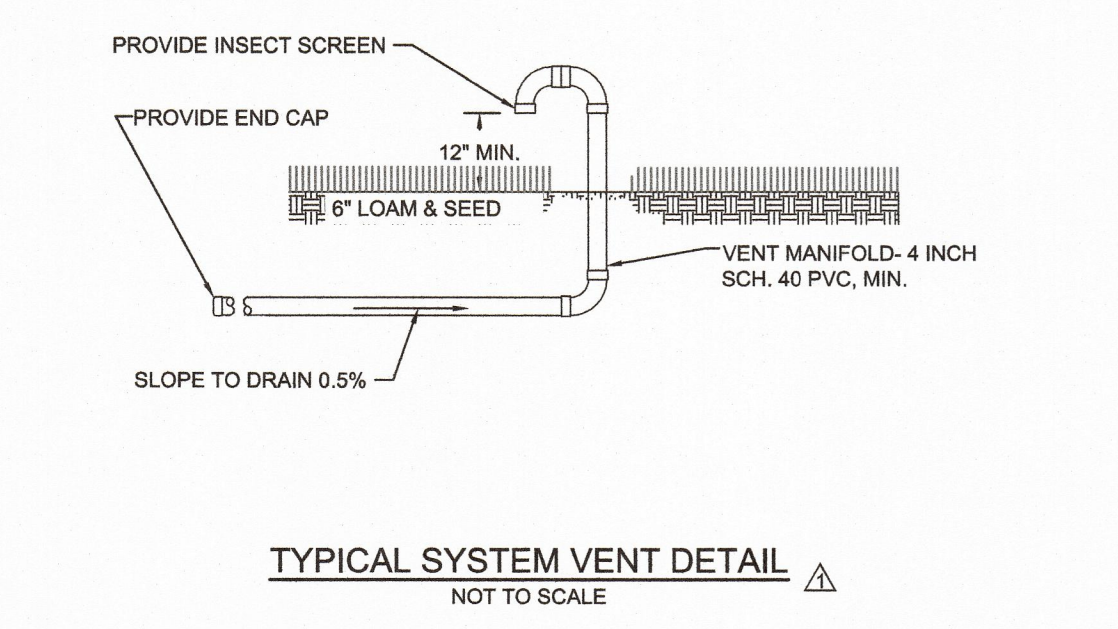


**WASTEWATER SYSTEM SCHEDULE OF ELEVATIONS**

|                                  | INV. EL. |
|----------------------------------|----------|
| BLDG INVERT                      | 61.71    |
| SEPTIC TANK - INLET              | 61.38    |
| SEPTIC TANK - OUTLET             | 61.13    |
| PUMP CHAMBER - INLET             | 61.03    |
| PUMP CHAMBER - OUTLET            | 60.17    |
| DRAIN BACK INLET                 | 58.82    |
| VALVE VAULT - INLET              | 61.00    |
| VALVE VAULT - OUTLET             | 61.00    |
| DRAIN BACK OUTLET                | 59.00    |
| MULTIZONE VALVE MANHOLE - INLET  | 62.17    |
| MULTIZONE VALVE MANHOLE - OUTLET | 62.17    |

**PUMP FLOAT ELEVATIONS**

| STORAGE (GAL.) | FLOAT SEPARATION (FT) | DESCRIPTION       | ELEVATION (FT) |
|----------------|-----------------------|-------------------|----------------|
| 9,900          | 4.99                  | EMERGENCY STORAGE | 60.07          |
| 496            | 0.25                  | HIGH ALARM        | 55.07          |
| 496            | 0.25                  | LAG PUMP ON       | 54.82          |
| 1,791          | 0.90                  | LEAD PUMP ON      | 54.57          |
| 991            | 0.50                  | PUMP OFF          | 53.67          |
| 0              | 0.00                  | BOTTOM OF TANK    | 53.17          |
| <b>13,673</b>  | <b>6.90</b>           |                   |                |



