| ST. 1. a. b. c. 2. 3. 4. 5. 6. 7. 8. 9. 10 | ANDARD RESPONSIBILITY NOTES: I (WE) CERTIFY THAT: 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 DISTRICT (AASCD) BOARD OF SUPERVISORS OR THEIR AUTHORIZED AGENTS. ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FRO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT'S APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AN EROSION BEFORE BEGINNING THE PROJECT. RESPONSIBLE PERSONNEL ON SITE: | , M D M AL AL T | ANNI DEI JU |
|---|--|---|--|
| TELE EMAI TELE EMAI TELE EMAI TELE EMAI THE I ON T CON SITE, GUID SEDII OWN MD P MD L NAME FIRM ADDF CITY NOTE ENGI | EXAMING TO FORCE INSPECTOR PRIOR TO COMMENCING WORK. | | |
| GEN 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. | VERSE CONSTRUCTION NOTES: THIS PLAT IS BASED UPON A FIELD-RUN TOPOGRAPHIC SURVEY PERFORMED BY WEIGM IN APRIL, 2022 AND REFLECTS SITE CONDITIONS AND THAT DATE: COORDINATES AND DIRECTIONS SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM. NAD BS2011 AS DETERMINED FROM REAL THE KINEMATICS SURVEYING AS BROADCAST BY THE LEAG AMARTIET IN ETWORK. ELEVATIONS SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM. NAD BS2011 AS DETERMINED FROM REAL THE KINEMATICS SURVEYING AS BROADCAST BY THE LECT AS MARTINE THE TWORK. ELEVATIONS SHOWN HEREON ARE REFERRED TO THE MORTH AMERICAN VERTICAL DATUM OF 1980 (MAVD 80), AS DETERMINED BY R.T.K. O.P.S. DOBERVATIONS RESIDE IN THE ELECTRONIC VERSION OF THIS DRAWING BUT ARE NOT PLOTTED HEREON. THE LOCATION OF EXISTING UNDERGROUND UTLITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE DESCRIPTION OF THE UNDERGROUND UTLITES AS SHOWN HEREON WERE BASED SQLY UPON FIED OBBERNATIONS AND HAVE NOT BEEN COMPARED TO OR VERPEID WITH RECORD LITERT DRAWINGS ON THESE DISC. TYPE AND LOCATION OF THE OTHER SHOULD BE VERHED BY THE USEN OF THIS DRAWING. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ACTUALS STORE TO THE START OF ANY WORK. THERE IS NO MARANTY OR GUARANTEE ON THE COMPLETING SCR COMPRECINESS OF THE EXISTING CONDITION NEOPERSSION, COMPOSISION, AND ONE IS THE USEN OF THIS DRAWING. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ACTUALS STORE TO THE START OF ANY WORK. THERE IS NO MARANTY OR GUARANTEE ON THE COMPLETING SCR COMPRECINESS OF THE EXISTING CONDITION NEOPERSSION, COMPOSISION, AND ONE IS THE USEN OF THIS DRAWING. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ACTUALS STORE TO THE WORK SCREWCOR SHALL DE ROUGHT TO THE MINEDATE THETTORY OF THE ACCHTECHENDREER FROM TO THE START OF ANY WORK. THE HOURS SCREWCOR SHALL DE NO COMPLETING THE MERGY AND | 16. 17. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. | ALL STONE USED FOR THE PROTECTIONS WORK SHALL BE DURABLE IFREE FROM EITHER LAMINATIONS, WEAK CLEAVAGES, OR UNDESIRAE DISINTEGRATE FROM THE ACTION OF AIR, SALT, WATER, OR HANDLININDVIDUAL STONES WILL BE FREE FROM THIN, SLABBY PIECES HAVINITIMES THE LEAST DIMENSION. ANY EXCAVATION THAT MEETS SAND FILL REQUIREMENTS MAY BE REOF AT AN APPROVED LOCATION. THE WORK INSTALLED AS A PART OF THE PROJECT WILL CONTAIN NOW WORKMANSHIP. THE CONTRACTOR SHALL CORRECT, REPAIR, OR REMOVE AND REPLAY WORK FOUND NOT TO BE AS PER THE GUARANTEE. THE CONTRACTOR WORK OR MATERIALS IN THE PROCESS OF FULFILLING THE GUARANT CONTRACTOR MAY UTILIZE STOCKPILE AREAS AS DELINEATED ON PL ALL DISTURBED AREAS SHALL HAVE PERMANENT OR TEMPORARY ST THREE CALENDAR DAYS ON SLOPES GREATER THAN 3:1 AND TO THE SEVEN CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED A ALL TREES WITH A DIAMETER GREATER THAN 12 INCHES WITHIN THE APPROVAL IS OBTAINED OR EXPLICITLY SHOWN ON THE PLANS TO BE THAT ARE NOT TO BE REMOVED SHALL BE PROTECTED WITH TREE PF ALL DISTURBED AREAS WITH SLOPES GREATER THAN 3:1 SHALL BE S HAS A SUFFICIENT DESIGN SHEAR STRESS FOR THE APPLICATION OR CONTROL PLANS. ALL ROADS SHALL BE CLEANED AND CLEARED BY THE END OF EACH 'S HALL BE SWEPT BEFORE THE END OF EACH WORK DAY. ALL STAKING, RE-STAKING, AND CUT SHEETS SHALL BE PERFORMED ENGINEER AT THE CONTRACTOR'S EXPENSE. ALL CONSTRUCTION TO BE PERFORMED IN ACCORDANCE WITH STAT CONTRACTOR MUST ENSURE THAT COPIES OF FEDERAL, STATE, AND OF ANY WORK. CONTRACTOR SHALL RESTORE ALL AREAS IMPACTED BY CONSTRUCT AREAS, ROADS, AND PAVED AREAS, ETC. |

50 100 1"=100'-

E ARUNDEL COUNTY MARYLAND PARTMENT OF PUBLIC WORKS JG BAY ENVIRONMENTAL EDUCATION CENTER

BID SET SUBMISSION - NOVEMBER 7, 2023 PINDELL ROAD, LOTHIAN, MARYLAND 20711 PROJECT NO. P584501, CONTRACT NO. P584500



ereby certify that these documents were prepared or approved by e, and that I am a duly licensed professional engineer under the aws of the State of Marvland License # 27734 Expiration Date: 07/12/24

A DIVISION OF TRANSYSTEMS

CHIEF ENGINEER

APPROVED

| NDE. | <u> X OF </u> | DRAWINGS |
|------------------------|---------------|---|
| HEET | DWG | SHEET TITLE |
| NO. | NO. | |
| | | |
| 1. | G100 | COVER SHEET |
| 2. | C100 | OVERALL EXISTING CONDITIONS PLAN |
| 3. | C101 | DEMOLITION PLAN |
| 4. | C102 | BORING LOG |
| 5. | C200 | OVERALL SITE LAYOUT PLAN |
| 6. | C201 | SITE LAYOUT PLAN |
| 7. | C202 | SITE DETAILS |
| 8. | C203 | SITE DETAILS |
| 9. | C301 | GRADING PLAN |
| 10. | C302 | PROFILES |
| 11. | C401 | UTILITY PLAN |
| 12. | C402 | UTILITY DETAILS |
| 13. | C403 | UNDERGROUND WATER STORAGE TANK |
| 14. | C404 | STORM DRAIN DRAINAGE AREA MAP |
| 15. | C501 | |
| 16. | C502 | STORMWATER MANAGEMENT PART PLAN |
| 17. | C503 | STORMWATER MANAGEMENT PART PLAN |
| 18. | C504 | STORMWATER MANAGEMENT NOTES & DETAILS |
| 19. | C601 | LANDSCAPE PLAN |
| 20. 21 | C701 | EANDSCAPE NOTES AND DETAILS |
| 21. 00 | C701 | |
| 22. | C702 | EROSION AND SEDIMENT CONTROL DETAILS |
| 23. 24 | C800 | ENESTION AND SEDIMENT CONTROL DETAILS |
| 2 7 . 25 | C901 | FOREST CONSERVATION PLAN |
| 26 | C902 | FOREST CONSERVATION NOTES AND DETAILS |
| 20. | 0002 | |
| | | ARCHITECTURAL |
| | | |
| 27 | Δ <u>0</u> 01 | GENERAL NOTES ABBREVIATIONS AND SYMBOLS |
| 28 | A002 | TYPICAL ADA CLEARANCES |
| 29 | A003 | |
| 30 | A004 | CODE REVIEW |
| 31. | A005 | LIFE SAFETY PLANS |
| 32. | A100 | ARCHITECTURAL SITE PLAN |
| 33. | A101 | CABINS PLANS AND ELEVATIONS |
| 34. | A102 | CABIN SECTIONS AND DETAILS |
| 35. | A103 | CABIN INTERIOR ELEVATIONS AND MILLWORK |
| 36. | A104 | CABIN SCHEDULES AND DETAILS |



CHANICAL. ELECTRICAL. PLUMBING. & FIRE PROTEC

| - | FP001 | GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS |
|---|-------|---|
| - | FP101 | CABIN FLOOR PLAN - FIRE PROTECTION |
| - | M001 | GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS |
| - | M101 | CABIN FLOOR PLAN - MECHANICAL |
| - | M102 | BATHHOUSE FLOOR PLAN - MECHANICAL |
| - | P001 | GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS |
| - | P101 | BATHHOUSE FLOOR PLAN - PLUMBING |
| | E001 | GENERAL NOTES, SYMBOLS LIST, AND ABBREVIATION |
| - | E101 | SITE PLAN - ELECTRICAL |
| | E102 | CABIN FLOOR PLAN - ELECTRICAL |
| | E103 | BATHHOUSE FLOOR PLAN - ELECTRICAL |
| | E201 | ONE-LINE RISER, SCHEDULES |

STRUCTURAL

| 59. | S001 | STRUCTURAL GENERAL NOTES | |
|-----|------|---|--|
| 60. | S101 | CABIN FOUNDATION AND ROOF FRAMING PLANS | |
| 61. | S201 | BATHHOUSE FOUNDATION PLAN AND SECTION | |
| 62. | S202 | BATHHOUSE ROOF FRAMING PLAN | |
| 63. | S301 | PAVILION FOUNDATION PLAN | |
| | | | |

| A104 | |
|------|---------------|
| A105 | CABIN DETAILS |

- CABIN DETAILS
- BATHHOUSE PLAN
- ATHHOUSE ROOF PLAN AND REFLECTED CEILING PLAN
- SIGNAGE DETAILS



DATE SCALE: DATE APPROVED AS SHOWN JUG BAY EDUCATION, RESEARCH, AND **DISCOVERY FIELD STATION** R.S.S. DRAWN BY: **COVER SHEET** CHECKED BY: R.W.H. PROJECT MANAGER DATE APPROVED DATE SHEET NO. 01 OF 63 PROJECT NO.: P584501 G100 CONTRACT NO.: P584500 CHIEF, RIGHT-OF-WAY



© WBCM 2023



| LEY COX & MAGNANI, LLC East Joppa Road Suite 200 | | NO. | DESCRIPTION | BY | DATE | |
|---|---|-----|-------------|----|------|-------------------------|
| .512.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| | | | | | | CHIEF ENGINEER |
| NSYSTEMS | | | | | | APPROVED |
| | 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 Data of the dead | | | | | |
| | License # <u>27734</u> Expiration Date: <u>07/12/24</u> | | | | | ASSISTANT CHIEF ENGINEI |



| | | | | O O N I NO E EI |
|-----|------------|--------------|-------|-----------------|
| PT# | NORTHING | EASTING | ELEV. | DESCRIPTION |
| 900 | 401,006.25 | 1,401,312.80 | 81.86 | REBAR & CAP |
| 901 | 400,993.69 | 1,401,634.35 | 71.53 | REBAR & CAP |
| 902 | 400,760.96 | 1,401,570.06 | 65.44 | REBAR & CAP |
| 002 | 100 750 10 | 1 404 227 25 | 65.24 | |

© WBCM 2023





PROJECT NO .:

CONTRACT NO.: P584500

P584501

C101

| 5 | Schnabel BORING | Project: Ju | ug Bay I othian, I | Environm Maryland | ental E | Educatio | on Cente | •5 | Borin Cont Shee | ng Num ract Nu t: 1 of | iber: umber: 1 | 22140004 | B-01 |
|---------------|---|-------------|-----------------------|----------------------|--------------|-------------|----------|----------------------------|-----------------------|------------------------------|----------------------|----------------------|----------------|
| Contract | tor: Recon Drilling Leesburg, Virginia | | | | | | | Grour Date | dwater C |)bserva | ations Depth | Casing | Caved |
| Contract | tor Foreman: Oswaldo | | | | En | counte | red 🛛 | 9/7 | 11:00 | AM | 12.2' | 13.5' | |
| Schnabe | el Representative: B. Like | | | | C | omoleti | ion V | 9/7 | 11.20 | | 20.0' | 23.5' | |
| Method: | 3-1/4" I.D. Hollow Stem Auger | | | | | sing Du | | 0/7 | 11.201 | A.N.4 | 40.4 | 20.0 | 40.01 |
| Hammor | Times Auto Hommor (110 lb) | | | | Cas | sing Pu | illea 🚡 | 9// | 11:457 | AM | 10.4 | i sta ti) | 18.0 |
| Dates | Started: 9/7/22 Finished: 9/7 | 7/22 | | | Aft | er Dril | ling ¥ | 9/7 | 12:00 1 | PM | Dry | | |
| Location | n: See Location Plan | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Ground | Surface Elevation: 68± (ft) | Total Dep | th: 25 | 5.0 ft | | | | | | | | | |
| DEPTH (ft) | MATERIAL DESCRIPTION | ON | SYM | BOL | ELEV (ft) | STRA TUM | S | AMPLING | A | Т | ESTS | RE | MARKS |
| 0.2 | Topsoil; 2 inches | | | 1 | 67.8 | | | / S-1, SS | | | | Eill | |
| 10 | FILL, sampled as silty sand; mo | ist, brown | FILL | | - | A | | 2+2+3 REC=11 | ", 61% | | | 50.300C | |
| 2.5 | | | | X | - 65.5 | | | | | | | 2223 | |
| <u>1</u> | SILTY SAND; moist, brown | | | | - | | | S-2, SS 2+2+1 REC=13 | * 72% | LL = 2 Pl = 1(| 8) | Patuxe | ent River e |
| - | | | SM | | - | 1 | - 4 | | | MC = 1 % Pas | 3.3% sing #20 | 00 | |
| 5.5 | CANDY I FANI OLAV | | | | 62.5 | | - 5 - | S-3, SS | | = 11.7 | 0.004-6 | 8 | |
| - | tan | it brown | | | - | 1 | | REC=17 | ", 94% | FF = . | 2.00 (5) | | |
| 7 | | | CL | | Ī | 1 | 5 95 | | | | | | |
| - | | | | | - | 1 | | S-4.SS | | | | | |
| 9.3 | CLAYEY SAND; moist, tan whit | e, trace | | 1 | 58.7 |] | | 2+7+5 REC=15 | ", 83% | | | | |
| | gravel | ¥ | | A | |] | | | | | | | |
| | | ∇ | | A | | | | | | | | | |
| _ | | | | 1A | - | | | | | | | | |
| _ | Change: light brown tan reddish | brown | | A | | в | | S-5, SS | | | | Runni | ng sands |
| | | | | A | - | | - 15 - | AREC=18 | ", 100% | | | | |
| 1 | | | | Ø. | | | - 22 | | | | | | |
| - | | | SC | 12 | - | | | | | | | | |
| 2 | | | | 1A | 8 | | | | | | | | |
| - | | | | A | 2 | | | S-6, SS | | | | | |
| | | Ţ | | A | 1.10 | | - 20 - | REC=18 | ", 100% | | | | |
| 4 | | | | Ø | 4 | | | | | | | | |
| - | | | | 1 | | | | | | | | | |
| - | Change: dark grav | | | 12 | - | | | | | | | | |
| | stranger ourn gruy | | | 1A | - | | 1 | S-7, SS 2+3+5 | | | | | |
| - | | | | | | | | | | | | | |



| 3 | Schnabel BORING LOG | ug Bay Envir othian, Mary | ronmental land | Educatio | on Ce | nter | | Bori Con She | ng N tract et: 1 | lumber: Number: of 1 | 22140004 | B-02 |
|---------------|---|------------------------------|-------------------|-------------|-------|-----------|------------------|--------------------|------------------------|----------------------------|---------------------|----------------|
| Contrac | tor: Recon Drilling | | | | | | Groun | dwater | Obse | ervations | | |
| Contrac | tor Foreman: Oswaldo | | - | | | | Date | Tim | e | Depth | Casing | Caved |
| Schnabe | el Representative: B. Like | | E | ncounte | red | ¥ | 9/7 | 12:55 | PM | 9.5' | 10.5' | 777 |
| Equipme | ent: CME 550 ATV Track Mount | | (| Complet | ion | Ā | 9/7 | 1:00 | PM | Dry | 00005 | |
| lethod: | 3-1/4" I.D. Hollow Stem Auger | | C | asing Pu | lled | Ţ | 9/7 | 1:05 | PM | Dry | 3 311 23 | 5.0' |
| lammer | Type: Auto Hammer (140 lb) | | A | fter Dril | ling | ¥ | 9/7 | 1:10 | PM | Dry | | |
| Dates | Started: 9/7/22 Finished: 9/7/22 | | 5 | | 5/50 | | | | | | | |
| ocation | n: See Location Plan | | | | | + | | - | | | | |
| | | | - | | | + | | | | - | | - |
| Ground | Surface Elevation: 67± (ft) Total Dep | oth: 12.0 ft | | | | | | 1 | | | 1 | |
| DEPTH (ft) | MATERIAL DESCRIPTION | SYMBOL | ELEV (ft) | STRA TUM | DEF | SA PTH | MPLING | A | | TESTS | RE | MARKS |
| 0.3 | Topsoil; 3 inches | × | 66.8 | | | M | S-1, SS 2+2+3 | wa usaw | | | Fill | |
| 1 | FILL, sampled as silty sand; moist, brown | FILL | 8 | A | | 14 | REC=15 | , 83% | | | | |
| 2.5 | | | 64.5 | | t. | 1 | | | | | 1200 | |
| 2 | SILTY SAND; moist, brown | | - | 7 | F | ΞX | 2+2+3 REC=15 | 83% | | | Terrac | ent River e |
| - | | SM | - | 5 | - | + | | 1.0010 | | | | |
| | | | - | | - 5 | + | S-3, SS | | | | | |
| 5.5 | CLAYEY SAND; moist, light brown | SC | 61.5 | | - | -X | 2+3+3 REC=12 | ', 67% | | | | |
| 7.0 - | OU TY CAND | | 60.0 | | - | - | | | | | | 10 |
| - | reddish brown | | - | - | - | - | | | | | Runni | ng sanos |
| _ | _ | SM | | 2 | _ | 1 | S-4, SS | | | | | |
| 10.0- | Ϋ́ | | 57.0 | | - 10 | M | REC=14 | ', 78% | Table No. | | | |
| 10.0 | SANDY LEAN CLAY; wet, tan gray | | 01.0 | | | | S-5, SS | | PP | = 1.50 tsf | Č. | |
|] | | | 1 | | | X | 2+1+2 REC=18' | ', 100% | | | | |
| 12.0 - | Bottom of Boring at 12.0 ft. | | - 55.0 | | - | | | | | | | |
| | Boring terminated at selected depth. | 00 | | | | | | | | | | |
| | Boring backnied with cuttings upon completi | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| 3 | Schnabel BORING ENGINEERING LOG | nmental Ind | Educatio | on Center | | Bor Cor She | ntract | Number: of 1 | 22140004 | B-03 | |
|-----------------|--|----------------|---------------|-------------|-------------------|-------------------|--------|-----------------|--------------------|---------------------|-----------|
| Contract | tor: Recon Drilling | | | | | Groun | dwater | Obse | rvations | | |
| Contract | Leesburg, Virginia | | | | | Date | Tin | ne | Depth | Casing | Caved |
| Schnabe | al Representative: B. Like | | E | ncounte | red | 9/7 | 6.00 | | Dry | 10.5' | |
| Equipme | ent: CME 550 ATV Track Mount | | C | omplet | ion I | 9/7 | 3:20 | PM | Dry | (an ts) | 5.2' |
| Method: | 3-1/4" I.D. Hollow Stem Auger | | | tor Dril | ling V | 0/7 | 3.30 | DM | Dov | Table 1 | - |
| waarata | | | | | ing ‡ | 511 | 0.00 | I IVI | Diy | 2377523 | |
| Hammer Dates | Started: 9/7/22 Einisbed: 9/7/22 | | | | | | | | | | |
| Location | n: See I ocation Plan | | | | | | | | | | |
| | | | - | | | | | | | | |
| Ground | Surface Elevation: 71± (ft) Total D | Depth: 12.0 ft | | 1 | | | | | | | |
| DEPTH (ft) | MATERIAL DESCRIPTION | SYMBOL | ELEV (ft) | STRA TUM | S. DEPTH | AMPLING | A | | TESTS | RE | MARKS |
| 0.2 | Topsoil; 2 inches | / 🗰 | 70.8 | | | S-1, SS | | 1 | | Fill | |
| - | FILL, sampled as silty sand, moist, light brown | FILL | 7 2 | A | 12 | REC=16 | , 89% | | | | |
| - | | | e Vizieria | - | | | | | | | |
| 2.5 | SANDY LEAN CLAY; moist, light brown | | - 68.5 - | - | 1 -1 | S-2, SS | | LL | = 33 | Patuxe | ent River |
| 40 | | | - 670 | | | REC=18 | , 100% | MC | = 19.9% | rerrac | e |
| 4.0 | SILTY SAND; moist, tan gray reddish | | 07.0 | | n desta | | | % F = 7 | Passing #20 6.0 | 00 | |
| 1000 | Li cini j | SM | 200 A | 1 | - 5 | S-3, SS | | | | | |
| 6.3 | | | 64.7 | - | / | REC=18 | , 100% | | | | |
| 5 | SANDY LEAN CLAY; moist, tan | | | в | | | | | | | |
| - | | | - | | | | | | | | |
| 25 | | | | | | /s-4, ss | | | | | |
| | | CL | | | | (3+7+5 REC=18 | , 100% | | | | |
| | | | | 1 | - 10 - | | | | | | |
| 10 | | | | - | + +) | S-5, SS 3+7+8 | 4000/ | | | | |
| 12.0 | | | - 59.0 | | | VREC=18 | , 100% | _ | | | |
| | Bottom of Boring at 12.0 ft. | | | | | | | | | | |
| | Boring backfilled with cuttings upon comple | etion. | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

| 3 | Schnabel BORING | ug Bay Er othian, M | nvironn aryland | nmental Education Center nd | | | | | Boring Number: Contract Number: Sheet: 1 of 1 | | | SWM-01 22140004.000 | | |
|---------------|---|---------------------------------------|--------------------|--------------------------------|--------------|-------------|--------|----------|---|----------|-------------|-------------------------------|--------------|----------|
| Contrac | tor: Recon Drilling | | | | | | | | Ground | lwater (| Obse | rvations | 20200 | |
| Contrac | tor Foreman: Oswaldo | | | | 0-00 | | | - | Date | Tim | e | Depth | Casing | Caved |
| Schnabe | el Representative: B. Like | | | | En | counte | red 🛓 | 4 | 9/7 | 0.000 | 9 | Dry | STA | 507 |
| Equipm | ent: CME 550 ATV Track Mount | | | | C | ompleti | on] | L | 9/7 | 10:30 | AM | Dry | 10.0' | |
| Method: | : 3-1/4" I.D. Hollow Stem Auger | | | | Ca | sing Pu | lled 1 | Z | 9/7 | 10:35 | AM | Dry | | 5.3' |
| Hammer | r Type: Auto Hammer (140 lb) | | | | Af | ter Drill | ing 5 | 7 | 9/7 | 10:45 | AM | Drv | | |
| Dates | Started: 9/7/22 Finished: 9/7 | /22 | | | - | | | | | | | 5.9 | | |
| Location | n: See Location Plan | | | | - | | | + | | | | | | 1 |
| | | | | | - | | | + | | | | | | 4 |
| Ground | Surface Elevation: 74± (ft) | Total Dep | oth: 12.0 | 0 ft | | | | | | | | | | |
| DEPTH (ft) | MATERIAL DESCRIPTIC | DN | SYMB | ol | ELEV (ft) | STRA TUM | DEPTI | SAI H | MPLING DATA | | | TESTS | RE | MARKS |
| 0.3 | Topsoil; 3 1/2 inches | | | *** | 73.7 | - | _ | ∇ | S-1, SS | | | | Ear | |
| | FILL, sampled as silty sand; moi | st, brown | FILL | ₩- | | A | | X | 1+2+2+1 REC=18", | 75% | | | C III | |
| 2.0 - | SILTY SAND: moist brown | | | | 72.0 - | | | H | S-2 SS | | | | Patuvo | nt Pivor |
| - | SILT SAND, MOSI, DOWN | | | - | - | _ | | X | 2+2+3+3 REC=17". | 71% | | | Terrac | e |
| _ | sterr Kannakan | | | | | | | \wedge | and a second | | | | | |
| - | Change: light brown | | | | | | - | M | S-3, SS 2+2+3+2 | | | | | |
| 875 | | | SM | | 1 | 1 | - 5 - | М | REC=18", | 75% | | | | |
| 5 | Change: tan | | | | 0 | 1 | 5) T | ∇ | S-4, SS | | | | | |
| 1 | | | | - | ž | в | | X | REC=15", | 63% | | | | |
| 8.2 - | CANDY I FANI OLAY | 4 haarina | | | 65.8 | | | () | S-5, SS | | мс | = 22.8% | USDA | Loam |
| 2 | gray | Lbrown | | | 1 | - | | X | 1+1+2+3 REC=24", | 100% | % F = 66 | assing #20 | 0 | |
| 100 | | | CL | 14- | s <u>as</u> | | - 10 - | () | C.C. CC | | PP | = 1.00 tsf | | |
| | | | | | - | | | N | 2+2+3+3 REC=24" | 100% | | | | |
| 12.0 | | | | | 62.0 | | | Λ | 1120-21 | 10075 | | | | |
| 12.0 - | Bottom of Boring at 12.0 ft. Boring terminated at selected de Boring backfilled with cuttings up 5-in PVC pipe installed in a 8-ft V | oth. Ion completi Vest offset I | on. poring to p | perform | n infiltra | tion test | 6 | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

| Contract | cor: Recon Drilling Leesburg, Virginia | | | | | Gr |
|---------------|--|------------------------------------|--------------|-------------|---------------|-----------------------------------|
| Contract | or Foreman: Oswaldo | | - | | | 0 |
| Schnabe | I Representative: B. Like | | Er | icounte | rea 🐺 | 9/ |
| Equipme | ent: CME 550 ATV Track Mount | | C | ompleti | ion | 9/ |
| Method: | 3-1/4" I.D. Hollow Stem Auger | | Ca | sing Pu | lled <u>V</u> | 9/ |
| Hammer | Type: Auto Hammer (140 lb) | | Af | ter Drill | ling 🏆 | 9/ |
| Dates | Started: 9/7/22 Finished: 9/7/22 | | | | | |
| Ground | I: See Location Plan Surface Elevation: 71± (ft) Tot | al Depth: 10.0 ft | | | | |
| DEPTH (ft) | MATERIAL DESCRIPTION | SYMBOL | ELEV (ft) | STRA TUM | S/ DEPTH | AMPL |
| 0.2 | Topsoil; 2 1/2 inches | | 70.8 | - | | /S-1, |
| 7 | FILL, sampled as silty sand; moist, bro | wn FILL | } . | A | $ \rangle$ | REC |
| 2.0 - | CLAYEY SAND; moist, light brown tar | | 69.0 | - | Ī | S-2, 2+2 REC |
| | 227 C 2010/04 | sc | | в | - 5 - | S-3, 2+7 REC S-4, 2+6 |
| - | Change: tan light brown | | | | 1 | S-5, 2+3 |
| 9.0 | LEAN CLAY; moist, light gray | CL | 62.0 | | [1/ | REC |
| | Bottom of Boring at 10.0 ft. Boring terminated at selected depth. Boring backfilled with cuttings upon co 5-in PVC pipe installed in a 8-ft East of | mpletion. Ifset boring to perfo | orm infiltra | tion test. | | |

| | | | REVISIONS | | | |
|----------------|--|-----|-------------|----|------|--------------------------|
| , LLC e 200 | | NO. | DESCRIPTION | BY | DATE | _ |
| 1280 I.com | | | | | | _ APPROVED |
| Л | | | | | | _ |
| | | | | | | |
| | | | | | | CHIEF ENGINEER |
| 10 | | | | | | APPROVED |
| 15 | I hereby certify that these documents were prepared or approved by | | | | | - |
| | me, and that I am a duly licensed professional engineer under the | | | | | |
| | License # 27734 Expiration Date: $07/12/24$ | | | | | ASSISTANT CHIEF ENGINEER |

| | Schnabel TEST Proje | ct: Jug Bay Environ | imental I | Educatio | n Cen | ter | | Bori | ng N | lumber: | | P-01 |
|-------------------|--|-------------------------|--------------|-------------|-------|-----------|------------------|----------|-------------|-----------------------|---------------|--------------|
| 2 | ENGINEERING LOG | Lothian, Marylar | br | | | | | Cont | tract | Number: of 1 | 2214000 | 4.000 |
| Contrac | tor: Recon Drilling | | | | | | Ground | lwater C | Obse | rvations | | |
| Contrac | tor Foreman: Oswaldo | | _ | | | + | Date | Tim | e | Depth | Casing | Caved |
| Schnabe | el Representative: B. Like | | Er | ncounte | red | Σ | 9/7 | 0.000 | | Dry | :सार | - |
| Equipm | ent: CME 550 ATV Track Mount | | c | ompleti | on | Ā | 9/7 | 9:30 A | ٩M | Dry | 8.5' | |
| Method: | : 3-1/4" I.D. Hollow Stem Auger | | Ca | sina Pu | lled | v | 9/7 | 9:35 | AM | Drv | | 4.5' |
| Hammo | r Tupe: Auto Hammer (140 lb) | | | ong ra | | - | 0.7 | 0.007 | | Diy D | 72511975 | 4.0 |
| Dates | Started: 9/7/22 Finished: 9/7/22 | | At | ter Drill | ling | ¥ | 9/7 | 10:00 | AM | Dry | | |
| Location | n: See Location Plan | | | | | | | | | | | |
| 5.500mmm210-10-10 | | | | | | | | | | | | |
| | | | | | | 1 | | | | | | |
| Ground | Surface Elevation: 76± (ft) Tota | al Depth: 10.0 ft | | | | | | | | | <u> </u> | |
| DEPTH (ft) | MATERIAL DESCRIPTION | SYMBOL | ELEV (ft) | STRA TUM | DEP | SA TH | MPLING | | | TESTS | RE | MARKS |
| 0.3 | Topsoil; 3 inches | | 75.8 | | | M | S-1, SS 1+3+3 | | | | Fill | |
| 7 | FILL, sampled as silty sand; moist, ligh brown | t FILL | - | A | | 1 | REC=18", | 100% | LL | = 39 | Bulk s | ample |
| | | | | | - | - | | | PI = MC | = 19 = 20.6% | collect ft | ed from 1-5 |
| 2.5 | SANDY LEAN CLAY; moist, light brow | n 🖉 | /3.5 | - | 1 | - | S-2, SS 2+4+2 | | % F = 74 | Passing #20 4.6 | 00 Patux | ent River |
| | | | | | | \square | REC=18", | 100% | MC % F | = 24.4% Passing #2 | USDA | : Silty Clay |
| | | | | | - | | | | = 8 | 7.6 = 1.00 tef | Loam | |
| 876 | Change: wet | | | 1 | - 5 | M | S-3, SS 1+1+1 | | FF | - 1.00 ISI | | |
| 5 | | CL | | в | ः ः | 1 | REC=18", | 100% | | | | |
| Ē | | | | - | - | - | | | | | | |
| 8 | | | i i | - | - | - | | | | | | |
| 1 | | | | | _ | 1 | S-4, SS | | | | | |
| 9.5 | CLAYEY SAND: wet, tan gray | SC SC | 66.5 | | 10 | Ň | REC=18", | 100% | | | | |
| 10.0- | Bottom of Boring at 10.0 ft. | | - 00.0 - | | - 10 | | | | | | | |
| | Boring terminated at selected depth. Boring backfilled with cuttings upon cor | moletion | | | | | | | | | | |
| | 5-in PVC pipe installed in a 17-ft East of | offset boring to perfor | rm infiltr | ation tes | st. | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| | Bori | ng N | umber: | SWM-02 | | | | |
|-------------------------|-----------------|-------------------|-------------------------------|--------|------------------|----------------|--|--|
| | Cont | tract et: 1 | Number: of 1 | 22* | 40004 | 1.000 | | |
| round ate | lwater (Tim | Obse e | rvations Depth | Ca | sing | Caved | | |
| 17 | 177 | W. | Dry | 22 | जाहत | | | |
| 17 | 2:30 F | PM | Dry | 8 | 3.0' | | | |
| /7 | 2:35 | PM | Dry | 2 | en c | 4.0' | | |
| 17 | 2:36 F | РМ | Dry | 2 | *** | | | |
| | 1 | | | | | | | |
| | - | | | | | | | |
| LING DATA | Ň | | TESTS | | RE | MARKS | | |
| , SS +4+5 C=18", | 75% | | | | Fill | | | |
| , SS +3+4 C=24", | 100% | | | | Patuxe Terrac | ent River e | | |
| , SS '+7+9 C=24", | 100% | | | | | | | |
| , SS 9+6+7 C=24", | 100% | MC % F = 36 | = 18.3% Passing #20 5.0 | 00 | USDA Loam | : Sandy | | |
| , SS +3+4 | 40000 | | | | | | | |

| 5 | Schnabel BORING | Project: Ju | ig Bay Environr othian, Marylan | nental E d | ducatio | n Cente | er | | Borin Contr Sheet | g Number: act Number: : 1 of 1 | 22140004 | VIVI-U 1.000 |
|---------------|--|----------------|------------------------------------|---------------|-------------|---------|-------------------|----------------------|-------------------------|--------------------------------------|----------|------------------------|
| Contracto | or: Recon Drilling Leesburg, Virginia | | | | | | ï | Ground | lwater O | bservations | Casing | . Com 1 |
| Contracto | or Foreman: Oswaldo | | | - | | | _ | Date | Time | Depth | Casing | Caved |
| Schnabel | Representative: B. Like | | | En | counter | ed Z | 4 | 9/7 | 1:15 PI | M 7.0' | 8.0' | 0.775 |
| quipmer | nt: CME 550 ATV Track Mount | | | C | ompleti | on 🤉 | Z | 9/7 | 1:40 PI | M Dry | 8.0' | |
| Method: | 3-1/4" I.D. Hollow Stem Auger | | | Ca | sing Pu | led J | Z | 9/7 | 1:45 PI | M Dry | | 5.5' |
| lammer ' | Type: Auto Hammer (140 lb) | | | Aft | ter Drill | ing S | Z | 9/7 | 1:46 PI | M Dry | | |
| Dates S | Started: 9/7/22 Finished: 9/7 | 7/22 | | - | | 1792 34 | | | | | | |
| .ocation: | : See Location Plan | | | \vdash | | | + | | | | | |
| Ground S | Surface Elevation: 65± (ft) | Total Dep | th: 10.0 ft | | | - | | | | | | |
| DEPTH (ft) | MATERIAL DESCRIPTION | DN | SYMBOL | ELEV (ft) | STRA TUM | DEPT | SAI H | MPLING | | TESTS | RE | MARKS |
| 0.2 | Topsoil; 2 inches | | | 64.8 | | 1 | M | S-1, SS | | | Fill | |
| - | FILL, sampled as silty sand; mo | ist, brown | FILL | | Α | | X | 1+2+2+2 REC=24", | , 100% | | | |
| 2.0 | SILTY SAND; moist, tan reddish | n brown | | 63.0 - | | | M | S-2, SS 2+2+3+3 | | | Patuxe | ent River |
| 1 | | | SM - | ā | | - in | 1Å | REC=21", | 88% | | renac | 6 |
| 4.0 + | CLAYEY SAND: moist tan redd | lish brown | | 61.0 - | - | | () | S-3, SS | | MC = 9.9% | USDA | Loamy |
| - 7 | | | | | | - 5 - | X | 4+5+6+7 REC=20", | 83% | % Passing #2 | 00 Sand | _ sainy |
| | | | SM | | B | | \wedge | | | - 10.0 | | |
| | | Ω | | 0 1222-122 | | | M | S-4, SS 4+7+8+9 | C STRANG | | | |
| 7.0 | SILTY SAND; wet, light brown to | an gray | | 58.0 - | | 5 34 | 1Å | REC=24", | , 100% | | | |
| - | | | SM - | 1 | | | () | S-5, SS | | | | |
| - | | | Sivi - | 1 | - | ÷ | X | 6+7+10+1 REC=21", | 0 , 88% | | | |
| 10.0 | | | | 55.0- | | - 10 - | $\langle \rangle$ | | | | 2 | |
| 10.0 | Bottom of Boring at 10.0 ft. | | | 00.0 | | 10 | | | | | | |
| | Boring terminated at selected de | pth. | | | | | | | | | | |
| | 5-in PVC pipe installed in a 6-ft f | North offset b | on. Doring to perform | n infiltra | ation tes | E | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| ANNE ARUNDEL COUNTY | | | | | | | | | | | |
|----------------------------|---------------------|-----------------------|----------------------------------|--|--|--|--|--|--|--|--|
| DEPARTMENT OF PUBLIC WORKS | | | | | | | | | | | |
| DATE | APPROVED DATE | SCALE: AS SHOWN | JUG BAY EDUCATION, RESEARCH, AND | | | | | | | | |
| | | DRAWN BY: R.S.S. | DISCOVERY FIELD STATION | | | | | | | | |
| | PROJECT MANAGER | CHECKED BY: R.W.H. | BORING LOGS | | | | | | | | |
| DATE | APPROVED DATE | SHEET NO. 04 OF 63 | | | | | | | | | |
| | | PROJECT NO.: P584501 | C100 | | | | | | | | |
| ER | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | C102 | | | | | | | | |
| | © WBCM 2023 | | | | | | | | | | |





| | | _ | | | | |
|--|--|-----|-------------|----|------|------------------------|
| | | | REVISIONS | | | |
| ILEY COX & MAGNANI, LLC East Joppa Road Suite 200 | | NO. | DESCRIPTION | BY | DATE | |
|).512.4500 www.wbcm.com | | | | | | APPROVED |
| SCM | | | | | | |
| | | | | | | |
| NSYSTEMS | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the | | | | | |
| | laws of the State of Maryland. License # <u>27734</u> Expiration Date: <u>07/12/24</u> | | | | | ASSISTANT CHIEF ENGINE |



| | NO. | DESCRIPTION | BY | DATE | - |
|--------------------------------------|-----|-------------|----|------|--------------------------|
| | | | | | APPROVED |
| | | | | | |
| | | | | | |
| | | | | | APPROVED |
| nsed professional engineer under the | | | | | |
| Date: 07/12/24 | | | | | ASSISTANT CHIEF ENGINEER |



ADA COMPLIANCE NOTE

IN ORDER TO MEET THE ADOPTED 2010 ADA MINIMUM REQUIREMENTS AND IN ACCORDANCE WITH THE PUBLIC RIGHTS-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG) PUBLISHED BY THE U.S. ACCESS BOARD IN 2011, ALL PUBLIC AND PRIVATE PEDESTRIAN ACCESS ROUTES, SIDEWALKS, CURB AND GUTTER, CURB RAMPS, AND TRAFFIC CONTROL DEVICES SHALL BE DESIGNED IN ACCORDANCE WITH THE ANNE ARUNDEL COUNTY PEDESTRIAN FACILITY STANDARDS PF1 – PF29

PARKING TABULATION

PROPOSED STANDARD PARKING SPACES: PROPOSED HANDICAPPED (VAN ACCESSIBLE): TOTAL:

40 SPACES 2 SPACES 42 SPACES

CONSTRUCTION NOTES

- N-1 NEW 20'x40' PRE-FABRICATED PAVILION, SEE SPECIFICATIONS FOR DETAILS.
- N-2 NEW ALPINE BATHHOUSE, SEE ARCHITECTURAL PLANS FOR DETAILS.
- N-3 NEW MULTI-UNIT CABIN, SEE ARCHITECTURAL PLANS FOR DETAILS.
- N-4 NEW GRAVEL PAVING, SEE DETAIL #1 ON SHEET C202.
- N-5 NEW FULL DEPTH BITUMINOUS CONCRETE PAVING, SEE DETAIL #2 ON SHEET C202.
- N-6 NEW CONCRETE SLAB AT BATH HOUSE, SEE STRUCTURAL DRAWING S201 FOR DETAILS
- N-7 NEW PIPE BOLLARD, SEE DETAIL #4 ON SHEET C202. N-8 NEW BITUMINOUS CONCRETE PAVED PEDESTRIAN TRAIL, SEE DETAIL #5 ON SHEET C202.
- N-9 NEW STANDARD PARKING SPACE, SEE DETAIL #6 ON SHEET C202.
- N-10 NEW ADA ACCESSIBLE PARKING STRIPING, SEE DETAIL #7 ON SHEET C202.
- N-11 NEW ADA ACCESSIBLE PARKING SIGN, SEE DETAIL #8 ON SHEET C202.
- N-12 NEW TIMBER WHEEL STOP, SEE DETAIL #9 ON SHEET C202.
- N-13 NEW PERVIOUS VEHICULAR PAVERS, SEE DETAIL #15 ON SHEET C203.
- N-14 NEW FIRE PIT AREA WITH SEAT WALLS, SEE ENLARGEMENT PLAN AND DETAIL #12 ON SHEET N-15 NEW NEW DUMPSTER PAD WITH ENCLOSURE AND GATES.
- SEE DETAIL #11 ON SHEET C203.
- N-16 NEW BRICK PAVERS ON SAND BASE, SEE DETAIL #13 ON SHEET C203. N-17 NEW 32" OD PLATE STEEL CAMPFIRE COOK RING.
- N-18 MEET THE EX GRAVEL ROAD DETAIL, SEE DETAIL #10 ON SHEET C202.
- N-19 NEW PICNIC TABLE.
- N-20 NEW CONCRETE PORCH SLAB AT CABIN. N-21 NEW REINFORCED TURF / GEOGRID (GRAVEL), SEE DETAIL #14 ON SHEET C203.

