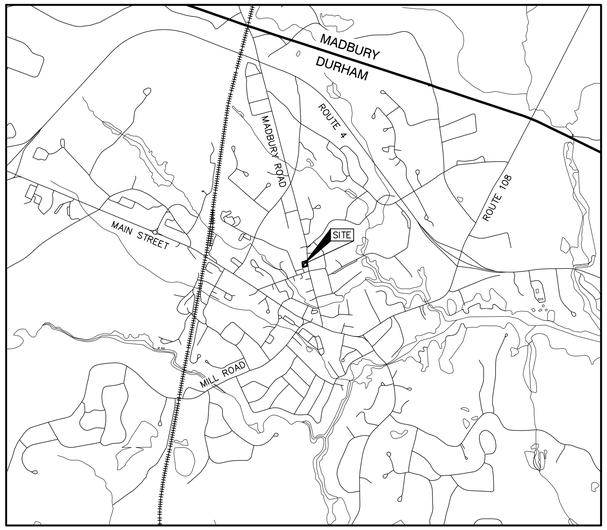
AMENDED SITE PLAN
LAMBDA CHI ALPHA
TAX MAP 106, LOT 19
35 MADBURY ROAD, DURHAM, NH

GENERAL LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINES
		SETBACK LINES
		CENTERLINE
		TREE LINE
		FENCE
		SOIL BOUNDARY
		EASEMENT
100	100	MAJOR CONTOUR
98	98	MINOR CONTOUR
VGC	VGC	EDGE OF PAVEMENT
X	X	VERTICAL GRANITE CURB
D		SILT FENCE
S	S	DRAINAGE LINE
G	G	SEWER LINE
W	W	GAS LINE
OHE	OHE	WATER LINE
		OVERHEAD ELECTRIC
		IRON PIPE/IRON ROD
		DRILL HOLE
		IRON ROD/DRILL HOLE
		STONE/GRANITE BOUND
100x0 100.00	100x0 100.00	SPOT GRADE
		PAVEMENT SPOT GRADE
		BENCHMARK (TBM)
		SINGLE POST SIGN
		TEST PIT
		TREES AND BUSHES
		UTILITY POLE
		LIGHT POLES
		DRAIN MANHOLE
		SEWER MANHOLE
		HYDRANT
		WATER GATE
		WATER SHUT OFF
		REDUCER
		SINGLE GRATE CATCH BASIN
		CULVERT W/FLARED END SECTION
		DRAINAGE FLOW DIRECTION
		RIPRAP
		PAVEMENT HATCH
		STABILIZED CONSTRUCTION ENTRANCE
		CONCRETE
		GRAVEL
		SNOW STORAGE
		RETAINING WALL



LOCUS MAP
SCALE 1" = 2000'

SHEET INDEX

CIVIL ENGINEER / SURVEYOR
JONES & BEACH ENGINEERS, INC.
85 PORTSMOUTH AVENUE
PO BOX 219
STRATHAM, NH 03885
(603) 772-4746
CONTACT: PAIGE LIBBEY
E-MAIL: PLIBBEY@JONESANDBEACH.COM

WATER/SEWER
DEPARTMENT OF PUBLIC WORKS
100 STONE QUARRY DRIVE
DURHAM, NH 03824
(603) 868-5578
CONTACT: RICHARD REINE

GAS
UNITIL NEW HAMPSHIRE
6 LIBERTY LANE WEST
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ELECTRIC
EVERSOURCE
740 N COMMERCIAL ST
PO BOX 330
MANCHESTER, NH 03105-0330
(800) 662-7764

CABLE TV
COMCAST COMMUNICATION CORPORATION
334-B CALEF HIGHWAY
EPPING, NH 03042-2325
(603) 679-5695

PROJECT PARCEL
TOWN OF DURHAM
TAX MAP 106, LOT 19

TOTAL LOT AREA
±18,060 SQ. FT.
±0.42 ACRES

APPROVED – DURHAM, NH
PLANNING BOARD

DATE:

Design: NJL	Draft: KDR	Date: 06/16/25
Checked: PSL	Scale: AS NOTED	Project No.: 25073
Drawing Name: 25073-PLAN.dwg		

PAIGE S. LIBBEY No.16670 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

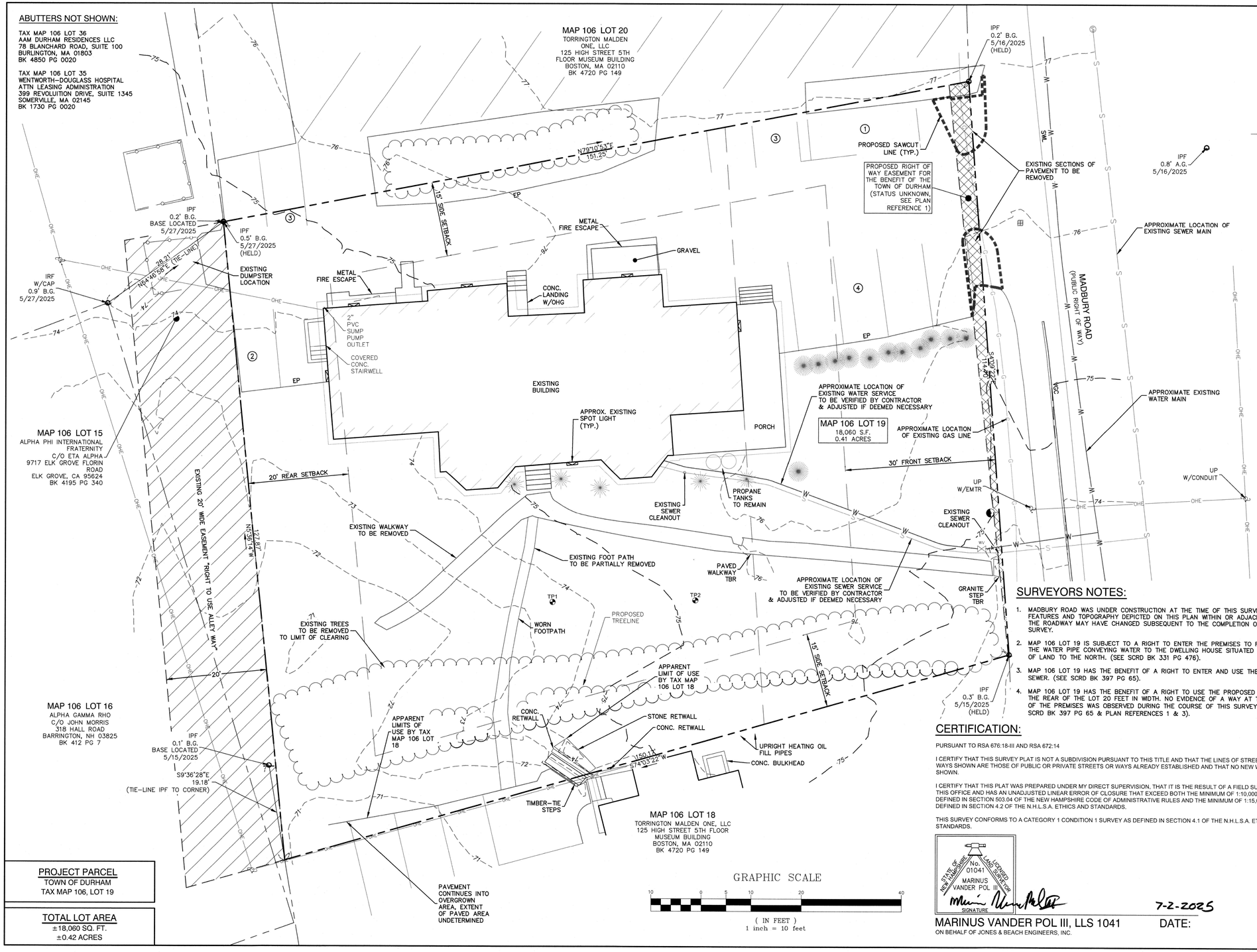
REV.	DATE	REVISION	BY
0	07/02/25	ISSUED FOR REVIEW	NJL

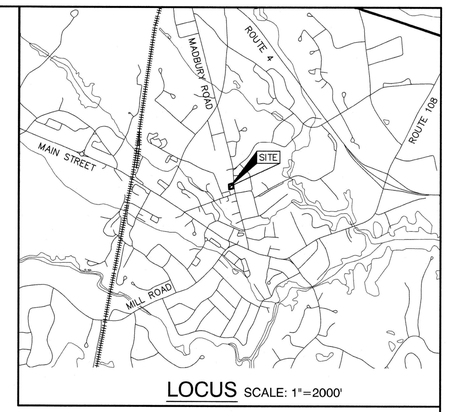
Designed and Produced in NH
J/B Jones & Beach Engineers, Inc.
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
Civil Engineering Services
603-772-4746
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	COVER SHEET
Project:	35 MADBURY ROAD DURHAM, NH
Owner of Record:	DWS 35, LLC 288 CALEF HIGHWAY, LEE, NH 03861

DRAWING No.
CS
SHEET 1 OF 10
JBE PROJECT NO. 25073

MADBURY ROAD, DURHAM, NH
JBE # 25073 REVISION 0 - 07/01/2025





LOCUS SCALE: 1"=2000'

NOTES:

1. THE INTENT OF THIS PLAN IS TO SHOW THE BOUNDARY, EXISTING CONDITIONS AND TOPOGRAPHY OF DURHAM TAX MAP 106 LOT 19.
2. CURRENT OWNER OF RECORD:
   DWS 35 LLC
   288 CALEF HIGHWAY
   LEE, NH 03861
   BK 5049 PG 100
3. ZONING DISTRICT:
   LOT AREA MINIMUM = 10,000 S.F.
   LOT AREA MINIMUM PER DWELLING UNIT = 3,000
   LOT FRONTAGE MINIMUM = 100'
   BUILDING SETBACKS (MINIMUM):
   FRONT SETBACK = 30'
   SIDE SETBACK = 15'
   REAR SETBACK = 20'
   WETLAND SETBACK = '
   MAX. BUILDING HEIGHT = 30'
   MAX. IMPERVIOUS SURFACE RATIO = 50%
4. THE UTILITY LOCATIONS SHOWN HEREON WERE DETERMINED BY OBSERVED ABOVE GROUND EVIDENCE AND SHOULD BE CONSIDERED APPROXIMATE IN LOCATION ONLY. LOCATION, DEPTH, SIZE, TYPE, EXISTENCE OR NONEXISTENCE OF UNDERGROUND UTILITIES AND/OR UNDERGROUND STORAGE TANKS WAS NOT VERIFIED BY THIS SURVEY. ALL CONTRACTORS SHOULD NOTIFY IN WRITING ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES PRIOR TO ANY EXCAVATION WORK OR CALL DIG-SAFE AT 1-888-DIG-SAFE.
5. THE SUBJECT PARCEL IS LOCATED WITHIN AN AREA HAVING A ZONE "X" DESIGNATION BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), ON FLOOD INSURANCE RATE MAP NO. 33017C0318E, WITH EFFECTIVE DATE OF SEPTEMBER 30, 2015, FOR COMMUNITY PANEL NO. 318 OF 405, IN STRAFFORD COUNTY, STATE OF NEW HAMPSHIRE, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR COMMUNITY IN WHICH SAID PREMISES IS SITUATED.
6. BASIS OF BEARING: HORIZONTAL NAD83(2011), VERTICAL NAVD88. HORIZONTAL AND VERTICAL INFORMATION DEPICTED ON THIS PLAN ARE PER STATIC GPS OBSERVATIONS POST-PROCESSED THROUGH THE ONLINE POSITIONING USER SYSTEM (OPUS). CERTAIN DATA HEREON MAY VARY FROM RECORDED DATA OR OTHER SOURCES DUE TO DIFFERENCES IN DECLINATION, ORIENTATION, AND METHODS OF MEASUREMENT. JONES AND BEACH SHOULD BE CONSULTED TO VERIFY HORIZONTAL AND VERTICAL INFORMATION ON SITE PRIOR TO UNDERTAKING ANY ACTIVITIES THAT RELY ON THIS DATUM.
7. CERTAIN DATA HEREON MAY VARY FROM RECORDED DATA DUE TO DIFFERENCES IN DECLINATION, ORIENTATION, AND METHODS OF MEASUREMENT.
8. ALL BOOK AND PAGE NUMBERS REFER TO THE STRAFFORD COUNTY REGISTRY OF DEEDS.
9. THE TAX MAP AND LOT NUMBERS ARE BASED ON THE TOWN OF DURHAM TAX RECORDS AND ARE SUBJECT TO CHANGE.
10. RESEARCH WAS PERFORMED AT INCLUDING BUT NOT LIMITED TO, THE TOWN OF DURHAM ASSESSOR'S OFFICE AND THE STRAFFORD COUNTY REGISTRY OF DEEDS.
11. THIS SURVEY IS NOT A CERTIFICATION TO OWNERSHIP OR TITLE OF LANDS SHOWN. OWNERSHIP AND ENCUMBRANCES ARE MATTERS OF TITLE EXAMINATION NOT OF A BOUNDARY SURVEY. THE INTENT OF THIS PLAN IS TO RETRACE THE BOUNDARY LINES OF DEEDS REFERENCED HEREON. OWNERSHIP OF ADJOINING PROPERTIES IS ACCORDING TO ASSESSOR'S RECORDS. THIS PLAN MAY OR MAY NOT INDICATE ALL ENCUMBRANCES EXPRESSED, IMPLIED OR PRESCRIPTIVE.
12. ANY USE OF THIS PLAN AND OR ACCOMPANYING DESCRIPTIONS SHOULD BE DONE WITH LEGAL COUNSEL, TO BE CERTAIN THAT TITLES ARE CLEAR, THAT INFORMATION IS CURRENT, AND THAT ANY NECESSARY CERTIFICATES ARE IN PLACE FOR A PARTICULAR CONVEYANCE, OR OTHER USES.
13. A WETLANDS INVESTIGATION WAS NOT PERFORMED ON THE SUBJECT PREMISES.
15. THIS PLAN IS THE RESULT OF A CLOSED TRAVERSE WITH A RAW, UNADJUSTED LINEAR ERROR OF CLOSURE GREATER THAN 1 IN 15,000.
16. SURVEY TIE LINES SHOWN HEREON ARE NOT BOUNDARY LINES. THEY SHOULD ONLY BE USED TO LOCATE THE PARCEL SURVEYED FROM THE FOUND MONUMENTS SHOWN AND LOCATED BY THIS SURVEY.

