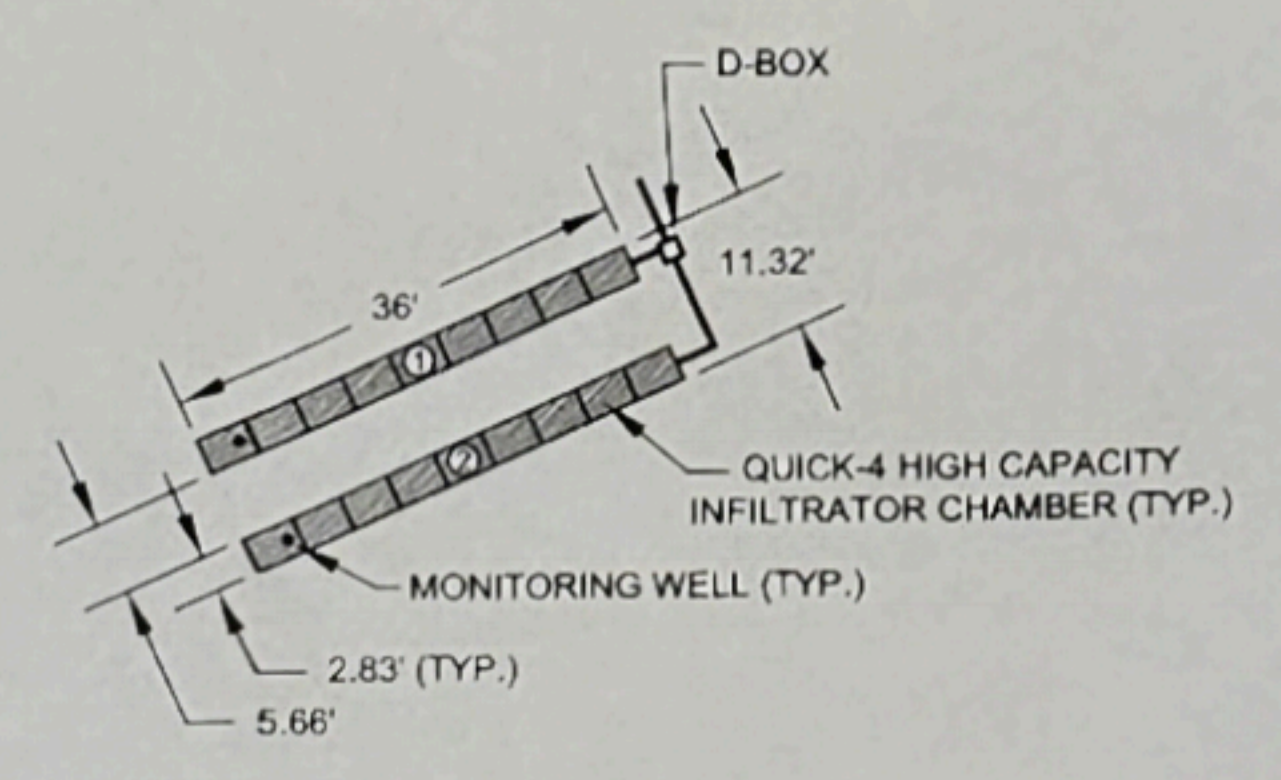