CONSTRUCTION LEGEND:

NEW BITUMINOUS PAVING NEW BITUMINOUS PATHWAY NEW PERVIOUS PAVERS NEW PERMEABLE GRASS PAVER NEW CONCRETE SIDEWALK NEW SWM FACILITY NEW GRAVEL ADA PATH PICNIC TABLE CAUTION: IF THIS DRAWING IS A REDUCTION, USE THE GRAPHIC SCALES. 1"=30'-0" BID SET ANNE ARUNDEL COUNTY

DEPARTMENT OF PUBLIC WORKS DATE SCALE: JUG BAY EDUCATION, RESEARCH, AND 1" = 30' DISCOVERY FIELD STATION R.S.S. DRAWN BY: SITE LAYOUT PLAN CHECKED BY: R.W.H. DATE SHEET NO. 06 OF 63 PROJECT NO .: P584501 C201 CONTRACT NO.: P584500 © WBCM 2023



License # 27734 Expiration Date: 07/12/24

C WBCM 2023

ASSISTANT CHIEF ENGINEER





| | STRUCTURE SCHEDULE | | | | | | | | | | |
|--------|--|-------------------------------|-------------|--------------|-------|--|--|--|--|--|--|
| NO. | DESCRIPTION INVERTS NORTHING EASTING | | | | | | | | | | |
| CO-101 | CLEAN OUT | INV IN 69.00 INV OUT 69.00 | N 401012.20 | E 1401508.86 | 73.00 | | | | | | |
| CO-102 | CLEAN OUT | INV OUT 69.00 | N 401045.78 | E 1401500.15 | 73.00 | | | | | | |
| ES-101 | ANNE ARUNDEL COUNTY STD. D-77 METAL END SECTION | INV IN 62.54 | N 400719.19 | E 1401397.73 | 64.06 | | | | | | |
| ES-201 | ANNE ARUNDEL COUNTY STD. D-77 METAL END SECTION | INV IN 63.00 | N 400727.93 | E 1401551.69 | 64.52 | | | | | | |
| I-101 | ANNE ARUNDEL COUNTY STD. D-40 STANDARD TYPE 'S' INLET | INV IN 62.83 INV OUT 62.73 | N 400809.39 | E 1401422.43 | 67.50 | | | | | | |
| I-102 | ANNE ARUNDEL COUNTY STD. D-40 STANDARD TYPE 'S' INLET | INV IN 67.36 INV OUT 67.23 | N 400992.81 | E 1401413.03 | 75.00 | | | | | | |
| I-103 | ANNE ARUNDEL COUNTY STD. D-40 STANDARD TYPE 'S' INLET | INV IN 69.00 INV OUT 68.95 | N 400998.66 | E 1401492.11 | 73.50 | | | | | | |
| I-201 | ANNE ARUNDEL COUNTY STD. D-40 STANDARD TYPE 'S' INLET | INV OUT 63.45 | N 400818.00 | E 1401553.29 | 67.50 | | | | | | |



STORM DRAIN NOTES

| SD-1 | NEW 4" PERFORATED UNDER DRAIN. |
|------|--------------------------------|
| SD-2 | NEW 15" HDPE PIPE. |
| SD-3 | NEW 6" HDPE PIPE |
| SD-4 | NEW 4" SOLID PVC |

GRADING & STORM DRAIN LEGEND

| NEW MAJOR CONTOUR | 70 |
|------------------------------------|----------|
| NEW MINOR CONTOUR | 71 |
| ADA PATH | |
| NEW SPOT ELEVATION | 71.50 |
| NEW INLET | |
| NEW MANHOLE | 0 |
| FLOW ARROW | → |
| NEW STORM DRAIN | |
| NEW CLEAN OUT | CO # |
| NEW INLET | |
| NEW END SECTION | ES # |
| NEW DRAINAGE MANHOLE | DMH # |
| NEW DOWNSPOUT & BOOT CONNECTION | ODS |
| NEW SPLASH BLOCK | |
| | |
| | |
| CAUTION: | |

IF THIS DRAWING IS A REDUCTION, USE THE GRAPHIC SCALES. 15 30 1"=30'-0"

BID SET

© WBCM 2023

DEPARTMENT OF PUBLIC WORKS JUG BAY EDUCATION, RESEARCH, AND DISCOVERY FIELD STATION GRADING PLAN C301 CONTRACT NO.: P584500







017\17141806\Drawings\07-Site\17141806-C302-SD Profiles.dwg Nov 07, 2023 — 2:48pm Plot By: rsm





| | | | REVISIONS | | | |
|---|--|-----|-------------|----|------|-------------------------|
| AILEY COX & MAGNANI, LLC 0 East Joppa Road Suite 200 Baltimore MD 21286 | | NO. | DESCRIPTION | BY | DATE | |
| 10.512.4500 www.wbcm.com | | | | | | APPROVED |
| SCM | | | | | | |
| | | | | | | |
| NSYSTEMS | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the | | | | | AFFROVED |
| | laws of the State of Maryland. License # <u>27734</u> Expiration Date: <u>07/12/24</u> | | | | | ASSISTANT CHIEF ENGINEE |





| DEPARTMENT OF PUBLIC WORKS | | | | | | | | |
|----------------------------|---------------------|-----------------------|----------------------------------|--|--|--|--|--|
| DATE | APPROVED DATE | SCALE: AS SHOWN | JUG BAY EDUCATION, RESEARCH, AND | | | | | |
| | | DRAWN BY: R.S.S. | DISCOVERY FIELD STATION | | | | | |
| | PROJECT MANAGER | CHECKED BY: R.W.H. | PROFILES | | | | | |
| DATE | APPROVED DATE | SHEET NO. 10 OF 63 | | | | | | |
| | | PROJECT NO.: P584501 | <u></u> | | | | | |
| R | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | U302 | | | | | |
| | | | © WBCM 2023 | | | | | |

ANNE ARUNDEL COUNTY



| AILE`) Eas | Y COX at Jopp Ba 2.4500 | (& MAG ba Road Iltimore, 0 www. | NANI, LLC Suite 200 MD 21286 wbcm.com | | | |
|----------------|----------------------------------|---|--|--|--|--|
| 3 | (| | Μ | | | |
| NSYSTEMS | | | | | | |

| | | REVISIONS | | | | | | |
|---|-----|-------------|----|------|--------------------------|--|--|--|
| | NO. | DESCRIPTION | BY | DATE | | | | |
| | | | | | APPROVED | | | |
| | | | | | | | | |
| | | | | | CHIEF ENGINEER | | | |
| | | | | | APPROVED | | | |
| I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. | | | | | | | | |
| License # 27734 Expiration Date: 07/12/24 | | | | | ASSISTANT CHIEF ENGINEER | | | |

| STRUCTURE SCHEDULE | | | | | | | | |
|---|--------------------------------|-------------|--------------|-------|--|--|--|--|
| DESCRIPTION INVERTS NORTHING EASTING TOP F | | | | | | | | |
| DISTRIBUTION BOX | INV OUT 63.35 INV OUT 63.35 | N 400766.21 | E 1401221.26 | 65.90 | | | | |
| OBSERVATION / INSPECTION PIPE | INV OUT 63.21 | N 400739.72 | E 1401296.57 | 64.72 | | | | |
| CLEAN OUT | INV IN 63.74 INV OUT 63.74 | N 400793.98 | E 1401247.66 | 68.73 | | | | |
| CLEAN OUT | INV OUT 66.11 INV OUT 66.11 | N 400825.38 | E 1401588.14 | 70.07 | | | | |
| CLEAN OUT | INV IN 66.24 INV OUT 66.24 | N 400844.62 | E 1401586.34 | 70.23 | | | | |
| ANNE ARUNDEL COUNTY STD. S-11 STANDARD PRECAST MANHOLE | INV IN 65.83 INV OUT 65.83 | N 400793.98 | E 1401560.66 | 68.60 | | | | |
| 5,000 GALLON SEPTIC TANK | INV IN 63.64 INV OUT 63.39 | N 400777.09 | E 1401231.59 | 67.00 | | | | |

VICINITY MAP SCALE: 1" = 8,333'

STORM DRAIN NOTES

| EGEND | |
|--------------------|---------------|
| CONTOUR | 70 |
| CONTOUR | 71 |
| | |
| E | 0 |
| / | \rightarrow |
| D LIGHT POLE | * |
| DRAIN | |
| RY SEWER (GRAVITY) | |
| MAIN | |
| GROUND ELECTRIC | E |
| | |
| E OFFSET LINE | |
| EST LOCATION | # |
| TANK | ST # |
| RY CLEAN OUT | SCO # |
| RY MANHOLE | (SMH) # |
| BUTION VALVE BOX | DV # |
| GALLON CISTERN | CT # |

REFER TO SHEET E101 FOR ELECTRICAL SITE PLAN

1. NEW WELL TO BE DRILLED BY CONTRACTOR AND LICENSED WELL DRILLER. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL APPLICABLE WELL PERMITS FROM ANNE ARUNDEL COUNTY HEALTH DEPARTMENT AND/OR MDE. NEW WELL TO INCLUDE SUBMERSIBLE WELL PUMP AND CONNECTION TO THE NEW UNDERGROUND HOLDING TANK AS SHOWN ON THE DRAWING. PERFORMANCE REQUIREMENTS SHALL BE BASED UPON A MINIMUM FLOW OF 38 GPM AND A MINIMUM PRESSURE OF 55 PSI DOWNSTREAM OF BACKFLOW PREVENTION DEVICE. IF SUFFICIENT PRESSURE IS NOT AVAILABLE AT POINT-OF-CONNECTION INSTALL A BOOSTER PUMP.

GENERAL NOTES

1. WITHOUT HE EXPRESS WRITTEN CONSENT OF THE COUNTY (THROUGH THE OFFICE OF PLANNING AND ZONING'S CULTURAL RESOURCES DIVISION,) THE OWNER OR MANAGER OF THE PROPERTY SHALL NOT CAUSE, PERMIT, OR SUFFER GRADING, EXCAVATION, PLOWING, SUBSOILING, DRAINAGE IMPROVEMENTS, OR OTHER UNDERTAKING OR ACTION THAT WOULD MATERIAL DISTURB THE SURFACE OR SUBSURFACE OF THE GROUND AREA WITHIN THE ARCHAEOLOGICAL SENSITIVE AREA, WHICH IS A SIGNIFICANT ARCHAEOLOGICAL RESOURCE, AS RECORDED WITH THE STATE OF MARYLAND, AND KNOWN AS 18AN346.

| TEST RESULTS | | | | | | | | | |
|--|-------|---|----------------|--|--|--|--|--|--|
| Time (Min.) | Depth | Soil Log | Water Table | | | | | | |
| 8 min. | 2' | 0-10 Sandy Loam; 10 Grey Clay | 10' | | | | | | |
| 3 min. | 2' | 0-9 Sand; 9 Grey Clay | 9' | | | | | | |
| 3 min. | 2' | 0-8 Sand; 8 Grey Clay | 8' | | | | | | |
| 3 min. | 2' | 0-9 Sand; 9 Grey Clay | 9' | | | | | | |
| 3 min. | 2' | 0-8 Sand; 8 Grey Clay | 8' | | | | | | |
| 3 min. | 2' | 0-9 Sand; 9 Grey Clay | 9' | | | | | | |
| 3 min. | 2' | 0-9 Sand; 9 Grey Clay | 9' | | | | | | |
| 8 min. | 2' | 0-5 Sandy Loam; 5- 10 Sandy Loamy Clay | 10' | | | | | | |
| +30 min. | 3' | 0-8 Sandy Loamy Clay; 8- 12 Grey Mottled Sand | 12' | | | | | | |
| +30 min. | 2' | 0-8 Sandy Loamy Clay; 8- 12 Grey Mottled Sand | 12' | | | | | | |
| 8 min. | 3' | 0-9 Sandy Loam; 9- 18 Sandy Loamy Clay | 18' | | | | | | |
|)32 Pindell Road. Chris Owens /22/23 | | | | | | | | | |

DESIGN DATA-SEWAGE DISPOSAL SYSTEM

 DESIGN FLOW: 1.1. TRAVEL TRAILER PARK/ CAMPS - CHILDREN'S CAMP, 100 GPD/PERSON

- 1.2. CABINS WITH A CAPACITY OF 4 PEOPLE
- 1.3. Q = 4 x 8 x 100 = 3,200 GPD (ESTIMATED DAILY PEAK FLOW) LATERAL PIPE @ 1' DEPTH

(INITIAL AND 1ST REPLACEMENT SYSTEMS) {(W+2) / (W+1+2D)} x AREA / WIDTH = 0.50 $(3+2) \div (3+1+2(3)) = 5 \div 10 = 0.50$ (3,200 ÷ 1.2 = 2,667) x 0.50 = 1,334) ÷ 3 = 445 FT OF TRENCH

(2ND REPLACEMENT SYSTEM)

{(W+2) / (W+1+2D)} x AREA / WIDTH = 0.36 (3+2) ÷ (3+1+2(5)) = 5 ÷ 14 = 0.36 (3,200 ÷ 0.8 = 4,000) x 0.36 = 1,440) ÷ 3 = 480 FT OF TRENCH

2. SEPTIC TANK CAPACITY:

- 2.1. FLOWS OF 1,500 GPD OR GREATER
- 2.2. V = 1,125 GAL + 0.75(Q) = 1,125 + 0.75(3200) = 3,525 GALLONS (MINIMUM)
- 2.3. USE 5,000 GALLONS

3. ABSORPTIVE AREA REQUIRED:

- 3.1. MAXIMUM SEWAGE APPLICATION RATES FOR COMMERCIAL, INSTITUTIONAL, AND OTHER NON-RESIDENTIAL ESTABLISHMENTS
- 3.2. 3 MIN/1" DROP, 1.2 GPD/SF FOR DRAIN FIELDS 8 MIN/1" DROP, 0.8 GPD/SF FOR DRAIN FIELDS

4. ABSORPTIVE AREA PROVIDED:

4.1. PROVIDED CONFIGURATION: (INITIAL AND 1ST REPLACEMENT SYSTEMS) (5) 3' TRENCHES AT 89 LF = 5 x 3 x 89 = 1,335 SF

(2ND REPLACEMENT SYSTEM)

(5) 3' TRENCHES AT 96 LF = 5 x 3 x 96 = 1,440 SF

5. LATERAL LENGTH:

5.1. (INITIAL AND 1ST REPLACEMENT SYSTEMS) 5 TRENCHES x 89' = 445' TOTAL LENGTH

(2ND REPLACEMENT SYSTEM) 5 TRENCHES x 96' = 480' TOTAL LENGTH

5.2. LATERAL DIAMETER = 4"

5.3. HOLE SPACING: 3 ROWS OF (20) 5/8" PERFORATIONS FOR A 10-FOOT SECTION OF PIPE.

DESIGN DATA-SEWAGE DISPOSAL SYSTEM

| DESIGN DATA - SEWAGE DISPOSAL SYSTEM | | | | | | | | | |
|--------------------------------------|-------------|-----------------|------|--|--|--|--|--|--|
| WASTE WATER FLOW BY FIXTURES | | | | | | | | | |
| FIXTURE | GPD/FIXTURE | NO. OF FIXTURES | GPD | | | | | | |
| FLUSH TOILET | 35 | 7 | 245 | | | | | | |
| FAUCET | 15 | 7 | 105 | | | | | | |
| SHOWERS | 100 | 7 | 700 | | | | | | |
| LAUNDRY | 50 | 1 | 50 | | | | | | |
| TOTAL RESTOOM | | | 365 | | | | | | |
| TOTAL SHOWER | | | 700 | | | | | | |
| TOTAL LAUNDRY | | | 50 | | | | | | |
| | | TOTAL | 1115 | | | | | | |

BID SET

⑦ WBCM 2023

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS DATE APPROVED DATE SCALE: JUG BAY EDUCATION, RESEARCH, AND 1" = 40' DISCOVERY FIELD STATION R.S.S. DRAWN BY: UTILITY PLAN CHECKED BY: PROJECT MANAGER R.W.H. DATE APPROVED DATE SHEET NO. 11 OF 63 PROJECT NO .: P584501 C401 CONTRACT NO.: P584500 CHIEF, RIGHT-OF-WAY





ASSISTANT CHIEF ENGINEER

© WBCM 2023



| EY COX & MAGNANI, LLC ast Joppa Road Suite 200 Baltimore MD 21286 | | NO. | DESCRIPTION | BY | DATE | |
|---|---|-----|-------------|----|------|--------------------------|
| 512.4500 www.wbcm.com | | | | | | APPROVED |
| CM | | | | | | CHIEF ENGINEER |
| | | | | | | APPROVED |
| NSYSTEMS | 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 Mandard | | | | | |
| | License # 27734 Expiration Date: $07/12/24$ | | | | | ASSISTANT CHIEF ENGINEER |

FINISH GRADE

GATE VALVE ----

INV. EL. 72.88-





| 15 | |
|----|---|
| | I hereby certify that these documents were pr |
| | laws of the State of Maryland. |
| | License # 27734 Expiration Date: 07/12/24 |



| | | | | | | | | | | | | | Job No. | | |
|------------------|-------|------|--------|---------|----------|-------|------|-------|----------|--------|--------------|-------|---------|------------|----------------|
| Sheet | | | | | | | | | | | 1 | | | | |
| | | | | | | | | | | | | | | | |
| r | | | | | | | | | | | Ву | Date | | | |
| D 20711 Computed | | | | | | | | | Computed | VP | 5/8/2023 | | | | |
| | | | | | | | | | | | | | Checked | | |
| | | | | | | | | | | | | | | | |
| | | | RUNOFF | - | | | | | | PIPE | | | | REM | /IARKS |
| | CA | SCA | | Тс | I | Q | D | n | Sf | L | Vf | TIME | | | Sa |
| | | | DESIGN | TIME OF | RAINFALL | | | MANN- | | | | IN | | | |
|)F | | | STORM | CONC. | INTENS | QUANT | DIAM | INGS | SLOPE | LENGTH | VELOC | PIPE | PIPE | ACTU SL | AL PIPE OPE |
| =. | | | (YRS) | (MIN) | (IN/HR) | (CFS) | (IN) | COEF | (%) | (FT) | (FT/SEC) | (MIN) | TYPE | (| %) |
| | 0.292 | | 10 | 5.0 | 7.00 | 2.05 | 15 | 0.012 | 0.09 | 79.0 | 1.67 | 0.79 | RCP | 2 | 2.00 |
| | 0.226 | 0.52 | 10 | 5.0 | 7.00 | 3.63 | 15 | 0.012 | 0.27 | 183.0 | 2.96 | 1.03 | RCP | 2 | .50 |
| | 0.044 | 0.56 | 10 | 5.0 | 7.00 | 3.94 | 15 | 0.012 | 0.32 | 94.0 | 3.21 | 0.49 | RCP | 0 | .00 |
| | | | | | | | | | | | | | | | |
| | 0.246 | | 10 | 5.0 | 7.00 | 1.72 | 15 | 0.012 | 0.06 | 90.0 | 1.40 | 1.07 | RCP | 0 | .50 |

| ANNE ARUNDEL COUNTY | | | | | | | | | |
|----------------------------|---------------------|-----|-----------------------|----------------------------------|--|--|--|--|--|
| DEPARTMENT OF PUBLIC WORKS | | | | | | | | | |
| DATE | APPROVED DATE | | SCALE: 1" = 40' | JUG BAY EDUCATION, RESEARCH, AND | | | | | |
| | | | DRAWN BY: R.S.S. | DISCOVERY FIELD STATION | | | | | |
| | PROJECT MANAGER | | CHECKED BY: R.W.H. | STORM DRAIN DRAINAGE AREA MAP | | | | | |
| DATE | APPROVED DA | ATE | SHEET NO. 14 OF 63 | | | | | | |
| | | | PROJECT NO.: P584501 | C101 | | | | | |
| | CHIEF, RIGHT-OF-WAY | | CONTRACT NO.: P584500 | L404 | | | | | |
| | | | | (C) WBCM 2023 | | | | | |



| IORTH ORD 33 - FT) | MD EAST COORD (NAD83 - FT) | WQV (ft3) (See Note 5) | Maintenance Responsibility | Comments |
|--------------------------|----------------------------------|------------------------------|-------------------------------|----------|
| ,020 | 1,401,505 | 2,734 | | |
| ,720 | 1,401,552 | 2,272 | | |

| STORMWATER MA v1 | NAGEMENT DATA FORM .1/2020 |
|--------------------------------|---|
| Project Table fo | r Each Drainage Area |
| Permit Number | G02019677 |
| Project Number | P584501 |
| Project Name | Jug Bay Environmental Education Center |
| StructureAddress | 6032 Pindell Road |
| Structure City | Lothian |
| State | MD |
| Structure Zip | 20711 |
| Total Drainage Area (Acres) | 8.91 |
| RCN - Pre Construction | 62 |
| RCN - Post Construction | 58 |
| RCN - Woods | |
| Total Number of BMPs | 2 |
| PE Required (see Note 1) | 1.5 |
| PE Addressed (see Note 2) | 1.5 |
| MD 8-Digit HUC (see Note 4) | 2131102 |
| USGS 12-Digit HUC | |

N 401100

★__EX.67.95

- 67.67

67 75



| SUMMARY TABLE (FACILITY BOTTOM VS GROUND WATER ELEVATION) | | | | |
|---|-----------------------------------|---------------------------------|---------------------------|--|
| BORING # | STORMWATER MANAGEMENT FACILITY | ELEVATION OF FACILITY BOTTOM | GROUND WATER ELEVATION | |
| SWM #1 | MICRO BIORETENTION #1 | 68.59 | - | |
| SWM #3 | MICRO BIORETENTION #2 | 59.59 | - | |
| | | | | |



ESD SWM FACILITY

DRAINAGE AREA BOUNDARY

IMPERVIOUS AREA TREATED BY SWM FACILITY

SWM BORING LOCATION



SWM # 🕈

CAUTION: IF THIS DRAWING IS A REDUCTION, USE THE GRAPHIC SCALES. 30 0 15 1"=30'-0"

BID SET

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS JUG BAY EDUCATION, RESEARCH, AND DISCOVERY FIELD STATION DATE APPROVED DATE SCALE: 1" = 30' R.S.S. DRAWN BY: STORMWATER MANAGEMENT CHECKED BY: R.W.H. PROJECT MANAGER DATE APPROVED DATE SHEET NO. 15 OF 63 PLAN PROJECT NO .: P584501 C501 CONTRACT NO.: P584500 CHIEF, RIGHT-OF-WAY © WBCM 2023

| PROJECT NAME: JUG BAY EDUCATION, RESEARCH AN | ND DISCOVERT FIELD STATION | |
|--|----------------------------|-------------------|
| DESIGN / AS - BUILT DATA | FOR MICRO-BIORETEN | ITION |
| * TO BE COMPLETED BY | THE CERTIFYING ENGINEER | |
| TYPE OF FACILITY: M-6, MICRO-BIORETENTION | BMP ID: MICRO-BIORETENTION | (M-6) FACILITY #1 |
| FEATURE | DESIGN | *AS-BUILT |
| FILTER BED DIMENSIONS (L x W) | 61' x 17' | |
| LEFT SIDE SLOPE | 3:1 | |
| RIGHT SIDE SLOPE | 3:1 | |
| FILTER BED SURFACE ELEVATION (TOP OF MULCH) | 72.50 | |
| 10-YEAR FREEBOARD (FT) | 0.5' | |
| OVERFLOW INLET / TOP ELEVATION | I-103 / 73.50 | |
| OUTLET PIPE DIAMETER / TYPE (HDPE, RCP, CMP) | 15" / RCP | |
| OUTLET PIPE INVERT | 69.00' | |
| UNDER DRAIN DIAMETER | 4" / 69.00' | |
| TOP OF EMBANKMENT ELEVATION, Tb | 74.00' | |
| TOP OF EMBANKMENT WIDTH | 5' | |
| THICKNESS OF MULCH | 3" | |
| THICKNESS OF FILTER MEDIA SHA BSM | 24" | |
| THICKNESS OF COARSE SAND | 4" | |
| THICKNESS OF PEA GRAVEL | 4" | |
| THICKNESS OF UNDERDRAIN GRAVEL | 12" | |
| PLACEMENT OF GEOTEXTILE | SIDES ONLY | |
| PLANTINGS | SEE THIS SHEET | |
| OBSERVATION WELL WITH DEPTH TO FILTER BOTTOM INDICATED ON CAP | OBS #1 (3.92') | |
| DATE AS-BUILT ACCEPTED BY ANNE ARUNDEL COUN | TY: | |

| | STORMWATER MANAGEMENT PLANT SCHEDULE | | | | | |
|--------------|--------------------------------------|-------------------------|-------------------|-------|----------|--|
| Groundcovers | s, Perennials a | nd Grasses | | | | |
| Symbol | Quantity | Botanical Name | Common Name | Size | Note | |
| ai | 102 | Aesclepias incarnata | Swamp Milkweed | 1 Qt. | 18" O.C. | |
| hm | 147 | Hibiscus moscheutos | Rose mallow | 1 Qt. | 24" O.C. | |
| ір | 89 | Iris prismatica | Slender Blueflag | 1 Qt. | 18" O.C. | |
| je | 71 | Juncus effusus | Soft Rush | 1 Qt. | 24" O.C. | |
| ра | 174 | Packera aurea | Golden Ragwort | 1 Qt. | 12" O.C. | |
| SS | 51 | Schizachyrium scoparium | Little Bluestem | 1 Qt. | 18" O.C. | |
| vn | 86 | Vernonia noveboracensis | New York Ironweed | 1 Qt. | 18" O.C. | |







| | NO. | DESCRIPTION | BY | DATE | |
|--|-----|-------------|----|------|-------------------------|
| | | | | | APPROVED |
| | | | | | |
| | | | | | APPROVED |
| certify that these documents were prepared or approved by that I am a duly licensed professional engineer under the he State of Maryland | | | | | |
| # <u>27734</u> Expiration Date: <u>07/12/24</u> | | | | | ASSISTANT CHIEF ENGINEE |

I hereby ce me, and the laws of the License #2

© WBCM 2023

| PROJECT NAME: JUG BAY EDUCATION, RESEARCH | AND DISCOVERT FIELD STATION | |
|--|-----------------------------|---------------------|
| DESIGN / AS - BUILT DAT | A FOR MICRO-BIORETE | NTION |
| * TO BE COMPLETED B | Y THE CERTIFYING ENGINEER | |
| TYPE OF FACILITY: M-6, MICRO-BIORETENTION | BMP ID: MICRO-BIORETENTION | I (M-6) FACILITY #2 |
| FEATURE | DESIGN | *AS-BUILT |
| FILTER BED DIMENSIONS (L x W) | 64' x 17' | |
| LEFT SIDE SLOPE | 3:1 | |
| RIGHT SIDE SLOPE | 3:1 | |
| FILTER BED SURFACE ELEVATION (TOP OF MULCH) | 63.00' | |
| UNDER DRAIN DIAMETER | N/A | |
| ESD STORAGE ELEVATION | 64.00' | |
| 10-YEAR FREEBOARD (FT) | 0.5' | |
| OVERFLOW WEIR ELEVATION | 64.00' | |
| WEIR DIMENSIONS (L x W) | 6' x 3' | |
| TOP OF EMBANKMENT ELEVATION, Tb | 64.50' | |
| TOP OF EMBANKMENT WIDTH | 3' | |
| THICKNESS OF MULCH | 3" | |
| THICKNESS OF FILTER MEDIA SHA BSM | 24" | |
| THICKNESS OF COARSE SAND | 4" | |
| THICKNESS OF PEA GRAVEL | 4" | |
| THICKNESS OF UNDERDRAIN GRAVEL | 6" | |
| PLACEMENT OF GEOTEXTILE | SIDES ONLY | |
| PLANTINGS | SEE THIS SHEET | |
| OBSERVATION WELL WITH DEPTH TO FILTER BOTTOM INDICATED ON CAP | OBS #2 (3.42') | |
| DATE AS-BUILT ACCEPTED BY ANNE ARUNDEL COU | NTY: | |

| | STORMWATER MANAGEMENT PLANT SCHEDULE | | | | | |
|--------------|--------------------------------------|-------------------------|-------------------|-------|----------|--|
| Groundcovers | s, Perennials a | nd Grasses | | | | |
| Symbol | Quantity | Botanical Name | Common Name | Size | Note | |
| ai | 102 | Aesclepias incarnata | Swamp Milkweed | 1 Qt. | 18" O.C. | |
| hm | 147 | Hibiscus moscheutos | Rose mallow | 1 Qt. | 24" O.C. | |
| ip | 89 | Iris prismatica | Slender Blueflag | 1 Qt. | 18" O.C. | |
| je | 71 | Juncus effusus | Soft Rush | 1 Qt. | 24" O.C. | |
| ра | 174 | Packera aurea | Golden Ragwort | 1 Qt. | 12" O.C. | |
| SS | 51 | Schizachyrium scoparium | Little Bluestem | 1 Qt. | 18" O.C. | |
| vn | 86 | Vernonia noveboracensis | New York Ironweed | 1 Qt. | 18" O.C. | |

0+60

WHITNEY BAILEY COX & MAGNANI, LLC 300 East Joppa Road Suite 200 Baltimore, MD 21286 410.512.4500 www.wbcm.com CM I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License # <u>27734</u> Expiration Date: <u>07/12/24</u> ASSISTANT CHIEF ENGINEER

© WBCM 2023

CONTRACT NO.: P584500

CHIEF, RIGHT-OF-WAY

| MATERIAL | SPECIFICATION | SIZE | NOTES |
|---|--|-----------------------------------|--|
| PLANTINGS | SEE PLAN SHEET | N/A | PLANTINGS |
| BSM | SHA BIORETENTION SOIL MIX (BSM) SECTION 920.01.05 ORGANIC CONTENT MIN. 5% BY DRY WEIGHT (ASTM D 2974) | N/A | MARYLAND SPECIFICAT JULY 2020 IN ON-SITE |
| MULCH | SHREDDED HARDWOOD | | AGED 6 MON |
| PEA GRAVEL | ASTM-D-448 | NO.8 OR NO.9 (1/8" TO 3/8") | |
| ORNAMENTAL STONE | WASHED COBBLES | STONE: 1" TO 3" | |
| GEOTEXTILE | | N/A | NONWOVEN TABLE H.1 2 SOIL EROSIO |
| UNDERDRAIN GRAVEL | AASHTO M-43 | NO.57, 6, OR 67 (3/8" TO 3/4") | |
| UNDERDRAIN PIPING | F 758, TYPE PS 28 AASHTO M-278 AASHTO M-252 | 4" TO 6" | SLOTTED OF MINIMUM OF MAXIMUM SI INCH. PERFC GALVANIZED |
| CAST-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 TES DAY STRENG (CAST-IN-PL APPROVED DRAWINGS STRUCTURA DESIGN TO LOADING [H- (BASED ON CRACKING |
| COARSE SAND | AASHTO-M6 OR ASTM-C-33 | 0.02" TO 0.04" | SAND SUBS (AASHTO) #1 OR DOLOMI "ROCK DUST |
| STABILIZATION MATTING | SHA SECTION 920.05 | | TYPE A, B, C MARYLAND SPECIFICAT JULY 2008 IN ON-SITE. SE |

| STORMWATER MAINTENANCE SCHEDULE BIORETENTION | | | | |
|--|---------------------------------------|---|---|--|
| INSPECTION ITEM | FREQUENCY OF INSPECTION | INSPECTION REQUIREMENTS | REMEDIAL ACTION | |
| BIORETENTION BASIN | SEASONALLY AND AFTER A MAJOR STORM | | | |
| DEWATERING | SEASONALLY AND AFTER A MAJOR STORM | FACILITY MUST DEWATER WITHIN 48 HOURS OF RAINFALL. NOTICEABLE ODORS, STAINED WATER ON THE FILTER SURFACE OR AT THE OUTLET, OR THE PRESENCE OF ALGAE OR AQUATIC VEGETATION ARE INDICATORS OF ANAEROBIC CONDITIONS, AND INADEQUATE DEWATERING OF THE FACILITY. | THE TOP THREE INCHES OF SOIL SHOULD BE REMOVED AND REPLACED WITH SOIL MATERIAL AS PER PLAN SPECIFICATIONS. FOLLOW UP INSPECTIONS MUST CONFIRM ADEQUATE DEWATERING. IF THE FACILITY DOES NOT FUNCTION AS INTENDED AFTER THE ABOVE ACTION OR DRAWDOWN EXCEEDS 72 HOURS, ALL MEDIA AND UNDERDRAIN SYSTEM NEED TO BE REMOVED AND REPLACED. | |
| MULCH LAYER | SEASONALLY AND AFTER A MAJOR STORM | CHECK MULCH FOR ADEQUATE COVER, SEDIMENT ACCUMULATION, OR DISCOLORATION. | REMOVE AND REPLACE OLD MULCH AND EXCESS SEDIMENTS. PROVIDE ADEQUATE MULCH COVER ACCORDING TO APPROVED DESIGN. | |
| ORNAMENTAL STONE | SEASONALLY AND AFTER A MAJOR STORM | CHECK STONE FOR ADEQUATE COVER, SEDIMENT ACCUMULATION, OR DISCOLORATION. | REMOVE AND REPLACE OLD STONE AND EXCESS SEDIMENTS. PROVIDE ADEQUATE STONE COVER ACCORDING TO APPROVED DESIGN. | |
| VEGETATIVE SURFACES | MONTHLY | | | |
| PLANT COMPOSITION AND HEALTH | MONTHLY | COMPARE PLANT COMPOSITION WITH APPROVED PLANS. CHECK FOR INVASIVE SPECIES OR WEEDS. CHECK FOR DEAD OR DYING VEGETATION. | REMOVE AND REPLACE PLANTS IN ACCORDANCE WITH PLAN SPECIFICATIONS. | |
| VEGETATIVE COVER AND EROSION | MONTHLY | CHECK FOR EVIDENCE OF EROSION, RUNOFF CHANNELIZING, OR BARE SPOTS. | RE-SEED OR RE-PLANT IN ACCORDANCE WITH APPROVED LANDSCAPING PLANS. RE-GRADING MAY BE REQUIRED WHEN CONCENTRATED FLOW CAUSES RILLS OR GULLYING THROUGH THE FACILITY. | |
| DEBRIS AND TRASH CLEANOUT | MONTHLY | CHECK THAT THE FACILITY IS CLEAN OF TRASH AND DEBRIS. INLETS, OUTLETS, AND CONTRIBUTING AREAS AROUND THE FACILITY MUST BE CHECKED. | TRASH AND DEBRIS MUST BE DISPOSED OF IN AN ACCEPTABLE MANNER ACCORDING TO CURRENT REGULATIONS. | |
| STRUCTURAL COMPONENTS | ANNUALLY | CHECK FOR EVIDENCE OF STRUCTURAL DETERIORATION, SPALLING, OR CRACKING. INLET AND OUTLET STRUCTURES MUST BE IN GOOD CONDITION. | REPAIR TO GOOD CONDITION ACCORDING TO SPECIFICATIONS ON THE APPROVED PLANS. | |
| OUTLETS | SEASONALLY AND AFTER A MAJOR STORM | CHECK FOR EVIDENCE OF EROSION, RILLS, OR GULLYING. RIPRAP OUTLET MUST BE MAINTAINED IN GOOD FUNCTIONAL CONDITION. | STABILIZE ALL ERODED AREAS AND GRADE TO PROVIDE STABLE CONVEYANCE. REPAIR ACCORDING TO APPROVED PLAN. | |
| | | | | |
| GRASS CHANNEL CONVEYANCE SYSTEMS | SEASONALLY AND AFTER A MAJOR STORM | CHECK FOR EROSION, FLOW BLOCKAGES, AND STABLE CONVEYANCE. | STABILIZE AND GRADE ACCORDING TO APPROVED PLAN. | |
| OVERALL FUNCTION OF THE FACILITY | ANNUALLY | CHECK THAT ANY FLOW SPLITTERS ARE FUNCTIONING AS DESIGNED AND THAT BYPASS IS OPERATING AS DESIGNED. | REPAIRS MUST BE IN ACCORDANCE WITH APPROVED PLANS | |

* IF FIELD CONDITIONS REQUIRE A MODIFICATION TO THE ORIGINAL APPROVAL IN ORDER TO ACHIEVE THE INTENDED DESIGN FUNCTION, CONTACT INSPECTOR FOR REVIEW AND APPROVAL OF PROPOSED MODIFICATIONS.

REGULAR INSPECTIONS SHALL BE MADE DURING THE FOLLOWING STAGES OF CONSTRUCTION: CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER 48 HOURS PRIOR TO REQUIRED INSPECTION.

- DURING EXCAVATION TO SUBGRADE.
- DURING PLACEMENT OF GEOTEXTILE. DURING PLACEMENT AND BACKFILL OF UNDERDRAIN PIPE AND GRAVEL.
- DURING PLACEMENT OF BACKFILL AND BSM SOIL.
- DURING PLACEMENT OF MULCH. • DURING PLACEMENT OF PLANTS.

-ON CENTER SPACING AS SHOWING ON PLANTING PLAN -EQUAL SPACING IN ALL DIRECTIONS. -SET PLANTS AT ORIGINAL

-KEEP MULCH 1" FROM -3" DEPTH MULCH - SEE

-BIORETENTION SOIL MIX -

APPROVED PLANS.

