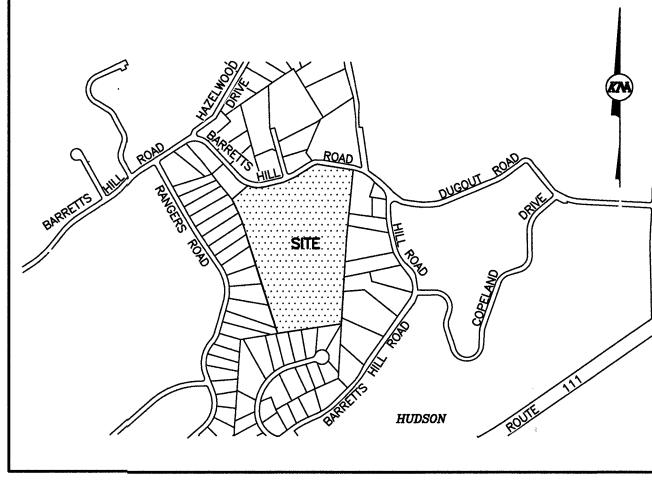


VICINITY PLAN
NOT TO SCALE

# RESIDENTIAL SUBDIVISION BARRETT HILL SUBDIVISION

MAP 151; LOT 59
75 BARRETTS HILL ROAD
HUDSON, NEW HAMPSHIRE



LOCATION PLAN
SCALE: 1" = 1000'-

NHB23-3253 NEW HAMPSHIRE FISH AND GAME RECOMMENDED PERMIT CONDITIONS

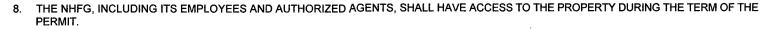
1. BLANDING'S TURTLE (STATE ENDANGERED) AND SPOTTED TURTLE (STATE THREATENED) OCCUR WITHIN THE VICINITY OF THE PROJECT AREA ALL OPERATORS AND PERSONNEL WORKING ON OR ENTERING THE SITE SHALL BE MADE AWARE OF THE POTENTIAL PRESENCE OF THESE SPECIES AND SHALL BE PROVIDED FLYERS THAT HELP TO IDENTIFY THESE SPECIES, ALONG WITH NHFG CONTACT INFORMATION. SEE PLAN

- 2. RARE SPECIES INFORMATION (E.G. IDENTIFICATION, OBSERVATION AND REPORTING OF OBSERVATIONS, WHEN TO CONTACT NHFG
  IMMEDIATELY AND NHFG CONTACT INFORMATION) SHALL BE COMMUNICATED DURING MORNING TAILGATE MEETINGS PRIOR TO WORK
- 3. ALL MANUFACTURED EROSION AND SEDIMENT CONTROL PRODUCTS, WITH THE EXCEPTION OF TURF REINFORCEMENT MATS, UTILIZED FOR, BUT NOT LIMITED TO, SLOPE PROTECTION, RUNOFF DIVERSION, SLOPE INTERRUPTION, PERIMETER CONTROL, INLET PROTECTION, CHECK DAMS, AND SEDIMENT TRAPS SHALL NOT CONTAIN PLASTIC, OR MULTIFILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH WITH AN OPENING SIZE OF GREATER THAN 1/8 INCHES. SEE PLAN SHEET 20.
- 4. TURTLES MAY BE ATTRACTED TO DISTURBED GROUND DURING NESTING SEASON. TURTLE NESTING SEASON OCCURS APPROXIMATELY MAY 15TH JUNE 30TH. ALL TURTLE SPECIES NESTS AND NORTHERN BLACK RACER NESTS ARE PROTECTED BY NH LAWS. IF A NEST IS OBSERVED OR SUSPECTED, OPERATORS SHALL CONTACT MELISSA WINTERS (603-479-1129) OR JOSH MEGYESY (978-578-0802) AT NHFG IMMEDIATELY FOR FURTHER CONSULTATION. THE NEST OR SUSPECTED NEST SHALL BE MARKED (SURROUNDING ROPED OFF OR CONE BUFFER DEPLOYED) AND AVOIDED; THIS SHALL BE COMMUNICATED TO ALL PERSONNEL ONSITE. SITE ACTIVITIES SHALL NOT OCCUR IN THE AREA SURROUNDING THE
- NEST OR SUSPECTED NEST UNTIL FURTHER GUIDANCE IS PROVIDED BY NHFG.

  5. DEED RESTRICTION LANGUAGE SUBMITTED TO NHFG (ATTACHED ABOVE AS 2024 04 OPEN SPACE LANGUAGE REVISED.) SHALL BE FINALIZED AS WRITTEN AND RECORDED AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS PRIOR TO THE COMMENCEMENT OF WORK.
- 6. ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES ON THE PROJECT SITE SHALL BE REPORTED IMMEDIATELY TO THE NHFG NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV, WITH THE EMAIL SUBJECT LINE CONTAINING THE NHB DATACHECK TOOL RESULTS LETTER ASSIGNED NUMBER. THE PROJECT NAME. AND THE TERM WILDLIFE SPECIES OBSERVATION.
- NUMBER, THE PROJECT NAME, AND THE TERM WILDLIFE SPECIES OBSERVATION.

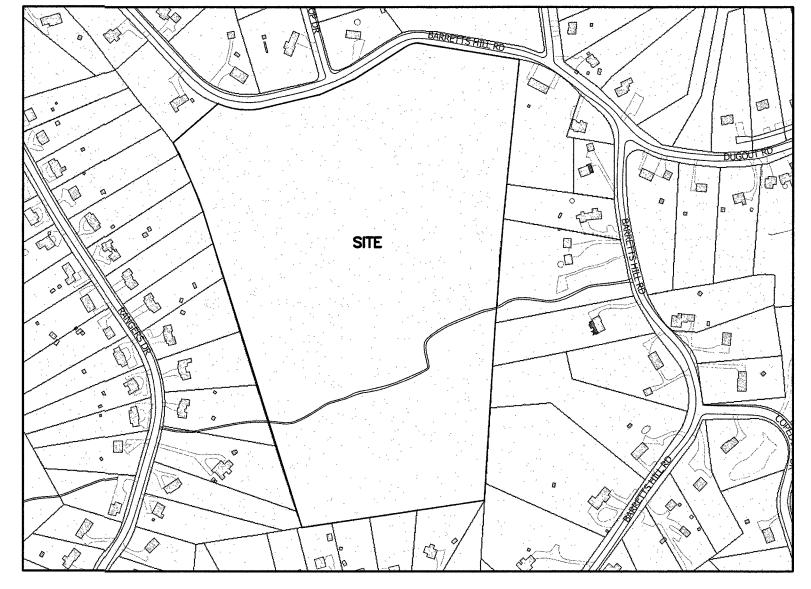
  a. PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHFG IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION, AS FEASIBLE.
- SPECIES SHALL NOT BE DISTURBED, HANDLED, OR HARMED IN ANY WAY PRIOR TO CONSULTATION WITH NHFG AND IMPLEMENTATION OF CORRECTIVE ACTIONS RECOMMENDED BY NHFG.

  a. SITE OPERATORS SHALL BE ALLOWED TO RELOCATE WILDLIFE ENCOUNTERED IF DISCOVERED WITHIN THE ACTIVE WORK ZONE IF IN
- DIRECT HARM FROM PROJECT ACTIVITIES. WILDLIFE SHALL BE RELOCATED IN CLOSE PROXIMITY TO THE CAPTURE LOCATION BUT OUTSIDE OF THE WORK ZONE AND IN THE DIRECTION THE INDIVIDUAL WAS HEADING. NHFG SHALL BE CONTACTED IMMEDIATELY IF THIS ACTION OCCURS.

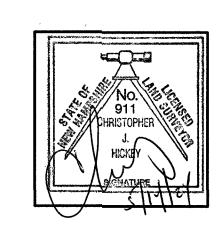


## OWNER/APPLICANT: BARRETT HILL, LLC 21 CONTINENTAL BLVD. DOOR #4 MERRIMACK, NEW HAMPSHIRE 03054

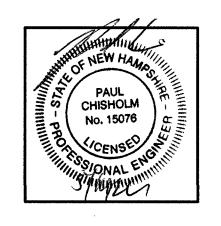
PREPARED BY:
KEACH-NORDSTROM ASSOCIATES, INC.
10 COMMERCE PARK NORTH, SUITE 3B
BEDFORD, NEW HAMPSHIRE 03110
(603) 627-2881

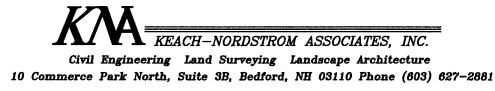


EXISTING FEATURES WITHIN 200 FT
NOT TO SCALE









DECEMBER 6, 2023

LAST REVISED: MAY 14, 2024

PROJECT NO. 23-0414-1

SHEET TITLE	SHEET No.
PROJECT NOTES	1
MASTER SUBDIVISION PLAN	2
SUBDIVISION PLAN	3 - 4
MASTER TOPOGRAPHIC SUBDIVISION PLAN	5
TOPOGRAPHIC SUBDIVISION PLAN	6 - 7
ROADWAY PLAN & PROFILES	8 - 9
GRADING & DRAINAGE PLAN	.10
OFFSITE GRADING, DRAINAGE & EROSION CONTROL PLAN	11
EROSION CONTROL PLAN	12
SIGHT DISTANCE PLAN & PROFILE	13
DRAINAGE PROFILES	14
DRIVEWAY PROFILES	15
CONSTRUCTION DETAILS	16 - 22
TEST PIT LOGS	23
CONVENTIONAL SUBDIVISION YIELD PLAN	24

NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT A PROPOSED 13 LOT RESIDENTIAL OPEN SPACE DEVELOPMENT

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1. THE PURPOSE OF THIS PLAN IS TO DEPICT A PROPOSED THIS PURPOSED THIS PU LOTS WITH 6 BEDROOMS EACH & ONE NON-BUILDABLE OPEN SPACE LOT.

2. EACH LOT OWNER WITHIN THE OPEN SPACE SUBDIVISION SHALL POSSESS AN EQUAL SHARE OF THE COMMON OPEN SPACE AREA ASSOCIATED WITH THIS DEVELOPMENT.

3. TOTAL SITE AREA: 1,540,252 S.F. OR 35.36 ACRES

4. OWNER OF RECORD: BARRETT HILL, LLC 21 CONTINENTAL BLVD. DOOR #4 MERRIMACK, N.H. 03054 HCRD BK. 9700 PG. 287

5. THE SUBJECT PARCEL IS LOCATED WITHIN THE GENERAL (G-1) ZONING DISTRICT AND IS SUBJECT TO THE FOLLOWING DIMENSIONAL REQUIREMENTS: MINIMUM BUILDING SETBACKS:

FRONT — SIDE 15 FT REAR

6. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON A FIELD SURVEY PERFORMED BY THIS OFFICE FROM APRIL TO NOVEMBER OF 2023.

7. ALL DRILL HOLES ARE SET UNLESS OTHERWISE NOTED.

6. HORIZONTAL DATUM IS NAD83 AND VERTICAL DATUM IS NAVD88 USING REAL TIME GPS SURVEYING METHODS.

7. EXAMINATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAPS (FIRM) FOR THE TOWN OF HUDSON, NEW HAMPSHIRE, HILLSBOROUGH COUNTY, MAP NUMBER 33011C0517D, PANEL NUMBER 517 OF 701 AND MAP NUMBER 33011CO519D, PANEL NUMBER 519 OF 701, EFFECTIVE DATE SEPTEMBER 25, 2009, INDICATE THAT NO PORTION OF THE SUBJECT PARCEL IS LOCATED IN A DESIGNATED FLOOD ZONE.

8. THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 811.

9. EASEMENTS, RIGHTS AND RESTRICTIONS SHOWN OR IDENTIFIED HEREON ARE THOSE FOUND DURING RESEARCH AT THE HILLSBOROUGH COUNTY REGISTRY OF DEEDS. OTHER EASEMENTS, RIGHTS AND RESTRICTIONS MAY EXIST WHICH A TITLE EXAMINATION OF THE SUBJECT PREMISES MAY DETERMINE.

10. THE OPEN SPACE SUBDIVISION IS TO BE SERVICED BY INDIVIDUAL WELLS & INDIVIDUAL SEPTIC SYSTEMS.

11. PROPER EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO CLEARING AND EXCAVATION. THE CONTROLS SHALL BE MAINTAINED IN GOOD WORKING ORDER UNTIL COMPLETION OF CONSTRUCTION. THE TOWN OF HUDSON RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES DURING CONSTRUCTION, IF NECESSARY.

12. IF DURING LOT DEVELOPMENT. SLOPES OF 2:1 EXCEED 20 FEET, 3:1 EXCEEDS 30 FEET, OR 4:1 EXCEEDS 40 FEET THE CONTRACTOR SHALL ADD BENCHING PER NHDES REQUIREMENTS.

13. OPEN SPACE: 1. LOT 59 TOTAL AREA = 1,540,252 S.F. 2. TOTAL REQUIRED OPEN SPACE

= 441.145 S.F.-MIN. LOT SIZE = 87,120 S.F. -TOTAL LOTS = 1,132,560 S.F.-TOTAL MIN. LOT SIZE -TOTAL PROPOSED BUILDABLE AREA = 688,415 S.F.

= 1,132,560 - 688,415 = 444,145 S.F.-REQUIRED OPEN SPACE

3. TOTAL PROPOSED OPEN SPACE = 754.352 S.F. AREAS TO BE REMOVED FROM TOTAL OPEN SPACE:

- ROADWAYS, DRIVEWAYS, RIGHT-OF-WAYS, PARKING AREAS, & OTHER DEVELOPED AREAS = 59,606 S.F. PSNH EASEMENT = 134,782 S.F.

- DRAINAGE/ACCESS EASEMENTS = 75,977 S.F. = 270,365 SF - TOTAL AREA TO BE REMOVED FROM TOTAL OPEN SPACE 754,352 - 270,365 = 483,987 S.F. - TOTAL PROPOSED OPEN SPACE = 483,987 S.F. > 444,145 S.F.

14. PERMITS REQUIRED: -NHDES AOT

> -NHDES SUBDIVISION -NHDES INDIVIDUAL SUBSURFACE DISPOSAL (SEPTIC SYSTEMS)

-NHDOT EXCAVATION PERMIT

15. THE ONSITE DRAINAGE SYSTEM SHALL BE CONSTRUCTED AND MAINTAINED IN COMPLIANCE WITH LOCAL AND NHDES REQUIREMENTS FOR SUCH SYSTEMS.

16. IF LOT DEVELOPMENT INVOLVES BLASTING AND/OR RAMMING OF BEDROCK MATERIALS, SAID ACTIVITIES SHALL BE LIMITED TO THE HOURS BETWEEN 7:00 A.M. AND 5:00 P.M. MONDAY THROUGH FRIDAY ONLY. SAID BLASTING / RAMMING ACTIVITIES ARE PROHIBITED ON SATURDAY AND SUNDAY.

17. CONSTRUCTION ACTIVITIES INVOLVING THE LOTS SHALL BE LIMITED TO THE HOURS BETWEEN 7:00 A.M AND 6:00 P.M., MONDAY THROUGH FRIDAY. INTERIOR CONSTRUCTION ACTIVITIES ARE ALLOWED ON SATURDAY 7:00 A.M. AND 6:00 P.M. BOTH INTERIOR AND EXTERIOR CONSTRUCTION ACTIVITIES ARE PROHIBITED ON SUNDAYS.

18. STONE BOUNDS (5"X5"X30") TO BE SET AT ALL POINTS OF CURVATURE ON THE RIGHT-OF-WAY AND (4"X"X36") TO BE SET AT PROPERTY CORNERS ALONG THE RIGHT-OF-WAY. IRON PINS (5/8"X30") TO BE SET AT ALL OTHER BOUNDARY CORNERS.

19. AN IMPERVIOUS LINER SHALL BE REQUIRED FOR THE POCKET POND UNLESS DETERMINED OTHERWISE BY THE DESIGN ENGINEER DURING CONSTRUCTION WHEN THE POND IS AT SUBGRADE, AND IS EITHER MORE THAN 5 FEET BELOW SEASONAL HIGH WATER TABLE AND/OR IN COMPLETE LEDGE.

20. THIS APPROVAL IS SUBJECT TO FINAL ENGINEERING REVIEW.

21. THIS PROJECT MEETS THE 2019 MS4 REQUIREMENTS.

22. THIS PLAN SET CONTAINS 23 SHEETS, SHEETS 1 THRU 4 SHALL BE RECORDED IN HILLSBOROUGH COUNTY REGISTRY OF DEEDS AND THE COMPLETE SET IS ON FILE IN THE HUDSON PLANNING DEPARTMENT.

23. THERE WILL BE NO EXTERIOR LIGHTING.

24. MAXIMUM BUILDING HEIGHT SHALL NOT EXCEED 38 FEET.

25. IT IS THE INTENT OF THE APPLICANT TO CONSTRUCT INDIVIDUAL CONDEX UNITS ON EACH PROPOSED BUILDING LOT.

26. THE APPLICANT SHALL PROVIDE A BOND FOR ONSITE AND OFFSITE IMPROVEMENTS WITHIN THE EXISTING AND PROPOSED RIGHT-OF-WAY, PRIOR TO RECORDING THE PLANS.

27. THE APPLICANT SHALL TRANSFER THE OWNERSHIP OF THE ROAD TO THE TOWN AND TO THE SATISFACTION OF THE TOWN PRIOR TO RECEIVING THE LAST CERTIFICATE OF OCCUPANCY OF THE LAST LOT.

28. THE SUBJECT PROPERTY DOES NOT CONTAIN ANY WATER FEATURES OR WETLANDS AS VERIFIED BY CHRISTOPHER DANFORTH, CWS #077.

29. THE FIRE CISTERN SHALL BE INSTALLED PRIOR TO OBTAINING A CERTIFICATE OF OCCUPANCY.

30. THE PROPOSED WELL LOCATIONS SHOWN ON THE PLAN ARE SUBJECT TO CHANGE BASED ON INDIVIDUAL LOT DEVELOPMENT AND IN FIELD CONDITIONS. ONCE FINAL WELL LOCATIONS ARE DETERMINED, WELL RADIUS EASEMENTS SHALL BE RECORDED PRIOR TO OBTAINING A CERTIFICATE OF OCCUPANCY.

APPROVED BY THE HUDSON, NH PLANNING BOARD DATE OF MEETING:

SIGNATURE DATE:\_\_\_\_\_

SIGNATURE DATE: \_\_\_\_

SUBDIVISIONS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL, FOR AN APPLICANT TO GAIN AN EXEMPTION FROM ALL SUBSEQUENT CHANGES IN SUBDIVISION REGULATIONS, SITE PLAN REGULATIONS AND CHANGES TO THE ZONING ORDINANCE, SEE NH RSA 674: 39.

**WAIVER REQUESTS:** 

THE FOLLOWING WAIVER IS REQUESTED FROM THE TOWN OF HUDSON SUBDIVISION REGULATIONS: 1. HTC 289-37(A.) - LOT PHASING

#### STATE LOT SIZING CALCULATIONS:

THE PREDOMINANT SOIL GROUP CHATFIELD-HOLLIS COMPLEX. THE MOST RESTRICTIVE UPLAND SLOPE IS "D" MINIMUM LOT LOADING FACTOR USED IS 1.73.

> LOT DENSITY FOR OPEN SPACE SUBDIVISION IS: TOTAL AREA OF EXISTING PARCEL = 35.36 ACRE -WETLAND AREA = 0 ACRES -STEEP SLOPES = 8.08 ACRES

= 8.3 NET AREA FOR LOT LOADING = 18.98 ACRES 18.98 ACRES x 2,000 GPD/AC./1.73 = 21,942 GPD ALLOWED 21,942 GPD = 146 BEDROOMS ALLOWED ON LOT (78 PROPOSED)

#### **REFERENCE PLANS:**

1. "LOT LINE RELOCATION TO INCLUDE WELL SURVEYED FOR GEORGE BOYER BARRETTS HILL ROAD HUDSON, N.H." SCALE: 1"=40'. DATED: JANUARY 10, 1978. PREPARED BY: PIANTIDOSI ASSOCIATES, INC. H.C.R.D. PLAN #11141

2. "BOUNDARY PLAN BARRETTS HILL ROAD HUDSON, NEW HAMPSHIRE. PREPARED FOR: MICHAEL F. CALLAHAN ET.UX." SCALE:1"=100'. DATED: OCTOBER 5, 1979. PREPARED BY: ALLEN H. SWANSON, INC. H.C.R.D. PLAN #12696

3. "DECLARATION OF CONDOMINIUM SITE PLAN HILLTO HOUSE -A CONDOMINIUM-" SCALE: 1"=20'. DATED: AUGUST 6, 1981. PREPARED BY: THOMAS F. MORAN INC. H.C.R.D. PLAN #15313

4. "SUBDIVISION PLAN BARRETTS HILL ROAD HUDSON, N.H. PREPARED FOR JOHN JACOBS." SCALE: 1"=50'. DATED: SEPTEMBER 25, 1985. PREPARED BY: STEVEN J. PATRICK & ASSOCIATES. H.C.R.D. PLAN #19495

5. "MALLARD DRIVE SUBDIVISION CONSOLIDATION AND RESUBDIVISION PLAN." SCALE: 1"=80'. DATED: AUGUST, 1985, PREPARED BY: COSTELLO. LOMASNEY & DE NAPOLI, INC. H.C.R.D. PLAN #22145

6. "CONSOLIDATION & SUBDIVISION PLAN LOT 54 MAP 31" SCALE: 1"=50'. DATED: AUGUST 1986. PREPARED BY: MAYNARD & PAQUETTE, INC. H.C.R.D. PLAN #22146

7. "CONDOMINIUM PLAN OF LAND IN HUDSON, N.H. PREPARED FOR JOHN JACOBS." SCALE: 1"=50'. DATED: AUGUST 30, 1990. PREPARED BY: STEVEN J. PATRICK & ASSOCIATES LAND SURVEYORS. H.C.R.D. PLAN #24824

8. "SUBDIVISION PLAN MASINGILL SUBDIVISION 65 BARRETTS HILL ROAD, HUDSON, N.H." SCALE: 1"=50'. DATED: FEBRUARY 11, 1998. PREPARED BY: JONES & BEACH ENGINEERS, INC. H.C.R.D. PLAN #29219

			TABLE C	F SUBDIVISION LOT A	REAS		
MAP	LOT NUMBER	LOT AREA (SF)	FRONTAGE (FT)	STEEP SLOPES (SF)	WETLANDS (SF)	NON-CONTIGUOUS AREA (SF)	BLA (SF)
151	59-1	43,785	335.00	0	0	0	43,785
151	59-2	43,702	195.83	0	0	0	43,702
151	59-3	62,051	100.00	0	0	0	62,051
151	59-4	55,409	100.57	0	0	0	55,409
151	59-5	46,995	102.12	0	0	0	46,995
151	59-6	46,435	100.52	0	0	0	46,435
151	59-7	62,521	100.95	18,588	0	0	43,933
151	59-8	57,445	100.05	5,040	0	0	52,405
151	59-9	77,869	221.83	6,604	0	0	71,265
151	59-10	75,659	164.14	4,289	0	0	71,370
152	70	60,124	100.00	3,325	0	0	56,799
152	71	47,988	153.96	32	0	0	47,956
152	72	46,311	195.59	0	0	0	46,311
		`					
	Totals	726,294		37,879			688,415
	Dight of Mar	F0.000					
	Right of Way	59,606					
	Open Space	754,352				<b></b>	
	Total	1,540,252					

#### SCS SOILS LEGEND

CAB CANTON FINE SANDY LOAM, 0-8% SLOPES CaC CANTON FINE SANDY LOAM, 8-15% SLOPES CmC CANTON FINE SANDY LOAM, 8-15% SLOPES, VERY STONY CHATFIELD-HOLLIS-CANTON COMPLEX, 15-25% SLOPES VERY ROCKY CsCCHATFIELD-HOLLIS COMPLEX, 8-15% SLOPES, ROCKY SCARBORO STONY MUCKY LOAMY SAND SsBSCITUATE FINE SANDY LOAM, 0-3 % SLOPES StB SCITUATE STONY FINE SANDY LOAM, 3-8% SLOPES

#### SITE SPECIFIC SOIL MAP UNIT KEY

SOURCE: USDA-SCS WEB SOIL SURVEY

SYMBOL	MAP UNIT	SLOPE CLASS	DRAINAGE CLASS	HSG
448B	SCITUATE	3-8%	MODERATELY WELL DRAINED	С
448C	SCITUATE	8-15%	MODERATELY WELL DRAINED	С
448D	SCITUATE	15-25%	MODERATELY WELL DRAINED	С
44B	MONTAUK	3-8%	WELL DRAINED	С
44C	MONTAUK	8-15%	WELL DRAINED	С
44D	MONTAUK	15-25%	WELL DRAINED	С

THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOILS SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, PRODUCED BY A CERTIFIED SOIL SCIENTIST, AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCE CONSERVATION SERVICE. THERE IS A NARRATIVE REPORT THAT ACCOMPANIES THIS MAP AND MAP KEY.

