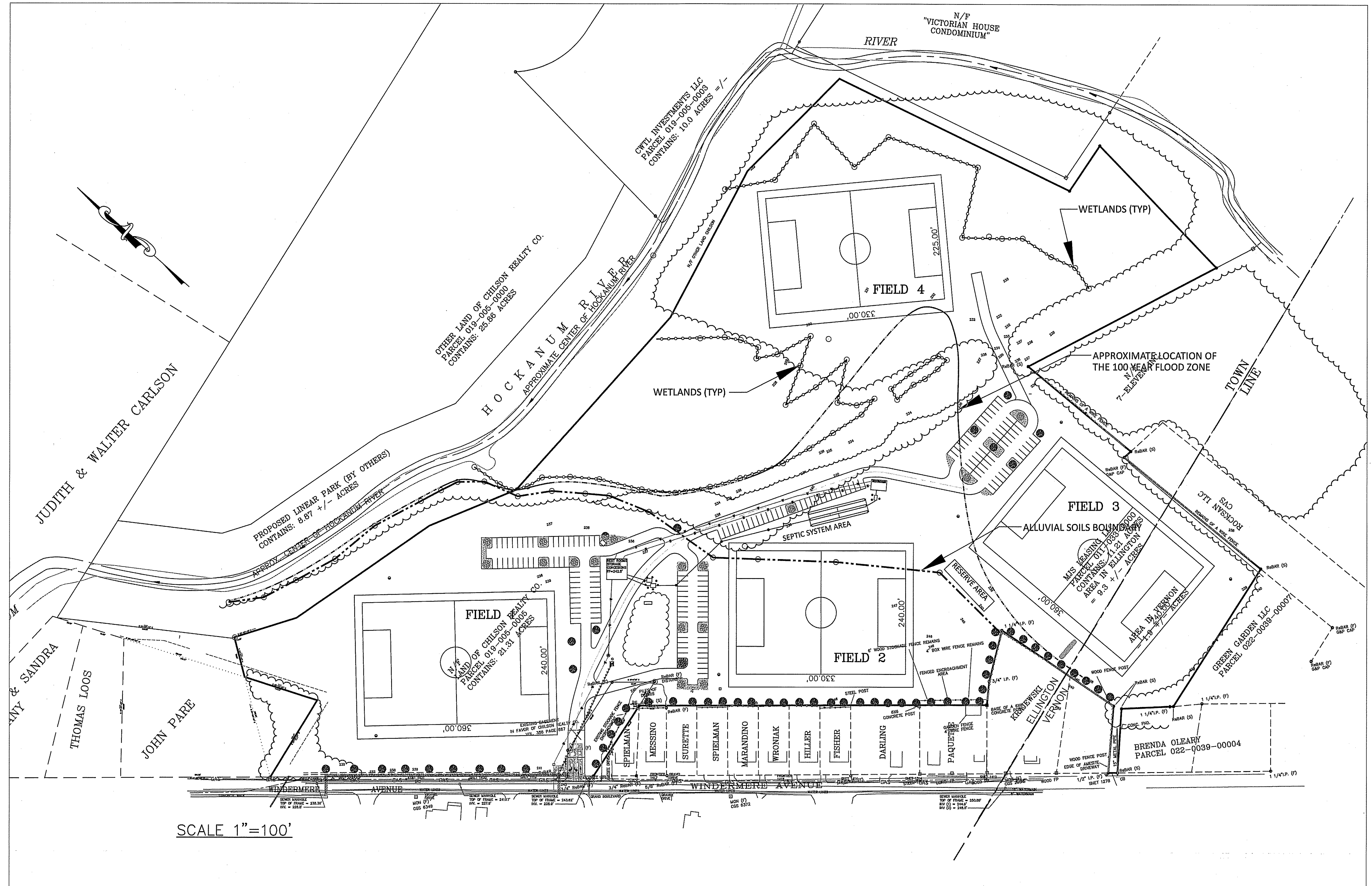


KEY MAP
SCALE 1" = 1000'

MAP REFERENCE:

- BOUNDARY INFORMATION SHOWN HEREON IS BASED IN PART ON THE FOLLOWING SURVEYS:
 - "REVISION TO SUBDIVISION MAP" LIMITED PROPERTY SURVEY LAND OF CHILSON REALTY CO. LANDMARK SURVEYS, LLC DATED 4/27/2020.
 - PROPERTY SURVEY PREPARED FOR TOWN OF VERNON LAND OF MJS LEASING LLC LANDMARK SURVEYS, LLC DATED 4/27/2020
- CONNECTICUT WATER MAP - PROPOSED WATER MAIN REPLACEMENT PREPARED BY GESICK & ASSOCIATES, P.C. DATED 11/9/2018.
- TOPOGRAPHIC INFORMATION DEVELOPED FROM LIDAR SURVEY PERFORMED BY CT DOT AND ACCESSED FROM UNIVERSITY OF CT MAPPING CENTER.



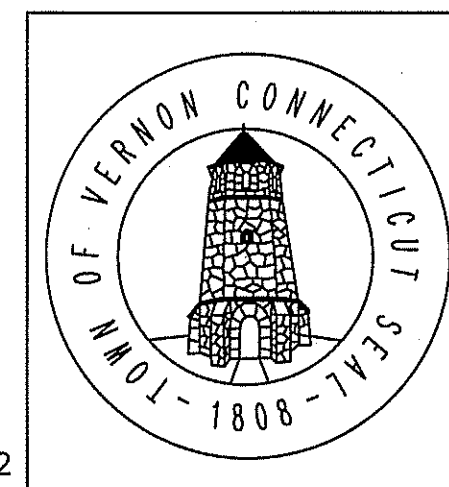
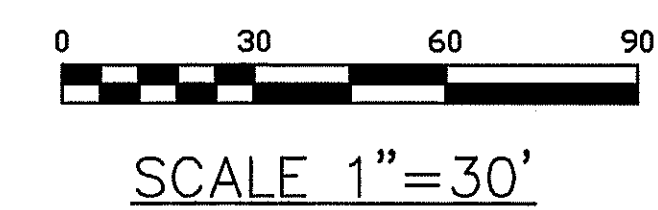
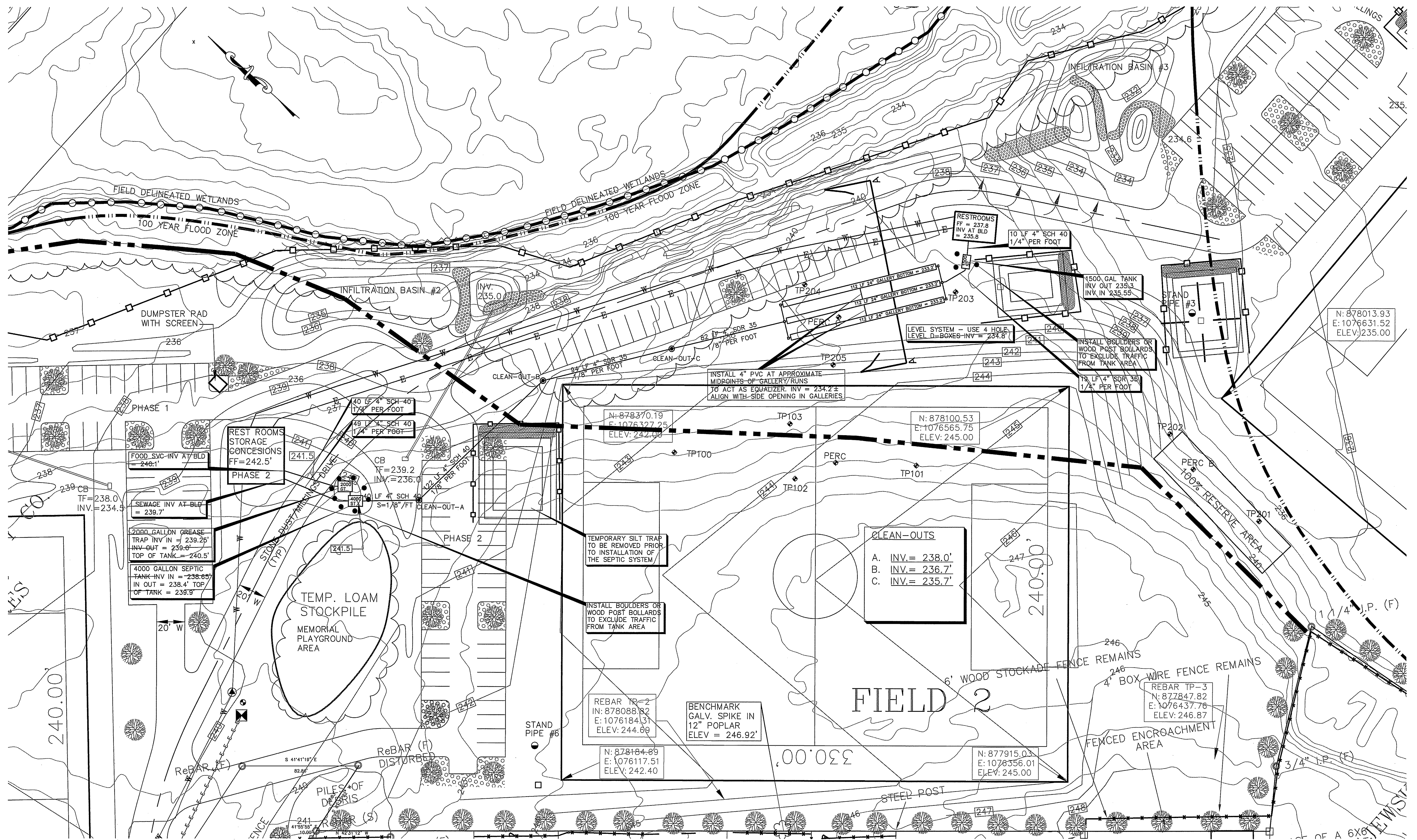
DAVID A. SMITH CT PELS #14173
VERNON TOWN ENGINEER
AUTHORIZED PRINTS WILL BEAR MY ORIGINAL SEAL

