

PLANTING SCHEDULE - MICRO-BIORETENTION & RAINGARDEN					
BOTANICAL NAME	COMMON NAME	CONDITION	SIZE	PLANTING	REMARKS
SHRUB	ILEX GAIANA	INBERRY	12"	PLANT 3' APART	
SHRUB	HAMELIS VIRGINIANA	WITCH HAZEL	CONTAINER	12"-24"	PLANT 3' APART
PERENNIAL	IRIS VEITCHIOLOR	BLUE FLAG	SEEDLINGS	PLANT 15" APART, TRIANGULAR GRID	
PERENNIAL	GERANIUM MACULATUM	CRANESBILL	SEEDLINGS	PLANT 15" APART, TRIANGULAR GRID	
PERENNIAL	SOLIDAGO SPHACELATA	GOLDEN FLEECE	SEEDLINGS	PLANT 15" APART, TRIANGULAR GRID	

STORMWATER MANAGEMENT SUMMARY				
FACILITY	ESDv CREDIT	TARGET Pp	REQUIRED Pp	
MICRO-BIO RETENTION-1 (M-8)	1,462 CF	1.8"	2.6"	
SHEETFLOW TO CONSERVATION (N-3)	227 CF	1.8"	1.6"	
TOTAL	1,689 CF			

ESDv PROVIDED = 1,689 CF  
 ESDv REQUIRED = 1,318 CF  
 ESDv SURPLUS = +371 CF

MICRO-BIO RETENTION ELEVATION CHART				
NUMBER	TOP POND	TOP MULCH	BOTTOM PIT	INVERT UNDERDRAN
1	561.0	560.0	555.83	556.83

SOIL TABLE				
SYMBOL	NAME/DESCRIPTION	TYPE	HYDROLOGIC	K-Factor
GgB	Genety Loom, 3% to 8% slope	B	NO	0.20
MaC	Monor Loom, 8% to 15% slope	C	NO	0.24

**SEQUENCE OF CONSTRUCTION :**

1. REQUEST FOR PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AUTHORITY, (2-WEEKS).
2. CLEARING AND GRUBBING AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS, (1 DAY).
3. CONSTRUCTION AND STABILIZATION OF PERIMETER CONTROLS, (1 DAY).
4. REMAINING CLEARING AND GRUBBING WITHIN INSTALLED PERIMETER CONTROLS (1 DAY).
5. DRIVEWAY GRADING, (1 DAY).
6. GRADING FOR THE REMAINDER OF THE SITE, (2 DAYS).
7. UTILITY INSTALLATION AND CONNECTIONS TO EXISTING STRUCTURES, (4 DAYS).
8. CONSTRUCTION OF BUILDING, ROADS, AND OTHER CONSTRUCTION, (4 MONTHS).
9. FINAL GRADING, LANDSCAPING, AND STABILIZATION, (3 DAYS).
10. INSTALLATION OF STORMWATER MANAGEMENT MEASURES (4 DAYS).
11. APPROVAL OF THE APPROPRIATE ENFORCEMENT AUTHORITY PRIOR TO REMOVAL OF SEDIMENT CONTROLS, (1 WEEK).
12. REMOVAL OF CONTROLS AND STABILIZATION OF AREAS THAT ARE DISTURBED BY REMOVAL OF SEDIMENT CONTROLS, (2 DAYS).

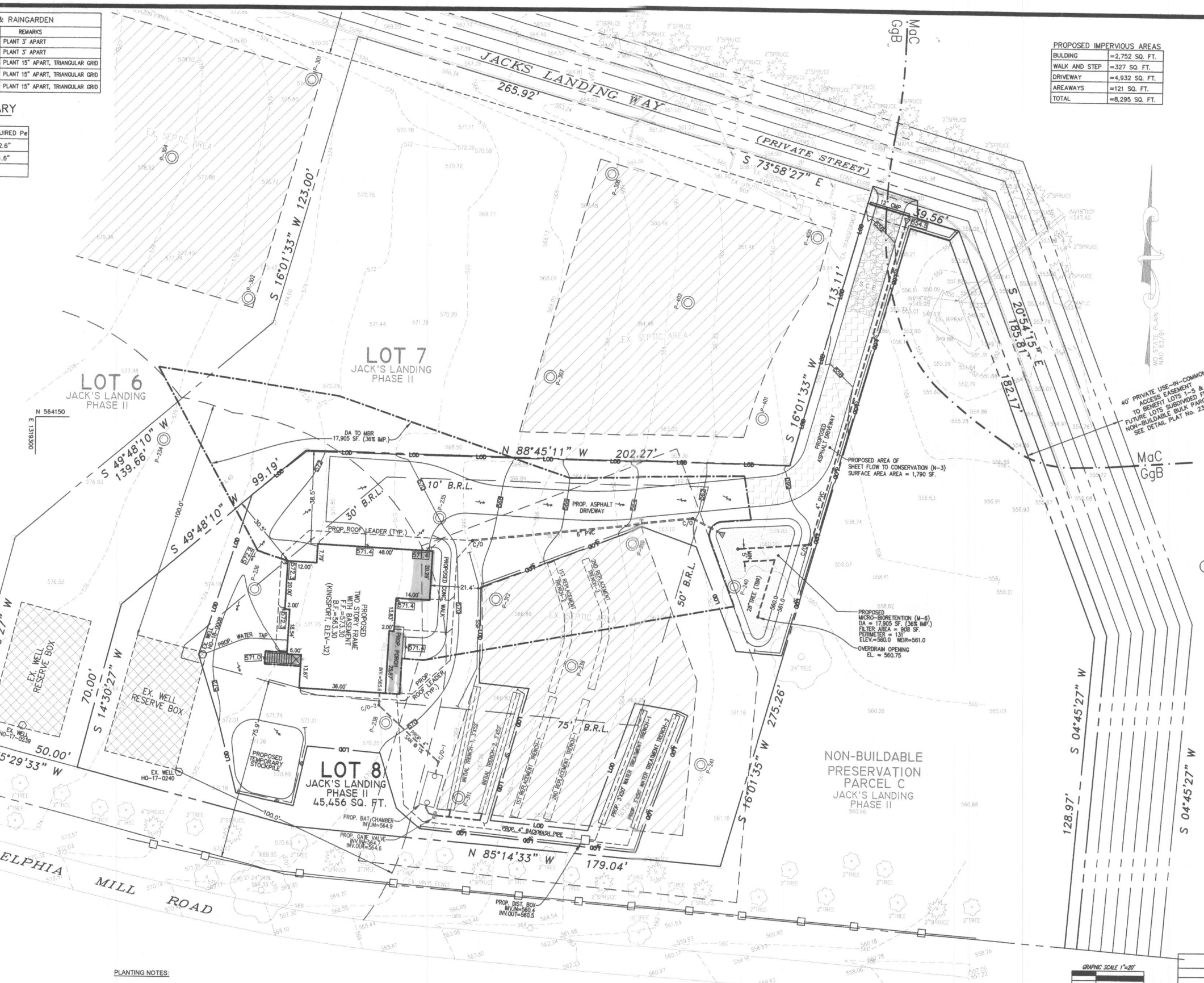
NOTE: ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.

SITE ANALYSIS DATA CHART	
TOTAL GROSS LOT AREA	= 1.044 ACRES
TOTAL NET LOT AREA	= (45,456)
TOTAL LOT IMPERVIOUS AREA PROPOSED	= (43,836)
LOT AREA "PROP. TO BE DISTURBED"	= 0.806 ACRE
TOTAL LOT IMPERVIOUS AREA PROPOSED	= (38,408 SF)
TOTAL PROPOSED GREEN AREA	= (2,048 SF)
TOTAL PROPOSED GREEN AREA	= (0.057 ACRE)
SITE AREA WITHIN WETLAND	= (0.000 ACRE)
SITE AREA WITHIN 25' WETLAND BUFFER	= (0.000 ACRE)
SITE AREA OF STEEP SLOPES	= (0.000 ACRE)
SITE AREA OF CROSSLIST SOILS	= (0.000 ACRE)
SITE AREA WITHIN 100-YR FLOODPLAIN	= (0.000 ACRE)
SITE AREA WITHIN 100-YR STREAM BUFFER	= (0.000 ACRE)
SITE TOTAL EXISTING FORESTED AREA	= (0.000 ACRE)
SITE ULTIMATE FORESTED AREA	= (0.000 ACRE)

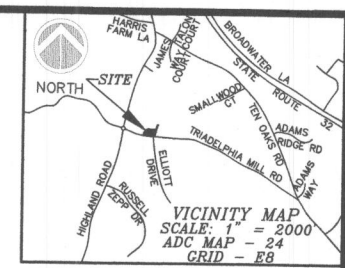
- GENERAL NOTES**
1. ZONING: R-10-100.
  2. PROPOSED SEWER - PRIVATE; PROPOSED WATER - PRIVATE.
  3. THE PLAN IS BASED ON A FIELD RUN BOUNDARY AND TOPOGRAPHIC SURVEY PERFORMED BY NJR & ASSOCIATES IN MAY OF 2021.
  4. THERE IS NO 100-YEAR FLOODPLAIN ON SITE.
  5. THERE ARE NO WETLANDS AND STREAMS ON SITE.
  6. THERE ARE NO CRITICAL HABITATS OF RARE, THREATENED OR ENDANGERED SPECIES ON SITE.
  7. TOTAL AREA WITHIN L100 = 26,406 SQ.FT.
  8. WATERSHED = PATENT RIVER.
  9. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
  10. CONTRACTOR TO MAINTAIN POSITIVE SLOPE AWAY FROM THE FOUNDATION OF THE HOUSE.

- PLANTING NOTES:**
1. PLANT A MIX OF SHRUBS AND PERENNIALS.
  2. REFERENCE STANDARDS: COMPLY WITH THOSE LISTED BELOW.
  3. NOMENCLATURE FOR PLANT MATERIALS SHALL BE IN ACCORDANCE WITH HORTUS III, BY THE STAFF OF L.H. BAILEY HORTICULTURUM.
  4. AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1, LATEST EDITION, AMERICAN NURSERY & LANDSCAPE ASSOCIATION (ANLA).
  5. LANDSCAPE SPECIFICATION GUIDELINES, LATEST EDITION, LANDSCAPE CONTRACTORS ASSOCIATION.
  6. PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECAST WEATHER CONDITIONS ARE SUITABLE FOR WORK. PERFORM ACTUAL PLANTING WHEN GROUND IS WORKABLE, I.E., MOIST, NOT WET OR FROZEN.

**MISS UTILITY**  
 CALL "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF WORK. THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR COMPLIANCE WITH REQUIREMENTS OF FREDERICK COUNTY REGULATIONS.



PROPOSED IMPERVIOUS AREAS	
BUILDING	=2,752 SQ. FT.
WALK AND STEP	=327 SQ. FT.
DRIVEWAY	=4,932 SQ. FT.
AREAWAYS	=121 SQ. FT.
TOTAL	=8,295 SQ. FT.



LEGEND	
(Symbol)	EX. WATER WELL
(Symbol)	EX. STREET SIGN
(Symbol)	EX. WOOD POST
(Symbol)	EX. TELEPHONE PEDESTAL
(Symbol)	EX. SANITARY CLEAN OUT
(Symbol)	EX. UTILITY POLE
(Symbol)	EX. GUY WIRE ANCHOR
(Symbol)	EX. STORM DRAIN MANHOLE
(Symbol)	EX. STUMP
(Symbol)	EX. EVERGREEN TREE
(Symbol)	EX. DECIDUOUS TREE
(Symbol)	PROP. SPOT ELEVATION
(Symbol)	EX. CONTOUR
(Symbol)	PROP. CONTOUR
(Symbol)	PROP. SUPER SILT FENCE
(Symbol)	PROP. SILT FENCE
(Symbol)	PROP. LIMIT OF DISTURBANCE
(Symbol)	NOTES (TO BE REMOVED)
(Symbol)	B.R.L. DENOTES (BUILDING RESTRICTION LINE)
(Symbol)	PROP. STABILIZED CONSTRUCTION ENTRANCE
(Symbol)	EX. SEPTIC RESERVE AREA
(Symbol)	EX. WELL RESERVE BOX
(Symbol)	EX. PASSING PERCOLATION TEST
(Symbol)	PROP. DRAINAGE AREA LIMIT
(Symbol)	PROP. SURFACE FLOW DIRECTION
(Symbol)	SOIL TYPE BOUNDARY

SHEET INDEX		
DESCRIPTION	SHEET NO.	
SITE PLAN	1 OF 2	
SITE DETAILS AND NOTES	2 OF 2	

PLAN PREPARED BY:  
**NJR & ASSOCIATES**  
 Land Surveying and Planning  
 2770 TERRAPIN RUN  
 WEST FRIENDSHIP, MD 21194  
 TEL: (240) 508-3200

PROFESSIONAL CERTIFICATE  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NUMBER 11049 WITH EXPIRATION DATE OF FEBRUARY 10, 2023.  
 MARY HOWARD  
 8045 HUNTERBROOKE LANE  
 FULTON, MD 20759  
 (301) 343-1353  
 DATE: June 9, 2022

DEVELOPER  
 CARUSO HOMES  
 2120 BALDWIN AVENUE, SUITE-200  
 CROFTON, MD 21114  
 (301) 281-0277  
 OWNER  
 MARY HOWARD  
 8045 HUNTERBROOKE LANE  
 FULTON, MD 20759  
 (301) 343-1353

**SITE PLAN**  
**JACK'S LANDING, PHASE II**  
**LOT 8**  
 PLAT No. 25063  
 5509 JACKS LANDING WAY, CLARKSVILLE  
 TAX MAP 34, GRID 3, PARCEL 414  
 5TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 SCALE: 1" = 20'  
 JOB NO.: 3438  
 DATE: JULY 12, 2021  
 SHEET: 1 OF 2

- OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIO RETENTION (M-6)**
- The Owner shall maintain the plant material, mulch layer and soil layer annually. Maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland Stormwater Design Manual Volume II, Table A.4.1 and 2.
  - The Owner shall perform a plant in the spring and in the fall of each year. During the inspection, the Owner shall remove dead and diseased vegetation considered beyond treatment, replace dead plant material with acceptable replacement plant material, treat diseased trees and shrubs, and replace all deficient stakes and wires.
  - The Owner shall inspect the mulch each spring. The mulch shall be replaced every two to three years. The previous mulch layer shall be removed before the new layer is applied.
  - The Owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.

