

### LEGEND

- 400 PROPOSED CONTOURS
- 398 EXISTING CONTOURS
- 400 EXISTING PRIVATE SEWAGE AREA
- PROPOSED PRIVATE SEWAGE DISPOSAL AREA
- EXISTING WELL BOX
- PROPOSED TREELINE
- EXISTING TREELINE
- SOILS MAP SYMBOL
- SOILS DELINEATION LINE
- PERC TEST PASSED
- PERC TEST FAILED

**OWNER/BUILDER:**  
 KEYSTONE CUSTOM HOMES, INC.  
 227 GRANITE RUN DR.  
 SUITE 100  
 LANCASTER, PA 17601  
 717-464-9060

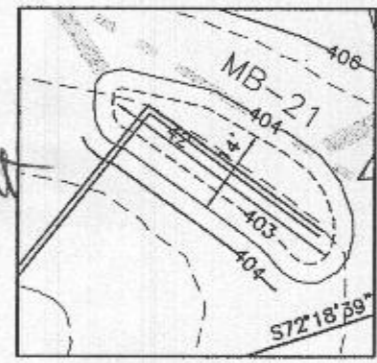
**GENERAL NOTES**

1. THE LOT SHOWN HEREON WAS RECORDED ON THE PLAT FOR THE MYRTUE PROPERTY, PLAT No. 23865. REFER TO THE PLATS FOR LOT DIMENSIONS, LOT AREAS, ALL EASEMENTS AND CONDITIONS.
2. SEDIMENT AND EROSION CONTROLS WERE APPROVED BY HOWARD SOIL CONSERVATION DISTRICT UNDER GP-20-45.
3. TOPOGRAPHY SHOWN HEREON IS TAKEN FROM THE APPROVED ROAD CONSTRUCTION PLANS F-06-104, PREPARED BY DAFT, McCUNE WALKER, INC. SEPT. 2007 AND REVISED BY BENCHMARK ENGINEERING, INC., DEC. 2015.
4. ALL SEDIMENT AND EROSION CONTROL FEATURES USED ON THIS SITE SHALL COMPLY WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
5. ALL DRAINAGE AND STORMWATER MANAGEMENT FEATURES USED ON THIS SITE MUST COMPLY WITH THE APPROVED ROAD CONSTRUCTION PLANS EXCEPT AS WAIVED.
6. THE EXISTING WELL SHOWN ON THIS PLAN, HO-98-1217, HAS BEEN FIELD LOCATED BY BENCHMARK ENGINEERING, INC., AND IS ACCURATELY SHOWN.
7. THERE ARE NO EXISTING WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THIS PROJECT'S BOUNDARY EXCEPT AS NOTED.
8. ANY CHANGES TO A PRIVATE SEWAGE DISPOSAL AREA OR WELL BOX SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
9. STORMWATER MANAGEMENT FOR THIS LOT IS PROVIDED BY ONE MICRO-BIORETENTION FACILITY (MDE M-6).
10. RAINWATER SHALL BE CONVEYED TO THE MICRO-BIORETENTION.

**PLAN VIEW**

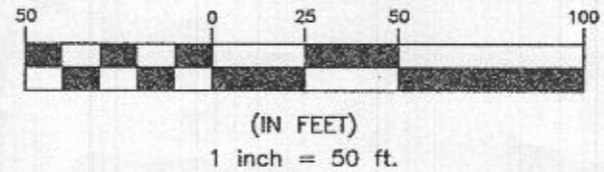
1" = 50'

*Approved by Howard County Department of Health*  
*6-bedroom SFD approved w/ un finished basement and no plumbing indicated for basement*  
*R. Bricker*  
*Signature*  
*6/5/20*  
*Date*  
*B 20001592*



**MB-21**  
1" = 30'

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 28376, Expiration Date: 01-01-2021



PROJECT:		MYRTUE PROPERTY LOT 21	
LOCATION:		TAX MAP: 10, GRID: 24, PARCEL: 225, ZONED: RC-DEO 1939 DAVIS BRANCH RD. WOODSTOCK, MD 21163 6TH ELECTION DISTRICT, HOWARD COUNTY, MD, TAX ID 352404	
TITLE:		BUILDING PERMIT PLAN	
HOUSE TYPE:		CUSTOM - KEYSTONE HOMES	
DATE:	MAY 2020	PROJECT NO.	2099
SCALE:	AS SHOWN	DRAWING	1 OF 2

