



Granite Columns



President's Letter



Congratulations, again, to Matt Low for being selected as the New Hampshire Engineer of the Year! Matt is just the third ever recipient of both YOY and EOY – in this case 17 years apart, a wonderful achievement which represents Matt's consistent presence and participation within our industry and his community, in addition to his exemplary 20-year career at Hoyle Tanner Assoc. SENH's nomination of Matt was initiated and pulled together by our nomination committee, with support from Matt's family, and colleagues. The time and effort put into documenting Matt's devotion to structural engineering, was the least we could do, in an attempt to have Matt's significant efforts recognized.

The morning after the Engineer's Week Dinner, where Matt and Heidi Caprood (YEOY) were recognized,



they and our state's engineering society representatives attended a Governor and Executive Council meeting. The Governor, an engineer, read the Engineer's Week proclamation and congratulated Matt and Heidi.

On another note, for some time now, SENH, through our legislative liaison and our Code Advisory Committee have been tracking legislative action regarding New Hampshire's building codes. Last year we provided a statement to legislators regarding the establishment of a committee to study the procedures of adoption of National Codes. That bill passed, and the efforts of that committee resulted in the recent filing of HB247, which would bring NH to up to the 2015 ICC codes, inline with our counterparts in Maine, Vermont, and Massachusetts. Our Code Advisory Committee has reviewed this bill and provided a letter of support, which was approved by our Board of Directors and sent along. Thank you to all involved. I'd encourage you to reach out to your own legislators and offer your perspective on this important topic.

In conclusion, literally, this May will be the end of my third (and final) 2-year term on the Board of Directors. We are now beginning the search for the next SENH member to join the Board. If you, or someone you know, has interest in stepping up and giving back to our fine organization, please reach out to me at president@senh.org. I've found my time on the Board to be very rewarding. If you just want to inquire about the time/effort commitment, reach out (356-6939) anytime, and I would be happy to chat with you about the experience. Otherwise, I look forward to seeing you at UNH for our March meeting.

Christopher R. Fournier, PE, SECB

SENH President

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Special Points of Interest/ Reminders:

- *Mark your calendars! The next meeting is March 27th—See inside for details and a Parking Map of UNH.*
- *Looking to take an active role in SENH? Contact Chris Fournier, SENH's President, to find out how!*
- *Forgot to send in your Dues Renewals and/or Corporate Sponsorship form? It's not too late to send them in!! Please contact Cassi if you need the forms emailed to you.*

SENH Committee Updates

NECSEA Committee

Submitted by Robert Durfee, P.E.

SENH Representatives: Bob Durfee & Jeff Karam

The chair of this committee was rotated to Mane (SEAM) for the coming year (Teresa Price, Chairperson). SENH members have recently been informed of upcoming seminars, meetings and presentations sponsored by adjoining State SEA's by this Committee.

Nomination Committee

Submitted by Robert Durfee, P.E.

Co-Chairs: Bob Durfee & Sean James

The Committee nominated **Matt Low, P.E.** for the 2019 New Hampshire Engineer of the Year (EOY) Matt was selected for this award by the NHSPE Jury, and he was presented the award at the Engineers Week Banquet on February 19th in Concord.

CONGRATULATIONS TO MATT FOR RECEIVING THIS PRESTIGIOUS AWARD!!

Young Members Group

Submitted by Sean Brown P.E.

The Younger Members Group will meet on March 27th at the University of New Hampshire to conduct resume reviews and perform mock interviews with the civil engineering students. The review will occur directly before SENH's main meeting, and will benefit students who are pursuing internships or making the transition into the structural engineering profession. We hope that students will take this opportunity to critique their resumes, hone their interviewing skills, and to get feedback on the professional life ahead of them! Exact time and location to follow in an announcement.