**PROPOSED IMPERVIOUS AREAS**

BUILDING	=2,752 SQ. FT.
WALK AND STEP	=327 SQ. FT.
PORCH	=163 SQ. FT.
DRIVEWAY	=4,932 SQ. FT. (3,142 SQ. FT. TO M-6 AND 1,790 SQ. FT. TO N-3)
AREAWAYS	=121 SQ. FT.
TOTAL	=8,295 SQ. FT.

**COMPUTATION OF THE REQUIRED ESDv:**

PROPERTY SIZE	= 45456 SF (GROSS), 43,638 SF (NET)
LIMITS OF DISTURBANCE (L.O.D.)	= 26,406 SF
SOIL	= HYDROLOGIC SOIL GROUP "B", 100% OF L.O.D. (GLENELG LOAM, 3 TO 8 PERCENT SLOPES)
EXISTING IMPERVIOUS AREA	= 0 SF
PROPOSED IMPERVIOUS AREA	= 8,295 SF

TARGET P<sub>e</sub>:  
 TARGET P<sub>v</sub>:  
 % IMPERVIOUS AREA (I):  $\frac{8,295}{43,638} = 19.01\%$   
 % IMPERVIOUS AREA (I):  $\frac{8,295}{26,406} = 31.41\%$  (USE 35%)  
 USING TABLE 5.3 FOR "HSB B" SOILS:  
 PE = 1.8" "B" SOILS = 72  
 TARGET ESDv:  
 I = 31.41%  
 F = 1.8"  
 Rv = 0.05 + (0.009)(I)  
 Rv = 0.05 + (0.009)(31.41) = 0.3327  
 A = 26,406 SF  
 ESDv =  $\frac{PE \times Rv \times A}{12}$   
 ESDv =  $\frac{1.8 \times 0.3327 \times 26,406}{12} = 1,318 \text{ CF}$

**COMPUTATION OF THE PROVIDED ESDv:**

**SHEETFLOW TO CONSERVATION (N-3)**

APPROX. DRAINAGE AREA (DA) = 1,790 SF  
 IMPERVIOUS IN DA = 100%  
 PE = 1.8"  
 F = 100%  
 Rv = 0.05 + (0.009)(100) = 0.95  
 A = 1,790 SF  
 ESDv =  $\frac{PE \times Rv \times A}{12}$   
 ESDv =  $\frac{1.8 \times 0.95 \times 1,790}{12} = 227 \text{ CF}$

**MICRO-BIO RETENTION (M-6)**

APPROX. DRAINAGE AREA (DA):  
 IMPERVIOUS = PART OF DRIVEWAY,  
 FRONT WALK & STOOP,  
 GREEN AREA = 6,505 SF  
 TOTAL DA = 11,400 SF  
 IMPERVIOUS IN DA: = 17,905 SF  
 PE = 2.6"  
 F = 36.33%  
 Rv = 0.05 + (0.009)(36.33) = 0.377  
 A = 17,905 SF  
 ESDv =  $\frac{PE \times Rv \times A}{12}$   
 ESDv =  $\frac{2.6 \times 0.377 \times 17,905}{12} = 1,482 \text{ CF}$

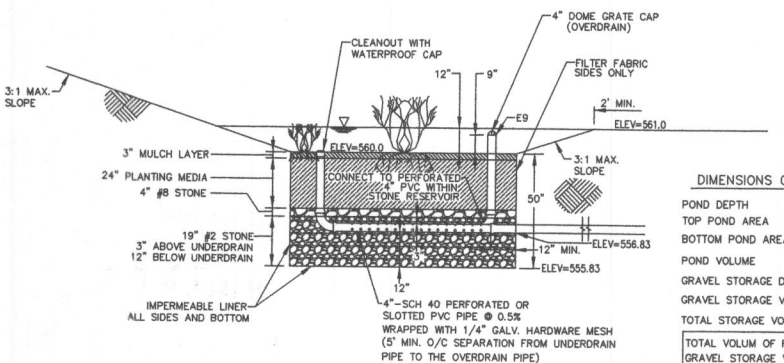
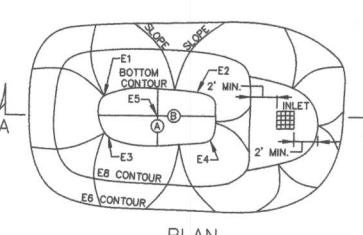
**HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES**

- A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1855 after the future L.O.D. and protected areas are marked clearly in the field. A minimum of 48 hour notice to CID must be given at the following stages:
  - Prior to the start of earth disturbance.
  - Upon completion of the installation perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading.
  - Prior to the start of another phase of construction or opening of another grading unit.
  - Prior to the removal or modification of sediment control practices. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to avoid conflicts with this plan.
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereof.
  - Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days from the surface of all perimeter controls, ditches, erosion channels, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and seven (7) calendar days to all other disturbed areas on the project site except for those areas under active grading.
  - All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, for topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-3), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-5). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the ground is frozen, incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with 2:1 of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 ft. must be banded with stable outlet. All concentrated flow, steep slopes, and highly erodible areas shall receive soil stabilization matting (Sec. B-4-6).
  - All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CID.
- Site Analysis:
 

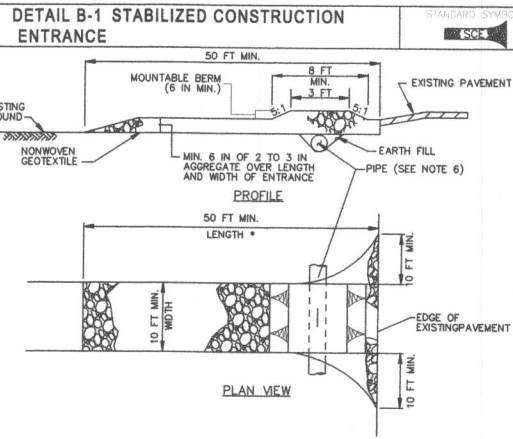
Total Area of Site:	= 1.04 Acres.
Area Disturbed:	= 0.81 Acres.
Area to be roofed or paved:	= 0.18 Acres.
Area to be vegetatively stabilized:	= 0.43 Acres.
Total Cut:	= 720± Cu. Yds.
Total Fill:	= 25± Cu. Yds.
Off-site waste/borrow area location:	= To be determined.
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly, and the next day after each rain event. A written report by the contractor, made available upon request, is part of every inspection and should include:
  - Inspection date
  - Inspection type (routine, pre-storm event, during rain event)
  - Name and title of inspector
  - Weather information (if applicable)
  - Evidence of sediment discharges
  - Evidence of sediment control status (e.g., percent complete) and/or current activities
  - Identification of plan deficiencies
  - Identification of sediment controls that require maintenance
  - Identification of missing or improperly installed sediment controls
  - Compliance status regarding the sequence of construction and stabilization requirements
  - Photographs
  - Stabilization/Seeding
  - Maintenance and/or corrective action performed
  - Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE).
- Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of each workday, whichever is shorter.
  - Area where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
  - Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in addition to the Permanent Seeding Summary. The summary is to be placed on the plan.

**NOTES**

- FACILITY SHALL BE MINIMUM OF 10FT FROM ANY BUILDING.
- FACILITY SHALL BE INSTALLED IN EXCAVATED VIRGIN SOIL (NOT FILL).
- FACILITY SHALL BE MINIMUM 4" ABOVE THE SEASONAL HIGH WATER TABLE.
- REGULAR INSPECTIONS SHALL BE REQUIRED DURING FOLLOWING STAGES OF THE CONSTRUCTION:
  - DURING EXCAVATION TO SUBGRADE AND PLACEMENT AND BACKFILL OF UNDERDRAIN SYSTEM.
  - DURING PLACEMENT OF PLANTING MEDIA.
  - DURING CONSTRUCTION OF APPURTENANCE CONVEYANCE.
  - UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION.
- E1 TO E9 AS-BUILT SPOT ELEVATION LOCATIONS.
- THIS STANDARD IS A REFERENCE TO SHOW THE ELEMENTS AND MINIMUM DIMENSIONS FOR A MICRO-BIO RETENTION FACILITY. EACH FACILITY SHALL BE DESIGNED AND APPROVED ON A SITE SPECIFIC BASIS. THIS DETAIL PROVIDES BLANK SPACES TO INFORM WHERE AS-BUILT INFORMATION IS REQUIRED FOR SWM CLOSURE.



**SECTION A-A**  
**TYPICAL MICRO-BIORETENTION (M-6)**  
**DETAIL**  
 (NOT TO SCALE)

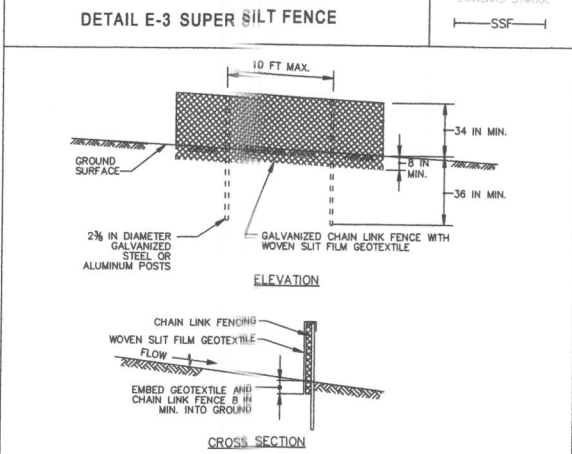


**CONSTRUCTION SPECIFICATIONS**

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

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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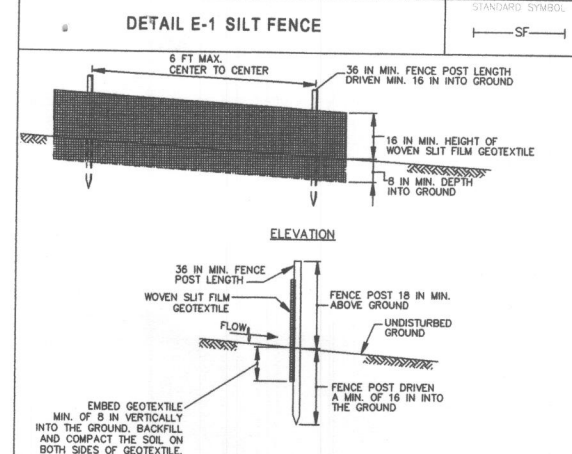


**CONSTRUCTION SPECIFICATIONS**

- INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 6 INCHES INTO THE GROUND.
- FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 1/2 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
- FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UNDERLIE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
- WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
- EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
- PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 20% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

- |   |      |  |
|---|------|--|
| U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION |
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**I. BIORETENTION AREA SOIL SPECIFICATION**

- PLANTING SOIL:**
- THE BIORETENTION AREA SHALL CONSIST OF A PLANTING SOIL HAVING A HOMOGENEOUS MIX OF SOIL CONSTRUCTION SAND, 20-30% TOPSOIL WITH AN ALLOWABLE 5% MAXIMUM CLAY CONTENT, AND 20-30% ORGANIC COMPOST OR MULCH TO PROVIDE A SOIL MEDIA WITH HIGH HYDROLOGIC CAPACITY. THE PLANTING MEDIA SHALL BE FREE OF PLANTS OR PLANT PARTS OF BERBERIS GRASS, QUACK GRASS, JOHNSON GRASS, BROMUS, HOTTENTOT, POISON IVY, GAMBIAN THISTLE OR OTHER AS SPECIFIED. IT SHALL NOT CONTAIN TOXIC SUBSTANCES HARMFUL TO PLANT GROWTH. THE PLANTING SOIL SHALL BE TESTED AND MEET THE FOLLOWING CRITERIA:
 

PH RANGE	5.5 - 6.5
ORGANIC MATTER	15 - 30%

 THE FOLLOWING TESTING FREQUENCIES SHALL APPLY TO THE ABOVE:
 

PH ORGANIC MATTER	1 TEST PER 90 CUBIC YARDS, BUT NOT MORE THAN 1 TEST PER BIORETENTION AREA.
ONE GRAN SIZE ANALYSIS	SHALL BE PERFORMED PER 90 CUBIC YARDS OF PLANTING SOIL, BUT NO LESS THAN 1 TEST PER BIORETENTION AREA.
  - MULCH LAYER SPECIFICATION: A MULCH LAYER SHALL BE PROVIDED ON TOP OF PLANTING SOIL. AN ACCEPTABLE MULCH LAYER SHALL INCLUDE SHREDDED HARDWOOD OR SHREDDED WOOD CHIPS OR OTHER SIMILAR PRODUCTS APPROVED BY THE HOWARD COUNTY DEPARTMENT OF ENVIRONMENTAL RESOURCES. OF THE APPROVED MULCH PRODUCTS, ALL MUST BE WELL AGED, UNIFORM IN COLOR, AND FREE OF FOREIGN MATERIALS, INCLUDING PLANT MATERIAL, WELL AGED AND MUST BE APPLIED AS MULCH THAT HAS BEEN STOCK PILED OR STORED FOR AT LEAST TWELVE (12) MONTHS.
  - SAND SPECIFICATION: THE SAND SHALL BE FREE OF DELICIOUS MATERIAL AND ROCKS GREATER THAN ONE INCH IN DIAMETER.
  - COMPACTION: SOIL SHALL BE PLACED IN LIFTS LESS THAN 18 INCHES AND LIGHTLY COMPACTED.

