

GENERAL NOTES

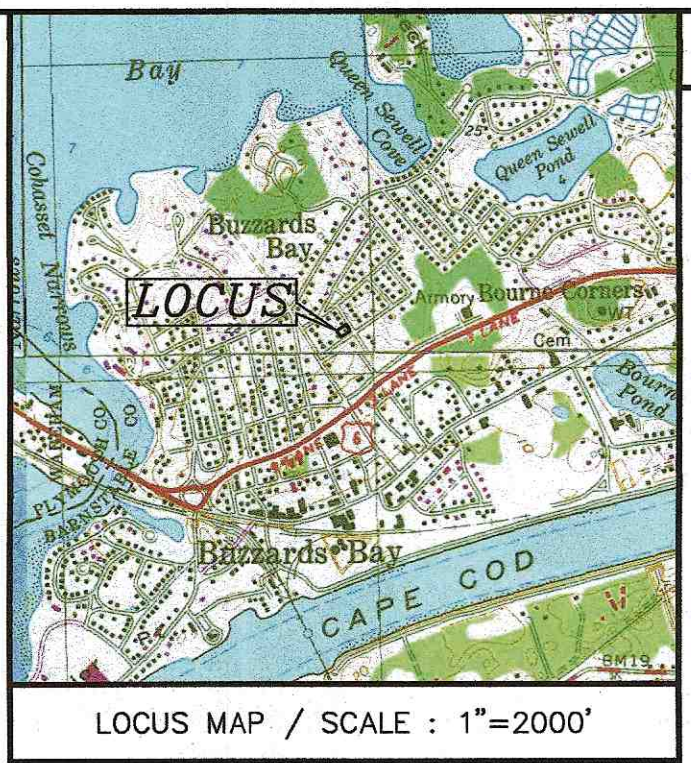
- UNLESS OTHERWISE NOTED, ALL SYSTEM COMPONENTS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH TITLE 5 OF THE STATE ENVIRONMENTAL CODE AND ANY APPLICABLE LOCAL RULES.
- ANY CHANGES TO THIS PLAN MUST BE APPROVED BY THE BOARD OF HEALTH AND THE DESIGN ENGINEER.
- 4" SCHEDULE 40 PVC PIPE WITH WATER TIGHT JOINTS SHALL BE USED IN THE DISPOSAL SYSTEM UNLESS OTHERWISE NOTED.
- SLOPE ALL SOLID PIPE AT 1.0% MINIMUM.
- THIS SYSTEM IS NOT DESIGNED FOR A GARBAGE DISPOSAL.
- LOCAL BOARD OF HEALTH AND DESIGN ENGINEER TO BE NOTIFIED PRIOR TO BACKFILLING WHEN SYSTEM IS NEARLY COMPLETE AND READY FOR INSPECTION. SYSTEM IS NOT TO BE BACKFILLED WITHOUT FIRST OBTAINING APPROVAL FROM BOARD OF HEALTH AND DESIGN ENGINEER.
- ELEVATIONS BASED ON NAVD-88
- CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION & REPORT ANY DISCREPANCIES TO THE DESIGN ENGINEER. ALL UNDERGROUND UTILITIES SHOWN OR NOT SHOWN WERE COMPILED ACCORDING TO AVAILABLE RECORD PLANS AND IN PART FROM DIGSAFE DELINEATIONS AND ARE APPROXIMATE ONLY. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD. BEFORE EXCAVATING, BLASTING, INSTALLING, BACK FILLING, GRADING, PAVING OR REPAIRING, ALL UTILITY COMPANIES, PUBLIC AND PRIVATE MUST BE CONTACTED INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN. SEE MGL CHAPTER 33A, ACTS OF 1983. CONTRACTORS MUST CALL DIG-SAFE, G.A.F. ENGINEERING, INC. ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
- NON-SHRINK GROUT TO BE USED AT ALL POINTS WHERE PIPES ENTER OR LEAVE ALL CONCRETE STRUCTURES IN ORDER TO PROVIDE WATER TIGHT SEALS.
- ALL TANKS SHALL BE WATERTIGHT THROUGH MANUFACTURERS SPECIFICATIONS OR APPLICATION OF ASPHALT OR SYNTHETIC POLYMER SEALER.
- ALL SEPTIC SYSTEM COMPONENTS SHALL WITHSTAND H-20 LOADING UNLESS LOCATED UNDER PAVEMENT, DRIVES OR TRAVELED WAYS IN WHICH CASE THEY SHALL WITHSTAND H-20 LOADING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING ALL APPLICABLE FEES AND OBTAINING ALL PERMITS INCLUDING A TRENCH PERMIT PURSUANT TO 320 CMR 14.00 AS APPLICABLE.
- WHERE REQUIRED, CONTRACTOR SHALL REMOVE ALL LOAM, SUBSOIL AND UNSUITABLE MATERIAL IN AREA BENEATH AND FOR 2 TO 5 FT. ON ALL SIDES OF LEACHING FACILITY. REPLACE ALL UNSUITABLE MATERIAL WITH CLEAN COARSE SAND FREE FROM CLAY, FINES OR OTHER UNSUITABLE MATERIAL IN ACCORDANCE WITH 310 CMR 15.255(3).
- CONTRACTOR SHALL NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES FOUND IN SITE CONDITIONS FROM THOSE SHOWN PRIOR TO CONTINUATION OF WORK.
- ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.
- ALL SOIL ABSORPTION SYSTEMS SHALL HAVE A MINIMUM OF ONE (1) INSPECTION PORT CONSISTING OF A PERFORATED FOUR(4) INCH PIPE PLACED VERTICALLY DOWN INTO THE CHAMBER TO THE NATURALLY OCCURRING SOIL OR SAND FILL BELOW THE CHAMBER. THE PIPE SHALL BE CAPPED WITH A SCREW TYPE CAP AND ACCESSIBLE TO WITHIN THREE(3) INCHES OF FINISH GRADE.
- WHERE AN EXISTING SEPTIC TANK IS TO BE ABANDONED IN PLACE, IT SHALL BE PUMPED COMPLETELY DRY AND THE BOTTOM SHALL BE RUPTURED. THE REMAINDER OF TANK SHALL BE COLLAPSED AND BACKFILLED WITH CLEAN SAND. WHERE AN EXISTING LEACHING PIT IS TO BE ABANDONED IN PLACE, IT SHALL BE PUMPED COMPLETELY DRY, COLLAPSED IN PLACE AND BACKFILLED WITH CLEAN SAND.
- WHERE AN EXISTING SEPTIC TANK IS TO BE REMOVED FROM THE SITE, IT SHALL BE PUMPED COMPLETELY DRY PRIOR TO REMOVAL. WHERE A LEACHING AREA IS TO BE REMOVED, ALL STRUCTURES, INCLUDING DISTRIBUTION BOX, ANY PIPE, CRUSHED STONE AND ALL CONTAMINATED SOIL SHALL BE REMOVED. ALL MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
- PROPOSED PROJECT IS LOCATED WITHIN:
ASSESSORS MAP # 19.4 LOT # 144
ZONING DISTRICT _____
BUILDING SETBACKS F: - ft. S: - ft. R: - ft.
FEMA FLOOD ZONE N/A ELEVATION N/A
AS SHOWN ON COMMUNITY PANEL # N/A
- OWNER OF RECORD: ERNEST F. & ANN C. ALDEN
ADDRESS: 7 ALDEN AVENUE
BOURNE, MA 02532