SENH January Meeting Announcement

NEXT MEETING: Wednesday, March 27, 2019

PLACE: University of New Hampshire
DeMeritt Hall Room 112 (large lecture hall on the first floor)
9 Library Way
Durham, NH 03824

DIRECTIONS: From the West: Take Rt. 101 to Rt. 125 North. At the Lee traffic circle, take Rt. 4 East to Exit for 155A (Main St.) Go right to 155A (Main St.), pass UNH Field House, take next right onto College Rd. Veer left onto College Rd. DeMeritt Hall is the second building inwards from the second large building on the left.

From the East: Take Rt. 16 North to Rt. 4 East towards Durham. Exit Rt. 4 onto Main Street and follow directions from above.

PARKING: Park in the visitor section of Lot H (before 9:00 pm it's "pay and display" parking by the hour, and then after 9:00 pm this lot is free). Lot A and Lot B are free after 6:00 pm, or use "pay and display" spots around campus. Please be careful to read all parking lot signs and hours before parking, and see the attached parking map.

AGENDA: 5:30 pm – 6:30 pm Registration/Social Hour/Dinner
6:30 pm – 6:45 pm Business Meeting
6:45 pm – 8:45 pm Presentations (See Next Page)

DINNER: Pizza, Assorted Sodas and Water.

Please include any food allergies or dietary restrictions to be accommodated.

COST: Member: \$20.00 - Non-Member: \$25.00
Student: FREE
"No-shows" will be billed at full amount. Refunds will not be issued.

RSVP: By Wednesday, March 20, 2019. There will be a \$5.00 late fee for anyone wishing to RSVP past this date.

Pay on line using PayPal at <http://www.senh.org/meeting-calendar> or send check payable to "Structural Engineers of New Hampshire" with list of attendees to:

TFMoran, Inc.
Attn. Cassi Beroney
48 Constitution Drive
Bedford, NH 03110
cberoney@tfmoran.com

NOTE: 2.0 PDHs have been assigned for attendance. Attendees are responsible for ensuring their check-in on the attendance list upon arrival at the meeting.

SENH January Meeting Announcement *(Continued)*

PRESENTATIONS:

6:45 pm-7:15 pm

The Site Development on the Haverhill Riverfront Senior Capstone Group will be presenting on their project progress. An additional time slot will be available for a Senior Capstone Group to present.

7:15 pm-7:45 pm

Structural Investigation, Evaluation, and Life Safety Decisions

By Jeffrey Tirey, PE

Mr. **Jeffrey Tirey** is the president of Tirey & Associates, in Littleton, NH, where he specializes in structural evaluations, failure investigations, and expert testimony services for most building types. He earned his BS in Civil Engineering from MIT, and is a licensed Professional Engineer in six states with over 42 years of experience. Jeffrey was the 2010 New Hampshire Engineer of the Year, and has served on numerous boards for SENH, including the founding board of directors. He has also had the opportunity to teach the Timber Design course at UNH at the graduate and undergraduate level.

Description: Two separate building investigations will be discussed. The first involves the LinWood High School, and the accidental discovery of a roof with severe dry rot in the wood framing resulting from poor architectural detailing of the ventilation of the roof system. The roof was located over a main corridor that students and staff used every day. The discovery was made in Oct. 2011, with winter on the doorstep in snow country. In addition to repair design, a key component of decisions revolved around can the school be kept open, maintaining egress in this portion of the school and speed of the repair with winter fast approaching.

The second brief presentation involves an insurance claim on a wood framed barn that nearly collapsed due to improper shoring, as a contractor tried to construct new footings for the barn. The principal question was, is the damage repairable and as an ancillary question, what caused the damage. A third question quickly became very obvious once it was determined that the building was not salvageable, that question being, how do you safely remove the barn without damaging adjacent occupied buildings.



7:45 pm-8:15 pm

ABC Design and Construction Project Overview and Lessons Learned

By Jim Hall, PE

Mr. **Jim Hall** has 19 years of experience in the rehabilitation and replacement of all types of bridges throughout New England from large interstate bridges to historic trusses and covered bridges. Jim leads the bridge department for Dubois & King from their Bedford, New Hampshire office and is a licensed PE in every New England state except Rhode Island. Jim worked closely with the Department on the Portsmouth Route 1 Bypass bridge replacements project, the Manchester Airport Access Road project, and numerous other bridge projects throughout New Hampshire.