#### **PROJECT NOTES**

#### BARRETT HILL SUBDIVISION

MAP 151 LOT 59 75 BARRETTS HILL ROAD HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

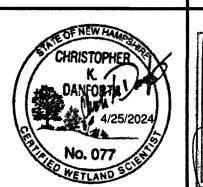
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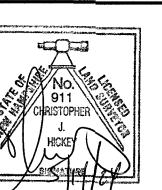


KEACH-NORDSTROM ASSOCIATES, INC.

Civil Engineering Land Surveying Landscape Architecture 10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

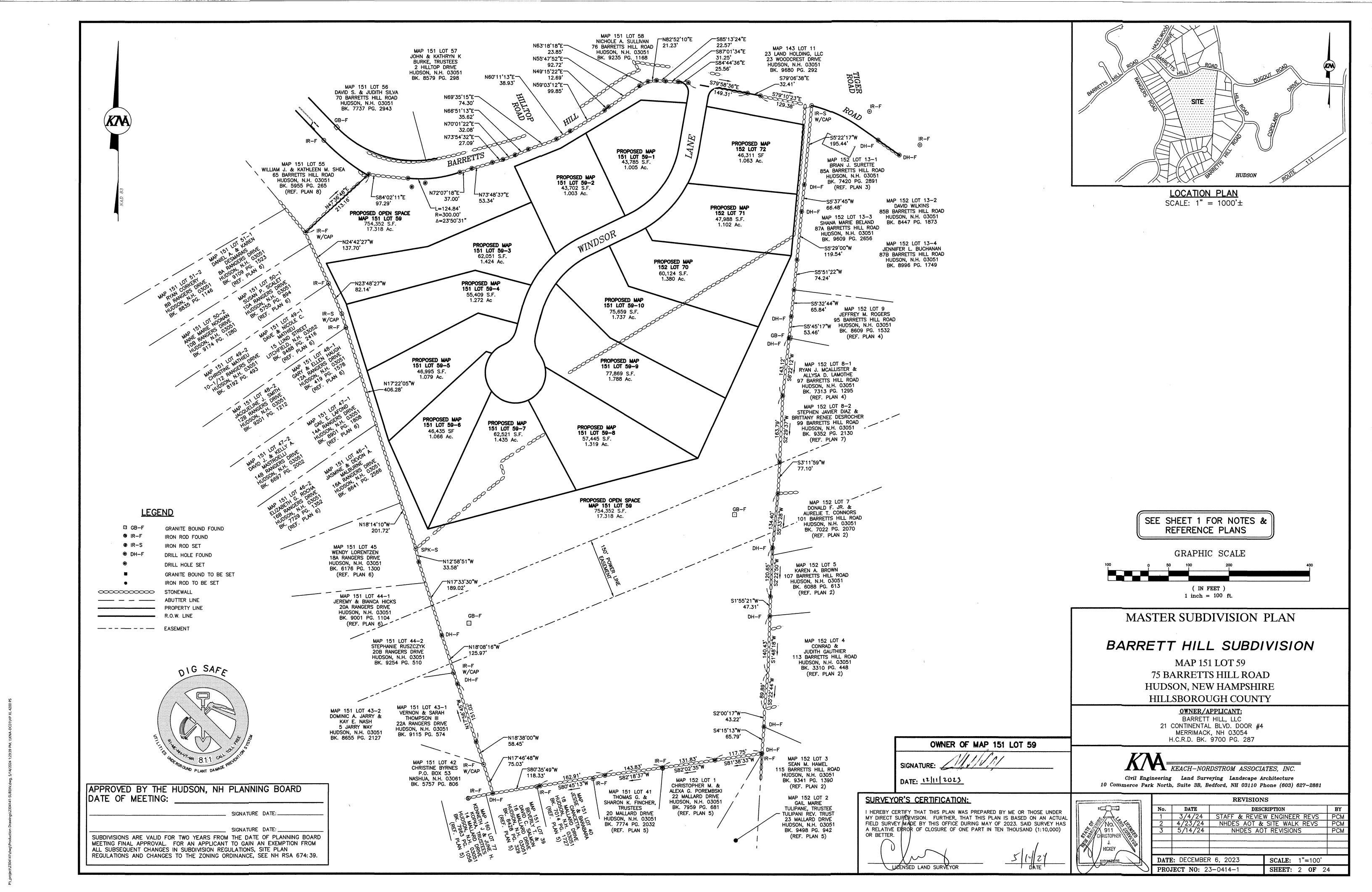
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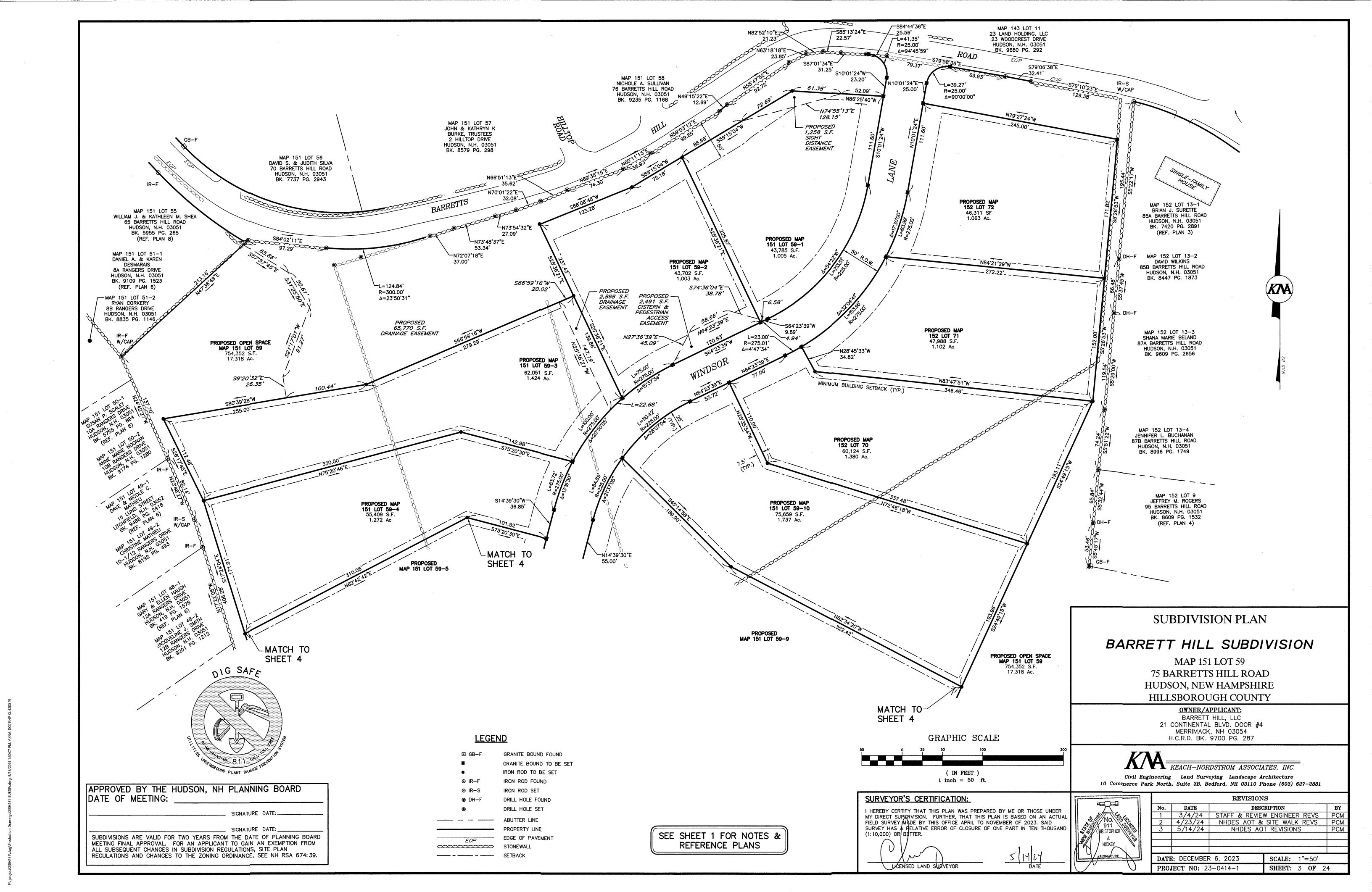


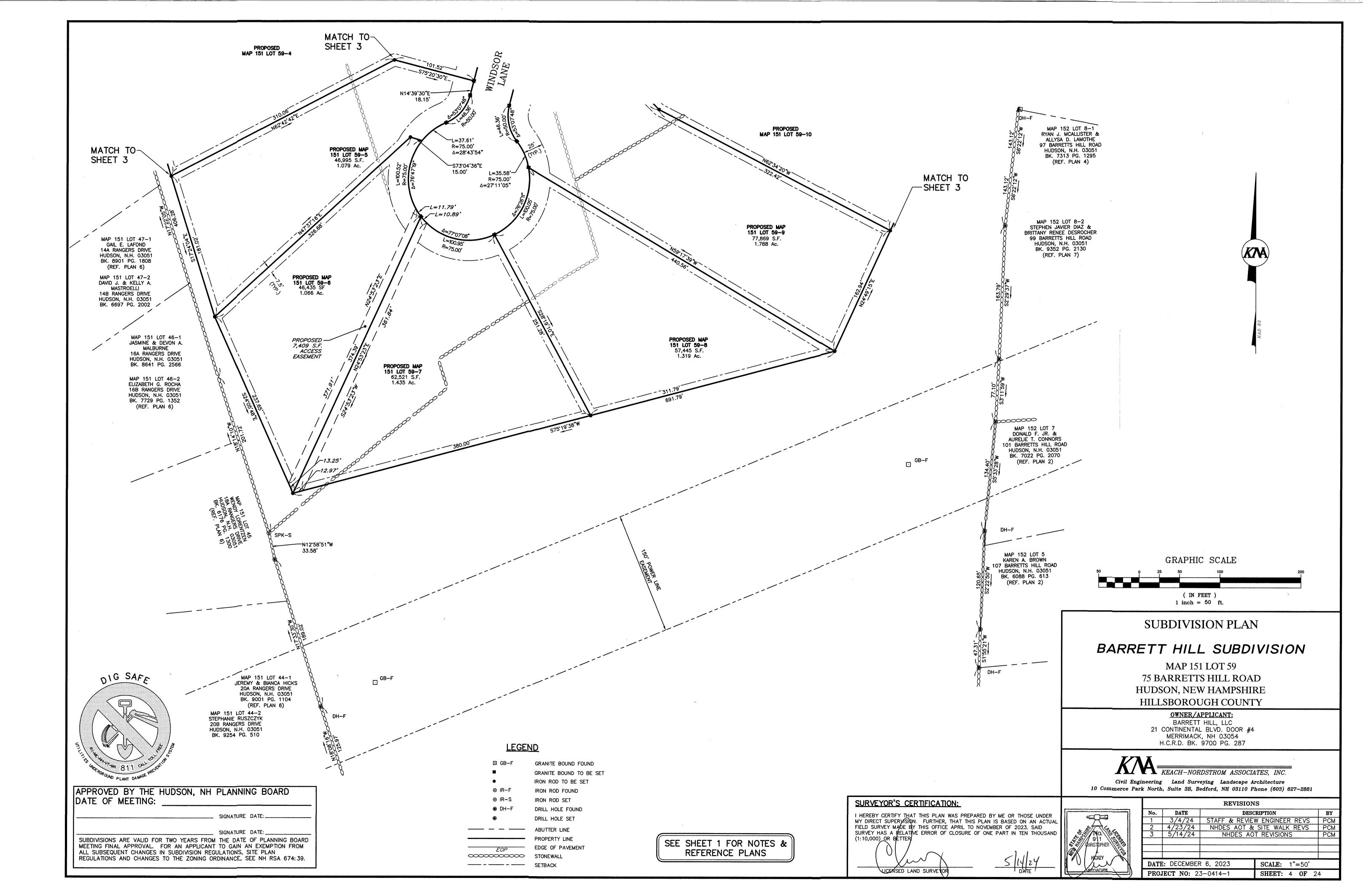


No.	DATE	DESCRIPTION	BY
1	3/4/24	STAFF & REVIEW ENGINEER REVS	PCN
2	4/23/24	NHDES AOT & SITE WALK REVS	PCM
3	5/14/24	NHDES AOT REVISIONS	
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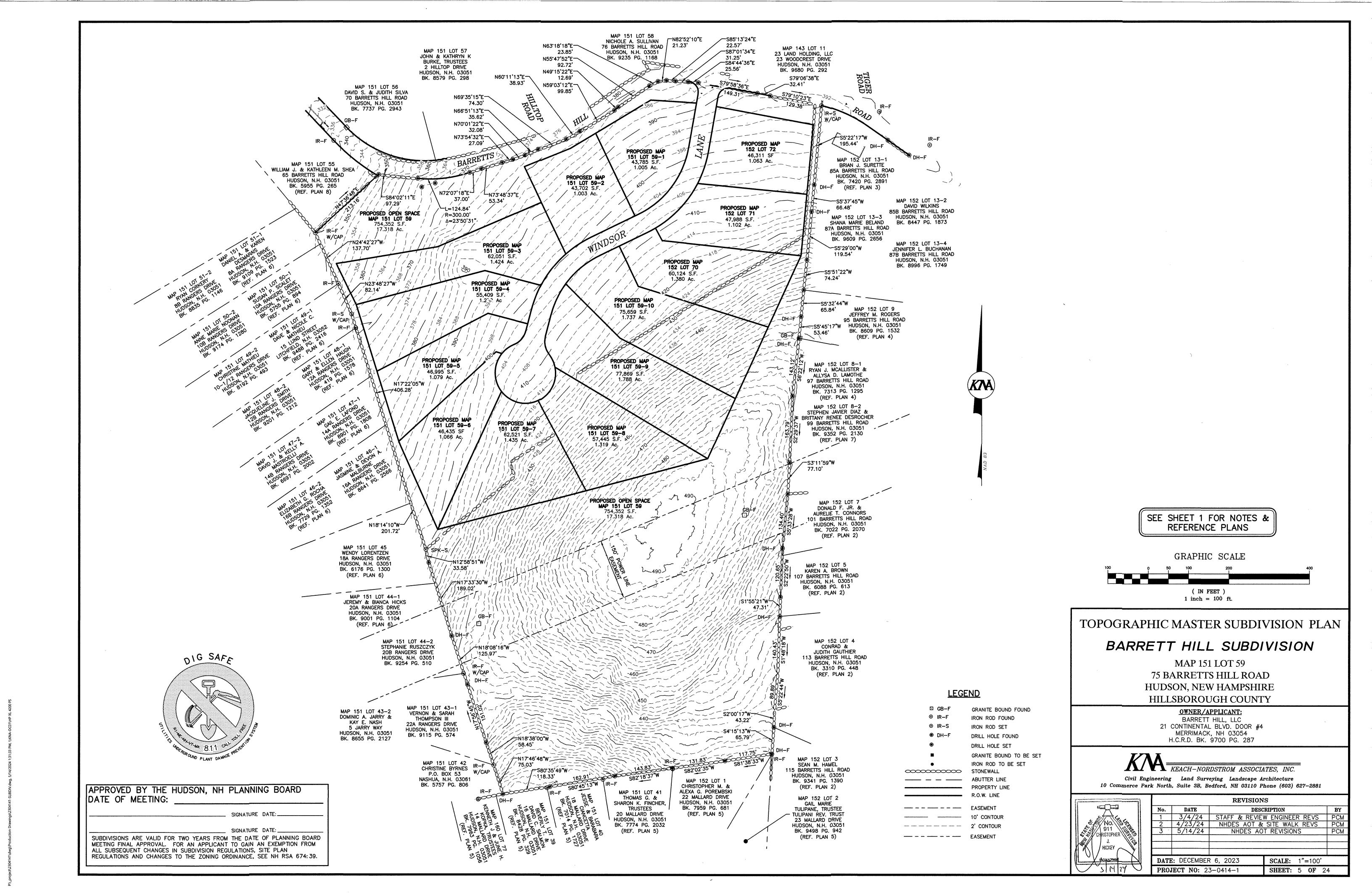
**SHEET:** 1 **OF** 24