SURVEYORS NOTES:

1. MADBURY ROAD WAS UNDER CONSTRUCTION AT THE TIME OF THIS SURVEY. FEATURES AND TOPOGRAPHY DEPICTED ON THIS PLAN WITHIN OR ADJACENT TO THE ROADWAY MAY HAVE CHANGED SUBSEQUENT TO THE COMPLETION OF THIS SURVEY.
2. MAP 106 LOT 19 IS SUBJECT TO A RIGHT TO ENTER THE PREMISES TO REPAIR THE WATER PIPE CONVEYING WATER TO THE DWELLING HOUSE SITUATED ON A LOT OF LAND TO THE NORTH. (SEE SCRD BK 331 PG 476).
3. MAP 106 LOT 19 HAS THE BENEFIT OF A RIGHT TO ENTER AND USE THE COLLEGE SEWER. (SEE SCRD BK 397 PG 65).
4. MAP 106 LOT 19 HAS THE BENEFIT OF A RIGHT TO USE THE PROPOSED STREET IN THE REAR OF THE LOT 20 FEET IN WIDTH. NO EVIDENCE OF A WAY AT THE REAR OF THE PREMISES WAS OBSERVED DURING THE COURSE OF THIS SURVEY. (SEE SCRD BK 397 PG 65 & PLAN REFERENCES 1 & 3).

CERTIFICATION:

PURSUANT TO RSA 676:18-III AND RSA 672:14

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.

I CERTIFY THAT THIS PLAT WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN UNADJUSTED LINEAR ERROR OF CLOSURE THAT EXCEED BOTH THE MINIMUM OF 1:10,000 AS DEFINED IN SECTION 503.04 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES AND THE MINIMUM OF 1:15,000 AS DEFINED IN SECTION 4.2 OF THE N.H.L.S.A. ETHICS AND STANDARDS.

THIS SURVEY CONFORMS TO A CATEGORY 1 CONDITION 1 SURVEY AS DEFINED IN SECTION 4.1 OF THE N.H.L.S.A. ETHICS AND STANDARDS.

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 01041 MARINUS VANDER POL III

SIGNATURE

7-2-2025

MARINUS VANDER POL III, LLS 1041 DATE:
ON BEHALF OF JONES & BEACH ENGINEERS, INC.

PLAN REFERENCES:

1. "DRAFT EASEMENT PLAN FOR THE TOWN OF DURHAM FOR A PORTION OF MADBURY ROAD DURHAM, NEW HAMPSHIRE" DATED MAY 16, 2025 BY DOUCET SURVEY. PLAN ON FILE WITH THE TOWN OF DURHAM.
2. "PLAN OF LAND 35 MADBURY ROAD TOWN OF DURHAM COUNTY OF STRAFFORD STATE OF NEW HAMPSHIRE" DATED AUGUST 21, 1991. SCRD PLAN# P0039-0049.
3. UNTITLED PLAN OF LAND AT GARRISON AVENUE & MADBURY ROAD DATED OCTOBER 1, 1929 BY UNKNOWN. SCRD PLAN# P009-F003-002.
4. "STANDARD BOUNDARY SURVEY TAX MAP 2 LOT 8-12 PROPERTY OF OMEGA CHAPTER OF ALPHA GAMMA RHO" DATED APRIL 20, 2012 BY MSC. SCRD PLAN# P0103-0094.

PROJECT PARCEL
TOWN OF DURHAM
TAX MAP 106, LOT 19

TOTAL LOT AREA
±18,060 SQ. FT.
±0.42 ACRES

Design: NJL	Draft: KDR	Date: 06/16/25	
Checked: PSL	Scale: AS SHOWN	Project No.: 25073	
Drawing Name: 25073-PLAN.dwg			

STATE OF NEW HAMPSHIRE PAIGE S. LIBBEY No.16670 LICENSED PROFESSIONAL ENGINEER

REV.	DATE	REVISION	BY
0	07/02/25	ISSUED FOR REVIEW	NJL

Designed and Produced in NH
Jones & Beach Engineers, Inc.
85 Portsmouth Ave.
PO Box 219
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Civil Engineering Services
603-772-4746
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: EXISTING CONDITIONS & DEMOLITION PLAN
Project: 35 MADBURY ROAD DURHAM, NH
Owner of Record: DWS 35, LLC 288 CALEF HIGHWAY, LEE, NH 03861

DRAWING No.
C1
SHEET 2 OF 10
JBE PROJECT NO. 25073

PLAN REFERENCES:

1. "DRAFT EASEMENT PLAN FOR THE TOWN OF DURHAM FOR A PORTION OF MADBURY ROAD DURHAM, NEW HAMPSHIRE" DATED MAY 16, 2025 BY DOUCET SURVEY. PLAN ON FILE WITH THE TOWN OF DURHAM.
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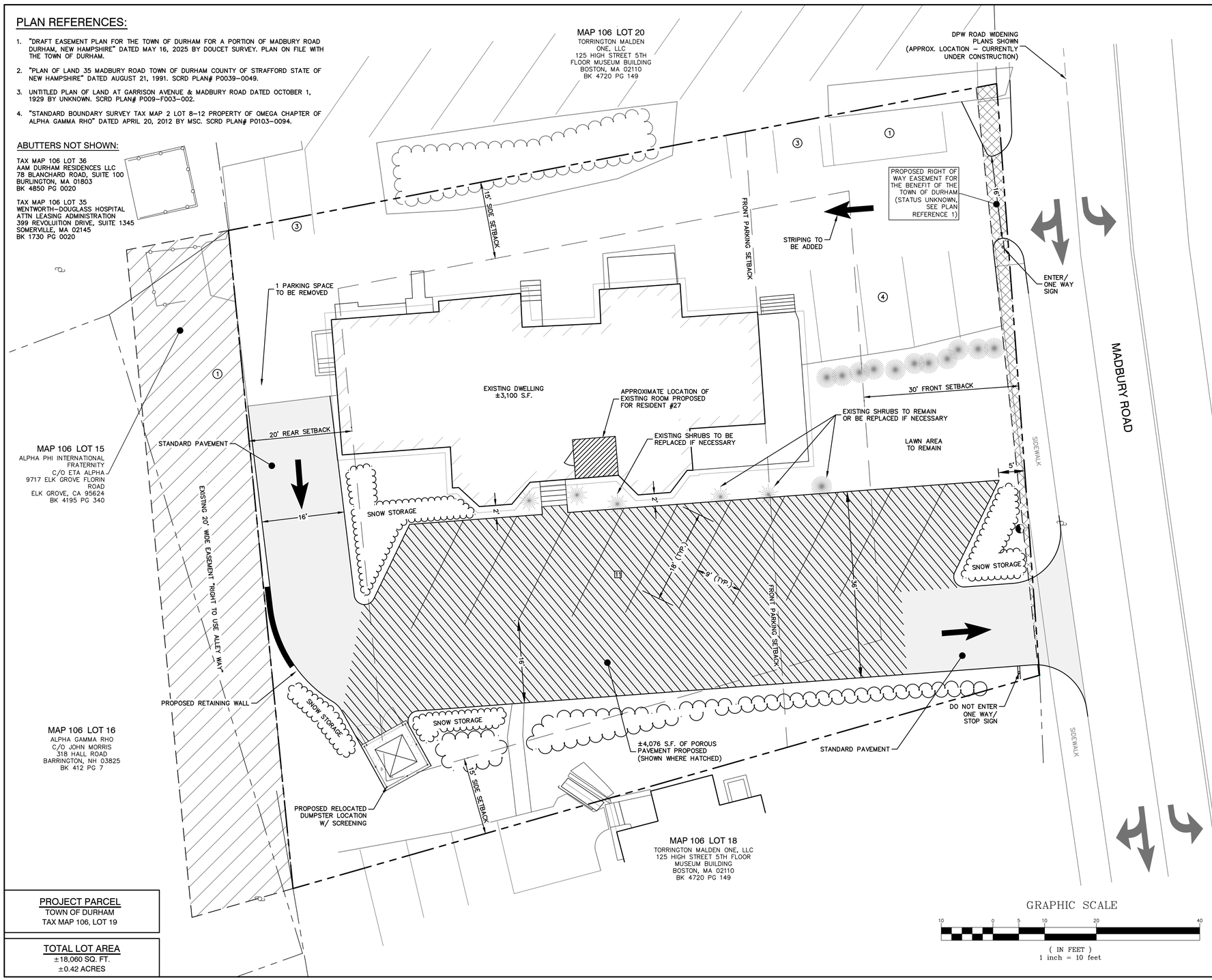
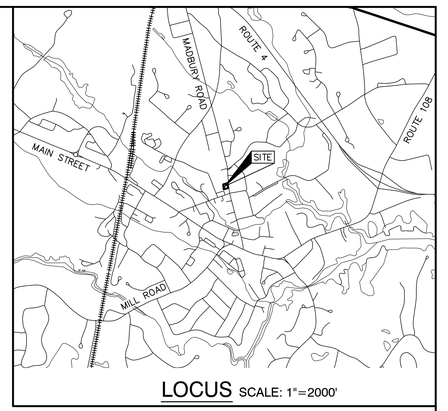
4. "STANDARD BOUNDARY SURVEY TAX MAP 2 LOT 8–12 PROPERTY OF OMEGA CHAPTER OF ALPHA GAMMA RHO" DATED APRIL 20, 2012 BY MSC. SCRD PLAN# P0103–0094.