**ESD STORMWATER MANAGEMENT SUMMARY TABLE**

Practice	#	DA to practice	Imp Area to practice	Af (s.f.)		ESDv		Rev (AC)		Ownership		
				Required	Provided	Required	Provided	Required	Provided			
(M-6) Micro-Bioretenment	#21	18,856	4,400	377	401	PASS	490	561	1.8	163.43	120.30	Private

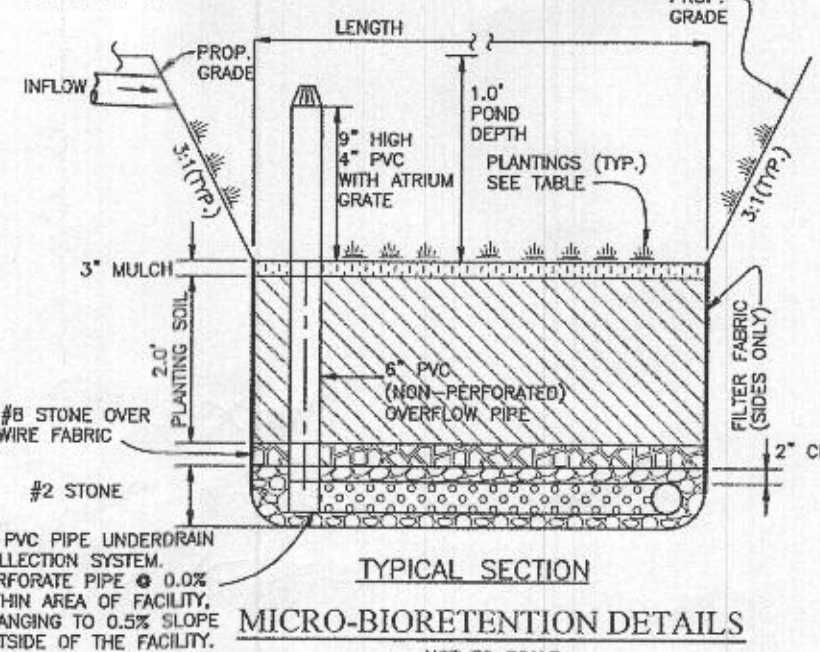
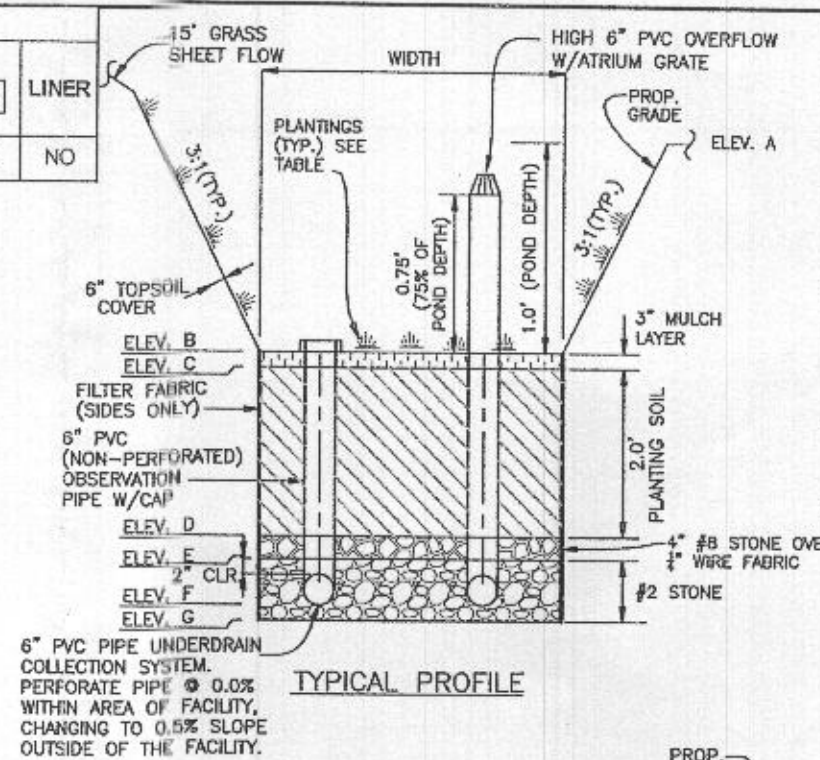
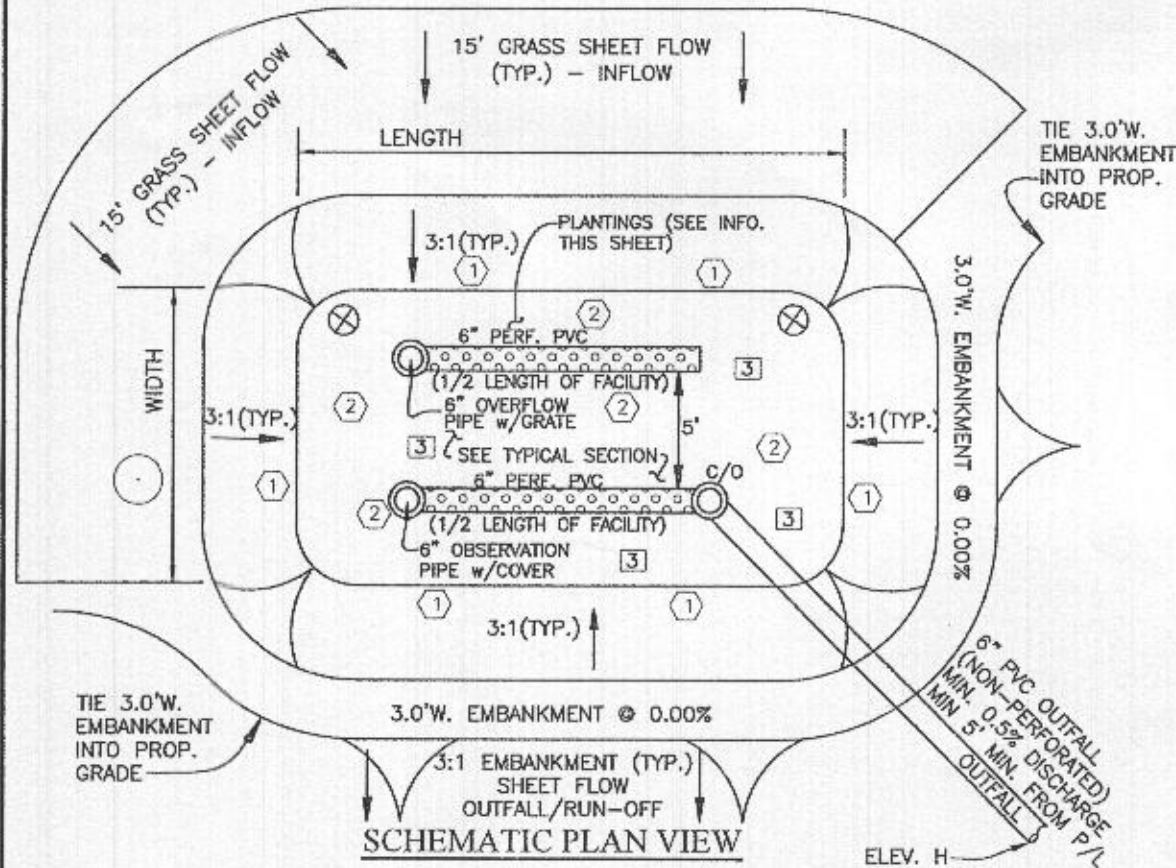
Pe= 1.60 inches    Qe= 0.18 inches    ESDv= 654 cf    Rv= 0.26