DATE

REV 2 - JULY 5, 2022
REV 1 - JUNE 15, 2022



OVERALL SITE PLAN - SEPTIC PLAN
WINDERMERE FIELDS
60 WINDERMERE AVENUE
ELLINGTON, CT
TOWN OF VERNON
ENGINEERING DEPARTMENT
14 PARK PLACE, VERNON, CT 06066
SCALE: AS NOTED DATE: MAY 3, 2022 SHEET: 1 OF 4
FILE: Q:\PARKS and REC\WINDERMERE SOCCER FIELDS



SEPTIC SYSTEM
WINDERMERE FIELDS
60 WINDERMERE AVENUE
ELLINGTON, CT
TOWN OF VERNON
ENGINEERING DEPARTMENT
14 PARK PLACE, VERNON, CT 06066
SCALE: 1" = 30' DATE: MAY 3, 2022 SHEET: 2 OF 4
FILE: Q:\PARKS and REC\WINDERMERE SOCCER FIELDS

REV 2 - JULY 5, 2022
REV 1 - JUNE 15, 2022

Basis of Sanitary Design
Town of Vernon Windermere Fields
60 Windermere Avenue, Ellington

4 Full Size Soccer Fields - with a small Concession Stand/Restroom/Utility Building proposed for Phase 2 and a separate Restroom Building for Phase 3.

