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COURSE 18180

Deck Code Changes Pt 2

Exam Material

Uscontractorlicense LLC

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Summary Of This Course

Deck Code Changes Part 2

Approved by the

Wisconsin Department of Safety and Professional Services Safety and Buildings Division

Course Identification Number 18180

Educational Credit Hours: 6 Hours

Course Provider:

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This course is Part 2 of the Deck Code changes and is designed to familiarize Contractors and Inspectors with the amendments to the deck codes required for building and remodeling decks, according to the Uniform Dwelling Code. Topics covered in this course include General Requirements, Footings and Post Connections, Posts and Post-to-Beam Connections, Beams, Joists, and Joist-to-Beam Connections.

This Course is approved for the following Registrations/Certifications or Licenses:

Dwelling Contractor Qualifier	6 Hours of Continuing Education	
UDC - Construction Inspector	6 Hours of Continuing Education	

This course is a distance learning or e-learning course, which allows the attendee to complete the course on their time schedule.

Course Outline

This course is a distance learning or e-learning course, which allows the attendee to complete the course on their time schedule.

Chapters SPS 325 APPENDIX B

Joist Hangers

Ledger Attachments

Ledger-Board Fasteners

Free Standing Decks

Lateral Support

Decking

Guard and Posts

Stairs

Framing Plan

Appendix C and

Attachment of Residential Deck Ledger to Metal Plate Connected Wood Truss Floor System

Exam

180 questions related to the reference materials are used to test the attendee on their comprehension of the materials. A 70% score will need to be attained in order to pass this course.

Answer Sheet(s)

2 bubble style answer sheet(s) are included. When you are finished with the exam, you may return the answer sheets for grading to:

By Mail: Uscontractorlicense LLC
PO Box 268
Platteville, Wisconsin 53818

By Email: michael@uscontractorlicense.com

By Fax: 608-571-0096

Once we get the answer sheets back, we will graded them, enter your hours into the attendance portal and email or mail you back your certificate of completion(s). You will be responsible for renewing your license with the DSPS at www.license.wi.gov website.

Any questions, please contact us at 608.348.6688

Deck Code Changes – Part 2

Chapters SPS 320 to 325 – Appendix B

Section 7: Joist Hangers

1. The joist–hanger depth (d, as shown in Figure 9) must be at least _____ of the joist depth.

a. 20 percent
b. 35 percent
c. 50 percent
d. 60 percent

2. For joist hangers that are fastened to a ledger board, _____ by the manufacturer must be used.

a. screws which are recommended
b. nails which are recommended
c. clamps which are recommended
d. screws or nails which are recommended

3. The manufactured width of the joist hanger _____ the number of plies being carried.

a. can accommodate
b. may accommodate
c. must accommodate
d. is recommended to accommodate

4. Each joist hanger must have the minimum capacity listed in Table 5.

a. True
b. False

5. _____ hanger flanges to accommodate field conditions.

a. Do not bend
b. You may bend
c. Alter
d. None of the above

6. Joists _____ from both sides of the same beam.

a. can frame in
b. may frame in
c. could frame in
d. must not frame in

7. The number of fasteners and the manner in which they are used must be as specified by the _____.

a. building inspector
b. manufacturer
c. homeowner
d. both a. and b.

8. For joist hangers that are fastened to a ledger board, screws which are recommended by the lumber yard must be used. All other fasteners are required to be nails.

a. True
b. False

9. Clip–angles or brackets used to support framing members in lieu of joist hangers _____.

a. are required
b. are strongly recommended
c. are prohibited
d. both a. and b.

10. Use joist hangers with _____ if clearances to the edge of the beam or ledger board dictate.

a. inside flanges
b. outside flanges
c. floor flanges
d. both a. and b.