POT BOUND DETAIL NOT TO SCALE

| ANNE ARUNDEL COUNTY | | | | | | | |
|----------------------------|---------------------|-----------------------|----------------------------------|--|--|--|--|
| DEPARTMENT OF PUBLIC WORKS | | | | | | | |
| DATE | APPROVED DATE | SCALE: AS SHOWN | JUG BAY EDUCATION, RESEARCH, AND | | | | |
| | | DRAWN BY: R.S.S. | DISCOVERY FIELD STATION | | | | |
| | PROJECT MANAGER | CHECKED BY: R.W.H. | STORMWATER MANAGEMENT | | | | |
| DATE | APPROVED DATE | SHEET NO. 18 OF 63 | NOTES & DETAILS | | | | |
| | | PROJECT NO.: P584501 | | | | | |
| R | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | 6304 | | | | |
| © WBCM 2023 | | | | | | | |

| PLANT SC | HEDULE | | | | | |
|-------------|------------|--|------------------------|-------------|-------|-------------------------|
| Qty. | SYM. | Botanical Name | Common Name | Size (Min.) | Root | Remarks |
| Major Decid | uous Trees | | 1 | | | |
| 5 | AS | Acer saccharum 'Legacy' | Sugar Maple Legacy | 2.5" Cal. | B&B | As Shown |
| 14 | NS | Nyssa sylvatica 'Wildfire' | Black Tupelo | 2.5" Cal. | B&B | As Shown |
| 6 | QF | Quercus falcata | Southern Red Oak | 2.5" Cal. | B&B | As Shown |
| 7 | QPH | Quercus phellos | Willow Oak | 2.5" Cal. | B&B | As Shown |
| 5 | UA | Ulmus americana 'Delaware' | Delaware Americana Elm | 2.5" Cal. | B&B | As Shown |
| 37 | | Total | | | | |
| Minor Decid | uous Trees | | | | | |
| 4 | СС | Cercis canadensis | Eastern Redbud | 2" Cal. | B&B | Multistem |
| 3 | LI | Lagerstroemia indica | Natchez | 2" Cal. | B&B | As Shown |
| 7 | | Total | | | | |
| Evergreen 1 | rees | | | | | |
| 12 | ю | Ilex opaca 'Jersey Princess' | American Holly | 8-10' Hgt. | B&B | As Shown |
| 9 | JV | Juniperus virginiana 'emerald Sentinel' | Eastern Red Cedar | 10-12' Hgt. | B&B | As Shown |
| 6 | PT | Pinus taeda | Loblolly Pine | 6'-7' Hgt | B&B | As Shown |
| 27 | | Total | | | | |
| Shrubs | | | | | | |
| 7 | aa | Aronia arbutifolia | Red Chokeberry | #7 | Cont. | 4' O.C. |
| 26 | CA | Clethra alnifolia 'Hummingbird' | Summersweet | #3 | Cont. | 3' O.C. |
| 32 | НА | Hydrangea aborscens 'Annabelle' | Smooth Hydrangea | #5 | Cont. | 5' O.C. |
| 10 | IV | llex verticillatta | Winterberry Holly | #5 | Cont. | 6' O.C. |
| 2 | IV | Ilex verticillatta 'Southern Gentleman' | Winterberry Holly | #5 | Cont. | 6' O.C. 1 male per 7 |
| 22 | VS | Itea virginica 'Henry's Garnet' | Virginia Sweetspire | #3 | Cont. | 4' O.C. |
| 10 | LB | Lindera benzoin | Spicebush | #5 | Cont. | 4' O.C. |
| 19 | MP | Myrica pensylvanica | Northern Bayberry | #5 | Cont. | 5' O.C. |
| 17 | RM | Rhododendron maximum | Rosebay Rhododendron | 3-4' Hgt. | Cont. | 5' O.C. |
| 145 | | Total | | | | |

| | | PLANTING UNITS REQUIREMEN | TS | | | |
|----------------------------|------------------|--|---|--|--|--|
| Кеу | Condition | Required Planting Units | Proposed Planting Units | | | |
| А | Class A | 10% INTERIOR TO BE LANDSCAPED | 2 Major Trees (1:1) +6 Shrubs = 2 PU | | | |
| INTERIOR PARKING LOT | Parking lot A | 1 PU / 250 SF 12,050 X 10% = 1205 SF 1205/250 = 4.48 PU REQ. | 18 Shrubs = 3:1 = 6.0PU | | | |
| | | Total Required = 4.48 PU | Total PU = 8.0 | | | |
| B PARKING LOT SCREEN | Class A | 1/20 LF | 12 Major Trees (1:1) +36 Shrubs = 12 PU | | | |
| | PARKING LOT | 205 LF / 20 = 10.25 PU | 3 Minor Trees+ 7.5 shrubs= (2:1) 1.5 PU | | | |
| | SCREENING | Total Required =10.25 PU | Total PU = 15.5 | | | |
| С | Class A | 1 PU / 20 ft. | 17 Major Trees (1:1) + 51 Shrubs = 17 PU | | | |
| Cabins and Camping Area | | 345 LF / 20 = 17.25 PU | 4 Minor Deciduous Trees + 10 Shrubs = 2.0 PU 21 Evergreen (3:1) = 7.0 PU | | | |
| | | Total Required = 17.25 PU | Total PU = 26.0 | | | |
| D | Class A | 1 Per 1500 SF | 6 Major Tree 18 Shrubs = 6.0 PU | | | |
| INTERIOR AREAS | INTERIOR | 12021 SF / 1500 = 8.01 PU | Total PU = 6.0 PU | | | |
| | PLANTINGS | Total Required = 8.1 PU | | | | |
| | | Total Required = 40.08 | Total Provided = 55.5 | | | |
| | | | | | | |

PLANTING LEGEND

DECIDUOUS SHADE TREE

DECIDUOUS ORNAMENTAL TREE

SHRUB

ΒY DATE APPROVED CHIEF ENGINEER APPROVED ASSISTANT CHIEF ENGINEER

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License # <u>27734</u> Expiration Date: <u>07/12/24</u>

| 4 oreshow Road Hogogo |
|---|
| PNOELL ROLD RD. ROLD |
| SITE PINDELL RD Creek |
| Lyons Citigener Jewell Regulation |
| VICINITY MAP |
| SCALE: 1" = 8,333' |

| | | | | | | | | | | | | BID SET |
|---|---|-----|-------------|----|------|--------------------------|------|---------------------|----------|---------------|----------|----------------------------------|
| | | | REVISIONS | | | | | ANNE | E ARUNDE | EL COU | NTY | |
| AILEY COX & MAGNANI, LLC East Joppa Road Suite 200 Baltimore MD 21286 | | NO. | DESCRIPTION | BY | DATE | _ | | DEPARTM | IENT OF | PUBLIC | WORKS | |
| 0.512.4500 www.wbcm.com | | | | | | APPROVED | DATE | APPROVED | DATE | SCALE: | AS SHOWN | JUG BAY EDUCATION, RESEARCH, AND |
| | | | | | | _ | | | | DRAWN BY: | R.S.S. | DISCOVERY FIELD STATION |
| | | | | | | CHIEF ENGINEER | | PROJECT MANAGER | | CHECKED BY: | R.W.H. | LANDSCAPE NOTES AND DETAILS |
| NSYSTEMS | | | | | | APPROVED | DATE | APPROVED | DATE | SHEET NO. | 20 OF 63 | |
| | 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 Mandard | | | | | | | | | PROJECT NO.: | P584501 | C602 |
| | License # 27734 Expiration Date: $07/12/24$ | | | | | ASSISTANT CHIEF ENGINEER | | CHIEF, RIGHT-OF-WAY | | CONTRACT NO.: | P584500 | 6002 |

MINIMUM LANDSCAPE MAINTENANCE REQUIREMENTS

- 1. LAWN AREAS SHALL BE MOWED TO A HEIGHT OF 2 TO 3 INCHES AND NOT ALLOWED TO REACH A HEIGHT OF 4 INCHES BEFORE MOWING.
- ALL CURBS AND WALKS SHALL BE EDGED AS NEEDED.
- ALL LAWN AREAS ADJACENT TO BUILDING FACES OR STRUCTURES SHALL BE TRIMMED. 4. A SLOW RELEASE NITROGEN BALANCED FERTILIZER WITH A 2-1-1 RATIO SHALL BE APPLIED AT A RATE OF 2 POUNDS
- OF NITROGEN PER 1000 SQUARE FEET IN SEPTEMBER, OCTOBER, AND FEBRUARY.
- 5. LIME SHALL BE APPLIED AT THE RATE DETERMINED BY A SOILS REPORT. 6. IT IS RECOMMENDED THAT LAWN AREAS BE TREATED IN MID-MARCH TO EARLY APRIL WITH PER-EMERGENT
- HERBICIDE (BETASAN) OR EQUAL APPLIED AT THE MANUFACTURER'S RECOMMENDED RATE. 7. A POST-EMERGENT HERBICIDE (TRIMEC) OR EQUAL IS RECOMMENDED TO BE SPRAYED ON LAWN AREAS IN THE
- LATE SPRING OR THE EARLY FALL. FOLLOW MANUFACTURER'S RATES AND RECOMMENDATIONS.
- INSECTICIDES AND FUNGICIDES ARE RECOMMENDED FOR INSECT AND DISEASE CONTROL. RESEED BARE AREAS OF LAWN AS NECESSARY. YEARLY AERATION IS RECOMMENDED.
- 10. ALL TRASH, LITTER, AND DEBRIS SHALL BE REMOVED FROM LAWN AREAS, PARKING LOTS, AND SHRUB BEDS AS NEEDED.
- 11. MULCH ALL SHRUB AND GROUNDCOVER BEDS YEARLY WITH 3 INCHES OF HARD WOOD BARK. 12. PERMIT SHRUBS AND TREES TO GROW AND ENLARGE TO THEIR DESIGN SIZE. CONSULT PROJECT LANDSCAPE ARCHITECT FOR DETAILS.
- 13. PRUNE TREES IN ACCORDANCE WITH LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METRO-POLITAN AREAS.

GENERAL NOTES:

- 1. ALL PLANT MATERIAL SHALL CONFORM TO THE SIZES GIVEN IN THE PLANT LIST AND SHALL BE NURSERY GROWN IN ACCORDANCE WITH THE "AMERICAN STANDARDS FOR NURSERY STOCK, ANSI Z60.1-2004" LATEST EDITION PREPARED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, 230 SOUTHERN BUILDING, WASHINGTON, DC, 20005.
- 2. CONTRACTOR MUST VERIFY THE CORRECT LOCATION OF ANY EXISTING UTILITIES WHICH ARE UNDERGROUND, PRIOR TO PLANT INSTALLATION. THE CONTRACTOR SHALL CALL MISS UTILITY (1-800-257-7777) A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND REQUIREMENTS FOR CONSTRUCTION.
- 3. ALL PLANT BEDS SHALL BE MULCHED WITH A MINIMUM OF 2" AND A MAXIMUM OF 3" LAYER OF MULCH WITHIN TWO DAYS AFTER PLANTING.THIS SHALL BE SHREDDED HARDWOOD BARK, AND SHALL COVER ENTIRELY THE PLANTING BED.
- 4. ALL PLANTS SHALL BE GUARANTEED TO REMAIN ALIVE AND HEALTHY FOR A PERIOD OF TWO FULL YEARS AFTER INITIAL ACCEPTANCE. ANY REPLACEMENT PLANTS, REQUIREMENTS, ETC. AND METHOD OF PLACING SHALL COMPLY WITH THE REQUIREMENTS SPECIFIED HEREIN AND ON THE DRAWINGS.
- 5. EXISTING SOIL IN BED AREAS SHALL BE AMENDED TO A DEPTH OF 12". SOIL MIX IN ALL BEDS SHALL BE 2/3 EXISTING SOIL, AND 1/3 ORGANIC MATERIAL SUCH AS LEAFGRO.
- 6. PLANT MATERIAL AVAILABILITY MAY VARY AT THE TIME OF CONSTRUCTION. ANY SUBSTITUTIONS ARE TO BE OF EQUIVALENT TYPE AND SIZE (OR LARGER), AND MUST BE APPROVED BY LANDSCAPE ARCHITECT BEFORE INSTALLATION.
- 7. WHERE THE CONDITION EXISTS THAT BALLED AND BURLAPPED TREES ARE DELIVERED IN WIRE BASKETS, THE WIRE BASKETS SHALL BE CUT DOWN THE SIDE OF EACH MESH AND PEELED AWAY FROM THE ROOTBALL OR REMOVED IN ENTIRETY. NO PORTION OF THE WIRE BASKET SHALL REMAIN INTACT AROUND THE SIDES OF THE ROOTBALL OR EXTEND ABOVE FINISHED GRADE.
- ANY DAMAGE TO THE EXISTING UTILITIES, BUILDINGS, PAVING, CURB, WALLS, AND VEGETATION (NOT SO 8. DESIGNATED FOR REMOVAL ON THESE PLANS) SHALL BE REPAIRED TO PREVIOUS CONDITION OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE. ALL AREAS DISTURBED DURING CONSTRUCTION ARE TO BE SEEDED UNLESS NOTED OTHERWISE.
- 9. ADJUST TREE LOCATIONS IN THE FIELD IF LOCATIONS SHOWN CONFLICT WITH EXISTING VEGETATION NOT PICKED UP IN SURVEY.
- 10. SEED DISTURBED AREAS.

© WBCM 2023

STANDARD STABILIZATION NOTE:

"FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS AS TO 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 (7) AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE."

MAINTENANCE OF SEDIMENT CONTROL

CONTRACTOR SHALL WITHOUT EXTRA COST TO THE PROJECT, REPAIR AND MAINTAIN EXISTING SEDIMENT CONTROL DEVICES UNTIL ALL AREAS WITHIN LIMITS OF CONSTRUCTION ARE STABILIZED. ALL SEDIMENT CONTROL MEASURES REFERRED TO ON THESE PLANS SHALL BE IN ACCORDANCE WITH THE PUBLICATION ENTITLED "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL".

CONTRACTOR SHALL INSPECT AND MAINTAIN ALL SEDIMENT CONTROL MEASURES AND DEVICES AFTER EVERY STORM EVENT. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO THE REMOVAL OF ALL ACCUMULATED SEDIMENT. GEOTEXTILE FABRIC SHALL BE REPLACED AS NEEDED TO ENSURE PROPER FUNCTION.

NOTE FOR SAME DAY STABILIZATION

CONTRACTOR SHALL ONLY DISTURB THAT AREA WHICH CAN BE COMPLETED AND STABILIZED BY THE END OF EACH WORKING DAY.

STABILIZATION SHALL BE AS FOLLOWS:

- 1) FOR AREAS TO BE PAVED, THE APPLICATION OF STONE BASE. 2) FOR AREAS TO BE VEGETATIVELY STABILIZED:
- A) PERMANENT SEED AND SOIL STABILIZATION MATTING OR SOD FOR ALL STEEP SLOPES, CHANNELS OR SWALES.

B) PERMANENT SEED AND MULCH FOR OTHER AREAS. ANY AREAS WHICH CANNOT BE STABILIZED BY THE END OF EACH WORKING DAY MUST HAVE SILT FENCE INSTALLED ON THE DOWNSLOPE SIDE.

UTILITY NOTE

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

MAINTENANCE NOTE:

CONTRACTOR SHALL INSPECT AND MAINTAIN ALL SEDIMENT CONTROL MEASURES AND DEVICES AFTER EVERY STORM EVENT. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO THE REMOVAL OF ALL ACCUMULATED SEDIMENT. GEOTEXTILE FABRIC SHALL BE REPLACED AS NEEDED TO ENSURE PROPER FUNCTION.

PROJECT NO .:

CONTRACT NO.: P584500

P584501

DATE APPROVED

APPROVED

CHIEF, RIGHT-OF-WAY

DATE

© WBCM 2023

C701

2018 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 SERECIA 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 FOR 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 1/4 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). APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. 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.
- 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 OCTOBER 31). 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 MINIMUM RATE OF 0.5 POUNDS PER 1.000 SQUARE FEET.
- 6. TOPSOIL SHALL BE APPLIED AS PER THE STANDARD AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS FROM THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 7. USE OF THESE VEGETATIVE ESTABLISHMENT SPECIFICATIONS DOES NOT PRECLUDE THE PERMITTEE OR CONTRACTOR FROM MEETING ALL OF THE REQUIREMENTS SET FORTH IN THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

1. PERMANENT SOD:

INSTALLATION OF SOD SHOULD FOLLOW PERMANENT SEEDING DATES. PERMANENT SOD IS TO BE TALL FESCUE, MARYLAND 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 ROOF CONTACT WITH THE SOIL. ALL SLOPES STEEPER THAN 3:1, 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 APPLIED ON FROZEN GROUND. SOD SHALL NOT BE HARVESTED OR 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 INSURE ESTABLISHED SOD.

2. 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.
- FOR SEEDING DATES OF MAY 1 THROUGH AUGUST 14 USE SEED MIXTURE OF TALL FESCUE AT THE RATE OF 2 POUNDS PER 1,000 SQUARE FEET AND WEEPING LOVEGRASS AT THE RATE OF 0.1 POUND PER 1,000 SQUARE FEET.
- TOPSOIL SHALL BE APPLIED AS PER THE STANDARD AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS FROM THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

NOTE: USE OF THIS INFORMATION DOES NOT PRECLUDE MEETING ALL OF THE REQUIREMENTS OF THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL."

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

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. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
- INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. 2. PERMANENT STABILIZATION
- A. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
- 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. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
- APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST. 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

- . 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. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
- THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
- 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 1¹/₂ 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
- EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
- 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 IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
- 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.

SEQUENCE OF CONSTRUCTION:

- INITIAL PHASE 1. PRE-CONSTRUCTION MEETING: NOTIFY THE DEPARTMENT OF INSPECTIONS AND PERMITS (410-222-7780), AT LEAST 48 HOURS BEFORE COMMENCING WORK. WORK MAY NOT COMMENCE UNTIL THE PERMITTEE OR THE RESPONSIBLE PERSONNEL HAVE MET ON SITE WITH THE SEDIMENT AND EROSION CONTROL INSPECTOR TO REVIEW THE APPROVED PLANS. (1 DAY)
- 2. THE PERMITTEE OR CONTRACTOR SHALL NOT COMMENCE WITH CLEARING OR ANY EARTH DISTURBANCE ACTIVITIES ON THE SITE DURING OR BEFORE PREDICTED WET WEATHER EVENTS. ONCE SITE WORK BEGINS, CLEARING AND GRUBBING
- 3. CONTRACTOR SHALL LOCATE AND PROCURE ALL STAGING AND STOCKPILING AREAS WHICH SHALL BE APPROVED BY THE PROJECT INSPECTOR. (1 WEEK)
- 4. PRESENT FINALIZED SCHEDULE OF WORK AND MAINTENANCE OF TRAFFIC OPERATIONS TO THE ENGINEER AND ANNE ARUNDEL COUNTY INSPECTIONS AND PERMITS DIVISION. (2 DAYS)
- 5. CLEAR MINIMUM AREA NECESSARY TO INSTALL SEDIMENT CONTROLS INCLUDING STABILIZED CONSTRUCTION ENTRANCE, DIVERSION FENCE, REINFORCED SILT FENCE PER PLAN AND INLET PROTECTION. THE STAGING/ LAYDOWN AREAS. MECHANICAL STABILIZATION WILL BE REQUIRED ON THE STAGING/ LAYDOWN AREAS AND HEAVY USE AREAS, INCLUDING TRAVEL LANES. WOOD CHIPS MAY BE UTILIZED WITH APPROVAL FROM INSPECTIONS AND PERMITS. (1 WEEK)
- 6. INSTALL REMAINING SEDIMENT CONTROL DEVICES AS REQUIRED PER THE PLANS. BUILD STAGING AND STOCKPILE AREAS. CONTACT THE INSPECTOR FOR APPROVAL OF THE SEDIMENT CONTROL INSTALLATION. INSPECTION AND PERMIT WILL REQUIRE THAT AN INSPECTION AND CERTIFICATION OF THE INSTALLATION OF THE SEDIMENT CONTROLS ALSO BE PERFORMED BY A DESIGN PROFESSIONAL PRIOR TO CONSTRUCTION COMMENCING. (2 WEEKS)

- 7. CLEAR, GRUB AND MASS GRADE REMAINDER OF THE SITE. HAUL DEBRIS TO AN APPROVED SITE. WITH THE INSPECTOR'S APPROVAL BEGIN INSTALLING TRAVEL LANES (WOOD CHIPS, MULCH, PAVEMENT) (2 MONTHS)
- 8. PERFORM THE FOLLOWING SEQUENCE FOR EACH DAY OF UTILITY CONSTRUCTION OPERATIONS: a. CONTRACTOR TO ONLY DISTURB THE AREA THAT WILL BE STABILIZED THE SAME DAY. b. INSTALL REINFORCED SILT FENCE DOWNGRADE OF AREA TO BE WORKED ON A DAILY BASIS.
- c. CLEAR AND GRUB AREA WHERE UTILITIES WILL BE INSTALLED. REMOVE AND SALVAGE TOPSOIL. d. EXCAVATE AND INSTALL UTILITIES AND APPURTENANCES. PLACE BACKFILL AND COMPACT. e. INSTALL TEMPORARY PAVING OR, PLACE TOPSOIL, FINE GRADE, SEED AND APPLY MULCH IN UNPAVED DISTURBED AREAS.
- STREETS ARE TO BE SWEPT FREE OF DIRT AND DEBRIS. g. DIRECT ALL WATER PUMPED DURING TRENCH DEWATERING OPERATIONS TO AN APPROVED PORTABLE SEDIMENT
- TANK. CLEAN OUT TANK WHEN ONE-THIRD (1/3) FILLED WITH SILT. HAUL SEDIMENT TO AN APPROVED SITE.
- MATERIALS STORAGE PRIOR TO INSTALLATION. CARE SHOULD BE TAKEN TO ENSURE PROPER CONSTRUCTION WHERE STORMWATER MANAGEMENT PRACTICES ARE USED FOR THIS PURPOSE. MICRO-BIORETENTION 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 WITHIN MICRO-BIORETENTION PRACTICES AND THE BOTTOM SCARIFIED BEFORE INSTALLING UNDERDRAINS AND FILTERING MEDIA. MICRO BIORETENTION #2 SHALL HAVE ITS MASS EXCAVATION PERFORMED EARLY AND PROTECTED WITH RSF PER PLANS.

SITE ANALYSIS

- TOTAL AREA OF PARCEL:
- TOTAL DISTURBED AREA:
- 3. TOTAL AREA TO BE STABILIZED: a. TOTAL IMPERVIOUS AREA:
- b. TOTAL TO BE VEGETATIVELY STABILIZED:
- 4. PROPOSED NEW IMPERVIOUS AREA:
- 5. ESTIMATED CUT:
- 6. ESTIMATED FILL

THE EARTHWORK QUANTITIES SHOWN HEREON ARE FOR INFORMATION PURPOSES ONLY. WBCM MAKES NO GUARANTEES OF ACCURACY OF QUANTITIES OR BALANCE OF SITE. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY OF ACTUAL EARTHWORK QUANTITIES ENCOUNTERED DURING CONSTRUCTION.

302.78 ACRES

3.76 ACRES

3.76 ACRES

0.82 ACRES

2.94 ACRES

0.82 ACRES

4,438 CU.YDS.

7,728 CU.YDS.

| BAILEY COX & MAGNANI, LLC 00 East Joppa Road Suite 200 Baltimore, MD 21286 10.512.4500 www.wbcm.com |
|--|
| 3CM |
| ANSYSTEMS |

| | | REVISIONS | | | | |
|---|-----|-------------|----|------|--------------------------|--|
| | NO. | DESCRIPTION | BY | DATE | | |
| | | | | | APPROVED | |
| | | | | | CHIEF ENGINEER | |
| nereby certify that these documents were prepared or approved by e, and that I am a duly licensed professional engineer under the ws of the State of Maryland. cense # <u>27734</u> Expiration Date: <u>07/12/24</u> | | | | | ASSISTANT CHIEF ENGINEEF | |

ACTIVITIES SHALL BE FOR THE INSTALLATION AND STABILIZATION OF THE PERIMETER EROSION CONTROL MEASURES ONLY.

9. THE MICRO-BIORETENTION AREAS SHALL NOT BE DISTURBED OR SUPPORT CONSTRUCTION VEHICLE TRAFFIC OR

- 10. INSTALL PROPOSED STORM DRAIN SYSTEM AND PLACE STANDARD INLET PROTECTIONS, PERFORM SAME DAY STABILIZATION FOR FOR THE INSTALLATION OF STORM DRAIN. (1 WEEK)
- 11. FOR OPEN CUT PIPE INSTALLATION THE FOLLOWING PROCEDURES SHALL APPLY:
- a. EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON HIGH SIDE OF TRENCH. b. IMMEDIATELY FOLLOWING PIPE INSTALLATION, THE TRENCH SHALL BE BACKFILLED COMPACTED AND STABILIZED AT
- THE END OF EACH WORKING DAY. c. TEMPORARY REINFORCED SILT FENCE SHALL BE PLACED DOWNSTREAM OF ANY DISTURBED AREA ON A DAILY BASIS.
- 12. NO EXCAVATED MATERIAL SHALL BE PLACED IN DITCHES ADJACENT TO THE EXISTING ROADWAY. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT THE DISTURBANCE OF EXISTING VEGETATED AREAS TO THE EXTENT POSSIBLE. ANY
- EXISTING VEGETATED AREAS DISTURBED AS A RESULT OF THE CONTRACTOR'S WORK OPERATIONS SHALL BE STABILIZED BY THE END OF THE WORK DAY.
- 13. STABILIZE THE TOP OF ALL TRENCHES BY THE END OF EACH WORK DAY. ALL EXCESS STOCKPILED SOIL REMAINING AFTER REFILLING THE TRENCH(ES) SHALL BE REMOVED FROM THE SURFACE AND HAULED FROM THE SITE BY THE END OF THE WORKING DAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS FOR HIS OFF-SITE STOCKPILE AREAS. THE CONTRACTOR SHALL ALSO ADEQUATELY CLEAN ALL DIRT AND MUD OFF THE ROADWAYS BY THE END OF EACH WORKING DAY.
- 14. BUILDING CONSTRUCTION MAY NOT PROCEED PAST THE GROUND FLOOR UNTIL ALL REMAINING DISTURBED AREAS HAVE BEEN PERMANENTLY OR TEMPORARILY STABILIZED. DURING BUILDING CONSTRUCTION BEYOND THE GROUND FLOOR, ALL DISTURBED AREAS MUST BE STABILIZED AT THE END OF EACH BUSINESS DAY. A CERTIFICATE MUST BE PROVIDED TO THE INSPECTOR VERIFYING THE GRADES AND DRAINAGE PATTERNS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN OBTAINED.
- 15. INSTALL PREFABRICATED CABINS, PAVILION, BATH HOUSE. (3 MONTHS)
- 16. FINISH FINE GRADING THE SITE AND UPON COMPLETION OF PAVING INSTALLATION AND DURING A NOAA 3-DAY DRY FORECASTED PERIOD, STABILIZE ANY REMAINING DISTURBED AREAS AS REQUIRED. (1 MONTH)
- 17. COMPLETE MASS GRADING SWM FACILITIES. MB#2 & MB#3 TO BE INSTALLED WHILE SITE IS STILL OPEN. REINFORCED SILT FENCE IS TO BE PLACED AROUND EACH FACILITY AND INFLOW PIPES TO BE CAPPED UNTIL STABILIZATION MEETS REQUIREMENTS AND THE E&S MEASURES CAN BE REMOVED. (1 WEEK)
- 18. BEGIN PARKING LOT AND SIDEWALK PAVING. (1 MONTH)

PHASE II

- 19. ONCE UPSTREAM AREAS ARE 95% STABILIZED, INSTALL TWO SWM MICRO BIORETENTION FACILITIES, CONTROL STRUCTURE AND DEVICES AND/OR PLANTINGS. (SEDIMENT IS TO BE PREVENTED FROM ENTERING SWM SYSTEMS DURING CONSTRUCTION; INFLOW PIPES TO BE CONNECTED AFTER CONTRIBUTING AREAS ARE ALSO STABILIZED). THE ENGINEER MUST CERTIFY SWM INSTALLATION. (2 WEEKS)
- 20. STABILIZE ANY REMAINING DISTURBED AREAS AS REQUIRED. (1 WEEK)
- 21. REMOVE ANY REMAINING SEDIMENT CONTROLS AFTER PRIOR APPROVAL FROM ANNE ARUNDEL COUNTY INSPECTIONS AND PERMITS DIVISION. FINE GRADE AND STABILIZE AREA FORMERLY OCCUPIED BY PERIMETER CONTROLS. (1 WEEK)

NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS RUNOFF IS DIRECTED TO A MDE APPROVED SEDIMENT CONTROL DEVICE

NOTE TO CONTRACTOR: SEDIMENT AND EROSION CONTROL SHALL BE STRICTLY ENFORCED.

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

- .) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN THREE HORIZONTAL TO ONE VERTICAL (3:1), AND
- .) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
- 1. EROSION CONTROL MATTING SHALL BE INSTALLED ON ALL SLOPE AREAS 3:1 OR GREATER.
- 2. FILL SOILS MAY BE AVAILABLE FROM ON-SITE SOIL BORROW AREA (CELL 9) PROVIDED THE SOILS MEET THE PROJECT SPECIFICATIONS.
- 3. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SOILS (TOP SOIL AND FILL SOIL) MEETING THE PROJECT SPECIFICATIONS FROM ON-SITE AND OFF-SITE SOURCES.

ANNE ARUNDEL COUNTY

| DEPARTMENT OF PUBLIC WORKS | | | | | | | | |
|----------------------------|---------------------|-----------------------|----------------------------------|--|--|--|--|--|
| DATE | APPROVED DATE | SCALE: N/A | JUG BAY EDUCATION, RESEARCH, AND | | | | | |
| | | DRAWN BY: R.S.S. | DISCOVERY FIELD STATION | | | | | |
| | PROJECT MANAGER | CHECKED BY: R.W.H. | EROSION AND SEDIMENT | | | | | |
| DATE | APPROVED DATE | SHEET NO. 22 OF 63 | CONTROL NOTES | | | | | |
| | | PROJECT NO.: P584501 | 0700 | | | | | |
| R | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | 6702 | | | | | |
| | © WRCM 2023 | | | | | | | |

4

5.

TREE PROTECTION SIGNAGE NOT TO SCALE

| | | | REVISIONS | | | |
|--|--|-----|-------------|----|------|--------------------------|
| ILEY COX & MAGNANI, LLC East Joppa Road Suite 200 | | NO. | DESCRIPTION | BY | DATE | |
| 0.512.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| | | | | | | CHIEF ENGINEER |
| NSVSTEMS | | | | | | APPROVED |
| NOTOTEMO | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the | | | | | |
| | laws of the State of Maryland. License # <u>27734</u> Expiration Date: <u>07/12/24</u> | | | | | ASSISTANT CHIEF ENGINEER |

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS DATE SCALE: DATE APPROVED JUG BAY EDUCATION, RESEARCH, AND AS SHOWN **DISCOVERY FIELD STATION** R.S.S. DRAWN BY: **EROSION AND SEDIMENT** CHECKED BY: R.W.H. PROJECT MANAGER DATE APPROVED DATE CONTROL DETAILS SHEET NO. 23 OF 63 PROJECT NO.: P584501 C703 CONTRACT NO.: P584500 CHIEF, RIGHT-OF-WAY © WBCM 2023

7141806\Drawings\07-Site\17141806-C800 Forest Stand Delineation Plan.dwg Nov 07, 2023 - 3:04pm Plot By:

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

A DIVISION OF TRAI

DATE:

SIGNATURE:

| | | | REVISIONS | | | |
|--|--|-----|-------------|----|------|------------------------|
| ILEY COX & MAGNANI, LLC East Joppa Road Suite 200 | | NO. | DESCRIPTION | BY | DATE | |
| 0.512.4500 www.wbcm.com | | | | | | _ APPROVED |
| SCM | | | | | | |
| | | | | | | |
| NSYSTEMS | | | | | | APPROVED |
| | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the lower of the Other of Mag dear of Mag d | | | | | |
| | License # $\frac{27734}{27734}$ Expiration Date: $\frac{07/12/24}{27734}$ | | | | | ASSISTANT CHIEF ENGINE |

1. ADDRESS: JUG BAY EDUCATION, RESEARCH AND DISCOVERY FIELD CENTER OWNER: ANNE ARUNDEL COUNTY, DEPARTMENT OF

- RECREATION AND PARKS, PO BOX 2660, ANNAPOLIS, MD 21404 2. PROPERTY INFORMATION: MAP 75, GRID 18, PARCEL 0006, 302.78 ACRES
- 3. ZONING: RA RURAL AGRICULTURAL.

4. THE EXISTING CONDITIONS INFORMATION SHOWN IS BASED UPON FIELD RUN TOPOGRAPHIC SURVEY PERFORMED BY WBCM. AN ABBREVIATED FOREST FIELD ASSESSMENT WAS CONDUCTED ON-SITE BY WBCM IN XXXXXX. SPECIMEN TREES NOTED ON SITE ARE AS INDICATED ON THE PLAN AND THE SPECIMEN TREE CHART. FOREST TYPE INDICATED IS BASED UPON A SINGLE 1/20 ACRE SAMPLE PLOT.

5. THE FOREST COVER SHOWN IS FROM FIELD RUN SURVEY AND AERIAL COVERAGE. PER CODE SECTION § 17-6-302. FOREST

- STAND DELINEATION (C)(1)
- 6. THE STATUS OF THE 100-YR FLOOD PLAIN: NO FLOOD PLAINS PRESENT ON-SITE WITHIN L.O.D.

 FEMA FLOOD MAP: FIRM PANEL 240008

 COMMUNITY
 NUMBER

 PANEL
 SUFFIX
- ANNE ARUNDEL COUNTY 24003C0290F & 24003C0295F 290 & 295 F 7. THERE ARE NO MAPPED NON-TIDAL WETLANDS AND/OR WETLAND BUFFERS LOCATED WITHIN THE LOD AS DETERMINED BY
- MERLIN ONLINE IN MARCH, 2018.
 THE PROJECT IS LOCATED OUTSIDE OF THE CHESAPEAKE BAY CRITICAL AREA.
- 9. INTERMITTENT AND PERENNIAL STREAMS ARE LOCATED ON-SITE.

| HYDRO | LOGIC SOIL GROUP - ANNE ARUNDEL COUNTY, MARYLAND | | | |
|----------|---|------------|-----------------|-----------------------------|
| MAP UNIT | MAP UNIT NAME | HSG RATING | <u>k RATING</u> | HYDRIC RATING |
| SYMBOL | | | | |
| CoA | COLLINGTON - WIST COMPLEX, 0 TO 2 PERCENT SLOPES | В | .17 | MODERATELY TO WELL DRAINED |
| CSE | COLLINGTON WIST & WESTPHALIA, 15 TO 25 PERCENT SLOPES | А | .17 | WELL TO EXCESSIVELY DRAINED |
| GaB | GALESTOWN LOMAY SAND, 0 TO 5 PERCENT SLOPES | А | .10 | WELL TO EXCESSIVELY DRAINED |
| PfB | PATAPSCO - FORT MOTT COMPLEX , 0 TO 5 PERCENT SLOPES | А | .02 | WELL TO EXCESSIVELY DRAINED |
| PfC | MARR-DODON COMPLEX, 5 TO 10 PERCENT SLOPES | А | .02 | WELL TO EXCESSIVELY DRAINED |
| TsA | TINTON LOAMY SAND, 2 TO 5 PERCENT SLOPES | А | .10 | WELL TO EXCESSIVELY DRAINED |

TsA TINTON LOAMY SAND, 2 TO 5 PERCENT SLOPES WdaB WOODSTOWN SANDY LOAM, 2 TO 5 PERCENT SLOPES

WdaB WOODSTOWN SANDY LOAM, 2 TO 5 PERCEI

GEOLOGY:

SOILS HAVING A HIGH INFILTRATION RATE (LOW RUNOFF POTENTIAL) WHEN THOROUGHLY WET. THESE CONSIST MAINLY OF DEEP, WELL DRAINED TO EXCESSIVELY DRAINED SANDS OR GRAVELLY SANDS. THESE SOILS HAVE A HIGH RATE OF WATER TRANSMISSION.

| | SPECIMAN TREE | CHART | | | | | |
|-----------------------------|-------------------------------------|--|-----------|--|--|--|--|
| TREE NO. | SPECIES | DBH (in.) | CONDITION | | | | |
| ST #1 | Liriodendron tulipifera Tulip Popla | r 30 | Good | | | | |
| ST #2 | Liriodendron tulipifera Tulip Popla | r 33 | Good | | | | |
| | Stand Variable | Stand # | A1 | | | | |
| 1. Dominant specie | s / Codominant species | Maple, C | Dak | | | | |
| 2. Successional sta | ge | Late | Late | | | | |
| 3. Basal area in s.f. | per acre | 130 | | | | | |
| 4. Size class of dor | ninant species | 6-12" DBH | | | | | |
| 5. Percent of canop | y closure | 90% | | | | | |
| 6. Number of tree s | pecies per acre | 7 | 7 | | | | |
| 7. Common unders | tory species per acre | PawPaw, Holl | y, Cedar | | | | |
| 8. Percent of under | story cover 3' to 20' tall | 25% | 25% | | | | |
| 9. Number of wood | y plant species 3' to 20' tall | 3 | | | | | |
| 10. Common herba | ceous species 0' to 3' tall | Cedar, Holly, Spicebush | | | | | |
| 11. Percent of herbattal | aceous & woody plant cover 0' to 3' | 15% | | | | | |
| 12. List of major inv cover | asive plant species & percent of | lvy - 5% & Silt Grass- 10% | | | | | |
| 13. Number of stan | ding dead trees 6" dbh or greater | 1 | | | | | |
| 14. Comments | | Not a lot of invasive material, very nice wood stand | | | | | |

BID SET

SLOW INFILTRATION RATE

.24

| ANNE ARUNDEL COUNTY | | | | | | |
|----------------------------|---------------------|-----------------------|----------------------------------|--|--|--|
| DEPARTMENT OF PUBLIC WORKS | | | | | | |
| DATE | APPROVED DATE | SCALE: 1" = 60' | JUG BAY EDUCATION, RESEARCH, AND | | | |
| | | DRAWN BY: R.S.S. | DISCOVERY FIELD STATION | | | |
| | PROJECT MANAGER | CHECKED BY: R.W.H. | FOREST STAND DELINEATION PLAN | | | |
| DATE | APPROVED DATE | SHEET NO. 24 OF 63 | | | | |
| | | PROJECT NO.: P584501 | <u> </u> | | | |
| R | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | 0080 | | | |
| | | | (C) WBCM 2023 | | | |

| | | | REVISIONS | | | |
|---------------------------------------|--|-----|-------------|----|------|--------------------------|
| K & MAGNANI, LLC pa Road Suite 200 | | NO. | DESCRIPTION | BY | DATE | |
| 0 www.wbcm.com | | | | | | APPROVED |
| CM | | | | | | CHIEF ENGINEER |
| <i>STEMS</i> | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the | | | | | APPROVED |
| | laws of the State of Maryland. License # <u>27734</u> Expiration Date: <u>07/12/24</u> | | | | | ASSISTANT CHIEF ENGINEER |

LEGEND

BITUMINOUS PAVEMENT CONCRETE PAVEMENT ELEVATION CONTOUR

CHAIN LINK FENCE PROPERTY LINE INDIVIDUAL TREES (NON-SPECIMEN)

SPECIMEN TREE CRITICAL ROOT ZONE

SPECIMEN TREE WITH CRITICAL ROOT ZONE, >30" DBH FOREST

PROPOSED LIMIT OF DISTURBANCE / NET TRACK AREA

FOREST FIELD SURVEY LIMITS

MAPPED SOIL UNIT / HYDROLOGIC SOIL GROUP RATING

STEEP SLOPES (15% TO 25%)

STEEP SLOPES (25% OR GREATER)

ANNE ARUNDEL COUNTY FOREST CONSERVATION WORKSHEET (In Acres)

| Variables | Unique Tract 1 | |
|--|-------------------------------|--|
| Site Information | | |
| A. Growth Management Area | OUTSIDE Priority Funding Area | |
| B. Land Use Type | Institutional / Recreational | |
| C. Total Unique Tract Area | 303 | |
| D. Universal Deductions (Critical Area or 100-Yr Floodplain) | 0 | |
| E. Impervious Surface Deductions for Targeted Growth and Priority Funding Areas | 0 | |
| F. Existing Forest Cover within Net Unique Tract Area | 196 | |
| G. Proposed Forest Clearing within Net Unique Tract Area | 0.04 | Total Net Tract Area |
| H. Net Unique Tract Area = (C)-(D)-(E) | 303 | |
| Is Total Net Tract Area less than or equal to 5 Acres? | NO | |
| Key for lookup table | Institutional | |
| I. Conservation Threshold | 0 | |
| J. Afforestation Threshold | 0 | |
| Forest Conservation | | |
| K. Conservation Threshold Area = (H) X (I) | 0.0 | |
| L. Area of Forest Above Conservation Threshold = (F) - (K) | 196.0 | |
| M. Breakeven Point (Amount of forest that must be retained so that no mitigation is required.) If the Area of Forest Above Conservation Threshold (L) is greater than 0, then M = $((0.3333) \times (L)) + (K)$. If the Area of Forest Above Conservation Threshold is equal to 0, then M = (F). | 65.3 | |
| N. Forest Clearing Permitted without Mitigation = (F) - (M) | 130.7 | |
| O. Proposed Forest Retention = (F) - (G) | 196.0 | |
| P. Reforestation for Retention Above the Threshold If Proposed Forest Clearing (G) is > Area of Forest Above Conservation Threshold (L), then (P) = (L) X (0.5). If not, then (P) = (G) X (0.5). | 0.0 | |
| Q. Credit for Retention Above the Threshold If Proposed Forest Clearing (G) is > Area of Forest Above Conservation Threshold (L), then (R) = 0. If not, then (R) = (L) - (G). | | |
| R. Reforestation for Retention Below the Threshold If Proposed Forest Clearing (G) < Area of Forest Above Conservation Threshold (L), then (R) = 0. If not, then (R) = ((G) - (L)) X 2 | 0.0 | |
| S. Total Reforestation Required = (P) + (R) - (Q) | 0.0 | |
| T. Afforestation Threshold Area = (H) X (J) | 0.0 | |
| U. Total Afforestation Required If Existing Forest Cover (F) < Afforestation Threshold Area (T), then (U) = (T) - (F). If not, then (U) = 0. | 0.0 | Total Mitigation Required for Site (Acres)* |
| V. Total Mitigation Required By Tract = (S) + (U) | 0 | 0 |
| | | * These mitigation values represent required mitigation absent any other conditional mitigation such as mitigation to cure a violation of fulfill a conditional approval. |

FOREST CONSERVATION NOTES:

1. ADDRESS: JUG BAY EDUCATION, RESEARCH AND DISCOVERY FIELD STATION,

6032 PINDELL ROAD LOTHIAN MARYLAND 20711

2. OWNER: ANNE ARUNDEL COUNTY, DEPARTMENT OF RECREATION AND

PARKS, PO BOX 2660, ANNAPOLIS, MD 21404 3. PROPERTY INFORMATION: MAP 75, GRID 18, PARCEL 0006, 302.78 ACRES

4. EXISTING IMPERVIOUS AREA =0 SQ.FT. / 0 ACRES. THE PROJECT IS NOT LOCATED IN A PRIORITY FUNDING AREA (PFA).

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

SIGNATURI

BID SET

ANNE ARUNDEL COUNTY

| DEPARTMENT OF PUBLIC WORKS | | | | | | | | | |
|----------------------------|---------------------|------|---------------|----------|----------------------------------|--|--|--|--|
| DATE | APPROVED | DATE | SCALE: | 1" = 60' | JUG BAY EDUCATION, RESEARCH, AND | | | | |
| | | | DRAWN BY: | R.S.S. | DISCOVERY FIELD STATION | | | | |
| | PROJECT MANAGER | | CHECKED BY: | R.W.H. | FOREST CONSERVATION PLAN | | | | |
| DATE | APPROVED | DATE | SHEET NO. | 25 OF 63 | | | | | |
| | | | PROJECT NO.: | P584501 | C001 | | | | |
| | CHIEF, RIGHT-OF-WAY | | CONTRACT NO.: | P584500 | C901 | | | | |
| | (Ĉ) WBCM 2023 | | | | | | | | |

| CANOPY TREE | = 00 TREES X 200 SF = 00.00 SF |
|------------------|--------------------------------|
| CANOPY TREE | = 00 TREES X 100 SF = 00.00 SF |
| UNDER STORY TREE | = 00 TREES X 75 SF = 00.00 SF |
| LARGE SHRUB | = 00 SHRUBS X 50 SF = 00.00 SF |
| SMALL SHRUB | = 00 SHRUBS X 25 SF = 00.00 SF |
| | |

REVIEW PROCESS.