Description: DuBois & King (D&K) provided design, assistance in the public involvement process, and associated environmental and cultural services for replacement of the bridge carrying NH Route 113 over Bearcamp River in the town of Tamworth. The existing bridge was constructed in 1955, was a 3-span bridge with a total length of 123 ft. The center span was steel girders and a concrete deck, while the end spans were concrete slabs.

D&K designed the replacement bridge (substructure and superstructure), which was constructed using Accelerated Bridge Construction (ABC) techniques in a compressed 28-day timeframe in August 2018. The new bridge design consists of butted precast/prestressed concrete on precast concrete abutments with spread footings. The replacement bridge is the longest single span of its type in New Hampshire with a span length of 133'-0" between bearings.

SENH January Meeting Announcement *(Continued)*

8:15 pm-8:45 pm

The Vila Bridge; Analysis of a Historic Concrete Spandrel Arch Bridge

By Kayla Hampe, PE

Ms. **Kayla Hampe** is a Structural Engineer with Hoyle, Tanner & Associate, Inc. where she is a Project Engineer for the New England Bridge Team. She earned her BS in Civil Engineering from the University of New Hampshire and her MS in Structural Engineering from Lehigh University. Kayla is a licensed Professional Engineer in New Hampshire and has over six years of experience with a diverse background in the design and analysis of bridges, buildings, and other structures for new construction and rehabilitation projects. She has been the Co-Chair of the Professional Development Committee for SENH since 2018.

Description: The Vilas Bridge is a two-span open spandrel deck arch bridge that carries Bridge Street in an east-west direction across the Connecticut River between Walpole, New Hampshire and the village of Bellows Falls, Vermont. The bridge was constructed circa 1930 and has been closed to traffic (vehicles and pedestrians) since 2009. Each span is approximately 108 feet from the abutment to the center pier and the bridge is 32'-6" wide at the deck. The deck includes a 24'-0" roadway with a 4'-9" sidewalk on the south side. Each arch includes two parallel reinforced ribs that support spandrel columns at approximately 12 feet on center. The deck is a reinforced concrete slab that is supported by transverse beams spanning between the spandrel columns or the arch ribs.

Hoyle, Tanner's New England Bridge Team was tasked with analyzing and load rating the Vilas Bridge in 2018 by the New Hampshire Department of Transportation (NHDOT). The bridge was analyzed using Midas Civil structural engineering software and the results were used to load rate the existing bridge. The load rating results were then presented to NHDOT.



January Meeting Attendance List & Meeting Minutes

Various Presentations (2.0 PDH's)

