The Preserve at Eisenhower Clubhouse

1576 Generals Hwy Crownsville, MD 21032

P570205 - DESIGN DEVELOPMENT SUBMISSION

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Architects/Interiors/Prime Consultant
Wheeler Goodman Masek & Associates, Inc.
165 Log Canoe Circle, Suite B1
Stevensville, MD 21666

Site Engineers/Environmental
Bay Engineering, Inc.
2661 Riva Road, Building 800
Annapolis, MD 21401

Structural Engineers
Watkins Partnership, Inc.
3032 Mitchellville Rd,
Bowie, MD 20716

Construction Cost Estimating
CostCon Construction Services, Inc.
1502 Wild Cranberry Drive
Crownsville, MD 21032

Fire Protection Engineers
EBL Engineers, LLC
8005 Harford Road
Baltimore, MD 21234

M/E/P Engineers
Century Engineering
10710 Gilroy Road
Hunt Valley, MD 21031

Sustainability & Commissioning
Lorax Partnerships, LLC
16 W. Hamilton Street
Baltimore, MD 21201

Food Service Consultant
Nyikos Garcia
7146 Starmount Ct
New Market, MD 21774

NOT FOR CONSTRUCTION

No.	Description	Date		
NO	REVISION DESCRIPTION		BY	DATE

WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

DESIGN DEVELOPMENT | CS

ANNE ARUNDEL COUNTY | JUNE 2023

DEPARTMENT OF PUBLIC WORKS | 202211.1

REVISED DATE	BY

APPROVED DATE — CHIEF ENGINEER
APPROVED DATE — PROJECT MANAGER
APPROVED DATE — ASSISTANT CHIEF ENGINEER
APPROVED DATE — CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

COVER SHEET

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032

GENERAL BUILDING STATISTICS

BUILDING CODES
ANNE ARUNDEL COUNTY BUILDING CODES
2018 INTERNATIONAL BUILDING CODE (IBC)
2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL PLUMBING CODE (IPC)
1993 AA COUNTY PLUMBING CODE - CHAPTERS 16 & 17
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2018 FIRE CODE (NFPA 1)
2018 STANDARD FOR PORTABLE FIRE EXTINGUISHERS (NFPA 10)
2016 STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS (NFPA 13)
2017 NATIONAL ELECTRIC CODE (NFPA 70)
2016 NATIONAL FIRE ALARM & SIGNALING CODE (NFPA 72)
2018 LIFE SAFETY CODE (NFPA 101)
2016 STANDARD FOR EMERGENCY & STANDBY POWER SYSTEMS (NFPA 110)
2009 ICC/ANSI A117.1 ACCESSIBLE & USEABLE BUILDINGS & FACILITIES
2010 AMERICAN WITH DISABILITIES ACT (ADA STANDARDS)

PROJECT DESCRIPTION
THIS PROJECT INCLUDES A TWO-STORY MIXED OCCUPANCY GOLF COURSE CLUBHOUSE BUILDING. THE UPPER LEVEL IS ASSEMBLY (A-2) RESTAURANT & BANQUET SPACE WITH SUPPORT KITCHEN. THE LOWER LEVEL IS MERCANTILE (M) PRO SHOP, (B) BUSINESS, & (S-1) STORAGE ELECTRIC GOLF CART STORAGE. THE LOWER LEVEL IS PARTIALLY BELOW GRADE. THE BUILDING IS SERVED BY WELL & SEPTIC AND SPRINKLERED VIA BELOW GRADE WATER TANKS AND EMERGENCY FIRE PUMP ON A DIESEL BACKUP GENERATOR.

CONSTRUCTION TYPE
THE CONSTRUCTION TYPE SHALL BE VB (5B), NON-PROTECTED (TABLE 602).

FIRE PROTECTION
BUILDING IS EQUIPPED THOUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH IBC SECTION 903.3.1.1

BUILDING IS EQUIPPED THOUGHOUT WITH AN APPROVED EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH IBC SECTION 907.5.2.2 AND NFPA 101, 12.3.4.3.

MIXED-OCCUPANCY, ONE-STORY, UNSEPARATED
A-2 - ASSEMBLY
M - MERCANTILE
S1 - STORAGE
B - BUSINESS

HEIGHT
ALLOWABLE : 60 FT AND 2 STORIES
ACTUAL: 35 FT AND 2 STORIES

AREA - 506.2 - ALLOWABLE AREA PER LEVEL (PER EQUATION 5-3)

OCCUPANCY	Aa	At	NS	If
A-2 - ASSEMBLY	22,500 SF =	18,000 +	(6,000 x .75)	
B, M, & S-1	33,750 SF =	27,000 +	(9,000 x .75)	
ALLOWABLE OVERALL:	**45,000SF**			
MAIN LEVEL:	13,039 SF			
LOWER LEVEL:	10,719 SF			
ACTUAL OVERALL:	**23,758 SF**			

OCCUPANT LOAD - IBC TABLE 1004.5, NFPA TABLE 7.3.1.2

MAIN LEVEL			OCCUPANTS
MULTI-PURPOSE	15 SF NET	3,028 SF/15 =	202
EXTERIOR DECK	15 SF NET	1,540 SF/15 =	103
GRILLE	15 SF NET	1,267 SF/15 =	85
EXTERIOR DECK	15 SF NET	943 SF/15 =	63
KITCHEN	200 SF GR	2,601 SF/200 =	13
OFFICE	150 SF GR	641 SF/150 =	5
		SUBTOTAL:	**471 OCCUPANTS**
LOWER LEVEL			
M (PRO SHOP)	60 SF GR	1,162 SF/60 =	20
B	150 SF GR	275 SF/150 =	2
S-1 WAREHOUSE	500 SF GR	3,387 SF/500 =	7
STO/STOCK/MECH	300 SF GR	1,894 SF/300 =	7
KITCHEN	200 SF GR	318 SF/200 =	2
		SUBTOTAL:	**38 OCCUPANTS**
		TOTAL:	**509 OCCUPANTS**

MEANS OF EGRESS
MINIMUM NUMBER OF EXITS - 2
EXITS PROVIDED - 7 TOTAL

EXITS PER SPACE PER PER SPACE PER TABLE 1006.2.1
PRO SHOP - 1 EXIT PER OCCUPANT LOAD & COMMON PATH LIMITS

EGRESS CAPACITY (IBC 1005.1, 1008.1.1; NFPA 7.2.1.2.3.2, 7.3.3.1)

DOORS (SECTION 1010)
32" MIN PER EXIT

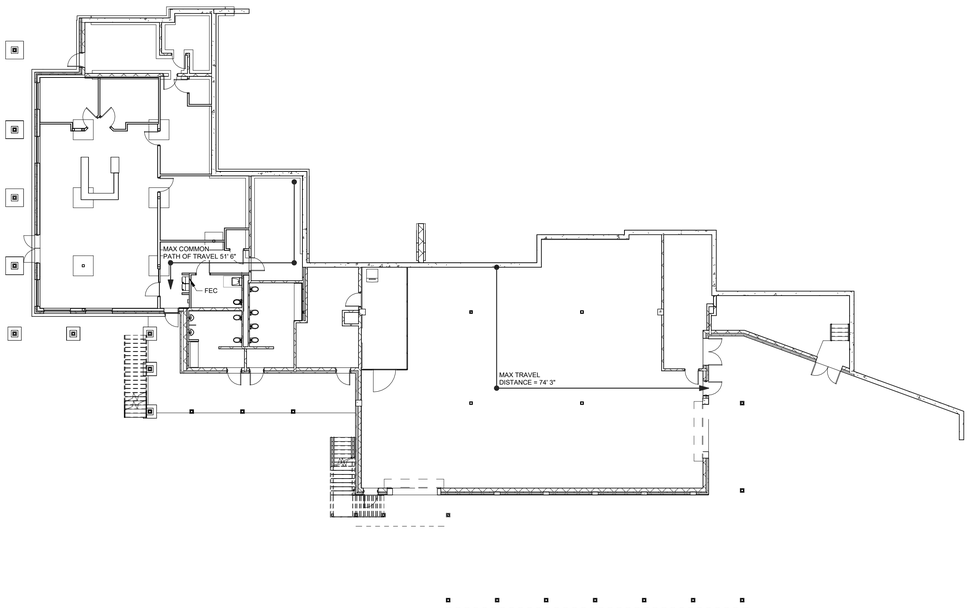
OCCUPANTS x .15" = _"	REQUIRED	**__" PROVIDED**
RESTAURANT		
85 x .15 =	13" REQUIRED	**80" PROVIDED**
MULTIPURPOSE		
202 x .15 =	31" REQUIRED	**80" PROVIDED**
MAIN LEVEL INTERIOR		
305 x .15 =	46" REQUIRED	**160" PROVIDED**
LOWER LEVEL INTERIOR		
38 x .15 =	6" REQUIRED	**128" PROVIDED**
OVERALL BUILDING		
509 x .15 =	77" REQUIRED	**288" PROVIDED**

STAIRWAYS (1011) AND EXIT ACCESS STAIRWAYS (SECTION 1019)

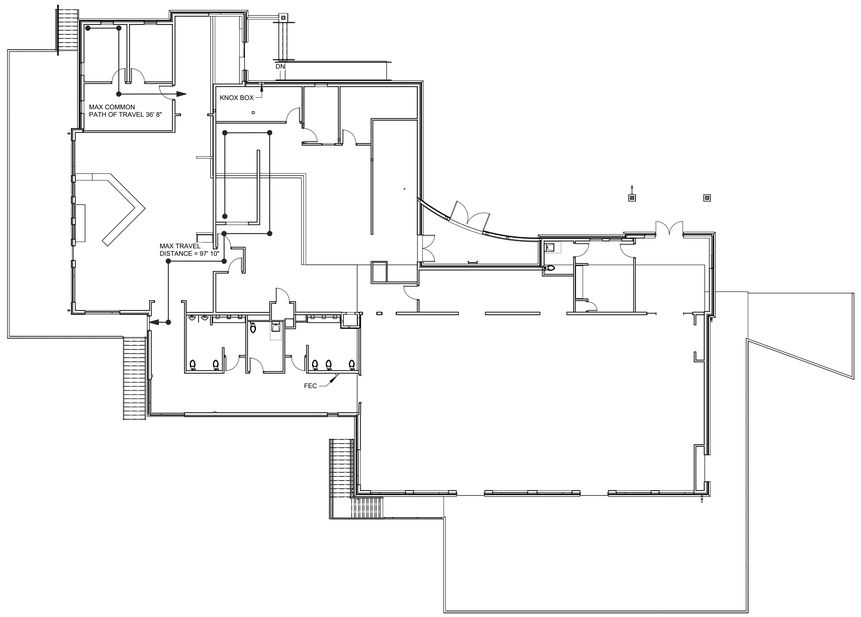
OCCUPANTS x .2" = __"	REQUIRED	**__" PROVIDED**
STAIR 1 - 50% MULTI-PURPOSE(101) + 50% (GRILLE(43) & DECK(32))		
176 x .2 =	36" REQUIRED	**48" PROVIDED**
STAIR 2 - 50% MULTI-PURPOSE EVENTS DECK		
52 x .2 =	11" REQUIRED	**48" PROVIDED**
STAIR 3 - 50% GRILLE DECK		
32 x .2 =	7" REQUIRED	**48" PROVIDED**

MINIMUM PLUMBING FACILITIES

LEVEL	OCCUPANTS	REQUIRED	**PROVIDED**
MAIN	471	8WC/4Lav	7WC/2UR/6Lav
LOWER	38	2WC/2Lav	5WC/2UR/4Lav
TOTAL:	509	11WC/6Lav	**12WC/2UR/10Lav**



1 LOWER LEVEL LIFE SAFETY
1/16" = 1'-0"



2 MAIN LEVEL LIFE SAFETY
1/16" = 1'-0"

NOT FOR CONSTRUCTION

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
ARCHITECTURE + INTERIORS
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Mayland, license number 13853, expiration date 08-29-2022.

REVISED DATE	BY	APPROVED DATE	APPROVED DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

DESIGN DEVELOPMENT | G100
ANNE ARUNDEL COUNTY | JUNE 2023
DEPARTMENT OF PUBLIC WORKS | 202211.1
SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

CODE ANALYSIS

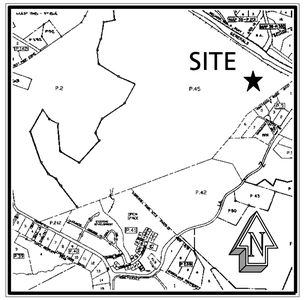
The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032

DESIGN DEVELOPMENT PLANS

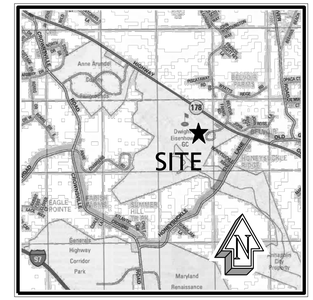
FOR

THE PRESERVE AT EISENHOWER CLUBHOUSE

TAX MAP 44, GRID 4, PARCEL 45
1576 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS



TAX MAP
SCALE: NONE

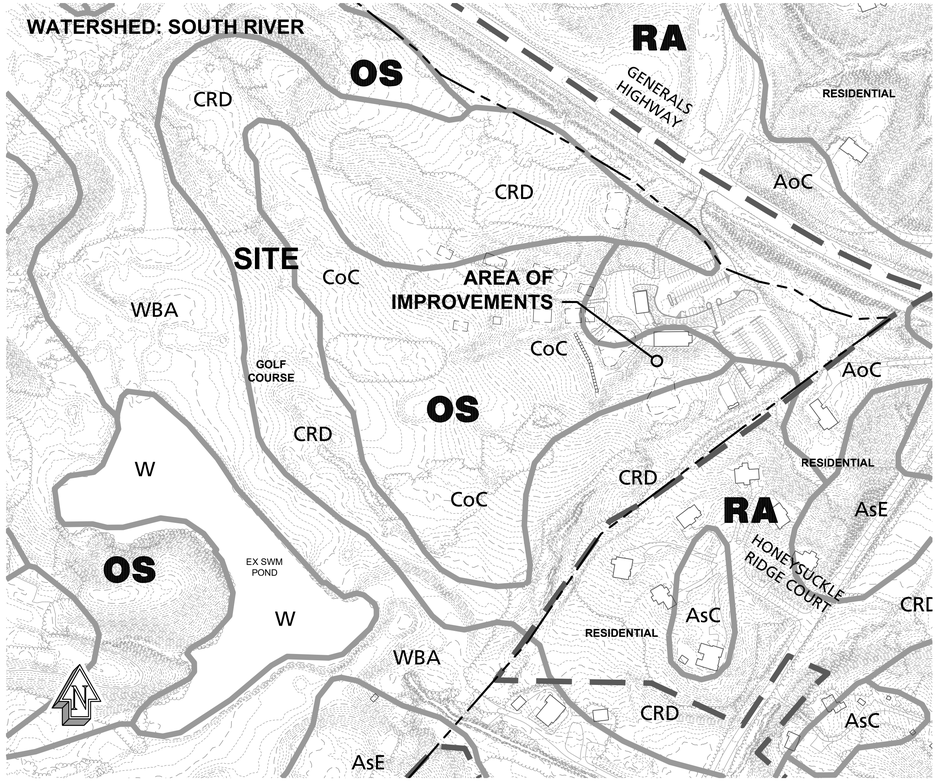


VICINITY MAP
SCALE: 1"=2,000'
© ADC THE MAP PEOPLE PERMITTED USE NO. 08301200

POI DRAINAGE AREA SUMMARY TABLE

	POI #1	SITE OUTFALL #1	SITE OUTFALL #2	SITE OUTFALL #3	SITE OUTFALL #4	SITE OUTFALL #5
Q10 (CFS)	822.45	2.59	7.46	4.64	3.63	15.83
RATIO OF OUTFALL Q10 TO POI Q10	-	0.003	0.009	0.006	0.004	0.019
AREA (ACRES)	569.0	0.44	2.46	0.88	1.09	3.72
RATIO OF OUTFALL AREA TO POI AREA	-	0.001	0.004	0.002	0.002	0.007
RCN	66	88	73	83	75	84
Tc (HOURS)	0.542	0.100	0.247	0.108	0.225	0.243
RUNOFF (INCHES)	1.87	3.86	2.44	3.36	2.61	3.45
RATIO OF OUTFALL RUNOFF TO POI RUNOFF	-	2.069	1.307	1.799	1.401	1.852

NOTES:
1. REFER TO SHEET **114** FOR DRAINAGE AREAS.
2. FLOW RATES SHOWN ABOVE ARE BASED ON THE ULTIMATE DEVELOPMENT (BASED ON ZONING) OF THE DRAINAGE AREAS TO EACH POINT. NO STORAGE WITHIN EXISTING OR PROPOSED S.W.M. PRACTICES IS TAKEN INTO CONSIDERATION.
3. FLOW RATES AND RUNOFF AMOUNTS WERE DETERMINED USING HYDROCAD AND TR20 METHODOLOGY.



LOCATION AND ZONING MAP
SCALE: 1"=200'

OUTFALL STATEMENT

THE PROPOSED PROJECT IS A RE-DEVELOPENT OF THE EISENHOWER GOLF COURSE'S CLUBHOUSE AND PARKING LOT. DRAINAGE PATTERNS ARE MAINTAINED AT THE SITE SO THAT RUNOFF FROM THE DEVELOPMENT CONTINUES TO DRAIN VIA SHEET FLOW ONTO THE GOLF COURSE, INTO AN EXISTING ONSITE STORM DRAIN SYSTEM LOCATED TO THE SOUTH AND WEST OF THE CLUBHOUSE AND ITS PARKING LOT, AND INTO SWALES WITHIN THE GENERALS HIGHWAY RIGHT-OF-WAY. SITE OUTFALLS #1 AND #2 HAVE BEEN IDENTIFIED WITHIN SWALES IN THE GENERALS HIGHWAY RIGHT-OF-WAY. ULTIMATELY, THIS RUNOFF DRAINS BACK ONTO THE GOLF COURSE AND INTO THE EXISTING STORMWATER MANAGEMENT POND LOCATED CENTRALLY ON THE GOLF COURSE. SITE OUTFALL #3 HAS BEEN IDENTIFIED FOR RUNOFF THAT SHEET FLOWS DIRECTLY ONTO THE GOLF COURSE FROM THE PROPOSED DEVELOPMENT. RUNOFF FROM SITE OUTFALL #1, #2, AND #3 ALL CONVERGE WITHIN THE EXISTING STORMWATER MANAGEMENT POND.

SITE OUTFALLS #4 AND #5 HAVE BEEN IDENTIFIED WITHIN EXISTING STORM DRAIN AT THE GOLF COURSE THAT RECEIVES RUNOFF FROM A LARGE AMOUNT OF THE PARKING LOT AND BUILDING ROOF. THE TWO STORM DRAIN SYSTEMS CONVERGE BEFORE OUTFALLING INTO A CHANNEL. THIS CHANNEL CONVERGES WITH RUNOFF FROM SITE OUTFALL #1 THROUGH #3 JUST BELOW THE DISCHARGE OF THE POND. THIS POINT OF CONVERGENCE HAS BEED IDENTIFIED AS THE POINT OF INVESTIGATION AND FALLS WITHIN A FEMA FLOODPLAIN.

THIS IS A RE-DEVELOPMENT PROJECT (IMPERVIOUS AREA EXCEEDS 40%), THE POINT OF INVESTIGATION IS LOCATED WITHIN A FEMA FLOODPLAIN, THE DIFFERENCE BETWEEN THE PRE- AND POST-DEVELOPMENT 10-YEAR DISCHARGE IS 10% OR LESS, AND AN ANALYSIS AT EACH SITE OUTFALL SHOWS THAT ADEQUATE OUTFALLS EXIST FOR THE PROPOSED DEVELOPMENT. THEREFORE, IN ACCORDANCE WITH THE ANNE ARUNDEL COUNTY STORMWATER PRACTICES AND PROCEDURES MANUAL,THIS PROJECT IS EXEMPT FROM PROVIDING A DOWNSTREAM ANALYSIS OF THE RECEIVING WATERWAYS BELOW THE SITE OUTFALLS .

SURVEY CONTROL NOTE

THE COORDINATES AND ELEVATIONS SHOWN HEREON ARE BASED ON RTK (REAL TIME KINEMATIC) OBSERVATIONS UTILIZING SMARTNET GPS NETWORK. THE HORIZONTAL DATUM IS REFERENCED TO MARYLAND STATE PLANE (NAD 83/2011) AND THE VERTICAL DATUM IS REFERENCED TO NAVD 88.

DRAWING INDEX

SHEET NO	SHEET TITLE
C100	**COVER PLAN**
C101	PROJECT NOTES PLAN
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C123	BORING PLAN
C124	SEPTIC PLAN
C125	**SEPTIC DETAILS AND SPECIFICATIONS**

CALL BEFORE YOU DIG!
MARYLAND LAW REQUIRES 48 HOURS NOTICE BEFORE PLANNED WORK TO MARK UNDERGROUND UTILITIES PRIOR TO EXCAVATION
MISS UTILITY: 1-800-257-7777

NOT FOR CONSTRUCTION

NO	REVISION DESCRIPTION	BY	DATE

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Engineers, Planners and Surveyors
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WGM ARCHITECTURE + INTERIORS
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410.263.6787 www.wgm-arch.com

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, TERRY L. SCHUMAN, 19593, PROFESSIONAL ENGINEER

Terry Schuman — Date
19593 — 3/31/24
License No. — Exp. Date

ANNE ARUNDEL COUNTY	6/30/23
DEPARTMENT OF PUBLIC WORKS	22-8449

REVISED DATE	BY	APPROVED / DATE	APPROVED / DATE	
				SCALE: AS SHOWN
				DRAWN BY: LS
		CHIEF ENGINEER	PROJECT MANAGER	CHECKED BY: TS
		APPROVED / DATE	APPROVED / DATE	SHEET: C100 OF 26
				PROJECT #: P570200
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	CONTRACT #: P570205

DESIGN DEVELOPMENT PLANS — C100

COVER PLAN

THE PRESERVE AT EISENHOWER CLUBHOUSE
TAX MAP 44, GRID 4, PARCEL 45
1576 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

PLOTTED: Jun 30, 2023 - 9:30am

F:\22-8449 Eisenhower GC - New Clubhouse\Drawing Files\DD PLANS\22-8449 EISENHOWER-GOLF-DESIGN DEVELOPMENT PLANS.dwg

PROJECT TABULATIONS

1.	TOTAL SITE AREA =	8,353,171.3 SQ. FT. OR 191.76 ACRES
2.	ZONING =	OS - OPEN SPACE
3.	PROPOSED AREA OF DISTURBANCE =	191,072 SQ. FT. OR 4.39 ACRES
4.	TOTAL AREA OF EXISTING FOREST WITHIN THE LOD =	12,907 SQ. FT. OR 0.29 ACRES
5.	AREA OF FLOODPLAIN WITHIN THE LOD =	0 SQ. FT. OR 0 ACRES
6.	AREA OF WETLANDS WITHIN THE LOD =	0 SQ. FT. OR 0 ACRES
7.	TOTAL AREA OF R/W DEDICATION =	0 SQ. FT. OR 0 ACRES
8.	TOTAL AREA OF EXISTING IMPERVIOUS AREAS WITHIN THE LOD =	89,460 SQ. FT. OR 2.05 ACRES

SITE AREA SUMMARY

TOTAL SITE AREA =	191.76 ACRES
TOTAL LIMIT OF DISTURBED AREA =	4.39 ACRES
TOTAL SITE AREA FOR ESD COMPS =	**4.39 ACRES**
EXISTING IMPERVIOUS ONSITE=	2.05 ACRES (46.7% OF LOD - REDEVELOPMENT)
POST-DEVELOPMENT IMPERVIOUS AREA =	2.70 ACRES (61.5% OF TOTAL SITE AREA)

NOTE: IMPERVIOUS AREA EXCLUDES RECONSTRUCTION AREAS (MILLING AND RESURFACING.

AREA OF SOILS OF HSG A =	0.00 ACRES
AREA OF SOILS OF HSG B =	1.30 ACRES
AREA OF SOILS OF HSG C =	3.09 ACRES
AREA OF SOILS OF HSG D =	0.00 ACRES

SITE TABULATIONS

(PRELIMINARY PLAN CHECKLIST ITEM #72)

USE:	GOLF COURSE	
DENSITY:	N/A	
GROSS SITE AREA:	8,353,171.3 SQ. FT. OR 191.76 ACRES	
PARKING REQUIRED: (SEE DETAILED BREAKDOWN BELOW)	179 SPACES	
PARKING PROVIDED: (SEE DETAILED BREAKDOWN BELOW)	202 SPACES	
FLOOR AREA:	18,484 SQ. FT. (8,656 SQ. FT. LOWER LEVEL, 9,828 SQ. FT. UPPER LEVEL)	
EXISTING IMPERVIOUS COVERAGE:	TOTAL =	89,460 SQ. FT. OR 2.05 ACRES (46.7% OF LOD)
PROPOSED IMPERVIOUS COVERAGE:	TOTAL =	117,735 SQ. FT. OR 2.70 ACRES (61.5% OF LOD)

PARKING CALCULATIONS

REQUIREMENT: PER THE URBAN STREETSCAPE STANDARDS (3.C) IN SECTION V.A., PAGE 25, OF THE LANDSCAPE MANUAL, BICYCLE PARKING SPACES SHALL BE PROVIDED FOR ALL NEW BUILDINGS AT A MINIMUM OF ONE BICYCLE SPACE FOR EVERY 20 REQUIRED AUTOMOBILE SPACES.

USE	# SEATS / HOLES	PARKING REQUIRED	PARKING REQUIRED	PARKING REQUIRED PER NOTE 1	PARKING PROVIDED
GOLF COURSE	18	8 SP / HOLE	144 SPACES	144 SPACES	-
BANQUEST HALL	150	1 SP / 3 SEATS	50 SPACES	25 SPACES	-
GRILLE	60	1 SP / 3 SEATS	20 SPACES	10 SPACES	-
TOTAL			**214 SPACES**	**179 SPACES**	**202 SPACES**

NOTES:
1. PER ANNE ARUNDEL COUNTY CODE ARTICLE 16-3-1105(B), JOINT USE PARKING IS ALLOWED IF THE USES OPERATE DURING OVERLAPPING TIMER PERIODS AND PARKING SPACES PROVIDE 100% OF THE NUMBER OF SPACES REQUIRED FOR THE GREATER GENERATOR PLUS 50% OF THE NUMBER OF SPACES REQUIRED FOR THE SECONDARY GENERATOR.
2. TOTAL ADA SPACES REQUIRED FOR 202 PARKING SPACES PROVIDED = 7 SPACES (2 OF WHICH ARE VAN ACCESSIBLE).

BREAKDOWN OF PARKING PROVIDED

TOTAL PARKING SPACES PROVIDED =	202 SPACES
TOTAL ADA SPACES PROVIDED =	10 SPACES (4 OF WHICH ARE VAN ACCESSIBLE)
ELECTRIC VEHICLE (EV) SPACES PROVIDED =	11 SPACES (1 OF WHICH IS ADA)

POST DEVELOPMENT OWNER / DEVELOPER'S STABILIZATION CERTIFICATION

"ALL GRADING DRAINAGE STRUCTURES AND/OR SYSTEMS, EROSION AND SEDIMENT CONTROL PRACTICES INCLUDING FACILITIES AND VEGETATIVE MEASURES HAVE BEEN COMPLETED IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS".

OWNER / DEVELOPER DATE

S.W.M. RECORD DRAWING CERTIFICATION

TO THE BEST OF MY KNOWLEDGE AND BELIEF THE RECORD DRAWING DATA AS NOTED ON THE PLANS HAVE BEEN CONSTRUCTED PER ANNE ARUNDEL COUNTY STANDARDS. THE LOCATIONS AND SPECIFICATIONS SHOWN ARE BASED ON A FIELD INSPECTION CONDUCTED ON .

TERRY SCHUMAN, P.E. DATE

UTILITY INFORMATION

GAS - BGE, PO BOX 1475, BALTIMORE, MARYLAND 21203, (410) 265-4100
TELEPHONE - VERIZON, 1E PRATT STREET, BALTIMORE, MARYLAND 21202, (410) 954-6260
ELECTRIC - BGE, PO BOX 1475, BALTIMORE, MARYLAND 21203, (410) 265-4100
STATE HIGHWAY - MARYLAND STATE HIGHWAY COMMISSION, 707 NORTH CALVERT STREET, BALTIMORE, MARYLAND 21202, (410) 545-5582
SEWER / WATER - ANNE ARUNDEL COUNTY DPW WATER AND WASTEWATER DIVISION, 2662 RIVA ROAD, ANNAPOLIS, MARYLAND 21401, (410) 222-7582

FOREST CONSERVATION NOTE

FOREST CONSERVATION REQUIREMENTS WITH THE PROJECT BEING EXEMPT PER ARTICLE 17-6-301 (B)(7)(I) SINCE THIS PROJECT WILL NOT RESULT IN THE CUMULATIVE CUTTING, CLEARING, OR GRADING OF MORE THAN 20,000 SQ. FT. OF FOREST (ACTUAL FOREST CLEARING= 0 SQ. FT.). NO FOREST EXISTS WITHIN THE LOT AREA AND THERE ARE NO SPECIMEN TREES ONSITE.

GENERAL NOTES

1. OWNER / APPLICANT:
ANNE ARUNDEL COUNTY
C/O REAL ESTATE MGMT
2662 RIVA ROAD, 4TH FLOOR
ANNAPOLIS, MARYLAND 21401
2. THE PROPERTY IS SHOWN ON TAX MAP 44, GRID 4, PARCEL 45, PER DEED 32876 / 269.
3. THE TAX ACCOUNT INFORMATION IS 02-000-02469800.
4. THE EXISTING ZONING OF THE SITE IS OS - OPEN SPACE. THE ZONING IS TO REMAIN THE SAME.
5. THE SITE ADDRESS IS 1576 GENERALS HIGHWAY, CROWNSVILLE, MARYLAND 21032.
6. THE TOTAL SITE AREA IS **8,353,171.3** SQ. FT. OR **191.76** ACRES ±. THE EXISTING USE OF THE SITE IS A GOLF COURSE. NO FLOODPLAIN IS PRESENT WITHIN THE AREA OF DISTURBANCE WITHIN THE PROPERTY.
7. THE PROPERTY OUTLINES AND TOPOGRAPHY SHOWN HEREON ARE BASED ON A "TOPOGRAPHIC SURVEY" PREPARED BY BAY ENGINEERING, INC. DATED MARCH, 2023.
8. THE EXISTING UTILITIES SHOWN HEREON ARE BASED ON VISIBLE ABOVE GROUND EVIDENCE AND VISIBLE INSPECTIONS OF MANHOLES PER THE LATEST DATE OF SURVEY SHOWN BELOW. NO FURTHER UNDERGROUND UTILITY INVESTIGATION OR DESIGNATION WAS CONDUCTED. THE COORDINATES, BEARINGS AND ELEVATIONS SHOWN HEREON ARE BASED ON RTK (REAL TIME KINEMATIC) OBSERVATIONS UTILIZING SMARTNET GPS NETWORK. THE HORIZONTAL DATUM IS REFERENCED TO MARYLAND STATE PLANE (NAD 83/2011) AND THE VERTICAL DATUM IS REFERENCED TO NAVD 88.
9. THE AREA OF THE PROPERTY TO BE DEVELOPED IS DESCRIBED HEREON IS LOCATED IN THE FLOOD HAZARD ZONE "X" (AREAS OF MINIMAL FLOODING) AS DELINEATED ON THE FIRM FLOOD INSURANCE MAP # 24003C0164F DATED FEBRUARY 18, 2015 FOR SAID COUNTY AND DISTRIBUTED BY THE FEDERAL EMERGENCY MANAGEMENT FACILITY.
10. THE CONTRACTOR SHALL CALL "MISS UTILITY" @ 1.800.257.7777, A MINIMUM OF 48 HOURS IN ADVANCE OF ANY EXCAVATION, BORING, PILE DRIVING, AND/OR DIGGING FOR THE LOCATION OF GAS, ELECTRIC, WATER, SEWER AND TELEPHONE LINES.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY FENCE, DRIVEWAYS, ETC. DAMAGED OR REMOVED BY HIM DURING CONSTRUCTION. ALL DISTURBED AREAS OUTSIDE OF THE RIGHT-OF-WAY LINES SHALL BE RETURNED TO THEIR ORIGINAL CONDITION UNLESS OTHERWISE INDICATED OR SPECIFIED.
12. ALL CONSTRUCTION METHODS AND MATERIAL SHALL BE IN ACCORDANCE WITH THE LATEST ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS DETAILS AND SPECIFICATIONS FOR CONSTRUCTION OF STORM DRAINS, WATER, SEWER, ROADS (EXCEPT FOR CONSTRUCTION WITHIN SHA RIGHT-OF-WAYS, WHICH SHALL BE IN ACCORDANCE WITH THE LATEST S.H.A. DETAILS AND SPECIFICATIONS FOR CONSTRUCTION) AND STORMWATER MANAGEMENT.
13. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK THAT WOULD NATURALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.
14. THESE DRAWINGS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE MOST CURRENT VERSION OF OSHA STANDARDS AND / OR REGULATIONS.
15. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER OF ANY DEVIATION TO THIS PLAN PRIOR TO ANY CHANGE BEING MADE. ANY CHANGE IN THIS PLAN WITHOUT THE WRITTEN AUTHORIZATION FOR SAID CHANGE FROM THE ENGINEER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR OR SUB-CONTRACTOR. SAID CHANGES MAY WARRANT MDE , ANNE ARUNDEL COUNTY, AND / OR SHA REVIEW AND APPROVAL.
16. THE CONTRACTOR SHALL NOTE THAT IN THE CASE OF A DISCREPANCY BETWEEN THE SCALED AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSION SHALL GOVERN.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF HIS CONSTRUCTION WITH THE CONSTRUCTION BY OTHER CONTRACTORS.
18. ALL UTILITY POLES SHALL BE BRACED WHEN NECESSARY AT THE CONTRACTOR'S EXPENSE. THE UTILITY POLES SHALL BE RELOCATED AT THE OWNERS EXPENSE ONLY IN CASES WHERE THEY WILL INTERFERE WITH CONSTRUCTION.
19. THE PERMITTEE (OR HIS REPRESENTATIVE) SHALL NOTIFY THE ANNE ARUNDEL COUNTY INSPECTIONS AND PERMITS @ 410.222.7780 AND THE ANNE ARUNDEL COUNTY OFFICE OF PLANNING AND ZONING @ 410.222.7537 AT LEAST SEVEN (7) DAYS BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY AND SHALL BE REQUIRED TO HOLD A PRE-CONSTRUCTION MEETING BETWEEN PROJECT REPRESENTATIVES AND A REPRESENTATIVE OF ANNE ARUNDEL COUNTY.
20. ALL WATER AND SEWER UTILITIES SHALL BE SEPARATED BY A MINIMUM OF 10 FEET OR AS DIRECTED BY THE ENGINEER.
21. ROOF DRAINS / LEADERS / DOWNSPOUTS ARE TO DISCHARGE DIRECTLY TO THE STORM DRAIN SYSTEMS THROUGH UNDERGROUND CONNECTIONS UNLESS OTHERWISE NOTED HEREIN.
22. THE CONTRACTOR SHALL NOTIFY BGE @ 410.234.5691, FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
23. THE CONTRACTOR SHALL NOTIFY THE VERIZON TELEPHONE COMPANY @ 301.393.3648, FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
24. PIPE ELEVATIONS REFER TO INVERTS UNLESS OTHERWISE SPECIFIED.
25. ALL STORM DRAIN PIPES ARE HDPE UNLESS OTHERWISE NOTED.
26. THE CONTRACTOR SHALL SAWCUT ALL JOINTS WHERE THE PROPOSED PAVEMENT MEETS THE EXISTING PAVEMENT.
27. IN PREPARATION OF THESE PLANS THE BEST AVAILABLE RECORDS, DEEDS, MAPS, SURVEYS AND AERIAL TOPOGRAPHY HAVE BEEN USED.
28. THE CLIENT \ CONTRACTOR ACKNOWLEDGES THAT THE REQUIREMENTS OF THE ADA WILL BE SUBJECT TO VARIOUS AND POSSIBLY CONTRADICTORY INTERPRETATIONS. BAY ENGINEERING INC., THEREFORE, WILL USE ITS REASONABLE PROFESSIONAL EFFORTS TO INTERPRET APPLICABLE ADA REQUIREMENTS AND OTHER FEDERAL, STATE AND LOCAL LAWS, RULES, CODES, ORDINANCES AND REGULATIONS AS THEY APPLY TO THE PROJECT. BAY ENGINEERING, HOWEVER, CANNOT AND DOES NOT WARRANT OR GUARANTEE THAT THE CLIENT'S PROJECT WILL COMPLY WITH INTERPRETATIONS OF ADA REQUIREMENTS AND / OR REQUIREMENTS OF OTHER FEDERAL, STATE AND LOCAL LAWS, RULES, CODES, ORDINANCES AND REGULATIONS AS THEY APPLY TO THE PROPERTY.
29. REFER TO THE GEO-TECHNICAL ENGINEERING REPORT PREPARED BY FROEHLING AND ROBERTSON, INC. DATED APRIL 4, 2023. THE CONTRACTOR SHALL REVIEW AND FULLY UNDERSTAND THE CONTENTS OF THE REPORTS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF SUB-SURFACE SOIL CONDITIONS AS PER THE REPORT.
30. THE SITE IS LOCATED WITHIN THE "OTHER" DESIGNATION OF THE "RURAL" PER ANNE ARUNDEL COUNTY MASTER WATER PLAN SHEET W-7.
31. THE SITE IS LOCATED WITHIN THE "NO PUBLIC SERVICE" DESIGNATION OF THE "RURAL" PER ANNE ARUNDEL COUNTY MASTER SEWER PLAN SHEET S-7.
32. NO RARE, THREATENED, OR ENDANGERED SPECIES WERE IDENTIFIED ON THE PROPERTY. NO KNOWN HISTORIC STRUCTURES ARE LOCATED ON THE PROPERTY.

SITE LEGEND

PROPERTY LINE
EXISTING CONTOUR — 142
EXISTING WOODS
EXISTING FENCE — X — X — X —
EXISTING SOILS BOUNDARY
EXISTING SOILS DESIGNATION — AoC
EXISTING UTILITY POLE W/ OVERHEAD WIRE
EXISTING SEWER — SS — SS —
EXISTING STORM DRAIN — SD — SD —
EXISTING WATER — W — W — W —
EXISTING GAS — G — G — G —
EXISTING ELECTRIC — E — E — E —
EXISTING TELEPHONE — T — T — T —
EXISTING SEWER FORCEMAIN — FM — FM — FM —
EXISTING ZONING BOUNDARY
EXISTING ZONING DESIGNATION — OS
EXISTING EASEMENT
EXISTING TREE
PROPOSED CURB AND GUTTER
PROPOSED WATER AND FIRE HYDRANT
PROPOSED SEWER
PROPOSED STORM DRAIN
PROPOSED CONCRETE
PROPOSED BRICK PAVERS / STAMPED CONCRETE
PROPOSED CONTOUR — 100
PROPOSED SPOT ELEVATION — + 100.0
PROPOSED # OF PARKING SPACES — 1
PROPOSED ON-SITE LIGHT DUTY PAVEMENT
PROPOSED ON-SITE HEAVY DUTY PAVEMENT
PROPOSED MILL AND RESURFACE PAVEMENT
PROPOSED ASPHALT CART PATH AND PAVED PAVEMENT
PROPOSED WEDGE AND LEVEL PAVEMENT
PROPOSED MICRO-BIORETENTION AREA
PROPOSED RIPRAP
PROPOSED BUILDING RESTRICTION LINE — BRL — BRL —
PROPOSED LIMIT OF DISTURBANCE
PROPOSED REINFORCED SILT FENCE — RSF — RSF — RSF —
PROPOSED SILT FENCE ON PAVEMENT — SFOP — SFOP —
PROPOSED SUPER SILT FENCE — SSF — SSF — SSF —
PROPOSED STABILIZED CONSTRUCTION ENTRANCE
PROPOSED INLET PROTECTION — IP
PROPOSED STAGING / STOCKPILE AREA

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT PLANS	C101

NO	REVISION DESCRIPTION	BY	DATE

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WGM ARCHITECTURE + INTERIORS
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410.263.6787 www.wgm-arch.com

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, TERRY L. SCHUMAN, 19593, PROFESSIONAL ENGINEER

Terry Schuman Date
19593 3/31/24
License No. Exp. Date

ANNE ARUNDEL COUNTY 6/30/23
DEPARTMENT OF PUBLIC WORKS 22-8449

REVISED DATE	BY	APPROVED DATE	APPROVED DATE	
		CHIEF ENGINEER	PROJECT MANAGER	SCALE: AS SHOWN
				DRAWN BY: LS
		APPROVED DATE	APPROVED DATE	CHECKED BY: TS
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	SHEET: C101 OF 26
				PROJECT #: P570200
				CONTRACT #: P570205

PROJECT NOTES PLAN

THE PRESERVE AT EISENHOWER CLUBHOUSE

TAX MAP 44, GRID 4, PARCEL 45
1576 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

PLOTTED: Jun 30, 2023 - 9:30am

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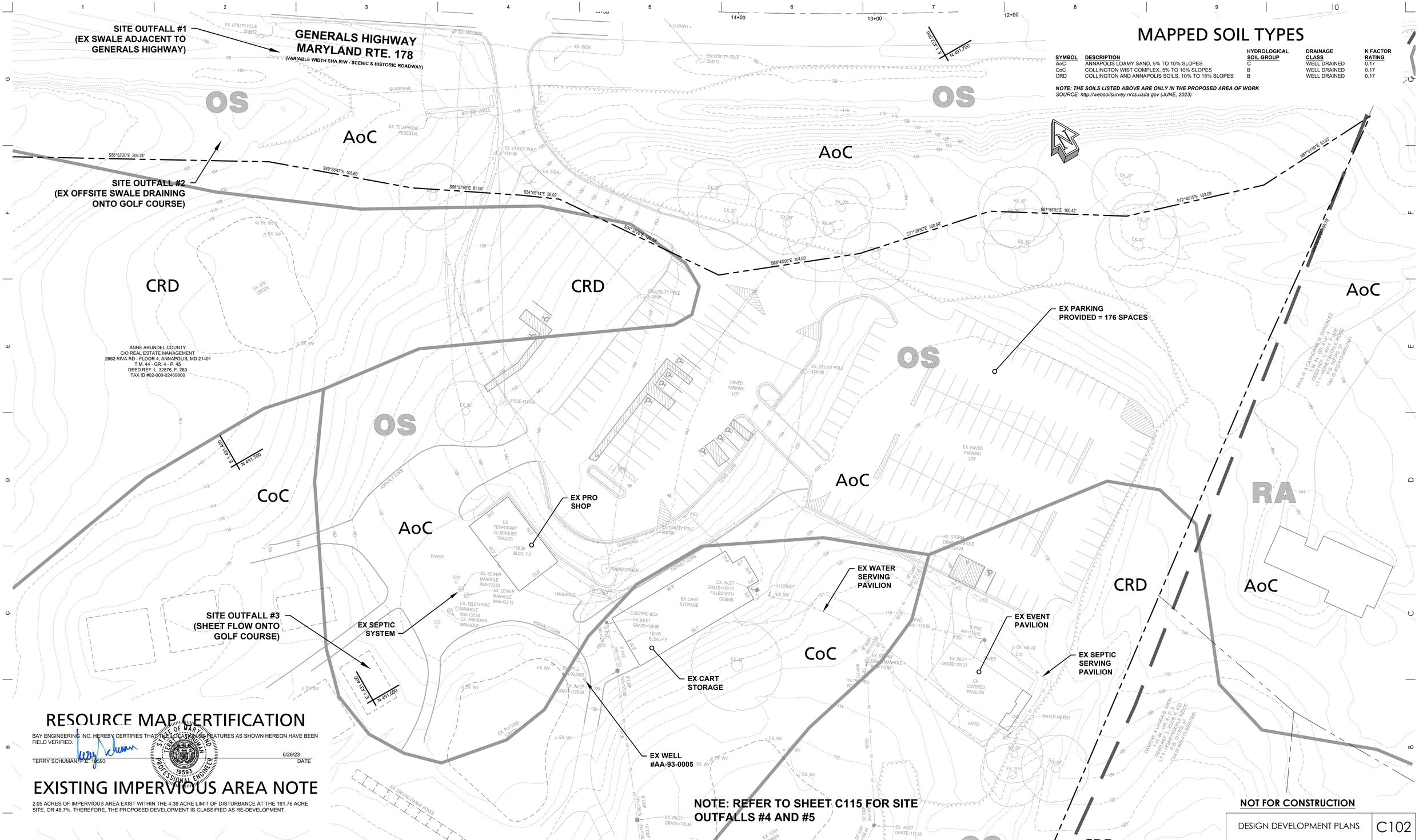

MAPPED SOIL TYPES

SYMBOL	DESCRIPTION	HYDROLOGICAL SOIL GROUP	DRAINAGE CLASS	K FACTOR RATING
AoC	ANNAPOLIS LOAMY SAND, 5% TO 10% SLOPES	C	WELL DRAINED	0.17
CoC	COLLINGTON WIST COMPLEX, 5% TO 10% SLOPES	B	WELL DRAINED	0.17
CRD	COLLINGTON AND ANNAPOLIS SOILS, 10% TO 15% SLOPES	B	WELL DRAINED	0.17

NOTE: THE SOILS LISTED ABOVE ARE ONLY IN THE PROPOSED AREA OF WORK
SOURCE: http://websoilsurvey.nrcs.usda.gov (JUNE, 2023)

RESOURCE MAP CERTIFICATION

BAY ENGINEERING INC. HEREBY CERTIFIES THAT THE TOPOGRAPHIC FEATURES AS SHOWN HEREON HAVE BEEN FIELD VERIFIED.

TERRY SCHUMAN, P.E. 19593 — 6/26/23 DATE

STATE OF MARYLAND · TERRY L. SCHUMAN · 19593 · PROFESSIONAL ENGINEER

EXISTING IMPERVIOUS AREA NOTE

2.05 ACRES OF IMPERVIOUS AREA EXIST WITHIN THE 4.39 ACRE LIMIT OF DISTURBANCE AT THE 191.76 ACRE SITE, OR 46.7%. THEREFORE, THE PROPOSED DEVELOPMENT IS CLASSIFIED AS RE-DEVELOPMENT.

NOTE: REFER TO SHEET C115 FOR SITE OUTFALLS #4 AND #5

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DESIGN DEVELOPMENT PLANS	C102

NO	REVISION DESCRIPTION	BY	DATE

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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.

STATE OF MARYLAND · TERRY L. SCHUMAN · 19593 · PROFESSIONAL ENGINEER

Terry Schuman — Date
19593 — 3/31/24
License No. — Exp. Date

ANNE ARUNDEL COUNTY — 6/30/23
DEPARTMENT OF PUBLIC WORKS — 22-8449

REVISED DATE	BY	APPROVED DATE	APPROVED DATE	
				SCALE: 1"=30'
		CHIEF ENGINEER	PROJECT MANAGER	DRAWN BY: LS
		APPROVED DATE	APPROVED DATE	CHECKED BY: TS
				SHEET: C102 OF 26
				PROJECT #: P570200
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	CONTRACT #: P570205

EXISTING SITE CONDITIONS AND RESOURCE MAPPING PLAN

THE PRESERVE AT EISENHOWER CLUBHOUSE

TAX MAP 44, GRID 4, PARCEL 45
1576 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

PLOTTED: Jun 30, 2023 - 9:30am

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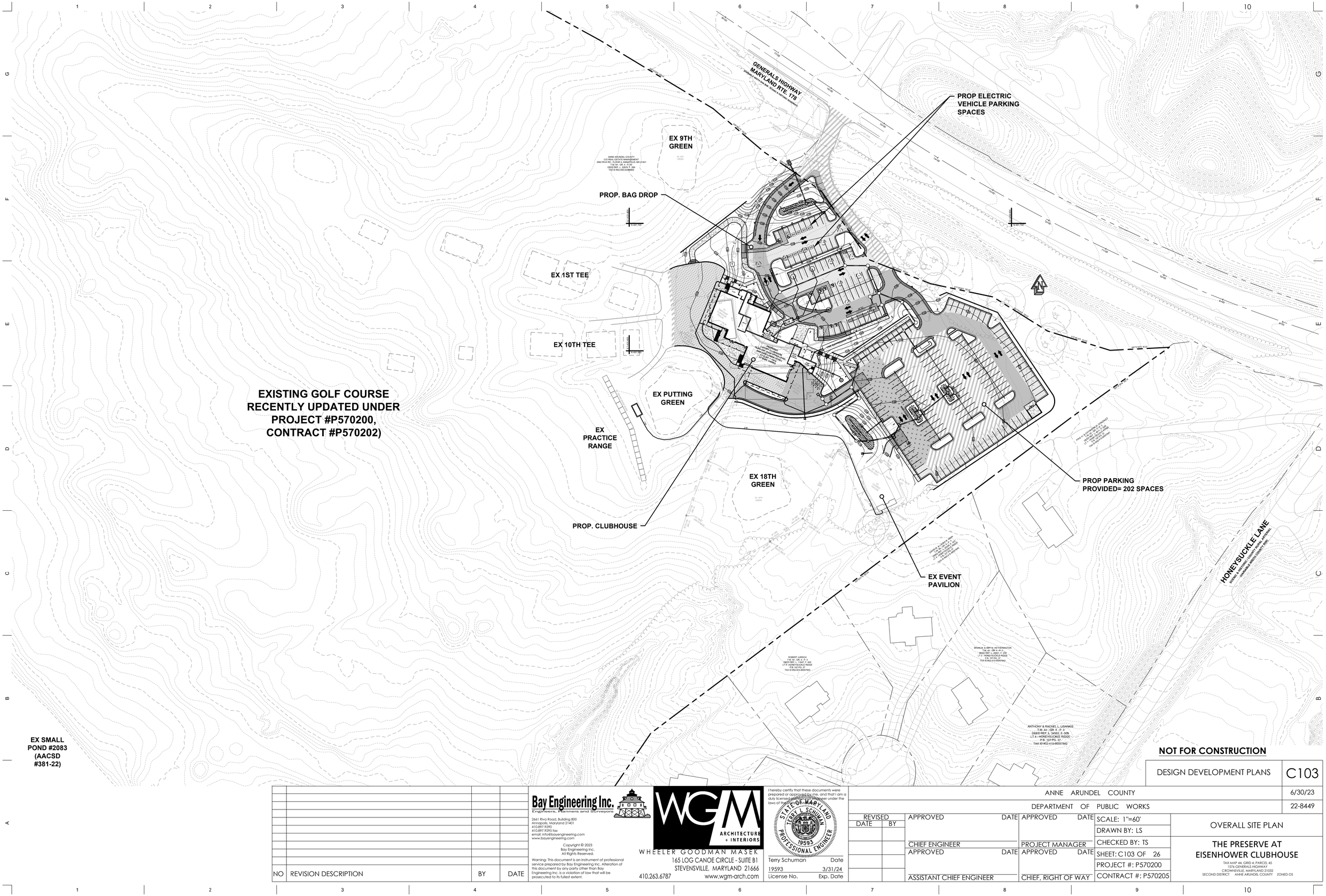

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DESIGN DEVELOPMENT PLANS	C103
ANNE ARUNDEL COUNTY	6/30/23
DEPARTMENT OF PUBLIC WORKS	22-8449

REVISED DATE	BY	NO	REVISION DESCRIPTION	BY	DATE

APPROVED ____ DATE ____ CHIEF ENGINEER
APPROVED ____ DATE ____ PROJECT MANAGER
APPROVED ____ DATE ____ ASSISTANT CHIEF ENGINEER
APPROVED ____ DATE ____ CHIEF, RIGHT OF WAY

SCALE: 1"=60'
DRAWN BY: LS
CHECKED BY: TS
SHEET: C103 OF 26
PROJECT #: P570200
CONTRACT #: P570205

OVERALL SITE PLAN

THE PRESERVE AT EISENHOWER CLUBHOUSE

TAX MAP 44, GRID 4, PARCEL 45
1576 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

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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.

STATE OF MARYLAND — TERRY L. SCHUMAN — 19593 — PROFESSIONAL ENGINEER

Terry Schuman — Date
19593 — 3/31/24
License No. — Exp. Date

PLOTTED: Jun 30, 2023 - 9:30am

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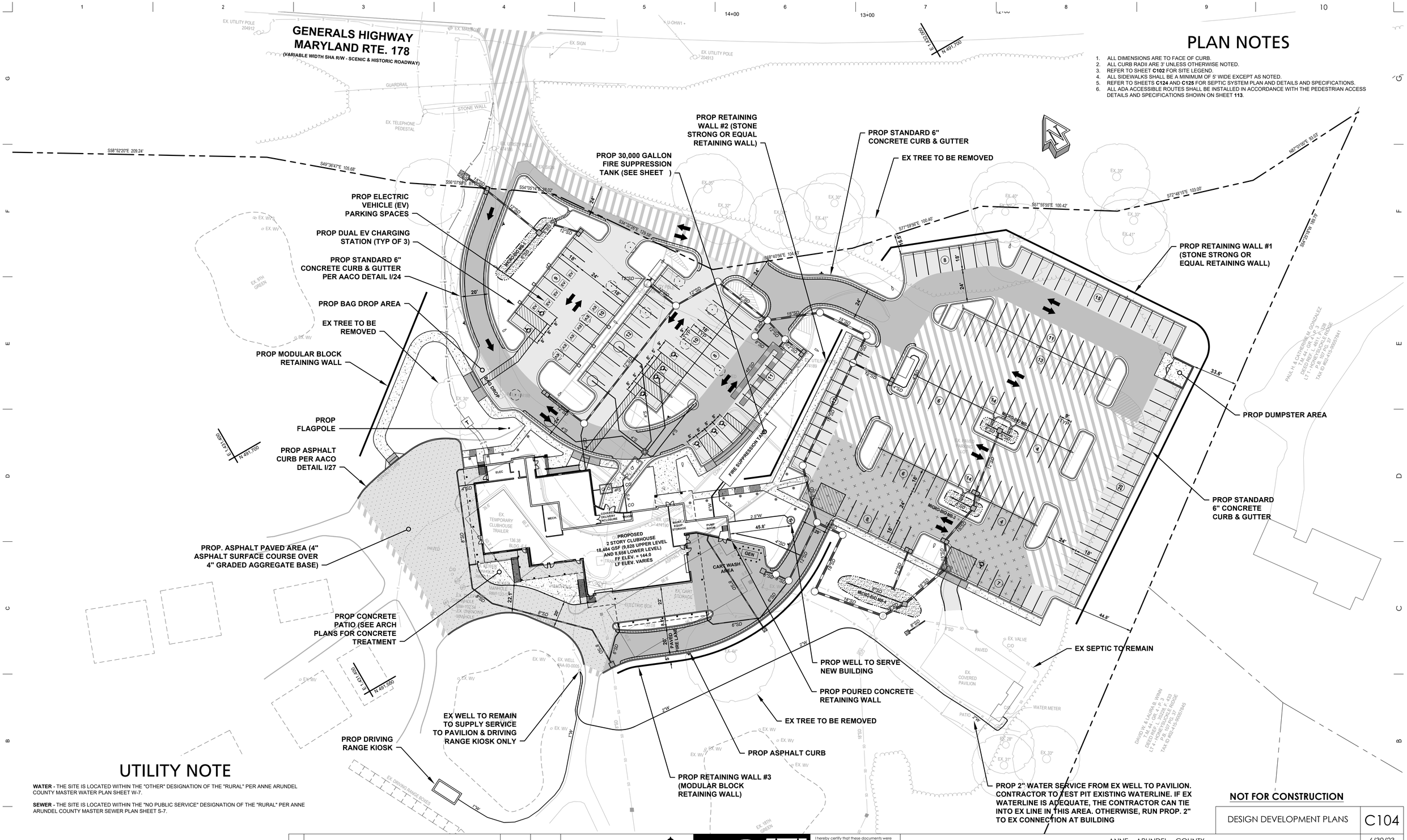

PLAN NOTES

1. ALL DIMENSIONS ARE TO FACE OF CURB.
2. ALL CURB RADII ARE 3' UNLESS OTHERWISE NOTED.
3. REFER TO SHEET **C102** FOR SITE LEGEND.
4. ALL SIDEWALKS SHALL BE A MINIMUM OF 5' WIDE EXCEPT AS NOTED.
5. REFER TO SHEETS **C124** AND **C125** FOR SEPTIC SYSTEM PLAN AND DETAILS AND SPECIFICATIONS.
6. ALL ADA ACCESSIBLE ROUTES SHALL BE INSTALLED IN ACCORDANCE WITH THE PEDESTRIAN ACCESS DETAILS AND SPECIFICATIONS SHOWN ON SHEET **113**.

UTILITY NOTE

WATER - THE SITE IS LOCATED WITHIN THE "OTHER" DESIGNATION OF THE "RURAL" PER ANNE ARUNDEL COUNTY MASTER WATER PLAN SHEET W-7.

SEWER - THE SITE IS LOCATED WITHIN THE "NO PUBLIC SERVICE" DESIGNATION OF THE "RURAL" PER ANNE ARUNDEL COUNTY MASTER SEWER PLAN SHEET S-7.

NOT FOR CONSTRUCTION

NO	REVISION DESCRIPTION	BY	DATE

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STATE OF MARYLAND — TERRY L. SCHUMAN — 19593 — PROFESSIONAL ENGINEER

Terry Schuman — Date
19593 — 3/31/24
License No. — Exp. Date

ANNE ARUNDEL COUNTY — 6/30/23
DEPARTMENT OF PUBLIC WORKS — 22-8449

REVISED DATE	BY	APPROVED / DATE	APPROVED / DATE	
				SCALE: 1"=30'
				DRAWN BY: LS
		CHIEF ENGINEER	PROJECT MANAGER	CHECKED BY: TS
		APPROVED / DATE	APPROVED / DATE	SHEET: C104 OF 26
				PROJECT #: P570200
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	CONTRACT #: P570205

SITE AND UTILITY PLAN

THE PRESERVE AT EISENHOWER CLUBHOUSE
TAX MAP 44, GRID 4, PARCEL 45
1574 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

DESIGN DEVELOPMENT PLANS — C104

PLOTTED: Jun 30 , 2023 - 9:30am

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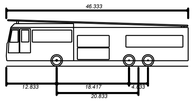
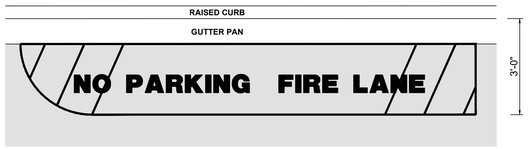


E-ONE Emergency One Ocala FL

Overall Length	*46.333ft*
Overall Width	*8.333ft*
Overall Body Height	*11.833ft*
Min Body Ground Clearance	*1.393ft*
Track Width	*8.333ft*
Lock-to-lock time	*6.00s*
Max Wheel Angle	*45.00°*

FIRE VEHICLE (TYPICAL)

SCALE: NONE



LETTER & STRIPING DIMENSIONS:

- **ALL STRIPING** - MINIMUM 6" THICK LINES
- **OUTER LINE** - 3' FROM CURB EDGE OR ROAD EDGE
- **ENDS OF DESIGNATED AREA** - CAN BE CURVED/ ROUNDED OR BOXED
- **ANGLED LINES** - 6' APART EXCEPT WHERE LETTERED GRAPHICS ARE PLACED
- **NO PARKING FIRE LANE** GRAPHIC - MINIMUM 8" HIGH, 2" CUT OUT, AT 50' INTERVALS
- **NO PARKING FIRE LANE** SIGNS - PER STANDARD DETAIL- AT EACH END OF FIRE LANE WITH ADDITIONAL SIGNS AS NEEDED AT 100 FT. SPACING

FIRE LANE LETTER & STRIPING DIMENSIONS

SCALE: NONE

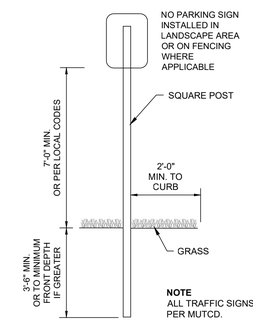
NOTE
TOTAL PROPOSED SIGNS= **6**

A.A. CO. FIRE DEPT. FIRE LANE SIGN STANDARD DETAIL

SCALE: NONE

FIRE LANE SIGN NOTES

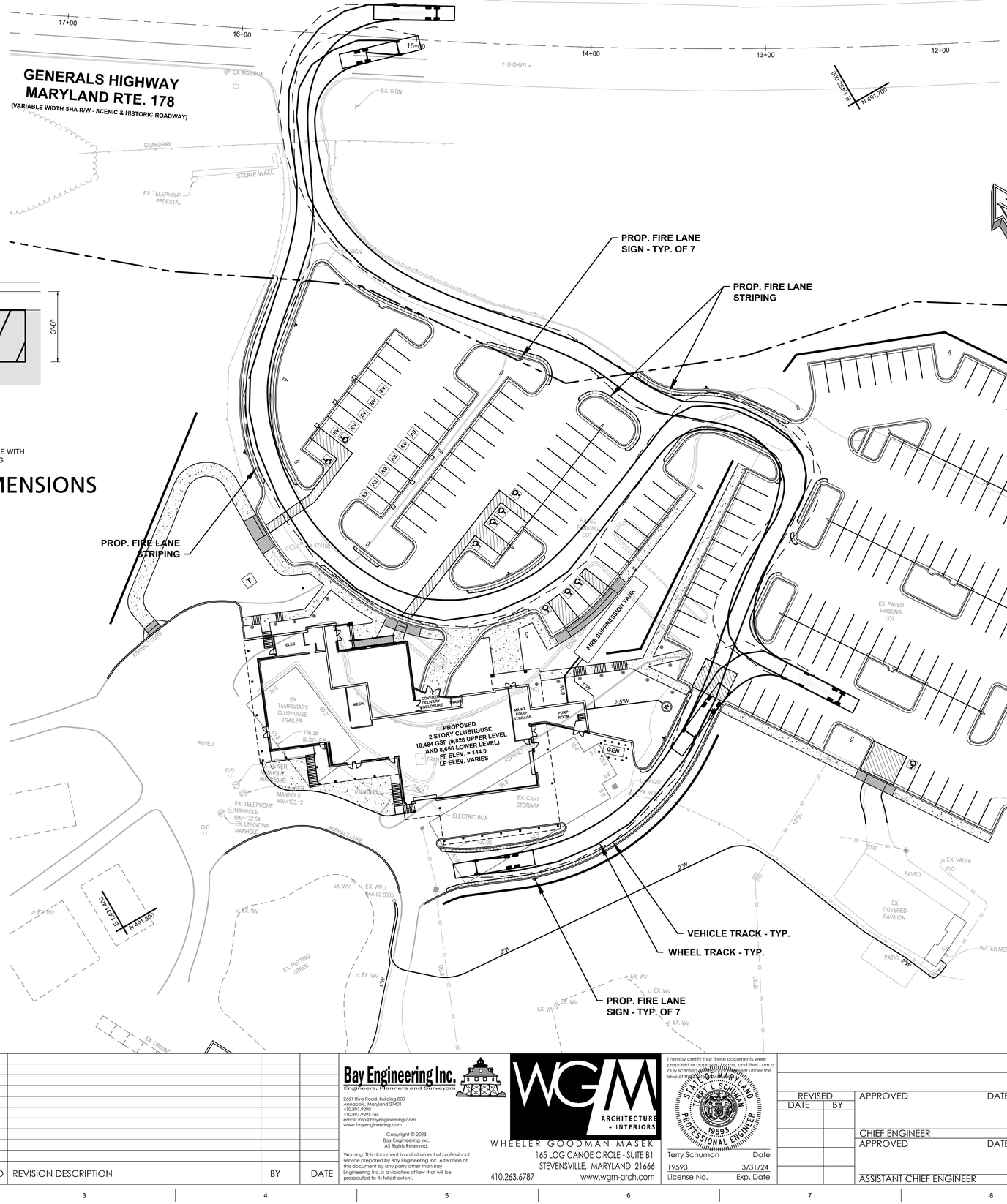
1. SIGN MATERIAL AND LETTERING SHALL BE ENGINEERING GRADE/ REFLECTIVE.
2. GRAPHICS AND BORDER SHALL BE RED ON WHITE BACKGROUND.
3. FONT SHALL BE HIGHWAY-STYLE B OR C AS INDICATED.
4. SIGN SHALL BE INSTALLED 7FT ABOVE GRADE.
5. ARROWS IN THE ENDS SHOULD POINT IN ONLY ONE DIRECTION TOWARD THE FIRE LANE. SIGNAGE WITHIN THE FIRELANE SHOULD SHOW ARROWS POINTING IN BOTH DIRECTIONS.



NOTE
ALL TRAFFIC SIGNS PER MUTCD.

TRAFFIC SIGN DETAIL

SCALE: NONE



FIRE ACCESS LANDSCAPE NOTE

SITE LANDSCAPING IS PROVIDED ON SHEET **00** WITH ALL TREES IN AND ALONG FIRE ACCESS ROUTE SHALL HAVE UPRIGHT OR VASE SHAPED CANOPIES. THESE SHADE AND STREET TREES SHALL BE MAINTAINED TO PROVIDE 14 FEET OR MORE VEHICLE HEIGHT CLEARANCE.

LEGEND

NO PARKING FIRE LANE STRIPING/ LETTERING PER DETAIL THIS SHEET

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT PLANS	C105

NO	REVISION DESCRIPTION	BY	DATE

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STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

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STATE OF MARYLAND — TERRY L. SCHUMAN — 19593 — PROFESSIONAL ENGINEER

Terry Schuman — Date
19593 — 3/31/24
License No. — Exp. Date

ANNE ARUNDEL COUNTY			6/30/23
DEPARTMENT OF PUBLIC WORKS			22-8449
REVISED DATE / BY	APPROVED DATE — CHIEF ENGINEER	APPROVED DATE — PROJECT MANAGER	SCALE: 1"=30'
			DRAWN BY: LS
	APPROVED DATE — ASSISTANT CHIEF ENGINEER	APPROVED DATE — CHIEF, RIGHT OF WAY	CHECKED BY: TS
			SHEET: C104 OF 26
			PROJECT #: P570200
			CONTRACT #: P570205

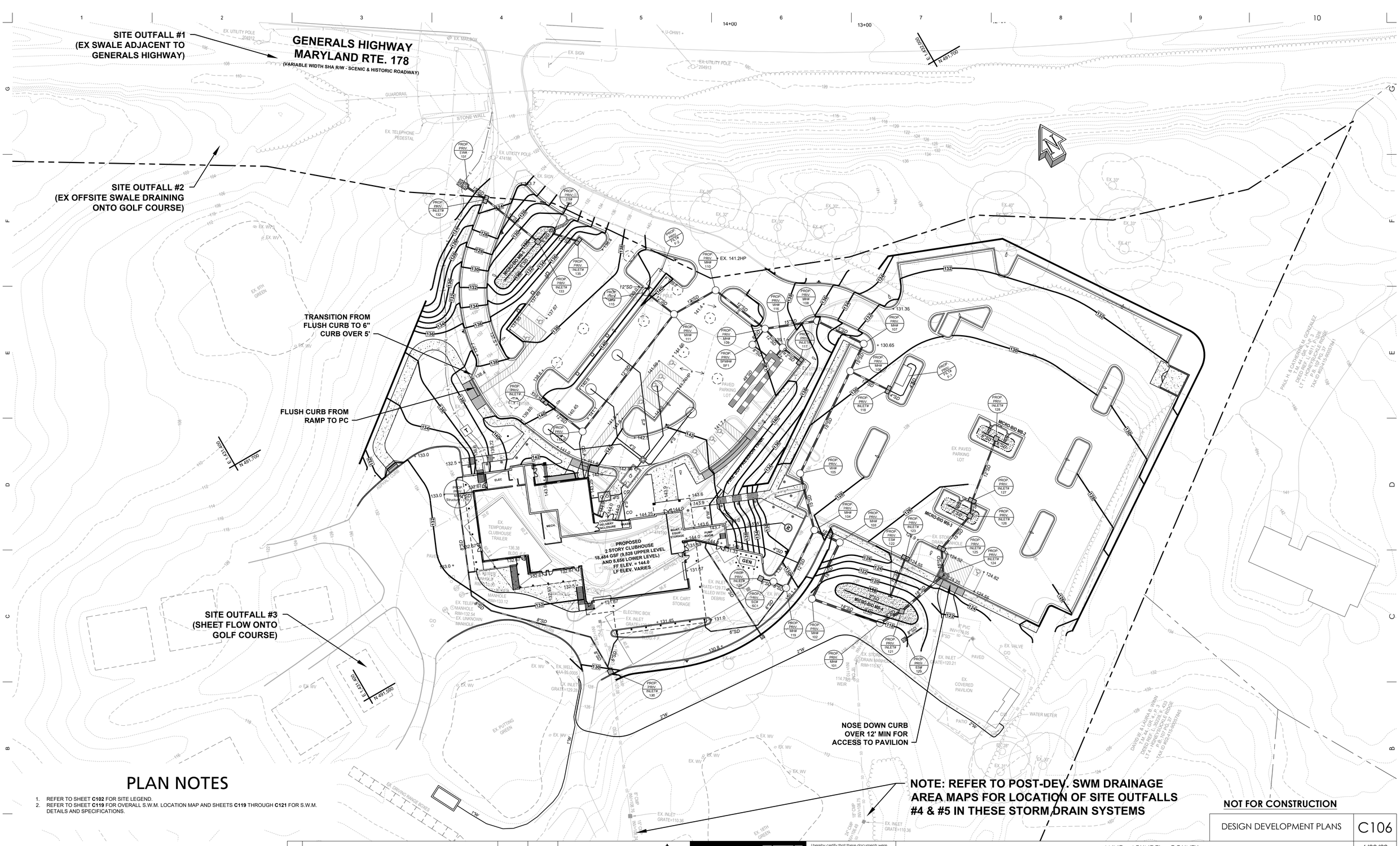
FIRE DEPARTMENT PLAN

THE PRESERVE AT EISENHOWER CLUBHOUSE

TAX MAP 44, GRID 4, PARCEL 45
1576 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

PLOTTED: Jun 30, 2023 - 9:31am

F:\22-8449 Eisenhower GC - New Clubhouse\Drawing Files\DD PLANS\22-8449 EISENHOWER-GOLF-DESIGN DEVELOPMENT PLANS.dwg



PLAN NOTES

1. REFER TO SHEET **C102** FOR SITE LEGEND.
2. REFER TO SHEET **C119** FOR OVERALL S.W.M. LOCATION MAP AND SHEETS **C119** THROUGH **C121** FOR S.W.M. DETAILS AND SPECIFICATIONS.

NOTE: REFER TO POST-DEV. SWM DRAINAGE AREA MAPS FOR LOCATION OF SITE OUTFALLS #4 & #5 IN THESE STORM DRAIN SYSTEMS

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Terry Schuman — Date
19593 — 3/31/24
License No. — Exp. Date

ANNE ARUNDEL COUNTY — 6/30/23
DEPARTMENT OF PUBLIC WORKS — 22-8449

REVISED DATE	BY	APPROVED / DATE	APPROVED / DATE	
				SCALE: 1"=30'
				DRAWN BY: LS
		CHIEF ENGINEER	PROJECT MANAGER	CHECKED BY: TS
		APPROVED / DATE	APPROVED / DATE	SHEET: C106 OF 26
				PROJECT #: P570200
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	CONTRACT #: P570205

GRADING AND STORM DRAIN PLAN

THE PRESERVE AT EISENHOWER CLUBHOUSE

TAX MAP 44, GRID 4, PARCEL 45
1574 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

DESIGN DEVELOPMENT PLANS — C106

PLOTTED: Jun 30 , 2023 - 9:31 am

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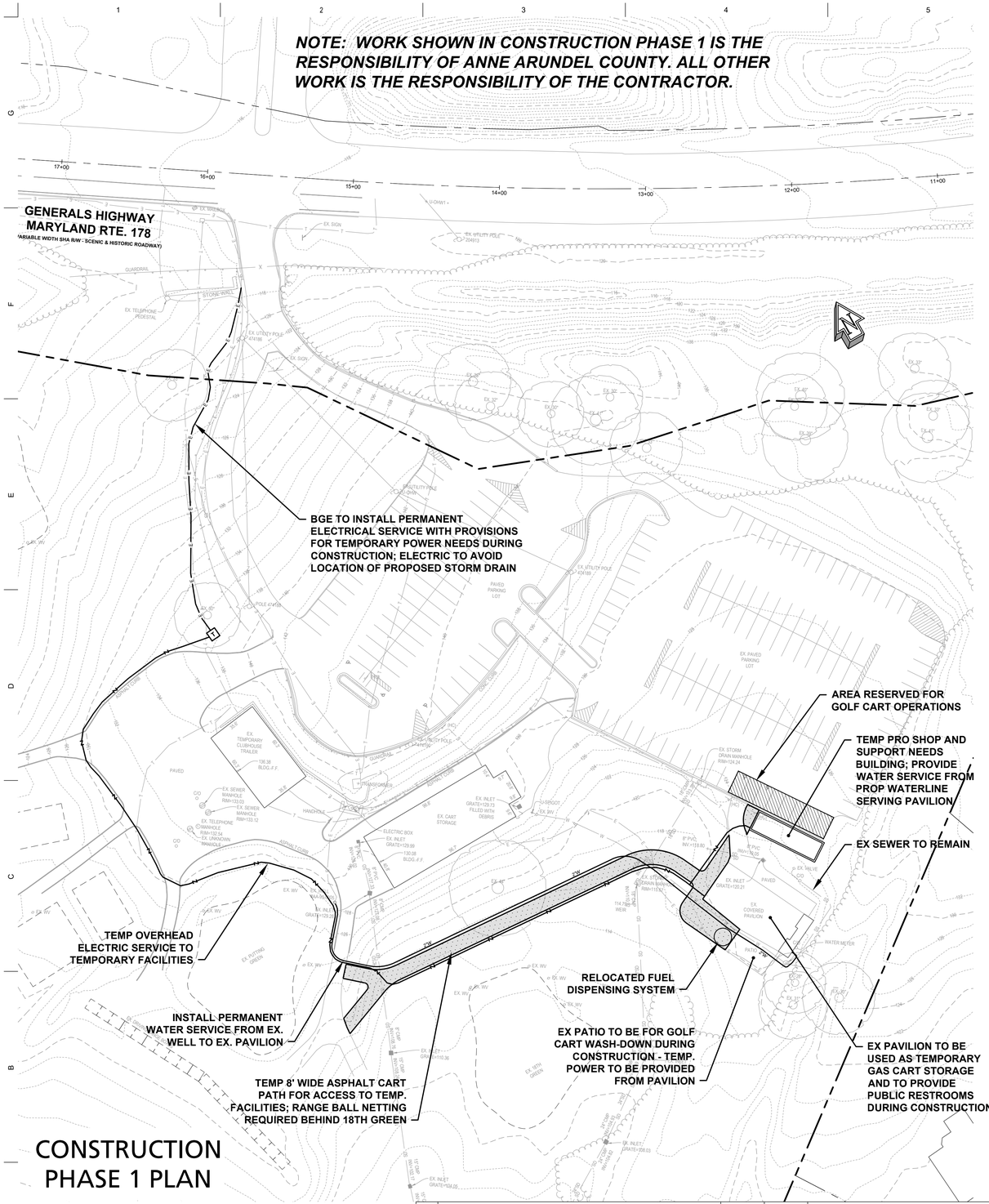
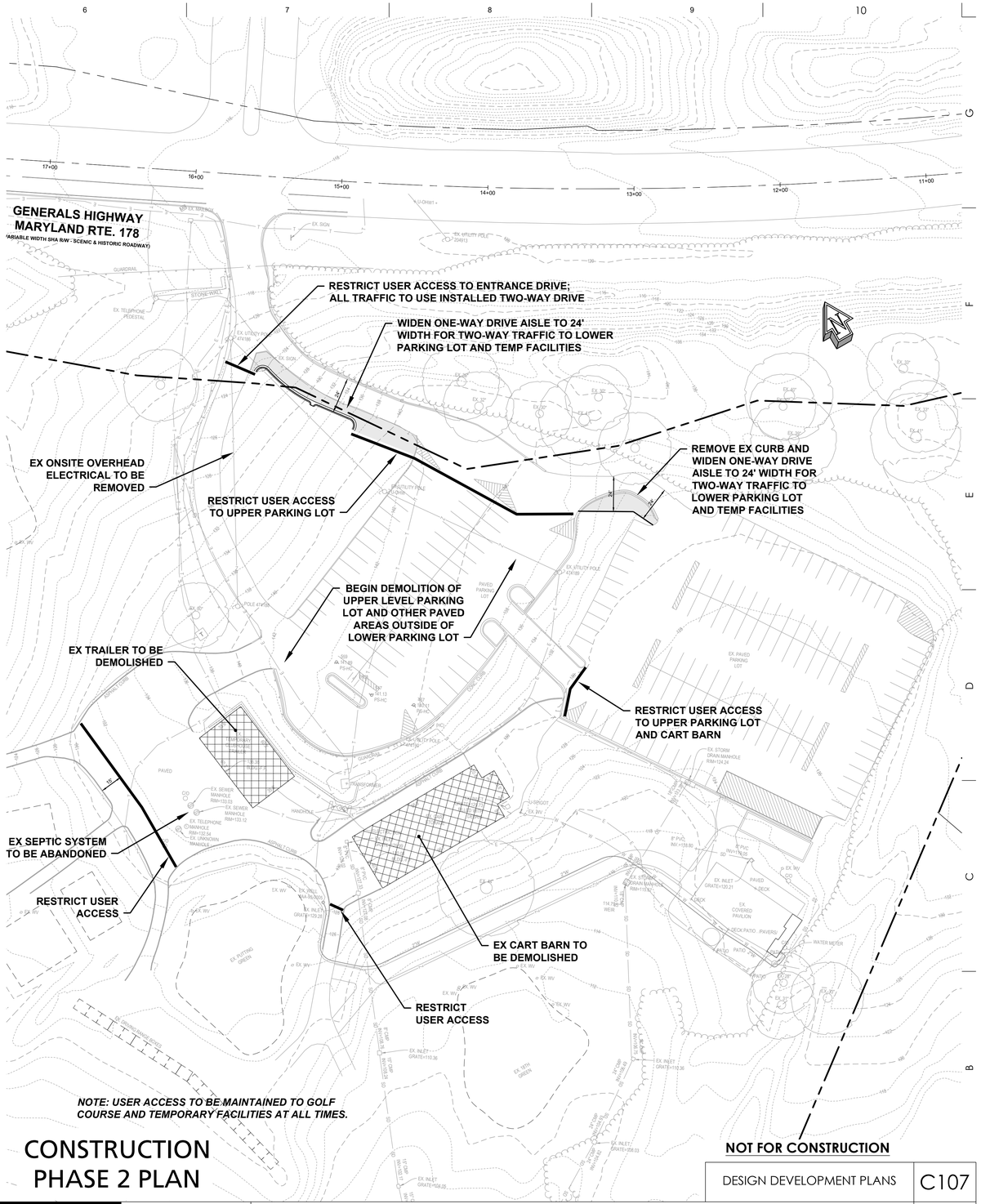
NOTE: WORK SHOWN IN CONSTRUCTION PHASE 1 IS THE RESPONSIBILITY OF ANNE ARUNDEL COUNTY. ALL OTHER WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.



CONSTRUCTION PHASE 1 PLAN



NOTE: USER ACCESS TO BE MAINTAINED TO GOLF COURSE AND TEMPORARY FACILITIES AT ALL TIMES.

CONSTRUCTION PHASE 2 PLAN

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Terry Schuman — Date
19593 — 3/31/24
License No. — Exp. Date

REVISED DATE	BY	APPROVED DATE	APPROVED DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

ANNE ARUNDEL COUNTY — 6/30/23
DEPARTMENT OF PUBLIC WORKS — 22-8449

DESIGN DEVELOPMENT PLANS — C107

SCALE: 1"=40'
DRAWN BY: LS
CHECKED BY: TS
SHEET: C107 OF 26
PROJECT #: P570200
CONTRACT #: P570205

CONSTRUCTION PHASING AND DEMOLITION PLAN

THE PRESERVE AT EISENHOWER CLUBHOUSE

TAX MAP 44, GRID 4, PARCEL 45
1576 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

PLOTTED: Jun 30, 2023 - 9:31am

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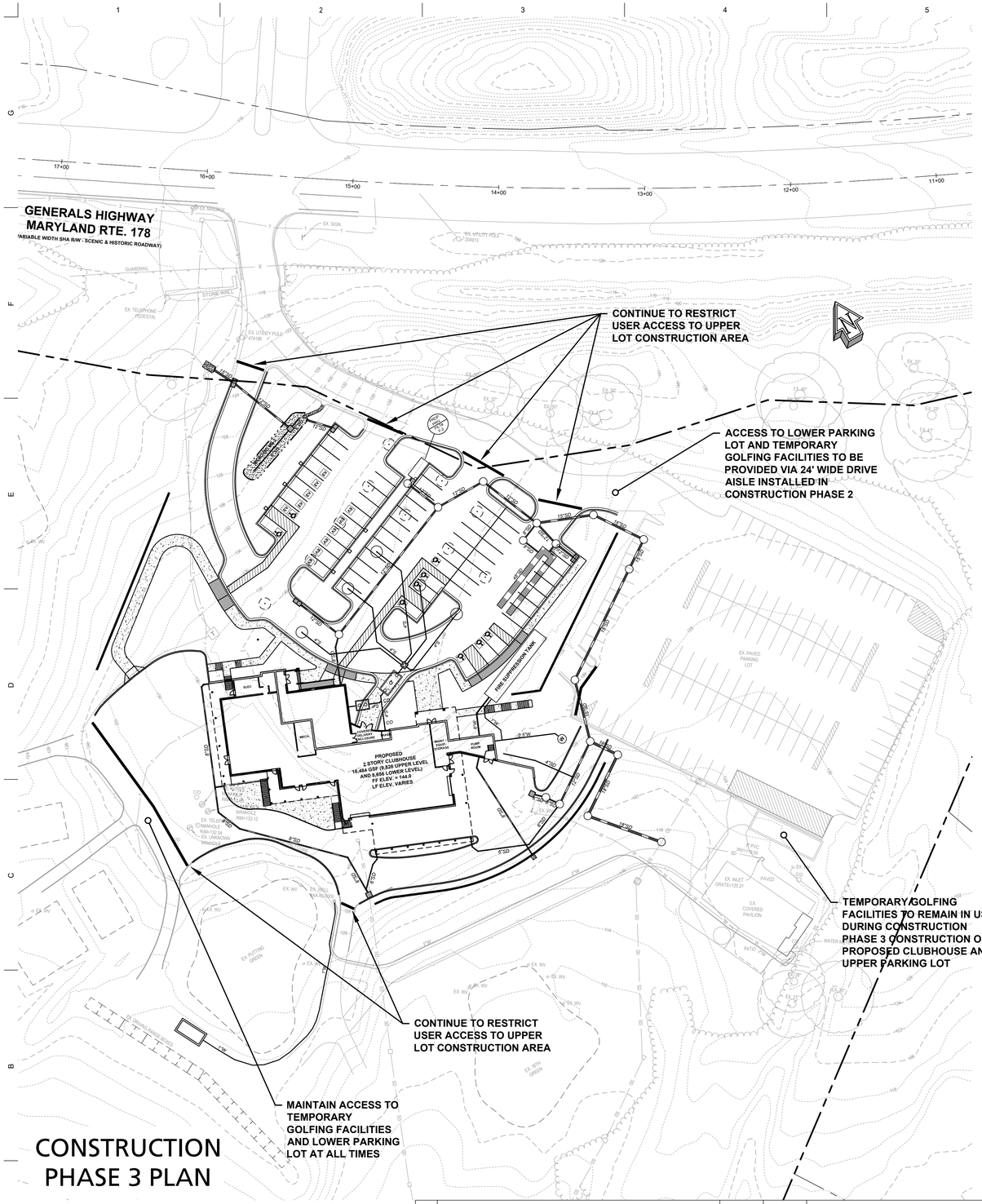
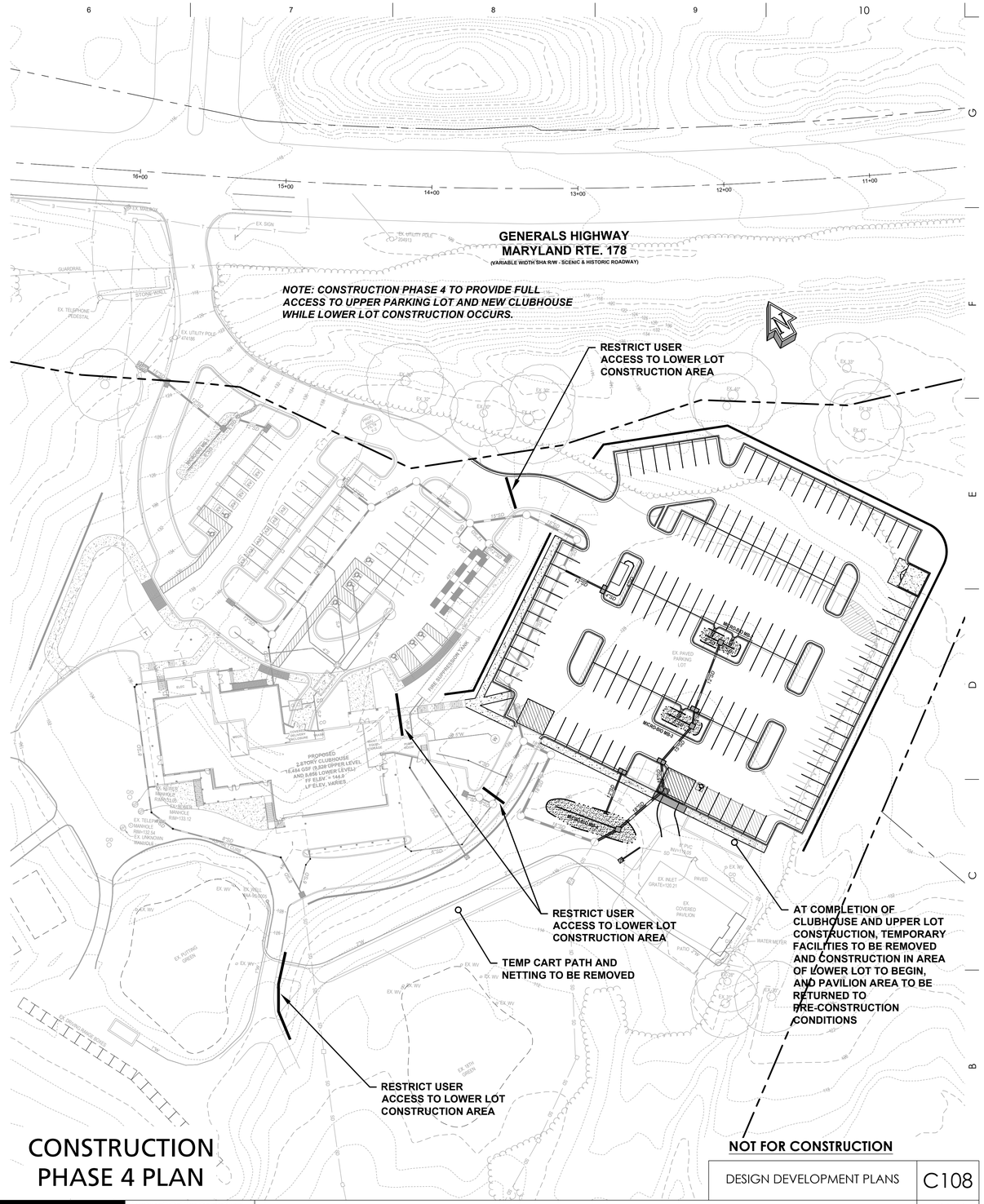


CONSTRUCTION PHASE 3 PLAN



CONSTRUCTION PHASE 4 PLAN

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STATE OF MARYLAND — TERRY L. SCHUMAN — 19593 — PROFESSIONAL ENGINEER

Terry Schuman	Date
19593	3/31/24
License No.	Exp. Date

REVISED DATE	BY

APPROVED DATE		APPROVED DATE	
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED DATE		APPROVED DATE	
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT OF WAY	

ANNE ARUNDEL COUNTY — 6/30/23
DEPARTMENT OF PUBLIC WORKS — 22-8449

SCALE: 1"=40'
DRAWN BY: LS
CHECKED BY: TS
SHEET: C108 OF 26
PROJECT #: P570200
CONTRACT #: P570205

DESIGN DEVELOPMENT PLANS — C108

CONSTRUCTION PHASING AND DEMOLITION PLAN

THE PRESERVE AT EISENHOWER CLUBHOUSE

TAX MAP 44, GRID 4, PARCEL 45
1576 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

PLOTTED: Jun 30, 2023 - 9:31am

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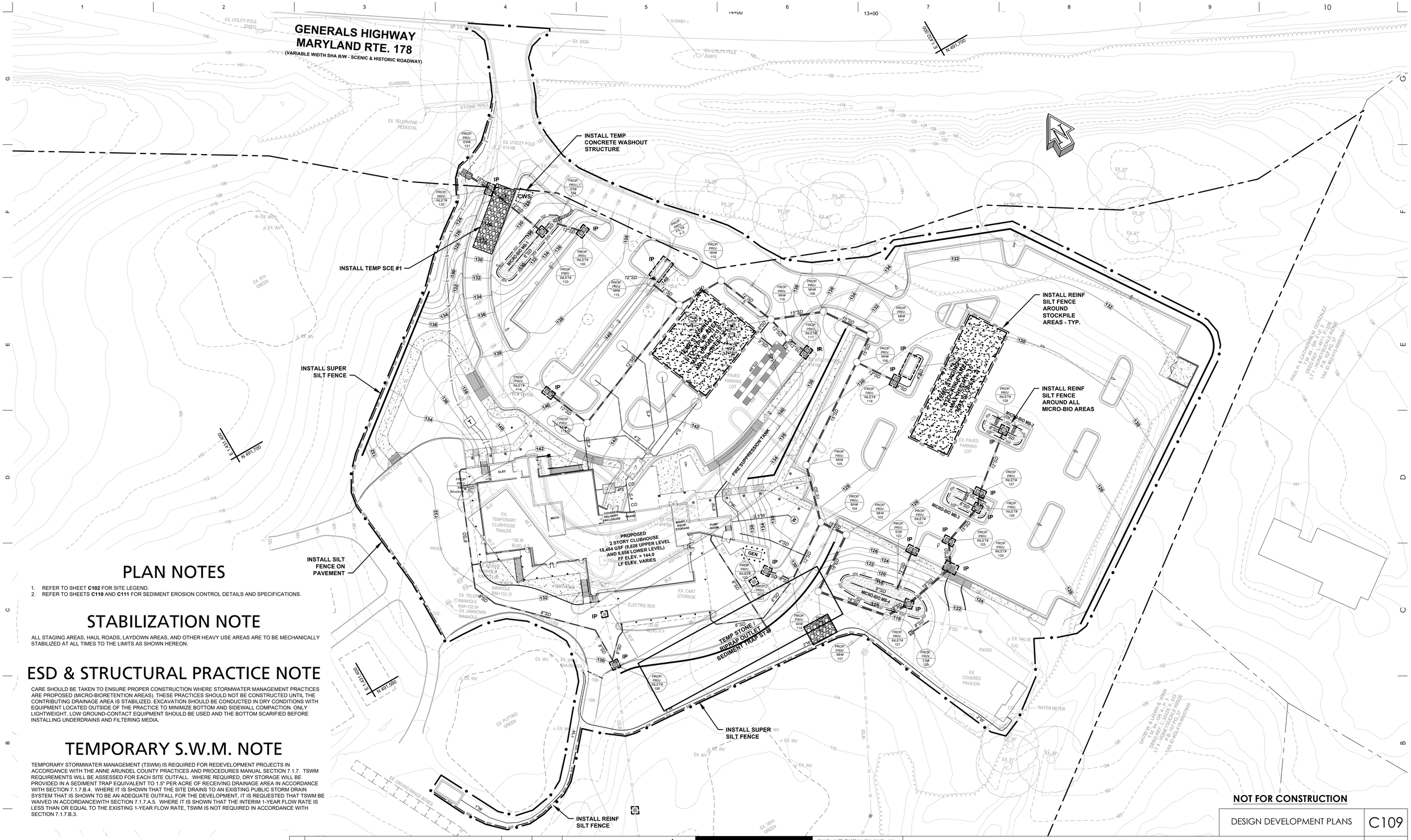

PLAN NOTES

1. REFER TO SHEET **C102** FOR SITE LEGEND.
2. REFER TO SHEETS **C110** AND **C111** FOR SEDIMENT EROSION CONTROL DETAILS AND SPECIFICATIONS.

STABILIZATION NOTE

ALL STAGING AREAS, HAUL ROADS, LAYDOWN AREAS, AND OTHER HEAVY USE AREAS ARE TO BE MECHANICALLY STABILIZED AT ALL TIMES TO THE LIMITS AS SHOWN HEREON.

ESD & STRUCTURAL PRACTICE NOTE

CARE SHOULD BE TAKEN TO ENSURE PROPER CONSTRUCTION WHERE STORMWATER MANAGEMENT PRACTICES ARE PROPOSED (MICRO-BIORETENTION AREAS). THESE PRACTICES SHOULD NOT BE CONSTRUCTED UNTIL THE CONTRIBUTING DRAINAGE AREA IS STABILIZED. EXCAVATION SHOULD BE CONDUCTED IN DRY CONDITIONS WITH EQUIPMENT LOCATED OUTSIDE OF THE PRACTICE TO MINIMIZE BOTTOM AND SIDEWALL COMPACTION. ONLY LIGHTWEIGHT, LOW GROUND-CONTACT EQUIPMENT SHOULD BE USED AND THE BOTTOM SCARIFIED BEFORE INSTALLING UNDERDRAINS AND FILTERING MEDIA.

TEMPORARY S.W.M. NOTE

TEMPORARY STORMWATER MANAGEMENT (TSWM) IS REQUIRED FOR REDEVELOPMENT PROJECTS IN ACCORDANCE WITH THE ANNE ARUNDEL COUNTY PRACTICES AND PROCEDURES MANUAL SECTION 7.1.7. TSWM REQUIREMENTS WILL BE ASSESSED FOR EACH SITE OUTFALL. WHERE REQUIRED, DRY STORAGE WILL BE PROVIDED IN A SEDIMENT TRAP EQUIVALENT TO 1.5" PER ACRE OF RECEIVING DRAINAGE AREA IN ACCORDANCE WITH SECTION 7.1.7.B.4. WHERE IT IS SHOWN THAT THE SITE DRAINS TO AN EXISTING PUBLIC STORM DRAIN SYSTEM THAT IS SHOWN TO BE AN ADEQUATE OUTFALL FOR THE DEVELOPMENT, IT IS REQUESTED THAT TSWM BE WAIVED IN ACCORDANCEWITH SECTION 7.1.7.A.5. WHERE IT IS SHOWN THAT THE INTERIM 1-YEAR FLOW RATE IS LESS THAN OR EQUAL TO THE EXISTING 1-YEAR FLOW RATE, TSWM IS NOT REQUIRED IN ACCORDANCE WITH SECTION 7.1.7.B.3.

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STATE OF MARYLAND · TERRY L. SCHUMAN · 19593 · PROFESSIONAL ENGINEER

Terry Schuman Date
19593 3/31/24
License No. Exp. Date

REVISED DATE	BY	APPROVED DATE	APPROVED DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

ANNE ARUNDEL COUNTY — 6/30/23
DEPARTMENT OF PUBLIC WORKS — 22-8449

DESIGN DEVELOPMENT PLANS — C109

SCALE: 1"=30'
DRAWN BY: LS
CHECKED BY: TS
SHEET: C109 OF 26
PROJECT #: P570200
CONTRACT #: P570205

SEDIMENT EROSION CONTROL PLAN

THE PRESERVE AT EISENHOWER CLUBHOUSE
TAX MAP 44, GRID 4, PARCEL 45
1574 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

PLOTTED: Jun 30 , 2023 - 9:31 am

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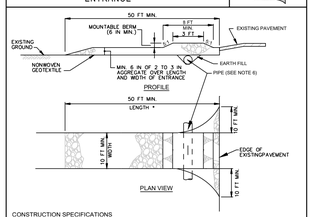
DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

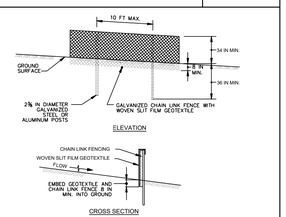
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE TO FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF



CONSTRUCTION SPECIFICATIONS

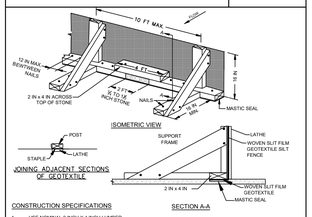
1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HOG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT APPROXIMATELY 45° TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-2 SILT FENCE ON PAVEMENT

STANDARD SYMBOL: SFOP



CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH X 4 INCH LUMBER.
2. USE WOVEN SLIT FILM GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
3. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
4. SPACE UPRIGHT SUPPORTS NO MORE THAN 10 FEET APART.
5. PROVIDE A TWO FOOT OPENING BETWEEN EVERY SET OF SUPPORTS AND PLACE STONE IN THE OPENING OVER GEOTEXTILE.
6. KEEP SILT FENCE TAUT AND SECURELY STAPLE TO THE UPSLOPE SIDE OF UPRIGHT SUPPORTS. EXTEND GEOTEXTILE UNDER 2x4.
7. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN, OVERLAP, FOLD, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL. ATTACH LATHE.
8. PROVIDE A MASTIC SEAL BETWEEN PAVEMENT, GEOTEXTILE, AND 2x4 TO PREVENT SEDIMENT-LADEN WATER FROM ESCAPING BENEATH SILT FENCE INSTALLATION.
9. SECURE BOARDS TO PAVEMENT WITH 40D 5 INCH MINIMUM LENGTH NAILS.
10. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. MAINTAIN WATER TIGHT SEAL ALONG BOTTOM. REPLACE STONE IF DISPLACED.

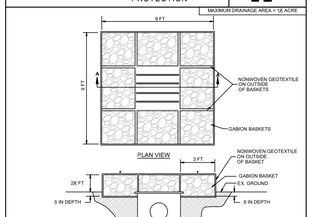
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-7 GABION INLET PROTECTION

STANDARD SYMBOL: GIP

MAXIMUM DRAINAGE AREA = ½ ACRE



CONSTRUCTION SPECIFICATIONS

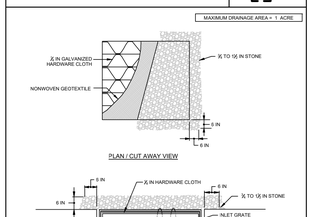
1. USE BASKETS MADE OF 11 GAUGE WIRE OR HEAVIER.
2. WRAP 3 FEET x 3 FEET GABION BASKETS (LENGTH VARIABLE) WITH NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS. OVERLAPPING AT THE TOP AND FASTEN THE GEOTEXTILE AT THE TOP OF THE BASKET WITH WIRE FASTENERS (HOG RINGS) AT A MAXIMUM OF 1 FOOT INTERVALS ALONG THE SEAM.
3. AVOID TEARING OR DAMAGING GEOTEXTILE.
4. ENTRENCH GABION BASKETS TO A DEPTH OF 6 INCHES.
5. PLACE AND INTERLOCK GABION BASKETS WITH NO GAPS.
6. FILL GABION BASKETS WITH CLEAN 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
7. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-2 AT-GRADE INLET PROTECTION

MAXIMUM DRAINAGE AREA = 1 ACRE



CONSTRUCTION SPECIFICATIONS

1. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. LET GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
3. PLACE CLEAN ¾ TO 1¼ INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
4. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

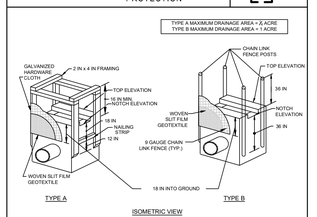
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

TYPE A MAXIMUM DRAINAGE AREA = ½ ACRE
TYPE B MAXIMUM DRAINAGE AREA = 1 ACRE



1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

CONSTRUCTION SPECIFICATIONS

1. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
3. FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN, STRETCH 2 INCH GALVANIZED HARDWARE CLOTH OVER THE OUTSIDE OF THE FRAME AND FASTEN SECURELY TO THE FRAME. FASTEN 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.

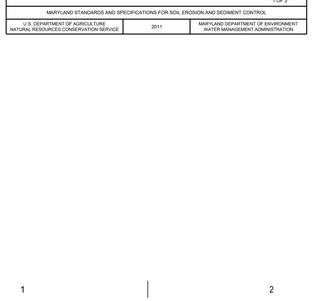
   FOR TYPE B, USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 4 FOOT LENGTH, DRIVEN 18 INCHES INTO THE GROUND AT EACH CORNER OF THE STRUCTURE. LENGTH MAY BE REDUCED TO 3 FEET WHERE 18 INCHES BELOW THE WEIR CREST IS NOT POSSIBLE. FASTEN WIRE TIES. FASTEN GEOTEXTILE SECURELY 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.
4. BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
5. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. 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.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 22A - REINFORCED SILT FENCE APPROVED BY MDE 2-7-05



Construction Specifications

1. Metal fence post shall be a minimum of 48" long driven 16" minimum into the ground. Post shall be standard T or U section weighting not less than 1.00 pound per linear foot.
2. Geotextile shall be fastened securely to each fence post with wire ties or zip ties at top and mid section and shall meet the following requirements for geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509,
Flow Rate	0.3 gal ft / minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

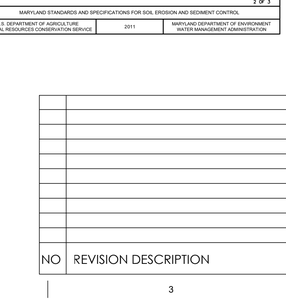
3. Where ends of geotextile fabric come together, they shall be overlapped, folded and wired tied or zip tied to prevent sediment bypass.
4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

ANNE ARUNDEL SOIL CONSERVATION DISTRICT	PAGE E-15-3B	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-6 FILTER LOG

STANDARD SYMBOL: FL-18

DESIGNATION FL-18 REFERS TO 18 INCH DIAMETER FILTER LOG



2 OF 3

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-6 FILTER LOG

STANDARD SYMBOL: FL-18

DESIGNATION FL-18 REFERS TO 18 INCH DIAMETER FILTER LOG

CONSTRUCTION SPECIFICATIONS

1. PRIOR TO INSTALLATION, CLEAR ALL OBSTRUCTIONS INCLUDING ROCKS, CLODS, AND DEBRIS GREATER THAN ONE INCH THAT MAY INTERFERE WITH PROPER FUNCTION OF FILTER LOG.
2. FILL LOG NETTING UNIFORMLY WITH COMPOST (IN ACCORDANCE WITH SECTION H-1 MATERIALS), OR OTHER APPROVED BIODEGRADABLE MATERIAL TO DESIRED LENGTH SUCH THAT LOGS DO NOT DEFORM.
3. INSTALL FILTER LOGS PERPENDICULAR TO THE FLOW DIRECTION AND PARALLEL TO THE SLOPE WITH THE BEGINNING AND END OF THE INSTALLATION POINTING SLIGHTLY UP THE SLOPE CREATING A "J" SHAPE AT EACH END TO PREVENT BYPASS.
4. FOR UNTRENCHED INSTALLATION BLOW OR HAND PLACE MULCH OR COMPOST ON UPHILL SIDE OF THE SLOPE ALONG LOG.
5. STAKE FILTER LOG EVERY 4 FEET OR CLOSER ALONG ENTIRE LENGTH OF LOG OR TRENCH LOG INTO GROUND A MINIMUM OF 4 INCHES AND STAKE LOG EVERY 8 FEET OR CLOSER.
6. USE STAKES WITH A MINIMUM NOMINAL CROSS SECTION OF 2X2 INCH AND OF SUFFICIENT LENGTH TO ATTAIN A MINIMUM OF 12 INCHES INTO THE GROUND AND 3 INCHES PROTRUDING ABOVE LOG.
7. WHEN MORE THAN ONE LOG IS NEEDED, OVERLAP ENDS 12 INCHES MINIMUM AND STAKE.
8. REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO A DEPTH OF ½ THE EXPOSED HEIGHT OF LOG AND REPLACE MULCH. REPLACE FILTER LOG IF TORN. REINSTALL FILTER LOG IF UNDERMINING OR DISLODGING OCCURS. REPLACE CLOGGED FILTER LOGS. FOR PERMANENT APPLICATIONS, ESTABLISH AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

3 OF 3

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL: CIP

MAXIMUM DRAINAGE AREA = ¾ ACRE

CONSTRUCTION SPECIFICATIONS

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

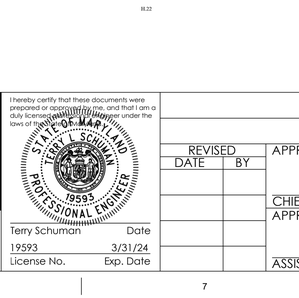
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL C-1 EARTH DIKE

STANDARD SYMBOL: A-A

PLACE PERPENDICULAR TO A FLOW FLOW CHANNEL SIDE SLOPE



DIKE TYPE

	A	B
a - DIKE HEIGHT	18 IN MIN.	30 IN MIN.
b - DIKE WIDTH	24 IN MIN.	36 IN MIN.
c - FLOW WIDTH	4 FT MIN.	5 FT MIN.
d - FLOW DEPTH	12 IN MIN.	24 IN MIN.

FLOW CHANNEL STABILIZATION

A-1 SEED WITH STRAW MULCH AND TACK. (NOT ALLOWED FOR CLEAR WATER DIVERSION.)

A-2/B-2 SEED WITH SOIL STABILIZATION MATTING OR LINE WITH SOD.

A-3/B-3 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE PRESSED INTO SOIL A MINIMUM OF 7 INCHES AND FLUSH WITH GROUND.

CONSTRUCTION SPECIFICATIONS

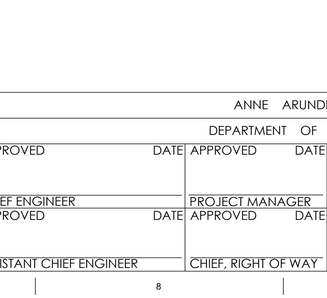
1. REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF EARTH DIKE.
2. EXCAVATE OR SHAPE EARTH DIKE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED. BANK PROJECTIONS OR OTHER IRREGULARITIES ARE NOT ALLOWED.
3. COMPACT FILL.
4. CONSTRUCT FLOW CHANNEL ON AN UNINTERRUPTED, CONTINUOUS GRADE, ADJUSTING THE LOCATION DUE TO FIELD CONDITIONS AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE.
5. PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN.
6. STABILIZE EARTH DIKE WITHIN THREE DAYS OF INSTALLATION. STABILIZE FLOW CHANNEL FOR CLEAR WATER DIVERSION WITHIN 24 HOURS OF INSTALLATION.
7. MAINTAIN LINE, GRADE, AND CROSS SECTION TO REMOVE ACCUMULATED SEDIMENT AND DEBRIS, AND MAINTAIN POSITIVE DRAINAGE. KEEP EARTH DIKE AND POINT OF DISCHARGE FREE OF EROSION, AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.
8. UPON REMOVAL OF EARTH DIKE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS OF REMOVAL STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS



CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED), EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL OF ACCUMULATION OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

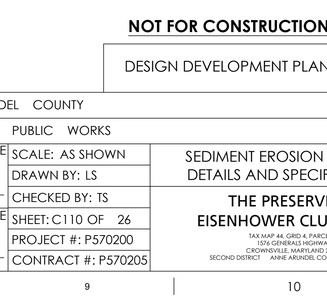
2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL D-3-1 RIPRAP INFLOW PROTECTION

STANDARD SYMBOL: RRP


COMPACTED EMBANKMENT
2" MIN.
10 FT MIN.
SIDE SLOPE OF TRAPEZOIDAL 2:1 OR FLATTER
4 FT MIN.
2 IN MIN. DEPTH OF CLASS I RIPRAP
TRAPEZOIDAL BOTTOM
ISOMETRIC VIEW
10 FT MIN.
EXIT SECTION 2% SLOPE
1 FT MIN. DEPTH

INFORMATION STATEMENT

1. OWNER / DEVELOPER :
   ANNE ARUNDEL COUNTY
   C/O REAL ESTATE MGMT
   2662 RIVA ROAD, 4TH FLOOR
   ANNAPOLIS, MARYLAND 21401

   CONSULTANT :
   BAY ENGINEERING, INC.
   2661 RIVA ROAD, BUILDING 800
   ANNAPOLIS, MARYLAND 21401
   ATTN: TERRY SCHUMAN, 410.897.9290
   tschuman@bayengineering.com

2. GENERAL DESCRIPTION OF PREDOMINATE SOIL TYPE PER TABLE SHOWN ON SHEET 102.

3. EXISTING ZONING IS **OS - OPEN SPACE** DISTRICT. THE ZONING IS TO REMAIN THE SAME.

4. TOTAL AREA OF SITE IS **191.76** ACRES ± OR **8,353,171.3** SQUARE FEET ±.
   TOTAL AREA DISTURBED IS **4.39** ACRES ± OR **191,072** SQUARE FEET ±.
   TOTAL AREA VEGETATIVELY STABILIZED IS **1.69** ACRES ± OR **73,600** SQUARE FEET ±.
   TOTAL AREA STRUCTURALLY STABILIZED IS **2.69** ACRES ± OR **117,472** SQUARE FEET ±.

5. TOTAL CUT ON SITE IS **TBD** CUBIC YARDS ±.
   TOTAL FILL ON SITE IS **TBD** CUBIC YARDS ±.
   TOTAL SPOIL TO BE REMOVED FROM THE SITE IS **TBD** CUBIC YARDS ±.
   TOTAL BORROW TO BE BROUGHT TO THE SITE IS **TBD** CUBIC YARDS ±.

   NOTE: CUT AND FILL QUANTITIES PROVIDED DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.

6. ALL UNPAVED ROAD R/W AREAS TO BE SEEDED OR SODDED. ALL OTHER DISTURBED AREAS TO BE PERMANENTLY SEEDED UNLESS OTHER METHODS (SODDING, RIP RAP, ETC.) ARE SPECIFIED ON THE PLAN.

STANDARD RESPONSIBILITY NOTES

1. I (WE) CERTIFY THAT:

   A. ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THIS SEDIMENT AND EROSION CONTROL PLAN, AND FURTHER, AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE ANNE ARUNDEL SOIL CONSERVATION (AASCD) BOARD OF SUPERVISORS OR THEIR AUTHORIZED AGENTS.

   B. ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENT'S APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

      RESPONSIBLE PERSONNEL ON SITE : TO BE DETERMINED AT PERMIT ISSUANCE

   C. IF APPLICABLE, THE APPROPRIATE ENCLOSURE WILL BE CONSTRUCTED AND MAINTAINED ON SEDIMENT BASIN(S) INCLUDED IN THIS PLAN. SUCH STRUCTURE(S) WILL BE IN COMPLIANCE WITH THE ANNE ARUNDEL COUNTY CODE.

2. THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORM WATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THE PLAN.

3. FOR INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT AND/OR TEMPORARY STABILIZATION PER THE AASCD VEGETATIVE ESTABLISHMENT SHALL BE COMPLETED WITHIN THREE CALENDAR DAYS FOR THE SURFACE OF ALL CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND SEVEN DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON PROJECT SITE.

4. THE GRADING AND SEDIMENT CONTROL APPROVAL ON THIS PLAN EXTENDS ONLY TO THOSE AREAS WITHIN THE LIMITS OF DISTURBANCE.

5. THE APPROVAL OF THIS PLAN FOR SEDIMENT AND EROSION CONTROL DOES NOT RELIEVE THE DEVELOPER/CONSULTANT FROM COMPLYING WITH FEDERAL, STATE OR COUNTY REQUIREMENTS PERTAINING TO ENVIRONMENTAL ISSUES.

6. THE DEVELOPER MUST REQUEST THAT THE SEDIMENT AND EROSION CONTROL INSPECTOR APPROVE WORK COMPLETED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN, THE GRADING OR BUILDING PERMIT, AND THE ORDINANCE.

7. ALL MATERIAL SHALL BE TAKEN TO A SITE WITH AN APPROVED SEDIMENT AND EROSION CONTROL PLAN.

8. FIRST PHASE INSPECTION AND APPROVAL OF THE SEDIMENT AND EROSION CONTROL INSPECTOR SHALL BE REQUIRED UPON COMPLETION OF THE INSTALLATION OF EROSION AND SEDIMENT CONTROLS PRIOR TO PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING, OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THE INITIAL APPROVAL BY THE SEDIMENT AND EROSION CONTROL INSPECTOR IS GIVEN. INSPECTIONS AND PERMITS MAY ALSO REQUIRE THAT AN INSPECTION AND CERTIFICATION OF THE INSTALLATION OF SEDIMENT CONTROL ALSO BE PERFORMED BY A DESIGN PROFESSIONAL PRIOR TO CONSTRUCTION COMMENCING.