VARIANCE REQUEST PURSUANT TO 310 CMR 15.405: CONTENTS OF LOCAL UPGRADE APPROVAL:

- 310 CMR 15.211: MINIMUM SETBACK DISTANCES:**
REQUIRED: THE SOIL ABSORPTION SYSTEM SHALL BE 20 FEET FROM A CELLAR WALL.
PROVIDED: THE SOIL ABSORPTION SYSTEM IS 3.5 FEET FROM THE BULKHEAD AND 8.0 FROM THE CELLAR WALL.
- REQUIRED: THE SOIL ABSORPTION SYSTEM SHALL BE 10 FEET FROM A PROPERTY LINE.
PROVIDED: THE SOIL ABSORPTION SYSTEM IS 5 FEET FROM THE PROPERTY LINE WITH LOT 143 AND 7 FEET FROM THE STREET LINE.
- REQUIRED: THE SEPTIC TANK SHALL BE 10 FEET FROM A CELLAR WALL.
PROVIDED: THE SEPTIC TANK IS 5 FEET FROM THE BULKHEAD.
- REQUIRED: THE SEPTIC TANK SHALL BE 10 FEET FROM A PROPERTY LINE.
PROVIDED: THE SEPTIC TANK IS 6 FEET FROM THE PROPERTY LINE WITH LOT 143.
- 310 CMR 15.255(5) CONSTRUCTION IN FILL**
REQUIRED: THE EXCAVATION OF UNSUITABLE MATERIAL SHALL EXTEND A MINIMUM OF FIVE FEET LATERALLY IN ALL DIRECTIONS BEYOND THE OUTER PERIMETER OF THE SOIL ABSORPTION SYSTEM.
PROVIDED: THE EXCAVATION OF UNSUITABLE MATERIAL WILL EXTEND A MINIMUM OF 2 FEET LATERALLY BEYOND A SMALL PORTION OF THE SOIL ABSORPTION SYSTEM.