Grappone Conference Center, 70 Constitution Drive, Concord, NH

January 17, 2019

Name	Company	Name	Company
Robert Landry, P.E.*	NH Dept. of Transportation	Mark Richardson, P.E.	NH Dept. of Transportation, Retired
Matt Card*	Alfred Benesch & Company	Matt Low, P.E.	Hoyle Tanner & Associates, Inc.
Edward Baumann*	Alfred Benesch & Company	Nevin Gomez	WSP USA
Aaron LaChance	Hoyle Tanner & Associates, Inc.	Nicholas Caron, P.E.	HDR, Inc.
Anna Giraldi	Fuss & O'Neill	Paul Lefebvre, P.E.	HDR, Inc.
Brian Brenner	Tighe & Bond	Rebekah Gaudreau, P.E.	GPI
Christopher Fournier, P.E.	HEB Engineers	Rich Rooney	McFarland Johnson
Daniel Martel, P.E.	Team Engineering	Robert Busby, P.E.	Kalwall Corp.
Devon Christen	TFMoran Inc.	Robert Durfee, P.E., SECB	Dubois & King, Inc.
Ed Weingartner, P.E.	Hoyle Tanner & Associates, Inc.	Roger Gayer	
Eric Caron	University of NH	Ross Wood, P.E.	Hoyle Tanner & Associates, Inc.
Eric Ohanian, P.E.	Tighe & Bond	Ryan McMullen	Hoyle Tanner & Associates, Inc.
Ethan Carrier	Fuss & O'Neill	Sam White, P.E.	McFarland Johnson
Jill Semprini, P.E.	Hoyle Tanner & Associates, Inc.	Sean Brown, NBIS	Kleinfelder
Jim Bouchard	Quantum Construction Consultants	Sean James, P.E.	Hoyle Tanner & Associates, Inc.
JoAnn Fryer	Fuss & O'Neill	Shana Bilech	Morgan Stanley
Joe Ripley, P.E.	Hoyle Tanner & Associates, Inc.	Stephen Langevin, P.E.	GPI
John Stockton, P.E.	Stantec	Steve Hodgdon, P.E. ENV SP	Hoyle Tanner & Associates, Inc.
Josh Lund, P.E.	McFarland Johnson	Thomas French, P.E.	HDR, Inc.
Josif Bicija, P.E.	Hoyle Tanner & Associates, Inc.	Thomas Levins, P.E.	GM2 Associates, Inc.
Kayla Hampe, P.E.	Hoyle Tanner & Associates, Inc.	Timothy Polson, P.E.	WSP USA
Kim Armstrong	GPI	Tom Kendrick, P.E.	McFarland Johnson
Lisa Martin, P.E.	Quantum Construction Consultants	Zachary Zavalianos	Dubois & King, Inc.

*Speaker

Business Portion of the Meeting

President Chris Fournier made a few announcements:

- New Hampshire is considering two House Bills that call for adopting to 2015 I-Codes
- The Engineer's Week Banquet is scheduled for February 19, 2019. SENH is serving as a sponsor
- SENH is donating to the NHSPE/Joint Engineering Societies Excellence in STEM Teaching Awards Program. This program helps to recognize Elementary, Middle School, and High School teachers who help to promote STEM.

Treasurer Josif Bicija provided a budget update

- SENH plans to award two scholarships to University of New Hampshire Students

Bob Durfee presented the call for entries for the SENH Excellence Awards.

- Categories include:
 - ◊ Buildings
 - ◊ Bridge
 - ◊ Special Structure
 - ◊ Small Firm
- Project Entries are due by March 1, 2019.
- Poster dimensions can either be 30"x30" or 22"x34".
- More information can be found on the SENH website.

Kayla Hampe announced that the next SENH meeting will be held at UNH Wednesday, March 27, 2019.

- Members are encouraged to contact Kayla if they are interested in presenting a project at the March meeting.

Presentations

Robert Landry, PE – NHDOT Bureau of Bridge Design Administrator presented his annual **NHDOT Bridge Program Update**.

- Overview of the Department's Draft 10 Year Plan
- Summary of Red List bridges (13 added, 17 removed)
- Annual Bridge Funding:
 - ◊ Municipal: \$11M
 - ◊ Maintenance: \$3M
 - ◊ Bridge Design: \$62M
 - ◊ Total Annual Funding: \$76M/year

Matt Card and Edward Baumann, both of Alfred Benesch & Company, presented the **North Washington Street Bridge Replacement**. The presentation described the design and construction of the 1400' long multi-span bridge structure that links the Boston North End to Charlestown. The bridge is owned by the City of Boston and will carry four lanes of vehicular traffic, a designated rapid transit lane, separated bike lanes, full length curbside plantings with irrigation, 10'-6" wide sidewalks on both sides with observational sidewalk buildouts over the navigation channel, architectural trellises and accent lighting above and below the bridge. The presentation covered the design process, maintenance of traffic considerations, construction phasing and early stages of construction. The bridge was awarded for construction in 2018 for \$177M. The project is targeted for completion in the fall of 2023.

Employment Opportunities

Structural Staff Engineer - 2 to 5 years of experience

Engineering Ventures, PC is currently seeking a Staff Engineer to join our Structural Group in either our Burlington, VT or Lebanon, NH offices. The ideal candidate for this position will have 2 plus years of experience in a professional engineering office and will want to work in a fast-paced team-oriented environment.