9. APPROVAL FROM THE INSPECTOR MUST BE REQUESTED ON FINAL STABILIZATION OF ALL SITES PRIOR TO REMOVAL OF SEDIMENT AND EROSION CONTROLS.

10. EXISTING TOPOGRAPHY MUST BE FIELD VERIFIED BY RESPONSIBLE PERSONNEL TO THE SATISFACTION OF THE SEDIMENT CONTROL INSPECTOR PRIOR TO COMMENCING WORK.

_____ _____
SIGNATURE OF DEVELOPER / OWNER DATE

NAME: **ANNE ARNDEL COUNTY** C/O: _____
C/O REAL ESTATE MGMT TITLE: _____
ADDRESS: **2662 RIVA ROAD, 4TH FLOOR**
ANNAPOLIS, MARYLAND 21401
PHONE: _____

CONSULTANT'S CERTIFICATION

"THE DEVELOPER'S PLANS TO CONTROL SILT AND EROSION IS ADEQUATE TO CONTAIN THE SILT AND EROSION ON THE PROPERTY COVERED BY THE PLAN. I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THIS SITE, AND WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ANNE ARUNDEL SOIL CONSERVATION DISTRICT PLAN SUBMITTAL GUIDELINES AND THE CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SEDIMENT AND EROSION CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER / DEVELOPER."

SIGNATURE: _____ FIRM NAME: **BAY ENGINEERING INC.**
MARYLAND P.E. LICENSE #: **19593** **2661 RIVA ROAD, BUILDING 800**
ANNAPOLIS, MARYLAND 21401
410.897.9290
C/O TERRY SCHUMAN, P.E.

DETAILS & SPECIFICATIONS FOR VEGETATIVE ESTABLISHMENT

FOLLOWING INITIAL SOIL DISTURBANCES OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE CALENDAR DAYS FOR THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND SEVEN DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

1. PERMANENT SEEDING:

   A. SOIL TESTS: LIME AND FERTILIZER WILL BE APPLIED PER SOIL TESTS RESULTS FOR SITES GREATER THAN 5 ACRES. SOIL TESTS WILL BE DONE AT COMPLETION OF INITIAL ROUGH GRADING OR AS RECOMMENDED BY THE SEDIMENT CONTROL INSPECTOR. RATES AND ANALYSES WILL BE PROVIDED TO THE GRADING INSPECTOR AS WELL AS THE CONTRACTOR.

      OCCURRENCE OF ACID SULFATE SOILS (GRAYISH BLACK COLOR) WILL REQUIRE COVERING WITH A MINIMUM OF 12 INCHES OF CLEAN SOIL WITH 6 INCHES MINIMUM CAPPING OF TOP SOIL. NO STOCKPILING OF MATERIAL IS ALLOWED. IF NEEDED, SOIL TESTS SHOULD BE DONE BEFORE AND AFTER A 6-WEEK INCUBATION PERIOD TO ALLOW OXIDATION OF SULFATES.

      THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:

      a. SOIL pH SHALL BE BETWEEN 6.0 AND 7.0.
      b. SOLUBLE SALTS SHALL BE LESS THAN 500 PARTS PER MILLION (PPM).
      c. THE SOIL SHALL CONTAIN LESS THAN 40% CLAY BUT ENOUGH FINE GRAINED MATERIAL (> 30% SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION IS IF LOVEGRASS OR SERICEA LESPEDEZA IS TO BE PLANTED, THEN A SANDY SOIL (< 30% SILT PLUS CLAY) WOULD BE ACCEPTABLE.
      d. SOIL SHALL CONTAIN 1.5% MINIMUM ORGANIC MATTER BY WEIGHT.
      e. SOIL MUST CONTAIN SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
      f. IF THESE CONDITIONS CANNOT BE MET BY SOILS ON SITE, ADDING TOPSOIL IS REQUIRED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS FROM THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOX SOIL EROSION AND SEDIMENT CONTROL OR AMENDMENTS MADE AS RECOMMENDED BY A CERTIFIED AGRONOMIST.

   B. SEEDBED PREPARATION: AREA TO BE SEEDED SHALL BE LOOSE AND FRIABLE TO A DEPTH OF AT LEAST 3-5 INCHES. THE TOP LAYER SHALL BE LOOSENED BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING OCCURS. FOR SITES LESS THAN 5 ACRES, APPLY 100 POUNDS DOLOMITIC LIMESTONE AND 21 POUNDS OF 10-10-10 FERTILIZER PER 1,000 SQUARE FEET. HARROW OR DISK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF AT LEAST 3-5 INCHES ON SLOPES FLATTER THAN 3:1.

   C. SEEDING. APPLY 5-6 POUNDS PER 1,000 SQUARE FEET OF TALL FESCUE BETWEEN FEBRUARY 1 AND APRIL 30 OR BETWEEN AUGUST 15 AND OCTOBER 31. APPLY SEED UNIFORMLY ON A MOIST FIRM SEEDBED WITH A CYCLONE SEEDER, CULTIPACKER SEEDER OR HYDROSEEDER (SLURRY INCLUDES SEEDS AND FERTILIZER, RECOMMENDED ON STEEP SLOPES ONLY). MAXIMUM SEED DEPTH SHOULD BE ½ INCH IN CLAYEY SOILS AND ½ INCH IN SANDY SOILS WHEN USING OTHER THAN THE HYDROSEEDER METHOD. IRRIGATE WHERE NECESSARY TO SUPPORT ADEQUATE GROWTH UNTIL VEGETATION IS FIRMLY ESTABLISHED. IF OTHER SEED MIXES ARE TO BE USED, SELECT FROM TABLE B3 AND B5 OF THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

   D. MULCHING: MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING. DURING THE TIME PERIODS WHEN SEEDING IS NOT PERMITTED, MULCH SHALL BE APPLIED IMMEDIATELY AFTER GRADING. MULCH SHALL BE UNROTTED, UNCHOPPED, SMALL GRAIN STRAW APPLIED AT A RATE OF 2 TONS PER ACRE OR 90 POUNDS PER 1,000 SQUARE FEET (2 BALES). IF A MULCH-ANCHORING TOOL IS USED, APPLY 2.5 TONS PER ACRE. MULCH MATERIALS SHALL BE RELATIVELY FREE OF ALL KINDS OF WEEDS AND SHALL BE COMPLETELY FREE OF PROHIBITED NOXIOUS WEEDS. SPREAD MULCH UNIFORMLY, MECHANICALLY OR BY HAND, TO A DEPTH OF 1-2 INCHES.

   E. SECURING STRAW MULCH: STRAW MULCH SHALL BE SECURED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE MOVEMENT BY WIND OR WATER. THE FOLLOWING METHODS ARE PERMITTED:

      (i) USE A MULCH-ANCHORING TOOL WHICH IS DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE TO A MINIMUM DEPTH OF 2 INCHES. THIS IS THE MOST EFFECTIVE METHOD FOR SECURING MULCH, HOWEVER, IT IS LIMITED TO RELATIVELY FLAT AREAS WHERE EQUIPMENT CAN OPERATE SAFELY.

      (ii) WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. IF MIXED WITH WATER, USE 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

      (iii) LIQUID BINDERS MAY BE USED. APPLY AT HIGHER RATES AT THE EDGES WHERE WIND CATCHES MULCH. SUCH AS IN VALLEYS AND ON CRESTS OF SLOPES. THE REMAINDER OF THE AREA SHOULD APPEAR UNIFORM AFTER BINDER APPLICATION. BINDERS LISTED IN THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL OR APPROVED EQUAL SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURERS.

      (iv) LIGHTWEIGHT PLASTIC NETTING MAY BE USED TO SECURE MULCH. THE NETTING WILL BE STAPLED TO THE GROUND ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

2. TEMPORARY SEEDING:
   LIME: 100 POUNDS OF DOLOMITIC LIMESTONE PER 1,000 SQUARE FEET.
   FERTILIZER: 15 POUNDS OF 10-10-10 PER 1,000 SQUARE FEET.
   SEED: PERENNIAL RYE - 0.92 POUNDS PER 1,000 SQUARE FEET (FEBRUARY 1 THROUGH APRIL 30 OR AUGUST 15
   THROUGH NOVEMBER 1). MILLET - 0.92 POUNDS PER 1,000 SQUARE FEET (MAY 1 THROUGH AUGUST 15).
   MULCH: SAME AS 1 D AND E ABOVE.

3. NO FILLS MAY BE PLACED ON FROZEN GROUND. ALL FILL IS TO BE PLACED IN APPROXIMATELY HORIZONTAL LAYERS, EACH LAYER HAVING A LOOSE THICKNESS OF NOT MORE THAN 8 INCHES. ALL COMPACTION REQUIREMENTS ARE IN ACCORDANCE TO ANNE ARUNDEL COUNTY STANDARD SPECIFICATIONS FOR CONSTRUCTION AS WELL AS THE AA COUNTY DESIGN MANUAL AND STANDARD DETAILS. FILLS FOR POND EMBANKMENTS SHALL BE COMPACTED AS PER MD-378 CONSTRUCTION SPECIFICATIONS. ALL OTHER FILLS SHALL BE COMPACTED SUFFICIENTLY SO AS TO BE STABLE AND PREVENT EROSION AND SLIPPAGE.

4. PERMANENT SOD:
   INSTALLATION OF SOD SHOULD FOLLOW PERMANENT SEEDING DATES. SEEDBED PREPARATION FOR SOD SHALL BE AS NOTED IN SECTION (B) ABOVE. PERMANENT SOD IS TO BE TALL FESCUE, STATE APPROVED SOD; LIME AND FERTILIZER PER PERMANENT SEEDING SPECIFICATIONS AND LIGHTLY IRRIGATE SOIL PRIOR TO LAYING SOD. SOD IS TO BE LAID ON THE CONTOUR WITH ALL ENDS TIGHTLY ABUTTING. JOINTS ARE TO BE STAGGERED BETWEEN ROWS. WATER AND ROLL OR TAMP SOD TO INSURE POSITIVE ROOT CONTACT WITH THE SOIL. ALL SLOPES STEEPER THAN 3:1, AS SHOWN, ARE TO BE PERMANENTLY SODDED OR PROTECTED WITH AN APPROVED EROSION CONTROL NETTING. ADDITIONAL WATERING FOR ESTABLISHMENT MAY BE REQUIRED. SOD IS NOT TO BE INSTALLED ON FROZEN GROUND. SOD SHALL NOT BE TRANSPLANTED WHEN MOISTURE CONTENT (DRY OR WET) AND/OR EXTREME TEMPERATURE MAY ADVERSELY AFFECT ITS SURVIVAL. IN THE ABSENCE OF ADEQUATE RAINFALL, IRRIGATION SHOULD BE PERFORMED TO ENSURE ESTABLISHMENT OF SOD.

5. MINING OPERATIONS:
   SEDIMENT CONTROL PLANS FOR MINING OPERATIONS MUST INCLUDE THE FOLLOWING SEEDING DATES AND MIXTURES:
   FOR SEEDING DATES OF FEBRUARY 1 THROUGH APRIL 30 AND AUGUST 15 THROUGH OCTOBER 31, USE SEED MIXTURE OF TALL FESCUE AT THE RATE OF 2 POUNDS PER 1,000 SQUARE FEET AND SERICEA LESPEDEZA AT THE RATE OF 0.5 POUNDS PER 1,000 SQUARE FEET.

   TOPSOIL SHALL BE APPLIED AS PER THE STANDARD AND SPECIFICATION FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS FROM THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOX SOIL EROSION AND SEDIMENT CONTROL.

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

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

PURPOSE
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

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

CRITERIA
A. SOIL PREPARATION

1. TEMPORARY STABILIZATION

   A. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
   B. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
   C. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

2. PERMANENT STABILIZATION

   A. SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
      I. SOIL PH BETWEEN 6.0 AND 7.0.
      II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
      III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
      IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
      V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
   B. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
   C. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OTHERWISE LOOSENED TO A RIFFTH OF 3 TO 5 INCHES.
   D. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
   E. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING

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

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

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

   A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH
   B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
   C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
   D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.

5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:

   A. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1½ INCHES IN DIAMETER.
   B. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
   C. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

6. TOPSOIL APPLICATION

   A. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
   B. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
   C. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.
3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

H-1 STANDARDS AND SPECIFICATIONS FOR MATERIALS TABLE H.1: GEOTEXTILE FABRICS

TEMPORARY SEDIMENT CONTROLS ONLY

		WOVEN SLIT FILM GEOTEXTILE		WOVEN MONOFILAMENT GEOTEXTILE		NONWOVEN GEOTEXTILE	
		MINIMUM AVERAGE ROLL VALUE [1]					
PROPERTY	TEST METHOD	MD	CD	MD	CD	MD	CD
GRAB TENSILE STRENGTH	ASTM D-4632	200 LB	200 LB	370 LB	250 LB	200 LB	200 LB
GRAB TENSILE ELONGATION	ASTM D-4632	15%	10%	15%	15%	50%	50%
TRAPEZOIDAL TEAR STRENGTH	ASTM D-4533	75 LB	75 LB	100 LB	60 LB	80 LB	80 LB
PUNCTURE STRENGTH	ASTM D-6241	450 LB		900 LB		450 LB	
APPARENT OPENING SIZE [2]	ASTM D-4751	U.S. SIEVE 30 (0.59 mm)		U.S. SIEVE 70 (0.21 mm)		U.S. SIEVE 70 (0.21 mm)	
PERMITTIVITY	ASTM D-4491	0.05 PER SEC		0.28 PER SEC		1.1 PER SEC	
ULTRAVIOLET RESISTENCE RETAINED AT 500 HOURS	ASTM D-4355	70% STRENGTH		70% STRENGTH		70% STRENGTH	

[1] ALL NUMERIC VALUES EXCEPT APPARENT OPENING SIZE (AOS) REPRESENT MINIMUM AVERAGE ROLL VALUES (MARV). MARV IS CALCULATED AS THE TYPICAL MINUS TWO STANDARD DEVIATIONS. MD IS MACHINE DIRECTION; CD IS CROSS DIRECTIONS.

[2] VALUES FOR AOS REPRESENT THE AVERAGE MAXIMUM OPENING.

GEOTEXTILES MUST BE EVALUATED BY THE NATIONAL TRANSPORTATION PRODUCT EVALUATION PROGRAM (NTPEP) AND CONFORM TO THE VALUES IN TABLE H.1.

THE GEOTEXTILE MUST BE INERT TO COMMONLY ENCOUNTERED CHEMICALS AND HYDROCARBONS AND MUST BE ROT AND MILDEW RESISTANT. THE GEOTEXTILE MUST BE MANUFACTURED FROM FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS AND COMPOSED OF A MINIMUM OF 95 PERCENT BY WEIGHT OF POLYOLEFINS OR POLYESTERS, AND FORMED INTO STABLE NETWORK SO THE FILAMENTS OR YARNS RETAIN THEIR DIMENSIONAL STABILITY RELATIVE TO EACH OTHER, INCLUDING SELVAGES.

WHEN MORE THAN ONE GEOTEXTILE IS NECESSARY, OVERLAP THE SECTIONS BY AT LEAST ONE FOOT. THE GEOTEXTILE MUST BE PULLED TAUT OVER THE APPLIED SURFACE. EQUIPMENT MUST NOT RUN OVER EXPOSED FABRIC. WHEN PLACING RIPRAP ON GEOTEXTILE, DO NOT EXCEED A ONE FOOT DROP HEIGHT.

TABLE H.2: STONE SIZE

TEMPORARY SEDIMENT CONTROLS ONLY

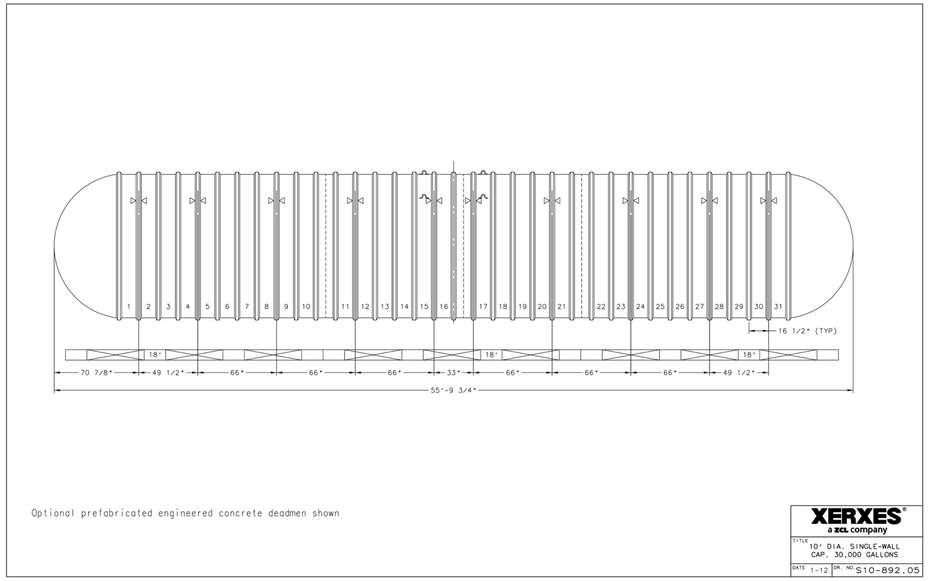
TYPE	SIZE RANGE	D_{50}	D_{50}	AASHTO	MIDSIZE WEIGHT [1]
NO. 57 [1]	3/8" - 1 1/2"	1/2"	1 1/2"	M-43	N/A
NO. 1	2" - 3"	2 1/2"	3"	M-43	N/A
RIPRAP [3] (CLASS 0)	4" - 7"	5 1/2"	7"	N/A	N/A
CLASS I	N/A	9 1/2"	15"	N/A	40 LB
CLASS II	N/A	16"	24"	N/A	200 LB
CLASS III	N/A	23"	34"	N/A	600 LB

[1] THIS CLASSIFICATION IS TO BE USED ON THE UPSTREAM FACE OF STONE OUTLETS AND CHECK DAMS.

[2] THIS CLASSIFICATION IS TO BE USED FOR GABIONS.

[3] OPTIMUM GRADATION IS FIFTY (50) PERCENT OF THE STONE ABOVE AND 50 PERCENT OF THE STONE BELOW THE MIDSIZE.

STONE MUST BE COMPOSED OF A WELL GRADED MIXTURE OF STONE SIZED SO THAT FIFTY (50) PERCENT OF THE PIECES BY WEIGHT ARE LARGER THAN THE SIZE DETERMINED BY USING THE CHARTS. A WELL GRADED MIXTURE, AS USED HEREIN, IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF LARGER STONE SIZES BUT WITH SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE SMALLER VOIDS BETWEEN THE STONES. THE DIAMETER OF THE LARGEST STONE IN SUCH MIXTURE MUST NOT EXCEED THE RESPECTIVE D_{100} SELECTED FROM TABLE H.2. THE D_{50} REFERS TO THE MEDIAN DIAMETER OF THE STONE. THIS IS THE SIZE FOR WHICH 50 PERCENT, BY WEIGHT WILL BE

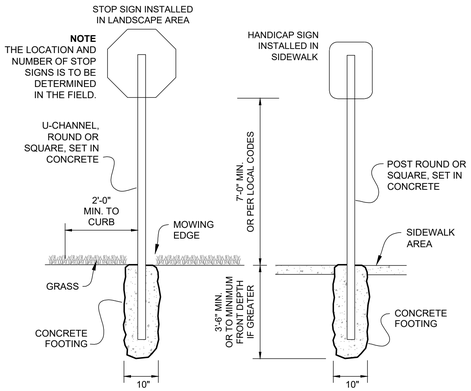


Optional prefabricated engineered concrete deadmen shown

XERXES® a zcl company

TITLE: 10' DIA, SINGLE-WALL CAP. 30,000 GALLONS

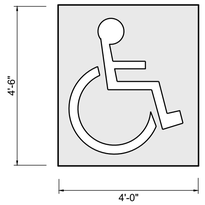
DATE: 1-12 DR. NO.: S10-892.05



TRAFFIC SIGNAGE DETAIL

SCALE: NONE

HANDICAP PARKING SYMBOL - 4" LINES PAINTED WHITE ON SAFETY BLUE BACKGROUND PER. STATE & LOCAL CODES OR FEDERAL CODES



HANDICAP SIGNAGE NOTES

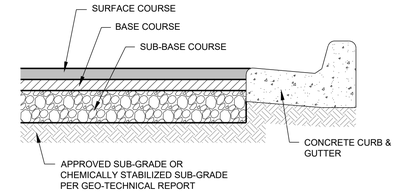
1. ALL LETTERS ARE 1" SERIES 'C'.
2. TOP PORTION TO BE REFLECTORIZED BLUE BACKGROUND WITH WHITE RE- FLECTORIZED LEGEND AND BORDER.
3. BOTTOM PORTION TO BE REFLECTORIZED WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER.
4. SIGN TO BE MTD. ON GALV. STEEL POST SET IN CONCRETE - VERIFY WITH LOCAL BUILDING OFFICIALS AS TO REQUIRED HEIGHT. IF LOCAL REQUIREMENTS DO NOT STIPULATE HEIGHT, MOUNT SIGNAGE AT BOTTOM OF "VAN ACCESSIBLE" SIGN @ 7'-0" ABOVE FINISH GRADE.

HANDICAP SIGNAGE DETAIL

SCALE: NONE

ON-SITE PAVEMENT NOTES

1. BITUMINOUS CONCRETE BAND DESIGNATIONS ARE MARYLAND STATE HIGHWAY ADMINISTRATION.
2. BITUMINOUS CONCRETE, STABILIZED AGGREGATE BASE COURSE DENSE GRADED AGGREGATE AND / OR GRAVEL SHALL BE MIXED AND PLACED IN ACCORDANCE WITH THE LATEST MDSHA SPECIFICATIONS.
3. THE CONTRACTOR SHOULD BE FAMILIAR WITH THE SITES GEO-TECHNICAL REPORT. REFER TO GENERAL NOTE #29 ON SHEET 2.
4. REFER TO SITE PLAN FOR LIMITS OF PAVEMENT TYPES.



PAVEMENT SECTION		HEAVY-DUTY	STANDARD-DUTY
LAYER	MATERIAL TYPE	THICKNESS (INCHES)	THICKNESS (INCHES)
SURFACE COURSE	HOT MIX SUPERPAVE (SURFACE-9.5MM)	2.0	1.5
BASE COURSE	HOT MIX SUPERPAVE (BASE-12.5MM OR 19.0 MM)	3.5	2.5
SUB-BASE COURSE	GRADED AGGREGATE BASE (GAB OR CR-6)	6.0	6.0

OUR PAVEMENT RECOMMENDATIONS ARE BASED ON PAVEMENTS BEING SUPPORTED ON SILTY SAND (SM) AND SILTY CLAY (CL) AS DESCRIBED ABOVE. FILL MATERIALS UNDERLYING PAVEMENTS SHOULD BE PLACED IN ACCORDANCE WITH THE CONTROLLED FILL AND PAVEMENT SUBGRADE RECOMMENDATIONS CONTAINED IN THIS REPORT. IN ADDITION, ALL PAVEMENT SUBGRADES SHOULD BE EVALUATED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE AGGREGATE BASE. IF EXCESSIVE SUBGRADE MOVEMENT IS OBSERVED, APPROPRIATE IMPROVEMENTS SUCH AS UNDERCUTTING AND/OR IN-PLACE STABILIZATION WILL BE REQUIRED AT THAT TIME.

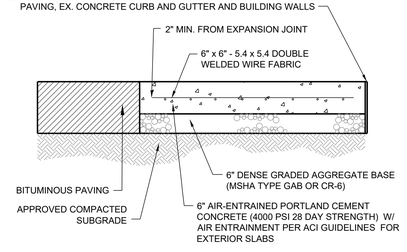
TYPICAL ON-SITE PAVEMENT DETAIL

SCALE: NONE

CONCRETE PAVEMENT NOTES

1. CONCRETE PAVEMENT SHALL BE IN ACCORDANCE WITH THE GEO-TECHNICAL REPORT. REFER TO NOTE #29 ON SHEET 2.

INSTALL PREFORMED ELASTOMERIC JOINT COMPRESSION MATERIAL AT ALL MEETINGS OF PROPOSED CONCRETE PAVING AND EX. CONCRETE PAVING, EX. CONCRETE CURB AND GUTTER AND BUILDING WALLS



CONCRETE PAVEMENT DETAIL

SCALE: NONE

NO.	DESCRIPTION
1	XERXES SINGLE WALL FRP TANK
2	XERXES PRECAST DEADMAN SYSTEM W/ HOLD DOWN STRAP AND TURNBUCKLE ASSEMBLY
3	30" MANWAY WITH BLANK COVER
4	30" MANWAY EXTENSION
5	FRP LADDER
6	4" NPT SERVICE FITTING
7	6" TANGENTIAL FULL BOTTOM DRAIN NOZZLE
8	FRP ANTI-VORTEX PLATE
9	4" VENT PIPE
10	4" FILL W/CAM LOCK CONNECTION
11	48" ROUND MANHOLE
12	16" ROUND MANHOLE

FIRE WATER

This drawing is for illustrative purposes only. Consult with an engineer for specific applications.

XERXES® a zcl company

TITLE: FIRE WATER STORAGE FULL BOTTOM DRAIN TANGENTIAL NOZZLE WITH ANTI-VORTEX PLATE

DATE: 1-14 DR. NO.: S20-305-02

FIRE SUPPRESSION TANK DETAILS

SCALE: NONE

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT PLANS | C112

ANNE ARUNDEL COUNTY | 6/30/23

DEPARTMENT OF PUBLIC WORKS | 22-8449

NO	REVISION DESCRIPTION	BY	DATE

REVISED DATE BY

APPROVED DATE — CHIEF ENGINEER

APPROVED DATE — ASSISTANT CHIEF ENGINEER

APPROVED DATE — PROJECT MANAGER

APPROVED DATE — CHIEF, RIGHT OF WAY

SCALE: AS SHOWN

DRAWN BY: LS

CHECKED BY: TS

SHEET: C112 OF 26

PROJECT #: P570200

CONTRACT #: P570205

SITE DETAILS AND SPECIFICATIONS

THE PRESERVE AT EISENHOWER CLUBHOUSE

TAX MAP 44, GRID 4, PARCEL 45
1576 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

Bay Engineering Inc.
Engineers, Planners and Surveyors
2661 Riva Road, Building 800
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410.897.9290
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WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

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.

STATE OF MARYLAND — TERRY L. SCHUMAN — 19593 — PROFESSIONAL ENGINEER

Terry Schuman — Date 3/31/24

19593 — License No. — Exp. Date

PLOTTED: Jun 30, 2023 - 9:39am

F:\22-8449 Eisenhower GC - New Clubhouse\Drawing Files\DD PLANS\22-8449 EISENHOWER-GOLF-DESIGN DEVELOPMENT PLANS.dwg

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PEDESTRIAN FACILITY NOTES

GENERAL NOTES

G-1. Anne Arundel county is recognized as a Title II public entity under the Americans with Disabilities Act (ADA) of 1990 (pub.l. no 101-336). A Title II entity is defined as any state or local government entity and prohibits discrimination on the basis of disability. The ADA extends the principles of Section 504 of the Rehabilitation Act of 1973, as amended, to protect persons with disabilities in all public facilities and programs irrespective of the funding source.

G-2. These sheets are in accordance with the 2010 revision of the Americans with Disabilities Act (ADA), with select modifications made in accordance with the 2011 Proposed Accessibility Guidelines for Pedestrian Facilities in The Public Right of Way (PROWAG) and published federal guidance memos.

G-3. The dimensions shown in the details as minimums and maximums are the limits for design and field layout. The contractor shall be responsible for field verifying all elevations and dimensions to ensure that the final layout of pedestrian facilities meets ADA requirements.

G-4. Pedestrian access routes (PAR) shall be firm, stable, and slip resistant. Provide slip resistant texture on sidewalks and curb ramps by brooming with a fine bristle broom transverse to the slope of the ramp and/or perpendicular to pedestrian travel. Extend texture the full width and length of the curb ramp including side flares. Do not score or make grooves in sloped surfaces.

G-5. Vertical surface discontinuities shall be 0.5 inches maximum. Vertical discontinuities between 0.25 inches and 0.5 inches shall be beveled with a slope not steeper than 50 percent (1:1). The bevel shall be applied across the entire vertical surface discontinuity.

G-6. Horizontal openings in gratings and joints shall not permit passage of a sphere more than 0.5 inches in diameter. Elongated openings in grates shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

G-7. Provide expansion joint material 0.5 inches thick where curb ramp adjoins any rigid pavement, sidewalk, or structure with the top of joint material flush with adjacent concrete surface.

G-8. Install ¼" tooled joints where curb ramps, turning spaces, flares, and sidewalks abut. All joints and transitions shall be flush. Grade breaks shall be straight, flush, and perpendicular to the direction of travel.

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PEDESTRIAN FACILITIES NOTES
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GENERAL NOTES – CONT.

G-9. Construct top / bottom of curb to be flush with adjacent surfaces (curb ramps, sidewalks, and flares). Vertical lips are not permitted at the bottom of curb ramps where the ramp meets street level.

G-10. The counter slope of the gutter adjacent to curb ramps or landing/turning spaces, should not exceed 5.0%. *However*, in no case shall the algebraic difference between the depressed curb slope and gutter/road counter slope exceed 13.3%.

a. Where the slope difference exceeds limits due to existing roadway profile, a minimum 5-foot level transition space shall be constructed at the detectable warning system to allow transition of differing slopes. See PED. FAC. STD. DETAIL PF-24.

G-11. Protruding and Post-Mounted Objects within the pedestrian circulation path shall comply with PROWAG Section R402.

a. Objects with leading edges more than 27" and not more than 80" above the finish surface shall protrude 4" maximum horizontally into pedestrian circulation paths.

b. Where objects are mounted on free-standing posts or pylons and the objects are 27" minimum and 80" maximum above the finish surface, the objects shall overhang pedestrian circulation paths 4" maximum measured horizontally from the post or pylon base. The base dimension shall be 2.5" thick (height) minimum.

c. Where objects are mounted between posts or pylons and the clear distance between the posts or pylons is greater than 1.0 ft, the lowest edge of the object shall be 27" maximum or 80" minimum above the finish surface.

SIDEWALKS

S-1. Sidewalk, and curb and gutter construction shall be in accordance with AACo standards except as revised herein.

S-2. Sidewalk shall have a minimum width of 5.0 ft, exclusive of the width of curb.

a. On alterations, minimum sidewalk width shall be 5.0 feet preferred, but may be reconstructed at 4.0 feet minimum where existing sidewalk width was 4.0 ft or less. Sidewalk widths may be constructed less than 4.0 feet only with county approval, but in no case shall widths of less than 3.0 feet be allowed.

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PEDESTRIAN FACILITIES NOTES
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SIDEWALKS – CONT.

b. On alterations, where sidewalk width must be reduced to less than 5.0 feet, passing zones shall be provided at intervals of 200 ft maximum. Passing zones shall be 5.0 ft minimum by 5.0 ft minimum. See PED. FAC. STD. DETAIL PF-26.

S-3. Any signs posts, utility poles, fire hydrants, traffic signals, street furniture, and other objects shall not reduce the clear width to less than 4.0 ft.

a. On alterations, the minimum clear width shall not be reduced to less than 3.0 ft.

S-4. The clear width of pedestrian access routes (PAR) within medians and pedestrian refuge islands shall be 5.0 ft minimum.

a. On alterations, the minimum clear width may be reduced where physical constraints are present, but in no case shall clear width be reduced to less than 3.0 ft.

S-5. Sidewalk cross slope design of 1.5% is recommended but shall not exceed 2.0%.

a. A construction tolerance of +1% is allowed on the pedestrian access route (2% design +1% construction tolerance).

S-6. Transition panels are required at the limits of a pedestrian improvement where a proposed pedestrian element is connecting to existing facilities which are not being altered and do not meet current standards. Transition panels allow for variations in width and/or cross slope to be blended across a brief distance.

a. Transition panels are not appropriate if proposed for use between required features that are being constructed within the localized limits of an isolated pedestrian improvement or proposed facility.

b. Transition panels are required to connect sidewalks to turning spaces/landing areas with cross slopes that exceed 2.0% as allowed when connecting to pedestrian street level connections.

c. The running slope of a transition slab shall be 5.0% or flatter unless matching the parallel roadway or existing sidewalk running slope.

d. The recommended length of PAR transition panels connecting a new section of PAR to an existing PAR should be equal to the width of the newly constructed sidewalk to allow for changes in width or cross slope (see below) but shall be no less than 5'.

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SIDEWALKS – CONT.

e. For cross slope transitions, the recommended transition rate is 1.0% per foot (not to exceed 3.0% per foot) to address the absolute algebraic grade difference between the cross slopes of the PAR surfaces. For example, if the existing PAR cross slope is 8.0% away from the street, then the recommended transition length is 10 feet to change to a cross slope of 2.0% toward the street at the connection to the new PAR (8.0%/1%) but shall be no less than 3.33 feet (3'-4") (8.00%/3%).

CURB RAMPS

C-1. Ramp (runs)

a. The clear width of curb ramp runs (excluding any flared sides) on New Construction shall be 5.0 ft min.

b. On Alterations, the minimum ramp clear width shall be 5.0 feet preferred but may be constructed at 4.0 feet minimum where the existing sidewalk width was 4.0 ft or less. Ramp widths may be constructed less than 4.0 feet only with County approval, but in no case shall widths of less than 3.0 feet be allowed.

c. Curb Ramps constructed along the continuing route of Shared Use Paths (SUP) shall be full width of the path.

d. For new construction and alterations, construct curb ramp and flare slopes with the flattest slope feasible. The maximum slope allowable is indicated herein along with the PED. FAC. STD. DETAILS. Slopes that exceed those indicated in the curb ramp Standard Details or construction plans will not be accepted and shall be removed and reconstructed.

e. Running slopes of curb ramps shall be 1:12 max, 8.3% preferred. Therefore, running slopes that exceed 8.3% as measured with a smart level will then be evaluated independent of the surrounding terrain and checked for minimum ramp length solely dependent on 1:12 of curb height. For Example, running slope is initially checked with a smart level, and if measured 8.3% or less, running slope passes. If measured greater than 8.3%, ramp length will then be compared at 1:12 to height of curb. Therefore, a 6-inch curb shall have a minimum 6-foot Ramp length (6 inches x12=72 inches).

f. Ramp running lengths shall be 24 inches min.

g. Where no curb is present, ramp slopes shall be 8.3% max. but shall not require the ramp length to exceed 15.0 ft to avoid chasing the slope indefinitely when connecting to steep grades.

h. Compound slopes in the path of travel should be avoided.

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PEDESTRIAN FACILITIES NOTES
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CURB RAMPS – CONT.

i. Grade breaks at the top and bottom of curb ramps should be perpendicular to the direction of the curb ramp run.

j. Cross slope on ramps is generally identified as the slope perpendicular to the direction of travel. The cross slope on ramps is recommended to be designed at 1.5% typical but shall not exceed 2.0%.

i. A construction tolerance of +1% is allowed (2.0% max design +1% construction tolerance).

k. Grade edge of road elevations at the flow line to ensure positive drainage and prevent ponding.

l. Curb ramps, excluding flared sides, shall be placed within the width of marked crosswalks.

m. Blunt curb ends that pose a hazard to snowplows shall be avoided. Leading ends of blunt curb, median and island noses, and the downstream side of curb ramp openings shall be tapered at 7: ft minimum. See PED. FAC. STD. DETAIL PF-17 – Tapered Nose detail for use with retaining curbs.

C-2. Landings/Turning Spaces

a. A level landing (design slope 2% or less in any direction) shall be provided at the top of perpendicular ramps or where a change in travel direction is required. The landing length/width should be ≥ the width of the connecting PAR and shall be ≥ the width of the ramp.

b. On New Construction, Landings/Turning Spaces shall be 5.0 FT x 5.0 FT minimum.

c. On Alterations, Landings/Turning Spaces shall be 5.0 FT x 5.0 FT preferred, but not less than 3.0 FT x 3.0 FT where severe physical constraints are present.

d. Cross slope on landings is generally identified as the slope perpendicular to the direction of travel from the perspective of the connecting sidewalk. The cross slope on landings/turning spaces is recommended to be designed at 1.5% typical but shall not exceed 2.0%.

i. A construction tolerance of +2% is allowed on the pedestrian access route (2.0% max design +3% construction tolerance).

e. Where Landings/Turning Spaces are 4 feet or less from a roadway that exceeds 2%, the Landing/Turning Space slope measured parallel to the roadway may be ≤ to the roadway profile slope measured at the ramp transition to the roadway.

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CURB RAMPS – CONT.

f. The slope of the depressed curb adjacent to Landings/Turning Spaces shall not exceed 12.5%.

g. For level turning spaces behind curb, ensure a minimum 1.5% grade toward road to provide positive drainage. Grade edge of road elevations at the flow line to ensure positive drainage and prevent ponding.

C-3. Side Flares and Tapered Curbs

a. Side flare/taper lengths are variable and based on curb height and the sidewalk slope.

b. Where flares are bordered by sidewalk, but the required landing is present at the top of the ramp, Flares are required to be **1:10 Max.** based on curb height/10% Preferred measured along the tapered curb.

c. Where the flares are bordered by sidewalk and the required landing is not present due to space limitations on alterations, or where travel across the flare is necessitated by the location of public facilities (mailboxes, pedestrian signal buttons, etc.), Flares are required to be **1:12 Max.** based on curb height/8.3% Preferred measured along the tapered curb.

d. Flares/Tapers will initially be checked with a smart level, and if measured percent of slope meets the preferred slope for the situation, the flare/taper passes. If the flare/taper measures higher than the preferred slope percent, flare/taper length will then be compared at the required ratio of either 1:10 or 1:12 relative to height of curb. For example, a 6-inch curb height with flares bordered by sidewalk will have either a slope of 10% or less, or a taper length of at least 5 feet (6 in. X 10 = 60 in.) when the required landing is present, OR a slope of 8.3% or less, or a taper length of at least 6 feet (6 in. X 12 = 72 in.) when the required landing is not present.

e. Where flares are bordered by non-walkable surfaces or furniture zones, the minimum flare/tapered curb length shall be 2 feet min.

f. Vertical walls or return/retaining curbs are permitted when adjacent to non-walkable areas or elevation differences cannot be accommodated by curb ramp flares or grading.

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DETECTABLE WARNING SURFACES

D-1. Detectable warning surfaces (DWS)

a. Detectable warning surfaces (DWS) complying with PED. FAC. STD. DETAIL 18 shall be provided on pedestrian access routes where curb ramps, blended transitions, or turning spaces provide a flush pedestrian connection to the street and the pedestrian access route (PAR) crosses a named street, named alley, traffic island, median, railroad, or any marked crossing. Detectable warning surface must be provided at the junction between the PAR and commercial driveways that are stop or yield controlled or are controlled by a signal. Detectable warning surfaces (DWS) will not be installed at residential driveways or unnamed streets/alleys.

b. Detectable warning surfaces are not required at pedestrian refuge islands that are cut through at street level and are less than 6.0 ft in length in the direction of pedestrian travel.

c. Not needed where PAR ends mid-block and access is given to road/shoulder if there is no crossing.

d. Detectable warning surfaces shall contrast visually with adjacent gutter, street or highway, or pedestrian access route surface, either light-on-dark or dark-on-light.

e. On Perpendicular curb ramps, detectable warning surfaces shall be placed as follows:

i. Where the ends of the bottom grade break are in front of the back of curb, detectable warning surfaces shall be placed at the back of curb.

ii. Where the ends of the bottom grade break are behind the back of curb and the distance from either end of the bottom grade break to the back of curb is 5.0 ft or less, detectable warning surfaces shall be placed on the ramp run within one dome spacing of the bottom grade break.

iii. Where the ends of the bottom grade break are behind the back of curb and the distance from either end of the bottom grade break to the back of curb is more than 5.0 ft, detectable warning surfaces shall be placed at the back of curb.

f. On Parallel curb ramps, detectable warning surfaces shall be placed on the landing/turning space at the back of curb.

g. On Blended Transitions, raised pedestrian street crossings, depressed corners, or other level pedestrian street crossings, detectable warning surfaces shall be placed at the back of curb.

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DETECTABLE WARNING SURFACES – CONT.

h. At cut-through pedestrian refuge islands, detectable warning surfaces shall be placed at the edges of the pedestrian island and shall be separated by a 2.0 ft minimum length of surface without detectable warnings.

i. At pedestrian at-grade rail crossings not located within a street or highway, detectable warning surfaces shall be placed on each side of the rail crossing. The edge of the detectable warning surface nearest the rail crossing shall be 6.0 ft minimum and 15.0 ft maximum from the centerline of the nearest rail. Where pedestrian gates are provided, detectable warning surfaces shall be placed on the side of the gates opposite the rail.

j. At boarding platforms for buses and rail vehicles, detectable warning surfaces shall be placed at the boarding edge of the platform.

k. At boarding and alighting areas at sidewalk or street level transit stops for rail vehicles, detectable warning surfaces shall be placed at the side of the boarding and alighting area facing the rail vehicles.

ACCESSIBLE PEDESTRIAN SIGNALS (APS) AND PEDESTRIAN PUSHBUTTONS

APS-1. For New and Alteration projects, pedestrian signal push buttons shall be installed or upgraded in compliance with the current edition of the manual on uniform traffic control devices (MUTCD) and located within a horizontal reach of 0" to 10" from a level landing/turning space and shall be within 18" to 48" above the sidewalk surface (42" preferred).

APS-2. When the pedestrian signal pushbutton is located such that is requires a separate level clear space, requirements for installation shall meet PROWAG R404 Clear Spaces.

a. Surfaces of clear spaces shall comply with R302.7 and shall have a running slope consistent with the grade of the adjacent pedestrian access route and cross slope of 2 percent maximum.

b. Clear spaces shall be 30 in. (2.5 ft) minimum by 48 in. (4.0 ft) minimum.

c. Unless otherwise specified, clear spaces shall be permitted to include knee and toe clearance complying with R405.

d. Unless otherwise specified, clear spaces shall be positioned for either forward or parallel approach to an element.

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PEDESTRIAN FACILITIES NOTES
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ACCESSIBLE PEDESTRIAN SIGNALS (APS) AND PEDESTRIAN PUSHBUTTONS – CONT.

e. One full unobstructed side of a clear space shall adjoin a pedestrian access route or adjoin another clear space.

f. Where a clear space is confined on all or part of three sides, additional maneuvering space shall be provided as follows:

g. Forward Approach. The clear space and additional maneuvering space shall be 36 in. (3.0 ft) wide minimum where the depth exceeds 24 in. (2.0 ft).

h. Parallel Approach. The clear space and additional maneuvering space shall be 60 in. (5.0 ft) wide minimum where the depth exceeds 15 in. (1.25 ft).

APS-3. Provide access to existing pedestrian pushbuttons to the maximum extent practicable. Install pedestrian stub poles, where applicable, so as not to create pedestrian obstructions. Refer to the MUTCD for further guidance.

ALTERATIONS TO EXISTING FACILITIES

ALT-1. Exception: In alteration work, if compliance is technically infeasible, the alteration shall provide accessibility to the maximum extent practicable. Any elements or features of the building or facility that is being altered and can be made accessible shall be made accessible within the scope of the alteration.

ALT-2. Technical Infeasibility: means, with respect to a building or a facility, that it has little likelihood of being accomplished because existing structural conditions would require removing or altering a load bearing member which is an essential part of the structural frame; or because other existing physical or site constraints prohibit.

ALT-3. In alterations where existing physical constraints prevent compliance to provide a curb ramp for each (marked) pedestrian crossing, a single diagonal curb ramp shall be permitted to serve both pedestrian street crossings.

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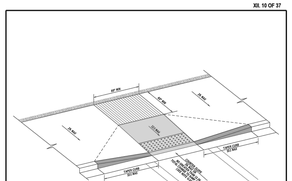
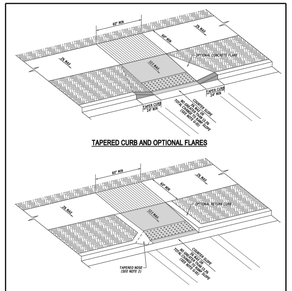


PERPENDICULAR CURB RAMP
NO BUFFER



TAPERED CURB AND OPTIONAL FLARES

RETURNED CURBS

NOTES:
1. *TO BE USED ON SIDEWALKS WITH SIGNIFICANT SEPARATION FROM THE ROADWAY WHERE THE GEOMETRIC SPECIFICS IN THE DETAILS ABOVE CAN BE SATISFIED. THIS STANDARD MAY BE MODIFIED TO SUIT A PARTICULAR LOCATION.*
2. *BLUNT CURB ENDS THAT POSE A HAZARD TO SNOW PLOWS SHALL BE AVOIDED. WHEN RETAINING CURBS ARE USED, THE DOWNSTREAM SIDE OF THE CURB RAMP OPENING SHALL BE TAPERED AT 2:1 MINIMUM. SEE PED. FAC. STD. DETAIL PF-17 - TAPERED NOSE.*

LEGEND
- LANDING/TURNING SPACE (SEE NOTE NUMBER 1)
- RAMP SURFACE (SEE NOTE NUMBER 1)
- TAPERED CURB (SEE NOTE NUMBER 2)
- DETECTABLE WARNING SURFACE (SEE NOTE NUMBER 3)

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TAPERED CURB AND OPTIONAL FLARES

RETURNED CURBS

NOTES:
1. *TO BE USED ON SIDEWALKS WITH SIGNIFICANT SEPARATION FROM THE ROADWAY WHERE THE GEOMETRIC SPECIFICS IN THE DETAILS ABOVE CAN BE SATISFIED. THIS STANDARD MAY BE MODIFIED TO SUIT A PARTICULAR LOCATION.*
2. *BLUNT CURB ENDS THAT POSE A HAZARD TO SNOW PLOWS SHALL BE AVOIDED. WHEN RETAINING CURBS ARE USED, THE DOWNSTREAM SIDE OF THE CURB RAMP OPENING SHALL BE TAPERED AT 2:1 MINIMUM. SEE PED. FAC. STD. DETAIL PF-17 - TAPERED NOSE.*

LEGEND
- LANDING/TURNING SPACE (SEE NOTE NUMBER 1)
- RAMP SURFACE (SEE NOTE NUMBER 1)
- TAPERED CURB (SEE NOTE NUMBER 2)
- DETECTABLE WARNING SURFACE (SEE NOTE NUMBER 3)

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED CHIEF ENGINEER DATE / DESIGN ENGINEER	STANDARD PEDESTRIAN FACILITY DETAILS CURB RAMPS PERPENDICULAR WITH BUFFER	REVISED	PF 3

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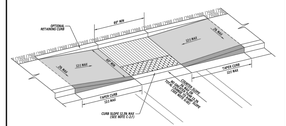

PARALLEL CURB RAMP
NO BUFFER

NOTES:
1. *TO BE USED WHERE SIDEWALK IS ADJACENT TO THE CURB. THIS STANDARD MAY BE MODIFIED TO SUIT A PARTICULAR LOCATION.*

LEGEND
- LANDING/TURNING SPACE (SEE NOTE NUMBER 1)
- RAMP SURFACE (SEE NOTE NUMBER 1)
- TAPERED CURB (SEE NOTE NUMBER 2)
- DETECTABLE WARNING SURFACE (SEE NOTE NUMBER 3)

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED CHIEF ENGINEER DATE / DESIGN ENGINEER	STANDARD PEDESTRIAN FACILITY DETAILS CURB RAMPS PARALLEL NO BUFFER	REVISED	PF 4

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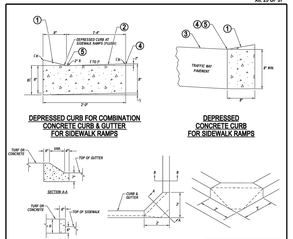
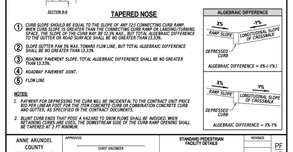


DEPRESSED CURB FOR COMBINATION CONCRETE CURB & GUTTER FOR SIDEWALK RAMPS

DEPRESSED CONCRETE CURB FOR SIDEWALK RAMPS



TAPERED NOSE

1. *CURB SLOPE SHOULD BE EQUAL TO THE SLOPE OF ANY CU CONNECTING CURB RAMP WHILE THE SLOPE OF THE CURB RAMP SHALL BE PERPENDICULAR TO THE ROADWAY.*
2. *SLOPE GUTTER PAN TO MAX. TOWARD FLOW LINE, BUT TOTAL ALGEBRAIC DIFFERENCE SHALL BE NO GREATER THAN 13.3%*
3. *ROADWAY PAVEMENT SLOPE. TOTAL ALGEBRAIC DIFFERENCE SHALL BE NO GREATER THAN 13.3%.*
4. *ROADWAY PAVEMENT JOINT.*
5. *FLOW LINE*

NOTES:
1. *PAYMENT FOR DEPRESSING THE CURB WILL BE INCIDENTAL TO THE CONTRACT UNIT PRICE PER LINE-M FOR THE TYPE OF CONCRETE CURB & GUTTER OR COMBINATION CONCRETE CURB AND GUTTER, AS SPECIFIED IN THE CONTRACT DOCUMENTS.*
2. *BLUNT CURB ENDS THAT POSE A HAZARD TO SNOW PLOWS SHALL BE AVOIDED. WHEN RETAINING CURBS ARE USED, THE DOWNSTREAM SIDE OF THE CURB RAMP OPENING SHALL BE TAPERED AT 2:1 MINIMUM.*

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED CHIEF ENGINEER DATE / DESIGN ENGINEER	STANDARD PEDESTRIAN FACILITY DETAILS DEPRESSED CURB	REVISED	PF 17

Published: Revised: 5/9/2022

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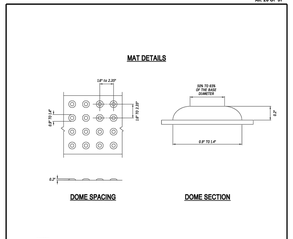
MAT DETAILS



DOME SPACING **DOME SECTION**

NOTES:
1. *DETECTABLE WARNING SURFACES ARE REQUIRED AT RAMED STREET CROSSINGS, INCLUDING SIGNALIZED ALLEYS, AND SIGNALIZED INTERSECTIONS.*
2. *DETECTABLE WARNING SURFACES SHALL EXTEND 2.0 KEYE MINIMUM IN THE DIRECTION OF PEDESTRIAN TRAVEL. FOR CURB RAMPS, THE DETECTABLE WARNING SURFACE SHALL EXTEND THE FULL WIDTH OF THE RAMP RUN, FROM THE BACK OF CURB, WHERE THE BACK OF CURB EXISTS TO TOUCH TO PROVIDE A RADIUS, THE DWS SHOULD BE CUT TO FIT THE RADIUS. THE DWS SHOULD NOT BE MORE THAN 2 IN. FROM THE EDGE OF CONCRETE, WHERE THE BACK OF CURB DOES NOT EXIST, THE DWS SHOULD BE WITHIN 2" OF THE BACK OF CURB AT ITS CLOSEST. THESE DIMENSIONS REQUIRE CAREFUL PLANNING ON THE PART OF THE CONTRACTOR TO ENSURE THE DWS CAN BE PLACED PROPERLY. NO SLOPE CHANGES, PLUMBING OR THE LIKE SHALL BE PLACED WITHIN THE LIMITS OF THE DETECTABLE WARNING SURFACE.*
3. *WHEN DETECTABLE WARNINGS ARE PLACED ON A SLOPE GREATER THAN 5%, DOMES SHALL BE ALIGNED WITH THE CENTERLINE OF THE RAMP; OTHERWISE DOMES ARE NOT REQUIRED TO BE ALIGNED.*

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED CHIEF ENGINEER DATE / DESIGN ENGINEER	STANDARD PEDESTRIAN FACILITY DETAILS DETECTABLE WARNINGS MAT DETAILS	REVISED	PF 18

Published: Revised: 5/9/2022

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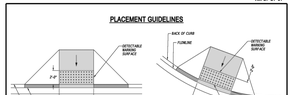
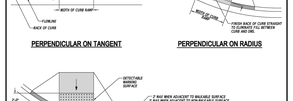
PLACEMENT GUIDELINES



PERPENDICULAR ON TANGENT **PERPENDICULAR ON RADIUS**



PERPENDICULAR DIRECTIONAL ON RADIUS

NOTES:
1. *DETECTABLE WARNING SURFACES ARE REQUIRED AT RAMED STREET CROSSINGS, INCLUDING SIGNALIZED ALLEYS, AND SIGNALIZED INTERSECTIONS.*
2. *PERPENDICULAR RAMPS - WHERE BOTH ENDS OF THE GRADE BREAK AT THE BOTTOM OF A RAMP RUN ARE LOCATED WITHIN THE BACK OF CURB, THE DWS SHALL BE LOCATED AT THE BOTTOM OF THE RAMP RUN WITH THE EDGE OF THE DWS CLOSEST TO THE GRADE BREAK AT THE BOTTOM OF THE RAMP AND THE BACK OF CURB TO SEPARATE FROM 2 FT. ON EITHER SIDE OF THE RAMP. THE DWS SHALL BE PLACED AT THE BACK OF CURB.*
3. *THE DWS SHOULD SPAN THE WIDTH OF THE CURB RAMP. THE EDGE OF THE DWS SHOULD NOT BE MORE THAN 2 IN. FROM THE EDGE OF CONCRETE, WHERE THE BACK OF CURB DOES NOT EXIST, THE DWS SHOULD NOT BE MORE THAN 2 IN. FROM THE EDGE OF CONCRETE. THESE DIMENSIONS REQUIRE CAREFUL PLANNING ON THE PART OF THE CONTRACTOR TO ENSURE THE DWS CAN BE PLACED PROPERLY. NO SLOPE CHANGES AND PRESSURE ON AFTER THEY ARE REMOVED WHILE THE CONCRETE IS STILL PLASTIC.*

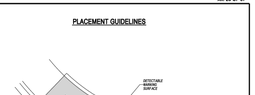
LEGEND
- LANDING/TURNING SPACE (SEE NOTE NUMBER 1)
- RAMP SURFACE (SEE NOTE NUMBER 1)
- TAPERED CURB (SEE NOTE NUMBER 2)
- DETECTABLE WARNING SURFACE (SEE NOTE NUMBER 3)

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED CHIEF ENGINEER DATE / DESIGN ENGINEER	STANDARD PEDESTRIAN FACILITY DETAILS DETECTABLE WARNINGS PERPENDICULAR RAMPS	REVISED	PF 19

Published: Revised: 5/9/2022

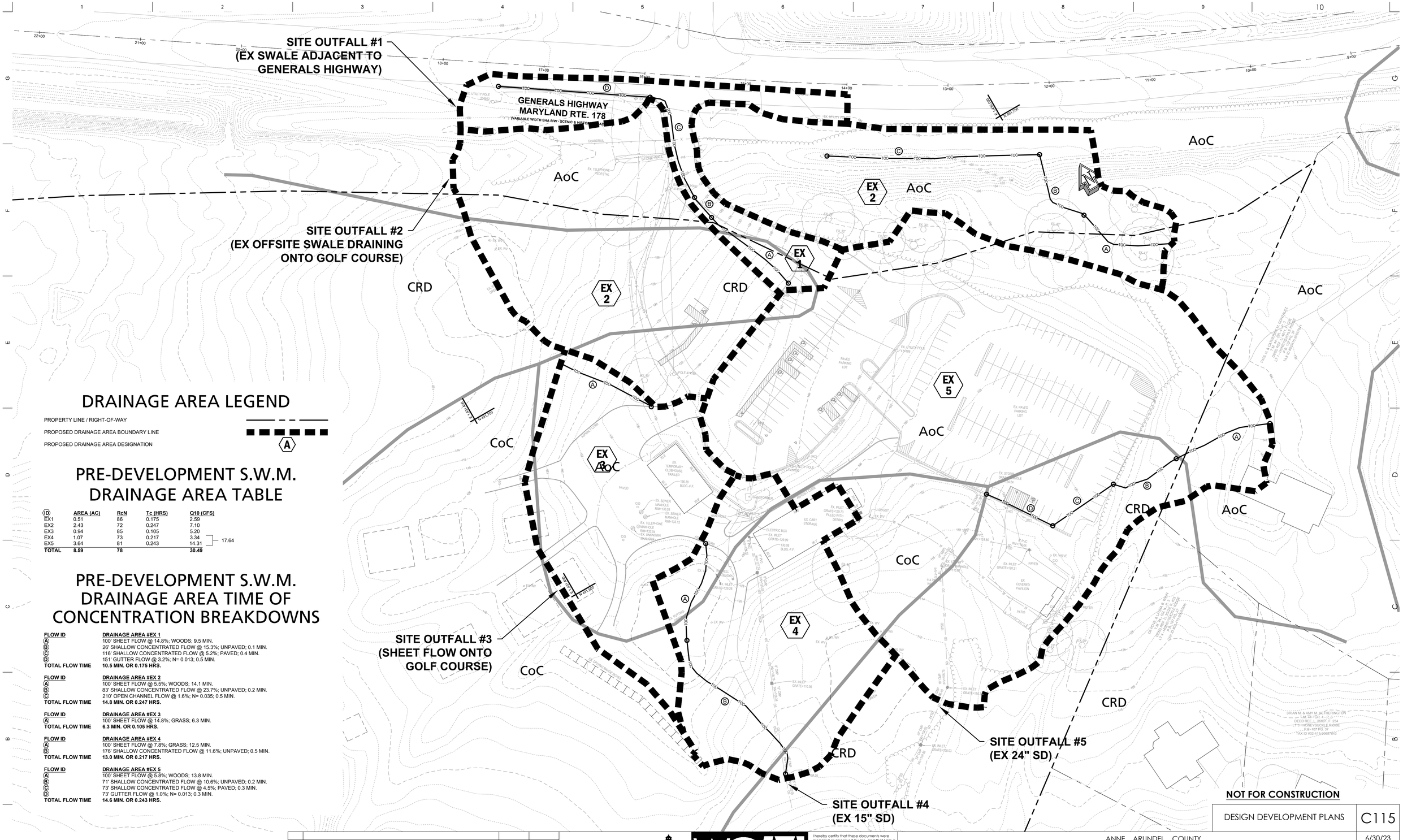
XL 28 OF 37

PLACEMENT GUIDELINES



PARALLEL

NOTES:
1. *DETECTABLE WARNING SURFACES ARE REQUIRED AT RAMED STREET CROSSINGS, INCLUDING SIGNALIZED ALLEYS, AND SIGNALIZED INTERSECTIONS.*
2. *PARALLEL RAMPS - THE DWS SHALL BE LOCATED ON THE LANDING AT THE BOTTOM OF THE RAMP, ADJACENT TO THE BACK OF CURB. THE DWS SHALL BE WITHIN 2" OF THE BACK OF CURB AT ITS CLOSEST.*
3. *THE DWS SHOULD SPAN THE WIDTH OF THE CURB RAMP. THE EDGE OF THE DWS SHALL NOT BE MORE THAN 2 IN. FROM THE EDGE OF CONCRETE, WHERE THE BACK OF CURB DOES NOT EXIST, THE DWS SHOULD NOT BE MORE THAN 2 IN. FROM THE EDGE OF CONCRETE. THESE DIMENSIONS REQUIRE CAREFUL PLANNING ON THE PART OF THE CONTRACTOR T



DRAINAGE AREA LEGEND

PROPERTY LINE / RIGHT-OF-WAY

PROPOSED DRAINAGE AREA BOUNDARY LINE

PROPOSED DRAINAGE AREA DESIGNATION (A)

PRE-DEVELOPMENT S.W.M. DRAINAGE AREA TABLE

ID	AREA (AC)	RcN	Tc (HRS)	Q10 (CFS)	
EX1	0.51	86	0.175	2.59	
EX2	2.43	72	0.247	7.10	
EX3	0.94	85	0.105	5.20	
EX4	1.07	73	0.217	3.34	17.64
EX5	3.64	81	0.243	14.31	
TOTAL	**8.59**	**78**		**30.49**	

PRE-DEVELOPMENT S.W.M. DRAINAGE AREA TIME OF CONCENTRATION BREAKDOWNS

FLOW ID	DRAINAGE AREA #EX 1
A	100' SHEET FLOW @ 14.8%; WOODS; 9.5 MIN.
B	26' SHALLOW CONCENTRATED FLOW @ 15.3%; UNPAVED; 0.1 MIN.
C	116' SHALLOW CONCENTRATED FLOW @ 5.2%; PAVED; 0.4 MIN.
D	151' GUTTER FLOW @ 3.2%; N= 0.013; 0.5 MIN.
TOTAL FLOW TIME	**10.5 MIN. OR 0.175 HRS.**

FLOW ID	DRAINAGE AREA #EX 2
A	100' SHEET FLOW @ 5.5%; WOODS; 14.1 MIN.
B	83' SHALLOW CONCENTRATED FLOW @ 23.7%; UNPAVED; 0.2 MIN.
C	210' OPEN CHANNEL FLOW @ 1.6%; N= 0.035; 0.5 MIN.
TOTAL FLOW TIME	**14.8 MIN. OR 0.247 HRS.**

FLOW ID	DRAINAGE AREA #EX 3
A	100' SHEET FLOW @ 14.8%; GRASS; 6.3 MIN.
TOTAL FLOW TIME	**6.3 MIN. OR 0.105 HRS.**

FLOW ID	DRAINAGE AREA #EX 4
A	100' SHEET FLOW @ 7.8%; GRASS; 12.5 MIN.
B	176' SHALLOW CONCENTRATED FLOW @ 11.6%; UNPAVED; 0.5 MIN.
TOTAL FLOW TIME	**13.0 MIN. OR 0.217 HRS.**

FLOW ID	DRAINAGE AREA #EX 5
A	100' SHEET FLOW @ 5.8%; WOODS; 13.8 MIN.
B	71' SHALLOW CONCENTRATED FLOW @ 10.6%; UNPAVED; 0.2 MIN.
C	73' SHALLOW CONCENTRATED FLOW @ 4.5%; PAVED; 0.3 MIN.
D	73' GUTTER FLOW @ 1.0%; N= 0.013; 0.3 MIN.
TOTAL FLOW TIME	**14.6 MIN. OR 0.243 HRS.**

NO	REVISION DESCRIPTION	BY	DATE

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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.

STATE OF MARYLAND — TERRY L. SCHUMAN — 19593 — PROFESSIONAL ENGINEER

Terry Schuman — Date 3/31/24

19593 — License No. — Exp. Date

REVISED DATE	BY

APPROVED DATE _____ CHIEF ENGINEER

APPROVED DATE _____ PROJECT MANAGER

APPROVED DATE _____ ASSISTANT CHIEF ENGINEER

APPROVED DATE _____ CHIEF, RIGHT OF WAY

ANNE ARUNDEL COUNTY — 6/30/23

DEPARTMENT OF PUBLIC WORKS — 22-8449

SCALE: 1"=40'
DRAWN BY: LS
CHECKED BY: TS
SHEET: C115 OF 26
PROJECT #: P570200
CONTRACT #: P570205

DESIGN DEVELOPMENT PLANS — C115

PRE-DEVELOPMENT S.W.M. DRAINAGE AREA PLAN

THE PRESERVE AT EISENHOWER CLUBHOUSE

TAX MAP 44, GRID 4, PARCEL 45
1574 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

PLOTTED: Jun 30 , 2023 - 9:32am

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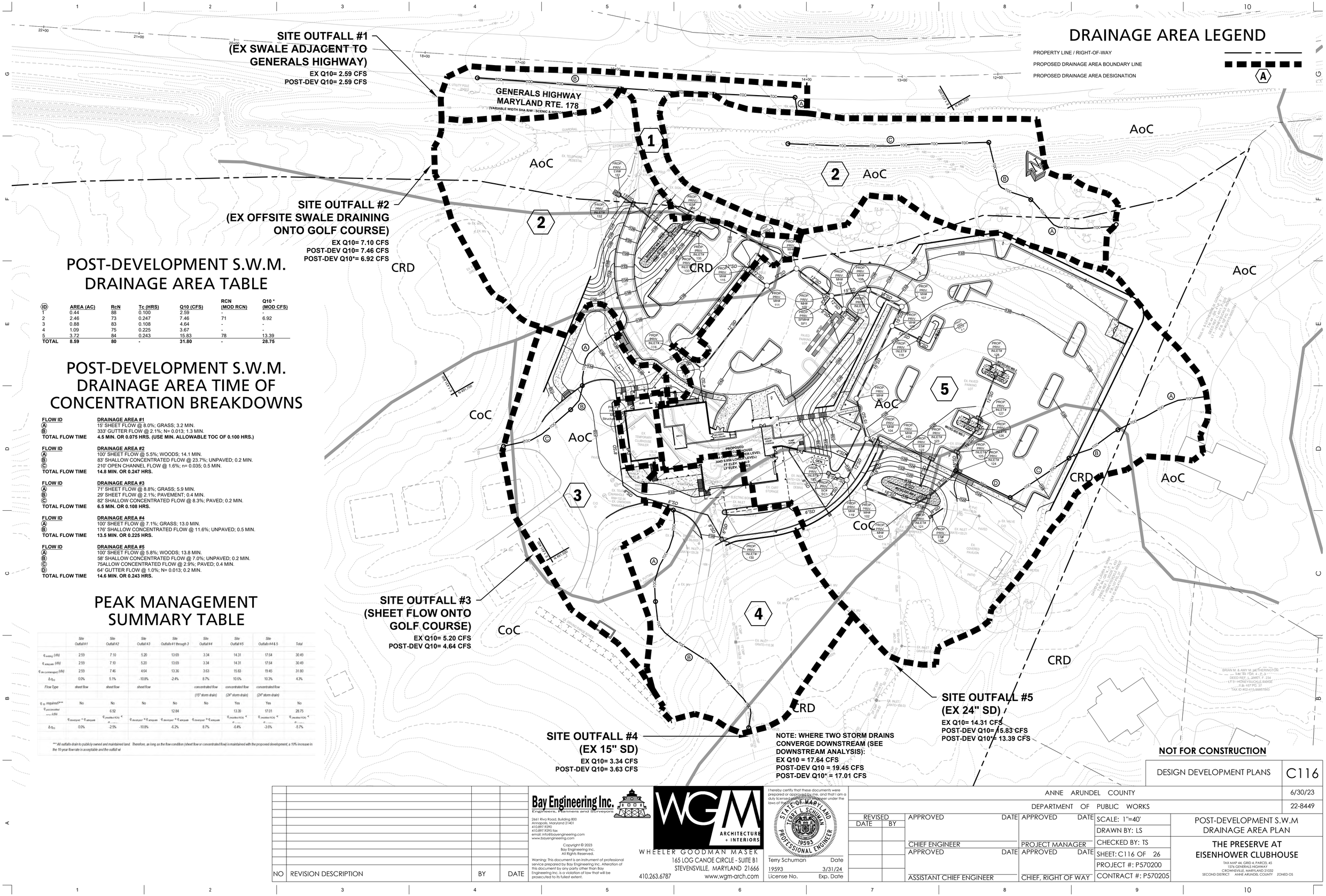

DRAINAGE AREA LEGEND

PROPERTY LINE / RIGHT-OF-WAY

PROPOSED DRAINAGE AREA BOUNDARY LINE

PROPOSED DRAINAGE AREA DESIGNATION (A)

POST-DEVELOPMENT S.W.M. DRAINAGE AREA TABLE

ID	AREA (AC)	RcN	Tc (HRS)	Q10 (CFS)	RCN (MOD RCN)	Q10 * (MOD CFS)
1	0.44	88	0.100	2.59	-	-
2	2.46	73	0.247	7.46	71	6.92
3	0.88	83	0.108	4.64	-	-
4	1.09	75	0.225	3.67	-	-
5	3.72	84	0.243	15.83	78	13.39
TOTAL	8.59	80	-	31.80	-	28.75

POST-DEVELOPMENT S.W.M. DRAINAGE AREA TIME OF CONCENTRATION BREAKDOWNS

DRAINAGE AREA #1

FLOW ID	
A	15' SHEET FLOW @ 8.0%; GRASS; 3.2 MIN.
B	333' GUTTER FLOW @ 2.1%; N= 0.013; 1.3 MIN.
TOTAL FLOW TIME	4.5 MIN. OR 0.075 HRS. (USE MIN. ALLOWABLE TOC OF 0.100 HRS.)

DRAINAGE AREA #2

FLOW ID	
A	100' SHEET FLOW @ 5.5%; WOODS; 14.1 MIN.
B	83' SHALLOW CONCENTRATED FLOW @ 23.7%; UNPAVED; 0.2 MIN.
C	210' OPEN CHANNEL FLOW @ 1.6%; n= 0.035; 0.5 MIN.
TOTAL FLOW TIME	14.8 MIN. OR 0.247 HRS.

DRAINAGE AREA #3

FLOW ID	
A	71' SHEET FLOW @ 8.8%; GRASS; 5.9 MIN.
B	29' SHEET FLOW @ 2.1%; PAVEMENT; 0.4 MIN.
C	82' SHALLOW CONCENTRATED FLOW @ 8.3%; PAVED; 0.2 MIN.
TOTAL FLOW TIME	6.5 MIN. OR 0.108 HRS.

DRAINAGE AREA #4

FLOW ID	
A	100' SHEET FLOW @ 7.1%; GRASS; 13.0 MIN.
B	176' SHALLOW CONCENTRATED FLOW @ 11.6%; UNPAVED; 0.5 MIN.
TOTAL FLOW TIME	13.5 MIN. OR 0.225 HRS.

DRAINAGE AREA #5

FLOW ID	
A	100' SHEET FLOW @ 5.8%; WOODS; 13.8 MIN.
B	58' SHALLOW CONCENTRATED FLOW @ 7.0%; UNPAVED; 0.2 MIN.
C	75ALLOW CONCENTRATED FLOW @ 2.9%; PAVED; 0.4 MIN.
D	64' GUTTER FLOW @ 1.0%; N= 0.013; 0.2 MIN.
TOTAL FLOW TIME	14.6 MIN. OR 0.243 HRS.

PEAK MANAGEMENT SUMMARY TABLE

	Site Outfall #1	Site Outfall #2	Site Outfall #3	Site Outfalls #1 through 3	Site Outfall #4	Site Outfall #5	Site Outfalls #4 & 5	Total
$q_{existing}$ (cfs)	2.59	7.10	5.20	13.69	3.34	14.31	17.64	30.49
$q_{adequate}$ (cfs)	2.59	7.10	5.20	13.69	3.34	14.31	17.64	30.49
$q_{dev (unmanaged)}$ (cfs)	2.59	7.46	4.64	13.36	3.63	15.83	19.45	31.80
Δq_{Q10}	0.0%	5.1%	-10.8%	-2.4%	8.7%	10.6%	10.3%	4.3%
Flow Type	sheet flow	sheet flow	sheet flow		concentrated flow (15" storm drain)	concentrated flow (24" storm drain)	concentrated flow (24" storm drain)	
q_{Q10} required/***	No	No	No	No	No	Yes	Yes	No
$q_{post-modified}$ (cfs)		6.92		12.84		13.39	17.01	28.75
	$q_{developed}$ > $q_{adequate}$	$q_{modified\ RCN}$ < $q_{adequate}$	$q_{developed}$ < $q_{adequate}$	$q_{developed}$ < $q_{adequate}$	$q_{developed}$ > $q_{adequate}$	$q_{modified\ RCN}$ < $q_{adequate}$	$q_{modified\ RCN}$ < $q_{adequate}$	$q_{modified\ RCN}$ < $q_{adequate}$
Δq_{Q10}	0.0%	-2.9%	-10.8%	-6.2%	8.7%	-6.4%	-3.6%	-5.7%

*** All outfalls drain to publicly owned and maintained land. Therefore, as long as the flow condition (sheet flow or concentrated flow) is maintained with the proposed development, a 10% increase in the 10-year flow rate is acceptable and the outfall wi

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NO	REVISION DESCRIPTION	BY	DATE

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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.

STATE OF MARYLAND — TERRY L. SCHUMAN — 19593 — PROFESSIONAL ENGINEER

Terry Schuman — Date
19593 — 3/31/24
License No. — Exp. Date

ANNE ARUNDEL COUNTY	6/30/23
DEPARTMENT OF PUBLIC WORKS	22-8449

REVISED DATE	BY	APPROVED DATE	APPROVED DATE	
				SCALE: 1"=40'
		CHIEF ENGINEER	PROJECT MANAGER	DRAWN BY: LS
		APPROVED DATE	APPROVED DATE	CHECKED BY: TS
				SHEET: C116 OF 26
				PROJECT #: P570200
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	CONTRACT #: P570205

DESIGN DEVELOPMENT PLANS — C116

POST-DEVELOPMENT S.W.M DRAINAGE AREA PLAN

THE PRESERVE AT EISENHOWER CLUBHOUSE

TAX MAP 44, GRID 4, PARCEL 45
1576 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

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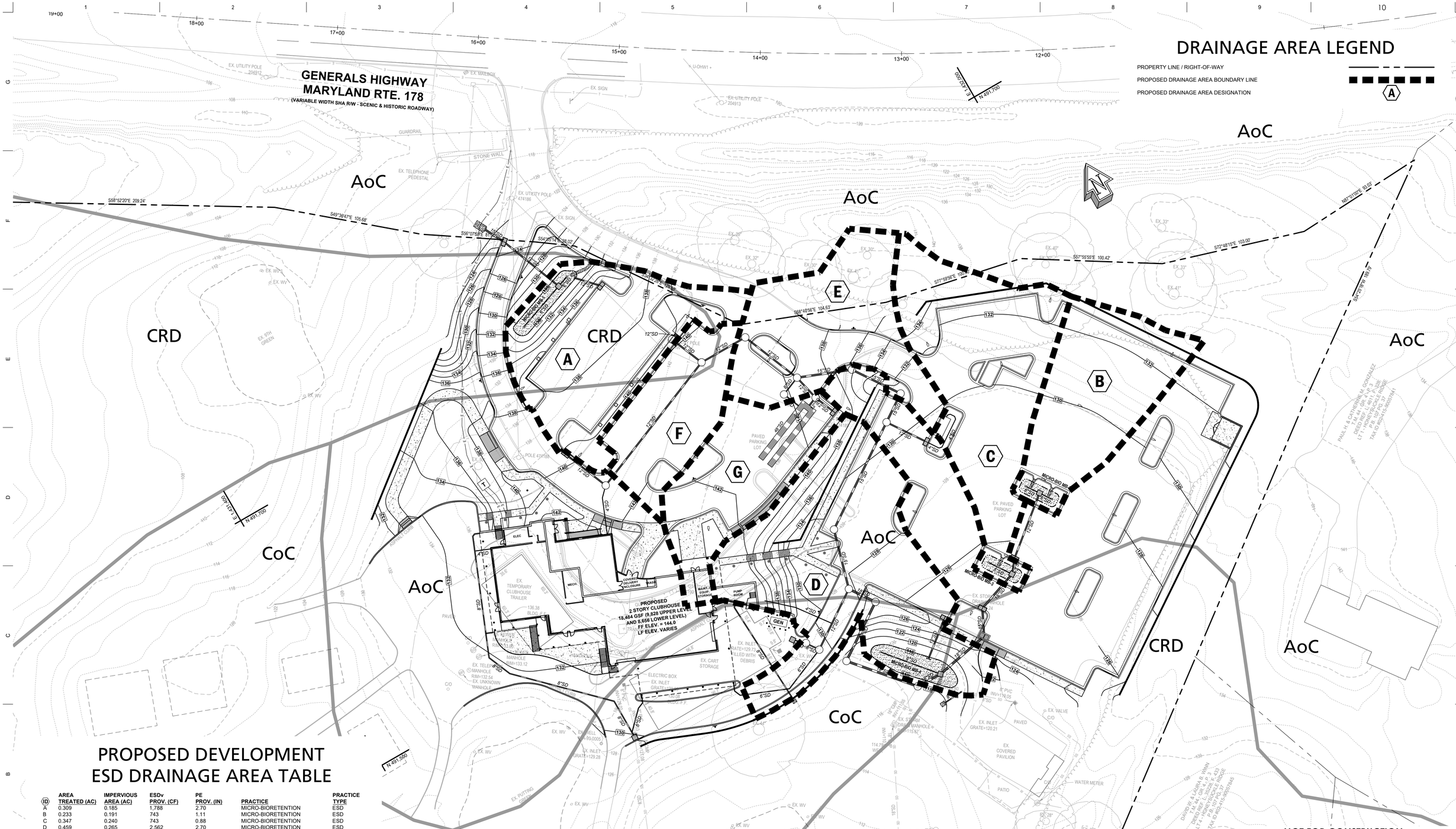

PROPOSED DEVELOPMENT
ESD DRAINAGE AREA TABLE

ID	AREA TREATED (AC)	IMPERVIOUS AREA (AC)	ESDv PROV. (CF)	PE PROV. (IN)	PRACTICE	PRACTICE TYPE
A	0.309	0.185	1,788	2.70	MICRO-BIORETENTION	ESD
B	0.233	0.191	743	1.11	MICRO-BIORETENTION	ESD
C	0.347	0.240	743	0.88	MICRO-BIORETENTION	ESD
D	0.459	0.265	2,562	2.70	MICRO-BIORETENTION	ESD
E	0.267	0.166	591	1.00	FILTERRA	ESD
F	0.161	0.154	532	1.00	FILTERRA	ESD
G	0.204	0.190	1,777	2.70	STORMFILTER	STRUCTURAL

REFER TO SHEET 118 FOR ESD DRAINAGE AREA SUMMARY NOTES AND TABLES

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STATE OF MARYLAND — TERRY L SCHUMAN — 19593 — PROFESSIONAL ENGINEER

Terry Schuman — Date
19593 — 3/31/24
License No. — Exp. Date

ANNE ARUNDEL COUNTY		DESIGN DEVELOPMENT PLANS	C117
DEPARTMENT OF PUBLIC WORKS			6/30/23
			22-8449

REVISED DATE	BY	APPROVED DATE / CHIEF ENGINEER	APPROVED DATE / PROJECT MANAGER	
		APPROVED DATE / ASSISTANT CHIEF ENGINEER	APPROVED DATE / CHIEF, RIGHT OF WAY	SCALE: 1"=30'
				DRAWN BY: LS
				CHECKED BY: TS
				SHEET: C117 OF 26
				PROJECT #: P570200
				CONTRACT #: P570205

ESD DRAINAGE AREA PLAN

THE PRESERVE AT EISENHOWER CLUBHOUSE
TAX MAP 44, GRID 4, PARCEL 45
1574 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

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S.W.M. DATA

Permit Number	
Project Number	
Project Name	EISENHOWER CLUBHOUSE
StructureAddress	1576 GENERALS HIGHWAY
Structure City	CROWNSVILLE
State	MARYLAND
Structure Zip	21032
Total Drainage Area (Acres)	8.59
RCN - Pre Construction	78
RCN - Post Construction	80 / 77 (MOD RCN)
RCN - Woods	77
Total Number of BMPs	7
PE Required (see Note 1)	1.51
PE Addressed (see Note 2)	1.51
MD 8-Digit HUC (see Note 4)	02131003
USGS 12-Digit HUC	

S.W.M. DATA

STORM_ID	STRU_NAME	MDE BMP CLASS	MDE BMP TYPE	CONSTRUCTION PURPOSE (NEWD), Redevelopment (REDE), or Restoration (REST)	ON or OFF SITE	LAND USE	DEVICE DRAINAGE AREA (acres)	IMPERVIOUS AREA DRAINING TO DEVICE (Square feet)	IMPERVIOUS ACRES RESTORED (See Note 3)	MD NORTH COORD (NAD83 - FT)	MD EAST COORD (NAD83 - FT)	WQ_v (ft3) (See Note 5)	Maintenance Responsibility	Comments
	MICRO-BIORETENTION AREAMB-1	E	MMBRMENF	REDE	ON	18	0.309	8,080	0.000	491,739	1,431,683	1,788	County	
	MICRO-BIORETENTION AREAMB-2	E	MMBRMENF	REDE	ON	18	0.233	8,320	0.000	491,441	1,431,889	743	County	
	MICRO-BIORETENTION AREAMB-2	E	MMBRMENF	REDE	ON	18	0.347	10,455	0.000	491,407	1,431,839	743	County	
	MICRO-BIORETENTION AREAMB-2	E	MMBRMENF	REDE	ON	18	0.459	11,540	0.000	491,398	1,431,745	2,562	County	
	FILTERRAF-1	E	MMRB	REDE	ON	18	0.267	7,215	0.000	491,508	1,431,855	591	County	
	FILTERRAF-2	E	MMRB	REDE	ON	18	0.161	6,720	0.000	491,663	1,431,732	532	County	
	STORMFILTER	S	FUND	REDE	ON	18	0.204	8,280	0.000	491,585	1,431,778	1,777	County	

NOTES

1 - Rainfall target (from Table 5.3, Design Manual pp.5.21-22) used to determine ESD goals and size practices (for new development or redevelopment). If practice is for restoration, then PE_REQ is 1inch.
2 - Rainfall addressed (using both ESD techniques and practices, and structural practices) by the BMPs within the drainage area
3 - Equals Impervious Area Draining to Device when PE_ADR = 1 inch (for restoration only)
4 - Maryland 8-Digit HUC (Hydrologic Unit Code) can be found by using the map at: https://mde.state.md.us/programs/Water/TMDL/DataCenter/Pages/8DigitWatershed.aspx
5 - Water Quality volume, the smaller of the volume of the actual storage volume in the device or the volume from the 1-year 24-hour storm for the drainage area to the device ((2.7" x Rv x A)/12)
6- If other is selected for maintenance responsibility, please explain the comments column.

S.W.M. SUMMARY TABLE

Criteria	Required	Provided	Practice	Comments
ESD_v	Target P_E = 1.51" ESD_v = 8,732 cf	P_E Treated = 1.51" ESD_v = 8,734 cf	ESD Practices: Four micro-bioretention areas with enhanced filters & two Filterras Structural Practices: StormFilter	This project is classified as redevelopment. Existing impervious area within LOD is 46.7%.
Cp_v	n/a	n/a	n/a	Cp_v is not required for this redevelopment.
Qp_{10}	Outfall #1: Q_{dev} = 2.59 cfs Outfall #2: Q_{dev} = 7.10 cfs Outfall #3: Q_{dev} = 5.20 cfs Outfalls #1-3: Q_{dev} = 13.69 cfs Outfall #4: Q_{dev} = 3.34 cfs Outfall #5: Q_{dev} = 14.31 cfs Outfalls #4&5: Q_{dev} = 17.64 cfs	Outfall #1: Q_{post} = 2.59 cfs Outfall #2: Q_{post} = 7.46 cfs $Q_{post\ (ROV)}$ = 6.92 cfs Outfall #3: Q_{post} = 4.64 cfs Outfalls #1-3: Q_{post} = 13.36 cfs $Q_{post\ (ROV)}$ = 12.84 cfs Outfall #4: Q_{post} = 3.63 cfs Outfall #5: Q_{post} = 15.83 cfs $Q_{post\ (ROV)}$ = 13.39 cfs Outfalls #4&5: Q_{post} = 19.45 cfs $Q_{post\ (ROV)}$ = 17.01 cfs		Post-dev. flow rates are less than existing or are increased by less than 10%.
Qp_{100}	n/a	n/a	n/a	Not required.

S.W.M. STRUCTURE SUMMARY TABLE

Stormwater Management Structure and Stream Restoration Summary Sheet

Project Name and Number	***THE PRESERVE AT EISENHOWER CLUBHOUSE, CROWNSVILLE, MARYLAND***
Design Professional	***BAY ENGINEERING, INC.***
Date	***June 23, 2023***

Overall Drainage Area	BMP Drainage Area	Practice	Structure #	Type	Location (NAD Grid Coordinates)		Drainage Area Treated (acres)	Runoff Volume from 1-Year 24-Hour Storm (cf)	ESD Volume Provided (cf)	Actual Device Volume (cf)
		ESD Practices								
2	A	***Micro-Bioretention Area***	***MB-1***	***M-6/M-9***	***491,739***	***1,431,683***	***0.309***	***1,788***	***1,788***	***1,813***
5	B	***Micro-Bioretention Area***	***MB-2***	***M-6/M-9***	***491,441***	***1,431,889***	***0.233***	***1,799***	***743***	***743***
5	C	***Micro-Bioretention Area***	***MB-3***	***M-6/M-9***	***491,407***	***1,431,839***	***0.347***	***2,287***	***743***	***743***
5	D	***Micro-Bioretention Area***	***MB-4***	***M-6/M-9***	***491,398***	***1,431,745***	***0.459***	***2,562***	***2,562***	***2,697***
5	E	***Filterra***	***F-1***	***M-6***	***491,508***	***1,431,855***	***0.267***	***1,592***	***591***	***591***
5	F	***Filterra***	***F-1***	***M-6***	***491,663***	***1,431,732***	***0.161***	***1,439***	***532***	***532***
5	G	***StormFilter***	***SF-1***		***491,585***	***1,431,778***	***0.204***	***1,777***	***1,777***	***1,900***
Total Provided in ESD Practices									***6,957***	
Total Provided in Structural Practices									***1,777***	
Total Provided in ESD and Structural Practices									***8,734***	
Total Required									***8,732***	

Stream Restoration and/or Outfall Stabilizations Associated with the Project

No.		Practice	Location	Length
		None		

S.W.M. SUMMARY NOTE

STORMWATER MANAGEMENT FOR THE EISENHOWER CLUBHOUSE PROJECT IN CROWNSVILLE, MARYLAND IS PROVIDED IN ACCORDANCE WITH ANNE ARUNDEL COUNTY STORMWATER MANAGEMENT PRACTICES AND PROCEDURES MANUAL AND CURRENT MDE STORMWATER MANAGEMENT GUIDELINES. THE PROPOSED DEVELOPMENT IS A REDEVELOPMENT PROJECT. UNDER BOTH PRE- AND POST-DEVELOPMENT CONDITIONS, DRAINAGE PATTERNS AT THE SITE ARE MAINTAINED SO THAT THE SITE CONTINUES TO DRAIN TO EXISTING STORM DRAIN AND THE EXISTING STORMWATER MANAGEMENT POND LOCATED WITHIN THE GOLF COURSE. RUNOFF IS CONVEYED OFFSITE TO BROAD CREEK. STORMWATER MANAGEMENT IS PROVIDED FOR THE PROPOSED DEVELOPMENT AS FOLLOWS:

- ESD VOLUME - THE PROPOSED DEVELOPMENT IS A REDEVELOPMENT PROJECT GIVEN THAT EXISTING IMPERVIOUS AREA IS GREATER THAN 40% OF THE SITE AREA. ESD VOLUME REQUIREMENTS ARE REQUIRED TO TREAT 1.0 INCH OF RUNOFF FROM 50% OF EXISTING IMPERVIOUS AREA AND 2.32 INCHES OF RUNOFF (BASED ON SOIL TYPES) FOR ALL NEW IMPERVIOUS AREA. IN TOTAL, 8,732 CF OF ESD VOLUME IS REQUIRED; THIS IS PROVIDED WITHIN FOUR MICRO-BIORETENTION AREAS WITH ENHANCED FILTERS, TWO FILTERRA BIORETENTION SYSTEMS, AND ONE STORMFILTER FILTRATION PRACTICE. THESE PROVIDE 8,734CF OF ESD VOLUME.
- CHANNEL PROTECTION VOLUME - CHANNEL PROTECTION VOLUME IS NOT REQUIRED GIVEN THAT THIS IS A REDEVELOPMENT PROJECT.
- OVERBANK FLOOD PROTECTION - ALTHOUGH OVERBANK FLOOD PROTECTION IS NOT REQUIRED FOR A REDEVELOPMENT PROJECT, ADEQUACY OF THE RECEIVING SYSTEMS MUST BE SHOWN. AN ASSESSMENT HAS BEEN PERFORMED AT EACH SITE OUTFALL AS FOLLOWS:

  - SITE OUTFALL #1 - SITE OUTFALL #1 HAS BEEN IDENTIFIED WITHIN A SWALE THAT PARALLELS GENERAL HIGHWAY. UNDER EXISTING CONDITIONS, THE 10-YEAR FLOW RATE IS 2.59 CFS. UNDER POST-DEVELOPMENT CONDITIONS, THE 10-YEAR FLOW RATE REMAINS AT 2.59 CFS. THEREFORE, THIS OUTFALL IS DEEMED ADEQUATE. ULTIMATELY, THIS RUNOFF FLOWS TO THE EXISTING ONSITE STORMWATER MANAGEMENT POND.
  - SITE OUTFALL #2 - SITE OUTFALL #2 HAS BEEN IDENTIFIED WITHIN A SWALE IN THE GENERALS HIGHWAY RIGHT-OF-WAY THAT PARALLELS THAT SITE'S PROPERTY LINE. UNDER EXISTING CONDITIONS, THE 10-YEAR FLOW RATE IS 7.10 CFS. UNDER POST-DEVELOPMENT CONDITIONS, THE 10-YEAR FLOW RATE IS 7.46 CFS, AN INCREASE OF 5.1%. RUNOFF TO THIS SITE OUTFALL FLOWS BACK ONSITE TO THE EXISTING ONSITE STORMWATER MANAGEMENT POND. GIVEN THAT THE INCREASE IN FLOW RATE IS LESS THAN 10%, THIS OUTFALL IS DEEMED ADEQUATE. FURTHERMORE, STORAGE WITHIN THE MICRO-BIORETENTION AREA AND ENHANCED FILTER WITHIN THE DRAINAGE AREA FURTHER REDUCES THE 10-YEAR FLOW RATE TO 6.92 CFS, OR A DECREASE IN FLOW RATE OF 2.5%. THEREFORE, THIS OUTFALL IS ALSO ADEQUATE.
  - SITE OUTFALL #3 - SITE OUTFALL #3 IS IDENTIFIED FOR RUNOFF THAT SHEETS FLOWS FROM THE AREA OF DEVELOPMENT ONTO THE GOLF COURSE. UNDER EXISTING CONDITIONS, THE 10-YEAR FLOW RATE IS 5.20 CFS. UNDER POST-DEVELOPMENT CONDITIONS, THE 10-YEAR FLOW RATE IS REDUCED TO 4.64 CFS. THEREFORE, THIS OUTFALL IS DEEMED ADEQUATE. ULTIMATELY, THIS RUNOFF FLOWS TO THE EXISTING ONSITE STORMWATER MANAGEMENT POND.
  - SITE OUTFALLS #1 THROUGH #3 - RUNOFF FROM THESE THREE SITE OUTFALLS FLOWS TO THE EXISTING ONSITE STORMWATER MANAGEMENT POND. UNDER EXISTING CONDITIONS, THE 10-YEAR FLOW RATE FROM THESE THREE SITE OUTFALLS TO THE POND IS 13.69 CFS. UNDER POST-DEVELOPMENT CONDITIONS, THE 10-YEAR FLOW RATE IS REDUCED TO 13.36 CFS. THEREFORE, THE DEVELOPMENT TO THESE THREE SITE OUTFALLS WILL NOT HAVE AN ADVERSE IMPACT ON THE RECEIVING STORMWATER MANAGEMENT POND. THE POST-DEVELOPMENT RUNOFF IS FURTHER REDUCED AS A RESULT OF STORAGE WITHIN ESD PRACTICES WITHIN THIS DRAINAGE AREA TO 12.84 CFS.
  - SITE OUTFALL #4 - SITE OUTFALL #4 HAS BEEN IDENTIFIED WITHIN AN EXISTING 15" STORM DRAIN IN THE AREA OF DEVELOPMENT. UNDER EXISTING CONDITIONS, THE 10-YEAR FLOW RATE IS 3.34 CFS. UNDER POST-DEVELOPMENT CONDITIONS, THE 10-YEAR FLOW RATE IS 3.63 CFS, AN INCREASE OF 8.7%. RUNOFF TO THIS SITE OUTFALL DRAINS TO EXISTING PUBLIC STORM DRAIN, WHICH DISCHARGES ONTO PROPERTY OWNED BY ANNE ARUNDEL COUNTY. GIVEN THAT THE INCREASE IN FLOW RATE IS LESS THAN 10%, THIS OUTFALL IS DEEMED ADEQUATE.
  - SITE OUTFALL #5 - SITE OUTFALL #5 HAS BEEN IDENTIFIED WITHIN AN EXISTING 24" STORM DRAIN IN THE AREA OF DEVELOPMENT. UNDER EXISTING CONDITIONS, THE 10-YEAR FLOW RATE IS 14.31 CFS. UNDER POST-DEVELOPMENT CONDITIONS, THE 10-YEAR FLOW RATE IS 15.83 CFS, AN INCREASE OF 10.6%. STORAGE WITHIN STORMWATER MANAGEMENT PRACTICES WITHIN THIS DRAINAGE AREA FURTHER REDUCES THE 10-YEAR FLOW RATE TO 13.39 CFS, OR A DECREASE IN FLOW RATE OF 6.4%. THEREFORE, THIS OUTFALL IS ALSO ADEQUATE.
  - SITE OUTFALLS #4 AND #5 - RUNOFF TO SITE OUTFALLS #4 AND #5 CONVERGE DOWNSTREAM WITHIN THE STORM DRAIN SYSTEM BEFORE BEING DISCHARGED INTO A CHANNEL THAT PARALLELS THE EASTERN PROPERTY LINE. UNDER EXISTING CONDITIONS, THE 10-YEAR FLOW RATE IS 17.64 CFS. UNDER POST-DEVELOPMENT CONDITIONS, THE 10-YEAR FLOW RATE IS 19.45 CFS, OR 17.01 CFS WHEN FACTORING IN STORAGE PROVIDED WITHIN STORMWATER MANAGEMENT PRACTICES WITHIN THE DRAINAGE AREA. THEREFORE, THE EXISTING STORM DRAIN SYSTEM IS DEEMED ADEQUATE.
  - TOTAL AREA OF DEVELOPMENT - ALL RUNOFF FROM THE DEVELOPMENT CONVERGES JUST DOWNSTREAM OF THE DISCHARGE OF THE EXISTING STORMWATER MANAGEMENT POND. THIS POINT OF CONVERGENCE, IDENTIFIED AS THE PROJECT'S POINT OF INVESTIGATION, IS LOCATED WITHIN FLOODPLAIN. UNDER EXISTING CONDITIONS, THE TOTAL CONTRIBUTING FLOW FROM THE AREA OF DEVELOPMENT IS 30.49 CFS. UNDER POST-DEVELOPMENT CONDITIONS AND FACTORING IN THE PROPOSED DEVELOPMENT STORMWATER MANAGEMENT PROGRAM, THE 10-YEAR FLOW RATE FROM THE AREA OF DEVELOPMENT IS REDUCED TO 28.75 CFS. THEREFORE, IT IS CONCLUDED THAT THE PROPOSED DEVELOPMENT WILL NOT HAVE A NEGATIVE IMPACT ON THE RECEIVING WATERWAYS.

- EXTREME FLOOD PROTECTION - MANAGEMENT OF THE 100-YEAR STORM EVENT IS NOT REQUIRED FOR THIS PROJECT.

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT PLANS | C118

NO	REVISION DESCRIPTION	BY	DATE

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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 STATE OF MARYLAND TERRY L. SCHUMAN 19593 PROFESSIONAL ENGINEER

Terry Schuman Date
19593 3/31/24
License No. Exp. Date

ANNE ARUNDEL COUNTY 6/30/23
DEPARTMENT OF PUBLIC WORKS 22-8449

REVISED DATE	BY

APPROVED DATE CHIEF ENGINEER	APPROVED DATE PROJECT MANAGER	SCALE: AS SHOWN DRAWN BY: LS CHECKED BY: TS	ESD / DRAINAGE AREA TABLES PLAN
APPROVED DATE ASSISTANT CHIEF ENGINEER	APPROVED DATE CHIEF, RIGHT OF WAY	SHEET: C118 OF 26 PROJECT #: P570200 CONTRACT #: P570205	THE PRESERVE AT EISENHOWER CLUBHOUSE TAX MAP 44, GRID 4, PARCEL 45 1574 GENERALS HIGHWAY CROWNSVILLE, MARYLAND 21032 SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

PLOTTED: Jun 30, 2023 - 9:32am

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B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION AREAS

1. MATERIAL SPECIFICATIONS

THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

2. FILTERING MEDIA OR PLANTING SOIL

THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.

THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:

- SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)
- ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%).
- CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.
- PH RANGE – SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED INTO THE SOIL TO INCREASE OR DECREASE PH.

THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

3. COMPACTION

IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TYPE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACTURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.

ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE.

WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.

WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

4. PLANT MATERIAL

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

5. PLANT INSTALLATION

COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.

ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8TI OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION.

TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL.

GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.

THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFEATS, OR AT A MINIMUM, IMPEDES THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

6. UNDERDRAINS (N/A FOR SUBMERGED GRAVEL WETLANDS)

UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:

- PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTMF 758, TYPE PS 28, OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OR HDPE).
- PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE W' DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A ¼" (NO. 4 OR 4X4) GALVANIZED HARDWARE CLOTH.
- GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.
- THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
- A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,0000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
- A 4" LAYER OF PEA GRAVEL (¼" TO /8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".

THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

7. MISCELLANEOUS

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

REFER TO SHEETS 0 THROUGH 0 FOR STORMWATER MANAGEMENT DETAILS AND SPECIFICATIONS

S.W.M. AS-BUILT PROCEDURES

1. ARRANGE FOR A PRECONSTRUCTION MEETING WITH OWNER, CONTRACTOR, GEOTECHNICAL INSPECTOR, AND THE ENGINEER OF RECORD WHO WILL PREPARE THE AS-BUILT DRAWINGS. AT THIS TIME THE DRAWINGS MAY BE REVIEWED AS WELL AS ANY SPECIFIC REQUIREMENTS OF THE JURISDICTION WHERE THE SITE IS LOCATED.
2. CONTRACTOR SHALL SUBMIT AND RECEIVE SHOP DRAWING APPROVAL FOR ALL COMPONENTS OF THE SWM DEVICES FROM THE CERTIFYING ENGINEER.
3. THE OWNER SHALL COORDINATE WITH THE CONTRACTOR, ENGINEER, THE GEOTECHNICAL INSPECTOR, AND THE SURVEYOR PRIOR TO CONSTRUCTION OF THE FACILITIES. THE OWNER IS RESPONSIBLE FOR OBTAINING MATERIALS TICKETS AND PROVIDING THEM TO THE GEOTECHNICAL INSPECTOR.
4. THE OWNER SHALL NOTIFY THE ENGINEER AT KEY POINTS DURING CONSTRUCTION SO THE ENGINEER HAS THE OPPORTUNITY TO OBSERVE PLACEMENT OF PIPES, UNDERDRAINS, LINERS, FILTER MATERIALS OR OTHER ITEMS THAT MAY BE COVERED DURING CONSTRUCTION. THE OCCURRENCE OF ANY VISITS OF THE ENGINEER DOES NOT REPLACE ANY OF THE REQUIREMENTS BELOW.
5. THE GEOTECHNICAL INSPECTOR SHALL:
   - KEEP DAILY INSPECTION REPORTS CONSISTENT WITH LOCAL REQUIREMENTS (SEE ATTACHED BALTIMORE COUNTY SAMPLE). IT IS THEIR RESPONSIBILITY TO MAKE SURE THERE ARE KNOWLEDGEABLE OF THE REQUIREMENTS OF THE LOCAL JURISDICTION.
   - TAKE PHOTOGRAPHS OF KEY POINTS DURING CONSTRUCTION TO INCLUDE: EXCAVATION OF CUTOFF TRENCH, PLACEMENT OF CONCRETE CRADLE, CONCRETE STRENGTH CYLINDER TESTS, COMPACTION, PIPE AND ANTI-SEEP COLLARS OR FILTER DIAPHRAGM, PLACEMENT OF ANY LINERS, UNDERDRAINS OR ANY OTHER ELEMENT THAT WILL NOT BE VISIBLE AT A LATER STAGE IN CONSTRUCTION. THE INSPECTOR MUST BE THE EYES OF THE DESIGN PROFESSIONAL WHO WILL CERTIFY THE AS-BUILT PLANS AND CONFIRM THAT THE FACILITIES ARE BEING INSTALLED IN ACCORDANCE WITH THE APPROVED DESIGN PLANS.
   - THE INSPECTOR SHALL BE FURNISHED MATERIAL DELIVERY TICKETS AND ENSURE THAT DELIVERED MATERIAL IS IN CONFORMANCE WITH THE SPECIFICATIONS ON THE PLANS.
   - AT THE END OF CONSTRUCTION OR IF CONSTRUCTION IS TO BE PAUSED FOR A PERIOD OF 6 MONTHS OR LONGER, PROVIDE A REPORT THAT INCLUDES THE DAILY REPORTS, PHOTOGRAPHS, MATERIAL TICKETS AND AND A CERTIFICATION THAT THE FACILITIES WERE BUILT PER THE APPROVED DRAWINGS.
6. THE OWNER SHALL COORDINATE DIRECTLY WITH THE SURVEYOR. THE SURVEYOR SHALL BE PRESENT TO RECORD ANY MEASUREMENTS OR DIMENSIONS THAT WILL NOT BE VISIBLE AS WORK PROCEEDS. THIS INCLUDES THE BOTTOM OF ANY EXCAVATED FACILITIES THAT ARE TO BE FILLED WITH STONE OR OTHER FILTER MATERIAL. IT IS ADVISABLE THAT INVERTS OF ANY OUTFALL PIPES OR UNDERDRAINS BE VERIFIED BEFORE PROCEEDING EVEN IF THE INVERTS MAY BE CHECKED IN THE FUTURE.

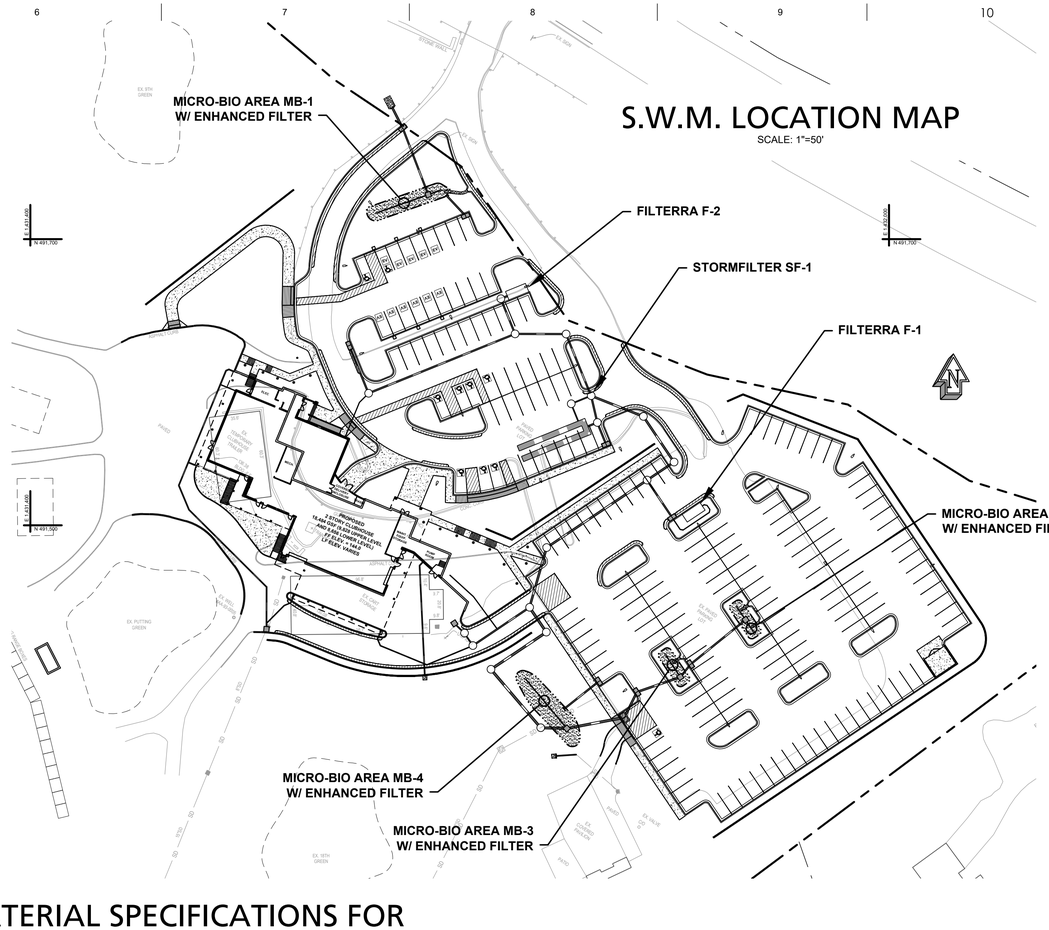
S.W.M. FILTERING SYSTEM NOTES (MICRO-BIORETENTION IN THE AIRPORT ZONE)

SURFACE FILTERING SYSTEMS

1. FILTERING SYSTEMS MUST BE INSPECTED REGULARLY. THE TOP FEW INCHES OF FILTER MEDIA SHALL BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN 24 HOURS.
2. SILT/SEDIMENT REMOVAL SHALL BE PERFORMED WHEN SEDIMENT ACCUMULATES TO A DEPTH THAT EXCEEDS ONE INCH.
3. DEAD OR DISEASED PLANT MATERIAL SHALL BE REPLACED. THE TOP 2" - 3" OF MULCH SHOULD BE REPLACED ON AN ANNUAL BASIS FOR MICRO-BIORETENTION AND RAIN GARDENS.
4. DIRECT MAINTENANCE ACCESS TO THE PRE-TREATMENT AREA AND FILTER BED SHALL BE MAINTAINED.
5. VIGOROUS AND DENSE GROWTH SHOULD BE MAINTAINED. ANY BARE SPOTS, BURNED OUT AREAS, OR ERODED AREAS MUST BE RE-SEEDED OR RE-SODDED IMMEDIATELY. WATERING AND/OR FERTILIZATION SHOULD BE PROVIDED DURING THE FIRST FEW MONTHS AFTER ESTABLISHED AND MAY PERIODICALLY BE NEEDED DURING PERIODS OF DROUGHT.

MICRO-BIORETENTION FACILITY MAINTENANCE SCHEDULE

DESCRIPTION	METHOD	FREQUENCY	TIME OF YEAR
SOIL			
INSPECT AND REPAIR EROSION	VISUAL	MONTHLY	MONTHLY
ORGANIC LAYER			
REMULCH ANY VOID AREAS	BY HAND	WHENEVER NEEDED	WHENEVER NEEDED
REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER (OPTIONAL)	BY HAND	ONCE EVERY TWO TO THREE YEARS	SPRING
ANY ADDITIONAL MULCH ADDED (OPTIONAL)	BY HAND	ONCE A YEAR	SPRING
PLANTS			
REMOVAL AND REPLACEMENT OF ALL DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT	SEE PLANTING SPECIFICATIONS	TWICE A YEAR	3/15 TO 4/30 AND 10/1 TO 11/30
TREAT ALL DISEASED TREES AND SHRUBS	MECHANICAL OR BY HAND	N/A	VARIES, DEPENDS ON INSECT OR DISEASE INFESTATION
WATERING OF PLANT MATERIAL SHALL TAKE PLACE AT THE END OF EACH DAY FOR FOURTEEN CONSECUTIVE DAYS AFTER PLANTING HAS BEEN COMPLETED	BY HAND	IMMEDIATELY AFTER COMPLETION OF PROJECT	N/A
REPLACE STAKES AFTER ONE YEAR	BY HAND	ONCE A YEAR	ONLY REMOVE STAKES IN THE SPRING
REPLACE ANY DEFICIENT STAKES OR WIRES	BY HAND	N/A	WHENEVER NEEDED



S.W.M. LOCATION MAP

SCALE: 1"=50'

MATERIAL SPECIFICATIONS FOR MICRO-BIORETENTION AREAS - MDE TABLE B.4.1

MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTINGS	SEE LANDSCAPE PLANS FOR PLANTINGS IN MICRO-BIO AREA	N/A	PLANTINGS ARE SITE SPECIFIC; REFER TO LANDSCAPE PLANS
PLANTING SOIL (2' TO 4' DEEP)	LOAMY SAND (60 - 65%) & COMPOST (35 - 40%) OR SANDY LOAM (30%), COARSE SAND (30%) & COMPOST (40%)	N/A	
ORGANIC CONTENT	MIN. 10% BY DRY WEIGHT (ASTM D 2974)		
MULCH	SHREDDED HARDWOOD		AGED 6 MONTHS, MINIMUM; NO PINE OR WOOD CHIPS
PEA GRAVEL DIAPHRAGM	PEA GRAVEL: ASTM D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
CURTAIN DRAIN	ORNAMENTAL STONE: WASHED COBBLES	STONE: 2" TO 5"	
GEOTEXTILE		N/A	PE TYPE 1 NONWOVEN
*GRAVEL (UNDERDRAINS AND INFILTRATION BERMS)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" TO 3/4")	
UNDERDRAIN PIPING	F 758, TYPE PS 28 OR AASHTO M-278	4" TO 6" RIGID SCHEDULE 40 PVC OR SDR35 (SEE PLAN VIEW)	SLOTTED OR PERFORATED PIPE; 3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES. PERFORATED PIPE SHALL BE WRAPPED WITH 1/4-INCH GALVANIZED HARDWARE CLOTH
POURED IN PLACE CONCRETE (IF REQUIRED)	MSHA MIX NO. 3; f'c = 3500 PSI @ 28 DAYS, NORMAL WEIGHT, AIR-ENTRAINED; REINFORCING TO MEET ASTM-615-60	N/A	ON-SITE TESTING OF POURED-IN-PLACE CONCRETE REQUIRED: 28 DAY STRENGTH AND SLUMP TEST; ALL CONCRETE DESIGN (CAST-IN-PLACE OR PRE-CAST) NOT USING PREVIOUSLY APPROVED STATE OR LOCAL STANDARDS REQUIRES DESIGN DRAWINGS SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND - DESIGN TO INCLUDE MEETING ACI CODE 350.R/89; VERTICAL LOADING [H-10 OR H-20]; ALLOWABLE HORIZONTAL LOADING (BASED ON SOIL PRESSURES); AND ANALYSIS OF POTENTIAL CRACKING
SAND	AASHTO-M-6 OR ASTM-C-33	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE (AASHTO) #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND.

NOT FOR CONSTRUCTION

NO	REVISION DESCRIPTION	BY	DATE

Bay Engineering Inc.
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WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

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.

STATE OF MARYLAND · TERRY L. SCHUMAN · 19593 · PROFESSIONAL ENGINEER

Terry Schuman Date
19593 3/31/24
License No. Exp. Date

ANNE ARUNDEL COUNTY 6/30/23
DEPARTMENT OF PUBLIC WORKS 22-8449

REVISED DATE	BY	APPROVED DATE	APPROVED DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

SCALE: AS SHOWN
DRAWN BY: LS
CHECKED BY: TS
SHEET: C119 OF 26
PROJECT #: P570200
CONTRACT #: P570205

S.W.M. DETAILS AND SPECIFICATIONS

THE PRESERVE AT EISENHOWER CLUBHOUSE

TAX MAP 44, GRID 4, PARCEL 45
1576 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

DESIGN DEVELOPMENT PLANS C119

PLOTTED: Jun 30 , 2023 - 9:32am

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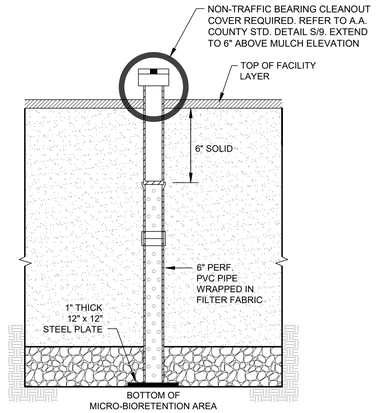
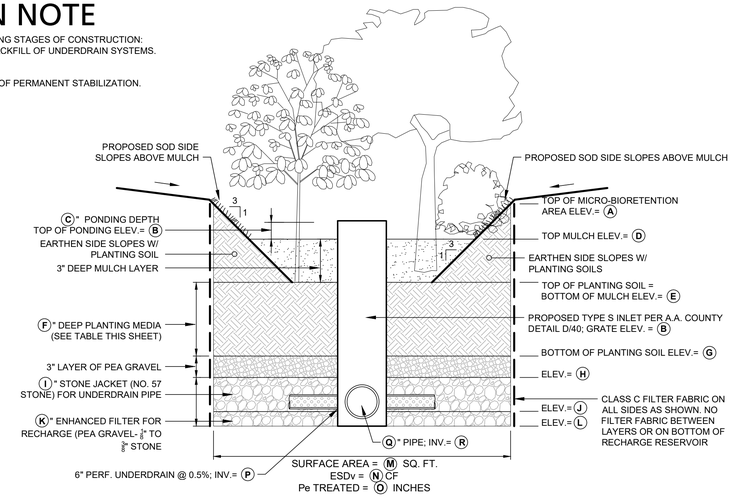


STANDARD S.W.M. MICRO-BIORETENTION OBSERVATION WELL DETAIL

SCALE: NONE

INSPECTION NOTE

REGULAR INSPECTIONS SHALL BE MADE DURING THE FOLLOWING STAGES OF CONSTRUCTION:
- DURING EXCAVATION TO SUBGRADE AND PLACEMENT AND BACKFILL OF UNDERDRAIN SYSTEMS.
- DURING PLACEMENT OF FILTER MEDIA.
- DURING CONSTRUCTION OF APPURTENANT CONVEYANCE.
- UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION.



