

MEENA LLC

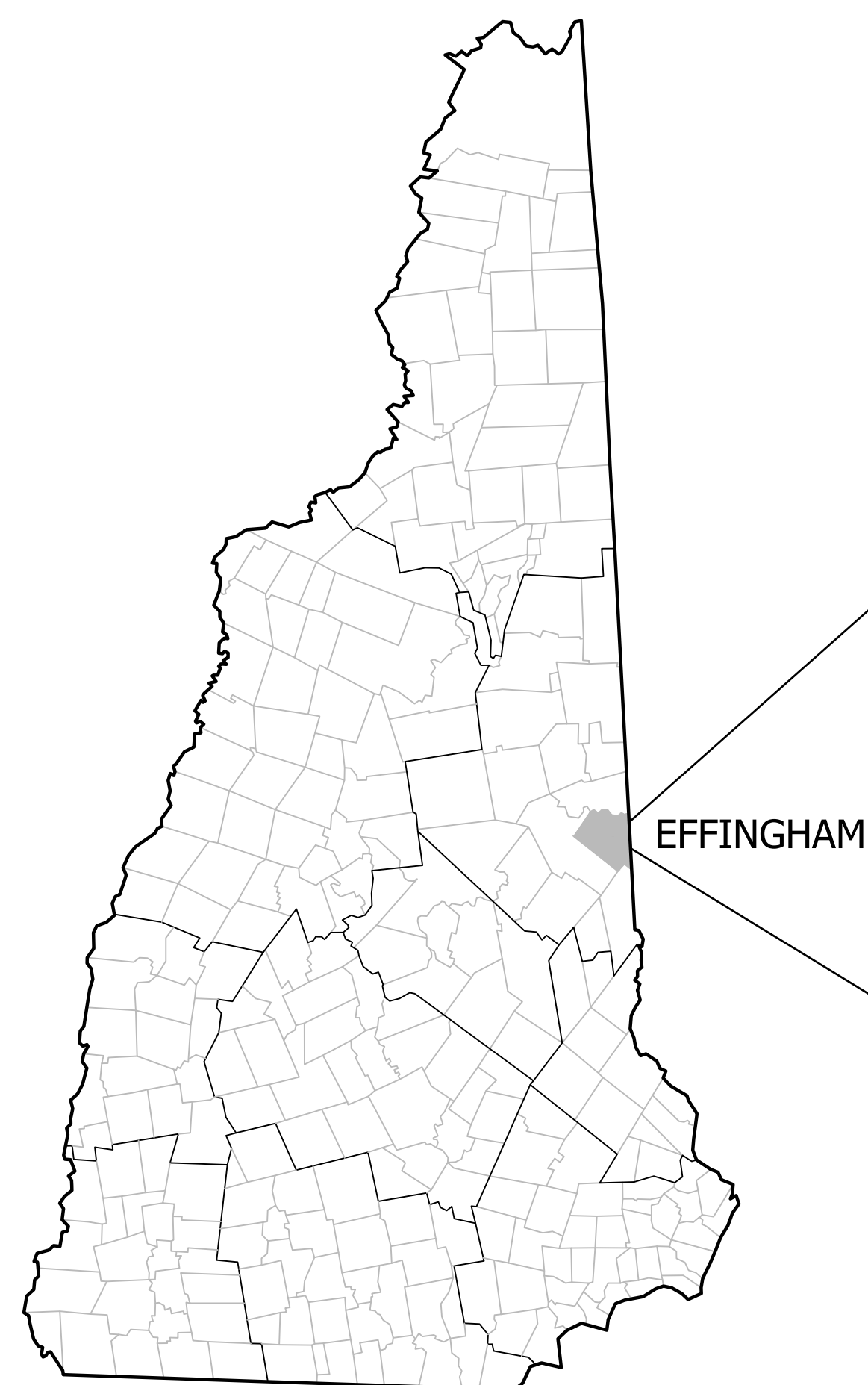
41 ROUTE 25

TAX MAP 401 LOT 5

EFFINGHAM, NEW HAMPSHIRE

JULY, 2022

REVISED APRIL 2023



NEW HAMPSHIRE
SHEET INDEX:

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SMP1.01	STORMWATER MANAGEMENT PLAN
SMP1.02	STORMWATER MANAGEMENT DETAILS
SMP1.03	BIORETENTION BASIN DETAILS



LOCATION PLAN

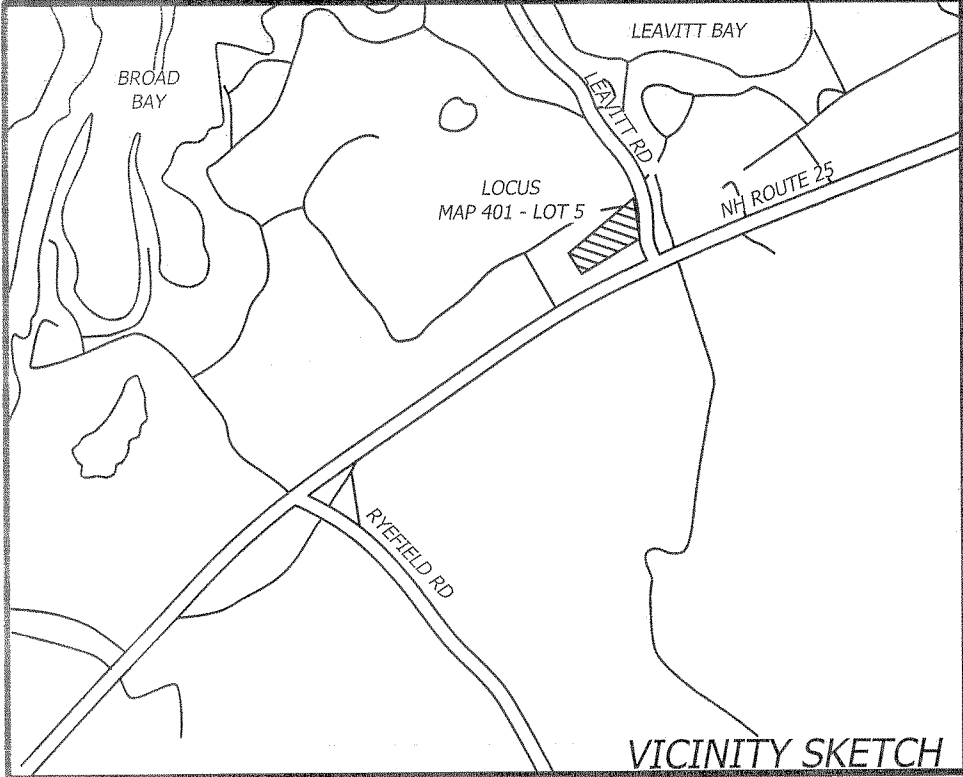
OWNER:

MEENA, LLC
41 NH ROUTE 25
EFFINGHAM NH 03882

ENGINEER & SURVEYOR:

horizons
Engineering

34 SCHOOL STREET
LITTLETON, NH 03561
(603) 444-4111



LEGEND

- ABUTTOR LOT BOUNDARY
- SUBJECT LOT BOUNDARY
- PAVEMENT
- GRAVEL
- TREELINE
- OVERHEAD UTILITY WIRE
- UTILITY POLE
- IRON PIPE OR REBAR FOUND
- STONE BOUND FOUND

GENERAL NOTES

- OWNER OF RECORD
MEENA, LLC
41 US ROUTE 25
EFFINGHAM, NH 03882
BOOK 3570 PAGE 955
- DEED REFERENCES:
 - "WARRANTY DEED FROM BFM REALTY, LLC TO MEENA, LLC," DATED FEBRUARY 24, 2021. RECORDED FEBRUARY 25, 2021 AT THE CARROLL COUNTY REGISTRY OF DEEDS BOOK 3570 PAGE 955.
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 - "BLUEBERRY ESTATES", PLAN OF LAND IN OSSIPPEE, N.H., BELONGING TO NORTHERN LAND TRADERS INC," DATED APRIL 28, 1980. SURVEYED BY NORTH COUNTRY SURVEYORS. RECORDED AT THE CARROLL COUNTY REGISTRY OF DEEDS, PLAN BOOK 52, PAGE 61.
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- THE BOUNDARIES AS DEPICTED HEREON WERE RETRACED SUBSTANTIALLY BASED ON MONUMENTATION FOUND IN THE FIELD AND ON REFERENCE PLANS.
- THE WORD "CERTIFY" OR "CERTIFICATION" AS SHOWN AND USED HEREON MEANS COMPLIANCE WITH APPLICABLE LAND SURVEY LAWS AND RULES AND AN EXPRESSION OF PROFESSIONAL OPINION BASED ON THE FACTS OF THE SURVEY, PRINCIPLES OF BOUNDARY RETRACEMENT AND LOCAL STANDARD OF CARE, AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EXPRESSED OR IMPLIED.