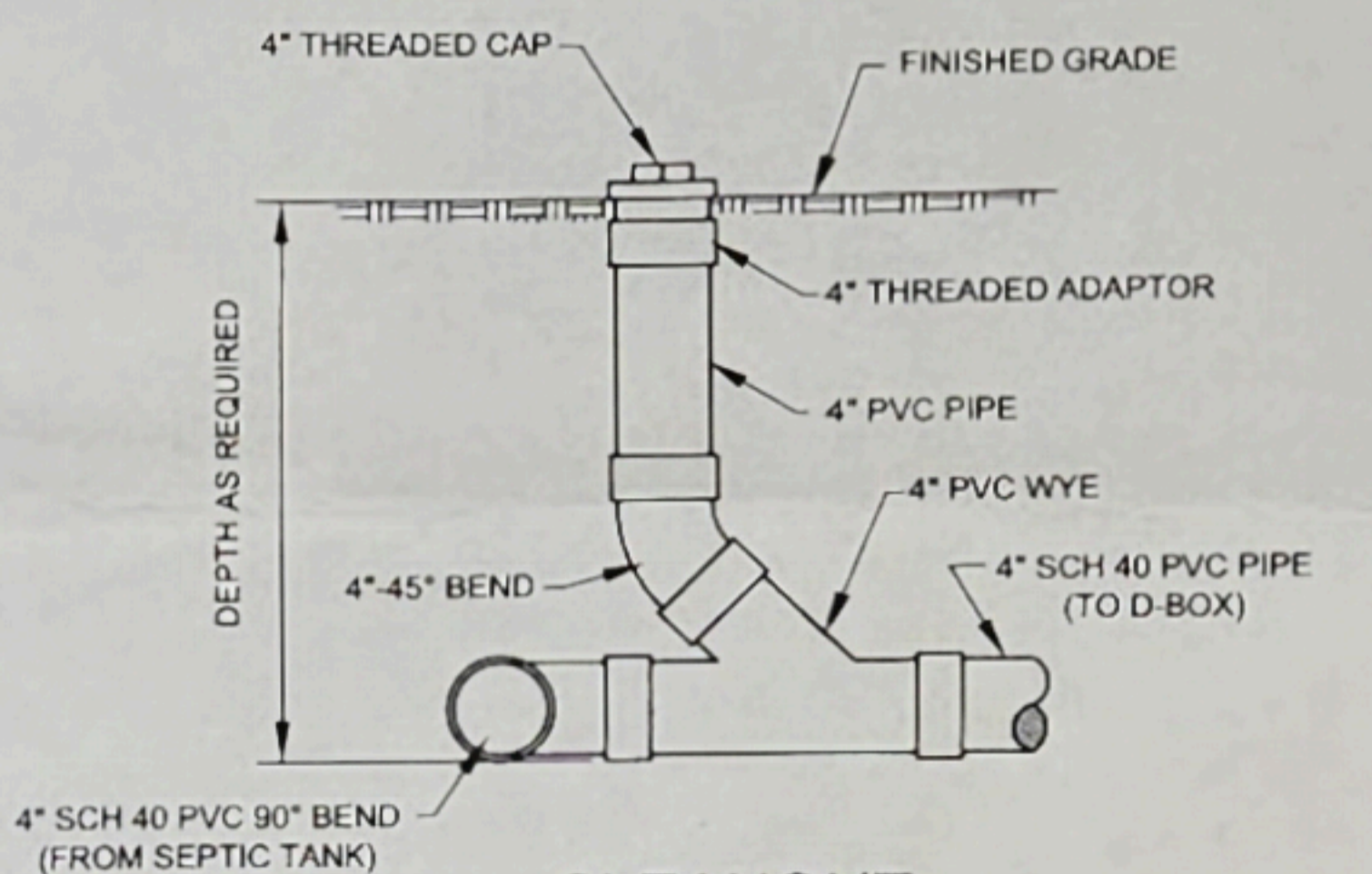