MICRO-BIORETENTION AREA TYPICAL DETAIL NOTES
1. ALL STONE RIPRAP CHANNELS FROM CURB CUTS INTO THE MICRO-BIORETENTION AREAS ARE TO BE #1 STONE (D_{50}= 2.5"); LINE VERTICAL SIDES WITH CLASS C FILTER FABRIC; REFER TO CURB OPENING NOTE ON THIS SHEET.
2. EXTEND RIPRAP CHANNELS AT LEAST 1.0' ONTO LEVEL SURFACE OF MICRO-BIORETENTION AREAS.

MICRO-BIORETENTION AREA TYPICAL DETAIL (M-6)

SCALE: NONE

PLAN NOTES

1. ALL STONE RIPRAP CHANNELS FROM CURB CUTS INTO THE MICRO-BIORETENTION AREAS ARE TO BE #1 STONE (D_{50}= 2.5"); LINE WITH CLASS C FILTER FABRIC; 2'D x 2'W.
2. EXTEND RIPRAP CHANNELS AT LEAST 1.0' ONTO LEVEL SURFACE OF MICRO-BIORETENTION AREAS.

CURB OPENING NOTE

PROPOSED CURB OPENINGS FOR DRAINAGE TO MICRO-BIORETENTION AREAS TO BE CONSTRUCTED PER ANNE ARUNDEL STANDARD DETAIL D/54 (AT LOW POINT AND ON GRADE). EXTEND RIPRAP PER SECTION B-B OF DETAIL TO SURFACE OF MICRO-BIORETENTION AREA A MINIMUM OF 1' @ 0.0% INTO THE MICRO-BIORETENTION AREA AT THE TOP OF MULCH ELEVATION. RIPRAP CHANNELS FROM CURB CUTS INTO MICRO-BIORETENTION AREAS ARE TO BE #1 STONE (D50 = 2.5"). LINE VERTICAL SIDES WITH CLASS C FILTER FABRIC. DEPTH OF RIPRAP CHANNEL = 2' MIN.

NOTES:
1. REFER TO SWM AS-BUILT PROCEDURES ON SHEET C119.
2. REFER TO SHEET C123 FOR SOIL BORING LOCATION PLAN.
3. REFER TO SHEET C119 AND THIS SHEET FOR MICRO-BIO AREA LOCATION MAP AND DETAILS AND SPECIFICATIONS.

NOT FOR CONSTRUCTION

NO	REVISION DESCRIPTION	BY	DATE

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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.

STATE OF MARYLAND — TERRY L. SCHUMAN — 19593 — PROFESSIONAL ENGINEER

Terry Schuman — Date
19593 — 3/31/24
License No. — Exp. Date

REVISED DATE	BY	APPROVED DATE	APPROVED DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

ANNE ARUNDEL COUNTY — 6/30/23
DEPARTMENT OF PUBLIC WORKS — 22-8449

SCALE: AS SHOWN
DRAWN BY: LS
CHECKED BY: TS
SHEET: C120 OF 26
PROJECT #: P570200
CONTRACT #: P570205

S.W.M. DETAILS AND SPECIFICATIONS

THE PRESERVE AT EISENHOWER CLUBHOUSE
TAX MAP 44, GRID 4, PARCEL 45
1576 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

DESIGN DEVELOPMENT PLANS — C120

PLOTTED: Jun 30, 2023 - 9:32am

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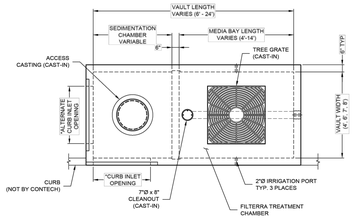
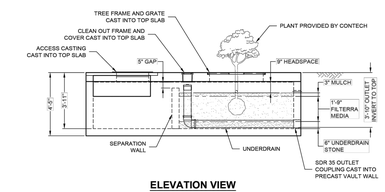


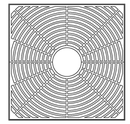
*CURB INLET OPENING LENGTH BY VAULT WIDTH:
4' VAULT WIDTH: 3'-0" CURB OPENING
6' VAULT WIDTH: 4'-0" CURB OPENING
7' VAULT WIDTH: 4'-0" CURB OPENING
8' VAULT WIDTH: 5'-0" CURB OPENING

PLAN VIEW

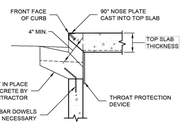


ELEVATION VIEW

FRAME AND COVER
(DIAMETER VARIES)
NOT TO SCALE



TREE GRATE
36" x 36" OR 48" x 48"
(ACTUAL PRODUCT MAY VARY)
NOT TO SCALE



CURB INLET DETAIL
NOT TO SCALE

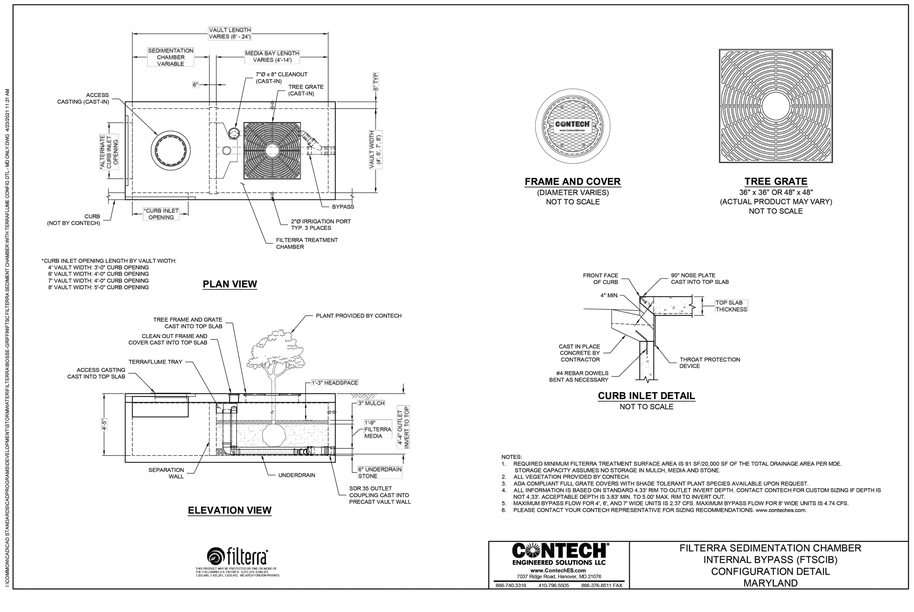
NOTES:
1. REQUIRED MINIMUM FILTERRA TREATMENT SURFACE AREA IS 91 SF/20,000 SF OF THE TOTAL DRAINAGE AREA PER MDE. STORAGE CAPACITY ASSUMES NO STORAGE IN MULCH, MEDIA AND STONE.
2. ALL VEGETATION PROVIDED BY CONTECH.
3. ADA COMPLIANT FULL GRATE COVERS WITH SHADE TOLERANT PLANT SPECIES AVAILABLE UPON REQUEST.
4. ALL INFORMATION IS BASED ON STANDARD 3.83' RIM TO OUTLET INVERT DEPTH. CONTACT CONTECH FOR CUSTOM SIZING IF DEPTH IS NOT 3.83'. ACCEPTABLE DEPTH IS 3.33' MIN. TO 5.00' MAX. RIM TO INVERT OUT.
5. PLEASE CONTACT YOUR CONTECH REPRESENTATIVE FOR SIZING RECOMMENDATIONS. www.conteches.com

filterra
THE PROCESS AND ALL METHODS, CLAIMS AND DESIGNS OF FILTERRA® ARE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: #5753115, #5849181, #6068765, #6371690, #7582216, #7666303.

CONTECH
ENGINEERED SOLUTIONS LLC
www.ContechES.com
7037 Ridge Road, Hanover, MD 21076
866-740-3318 410-796-5005 866-376-8511 FAX

FILTERRA SEDIMENTATION CHAMBER (FTSC)
CONFIGURATION DETAIL
MARYLAND

FILTERRA 1 DETAIL
SCALE: NONE



*CURB INLET OPENING LENGTH BY VAULT WIDTH:
4' VAULT WIDTH: 3'-0" CURB OPENING
6' VAULT WIDTH: 4'-0" CURB OPENING
7' VAULT WIDTH: 4'-0" CURB OPENING
8' VAULT WIDTH: 5'-0" CURB OPENING

PLAN VIEW

ELEVATION VIEW

FRAME AND COVER
(DIAMETER VARIES)
NOT TO SCALE

TREE GRATE
36" x 36" OR 48" x 48"
(ACTUAL PRODUCT MAY VARY)
NOT TO SCALE

CURB INLET DETAIL
NOT TO SCALE

NOTES:
1. REQUIRED MINIMUM FILTERRA TREATMENT SURFACE AREA IS 91 SF/20,000 SF OF THE TOTAL DRAINAGE AREA PER MDE. STORAGE CAPACITY ASSUMES NO STORAGE IN MULCH, MEDIA AND STONE.
2. ALL VEGETATION PROVIDED BY CONTECH.
3. ADA COMPLIANT FULL GRATE COVERS WITH SHADE TOLERANT PLANT SPECIES AVAILABLE UPON REQUEST.
4. ALL INFORMATION IS BASED ON STANDARD 4.33' RIM TO OUTLET INVERT DEPTH. CONTACT CONTECH FOR CUSTOM SIZING IF DEPTH IS NOT 4.33'. ACCEPTABLE DEPTH IS 3.83' MIN. TO 5.00' MAX. RIM TO INVERT OUT.
5. MAXIMUM BYPASS FLOW FOR 4' - 6" WIDE UNITS IS 2.37 CFS. MAXIMUM BYPASS FLOW FOR 8' WIDE UNITS IS 4.74 CFS.
6. PLEASE CONTACT YOUR CONTECH REPRESENTATIVE FOR SIZING RECOMMENDATIONS. www.conteches.com

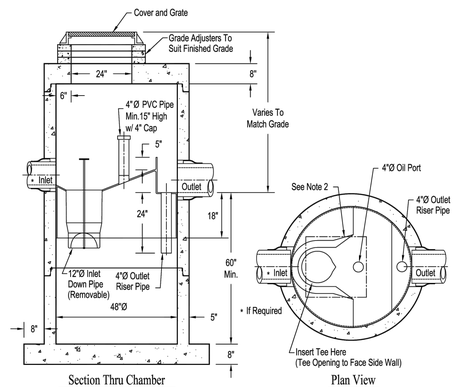
CONTECH
ENGINEERED SOLUTIONS LLC
www.ContechES.com
7037 Ridge Road, Hanover, MD 21076
866-740-3318 410-796-5005 866-376-8511 FAX

FILTERRA SEDIMENTATION CHAMBER
INTERNAL BYPASS (FTSCIB)
CONFIGURATION DETAIL
MARYLAND

FILTERRA 2 DETAIL
SCALE: NONE

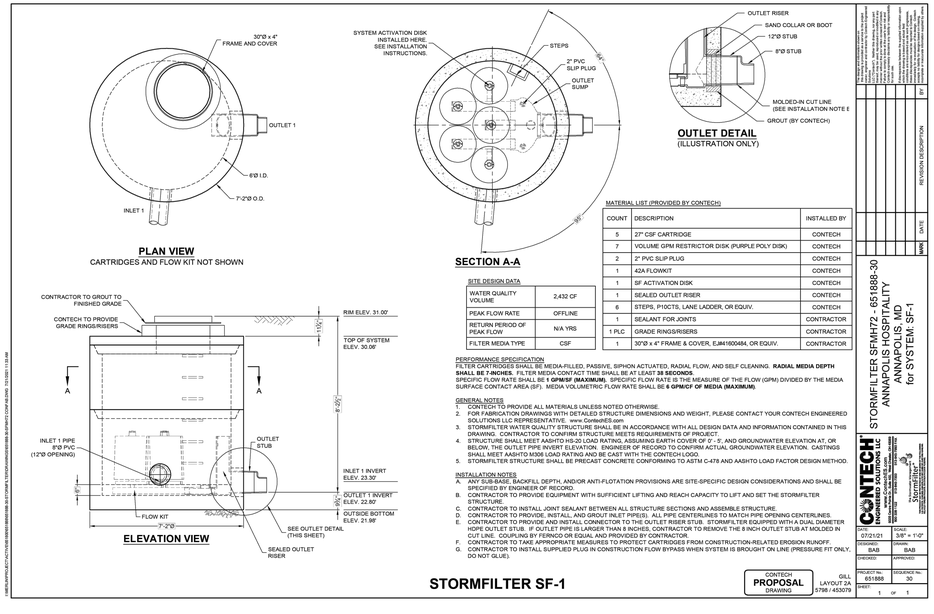
Rinker MATERIALS
Concrete Pipe Division

EOS 4-175 Precast Concrete Stormceptor®
(175 U.S. Gallon Oil Capacity)



Notes:
1. The Use Of Flexible Connection is Recommended at The Inlet and Outlet Where Applicable.
2. The Cover Should be Positioned Over The Inlet Drop Pipe and The Oil Port.
3. The Stormceptor System is protected by one or more of the following U.S. Patents: #5753115, #5849181, #6068765, #6371690, #7582216, #7666303.
4. Contact a Concrete Pipe Division representative for further details not listed on this drawing.

STORMCEPTOR DETAIL
SCALE: NONE



SITE DESIGN DATA

WATER QUALITY VOLUME	2,432 CF
PEAK FLOW RATE	OFFLINE
RETURN PERIOD OF PEAK FLOW	N/A YRS
FILTER MEDIA TYPE	CSF

MATERIAL LIST (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
5	27" CSF CARTRIDGE	CONTECH
7	VOLUME GPM RESTRICTOR DISK (PURPLE POLY DISK)	CONTECH
2	2" PVC SLIP PLUG	CONTECH
1	42A FLOWKIT	CONTECH
1	SF ACTIVATION DISK	CONTECH
1	SEALED OUTLET RISER	CONTECH
6	STEPS, P1OCTS, LANE LADDER, OR EQUIV.	CONTECH
1	SEALANT FOR JOINTS	CONTRACTOR
1 PLC	GRADE RINGS/RISERS	CONTRACTOR
1	30"Ø x 4" FRAME & COVER, EJM1600484, OR EQUIV.	CONTRACTOR

PERFORMANCE SPECIFICATION
FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. **RADIAL MEDIA DEPTH SHALL BE 7-INCHES.** FILTER MEDIA CONTACT TIME SHALL BE AT LEAST **39 SECONDS.**
SPECIFIC FLOW RATE SHALL BE **1 GPM/SF (MAXIMUM).** SPECIFIC FLOW RATE IS THE MEASURE OF THE FLOW (GPM) DIVIDED BY THE MEDIA SURFACE CONTACT AREA (SF). MEDIA VOLUMETRIC FLOW RATE SHALL BE **6 GPM/CF OF MEDIA (MAXIMUM).**

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STORMFILTER STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET PIPE(S). ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO PROVIDE AND INSTALL CONNECTOR TO THE OUTLET RISER STUB. STORMFILTER EQUIPPED WITH A DUAL DIAMETER HDPE OUTLET STUB. IF OUTLET PIPE IS LARGER THAN 8 INCHES, CONTRACTOR TO REMOVE THE 8 INCH OUTLET STUB AT MOLDED IN CUT LINE. COUPLING BY FERNCO OR EQUAL AND PROVIDED BY CONTRACTOR.
F. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
G. CONTRACTOR TO INSTALL SUPPLIED PLUG IN CONSTRUCTION FLOW BYPASS WHEN SYSTEM IS BROUGHT ON LINE (PRESSURE FIT ONLY, DO NOT GLUE).

STORMFILTER SF-1

CONTECH **PROPOSAL** DRAWING
GILL LAYOUT 2A
5798 / 453079

REVISION DESCRIPTION	BY	DATE

STORMFILTER SFMH72 - 651888-30
ANNAPOLIS HOSPITALITY
ANNAPOLIS, MD
for SYSTEM: SF-1

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
800.338.1122 513.645.7000 513.645.7993 FAX
StormFilter®

DATE: 07/21/21	SCALE: 3/8" = 1'-0"
DESIGNED: BAB	DRAWN: BAB
CHECKED:	APPROVED:
PROJECT No.: 651888	SEQUENCE No.: 30
SHEET: 1 OF 1	

STORMFILTER DETAIL
SCALE: NONE

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT PLANS	C121
ANNE ARUNDEL COUNTY	6/30/23
DEPARTMENT OF PUBLIC WORKS	22-8449

REVISED DATE	BY	APPROVED DATE — CHIEF ENGINEER	APPROVED DATE — PROJECT MANAGER	SCALE: AS SHOWN / DRAWN BY: LS / CHECKED BY: TS / SHEET: C121 OF 26 / PROJECT #: P570200 / CONTRACT #: P570205
		APPROVED DATE — ASSISTANT CHIEF ENGINEER	APPROVED DATE — CHIEF, RIGHT OF WAY	S.W.M. DETAILS AND SPECIFICATIONS

THE PRESERVE AT EISENHOWER CLUBHOUSE
TAX MAP 44, GRID 4, PARCEL 45
1576 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

NO	REVISION DESCRIPTION	BY	DATE

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165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

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Terry Schuman Date 3/31/24
19593 Exp. Date
License No.

PLOTTED: Jun 30, 2023 - 9:32am
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GENERALS HIGHWAY
MARYLAND RTE. 178
(VARIABLE WIDTH SHA R/W - SCENIC & HISTORIC ROADWAY)
AoC
CRD
CoC
132
133
135
118
115
117
128
127
126
123
125
124
114
112
130B
119
130
130A
120
129
100
130C
121
101
PROPOSED BUILDING (LEVEL) AND B.RM. LOW LEVEL FF ELEV. VARIES LF ELEV. VARIES
TEMPORARY CLUBHOUSE TRAILER
EX. PAVED PARKING LOT
PROPOSED PAVED PARKING LOT
PROPOSED PAVED DRIVE
PROPOSED PAVED PATIO
PROPOSED PAVED WALK
PROPOSED GRAVEL WALK
PROPOSED GRAVEL PATIO
PROPOSED GRAVEL DRIVE
PROPOSED GRAVEL PARKING
PROPOSED GRAVEL PARKING LOT
PROPOSED GRAVEL PARKING LOT
PROPOSED GRAVEL PARKING LOT

BORING LOG
Boring: B-1 (1 of 1)

Project No: 75B-0033
Client: Bay Engineering, Inc.
Project: Eisenhower Golf Course Clubhouse
City/State: Crownsville, Maryland
Elevation: 138.3 ± **Total Depth:** 25.0' **Boring Location:** See Location Plan
Drilling Method: HSA **Hammer Type:** Automatic **Data Drilled:** 3/8/23 **Driller:** D&S Drilling

Elevation	Depth	Description of Materials (Classification)	* Sample Blows	Sample Depth (feet)	N-Value (blows/ft)	Remarks
137.5	0.8	10 inches of mulch	4-7-3 REC=44%	0.0	10	**Subsurface Water Data**
136.3	2.0	FILL: Brown, moist, loose, Sandy SILT, mulch and wood (FILL-ML)	4-5-5 REC=89%	1.5 2.0		Dry while drilling
		Orange brown, moist, loose to medium dense, Silty Clayey SAND (SM-SC)	3-4-6 REC=100%	3.5	10	Dry upon completion
				5.0	15	Cave-in at 22.5 feet upon completion
			5-8-10 REC=100%	6.5	18	
130.3	8.0		5-9-12 REC=89%	8.0 8.5	21	
		Brown, moist, medium dense to dense, Silty SAND (SM)		10.0		
			7-10-16 REC=100%	13.5 15.0	26	
			11-16-17 REC=100%	18.5 20.0	33	
				23.5		
113.3	25.0	Boring terminated at 25 feet.	13-17-21 REC=100%	25.0	38	

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D. x 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N-Value.

BORING LOG
Boring: B-2 (1 of 1)

Project No: 75B-0033
Client: Bay Engineering, Inc.
Project: Eisenhower Golf Course Clubhouse
City/State: Crownsville, Maryland
Elevation: 141.9 ± **Total Depth:** 25.0' **Boring Location:** See Location Plan
Drilling Method: HSA **Hammer Type:** Automatic **Data Drilled:** 3/8/23 **Driller:** D&S Drilling

Elevation	Depth	Description of Materials (Classification)	* Sample Blows	Sample Depth (feet)	N-Value (blows/ft)	Remarks
141.2	0.7	3 inches of Asphalt over 4 inches of gravel	3-6-6 REC=100%	0.5	12	**Subsurface Water Data**
		Brown, moist, stiff to very stiff, Silty CLAY (CL)	5-6-4 REC=100%	1.5 2.0		Dry while drilling
			2-4-4 REC=100%	3.5	8	Dry upon completion
				5.0		Cave-in at 18.9 feet upon completion
			7-9-12 REC=100%	6.5	21	
		Greenish brown, moist, medium dense, Silty Fine SAND (SM)	4-5-9 REC=100%	8.0 8.5 10.0	14	
			7-7-10 REC=100%	13.5 15.0	17	
			5-8-10 REC=100%	18.5 20.0	18	
116.9	25.0	Boring terminated at 25 feet.	14-14-13 REC=100%	23.5 25.0	27	

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D. x 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N-Value.

BORING LOG
Boring: B-3 (1 of 1)

Project No: 75B-0033
Client: Bay Engineering, Inc.
Project: Eisenhower Golf Course Clubhouse
City/State: Crownsville, Maryland
Elevation: 139.5 ± **Total Depth:** 25.0' **Boring Location:** See Location Plan
Drilling Method: HSA **Hammer Type:** Automatic **Data Drilled:** 3/8/23 **Driller:** D&S Drilling

Elevation	Depth	Description of Materials (Classification)	* Sample Blows	Sample Depth (feet)	N-Value (blows/ft)	Remarks
139.3	0.3	3 inches of surface soil	2-3-3 REC=17%	0.0	6	**Subsurface Water Data**
		Brown, moist, firm, Silty CLAY with organic matter (CL)		1.5 2.0		Dry while drilling
137.5	2.0	Brown, moist, firm to stiff, Silty CLAY (CL)	3-3-5 REC=100%	3.5	8	Dry upon completion
			3-4-6 REC=100%	5.0	10	Cave-in at 20.8 feet upon completion
			4-5-7 REC=100%	6.5 8.0 8.5	12	
133.5	6.0	Brown to greenish brown, moist, medium dense, Silty SAND, trace clay (SM)	3-5-6 REC=100%	10.0	11	
			5-6-6 REC=100%	13.5 15.0	12	
			5-9-12 REC=100%	18.5 20.0	21	
114.5	25.0	Boring terminated at 25 feet.	8-9-13 REC=100%	23.5 25.0	22	
			10-13-16 REC=100%		29	

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D. x 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N-Value.

BORING LOG
Boring: B-4 (1 of 1)

Project No: 75B-0033
Client: Bay Engineering, Inc.
Project: Eisenhower Golf Course Clubhouse
City/State: Crownsville, Maryland
Elevation: 134.9 ± **Total Depth:** 25.0' **Boring Location:** See Location Plan
Drilling Method: HSA **Hammer Type:** Automatic **Data Drilled:** 3/8/23 **Driller:** D&S Drilling

Elevation	Depth	Description of Materials (Classification)	* Sample Blows	Sample Depth (feet)	N-Value (blows/ft)	Remarks
134.4	0.5	6 inches of mulch	3-5-4 REC=47%	0.0	9	**Subsurface Water Data**
132.9	2.0	FILL: Brown and gray, moist, loose, Sandy SILT, trace organic matter and gravel (FILL-ML)	2-3-3 REC=89%	1.5 2.0	6	Dry while drilling
		Brown, moist, firm to stiff, Silty CLAY (CL)	3-4-5 REC=100%	3.5	9	Dry upon completion
			3-5-6 REC=100%	5.0 6.5	11	Cave-in at 21.7 feet upon completion
126.9	8.0	Brown to greenish brown, moist, medium dense to dense, Silty SAND, trace clay (SM)	3-6-9 REC=100%	8.0 8.5 10.0	15	
			4-8-11 REC=100%	13.5 15.0	19	
			7-10-12 REC=100%	18.5 20.0	22	
109.9	25.0	Boring terminated at 25 feet.	9-13-18 REC=100%	23.5 25.0	31	

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D. x 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N-Value.

BORING LOG
Boring: B-5 (1 of 1)

Project No: 75B-0033
Client: Bay Engineering, Inc.
Project: Eisenhower Golf Course Clubhouse
City/State: Crownsville, Maryland
Elevation: 141 ± **Total Depth:** 25.0' **Boring Location:** See Location Plan
Drilling Method: HSA **Hammer Type:** Automatic **Data Drilled:** 3/9/23 **Driller:** D&S Drilling

Elevation	Depth	Description of Materials (Classification)	* Sample Blows	Sample Depth (feet)	N-Value (blows/ft)	Remarks
140.3	0.7	4 inches of asphalt over 4 inches of gravel	3-5-6 REC=100%	0.0	11	**Subsurface Water Data**
		Brown, moist, medium dense to loose, Silty SAND (SM)		1.5 2.0		Dry while drilling
			3-4-4 REC=100%	3.5	8	Dry upon completion
137.5	3.5	Orange brown, moist, very stiff, Silty CLAY (CL)	8-10-12 REC=100%	5.0	22	Cave-in at 20.4 feet upon completion
			6-9-10 REC=100%	6.5 8.0 8.5	19	
133.0	8.0	Orange brown to green brown, moist, loose to medium dense Silty SAND (SM)	5-4-5 REC=100%	10.0	9	
			7-8-9 REC=100%	13.5 15.0	17	
			6-9-12 REC=100%	18.5 20.0	21	
				23.5		
116.0	25.0	Boring terminated at 25 feet.	10-12-14 REC=100%	25.0	26	

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D. x 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N-Value.

BORING LOG
Boring: B-6 (1 of 1)

Project No: 75B-0033
Client: Bay Engineering, Inc.
Project: Eisenhower Golf Course Clubhouse
City/State: Crownsville, Maryland
Elevation: 133 ± **Total Depth:** 25.0' **Boring Location:** See Location Plan
Drilling Method: HSA **Hammer Type:** Automatic **Data Drilled:** 3/9/23 **Driller:** D&S Drilling

Elevation	Depth	Description of Materials (Classification)	* Sample Blows	Sample Depth (feet)	N-Value (blows/ft)	Remarks
132.4	0.6	3 inches of asphalt over 4 inches of gravel	10-6-6 REC=78%	0.0	12	**Subsurface Water Data**
		Brown, moist, medium dense, Silty SAND (SM)		1.5 2.0		Dry while drilling
			5-5-7 REC=100%	3.5	12	Dry upon completion
			8-9-11 REC=100%	5.0	20	Cave-in at 17.3 feet upon completion
			4-6-8 REC=100%	6.5 8.0 8.5	14	
119.5	13.5	Orange brown to brown, dense to very dense, Silty SAND (SM)	5-6-7 REC=100%	10.0	13	
			45-31-20 REC=100%	13.5 15.0	51	
			28-30-30 REC=100%	18.5 20.0	60	
108.0	25.0	Boring terminated at 25 feet.	16-20-24 REC=100%	23.5 25.0	44	

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D. x 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N-Value.

BORING LOG
Boring: FT-1 (1 of 1)

Project No: 75B-0033
Client: Bay Engineering, Inc.
Project: Eisenhower Golf Course Clubhouse
City/State: Crownsville, Maryland
Elevation: 138.3 ± **Total Depth:** 10.0' **Boring Location:** See Location Plan
Drilling Method: HSA **Hammer Type:** Automatic **Data Drilled:** 3/9/23 **Driller:** D&S Drilling

Elevation	Depth	Description of Materials (Classification)	* Sample Blows	Sample Depth (feet)	N-Value (blows/ft)	Remarks
138.1	0.3	3 inches of surface soil	2-2-2 REC=100%	0.0 0.5	4	**Subsurface Water Data**
		Multi colored brown, moist, soft to firm, Silty CLAY (CL)	2-3-4 REC=89%	1.5 2.0	7	Dry while drilling
			3-3-4 REC=100%	3.5 5.0	7	Dry upon completion
			3-4-4 REC=100%	6.5 8.0 8.5	8	Cave-in at 6.4 feet upon completion
128.3	10.0	Boring terminated at 10 feet.	3-4-4 REC=100%	10.0	8	

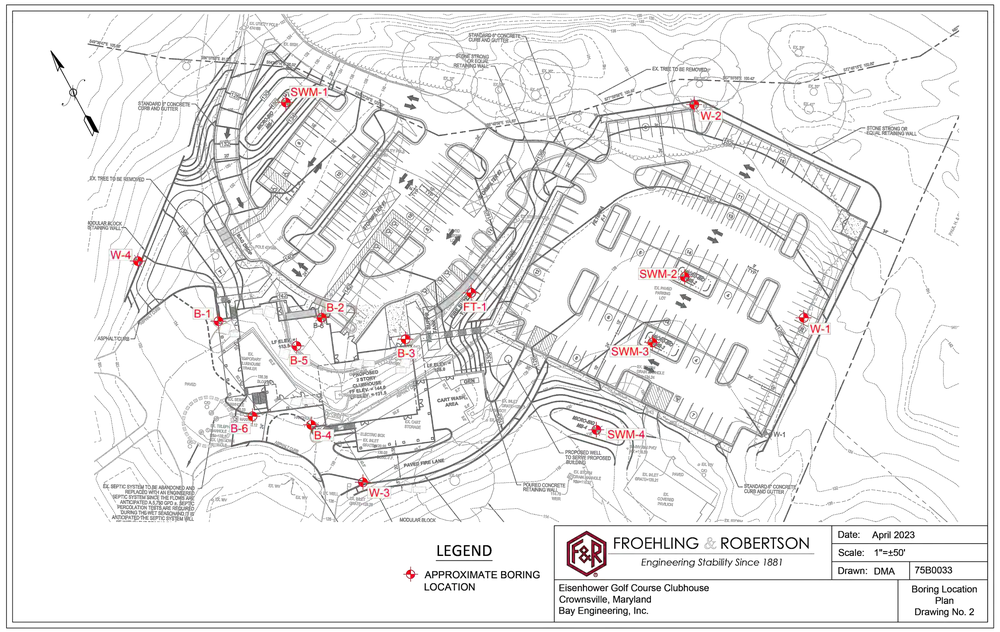
*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D. x 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N-Value.

BORING LOG
Boring: SWM-1 (1 of 1)

Project No: 75B-0033
Client: Bay Engineering, Inc.
Project: Eisenhower Golf Course Clubhouse
City/State: Crownsville, Maryland
Elevation: 131.5 ± **Total Depth:** 12.0' **Boring Location:** See Location Plan
Drilling Method: HSA **Hammer Type:** Automatic **Data Drilled:** 3/9/23 **Driller:** D&S Drilling

Elevation	Depth	Description of Materials (Classification)	* Sample Blows	Sample Depth (feet)	N-Value (blows/ft)	Remarks
131.2	0.3	4 inches of surface soil	2-2-3 REC=83%	0.0	5	**Subsurface Water Data**
		Brown, moist, loose Silty SAND, trace organic matter (SM)		1.5 2.0		Dry while drilling
129.5	2.0	Reddish brown to green brown, moist, medium dense to dense, Clayey SAND, trace silt (SC)	4-6-7 REC=100%	3.5	13	Dry upon completion
			5-7-10 REC=78%	5.0	17	Cave-in at 9.1 feet upon completion
			6-8-12 REC=100%	6.5 8.0	20	
			7-11-13 REC=89%	9.5 10.5	24	
119.5	12.0	Boring terminated at 12 feet.	7-14-18 REC=78%	12.0	32	

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D. x 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N-Value.

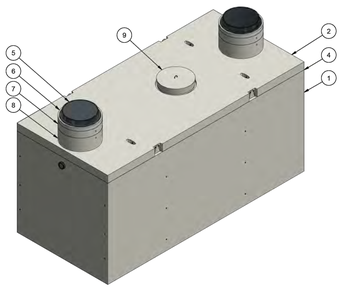

SWM-1
W-2
W-4
B-1
B-2
B-3
B-4
B-5
B-6
FT-1
W-3
SWM-2
SWM-3
SWM-4
W-1
EX. TREE TO BE REMOVED
STONE STRONG OR EQUAL RETAINING WALL
STANDARD 6" CONCRETE CURB AND GUTTER
MODULAR BLOCK RETAINING WALL
ASPHALT DRIVE
PROPOSED 1 STORY CLUBHOUSE FF ELEV. = 141.5
PROPOSED 1 STORY CLUBHOUSE FF ELEV. = 141.5
EX. SEPTIC SYSTEM TO BE ABANDONED AND REMOVED. PROPOSED CLUBHOUSE SEPTIC SYSTEM SINCE THE FLOWS ARE ANTICIPATED A 5,750 GPD. A SEPTIC SYSTEM WAS DESIGNED AND APPROVED TO MEET ISSUES REQUIRED. ANTICIPATED THE SEPTIC SYSTEM SHALL
PROPOSED RETAINING WALL
PROPOSED WELL TO SERVE PROPOSED BUILDING
EX. WELL TO REMAIN
EX. SEPTIC SYSTEM TO REMAIN
EX. COVERED PAVILION
EX. TENNIS COURTS
EX. PAVED PARKING LOT
EX. GRAVEL PARKING LOT
EX. TEMPORARY CLUBHOUSE
EX. PAVILION
EX. GAZEBO
EX. GRAVEL PARKING AREA
EX. GRAVEL PARKING AREA
EX. GRAVEL PARKING AREA

NOTES

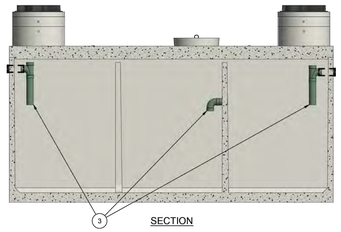
- IN COMPLIANCE WITH UNIFORM PLUMBING CODE (UPC), INTERNATIONAL PLUMBING CODE (IPC), AND STRUCTURAL LOADING REQUIREMENTS OF ASTM INTERNATIONAL C1227.
- JENSEN PRECAST'S PRODUCT IS LISTED BY IAPMO R&T TO STANDARD Z1000. MODEL JZ-5000-EBE-ST.
- MINIMUM ONE (1) ACCESS OPENING PER COMPARTMENT REQUIRED (AS SHOWN). ADDITIONAL ACCESS CAN BE ADDED IN LIEU OF PLUG COVER WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
- MUST BE INSTALLED PER "JENSEN PRECAST UNDERGROUND WASTEWATER PRECAST CONCRETE TANK INSTALLATION PROCEDURE" WHICH CAN BE FOUND AT https://www.jensenprecast.com/Tank-Installation-Procedure-d2106.pdf. THIS PROCEDURE ADDRESSES REQUIRED EXCAVATION, SITE PREPARATION, INSTALLATION, VENTILATION, AND WATER/VACCUM TESTING

BILL OF MATERIALS

ITEM	QTY	PART NUMBER	DESCRIPTION	WEIGHT (LBS)
1	1	200016151	Tank JZ 5000 Gallon 4 Inch Base Section Single Baffle	25659
2	1	200011223	Tank JZ 4000/5000 Gallon x 8 Slab Top 24"E, 24"B, 24"E	11475
3	1	200049042	200017817 Plumbing - JZ 5000 4 Inch Septic 24"E, 24"B, 24"E Single Baffle	6
4	4	100013648	SEALANT JOINT BUTYL RUBBER ASTM C-990 AND M198 CS-102 1IN EQUIV X14.5FT PER ROLL	0
5	JOB SPECIFIC	100005850	CI RINGCOVER 24DIA B-5105-02/B-5105-R2 ASTM A48 CL35B CP O-RING GASKET OSI JENSEN/INTERCEPT	196
6	JOB SPECIFIC	100001524	Grade Ring D2432x3	87
7	JOB SPECIFIC	100001525	Grade Ring D2432x6	180
8	JOB SPECIFIC	100001526	Grade Ring D2432x12	365
9	JOB SPECIFIC	100012046	Plug Cover D2428x6 Slab Top	300



ISO LAYOUT



SECTION

MODEL:
JZ-5000-EBE-ST

REVISION HISTORY

REV	DESCRIPTION	DATE	BY
A	DRAWING CREATED	1/31/2019	T.Larson
B	TOP SLAB LIFTING AND PLUMBING UPDATED	2/12/2021	C.Keller
C	THREADED INSERTS AND BAFFLE WALL NOTCH FIXED	5/2/2022	E.FINE
D	ACCESSORIES UPDATED	8/4/2022	E.FINE

BURY DEPTH:	1.1' - 4.0' to Top		
WATER LEVEL:	Below Structure	WEIGHT:	39096.16 Lbs
DESIGN SPEC:	ASTM C890,ACI 318	LOADING SPEC:	A-16 (AASHTO HS20-44)
REINFORCEMENT TYPE:		LIFTING TYPE:	

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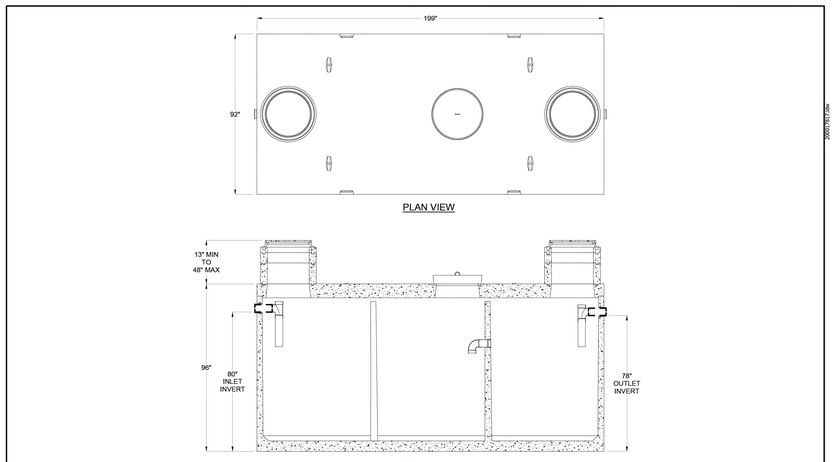
DESCRIPTION:	Tank JZ 5000 Gallon 4 Inch Layout Septic 24"E, 24"B, 24"E Single Baffle		REV: C-3
LAYOUT DRAWING			
PART NUMBER:	200017817	DRAWN BY:	E. Fine
CREATED:	1/31/2019	MODIFIED:	8/4/2022
			SHEET: 1 OF 2



BURY DEPTH:	1.1' - 4.0' to Top		
WATER LEVEL:	Below Structure	WEIGHT:	39096.16 Lbs
DESIGN SPEC:	ASTM C890,ACI 318	LOADING SPEC:	A-16 (AASHTO HS20-44)
REINFORCEMENT TYPE:		LIFTING TYPE:	

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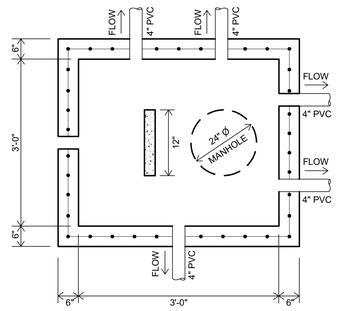
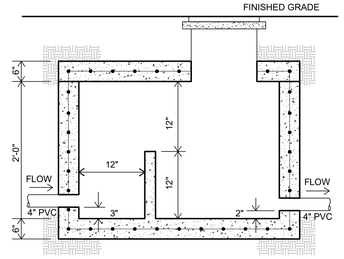
DESCRIPTION:	Tank JZ 5000 Gallon 4 Inch Layout Septic 24"E, 24"B, 24"E Single Baffle		REV: C-3
LAYOUT DRAWING			
PART NUMBER:	200017817	DRAWN BY:	E. Fine
CREATED:	1/31/2019	MODIFIED:	8/4/2022
			SHEET: 2 OF 2

5,000 GALLON SEPTIC TANK DETAIL

SCALE: NONE



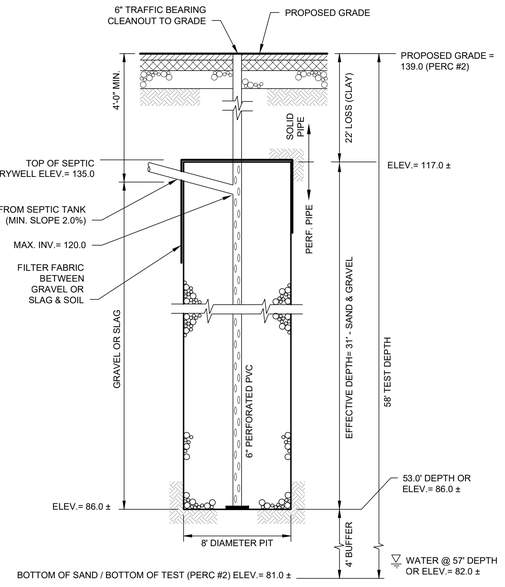
PLAN



SECTION

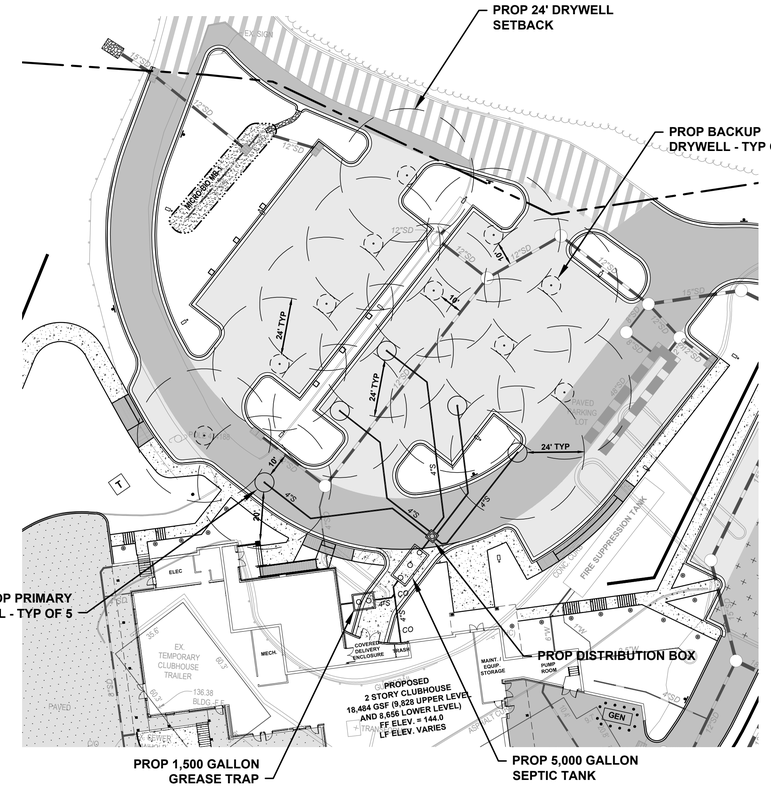
CAST-IN-PLACE DISTRIBUTION BOX DETAIL

REFER TO PLAN VIEW FOR PLACEMENT OF OUTLET PIPES
SCALE: NONE



TYPICAL SEPTIC DRYWELL DETAIL

SCALE: NONE



SEPTIC PLAN

SCALE: 1"=30'

SEPTIC SYSTEM DESIGN NOTES

1. **PERC TEST INFORMATION**
   - TEST (PERC TEST #PAT02050548 WAS PERFORMED ON FEBRUARY 8, 2023 - REFER TO RESULTS ON SHEET
   - PT#1 - GOOD SANDS AVAILABLE 39' EFFECTIVE MATERIAL
   - PT#2 - GOOD SANDS AVAILABLE 31' EFFECTIVE MATERIAL
2. **PROPOSED BUILDING USE & FLOWS ARE AS FOLLOWS**
   - GOLF COURSE = 3,500 GPD
   - BANQUET HALL = 150 PERSONS x 5 GPD / SEAT = 750 GPD
   - TOTAL FLOW = 4,250 GPD
3. **SEPTIC DRYWELL SIZING (PRIMARY AND BACKUPS)**
   (USING 8' DIAMETER DRYWELL) FOR PRIMARY AND BACKUPS
   - 3 MIN. TEST = USE 1.20 GPD / SQ.FT. PER STATE
   - 4,250 GPD ÷ 1.2 GAL. / S.F. / DAY = 3,542 S.F. REQ'D. SIDEWALL AREA
   - SIDEWALL AREA PER DRYWELLS (8' x 3.14 x 31') = 779 S.F.
   - NUMBER OF DRYWELLS REQ'D. = 3,542 / 779 = 5 DRYWELLS
   - NUMBER OF DRYWELLS PROPOSED = 5 DRYWELLS (PRIMARY) AND 10 DRYWELLS (BACKUPS #1 & #2)
4. **SEPTIC TANK SIZING**
   - V = 1,125 GALLONS ÷ 0.75 (Q) WHERE Q= 4,250 GPD
   - < 1,125 ÷ 0.75 (4,250) = 4,313 GALLONS; PROPOSING A 5,000 GALLON SEPTIC TANK
5. **SEPTIC DRYWELL SPACING**
   - 3 x DIA. (EDGE TO EDGE) = 24' EDGE TO EDGE OR 28' CENTER TO CENTER

SEPTIC TANK AND SEPTIC SYSTEM GENERAL NOTES

1. ALL CONCRETE USED FOR THE SEPTIC TANK CONSTRUCTION SHALL HAVE A MINIMUM 28 DAY COMPREHENSIVE STRENGTH OF 4,000 PSI AND SHALL BE READY MIXED (ASTM C94). WATER TO CEMENT RATIO OF APPROXIMATELY 0.45 BY WEIGHT SHALL BE ADHERED TO. PORTLAND CEMENT USED IN THE MIX SHALL BE TYPE V (ASTM C150) AND SHALL BE AIR ENTRAINED (ASTM C220, C260, C595) TO 5% AIR CONTENT TO INSURE WATER TIGHTNESS. ALL INTERIOR AND EXPOSED SURFACES SHALL BE STEEL TROWELED TO A SMOOTH FINISH. THE C3A CONTENT OF THE PORTLAND CEMENT USED SHALL BE LESS THAN 8%.
2. CONCRETE SHALL CONFORM TO ACI 310 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
3. REQUIRED STRENGTH: 4,000 PSI @ 28 DAYS (MSHA MIX #5).
4. LAP ALL SPLICES ON REBAR NOT LESS THAN 12" OR AS SPECIFIED.
5. CURE ALL CONCRETE BY SPRAYING WITH A COMMERCIAL GRADE CURING COMPOUND.
6. PLACE CONCRETE BOTTOM SLAB ON UNDISTURBED EARTH OR ON COMPACTED SUB-GRADE.
7. THE EXTERIOR OF THE TANK SHALL BE COATED WITH KOPPERS BITUMINASTIC 300M OR EQUAL.
8. REINFORCING STEEL SHALL BE GRADE 60 DEFORMED BARS IN ACCORDANCE WITH ASTM A615.
9. ALL PVC PIPING SHALL BE IN CONFORMANCE WITH ASTM D3033 TYPE PSP OR ASTM D3034 TYPE PSM. METHODS SHOULD CONFORM WITH PLUMBING CODE.
10. THIS PLAN INDICATES THE INTENDED OR PREFERRED LAYOUT. THE CONTRACTOR SHALL VERIFY THAT THERE ARE NO UTILITY CONFLICTS PRIOR TO CONSTRUCTION. FIELD ADJUSTMENTS MAY BE NECESSARY AND IF REQUIRED SHALL BE APPROVED BY THE HEALTH DEPARTMENT ENGINEER AND OWNER.
11. THIS DRAWING DOES NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE O.S.H.A. RULES AND REGULATIONS THERE TO APPURTENANT.
12. THE CONTRACTOR SHALL GIVE SUFFICIENT NOTICE TO THE ANNE ARUNDEL COUNTY HEALTH DEPARTMENT INSPECTOR, SO THAT HE MAY EXAMINE AND APPROVE THE FORMWORK AND PLACEMENT OF REINFORCING STEEL PRIOR TO POURING CONCRETE FOR ALL POURED IN PLACE COMPONENTS. FAILURE TO DO SO MAY RESULT IN REJECTION OF SAME (222-7194).
13. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING FOR THE PROPOSED TANK AND DISTRIBUTION BOX APPROVED BY A STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
14. PRE-CAST SEPTIC TANKS ARE PERMITTED SUBJECT TO MEETING ALL HEALTH DEPARTMENT CRITERIA.

NOT FOR CONSTRUCTION

NO	REVISION DESCRIPTION	BY	DATE

Bay Engineering Inc.
Engineers, Planners and Surveyors
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410.897.9295 fax
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WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

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.

STATE OF MARYLAND — TERRY L. SCHUMAN — 19593 — PROFESSIONAL ENGINEER

Terry Schuman — Date
19593 — 3/31/24
License No. — Exp. Date

ANNE ARUNDEL COUNTY — 6/30/23
DEPARTMENT OF PUBLIC WORKS — 22-8449

REVISED DATE	BY	APPROVED	DATE	APPROVED	DATE
		CHIEF ENGINEER		PROJECT MANAGER	
		APPROVED	DATE	APPROVED	DATE
		ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT OF WAY	

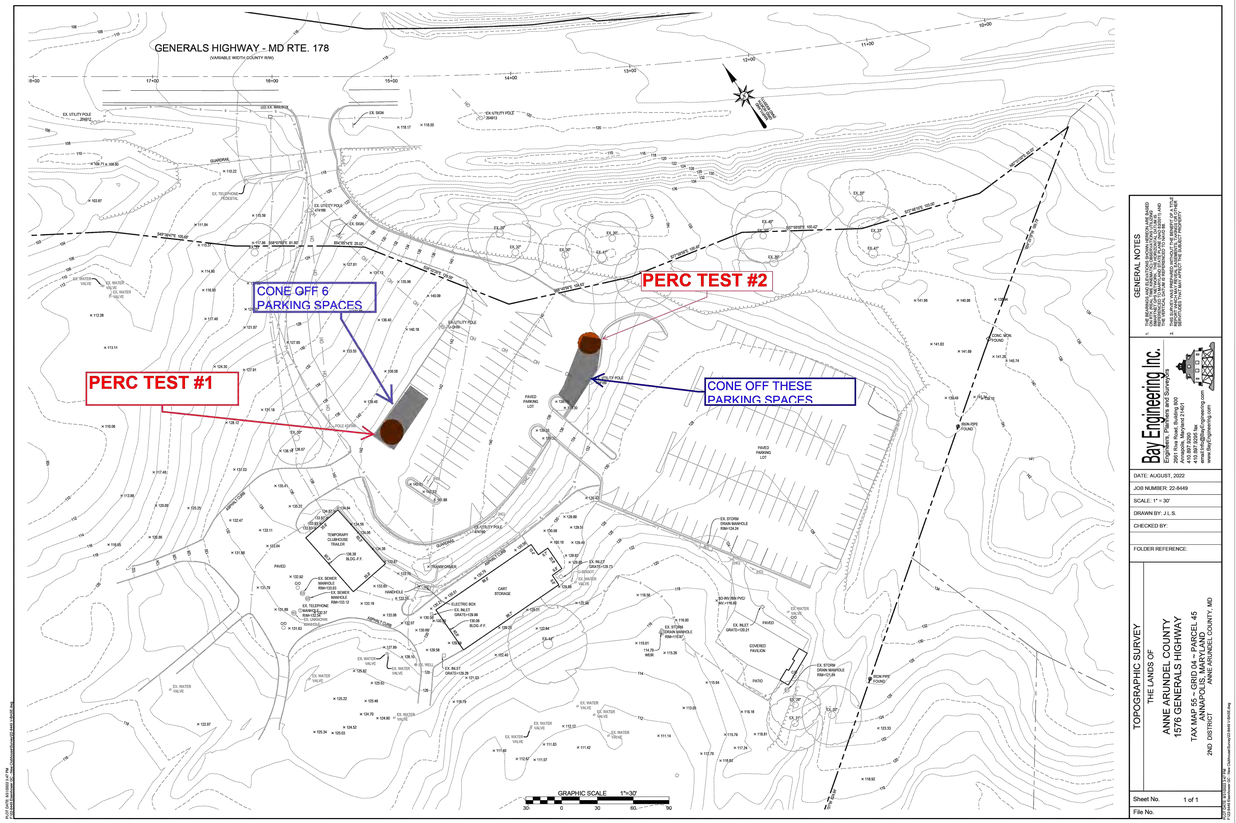
SCALE: 1"=30'
DRAWN BY: LS
CHECKED BY: TS
SHEET: C124 OF 26
PROJECT #: P570200
CONTRACT #: P570205

SEPTIC PLAN

THE PRESERVE AT EISENHOWER CLUBHOUSE
TAX MAP 44, GRID 4, PARCEL 45
1074 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

DESIGN DEVELOPMENT PLANS — C124

PLOTTED: Jun 30 , 2023 - 9:33am
F:\22-8449 Eisenhower GC - New Clubhouse\Drawing Files\DD PLANS\22-8449 EISENHOWER-GOLF-DESIGN DEVELOPMENT PLANS.dwg



GENERAL NOTES

THE BOUNDARY AND TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED BY BAY ENGINEERING INC. IN JANUARY, 2021 AND MARCH, 2022.

THE HORIZONTAL DATUM IS BASED ON MARYLAND STATE GRID NAD 83/91 AS DERIVED FROM GPS OBSERVATIONS.

THE VERTICAL DATUM IS BASED ON NAVD 88 AS DERIVED FROM GPS OBSERVATIONS AND ESTABLISHED BENCHMARKS.

Bay Engineering Inc.
Engineers, Planners and Surveyors
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www.bayengineering.com

DATE: AUGUST, 2022
JOB NUMBER: 22-8449
SCALE: 1" = 30'
DRAWN BY: J.L.S.
CHECKED BY:
FOLDER REFERENCE:

TOPOGRAPHIC SURVEY
THE LANDS OF
ANNE ARUNDEL COUNTY
1576 GENERALS HIGHWAY
TAX MAP 55 – GRID 04 – PARCEL 45
ANNAPOLIS, MARYLAND
2ND DISTRICT ANNE ARUNDEL COUNTY, MD

Sheet No. 1 of 1
File No.

ANNE ARUNDEL COUNTY DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH
COMMERCIAL PERC TEST RESULTS

Perc Application #: PAT02050548

Property: 1576 Generals Highway (Eisenhower Golf)
Sanitarian: Chris Owens Perc Date: Feb. 8, 2023

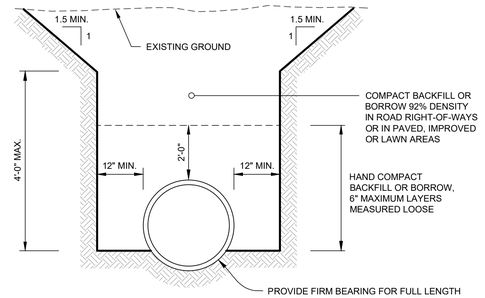
TEST RESULTS

PERC NO.	TIME (MIN)	DEPTH	SOIL LOG	WATER TABLE
1	3 Min	17"	0 – 17 Loss Loamy Clay; 17 – 60 Sand	60 Open 24 hrs
2	3 Min	22"	0 – 22 Loss Loamy Clay; 22 – 58 Sand	57 Open 24 Hrs

COMMENTS:

TRENCHING EXCAVATION NOTES

1. THE CONTRACTOR SHALL USE THIS DETAIL FOR ALL UTILITY EXCAVATIONS WHERE THE SEWER INSTALLATION IS BELOW 4 FEET IN DEPTH.
2. THE CONTRACTOR SHALL FOLLOW AND ADHERE TO ALL OSHA TRENCH EXCAVATION STANDARDS.
3. THE CONTRACTOR SHALL NOT BACKFILL ANY SEPTIC SYSTEM COMPONENT UNTIL THE HEALTH DEPARTMENT INSPECTOR HAS GIVEN AUTHORIZATION.



TYPICAL SEPTIC SYSTEM TRENCHING EXCAVATION DETAIL

SCALE: NONE

NOT FOR CONSTRUCTION

NO	REVISION DESCRIPTION	BY	DATE

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STATE OF MARYLAND · TERRA L. SCHUMAN · 19593 · PROFESSIONAL ENGINEER

Terry Schuman Date
19593 3/31/24
License No. Exp. Date

ANNE ARUNDEL COUNTY				6/30/23
DEPARTMENT OF PUBLIC WORKS				22-8449
REVISED DATE	BY	APPROVED DATE / CHIEF ENGINEER	APPROVED DATE / PROJECT MANAGER	SCALE: AS SHOWN
				DRAWN BY: LS
				CHECKED BY: TS
		APPROVED DATE / ASSISTANT CHIEF ENGINEER	APPROVED DATE / CHIEF, RIGHT OF WAY	SHEET: C125 OF 26
				PROJECT #: P570200
				CONTRACT #: P570205

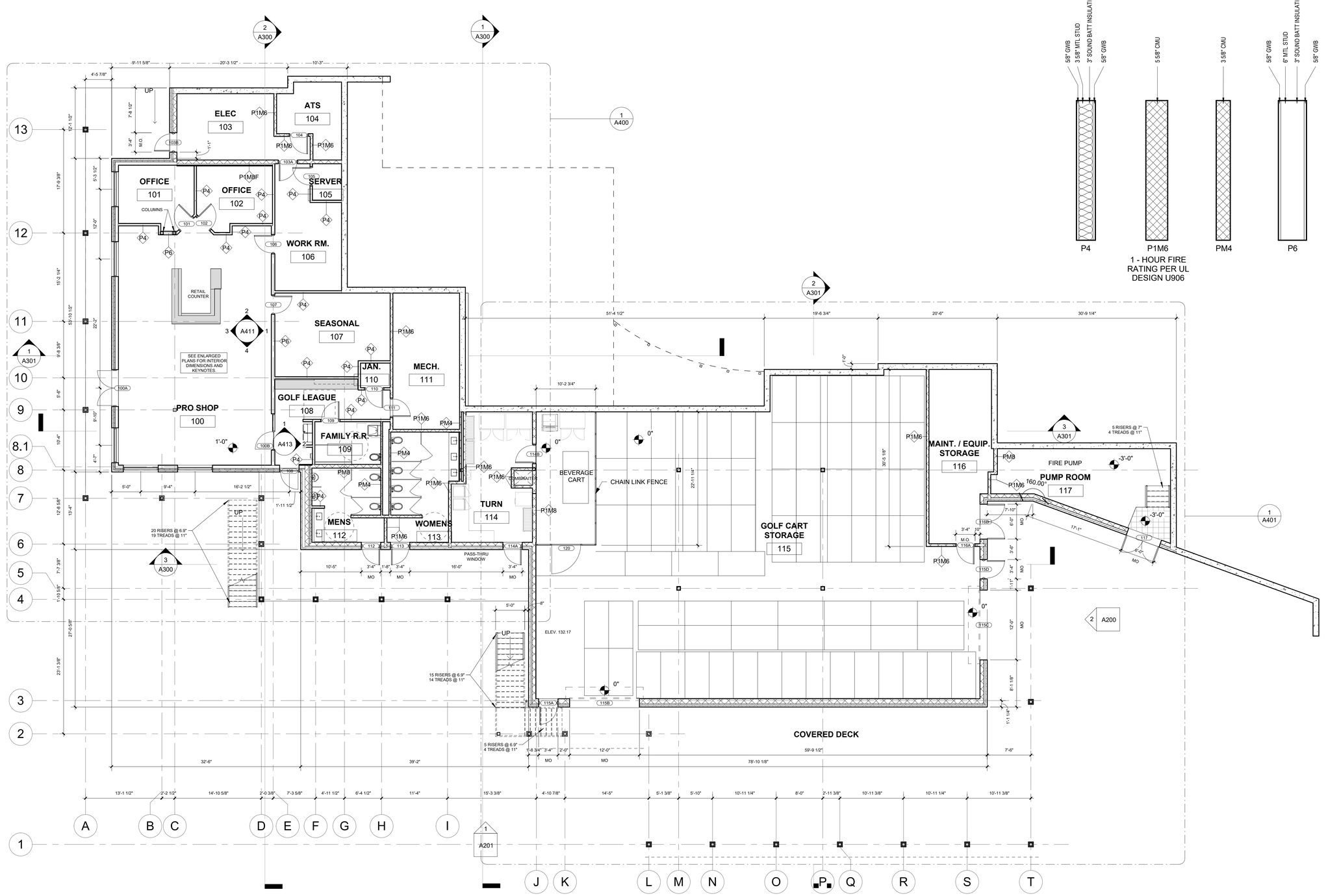
DESIGN DEVELOPMENT PLANS — C125

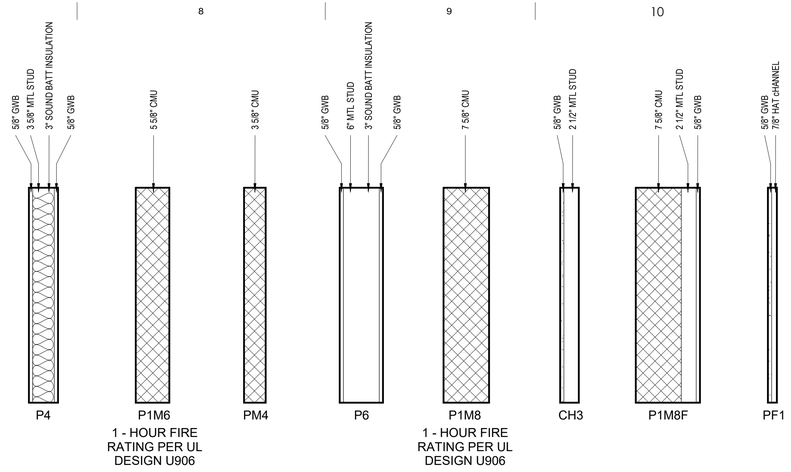
SEPTIC DETAILS AND SPECIFICATIONS

THE PRESERVE AT EISENHOWER CLUBHOUSE
TAX MAP 44, GRID 4, PARCEL 45
1576 GENERALS HIGHWAY
CROWNSVILLE, MARYLAND 21032
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS

PLOTTED: Jun 30 , 2023 - 9:33am

F:\22-8449 Eisenhower GC - New Clubhouse\Drawing Files\DD PLANS\22-8449 EISENHOWER-GOLF-DESIGN DEVELOPMENT PLANS.dwg





PARTITION TYPES

1 LOWER LEVEL FLOOR PLAN
1/8" = 1'-0"

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

A101

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

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ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

JUNE 2023
202211.1

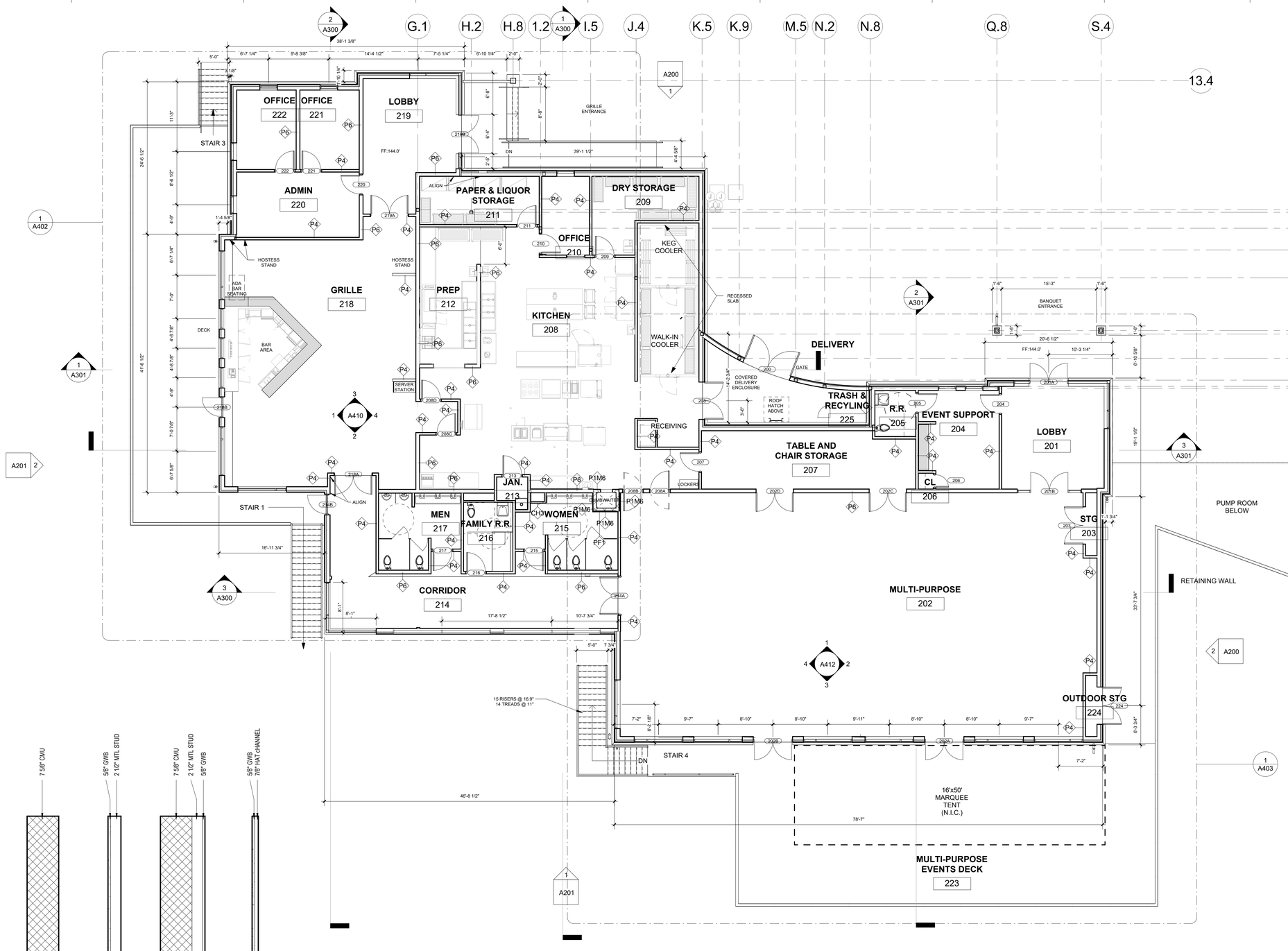
REVISED DATE	BY

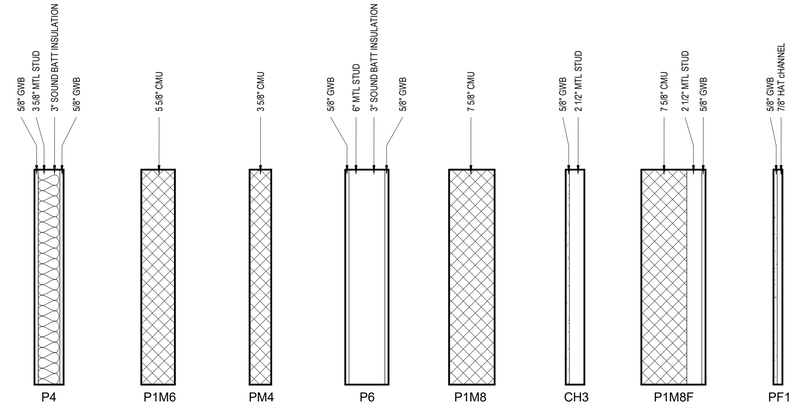
APPROVED DATE
CHIEF ENGINEER
APPROVED DATE
ASSISTANT CHIEF ENGINEER
APPROVED DATE
PROJECT MANAGER
APPROVED DATE
CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

LOWER LEVEL FLOOR PLAN

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032





PARTITION TYPES

1 MAIN LEVEL FLOOR PLAN
1/8" = 1'-0"

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT | A102

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

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410.263.6787 www.wgm-arch.com

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ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

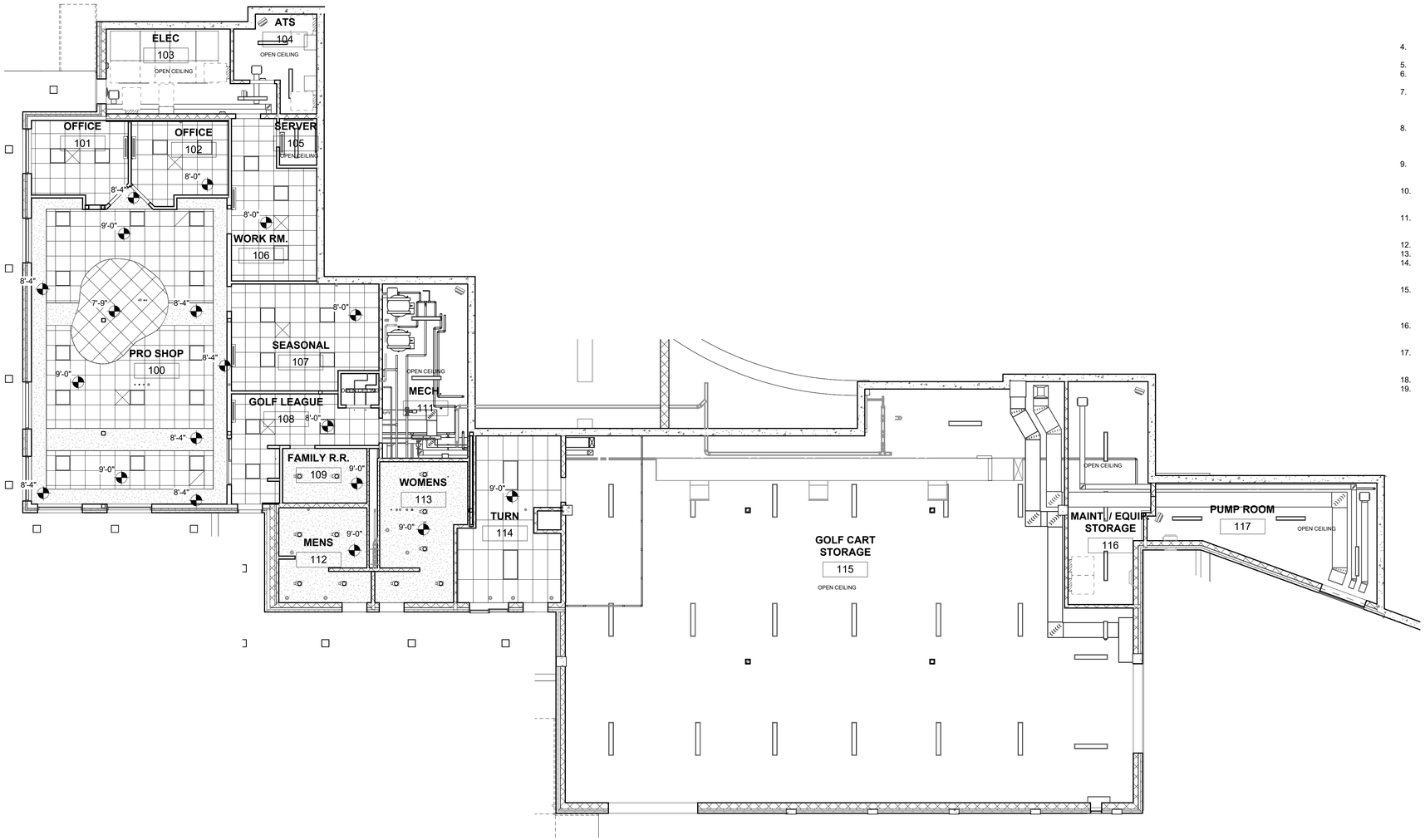
JUNE 2023
202211.1

REVISED DATE	BY	APPROVED / DATE	APPROVED / DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED / DATE	APPROVED / DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

UPPER LEVEL FLOOR PLAN

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



1 LOWER LEVEL RCP
1/8" = 1'-0"

SHEET NOTES

1. CEILING HEIGHTS ARE GIVEN FROM FINISHED FLOOR ELEV. ANY CONFLICT / DISCREPANCY SHALL BE REPORTED TO ARCHITECT BEFORE WORK IS STARTED.
2. ALL LIGHTING FIXTURES ON THIS PLAN ARE SHOW FOR LOCATION REFERENCE ONLY. COORDINATE WITH ELECTRICAL DWGS FOR FIXTURE TYPE AND WIRING DIAGRAMS.
3. ARCHITECTURAL CEILING PLANS SHALL FOVERN FOR LOCATIONS OF ALL CEILING DEVICES AS SHOWN. ENGINEERING DOCUMENTS SHALL PREVAIL ONLY INCASE OF SCOPE OF WORK AND ELEMENTS OCCURING ABOVE CEILING. DISCREPANCIES BETWEEN THE ARCHITECTURAL AND ENGINEERING DOCUMENTS MUST BE BROGHT TO THE ARCHITECT'S ATTENTION. AT TIME OF BID, ANY COSTS ASSOCIATED WITH DOCUMENT AND SPECIFICATION DISCREPANCIES NOT BROUGHT TO THE ARCHITECT'S ATTENTION SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
4. REFER TO MECHANICAL, ELECTRICAL, SPRINKLER, AND AV/IT DRAWINGS FOR DEVICES.
5. CENTER SUSPENDED CEILING GRID IN ROOMS, U.O.N.
6. TILES SHALL BE INSTALLED SO GRAIN LINES OF TILES ARE RUNNING IN SAME DIRECTION FOR EACH CEILING TYPE.
7. SPRINKLER HEADS SHALL BE CENTERED IN MODULE OF THE TILE INDICATED. SPRINKLER HEAD ESCHUTIONS IN COLOR GYPSUM BOARD PLANES SHALL BE CUSTOM FINISHED BY MANUFACTURER TO MATCH CEILING COLOR AS SCHEDULED. CONTRACTOR TO COORFINATE AS REQUIRED.
8. IF CEILING DIFFUSER, LIGHT FIXTURE, OR OTHER ELEMENTS ON OR ABOVE THE CEILING CAN NOT BE LOCATED AS SHOWN ON THE DRAWINGS, SUCH INTERFERENCE SHALL BE REPORTED IMMEDIATELY TO ARCHITECT FOR RELOCATION.
9. PROVIDE EMERGENCY BATTERY PACKS OR EMERGENCY CIRCUITS AS REQUIRED BY CODE. SEE ELECTRICAL DRAWINGS FOR CIRCUITRY OF EMERGENCY LIGHT FIXTURES.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL QUANTITY AND LOCATION OF ALL EMERGENCY DEVICES (INCLUDING BUT NOT LIMITED TO: BATTERY PACKS, EXIT SIGNS, FIRE ALARMS, ETC.) WITH MUNICIPAL AGENCY HAVING JURISDICTION.
11. DIMMERS AND SWITCHES SHALL BE GANGED TOGETHERI IN LARGEST MULTI-GANG BOXES WITH COMMON FACE PLATES POSSIBLE. STACKING OF LARGE BOXES (5 SWITCHES ABOVE 5 SWITCHES) IS ACCEPTABLE.
12. MATERIALS PLACED IN CEILING SHALL BE REQUIRED TO HAVE A PLENIUM RATING.
13. STENCIL RATED WALLS ABOVE CEILING.
14. 18" CLEARANCE MUST BE MAINTAINED BETWEN THE UNDERSIDE OF ANY SPRINKLER HEADS AND THE TOP OF ANY OBSTRUCTION BELOW EXCEPT FOR THOSE SPRINKLER HEADS INSTALLED ABOVE SUSPENDED CEILING CLOUDS.
15. ALL EXPOSED CONDUIT, PIPIN, DUCT WORK, AND STRUCTURE IN AREAS WHERE SPACE IS OPEN TO DECK ABOVE SHALL BE PAINTED: REFER TO FINISH SCHEDULE FOR PAINT SPECIFICATION; EXCEPT ALL SPIRAL DUCTS. IF NOT INDICATED, PAINT EXPOSED ELEMENTS TO MATCH ADJACENT WALL ASSEMBLY.
16. PROVIDE CONTROL JOINTS ON GYPSUM BOARD ASSEMBLIES PER CONSTRAINTS IDENTIFIED IN THE CONTRACT DOCUMENTS. IF DICREPANCIES ARE FOUND, PROCEED WITH THE MOST STRINGENT METHOD.
17. FULL HEIGHT PARTITION WALLS CAN NOT HAVE ANY PORTION OF A V.A.V. BOX OR FAN POWERED BOX ABOVE THEM. RELOCATE AFFECTED V.A.V. AND F.P. BOXES AS REQUIRED.
18. LIGHTING PENDANTS TO BE SET AT 8'-6" AFF TO BOTTOM OF FIXTURE.
19. SEE I.D. DRAWINGS FOR DECORATIVE LIGHTING LAYOUT.

RCP LEGEND

- GYPSUM BOARD CEILING
- OPEN CEILING
- 2'X4' ACOUSTIC TILE CEILING
- 2'X2' ACOUSTIC TILE CEILING

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT | A110

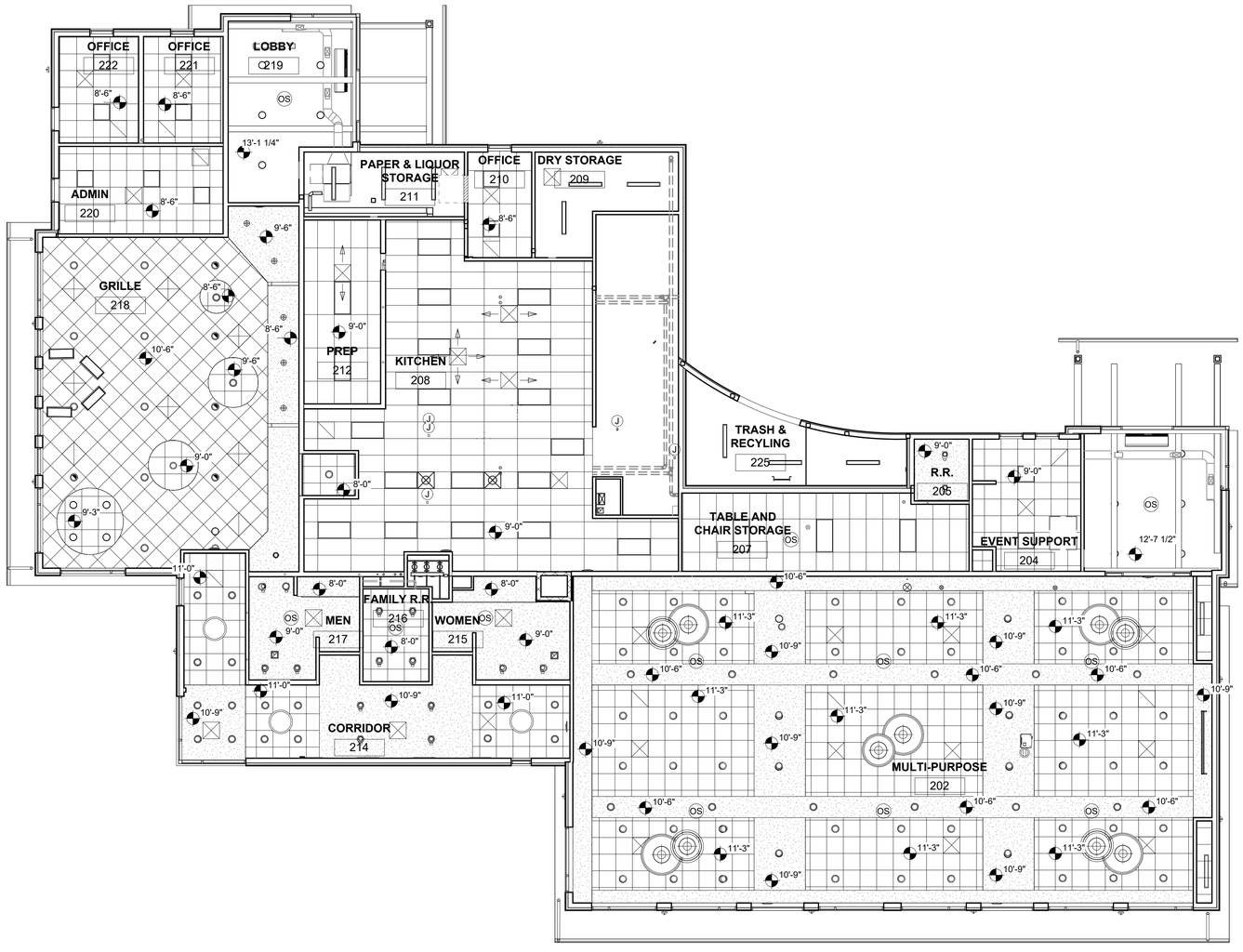
No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Mayland, license number 13453, expiration date 08-29-2022.

ANNE ARUNDEL COUNTY | JUNE 2023
DEPARTMENT OF PUBLIC WORKS | 202211.1

REVISED DATE	BY	APPROVED / DATE	APPROVED / DATE	SCALE: AS NOTED	LOWER FLOOR RCP
				DRAWN BY:	
		CHIEF ENGINEER	PROJECT MANAGER	CHECKED BY:	
		APPROVED / DATE	APPROVED / DATE	SHEET: OF	The Preserve at Eisenhower Clubhouse 1576 Generals Hwy Crownsville, MD 21032
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	PROJECT #: P570200	
				CONTRACT #: P570205	



1 MAIN LEVEL
1/8" = 1'-0"

SHEET NOTES

1. CEILING HEIGHTS ARE GIVEN FROM FINISHED FLOOR ELEV. ANY CONFLICT / DISCREPANCY SHALL BE REPORTED TO ARCHITECT BEFORE WORK IS STARTED.
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18. LIGHTING PENDANTS TO BE SET AT 8'-6" AFF TO BOTTOM OF FIXTURE.
19. SEE I.D. DRAWINGS FOR DECORATIVE LIGHTING LAYOUT.

RCP LEGEND

- GYPSUM BOARD CEILING
- OPEN CEILING
- 2'X4' ACOUSTIC TILE CEILING
- 2'X2' ACOUSTIC TILE CEILING

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT | A111

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

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I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland, license number 18853, expiration date 08-29-2022.

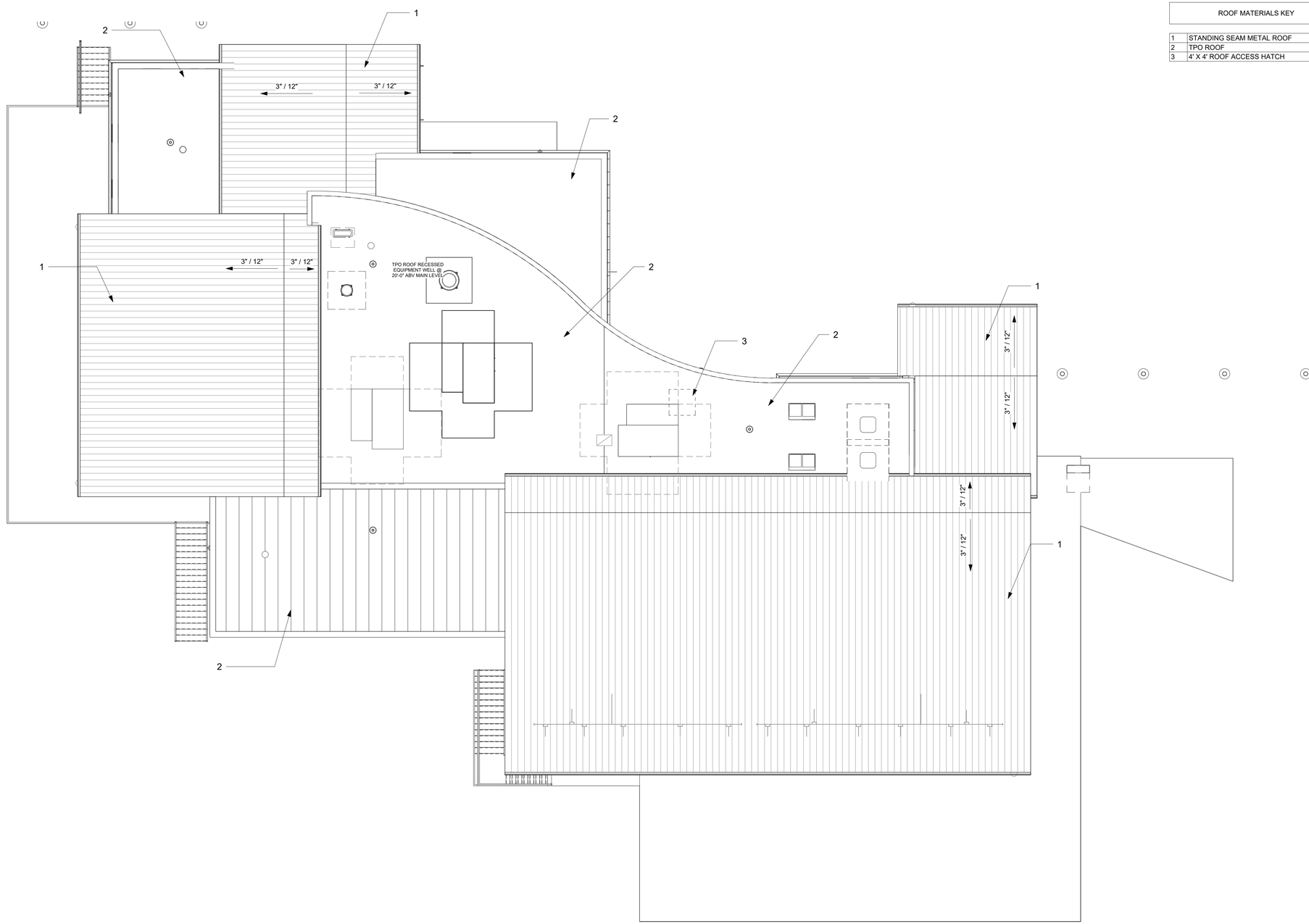
ANNE ARUNDEL COUNTY — JUNE 2023
DEPARTMENT OF PUBLIC WORKS — 202211.1

REVISED DATE	BY	APPROVED DATE	APPROVED DATE	
				SCALE: AS NOTED
				DRAWN BY:
		CHIEF ENGINEER	PROJECT MANAGER	CHECKED BY:
		APPROVED DATE	APPROVED DATE	SHEET: OF
				PROJECT #: P570200
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	CONTRACT #: P570205

UPPER FLOOR RCP

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032

ROOF MATERIALS KEY	
1	STANDING SEAM METAL ROOF
2	TPO ROOF
3	4' X 4' ROOF ACCESS HATCH



2 ROOF
1/8" = 1'-0"

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT | A112

ANNE ARUNDEL COUNTY | JUNE 2023

DEPARTMENT OF PUBLIC WORKS | 202211.1

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

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ARCHITECTURE + INTERIORS
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STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

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REVISED DATE	BY

APPROVED DATE _____ CHIEF ENGINEER

APPROVED DATE _____ PROJECT MANAGER

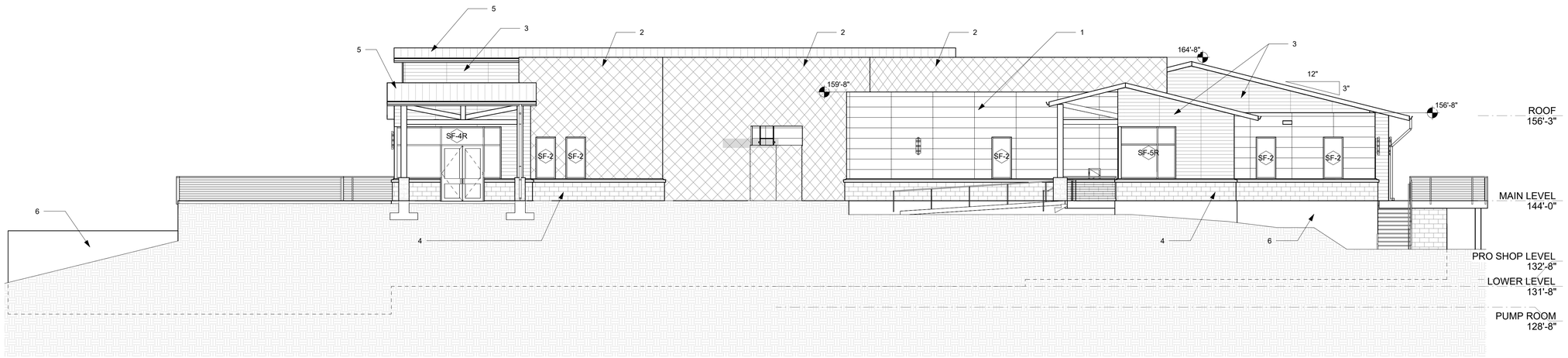
APPROVED DATE _____ ASSISTANT CHIEF ENGINEER

APPROVED DATE _____ CHIEF, RIGHT OF WAY

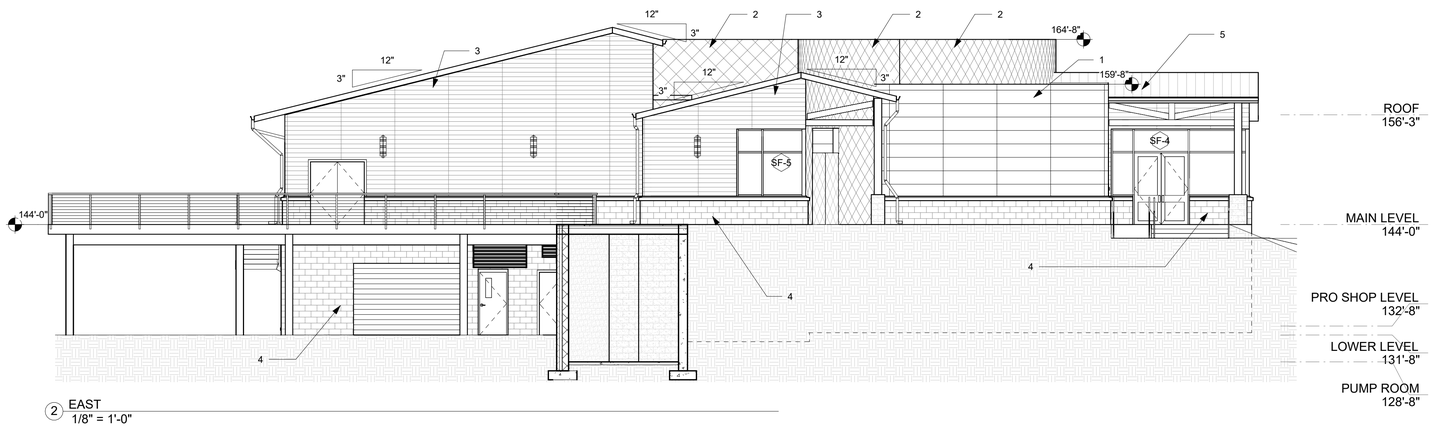
SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

ROOF PLAN

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



1 NORTH
1/8" = 1'-0"



2 EAST
1/8" = 1'-0"

EXTERIOR MATERIALS KEY

1	18' O.C. HORIZONTAL ARCHITECTURAL WALL PANELS
2	15" MODULAR METAL WALL PANELS
3	6' O.C. HORIZONTAL ARCHITECTURAL WALL PANELS
4	8" GROUND FACE CMU
5	STANDING SEAM METAL ROOF
6	CONCRETE

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

A200

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

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ARCHITECTURE + INTERIORS
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ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

JUNE 2023
202211.1

REVISED DATE	BY

APPROVED DATE
CHIEF ENGINEER

APPROVED DATE
PROJECT MANAGER

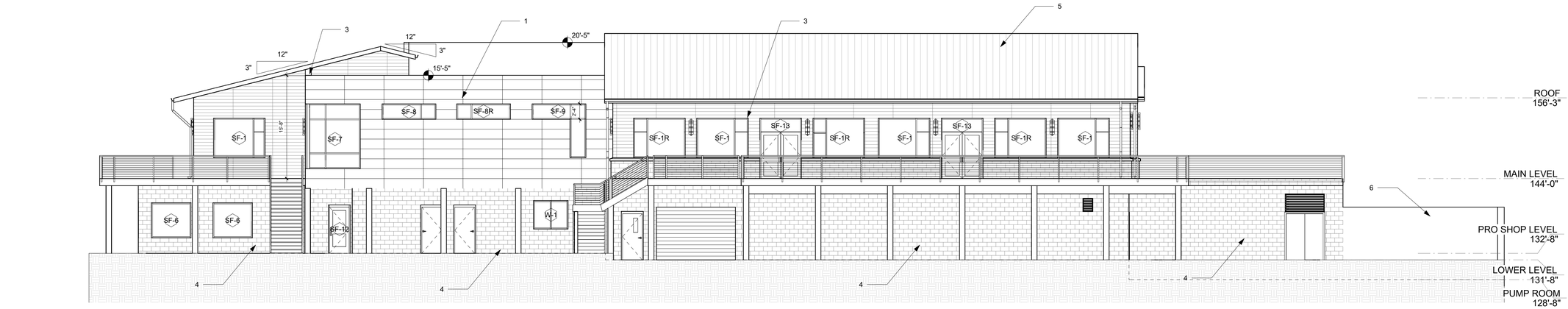
APPROVED DATE
ASSISTANT CHIEF ENGINEER

APPROVED DATE
CHIEF, RIGHT OF WAY

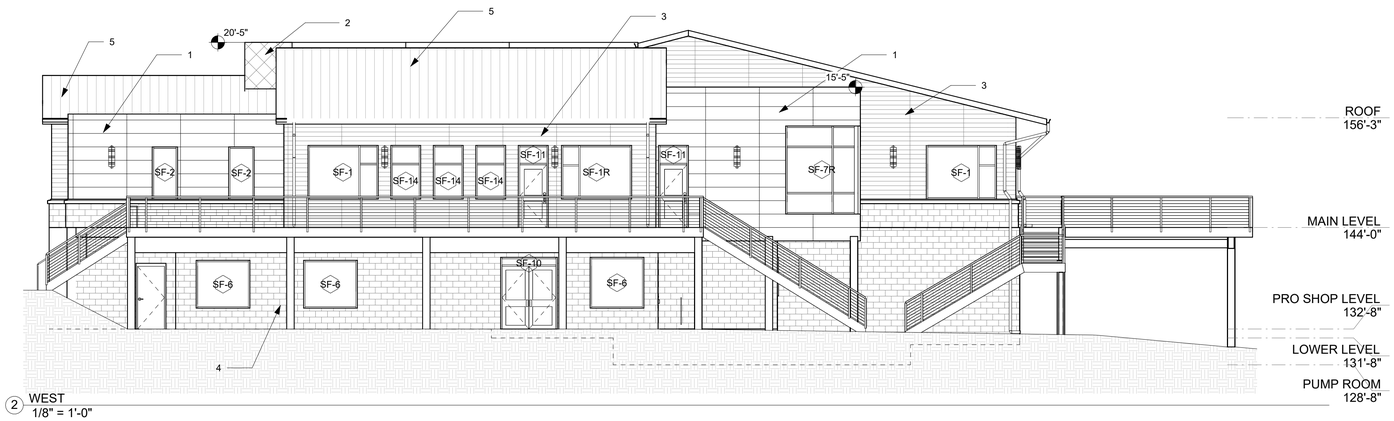
SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

BUILDING ELEVATIONS

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



1 SOUTH
1/8" = 1'-0"



2 WEST
1/8" = 1'-0"

EXTERIOR MATERIALS KEY

1	18" O.C. HORIZONTAL ARCHITECTURAL WALL PANELS
2	15" MODULAR METAL WALL PANELS
3	6" O.C. HORIZONTAL ARCHITECTURAL WALL PANELS
4	8" GROUND FACE CMU
5	STANDING SEAM METAL ROOF
6	CONCRETE

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
ARCHITECTURE + INTERIORS
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Mayland, license number 13853, expiration date 08-29-2022.

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

A201

ANNE ARUNDEL COUNTY

JUNE 2023

DEPARTMENT OF PUBLIC WORKS

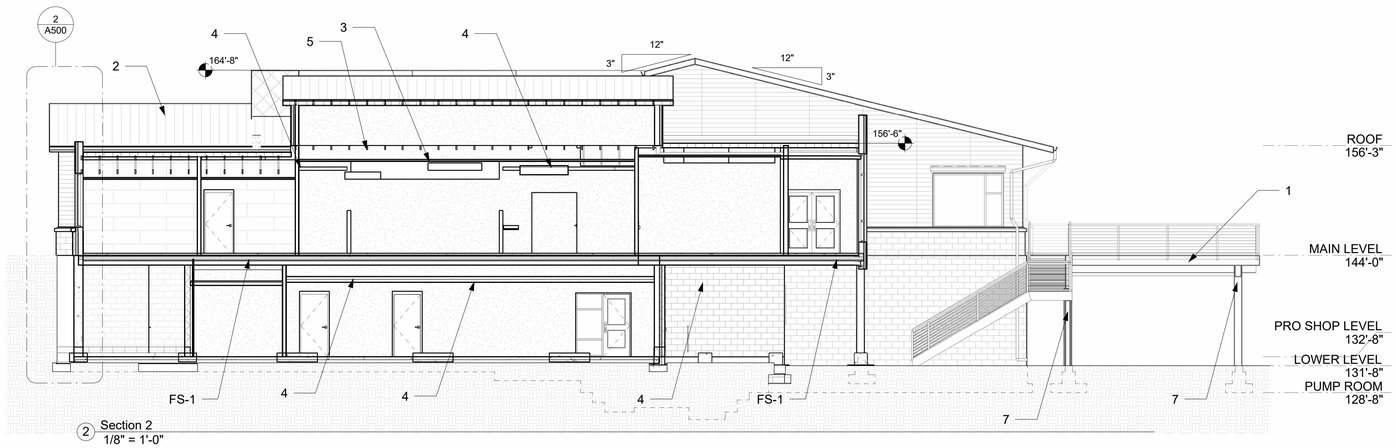
202211.1

REVISED DATE	BY	APPROVED DATE	APPROVED DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

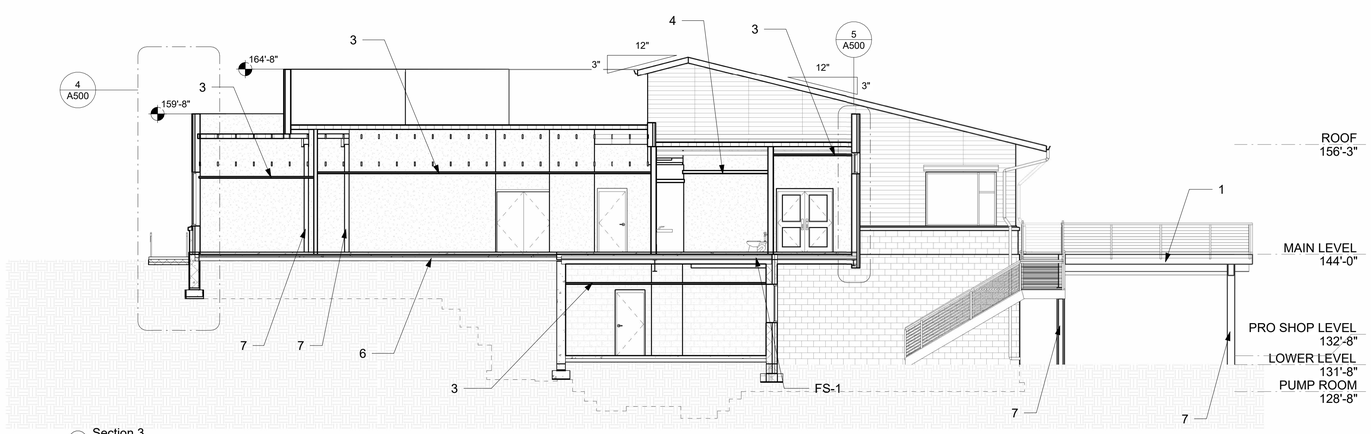
SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

BUILDING ELEVATIONS

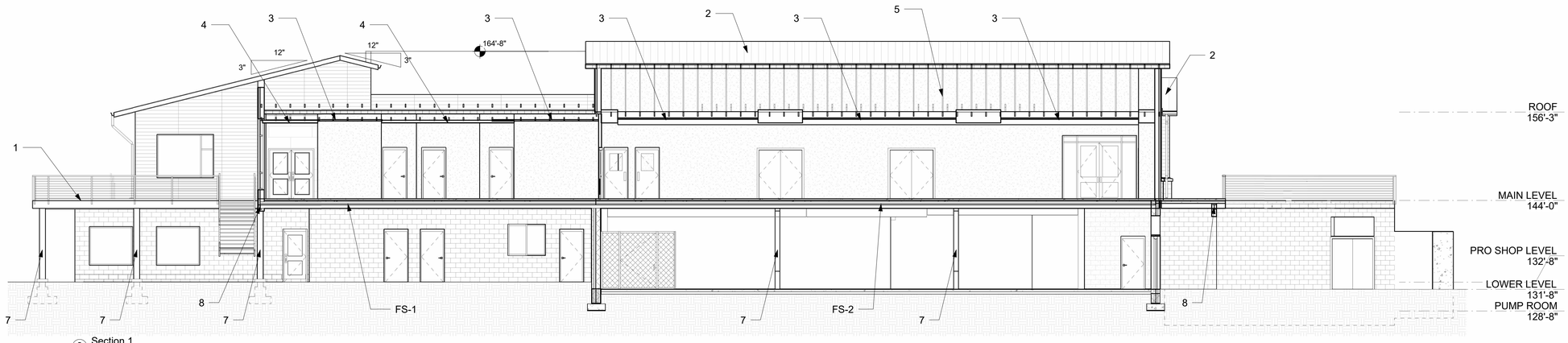
The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



2 Section 2
1/8" = 1'-0"



1 Section 3
1/8" = 1'-0"



3 Section 1
1/8" = 1'-0"

BUILDING SECTIONS MATERIAL KEY

1	CONCRETE DECKING
2	STANDING SEAM METAL ROOF
3	ACOUSTICAL LAY-IN CEILING; SEE FINISH SCHEDULE
4	GYPSUM BOARD CEILING; SEE FINISH SCHEDULE
5	PRE-ENGINEERED ROOF TRUSS @ 24" O.C.
6	CONCRETE SLAB ON GRADE; SEE STRUCTURAL
7	STRUCTURAL COLUMN; SEE STRUCTURAL
8	STEEL BEAM; SEE STRUCTURAL

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

A300

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

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ANNE ARUNDEL COUNTY — JUNE 2023

DEPARTMENT OF PUBLIC WORKS — 202211.1

REVISED DATE | BY

APPROVED DATE — CHIEF ENGINEER

APPROVED DATE — ASSISTANT CHIEF ENGINEER

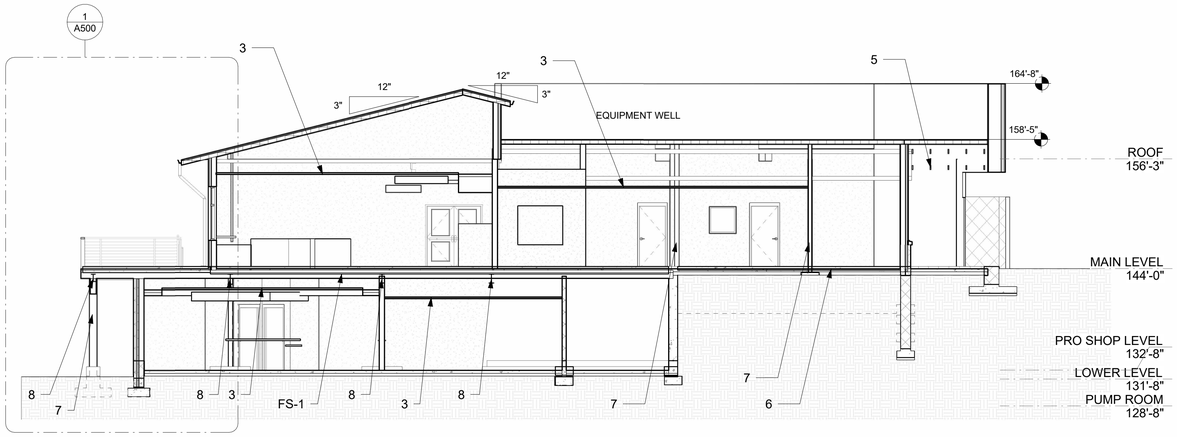
APPROVED DATE — PROJECT MANAGER

APPROVED DATE — CHIEF, RIGHT OF WAY

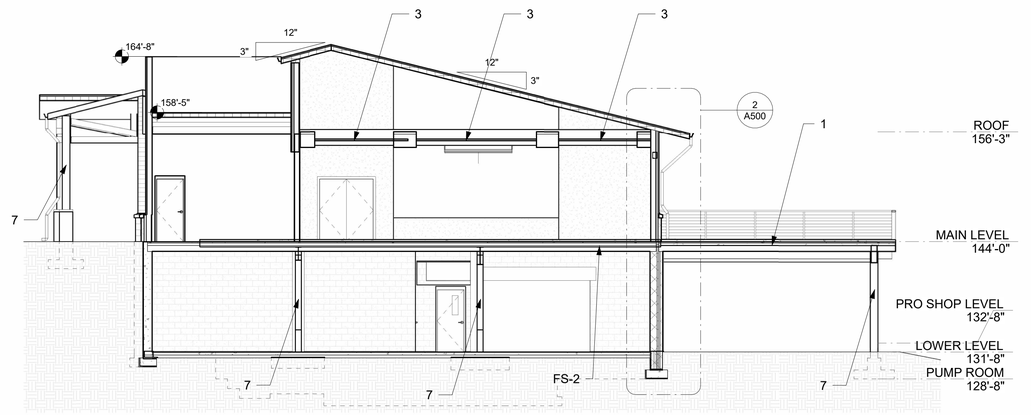
SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

BUILDING SECTIONS

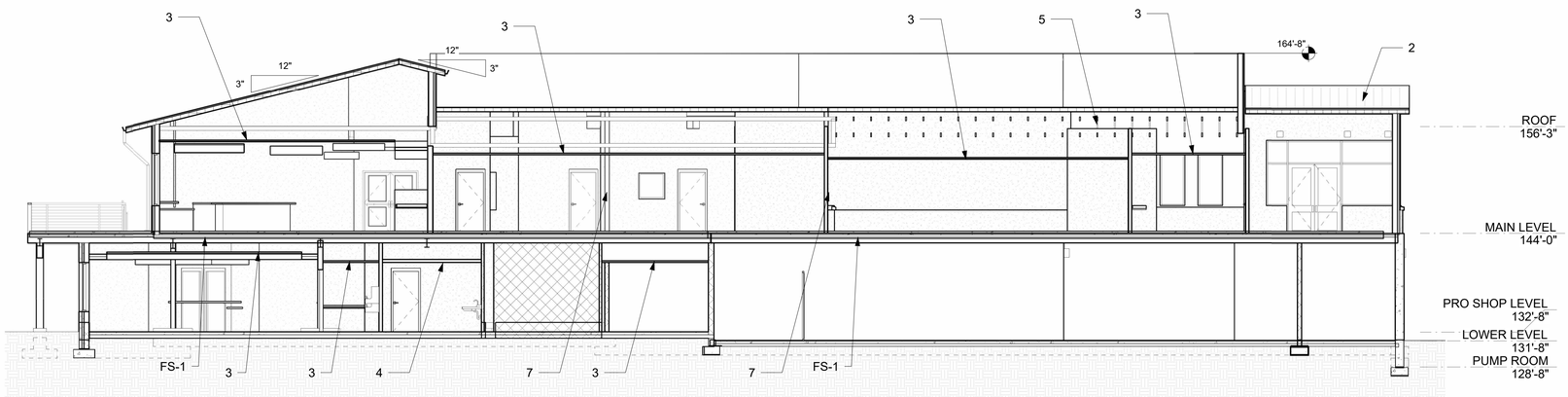
The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



1 GRILLE & KITCHEN SECTION
1/8" = 1'-0"



2 MULTIPURPOSE ROOM SECTION
1/8" = 1'-0"



3 Section 6
1/8" = 1'-0"

BUILDING SECTIONS MATERIAL KEY	
1	CONCRETE DECKING
2	STANDING SEAM METAL ROOF
3	ACOUSTICAL LAY-IN CEILING; SEE FINISH SCHEDULE
4	GYPSUM BOARD CEILING; SEE FINISH SCHEDULE
5	PRE-ENGINEERED ROOF TRUSS @ 24" O.C.
6	CONCRETE SLAB ON GRADE; SEE STRUCTURAL
7	STRUCTURAL COLUMN; SEE STRUCTURAL
8	STEEL BEAM; SEE STRUCTURAL

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

A301

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
ARCHITECTURE + INTERIORS
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
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ANNE ARUNDEL COUNTY — JUNE 2023
DEPARTMENT OF PUBLIC WORKS — 202211.1

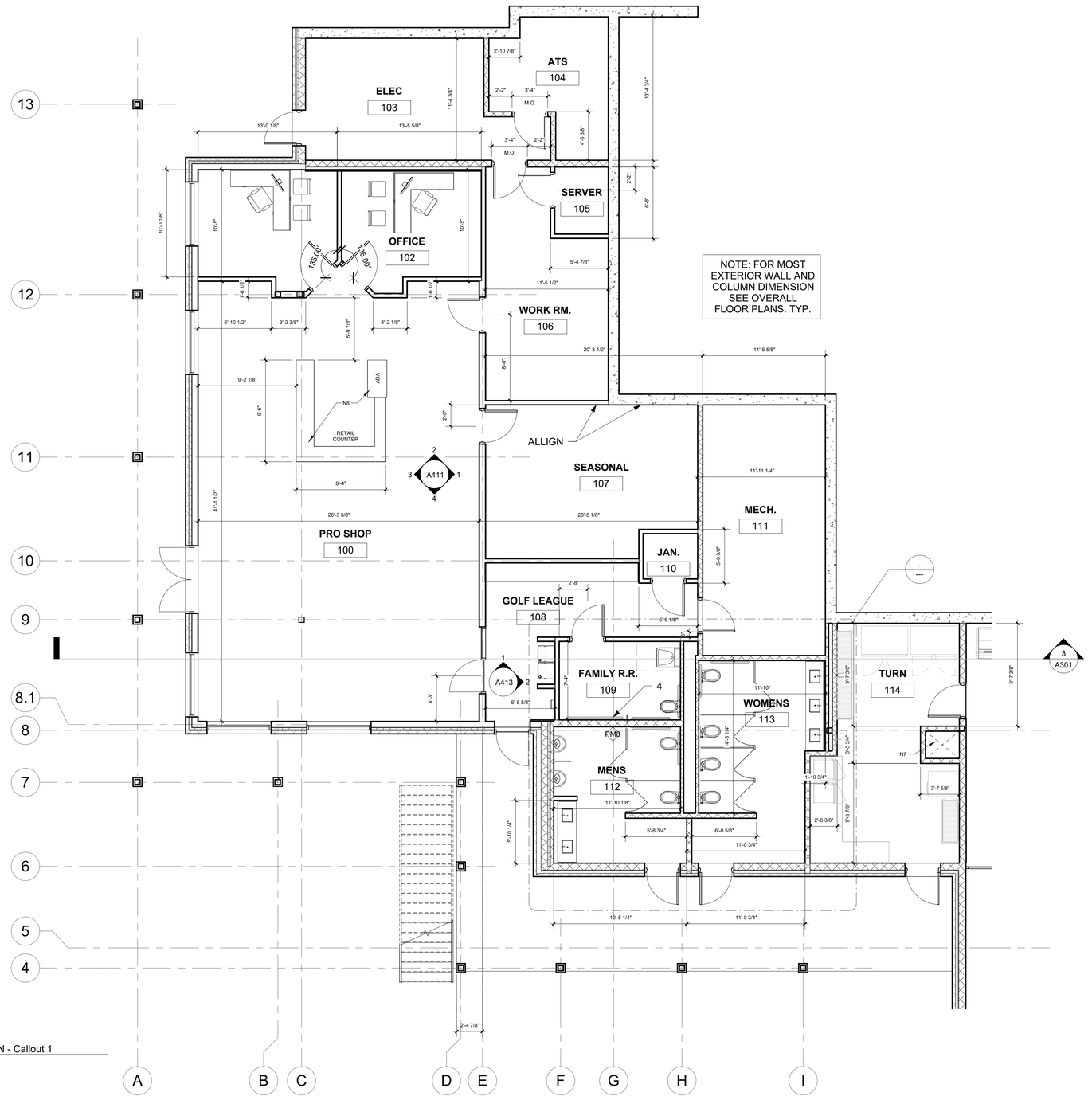
REVISED DATE	BY

APPROVED DATE — CHIEF ENGINEER
APPROVED DATE — PROJECT MANAGER
APPROVED DATE — ASSISTANT CHIEF ENGINEER
APPROVED DATE — CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

BUILDING SECTIONS

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



1 LOWER LEVEL FLOOR PLAN - Callout 1
3/16" = 1'-0"

GENERAL NEW WORK NOTES

- SEE ELECTRICAL DRAWINGS FOR LIGHTING AND POWER DEMOLITION/REMOVAL
- INSTALL NEW LINTELS. SEE STRUCTURAL DRAWINGS FOR SPECIFICATIONS.
- FURNISH AND INSTALL NEW FINISHES THROUGHOUT. UNLESS OTHERWISE NOTED.
- FURNISH AND INSTALL NEW CEILINGS THROUGHOUT. UNLESS OTHERWISE NOTED.
- FURNISH AND INSTALL NEW INSET WALK OFF MATS.
- FURNISH AND INSTALL NEW FLOOR AND TRANSITIONS STRIPS THROUGHOUT. SEE FINISH PLAN FOR TYPE AND FLOORING PATTERNS.
- FURNISH AND INSTALL NEW WALL PARTITIONS. SEE PARTITION SCHEDULE FOR MORE INFORMATION.
- COORDINATE MILLWORK INSTALLATION WITH MILLWORK COMPANY. SUBMIT SHOP DRAWINGS TO WGM FOR APPROVAL.
- PROVIDE 6" COVE BASE IN ALL RESTROOMS.
- FURNISH AND INSTALL ALL NEW PLUMBING FIXTURES (TOILETS, SINKS, ETC.) & ACCESSORIES. SEE MEP DRAWINGS AND SCHEDULES FOR MORE INFORMATION.
- WHERE WALL PARTITIONS ARE NOT ATTACHED TO PERPENDICULAR WALL ASSEMBLIES AND AT EACH KNEE WALL, USE WALL REINFORCEMENT AT EACH END OF WALL & 48" OC. ATTACHED TO STUDS AND ANCHORED INTO SLAB. CLARKDIETRICH (LGPW36) OR SIM.
- PROVIDE STAINLESS STEEL CORNER GUARDS AT ALL GYP. BOARD WALL PARTITIONS.
- FURNISH AND INSTALL MARBLE THRESHOLDS AT EACH DOOR ENTERING A RESTROOM. TYP.