**WASTEWATER NOTES**

- UNLESS OTHERWISE NOTED, ALL SYSTEM COMPONENTS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THE STATE ENVIRONMENTAL CODE AND THE RULES AND REGULATIONS OF THE LOCAL BOARD OF HEALTH.
- ANY CHANGES TO THIS PLAN MUST BE APPROVED BY THE ENGINEER AND/OR THE LOCAL BOARD OF HEALTH (BOH) STAFF.
- FAILING TO PROPERLY INSPECT OR PUMP THE SEPTIC TANKS AND TREATMENT SYSTEM OR CHANGES TO EFFLUENT FLOW, GRADING, OR LANDSCAPING, EITHER ON-SITE OR ADJACENT TO THE SITE, MAY RESULT IN IMPROPER FUNCTIONING OF THE SEPTIC AND LEACHING SYSTEM(S).
- THIS ON-SITE WASTEWATER TREATMENT SYSTEM IS NOT DESIGNED FOR USE WITH GARBAGE GRINDERS.
- THE OWNER SHALL INSPECT AND HAVE THE SEPTIC TANK PUMPED EVERY 2 YEARS.
- PROVIDE WATERTIGHT SEALS BY USE OF NON-SHRINK GROUT AT ALL POINTS WHERE PIPES ENTER OR LEAVE ANY CONCRETE STRUCTURES.
- USE SCH. 40 PVC PIPING WITH WATERTIGHT JOINTS UNLESS OTHERWISE NOTED ON PLAN. ALL PIPE SHALL BE PLACED ON A COMPACTED FIRM BASE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING A HYDROSTATIC PRESSURE TEST ON THE NEW SEWER FORCE MAIN. THE TEST SHALL CONSIST OF HOLDING A PRESSURE OF 50 PSI IN THE FORCE MAIN FOR A PERIOD OF 1 HOUR. THE TEST SHALL BE WITNESSED BY THE ENGINEER.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING OPERATIONS AND MAINTENANCE INFORMATION FOR THE SEPTIC SYSTEM TO THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE A DEWATERING PROTOCOL PRIOR TO CONSTRUCTION IF GROUNDWATER IS ANTICIPATED DURING CONSTRUCTION.
- AREAS UNDER THE LEACHING FIELD FOUND TO HAVE UNSUITABLE SOIL MUST BE REPLACED WITH TITLE 5 SAND AS SPECIFIED IN 310 CMR 15.255(3). ANY AREAS THAT ARE FOUND TO HAVE UNSUITABLE MATERIAL SHALL BE REPORTED TO THE ENGINEER.
- ALL SEPTIC COMPONENTS SHALL BE INSTALLED WITH MAGNETIC WARNING TAPE.
- ALL SEPTIC TANKS SHALL BE APPLIED WITH 2 COATS OF DAMP PROOFING OR BITUMINOUS MATERIAL ON THE OUTSIDE OF THE TANKS.
- THE CONTRACTOR SHALL PROVIDE OPERATOR TRAINING FOR EACH OF THE EQUIPMENT PROVIDED INCLUDING ALARM NOTIFICATION.

**EFFLUENT DOSING PUMP CONTROL PANEL SPECIFICATION**

- USE DUPLEX ALTERNATING PUMPS CAPABLE OF 80 GPM AT 33-FEET OF TDH.
- THE CONTRACTOR IS RESPONSIBLE FOR SETTING UP THE PUMPS, CONTROL PANEL, FLOAT SWITCH ELEVATIONS, AND ALL ELECTRICAL WIRING WITHIN THE PUMP CHAMBER. THE CONTRACTOR SHALL THEN CONDUCT A STARTUP TEST TO DEMONSTRATE THE PUMP CHAMBER IS FUNCTIONING AS DESIGNED PRIOR TO REQUESTING FOR A CLEAN WATER TEST, WHICH SHALL BE WITNESSED BY THE ENGINEER AND/OR THE LOCAL BOH.
- THE PUMP ALARM PANEL SHALL BE INSTALLED ON A SEPARATE CIRCUIT FROM THE DOSING PUMPS.
- THE CONTRACTOR SHALL INCLUDE AN ALLOWANCE FOR COORDINATING, INSTALLING AND PAYING FOR A MISSION MODEL 112 (NEMA 4) RTU REMOTE ALARM UNIT OR APPROVED EQUAL INCLUDING THE FIRST YEAR MONITORING FEE. A 110V OUTLET SHALL BE INSTALLED IN CLOSE PROXIMITY TO THE REMOTE ALARM. FINAL LOCATION OF THE UNIT SHALL BE FIELD DETERMINED. MONITORING UNIT. THE FOLLOWING ALARMS SHALL BE MONITORED:
  - PUMP 1 AND PUMP 2 FAIL
  - LOW LEVEL ALARM
  - HIGH LEVEL ALARM
  - POWER FAIL ALARM
- DUPLEX PUMP CONTROL PANEL SHALL CONSIST OF THE FOLLOWING:
  - NEMA 4X LOCKABLE ENCLOSURE
  - HAND-OFF-AUTO SWITCH
  - ALARM TEST SWITCH
  - PUMP RUN LIGHT
  - ALARM LIGHT AND HORN WITH SILENCE SWITCH
  - CONDENSATION HEATER
  - LOW LEVEL CUT-OFF AND ALARM
  - GENERATOR RECEPTACLE
- PANEL SHALL BE SHIPPED LOOSE FOR REMOTE MOUNTING