ABUTTERS NOT SHOWN:

TAX MAP 106 LOT 36
AAM DURHAM RESIDENCES LLC
78 BLANCHARD ROAD, SUITE 100
BURLINGTON, MA 01803
BK 4850 PG 0020

TAX MAP 106 LOT 35
WENTWORTH–DOUGLASS HOSPITAL
ATTN LEASING ADMINISTRATION
399 REVOLUTION DRIVE, SUITE 1345
SOMERVILLE, MA 02145
BK 1730 PG 0020





LOCUS SCALE: 1"=2000'

SITE NOTES:

1. THE INTENT OF THIS PLAN IS TO SHOW A PROPOSED PARKING AREA AND CONVERT AN EXISTING ROOM IN THE BUILDING TO BE HABITABLE FOR ONE ADDITIONAL RESIDENT.
2. CONVERSION OF THE EXISTING ROOM IN THE BUILDING TO BE HABITABLE FOR A RESIDENT REQUIRES EXTENSION OF SPRINKLER LINE INTO THE ROOM, ADDITION OF A SMOKE DETECTOR, AND A DOOR CLOSER ON THE EXISTING DOOR PER MEETING WITH FIRE DEPARTMENT.
3. PARKING CALCULATIONS:
   FRATERNITY USE – 1 PARKING SPACE PER RESIDENT REQUIRED
   26 EXISTING RESIDENTS + 1 PROPOSED RESIDENT = 27 PARKING SPACES REQUIRED
   13 EXISTING SPACES
   12 SPACES TO BE REUSED + 11 PARKING SPACES PROPOSED = 23 PARKING SPACES PROVIDED
4. IMPERVIOUS CALCULATIONS:
   EXISTING:
   HOUSE = 3,098 S.F.
   PAVEMENT = 4,551 S.F.
   WALKWAYS = 690 S.F.
   TOTAL = 8,339 S.F. (46.2% OF LOT)
   PROPOSED:
   HOUSE = 3,098 S.F.
   PAVEMENT = 5,821 S.F.
   WALKWAYS = 0 S.F.
   TOTAL = 8,919 S.F. (49.4% OF LOT)
5. THE FOLLOWING WAIVERS ARE REQUIRED FOR THIS PROPOSAL FROM THE SITE PLAN REVIEW REGULATIONS:
   A) SECTION 10.4.3(C) – WIDTH OF DRIVE AISLE
   B) SECTION 10.4.1(B) – FRONT SETBACK TO PARKING
   C) SECTION 16.2.5(C) – DRIVEWAY WIDTH AT ROAD ACCESS
6. THIS PLAN SET HAS BEEN PREPARED BY JONES & BEACH ENGINEERS, INC., FOR MUNICIPAL AND STATE APPROVALS AND FOR CONSTRUCTION BASED ON DATA OBTAINED FROM ON–SITE FIELD SURVEY AND EXISTING MUNICIPAL RECORDS. THROUGHOUT THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY FIELD DISCREPANCY FROM DATA AS SHOWN ON THE DESIGN PLANS, INCLUDING ANY UNFORESEEN CONDITIONS, SUBSURFACE OR OTHERWISE, FOR EVALUATION AND RECOMMENDATIONS. ANY CONTRADICTION BETWEEN ITEMS ON THIS PLAN/PLAN SET, OR BETWEEN THE PLANS AND ON–SITE CONDITIONS, MUST BE RESOLVED BEFORE RELATED CONSTRUCTION HAS BEEN INITIATED. CONTRACTOR TO ALWAYS CONTACT DIG SAFE PRIOR TO DIGGING ONSITE OR OFFSITE TO ENSURE SAFETY AND OBEY THE LAW.
7. ALL CONSTRUCTION SHALL CONFORM TO TOWN STANDARDS AND REGULATIONS, AND NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, WHICHEVER IS MORE STRINGENT.
8. THE SUBJECT PARCEL IS LOCATED WITHIN AN AREA HAVING A ZONE "X" DESIGNATION BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), ON FLOOD INSURANCE RATE MAP NO. 33017C0318E, WITH EFFECTIVE DATE OF SEPTEMBER 30, 2015, FOR COMMUNITY PANEL NO. 318 OF 405, IN STRAFFORD COUNTY, STATE OF NEW HAMPSHIRE, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR COMMUNITY IN WHICH SAID PREMISES IS SITUATED.
9. LANDOWNERS ARE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL WETLAND REGULATIONS, INCLUDING PERMITTING REQUIRED UNDER THESE REGULATIONS.
10. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, ARCHITECT AND/OR OWNER, IN ORDER TO OBTAIN AND/OR PAY ALL THE NECESSARY LOCAL PERMITS, FEES AND BONDS.
11. ALL PROPOSED SIGNAGE SHALL CONFORM WITH THE TOWN ZONING REGULATIONS, UNLESS A VARIANCE IS OTHERWISE REQUESTED.
12. ALL SIGNAGE AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) AND NHDOT STANDARDS AND SPECIFICATIONS (NON–REFLECTORIZED PAVEMENT MARKINGS), UNLESS OTHERWISE NOTED.
13. ALL PARKING STALLS SHALL BE SEPARATED USING 4" WIDE SOLID STRIPES. STRIPING SHALL BE 100% ACRYLIC TYPE, LOW VOC, FAST DRYING, IN A COLOR OF WHITE.
14. SNOW TO BE STORED AT EDGE OF PAVEMENT AND IN AREAS SHOWN ON THE PLANS, OR TRUCKED OFFSITE TO AN APPROVED SNOW DUMPING LOCATION.
15. DUMPSTERS ARE NOT TO BE PICKED UP BETWEEN 7:00 PM AND 7:00 AM.
16. ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.

PROJECT PARCEL
TOWN OF DURHAM
TAX MAP 106, LOT 19

TOTAL LOT AREA
±18,060 SQ. FT.
±0.42 ACRES

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 feet

ZONING SUMMARY	
ZONE	PROFESSIONAL OFFICE (PO)
MINIMUM LOT SIZE	10,000 S.F.
MINIMUM LOT AREA PER DWELLING UNIT	3,000 S.F.
MINIMUM FRONT SETBACK	30'
MINIMUM SIDE SETBACK	15'
MINIMUM REAR SETBACK	20'
MAXIMUM BUILDING HEIGHT	35'
MAXIMUM IMPERVIOUS COVERAGE	50%

APPROVED – DURHAM, NH
PLANNING BOARD

DATE:

Design: NJL	Draft: KDR	Date: 06/16/25	
Checked: PSL	Scale: AS SHOWN	Project No.: 25073	
Drawing Name: 25073-PLAN.dwg			

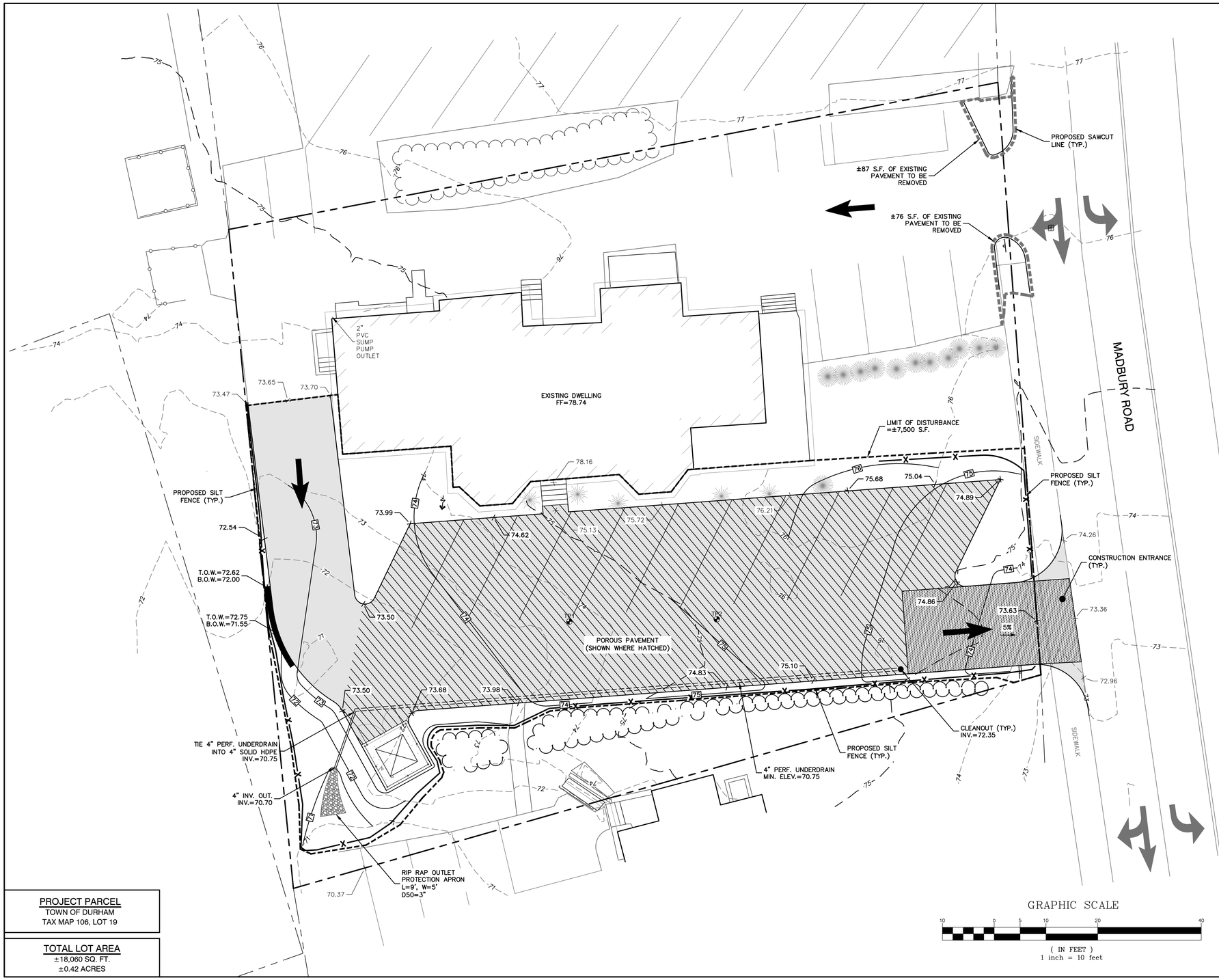
STATE OF NEW HAMPSHIRE – PAIGE S. LIBBEY No. 16670 – LICENSED PROFESSIONAL ENGINEER – 07/02/25

REV.	DATE	REVISION	BY
0	07/02/25	ISSUED FOR REVIEW	NJL

Designed and Produced in NH
Jones & Beach Engineers, Inc.
85 Portsmouth Ave. PO Box 219 Stratham, NH 03885
Civil Engineering Services
603-772-4746
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	AMENDED SITE PLAN MAP 106 , LOT 19
Project:	35 MADBURY ROAD DURHAM, NH
Owner of Record:	DWS 35, LLC 288 CALEF HIGHWAY, LEE, NH 03861

DRAWING No.
C2
SHEET 3 OF 10
JBE PROJECT NO. 25073



GRADING AND DRAINAGE NOTES:

1. UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN PLOTTED FROM FIELD OBSERVATION AND THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. NEITHER JONES & BEACH ENGINEERS, INC., NOR ANY OF THEIR EMPLOYEES TAKE RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES AND/OR UTILITIES NOT SHOWN THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND STRUCTURES AND/OR UTILITIES LOCATED PRIOR TO EXCAVATION WORK BY CALLING 888-DIG-SAFE (888-344-7233).
2. BASIS OF BEARING: HORIZONTAL NAD83(2011). VERTICAL NAVD88. HORIZONTAL AND VERTICAL INFORMATION DEPICTED ON THIS PLAN ARE PER STATIC GPS OBSERVATIONS POST-PROCESSED THROUGH THE ONLINE POSITIONING USER SYSTEM (OPUS). CERTAIN DATA HEREON MAY VARY FROM RECORDED DATA OR OTHER SOURCES DUE TO DIFFERENCES IN DECLINATION, ORIENTATION, AND METHODS OF MEASUREMENT. JONES AND BEACH SHOULD BE CONSULTED TO VERIFY HORIZONTAL AND VERTICAL INFORMATION ON SITE PRIOR TO UNDERTAKING ANY ACTIVITIES THAT RELY ON THIS DATUM.
3. ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR.
4. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED. SEE CONSTRUCTION SEQUENCE ON SHEET E1.
5. ANY SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH NORTH AMERICAN GREEN S75 EROSION CONTROL BLANKETS (OR AN EQUIVALENT APPROVED IN WRITING BY THE ENGINEER), UNLESS OTHERWISE SPECIFIED.
6. IN AREAS WHERE CONSTRUCTION IS PROPOSED ADJACENT TO ABUTTING PROPERTIES, THE CONTRACTOR SHALL INSTALL ORANGE CONSTRUCTION FENCING ALONG PROPERTY LINES IN ALL AREAS WHERE SILT FENCING IS NOT REQUIRED.
7. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY ALL GOVERNING AUTHORITIES.
8. ALL EXPOSED AREAS SHALL BE SEEDED AS SPECIFIED WITHIN 3 DAYS OF FINAL GRADING AND ANYTIME CONSTRUCTION STOPS FOR LONGER THAN 3 DAYS.
9. MAINTAIN EROSION CONTROL MEASURES AFTER EACH RAIN EVENT OF 0.25" OR GREATER IN A 24 HOUR PERIOD AND AT LEAST ONCE A WEEK.
10. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE, AS THE GENERAL CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SEDIMENT FROM LEAVING THE SITE.
11. CONSTRUCTION VEHICLES SHALL UTILIZE THE STABILIZED CONSTRUCTION ENTRANCE TO THE EXTENT POSSIBLE THROUGHOUT CONSTRUCTION.
12. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
13. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
14. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED, IF DEEMED NECESSARY BY ON-SITE INSPECTION BY ENGINEER AND/OR REGULATORY OFFICIALS.
15. SEE ALSO EROSION AND SEDIMENT CONTROL SPECIFICATIONS ON SHEET E1.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 feet