**II. BIORETENTION AREA PLANT SPECIFICATION**

- GENERAL PLANTING:**
- ROOT STOCK OF PLANT MATERIAL SHALL BE KEPT MOST DURING TRANSPORT FROM SOURCE TO THE JOB SITE AND UNTIL PLANTED.
  - WALLS OF PLANTING PIT SHALL BE DUG SO THAT THEY ARE VERTICAL.
  - THE DIAMETER OF PLANTING PIT MUST BE A MINIMUM OF SIX INCHES LARGER THAN THE DIAMETER OF THE BARK OF THE BARK OF THE PLANTING PIT SHALL BE DEEP ENOUGH TO ALLOW 1/4 OF THE BALL TO BE ABOVE THE EXISTING GRADE. LOOSE SOIL AT THE BOTTOM OF THE PIT SHALL BE TAMPED BY HAND.
  - THE APPROPRIATE AMOUNT OF FERTILIZER IS TO BE PLACED AT THE BOTTOM OF THE PIT.
  - THE PLANT SHALL BE REMOVED FROM THE CONTAINER AND PLACED AT THE BOTTOM OF THE PLANTING PIT BY LIFTING AND CARVING THE PLANT BY ITS BALL. NEVER LIFT THE PLANT BY THE BRANCHES OR TRUNK.
  - SET THE PLANT STRAIGHT AND IN THE CENTER OF THE PIT SO THE CENTER OF THE BALL IS APPROXIMATELY 1/4 ABOVE THE FINAL GRADE.
  - BACKFILL PLANTING PIT WITH EXISTING SOIL.
  - MAKE SURE PLANT REMAINS STRAIGHT DURING BACKFILLING PROCEDURE.
  - NEVER COVER THE TOP OF THE BALL WITH SOIL. WOUND SOIL AROUND THE EXPOSED SIDE OF THE BALL.
  - MAKE SURE MULCH DOES NOT CONTACT TREE'S TRUNK.
  - TREE SHALL BE BRACED USING 1/2" WHITE GUM STAKES. STAKES SHALL BE PLACED PARALLEL TO WALKWAYS AND BUILDINGS. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE.
  - BALL THE TREE IS BRACED TO THE STAKES UTILIZING HOSE AND WIRE.
- FERTILIZER:**
- AND SHRUB FERTILIZER SHALL BE A 21 gm. TIGHTLY COMPRESSED, LONG LASTING, SLOW RELEASE (2-3 YEAR) FERTILIZER TABLET WITH MINIMUM GUARANTEED ANALYSIS OF 20-10-5.
  - TOTAL NITROGEN (N) - 20% WATER SOLUBLE ORGANIC NITROGEN - 7% AVAILABLE PHOSPHORIC ACID (P2 O5) - 13% SOLUBLE POTASSIUM (K2 O) - 10% S&S
  - FOR CONTAINERIZED TREES AND SHRUBS, PLACE THE SPECIFIED FERTILIZER TABLETS IN THE BOTTOM OF THE PLANTING PIT ACCORDING TO THE FOLLOWING:
 

1 GAL. CONTAINER	= 2 ea. 21 gm. TABLETS
3 GAL. CONTAINER	= 2 ea. 21 gm. TABLETS
5 GAL. CONTAINER	= 2 ea. 21 gm. TABLETS
7 GAL. CONTAINER	= 2 ea. 21 gm. TABLETS
- PLANTING NON-GRASS GROUND COVER:**
- THE GROUND COVER PLANTING HOLES SHALL BE DUG THROUGH THE MULCH WITH ONE OF THE FOLLOWING: HAND TRIMMER, SHOVEL, BALL PLANTER, OR HOE (THIS DOES NOT APPLY TO GRASS OR LEGUMES).
  - BEFORE PLANTING BIODEGRADABLE POTS, THEY SHALL BE SPLIT, AND NON BIODEGRADABLE POTS SHALL BE REMOVED. ROOT SYSTEMS OF THE POTTED PLANTS SHALL BE SPLIT OR CRUMBLED.
  - THE GROUND COVER SHALL BE PLANTED SO THAT ROOTS ARE SURROUNDED BY THE SOIL BELOW THE MULCH. POTTED PLANTS SHALL BE SET SO THAT THE TOP OF THE POT IS EVEN WITH THE EXISTING GRADE. THE ROOTS OF BARE-ROOT PLANTS SHALL BE COVERED TO THE CROWN.
  - THE MULCH AND PLANTED GROUND COVER BED SHOULD BE SURROUNDED WITH A PRE-EMERGENT HERBICIDE. THE ENTIRE GROUND COVER BED SHALL BE THOROUGHLY WATERED.

**B-4-1 STANDARDS AND SPECIFICATIONS**

- TEMPORARY STABILIZATION**
- To stabilize disturbed soils with vegetation for up to 6 months.
- Conditions Where Practice Applies**
- Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.
- Criteria**
- Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardness Zone (see Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan at completion, then Table B.3 plus fertilizer and lime rates must be put on the plan.
  - For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
  - When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-1.3, and maintain until the next seeding season.

**Temporary Seeding Summary**

No.	Species	Application Rate (lb/ac)	Seeding Date	Seeding Depth	Fertilizer Rate (10-20-20)		Lime Rate
					N	P <sub>2</sub> O <sub>5</sub>	
1	Cool Season Ryegrass or Annual Ryegrass	40 lb/ac	May 1 to May 15	1/2 in.	436 lb/ac	2 tons/ac	(100 lb/1000 sf)
2	Warm Season Fescue, Wild Rind or Equid	30 lb/ac	May 18 to July 31	1/2 in.	436 lb/ac	2 tons/ac	(100 lb/1000 sf)

PLAN PREPARED BY: **NJR & ASSOCIATES**  
 Land Surveying and Planning  
 2770 TERRAPIN RUN  
 WEST FRIENDSHIP, MD #1794  
 TEL: (240) 608-3200

PROFESSIONAL CERTIFICATE  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NUMBER 11049 WITH EXPIRATION DATE OF FEBRUARY 10, 2023.

DEVELOPER: CARUSO HOMES  
 2120 BALDWIN AVENUE, SUITE 200  
 CROFTON, MD 21114  
 (301) 261-0277

OWNER: MARTY HOWARD  
 8045 HUNTERBROCK LANE  
 FULTON, MD 20759  
 (301) 343-1353

June 9, 2022  
 DATE

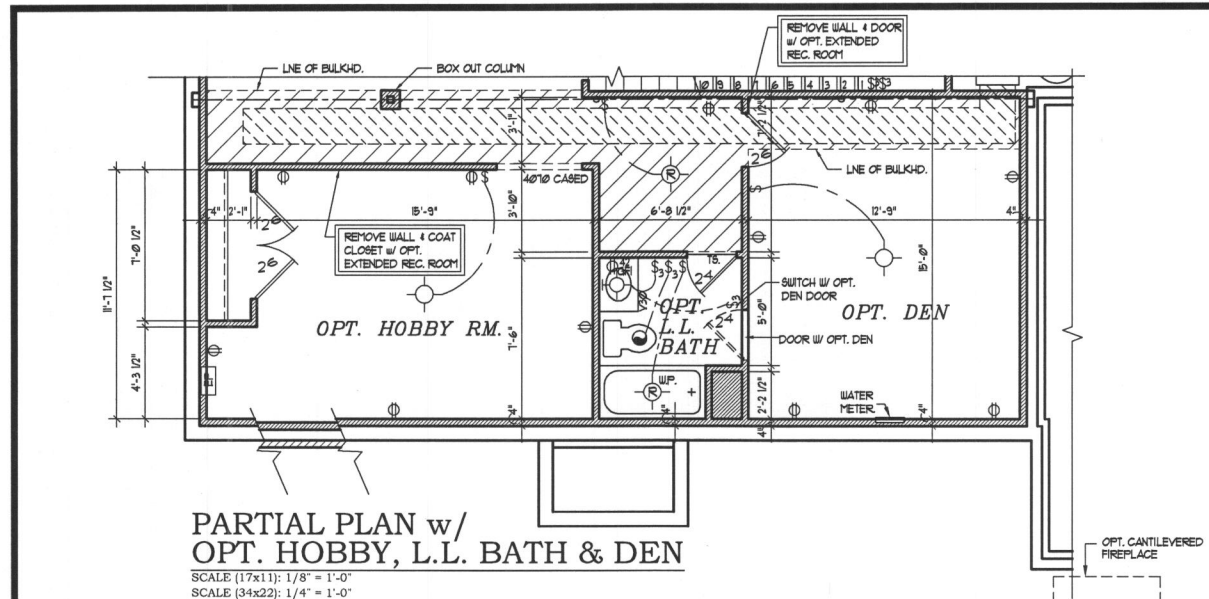
**SITE DETAIL AND NOTES**  
**JACK'S LANDING, PHASE II**  
**LOT 8**  
 PLAT No. 25063  
 5509 JACK'S LANDING WAY, CLARKSVILLE  
 TAX MAP 34, GRID 3, PARCEL 414  
 5TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

DATE : JULY 12, 2021 SHEET : 2 OF 2

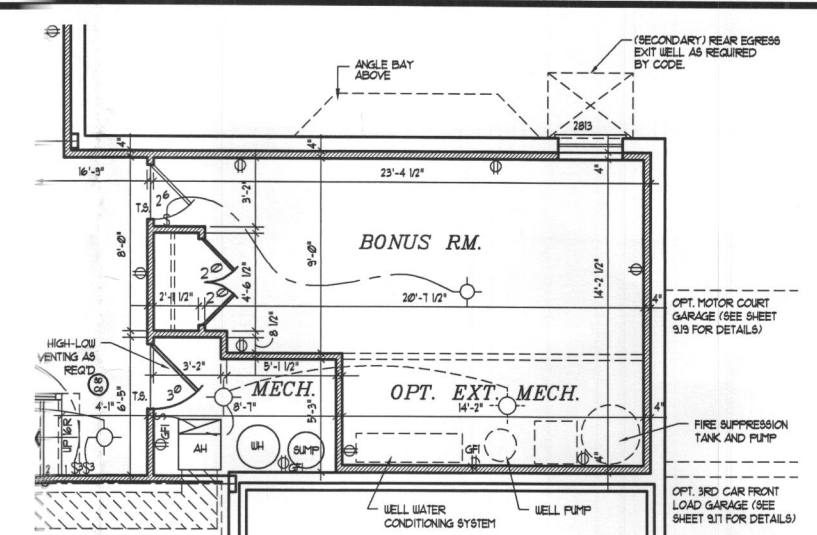
**Permanent Seeding Summary**

Hardness Zone (from Figure B.3):	Zone	Seeding Date	Seeding Depth	Fertilizer Rate (10-20-20)		Lime Rate
				N	P <sub>2</sub> O <sub>5</sub>	
1	Cool Season Ryegrass or Annual Ryegrass	May 1 to May 15	1/4-1/2 in.	436 pounds per acre (100 lb/1000 sf)	2 tons/ac (200 lb/1000 sf)	2 tons/ac (100 lb/1000 sf)
2	Warm Season Fescue, Wild Rind or Equid	May 18 to July 31	1/2 in.	436 pounds per acre (100 lb/1000 sf)	2 tons/ac (200 lb/1000 sf)	2 tons/ac (100 lb/1000 sf)

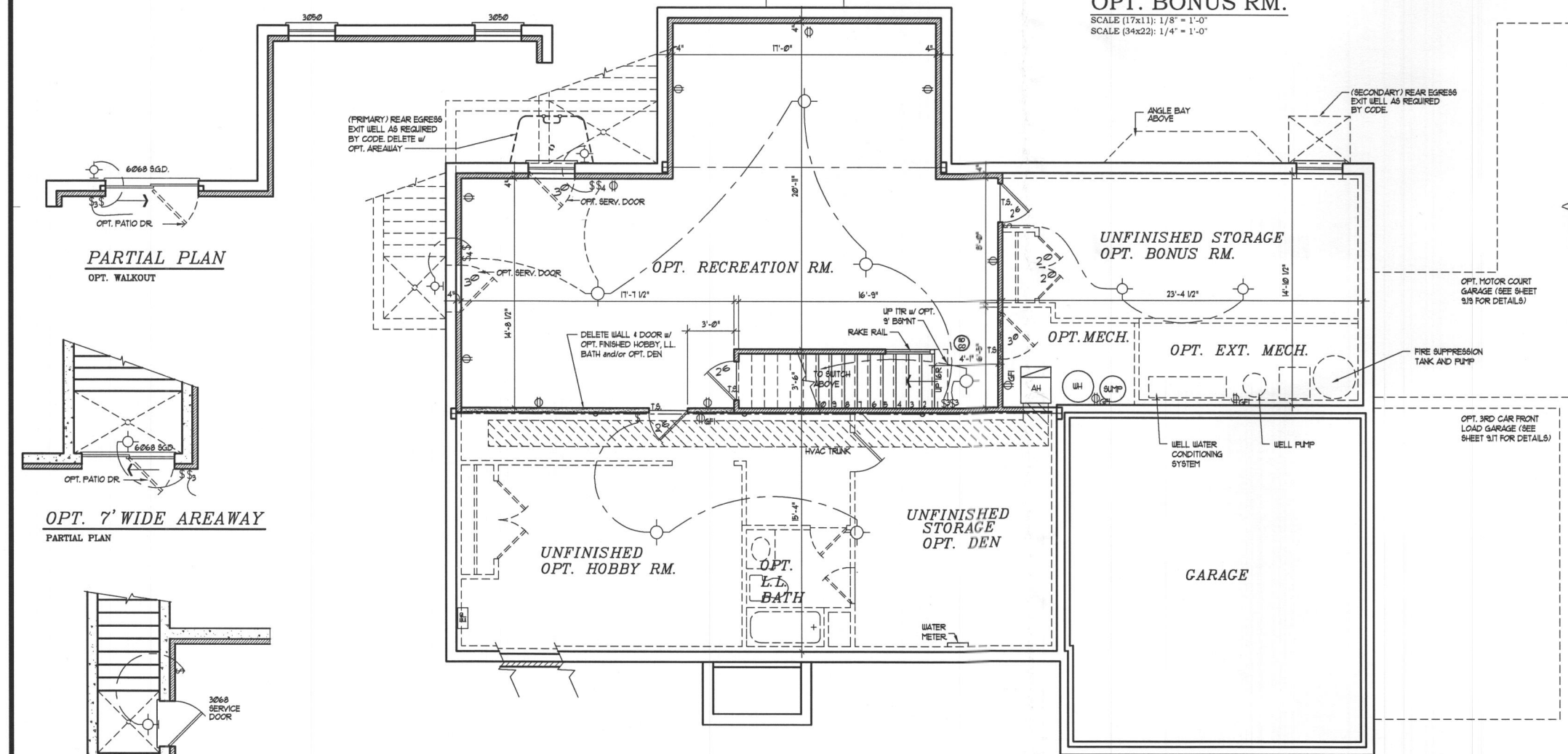
GRAPHIC SCALE 1"=20'