We work on projects in a wide variety of fields including industrial, commercial, hospitality, municipal, residential and historic preservation. We take pride in engineering places to live, learn, work, play and heal.

We are seeking a motivated person with an EI certification who is on a PE track. Strong technical skills combined with clear and concise written and verbal communication are important. Willingness to complete assignments as workloads dictate is necessary.

Specific initial responsibilities and expectations will include:

- Preparing calculations under the supervision of an experienced engineer using current material and building codes and relevant design standards.
- Proficiency with design software such as Risa, Ram, Dlubal, Enercalc, Tedds, and RetainPro, among others.
- Ability to design and detail using a variety of building materials such as Steel, Concrete, Wood, Cold Formed Steel and Masonry.
- Ability to work in Revit to assist with the preparation of drawings and sketches including completion of redlines.
- Ability to work in a fast-paced team environment.
- Conducting field work to survey existing conditions or review project conformance with plans. Flexibility with schedule to accommodate project requirements as necessary.

We encourage professional growth with both in-house and external training, but also expect employees to take initiative for their own development. As technical and management skills improve, our engineers are expected to take on larger roles with project design and client contact.

Job Requirements:

- Bachelor's Degree in Civil Engineering from an ABET accredited program
- 2 years of relevant experience in structural design, including proficiency with structural design and Revit software
- Expectation to pass the NCEES Structural Engineering and become registered in Vermont or New Hampshire within 5 years
- Strong written and verbal communication skills
- A service-oriented approach and ability to be flexible to meet project requirements

Looking at building a future in Vermont or New Hampshire? See more at www.engineeringventures.com

Email your interest to Trish Densham at trishd@engineeringventures.com.

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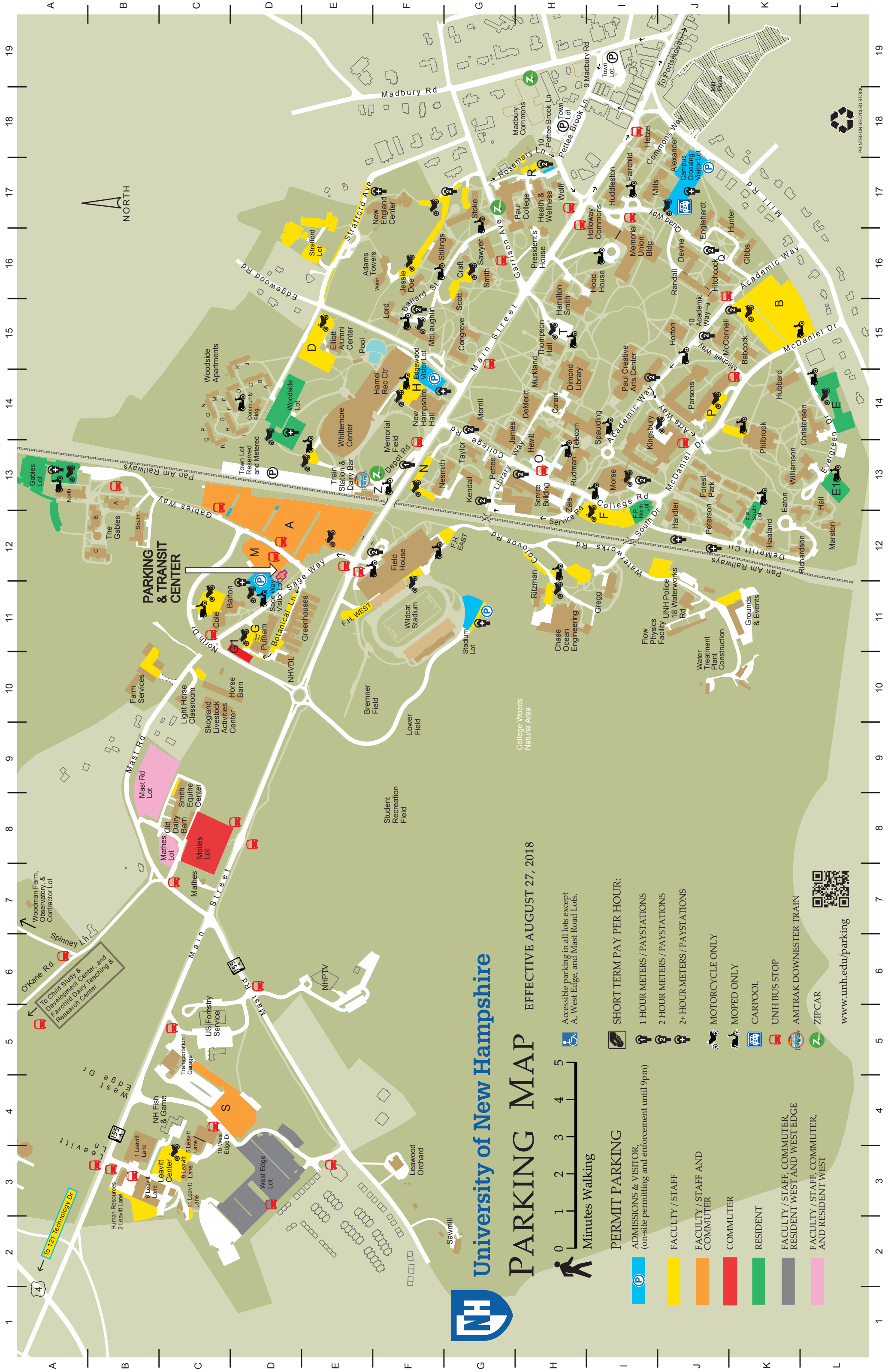
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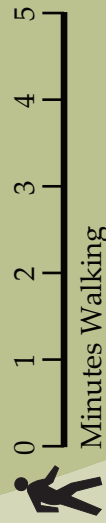
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University of New Hampshire