Depth of Stone: 9 inches

**BENCHMARK**  
 ENGINEERS & LAND SURVEYORS & PLANNERS  
**ENGINEERING, INC.**  
 8180 BALTIMORE NATIONAL PIKE & SUITE 315  
 ELLICOTT CITY, MARYLAND 21043  
 (P) 410-485-6105 & (F) 410-485-6844  
 WWW.BEI-CIVILENGINEERING.COM

**ON-LOT BIORETENTION DIMENSIONS**

Practice	#	A	B	C	D	E	F	G	H	LENGTH	WIDTH	FILTER AREA	PLANTINGS			LINER
													①	②	③	
(M-6) Micro-Bioretenition	21	404.00	403.00	402.75	401.00	400.67	400.17	399.42	397.90	42	14	401	45	45	22	NO



- OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (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 INSPECTION 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.

**OWNER/BUILDER:**  
 KEYSTONE CUSTOM HOMES, INC.  
 227 GRANITE RUN DR.  
 SUITE 100  
 LANCASTER, PA 17601  
 717-464-9060

**BENCHMARK ENGINEERING, INC.**  
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 (P) 410-465-6105 • (F) 410-465-6644  
 WWW.BEI-CVLENGINEERING.COM

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 28376, Expiration Date: 01-01-2021.