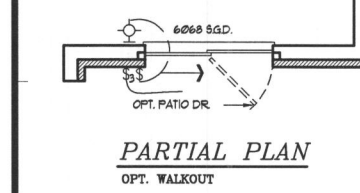
**PARTIAL PLAN w/  
OPT. HOBBY, L.L. BATH & DEN**  
SCALE (17x11): 1/8" = 1'-0"  
SCALE (34x22): 1/4" = 1'-0"



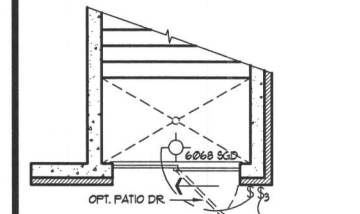
**PARTIAL PLAN w/  
OPT. BONUS RM.**  
SCALE (17x11): 1/8" = 1'-0"  
SCALE (34x22): 1/4" = 1'-0"



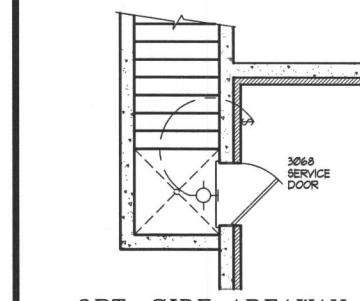
**OPT. FINISHED LOWER LEVEL PLAN**  
SCALE: 1/4" = 1'-0"



**PARTIAL PLAN  
OPT. WALKOUT**



**OPT. 7' WIDE AREAWAY  
PARTIAL PLAN**



**OPT. SIDE AREAWAY  
PARTIAL PLAN**

**GENERAL NOTES:**

- FLOOR ASSEMBLIES LOCATED DIRECTLY OVER A SPACE THAT IS NOT PROTECTED BY AN AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE:
  - CONSTRUCTED OF NOMINAL 2"x 10" OR GREATER DIMENSIONAL LUMBER -07-
  - PROVIDED WITH 1/2" GYPSUM WALLBOARD MEMBRANE, 5/8" WOOD STRUCTURAL PANEL MEMBRANE, OR EQUIVALENT ON THE UNDERSIDE OF THE FLOOR FRAMING MEMBERS. (AS AN ALTERNATIVE, JOIST MAY BE PROTECTED WITH AN APPROVED FIRE-PROTECTIVE COATING.)
- SLEEPING ROOMS IN BASEMENTS THAT ARE NOT PROTECTED BY AN AUTOMATIC FIRE SPRINKLER SYSTEM SHALL ALSO HAVE AN EMERGENCY ESCAPE AND RESCUE OPENING THAT LEADS TO A PUBLIC WAY.
- SLEEPING ROOMS IN BASEMENTS THAT ARE PROTECTED WITH FIRE SPRINKLER SYSTEM ARE NOT REQUIRED TO HAVE EMERGENCY ESCAPE AND RESCUE OPENING. THE ESCAPE WINDOW AND WELL MAY BE OFFERED AS 'OPTIONAL'.

**2021 IRC ELECTRICAL NOTES:**  
CHAPTER 34

- PROVIDE SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS WIRED TO A NEARBY CIRCUIT (WITH BATTERY BACKUP) AND INTER-CONNECTED FOR SIMULTANEOUS ACTIVATION (AS REQUIRED BY CODE).
- ELECTRICAL OUTLETS LOCATED IN GARAGES, KITCHEN, FOLDING ROOM, BATH ROOMS, LAUNDRY AREA, CRAWL SPACES AND THE EXTERIOR ARE TO BE GFCI PROTECTED AS REQUIRED BY CODE.
- PROVIDE SWITCH w/ KEYLESS LIGHT IN ATTIC SPACES.
- THESE DRAWINGS ARE SCHEMATIC ONLY.
- THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL ELECTRICAL SYSTEMS.
- ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE, THE LOCAL POWER COMPANY AND ALL APPLICABLE CODES.
- FIXTURES AND APPARATUS ARE SELECTED BY THE BUILDER AND SHALL BE UL APPROVED.

**ELECTRICAL SYMBOLS**

⊕	DUPLEX OUTLET 18" AFF.
⊕42	DUPLEX OUTLET 42" AFF.
⊕	DUPLEX OUTLET 18" AFF. HALF SWITCHED
⊕220	220 VOLT DUPLEX OUTLET
⊕F	WATERPROOF RECEPTACLE
⊕GFI	GROUND FAULT INTERRUPTER
⊕42 GFI	GROUND FAULT INTERRUPTER 42" AFF.
\$	WALL SWITCH
\$3	3-WAY WALL SWITCH
\$4	4-WAY WALL SWITCH
\$D	DIMMER WALL SWITCH
⊕F	EXHAUST FAN
⊕FL	FANLIGHT COMBO
⊕	LIGHT FIXTURE CEILING MOUNTED
⊕	LIGHT FIXTURE RECESSED LIGHT
⊕PC	FIXTURE PULL CHAIN FLUORESCENT LIGHT FIXTURE
⊕	FLOOD LIGHTS
⊕	LIGHT FIXTURE WALL MOUNTED
⊕	THERMOSTAT
⊕	JUNCTION BOX
⊕	DOOR CHIME
⊕	TELEPHONE JACK
⊕	TELEVISION JACK
⊕	GARBAGE DISPOSAL
⊕	SMOKE DETECTOR
⊕	CARBON MONOXIDE DETECTOR
⊕	COMBINATION SMOKE-CARBON DETECTOR
⊕	ELECTRIC PANEL
⊕	ELECTRIC METER
⊕	INTERCOM
⊕	INTERCOM CONSOLE

**Architecture Collaborative, Inc.**  
Elicott City, MD 21043  
8334 Main Street  
www.archcol.com  
Tel: (410) 465-7500 Fax: (410) 465-0903

**OPT. FINISHED LOWER LEVEL**  
date: 06-10-21  
drawn: ACI  
scale: 1" = 4' (34x22) file: CARUSO\_HOMES  
U.N.O. 1" = 8' (17x11) 4.2  
**CARUSO HOMES**  
KINGSFORD

revision	RC
1	ADDED EXPANDED TECH ROOM

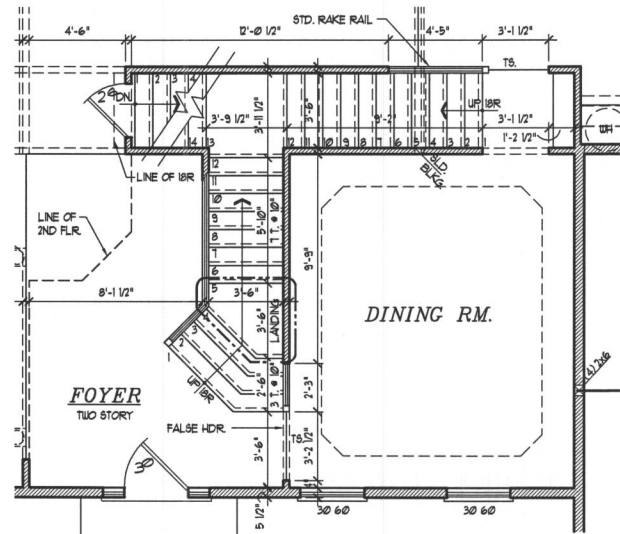
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4.2

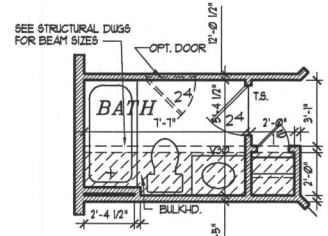
Professional Certification  
I hereby certify that these documents were prepared by me or under my direct supervision and that I am a duly licensed professional engineer in the State of Maryland.  
license number: 5821  
expiration date: 04-02-2024



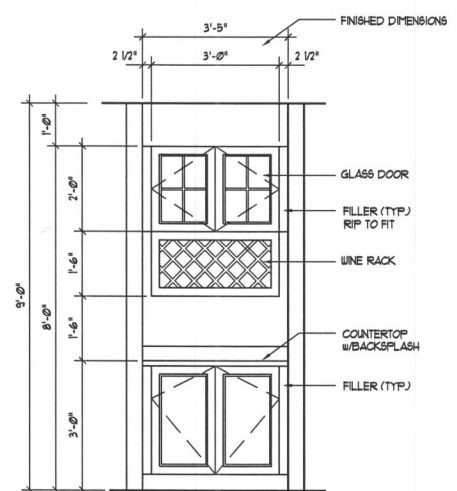
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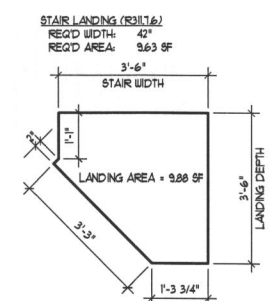
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SCALE: 1/4" = 1'-0"



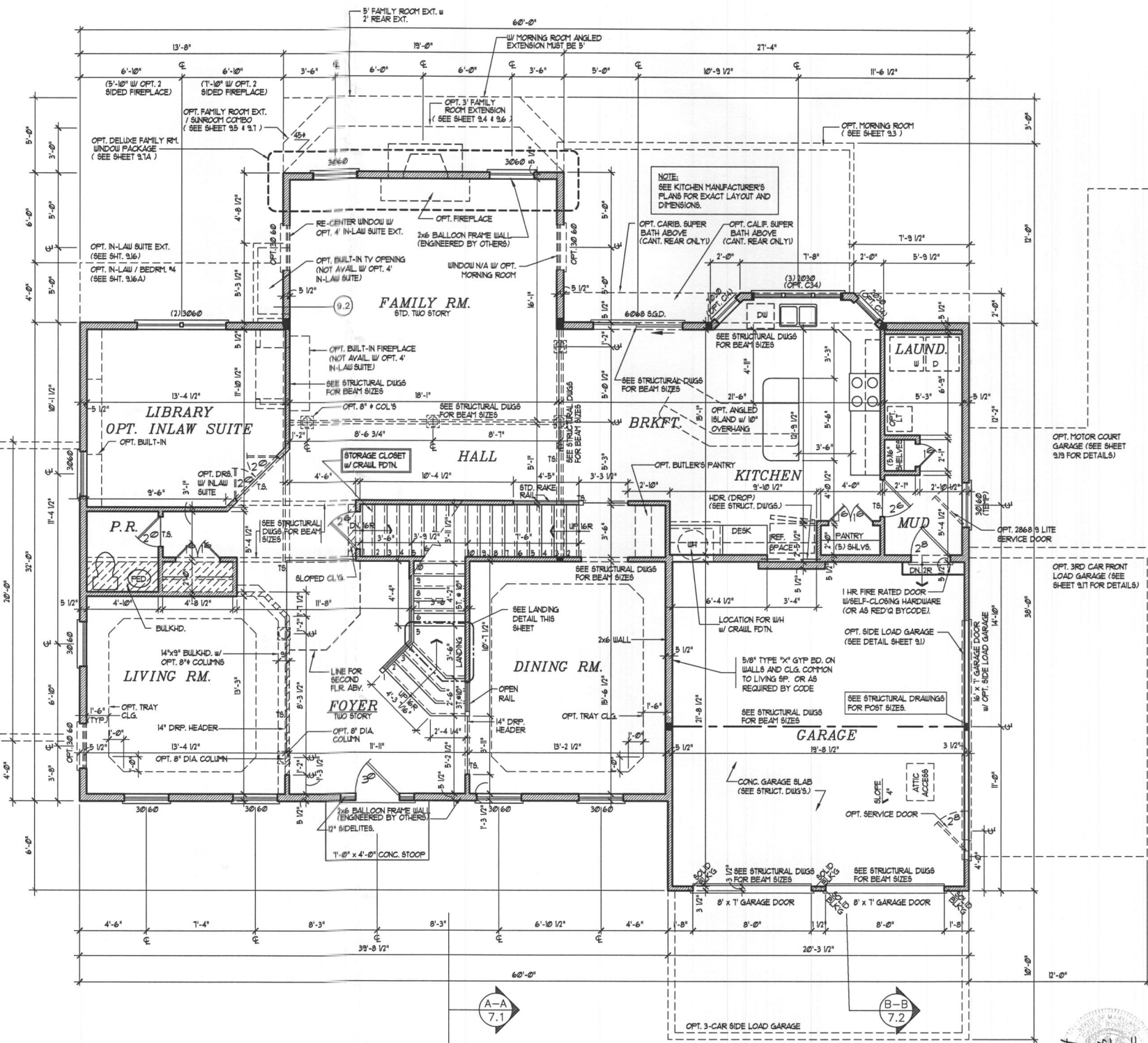
PARTIAL PLAN  
OPT. FULL BATH



ELEVATION  
OPT. BUTLER'S PANTRY  
SCALE: 1/2" = 1'-0"



PLAN DETAIL - STAIR LANDING  
SCALE: 1/2" = 1'-0"



FIRST FLOOR PLAN  
SCALE: 1/8" - 1/4" = 1'-0"

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8334 Main Street  
Ellicott City, MD 21043  
www.archcol.com  
Tel.: (410) 465-7500 Fax: (410) 465-0903