11. Using Figure 9 – Joist Hangers, which flange is represented in graph A?

a. inside flange
b. outside flange
c. floor flange
d. pool flange

12. Using Table 5 – Joist Hanger Download, what is the minimum download capacity for a 2"x8" joist?

a. 500 lbs.
b. 600 lbs.
c. 700 lbs.
d. All of the above

13. Using Table 5 – Joist Hanger Download, what is the minimum download capacity for a 2"x12" joist?

a. 500 lbs.
b. 600 lbs.
c. 700 lbs.
d. All of the above

14. Using Table 5 – Joist Hanger Download, what is the minimum download capacity for a 2"x10" joist?

a. 500 lbs.
b. 600 lbs.
c. 700 lbs.
d. All of the above

15. Using Figure 9 – Joist Hangers, which flange is represented in graph B?

a. inside flange
b. outside flange
c. floor flange
d. pool flange

Section 8: Ledger Attachments

16. The ledger–board depth must be greater than or equal to the depth of the deck joists, but _____ .

a. not less than 2"x4"
b. not less than 2"x6"
c. not less than 2"x8"
d. none of the above

17. Continuous flashing with a drip edge, as shown in _____, is required at a ledger board that is attached to wood–framed construction.

a. Figure 11
b. Figure 12
c. Figure 13
d. Figure 14

18. The existing band board on the house must be capable of supporting the deck.

a. True
b. False

19. The _____ and the _____ must be at the same elevation.

a. top of the ledger board / bottom of the deck joists
b. top of the ledger board / top of the deck joists
c. bottom of the ledger board / bottom of the deck joist
d. bottom of the ledger board / top of the deck joist

20. The exterior finish, such as house siding, can be removed in the area for the ledger board after the installation of the ledger board.

a. True
b. False

21. The ledger board must be attached in accordance with one of the conditions shown in _____ – except if metal–plate–connected wood floor trusses were used in the house, see the text for manufactured wood trusses.

a. Figures 11 and 12
b. Figures 12 and 13
c. Figures 11 through 14
d. Figures 11 through 13

22. MPCWT systems that are used in residential floors are often installed with a _____ lumber "ribbon" board at the ends of the trusses to tie the ends of the trusses together (see Detail 1 in Appendix C.).

a. 2″x4″
b. 2″x6″
c. 4″x4″
d. 2″x8″

23. Installing a residential deck where the floor for the house uses a MPCWT system must be in accordance with a standard detail provided by the truss designer, a corresponding detail in section 7 of Appendix C, or a full plan submission – unless the deck is free–standing as addressed in section 10.

a. True
b. False

24. A _____ is an engineered, prefabricated structural component that is designed for each specific application.

a. manufactured–plate–connected wood truss (MPCWT)
b. metal–plate–connected wood trim (MPCWT)
c. metal–plate–connected wood truss (MPCWT)
d. manufactured–plate–centered wood truss (MPCWT)

25. Many homes are constructed with wood I–joists, as shown in Figure 10. Rather than utilize a 2x band board, these systems are often constructed with a minimum 1–inch–thick engineered wood product (EWP) band board capable of supporting a deck. If a minimum 1–inch EWP or 2x band board is not present, then a free– standing deck is required, as addressed in section 10.

a. True
b. False

26. Flashing must be a corrosion–resistant metal having a minimum nominal 0.019–inch thickness – such as galvanized steel coated with _____, copper (attached using copper nails only), or stainless steel – or must be a UV–resistant plastic recommended by its manufacturer for this use.

a. 1.65 ounces of zinc per square foot (G–165 coating)
b. 1.85 ounces of zinc per square foot (G–185 coating)
c. 1.75 ounces of zinc per square foot (G–175 coating)
d. All of the above

27. Using Figure 11 – Attachment of Ledger Board to Band Board or Band Joist, the letter 'C' represents

a. deck joist
b. floor joist
c. joist hanger
d. 2x ledger board

28. Using Figure 11 – Attachment of Ledger Board to Band Board or Band Joist, the letter 'H' represents

a. exterior sheathing
b. foundation wall
c. joist hanger
d. 2x ledger board

29. Using Figure 11 – Attachment of Ledger Board to Band Board or Band Joist, the letter 'J' represents

a. existing stud wall
b. remove siding at ledger prior to installation
c. existing 2x or 1" minimum EWP band board
d. 1/2 "diameter lag screws or through-bolts