- 3. BOUNDARIES OF RETENTION AREA SHALL BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE. 4. AVOID DAMAGE TO CRITICAL ROOT ZONE. DO NOT DAMAGE OR SEVER LARGE ROOTS WHEN INSTALLING
- POSTS. PROTECTION SIGNS ARE REQUIRED.
- 6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

TREE PROTECTION FENCE NOT TO SCALE

| | | | REVISIONS | | | |
|---|---|-----|-------------|----|------|--------------------------|
| LEY COX & MAGNANI, LLC East Joppa Road Suite 200 Boltimoro MD 21286 | | NO. | DESCRIPTION | BY | DATE | |
| 512.4500 www.wbcm.com | | | | | | APPROVED |
| () | | | | | | |
| | | | | | | |
| NSYSTEMS | | | | | | APPROVED |
| | 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 Mandand | | | | | |
| | License # <u>27734</u> Expiration Date: <u>07/12/24</u> | | | | | ASSISTANT CHIEF ENGINEER |

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

SIGNATURE:

DATE:

BID SET

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS DATE APPROVED DATE SCALE: JUG BAY EDUCATION, RESEARCH, AND AS SHOWN DISCOVERY FIELD STATION DRAWN BY: R.S.S. FOREST CONSERVATION CHECKED BY: PROJECT MANAGER R.W.H. DATE APPROVED DATE SHEET NO. 26 OF 63 NOTES AND DETAILS PROJECT NO .: P584501 C902 CONTRACT NO.: P584500 CHIEF, RIGHT-OF-WAY ⑦ WBCM 2023

Designing Infrastructure f

| A/C | AIR CONDITION | FIN | FINISH | PLAM | PLASTIC I |
|---------------|-----------------------------------|---------|---------------------------------|---------|---|
| ACC | ACCESSIBLE | FIXT | FIXTURE | PLAS | PLASTIC |
| ACOUS INSUL | ACOUSTICAL INSULATION | FLR | FLOOR | PLYWD | PLYWOO |
| ACT | ACOUSTICAL CEILING TILE | FLR FIN | FLOOR FINISH | PREFAB | PREFABR |
| ADDL | ADDITIONAL | FLUOR | FLUORESCENT | PREFIN | PREFINIS |
| ADH | ADHESIVE | FO | FINISHED OPENING | PREP | PREPARA |
| | ADJACENT, ADJOING, ADJUSTABLE | FRP | FIBERGLASS REINFORCED PLASTIC | PT | PAINT, PF |
| 4.65 A E E | | FR7 | EREFZER | ORY | OLIARRY |
| | | FRZ | FREIZER | OT | |
| ALI | ALIERNATE | | | | |
| ALUM | ALUMINUM | FURN | | ĸ | RADIUS, I |
| ANOD | ANODIZE | GA | GAGE | RB | RUBBER |
| APPROX | APPROXIMATE | GALV | GALVANIC, GALVANIZED | RD | ROAD, RO |
| ARCH | ARCHITECT | GC | GENERAL CONTRACTOR | RECT | RECTANO |
| AV | AUDIO VISUAL | GL | GLASS | REF | REFERENC |
| BATT | BATTEN | GLZ | GLAZING | REINF | REINFOR |
| BLDG | BUILDING | GYP | GYPSUM | REQD | REQUIRE |
| BLKHD | BULKHEAD | HC | HANDICAP | REV | REVISION |
| ЗОТ | воттом | HDPE | HIGH DENSITY POLYETHYLENE | RFI | REQUEST |
| СВ | CERAMIC BASE | HDW | HARDWARE | RH | RIGHT H/ |
| CER | | HM | HOLLOW MFTAL | RM | ROOM |
| | | | ΗΟΒΙΖΟΝΤΔΙ | RO | RUIICH |
| .G | | | | | |
| Ц. | CONSTRUCTION JOINT, CONTROL JOINT | пі | | κı c | KIGHI |
| ĴĹ | CENTER LINE | HVAC | CONDITIONING | 5 | SOUTH |
| CLR | CLEAR, COLOR | INSTL | INSTALL | SC | SOLID CO |
| CMU | CONCRETE MASONRY UNIT | INSUI | INSULATION | SCHED | SCHEDUL |
| COL | COLUMN | INT | | SCWD | SOLID CO |
| CONC | CONCRETE | | | SF | SQUARE |
| ONF | CONFERENCE | JAN | | SHT | SHEET |
| ONT | CONTINUE | L | | SIM | SIMILAR |
| COORD | COORDINATE | LAM | LAMINATE | SPEC | SPECIFIC/ |
| ORR | CORRIDOR | LAV | LAVATORY | SQ | SQUARE |
| | CARDET | LBS | POUND | STC | SOUND T |
| | | LED | LIGHT EMITTING DIODE | STOR | STORAGE |
| _ | | LH | LEFT HAND | STRUCT | STORAGE |
| | CENTER | LIN | LINEAR | | |
| CYL | CYLINDER | MAINT | MAINTENANCE | SUSP | SUSPEND |
|) | DEEP, DEPTH | MATL | MATERIAL | SYM | SYMBOL |
| JEMO | DEMOLITION | MAX | MAXIMUM | Т | TREAD |
| DF | DRINKING FOUNTAIN | MECH | MECHANICAL | TEL | TELEPHO |
| AIC | DIAMETER | MEL | | TEMP | TEMPOR |
| ЯМ | DIMENSION | | | ТНК | THICKNES |
| DIR | DIRECTION | | | THRES | THRESHC |
| DISP | DISPENSER | MID | | THRU | THROUG |
| DIST | DISTANCF | MIN | MINIMUM, MINULE | TK BD | ΤΑϹΚΒΟΑ |
| | | MIRR | MIRROR | TMPD GI | TEMPERF |
| אוכ | | MISC | MISCELLANEOUS | TV | |
| 20 | | МО | MASONRY OPENING | | |
| | DISHWASHEK | MOD | MODIFY | 111 | |
| DWG | DRAWING | MTL | METAL | | |
| E | EAST | Ν | NORTH | UNO | UNLESS N |
| EA | EACH | NA | ΝΟΤ ΑΡΡΙ ΙCAΒΙ Ε | UTIL | UTILITY |
| EL | ELEVATION | NAR | NARROW | VAR | VARIATIC |
| ELEC | ELECTRIC | | | VB | VINYL BA |
| ELEV | ELEVATION | | | VCT | VINYL CO |
| EQ | EQUAL | NOM | NOMINAL | VERT | VERTICAI |
| EQUIP | EQUIPMENT | NTS | NOT TO SCALE | VIF | VERIFY IN |
| EOUIV | EOUIVAI FNT | OC | ON CENTER | W | WEST, W |
| - ~~·· | | OCC | OCCUPY | W/ | WITH |
| | | OD | OUTSIDE DIAMETER | W/O | \ <u>\</u> \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ |
| | | | OWNER FURNISHED/CONTRACTOR | | |
| EXI | | OF/CI | INSTALLED | | |
| FD | FLOOR DRAIN | OFF | OFFICE | WC | WALL CO |
| FE | FIRE EXTINGUISHER | OF/OI | OWNER FURNISHED/OWNER INSTALLED | WD | WOOD |
| FEC | FIRE EXTINGUISHER CABINET | ОН | OVERHANG | WH | WATER H |
| FF | FINISH FACE | OPH | OPPOSITE HAND | WLD | WELDED |
| FF EL | FINISH FLOOR ELEVATION | OPNG | OPENING | WM | WIRE ME |
| | | | | | |

| AGNANI, LLC / WBCM, LLC East Joppa Road Suite 200 Baltimore, MD 21286 .512.4500 www.wbcm.com |
|---|
| CM |
| or Tomorrow® |

| | NO. | DESCRIPTION | BY | DATE | |
|---|-----|-------------|----|------|--------------------------|
| | | | | | APPROVED |
| | | | | | CHIEF ENGINEER |
| I berefy certify that these documents were prepared or | | | | | APPROVED |
| approved by me, and that I am a duly licensed professional architect under the laws of the State of Maryland. | | | | | ASSISTANT CHIEF ENGINEER |
| License # 10010 Expiration Date. 11/20/24 | | | | | 1 |

REVISIONS

| DATE | APPROVED DA | ATE | SCALE: | JUG BAY EDUCATION, RESEARCH, AND |
|------|---------------------|-----|-----------------------|----------------------------------|
| | | | DRAWN BY: A.D.M. | DISCOVERY FIELD STATION |
| | PROJECT MANAGER | | CHECKED BY: B.F. | GENERAL NOTES. |
| DATE | APPROVED DA | ATE | SHEET NO. 27 OF 63 | ABBREVIATIONS & SYMBOLS |
| | | | PROJECT NO.: P584501 | |
| R | CHIEF, RIGHT-OF-WAY | | CONTRACT NO.: P584500 | AUUT |
| | | | | |

RAISED CHARACTERS

FIGURE 703.4.1 HEIGHT OF TACTILE CHARACTERS ABOVE FINISHED FLOOR OR GROUND

BRAILLE

| LEGEND | | | | | | |
|------------------------|---|--|--|--|--|--|
| CONVENTION | DESCRIPTION | | | | | |
| ^{36"} ↓ 6" | DIMENSION SHOWING ENGLISH UNITS IN INCHES UNLESS OTHERWISE SPECIFIED, ABOVE THE LINE. | | | | | |
| | DIMENSION FOR SMALL MEASUREMENTS | | | | | |
| <u>33"-36"</u> ↓ | DIMENSION SHOWING A RANGE WITH MINIMUM - MAXIMUM | | | | | |
| MIN. | MINIMUM | | | | | |
| MAX. | MAXIMUM | | | | | |
| > | GREATER THAN | | | | | |
| 2 | GREATER THAN OR EQUAL TO | | | | | |
| < | LESS THAN | | | | | |
| <u> </u> | LESS THAN OR EQUAL TO | | | | | |
| | BOUNDARY OF CLEAR FLOOR SPACE OR MANEUVERING CLEARANCE | | | | | |
| ዊ | CENTERLINE | | | | | |
| | A PERMITTED ELEMENT OR ITS EXTENSION | | | | | |
| \Rightarrow | DIRECTION OF TRAVEL OR APPROACH | | | | | |
| | A WALL, FLOOR, CEILING OR OTHER ELEMENT CUT IN SECTION OR PLAN | | | | | |
| | A HIGHLIGHTED ELEMENT IN ELEVATION OR PLAN | | | | | |
| | LOCATION ZONE OF ELEMENT CONTROL OR FEATURE | | | | | |
| | | | | | | |
| GENERAL NOTE | | | | | | |

ALL FIGURES SHOWN DEPICT COMMON DESIGN EXAMPLES AND SOME FIGURES MAY NOT NECESSARY APPLY TO THE SUBMITTED DRAWINGS.

FIGURE 703.4.2 LOCATION OF TACTILE SIGNS AT DOORS

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS DATE APPROVED JUG BAY EDUCATION, RESEARCH, AND DATE SCALE: DISCOVERY FIELD STATION A.D.M. DRAWN BY: TYPICAL ADA CLEARANCES CHECKED BY: PROJECT MANAGER B.F. DATE APPROVED DATE SHEET NO. 28 OF 63 PROJECT NO .: P584501 A002 CONTRACT NO.: P584500 CHIEF, RIGHT-OF-WAY © WBCM 2023

| | | | REVISIONS | | | |
|---|--|-----|-------------|----|------|--------------------------|
| GNANI, LLC / WBCM, LLC | | NO. | DESCRIPTION | BY | DATE | |
| Baltimore, MD 21286 12.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| | | | | | | CHIEF ENGINEER |
| | | | | | | APPROVED |
| r Tomorrow ® | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of | | | | | |
| | Maryland. License # <u>15613</u> Expiration Date: <u>11/26/24</u> | | | | | ASSISTANT CHIEF ENGINEER |

| LEGEND | | | | | |
|---------------------------------|---|--|--|--|--|
| CONVENTION | DESCRIPTION | | | | |
| ≠ <u>36"</u> ≠ ^{6"} | DIMENSION SHOWING ENGLISH UNITS IN INCHES UNLESS OTHERWISE SPECIFIED, ABOVE THE LINE. | | | | |
| ↓ ↓ ≁ ^{33"-36"} ≁ | DIMENSION FOR SMALL MEASUREMENTS DIMENSION SHOWING A RANGE WITH MINIMUM - MAXIMUM | | | | |
| MIN. | MINIMUM | | | | |
| MAX. | MAXIMUM | | | | |
| > | GREATER THAN | | | | |
| ≥ | GREATER THAN OR EQUAL TO | | | | |
| < | LESS THAN | | | | |
| ≤ | LESS THAN OR EQUAL TO | | | | |
| | BOUNDARY OF CLEAR FLOOR SPACE OR MANEUVERING CLEARANCE | | | | |
| ୁଦ୍ | CENTERLINE | | | | |
| | A PERMITTED ELEMENT OR ITS EXTENSION | | | | |
| | DIRECTION OF TRAVEL OR APPROACH | | | | |
| + | A WALL, FLOOR, CEILING OR OTHER ELEMENT CUT IN SECTION OR PLAN | | | | |
| | A HIGHLIGHTED ELEMENT IN ELEVATION OR PLAN | | | | |
| | LOCATION ZONE OF ELEMENT CONTROL OR FEATURE | | | | |
| (| GENERAL NOTE | | | | |
| 1. ALL FIGURES | ARE TAKEN FROM THE 2010 ADA STANDARDS | | | | |

- KEN FROM THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.
- 2. ALL FIGURES SHOWN DEPICT COMMON DESIGN EXAMPLES AND SOME FIGURES MAY NOT NECESSARY APPLY TO THE SUBMITTED DRAWINGS.
- 3. ALL ACCESSORIES TO RECIEVE IN WALL BLOCKING FOR ATTACHMENT.

| ANNE ARUNDEL COUNTY | | | | | | | | | |
|----------------------------|---------------------|-----------------------|----------------------------------|--|--|--|--|--|--|
| DEPARTMENT OF PUBLIC WORKS | | | | | | | | | |
| DATE | APPROVED DATE | SCALE: | JUG BAY EDUCATION, RESEARCH, AND | | | | | | |
| | | DRAWN BY: A.D.M. | DISCOVERY FIELD STATION | | | | | | |
| | PROJECT MANAGER | CHECKED BY: B.F. | TYPICAL ADA CLEARANCES | | | | | | |
| DATE | APPROVED DATE | SHEET NO. 29 OF 63 | | | | | | | |
| | | PROJECT NO.: P584501 | 1000 | | | | | | |
| R | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | AUU3 | | | | | | |
| | | | © WBCM 2023 | | | | | | |

| | | | Í | | Ì | | | | | | | | |
|------------------------|---|---|----------------------|--|---------------------|--|-------------------------------------|------------------------|---|--|---|--|-----------------------------|
| | PROJECT CC | DE | | PROJECT CODE | | | | | | DUE ZU 18 REVIEVV | IRES | | |
| | RESS | | TABLE 705.2 | | _ | EQUIPMENT IS OVER 15 PSI AND 10 HORSEPOWER | | | USE OF SPACE = | ASSEMBLY | | | |
| JUG BAY EDUCATION RE | SEARCH AND DISCOVERY FIELD STATION | | | 5 OR GREATER; 40 INCHES; CABIN TO CABIN: COMPLIES; CLOSEST CABIN TO BATHHOUSE: COMPLIES. | | LAUNDRY ROOMS OVER 100 SF | 1 HOUR REQUIRED; COM | OMPLIES | 114 OCCUPANTS | 114 OCCUPANTS/2 = | 57 MEN; 57 WOMEN | | |
| 6032 PINDELL RD | | | SECTION 705.2.3 | COMBUSTIBLE PROJECTIONS EXTENDING TO WITHIN 5 FEET OF THE LINE USED TO DETERMINE FIRE SEPARATION DISTANCE SHALL BE OF NOT LESS THAN 1-HOUR FIRE RESISTANCE RATED CONSTRUCTION | CHAPTER 6 TYPES OF | | | | | OUTDOOR ACTIVITIES | | | |
| LOTHIAN, MARYLAND 207 | 711-0000 | | | COMBUSTIBLE PROJECTIONS DOES NOT EXTEND WITHIN 5 FEET OF THE LINE USED TO DETERMINE FIRF | | | | WATER C | LOSETS (WC) MALE: 1 PER 75 | | FEMALE: 1 PER 40 | | |
| APPLICABLE CODE | S | | | SEPARATION DISTANCE. | _ | PRIMARY STRUCTURAL FRAME | 0 HR FIRE RATING | LAVATOR | ES (LAV) MALE: 1 PER 200 | | FEMALE: 1 PER 150 | | |
| 2018 INTERNATIONAL BU | | | SECTION 705.3 | BUILDINGS ON THE SAME LOT | _ | BEARING WALLS EXTERIOR | 0 HR FIRE RATING (NOT LESS THAN | N TABLE 602 AND | FOUNTAIN (DF) MALE: 1 PER 1000 | | FEMALE: 1 PER 1000 | | |
| 2018 INTERNATIONAL EN | ERGY CONSERVATION CODE | | | FOR THE PURPOSES OF DETERMINING THE REQUIRED WALL AND OPENING PROTECTIONS AND ROOF COVERING REQUIREMENTS, BUILDINGS ON THE SAME LOT SHALL BE ASSUMED TO HAVE AN IMAGINARY LINE | E | | | | | | | | |
| 2018 INTERNATIONAL ME | UMBING CODE | | | BETWEEN THEM. | _ | | 0 HR FIRE RATING (NOT LESS THAN | AN TABLE 602 AND | PANIS (FEMALE) 2 WC REQUIRED | 1 LAV REQUIRED | 1HC TOILET REQUIRED | 1 DF REQUIRED | |
| CHAPTERS 16 & 17 OF TH | HE AA COUNTY PLUMBING CODE, 1993 | | SECTION 705.4 | CONSTRUCTION. | | NON-BEARING WALLS EXTERIOR | SECTION 704.10) | TOTAL RE | QUIRED 3 WC | 2 LAV | 2HC TOILET | 1 DF | |
| ACCESSIBLE AND USEAE | BLE BUILDINGS AND FACILITIES - ICC A117.1-2009 | | SECTION 705.8 | MAXIMUM AREA OF EXTERIOR WALL OPENINGS BASED ON FIRE SEPARATION DISTANCE AND DEGREE OF OPENING PROTECTION | | NON-BEARING WALLS INTERIOR | 0 HR FIRE RATING | CODE | OF MARYLAND REGULA | TIONS | | | |
| FIRE PREVENTION CODE | 2018 NFPA 1 | | TABLE 705.8 | MAXIMUM AREA OF EXTERIOR WALL OPENINGS BASED ON FIRE SEPARATION DISTANCE AND DEGREE OF | | | 0 HR FIRE RATING | TITLE 10 | | RTMENT OF HEALTH | | | |
| LIFE SAFETY 2018 NFPA | | | | | | | | HOUSING | UBITILE 16. | | | | |
| AUTOMATIC SPRINKLER | SYSTEMS CODE 2016 NEPA 13 | | | | TABLE 602 | FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTE | ERIOR WALLS BASED ON FIRE SEPARA | ATION DISTANCE CHAPTER | 10.16.03 CAMPS | | | | |
| FIRE ALARM CODE 2016 | NFPA 72 NATIONAL FIRE ALARM CODE | | TABLE 803.13 | INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY | | PROPOSED SEPARATION BETWEEN PAVILION AND EX | (TERIOR WALL OF BATHHOUSE = 57'-2" | 2" LF; FIRE | | GS | | | |
| DESCRIPTION C | DF WORK | | | GROUP R-3 ROOMS AND ENCLOSED CLASS C REQUIRED | | SEPARATION DISTANCE = 28.5" LF | | | | | | | |
| PROJECT CONSISTS OF | 8 CABINS, A BATHHOUSE, AND A PRE-ENGINEERED / PR | E-FABRICATED PAVILION. REFER TO CIVIL PLANS FOR | SECTION 803.1.2 | | | PROPOSED SEPARATION BETWEEN BATHHOUSE AND | CLOSEST CABIN FROM EXTERIOR WA | VALL TO EXTERIOR | TOILETS | | 20 | | |
| COMPLETE EXTENT OF V | VORK. | | | MATERIALS TESTED IN ACCORDANCE WITH ASTM F84 OR LIL 723 | | WALL = 72'-2" LF; FIRE SEPARATION DISTANCE = 36 LF | | | UNRINALS | 1 PER | 30 | | |
| BATHHOUSE: BUSINESS | GROUP B OCCUPANCY | | _ | FLAME SPREAD INDEX: 76 CHOKE DEVELOPMENT OF THE COMPANY OF THE COMPANY. | | > 30; VB CONSTRUCTION, OCCUPANCY GROUPS R-1 A | AND B = 0 HR RATING REQUIRED | | LAVATORIES | 1 PER | 20 | 20 | |
| PAVILION: ASSEMBLY GR | ROUP A-5 OCCUPANCY | | | SMOKE DEVELOPMENT INDEX: 0 - 450 | SECTION 705 | | | | SHOWERS | 1 PER | 20 | 20 | |
| CODE REVIEW | - CABINS | | SECTION 804 | IN FRIOR FLOOR FINISH | 2 SECTION 705.2 | PROJECTIONS | | | THIS SHALL APPL PROVIDED | Y TO OVERNIGHT CAMPING FACIL | LITIES AND/OR WHERE SWIMMI | ING OR BATHING IS | |
| 2018 INTERNATIONAL E | BUILDING CODE | | SECTION 804.2 | TO BE OF CLASS I OR II MATERIALS SHALL BE CLASSIFIED IN ACCORDANCE WITH ASTM E648 OR NFPA 253 | TABLE 705.2 | MINIMUM DISTANCE OF PROJECTION | | | 8 CABINS MAX 6 | DCCUPANTS PER CABIN = 48 | | | |
| CHAPTER 3: USE AND | DCCUPANCY CLASSIFICATION | | SECTION 804 4 2 | MINIMUM CRITICAL RADIANT FLUX. IN ALL OCCUPANCIES INTERIOR FLOOR FINISH AND FLOOR COVERING MATERIALS SHALL WITHSTAND A MINIMUM CRITICAL RADIANT FLUX. R-1 OCCUPANCY. NOT LESS THAN CLASS | ss | 5 OR GREATER; 40 INCHES; CLOSEST CABIN TO BATH | HHOUSE: COMPLIES; BATHHOUSE TO P | PAVILION, | OCCUPANT | | 48 OCCUPANTS/2= | 24 MEN; 24 WOMEN | |
| SECTION 310 | RESIDENTIAL GROUP R | | | II REQUIRED, COMPLIES | | MAXIMUM AREA OF EXTERIOR WALL OPENINGS BASE | D ON FIRE SEPARATION DISTANCE AN | ND DEGREE OF 24 OCCU | PANTS (MALE) 2 WC REQUIRED | 1 URINAL REQUIRED | 2 LAV REQUIRED | 2 SHOWER REQUIRED | |
| SECTION 310.2 | RESIDENTIAL GROUP R-3 | | SECTION 806 | DECORATIVE MATERIALS AND TRIM | TABLE 705.8 | OPENING PROTECTION. | | 24 OCCU | PANTS (FEMALE) 2 WC REQUIRED | N/A | 2 LAV REQUIRED | 2 SHOWER REQUIRED | |
| | | ND LISE | SECTION 806.1 | DECORATIVE MATERIALS AND TRIM | | | D (UP, NS) = NO LIMIT | TOTAL RE | QUIRED 4 WC | 1 URINAL | 4 LAV | 4 SHOWER | |
| SHAFTER 4. SPEUIAL L | | | - | FURNISHING OR DECORATIVE MATERIALS OF AN EXPLOSIVE OR HIGHLY FLAMMABLE CHARACTER SHALL NOT BE USED | CHAPTER 8: INTERIOR | | | TOTAL RE | QD, | | | | |
| SECTION 420 4 | AUTOMATIC SPRINKI FR SYSTEM | | | INTERIOR FLOOR-WALL BASE THAT IS 6" OR LESS IN HEIGHT SHALL BE TESTED IN ACCORDANCE W/ SECTION | INDLE OUS. 13 | | | IPC+COM REQUIRE | AR 7 WC MENTS | 1 URINAL | 6 LAV | 4 SHOWER | |
| | GROUP R OCCUPANCIES SHALL BE EQUIPPED THRO | UGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN | SECTION 806.8 | 804.2 AND SHALL NOT BE LESS THAN CLASS II. WHERE A CLASS I FLOOR FINISH IS REQD, THE FLOOR WALL BASE SHALL BE CLASS L COMPLIES | | | | INTER | NATIONAL ENERGY CON | ISERVATION CODE 20 ² | 18 REVIEW | | |
| | ACCORDANCE WITH SECTION 903.2.8. QUICK RESPO INSTALLED IN ACCORDANCE WITH SECTION 903.3.2: | NSE OR RESIDENTIAL AUTOMATIC SPRINKLERS SHALL E COMPLIES | | ECTION AND LIFE SAFETY SYSTEMS | -1 | PASSAGEWAYS ENCLOSURES FOR EXIT ACCESS | ROOMS AND ENCLOSED SPACES | TABLE C3 | 01.1 CLIMATE ZONES | | | | |
| SECTION 420.5 | FIRE ALARM SYSTEMS AND SMOKE ALARMS | | | | _ | CLASS A REQUIRED CLASS B REQUIRED | CLASS C REQUIRED | | MARYLAND, ANNE | ARUNDEL COUNTY- CLIMATE ZO | DNE 4A | | |
| | FIRE ALARM AND SYSTEMS AND SMOKE ALARM SHA | L BE PROVIDED IN GROUP R-1 OCCUPANCIES; | | NEW GROUP & OCCUPANCIES ARE REQUIRED TO BE PROTECTED BY AN AUTOMATIC SPRINKLER SYSTEM IN | | MINIMUM CRITICAL RADIANT FLUX. IN ALL OCCUPANCI | CIES INTERIOR FLOOR FINISH AND FLOO | OOR COVERING TABLE C4 | 02.1.3 OPAQUE THERMA | L ENVELOPE INSULATION | | | |
| | | | SECTION 903.2.8 | ACCORDANCE WITH SECTION 903.2.8.1; COMPLIES | SECTION 804.4.2 | REQUIRED, COMPLIES | RADIANT FLUX, B OCCUPANCT, NOT LE | LESS THAN CLASS II | | IMUM REQUIREMENTS, R-VALUE I | | | |
| CHAPTER 5: GENERAL | | | SECTION 906 | PORTABLE FIRE EXTINGUISHERS; FIRE EXTINGUISHERS PROVIDED IN EACH CABIN | CHAPTER 9: FIRE PRO | TECTION AND LIFE SAFETY SYSTEMS | | | ROOF | ROOF DECK | | R-30 CI PROVIDED | |
| JECTION 303.T.Z. | | R-3 USE GROUP | SECTION 907.2.10 | SMOKE ALARM AND SMOKE DETECTION SYSTEMS SHALL BE INSTALLED | CHAPTER 10: MEANS (| OF EGRESS | | | | /ALLS | R-38 ci REQUIRED | N/A | |
| | SEPARATION DISTANCE OF CABINS TO EACHOTHER | = 32 LF | CHAPTER 10: MEANS O | FEGRESS | SECTION 1004 | | | | | | R-13 + R 3.8 ci or R-20 | | |
| | BATHHOUSE | B USE GROUP | SECTION 1004 | OCCUPANT LOAD. | | GANG BATHROOMS = 5 MEN AND 5 WOMAN - 10 OCCU | JPANTS | | | | | | |
| | SEPARATION DISTANCE OF NEAREST CABIN TO BAT | HOUSE = 30 LF | TABLE 1004.5 | 398 GSF / 50 GSF = 7 OCCUPANTS MAXIMUM; ACTUAL USE 6 OCCUPANTS; COMPLIES. | | 4 INDIVIDUAL BATHROOMS = 4 OCCUPANTS | | | | -LO | K-1.3 CI KEQUIKED | | |
| | PAVILION | A-5 USE GROUP | SECTION 1005.3.2 | 6 OCCUPANTS X 0.2INCH PER OCCUPANT = 1.2" | | 1 FAMILY BATHROOM = 2 OCCUPANTS | | | | | R-10 FOR 24" BELOW | R-10 FOR 24" BELOW | |
| | SEPARATION DISTANCE OF BATHHOUSE TO PAVILIO | N = 38 LF | _ | TOTAL EGRESS WIDTH PROVIDED = MAIN ENTRANCE = 32"; COMPLIES | 1 | MECH/UTILITY ROOM = 1 OCCUPANT | | | SLAB ON GRADE | UNHEATED SLABS | REQUIRED | PROVIDED | |
| TABLE 504.3 | ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRAD | | SECTION 1006.2.1 | TWO EXITS ARE REQUIRED WHERE COMMON PATH OF EGRESS TRAVEL EXCEEDS TABLE 1006.2.1 | | 17 OCCUPANTS TOTAL | | | | 2040 | | N/A | |
| | | JUTION ALLOWABLE HT = 40' ABOVE GRADE | TABLE 1006 2 1 | R-3; MAX OCCUPANT LOAD: 10; MAX COMMON PATH OF TRAVEL DISTANCE: 75". COMPLIES | TABLE 1006.3.3 | FIRST STORY ABOVE GRADE PLANE, OCCUPANCY B, N | MAX OCCUPANT LOAD 49, MAX COMMO | MON PATH OF NFPA | IUT LIFE SAFETY CODE 2 | 2018 | | | |
| TABLE 504 4 | | | | FIRST STORY ABOVE GRADE PLANE, R-3 OCCUPANCY, MAX OCCUPANT 20. MAX COMMON PATH OF EGRESS | | | | | | | | | |
| -/ JULL JUH.H | GROUP R-3, S13D, VB = 3 STORIES ALLOWED PROP | SED = 1 STORY; COMPLIES WITH REQUIREMENT | IABLE 1006.3.3 | TRAVEL DISTANCE, 125 FT; COMPLIES | TABLE 1020.2 | | | CHAPTER | 20 LODGING OR ROO | VIIING HOUSES | PLY TO BUII DINGS THAT PROV | | |
| SECTION 506 | BUILDING AREA | , | SECTION 1010.1.1 | MINIMUM CLEAR OPENING WIDTH OF 32", COMPLIES | _ | ACCESS TO AND UTILIZATION OF MECHANICAL, PLUME REQUIRED 24" WIDTH MINIMUM; COMPLIES | IBING OR ELECTRICAL SYSTEMS OF EC | EQUIPMENT, SECTION | 26.1.1.1 ACCOMMODATIO | NS FOR 16 OR FEWER PERSONS | ON EITHER A TRANSIENT OR PI | ERMANENT BASIS, WITH OR | |
| TABLE 506.2 | ALLOWABLE AREA FACTOR | | CHAPTER 11: ACCESSI | BILITY | CHAPTER 12: INTERIO | RENVIRONMENT | | | EVERY SLEEPING | ROOM AND LIVING AREA SHALL | HAVE ACCESS TO A PRIMARY N | MEANS OF ESCAPE | |
| | R-3, S13D VB = UL; PROPOSED = 398 SF; COMPLIES V | /ITH REQUIREMENT | TABLE 1107.6.3 | GROUP R-3. ACCESSIBLE UNITS AND TYPE B UNITS SHALL BE PROVIDED IN GROUP R-1 OCCUPANCIES IN ACCORDANCE WITH SECTIONS 1107.7 | SECTION 1207.2 | MINIMUM CEILING HEIGHT OF 7'-6", COMPLIES. | | | 26.2.1.1 COMPLYING W/ C | HAPTER 24 AND LOCATED TO PRO | OVIDE A SADE PATH OF TRAVE | L TO THE OUTSIDE. | |
| CHAPTER 6 TYPES OF | CONSTRUCTION | | TARI E 1107 7 | TYPE A UNITS SHALL BE DETERMINED BY SECTION 1107.6.2.2.1. N/A BECAUSE THIS IS NOT AN R-2 | CODE REVIEW - P | AVILION | | SECTION | 24.2.2.1.1 IN DWELLING UNI HAVE NOT LESS T | IS OF TWO ROOMS ARE MORE, E HAN ONE PRIMARY MEANS OF ES | EVERY SLEEPING ROOM AND EN SCAPE AND ONE SECONDARY I | VERY LIVING AREA SHALL MEANS OF ESCAPE. | |
| TABLE 601 | FIRE RESISTANCE RATING REQUIREMENTS FOR BUI | DING ELEMENTS | | | CHAPTER 3: USE AND | OCCUPANCY CLASSIFICATION | | | SECONDARY MEA | | | RABLE FROM THE INSIDE | |
| | | | _ | TYPE B UNITS SHALL BE DETERMINED BY 1107.7.1.1 | SECTION 303 | ASSEMBLY GROUP A, UTILITY AND MISCELLANEOUS G | GROUP U | SECTION | 24.2.2.3.3 W/O THE USE OF THAN 5.7SF. WID | TOOLS, NETS OK SPECIAL EFFOR TH SHALL NOT BE LESS THAN 20 | INCHES AND HEIGHT SHALL NO | OFEINING OF NOT LESS OT BE LESS THAN 24 INCHES. | |
| | PRIMARY STRUCTURAL FRAME | | SECTION 1107 7 4 4 | CABINS ARE NOT INTENDED TO BE OCCUPIED AS A RESIDENCE; THEREFORE, THE CRITERIA FOR TYPE B NO | т — т | | | | BOTTOM OF THE | | HAN 44" ABOVE THE FLOOR; CC | DMPLIES | |
| | BEARING WALLS EXTERIOR | SECTION 704.10) | SECTION 1107.7.1.1 | APPLICABLE. | | | | CHAPTER | 28 NEW HOTELS AND | DUCKMITURES | | | |
| | BEARING WALLS INTERIOR | 0 HR FIRE RATING | CHAPTER 12: INTERIOR | | TABLE 504 2 | | | SECTION | 6.2.1.1 DEFINITION; GATE | | | | |
| | NON-BEARING WALLS EXTERIOR | 0 HR FIRE RATING (NOT LESS THAN TABLE 602 AND SECTION 704.10) | SECTION 1207.2 | MINIMUM CEILING HEIGHT OF 7'-6", COMPLIES. | TADLE 004.3 | | | GRADE SECTION | 28.2.6. TRAVEL DISTANC | E | | | |
| | NON-BEARING WALLS INTERIOR | 0 HR FIRE RATING | | THHOUSE | TABLE 504.4 | ALLOWABLE NUMBER OF STORIES | | SECTION | 28.2.6.2 TRAVEL DISTANC 125FT IN BUILDING | E WITHIN A GUEST ROOM OR GUI 35 PROTECTED BY AN APPROVEI | EST SUITE TO A CORRIDOR DO D, SUPERVISED AUTOMATIC SF | OOR SHALL NOT EXCEED PRINKLER SYSTEM IN | |
| | NON BEARING WALLS INTERIOR | 0 HR FIRE RATING | | | - | GROUP U, NON-SPRINKLERED (NS) VB = 1 STORY; CO | DMPLIES WITH REQUIREMENT | | ACCORDANCE W/ | 28.3.5; COMPLIES | ······································ | | |
| | FLOOR CONSTRUCTION | 0 HR FIRE RATING | SECTION 304 | | SECTION 506 | BUILDING AREA | | CODE RE | VIEW BATHHOUSE | | | | |
| | ROOF CONSTRUCTION | 0 HR FIRE RATING | CHAPTER 5: GENERAL | BUILDING HEIGHTS AND AREAS | TABLE 506.2 | ALLOWABLE AREA FACTOR | | CHAPTER | 7 MEANS OF EGRES | SS | | | |
| TABLE 602 | FIRE-RESISTANCE RATING REQUIREMENTS FOR EXT | ERIOR WALLS BASED ON FIRE SEPARATION DISTANCE | SECTION 503.1.2. | BUILDINGS ON SAME LOT SHALL BE REGULATED AS SEPARATE BUILDINGS | | U, NS VB =5,500 SF; PROPOSED = 20' X 40' = 800 SF; CO | OMPLIES WITH REQUIREMENT | SECTION | 7.13 MECH EQUIP ROC | MS, BOILER ROOMS, AND FURNA | ACE ROOMS | | |
| | | | TABLE 504.3 | ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE | TABLE 602 | SEE BATHHOUSE REVIEW ABOVE | | | MECH EQUIP ROC FOLLOWING: A CO | MS LIMIT COMMON PATH OF TRA MMON PATH OF TRAVEL NOT FX | AVEL TO 50FT UNLESS OTHERW (CEEDING 100FT SHALL BE PER | VISE PERMITTED BY THE RMITTED IN MECHANICAL | |
| | 10 \leq x < 30; VB CONSTRUCTION, OCCUPANCY GROUP | PS R-3 AND R-3 = 0 HR RATING REQUIRED | | GROUP B, SPRINKLERED NS:, TYPE VB CONSTRUCTION ALLOWABLE HT = 40' ABOVE GRADE | CHAPTER 10: MEANS (| OF EGRESS | | | ROOMS WITH NO | FUEL-FIRED EQUIPMENT; COMPLI | IES | | |
| | | | | PROPOSED HEIGHT = 17'-0"; COMPLIES WITH REQUIREMENT | SECTION 1004 | OCCUPANT LOAD | | CHAPTER | 38 NEW BUSINESS (| DCCUPANCIES | | | |
| | | | TABLE 504.4 | ALLOWABLE NUMBER OF STORIES | TABLE 1004.5 | ASSEMBLY WITHOUT FIXED SEATS = 7 NET. 800SF/7 = | 114 OCCUPANTS MAX. | SECTION | 38.2.6.3 TRAVEL DISTANC PERMITTED: COM | E SHALL NOT EXCEED 200 FT FRO PLIES | OM ANY POINT IN A BUILDING, U | UNLESS OTHERWISE | |
| CHAPTER 7 FIRE AND S | SMOKE PROTECTION FEATURES | | -1 | GROUP B, NON-SPRINKLERED (NS) VB = 2 STORIES ALLOWED; PROPOSED = 1 STORY; COMPLIES WITH REQUIREMENT | | | | CODE RE | /IEW OUTDOOR PAVILION | | | | |
| SECTION 705 | EXTERIOR WALLS | | SECTION 506 | BUILDING AREA | | | | CHAPTER | 12 NEW ASSEMBLY C | OCCUPANCIES | | | |
| SECTION 705 2 | PROJECTIONS | | TABLE 506.2 | ALLOWABLE AREA FACTOR | | | | TABLE 12 | 1.6 CONSTRUCTION | TYPE LIMITATIONS | | | |
| | | S AND SIMILAR PROJECTION EXTENDING REVOND THE | | GROUP B, NON-SPRINKLERED (NS) VB = 9,000 SF; PROPOSED = 1,603 SF; COMPLIES WITH REQUIREMENT | _ | | | | CONSTRUCTION | TYPE V (000), NS, I STORY HIGH X | 4, X4= PERMITTED ASSEMBLY I | LIMITED TO AN OCCUPANT | |
| | EXTERIOR WALL SHALL NOT EXTERIOR DALCONIC | MENTS OF THIS SECTION AND SECTION 1405. | TABLE 509 | INCIDENTAL USES | _ | | | | LOAD OF 300 OR I | LESS; OCCUPANT LOAD = 1144 OC | CCUPANTS; COMPLIES. | | |
| | DISTANCE THAN SHOWN IN TABLE 705.2 | | _ | INCIDENTAL USES | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | BID SET |
| | | | | | | REVISIONS | | | | A | | L COUNTY | |
| | | | | | NO. | DESCRIPTION | BY | DATE | | | | | |
| | | | | WHITNEY BAILEY COX & MAGNANI, LLC / WBCM, LLC 300 East Joppa Road Suite 200 | | | | | | | | | |
| | | | | 410.512.4500 www.wbcm.com | | | | APPROVED | DATE | APPROVED | DATE S | SCALE: | JUG BAY EDUCATION, RESEARCH |
| 1 | | | | | | | | | | | [[| DRAWN BY: A.D.M. | |
| 1 | | | | | | | | CHIEF ENGIN | EER | PROJECT MANAGER | (| CHECKED BY: B.F. | CODE REVIEW |
| 1 | | | | | | | | APPROVED | DATE | APPROVED | DATE | SHEET NO. 30 OF 63 | |

Designing Infrastructure fo

| AGNANI, LLC / WBCM, LLC East Joppa Road Suite 200 Baltimore, MD 21286 .512.4500 www.wbcm.com |
|---|
| CM |
| or Tomorrow [®] |

| | NO. | DESCRIPTION | BY | DATE | |
|--|-----|-------------|----|------|----------------------------------|
| I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of | | | | | APPROVED CHIEF ENGINEER APPROVED |
| Maryland. License # <u>15613</u> Expiration Date: <u>11/26/24</u> | | | | | ASSISTANT CHIEF ENGINEER |

PROJECT NO.: P584501

CONTRACT NO.: P584500

CHIEF, RIGHT-OF-WAY

© WBCM 2023

LIFE SAFETY PLAN - ADA CABIN

SCALE: 1/8"=1'-0"

| JANI, LLC / WBCM, LLC | | NO. | DESCRIPTION | BY | DATE | |
|--|--|-----|-------------|----|------|------------------------|
| Baltimore, MD 21286 2.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| | | | | | | CHIEF ENGINEER |
| | | | | | | APPROVED |
| Tomorrow ® | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of | | | | | |
| | Maryland. License # 15613 Expiration Date: 11/26/24 | | | | | ASSISTANT CHIEF ENGINE |

| LIFE SAFETY LEGEND: | | | | | | |
|---------------------|--|--|--|--|--|--|
| FE | RECESSED WALL MOUNTED FIRE EXTINGUISHER. REFER TO DETAIL 10 AND 11 ON SHEET A404 FOR DETAILS. | | | | | |
| > | PATH OF TRAVEL TO EXIT | | | | | |
| ##' | TRAVEL DISTANCE TO EXIT | | | | | |
| | 1 HR RATED WALL CONSTRUCTION | | | | | |

BID SET

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS DATE APPROVED JUG BAY EDUCATION, RESEARCH, AND DISCOVERY FIELD STATION DATE SCALE: A.D.M. DRAWN BY: LIFE SAFETY PLANS CHECKED BY: B.F. PROJECT MANAGER DATE APPROVED DATE SHEET NO. 31 OF 63 PROJECT NO.: P584501 A005 EER CHIEF, RIGHT-OF-WAY CONTRACT NO.: P584500 © WBCM 2023

| GNANI, LLC / WBCM, LLC | | NO. | DESCRIPTION | BY | DATE | _ |
|---|--|-----|-------------|----|------|-------------------------|
| Baltimore, MD 21286 12.4500 www.wbcm.com | | | | | | APPROVED |
| CM | | | | | | CHIEF ENGINEER |
| | | | | | | APPROVED |
| r Tomorrow ® | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of | | | | | |
| | Maryland. License # <u>15613</u> Expiration Date: <u>11/26/24</u> | | | | | ASSISTANT CHIEF ENGINEE |

GENERAL SHEET NOTES FOR EXACT LOCATION OF BUILDINGS REFER TO CIVIL PLANS. PURPOSE OF ARCHITECTURAL SITE PLAN IT TO SHOW APPROXIMATE DISTANCES BETWEEN BUILDING ON SITE ARE IN ACCORDANCE WITH THE CODE REVIEW ON SHEET A003 AND IBC TABLE 602 FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE. ♦ SHEET KEYNOTES 1. NEW MULTI-UNIT CABIN, SEE A101 FOR DETAILS. 2. NEW BATHHOUSE , SEE A201 FOR DETAILS.