PROJECT PARCEL
TOWN OF DURHAM
TAX MAP 106, LOT 19

TOTAL LOT AREA
±18,060 SQ. FT.
±0.42 ACRES

Design: NJL	Draft: KDR	Date: 06/16/25
Checked: PSL	Scale: AS SHOWN	Project No.: 25073
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PAIGE S. LIBBEY No. 16670 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

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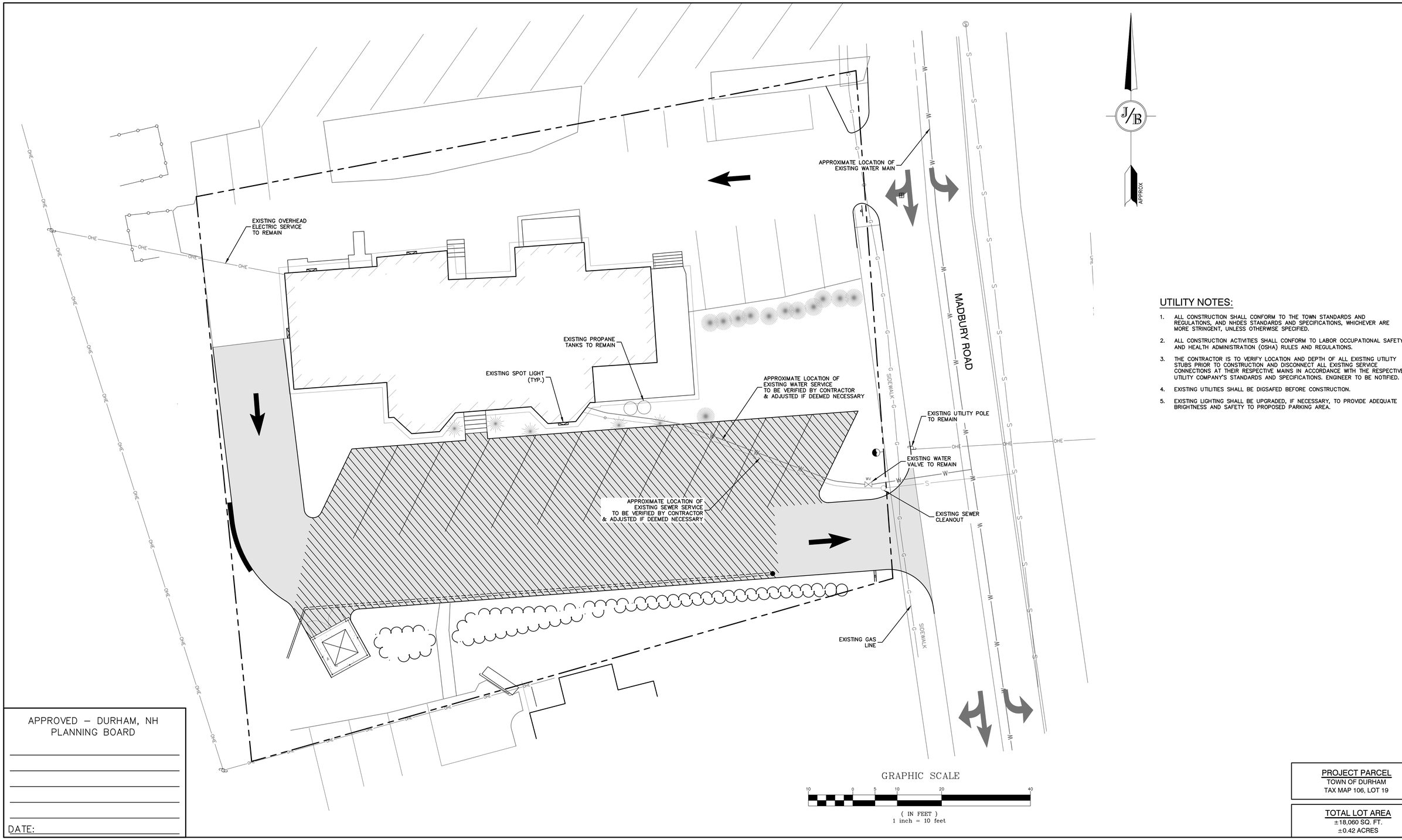
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	GRADING AND DRAINAGE PLAN
Project:	35 MADBURY ROAD DURHAM, NH
Owner of Record:	DWS 35, LLC 288 CALEF HIGHWAY, LEE, NH 03861

DRAWING No.
C3
SHEET 4 OF 10
JBE PROJECT NO. 25073



UTILITY NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO THE TOWN STANDARDS AND REGULATIONS, AND NHDES STANDARDS AND SPECIFICATIONS, WHICHEVER ARE MORE STRINGENT, UNLESS OTHERWISE SPECIFIED.
2. ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.
3. THE CONTRACTOR IS TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITY STUBS PRIOR TO CONSTRUCTION AND DISCONNECT ALL EXISTING SERVICE CONNECTIONS AT THEIR RESPECTIVE MAINS IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANY'S STANDARDS AND SPECIFICATIONS. ENGINEER TO BE NOTIFIED.
4. EXISTING UTILITIES SHALL BE DIGSAFED BEFORE CONSTRUCTION.
5. EXISTING LIGHTING SHALL BE UPGRADED, IF NECESSARY, TO PROVIDE ADEQUATE BRIGHTNESS AND SAFETY TO PROPOSED PARKING AREA.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 feet

APPROVED – DURHAM, NH
PLANNING BOARD

DATE:

PROJECT PARCEL
TOWN OF DURHAM
TAX MAP 106, LOT 19

TOTAL LOT AREA
±18,060 SQ. FT.
±0.42 ACRES

Design: NJL	Draft: KDR	Date: 06/16/25	
Checked: PSL	Scale: AS SHOWN	Project No.: 25073	
Drawing Name: 25073-PLAN.dwg			

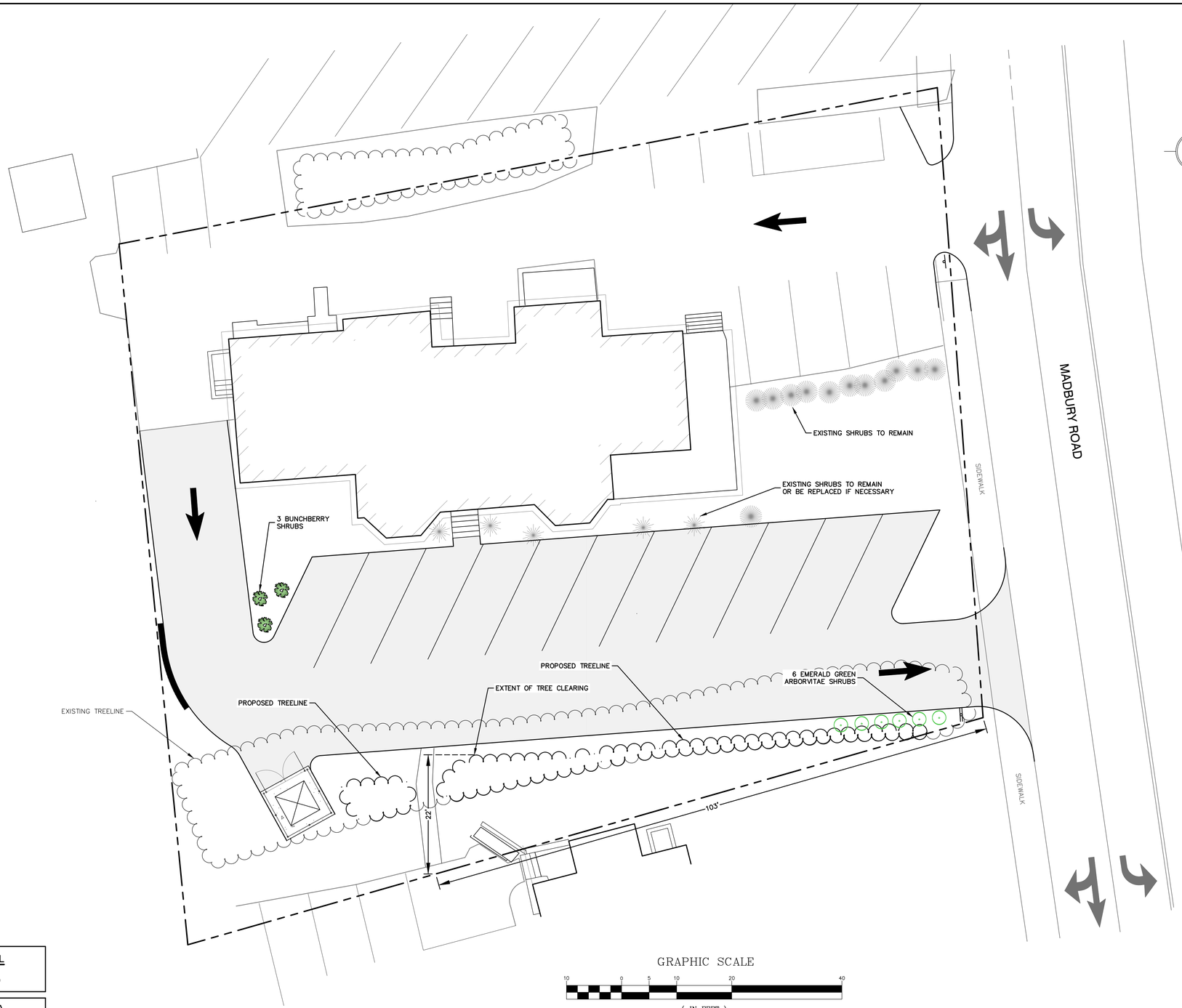
PAIGE S LIBBEY No.16670 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

REV.	DATE	REVISION	BY
0	07/02/25	ISSUED FOR REVIEW	NJL

Designed and Produced in NH
Jones & Beach Engineers, Inc.
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
Civil Engineering Services
603-772-4746
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	UTILITY PLAN
Project:	35 MADBURY ROAD DURHAM, NH
Owner of Record:	DWS 35, LLC 288 CALEF HIGHWAY, LEE, NH 03861

DRAWING No.
C4
SHEET 5 OF 10
JBE PROJECT NO. 25073



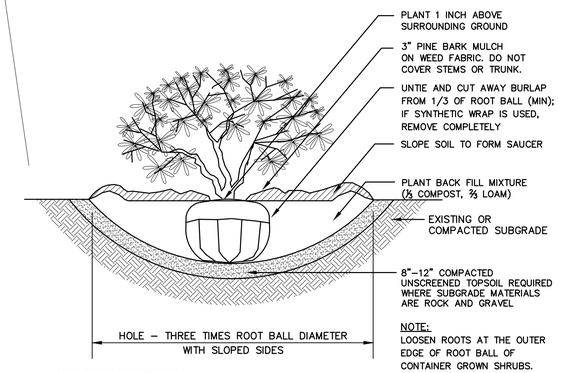
LANDSCAPE NOTES:

1. THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING WORK.
2. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTINGS SHOWN ON THE DRAWINGS.
3. ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
4. NO PLANT SHALL BE PUT IN THE GROUND BEFORE GRADING HAS BEEN FINISHED.
5. ALL LANDSCAPING SHALL MEET THE TOWN STANDARDS AND REGULATIONS.
6. THIS PLAN IS INTENDED FOR LANDSCAPING PURPOSES ONLY. REFER TO CIVIL/SITE DRAWINGS FOR OTHER SITE CONSTRUCTION INFORMATION.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 feet



SHRUB PLANTING

NOT TO SCALE

PROJECT PARCEL
TOWN OF DURHAM
TAX MAP 106, LOT 19

TOTAL LOT AREA
±18,060 SQ. FT.
±0.42 ACRES

Design: NJL	Draft: KDR	Date: 06/16/25
Checked: PSL	Scale: AS SHOWN	Project No.: 25073
Drawing Name: 25073-PLAN.dwg		

PAIGE S. LIBBEY No.16670 – STATE OF NEW HAMPSHIRE – LICENSED PROFESSIONAL ENGINEER

REV.	DATE	REVISION	BY
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Plan Name:	LANDSCAPE PLAN
Project:	35 MADBURY ROAD DURHAM, NH
Owner of Record:	DWS 35, LLC 288 CALEF HIGHWAY, LEE, NH 03861

DRAWING No.