**MATERIALS & SPECIFICATIONS FOR MICRO-BIORETENTION**

MATERIAL	SPECIFICATION	SIZE	NOTES:
PLANTINGS	SEE APPENDIX A; TABLE A.4	N/A	PLANTINGS ARE SITE SPECIFIC
PLANTING SOIL (2.0' TO 4.0' DEEP)	LOAMY SAND 60-65% COMPOST 35-40% OR SANDY LOAM 30% COARSE SAND 30% & COMPOST 40%	N/A	USDA SOIL TYPES: LOAMY SAND OR SANDY LOAM; CLAY CONTENT <5%
ORGANIC CONTENT	MIN 10% BY DRY WEIGHT ASTM D 2974		
MULCH	SHREDDED HARDWOOD	N/A	AGED 6 MONTHS, MINIMUM, NO PINE OR WOOD CHIPS
GEOTEXTILE (CLASS "C")		N/A	PE TYPE 1 NONWOVEN
GEOTEXTILE (1/4" WIRE MESH)		1/4" WIRE MESH	1/4" WIRE MESH
UNDERDRAIN GRAVEL	AASHTO M-43	NO. 57 OR NO. 6 0.375" TO 0.750"	
UNDERDRAIN PIPING	F758, TYPE PS2B OR AASHTO M-278	4" TO 6" RIGID SCH.40 PVC, SDR35 OR HDPE	3/8" PERF. @ 6" O/C, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES, NOT NECESSARY UNDERNEATH PIPES. PIPE SHALL BE WRAPPED WITH 1/4-INCH GALVANIZED HARDWARE CLOTH
IMPERVIOUS LINER	ASTM-D-4833 (THICKNESS) ASTM-D-412 (TENSILE STRENGTH 1,100 LB., ELONGATION 200%) ASTM-D-624 (TEAR RESISTANCE - 150 LB./IN) ASTM-D-471 (WATER ADSORPTION: +8 TO -2% MASS)	30 MIL THICK	LINER TO BE ULTRAVIOLET RESISTANT. A GEOTEXTILE FABRIC SHOULD BE USED TO PROTECT THE LINER FROM PUNCTURE.
GEOTEXTILE (BELOW IMPERV. LINER)	ASTM-D-4833 (PUNCTURE STRENGTH 125LB) ASTM-D-4832 (TENSILE STRENGTH 300 LB.)		

**MICROBIORETENTION PLANTING SCHEDULE**

- (PLANTING SPECIES AND DENSITY CAN BE CHANGED OR SUBSTITUTED BY A LANDSCAPE ARCHITECT OR QUALIFIED DESIGNER)
- ① IRIS FULVA (COPPER IRIS) (1 PER SY)
  - ② LOBELIA CARDINALIS (CARDINAL FLOWER) (1 PER SY)
  - ③ RUDBECKIA SUBTOMENTOSA (SWEET CONEFLOWER) (1 PER 2 SY)
  - ⊗ CALLUNA VULGARIS (HEATHER) (1 PER FACILITY)
  - ACER GINNALA (ARMUR MAPLE) (1 PER FACILITY)

