



CONSULTING ENGINEERS, D.P.C.

MICHAEL J. LAMOREAUX, P.E. (NY, NJ, PA, VT, VA & CT)
MICHAEL W. WEEKS, P.E. (NY, NJ & PA)
LYLE R. SHUTE, P.E., LEED-AP (NY, NJ, PA)
PATRICK J. HINES

Main Office
33 Airport Center Drive
Suite 202
New Windsor, New York 12553

(845) 567-3100
fax: (845) 567-3232
e-mail: mheny@mhepc.com

Principal Emeritus:
RICHARD D. MCGOEY, P.E. (NY & PA)

**TOWN OF NEWBURGH
PLANNING BOARD
TECHNICAL REVIEW COMMENTS**

PROJECT: MAHER – 50 COCOA LANE
PROJECT NO.: 21-09
PROJECT LOCATION: SECTION 34, BLOCK 2, LOT 71.34
REVIEW DATE: 28 MAY 2021
MEETING DATE: 3 JUNE 2021
PROJECT REPRESENTATIVE: ENGINEERING & SURVEYING PROPERTIES

1. A survey sheet suitable for filing with Orange County is required. Survey sheet must bear the stamp of a New York State Licensed Surveyor. The Applicants response letter of 20 May 2021 identifies that the survey sheet will be provided identifying the metes and bounds of all existing lots as well as the wetland delineation.
2. The Applicants representatives have addressed our previous comments dated 30 April 2021.

Respectfully submitted,

**McGoey, Hauser and Edsall
Consulting Engineers, D.P.C.**

Patrick J. Hines
Principal

PJH/kbw



Montgomery Office:

71 Clinton Street
Montgomery, NY 12549
phone: (845) 457-7727
fax: (845) 457-1899

Warwick Office:

17 River Street
Warwick, NY 10990
phone: (845) 986-7737
fax: (845) 986-0245

www.EngineeringPropertiesPC.com

May 20, 2021

Town of Newburgh Planning Board
21 Hudson Valley Professional Plaza
Newburgh, NY 12550

ATTN: John Ewasutyn, Chairman

**RE: W.O. # 1325.02
PB APPLICATION 2021-09
MAHER – COCOA LANE
50 COCOA LANE
COMMENT RESPONSE**

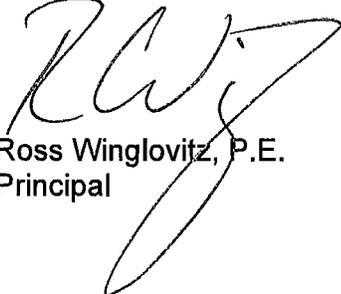
Dear Mr. Ewasutyn,

We are in receipt of the comment memo regarding the above-mentioned project dated April 30, 2021 from MH&E Consulting Engineers, D.P.C. Below is a comment-by-comment response;

1. Our office has requested that Jonathan N. Millen L.L.S. depict the metes and bounds of all existing and proposed lot lines. Our office will submit this documentation to the Planning Board once it is received.
2. Our office has requested that Jonathan N. Millen L.L.S. provide information regarding the wetland delineation present on the survey sheet. Our office will submit this documentation to the Planning Board once it is received.
3. The proposed driveway location was inspected and approved by a member of the Town of Newburgh Highway Department on September 23, 2019. The Driveway Inspections form is included as part of this submission.
4. Note #18 on Sheet C-2 states that "An as-built survey and certification by a NYS licensed design professional as to the construction of the subsurface sanitary sewer disposal system will be required prior to issuance of a certificate of occupancy."
5. Detail "Absorption Tile Field Overall Plan" on Sheet C-2 has a "Typical Eljen Trench Section" which specifies the use of concrete sand.

If you have any additional questions and/or comments please don't hesitate to contact this office.