Maximum Use - All 4 Fields engaged (Weekend Tournament) 1 - 3 times / year
8 teams with 20 individuals per team, Includes players and coaches Plus 100% for Parents/spectators - 320 individuals each flight

6 flights per day - 320 x 6=1920 persons

75% use the restroom at 1.6 gallon/ea. (toilet) 1440 x 1.6 = 2304 gallons
25% use the restroom at 1.0 gallon/ea. (urinal) 480 x 1.0 = 480 gallons
Total = 2784 gallons

Concession/Snack Shack – class II or possibly class III Food Service Establishment
Provide 1 gallon per day per person for Concession Stand = 1920 gallons

Maximum Daily Flow - 2304 + 480 + 1920 = **4704 Gallons per day**

Typical Use – Weekend Interleague Play – 3 of 4 fields in use
6 teams with 20 individuals per team, Includes players and coaches Plus 100% for Parents/spectators - 240 individuals each flight

3 flights per day – 240 x 3 = 720 persons

75% use the restroom at 1.6 gallon/ea. 540 x 1.6 = 864 gallons
25% use the restroom at 1.0 gallon/ea. 180 x 1.0 = 180 gallons
(864 gallons + 180 gallons = 1044 gallons) = 60% of 1764 gpd
1 gallon per day per person for Concession Stand = 720 gallons = 40% of 1764 gpd

Typical Weekend Daily Flow – 864 + 180 + 720 = **1764 Gallons per day**

Agreed upon design flow (including safety factor) = 2500 Gallons per day

Size Septic Tanks for Maximum Day

Northerly Building (Phase 1 and 2 w/ concession stand)
50% of Maximum Restroom Use plus All Concession Stand use
1392 gallons / plus 1920 = 3312 gallon – use 4000 gallon septic tank
Grease Trap – Kitchen Waste Water 1920 gallons – use a 2000 gallon tank Grease Trap

Southerly Building (Phase 3 and 4)
50% of Maximum Use Restroom – 1392 gallons – use 1500 gallon septic tank

Distribution Field Sizing

Percolation Rate 1-10.0 mins/inch

2500 gallons x 0.400 = 1000 / 0.8 ltr = 1250.0 sf effective area
2500 gallons x 0.600 = 1500 / 1.5 ltr = 1000.0 sf effective area
Total effective leaching area required = 2250.0 sf

Leaching product: 24" concrete galleys @ 6.8 sq ft / lf

Total 2250 sf. / 6.8 sq ft /lf = 330.9 lf required

Provide 3 runs 116 lf (112+4) or 2366.4 sq ft effective area
or 105% of required.

Gallery Storage Volume:

Gallery storage: 42.5 gallons / lf X 336 lf = 14,280 gallons not including surrounding stone shoulders

SEPTIC SYSTEM NOTES

CONTRACTORS AND OTHER USERS OF THIS PLAN ARE HEREBY WARNED THAT APPROVAL OF THIS PLAN BY THE PROPER HEALTH OFFICIAL AND OTHER REGULATORY OFFICIALS IS REQUIRED PRIOR TO CONSTRUCTION. ALL CONTRACTORS AND USERS OF THIS PLAN MUST BE CERTAIN THAT THEY ARE USING AN APPROVED PLAN FOR CONTRACT AND CONSTRUCTION PURPOSES AND THAT ALL REQUIRED PERMITS ARE IN PLACE AND ANY REQUIRED NOTIFICATIONS HAVE BEEN MADE PRIOR TO COMMENCING CONSTRUCTION.

REFERENCE MUST BE MADE TO THE REGULATIONS AND TECHNICAL STANDARDS FOR SUBSURFACE SEWAGE DISPOSAL SYSTEMS AS PUBLISHED BY THE STATE HEALTH DEPARTMENT, AND SUBSEQUENT ADDENDUMS TO ENSURE THAT THE INSTALLATION AND MATERIALS, INCLUDING THE SEPTIC FILL, MEET THE STANDARDS THAT ARE APPLICABLE AT THE TIME OF INSTALLATION.