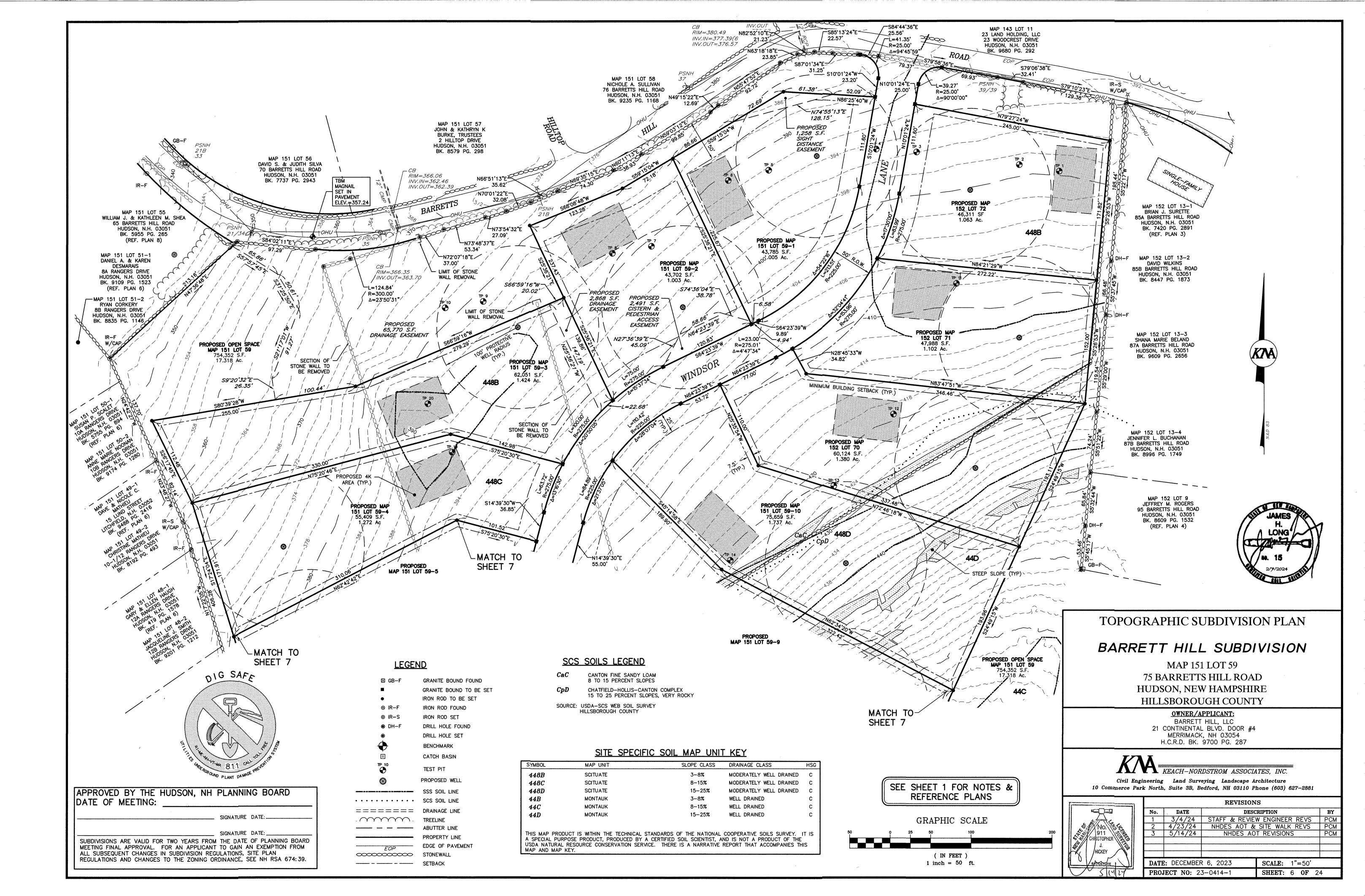




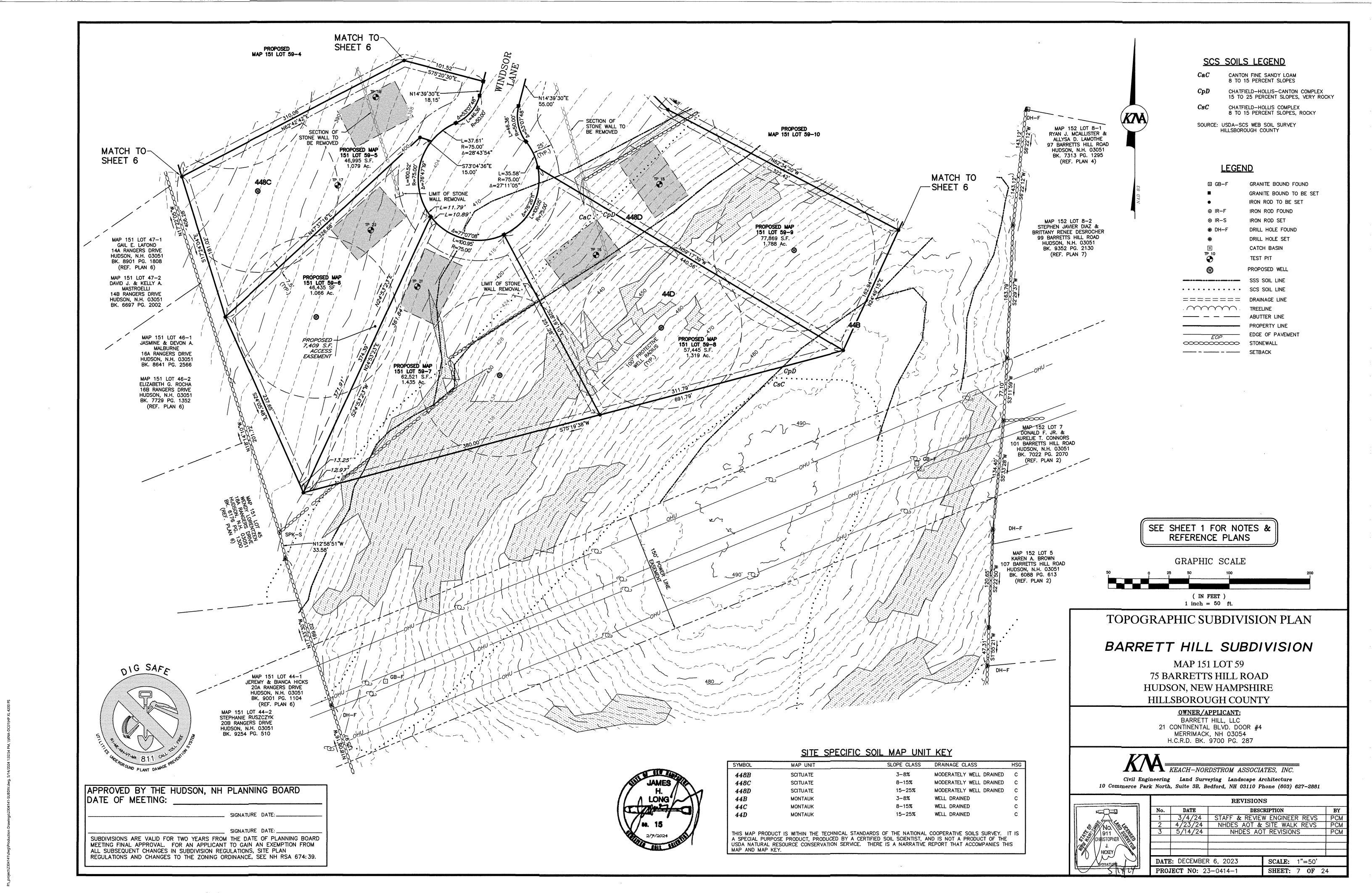


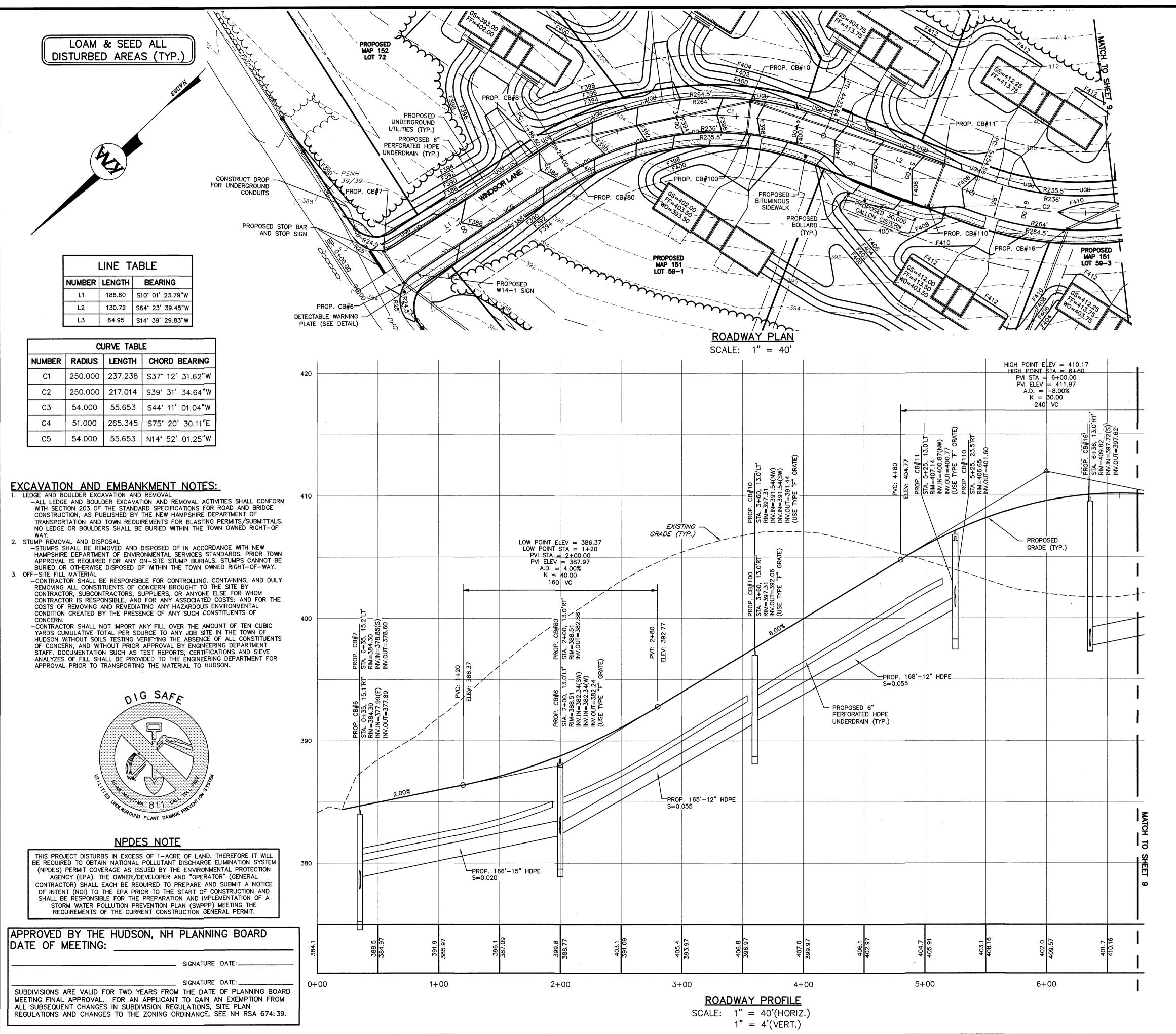
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**CONSTRUCTION NOTES:** 

THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED ROADWAY DESIGN, GRADING, AND UTILITIES FOR THIS SITE.
 ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE TOWN OF HUDSON, AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. ALL WORK PERFORMED IN THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION RIGHT—OF—WAY SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION. APPROVED AND

RIGHT-OF-WAY SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, APPROVED AND ADOPTED 2016 ARE HEREBY INCORPORATED BY REFERENCE.

3. CONSTRUCTION SHALL CONFORM TO THE TYPICAL SECTIONS AND DETAILS SHOWN ON THE PLANS, AND SHALL MEET THE REQUIREMENTS AND SPECIFICATIONS FOR ROAD CONSTRUCTION, PUBLIC WORKS

DEPARTMENT, HUDSON, NEW HAMPSHIRE. ALL DRAINAGE PIPES SHOWN SHALL BE HDPE. CATCH BASINS SHALL BE TYPE B, AND HAVE 3' SUMPS UNLESS OTHERWISE NOTED.

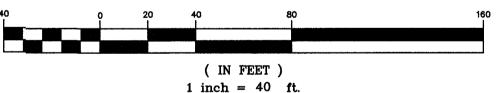
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION, AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING "DIG SAFE" AT 811 AT LEAST 72 HOURS BEFORE DIGGING.

ALL DRAINAGE PIPE SHALL BE INSTALLED FOLLOWING MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 ALL LOT DEVELOPMENT SHOWN ON THIS PLAN INCLUDING BUT NOT LIMITED TO DRIVEWAYS, BUILDING LOCATIONS, AND GRADING ARE SHOWN FOR PROOF OF CONCEPT ONLY. FINAL LOT LAYOUT SHALL BE COORDINATED WITH THE OWNER, THE ENGINEER OF RECORD, AND TOWN STAFF FOR FINAL APPROVAL PRIOR TO CONSTRUCTION.

#### **LEGEND**

© GB-F  © IPIN-F  © DH-F  © IPP-F  △ RRS-F  ()  *	DRILL HOLE FOUND IRON PIPE FOUND RAILROAD SPIKE FOUND UTILITY POLE SIGN LIGHT
<b>@</b>	WELL
© © III	SEWER MANHOLE DRAINAGE MANHOLE CATCH BASIN ABUTTER LINE
	PROPERTY LINE
• • • • • • • • • • • • • • • • • • • •	STREAM WETLAND
0///	OVERHEAD UTILITIES
OHU	
	DRAINAGE LINE TREELINE
. / Y Y Y Y Y Y Y .	
	10' CONTOUR 2' CONTOUR
	STONEWALL BUILDING SETBACK
	EASEMENT
<b>**</b>	PROPOSED WATER VALVE
"	PROPOSED HYDRANT
<b>®</b>	PROPOSED WELL
0	PROPOSED DRAINAGE MANHOLE
	PROPOSED CATCH BASIN
	PROPOSED PROPERTY LINE PROPOSED GUARDRAIL
	· · · · · · · · · · · · · · · · · · ·
——G———G——	
	PROPOSED WATER LINE
	PROPOSED DRAINAGE LINE
.~~~	PROPOSED TREELINE
	PROPOSED EDGE OF PAVEMENT
	PROPOSED SLOPED GRANITE CURB PROPOSED 2' CONTOUR

GRAPHIC SCALE



#### ROADWAY PLAN & PROFILES

#### BARRETT HILL SUBDIVISION

MAP 151 LOT 59
75 BARRETTS HILL ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT: BARRETT HILL, LLC

BARRETT HILL, LLC
21 CONTINENTAL BLVD. DOOR #4
MERRIMACK, NH 03054
H.C.R.D. BK. 9700 PG. 287



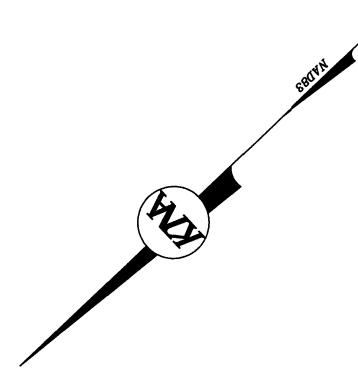
KEACH-NORDSTROM ASSOCIATES, INC.

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	REVISIONS						
	No.	DATE	DESCRIPTION				
	1	3/4/24	STAFF & REV	EW ENGINEER REVS	PCM		
	2	4/23/24	NHDES AOT	NHDES AOT & SITE WALK REVS			
	3	5/14/24	NHDES A	PCM			
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		<u> L</u>			<u> </u>		
	DATI	E: DECEMBER	R 6, 2023	<b>SCALE:</b> $1" = 40'$			
	PRO.	JECT NO: 23	3-0414-1	SHEET: 8 OF 2	:4		

LOAM & SEED ALL DISTURBED AREAS (TYP.)

SEE SHEET 8 FOR LINE AND CURVE TABLE





#### NPDES NOTE

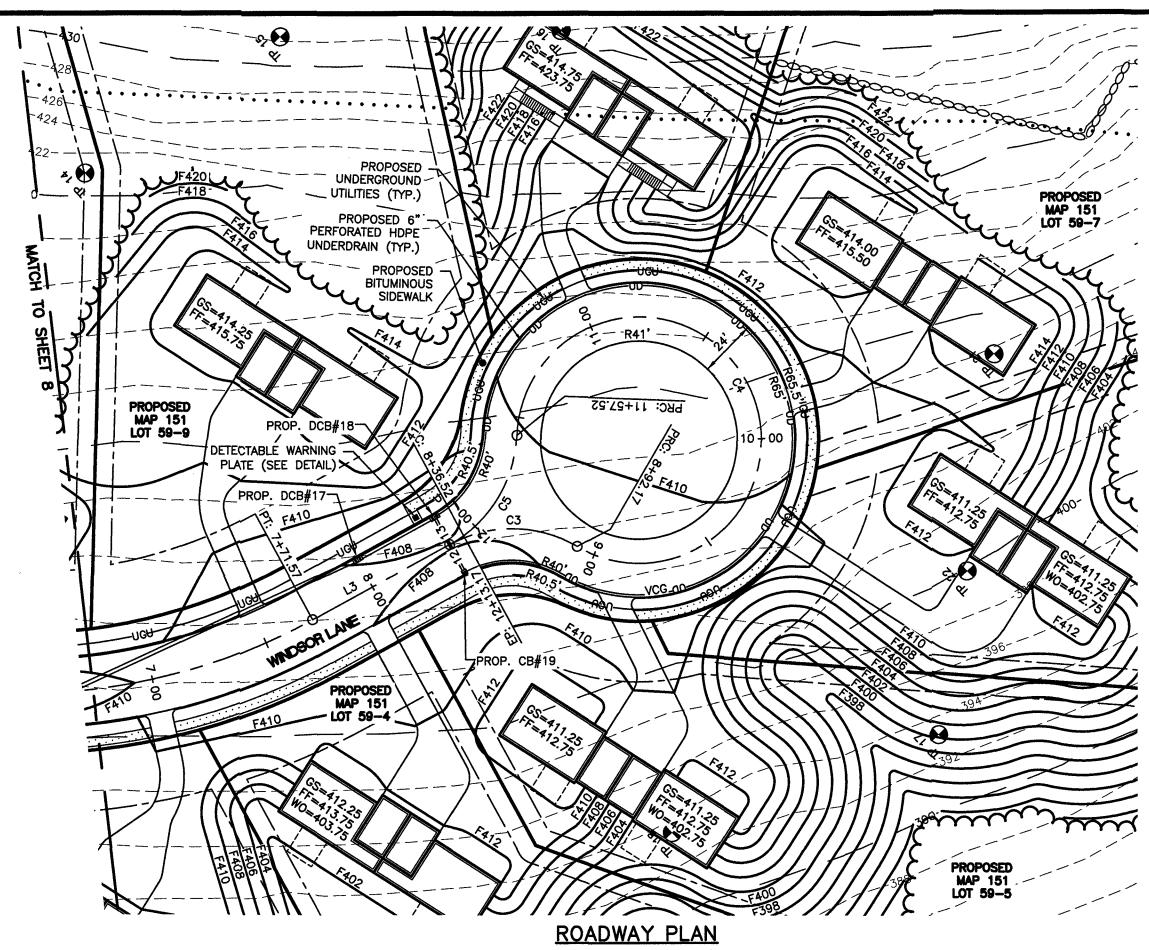
THIS PROJECT DISTURBS IN EXCESS OF 1-ACRE OF LAND. THEREFORE IT WILL BE REQUIRED TO OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE AS ISSUED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE OWNER/DEVELOPER AND "OPERATOR" (GENERAL CONTRACTOR) SHALL EACH BE REQUIRED TO PREPARE AND SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA PRIOR TO THE START OF CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE PREPARATION AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MEETING THE REQUIREMENTS OF THE CURRENT CONSTRUCTION GENERAL PERMIT.

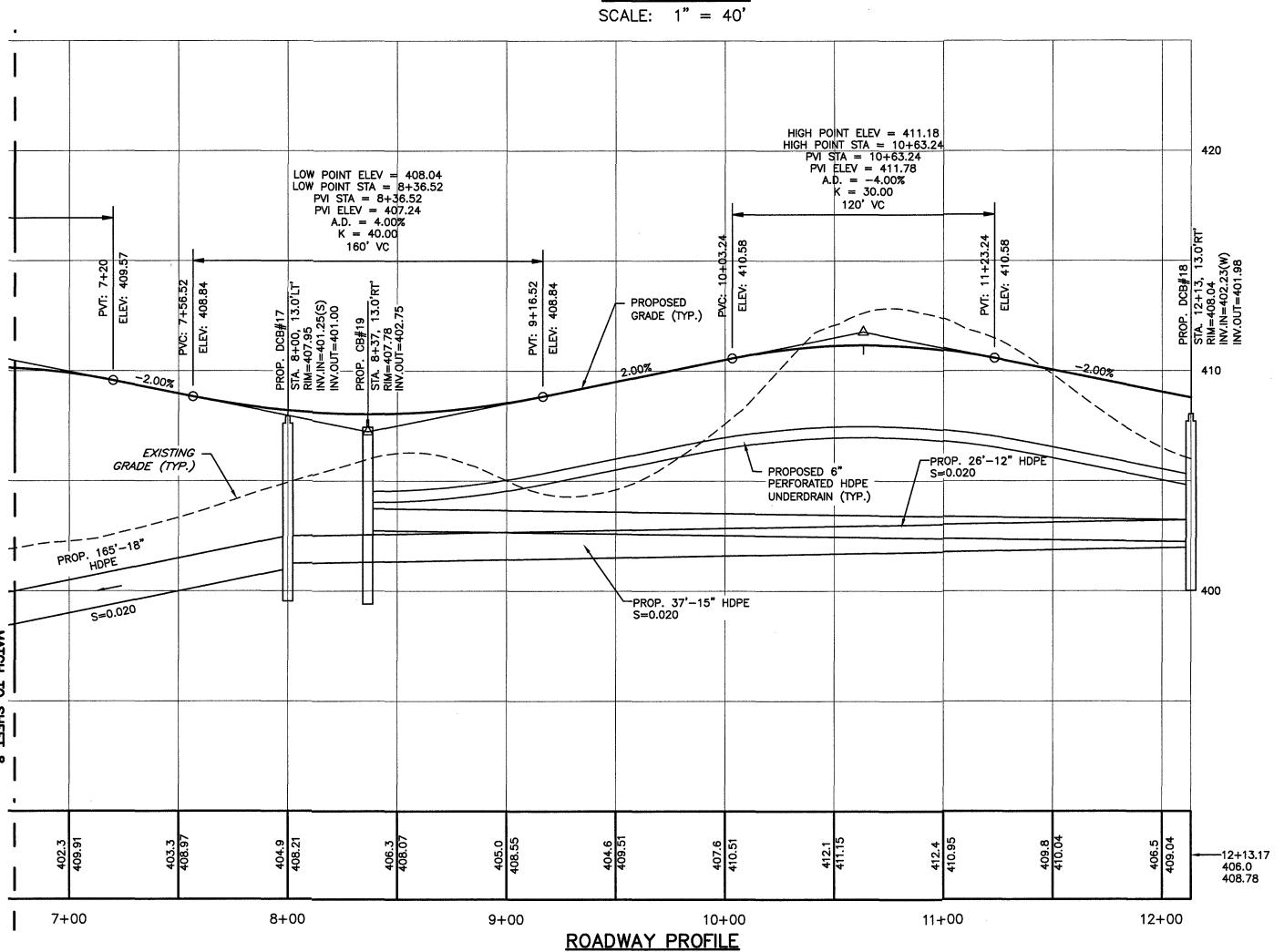
APPROVED BY THE HUDSON, NH PLANNING BOARD DATE OF MEETING:

SIGNATURE DATE: \_\_\_\_

SIGNATURE DATE: \_\_

SUBDIVISIONS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FOR AN APPLICANT TO GAIN AN EXEMPTION FROM ALL SUBSEQUENT CHANGES IN SUBDIVISION REGULATIONS, SITE PLAN REGULATIONS AND CHANGES TO THE ZONING ORDINANCE, SEE NH RSA 674:39.



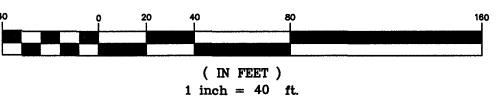


SCALE: 1" = 40'(HORIZ.) 1" = 4'(VERT.)

#### <u>LEGEND</u>

LLGLIND					
□ GB-F	GRANITE BOUND FOUND				
● IPIN-F	IRON PIN FOUND				
● DHF					
	IRON PIPE FOUND				
<del>-</del>	RAILROAD SPIKE FOUND				
G	UTILITY POLE				
▼	SIGN				
<b>□</b> .	LIGHT				
<b>@</b>	WELL				
<b>S</b>	SEWER MANHOLE				
<b>©</b>	DRAINAGE MANHOLE				
Ш	CATCH BASIN				
	ABUTTER LINE				
	PROPERTY LINE				
	STREAM				
	WETLAND				
———ОНU ———	OVERHEAD UTILITIES				
	DRAINAGE LINE				
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<del></del>	10' CONTOUR				
	2' CONTOUR				
$\infty$	STONEWALL				
	BUILDING SETBACK				
	EASEMENT				
<b>w</b>	PROPOSED WATER VALVE				
×	PROPOSED HYDRANT				
<b>(0)</b> (0)	PROPOSED WELL				
0	PROPOSED DRAINAGE MANHOLE				
	PROPOSED CATCH BASIN				
	PROPOSED PROPERTY LINE				
o <del>a a a a</del> .	PROPOSED GUARDRAIL				
UGU	PROPOSED UNDERGROUND UTILITIES				
——G———G——	PROPOSED GAS LINE				
W	PROPOSED WATER LINE				
	PROPOSED DRAINAGE LINE				
.~~~	PROPOSED TREELINE				
	PROPOSED EDGE OF PAVEMENT				
	PROPOSED SLOPED GRANITE CURB				
	PROPOSED 2' CONTOUR				

GRAPHIC SCALE



ROADWAY PLAN & PROFILES

#### BARRETT HILL SUBDIVISION

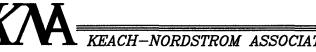
MAP 151 LOT 59 75 BARRETTS HILL ROAD HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

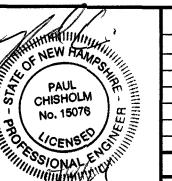
OWNER/APPLICANT:

BARRETT HILL, LLC
21 CONTINENTAL BLVD. DOOR #4

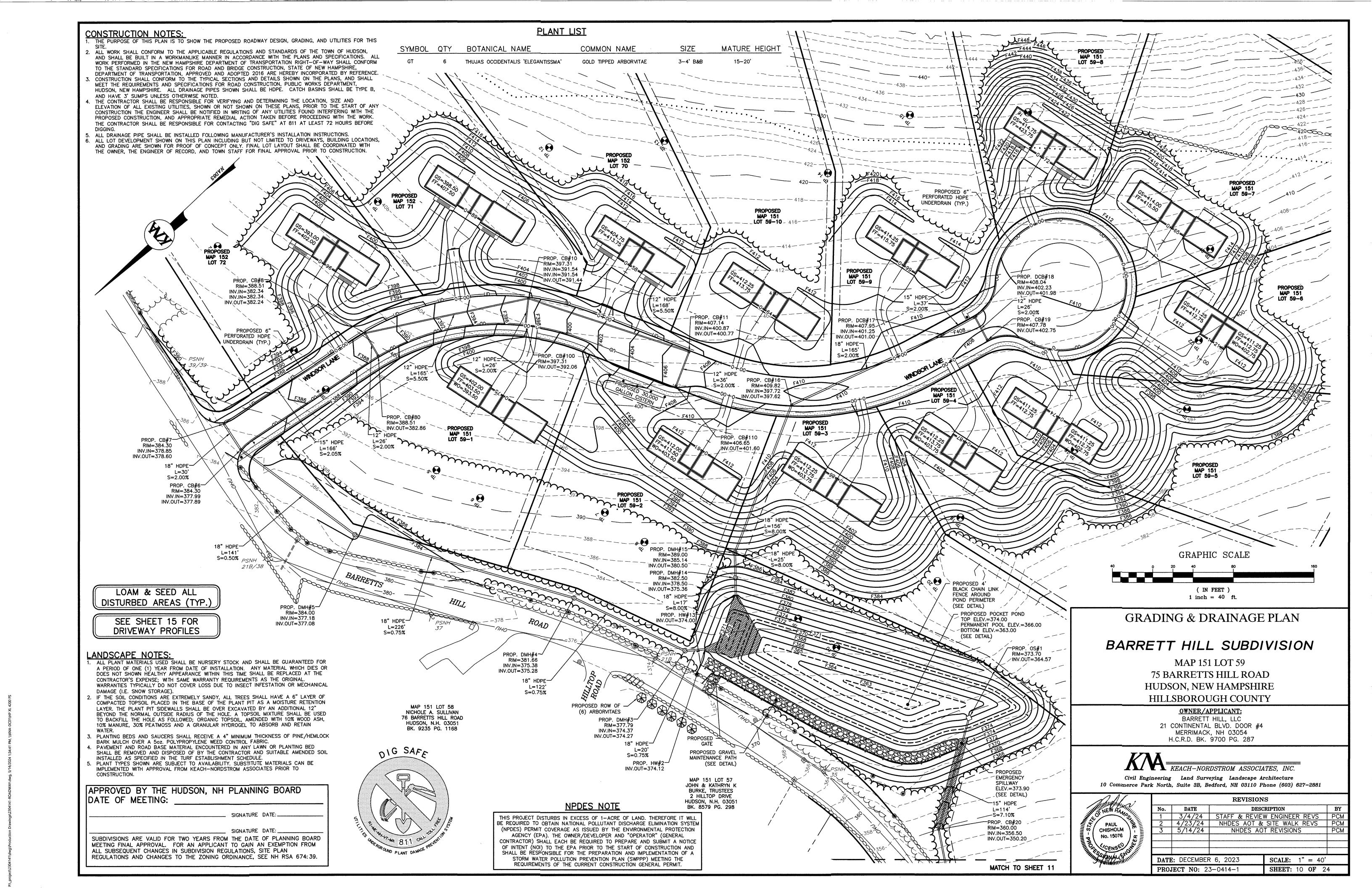
MERRIMACK, NH 03054

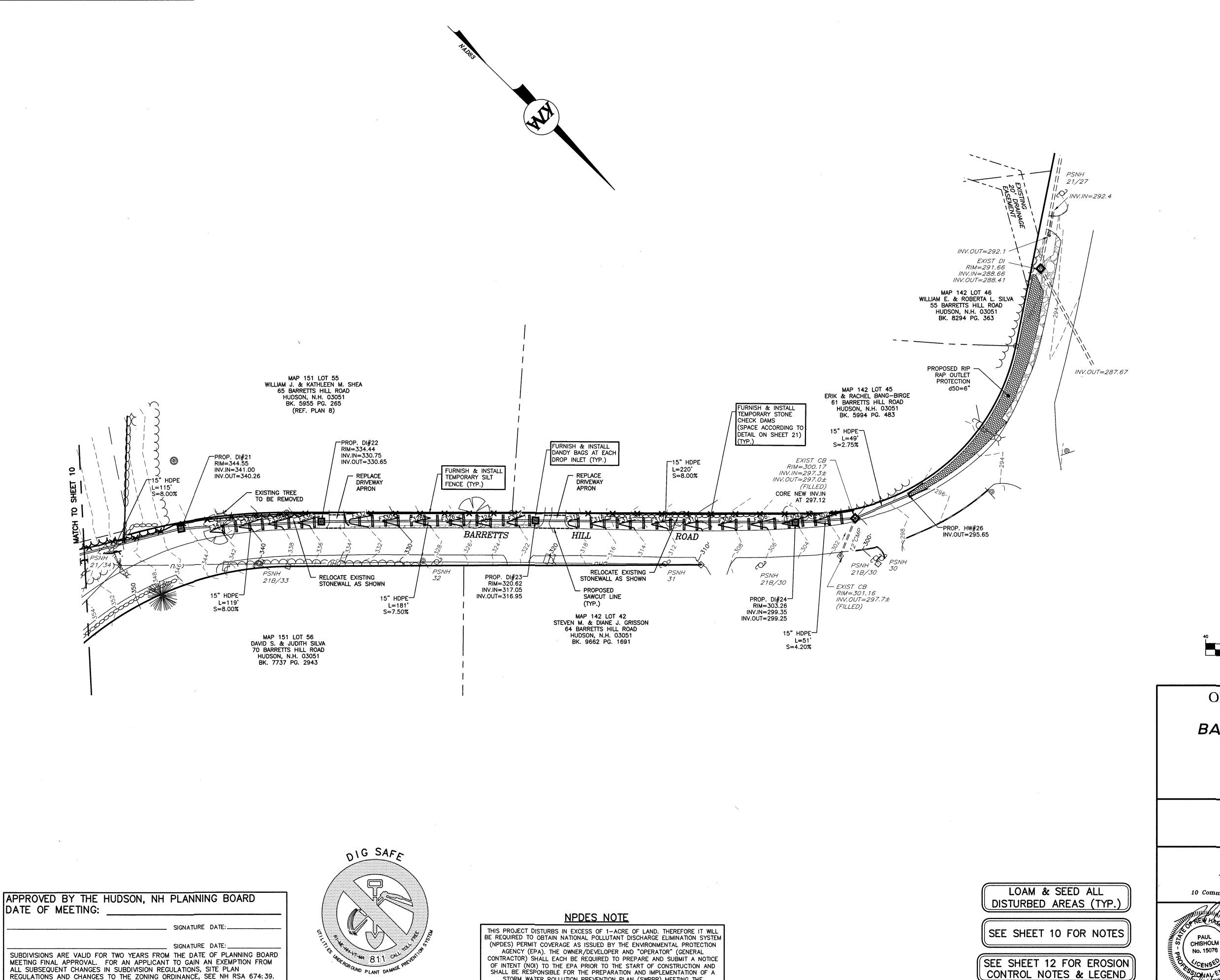
H.C.R.D. BK. 9700 PG. 287





	REVISIONS						
No.	DATE		DESCRIPTION	BY			
1	3/4/24	STAFF & R	EVIEW ENGINEER REVS	PCM			
2	4/23/24	NHDES AC	T & SITE WALK REVS	PCM			
3	5/14/24	NHDES	AOT REVISIONS	PCM			
DATI	: DECEMBER	6, 2023	SCALE: $1" = 40$	)'			
PRO.	JECT NO: 23	3-0414-1	SHEET: 9 OF	24			





**LEGEND** 

GRANITE BOUND FOUND IRON PIN FOUND DRILL HOLE FOUND IRON PIPE FOUND RAILROAD SPIKE FOUND UTILITY POLE SEWER MANHOLE DRAINAGE MANHOLE CATCH BASIN OVERHEAD UTILITIES  $\infty$ ----- BUILDING SETBACK PROPOSED WATER VALVE PROPOSED HYDRANT PROPOSED WELL PROPOSED DRAINAGE MANHOLE PROPOSED CATCH BASIN PROPOSED PROPERTY LINE PROPOSED GUARDRAIL PROPOSED UNDERGROUND UTILITIES PROPOSED GAS LINE PROPOSED WATER LINE PROPOSED DRAINAGE LINE . PROPOSED TREELINE PROPOSED EDGE OF PAVEMENT PROPOSED SLOPED GRANITE CURB PROPOSED 2' CONTOUR PROPOSED ARBORVITAE

GRAPHIC SCALE

( IN FEET ) 1 inch = 40 ft.

OFFSITE GRADING, DRAINAGE & **EROSION CONTROL PLAN** BARRETT HILL SUBDIVISION

> MAP 151 LOT 59 75 BARRETTS HILL ROAD HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

> > OWNER/APPLICANT: BARRETT HILL, LLC 21 CONTINENTAL BLVD. DOOR #4 MERRIMACK, NH 03054 H.C.R.D. BK. 9700 PG. 287

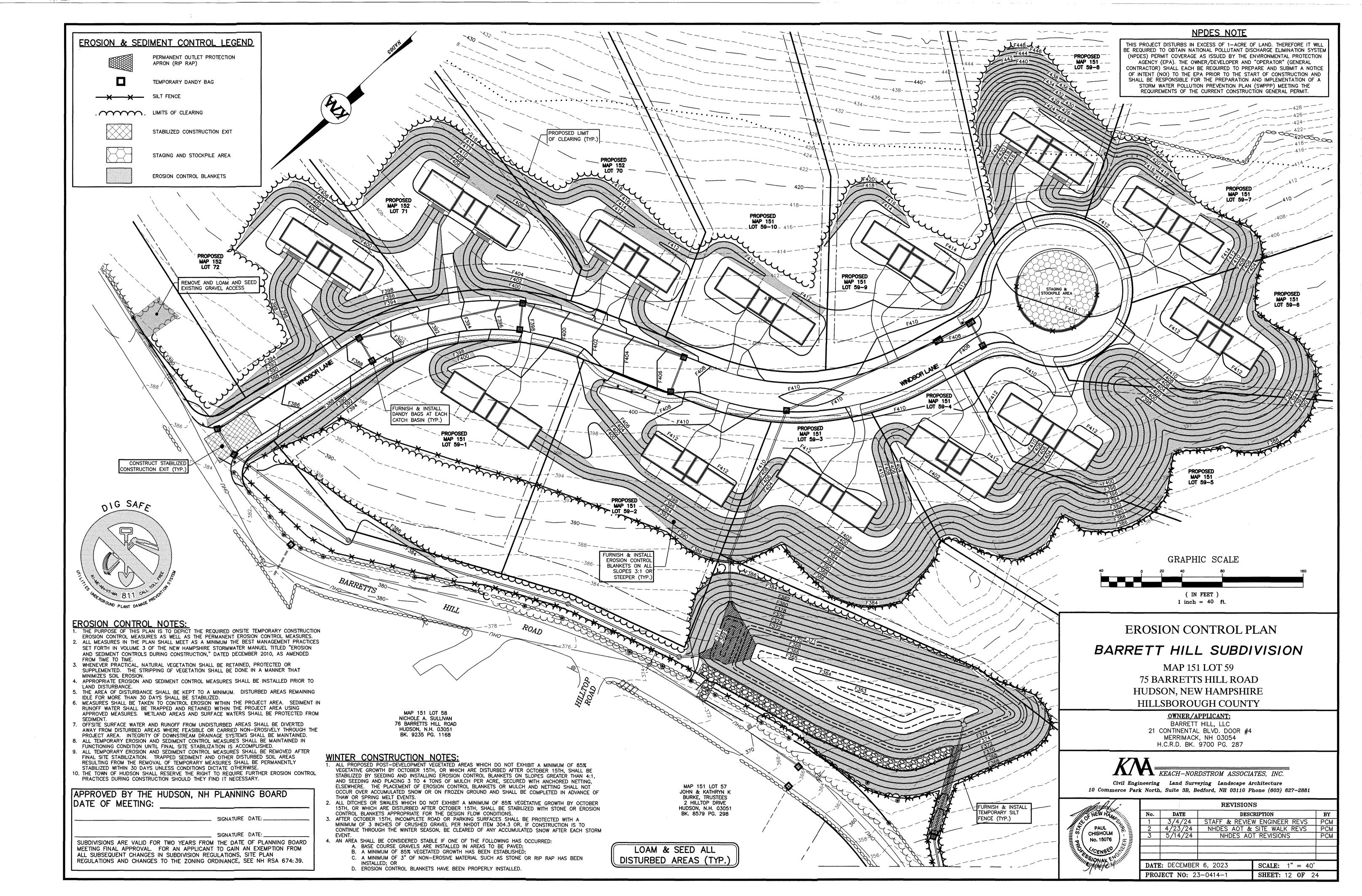
KEACH-NORDSTROM ASSOCIATES, INC.

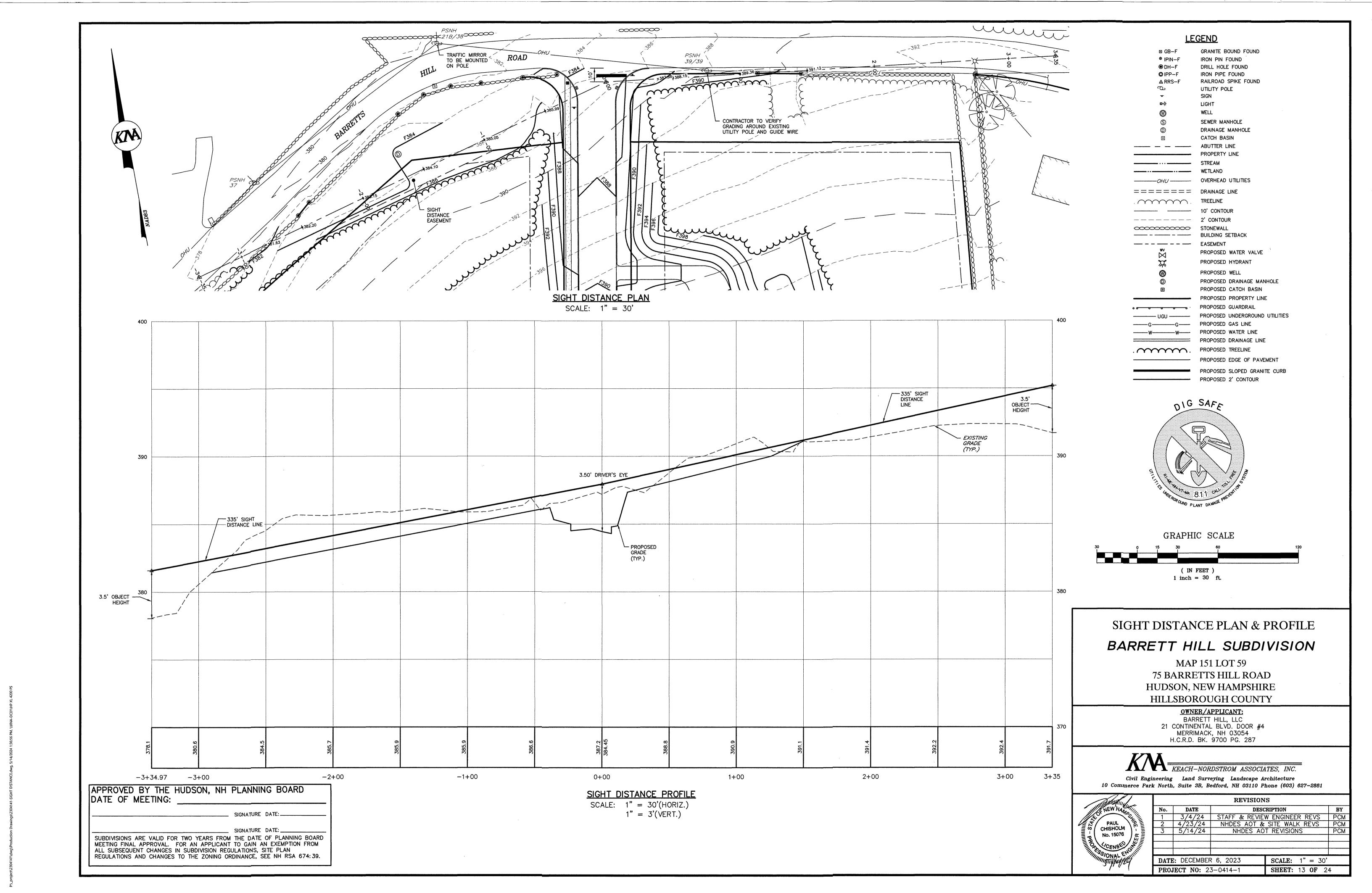
Civil Engineering Land Surveying Landscape Architecture 10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

MILLE WHILE	REVISIONS					
PAUL PAUL	No.	DATE	DES	CRIPTION	BY	
	1	3/4/24	STAFF & REVIE		PCN	
PAUL A	2	4/23/24	NHDES AOT &	SITE WALK REVS	PCM	
CHISHOLM	3	5/14/24	NHDES AC	OT REVISIONS	PCN	
2 No. 150/6 /# =						
CENSED Z						
IN STONAL ENGIN						
PAUL CHISHOLM No. 15076  CENSED CHISHOLM NO. 15076	DATI	E: DECEMBER	R 6, 2023	SCALE: $1" = 40$		
<i>'''</i>	PRO.	JECT NO: 23	3-0414-1	SHEET: 11 OF 2	4	

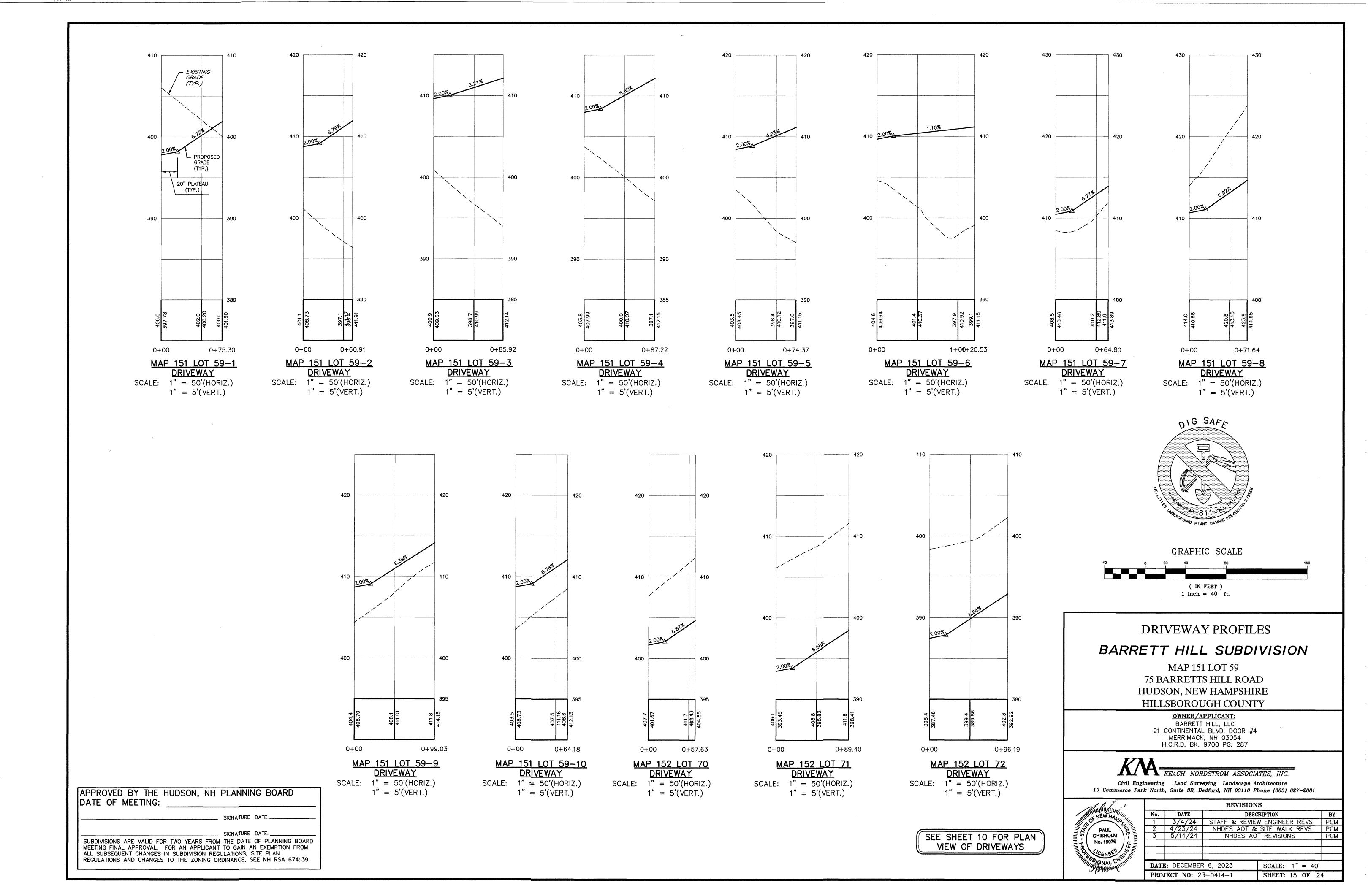
REGULATIONS AND CHANGES TO THE ZONING ORDINANCE, SEE NH RSA 674:39.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MEETING THE REQUIREMENTS OF THE CURRENT CONSTRUCTION GENERAL PERMIT.