- 3. PRE-FABRICATED PAVILION, REFER TO SPECS FOR DETAILS.
- 4. ADA CABIN, REFER TO CIVIL DRAWINGS FOR DETAILS.

BID SET

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS DATE SCALE: JUG BAY EDUCATION, RESEARCH, AND DISCOVERY FIELD STATION DATE APPROVED A.D.M. DRAWN BY: ARCHITECTURAL SITE PLAN CHECKED BY: B.F. PROJECT MANAGER DATE APPROVED DATE SHEET NO. 32 OF 63 PROJECT NO.: P584501 A100 CHIEF, RIGHT-OF-WAY CONTRACT NO.: P584500 © WBCM 2023

| GNANI, LLC / WBCM, LLC | | NO. | DESCRIPTION | BY | DATE | |
|--|--|-----|-------------|----|------|-------------------------|
| ast Joppa Road Suite 200 Baltimore, MD 21286 512.4500 www.wbcm.com | | | | | | _ APPROVED |
| | | | | | | |
| | | | | | | APPROVED |
| or Tomorrow [®] | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of | | | | | |
| | Maryland. License # <u>15613</u> Expiration Date: <u>11/26/24</u> | | | | | ASSISTANT CHIEF ENGINEE |

⑦ WBCM 2023

| GNANI, LLC / WBCM, LLC | | NO. | DESCRIPTION | BY | DATE | - |
|--|--|-----|-------------|----|------|-------------------------|
| Baltimore, MD 21286 512.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| | | | | | | |
| or Tomorrow ® | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of | | | | | APPROVED |
| | Maryland. License # <u>15613</u> Expiration Date: <u>11/26/24</u> | | | | | ASSISTANT CHIEF ENGINEE |

| DEPARTMENT OF PUBLIC WORKS | | | | | | | | |
|----------------------------|---------------------|-----------------------|----------------------------------|--|--|--|--|--|
| DATE | APPROVED DATE | SCALE: | JUG BAY EDUCATION, RESEARCH, AND | | | | | |
| | | DRAWN BY: A.D.M. | DISCOVERY FIELD STATION | | | | | |
| | PROJECT MANAGER | CHECKED BY: B.F. | CABIN SECTIONS AND | | | | | |
| DATE | APPROVED DATE | SHEET NO. 34 OF 63 | DETAILS | | | | | |
| | | PROJECT NO.: P584501 | | | | | | |
| R | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | AIUZ | | | | | |
| | | | (C) WBCM 2023 | | | | | |

CAUTION:

3/4"=1'-0"

3"=1'-0"

IF THIS DRAWING IS A REDUCTION,

USE THE GRAPHIC SCALES.

Designing Infrastructure for

| | | | REVISIONS | | | |
|--|--|-----|-------------|----|------|--------------------------|
| WHITNEY BAILEY COX & MAGNANI, LLC / WBCM, LLC | | NO. | DESCRIPTION | BY | DATE | |
| Baltimore, MD 21286 410.512.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| | | | | | | |
| Infrastructure for Tomorrow ® | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of | | | | | |
| | Maryland. License # <u>15613</u> Expiration Date: <u>11/26/24</u> | | | | | ASSISTANT CHIEF ENGINEER |

© WBCM 2023

CONTRACT NO.: P584500

CHIEF, RIGHT-OF-WAY

| | | | REVISIONS | | | |
|--|--|-----|-------------|----|------|----------------------------|
| GNANI, LLC / WBCM, LLC | | NO. | DESCRIPTION | BY | DATE | |
| Baltimore, MD 21286 512.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| | | | | | | CHIEF ENGINEER APPROVED |
| or Tomorrow [®] | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of | | | | | |
| | Maryland. License # <u>15613</u> Expiration Date: <u>11/26/24</u> | | | | | ASSISTANT CHIEF ENGINEER |

WOOD DOOR HEAD DETAIL SCALE: 3"=1'-0"

WOOD DOOR JAMB DETAIL SCALE: 3"=1'-0"

| ANNE ARUNDEL COUNTY | | | | | |
|---------------------|---------------------|-----------------------|----------------------------------|--|--|
| | DEPARTMENT OF | PUBLIC WORKS | | | |
| DATE | APPROVED DATE | SCALE: | JUG BAY EDUCATION, RESEARCH, AND | | |
| | | DRAWN BY: A.D.M. | DISCOVERY FIELD STATION | | |
| | PROJECT MANAGER | CHECKED BY: B.F. | CARIN DETAILS | | |
| DATE | APPROVED DATE | SHEET NO. 37 OF 63 | | | |
| | | PROJECT NO.: P584501 | A 4 0 E | | |
| R | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | CULA | | |
| | | | © WBCM 2023 | | |

| | | | REVISIONS | | | |
|--|--|-----|-------------|----|------|-------------------------|
| NANI, LLC / WBCM, LLC | | NO. | DESCRIPTION | BY | DATE | |
| Baltimore, MD 21286 2.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| | | | | | | |
| r Tomorrow ® | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of | | | | | APPROVED |
| | Maryland. License # 15613 Expiration Date: 11/26/24 | | | | | ASSISTANT CHIEF ENGINEE |

BID SET

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS JUG BAY EDUCATION, RESEARCH, AND DISCOVERY FIELD STATION DATE SCALE: DATE APPROVED A.D.M. DRAWN BY: CHECKED BY: PROJECT MANAGER B.F. CABIN DETAILS DATE APPROVED DATE SHEET NO. 38 OF 63 PROJECT NO.: P584501 A106 CHIEF, RIGHT-OF-WAY CONTRACT NO.: P584500 EER © WBCM 2023

| | | | REVISIONS | 6 | | |
|--|--|-----|-------------|----|------|-------------------------|
| NI, LLC / WBCM, LLC | | NO. | DESCRIPTION | BY | DATE | _ |
| Baltimore, MD 21286 00 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| | | | | | | |
| omorrow [®] | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of | | | | | |
| | Maryland. License # <u>15613</u> Expiration Date: <u>11/26/24</u> | | | | | ASSISTANT CHIEF ENGINEE |

GENERAL SHEET NOTES

- 1. ALL WORK TO COMPLY WITH IBC 2018 REQUIREMENTS.
- 2. GENERAL CONTRACTOR TO COORDINATE ALL TRADES.
- 3. REFER TO A001 FOR ALL APPLICABLE GENERAL NOTES.
- 4. DIMENSIONS ON THIS SHEET DIMENSIONS ARE TO CENTER LINE OF WALL, UNO.
- ALL EXPOSED EXTERIOR WOOD TO BE PRESSURE TREATED AND RECEIVE SEMI-TRANSPARENT STAIN FINISH, TYPICAL.
- PROVIDE IN-WALL BLOCKING FOR ALL WALL-HUNG PLUMBING FIXTURES, BATHROOM PARTITIONS, BATHROOM ACCESSORIES, CASEWORK, AND MECHANICAL EQUIPMENT.

EXTERIOR

SHEATHING, REFER TO STRUCT. DWGS. FOR DETAILS HIGH EFFICIENCY DRAINAGE WRAP (>90% EFFICIENCY) (CONTINUOUS)-----3/4" RIGID INSULATION SHEATHING (R-5 MIN CI)-8" ROUND CONC. WOOD LOOK LOG SIDING

2" X 6" WOOD STUD FRAMING @16" O.C. —(1) LAYER OF 5/8" FIRECODE GYPSUM PANELS EA. SIDE PAINTED, JOINTS FIN. ——5 1/2" BATT INSUL. (R-20 MIN)

INTERIOR

G EXTERIOR WALL ASSEMBLY

| ANNE ARUNDEL COUNTY | | | | | |
|----------------------------|---------------------|-----------------------|----------------------------------|--|--|
| DEPARTMENT OF PUBLIC WORKS | | | | | |
| DATE | APPROVED DATE | SCALE: | JUG BAY EDUCATION, RESEARCH, AND | | |
| | | DRAWN BY: A.D.M. | DISCOVERY FIELD STATION | | |
| | PROJECT MANAGER | CHECKED BY: B.F. | BATHHOUSE PLAN | | |
| DATE | APPROVED DATE | SHEET NO. 39 OF 63 | | | |
| | | PROJECT NO.: P584501 | 1001 | | |
| R | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | AZUT | | |
| | | | © WBCM 2023 | | |

| 1. | LAUNDRY |
|----|---------|
| 2. | MECHANI |
| 3. | PLUMBIN |
| 1 | |

| | | | REVISIONS | | | |
|--|--|-----|-------------|----|------|--------------------------|
| ANI, LLC / WBCM, LLC | | NO. | DESCRIPTION | BY | DATE | |
| Joppa Road Suite 200 Baltimore, MD 21286 4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| | | | | | | APPROVED |
| Tomorrow [®] | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of | | | | | |
| | Maryland. License # <u>15613</u> Expiration Date: <u>11/26/24</u> | | | | | ASSISTANT CHIEF ENGINEER |

GENERAL SHEET NOTES

- 1. REFER TO G SERIES FOR ARCHITECTURAL GENERAL NOTES
- 2. FOR EXIT & EMERGENCY LIGHTING REFER TO ELECTRICAL DRAWINGS & SPECIFICATIONS
- 3. FOR SWITCHING & WIRING REFER TO ELECTRICAL DRAWINGS & SPECIFICATIONS
- 4. FIRE ALARM SYSTEM SHALL BE COORDINATED ON THE ELECTRICAL DRAWINGS & SPECIFICATIONS
- 5. GYPSUM BOARD CEILINGS AND WALLS TO BE MOISTURE RESISTANT IN ALL TOILET ROOMS AND LAUNDRY ROOMS.
- 6. REFER TO FINISH SCHEDULE FOR ALL CEILING HEIGHT INFORMATION
- 7. LIGHT FIXTURES REFER TO ELECTRICAL DRAWINGS FOR EXACT LOCATIONS & VERIFICATION OF FIXTURE QUANTITIES
- 8. ALL EXPOSED ELECTRICAL CONDUIT, PIPING, WIRING, AND HVAC EQUIPMENT SHALL BE LOCATED TO MINIMIZE VISIBILITY IN AREAS EXPOSED TO STRUCTURE OR EXPOSED MASONRY WALLS. RUN CONDUIT, PIPE AND WIRING ADJACENT TO COLUMNS VERTICALLY AND BEAMS HORIZONTALLY. MINIMIZE EXPOSURE TO THE GREATEST EXTENT POSSIBLE. PAINT ALL EXPOSED MATERIALS TO MATCH SUBSTRATE FOR ALL EXPOSED CONDUIT ALONG WALLS RUN IN DIRECTION TO MINIMIZE EXPOSURE
- 9. FOR MOUNTING HEIGHTS OF LIGHT FIXTURES REFER TO ELECTRICAL DRAWINGS.
- 10. ACCESS PANEL LOCATIONS TO BE PROVIDED BY CONTRACTOR TO ARCHITECT FOR APPROVAL.

| CEILING LEGEND | | | | | |
|----------------|--|--|--|--|--|
| 0 | INSTALL RECESSED DOWNLIGHT IN CEILING SYSTEM. EXTERIOR DOWNLIGHTS TO BE WEATHER PROOF. REFER TO ELEC. DWGS. | | | | |
| | 1 HR RATED WALL CONSTRUCTION | | | | |
| | GYPSUM BOARD CEILING, FINISH JOINTS, PAINTED FINISH | | | | |
| | PROVIDE 1HR FIRE RATED CEILING ASSEMBLY, REFER TO 5/202 | | | | |

-1" SHEETROCK BRAND GYP. LINER PANEL

| ANNE ARUNDEL COUNTY | | | | | |
|---------------------|---------------------|-----------------------|----------------------------------|--|--|
| | DEPARTMENT OF | PUBLIC WORKS | | | |
| DATE | APPROVED DATE | SCALE: | JUG BAY EDUCATION, RESEARCH, AND | | |
| | | DRAWN BY: A.D.M. | DISCOVERY FIELD STATION | | |
| | PROJECT MANAGER | CHECKED BY: B.F. | BATHHOUSE ROOF PLAN AND | | |
| DATE | APPROVED DATE | SHEET NO. 40 OF 63 | REFLECTED CEILING PLAN | | |
| | | PROJECT NO.: P584501 | 1000 | | |
| R | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | AZUZ | | |
| | | | © WBCM 2023 | | |

| 12 | | | | | | 5 BA A203 A203 SCALE: |
|--|--|-----|-------------|----|------|--------------------------|
| | | | REVISIONS | | | |
| GNANI, LLC / WBCM, LLC | | NO. | DESCRIPTION | BY | DATE | _ |
| ast Joppa Road Suite 200 Baltimore, MD 21286 i12.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | _ |
| | | | | | | |
| •••• | | | | | | APPROVED |
| or Tomorrow [®] | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of | | | | | |
| | Maryland. License # <u>15613</u> Expiration Date: <u>11/26/24</u> | | | | | ASSISTANT CHIEF ENGINEER |

[©] WBCM 2023

| i noroby contry that thece accuments there propa |
|--|
| approved by me, and that I am a duly licensed |
| professional architect under the laws of the State |
| Maryland. |
| License # 15613 Expiration Date: 11/26/24 |

CHIEF, RIGHT-OF-WAY

[©] WBCM 2023

| DATE | APPROVED DATE | SCALE: | JUG BAY EDUCATION, RESEARCH, AND |
|------|---------------------|-----------------------|----------------------------------|
| | | DRAWN BY: A.D.M. | DISCOVERY FIELD STATION |
| | PROJECT MANAGER | CHECKED BY: B.F. | BATHHOUSE INTERIOR |
| DATE | APPROVED DATE | SHEET NO. 43 OF 63 | ΕΙ Ε\/ΔΤΙΟΝS |
| | | PROJECT NO.: P584501 | |
| २ | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | A205 |
| | | | © WBCM 2023 |

| | | | | | | | | | F | INIS | H SCH | IE | DULE | | | | | | |
|------------------|-----------|-------|--------------|------------|-------|-----------|----------|--------|------------|----------|---------------------|-----|------------------|------------|-------|-------|-----|---|--|
| ROOM | | F | | ME | | FLOOR | B | ASE | | V | WALLS | | | CE | ILING | TRI | м | | REMARKS |
| NO. | | • | | | | 1 2001 | | | NORTH | SOUT | H EAS | т | WEST | MATL. | HT. | | v | | |
| 101 | | W | DMAN'S GANG | TOILET | | P-3 | E | WB-1 | P-2 | P-2 | PT-1/P | T-2 | P-2 | P-1 | 8'-6" | NA | | | |
| 102 | | | TOILET | | | P-3 | E | WB-1 | P-2 | P-2 | PT-1/P | T-2 | P-2 | P-1 | 8'-6" | NA | | ę | SHOWERS WALLS TO HAVE TILE FINISH |
| 103 | | MEC | | TY ROOM | | P-3 | E' | WB-1 | P-2 | P-2 | P-2 | то | P-2 | P-1 | 8'-6" | NA NA | | | |
| 104 | | | | 1 | | P-3 | E | WB-1 | P-2 | P-2 | P-2 | 1-2 | P-2 | P-1 | 8'-6" | NA | | | SHOWERS WALLS TO HAVE THE FINISH |
| 106 | | (| DUTDOOR SHC | WER | | S-1 | | - | - | - | - | | - | - | - | - | | | |
| 107 | | (| OUTDOOR SHO | WER | | S-1 | | - | - | - | - | | - | - | - | - | | | |
| 108 | | | FAMILY TOIL | ET | | P-3 | E | WB-1 | P-2 | P-2 | P-2 | | PT-1/PT-2 | P-1 | 8'-6" | NA | | Ş | SHOWERS WALLS TO HAVE TILE FINISH |
| 109 | | | H.C. TOILE | Т | | P-3 | E | WB-1 | P-2 | P-2 | P-2 | | PT-1/PT-2 | P-1 | 8'-6" | NA | | Ş | SHOWERS WALLS TO HAVE TILE FINISH |
| 110 | | | H.C. TOILE | | | P-3 | E | WB-1 | P-2 | P-2 | P-2 | | PT-1/PT-2 | P-1 | 8'-6" | NA | | | SHOWERS WALLS TO HAVE TILE FINISH |
| 111 | | N | | JILET M | | P-3 | E | WB-1 | P-2 | P-2 | P-2 | | P1-1/P1-2 P-1 | P-1 P-1 | 8'-6" | | | | |
| 112 | | | | | | 10 | | F | INISH | MAI | FRIA | | SCHEI | | 0.0 | | | | |
| FINISH | FINI | SH | | | | | | • | | 1017 () | MATE | | | | | | | | |
| NO. | LOCA | TION | FINI | SH NAN | ΛE | MAN | UF. | | STYLE | | COLOF | R | FIN | NISH | CONTE | NT | SIZ | ΖE | REMARKS |
| S-1 | FLO | OR | SEALED CON | CRETE | | - | | | - | | - | | | - | - | | - | BROOM | ED FINISH ON EXTERIOR |
| PT-1 | WA | LL | PORCELAIN T | ILE | | DALT | ILE | | EMERSON | | HICKORY PE EP05 | CAN | | - | - | | 6X4 | PROVIDI 48 ENDS AT BRICK A | E MATCHING JOLLYS/TILE ACCESSORIES WHEN TILE I WALL CORNERS OR IN MIDDLE OF WALL, VERTICAL SHLAR PATTERN |
| PT-2 | WA | LL | PORCELAIN T | ILE | | DALT | ILE | | BRYNE | | MIST BR3 | 1 | | - | - | | 12X | 24 PROVIDI 24 ENDS AT STACKE | E MATCHING JOLLYS/TILE ACCESSORIES WHEN TILE I WALL CORNERS OR IN MIDDLE OF WALL. HORIZONTAL D BOND PATTERN. |
| P-1 | CEIL | ING | PAINT, STANE | DARD WALL | PAINT | SHERWIN V | VILLIAMS | | - | | MARSHMALL SW7002 | .OW | MA | ATTE | - | | - | FLAT FIN | NISH FOR CEILING PAINT |
| P-2 | WA | LL | EPOXY PAINT | COATING | | SHERWIN V | VILLIAMS | | - | | - | | | - | - | | - | ARCHITE | ECT TO SELECT FROM FULL RANGE OF COLORS |
| P-3 | FLO | OR | EPOXY FLOO | R | | SHERWIN | WILLIAMS | FASTOP | DECO QUART | TZ SL45 | - | | | - | - | | - | ARCHITECT TO SELECT FROM FULL RANGE OF COLORS | |
| EWB-1 | BAS | SE | EPOXY WALL | BASE | | SHERWIN V | VILLIAMS | FASTOP | DECO QUART | TZ SL45 | - | | | - | - | | 4' | REFER 1 | TO DETAIL 3/A206 |
| SS-1 | CASEV | VORK | SOLID SURFA | CE | | DEKT | ON | | - | | - | | | - | - | | - | PROVIDI FULL RA STONEC | E ON OUTDOOR SINK , ARCHITECT TO SELECT FROM NGE OF DEKTON ENGINEERED COLORS/FINISHES |
| SS-2 | CASEV | VORK | SOLID SURFA | КЕ | | CORI | AN | | - | | - | | | - | - | | - | PROVIDI FROM F | E ON ADULT CHANGING TABLE, ARCHITECT TO SELECT ULL RANGE OF COLORS/FINISHES |
| | | | | | | | | | | DOOF | R SCH | IEC | OULE | | | | | | |
| | | | | | D | OOR | - | | | | FRA | AME | | | | ╒╟ | HA | RDWARE | |
| ROOM | NAME | | R | DOORS | SIZE | | | | | ELE\ | / GLAZ | | FRAME [| DETAIL | RATI | NG S | ЕΤ | KEY SIDE | REMARKS |
| | | | W. | н. | ТНК | | ELEV. | GLAZ. | MAIL. | . | | HE. | AD JAN | /IB SIL | | EL | 0. | ROOM NO. | |
| WOMEN'S TOILE | GANG T | 101- | 1 3'-0" | 6'-8" | - | FG | A | - | H.M. | 1 | - | | | | | | - | | PROVIDE LOUVER ABOVE DOOR |
| TOILET | 102 | 102- | 1 3'-0" | 6'-8" | - | FG | A | - | H.M. | 1 | - | | | | | | - | | PROVIDE LOUVER ABOVE DOOR |
| MECH/UTILI1 | IY ROOM | 103- | 1 3'-0" | 6'-8" | | FG | В | - | H.M. | 1 | - | | | | | | - | | PROVIDE LOUVER AND INSUIL. BLANK OFF PANEL ABOVE DOOR |
| H.C. TO | ILET | 104- | 1 3'-0" | 6'-8" | - | FG | A | - | H.M. | 1 | - | | | | | | - | | PROVIDE LOUVER ABOVE DOOR |
| LAUND | IRY | 105- | 1 3'-0" | 6'-8" | - | FG | A | - | H.M. | 1 | - | | | | | | - | | PROVIDE LOUVER ABOVE DOOR |
| FAMILY T | OILET | 108-1 | 1 3'-0" | 6'-8" | - | FG | A | - | H.M. | 1 | - | | | | | | - | | PROVIDE LOUVER ABOVE DOOR |
| H.C. TO | ILET | 109- | 1 3'-0" | 6'-8" | - | FG | A | - | H.M. | 1 | - | | | | | | - | | PROVIDE LOUVER ABOVE DOOR |
| H.C. TO | ILET | 110- | I 3'-0" | 6'-8" | - | FG | A | - | H.M. | 1 | - | | | | | | - | | PROVIDE LOUVER ABOVE DOOR |
| MEN'S GANC | G TOILET | 111- | 1 3'-0" | 6'-8" | - | FG | A | - | H.M. | 1 | - | | | | | | - | | PROVIDE LOUVER ABOVE DOOR |
| ELEC. R | ООМ | 112- | 1 3'-0" | 6'-8" | - | FG | В | - | H.M. | 1 | - | | | | | | - | | PROVIDE LOUVER AND INSUIL. BLANK OFF PANEL ABOVE DOOR |

DOOR NOTES

GENERAL DOOR NOTES:

1. ALL DOORS TO HAVE LEVER TYPE DOOR HANDLES UNO IN DRAWINGS OR

SPECS. 2. ALL DOORS WHERE OPEN PARALLEL TO WALL TO HAVE WALL MOUNTED

- DOOR STOPS.
- 3. REFER TO SPECIFICATIONS FOR HARDWARE SET INFORMATION.
- 4. ALL DOORS TO HAVE MATTE BLACK HARDWARE, UNO. 5. ALL EXTERIOR FG DOORS TO HAVE MANUFACTURER PREFINISHED PAINT
- OR STAIN, ARCHITECT TO SELECT FROM ALL MANUF. FINISHES.
- 6. FG = FIBERGLASS
- 7. CM = COMPOSITE MATERIAL
- 8. ALL DOORS TO HAVE LOW PROFILE ADA ACCESSIBLE SILLS
- 9. HM = HOLLOW METAL
- 10. REFER TO SPECIFICATIONS FOR ALL HARDWARE

(A)WOOD LOOK FIBERGLASS DOOR BASIS OF DESIGN: PELLA Craftsman Fiberglass Entry Door w/ view lite, simulated divided lite and spacers and low-e obscure glass: See specifications for additional info.

В WOOD LOOK

CAUTION: IF THIS DRAWING IS A REDUCTION, USE THE GRAPHIC SCALES. 1/4"=1'-0 3"=1'-0"

FIBERGLASS DOOR

| SOLID SURFACE COUNTER TOP W/ INTEGRAL BOWL O 1" MARINE GRADE, STRUCTURAL PLYWOOD- | R DN | | ł | | |
|--|---------|----------------------|---|---|--|
| 2X4 PT. WOOD LINTEL | د | | | | |
| PERFORMED DRAINAGE SUPPLY INSULATION | 2'-10" | | | | |
| 5X5 TIMBER POST | | | | + | |
| MAINTAIN REQUIRED ADA CLEARANCE SPACE BENEATH VANITY | | | | | |

| 2 DOOR F 06 A206 SCALE: 1/4"=1'-0" | RAME ELEVATIONS | | 5 A206 A206 SCALE: 3/4"=1'-0" | ION | 7 A206 A206 | CASEWORK SCALE: 3/4"=1'-0" |
|--|--|-----|----------------------------------|-----|----------------|-------------------------------|
| | | | REVISIONS | | | |
| GNANI, LLC / WBCM, LLC | | NO. | DESCRIPTION | BY | DATE | _ |
| ast Joppa Road Suite 200 Baltimore, MD 21286 512.4500 www.wbcm.com | | | | | | _ APPROVED |
| | | | | | | CHIEF ENGINEER |
| | | | | | | APPROVED |
| or Tomorrow [®] | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of | | | | | |
| | Maryland. License # <u>15613</u> Expiration Date: <u>11/26/24</u> | | | | | ASSISTANT CHIEF ENGINEE |

FINISH NOTES

1. CONTRACTOR SHALL PROPERLY PREPARE SURFACES FOR FINISH MANUFACTURER'S SPECIFICATIONS PRIOR TO APPLICATION OF FINISH. ALL FINISHES AND ADJOINING SURFACES SHALL REMAIN FREE OF GLUE, PLASTER AND PAINT EXCESS.

GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION BETWEEN TRADES TO INSURE PROPER INSTALLATION OF FLOOR FINISH FOR COLORS AND FINISH QUALITIES.

3. PAINTER SHALL USE PRIMER COMPATIBLE WITH SUBSTRATE TO BE PAINTED AND WILL PROVIDE FINAL FINISH COAT AS RECOMMENDED BY MANUFACTURER. TINT PRIME COAT TOWARD FINAL COLOR. SEALER/PRIMER SHALL BE ROLLER APPLIED TO GYPSUM BOARD. SPRAY APPLICATION IS NOT ACCEPTABLE.

4. EXPOSED CONCRETE PATIO FLOOR TO BE THOROUGHLY CLEANED, REMOVE ALL STAINS, GRIND PATCHES SMOOTH & BLEND TO CONCRETE TO GREATEST DEGREE POSSIBLE. PRIME WITH CURING COMPOUND & SEAL WITH COMPATIBLE SEALER.

5. ALL EXPOSED CONDUIT, PIPING, POWER, UTILITY TO RECEIVE PAINT FINISH TO MATCH ADJACENT SURFACE FINISH.

6. ALL EXPOSED CONDUIT, PIPE, WIRING & HVAC EQUIPMENT SHALL BE LOCATED TO MINIMIZE ITS VISIBILITY. RUN CONDUIT, PIPE & WIRING ADJACENT TO COLUMNS VERTICALLY & ROOF BEAMS HORIZONTALLY. MINIMIZE EXPOSURE, PLACE ABOVE CEILING TO THE GREATEST EXTENT POSSIBLE. PAINT ALL EXPOSED MATERIALS TO MATCH SUBSTRATE FOR ALL EXPOSED CONDUIT ALONG WALLS RUN IN DIRECTION TO MINIMIZE EXPOSURE.

7. PAINT SHEEN SHALL BE AS FOLLOWS:

A. SHEEN AT PAINTED GYPSUM BOARD WALL TO BE PAINTED EGGSHELL, U.N.O. B. SEMI GLOSS FINISH - WINDOW FRAMES, WINDOW TRIM, DOOR TRIM.

ADULT CHANGING TABLE SECTION SCALE: 3/4"=1'-0"

K SECTION

| | ANNE ARUNDEL COUNTY | | | | | | | | | | | |
|----------------------------|---------------------|-----------------------|----------------------------------|--|--|--|--|--|--|--|--|--|
| DEPARTMENT OF PUBLIC WORKS | | | | | | | | | | | | |
| DATE | APPROVED DATE | SCALE: | JUG BAY EDUCATION, RESEARCH, AND | | | | | | | | | |
| | | DRAWN BY: A.D.M. | DISCOVERY FIELD STATION | | | | | | | | | |
| | PROJECT MANAGER | CHECKED BY: B.F. | BATHHOUSE SCHEDULES | | | | | | | | | |
| DATE | APPROVED DATE | SHEET NO. 44 OF 63 | AND DETAILS | | | | | | | | | |
| | | PROJECT NO.: P584501 | | | | | | | | | | |
| ER | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | AZUO | | | | | | | | | |
| | | | © WBCM 2023 | | | | | | | | | |

| | | | REVISIONS | | | |
|--|--|-----|-------------|----|------|--------------------------|
| GNANI, LLC / WBCM, LLC | | NO. | DESCRIPTION | BY | DATE | |
| st Joppa Road Suite 200 Baltimore, MD 21286 12.4500 www.wbcm.com | | | | | | APPROVED |
| CM | | | | | | CHIEF ENGINEER |
| | | | | | | APPROVED |
| r Tomorrow [®] | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of | | | | | |
| | Maryland. License # <u>15613</u> Expiration Date: <u>11/26/24</u> | | | | | ASSISTANT CHIEF ENGINEER |

| | | | BID SET | | | | | | | | | |
|------|----------------------------|-----------------------|----------------------------------|--|--|--|--|--|--|--|--|--|
| | ANNE ARUND | EL COUNTY | | | | | | | | | | |
| | DEPARTMENT OF PUBLIC WORKS | | | | | | | | | | | |
| DATE | APPROVED DATE | SCALE: | JUG BAY EDUCATION, RESEARCH, AND | | | | | | | | | |
| | | DRAWN BY: A.D.M. | DISCOVERY FIELD STATION | | | | | | | | | |
| | PROJECT MANAGER | CHECKED BY: B.F. | SIGNAGE DETAILS | | | | | | | | | |
| DATE | APPROVED DATE | SHEET NO. 45 OF 63 | | | | | | | | | | |
| | | PROJECT NO.: P584501 | A 0 0 7 | | | | | | | | | |
| | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | A207 | | | | | | | | | |
| | | | (C) WBCM 2023 | | | | | | | | | |

GENERAL SHEET NOTES

- 1. ALL WORK TO COMPLY WITH IBC 2018 REQUIREMENTS.
- 2. GENERAL CONTRACTOR TO COORDINATE ALL TRADES.
- 3. REFER TO A001 FOR ALL APPLICABLE GENERAL NOTES
- 4. ALL ROOM SIGNAGE TO BE PRE-FINISHED MATTE BLACK METAL W/ WOOD LOOK BACKGROUND. SIGNS TO BE STUD MOUNTED W/ PRE-FINISHED BLACK PROJECTED SPACER AND JAMB NUT.
- 5. TYPE FACE TO BE ARIAL NARROW, TYP.

EXTERIOR SIGNAGE SCHEDULE

| ROOM NO. | TEXT | SIGN TYPE |
|----------|--------------------------------|------------------|
| 101 | WOMEN BRAILLE | A/207 |
| 102 | RESTROOM BRAILLE | B/A207 |
| 103 | UTILITY ROOM BRAILLE | C/A207 |
| 104 | RESTROOM BRAILLE | D/A207 |
| 105 | LAUNDRY ROOM BRAILLE | E/A207 |
| 108 | FAMILY RESTROOM BRAILLE | F/A207 J/A207 |
| 109 | RESTROOM BRAILLE | D/A207 |
| 110 | RESTROOM BRAILLE | D/A207 |
| 111 | MEN BRAILLE | G/A207 |
| 112 | ELECTREICAL ROOM BRAILLE | H/A207 |

RAISED GRADE 2 BRAILLE MATERIAL: PRE-FINISHED METAL NOTE: FACE OF SIGN TO BE PRE-FINISHED BLACK

ADULT CHANGING TABLE SIGN

| | | | REVISIONS | | | |
|--|--|-----|-------------|----|------|------------------------|
| GNANI, LLC / WBCM, LLC | | NO. | DESCRIPTION | BY | DATE | _ |
| Baltimore, MD 21286 i12.4500 www.wbcm.com | | | | | | APPROVED |
| CM | | | | | | |
| or Tomorrow [®] | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of | | | | | APPROVED |
| | Maryland. License # <u>15613</u> Expiration Date: <u>11/26/24</u> | | | | | ASSISTANT CHIEF ENGINE |

___GUTTER

BID SET

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS JUG BAY EDUCATION, RESEARCH, AND DISCOVERY FIELD STATION DATE APPROVED DATE SCALE: A.D.M. DRAWN BY: PRE-FABRICATED CHECKED BY: B.F. PROJECT MANAGER DATE APPROVED DATE SHEET NO. 46 OF 63 PAVILION DRAWINGS PROJECT NO .: P584501 A301 CHIEF, RIGHT-OF-WAY CONTRACT NO.: P584500

© WBCM 2023

ALL WORK OF THIS CONTRACT SHALL BE COMPLETED IN ACCORDANCE WITH THE 2018 INTERNATIONAL FIRE CODE AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION ON THE WORK OF THIS CONTRACT.

1. ALL WORK AND MATERIAL NOT SPECIFICALLY DESCRIBED, BUT REQUIRED FOR A COMPLETE AND PROPER INSTALLATION OF THE FIRE PROTECTION SYSTEMS SHALL BE PROVIDED BY THE FIRE PROTECTION SPRINKLER CONTRACTOR AND SHALL BE NEW, AND FIRST QUALITY OF THEIR RESPECTIVE KINDS, AND SUBJECT TO THE APPROVAL BY THE ARCHITECT/ENGINEER AND ALL AUTHORITIES HAVING JURISDICTION.

2. NOTE: ALL MATERIAL FOR THE COMPLETE FIRE PROTECTION SYSTEM MUST BE U/L, F.M. AND APPROVED TYPE. WHERE, DUE TO UNION REGULATIONS OR TRADE AGREEMENTS, ANY OF THE WORK SHOWN ON THE DRAWINGS OR DESCRIBED IN SPECIFICATIONS IS NOT CONSIDERED THE FIRE PROTECTION CONTRACTOR'S WORK, THE FIRE PROTECTION CONTRACTOR SHALL SUBCONTRACT THIS WORK IN QUESTION, BUT THE FIRE PROTECTION CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE COMPLETE INSTALLATION.