Sincerely,
Engineering & Surveying Properties, PC



Ross Winglovitz, P.E.
Principal



Reuben Buck
Project Engineer

TOWN OF NEWBURGH HIGHWAY DEPARTMENT

90 Gardnertown Road
Newburgh, NY 12550
(845) 561-2177 Fax: (845) 561-8987

\$50.00 FEE

CASH
 CHECK # 2006

DRIVEWAY INSPECTIONS

LOCATION: 50 Cocoa Lane

SECTION: 34 BLOCK: 2 LOT: 71.34

OWNER: Michael Maher ADDRESS: _____

CONTRACTOR: _____ ADDRESS: _____

PHONE # OWNER: 527-3110 PHONE # CONTRACTOR: _____

INSPECTION: PRELIMINARY

FINAL

DATE: 9/23/19

DATE: _____

APPROVED: YES NO

APPROVED: YES NO

DIAGRAM / COMMENTS:
NO PIPE NEEDED ✓
12 PIPE
15 PIPE
18 PIPE
SPLASH PLATES
HEAD WALLS

DRIVEWAY INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 161-34 OF THE TOWN CODE

- A. All driveways within the limits of the right-of-way shall be designed and constructed with sufficient sight distance and with a grade no more than one (1) inch per foot from edge of pavement or back of curb to the right-of-way line. The minimum width of the driveway pavement at the road pavement line or at the curbline shall be fifteen (15) feet, tapering to a minimum of ten (10) feet at the right-of-way line. All driveways shall have a six-inch subbase material foundation course with 2 inches Type 6F bituminous concrete top course mix from the edge of pavement or back of curb to the right-of-way line which shall be applied during or after the laying of street pavement.
- B. All driveways shall be graded to the satisfaction of the Town Superintendent of Highways prior to the surfacing of said driveways. In accordance with Section 161-33, installation of culverts or other structures may be required.

ACKNOWLEDGEMENT:

PRELIMINARY

OWNER/ CONTRACTOR: _____ DATE: _____

T.O.N. HIGHWAY DEPT.: [Signature] DATE: 9/23/19

FINAL

OWNER/ CONTRACTOR: _____ DATE: _____

T.O.N. HIGHWAY DEPT.: _____ DATE: _____

PERCOLATION TEST RESULTS

PERC HOLE #	PERC HOLE DEPTH	PERC HOLE DIA	TIME	PERCOLATION TEST RUNS - STOPWATCH USED FOR ALL TESTS (TIME FOR 1" DROP IN WATER LEVEL)	STABILIZED RATE
09/17/20 PT-1	24"	8"	FINISH		38 MIN
			START	STOPWATCH USED FOR TIMED INTERVALS	
			TIME	00:08:16 00:18:56 00:24:41 00:35:50 00:37:35	
09/17/20 PT-2	24"	8"	FINISH		31 MIN
			START	STOPWATCH USED FOR TIMED INTERVALS	
			TIME	00:11:22 00:18:19 00:21:19 00:29:50 00:30:42	