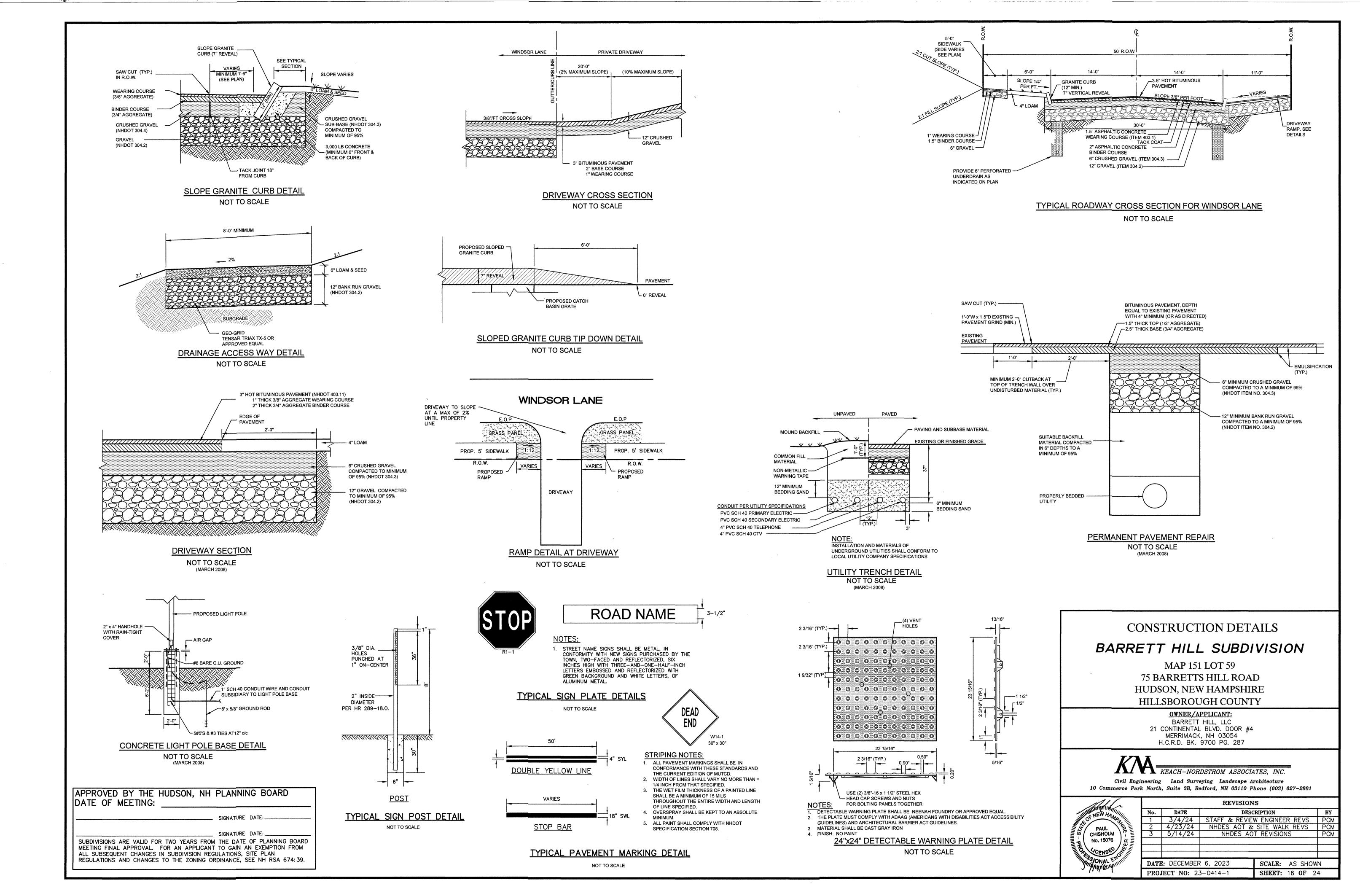




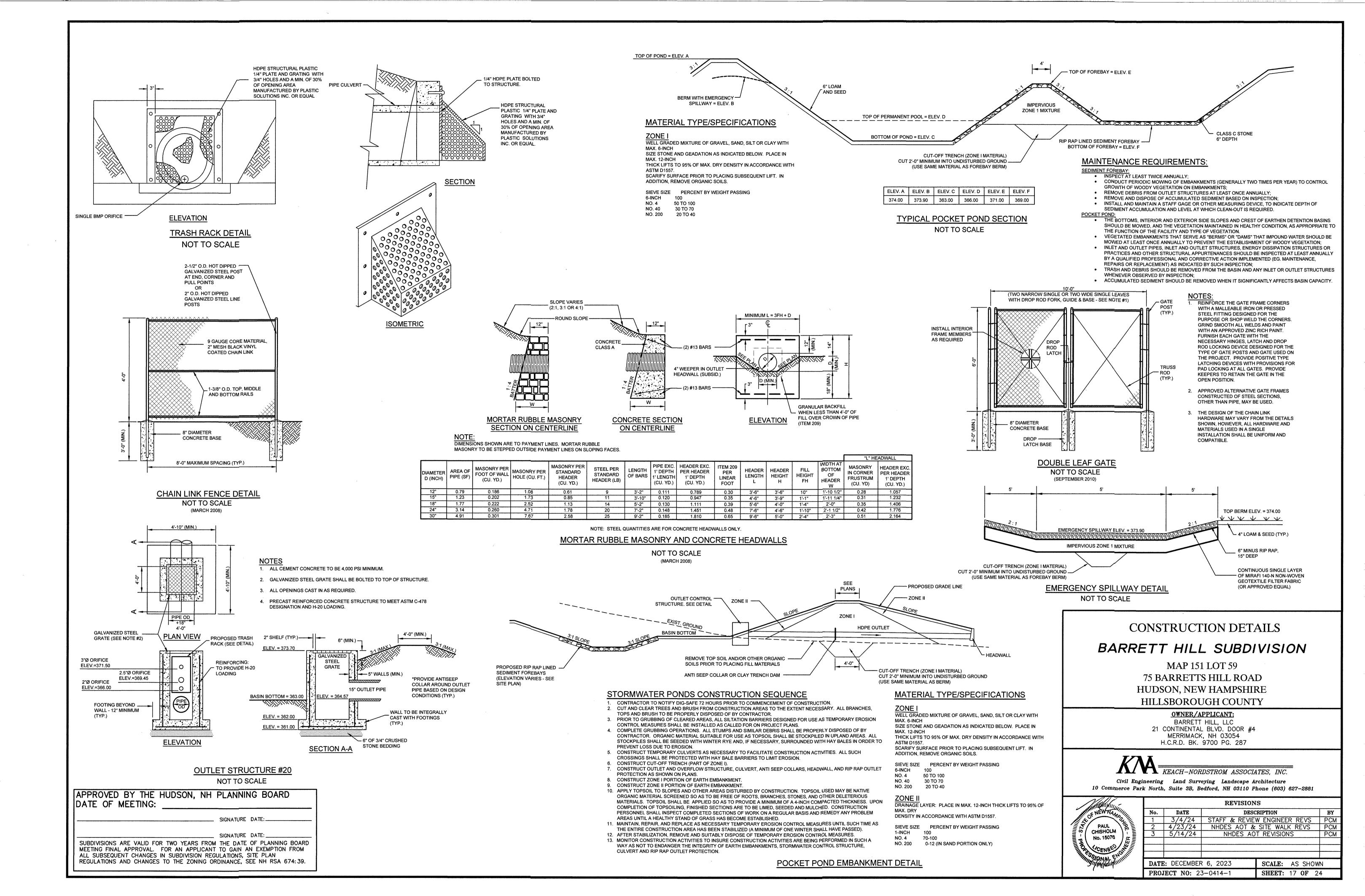
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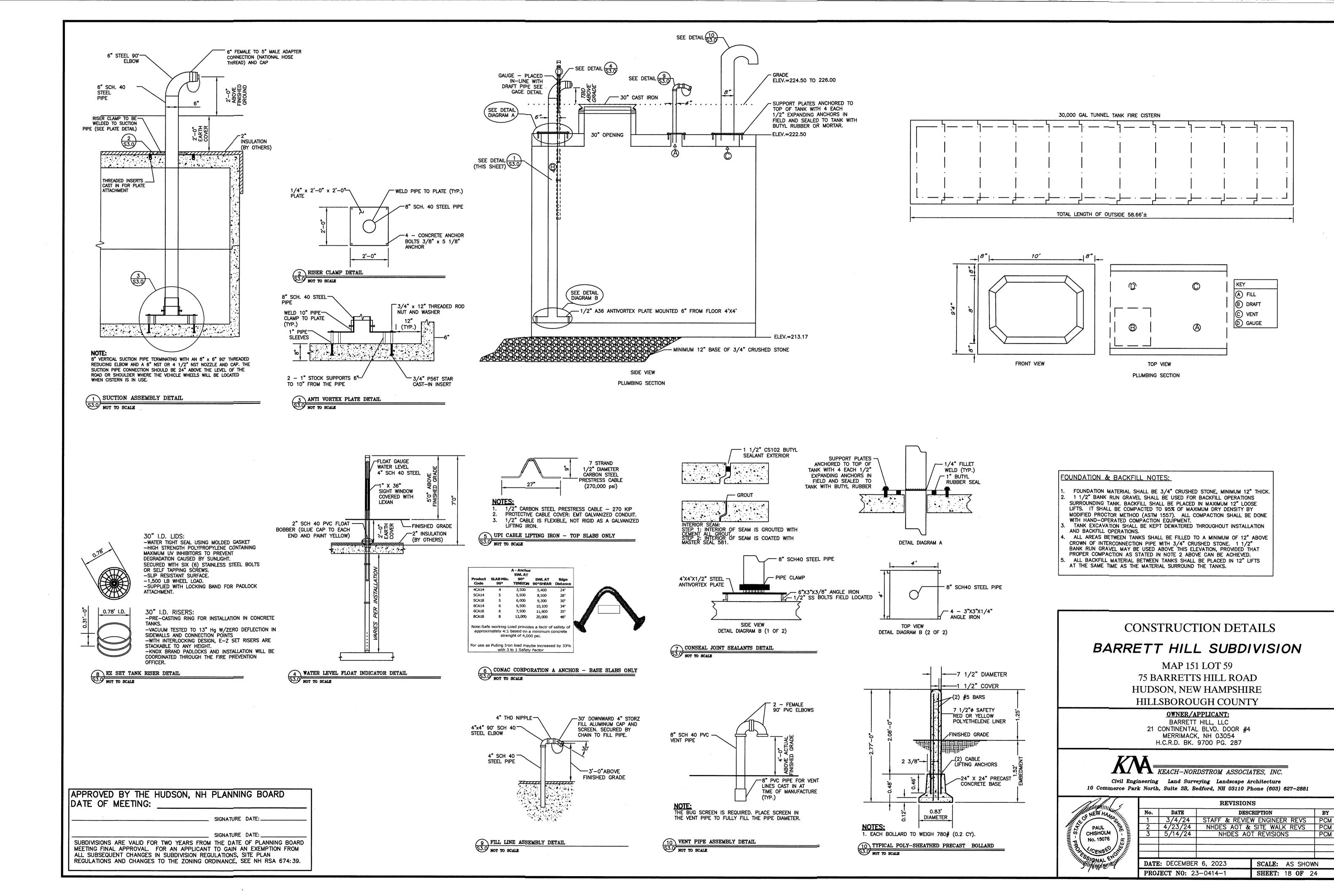
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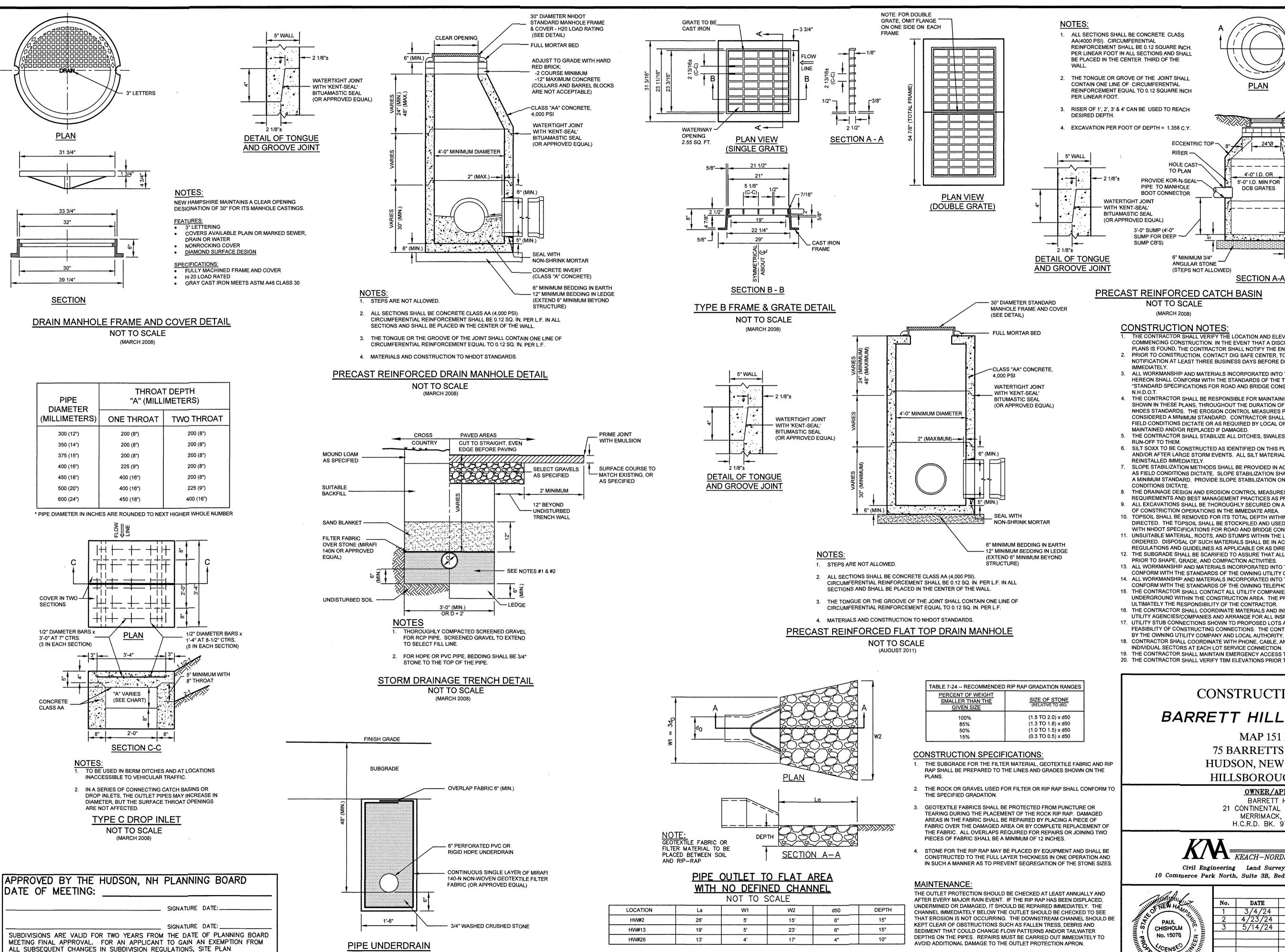
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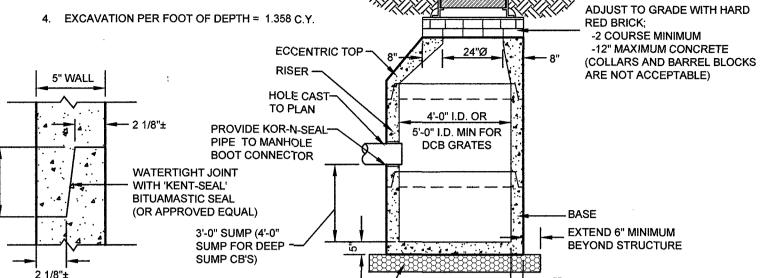


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REGULATIONS AND CHANGES TO THE ZONING ORDINANCE, SEE NH RSA 674:39.

NOT TO SCALE (MARCH 2008)



#### PRECAST REINFORCED CATCH BASIN

#### CONSTRUCTION NOTES

THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. IN THE EVENT THAT A DISCREPANCY FROM THE INFORMATION SHOWN ON THESE PLANS IS FOUND, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO RESOLVE THE SITUATION.

TOP OF GRATE

(SEE DETAIL)

2. PRIOR TO CONSTRUCTION, CONTACT DIG SAFE CENTER, TOLL FREE 811. NEW HAMPSHIRE STATE LAW REQUIRES NOTIFICATION AT LEAST THREE BUSINESS DAYS BEFORE DIGGING OPERATIONS START. IF AN EMERGENCY, CALL

**SECTION A-A** 

3. ALL WORKMANSHIP AND MATERIALS INCORPORATED INTO THE CONSTRUCTION OF ROADS AND DRAINAGE SHOWN HEREON SHALL CONFORM WITH THE STANDARDS OF THE TOWN OF HUDSON ENGINEERING DEPARTMENT AND THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AS PUBLISHED AND AMENDED BY THE

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROL DEVICES, AS SHOWN IN THESE PLANS, THROUGHOUT THE DURATION OF THE PROJECT IN ACCORDANCE WITH APPLICABLE NHDES STANDARDS. THE EROSION CONTROL MEASURES PROVIDED SERVE AS A GUIDE ONLY AND SHALL BE CONSIDERED A MINIMUM STANDARD. CONTRACTOR SHALL IMPLEMENT ANY AND ALL ADDITIONAL MEASURES AS FIELD CONDITIONS DICTATE OR AS REQUIRED BY LOCAL OR STATE GUIDELINES. ALL EROSION CONTROL SHALL BE MAINTAINED AND/OR REPLACED IF DAMAGED.

5. THE CONTRACTOR SHALL STABILIZE ALL DITCHES, SWALES AND PONDS PRIOR TO DIRECTING STORM WATER

SILT SOXX TO BE CONSTRUCTED AS IDENTIFIED ON THIS PLAN. SILT SOXX BARRIERS TO BE CHECKED WEEKLY AND/OR AFTER LARGE STORM EVENTS. ALL SILT MATERIAL TO BE REMOVED. ANY DAMAGED SILT SOXX SHALL BE

7. SLOPE STABILIZATION METHODS SHALL BE PROVIDED IN ACCORDANCE WITH THE NHDES SITE SPECIFIC PERMIT OR AS FIELD CONDITIONS DICTATE. SLOPE STABILIZATION SHALL BE PROVIDED ON ALL SLOPES 3:1 AND GREATER AS A MINIMUM STANDARD. PROVIDE SLOPE STABILIZATION ON SLOPES LESS THAN 3:1 IF WARRANTED, AS FIELD

8. THE DRAINAGE DESIGN AND EROSION CONTROL MEASURES AS PROPOSED MEET ALL TOWN AND STATE REQUIREMENTS AND BEST MANAGEMENT PRACTICES AS PROMULGATED BY THE NHDES.

9. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRICTION OPERATIONS IN THE IMMEDIATE AREA.

10.  $\,$  TOPSOIL SHALL BE REMOVED FOR ITS TOTAL DEPTH WITHIN THE LIMITS OF GRADING, UNLESS OTHERWISE DIRECTED. THE TOPSOIL SHALL BE STOCKPILED AND USED IN ITS ENTIRETY. STOCKPILE SOIL IN ACCORDANCE WITH NHDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT EDITION).

11. UNSUITABLE MATERIAL, ROOTS, AND STUMPS WITHIN THE LIMITS OF WORK SHALL BE REMOVED FROM THE SITE AS ORDERED. DISPOSAL OF SUCH MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL

REGULATIONS AND GUIDELINES AS APPLICABLE OR AS DIRECTED. THE SUBGRADE SHALL BE SCARIFIED TO ASSURE THAT ALL BOLL DERS AND CORRLES OVER 6" ARE REMOVED

PRIOR TO SHAPE, GRADE, AND COMPACTION ACTIVITIES. 13. ALL WORKMANSHIP AND MATERIALS INCORPORATED INTO THE CONSTRUCTION OF ELECTRIC LINES SHALL

CONFORM WITH THE STANDARDS OF THE OWNING UTILITY COMPANY. 14. ALL WORKMANSHIP AND MATERIALS INCORPORATED INTO THE CONSTRUCTION OF TELEPHONE LINES SHALL

CONFORM WITH THE STANDARDS OF THE OWNING TELEPHONE COMPANY 15. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND WITHIN THE CONSTRUCTION AREA. THE PROTECTION OR RELOCATION OF UTILITIES IS

ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR. 16. THE CONTRACTOR SHALL COORDINATE MATERIALS AND INSTALLATION SPECIFICATIONS WITH THE INDIVIDUAL UTILITY AGENCIES/COMPANIES AND ARRANGE FOR ALL INSPECTIONS.

17. UTILITY STUB CONNECTIONS SHOWN TO PROPOSED LOTS ARE APPROXIMATE AND INTENDED TO ILLUSTRATE FEASIBILITY OF CONSTRUCTING CONNECTIONS. THE CONTRACTOR SHALL PROVIDE SERVICE STUBS AS DIRECTED

18. CONTRACTOR SHALL COORDINATE WITH PHONE, CABLE, AND ELECTRIC COMPANIES FOR POTENTIAL NEED OF INDIVIDUAL SECTORS AT EACH LOT SERVICE CONNECTION 19. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY HIS WORK AT ALL TIMES.

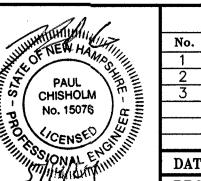
20. THE CONTRACTOR SHALL VERIFY TBM ELEVATIONS PRIOR TO CONSTRUCTION.

#### CONSTRUCTION DETAILS BARRETT HILL SUBDIVISION

MAP 151 LOT 59 75 BARRETTS HILL ROAD HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

> OWNER/APPLICANT: BARRETT HILL, LLC 21 CONTINENTAL BLVD. DOOR #4 MERRIMACK, NH 03054 H.C.R.D. BK. 9700 PG. 287

KEACH-NORDSTROM ASSOCIATES, INC.



		REVISIONS					
	No. DATE DESCRIPTION						
	1	3/4/24	STAFF & REVIE	PCM			
	2	4/23/24	NHDES AOT 8	NHDES AOT & SITE WALK REVS			
	3	5/14/24	NHDES A	PCM			
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1111							
	DATE	ATE: DECEMBER 6, 2023 SCALE: AS SHOWN					
	PRO.	ECT NO: 23	3-0414-1	SHEET: 19 OF 2	24		

#### PREPARATION AND EXECUTION:

- RAKE THE SUBGRADE OF ALL AREAS TO BE LOAMED AND SEEDED TO REMOVE RUBBISH, STICKS,
- ROOTS AND STONES LARGER THAN 1 INCH. PLACE LOAM OVER AREAS TO BE SEEDED AND SPREAD.
- 3. FINE GRADE SURFACE AND SUPPLEMENT WITH SUITABLE LOAM WHERE NEEDED TO CREATE A UNIFORM SURFACE ACCORDING TO THE FINISH GRADES INDICATED; TOP AND BOTTOM OF SLOPES SHALL BE ROUNDED. NO LOAM SHALL BE SPREAD IF THE SUBGRADE IS EXCESSIVELY WET OR
- IF THE pH OF THE SOIL NEEDS TO BE RAISED, APPLY LIME EVENLY OVER LOAM SURFACE AND THOROUGHLY INCORPORATE LIME INTO THE LOAM BY HEAVY RAKING TO AT LEAST ONE-HALF THE DEPTH OF THE LOAM.
- APPLY FERTILIZER AND MIX WITH THE UPPER 2 INCHES OF LOAM.
- DETERMINE APPROPRIATE MIXTURE FOR AREA TO BE SEEDED BASED ON EXAMINATION OF PROJECT PLANS. UNIFORMLY SPREAD THE SEED BY BROADCASTING OR HYDROSEEDING. IF BROADCASTING, LIGHTLY RAKE INTO THE PREPARED SURFACE AND ROLL. IF, HYDROSEEDING, USE 4 TIMES THE RECOMMENDED RATE OF INOCULANT. AFTER SEED IS SPREAD, WATER THOROUGHLY WITH A FINE
- SEEDING AND INITIAL FERTILIZING SHALL BE DONE BETWEEN APRIL 1 AND JUNE 1 OR BETWEEN AUGUST 15 AND OCTOBER 14, OR AS PERMITTED. SEEDING SHALL NOT BE DONE DURING WINDY WEATHER OR WHEN THE GROUND IS FROZEN, EXCESSIVELY WET OR OTHERWISE UNTILLABLE. WITHIN 24 HOURS AFTER SEEDING OPERATION, UNIFORMLY MULCH THE AREA WITH STRAW.
- ANCHOR MULCH ON ALL SLOPES EXCEEDING 3:1 USING MULCH NETTING INSTALLED IN ACCORDANCE WITH THE MANUFACTURER. PROTECT AND PREVENT AGAINST WASHOUTS, ANY WASHOUTS WHICH OCCUR SHALL BE PROMPTLY
- REGRADED AND RESEEDED WHEN IT IS IMPRACTICAL TO ESTABLISH PERMANENT GROWTH ON DISTURBED EARTH BY OCTOBER 14, A TEMPORARY SEED MIXTURE SHALL BE USED. WHEN TEMPORARY SEEDING CANNOT ESTABLISH VISIBLE GROWTH, THE DISTURBED AREA SHALL BE COVERED WITH SIX INCHES OF MULCH FOR THE

#### MAINTENANCE

ALL SEEDED AREAS SHALL BE KEPT WATERED AND IN GOOD CONDITION. RESEED AS NECESSARY TO ESTABLISH HEALTHY UNIFORM GROWTH OVER THE ENTIRE SEEDED AREA. MAINTAIN SEEDED AREAS IN AN APPROVED CONDITION UNTIL FINAL ACCEPTANCE. MAINTENANCE SHALL INCLUDE REPAIRS FOR DAMAGE CAUSED BY EROSION.

#### APPLICATION RATES

LOAM SHALL BE APPLIED AT A MINIMUM COMPACTED THICKNESS OF 4 INCHES. 2. LIME SHALL BE USED WHEN NECESSARY TO RAISE THE m ph OF THE SOIL AND APPLIED AT ONE OF THE FOLLOWING RATES:

EXISTING SOIL Ph	TONS/ACRE	POUNDS/CUBIC YARD
4.0 - 4.4	3	1.2
4.5 - 4.9	2	0.8
5.0 - 5.4	1	0.4

FERTILIZER SHALL BE APPLIED AT THE FOLLOWING RATE

INITIAL APPLICATION	POUNDS/1,000 SF	MEASUREMENT FACTOR
10-10-10	20.0	1.0
15-15-15	13.4	1.5
19-19-19	10.5	1.9
REFERTILIZATION	POUNDS/1,000 SF	MEASUREMENT FACTOR
10-3-6	20.0	1.0
12-2-8	16.7	1.2

MULCH SHALL BE APPLIED AT A RATE OF 13 CUBIC YARDS PER 1,000 S.F. OF LANDSCAPE BED. **MATERIALS:** 

LOAM SHALL CONSIST OF LOOSE, FRIABLE TOPSOIL WITH NO ADMIXTURE OF REFUSE OR MATERIAL TOXIC TO PLANT GROWTH. LOAM SHALL BE FREE OF VIABLE PARTS OF PROHIBITED INVASIVE PLANTS AND BE GENERALLY FREE OF STONES, LUMPS, STUMPS AND SIMILAR OBJECTS LARGER THAN 2 INCHES IN GREATEST DIAMETER, SUBSOIL, ROOTS AND WEEDS. THE MINIMUM AND MAXIMUM pH VALUE SHALL BE FROM 5.5 TO 7.6.

