



**TOPIC:** One- & Two-Family Walls and Projections- ORSC/3/#4

**CODE:** Oregon Residential Specialty Code: 2021 Edition

**APPROVED:** August 8, 2023 [Rebecca Esau] , Director

**REFERENCE:** Oregon Residential Specialty Code - Section R302

**SUBJECT:** Requirements for Fire Resistive Rating for Building Walls and Projections for Conversion of One & Two Family Residential Detached Accessory Structures

**QUESTION:** For conversions of accessory buildings from non-habitable space to habitable space, are there alternative methods to meet fire-resistance rating for building walls and projections other than those specified in Table R302.1 of the Oregon Residential Specialty Code (ORSC)?

**RESPONSE:** ORSC 302.1 and Table R302.1 require walls less than 3 feet from a property line be fire-resistance rated. ORSC 302.1 and Table R302.1 also require projections less than 3 feet must be fire-resistance rated, and projections less than 2 feet are not allowed. The Bureau of Development Services (BDS) has determined that, as an alternative to meeting the requirements of ORSC 302.1 and Table R302.1, building walls may be less than 3 feet from a property line, and projections may be less than 2 feet from a property line if the following conditions are met.

General: This code guide applies to existing detached buildings that are being converted from non-habitable to habitable spaces. These buildings must be accessory to one-and two-family dwelling units.

Code Guide Sections **A**, **B**, **C**, and **D** explain how to provide the minimum required fire protection rating for the following elements:

- A. Exterior Walls, including the space between the wall top plate and the roof sheathing;
- B. Roof Sheathing;
- C. Roof Eaves or Projections where walls are located more than 3' from the property line
- D. Walls and Roof Eaves or Projections, where walls are located less than 3' from the property line

Code Guide Section **E** provides information on additional requirements unrelated to fire rating.

**A. Exterior Walls:** Exterior walls located *less than 3 feet* from the property line must meet the following conditions:

1. Interior Side of Wall: Provide two (2) layers of 5/8" Type X gypsum board;

and

2. Area at Top Plate: Provide one of the following options between the top plate and the underside of the roof sheathing;

- a. Continuation of Gypsum Board: Continue two (2) layers of 5/8" Type X gypsum board at the interior side of the wall to the underside of the roof sheathing with blocking above the top plate sufficient for gypsum board attachment; (See **Figure A.1**)

or

- b. Addition of Blocking: Terminate gypsum board at the top of the top plate. Provide two (2) layers of solid, vertical, nominal 2 x blocking above the top plate. Bevel the 2-x blocking to be tight to the underside of the roof sheathing. Blocking may be existing, new, or a combination of both. (See **Figure A.2**)

3. Openings or Penetrations: No openings or penetrations may be installed in any portion of the wall that is *less than 3 feet* from the property line. Examples of nonpermitted openings and penetrations include but are not necessarily limited to, windows, plumbing, and vents.

**B. Roof Sheathing:** Roofs located *less than 3 feet* from the property line must meet the following conditions:

1. Existing Sheathing to Remain: Provide one (1) layer of 5/8" Type X gypsum board installed directly beneath the roof decking or sheathing. It must be supported by minimum nominal 2 x ledgers attached to the side of the roof framing members for a minimum distance of 4 feet measured from the wall along the slope of the roof. (See **Figure B.1**)
2. Existing Sheathing to be Replaced: Provide one (1) layer of minimum 1/2" fire retardant treated roof sheathing for a minimum distance of 4 feet measured from the edge of the roof along the slope of the roof. (See **Figure B.2**)
3. Openings or Penetrations: No openings or penetrations may be installed in any portion of the roof that is less than 3 feet from the property line. Examples of openings include but are not necessarily limited to, skylights, plumbing vents, and roof vents.

**C. Roof Eaves or Projections:** Where there are walls located *3 feet or more* from the property line AND eaves or other projections *located less than 2 feet* from the property line, the eaves or projections must meet the following conditions:

1. Existing Sheathing to Remain: Provide two (2) layers of 5/8" Type X gypsum sheathing on the underside of the soffit. A protective weather barrier may cover this material. (See **Figure C.1**)
2. Existing Sheathing to be Replaced: Provide one (1) layer of minimum 1/2" fire retardant roof sheathing for the depth of the eave, minimum and provide one (1) layer of 5/8" Type X gypsum sheathing on the underside of the soffit. A protective weather barrier may cover the gypsum sheathing at the soffit. (See **Figure C.2**)
3. Openings or Penetrations: No openings, including eave vents, may be installed in the soffit.