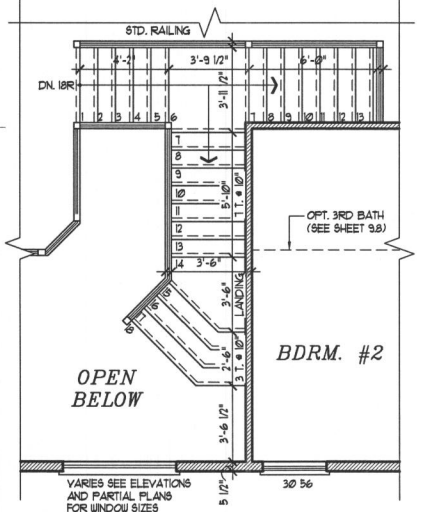
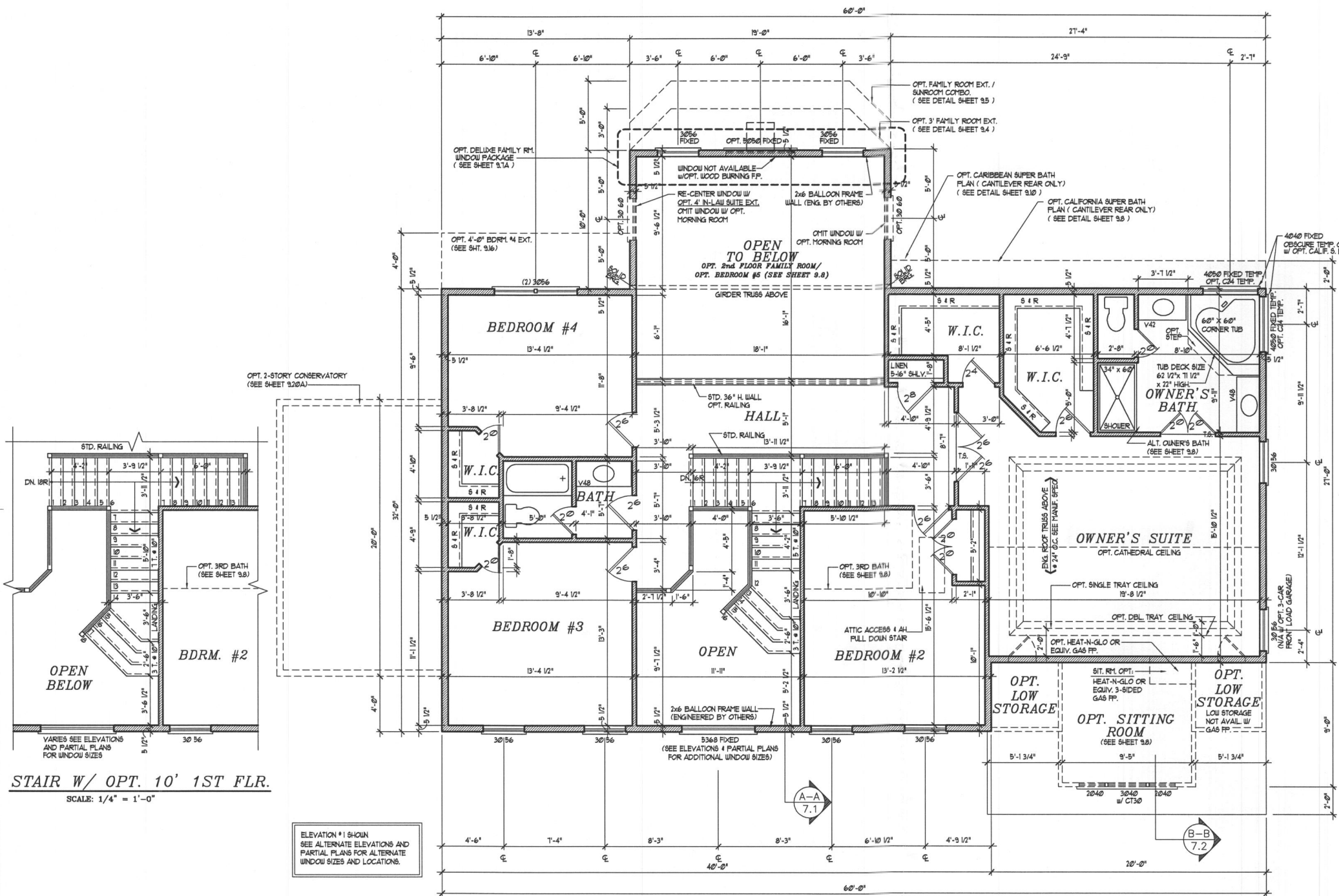
content	FIRST FLOOR PLAN	date	06-10-21
drawn	ACT	checked	ACT
scale	1" = 4' (3/4" = 21')	date	06-10-21
U.N.O.	1" = 8' (7/8" = 5.1')	checked	ACT
title	CARUSO HOMES	location	KINGSPOINT

date	revision

SHEET #  
5.1

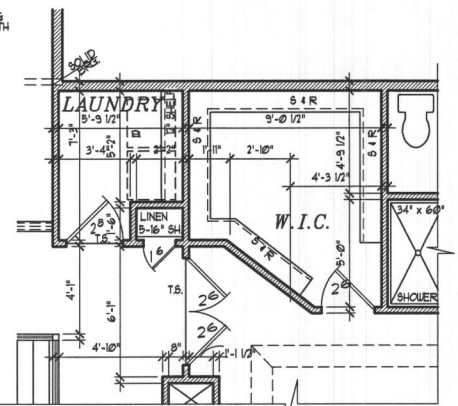
Professional Certification  
I hereby certify that these documents were prepared or approved by me, and I am a duly Licensed Professional Architect under the laws of the State of Maryland.  
license number: 9821  
expiration date: 04-09-2024



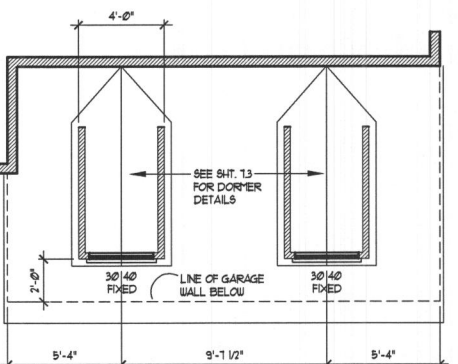


STAIR W/ OPT. 10' 1ST FLR.  
SCALE: 1/4" = 1'-0"

ELEVATION #1 SHOWN  
SEE ALTERNATE ELEVATIONS AND  
PARTIAL PLANS FOR ALTERNATE  
WINDOW SIZES AND LOCATIONS.



OPT. LAUNDRY ROOM  
SCALE: 1/4" = 1'-0"



OPT. DORMER LOCATION PLAN  
SCALE: 1/4" = 1'-0"

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

Architecture Collaborative, Inc.  
8334 Main Street  
Ellicott City, MD 21043  
www.archcol.com  
Tel.: (410) 465-7500 Fax: (410) 465-0903

content SECOND FLOOR PLAN  
UNO. 1'-0" (34222) FILE: UNO. 1'-0" (17217) 6.1  
drawn: ACT  
date: 06-10-21  
title CARUSO HOMES  
KINGSPOINT

date	revision

Professional Certification  
I hereby certify that these documents  
were prepared or approved by me, and  
that I am a duly licensed architect under the laws  
of the State of Maryland.  
license number: 8521  
expiration date: 04-03-2024

SHEET #  
6.1

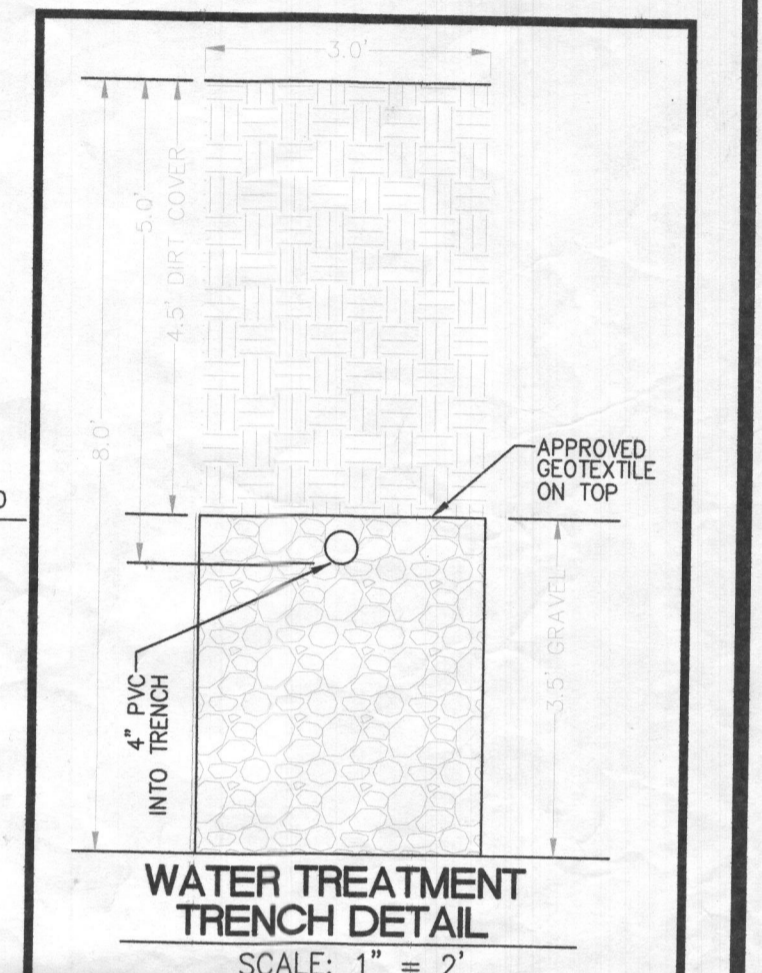
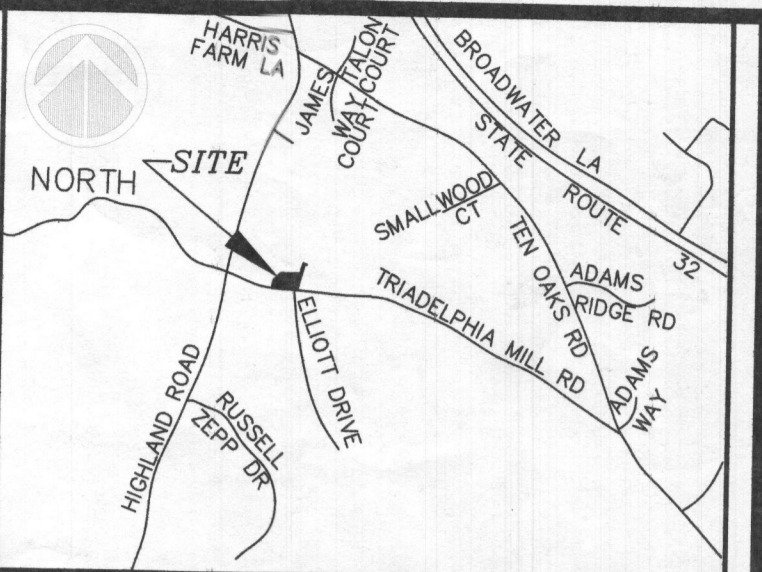


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File Name: C:\Users\carol\OneDrive\Documents\KINGSPOINT\KINGSPOINT\6.1.DWG

LEGEND	
	EX. WATER WELL
	EX. STREET SIGN
	EX. WOOD POST
	EX. TELEPHONE PEDESTAL
	EX. SANITARY CLEAN OUT
	EX. UTILITY POLE
	EX. GUY WIRE ANCHOR
	EX. STORM DRAIN MANHOLE
	EX. STUMP
	EX. EVERGREEN TREE
	EX. DECIDUOUS TREE
	PROP. SPOT ELEVATION
	EX. CONTOUR
	PROP. CONTOUR
	PROP. SUPER SILT FENCE
	PROP. SILT FENCE
	PROP. LIMIT OF DISTURBANCE
	B.R.L.
	PROP. STABILIZED CONSTRUCTION ENTRANCE
	EX. SEPTIC RESERVE AREA
	EX. WELL RESERVE BOX
	EX. PASSING PERCOLATION TEST
	PROP. DRAINAGE AREA LIMIT
	PROP. SURFACE FLOW DIRECTION

- GENERAL NOTES**
- ZONING: RR-500
  - PROPOSED SEWER - PRIVATE; PROPOSED WATER - PRIVATE.
  - THE PLAN IS BASED ON A FIELD RUN BOUNDARY AND TOPOGRAPHIC SURVEY PERFORMED BY NJR & ASSOCIATES IN MAY OF 2021.
  - THERE IS NO 100 YEAR FLOODPLAIN ON SITE.
  - THERE ARE NO WETLANDS AND STREAMS ON SITE.
  - THERE ARE NO CRITICAL HABITATS OF RARE, THREATENED OR ENDANGERED SPECIES ON SITE.
  - TOTAL AREA WITHIN LOD = 26,406 SQ.FT.
  - WATERSHED = PATUXENT RIVER
  - THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
  - CONTRACTOR TO MAINTAIN POSITIVE SLOPE AWAY FROM THE FOUNDATION OF THE HOUSE.



WATER TREATMENT TRENCH INFORMATION					
TRENCH	TRENCH LENGTH OF GROUND	EX. TOP OF TRENCH	TOP OF GRAVEL	INV. INTO TRENCH	BOTTOM OF TRENCH
1	50.0'	563.4±	558.9	558.4	555.4
2	50.0'	562.8±	558.3	557.8	554.8

- Required BAT Site Plan Notes:**
- Any change to the locations or depths to any components must be approved by the engineer and the Howard County Health Department prior to installation. A revised site plan may be required.
  - The maximum depth of the BAT per the manufacturer's specification is 6 feet.
  - The blower may not be located 50 feet more than manufacturer's specifications.
  - The BAT system shall be maintained and operated for the life of the system.
  - The BAT shall be operated by and maintained by a certified service provider.
  - Within one month of installation, a person installing the BAT system shall report to the Maryland Department of the Environment (MDE) in a manner acceptable to MDE, the address and date of completion of the BAT installation and the type of BAT installed.
  - Electrical work for the BAT installation must be performed by a licensed electrician.
  - An Agreement and Easement must be completed and signed by all applicable parties, and recorded in Land Records of Howard County.
  - The Health Department requires documentation for the start-up certification from the manufacturer prior to final approval of the installation.