THE SEPTIC TANKS SHALL BE A TWO COMPARTMENT TANKS AS MANUFACTURED BY CONCRETE PRODUCTS OF CONNECTICUT, SUPERIOR, JOLLY, ROTANDO OR EQUAL. THEY MUST BE PROPERLY BAFFLED AT THE INLET AND OUTLET AND SHALL BE WATERTIGHT. WATERTIGHT CERTIFICATION BY THE MANUFACTURER OR TESTING LABORATORY SHALL BE SUPPLIED BY INSTALLER IF SPECIFIED ON THIS PLAN. JOINTS SHALL BE FIELD SEALED WITH ASPHALT, HYDRAULIC CEMENT OR EQUAL. CONCRETE SHALL BE 4000 P.S.I. AT INSTALLATION, REINFORCED WITH 8" X 6"- 10 GAUGE WIRE MESH. THE SEPTIC TANKS, GREASE TRAP, AND PUMP CHAMBER SHALL BE SUPPLIED WITH OUTLET BAFFLE FILTERS AND ALSO RISERS TO GRADE OVER ALL OPENINGS.

THE PIPES BETWEEN THE BUILDINGS AND SEPTIC TANKS AND/OR GREASE TRAP SHALL BE 4 INCH PVC SCH40 ASTM D1785 PRESSURE WATER PIPE, OR ANY OTHER STATE APPROVED PIPE AND JOINTS WHICH CONFORM TO SECTION 19-13-b103 OF THE CONNECTICUT PUBLIC HEALTH CODE. THE PIPE IS TO BE LAID ON A UNIFORM GRADE (AS SET BY THE LENGTH AND INVERTS SHOWN) AND IN A STRAIGHT LINE.

NO CAST IRON OR DUCTILE IRON PIPING SHALL BE ALLOWED FOLLOWING THE SEPTIC TANKS OR GREASE TRAP OR PUMP CHAMBER DUE TO CORROSIVE FACTORS. 4 INCH DIAMETER PVC MEETING ASTM D3034 SDR-35 OR EQUAL IS REQUIRED FOR ALL SOLID DISTRIBUTION PIPING. ALL PIPING INSTALLED SHALL BE BACK FILLED CAREFULLY WITH SELECT BACK FILL MATERIAL AND HAND TAMPED TO AVOID ANY MEASURABLE SETTLEMENT.

NO PIPING LESS THAN 4 INCH DIAMETER SHALL BE PERMITTED EXCEPT SPECIFIED FORCE OR PRESSURE MAIN IN A PUMPED INSTALLATION.

ANY PIPE BEND OR CUMULATIVE PIPE BENDS IN EXCESS OF 45 DEGREES WILL REQUIRE THE INSTALLATION OF ACCESSIBLE MANHOLES OR CLEAN OUTS IN ACCORDANCE WITH THE TECHNICAL STANDARDS. NO SEGMENT OF LATERAL SHALL EXCEED 75 FEET WITHOUT A MANHOLE OR CLEAN OUT BEING PROVIDED. ALL CLEANOUTS SHALL BE BURIED TO A 1' DEPTH, HAVE A SCREW TYPE CAP INSTALLED AND SHALL HAVE A REBAR PLACED NEXT TO THE COVER TO ALLOW FOR RECOVERY.

DISTRIBUTION BOXES SHALL BE PRECAST CONCRETE WITH INVERTS AS NOTED ON THE PLANS. INVERT OF THE DISTRIBUTION PIPE TO THE GALLEYS SHALL BE SET AT SAME ELEVATION AS THE DISTRIBUTION BOX INLET.

ALL D-BOXES AND SPLASH BOXES SHALL BE PLACED ON A 6 INCH COMPACTED LEVEL LAYER OF PROCESSED GRAVEL OR PROCESSED AGGREGATE.

THE GAPS LEFT SURROUNDING ALL PIPES AT THE BUILDINGS, SEPTIC TANKS AND D-BOXES SHALL BE MORTARED TIGHT ONCE SEWER PIPES ARE INSTALLED UNLESS APPROVED RUBBER BOOTS ARE INSTALLED.

BOTTOM OF ALL LEACHING TRENCHES SHALL BE LEVEL THROUGHOUT. MAXIMUM ALLOWABLE PITCH SHALL BE NO MORE THAN 1/8 INCH IN 50 FEET.