**D. Walls and Roof Eaves or Projections:** When there are walls located *less than 3 feet* from the property line AND eaves or other projections *less than 2 feet* from the property line, the conditions of sections A, B, and C above must be met. (See **Figures D.1 and D.2**)

## E. Additional Requirements

1. Built Elements: No built elements, including footings and gutters, may cross the property line.
  
2. Stormwater Retention: Stormwater must remain and be disposed of onsite. A minimum of 4.5 inches, measured from the outside of the eave or projection, must be provided to accommodate a rain gutter. The 4.5-inch distance requirement does not apply if:
  - a. There is a rake board facing the property line; or
  
  - b. The roof is sloped in such a way that no drainage occurs along this roof edge.

Alternative proposals not meeting the standards of the code or this code guide may be approved on a case-by-case basis through the BDS administrative appeals process.

### CODE GUIDE DETAILS

FIGURE A.1 CONTINUATION OF GYPSUM BOARD

- APPLIES TO WALLS LESS THAN 3 FEET FROM PROPERTY LINE
- EXTEND GYPSUM BOARD TO UNDERSIDE OF ROOF SHEATHING
- NO PLUMBING IN EXTERIOR WALL

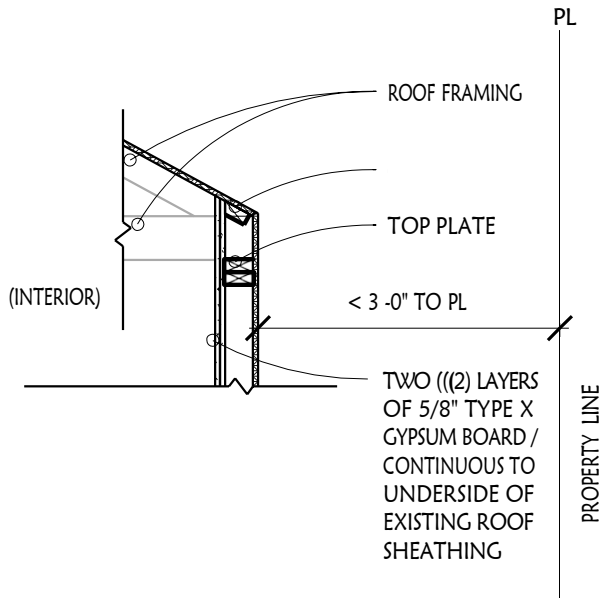
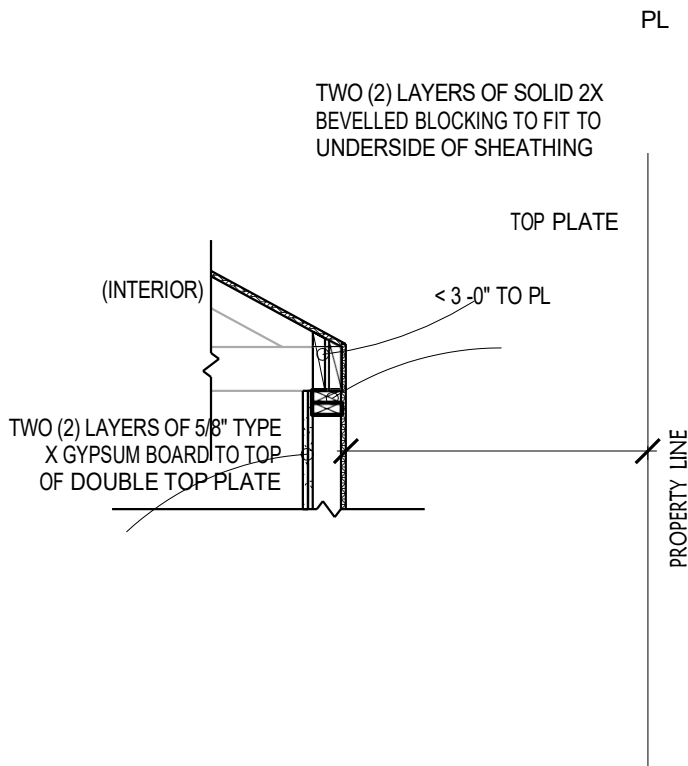