NEW WORK KEYNOTES - N_

1. FURNISH AND INSTALL ALL NEW PLUMBING FIXTURES (TOILETS, SINKS, ETC.) & ACCESSORIES. SEE MEP DRAWINGS AND SCHEDULES FOR MORE INFORMATION.

2. FURNISH AND INSTALL 12" DEEP SHELVES ON HEAVY DUTY BRACKETS. PROVIDE BLOCKING AS REQUIRED.

3. PROVIDE STEEL GRATE FLOOR.

4. PROVIDE ADULT CHANGING TABLE WHERE INDICATED. PROVIDE BLOCKING AS REQUIRED. INSTALL PER MANUFACTURERS INSTRUCTIONS AT ADA HEIGHT.

5. FURNISH AND INSTALL "OVERHEAD" DOOR. INSTALL PER MANUFACTURERS INSTRUCTIONS.

6. FURNISH AND INSTALL CHAIN LINKED FENCE AND GATE.

7. FURNISH AND INSTALL "DUMB WAITER" AND SHAFT OPENING PER MANUFACTURERS INSTRUCTIONS.

8. ALL MILLWORK DRAWINGS ARE TO BE APPROVED BY THE ARCHITECT BEFORE MANUFACTURING. PROVIDE SHOP DRAWINGS AND V.I.F. BEFORE INSTALLATION. TYP.

9. FURR-OUT WITH 5/8" AROUND ANY EXPOSED COLUMNS. FRAME AS TIGHT AS POSSIBLE. TYP.

10. PROVIDE KNEE WALL WITH STAINED WOOD CAP. SEE ELEVATIONS AND DETAILS.

11. PROVIDE MECHANICAL CHASE. COORDED WITH MEP ON REQUIRED CHASE DIMENSIONS.

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland, license number 13833, expiration date 08-28-2022.

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DESIGN DEVELOPMENT	A400
ANNE ARUNDEL COUNTY	JUNE 2023
DEPARTMENT OF PUBLIC WORKS	202211.1

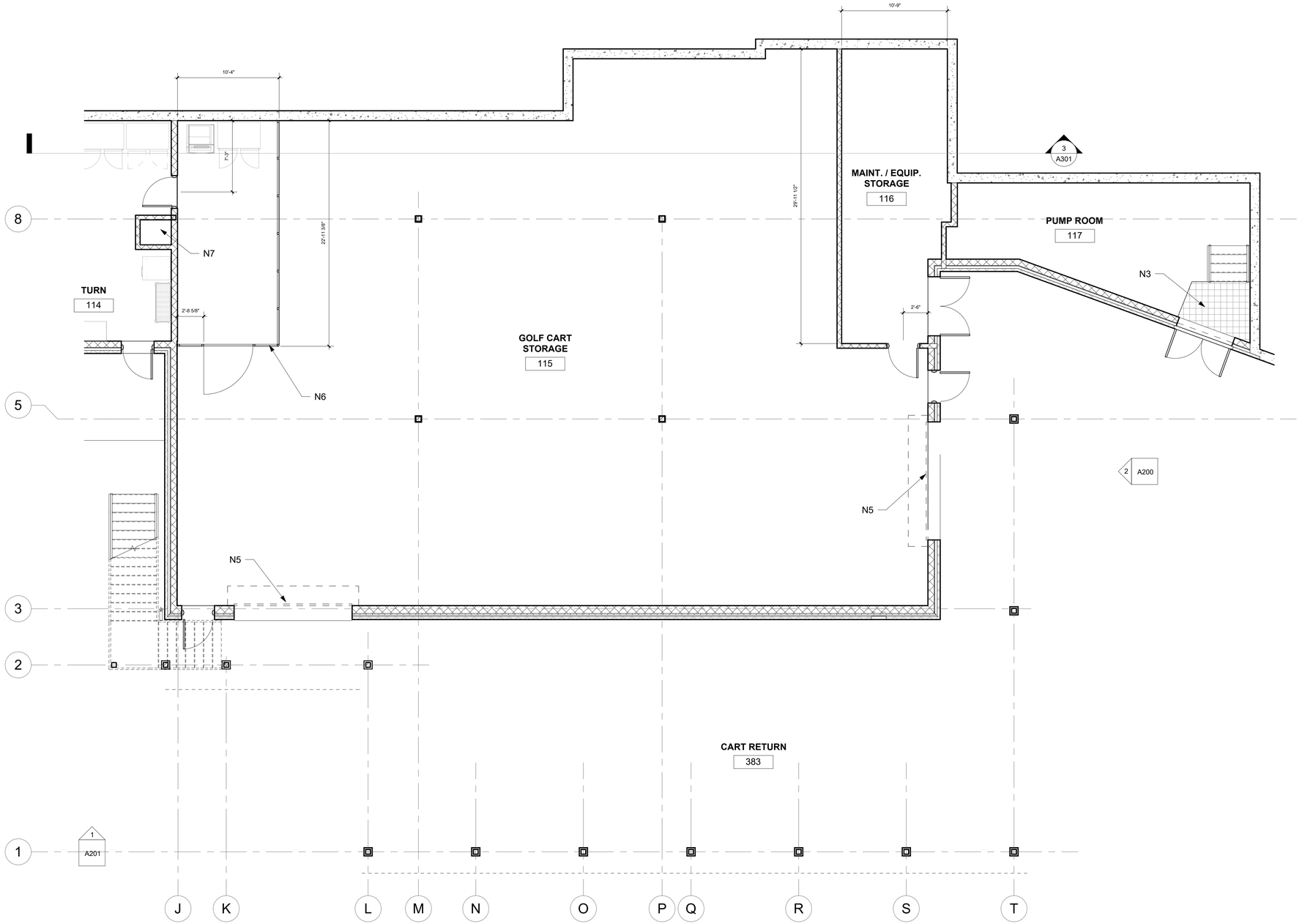
REVISED DATE BY

APPROVED DATE — CHIEF ENGINEER
APPROVED DATE — ASSISTANT CHIEF ENGINEER
APPROVED DATE — PROJECT MANAGER
APPROVED DATE — CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

ENLARGED NEW WORK PLAN - LOWER LEVEL

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



1 LOWER LEVEL FLOOR PLAN B
3/16" = 1'-0"

GENERAL NEW WORK NOTES

- SEE ELECTRICAL DRAWINGS FOR LIGHTING AND POWER DEMOLITION/REMOVAL
- INSTALL NEW LINTELS. SEE STRUCTURAL DRAWINGS FOR SPECIFICATIONS.
- FURNISH AND INSTALL NEW FINISHES THROUGHOUT. UNLESS OTHERWISE NOTED.
- FURNISH AND INSTALL NEW CEILINGS THROUGHOUT. UNLESS OTHERWISE NOTED.
- FURNISH AND INSTALL NEW INSET WALK OFF MATS.
- FURNISH AND INSTALL NEW FLOOR AND TRANSITIONS STRIPS THROUGHOUT. SEE FINISH PLAN FOR TYPE AND FLOORING PATTERNS.
- FURNISH AND INSTALL NEW WALL PARTITIONS. SEE PARTITION SCHEDULE FOR MORE INFORMATION.
- COORDINATE MILLWORK INSTALLATION WITH MILLWORK COMPANY. SUBMIT SHOP DRAWINGS TO WGM FOR APPROVAL.
- PROVIDE 6" COVE BASE IN ALL RESTROOMS.
- FURNISH AND INSTALL ALL NEW PLUMBING FIXTURES (TOILETS, SINKS, ETC.) & ACCESSORIES. SEE MEP DRAWINGS AND SCHEDULES FOR MORE INFORMATION.
- WHERE WALL PARTITIONS ARE NOT ATTACHED TO PERPENDICULAR WALL ASSEMBLIES AND AT EACH KNEE WALL, USE WALL REINFORCEMENT AT EACH END OF WALL & 48" OC. ATTACHED TO STUDS AND ANCHORED INTO SLAB. CLARKDIETRICH (LGPW36) OR SIM.
- PROVIDE STAINLESS STEEL CORNER GUARDS AT ALL GYP. BOARD WALL PARTITIONS.
- FURNISH AND INSTALL MARBLE THRESHOLDS AT EACH DOOR ENTERING A RESTROOM. TYP.

NEW WORK KEYNOTES - N_

1. FURNISH AND INSTALL ALL NEW PLUMBING FIXTURES (TOILETS, SINKS, ETC.) & ACCESSORIES. SEE MEP DRAWINGS AND SCHEDULES FOR MORE INFORMATION.

2. FURNISH AND INSTALL 12" DEEP SHELVES ON HEAVY DUTY BRACKETS. PROVIDE BLOCKING AS REQUIRED.

3. PROVIDE STEEL GRATE FLOOR.

4. PROVIDE ADULT CHANGING TABLE WHERE INDICATED. PROVIDE BLOCKING AS REQUIRED. INSTALL PER MANUFACTURERS INSTRUCTIONS AT ADA HEIGHT.

5. FURNISH AND INSTALL "OVERHEAD" DOOR. INSTALL PER MANUFACTURERS INSTRUCTIONS.

6. FURNISH AND INSTALL CHAIN LINKED FENCE AND GATE.

7. FURNISH AND INSTALL "DUMB WAITER" AND SHAFT OPENING PER MANUFACTURERS INSTRUCTIONS.

8. ALL MILLWORK DRAWINGS ARE TO BE APPROVED BY THE ARCHITECT BEFORE MANUFACTURING. PROVIDE SHOP DRAWINGS AND V.I.F. BEFORE INSTALLATION. TYP.

9. FURR-OUT WITH 5/8" AROUND ANY EXPOSED COLUMNS. FRAME AS TIGHT AS POSSIBLE. TYP.

10. PROVIDE KNEE WALL WITH STAINED WOOD CAP. SEE ELEVATIONS AND DETAILS.

11. PROVIDE MECHANICAL CHASE. COORDED WITH MEP ON REQUIRED CHASE DIMENSIONS.

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

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NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

A401

ANNE ARUNDEL COUNTY

JUNE 2023

DEPARTMENT OF PUBLIC WORKS

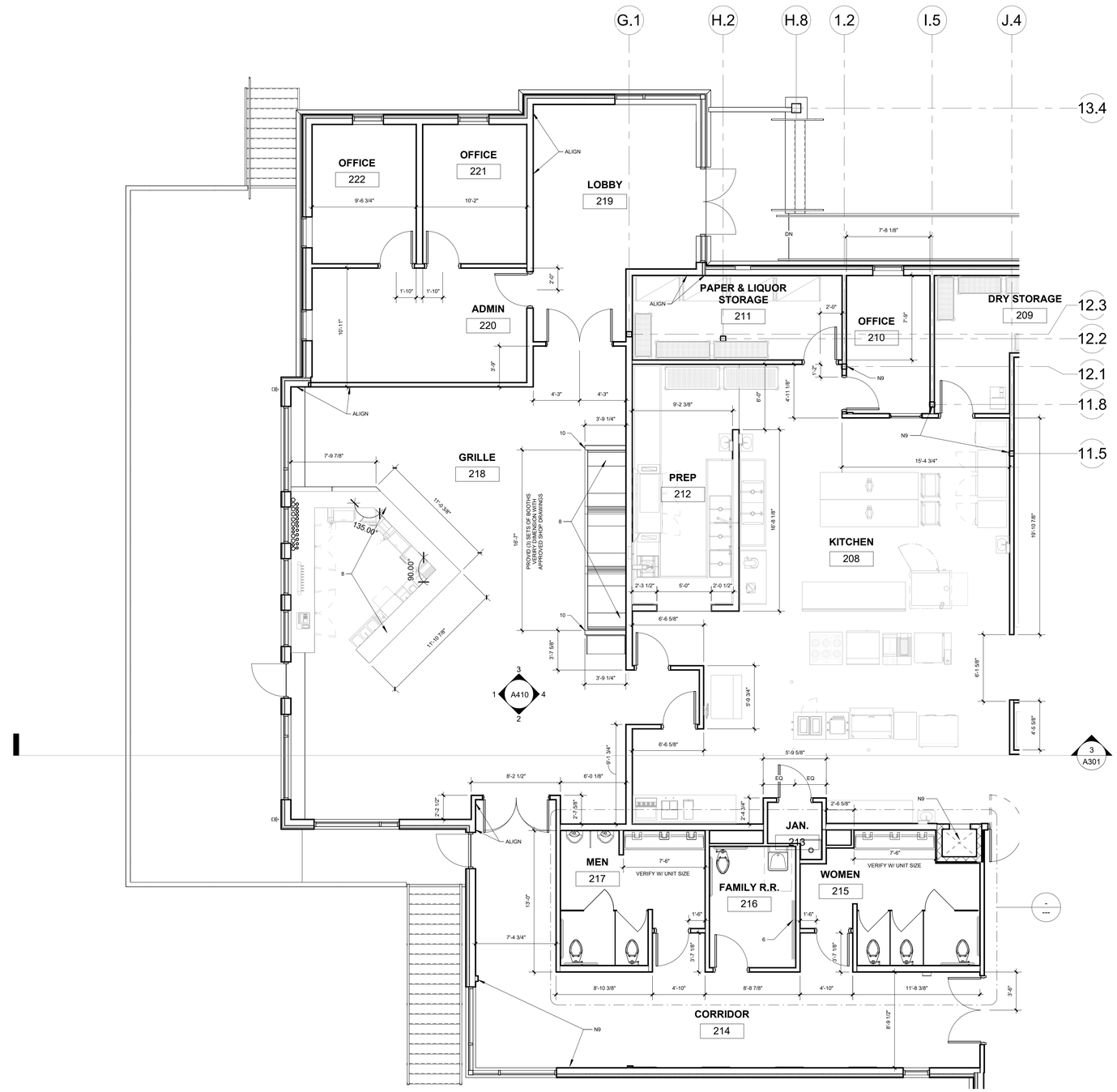
202211.1

REVISED DATE	BY	APPROVED DATE	APPROVED DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

ENLARGED NEW WORK PLAN - LOWER LEVEL

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



1 MAIN LEVEL FLOOR PLAN - Callout 1
3/16" = 1'-0"

GENERAL NEW WORK NOTES

- SEE ELECTRICAL DRAWINGS FOR LIGHTING AND POWER DEMOLITION/REMOVAL
- INSTALL NEW LINTELS. SEE STRUCTURAL DRAWINGS FOR SPECIFICATIONS.
- FURNISH AND INSTALL NEW FINISHES THROUGHOUT. UNLESS OTHERWISE NOTED.
- FURNISH AND INSTALL NEW CEILINGS THROUGHOUT. UNLESS OTHERWISE NOTED.
- FURNISH AND INSTALL NEW INSET WALK OFF MATS.
- FURNISH AND INSTALL NEW FLOOR AND TRANSITIONS STRIPS THROUGHOUT. SEE FINISH PLAN FOR TYPE AND FLOORING PATTERNS.
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- PROVIDE 6" COVE BASE IN ALL RESTROOMS.
- FURNISH AND INSTALL ALL NEW PLUMBING FIXTURES (TOILETS, SINKS, ETC.) & ACCESSORIES. SEE MEP DRAWINGS AND SCHEDULES FOR MORE INFORMATION.
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- PROVIDE STAINLESS STEEL CORNER GUARDS AT ALL GYP. BOARD WALL PARTITIONS.
- FURNISH AND INSTALL MARBLE THRESHOLDS AT EACH DOOR ENTERING A RESTROOM. TYP.

NEW WORK KEYNOTES - N_

1. FURNISH AND INSTALL ALL NEW PLUMBING FIXTURES (TOILETS, SINKS, ETC.) & ACCESSORIES. SEE MEP DRAWINGS AND SCHEDULES FOR MORE INFORMATION.

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3. PROVIDE STEEL GRATE FLOOR.

4. PROVIDE ADULT CHANGING TABLE WHERE INDICATED. PROVIDE BLOCKING AS REQUIRED. INSTALL PER MANUFACTURERS INSTRUCTIONS AT ADA HEIGHT.

5. FURNISH AND INSTALL "OVERHEAD" DOOR. INSTALL PER MANUFACTURERS INSTRUCTIONS.

6. FURNISH AND INSTALL CHAIN LINKED FENCE AND GATE.

7. FURNISH AND INSTALL "DUMB WAITER" AND SHAFT OPENING PER MANUFACTURERS INSTRUCTIONS.

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9. FURR-OUT WITH 5/8" AROUND ANY EXPOSED COLUMNS. FRAME AS TIGHT AS POSSIBLE. TYP.

10. PROVIDE KNEE WALL WITH STAINED WOOD CAP. SEE ELEVATIONS AND DETAILS.

11. PROVIDE MECHANICAL CHASE. COORDED WITH MEP ON REQUIRED CHASE DIMENSIONS.

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

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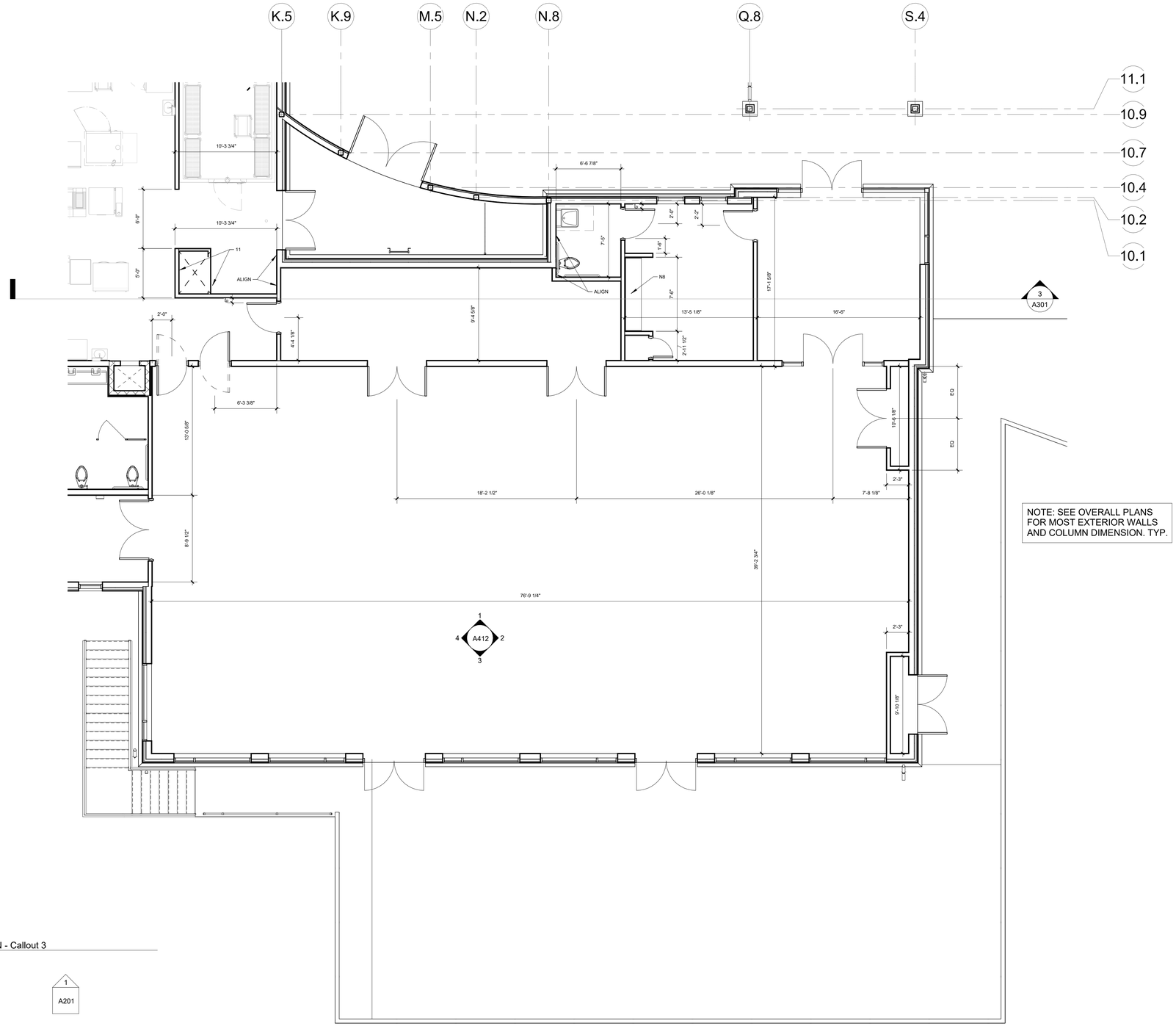
NOT FOR CONSTRUCTION | DESIGN DEVELOPMENT | A402

ANNE ARUNDEL COUNTY | JUNE 2023

DEPARTMENT OF PUBLIC WORKS | 202211.1

REVISED DATE	BY	APPROVED DATE / CHIEF ENGINEER	APPROVED DATE / PROJECT MANAGER	SCALE: AS NOTED	ENLARGED NEW WORK PLAN - UPPER LEVEL
				DRAWN BY:	
				CHECKED BY:	
		APPROVED DATE / ASSISTANT CHIEF ENGINEER	APPROVED DATE / CHIEF, RIGHT OF WAY	SHEET: OF	The Preserve at Eisenhower Clubhouse 1576 Generals Hwy Crownsville, MD 21032
				PROJECT #: P570200	
				CONTRACT #: P570205	



NOTE: SEE OVERALL PLANS FOR MOST EXTERIOR WALLS AND COLUMN DIMENSION. TYP.

1 MAIN LEVEL FLOOR PLAN - Callout 3
3/16" = 1'-0"

1
A201

GENERAL NEW WORK NOTES

- SEE ELECTRICAL DRAWINGS FOR LIGHTING AND POWER DEMOLITION/REMOVAL
- INSTALL NEW LINTELS. SEE STRUCTURAL DRAWINGS FOR SPECIFICATIONS.
- FURNISH AND INSTALL NEW FINISHES THROUGHOUT. UNLESS OTHERWISE NOTED.
- FURNISH AND INSTALL NEW CEILINGS THROUGHOUT. UNLESS OTHERWISE NOTED.
- FURNISH AND INSTALL NEW INSET WALK OFF MATS.
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- PROVIDE STAINLESS STEEL CORNER GUARDS AT ALL GYP. BOARD WALL PARTITIONS.
- FURNISH AND INSTALL MARBLE THRESHOLDS AT EACH DOOR ENTERING A RESTROOM. TYP.

NEW WORK KEYNOTES - N_

1. FURNISH AND INSTALL ALL NEW PLUMBING FIXTURES (TOILETS, SINKS, ETC.) & ACCESSORIES. SEE MEP DRAWINGS AND SCHEDULES FOR MORE INFORMATION.

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3. PROVIDE STEEL GRATE FLOOR.

4. PROVIDE ADULT CHANGING TABLE WHERE INDICATED. PROVIDE BLOCKING AS REQUIRED. INSTALL PER MANUFACTURERS INSTRUCTIONS AT ADA HEIGHT.

5. FURNISH AND INSTALL "OVERHEAD" DOOR. INSTALL PER MANUFACTURERS INSTRUCTIONS.

6. FURNISH AND INSTALL CHAIN LINKED FENCE AND GATE.

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9. FURR-OUT WITH 5/8" AROUND ANY EXPOSED COLUMNS. FRAME AS TIGHT AS POSSIBLE. TYP.

10. PROVIDE KNEE WALL WITH STAINED WOOD CAP. SEE ELEVATIONS AND DETAILS.

11. PROVIDE MECHANICAL CHASE. COORDED WITH MEP ON REQUIRED CHASE DIMENSIONS.

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
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		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT | A403

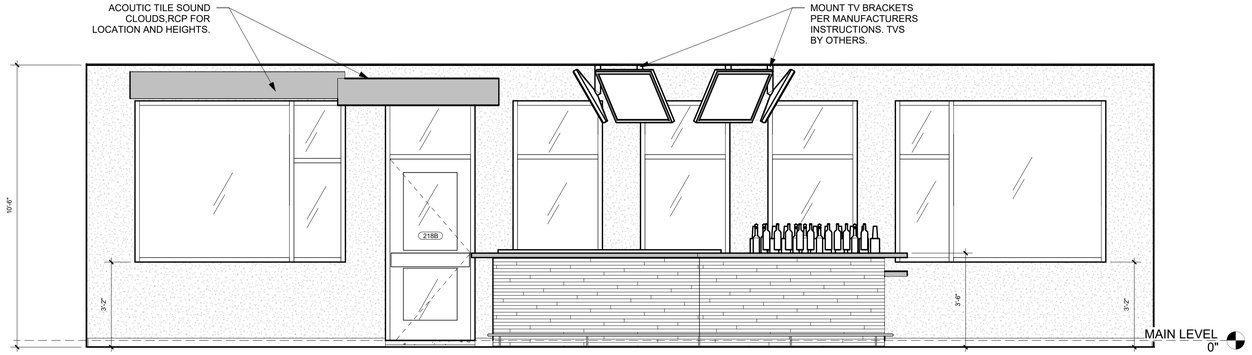
ANNE ARUNDEL COUNTY | JUNE 2023

DEPARTMENT OF PUBLIC WORKS | 202211.1

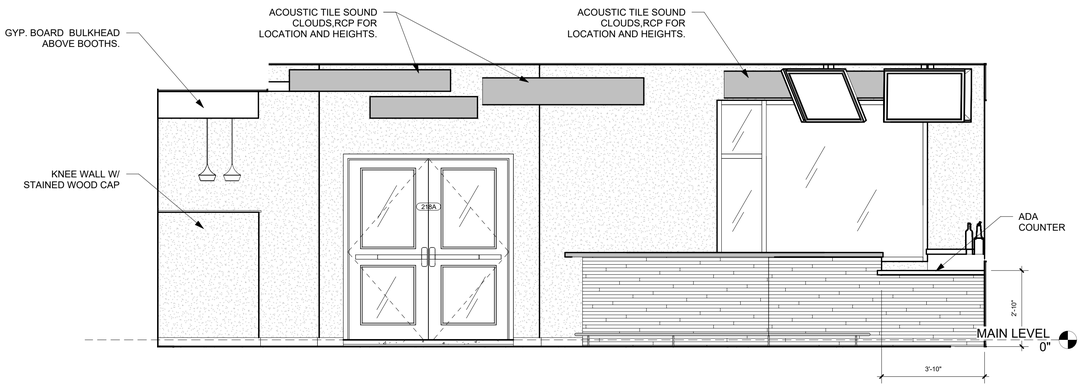
SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

ENLARGED NEW WORK PLAN - UPPER LEVEL

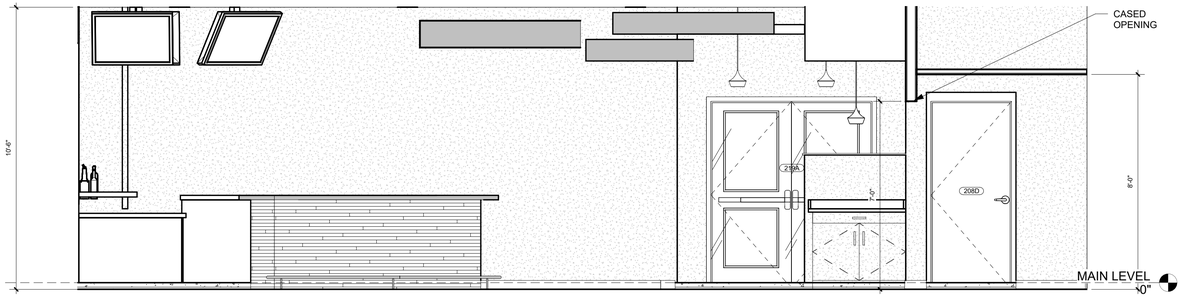
The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



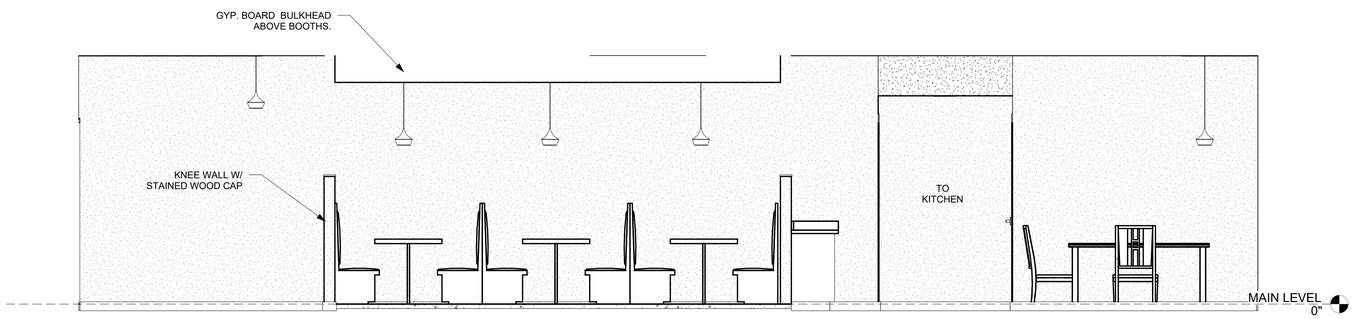
1 THE GRILL - WINDOW WALL
3/8" = 1'-0"



2 THE GRILL - CORRIDOR ENTRANCE
3/8" = 1'-0"



3 THE GRILL - ENTRANCE
3/8" = 1'-0"



4 THE GRILL - BOOTH SEATING
3/8" = 1'-0"

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

A410

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland, license number 13853, expiration date 08-29-2022.

ANNE ARUNDEL COUNTY — JUNE 2023

DEPARTMENT OF PUBLIC WORKS — 202211.1

REVISED DATE	BY

APPROVED DATE — CHIEF ENGINEER

APPROVED DATE — PROJECT MANAGER

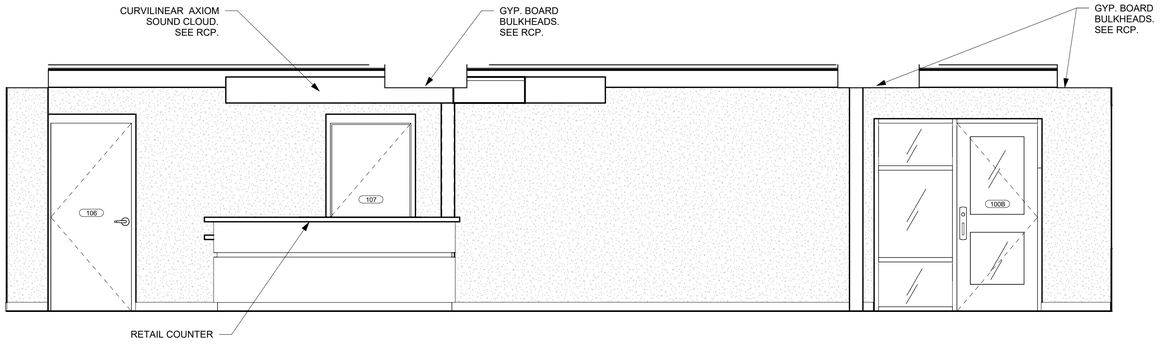
APPROVED DATE — ASSISTANT CHIEF ENGINEER

APPROVED DATE — CHIEF, RIGHT OF WAY

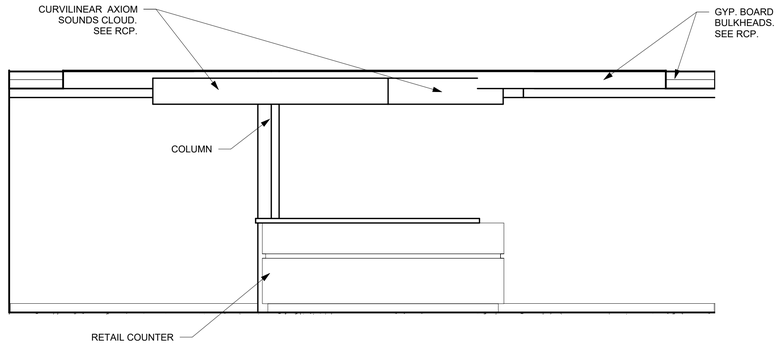
SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

INTERIOR ELEVATIONS

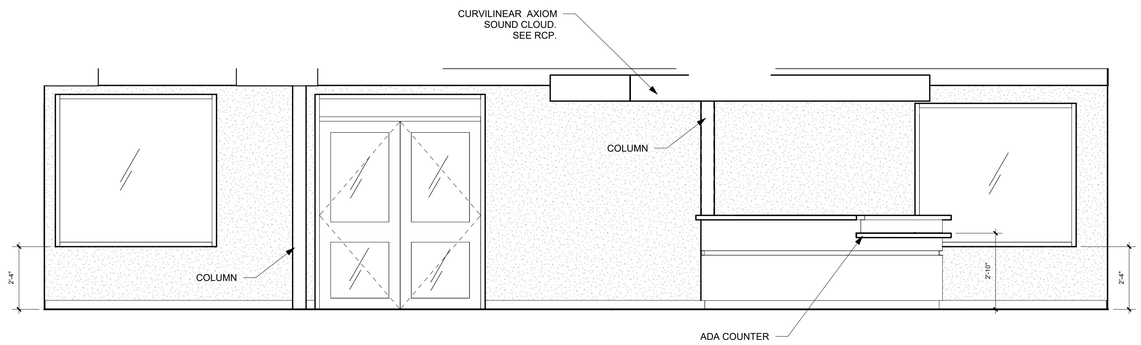
The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



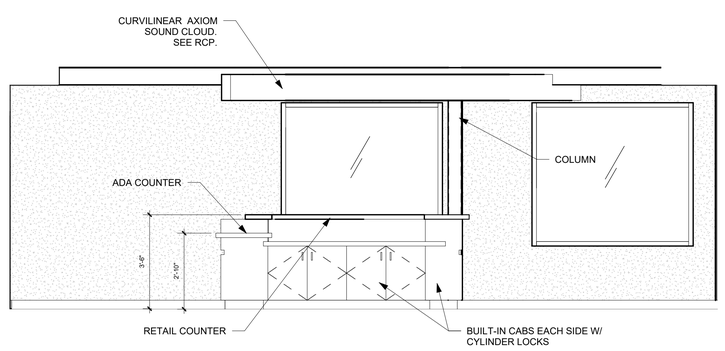
1 PRO SHOP ELEVATION 1
3/8" = 1'-0"



2 PRO SHOP - ELEVATION 2
3/8" = 1'-0"



3 PRO SHOP - ELEVATION 3
3/8" = 1'-0"



4 PRO SHOP - ELEVATION 4
3/8" = 1'-0"

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

A411

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

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ANNE ARUNDEL COUNTY — JUNE 2023

DEPARTMENT OF PUBLIC WORKS — 202211.1

REVISED DATE	BY

APPROVED DATE — CHIEF ENGINEER

APPROVED DATE — PROJECT MANAGER

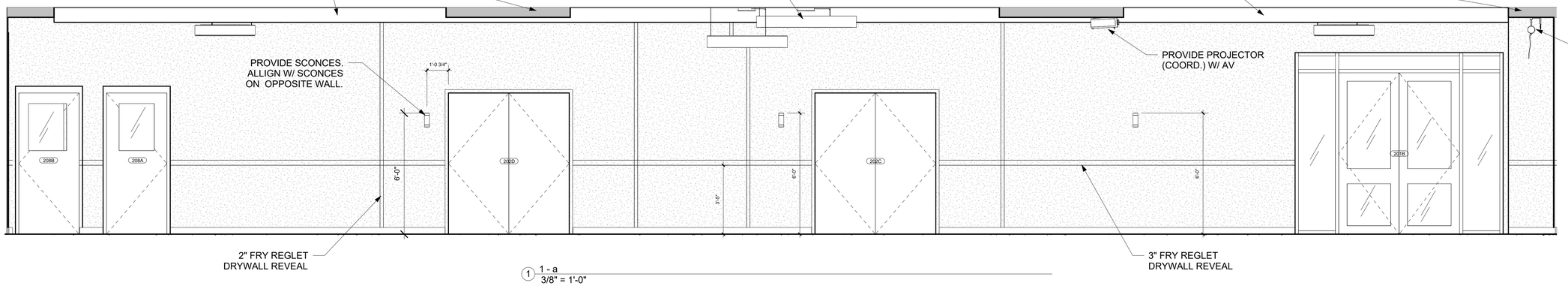
APPROVED DATE — ASSISTANT CHIEF ENGINEER

APPROVED DATE — CHIEF, RIGHT OF WAY

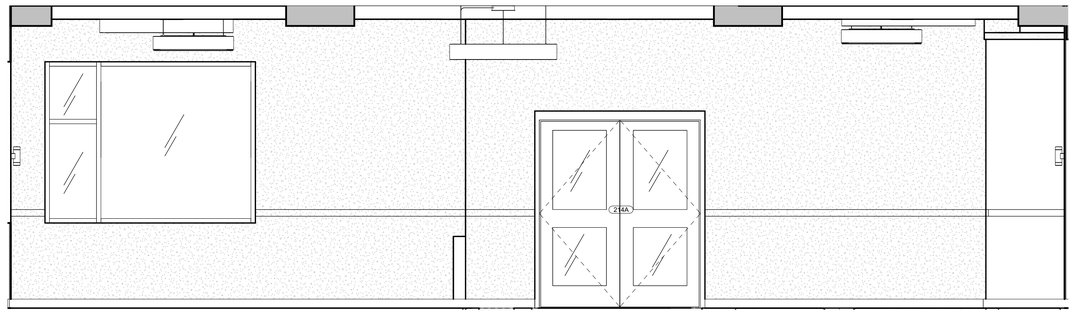
SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

INTERIOR ELEVATIONS

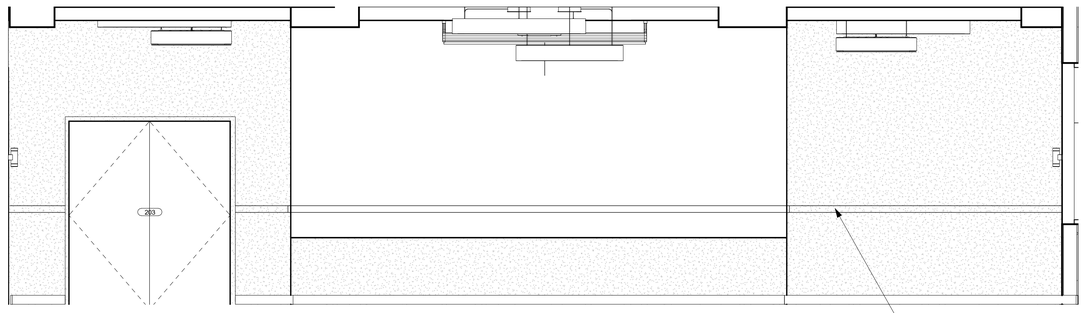
The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



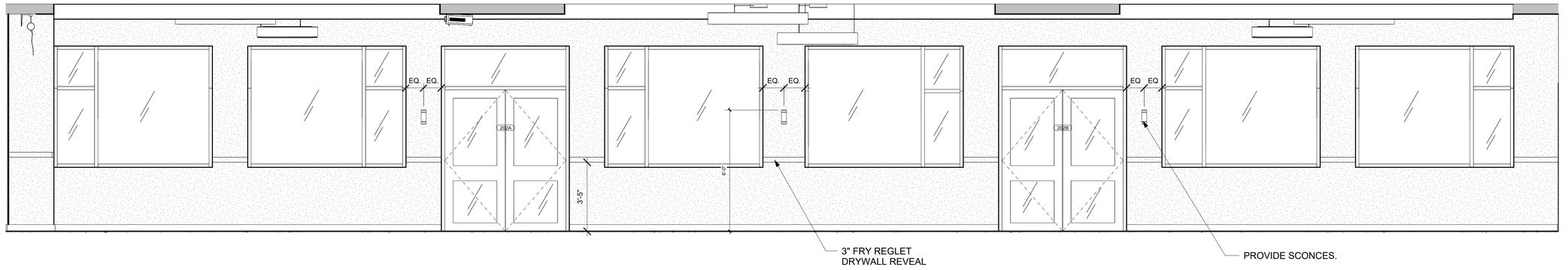
1 1 - a
3/8" = 1'-0"



4 1 - d
3/8" = 1'-0"



2 1 - b
3/8" = 1'-0"



3 1 - c
3/8" = 1'-0"

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

A412

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
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ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

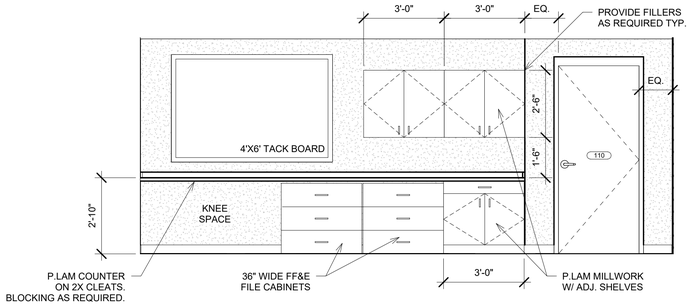
JUNE 2023
202211.1

REVISED DATE	BY	APPROVED DATE	APPROVED DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

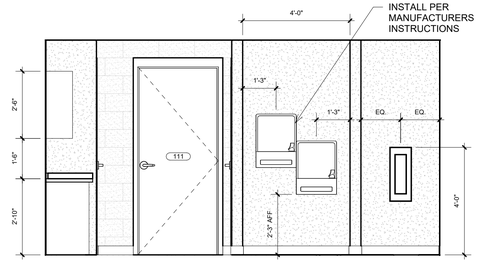
SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

INTERIOR ELEVATIONS

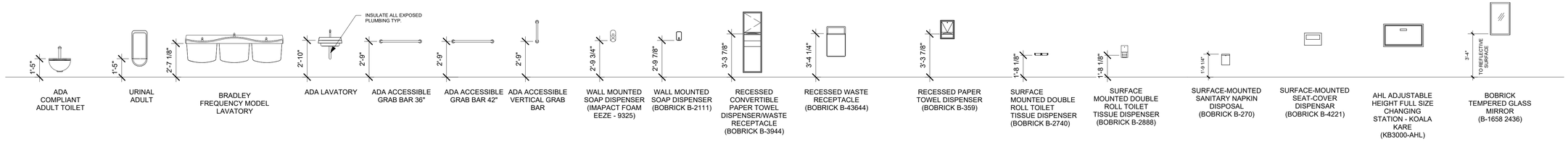
The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



1 2 - a
3/8" = 1'-0"



2 2 - b
3/8" = 1'-0"



TOILET ACCESSORIES SCHEDULE
1/4" = 1'-0"

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

A413

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
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STEVENSVILLE, MARYLAND 21666
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ANNE ARUNDEL COUNTY

JUNE 2023

DEPARTMENT OF PUBLIC WORKS

202211.1

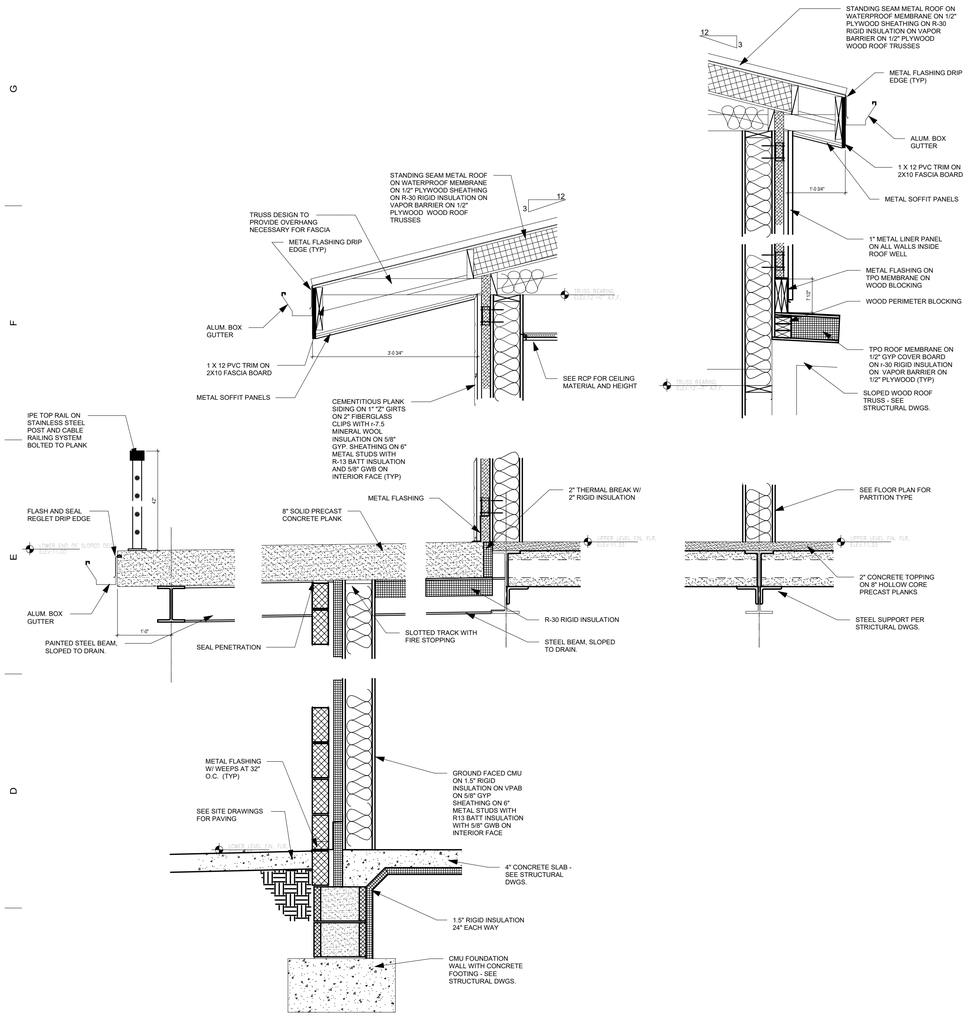
REVISED DATE	BY

APPROVED DATE
CHIEF ENGINEER
APPROVED DATE
ASSISTANT CHIEF ENGINEER
APPROVED DATE
PROJECT MANAGER
APPROVED DATE
CHIEF, RIGHT OF WAY

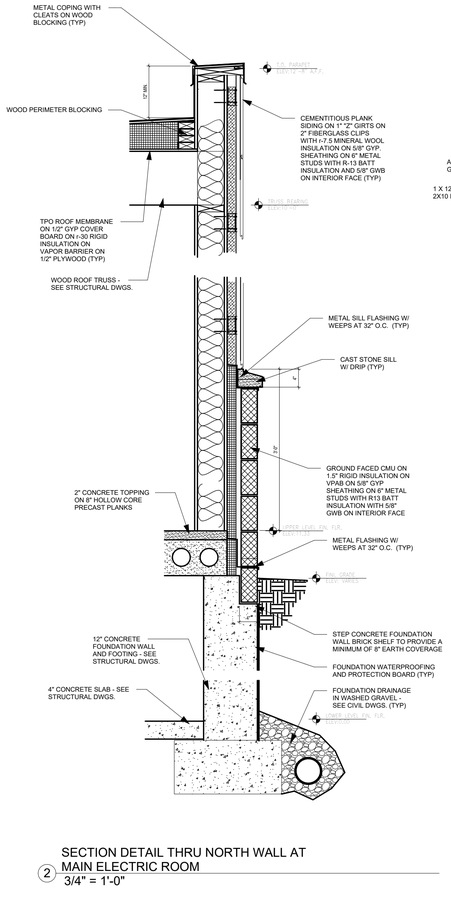
SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

INTERIOR ELEVATIONS & RESTROOM ACCESSORY SCHEDULE

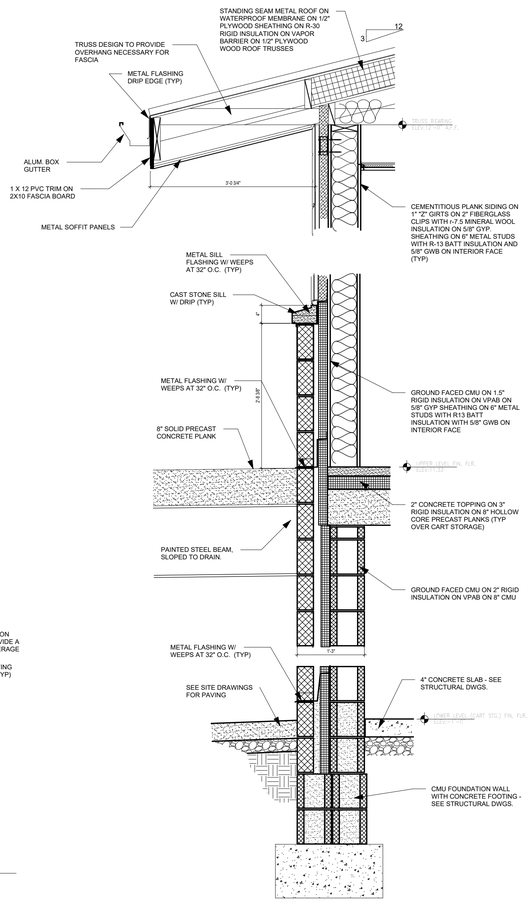
The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



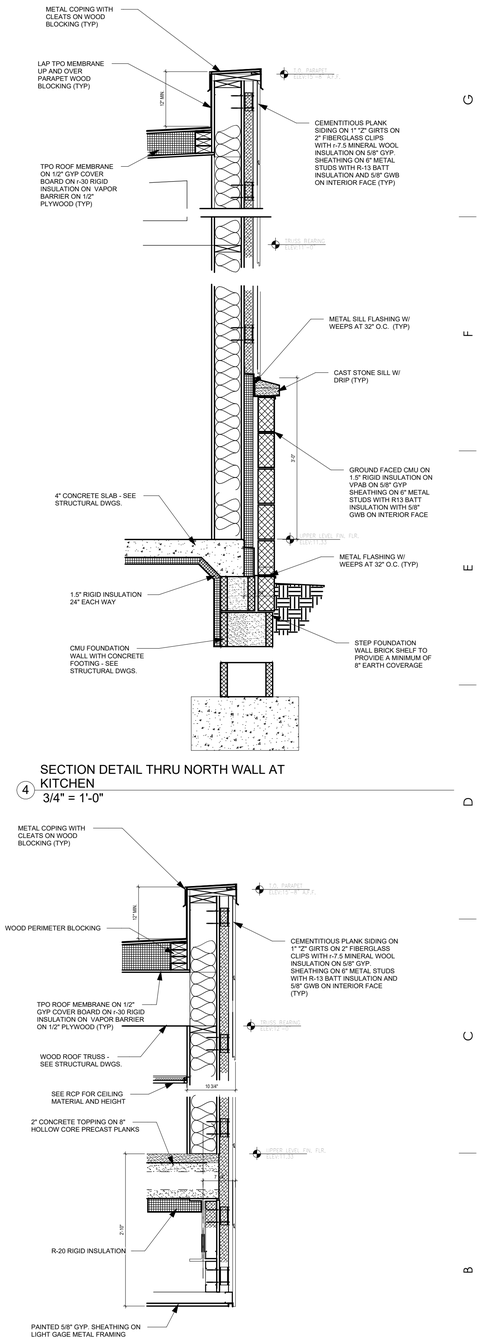
1 SECTION DETAIL THRU WEST WALL AT PRO SHOP/GRILLE
3/4" = 1'-0"



2 SECTION DETAIL THRU NORTH WALL AT MAIN ELECTRIC ROOM
3/4" = 1'-0"



3 SECTION DETAIL THRU SOUTH WALL AT CART STORAGE
3/4" = 1'-0"



4 SECTION DETAIL THRU NORTH WALL AT KITCHEN
3/4" = 1'-0"

5 SECTION DETAIL THRU SOUTH WALL AT RESTROOM CORRIDOR
3/4" = 1'-0"

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

A500

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

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ANNE ARUNDEL COUNTY

JUNE 2023

DEPARTMENT OF PUBLIC WORKS

202211.1

REVISED DATE	BY	APPROVED DATE	APPROVED DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

WALL SECTIONS

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032

Door Schedule

Mark	Door Elevation	Material	Height	Width	Thickness	Frame Elevation	Frame Material	Fire Rating	Head	Jamb	Sill	Remarks	Hardware Set No.
100A	SF-10	AL/GL	7'-0"	6'-0"	1 3/4"	SF-10	ALUM					PAIR	1
100B	SF-16	AL/GL	7'-0"	3'-0"	1 3/4"	SF-16	ALUM						2
101	D5	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					3
102	D5	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					3
103A	D2	HM	7'-0"	3'-0"	1 3/4"	F2	HM	-				CARD READER	6
103B	D2	HM	7'-0"	3'-0"	1 3/4"	F2	HM	-				CARD READER	5
104	D2	HM	7'-0"	3'-0"	1 3/4"	F2	HM	-					4
105	D2	HM	7'-0"	3'-0"	1 3/4"	F1	HM	-				CARD READER	4
106	D1	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					4
107	D1	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					4
108	SF-12	AL/GL	7'-0"	3'-0"	1 3/4"	SF-12	ALUM					CARD READER	7
109	D2	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					8
110	D2	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					4
111	D2	HM	7'-0"	3'-0"	1 3/4"	F2	HM	-				CARD READER	4
112	D2	HM	7'-0"	3'-0"	1 3/4"	F2	HM	-					9
113	D2	HM	7'-0"	3'-0"	1 3/4"	F2	HM	-					9
114A	D2	HM	7'-0"	3'-0"	1 3/4"	F2	HM	-					10
114B	D2	HM	7'-0"	3'-0"	1 3/4"	F2	HM	-					10
115A	D6	HM	7'-0"	3'-0"	1 3/4"	F2	HM	-					10
115B	D4	STL	8'-0"	12'-0"	2"		STL					SECURITY ROLL DOWN DOOR	
115C	D4	STL	8'-0"	12'-0"	2"		STL					SECURITY ROLL DOWN DOOR	
115D	D6	HM	7'-0"	3'-0"	1 3/4"	F2	HM	-					10
116A	D2	HM	7'-0"	3'-0"	1 3/4"	F2	HM	-					4
116B	D2	HM	7'-0"	6'-0"	2"	F2	HM					PAIR, CARD READER	11
117	D2	HM	7'-0"	6'-0"	2"	F4	HM					PAIR, CARD READER	11
120		STL	7'-7"	5'-0"								CHAIN LINK GATE	
200	D9	STL	8'-0"	8'-0"	2"		STL					CUSTOM STEEL DOOR, PAIR	
201A	SF-4R	AL/GL	8'-0"	6'-0"	1 3/4"	SF-4R	ALUM					PAIR	12
201B	SF-15	AL/GL	8'-0"	6'-0"	1 3/4"	SF-15	ALUM					PAIR	13
202A	SF-13	AL/GL	7'-0"	6'-0"	1 3/4"	SF-13	ALUM					PAIR	12
202B	SF-13	AL/GL	7'-0"	6'-0"	1 3/4"	SF-13	ALUM					PAIR	12
202C	D1	HM	7'-0"	6'-0"	2"	F1	HM					PAIR	14
202D	D1	HM	7'-0"	6'-0"	2"	F1	HM					PAIR	14
203	D1	HM	7'-0"	6'-0"	2"	F1	HM					PAIR	15
204	D1	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					16
205	D1	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					8
206	D1	WD	7'-0"	2'-0"	1 3/4"	F1	HM	-					17
207	D1	HM	7'-0"	3'-0"	1 3/4"	F1	HM	-					18
208	D2	HM	7'-0"	6'-0"	2"	F1	HM					PAIR, CARD READER	11
208A	D1	HM	7'-0"	3'-0"	1 3/4"	F3	HM					DOUBLE-ACTING	19
208B	D1	HM	7'-0"	3'-0"	1 3/4"	F3	HM					DOUBLE-ACTING	19
208C	D1	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					19
208D	D1	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					19
209	D2	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					4
210	D2	WD	7'-0"	3'-0"	1 3/4"	F1	HM						3
211	D2	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					4
213	D2	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					18
214A	D1	HM	7'-0"	6'-0"	1 3/4"	F1	HM					PAIR	20
214B	SF-11	AL/GL	7'-0"	3'-0"	1 3/4"	SF-11	ALUM						22
215	D1	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					21
216	D1	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					8
217	D1	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					21
218A	D3	WD/GL	7'-0"	6'-0"	1 3/4"	F1	HM					PAIR	20
218B	SF-11	AL/GL	7'-0"	3'-0"	1 3/4"	SF-11	ALUM						22
219A	D3	WD/GL	7'-0"	6'-0"	1 3/4"	F1	HM					PAIR, CARD READER	20
219B	SF-4	AL/GL	8'-0"	6'-0"	1 3/4"	SF-4	ALUM					PAIR	12
220	D1	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-				CARD READER	3
221	D7	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					3
222	D7	WD	7'-0"	3'-0"	1 3/4"	F1	HM	-					3
224	D2	HM	7'-0"	6'-0"	2"	F1	HM					PAIR	11

HARDWARE KEY

1
SF HARDWARE
2 CONTINUOUS HINGES
WEATHER SEAL
ENTRANCE LOCK
2 CLOSERS
FLUSH BOLT
ALUMINUM THRESHOLD

2
SF HARDWARE
CONTINUOUS HINGE
ENTRANCE LOCK
WEATHER SEAL
CLOSER

3
3 HINGES
OFFICE LOCKSET
WALL STOP
SILENCERS
SS KICKPLATE

4
3 HINGES
STOREROOM LOCKSET
CLOSER
SILENCERS

5
3 HINGES
RIM EXIT DEVICE
CLOSER
ALUMINUM THRESHOLD
WEATHER SEAL

6
3 HINGES
RIM EXIT DEVICE
CLOSER
SILENCERS

7
CONTINUOUS HINGE
DEADBOLT
PUSH/PULL BARS
CLOSER
ALUMINUM THRESHOLD

8
3 HINGES
PRIVACY LOCKSET
CLOSER
SS KICKPLATE
SILENCERS

9
CONTINUOUS HINGES
DEADBOLT
PUSH/PULL BARS
CLOSER
ALUMINUM THRESHOLD
SS KICKPLATE

10
3 HINGES
STOREROOM LOCKSET
CLOSER
WEATHER SEAL
ALUMINUM THRESHOLD

11
2 CONTINUOUS HINGES
WEATHER SEAL
STOREROOM LOCK
1 CLOSER
FLUSH BOLT
ALUMINUM THRESHOLD

12
SF HARDWARE
2 CONTINUOUS HINGES
WEATHER SEAL
ENTRANCE LOCK
2 CONCEALED VERTICAL ROD EXIT DEVICE
2 CLOSERS
FLUSH BOLT
ALUMINUM THRESHOLD

13
SF HARDWARE
2 CONTINUOUS HINGES
WEATHER SEAL
2 PUSH/PULL BARS
2 CLOSERS
FLUSH BOLT

14
3 HINGES (180 DEGREE) PER LEAF
STOREROOM LOCKSET
FLUSHBOLT
WALL STOP
SILENCERS
SS KICKPLATE

15
3 HINGES (PER LEAF)
STOREROOM LOCKSET
FLUSHBOLT
2 CLOSERS
SILENCERS

16
3 HINGES
OFFICE LOCKSET
CLOSER
WALL STOP
SILENCERS

17
3 HINGES
PASSAGE SET
SILENCERS

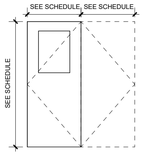
18
3 HINGES
STOREROOM LOCKSET
CLOSER
SS KICKPLATE
SILENCERS

19
SPRING HINGES
SS PUSH PLATES (EACH SIDE)
WALL STOP
SS KICKPLATE (EACH SIDE) 36 X 32W

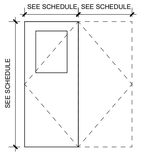
20
3 HINGES (PER LEAF)
ENTRANCE LOCK
2 CONCEALED VERTICAL ROD EXIT DEVICE
2 CLOSERS
1 WALL STOP
DOOR SILENCERS
2 SS KICKPLATES

21
3 HINGES
PASSAGE SET
DEADBOLT
CLOSER
DOOR SILENCERS
SS KICKPLATE
WALL STOP

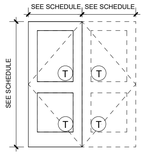
22
CONTINUOUS HINGE
RIM EXIT DEVICE
ENTRANCE LOCK
WEATHER SEAL
CLOSER
ALUMINUM THRESHOLD



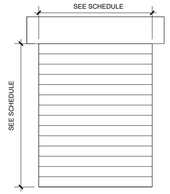
D1 SOLID CORE STAIN GRADE WOOD DOOR



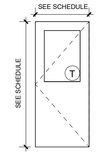
D2 HOLLOW CORE METAL DOOR



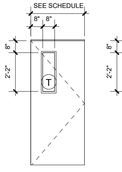
D3 SOLID CORE STAIN GRADE WITH DOUBLE LITE



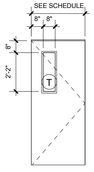
D4 ROLL UP DOOR



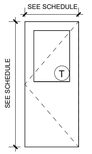
D5 SOLID CORE STAIN GRADE WITH HALF LITE



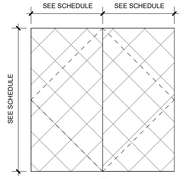
D6 HOLLOW METAL WITH QUARTER LITE



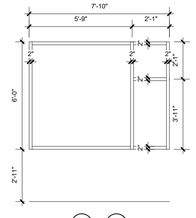
D7 CORE STAIN GRADE WITH QUARTER LITE



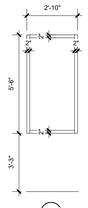
D8 HOLLOW METAL WITH HALF LITE



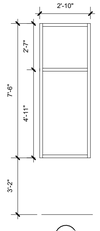
D9 CUSTOM STEEL DOOR



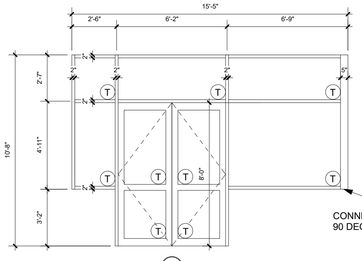
SF1 SF1R (REVERSED) STOREFRONT



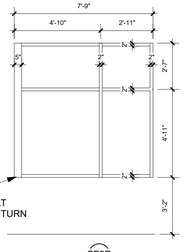
SF2 STOREFRONT



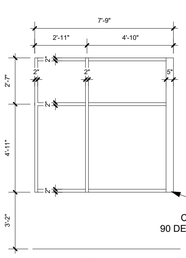
SF3 STOREFRONT



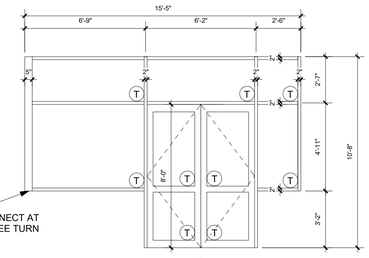
SF4 STOREFRONT



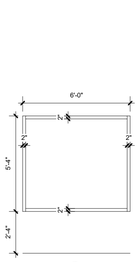
SF5R STOREFRONT



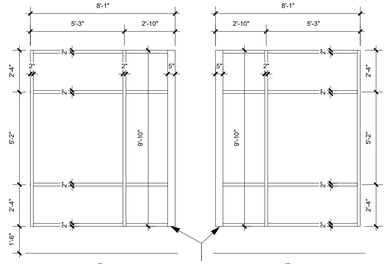
SF5 STOREFRONT



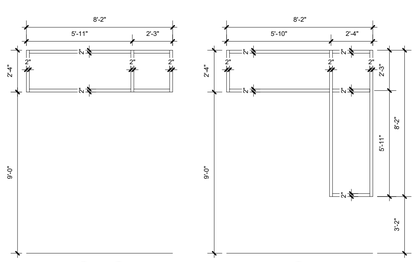
SF4R STOREFRONT



SF6 STOREFRONT

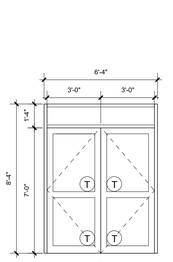


SF7R CONNECT AT 90 DEGREE TURN SF7 STOREFRONT

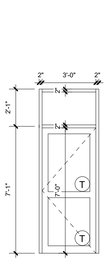


SF8 SF8R (REVERSED) STOREFRONT

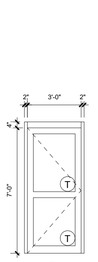
SF9 STOREFRONT



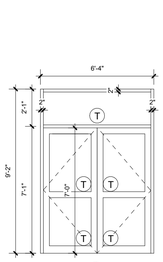
SF10 STOREFRONT



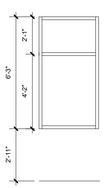
SF11 STOREFRONT



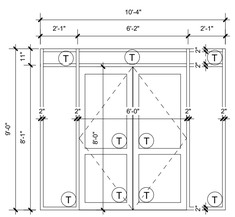
SF12 STOREFRONT



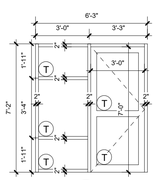
SF13 STOREFRONT



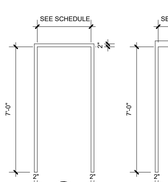
SF14 STOREFRONT



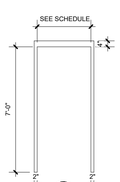
SF15 STOREFRONT



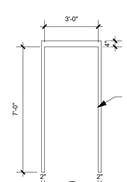
SF15 STOREFRONT



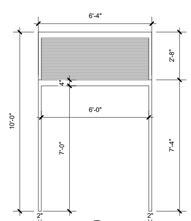
F1 STOREFRONT



F2 STOREFRONT



F3 STOREFRONT



F4 STOREFRONT

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland, license number 12853, expiration date 08-29-2022.

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

A600

ANNE ARUNDEL COUNTY

JUNE 2023

DEPARTMENT OF PUBLIC WORKS

202211.1

REVISED DATE	BY	APPROVED DATE	APPROVED DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

DOOR SCHEDULE AND FRAME ELEVATIONS

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032

FINISH SCHEDULE

Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Notes
303	ADMIN					
304	MEN					
305	ADMIN					
218	GRILLE	LVT-1	WB-1	PT-1, PT-2	ACT-A, AX-2,	PROVIDE RES-1 FLOORING BEHIND BAR
202	MULTI-PURPOSE	LVT-2	WB-1	PT-1, PT-2	ACT-A, CP-1	
308	Room					
309	Room					
310	KITCHEN					
311	COATS					
312	STO					
313	STO					
314	MEN					
315	WOMEN					
316	OUTDOOR STORAGE					
317	DELIV					
207	TABLE AND CHAIR STORAGE					
319	STO					
320	COVERED SERVICE					
321	MEN					
322	COOLER					
323	STO					
324	MEN					
325	WOMEN					
326	DELIVERIES					
327	MEN					
328	WOMEN					
329	ENTRY					
330	CORRIDOR					
331	84 CARTS					
332	PRO SHOP					
333	SEASONAL STORAGE					
334	WOMEN					
335	TURN					
336	BEV					
337	GM					
338	Room					
339	PRO					
340	GENERAL STORAGE					
341	STORAGE					
342	MAINT STORAGE					
343	BEVERAGE CART STORAGE					
344	ELEC					
345	WATER/ELEC/SPRINKLER					
346	STO					
347	WOMEN					
348	MEN					
349	SEASONAL STORAGE					
350	MAINT					
351	STORAGE					
352	RR					
353	MEN					
354	GOLF SIM					
355	STORAGE					
356	COATS					
357	Room					
358	JAN					
359	TURN					
360	TURN STO					
361	SEASONAL					
362	SPR					
363	EQ					
364	WORK ROOM					
223	MULTI-PURPOSE EVENTS DECK					
366	DELIVERY					
367	CIRCULATION					
368	STORAGE					
369	GRILLE ENTRY					
370	EVENT ENTRY					
371	OD STO					
372	TURN					
373	STO					
374	COVERED EXT					
375	ADMIN					
376	STO					
201	LOBBY	LVT-2	WB-1	PT-1	WPL-1	
378	STO					
379	STO					
380	ADMIN					
381	DELIVERY					
382	COOLER					
383	CART RETURN					
384	RETAIL					
385	STO					
386	WATER					
387	CIRC DECK					
388	EQUIP					
389	STO					
390	ADMIN					
391	STO					

FINISH SCHEDULE

Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Notes
392	IT					
393	WATER					
394	PRO					
395	GM					
396	SERVICE YARD					
397	WOMEN					
398	WATER					
399	BEV					
400	MAINT					
401	STO					
402	STO					
403	SUPPORT					
404	ADMIN					
405	DELIV					
406	COOLER					
407	YARD					
408	COVERED EXT					
409	CIRCULATION					
411	STO/COATS					
412	DECK					
417	STO					
418	COATS					
419	SUPPORT					
420	IT					
421	ALT ELEC					
422	JAN					
219	LOBBY	LVT-1	WB-1	PT-1	WPL-1	
221	OFFICE	CPT-1	RB-1	PT-1	ACT-A	
220	ADMIN	CPT-1	RB-1	PT-1	ACT-A	
222	OFFICE	CPT-1	RB-1	PT-1	ACT-A	
427	IT					
428	SPR & PUMP					
429	COVERED EXT					
430	EVENTS CIRC					
431	CHEF					
225	TRASH & RECYLING	SC-1	RB-1	SEE ELEVATIONS	PT-1	
433	EQUIPMENT					
434	MECH					
215	WOMEN	CFT-1	CTB-1	PT-1, SWT-1	CP-1	TILE 4' HIGH ON 3 WALLS AND FULL HEIGHT OVER SINK
217	MEN	CFT-1	CTB-1	PT-1, SWT-1	CP-1	TILE 4' HIGH ON 3 WALLS AND FULL HEIGHT OVER SINK
208	KITCHEN	RES-1	RES/B-1	FRP-1	ACT-B	PROVIDE FIBER REINFORCED PANEL FULL HEIGHT TO CEILING
103	ELEC					
101	OFFICE	CPT-1	RB-1	PT-1	ACT-A	
102	OFFICE	CPT-1	RB-1	PT-1	ACT-A	
106	WORK RM.	CPT-1	RB-1	PT-1	ACT-A	
100	PRO SHOP	LVT-1	RB-1	PT-1	ACT-A, AX-1, CP-1	
443	GOLF CART					
104	ATS	SC-1	NONE	NONE	OPEN	
105	SERVER	SC-1	RB-1	PT-1	OPEN	
111	MECH.	CP-1	NONE	NONE	OPEN	
107	SEASONAL	CPT-1	RB-1	PT-1	ACT-A	
108	GOLF LEAGUE	LVT-1	RB-1	PT-1	ACT-A	
109	FAMILY R.R.	CFT-1	CB-1	CWT-1, PT-1	CP-1	TILE 4' ON 3 WALLS AND FULL HEIGHT ON WET WALL
112	MENS	SC-1	RB-1	PT-3	CP-1	
113	WOMENS	SC-1	RB-1	PT-3	CP-1	
114	TURN	SC-1	RB-1	PT-E	ACT-B	
115	GOLF CART STORAGE	SC-1	NONE	PT-3	OPEN	
116	MAINT. / EQUIP. STORAGE	NONE	NONE	NONE	NONE	
211	PAPER & LIQUOR STORAGE	RES-1	RES/B-1	PT-1	OPEN	
210	OFFICE	RES-1	RES/B-1	PT-1	ACT-B	
209	DRY STORAGE	RES-1	RES/B-1	PT-1	OPEN	
204	EVENT SUPPORT	LVT-2	WB-1	PT-1	ACT-A	
205	R.R.	CFT-1	CTB-1	CWT-1	ACT-A	TILE 4' ON 3 WALLS AND FULL HEIGHT ON WET WALL
460	Room					
461	Room					
213	JAN.	RES-1	RES/B-1	PT-1	OPEN	
212	PREP	RES-1	RES/B-1	FRP-1	ACT-B	PROVIDE FIBER REINFORCED PANEL FULL HEIGHT TO CEILING
214	CORRIDOR	CPT-1	WB-1	PT-1	ACT-A, CP-1	
117	PUMP ROOM	NONE	NONE	NONE	NONE	
117	Room					
110	JAN.	SC-1	RB-1	PT-1, SWT-1	OPEN	
216	FAMILY R.R.					TILE 4' ON 3 WALLS AND FULL HEIGHT ON WET WALL
103	ELEC	SC-1	NONE	NONE	OPEN	
206	CL	CPT-1	WB-1	PT-1	ACT-A	
224	OUTDOOR STG	LVT-2	RB-1	PT-1	ACT-A	
203	STG	LVT-2	RB-1	PT-1	ACT-A	
226	Room					
101	OFFICE					

MATERIAL SCHEDULE

CODE	MATERIAL	MANFACTURER BASIS OF DESIGN	STYLE / PATTERN	COLOR	VENDOR / REP	NOTES
PT-1	INTERIOR FIELD PAINT	SHERWIN WILLIAMS	SEMI GLOSS	TBD		
PT-2	INTERIOR ACCENT PAINT	SHERWIN WILLIAMS	SEMI GLOSS	TBD		
PT-3	ELASTOMERIC PAINT	SHERWIN WILLIAMS	TBD	TBD		PROVIDE AT ALL EXPOSED INTERIOR CMU WALLS
TP-1	TRIM PAINT - DOOR FRAMES	SHERWIN WILLIAMS	SEMI GLOSS	TBD		
CWT-1	CERAMIC TILE	SPARTAN SURFACES	TBD	TBD		WALL TILE
TO-1	TOLIET PARTITIONS	GLOBAL PARTITIONS	TBD	TBS		
ACT-A	ACOUSTIC CEILING TILE	ARMSTRONG	2'X2' CALLA TEGULAR, 15"/16" PRELUDE XL	WHITE		
ACT-B	ACOUSTIC CEILING TILE	ARMSTRONG	2'X4' "KITCHEN ZONE" SMOOTH TEXTURE	WHITE		PROVIDE IN KITCHEN AND "TURN" CEILING
PT-4	PAINT - OPEN CEILING	SHERWIN WILLIAMS	SEMI GLASS	TBD		
PL-1	PLASTIC LAMINATE - GENERAL	WILSONART	TBD	TBD		GENERAL MILLWORK
PL-2	PLASTIC LAMINATE - ACCENT	WILSONART	TBD	TBD		GENERAL MILLWORK
SS-1	SOLID SURFACE	CORIAN	TBD	TBD		GENERALL COUNTERTOPS
QTZ-1	QUARTZ	WILSONART	TBD	TBD		BAR TOP
RB-1	RUBBER BASE	ROPPE	TBD	TBD		LOWER LEVEL
WB-1	WOOD BASE	TBD	TBD	TBD		1"X4" PAINTED WOOD BASE
CB-1	TILE COVE BASE	SPARTAN SURFACES	TBD	TBD		6" TILE COVE BASE
LVT-1	LUXURY VINYL TILE	J & J FLOORING	TBD	TBD		
LVT-2	LUXURY VINYL TILE	J & J FLOORING	TBD	TBD		
CPT-1	BROADLOOM CARPET	J & J FLOORING	TBD	TBD		OFFICES
CPT-2	CARPET TILE	J & J FLOORING	TBD	TBD		
AX-1	AXIOM CEILING TRIM	ARMSTRONG	10" AXIOM CLASSIC	TBD		CURVELINEAR ,CEILING ABOVE RETAIL COUNTER IN...
AX-2	AXIOM CEILING TRIM	ARMSTRONG	AXIOM VECTOR	TBD		ROUND SOUND CLOUDS IN GRILL. SEE RCP FOR SIZES.
SC-1	SEALED CONCRETE	TBD	TBD	TBD		
CP-1	PAINT ON GYP. BOARD CEILING	SHERWIN WILLIAMS	SEMI GLOSS	TBD		
CFT-1	CERAMIC TILE	SPARTAN SURFACES	TBD	TBD		FLOOR TILE
CTB-1	CERAMIC TILE BASE	SPARTAN SURFACES	TBD	TBD		
WPL-1	WOOD PLANKS	TBD	TBD	TBD		WOOD PLANKS ON VAULTED CEILING
RES-1	EXPOXY FLOORING	TBD	TBD	TBD		
RES/B-1	EXPOXY BASE	TBD	TBD	TBD		INTERGRATED 6" EXPOXY BASE
FRP-1	FIBER REINFORCED PANEL	TBD	TBD	TBD		PROVIDE 4' HIGH IN ROOMS INDICATED

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
ARCHITECTURE + INTERIORS
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland, license number 18853, expiration date 08-28-2022.

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

A602

ANNE ARUNDEL COUNTY

JUNE 2023

DEPARTMENT OF PUBLIC WORKS

202211.1

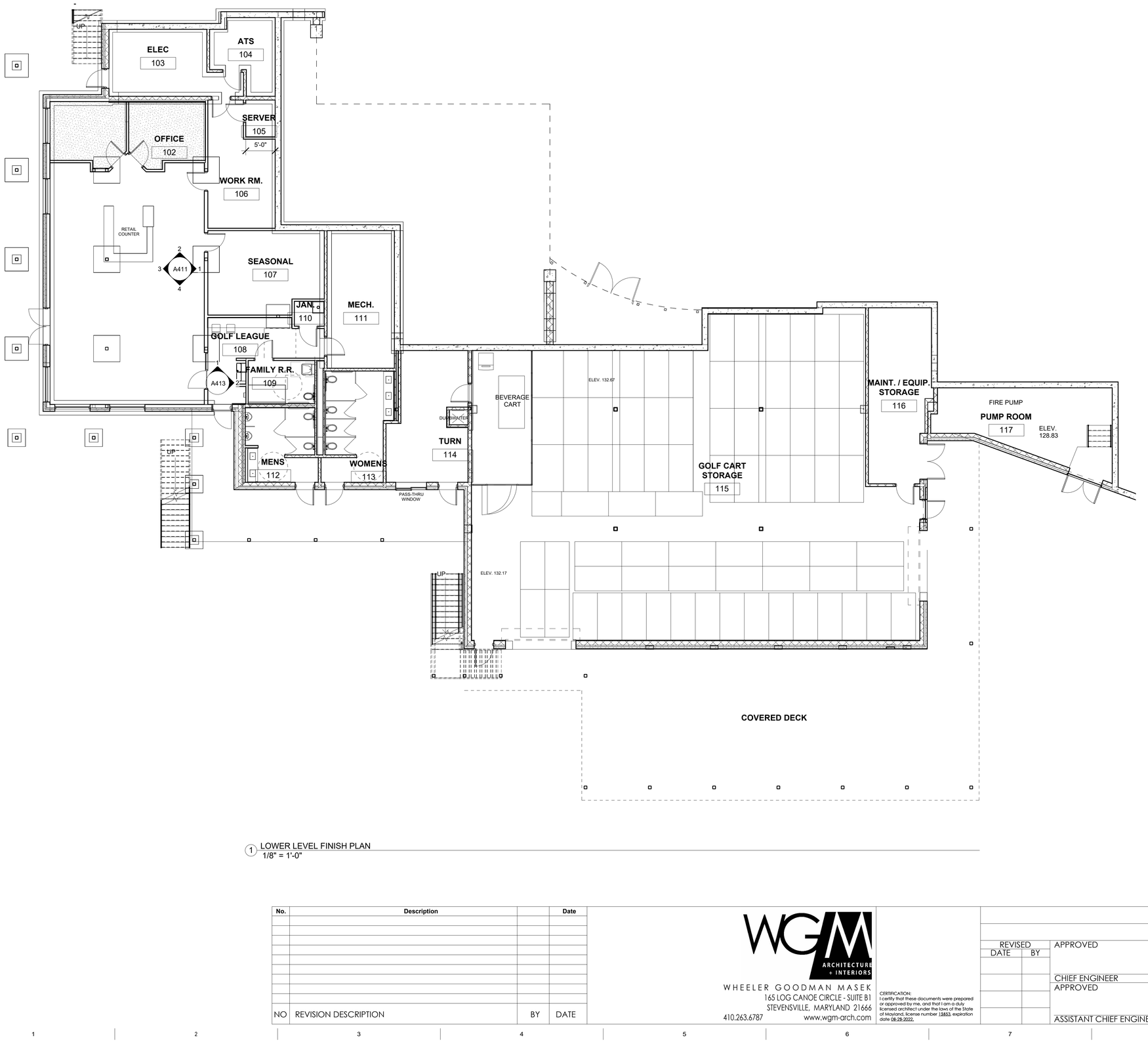
REVISED DATE	BY

APPROVED DATE
CHIEF ENGINEER
APPROVED DATE
ASSISTANT CHIEF ENGINEER
APPROVED DATE
PROJECT MANAGER
APPROVED DATE
CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

FINISH SCHEDULE - BOTH LEVELS

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



1 LOWER LEVEL FINISH PLAN
1/8" = 1'-0"

FINISH LEGEND (SEE MATERIALS SCHEDULE)

- CMU
- BATT INSULATION
- WOOD
- BRICK
- STEEL
- GROUT, MORTAR, SAND, OR PRECAST
- GROUND FACE BLOCK
- CONCRETE
- CARPET
- SOIL FILL
- ROCK FILL
- GYPSUM BOARD
- RIGID INSULATION

GENERAL FINISH NOTES:

1. ALL SURFACES AND SUBSTRATES TO BE PREPARED PER FINISH MANUFACTURER'S RECOMMENDED INSTRUCTIONS PRIOR TO APPLICATION OF FINISHES. THIS INCLUDES, BUT IS NOT LIMITED TO: FLASH-PATCHING CONCRETE SLABS TO PROVIDE A LEVEL SURFACE FOR FLOORING APPLICATION; CLEANING, SANDING AND PRIMING ALL SURFACES TO BE PAINTED.

2. CONTRACTOR TO FIELD VERIFY ALL AREAS TO RECEIVE CABINETRY PRIOR TO START OF WORK. MEASUREMENTS SHOWN ARE APPROXIMATE.

3. SUBMIT SHOP DRAWINGS OF ALL CABINETRY AND MILLWORK FOR ARCHITECT APPROVAL PRIOR TO ORDERING. IN ADDITION, CASEWORK TO BE SUBMITTED TO THE AWI CERTIFICATION PROGRAM FOR REVIEW.

4. ALL WORK TO BE DONE IN ACCORDANCE WITH FINISH MANUFACTURER'S RECOMMENDATIONS.

5. PROVIDE OWNER WITH MANUFACTURER'S RECOMMENDED MAINTENANCE INSTRUCTIONS PRIOR TO SUBSTANTIAL COMPLETION.

6. ALL NEW DOOR FRAMES SHALL BE PAINTED TP-1.

7. PROVIDE APPROPRIATE TRANSITION STRIPS AND/OR THRESHOLDS AT ALL LOCATIONS NECESSARY. BASIS OF DESIGN IS JOHNSONITE. TYPICAL VCT TO CARPET TRANSITION STRIP IS A TWO PIECE SYSTEM: TRACK FOR T-MOULDING (MT-00-B) AND T-MOULDING (CE-XXX-A).

9. ALL CMU EXPOSED TO VIEW SHALL BE PAINTED PRE ARCHITECTS DIRECTION.

10. WHEN FLOOR FINISH MATERIAL CHANGE BETWEEN ROOMS, LOCATE SEAM IN CENTER OF DOOR.

11. TERRAZZO TILE TO BE INSTALLED PARALLEL TO WALLS, U.N.O.

12. PROVIDE APPROPRIATE TRANSITION STRIPS AT EVERY LOCATION WHERE DIFFERENT FLOOR FINISHES MEET.

13. ALL SIGNS TO BE MOUNTED ON THE WALL ON THE HARDWARE SIDE OF THE DOOR, WHERE APPROPRIATE. SEE SHEET A402 FOR SIGNAGE TYPES AND MOUNTING HEIGHTS.

14. SEE SIGNAGE SCHEDULE ON A401 FOR SIGN TYPES

15. PRIOR TO INSTALLING FINISH FLOOR, SLAB SHALL BE TESTED FOR HUMIDITY FOR APPLICATION OF EACH FLOORING MATERIAL TYPE. IF ALLOWABLE PERCENTAGES ARE NOT ACHIEVED, CONTRACTOR SHALL PROVIDE MOISTURE MITIGATION SYSTEM OR ENHANCED ADHESIVE AT NO ADDITIONAL COST TO THE OWNER. REFER TO DIVISION 033000 SECTION 2.7A. BASE BID IS FOR ENTIRE PROJECT TO HAVE MITIGATION SYSTEM. CREDIT WILL BE GIVEN IF MITIGATION SYSTEM IS NOT NEEDED DUE TO PASSED FIELD TEST.

16. TACK STRIP LOCATIONS TO BE CONFIRMED WITH OWNER PRIOR TO INSTALLATION.

17. EXTERIOR WINDOWS SHALL RECEIVE HORIZONTAL LOUVER BLINDS.

18. CORNER GUARDS ARE TO BE PROVIDED AT ALL OUTSIDE CORNERS ON ALL DRYWALL PARTITIONS.

19. ALL EXPOSED METAL TO BE PAINTED INCLUDING BUT NOT LIMITED TO STRUCTURAL STEEL, DECKING, ETC.

20. LOCKERS TO BE ONE COLOR, BOTH INSIDE AND OUT.

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

A603

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland, license number 18853, expiration date 08-29-2022.

ANNE ARUNDEL COUNTY

DEPARTMENT OF PUBLIC WORKS

JUNE 2023

202211.1

REVISED DATE	BY

APPROVED DATE — CHIEF ENGINEER

APPROVED DATE — PROJECT MANAGER

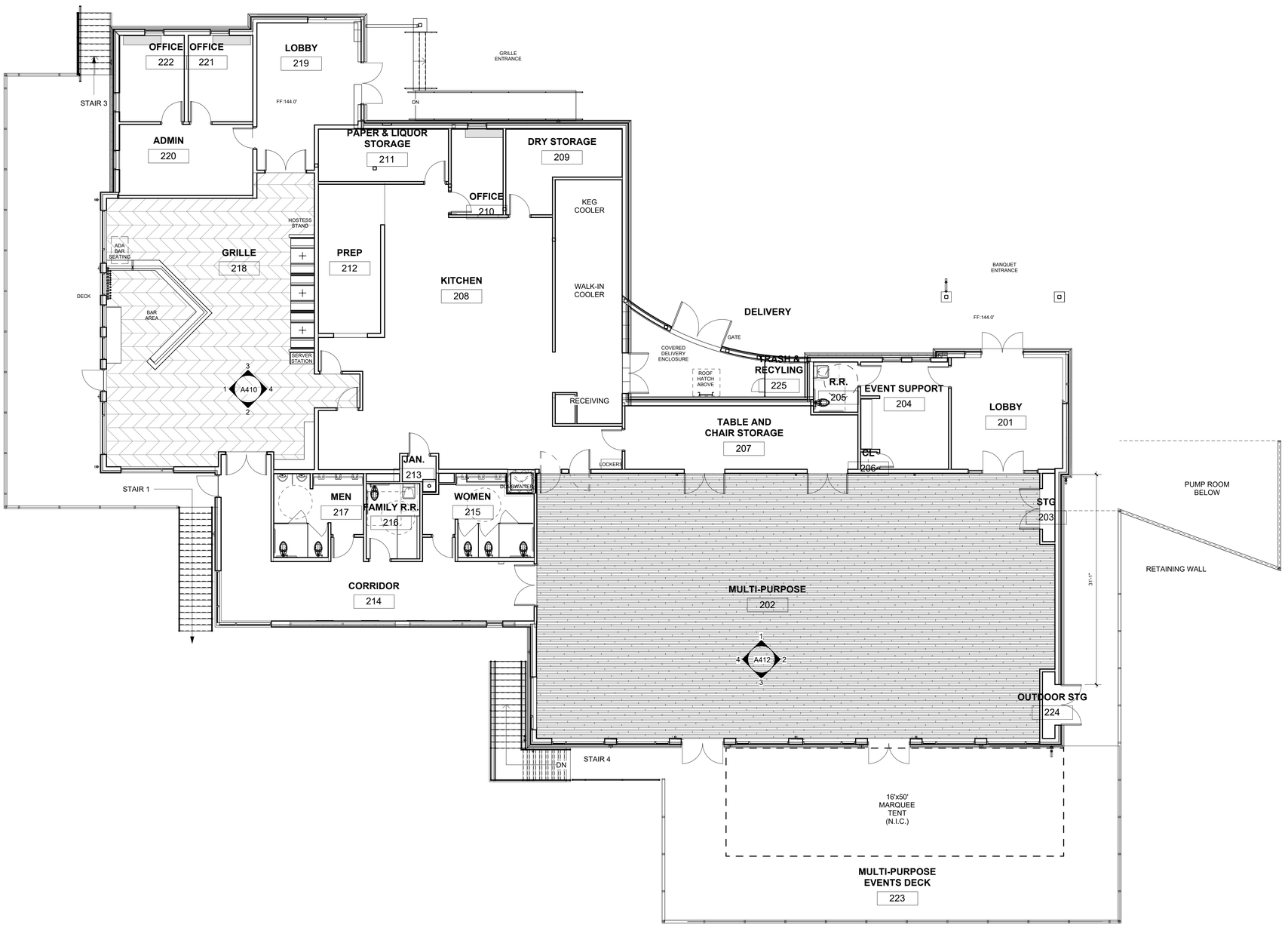
APPROVED DATE — ASSISTANT CHIEF ENGINEER

APPROVED DATE — CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

FINISH PLAN LOWER LEVEL

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



1 FINISH PLAN UPPER LEVEL
1/8" = 1'-0"

FINISH LEGEND (SEE MATERIALS SCHEDULE)

- CMU
- BATT INSULATION
- WOOD
- BRICK
- STEEL
- GROUT, MORTAR, SAND, OR PRECAST
- GROUND FACE BLOCK
- CONCRETE
- CARPET
- SOIL FILL
- ROCK FILL
- GYPSUM BOARD
- RIGID INSULATION

GENERAL FINISH NOTES:

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3. SUBMIT SHOP DRAWINGS OF ALL CABINETRY AND MILLWORK FOR ARCHITECT APPROVAL PRIOR TO ORDERING. IN ADDITION, CASEWORK TO BE SUBMITTED TO THE AWI CERTIFICATION PROGRAM FOR REVIEW.
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5. PROVIDE OWNER WITH MANUFACTURER'S RECOMMENDED MAINTENANCE INSTRUCTIONS PRIOR TO SUBSTANTIAL COMPLETION.
6. ALL NEW DOOR FRAMES SHALL BE PAINTED TP-1.
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19. ALL EXPOSED METAL TO BE PAINTED INCLUDING BUT NOT LIMITED TO STRUCTURAL STEEL, DECKING, ETC.
20. LOCKERS TO BE ONE COLOR, BOTH INSIDE AND OUT.

NOT FOR CONSTRUCTION | DESIGN DEVELOPMENT | A604

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Mayland, license number 13453, expiration date 08-29-2022.

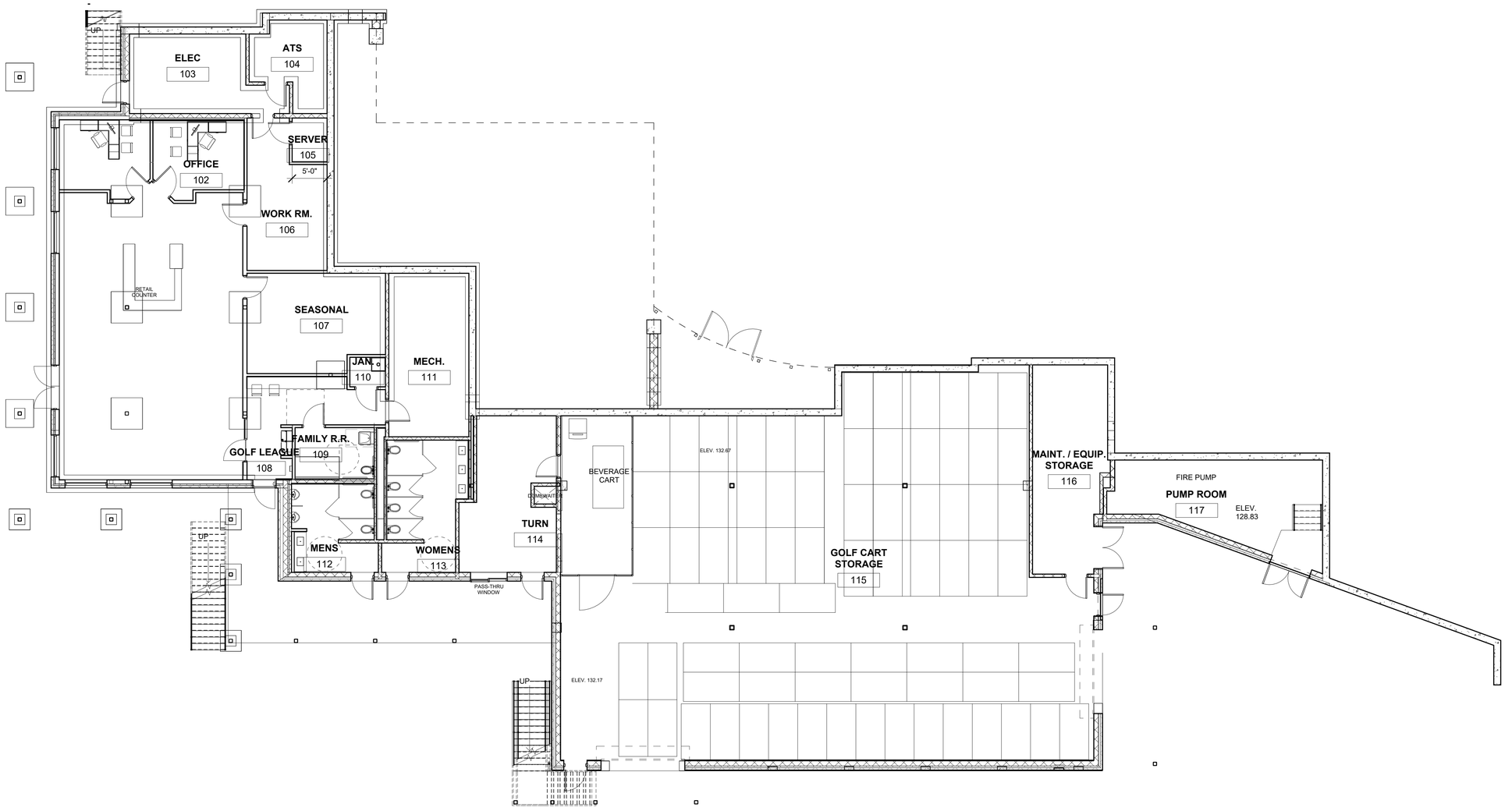
ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

REVISED DATE	BY	APPROVED DATE	APPROVED DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

JUNE 2023
202211.1
SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

FINISH PLAN UPPER LEVEL

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

A605

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
ARCHITECTURE + INTERIORS
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

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ANNE ARUNDEL COUNTY

DEPARTMENT OF PUBLIC WORKS

JUNE 2023

202211.1

REVISED DATE	BY

APPROVED DATE
CHIEF ENGINEER

APPROVED DATE
PROJECT MANAGER

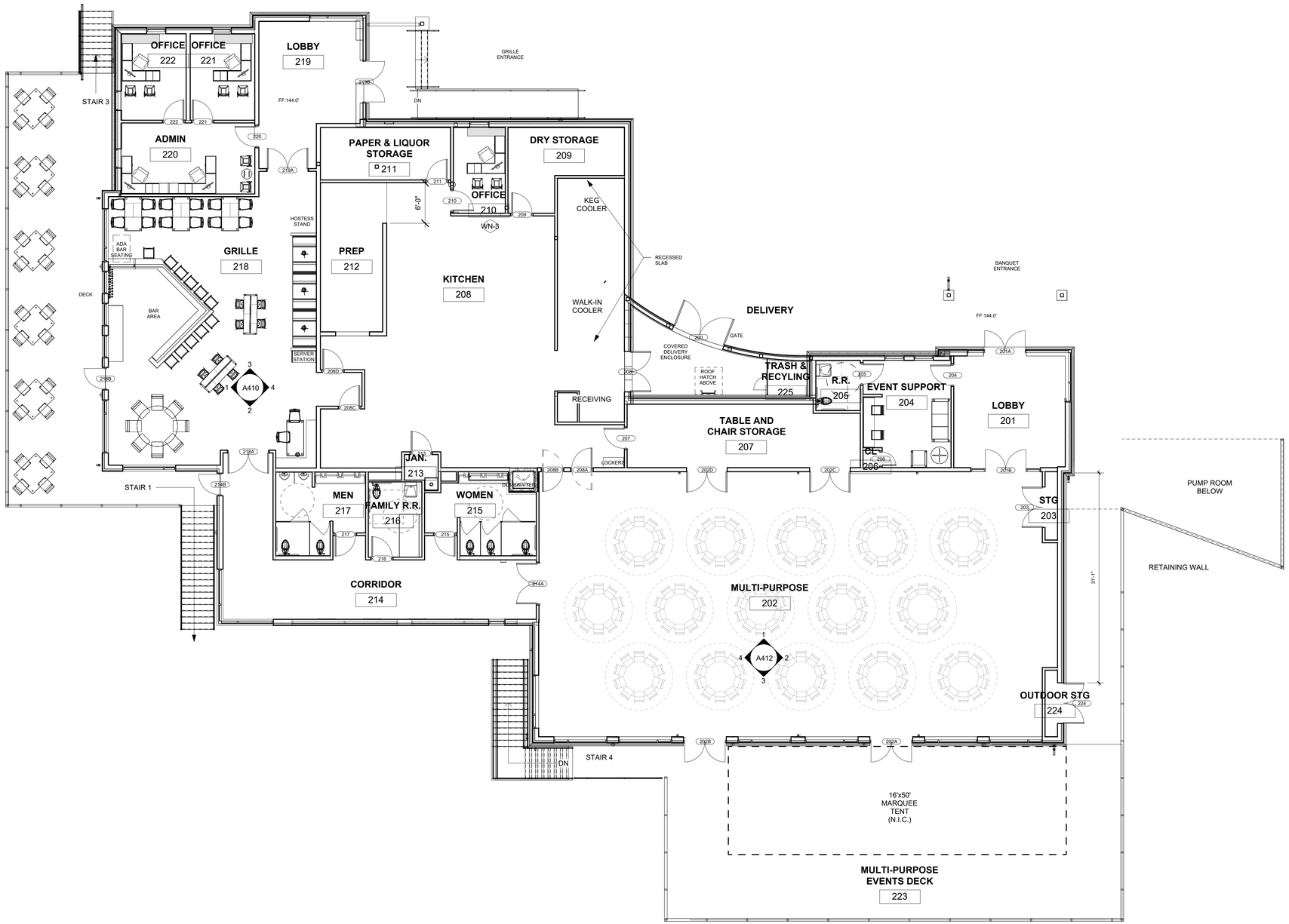
APPROVED DATE
ASSISTANT CHIEF ENGINEER

APPROVED DATE
CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

FURNITURE PLAN LOWER LEVEL

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



1 UPPER LEVEL FURNITURE PLAN
1/8" = 1'-0"

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT | A606

ANNE ARUNDEL COUNTY | JUNE 2023

DEPARTMENT OF PUBLIC WORKS | 202211.1

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
ARCHITECTURE + INTERIORS
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
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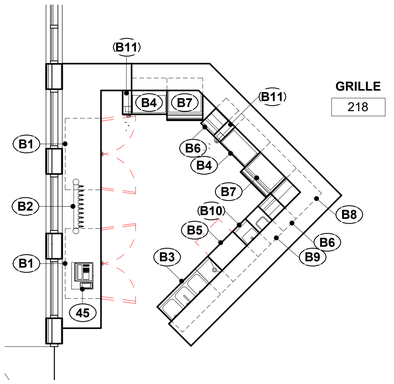
REVISED DATE	BY	APPROVED / DATE	APPROVED / DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED / DATE	APPROVED / DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

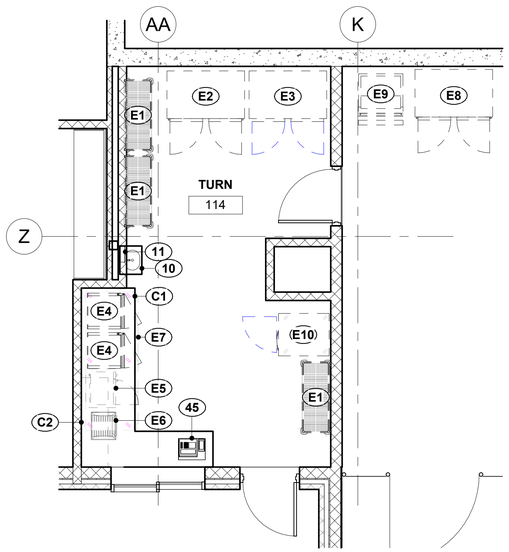
UPPER LEVEL FURNITURE PLAN

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



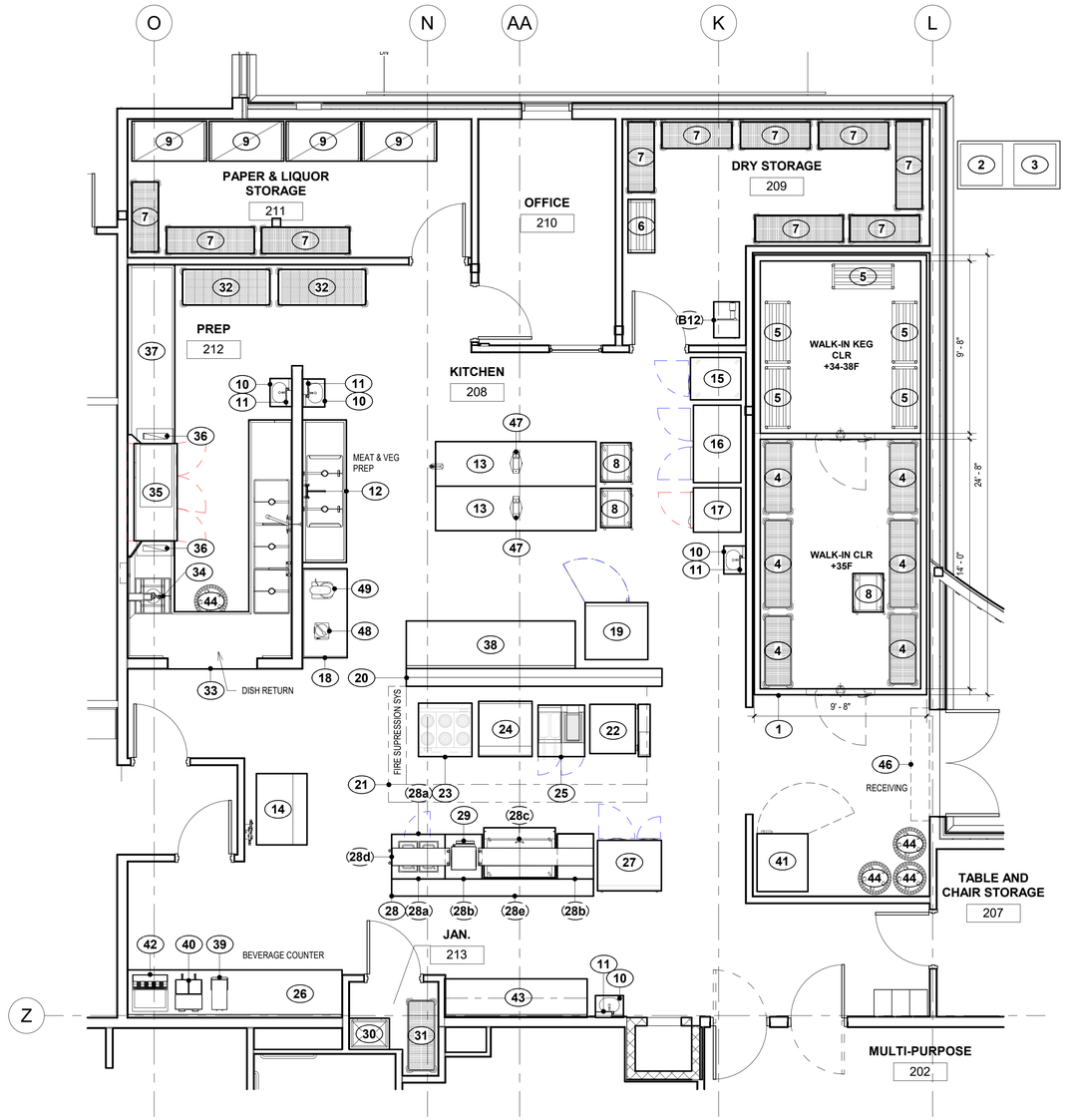
BAR EQUIPMENT PLAN

SCALE: 1/4"=1'-0"



SNACK BAR EQUIPMENT PLAN

SCALE: 1/4"=1'-0"



KITCHEN EQUIPMENT PLAN

SCALE: 1/4"=1'-0"

GENERAL HEALTH DEPARTMENT NOTATIONS

1. ALL PIPING, CONDUIT, BX CABLE AND SIMILAR CONSTRUCTION WILL BE EITHER LOCATED INSIDE A WALL OR INSTALLED WITH A MINIMUM 3/4" SPACE FROM THE WALL OR SEALED TO THE WALL.
2. ALL DOORS TO THE OUTSIDE WILL BE SELF-CLOSING AND RODENT-PROOF.
3. A MINIMUM OF FIFTY (50) FOOT-CANDLES OF SHIELDED LIGHT WILL BE PROVIDED AT ALL WORK SURFACES, STORAGE AREAS, FOOD PREPARATION AREAS, UTENSIL WASHING AREAS, TOILET ROOMS, LOCKER ROOMS AND IN THE GARBAGE AND RUBBISH STORAGE AREAS.
4. ALL RESTROOM DOORS WILL BE SELF-CLOSING.
5. ALL RESTROOMS WILL BE EQUIPPED WITH MECHANICAL EXHAUST VENTILATION SIZED AT A MINIMUM RATE OF TWO (2) CUBIC FEET PER MINUTE PER SQUARE FOOT OF FLOOR AREA AND EXHAUSTING DIRECTLY TO THE OUTSIDE.
6. ALL FLOOR MOUNTED EQUIPMENT WILL BE PLACED ON NATIONAL SANITATION FOUNDATION (NSF) APPROVED SIX (6) INCH LEGS, OR THE EQUIVALENT, AND PROPERLY SPACED FROM ADJACENT EQUIPMENT OR WALLS; OR PLACED ON NSF APPROVED CASTERS, OR THE EQUIVALENT; OR PROPERLY SEALED TO ALL ADJACENT SURFACES.
7. ALL COUNTER MOUNTED FOODSERVICE EQUIPMENT WEIGHING IN EXCESS OF EIGHTY (80) POUNDS WILL BE MOUNTED ON NSF APPROVED FOUR (4) INCH HIGH LEGS.
8. ALL EXPOSED RAW WOOD WILL BE SEALED.
9. ALL ANNULAR OPENINGS IN CONSTRUCTION WILL BE SEALED TO WITHIN 1/32ND OF AN INCH.
10. ALL AISLES WILL BE A MINIMUM OF THIRTY-SIX (36) INCHES WIDE PER NATIONAL FIRE PROTECTION ASSOCIATION 101.
11. THE OUTSIDE STORAGE OF REFUSE WILL BE IN RODENT-PROOF CONTAINERS LOCATED ON A PAVED SURFACE.
12. ALL SINK INSTALLATIONS WILL BE EQUIPPED WITH HOT AND COLD RUNNING WATER THROUGH A MIXING VALVE OR COMBINATION FAUCET.
13. ALL PAINTING WILL BE WITH LEAD-FREE, NON-METALLIC ENAMEL PAINT OR A HIGH QUALITY VARNISH.
14. WASTE WATER FROM ALL APPLICABLE FOODSERVICE EQUIPMENT WILL BE INDIVIDUALLY PLUMBED TO AN OPEN SITE DRAIN WITH A MINIMUM ONE INCH AIR GAP.

THE USE OF SEALANTS IN FOOD SERVICE EQUIPMENT

1. ALL SEALANTS MUST BE LISTED AS APPROVED BY THE NATIONAL SANITATION FOUNDATION (NSF) UNDER 51.
2. SEALANTS SHALL BE USED ONLY ON STRUCTURALLY SOUND JOINTS AND SEAMS.
3. SEALANTS MAY BE USED TO FILL SPACES AND OPENINGS SUCH AS, BUT NOT LIMITED TO, BLIND RIVET HEADS AND SLOT AND PHILLIPS HEAD SCREWS.
4. OPENINGS AROUND SERVICE AND UTILITY LINES SHOULD BE CLOSED INSOFAR AS PRACTICAL BY:
   A. COLLARS AND GROMMETS.
   B. FLEXIBLE FORM GASKETS.
5. SEALANTS MAY BE USED TO SEAL SERVICE AND UTILITY LINES TO WALL AND ADJACENT PIECES OF EQUIPMENT WHERE THE SPACING IS. CLOSED TO LESS THAN 1/8 OF INCH.
6. SEALANTS MAY NOT BE UTILIZED IN FOOD AND SPLASH CONTACT SURFACES, TO FILL OPEN SPACES, OR VOIDS WHICH RESULT DUE TO IMPROPER DESIGN OR FABRICATION. ANY OPENING IN EXCESS OF 1/8 INCH SHALL BE CONSIDERED EXCESSIVE AND MUST BE CLOSED USING PROPER FIELD JOINTS.

EQUIPMENT LEGEND

NEW EQUIPMENT

EXISTING EQUIPMENT TO BE RE-USED

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT	K101

NYIKOS GARCIA
Foodservice Design Inc.
7146 Starmount Way
New Market, MD 21774
P 240.683.9530

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Mayland, license number 19853, expiration date 08-28-2022.

REVISED DATE	BY

ANNE ARUNDEL COUNTY			JUNE 2023
DEPARTMENT OF PUBLIC WORKS			P570200
APPROVED DATE	APPROVED DATE	SCALE: AS NOTED	KITCHEN EQUIPMENT PLAN
		DRAWN BY:	
CHIEF ENGINEER	PROJECT MANAGER	CHECKED BY:	
APPROVED DATE	APPROVED DATE	SHEET: OF	THE PRESERVE AT EISENHOWER CLUBHOUSE 1576 Generals Way Crownsville, MD 21032
		PROJECT #: P570200	
ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	CONTRACT #: P570205	

EQUIPMENT SCHEDULE

ITEM	QTY.	DESCRIPTION	REMARKS
1	1	WALK-IN COOLER/KEG COOLER	W/ AIR CURTAIN
2	1	COOLER REFRIGERATION SYSTEM	LOCATED OUTDOORS ON ROOF
3	1	KEG COOLER REFRIGERATION SYSTEM	LOCATED OUTDOORS ON ROOF
4	6	SHELVING, MOBILE	
5	5	KEG RACK	TWO-TIER
6	1	DUNNAGE RACK	
7	10	SHELVING, MOBILE	
8	3	PAN RACK CART, MOBILE	
9	4	SECURITY SHELVING, MOBILE	
10	5	HAND SINK	
11	5	SOAP & TOWEL DISPENSER	(N.I.K.E.C.) - SPECIFIED BY ARCHITECT
12	1	PREP-SINK	W/ OVERSHELF
13	2	WORKTABLE	W/ LOCKABLE S/S DRAWER; (1) MANUAL CAN OPENER
14	1	ICE MACHINE W/ BIN	
15	1	REACH-IN REFRIGERATOR, MOBILE	
16	1	REACH-IN FREEZER, MOBILE	
17	1	REACH-IN HEATED CABINET, MOBILE	
18	1	WORKTABLE	
19	1	COMBI OVEN, MOBILE	DOUBLE STACK; VENTLESS
20	1	UTILITY DISTRIBUTION SYSTEM (UDS)	W/ POT FILLER
21	1	VENTILATOR	W/ FIRE SUPPRESSION SYSTEM
22	1	MULTI-COOKER	W/ STAND
23	1	6-BURNER RANGE, MOBILE	W/ OVEN
24	1	GRIDDLE, MOBILE	
25	1	FRYER ASSEMBLY, MOBILE	W/ OIL FILTRATION & DUMP STATION
26	1	WORKTABLE	W/ LOCKABLE S/S DRAWERS & OVERSHELF
27	1	REFRIGERATED WORK TOP	
28	1	CHEF'S COUNTER	W/ TWO-TIER OVERSHELVES
28a	1	HOT FOOD COUNTER	
28b	2	SOLID TOP COUNTER	
28c	1	REFRIGERATED PREP COUNTER, MOBILE	
28d	1	DOUBLE OVERSHELF	
28e	1	PLATE STORAGE	
29	1	CONVEYOR TOASTER	
30	1	MOP SINK & RACK	N.I.K.E.C. - SPECIFIED BY PLUMBING DIVISION
31	1	SHELVING, MOBILE	
32	2	POT & PAN SHELVING, MOBILE	
33	1	SOILED DISHTABLE/ POT WASHING SINK	
34	1	DISPOSER	

(N.I.C.) - NOT IN CONTRACT.