ALL TOPSOIL IN THE VICINITY OF THE SEPTIC SYSTEM FILL AREA SHALL BE STRIPPED OFF AND STOCKPILED. ALL STRIPPING OF THE LEACHING AREAS SHALL BE DONE WITH AN EXCAVATOR OR BACK HOE. NO BULLDOZER, FRONT END LOADER, OR GRADER SHALL BE PERMITTED TO STRIP THE SEPTIC LEACHING AREA.

THE INSTALLER SHALL NOTIFY THE DESIGN ENGINEER WHEN THE INSTALLATION WILL BE READY FOR AN INSPECTION OF THE STRIPPED AND PREPARED LEACHING AREA PRIOR TO PLACING ANY FILL OR INSTALLING THE SEPTIC ELEMENTS IF NO FILL IS REQUIRED. AT LEAST 24 HOURS NOTICE SHALL BE PROVIDED. THE NOTIFICATION OF THE DESIGN ENGINEER SHALL NOT BE CONSTRUED AS RELIEVING THE INSTALLER FROM OBTAINING ANY AND ALL INSPECTIONS REQUIRED BY THE APPROVING HEALTH AUTHORITY.

STONE SHALL BE CLEAN 1 INCH DIAMETER (WASHED) BANK RUN OR CRUSHED STONE MEETING CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 817 SPECIFICATION M.01.01 FOR NO. 4 STONE AND SHALL SHOW A LOSS OF ABRASION OF NOT MORE THAN 50% USING AASHTO METHOD T-96. INSTALLERS ARE HEREBY WARNED THAT LEACHING STONE CONTAINING DIRT, DEBRIS, PAVEMENT PIECES, WOOD, ETC. IS NOT ACCEPTABLE FOR INSTALLATION AND WILL BE REJECTED.

A LAYER OF APPROVED NON-WOVEN FILTER FABRIC SHALL BE PLACED OVER ALL STONE USED IN LEACHING SYSTEM CONSTRUCTION BEFORE BACK FILLING. REFER TO TECHNICAL STANDARDS FOR A COMPLETE LISTING OF APPROVED FABRICS.

THE GROUND SURFACE OVER THE ENTIRE SEPTIC SYSTEM SHALL BE GRADED AND MAINTAINED TO DRAIN SURFACE WATER AWAY FROM THE SEPTIC LEACHING AREA.

POSITIVE PITCH DIRECTING STORM WATER AWAY FROM ANY RISER COVER AND/OR MANHOLE COVER SHALL BE PROVIDED.

ALL SEPTIC TANK RISERS INSTALLED SHALL BE INSTALLED TO PROVIDE A WATERTIGHT SEAL, INCLUDING ANY JOINTS IN THE MANHOLE OR RISER SECTIONS.

ALL RISERS SHALL BE 24" MINIMUM DIAMETER CONCRETE PIPE AND HAVE STANDARD MANHOLE COVERS MARKED 'SEWER' INSTALLED.

THE LEACHING SYSTEM SHALL BE PROPERLY COVERED WITHIN TWO WORKING DAYS FOLLOWING LOCAL HEALTH DEPARTMENT'S INSPECTION AND APPROVAL.

IF THE INSTALLER OF THE SYSTEM FINDS ANY ACTIVE GROUNDWATER, MOTTILING, SHALLOW LEDGE, FILLED AREAS OR OTHER SITE LIMITATIONS DURING CONSTRUCTION MORE RESTRICTIVE THAN THOSE SHOWN ON THE PLAN, HE SHALL IMMEDIATELY STOP WORK AND CONTACT THE REVIEWING HEALTH AGENCY AND THE DESIGN ENGINEER FOR ANY NECESSARY REVISIONS TO THE PLAN.

CONSTRUCTION STAKE-OUT OF THE SEPTIC ELEMENTS SHALL BE SUPERVISED BY A CONNECTICUT LICENSED PROFESSIONAL ENGINEER.

