INNOVATION & COLLABORATION
YOUR SOURCE FOR MASS TIMBER

MAXXON® & Boise Cascade® COMMERCIAL SOLUTIONS
Mass timber construction has revolutionized the construction industry and gained a stronghold due to its sustainability, decreased construction time and captivating beauty. Raw materials are left exposed to see the natural wood in the building. Mass timber growth continues to gain in popularity for new construction as well as renovation for trendy offices and multifamily environments.

Maxxon recognized mass timber as an exciting new construction method when it began as an emerging trend in the United States. Its growing impact on the industry has only increased Maxxon’s commitment to providing fire and acoustical solutions to meet the unique demands for mass timber. As the innovator of Gyp-Crete® underlayment and Acousti-Mat® sound control, Maxxon’s expertise provides innovative solutions and confidence.

Boise Cascade® has advanced the building materials industry for more than 60 years as one of the largest manufacturers of plywood and engineered wood products. Recent advances in engineering and manufacturing, along with a demand for sustainable structures places mass timber construction at the forefront of feasible and environmentally responsible solutions. Boise Cascade’s leadership and innovative VersaWorks™ VLT panels for mass timber offer a pragmatic, beautiful and superior alternative to concrete and steel multifamily and commercial buildings.

BUILD BEAUTIFULLY. BUILD CONFIDENTLY.
Because acoustical privacy is almost always one of the first factors cited in occupant satisfaction, it should be one of the first considerations when designing commercial and multifamily residences. The bare VersaWorks 6-3/8” VLT panel is STC 40 / IIC 25 and in combination with Acousti-Mat and Gyp-Crete meets all contemporary occupant expectations.

### COMMERCIAL

**SOUND CONTROL SYSTEM**
- Maxxon Underlayment
- Maxxon Acousti-Mat 3/8 Premium
- VLT

**EXPECTED SYSTEM PERFORMANCE**
- Sound Control System
  - Carpets or Hard Floor Finish
  - Topical Mat
  - Sound Rating
  - Acousti-Mat 3/8 Premium
  - Optional 2mm Mat
  - STC 53 / IIC 45

### CODE MINIMUM

**SOUND CONTROL SYSTEM**
- Carpet and Pad or Hard Floor Finish with 2mm Mat
- Maxxon Underlayment
- Maxxon Acousti-Mat 3/8 Premium
- VLT

**EXPECTED SYSTEM PERFORMANCE**
- Sound Control System
  - Carpets or Hard Floor Finish
  - Topical Mat
  - Sound Rating
  - Acousti-Mat 3/8 Premium
  - 2mm Mat
  - STC 53 / IIC 50

### ACCEPTABLE

**SOUND CONTROL SYSTEM**
- Carpet or Hard Floor Finish
- Maxxon Underlayment
- Maxxon Acousti-Mat 3/4 Premium + Acousti-Mat SBR
- VLT

**EXPECTED SYSTEM PERFORMANCE**
- Sound Control System
  - Carpets or Hard Floor Finish
  - Topical Mat
  - Sound Rating
  - Maxxon Acousti-Mat 3/4 Premium + Acousti-Mat SBR
  - Maxxon Acousti-Top
  - STC 57 / IIC 54

### PREFERRED

**SOUND CONTROL SYSTEM**
- Carpet or Hard Floor Finish
- Maxxon Underlayment
- Maxxon Acousti-Mat 1/8
- VLT
- 5/8” gypsum board: 2 layers direct applied and 1 layer suspended

**EXPECTED SYSTEM PERFORMANCE**
- Sound Control System
  - Carpets or Hard Floor Finish
  - Topical Mat
  - Sound Rating
  - Maxxon Acousti-Mat 1/8
  - Insulation
  - STC 60 / IIC 64

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*Maxxon Underlayments and Acousti-Mats are but single components of an effective sound control system. No sound control system is better than its weakest component. Care must be taken in the selection and installation of all components of construction to ensure the ultimate designed acoustical performance. For more information, including type of floor covering used and additional system component information, contact Maxxon Corporation. All data presented on this page is backed by third party testing. For copies of relevant test reports, contact Maxxon Corporation.

**Maxxon Underlayments are selected based on the end use requirements. Considerations should at minimum include: end use sound code requirements, floor goods strength requirements, building frame type.**
**SOUND CONTROL BASICS**

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<td><strong>IIC IMPACT SOUNDS</strong></td>
<td></td>
<td>Direct impact on a floor is transmitted through the building material and is radiated as sound.</td>
<td>Impact sounds are measured using a tapping machine in which standard sized weights are dropped onto the floor in a constant rhythmic pattern. Sound levels in the room below are recorded at 16 frequency bands and calculated into one number identified as the IIC (Impact Insulation Class) Rating.</td>
<td>CEILING CAVITY — Adding a dropped ceiling assembly below a mass timber panel provides an air space proven to further reduce impact sounds, similar to traditional wood-frame construction. Mass timber assemblies with exposed wood ceiling or with gypsum board directly screwed for encapsulation need thicker sound mats and topping slabs to achieve similar isolation performance.</td>
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<td><strong>STC AIRBORNE SOUNDS</strong></td>
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<td>Sound waves travel through the air and are transmitted through walls and floors.</td>
<td>MASS — Adding mass to a floor increases the amount of airborne sound that is blocked. Where the International Building Code requires encapsulation on the top of mass timber floors to meet fire requirements, a 1” gypsum topping is the minimum. Maxxon Underlayment minimum thickness is dictated by sound mat requirements.</td>
<td>FLANKING PATHS — Rigid connections across isolation breaks, exposed ducts between separate spaces, continuous curtain walls, exposed, continuous columns and beams, or doors with undercuts for ventilation are often potential flanking paths. Flanking path noise is typically observed as high frequency sounds.</td>
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**SOUND MATS**

- **Acousti-Mat**
- **Boise Cascade**

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