NOTES

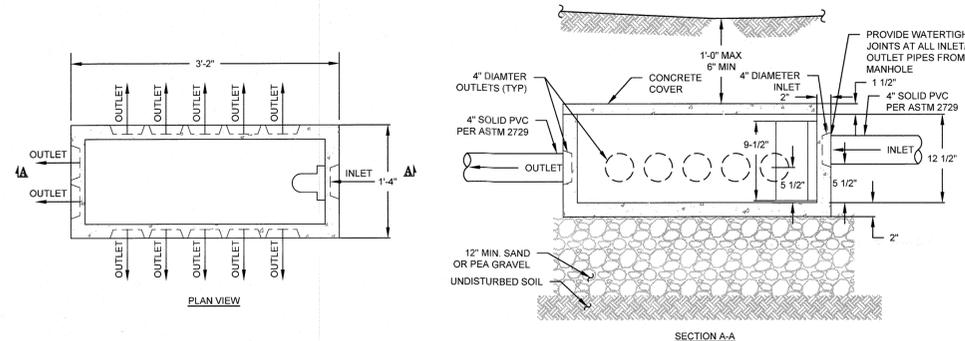
- SEPTIC TANK TO BE LOCATED A MINIMUM DISTANCE OF 10 FEET FROM THE HOUSE.
- THERE SHALL BE NO REGRADING, EXCEPT AS SHOWN ON THE APPROVED PLANS, IN THE AREA OF THE ABSORPTION FIELDS.
- GARBAGE GRINDERS AND/OR JACUZZI TYPE SPA TUBS OVER 100 GALLONS ARE NOT PERMITTED WITHOUT THE SYSTEM BEING REDESIGNED AND REAPPROVED BY THE ORANGE COUNTY DEPARTMENT OF HEALTH.
- CELLAR DRAINS, ROOF DRAINS OR FOOTING DRAINS SHALL NOT BE DISCHARGED IN THE VICINITY OF THE TILE FIELDS OR TRENCHES.
- SWIMMING POOLS, DRIVEWAYS AND/OR STRUCTURES THAT MAY COMPACT THE SOIL ARE NOT TO BE CONSTRUCTED OVER TILE FIELDS.
- ASPHALTIC SEALS SHALL BE MAINTAINED BETWEEN THE SEPTIC TANK, AND ALL PIPES AND COVERS.
- NO TRENCHES TO BE INSTALLED IN WET SOIL.
- RAKE SIDES AND BOTTOM OF TRENCH PRIOR TO PLACING GRAVEL IN ABSORPTION TRENCH.
- GROUT ALL PIPE PENETRATIONS INTO AND OUT OF ANY DISTRIBUTION OR DROP BOX.
- ALL CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS AS SET FORTH IN THE PUBLICATION "INDIVIDUAL RESIDENTIAL WASTEWATER TREATMENT SYSTEMS, DESIGN HANDBOOK", LATEST EDITION, AND APPENDIX 75-A OF THE NEW YORK STATE DEPARTMENT OF HEALTH.
- ABSORPTION TRENCH PIPE TO BE CAPPED AT END.
- ABSORPTION SYSTEM TO BE LOCATED A MINIMUM DISTANCE OF 20 FEET FROM ANY DWELLING UNIT.
- SEPTIC TANK JOINTS MUST BE SEALED AND TESTED FOR WATERTIGHTNESS.
- PROVIDE 30" OF SOLID PIPE PRIOR TO START OF PERFORATED ABSORPTION PIPE AND BE BACKFILLED WITH NATIVE MATERIAL.
- THERE MUST BE AN UNINTERRUPTED POSITIVE SLOPE FROM THE SEPTIC TANK (OR ANY PUMPING OR DOSING CHAMBER) TO THE DWELLING, ALLOWING SEPTIC GASES TO DISCHARGE THROUGH THE STACK VENT.
- DROP BOXES SHOULD BE INSPECTED PERIODICALLY TO ASSURE THAT THEY ARE LEVEL AND OPERATING PROPERLY.
- HEAVY EQUIPMENT SHALL BE KEPT OFF THE AREA OF THE ABSORPTION FIELDS EXCEPT DURING THE ACTUAL CONSTRUCTION. THERE SHALL BE NO UNNECESSARY MOVEMENT OF CONSTRUCTION EQUIPMENT IN THE ABSORPTION FIELD AREA BEFORE, DURING, OR AFTER CONSTRUCTION. EXTREME CARE MUST BE TAKEN DURING THE ACTUAL CONSTRUCTION SO AS TO AVOID ANY UNDE COMPACTION THAT COULD RESULT IN A CHANGE OF ABSORPTION CAPACITY OF THE SOIL ON WHICH THE DESIGN WAS BASED.
- AN AS-BUILT SURVEY AND CERTIFICATION BY A NYS LICENSED DESIGN PROFESSIONAL AS TO THE CONSTRUCTION OF THE SUBSURFACE SANITARY SEWER DISPOSAL SYSTEM WILL BE REQUIRED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

DEEP TEST HOLE RESULTS

TEST HOLE #	DATE	DEPTH	DESCRIPTION
TP-1	09/17/20	0' - 4" 4' - 57" 57' - 80"	TOPSOIL TAN, SILTY, LOAM WITH LARGE COBBLE BROWN, SILTY LOAM WITH GRAVEL
TP-2	09/17/20	0' - 4" 4' - 55"	TOPSOIL TAN, SILTY, LOAM WITH LARGE COBBLE