FIGURE A.2 ADDITION OF BLOCKING

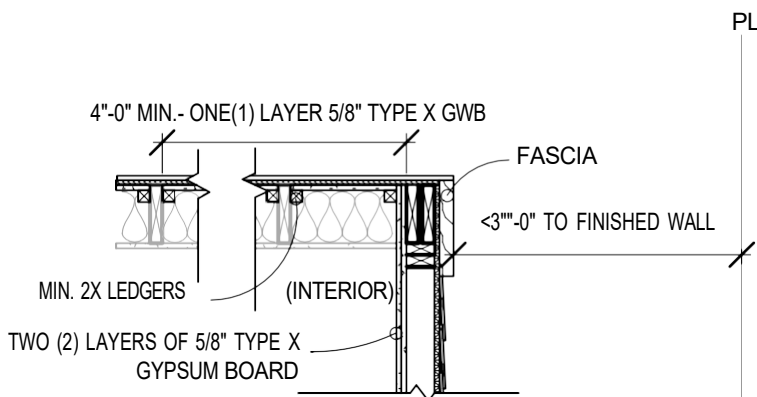
- WALLS LESS THAN 3 FEET FROM PROPERTY LINE
- PROVIDE BLOCKING ABOVE TOP PLATE
- NO PLUMBING IN EXTERIOR WALL



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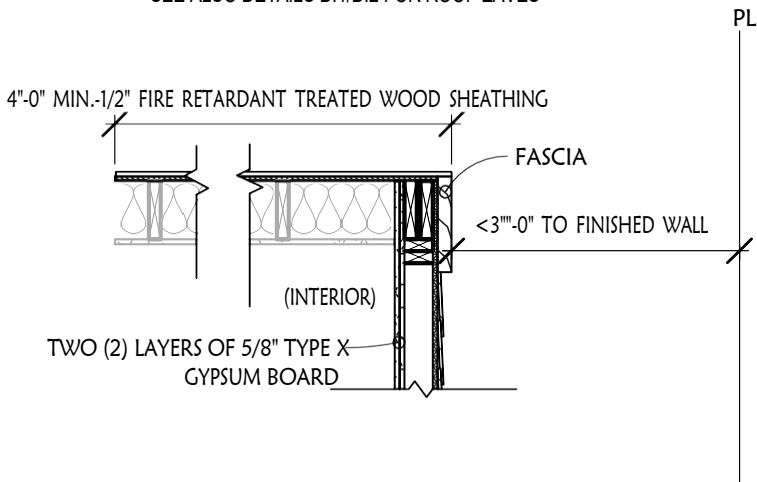
**FIGURE B.1 ROOF SHEATHING--EXISTING SHEATHING TO REMAIN OR WHERE NON-FIRE RESISTANT TREATED SHEATHING IS TO BE INSTALLED**

- WALLS LESS THAN 3 FEET FROM PROPERTY LINE
- NO OPENINGS OR PENETRATIONS MAY BE INSTALLED IN ANY PORTION OF THE ROOF THAT IS LESS THAN 3 FEET FROM THE PROPERTY LINE
- PROVIDE ONE (1) LAYER OF 5/8" TYPE X GYPSUM BOARD AT UNDERSIDE OF EXISTING ROOF SHEATHING
- ROOF FRAMING PARALLEL TO WALL (SIMILAR WHERE PERPENDICULAR)
- NO EAVES
- SEE ALSO DETAILS A.1 / A.2 FOR EXTERIOR WALL DRYWALL CONTINUITY AND BLOCKING
- SEE ALSO DETAILS D.1/D.2 FOR ROOF EAVES