- 3. DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE FULLY COOPERATIVE AND TO AGREE, BUT SHOULD ANY DISCREPANCY OR APPARENT DIFFERENCES OCCUR BETWEEN THE DRAWINGS AND SPECIFICATIONS OR SHOULD OCCUR IN THE WORK OF OTHERS AFFECTING THE WORK, THE FIRE PROTECTION SYSTEMS, THE F.P. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER AT ONCE. IF THE FIRE PROTECTION CONTRACTOR PROCEEDS WITH THE AFFECTED WORK WITHOUT INSTRUCTIONS FROM THE ARCHITECT/ENGINEER, HE SHALL MAKE GOOD FOR ANY RESULTANT DAMAGE, DEFECT OR VIOLATIONS OF THE APPLICABLE FIRE PROTECTION CODES AT HIS OWN EXPENSE. ALL MISUNDERSTANDINGS OF DRAWINGS AND SPECIFICATIONS SHALL BE CLARIFIED BY THE ARCHITECT/ENGINEER.
- 4. ANY AND ALL SPRINKLER HEADS PLACED IN LOCATION WHERE THEY ARE LIABLE TO BE ACCIDENTALLY DAMAGED IN THE NORMAL COURSE OF EVENTS SHALL BE PROVIDED WITH HEAVY WIRE GUARDS.
- 5. SPRINKLER HEADS, IN GENERAL, SHALL HAVE ORDINARY DEGREE TEMPERATURE RATING, UNLESS OTHERWISE NOTED. ALL HEADS SUBJECT TO ABNORMAL CONDITIONS, AS THOSE IN VICINITY OF HEATING UNITS, BOILERS, OR VERY CLOSE TO HOT PIPING, SHALL BE OF SUFFICIENTLY HIGH TEMPERATURE RATING BASED ON NFPA #13 REQUIREMENTS TO PREVENT THEIR ACCIDENTAL DISCHARGE WHEN NO FIRE IS PRESENT. COORDINATE LOCATION OF ALL THE ABOVE MENTIONED EQUIPMENT WITH HVAC CONTRACTOR AND INDICATE ON THE SHOP DRAWINGS PRIOR TO SUBMITTAL.
- 6. SPRINKLER HEADS IN ALL AREAS ARE TO BE INSTALLED IN THE CENTER OF THE TILE, AND CENTERED WITH LIGHTS, DIFFUSERS OR SIMILAR ELEMENTS AS INDICATED ON ARCHITECTURAL REFLECTED CEILING DRAWINGS. SPRINKLER HEADS SHALL ALSO BE INSTALLED ON A TRUE AXIS LINE IN BOTH DIRECTIONS WITH A TOLERANCE OF +/- 1/2". AT THE COMPLETION OF THE INSTALLATION, IF ANY SPRINKLER HEADS ARE FOUND TO EXCEED THE ABOVE SPECIFIED TOLERANCES, THE FIRE PROTECTION CONTRACTOR SHALL RELOCATE ALL SPRINKLER HEADS THAT ARE NOT INSTALLED PROPERLY. ANY ADJOINING WORK OF ANOTHER TRADE THAT MAY BE DISTURBED IN RELOCATING MISALIGNED SPRINKLER HEADS SHALL BE REPAIRED AT NO COST TO THE OWNER.
- 7. PIPING AND FITTINGS SHALL BE ERECTED SO THAT THE ENTIRE SYSTEM MAY BE THOROUGHLY DRAINED. ON DRY-PIPE SYSTEMS, BRANCH LINES SHALL BE PITCHED 1/2" IN 10'; CROSS AND FEED MAINS SHALL BE PITCHED 1/4" IN 10' MINIMUM. ALL FIRE PROTECTION SYSTEMS DRAIN LINES MUST BE PIPED TO A SAFE LOCATION BY THE FIRE PROTECTION CONTRACTOR. FOR EXACT LOCATIONS OF ALL DRAINAGE RECEPTACLES SUCH AS FLOOR DRAINS, SPRINKLER FUNNEL DRAINS, SUMP PITS, ETC. BY THE PLUMBING CONTRACTOR, COORDINATE WITH PLUMBING DRAWING.
- 8. INSTALL O.S.&Y. TYPE GATE VALVES AND OTHER TYPES OF VALVES IN HORIZONTAL POSITION (WITH STEMS POINTED UP OR IN VERTICAL POSITION) WHERE POSSIBLE, BUT IN NO CASE WITH STEMS POINTED DOWNWARD.
- 9. INSTALLATION OF CHECK VALVES:
 - A. SWING CHECK VALVES: INSTALL IN HORIZONTAL POSITION WITH HINGE PIN LOCATED ON THE UPSIDE OF THE PIPE AND PERPENDICULAR TO THE PIPE'S CENTERLINE.
 - B. WAFER CHECK VALVES: INSTALL BETWEEN 2 FLANGES IN HORIZONTAL OR VERTICAL POSITION.
- ALL FIRE PROTECTION SYSTEMS SHALL BE TESTED IN THE PRESENCE OF THE ARCHITECT/ENGINEER OR THEIR REPRESENTATIVES, THE OWNER OR HIS REPRESENTATIVES AND THE LOCAL AUTHORITIES HAVING JURISDICTION OF THE WORK TO BE TESTED, AS MAY BE DIRECTED. AT LEAST 72 HOURS NOTICE SHALL BE GIVEN IN ADVANCE TO ALL PARTIES CONCERNED OF ALL TESTS.
- A. THE WORK OF THIS CONTRACTOR SHALL INCLUDE THE FURNISHING OF ALL TESTING INSTRUMENTS, GAUGES, PUMPS AND OTHER EQUIPMENT REQUIRED OR NECESSARY FOR TESTS, REQUIRED BY LAWS, RULES AND REGULATIONS AND AS SPECIFIED.
- B. PROVIDE ALL ADDITIONAL TESTS REQUIRED BY LOCAL INSPECTORS AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
- C. ALL DEFECTS DISCLOSED IN THE WORK BY TESTS AND OTHERWISE, SHALL BE MADE GOOD (BY THE FIRE PROTECTION CONTRACTOR) OR THE WORK REPLACED WITHOUT ADDITIONAL COST TO THE OWNER. NO CAULKING OR PATCHING OF SCREWED JOINTS, CRACKS OR HOLES IN PIPING SYSTEM WILL NOT BE ACCEPTABLE.
- 11. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT AND LOCATION OF EQUIPMENT, PIPING, ETC. THE FIRE PROTECTION CONTRACTOR SHALL MAKE ALL REQUIRED MODIFICATIONS IN THE LAYOUT WORK THAT MAY BE REQUIRED TO SUIT ACTUAL JOB CONDITIONS WITHOUT EXTRA COMPENSATION.
- 12. THE FIRE PROTECTION CONTRACTOR SHALL ASCERTAIN THAT ALL HIS EQUIPMENT, SUCH AS VALVES, ETC. IS MADE EASILY ACCESSIBLE FOR OPERATION AND MAINTENANCE, AS MAY BE NECESSARY TO BE REACHED FROM TIME TO TIME FOR OPERATION AND MAINTENANCE.

- 13. BEFORE STARTING ANY WORK, THE FIRE PROTECTION CONTRACTOR SHALL CONSULT THE ARCHITECT'S DETAILED DRAWINGS AND STRUCTURAL DRAWINGS FOR SPACES AND HEADROOM ALLOWED FOR THE INSTALLATION OF ALL PIPING, EQUIPMENT, ETC. SHOULD ANY PIPING OR EQUIPMENT REQUIRE MORE SPACE THAN ALLOWED FOR, OR ENCROACH UPON SUSPENDED CEILINGS OR AVAILABLE HEADROOM AS PLANNED, THE FIRE PROTECTION CONTRACTOR SHALL CALL THE ARCHITECT'S/ ENGINEER'S ATTENTION TO SAME AND OBTAIN HIS APPROVAL BEFORE INSTALLING THE WORK.
- REDUCING TYPE COUPLING SIMILAR TO "VICTAULIC" (OR APPROVED EQUAL) FIG. No. 750 AND FITTING STYLES FIG. 921 AND 925 WILL NOT BE PERMITTED.
- 15. FITTINGS AND COUPLINGS FOR PLAIN END PIPE SIMILAR TO "VICTAULIC" (OR OTHER APPROVED EQUAL) FIT TYPE FITTINGS AND <u>"ROUST-ABOUT</u>" AND <u>"PLAINLOCK</u>" COUPLINGS WILL NOT BE PERMITTED.
- 16. THE FIRE PROTECTION CONTRACTOR SHALL PROVIDE ALL NECESSARY STRUCTURAL MEMBERS, HANGERS AND SUPPORTS OF APPROVED DESIGN TO KEEP PIPING IN PROPER ALIGNMENT AND PREVENT TRANSMISSION OF INJURIOUS THRUSTS AND VIBRATIONS. IN ALL CASES, WHERE HANGERS, BRACKETS, ETC. ARE SUPPORTED FROM CONCRETE CONSTRUCTION, CARE SHALL BE TAKEN NOT TO WEAKEN CONCRETE OR PENETRATE WATERPROOFING. ALL HANGERS AND SUPPORTS SHALL BE CAPABLE OF SCREW ADJUSTMENT AFTER PIPING IS ERECTED. HANGERS SUPPORTING PIPING EXPANDING INTO LOOPS, BENDS AND OFFSETS SHALL BE SECURED TO THE BUILDING STRUCTURE IN SUCH A MANNER THAT HORIZONTAL ADJUSTMENT PERPENDICULAR TO THE RUN OF PIPING SUPPORTED MAY BE MADE TO ACCOMMODATE DISPLACEMENT DUE TO EXPANSION. ALL SUCH HANGERS SHALL BE FINALLY ADJUSTED, BOTH IN THE VERTICAL AND HORIZONTAL DIRECTION.
 - A. PIPING SHALL NOT BE SUPPORTED FROM METAL DECKING.
 - B. TRAPEZE TYPE HANGERS, IF REQUIRED, SHALL BE MADE UP OF ANGLES OR CHANNELS BOLTED BACK-TO-BACK FOR SUPPORTING PARALLEL LINES OF PIPING. TRAPEZE TYPE HANGERS SHALL BE SUPPORTED WITH SUSPENSION RODS HAVING DOUBLE NUTS SECURELY ATTACHED TO CONSTRUCTION WITH INSERTS, BEAM CLAMPS, STEEL FISH PLATES, CANTILEVER BRACKETS, LAG SCREWS OR OTHER APPROVED MEANS. USE APPROVED TYPE BRACKETS FOR SUPPORTING PIPING ATTACHED ALONG WALLS. FIRE PROTECTION PIPING SUPPORTED BY TRAPEZE HANGERS SHALL BE PROVIDED WITH HOLD DOWN CLAMPS.
 - C. PROVIDE NECESSARY LONGITUDINAL AND LATERAL SWAY BRACING FOR FEED AND CROSS MAINS. INDICATE LOCATION OF THE BRACES ON THE SHOP DRAWINGS. SUBMIT ALL DETAILS FOR SEISMIC HANGERS.
 - D. SUPPORTS FOR VERTICAL PIPING SHALL BE DOUBLE BOLT RISER CLAMPS, WITH EACH END HAVING EQUAL BEARING ON THE BUILDING STRUCTURE. CUT EXISTING RISERS AND PROVIDE FLEXIBLE COUPLING ON ALL RISERS 4" AND LARGER AS REQUIRED BY NFPA. PROVIDE FLEXIBLE COUPLINGS AT ALL OTHER OTHER LOCATIONS AS REQUIRED BY NFPA-13. USE 4-WAY SWAY BRACE TO SECURE TOP OF EACH RISER AGAINST DRIFTING IN ANY DIRECTION.
 - E. USE OF "C"-TYPE CLAMPS WITHOUT A RETAINING STRAP TO ATTACH HANGERS TO A BUILDING STRUCTURE IS PROHIBITED. USE OF "C"-TYPE CLAMPS WITH OR WITHOUT RETAINING STRAPS TO ATTACH BRACES TO THE BUILDING
 - F. THE ARCHITECT/ENGINEER MUST APPROVE METHOD OF SUPPORTING PIPES FROM BUILDING STRUCTURE BEFORE WORK IS STARTED. THIS CONTRACTOR SHALL BEAR ALL RESPONSIBILITY FOR MATERIALS AND WORKMANSHIP AS DESCRIBED IN THESE NOTES, AND SHALL MAKE SURE THAT ALL HANGERS AND SUPPORTS ARE PROPERLY AND PERMANENTLY CONNECTED TO THE BUILDING STRUCTURE.
- 17. WATERFLOW DETECTORS SHALL BE DESIGNED FOR MOUNTING ON EITHER VERTICAL OR HORIZONTAL PIPING, BUT SHALL NOT BE MOUNTED IN A FITTING OR WITHIN MINIMUM DISTANCE, AS DESCRIBED IN MANUFACTURER'S INSTALLATION RECOMMENDATIONS, OF ANY FITTING THAT CHANGES THE DIRECTION OF WATER FLOW.
- 18. RISER AND BRANCH ASSEMBLIES, INCLUDING TRIMMINGS, SHALL BE INSTALLED AT LOCATIONS AS DIRECTED. APPROVED TYPE DEVICES SHALL BE INSTALLED FOR THE AUTOMATIC ANNUNCIATION OF THE FLOW OF WATER. EACH WET PIPE ASSEMBLY AND ITS APPURTENANCES SHALL BE SO ARRANGED AND EQUIPPED IN AN APPROVED MANNER THAT THE TRANSMISSION OF ACCIDENTAL WATERFLOW ALARMS (DUE TO SURGES OR RELATED CONDITIONS) WILL POSITIVELY BE PREVENTED.
- 19. DIRECT CONNECTION FROM ANY DRAIN TO ANY COMPONENT OF THE SANITARY OR STORM DRAINAGE SYSTEM SHALL BE PROHIBITED.
- 20. SPRINKLER HEADS INSTALLED IN FITTINGS BEFORE PIPING IS ERECTED SHALL BE PROHIBITED.
 - A. TESTS ARE NOT PERMITTED TO BE MADE WITH AIR, EXCEPT WHEN SPECIFICALLY INDICATED, OR FOR DRY-PIPE SYSTEMS.
 - B. THIS CONTRACTOR SHALL PROVIDE ALL NECESSARY TEST PLUGS OR TEE FITTINGS DURING ERECTION OF PIPE SYSTEM
 - FOR THE PURPOSE OF PERFORMING SYSTEMS TESTING.
 C. ALL PIPING WHICH IS TO BE ENCLOSED IN PARTITIONS OR SUSPENDED CEILINGS SHALL BE TESTED AND MADE TIGHT WHEN DIRECTED BY THE CONSTRUCTION SUPERVISOR AND IN ADEQUATE TIME TO PERMIT THE INSTALLATION OF PARTITIONS AND CEILINGS. WHEN NECESSARY, THIS CONTRACTOR SHALL DRAIN THE PIPING AND/OR TAKE SUCH PRECAUTIONS AS REQUIRED TO PREVENT DAMAGE BY FREEZING.

(22029 Jug Bay Environmental Center Infrastructure\Mech\Draw\FP001_Gen_22029.dwg Nov 07, 2023 - 8:06am Plot By:

SYMBOLS AND ABBREVIATIONS

| w | WATER SUPPLY MAIN | ABD | AUTOMATIC BALL DRIP |
|---------------------|--|-----------------|------------------------------|
| " SP | SPRINKLER PIPING (SP.) | A D | ACCESS DOOR |
| | | AFF | ABOVE FINISHED FLOOR |
| | SPRINKLER DRAIN PIPING | ARCH | ARCHITECTURAL |
| → → → | DRAIN VALVE (D.V.) | CI G. | CFILING |
| | OS&Y GATE VALVE WITH TAMPER SWITCH | C.V. | CHECK VALVE |
| | WATERFLOW SWITCH | CONN | CONNECTION |
| | STDAINED | DN. | DOWN |
| | | DTL | DETAIL |
| \sim | GOIDE | EL. | ELEVATION |
| <u> </u> | PRESSURE GAUGE | EX,EXIST | EXISTING |
| <u>+</u> | WATERTIGHT SLEEVE (WTSLV) | F.D. FL. DR. | FLOOR DRAIN |
| **** | PIPING TO BE REMOVED, SERVICE AS NOTED | FUN. DR. | FUNNEL DRAIN |
| | UNION CONNECTION | G.V. | GATE VALVE |
| | DIELECTRIC FITTING | INV. | INVERT |
| | | N.A.S. | NO AUTOMATIC SPRINKLERS |
| | WET SPRINKLER SYSTEM - FLOOR CONTROL | N.I.C. | NOT IN CONTRACT |
| | VALVE ASSEMBLY IN CABINET | N.T.S. | NOT TO SCALE |
| FCVA-1 TFCVA-1 | | OS&Y | OUTSIDE SCREW & YOKE |
| | WET SPRINKLER SYSTEM - FLOOR CONTROL | PLBG. | PLUMBING |
| | VALVE ASSEMBLT WITHOUT CADINET | RCV | RISER CONTROL VALVE |
| $A \xrightarrow{B}$ | A – DENOTES DETAIL (D), SECT (S), | SLV | SLEEVE |
| \bigcirc | B – DENOTES DETAIL OR SECTION No. | T & D | TEST AND DRAIN CONNECTION |
| | C = DENOTES DRAWING IT IS ON | IOS | TOP OF SLAB |
| Ŭ | | | TAMPER SWITCH |
| (1) | HYDRAULIC CALCULATIONS REFERENCE POINT | | TAMPER SWITCH |
| м | METER ASSEMBLY | | |
| L RED | | | |
| | DAURFLUW FREVENIER ASSEMBLT | | |
| | | FUVA | FLOOR CONTROL VALVE ASSEMBLT |

| LEY COX & MAGNANI, LLC East Joppa Road Suite 200 Baltimore, MD 21286 | |
|--|--|
| | |
| or Tomorrow [®] | |

| | NO. | DESCRIPTION | ВҮ | DATE | |
|---|-----|-------------|----|------|--------------------------|
| | | | | | APPROVED |
| | | | | | |
| | | | | | |
| | | | | | CHIEF ENGINEER |
| | | | | | APPROVED |
| I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the | | | | | |
| License # <u>18795</u> Expiration Date: <u>08/06/24</u> | | | | | ASSISTANT CHIEF ENGINEEF |
| | | | | | |

REVISIONS

BID SET

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS APPROVED DATE SCALE: DATE N.T.S. JUG BAY EDUCATION, RESEARCH, AND DISCOVERY FIELD STATION DRAWN BY: M.T.D. **GENERAL NOTES, SYMBOLS** CHECKED BY: J.A.B. PROJECT MANAGER DATE APPROVED DATE AND ABBREVIATIONS SHEET NO. 47 OF 63 PROJECT NO.: P584501 FP001 CONTRACT NO.: P584500 CHIEF, RIGHT-OF-WAY C WBCM 2023

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

| SPRINKLER SYMBOL | |
|---------------------|--|
| • | |

NOTES:

-1--1-CONCEAL PIPING WITHIN BUILT-INS (TYP.) 1"ø –⁄ 1ľø 🔨 _1″Ø ¬∖⊟ ⊭∕ c <u>FP-1</u> 250 GALLON TANK TALCO HH2—200À OR - APPROVED EQUAL

TYPICAL ADA CABIN FLOOR PLAN - FIRE PROTECTION SCALE: 1/4"=1'-0"

TYPICAL CABIN FLOOR PLAN - FIRE PROTECTION

| | | Schedule of sprinkler h | HEADS | | | | | |
|-------------------------------------|------------------------|-------------------------|---|---------------|---------------------|--------------|----------------|-----|
| NUFACTURER & DEL No. | TYPE | LOCATION | FINISH & REMARKS | ʹκ' FACTOR | SP. HD. COVERAGE | MIN. FLOW | MIN. PRESS. | APF |
| ING MODEL 460 OR PROVED EQUAL | HORIZONTAL SIDEWALL | CABIN | COATED AS APPROVED BY THE ARCHITECT | 5.8 | | | | U |
| | | | | | | | | |

1. SPRINKLER HEADS SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.

2. ALL SPRINKLER HEAD FINISHES TO BE APPROVED BY ARCHITECT.

3. SPRINKLER HEADS MINIMUM FLOW & MINIMUM PRESSURE REQUIREMENTS TO BE BASED ON HYDRAULIC CALCULATIONS AND DESIGN DENSITIES (ALL TO BE PROVIDED AND CONFIRMED BY THE SPRINKLER CONTRACTOR).

| LEY COX & MAGNANI, LLC | | NO. | DESCRIPTION | BY | DATE | |
|--|--|-----|-------------|----|------|-------------------------|
| Baltimore, MD 21286 512.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| | | | | | | |
| or Tomorrow® | Liberabu certify that these desuments were prepared or approved by | | | | | ALTROVED |
| | me, and that I am a duly licensed professional engineer under the laws of the State of Maryland | | | | | |
| | License # <u>18795</u> Expiration Date: <u>08/06/24</u> | | | | | ASSISTANT CHIEF ENGINEE |

HOME HYDRANT (NFPA 13D)

PROVALS UL/FM

| ANNE ARUNDEL COUNTY | | | | | | |
|----------------------------|---------------------|-----------------------|----------------------------------|--|--|--|
| DEPARTMENT OF PUBLIC WORKS | | | | | | |
| DATE | APPROVED DATE | SCALE: AS NOTED | JUG BAY EDUCATION, RESEARCH, AND | | | |
| | | DRAWN BY: M.J.F. | DISCOVERY FIELD STATION | | | |
| | PROJECT MANAGER | CHECKED BY: J.A.B. | CABIN FLOOR PLAN | | | |
| DATE | APPROVED DATE | SHEET NO. 48 OF 63 | FIRE PROTECTION | | | |
| | | PROJECT NO.: P584501 | | | | |
| R | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | FPIUI | | | |
| | | | © WBCM 2023 | | | |

| | GENERAL NOTES |
|--------------------------|---|
| THE DRA | FOLLOWING NOTES SHALL APPLY THROUGHOUT. EXCEPTIONS ARE SPECIFICALLY NOTED ON WINGS. |
| 1. | ALL WORK OF THIS CONTRACT SHALL BE DONE IN ACCORDANCE WITH THE 2018 INTERNATIONAL MECHANICAL CODE AND REGULATIONS OF OTHER AGENCIES HAVING JURISDICTION ON THE WORK OF THIS CONTRACT. |
| 2. | ALL WORK SHALL COMPLY WITH THE PROVISIONS OF THE: |
| 2.1 2.2 2.3 2.4 | 2018 INTERNATIONAL BUILDING CODE (IBC) 2018 INTERNATIONAL MECHANICAL CODE (IMC) 2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) 2018 INTERNATIONAL FIRE CODE (IFC) |
| 3. | ALL WORK ON THESE DRAWINGS SHALL BE CONSIDERED NEW WORK UNLESS OTHERWISE NOTED. |
| 4. | CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CONDITIONS OF THE SITE AND/OR BUILDING. |
| 5. | COORDINATION OF ALL WORK UNDER THIS CONTRACT SHALL BE MAINTAINED BETWEEN ALL TRADES TO ENSURE THE QUALITY AND TIMELY COMPLETION OF THE WORK/PROJECT. |
| 6. | THE CONTRACTOR SHALL PATCH AND REPAIR ALL DAMAGED OR EXPOSED SURFACES DUE TO CONTRACT WORK. ALL NEWLY INSTALLED, PATCHED WORK AND ALL AFFECTED AREAS SHALL BE PAINTED. ALL PAINTING WORK SHALL BE PERFORMED TO COVER THE ENTIRE HORIZONTAL OR VERTICAL SURFACE TO THE CLOSEST CORNER IN ALL FOUR DIRECTIONS. COLORS TO BE APPROVED BY ARCHITECT PRIOR TO APPLICATION. |
| 7. | THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, DISTORTIONS AND OFF ALIGNMENTS ACCORDING TO CODES AND STANDARDS OF GOOD PRACTICE. |
| 8. | WHERE MANUFACTURER'S NAMES AND PRODUCT NUMBERS ARE INDICATED ON DRAWINGS, IT SHALL BE CONSTRUCTED TO MEAN THE ESTABLISHMENT OF QUALITY AND PERFORMANCE STANDARDS OF SUCH ITEMS. ALL OTHER PRODUCTS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE THEY SHALL BE DEEMED EQUAL. |
| 9. | FIRESTOPPING SHALL BE INSTALLED AT ALL PENETRATIONS OF FIRE RATED CONSTRUCTION. |
| 10. | THE CONTRACTOR SHALL KEEP WORK SITE FREE FROM DEBRIS AND ACCUMULATED REFUSE, AND SHALL HAVE SOLE RESPONSIBILITY FOR PROTECTING ALL DANGEROUS AREAS FROM ENTRY BY UNAUTHORIZED PARTIES. SITE SHALL BE LEFT BROOM CLEAN AT THE END OF EACH WORKING DAY. |
| 11. | UNLESS OTHERWISE PROVIDED IN THE CONTRACT DOCUMENTS, SECURE AND PAY FOR THE REQUIRED CONSTRUCTION PERMITS, FEES LICENSES, AND INSPECTIONS NECESSARY FOR THE PROPER EXECUTION OF THE WORK. APPLICATION FOR CONSTRUCTION PERMITS SHALL BE PROCESS THROUGH THE BUILDING CODE COMPLIANCE INSPECTION DIVISION AUTHORITY. |
| 12. | INSPECTIONS SHALL BE CONDUCTED TO SHOW COMPLIANCE OF THE INSTALLATION WITH THE DRAWINGS AND PROPER FUNCTION OF ALL EQUIPMENT AND DEVICES BEFORE THE SYSTEM IS APPROVED. THE INSPECTION SHALL INCLUDE CONDUCTING A PRELIMINARY TEST OF THE EQUIPMENT FOR THE PURPOSE OF CHECKING GENERAL OPERATION AND MAKING THE NECESSARY ADJUSTMENTS. |
| 13. | CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS, EQUIPMENT USE PERMITS, ALL INSPECTION APPROVALS, AND LETTER OF COMPLETION FROM THE FILING AGENCY FOR WORK UNDER THIS CONTRACT. |
| 14. | CONTRACTOR MUST INSULATE, PAINT, LABEL, AND TAG ALL NEW EQUIPMENT, AND |

- SULATE, PAINT, LABEL, AND TAG ALL NEW EQUIPMENT, AND DUCTWORK.
- 15. CONTRACTOR MAY PROPOSE ALTERNATE ROUTING IN DIFFICULT AREAS. ANY AND ALL ALTERNATE ROUTING IS SUBJECT TO PRIOR REVIEW AND APPROVAL BY THE ENGINEER.
- 16. ALL NEW ROOF PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR TO BE PATCHED AND SEALED BY THE OWNER'S ROOFING CONTRACTOR.

BUILDING DEPARTMENT NOTES

ALL WORK SHALL BE EXECUTED IN FULL COMPLIANCE WITH THE APPLICABLE PROVISIONS OF ALL LOCAL LAWS, BY LAWS, STATUTES, ORDINANCES, CODES, RULES, REGULATIONS, AND LAWFUL ORDERS OF PUBLIC AUTHORITIES BEARING ON THE PERFORMANCE AND EXECUTION OF WORK.

- 1. ALL DUCTWORK AND FITTINGS SHALL BE INSTALLED AS PER THE LATEST ADDITION OF SMACNA STANDARDS.
- 2. EQUIPMENT SHALL BE LISTED AND APPROVED AS REQUIRED PER IMC SECTIONS 102 AND 107.
- 3. ALL PERMITS, INSPECTIONS, AND TESTING SHALL BE COMPLETED IN ACCORDANCE WITH IMC SECTIONS 106 AND 107.
- 4. DUCT CONSTRUCTION AND INSTALLATION SHALL ADHERE TO ALL REQUIREMENTS SPECIFIED WITHIN IMC SECTION 603.
- 5. ALL DUCT AND TRANSFER OPENINGS SHALL COMPLY WITH IMC SECTION 607.
- 6. ALL FUEL BURNING EQUIPMENT SHALL BE IN ACCORDANCE WITH THE 2018 INTERNATIONAL FUEL GAS CODE AND CHAPTER 9 OF THE IMC.
- 7. REFRIGERANT PIPING SHALL BE INSTALLED IN ACCORDANCE IMC CHAPTER 11.
- 8. DUCTWORK SHALL BE INSULATED AS PER IMC SECTION 604 AND IECC SECTION 403.
- 9. DUCTWORK SUPPORTS SHALL BE PROVIDED AS PER IMC SECTION 603.1.
- 10. ALL EQUIPMENT AND DUCTWORK INSULATION SHALL ADHERE TO ALL REQUIREMENTS SPECIFIED WITHIN IMC SECTION 304 AND IECC SECTION 403.
- 11. THERMOSTATS SHALL HAVE DEAD-BAND, SET BACK, AND START-UP & SHUTDOWN CAPABILITIES AS PER IECC SECTION 403.
- 12. HVAC EQUIPMENT SHALL MEET THE MINIMUM EFFICIENCY REQUIREMENTS IN IECC SECTION 403.

13. ALL EXHAUST SYSTEMS AND ASSOCIATED DISCHARGE LOCATIONS SHALL BE IN FULL COMPLIANCE WITH IMC CHAPTER 5.

| DUC | T SYMBOLS | | |
|--------|--|----------------|-------------------------------------|
| ∑>D | INCLINED DROP IN DUC WITH RESPECT TO AIR FLOW. | | MITERED ELBOW WITH TURNING VANES |
| R — | INCLINED DROP IN DUC WITH RESPECT TO AIR FLOW. | | ROUND TO SQUARE TRANSITION |
| | SUPPLY DUCT RISER | -► | SUPPLY AIR GRILLE |
| | RETURN/EXHAUST DUCT RISER | ◄-∿- | RETURN/EXHAUST AIR GRILLE |
| | OUTSIDE AIR DUCT RISER | -//-] | TRANSFER AIR WALL OPENING |
| CD | SUPPLY AIR CEILING DIFFUSER | FD/AD | FIRE DAMPER AND ACCESS DOOR |
| RR | RETURN AIR REGISTER | <u> </u> | VOLUME DAMPER |
| ER | EXHAUST AIR REGISTER | | GRAVITY DAMPER |
| | WALL LOUVER | ——- M | MOTORIZED DAMPER |
| EF-X | ROOF MOUNTED EXHAUST FAN | Ē _s | FIRE SMOKE DAMPER |
| ——AFMS | AIRFLOW MONITORING SYSTEM | Ē | FIRE DAMPER |

| SYN | /BOLS | | |
|--------------------|-----------------------------|-----------|---------------------------------|
| _0_ | PIPE RISER | | UNION (FLANGED OR SCREWED) |
| - ► +C+► | PIPE RISE |] | THREADED CAP |
| -++C+- | PIPE DROP | Ŷ | MANUAL AIR VENT |
| -+0+ | PIPE TEE UP | | STRAINER |
| | PIPE TEE DN | —-ti—- | PLUG COCK |
| +2+ | 90 DEGREE TOP CONNECTION | \otimes | THERMOSTATIC TRAP |
| -+ \$ + | 90 DEGREE BOTTOM CONNECTION | • | POINT OF DISCONNECTION |
| | CONCENTRIC REDUCER | € | POINT OF CONNECTION TO EXISTING |
| | GATE VALVE | — U—► | DOOR UNDERCUT |
| | GLOBE VALVE | — L—► | DOOR LOUVER |
| | AUTOMATIC CONTROL VALVE | T | THERMOSTAT |
| —Ю— | BALL VALVE | S | MANUAL WALL SWITCH |
| | CHECK VALVE | © | CARBON MONOXIDE DETECTOR |

| AE | BREVIATIONS | | |
|-----------|-------------------------------------|-----|---------------------------------|
| AD AFF | ACCESS DOOR ABOVE FINISHED FLOOR | GRD | GRILLE, REGISTER, & DIFFUSER |
| AHU | AIR HANDLING UNIT | HC | HEATING COIL |
| BOD | BOTTOM OF DUCT | MBH | THOUSAND BTU'S PER |
| BOG | BOTTOM OF GRILLE | | HOUR |
| С | CONDENSATE | MD | MOTORIZED DAMPER |
| CC | COOLING COIL | NIC | NOT IN CONTRACT |
| CD | CEILING DIFFUSER | NTS | NOT TO SCALE |
| CDR | CONDENSATE DRAIN | NC | NORMALLY CLOSED |
| CG | CEILING GRILLE | NO | NORMALLY OPEN |
| CR | CEILING REGISTER | OAD | OUTSIDE AIR DAMPER |
| CFM | CUBIC FEET PER | OAI | OUTSIDE AIR INTAKE |
| | MINUTE | OED | OPEN ENDED DUCT |
| DWG | DRAWING | RA | RETURN AIR |
| E . | EXISTING | RR | RETURN REGISTER |
| EA | EXHAUST AIR | RTU | ROOFTOP UNIT |
| EF | EXHAUST FAN | SA | SUPPLY AIR |
| EUH | ELECTRIC UNIT HEATER | SF | SUPPLY FAN |
| EL | | TAB | TESTING, ADJUSTING, AND |
| FD | FIRE DAMPER WITH | | BALANCING |
| 50 | | IRO | IRANSFER OPENING |
| | | IYP | |
| | | UH | |
| GLOWK | GLIGUL SUPPLI & | V | |
| | RETURN | WM2 | WIKE MESH SCREEN |

| | | | | - | 1 |
|---|-----|-------------|----|------|------------------------|
| | NO. | DESCRIPTION | BY | DATE | |
| | | | | | |
| | | | | | APPROVED |
| | | | | | |
| | | | | | |
| | | | | | CHIEF ENGINEER |
| | | | | | APPROVED |
| | | | | | |
| me, and that I am a duly licensed professional engineer under the | | | | | |
| License # 18795 Expiration Date: $08/06/24$ | | | | | ASSISTANT CHIEF ENGINE |

REVISIONS

HEATER SCHEDULE

| TAG | WH-1 | WH-2 |
|--------------|----------------------|----------------------|
| TYPE | ELECTRIC WALL HEATER | ELECTRIC WALL HEATER |
| LOCATION | VARIOUS | BATHHOUSE/MECHANICAL |
| MANUFACTURER | QMARK | QMARK |
| MODEL | SSH04004 | AWH4404F |
| kW | 1.8/4.0 | 2.0/4.0 |
| ELEC. | 240/1/60 | 240/1/60 |
| AMPS | 7.5/16.7 | 8.3/16.7 |
| NOTES | 1,2,4,5,6 | 1,3,4,5,6 |
| | | |

NOTES:

1. PROVIDE DISCONNECT SWITCH 2. PROVIDE INTEGRAL THERMOSTAT

3. PROVIDE BUILT-IN TAMPER RESISTANT SINGLE-POLE THERMOSTAT 4. WALL MOUNTED. COORDINATE MOUNTING REQUIREMENTS WITH ARCHITECT

5. COORDINATE COLOR/FINISH WITH ARCHITECT.

6. UNIT HEATER IS BASED ON THE MANUFACTURER PROVIDED OR APPROVED EQUAL

| EXHAUST FAN | SCHEDULE |
|--------------|------------|
| TAG | EF-1 |
| LOCATION | BATH HOUSE |
| MANUFACTURER | GREENHECK |
| MODEL | SP-B200 |
| CFM | 140 |
| ESP (IN. WG) | 0.25 |
| RPM | 980 |
| ELEC. | 115/1/60 |
| WATTS | 172 |
| NOTES | 1,2 |
| | |

NOTES:

1. PROVIDE ROUND DUCT CONNECTION AND HOODED ROOF CAP WITH BIRDSCREEN AND BACKDRAFT DAMPER. COORDINATE COLOR/FINISH OF WALL CAP WITH ARCHITECT. 2. EXHAUST FAN IS BASED ON THE MANUFACTURER PROVIDED OR APPROVED EQUAL.

BID SET

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS DATE APPROVED DATE SCALE: JUG BAY EDUCATION, RESEARCH, AND N.T.S. DISCOVERY FIELD STATION M.J.F. DRAWN BY: GENERAL NOTES, SYMBOLS CHECKED BY: J.A.B. PROJECT MANAGER DATE APPROVED DATE AND ABBREVIATIONS SHEET NO. 49 OF 63 PROJECT NO.: P584501 M001 CONTRACT NO.: P584500 CHIEF, RIGHT-OF-WAY C WBCM 2023

TYPICAL CABIN FLOOR PLAN - MECHANICAL SCALE: 1/4"=1'-0"

TYPICAL ADA CABIN FLOOR PLAN - MECHANICAL SCALE: 1/4"=1'-0"

| | | REVISIONS | | | | |
|--|--|-----------|-------------|----|------|--------------------------|
| EY COX & MAGNANI, LLC | | NO. | DESCRIPTION | ВҮ | DATE | |
| ast Joppa Road Suite 200 Baltimore, MD 21286 512.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| | | | | | | CHIEF ENGINEER |
| - | | | | | | APPROVED |
| or Iomorrow® | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the law of the State of May lead. | | | | | |
| | License # 18795 Expiration Date: $08/06/24$ | | | | | ASSISTANT CHIEF ENGINEEI |

| ANNE ARUNDEL COUNTY | | | | | | |
|----------------------------|---------------------|-----------------------|----------------------------------|--|--|--|
| DEPARTMENT OF PUBLIC WORKS | | | | | | |
| DATE | APPROVED DATE | SCALE: AS NOTED | JUG BAY EDUCATION, RESEARCH, AND | | | |
| | | DRAWN BY: M.J.F. | DISCOVERY FIELD STATION | | | |
| | PROJECT MANAGER | CHECKED BY: J.A.B. | CABIN FLOOR PLAN | | | |
| DATE | APPROVED DATE | SHEET NO. 50 OF 63 | MECHANICAL | | | |
| | | PROJECT NO.: P584501 | | | | |
| R | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | | | | |
| | | | © WBCM 2023 | | | |

NBCM\22029 Jug Bay Environmental Center Infrastructure\Mech\Draw\M102_BathhousePlan_22029.dwg Nov 07, 2023 - 8:07am Plot By: Admin

BATHHOUSE FLOOR PLAN - MECHANCIAL SCALE: 1/4"=1'-0"

| LEY COX & MAGNANI, LLC | | NO. | DESCRIPTION | ВҮ | DATE | |
|--|--|-----|-------------|----|------|--------------------------|
| Baltimore, MD 21286 512.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | CHIEF ENGINEER |
| or Tomorrow® | 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 of the doct | | | | | |
| | License # <u>18795</u> Expiration Date: <u>08/06/24</u> | | | | | ASSISTANT CHIEF ENGINEEI |

| | ANNE ARUNDEL COUNTY | | | | | | | | |
|----------------------------|---------------------|-----------------------|----------------------------------|--|--|--|--|--|--|
| DEPARTMENT OF PUBLIC WORKS | | | | | | | | | |
| DATE | APPROVED DATE | SCALE: AS NOTED | JUG BAY EDUCATION, RESEARCH, AND | | | | | | |
| | | DRAWN BY: M.J.F. | DISCOVERY FIELD STATION | | | | | | |
| | PROJECT MANAGER | CHECKED BY: J.A.B. | BATHHOUSE FLOOR PLAN | | | | | | |
| DATE | APPROVED DATE | SHEET NO. 51 OF 63 | MECHANICAL | | | | | | |
| | | PROJECT NO.: P584501 | N/100 | | | | | | |
| R | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | IVI 102 | | | | | | |
| | | | © WBCM 2023 | | | | | | |

- 1. THE CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS REQUIRED FOR THE PERFORMANCE OF THE WORK AND PAY ALL FEES IN CONNECTION THEREWITH.
- 2. EXACT SIZES AND LOCATIONS OF ALL EXISTING PIPING SHALL BE VERIFIED ON THE SITE.
- 3. NO REMOVED EXISTING PIPING SHALL BE REUSED UNLESS OTHERWISE INDICATED.
- 4. THIS CONTRACTOR SHALL NEITHER INTERRUPT THE SERVICES OF THE EXISTING BUILDING NOR INTERFERE WITH THE SERVICES IN ANY WAY WITHOUT THE EXPRESSED PERMISSION OF THE OWNER. SUCH INTERRUPTIONS AND INTERFERENCES SHALL BE MADE AS BRIEF AS POSSIBLE AND ONLY AT THE TIME SUITED BY THE OWNER.
- 5. UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR OR HIS WORKMEN BE PERMITTED TO USE ANY PART OF THE BUILDING AS A SHOP, EXCEPT PART DESIGNATED BY THE OWNER FOR SUCH PURPOSES.
- 6. UNNECESSARY NOISE SHALL BE AVOIDED AT ALL TIMES AND NECESSARY NOISE SHALL BE REDUCED TO A MINIMUM.
- 7. WHERE THE WORK MAKES TEMPORARY SHUTDOWNS OF SERVICES UNAVAILABLE, THEY SHALL BE MADE AT NIGHT OR AT TIMES AS THIS WILL CAUSE THE LEAST INTERFERENCE WITH THE ESTABLISHED OPERATING ROUTINE OF THE BUILDING.
- 8. THE CONTRACTOR SHALL ARRANGE ALL WORK CONTINUOUSLY, INCLUDING OVERTIME AS REQUIRED, TO ASSURE THAT SERVICES WILL BE SHUT DOWN AND CUT-INS ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE THE NECESSARY CONNECTION TO EXISTING WORK.
- 9. THE CONTRACTOR SHALL GIVE AMPLE WRITTEN NOTICE IN ADVANCE TO THE OWNER OF ANY REQUIRED SHUT DOWNS, AND REQUIRED DEMOLITION WORK TO BE PERFORMED ABOVE EXISTING.
- 10. CONNECTIONS BETWEEN NEW AND EXISTING WORK: THE COST RESULTING FROM TEMPORARY SHUTDOWNS SHALL BE BORNE BY THIS CONTRACTOR.
- 11. ALL VENT, HOT WATER CIRCULATION, HOT AND COLD WATER PIPING ARE AT CEILING OR IN HUNG CEILING: EXCEPT IN PIPE CHASES OR OTHERWISE NOTED.
- 12. CONTRACTOR SHALL CHECK AND VERIFY THE EXACT LOCATION OF ALL PIPE PENETRATIONS, PIPE ELEVATIONS, ETC.
- 13. PROVIDE SHUT OFF VALVES AND UNIONS/FLANGES AT BASE OF ALL RISERS, MAINS, ALL BRANCHES AND ALL CONNECTIONS IN ORDER TO ISOLATE FOR MAINTENANCE PURPOSES.
- 14. VALVES, AND OTHER EQUIPMENT AND ACCESSORIES THAT MAY REQUIRED ACCESS FOR MAINTENANCE OR OPERATION WHICH ARE LOCATED BEHIND WALLS AND PARTITIONS OR CONCEALED IN HUNG CEILINGS. COORDINATE INSTALLATION WITH GENERAL CONTRACTOR.
- 15. THE CONTRACTOR SHALL OBTAIN A COPY OF THE BUILDING RULES AND REGULATIONS AND PROVIDE ALL WORK AS REQUIRED TO CONFORM TO REQUIREMENTS.
- 16. THIS CONTRACTOR SHALL PROVIDE ALL WORK AT THE CEILING OF THE FLOOR BELOW AS INDICATED ON THE DRAWINGS. COORDINATE EXACT ROUTING OF PIPING IN THE FIELD WITH EXISTING CONDITIONS AND WORK OF OTHER TRADES. THIS CONTRACTOR SHALL PROVIDE CAPPED VALVED OUTLETS FOR FUTURE CONNECTIONS WHENEVER CONNECTING INTO AN EXISTING CAPPED VALVED OUTLET. SIZE OF NEW CAPPED VALVED OUTLET SHALL MATCH EXISTING.
- 18. PLUMBING CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWING FOR DEMOLITION SCOPE. THE PLUMBING CONTRACTOR SHALL CUT AND CAP ALL SERVICES TO AREAS THAT ARE TO BE REMOVED AS CLOSE AS POSSIBLE TO THE EXISTING MAINS. SANITARY BRANCHES THAT ARE TO BE REMOVED ARE TO BE PLUGGED AT MAINS. PLUMBING CONTRACTOR SHALL LEAVE NO DEAD LEGS LONGER THAT CODE REQUIREMENTS. CONTRACTOR SHALL VERIFY EXTENTS IN FIELD.
- 19. THE CONTRACTOR SHALL COORDINATE PLUMBING WORK WITH ALL OTHER TRADES AND VERIFY DIMENSION AND CONDITIONS AT THE SITE PRIOR TO BEGINNING WORK. NO ADDITIONAL COSTS WILL BE ACCEPTED IF ATTRIBUTED TO FAILURE TO COORDINATE OR VERIFY.
- 20. ALL PLUMBING LINES SHOWN ARE DIAGRAMMATIC AND NOT INTENDED TO SHOW EXACT LOCATIONS. THE CONTRACTOR SHALL INSTALL PIPING SYSTEM TO MINIMIZE LENGTH OF RUNS AND AVOID INTERFERENCES.
- 21. ALL PIPING WITHIN SLAB SHALL BE INSTALLED TO CLEAR FOOTINGS AND SHALL NOT BE INSTALLED WITHIN OR BELOW THE TRIANGULAR BEARING PLANE OF ALL FOOTINGS.
- 22. THE CONTRACTOR SHALL SEAL SLEEVES INSTALLED IN FIRE-RATED WALLS, CEILINGS AND FLOORS WITH FIRE-PROOF MATERIAL EQUAL TO THE RATING OF THE RESPECTIVE WALLS, CEILINGS AND FLOORS.
- 23. INSTALL PIPING AS STRAIGHT AND DIRECT AS POSSIBLE FORMING RIGHT ANGEL OR PARALLEL LINES WITH BUILDING WALLS, NEATLY SPACED, RISERS PLUMB AND TRUE, AND AVOID INTERFERENCE WITH OTHER CONSTRUCTION.
- 24. CLEANOUTS SHALL BE PROVIDED ON ALL PLUMBING DRAINAGE PIPING AT CHANGES OF DIRECTION GREATER THAN 45' AND EVERY 50 FEET FOR PIPING UP TO 4" DIAMETER, AND 100 FEET FOR PIPING 5" AND LARGER.
- 25. ALL PIPING SHALL BE IDENTIFIED AND COLORED IN FULL COMPLIANCE WITH ASME A13.1.