L1

SHEET 6 OF 10
JBE PROJECT NO. 25073

CONSTRUCTION SPECIFICATIONS FOR POROUS ASPHALT

REFERENCE DOCUMENT: UNHSC DESIGN SPECIFICATIONS FOR POROUS ASPHALT PAVEMENT AND INFILTRATION BEDS, UNH STORMWATER CENTER, FEBRUARY, 2014, REVISED SEPTEMBER, 2016

INSTALLATION REQUIREMENTS

THE FOLLOWING REQUIREMENTS WILL HELP ASSURE THAT THE POROUS ASPHALT PAVEMENT IS PROPERLY INSTALLED.

1. THE FULL PAVEMENT SPECIFICATION MUST BE FOLLOWED CONSCIENTIOUSLY DURING CONSTRUCTION. IT IS BASED ON UNHSC DESIGN SPECIFICATIONS FOR POROUS ASPHALT PAVEMENT AND INFILTRATION BEDS. THE UNH SPECIFICATION INCLUDE NUMEROUS VITAL PROVISIONS FOR AGGREGATE AND BITUMINOUS MATERIALS, THEIR PLACEMENT, AND QUALITY CONTROL. AMONG ITS NOTABLE PROVISIONS ARE THE FOLLOWING EXAMPLES:
   - OPEN-GRADED AGGREGATE TO MAKE ALL PAVEMENT LAYERS POROUS AND PERMEABLE;
   - STIFF ASPHALT BINDER TO ADHERE TO THE AGGREGATE PARTICLES AND RESIST "DRAINDOWN" THROUGH THE PAVEMENT'S PORES, ENHANCING THE MATERIAL'S PERFORMANCE AND DURABILITY;
   - A SPECIFIC LIMIT ON ALLOWABLE DRAINDOWN, AND ADDITION OF A STYRENE-BUTADIENE-STYRENE (SBS) POLYMER ADDITIVE TO HELP MEET THAT REQUIREMENT;
   - THE POROUS PAVEMENT IS TO BE INSTALLED ONLY AFTER MAJOR CONSTRUCTION IS COMPLETED, SO THAT CONSTRUCTION TRAFFIC WILL NOT TRACK POTENTIALLY CLOGGING SEDIMENT ONTO THE PAVEMENT SURFACE. FOR CONSTRUCTION ACCESS, A TEMPORARY SURFACE WILL BE INSTALLED, SIMILAR IN CONSTRUCTION TO A STANDARD STABILIZED CONSTRUCTION ENTRANCE. THIS TYPE OF SURFACE CAN BEAR CONSTRUCTION TRAFFIC WITHOUT ERODING.
   - PROMINENT AND REPEATED STATEMENTS OF THE SPECIAL NATURE AND PURPOSE OF POROUS PAVEMENT, AND THE NECESSITY OF COMPLYING STRICTLY WITH THESE DISTINCTIVE SPECIFICATIONS.
   - PROTECTION OF THE FINISHED POROUS ASPHALT SURFACE FROM TRACKING OF CONSTRUCTION SEDIMENT.
2. THOROUGH COMMUNICATION WITH THE POROUS ASPHALT SUPPLIER AND PAVEMENT INSTALLER IS ESSENTIAL. THEY MUST UNDERSTAND THE POROUS PAVEMENT'S SPECIAL OBJECTIVES, THE SPECIAL MATERIALS AND PROCEDURES NECESSARY TO MAKE IT EFFECTIVE, AND WHY COMPLIANCE WITH SPECIFICATIONS IS ESSENTIAL. TO THIS END, THE SPECIFICATIONS STATE PROMINENTLY AND REPEATEDLY THE SPECIAL NATURE AND PURPOSE OF THE POROUS MATERIALS. IN ADDITION, THE PROJECT ENGINEER SHALL MEET WITH THE CONTRACTORS IN PERSON TO REVIEW THE SPECIFICATIONS AND MAKE SURE THE CONTRACTORS UNDERSTAND THE OBJECTIVES. THE PROJECT ENGINEER SHALL OBSERVE THE CONTRACTORS ON-SITE FREQUENTLY, TO MAKE SURE THE OBJECTIVES ARE CARRIED OUT. THE PROJECT ENGINEER SHALL MAINTAIN A WRITTEN RECORD DOCUMENTING REVIEW AND APPROVAL AT CRITICAL PROJECT STAGES SUCH AS EXCAVATION OF THE SUB GRADE AND QUALITY CHECKS OF BASE AND SURFACE MATERIALS. THE PROJECT ENGINEER SHALL INSPECT THE SITE TO MAKE SURE CONSTRUCTION VEHICLES ARE NOT ALLOWED TO TRAVERSE EXCAVATED SUB GRADE OR THE PAVEMENT STRUCTURE AT ANY INAPPROPRIATE STAGE. CONSTRUCTION TRAFFIC SHALL BE FORBIDDEN FROM TRACKING SOIL ONTO THE FINISHED POROUS PAVEMENT SURFACE.

INSTALLATION

A. PERCOLATION BEDS
   1. OWNER SHALL BE NOTIFIED AT LEAST 24 HOURS PRIOR TO ALL PERCOLATION BED AND POROUS PAVING WORK.
   2. SUB GRADE PREPARATION
      a. EXISTING SUB GRADE UNDER BED AREAS SHALL NOT BE COMPACTED OR SUBJECT TO EXCESSIVE CONSTRUCTION EQUIPMENT TRAFFIC PRIOR TO STONE BED PLACEMENT.
      b. WHERE EROSION OF SUB GRADE HAS CAUSED ACCUMULATION OF FINE MATERIALS AND/OR SURFACE PONDING, THIS MATERIAL SHALL BE REMOVED WITH LIGHT EQUIPMENT AND THE UNDERLYING SOILS SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES WITH A YORK RAKE OR EQUIVALENT AND LIGHT TRACTOR.
      c. BRING SUB GRADE OF STONE PERCOLATION BED TO LINE, GRADE, AND ELEVATIONS INDICATED. FILL AND LIGHTLY REGRADE ANY AREAS DAMAGED BY EROSION, PONDING, OR TRAFFIC COMPACTION BEFORE THE PLACING OF STONE. ALL BED BOTTOMS ARE LEVEL GRADE.
      d. WHERE PARKING LOT BASE IS NOT LEVEL, INTERNAL DAMS ARE TO BE INSTALLED EVERY 100 YARDS ALONG CONTOUR LINES IN THE COARSE SUBBASE MATERIALS (CRUSHED STONE). A SUBDRAIN SHALL BE LOCATED IMMEDIATELY UPSTREAM OF INTERNAL DAMS. DAMS ARE TO BE MADE OF OVERLYING FILTER COARSE OR MEDIUM TO FINE SAND EQUIVALENT.
   3. RECHARGE BED INSTALLATION
      a. UPON COMPLETION OF SUB GRADE WORK, THE ENGINEER SHALL BE NOTIFIED AND SHALL INSPECT AT HIS DISCRETION BEFORE PROCEEDING WITH PERCOLATION BED INSTALLATION.
      b. PERCOLATION BED AGGREGATE SHALL BE PLACED IMMEDIATELY AFTER APPROVAL OF SUB GRADE PREPARATION. ANY ACCUMULATION OF DEBRIS OR SEDIMENT WHICH HAS TAKEN PLACE AFTER APPROVAL OF SUB GRADE SHALL BE REMOVED PRIOR TO INSTALLATION OF AGGREGATE AT NO EXTRA COST TO THE OWNER.
      c. INSTALL COARSE AGGREGATE (CRUSHED STONE) IN 8-INCH MAXIMUM LIFTS, TO A MAXIMUM OF 95% STANDARD PROCTOR COMPACTION, KEEPING EQUIPMENT MOVEMENT OVER STORAGE BED SUBGRADES TO A MINIMUM. INSTALL AGGREGATE TO GRADES INDICATED ON THE DRAWINGS.
      d. INSTALL FILTER COARSE (BANK RUN GRAVEL) IN 8-INCH MAXIMUM LIFTS, TO A MAXIMUM OF 95% STANDARD PROCTOR COMPACTION, KEEPING EQUIPMENT MOVEMENT OVER STORAGE BED SUBGRADES TO A MINIMUM. INSTALL AGGREGATE TO GRADES INDICATED ON THE DRAWINGS.
      e. INSTALL CHOKER BASE COURSE (SEE MATERIALS SECTION) AGGREGATE EVENLY OVER SURFACE OF STONE BED, SUFFICIENT TO ALLOW PLACEMENT OF PAVEMENT, AND NOTIFY ENGINEER FOR APPROVAL. CHOKER BASE COURSE SHALL BE SUFFICIENT TO ALLOW FOR EVEN PLACEMENT OF ASPHALT BUT NO LESS THAN 4-INCH IN DEPTH.
   4. SURROUNDING AREAS
      a. BEFORE THE POROUS PAVEMENT IS INSTALLED, ADJACENT SOIL AREAS SHALL BE SLOPED AWAY FROM ALL PAVEMENT EDGES, TO PREVENT POTENTIAL SEDIMENT FROM WASHING ONTO THE PAVEMENT SURFACE.
      b. TO ACCOMPLISH THIS, A SEQUENCE OF SWALES SHALL BE EXCAVATED INTO ALL EARTHEN (UNPAVED) AREAS AT LEAST ON THE UPHILL SIDES OF THE PAVEMENT, AND WHERE NECESSARY, TO BELOW THE CURB OR PAVEMENT ELEVATION. ITS SHAPE AND PLANTINGS CAN BE INTEGRATED WITH THE PROJECT'S ARCHITECTURE AND LANDSCAPE, AND DESIGNED TO MAXIMIZE INFILTRATION. SWALE OVERFLOW, WHEN IT OCCURS, CAN BE DISCHARGED FROM ONE SWALE TO ANOTHER BY CONNECTING PIPES UNDER DRIVEWAYS.
      c. BUILDING BASEMENTS AND FOUNDATIONS SHALL BE WATERPROOFED AS NECESSARY, WHERE THE POROUS PAVEMENT ABUTS BUILDINGS.