BUOYANCY CALCULATIONS

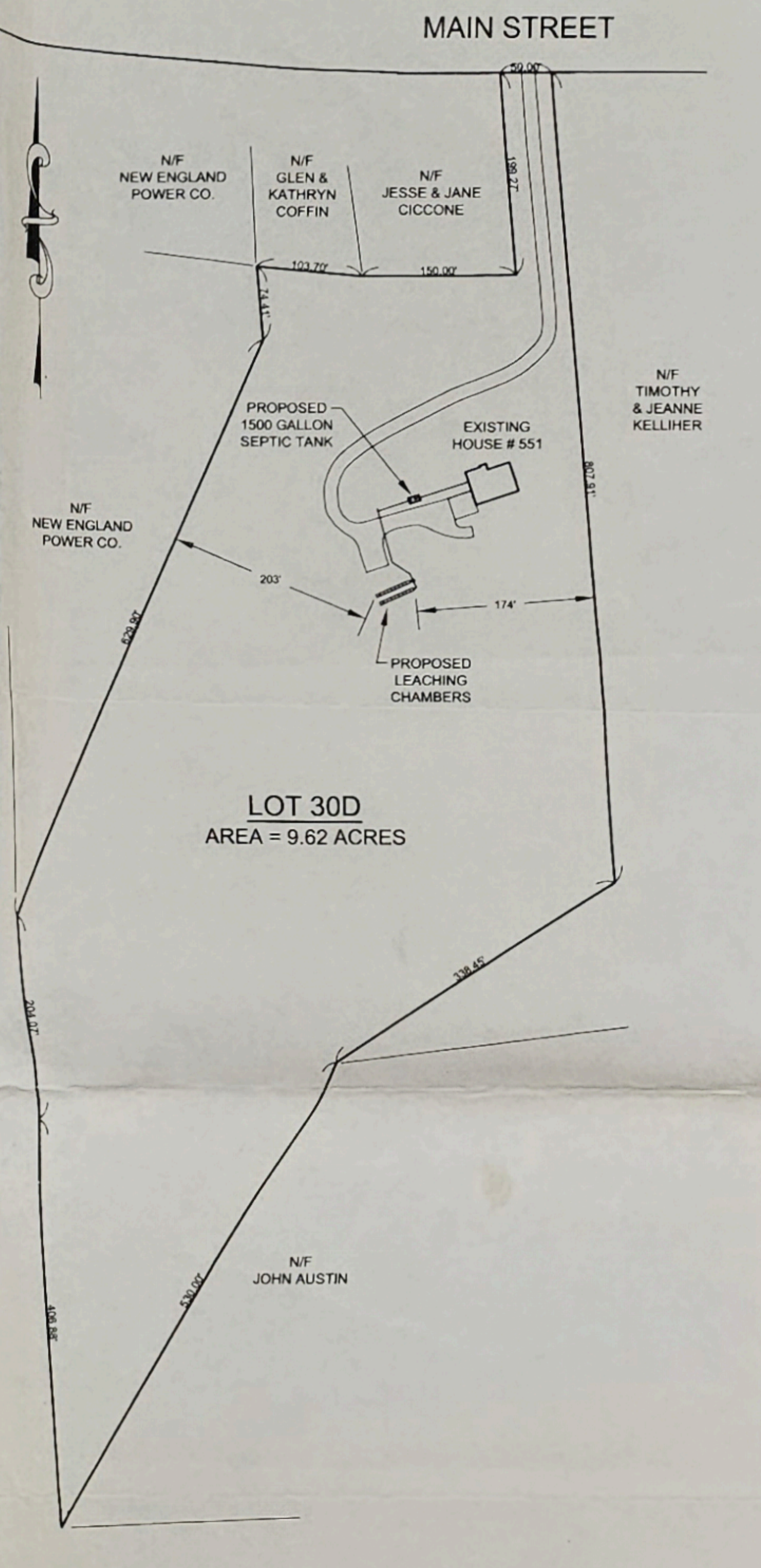
CALCULATIONS FOR SEPTIC TANK:
 ASSUME GW AT 24" (ELEV. 94.5 FT.)
 BOTTOM OF SEPTIC TANK IS AT ELEV. 88.92 FT.
 DISPLACEMENT VOLUME: 10.50' X 5.67' X (94.5 - 88.9) = 333 C.F.
 BUOYANT FORCE: 333 C.F. X 62.4 LBS./C.F. = 20,779 LBS.
 WEIGHT OF SHEA CONCRETE PRODUCTS: 1500 GALLON TANK = 11,670 LBS.
 SOIL VOLUME: (10.5' X 5.67' X 2.4') - (3' X 3.14' X 1' X 2.4') = 120 C.F.
 SOIL WEIGHT: 120 C.F. X 110 LBS./C.F. = 13,200 LBS.
 TOTAL WEIGHT: 11,670 + 13,200 = 24,870 LBS.
 NET FORCE = 24,870 LBS. - 20,779 LBS. = 4,091 LBS. DOWNWARD



LEACHING AREA DIMENSIONS
SCALE: 1" = 20'