N/E
RICHARD M. &
TAMMY S. MCPHERSON
3 BLUEBERRY RD
CENTER OSSIPPEE, NH 03814
BOOK 3161 PAGE 793
OSSIPPEE ASSESSORS MAP 47 LOT 41

N/E
RICHARD T. & MARY A. GIGLIO
35 NH ROUTE 25
41 WEONA DR.
FREEDOM, NH 03836
BOOK 2927 PAGE 763
EFFINGHAM ASSESSORS MAP 406 LOT 80

N/E
ROGER D. & JOY L. RUTTER
2 NORWAY RD
CENTER OSSIPPEE, NH 03814
BOOK 2383 PAGE 99
OSSIPPEE ASSESSORS MAP 47 LOT 43

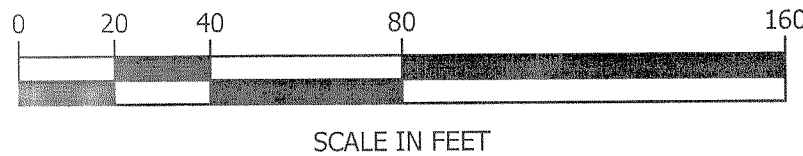
N/E
ERIN & AMY HARTLEY
773 GREEN MOUNTAIN RD
PO BOX 130
CHOCORUA, NH 03817
BOOK 3516 PAGE 222
EFFINGHAM ASSESSORS MAP 406 LOT 75

N/E
MICHAEL D. & LYNETTE N. KATCHEN
52 NH ROUTE 25
PO BOX 178
EFFINGHAM, NH 03882
BOOK 3339 PAGE 909
EFFINGHAM ASSESSORS MAP 401 LOT 4.1

N/E
MICHAEL & DEBORAH LAVOIE
2 RENLE ROAD
4709 E. PARADISE LANE
PHOENIX, AZ 85032
BOOK 1761 PAGE 534
OSSIPPEE ASSESSORS MAP 33 LOT 42

N/E
JUSTIN A. PETERS &
CARLA WILKINSON
LEAVITT RD
275 SACO RD
STANDISH, ME 04084
BOOK 3606 PAGE 725
EFFINGHAM ASSESSORS MAP 401 LOT 6

N/E
TOWN OF EFFINGHAM
NH ROUTE 25
68 SCHOOL ST
EFFINGHAM, NH 03882
BOOK 3333 PAGE 908
EFFINGHAM ASSESSORS MAP 401 LOT 9



DATE OF PRINT
OCTOBER 20 2021
HORIZONS ENGINEERING

CERTIFICATION

I CERTIFY THAT THIS PLAT WAS PREPARED BY ME OR BY THOSE UNDER MY DIRECT AND IMMEDIATE SUPERVISION.

I ALSO CERTIFY THAT THIS SURVEY CONFORMS TO THE NHLSA MINIMUM STANDARDS OF PRACTICE FOR THE SURVEY OF REAL PROPERTY.

I HEREBY CERTIFY THAT THIS PLAN IS BASED ON A TOTAL STATION AND GNSS SURVEY AND IS CLASSIFIED RURAL.

DATE 10-20-2021

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Engineering
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horizons
Engineering

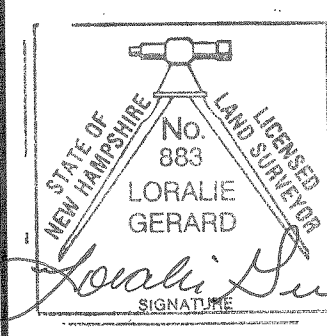
NEWPORT VT • SHARON VT • LITTLETON NH • CONWAY NH
NEW LONDON NH • NEWMARKET NH • SACO ME

BOUNDARY SURVEY OF LANDS OF MEENA, LLC

PO BOX 2262
NORTH CONWAY, NH 03860

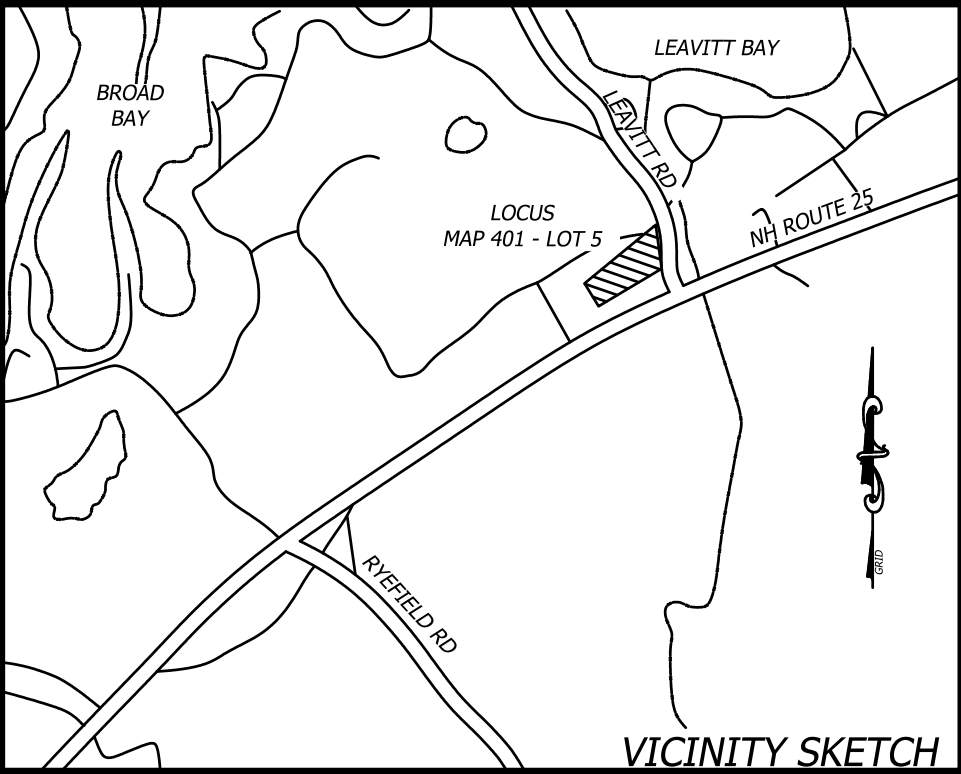
41 NH ROUTE 25
EFFINGHAM, NH 03882
TAX MAP 401 - LOT 5
CCRD BOOK 3570 - PAGE 955

NO.	DATE	REVISION DESCRIPTION	ENG	DWG



DATE: OCT. 2021	PROJECT #: S-21268
SURV'D BY: TWH/ DH	DRAWN BY: TWH/ WWS
CHECK'D BY: LG	ARCHIVE #: H-___

DWG NO. 21-27



GENERAL NOTES

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EFFINGHAM, NH 03882
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- BEARINGS SHOWN HEREON REFER TO GRID NORTH AND ARE BASED ON THE NEW HAMPSHIRE COORDINATE SYSTEM, NAD 83 AS DETERMINED BY GPS SURVEY OBSERVATIONS. ELEVATIONS ARE BASED ON NAVD83 VERTICAL DATUM.
- ALL BUILDINGS WITHIN 200' ARE RESIDENTIAL OR AGRICULTURAL AND ARE TWO STORIES OR LESS IN HEIGHT.
- LOT AREA: 103,803 SF OR 2.38 ACRES
- SUBJECT PARCEL BUILDING HEIGHTS:
STORE: 17.5' +/-
CANOPY: 15.3' +/-
APARTMENTS: 14.3' +/-
- NO HYDRANTS OR PONDS IN THE AREA.
- THERE IS A 20' ELECTRICAL EASEMENT ALONG THE RIGHT OF WAY OF ROUTE 25.
- BOTH ENTRANCES ARE EXISTING AND THERE ARE NO PROPOSED CHANGES. THE ENTRANCE ON LEAVITT ROAD HAS 200' OF SIGHT DISTANCE IN THE NORTHERLY AND SOUTHERLY DIRECTIONS. THE ENTRANCE ON NH ROUTE 25 IS APPROVED. SEE NOTE 19, AND HAS A SIGHT DISTANCE IN THE EASTERLY AND WESTERLY DIRECTION IN EXCESS OF 400'.
- NRCS SOILS TYPES: 35B & 35C (CHAMPLAIN LOAMY SAND) .
- NHDOT DRIVEWAY PERMIT #14116A.
- ALL PROPERTY SHOWN ID IN THE EFFINGHAM RESIDENTIAL/AGRICULTURAL DISTRICT.