SEPTIC SYSTEM DESIGN SCHEDULE

LOT #	STABILIZE PERC RATE (min)	PROPOSED BEDROOMS	FLOW RATE (GPD)	APPLICATION RATE (GPD/Sq. ft.)	REQUIRED AREA (Sq. ft.)	REQUIRED ABSORPTION FIELD LENGTH (ft) (ELJEN)	PROPOSED ABSORPTION FIELD LENGTH (ft)
2	38	4	440	0.50	880	147	5 LATERALS @ 32 LF = 160 40 TOTAL ELJEN MATS



CHANNEL CROSS-SECTION

CONSTRUCTION SPECIFICATIONS:

- ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS AND OTHER OBJECTIONABLE SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE WATERWAY.
- THE WATERWAY SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN, AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
- ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE WATERWAY.
- FILL SHALL BE COMPACTED AS NEEDED IN CONSTRUCTION TO PREVENT UNEQUAL SETTLEMENT THAT WOULD CAUSE DAMAGE IN THE COMPLETED WATERWAY.
- WATERWAY SHALL BE SEEDED AND STABILIZED JUTE OR EXCELSIOR MATTING UNTIL THE VEGETATION IS ESTABLISHED.

GRASSED SWALE

SCALE: N.T.S.

PUMP STATION CALCULATIONS

PUMP VOLUME CALCULATIONS:

280 LF x (3.14) (33")² / 4 = 22.8 CF x 7.48 GAL/CF = 169 GALLONS (TILE FIELD)
 58 LF x (3.14) (8.63")² / 4 = 0.3 CF x 7.48 GAL/CF = 2 GALLONS (FORCE MAIN)
 ELEVATION BETWEEN PUMP OFF TO PUMP ON TRY 7.5' OR 0.63'
 8 FT x 4.33 FT x 0.63 FT = 22 CF = 165 GAL
 165 GAL / (169 + 2) GAL = 96%

24 HOUR STORAGE CALCULATIONS:

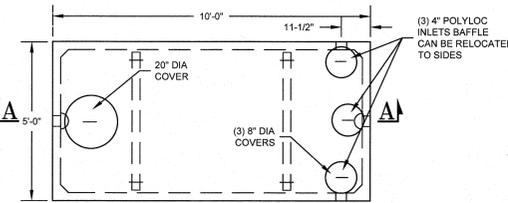
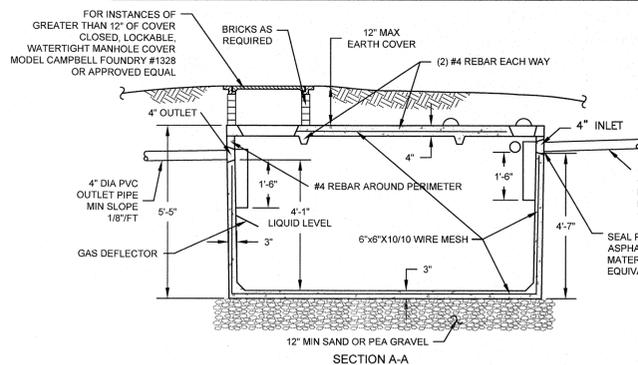
24 HOUR STORAGE = 440 GAL / 7.48 GAL/CF = 58.8 CF
 24 HOUR STORAGE HEIGHT = 58.8 CF / (8 FT x 4.33 FT) = 1.70 FT
 24 HOUR STORAGE AVAILABLE TO INVERT IN = 2.93 FT

NOTES:

- PRECAST CONCRETE PUMP CHAMBER AS MFG. BY WOODARD'S CONCRETE PRODUCTS, INC. MODEL GT 750, W/ (2) 24" DIA COVERS OR APPROVED EQUAL.
- CONCRETE - 4,000 PSI AT 28 DAYS.
- REINFORCEMENT - W/M #4 REBAR.
- CONSTRUCTION JOINT TO BE SEALED WITH BUTYL RUBBER SEALANT.
- CONTROL PANEL AS MFG. GOULDS PUMPS, INC. MODEL SES SERIES CUSTOMIZED CONTROL PANEL-NEMA 1 SIMPLEX CONTROLLER WITH ALARM. CONTROL PANEL IS TO BE MOUNTED INDOORS AND WIRED TO CIRCUIT BREAKER.
- ALL ELECTRICAL WORK SHALL MEET WITH THE NATIONAL ELECTRICAL CODE LATEST EDITION.
- PUMP STATION(S) SHOULD BE INSPECTED PERIODICALLY BY A PROPERLY TRAINED PERSON FOR PROPER OPERATION, INCLUDING HIGH WATER ALARMS, VENTING AND ANY PHYSICAL DAMAGE.