PARKING MAP

EFFECTIVE AUGUST 27, 2018



♿ Accessible parking in all lots except A, West Edge, and Mast Road Lots.

- | | | | |
|--|--|--|---------------------------------|
| | PERMIT PARKING | | SHORT TERM PAY PER HOUR: |
| | ADMISSIONS & VISITOR, (on-site permitting and enforcement until 9pm) | | 1 HOUR METERS / PAYSTATIONS |
| | FACULTY / STAFF | | 2 HOUR METERS / PAYSTATIONS |
| | FACULTY / STAFF AND COMMUTER | | 2+ HOUR METERS / PAYSTATIONS |
| | COMMUTER | | MOTORCYCLE ONLY |
| | RESIDENT | | MOPED ONLY |
| | FACULTY / STAFF, COMMUTER, RESIDENT WEST AND WEST EDGE | | CARPOOL |
| | FACULTY / STAFF, COMMUTER, AND RESIDENT WEST | | UNH BUS STOP |
| | | | AMTRAK DOWNESTER TRAIN |
| | | | ZIPCAR |



www.unh.edu/parking



PRINTED ON RECYCLED STOCK

KEY TO PARKING LOTS

Commuters Only Lots – Commuter permit required.

Commuter permits are sold to qualified students who live mile or more off campus.

G1 Lot	D10
Moiles Lot	C8

Resident Lots – Lot-specific permits required.

resident permits are sold to qualified students living in campus Resident halls or campus apartment housing.

E Lot	L14	Forest Park South	K12
E1 Lot	L13	Gables	A13
Forest Park North	I13	Woodside	D14

Faculty/Staff Lots – F/S permit required.

Faculty/Staff permits are sold to qualified employees of UNH.

B Lot	K15	G Lot	D11
Barton	C11	H Lot	F14
Brook Way	F16	Leavitt Lane 1 & 2	C3
D Lot	E15	N Lot	F13
F Lot	I12	P Lot	J14
Field House East	G12	Strafford Lot	E17
Field House West	E11		

Mixed Use Lots – appropriate permit required.

These lots offer parking to multiple permit type holders, as indicated.