30. Using Figure 11 – Attachment of Ledger Board to Band Board or Band Joist, the letter 'E' represents

a. deck joist
b. floor joist
c. joist hanger
d. 2x ledger board

31. Using Figure 11 – Attachment of Ledger Board to Band Board or Band Joist, the letter 'B' represents

a. exterior sheathing
b. foundation wall
c. joist hanger
d. 2x ledger board

32. Using Figure 11 – Attachment of Ledger Board to Band Board or Band Joist, the letter 'G' represents

a.existing stud wall
b. remove siding at ledger prior to installation
c. existing 2x or 1" minimum EWP band board
d. 1/2 "diameter lag screws or through-bolts

33. Using Figure 11 – Attachment of Ledger Board to Band Board or Band Joist, the letter 'K' represents

a. deck joist
b. floor joist
c. joist hanger
d. 2x ledger board

34. Using Figure 11 – Attachment of Ledger Board to Band Board or Band Joist, the letter 'I' represents

a. existing stud wall
b. remove siding at ledger prior to installation
c. existing 2x or 1" minimum EWP band board
d. 1/2 "diameter lag screws or through-bolts

35. Using Figure 11 – Attachment of Ledger Board to Band Board or Band Joist, the letter 'D' represents

a. existing stud wall
b. remove siding at ledger prior to installation
c. existing 2x or 1" minimum EWP band board
d. 1/2 "diameter lag screws or through-bolts

36. Using Figure 11 – Attachment of Ledger Board to Band Board or Band Joist, the letter 'A' represents

a. existing stud wall
b. foundation wall
c. 2x ledger board
d. exterior sheathing

37. Using Figure 11 – Attachment of Ledger Board to Band Board or Band Joist, the letter 'F' represents

a. 1/2 "diameter lag screws or through-bolts
b. remove siding at ledger prior to installation
c. existing 2x or 1" minimum EWP band board
d. continuous flashing with drip edge

38. Using Figure 12 – Attachment of Ledger Board Solid Foundation, the 'joist hanger' is represented by the letter

a. B
b. C
c. D
d. E

39. Using Figure 12 – Attachment of Ledger Board Solid Foundation, the 'concrete or solid masonry wall' is represented by the letter

a. H
b. G
c. F
d. E

40. Using Figure 12 – Attachment of Ledger Board Solid Foundation, the 'to resist corrosion and decay, this area should be caulked' is represented by the letter

a. D
b. C
c. B
d. A

41. Using Figure 12 – Attachment of Ledger Board Solid Foundation, the 'deck joist' is represented by the letter

a. B
b. C
c. D
d. E

42. Using Figure 12 – Attachment of Ledger Board Solid Foundation, the 'embedment distance per manufacturer' is represented by the letter

a. H
b. G
c. F
d. E

43. Using Figure 12 – Attachment of Ledger Board Solid Foundation, the '1/2 "diameter expansion anchors with washers' is represented by the letter

a. B
b. C
c. D
d. E

44. Using Figure 12 – Attachment of Ledger Board Solid Foundation, the 'edge distance per manufacturer' is represented by the letter

a. H
b. G
c. F
d. E

45. Using Figure 12 – Attachment of Ledger Board Solid Foundation, the '2x ledger board' is represented by the letter

a. B
b. C
c. D
d. E

46. Attaching a ledger board to or through an exterior veneer such as _____, or to or through a _____, or to a _____ – as shown in Figure 14 – are prohibited. In such cases, the deck must be free—standing, as addressed in section 10. Attaching a ledger board to a house overhang is allowed if supported by engineering.

a. brick or stone
b. masonry chimney
c. house overhang
d. All of the above

47. Using Figure 13 – Attachment of Ledger Board to Hollow Foundation, the 'hollow masonry wall' is represented by the letter

a. I
b. H
c. G
d. F

48. Using Figure 13 – Attachment of Ledger Board to Hollow Foundation, the '8" block wall - minimum' is represented by the letter

a. D
b. E
c. F
d. G

49. Using Figure 13 – Attachment of Ledger Board to Hollow Foundation, the 'edge distance per manufacturer' is represented by the letter

a. I
b. H
c. G
d. F

50. Using Figure 13 – Attachment of Ledger Board to Hollow Foundation, the '1/2" diameter approved adhesive anchors with washers' is represented by the letter

a. D
b. C
c. B
d. A

51. Attaching a ledger board to a house overhang is allowed if supported by engineering.

a. True
b. False

52. Using Figure 13 – Attachment of Ledger Board to Hollow Foundation, the 'embedment distance per manufacturer' is represented by the letter