SCHEDULE OF MECHANICAL EQUIPMENT

REF#	QTY	DESCRIPTION & WOODARD'S MODEL #	A	O	D
1	1	ELECTRICAL JUNCTION BOX - AB-1J			
2	1	STAINLESS STEEL FLOAT BRACKET - FSB1			
3	3	MERCURY FLOAT SWITCH - A2K23			
4	1	GOULDS 3885 SUBMERSIBLE EFFLUENT PUMP- WOODARD'S MODEL # - GP-WE03L			
5	1	10' LIFT CABLE - ACBL-10			
6	1	1" UNION - FUNION-2			
7	1	1" BALL VALVE - FBALLVALVE-2			
8	1	1" FLAP CHECK VALVE - FFLAPCHECK-2			
9	1	1" NPT THREADED ADAPTER - FMA-2			
10	1	GOULDS SIMPLEX CONTROL PANEL WALARM - WOODARD'S MODEL # S10020N1			



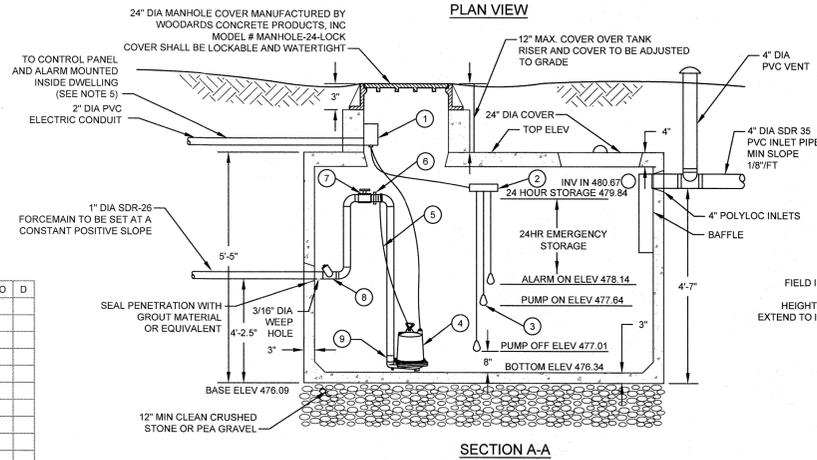
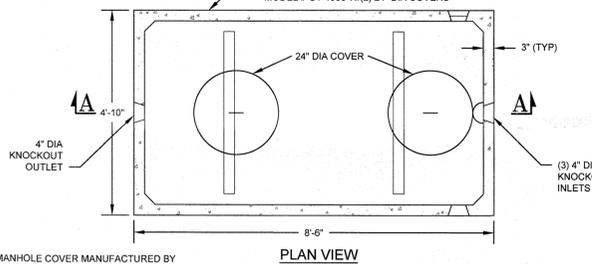
NOTES:

- PRECAST CONC. SEPTIC TANK AS MFG. BY WOODARD'S CONCRETE PRODUCTS, INC. MODEL ST 1250, OR APPROVED EQUAL.
- CONCRETE - 4,000 PSI AT 28 DAYS.
- REINFORCEMENT - 6" x 6" x 10 GA WIRE MESH.
- SECTIONS TO BE SEALED WITH BUTYL RUBBER BASE CEMENT.
- THERE MUST BE AN UNINTERRUPTED POSITIVE SLOPE FROM THE SEPTIC TANK, OR ANY PUMPING OR DOSING CHAMBER, TO THE BUILDING, ALLOWING SEPTIC GASES TO DISCHARGE THROUGH THE STACK VENT.
- SEPTIC TANKS SHOULD BE INSPECTED PERIODICALLY AND PUMPED EVERY 2 - 3 YEARS.

