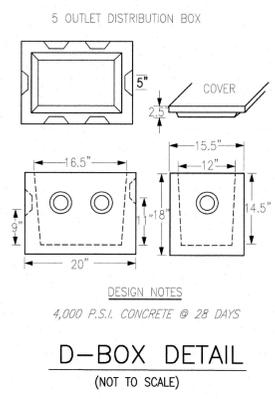
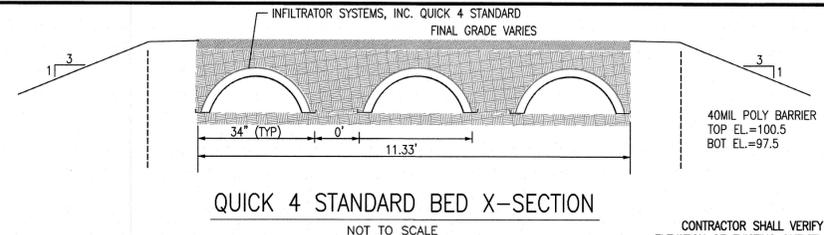


**QUICK 4 STANDARD CHAMBER DETAIL**  
(NOT TO SCALE)

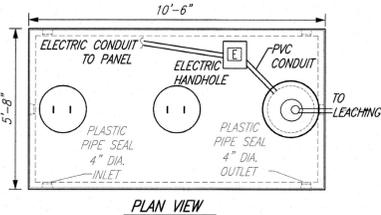
SOIL LOGS	
T.H.#1	T.H.#2
EL. 99.40	EL. 100.00
0'-10" A SANDY LOAM	0'-10" A SANDY LOAM
98.57	99.17
10'-36" C1 GRAVELLY SAND	10'-14" Bw GRAVELLY SAND
98.40	98.83
PERC @ 36"-54" P.R.<2 MIN/IN	14'-36" C1 GRAVELLY SAND
89.40	97.00
D= 10'-0" MOTTLING @68" EL=93.73	36'-120" C2 MED-FINE SAND
	90.00
	D= 10'-0" MOTTLING @74" EL=93.83
	88.50
	D= 10'-0" MOTTLING @68" EL=93.50
	89.10
	D= 10'-0" MOTTLING @68" EL=93.43



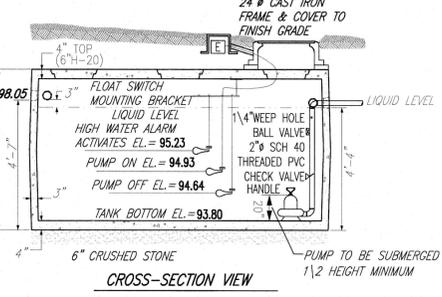
**D-BOX DETAIL**  
(NOT TO SCALE)



**QUICK 4 STANDARD BED X-SECTION**  
(NOT TO SCALE)



**PLAN VIEW**

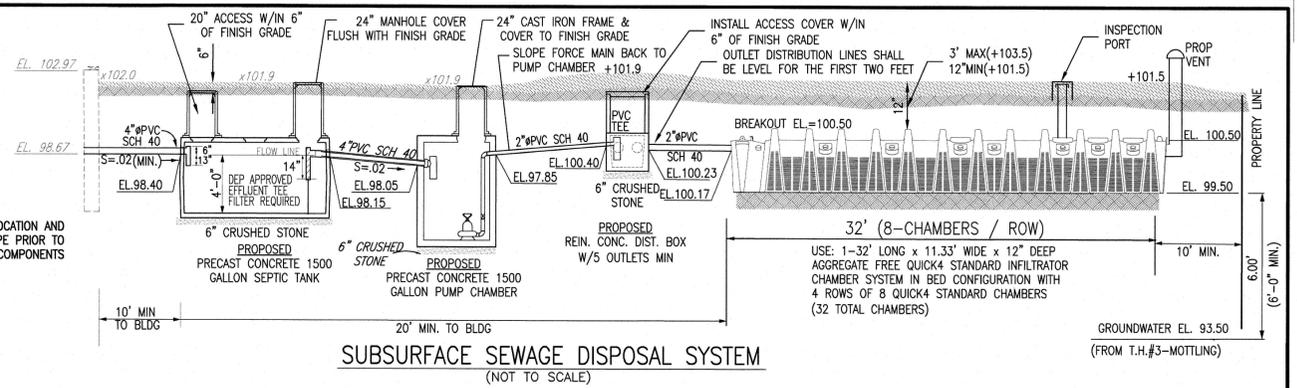


**CROSS-SECTION VIEW**

**PUMP CHAMBER DETAIL: 1500 GAL.**  
(NOT TO SCALE)

VEL. (ft/sec)	H <sub>L</sub> (ft/100ft)	H <sub>L</sub> (ft)	H <sub>L</sub> (total)
20	2.04	0.86	7.23
40	4.09	3.11	2.27
60	6.13	6.59	4.81
80	8.17	11.22	8.19
			14.79