a. G
b. C
c. E
d. A

53. Using Figure 13 – Attachment of Ledger Board to Hollow Foundation, the 'to resist corrosion and decay, this area should be caulked' is represented by the letter

a. G
b. C
c. E
d. A

54. Using Figure 13 – Attachment of Ledger Board to Hollow Foundation, the '2x ledger board' is represented by the letter

a. D
b. E
c. F
d. G

Section 9: Ledger-Board Fasteners

55. Lead anchors are prohibited.

a. True
b. False

56. Adequacy of connections must be verified with an engineer.

a. True
b. False

57. Using Figure 15 – Ledger Board Fastener Spacing and Clearances, the letter 'D' represents

a. lag screw
b. thru-bolt
c. anchor with washer
d. All of the above

58. Using Figure 15 – Ledger Board Fastener Spacing and Clearances, the letter 'A' represents

a. 2″ max
b. 2″ min
c. 5″ max
d. 5″ min

59. Using Figure 15 – Ledger Board Fastener Spacing and Clearances, the letter 'G' represents

a. staggered fasteners in 2 rows
b. 2″ min
c. 5″ max
d. 3⁄4″ min

60. Using Figure 15 – Ledger Board Fastener Spacing and Clearances, the letter 'F' represents

a. 5.5″ min for 2x8*
b. 6.5″ min. for 2x10
c. 7.5″ min. for 2x12
d. All of the above

61. Using Table 6 - Ledger Board Fastener Spacing, on Center1 2 3 and the notes: The thickness of the sheathing over the band board _____ .

a. must not exceed 10/26″
b. must not exceed 12/28″
c. must not exceed 15/32″
d. may exceed 16/34″

62. Pilot holes for through–bolts must be 17/32 to 9/16 inches in diameter.

a. True
b. False

63. Expansion or adhesive anchors must be used for attaching a ledger board to a concrete or solid masonry wall, as shown in _____.

a. Figure 11
b. Figure 12
c. Figure 13
d. Figure 14

64. Bolts should be tightened _____ after construction due to drying and wood shrinkage.

a. 6 to 12 months
b. 4 to 10 months
b. 2 to 6 months
d. within 1 month

65. Using Table 6 - Ledger Board Fastener Spacing, on Center1 2 3 and the notes: Where solid–sawn pressure–preservative–treated deck ledgers are attached to engineered wood products (_____ or structural composite lumber including laminated veneer lumber), the ledger attachment must be designed in accordance with accepted engineering practice. These tabulated values are in accordance with that practice and are based on 300 lbs and 350 lbs for 1" and 1 1/8" EWP rim board, respectively.

a. maximum 1″ thick wood structural panel band joist
b. minimum 1″ thick wood structural panel band joist
c. recommended 1″ thick wood structural panel band joist
d. Any of the above

66. Approved adhesive anchors with a 1/2 inch−diameter threaded rod must be used for attaching a ledger board to hollow masonry, as shown in _____.

a. Figure 11
b. Figure 12
c. Figure 13
d. Figure 14

67. Using Table 6 - Ledger Board Fastener Spacing, on Center1 2 3 and the notes: The minimum gap between the face of the ledger board and face of the wall sheathing is 1.

a. True
b. False

68. The values in Table 6 - Ledger Board Fastener Spacing, on Center1 2 3 and the notes: These Values are valid for deck ledgers consisting of _____, hem/fir, or southern pine; and for band boards consisting of _____, _____, spruce−pine−fir, southern pine, or _____ .

a. douglas fir/larch
b. hem−fir
c. engineered wood product (EWP)
d. All of the above

69. Using Table 6 - Ledger Board Fastener Spacing, on Center1 2 3 and the notes: Wood _____, _____, or _____ is permitted between the ledger board and the band board.

a. foam sheeting
b. gypsum board sheating
c. structural panel sheating
d. All of the above

70. Adhesive anchors must be installed in accordance with the _____ and must be equipped with washers. Adhesive cartridges should remain on the jobsite for _____.

a. inspector's approval/ proper verification
b. manufacturer's instructions/ inspector verification
c. homeowner's instructions/ inspector verification
d. manufacturer's instructions / DNR hazardous waste disposal verification.