B. POROUS ASPHALT
   1. TRANSPORTING MATERIAL
      a. TRANSPORTING OF MIX TO THE SITE SHALL BE IN VEHICLES WITH SMOOTH, CLEAN DUMP BEDS THAT HAVE BEEN SPRAYED WITH A NON-PETROLEUM RELEASE AGENT.
      b. THE MIX SHALL BE COVERED DURING TRANSPORT TO CONTROL COOLING.
   2. POROUS BITUMINOUS ASPHALT SHALL NOT BE STORED IN EXCESS OF 90 MINUTES BEFORE PLACEMENT.
   3. ASPHALT PLACEMENT
      a. THE POROUS BITUMINOUS SURFACE COURSE SHALL BE LAID IN ONE OR TWO LIFTS DIRECTLY OVER THE CHOKER COARSE, FILTER COARSE, AND CRUSHED STONE BASE COURSE TO DEPTH INDICATED. IF LAID IN TWO LIFTS THE PAVEMENT SHALL BE CLEANED AND INSPECTED BY THE ENGINEER BEFORE PLACEMENT OF THE SECOND LIFT.
      b. THE LAYING TEMPERATURE OF THE BITUMINOUS MIX SHALL BE BETWEEN 275 DEGREES FAHRENHEIT AND 325 DEGREES FAHRENHEIT (BASED ON THE RECOMMENDATIONS OF THE ASPHALT SUPPLIER).
      c. INSTALLATION SHALL TAKE PLACE WHEN AMBIENT TEMPERATURES ARE 55 DEGREES FAHRENHEIT OR ABOVE, WHEN MEASURED IN THE SHADE AWAY FROM ARTIFICIAL HEAT.
      d. THE USE OF A REMIXING MATERIAL TRANSFER DEVICE BETWEEN THE TRUCKS AND THE PAVER IS HIGHLY RECOMMENDED TO ELIMINATE COLD LUMPS IN THE MIX.
      e. THE POLYMER-MODIFIED ASPHALT IS VERY DIFFICULT TO RAKE, A WELL-HEATED SCREED SHALL BE USED TO MINIMIZE THE NEED FOR RAKING.
      f. COMPACTION OF THE SURFACE COURSE SHALL TAKE PLACE WHEN THE SURFACE IS COOL ENOUGH TO RESIST AN 8-12-TON ROLLER. BREAKDOWN ROLLING SHALL OCCUR WHEN THE MIX TEMPERATURE IS BETWEEN 275 DEGREES FAHRENHEIT AND 325 DEGREES FAHRENHEIT. INTERMEDIATE ROLLING SHALL OCCUR WHEN THE MIX TEMPERATURE IS BETWEEN 150 DEGREES FAHRENHEIT AND 200 DEGREES FAHRENHEIT. THE CESSATION TEMPERATURE OCCURS AT APPROXIMATELY 175 DEGREES FAHRENHEIT, AT WHICH POINT THE MIX BECOMES RESISTANT TO COMPACTION. IF COMPACTION HAS NOT BEEN DONE AT TEMPERATURES GREATER THAN THE CESSATION TEMPERATURE, THE PAVEMENT WILL NOT ACHIEVE ADEQUATE DURABILITY.
   4. IN THE EVENT CONSTRUCTION SEDIMENT IS INADVERTENTLY DEPOSITED ON THE FINISHED POROUS SURFACE, IT MUST BE IMMEDIATELY REMOVED BY VACUUMING.
   5. AFTER FINAL ROLLING, NO VEHICULAR TRAFFIC OF ANY KIND SHALL BE PERMITTED ON THE SURFACE UNTIL COOLING AND HARDENING HAS TAKEN PLACE, AND IN NO CASE WITHIN THE FIRST 48 HOURS. PROVIDE BARRIERS AS NECESSARY AT NO EXTRA COST TO THE OWNER TO PREVENT VEHICULAR USE; REMOVE AT THE DISCRETION OF THE ENGINEER.
   6. STRIPING PAINT FOR TRAFFIC LANES AND PARKING BAYS SHALL BE CHLORINATED RUBBER BASE, FACTORY MIXED, NON-BLEEDING, FAST DRYING, BEST QUALITY, WHITE TRAFFIC PAINT WITH A LIFE EXPECTANCY OF TWO YEARS UNDER NORMAL TRAFFIC USE.
      a. PAVEMENT-MARKING PAINT; LATEX, WATER-BASE EMULSION, READY-MIXED, COMPLYING WITH PS TT-P-1952.
      b. SWEEP AND CLEAN SURFACE TO ELIMINATE LOOSE MATERIAL AND DUST.
      c. PAINT 4 INCH WIDE PARKING STRIPING AND TRAFFIC LANE STRIPING IN ACCORDANCE WITH LAYOUTS OF PLAN. APPLY PAINT WITH MECHANICAL EQUIPMENT TO PRODUCE UNIFORM STRAIGHT EDGES. APPLY IN TWO COATS AT MANUFACTURER'S RECOMMENDED RATES. PROVIDE CLEAR, SHARP LINES USING WHITE TRAFFIC PAINT, INSTALLED IN ACCORDANCE WITH NHDOT SPECIFICATIONS.
   7. WORK SHALL BE DONE EXPERTLY THROUGHOUT, WITHOUT STAINING OR INJURY TO OTHER WORK. TRANSITION TO ADJACENT IMPERVIOUS BITUMINOUS PAVING SHALL BE MERGED NEATLY WITH FLUSH, CLEAN LINE. FINISHED PAVING SHALL BE EVEN, WITHOUT POCKETS, AND GRADED TO ELEVATIONS SHOWN ON DRAWING.
   8. POROUS PAVEMENT BEDS SHALL NOT BE USED FOR EQUIPMENT OR MATERIALS STORAGE DURING CONSTRUCTION, AND UNDER NO CIRCUMSTANCES SHALL VEHICLES BE ALLOWED TO DEPOSIT SOIL ON PAVED POROUS SURFACES.
   9. REPAIR OF DAMAGED PAVING
      a. ANY EXISTING PAVING ON OR ADJACENT TO THE SITE THAT HAS BEEN DAMAGED AS A RESULT OF CONSTRUCTION WORK SHALL HE REPAIRED TO THE SATISFACTION OF THE OWNER WITHOUT ADDITIONAL COST TO THE OWNER.
   10. FIELD QUALITY CONTROL
      a. THE FULL PERMEABILITY OF THE PAVEMENT SURFACE SHALL BE TESTED BY APPLICATION OF CLEAN WATER AT THE RATE OF AT LEAST 5 GPM OVER THE SURFACE, USING A HOSE OR OTHER DISTRIBUTION DEVISE. WATER USED FOR THE TEST SHALL BE CLEAN, FREE OF SUSPENDED SOLIDS AND DELETERIOUS LIQUIDS AND WILL BE PROVIDED AT NO EXTRA COST TO THE OWNER. ALL APPLIED WATER SHALL INFILTRATE DIRECTLY WITHOUT PUDDLE FORMATION OR SURFACE RUNOFF, AND SHALL BE OBSERVED BY THE ENGINEER AND OWNER.
      b. TEST IN-PLACE BASE AND SURFACE COURSE FOR COMPLIANCE WITH REQUIREMENTS FOR THICKNESS AND SURFACE SMOOTHNESS. REPAIR OR REMOVE AND REPLACE UNACCEPTABLE WORK AS DIRECTED BY THE OWNER.
      c. SURFACE SMOOTHNESS: TEST FINISHED SURFACE FOR SMOOTHNESS AND EVEN DRAINAGE, USING A TEN-FOOT TO CENTERLINE OF PAVED AREA. SURFACE WILL NOT BE ACCEPTED IF GAPS OR RIDGES EXCEED 3/16 OF AN INCH.

MAINTENANCE SPECIFICATIONS FOR POROUS ASPHALT

THE FOLLOWING REQUIREMENTS WILL HELP ASSURE THAT THE PAVEMENT IS MAINTAINED TO PRESERVE ITS HYDROLOGIC EFFECTIVENESS.

WINTER MAINTENANCE:

1. PLOW AFTER EACH STORM. SPECIAL PLOW BLADES MAY BE USED TO PREVENT SCARRING. DO NOT RAISE BLADE OF PLOW. ICE AND LIGHT SNOW ACCUMULATION ARE GENERALLY NOT AS PROBLEMATIC AS FOR STANDARD ASPHALT. SNOW WILL ACCUMULATE DURING HEAVIER STORMS AND SHALL BE PLOWED AFTER 2 TO 4 INCHES OF SNOW ACCUMULATION.
2. SANDING FOR WINTER TRACTION IS PROHIBITED. DEICING IS PERMITTED (NaCl, $MgCl_2$, OR EQUIVALENT). REDUCE SALT APPLICATION OF 75% OVER TRADITIONAL PAVEMENT APPLICATION RATES. NONTOXIC, ORGANIC DEICERS, APPLIED EITHER AS BLENDED, MAGNESIUM CHLORIDE-BASED LIQUID PRODUCTS OR AS PRETREATED SALT, ARE PREFERABLE. EXCESS SALT APPLICATION MAY BE NEEDED DURING CHALLENGING STORM EVENTS. SALT REDUCTIONS TYPICALLY OCCUR BETWEEN STORM EVENTS WITH NO BLACK ICE FORMATION
3. APPLY ANTI-ICING TREATMENTS PRIOR TO STORMS. ANTI-ICING HAS THE POTENTIAL TO PROVIDE THE BENEFIT OF INCREASED TRAFFIC SAFETY AT THE LOWEST COST AND WITH LESS ENVIRONMENTAL IMPACT.
4. APPLY DEICING TREATMENTS DURING AND AFTER STORMS AS NECESSARY TO CONTROL COMPACT SNOW AND ICE NOT REMOVED BY PLOWING.

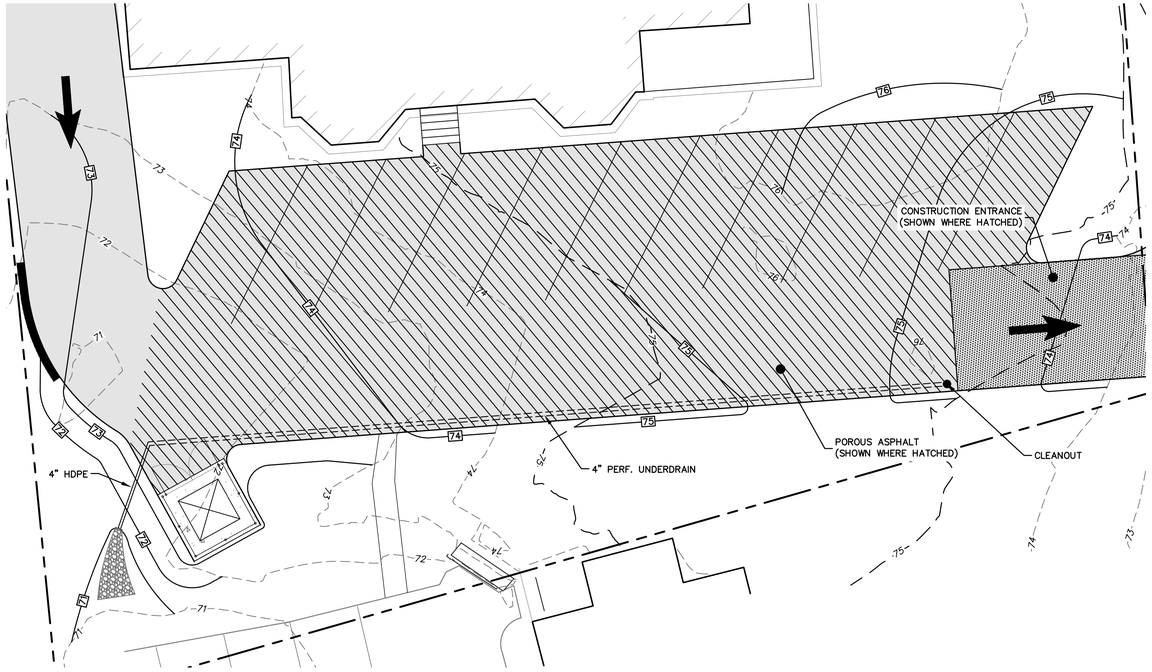
ROUTINE MAINTENANCE:

1. ASPHALT SEAL COATING MUST BE ABSOLUTELY FORBIDDEN. SURFACE SEAL COATING IS NOT REVERSIBLE.
2. THE PAVEMENT SURFACE SHALL BE VACUUMED 2 TO 4 TIMES PER YEAR, ESPECIALLY AFTER WINTER AND FALL SEASONS, AND AT ANY ADDITIONAL TIMES SEDIMENT IS SPILLED, ERODED, OR TRACKED ONTO THE SURFACE.
3. PLANTED AREAS ADJACENT TO PERVIOUS PAVEMENT SHALL BE WELL MAINTAINED TO PREVENT SOIL WASHOUT ONTO THE PAVEMENT. IF ANY BARE SPOTS OR ERODED AREAS ARE OBSERVED WITHIN THE PLANTED AREAS, THEY SHALL BE REPLANTED AND/OR STABILIZED AT ONCE.
4. IMMEDIATELY CLEAN ANY SOIL DEPOSITED ON PAVEMENT. SUPERFICIAL DIRT DOES NOT NECESSARILY CLOG THE PAVEMENT VOIDS. HOWEVER, DIRT THAT IS GROUND IN REPEATEDLY BY TIRES CAN LEAD TO CLOGGING. THEREFORE, TRUCKS OR OTHER HEAVY VEHICLES SHALL BE PREVENTED FROM TRACKING OR SPILLING DIRT ONTO THE PAVEMENT.
5. DO NOT ALLOW CONSTRUCTION STAGING, SOIL/MULCH STORAGE, ETC. ON UNPROTECTED PAVEMENT SURFACE
6. REPAIRS: FOR THE POROUS ASPHALT PARKING LOT, POTHOLES OF LESS THAN 50 SQUARE FEET CAN BE PATCHED BY ANY MEANS SUITABLE WITH STANDARD PAVEMENT OR A PERVIOUS MIX IS PREFERRED. FOR AREAS GREATER THAN 50 SQ. FT. IS IN NEED OF REPAIR, APPROVAL OF PATCH TYPE SHALL BE SOUGHT FROM A QUALIFIED ENGINEER. ANY REQUIRED REPAIR OF DRAINAGE STRUCTURES SHALL BE DONE PROMPTLY TO ENSURE CONTINUED PROPER FUNCTIONING OF THE SYSTEM. REPAIRS TO THE POROUS ASPHALT SIDEWALK SHALL BE MADE WITH A PERVIOUS MIX.
7. WRITTEN AND VERBAL COMMUNICATION TO THE POROUS PAVEMENT'S FUTURE OWNER SHALL MAKE CLEAR THE PAVEMENT'S SPECIAL PURPOSE AND SPECIAL MAINTENANCE REQUIREMENTS SUCH AS THOSE LISTED HERE.
8. A PERMANENT SIGN SHALL BE ADDED AT THE ENTRANCE AND END OF THE POROUS ASPHALT PARKING AREA TO INFORM RESIDENTS AND MAINTENANCE STAFF OF THE SPECIAL NATURE AND PURPOSE OF THE PAVEMENT, AND ITS SPECIAL MAINTENANCE REQUIREMENTS. SIGNS ARE NOT REQUIRED FOR THE POROUS SIDEWALKS.