BUILDING DEPARTMENT NOTES

- ALL PLUMBING WORK SHALL MEET THE REQUIREMENTS OF THE 2018 INTERNATIONAL PLUMBING CODF.
- PROTECTION OF PIPING AS OUTLINED IN SECTION PC 305 SHALL BE PROVIDED AS REQUIRED.
- 2. ALL PIPING AND MATERIALS SHALL BE AS DIRECTED IN SECTIONS PC 303 & PC 702.
- 3. PIPING JOINTS AND CONNECTIONS SHALL BE AS APPROVED IN SECTIONS PC 605 & PC 705.
- I. CONSTRUCTION, QUANTITIES, DEVICES, FIXTURES, FAUCETS, VALVES AND FACILITIES FOR THE DISABLED SHALL BE AS OUTLINED IN CHAPTER 4.
- 5. TRAPS SHALL BE AS PER SECTION PC 1002.
- CONSTRUCTION AND SPACING OF HANGERS AND SUPPORTS SHALL BE AS DIRECTED IN SECTION PC 308.
- WATER SUPPLY SYSTEM, VALVES, TESTS SHALL BE AS DIRECTED IN CHAPTER 6. VALVES SHALL BE PROVIDED AT RISERS AND ELSEWHERE AS PER SECTION PC 606.
- 8. SANITARY DRAINAGE PIPING, SIZING, GRADING AND OFFSETS SHALL BE AS OUTLINED IN CHAPTER 7.
- 9. VENT SIZING, GRADING, CONNECTIONS, LOCATIONS AND OFFSETS SHALL BE AS DIRECTED IN CHAPTER 9.
- 10. STORM DRAINAGE PIPING AND SIZING SHALL BE IN ACCORDANCE WITH CHAPTER 11. STORM WATER MANAGEMENT UTILIZING CONTROLLED FLOW DRAINAGE SHALL BE AS PER CHAPTER 11.
- 11. SPECIAL AND MISCELLANEOUS PIPING SHALL BE AS DIRECTED IN CHAPTER 8.
- 12. INDIRECT WASTE PIPING SHALL BE AS DIRECTED IN CHAPTER 8.
- 13. GAS PIPING INSTALLATION, MATERIAL AND SIZES SHALL ADHERE TO INTERNATIONAL FUEL GAS CODE, SECTION FGC 404.
- 14. ALL PLUMBING FIXTURES SHALL BE AS DIRECTED IN CHAPTER 4.
- 15. ALL PLUMBING DRAINAGE PIPING, INCLUDING ANY EQUIPMENT CONNECTED THERETO SHALL BE SEISMICALLY RESTRAINED AS PER BC 1621 AND ASCE 7–2002 SECTION 9.6.
- 16. CLEAN OUTS FOR SANITARY AND STORM DRAINAGE SHALL BE AS PER SECTION PC 708.
- 17. TESTING AND PURGING OF GAS PIPING PRIOR TO OPERATIONS SHALL CONFORM TO FGC 406.
- 18. WATER HEATER SHALL BE TESTED IN ACCORDANCE WITH ANSI 21.10.1 AND ANSI 21.10.3.
- 19. PIPING JOINTS FOR GAS DISTRIBUTION PIPING SHALL BE DONE PER AUTHORITY'S SPECIFICATION. ALL WELDED GAS PIPES SHALL BE RADIOGRAPHED. THE RADIOGRAPHY AND ACCEPTANCE SHALL ADHERE TO FGC 107.
- 20. ALL PLUMBING WORK SHALL BE DONE BY OR UNDER THE DIRECT SUPERVISION OF A LICENSED MASTER PLUMBER.

| | PLUMBING FIXTURE SCHEDULE | | | | | | | |
|------|---------------------------|------|------|------|--------|--------|---------------|--|
| TAG | DESCRIPTION | нพ | CW | SOIL | WASTE | VENT | REMARKS | |
| WC-1 | WATER CLOSET | - | 1" | 4" | - | 2" | NOTES 1, 2 | |
| UR-1 | URINAL | - | 1" | 2" | _ | 2" | NOTES 1, 2 | |
| L-1 | LAVATORY | 1/2" | 1/2" | _ | 1-1/2" | 1-1/2" | NOTES 1, 2 | |
| L-2 | LAVATORY | 1/2" | 1/2" | _ | 1-1/2" | 1-1/2" | NOTES 1, 2 | |
| W-1 | SHOWER | 1/2" | 1/2" | _ | 2" | 2" | NOTES 1, 2 | |
| W-1 | SHOWER | 1/2" | 1/2" | _ | 2" | 2" | NOTES 1, 2 | |
| W-1 | SHOWER | 1/2" | 1/2" | _ | 2" | 2" | NOTES 1, 2 | |
| SS-1 | SERVICE SINK | 3/4" | 3/4" | _ | 3" | 2" | NOTES 1, 2 | |
| SS-2 | SERVICE SINK | 3/4" | 3/4" | _ | 3" | 2" | NOTES 1, 2 | |
| FD-1 | FLOOR DRAIN | - | - | _ | 3" | - | NOTES 1, 2, 3 | |
| W-1 | WASHER | 1/2" | 1/2" | _ | 2" | 2" | NOTES 1, 2 | |
| DF-1 | DRINKING FOUTAIN | - | 1/2" | _ | 1-1/2" | _ | NOTES 1, 2 | |
| | | | | - | | | | |

NOTES:

REFER TO ARCHITECTURAL DRAWINGS FOR EXACT FIXTURE MOUNTING HEIGHTS. CLEARANCES. ETC. COORDINATE ALL PLUMBING FIXTURES, CARRIERS, AND FAUCET TYPE, STYLE, FINISH, TRIM ETC. WITH ARCHITECTURAL DRAWINGS.

PROVIDE PROVENT SYSTEMS PROSET TRAP GUARD OR APPROVED EQUAL.

| | WATE | R HAMMER , | ARRE | STOR S | CHEDULE |
|------|-------|---------------------------------------|------|---------|---------------------------------------|
| SIZE | WSFU | JR SMITH MODEL (OR APPROVED EQUAL) | SIZE | WSFU | JR SMITH MODEL (OR APPROVED EQUAL) |
| Α | 1–11 | 5005 | D | 61–113 | 5030 |
| В | 12-32 | 5010 | E | 114–154 | 5040 |
| С | 33-60 | 5020 | F | 155-330 | 5050 |

| | NOTES: THE KEY OF SYMBOLS AND INDICATED ARE NOT NECESSARILY | ABBREVIATIONS IS FOR WITHIN THE SCOPE OF |
|--------------------|--|---|
| | SANITARY | AD AFF |
| | UNDERGROUND DRAINAGE/PIPING BELOW | BLDG BOP |
| | ABOVE GROUND DRAINAGE PIPING | BFP BG CO |
| | VENT PIPING | CODP CM |
| | COLD WATER PIPING | CVO CW |
| | HOT WATER PIPING | CLG CONN CONT |
| | HOT WATER RETURN | DIA DN |
| G | GAS PIPING | DR DWG |
| W | WASTE | EXIST EL EWC |
| w | | EWH FD |
| | VENT THROUGH ROOF | FS FT GC |
| '' | | GAL GPM |
| | CLEANOUT DECK PLATE | HB H&CW HW |
| | HOUSE IRAP | HWR IE |
| | SANITARY/WATER RISER NUMBER | IW LAV MS |
| _ <u>_</u> | WALL SLEEVE | NIC NFWH NTS |
| 🖸 FD | FLOOR DRAIN | PC PO PRV PSI SA |
| | GATE VALVE | SAN SAN SK SQ FT |
| | SOLENOID VALVE | SS ST |
| - , - | STRAINER | UON UR |
| -&- | MASTER MIXING VALVE | V VB |
| _ | BALL VALVE | VIF WCO W |
| | CHECK VALVE | ŴĊ |
| | TEMPERATURE & PRESSURE RELIEF VALVE | |
| <u>_</u> | SHOCK ABSORBER | |
| _Ψ | THERMOMETER | |
| Ø | PRESSURE GAUGE | |
| -Å | OS&Y VALVE WITH TAMPER SWITCH | |
| œ— | TRAP | |
| | HOSE BIBB/WALL HYDRANT | |
| \bullet | POINT OF DISCONNECTION | |
| \bullet | POINT OF CONNECTION TO EXISTING | |

SYMBOLS AND ABBREVIATIONS

| FOR CONVENIENCE ONLY AND ITEMS |
|--|
| |
| AREA DRAIN |
| ABOVE FINISHED FLOOR BUILDING |
| BOTTOM OF PIPE |
| BACKFLOW PREVENTER |
| CLEANOUT |
| CLEANOUT DECK PLATE |
| COFFEE MAKER |
| CAPPED AND VALVED OUTLET |
| COLD WATER |
| CONNECT |
| CONTINUATION |
| |
| DOWN (PENETRATES FLOOR SLAB) DRAIN |
| DRAWING |
| EXISTING ELEVATION |
| ELECTRIC WATER COOLER |
| ELECTRIC WATER HEATER |
| FLOOR DRAIN FLOOR SINK |
| FEET |
| GENERAL CONTRACTOR |
| GALLONS PER MINUTE |
| HOSE BIBB |
| HOT WATER |
| HOT WATER RETURN |
| INVERT ELEVATION INDIRECT WASTE |
| LAVATORY |
| MOP SINK NOT IN THIS CONTRACT |
| NON-FREEZE WALL HYDRANT |
| NOT TO SCALE |
| PLUGGED OUTLET |
| PRESSURE REDUCING VALVE |
| POUNDS PER SQUARE INCH (GAUGE) SHOCK ABSORBER |
| SANITARY |
| SINK SOLLARE FOOT |
| SERVICE SINK |
| STORM |
| UNLESS OTHERWISE NOTED |
| URINAL |
| VENT VACUUM BREAKFR |
| VERIFY IN FIELD |
| WALL CLEANOUT WASTE |
| WATER CLOSET |
| |
| |

| East Joppa Road Suite 200 Baltimore, MD 21286 |
|--|
| 512.4500 www.wbcm.com |
| CM |
| or Tomorrow® |

| | NO. | DESCRIPTION | BY | DATE | |
|--|-----|-------------|----|------|--------------------------|
| | | | | | APPROVED |
| | | | | | |
| | | | | | · · |
| | | | | | CHIEF ENGINEER |
| | | | | | APPROVED |
| I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the | | | | | |
| laws of the State of Maryland. License # <u>18795</u> Expiration Date: <u>08/06/24</u> | | | | | ASSISTANT CHIEF ENGINEEI |
| | | | | | |

REVISIONS

| ELECTRIC WATER HEATER SCHEDULE | | | | | | | | |
|--------------------------------|-----------------------------|--------------|-----------|----------|---------------|-----------------|-----------------------|---------|
| TAG | LOCATION | MANUFACTURER | MODEL NO. | CAPACITY | INPUT (KW) | RECOVERY (GPH) | ELEC (V/PH/H Z) | REMARKS |
| WH-1 | MECH/UTILITY | AO SMITH | DVE-80-36 | 80 GAL | 36 | 148 GPH @ 100°F | 240/1/60 | 1 |
| 1. PROVIDE DISCO | . PROVIDE DISCONNECT SWITCH | | | | | | | |

| | ANNE ARUNDEL COUNTY | | | | | | | | |
|----------------------------|---------------------|-----------------------|----------------------------------|--|--|--|--|--|--|
| DEPARTMENT OF PUBLIC WORKS | | | | | | | | | |
| DATE | APPROVED DATE | SCALE: N.T.S. | JUG BAY EDUCATION, RESEARCH, AND | | | | | | |
| | | DRAWN BY: M.J.F. | DISCOVERY FIELD STATION | | | | | | |
| | PROJECT MANAGER | CHECKED BY: J.A.B. | GENERAL NOTES, SYMBOLS | | | | | | |
| DATE | APPROVED DATE | SHEET NO. 52 OF 63 | AND ABBREVIATIONS | | | | | | |
| | | PROJECT NO.: P584501 | D001 | | | | | | |
| 2 | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | PUUT | | | | | | |
| | | | © WBCM 2023 | | | | | | |

BATHHOUSE FLOOR PLAN - SANITARY & VENT SCALE: 1/4"=1'-0"

| | | | REVISIONS | | | |
|---|--|-----|-------------|----|------|--------------------------|
| ILEY COX & MAGNANI, LLC Fast Joppa Road, Suite 200 | | NO. | DESCRIPTION | BY | DATE | |
| Baltimore, MD 21286 .512.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| or Tomorrow [®] | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the | | | | | |
| | laws of the State of Maryland. License # <u>18795</u> Expiration Date: <u>08/06/24</u> | | | | | ASSISTANT CHIEF ENGINEER |

| | | | | | BID SET |
|------|---------------------|------|----------------|----------------|----------------------------------|
| | ANNE ARU | ND | EL COUN | NTY | |
| | DEPARTMENT | OF | PUBLIC | WORKS | |
| DATE | APPROVED | DATE | SCALE: | AS NOTED | JUG BAY EDUCATION, RESEARCH, AND |
| | | | DRAWN BY: | M.J.F. | DISCOVERY FIELD STATION |
| | PROJECT MANAGER | | CHECKED BY: | J.A.B. | BATHHOUSE FLOOR PLAN |
| DATE | APPROVED | DATE | SHEET NO. 5 | 3 OF 63 | PLUMBING |
| | | | PROJECT NO.: | P584501 | D101 |
| R | CHIEF, RIGHT-OF-WAY | | CONTRACT NO .: | P584500 | PIUI |
| | | | | | © WBCM 2023 |

S VICINITY MAP SCALE: 1" = 8,333'

ABBREVIATION LIST:

| A | AMPERES |
|-------|-------------------------------|
| AC | AC PANELBOARD |
| ADMIN | ADMINISTRATION |
| AFF | ABOVE FINISHED FLOOR |
| AFG | ABOVE FINISHED GRADE |
| AHU | AIR HANDLING UNIT |
| ANN | ANNUNCIATOR |
| ATS | AUTOMATIC TRANSFER SWITCH |
| AWG | AMERICAN WIRE GAUGE |
| BKR | BREAKER |
| BLDG | BUILDING |
| C | CONDUIT |
| CB | CIRCUIT BREAKER |
| CIRC | CIRCULATING |
| CKT | CIRCUIT |
| CMU | CONCRETE MASONRY UNIT |
| COMM | COMMUNICATIONS |
| CORR | CORRIDOR |
| СТ | CURRENT TRANSFORMER |
| CPT | CONTROL POWER TRANSFORMER |
| CU | COPPER |
| DCU | DIGITAL CONTROL UNIT |
| DG | DIESEL GENERATOR |
| DISC | DISCONNECT |
| DIST | DISTRIBUTION |
| DT | DRY TYPE TRANSFORMER |
| DWG | DRAWING |
| EBB | ELECTRIC BASEBOARD HEATER |
| EC | ELECTRICAL CONTRACTOR |
| EDH | ELECTRIC DUCT HEATER |
| EDT | EMERGENCY DRY TYPE TRANSFORME |
| EF | EXHAUST FAN |
| ELEC | ELECTRICAL |
| EMERG | EMERGENCY |
| EQUIP | EQUIPMENT |
| EUH | ELECTRIC UNIT HEATER |
| EWC | ELECTRIC WATER COOLER |
| EWH | ELECTRIC WATER HEATER |
| F | FUSE |
| FACP | FIRE ALARM CONTROL PANEL |
| FCU | FAN COIL UNIT |
| GND | GROUND |
| GC | GENERAL CONTRACTOR |
| GEN | GENERATOR |
| GFI | GROUND FAULT INTERRUPTER |
| | |

| | | | REVISIONS | | | |
|--|--|-----|-------------|----|------|-------------------------|
| COX & MAGNANI, LLC | | NO. | DESCRIPTION | BY | DATE | |
| Baltimore, MD 21286 2.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| | | | | | | |
| [•] Tomorrow [®] | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the | | | | | _ |
| | laws of the State of Maryland. License # <u>18795</u> Expiration Date: <u>08/06/24</u> | | | | | ASSISTANT CHIEF ENGINEE |

| <u>SYMBOLS LIST:</u> | POWER SYMBOLS LIST: |
|---|---|
| INDUSTRIAL CHAIN HUNG FIXTURE NORMAL SURFACE FIXTURE NORMAL RECESSED DOWN LIGHT BOLLARD CEILING FAN | Image: Duplex Receptacle Image: Duplex Receptacle w/ground fault Image: Dup |
| CONTROLS SYMBOLS LIST: | LINES SYMBOLS LIST: |
| PC PHOTOCELL S SWITCH Sos SWITCH - OCCUPANCY SENSOR | CIRCUIT HOMERUN CIRCUIT CONTINUATION CIRCUIT CONTINUATION EXISTING LINE SAME WORK LINE SAME UNSWITCHED CIRCUIT |

HOT WIRE HID HIGH INTENSITY DISCHARGE HIGH POWER FACTOR HPF HPS HIGH PRESSURE SODIUM HTR HEATER HZ HERTZ JUNCTION BOX B **KILO VOLT-AMPERES** KVA KW KILOWATTS LA LIGHTING ARRESTOR LC LIGHTING CONTACTOR Р LIGHTING PANEL LTG LIGHTING MDP MAIN DISTRIBUTION PANEL MECH MECHANICAL MIN MINIMUM MISC MISCELLANEOUS NEUTRAL Ν N.T.S. NOT TO SCALE POLE PUSHBUTTON PB PH PHASE PHC PHOTOELECTRIC CELL PNL PANEL PP POWER PANEL POTENTIAL TRANSFORMER PT PWR POWER RECEPTACLE RECPT ROOM TELE TELEPHONE TYP TYPICAL UPS UNINTERRUPTABLE POWER SUPPLY UNLESS NOTED OTHERWISE UNO VOLTS VARIABLE AIR VOLUME VAV VEST VESTIBULE WATT W WEATHERPROOF WP WTR WATER

GENERAL NOTES:

- A. ALL NEW CIRCUITS INDICATED SHALL BE (2)#12 + (1)#12G-3/4°C UNLESS INDICATED OTHERWISE. NEW CIRCUITS SHALL NOT BE LESS THAN #12 AWG FOR POWER OR #14 AWG FOR CONTROLS.
- B. CONTROL SWITCHES THAT CONTROL LIGHTING FIXTURES THAT ARE NOT IN THE SAME AREA OR ROOM AS THE SWITCHES MUST BE PROVIDED WITH A NAMEPLATE INDICATING WHAT EACH SWITCH CONTROLS. THIS SHALL ALSO BE REQUIRED FOR SWITCHES THAT CONTROL FANS, AIR HANDLING UNITS OR MISCELLANEOUS MECHANICAL EQUIPMENT REGARDLESS OF THE SWITCH LOCATION.
- C. GENERALLY ALL RACEWAYS AND OUTLET BOXES SHALL BE INSTALLED CONCEALED IN ALL FINISHED AREAS. IN UNFINISHED AREAS IN THE EXISTING PORTION OF THE BUILDING USE EXPOSED CONDUIT AND OUTLET BOXES. IN THE NEW PORTION OF THE BUILDING USE CONCEALED CONDUIT AND OUTLET BOXES, EXCEPT FOR RUNS TO EXPOSED OR SURFACE MOUNTED EQUIPMENT OR IN CASES WHERE CONCEALED RUNS ARE NOT PRACTICAL. SURFACE METAL RACEWAYS SHALL BE PERMITTED ONLY IN PORTIONS OF THE EXISTING BUILDING WHERE SPECIFICALLY APPROVED BY THE ENGINEER, ALL OUTLET BOXES SHALL BE OF THE TYPE SUITABLE BY THE MANUFACTURER OF THE RACEWAY SYSTEM.
- D. FLEXIBLE CONDUIT MAY BE UTILIZED FOR SHORT CONNECTIONS TO MOTORS 24" MAXIMUM LENGTH, OR TO RECESSED LIGHT FIXTURES 72" MAXIMUM LENGTH, ADDITIONALLY FLEXIBLE CONDUIT MAY BE USED WHERE SPECIFICALLY NOTED ON THE DRAWINGS IN LENGTHS AS INDICATED OR REQUIRED. WHERE FLEXIBLE CONDUIT IS USED IN DAMP OR WET LOCATIONS, IT SHALL BE OF THE LIQUID TIGHT TYPE WITH PVC JACKET.
- E. ALL CUTTING, PATCHING, REFINISHING AND PAINTING REQUIRED FOR THE INSTALLATION OF ALL ELECTRICAL WORK UNDER THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- F. PROVIDE A FISH LINE IN ALL EMPTY CONDUITS INCLUDING FLEXIBLE CONDUIT.
- G. GENERALLY ALL CIRCUIT BREAKER POLES IN PANELBOARDS THAT ARE NOT USED SHALL BE EQUIPPED WITH CLOSURE COVERS, IF KNOCKOUT PIECE HAS BEEN REMOVED.
- H. THE CONTRACTOR SHALL ENSURE THAT FEEDER AND BRANCH CIRCUIT WIRING LENGTHS ARE KEPT AS SHORT AS PRACTICAL. THE CONTRACTOR SHALL REVIEW WIRING METHODS WITH THE ENGINEER PRIOR TO EXECUTION OF THE WORK.

BID SET

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS DATE APPROVED DATE SCALE: JUG BAY EDUCATION, RESEARCH, AND N.T.S. DISCOVERY FIELD STATION DRAWN BY: M.J.F. GENERAL NOTES, SYMBOLS, AND CHECKED BY: PROJECT MANAGER J.A.B. DATE APPROVED DATE SHEET NO. 54 OF 63 ABBREVIATIONS PROJECT NO .: P584501 E001 CONTRACT NO.: P584500 CHIEF, RIGHT-OF-WAY © WBCM 2023

₩H—1 240V,1¢,4KW

ADA CABIN FLOOR PLAN - ELECTRICAL Scale: 1/4"=1'=0"

| | | | REVISIONS | | | |
|--|--|-----|-------------|----|------|----------------------------|
| EY COX & MAGNANI, LLC | | NO. | DESCRIPTION | BY | DATE | _ |
| Baltimore, MD 21286 512.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| | | | | | | CHIEF ENGINEER APPROVED |
| or Tomorrow [®] | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the | | | | | - |
| | laws of the State of Maryland. License # <u>18795</u> Expiration Date: <u>08/06/24</u> | | | | | ASSISTANT CHIEF ENGINEEF |

(1) INTER CONNECT SMOKE DETECTORS WITHIN CABIN SUCH THAT WHEN ONE DETECTOR IS ACTIVATED, ALL DETECTORS ARE ACTIVATED. CONNECT DETECTORS TO CIRCUIT <u>CBN-5</u>,

SPRINKLER PUMP 240V,1#,2HP

| | ANNE ARUND | EL COUNTY | |
|------|---------------------|-----------------------|----------------------------------|
| | DEPARTMENT OF | PUBLIC WORKS | |
| DATE | APPROVED DATE | SCALE: AS NOTED | JUG BAY EDUCATION, RESEARCH, AND |
| | | DRAWN BY: M.J.F. | DISCOVERY FIELD STATION |
| | PROJECT MANAGER | CHECKED BY: J.A.B. | CABIN ELOOR PLAN - ELECTRICAL |
| DATE | APPROVED DATE | SHEET NO. 56 OF 63 | |
| | | PROJECT NO.: P584501 | F102 |
| R | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | |
| | | | © WBCM 2023 |

| | | | REVISIONS | | | |
|--|--|-----|-------------|----|------|----------------------------|
| EY COX & MAGNANI, LLC | | NO. | DESCRIPTION | BY | DATE | |
| Baltimore, MD 21286 512.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| | | | | | | CHIEF ENGINEER APPROVED |
| or Tomorrow [®] | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the | | | | | |
| | laws of the State of Maryland. License # <u>18795</u> Expiration Date: <u>08/06/24</u> | | | | | ASSISTANT CHIEF ENGINEEF |

© WBCM 2023

| - | | | | | | | | | | | | | | | | | |
|-------------------|-------------------|---------------------|-----------------|------------------------------|------|---------|---------|--------------|-----------------------|--------------|---------|---------|-------------------------------|-------------------|---------------------|-----------------|-------------------|
| | | | | PANEL SCHI | EDI | JLE | | Ρ | AN | EL | 'Bl | Η' | (LEFT SECTION) | | | | |
| CIRCUIT NUMBER | # WIRES & SIZE | GROUND WIRE SIZE | CONDUIT SIZE | ITEM | NOTE | KV A | /A B | trip Amps | POLE PHASE POLF | TRIP AMPS | K' A | VA B | NOTE ITEM | # WIRES & SIZE | GROUND WIRE SIZE | CONDUIT SIZE | CIRCUIT NUMBER |
| 1 | 2#3/0 | #6 | 2 | WATER HEATER | | 18 | | 200 | 2 A 1 | 20 | 0.8 | | RECEPT-HC TOILET 109 | 2#12 | #12 | 3/4 | 2 |
| 3 | _ | - | — | _ | | | 18 | — | — в 1 | 20 | | 0.8 | RECEPT-HC TOILET 108 | 2#12 | #12 | 3/4 | 4 |
| 5 | | | | SPARE | | | | 20 | 1 A 1 | 20 | 0.8 | | RECEPT-HC TOILET 107 | 2#12 | #12 | 3/4 | 6 |
| 7 | 3#10 | #10 | 3/4 | DRYER | | | 2.25 | 30 | 2в1 | 20 | | 0.8 | RECEPT-HC TOILET 106 | 2#12 | #12 | 3/4 | 8 |
| 9 | _ | - | — | - | | 2.25 | | — | — A 1 | 20 | 0.8 | | RECEPT-TOILET 101 | 2#12 | #12 | 3/4 | 10 |
| 11 | 3#10 | #10 | 3/4 | DRYER | | | 2.25 | 30 | 2в1 | 20 | | 0.8 | RECEPT-TOILET 102 | 2#12 | #12 | 3/4 | 12 |
| 13 | _ | - | _ | - | | 2.25 | | _ | — A 1 | 20 | 0.8 | | RECEPT-HC TOILET 104 | 2#12 | #12 | 3/4 | 14 |
| 15 | 2#12 | #12 | 3/4 | WASHER | | | 1.2 | 20 | 1в1 | 20 | | 0.2 | RECEPT-MECH RM | 2#12 | #12 | 3/4 | 16 |
| 17 | 2#12 | #12 | 3/4 | WASHER | | 1.2 | | 20 | 1 A 1 | 20 | 0.5 | | LIGHTING | 2#12 | #12 | 3/4 | 18 |
| 19 | 2#10 | #10 | 3/4 | RM 109 - HEATER | | | 2.0 | 25 | 2в1 | 20 | | 0.4 | LIGHTING | 2#12 | #12 | 3/4 | 20 |
| 21 | _ | _ | _ | - | | 2.0 | | _ | - A 2 | 25 | 2.0 | | RM 101 – HEATER | 2#10 | <i>#</i> 10 | 3/4 | 22 |
| 23 | 2#10 | <i>#</i> 10 | 3/4 | RM 108 – HEATER | | | 2.0 | 25 | 2в- | _ | | 2.0 | - | _ | _ | _ | 24 |
| 25 | _ | _ | _ | - | | 2.0 | | _ | - A 2 | 25 | 2.0 | | RM 102 – HEATER | 2#10 | <i>#</i> 10 | 3/4 | 26 |
| 27 | 2#10 | <i>#</i> 10 | 3/4 | RM 107 – HEATER | | | 2.0 | 25 | 2в- | _ | | 2.0 | - | _ | _ | _ | 28 |
| 29 | _ | _ | _ | - | | 2.0 | | _ | - A 2 | 25 | 2.0 | | RM 103 – HEATER | 2#10 | <i>#</i> 10 | 3/4 | 30 |
| 31 | 2#10 | #10 | 3/4 | RM 106 - HEATER | | | 2.0 | 25 | 2в- | - | | 2.0 | - | _ | _ | - | 32 |
| 33 | _ | _ | _ | - | | 2.0 | | _ | - A 2 | 25 | 2.0 | | RM 104 – HEATER | 2#10 | <i>#</i> 10 | 3/4 | 34 |
| 35 | 2#10 | <i>#</i> 10 | 3/4 | CHASE – HEATER | | | 2.0 | 25 | 2в- | _ | | 2.0 | — | _ | _ | _ | 36 |
| 37 | _ | _ | _ | - | | 2.0 | | _ | - A 2 | 25 | 2.0 | | RM 105 – HEATER | 2#10 | <i>#</i> 10 | 3/4 | 38 |
| 39 | 2#12 | #12 | 3/4 | RM 109 - HAND DRYER | | | 1.0 | 20 | 1в— | · _ | | 2.0 | - | _ | _ | _ | 40 |
| | | | CONN | I LOAD DEM FACT DEM LOAD | | 33.70 | 34.70 | | | | 13.70 | 13.00 | | | • | | |
| | LIGHTING | GLOAD | | 0.9 1.0 0.9 | | | | | | | | | PANEL | 'BH' | | | |
| | HVAC LO | AD | | 5.8 NEC 5.8 36.0 0.8 28.8 | | | | | | | | | | | | | |
| | EQUIPME | ENT LOAD | | 48.4 0.8 38.7 | | | | | | | | | MOUNTING <u>SURFACE</u> MAINS | 600A MLO | <u> </u> | <u> </u> | W |
| | KITCHEN | | | 0.05 | | | | | | | | | NEUTRAL BUS RATING 100% | _ | | | |
| | DEMAND | JAD AMPS | | 91.1 /4.2 309A | | | | | | | | | A.I.C. RATING <u>ZZKA</u> | | | | |
| | | | | | | | | | | | | | | | | | |

| | | | | | PA | NF | | SCHF | DU | IF | _ | PA | ١N | FI | 'Bŀ | +' (| RI(| GH | Т | SF | СТ | ON) | | | | |
|-----|--|---|---------|---|--------------------------------------|-----------------------------------|----------|--|------|------|------|------|------------|------|------|------|------|-----------------------|--|----------------------------------|-----------------------------|---------------------------------|--|------------------------|--------------------|---------|
| | # WIRES | GROUND | CONDUIT | | 1 / 11 | ITI | ĒM | OUTIL | NOTE | К | /A | TRIP | <u>ASE</u> | | K | | NOTE | | | | ITEM | 011) | # WIRES | GROUND | CONDUIT | |
| 41 | 2 <i>#</i> 12 | #12 | 3/4 | RM | 108 | _ F | | DRYFR | | 1 0 | D | 20 | 14 | 1 20 | | D | | RM | 108 | _ | ΗΔΝΓ | | 2 2 # 1 2 | #12 | 3/4 | 42 |
| 4.3 | 2#12 | #12 | 3/4 | RM | 107 | _ F | | | | 1.0 | 1.0 | 20 | 1 B | 1 20 | 1.0 | 1 0 | | RM | 107 | _ | HAND | | 2 2 # 12 | #12 | 3/4 | 44 |
| 45 | 2#12 | #12 | 3/4 | RM | 106 | - F | | | | 1 0 | 1.0 | 20 | 1 A | 1 20 | 1.0 | 1.0 | | RM | 106 | _ | HAND | | <u>x 2#12</u> | #12 | 3/4 | 46 |
| 47 | 2#12 | #12 | 3/4 | FX | TFRIOF | א ס | | IGHT | | | 0.1 | 20 | 1 B | | | | | | 100 | | | DIVIE | <u> </u> | | | 48 |
| 49 | | | - / · | | | | <u> </u> | | | | | | A | | | | | | | | | | | | | 50 |
| 51 | | | | | | | | | | | | | В | | | | | | | | | | | | | 52 |
| 53 | | | | | | | | | | | | | A | | | | | | | | | | | | | 54 |
| 55 | | | | | | | | | | | | | В | | | | | | | | | | | | | 56 |
| 57 | | | | | | | | | | | | | A | | | | | | | | | | | | | 58 |
| 59 | | | | | | | | | | | | | В | | | | | | | | | | | | | 60 |
| 61 | | | | | | | | | | | | | Α | | | | | | | | | | | | | 62 |
| 63 | | | | | | | | | | | | | В | | | | | | | | | | | | | 64 |
| 65 | | | | | | | | | | | | | Α | | | | | | | | | | | | | 66 |
| 67 | | | | | | | | | | | | | В | | | | | | | | | | | | | 68 |
| 69 | | | | | | | | | | | | | Α | | | | | | | | | | | | | 70 |
| 71 | | | | | | | | | | | | | В | | | | | | | | | | | | | 72 |
| 73 | | | | | | | | | | | | | Α | | | | | | | | | | | | | 74 |
| 75 | | | | | | | | | | | | | В | | | | | | | | | | | | | 76 |
| 77 | | | | | | | | | | | | | Α | | | | | | | | | | | | | 78 |
| 79 | | | | | | | | | | | | | В | | | | | | | | | | | | | 80 |
| | LIGHTING RECEPT HVAC LC EQUIPME KITCHEN TOTAL L DEMAND | G LOAD LOAD AD ENT LOAD I LOAD OAD AMPS | CONN | U LOAI 0.1 0.0 0.0 6.0 6.1 | D DEM 1. NE 1. 0. 0.0 | FACT 0 EC .0 .8 65 | DEM | LOAD 0.1 0.0 0.0 4.8 4.9 20A | | 2.00 | 1.10 | | | | 2.00 | 1.00 | - | EL MO NE A.I | Lectric. Ounting Eutral I.C. Rati | AL DA ⁻ 3 <u> </u> | TA <u>SURFA(</u> 22K/ | PAN 240/120V CE MAINS | EL 'BH' PANEL TYP 600A ML(0% | e <u>Se</u>) Phase | <u>E SPEC</u> 1Ø/3 | - 3W |

| | | LIGH | r fixture schei | DULE | | | | | |
|--------|---|-----------------|---|-------|--------------|----|----------|-------|---|
| TYDE | DESCRIPTION | | | | LED | | | | DEMARKS |
| | | | | COLOR | LUMENS WATTS | | | VULIS | |
| PA-29 | 36" CEILING FAN WITH 3 BLADES, INTEGRAL LIGHT AND WHITE FINISH. | HUNTER | AKER COLLECTION | 3000 | 800 | 18 | PENDANT | 120 | |
| RA-14 | 5" ROUND SLIM DOWNLIGHT WITH SELECT CCT AND IC RATED. | ELITE LIGHTING | RL575-1100-DIMTR-12 0-27/30/35/40/50-9 0-WH | 3000 | 1100 | 14 | RECESSED | 120 | WET/DAMP LOCATION LISTED |
| RB-15 | 6" ROUND SLIM DOWNLIGHT WITH SELECT CCT AND IC RATED. | ELITE LIGHTING | RPL664-800L-DIMTR-1 20-27/30/35/40/50- 90-WH | 3000 | 800 | 15 | RECESSED | 120 | |
| SA-24 | 4' LINEAR SURFACE FIXTURE WITH FROSTED ACRYLIC LENS, SELECTABLE LUMEN OUTPUT AND CCT. | ELITE LIGHTING | 4-0C1-LED-3000L-DIM 10-MV0LT-35/40/50K -85-V2 | 3500 | 3000 | 24 | SURFACE | 120 | |
| SB-24 | 4' LINEAR SURFACE FIXTURE WITH FROSTED ACRYLIC LENS, SELECTABLE LUMEN OUTPUT AND CCT. | ELITE LIGHTING | 4-0C1-LED-3000L-DIM 10-MV0LT-35/40/50K -85-V2-0-EMG-LED -10W | 3500 | 3000 | 24 | SURFACE | 120 | PROVIDE WITH EMERGENCY BATTERY BACKUP. |
| SLA-14 | EXTRUDED & DIECAST ALUMINUM BOLLARD WITH TYPE 2 DISTRIBUTION AND DARK SKY COMPLIANT. | LIGMAN LIGHTING | UPRA-10012-14-T2-W 30-01-120/277 | 3000 | 1660 | 14 | SITE | 120 | |