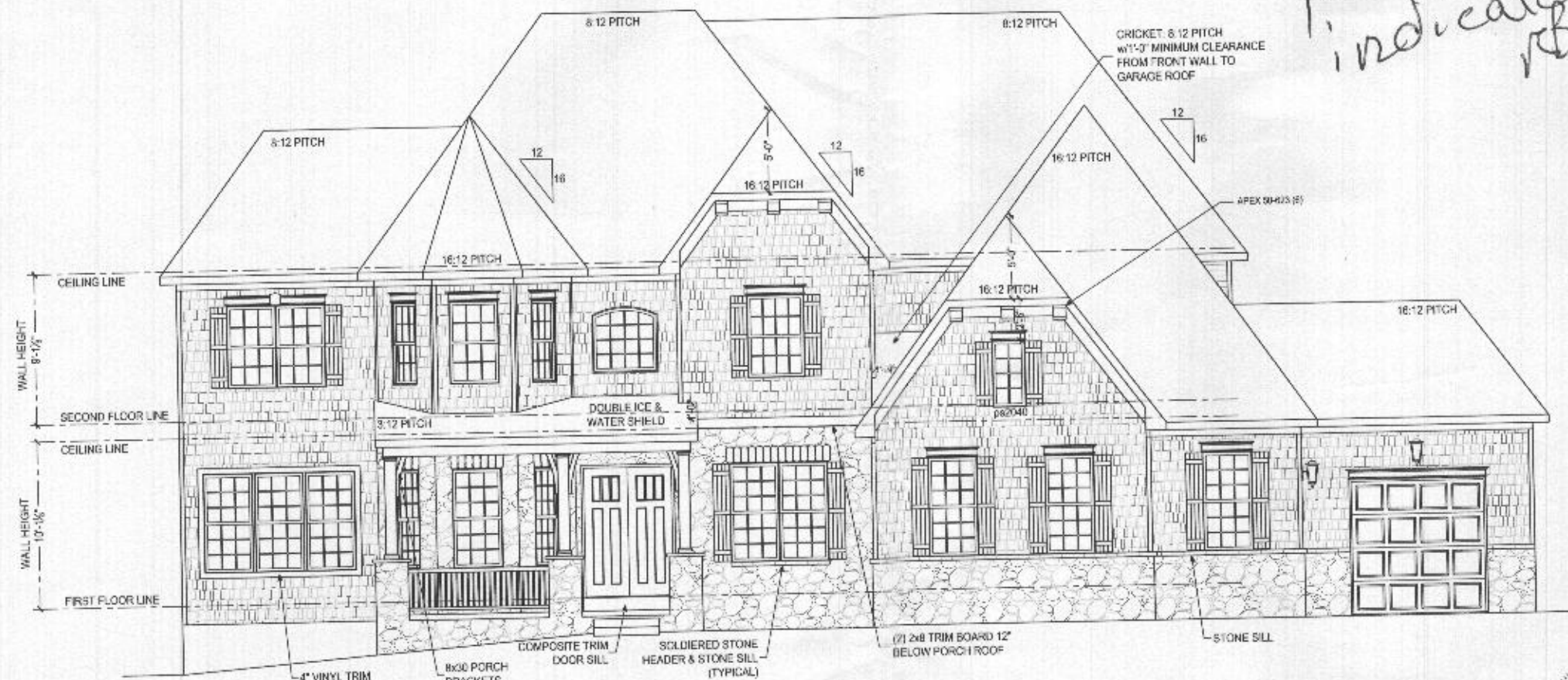
**MICROBIORETENTION PLANTING DATA**

- PLANTINGS WITHIN THE PONDING AREA OF THE FACILITY ARE TO BE OF A MEDIUM TO HIGH WATER TOLERANCE
- PLANTINGS ALONG THE PERIMETER (BERM) AREA OF THE FACILITY ARE TO BE OF A LOW TO MEDIUM WATER TOLERANCE
- AVOID PLANTINGS WITH EXCESSIVE ROOT MASS IN POND AREA OF THE RAIN GARDEN NEAR O.B. PIPE AND UNDERDRAIN.

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TITLE:	<b>BUILDING PERMIT PLAN</b>	
HOUSE TYPE:	<b>CUSTOM - KEYSTONE HOMES</b>	
DATE:	MAY, 2020	PROJECT NO. 2099
SCALE:	AS SHOWN	DRAWING <u>2</u> OF <u>2</u>

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OK.  
 Though basement plan does not indicate plumbing  
 RB



CEILING LINE  
 WALL HEIGHT 8'-1 1/2"  
 SECOND FLOOR LINE  
 CEILING LINE  
 WALL HEIGHT 10'-1/2"  
 FIRST FLOOR LINE

FRONT ELEVATION  
 SCALE: 3/8" = 1'-0"



Professional Engineer, Paul B. Elser, License No. 95478, State of Maryland. The seal is circular with the text 'STATE OF MARYLAND' at the top, 'PAUL B. ELSE' in the center, and 'PROFESSIONAL ENGINEER' at the bottom. The license number '95478' is also present.

227 GRANITE RUN DRIVE, SUITE 100  
 LANCASTER, PENNSYLVANIA 17601  
 PH: (717) 464-9060 • FAX: (717) 464-9046  
 www.keystonecustomhomes.com



KEYSTONE CUSTOM HOMES, INC.

DATE	APRIL 7 2020
SCALE	AS NOTED
DRAWN BY	M. FRISHEY
CHECKED BY	MRS. SKLAR
PROJECT NO.	A10
DATE	4/8/20

1939 DAVIS BRANCH RD.



REAR ELEVATION  
SCALE: 3/8" = 1'-0"



Professional Engineer  
STATE OF MARYLAND  
PAUL B. ELSE  
No. 35478  
PROFESSIONAL ENGINEER

The user shall verify compliance with all applicable codes, ordinances, and regulations. The user shall be responsible for obtaining all necessary permits and approvals. The user shall be responsible for the accuracy of the information provided. The user shall be responsible for the accuracy of the information provided. The user shall be responsible for the accuracy of the information provided.

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PH: (717) 464-9060 • FAX: (717) 464-9046  
www.keystonestructural.com



KEYSTONE CUSTOM HOMES, INC.

REAR ELEVATION  
MR 9/21  
SKLAR

DATE: APRIL 7 2020  
SCALE: AS NOTED  
DRAWN BY: MHERSHEY

SHEET NO.  
A1.2  
PAGE  
ads 20