TEST PIT DATA: BY ADAM DOIRON OF DOIRON ENVIRONMENTAL, LLC ON 6/16/2022

TEST PIT #01:

0-7"	10YR3/1	FINE SANDY LOAM, WEAK FINE GRANULAR, VERY FRIABLE
7-18"	10YR5/3	FINE SAND, SINGLE GRAIN, LOOSE
18-19"	10YR5/3	FINE SAND, SINGLE GRAIN, LOOSE, COMMON PROMINENT REDOXIMORPHIC CONCENTRATIONS
19-21"	10YR2/1	MUCKY FINE SANDY LOAM, WEAK FINE GRANULAR, VERY FRIABLE, COMMON PROMINENT REDOXIMORPHIC CONCENTRATIONS
21-24"	10YR4/1	LOAMY FINE SAND, MODERATE MEDIUM GRANULAR, VERY FRIABLE
24-27"	10YR2/1	FINE SANDY LOAM, MODERATE MEDIUM SUB-ANGULAR BLOCKY, FRIABLE, COMMON DISTINCT REDOXIMORPHIC DEPLETIONS
27-40"	7.5YR3/3	FINE SANDY LOAM, MODERATE MEDIUM SUB-ANGULAR BLOCK, FRIABLE, COMMON PROMINENT REDOXIMORPHIC CONCENTRATIONS, COMMON DISTINCT REDOXIMORPHIC DEPLETIONS
40-53"	10YR4/3	FINE SAND, SINGLE GRAIN, LOOSE, COMMON PROMINENT REDOXIMORPHIC CONCENTRATIONS
53-63"	2.5Y5/1	FINE SAND & VERY FINE SAND, MASSIVE, VERY FRIABLE

ESHWT @ 18"
RESTRICTIVE @ NONE
REFUSAL @ NONE
OBSERVED WATER TABLE @ 44"
ROOTS TO 29"
DEPTH OF FILL MATERIAL @ 19"

LEGEND

---	APPROXIMATE ABUTTER LOT BOUNDARY
---	SUBJECT LOT BOUNDARY
---	EDGE OF PAVEMENT
---	EDGE OF GRAVEL
---	TREELINE
---	OVERHEAD UTILITY WIRE
---	EDGE OF JURISDICTIONAL WETLANDS
---	ELECTRICAL EASEMENT
---	EDGE OF BROOK
---	NRCS SOIL BOUNDARY
○	UTILITY POLE
○	IRON PIPE OR REBAR FOUND
□	STONE BOUND FOUND
●	TEST PIT LOCATION
○	EXISTING SITE LIGHT
○	WELL
○	BENCHMARK
---	EXISTING GRAVEL
---	EXISTING PAVEMENT

NRCS SOIL LEGEND

SYMBOL	NAME	HYDROLOGIC SOIL GROUP
35	CHAMPLAIN	A

INDICATES SOIL TYPE

INDICATES SLOPE OF LAND

A = 0 TO 3 PERCENT SLOPE
B = 3 TO 8 PERCENT SLOPE
C = 8 TO 15 PERCENT SLOPE
D = 15 TO 25 PERCENT SLOPE
E = GREATER THAN 25 PERCENT

TEST PIT #02:

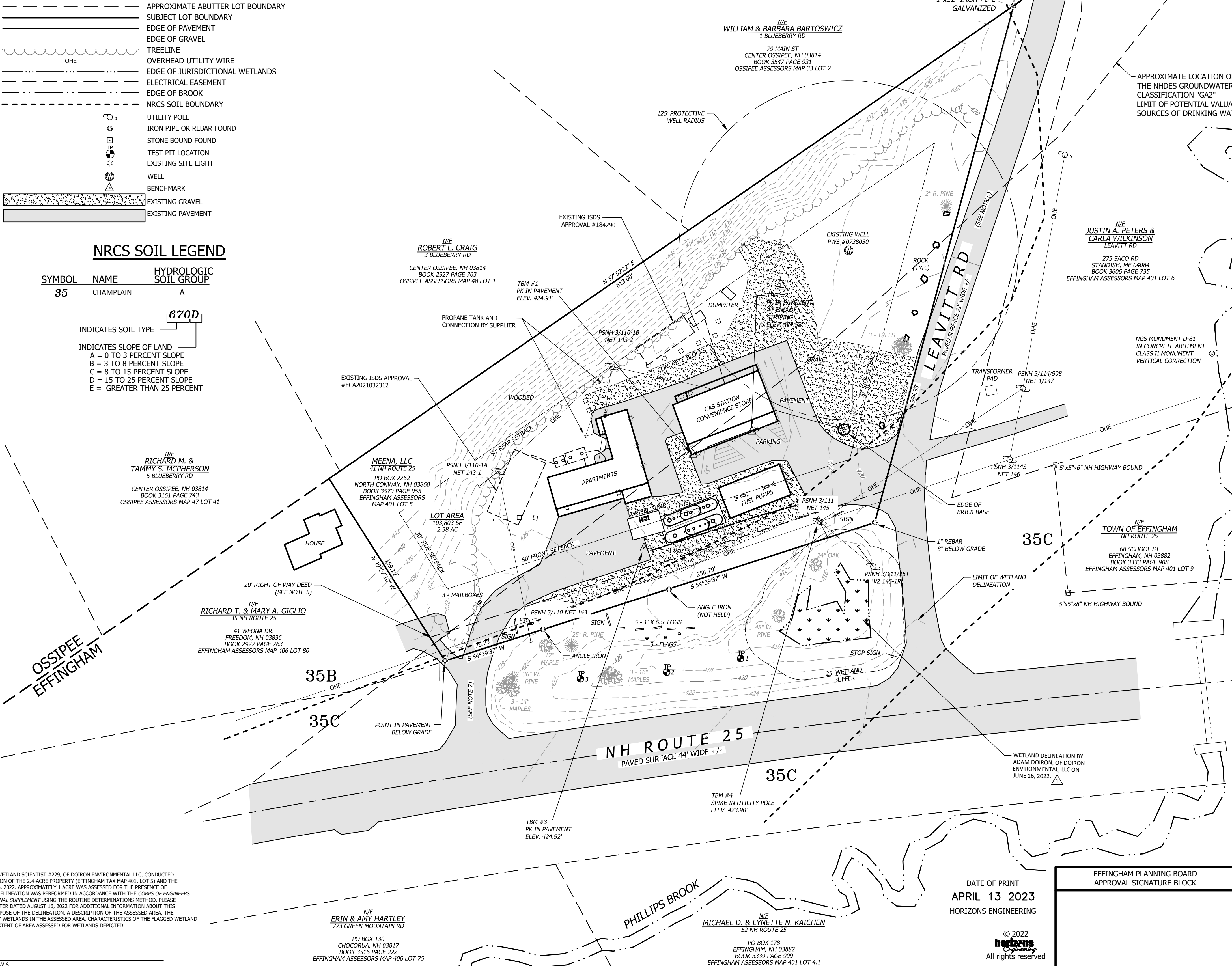
0-3"	10YR2/1	FINE SANDY LOAM, WEAK FINE GRANULAR, VERY FRIABLE
3-7"	10YR5/3	LOAMY FINE SAND, WEAK FINE GRANULAR, VERY FRIABLE
7-16"	10YR4/4	FINE SAND, SINGLE GRAIN, LOOSE
16-21"	10YR5/3	FINE AND MEDIUM SAND, SINGLE GRAIN, LOOSE
21-24"	10YR2/1	COMMON PROMINENT REDOXIMORPHIC CONCENTRATIONS
24-29"	10YR4/1	HEMIC ORGANIC MATERIALS, WEAK FINE GRANULAR, VERY FRIABLE
29-31"	2.5YR2.5/1	LOAMY FINE SAND, WEAK MEDIUM GRANULAR, VERY FRIABLE
31-36"	5YR4/3	FINE SANDY LOAM, MODERATE MEDIUM SUBANGULAR BLOCKY, FRIABLE
36-44"	2.5Y5/3	FINE SANDY LOAM, MASSIVE, FIRM, COMMON PROMINENT REDOXIMORPHIC CONCENTRATIONS
44-63"	2.5Y4/3	LOAMY FINE SAND, MASSIVE, FRIABLE, COMMON PROMINENT REDOXIMORPHIC CONCENTRATIONS, COMMON DISTINCT REDOXIMORPHIC DEPLETIONS
63-75"	2.5Y5/3	FINE SAND, SINGLE GRAIN, LOOSE, COMMON PROMINENT REDOXIMORPHIC CONCENTRATIONS

ESHWT @ 16"
RESTRICTIVE @ 31-36"
REFUSAL @ NONE
OBSERVED WATER TABLE @ 53"
ROOTS TO 32"
DEPTH OF FILL MATERIAL @ 21"

TEST PIT #03:

0-2"	7.5YR2.5/1	FIBRIC ORGANIC MATERIALS, WEAK FINE GRANULAR, VERY FRIABLE
2-4"	10YR5/1	FINE SANDY LOAM, WEAK FINE GRANULAR, VERY FRIABLE
4-8"	10YR4/6	FINE SANDY LOAM, WEAL MEDIUM GRANULAR, VERY FRIABLE
8-13"	10YR5/6	LOAMY FINE SAND, WEAK MEDIUM GRANULAR, VERY FRIABLE
13-24"	2.5Y5/4	LOAMY FINE SAND, WEAK MEDIUM GRANULAR, VERY FRIABLE
24-47"	2.5Y5/3	LOAMY FINE SAND, MASSIVE, VERY FRIABLE
47-60"	2.5Y4/3	MEDIUM SAND, SINGLE GRAIN, LOOSE
60-66"	7.5YR2.5/1	COARSE SAND, SINGLE GRAIN, LOOSE, MANY REDOXIMORPHIC FEATURES CONSISTING OF EXTREMELY WEAKLY CEMENTED MASSES OF MANGANESE
66-92"	2.5Y4/3	MEDIUM AND COARSE SAND, SINGLE GRAIN, LOOSE, MANY DISTINCT REDOXIMORPHIC CONCENTRATIONS