LIME SHALL BE A CALCIC OR DOLOMITIC GROUND AGRICULTURAL LIMESTONE CONTAINING NOT LESS THAN 95% OF EITHER CALCIUM OR MAGNESIUM CARBONATE, OR BOTH. IT SHALL CONFORM TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS AND SHALL COMPLY WITH ALL STATE AND FEDERAL RULES AND REGULATIONS

FERTILIZER SHALL BE STANDARD COMMERCIAL GRADE FERTILIZER CONFORMING TO ALL STATE AND FEDERAL RULES AND REGULATIONS AND TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS. EXCEPT AS PERMITTED, THE ANALYSIS RATIO SHALL BE 1:1:1 FOR INITIAL APPLICATION AND 3:1:2 FOR REFERTILIZATION APPLICATION. GRASS SEED SHALL MEET THE REQUIREMENTS OF THE NEW HAMPSHIRE AGRICULTURAL AND

VEGETABLE SEED LAWS AND SHALL INCLUDE NO "PRIMARY NOXIOUS WEED SEEDS."

5. SEED MIXTURE FOR L	AWN AREAS SHALL CO	NSIST OF THE FOLLOW	/ING:
KIND OF SEED	MINIMUM PURITY (%)	MINIMUM GERMANATION (%)	POUNDS/ACRE (TOTAL 120 POUNDS)
CREEPING RED FESCUE	96	85	40
PERENNIAL RYEGRASS	98	90	50
KENTUCKY BLUEGRASS	97	85	25
REDTOP	95	80	5

6. SEED MIXTURE FOR SLOPE AREAS SHALL CONSIST OF THE FOLLOWING

KIND OF SEED	MINIMUM PURITY (%)	MINIMUM GERMANATION (%)	POUNDS/ACRE (TOTAL 95 POUNDS)
CREEPING RED FESCUE	96	85	35
PERENNIAL RYEGRASS	98	90	30
REDTOP	95	80	5
ALSIKE CLOVER	97	90	5
BIRDSFOOT TREFOIL	98	80	5
LANCE-LEAVED COREOPSIS	95	80 -	4
OXEYE DAISY	95	80	3
BLACKEYED SUSAN	95	80	4
WILD LUPINE	95	80	4

#### WINTER CONSTRUCTION NOTES:

ALL PROPOSED POST-DEVELOPMENT VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 4:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE PLACEMENT OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN

GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.

AFTER OCTOBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3 OR, IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON, BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT.

AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:

A. BASE COURSE GRAVELS ARE INSTALLED IN AREAS TO BE PAVED; A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;

A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED; OR

D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

APPROVED BY THE HUDSON, NH PLANNING BOARD DATE OF MEETING:

SIGNATURE DATE: \_

SIGNATURE DATE: \_

SUBDIVISIONS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FOR AN APPLICANT TO GAIN AN EXEMPTION FROM ALL SUBSEQUENT CHANGES IN SUBDIVISION REGULATIONS, SITE PLAN REGULATIONS AND CHANGES TO THE ZONING ORDINANCE, SEE NH RSA 674: 39.

- TEMPORARY SEEDING MIXTURE SHALL BE APPLIED AT A RATE OF 2 POUNDS PER 1,000 SF AND SHALL BE AN APPROVED CONSERVATION MIX OR CONSIST OF THE FOLLOWING
  - 15% BLACKWELL OR SHELTER SWITCHGRASS 30% NIAGRA OR KAW BIG BLUESTEM
  - 30% CAMPER OR BLAZE LITTLESTEN
  - 15% NE-27 OR BLAZE SAND LOVEGRASS
  - 10% VIKING BIRDSFOOT TREFOIL
  - INOCULUM SPECIFIC TO BIRDSFOOT TREFOIL MUST BE USED WITH THIS MIXTURE. IF SEEDING BY HAND, A STICKING AGENT SHALL BE USED. IF SEEDING WITH A HYDROSEEDER, USE FOUR TIMES THE RECOMMENDED AMOUNT OF INOCULUM.
- SEED MIXTURE FOR STORMWATER MANAGEMENT AREAS, INCLUDING DETENTION BASINS AND VEGETATED TREATMENT SWALES, SHALL BE APPLIED AT A RATE OF 70 POUNDS PER ACRE OR 1.6 POUNDS PER 1.000 SF. AND SHALL CONSIST OF THE FOLLOWING:
  - 25% CREEPING RED FESCUE 15% SWITCH GRASS
  - 15% FOX SEDGE
  - 15% CREEPING BENTGRASS 10% FLATPEA
- 20% WILDFLOWER VARIETY STRAW USED FOR MULCH SHALL CONSIST OF MOWED AND PROPERLY CURED GRASS OR LEGUME MOWINGS, FREE FROM WEEDS, TWIGS, DEBRIS,

INVASIVE SPECIES OR OTHER DELETERIOUS MATERIAL AND ROT OR MOLD.

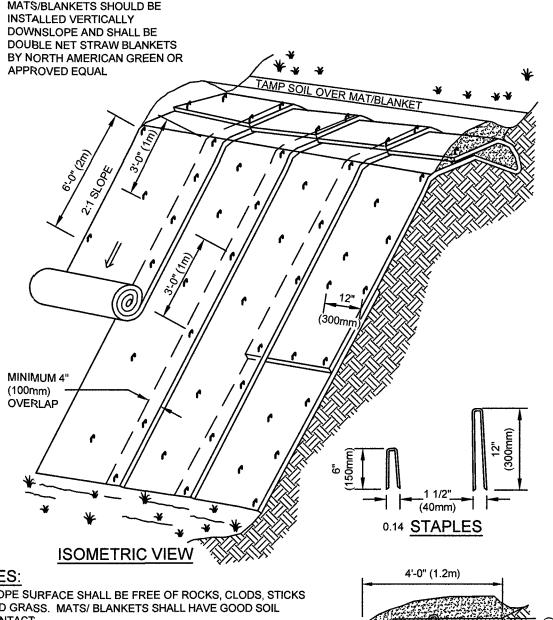
LOCAL GRASS VARIETIES

SOD SHALL BE PROVIDED WITH A STRONG ROOT SYSTEM, NOT LESS THAN TWO YEARS OLD AND SHALL BE FREE OF ANY UNDESIRABLE NATIVE GRASSES OR WEEDS. SOD SHALL BE MACHINE CUT TO A THICKNESS NOT LESS THAN 3/4",

EXCLUDING THATCH, AND SHALL BE CAPABLE OF VIGOROUS GROWTH SOD PADS SHALL BE OF UNIFORM SIZE AND COMPOSED OF AT LEAST TWO

LAY SOD TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS, DO NOT OVERLAP. STAGGER STRIPS TO OFFSET JOINTS IN ADJACENT COURSES. TAMP SOD TO ENSURE CONTACT WITH WITH SOIL

WATER WITHIN ONE HOUR OF PLANTING WITH A FINE SPRAY.

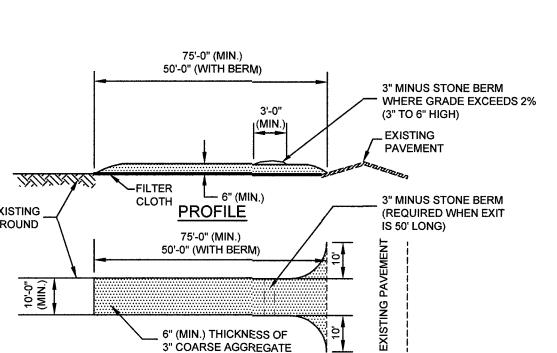


- SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/ BLANKETS SHALL HAVE GOOD SOIL
- APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT
- 4. THERE SHALL BE NO PLASTIC, OR MULTI-FILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH WITH AN OPENING SIZE OF GREATER THAN 1/8 INCHES MATERIAL

## **EROSION CONTROL BLANKETS - SLOPE INSTALLATION**

NOT TO SCALE

(AUGUST 2011)



#### STABILIZED CONSTRUCTION EXIT DETAIL NOT TO SCALE

PLAN VIEW

#### MAINTENANCE

MUD AND SOIL PARTICLES WILL EVENTUALLY CLOG THE VOIDS IN THE CRUSHED STONE AND THE EFFECTIVENESS OF THE CRUSHED STONE PAD WILL NOT BE SATISFACTORY. WHEN THIS OCCURS, THE PAD SHOULD BE TOPDRESSED WITH NEW CRUSHED STONE OR COMPLETE REPLACEMENT OF THE PAD MAY BE NECESSARY WHEN THE PAD BECOMES COMPLETELY

IF WASHING FACILITIES ARE USED, THE SEDIMENT TRAPS SHOULD BE CLEANED OUT AS OFTEN AS NECESSARY TO ASSURE THAT ADEQUATE TRAPPING EFFICIENCY AND STORAGE VOLUME IS AVAILABLE. VEGETATIVE FILTER STRIPS SHOULD BE MAINTAINED TO INSURE A VIGOROUS STAND OF VEGETATION AT ALL TIMES.

#### **CONSTRUCTION SPECIFICATIONS:**

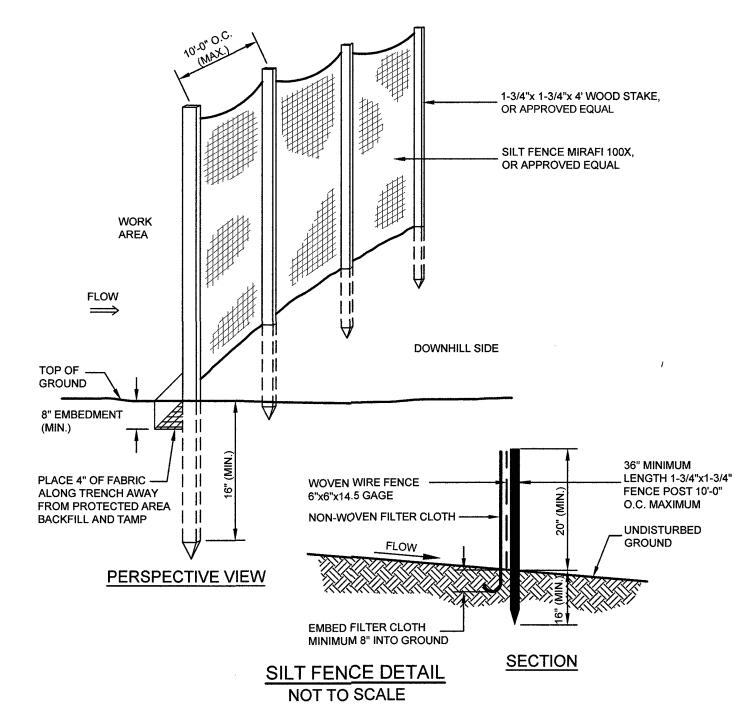
- 1. STONE FOR A STABILIZED CONSTRUCTION EXIT SHALL BE 1 TO 2 INCH STONE, RECLAIMED STONE OR RECYCLED CONCRETE EQUIVALENT.
- 2. THE LENGTH OF THE STABILIZED EXIT SHALL NOT BE LESS THAN 50 FEET, EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.
- 3. THE THICKNESS OF THE STONE FOR THE STABILIZED EXIT SHALL NOT BE LESS THAN 6 INCHES.
- 4. THE WIDTH OF THE EXIT SHALL NOT BE LESS THAN THE FULL WIDTH OF THE AREA WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICHEVER IS GREATER.
- 5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER CLOTH IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENCE LOT
- 6. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION EXIT SHALL BE PIPED BENEATH THE EXIT. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE
- PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH ADDITIONAL STONE AS CONDITIONS. DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.

7. THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO

- 8. WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY, WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT
- 9. STABILIZED CONSTRUCTION EXITS SHALL BE A MINIMUM OF 75 FEET LONG UNLESS A 3" TO 6" HIGH 3" MINUS STONE BERM IS PROVIDED, IN WHICH CASE THE LENGTH CAN BE REDUCED TO 50 FEET.

## **EROSION CONTROL BLANKETS - SWALE INSTALLATION**

NOT TO SCALE



BURY THE TOP END OF THE JUTE STRIPS IN A

ROW OF STAPLES, 6 INCH SPACING, 4 INCHES

IN "A" AND "B". OVERLAP END OF TOP STRIP 4

OR MESH WITH AN OPENING SIZE OF GREATER

THAN 1/8 INCHES MATERIAL UTILIZED.

EROSION STOP: FOLD OF

OF STAPLES.

JUTE BURIED IN SILT TRENCH

AND TAMPED; DOUBLE ROW

TAMP THE TRENCH FULL OF SOIL. SECURE WITH

OVERLAP: BURY UPPER END OF LOWER STRIP AS

THERE SHALL BE NO PLASTIC, OR MULTI-FILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING

TRENCH 6 INCHES OR MORE IN DEPTH.

DOWN FROM THE TRENCH

INCHES AND STAPLE.

#### CONSTRUCTION SPECIFICATIONS:

- 1. THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.
- 2. THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND AND THE SOIL COMPACTED OVER THE
- 3. WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIE OR STAPLES WHERE NOTED OR AS DIRECTED BY DESIGN ENGINEER.
- 4. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT
- 5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED
- 6. FENCE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG AND DRIVEN A MINIMUM OF 16 INCHES INTO THE GROUND. WOOD POSTS SHALL BE OF SOUND QUALITY HARDWOOD AND SHALL HAVE A MINIMUM CROSS SECTIONAL AREA OF
- 7. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT

#### MAINTENANCE:

- 1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
- 2. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
- 3. SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
- 4. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

#### CONSTRUCTION SEQUENCE

- CONTRACTOR TO NOTIFY DIG-SAFE 72-HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AN ENVIRONMENTAL MONITOR TO COMPLETE ALL NECESSARY INSPECTIONS AND
- REPORTS REQUIRED BY THE DEPARTMENT OF ENVIRONMENTAL SERVICES AS OUTLINED IN ENV-WQ 1505 (SEE ENVIRONMENTAL
- PRIOR TO GRUBBING OF CLEARED AREAS, ALL SILTATION BARRIERS DESIGNED FOR USE AS TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED AS CALLED FOR ON PROJECT PLANS. INSTALL STABILIZED CONSTRUCTION EXIT AT LOCATION OF CONSTRUCTION
- ACCESS AT LOCATION OF INTERSECTION WITH EXISTING PAVEMENT CUT AND CLEAR TREES AND BRUSH FROM CONSTRUCTION AREAS TO THE EXTENT NECESSARY. ALL BRANCHES, TOPS AND BRUSH TO BE

PROPERLY DISPOSED OF BY CONTRACTOR. THIS PROJECT IS MANAGED TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR

- 3800 RELATIVE TO INVASIVE SPECIES. 5. COMPLETE GRUBBING OPERATIONS UNDER THE ROADWAY AND SLOPE SECTIONS. ALL STUMPS AND SIMILAR DEBRIS SHALL BE PROPERLY DISPOSED OF BY CONTRACTOR. ORGANIC MATERIAL SUITABLE FOR USE AS TOPSOIL SHALL BE STOCKPILED IN UPLAND AREAS. ALL
- STOCKPILES SHALL BE SEEDED WITH WINTER RYE AND, IF NECESSARY, SURROUNDED WITH HAY BALES IN ORDER TO PREVENT LOSS DUE
- 6. CONSTRUCT TEMPORARY CULVERTS AS NECESSARY TO FACILITATE CONSTRUCTION ACTIVITIES. ALL SUCH CROSSINGS SHALL BE PROTECTED WITH HAY BALE BARRIERS TO LIMIT EROSION.
- 7. STABILIZE ALL DITCHLINES AND PONDS PRIOR TO DIRECTING FLOW INTO THEM, CONSTRUCT DRAINAGE SYSTEM SEWER AND OTHER SUBSURFACE UTILITIES.
- 8. COMMENCE CONSTRUCTION OF ROADWAY, PERFORM EXCAVATION ACTIVITIES REQUIRED TO ACHIEVE SUBGRADE ELEVATION. ALL EXCAVATED EMBANKMENTS, DITCHES, SWALES AND ROADWAY CROSS CULVERTS SHALL BE INSTALLED AND STABILIZED. ALL SWALES AND DITCHLINES SHALL BE PROTECTED FROM EROSION BY IMPLEMENTATION OF HAY BALE SILTATION FENCES AS SHOWN ON PROJECT PLANS. DIVERT STORMWATER RUNOFF THROUGH THE USE OF TEMPORARY CULVERTS, OR OTHER MEANS NECESSARY PRIOR TO THE COMPLETIONS OF A FUNCTIONAL STORM DRAINAGE SYSTEM, SLOPES AND EMBANKMENTS SHALL BE STABILIZED BY TRACKING AND TEMPORARY SEEDING WITH WINTER RYE PRIOR TO TURF ESTABLISHMENT. ALL DITCHES AND SWALES SHALL BE STABILIZED PRIOR TO HAVING RUNOFF DIRECTED TO THEM.
- 9. COMPLETE CONSTRUCTION OF ROADWAY EMBANKMENTS BY ADDING APPROPRIATE BASE MATERIALS GRADED TO PROPER ELEVATION. 10. APPLY TOPSOIL TO ROADWAY SLOPES AND OTHER AREAS DISTURBED BY CONSTRUCTION. TOPSOIL USED MAY BE NATIVE ORGANIC MATERIAL SCREENED SO AS TO BE FREE OF ROOTS, BRANCHES, STONES AND OTHER DELETERIOUS MATERIALS. TOPSOIL SHALL BE APPLIED SO AS TO PROVIDE A MINIMUM OF A 4-INCH COMPACTED THICKNESS. UPON COMPLETION OF TOPSOILING, FINISHED SECTIONS ARE TO BE LIMED, SEEDED AND MULCHED. CONSTRUCTION PERSONNEL SHALL INSPECT COMPLETED SECTIONS OF WORK ON A REGULAR REQUIRED (STAPLE ON 18 BASIS AND REMEDY ANY PROBLEM AREAS UNTIL A HEALTHY STAND OF GRASS HAS BECOME ESTABLISHED.
  - 11. PERFORM FINE GRADING OF ROADWAY BASE MATERIALS. 12. MAINTAIN, REPAIR AND REPLACE AS NECESSARY TEMPORARY EROSION CONTROL MEASURES UNTIL SUCH TIME AS THE ENTIRE CONSTRUCTION AREA HAS BEEN STABILIZED (A MINIMUM OF ONE WINTER SHALL HAVE PASSED)
  - 13. AFTER STABILIZATION REMOVE AND SUITABLY DISPOSE OF TEMPORARY EROSION CONTROL MEASURES 14. MONITOR CONSTRUCTION ACTIVITIES ON INDIVIDUAL LOTS TO INSURE CONSTRUCTION ACTIVITIES ARE BEING PERFORMED IN SUCH A WAY AS NOT TO ENDANGER THE INTEGRITY OF ROADWAY EMBANKMENTS, STORMWATER SYSTEMS AND UTILITIES. ALL DRIVEWAYS ACROSS
  - DITCHLINES SHALL HAVE CULVERTS INSTALLED IN ACCORDANCE WITH LOCAL REQUIREMENTS. 15. LOT DISTURBANCE, OTHER THAN THAT SHOWN ON THE APPROVED PLANS, SHALL NOT COMMENCE UNTIL AFTER THE ROADWAY HAS THE BASE COURSE TO DESIGN ELEVATION AND THE ASSOCIATED DRAINAGE IS COMPLETE AND STABLE.

#### **EROSION CONTROL NOTES:**

4 INCH OVERLAP OF JUTE

STRIPS WHERE TWO OR

MORE STRIP WIDTHS ARE

INCH CENTERS)

ON 2 INCH CENTERS

TYPICAL STAPLES

No. 11 GAUGE WIRE

1. EXPOSED EARTHWORK SHALL BE CONFINED TO AS LIMITED AN AREA AS IS PRACTICAL AT ANY GIVEN TIME THROUGHOUT THE CONSTRUCTION SEQUENCE. AT NO TIME SHALL MORE THAN FIVE (5) ACRES OF SITE AREA BE IN AN UNSTABLE CONDITION. NO GIVEN AREA OF THE SITE SHALL BE LEFT IN AN UNSTABILIZED CONDITION FOR A PERIOD OF TIME EXCEEDING THIRTY (30) CALENDAR DAYS. 2. TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH PROJECT PLANS. IN ADDITION, SIMILAR

MEASURES SHALL BE INSTALLED WHERE AND WHEN THE FIELD CONDITION, OR FIELD OPERATION OF THE INDIVIDUAL SITE CONTRACTOR

- MAY WARRANT. ALL TEMPORARY EROSION CONTROL MEASURES USED SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER 0.25" OF RAINFALL OR MORE. THEY SHALL BE CLEANED AND MAINTAINED AND OTHERWISE KEPT IN AN EFFECTIVE OPERATING MANNER
- 3. ALL DISTURBED AREAS DESIGNATED TO BE TURF, SHALL RECEIVE A MINIMUM APPLICATION OF 4 INCHES OF LOAM (COMPACTED
- THICKNESS), PRIOR TO FINAL SEEDING AND MULCHING. 4. ALL SWALES AND DITCHLINES SHALL BE PERIODICALLY CLEANED OF DEPOSITED SEDIMENT SO AS TO MAINTAIN AN EFFECTIVE GRADE AND
- CROSS SECTION. ALL SWALES AND DITCHLINES SHALL BE FULLY STABILIZED PRIOR TO HAVING STORMWATER DIRECTED TOWARDS THEM. 5. IN THE EVENT THAT, DURING CONSTRUCTION OF ANY PORTION OF THIS PROJECT, A WINTER SHUTDOWN IS NECESSARY, THE CONTRACTOR SHALL STABILIZE ALL INCOMPLETE WORK AND PROVIDE FOR SUITABLE METHODS OF DIVERTING RUNOFF IN ORDER TO ELIMINATE SHEET FLOW ACROSS FROZEN SURFACES.
- 6. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
  - A. BASE COURSE GRAVELS ARE INSTALLED IN AREAS TO BE PAVED; B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
  - A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED; OR
- D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED. 7. DUST SHALL BE CONTROLLED BY THE USE OF WATER AS NECESSARY THROUGHOUT THE CONSTRUCTION PERIOD, IN ACCORDANCE WITH
- 8. IN NO WAY ARE THOSE TEMPORARY EROSION CONTROL MEASURES INDICATED ON THESE PLANS TO BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR SHALL USE JUDGEMENT IN INSTALLING SUPPLEMENTARY EROSION CONTROL MEASURES WHERE AND WHEN SPECIFIC SITE
- CONDITIONS AND/OR CONSTRUCTION METHODOLOGIES MAY WARRANT. 9. AREAS HAVING FINISH GRADE SLOPES OF 3: 1 OR STEEPER, SHALL BE STABILIZED WITH JUTE MATTING WHEN AND IF FIELD CONDITIONS WARRANT, OR IF SO ORDERED. JUTE MATTING INSTALLED TO CONFORM WITH THE RECOMMENDED BEST MANAGEMENT PRACTICE
- OUTLINED IN VOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUAL "EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION." 10. ALL DETENTION PONDS AND TREATMENT SWALES SHALL BE CONSTRUCTED PRIOR TO ANY EARTH MOVING ACTIVITIES THAT WILL INFLUENCE
- 11. ALL ROADWAYS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE. 12. ALL CUT AND FILL SLOPES SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

#### ENVIRONMENTAL MONITORING

- THE APPLICANT'S CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AN ENVIRONMENTAL MONITOR TO COMPLETE ALL NECESSARY INSPECTIONS AND REPORTS REQUIRED BY THE DEPARTMENT OF ENVIRONMENTAL SERVICES AS OUTLINED IN ENV-WQ 1505. 2. SUBJECT TO (3), BELOW, THE ENVIRONMENTAL MONITOR SHALL:
- a. INSPECT THE PROJECT SITE AT LEAST ONCE EACH WEEK FROM THE START OF TERRAIN ALTERATION ACTIVITIES UNTIL ALL TERRAIN ALTERATION ACTIVITIES ARE COMPLETED AND THE SITE IS STABILIZED; b. IN ADDITION TO REGULAR WEEKLY INSPECTIONS, INSPECT THE PROJECT SITE DURING ANY RAIN EVENT IN WHICH 0.5 INCH OF
- PRECIPITATION OR MORE FALLS WITHIN A 24 HOUR PERIOD, PROVIDED THAT IF THE ENVIRONMENTAL MONITOR IS UNABLE TO BE PRESENT DURING SUCH A STORM, THE MONITOR SHALL INSPECT THE SITE WITHIN 24 HOURS OF THE RAIN EVENT; c. SUBMIT A WRITTEN REPORT, STAMPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST, TO THE DEPARTMENT WITHIN 24 HOURS OF
- DESCRIBES THE PROGRESS OF THE PROJECT, INCLUDING WHETHER ALL CONDITIONS OF THE PERMIT ARE BEING MET AND, IF NOT, WHICH REQUIREMENTS ARE NOT BEING MET IF ANY REQUIREMENTS ARE NOT BEING MET, AN EXPLANATION OF THE CORRECTIVE ACTION(S) THAT WILL BE OR ARE BEING TAKEN TO

BRING THE PROJECT INTO COMPLIANCE WITH APPLICABLE REQUIREMENTS AND THE DEADLINE BY WHICH SUCH ACTIONS WILL BE

- COMPLETED: AND INCLUDES PHOTOGRAPHS OF THE SITE THAT ARE REPRESENTATIVE OF THE PROJECT; AND d. RETAIN A COPY OF THE REPORT PREPARED PURSUANT TO (c), ABOVE, ON-SITE FOR REVIEW DURING SITE INSPECTIONS BY FEDERAL,
- STATE, AND LOCAL OFFICIALS. ROUTINE INSPECTION FREQUENCY MAY BE REDUCED FROM ONCE EACH WEEK TO AT LEAST ONCE EACH MONTH IF EITHER OF THE FOLLOWING CONDITIONS IS MET:

THE PROJECT IS IN AN AREA WHERE FROZEN CONDITIONS ARE ANTICIPATED TO CONTINUE FOR MORE THAN ONE MONTH.

