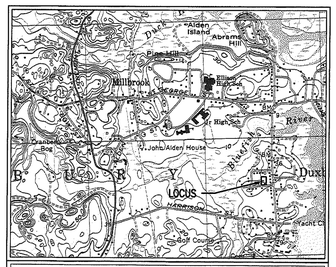
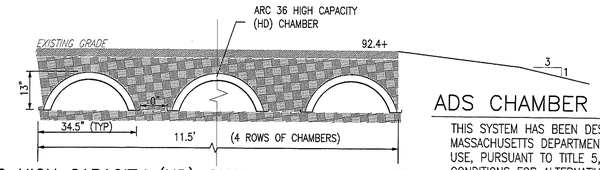


LOCATION MAP (NOT TO SCALE)

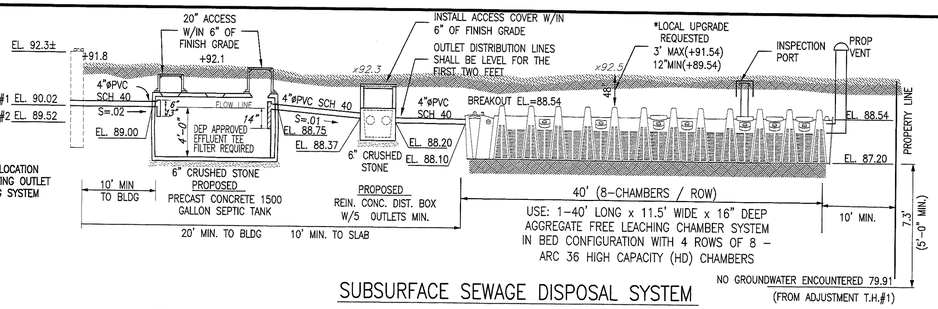


ARC 36 HIGH CAPACITY (HD) CHAMBER BED X-SECTION

ADS CHAMBER SYSTEM NOTES

THIS SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION CERTIFICATION FOR GENERAL USE, PURSUANT TO TITLE 5, 310 CMR 15.000, REVISED JUNE 12, 2015 AND STANDARD CONDITIONS FOR ALTERNATIVE SOIL ABSORPTION SYSTEMS WITH GENERAL USE CERTIFICATION AND/OR APPROVED FOR REMEDIAL USE REVISED MARCH 5, 2018. NO STONE AROUND OR BELOW CHAMBERS IS REQUIRED.

BACKFILL BIODIFFUSER CHAMBERS WITH ON SITE SAND SOIL OR CLEAN COARSE SAND IN ACCORDANCE WITH 310 CMR 15.255(3).



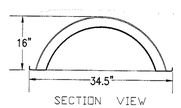
NOTE:
CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING OUTLET PIPES, PRIOR TO SETTING SYSTEM COMPONENTS.

REQUIRED INSPECTIONS

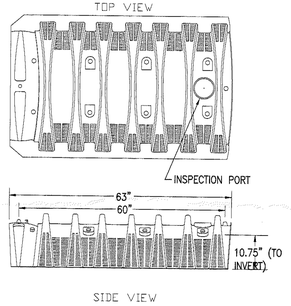
1. AFTER EXCAVATION OF LEACHING AREA PRIOR TO INSTALLING SAND.
2. AFTER SYSTEM CONSTRUCTION PRIOR TO BACKFILLING.
3. AFTER FINAL GRADING IS COMPLETED.

(ADDITIONAL INSPECTIONS MAY BE REQUIRED BY THE BOARD OF HEALTH)

EFFECTIVE LEACHING AREA
4.80 (SF/LF)
(BED CONFIGURATION)



SECTION VIEW



SIDE VIEW

ARC 36 HIGH CAPACITY (HD) CHAMBER DETAIL

NOT TO SCALE

SUBSURFACE SEWAGE DISPOSAL SYSTEM

(NOT TO SCALE)

SEPTIC DESIGN

(NOT DESIGNED FOR GARBAGE GRINDER)

1. DESIGN DAILY FLOW: 5 BR. x 110 GPD = 550 GPD
2. SEPTIC TANK: 550 GPD x 2 = 1,100 GAL. USE: 1500 GAL (MIN)
3. LEACHING CHAMBERS: P.R. = 3 MIN/IN CLASS I

USE: 40' LONG x 11.5' WIDE x 16" DEEP LEACHING CHAMBER SYSTEM IN BED CONFIGURATION WITH 32-5' LONG ARC36 HIGH CAPACITY (HD) LEACHING CHAMBERS IN 4 ROWS OF 8.