71. The _____ of lag screws must comply with Figure 16.

a. shank
b. diameter
c. length
d. All of the above

72. Tighten each lag screw snugly, but do not over−tighten so as to cause wood damage.

a. True
b. False

73. Insert the lag screw through the ledger board and into the pilot hole by turning. _____ with a hammer.

a. You may drive
b. You can drive
c. Do not drive
d. Both a. and b.

74. Do not use soap or a wood−compatible lubricant if needed to facilitate tightening.

a. True
b. False

Section 10: Free-Standing Decks

75. If the edge of a deck footing is closer than 5 feet to an existing exterior house wall, the footing _____ as the existing wall footing as shown in Figure 17.

a. must bear at the same elevation
b. can bear at the same elevation
c. may bear at the same elevation
d. is recommended to bear at the same elevation

76. Using Figure 17 – Free-Standing Deck, the letter 'A' represents:

a. diagonal bracing
b. joist overhang
c. 2x blocking or rim joist
d. rim joist

77. Using Figure 17 – Free-Standing Deck, the letter 'C' represents:

a. existing house foundation wall
b. beam, post
c. when less than 5', footings must be at same elevation as existing house footing
d. 2x blocking or rim joist

78. Using Figure 17 – Free-Standing Deck, the letter 'E' represents:

a. rim joist
b. joist
c. beam, post
d. joist overhang

79. Using Figure 17 – Free-Standing Deck, the letter 'G' represents:

a. diagonal bracing
b. joist overhang
c. 2x blocking or rim joist
d. rim joist

80. Using Figure 17 – Free-Standing Deck, the letter 'D' represents:

a. existing house foundation wall
b. beam, post
c. when less than 5', footings must be at same elevation as existing house footing
d. 2x blocking or rim joist

81. Using Figure 17 – Free-Standing Deck, the letter 'H' represents:

a. rim joist
b. joist
c. beam, post
d. joist overhang

82. Using Figure 17 – Free-Standing Deck, the letter 'B' represents:

a. diagonal bracing
b. joist overhang
c. 2x blocking or rim joist
d. rim joist

83. Using Figure 17 – Free-Standing Deck, the letter 'F' represents:

a. diagonal bracing
b. joist overhang
c. joist
d. rim joist

Section 11: Lateral Support

84. A deck that is more than 24 inches above grade must resist lateral loads in accordance with the following: Diagonal Bracing. Provide diagonal bracing both parallel and perpendicular to the beam at each post as shown in _____ .

a. Figure 18
b. Figure 19
c. Figure 20
d. Figure 21

85. A deck that is more than 24 inches above grade must resist lateral loads in accordance with the following: Where perpendicular to the beam, the bracing _____ to the post at one end and to a joist or blocking between joists at the other.

a. can be bolted
b. must be bolted
c. should be bolted
d. is recommended to be bolted

86. A deck that is more than 24 inches above grade must resist lateral loads in accordance with the following: Bracing is required perpendicular to the house for a deck that is not attached to the house with a ledger board under either section 8 or 9 and the connection specified in either Figure 19 or 20.

a. True
b. False

87. A deck that is more than 24 inches above grade must resist lateral loads in accordance with the following: All bracing may be omitted for a deck which is attached to the house in accordance with _____ and which has all of its decking installed at a 45 degree angle to the deck joists.

a. section 8
b. section 9
c. Figure 21
d. All of the above

88. A deck that is more than 24 inches above grade must resist lateral loads in accordance with the following: Where a joist does not align with the bracing location, provide blocking between the adjacent joists.

a. True
b. False

89. Using Figure 18 – Diagonal Bracing Requirements, the letter 'D' represents:

a. joist and post locations
b. provide blocking when joists do not align with posts
c. beam
d. (1) 3/8″ diameter thru-bolt with washers, typical

90. Using Figure 18 – Diagonal Bracing Requirements, the letter 'E' represents:

a. joist and post locations
b. provide blocking when joists do not align with posts
c. 14′-0″ maximum
d. (1) 3/8″ diameter thru-bolt with washers, typical

91. Using Figure 18 – Diagonal Bracing Requirements, the letter 'G' represents:

a. joist at post locations
b. provide blocking when joists do not align with posts
c. beam
d. (1) 3/8″ diameter thru-bolt with washers, typical