**WASTEWATER INSTALLATION INSPECTION NOTES**

- THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 24 HOURS ADVANCE NOTICE TO THE ENGINEER, DEP AND LOCAL BOARD OF HEALTH FOR ANY INSPECTION.
- ALL WASTEWATER SYSTEMS, INCLUDING THE LEACHING SYSTEM, SHALL BE INSPECTED BY THE ENGINEER AND A THE LOCAL BOH REPRESENTATIVE PRIOR TO BACKFILLING. AT A MINIMUM THE FOLLOWING ITEMS SHALL BE INSPECTED:
  - EXCAVATION OF LEACHING FIELD PRIOR TO PLACING SYSTEM STONE/COMPONENTS
  - LEACHING FIELD COMPLETE INSTALLATION PRIOR TO BACKFILL
  - ALL SYSTEM COMPONENTS BASE AND INSTALLATION PRIOR TO BACKFILL
  - START UP TEST OF SYSTEM WITH ALL COMPONENTS INSTALLED AND FUNCTIONING AS DESIGNED
  - FINAL INSPECTION OF BACKFILLED SYSTEM
- THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN UP-TO-DATE RED LINED DRAWINGS AND NOTES INDICATING THE HORIZONTAL AND VERTICAL LOCATION WITH TWO TIES OF ALL SYSTEM COMPONENTS INSTALLED. THESE AS-BUILT DRAWINGS AND NOTES WILL BE UTILIZED BY THE ENGINEER FOR THE PREPARATION OF RECORD PLANS.

**CLEAR WATER TEST PROTOCOL**

- VERIFY ALL FLOATS ARE SET AT THE DESIGN ELEVATION.
  - VERIFY ALL ALARM CONDITIONS ARE FUNCTIONING AS DESIGNED.
  - VERIFY ALL REMOTE ALARMS ARE NOTIFYING THE OPERATOR ACCORDINGLY.
  - VERIFY PUMPS ARE ALTERNATING AS DESIGNED AND DISTAL HEAD REQUIREMENTS ARE MET.
- NOTE:  
NOTIFY THE ENGINEER 72 HOURS IN ADVANCE OF THE CLEAR WATER TEST. THE SCHEDULE MAY HAVE TO BE ADJUSTED DUE TO AVAILABILITY OF BOH STAFF.

**Revisions**

| Rev. | Date     | By  | Appr. | Description                          |
|------|----------|-----|-------|--------------------------------------|
| 1    | 01/31/21 | JEH | JEH   | REVISION LEACHING FIELD DESIGN       |
| 2    | 02/02/21 | JEH | JEH   | SECOND REVISION REVIEW COMMENT EDITS |

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Designed By: EVH  
Date: SEPTEMBER 2021

Plan Set:  
**CAPE VIEW WAY  
PERMITTING PLANS  
BOURNE, MASSACHUSETTS**

Plan Title:  
**WASTEWATER DETAILS**

Prepared For:  
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Sheet: 13 of 23  
Sheet Number: C-13

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