(N.I.K.E.C.) - NOT IN KITCHEN EQUIPMENT CONTRACT.

EQUIPMENT SCHEDULE

ITEM	QTY.	DESCRIPTION	REMARKS
35	1	DISHMACHINE	HIGH TEMP, W/ WATER SOFTENER
36	2	VENT DUCTS	
37	1	CLEAN DISHTABLE	
38	1	WORKTABLE	W/ LOCKABLE S/S DRAWERS & OVERSHELF
39	1	ICED TEA BREWER	N.I.K.E.C. - FURNISHED BY VENDOR
40	1	COFFEE MACHINE	N.I.K.E.C. - FURNISHED BY VENDOR
41	1	BLAST CHILLER, MOBILE	
42	1	SODA DISPENSER	N.I.K.E.C. - FURNISHED BY VENDOR
43	1	WORKTABLE	W/ LOCKABLE S/S DRAWERS & OVERSHELF
44	4	TRASH CONTAINER, MOBILE	
45	1	CASH REGISTER	
46	1	FLY FAN	
47	2	RETRACTABLE CORD REEL	
48	1	FOOD PROCESSOR	
49	1	5-QUART TABLE MIXER	
B1	2	UNDERCOUNTER WINE REFRIGERATOR	
B2	1	BEER DISPENSING TOWER	10-TAPS
B3	1	UNDERBAR THREE-COMPARTMENT SINK	
B4	2	GLASS CHILLER	
B5	1	UNDERCOUNTER GLASSWASHER	
B6	2	LIQUOR DISPLAY W/ SPEED RAIL	
B7	2	ICE CHEST	
B8	1	CORNER DRAINBOARD	
B9	1	TRASH RECEPTACLE	
B10	1	DUMP/HAND SINK	
B11	2	SODA GUN	
B12	1	BEVERAGE CHILLING SYSTEM	W/ STAND
C1	1	WORKCOUNTER	
C2	1	WALL SHELF	
E1	3	SHELVING, MOBILE	EXISTING TO BE REUSED
E2	1	REACH-IN REFRIGERATOR, MOBILE	EXISTING TO BE REUSED
E3	1	REACH-IN FREEZER, MOBILE	EXISTING TO BE REUSED
E4	2	COUNTERTOP REFRIGERATOR	EXISTING TO BE REUSED
E5	1	MICROWAVE OVEN	EXISTING TO BE REUSED
E6	1	HOT DOG GRILL W/ COVER	EXISTING TO BE REUSED
E7	1	UNDERCOUNTER REFRIGERATOR	EXISTING TO BE REUSED
E8	1	REACH-IN REFRIGERATOR, MOBILE	EXISTING TO BE REUSED
E9	1	ICE MACHINE & BIN	EXISTING TO BE REUSED; W/ NEW WATER FILTRATION SYSTEM
E10	1	REACH-IN REFRIGERATOR, MOBILE	EXISTING TO BE REUSED

(N.I.C.) - NOT IN CONTRACT.

(N.I.K.E.C.) - NOT IN KITCHEN EQUIPMENT CONTRACT.

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT | K101a

NYIKOS GARCIA
Foodservice Design Inc.
7146 Starmount Way
New Market, MD 21774
P 240.683.9530

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WGM ARCHITECTURE + INTERIORS
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ANNE ARUNDEL COUNTY | JUNE 2023

DEPARTMENT OF PUBLIC WORKS | P570200

REVISED DATE	BY

APPROVED DATE — CHIEF ENGINEER

APPROVED DATE — PROJECT MANAGER

APPROVED DATE — ASSISTANT CHIEF ENGINEER

APPROVED DATE — CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

KITCHEN EQUIPMENT SCHEDULE

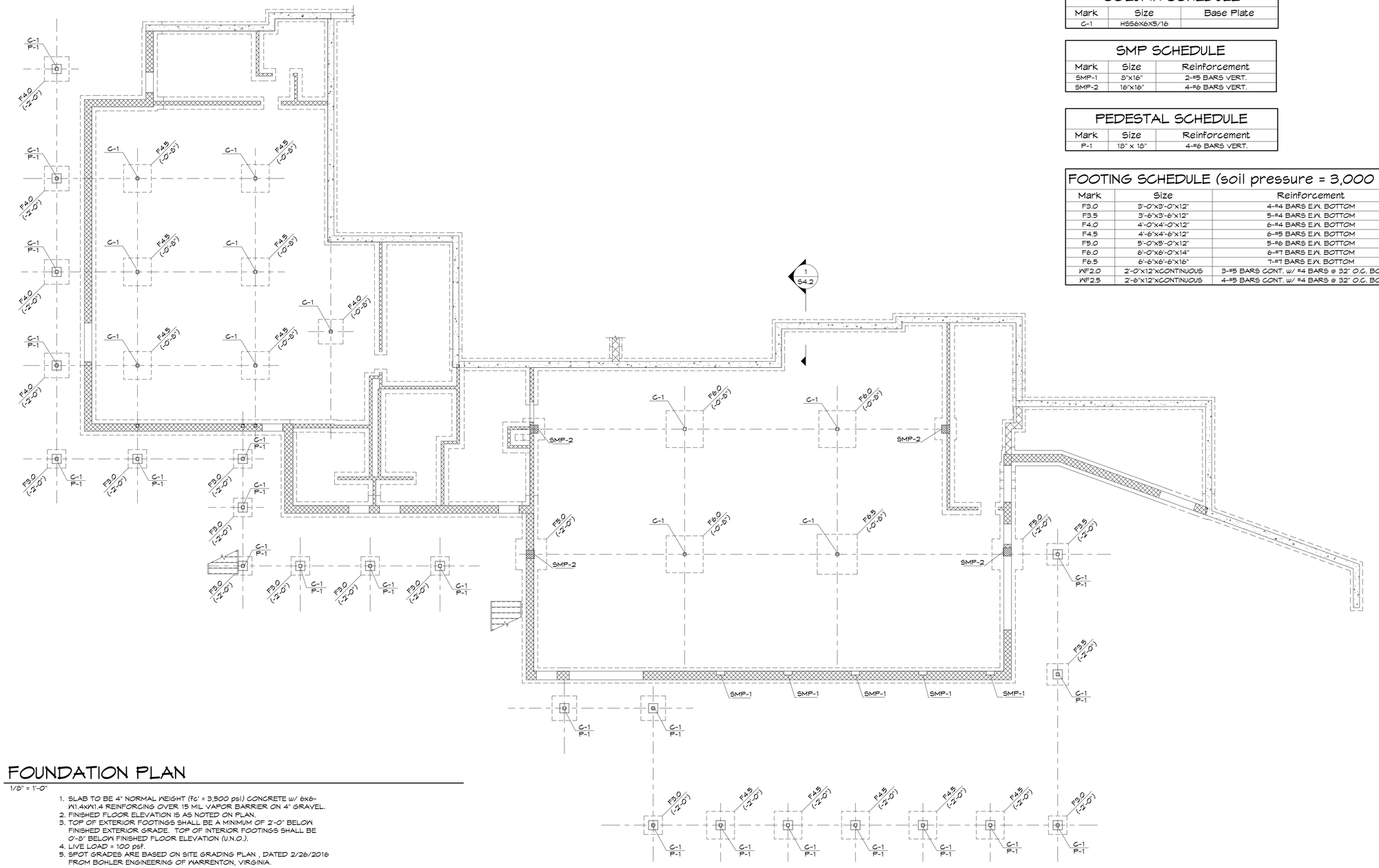
THE PRESERVE AT EISENHOWER CLUBHOUSE
1576 Generals Way
Crownsville, MD 21032

COLUMN SCHEDULE		
Mark	Size	Base Plate
C-1	HSS6X6X5/16	

SMP SCHEDULE		
Mark	Size	Reinforcement
SMP-1	8"x16"	2-#5 BARS VERT.
SMP-2	16"x16"	4-#6 BARS VERT.

PEDESTAL SCHEDULE		
Mark	Size	Reinforcement
P-1	18" x 18"	4-#6 BARS VERT.

FOOTING SCHEDULE (soil pressure = 3,000 psf)		
Mark	Size	Reinforcement
F3.0	3'-0"x3'-0"x12"	4-#4 BARS E/W, BOTTOM
F3.5	3'-6"x3'-6"x12"	5-#4 BARS E/W, BOTTOM
F4.0	4'-0"x4'-0"x12"	6-#4 BARS E/W, BOTTOM
F4.5	4'-6"x4'-6"x12"	6-#5 BARS E/W, BOTTOM
F5.0	5'-0"x5'-0"x12"	5-#6 BARS E/W, BOTTOM
F6.0	6'-0"x6'-0"x14"	6-#7 BARS E/W, BOTTOM
F6.5	6'-6"x6'-6"x16"	7-#7 BARS E/W, BOTTOM
WF2.0	2'-0"x12"xCONTINUOUS	3-#5 BARS CONT. w/ #4 BARS @ 32" O.C. BOTTOM
WF2.5	2'-6"x12"xCONTINUOUS	4-#5 BARS CONT. w/ #4 BARS @ 32" O.C. BOTTOM



FOUNDATION PLAN

1/8" = 1'-0"

1. SLAB TO BE 4" NORMAL WEIGHT (fc' = 3,500 psi) CONCRETE w/ 6x6-W1.4xW1.4 REINFORCING OVER 15 MIL VAPOR BARRIER ON 4" GRAVEL.
2. FINISHED FLOOR ELEVATION IS AS NOTED ON PLAN.
3. TOP OF EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 2'-0" BELOW FINISHED EXTERIOR GRADE. TOP OF INTERIOR FOOTINGS SHALL BE 0'-8" BELOW FINISHED FLOOR ELEVATION (U.N.O.).
4. LIVE LOAD = 100 psf.
5. SPOT GRADES ARE BASED ON SITE GRADING PLAN , DATED 2/26/2016 FROM BOHLER ENGINEERING OF WARRENTON, VIRGINIA.

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

S1.1

ANNE ARUNDEL COUNTY

DEPARTMENT OF PUBLIC WORKS

202211.1

FOUNDATION PLAN

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WATKINS Partnership Inc.
Consulting Structural Engineering
3032 Mitchellville Road
Suite 202
Bowie, Maryland 20716
Phone:(301) 249-0974

PROJECT #: 20223002 v23

WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

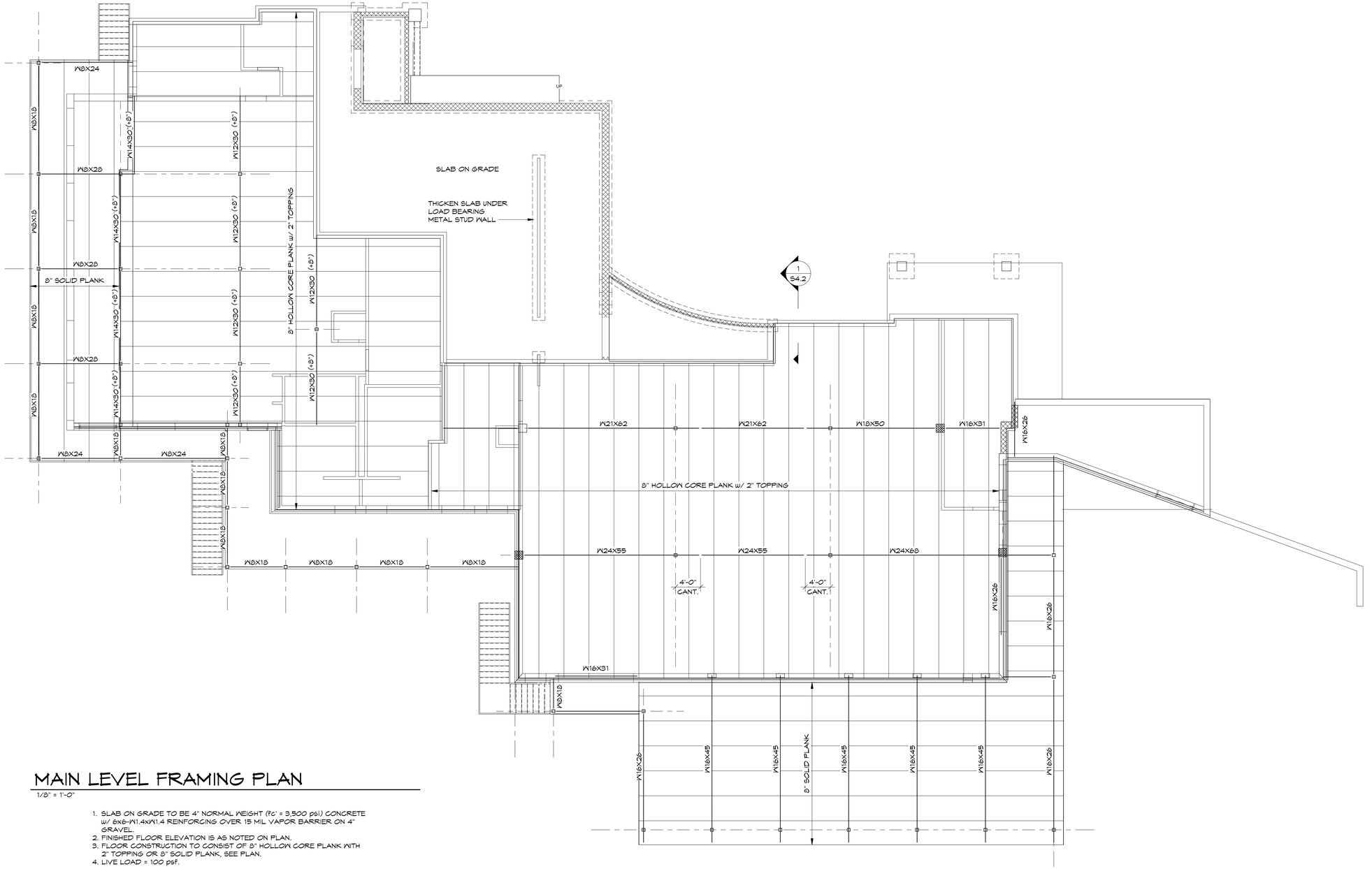
CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland, license number 12658, expiration date 10-11-2023

REVISED DATE	BY

APPROVED DATE — CHIEF ENGINEER
APPROVED DATE — ASSISTANT CHIEF ENGINEER
APPROVED DATE — PROJECT MANAGER
APPROVED DATE — CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



MAIN LEVEL FRAMING PLAN

1/8" = 1'-0"

1. SLAB ON GRADE TO BE 4" NORMAL WEIGHT (f'c' = 3,500 psi) CONCRETE w/ 6x6-W1.4xW1.4 REINFORCING OVER 15 MIL VAPOR BARRIER ON 4" GRAVEL.
2. FINISHED FLOOR ELEVATION IS AS NOTED ON PLAN.
3. FLOOR CONSTRUCTION TO CONSIST OF 8" HOLLOW CORE PLANK WITH 2" TOPPING OR 8" SOLID PLANK, SEE PLAN.
4. LIVE LOAD = 100 psf.

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

S1.2

ATKINS Partnership Inc.
Consulting Structural Engineering
3032 Mitchellville Road
Suite 202
Bowie, Maryland 20716
Phone:(301) 249-0974

PROJECT #: 20223002 v23

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
ARCHITECTURE + INTERIORS
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787
www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland, license number 19658, expiration date 10-11-2023

ANNE ARUNDEL COUNTY

DEPARTMENT OF PUBLIC WORKS

202211.1

REVISED DATE	BY	APPROVED DATE	APPROVED DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

SCALE: AS NOTED

DRAWN BY:

CHECKED BY:

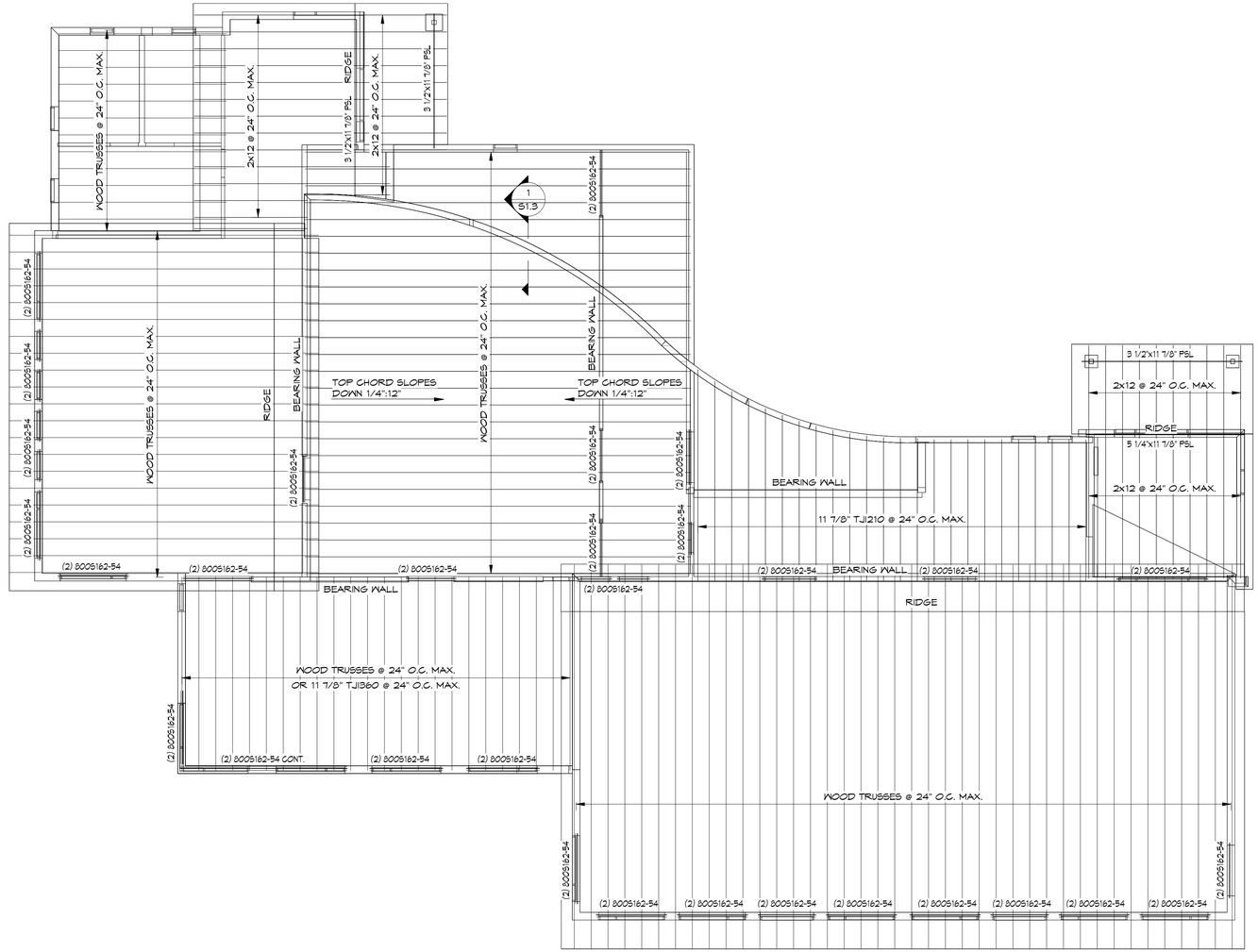
SHEET: OF

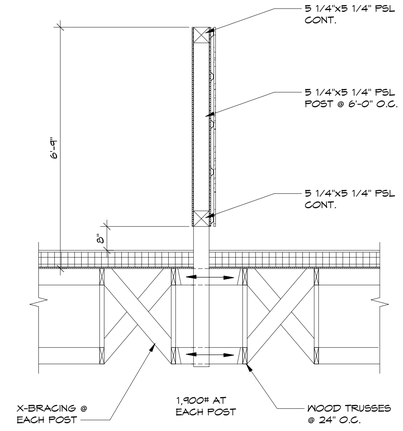
PROJECT #: P570200

CONTRACT #: P570205

MAIN LEVEL FRAMING PLAN

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032





1 S1.3 SCREENWALL

1/2" = 1'-0"

ROOF FRAMING PLAN

1/8" = 1'-0"

1. ROOF CONSTRUCTION TO CONSIST OF PRE-ENGINEERED ROOF TRUSSES @ 24" O.C. (U.N.O.) AND CONVENTIONAL FRAMING @ 24" O.C. MAX. w/ OSB ROOF SHEATHING.
2. TRUSS BEARING ELEVATION VARIES, SEE PLAN.
3. LIVE LOAD: 30 psf.
4. TRUSS CONFIGURATIONS SHOWN IN DETAILS AND SETIONS ARE STRICTLY GRAPHICAL. TRUSS CONFIGURATIONS SUPPORTING MECHANICAL EQUIPMENT SHALL BE DESIGNED AS EITHER A SINGLE OR DOUBLE TRUSS FOR THE TOTAL LOADS SHOWN ON THE PLAN. EQUIPMENT SHALL NOT INTERFERE WITH TRUSS SPACING. TRUSS MANUFACTURER SHALL VERIFY EXACT EQUIPMENT LOCATIONS AND LOADING SHOWN ON MECHANICAL DRAWINGS.
5. ALL EXTERIOR WALLS ARE TO BE 8005162-54 @ 16" O.C.
6. ALL HEADERS SHALL EXTEND OVER ALL JACK STUDS, SEE TYPICAL DETAILS.
7. ALL CONNECTIONS TO BE MADE WITH "SIMPSON" HARDWARE APPROPRIATE FOR CONNECTION APPLICATION.

NOT FOR CONSTRUCTION | DESIGN DEVELOPMENT | S1.3

ANNE ARUNDEL COUNTY

DEPARTMENT OF PUBLIC WORKS | 202211.1

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

REVISED DATE / BY

APPROVED DATE — CHIEF ENGINEER

APPROVED DATE — ASSISTANT CHIEF ENGINEER

APPROVED DATE — PROJECT MANAGER

APPROVED DATE — CHIEF, RIGHT OF WAY

SCALE: AS NOTED

DRAWN BY:

CHECKED BY:

SHEET: OF

PROJECT #: P570200

CONTRACT #: P570205

ROOF FRAMING PLAN

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032

The Watkins Partnership Inc.
Consulting Structural Engineering
3032 Mitchellville Road
Suite 202
Bowie, Maryland 20716
Phone:(301) 249-0974
PROJECT #: 20223002 v23

WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
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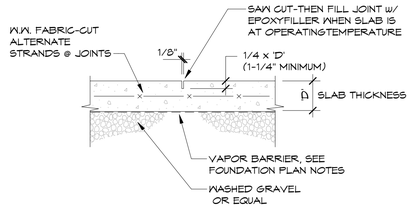
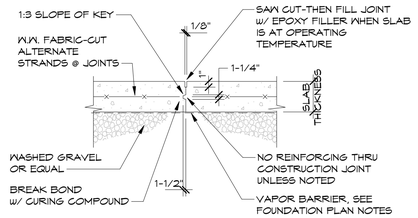
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland, license number 19658, expiration date 10-11-2023



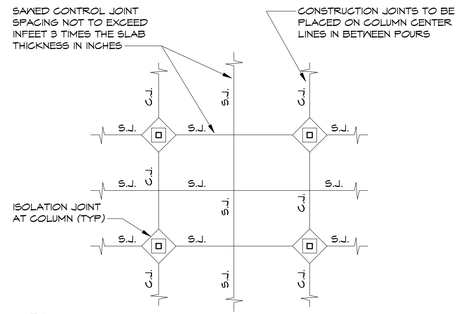
PROVIDE CONTROL JOINTS BETWEEN CONSTRUCTION JOINTS WITH SPACING NOT TO EXCEED IN FEET 3 TIMES THE SLAB THICKNESS IN INCHES IN EACH DIRECTION. CONTROL JOINTS TO BE FORMED WHILE CONCRETE IS STILL PLASTIC OR SAW CUT WITHIN 8 HOURS OF PLACING CONCRETE.

D1a DET — SAWED CONTROL JOINT (S.J.) w/ W.W.F.

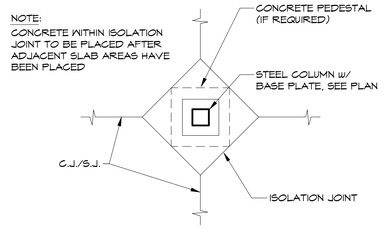


CONSTRUCTION JOINT: SLABS TO BE PLACED USING EITHER ADJACENT LANES OR ALTERNATE LANES. ALLOW 2 DAYS BETWEEN PLACEMENT OF ADJACENT SECTIONS. CONSTRUCTION JOINT MAY REPLACE CONTROL JOINT.

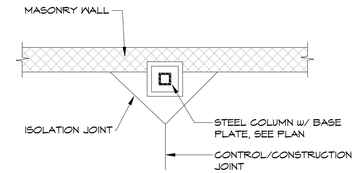
D2a DET — CONSTRUCTION JOINT (C.J.) w/ W.W.F.



D3c DET — JOINTING DETAIL @ SLAB ON GRADE

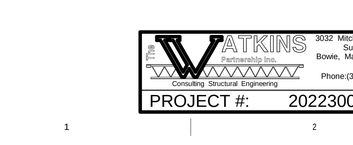


D4b DET — ISOLATION JOINT @ INTERIOR COLUMN



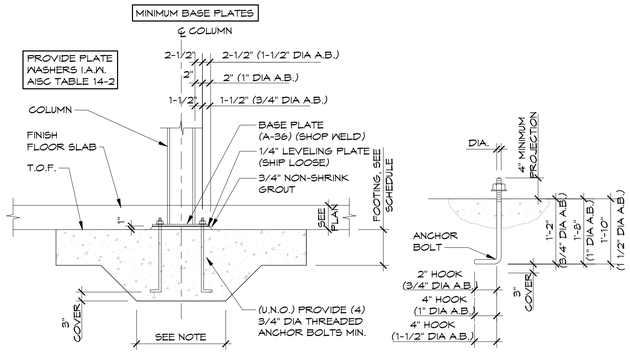
NOTE:
CONCRETE WITHIN ISOLATION JOINT TO BE PLACED AFTER ADJACENT SLAB AREAS HAVE BEEN PLACED

D5b DET — ISOLATION JOINT @ WALL



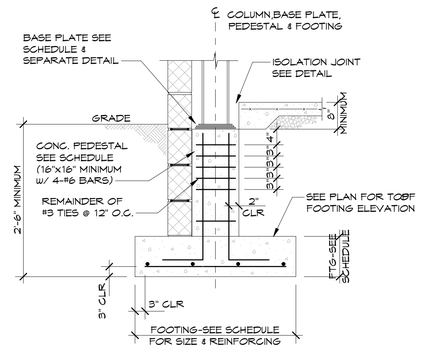
NOTE:
CONCRETE WITHIN ISOLATION JOINT TO BE PLACED AFTER ADJACENT SLAB AREAS HAVE BEEN PLACED

D5d DET — ISOLATION JOINT @ WALL

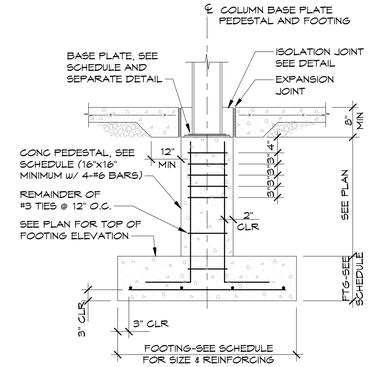


D6a DET — TYPICAL COLUMN BASE PLATE DETAIL WITH LEVELING PLATE

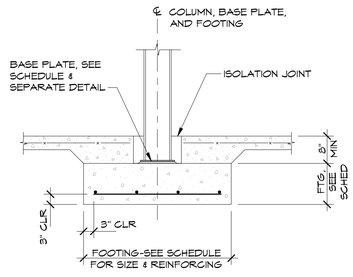
NOTE: WHERE FOOTING DEPTH IS NOT ADEQUATE TO COVER BOLTS PROVIDE 24"x24"x12" CONCRETE AREA BELOW CENTER OF FOOTING TO PROVIDE COVER. 2" NON-SHRINK GROUT WITH LEVELING NUTS MAY BE USED IN PLACE OF 1/4" PLATE WITH 3/4" GROUT. CONTRACTOR TO COORDINATE WITH STEEL FABRICATOR.



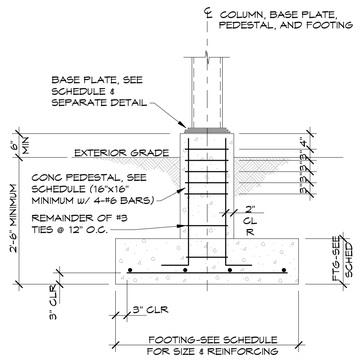
D7c DET — PERIMETER COLUMN w/ PEDESTAL



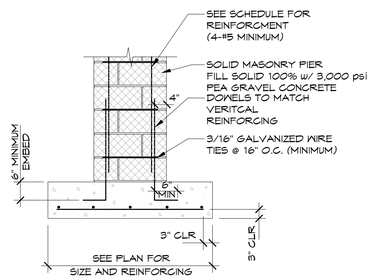
D8a DET — COLUMN w/ PEDESTAL



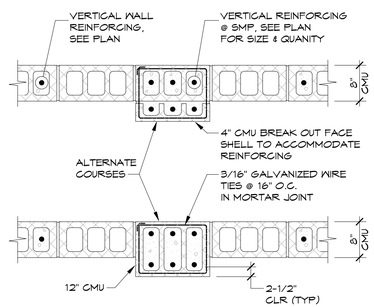
D8b DET — COLUMN w/ OUT PEDESTAL



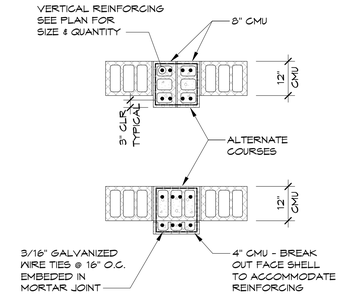
D9a DET — EXTERIOR COLUMN w/ PEDESTAL



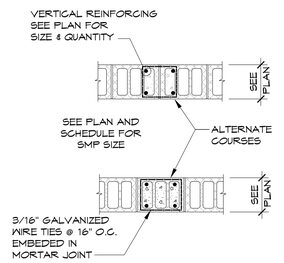
D10a DET — TYPICAL SMP FOOTING DETAIL



D10b DET — DETAIL 12"x16" SMP @ 8" CMU



D10c DET — DETAIL 16"x16" SMP @ 12" CMU



D10d DET — DETAIL SMP @ 12" CMU

NOT FOR CONSTRUCTION | DESIGN DEVELOPMENT | S3.1

ANNE ARUNDEL COUNTY

DEPARTMENT OF PUBLIC WORKS | 202211.1

No.	Description		Date

NO	REVISION DESCRIPTION	BY	DATE

REVISED DATE	BY

APPROVED DATE _____ CHIEF ENGINEER

APPROVED DATE _____ PROJECT MANAGER

APPROVED DATE _____ ASSISTANT CHIEF ENGINEER

APPROVED DATE _____ CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

TYPICAL DETAILS

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032

The Watkins Partnership Inc.
Consulting Structural Engineering
3032 Mitchellville Road
Suite 202
Bowie, Maryland 20716
Phone:(301) 249-0974

PROJECT #: 20223002 v23

WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
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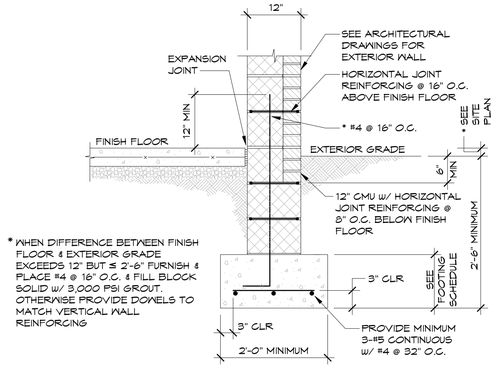
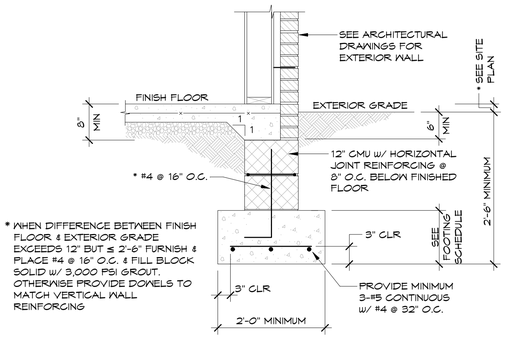
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

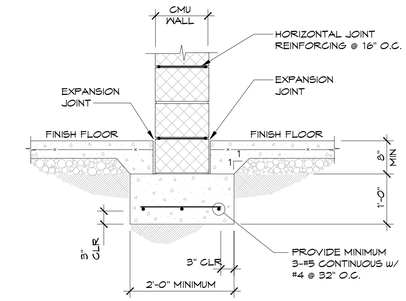
CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Mayland, license number 12638, expiration date 10-11-2023



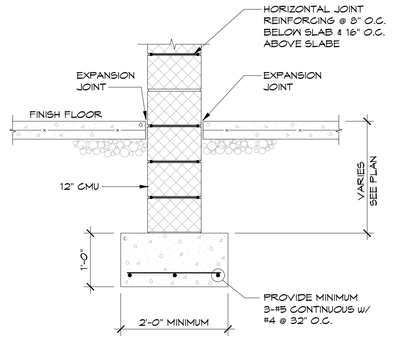
D11a DET — TYPICAL EXTERIOR WALL FOOTING



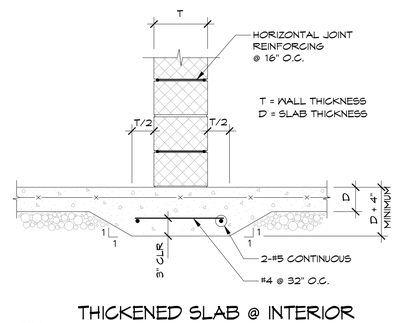
D11c DET — TYPICAL EXTERIOR WALL FOOTING



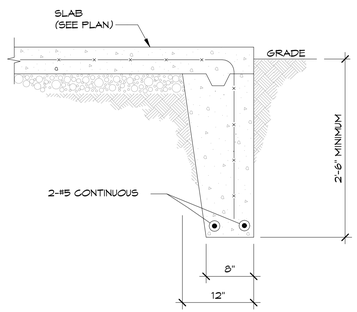
D12a DET — WALL FOOTING @ INTERIOR CMU WALL



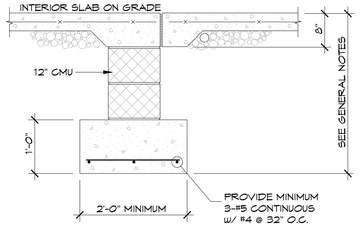
D12b DET — WALL FOOTING @ INTERIOR CMU WALL



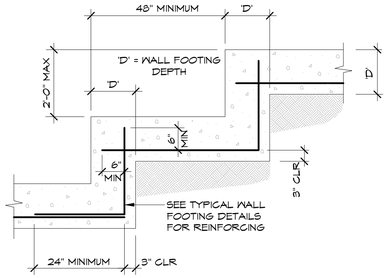
D13a DET — THICKENED SLAB @ INTERIOR NON-LOAD BEARING CMU WALL



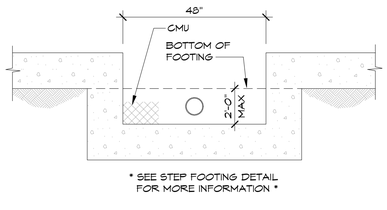
D14a DET — DETAIL-TURN DOWN SLAB



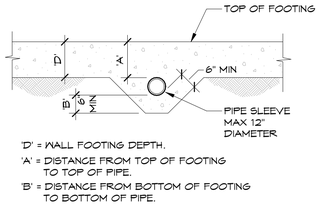
D14c DET — EDGE OF SLAB @ WALL OPENING



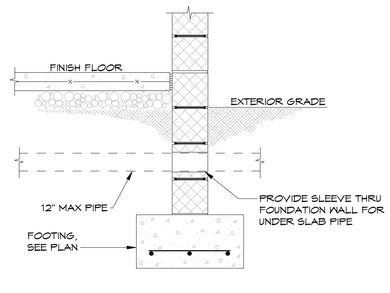
D16a DET — TYPICAL STEPPED FOOTING DETAIL



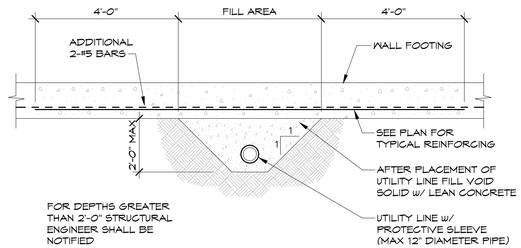
D17a DET — STEPPED WALL FOOTING @ PIPE



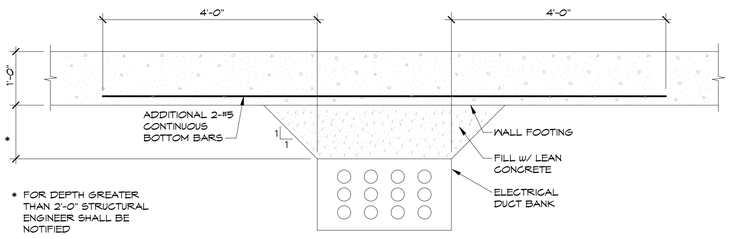
'D' = WALL FOOTING DEPTH.
'A' = DISTANCE FROM TOP OF FOOTING TO TOP OF PIPE.
'B' = DISTANCE FROM BOTTOM OF FOOTING TO BOTTOM OF PIPE.
'A'+'B' SHALL NOT BE LESS THAN 'D'



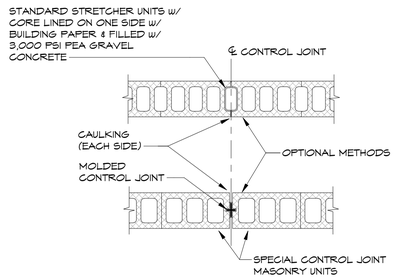
D17b DET — FOUNDATION WALL SLEEVE



D17c DET — MAXIMUM 12" DIAMETER PIPE TYPICAL PLACEMENT OF UTILITY LINES UNDER WALL FOOTINGS



D17d DET — DUCT BANK UNDER WALL FOOTINGS



NOTES FOR MASONRY CONTROL JOINT

PROVIDE VERTICAL CONTROL JOINTS IN CONCRETE MASONRY PORTION OF ALL WALLS AND PARTITIONS AS FOLLOWS:

1. WHEN LENGTH EXCEEDS 25'-0".
2. AT JUNCTIONS OF BEARING AND NON-BEARING WALLS, CHANGES IN WALL HEIGHT OR THICKNESS, JUNCTIONS OF WALL WITH COLUMNS AND PIERS AND INTERSECTING WALL AND PARTITION JUNCTION WHEN THE PARTITION LENGTH EXCEEDS 12'-0".
3. AT RETURN ANGLES OF 'L', 'T' AND 'V' SHAPED WALL CONSTRUCTION.
4. AT CHASES AND RECESSES FOR PIPING OR FIXTURES.
5. AT HINGE SIDE OF ALL DOOR OPENINGS; WHERE DOUBLE DOORS OCCUR PROVIDE CONTROL JOINTS AT BOTH JAMBS.
6. AT ONE SIDE OF WALL OPENINGS LESS THAN 6'-0" AND BOTH SIDES OF OPENINGS OVER 6'0" WIDE.
7. CONTROL JOINT SPACING SHALL NOT EXCEED 25'-0" WHEREVER FEASIBLE. CONTROL JOINTS MAY BE EASILY LOCATED AT ENDS OF LINTELS OVER DOOR OPENINGS AND EXTEND UP FOR REMAINDER OF THE WALL HEIGHT.
8. CONTROL JOINTS SHALL EXTEND THROUGH ENTIRE WALL THICKNESS AND FOR FULL WALL HEIGHT THROUGH ALTERNATE BOND BEAM JOINTS.
9. BOND SHALL BE CUT AT A MAXIMUM OF 50'0", EXCEPT AT CORNER CORNER OF BUILDING, JOINT SHALL NOT EXCEED 25'-0".

D22a DET — MASONRY CONTROL JOINT @ CMU WALL

NOT FOR CONSTRUCTION | DESIGN DEVELOPMENT | S3.2

ANNE ARUNDEL COUNTY

DEPARTMENT OF PUBLIC WORKS | 202211.1

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

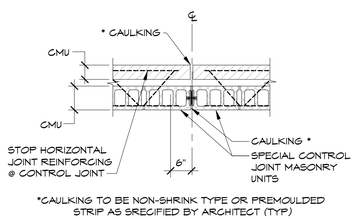
REVISED DATE	BY	APPROVED DATE	APPROVED DATE	SCALE: AS NOTED	TYPICAL DETAILS
				DRAWN BY:	
		CHIEF ENGINEER	PROJECT MANAGER	CHECKED BY:	
		APPROVED DATE	APPROVED DATE	SHEET: OF	
				PROJECT #: P570200	
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	CONTRACT #: P570205	

The Watkins Partnership Inc. — Consulting Structural Engineering
3032 Mitchellville Road Suite 202 Bowie, Maryland 20716 Phone:(301) 249-0974
PROJECT #: 20223002 v23

WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION: I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland, license number 12658, expiration date 10-11-2023

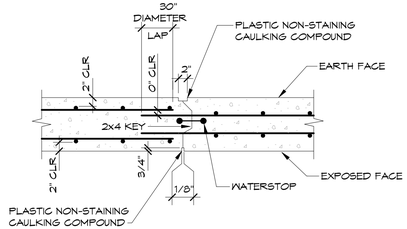
The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



D22b DET

MASONRY CONTROL JOINT @ BRICK AND BLOCK WALL

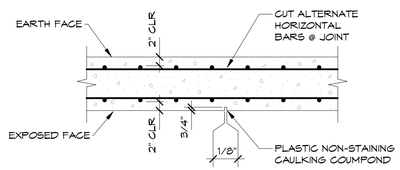
NOTE: LOCATE AT 25'-0" (+-) INTERVALS OR AS SHOWN ON ARCHITECTURAL DRAWINGS.



D23a DET

CONCRETE WALL CONSTRUCTION JOINT

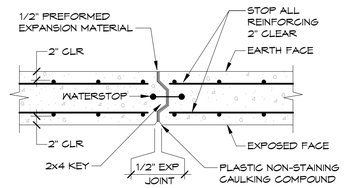
CONSTRUCTION JOINT MAY REPLACE CONTROL JOINT



D23b DET

CONCRETE WALL CONTROL JOINT

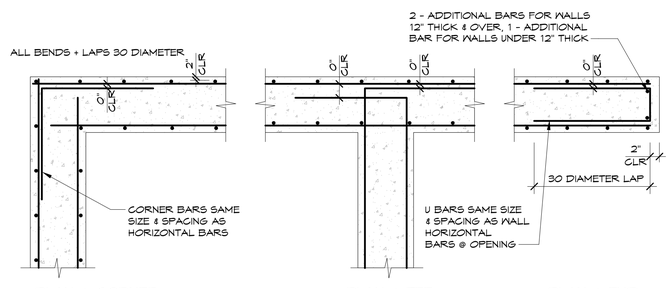
PROVIDE CONTROL JOINT @ INTERVALS NO GREATER THAN 30'-0"



D23c DET

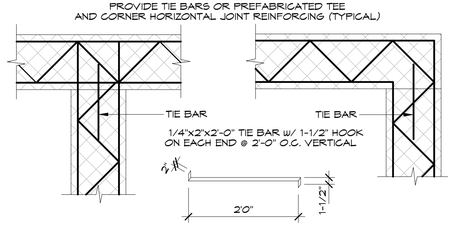
CONCRETE WALL EXPANSION JOINT

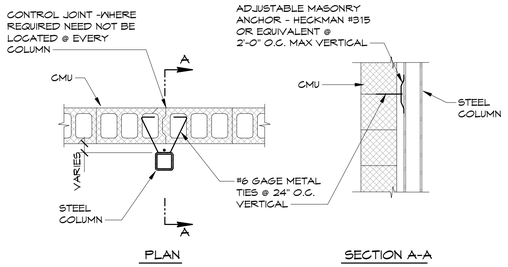
NOT TO EXCEED 100'-0"



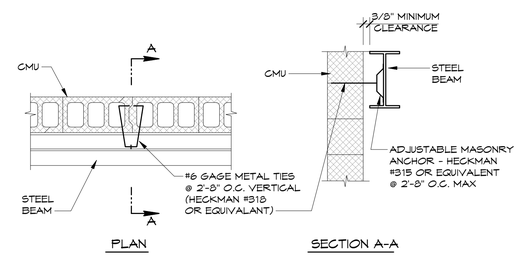
D24a DET

TYPICAL CONCRETE WALL REINFORCEMENT DETAILS

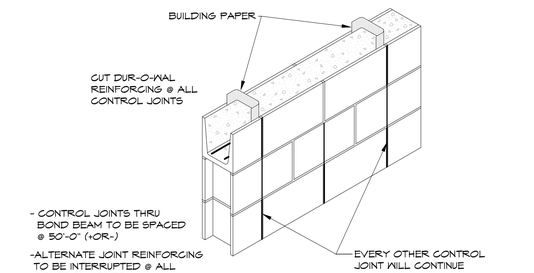




MASONRY ANCHOR DETAIL WHERE STEEL



MASONRY ANCHOR DETAIL WHERE STEEL



D24b DET

HORIZONTAL MASONRY REINFORCEMENT DETAILS

D25b DET

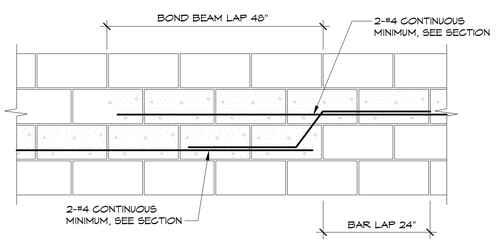
COLUMNS ARE ADJACENT TO MASONRY WALL

D25b DET

BEAMS ARE PARALLEL TO MASONRY WALL

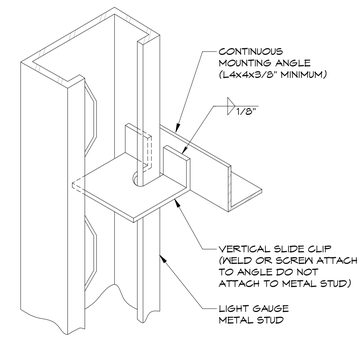
D26a DET

DETAIL @ BOND BEAM



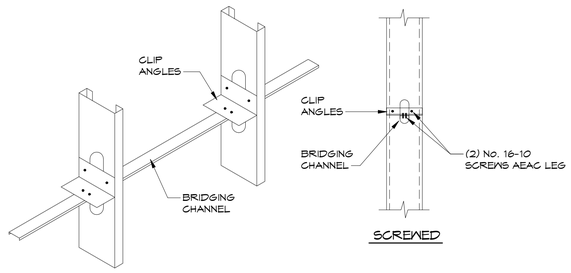
D26b DET

BOND BEAM STEP DETAIL



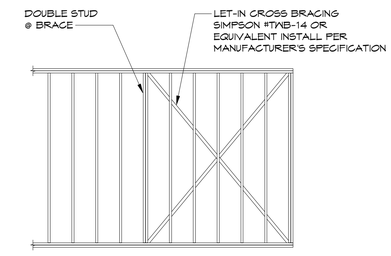
D27 DET

SLIDE CLIP DETAIL



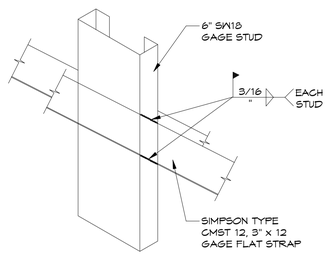
D28 DET

STUD BRIDGING DETAIL



D30a DET

X-BRACING DETAIL



D30b DET

X-BRACING ATTACHMENT DETAIL

NOT FOR CONSTRUCTION | DESIGN DEVELOPMENT | S3.3

No.	Description		Date

NO | REVISION DESCRIPTION | BY | DATE

ATKINS Partnership Inc.
Consulting Structural Engineering
3032 Mitchellville Road
Suite 202
Bowie, Maryland 20716
Phone:(301) 249-0974

PROJECT #: 20223002 v23

WHEELER GOODMAN MASEK
ARCHITECTURE + INTERIORS
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland, license number 12658, expiration date 10-11-2023

ANNE ARUNDEL COUNTY

DEPARTMENT OF PUBLIC WORKS

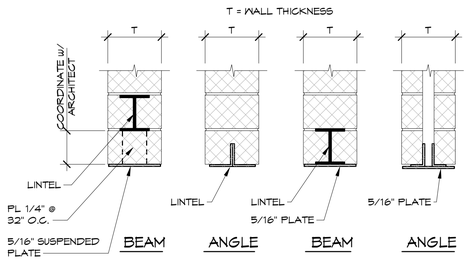
202211.1

REVISED DATE	BY	APPROVED DATE	APPROVED DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

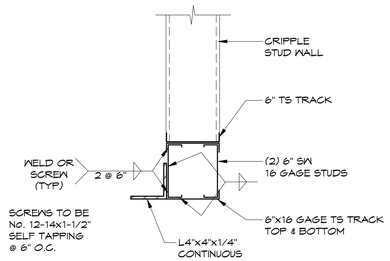
SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

TYPICAL DETAILS

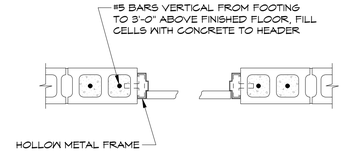
The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



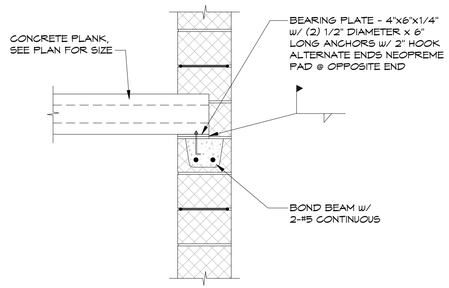
D31a DET LINTEL DETAILS



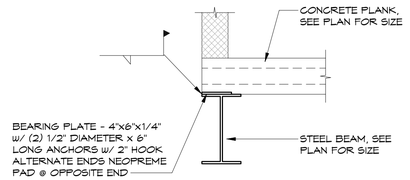
D31e DET HEADER DETAIL



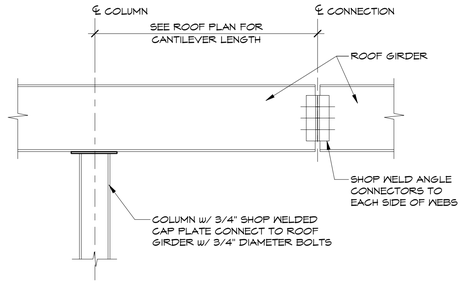
D31f DET TYPICAL OPENING REINFORCING



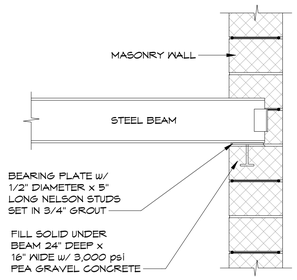
D32a DET CONCRETE PLANK BEARING ON WALL



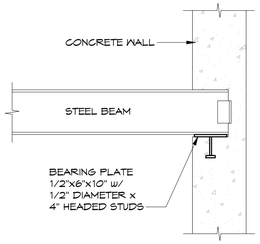
D32b DET CONCRETE PLANK BEARING ON BEAM



D39a DET TYPICAL CANTILEVERED GIRDER DETAIL



D40a DET BEAM BEARING @ MASONRY WALL



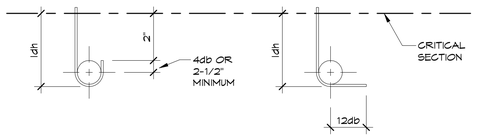
D40b DET BEAM BEARING @ CONCRETE WALL

LAP SPLICE LENGTH (inch)						MINIMUM TENSION EMBEDMENTS (inch)			
BAR SIZE		SLAB & WALL		BEAM		STANDARD 90° HOOK		STANDARD 180° HOOK	
SOFT METRIC	ENGLISH	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	ldh	12db	ldh	4db
#10	#3	12	16	14	18	6	5	6	3
#13	#4	16	20	19	24	7	6	8	3
#16	#5	20	24	24	30	9	8	9	3
#19	#6	22	30	28	36	10	9	10	3
#22	#7	38	48	41	53	12	11	12	4
#25	#8	48	60	48	60	14	12	14	4
#29	#9	58	74	58	74	16	14	16	5
#32	#10	70	90	70	90	17	16	17	5
#36	#11	93	108	93	108	19	17	19	6

SLAB & WALL: 6" MINIMUM REBAR SPACING WITH CONCRETE COVER = 1-1/2" CLEAR

BEAM: MINIMUM CLEAR SPACING BETWEEN BARS = db (BAR DIAMETER)
MINIMUM CONCRETE COVER = 1-1/2" CLEAR

TOP BAR: TOP BAR FOR SLAB AND BEAM SHALL BE DEFINED AS REINFORCEMENT SO PLACED THAT MORE THAN 12" OF CONCRETE IS CAST BELOW THE SPLICE.

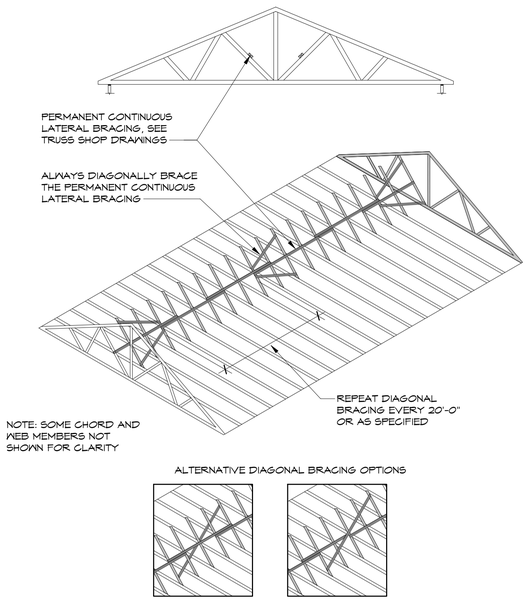


STANDARD HOOKS: SIDE COVER MORE THAN 2-1/2"
END COVER (90° HOOK) MORE THAN 2" MINIMUM COVER TO TAIL = 2"

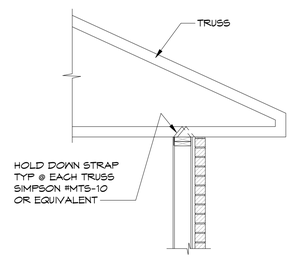
STANDARD 180°AND 90° END HOOKS

D64 DET TENSION LAP SPLICE AND STANDARD HOOK LENGTH

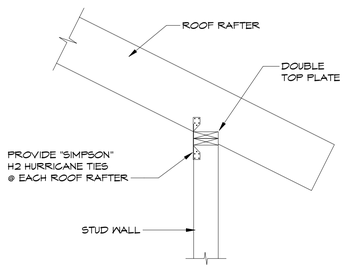
THE DIAGONAL BRACE MUST BE AT LEAST 4", 18 GAGE METAL STUD FASTENED TO EAC TRUSS WITH 2-#8 TEK SCREWS. PROPRIETARY METAL DIAGONAL BRACING PRODUCTS CAN ALSO BE USED.



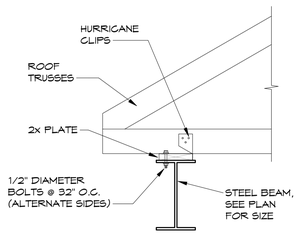
D65 DET PERMANENT CONTINUOUS LATERAL BRACING DETAIL



D50a DET TRUSS BEARING DETAIL



D50c DET HURRICANE CLIP DETAIL



D50d DET TRUSS BEARING DETAIL

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

S3.4

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

The Watkins Partnership Inc.
Consulting Structural Engineering
3032 Mitchellville Road
Suite 202
Bowie, Maryland 20716
Phone:(301) 249-0974

PROJECT #: 20223002 v23

WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787
www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland, license number 19658, expiration date 10-11-2023

ANNE ARUNDEL COUNTY

DEPARTMENT OF PUBLIC WORKS

202211.1

REVISED DATE	BY	APPROVED	DATE	APPROVED	DATE
		CHIEF ENGINEER		PROJECT MANAGER	
		APPROVED	DATE	APPROVED	DATE
		ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT OF WAY	

SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

TYPICAL DETAILS

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032

GENERAL NOTES:

GENERAL: ALL NOTES ARE FOR SUPPLEMENTING THE PLANS AND SPECIFICATIONS AND ARE IN NO WAY TO BE CONSIDERED AS EXCLUDING ANY ITEM IN THEM.

COORDINATION: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE STRUCTURAL DRAWINGS AND THEIR DIMENSIONS WITH OTHER DRAWINGS AND IF A CONFLICT EXISTS HE SHALL NOT CARRY OUT THE AFFECTED WORK UNTIL THE ARCHITECT HAS RESOLVED THE CONFLICT.

CODE: DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH THE IBC 2018 CODE AND THE PARTICULAR CODES AS REFERENCED IN IBC 2018 BLDG CODE OR IN ACCORDANCE WITH THE ASCE 7-16.

LIVE LOADS: THE STRUCTURE HAS BEEN DESIGNED FOR LIVE LOADS AS FOLLOWS:

FLOOR LOAD:
- OFFICE: 50 PSF
- RETAIL: 100 PSF
- ASSEMBLY: 100 PSF
- CORRIDOR: 100 PSF
- STAIRWAYS: 100 PSF
- PARTITIONS: 20 PSF

ROOF LOAD: 20 PSF

HANDRAIL/GUARDRAIL LOAD: 50 PLF/ 200 LBS CONCENTRATED LOAD

INFILL PANELS (PICKETS/ SCREENS): 50 LBS ON 1 SQUARE FOOT

TREADS: 300 LBS CONCENTRATED LOAD ON 4 SQUARE INCHES

RISK CATEGORY: II
EXPOSURE CATEGORY: C

WIND:
ULTIMATE DESIGN WIND SPEED (Vult): 115 MPH
NOMINAL DESIGN WIND SPEED (Vasd): 90 MPH
IMPORTANCE FACTOR (Iw): 1.0
INTERNAL PRESSURE COEFFICIENT: 0.18
MEAN ROOF HT: 25 FT

WALL PRESSURE:
- INTERIOR ZONE: 16.9 PSF
- END ZONE: 25.4 PSF

COMPONENTS & CLADDING:
ROOF BASED UPON 10 SQ. FT. AREA:
NEGATIVE ZONE 1: -45.9 PSF
NEGATIVE ZONE 2: -60.6 PSF
NEGATIVE ZONE 3: -60.6PSF
POSITIVE ZONES 1 THRU 3: 26.4 PSF
OVERHANG ZONE 2: -41.5 PSF
OVERHANG ZONE 3: -56.2 PSF

WALLS BASED UPON 20 SQ. FT. AREA:
NEGATIVE ZONE 4: -24.4 PSF
NEGATIVE ZONE 5: -32.8 PSF
POSITIVE ZONE 4 & 5: 25.2 PSF

PARAPETS BASED UPON 10 SQ. FT. AREA:
INTERIOR ZONE: -53.0 PSF
CORNER ZONE: -44.9 PSF

SNOW:
GROUND SNOW LOAD (Pg): 30 PSF
- EXPOSURE *FACTOR* (Ce):
- LOAD IMPORTANCE FACTOR (I):
- THERMAL FACTOR (Ct):
- FLAT ROOF SNOW LOAD (Pf): PSF

SEISMIC:
IMPORTANCE FACTOR (Ie): 1.0
- SITE CLASS: D
- SPECTRAL RESPONSE ACCEL.
  - Ss = 13.07%
  - S1 = 4.29%
- SPECTRAL RESPONSE COEFF.
  - S ds = 13.9%
  - S d1 = 6.8%

SEISMIC DESIGN CATEGORY: B
SEISMIC FORCE RESISTING SYSTEM:
- ORDINARY REINF MASONRY SHEAR WALLS

DESIGN BASED ON EQUIVALENT LATERAL FORCE PROCEDURE
RESPONSE MODIFICATION FACTOR (R):
SEISMIC RESPONSE COEFF. (Cs):
DESIGN BASE SHEAR (Cs*W):

CONSTRUCTION SAFETY: LOADS GREATER THAN THE APPLICABLE DESIGN LOADS SHALL NOT BE PLACED ON THE STRUCTURE. PROVISION SHALL BE MADE FOR ADEQUATE BRACING AND SUPPORT OF ADJACENT CONSTRUCTION, UTILITIES AND EXCAVATIONS. JOB SITE SAFETY AND CONSTRUCTION PROCEDURES ARE THE RESPONSIBILITY OF THE CONTRACTOR.

FOUNDATION: THE SOILS REPORT AS PREPARED BY FROEHLING & ROBERTSON, INC. DATED APRIL 4, 2023, F&R PROJECT #15B0033 SHALL BE CONSIDERED PART OF THESE SPECIFICATIONS. IF ANY CONFLICT EXISTS BETWEEN SOIL CONSULTANTS REPORT AND THE FOLLOWING RECOMMENDATIONS, THE MORE STRINGENT REQUIREMENT WILL APPLY. BEFORE PLACEMENT OF FILL, IT IS RECOMMENDED THAT THE SITE BE INSPECTED BY A PROFESSIONAL SOILS ENGINEER REGISTERED IN THE JURISDICTION OF THE PROJECT FOR PROPER STRIPPING AND PREPARATION FOR RECEIVING THE FILL.

EXCAVATION FOR AND BEARING MATERIAL FOR FOUNDATIONS SHOULD BE SUPERVISED AND APPROVED BY A PROFESSIONAL SOILS ENGINEER REGISTERED IN THE JURISDICTION OF THE PROJECT.

THE AREAS WITHIN THE BUILDING LIMITS AND THOSE EXTENDING ON ALL THE SIDES SHALL BE PREPARED (BY EXCAVATION OR BY PLACING CONTROLLED FILL) TO A MINIMUM OF SIX (6) FEET OR THE DEPTH OF CONTROLLED FILL, WHICHEVER IS MORE, TO AN ELEVATION (10) INCHES BELOW THE FINISHED FLOOR LEVELS OF SLABS ON GRADE,.

THE FOOTINGS SHALL BE EXCAVATED AFTER THE BUILDING AREAS HAVE BEEN PROPERLY PREPARED.

MATERIAL SATISFACTORY FOR CONTROLLED FILL AND BACKFILL MATERIAL AROUND AND ABOVE FOOTINGS SHALL INCLUDE CLEAN SOIL OR BANKRUN SAND AND GRAVEL (GW, GC, SC, SM, ML & CL), BUT EXCLUDE HIGHLY PLASTIC CLAYS (MH & CH) OR HIGH SHRINK-SWELL SOILS. THE FILL MATERIALS SHALL BE FREE FROM TOPSOIL, ORGANIC CONTAMINATED SOIL AND ROCK FRAGMENTS HAVING A MAJOR DIMENSION GREATER THAN FOUR (4) INCHES, AND SHALL CONTAIN NO ICE OR SNOW.

ALL FOOTINGS SHALL BE CARRIED DOWN A MINIMUM OF ONE FOOT INTO VIRGIN SOIL OR COMPACTED FILL OR AS DIRECTED BY THE SOILS ENGINEER AND, IF EXTERIOR, SHALL BE A MINIMUM OF 2'6" BELOW FINISHED EXTERIOR GRADE. FOOTINGS ARE DESIGNED FOR A SOIL BEARING PRESSURE OF 3,000 PSF. FOOTING ELEVATIONS HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND SHALL NOT BE TAKEN AS A WAIVER OF THESE REQUIREMENTS.

WATER, LOOSE SOIL AND SOIL SOFTENED BY WATER SHALL BE REMOVED FROM THE BOTTOM OF THE FOOTING EXCAVATIONS BEFORE PLACING CONCRETE.

FOOTING EXCAVATIONS SHALL NOT BE LEFT OPEN FOR LONG PERIODS. IT IS SUGGESTED THAT THE BOTTOM OF THE FOOTING EXCAVATIONS AND TRENCHES BE PROTECTED BY UNDERCUTTING AND PLACING THREE (3) INCHES OF A LEAN-MIX CONCRETE SLAB IMMEDIATELY UPON APPROVAL AND BEFORE REINFORCING STEEL IS PLACED.

DEPTH OF EXCAVATIONS BELOW ANY FOOTINGS SHALL NOT EXCEED 1/2 THE DISTANCE FROM THE NEAREST EDGE OF THAT FOOTING.

WHERE BACKFILL IS REQUIRED ON BOTH SIDES OF A WALL, BACKFILL BOTH SIDES SIMULTANEOUSLY WITH THE GRADE DIFFERENCE NOT TO EXCEED 2'-0" AT ANY TIME.

PROVISIONS MUST BE TAKEN TO PROTECT ALL CONCRETE WORK FROM FROST DAMAGE WITH SPECIAL ATTENTION PAID TO FOOTINGS AND OTHER CONCRETE ON GRADE PRIOR TO BACKFILLING AND ENCLOSING THE BUILDING.

CARE SHOULD BE TAKEN TO ASSURE THAT DURING PLACING OF CONCRETE FOOTINGS AND SLABS ON GRADE NO ORGANIC MATTER, SALTS, OR CLAYS ARE MIXED WITH THE CONCRETE.

UNLESS OTHERWISE NOTED, FLOOR SLAB ON GRADE TO BE AS SHOWN ON DRAWINGS. FLOOR SLAB TO BE POURED IN STRIPS OR AS NOTED BY THE ARCHITECT. CUT ALTERNATE STRANDS OF WWF AT FOUR JOINTS OR USE SCREED KEYS, IN WHICH CASE ALL STRANDS AT THE KEY MAY BE CUT.

COMPACTION: EACH LAYER OF FILL SHALL BE COMPACTED AT OPTIMUM MOISTURE CONTENT (PLUS OR MINUS 2%) TO NOT LESS THAN 95% OF MAXIMUM DRY DENSITY.

LOWER DEGREES OF COMPACTION MAY BE PERMITTED BY THE BUILDING OFFICIAL AFTER RECEIPT OF A REPORT FROM THE SOILS ENGINEER CERTIFYING THAT HE HAS INVESTIGATED THE SUBSOIL OF THE SITE, HAS TESTED REPRESENTATIVE FILL MATERIALS AND THAT IN HIS OPINION SUCH LOWER DEGREE OF COMPACTION WILL BE ADEQUATE FOR THE INTENDED USE OF THE FILL.

IN-PLACE FIELD DENSITY SHALL BE DETERMINED IN ACCORDANCE WITH ASTM D-698 OR ASTM D-1557.

ALL FILLS SHALL BE PLACED IN APPROXIMATELY HORIZONTAL LAYERS, EACH LAYER HAVING A LOOSE THICKNESS OF NOT MORE THAN 8 INCHES.

NO FILL SHALL BE PLACED ON FROZEN GROUND.

CONCRETE: TO BE MIXED AND PLACED IN ACCORDANCE WITH THE CURRENT "AMERICAN CONCRETE INSTITUTE (ACI) BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE". A COPY OF THIS CODE SHALL BE AVAILABLE ON THE PROJECT AT ALL TIMES.

ALL REINFORCED CONCRETE, INCLUDING FLOOR TOPPING, TO HAVE A COMPRESSIVE STRENGTH (f'c) OF 3,000 PSI, UNLESS OTHERWISE NOTED.

SLAB ON GRADE	3,500 PSI
WALLS AND FOOTINGS	3,000 PSI
PEA-GRAVEL GROUT	3,000 PSI (CMU FILL)
EXTERIOR CONCRETE F2(w/c=0.45)	4,500 PSI

ALL EXTERIOR CONCRETE AND CONCRETE EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED.

CONTRACTOR SHALL SUBMIT MIX DESIGNS ACCOMPANIED BY APPROPRIATE GRAPHS AND BACKGROUND DATA FOR APPROVAL. MIX DESIGN SHALL INDICATE 7 AND 28 DAYS STRENGTHS, CEMENT CONTENT, AIR CONTENT, WATER-CEMENT RATIO, AMOUNT OF FINE AND COARSE AGGREGATES AND ADMIXTURES..

CONCRETE CYLINDER TESTS SHALL BE MADE BY AN INDEPENDENT QUALIFIED TESTING AGENCY, TO BE RETAINED AND PAID FOR BY THE CONTRACTOR, IN ACCORDANCE WITH ASTM SPECIFICATION FOR "COMPRESSION TESTS OF CONCRETE". A SET OF TEST CYLINDERS SHALL BE MADE FOR EACH 50 CUBIC YARDS, OR FRACTION THEREOF, OF CONCRETE PLACED:

CYLINDER SIZE	NUMBER OF CYLINDERS REQUIRED 7 DAY	28 DAY	56 DAY
4x8	1	3	1
6x12	1	2	1

THE TESTING AGENCY SHALL BE RESPONSIBLE FOR OBTAINING SAMPLES AND FOR STORAGE.

ALL CONTINUOUS REINFORCING SHALL BE CONTINUOUS OR LAPPED AT ALL SPLICES, CORNERS AND INTERSECTIONS A MINIMUM OF 30 BAR DIAMETERS (U.N.O.).

PROVIDE SPACERS, CHAIRS, TIES AS REQUIRED AND NECESSARY FOR ASSEMBLING, PLACING AND SUPPORTING ALL REINFORCEMENT IN PROPER POSITION.

CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AS GIVEN IN ACI-318.

ALL CONCRETE WORK, REINFORCING PLACEMENT, FORMWORK AND SHORING SHALL BE INSPECTED BY A PROFESSIONAL ENGINEER REGISTERED IN THE JURISDICTION OF THE PROJECT. CONCRETE QUALITY CONTROL, INSPECTION AND TESTING SHALL BE IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS, AS WELL AS LOCAL BUILDING CODE REQUIREMENTS.

USE OF ADDITIVES SHALL NOT BE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER. USE OF ADDITIVES CONTAINING CALCIUM CHLORIDE SHALL NOT BE PERMITTED.

USE OF "CEMENT SUBSTITUTES" SUCH AS SLAG OR FLY ASH SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER. THE USE OF CEMENT SUBSTITUTES WILL ONLY BE PERMITTED DURING SPECIFIC SEASONS. DURING COLD WEATHER, AS DEFINED BY ACI, NO FLY ASH WILL BE PERMITTED FOR USE. THE AMOUNT OF FLY ASH PERMITTED IN THE MIX DESIGN WILL BE LIMITED TO 25% BY WEIGHT OF THE TOTAL AMOUNT OF CEMENT IN THE MIX. THE AMOUNT OF SLAG PERMITTED IN THE MIX DESIGN WILL BE LIMITED TO 50% BY WEIGHT OF THE TOTAL AMOUNT OF CEMENT IN THE MIX. WHERE A COMBINATION OF CEMENT SUBSTITUTES IS USED, THE MAXIMUM AMOUNT OF FLY ASH PERMITTED IN THE MIX DESIGN WILL BE LIMITED TO 15% BY WEIGHT OF THE TOTAL AMOUNT OF CEMENT IN THE MIX, AND THE REMAINDER OF SLAG WHEN ADDED TO THE FLY ASH SHALL NOT EXCEED 50% BY WEIGHT OF THE TOTAL AMOUNT OF CEMENT IN THE MIX.

PRE-CAST CONCRETE

GENERAL: THE WORK INCLUDED IS THE FURNISHING, DELIVERY AND ERECTION OF THE PRECAST PRESTRESSED CONCRETE FLOOR AND/OR ROOF SLABS DIRECTLY ON DRY BEARING SURFACES PREPARED TRUE TO LINE AND GRADE BY OTHERS UNDER OTHER ITEMS OF GENERAL CONTRACT.

SUBMIT SHOP DRAWINGS TO ARCHITECT FOR APPROVAL, SHOWING SETTING PLAN, REINFORCING AND DETAILS. EACH SLAB SHALL BE IDENTIFIED BY A STANDARD MARK TO BE LISTED IN THE SCHEDULE SHOWN ON THE MANUFACTURER'S ERECTION PLAN AND PLACED LEGIBLY ON EACH UNIT AT TIME OF MANUFACTURE.

WHERE SHOWN AND DETAILED ON THE PLANS, FOR LATERAL BRACING, INCLUDE EITHER WELD PLATES CAST IN THE SLAB BY SLAB MANUFACTURER, OR THRUST PLATES FURNISHED AND WELDED ON THE TOP FLANGES OF BEAMS AND TRUSSES BY THE STRUCTURAL STEEL FABRICATOR AS INDICATED ON THE STRUCTURAL DRAWINGS.

WHERE OPENINGS, CURBS FILLERS, ETC., OR DETAILS ON DRAWINGS PRECLUDE PRECASTING, THE GENERAL CONTRACTOR SHALL FORM SUCH WORK OF POURED CONCRETE PROPERLY REINFORCED. IF FILLERS ARE PRECAST, THEY SHALL BE FURNISHED IN AVAILABLE WIDTHS, AS SPECIFIED BY MANUFACTURER.

ANCHORAGE OF SLABS TO MASONRY CONSTRUCTION, IF REQUIRED, SHALL COMPLY WITH LOCAL BUILDING CODE.

TYPE OF SLAB: THE UNITS SHALL BE FLEXICORE FLOOR AND/OR ROOF SLABS, WITH VOIDS RUNNING LENGTHWISE AS FABRICATED BY A LICENSEE OF THE FLEXICORE CO., INC., DAYTON, OHIO.

SLABS ARE TO BE DESIGNED IN ACCORDANCE WITH ACI STANDARD BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318).

MATERIAL AND FABRICATION: ALL CONCRETE MATERIALS SHALL BE CLEAN AND PROPERLY GRADED AND THE RESULTING CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,500 PSI AT TIME OF INITIAL PRESTRESS AND 5,000 PSI AT 28 DAYS.

PRESTRESSING STEEL SHALL BE UNCOATED SEVEN-WIRE, STRESS-RELIEVED STRAND EQUIVALENT OF ASTM A 416.

PORTLAND CEMENT SHALL BE THE EQUIVALENT OF ASTM C 150. CONCRETE AGGREGATES SHALL BE THE EQUIVALENT OF ASTM C 33 OR C 330. ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE USED.

THE MANUFACTURER SHALL CURE THE SLABS BY THE STEAM OR OTHER SUITABLE METHODS TO SECURE 3,500 PSI MINIMUM COMPRESSIVE STRENGTH AT TIME OF INITIAL PRESTRESS AND 5,000 PSI MINIMUM AT 28 DAYS, AS INDICATED BY 6"X12" COMPRESSION CYLINDER TESTS (ASTM C 39).

SLAB LENGTH SHALL BE FURNISHED ONLY IN ONE INCH INCREMENTS.

ERECTION AND INSTALLATION: INSTALLATION OF THE PRECAST UNITS IS TO BE MADE BY LEVELING THE FLOOR AND/OR ROOF SLABS IN A WORKMANLIKE MANNER KEEPING THE UNITS TIGHT AND AT RIGHT ANGLES TO THE BEARING WALLS.

SLABS SHALL BE ALIGNED AND LEVELED BY THE METHOD APPROVED BY THE FLEXICORE MANUFACTURER USING EQUIPMENT RECOMMENDED OR SUPPLIED BY THE MANUFACTURER.

SLABS SHALL BE GROUTED BY A MIXTURE OF NOT LESS THAN ONE PART CEMENT TO THREE PARTS FINE SAND, CARE BEING TAKEN TO SEE THAT THE JOINTS ARE FILLED. ANY GROUT THAT MAY HAVE SEEPED THROUGH TO THE CEILING BELOW SHALL BE REMOVED BEFORE IT HARDENS.

COOPERATION SHALL BE EXTENDED OTHER TRADES IN PERMITTING INSERTION OF ANCHORS, HANGERS, ELECTRICAL OUTLETS, ETC. HOLES, NOT REQUIRING CUTTING OF PRESTRESS STRANDS, FOR PLUMBING AND HEATING PIPES, DUCTS, ELECTRIC CONDUITS, OUTLET BOXES, VENTS, ETC. SHALL BE CUT IN THE FIELD IN HOLLOW SECTIONS OF SLABS IN ACCORDANCE WITH THE MANUFACTURER'S STANDARD RECOMMENDATIONS. HOLES REQUIRING CUTTING OF PRESTRESS STRAND SHALL BE PLANNED FOR IN ADVANCE OF INSTALLATION AS DICTATED BY STRUCTURAL CONSIDERATIONS. NO PRESTRESS STRAND SHALL BE CUT WITHOUT APPROVAL OF MANUFACTURER AND ARCHITECT. ALL OPENINGS LARGER THAN A SLAB WIDTH SHALL BE FRAMED WITH CONCRETE HEADERS OR STRUCTURAL STEEL HANGERS IN ACCORDANCE WITH THE DESIGN LIMITATIONS OF ACI 711-58.

IN THOSE AREAS, INDICATED BY THE ARCHITECT, WHERE FLEXICORE IS TO BE USED AS A FINISHED CEILING AND PAINTED, THE CEILING JOINTS SHALL BE CAULKED PRIOR TO PAINTING BY THE METHOD APPROVED BY THE FLEXICORE MANUFACTURER.

FINALLY, ALL WORK SHALL BE NEATLY AND FULLY FINISHED AND ALL SURPLUS MATERIALS AND RUBBISH ATTRIBUTED TO THIS CONTRACTOR'S WORK SHALL BE REMOVED FROM THE PREMISES.

REINFORCING STEEL: SHALL CONFORM TO ASTM SPECIFICATION A615, GRADE 60 FOR BARS, GRADE 40 FOR STIRRUPS AND TIES, AND ASTM SPECIFICATION A185 FOR WELDED WIRE FABRIC (WWF).

FABRICATION, INCLUDING ACCESSORIES, ALLOWANCE FOR CONCRETE PROTECTION AND MINIMUM AREA OF STEEL REQUIRED, TO BE IN ACCORDANCE WITH THE ACI BUILDING CODE AND MANUAL OF STANDARD PRACTICE.

LINTELS: WHERE PRE-CAST LINTELS ARE NOT FURNISHED AND UNLESS OTHERWISE SHOWN OR NOTED, PROVIDE ONE ANGLE FOR EACH 4" THICKNESS OF NON-LOAD BEARING WALL OR PARTITION, WITH 3 1/2" LEG HORIZONTAL FOR OPENINGS IN MASONRY WALLS AS FOLLOWS:

OPENINGS TO 3'-0"	L3-1/2x3x1/4
OPENINGS 3'1" TO 5'11"	L4x3-1/2x5/16
OPENINGS 6'0" TO 7'11"	L5x3-1/2x5/16
OPENINGS 8'0" TO 9'11"	W8x18 WITH 5/16 HUNG PLATE.

TACK WELD STEEL ANGLE LINTELS TOGETHER WHERE MORE THAN ONE IS REQUIRED.

PROVIDE A MINIMUM OF 6" BEARING AT EACH END FOR ANGLE LINTELS AND A MINIMUM OF 8" BEARING AT EACH END FOR BEAM LINTELS. ALL LINTELS ARE TO RECEIVE FIELD COAT OF PAINT BEFORE INSTALLATION.

ALL PRECAST LINTELS IN NON-LOAD BEARING MASONRY WALLS SHALL BE PRECAST CONCRETE (MIN. f'c= 3,000 PSI) AS FOLLOWS FOR EACH 4" OF WALL THICKNESS OR FRACTION THEREOF (UNLESS NOTED OTHERWISE):

OPENINGS UNDER 8'0"	8" DEEP W/ 1-#5 BAR T & B
OPENING 8'0" TO 12'0"	16" DEEP W/ 1-#6 BAR T & B

PRECAST LINTELS SHALL BE SAME WIDTH AS WALLS SUPPORTED. MINIMUM END BEARING 8" AT EACH END FOR ALL PRECAST LINTELS SPECIFIED ABOVE. SEE BEAM BEARING NOTES.

IN ADDITION TO THE LINTELS NOTED, PROVIDE ANGLE LINTELS AND/OR BEAM LINTELS AS REQUIRED FOR ANY OPENING SHOWN ON THE ARCHITECTURAL DRAWINGS AND FOR ANY OPENINGS REQUIRED BY THE MECHANICAL DRAWING AND ANY OTHER AS THE ARCHITECT MAY SHOW ON HIS DRAWINGS.

WHERE TWO ADJACENT OPENINGS OCCUR BETWEEN WHICH MINIMUM BEARING DOES NOT OCCUR, USE SIZE OF LINTEL REQUIRED FOR LENGTH OF CONTINUOUS OPENINGS. FOR OPENINGS GREATER THAN THOSE SHOWN ABOVE, CONSULT ARCHITECT.

ALL LINTELS TO BE SET TRUE AND LEVEL, ON STEEL PLATE, MINIMUM 3/8x4"x0'4".

MECHANICAL OPENINGS: OPENINGS THROUGH MASONRY AND/OR CONCRETE WALLS FOR MECHANICAL EQUIPMENT, DUCTS, PIPES, ETC., ARE TO BE PROVIDED WITH LINTELS OR STEEL SLEEVES WHICH HAVE BEEN BUILT INTO THE WALL. SPECIFIC APPROVAL WILL BE REQUIRED FOR OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS THROUGH BEARING WALLS AND ANY COMPLETED WALL.

ALL OPENINGS GREATER THAN 4" THRU ROOF DECK SHALL BE FRAMED USING A MINIMUM OF L 4"x 4"x 1/4" ANGLE WELDED TO JOIST OR BEAM STRUCTURE.

MASONRY: LOAD BEARING CONCRETE MASONRY CONSTRUCTION TO BE IN ACCORDANCE WITH THE CURRENT ASCE 5/ACI 530/TMS 402, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES", AND THE CURRENT ASCE 6/ACI 530.1/TMS/602, SPECIFICATIONS FOR MASONRY STRUCTURES." BEARING WALLS AND PIERS TO CONSIST ENTIRELY OF LOAD BEARING UNITS.

THE OWNER SHALL EMPLOY AN INDEPENDENT INSPECTION AND TESTING AGENCY TO ASCERTAIN THAT THE MASONRY WALLS ARE CONSTRUCTED IN COMPLIANCE WITH THE LOCAL BUILDING CODE AND THE AFOREMENTIONED SPECIFICATIONS.

ALL MASONRY CONSTRUCTION IS TO BE IN ACCORDANCE WITH ACCEPTABLE INDUSTRY STANDARDS AND METHODS OF CONSTRUCTION.

SHOP DRAWINGS FOR ALL REINFORCED MASONRY MUST BE SUBMITTED AND APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.

PROVIDE LAYOUT DRAWINGS FOR THE BRACING OF FREE STANDING WALLS, PREPARED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT.

PROVIDE DUR-O-WAL OR EQUAL EVERY BLOCK COURSE BELOW FINISHED FLOOR AND EVERY OTHER COURSE ABOVE FINISHED FLOOR UNLESS OTHERWISE SHOWN ON THE ARCHITECTURAL SECTION.

ALL HORIZONTAL WALL REINFORCING IS TO BE TRUSSED AND GALVANIZED. AT CORNERS AND INTERSECTIONS HORIZONTAL WALL REINFORCING TO BE FULLY LAPPED WITH TRUSSED GALVANIZED CORNERS AND TEES.

HOLLOW LOAD BEARING MASONRY UNITS SHALL CONFORM TO ASTM C90 REGULAR WEIGHT (UNLESS NOTED OTHERWISE). SOLID LOAD BEARING CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C145. THE UNIT MASONRY SHALL HAVE A NET UNIT COMPRESSIVE STRENGTH OF 1,500 PSI. THE COMPRESSIVE STRENGTH OF THE UNITS SHALL BE DETERMINED IN ACCORDANCE WITH ASTM C140-70, STANDARD METHODS OF SAMPLING AND TESTING CONCRETE MASONRY UNITS. A 28-DAY PRISM STRENGTH VALUE OF 1,350 PSI HAS BEEN USED IN THE DESIGN.

MORTAR FOR CONCRETE MASONRY SHALL CONFORM TO THE REQUIREMENTS OF THE ASTM SPECIFICATION FOR MORTAR UNIT MASONRY ASTM C270, TYPE M OR S. GROUT SHALL CONFORM TO ASTM C476.

CONCRETE GROUT USED TO FILL CORES IN REINFORCED MASONRY UNITS SHALL HAVE A 28-DAY STRENGTH OF 3,000 PSI MIN.

SOLID MASONRY IS COMPOSED OF LOAD BEARING UNITS HAVING A NET CROSS-SECTIONAL AREA OF AT LEAST 75% OF THE GROSS AREA (ASTM C145). "100% SOLID" MEANS HOLLOW LOAD BEARING BLOCK (ASTM C-90) FILLED WITH GROUT. ALL WALLS BELOW GRADE ARE TO BE 100% SOLID.

PROVIDE A MINIMUM OF 24" DEPTH AND 16" LENGTH OF 100% SOLID MASONRY BEARING AT ENDS OF BEAMS, AND A MINIMUM OF 8" DEPTH AND 4" WIDTH CONTINUOUS LENGTH OF 100% SOLID MASONRY AT TIMBER TRUSS, SLAB OR DECK BEARING.

DURING CONSTRUCTION, THE MASONRY WALLS SHALL BE PROPERLY BRACED UNTIL ANCHORAGE IS OBTAINED AT THE FLOOR LEVEL AND OR ROOF LEVEL. IT IS RECOMMENDED THAT THE UNBRACED HEIGHT NOT EXCEED 6 FEET.

ALL MASONRY IS TO BE LAID IN TYPE M OR S MORTAR WITH FULL HEAD AND BED JOINT.

NON-LOAD BEARING MASONRY BLOCK SHALL CONFORM TO ASTM C-129.

A PRISM TEST SHALL BE PERFORMED FOR EVERY 5000 SQ. FT. OF MASONRY WALL SURFACE LAID UP. THE PRISM TEST SHALL CONFORM TO THE REQUIREMENTS OF ACI-530.1/ASCE 6/TMS 602, CURRENT EDITION.

WALL SECTIONS AND PIERS LESS THAN 4 SQUARE FEET IN CROSS-SECTIONAL AREA ARE TO BE OF 100% SOLID MASONRY AS DEFINED EARLIER. ALL PIERS AND PARTITIONS TO BE BONDED AND INTERLOCKED TO ADJACENT MASONRY WALLS.

CONTRACTOR IS TO PROVIDE REQUIRED BRACING AND SUPPORT FOR ALL MASONRY WORK UNTIL PERMANENT CONSTRUCTION IS IN PLACE. SEE SPECIFICATIONS AND DETAILS FOR GENERAL CONTROL JOINT REQUIREMENTS.

PROVIDE MASONRY WALL ANCHORS TO STEEL BEAMS AT 2'0" O.C. AND TO STEEL COLUMNS AT 2'0" MAXIMUM. ANCHORS TO BE GALVANIZED AND EMBEDDED TO MASONRY JOINT WITH "DUR-O-WAL" OR SIMILAR JOINT REINFORCING.

STRUCTURAL STEEL: ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (A.I.S.C.) "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", AND THE AISC CODE OF STANDARD PRACTICE.

STRUCTURAL STEEL, TO BE OF DOMESTIC ORIGIN, AND CONFORM TO:

WIDE FLANGE & TEE SECTIONS:	ASTM A992
PLATES, ANGLES, & CHANNELS:	ASTM A36
HSS SQUARE/RECTANGULAR:	ASTM A500, GRADE B, Fy=46 ksi
HSS ROUND PIPE:	ASTM A500, GRADE B, Fy=42 ksi
ANCHOR BOLTS:	ASTM F1554, GRADE 36.

ALL SHOP AND FIELD CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH BOLTS, ASTM A325/A490 (OR WELDED EQUIVALENT) UNLESS OTHERWISE NOTED. SELECT CONNECTIONS TO SUPPORT 50% OF THE TOTAL UNIFORM LOAD CAPACITY IN BENDING FOR EACH GIVEN BEAM AND SPAN OR FOR REACTIONS SHOWN ON PLAN. BOLTING TO BE IN ACCORDANCE WITH RCSC SPECIFICATIONS.

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

S4.1

ANNE ARUNDEL COUNTY

DEPARTMENT OF PUBLIC WORKS

202211.1

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

The Watkins Partnership Inc.
Consulting Structural Engineering
3032 Mitchellville Road
Suite 202
Bowie, Maryland 20716
Phone:(301) 249-0974

PROJECT #: 20223002 v23

WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland, license number 12658, expiration date 10-11-2023

REVISED DATE	BY	APPROVED DATE	APPROVED DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY:
CHECKED BY:
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

GENERAL NOTES

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SIGNED AND SEALED SHOP DRAWINGS IF THEY ARE REQUIRED BY THE GOVERNING BUILDING DEPARTMENT. THE SUPPLIER OF THE STRUCTURAL STEEL SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL STANDARD CONNECTIONS. CONNECTIONS OTHER THAN STANDARD WILL BE DETAILED ON THE STRUCTURAL DRAWINGS.

ALL BEAMS BEARING IN MASONRY OR CONCRETE TO HAVE STANDARD ANGLE ANCHORS AND MINIMUM 3/8x1-1/2"x8" BEARING PLATES.

THE GENERAL CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF ANY FABRICATION AND ERECTION ERRORS OR DEVIATIONS TO RECEIVE WRITTEN APPROVAL BEFORE ANY FIELD CORRECTIONS ARE MADE.

SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ANY SPECIAL COATINGS OR FINISHES REQUIRED ON STRUCTURAL STEEL.

MISCELLANEOUS METALS: STAIRS, RAILS & LADDERS, SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS "METAL STAIR MANUAL". ALL REQUIREMENTS AND DETAILS AS INDICATED ON THE ARCHITECTURAL DRAWINGS FOR LAYOUT, DIMENSIONS AND MATERIALS SHALL BE FOLLOWED.

ENGINEERING CALCULATIONS AND SHOP DRAWINGS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE JURISDICTION OF THE PROJECT SHALL BE PROVIDED FOR REVIEW BY THE ARCHITECT AND EOR.

METAL STUDS AND JOIST: ALL STUDS AND JOIST AND ACCESSORIES SHALL BE AT A MINIMUM OF THE TYPE, SIZE, GAUGE AND SPACING SHOWN ON THE DRAWINGS. ALL STUD AND JOIST MEMBERS SHALL HAVE A MINIMUM 1-5/8" FLANGE WITH A 1/2" RETURN. RUNNERS SHALL HAVE A MINIMUM 1" FLANGE.

SHOP DRAWINGS AND ENGINEERING CALCULATIONS SHALL BE PROVIDED FOR ALL LIGHT GAUGE METAL STUD WORK, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE JURISDICTION OF THE PROJECT.

ALL STRUCTURAL MEMBERS SHALL BE DESIGNED IN ACCORDANCE WITH AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS," LATEST ADOPTED EDITION.

ALL STUDS, RUNNERS AND JOISTS SHALL BE FORMED FROM CORROSION-RESISTANT STEEL, CORRESPONDING TO THE REQUIREMENTS OF ASTM A446, WITH A MINIMUM YIELD STRENGTH OF 50 KSI FOR JOISTS AND STUD MEMBERS 18 GAGE AND HEAVIER, 33 KSI FOR JOISTS AND STUD MEMBERS 18 GAGE AND LIGHTER, 33 KSI FOR RUNNERS.

ERECTION SHALL BE IN ACCORDANCE WITH AISI AND MANUFACTURER'S RECOMMENDED PRACTICE.

WELDING: ALL WELDING TO BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE AMERICAN WELDING SOCIETY (A.W.S.) EXCEPT AS MODIFIED IN A.I.S.C. AND AS INDICATED ON THE STRUCTURAL DRAWINGS. WELDING ELECTRODES, WELDING PROCESS, MINIMUM PREHEAT AND INTERPASS TEMPERATURES TO BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY. ANY STRUCTURAL STEEL DAMAGED IN WELDING TO BE REPLACED OR ACCEPTABLY REINFORCED.

WELDING, LIGHT GAUGE FRAMING: ARC WELDING IS A SUITABLE ALTERNATE TO CONNECTING FRAMING WITH USG SCREWS. HOWEVER, SCREWS MUST BE USED TO FASTEN PANEL SURFACING TO FRAMING MEMBERS. GENERALLY, GAS METAL ARC WELDING (GMAW) - MIG WELDING IS PREFERRED FOR LIGHTER 20-GA. MEMBERS - AND SHIELDED METAL ARC WELDING (SMAW) - STICK WELDING - IS COMMONLY USED FOR 18-GA. AND HEAVIER STEEL MEMBERS.

FOR GMAW, A WIRE-FEED WELDER IS SUITABLE FOR FAST, UNIFORM WELDING IN SHOP ASSEMBLY. EQUIPMENT SHOULD HAVE CAPACITY OF 60 TO 100 AMPERES AT APPROXIMATELY 25 VOLTS AND REQUIRES 220-VOLT, 3-PHASE ELECTRIC SERVICE. WIRE ELECTRODES, AWS E-70S-3, E-70S-5 OR E-70S-6 WITH CO2, ARGON-OXYGEN OR ARGON-CO2 GAS SHIELDING ARE USED.

FOR SMAW, A 200-AMPERE, "HOT BOX" ELECTRIC WELDER OR GASOLINE GENERATOR-WELDER IS SUITABLE. THIS EQUIPMENT IS SIMPLY OPERATED, VERSATILE AND PORTABLE, MAKING IT IDEAL FOR JOB FABRICATION AND ASSEMBLY. FLUX-COVERED, MILD STEEL ELECTRODES AWS E-6012, E-6013 OR-7014 ARE USED.

ALL WELDING SHOULD BE DONE ACCORDING TO CURRENT AMERICAN WELDING SOCIETY PRACTICES. MANUFACTURES SHOULD BE CONSULTED FOR EQUIPMENT RECOMMENDATIONS AND PROPER ELECTRODE SELECTION. AFTER WELDING, ZINC-RICH PAINT SHALL BE APPLIED TO THE WELD AREA TO PROVIDE CORROSION RESISTANCE. ADEQUATE VENTILATION IS NECESSARY TO PROPERLY VENT FUMES.

ROOF DECK PLYWOOD: TO BE A MINIMUM OF 1/2" PLYWOOD RATED FOR 24" SPACES. PLYWOOD DECKING ATTACHMENTS, USE WAFER HEAD WINGED REAMER SHALL BE USED WITH LIGHT GAUGED ROOF TRUSSES. MINIMUM SIZE AND SPACING SHALL BE 6" O.C. AROUND PREMETER AND 12" O.C. IN THE FIELD UNLESS NOTED OTHERWISE. MINIMUM SIZE 10d, UNLESS NOTED OTHERWISE.

TIMBER: ALL STRUCTURAL LUMBER SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

Fb =1,000 PSI Fv =100 PSI E=1,300,000 PSI

MOISTURE CONTENT: ALL LUMBER 6 INCHES AND DEEPER SHALL HAVE A MOISTURE CONTENT OF NOT GREATER THAN 19 PERCENT. AIR DRIED LUMBER IS DESIRED BUT, IF NECESSARY, LUMBER MAY BE KILN DRIED. DRYING PROCESS MUST BE SLOW AND REGULATED TO CAUSE A MINIMUM AMOUNT OF CHECKING, COMPARABLE WITH AIR DRIED STOCK.

TIMBER AND TIMBER CONSTRUCTION SHALL CONFORM WITH THE "NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION" OF THE NATIONAL FOREST PRODUCTS ASSOCIATION AND THE "TIMBER CONSTRUCTION MANUAL" OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION.

TIMBER ROOF TRUSSES SHALL BE DESIGNED TO SUPPORT A ROOF LIVE LOAD OF 30 PSF. DESIGN SHALL BE CERTIFIED BY A PROFESSIONAL ENGINEER EMPLOYED BY THE DESIGNER, REGISTERED IN THE JURISDICTION OF THE PROJECT AND APPROVED BY THE ARCHITECT. SHOP DRAWINGS OF FABRICATED ROOF TRUSSES AND INSTRUCTIONS FOR THEIR INSTALLATION ARE TO BE SUPPLIED FOR APPROVAL BY THE ARCHITECT.

ROOF TRUSSES SHALL BE ADEQUATELY BRACED AGAINST LATERAL AND OTHER FORCES DURING ERECTION, TEMPORARY AND / OR PERMANENT BRACING SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE EFFECT OF LATERAL THRUST ON THE TRUSS SUPPORT SHALL BE CONSIDERED IN THE DESIGN OF SCISSOR TYPE TRUSSES. HORIZONTAL MOVEMENT SHALL NOT EXCEED L/360 OR 3/8", WHICHEVER IS LESS.

16 GAUGE FRAMING ANCHORS SHALL BE USED TO CONNECT TRUSSES TO ROOF PLATE.

TOP CHORD OF TRUSSES TO BE BRACED BY MINIMUM PLYWOOD SHEETING.

PROVIDE 2x4 CONTINUOUS SPACER TIE ACROSS TOP OF BOTTOM CHORD AT THE QUARTER POINTS.

THE NAILING SCHEDULE AS FOUND IN THE LATEST ADOPTED IBC (TABLE 2304.9.1) SHALL BE USED AS A MINIMUM FOR ALL TIMBER CONNECTIONS.

ENGINEERED LUMBER: ALL ENGINEERED LUMBER TO BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE MANUFACTURER AND AS INDICATED ON THE STRUCTURAL DRAWINGS.

BEAMS & HEADERS SHALL HAVE THE MINIMUM PROPERTIES AS FOLLOWS:

LVL	Fb =2,800 PSI	Fv =285 PSI	E =1,900,000 PSI
PSL	Fb =2,900 PSI	Fv =290 PSI	E =2,000,000 PSI

PSL COLUMNS SHALL HAVE THE MINIMUM PROPERTIES AS FOLLOWS:

PSL Fb =2,400 PSI Fc =2500 PSI E =1,800,000 PSI

GLUE LAMS: ALL GLUED LAMINATED TIMBERS TO BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION STANDARDS AND SPECIFICATIONS AND AS INDICATED ON THE STRUCTURAL DRAWINGS.

Fb =2,400 PSI Fv =175 PSI E =1,700,000 PSI

WOODEN I-JOIST: THE PLYWOOD WEB I- JOISTS ARE TO BE FACTORY MANUFACTURED WITH STRUCTURAL GRADE PLYWOOD, LVL OR MACHINE STRESS RATED LUMBER FLANGES AND UTILIZING WATERPROOF TYPE GLUES.

THE PLYWOOD WEBS ARE TO BE OF AN APA STRUCTURAL I C-C EXTERIOR GRADE WITH FACE VENEERS INSTALLED WITH GRAIN RUNNING IN THE VERTICAL DIRECTION OF THE JOIST AND BUTT JOINTED TO FORM A CONTINUOUS WEB MEMBER. THE WEB SHALL BE PRESSURE FORMED AND FIT INTO A GROOVE IN THE CENTER OF THE WIDE FACE OF THE FLANGE MEMBERS SO AS TO FORM A PRESSURED GLUE JOINT AT THAT JUNCTION.

THE I-JOISTS SHALL BE SIZED AND DETAILED TO FIT THE DIMENSIONS AND LOADS INDICATED ON THE PLANS. ALL DESIGNS SHALL BE IN ACCORDANCE WITH ALLOWABLE VALUES AND SECTION PROPERTIES ASSIGNED AND APPROVED BY THE BUILDING CODE. VERIFICATION OF DESIGN OF THE I-JOIST BY COMPLETE CALCULATIONS IS TO BE AVAILABLE UPON REQUEST. THE DESIGN OF THE I-JOIST IS TO BE APPROVED BY A PROFESSIONAL ENGINEER REGISTERED IN THE JURISDICTION OF THE PROJECT.

ADDITIONAL DRAWINGS SHOWING LAYOUT AND DETAIL NECESSARY FOR DETERMINING FIT AND PLACEMENT IN THE BUILDING ARE TO BE PROVIDED BY THE MANUFACTURER.

THE I-JOISTS SHALL BE MANUFACTURED IN A PLANT APPROVED FOR FABRICATION BY THE BUILDING CODE.

THE I-JOISTS IF STORED PRIOR TO ERECTION SHALL BE STORED IN A VERTICAL POSITION AND PROTECTED FROM THE WEATHER. THEY SHALL BE HANDLED WITH CARE SO THEY ARE NOT DAMAGED.

THE I-JOISTS ARE TO BE ERECTED AND INSTALLED IN ACCORDANCE WITH THE PLANS, I-JOIST DRAWINGS AND THE MANUFACTURE'S INSTALLATION SUGGESTIONS. TEMPORARY CONSTRUCTION LOADS WHICH CAUSE MEMBER STRESSES BEYOND DESIGN LIMITS ARE NOT PERMITTED. ERECTION BRACING IN ADDITION TO SPECIFIED BRIDGING IS TO BE PROVIDED TO KEEP THE I-JOIST STRAIGHT AND PLUMB AS REQUIRED TO ASSURE ADEQUATE LATERAL SUPPORT FOR THE INDIVIDUAL I-JOIST AND THE ENTIRE SYSTEM UNTIL THE SHEATHING MATERIAL HAS BEEN APPLIED. THE CONTRACTOR WILL GIVE NOTIFICATION PRIOR TO ENCLOSING THE I-JOIST TO PROVIDE OPPORTUNITY FOR INSPECTION OF THE INSTALLATION.

OPEN WEB JOISTS (TIMBER): THE TRUSSES SHALL BE FACTORY MANUFACTURED WITH TUBULAR STEEL WEBS, TRUE PIN CONNECTIONS AND STRUCTURAL WOOD OR LVL CHORDS SUCH AS MANUFACTURED BY TRUSS JOIST CORPORATION.
STRUCTURAL WOOD CHORD MEMBERS SHALL BE OF MACHINE STRESS RATED LUMBER OF APPROVED TRUSS JOIST GRADE AND KILN DRIED TO A MAXIMUM MOISTURE CONTENT OF 19%. ALL END JOINTS SHALL BE FINGER JOINTS CONFORMING OF DETAILS APPROVED BY THE BUILDING CODE OR AUTHORITY. STEEL WEB MEMBERS SHALL BE ACCURATELY DIE STAMPED FROM ELECTRICALLY WELDED, COLD ROLLED STEEL TUBING HAVING A MINIMUM YIELD STRENGTH OF 45,000 PSI. CONNECTING PINS AND BEARING DETAILS SHALL BE OF MATERIAL AND SIZE AS REQUIRED BY DESIGN.

THE TRUSS JOIST SHALL BE CUSTOM DESIGNED TO FIT THE DIMENSIONS AND LOADS INDICATED ON THE PLANS. ALL DESIGNS SHALL BE IN ACCORDANCE WITH ALLOWABLE VALUES ASSIGNED BY THE BUILDING CODE APPROVAL. COMPLETE DESIGN CALCULATION SHOWING INTERNAL LAYOUT, MEMBER FORCES AND STRESS CONTROL POINTS ARE TO BE AVAILABLE UPON REQUEST FOR EACH TRUSS JOIST DESIGN. THE DESIGN OF THE TRUSS JOISTS IS TO BE DONE UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER IN THE JURISDICTION OF THE PROJECT.

DRAWINGS SHALL BE FURNISHED BY THE MANUFACTURER SHOWING ALL CRITICAL DIMENSIONS FOR DETERMINING FIT AND PLACEMENT IN THE BUILDING AS WELL AS THE LOADS THE TRUSS JOISTS ARE DESIGNED TO SUPPORT. THESE DRAWINGS SHALL BE APPROVED PRIOR TO FABRICATION.

THE TRUSS JOISTS SHALL BE MANUFACTURED IN A PLANT APPROVED FOR FABRICATION BY THE BUILDING CODE.

THE TRUSS JOISTS IF STORED PRIOR TO ERECTION SHALL BE STORED IN A VERTICAL POSITION AND PROTECTED FROM THE WEATHER. THEY SHALL BE HANDLED WITH CARE SO THEY ARE NOT DAMAGED.

THE TRUSS JOISTS ARE TO BE ERECTED AND INSTALLED IN ACCORDANCE WITH THE PLANS, THE APPROVED TRUSS JOIST DRAWINGS AND INSTALLATION SUGGESTIONS. TEMPORARY CONSTRUCTION LOADS WHICH CAUSE MEMBER STRESSES BEYOND DESIGN LIMITS ARE NOT PERMITTED. ERECTION BRACING IN ADDITION TO SPECIFIED BRIDGING IS TO BE PROVIDED TO KEEP THE TRUSS JOISTS STRAIGHT AND PLUMB AS REQUIRED TO ENSURE ADEQUATE LATERAL SUPPORT FOR THE INDIVIDUAL TRUSS JOIST AND ENTIRE SYSTEM UNTIL THE SHEATHING MATERIAL HAS BEEN APPLIED. THE CONTRACTOR WILL GIVE NOTIFICATION PRIOR TO ENCLOSING THE TRUSS JOISTS TO PROVIDE OPPORTUNITY FOR INSPECTION OF THE INSTALLATION.

SHOP DRAWINGS: FOR ALL STEEL STRUCTURAL ITEMS THAT ARE PART OF THIS PROJECT AND MUST BE REVIEWED BY THE STRUCTURAL ENGINEER.

PARTIAL SUBMISSIONS OF SHOP DRAWINGS FOR REVIEW MUST BE PRE-APPROVED BY THE STRUCTURAL ENGINEER.

INCOMPLETE OR SHOP DRAWINGS WHICH HAVE NOT BEEN CHECKED BY THE DETAILER, STRUCTURAL STEEL SUPPLIER, AND CONTRACTOR WILL NOT BE REVIEWED BY THE STRUCTURAL ENGINEER.

NUMEROUS DIMENSIONAL ERRORS, LACK OF CONNECTION COORDINATION, AND MISSING MEMBER FABRICATION DETAILING ARE CONSIDERED PROOF THAT THE SHOP DRAWING HAVE NOT BEEN CHECKED OR ARE INCOMPLETE.

THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS FOR CONFORMANCE WITH THE STRUCTURAL/ARCHITECTURAL DRAWINGS BEFORE SUBMISSION TO THE STRUCTURAL ENGINEER.

ANY DEVIATIONS FROM THE CONTRACT STRUCTURAL/ARCHITECTURAL DRAWINGS SHALL BE INDICATED IN RED ON THE SHOP DRAWINGS BY THE CONTRACTOR.

ONLY SHOP DRAWINGS SIGNED AND DATED BY THE CONTRACTOR WILL BE REVIEWED BY THE STRUCTURAL ENGINEER.

THE STRUCTURAL ENGINEER WILL PROCESS A MAXIMUM OF 5 SETS OF SHOP DRAWINGS PER SUBMISSION.

THE STRUCTURAL ENGINEER SHALL HAVE 12 WORKING DAYS TO PERFORM THE SHOP DRAWING REVIEW.

CONTRACT DOCUMENTS MAY NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS WITHOUT A WRITTEN AGREEMENT BETWEEN THE GENERAL CONTRACTOR AND THE ENGINEER OF RECORD.

IF ELECTRONIC FILES ARE REQUESTED, A USE AND ROYALTY FEE WILL BE ASSESSED FOR ELECTRONIC COPIES PER EACH SHEET OF THE CONTRACT DRAWINGS, AND MUST BE PAID IN FULL PRIOR TO THE ENGINEER RELEASING THE SHOP DRAWINGS.

THE FOLLOWING SHOP DRAWINGS AND SUBMITTALS SHALL BE PROVIDED FOR REVIEW AND APPROVAL:
- SHORING/BRACING
- CONCRETE MIX DESIGN
- GROUT MIX DESIGN
- CONCRETE MASONRY BLOCK AND REINFORCING
- CONCRETE REINFORCING
- STRUCTURAL STEEL
- COLD FORMED METAL FRAMING/TRUSSES
- WELDING CERTIFICATIONS
- WOOD FRAMING/TRUSSES

STEEL INSPECTION: STRUCTURAL STEEL SHALL BE INSPECTED, BOTH IN SHOP AND IN FIELD, BY A QUALIFIED INSPECTION AGENCY APPROVED BY THE STRUCTURAL ENGINEER, WRITTEN INSPECTION REPORTS SHALL BE FILED WITH THE STRUCTURAL ENGINEER WITHIN 5 WORKING DAYS OF THE ACTUAL INSPECTION. INSPECTORS SHALL BE NOTIFIED OF ALL PHASES OF STRUCTURAL STEEL CONSTRUCTION AND WELDING BY THE GENERAL CONTRACTOR.

STRUCTURAL TESTS AND SPECIAL INSPECTIONS: AN INDEPENDENT TESTING AND INSPECTION AGENCY SHALL INSPECT, MONITOR AND/OR TEST THE FOLLOWING IN ACCORDANCE WITH THE MOST STRINGENT REQUIREMENTS OF THE LOCAL JURISDICTION, IBC, TENANT REQUIREMENTS, CONTRACT DOCUMENTS, AND APPROVED SHOP DRAWINGS. THE TESTING AND INSPECTION AGENCY WILL BE PAID BY THE OWNER. REPORTS OF INSPECTIONS SHALL BE SUBMITTED TO THE ARCHITECT, ENGINEER, AND BUILDING OFFICIAL.

CONSTRUCTION CONSIDERED NON-COMPLIANT SHALL BE REMOVED AND REPLACED.

TESTING AND INSPECTION SHALL BE UNDER THE DIRECTION OF AN ENGINEER LICENSED TO PRACTICE IN THIS LOCAL JURISDICTION.

REPORTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD IN A TIMELY MANNER, UNDER THE LICENSURE SEAL AND SIGNATURE OF THE INSPECTION ENGINEER.

SOILS
- SITE PREPARATION, FILL AND/OR BACKFILL PLACEMENT AND COMPACTION, FIELD DENSITY TESTING, VERIFICATION OF SOIL BEARING CAPACITY FOR FOOTINGS AND FOUNDATIONS.

CONCRETE
- VERIFY AND INSPECT IN ACCORDANCE WITH TABLE 1704.4 OF IBC. INSPECT REINFORCING LOCATION, STRENGTH, BAR SIZE, PLACEMENT, AND CLEARANCES. INSPECT CONCRETE LOCATION, STRENGTH, SLUMP, PLACEMENT, CURING, AND ADDITIVES.

MASONRY
- TESTING AND INSPECTION OF ENGINEERED MASONRY IN ACCORDANCE WITH: IBC LEVEL 1 SPECIAL INSPECTION FOR BUILDING CATEGORY: I, II, OR III
IBC LEVEL 2 SPECIAL INSPECTION FOR BUILDING CATEGORY: IV

INSPECT PROPORTIONS OF SITE PREPARED MORTAR AND GROUT. INSPECT MASONRY UNITS AND MORTAR JOINTS, SIZE, GRADE AND TYPE OF REINFORCEMENT, ANCHORS AND CONNECTORS. INSPECT GROUT SPACE AND CONTINUOUSLY INSPECT GROUT PLACEMENT. PREPARATION AND TESTING OF GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS AS REQUIRED BY PROJECT SPECIFICATIONS.