92. Using Figure 18 – Diagonal Bracing Requirements, the letter 'A' represents:

a. joist and post locations
b. provide blocking when joists do not align with posts
c. beam
d. (1) 3/8″ diameter thru-bolt with washers, typical

93. Using Figure 19 – Tension-Tie Connection, with Ledger Board, the letter 'D' represents:

a. tension-tie fastened per manufacturer
b. install tension-tie to underside of outside and first inside joists on each side of deck
c. end joist or first inside joist
d. floor joists parallel to deck joists

94. Using Figure 19 – Tension-Tie Connection, with Ledger Board, the letter 'A' represents:

a. tension-tie fastened per manufacturer
b. install tension-tie to underside of outside and first inside joists on each side of deck
c. end joist or first inside joist
d. floor joists parallel to deck joists

95. Using Figure 19 – Tension-Tie Connection, with Ledger Board, the letter 'E' represents:

a. 1/2" lag screw
b. install tension-tie to underside of outside and first inside joists on each side of deck
c. end joist or first inside joist
d. floor joists parallel to deck joists

96. Using Figure 19 – Tension-Tie Connection, with Ledger Board, the letter 'C' represents:

a. tension-tie fastened per manufacturer
b. end joist or first inside joist
c. 1/2" lag screw
d. floor joists parallel to deck joists

97. Tension ties, if used instead of perpendicular bracing as described above, must comply with all of the following, but are not permitted for free–standing decks: The maximum capacity of each tension–tie is 650 pounds.

a. True
b. False

98. Tension ties, if used instead of perpendicular bracing as described above, must comply with all of the following, but are not permitted for free–standing decks: Lag screws must penetrate a _____ into the sill plate or top plate of a wood–framed wall.

a. minimum of 3 inches
b. minimum of 4 inches
c. maximum of 3 inches
d. maximum of 4 inches

99. Hold–down tension devices. Hold–down tension devices, if used instead of perpendicular bracing as described in Figure 20, must be provided in _____, and each device must have an allowable–stress–design capacity of at least _____.

a. at least 2 locations per deck/ 1,200 pounds
b. at least 2 locations per deck/ 1,500 pounds
c. no more than 2 locations per deck/ 1,700 pounds
d. no more than 4 locations per deck/ 1,000 pounds

100. Free–standing deck – attachment to house. Do not attach to brick veneers. Verify this condition in the field prior to utilizing this method. Fasteners must be 16 inches on center and staggered in 2 rows. Flashing over the rim joist is required and must be installed in accordance with the flashing provisions in section 8.

a. True
b. False

101. Using Figure 21 – Attachment of Free-Standing Deck to House for Lateral Support, the letter 'A' stands for:

a. exterior sheathing min. thickness =3/8"
b. existing wall stud, band joist or concrete or masonry foundation wall
c. fasteners @ 16" o.c. staggered
d. continuous flashing extending past rim joist fasteners

102. Using Figure 21 – Attachment of Free-Standing Deck to House for Lateral Support, the letter 'G' stands for:

a. rim joist
b. existing wall stud, band joist or concrete or masonry foundation wall
c. remove siding at rim joist location prior to installation
d. beam & post

103. Using Figure 21 – Attachment of Free-Standing Deck to House for Lateral Support, the letter 'C' stands for:

a. fasteners @ 16″ o.c. staggered
b. existing wall stud, band joist or concrete or masonry foundation wall
c. beam & post
d. continuous flashing extending past rim joist fasteners

104. Using Figure 21 – Attachment of Free-Standing Deck to House for Lateral Support, the letter 'F' stands for:

a. exterior sheathing min. thickness =3/8″
b. existing wall stud, band joist or concrete or masonry foundation wall
c. fasteners @ 16″ o.c. staggered
d. continuous flashing extending past rim joist fasteners

105. Using Figure 21 – Attachment of Free-Standing Deck to House for Lateral Support, the letter 'B' stands for:

a. exterior sheathing min. thickness =3/8″
b. existing wall stud, band joist or concrete or masonry foundation wall
c. fasteners @ 16″ o.c. staggered
d. continuous flashing extending past rim joist fasteners

