

Example Type III Floor-Wall Intersection Details in DCA3



Jason Smart, PE
Manager, Engineering Technology
American Wood Council

jsmart@awc.org



WHAT IS DCA3?

- An AWC publication containing the following information for wood-framed assemblies:
 - ✓ Fire-resistance data for tested wood-frame wall and floor/ceiling assemblies
 - ✓ Sound insulation data for tested wood-frame floor/ceiling assemblies
 - ✓ Example details for exterior wall – floor intersections in platform construction
- Part of a series of AWC documents: Design for Code Acceptance (DCA)
- Available for free download on the AWC website at:

<https://awc.org/codes-standards/publications/dca3>

BUILDING CODE REQUIREMENTS – EXTERIOR WALL/FLOOR INTERSECTIONS

Exterior bearing walls in Type III construction must be fire-resistance rated

- In platform construction, the floor assembly bears on the wall below; and the wall above bears on the floor
 - ✓ This intersecting part of the floor assembly is *not* considered part of the exterior wall assembly...
 - ✓ However, the portion of the floor that transfers load from the wall above to the wall below must be designed to provide continuity of FRR from the wall above to the wall below



BUILDING CODE REQUIREMENTS – EXTERIOR WALL/FLOOR INTERSECTIONS

Exterior bearing walls in Type III construction:

- Must have a 2-hour fire-resistance rating (IBC Table 601)
- If wood is used, the framing members within the exterior wall must be FRT (IBC Section 602.3)



BUILDING CODE REQUIREMENTS – EXTERIOR WALL/FLOOR INTERSECTIONS

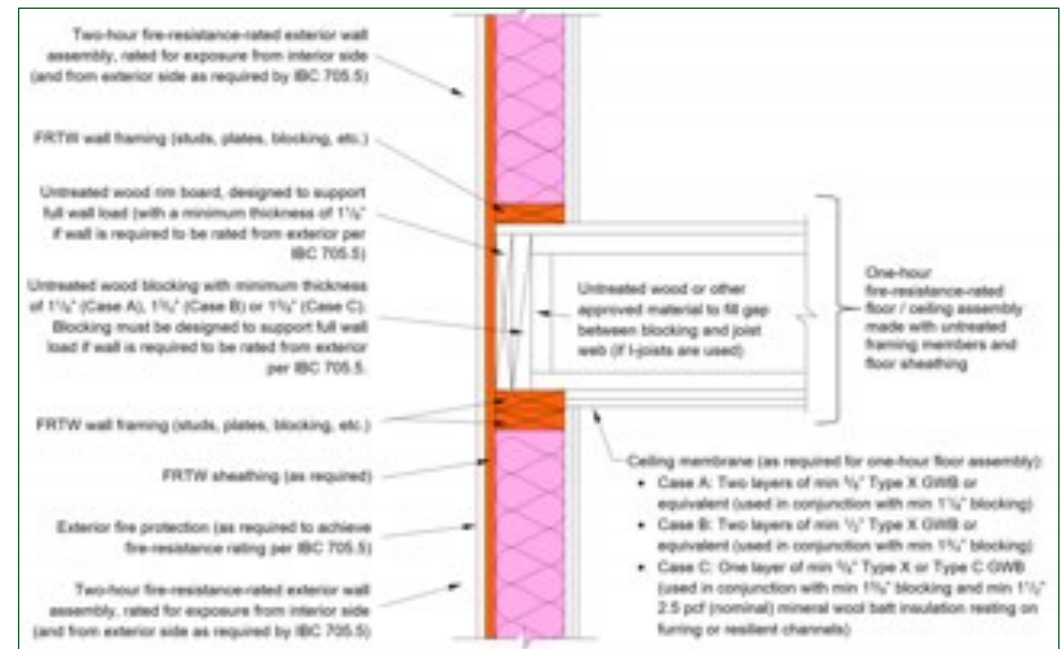
- In platform construction, the floor assembly bears on the wall below; and the wall above bears on the floor
 - ✓ This intersecting part of the floor assembly is *not* considered part of the exterior wall assembly (and therefore not required to be FRT)...
 - ✓ However, the portion of the floor that transfers load from the wall above to the wall below must be designed to provide continuity of FRR from the wall above to the wall below



DCA3 – EXTERIOR WALL/FLOOR INTERSECTIONS

Example Details of Exterior Wall/ Floor Intersections

- Applicable to Type III platform construction
- Provide continuity of FRR through the floor, from the wall above to the wall below
- Identify which framing members are required to be FRT