- a. WORK HAS BEEN SUSPENDED AND THE ENTIRE SITE IS STABILIZED IN ACCORDANCE WITH ENV-WQ 1505.04; OR
- b. RUNOFF IS UNLIKELY BECAUSE: THE GROUND IS FROZEN OR THE SITE IS COVERED WITH SNOW OR ICE; AND

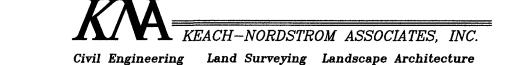
## CONSTRUCTION DETAILS

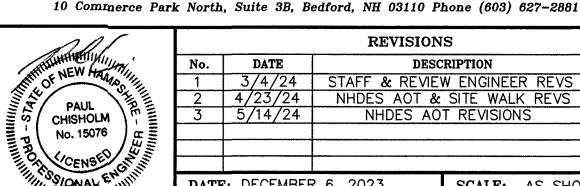
## BARRETT HILL SUBDIVISION

MAP 151 LOT 59 75 BARRETTS HILL ROAD HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

#### OWNER/APPLICANT: BARRETT HILL, LLC

21 CONTINENTAL BLVD. DOOR #4 MERRIMACK, NH 03054 H.C.R.D. BK. 9700 PG. 287





		REVISION	NS .	
No.	DATE	DES	CRIPTION	BY
1	3/4/24	STAFF & REVIE	W ENGINEER REVS	PCM
2	4/23/24	NHDES AOT 8	SITE WALK REVS	PCM
3	5/14/24	NHDES AC	OT REVISIONS	PCM
<b>5</b> 4 <b>5</b> 7 7	DEOEMBEE	0007	I agus II agus	
DATI	: DECEMBER	R 6, 2023	SCALE: AS SHOW	VN
 PRO.	JECT NO: 23	3-0414-1	SHEET: 20 OF 2	24

#### SILTSAK DETAIL NOT TO SCALE (MARCH 2008)

#### SILTSAK<sup>®</sup>NOTES:

- 1. THE SILTSAK SHALL BE MANUFACTURED FROM WOVEN POLYPROPYLENE AND SEWN BY A DOUBLE NEEDLE MACHINE, USING A HIGH STRENGTH NYLON THREAD.
- 2. THE SILTSAK SEAMS HAVE A CERTIFIED WIDE WIDTH STRENGTH PER ASTM D-4884 STANDARDS AS FOLLOWS:

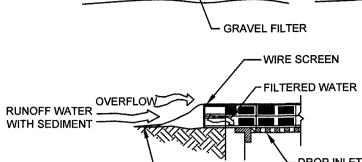
TEST RESULT 165.0 LBS/IN SILTSAK STYLE REGULAR FLOW ASTM D-4884 114.6 LBS/IN **ASTM D-4884** HI-FLOW

- 3. THE SILTSAK WILL BE MANUFACTURED TO FIT THE OPENING OF THE CATCH BASIN OR DROP INLET. THE SILTSAK WILL HAVE THE FOLLOWING FEATURES:
  - A. TWO DUMP STRAPS ATTACHED AT THE BOTTOM TO FACILITATE THE EMPTYING
  - A. LIFTING LOOPS AS AN INTEGRAL PART OF THE SYSTEM TO BE USED TO LIFT THE SILTSAK FROM THE BASIN; AND
  - B. A RESTRAINT CORD APPROXIMATELY HALFWAY UP THE SACK TO KEEP THE SIDES AWAY FROM THE CATCH BASIN WALLS. THIS YELLOW CORD IS ALSO A VISIBLE MEANS OF INDICATING WHEN THE SACK SHOULD BE EMPTIED, CLEANED
- 4. THE GEOTEXTILE FABRIC SHALL BE WOVEN POLYPROPYLENE FABRIC WITH THE

#### SILTSAK REGULAR FLOW:

PROPERTY	TEST METHOD	TEST RESULT
GRAB TENSILE	ASTM D-4643	300 LBS.
GRAB ELONGATION	ASTM D-4631	20%
PUNCTURE	ASTM D-4833	120 LBS.
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS.
UV RESISTANCE	ASTM D-4355	80%
APPARENT OPENING	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL./MIN./F
PERMITTIVITY	ASTM D-4491	0.55 SEC.

OR SILTSAK HI-FLOW:		
PROPERTY	TEST METHOD	TEST RESULT
GRAB TENSILE	ASTM D-4632	265 LBS.
GRAB ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	135 LBS.
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS.
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	20 GAL./MIN./FT2
PERMITTIVITY	ASTM D-4491	1.5 SEC.



WIRE SCREEN-

1. CONCRETE BLOCKS SHOULD BE PLACED LENGTHWISE ON THEIR SIDES IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET. THE ENDS OF EACH BLOCK SHOULD BE ABUTTING. THE HEIGHT OF THE BARRIER CAN BE VARIED DEPENDING ON THE DESIGN BY STACKING VARIOUS COMBINATIONS OF DIFFERENT SIZED BLOCKS. THE BARRIER SHOULD BE A MINIMUM OF 12 INCHES HIGH AND A MAXIMUM OF 24 INCHES HIGH.

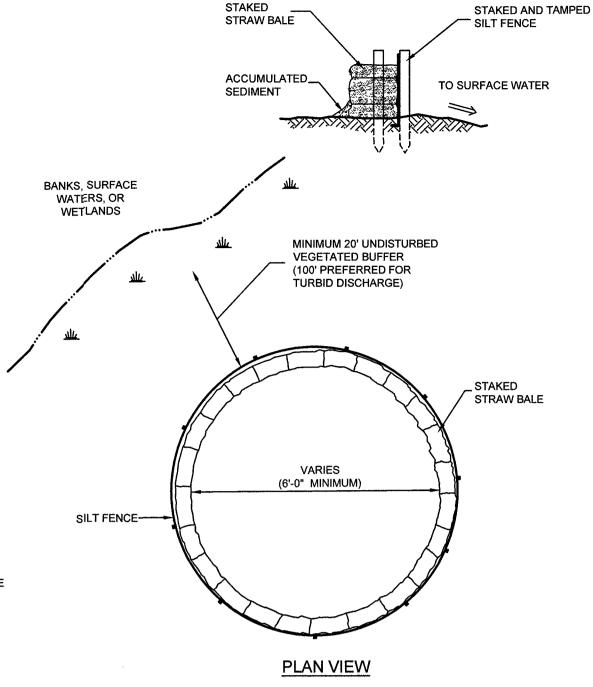
WITH GRATE

- CONCRETE BLOCK

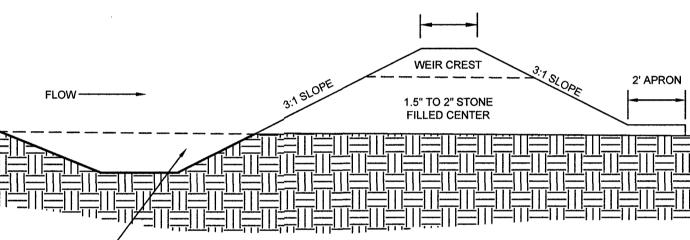
- HARDWARE CLOTH OR WIRE MESH SHOULD BE PLACED OVER OPENINGS OF THE CONCRETE BLOCKS AND EXTENDED AT LEAST 12 INCHES AROUND THE OPENING TO PREVENT AGGREGATE FROM BEING TRANSPORTED THROUGH THE OPENINGS IN THE BLOCK.
- 3. SEWER STONE OR OTHER CLEAN COARSE AGGREGATE SHOULD BE PLACED AGAINST THE BLOCK TO THE TOP OF THE BARRIER.

#### **BLOCK & GRAVEL DROP INLET SEDIMENT FILTER**

NOT TO SCALE (MARCH 2008)



#### SEDIMENT RETENTION BASIN NOT TO SCALE (AUGUST 2013)

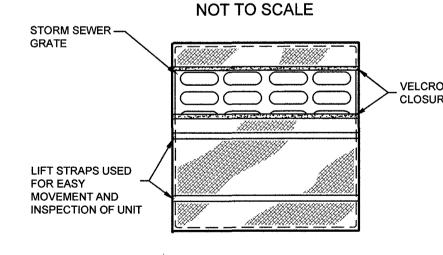


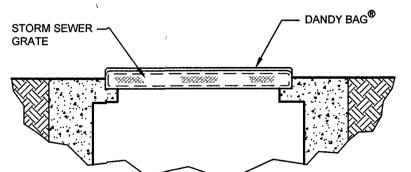
#### **EXCAVATE FOR** REQUIRED STORAGE

#### **SECTION A-A**

- 1. THE TRAP SHALL BE INSTALLED AS CLOSE TO THE DISTURBED AREA OR SOURCE OF SEDIMENT AS POSSIBLE.
- THE MINIMUM VOLUME OF THE TRAP SHALL BE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE OF DRAINAGE AREA. 4. THE SIDE SLOPES OF THE TRAP SHALL BE 3:1 OR FLATTER, AND SHALL BE STABILIZED IMMEDIATELY AFTER THEIR
- 5. THE OUTLET OF THE TRAP SHALL BE A MINIMUM OF ONE FOOT BELOW THE CREST OF THE TRAP AND SHALL DISCHARGE TO
- A STABILIZED AREA.
- 6. THE TRAP SHALL BE CLEANED WHEN 50 PERCENT OF THE ORIGINAL VOLUME IS FILLED. THE MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.
- 8. SEDIMENT TRAPS AND/OR BASINS SHOULD BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL BASINS/PONDS ARE

#### TEMPORARY SEDIMENT TRAP DETAIL





#### HI-FLOW DANDY BAG® (SAFETY ORANGE)

MECHANICAL PROPERTIES	TEST METHOD	UNITS	MARV
GRAB TENSILE STRENGTH	ASTM D 4632	kN (lbs)	1.62 (365) x 0.89 (200
GRAB TENSILE ELONGATION	ASTM D 4632	%	24 x 10
PUNCTURE STRENGTH	ASTM D 4833	kN (lbs)	0.40 (90)
MULLEN BURST STRENGTH	ASTM D 3786	kPa (psi)	3097 (450)
TRAPEZOID TEAR STRENGTH	ASTM D 4533	kN (lbs)	0.51 (115) x 0.33 (75)
UV RESISTANCE	ASTM D 4355	%	90
APPARENT OPENING SIZE	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
FLOW RATE	ASTM D 4491	1/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	5907 (145)
PERMITTIVITY	ASTM D 4491	Sec <sup>-1</sup>	2.1

DANDY BAG® NOT TO SCALE (APRIL 2010)

## CONSTRUCTION DETAILS

STAKE ON 10'

WATER FLOW

2"x2" WOODEN ---

FILTREXX®SILTSOXX (12"-18" TYPICAL) OR ---

APPROVED EQUAL

STAKE

WORK AREA

LINEAL SPACING

PLAN VIEW

SECTION VIEW

NOTES:

1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.

SILTSOXX COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS.

MAY REQUIRE LARGER SOCKS PER THE ENGINEER.

FILTREXX<sup>®</sup> SILTSOXX<sup>™</sup>DETAIL

NOT TO SCALE

(AUGUST 2011)

3. SILTSOXX<sup>(TM)</sup> DEPICTED IS FOR MINIMUM SLOPES. GREAT SLOPES

4. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED

AREA TO BE

PROTECTED

FILTREXX<sup>®</sup>COMPOST

-SILTSOXX(TM)

3" TO 4"

AREA TO BE PROTECTED

#### BARRETT HILL SUBDIVISION MAP 151 LOT 59

75 BARRETTS HILL ROAD HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

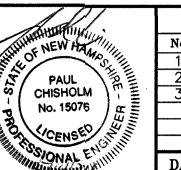
#### OWNER/APPLICANT:

BARRETT HILL, LLC 21 CONTINENTAL BLVD. DOOR #4 MERRIMACK, NH 03054 H.C.R.D. BK. 9700 PG. 287

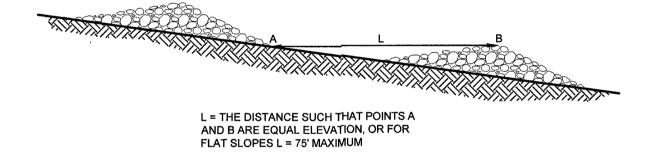


KEACH-NORDSTROM ASSOCIATES, INC.

Civil Engineering Land Surveying Landscape Architecture 10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

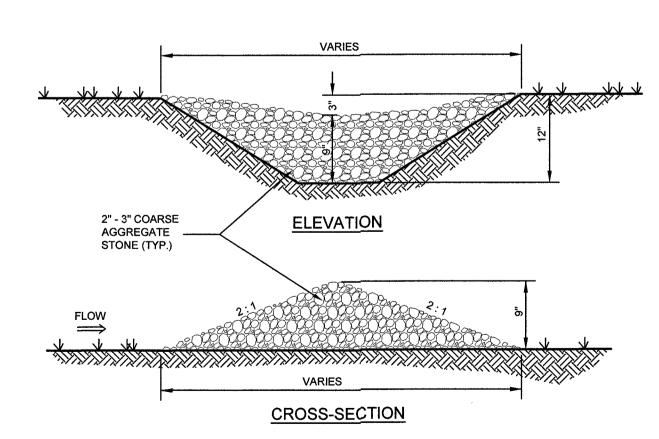


<u> </u>		REVISI	ONS		
No.	DATE	D	ESCRIPTION		BY
1	3/4/24	STAFF & REV	VIEW ENGINEER	REVS	PCM
2	4/23/24	NHDES AOT	& SITE WALK	REVS	PCM
3	5/14/24	NHDES	AOT REVISIONS		PCM
DATE	: DECEMBER	R 6, 2023	SCALE: A	AS SHOW	N
PRO.	IECT NO: 2	3-0414-1	SHEET: 2	1 <b>OF</b> 2	4



#### STONE CHECK DAM SPACING DETAIL NOT TO SCALE

(MARCH 2008)



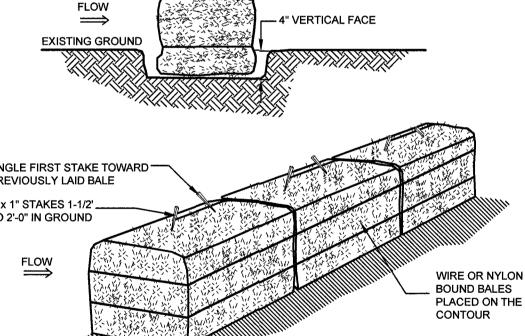
STONE CHECK DAM DETAIL NOT TO SCALE (MARCH 2008)

SIGNATURE DATE: \_\_\_

#### APPROVED BY THE HUDSON, NH PLANNING BOARD DATE OF MEETING:

SIGNATURE DATE: \_

SUBDIVISIONS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FOR AN APPLICANT TO GAIN AN EXEMPTION FROM ALL SUBSEQUENT CHANGES IN SUBDIVISION REGULATIONS, SITE PLAN REGULATIONS AND CHANGES TO THE ZONING ORDINANCE, SEE NH RSA 674: 39.

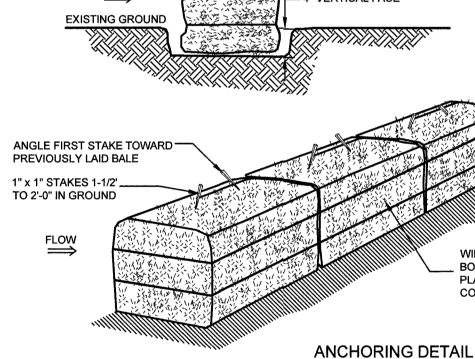


#### **CONSTRUCTION SPECIFICATIONS:**

- 2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4".
- THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED
- 4. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
- HAMPSHIRE INVASIVE SPECIES LIST.

#### **STRAW BALE BARRIER**

NOT TO SCALE



- 1. BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE
- 3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES DRIVEN TOWARD THE PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
- 5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS
- 6. BALES SHOULD BE FREE FROM ANY PLANT MATERIAL FOUND ON THE NEW

(JULY 2010)

APPROVED BY THE HUDSON, NH PLANNING BOARD

SUBDIVISIONS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD

MEETING FINAL APPROVAL. FOR AN APPLICANT TO GAIN AN EXEMPTION FROM

REGULATIONS AND CHANGES TO THE ZONING ORDINANCE, SEE NH RSA 674: 39.

ALL SUBSEQUENT CHANGES IN SUBDIVISION REGULATIONS, SITE PLAN

SIGNATURE DATE: \_

SIGNATURE DATE:\_

DATE OF MEETING:

#### BEST MANAGEMENT PRACTICES FOR BLASTING

IF MORE THAN 5000 CUBIC YARDS ARE BLASTED:
IDENTIFY DRINKING WATER WELLS LOCATED WITHIN 2000 FEET OF THE PROPOSED BLASTING ACTIVITIES. DEVELOP A GROUNDWATER QUALITY SAMPLING

PROGRAM TO MONITOR FOR NITRATE AND NITRITE EITHER IN THE DRINKING WATER SUPPLY WELLS OR IN OTHER WELLS THAT ARE REPRESENTATIVE OF THE DRINKING WATER SUPPLY WELLS IN THE AREA. THE PLAN MUST INCLUDE PRE AND POST BLAST WATER QUALITY MONITORING AND BE APPROVED BY NHDES PRIOR TO INITIATING BLASTING. THE GROUNDWATER SAMPLING PROGRAM MUST BE IMPLEMENTED ONCE APPROVED BY NHDES.

#### BEST MANAGEMENT PRACTICES FOR BLASTING.

ALL ACTIVITIES RELATED TO BLASTING SHALL FOLLOW BEST MANAGEMENT PRACTICES (BMPS) TO PREVENT CONTAMINATION OF GROUNDWATER INCLUDING PREPARING, REVIEWING AND FOLLOWING AN APPROVED BLASTING PLAN; PROPER DRILLING, EXPLOSIVE HANDING AND LOADING PROCEDURES; OBSERVING THE ENTIRE BLASTING PROCEDURES; EVALUATING BLASTING PERFORMANCE; AND HANDLING AND STORAGE OF BLASTED ROCK.

#### (1) LOADING PRACTICES.

(2) EXPLOSIVE SELECTION.

- THE FOLLOWING BLASTHOLE LOADING PRACTICES TO MINIMIZE ENVIRONMENTAL EFFECTS SHALL BE FOLLOWED:

  (A) DRILLING LOGS SHALL BE MAINTAINED BY THE DRILLER AND COMMUNICATED DIRECTLY TO THE BLASTER. THE LOGS SHALL INDICATE DEPTHS AND LENGTHS
- OF VOIDS, CAVITIES, AND FAULT ZONES OR OTHER WEAK ZONES ENCOUNTERED AS WELL AS GROUNDWATER CONDITIONS.

  (B) EXPLOSIVE PRODUCTS SHALL BE MANAGED ON SITE SO THAT THEY ARE EITHER USED IN THE BOREHOLE, RETURNED TO THE THE DELIVERY VEHICLE, OR
- PLACED IN SECURE CONTAINERS FOR OFF SITE DISPOSAL

  (C) SPILLAGE AROUND THE BOREHOLE SHALL EITHER BE PLACED IN THE BOREHOLE OR CLEANED UP AND RETURNED TO AN APPROPRIATE VEHICLE FOR
- HANDLING OR PLACEMENT IN SECURED CONTAINERS FOR OFF SITE DISPOSAL.