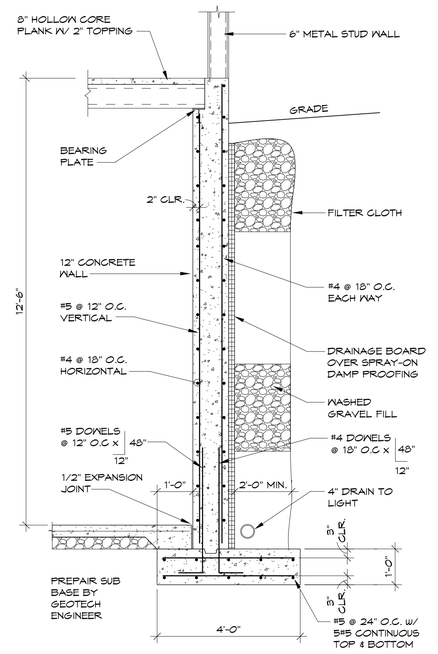
STRUCTURAL STEEL
- VERIFICATION AND INSPECTION OF STRUCTURAL STEEL IN ACCORDANCE WITH TABLE 1704.3 OF IBC. VERIFY WELDING MATERIALS, WELDING PROCEDURES AND QUALIFICATIONS OF WELDERS IN ACCORDANCE WITH AWS D1.1 PRIOR TO START OF FABRICATION. INSPECT MATERIALS FOR STRUCTURAL STEEL, HIGH STRENGTH STEEL BOLTS, NUTS AND WASHERS, AND WELD FILLER MATERIALS. INSPECT INSTALLATION OF HIGH STRENGTH BOLTS IN ACCORDANCE WITH AISC SPECIFICATIONS. INSPECT JOINT FIT-UP PRIOR TO WELDING. INSPECT ALL JOINTS AND CONNECTIONS. INSPECT SHEAR STUDS FOR COMPOSITE CONSTRUCTION.

COLD-FORMED METAL FRAMING
- INSPECT TYPE, SIZE, GAGE AND FINISH OF COLD-FORMED METAL FRAMING IN EXTERIOR CURTAINWALL OR BEARING WALL CONSTRUCTION. INSPECT CONNECTIONS OF MEMBERS TO EACH OTHER AND TO THE SUPPORTING STRUCTURE.

TIMBER
- INSPECT TYPE, SIZE, POSITION, AND CONNECTIONS.

ABBREVIATIONS LEGEND:

ARCH'T	ARCHITECT
AFF	ABOVE FINISHED FLOOR
BM	BEAM
B.O.	BOTTOM OF
BRG	BEARING
CANT	CANTILEVER
CMU	CONCRETE MASONRY UNIT
CIP	CAST IN PLACE
CL	CENTERLINE
CLR	CLEAR
CONC	CONCRETE
COL	COLUMN
DBL	DOUBLE
(E)	EXISTING
ELEV	ELEVATOR
EOR	ENGINEER OF RECORD
EOS	EDGE OF SLAB
EQ	EQUAL
EQUIP	EQUIPMENT
EXP	EXPANSION
EXT	EXTERIOR
FIN	FINISHED
FLR	FLOOR
FND	FOUNDATION
FT	FEET
FTG	FOOTING
GA	GAGE
GALV	GALVANIZED
GR	GRADE
G.C.	GENERAL CONTRACTOR
HORIZ	HORIZONTAL
HT	HEIGHT
IN	INCH
INT	INTERIOR
JNT	JOINT
JST	JOIST
K	KIP
LB	POUND
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LVL	LAMINATED VENEER LUMBER
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
MISC	MISCELLANEOUS
MTL	METAL
(N)	NEW
O.C.	ON CENTER
OH	OPPOSITE HAND
PAF	PONDER ACTUATED FASTENER
REINF	REINFORCING
REQ	REQUIRED
SCH OR SCHED	SCHEDULE
SECT	SECTION
SF	STEP FOOTING
SIM	SIMILAR
SOG	SLAB ON GRADE
SP. JST.	SPECIAL JOIST
STL	STEEL
T&B	TOP AND BOTTOM
THK	THICK
T.O.	TOP OF
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
V.I.F.	VERIFY IN FIELD
W/	WITH
WF	WIDE FLANGE
WP	WORKING POINT
WT	WEIGHT
WWF	WELDED WIRE FABRIC



1 S4.2 Basement Wall
1/2" = 1'-0"

NOT FOR CONSTRUCTION | DESIGN DEVELOPMENT | S4.2

ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS | 202211.1

REVISED DATE	BY	APPROVED DATE	APPROVED DATE	SCALE: AS NOTED	GENERAL NOTES
				DRAWN BY:	
		CHIEF ENGINEER	PROJECT MANAGER	CHECKED BY:	
		APPROVED DATE	APPROVED DATE	SHEET: OF	The Preserve at Eisenhower Clubhouse 1576 Generals Hwy Crownsville, MD 21032
				PROJECT #: P570200	
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	CONTRACT #: P570205	

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

ATKINS Partnership Inc.
Consulting Structural Engineering
3032 Mitchellville Road
Suite 202
Bowie, Maryland 20716
Phone:(301) 249-0974

PROJECT #: 20223002 v23

WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Mayland, license number 12658, expiration date 10-11-2023

SPECIFIC NOTES - HVAC	
M1	EA DUCT UP TO EXHAUST FAN ON ROOF.
M2	EA DUCT DN TO GREASE EXHAUST HOOD.
M4	6" ROUND EA DUCT TERMINATING IN WALL CAP AT EXTERIOR WALL.
M5	OA AND EA UP.
M6	OA AND EA DN.
M7	OA UP TO RTU-1 ON ROOF.
M8	RA UP TO RTU-1 ON ROOF.
M9	FOOD SERVICE EQUIPMENT CONDENSING UNIT PROVIDED UNDER ANOTHER DIVISION AND SHOWN FOR ROOF COORDINATION ONLY. REFER TO FOOD SERVICE DRAWINGS FOR MORE INFORMATION.
M10	OA UP TO MAU-1 ON ROOF.

GENERAL NOTES
(APPLY TO WORK PROVIDED UNDER DIV. 20):

1. PROVIDE LABOR, EQUIPMENT AND MATERIALS NECESSARY FOR THE INSTALLATION OF THE COMPLETE MECHANICAL SYSTEMS AS SPECIFIED HEREIN AND INDICATED IN THE CONTRACT DOCUMENTS. OUTLINE DESCRIPTION AND DIAGRAMMATIC REPRESENTATION OF SYSTEM OPERATION AND EQUIPMENT DOES NOT LIMIT CONTRACTOR LIABILITY FOR FURNISHING AND INSTALLING COMPLETE AND OPERABLE SYSTEMS.
2. THE INSTALLATION SHALL COMPLY WITH THE LATEST EDITION OF THE CODE OF THE LOCAL AUTHORITY HAVING JURISDICTION.
3. "DRAWING NOTES" APPLY TO THE ENTIRE DRAWING ON WHICH THEY APPEAR, WHERE RELEVANT. "SPECIFIC NOTES" APPLY ONLY WHERE INDICATED WITH THE "SPECIFIC NOTE" SYMBOL. REFER TO LEGEND.
4. DUCTWORK TO BE SHEET METAL UNLESS NOTED OTHERWISE.
5. PROVIDE REQUIRED CLEARANCE FOR MAINTENANCE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, OR AS REQUIRED BY CODE FOR MECHANICAL EQUIPMENT.
6. INCLUDE IN THE BID PRICE THE PAYMENT OF NECESSARY PERMITS. FURNISH THE OWNER PRIOR TO THE FINAL PAYMENT A CERTIFICATE FROM THE INSPECTION DEPARTMENT HAVING JURISDICTION CERTIFYING THAT THE WORK MEETS THE REQUIREMENTS OF THE LOCAL INSPECTION AUTHORITIES AND/OR THE NATIONAL BOARD OF FIRE UNDERWRITERS.
7. COORDINATE WITH THE OWNER FOR THE SCHEDULING OF WORK.
8. WORK SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER.
9. KEEP THE WORK SITE AND SURROUNDING AREA FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH GENERATED BY WORK FROM THIS CONTRACT. PROPERLY AND LEGALLY DISPOSE OF MATERIALS.
10. JOB SITE SAFETY SHALL BE IN STRICT ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
11. VISIT THE SITE AND CAREFULLY EXAMINE EXISTING CONDITIONS THAT MAY AFFECT THE BID.
12. PROVIDE SUBMITTALS (SHOP DRAWINGS) FOR REVIEW FOR NEW MATERIALS AND EQUIPMENT. PRIOR TO SUBMITTING, REVIEW SUBMITTALS FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS, CONFLICTS WITH OTHER TRADES, AND CONSTRUCTABILITY. IDENTIFY ANY DEVIATIONS IN SUBMITTALS FROM CONTRACT DOCUMENTS. ENGINEER'S REVIEW OF SUBMITTALS DOES NOT INCLUDE REVIEW OF DIMENSIONS, DETAILS, OR QUANTITIES. REVIEW DOES NOT WAIVE ANY REQUIREMENTS OF CONTRACT DOCUMENTS, INCLUDING THE REQUIREMENT TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM.
13. WHEN MOUNTING MECHANICAL WORK IN AREAS SUBJECT TO PEDESTRIAN TRAFFIC, MAINTAIN REQUIRED HEADROOM CLEARANCES.
14. MECHANICAL MATERIALS AND EQUIPMENT SHALL BE INSTALLED AS TO MAINTAIN THEIR RESPECTIVE UL RATING AND SHALL CONFORM TO FACTORY MUTUAL STANDARDS AS APPLICABLE.
15. MECHANICAL WORK SHALL BE CONCEALED IN FINISHED AREAS SHOWN ON THE ARCHITECTURAL DRAWINGS UNLESS NOTED OTHERWISE.
16. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT DIFFUSER LOCATIONS AND THE ELECTRICAL DRAWINGS FOR EXACT ELECTRICAL EQUIPMENT LOCATIONS. LOCATIONS OF MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING ARE SHOWN DIAGRAMMATICALLY. DETERMINE EXACT LOCATIONS IN THE FIELD.
17. SEALING FITTINGS AND APPROVED SEALING COMPOUND SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE CODE. SEAL AROUND PENETRATIONS OF FIRE-RATED WALLS WITH AN APPROVED SEALANT.
18. LOCATIONS OF DUCTWORK, AIR DEVICES, TEMPERATURE CONTROLS, AND EQUIPMENT SHALL BE COORDINATED WITH THE ARCHITECTURAL LAYOUTS, EQUIPMENT CUTS AND PLUMBING/ELECTRICAL/STRUCTURAL PLANS. NO WORK SHALL BE INSTALLED UNTIL THE LOCATIONS HAVE BEEN VERIFIED. BRING ANY DISCREPANCY TO THE ARCHITECTS ATTENTION PRIOR TO MANUFACTURING OF DUCTWORK OR INSTALLATION.
19. NORTH ARROWS ON THESE DRAWINGS INDICATE TRUE NORTH.
20. INSTALL A MANUAL VOLUME DAMPER IN EACH BRANCH DUCT THAT RUNS TO (1) AIR DEVICE.
21. INSTALL A MANUAL VOLUME DAMPER IN EACH OA BRANCH DUCT THAT RUNS TO EACH FAN COIL UNIT.
22. PROVIDE PIPE SLEEVE FOR PIPING PENETRATIONS THROUGH RATED SLABS OR WALLS.
23. DUCT JOINTS SHALL BE SEALED USING 3M MODEL 540 DUCT SEALER. EXCESS SEALER SHALL BE REMOVED FROM DUCTWORK AND JOINTS. PAINT SEALED JOINTS TO MATCH FINISH OF DUCTWORK.
24. IN AREAS WHERE WORK IS INSTALLED IN CLOSE PROXIMITY TO WORK OF OTHER TRADES OR WITHIN TRADES COVERED BY THIS DIVISION OF THE SPECIFICATIONS, PREPARE LARGER SCALE DRAWINGS CONSISTING OF PLANS AND SECTIONS TO SHOW HOW WORK IS TO BE INSTALLED IN RELATION TO WORK OF OTHER TRADES.
25. COORDINATE DUCTWORK AND PIPING ROUTING WITH OPEN-WEB TRUSS STRUCTURE.
26. SUPPLY AIR DIFFUSERS SHALL HAVE 4-WAY THROW UNLES OTHERWISE INDICATED BY ARROWS ON THE FLOOR PLANS.
27. RECTANGULAR ELBOWS AND RECTANGULAR SPLIT FITTINGS SHALL HAVE TURNING VANES UNLESS NOTED OTHERWISE.
28. VRF FAN COIL RETURN AIR DUCTS COMING OFF THE BACK OF THE UNIT SHALL BE THE SAME SIZE AS THE UNIT CONNECTION UNLESS NOTED OTHERWISE.
29. THE CONTRACTOR MAY PROVIDE COMBINATION THERMOSTATS AND HUMIDISTATS IN A SINGLE MEASURING DEVICE AT THEIR OPTION WHERE TWO SEPARATE DEVICES ARE INDICATED ON THE DRAWINGS.

MECHANICAL LEGEND

SYMBOL	ABBREV	DESCRIPTION
RS	RS	REFRIGERANT SUCTION
RL	RL	REFRIGERANT LIQUID
RD	RD	REFRIGERANT DISCHARGE
RE	RE	REFRIGERANT EQUALIZER
		FLOW METER FITTING
		REDUCED PRESSURE ZONE BACKFLOW PREVENTER
TP	TP	TRAP PRIMER
		RELIEF VALVE
MAV	MAV	MANUAL AIR VALVE
AAV	AAV	AUTOMATIC AIR VALVE
		STRAINERW/VALVE
		UNION
SA	SA	SHOCK ABSORBER
FS		FLOW SWITCH
		THERMOMETER
		THERMOMETER WELL
		PRESSURE GAUGE W/ SYPHON & NEEDLE VALVE
P		PRESSURE GAUGE W/NEEDLE VALVE
	PG	PRESSURE GAUGE TAPPING
		PIPE GUIDE
		ANCHOR
	TCV	TEMPERATURE CONTROL VALVE (2-WAY)
	TCV	TEMPERATURE CONTROL VALVE (3-WAY)
		DRIP POINT
		FLEXIBLE PIPE CONNECTION
		OS&Y VALVE W/ TAMPER SWITCH
		SHUTOFF VALVE
		CHECK VALVE
BWV	BWV	BACK WATER VALVE
	PRV	PRESSURE REDUCING VALVE
		PIPE TURNING UP
		PIPE TURNING DOWN
		TEE TURNING UP
		TEE TURNING DOWN
H T		HUMIDISTAT THERMOSTAT
		SUPPLY DUCT TURNED UP
		SUPPLY DUCT TURNED DOWN
		RETURN OR OUTSIDE AIR DUCT TURNEDUP
		RETURN OR OUTSIDE AIR DUCT TURNEDDOWN
		EXHAUST AIR DUCT TURNED UP
		EXHAUST AIR DUCT TURNED DOWN
		FLEXIBLE DUCT CONNECTION

SYMBOL	ABBREV	DESCRIPTION
DD	DD	DUCT SMOKE DETECTOR
CO2	CO2	CARBON DIOXIDE DETECTOR (DUCT MOUNTED)
MVD	MVD	MANUAL VOLUMEDAMPER
MOD	MOD	MOTOR OPERATED DAMPER
SD	SD	SMOKE DAMPER
FD	FD	FIRE DAMPER
BDD	BDD	BACKDRAFT DAMPER
	OBD	OPPOSED BLADE DAMPER
R		INCLINED DUCT RISE
D		INCLINED DUCT DOWN
		MATCH LINE
1 1		SECTION DESIGNATION
1 1		DETAIL DESIGNATION

ABBREV	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
BTU	BRITISH THERMAL UNIT
CB	CATCHBASIN
CFH	CUBIC FEET HOUR
CFM	CUBIC FEET MINUTE
DIFF	DIFFUSER
DB	DRY BULB
EAT	ENTERING AIR TEMPERATURE
ESP	EXTERNAL STATIC PRESSURE
EX	EXISTING
EXH	EXHAUST
EXTR	EXISTING TO REMAIN
(FLOOR PLAN-M-1)	FOR CONTINUATION SEE FLOOR PLAN ON DRAWING M-1
GR	GRILLE
GPM	GALLONS PER MINUTE
KW	KILOWATTS
LAT	LEAVING AIR TEMPERATURE
MBH	THOUSAND BTU/HR
OA	OUTSIDEAIR
PD	PRESSURE DROP
RA	RETURN AIR
REG	REGISTER
RX	REMOVE EXISTING
SA	SUPPLY AIR
TSP	TOTAL STATIC PRESSURE
V-PH	VOLT-PHASE
VTR	VENT THROUGH ROOF

DRAWING LIST - MECHANICAL	
SHEET NUMBER	**SHEET NAME**
M0.1	SYMBOLS, NOTES AND ABBREVIATIONS
M1.1	MECHANICAL - HVAC - PRO SHOP LEVEL
M1.2	MECHANICAL - HVAC - MAIN LEVEL
M1.3	MECHANICAL - HVAC - ROOF LEVEL
M5.1	MECHANICAL DETAILS
M7.1	MECHANICAL SCHEDULES
M7.2	MECHANICAL SCHEDULES
M7.3	MECHANICAL SCHEDULES

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No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

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ARCHITECTURE + INTERIORS
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

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REVISED DATE	BY

APPROVED DATE _____ CHIEF ENGINEER
APPROVED DATE _____ ASSISTANT CHIEF ENGINEER
APPROVED DATE _____ PROJECT MANAGER
APPROVED DATE _____ CHIEF, RIGHT OF WAY

DESIGN DEVELOPMENT | M0.1

ANNE ARUNDEL COUNTY | JUNE 2023

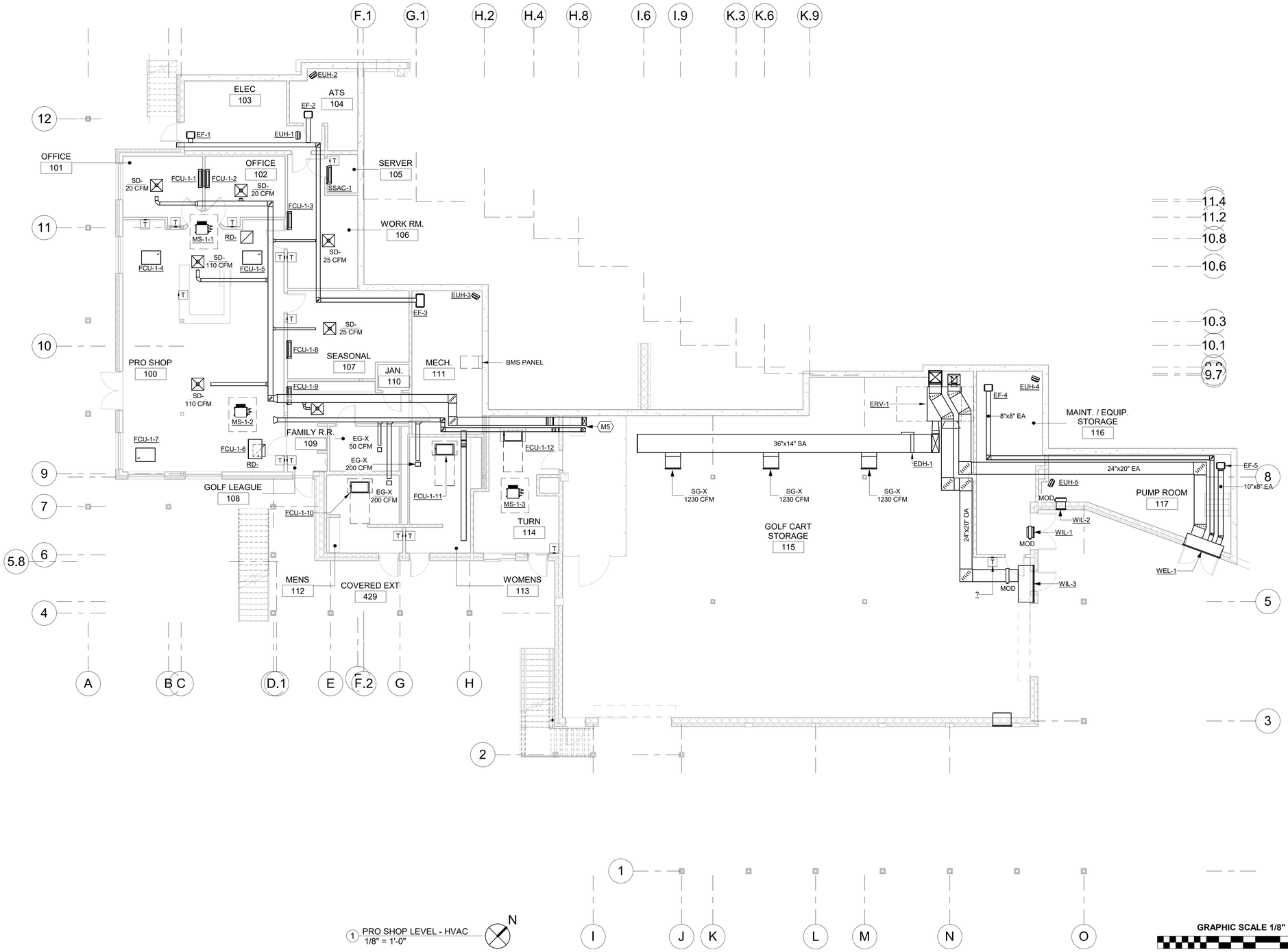
DEPARTMENT OF PUBLIC WORKS | 20232548

SCALE: AS NOTED
DRAWN BY: KAB
CHECKED BY: ADS
SHEET: OF XXX
PROJECT #: P570200
CONTRACT #: P570205

SYMBOLS, NOTES AND ABBREVIATIONS

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

SPECIFIC NOTES - HVAC NEW	
M5	OA AND EA UP.



1 PRO SHOP LEVEL - HVAC
1/8" = 1'-0"

N

GRAPHIC SCALE 1/8" = 1'-0"
0 8 16 24 32

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REVISED DATE	BY

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APPROVED DATE — PROJECT MANAGER
APPROVED DATE — ASSISTANT CHIEF ENGINEER
APPROVED DATE — CHIEF, RIGHT OF WAY

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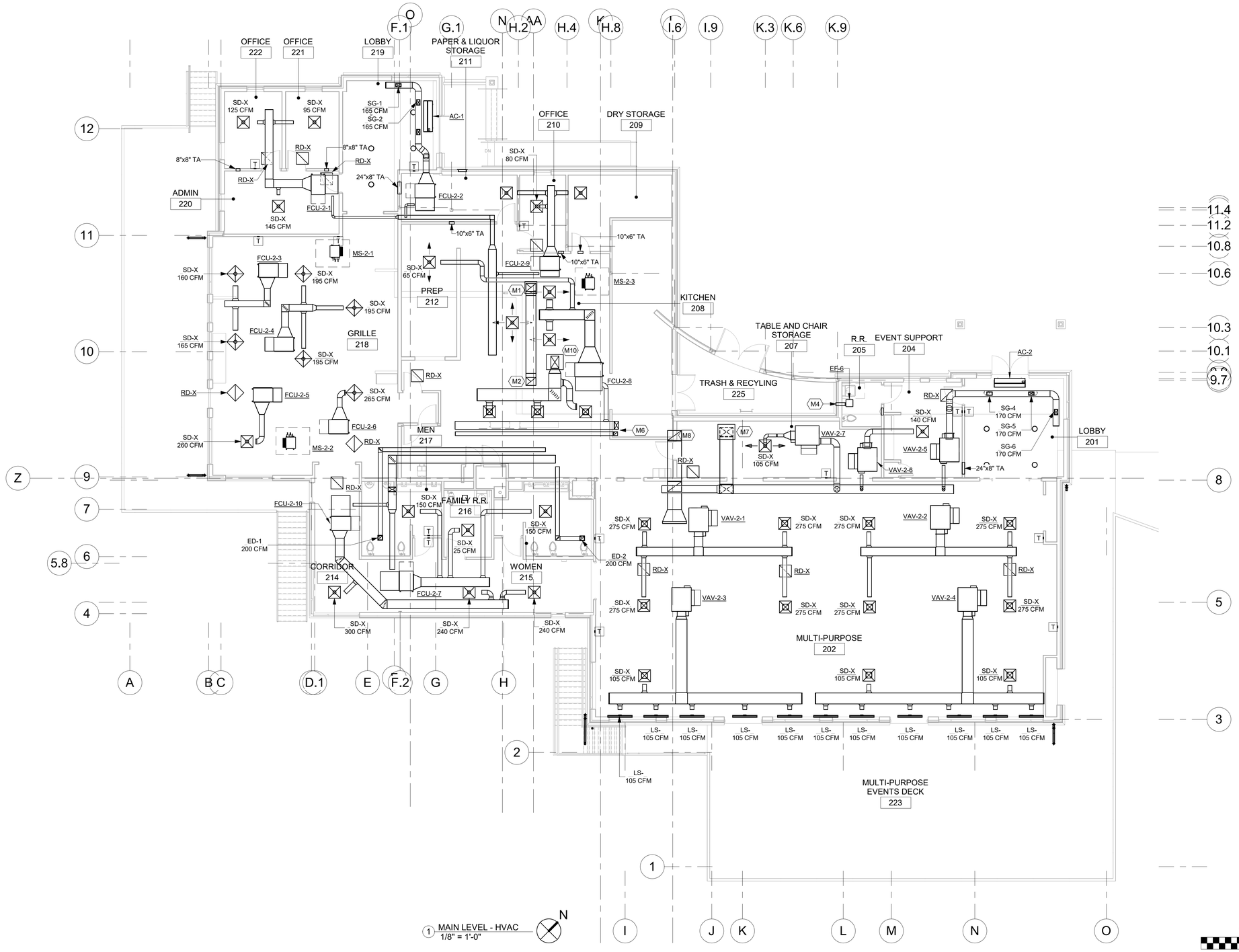
DESIGN DEVELOPMENT | M1.1
JUNE 2023
20232548

SCALE: AS NOTED
DRAWN BY: KAB
CHECKED BY: ADS
SHEET: OF XXX
PROJECT #: P570200
CONTRACT #: P570205

MECHANICAL - HVAC - PRO SHOP LEVEL

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

SPECIFIC NOTES - HVAC NEW	
M1	EA DUCT UP TO EXHAUST FAN ON ROOF.
M2	EA DUCT DN TO GREASE EXHAUST HOOD.
M4	6" ROUND EA DUCT TERMINATING IN WALL CAP AT EXTERIOR WALL.
M6	OA AND EA DN.
M7	OA UP TO RTU-1 ON ROOF.
M8	RA UP TO RTU-1 ON ROOF.
M10	OA UP TO MAU-1 ON ROOF.



1 MAIN LEVEL - HVAC
1/8" = 1'-0"

GRAPHIC SCALE 1/8" = 1'-0"
0 8 16 24 32

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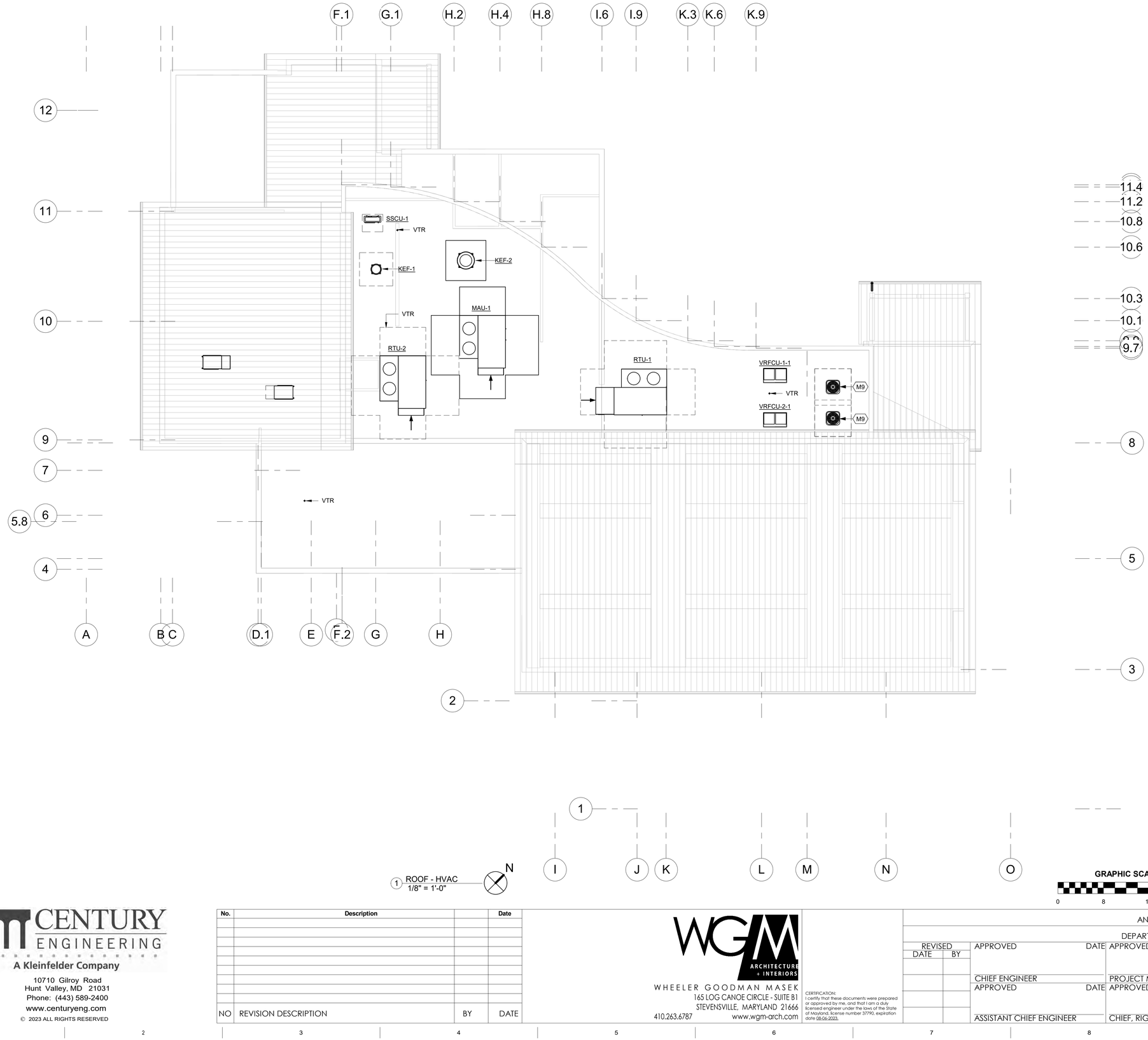
		APPROVED / DATE	APPROVED / DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

DESIGN DEVELOPMENT | M1.2
JUNE 2023
20232548
SCALE: AS NOTED
DRAWN BY: KAB
CHECKED BY: ADS
SHEET: OF XXX
PROJECT #: P570200
CONTRACT #: P570205

MECHANICAL - HVAC - MAIN LEVEL

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032



1 ROOF - HVAC
1/8" = 1'-0"

GRAPHIC SCALE 1/8" = 1'-0"

0 8 16 24 32

SPECIFIC NOTES - HVAC NEW	
M9	FOOD SERVICE EQUIPMENT CONDENSING UNIT PROVIDED UNDER ANOTHER DIVISION AND SHOWN FOR ROOF COORDINATION ONLY. REFER TO FOOD SERVICE DRAWINGS FOR MORE INFORMATION.

GENERAL NOTES

1. ROOF-MOUNTED EQUIPMENT, INCLUDING ROOFTOP UNITS, CONDENSING UNITS, FANS, AND OTHER EQUIPMENT WHICH DISCHARGES VERTICALLY, SHALL BE MOUNTED AT A SUFFICIENT HEIGHT ABOVE THE ROOF DECK SO THAT THE POINT OF DISCHARGE OFF THE EQUIPMENT IS EQUAL TO, OR HIGHER THAN, THE HEIGHT OF THE ROOF SCREEN WALL. REFER TO THE MECHANICAL DETAILS FOR MORE INFORMATION.

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT	M1.3

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ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

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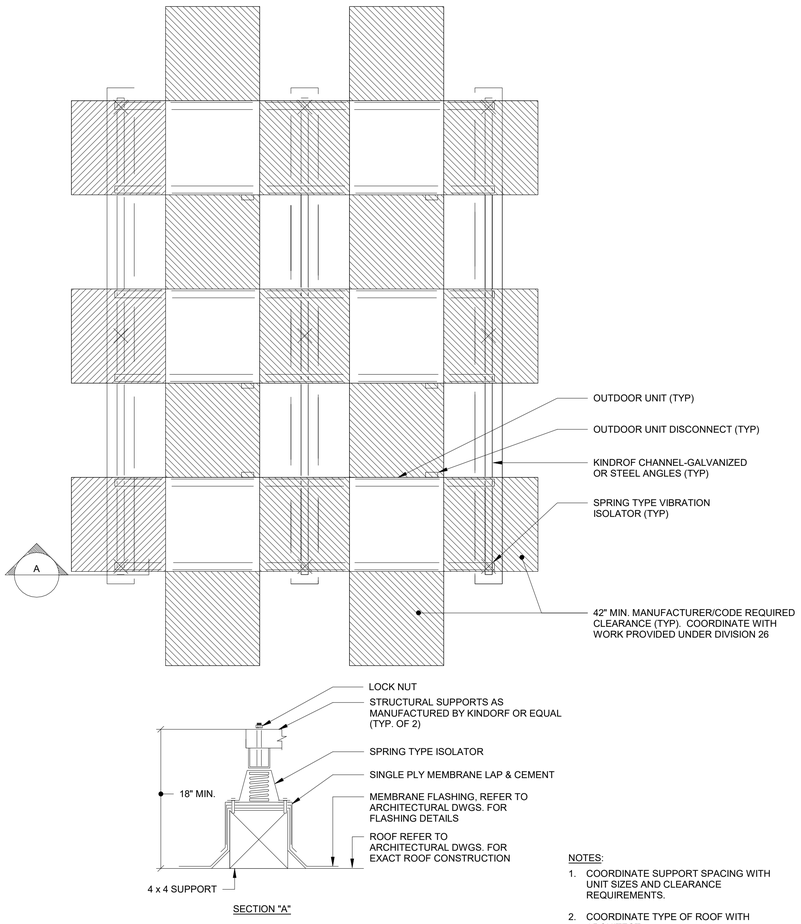
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED / DATE	APPROVED / DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

JUNE 2023	
20232548	
SCALE: AS NOTED	MECHANICAL - HVAC - ROOF LEVEL
DRAWN BY: KAB	
CHECKED BY: ADS	
SHEET: OF XXX	The Preserve at Eisenhower Clubhouse 1576 Generals Highway, Crownsville, Maryland 21032
PROJECT #: P570200	
CONTRACT #: P570205	

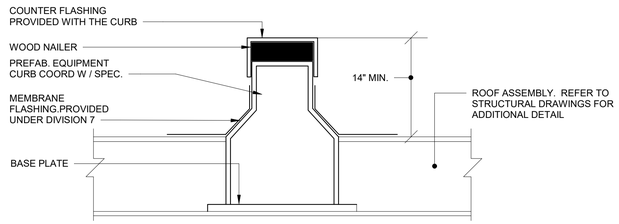


SECTION "A"

1 TYPICAL CONDENSER SUPPORT ON ROOF
NO SCALE

NOTES:

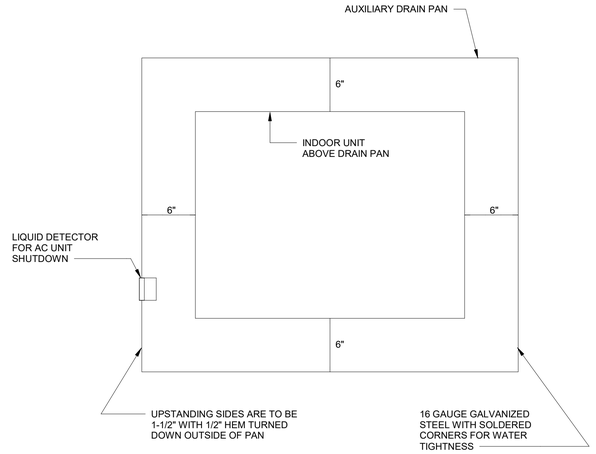
1. COORDINATE SUPPORT SPACING WITH UNIT SIZES AND CLEARANCE REQUIREMENTS.
2. COORDINATE TYPE OF ROOF WITH ARCHITECT.



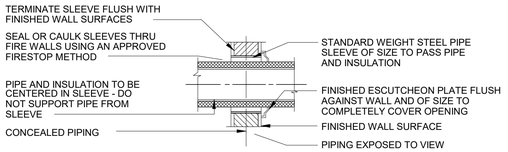
NOTES:

1. COORDINATE TYPE OF ROOF WITH ARCHITECT.

2 EQUIPMENT RAIL DETAIL
NO SCALE



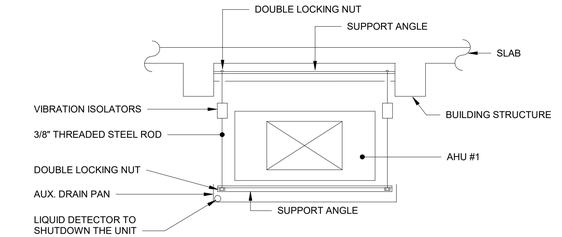
3 SECONDARY DRAIN PAN
NO SCALE



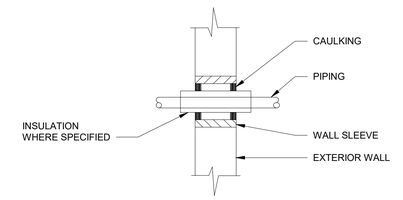
NOTES:

1. REFER TO ARCHITECTURAL DRAWING FOR TYPES OF WALLS & THEIR CONSTRUCTION.
2. PROVIDE SLEEVES @ ALL RATED WALL PENETRATIONS.

4 TYPICAL SLEEVE THROUGH INTERIOR WALL
NO SCALE



5 TYPICAL AIR HANDLER SUPPORT
NO SCALE



7 PIPE SLEEVE
NO SCALE

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DESIGN DEVELOPMENT	M5.1

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ANNE ARUNDEL COUNTY — JUNE 2023
DEPARTMENT OF PUBLIC WORKS — 20232548

REVISED DATE	BY	APPROVED / DATE	APPROVED / DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED / DATE	APPROVED / DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY: KAB
CHECKED BY: ADS
SHEET: OF XXX
PROJECT #: P570200
CONTRACT #: P570205

MECHANICAL DETAILS

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

PACKAGED ROOFTOP UNIT HEAT PUMP SCHEDULE

MARK	SERVING	SUPPLY FAN DATA					EXHAUST FAN DATA				ENERGY RECOVERY WHEEL DATA										COOLING DATA						EER	HOT GAS REHEAT CAPACITY (MBH)	HEAT PUMP HEATING DATA			AUXILIARY ELECTRIC HEAT INPUT (KW)	FILTER DATA		ELECTRICAL DATA				BASIS OF DESIGN		REMARKS
		SA FLOWRATE (CFM)	ESP (IN. W.C.)	OA FLOWRATE (CFM)	SUPPLY FAN POWER (HP)	SUPPLY FAN BRAKE HORSEPOWER (BHP)	EA FLOWRATE (CFM)	ESP (IN. W.C.)	EXHAUST FAN POWER (HP)	EXHAUST FAN BRAKE HORSEPOWER (BHP)	VENTILATION						EXHAUST						EAT (°F)		LAT (°F)		REQUIRED SENSIBLE CAPACITY (MBH)	REQUIRED TOTAL CAPACITY (MBH)			EAT DB (°F)	LAT DB (°F)	REQUIRED CAPACITY (MBH)		TYPE	DIRTY FILTER ALLOWANCE (IN WC)	MCA	MOCP	VOLTAGE	PHASE	MANUFACTURER	MODEL	
											SUMMER EAT (°F)		SUMMER LAT (°F)		WINTER EAT (°F)		WINTER LAT (°F)		SUMMER EAT (°F)		WINTER EAT (°F)																					
											DB	WB	DB	WB	DB	WB	DB	WB	DB	WB	DB	WB	DB	WB	DB	WB														
RTU-1	MULTIPURPOSE	4280		2480							95	78					10														0			2" MERV 8 / 4" MERV 13	0.35	231	250	208	3	DAIKIN	DPS015A	
RTU-2	CLUBHOUSE	2535		2535							95	78					10														0			2" MERV 8 / 4" MERV 13	0.35	223	250	208	3	DAIKIN	DPS015A	

NOTES:
1. COOLING AND HEATING CAPACITIES INDICATED AS REQUIRED ARE CALCUALTED MINIMUM CAPACITIES.
2. COOLING COIL SHALL HAVE A MAXIMUM FACE VELOCITY OF 500 FEET PER MINUTE.
3. PROVIDE VARIABLE FREQUENCY DRIVES ON BOTH THE SUPPLY FAN AND EXHAUST FAN, OR ALTERNATE METHOD OF FAN SPEED MODULATION.

KITCHEN HOOD MAKEUP-AIR UNIT SCHEDULE

MARK	SERVING	SUPPLY FAN DATA					EXHAUST FAN DATA				COOLING DATA						EER	HOT GAS REHEAT CAPACITY (MBH)	HEAT PUMP HEATING DATA			FILTER DATA		ELECTRICAL DATA				BASIS OF DESIGN		REMARKS
		SA FLOWRATE (CFM)	ESP (IN. W.C.)	OA FLOWRATE (CFM)	SUPPLY FAN POWER (HP)	SUPPLY FAN BRAKE HORSEPOWER (BHP)	EA FLOWRATE (CFM)	ESP (IN. W.C.)	EXHAUST FAN POWER (HP)	EXHAUST FAN BRAKE HORSEPOWER (BHP)	EAT (°F)		LAT (°F)		REQUIRED SENSIBLE CAPACITY (MBH)	REQUIRED TOTAL CAPACITY (MBH)			EAT DB (°F)	LAT DB (°F)	REQUIRED CAPACITY (MBH)	TYPE	DIRTY FILTER ALLOWANCE (IN WC)	MCA	MOCP	VOLTAGE	PHASE	MANUFACTURER	MODEL	
											DB	WB	DB	WB																
MAU-1	KITCHEN	0	0.00	0	0	0.0	0	0.00	0.0	0.0	95	78	0	0	0	0	0	0.0	0	0	0.0	2" MERV 8 / 4" MERV 13	0.35	0	0	208	3	DAIKIN	DPS015A	

VARIABLE REFRIGERANT FLOW MULTI-PORT BRANCH SELECTOR SCHEDULE

MARK	SERVING	ELECTRICAL DATA				BASIS OF DESIGN		REMARKS
		MCA	MOCP	VOLTAGE	PHASE	MANUFACTURER	MODEL	
MS-1-1	FCU-1-1 THROUGH FCU-1-5	0.0	15	208	1	DAIKIN	BSF4Q54TVJ	
MS-1-2	FCU-1-6 THROUGH FCU-1-9	0.0	15	208	1	DAIKIN	BSF4Q54TVJ	
MS-1-3	FCU-1-10 THROUGH FCU-1-12	0.0	15	208	1	DAIKIN	BSF4Q54TVJ	
MS-2-1	FCU-2-1 THROUGH FCU-2-4	0.0	15	208	1	DAIKIN	BSF4Q54TVJ	
MS-2-2	FCU-2-5 THROUGH FCU-2-7, FCU-2-10	0.0	15	208	1	DAIKIN	BSF4Q54TVJ	
MS-2-3	FCU-8, FCU-9	0.0	15	208	1	DAIKIN	BSF4Q54TVJ	

VARIABLE REFRIGERANT FLOW FAN COIL UNIT SCHEDULE

MARK	SUPPLY FAN DATA			COOLING DATA				HEATING DATA		ELECTRICAL DATA				BASIS OF DESIGN		REMARKS
	SUPPLY AIR FLOW (CFM)	OUTSIDE AIR (CFM)	ESP (IN.W.C.)	EAT °F		SENSIBLE CAPACITY (MBH)	TOTAL CAPACITY (MBH)	EAT °F	HEATING CAPACITY (MBH)	MCA	MOCP	VOLTAGE	PHASE	MANUFACTURER	MODEL	
				DB	WB											
FCU-1-1		0	0.60	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXAQ	1
FCU-1-2		0	0.60	75	63	0.0	0.0	70	0.0	0.5	15	208	1	DAIKIN	FXAQ	1
FCU-1-3		0	0.60	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXAQ	1
FCU-1-4		0	0.60	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXHQ	1
FCU-1-5		0	0.60	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXHQ	1
FCU-1-6		0	0.60	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXHQ	1
FCU-1-7		0	0.60	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXHQ	1
FCU-1-8		0	0.60	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXAQ	1
FCU-1-9		0	0.60	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXAQ	1
FCU-1-10	0	0	0.60	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXEQ	1
FCU-1-11	0	0	0.60	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXEQ	1
FCU-1-12	0	0	0.60	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXEQ	1
FCU-2-1	0	0	0.00	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXSQ	1
FCU-2-2	495	0	0.00	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXSQ	1
FCU-2-3	0	0	0.00	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXSQ	1
FCU-2-4	0	0	0.00	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXSQ	1
FCU-2-5	0	0	0.00	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXSQ	1
FCU-2-6	0	0	0.00	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXSQ	1
FCU-2-7	0	0	0.00	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXSQ	1
FCU-2-8	0	0	0.00	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXSQ	1
FCU-2-9	0	0	0.00	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXSQ	1
FCU-2-10	0	0	0.00	75	63	0.0	0.0	70	0.0	0.0	15	208	1	DAIKIN	FXSQ	1

NOTES:
1. COOLING AND HEATING CAPACITIES INDICATED ARE CALCUALTED MINIMUM CAPACITIES.

SERIES FAN POWERED TERMINAL UNIT SCHEDULE

MARK	SERVING	INLET SIZE (IN)	AIRFLOW (CFM)		COOLING LAT °F	ELECTRIC HEATING COIL DATA				ELECTRICAL DATA				BASIS OF DESIGN		REMARKS
			MAX	MIN		EAT °F	MIN HEATING °F	MIN HEATING CAPACITY (MBH)	HEATING INPUT (KW)	MCA	MOCP	VOLTAGE	PHASE	MANUFACTURER	MODEL	
VAV-2-1	MULTIPURPOSE 202				55					0.0	15	208	3	TITUS	DTFS	
VAV-2-2	MULTIPURPOSE 202				55					0.0	15	208	3	TITUS	DTFS	
VAV-2-3	MULTIPURPOSE 202				55					0.0	15	208	3	TITUS	DTFS	
VAV-2-4	MULTIPURPOSE 202				55					0.0	15	208	3	TITUS	DTFS	
VAV-2-5	LOBBY 201				55					0.0	15	208	3	TITUS	DTFS	
VAV-2-6	EVENT SUPPORT 204				55					0.0	15	208	3	TITUS	DTFS	
VAV-2-7	TABLE STORAGE 207				55					0.0	15	208	3	TITUS	DTFS	

NOTES:
1. TERMINAL UNITS ARE SELECTED FOR A 1" INLET STATIC PRESURE, WITH 0.25" OF DOWNSTREAM STATIC PRESSURE.
2. TERMINAL UNITS SHALL HAVE A MAXIMUM RADIATED NOISE CRITERIA (NC) OF 30, AND A MAXIMUM DISCHARGE NC OF 30.
3. PROVIDE THE HEATING COIL WITH A MINIMUM OF 3 STAGES OF CAPACITY.

ELECTRIC AIR CURTAIN SCHEDULE

MARK	SERVING	MOUNTING TYPE	ELECTRICAL DATA					BASIS OF DESIGN		REMARKS
			KILOWATTS (KW)	MCA	MOCP	VOLTAGE	PHASE	MANUFACTURER	MODEL	
AC-1	LOBBY 219	WALL MOUNTED				208	3	SCHWANK	AC-TE60-20	1,2
AC-2	LOBBY 211	WALL MOUNTED				208	3	SCHWANK	AC-TE60-20	1,2

NOTES:
1. PROVIDE HEATER WITH INTEGRAL, TAMPER-PROOF THERMOSTAT.
2. PROVIDE WITH INTEGRAL DISCONNECT SWITCH.

ELECTRIC UNIT HEATER SCHEDULE

MARK	SERVING	MOUNTING TYPE	ELECTRICAL DATA					BASIS OF DESIGN		REMARKS
			KILOWATTS (KW)	MCA	MOCP	VOLTAGE	PHASE	MANUFACTURER	MODEL	
EUH-1	ELEC	WALL MOUNTED	5	18.0	20	208	3	QMARK	MUH05-81	1,2
EUH-2	ATS	WALL MOUNTED	5	18.0	20	208	3	QMARK	MUH05-81	1,2
EUH-3	MECHANICAL	WALL MOUNTED	5	18.0	20	208	3	QMARK	MUH05-81	1,2
EUH-4	MAINT/EQUIP STORAGE	WALL MOUNTED	5	18.0	20	208	3	QMARK	MUH05-81	1,2
EUH-5	FIRE PUMP	WALL MOUNTED	5	18.0	20	208	3	QMARK	MUH05-81	1,2

NOTES:
1. PROVIDE HEATER WITH INTEGRAL, TAMPER-PROOF THERMOSTAT.
2. PROVIDE WITH INTEGRAL DISCONNECT SWITCH.

VARIABLE REFRIGERANT VOLUME HEAT PUMP OUTDOOR UNIT SCHEDULE

MARK	SERVING	DESIGN CONDITIONS			REQUIRED COOLING CAPACITY (MBH)	EER	REQUIRED HEATING CAPACITY (MBH)	COP (47 °F)	ELECTRICAL DATA				BASIS OF DESIGN		REMARKS
		SUMMER DRY BULB (°F)	SUMMER WET BULB (°F)	WINTER DRY BULB (°F)					MCA	MOCP	VOLTAGE	PHASE	MANUFACTURER	MODEL	
VRFCU-1-1		95	78	10	0		0		0.0	0	208	3	DAIKIN	REYQ	
VRFCU-2-1		95	78	10	0		0		0.0	0	208	3	DAIKIN	REYQ	

NOTES:
1. REFRIGERANT PIPE SIZES AND ROUTING SHALL BE AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
2. COORDINATE REFRIGERANT LINE LENGTHS WITH PLANS AND MANUFACTURER'S REQUIREMENTS.
3. UNIT SHALL UTILIZE R-410 REFRIGERANT
4. COOLING AND HEATING CAPACITIES INDICATED AS REQUIRED ARE CALCUALTED MINIMUM CAPACITIES.
5. VRFCU-1-1 AND VRFCU-1-2 CONSTITUTE A 2-MODULE UNIT AND HAVE A COMBINED COOLING AND HEATING CAPACITY OF XX MBH AND XX MBH, RESPECTIVELY.
6. THE VRF SYSTEM SHALL HAVE LOW AMBIENT COOLING DOWN TO 23 DEGREES F. FURTHER COOLING BELOW 23 DEGREES F SHALL BE POSSIBLE BY A 'TECHNICAL COOLING' SOLUTION. BOTH THE SINGLE PORT AND MULTIPORT BRANCH SELECTOR BOXES SHALL BE CAPABLE OF TECHNICAL COOLING.

EXHAUST FAN SCHEDULE

MARK	SERVING	AIRFLOW (CFM)	ESP (IN WC)	DRIVE TYPE	ELECTRICAL DATA						BASIS OF DESIGN		REMARKS
					WATTS	HP	FLA	MOCP	VOLTAGE	PHASE	MANUFACTURER	MODEL	
EF-1	ELEC	215	0.40	DIRECT			0.00	15	120	1	GREENHECK	SP	1
EF-2	ATS	115	0.40	DIRECT			0.00	15	120	1	GREENHECK	SP	1
EF-3	MECHANICAL	270	0.40	DIRECT			0.00	15	120	1	GREENHECK	SP	1
EF-4	MAINT/EQUIP STORAGE	290	0.40	DIRECT			0.00	15	120	1	GREENHECK	SP	1
EF-5	FIRE PUMP	350	0.40	DIRECT			0.00	15	120	1	GREENHECK	SP	1
EF-6	EVENT RESTROOM	50	0.25	DIRECT			0.00	15	120	1	GREENHECK	SP	2

NOTES:
1. PROVIDE FAN WITH SPEED CONTROLLER, STANDARD GRILLE, AND BACKDRAFT DAMPER.
2. PROVIDE FAN WITH SPEED CONTROLLER, STANDARD GRILLE, ROUND WALL CAP, AND BACKDRAFT DAMPER.

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT | M7.1

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NO	REVISION DESCRIPTION	BY	DATE

WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Mayland, license number 37790, expiration date 06-06-2023.

ANNE ARUNDEL COUNTY | JUNE 2023
DEPARTMENT OF PUBLIC WORKS | 20232548

REVISED DATE	BY

APPROVED DATE — CHIEF ENGINEER
APPROVED DATE — ASSISTANT CHIEF ENGINEER
APPROVED DATE — PROJECT MANAGER
APPROVED DATE — CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY: KAB
CHECKED BY: ADS
SHEET: OF XXX
PROJECT #: P570200
CONTRACT #: P570205

MECHANICAL SCHEDULES

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

ENERGY RECOVERY VENTILATOR SCHEDULE

MARK	SERVING	SUPPLY FAN DATA					EXHAUST FAN DATA				ENERGY RECOVERY WHEEL DATA								FILTER DATA		ELECTRICAL DATA				BASIS OF DESIGN		REMARKS
											VENTILATION						EXHAUST										
											SUMMER EAT (°F)		SUMMER LAT (°F)		WINTER EAT (°F)		WINTER LAT (°F)		SUMMER EAT (°F)		WINTER LAT (°F)						
		SA FLOWRATE (CFM)	ESP (IN. W.C.)	OA FLOWRATE (CFM)	SUPPLY FAN POWER (HP)	SUPPLY FAN BRAKE HORSEPOWER (BHP)	EA FLOWRATE (CFM)	ESP (IN. W.C.)	EXHAUST FAN POWER (HP)	EXHAUST FAN BRAKE HORSEPOWER (BHP)	DB	WB	DB	WB	DB	WB	DB	WB	DB	WB	DB	WB	TYPE	DIRTY FILTER ALLOWANCE (IN WC)	MCA	MOCP	VOLTAGE	PHASE	MANUFACTURER	MODEL	
ERV-1	115 GOLF CART STORAGE	3700		3700							95	78			10								2" MERV 8						GREENHECK	ERV-45-30L	

NOTES:
1.

KITCHEN EXHAUST FAN SCHEDULE

MARK	SERVING	AIRFLOW (CFM)	ESP (IN WC)	DRIVE TYPE	FAN RPM	ELECTRICAL DATA						BASIS OF DESIGN		REMARKS
						HP	BRAKE HP	FLA	MOCP	VOLTAGE	PHASE	MANUFACTURER	MODEL	
KEF-1	PREP AREA	0	0.35	DIRECT	0	0.00	0.00	0	15	120	1	GREENHECK	CUE	
KEF-2	KITCHEN	0	1.00	BELT	0	0.00	0.00	0	15	208	3	GREENHECK	CUB	

NOTES:
1. PROVIDE FAN WITH SPEED CONTROLLER.
2. PROVIDE FAN DESIGNED FOR GREASE EXHAUST APPLICATIONS.

DUCTLESS SPLIT SYSTEM HEAT PUMP INDOOR UNIT SCHEDULE

MARK	SERVING	SUPPLY AIR (CFM)	COOLING DATA					HEATING DATA			ELECTRICAL DATA		BASIS OF DESIGN		REMARKS
			EAT (°F)		SENSIBLE CAPACITY (MBH)	TOTAL CAPACITY (MBH)	SEER	MINIMUM SEER2	HEATING CAPACITY (MBH)	HSPF	MINIMUM HSPF2	VOLTAGE	PHASE	MANUFACTURER	MODEL	
			DB	WB												
SSAC-1	ROOM	141										208	1	DAIKIN	FAQ24	

NOTES:
1. INDOOR UNIT SHALL BE POWERED SEPARATELY FROM THE OUTDOOR UNIT.
2. INDOOR UNIT SHALL HAVE A WALL-MOUNTED THERMOSTAT.
3. PROVIDE UNIT WITH AUTOMATIC FAN SPEED CONTROL.

DUCTLESS SPLIT SYSTEM HEAT PUMP OUTDOOR UNIT SCHEDULE

MARK	SERVING	DESIGN CONDITIONS			ELECTRICAL DATA				BASIS OF DESIGN		REMARKS
		SUMMER DRY BULB (°F)	SUMMER WET BULB (°F)	WINTER DRY BULB (°F)	MCA	MOCP	VOLTAGE	PHASE	MANUFACTURER	MODEL	
SSCU-1	SSAC-1	95	78	10			208	1	DAIKIN	RZQ	

NOTES:
1. REFRIGERANT PIPE SIZES AND ROUTING SHALL BE AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
2. COORDINATE REFRIGERANT LINE LENGTHS WITH PLANS MANUFACTURER'S REQUIREMENTS.
3. UNIT SHALL UTILIZE R-410 REFRIGERANT
4. UNIT SHALL BE CAPABLE OF LOW AMBIENT COOLING DOWN TO 10 DEGREES F.

ELECTRIC DUCT HEATER SCHEDULE

MARK	SERVING	MOUNTING TYPE	AIRFLOW (CFM)	PRESSURE DROP (IN WC)	HEATING DATA			ELECTRICAL DATA					BASIS OF DESIGN		REMARKS
					EAT (°F)	LAT (°F)	HEATING CAPACITY (MBH)	KW	MCA	MOCP	VOLTAGE	PHASE	MANUFACTURER	MODEL	
EDH-1	ERV-1	DUCT- MOUNTED	3700	0.025	60						208	3	INDEECO	QUZ	

NOTES:
1. PROVIDE WITH FACTORY OPTION WALL-MOUNTED THERMOSTAT AND FACTORY OPTION FUSED DISCONNECT. PROVIDE A MINIMUM OF 3 STAGES OF HEAT.
2. DUCT HEATER DIMENSIONS SHALL MATCH THE DUCTWORK IN WHICH IT IS INSTALLED. PROVIDE WITHOUT PRESSURE PLATE.
3. PROVIDE A FLANGED CONNECTION FOR THE HEATER.

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT | M7.2

ANNE ARUNDEL COUNTY | JUNE 2023

DEPARTMENT OF PUBLIC WORKS | 20232548

MECHANICAL SCHEDULES

SCALE: AS NOTED
DRAWN BY: KAB
CHECKED BY: ADS
SHEET: OF XXX
PROJECT #: P570200
CONTRACT #: P570205

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

REVISED

DATE	BY

APPROVED DATE
CHIEF ENGINEER

APPROVED DATE
ASSISTANT CHIEF ENGINEER

APPROVED DATE
PROJECT MANAGER

APPROVED DATE
CHIEF, RIGHT OF WAY

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

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CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Mayland, license number 37790, expiration date 08-06-2023.

AIR TERMINAL SCHEDULE - CEILING EXHAUST AIR DIFFUSERS

MARK	AIRFLOW (CFM)	NECK SIZE	AIR PRESSURE DROP (IN W.G.)	NOISE CRITERIA (NC)	BASIS OF DESIGN		REMARKS
					MANUFACTURER	MODEL	
ED-1	200	8"x8"	0.00	0	TITUS	350	
ED-2	200	8"x8"	0.00	0	TITUS	350	

NOTES:
1. MAXIMUM PRESSURE DROP SHALL BE 0.1 IN. W.C. FOR EXHAUST AIR.
2. LENGTH AND WIDTH NOTED IS THE DUCT CONNECTION SIZE.
3. COORDINATE BORDER TYPE WITH ARCHITECTURAL DRAWINGS OR EXISTING CONDITIONS.

AIR TERMINAL SCHEDULE - CEILING EXHAUST AIR REGISTER

MARK	AIRFLOW (CFM)	NECK SIZE	AIR PRESSURE DROP (IN W.G.)	NOISE CRITERIA (NC)	BASIS OF DESIGN		REMARKS
					MANUFACTURER	MODEL	

NOTES:
1. AIR DEVICE SHALL HAVE A MAXIMUM PRESSURE DROP OF 0.1 IN. W.C.
2. AIR DEVICE SHALL HAVE A MAXIMUM NOISE CRITERIA OF 25 NC.
3. AIR DEVICE SHALL BE SELECTED FOR A 24"X24" LAY-IN CEILING MOUNTING.
4. AIR DEVICE SHALL BE SELECTED FOR INSTALLATION INTO A GYPSUM CEILING.
5. AIR DEVICE SHALL BE SELECTED FOR NO CEILING. THE AIR DEVICE SHALL BE SUPPORTED BY THE DUCTWORK.
6. AIR DEVICE SHALL BE CONSTRUCTED OF ALUMINUM.

AIR TERMINAL SCHEDULE - CEILING RETURN AIR DIFFUSERS

MARK	FACE SIZE (INXIN)	AIR PRESSURE DROP (IN W.G.)	NOISE CRITERIA (NC)	BASIS OF DESIGN		REMARKS
				MANUFACTURER	MODEL	
RD-	24X24			TITUS	50F	
RD-	24X24			TITUS	50F	
RD-X	24X24			TITUS	50F	
RD-X	24X24			TITUS	50F	
RD-X	24X24			TITUS	50F	
RD-X	24X24			TITUS	50F	
RD-X	24X24			TITUS	50F	
RD-X	24X24			TITUS	50F	
RD-X	24X24			TITUS	50F	
RD-X	24X24			TITUS	50F	
RD-X	24X24			TITUS	50F	
RD-X	24X24			TITUS	50F	
RD-X	24X24			TITUS	50F	
RD-X	24X24			TITUS	50F	

NOTES:
1. MAXIMUM PRESSURE DROP SHALL BE 0.05 IN. W.C. FOR RETURN AIR.
2. LENGTH AND WIDTH NOTED IS THE DUCT CONNECTION SIZE.
3. COORDINATE BORDER TYPE WITH ARCHITECTURAL DRAWINGS.

AIR TERMINAL SCHEDULE - CEILING SUPPLY AIR DIFFUSERS

MARK	AIRFLOW (CFM)	NECK SIZE	AIR PRESSURE DROP (IN W.G.)	NOISE CRITERIA (NC)	BASIS OF DESIGN		REMARKS
					MANUFACTURER	MODEL	
SD-	20	6"ø			TITUS	TDC	
SD-	20	6"ø			TITUS	TDC	
SD-	110	6"ø			TITUS	TDC	
SD-	25	6"ø			TITUS	TDC	
SD-	25	6"ø			TITUS	TDC	
SD-	110	6"ø			TITUS	TDC	
SD-	500	6"ø			TITUS	TDC	
SD-X	125	6"ø			TITUS	TDC	
SD-X	95	6"ø			TITUS	TDC	
SD-X	145	6"ø			TITUS	TDC	
SD-X	160	6"ø			TITUS	TDC	
SD-X	300	6"ø			TITUS	TDC	
SD-X	240	6"ø			TITUS	TDC	
SD-X	240	6"ø			TITUS	TDC	
SD-X	140	6"ø			TITUS	TDC	
SD-X	105	6"ø			TITUS	TDC	
SD-X	80	6"ø			TITUS	TDC	
SD-X	150	6"ø			TITUS	TDC	
SD-X	150	6"ø			TITUS	TDC	
SD-X	65	6"ø			TITUS	TDC	
SD-X	500	6"ø			TITUS	TDC	
SD-X	500	6"ø			TITUS	TDC	
SD-X	25	6"ø			TITUS	TDC	
SD-X	500	12"ø			TITUS		
SD-X	500	12"ø			TITUS		
SD-X	500	12"ø			TITUS		
SD-X	80	6"ø			TITUS	TDC	
SD-X	80	6"ø			TITUS	TDC	
SD-X	500	6"ø			TITUS		
SD-X	195	6"ø			TITUS	TDC	
SD-X	165	6"ø			TITUS	TDC	
SD-X	260	6"ø			TITUS	TDC	
SD-X	195	6"ø			TITUS	TDC	
SD-X	265	6"ø			TITUS	TDC	
SD-X	195	6"ø			TITUS	TDC	
SD-X	275	12"ø			TITUS	TDC	
SD-X	275	12"ø			TITUS	TDC	
SD-X	275	12"ø			TITUS	TDC	
SD-X	275	12"ø			TITUS	TDC	
SD-X	275	12"ø			TITUS	TDC	
SD-X	105	12"ø			TITUS	TDC	
SD-X	105	12"ø			TITUS	TDC	
SD-X	275	12"ø			TITUS	TDC	
SD-X	275	12"ø			TITUS	TDC	
SD-X	275	12"ø			TITUS	TDC	
SD-X	105	12"ø			TITUS	TDC	

NOTES:
1. MAXIMUM PRESSURE DROP SHALL BE 0.1 IN. W.C. FOR SUPPLY AIR.
2. WHERE DIFFUSER IS TO BE INSTALLED IN A LAY-IN CEILING, IT SHALL HAVE PANELS TO FIT INTO A 24 x 24 MODULAR LAY-IN CEILING GRID.
3. COORDINATE BORDER TYPE WITH ARCHITECTURAL DRAWINGS OR EXISTING CONDITIONS.
4. PATTERN TO BE 4-WAY THROW UNLESS NOTED OTHERWISE.

AIR TERMINAL SCHEDULE - SUPPLY AIR LINEAR SLOT DIFFUSERS

MARK	AIRFLOW (CFM)	NECK SIZE (IN)	LENGTH (FEET)	NUMBER OF SLOTS	SLOT WIDTH (IN)	AIR PRESSURE DROP (IN W.G.)	NOISE CRITERIA (NC)	BASIS OF DESIGN		REMARKS
								MANUFACTURER	MODEL	
LS-	105		4	2				TITUS	ML	
LS-	105		4	2				TITUS	ML	
LS-	105		4	2				TITUS	ML	
LS-	105		4	2				TITUS	ML	
LS-	105		4	2				TITUS	ML	
LS-	105		4	2				TITUS	ML	
LS-	105		4	2				TITUS	ML	
LS-	105		4	2				TITUS	ML	
LS-	105		4	2				TITUS	ML	
LS-	105		4	2				TITUS	ML	
LS-	105		4	2				TITUS	ML	

WALL LOUVER SCHEDULE

MARK	SYSTEM	FLOWRATE (CFM)	WIDTH x HEIGHT	VELOCITY	MINIMUM FREE AREA (SQ FT)	REMARKS
WEL-1	EXHAUST	4340	76"x32"			
WIL-1	INTAKE	290	20"x16"			
WIL-2	INTAKE	350	18"x24"			
WIL-3	INTAKE	3700	72"x32"			

NOTES:
1. LOUVER SHALL HAVE A MAXIMUM VELOCITY OF 750 FEET PER MINUTE.
2. LOUVER SHALL HAVE A MAXIMUM VELOCITY OF 600 PEET PER MINUTE.

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CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland, license number 33790, expiration date 08-06-2023.

REVISED		APPROVED DATE	APPROVED DATE
DATE	BY		
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

DESIGN DEVELOPMENT | M7.3

ANNE ARUNDEL COUNTY | JUNE 2023

DEPARTMENT OF PUBLIC WORKS | 20232548

SCALE: AS NOTED
DRAWN BY: KAB
CHECKED BY: ADS
SHEET: OF XXX
PROJECT #: P570200
CONTRACT #: P570205

MECHANICAL SCHEDULES

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

ABBREVIATIONS:

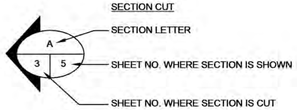
AFF	ABOVE FINISHED FLOOR
ATR	ALL-THREAD ROD
CL	CENTER LINE
CHR	CHROME
ELEV	ELEVATION
ETR	EXISTING TO REMAIN
EX	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FHV	FIRE HOSE VALVE
FF	FINISHED FLOOR
FM	FACTORY MUTUAL
GPM	GALLONS-PER-MINUTE
MAX	MAXIMUM
MIN	MINIMUM
NO	NUMBER
OS&Y	OUTSIDE SCREW & YOKE
PSI	POUNDS-PER-SQUARE INCH
PAC	PERMIT APPLICATION CENTER
QR	QUICK RESPONSE
RC	REDUCING COUPLING
RCP	REFLECTED CEILING PLAN
RN	RISER NIPPLE
RX	REMOVE EXISTING
SCH	SCHEDULE
SF	SQUARE FOOT
STD	STANDARD
TBD	TO BE DETERMINED
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
W/	WITH
WWP	WATER WORKING PRESSURE

FIRE PROTECTION LEGEND

SYMBOL	DESCRIPTION
	SPRINKLER MAIN/BRANCHLINE W/ CHANGE IN ELEVATION
	SPRINKLER MAIN/BRANCHLINE W/ RISE OR DROP PIPE
	PIPE HANGER
	NEW SPRINKLER MAIN/BRANCHLINE
	OS&Y VALVE
	CHECK VALVE; DIRECTION OF FLOW INDICATED
VS	VALVE TAMPER SUPERVISORY SWITCH
WF	WATERFLOW SWITCH
	PIPE CAP - FLUSHING CONNECTION
#	HYDRAULIC CALCULATION NODE
	HYDRAULIC CALCULATION REMOTE AREA BOUNDARY
WP F	ELECTRIC SPRINKLER ALARM BELL SUPERSCRIPT 'WP' DENOTES WEATHERPROOF DEVICE
	STORZ FIRE DEPARTMENT CONNECTION WITH CAP AND CHAIN
	INCOMING SERVICE/SPRINKLER RISER
+0-0	CEILING HEIGHT
[*0"*0]	BOTTOM OF ROOF SLAB OR DECK TO CENTERLINE OF PIPE
[+0'-0"*0]	FINISHED FLOOR TO CENTERLINE OF PIPE
	FIRE ALARM/SPRINKLER ZONE BOUNDARY
	PIPE SLEEVE

CONVENTIONS

SECTION CUT

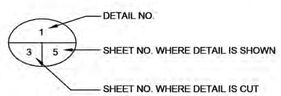


SECTION LETTER

SHEET NO. WHERE SECTION IS SHOWN

SHEET NO. WHERE SECTION IS CUT

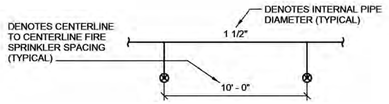
DETAIL CUT



DETAIL NO.

SHEET NO. WHERE DETAIL IS SHOWN

SHEET NO. WHERE DETAIL IS CUT



PIPE DIMENSION DETAIL

NO SCALE

NOTE:

1. ALL PIPE DIMENSIONS ARE FOR INFORMATIONAL PURPOSES ONLY. THE FIRE PROTECTION INSTALLER(S) SHALL VERIFY ALL DIMENSIONS WITH STANDARD FITTING TAKEOUT.

FIRE PROTECTION DESIGN CRITERIA:

1. ALL AUTOMATIC SPRINKLER SYSTEMS HAVE BEEN HYDRAULICALLY DESIGNED AS FOLLOWS:

   - LIGHT HAZARD AREAS HAVE BEEN HYDRAULICALLY DESIGNED BASED ON .10 GPM/SF OVER THE MOST REMOTE 900 SF (REDUCED AREA FOR Q.R. HEADS). AN ADDITIONAL 100 GPM HOSE STREAM ALLOWANCE TO BE PROVIDED AT THE NEAREST FIRE HYDRANT. MAXIMUM SPRINKLER HEAD SPACING SHALL BE 225 SF.

   LIGHT HAZARD AREAS SHALL INCLUDE:
   A. CORRIDORS
   B. OFFICES
   C. TOILET ROOMS
   D. VESTIBULES
   E. TRAINING ROOMS
   F. CONFERENCE ROOMS

   - ORDINARY HAZARD, GROUP I AREAS HAVE BEEN HYDRAULICALLY DESIGNED BASED ON .15 GPM/SF OVER THE MOST HYDRAULICALLY REMOTE 1500 SF. AN ADDITIONAL 250 GPM HOSE STREAM ALLOWANCE HAS BEEN PROVIDED AT THE NEAREST FIRE HYDRANT. MAXIMUM SPRINKLER HEAD SPACING SHALL BE 130 SF.

   ORDINARY HAZARD, GROUP I AREAS SHALL INCLUDE:
   A. STORAGE ROOMS
   B. MECHANICAL ROOMS
   C. ELECTRICAL ROOMS
   D. GOLF CART STORAGE
   E. KITCHEN
2. SPRINKLER HEADS IN FINISHED CEILING AREAS SHALL BE CONCEALED QUICK RESPONSE HEADS WITH A WHITE ESCUTCHEON/COLOR PLATE AND SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 13 AND CONTRACT SPECIFICATIONS UNO.
3. SPRINKLER HEADS IN UNFINISHED CEILING AREAS SHALL BE QUICK RESPONSE, FUSIBLE LINK, BRASS FINISH, UPRIGHT TYPE HEADS INSTALLED IN ACCORDANCE WITH NFPA 13 AND CONTRACT SPECIFICATIONS UNO.
4. GENERALLY PIPING SHALL BE CONCEALED ABOVE SUSPENDED CEILINGS IN FINISHED CEILING AREAS.
5. ALL FIRE SPRINKLER SYSTEM PIPING SHALL ADHERE TO THE FOLLOWING REQUIREMENTS:
   A. 2-INCH AND SMALLER - THREADED BLACK STEEL SCHEDULE 40
   B. 2-1/2-INCH AND LARGER - ROLL OR CUT GROOVED BLACK STEEL SCHEDULE 40 OR ROLL GROOVED BLACK STEEL SCHEDULE 10 PER ASTM A53 AND ASTM 135.
   C. BRANCHLINE OUTLETS AT MAIN PIPING SHALL BE SHOP-WELDED.
   D. MECHANICAL TEE OUTLETS SHALL NOT BE USED ON BRANCHLINES FROM THE BRANCHLINE OUTLET TO THE SPRINKLER HEAD(S).
   E. ALL PIPING SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 13.
6. ALL FITTINGS SHALL BE MINIMUM 175 WWP RATED.

FIRE SPRINKLER SYSTEM PRODUCT SPECIFICATIONS:

ITEM	MANUFACTURER	MODEL NO.
EASY RISER SWING CHECK VALVE	VIKING	E-1 & F-1
OS&Y VALVE	KENNEDY	KS-FW
CHECK VALVES	VIKING	M-2
PIPE - SCHEDULE 10 & 40	ALLIED TUBE	N/A
GROOVED FITTINGS	ANVIL STAR	ELBOW - FIGURE 7050S TEES - FIGURE 7060S
THREADED FITTINGS	ANVIL STAR	CLASS 125 CAST IRON
WELDED BRANCH FITTINGS	MERIT	TYPE A, C AND B
TEST AND DRAIN	AGF	MODEL 1000
TOP BEAM CLAMP	ANVIL STAR	FIGURE 92
WATERFLOW SWITCH/TAMPER SWITCH	POTTER	VSR 1
STORZ FIRE DEPARTMENT CONNECTION	GUARDIAN	6124
RING HANGER	ERICO	MODEL #100
AUTO AIR RELIEF VALVE	AGF	

FIRE PROTECTION GENERAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE A NEW AUTOMATIC SPRINKLER SYSTEM FOR THE NEW BUILDING AS INDICATED. THE AUTOMATIC SPRINKLER SYSTEM HAS BEEN DESIGNED AND SHALL BE INSTALLED IN FULL ACCORDANCE WITH THE REQUIREMENTS OF NFPA 13, NFPA 20, NFPA 25, NFPA 70, NFPA 72, NFPA 241, NFPA 291, LOCAL AUTHORITY REQUIREMENTS, AND THE CONTRACT DOCUMENTS.
2. THE GENERAL SCOPE OF THE AUTOMATIC FIRE PROTECTION SYSTEM SHALL CONSIST OF THE FOLLOWING FOR ALL AREAS OF THE PROJECT AS SHOWN:
   A. PROVIDE WET PIPE SPRINKLER SYSTEMS AS SHOWN.
   B. PROVIDE DRY PIPE SPRINKLER SYSTEM AS SHOWN.
   C. PROVIDE FIRE PUMP ASSEMBLY AND ASSOCIATED EQUIPMENT AS SHOWN
3. ALL FIRE SPRINKLER SYSTEM COMPONENTS AND HEAD LOCATIONS HAVE BEEN COORDINATED WITH PROPOSED ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL FEATURES, TO THE EXTENT POSSIBLE DURING DESIGN. THIS CONCEPTUAL DESIGN MAY REQUIRE ADDITIONAL COORDINATION AND MODIFICATIONS PRIOR TO INSTALLATION WITHOUT ADDITIONAL COST TO THE OWNER. COORDINATION WITH STRUCTURAL ELEMENTS AND OTHER TRADES IS THE RESPONSIBILITY OF THE FIRE PROTECTION INSTALLER(S). CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING THE DESIGN OF THE AUTOMATIC SPRINKLER SYSTEM PRIOR TO FABRICATION & INSTALLATION OF PIPE. INSTALLATION SHOP DRAWINGS, AND MANUFACTURER'S DATA SHEETS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE PURCHASE AND INSTALLATION. DEVIATIONS FROM CONSTRUCTION DOCUMENTS SHALL BE CLEARLY ANNOTATED AND SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL. FINAL DESIGN OF THE SYSTEMS SHALL BE COMPLETED BY THE FIRE PROTECTION INSTALLER(S) AND COORDINATED WITH FIELD CONDITIONS.
4. MAJOR PIPING LAYOUT AND SPRINKLER HEAD DEVIATIONS THAT ARE REQUESTED BY THE FIRE PROTECTION INSTALLER(S) SHALL REQUIRE THE FIRE PROTECTION INSTALLER(S) TO REVISE AND RESUBMIT THE SHOP DRAWINGS & HYDRAULIC CALCULATIONS TO THE ENGINEER OF RECORD AND AA CO PERMIT APPLICATION CENTER. THIS EFFORT SHALL BE COMPLETED AT NO ADDITIONAL COST TO THE OWNER.
5. THE FIRE PROTECTION INSTALLER(S) SHALL PROVIDE ALL NECESSARY PARTS AND ACCESSORIES EVEN THOUGH THE PARTS AND ACCESSORIES ARE NOT SPECIFICALLY MENTIONED OR SHOWN HEREIN.
6. THE SPRINKLER SYSTEM PIPING SHALL BE SUBJECTED TO A HYDROSTATIC PRESSURE TEST IN ACCORDANCE WITH NFPA 13.
7. PIPE HANGERS SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 13. ALL HANGER MATERIALS SHALL BE UL LISTED AND FM APPROVED. THE FIRE PROTECTION INSTALLERS SHALL ASSUME FOR BIDDING PURPOSES THAT 30% OF ALL HANGERS WILL NEED TO BE TRAPEZE OR NIPPLE & CAP STYLE ALTHOUGH NOT INDICATED ON THE SPRINKLER LAYOUT.
8. FLUSHING CONNECTIONS SHALL BE PROVIDED ON THE SPRINKLER SYSTEM PIPING PER NFPA 13 EVEN IF NOT SPECIFICALLY SHOWN HEREIN.
9. APPROVED IDENTIFICATION SIGNS FOR ALL SYSTEM COMPONENTS, INCLUDING PIPE, SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 13.
10. WHERE FIRE SPRINKLER PIPING PENETRATES A FIRE RESISTANCE RATED WALL OR FLOOR/CEILING ASSEMBLY, A RATED THRU PENETRATION FIRE STOP SHALL BE PROVIDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. WHERE ADDITIONAL DETAILING, ESCUTCHEON PLATES, ETC., ARE NEEDED, THEY WILL BE NOTED ON THE CONTRACT DRAWINGS.
11. WHERE FIRE SPRINKLER PIPING PENETRATES A NON FIRE RESISTANCE RATED WALL OR FLOOR/CEILING ASSEMBLY, TREATMENT OF THE THRU PENETRATION SHALL BE PROVIDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. WHERE ADDITIONAL DETAILING, ESCUTCHEON PLATES, ETC., ARE NEEDED, THEY WILL BE NOTED ON THE CONTRACT DRAWINGS.
12. THE FIRE PROTECTION INSTALLER(S) SHALL FIELD LOCATE THE NEED FOR 286°F & 212°F SPRINKLERS DUE TO UNIT HEATERS, DIFFUSERS, OTHER HEAT SOURCES. ALL COMBUSTIBLE CONCEALED SPACES SHALL BE PROVIDED WITH INTERMEDIATE TEMPERATURE RATED SPRINKLERS.
13. THE FIRE PROTECTION INSTALLER(S) SHALL FIELD LOCATE SPRINKLERS BELOW OBSTRUCTIONS SUCH AS DUCTWORK GREATER THAN 4 FT IN WIDTH.
14. THE FIRE PROTECTION INSTALLER(S) SHALL PROVIDE SPRINKLER HEAD GUARDS ON ALL PLATFORM, STORAGE ROOMS, MECHANICAL ROOM, ETC.
15. ALL ELECTRICAL WORK AND ALARM WIRING SHALL BE BY OTHERS.
16. THE FIRE PROTECTION INSTALLER(S) SHALL ASSUME ALL UPRIGHT SPRINKLERS ON EXPOSED PIPING AND CONCEALED PIPING ARE ON SPRIGS. PIPING SHALL BE COORDINATED AND MODIFIED FOR INSTALLATION WITHOUT ADDITIONAL COST TO THE OWNER.
17. THE FIRE PROTECTION INSTALLER(S) SHALL FIELD LOCATE THE NEED FOR AUXILIARY DRAINS AND CONNECTIONS TO SUITABLE INTERIOR DRAINS IN THE BUILDING OR HARD-PIPED TO THE EXTERIOR PER NFPA 13. PIPING TO INTERIOR DRAINS SHALL BE PRE-APPROVED BY THE ENGINEER OF RECORD.
18. ALL ARM-OVERS LESS THAN 2'-0" IN LENGTH TO BE 1 INCH PIPE UNO.
19. ALL SPRINKLER PIPING IN CONCEALED AREAS TO BE INSTALLED 6" TO 12" ABOVE FINISHED CEILING, UNO.
20. PROVIDE ESCUTCHEONS AT WALL PENETRATIONS ON EXPOSED PIPING.
21. PROVIDE AUTOMATIC AIR VENTS ON ALL SPRINKLER SYSTEMS. COORDINATE LOCATION PER MANUFACTURER RECOMMENDATIONS.
22. PROVIDE SPARE SPRINKLER HEAD CABINET WITH WRENCH AND A MINIMUM OF 12 SPARE SPRINKLER HEADS IN ACCORDANCE WITH NFPA 13.
23. VALVE POSITIONING IS PROVIDED FOR CLARIFICATION. THE FIRE PROTECTION INSTALLER SHALL COORDINATE THE POSITION OF THE OS&Y VALVES.

CODE REFERENCES:

ALL REFERENCES TO NFPA 13 SHALL MEAN THE 2016 EDITION.
ALL REFERENCES TO NFPA 20 SHALL MEAN THE 2016 EDITION.
ALL REFERENCES TO NFPA 25 SHALL MEAN THE 2016 EDITION.
ALL REFERENCES TO NFPA 70 SHALL MEAN THE 2017 EDITION.
ALL REFERENCES TO NFPA 72 SHALL MEAN THE 2016 EDITION.
ALL REFERENCES TO NFPA 101 SHALL MEAN THE 2018 EDITION.
ALL REFERENCES TO NFPA 241 SHALL MEAN THE 2015 EDITION.
ALL REFERENCES TO NFPA 291 SHALL MEAN THE 2015 EDITION.
ALL REFERENCES TO IBC SHALL MEAN THE 2018 EDITION.

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No.	Description		Date
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WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland, license number 40447, expiration date 02.14.2024.

ANNE ARUNDEL COUNTY | 06/30/23
DEPARTMENT OF PUBLIC WORKS | 202211.1

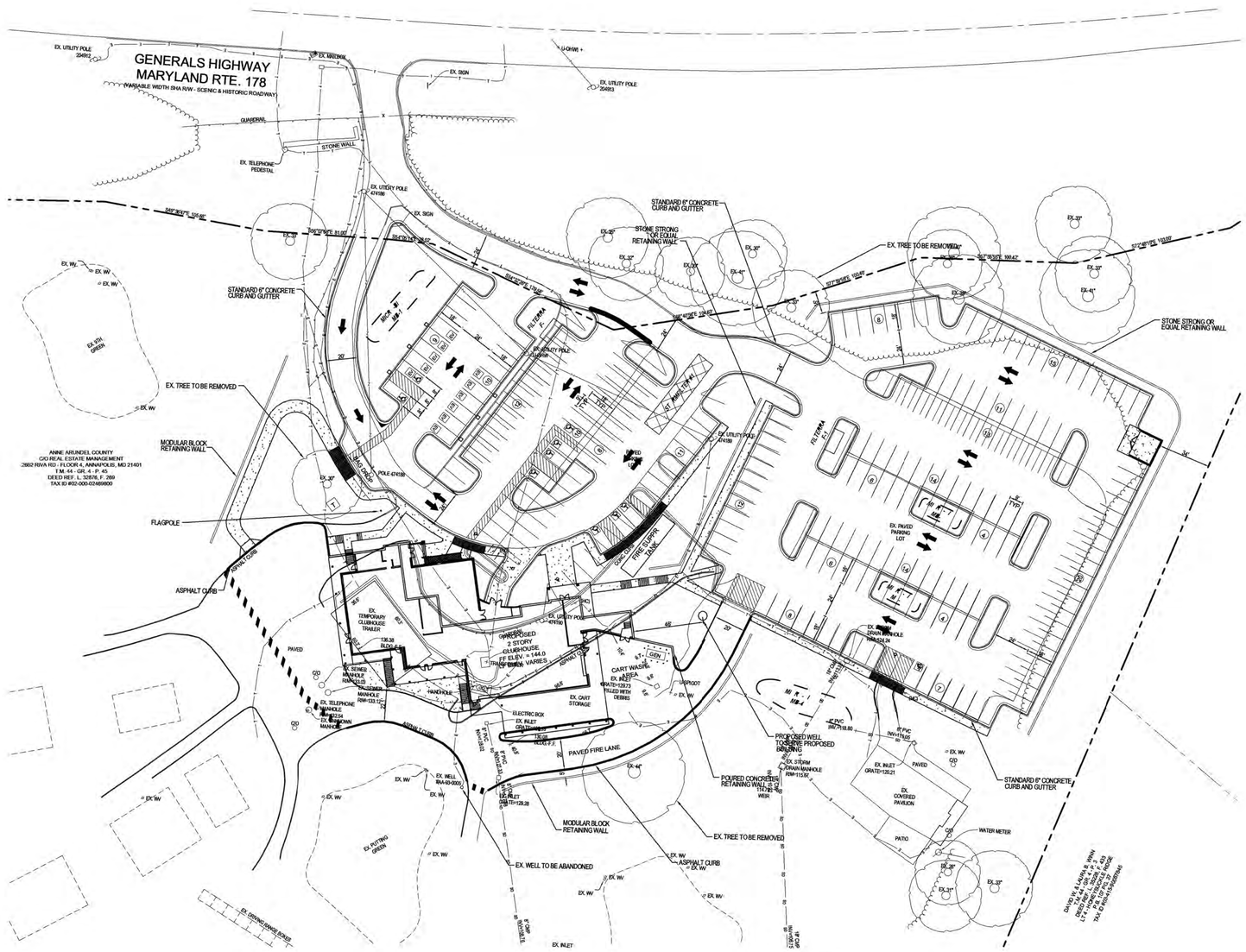
REVISED DATE	BY

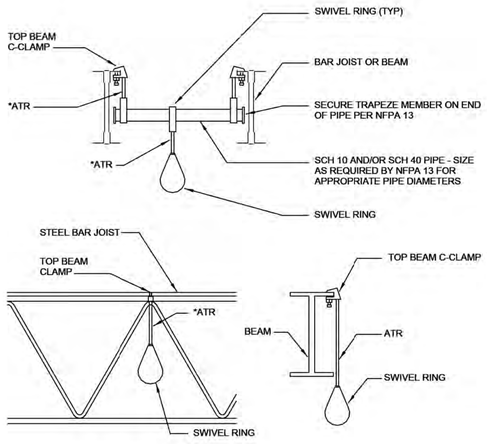
APPROVED DATE — CHIEF ENGINEER
APPROVED DATE — PROJECT MANAGER
APPROVED DATE — ASSISTANT CHIEF ENGINEER
APPROVED DATE — CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY: JCW
CHECKED BY: RWB
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

FIRE PROT. GENERAL NOTES, LEGEND, AND ABBREVIATIONS

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032


GENERALS HIGHWAY
MARYLAND RTE. 178
VARIABLE WIDTH SHA R/W - SCENIC & HISTORIC ROADWAY
EX. UTILITY POLE 354952
EX. MAILBOX
EX. SIGN
EX. UTILITY POLE 354953
U-GHWI +
GUARDRAIL
STONE WALL
EX. TELEPHONE PEDESTAL
EX. UTILITY POLE 474156
EX. SIGN
S45°30'00"E 104.92'
N45°30'00"W 81.00'
S45°30'00"E 24.00'
S45°30'00"E 130.00'
STANDARD 6" CONCRETE CURB AND GUTTER
STONE STRONG OR EQUAL RETAINING WALL
EX. TREE TO BE REMOVED
S37°30'00"E 100.00'
S37°30'00"E 100.00'
S37°30'00"E 100.00'
S45°30'00"E 104.92'
EX. WV
EX. WV
EX. WV



PIPE HANGER NOTES:

MAXIMUM DISTANCE OF HANGERS:

FOR ALL STEEL PIPE 1" - 1-1/4" = 12'-0" O/C
FOR ALL OTHER SIZES = 15'-0" O/C

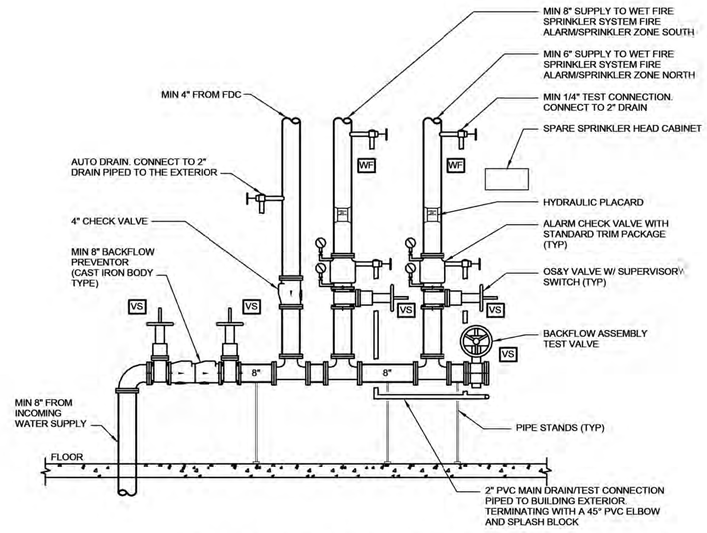
THE UNSUPPORTED LENGTH FROM THE LAST SPKL:

FOR 1" PIPE - NOT MORE THAN 36"
FOR 1-1/4" PIPE - NOT MORE THAN 48"
FOR 1-1/2" AND LARGER PIPE - NOT MORE THAN 60"

HANGER DETAILS

NO SCALE

NOTE:
* ATR SHALL BE 3/8" IN DIAMETER FOR 1" THRU 4" PIPE & 1/2" FOR 6" PIPE.



SPRINKLER RISER DETAIL

NO SCALE

NOTE:
1. SECURE PIPE STANDS TO FLOOR AND PIPE.
2. PROVIDE HYDRAULIC PLACARD.
3. PROVIDE 11" X 17" DIAGRAM INDICATING THE FIRE SPRINKLER SYSTEM ZONING. PROVIDE 11" X 17" METAL FRAME AND GLASS. MOUNT TO THE WALL AT THE RISERS.
4. CONNECT TO FIRE LINE 5'-0" OUTSIDE OF THE BUILDING.

FIRE PUMP SCHEDULE

PUMP	PUMP TYPE	DRIVER TYPE	DRIVER HP	DRIVER VOLTS	DRIVER PH	DRIVER RPM	RATED PUMP CAPACITY (GPM)	PRESSURE (PSI)
VERTICAL FIRE PUMP	VERTICAL	ELECTRIC	40	208	3	3600	500	70
JOCKEY PUMP	VERTICAL	ELECTRIC	3/4	208	3	3450	6.75	86

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DESIGN DEVELOPMENT | FP0.3

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ANNE ARUNDEL COUNTY | 06/30/23
DEPARTMENT OF PUBLIC WORKS | 202211.1

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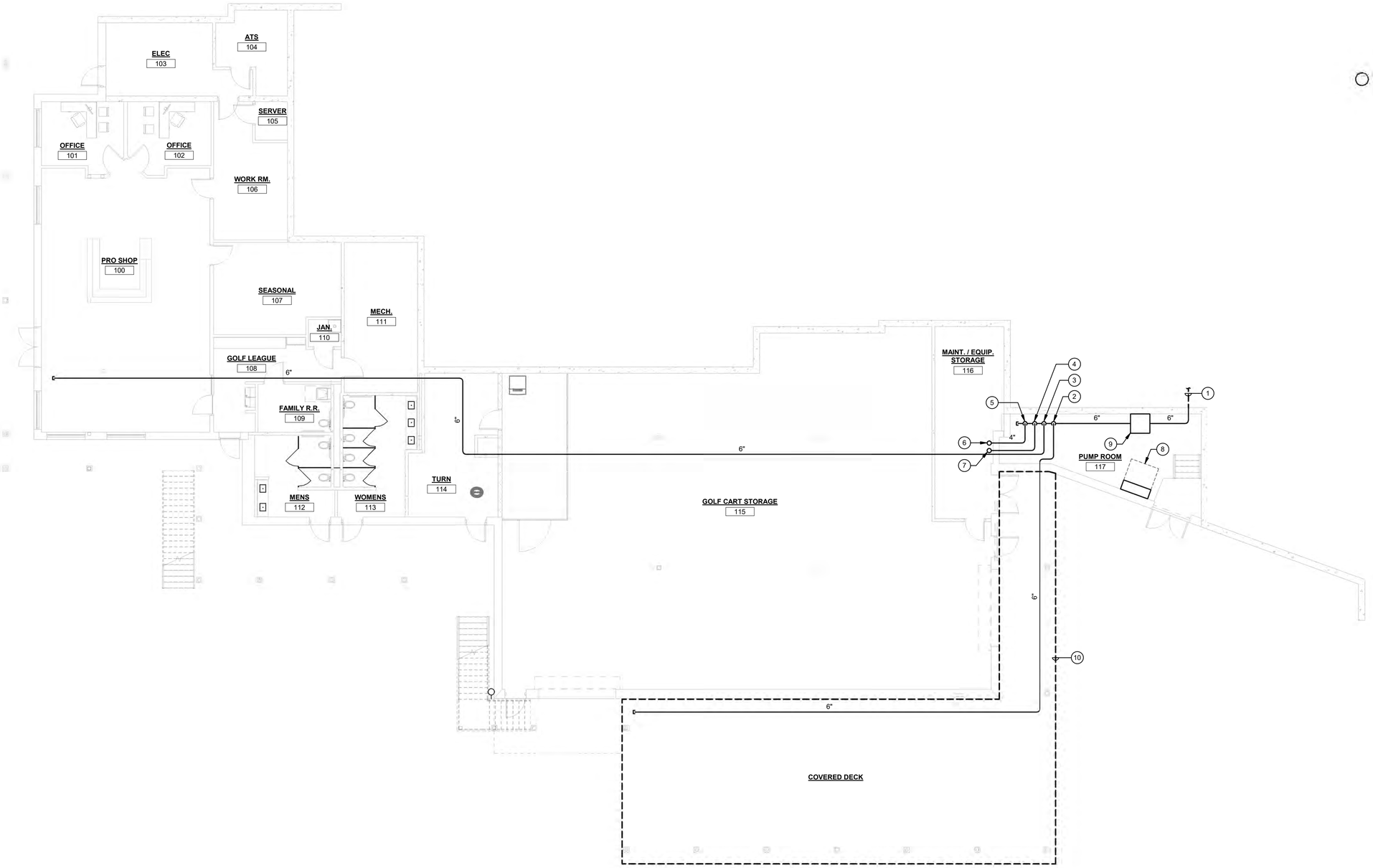
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY: JCW
CHECKED BY: RWB
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

FIRE PROTECTION DETAILS

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



GENERAL NOTES: (APPLY TO THIS SHEET ONLY)

1. FOR FIRE PROTECTION GENERAL NOTES, LEGEND, AND ABBREVIATIONS, SEE SHEET FP0.1.
2. FOR FIRE PROTECTION SITE PLAN, SEE SHEET FP0.2.
3. FOR FIRE PROTECTION DETAILS, SEE SHEET FP0.3.

DRAWING NOTES: (APPLY TO THIS SHEET ONLY)

1 INCOMING 6" FIRE PROTECTION WATER SERVICE FROM UNDERGROUND WATER STORAGE TANK.

2 LOWER LEVEL DRY PIPE SPRINKLER ZONE RISER.

3 LOWER LEVEL WET PIPE SPRINKLER ZONE RISER.

4 UPPER LEVEL WET PIPE SPRINKLER ZONE RISER.

5 FIRE DEPARTMENT CONNECTION INLET PIPING.

6 4" PIPE UP TO LEVEL ABOVE.

7 6" MAIN PIPING UP TO LEVEL ABOVE TO SERVE UPPER LEVEL WET PIPE SPRINKLER ZONE.

8 MAINTAIN MINIMUM 42" CLEARANCE IN FRONT OF ELECTRIC FIRE PUMP CONTROLLER.

9 ELECTRIC FIRE PUMP ASSEMBLY. REFER TO PUMP SCHEDULE FOR FURTHER INFORMATION.

10 PROVIDE DRY PIPE AUTOMATIC SPRINKLER PROTECTION BENEATH COVERED DECK.

LOWER LEVEL FLOOR PLAN - FIRE PROTECTION

SCALE: 1/8" = 1'-0"

CAUTION:
IF THIS PLAN IS A REDUCTION, GRAPHIC SCALES MUST BE USED.

GRAPHIC SCALE

0 4' 8' 16'

SCALE: 1/8" = 1'-0"

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DESIGN DEVELOPMENT | FP1.1

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ANNE ARUNDEL COUNTY | 06/30/23
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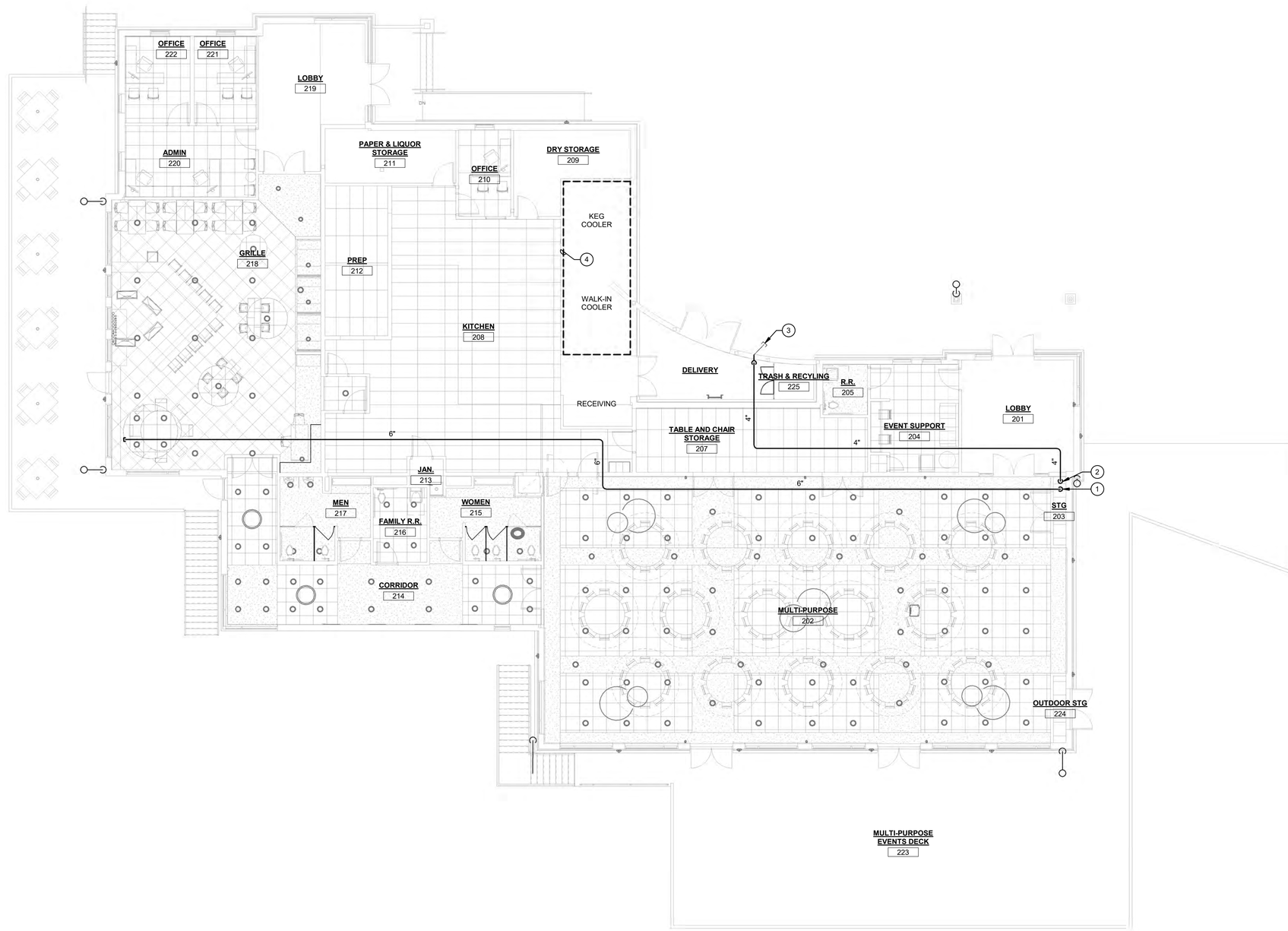
REVISED DATE	BY	APPROVED / DATE	APPROVED / DATE	
				SCALE: AS NOTED
				DRAWN BY: JCW
		CHIEF ENGINEER	PROJECT MANAGER	CHECKED BY: RWB
		APPROVED / DATE	APPROVED / DATE	SHEET: OF
				PROJECT #: P570200
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	CONTRACT #: P570205

LOWER LEVEL FLOOR PLAN - FIRE PROTECTION

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



UPPER LEVEL FLOOR PLAN - FIRE PROTECTION

SCALE: 1/8" = 1'-0"

GENERAL NOTES: (APPLY TO THIS SHEET ONLY)

1. FOR FIRE PROTECTION GENERAL NOTES, LEGEND, AND ABBREVIATIONS, SEE SHEET FP0.1.
2. FOR FIRE PROTECTION SITE PLAN, SEE SHEET FP0.2.
3. FOR FIRE PROTECTION DETAILS, SEE SHEET FP0.3.

DRAWING NOTES: (APPLY TO THIS SHEET ONLY)

1 6" MAIN PIPING UP FROM BELOW TO SERVE UPPER LEVEL WET PIPE SPRINKLER ZONE.

2 4" PIPE UP FROM BELOW.

3 5" STORZ FIRE DEPARTMENT CONNECTION. LOCATE 18"-36" ABOVE FINISHED GRADE. PROVIDE WALL PLATE WITH AUTO-BALL DRIP/SILCOCK CONNECTION. PROVIDE SIGN WITH FDC SYMBOL ABOVE FDC AND SHALL BE WHITE WITH RED LETTERING.

4 PROVIDE DRY-TYPE PENDANT SPRINKLERS WITHIN WALK-IN COOLER.

CAUTION:

IF THIS PLAN IS A REDUCTION, GRAPHIC SCALES MUST BE USED.

GRAPHIC SCALE

0 4' 8' 16'

SCALE: 1/8" = 1'-0"

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DESIGN DEVELOPMENT | FP1.2

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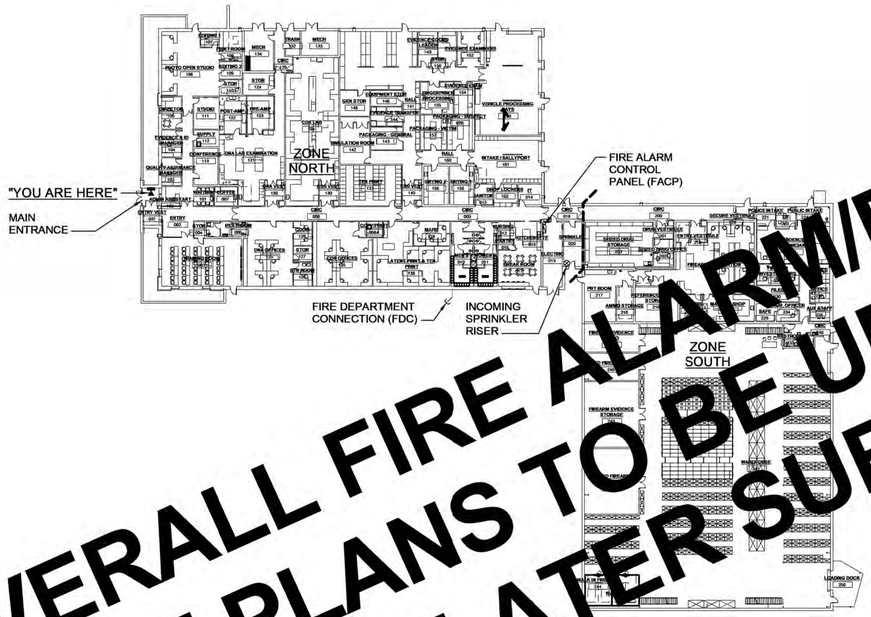
ANNE ARUNDEL COUNTY | 06/30/23

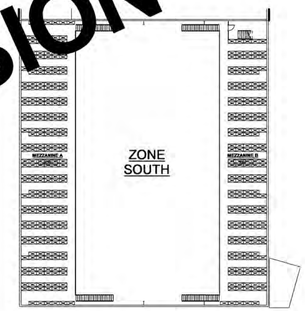
DEPARTMENT OF PUBLIC WORKS | 202211.1

REVISED DATE	BY	APPROVED DATE	APPROVED DATE	SCALE: AS NOTED	UPPER LEVEL FLOOR PLAN - FIRE PROTECTION
				DRAWN BY: JCW	
		CHIEF ENGINEER	PROJECT MANAGER	CHECKED BY: RWB	
		APPROVED DATE	APPROVED DATE	SHEET: OF	The Preserve at Eisenhower Clubhouse 1576 Generals Hwy Crownsville, MD 21032
				PROJECT #: P570200	
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	CONTRACT #: P570205	



OVERALL FIRE ALARM/FIRE PROTECTION ZONE PLAN - FIRST FLOOR

NO SCALE



OVERALL FIRE ALARM/FIRE PROTECTION ZONE PLAN - MEZZANINE

NO SCALE

OVERALL FIRE ALARM/FIRE PROTECTION ZONE PLANS TO BE UPDATED DURING A LATER SUBMISSION

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT | FP6.1

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ANNE ARUNDEL COUNTY — 06/30/23
DEPARTMENT OF PUBLIC WORKS — 202211.1

REVISED DATE	BY

APPROVED DATE — CHIEF ENGINEER
APPROVED DATE — PROJECT MANAGER
APPROVED DATE — ASSISTANT CHIEF ENGINEER
APPROVED DATE — CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY: JCW
CHECKED BY: RWB
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

OVERALL FIRE PROT. ZONE PLANS AND ELEVATION VIEW

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032

GENERAL NOTES
(APPLY TO WORK PROVIDED UNDER DIV. 20):

1. PROVIDE LABOR, EQUIPMENT AND MATERIALS NECESSARY FOR THE INSTALLATION OF THE COMPLETE PLUMBING SYSTEMS AS SPECIFIED HEREIN AND INDICATED IN THE CONTRACT DOCUMENTS. OUTLINE DESCRIPTION AND DIAGRAMMATIC REPRESENTATION OF SYSTEM OPERATION AND EQUIPMENT DOES NOT LIMIT CONTRACTOR LIABILITY FOR FURNISHING AND INSTALLING COMPLETE AND OPERABLE SYSTEMS.
2. THE INSTALLATION SHALL COMPLY WITH THE LATEST EDITION OF THE CODE OF THE LOCAL AUTHORITY HAVING JURISDICTION.
3. "DRAWING NOTES" APPLY TO THE ENTIRE DRAWING ON WHICH THEY APPEAR, WHERE RELEVANT. "SPECIFIC NOTES" APPLY ONLY WHERE INDICATED WITH THE "SPECIFIC NOTE" SYMBOL. REFER TO LEGEND.
4. PROVIDE REQUIRED CLEARANCE FOR MAINTENANCE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS OR AS REQUIRED BY CODE FOR MECHANICAL AND PLUMBING EQUIPMENT.
5. INCLUDE IN THE BID PRICE THE PAYMENT OF NECESSARY PERMITS. FURNISH THE OWNER PRIOR TO THE FINAL PAYMENT A CERTIFICATE FROM THE INSPECTION DEPARTMENT HAVING JURISDICTION CERTIFYING THAT THE WORK MEETS THE REQUIREMENTS OF THE LOCAL INSPECTION AUTHORITIES AND/OR THE NATIONAL BOARD OF FIRE UNDERWRITERS.
6. COORDINATE WITH THE OWNER FOR SCHEDULING OF WORK.
7. WORK SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER.
8. KEEP THE WORK SITE AND SURROUNDING AREA FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH GENERATED BY WORK FROM THIS CONTRACT. PROPERLY AND LEGALLY DISPOSE OF MATERIALS.
9. JOB SITE SAFETY SHALL BE IN STRICT ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
10. VISIT THE SITE AND CAREFULLY EXAMINE EXISTING CONDITIONS THAT MAY AFFECT THE BID.
11. DO NOT DISCONTINUE ANY PLUMBING SYSTEM SERVICE WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE USER AGENCY. THE PLUMBING SYSTEM OUTAGES SHALL BE KEPT TO A MINIMUM.
12. PROVIDE SUBMITTALS (SHOP DRAWINGS) FOR REVIEW FOR NEW MATERIALS AND EQUIPMENT, PRIOR TO SUBMITTING, REVIEW SUBMITTALS FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS, CONFLICTS WITH OTHER TRADES, AND CONSTRUCTABILITY. IDENTIFY ANY DEVIATIONS IN SUBMITTALS FROM CONTRACT DOCUMENTS. ENGINEER'S REVIEW OF SUBMITTALS DOES NOT INCLUDE REVIEW OF DIMENSIONS, DETAILS, OR QUANTITIES. REVIEW DOES NOT WAIVE ANY REQUIREMENTS OF CONTRACT DOCUMENTS, INCLUDING REQUIREMENT TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM.
13. WHEN MOUNTING PLUMBING WORK IN AREAS SUBJECT TO PEDESTRIAN TRAFFIC, MAINTAIN REQUIRED HEADROOM CLEARANCES.
14. PLUMBING MATERIALS AND EQUIPMENT SHALL BE INSTALLED AS TO MAINTAIN THEIR RESPECTIVE UL RATING AND SHALL CONFORM TO FACTORY MUTUAL STANDARDS AS APPLICABLE.
15. PLUMBING WORK SHALL BE CONCEALED IN FINISHED AREAS SHOWN ON THE ARCHITECTURAL DRAWINGS UNLESS NOTED OTHERWISE.
16. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT FIXTURE LOCATIONS AND THE ELECTRICAL DRAWINGS FOR EXACT ELECTRICAL EQUIPMENT LOCATIONS. LOCATIONS PLUMBING EQUIPMENT AND PIPING ARE SHOWN DIAGRAMMATICALLY. DETERMINE EXACT LOCATIONS IN THE FIELD.
17. SEALING FITTINGS AND APPROVED SEALING COMPOUND SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE CODE. SEAL AROUND PENETRATIONS OF FIRE-RATED WALLS WITH AN APPROVED SEALANT.
18. SANITARY AND DRAINAGE PIPING SHALL RUN AT 2% SLOPE MINIMUM TO ACCOMODATE LOW-FLOW FIXTURES, UNLESS NOTED OTHERWISE.
19. LOCATIONS OF DRAINS AND CONNECTIONS TO FIXTURES AND EQUIPMENT SHALL BE COORDINATED WITH FLOOR PLANS, EQUIPMENT CUTS AND MECHANCIAL/ELECTRICAL/STRUCTURAL PLANS. NO WORK SHALL BE INSTALLED UNTIL LOCATIONS HAVE BEEN VERIFIED.
20. PLUMBING FIXTURES SHALL BE CAULKED TO THE ADJOINING FLOOR OR WALL SURFACE.
21. PROVIDE CLEANOUTS IN SANITARY AND DRAIN LINES EVERY 50 FEET UNLESS INDICATED AT CLOSER INTERVALS ON THE DRAWINGS AND AT CHANGES OF DIRECTION.
22. THE PLUMBING FIXTURE SCHEDULE AND SPECIFICATIONS SUPERCEDE THE SYMBOLS INDICATED ON THE FLOOR PLANS.
23. PIPE DROPS IN EXTERIOR WALLS SHALL BE INBOARD OF INSULATION.
24. NORTH ARROWS ON THESE DRAWINGS INDICATE TRUE NORTH.
25. WHERE LOCATED ABOVE GYPSUM WHITE BOARD CEILINGS, GROUP VAVLES AND OTHER COMPONENTS REQUIRING ACCESS TOGETHER AS FAR AS IS PRACTICABLE TO REDUCE THE REQUIRED QUANTITY OF ACCESS PANELS. ACCESS PANELS ARE SPECIFIED UNDER SECTION 08 31 13 ACCESS DOORS AND FRAMES, AND SHALL BE FURNISHED AND INSTALLED UNDER THE SAME DIVISION.