TITLE 5
(PER MODIFIED CERTIFICATION FOR GENERAL USE DESIGN STANDARD ITEM 6.)
EFFECTIVE LEACHING AREA = 4.80 SF/LF
PROPOSED AREA: 160 LF x 4.80 SF/LF = 768 S.F.
CAPACITY: 768 S.F. x 0.74 GPD/S.F. = 568 > 550 GPD(D.D.F.)

(CONTRACTOR MAY SUBSTITUTE QUICK 4 HIGH CAPACITY H-20 CHAMBERS (40 x 4' LONG) - CAPACITY = 160 LF x 4.73 SF/LF x 0.74 GPD/SF = 560 > 550 GPD(D.D.F.))

FULL SIZE CONVENTIONAL SEPTIC DESIGN-PER STANDARD CONDITIONS FOR ALTERNATIVE SOIL ABSORPTION SYSTEMS

LEACHING TRENCHES: P.R. = 2 MIN/IN CLASS I
USE: 3-57' LONG x 2' WIDE x 2' DEEP LEACHING TRENCHES
PROPOSED AREA: 3(6 x 45) = 810 S.F. (800 S.F. MIN)
CAPACITY: 810 S.F. x 0.74 GPD/S.F. = 599 > 550 GPD(D.D.F.)

SOIL LOG

T.H.#1
EL. 92.40

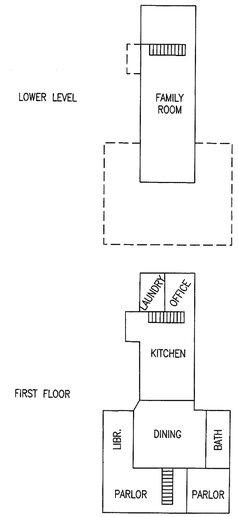
0"-27" A SANDY LOAM	90.15
27"-42" B LOAMY SAND	88.90
42"-144" C1 SAND	PERC @ 45"-63" P.R.<3 MIN/IN 80.40
144"-150" C2 SANDY LOAM	79.90
D= 12'-6" NO WATER (EL.=79.90)	

SEPTIC NOTES

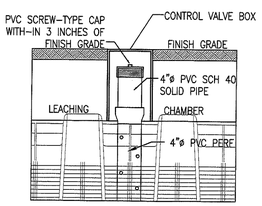
1. PROPERTY LINE DATA FROM "PLAN OF LAND IN DUXBURY, OWNED BY SABINA MARSHALL, SCALE 1"=40' W.G. FORD MARSHFIELD MA PLAN BOOK 6 PAGE 642.
2. TOPOGRAPHIC SURVEY BY GRADY CONSULTING SEPTEMBER 9, 2020.
3. SOILS TESTING BY FREEMAN BOYNTON III, WITNESSED BY TRACY MAYO SEPTEMBER 15, 2017.
4. CALL DIG SAFE 1-888-344-7233 AT LEAST 4 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. NOTIFY TOWN AND GRADY CONSULTING PRIOR TO BACKFILLING OF SYSTEM.
6. NO KNOWN WELLS EXIST WITHIN 200' OF THE PROPOSED SYSTEM
7. THE SITE IS NOT LOCATED IN AN AQUIFER PROTECTION ZONE II.
8. ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED (310 CMR 15.221(12))
9. THE SITE IS NOT LOCATED IN A FLOOD ZONE AS SHOWN ON FIRM MAP 25023C0241K.
10. NO KNOWN EASEMENTS ARE IN THE AREA OF THE PROPOSED SYSTEM.
12. 11. EXCAVATION AND SAND REPLACEMENT IN ACCORDANCE WITH 310 CMR 15.255 (3) NOT REQUIRED AS THE SYSTEM IS LOCATED ENTIRELY WITHIN THE 4 FT NATURALLY OCCURRING PERVIOUS STRATA.

