

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. G264

August 30, 2019

Restrained Assembly Ratings — 1, 1-1/2 Hr. (See Item 14A)

Unrestrained Assembly Rating — 1, 1-1/2 Hr. (See Item 14A)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

fixture permitted in the ceiling (max six "high hat" fixtures per 100 sq ft of ceiling area). For use with USG Interiors LLC steel framing members and acoustical materials only. Wired in accordance with National Electrical Code.

12. **Fixture Protection — Acoustical Material*** — Same as Item 14. Cut into pieces to form a three-sided enclosure with open ends and trapezoidal in cross-section. Fixture protection consists of a 23-3/4 by 23-3/4 in. top piece, two 23-3/4 in. long side pieces of a width which will provide a min 5/8 in. clearance between the top piece and the fixture housing. The side pieces are placed against the sides of the fixture and the top piece is placed on top of the side pieces. The pieces are held together by 6d nails near the ends of each side of the fixture.

12A. **Fixture Protection — Acoustical Material*** — For use with "high hat" light fixtures (Item 11A). Five sided enclosure, rectangular in cross section, cut from the same acoustical material used in the ceiling assembly. Two side pieces measuring 8 in. high by 23-3/4 in. long resting upon ceiling tile, two end pieces measuring 6-3/4 in. high by 16 in. long resting upon steel bar hangers and one top piece measuring 14 in. by 18 in. resting upon side and end pieces with 18 in. dimension parallel with end pieces. Enclosure secured with four 8d nails installed through side pieces into end pieces near the top of the assembly.

13. **Steel Framing Members*** — Main runners, nom 10 or 12 ft long spaced 4 ft OC. Cross tees, nom 4 ft long installed perpendicular to main runners and spaced 2 ft OC. Cross tees, nom 2 ft long, installed perpendicular to the 4 ft cross tees at midspan, spaced 4 ft OC.
CGC INC — Type DXLF.

USG INTERIORS LLC — Type DXLF.

13A. **Steel Framing Members*** — Main runners, nom 12 ft long spaced 4 ft OC. Cross tees, nom 4 ft long installed perpendicular to main runners and spaced 2 ft OC. Cross tees, nom 2 ft long, installed
ROXUL USA INC, D/B/A ROCKFON — Type 3550, Type 4550.

14. **Acoustical Material*** — Nom 24 by 24 by 5/8 or 3/4 in. thick fineline edge lay-in panels. Border panels supported at walls by min. 0.016 in thick painted steel angle with 7/8 in legs or min. 0.016 in thick painted steel channel with a 1 by 1-9/16 by 1/2 in profile. Type ASTRO-FR to be used with Type DXLF steel framing members only.

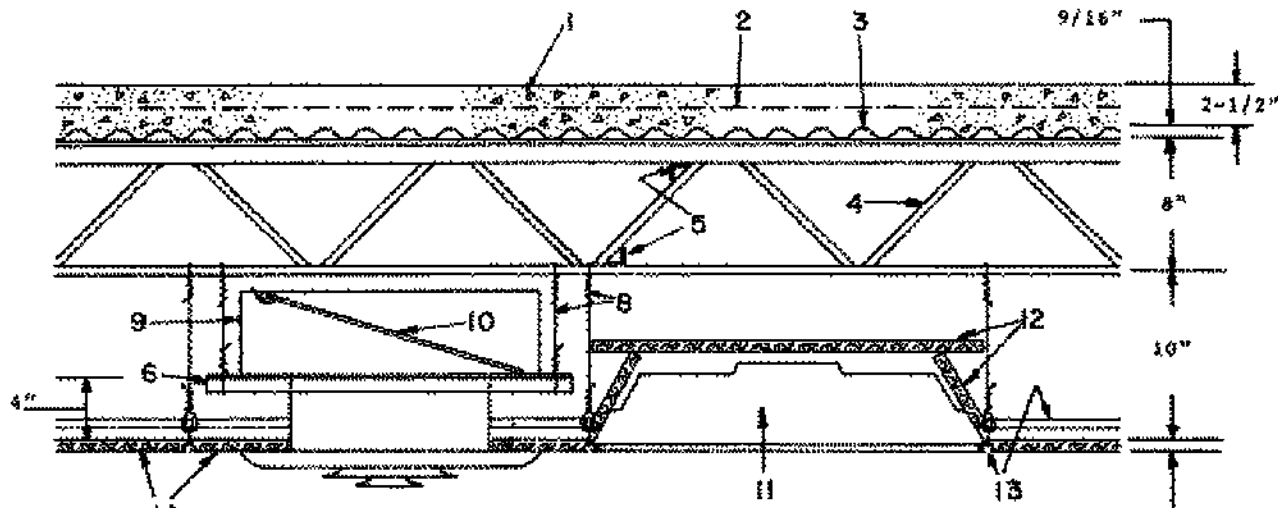
Panel Dimensions - Nom, In.		Types
24 by 24 by 5/8 or 3/4		FR-2, FR-83
24 by 24 by 3/4		ASTRO-FR, FR-81, FR-X1

BUILDING PRODUCTS OF CANADA CORP — Types FR-2, FR-81, FR-83, FR-X1. See **Acoustical Materials** (BYIT), Building Products Of Canada Corp., for specific tile details.

USG INTERIORS LLC — Types ASTRO-FR, FR-2, FR-81, FR-83, FR-X1. See **Acoustical Materials** (BYIT), USG Interiors LLC, for specific tile details.

14A. **Acoustical Material*** — For 1 hr Restrained and Unrestrained Assembly ratings — Nom 24 by 24 by 3/4 in. thick lay-in panels. Border panels supported at walls by min. 0.016 in thick painted steel angle with 7/8 in legs or min. 0.016 in thick painted steel channel with a 1 by 1-9/16 by 1/2 in profile. Panels to be used with Type DXLE steel framing members only.