1250 GAL SEPTIC TANK

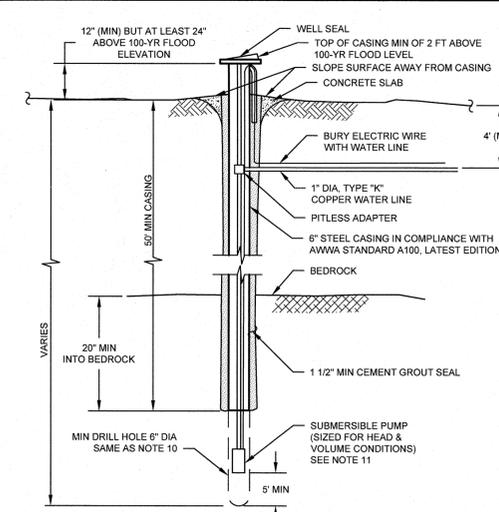
SCALE: N.T.S.
(FOR 4-BEDROOM HOUSE)

1,000 GAL PRECAST PUMP CHAMBER MANUFACTURED BY WOODARD'S CONCRETE PRODUCTS, INC. MODEL # GT-1000 W/ (2) 24" DIA COVERS



1,000 GAL PUMP CHAMBER

SCALE: N.T.S.



NOTES:

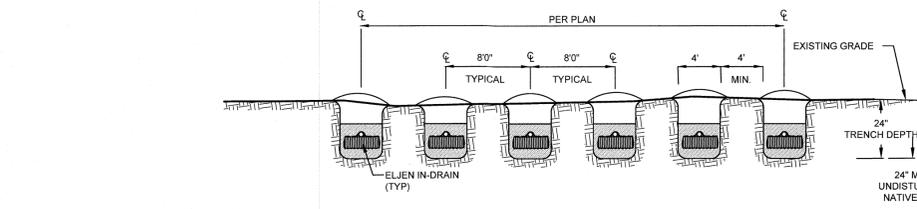
- WELL IS TO BE CAGED AND GROUTED FOR A MIN OF 50' IN LENGTH.
- CASING SHALL EXTEND MINIMUM 20' INTO BEDROCK.
- OVERSIZE DRILL HOLE (FOR GROUTING) TO BE 10" DIAMETER.
- EXPECTED DEPTH OF LOAM AND SHALE OVERBURDEN = 5 - 30 FEET.
- EXPECTED DEPTH OF WATER BEARING FORMATION = 300 - 600 FEET.
- THE WELL CASING TO CONFORM TO AWMA STANDARD A100 (LATEST EDITION).
- SANITARY WELL SEAL SHALL BE MONITOR MODEL NO 6WE-1, MFG BY THE BAKER MFG CO, EVANSVILLE, WIS. OR APPROVED EQUAL AND SHALL HAVE THE APPROVAL OF THE WATER SYSTEMS COUNSEL.
- PITLESS ADAPTOR SHALL BE MONITOR MODEL NO 8PL61U, MFG BY THE BAKER MFG CO, EVANSVILLE, WIS. OR APPROVED EQUAL AND SHALL HAVE THE APPROVAL OF THE WATER SYSTEMS COUNSEL.
- DISCHARGE PIPE: 1" MIN OF TYPE "K" COPPER WATER LINE.
- WATER SERVICE LINES UNDER PRESSURE SHALL NOT PASS CLOSER THAN 10' OF A SEPTIC TANK, TILE FIELD, OR ANY OTHER PART OF A SEWAGE DISPOSAL SYSTEM.
- PVC PIPE WITH O-RING JOINTS ARE REQUIRED FOR SEWAGE LINES BETWEEN 25 AND 50 FEET OF ANY WELL.
- MIN. WELL YIELD TO BE A MINIMUM OF 2 GAL PER MINUTE. ANY WELL PRODUCING BETWEEN 2-5 GPM REQUIRES 24 HOURS OF STORAGE WITHIN HOME.
- CEMENT GROUT SHALL BE A MIXTURE OF 1 BAG CEMENT (94 LBS) AND 5 1/2 GAL OF CLEAN WATER.
- ELECTRICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
- CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS AS SET FORTH IN THE PUBLICATION "RURAL WATER SUPPLY", NYS DEPT OF HEALTH, LATEST EDITION.
- WELLS ARE TO BE INSTALLED IN THE LOCATIONS SHOWN ON THE PLAN TO ASSURE THE MINIMUM SEPARATION DISTANCES ARE MET.