REFERENCE: CAMERON HYDRAULIC DATA, PG 3-38 & GOULDS PUMPS WASTEWATER & SEWAGE



**SUBSURFACE SEWAGE DISPOSAL SYSTEM**  
(NOT TO SCALE)

**REQUIRED INSPECTIONS**

- AFTER EXCAVATION OF LEACHING AREA PRIOR TO INSTALLING SAND.
  - AFTER SYSTEM CONSTRUCTION PRIOR TO BACKFILLING.
- (ADDITIONAL INSPECTIONS MAY BE REQUIRED BY THE BOARD OF HEALTH)

**LOCAL VARIANCE REQUEST**

- VII.J. SIX FEET OF NATURALLY OCCURRING PERMEABLE MATERIAL BETWEEN THE BOTTOM OF THE SOIL ABSORPTION SYSTEM AND THE MAXIMUM GROUNDWATER ELEVATION
- VII.M. CONSTRUCTION OF SOIL ABSORPTION SYSTEM IN CLEAN GRANULAR FILL
- VII.F.9. SEWAGE DISPOSAL SYSTEM CONSTRUCTED WITHIN 125 FEET OF ANY SURFACE OR SUBSURFACE DRAIN WHICH DISCHARGES INTO A PROTECTED WATER BODY

**SEPTIC DESIGN** (NOT DESIGNED FOR GARBAGE GRINDER)

- DESIGN DAILY FLOW: 4 BR. x 110 GPD = 440 GPD
  - SEPTIC TANK: 440 GPD x 2 = 880 GAL. USE: 1500 GAL (MIN)
  - LEACHING CHAMBERS: P.R. <2 MIN/IN CLASS I
- USE: 1-32' LONG X 11.33' WIDE X 12" DEEP LEACHING CHAMBER SYSTEM IN BED CONFIGURATION WITH 32 - 4' LONG INFILTRATOR QUICK4 STANDARD LEACHING CHAMBERS IN 4 ROWS OF 8.
- TITLE 5**  
(PER MODIFIED CERTIFICATION FOR GENERAL USE DESIGN STANDARD ITEM 6.)  
EFFECTIVE LEACHING AREA = 4.73 SF/LF  
PROPOSED AREA: 128 LF x 4.73 SF/LF = 605.4 S.F.  
CAPACITY: 605.4 S.F. x 0.74 GPD/S.F. = 448 > 440 GPD(D.F.F.)

**SEPTIC NOTES**

- PROPERTY LINE DATA FROM "PLAN OF ROAD AND LOTS OFF EAST STREET, HINGHAM, MASS" BY PERKINS ENGINEERING INC., ENGRS AND SURVEYORS RECORDED WITH PLYMOUTH COUNTRY REGISTRY OF DEEDS PLAN BOOK 16, PAGE 140.
- TOPOGRAPHIC SURVEY BY GRADY CONSULTING AUGUST 28, 2020.
- SOILS TESTING BY SCOTT FANARA, GRADY CONSULTING WITNESSED BY BETTY NEE AUGUST 28, 2020.
- CALL DIG SAFE 1-888-344-7233 AT LEAST 4 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- NOTIFY TOWN AND GRADY CONSULTING PRIOR TO BACKFILLING OF SYSTEM.
- NO KNOWN WELLS EXIST WITHIN 500' OF THE PROPOSED SYSTEM, EXCEPT WHERE SHOWN.
- THE SITE IS NOT LOCATED IN AN AQUIFER PROTECTION ZONE II.
- 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))
- NO STREAMS, SURFACE & SUBSURFACE DRAINS AND WETLANDS EXIST WITHIN 100 FT OF THE PROPOSED SYSTEM, EXCEPT AS SHOWN.
- THE SITE IS NOT LOCATED IN A FLOOD PLAIN DISTRICT.
- NO KNOWN EASEMENTS ARE IN THE AREA OF THE PROPOSED SYSTEM.
- EXCAVATE ALL MATERIAL (A, Bw, & C1 LAYERS) TO MED-FINE SAND C2 LAYER (50"), 5' AROUND SYSTEM. REPLACE WITH CLEAN COARSE SAND IN ACCORDANCE WITH 310 CMR 15.255 (3). EXCAVATION TO BE INSPECTED BY GRADY CONSULTING L.L.C. AND TOWN PRIOR TO SOIL REPLACEMENT

APPROXIMATE PERC SAND VOLUME =  $42 \times 21.3 \times (100.5 - 95.0) / 27 + 20\% = 219 \pm$  C.Y.  
**INFILTRATOR SYSTEM NOTES**

THIS SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION MODIFIED CERTIFICATION FOR GENERAL USE, PURSUANT TO TITLE V, 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. A DISCLOSURE NOTICE IN THE DEED TO THE PROPERTY IS REQUIRED FOR SYSTEMS INSTALLED UNDER THE REMEDIAL USE APPROVAL.

