Monthly Newsletter from your Friends at Team Engineering

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Residential

Structural Lingo

By Brian Ki, EIT

When entering a construction project, there are certain terms that are not as familiar to the regular home owner. This article is intended to help describe some of those elements in residential construction and help interpret what contractors, architects, and engineers are all discussing about your home.

Floor Joist – These horizontal members are typically single 2”x lumber supporting a floor or a ceiling. They are often spaced at a constant distance (16” apart is most typical). The purpose of these members is to support any plywood, which the above finished flooring would be attached to. On the underside of the joist, the drywall ceiling below would be attached; sometimes neglected for unfinished basements.

- Stand in your basement and look up (assumed unfinished basement). The horizontal repetitive members are the joists

Rafter – A rafter is similar in nature to a joist. Both are typically 2x lumber, but rafters support the roof and are installed at an angle. They are also spaced at a constant distance (once again 16” is standard) and the purpose of these members is to support the plywood of the roof, which the shingles get attached to.

- Stand in your attic and look up (assumed unfinished). The repetitive members at an angle are the rafters

Beam – A beam is used to support the floor joists or rafters that frame into it. Because they are carrying several other members, the load applied to the beam is much heavier, and thus, the beam is usually several plies and a much deeper member.

- Stand in your basement and look at the wooden member dropped below the joists near the center of the home. This is a beam

Posts/Columns – A beam cannot just float in mid-air and needs to sit on-something. That's what the posts and columns do for the structure. Both terms are similar in nature and can usually be used interchangeably. They are typically several studs fastened together or sometimes one solid member and placed at each end of the beams.

- Stand in your basement and locate the beam as described above. The beam typically will sit on round columns and you've found them

This list is a *short* sample of the many words that are relevant to all buildings, but may make you seem more intelligent in your next design meeting. Best of luck!

Commercial

Managing Opinions & Helping Guide Decisions of an Entire Community (Condo)

By Eric Battey, Project Manager

Homeowner Associations are charged with the responsibility of managing the commonly owned assets of the Association's property. This can include repair, maintenance, and eventual replacement of these assets. There may be instances where the Board would want to upgrade versus replace an existing asset. While the Board may have authority to decide on either replacement or upgrade, the Board may desire or need a qualified vote by the entire Association.

Of course, there will be costs involved to perform repairs, replacements or upgrades. Long-term planning for these expenditures is needed for successful implementation. Planning tools such as Capital Improvement Plans and Reserve Studies are valuable planning tools for use by an Association's leadership. Generally, a Capital Improvement Plan offers guidance for improving or upgrading all physical assets of the Association's property, and generally covers a 10-year period. A Reserve Study would be for an extended period, in most cases 30 years, and is focused on replacement of assets that are commonly owned. In a previous newsletter we described the nuts and bolts of Reserve Studies. *(See our April 2017 newsletter)*

Consideration of all physical building and financial factors can be complicated. Garnering buy-in from Association membership is vital for a healthy and positive community environment. Therefore, objectives, means and costs need to all be

clearly identified, described, and evaluated. One example would be parking area lighting. If existing light fixtures are more than 5 years old, the advances in lighting technology make in-kind replacement more expensive, therefore upgrade is the obvious choice. This should be made clear to all interested parties to avoid confusion and negativity.

Changing a structural aspect of a community building may be determined by your association's engineer to be the most cost-effective action for the long-term. For instance, Ice dam formation has been a continual problem on one of our client's Association building. Snow removal is labor intensive and a costly expenditure. A recent Reserve Study update included a recommendation for investigation of the cause of the ice dams so that a plan can be developed to reduce the occurrences from year to year and thereby reduce operation expenses in the long-term. However, investigation, design of repair and implementation can be costly, so long-term planning may be necessary to finance and implement the recommended action plan. This might be viewed as improvements (versus repair) by some members of the community with coincidental restraints on financing. It is vital that a clear explanation of the benefits of these actions be provided to all interested parties before people jump to conclusions.

Team Engineering offers Capital Improvement Plans and Reserve Studies to meet the stated objectives of the Association's leadership. Our mission is to provide cost-effective information to our Association Board member clients and their Property Managers to aid their efforts to maintain, enhance and safeguard the assets of their communities. We value teamwork with our clients, engineering and technological innovation, and Continuous Improvements in all aspects of project communications and processes to achieve these goals.

Project Spotlight

By Brian Ki, EIT

Avaloch Farm Music Institute

Team Engineering, in-partnership with Northpoint Construction Management, helped design the structure for the Avaloch Music Institute West Wing Addition in Boscawen, NH. Construction wrapped up earlier this year and the final building is an amazingly new living and practice space for the many musicians that arrive to enhance their craft.

Client of the Month

By John Turner

Debbie Dearborn, Concord, NH

Our motto says it, and it remains a central theme. We love to improve peoples' lives through great Building Inspection and Design. We met Debbie Dearborn when she had us perform a building inspection on an old house in Concord. The garage was falling down and a number of room-only renovations had this house waving the white flag – hoping for a serious dose of holistic design improvements!

Enter Team Engineering's Dan Martel, Cheryl Tufts of 3W Design and Ed Rimm and Joe Campbell of North Branch Construction – who together are working on a spectacular renovation of Debbie's home. Thank you, Debbie, for trusting us to improve your life in a beautiful place to welcome your family and friends!

Team Fun

We Escaped from **Granite State Escape** in Manchester!

Charitable Giving

Animal Rescue League of NH

Mission: The Animal Rescue League of NH improves animal welfare in our communities by helping pets and the people who care for them.

The Animal Rescue League of New Hampshire is a 501(c)3 nonprofit organization that helps more than 2,200 cats, dogs, and small animals each year. Being more than a shelter, the League also employs one of only three shelter-based Animal Cruelty Investigators in the state. To help people who love their pets, but are currently struggling to care for them, the League offers community outreach programs, such as a Pet Food Pantry and Low-Cost Spay/Neuter Clinics.

Team Engineering has proudly donated $150 this month to the **Animal Rescue League of NH**.

What's happening with Turbo

Indicating the scent location at a recent Scentwork Trial.