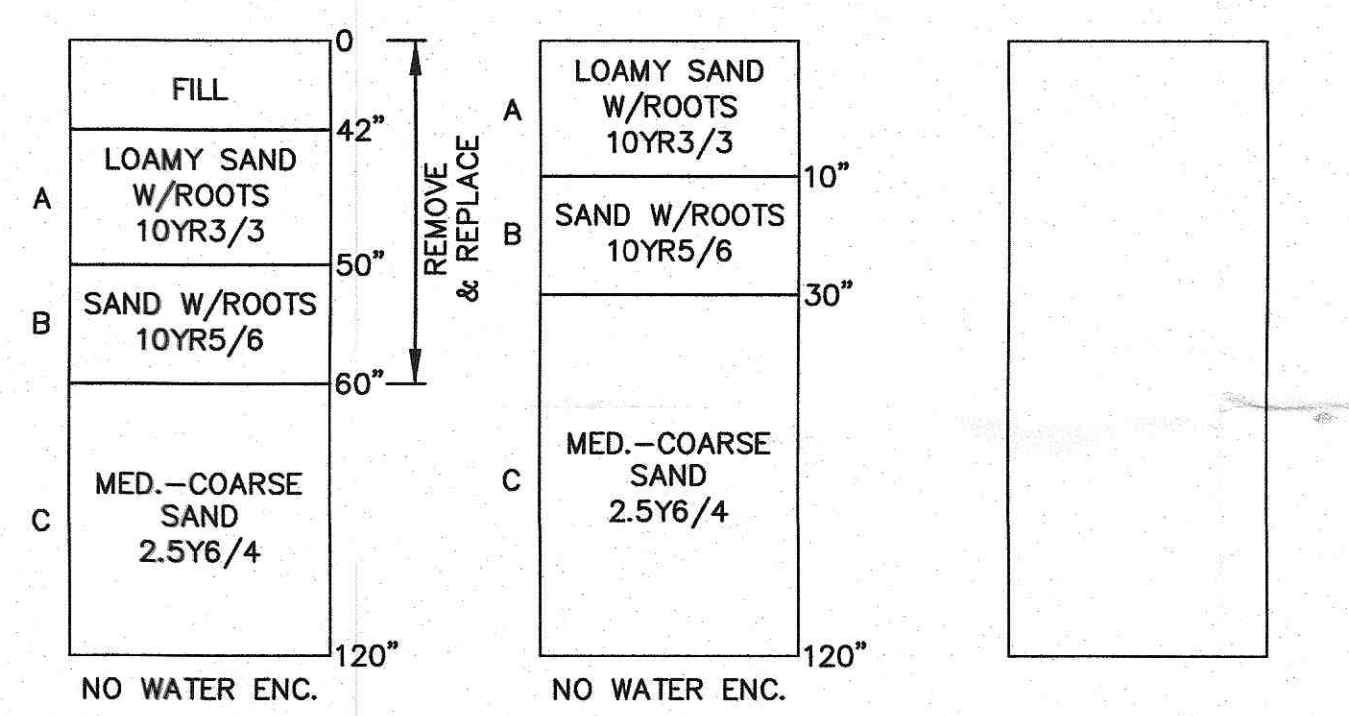
NOTES:

- THE EXACT LOCATION, ELEVATION AND CONSTRUCTION OF THE EXISTING LEACHING PIT IS UNKNOWN. THE CONTRACTOR SHALL DETERMINE THE DETAILS OF CONSTRUCTION. THE EXISTING SYSTEM SHALL BE EXCAVATED AND DISPOSED OF OFF SITE.
- CONTRACTOR SHALL CONFIRM LOCATION AND ELEVATION OF EXISTING BUILDING SEWER PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL FIELD LOCATE THE LOCATION OF THE EXISTING GAS SERVICE PRIOR TO CONSTRUCTION. GAS SERVICE MAY HAVE TO BE TEMPORARILY REMOVED AND RESET DURING CONSTRUCTION, CONTRACTOR SHALL COORDINATE WITH THE LOCAL GAS COMPANY.
- CONTRACTOR SHALL COORDINATE WITH OWNER FOR RELOCATING THE EXISTING SHEDS. RELOCATED SHEDS SHALL MEET ALL TOWN ZONING & BUILDING REGULATIONS AS REQUIRED.
- THERE IS NO SOIL ABSORPTION ON ADJACENT LOT WITHIN 10 FEET OF THE PROPOSED SEWAGE DISPOSAL SYSTEM.
- COORDINATE FINAL LOCATION OF VENT WITH OWNER.
- LOAM AND SEED ALL DISTURBED AREAS.



TEST PIT DATA

INSPECTOR: TERRI QUASINO	DATE: 3/10/21
SOIL EVALUATOR: BRIAN GRADY	CERT. #:
TEST PIT #: 1	TEST PIT #:
ELEV TOP = 24.9	ELEV TOP = 25.4
NONE ENC.	NONE ENC.
ELEV WATER = 14.9	ELEV WATER = 15.4
PERC RATE = MIN/IN	PERC RATE = 2 MIN/IN
DEPTH OF PERC =	DEPTH OF PERC = 36-54"
TEXTURAL CLASS I	TEXTURAL CLASS I



DESIGN DATA

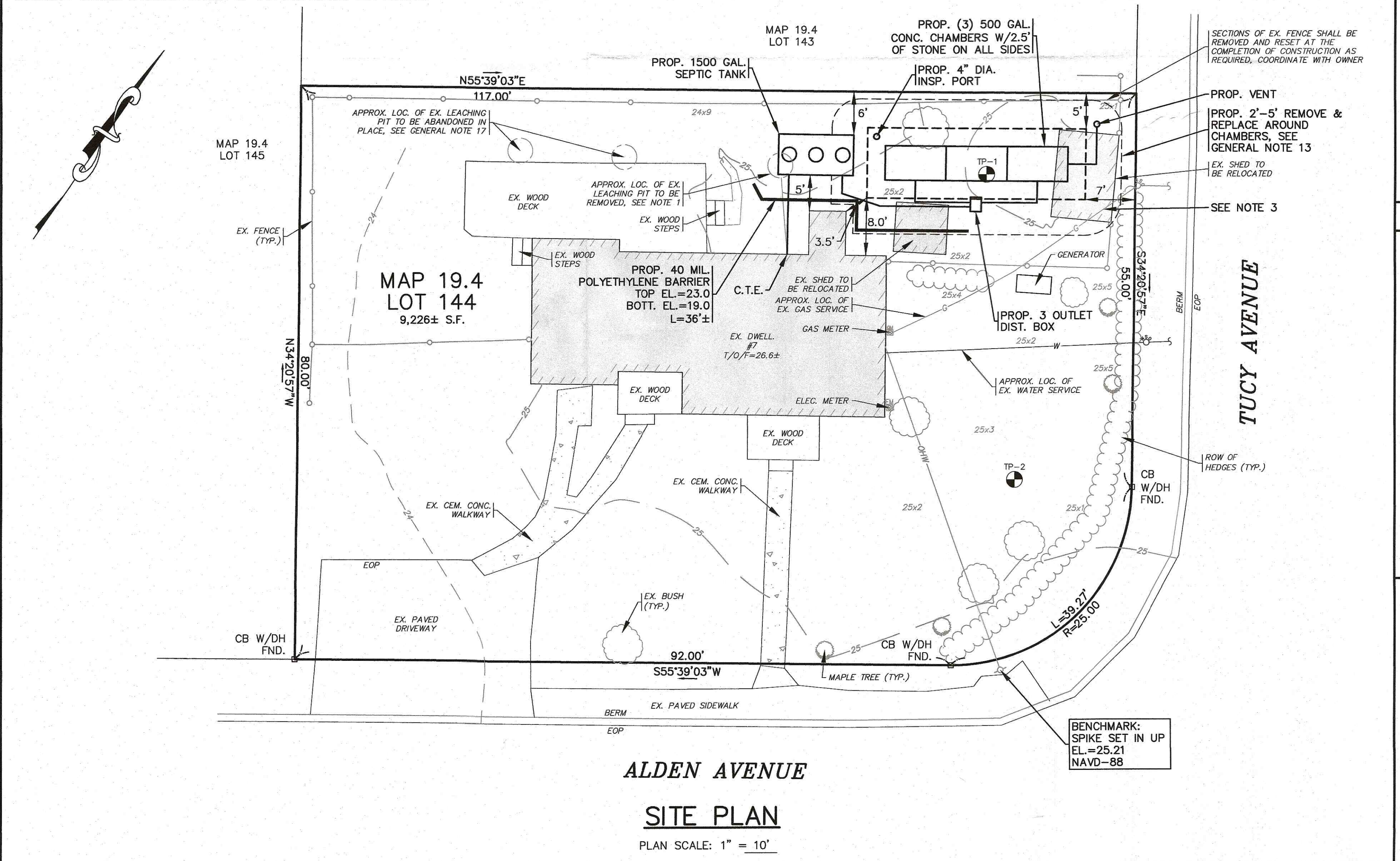
NUMBER OF BEDROOMS 3 (DESIGN)
NUMBER OF PERSONS 6
DESIGN FLOW 110 GAL/DAY/BEDROOM
TOTAL DESIGN FLOW 330 GAL/DAY