TYPICAL DRILLED WELL SECTION

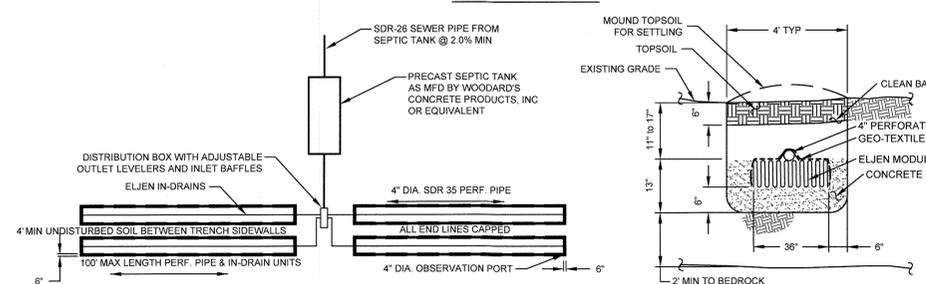
SCALE: N.T.S.

12 HOLE DISTRIBUTION BOX

SCALE: N.T.S.



A-A - TILE FIELD ABSORPTION TRENCH WITH ELJEN SYSTEM



ABSORPTION TILE FIELD OVERALL PLAN

SCALE: N.T.S.

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No.	DATE	DESCRIPTION
1	05/20/21	REVISED PER PB ENGINEER COMMENTS 05/06/21

DRAWING STATUS		ISSUE DATE:
THIS SHEET IS PART OF THE PLAN SET ISSUED FOR		05/20/21
CONCEPT APPROVAL	N/A OF N/A	SHEET NUMBER
PLANNING BOARD APPROVAL	2 OF 2	
OCDOH REALTY SUBDIVISION APPROVAL	N/A OF N/A	
OCDOH WATERMAIN EXTENSION APPROVAL	N/A OF N/A	
NYSDEC APPROVAL	N/A OF N/A	
NYSDOT APPROVAL	N/A OF N/A	
OTHER	N/A OF N/A	
FOR BID	N/A OF N/A	
FOR CONSTRUCTION	N/A OF N/A	

THIS PLAN SET HAS BEEN ISSUED SPECIFICALLY FOR THE APPROVAL OR ACTION NOTED ABOVE AND SHALL NOT BE USED FOR ANY OTHER PURPOSE. THIS SHEET SHALL BE CONSIDERED INVALID UNLESS ACCOMPANIED BY ALL SHEETS OF THE DENOTED PLAN SET(S).

COPIES OF THIS DOCUMENT WITHOUT AN ACTUAL OR FACSIMILE OF THE ENGINEER'S SIGNATURE AND AN ORIGINAL STAMP IN RED OR BLUE INK SHALL BE CONSIDERED INVALID.

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DOCUMENT BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209 SUBSECTION 2 OF THE NEW YORK STATE EDUCATION LAW.

ROSS WINGLOVITZ, P.E.
NEW YORK LICENSE # 071701

ORIGINAL SCALE IN INCHES

ENGINEERING & SURVEYING PROPERTIES
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F: (845) 457-1899

SOIL TESTING RESULTS & DETAILS

MAHER - COCOA LANE
50 COCOA LANE
TOWN OF NEWBURGH
ORANGE COUNTY, NEW YORK

JOB #: 1325.02 DRAWN BY: RMB
DATE: 01/06/21 SCALE: AS NOTED
REVISION: 1 - 05/20/21 TAX LOT: 34-2-71.34

C-2