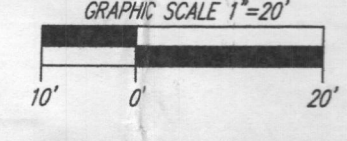
**NOTES:**

- ANY CHANGES TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
- THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET OR LESS. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
- THE EXISTING WELL (TAG # HO-18-008 & HO-17-0240) HAS BEEN FIELD LOCATED AND ACCURATELY SHOWN ON THIS PLAN.
- ALL EXISTING WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN ON THIS PLAN.
- THE TOPOGRAPHY SHOWN ON THIS PLAN IS BASED ON AN ACTUAL FIELD RUN SURVEY BY NJR & ASSOCIATES PERFORMED ON SEPTEMBER OF 2020.
- THIS SURVEY IS TIED TO MARYLAND STATE PLANE NAD 83/91 COORDINATE SYSTEM.
- THE LOT SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT ARE AS REQUIRED BY THE MARYLAND DEPARTMENT OF ENVIRONMENT.

Approved Septic System Plan  
Howard County Health Department  
APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS.  
Signature: Mark Oswald Date: 9/16/22  
HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT. DATE

**MISS UTILITY**  
CALL "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF WORK. THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR COMPLIANCE WITH REQUIREMENTS OF FREDERICK COUNTY REGULATIONS.

SOIL TABLE			
SYMBOL	NAME/DESCRIPTION	TYPE	HYDRIC
GgB	Glennel Loam, 3% to 8% Slopes		No



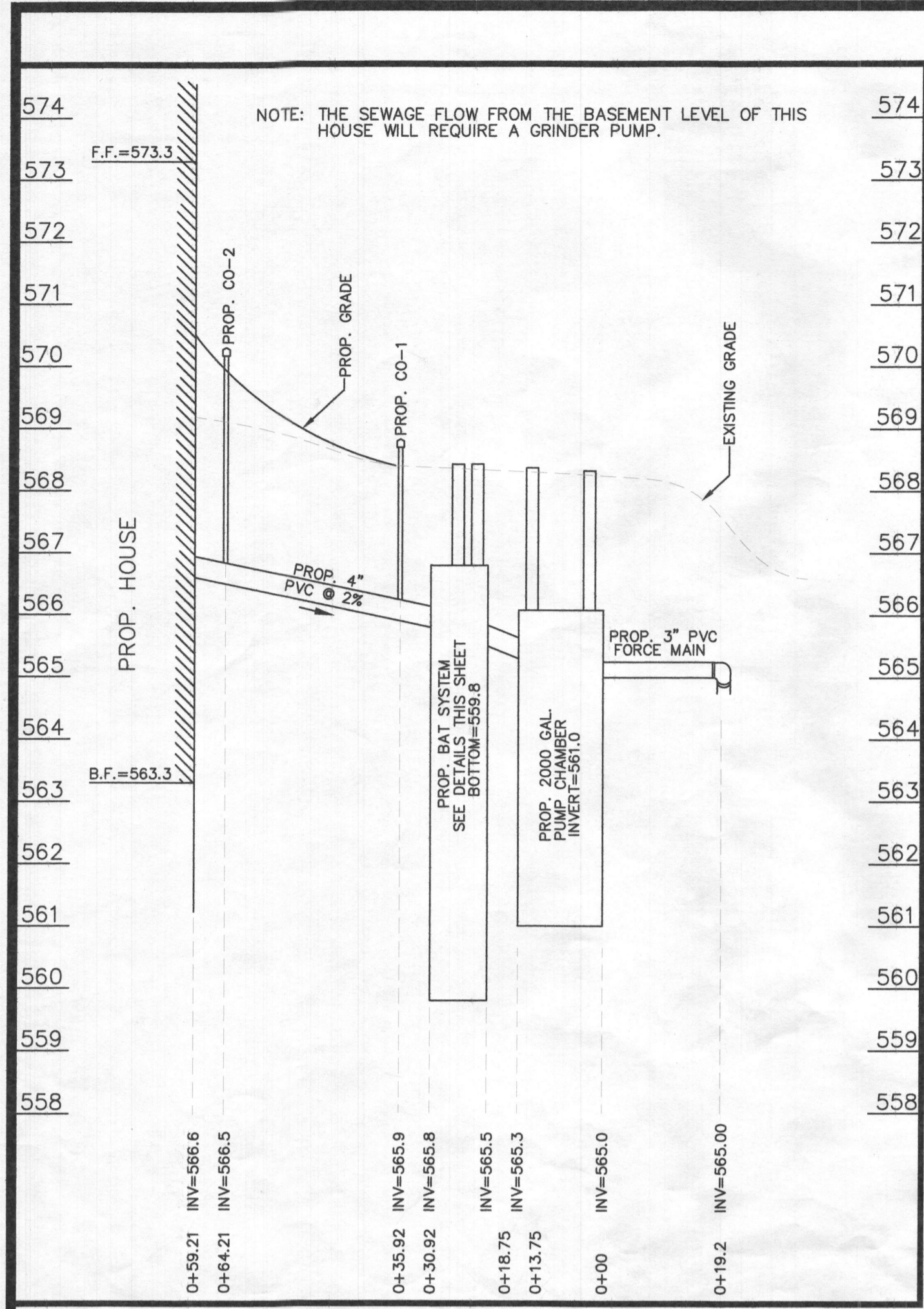
REVISIONS	
No.	DATE

PLAN PREPARED BY:  
**NJR & ASSOCIATES, LLC.**  
LAND SURVEYING AND PLANNING  
2770 TERRAPIN RUN  
WEST FRIENDSHIP, MARYLAND 21794  
TEL: (240) 508-3200

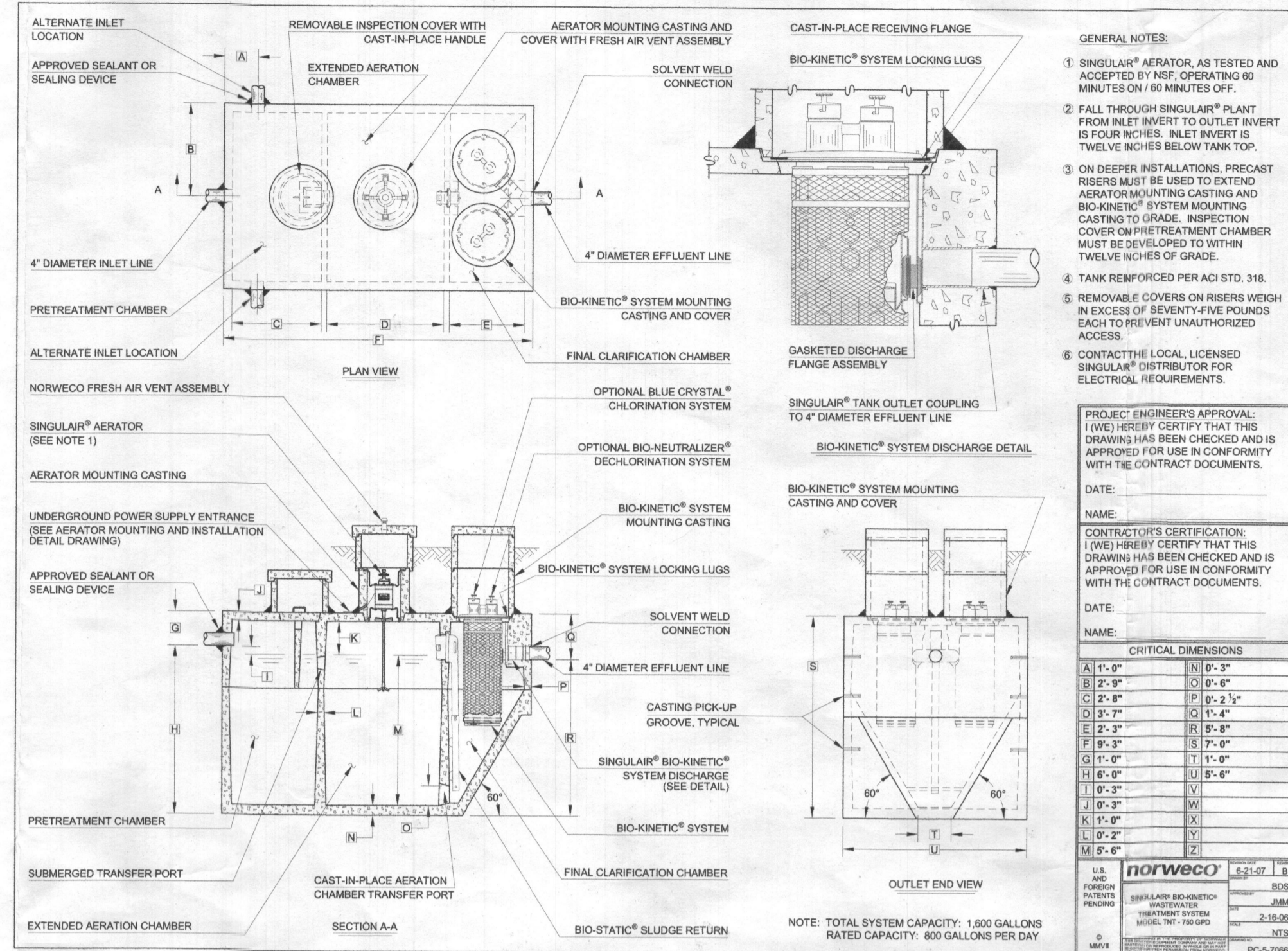
PROFESSIONAL CERTIFICATE  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NUMBER 11049. WITH EXPIRATION DATE OF FEBRUARY 10, 2023.  
AUGUST 23, 2022  
DATE

DEVELOPER  
CARUSO HOMES  
2120 BALDWIN AVENUE, SUITE-200  
CROFTON, MD 21114  
(301) 261-0277  
OWNER  
MARTY HOWARD  
8045 HUNTERBROOKE LANE  
RULTON, MD 20759  
(301) 343-1353

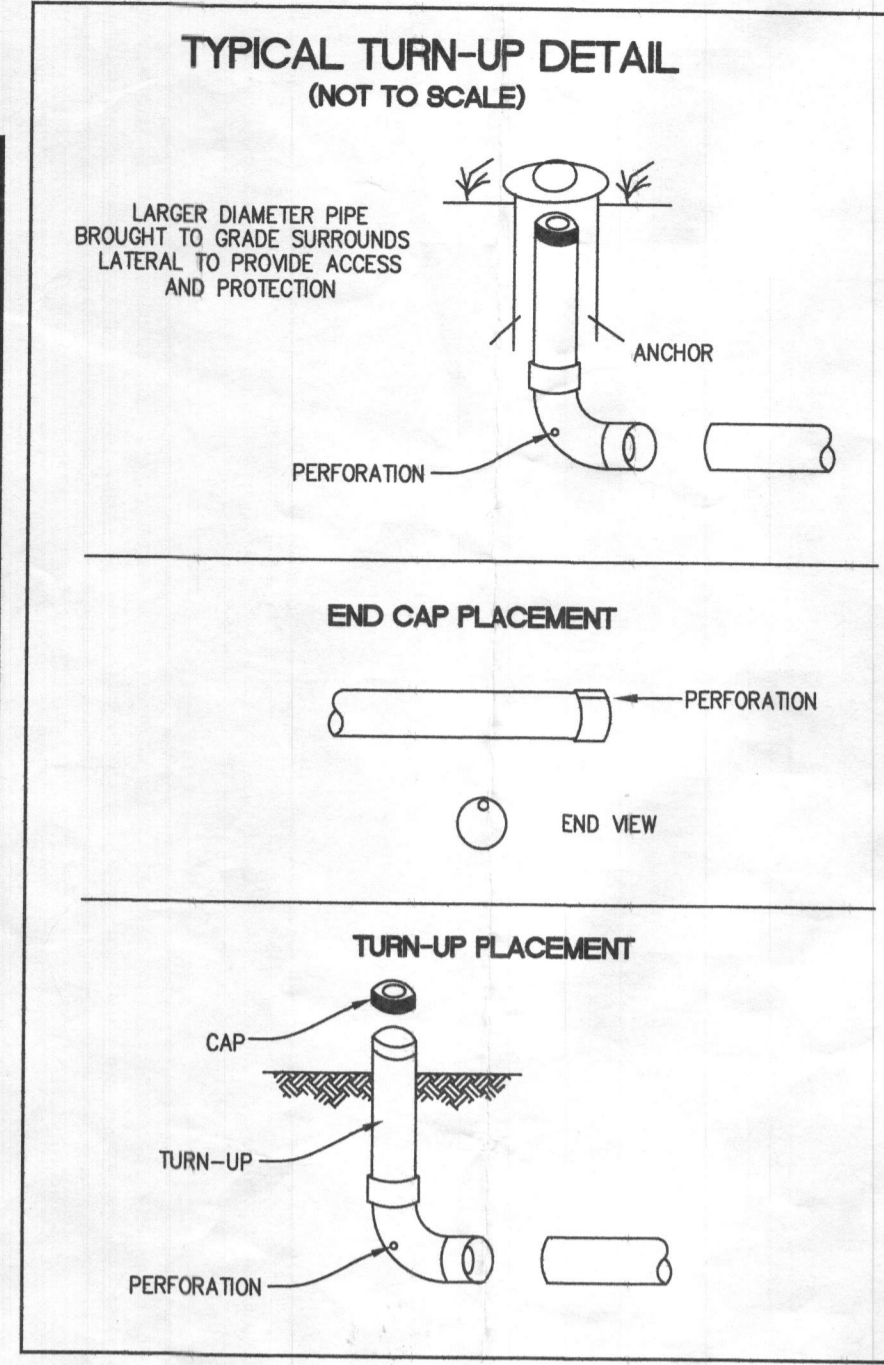
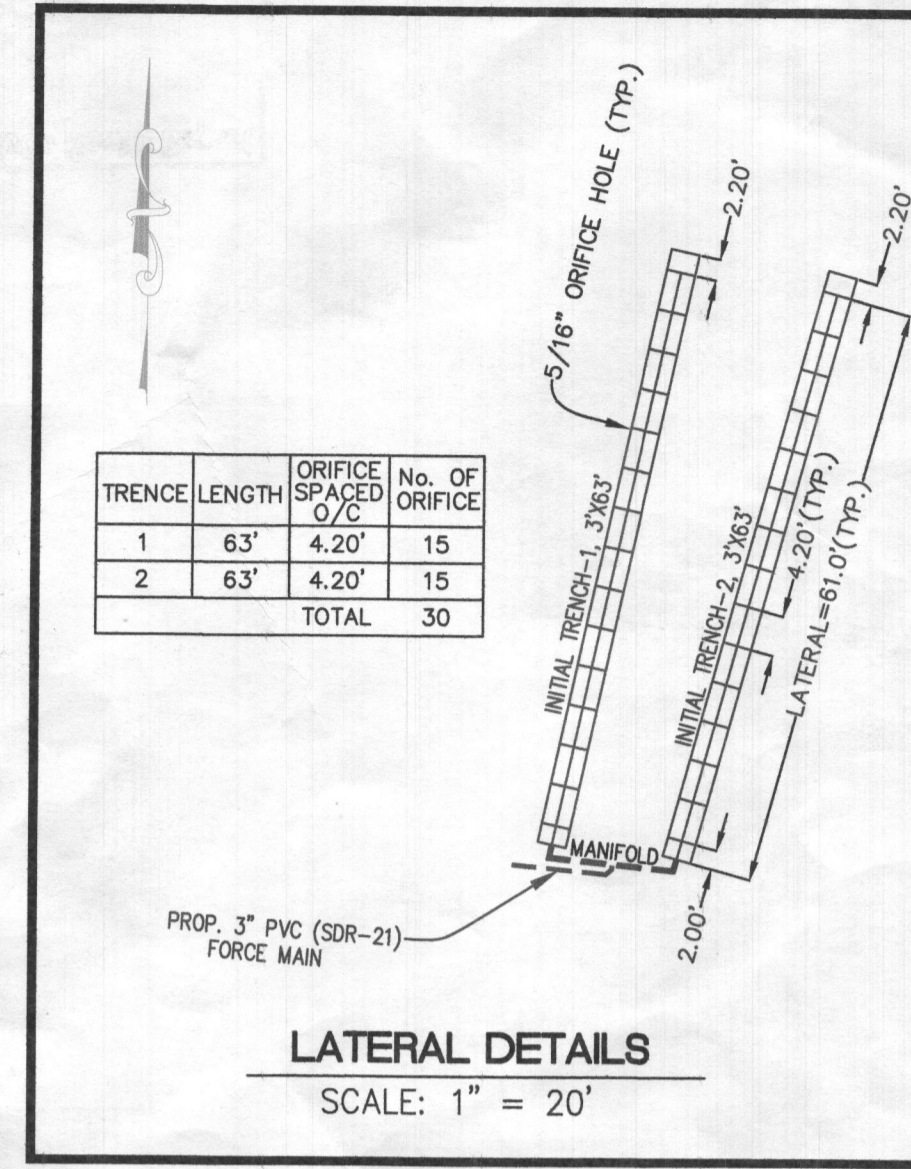
SITE PLAN FOR BAT INSTALLATION  
JACK'S LANDING, PHASE II  
LOT 8  
PLAT No. 25063  
5509 JACKS LANDING WAY, CLARKSVILLE  
TAX MAP 34, GRID 3, PARCEL 414  
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: 1" = 20' JOB NO.: 3438 DATE: JULY 12, 2021 SHEET: 1 OF 2