ESHWT @ 60"
RESTRICTIVE @ NONE
REFUSAL @ NONE
OBSERVED WATER TABLE @ 92"
ROOTS TO 53"
DEPTH OF FILL MATERIAL @ NONE



horizons
Engineering

NEWPORT VT • SHARON VT • LITTLETON NH • CONWAY NH
NEW LONDON NH • NEWMARKET NH • SACO ME

EXISTING CONDITIONS PLAN

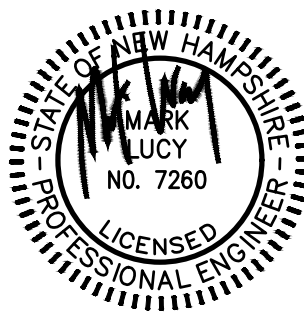
MEENA, LLC

PO BOX 2262
NORTH CONWAY, NH 03860

41 NH ROUTE 25
EFFINGHAM, NH 03882

TAX MAP 401 - LOT 5
CCRD BOOK 3570 - PAGE 955

NO.	DATE	REVISION DESCRIPTION	ENG	DWG
△	9/08/22	REVISED PER PEER REVIEW	JH	WWS
△	4/13/23	REVISED PER PEER REVIEW	ML	JFH



DATE: PROJECT #:

JUNE 2022 220473

SURV'D BY: DRAWN BY:

TWH/DH TWH/JFH

CHECK'D BY: ARCHIVE #:

ML H- E 1.00

DATE OF PRINT

APRIL 13 2023

HORIZONS ENGINEERING

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EFFINGHAM PLANNING BOARD

APPROVAL SIGNATURE BLOCK

ERIN & ARRY HARTLEY
773 GREEN MOUNTAIN RD

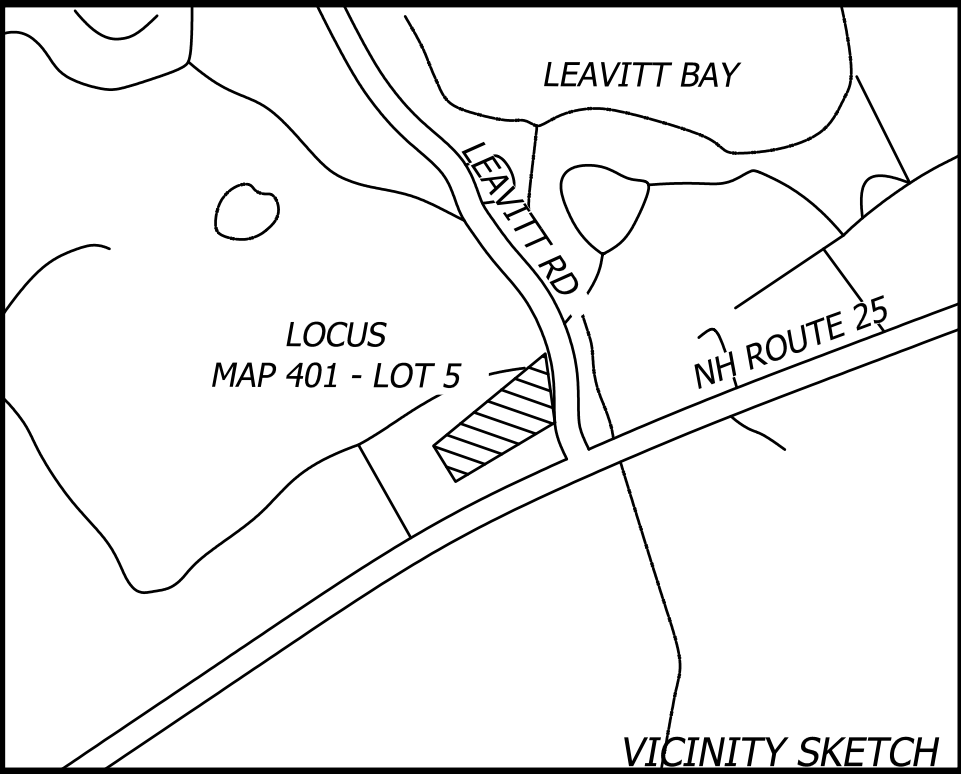
PO BOX 130
CHOCORUA, NH 03817

BOOK 3516 PAGE 222
EFFINGHAM ASSESSORS MAP 406 LOT 75

MICHAEL D. & LYNETTE N. KAICHEN
52 NH ROUTE 25

PO BOX 178
EFFINGHAM, NH 03882

BOOK 3339 PAGE 909
EFFINGHAM ASSESSORS MAP 401 LOT 4.1

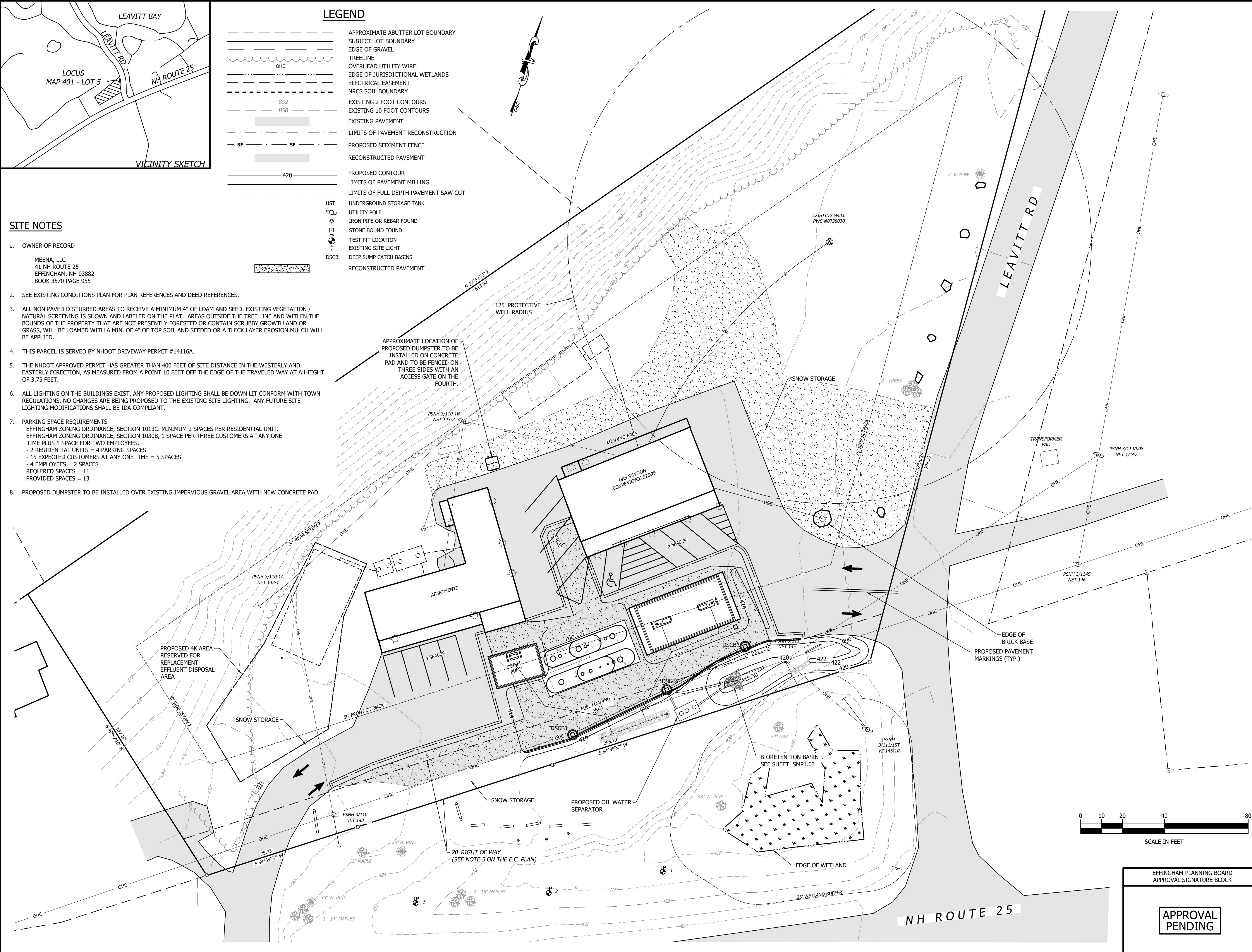


LEGEND

- APPROXIMATE ABUTTER LOT BOUNDARY
- SUBJECT LOT BOUNDARY
- EDGE OF GRAVEL
- TREELINE
- OVERHEAD UTILITY WIRE
- EDGE OF JURISDICTIONAL WETLANDS
- ELECTRICAL EASEMENT
- NRCS SOIL BOUNDARY
- EXISTING 2 FOOT CONTOURS
- EXISTING 10 FOOT CONTOURS
- EXISTING PAVEMENT
- LIMITS OF PAVEMENT RECONSTRUCTION
- PROPOSED SEDIMENT FENCE
- RECONSTRUCTED PAVEMENT
- PROPOSED CONTOUR
- LIMITS OF PAVEMENT MILLING
- LIMITS OF FULL DEPTH PAVEMENT SAW CUT
- UNDERGROUND STORAGE TANK
- UTILITY POLE
- IRON PIPE OR REBAR FOUND
- STONE BOUND FOUND
- TEST PIT LOCATION
- EXISTING SITE LIGHT
- DEEP SUMP CATCH BASINS
- RECONSTRUCTED PAVEMENT