NO STONE AROUND OR BELOW CHAMBERS IS REQUIRED.  
BACKFILL CHAMBERS WITH ON SITE SAND SOIL OR CLEAN COARSE SAND IN ACCORDANCE WITH 310 CMR 15.255(3).

REVISIONS	DATE
10/02/2020	200' RIVERFRONT AREA

**CERTIFICATION**  
I CERTIFY THAT ON OCTOBER 23, 2019 I PASSED THE SOIL EVALUATOR EXAMINATION APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT THE ABOVE ANALYSIS WAS PERFORMED BY ME CONSISTENT WITH THE REQUIRED TRAINING, EXPERTISE AND EXPERIENCE DESCRIBED IN 310 CMR 15.017.

Darren Grady  
DARREN GRADY  
DATE

WE HAVE EXAMINED THE SURROUNDING PROPERTY AND RECORD INFORMATION AND WE HAVE FOUND NO EVIDENCE OF WELLS WITHIN 500' OF THE PROPOSED SYSTEM.

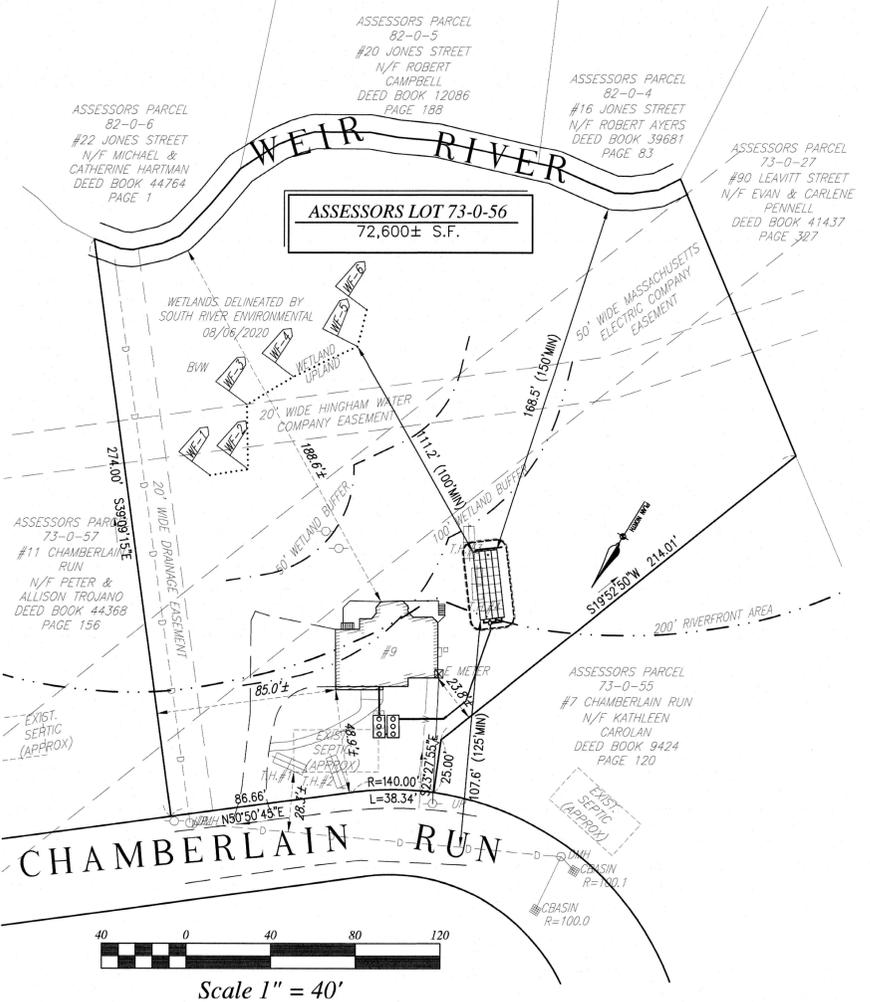
Darren Grady  
DARREN GRADY

**SEPTIC REPAIR PLAN**  
#9 CHAMBERLAIN RUN  
HINGHAM, MASSACHUSETTS

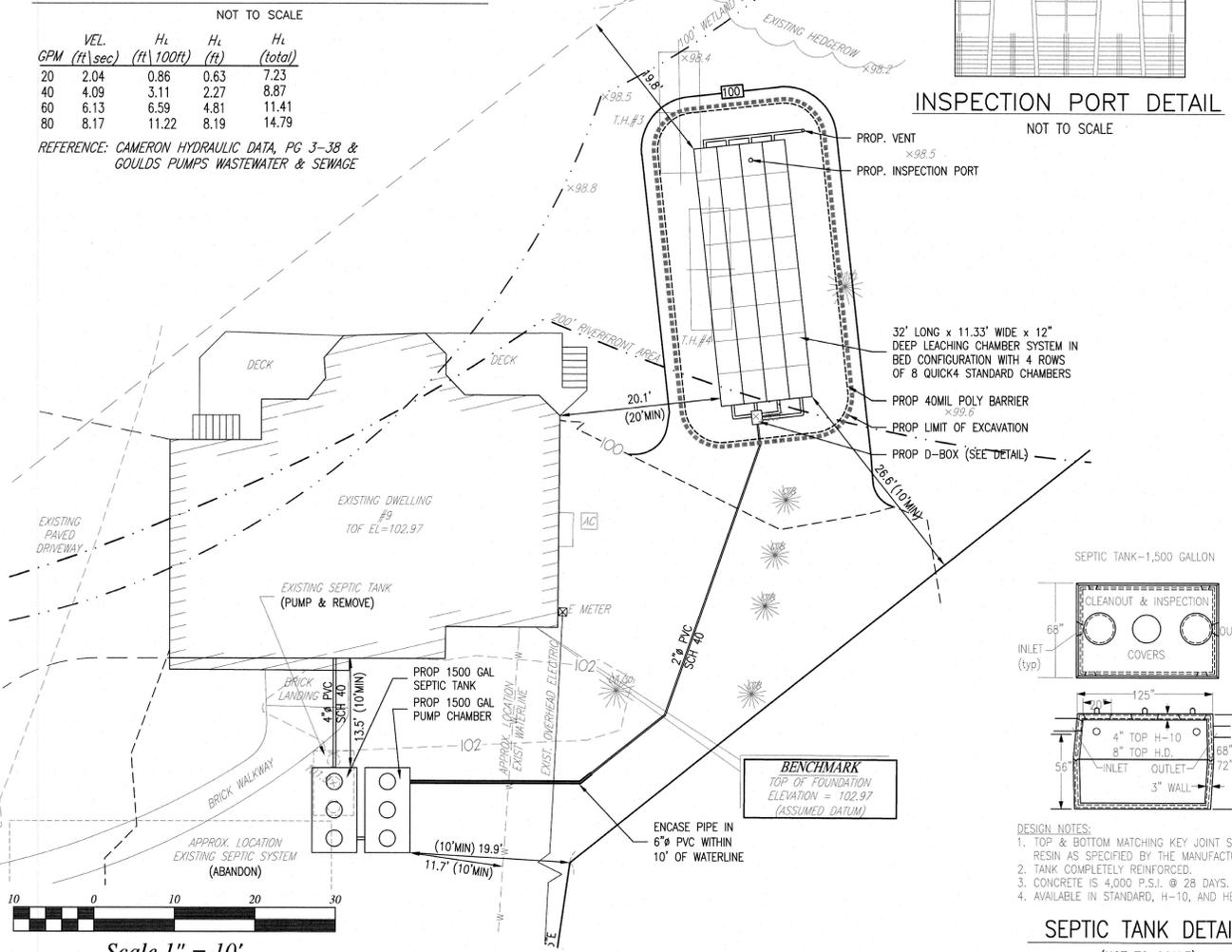
APPLICANT: JOSEPH ANNESE  
9 CHAMBERLAIN RUN  
HINGHAM, MA 02043

SEPTEMBER 10, 2020  
SCALE: AS SHOWN  
JOB NO. 20-302

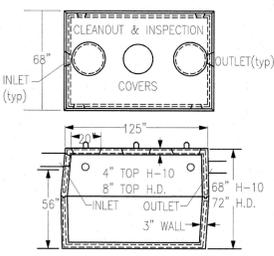
**GRADY CONSULTING, L.L.C.**  
Civil Engineers, Land Surveyors & Landscape Architects  
71 Evergreen Street, Suite 1, Kingston, MA 02364  
Phone (781) 585-2300 Fax (781) 585-2378



Scale 1" = 40'



Scale 1" = 10'



**SEPTIC TANK DETAIL**  
(NOT TO SCALE)

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