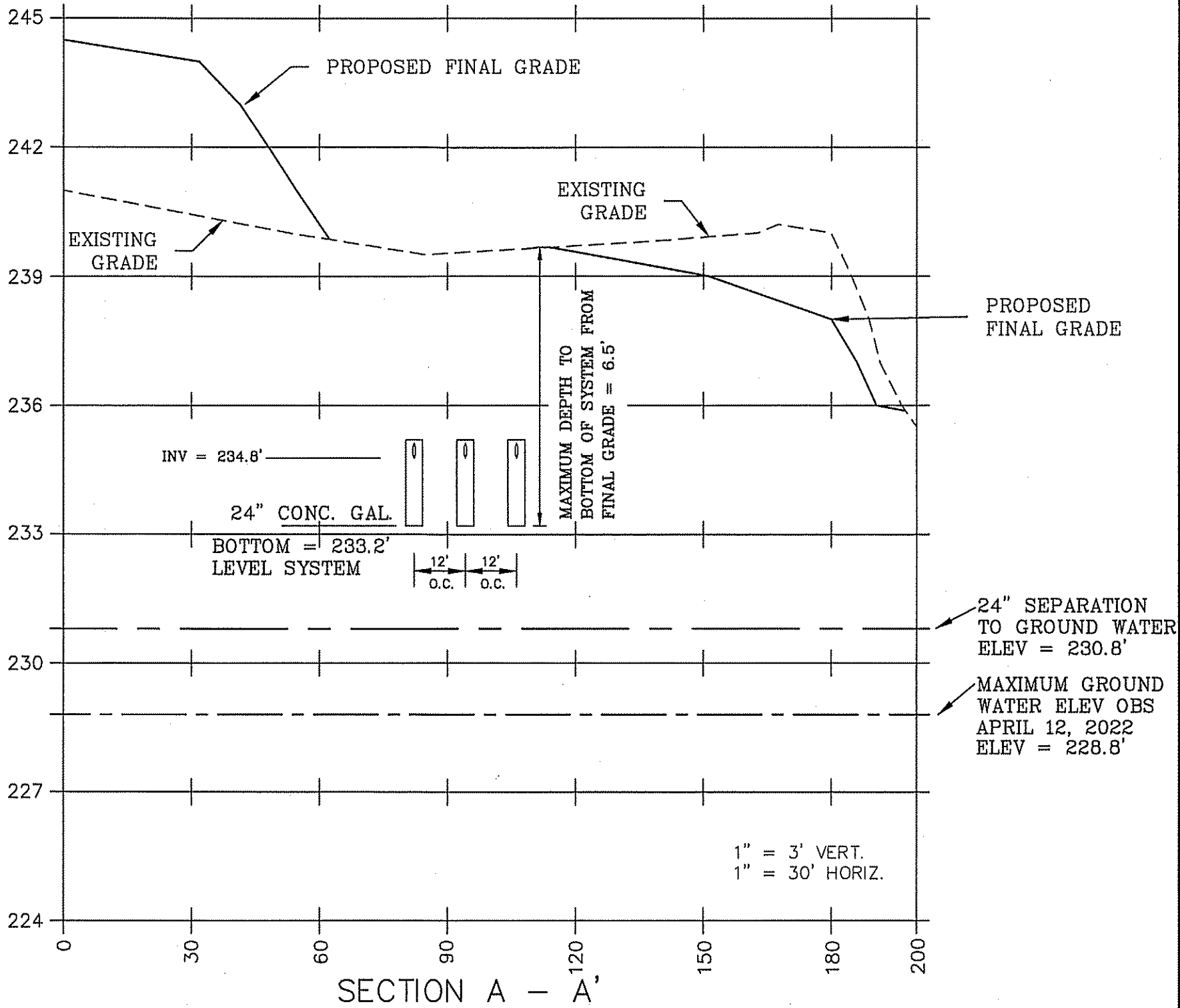
IT IS REQUIRED THAT A REGISTERED ENGINEER INSPECT THE PROPOSED SEPTIC SYSTEM DURING CONSTRUCTION TO ENSURE THAT THE SEPTIC SYSTEM IS INSTALLED ACCORDING TO THE PLAN.