SITE NOTES

- OWNER OF RECORD
MEENA, LLC
41 NH ROUTE 25
EFFINGHAM, NH 03882
BOOK 3570 PAGE 955
- SEE EXISTING CONDITIONS PLAN FOR PLAN REFERENCES AND DEED REFERENCES.
- ALL NON PAVED DISTURBED AREAS TO RECEIVE A MINIMUM 4" OF LOAM AND SEED. EXISTING VEGETATION / NATURAL SCREENING IS SHOWN AND LABELED ON THE PLAT. AREAS OUTSIDE THE TREE LINE AND WITHIN THE BOUNDS OF THE PROPERTY THAT ARE NOT PRESENTLY FORESTED OR CONTAIN SCRUBBY GROWTH AND OR GRASS, WILL BE LOAMED WITH A MIN. OF 4" OF TOP SOIL AND SEEDED OR A THICK LAYER EROSION MULCH WILL BE APPLIED.
- THIS PARCEL IS SERVED BY NHDOT DRIVEWAY PERMIT #14116A.
- THE NHDOT APPROVED PERMIT HAS GREATER THAN 400 FEET OF SITE DISTANCE IN THE WESTERLY AND EASTERLY DIRECTION, AS MEASURED FROM A POINT 10 FEET OFF THE EDGE OF THE TRAVELED WAY AT A HEIGHT OF 3.75 FEET.
- ALL LIGHTING ON THE BUILDINGS EXIST. ANY PROPOSED LIGHTING SHALL BE DOWN LIT CONFORM WITH TOWN REGULATIONS. NO CHANGES ARE BEING PROPOSED TO THE EXISTING SITE LIGHTING. ANY FUTURE SITE LIGHTING MODIFICATIONS SHALL BE IDA COMPLIANT.
- PARKING SPACE REQUIREMENTS
EFFINGHAM ZONING ORDINANCE, SECTION 1013C. MINIMUM 2 SPACES PER RESIDENTIAL UNIT.
EFFINGHAM ZONING ORDINANCE, SECTION 1030B, 1 SPACE PER THREE CUSTOMERS AT ANY ONE TIME PLUS 1 SPACE FOR TWO EMPLOYEES.
- 2 RESIDENTIAL UNITS = 4 PARKING SPACES
- 15 EXPECTED CUSTOMERS AT ANY ONE TIME = 5 SPACES
- 4 EMPLOYEES = 2 SPACES
REQUIRED SPACES = 11
PROVIDED SPACES = 13
- PROPOSED DUMPSTER TO BE INSTALLED OVER EXISTING IMPERVIOUS GRAVEL AREA WITH NEW CONCRETE PAD.



DATE OF PRINT
APRIL 13 2023
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Land Surveying and Environmental Consulting
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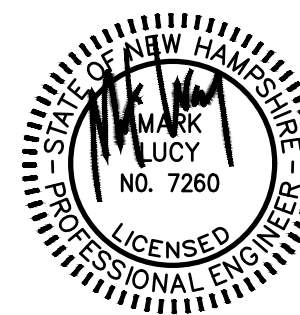
MEENA LLC

41 NH ROUTE 25

EFFINGHAM, NEW HAMPSHIRE

SITE PLAN

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1	9/08/22	REVISED PER PEER REVIEW	JH	WWS
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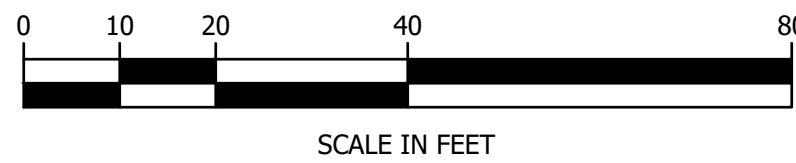


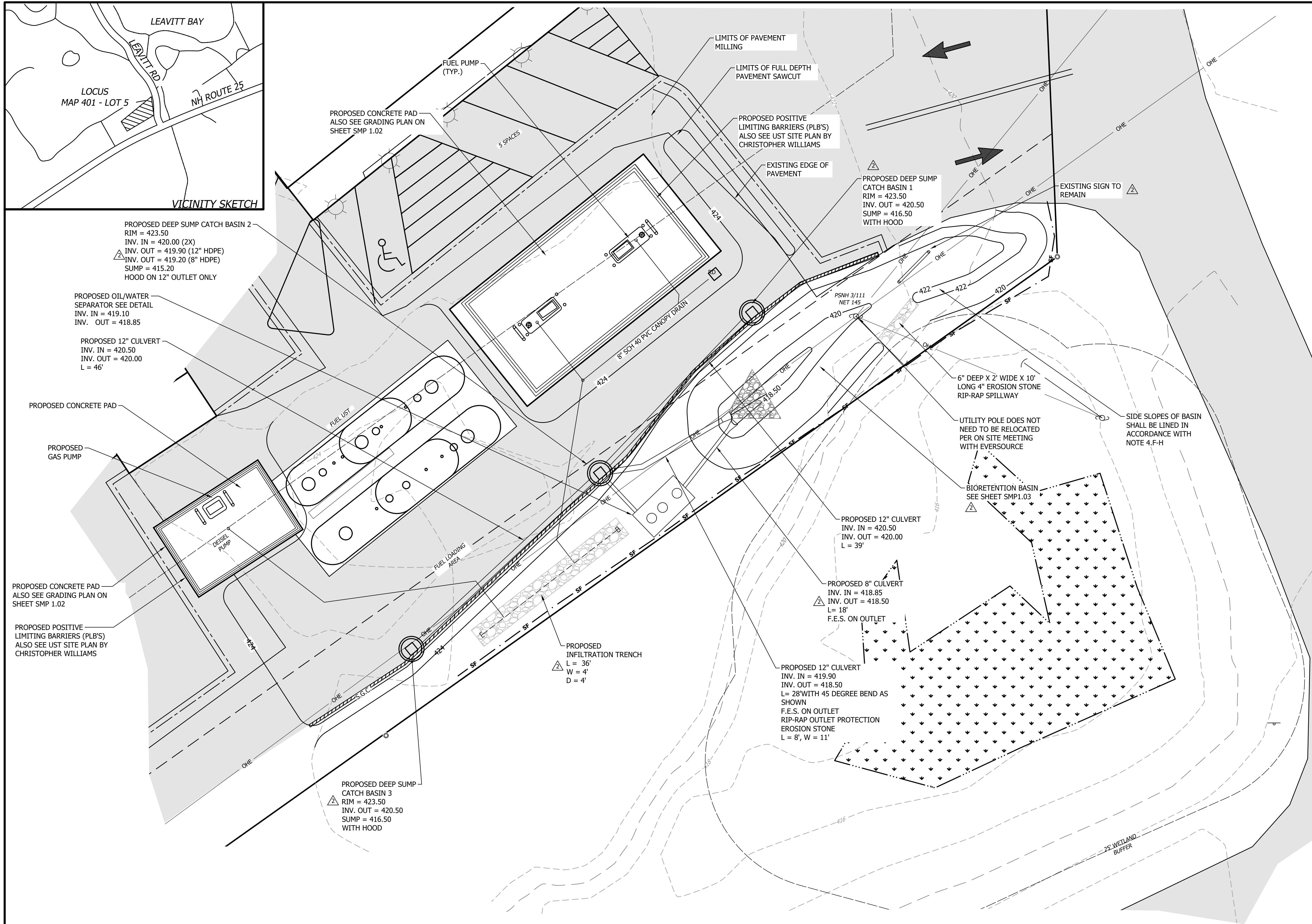
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STORMWATER MANAGEMENT GUIDELINES

GENERAL
EXCEPT WHERE MODIFIED HEREIN, ALL CONDITIONS, MEANS, METHODS AND MATERIALS SHALL COMPLY WITH THE NHDOT'S MOST RECENT EDITIONS OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION AND AS MAY BE FURTHER SPECIFIED WITHIN THE TOWN'S MOST RECENTLY ADOPTED ROAD OR STREET REGULATIONS.

(1) CURBING
ALL PROPOSED GRANITE CURBING SHALL BE SLOPED OR VERTICAL FACE CURBING MEETING NEW HAMPSHIRE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, HIGHWAY DESIGN MANUAL, STANDARD CR-1 PLATES 1 THROUGH 4. "BACKFILL MATERIAL" DEPICTED ON PLATE 1 SHALL BE CLASS B CONCRETE PLACED ON VEHICLE SIDE OF CURB.

(2) PRECAST CONCRETE DRAINAGE STRUCTURES
ALL PROPOSED DRAINAGE STRUCTURES SHALL MEET NEW HAMPSHIRE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DIVISION 600, SECTION 604.