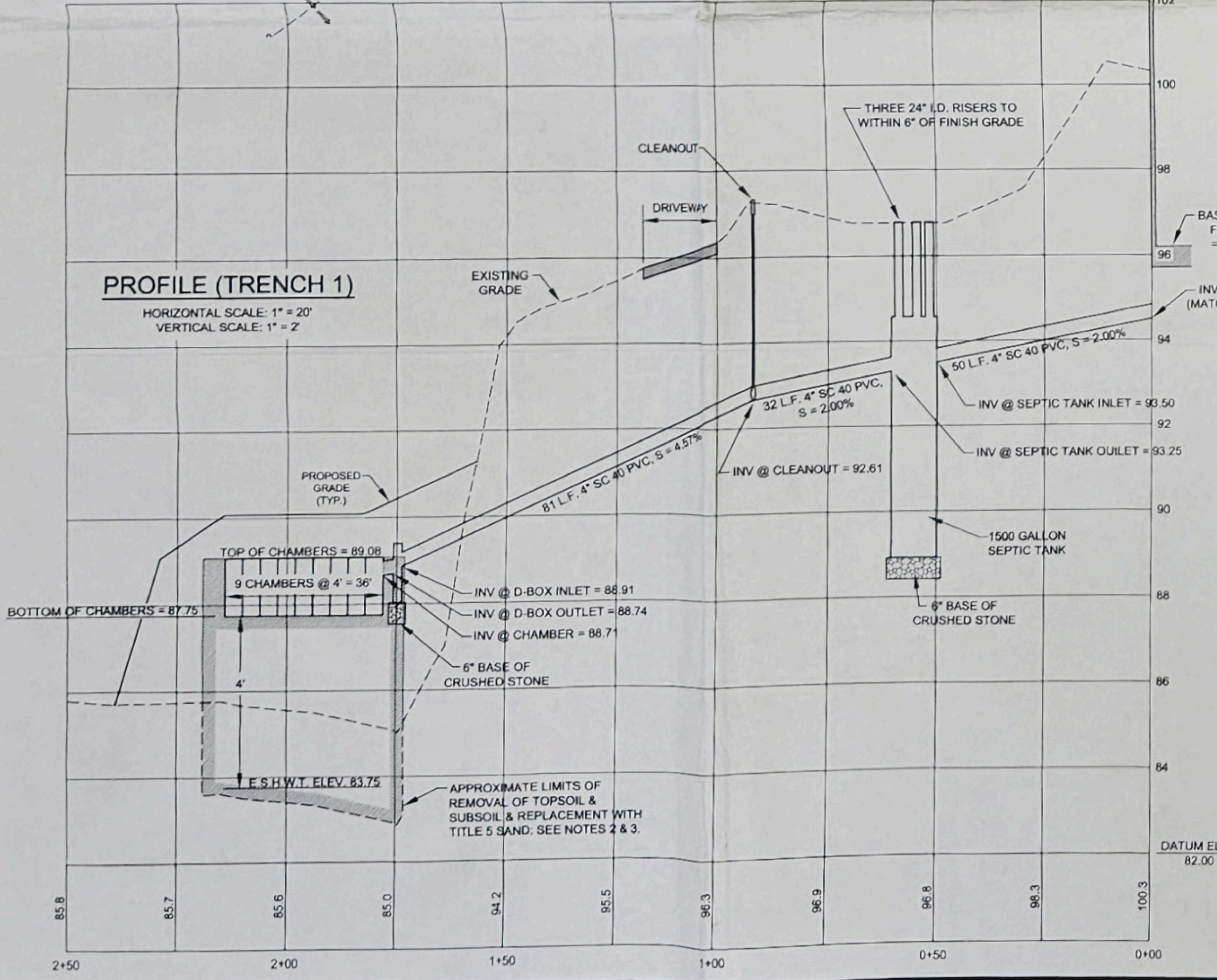


CLEANOUT
NOT TO SCALE



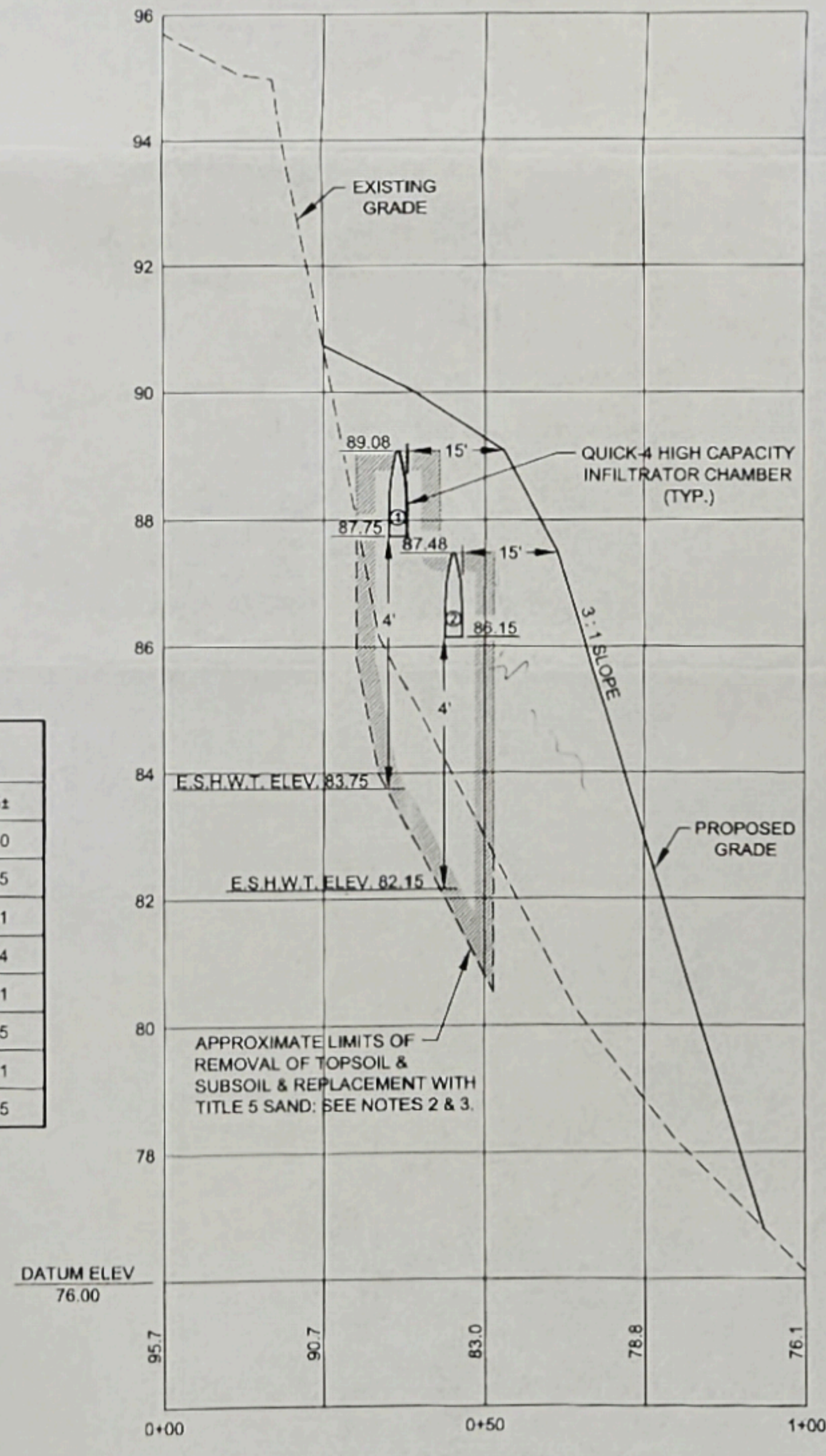
PLAN OF ENTIRE LOT
SCALE: 1" = 200'

ASSESSORS REFERENCE:
MAP R14 LOT 30D



PROFILE (TRENCH 1)
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'

ELEVATIONS	
INV. OF PIPE OUT OF HOUSE	94.5±
INV. OF PIPE AT SEPTIC TANK INLET	93.50
INV. OF PIPE AT SEPTIC TANK OUTLET	93.25
INV. OF PIPE AT D-BOX INLET	88.91
INV. OF PIPE AT D-BOX OUTLET	88.74
INV. AT LEACHING CHAMBERS (TRENCH 1)	88.71
BOTTOM OF LEACHING CHAMBERS (TRENCH 1)	87.75
INV. AT LEACHING CHAMBERS (TRENCH 2)	87.11
BOTTOM OF LEACHING CHAMBERS (TRENCH 2)	86.15



CROSS-SECTION A-A
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'

SEPTIC SYSTEM REPAIR DESIGN
FOR
551 MAIN STREET
IN
WEST NEWBURY, MASS.

OWNER: **BRUCE & RENEE HAMILTON**
551 MAIN STREET
WEST NEWBURY, MA 01985

PROFESSIONAL ENGINEER
PHILIP G. CHRISTIANSEN
No. 28894
REGISTERED PROFESSIONAL ENGINEER

DATE: JANUARY 17, 2012
REVISED: 2/1/2012, 2/2/2012
DWG. NO. 11083003

PROFESSIONAL ENGINEERS & LAND SURVEYORS
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