PLUMBING L LEGEND

SYMBOL	ABBREV	DESCRIPTION
	GL	GREASE DISCHARGE LINE
	SP,SAN	SANITARY PIPE
SW	SW	STORM WATER
D	D	DRAIN
C.O. C.O.	C.O.	CLEANOUT
	VP	VENT PIPE
	CW	COLD WATER
	HW	HOT WATER
	HWR	HOT WATER RETURN
T	T	TEMPERED WATER
		FLOW METER FITTING
		BACKFLOWPREVENTER REDUCED PRESSURE ZONE
TP	TP	TRAP PRIMER
		RELIEFVALVE
MAV	MAV	MANUAL AIR VALVE
AAV	AAV	AUTOMATIC AIR VALVE
		STRAINERW/VALVE
		UNION
SA	SA	SHOCK ABSORBER
FS		FLOW SWITCH
T		THERMOMETER
		THERMOMETER WELL
P		PRESSURE GAUGE W/ SYPHON & NEEDLE VALVE
P		PRESSURE GAUGE W/NEEDLE VALVE
	PG	PRESSURE GAUGE TAPPING
		PIPE GUIDE
		ANCHOR
		FLEXIBLE PIPE CONNECTION
	OS&Y	OS&Y VALVE W/ TAMPER SWITCH
		SHUTOFF VALVE
		CHECK VALVE
BWV	BWV	BACK WATER VALVE
	PRV	PRESSURE REDUCING VALVE
		PIPE TURNING UP
		PIPE TURNING DOWN
		TEE TURNING UP
		TEE TURNING DOWN
WH WH	WH	WALL HYDRANT

SYMBOL	ABBREV	DESCRIPTION
AD	AD	AREA DRAIN
FD	FD	FLOOR DRAIN WITH TRAP PRIMER
RD	RD	ROOF DRAIN
FS	FS	FLOORSINK
		MATCH LINE
1 / 1		SECTION DESIGNATION
1 / 1		
		CONNECT TO EXISTING
		DEMO TO THIS POINT

ABBREV	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
BTU	BRITISH THERMAL UNIT
BFF	BELOW FINISHED FLOOR
BOP	BOTTOM OF PIPE
CB	CATCH BASIN
CFH	CUBIC FEET HOUR
CFM	CUBIC FEET MINUTE
DIFF	DIFFUSER
DMVS	DIGITAL MIXING VALVE STATION
EX	EXISTING
EXTR	EXISTING TO REMAIN
(FLOOR PLAN - M-1)	FOR CONTINUATION SEE FLOOR PLAN ON DRAWING M-1
GPM	GALLONS PER MINUTE
KW	KILOWATTS
MBH	THOUSAND BTU/HR
OSD	OPEN SITE DRAIN
RX	REMOVE EXISTING
V-PH	VOLT-PHASE
VTR	VENT THROUGH ROOF

DRAWING LIST - PLUMBING	
SHEET NUMBER	**SHEET NAME**
P0.1	SYMBOLS, NOTES AND ABBREVIATIONS
P1.1	PLUMBING - SANITARY - FOUNDATION PLAN
P1.2	PLUMBING - SANITARY - PRO SHOP LEVEL
P1.3	PLUMBING- SANITARY - MAIN LEVEL
P1.4	PLUMBING - STORM WATER AND VENT - ROOF LEVEL
P2.1	PLUMBING - DOMESTIC WATER AND VENT - PRO SHOP LEVEL
P2.2	PLUMBING - DOMESTIC WATER AND VENT - MAIN LEVEL
P4.1	PARTIAL FLOOR PLANS
P5.1	PLUMBING DETAILS
P5.2	PLUMBING DETAILS
P7.1	PLUMBING SCHEDULES

NOT FOR CONSTRUCTION

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165 LOG CANOE CIRCLE - SUITE B1
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410.263.6787 www.wgm-arch.com

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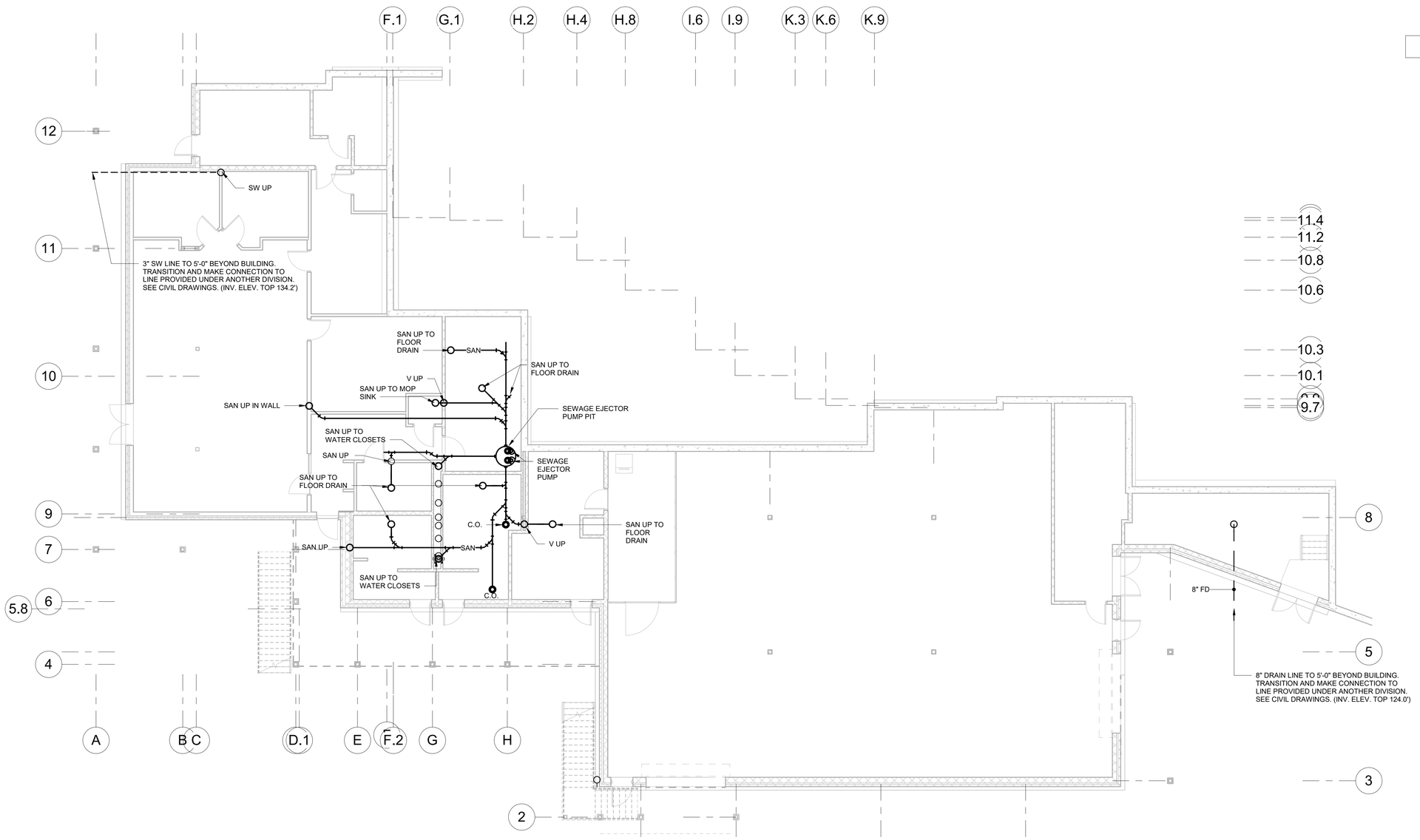
ANNE ARUNDEL COUNTY			JUNE 2023
DEPARTMENT OF PUBLIC WORKS			20232548
REVISED DATE / BY	APPROVED DATE / CHIEF ENGINEER	APPROVED DATE / PROJECT MANAGER	SCALE: AS NOTED
			DRAWN BY: KAB
	APPROVED DATE / ASSISTANT CHIEF ENGINEER	APPROVED DATE / CHIEF, RIGHT OF WAY	CHECKED BY: ADS
			SHEET: OF XXX
			PROJECT #: P570200
			CONTRACT #: P570205

DESIGN DEVELOPMENT | P0.1

SYMBOLS, NOTES AND ABBREVIATIONS

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

SPECIFIC NOTES - PLUMBING NEW



1 PLUMBING - SANITARY - FOUNDATION
1/8" = 1'-0"

N

GRAPHIC SCALE 1/8" = 1'-0"
0 8 16 24 32

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DESIGN DEVELOPMENT | P1.1

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ANNE ARUNDEL COUNTY — JUNE 2023
DEPARTMENT OF PUBLIC WORKS — 20232548

REVISED DATE	BY

APPROVED DATE — CHIEF ENGINEER
APPROVED DATE — PROJECT MANAGER
APPROVED DATE — ASSISTANT CHIEF ENGINEER
APPROVED DATE — CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY: KAB
CHECKED BY: ADS
SHEET: OF XXX
PROJECT #: P570200
CONTRACT #: P570205

PLUMBING - SANITARY - FOUNDATION PLAN

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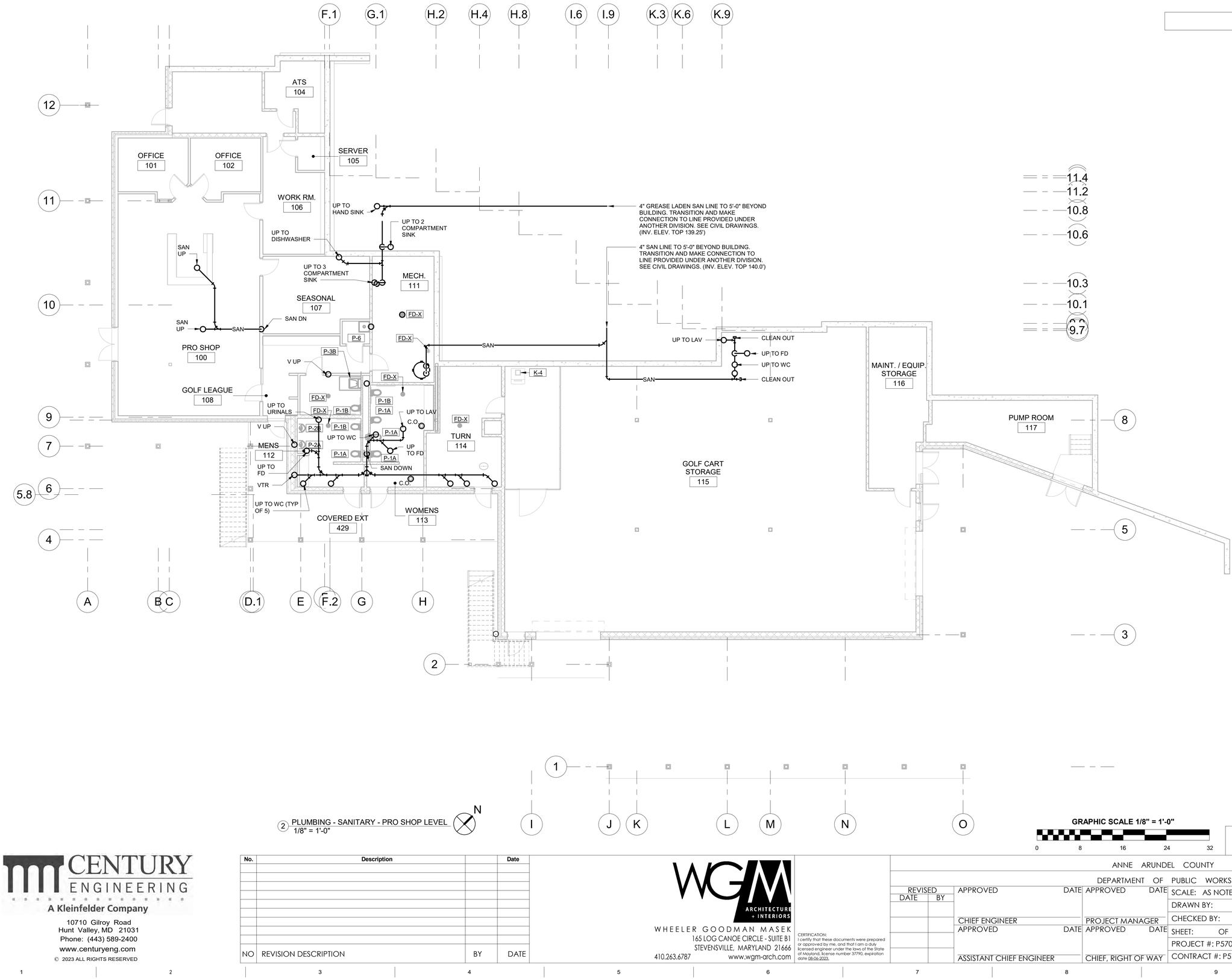
1576 Generals Highway,
Crownsville, Maryland 21032

SPECIFIC NOTES - PLUMBING NEW



② PLUMBING - SANITARY - PRO SHOP LEVEL
1/8" = 1'-0"

N

GRAPHIC SCALE 1/8" = 1'-0"
0 8 16 24 32

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DESIGN DEVELOPMENT	P1.2

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DEPARTMENT OF PUBLIC WORKS

REVISED DATE	BY

APPROVED DATE		APPROVED DATE	
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED DATE		APPROVED DATE	
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT OF WAY	

SCALE: AS NOTED	
DRAWN BY: KAB	
CHECKED BY: ADS	
SHEET: OF XXX	
PROJECT #: P570200	
CONTRACT #: P570205	

JUNE 2023
20232548

PLUMBING - SANITARY - PRO SHOP LEVEL

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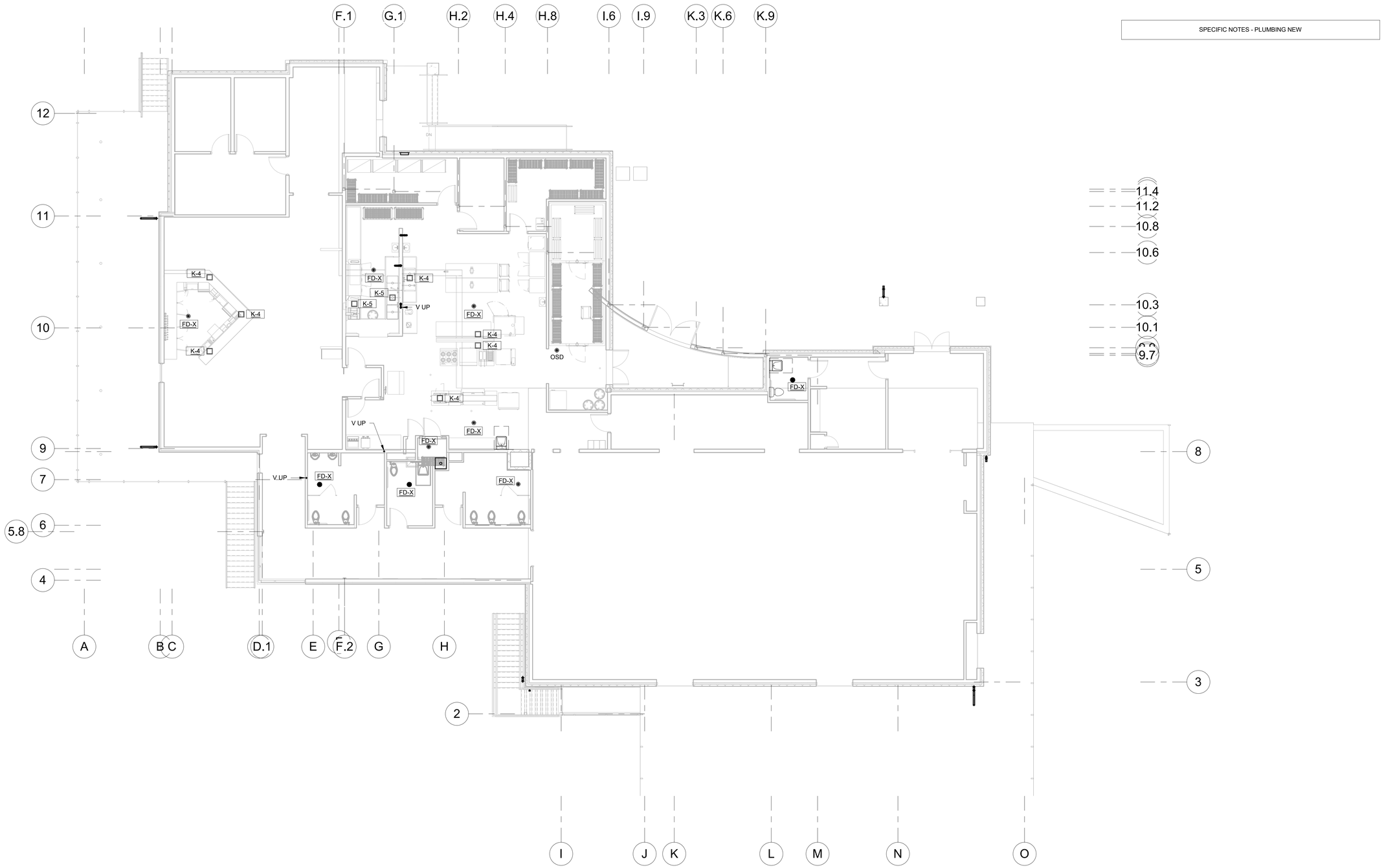
SPECIFIC NOTES - PLUMBING NEW



1 PLUMBING - SANITARY - MAIN LEVEL
1/8" = 1'-0"

N

GRAPHIC SCALE 1/8" = 1'-0"
0 8 16 24 32

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DESIGN DEVELOPMENT	P1.3
ANNE ARUNDEL COUNTY	JUNE 2023
DEPARTMENT OF PUBLIC WORKS	20232548

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REVISED DATE	BY

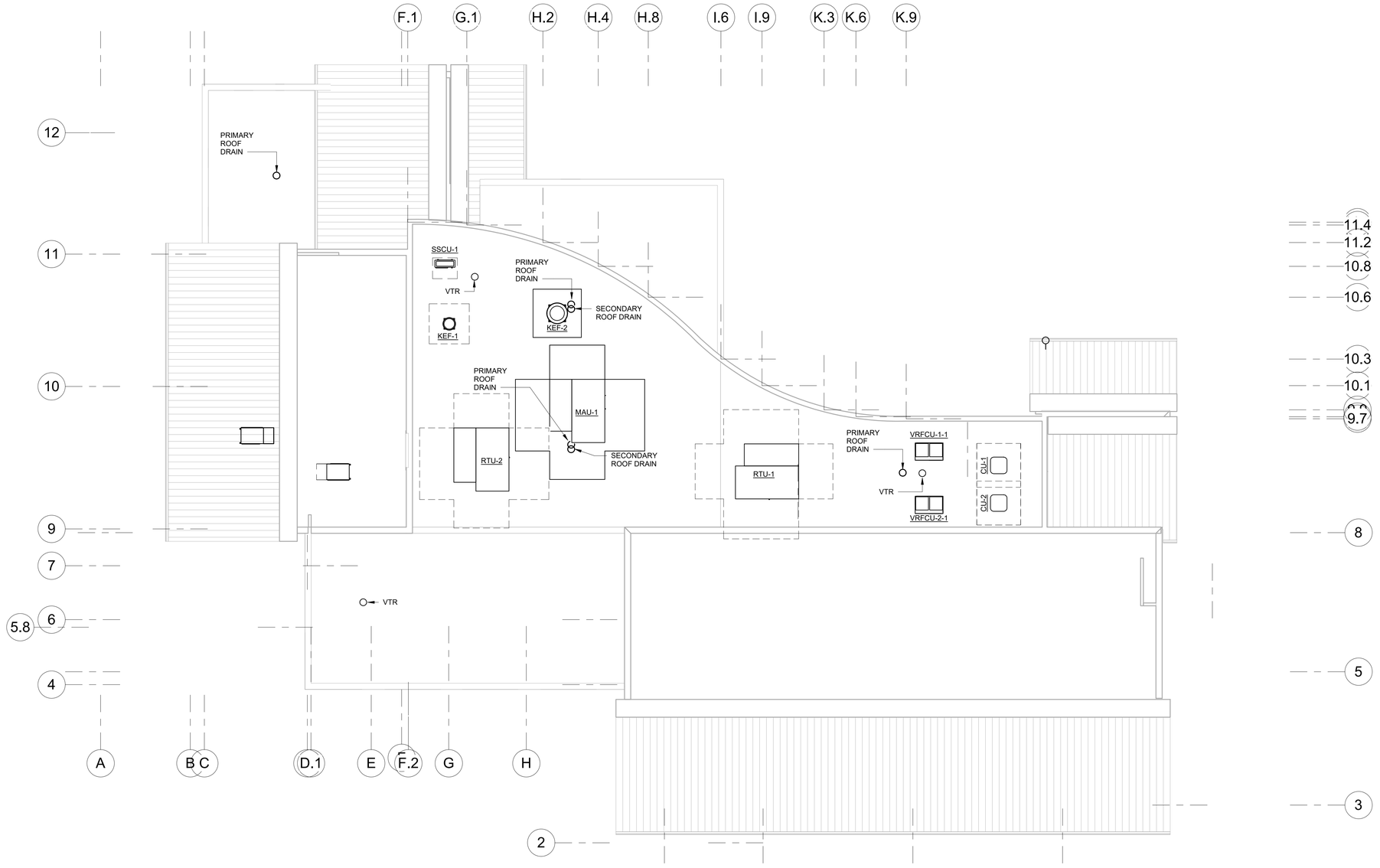
APPROVED DATE
CHIEF ENGINEER
APPROVED DATE
ASSISTANT CHIEF ENGINEER
APPROVED DATE
PROJECT MANAGER
APPROVED DATE
CHIEF, RIGHT OF WAY

SCALE:	AS NOTED
DRAWN BY:	KAB
CHECKED BY:	ADS
SHEET:	OF XXX
PROJECT #:	P570200
CONTRACT #:	P570205

PLUMBING- SANITARY - MAIN LEVEL

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

SPECIFIC NOTES - PLUMBING NEW



1 PLUMBING - STORM WATER AND VENT - ROOF LEVEL
NO SCALE

GRAPHIC SCALE 1/8" = 1'-0"
0 8 16 24 32

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DESIGN DEVELOPMENT	P1.4

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ANNE ARUNDEL COUNTY — JUNE 2023
DEPARTMENT OF PUBLIC WORKS — 20232548

REVISED DATE	BY	APPROVED / DATE	APPROVED / DATE	
		CHIEF ENGINEER	PROJECT MANAGER	SCALE: AS NOTED
		APPROVED / DATE	APPROVED / DATE	DRAWN BY: KAB
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	CHECKED BY: ADS
				SHEET: OF XXX
				PROJECT #: P570200
				CONTRACT #: P570205

PLUMBING - STORM WATER AND VENT - ROOF LEVEL

The Preserve at Eisenhower Clubhouse
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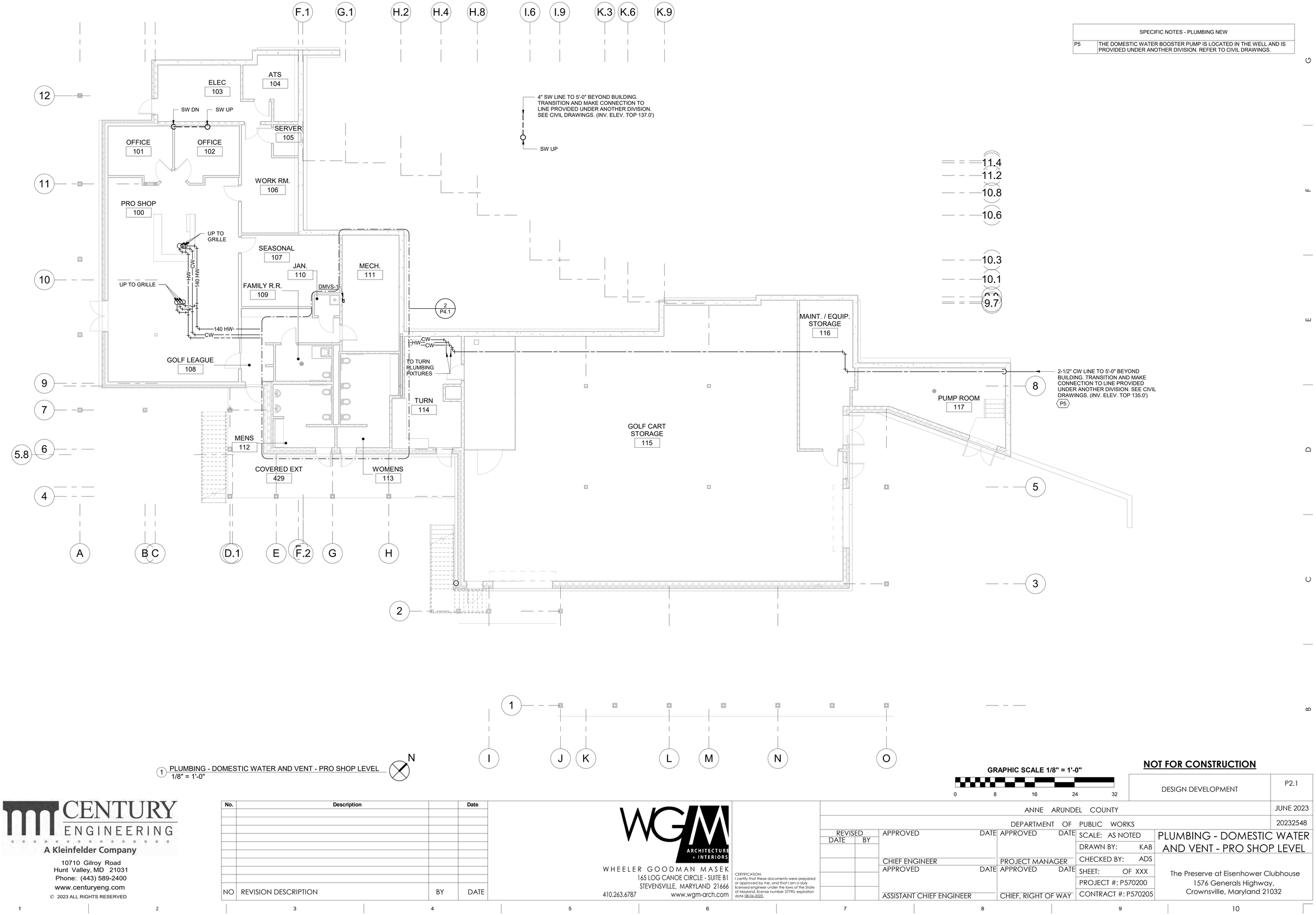
SPECIFIC NOTES - PLUMBING NEW	
P5	THE DOMESTIC WATER BOOSTER PUMP IS LOCATED IN THE WELL AND IS PROVIDED UNDER ANOTHER DIVISION. REFER TO CIVIL DRAWINGS.



1 PLUMBING - DOMESTIC WATER AND VENT - PRO SHOP LEVEL
1/8" = 1'-0"

N

GRAPHIC SCALE 1/8" = 1'-0"
0 8 16 24 32

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DESIGN DEVELOPMENT	P2.1

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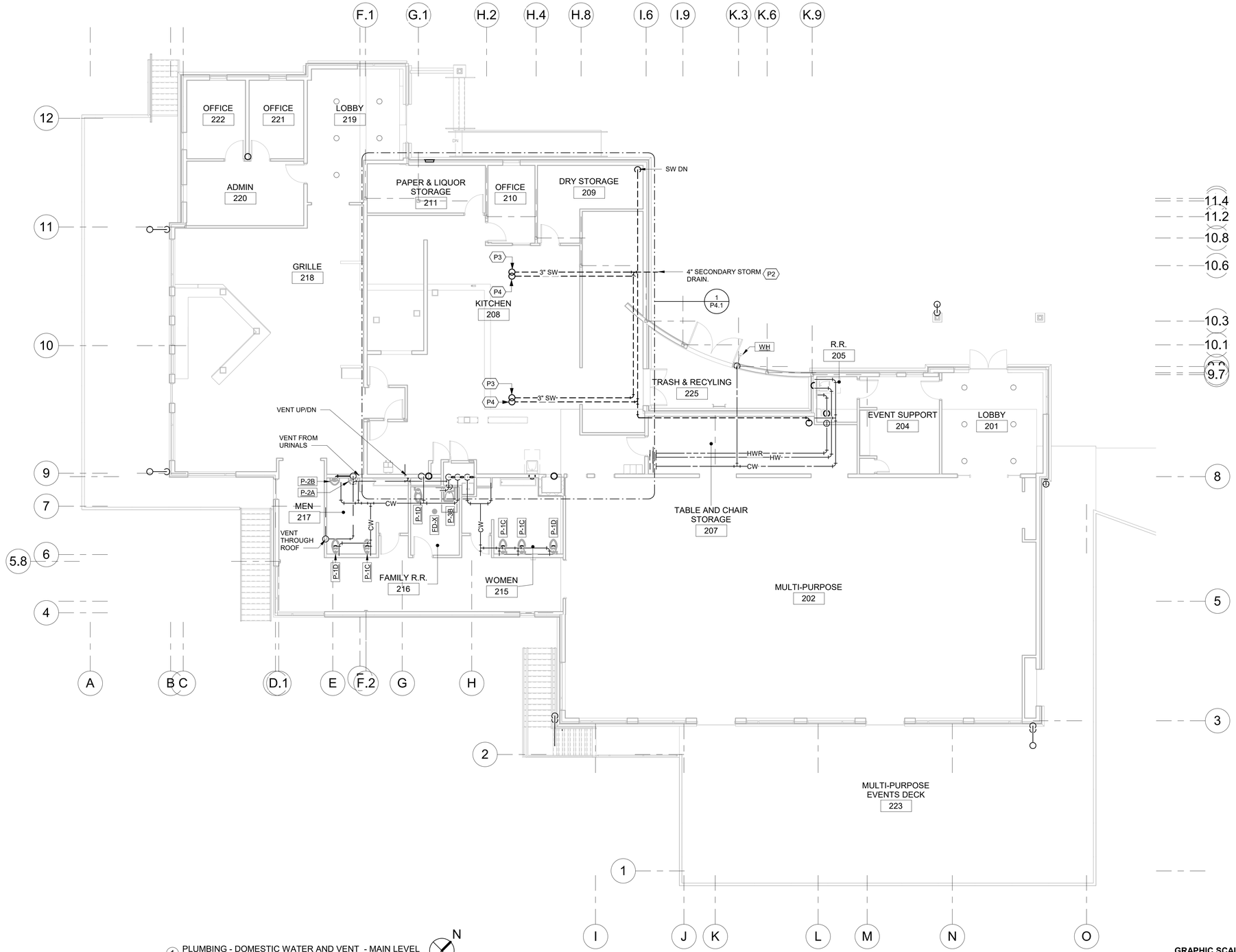
REVISED DATE	BY

ANNE ARUNDEL COUNTY			JUNE 2023
DEPARTMENT OF PUBLIC WORKS			20232548
APPROVED DATE	APPROVED DATE	SCALE: AS NOTED	PLUMBING - DOMESTIC WATER AND VENT - PRO SHOP LEVEL
		DRAWN BY: KAB	
CHIEF ENGINEER	PROJECT MANAGER	CHECKED BY: ADS	
APPROVED DATE	APPROVED DATE	SHEET: OF XXX	
		PROJECT #: P570200	The Preserve at Eisenhower Clubhouse 1576 Generals Highway, Crownsville, Maryland 21032
ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	CONTRACT #: P570205	

SPECIFIC NOTES - PLUMBING NEW	
P2	TERMINATE SECONDARY STORM DRAIN AT WALL WITH ARCHITECTURAL COW TONGUE.
P3	STORM WATER UP TO PRIMARY ROOF DRAIN.
P4	STORM WATER UP TO SECONDARY ROOF DRAIN.



1 PLUMBING - DOMESTIC WATER AND VENT - MAIN LEVEL
1/8" = 1'-0"

N

GRAPHIC SCALE 1/8" = 1'-0"
0 8 16 24 32

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DESIGN DEVELOPMENT	P2.2

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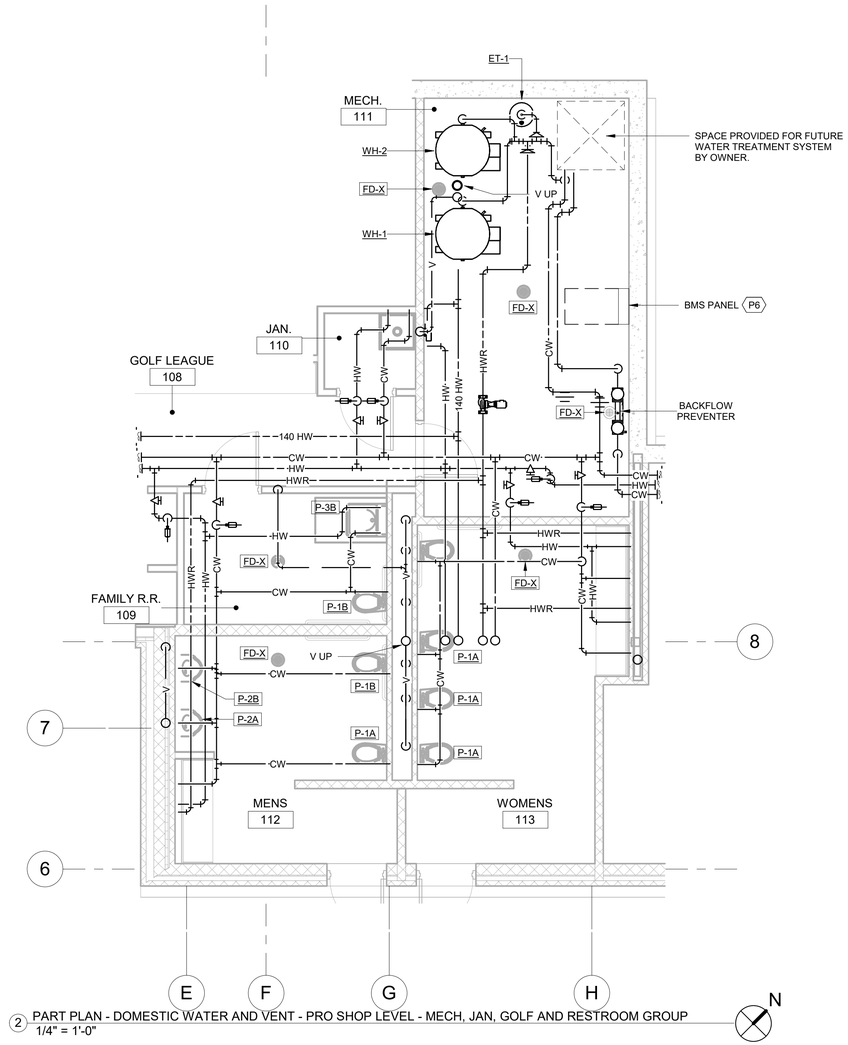
REVISED DATE	BY

APPROVED DATE _____ CHIEF ENGINEER
APPROVED DATE _____ PROJECT MANAGER
APPROVED DATE _____ ASSISTANT CHIEF ENGINEER
APPROVED DATE _____ CHIEF, RIGHT OF WAY

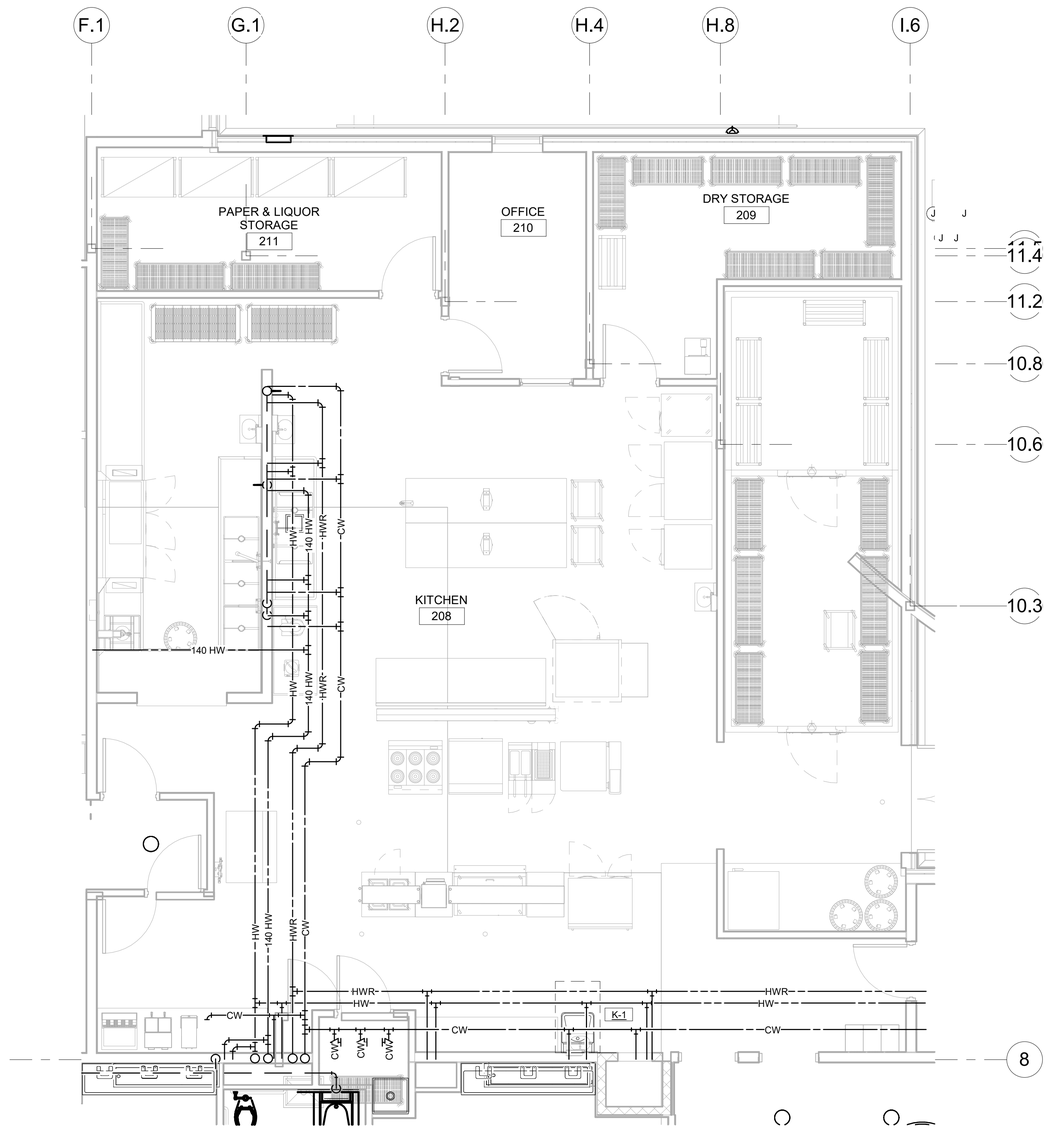
ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

	JUNE 2023
	20232548
SCALE: AS NOTED	PLUMBING - DOMESTIC WATER AND VENT - MAIN LEVEL
DRAWN BY: KAB	
CHECKED BY: ADS	
SHEET: OF XXX	The Preserve at Eisenhower Clubhouse 1576 Generals Highway, Crownsville, Maryland 21032
PROJECT #: P570200	
CONTRACT #: P570205	

SPECIFIC NOTES - PLUMBING NEW	
P6	ROUTE ALL OVERHEAD PIPING SO AS TO NOT RUN OVER THE BMS PANEL OR THE INDICATED CLEARANCE AREA.



2 PART PLAN - DOMESTIC WATER AND VENT - PRO SHOP LEVEL - MECH, JAN, GOLF AND RESTROOM GROUP
1/4" = 1'-0"



1 PART PLAN - DOMESTIC WATER AND VENT - MAIN LEVEL - KITCHEN
1/4" = 1'-0"

GRAPHIC SCALE 1/4" = 1'-0"

0 4 8 12 16

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DESIGN DEVELOPMENT	P4.1

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REVISED DATE	BY

APPROVED DATE
CHIEF ENGINEER

APPROVED DATE
ASSISTANT CHIEF ENGINEER

APPROVED DATE
PROJECT MANAGER

APPROVED DATE
CHIEF, RIGHT OF WAY

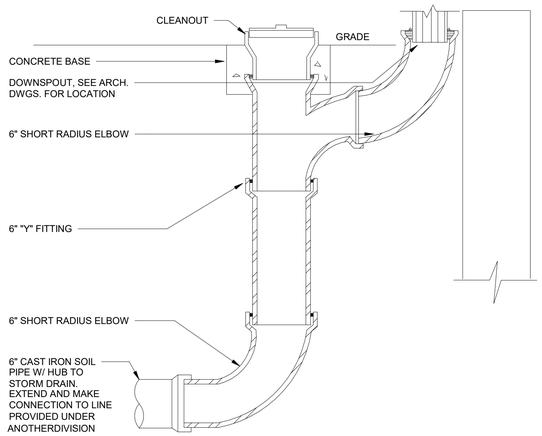
ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

JUNE 2023
20232548

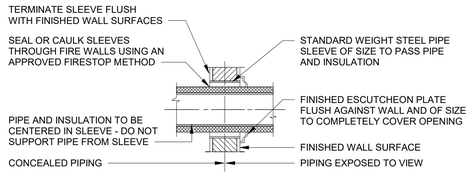
SCALE: AS NOTED
DRAWN BY: KAB
CHECKED BY: ADS
SHEET: OF XXX
PROJECT #: P570200
CONTRACT #: P570205

PARTIAL FLOOR PLANS

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

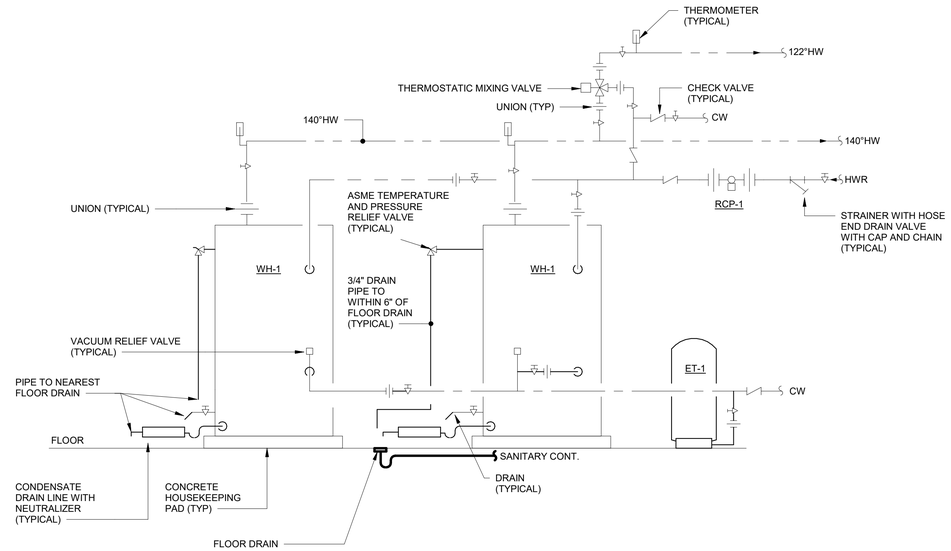


1 METAL RAIN LEADER BOOT AT GRADE
NO SCALE

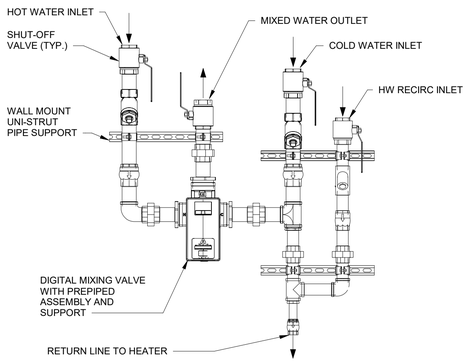


NOTES:
1. REFER TO ARCHITECTURAL DRAWING FOR TYPES OF WALLS & CONSTRUCTION.
2. PROVIDE SLEEVES @ RATED WALL PENETRATIONS.
3. PACK AND CAULK WALLS TO MEET THE WALLS SOUND (STC) RATING AND FIRE RATINGS.

2 TYPICAL SLEEVE THROUGH INTERIOR WALL
NO SCALE

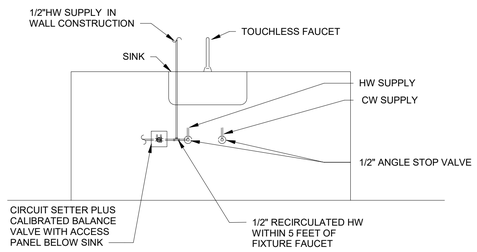


3 DUAL WATER HEATER PIPING DETAIL WITH RECIRCULATING PUMP
NO SCALE

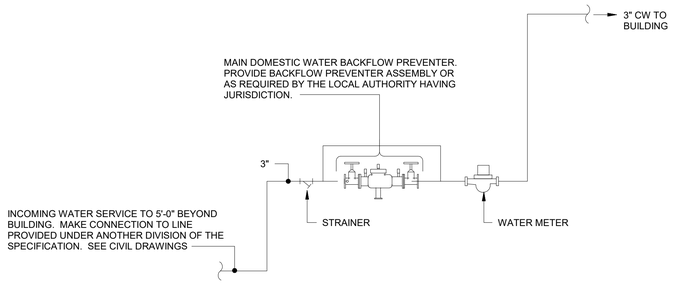


4 DIGITAL MIXING VALVE STATION DETAIL
NO SCALE

NOTES:
1. REFER TO PLAN FOR PIPE SIZES.
2. PREPIPED SYSTEM SHALL INCLUDE INLET CHECK VALVES AND STRAINERS.

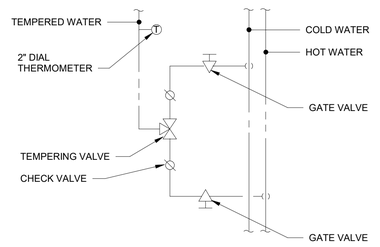


5 HOT WATER CODE COMPLIANT RECIRCULATION DETAIL
NO SCALE



8 INCOMING DOMESTIC WATER SERVICE
NO SCALE

NOTE:
1. MAIN BACKFLOW PREVENTION DEVICE TO BE THE EQUIVALENT OF THE INCOMING PIPE SIZE



7 THERMOSTATIC MIXING VALVE
NO SCALE

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT	P5.1

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road
Hunt Valley, MD 21031
Phone: (443) 589-2400
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No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland, license number 37790, expiration date 08-06-2023.

ANNE ARUNDEL COUNTY — JUNE 2023
DEPARTMENT OF PUBLIC WORKS — 20232548

REVISED DATE	BY

APPROVED DATE — CHIEF ENGINEER
APPROVED DATE — ASSISTANT CHIEF ENGINEER
APPROVED DATE — PROJECT MANAGER
APPROVED DATE — CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY: KAB
CHECKED BY: ADS
SHEET: OF XXX
PROJECT #: P570200
CONTRACT #: P570205

PLUMBING DETAILS

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	DESCRIPTION	LOCATION	CW SIZE	HW SIZE	TRAP & ARM	WASTE	VENT	ACCESSIBILITY	REMARKS
P-1A	WATER CLOSET (FLUSH VALVE WALL MTD)	PRO LEVEL TOILET ROOMS	1/2"		INTEGRAL	4"	2"		
P-1B	WATER CLOSET (FLUSH VALVE WALL MTD)	PRO LEVEL TOILET ROOMS	1/2"		INTEGRAL	4"	2"	ADA COMPLIANT	
P-1C									
P-1D									
P-2A	URINAL (FLUSH VALVE)	TOILET ROOMS	1/2"		INTEGRAL	2"	2"		
P-2B	URINAL (FLUSH VALVE)	TOILET ROOMS	1/2"		INTEGRAL	2"	2"	ADA COMPLIANT	
P-3B	LAVATORY (WALL HUNG)	TOILET ROOMS	1/2"	1/2"	P-TRAP	1 1/2"	1 1/2"	ADA COMPLIANT	<varies>
P-6	JANITORS SINK	JANITOR CLOSETS	1/2"	1/2"	P-TRAP	3"	2"		

NOTES:
1. PROVIDE AN ASSE 1070 LOCAL TEMPERING MIXING VALVE.
2. PROVIDE CIRCUIT SETTER WITH CONNECTION TO THE HOT WATER RECIRCULATION SYSTEM. CIRCUIT SETTER SHALL BE ENERGY CODE COMPLIANT.
3. PROVIDE HARDWIRED ELECTRONIC LAVATORY FAUCET.

ELECTRIC WATER HEATER SCHEDULE

MARK	STORAGE CAPACITY (GAL)	HEATING INPUT (KW)	TEMP RISE (DEG. F)	RECOVERY RATE @ 100 DEG F (GPH)	ELECTRICAL DATA				BASIS OF DESIGN		REMARKS
					MCA	MOCP	VOLTAGE	PHASE	MANUFACTURER	MODEL	
WH-1	150	36	100	150			208	3	PVI	180 L 150 A-VE	
WH-2	150	36	100	150			208	3	PVI	180 L 150 A-VE	

HOT WATER RECIRCULATING PUMP SCHEDULE

MARK	SERVING	CAPACITY (GPM)	DISCHARGE HEAD (FT)	ELECTRICAL DATA			BASIS OF DESIGN		REMARKS
				WATTS	VOLTAGE	PHASE	MANUFACTURER	SERIES	
RCP-1	DOMESTIC HOT WATER SYSTEM	0	0	0	120	1	TACO	0	1,2

NOTES:
1. RECIRCULATING PUMP SHALL BE PROVIDED WITH EITHER BRONZE OR STAINLESS STEEL INTERNAL CONSTRUCTION.
2. DISCHARGE HEAD IS BASED ON CIRCUIT SETTERS BEING SELECTED FOR A MAXIMUM PRESSURE DROP OF 3' OF HEAD AT 0.5 GPM OF FLOW.

DIGITAL MIXING VALVE STATION

MARK	GPM	PSI DROP	VOLTAGE	PHASE	MANUFACTURER	MODEL NUMBER	REMARKS
DMVS-1			120 V				

NOTES:
1. MIXING VALVE SHALL HAVE A MAXIMUM PRESSURE DROP OF 5PSI AT THE FLOWRATE INDICATED.
2. MIXING VALVE SHALL BE ASSE 1017 COMPLIANT.

EXPANSION TANK SCHEDULE

MARK	SERVING	TANK VOLUME	MAX ACCEPTANCE FACTOR	MANUFACTURER	SERIES
ET-1				Amtrol	

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PROJECT MANAGER
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CHIEF, RIGHT OF WAY

ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

DESIGN DEVELOPMENT | P7.1
JUNE 2023
20232548

SCALE: AS NOTED
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PLUMBING SCHEDULES

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

GENERAL NOTES - DIVISION 26

1. PROVIDE LABOR, EQUIPMENT AND MATERIALS NECESSARY FOR THE INSTALLATION OF THE COMPLETE ELECTRICAL SYSTEM AS SPECIFIED HEREIN AND SHOWN ON THE CONTRACT DRAWINGS. OUTLINE DESCRIPTION AND DIAGRAMMATIC REPRESENTATION OF SYSTEM OPERATION AND EQUIPMENT DOES NOT LIMIT CONTRACTOR LIABILITY FOR FURNISHING AND INSTALLING COMPLETE AND OPERABLE SYSTEMS.
2. "DRAWING NOTES" APPLY TO WORK ON THAT INDIVIDUAL DRAWING. "SPECIFIC NOTES" APPLY ONLY WHERE INDICATED WITH THE "SPECIFIC NOTE" SYMBOL.
3. WIRE AND CONDUIT SIZES ARE BASED ON COPPER CONDUCTORS UNLESS SPECIFICALLY NOTED OTHERWISE.
4. VOLTAGE DROP CALCULATIONS ARE BASED ON CIRCUIT LOADING AND DISTANCES GENERALLY AS CIRCUITED ON PLAN. IF ALTERNATE CONDUIT ROUTING, CIRCUIT LOADING, OR CONDUCTOR MATERIAL IS PROVIDED, VERIFY VOLTAGE DROP, AND SUBMIT VOLTAGE DROP CALCULATIONS PER SPECIFICATION.
5. UNLESS OTHERWISE NOTED, CIRCUITS HAVE NOT BEEN DERATED FOR CONDUCTOR BUNDLING, NOR HAVE CONDUITS BEEN SIZED FOR MULTIPLE CIRCUITS. IF MULTIPLE CIRCUITS ARE INSTALLED IN A SINGLE RACEWAY, DERATE CONDUCTOR AMPACITY PER NEC, AND PROVIDE APPROPRIATE SIZE CONDUIT. WHERE CONDUIT SIZE INCREASES, COORDINATE WITH ADJACENT UTILITIES AND BUILDING FEATURES.
6. INCLUDE IN THE BID PRICE THE PAYMENT OF NECESSARY PERMITS. FURNISH THE OWNER PRIOR TO THE FINAL PAYMENT A CERTIFICATE FROM THE ELECTRICAL INSPECTION DEPARTMENT HAVING JURISDICTION CERTIFYING THAT THE ELECTRICAL WORK MEETS THE REQUIREMENTS OF THE LOCAL INSPECTION AUTHORITIES AND/OR THE NATIONAL BOARD OF FIRE UNDERWRITERS.
7. COORDINATE WITH OWNER'S REPRESENTATIVE FOR SCHEDULING OF WORK.
8. WORK SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER.
9. KEEP THE WORK SITE AND SURROUNDING AREA FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH GENERATED BY WORK FROM THIS CONTRACT. PROPERLY AND LEGALLY DISPOSE OF MATERIALS.
10. JOB SITE SAFETY SHALL BE IN STRICT ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.
11. DRAWINGS SHALL NOT BE SCALED. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT LIGHT FIXTURE LOCATIONS AND THE MECHANICAL DRAWINGS FOR EXACT MECHANICAL EQUIPMENT LOCATIONS. LOCATIONS OF ELECTRICAL EQUIPMENT AND CONDUIT ARE SHOWN DIAGRAMMATICALLY. DETERMINE EXACT LOCATIONS IN FIELD.
12. CONFIRM EQUIPMENT LOCATIONS AND PLUG TYPES PRIOR TO RECEPTACLE INSTALLATION. PROVIDE RECEPTACLE TYPES TO MATCH PLUG TYPES AND NEMA CONFIGURATION.
13. COORDINATE WORK WITH OTHER TRADES. ARCHITECTURAL, STRUCTURAL, MECHANICAL, CIVIL, AND OTHER DRAWINGS AND SPECIFICATIONS SHALL BE CONSULTED AND COORDINATED WITH PRIOR TO ROUGH-IN.
14. WHEN MOUNTING ELECTRICAL WORK IN AREAS SUBJECT TO PEDESTRIAN TRAFFIC, MAINTAIN REQUIRED HEADROOM CLEARANCES.
15. WHEREVER POSSIBLE, OBTAIN ACTUAL ROUGH-IN DRAWINGS FOR EQUIPMENT TO BE INSTALLED PRIOR TO ROUGH-IN. FINAL ELECTRICAL CONNECTIONS TO EQUIPMENT, WHETHER FURNISHED UNDER THIS DIVISION, ANOTHER DIVISION, OR BY OTHERS, SHALL BE MADE UNDER THIS DIVISION. FINAL CONNECTIONS TO EQUIPMENT SHALL CONSIST OF SAME SIZE PHASE CONDUCTORS, NEUTRAL CONDUCTORS (AS APPLICABLE), GROUND CONDUCTORS, CONTROL CONDUCTORS (AS APPLICABLE), AND CONDUIT SIZES AS INDICATED ELSEWHERE.
16. PRIOR TO PURCHASE AND INSTALLATION OF ANY MOTOR CONTROL EQUIPMENT (STARTERS, ETC.), VERIFY ACTUAL MOTOR ELECTRICAL CHARACTERISTICS. STARTER OVERLOADS SHALL BE SIZED IN ACCORDANCE WITH ACTUAL MOTOR FULL LOAD AMPERES.
17. WHERE MULTIPLE WALL SWITCHES ARE SHOWN ADJACENT TO ONE ANOTHER, GROUP TOGETHER UNDER MULTIGANG PLATE. WHERE DIMMER SWITCHES ARE USED, SELECTION OF CAPACITY SHALL BE BASED ON LOAD SERVED AND ANY DERATING REQUIRED DUE TO GANGING OF SWITCHES.
18. PROVIDE TYPED CIRCUIT DIRECTORIES FOR NEW AND EXISTING PANELBOARDS TO INDICATE TYPE OF LOAD SERVED AND AREA SERVED (E.G. RECEPTACLES-OFFICE 201).
19. PROVIDE SEPARATE UNSHARED NEUTRAL CONDUCTOR(S) FOR EACH CIRCUIT UTILIZING A NEUTRAL. UNLESS SPECIFICALLY INDICATED OTHERWISE, MULTIWIRE BRANCH CIRCUITS ARE NOT PERMITTED.
20. CENTER EQUIPMENT OR DEVICES LOCATED ABOVE OPENINGS SUCH AS DOORS, LOUVER, ETC. ABOVE THE OPENING.
21. PAINT PLYWOOD BACKBOARDS (MINIMUM 2 COATS OF FIRE RETARDANT PAINT) TO MATCH WALL FINISH. DO NOT PAINT OVER FIRE LABEL.
22. ELECTRICAL PENETRATIONS IN FIRE-RESISTANCE-RATED CONSTRUCTION SHALL COMPLY WITH REQUIREMENTS OF INTERNATIONAL BUILDING CODE. PROVIDE LISTED FIRE STOP METHOD FOR PENETRATIONS THROUGH FIRE RATED FLOORS AND WALLS TO MAINTAIN THE APPLICABLE FIRE RATING.
23. FOR EQUIPMENT ENERGIZED FROM TWO SOURCES, PROVIDE PERMANENT WARNING LABEL READING "WARNING! EQUIPMENT ENERGIZED FROM MULTIPLE SOURCES."
24. PROVIDE STRUCTURAL STEEL FRAME SUPPORTS AS REQUIRED FOR DISCONNECT SWITCHES, MOTOR STARTERS, ETC. IF DISCONNECT SWITCHES OR STARTERS ARE LOCATED ON EQUIPMENT HOUSINGS, COORDINATE LOCATIONS WITH EQUIPMENT SUPPLIER TO ENSURE SWITCHES/STARTERS ARE NOT INSTALLED ON EQUIPMENT ACCESS PANELS. MAINTAIN PROPER NATIONAL ELECTRICAL CODE CLEARANCES. IN ADDITION, MAINTAIN PROPER MECHANICAL WORKING CLEARANCES FOR SERVICING OF EQUIPMENT.
25. PROVIDE STRUCTURAL STEEL FRAME SUPPORTS OR PLYWOOD BACKBOARDS TO MOUNT PANELBOARDS ON METAL STUD WALLS/PARTITIONS. ANCHOR STRUCTURAL STEEL FRAME SUPPORTS OR PLYWOOD BACKBOARD TO METAL STUDS. PROVIDE STRUCTURAL STEEL FRAME SUPPORTS AT A MINIMUM OF TOP AND BOTTOM OF PANELBOARD AND SPAN A MINIMUM OF TWO VERTICAL STUDS. DO NOT ANCHOR PANELBOARDS DIRECTLY TO DRYWALL PARTITION.
26. IF APPLICABLE, FURNISH PANELBOARD WITH NUMBER OF POLES INDICATED. EACH SPACE SHALL BE A FULLY PREPARED SPACE (I.E. COMPLETE WITH PROVISIONS AND HARDWARE REQUIRED TO MOUNT A FUTURE CIRCUIT BREAKER, INCLUDING BUS CONNECTIONS, CIRCUIT BREAKER MOUNTING BRACKET, CIRCUIT BREAKER COVER AND COVER KNOCKOUTS, ETC.).
27. VERIFY ELECTRICAL SYSTEM PHASING AND ROTATION WITH UTILITY COMPANY.
28. IF APPLICABLE, PROVIDE TRENCHING AND BACKFILL FOR BURIED ELECTRICAL AND TELECOMMUNICATIONS (TELEPHONE, CABLE TELEVISION) SERVICES, UNLESS NOTED OTHERWISE. COORDINATE UNDERGROUND CIRCUIT INSTALLATION WITH OTHER EXISTING AND PROPOSED UNDERGROUND UTILITIES. ENGAGE THE SERVICES OF A UTILITY LOCATING FIRM PRIOR TO EXCAVATION.
29. ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE UL LISTED AND SHALL CONFORM TO FACTORY MUTUAL STANDARDS AS APPLICABLE.
30. NEW ELECTRICAL WORK INSTALLED IN FINISHED AREAS SHALL BE INSTALLED CONCEALED WITHIN NEW OR EXISTING WALLS, FLOORS OR CEILINGS. PROVIDE CUTTING AND PATCHING OF SURFACES. SURFACE RACEWAYS SHALL BE PERMITTED IN FINISHED AREAS ONLY WHERE SPECIFICALLY APPROVED IN THE FIELD BY ARCHITECT.
31. THE ENTIRE ELECTRICAL INSTALLATION, MATERIAL AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION, UNLESS A LONGER WARRANTY PERIOD IS REQUIRED ELSEWHERE IN CONTRACT DOCUMENTS.
32. MINIMIZE THE USE OF JUNCTION BOXES ABOVE INACCESSIBLE (I.E. GYPSUM) CEILINGS. WHERE JUNCTION BOXES ARE UNAVOIDABLE ABOVE SUCH CEILINGS, GROUP THEM WITH OTHER BOXES, SWITCHES, VALVES, ETC. THAT REQUIRE ACCESS, AND PROVIDE AN ACCESS HATCH IN CEILING AS APPROVED BY ARCHITECT.
33. CONDUIT, FITTINGS, AND JUNCTION BOXES SHALL BE SUITABLE FOR THE AREA CLASSIFICATION IN WHICH THEY ARE TO BE INSTALLED.
34. MINIMIZE THE NUMBER AND SIZE OF ROOF PENETRATIONS, GROUPING MULTIPLE CONDUITS IN THE SAME PENETRATION WHEN POSSIBLE. WHEN APPLICABLE, COORDINATE WITH ORIGINAL ROOFING MEMBRANE MANUFACTURER IN ORDER TO MAINTAIN ROOF WARRANTY. SEAL AROUND ROOF PENETRATIONS WITH A LISTED SEALING COMPOUND. PROVIDE RUBBER BOOT, FLASHING, CAULKING, AND OTHER ITEMS AS REQUIRED FOR A WEATHERTIGHT INSTALLATION. PRIOR TO PENETRATING ROOF, USE NON-DESTRUCTIVE MEANS TO LOCATE REINFORCING STEEL OR TENDONS WITHIN THE PROPOSED AREA OF PENETRATION, IF APPLICABLE. WHEN PENETRATING ROOF, DO NOT CUT, BURN OR DAMAGE EXISTING REINFORCING STEEL OR TENDONS UNLESS APPROVED BY A STRUCTURAL ENGINEER. CONDUIT ROOF PENETRATIONS SHALL BE INCLUDED IN CONTRACTOR'S GUARANTEE OF WORK.
35. UNLESS INDICATED OTHERWISE (IN NON-DWELLING UNIT PANELBOARDS) 15A AND 20A SINGLE-PHASE CIRCUITS SHALL CONSIST OF 2#12, 1#12 G, 3/4" C.
36. REMOVE AND REINSTALL CEILING PANELS AS REQUIRED FOR ELECTRICAL WORK. REPLACE, IN-KIND, ANY CEILING PANELS DAMAGED DURING THE COURSE OF WORK.

ELECTRICAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
ADA	AMERICAN DISABILITY ACT
AWG	AMERICAN WIRE GAUGE
A	AMPERE(S)
AIC	AMPERE INTERRUPTING CAPACITY
AFCI	ARC FAULT CIRCUIT INTERRUPTER
ATS	AUTOMATIC TRANSFER SWITCH
BATT	BATTERY
BFC	BELOW FINISHED CEILING
BFG	BELOW FINISHED GRADE
BPS	BOLTED PRESSURE SWITCH
BLDG	BUILDING
CATV	CABLE TELEVISION
C	CONDUIT
CLG	CEILING
CKT	CIRCUIT
C/B	CIRCUIT BREAKER
CONT	CONTINUATION
CU	COPPER
CT	CURRENT TRANSFORMER
Δ	DELTA CONNECTED
DACT	DIGITAL ALARM COMMUNICATOR TRANSMITTER
DC	DIRECT CURRENT
DISC	DISCONNECT
DAS	DISTRIBUTED ANTENNA SYSTEM
2P	DOUBLE POLE
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
DT	DOUBLE THROW
DWG	DRAWING
DE/TD	DUAL ELEMENT / TIME DELAY
EMT	ELECTRICAL METALLIC TUBING
E	EMERGENCY
EC	EMPTY CONDUIT
ECB	ENCLOSED CIRCUIT BREAKER
EMS	ENERGY MANAGEMENT SYSTEM
EV	ELECTRIC VEHICLE
ERMS	ENERGY REDUCTION MAINTENANCE SWITCH
EF	EXHAUST FAN
EX	EXISTING
ER	EXISTING RELOCATED
ETR	EXISTING TO REMAIN
FT	FEET
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FAEP	FIRE ALARM EXTENDER PANEL
4P	FOUR POLE
FLA	FULL LOAD AMPERES
F	FUSED OR FUSIBLE
FSS	FUSED SAFETY SWITCH
FS	FUSED SWITCH
G/GRD	GROUND
GB	GROUND BAR
GEC	GROUNDING ELECTRODE CONDUCTOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFD	GROUND FAULT DEVICE
HOA	HAND-OFF-AUTOMATIC
HZ	HERTZ
HID	HIGH INTENSITY DISCHARGE
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HP	HORSEPOWER
IG	ISOLATED GROUND
IT	INFORMATION TECHNOLOGY
ITGB	INFORMATION TECHNOLOGY GROUND BAR
J/JB	JUNCTION BOX
LTG	LIGHTING
LED	LIGHT EMITTING DIODE
LRA	LOCKED ROTOR AMPS
LV	LOW VOLTAGE
MCB	MAIN CIRCUIT BREAKER
MGB	MAIN GROUND BAR
MLO	MAIN LUGS ONLY
MTS	MANUAL TRANSFER SWITCH
MISC	MISCELLANEOUS
MOD	MOTOR OPERATED DAMPER
MTD	MOUNTED
MH	MOUNTING HEIGHT
NEC	NATIONAL ELECTRICAL CODE
NL	NIGHT LIGHT (UNSWITCHED)
NFSS	NON-FUSED SAFETY SWITCH
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OE	OVERHEAD ELECTRIC
OT	OVERHEAD TELECOMMUNICATIONS
PNL	PANELBOARD
∅ / PH	PHASE
P	POLE
PVC	POLYVINYL CHLORIDE
PT	POTENTIAL TRANSFORMER
PWR	POWER
PF	POWER FACTOR
PRI	PRIMARY
REC	RECEPTACLE
RL	REMOVE AND RETAIN FOR RELOCATION
RM	ROOM
RMS	ROOT MEAN SQUARE
RX	REMOVE EXISTING
SS	SAFETY DISCONNECT SWITCH
SEC	SECONDARY
SD	SERVICE DISCONNECT
Isc	SHORT CIRCUIT CURRENT (RMS SYMMETRICAL AMPERES)
SCCR	SHORT CIRCUIT CURRENT RATING
1P	SINGLE POLE
SPDT	SINGLE POLE, DOUBLE THROW
SPST	SINGLE POLE, SINGLE THROW
ST	SINGLE THROW
S/N	SOLID NEUTRAL
SPD	SURGE PROTECTION DEVICE
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
TGB	TELECOMMUNICATIONS GROUND BAR
TMGB	TELECOMMUNICATIONS MAIN GROUND BAR
TELE	TELEPHONE
TTB	TELEPHONE TERMINAL BOARD
TMS	THERMAL MANUAL SWITCH
KCM	THOUSAND CIRCULAR MILS
3P	THREE POLE
XFMR	TRANSFORMER
TYP	TYPICAL
UE	UNDERGROUND ELECTRIC
UT	UNDERGROUND TELECOMMUNICATIONS
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
V	VOLTS
VA	VOLT-AMPERE
WH	WATER HEATER
W	WATTS, WIRE
WP	WEATHERPROOF
W/	WITH
WCR	WITHSTAND AND CLOSE-ON RATING
Y	WYE CONNECTED
KV	KILOVOLTS
KVA	KILOVOLT-AMPERES
KW	KILOWATTS

ELECTRICAL MOUNTING HEIGHT SCHEDULE

$	SWITCHES	46" AFF TO ℄ (UNO)
	RECEPTACLES	18" AFF TO ℄ (UNO)
	COUNTER RECEPTACLES	9" ABOVE COUNTER TO ℄ (UNO)
R	REFRIGERATOR REC.	46" AFF TO ℄ (UNO)
W	CLOTHES WASHER REC.	46" AFF TO ℄ (UNO)
M	MICROWAVE REC.	ABOVE RANGE: INSIDE UPPER CABINET
M	MICROWAVE REC.	9" ABOVE COUNTER TO ℄ (UNO)
D	DISHWASHER REC.	IN BASE CABINET
GD	GARBAGE DISPOSAL REC.	IN BASE CABINET
R	RANGE RECEPTACLE	COORDINATE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS
D	DRYER RECEPTACLE	46" AFF TO ℄ (UNO)
	PANELBOARDS	6'-6" AFF TO TOP OF PANEL
	LOAD CENTERS RESIDENTIAL UNITS	48" AFF TO TOP OF PANEL
	MISC. EQUIPMENT BOXES	COORDINATE IN FIELD
F	MANUAL PULLSTATIONS	46" AFF TO ℄ (UNO)
F F F	WALL MOUNTED FIRE ALARM NOTIFICATION APPLIANCES	6'-8" AFF
	TELEPHONE OUTLET	18" AFF TO ℄ (UNO)
	TELEPHONE - COUNTERTOP	9" ABOVE COUNTER TO ℄ (UNO)
	DATA OUTLET	18" AFF TO ℄ (UNO)
	DATA OUTLET - COUNTERTOP	9" ABOVE COUNTER TO ℄ (UNO)
	TELE/DATA OUTLET	18" AFF TO ℄ (UNO)
	TELE/DATA - COUNTERTOP	9" ABOVE COUNTER TO ℄ (UNO)
TV	TV OUTLET	18" AFF TO ℄ (UNO)
TV	COMBINATION TV/REC OUTLET	COORDINATE MOUNTING HEIGHT SUCH THAT DEVICE IS CENTERED BEHIND TV. COORDINATE TV LOCATION WITH AV INSTALLER
	LED EXIT SIGN	6" ABOVE DOOR FRAME
+X"	ITEMIZED MOUNTING HEIGHT	HEIGHT DESIGNATED BY SUBSCRIPT

BRANCH CIRCUIT WIRE SIZING

(120V, 20 AMPERE SINGLE PHASE CIRCUITS) (1)

LENGTH OF RUN	CIRCUIT WIRE SIZE
0' - 60'	#12
60' - 100'	#10
100' - 150'	#8

NOTES

(1) CHART IS BASED ON 1920 WATT LOAD, 120 VOLTS WITH 3% VOLTAGE DROP. ANY DEVIATION, INCLUDING DE-RATING, SHALL BE FIELD CALCULATED. TOTAL MAXIMUM VOLTAGE DROP (ON FEEDER AND BRANCH CIRCUIT) SHALL BE LESS THAN 5%. WHERE A DISCREPANCY EXISTS BETWEEN THIS CHART AND WIRE SIZE ON PANEL SCHEDULE, PROVIDE THE LARGER SIZE.

DRAWING LIST - ELECTRICAL

SHEET NUMBER	SHEET NAME
E0.1	ELECTRICAL NOTES & ABBREVIATIONS
E0.2	ELECTRICAL SYMBOLS
E0.3	SITE PLAN - ELECTRICAL
E1.1	PRO SHOP LEVEL - LIGHTING
E1.2	MAIN LEVEL - LIGHTING
E2.1	PRO SHOP LEVEL - POWER
E2.2	MAIN LEVEL - POWER
E2.3	ROOF PLAN - ELECTRICAL
E4.1	ELECTRICAL PART PLANS
E5.1	ELECTRICAL RISER DIAGRAM
E5.2	ELECTRICAL DETAILS
E5.3	ELECTRICAL DETAILS
E5.4	ELECTRICAL DETAILS
E6.1	EQUIPMENT SCHEDULES
E6.2	PANEL SCHEDULES
E6.3	PANEL SCHEDULES
E6.4	PANEL SCHEDULES
E6.5	PANEL SCHEDULES

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DESIGN DEVELOPMENT | E0.1

ANNE ARUNDEL COUNTY | JUNE 2023

DEPARTMENT OF PUBLIC WORKS | 20232548

SCALE: AS NOTED
DRAWN BY: SP
CHECKED BY: DRW
SHEET: 1 OF XXX
PROJECT #: P570200
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ELECTRICAL NOTES & ABBREVIATIONS

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LIGHTING SYMBOLS

- LIGHTING FIXTURE, CEILING MOUNTED
- LIGHTING FIXTURE, WALL MOUNTED
- LIGHTING FIXTURE, PENDANT MOUNTED
- TRACK LIGHT, TRIANGLES INDICATE TRACK FIXTURES
- LED LIGHT TAPE
- EMERGENCY LIGHTING FIXTURE
- EMERGENCY BATTERY TYPE LIGHTING FIXTURE
- EMERGENCY REMOTE HEAD TYPE LIGHTING FIXTURE
- EXIT SIGN, SINGLE FACE, CEILING/WALL MOUNTED
- EXIT SIGN, DOUBLE FACE, CEILING/WALL MOUNTED
- EXIT SIGN, AS ABOVE, WITH DIRECTIONAL ARROWS
- COMBINATION EXIT SIGN EMERGENCY LIGHT, SINGLE FACE, WALL MOUNTED
- $ SINGLE POLE TOGGLE SWITCH
- $3 THREE-WAY TOGGLE SWITCH
- $4 FOUR-WAY TOGGLE SWITCH
- $D DIMMER CONTROL SWITCH
- $LV LOW VOLTAGE PUSHBUTTON WALL STATION
- $LVD LOW VOLTAGE PUSHBUTTON WALL STATION WITH DIMMING CONTROL
- $O LIGHTING CONTROL OCCUPANCY/VACANCY SENSOR WALL SWITCH
- $OD LIGHTING CONTROL OCCUPANCY/VACANCY SENSOR DIMMING WALL SWITCH
- $WP WEATHERPROOF LIGHTING CONTROL SWITCH, TYPE AS NOTED
- $K WALL MOUNTED KEY SWITCH
- $F CEILING FAN SWITCH, COORDINATE STYLE AND CONTROL FUNCTION WITH FAN
- $S SHADE CONTROL SWITCH, COORDINATE STYLE AND CONTROL FUNCTION WITH SHADE
- $SC SCENE CONTROL KEYPAD WITH DIMMING
- (J)F CEILING FAN RATED JUNCTION BOX, CEILING MOUNTED
- OS LIGHTING CONTROL OCCUPANCY SENSOR, CEILING MOUNTED
- OC LIGHTING CONTROL OCCUPANCY SENSOR FOR CORRIDOR, CEILING MOUNTED
- OW LIGHTING CONTROL OCCUPANCY SENSOR, WALL MOUNTED
- C LIGHTING CONTACTOR, AS NOTED OR SCHEDULED
- TC TIME CLOCK
- RC LIGHTING ROOM CONTROLER, LOW VOLTAGE
- ZC LIGHTING ZONE CONTROLLER, LOW VOLTAGE
- DL LIGHTING DAYLIGHT SENSOR, CEILING MOUNTED
- ER EMERGENCY LIGHTING RELAY FOR OVERRIDE CONTROL
- POLE ARM MOUNTED SITE LIGHTING SINGLE FIXTURE
- POLE ARM MOUNTED SITE LIGHTING DOUBLE FIXTURE
- POST TOP MOUNTED SITE LIGHTING FIXTURE
- PC PHOTOCELL, WALL MOUNTED

POWER SYMBOLS

- DUPLEX RECEPTACLE, NEMA CONFIGURATION 5-15R/5-20R, PER SPECIFICATION
- DOUBLE DUPLEX (QUAD) RECEPTACLE NEMA CONFIGURATION 5-15R/5-20R, PER SPECIFICATION
- DUPLEX RECEPTACLE AS ABOVE, GROUND FAULT CIRCUIT INTERRUPTER (GFCI) TYPE OR PROTECTED BY UPSTREAM GFCI RECEPTACLE.
- DUPLEX RECEPTACLE AS ABOVE, COUNTERTOP
- DUPLEX RECEPTACLE AS ABOVE, COUNTERTOP GROUND FAULT CIRCUIT INTERRUPTER (GFCI) TYPE OR PROTECTED BY UPSTREAM GFCI RECEPTACLE.
- WP WEATHER RESISTANT GFCI DUPLEX RECEPTACLE AS ABOVE, WITH WEATHERPROOF COVER
- R 20A SIMPLEX RECEPTACLE, DEDICATED FOR REFRIGERATOR
- W DUPLEX RECEPTACLE AS ABOVE, DEDICATED FOR CLOTHES WASHER
- M 20A SIMPLEX RECEPTACLE, DEDICATED FOR ABOVE RANGE MICROWAVE
- M DUPLEX RECEPTACLE AS ABOVE, DEDICATED FOR COUNTERTOP MICROWAVE
- D 20A SIMPLEX RECEPTACLE, DEDICATED FOR DISHWASHER
- H DUPLEX RECEPTACLE AS ABOVE, HORIZONTAL MOUNTING
- U DUPLEX RECEPTACLE AS ABOVE, WITH TWO INTEGRAL USB PORTS
- GD 20A SIMPLEX RECEPTACLE, DEDICATED FOR GARBAGE DISPOSAL
- DUPLEX RECEPTACLE AS ABOVE, SPLIT YOKE, BOTTOM SECTION OF RECEPTACLE SHALL BE SWITCHED, TOP SHALL ALWAYS BE HOT.
- DUPLEX RECEPTACLE AS ABOVE, STANDBY POWER (SUBSCRIPT DESIGNATIONS SAME AS ABOVE)
- DUPLEX RECEPTACLE AS ABOVE, CEILING MOUNTED.
- DUPLEX RECEPTACLE AS ABOVE, IN FLOOR BOX
- # COMBINATION DUPLEX RECEPTACLE/DATA OUTLET, IN FLOOR BOX, SIZE PER SPECIFICATION, "#" INDICATES TOTAL OUTLETS (HALF VOICE, HALF DATA). PROVIDE ONE VOICE AND ONE DATA IN ABSENCE OF A NUMBER
- TV C COMBINATION REC/TV OUTLET, PROVIDE ARLINGTON "TVBS505 2G' W/ F-TYPE CONNECTOR (OR APPROVED EQUAL) AND RG6 CABLING; PROVIDE DUPLEX RECEPTACLE AND WIRING WITH VOLTAGE DIVIDER. "C" SUBSCRIPTS DENOTES CEILING MOUNTED
- DUPLEX RECEPTACLE AS ABOVE, PROVIDE WITH CORD REEL MOUNTED TO STRUCTURE
- SIMPLEX SINGLE RECEPTACLE, NEMA CONFIGURATION 5-15R/5-20R PER SPECIFICATION (SUBSCRIPT DESIGNATIONS SAME AS ABOVE)
- SPECIAL RECEPTACLE, NEMA TYPE AS INDICATED ON PLAN
- R RANGE RECEPTACLE, NEMA 14-50R
- D DRYER RECEPTACLE, NEMA 14-30R
- 208Y/120V PANELBOARD, EXTENDED FRONT LINES INDICATE RECESSED, OTHERWISE SURFACE MOUNTED.
- 480Y/277V PANELBOARD, EXTENDED FRONT LINES INDICATE RECESSED, OTHERWISE SURFACE MOUNTED.
- 120/240V PANELBOARD, EXTENDED FRONT LINES INDICATE RECESSED, OTHERWISE SURFACE MOUNTED.
- (J) (J) [J] JUNCTION BOX - CEILING, WALL OR FLOOR MOUNTED

ACCESS CONTROL AND DETECTION SYSTEMS SYMBOLS

- P CCTV CAMERA LOCATION, PROVIDE JUNCTION BOX WITH 3/4" CONDUIT BACK TO CCTV MONITORING SYSTEM. "P" SUBSCRIPT INDICATES POWER FOR HEATER, PROVIDE CIRCUIT AS INDICATED.
- MON CCTV MONITOR LOCATION
- CR CARD/FOB READER ACCESS CONTROLLED DOOR ROUGH-IN, PROVIDE 1/2"C TO ACCESSIBLE LOCATION, COORDINATE LOCATION WITH ARCHITECT.
- KP KEYPAD ACCESS CONTROLLED DOOR ROUGH-IN, COORDINATE LOCATION WITH ARCHITECT.
- DS ELECTRIC DOOR STRIKE, PROVIDE 1/2" C TO ACCESSIBLE LOCATION, COORDINATE LOCATION WITH ARCHITECT.
- DC DOOR CONTACT SWITCH, PROVIDE 1/2" C TO ACCESSIBLE LOCATION, COORDINATE LOCATION WITH ARCHITECT.
- MD MOTION DETECTOR, PROVIDE 1/2" C TO ACCESSIBLE LOCATION, COORDINATE LOCATION WITH ARCHITECT.
- PB DOOR OPERATOR PUSH BUTTON ROUGH-IN, PROVIDE 1/2" C TO ACCESSIBLE LOCATION, COORDINATE LOCATION WITH ARCHITECT.
- ADO AUTOMATIC DOOR OPERATOR, INTERCONNECT WITH DOOR OPERATOR, COORDINATE LOCATION WITH ARCHITECT.
- DR DOOR RELEASE SWITCH, PROVIDE 1/2" C TO ACCESSIBLE LOCATION, COORDINATE LOCATION WITH ARCHITECT.
- DA UNDERCOUNTER DURESS ALARM, PROVIDE 1/2" C TO ACCESSIBLE LOCATION, COORDINATE LOCATION WITH ARCHITECT.
- ACS ACCESS CONTROL SYSTEM
- SEC SECURITY SYSTEM CONTROLLER
- TEI TENANT ENTRY MAIN INTERCOM
- TE TENANT ENTRY APARTMENT INTERCOM

COMMUNICATIONS SYSTEMS SYMBOLS

- # TELEPHONE OUTLET

  PROVIDE 2-GANG BOX WITH SINGLE GANG ADAPTER PLATE, 1" CONDUIT W/BUSHING, AND PULLSTRING TO ABOVE ACCESSIBLE CEILING.

  "#" INDICATES TOTAL CABLES & JACKS. PROVIDE TWO IN ABSENCE OF A NUMBER.
- TELEPHONE OUTLET AS ABOVE, COUNTERTOP
- # DATA OUTLET

  PROVIDE 2-GANG BOX WITH SINGLE GANG ADAPTER PLATE, 1" CONDUIT W/BUSHING, AND PULLSTRING TO ABOVE ACCESSIBLE CEILING.

  "#" INDICATES TOTAL CABLES & JACKS. PROVIDE TWO IN ABSENCE OF A NUMBER.
- DATA OUTLET AS ABOVE, COUNTERTOP
- # COMBINATION COMMUNICATION OUTLET

  PROVIDE 2-GANG BOX WITH SINGLE GANG ADAPTER PLATE, 1" CONDUIT W/BUSHING, AND PULLSTRING TO ABOVE ACCESSIBLE CEILING.

  "#" INDICATES TOTAL OUTLETS (HALF VOICE, HALF DATA). PROVIDE ONE VOICE AND ONE DATA AND ONE TYPE F CONNECTOR IN ABSENCE OF A NUMBER
- COMBINATION COMMUNICATION OUTLET AS ABOVE, COUNTERTOP
- # COMBINATION TELEPHONE/DATA OUTLET AS ABOVE, IN FLOOR BOX
- TV TV OUTLET AND RG6 CABLING
- DB DOORBELL, HARD WIRED
- D DOORBELL CHIME
- D DOORBELL LIGHT
- S AUDIO SYSTEM SPEAKER
- W WIFI ACCESS POINT, PROVIDE CAT6 CABLING BACK TO LOCAL TELECOM ROOM
- P AV PROJECTOR, COORDINATE WITH AV INSTALLER FOR AV REQUIREMENTS
- EC EMERGENCY CALL STATION
- E EMERGENCY CALL LIGHT, CEILING MOUNTED
- E EMERGENCY CALL LIGHT, WALL MOUNTED
- ECSC EMERGENCY CALL SYSTEM CONTROLLER
- MIC MICROPHONE JACK
- AV AUDIO/VISUAL VOLUME CONTROL STATION
- C TWO-WAY COMMUNICATION SYSTEM CALL STATION

CONTROL/SINGLE LINE DIAGRAM SYMBOLS

- NO OE CL AUTOMATIC TRANSFER SWITCH
  - LS - LIFE SAFETY
  - LR - LEGALLY REQUIRED
  - SB - STANDBY
- (M) METER
- CIRCUIT BREAKER
- CURRENT TRANSFORMER
- (C) CONTACTOR COIL
- NORMALLY OPEN CONTACTS
- NORMALLY CLOSED CONTACTS
- TC TIME CLOCK
- _A FUSE
- _A FUSED SWITCH
- NON-FUSED SWITCH
- THERMAL OVERLOAD
- TRANSFORMER
- GENERATOR
- (#) MOTOR CONNECTION - HP AS INDICATED
- # GROUND CONNECTION - # DENOTES SIZE
- SPD SURGE PROTECTION DEVICE
- $M MANUAL MOTOR STARTER SWITCH - NO OVERLOADS
- $MOL MANUAL MOTOR STARTER SWITCH - W/ OVERLOADS
- $T TIMER SWITCH
- SAFETY SWITCH
- COMBINATION TYPE MOTOR STARTER
- ENCLOSED CIRCUIT BREAKER
- MOTOR STARTER
- GAP GENERATOR ANNUNCIATOR PANEL
- EP EMERGENCY STOP PUSHBUTTON STATION
- MH IN-GRADE MANHOLE, TYPE AS NOTED
- HH IN-GRADE HANDHOLE, TYPE AS NOTED
- METER

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT	E0.2

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NO	REVISION DESCRIPTION	BY	DATE

WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland, license number 37790, expiration date 08-06-2023.

ANNE ARUNDEL COUNTY — JUNE 2023
DEPARTMENT OF PUBLIC WORKS — 20232548

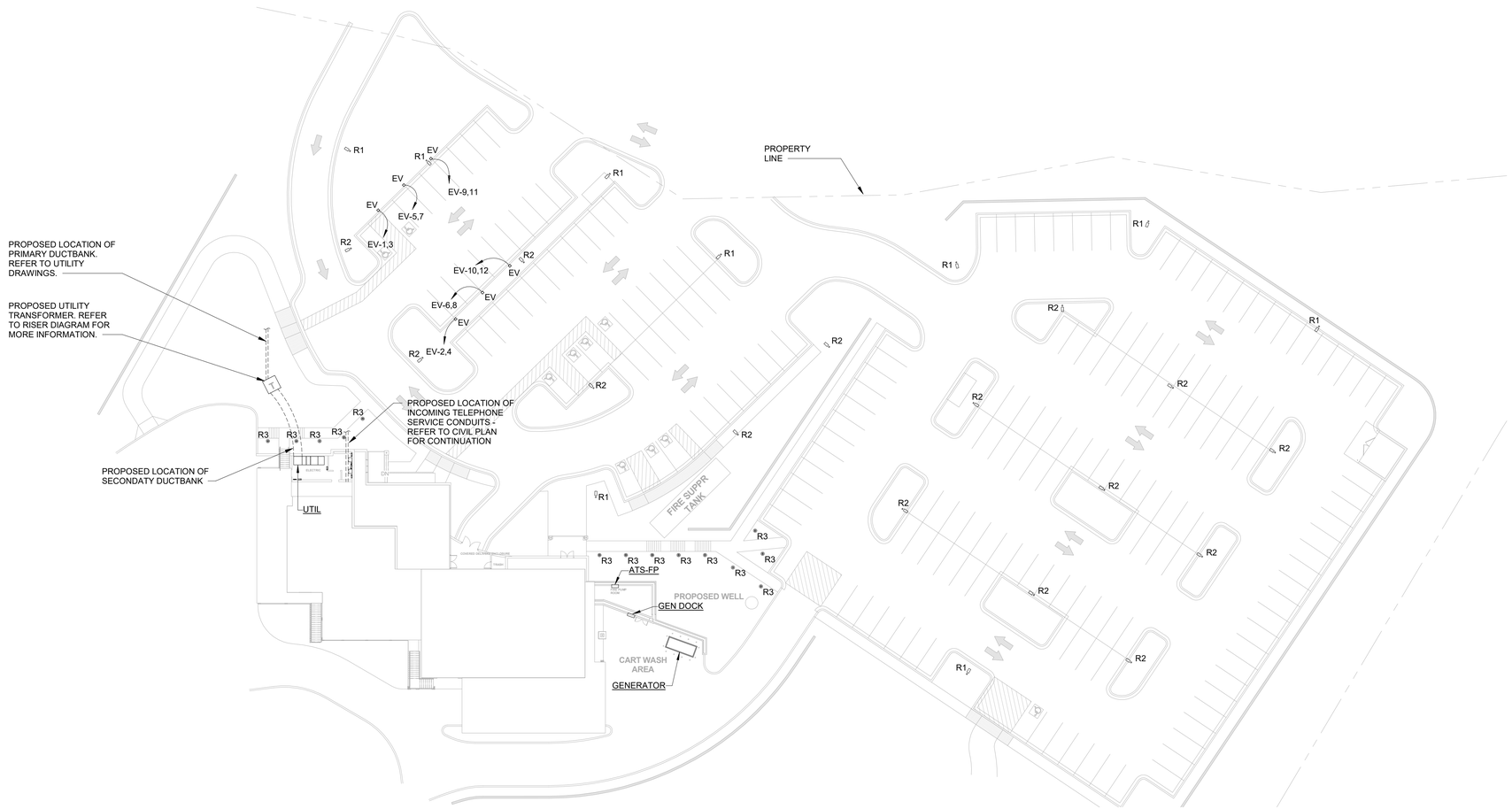
REVISED DATE	BY	APPROVED / DATE	APPROVED / DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED / DATE	APPROVED / DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY: SP
CHECKED BY: DRW
SHEET: 2 OF XXX
PROJECT #: P570200
CONTRACT #: P570205

ELECTRICAL SYMBOLS

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

SPECIFIC NOTES - ELECTRICAL NEW	
No.	KEYNOTE TEXT



1 SITE PLAN - ELECTRICAL
1" = 30'-0"

N

GRAPHIC SCALE 1" = 30'-0"

0 30 60

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DESIGN DEVELOPMENT	E0.3

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ARCHITECTURE + INTERIORS
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REVISED DATE	BY

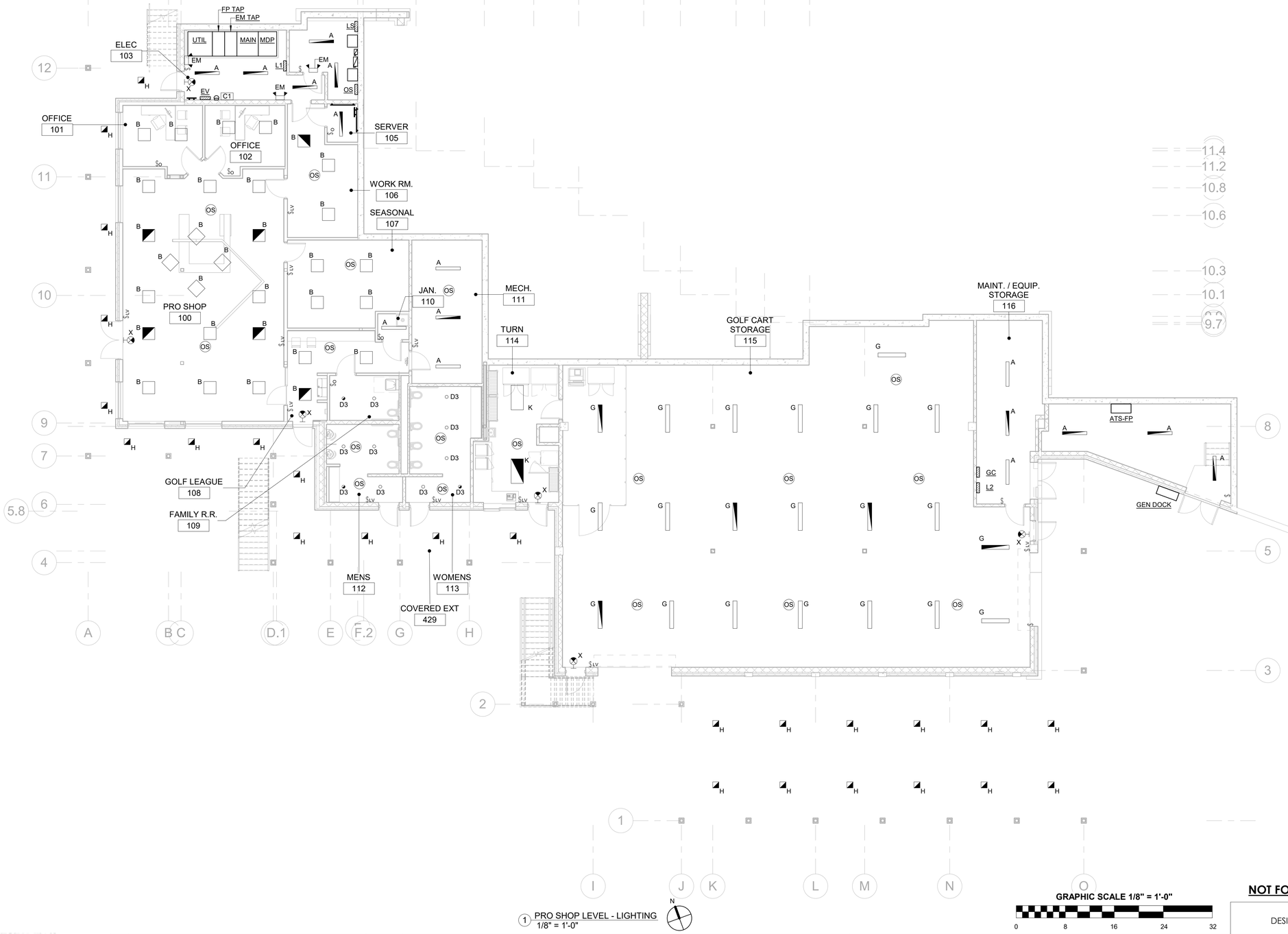
ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

APPROVED DATE	APPROVED DATE
CHIEF ENGINEER	PROJECT MANAGER
APPROVED DATE	APPROVED DATE
ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

JUNE 2023
20232548

SCALE: AS NOTED	SITE PLAN - ELECTRICAL
DRAWN BY: SP	
CHECKED BY: DRW	The Preserve at Eisenhower Clubhouse 1576 Generals Highway, Crownsville, Maryland 21032
SHEET: 3 OF XXX	
PROJECT #: P570200	
CONTRACT #: P570205	

SPECIFIC NOTES - ELECTRICAL NEW	
No.	KEYNOTE TEXT



1 PRO SHOP LEVEL - LIGHTING
1/8" = 1'-0"

GRAPHIC SCALE 1/8" = 1'-0"
0 8 16 24 32

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT	E1.1

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REVISED DATE	BY

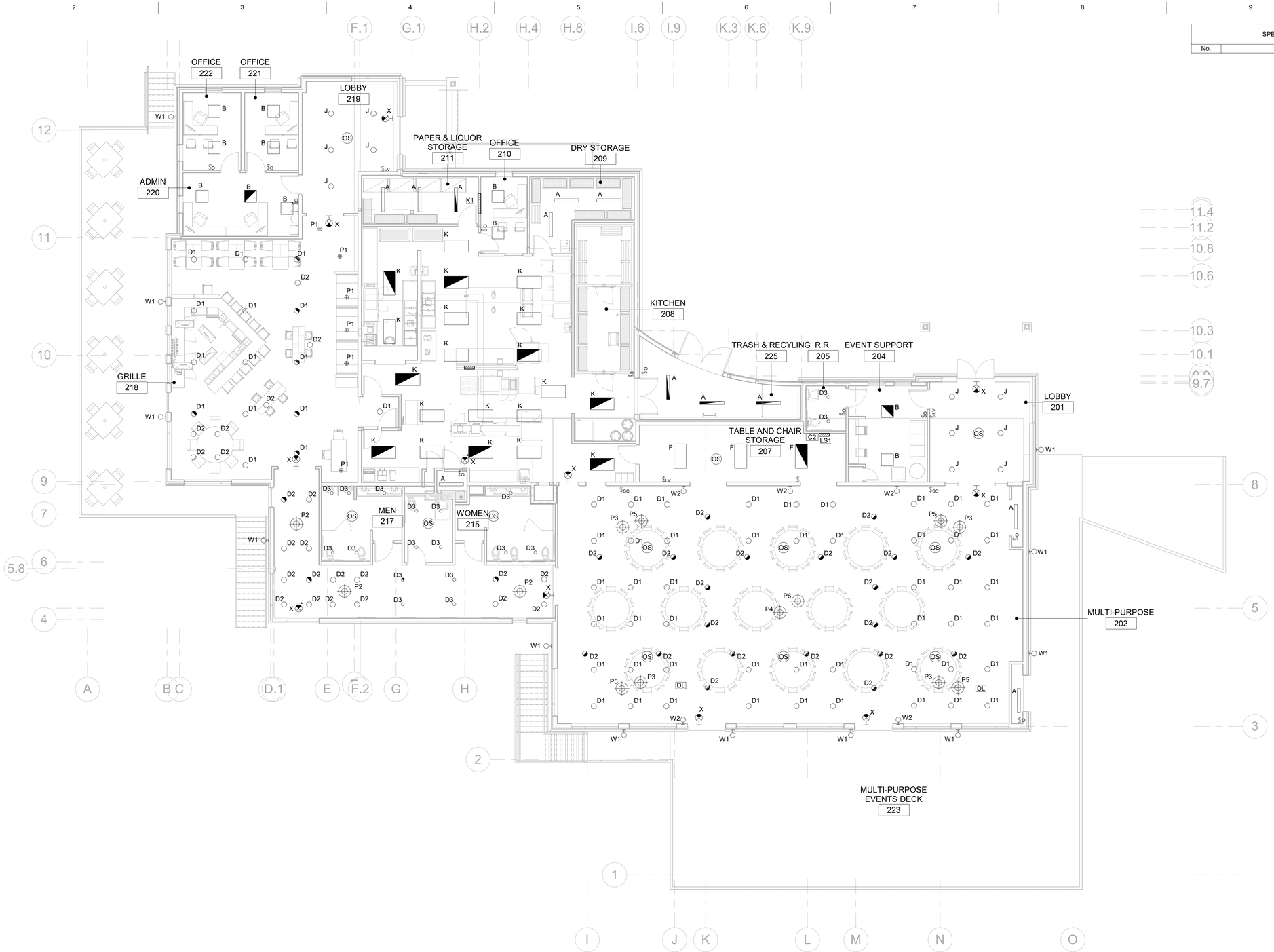
APPROVED DATE		APPROVED DATE	
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED DATE		APPROVED DATE	
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT OF WAY	

ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

SCALE: AS NOTED	PRO SHOP LEVEL - LIGHTING
DRAWN BY: SP	
CHECKED BY: DRW	
SHEET: 4 OF XXX	The Preserve at Eisenhower Clubhouse
PROJECT #: P570200	1576 Generals Highway,
CONTRACT #: P570205	Crownsville, Maryland 21032

JUNE 2023
20232548

SPECIFIC NOTES - ELECTRICAL NEW	
No.	KEYNOTE TEXT



1 MAIN LEVEL- LIGHTING
1/8" = 1'-0"

GRAPHIC SCALE 1/8" = 1'-0"
0 8 16 24 32

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT	E1.2

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ANNE ARUNDEL COUNTY — JUNE 2023
DEPARTMENT OF PUBLIC WORKS — 20232548

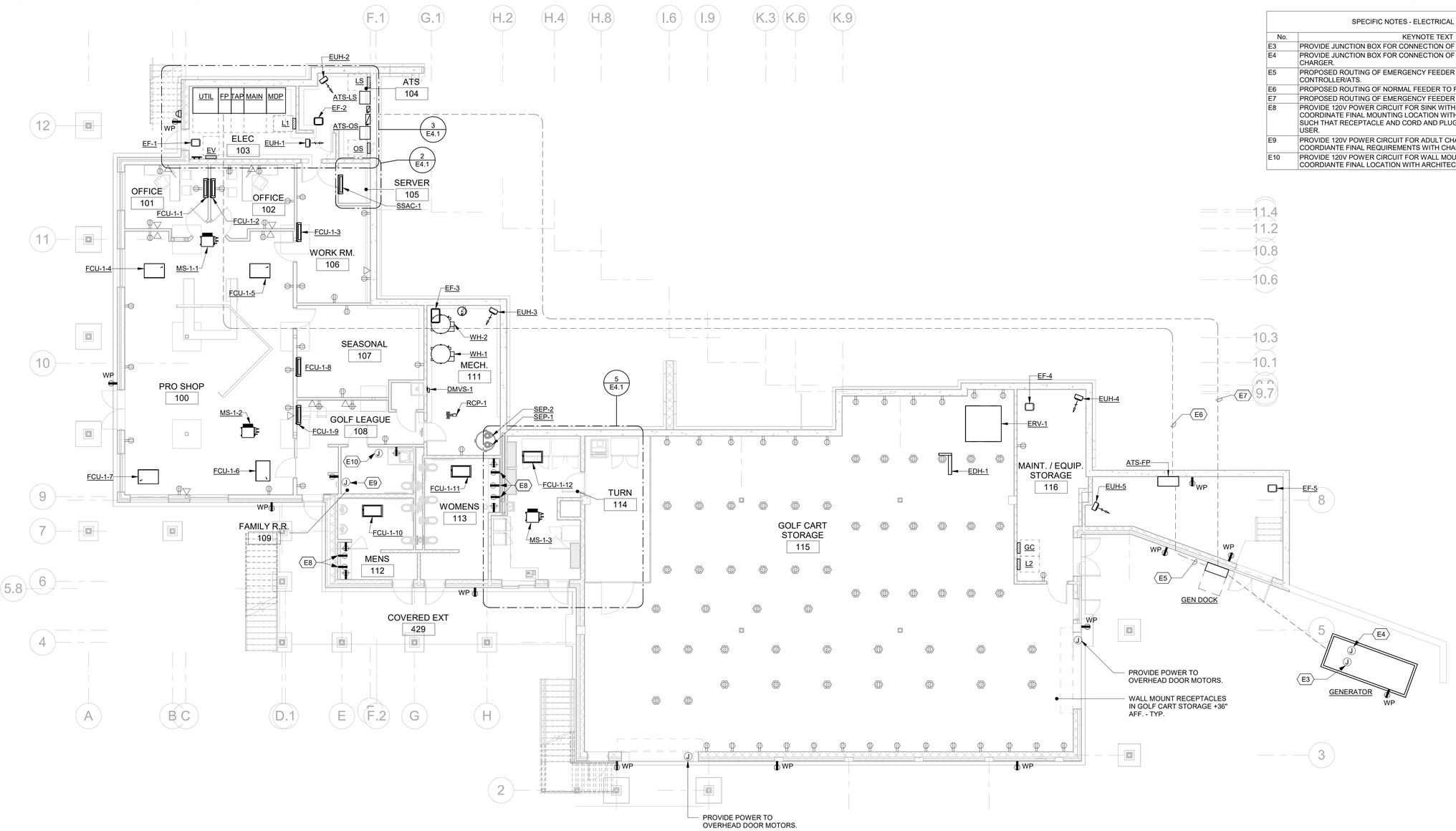
REVISED DATE	BY	APPROVED / DATE	APPROVED / DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED / DATE	APPROVED / DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY: SP
CHECKED BY: DRW
SHEET: 5 OF XXX
PROJECT #: P570200
CONTRACT #: P570205

MAIN LEVEL - LIGHTING

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

SPECIFIC NOTES - ELECTRICAL NEW	
No.	KEYNOTE TEXT
E3	PROVIDE JUNCTION BOX FOR CONNECTION OF GENERATOR BLOCK HEATER.
E4	PROVIDE JUNCTION BOX FOR CONNECTION OF GENERATOR BATTERY CHARGER.
E5	PROPOSED ROUTING OF EMERGENCY FEEDER TO FIRE PUMP CONTROLLER/ATS.
E6	PROPOSED ROUTING OF NORMAL FEEDER TO FIRE PUMP CONTROLLER/ATS.
E7	PROPOSED ROUTING OF EMERGENCY FEEDER TO ATS ROOM TROUGH.
E8	PROVIDE 120V POWER CIRCUIT FOR SINK WITH INTEGRAL HAND DRYERS. COORDINATE FINAL MOUNTING LOCATION WITH SINK INSTALLER. INSTALL SUCH THAT RECEPTACLE AND CORD AND PLUG ARE NOT VISIBLE TO END USER.
E9	PROVIDE 120V POWER CIRCUIT FOR ADULT CHANGING STATION. COORDIANTE FINAL REQUIREMENTS WITH CHANGING STATION PROVIDED.
E10	PROVIDE 120V POWER CIRCUIT FOR WALL MOUNTED HAND DRYER. COORDIANTE FINAL LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.



1 PRO SHOP LEVEL - POWER
1/8" = 1'-0"

N

GRAPHIC SCALE 1/8" = 1'-0"
0 8 16 24 32

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT	E2.1
ANNE ARUNDEL COUNTY	JUNE 2023
DEPARTMENT OF PUBLIC WORKS	20232548

PRO SHOP LEVEL - POWER

SCALE: AS NOTED
DRAWN BY: SP
CHECKED BY: DRW
SHEET: 6 OF XXX
PROJECT #: P570200
CONTRACT #: P570205

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

REVISED DATE | BY

APPROVED DATE — CHIEF ENGINEER
APPROVED DATE — ASSISTANT CHIEF ENGINEER
APPROVED DATE — PROJECT MANAGER
APPROVED DATE — CHIEF, RIGHT OF WAY

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

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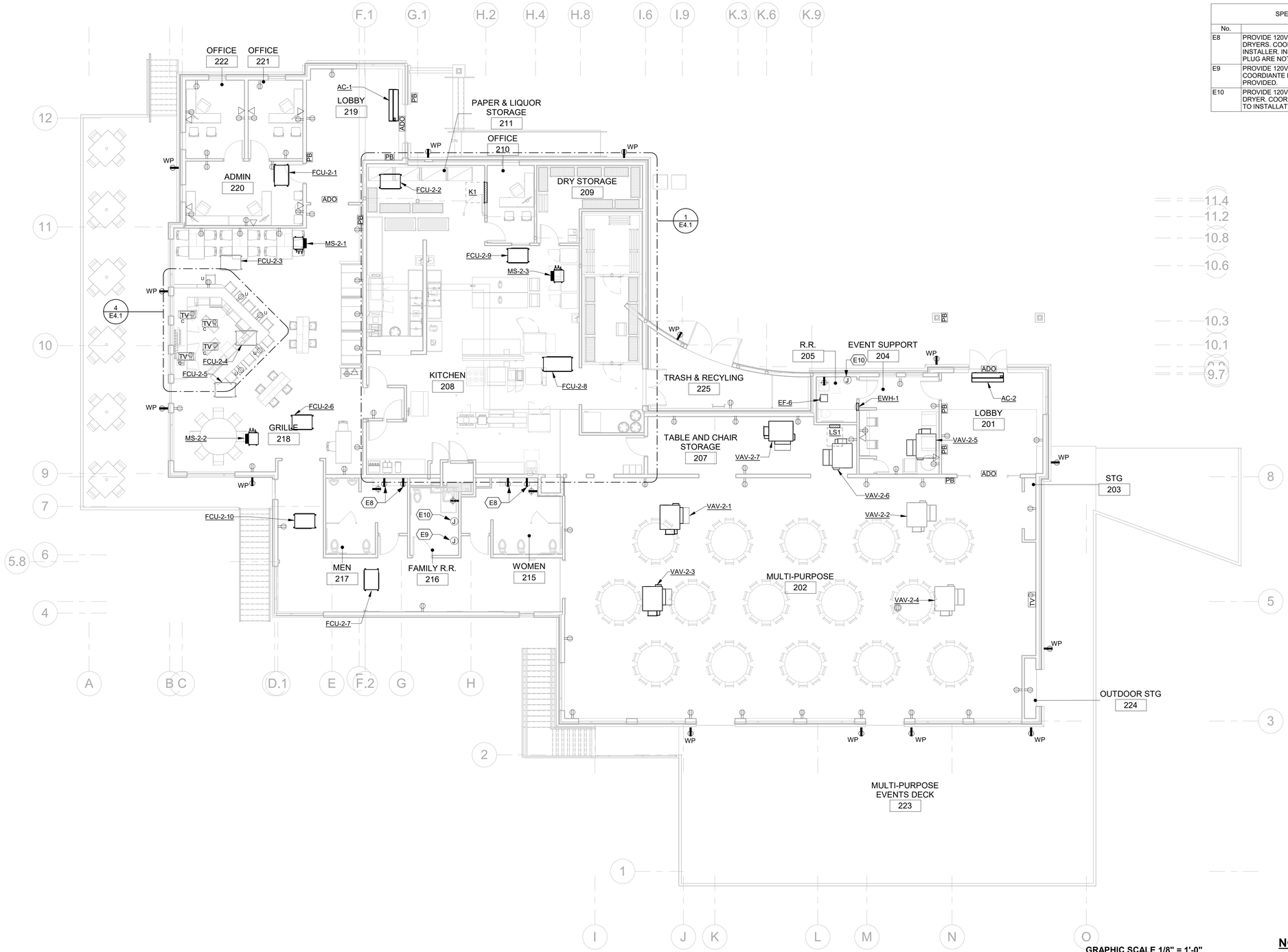
SPECIFIC NOTES - ELECTRICAL NEW	
No.	KEYNOTE TEXT
E8	PROVIDE 120V POWER CIRCUIT FOR SINK WITH INTEGRAL HAND DRYERS. COORDINATE FINAL MOUNTING LOCATION WITH SINK INSTALLER. INSTALL SUCH THAT RECEPTACLE AND CORD AND PLUG ARE NOT VISIBLE TO END USER.
E9	PROVIDE 120V POWER CIRCUIT FOR ADULT CHANGING STATION. COORDIANTE FINAL REQUIREMENTS WITH CHANGING STATION PROVIDED.
E10	PROVIDE 120V POWER CIRCUIT FOR WALL MOUNTED HAND DRYER. COORDIANTE FINAL LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.