LOCAL UPGRADE APPROVAL REQUEST

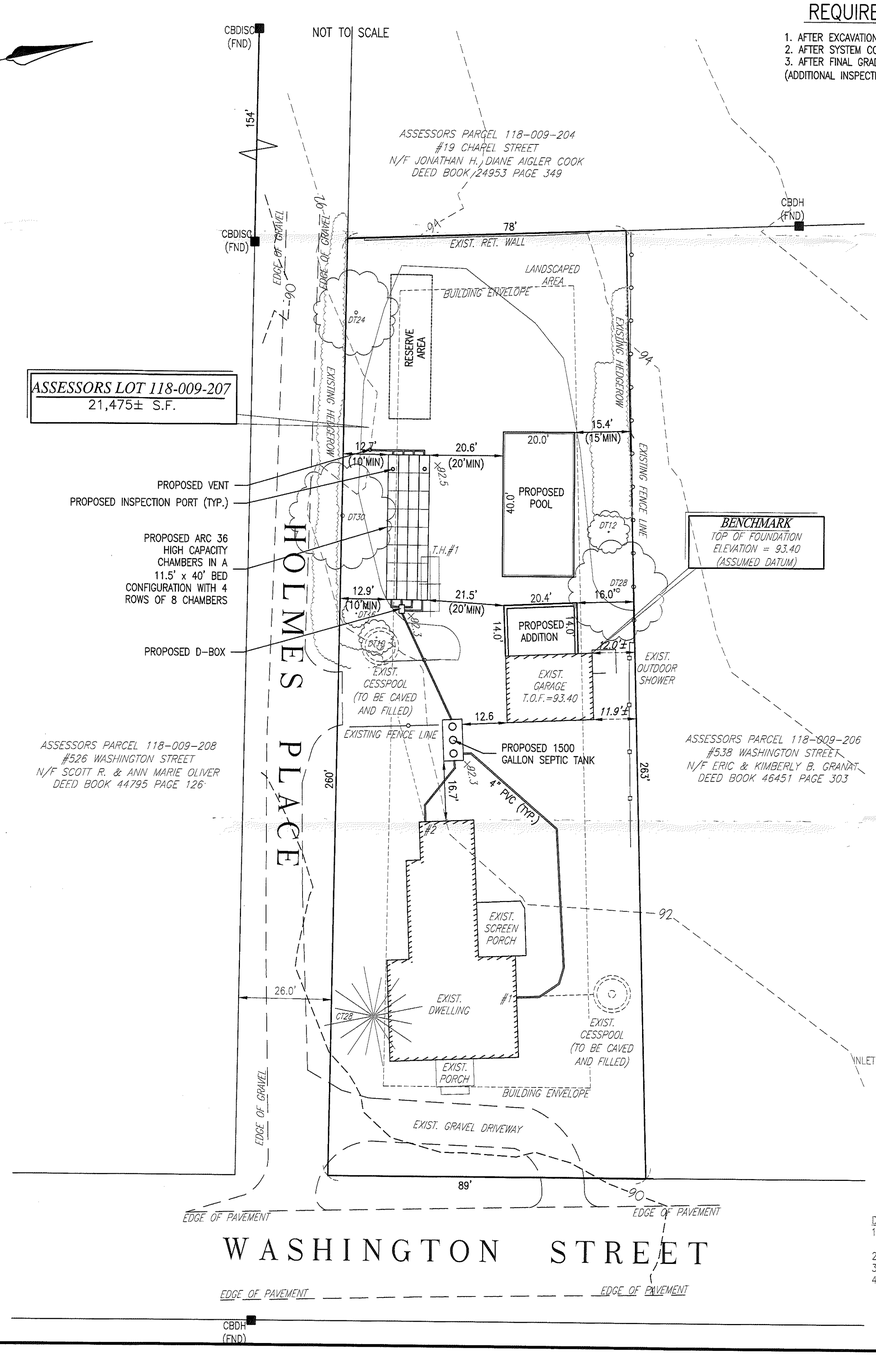
1. 15.405(1)(b) INCREASE IN THE MAXIMUM ALLOWABLE DEPTH OF SYSTEM COMPONENTS (SOIL ABSORPTION SYSTEM) REQUIRED BY 310 CMR CMR 15.221(7), FROM 36 INCHES TO 72 INCHES (36"-48" PROPOSED) BELOW FINISH GRADE, PROVIDED THAT ADEQUATE VENTING AND ADEQUATE ACCESS ARE PROVIDED AND H-20 LOADING IS PROVIDED FOR ALL SYSTEM COMPONENTS.