**FIGURE B.2 ROOF SHEATHING--EXISTING SHEATHING TO BE REPLACED**

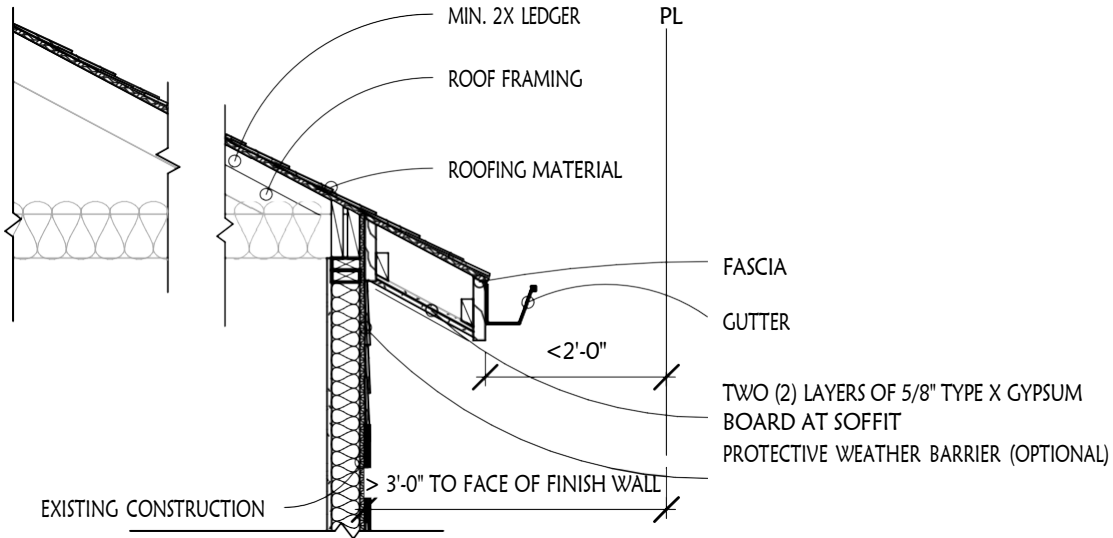
- WALLS LESS THAN 3 FEET FROM PROPERTY LINE
- NO OPENINGS OR PENETRATIONS MAY BE INSTALLED IN ANY PORTION OF THE ROOF THAT IS LESS THAN 3 FEET FROM THE PROPERTY LINE
- REPLACE EXISTING ROOF SHEATHING WITH FIRE RETARDANT-TREATED WOOD (FRTW) SHEATHING
- ROOF FRAMING PARALLEL TO WALL (SIMILAR WHERE PERPENDICULAR)
- NO EAVES
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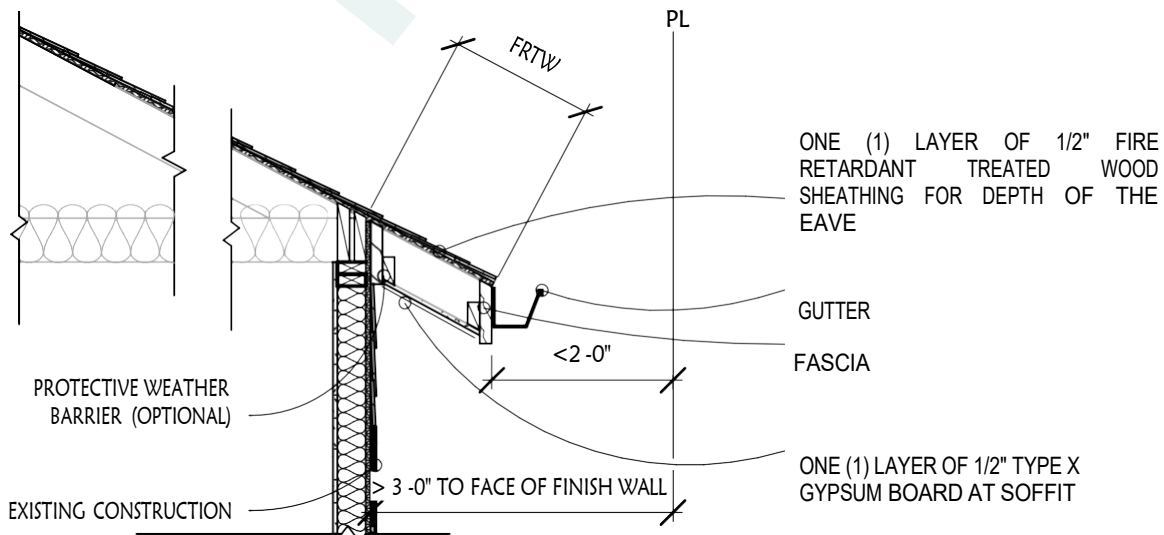
**FIGURE C.1 ROOF EAVES OR OTHER PROJECTIONS - EXISTING SHEATHING TO REMAIN OR WHERE NON-FIRE RESISTANT TREATED SHEATHING IS TO BE INSTALLED**