SEPTIC TANK:
330 GAL X 200% = 660 GALS. DESIGN CAPACITY
USE 1500 GALLON SEPTIC TANK. (MIN. SIZE PER REGS)

LEACHING TRENCH:
SIDEWALL CAPACITY
2 X 40.33 (LENGTH + WIDTH) X 2 (DEPTH) = 161.3 SQ.FT.
161.3 SQ.FT. X 0.74 GAL/SQ.FT. = 119.4 GAL. LEACHING/DAY

BOTTOM CAPACITY
30.5 (LENGTH) X 9.83 (WIDTH) = 299.8 SQ.FT.
299.8 SQ.FT. X 0.74 GAL/SQ.FT. = 221.9 GAL. LEACHING/DAY

TOTALS:
TOTAL NUMBER OF CHAMBERS 3
TOTAL NUMBER OF TRENCHES 1
TOTAL LEACHING AREA 461.1 SQ.FT.
TOTAL LEACHING CAPACITY 341.3 GAL/DAY



LEGEND

F.F. = 00.00	FINISHED FLOOR ELEVATION	T/O/F = 00.00	TOP OF FOUNDATION
G.F. = 00.00	GARAGE FLOOR ELEVATION	INV. = 00.00	INVERT ELEVATION
B.F. = 00.00	BASEMENT FLOOR ELEVATION	(00.00)	AS-BUILT ELEVATION
---	EXISTING CONTOURS	---	EXISTING SPOT GRADE
---	PROPOSED CONTOURS	---	TEST PIT LOCATION
G	GAS LINE	---	LIMITS OF WETLANDS
E	ELECTRIC LINE	---	LIMITS OF SEPTIC TANK
W	WATER LINE	---	LIMITS OF OVERDIG DISTRIBUTION BOX
---	4" SOLID SCH-40 PVC PIPE	---	

REV.	DATE	BY	APP'D.	DESCRIPTION

APPROVED BY: *[Signature]* 10/12/21

SEWAGE DISPOSAL SYSTEM DESIGN
PREPARED FOR
ERNEST & ANN ALDEN
MAP 19.4 / LOT 144
7 ALDEN AVENUE
BOURNE, MA

G.A.F. ENGINEERING, INC.
PROFESSIONAL ENGINEERS & LAND SURVEYORS
266 MAIN STREET, WAREHAM, MA 02571
TEL: (508) 295-6600 FAX: (508) 295-6634
E-MAIL: info@gafenginc.com

APPROVED BY: *[Signature]*

ROBERT GRANAN JR. #48850
LAND SURVEYOR

DWG NO.: SD-1
DRN BY: JMP
SCALE: AS NOTED
CHK BY: WFM
DATE: OCT. 12, 2021
JOB NO. 20-9601