(3) CULVERTS AND STORM DRAINS
ALL PROPOSED PIPING SHALL BE AS INDICATED IN PLAN VIEW:
A. CORRUGATED EXTERIOR, SMOOTH WALL INTERIOR HDPE PIPE COMPLYING WITH AASHTO M294, TYPE S.
B. FLARED STEEL END SECTIONS SHALL BE GALVANIZED COMPLYING WITH AASHTO M 36M/M 36 AND SHALL BE INSTALLED WHERE STONE RIPRAP OUTLET PROTECTION IS NOT USED.
C. ALL STREET CROSS CULVERTS SHALL HAVE PRECAST CONCRETE, CAST IN PLACE CONCRETE OR MORTARED RUBBLE MASONRY HEADWALLS AT BOTH ENDS OF THE CULVERTS.

(4) LOAMING AND LOAM AMENDMENTS

A. ALL REMAINING DISTURBED AREAS SHALL HAVE FOUR INCHES OF LOAM INSTALLED. LOAM SHALL BE FRIABLE, FREE OF STUMPS, ROOTS AND OTHER UNSUITABLE MATERIAL AND SHALL NOT BE SPREAD WHEN WET.

B. ALL LOAMED AREAS SHALL BE FERTILIZED AND SEEDED BY HAND, BROADCAST OR HYDROSEED, AS FOLLOWS:

FERTILIZER

C. BEYOND 100 FEET FROM ANY RIVER, STREAM, POND OR LAKE, THE FOLLOWING MAY BE USED:
LIMESTONE AT 100 LBS PER 1000 SF 10-20-20 AT 12 LBS PER 1,000 SF

PERMANENT SEED MIXES

AREAS WITHIN ROAD ROW AND DITCHES AND SWALES: NHDOT SLOPE SEED TYPE 44 AT 80 LBS PER ACRE
AREAS OUTSIDE OF THE ROAD WORK: NHDOT PARK SEED TYPE 15 AT 120 LBS PER ACRE

TEMPORARY SEED MIX

SPRING PLANTING (BEFORE MAY 15): OATS AT 34 LBS PER ACRE OR ANNUAL RYEGRASS AT 16 LBS. PER ACRE
FALL PLANTING (AFTER AUGUST 15): WINTER RYE AT 45 LBS. PER ACRE OR ANNUAL RYEGRASS AT 16 LBS. PER ACRE

D. MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING UNLESS HYDROSEEDING IS USED THAT INCLUDES A MULCH AND TACIFIER. HYDROSEEDING NOTWITHSTANDING, MULCH SHALL CONSIST OF DRY STRAW OR SEEDLESS HAY SPREAD BY HAND OR MACHINE AND SHALL EITHER CONTAIN A TACKIFIER OR HAVE A TACKIFIER APPLIED.

E. DRAINAGE BASINS' AND CUT/FILL SLOPES STEEPER THAN 3:1 SHALL BE TREATED WITH EROSION CONTROL BLANKET PER MANUFACTURERS' SPECIFICATIONS FOLLOWING THE LOAMING AND LOAM AMENDMENTS' APPLICATION. EROSION CONTROL BLANKET SHALL BE EQUIVALENT TO GEOCOIR DEKOWE 400. THESE AREAS NEED NOT BE MULCHED.

F. SLOPES SHOWN STEEPER THAN 2:1, IF NOT PROTECTED BY STONE RIPRAPING, SHALL BE PROTECTED WITH JUTE EROSION CONTROL BLANKET INSTALLED PER MANUFACTURER'S SPECIFICATIONS FOLLOWING THE LOAMING AND LOAM AMENDMENTS' APPLICATION. JUTE EROSION CONTROL BLANKET SHALL BE EQUIVALENT TO GEOCOIR DEKOWE 700. THESE AREAS NEED NOT BE MULCHED.

G. DITCHES' AND SWALES' SIDESLOPES AND INVERTS, IF NOT PROTECTED BY STONE RIPRAPING, SHALL BE PROTECTED WITH JUTE EROSION CONTROL BLANKET INSTALLED PER MANUFACTURER'S SPECIFICATIONS FOLLOWING THE LOAMING AND LOAM AMENDMENTS' APPLICATION. JUTE EROSION CONTROL BLANKET SHALL BE EQUIVALENT TO GEOCOIR DEKOWE 900. THESE AREAS NEED NOT BE MULCHED.

(5) ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS STABILIZED.

(6) THE GAS STATION IS CONSIDERED A "HIGH LOAD AREA" AND THE FOLLOWING DESIGN METHODS ARE REQUIRED.

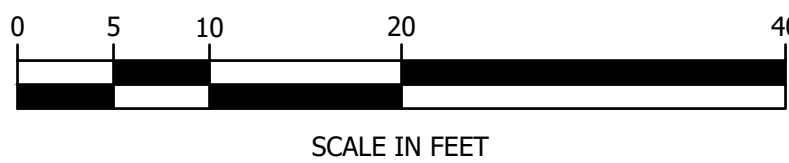
1. CANOPIES OVER THE FUELING AREAS
2. POSITIVE LIMITING BARRIERS AROUND THE FUELING ISLAND
3. FUELING ISLANDS HIGHER THAN THE SURROUNDING PAVEMENT.

DATE OF PRINT
APRIL 13 2023
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LEGEND

	EXISTING 2 FOOT CONTOURS
	EXISTING 10 FOOT CONTOURS
	PROPERTY LINE
	EDGE OF WETLANDS
	PROPOSED SEDIMENT FENCE
	PROPOSED CONTOUR
	ROOF DRAIN CLEAN OUT
	PROPOSED CONTOUR



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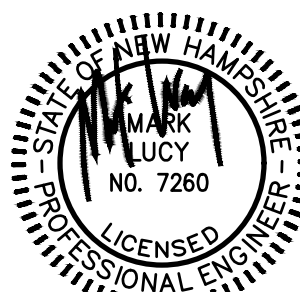
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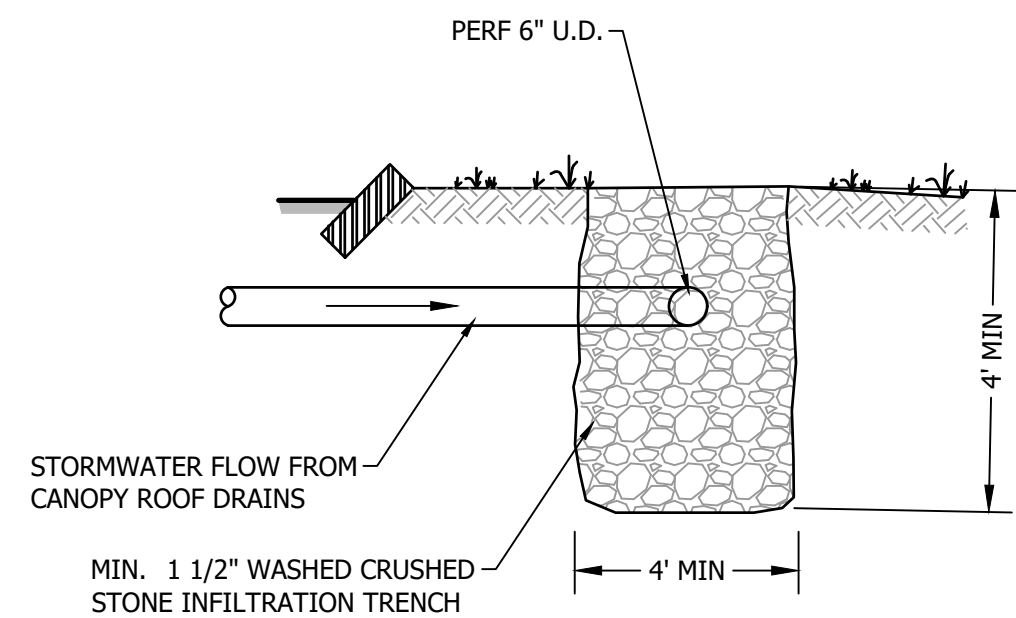
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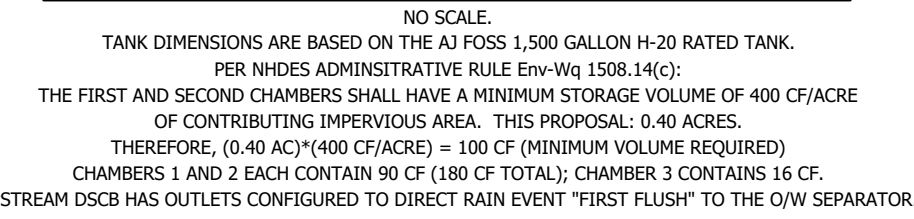
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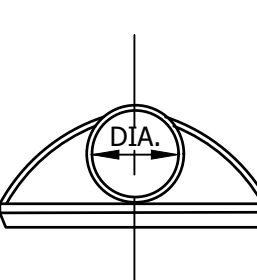