SEPTIC SYSTEM PROFILE  
SCALE: HORIZONTAL - 1" = 20'  
VERTICAL - 1" = 2'



BAT TANK DETAILS  
(NOT TO SCALE)



MINIMUM SYSTEM DISCHARGE RATE = 48.90 gpm  
3" PVC MAIN f = 1.73' / 100'  
3" MANIFOLD

DOSE:  
(5 X LATERALS) + MANIFOLD + MAIN  
1.5" LATERALS: 5 X 2 X 61 X 10.6 / 100 = 64.66 GALS.  
FORCE MAIN 19.2 X 38.4 GAL/100 L.F. = 7.37 GALS.  
MANIFOLD 15.8 X 38.4 GAL/100 L.F. = 5.91 GALS.  
77.94 GALS.

1/6 X 900 GAL = 150 GALLONS > 77.94 => (150 GAL = MIN. DOSE)  
RUNTIME = 1.5 MIN.

PUMP CHAMBER:  
ONE DAY DOSE = 1,204 GALLONS

TDH: (FITTINGS)

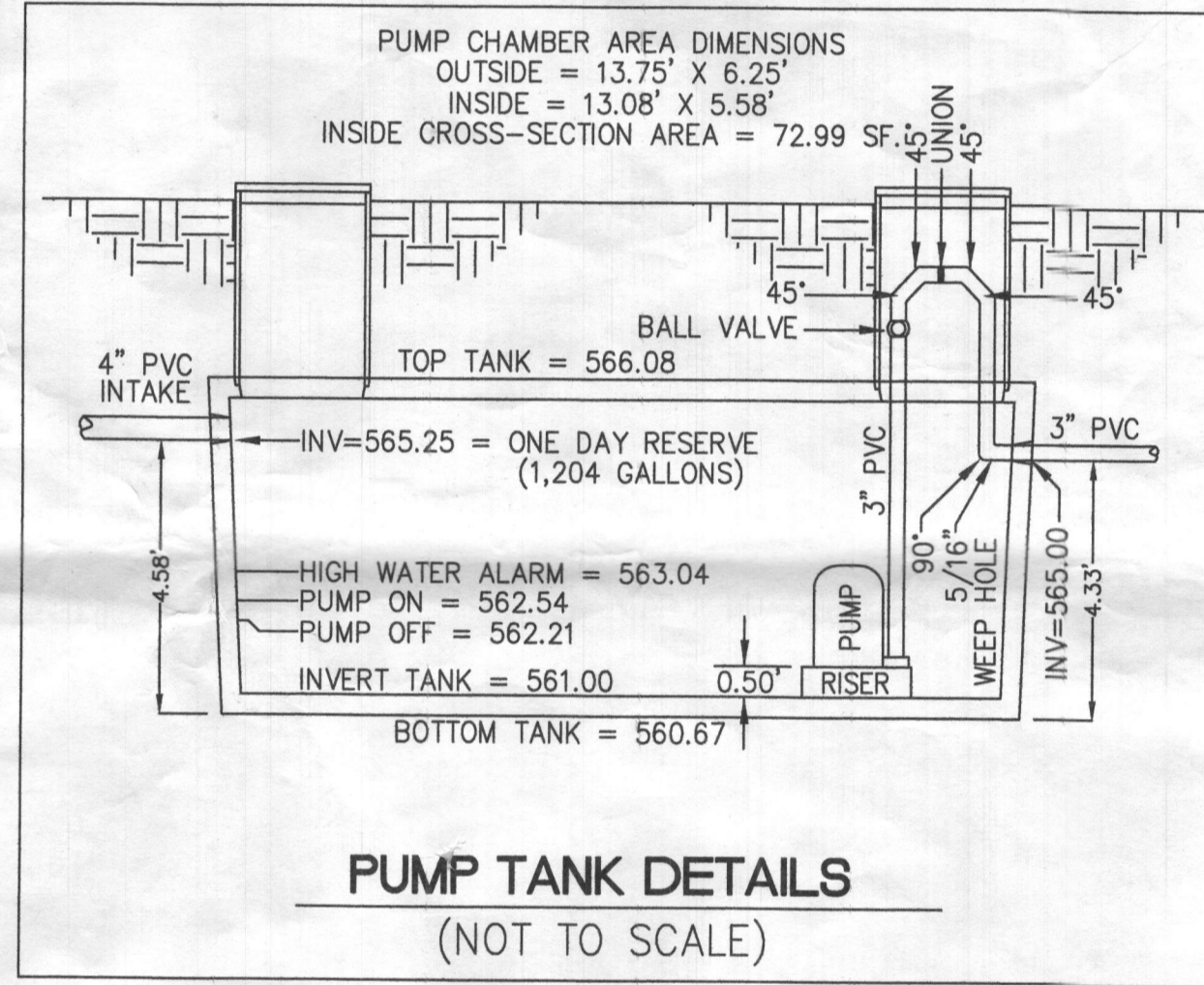
DISCONNECT :	1 X 3	= 3
45' :	6 X 6	= 36
90' :	1 X 10	= 10
VALVES :	1 X 2	= 2
TOTAL		= 51

FRICITION:  
MAIN + FITTINGS = 5.8 + 51 = 56.8  
56.8 ( 1.73/100 ) = 0.98

STATIC:  
(INVERT OF MANIFOLD - PUMP OFF) 564.60 - 562.21 = 2.39

DISTAL HEAD = 2.0'

TDH (0.98 + 2.39 + 2.0) = 5.37 @ 48.90 GPM  
USE ASHLAND MODEL (EPF30)



SEPTIC SYSTEM CALCULATIONS:

INITIAL SYSTEM AND TWO REPLACEMENTS  
ABS. RATE = 1.2, EFFECTIVE DEPTH = 5'-8" (3.0')  
DRAINFIELD AREA: 6 BEDROOMS AT 900 gpd / 1.2 ABSORPTION RATE = 750 SQ. FT.  
SIDEWALL REDUCTION CREDIT:  $\frac{WIDHT+2}{WIDHT+1+2(DEPTH)} = \frac{3+2}{3+1+2(3)} = \frac{5}{10} = 0.50$   
LENGTH OF TRENCHES:  $\frac{750 \text{ SQ. FT.} \times 0.50}{3} = 125 \text{ LINEAR FEET}$

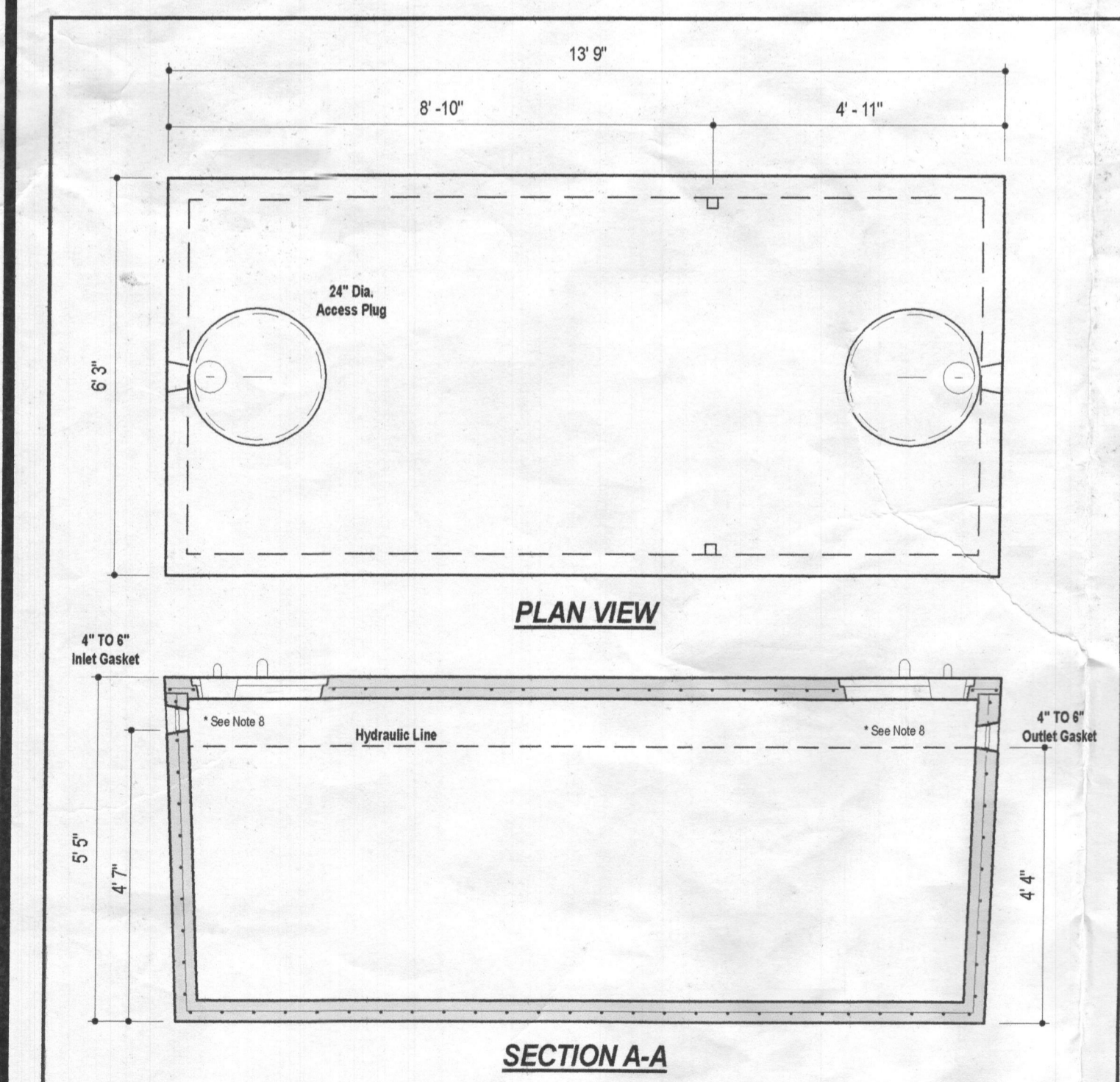
INITIAL SYSTEM: TWO TRENCHES OF 63 FEET IN LENGTH, 3 FEET WIDE, 10 FEET MINIMUM SPACED ARE PROVIDED.  
REPLACEMENT SYSTEM-1: TWO TRENCHES OF 63 FEET IN LENGTH, 3 FEET WIDE, 10 FEET MINIMUM SPACED ARE PROVIDED.  
REPLACEMENT SYSTEM-2: THREE TRENCHES OF 42 FEET IN LENGTH, 3 FEET WIDE, 10 FEET MINIMUM SPACED ARE PROVIDED.