MIX SUMMARY

1. POROUS ASPHALT PAVEMENT MIX PER THE CURRENT UNH STORM WATER CENTER DESIGN SPECIFICATIONS FOR POROUS ASPHALT PAVEMENT AND INFILTRATION BEDS MANUAL.
2. NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR HAS SUBMITTED AND THE ENGINEER HAS APPROVED A MIX DESIGN INCLUDING THE PERCENTAGE OF EACH INGREDIENT INCLUDING BINDER, POLYMER, AND THE JOB-MIX FORMULA FROM SUCH A COMBINATION. THE JOB-MIX FORMULA SHALL ESTABLISH A SINGLE PERCENTAGE OF AGGREGATE PASSING SIEVE AND A SINGLE PERCENTAGE OF BITUMINOUS MATERIAL TO BE ADDED TO THE AGGREGATE. NO CHANGE IN THE JOB-MIX FORMULA MAY BE MADE WITHOUT WRITTEN APPROVAL OF THE ENGINEER. THE JOB-MIX FORMULA MUST FALL WITH THE MASTER RANGE SPECIFIED IN COMPOSITION OF MIXTURE TABLE.

TRANSPORTING MATERIAL: SEE CONSTRUCTION AND INSTALL SPECIFICATIONS



POROUS ASPHALT

1" = 10'

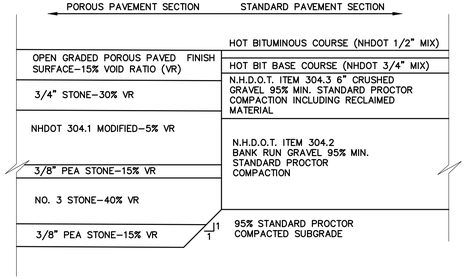
POROUS ASPHALT FOR STORMWATER MANAGEMENT
BEYOND THIS POINT

MAINTENANCE REQUIREMENTS:

DO NOT RAISE BLADE OF PLOW
SANDING OF SURFACE PROHIBITED
DEICING PERMITTED (NaCl, $MgCl_2$ OR EQUIVALENT)
SEAL-COATING PROHIBITED
CLEANING BY PRESSURIZED AIR OR WATER PROHIBITED
DRY VACUUM SEMIANNUALLY

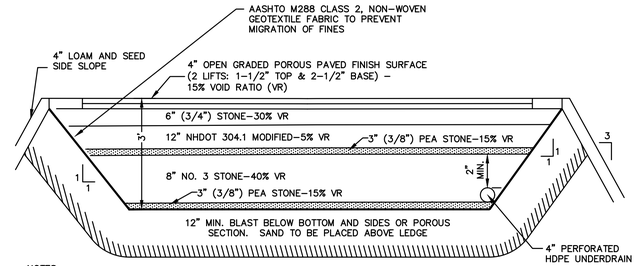
TYPICAL POROUS ASPHALT PAVEMENT MAINTENANCE SIGN

NOT TO SCALE



POROUS TO STANDARD PAVEMENT INTERFACE DETAIL

NOT TO SCALE



NOTES:
1. CONTRACTOR IS TO REMOVE THE EXISTING BURIED LAYER OF ORIGINAL LOAM DURING THE EXCAVATION OF THE GRAVELS FOR THE ROADWAY AND WHENEVER ENCOUNTERED IN TRENCHES.
2. DESIGN ENGINEER TO INSPECT SITE PREPARATION AND INSTALLATION OF POROUS PAVEMENT.
3. THE TOP LAYER (WEARING COURSE) SHALL BE PRE-BLENDED PG 76-28 MODIFIED WITH SBS. THE BASE COURSE SHALL BE, AT A MINIMUM, PG 64-28 WITH 5 POUNDS OF FIBER PER TON OF ASPHALT MIX. IF SUFFICIENT STAGING OR USE OF THE BASE COURSE SECTION WILL BE REQUIRED PRIOR TO THE APPLICATION OF THE WEARING COURSE, THE ENGINEER MAY DECIDE TO USE PRE-BLENDED PG 76-28 MODIFIED WITH SBS ON BOTH COURSES.
4. THE POROUS PAVEMENT SYSTEM SHALL BE LOCATED ONE FOOT ABOVE LEDGE AND THE SHWT.
5. INTERFACE FROM 12" FILTER COURSE TO 18" FILTER COURSE AT WATER SUPPLY INTAKE PROTECTION AREA (WSIPA) LINE AS SHOWN ON GRADING AND DRAINAGE PLAN.
6. SECTIONS OF POROUS ASPHALT PAVEMENT AND CONCRETE DESIGNATED AS UNLINED SHALL STILL BE UNDERDRAINED BUT SHALL NOT BE LINED WITH AN IMPERMEABLE LINER

TYPICAL POROUS ASPHALT PAVEMENT SECTION

NOT TO SCALE

Design: NJL	Draft: KDR	Date: 06/16/25	
Checked: PSL	Scale: AS NOTED	Project No.: 25073	
Drawing Name: 25073-PLAN.dwg			

STATE OF NEW HAMPSHIRE — PAIGE S. LIBBEY No.16670 — LICENSED PROFESSIONAL ENGINEER — 07/02/25

0	07/02/25	ISSUED FOR REVIEW	NJL
REV.	DATE	REVISION	BY

Designed and Produced in NH
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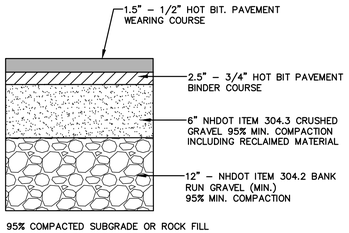
Civil Engineering Services
603-772-4746
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	DETAIL SHEET
Project:	35 MADBURY ROAD DURHAM, NH
Owner of Record:	DWS 35, LLC 288 CALEF HIGHWAY, LEE, NH 03861

DRAWING No.

D1

SHEET 7 OF 10
JBE PROJECT NO. 25073



TYPICAL BITUMINOUS PAVEMENT

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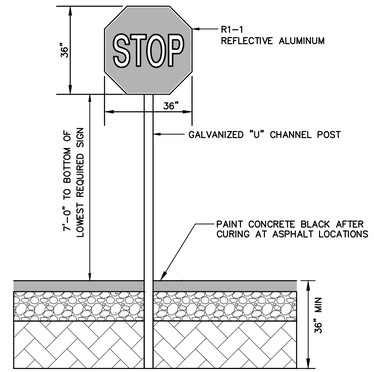
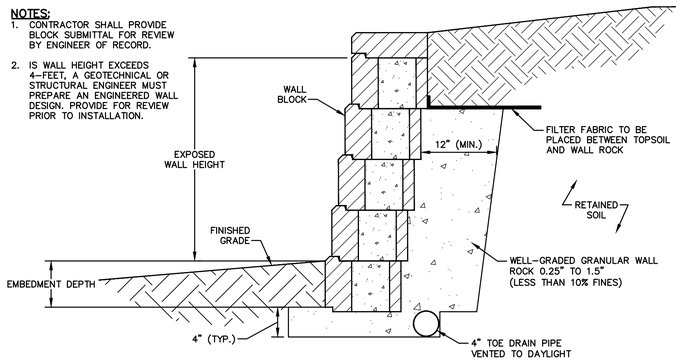


STOP SIGN (R1-1)

NOT TO SCALE

NOTES:
1. ALL SIGNAGE SHALL BE TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS AND NHDOT STANDARDS.
2. SIGN, HARDWARE, AND INSTALLATION TO CONFORM TO 2016 NHDOT STANDARD SPECIFICATION, SECTION 615 – TRAFFIC SIGNS.



TYPICAL GRAVITY WALL DETAIL

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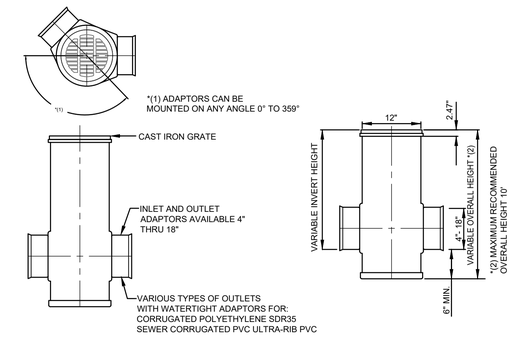

12" DRAIN BASIN (CLEANOUT)

NOT TO SCALE

nyloplast usa inc
3130 Verona Avenue - Buford, Georgia 30518
Tel. (770) 932-2443 - Fax: (770) 932-2490

Design: NJL	Draft: KDR	Date: 06/16/25
Checked: PSL	Scale: AS NOTED	Project No.: 25073
Drawing Name: 25073-PLAN.dwg		

PAIGE S LIBBEY No.16670 — STATE OF NEW HAMPSHIRE — LICENSED PROFESSIONAL ENGINEER

REV.	DATE	REVISION	BY
0	07/02/25	ISSUED FOR REVIEW	NJL

Designed and Produced in NH
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Civil Engineering Services
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Plan Name:	DETAIL SHEET
Project:	35 MADBURY ROAD DURHAM, NH
Owner of Record:	DWS 35, LLC 288 CALEF HIGHWAY, LEE, NH 03861

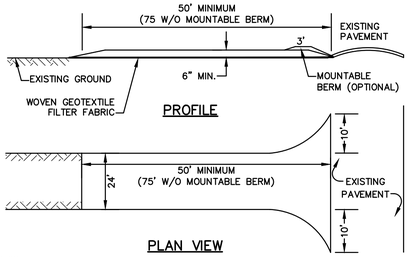
DRAWING No.

D2

SHEET 8 OF 10
JBE PROJECT NO. 25073

TEMPORARY EROSION CONTROL NOTES

1. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME. AT NO TIME SHALL AN AREA IN EXCESS OF 5 ACRES BE EXPOSED AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.
2. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AT LOCATIONS AS REQUIRED, DIRECTED BY THE ENGINEER.
3. ALL DISTURBED AREAS (INCLUDING POND AREAS BELOW THE PROPOSED WATERLINE) SHALL BE RETURNED TO PROPOSED GRADES AND ELEVATIONS. DISTURBED AREAS SHALL BE LOAMED WITH A MINIMUM OF 6" OF SCREENED ORGANIC LOAM AND SEEDED WITH SEED MIXTURE 'C' AT A RATE NOT LESS THAN 1.10 POUNDS OF SEED PER 1,000 S.F. OF AREA (48 LBS. / ACRE).
4. SILT FENCES AND OTHER BARRIERS SHALL BE INSPECTED EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 0.5" OR GREATER. ALL DAMAGED AREAS SHALL BE REPAIRED, AND SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED OF.
5. AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED AND THE AREA DISTURBED BY THE REMOVAL SMOOTHED AND RE-VEGETATED.
6. AREAS MUST BE SEEDED AND MULCHED OR OTHERWISE PERMANENTLY STABILIZED WITHIN 3 DAYS OF FINAL GRADING, OR TEMPORARILY STABILIZED WITHIN 14 DAYS OF THE INITIAL DISTURBANCE OF SOIL. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
7. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING NORTH AMERICAN GREEN S75 EROSION CONTROL BLANKETS (OR AN EQUIVALENT APPROVED IN WRITING BY THE ENGINEER) ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION 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.
8. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
9. AFTER OCTOBER 15th, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3" OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.
10. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
    a. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
    b. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
    c. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN INSTALLED; OR
    d. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
11. FUGITIVE DUST CONTROL IS REQUIRED TO BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000, AND THE PROJECT IS TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.

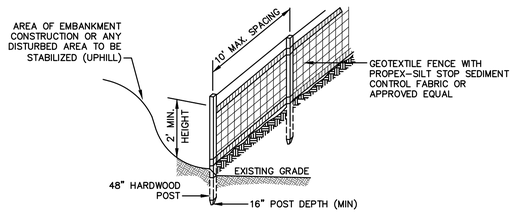


NOTES:

1. STONE FOR STABILIZED CONSTRUCTION ENTRANCE SHALL BE 3 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET, 75' WITHOUT A MOUNTABLE BERM, AND EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.
3. THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS, OR 10 FEET, WHICHEVER IS GREATER.
5. GEOTEXTILE FILTER FABRIC SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER FABRIC IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENTIAL LOT.
6. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A STONE BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO THE PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.