USG INTERIORS LLC — Types AP-1, AP-2. See **Acoustical Materials** (BYIT), USG Interiors LLC, for specific tile details.



1. **Normal Weight Concrete** — Carbonate or siliceous aggregate, 150 +/- 3 pcf unit weight, 2500 psi compressive strength.

2. **Welded Wire Fabric** — 6 x 6-W1.4 x W1.4 or heavier.

3. **Steel Form Units** — Min. 9/16 in. deep corrugated units, min. No. 24 MSG galvanized steel. Welded to supports with 1/2 in. puddle welds through welding washers. Welds located at each joist. Adjacent units overlapped one corrugation at the sides.

4. **Steel Joists** — Type 8H3 min. size; spaced 24 in. OC, welded to end supports.
Note: Design load shall stress joists to a max. bending stress of 22,000 psi.

5. **Bridging** — 1 by 1 in. steel angles, welded to top and bottom chord of each joist.

6. **Duct Supports** — Nom. 1 by 1 by 1/8 in. thick steel angles or No. 16 MSG cold rolled steel channels, 1-1/2 in. deep, suspended from lower chord of joists with No. 12 SWG galvanized steel wire to form a trapeze; spaced not over 48 in. OC along length of duct and at air duct outlets.

7. **Cold Rolled Channels** — (Not Shown) — No. 16 MSG cold-rolled steel channels, 1-1/2 in. deep with 9/16 in. flanges, located as needed to provide means of attachment for hanger wires between joists. Placed on top and secured to lower chord of joists with No. 18 SWG galvanized steel wire.

8. **Hanger Wire** — No. 12 SWG galvanized steel wire, twist-tied to bottom chord of joists; spaced not over 48 in. OC along main runners adjacent to cross tee intersections. If not already present, hanger wires shall also be provided at the four corners of each light fixture and at center of cross tees adjacent to air duct outlets.

9. **Air Duct** — No. 24 MSG min. galvanized steel. Total area of duct openings not to exceed 113 sq. in. per each 100 sq ft of ceiling area. Area of individual duct opening not to exceed 113 sq in. Max. dimension of opening 12 in.

10. **Damper** — No. 16 MSG galvanized steel, sized to overlap duct opening 1 in. minimum. Protected on both surfaces with 1/16 in. thick ceramic fiber paper and held open with a **Fusible Link** (bearing the UL Listing Mark).

11. **Fixtures, Recessed Light** — (Bearing the UL Listing Mark) Recessed light fixture with steel housing; 2 by 2 ft size. Fixtures t exceed 24 sq ft per each 100 sq ft of ceiling area. Wired in conformance with the National electrical code.

gnom 6-1/2 in. diam by 7-1/2 in. high. Each fixture provided with a nom 7-3/4 in. by 12-1/2 in. base plate screw-attached to the "high hat" fixture with three steel screws. Base plate to be provided with steel bar hangers designed to span across nom 24 in-spacing of cross tees for fixture support. Fixture secured to cross tees with steel bar hangers. A max of one "high hat" fixture may be substituted for each nom 24 in. by 24 in.

15. **Speaker Assemblies*** — (Not Shown) Optional. The speaker assemblies consist of speakers, speaker enclosures and their accessories. The ceiling penetration for the speaker enclosure shall not exceed 11-7/8 by 11-7/8 in. for the square speaker enclosures and 12 in. in diam for the round speaker enclosures. The speaker assemblies are installed in accordance with the installation instructions provided. A maximum of two 144 sq. in. speaker assemblies per 100 sq ft of ceiling area is allowed.
ATLAS SOUND L P

See **Speaker Assemblies For Fire Resistance (CHML)** for specific Types.

16. **Steel Framing Members* — Metal pans** — Not shown — Nom 24 by 24 in. formed from min 0.30 in. thick aluminum sheet, plain or perforated, installed by snapping flanges of metal pan into the box flange of the DXLF main runners and cross tees; the border metal pans are supported at the walls by min 0.025 in. thick (24 MSG) steel retrofit wall molding which is installed over the steel wall angle described in Item No. 14. A 23 in. length of 0.281 in. diam. PVC spacer is applied to the back of each border pan at the retrofit wall molding to secure the cut edge of the metal pan to the retrofit wall molding.
CGC INC — Types CM or CP.

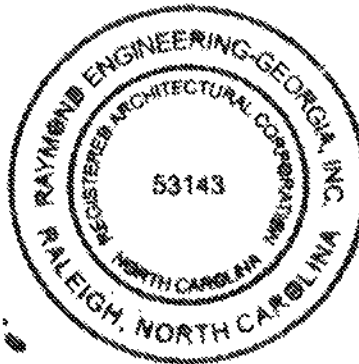
USG INTERIORS LLC — Types CM or CP.

17. **Discrete Products Installed in Air-handling Spaces*** — Automatic Balancing Valve/Damper (Not Shown - Optional) — For use with item 10. Valve/Damper to be provided with ducted installation with steel duct per damper manufacturer's instructions. Automatic Balancing Valve/Damper shall be installed within duct such that it is not directly above the ceiling radiation damper.

METAL INDUSTRIES INC — Model ABV-4, ABV-5, ABV-6

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Last Updated on 2019-08-30



GOVERNOR MOREHEAD SCHOOL
SPRINKLER, ADA TOILET, LIGHTING
UPGRADES FOR DORMS A, B, & D
RALEIGH, NC

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SHEET NOTES

DATE:
05/27/2025
FOR
CONSTRUCTION
DESIGNER:
ENGINEER:

SHEET NO.
G-501
OF

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NC DEPARTMENT
OF INSTRUCTION
SCO #
24-27792-01A

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