A Lot (commuters & fac/staff)	D12
M Lot (commuters & fac/staff)	D12
Mast Rd. & Mathes Lots (commuters, res west, fac/staff)	B9
S Lot (commuters and fac/staff)	D4
West Edge Lot (commuters, res west, fac/staff)	D3

Visitor, Meter, Short Term and Specialized Lots

These lots have special permit/meter requirements and/or limited use.

Congreve Lot	G15	Q Lot	J16
Depot Road	F13	Sage Way Visitor	D11
Edgewood Rd. Visitor	G14	T Lot	H15
Campus Crossing Vis.	J17	Z Lot	F13

Some smaller lots and buildings not listed. See map on reverse side.

KEY TO BUILDINGS

Adams Tower	F15	Holloway Commons	I17	Memorial Union (MUB)	I16	Randall	J16
Admissions/Smith	G16	Hood House	I16	Mills	I17	Richardson	L12
Alexander	J18	Horse Barn	C10	Morrill	G14	Ritzman	H11
Alumni Center, Elliot	E15	Horton	J15	Morse	I13	Rudman	H13
Amtrack Station	E13	Hubbard	K14	Murkland	H14	Sawyer	G16
Babcock	K15	Huddleston	I17	Nesmith	F13	Scott	G15
Barton	C11	Human Resources	B3	New England Center	F17	Service Bldg.	G13
Christensen	L14	Hunter	K17	New Hampshire Hall	F14	Smith/Admissions	G16
Cole	C11	James	G14	NHPV	E6	Spaulding	I14
Conant	H14	Jessie Doe	F16	Ocean Engineering	H11	Stillings	F16
Congreve	G15	Kendall	G13	Parking & Transit Cr.	D12	Stoke	G17
Craft	G16	Kingsbury	I14	Parsons	J14	Taylor	G13
Dairy Bar	F13	Leavitt Center	C3	Paul Creative Arts	I14	Telecom	H13
DeMeritt	H14	Library, Dimond	H14	Paul College	G17	Thompson Hall	H15
Devine	J16	Lord	F15	Peterson Hall	J12	Whittemore Center	E14
Eaton	L12	Marston	L12	Pettee Hall	G13	Williamson	L13
Englehardt	J17	Mathes	C7	Phillbrook	K13	Wolff	H17
Equine Center	C8	McConnell	J15	President's House	H16	Woodside	D14
Fairchild	I17	Hitchcock	F15	Putnam	D11	Zais	H13
Farm Services	B10	Farm Services	B10	Memorial Union (MUB)	I16	Randall	J16
Field House	F12	Field House	F12	Mills	I17	Richardson	L12
Figment	B2	Horse Barn	B2	Morrill	G14	Ritzman	H11
Forest Park	J13	Horton	J13	Morse	I13	Rudman	H13
Gables, The	B12	Hubbard	B12	Murkland	H14	Sawyer	G16
Garage	C5	Huddleston	C5	Nesmith	F13	Scott	G15
Gibbs	K16	Human Resources	B3	New England Center	F17	Service Bldg.	G13
Greenhouses	D11	Hunter	K17	New Hampshire Hall	F14	Smith/Admissions	G16
Gregg	I11	James	G14	NHPV	E6	Spaulding	I14
Grounds & Roads	K11	Jessie Doe	F16	Ocean Engineering	H11	Stillings	F16
Haaland Hall	K12	Kendall	G13	Parking & Transit Cr.	D12	Stoke	G17
Hall House	L13	Kingsbury	I14	Parsons	J14	Taylor	G13
Hamilton Smith	H16	Leavitt Center	C3	Paul Creative Arts	I14	Telecom	H13
Handler Hall	J12	Library, Dimond	H14	Paul College	G17	Thompson Hall	H15
Health & Wellness	H17	Lord	F15	Peterson Hall	J12	Whittemore Center	E14
Heating Plant	H13	Marston	L12	Pettee Hall	G13	Williamson	L13
Hetzel	I18	Mathes	C7	Phillbrook	K13	Wolff	H17
Hewitt	H13	McConnell	J15	President's House	H16	Woodside	D14
Hitchcock	J16	Hitchcock	F15	Putnam	D11	Zais	H13



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