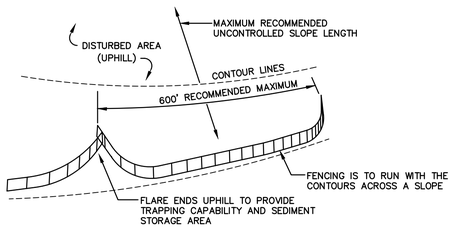
STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS:

1. WOVEN FABRIC FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP, MID AND BOTTOM AND EMBEDDED IN THE GROUND A MINIMUM OF 8" AND THEN COVERED WITH SOIL.
2. THE FENCE POSTS SHALL BE A MINIMUM OF 48" LONG, SPACED A MAXIMUM 10' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THE ENDS OF THE FABRIC SHALL BE OVERLAPPED 6", FOLDED AND STAPLED TO PREVENT SEDIMENT FROM BY-PASSING.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED AND PROPERLY DISPOSED OF WHEN IT IS 6" DEEP OR VISIBLE 'BULGES' DEVELOP IN THE SILT FENCE.
5. PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE.
6. SILT FENCE SHALL REMAIN IN PLACE FOR 24 MONTHS.



7. SILT FENCES SHALL BE REMOVED WHEN NO LONGER NEEDED AND THE SEDIMENT COLLECTED SHALL BE DISPOSED AS DIRECTED BY THE ENGINEER. THE AREA DISTURBED BY THE REMOVAL SHALL BE SMOOTHED AND REVEGETATED.

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 DONE 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.

SILT FENCE

NOT TO SCALE

SEEDING SPECIFICATIONS

1. GRADING AND SHAPING
   A. SLOPES SHALL NOT BE STEEPER THAN 2:1 WITHOUT APPROPRIATE EROSION CONTROL MEASURES AS SPECIFIED ON THE PLANS (3:1 SLOPES OR FLATTER ARE PREFERRED).
   B. WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
2. SEEDBED PREPARATION
   A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
   B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEEDBED AND FERTILIZER AND LIME MIXED INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.
3. ESTABLISHING A STAND
   A. LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL. TYPES AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:
      AGRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100 LBS. PER 1,000 SQ.FT.
      NITROGEN(N), 50 LBS. PER ACRE OR 1.1 LBS. PER 1,000 SQ.FT.
      PHOSPHATE(P2O5), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ.FT.
      POTASH(K2O), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ.FT.
      (NOTE: THIS IS THE EQUIVALENT OF 500 LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS. PER ACRE OF 5-10-10.)
   B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.
   C. REFER TO THE 'SEEDING GUIDE' AND 'SEEDING RATES' TABLES ON THIS SHEET FOR APPROPRIATE SEED MIXTURES AND RATES OF SEEDING. ALL LEGUMES (CROWNVETCH, BIRDSFOOT, TREFOIL AND FLATPEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT PRIOR TO THEIR INTRODUCTION TO THE SITE.
   D. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20th OR FROM AUGUST 10th TO SEPTEMBER 1st.
4. MULCH
   A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
   B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING. HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90 LBS PER 1000 S.F.
5. MAINTENANCE TO ESTABLISH A STAND
   A. PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
   B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIALS TAKE 2 TO 3 YEARS TO BECOME FULLY ESTABLISHED.
   C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, ANNUAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

USE	SEEDING MIXTURE 1/	DROUGHTY	WELL DRAINED	MODERATELY WELL DRAINED	POORLY DRAINED
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD	FAIR
	B	POOR	GOOD	FAIR	FAIR
	C	POOR	GOOD	EXCELLENT	GOOD
	D	FAIR	EXCELLENT	EXCELLENT	POOR
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	A	GOOD	GOOD	GOOD	FAIR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES.	A	GOOD	GOOD	GOOD	FAIR
	B	GOOD	GOOD	FAIR	POOR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	E	FAIR	EXCELLENT	EXCELLENT	2/
	F	FAIR	EXCELLENT	EXCELLENT	2/

GRAVEL PIT, SEE NH-PM-24 IN APPENDIX FOR RECOMMENDATION REGARDING RECLAMATION OF SAND AND GRAVEL PITS.

1/ REFER TO SEEDING MIXTURES AND RATES IN TABLE BELOW.
2/ POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREA AND ATHLETIC FIELDS.

NOTE: TEMPORARY SEED MIX FOR STABILIZATION OF TURF SHALL BE WINTER RYE OR OATS AT A RATE OF 2.5 LBS. PER 1000 S.F. AND SHALL BE PLACED PRIOR TO OCTOBER 15th, IF PERMANENT SEEDING NOT YET COMPLETE.

SEEDING GUIDE

MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 Sq. Ft.
A. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
RED TOP	2	0.05
TOTAL	42	0.95
B. TALL FESCUE	15	0.35
CREEPING RED FESCUE	10	0.25
CROWN VETCH	15	0.35
OR		
FLAT PEA	30	0.75
TOTAL	40 OR 55	0.95 OR 1.35
* C. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
BIRDS FOOT TREFOIL	8	0.20
TOTAL	48	1.10
D. TALL FESCUE	20	0.45
FLAT PEA	30	0.75
TOTAL	50	1.20
E. CREEPING RED FESCUE 1/	50	1.15
KENTUCKY BLUEGRASS 1/	50	1.15
TOTAL	100	2.30
F. TALL FESCUE 1	150	3.60

1/ FOR HEAVY USE ATHLETIC FIELDS CONSULT THE UNIVERSITY OF NEW HAMPSHIRE COOPERATIVE EXTENSION TURF SPECIALIST FOR CURRENT VARIETIES AND SEEDING RATES.

SEEDING RATES

CONSTRUCTION SEQUENCE

1. CUT AND REMOVE TREES IN CONSTRUCTION AREA AS REQUIRED OR DIRECTED.
2. INSTALL SILT FENCING AND CONSTRUCTION ENTRANCES PRIOR TO THE START OF CONSTRUCTION. THESE ARE TO BE MAINTAINED UNTIL THE FINAL PAVEMENT SURFACING AND LANDSCAPING AREAS ARE ESTABLISHED.
3. CLEAR, CUT, GRUB AND DISPOSE OF DEBRIS IN APPROVED FACILITIES. THIS INCLUDES ANY REQUIRED DEMOLITION OF EXISTING STRUCTURES, UTILITIES, ETC.
4. CONSTRUCT AND/OR INSTALL TEMPORARY OR PERMANENT SEDIMENT AND/OR DETENTION BASIN(S) AS REQUIRED. THESE FACILITIES SHALL BE INSTALLED AND STABILIZED PRIOR TO DIRECTING RUN-OFF TO THEM.
5. STRIP LOAM AND PAVEMENT WITHIN LIMITS OF WORK PER THE RECOMMENDATIONS OF THE PROJECT ENGINEER AND STOCKPILE EXCESS MATERIAL. STABILIZE STOCKPILE AS NECESSARY.
6. PERFORM PRELIMINARY SITE GRADING IN ACCORDANCE WITH THE PLANS, INCLUDING THE CONSTRUCTION OF ANY RETAINING WALLS.
7. INSTALL THE DRAINAGE SYSTEMS FIRST. ANY CONFLICTS BETWEEN UTILITIES ARE TO BE RESOLVED WITH THE INVOLVEMENT AND APPROVAL OF THE ENGINEER.
8. ALL DRAINAGE STRUCTURES ARE TO BE CONSTRUCTED AND STABILIZED PRIOR TO HAVING RUN-OFF DIRECTED TO THEM.
9. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINAGE DITCHES, CHECK DAMS, SEDIMENT TRAPS, ETC., TO PREVENT EROSION ON THE SITE AND PREVENT ANY SILTATION OF ABUTTING WATERS AND/OR PROPERTY.
10. PERFORM FINAL FINE GRADING, INCLUDING PLACEMENT OF 'SELECT' SUBGRADE MATERIALS.
11. PAVE ALL PARKING LOTS AND DRIVEWAYS WITH INITIAL 'BASE COURSE'.
12. PERFORM ALL REMAINING SITE CONSTRUCTION.
13. LOAM AND SEED ALL DISTURBED AREAS AND INSTALL ANY REQUIRED SEDIMENT AND EROSION CONTROL FACILITIES (i.e. RIP RAP, EROSION CONTROL BLANKETS, ETC.).
14. FINISH PAVING ALL DRIVEWAYS AND PARKING AREAS WITH 'FINISH' COURSE.
15. ALL DRIVEWAYS AND PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
16. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
17. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
18. REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDING AREAS HAVE BEEN 75%-85% ESTABLISHED AND SITE IMPROVEMENTS ARE COMPLETE. SMOOTH AND RE-VEGETATE ALL DISTURBED AREAS.
19. CLEAN SITE AND ALL DRAINAGE STRUCTURES, PIPES AND SUMPS OF ALL SILT AND DEBRIS.
20. INSTALL ALL PAINTED PAVEMENT MARKINGS AND SIGNAGE PER THE PLANS AND DETAILS.
21. ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY HALF-INCH OF RAINFALL.
22. UPON COMPLETION OF CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ANY RELEVANT PERMITTING AGENCIES THAT THE CONSTRUCTION HAS BEEN FINISHED IN A SATISFACTORY MANNER.

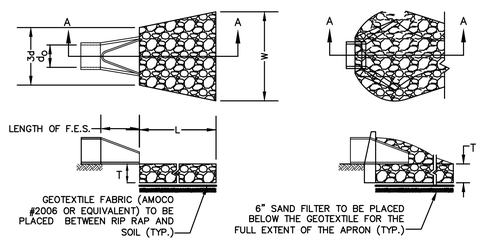


TABLE 7-24--RECOMMENDED RIP RAP GRADATION RANGES			
THICKNESS OF RIP RAP = 1.5 FEET			
d50 SIZE=	0.25	FEET 3	INCHES
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE	SIZE OF STONE (INCHES) FROM		TO
100%	5		6
85%	4		5
50%	3		5
15%	1		2

NOTES:

1. THE SUBGRADE FOR THE GEOTEXTILE FABRIC AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE RIP RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIP RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
5. OUTLETS TO A DEFINED CHANNEL SHALL HAVE 2:1 OR FLATTER SIDE SLOPES AND SHOULD BEGIN AT THE TOP OF THE CULVERT AND TAPER DOWN TO THE CHANNEL BOTTOM THROUGH THE LENGTH OF THE APRON.
6. MAINTENANCE: THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIP RAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO OUTLET PROTECTION.

RIP RAP OUTLET PROTECTION APRON

NOT TO SCALE

Design: NJL	Draft: KDR	Date: 06/16/25	
Checked: PSL	Scale: AS NOTED	Project No.: 25073	
Drawing Name: 25073-PLAN.dwg			

STATE OF NEW HAMPSHIRE · PAIGE S LIBBEY No.16670 · LICENSED PROFESSIONAL ENGINEER

REV.	DATE	REVISION	BY
0	07/02/25	ISSUED FOR REVIEW	NJL

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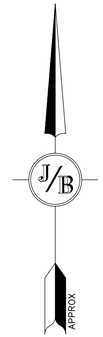
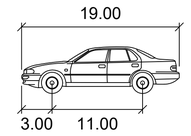
Plan Name:	EROSION AND SEDIMENT CONTROL DETAILS
Project:	35 MADBURY ROAD DURHAM, NH
Owner of Record:	DWS 35, LLC 288 CALEF HIGHWAY, LEE, NH 03861

DRAWING No.
E1
SHEET 9 OF 10
JBE PROJECT NO. 25073





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		feet
Width	:	7.00
Track	:	6.00
Lock to Lock Time	:	6.0
Steering Angle	:	31.6

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 feet

Design: NJL	Draft: KDR	Date: 06/16/25
Checked: PSL	Scale: AS SHOWN	Project No.: 25073
Drawing Name: 25073-PLAN.dwg		

STATE OF NEW HAMPSHIRE – PAIGE S. LIBBEY No.16670 – LICENSED PROFESSIONAL ENGINEER

REV.	DATE	REVISION	BY
0	07/02/25	ISSUED FOR REVIEW	NJL

Designed and Produced in NH
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Plan Name:	VEHICLE TURNING PLAN
Project:	35 MADBURY ROAD DURHAM, NH
Owner of Record:	DWS 35, LLC 288 CALEF HIGHWAY, LEE, NH 03861

DRAWING No.

T1

SHEET 10 OF 10
JBE PROJECT NO. 25073