  (D) LOADED EXPLOSIVES SHALL BE DETONATED AS SOON AS POSSIBLE AND SHALL NOT BE LEFT IN THE BLASTHOLES OVERNIGHT, UNLESS WEATHER OR OTHER SAFETY CONCERNS REASONABLY DICTATE THAT DETONATION SHOULD BE POSTPONED.
- (E) LOADING EQUIPMENT SHALL BE CLEANED IN AN AREA WHERE WASTEWATER CAN BE PROPERLY CONTAINED AND HANDLED IN A MANNER THAT PREVENTS RELEASE OF CONTAMINANTS TO THE ENVIRONMENT.
- (F) EXPLOSIVES SHALL BE LOADED TO MAINTAIN GOOD CONTINUITY IN THE COLUMN LOAD TO PROMOTE COMPLETE DETONATION. INDUSTRY ACCEPTED LOADING PRACTICES FOR PRIMING, STEMMING, DECKING AND COLUMN RISE NEED TO BE ATTENDED TO.
- THE FOLLOWING BMPS SHALL BE FOLLOWED TO REDUCE THE POTENTIAL FOR GROUNDWATER CONTAMINATION WHEN EXPLOSIVES ARE USED:

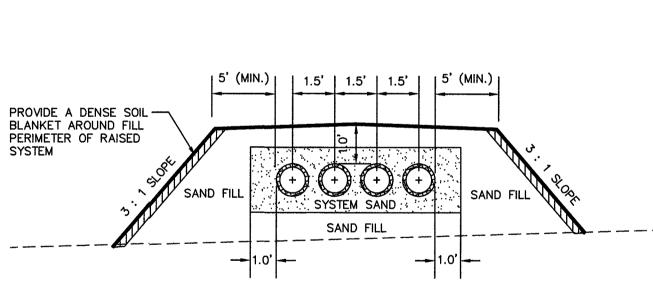
  (A) EXPLOSIVE PRODUCTS SHALL BE SELECTED THAT ARE APPROPRIATE FOR SITE CONDITIONS AND SAFE BLAST EXECUTION.
- (A) EXPLOSIVE PRODUCTS SHALL BE SELECTED THAT ARE APPROPRIATE FOR SITE CONDITIONS AND SAFE BLAST EXECUTION.

  (B) EXPLOSIVE PRODUCTS SHALL BE SELECTED THAT HAVE THE APPROPRIATE WATER RESISTANCE FOR THE SITE CONDITIONS PRESENT TO MINIMIZE THE POTENTIAL FOR HAZARDOUS EFFECT OF THE PRODUCT UPON GROUNDWATER.
- (3) PREVENTION OF MISFIRES.

  APPROPRIATE PRACTICES SHALL BE DEVELOPED AND IMPLEMENTED TO PREVENT MISFIRES.
- (4) MUCK PILE MANAGEMENT.

  MUCK PILES (THE BLASTED PIECES OF ROCK) AND ROCK PILES SHALL BE MANAGED IN A MANNER TO REDUCE THE POTENTIAL FOR CONTAMINATION BY IMPLEMENTING THE FOLLOWING MEASURES:
- (A) REMOVE THE MUCK PILE FROM THE BLAST AREA AS SOON AS REASONABLY POSSIBLE.
- (B) MANAGE THE INTERACTION OF BLASTED ROCK PILES AND STORMWATER TO PREVENT CONTAMINATION OF WATER SUPPLY WELLS OR SURFACE WATER. (5) SPILL PREVENTION MEASURES AND SPILL MITIGATION.
- PILL PREVENTION AND SPILL MITIGATION MEASURES SHALL BE IMPLEMENTED TO PREVENT THE RELEASE OF FUEL AND OTHER RELATED SUBSTANCES TO THE ENVIRONMENT. THE MEASURES SHALL INCLUDE AT A MINIMUM:
- (A) THE FUEL STORAGE REQUIREMENTS SHALL INCLUDE:
- 1. STORAGE OF REGULATED SUBSTANCES ON AN IMPERVIOUS SURFACE.
- 2. SECURE STORAGE AREAS AGAINST UNAUTHORIZED ENTRY.
- 3. LABEL REGULATED CONTAINERS CLEARLY AND VISIBLY.
  4. INSPECT STORAGE AREAS WEEKLY.
- 5. COVER REGULATED CONTAINERS IN OUTSIDE STORAGE AREAS.
- 6. WHEREVER POSSIBLE, KEEP REGULATED CONTAINERS THAT ARE STORED OUTSIDE MORE THAN 50 FEET FROM SURFACE WATER AND STORM DRAINS, 75
- FEET FROM PRIVATE WELLS, AND 400 FEET FROM PUBLIC WELLS.
  7. SECONDARY CONTAINMENT IS REQUIRED FOR CONTAINERS CONTAINING REGULATED SUBSTANCES STORED OUTSIDE, EXCEPT FOR ON PREMISE USE
- HEATING FUEL TANKS, OR ABOVEGROUND OR UNDERGROUND STORAGE TANKS OTHERWISE REGULATED.

  (B) THE FUEL HANDLING REQUIREMENTS SHALL INCLUDE:
- 1. EXCEPT WHEN IN USE, KEEP CONTAINERS CONTAINING REGULATED SUBSTANCES CLOSED AND SEALED.
- PLACE DRIP PANS UNDER SPIGOTS, VALVES, AND PUMPS.
   HAVE SPILL CONTROL AND CONTAINMENT EQUIPMENT READILY AVAILABLE IN ALL WORK AREAS.
- 4. USE FUNNELS AND DRIP PANS WHEN TRANSFERRING REGULATED SUBSTANCES.
- 5. PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS SURFACE.
- (C) THE TRAINING OF ON SITE EMPLOYEES AND THE ON SITE POSTING OF RELEASE RESPONSE INFORMATION DESCRIBING WHAT TO DO IN THE EVENT OF A SPILL OF REGULATED SUBSTANCES.
- (D) FUELING AND MAINTENANCE OF EXCAVATION, EARTHMOVING AND OTHER CONSTRUCTION RELATED EQUIPMENT WILL COMPLY WITH THE REGULATIONS OF THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES [NOTE THESE REQUIREMENTS ARE SUMMARIZED IN WD-DWGB-22-6 BEST MANAGEMENT PRACTICES FOR FUELING AND MAINTENANCE OF EXCAVATION AND EARTHMOVING EQUIPMENT" OR ITS SUCCESSOR DOCUMENT.



FILL SPECIFICATION
SYSTEM SAND TO BE 6" MINIMUM OF MEDIUM TO COARSE
SAND WITH AN EFFECTIVE PARTICLE SIZE OF 0.25 MM TO
2.00 MM, WITH NO GREATER THAN 2% PASSING A #200
SIEVE AND NO PARTICLES LARGER THAN 3/4" AROUND
THE CIRCUMFERENCE OF THE ENVIRO-SEPTIC PIPE. ALL
OTHER FILL USED IN RAISED SYSTEMS SHALL BE CLEAN
BANK RUN SAND, FREE FROM TOPSOIL, HUMUS, DREDGING,
DEBRIS. OR STONES LARGER THAN 6 IN ANY DIMENSION

## TYPICAL ENVIRO—SEPTIC CROSS SECTION -NOT TO SCALE—

IN ACCORDANCE WITH ENV-WQ 1021.03

EDA PLAN DETAIL

SCALE: 1" = 10'



#### NOTE: 1. MARKERS SHALL BE PLACED:

- . MARKERS SHALL BE PLACED:
  A. EVERY 100' ON BOUNDARY LINES BETWEEN RESIDENT
- LOTS AND OPEN SPACE; AND

  B. AT ANY POINT IN WHICH A BOUNDARY LINE CHANGES

4" OPEN SPACE BOUNDARY MARKER
NOT TO SCALE

- ENVIRO-SEPTIC DISTIBUTION BOX W/ FLOW -EQUALIZERS ON OUTLETS - 3" MIN. LOAM & SEED OVER 4" SCH 40 PVC ALL EXPOSED SURFACES TO S=0.02 (MIN.) 4" SCH 40 PVC 3:1 SLOPE 1,500 GALLON CONC. SEPTIC TANK W/ ZABEL A1800, ÓR EQUAL, EFFLUENT FILTER ON OUTLET SAND AREA PERIMETER OFFSET ADAPTER -APPROX.-FOUNDATION DRAIN \*\*SEPTIC TANK TO BE EXIST. -REMOVE TOPSOIL BEFORE BACKFILLING. FILL MATERIAL NOTE: EFFLUENT DISPOSAL AREA SHOWN IS A SEALED & GROUTED GRADE BELOW THE 6" SPECIFICATION SAND IN RAISED SYSTEMS "DISTRIBUTION BOX SYSTEM" AS DEPICTED IN THE NEW HAMPSHIRE ENVIRO—SEPTIC DESIGN AND INSTALLATION SHALL BE CLEAN FILL PER ENV-WQ 1021.03. FILL MUST BE COMPACTED TO PREVENT UNEVEN SETTLING. MANUAL (2003 EDITION).

TYPICAL SECTION OF PROPOSED SEPTIC SYSTEM
-NOT TO SCALE-

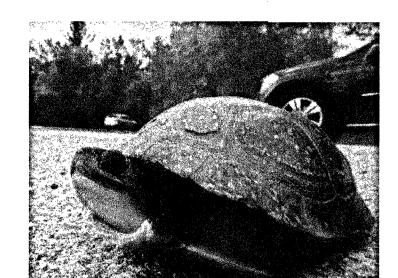


#### WATCH FOR RARE TURTLES



Turtles may be attracted to disturbed ground during nesting season (May 15th – June 30th).

Turtles are most active from April 15th - October 15th.

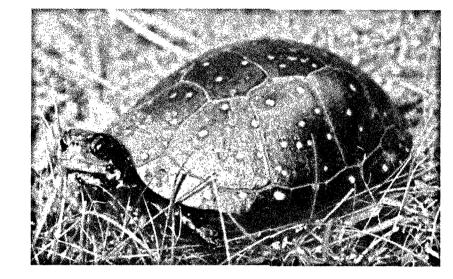


Blanding's turtle (State Endangered)

Large, dark/black domed shell with lighter speckles.

Distinct yellow throat/chin.

Semi-aquatic- uses both wetland and terrestrial habitats.



Spotted turtle (State Threatened)

Small, mostly aquatic with black or dark brown with yellow spots.

Fairly flat shell compared to

. . . .

Blanding's turtle.

Spots vary in color and number.

Semi-aquatic - uses both wetland and terrestrial habitats.

Blanding's and spotted turtles are protected by state laws. It is illegal to capture, harass or harm these species, including their nests. Handle ONLY if necessary to move out of harms way. Move to the nearest location in the direction they were moving and contact NHFG. Do not disturb nests.

Report sightings in accordance with NHFG conditions. Contact NHFG Wildlife Biologist Melissa Winters 603-479-1129 (cell) anytime. Please report promptly, noting specific location and date – Photographs strongly encouraged.

## CONSTRUCTION DETAILS

#### BARRETT HILL SUBDIVISION

MAP 151 LOT 59
75 BARRETTS HILL ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:

BARRETT HILL, LLC
21 CONTINENTAL BLVD. DOOR #4

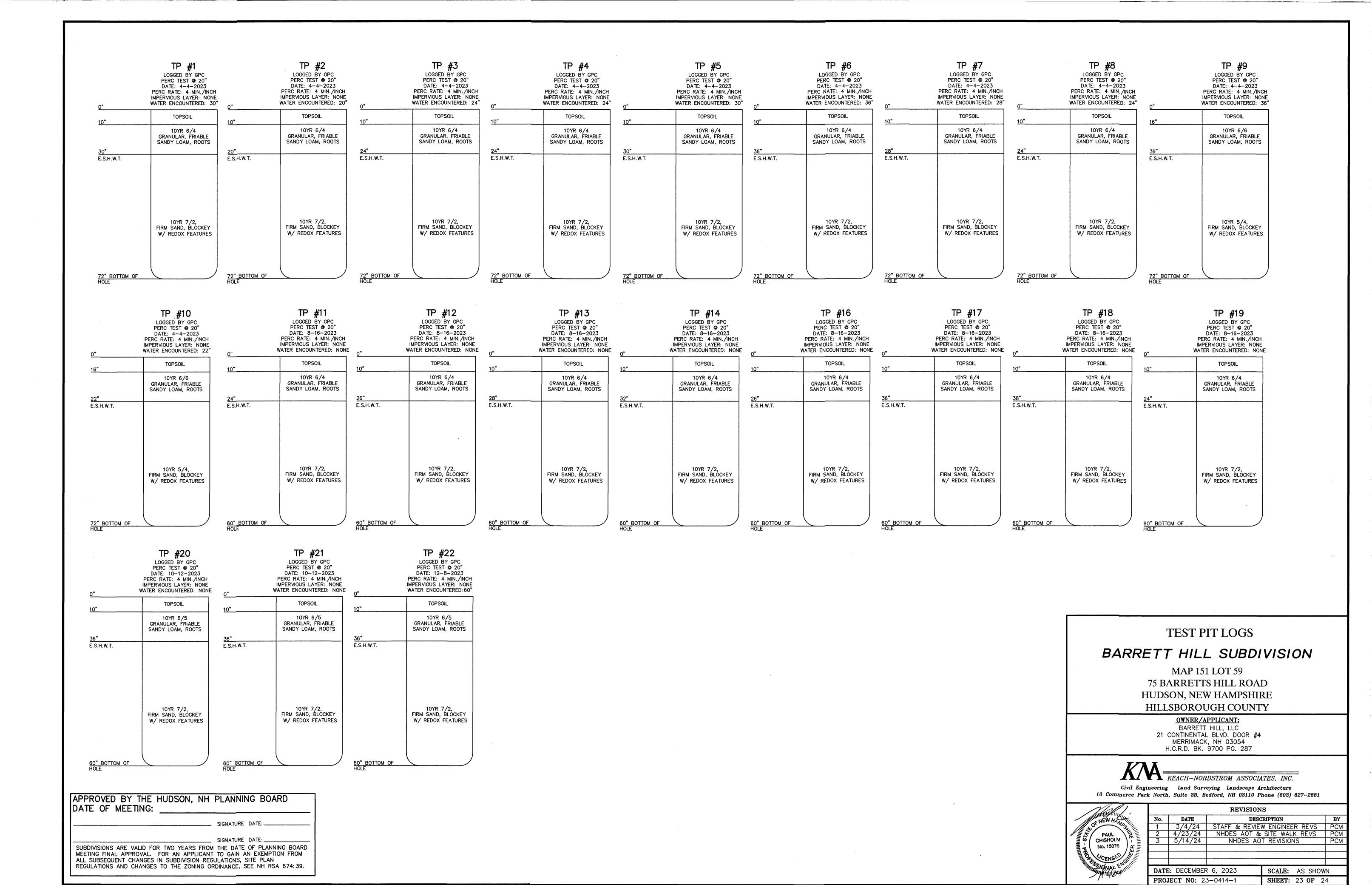
MERRIMACK, NH 03054

H.C.R.D. BK. 9700 PG. 287

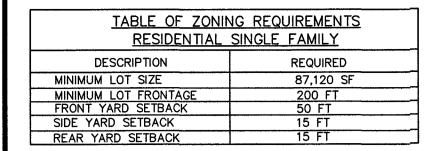


KEACH-NORDSTROM ASSOCIATES, INC.

		REVISIO	ONS	
No.	DATE	DI	ESCRIPTION	BY
1	3/4/24	STAFF & REV	IEW ENGINEER REVS	PCI
2	4/23/24	NHDES AOT	& SITE WALK REVS	PCI
3	5/14/24	NHDES /	AOT REVISIONS	PC
DATI	E: DECEMBER	R 6, 2023	SCALE: AS SHOW	٧N
PRO.	JECT NO: 2.	3-0414-1	SHEET: 22 OF 2	4



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#### **LEGEND**

PROPERTY LINE EDGE OF PAVEMENT

---- - - - EASEMENT STEEP SLOPE AREAS

	,		TABLE OF LOT	AREAS		
OT NUMBER	LOT AREA (SF)	FRONTAGE (FT)	STEEP SLOPES (SF)	WETLANDS (SF)	NON-CONTIGUOUS AREA (SF)	BLA (SF)
59-1	88,131	335.00	0	0	0	88,131
59-2	96,775	285.80	5,009	0	0	91,766
59-3	97,174	200.00	6,971	0	0	90,203
59-4	156,151	200.00	16,069	0	0	140,082
59-5	142,602	697.40	33,998	0	0	108,604
59-6	136,428	245.00	30,511	0	0	105,917
59-7	126,038	326.90	28,789	0	0	97,249
59-8	109,418	772.80	13,736	0	0	95,682
59-9	87,890	523.00	0	0	0	87,890
59-10	90,231	542.30	264	0	0	89,967
59-11	89,194	579.90	1,668	0	0	87,526
59-12	89,761	275.00	0	0	0	89,761
59-13	88,433	290.00	0	0	0	88,433

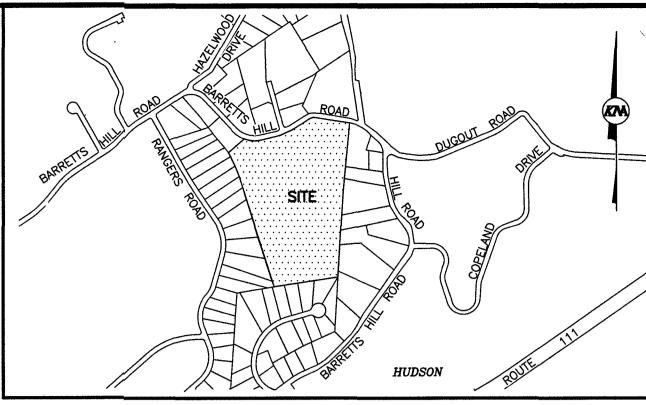
APPROVED BY THE HUDSON, NH PLANNING BOARD DATE OF MEETING:

SIGNATURE DATE: \_

SIGNATURE DATE: \_\_\_\_ SUBDIVISIONS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FOR AN APPLICANT TO GAIN AN EXEMPTION FROM ALL SUBSEQUENT CHANGES IN SUBDIVISION REGULATIONS, SITE PLAN REGULATIONS AND CHANGES TO THE ZONING ORDINANCE, SEE NH RSA 674:39.

PROPOSED LOT 12 PROPOSED LOT 1 ---PROPOSED LOT 13 PROPOSED LOT 11 PROPOSED LOT 9 PROPOSED LOT 10 PROPOSED LOT 3 PROPOSED LOT PROPOSED LOT 8 PROPOSED LOT 5 REFERENCE PLANS: H.C.R.D. PLAN #11141 H.C.R.D. PLAN #12696

PROPOSED LOT



LOCATION PLAN SCALE:  $1" = 1000' \pm$ 

NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE EXISTING CONDITIONS PRESENT ON ASSESSORS MAP 151 LOT 59

- 2. TOTAL SITE AREA = 1,540,250 S.F. OR 35.36 ACRES
- OWNER OF RECORD:
- BARRETT HILL, LLC 21 CONTINENTAL BLVD, DOOR #4 MERRIMACK, N.H. 03054

SIDE

4. THE SUBJECT PARCEL IS LOCATED WITHIN THE GENERAL (G-1) ZONING DISTRICT AND IS SUBJECT TO THE FOLLOWING DIMENSIONAL REQUIREMENTS:

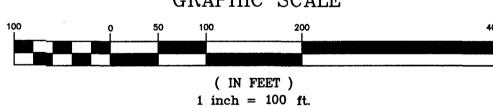
MINIMUM LOT AREA: MINIMUM FRONTAGE: 200 FT MINIMUM BUILDING SETBACKS:

FRONT

- 5. BOUNDARY AND TOPOGRAPHIC INFORMATION IS BASED ON A FIELD SURVEY PERFORMED BY THIS OFFICE IN MAY
- 6. HORIZONTAL DATUM IS NAD83 AND VERTICAL DATUM IS NAVD88 USING REAL TIME GPS SURVEYING METHODS.
- 7. EXAMINATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR THE TOWN OF HUDSON, NEW HAMPSHIRE, HILLSBOROUGH COUNTY COMMUNITY NUMBER 33011C0517D PANEL NUMBER 517 OF 701 EFFECTIVE DATE SEPTEMBER 25, 2009 INDICATES THAT NO PORTION OF THE SUBJECT PARCEL IS LOCATED WITHIN A DESIGNATED FLOOD HAZARD.
- 8. THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. KEACH—NORDSTROM ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE OWNER OR CONTRACTOR SHALL CONTACT DIG SAFE AT 811.
- 9. EASEMENTS, RIGHTS AND RESTRICTIONS SHOWN OR IDENTIFIED HEREON ARE THOSE FOUND DURING RESEARCH AT THE HILLSBOROUGH COUNTY REGISTRY OF DEEDS. OTHER EASEMENTS, RIGHTS AND RESTRICTIONS MAY EXIST WHICH A TITLE EXAMINATION OF THE SUBJECT PREMISES MAY DETERMINE.



GRAPHIC SCALE



- 1. "LOT LINE RELOCATION TO INCLUDE WELL SURVEYED FOR GEORGE BOYER BARRETTS HILL ROAD HUDSON, N.H." SCALE: 1"=40'. DATED: JANUARY 10, 1978. PREPARED BY: PIANTIDOSI ASSOCIATES, INC.
- "BOUNDARY PLAN BARRETTS HILL ROAD HUDSON, NEW HAMPSHIRE. PREPARED FOR: MICHAEL F. CALLAHAN ET.UX." SCALE:1"=100'. DATED: OCTOBER 5, 1979. PREPARED BY: ALLEN H. SWANSON, INC.
- 3. "DECLARATION OF CONDOMINIUM SITE PLAN HILLTO HOUSE -A CONDOMINIUM—" SCALE: 1"=20'. DATED: AUGUST 6, 1981. PREPARED BY: THOMAS F. MORAN INC. H.C.R.D. PLAN #15313
- . "SUBDIVISION PLAN BARRETTS HILL ROAD HUDSON, N.H. PREPARED FOR JOHN JACOBS." SCALE: 1"=50'. DATED: SEPTEMBER 25, 1985. PREPARED BY: STEVEN J. PATRICK & ASSOCIATES. H.C.R.D. PLAN #19495
- 5. "MALLARD DRIVE SUBDIVISION CONSOLIDATION AND RESUBDIVISION PLAN." SCALE: 1"=80'. DATED: AUGUST, 1985. PREPARED BY: COSTELLO, LOMASNEY & DE NAPOLI, INC. H.C.R.D. PLAN #22145
- "CONSOLIDATION & SUBDIVISION PLAN LOT 54 MAP 31" SCALE: 1"=50'. DATED: AUGUST 1986. PREPARED BY: MAYNARD & PAQUETTE, INC. H.C.R.D. PLAN #22146
- 7. "CONDOMINIUM PLAN OF LAND IN HUDSON, N.H. PREPARED FOR JOHN JACOBS." SCALE: 1"=50'. DATED: AUGUST 30, 1990. PREPARED BY: STEVEN J. PATRICK & ASSOCIATES LAND SURVEYORS. H.C.R.D. PLAN #24824
- 8. "SUBDIVISION PLAN MASINGILL SUBDIVISION 65 BARRETTS HILL ROAD, HUDSON, N.H." SCALE: 1"=50'. DATED: FEBRUARY 11, 1998. PREPARED BY: JONES & BEACH ENGINEERS, INC. H.C.R.D. PLAN #29219



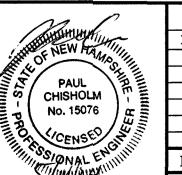
#### BARRETT HILL SUBDIVISION

MAP 151 LOT 59 75 BARRETTS HILL ROAD HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

> OWNER/APPLICANT: BARRETT HILL, LLC 21 CONTINENTAL BLVD. DOOR #4 MERRIMACK, NH 03054 H.C.R.D. BK. 9700 PG. 287



Civil Engineering Land Surveying Landscape Architecture 10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881



		REVISIONS	
No.	DATE	DESCRIPTION	BY
1	3/4/24	STAFF & REVIEW ENGINEER REVS	PCM
2	4/23/24	NHDES AOT & SITE WALK REVS	PCM
3	5/14/24	NHDES AOT REVISIONS	PCM
		·	<u> </u>
· · ·	<u> </u>		<u> </u>

DATE: DECEMBER 6, 2023 SCALE: 1"=100' PROJECT NO: 23-0414-1 SHEET: 24 OF 24