| (TYP.OF 8 CABINS) | | | | HANDHOLE | (TYP. OF 2) ONE- | LINE RISI | | EXTERIOR FACADE) | | | | | |
|--|-----|-------------|----|----------|----------------------------|-----------|---------------------|------------------|----------------|---------|----------------------------------|--|--|
| | | | | | NOT TO SCA | ALE | | | | | BID SET | | |
| | | REVISIONS | | | ANNE ARUNDEL COUNTY | | | | | | | | |
| | NO. | DESCRIPTION | BY | DATE | DEPARTMENT OF PUBLIC WORKS | | | | | | | | |
| | | | | | APPROVED | DATE | APPROVED | DATE | SCALE: | N.T.S. | JUG BAY EDUCATION, RESEARCH, AND | | |
| | | | | | | | | | DRAWN BY: | M.J.F. | DISCOVERY FIELD STATION | | |
| | | | | | CHIEF ENGINEER | | PROJECT MANAGER | | CHECKED BY: | J.A.B. | ONE-LINE RISER, SCHEDULES | | |
| | | | | | APPROVED | DATE | APPROVED | DATE | SHEET NO. 58 | OF 63 | | | |
| I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the lower of the State of Maximum | | | | | - | | | | PROJECT NO.: | P584501 | F201 | | |
| License # <u>18795</u> Expiration Date: <u>08/06/24</u> | | | | | ASSISTANT CHIEF ENGINEER | | CHIEF, RIGHT-OF-WAY | | CONTRACT NO .: | P584500 | 1 | | |

| ILEY COX & MAGNANI, LLC |
|--|
| East Joppa Road Suite 200 Baltimore, MD 21286 |
| 0.512.4500 www.wbcm.com |
| SCM |
| for Tomorrow® |

| 15 | | |
|----|--|---|
| 17 | | |
| 19 | | |
| 21 | 2 # 10 | #1 |
| 23 | 2#10 | #1 |
| 25 | | |
| 27 | | |
| 29 | | |
| 31 | | |
| 33 | | |
| 35 | | |
| 37 | | |
| 39 | | |
| | LIGHTING RECEPT I HVAC LO. EQUIPME KITCHEN TOTAL LO DEMAND | s Load Load Ad SNT Load Load Dad Amps |
| | | |
| | | |
| | # WIRES | GROU |

| | | | | PA | NEL | SCHE | DU | LE | | PA | N | EL | _ | CB | N' | $(\top$ | YPICAL OF 8) | | | | |
|-------------------|--|---|-----------------|--|--|---|-------------|-----------------|------------------|--------------|-------|-----|-------------|---------|---------|---------|--|---------------------------------|---------------------|-----------------|-------------------|
| CIRCUIT NUMBER | # WIRES & SIZE | GROUND WIRE SIZE | CONDUIT SIZE | | ITEM | | NOTE | KV A | 'A B | TRIP AMPS | POLE | | irip Mps | KV A | /A B | NOTE | ITEM | # WIRES & SIZE | GROUND WIRE SIZE | CONDUIT SIZE | CIRCUIT NUMBER |
| 1 | 2#12 | #12 | 3/4 | RECEPT | -BEDR | MOC | 1 | 1.2 | | 20 | 1 A | 2 2 | 25 | 2.0 | | | WH-1 | 2#10 | # 10 | 3/4 | 2 |
| 3 | 2#12 | #12 | 3/4 | RECEPT | -BEDRO | MOC | 1 | | 1.2 | 20 | 1 B - | | - | | 2.0 | | — | _ | _ | _ | 4 |
| 5 | 2#12 | #12 | 3/4 | SMOKE | DETEC1 | OR | 1 | 0.1 | | 20 | 1 A | 2 2 | 25 | 2.0 | | | WH-1 | 2#10 | # 10 | 3/4 | 6 |
| 7 | | | | SPARE | | | 1 | | | 20 | 1 B · | | - | | 2.0 | | - | - | - | - | 8 |
| 9 | | | | SPARE | | | 1 | | | 20 | 1 A | 2 2 | 25 | 1.3 | | | SPRINKLER PUMP | 2#10 | # 10 | 3/4 | 10 |
| 11 | | | | SPARE | | | 1 | | | 20 | 1 B · | | - | | 1.3 | | - | - | - | - | 12 |
| 13 | | | | | | | | | | | Α | | | | | | | | | | 14 |
| 15 | | | | | | | | | | | В | | | | | | | | | | 16 |
| 17 | | | | | | | | | | | Α | | | | | | | | | | 18 |
| 19 | | | | | | | | | | | В | | | | | | | | | | 20 |
| | LIGHTING RECEPT I HVAC LO. EQUIPME KITCHEN TOTAL LO DEMAND | G LOAD Load Ad Int Load Load Dad AMPS | CONN | LOAD DEM 0.0 2.4 8.0 2.6 13.0 | A FACT DE 1.25 NEC 0.8 0.5 0.65 | IM LOAD 0.0 2.4 6.4 1.3 - 10.1 42A | NOTES 1. | 1.30 PROVIDE | 1.20 WITH AFC | CI BREAK | KER. | | | 5.30 | 5.30 | | PANEL ELECTRICAL DATA <u>120/208V</u> MOUNTING <u>SURFACE</u> MAINS NEUTRAL BUS RATING <u>100%</u> A.I.C. RATING <u>10KA</u> | 'CBN' PANEL TYPE 100A MCB | SE PHASE | E SPEC 1Ø/3 | <u>w</u> |

| | | | | PANE | | SCF | HED | UL | .E | | PA | NEL | , | MDP' | | | | |
|-------------------|--|---|-----------------|--|------|---------|---------|--------------|------------------------|--------------|---------|---------|------|--|----------------------------------|---------------------|-----------------|-------------------|
| CIRCUIT NUMBER | # WIRES & SIZE | GROUND WIRE SIZE | CONDUIT SIZE | ITEM | NOTE | KV A | 'A B | TRIP AMPS | POLE PHASE PNI F | TRIP AMPS | K\ A | /A B | NOTE | ITEM | # WIRES & SIZE | GROUND WIRE SIZE | CONDUIT SIZE | CIRCUIT NUMBER |
| 1 | 3#3 | #8 | 1-1/4 | CABIN #1 | | 5.1 | | 80 | 2 A 2 | 2 80 | 5.1 | | | CABIN #2 | 3#3 | #8 | 1-1/4 | 2 |
| 3 | | | <u> </u> | - | | | 5.1 | | — в – | | | 5.1 | | - | _ | _ | — | 4 |
| 5 | 3#3 | #8 | 1-1/4 | CABIN #3 | | 5.1 | | 80 | 2 A 2 | 2 80 | 5.1 | | | CABIN #4 | 3#3 | #8 | 1-1/4 | 6 |
| 7 | | | <u> </u> | - | | | 5.1 | | —в– | | | 5.1 | | - | — | - | _ | 8 |
| 9 | 3#3 | #8 | 1-1/4 | CABIN #5 | | 5.1 | | 80 | 2 A 2 | 2 80 | 5.1 | | | CABIN #6 | 3#3 | #8 | 1-1/4 | 10 |
| 11 | | | <u> </u> | - | | | 5.1 | | — в – | | | 5.1 | | - | _ | - | _ | 12 |
| 13 | 3#3 | #8 | 1-1/4 | CABIN #7 | | 5.1 | | 80 | 2 4 2 | 2 80 | 5.1 | | | CABIN #8 | 3#3 | #8 | 1 - 1/4 | 14 |
| 15 | | | <u> </u> | | | | 5.1 | _ | — В — | | | 5.1 | | - | _ | _ | — | 16 |
| 17 | i | | | BATHHOUSE | | 39.5 | | 600 | 2 A 2 | 20 | 0.0 | | | SPARE | | | | 18 |
| 19 | · | | | - | | | 39.5 | _ | — в – | | | 0.0 | | - | _ | — | — | 20 |
| 21 | 2#10 | #10 | 3/4 | PARKING LOT LIGHTING | | 0.1 | | 20 | 1 A 2 | 20 | 0.5 | | | WELL PUMP | 2#10 | #10 | 1 | 22 |
| 23 | 2#10 | #10 | 3/4 | SITE LIGHTING | | | 0.2 | 20 | 1в– | | | 0.5 | | - | _ | - | _ | 24 |
| 25 | i | | 1 | | | | | | A | | | | | | | | | 26 |
| 27 | ·i | | 1 | | | | | | В | | | | | | | | | 28 |
| 29 | i | | | | | | | | A | | | | | | | | | 30 |
| 31 | ·i | | 1 | | | | | | В | | | | | | | | | 32 |
| 33 | | | 1 | | | | | | A | | | | | | | | | 34 |
| 35 | · | | | | | | | | В | | | | | | | | | 36 |
| 37 | · | | | | | | | | A | | | | | | | | | 38 |
| 39 | · | | 1 | | | | | | В | | | | | | | | | 40 |
| | LIGHTING RECEPT HVAC LC EQUIPMI KITCHEN TOTAL L | 3 LOAD LOAD)AD ENT LOAD V LOAD -OAD | CONN | LOAD DEM FACT DEM LOAD 0.0 1.0 0.0 <td></td> <td>60.00</td> <td>60.10</td> <td></td> <td></td> <td></td> <td>20.90</td> <td>20.90</td> <td></td> <td>PANEL ELECTRICAL DATA <u>240/120V</u> MOUNTING <u>SURFACE</u> MAINS _ NEUTRAL BUS RATING <u>100%</u> A.I.C. RATING <u>22KA</u></td> <td>'MDP' PANEL TYPE 1000A MCB</td> <td><u>SE</u> PHASE</td> <td><u>E SPEC</u></td> <td><u>w</u></td> | | 60.00 | 60.10 | | | | 20.90 | 20.90 | | PANEL ELECTRICAL DATA <u>240/120V</u> MOUNTING <u>SURFACE</u> MAINS _ NEUTRAL BUS RATING <u>100%</u> A.I.C. RATING <u>22KA</u> | 'MDP' PANEL TYPE 1000A MCB | <u>SE</u> PHASE | <u>E SPEC</u> | <u>w</u> |
| | | | | 6794 | | | | | | | | | | A.i.o. IV(III) | | | | |

GENERAL NOTES:

I. CODE

A. ALL CONSTRUCTION SHALL CONFORM TO 2018 INTERNATIONAL BUILDING CODE, AND ANNE ARUNDEL COUNTY LOCAL AMENDMENTS.

II. DESIGN LOADING

A. THE DESIGN DEAD LOAD FOR THE FRAMING IS AS FOLLOWS:

| ROOF | |
|--------------------|------|
| ROOFING | 2 PS |
| STRUCTURAL FRAMING | 6 PS |
| NSULATION | 3 PS |
| MISCELLANEOUS | 4 PS |
| M/E/P | 5 PS |
| | |

TOTAL DEAD LOAD = 20 PSF

B. THE FOLLOWING LIVE LOADS WERE USED IN DESIGN:

IBC 1603.1.3 - ROOF SNOW LOAD

IBC 1603.1.2 - ROOF LIVE LOAD

| THERN | GROUND SNOW LOAD (P/G) FLAT SNOW LOAD (P/F) SNOW EXPOSURE FACTOR (C/E) SNOW LOAD IMPORTANCE FACTOR (I) IAL FACTOR (C/T) SLOPE FACTOR (CS) SLOPED SNOW LOAD (PS) | = 25 PSF = 21.3 PSF = 1.0 = 1.0 = 1.2 = 1.1 = 19 |
|---------|--|---|
| IBC 16 | 03.1.4 - WIND LOAD | |
| | ULTIMATE DESIGN WIND SPEED (V/ULT) NOMINAL DESIGN WIND SPEED (V/ASD) RISK CATEGORY WIND EXPOSURE INTERNAL PRESSURE COEFFICIENT | = 115 MPH = 89 MPH = II = C = ±0.18 |
| IBC 160 | 03.1.5 - EARTHQUAKE DESIGN DATA RISK CATEGORY SEISMIC IMPORTANCE FACTOR (I/E) MAPPED SPECTRAL RESPONSE ACCELEF S/S = 0.1327 S/1 = 0.0520 | = II = 1.0 RATION PARAMETERS; |
| | SITE CLASS DESIGN SPECTRAL RESPONSE ACCELER S/DS = 0.142 S/D1 = 0.083 | = D ATION PARAMETERS; |
| | SEISMIC DESIGN CATEGORY = B BASIC SEISMIC FORCE-RESISTING SYSTE LIGHT FRAME WALLS AND WOOD- BASIC SEISMIC FORCE-RESISTING SYSTE TIMBER FRAME | EM (BATHHOUSE & CABI FRAMED SHEAR WALLS EM (GRANDSTAND): |
| | DESIGN BASE SHEAR = KIPS (BATHHOU DESIGN BASE SHEAR = KIPS (CABIN) SEISMIC RESPONSE COEFFICIENT (CS) = SEISMIC RESPONSE COEFFICIENT (CS) = RESPONSE MODIFICATION COEFFICIENT RESPONSE MODIFICATION COEFFICIENT ANALYSIS PROCEDURE USED = EQUIVAL | JSE) (BATHHOUSE) (CABIN) (R) = (BATHHOUSE) (R) = (CABIN) ENT LATERAL FORCE |

= 30 PSF

- C. ALL STRUCTURAL COMPONENTS HAVE BEEN DESIGNED FOR THE DEAD LOADS SHOWN ON THE PLANS AND THE LIVE LOADS SHOWN ABOVE. IT IS THE RESPONSIBILITY TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF THOSE ITEMS NECES FACILITATE CONSTRUCTION INCLUDING BUT NOT LIMITED TO FALSEWORK, FORMWORK, STAGING, BRACING, SHEETING AND SHORING, ETC.
- D. THE STABILITY OF THE STRUCTURE IS DEPENDENT UPON THE DIAPHRAGM ACTION OF THE ROOFS. THE CONTRACTOR IS COMPLETELY RESPONSIBLE OF CONSTRUCTIONS AND SHALL PROVIDE ALL GUYS, BRACING AND SHORING REQUIRED TO ACCOMMODATE ALL INTERIM LOADING CONDITIONS THRO CONSTRUCTION PHASE.

III. GENERAL

- A. THE CONTRACTOR SHALL FIELD CHECK AND VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING WORK PRIOR TO FABRICATION OF ANY NEW MATI
- B. THE CONTRACTOR IS ADVISED THAT ALL PLANS, DIMENSIONS, AND DETAILS DEPICT FIELD CONDITION AS SHOWN. MINOR VARIATIONS ARE TO BE EXP DEVIATIONS FROM THE CONTRACT DOCUMENTS SHALL BE APPROVED BY THE ARCHITECT IN WRITING PRIOR TO PROCEEDING.
- C. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SATISFY HIMSELF AS TO THE LOCATION OF ANY UTILITIES IN THE IMMEDIATE VICINITY OF CONSTRUCTION PREVENT DAMAGE TO THEM. SHOULD ANY DAMAGE TO SUCH UTILITIES OCCUR, THE CONTRACTOR SHALL BE REQUIRED TO REPAIR SUCH DAMAGE A EXPENSE AND TO THE SATISFACTION OF THE OWNER.
- D. CONSULT THE ARCHITECTURAL DRAWINGS FOR VERIFICATION OF LOCATION AND DIMENSION OF CHASES, INSERTS, OPENINGS, SLEEVES, WASHERS, DEPRESSIONS AND OTHER PROJECT REQUIREMENTS.
- E. ALL WORK SPECIFIED HEREIN SHALL BE INSPECTED IN ACCORDANCE WITH THE BUILDING CODE AND ALL LOCAL ORDINANCES. THE CONTRACTOR SHA EXPERIENCED, QUALIFIED INSPECTOR TO PERFORM ALL THE REQUIRED INSPECTION WORK. THE ENGINEER WILL NOT PERFORM THE REQUIRED INSP OF THEIR DESIGN SERVICES. THE ENGINEER MAY VISIT THE SITE TO ASCERTAIN GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS. SUCH NOT TO BE CONSTRUED AS MEETING ANY INSPECTION REQUIREMENTS UNLESS THE ENGINEER SPECIFICALLY SO STATES IN WRITING.
- F. ANY REVIEW OF STRUCTURAL ITEM SHOP DRAWINGS BY (THE STRUCTURAL ENGINEER) IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT THE CONTRACT DOCUMENTS. NO DETAILED CHECK OF QUANTITIES OR DIMENSIONS WILL BE MADE.
- G. AT THE TIME OF SHOP DRAWING SUBMISSION, THE GENERAL CONTRACTOR SHALL STATE IN WRITING ANY DEVIATION OR OMISSIONS FROM THE CONT THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS BEFORE SUBMISSION AND MAKE ALL CORRECTIONS AS HE DEEMS NECESSARY.
- H. SUBMIT SHOP DRAWINGS FOR SPECIFIC AREAS IN THEIR ENTIRETY. THAT IS, IN A GIVEN AREA OF THE BUILDING INCLUDE ALL COLUMNS, BASE PLATES CONNECTION DETAILS. SHOP DRAWINGS FOR SIMILAR FLOORS SHALL BE SUBMITTED IN THE SAME PACKAGE.
- I. THE STRUCTURAL CONTRACT DOCUMENTS ARE NOT TO BE REPRODUCED FOR USE AS SHOP DRAWINGS.
- J. SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY THE GENERAL CONTRACTOR. IF A CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS, THE ENGINEER WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION OR FOR THE DESIGN OF THE PROJECT.

| | IV. FOUNDATIONS | <u>VII. WOOD F</u> |
|---|--|-----------------------|
| | A. SPREAD FOOTING FOUNDATIONS | A. ALL I |
| | 1. THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 2'-6" BELOW FINISH GRADE. | B. ALL |
| | 2 ALL FOOTINGS HAVE BEEN DESIGNED FOR AN ASSUMED ALLOWABLE NET SOIL BEARING PRESSURE OF 1500 PSE. IT SHALL BE THE CONTRACTOR'S | C. ALLS |
| | RESPONSIBILITY TO SECURE THE SERVICES OF A GEOTECHNICAL ENGINEER FOR FIELD VERIFICATION OF THE ASSUMED SOIL BEARING PRESSURES. SHOULD THE SOIL BEARING PRESSURE BE FOUND TO BE LESS THAN THIS VALUE, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER. IN THIS CASE, THE FOOTINGS WILL EITHER HAVE TO BE LOWERED OR RE-DESIGNED. CONTRACTOR SHALL RECEIVE THE APPROVAL OF THE TESTING AGENCY PRIOR TO POURING | VIII. <u>PRE-EN</u> |
| | ALL FOUNDATIONS. 3. ALL FILL UNDER FOOTINGS AND SLABS SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DRY DENSITY PER ASTM D-1577, MODIFIED PROCTOR. | A. THE PUBL |
| | 4. ALL EXCAVATION, BACKFILLING, AND FILLING OPERATIONS BENEATH THE BUILDING SLAB AND FOUNDATIONS, AND ALL COMPACTION TESTS AND INSPECTION, SHALL BE DONE UNDER THE DIRECTION AND SUPERVISION OF A REGISTERED PROFESSIONAL SOILS ENGINEER RETAINED BY THE OWNER. ALL SOIL, | B. SHO ENGI |
| | EQUIPMENT AND PROCEDURES SHALL BE APPROVED BY THE SOILS ENGINEER PRIOR TO ALL EARTHWORK OPERATIONS. | C. FOO |
| | V. CAST-IN-PLACE CONCRETE A. GENERAL CONSTRUCTION | AND THE |
| | 1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST APPROVED (BY LOCAL GOVERNMENT) EDITIONS OF THE FOLLOWING A.C.I. AND A.S.T.M. DOCUMENTS: | D. IT SH PRO |
| | ACI-302, IR FLOOR AND SLAB CONSTRUCTION ACI-318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE | F REG |
| | ACI-214 COMPRESSION TESTS | BUIL |
| | ACI-306 COLD WEATHER ACI-315 DETAILING | FINA |
| | ACI-347 FORMWORK | F. THE |
| | ACI-305 HOT WEATHER | PRE- UNDI |
| | ACI-304 PLACING CONCRETE | |
| | ASTM C94 READY-MIX CONCRETE | G. THE |
| | 2. ALL FIELD AND LAB TESTING OF CONCRETE SHALL CONFORM TO THE LATEST APPROVED (BY LOCAL GOVERNMENT) EDITIONS OF ASTM: | H. MINI |
| | ASTM_C31 FIELD CYLINDER SPECIMENS ASTM_C143 SI LIMP TEST | I. EACH |
| | ASTM C143 AIR CONTENT (WHEN REQUIRED) | DIFF |
| | ASTM C39 LAB TESTING CYLINDERS | |
| | ASTM C172 SAMPLING FRESH CONCRETE ASTM C42 HARDENED CORES (WHEN REQUIRED) | DETE |
| | 3. THE CONTRACTOR IS CAUTIONED THAT THE SCHEDULED CONSTRUCTION SEQUENCE FOR THE CONCRETE WORK MAY REQUIRE HIGHER CONCRETE STRENGTHS FOR SUPPORT OF CONSTRUCTION LOADINGS. CONCRETE MEMBERS CANNOT CARRY THEIR DESIGN LOADING UNTIL THE SPECIFIED 28-DAY COMPRESSIVE STRENGTHS ARE OBTAINED. CONTRACTOR SHALL INCREASE CONCRETE STRENGTHS AS REQUIRED. | K. THE CON WITH |
| | 4. ALL CONCRETE SHALL BE STONE AGGREGATE CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE AN AIR ENTRAINMENT OF 5%±1%. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED. MAXIMUM AGGREGATE SIZE | L. THE |
| | FOR CONCRETE SHALL BE 1", AND MAXIMUM SLUMP SHALL BE 4", AND 3" FOR SLABS ON GRADE. ALL CONCRETE, EXCEPT FOOTINGS, SHALL CONTAIN A WATER REDUCING ADMIXTURE. | M. THE |
| | 5. ALL CONCRETE MIX DESIGNS AND ADMIXTURES SHALL BE AFFROVED BY THE ENGINEER 30 DATS FRIOR TO INITIATION OF FIRST FOUR. | 1001 |
| | 6. ALL REINFORCING BARS SHALL CONFORM TO ASTM A-615 GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. | |
| | HOURS PRIOR TO THE POURING OF ANY CONCRETE. | |
| IE CONTRACTOR'S ESSARY TO | 8. TESTING FREQUENCY: OBTAIN ONE CONCRETE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE EXCEEDING 5 CU. YD. BUT LESS THAN 25 CU. YD. PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF. | |
| E FOR THE METHODS | a. CAST AND LABORATORY CURE ONE SET OF TWO STANDARD CYLINDERS. | |
| ROUGHOUT THE | D. CAST AND FIELD CURE TWO SETS OF TWO STANDARD CYLINDERS. | |
| | 9. COMPRESSIVE STRENGTH TESTS: ASTM C39/C 39M; TEST ONE SET OF TWO LABORATORY CURED SPECIMENS AT 7 DAYS AND ONE SET OF TWO SPECIMENS AT 28 DAYS. | |
| TERIALS. | a. TEST ONE SET OF TWO FIELD-CURED SPECIMENS AT 7 DAYS AND ONE SET OF TWO SPECIMENS AT 28 DAYS. HOLD LAB-CURED CYLINDERS FOR TESTING AT 56 DAYS, IF REQUIRED. | |
| (PECTED AND ANY | b. A COMPRESSIVE-STRENGTH TEST SHALL BE THE AVERAGE COMPRESSIVE STRENGTH FROM A SET OF TWO SPECIMENS OBTAINED FROM SAME COMPOSITE SAMPLE AND TESTED AT AGE INDICATED. | |
| ION SO AS TO AT HIS OWN | 10. CONCRETE EXPOSED TO PUBLIC VIEW SHALL MEET THE REQUIREMENTS FOR ARCHITECTURAL CONCRETE OF ACI 301. | |
| S, DRIPS, REVEALS, | VI. WOOD FRAMING | |
| | A. ALL EXTERIOR EXPOSED LUMBER SHALL BE PRESSURE-TREATED SOUTHERN PINE #2 (ALL WOOD) OR BETTER. ALL FABRICATION, ERECTION, OTHER PROCEDURES, AND | |
| HALL HIRE AN | | |
| SPECTION AS A PART H SITE VISITS ARE | B. ALL LUMBER (EXCEPT FOR EXTERIOR & IN CONTRACT W/ CONCRETE) FOR STOD WALLS SHALL BE #2 OR BETTER (HEM-FIR OR SPRUCE-PINE-FIR) AND MINIMUM UNIT STRESSES SHALL CONFORM TO THE CURRENT "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION". C. ALL LUMBER FOR RAFTERS, BEAMS, POSTS & HEADERS SHALL BE #2 OR BETTER U.N.O. (HEM-FIR OR DOUGLAS-FIR OR SOUTHERN PINE) AND MINIMUM UNIT STRESSES. | |
| | SHALL CONFORM TO THE CURRENT "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION". | |
| TAS PRESENTED BY | D. ALL WOOD FRAMING SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION SPECIFICATION AITC 105 "RECOMMENDED PRACTICE FOR THE ERECTION OF STRUCTURAL TIMBER FRAMING, AITC 106," "CODE OF STANDARD PRACTICE", AND "THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION," LATEST EDITION, AS PUBLISHED BY THE NATIONAL FOREST PRODUCTS ASSOCIATION. | |
| NTRACT DOCUMENTS. | E. ALL STEEL TIMBER FASTENINGS AND CONNECTORS SHALL BE A MINIMUM OF A 16 GA. GALVANIZED STEEL WITH A RATED LOAD CAPACITY EQUAL TO OR EXCEEDING THE IMPOSED LOADING REQUIREMENTS. ALL NAILING SHALL BE PER THE INTERNATIONAL BUILDING CODE. CHAPTER 23, UNLESS NOTED OTHERWISE. | |
| ES, BEAMS AND | F. ANCHOR ALL SILL PLATES (PRESSURE-TREATED) TO CONCRETE SLABS OR MASONRY WALLS WITH 1/2" ON CENTER X 1'-3" ANCHOR BOLTS SPACED AT 32 INCHES ON CENTER. G. 2x6 TONGUE & GROOVE DECKING SHALL BE SOLUTHERN PINE #1 | |
| | | |
| IF A CONTRACTOR | | |

| EY COX & MAGNANI, LLC | | NO. | DESCRIPTION | BY | DATE | |
|---|---|-----|-------------|----|------|-------------------------|
| Baltimore, MD 21286 12.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| | | | | | | APPROVED |
| r Tomorrow® | 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 other deal | | | | | |
| | License # Expiration Date: | | | | | ASSISTANT CHIEF ENGINEE |

RAFTERS, JOISTS, AND BEAMS

DOUBLE JOISTS OR HEADERS SHALL BE SPIKED TOGETHER WITH 10D NAILS @ 16" O/C.

WOOD BEAMS MADE UP OF 3 OR MORE X'S SHALL BE BOLTED TOGETHER WITH 1/2" O/C BOLTS @ 32" O/C.

L STAIR STRINGERS SHALL BE ANCHORED TO BEAM W/2-TECO TRIP-L-GRIPS, MINIMUM.

NGINEERED PAVILION

E PAVILION BUILDING SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE "STEEL CONSTRUCTION MANUAL" AS BLISHED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).

OP DRAWINGS AND CALCULATIONS FOR ALL PAVILION BUILDING COMPONENTS SHALL BE SUBMITTED FOR REVIEW AND SHALL BE SEALED BY A PROFESSIONAL GINEER REGISTERED IN THE STATE OF MARYLAND.

DTING AND ANCHOR SIZES AND REINFORCEMENT HAVE BEEN DESIGNED ASSUMING A PINNED CONNECTION AT THE COLUMN BASE. SHOULD BUILDING NUFACTURER REQUIRE FIXITY AT THE COLUMN BASE, THE CONTRACTOR SHALL INCREASE THE SIZES OF FOOTINGS, PEDESTALS AND REINFORCEMENT AS REQUIRED D AT NO INCREASE IN COST. SUBMIT DESIGN DRAWINGS AND CALCULATIONS OF ALTERNATE FOUNDATIONS SEALED BY A PROFESSIONAL ENGINEER REQUESTED IN E STATE OF MARYLAND.

HALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL DIMENSIONS AND OTHER WORK WITH THE PAVILION BUILDING MANUFACTURER'S DESIGNS, AND DVIDE ALL POCKETS, RECESSES, ANCHOR BOLTS, INSERTS AND OTHER ELEMENTS REQUIRED FOR A COMPLETE FACILITY.

GISTERED PROFESSIONAL ENGINEER IN THE STATE OF MARYLAND SHALL CERTIFY THE DESIGN, FABRICATION, AND ERECTION OF THE PRE-ENGINEERED PAVILION LDING. CERTIFICATION SHALL BE BY THE SEAL AND SIGNATURE OF THE REGISTERED PROFESSIONAL ENGINEER ON THE MANUFACTURED DRAWINGS AND ON THE AL SHOP AND FIELD INSPECTION REPORTS.

E TOTAL RESPONSIBILITY OF THE DESIGN AND CONSTRUCTION OF THE PRE-ENGINEERED PAVILION BUILDING SHALL BE BORNE BY THE CONTRACTOR, THE E-ENGINEERED PAVILION BUILDING MANUFACTURER, AND THEIR REGISTERED PROFESSIONAL ENGINEER. THE STRUCTURAL ENGINEER WILL NOT BE RESPONSIBLE DER ANY CONDITIONS(S) FOR THE STRUCTURAL DESIGN, FABRICATION AND ERECTION OF THE PRE-ENGINEERED PAVILION BUILDING AND ITS COMPONENTS.

E DESIGN OF THE PRE-ENGINEERED PAVILION BUILDING SHALL BE IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE.

IMUM DESIGN LIVE, WIND, AND EARTHQUAKE LOADS SHALL BE PER SECTION II OF THESE GENERAL NOTES.

CH AND EVERY COLUMN FOUNDATION IS ANTICIPATED TO HAVE A DIFFERENTIAL SETTLEMENT OF 1 INCH. THEREFORE, THE PAVILION SHALL BE DESIGNED FOR A FERENTIAL SETTLEMENT OF 1 INCH AT EVERY COLUMN.

HALL BE THE RESPONSIBILITY OF THE CONTRACTOR, THE PRE-ENGINEERED PAVILION MANUFACTURER AND THEIR REGISTERED PROFESSIONAL ENGINEERS TO "ERMINE AND OBTAIN ALL OTHER PERTINENT DEAD LOADS AND OTHER DESIGN CRITERIA AS MAY BE REQUIRED FOR THE DESIGN OF A SAFE STRUCTURE.

E FOUNDATIONS OF THE PRE-ENGINEERED PAVILION BUILDING HAVE BEEN DESIGNED FOR CERTAIN ESTIMATED BUILDING STRUCTURE REACTIONS. THE NTRACTOR, THE PRE-ENGINEERED TIMBER PAVILION BUILDING MANUFACTURER AND HIS REGISTERED PROFESSIONAL ENGINEER SHALL FURNISH THE ENGINEER TH THE REACTION AT EACH AND EVERY COLUMN. THE FOUNDATIONS OF THIS BUILDING STRUCTURE SHALL NOT BE STARTED UNTIL THE FOUNDATION DESIGN HAS EN COORDINATED WITH THE ACTUAL PRE-ENGINEERED PAVILION BUILDING REACTIONS.

E DESIGN OF THE ANCHOR BOLTS SHALL BE VERIFIED BY THE PRE-ENGINEERED PAVILION MANUFACTURER AND THEIR REGISTERED PROFESSIONAL ENGINEER.

E PRE-ENGINEERED PAVILION MUST BE ADEQUATELY BRACED AGAINST LATERAL FORCES AND UPLIFT UNTIL THE CONCRETE SLAB IS POURED AND CURED. THE JUDATIONS WITHOUT THE CONCRETE SLAB WERE NOT DESIGNED TO RESIST THE REQUIRED FORCES.

BID SET

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS DATE APPROVED DATE SCALE: AS SHOWN JUG BAY EDUCATION, RESEARCH, AND **DISCOVERY FIELD STATION** D.E.F. DRAWN BY: STRUCTURAL CHECKED BY: M.W.S. PROJECT MANAGER DATE SHEET NO. 59 OF 63 DATE APPROVED **GENERAL NOTES** PROJECT NO .: P584501 S001 CONTRACT NO.: P584500 CHIEF, RIGHT-OF-WAY FR © WBCM 2023

 $\label{eq:p:2017_141806_Drawings_03-Struct_2017141806_S100s-Cabin_Drawings.dwg$

1/4"=1'-0"

hereby certify that these documents were prepared or approved by ne, and that I am a duly licensed professional engineer under the laws of the State of Maryland. icense # Expiration Date:

ASSISTANT CHIEF ENGINEER

CHIEF, RIGHT-OF-WAY

© WBCM 2023

S101

CONTRACT NO.: P584500

| EY COX & MAGNANI, LLC | | NO. | DESCRIPTION | BY | DATE | |
|--|---|-----|-------------|----|------|----------------------------|
| Baltimore, MD 21286 512.4500 www.wbcm.com | | | | | | APPROVED |
| | | | | | | |
| | | | | | | CHIEF ENGINEER APPROVED |
| or Tomorrow [®] | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the | | | | | |
| | laws of the State of Maryland. License # Expiration Date: | | | | | ASSISTANT CHIEF ENGINE |

S201

PROJECT NO .:

CONTRACT NO.: P584500

CHIEF, RIGHT-OF-WAY

P584501

P:\2017\17141806\Drawings\03-Struct\2017141806_S200s-Bathhouse_Drawings.dwg

| | | | REVISIONS | | | |
|---|---|-----|-------------|----|------|--------------------------|
| EY COX & MAGNANI, LLC | - | NO. | DESCRIPTION | BY | DATE | |
| Baltimore, MD 21286 12.4500 www.wbcm.com | - | | | | | APPROVED |
| | - | | | | | |
| | | | | | | CHIEF ENGINEER |
| | | | | | | APPROVED |
| r Tomorrow ® | by certify that these documents were prepared or approved by and that I am a duly licensed professional engineer under the | | | | | |
| laws o Licens | of the State of Maryland. se # Expiration Date: | | | | | ASSISTANT CHIEF ENGINEER |

| DEPARTMENT OF PUBLIC WORKS DATE APPROVED DATE SCALE: AS SHOWN JUG BAY EDUCATION, RESEARCH, AND DISCOVERY FIELD STATION PROJECT MANAGER CHECKED BY: M.W.S. BATHHOUSE DATE APPROVED DATE SHEET NO. 62 0F 63 PROJECT MANAGER DATE SHEET NO. 62 0F 63 ROOFF FRAMING PLAN SALE: APPROVED DATE SHEET NO. 62 0F 63 ROOFF FRAMING PLAN SALE: APPROVED DATE SHEET NO. 62 0F 63 ROOFF FRAMING PLAN SALE: APPROVED DATE SALE: SALE: SALE: SALE: SALE: SALE: | | ANNE ARUND | EL COUNTY | | | | | | | | | |
|--|----------------------------|---------------------|-----------------------|----------------------------------|--|--|--|--|--|--|--|--|
| DATE APPROVED DATE SCALE: AS SHOWN JUG BAY EDUCATION, RESEARCH, AND DISCOVERY FIELD STATION PROJECT MANAGER DRAWN BY: D.E.F. D.E.F. DISCOVERY FIELD STATION DATE PROJECT MANAGER CHECKED BY: M.W.S. BATHHOUSE DATE APPROVED DATE SHEET NO. 62 OF 63 ROOF FRAMING PLAN PROJECT NO.: P584501 PROJECT NO.: P584501 S202 | DEPARTMENT OF PUBLIC WORKS | | | | | | | | | | | |
| DRAWN BY: D.E.F. DISCOVERY FIELD STATION PROJECT MANAGER CHECKED BY: M.W.S. BATHHOUSE DATE APPROVED DATE SHEET NO. 62 OF 63 ROOF FRAMING PLAN PROJECT NO: P584501 F584501 S202 | DATE | APPROVED DATE | SCALE: AS SHOWN | JUG BAY EDUCATION, RESEARCH, AND | | | | | | | | |
| PROJECT MANAGER CHECKED BY: M.W.S. BATHHOUSE DATE APPROVED DATE SHEET NO. 62 0F 63 PROJECT NO:: PTOJECT NO:: P584501 P584501 S202 | | | DRAWN BY: D.E.F. | DISCOVERY FIELD STATION | | | | | | | | |
| DATE APPROVED DATE DATE SHEET NO. 62 OF 63 PROJECT NO.: P584501 S202 | | PROJECT MANAGER | CHECKED BY: M.W.S. | BATHHOUSE | | | | | | | | |
| PROJECT NO.: P584501 \$202 | DATE | APPROVED DATE | SHEET NO. 62 OF 63 | ROOF FRAMING PLAN | | | | | | | | |
| | | | PROJECT NO.: P584501 | C000 | | | | | | | | |
| R CHIEF, RIGHT-OF-WAY CONTRACT NO.: P584500 OZOZ | R | CHIEF, RIGHT-OF-WAY | CONTRACT NO.: P584500 | 5202 | | | | | | | | |

А S301 S30

PAVILION FOUNDATION PLAN

SCALE: 1/4" = 1'-0" PAVILION FOUNDATION PLAN NOTES:

- 1. FOOTINGS HAVE BEEN DESIGNED FOR AN ASSUMED SOIL BEARING PRESSURE OF 1,500 PSF. CONTRACTOR VERIFY SOIL
- CONDITIONS, SEE GENERAL NOTES.
- GRADE. CONTRACTOR COORDINATE WITH FINAL GRADES.
- 3. CONCRETE SLAB ON GRADE SHALL BE 5" THICK REINFORCED WITH 6"x6" W2.9xW2.9 (AND ADDITIONAL BARS WHERE
- NOTED) PLACE SLAB ON 4" GRAVEL SUB-BASE. 4. "CJ" INDICATES SLAB CONTROL JOINTS. SEE DETAIL 3/S101.
- 5. SEE CIVIL DWGS. FOR FINISHED FLOOR ELEVATIONS. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND EXTENT OF DEPRESSIONS AND FLOOR SLOPES IN CONCRETE SLABS.
- 6. FOUNDATIONS DESIGNED TO SUPPORT PRE-ENGINEERED / PRE-FABRICATED PAVILION. SEE ARCH. DWGS. SEE BASIS-OF-DESIGN FOUNDATION LOADS ON THIS SHEET FOR WHICH FOUNDATIONS WERE DESIGNED.
- 7. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND ELEVATIONS NOT SHOWN. 8. SLAB SHALL BE CURED WITH AN APPROVED SEALING COMPOUND AND FINISHED WITH AN APPROVED NON-METALLIC HARDENER. CURING COMPOUNDS AND HARDENERS SHALL BE APPROVED BY THE ARCHITECT PRIOR TO THEIR USE, AND SHALL BE APPLIED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 9. FOR FOOTING REINFORCEMENT, PROVIDE 3" CLEAR TO BOTTOM BARS, 2" CLEAR TO TOP BARS. 10. ANCHOR BOLT SHOP DRAWINGS SHALL BE SUBMITTED FOR E.O.R. REVIEW ALONG W/ BASE REACTIONS (PROVIDED BY MANUFACTURER) FOR PAVILION COLUMNS, PRIOR TO PLACEMENT OF FOOTING/SLAB CONCRETE. (4) $\frac{1}{2}$ "Ø A36 GALV. THREADED RODS HAS BEEN ASSUMED BY THE E.O.R., WHICH SHALL BE VERIFIED AND COORDINATED BY THE CONTRACTOR.

2. BOTTOM OF FOOTINGS, AND BOTTOM OF TURNED-DOWN SLAB EDGE WHERE NO FOOTING, SHALL BE 30" MINIMUM BELOW

| Y COX & MAGNANI, LLC | | NO. | DESCRIPTION | BY | DATE | |
|--|--|-----|-------------|----|------|--------------------------|
| Baltimore, MD 21286 2.4500 www.wbcm.com | | | | | | APPROVED |
| CM | | | | | | CHIEF ENGINEER |
| r Tomorrow ® | I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the | | | | | APPROVED |
| | laws of the State of Maryland. License # Expiration Date: | | | | | ASSISTANT CHIEF ENGINEER |

BID SET

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS DATE APPROVED JUG BAY EDUCATION, RESEARCH, AND DATE SCALE: AS SHOWN DISCOVERY FIELD STATION DRAWN BY: D.E.F. PAVILION CHECKED BY: PROJECT MANAGER M.W.S. DATE APPROVED DATE SHEET NO. 63 OF 63 FOUNDATION PLAN PROJECT NO .: P584501 S301 CONTRACT NO.: P584500 CHIEF, RIGHT-OF-WAY EER

© WBCM 2023