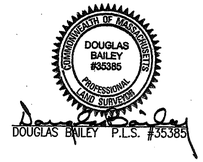


FLOOR PLAN
NOT TO SCALE



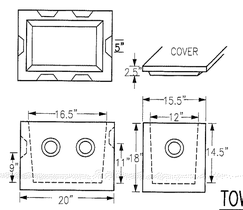
INSPECTION PORT DETAIL
NOT TO SCALE





DOUGLAS BAILEY P.L.S. #35385

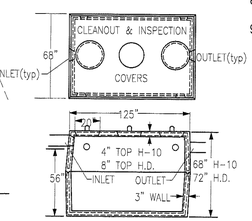
5 OUTLET DISTRIBUTION BOX



DESIGN NOTES
4,000 P.S.I. CONCRETE @ 28 DAYS

D-BOX DETAIL
(NOT TO SCALE)

SEPTIC TANK-1,500 GALLON



DESIGN NOTES:
1. TOP & BOTTOM MATCHING KEY JOINT SEALED BUTYL RESIN AS SPECIFIED BY THE MANUFACTURER.
2. TANK COMPLETELY REINFORCED.
3. CONCRETE IS 4,000 P.S.I. @ 28 DAYS.
4. AVAILABLE IN STANDARD, H-10, AND HEAVY DUTY TOP.

SEPTIC TANK DETAIL
(NOT TO SCALE)

TOWN OF DUXBURY CHECKLIST NOTES

1. WETLANDS NOTE: THERE ARE NO WETLANDS WITHIN 150' OF THE PROPOSED LEACHING AREA.
2. POTABLE WELL NOTE: THERE ARE NO POTABLE WELLS WITHIN 150' OF THE PROPOSED LEACHING AREA.
3. IRRIGATION WELL NOTE: THERE ARE NO IRRIGATION WELLS WITHIN 100' OF THE PROPOSED LEACHING AREA.
4. ZONE I, ZONE II NOTE: THIS PROPERTY IS NOT LOCATED IN A ZONE I OR ZONE II OF A WELL HEAD PROTECTION AREA.
5. FLOOD ZONE NOTE: THIS PROPERTY IS NOT LOCATED IN A FLOOD ZONE AS SHOWN ON FIRM MAP
6. VARIANCE NOTE: THIS DESIGN DOES NOT REQUIRE A VARIANCE FROM TITLE 5 OR DUXBURY RULES AND REGULATIONS.
7. INSPECTION PORT DETAIL: SHOWN ON PLAN.
8. MAGNETIC MARKING NOTE: ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.
9. WATER SOURCE NOTE:

118-009-207	#534 WASHINGTON ST	TOWN WATER
118-009-206	#538 WASHINGTON ST	TOWN WATER
118-009-205	#546 WASHINGTON ST	TOWN WATER
118-009-204	#19 CHAPEL ST	TOWN WATER
118-009-208	#526 WASHINGTON ST	TOWN WATER
118-167-001	#555 WASHINGTON ST	TOWN WATER
118-169-000	#541 WASHINGTON ST	TOWN WATER
118-170-000	#535 WASHINGTON ST	TOWN WATER
118-171-000	#0 WASHINGTON ST	TOWN WATER

SEPTIC REPAIR PLAN

#534 WASHINGTON STREET

DUXBURY, MASSACHUSETTS

PREPARED FOR:
JOHN T. & HEATHER CULLY
534 WASHINGTON STREET
DUXBURY, MA 02332

OCTOBER 15, 2020
SCALE: 1"=20'
JOB No. 20-318

GRADY CONSULTING, L.L.C.
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