- ROOF EAVES OR OTHER PROJECTIONS LOCATED LESS THAN 2 FEET FROM PROPERTY LINE
- WALLS LOCATED 3 FEET OR MORE FROM PROPERTY LINE
- PROVIDE TWO (2) LAYERS OF 5/8" TYPE X GYPSUM BOARD AT SOFFIT
- ROOF FRAMING LOCATED PERPENDICULAR TO WALL (SIMILAR WHERE PARALLEL)
- NO OPENINGS, INCLUDING EAVE VENTS, MAY BE INSTALLED IN THE SOFFIT
- SEE ALSO, DETAILS A.1 / A.2 FOR EXTERIOR WALL DRYWALL CONTINUITY AND BLOCKING



**FIGURE C.2 ROOF EAVES OR OTHER PROJECTIONS - EXISTING SHEATHING TO BE REPLACED**

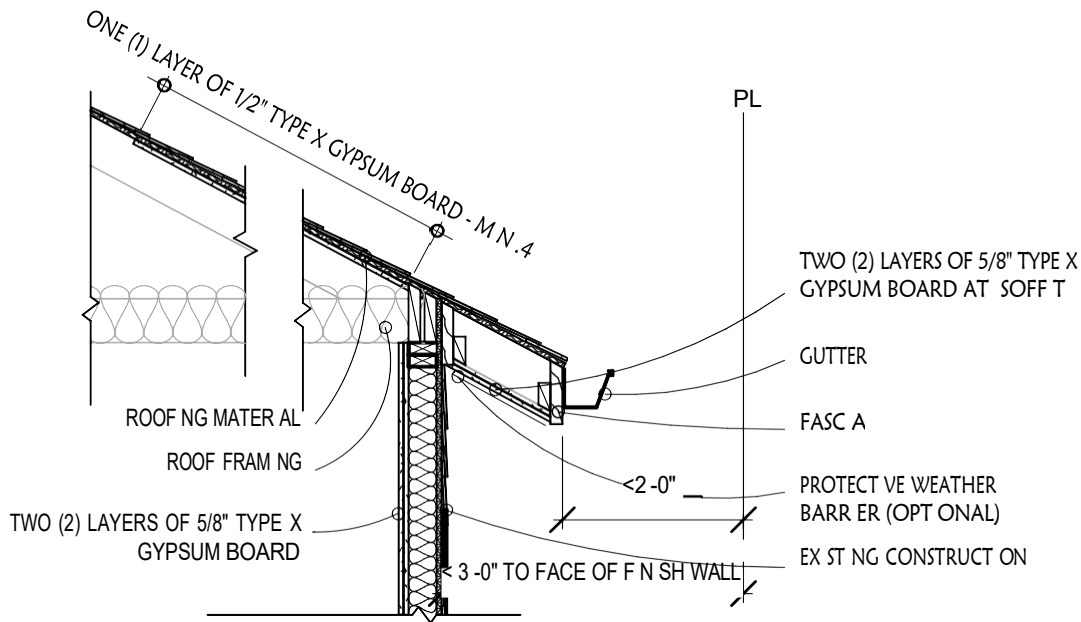
- ROOF EAVES OR OTHER ROOF PROJECTIONS LOCATED LESS THAN 2 FEET FROM PROPERTY LINE
- WALLS LOCATED MORE THAN 3 FEET FROM PROPERTY LINE
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- ROOF EAVES OR OTHER PROJECTIONS LOCATED LESS THAN 2 FEET FROM PROPERTY LINE
- WALLS LOCATED LESS THAN 3 FEET FROM PROPERTY LINE
- PROVIDE LAYER OF 5/8" TYPE X GYPSUM BOARD AT UNDERSIDE OF EXISTING ROOF SHEATHING
- ROOF FRAMING PERPENDICULAR TO WALL (SIMILAR WHERE PARALLEL)
- NO OPENINGS, INCLUDING EAVE VENTS, MAY BE INSTALLED IN THE SOFFIT
- SEE ALSO, DETAILS A.1 / A.2 FOR EXTERIOR WALL DRYWALL CONTINUITY AND BLOCKING
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**FIGURE D.2 ROOF EAVES OR OTHER PROJECTIONS EXISTING SHEATHING TO BE REPLACED**

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