IT IS REQUIRED THAT A REGISTERED LAND SURVEYOR PROVIDE CONSTRUCTION STAKE-OUT FOR BOTH LOCATION AND ELEVATIONS FOR ALL MAJOR COMPONENTS OF THE SEPTIC SYSTEM PRIOR TO THE INSTALLATION BY THE INSTALLER OF RECORD.

THE INSTALLER AND/OR OWNER MUST COMPLY WITH ALL RELEVANT TOWN AND STATE HEALTH DEPARTMENT REGULATIONS DURING CONSTRUCTION OF THE SEPTIC SYSTEM DETAILED ON THIS PLAN.

ALL BENCHMARKS AND TOPOGRAPHY SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.

PRIOR TO ANY EXCAVATION ALL CONTRACTORS MUST CALL "CALL BEFORE YOU DIG" AT 1-800-922-4455 AND HAVE ALL UTILITIES MARKED ON THE GROUND.



EROSION AND SEDIMENTATION CONTROL NOTES

PROJECT DESCRIPTION:

THIS PORTION OF THE PROJECT CONSISTS OF INSTALLATION OF A SEPTIC SYSTEM FOR THE DEVELOPMENT OF 4 SOCCER FIELDS AND 2 RESTROOM FACILITIES FOR THE PROJECT.

CONSTRUCTION SCHEDULE:

1. INSTALL HAY BALES OR SILT FENCE AS SHOWN ON THE PLAN.
2. STRIP AND REMOVE TOPSOIL. TOPSOIL TO BE STOCKPILED FOR FINAL RESTORATION.
3. INSTALL LEACHING TRENCHES.
4. CONNECT BUILDING SEWERS TO SEPTIC TANKS.
5. PERFORM FINAL INSPECTION AND BACKFILL SEPTIC SYSTEM.
6. FINISH GRADE SITE. FERTILIZE, SEED AND MULCH DISTURBED AREAS.

ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO OR THE START OF CONSTRUCTION AND SHALL REMAIN IN EFFECT UNTIL ALL DISTURBED AREAS ARE STABILIZED.

OPERATION AND MAINTENANCE:

IN GENERAL, EROSION AND SEDIMENTATION CONTROL AND RESTORATION MEASURES SHALL CONFORM TO THE "2002 CONNECTICUT E & S GUIDELINES" AS PUBLISHED BY THE DEEP AND TO LOCAL TOWN REQUIREMENTS.

THE CONTRACTOR SHALL MAKE DAILY INSPECTIONS OF THE SITE TO ENSURE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES AND IMMEDIATELY MAKE NECESSARY REPAIRS.

ALL CONSTRUCTION TRAFFIC SHALL ENTER AND LEAVE BY THE EXISTING CONSTRUCTION ENTRANCE.

WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA OR WHEN GRADING ACTIVITY HAS TEMPORARILY CEASED FOR A PERIOD OF TIME EXPECTED TO EXCEED ONE MONTH, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT CONTROL MEASURES ARE IMPLEMENTED.

ADDITIONAL SEDIMENTATION AND/OR EROSION CONTROL MEASURES IF REQUESTED BY THE TOWN SHALL BE INSTALLED IMMEDIATELY UPON REQUEST.

THE CONTRACTOR HEREBY ACKNOWLEDGES HIS RESPONSIBILITY TO INSTALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ON THIS SITE AND THAT HIS FAILURE TO INSTALL AND MAINTAIN THESE DEVICES COULD RESULT IN FINES OR SUSPENSION OF WORK.

ALL CONTRACTORS MUST CONTACT "CALL BEFORE YOU DIG"
AT 1-800-922-4455 PRIOR TO ANY EXCAVATION.

REV 2 – JULY 5, 2022
REV 1 – JUNE 15, 2022



SEPTIC SYSTEM		
WINDERMERE FIELDS 60 WINDERMERE AVENUE ELLINGTON, CT		
TOWN OF VERNON ENGINEERING DEPARTMENT 14 PARK PLACE, VERNON, CT 06066		
SCALE: N.T.S.	DATE: MAY 3, 2022	SHEET: 3 OF 4
FILE: Q:\PARKS and REC\WINDERMERE SOCCER FIELDS		