1. FILTER FABRIC SHALL BE A PERMEABLE SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE VINYL CARBONATE CERTIFIED TO CONTAIN ULTRAVIOLET RAY INHIBITORS/STABILIZERS WITH A MINIMUM 6 MONTHS USABLE CONSTRUCTION BETWEEN TEMPERATURES OF 5 TO 20°F.
2. FABRIC SHALL BE PURCHASED IN A ROLL AND CUT TO THE LENGTH OF THE BARBER.
3. POSTS FOR SILT FENCES SHALL BE 1 1/2 INCH SQUARE HARDWOOD STAKES OR 60' LONG 1 3/8 INCH ST. STEEL POSTS WITH PROJECTIONS FOR FASTENING WIRE.
4. ALTERNATIVELY, A MANUFACTURED SYSTEM WITH INTEGRAL POSTS SPACED AT A 6 FEET MAX MAY BE USED WITH SUPPORT POSTS SIZED AND ANCHORED PER MANUFACTURER'S INSTRUCTIONS.
- B. INSTALLATION**
1. FENCES SHALL BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSELY AS POSSIBLE, FLARED UPHILL WITH 3 HOOKS AT THE ENDS.
2. EXCAVATE A TRENCH A MINIMUM OF 4 INCHES WIDE AND 4 INCHES DEEP UPHILL OF POSTS AND BARRIER. EMBED A MINIMUM OF 8 INCHES OF FILTER FABRIC IN TRENCH AND COVER WITH 2 INCHES OF FILTER FABRIC. ALTERNATIVELY, COVER WITH EQUIVALENT NON-EROSIVE, NON-DECOMPOSABLE EQUIPMENT.
3. IF UNABLE TO TRENCH, ANCHOR THE BASE OF THE FABRIC WITH 2 1/2-INCH CRUSHED STONE, MINIMUM 8 INCHES THICK. FILTER FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE EXISTING GRADE.
4. PLACE POSTS DOWNHILL OF THE FABRIC SPACED 2 FEET APART MAX. DO NOT STAPLE OR NAIL TO TREES.
5. JOIN SECTIONS BY OVERLAPPING FABRIC (MIN 6 INCHES, 24 INCHES PREFERRED), FOLD AND STAPLE TO A SUPPORT POST. FOR PLAST POSTS, WIRE-TIE FABRIC DIRECTLY TO THE POSTS WITH THREE DIAGONAL TIES.
- C. MAINTENANCE**
1. THE USABLE LIFE OF SILT FENCE IS ONE SEASON. REPLACE PERIODICALLY AS REQUIRED TO MAINTAIN EFFECTIVENESS ON PROJECTS.
2. INSPECT AND MAINTAIN IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
3. AT A MINIMUM, REMOVE SEDIMENT WHEN DEPOSITION ACCUMULATES TO HALF THE HEIGHT OF THE FENCE AND REMOVE TO A LOCATION NOT UPHILL OF SILT FENCE.
4. REPAIR SILT FENCE IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION DOWNHILL. REPLACE WITH A TEMPORARY CHECK DAM IF UNDERCUTTING OR REMOVAL OF LARGE VOLUMES OF WATER OCCURS.
5. EXTEND SILT FENCE UPHILL OR REPLACE WITH TEMPORARY DIVERSIONS OR SEDIMENT TRAPS IF THERE IS EVIDENCE OF END FLOW.
6. REPLACE IMMEDIATELY IF DECOMPOSITION OR INEFFECTIVENESS OCCURS PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND IS STILL REQUIRED.
7. REPAIR OR REMOVE PRIOR TO REMOVAL. SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.
8. REMOVE SILT FENCE ONCE UPHILL AREAS HAVE BEEN PERMANENTLY STABILIZED.

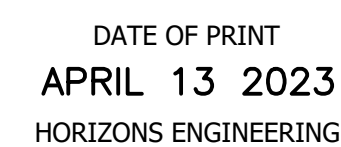
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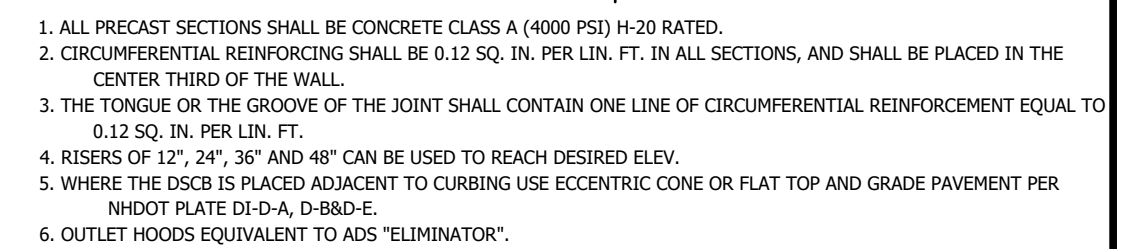
DIMENSIONS TABLE			
PIPE DIA. (IN.)	A (IN.)	L (IN.)	W (IN.)
12	6	20	24
15	7	26	30
18	8	30	36
24	10	40	48
30	12	50	60
36	14	60	72



NO SCALE



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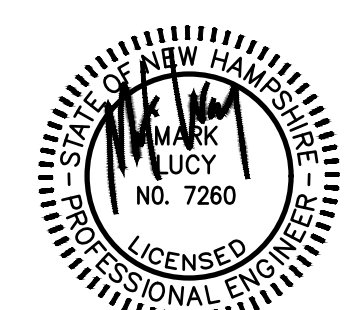


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BARK MULCH

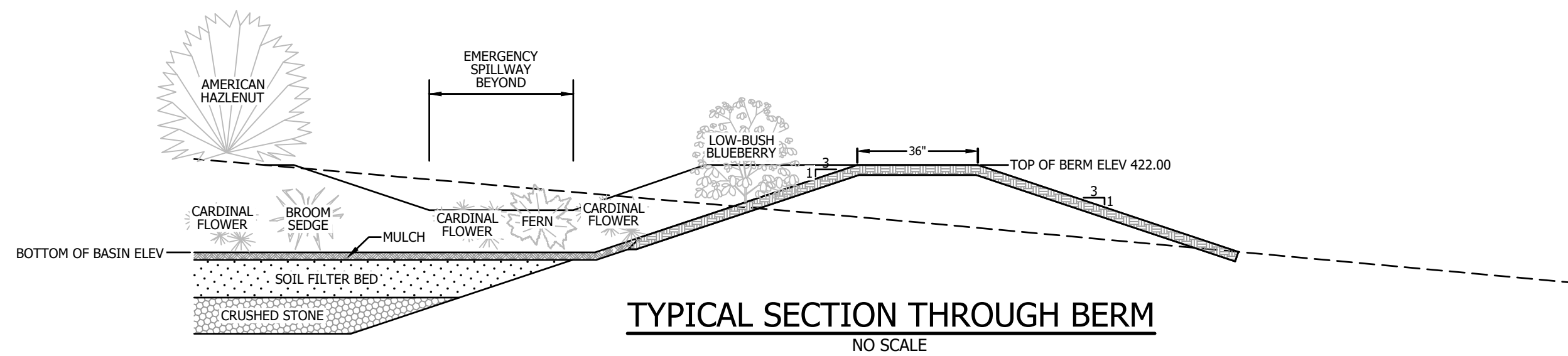
1. MULCH SHALL CONSIST OF AGED, BUT NOT ROTTED, SOFTWOOD BARK.

2. BARK GRADATION SHALL BE AS FOLLOWS:

SIZE	PASSING
1 1/2"	100
1"	95-100
1/2"	95-100
1/4"	65-85
#10	35-55
#40	10-30
#100	0-10

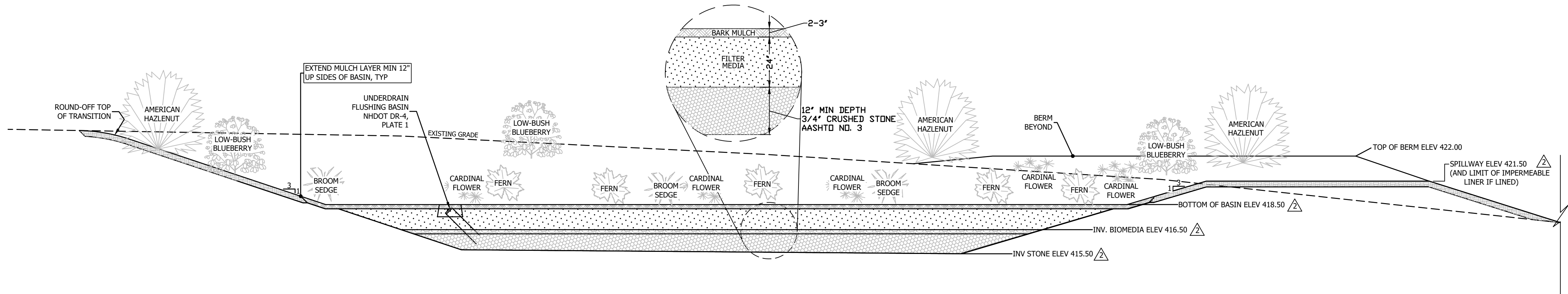
3. WHEN TESTED FOR AVAILABLE WATER SOLUBLE BY THE EXTRACT METHOD, VALUES SHALL BE AS FOLLOWS:

SOIL PH	5.0 - 6.0
NITROGEN	0.2 - 0.3 %
PHOSPHORUS	0.05 - 0.15 %
POTASSIUM	0.05 - 0.2 %
SULFUR	0.05 - 0.1 %
MAGNESIUM	0.05 - 0.1 %
CALCIUM	0.3 - 0.5 %
SODIUM	0.01 - 0.02 %
IRON	0.05 - 0.2 %
MANGANESE	0.0005 - 0.001 %
COPPER	0.0005 - 0.002 %
ZINC	0.001 - 0.005 %



TYPICAL SECTION THROUGH BERM

NO SCALE



TYPICAL SECTION THROUGH PONDING AREA

NO SCALE

PLANTINGS SHOWN ARE REPRESENTATIVE ONLY
SEE INDIVIDUAL BIORETENTION BASIN PLAN(S) FOR PLANTINGS

FILTER MEDIA OPTION A

COMPONENT MATERIAL	PERCENT (%) OF MIXTURE BY VOLUME	SIEVE NO.	PERCENT PASSING (%) STANDARD SIEVE
ASTM C-33 CONCRETE SAND	50 TO 55		
LOAMY SAND TOPSOIL, WITH FINES AS INDICATED	20 TO 30	200	15 TO 25
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED	20 TO 30	200	<5

FILTER MEDIA OPTION B

COMPONENT MATERIAL	PERCENT (%) OF MIXTURE BY VOLUME	SIEVE NO.	PERCENT PASSING (%) STANDARD SIEVE
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED	20 TO 30	200	<5
LOAMY COARSE SAND	70 TO 80	10	85 TO 100
		20	70 TO 100
		60	15 TO 40
		200	8 TO 15

FILTER MEDIA DETAIL

NOT TO SCALE

INVASIVE SPECIES CONTROL (BY OWNER)

- MONITOR ALL DISTURBED AND REVEGETATED AREAS REGULARLY FOR ESTABLISHMENT OF INVASIVE SPECIES SUCH AS PURPLE LOOSESTRIPE (LYTHRUM SALICARIA) OR COMMON REED (PHRAGMITES AUSTRALIS).
- REMOVE PURPLE LOOSESTRIPE BY HAND DIGGING AS SOON AS IT IS IDENTIFIABLE. MAKE SURE THAT ALL PIECES OF ROOT TISSUE ARE REMOVED AND DRY OUT THE PLANT MATERIAL THOROUGHLY BEFORE DISPOSAL. WHERE PERMITTED, PLANT MATERIAL SHALL BE BURNED. OTHERWISE, PLACE ALL PLANT MATERIAL IN A CLOSED BLACK PLASTIC BAG IN THE SUN FOR SEVERAL DAYS TO KILL THE PLANT AND SEEDS.
- COMMON REED CAN BE CONTROLLED BY FREQUENT CUTTING AND PULLING OF RHIZOMES DURING THE LATE GROWING SEASON.
- JAPANESE BARBERRY SHALL BE PULLED OUT AT THE EARLIEST OPPORTUNITY. IF MOST OF THE CROWN IS REMOVED, IT DOES NOT RE-GROW.
- IN ALL CASES, THE BEST METHOD OF CONTROL IS TO MAINTAIN HEALTHY GROUND COVER IN ALL AREAS TO MINIMIZE OPPORTUNITY FOR UNWANTED INVASIVE SPECIES TO GAIN A FOOTHOLD.
- WILDFLOWER/MEADOW SEED MIX SHALL NOT CONTAIN ANY INVASIVE SPECIES.

EFFICACY DOCUMENTATION

(BY INSTALLER)

- FOLLOWING COMPLETION OF PLANTING AND REVEGETATION ACTIVITIES, MONITOR THE PROJECT AREA ON A WEEKLY BASIS FOR THE FOLLOWING FOUR WEEKS. DOCUMENT THE SUCCESS OF EFFORTS WITH PHOTOGRAPHS AND A WRITTEN DESCRIPTION OF PROGRESS AND ANY MEASURES TAKEN TO ENSURE SUCCESS.
- FOR THE REMAINDER OF THE FIRST GROWING SEASON, MONITOR AND DOCUMENT ON A MONTHLY BASIS.
- OWNER SHALL INSPECT THE AREA AT THE BEGINNING OF THE FOLLOWING GROWING SEASON. CONTRACTOR SHALL REPAIR OR REPLACE ANY VEGETATION DAMAGED OR KILLED DURING THE WINTER SEASON.

BIORETENTION BASIN PLANTINGS

- TREES, SHRUBS AND GROUNDCOVERS USED IN RESTORATION EFFORTS CAN BE SUPPLIED FROM AREAS ON-SITE THAT ARE OUTSIDE OF ANY EXISTING JURISDICTIONAL WETLANDS. ADDITIONALLY, PLANTS AND SEEDS MAY ALSO BE SUPPLIED FROM APPROVED NURSERY STOCK IF ON-SITE VEGETATION IS NOT SUITABLE FOR TRANSPLANTATION.
 - EASTERN RED CEDAR (JUNIPERUS VIRGINIANA)
 - SUGAR MAPLE (ACER ACCHARUM)
- TREES TO BE USED SHALL BE 2" TO 3" MINIMUM CALIPER AT 6" ABOVE THE ROOT BALL AND BE TRANSPORTED BALLED AND BURLAPPED. SUITABLE TREE SPECIES SHALL BE OF THE FOLLOWING ALTERNATIVES:
 - AMERICAN HAZLENUT (CORYLIS AMERICANA)
 - LOWBUSH BLUEBERRY (VACCINIUM ANGUSTIFOLIUM)
- SHRUBS TO BE USED SHALL BE 24 INCH TO 36 INCH IN HEIGHT AND BE TRANSPORTED IN 2 GALLON TO 3 GALLON POTS OR BALLED AND BURLAPPED. SUITABLE SHRUB SPECIES SHALL BE OF THE FOLLOWING ALTERNATIVES:
 - MAIDENHAIR FERN (ADIANTUM PEDATUM)
 - CINNAMON FERN (OSMUNDA CINNAMOMEA)
 - BROOM SEDGE (CAREX SCORPIARIA)
 - CARDINAL FLOWER (LOBELIA CADINALIS)
- GROUNDCOVER TO BE USED SHALL BE IN #1 CONTAINERS OR FLATS. GROUNDCOVER TO BE PLANTED AT RANDOM, WITH A MAXIMUM CENTER-TO-CENTER SPACING OF 60". SUITABLE GROUNDCOVER SPECIES SHALL BE OF THE FOLLOWING ALTERNATIVES:
 - MAIDENHAIR FERN (ADIANTUM PEDATUM)
 - CINNAMON FERN (OSMUNDA CINNAMOMEA)
 - BROOM SEDGE (CAREX SCORPIARIA)
 - CARDINAL FLOWER (LOBELIA CADINALIS)
- BIORETENTION BASIN SHALL NOT BE PLACED INTO SERVICE UNTIL COMPLETELY PLANTED AND ALL CONTRIBUTING AREAS HAVE BEEN STABILIZED.
- SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (E.G., STORMWATER RUNOFF, WATER FROM EXCAVATION DE-WATERING) SHALL NOT BE ALLOWED TO DISCHARGE INTO THE BIORETENTION BASIN DURING ANY STAGE OF CONSTRUCTION.
- CONSTRUCTION EQUIPMENT SHALL NOT TRAFFIC EXPOSED SOIL SURFACES. WHEREVER PRACTICABLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE OF THE LIMITS OF THE INFILTRATION COMPONENTS OF THE BIORETENTION BASINS.

EROSION CONTROL AND STABILIZATION

- AS NEEDED, INSTALL HAY BALES BARRIERS OR SILT FENCE BETWEEN PLANTING AREAS. BEGIN BY PLANTING VEGETATION AT THE CENTER OF THE BASIN, THEN WORKING OUTWARD FROM THE CENTER OF THE BASIN. REDUCE IMPACT TO GROUNDCOVER BY MANEUVERING CONSTRUCTION EQUIPMENT ONLY THROUGH AREAS YET TO BE PLANTED.
- PLANT ANY DISTURBED SURROUNDING AREAS USING A WILDFLOWER/MEADOW SEED MIX CONTAINING NO INVASIVE SPECIES MIXTURE, MULCHED WITH STRAW.
- INSPECT THE AREA ON A REGULAR BASIS TO ENSURE ADEQUATE WATER SUPPLY UNTIL VEGETATION IS WELL-ESTABLISHED. REPAIR ANY DISTURBED AREAS IMMEDIATELY UPON DISCOVERY.
- ONCE THE AREA IS STABILIZED AND VEGETATION IS DEMONSTRATING VIGOROUS GROWTH, CAREFULLY REMOVE HAY BALES AND/OR SILT FENCE.

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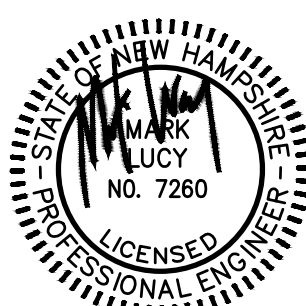
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