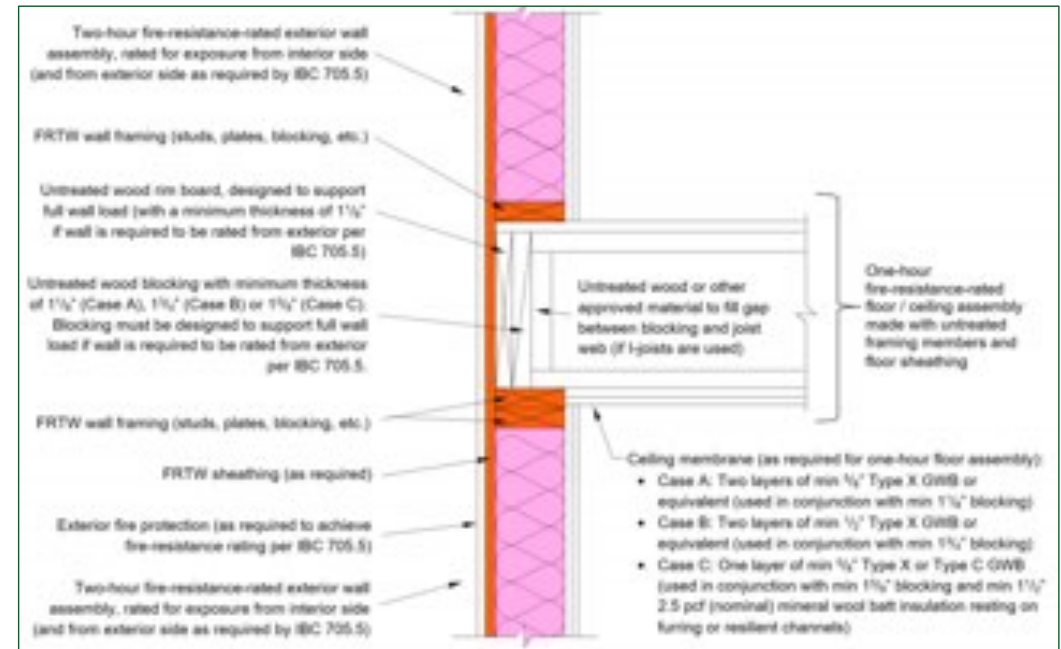
DCA3 – EXTERIOR WALL/FLOOR INTERSECTIONS

Example Details of Exterior Wall/ Floor Intersections

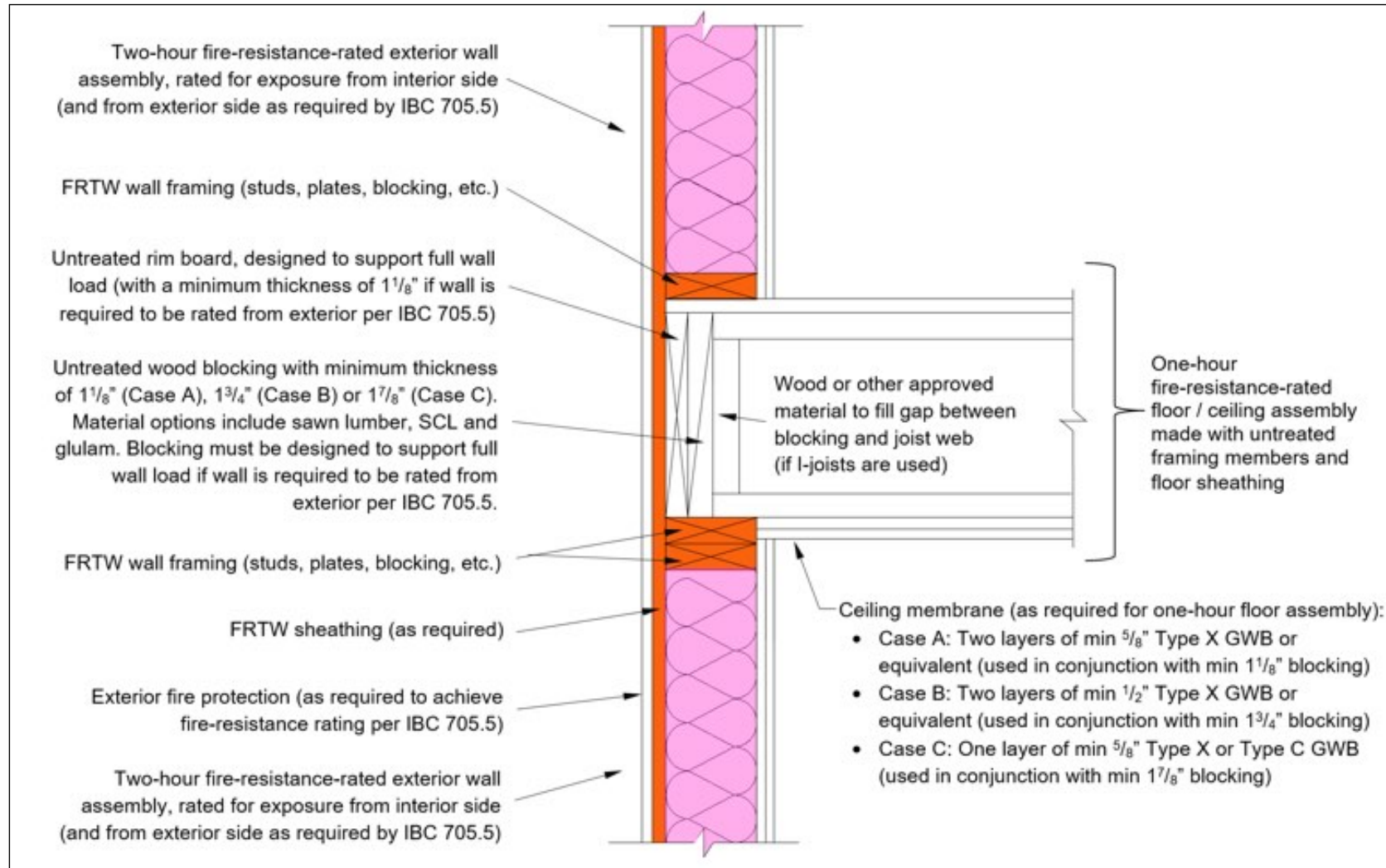
➤ Example details achieve FRR by:

✓ Calculations per IBC Section 722
(NDS Ch 16)

✓ Engineering analysis based on
comparisons of tested building
elements



DCA3 – EXTERIOR WALL/FLOOR INTERSECTIONS



Example Type III Floor-Wall Intersection Details in DCA3



Jason Smart, PE
Manager, Engineering Technology
American Wood Council

jsmart@awc.org