LOW PRESSURE DOSING SYSTEM

TRENCH	PIPE INVERT ELEVATION	TRENCH LENGTH	LATERAL LENGTH	ASSUMED HEAD	ORIFICE DIAMETER	ORIFICE FLOW RATE	ORIFICE SPACING	ORIFICE NUMBER	FLOW RATE GPM/L.F. TRENCH	FLOW RATE GPM/L.F. TRENCH
1	564.6	63'	61'	2.0'	5/16"	1.63 gpd	4.20'	15	0.38	24.45 GPM
2	564.6	63'	61'	2.0'	5/16"	1.63 gpd	4.20'	15	0.38	24.45 GPM
TOTAL										48.90 GPM

SEPTIC TRENCH INFORMATION, INITIAL SYSTEM

TRENCH	TRENCH LENGTH	EX. TOP OF GROUND	TOP OF GRAVEL	INV. INTO TRENCH	BOTTOM OF TRENCH	DEPTH OF TRENCH	SURFACE TO TOP OF STONE	START OF TRENCH EFFECTIVE DEPTH	EFFECTIVE DEPTH	TRENCH DEPTH	TRENCH WIDTH	TRENCH SPACING
1	63'	567.7±	565.1	564.6	559.7	5.4'	2.6'	560.9	3.0'	8.0'	3.0'	10.0'
2	63'	566.8±	565.1	564.6	558.6	6.5'	1.5'	560.9	3.0'	8.0'	3.0'	10.0'

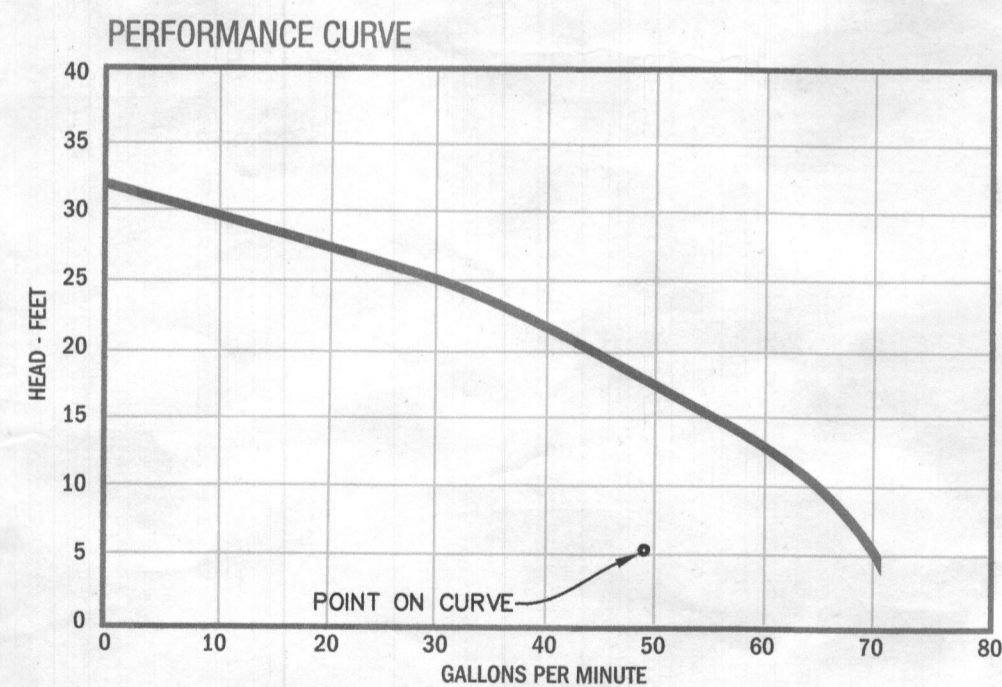


WEIGHT = 19,000 lbs.

DESIGN DATA & GENERAL NOTES  
[1] Concrete strength: Fc=3000 p.s.i., @ 28 days. Density = 150 pcf.  
[2] Cement - Portland Type III per ASTM C 150-02.  
[3] Admixtures & plasticizers per ASTM C 260-88 & C 494-02.  
[4] Reinforcing per ASTM A 199, Min. 1-1/2" cover.  
[5] Top slab sealed with butyl rope mastic.  
[6] 4" wall, 4" base, 8" top thickness.  
[7] Max 3" of cover.  
[8] Depending on use of tank, Inlet & Outlet baffles may be required by code.

2,000 GALLON SEPTIC TANK  
1-Compartment  
Stock Item [Approx. 19,000 lbs]  
Dwg. No. 2000-1C No Scale Aug. 11, 2008

EFFLUENT PUMPS  
EPF30 Performance Data  
RPM: 3450 Discharge: 2" Solids: 3/4"

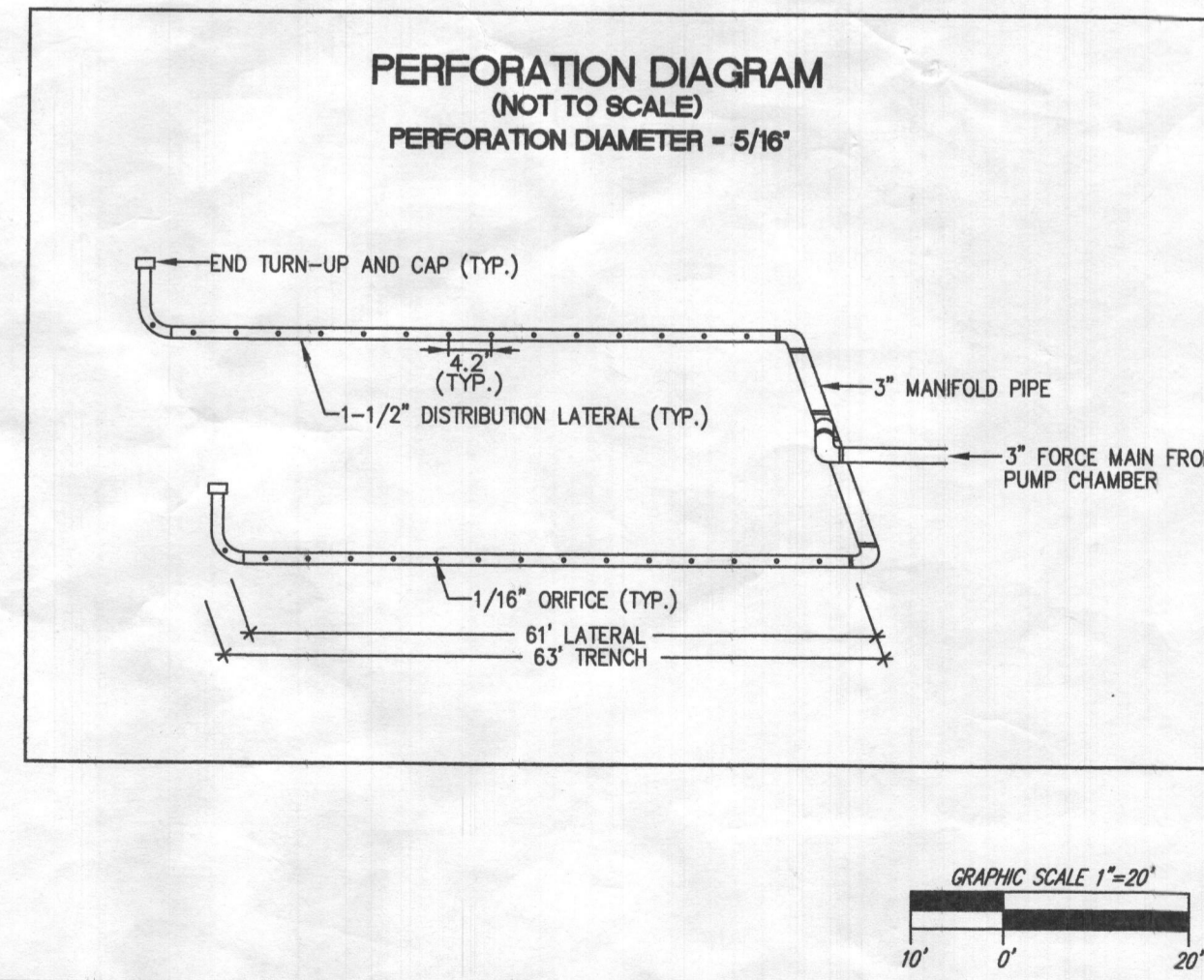


PERFORMANCE CURVE

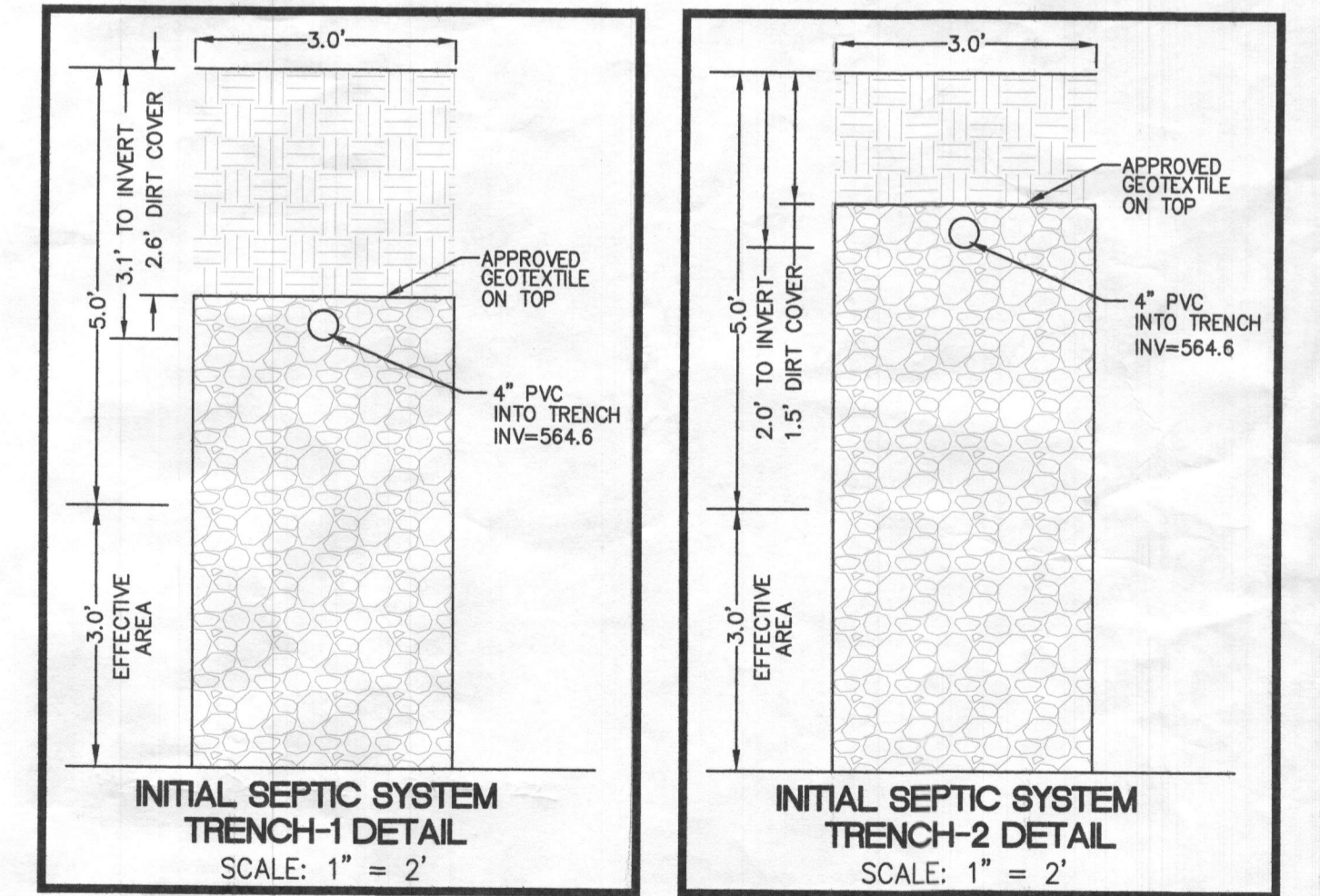
Total Lift (feet)	0	5	10	15	20	25	30	32
GPM	75	70	63	56	44	31	9	0

Conditions of Service:  
GPM: \_\_\_\_\_ TDH: \_\_\_\_\_

Ashland  
PUMP  
Honest, Professional, Dependable  
1699 Cottage Street, Ashland, Ohio 44805  
Telephone: 855 281-6830 • Fax: 877 326-1994 • ashlandpump.com



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



PLAN PREPARED BY:  
NJR & ASSOCIATES, LLC.  
LAND SURVEYING AND PLANNING  
2770 TERRAPIN RUN  
WEST FRIENDSHIP, MARYLAND 21794  
TEL: (240) 608-3200

PROFESSIONAL CERTIFICATE  
HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NUMBER 11049 WITH EXPIRATION DATE OF FEBRUARY 10, 2023.  
AUGUST 23, 2022  
DATE

DEVELOPER  
CARUSO HOMES  
2120 BALDWIN AVENUE, SUITE-200  
CROFTON, MD 21114  
(301) 261-0277  
OWNER  
MARTY HOWARD  
8045 HUNTERBROOKE LANE  
FULTON, MD 20759  
(301) 343-1353

SITE PLAN FOR BAT INSTALLATION  
JACK'S LANDING, PHASE II  
LOT 8  
PLAT No. 25063  
5509 JACKS LANDING WAY, CLARKSVILLE  
TAX MAP 34, GRID 3, PARCEL 414  
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: 1" = 20' JOB NO.: 3438 DATE: JULY 12, 2021 SHEET: 2 OF 2