1 MAIN LEVEL- POWER
1/8" = 1'-0"

GRAPHIC SCALE 1/8" = 1'-0"
0 8 16 24 32

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT	E2.2
ANNE ARUNDEL COUNTY	JUNE 2023
DEPARTMENT OF PUBLIC WORKS	20232548

MAIN LEVEL - POWER

SCALE: AS NOTED
DRAWN BY: SP
CHECKED BY: DRW
SHEET: 7 OF XXX
PROJECT #: P570200
CONTRACT #: P570205

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

REVISED DATE | BY

APPROVED DATE — CHIEF ENGINEER
APPROVED DATE — ASSISTANT CHIEF ENGINEER
APPROVED DATE — PROJECT MANAGER
APPROVED DATE — CHIEF, RIGHT OF WAY

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

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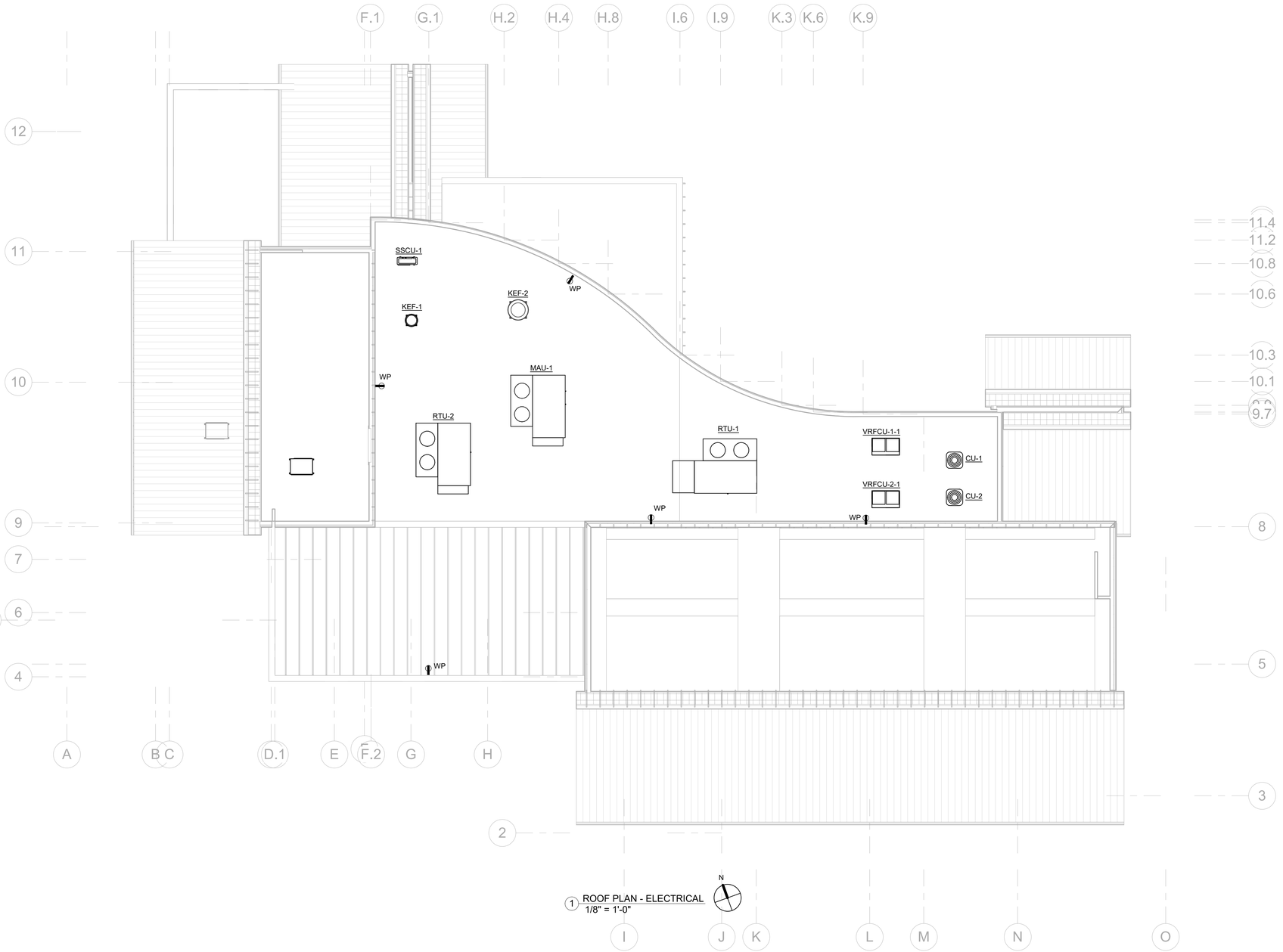
SPECIFIC NOTES - ELECTRICAL NEW	
No.	KEYNOTE TEXT



1 ROOF PLAN - ELECTRICAL
1/8" = 1'-0"

GRAPHIC SCALE 1/8" = 1'-0"
0 8 16 24 32

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT	E2.3

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ANNE ARUNDEL COUNTY — JUNE 2023
DEPARTMENT OF PUBLIC WORKS — 20232548

REVISED DATE	BY

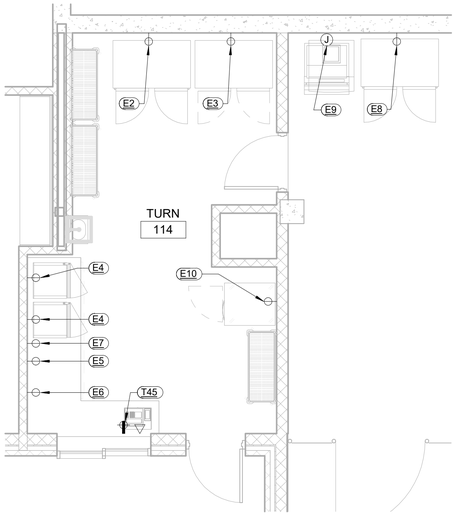
APPROVED DATE — CHIEF ENGINEER
APPROVED DATE — ASSISTANT CHIEF ENGINEER
APPROVED DATE — PROJECT MANAGER
APPROVED DATE — CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY: SP
CHECKED BY: DRW
SHEET: 8 OF XXX
PROJECT #: P570200
CONTRACT #: P570205

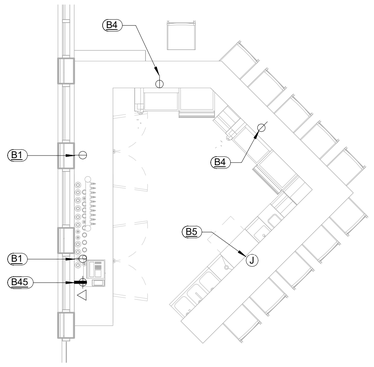
ROOF PLAN - ELECTRICAL

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

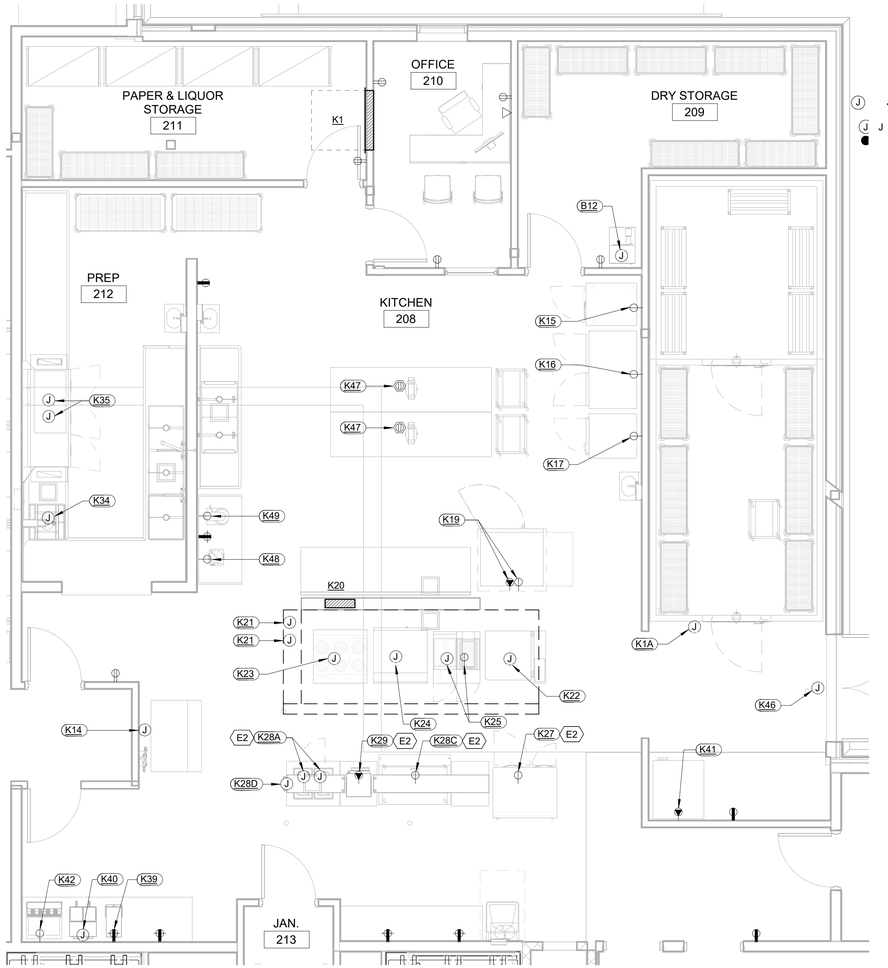
SPECIFIC NOTES - ELECTRICAL NEW	
No.	KEYNOTE TEXT
E2	COORDINATE LOCATION OF DEVICES STUBBED OUT OF FLOOR FOR CONNECTION OF KITCHEN EQUIPMENT WITH ARCHITEXT AND FOOD SERVICE VENDOR.



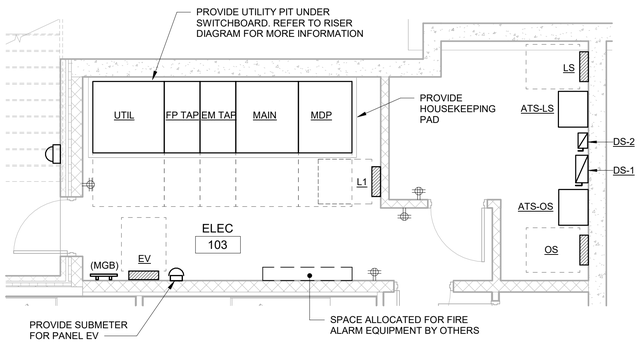
5 PART PLAN - TURN
1/4" = 1'-0"



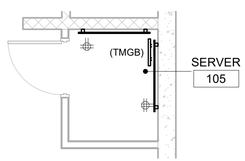
4 PART PLAN - BAR
1/4" = 1'-0"



1 PART PLAN - KITCHEN
1/4" = 1'-0"



3 PART PLAN - ELECTRIC ROOM
1/4" = 1'-0"



2 PART PLAN - TELECOM
1/4" = 1'-0"

NOT FOR CONSTRUCTION

GRAPHIC SCALE 1/4" = 1'-0"
0 4 8 12 16

DESIGN DEVELOPMENT	E4.1

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ARCHITECTURE + INTERIORS
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

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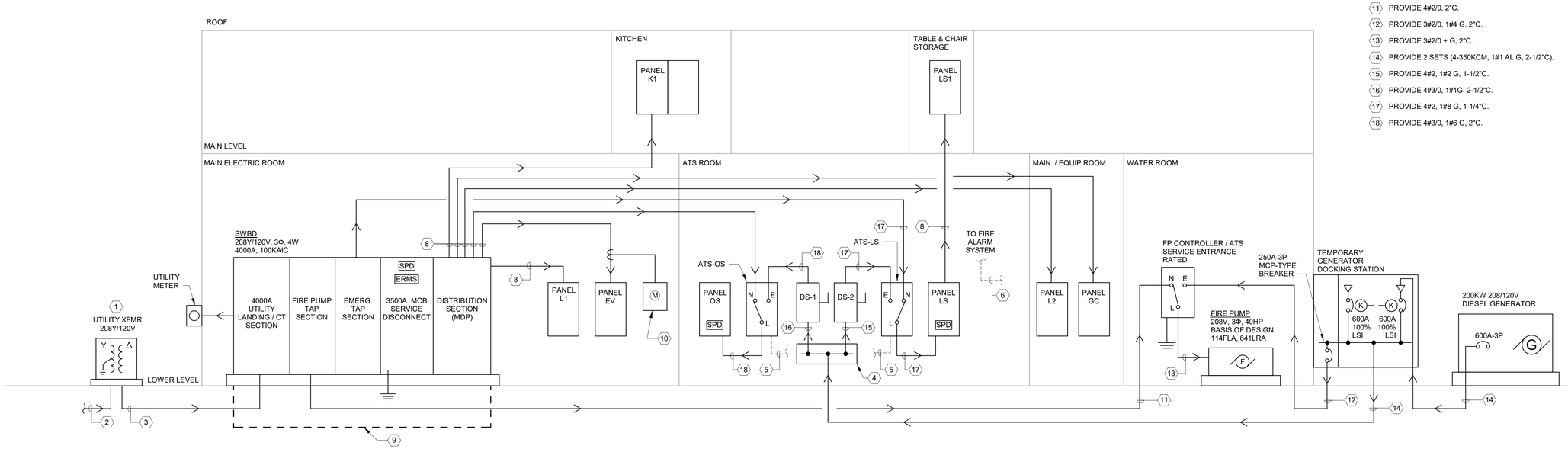
ANNE ARUNDEL COUNTY			JUNE 2023
DEPARTMENT OF PUBLIC WORKS			20232548
REVISED DATE / BY	APPROVED DATE CHIEF ENGINEER	APPROVED DATE PROJECT MANAGER	SCALE: AS NOTED DRAWN BY: SP CHECKED BY: DRW SHEET: 9 OF XXX PROJECT #: P570200 CONTRACT #: P570205
	APPROVED DATE ASSISTANT CHIEF ENGINEER	APPROVED DATE CHIEF, RIGHT OF WAY	

ELECTRICAL PART PLANS

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032



1 ELECTRICAL RISER DIAGRAM
NO SCALE

SPECIFIC NOTES

1. 3Φ UTILITY TRANSFORMER, 208Y/120V SECONDARY. PROVIDE TRANSFORMER PAD, GROUNDING, AND PRIMARY/SECONDARY DUCTS PER UTILITY SPECIFICATIONS.
2. INCOMING PRIMARY FEEDERS PROVIDED BY UTILITY IN CUSTOMER-PROVIDED, CONCRETE-ENCASED DUCTBANK PER UTILITY SPECIFICATIONS. REFER TO CIVIL DRAWINGS AND UTILITY-APPROVED DRAWINGS FOR DETAILS.
3. UTILITY SECONDARY FEEDERS. PROVIDE CONCRETE-ENCASED CONDUIT DUCTBANK PER UTILITY SPECIFICATIONS. CABLES FURNISHED AND INSTALLED BY UTILITY.
4. PROVIDE WIRE TROUGH, SIZED TO ACCOMMODATE CABLES AND SPLICES SHOWN.
5. PROVIDE GENERATOR START WIRING IN 1"C TO GENERATOR CONTROL PANEL.
6. PROVIDE SIGNAL WIRING IN 1"C TO MONITOR GENERATOR ALARMS VIA FIRE ALARM SYSTEM. REFER TO SPECIFICATION FOR PARAMETERS TO BE MONITORED.
7. REFER TO TRANSFORMER SECONDARY CIRCUIT SCHEDULE FOR REQUIREMENTS.
8. REFER TO PANEL SCHEDULE FOR CIRCUIT REQUIREMENTS.
9. PROVIDE RECESSED FLOOR PIT FOR SECONDARY SERVICE CONDUCTORS. FLOOR PIT SHALL BE PROVIDED PER BGE SPECIFICATIONS. PROVIDE DIVIDING WALL BETWEEN LANDING SECTION PIT AND DISTRIBUTION SECTION PIT.
10. PROVIDE SUB METER FOR PANEL EV.
11. PROVIDE 4#2/0, 2"C.
12. PROVIDE 3#2/0, 1#4 G, 2"C.
13. PROVIDE 3#2/0 + G, 2"C.
14. PROVIDE 2 SETS (4-350KCM, 1#1 AL G, 2-1/2"C).
15. PROVIDE 4#2, 1#2 G, 1-1/2"C.
16. PROVIDE 4#3/0, 1#1G, 2-1/2"C.
17. PROVIDE 4#2, 1#8 G, 1-1/4"C.
18. PROVIDE 4#3/0, 1#6 G, 2"C.

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DESIGN DEVELOPMENT	E5.1

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ANNE ARUNDEL COUNTY — JUNE 2023
DEPARTMENT OF PUBLIC WORKS — 20232548

REVISED DATE	BY	APPROVED / DATE	APPROVED / DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED / DATE	APPROVED / DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

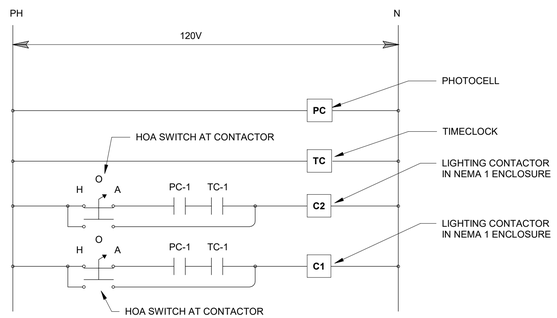
SCALE: AS NOTED
DRAWN BY: SP
CHECKED BY: DRW
SHEET: 10 OF XXX
PROJECT #: P570200
CONTRACT #: P570205

ELECTRICAL RISER DIAGRAM

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

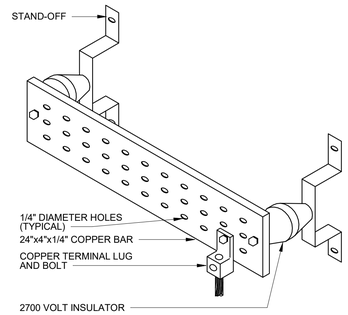
CONTACTOR SCHEDULE C1							(ELECTRIC ROOM 103)
POLE	VOLTS	AMPS	HOLD TYPE	CIRCUIT	30A CONTACTS NO	30A CONTACTS NC	REMARKS PHOTOCELL ON / PHOTOCELL OFF
1	120	20	ELEC.	LP-XX		X	REMARKS**
2							
3							
4							
5							
6							
7							
8							

CONTACTOR SCHEDULE C2							(STORAGE ROOM 207)
POLE	VOLTS	AMPS	HOLD TYPE	CIRCUIT	30A CONTACTS NO	30A CONTACTS NC	REMARKS PHOTOCELL ON / PHOTOCELL OFF
1	120	20	ELEC.	LP-XX		X	REMARKS**
2							
3							
4							
5							
6							
7							
8							

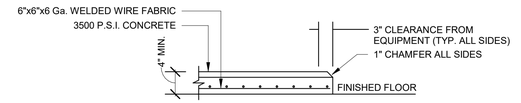


NOTE: CONTROL WIRING SHALL CONSIST OF #12'S IN 3/4" CONDUIT.

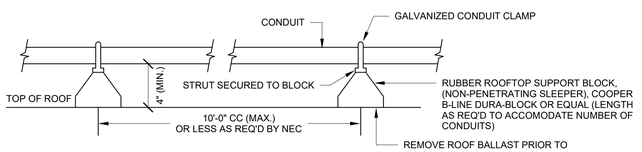
1 CONTROL DIAGRAM - EXTERIOR LIGHTING
NO SCALE



2 GROUND BUS BAR
NO SCALE

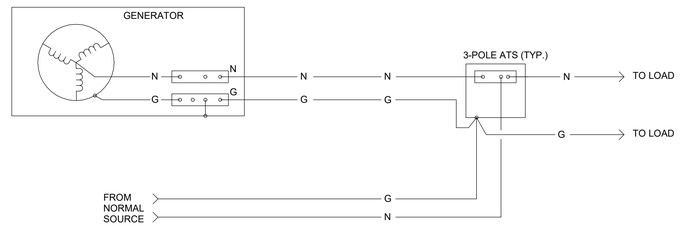


3 CONCRETE HOUSEKEEPING PAD DETAIL
NO SCALE



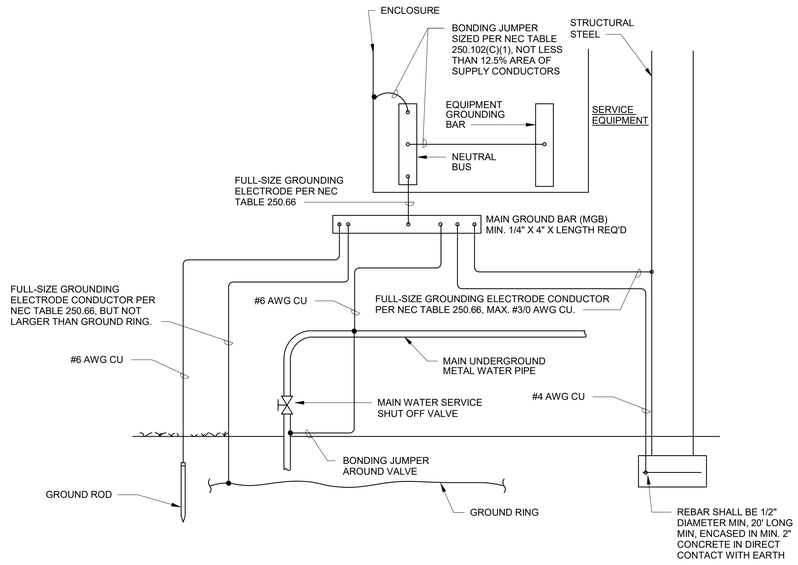
NOTE:
IF CONDUIT IS ROUTED HORIZONTALLY ALONG ROOF PER THIS DETAIL CONTRACTOR SHALL COORDINATE WITH ENGINEER TO DERATE CABLE SIZE PRIOR TO INSTALLATION.

4 ROOFTOP CONDUIT SUPPORT DETAIL
NO SCALE



NOTE ALL NEUTRAL AND GROUNDING CONDUCTORS SHALL BE ROUTED WITH PHASE CONDUCTORS, AND SIZED PER POWER RISER DIAGRAM.

5 GENERATOR GROUNDING SCHEMATIC
NO SCALE



6 GROUNDING ELECTRODE SYSTEM WIRING DIAGRAM
NO SCALE

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT	E5.2

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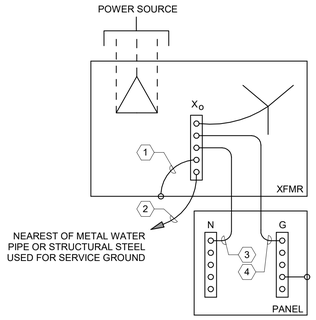
REVISED DATE	BY

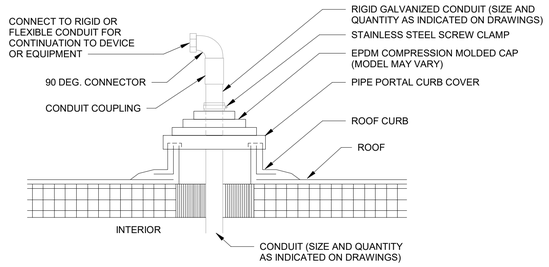
ANNE ARUNDEL COUNTY			JUNE 2023
DEPARTMENT OF PUBLIC WORKS			20232548
APPROVED DATE	APPROVED DATE	SCALE: AS NOTED	ELECTRICAL DETAILS
		DRAWN BY: SP	
CHIEF ENGINEER	PROJECT MANAGER	CHECKED BY: DRW	
APPROVED DATE	APPROVED DATE	SHEET: 11 OF XXX	The Preserve at Eisenhower Clubhouse 1576 Generals Highway, Crownsville, Maryland 21032
		PROJECT #: P570200	
ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	CONTRACT #: P570205	



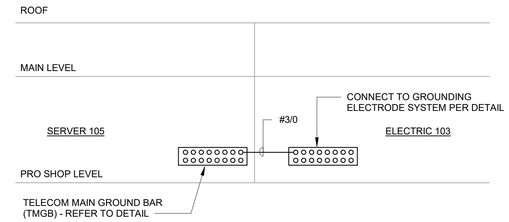
SPECIFIC NOTES

1. SYSTEM BONDING JUMPER SIZED PER NEC TABLE 250.102(C)(1)
2. GROUNDING ELECTRODE CONDUCTOR SIZED PER NEC TABLE 250.66
3. NEUTRAL CONDUCTOR - REFER TO POWER RISER DIAGRAM OR SINGLE-LINE DIAGRAM
4. SUPPLY-SIDE BONDING JUMPER SIZED PER NEC TABLE 250.102(C)(1)

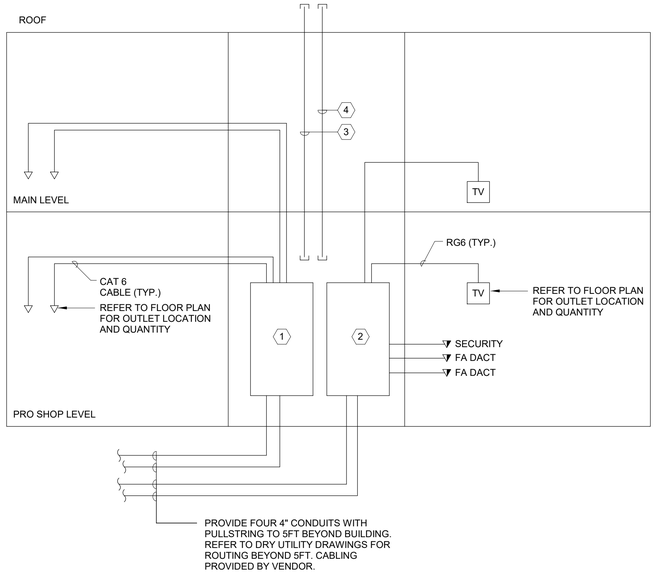
1 TRANSFORMER AND PANEL GROUNDING DETAIL
NO SCALE



2 CONDUIT ROOF PENETRATION DETAIL
NO SCALE



3 GROUND BAR RISER DIAGRAM
NO SCALE



4 TELECOMMUNICATIONS RISER
NO SCALE

GENERAL NOTES:

1. PROVIDE NYLON BUSHING ON END OF COMMUNICATIONS CONDUITS.
2. ALL TELECOM CONDUIT: MAX 180° BENDS BETWEEN PULLBOXES, MAX 100FT BETWEEN PULLBOXES, 36" BENDING RADIUS, PROVIDE PULLSTRING, LABEL EACH END, PROVIDE END BUSHING.

DRAWING NOTES:

1. PROVIDE 3/4"x4'x8' FIRE RESISTANT PLYWOOD FOR VERIZON FIOS. PROVIDE 6" STENCILED LETTERING LOCATED 12" FROM TOP OF PLYWOOD BACKBOARD TO READ "VERIZON EQUIPMENT ONLY". PAINT BACKBOARD, LEAVING FIRE RATING STAMP UNPAINTED. SURFACE MOUNT RECEPTACLE.
2. PROVIDE 3/4"x4'x8' FIRE RESISTANT PLYWOOD FOR COMCAST. PAINT BACKBOARD, LEAVING FIRE RATING STAMP UNPAINTED. SURFACE MOUNT RECEPTACLE.
3. PROVIDE ONE 4" EMPTY CONDUIT WITH BUSHING, PULLSTRING, AND WEATHERHEAD TO ROOF LEVEL FOR FUTURE SATELLITE VENDOR. COORDINATE LOCATION AND TERMINATION WITH OWNER.
4. PROVIDE ONE 4" EMPTY CONDUIT WITH BUSHING, PULLSTRING, AND WEATHERHEAD TO ROOF LEVEL FOR CONNECTION TO FUTURE DAS DONOR ANTENNA. COORDINATE LOCATION AND TERMINATION WITH OWNER.

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT	E5.3
ANNE ARUNDEL COUNTY	JUNE 2023
DEPARTMENT OF PUBLIC WORKS	20232548

No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

REVISED DATE / BY

APPROVED DATE — CHIEF ENGINEER
APPROVED DATE — ASSISTANT CHIEF ENGINEER
APPROVED DATE — PROJECT MANAGER
APPROVED DATE — CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY: SP
CHECKED BY: DRW
SHEET: 12 OF XXX
PROJECT #: P570200
CONTRACT #: P570205

ELECTRICAL DETAILS

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

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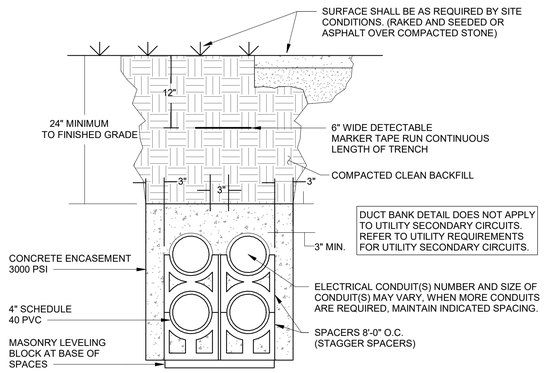
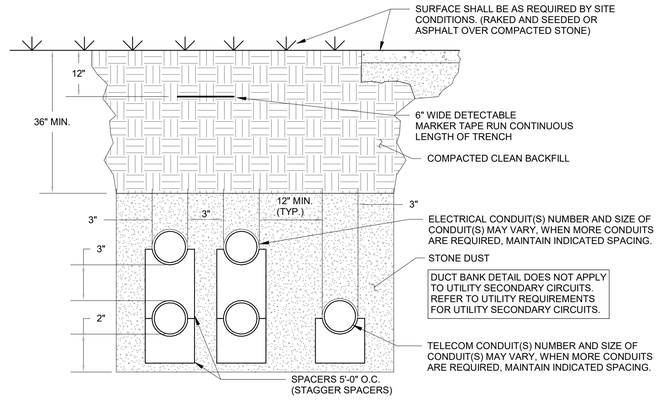
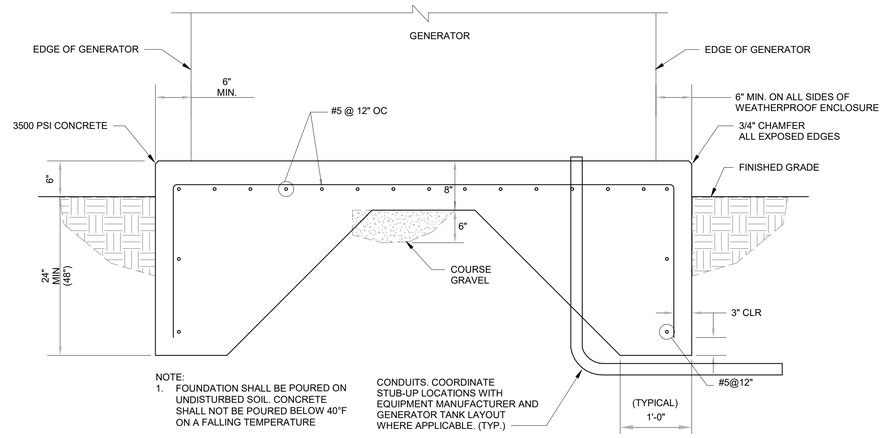


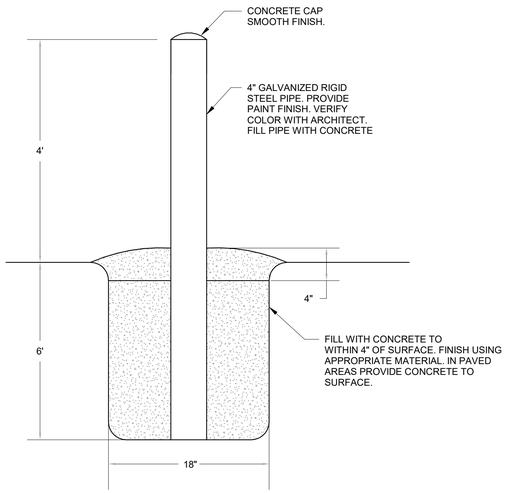
1 CONCRETE DUCT BANK DETAIL
NO SCALE



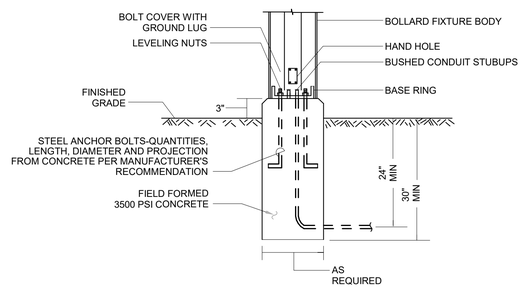
2 UNDERGROUND DUCT BANK DETAIL
NO SCALE



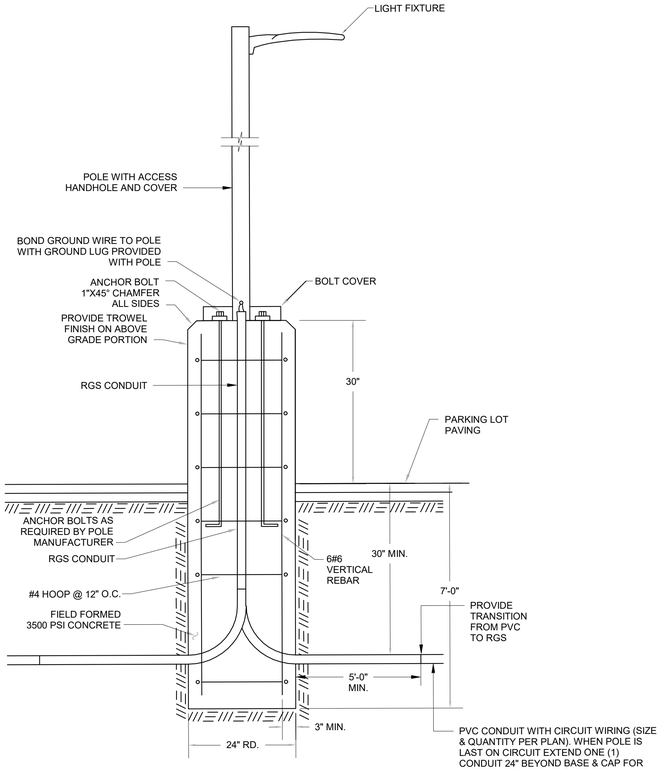
3 GENERATOR PAD DETAIL
NO SCALE



4 BOLLARD DETAIL
NO SCALE



5 LIGHTING BOLLARD FOUNDATION DETAIL
NO SCALE



6 LIGHT POLE FOUNDATION DETAIL - 30"
NO SCALE

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT	E5.4

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REVISED DATE	BY

ANNE ARUNDEL COUNTY	JUNE 2023
DEPARTMENT OF PUBLIC WORKS	20232548

APPROVED DATE	APPROVED DATE		
CHIEF ENGINEER	PROJECT MANAGER	SCALE: AS NOTED	ELECTRICAL DETAILS
		DRAWN BY: SP	
APPROVED DATE	APPROVED DATE	CHECKED BY: DRW	
ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	SHEET: 13 OF XXX	The Preserve at Eisenhower Clubhouse 1576 Generals Highway, Crownsville, Maryland 21032
		PROJECT #: P570200	
		CONTRACT #: P570205	

MECHANICAL EQUIPMENT CONNECTION SCHEDULE

Type Mark	VOLTS	PH	MCA	MOCP	WATTS	SS POLES	SS RATED AMPS	FUSE AMPS	FUSE TYPE	MOTOR STARTER/SIZE	PANEL	CIRCUIT	REMARKS
AC-1	208 V	3											
AC-2	208 V	3											
CU-1	208 V		15.0 A	20 A									
CU-2	208 V		15.0 A	20 A									
DMVS-1	120 V				50 VA	1							
EDH-1	208 V	3											
EF-1	120 V	1	0.0 A	15 A	0 VA	1							
EF-2	120 V	1	0.0 A	15 A	0 VA	1							
EF-3	120 V	1	0.0 A	15 A	0 VA	1							
EF-4	120 V	1	0.0 A	15 A	0 VA	1							
EF-5	120 V	1	0.0 A	15 A	0 VA	1							
EF-6	120 V	1	0.0 A	15 A	0 VA	1							
ERV-1													
EUH-1	208 V	3	18.0 A	20 A	5 VA	2	30A	NF		--			
EUH-2	208 V	3	18.0 A	20 A	5 VA	2							
EUH-3	208 V	3	18.0 A	20 A	5 VA	2	30A	NF		--			
EUH-4	208 V	3	18.0 A	20 A	5 VA	2	30A	NF		--			
EUH-5	208 V	3	18.0 A	20 A	5 VA	2	30A	NF		--			
EWH-1													
FCU-1-1	208 V	1	0.0 A	15 A	125 VA	2	MOTOR RATED TOGGLE	--		--			
FCU-1-2	208 V	1	0.5 A	15 A	104 VA	2	MOTOR RATED TOGGLE	--		--			
FCU-1-3	208 V	1	0.0 A	15 A	104 VA	2	MOTOR RATED TOGGLE	--		--			
FCU-1-4	208 V	1	0.0 A	15 A		2							
FCU-1-5	208 V	1	0.0 A	15 A		2							
FCU-1-6	208 V	1	0.0 A	15 A		2							
FCU-1-7	208 V	1	0.0 A	15 A		2							
FCU-1-8	208 V	1	0.0 A	15 A	3120 VA	2							
FCU-1-9	208 V	1	0.0 A	15 A	3120 VA	2							
FCU-1-10	208 V	1	0.0 A	15 A		2							
FCU-1-11	208 V	1	0.0 A	15 A		2							
FCU-1-12	208 V	1	0.0 A	15 A		2							
FCU-2-1	208 V	1	0.0 A	15 A	333 VA	2	MOTOR RATED TOGGLE	--		--			
FCU-2-2	208 V	1	0.0 A	15 A	333 VA	2	MOTOR RATED TOGGLE	--		--			
FCU-2-3	208 V	1	0.0 A	15 A	333 VA	2	MOTOR RATED TOGGLE	--		--			
FCU-2-4	208 V	1	0.0 A	15 A	333 VA	2	MOTOR RATED TOGGLE	--		--			
FCU-2-5	208 V	1	0.0 A	15 A	333 VA	2	MOTOR RATED TOGGLE	--		--			
FCU-2-6	208 V	1	0.0 A	15 A	333 VA	2	MOTOR RATED TOGGLE	--		--			
FCU-2-7	208 V	1	0.0 A	15 A	333 VA	2	MOTOR RATED TOGGLE	--		--			
FCU-2-8	208 V	1	0.0 A	15 A	520 VA	2	MOTOR RATED TOGGLE	--		--			
FCU-2-9	208 V	1	0.0 A	15 A	333 VA	2	MOTOR RATED TOGGLE	--		--			
FCU-2-10	208 V	1	0.0 A	15 A	333 VA	2	MOTOR RATED TOGGLE	--		--			
KEF-1	120 V	1	0.0 A	15 A	29 VA	1	MOTOR RATED TOGGLE			--			
KEF-2	208 V	3	0.0 A	15 A	2493 VA	3	30A	NF		--			
MAU-1	208 V	3	0.0 A	0 A	20773 VA	3	30A	NF		--			
MS-1-1	208 V	1	0.0 A	15 A	0 VA	1	MOTOR RATED TOGGLE						
MS-1-2	208 V	1	0.0 A	15 A	0 VA	1	MOTOR RATED TOGGLE						
MS-1-3	208 V	1	0.0 A	15 A	0 VA	1	MOTOR RATED TOGGLE						
MS-2-1	208 V	1	0.0 A	15 A	0 VA	1	MOTOR RATED TOGGLE						
MS-2-2	208 V	1	0.0 A	15 A	0 VA	1	MOTOR RATED TOGGLE						
MS-2-3	208 V	1	0.0 A	15 A	0 VA	1	MOTOR RATED TOGGLE						
RCP-1	120 V	1	0.0 A	0 A	44 VA	1	MOTOR RATED TOGGLE						
RTU-1	208 V	3	231.0 A	250 A	70686 VA	3	400A	250A		--			
RTU-2	208 V	3	223.0 A	250 A	68238 VA	3	400A	250A		--			
SEP-1	0 V		0.0 A	0 A									
SEP-2	0 V		0.0 A	0 A									
SSAC-1	208 V	1	0.6 A	15 A	125 VA	2	MOTOR RATED TOGGLE	--		--			
SSCU-1	208 V	1			3432 VA	2							
VAV-2-1	208 V	3	0.0 A	15 A	1040 VA	2	MOTOR RATED TOGGLE	--		--			
VAV-2-2	208 V	3	0.0 A	15 A	1643 VA	2	MOTOR RATED TOGGLE	--		--			
VAV-2-3	208 V	3	0.0 A	15 A	1040 VA	2	MOTOR RATED TOGGLE	--		--			
VAV-2-4	208 V	3	0.0 A	15 A	1040 VA	2	MOTOR RATED TOGGLE	--		--			
VAV-2-5	208 V	3	0.0 A	15 A	1040 VA	2	MOTOR RATED TOGGLE	--		--			
VAV-2-6	208 V	3	0.0 A	15 A	1040 VA	2	MOTOR RATED TOGGLE	--		--			
VAV-2-7	208 V	3	0.0 A	15 A	1040 VA	2	MOTOR RATED TOGGLE	--		--			
VRFCU-1-1	208 V	3	0.0 A	0 A	17451 VA	3							
VRFCU-2-1	208 V	3	0.0 A	0 A	25761 VA	3							
WH-1	208 V	3											
WH-2	208 V	3											

TRANSFER SWITCH SCHEDULE

Panel Name	PURPOSE	AMPS	VOLTS	PHASE	NEMA RATING	NEUTRAL	POLES	WCR	TRANSFER TYPE	INITIAL TRANSFER DELAY	RETRANSFER DELAY
ATS-LS	LIFE SAFETY	100 A	208 V	3	NEMA 1	S/N	4	0 kA	OPEN	0 SEC	10 MIN
ATS-OS	OPTIONAL EQUIPMENT	200 A	208 V	3	NEMA 1	S/N	4	0 kA	OPEN	25 SEC	15 MIN

DISCONNECT SCHEDULE

ID TAG	VOLTS	RATED AMPS	POLES	FUSE AMPS	FUSE TYPE	NEMA RATING	REMARKS
DS-1	240 V	200 A	3	200	CLASS RK1	1	OS SYSTEM DISCONNECT
DS-2	240 V	100 A	3	100	CLASS RK1	1	LS SYSTEM DISCONNECT

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	VOLTS	LAMP TYPE	WATTS	LUMENS	COLOR TEMP. (K)	CRI	MOUNTING	MANUFACTURER	MODEL SERIES	REMARKS
A	4' STRIP LIGHT, NO REFLECTOR, DROP LENS, 0-10V DIMMING DRIVER, HANGER CHAIN	120 V	LED	41 VA	5000 lm	3500 K	80	SURFACE	LITHONIA	ZL1D	
B	2 X 2 RECESSED TROFFER	120 V	LED	0 VA	0 lm	3500 K		RECESSED	LITHONIA	2BLT2	
D1		120 V	LED	0 VA	0 lm	0 K		RECESSED	LITHONIA		
D2		120 V	LED	0 VA	0 lm	0 K		RECESSED	LITHONIA		
D3		120 V	LED	0 VA	0 lm	0 K		RECESSED	LITHONIA		
EM	DUAL HEAD EMERGENCY LIGHT WITH 90 MINUTE BATTERY BACK UP, NICAD BATTERY, AIMABLE OPTICS, WHITE HOUSING	277 V	LED	5 VA	0 lm	0 K	--	WALL	LITHONIA	ELM4L	
F	2 X 4 RECESSED TROFFER	120 V	LED	0 VA	0 lm	3500 K		RECESSED	LITHONIA	2BLT4	
G	ENCLOSED AND GASKETED, GARAGE	120 V	LED	49 VA	6000 lm	3500 K	80	SURFACE	LITHONIA	VAP LED	
H	CANOPY STYLE SURFACE MOUNT	120 V	LED	0 VA	0 lm	4000 K	70	SURFACE			
J	SURFACE MOUNT CYLINDRICAL DOWNLIGHT	120 V	LED	0 VA	0 lm	3500 K	80	SURFACE	LITHONIA	LDN6	
K	2 X 4 MVOLT, NSF WET LOCATION	120 V	LED	0 VA	0 lm	4000 K	90	RECESSED	LITHONIA	2SRTL	
P1	PENDANT, TBD	120 V	LED	0 VA	0 lm	0 K		SURFACE			
P2	PENDANT, TBD	120 V	LED	0 VA	0 lm	0 K		SURFACE			
P3	PENDANT, TBD	120 V	LED	0 VA	0 lm	0 K		SURFACE			
P4	PENDANT, TBD	120 V	LED	0 VA	0 lm	0 K		SURFACE			
P5	PENDANT, TBD	120 V	LED	0 VA	0 lm	0 K		SURFACE			
P6	PENDANT, TBD	120 V	LED	0 VA	0 lm	0 K		SURFACE			
R1	SINGLE HEAD SITE FIXTURE ON 15 FOOT POLE, TYPE P2 LUMEN PACKAGE, TYPE R3 DISTRIBUTION WITH HOUSE-SIDE SHIELD, MVOLT	208 V	LED	73 VA	9840 lm	4000 K	70	POLE	LITHONIA	RSX1 LED SERIES	
R2	SINGLE HEAD SITE FIXTURE ON 15 FOOT POLE, TYPE P3 LUMEN PACKAGE, TYPE R5 DISTRIBUTION, MVOLT	208 V	LED	109 VA	14400 lm	4000 K	70	POLE	LITHONIA	RSX1 LED SERIES	
R3	DECORATIVE BOLLARD, ASYMMETRIC DISTRIBUTION, 350mA DRIVE CURRENT, ARCHITECT SHALL SELECT FINISH	120 V	LED	16 VA	810 lm	4000 K	70	GRADE	LITHONIA	KBC8	
W1	EXTERIOR WALL SCONCE	120 V	LED	0 VA	0 lm	4000 K	70	WALL			
W2	INTERIOR WALL SCONCE	120 V	LED	0 VA	0 lm	4000 K	70	WALL			
X	EDGE LIT EXIT SIGN, ARCHTIECT TO SELECT TRIM FINISH, MIRRORED BACKGROUND. LETTER COLOR PER AHJ, AC ONLY, MOUNTING ORIENTATION AND CHEVRONS AS REQUIRED	277 V	LED	5 VA	0 lm	0 K	--	VERIFY IN FIELD	LITHONIA	EDG / EDGR	

FOOD SERVICE EQUIPMENT CONNECTION SCHEDULE

H	DESCRIPTION	VOLTAGE	PHASE	AMPS	KW	DS TYPE	PANEL	CIRCUIT	REMARKS
B1	UNDERBAR REFRIGERATOR	120 V	1	1.6 A	0.20 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 18" AFF
B1	UNDERBAR REFRIGERATOR	120 V	1	1.6 A	0.20 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 18" AFF
B4	GLASS CHILLER	120 V	1	3.8 A	0.50 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 18" AFF
B4	GLASS CHILLER	120 V	1	3.8 A	0.50 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 18" AFF
B5	UNDER COUNTER GLASS WASHER	120 V	1	16.0 A	1.92 kVA	DIRECT			
B12	BEVERAGE CHILLING SYSTEM	120 V	1	14.4 A	1.73 kVA	DIRECT			PROVIDE MOTOR RATED TOGGLE SWITCH
B45	POS SYSTEM	120 V	1	4.0 A	0.50 kVA	CORD & PLUG			NEMA 5-20R
E2	EXISTING REACH-IN REFRIGERATOR	120 V	1	7.0 A	0.85 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 7'-0" AFF
E3	EXISTING REACH-IN FREEZER	120 V	1	11.0 A	1.29 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 7'-0" AFF
E4	EXISTING COUNTERTOP REFRIGERATOR	120 V	1	6.5 A	0.78 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 18" AFF
E4	EXISTING COUNTERTOP REFRIGERATOR	120 V	1	6.5 A	0.78 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 18" AFF
E5	EXISTING MICROWAVE	120 V	1	12.0 A	1.50 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 48" AFF
E6	EXISTING HOT DOG GRILL	120 V	1	12.0 A	1.50 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 48" AFF
E7	EXISTING UNDER COUNTER REFRIGERATOR	120 V	1	6.5 A	0.78 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 18" AFF
E8	EXISTING REACH-IN REFRIGERATOR	120 V	1	7.0 A	0.85 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 7'-0" AFF
E9	EX ICE MACHINE	120 V	1	15.2 A	1.82 kVA	DIRECT			PROVIDE MOTOR RATED TOGGLE SWITCH
E10	EXISTING REACH-IN REFRIGERATOR	120 V	1	7.0 A	0.85 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 7'-0" AFF
K1A	WALK-IN COOLER LTG/MONITORING POWER	120 V	1	10.5 A	1.30 kVA	DIRECT			
K14	ICE MACHINE	208 V	3	9.5 A	3.42 kVA	DIRECT			
K15	REACH-IN REFRIGERATOR	120 V	1	5.2 A	0.63 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 7'-0" AFF
K16	REACH-IN FREEZER	120 V	1	9.0 A	1.08 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 7'-0" AFF
K17	REACH IN HEATED CABINET	208 V	1	7.2 A	1.50 kVA	CORD & PLUG			NEMA 6-15R, MOUNTED AT 18" AFF
K19	COMBI OVEN	208 V	3	62.2 A	22.40 kVA	DIRECT			
K19	COMBI OVEN - HOOD	120 V	1	1.4 A	0.17 kVA	CORD & PLUG			NEMA 6-15R, MOUNTED AT 18" AFF
K21	EXHAUST HOOD CONTROL	120 V	1	9.0 A	1.00 kVA	DIRECT			
K21	EXHAUST HOOD FIRE SUPPRESSION SYSTEM	120 V	1	10.0 A	1.20 kVA	DIRECT			
K22	MULTI - COOKER	208 V	3	64.0 A	23.00 kVA	DIRECT			
K23	6 BURNER RANGE WITH OVEN	208 V	3	60.0 A	21.60 kVA	DIRECT			
K24	GRIDDLE	208 V	1	72.0 A	15.00 kVA	DIRECT			
K25	FRYER HEAT LAMP	120 V	1	6.3 A	0.83 kVA	CORD & PLUG			NEMA 5-15R,
K25	FRYER STATION	208 V	3	39.0 A	14.00 kVA	CORD & PLUG			
K27	REFRIGERATED WORK TOP	120 V	1	4.5 A	0.54 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 48" AFF
K28A	HOT FOOD COUNTER	208 V	1	10.0 A	2.08 kVA	DIRECT			
K28A	HOT FOOD COUNTER	208 V	1	24.0 A	5.00 kVA	DIRECT			
K28C	REFRIGERATED PREP COUNTER	120 V	1	4.0 A	0.48 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 18" AFF
K28D	DOUBLE SHELF HEAT LAMP	120 V	1	17.5 A	2.10 kVA	DIRECT			
K29	CONVEYOR TOASTER	208 V	1	16.0 A	3.30 kVA	CORD & PLUG			NEMA L6-20R, MOUNT RECEPTACLE 42" AFF
K34	DISPOSER	208 V	3	7.8 A	2.80 kVA	DIRECT			PROVIDE 30A-240V-3P-NF-NEMA 1 DISCONNECT SWITCH. COORDINATE FINAL MOUNTING LOCATION
K35	DISHWASHING MACHINE	208 V	3	41.6 A	15.00 kVA	DIRECT			PROVIDE 60A-240V-3P-NF-NEMA 1 DISCONNECT SWITCH. COORDINATE FINAL MOUNTING LOCATION
K35	DISHWASHING MACHINE BOOSTER HEATER	208 V	3	83.0 A	30.00 kVA	DIRECT			PROVIDE 100A-240V-3P-NF-NEMA 1 DISCONNECT SWITCH. COORDINATE FINAL MOUNTING LOCATION
K39	ICE TEA BREWER	120 V	1	14.0 A	1.68 kVA	CORD & PLUG			NEMA 5-15R
K40	COFFEE DISPENSER	120 V	1	15.0 A	1.80 kVA	DIRECT			
K41	BLAST CHILLER FREEZER	208 V	3	9.1 A	3.10 kVA	CORD & PLUG			NEMA L14-20R, MOUNT RECEPTACLE 42" AFF
K42	SODA DISPENSER	120 V	1	6.5 A	0.78 kVA	CORD & PLUG			NEMA 5-15R, MOUNTED AT 48" AFF
K46	FLY FAN	120 V	1	10.0 A	1.20 kVA	DIRECT			
K47	RETRACTABLE CORD REEL	120 V	1	10.0 A	1.20 kVA	CORD & PLUG			NEMA 5-20R, MOUNTED AT CEILING
K47	RETRACTABLE CORD REEL	120 V	1	10.0 A	1.20 kVA	CORD & PLUG			NEMA 5-20R, MOUNTED AT CEILING
K48	FOOD PROCESSOR	120 V	1	5.8 A	0.70 kVA	CORD & PLUG			NEMA 5-20R, MOUNTED AT 4'-0" AFF
K49	5 QUART TABLE MIXER	120 V	1	4.0 A	0.80 kVA	CORD & PLUG			NEMA 5-20R, MOUNTED AT 4'-0" AFF
T45	POS SYSTEM	120 V	1	4.0 A	0.50 kVA	CORD & PLUG			NEMA 5-20R

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT | E6.1

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road
Hunt Valley, MD 21031
Phone: (443) 589-2400
www.centuryeng.com

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No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland, license number 37790, expiration date 08.06.2023.

ANNE ARUNDEL COUNTY | JUNE 2023
DEPARTMENT OF PUBLIC WORKS | 20232548

REVISED DATE	BY

APPROVED DATE
CHIEF ENGINEER
APPROVED DATE
ASSISTANT CHIEF ENGINEER
APPROVED DATE
PROJECT MANAGER
APPROVED DATE
CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY: SP
CHECKED BY: DRW
SHEET: 14 OF XXX
PROJECT #: P570200
CONTRACT #: P570205

EQUIPMENT SCHEDULES

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

Branch Panel: MDP

Location: ELEC 103
Supply From:
Mounting: FLOOR
Enclosure: NEMA 1

Volts: 208Y/120
Phases: 3
Wires: 4

A.I.C. Rating: 100K
BUS OCP Type: 4000
BUS Rating: 4000 A
MCB Rating: NONE

Notes:

CKT	Circuit Description	Notes	Trip	Poles	Wire & Conduit Size	A	B	C	A	B	C	Wire & Conduit Size	Poles	Trip	Notes	Circuit Description	CKT
1	PANEL L1		400 A	3	2 SETS (4#3/0, 1#3 G, 2" C)	0.0 kVA			0.0 kVA			2 SETS (4#3/0, 1#3 G, 2" C)	3	400 A		PANEL L2	2
3	--	--	--	--	--		0.0 kVA			0.0 kVA		--	--	--	--	--	4
5	--	--	--	--	--			0.0 kVA			0.0 kVA	--	--	--	--	--	6
7	PANEL K1		600 A	3	2 sets(4-350KCM, 1#1 G, 2-1/2" C)	0.0 kVA			13.3...			2 SETS (4#3/0, 1#3 G, 2" C)	3	400 A		PANEL EV	8
9	--	--	--	--	--		0.0 kVA			13.3...		--	--	--	--	--	10
11	--	--	--	--	--			0.0 kVA			13.3...	--	--	--	--	--	12
13	ATS-LS		100 A	3	4#2, 1#8 G, 1-1/4" C	0.0 kVA			0.0 kVA			4#4/0, 1#4 G, 2" C	3	225 A		ATS-OS	14
15	--	--	--	--	--		0.0 kVA			0.0 kVA		--	--	--	--	--	16
17	--	--	--	--	--			0.0 kVA			0.0 kVA	--	--	--	--	--	18
19	PANEL GC		600 A	3	2 sets(4-350KCM, 1#1 G, 2-1/2" C)	0.0 kVA											20
21	--	--	--	--	--		0.0 kVA										22
23	--	--	--	--	--			0.0 kVA									24
25																	26
27																	28
29																	30
31																	32
33																	34
35																	36
37																	38
39																	40
41																	42
					Total Load:	13.3 kVA		13.3 kVA			13.3 kVA						
					Total Amps:	111 A		111 A			111 A						

Load Classification	Connected Load	Demand Factor	Demand	Panel Totals	
Electric Vehicle	39936 VA	100.00%	39936 VA		
				Total Conn. Load:	39936 VA
				Total Est. Demand:	39936 VA
				Total Conn. Current:	111 A
				Total Est. Demand Current:	111 A

Notes:

Branch Panel: LS

Location: ATS 104
Supply From: ATS-LS
Mounting: SURFACE
Enclosure: NEMA 1

Volts: 208Y/120
Phases: 3
Wires: 4

A.I.C. Rating:
BUS OCP Type: MLO
BUS Rating: 100 A

Notes:
PROVIDE FUSIBLE PANELBOARD. BRANCH OVERCURRENT PROTECTION DEVICES SHALL BE FUSE TYPE. REFER TO SPECIFICATIONS FOR REQUIREMENTS.
PROVIDE PANEL WITH INTEGRAL SPD.

CKT	Circuit Description	Notes	Trip	Poles	Wire & Conduit Size	A	B	C	A	B	C	Wire & Conduit Size	Poles	Trip	Notes	Circuit Description	CKT
1	PANEL LS1		50 A	3	4#6, 1#10 G, 3/4" C	0.0 kVA											2
3	--	--	--	--	--		0.0 kVA										4
5	--	--	--	--	--			0.0 kVA									6
7																	8
9																	10
11																	12
13																	14
15																	16
17																	18
19																	20
21																	22
23																	24
25																	26
27																	28
29																	30
31																	32
33																	34
35																	36
37																	38
39																	40
41																	42
					Total Load:	0.0 kVA		0.0 kVA			0.0 kVA						
					Total Amps:	0 A		0 A			0 A						

Load Classification	Connected Load	Demand Factor	Demand	Panel Totals	
				Total Conn. Load:	0 VA
				Total Est. Demand:	0 VA
				Total Conn. Current:	0 A
				Total Est. Demand Current:	0 A

Notes:

Branch Panel: OS

Location: ATS 104
Supply From: ATS-OS
Mounting: SURFACE
Enclosure: NEMA 1

Volts: 208Y/120
Phases: 3
Wires: 4

A.I.C. Rating:
BUS OCP Type: MLO
BUS Rating: 225 A

Notes:
PROVIDE FUSIBLE PANELBOARD. BRANCH OVERCURRENT PROTECTION DEVICES SHALL BE FUSE TYPE. REFER TO SPECIFICATIONS FOR REQUIREMENTS.
PROVIDE PANEL WITH INTEGRAL SPD.

CKT	Circuit Description	Notes	Trip	Poles	Wire & Conduit Size	A	B	C	A	B	C	Wire & Conduit Size	Poles	Trip	Notes	Circuit Description	CKT
1																	2
3																	4
5																	6
7																	8
9																	10
11																	12
13																	14
15																	16
17																	18
19																	20
21																	22
23																	24
25																	26
27																	28
29																	30
31																	32
33																	34
35																	36
37																	38
39																	40
41																	42
					Total Load:	0.0 kVA		0.0 kVA			0.0 kVA						
					Total Amps:	0 A		0 A			0 A						

Load Classification	Connected Load	Demand Factor	Demand	Panel Totals	
				Total Conn. Load:	0 VA
				Total Est. Demand:	0 VA
				Total Conn. Current:	0 A
				Total Est. Demand Current:	0 A

Notes:

MDP	LS
OS	

NOT FOR CONSTRUCTION

CENTURY ENGINEERING
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Phone: (443) 589-2400
www.centuryeng.com

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No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WHEELER GOODMAN MASEK
ARCHITECTURE + INTERIORS
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STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Mayland, license number 37790, expiration date 08-06-2023.

DESIGN DEVELOPMENT			E6.2
ANNE ARUNDEL COUNTY			JUNE 2023
DEPARTMENT OF PUBLIC WORKS			20232548
REVISED DATE / BY	APPROVED DATE / CHIEF ENGINEER	APPROVED DATE / PROJECT MANAGER	SCALE: AS NOTED
			DRAWN BY: SP
	APPROVED DATE / ASSISTANT CHIEF ENGINEER	APPROVED DATE / CHIEF, RIGHT OF WAY	CHECKED BY: DRW
			SHEET: 15 OF XXX
			PROJECT #: P570200
			CONTRACT #: P570205

PANEL SCHEDULES

The Preserve at Eisenhower Clubhouse
1576 Generals Highway,
Crownsville, Maryland 21032

CODE REFERENCES:

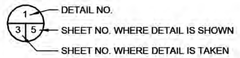
ALL REFERENCES TO IBC SHALL MEAN THE 2018 EDITION.
ALL REFERENCES TO IMC SHALL MEAN THE 2018 EDITION.
ALL REFERENCES TO NFPA 1 SHALL MEAN THE 2018 EDITION.
ALL REFERENCES TO NFPA 70 SHALL MEAN THE 2017 EDITION.
ALL REFERENCES TO NFPA 72 SHALL MEAN THE 2016 EDITION.
ALL REFERENCES TO NFPA 90A SHALL MEAN THE 2018 EDITION.
ALL REFERENCES TO NFPA 101 SHALL MEAN THE 2018 EDITION.
ALL REFERENCES TO NFPA 241 SHALL MEAN THE 2018 EDITION.
ALL REFERENCES TO NFPA 1221 SHALL MEAN THE 2018 EDITION.

ABBREVIATIONS

A	AMPERE
AACO	ANNE ARUNDEL COUNTY
AACO-DPW	ANNE ARUNDEL COUNTY - DEPARTMENT OF PUBLIC WORKS
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
ATC	AUTOMATIC TEMPERATURE CONTROL
C	CONDUIT
EOR	ENGINEER OF RECORD
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FAGAP	FIRE ALARM GRAPHIC ANNUNCIATOR PANEL
FAPB	FIRE ALARM POWER BOOSTER PANEL
FASC	FIRE ALARM SYSTEM CONTRACTOR
FDC	FIRE DEPARTMENT CONNECTION
FPE	FIRE PROTECTION ENGINEER
GRD	GROUND
IBC	INTERNATIONAL BUILDING CODE
IMC	INTERNATIONAL MECHANICAL CODE
MAX	MAXIMUM
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
Ø	PHASE
P	POLE (1P,2P,3P)
PA	PUBLIC ADDRESS SYSTEM
RTU	ROOF TOP UNIT
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
V	VOLTS
W	WIRE
W/	WITH

CONVENTIONS

DETAIL



DETAIL NO.
SHEET NO. WHERE DETAIL IS SHOWN
SHEET NO. WHERE DETAIL IS TAKEN

FIRE ALARM LEGEND

(NEW WORK)

SYMBOL	DESCRIPTION
	SPECIAL CABINET - TYPE AS NOTED
P	ADDRESSABLE FIRE ALARM MANUAL STATION MOUNTING HEIGHT 4'-0"
WP P	CONVENTIONAL WEATHERPROOF (WP) FIRE ALARM MANUAL STATION MOUNTING HEIGHT 4'-0"
C,WP 15,30,75, 95,110,185	FIRE ALARM COMBINATION AUDIO/VISUAL (SPEAKER/STROBE) DEVICE MOUNTING HEIGHT 6'-8" UNLESS NOTED OTHERWISE SUBSCRIPT '15,30,75,95,110,185' DENOTES CANDELA RATINGS SUPERSCRIPT 'C' DENOTES CEILING MOUNTED SUPERSCRIPT 'WP' DENOTES WEATHERPROOF DEVICE
C , 15,30, 75,110,115	FIRE ALARM VISUAL (STROBE) DEVICE MOUNTING HEIGHT 6'-8" UNLESS NOTED OTHERWISE SUBSCRIPT '15,30,75,110,115' DENOTES CANDELA RATINGS SUPERSCRIPT 'C' DENOTES CEILING MOUNTED
C	FIRE ALARM AUDIO (SPEAKER) DEVICE MOUNTING HEIGHT 6'-8" UNLESS NOTED OTHERWISE SUPERSCRIPT 'C' DENOTES CEILING MOUNTED
WP 185	ELECTRIC SPRINKLER ALARM COMBINATION HORN/STROBE DEVICE MOUNTING HEIGHT 7'-6" UNLESS NOTED OTHERWISE SUPERSCRIPT "WP" DENOTES WEATHERPROOF DEVICE SUBSCRIPT "185" DENOTES CANDELA RATING
	SMOKE SENSOR - PHOTOELECTRIC TYPE
RA,SA	DUCT SMOKE SENSOR - PHOTOELECTRIC TYPE (24VDC) WITH ALARM CONTACTS FOR ATC WIRING SUPERSCRIPT 'SA' DENOTES SUPPLY AIR SUPERSCRIPT 'RA' DENOTES RETURN AIR
	COMBINATION REMOTE INDICATING LAMP/TEST SWITCH MOUNTING HEIGHT 66" UNLESS NOTED OTHERWISE
WF	WATERFLOW/PRESSURE SWITCH WITH ADDRESSABLE MONITOR MODULE
VS	VALVE TAMPER SUPERVISORY SWITCH WITH ADDRESSABLE MONITOR MODULE
LT	LOW TEMPERATURE SENSOR (SET AT 40 DEGREES) WITH ADDRESSABLE MONITOR MODULE
LWL	LOW WATER LEVEL WITH ADDRESSABLE MONITOR MODULE
AIM	JUNCTION BOX WITH ADDRESSABLE MONITOR MODULE
AOM	JUNCTION BOX WITH ADDRESSABLE CONTROL MODULE
J	JUNCTION BOX WITH FIRE PLATE - SIZE AS REQUIRED
	DEDICATED TELEPHONE OUTLET (SEE ELECTRICAL/INFORMATION TECHNOLOGY DRAWINGS AND SPECIFICATIONS)
TVSS ,	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	FIRE ALARM/SPRINKLER ZONE BOUNDARY
	MATCHLINE
#	DRAWING NOTE NUMBER

DISTRIBUTED ANTENNA SYSTEM FOR PUBLIC SAFETY/FIRST RESPONDER RADIO:

IN COMPLIANCE WITH THE 2018 INTERNATIONAL FIRE CODE (IFC) 510.2 AND 1103.2, AND 2016 NFPA 72-24.5.2, A TWO-WAY RADIO COMMUNICATIONS ENHANCEMENT SYSTEM FOR EMERGENCY RESPONDER RADIO COVERAGE WILL BE PROVIDED IN THE FORM OF A DISTRIBUTED ANTENNA SYSTEM (DAS) FIRST RESPONDER RADIO AMPLIFICATION SYSTEM WILL BE SPECIFIED FOR THE ENTIRE BUILDING AND MONITORED BY THE FIRE ALARM SYSTEM. THE DISTRIBUTED ANTENNA SYSTEM FOR PUBLIC SAFETY RADIO WILL INCLUDE A HEAD-END REPEATER, BOOSTER, OR COMBINER, TAPS, SPLITTERS, COUPLERS, OR FILTERS AS REQUIRED, CEILING MOUNTED INTERIOR ANTENNAS, ROOF MOUNTED EXTERIOR ANTENNA WITH LIGHTNING/SURGE PROTECTION, AND ASSOCIATED COAXIAL OR FIBER OPTIC CABLING.

FIRE ALARM/ELECTRICAL GENERAL NOTES:

1. THE GENERAL SCOPE OF THE FIRE ALARM PORTION OF THIS PROJECT SHALL CONSIST OF THE INSTALLATION OF A NEW SUPERVISED DIGITAL/ADDRESSABLE FIRE ALARM AND DETECTION SYSTEM WITH VOICE EVACUATION FOR THE ENTIRE BUILDING. THE FIRE ALARM AND DETECTION SYSTEM SHALL BE MANUFACTURED BY SILENT KNIGHT USING A 6820-EVS FACP. ALL WORK SHALL BE IN FULL ACCORDANCE WITH THE REQUIREMENTS AND APPENDIX OF NFPA 70, 72, 90A, 101, IBC, IMC, LOCAL AUTHORITY, AND THE SPECIFICATIONS.
2. TO EXPEDITE THE FIRE ALARM SYSTEM PERMIT, AACPS AND THE AACO PERMIT APPLICATION CENTER HAVE AGREED ON THE FOLLOWING SUBMITTAL PROCESS:
   A. THE FIRE ALARM SYSTEM CONTRACTOR (FASC) SHALL SUBMIT A COMPLETE SUBMITTAL IN ELECTRONIC FORMAT TO THE ENGINEER OF RECORD (EOR-EBL FIRE) FOR INITIAL REVIEW.
   B. THE FASC SHALL COMPLETE RESUBMISSION TO THE EOR IF REQUIRED TO MAKE CLARIFICATION OR REVISIONS.
   C. WHEN SUBMITTAL IS ACCEPTABLE, THE FASC SHALL PROVIDE A MINIMUM OF FOUR (PAPER) SETS TO THE EOR FOR ATTACHMENT OF THE PE REVIEW COVER LETTER. THE LETTER SHALL BE ATTACHED TO THE SUBMITTAL BOOKLET AND EACH SUBMITTAL DRAWING.
   D. THE FASC SHALL FILE A MINIMUM OF FOUR SETS TO THE AACO PERMIT APPLICATION CENTER FOR APPROVAL OF THE FIRE ALARM SYSTEM PERMIT. THE FASC SHALL ALSO PROVIDE TWO SETS OF THE ANNOTATED CONTRACT DRAWINGS DEPICTING COMPONENT LOCATIONS WITH THE PERMIT SETS. THE ANNOTATED DRAWINGS WILL HELP FACILITATE THE REVIEW PROCESS.
   E. THE FASC SHALL COMPLY WITH ALL AACO AHJ COMMENTS, REVISE, UPDATE, AND/OR RESUBMIT DRAWINGS AS REQUIRED AT NO ADDITIONAL COST TO AACPS.
   F. THE FASC SHALL PROVIDE AND HAVE AVAILABLE A MINIMUM OF ONE SET OF AACO APPROVED PERMIT DOCUMENTS AT THE PROJECT SITE FOR INSPECTIONS AND/OR USE BY AACO OFFICIALS AND THE EOR. SEE SPEC SECTION 283111 FOR ADDITIONAL REQUIREMENTS.
3. WHERE FIRE ALARM DEVICES ARE INSTALLED IN NEW PARTITIONS, THE DEVICES SHALL BE RECESSED MOUNTED. THE CONDUIT SHALL BE INSTALLED CONCEALED IN WALLS AND ABOVE CEILINGS - UNLESS NOTED OTHERWISE.
4. FIRE ALARM MANUAL PULL STATIONS AT DOOR OPENINGS SHALL BE WITHIN 5'-0" HORIZONTALLY OF THE DOOR OPENING.
5. SPACING OF SMOKE SENSOR/HEAT SENSOR AND DUCT SMOKE SENSORS SHALL BE IN ACCORDANCE WITH NFPA 72, 90A, IMC, AND AS INDICATED ON THE CONTRACT DOCUMENTS.
6. PROVIDE SYNCHRONIZATION FOR AUDIO (SPEAKER) AND VISUAL (STROBE) NOTIFICATION APPLIANCE DEVICES WHERE THERE ARE MORE THAN TWO DEVICES WITHIN A FIELD OF VIEW TO COMPLY WITH THE REQUIREMENTS OF NFPA 72. SYNCHRONIZATION OF AUDIO (SPEAKER) AND VISUAL (STROBE) DEVICES SHALL BE DONE FROM THE FIRE ALARM POWER BOOSTER PANEL(S) OR THE FIRE ALARM AMPLIFIER PANEL, IN LIEU OF, THE USE OF INDIVIDUAL SYNC MODULES PER AACO-DPW.
7. INDIVIDUAL ADDRESSABLE AND CONVENTIONAL FIRE ALARM POWER BOOSTER PANEL(S) (MANUFACTURER: SILENT KNIGHT, MODELS 5496 AND SK-PS10) SHALL BE SEPARATELY MONITORED BY THE FIRE ALARM SYSTEM.
8. PROVIDE QUANTITY OF FIRE ALARM POWER BOOSTER PANELS BASED ON A/V LOAD, CO DETECTORS, DUCT SMOKE DETECTORS, INCLUDING SPARE CAPACITY AS SPECIFIED IN SPEC SECTION 283111.
9. PLENUM RATED FIRE ALARM WIRING OR MC CABLE IS NOT PERMITTED PER AACO-DPW.
10. ALL FIRE ALARM CONDUIT, COUPLINGS, AND CONNECTORS SHALL BE FACTORY PAINTED RED.
11. THE FIRE ALARM/ELECTRICAL CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF CEILING MOUNTED FIRE ALARM SYSTEM DEVICES INCLUDING THE ROUTING OF CONDUIT ABOVE CEILINGS WITH LIGHT FIXTURES, CONDUITS, DUCTWORK, DIFFUSERS, PIPING, AND ANY OTHER OBSTRUCTIONS.
12. CONDUCTORS FOR THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70. THE CONDUCTORS SHALL NOT BE INSTALLED WITH CONDUCTORS OF LIGHTING OR POWER SYSTEMS. THE SUM OF THE CROSS-AREA OF INDIVIDUAL CONDUCTORS SHALL NOT EXCEED 40 PERCENT OF THE INTERIOR CROSS-SECTION OF THE CONDUIT. ALL FIRE ALARM SYSTEM CONDUIT SHALL NOT BE LESS THAN 3/4 INCH.
13. FOR ADDITIONAL ELECTRICAL WORK, SEE ELECTRICAL DRAWINGS.
14. FOR EXACT LOCATION OF MECHANICAL UNITS, DUCT SMOKE DETECTORS, SEE MECHANICAL DRAWINGS.
15. REFER TO CONTRACT SPECIFICATIONS FOR SEISMIC CONTROLS FOR COMMUNICATIONS SYSTEMS.
16. THE TERM "PROVIDE" MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR INTENDED USE.

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

FA0.1

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No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
410.263.6787 www.wgm-arch.com

CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland, license number 45447, expiration date 02-14-2024.

ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

REVISED DATE	BY	APPROVED DATE	APPROVED DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

06/30/23
202211.1
SCALE: AS NOTED
DRAWN BY: JCW
CHECKED BY: RWB
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

FIRE ALARM GENERAL NOTES, LEGEND, AND ABBREVIATIONS

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032

FIRE ALARM WIRING COLORS (2)

SLC (4)	RED (+) (1)		BLACK (-) (1)	
CIRCUIT 1 HORN/STROBES OR STROBES	BLUE (+)		WHITE (-)	
CIRCUIT 2 HORN/STROBES OR STROBES	BLUE/BLACK TRACER (+)		WHITE/BLACK TRACER (-)	
CIRCUIT 3 HORN/STROBES OR STROBES	BLUE/YELLOW TRACER (+)		WHITE/YELLOW TRACER (-)	
CIRCUIT 4 HORN/STROBES OR STROBES	BLUE/RED TRACER (+)		WHITE/RED TRACER (-)	
CIRCUIT 5 HORN/STROBES OR STROBES	BLUE/GREEN TRACER (+) (3)		WHITE/GREEN TRACER (-) (3)	
CIRCUIT 6 HORN/STROBES OR STROBES	BLUE/ORANGE TRACER (+) (3)		WHITE/ORANGE TRACER (-) (3)	
CIRCUIT 7 HORN/STROBES OR STROBES	BLUE/GREY TRACER (+) (3)		WHITE/GREY TRACER (-) (3)	
FIRE ALARM SPEAKERS	RED (+) (1)		BLACK (-) (1)	
RESETTABLE POWER (DUCT DETECTORS AND CO-DETECTORS)	PURPLE (+)		BROWN (-)	
DOOR HOLDERS	YELLOW (+)		YELLOW/BLACK TRACER (-)	
SBUS	PINK (+) GRAY (A)		GREEN (-) ORANGE (B)	
VBUS	RED (+) (1)		BLACK (-) (1)	
DUCT DETECTOR TEST SWITCH	GRAY (TEST)	GREEN (GND)	PINK (PILOT LED)	ORANGE (ALARM LED)

FIRE ALARM WIRING COLOR NOTES:

1. WITH RED JACKET.
2. ALL ASSOCIATED FIRE ALARM WIRING SHALL BE SOLID.
3. WHEN USING SILENT KNIGHT SK-PS10 POWER BOOSTER PANELS.
4. WITH NO MORE THAN (2) SLC LOOPS IN A SINGLE CONDUIT.

CIRCUITS/PATHWAYS WIRING DESIGNATION BY CLASS/LEVEL

THE INSTALLATION OF ALL PATHWAY WIRING, CABLE, AND EQUIPMENT SHALL BE IN ACCORDANCE WITH NFPA 70 AND APPLICABLE REQUIREMENTS OF NFPA 72.

CLASS IDENTIFIER	PATHWAY CLASS DESIGNATION REQUIREMENTS
☐ A	1. IT INCLUDES A REDUNDANT PATH. 2. OPERATIONAL CAPABILITY CONTINUES PAST A SINGLE OPEN, AND THE SINGLE OPEN FAULT SHALL RESULT IN THE ANNUNCIATION OF A TROUBLE SIGNAL. 3. CONDITIONS THAT AFFECT THE INTENDED OPERATION OF THE PATH ARE ANNUNCIATED AS A TROUBLE SIGNAL. 4. OPERATIONAL CAPABILITY IS MAINTAINED DURING THE APPLICATION OF A SINGLE GROUND FAULT. 5. A SINGLE GROUND CONDITION SHALL RESULT IN THE ANNUNCIATION OF A TROUBLE SIGNAL.
☒ B	1. IT DOES NOT INCLUDE A REDUNDANT PATH. 2. OPERATIONAL CAPABILITY STOPS AT A SINGLE OPEN. 3. CONDITIONS THAT AFFECT THE INTENDED OPERATION OF THE PATH ARE ANNUNCIATED AS A TROUBLE SIGNAL. 4. OPERATIONAL CAPABILITY IS MAINTAINED DURING THE APPLICATION OF A SINGLE GROUND FAULT. 5. A SINGLE GROUND CONDITION SHALL RESULT IN THE ANNUNCIATION OF A TROUBLE SIGNAL.
☒ C	1. IT INCLUDES ONE OR MORE PATHWAYS WHERE OPERATIONAL CAPABILITY IS VERIFIED VIA END-TO-END COMMUNICATION, BUT THE INTEGRITY OF INDIVIDUAL PATHS IS NOT MONITORED. 2. A LOSS OF END-TO-END COMMUNICATION IS ANNUNCIATED AS A TROUBLE SIGNAL.
☒ D	1. IT HAS FAIL-SAFE OPERATION, WHERE NO FAULT IS ANNUNCIATED, BUT THE INTENDED OPERATION IS PERFORMED IN THE EVENT OF A PATHWAY FAILURE.
☒ E	1. NOT MONITORED FOR INTEGRITY.
☐ N	1. INCLUDES TWO OR MORE PATHWAYS WHERE OPERATIONAL CAPABILITY OF THE PRIMARY PATHWAY AND A REDUNDANT PATHWAY TO EACH DEVICE SHALL BE VERIFIED THROUGH END-TO-END COMMUNICATION. 2. A LOSS OF INTENDED COMMUNICATIONS BETWEEN ENDPOINTS SHALL BE ANNUNCIATED AS A TROUBLE SIGNAL. 3. A SINGLE OPEN, GROUND, SHORT, OR COMBINATION OF FAULTS ON ONE PATHWAY SHALL NOT AFFECT ANY OTHER PATHWAY. 4. CONDITIONS THAT AFFECT THE OPERATION OF THE PRIMARY PATHWAYS AND REDUNDANT PATHWAYS SHALL BE ANNUNCIATED AS A TROUBLE SIGNAL WHEN THE SYSTEM'S MINIMAL OPERATIONAL REQUIREMENTS CANNOT BE MET. 5. PRIMARY AND REDUNDANT PATHWAYS SHALL NOT BE PERMITTED TO SHARE TRAFFIC OVER THE SAME PHYSICAL SEGMENT.
☐ X	1. IT INCLUDES A REDUNDANT PATH. 2. OPERATIONAL CAPABILITY CONTINUES PAST A SINGLE OPEN, AND THE SINGLE OPEN FAULT SHALL RESULT IN THE ANNUNCIATION OF A TROUBLE SIGNAL. 3. OPERATIONAL CAPABILITY CONTINUES PAST A SINGLE SHORT-CIRCUIT, AND THE SINGLE SHORT-CIRCUIT FAULT SHALL RESULT IN THE ANNUNCIATION OF A TROUBLE SIGNAL. 4. OPERATIONAL CAPABILITY CONTINUES PAST A COMBINATION OPEN FAULT AND GROUND FAULT. 5. CONDITIONS THAT AFFECT THE INTENDED OPERATION OF THE PATH ARE ANNUNCIATED AS A TROUBLE SIGNAL. 6. OPERATIONAL CAPABILITY IS MAINTAINED DURING THE APPLICATION OF A SINGLE GROUND FAULT. 7. A SINGLE GROUND CONDITION SHALL RESULT IN THE ANNUNCIATION OF A TROUBLE SIGNAL.

LEVEL IDENTIFIER	LEVEL DESCRIPTION REQUIREMENTS
☐ LEVEL 0	1. NOT REQUIRED TO HAVE ANY PROVISIONS FOR PATHWAY SURVIVABILITY.
☒ LEVEL 1	1. PATHWAYS SURVIVABILITY LEVEL 1 SHALL CONSIST OF PATHWAYS IN BUILDINGS THAT ARE FULLY PROTECTED BY AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13, WITH ANY INTERCONNECTING CONDUCTORS, CABLES, OR OTHER PHYSICAL PATHWAYS INSTALLED IN METAL RACEWAYS.
☐ LEVEL 2	PATHWAY SURVIVABILITY SHALL CONSIST OF ONE OR MORE OF THE FOLLOWING: 1. 2-HOUR FIRE-RATED CIRCUIT INTEGRITY (CI) CABLE. 2. 2-HOUR FIRE-RATED CABLE SYSTEM (ELECTRICAL CIRCUIT PROTECTIVE SYSTEMS). 3. 2-HOUR FIRE-RATED ENCLOSURE OR PROTECTED AREA. 4. PERFORMANCE ALTERNATIVES APPROVED BY THE AUTHORITY HAVING JURISDICTION. PERFORMED IN THE EVENT OF A PATHWAY FAILURE.
☐ LEVEL 3	PATHWAY SURVIVABILITY LEVEL 3 SHALL CONSIST OF PATHWAYS IN BUILDINGS THAT ARE FULLY PROTECTED BY AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13 AND ONE OR MORE OF THE FOLLOWING: 1. 2-HOUR FIRE-RATED CIRCUIT INTEGRITY (CI) CABLE. 2. 2-HOUR FIRE-RATED CABLE SYSTEM (ELECTRICAL CIRCUIT PROTECTIVE SYSTEMS). 3. 2-HOUR FIRE-RATED ENCLOSURE OR PROTECTED AREA. 4. PERFORMANCE ALTERNATIVES APPROVED BY THE AUTHORITY HAVING JURISDICTION. PERFORMED IN THE EVENT OF A PATHWAY FAILURE.

CLASS AND LEVEL REQUIREMENTS ARE TAKEN FROM NFPA 72, 2016 EDITION, CHAPTER 12.

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DESIGN DEVELOPMENT | FA0.2

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No.	Description		Date
NO	REVISION DESCRIPTION	BY	DATE

WGM ARCHITECTURE + INTERIORS
WHEELER GOODMAN MASEK
165 LOG CANOE CIRCLE - SUITE B1
STEVENSVILLE, MARYLAND 21666
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CERTIFICATION:
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Mayland, license number 40447, expiration date 02-14-2024.

ANNE ARUNDEL COUNTY | 06/30/23
DEPARTMENT OF PUBLIC WORKS | 202211.1

REVISED DATE	BY

APPROVED DATE _____ CHIEF ENGINEER
APPROVED DATE _____ PROJECT MANAGER
APPROVED DATE _____ ASSISTANT CHIEF ENGINEER
APPROVED DATE _____ CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY: JCW
CHECKED BY: RWB
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

FIRE ALARM SCHEDULES

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032

FIRE ALARM MATRIX (1)

SYSTEM RESPONSE	DEVICE ACTIVATION																										
	ACTIVATION OF ANY FIRE ALARM MANUAL PULL STATION	ACTIVATION OF ANY AREA SMOKE SENSOR	ACTIVATION OF ANY DUCT SMOKE DETECTOR	ACTIVATION OF ANY WATERFLOW/PRESSURE SWITCH	ACTIVATION OF ANY KITCHEN HOOD FIRE EXTINGUISHING SYSTEM	ACTIVATION OF ANY VALVE TAMPER SUPERVISORY SWITCH	ACTIVATION OF ANY LOW WATER LEVEL SUPERVISORY SWITCH (2)	ACTIVATION OF ANY LOW TEMPERATURE SENSOR	FIRE PUMP - RUNNING	FIRE PUMP - LOSS OF PHASE	FIRE PUMP - PHASE REVERSAL	FIRE PUMP - CONTROLLER CONNECTED TO ALTERNATE SOURCE	EMERGENCY GENERATOR - LINE POWER	EMERGENCY GENERATOR - GENERATOR POWER	EMERGENCY GENERATOR - SWITCH NOT IN AUTO	ACTIVATION OF ANY FIRST RESPONDER RADIO AMPLIFICATION SYSTEM - 800 SHUTDOWN ALARM	ACTIVATION OF ANY FIRST RESPONDER RADIO AMPLIFICATION SYSTEM - 800 ANTENNA FAILURE	ACTIVATION OF ANY FIRST RESPONDER RADIO AMPLIFICATION SYSTEM - 800 AMP FAILURE	ACTIVATION OF ANY FIRST RESPONDER RADIO AMPLIFICATION SYSTEM - LOW BATTERY CAPACITY	ACTIVATION OF ANY FIRST RESPONDER RADIO AMPLIFICATION SYSTEM - BATTERY CHARGER FAIL	ACTIVATION OF ANY FIRST RESPONDER RADIO AMPLIFICATION SYSTEM - 700 SHUTDOWN ALARM	ACTIVATION OF ANY FIRST RESPONDER RADIO AMPLIFICATION SYSTEM - 700 ANTENNA FAILURE	ACTIVATION OF ANY FIRST RESPONDER RADIO AMPLIFICATION SYSTEM - 700 AMP FAILURE	ACTIVATION OF ANY FIRST RESPONDER RADIO AMPLIFICATION SYSTEM - AC POWER	ACTIVATION OF ANY FIRST RESPONDER RADIO AMPLIFICATION SYSTEM - AUX	POWER SUPPLY PROBLEMS AND AMPLIFIER PROBLEMS (PRIMARY, TROUBLE AND SECONDARY)	OPEN WIRE OR GROUND IN ANY SUPERVISED CIRCUIT	MANUAL EVAC VIA FIRE ALARM MICROPHONE
ACTIVATE BUILDING COMBINATION SPEAKER/STROBE, SPEAKERS AND STROBES	●	●		●	●																						
ACTIVATE ELECTRIC SPRINKLER ALARM COMBINATION HORN/STROBE				●																							
SHUTDOWN ASSOCIATED MECHANICAL (HVAC) UNIT			●																								
RELEASE ELECTRIC DELAYED EGRESS DOORS	●	●		●	●																						
ACTIVATE SYSTEM SUPERVISORY			●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
ACTIVATE SYSTEM TROUBLE																										●	●	
ANNUNCIATE AT THE FACP, AND REMOTE LCD ANNUNCIATOR PANEL	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
RECORD EVENTS IN THE SYSTEM MEMORY	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
ACTIVATE AACO-DPW THE FIRE ALARM CENTRAL STATION (INDIVIDUAL ADDRESSABLE ID ALARM, SUPERVISORY AND TROUBLE)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	

FIRE ALARM MATRIX NOTES:

(1) FOR ADDITIONAL SYSTEM OPERATION REQUIREMENTS, SEE SPEC SECTION 283111.

(2) TWO SEPARATE SIGNALS. ONE INDICATING THAT THE REQUIRED WATER LEVEL HAS BEEN LOWERED OR RAISED (OFF NORMAL) AND THE OTHER INDICATING RESTORATION.

NOT FOR CONSTRUCTION | DESIGN DEVELOPMENT | FA0.3

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ANNE ARUNDEL COUNTY | 06/30/23
DEPARTMENT OF PUBLIC WORKS | 202211.1

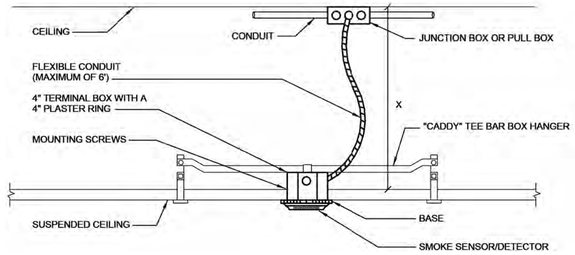
REVISED DATE	BY

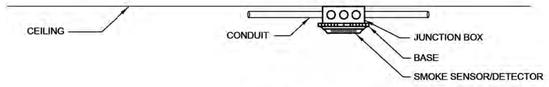
APPROVED DATE
CHIEF ENGINEER
APPROVED DATE
PROJECT MANAGER
APPROVED DATE
ASSISTANT CHIEF ENGINEER
APPROVED DATE
CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY: JCW
CHECKED BY: RWB
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

FIRE ALARM MATRIX

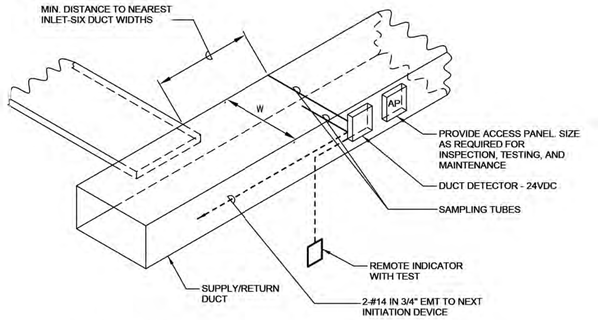
The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032





CEILING SENSOR/DETECTOR MOUNTING DETAILS

NO SCALE

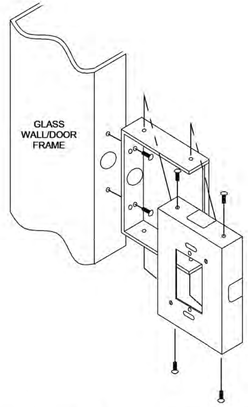


DUCT SENSOR (DETECTOR) INSTALLATION

NO SCALE

NOTES:

1. IN AIR DISTRIBUTION SYSTEMS WITH A CAPACITY GREATER THAN 2,000 CFM, PROVIDE LISTED SMOKE DETECTORS AS FOLLOWS:
   - A. SUPPLY SIDE - DOWNSTREAM OF ANY AIR FILTERS AND AHEAD OF ANY BRANCH CONNECTION AND WITHIN 5 FEET OF SMOKE DAMPER.
   - B. RETURN SIDE - UPSTREAM OF ANY AIR FILTERS, EXHAUST AIR CONNECTIONS, OUTDOOR AIR CONNECTIONS, OR DECONTAMINATION EQUIPMENT APPLIANCES, AND WITHIN 5 FEET OF SMOKE DAMPERS..
   - C. WHERE DUCTS PENETRATE SMOKE PARTITIONS, ACTIVATION SHALL CLOSE THE MOTORIZED SMOKE DAMPER.
   - D. DETECTOR LOCATION SHALL BE ACCESSIBLE FOR INSPECTION, TESTING AND MAINTENANCE.

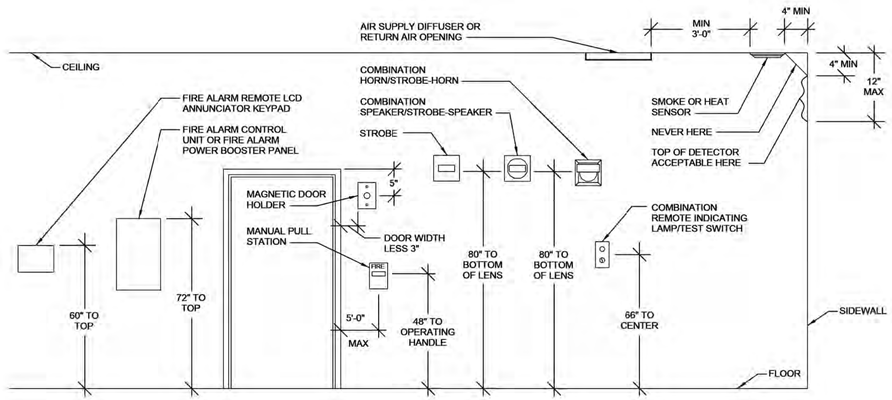


MANUAL PULL STATION MOUNTING DETAIL

NO SCALE

NOTES:

1. MANUFACTURER: SPACE ACE/ACER BOX, MODEL: PSB OR AN APPROVED EQUAL. INCLUDE PRODUCT DATA SHEETS IN THE FIRE ALARM SUBMITTAL/SHOP DRAWING.



TYPICAL MOUNTING HEIGHTS FOR WALL MOUNTED DEVICES

NO SCALE

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT	FA0.4
ANNE ARUNDEL COUNTY	06/30/23
DEPARTMENT OF PUBLIC WORKS	202211.1

REVISED DATE	BY	APPROVED / DATE	APPROVED / DATE	
				SCALE: AS NOTED
				DRAWN BY: JCW
		CHIEF ENGINEER	PROJECT MANAGER	CHECKED BY: RWB
		APPROVED / DATE	APPROVED / DATE	SHEET: OF
				PROJECT #: P570200
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY	CONTRACT #: P570205

FIRE ALARM DETAILS

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CERTIFICATION:
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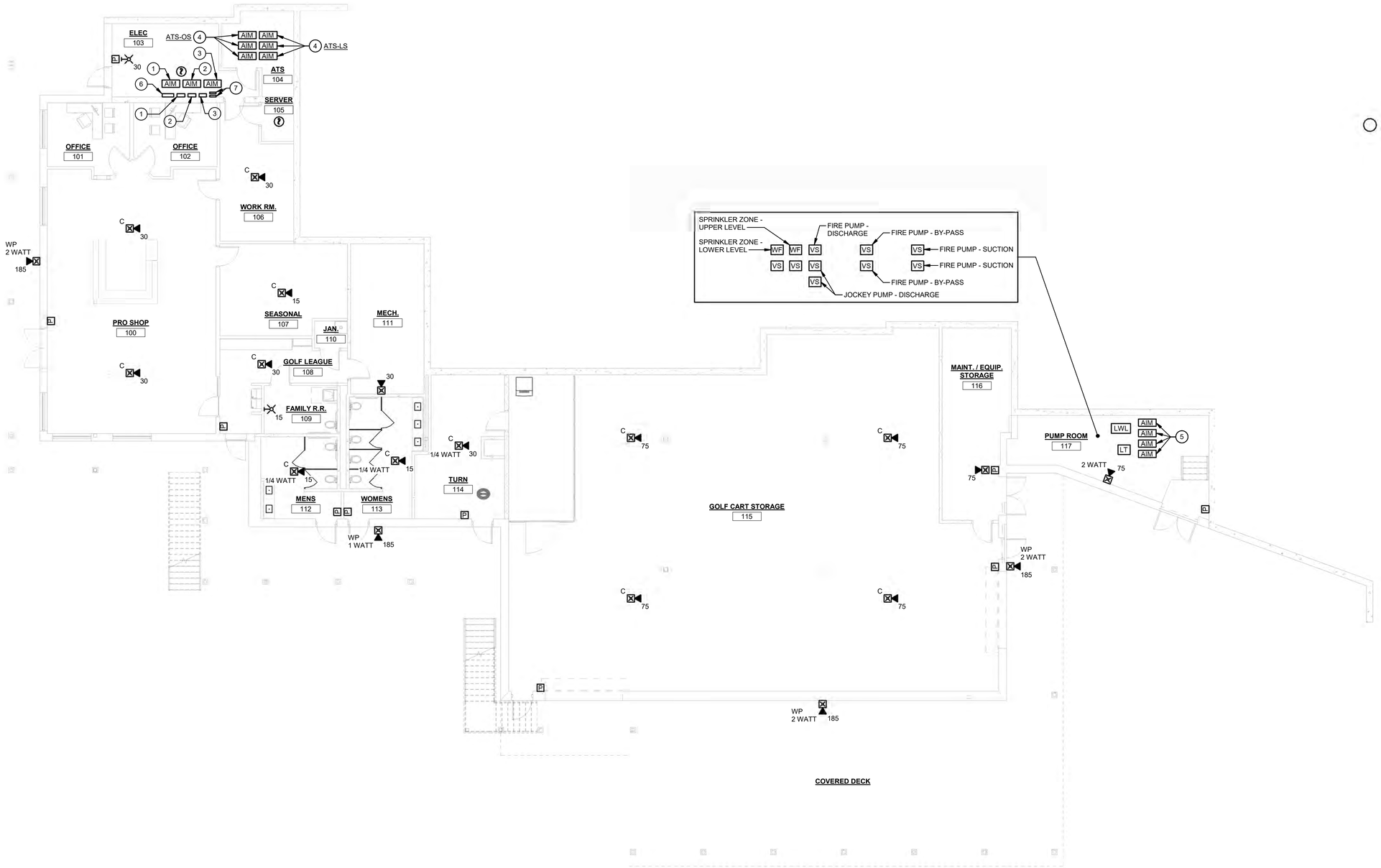

LOWER LEVEL FLOOR PLAN - FIRE ALARM

SCALE: 1/8" = 1'-0"

GENERAL NOTES: (APPLY TO THIS SHEET ONLY)

1. FOR FIRE ALARM GENERAL NOTES, LEGEND, AND ABBREVIATIONS, SEE SHEET FA0.1.
2. FOR FIRE ALARM SCHEDULES, SEE SHEET FA0.2.
3. FOR FIRE ALARM MATRIX, SEE SHEET FA0.3.
4. FOR FIRE ALARM DETAILS, SEE SHEET FA0.4.
5. ALL FIRE ALARM SYSTEM SPEAKERS SHALL BE TAPPED AT 1/2 WATT UNLESS NOTED OTHERWISE, AND SHALL BE ADJUSTED TO SUIT ACTUAL OCCUPIED CONDITIONS.

DRAWING NOTES: (APPLY TO THIS SHEET ONLY)

1 FIRE ALARM AMPLIFIER PANEL (SUFACE MOUNTED). EXTEND 2#14-3/4"C FROM ADDRESSABLE MONITOR MODULE AND CONNECT TO FIRE ALARM AMPLIFIER PANEL TO MONITOR TROUBLE CONDITIONS.

2 FIRE ALARM POWER BOOSTER PANEL (FAPB-LL) (SURFACE MOUNTED). EXTEND 2#14-3/4"C FROM ADDRESSABLE MONITOR MODULE AND CONNECT TO FIRE ALARM AMPLIFIER PANEL TO MONITOR TROUBLE CONDITIONS.

3 FIRE ALARM POWER BOOSTER PANEL (FAPB-UL) (SURFACE MOUNTED). EXTEND 2#14-3/4"C FROM ADDRESSABLE MONITOR MODULE AND CONNECT TO FIRE ALARM AMPLIFIER PANEL TO MONITOR TROUBLE CONDITIONS.

4 EXTEND 2#14-3/4"C FROM ASSOCIATED ADDRESSABLE MONITOR MODULE AND CONNECT TO ATS-OS AND ATS-LS TO MONITOR THE FOLLOWING: EMERGENCY GENERATOR - LINE POWER; EMERGENCY GENERATOR - GENERATOR POWER; EMERGENCY GENERATOR - NOT IN AUTO.

5 EXTEND 2#14-3/4"C FROM ASSOCIATED ADDRESSABLE MONITOR MODULE AND CONNECT TO COMBINATION FIRE PUMP CONTROLLER/TRANSFER SWITHC TO MONITOR THE FOLLOWING: FIRE PUMP - RUNNING; FIRE PUMP - LOSS OF POWER; FIRE PUMP - PHASE REVERSAL; FIRE PUMP - CONTROLLER CONNECTED TO ALTERNATE SOURCE.

6 DIGITAL/ADDRESSABLE FIRE ALARM CONTROL PANEL WITH MICROPHONE (SUREFACE MOUNTED).

7 FIRE ALARM DOCUMENT STORAGE CABINET AND DRAWING STORAGE BOX.

CAUTION:

IF THIS PLAN IS A REDUCTION, GRAPHIC SCALES MUST BE USED.

GRAPHIC SCALE

0 4' 8' 16'

SCALE: 1/8" = 1'-0"

NOT FOR CONSTRUCTION | DESIGN DEVELOPMENT | FA1.1

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Baltimore, Maryland 21234-5701
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No.	Description		Date

NO	REVISION DESCRIPTION	BY	DATE

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ANNE ARUNDEL COUNTY | 06/30/23
DEPARTMENT OF PUBLIC WORKS | 202211.1

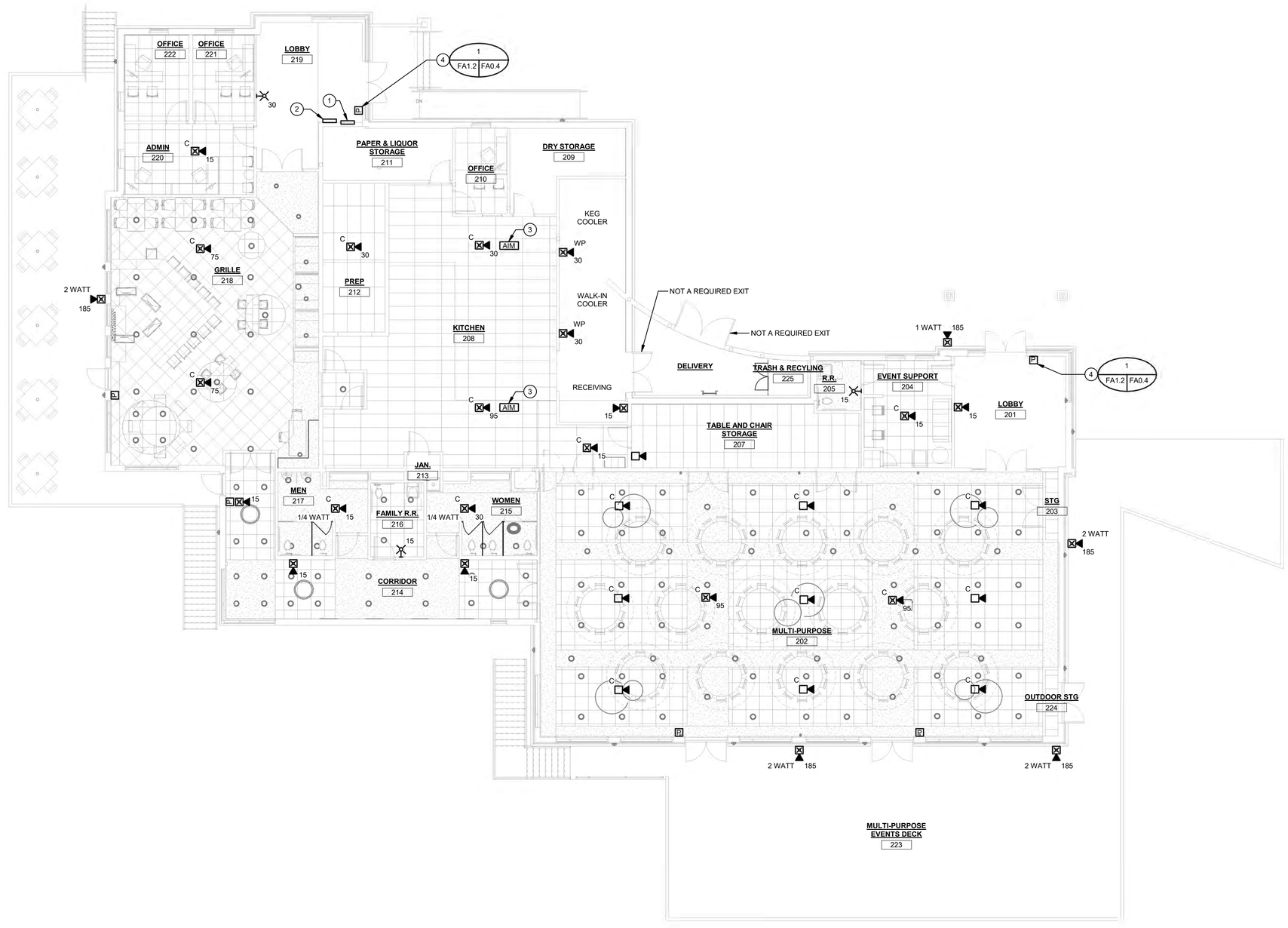
REVISED DATE	BY

APPROVED DATE — CHIEF ENGINEER
APPROVED DATE — PROJECT MANAGER
APPROVED DATE — ASSISTANT CHIEF ENGINEER
APPROVED DATE — CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY: JCW
CHECKED BY: RWB
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

LOWER LEVEL FLOOR PLAN - FIRE ALARM

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



UPPER LEVEL FLOOR PLAN - FIRE ALARM

SCALE: 1/8" = 1'-0"

GENERAL NOTES: (APPLY TO THIS SHEET ONLY)

1. FOR FIRE ALARM GENERAL NOTES, LEGEND, AND ABBREVIATIONS, SEE SHEET FA0.1.
2. FOR FIRE ALARM SCHEDULES, SEE SHEET FA0.2.
3. FOR FIRE ALARM MATRIX, SEE SHEET FA0.3.
4. FOR FIRE ALARM DETAILS, SEE SHEET FA0.4.
5. ALL FIRE ALARM SYSTEM SPEAKERS SHALL BE TAPPED AT 1/2 WATT UNLESS NOTED OTHERWISE, AND SHALL BE ADJUSTED TO SUIT ACTUAL OCCUPIED CONDITIONS.

DRAWING NOTES: (APPLY TO THIS SHEET ONLY)

1 FIRE ALARM REMOTE LCD ANNUNICATOR PANEL WITH MICROPHONE AND PROGRAMMABLE SECTIVE SWITCHES (RECESSED MOUNTED).

2 FIRE ALARM GRAPHIC MAP.

3 EXTEND 2#14-3/4"C FROM ADDRESSABLE MONITOR MODULE AND CONNECT TO KITCHEN HOOD FIRE EXTINGUISHING SYSTEM.

4 FIRE ALARM DEVICE SHALL BE SURFACE MOUNTED AS INDICATED ON DETAIL 1/FA0.1 WITH ALL ASSOCIATED WIRING/RACEWAY INSTALLED IN MULLION, AND CONDUIT ABOVE CEILING.

CAUTION:

IF THIS PLAN IS A REDUCTION, GRAPHIC SCALES MUST BE USED.

GRAPHIC SCALE

0 4' 8' 16'

SCALE: 1/8" = 1'-0"

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT | FA1.2

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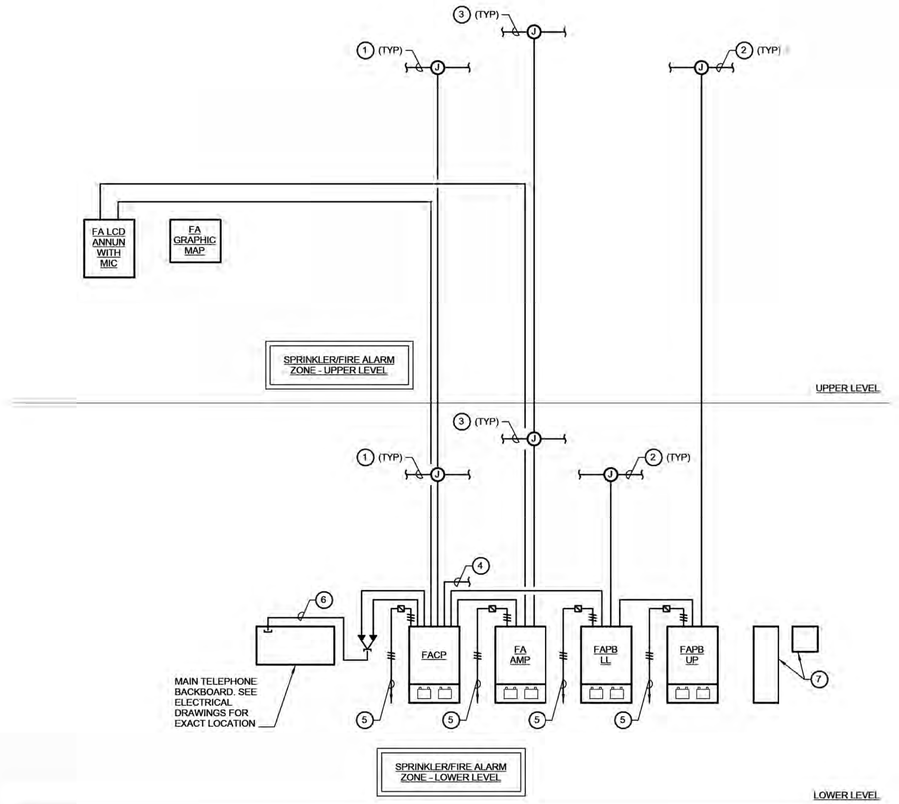
ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

REVISED DATE	BY	APPROVED / DATE	APPROVED / DATE
		CHIEF ENGINEER	PROJECT MANAGER
		APPROVED / DATE	APPROVED / DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

06/30/23
202211.1
SCALE: AS NOTED
DRAWN BY: JCW
CHECKED BY: RWB
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

UPPER LEVEL FLOOR PLAN - FIRE ALARM

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032



FIRE ALARM RISER DIAGRAM

NO SCALE

FIRE ALARM RISER DIAGRAM GENERAL NOTES:

1. ALL WIRING AND CONDUIT SIZES AND QUANTITIES SHALL BE IN ACCORDANCE WITH THE FIRE ALARM SYSTEM MANUFACTURER'S RECOMMENDATIONS, NFPA 70 AND NFPA 72. COORDINATE ALL WORK WITH THE ELEVATOR, MECHANICAL AND SPRINKLER CONTRACTOR.
2. FIRE ALARM RISER DIAGRAM IS DIAGRAMMATIC. RUNS OF CONDUIT AND MANNER OF CONNECTION SHALL BE DETERMINED BY THE CONTRACTOR AND IN ACCORDANCE WITH THE FIRE ALARM SYSTEM MANUFACTURER'S RECOMMENDATIONS, NFPA 70, NFPA 72 AND THE CONTRACT SPECIFICATIONS.
3. ALL FIRE ALARM WIRING SHALL BE INSTALLED IN 3/4"C CONDUIT MINIMUM.
4. ALL FIRE ALARM RELATED CONDUIT, COUPLINGS, AND CONNECTORS SHALL BE FACTORY PAINTED RED.
5. SEE FLOOR PLAN DRAWINGS FOR THE FIRE ALARM SYSTEM INITIATING AND NOTIFICATION APPLIANCE DEVICE LOCATIONS.
6. FOR 120V BRANCH CIRCUIT REQUIREMENTS, SEE ELECTRICAL DRAWINGS.

FIRE ALARM RISER DIAGRAM DRAWING NOTES:

1. TO INITIATING DEVICES.
2. TO NOTIFICATION APPLIANCE (STROBE) DEVICES.
3. TO NOTIFICATION APPLIANCE (SPEAKER/STROBE, SPEAKER) DEVICES.
4. TO NOTIFICATION APPLIANCE (ELECTRIC SPRINKLER ALARM BELL) DEVICE.
5. FOR 120 VOLT BRANCH CIRCUIT REQUIREMENTS, SEE ELECTRICAL DRAWINGS.
6. EXTEND ALL ASSOCIATED TELEPHONE WIRING AND CONDUIT (1"C MIN) AS REQUIRED.
7. FIRE ALARM DOCUMENT STORAGE CABINET AND DRAWING STORAGE BOX.

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT

FA5.1

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ANNE ARUNDEL COUNTY

06/30/23

DEPARTMENT OF PUBLIC WORKS

202211.1

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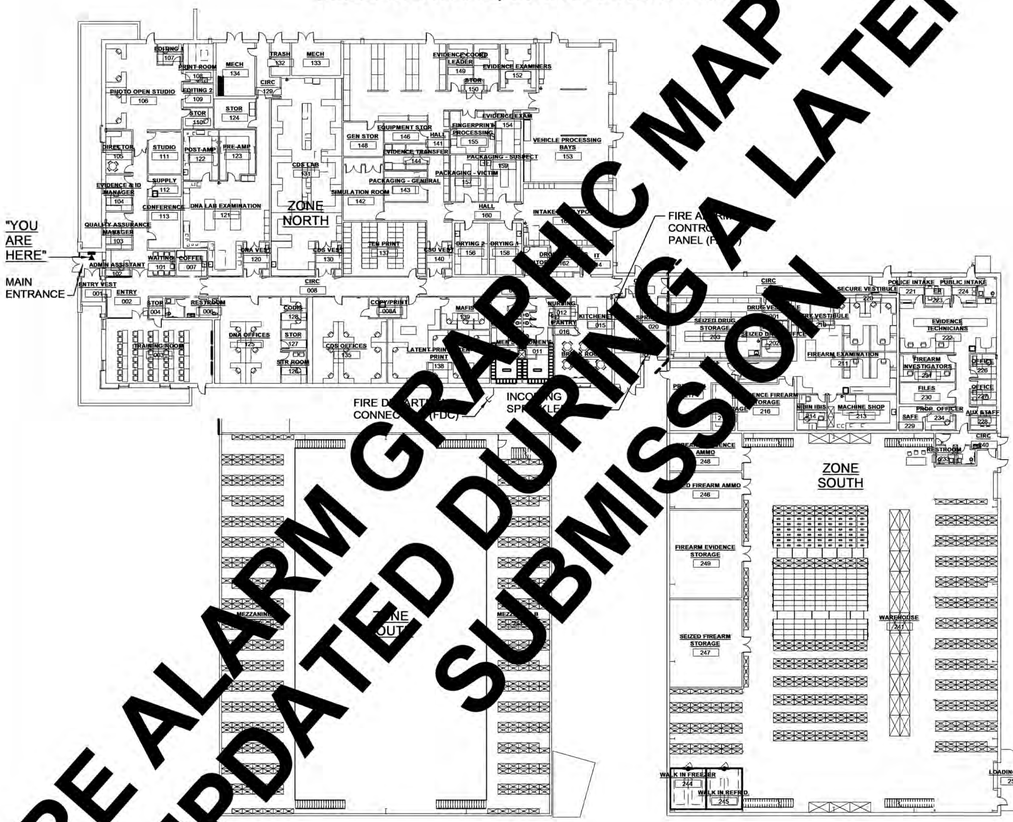
		APPROVED DATE	APPROVED DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY: JCW
CHECKED BY: RWB
SHEET: OF
PROJECT #: P570200
CONTRACT #: P570205

FIRE ALARM RISER DIAGRAM

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032

POLICE EVIDENCE & FORENSIC SCIENCE BUILDING
FIRE ALARM GRAPHIC MAP
407 MAXWELL V FRYE JR. ROAD
MILLERSVILLE, MARYLAND 21108



FIRE ALARM GRAPHIC MAP TO BE UPDATED DURING A LATER SUBMISSION

FIRE ALARM GRAPHIC MAP DETAIL

NO SCALE

NOTES:
1. THE GRAPHIC MAP SHALL NOT DISPLAY THE NAME OF THE MANUFACTURER OR THE MANUFACTURER'S CONTACT INFORMATION PER AACO-DPW.
2. THE FIRE ALARM/ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT AND AACO-DPW AS FAR AS CORRECT/FINAL ROOM NAMES AND ROOM NUMBERS PRIOR TO FABRICATION.

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		APPROVED / DATE	APPROVED / DATE
		ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT OF WAY

SCALE: AS NOTED
DRAWN BY: JCW
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SHEET: OF
PROJECT #: P570200
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FIRE ALARM GRAPHIC MAP DETAIL

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