106. Using Figure 21 – Attachment of Free-Standing Deck to House for Lateral Support, the letter 'D' stands for:

a. fasteners @ 16″ o.c. staggered
b. existing wall stud, band joist or concrete or masonry foundation wall
c. beam & post
d. continuous flashing extending past rim joist fasteners

107. Using Figure 21 – Attachment of Free-Standing Deck to House for Lateral Support, the letter 'E' stands for:

a. rim joist
b. existing wall stud, band joist or concrete or masonry foundation wall
c. remove siding at rim joist location prior to installation
d. beam & post

Section 12: Decking

108. Decking may overhang a joist by _____ unless disallowed in the manufacturer's instructions.

a. up to 1 inches
b. up to 2 inches
c. up to 3 inches
d. up to 4 inches

109. Each wood decking member must bear on a minimum of _____ or intermediate blocking between joists.

a. 2 joists
b. 3 joists
c. 4 joists
d. None of the above

110. Wood decking must be _____ decking boards.

a. 2x4s
b. 2x6s
c. five-quarter span-rated
d. All of the above

111. Plastic decking may be used if it is approved by a professional testing organization for supporting a live load of _____ and is installed according to the manufacturer's instructions.

a. 40 psf
b. 30 psf
b. 20 psf
d. Any of the above

112. Using Figure 22 – Typical Decking, the '1/8" typical gap after drying' is represented by the letter:

a. D
b. C
c. B
d. A

113. The center–to–center joist spacing may _____for wood decking, _____ for wood–plastic–composite decking unless specified otherwise by the manufacturer.

a. may be up to 24 inches/ may not exceed 20 inches
b. may be up to 20 inches/ may not exceed 24 inches
c. may be up to 20 inches/ may not exceed 16 inches
d. may be up to 24 inches/ may not exceed 16 inches

114. Using Figure 22 – Typical Decking, the '(2) 8d nails or (2) #8 screws at each post' is represented by the letter:

a. D
b. C
c. B
d. A

115. Using Figure 23 – Rim Joist Connection, the 'attach rim joist to end of each joist with (3) 10d threaded nails or (3) #10x3" minimum wood screw' is represented by the letter:

a. C
b. D
c. E
d. F

Section 13: Guard and Posts

116. The guard and posts must withstand a _____ applied in any direction.

a. 100 – pound load
b. 150 – pound load
c. 175 – pound load
d. 200 – pound load

117. Required horizontal guards shall not have openings from the walking surface to the required guard height which allow passage of _____, when applying a force of 4 pounds.

a. a sphere 4 inches in diameter
b. a sphere 4.5 inches in diameter
c. a sphere 5 inches in diameter
d. a sphere 5.5 inches in diameter

118. Wet lumber must be spaced such that when shrinkage due to drying occurs, a compliant opening is maintained.

a. True
b. False

119. Guard–infill components, such as balusters and panel fillers, must withstand a horizontally applied, perpendicular load of _____.

a. 25 pounds on any one-foot-square area
b. 30 pounds on any one-foot-square area
c. 40 pounds on any one-foot-square area
d. 50 pounds on any one-foot-square area

120. Rope, cable, or a similar non—rigid material must be used instead of balusters if it is strung with minimum openings of 3 1/2 inches and with vertical supports no more than 5 feet apart.

a. True
b. False

121. Wood—plastic composites of equivalent dimensions may be substituted for the guard cap and infill elements shown in Figure 24 if the manufacturer's instructions permit this use.

a. True
b. False

122. Using figure 24 – Guards, the letter 'D' represents:

a. 36″ minimum
b. 2″ min. top and bottom
c. 6′ maximum
d. (2) 1/2″ diameter through bolts and washers

123. Using figure 24 – Guards, the letter 'B' represents:

a. 36″ minimum
b. 2″ min. top and bottom
c. 6′ maximum
d. (2) 1/2″ diameter through bolts and washers

124. Using figure 24 – Guards, the letter 'F' represents:

a. 2x4 rail runners fastened to guard post with (2) 8d nails or (2) #8 wood screws
b. 2″ min. top and bottom
c. attach baluster to rail runners with (1) #8 wood screws or (2) 8d nails
d. (2) 1/2″ diameter through bolts and washers

125. Using figure 24 – Guards, the letter 'I' represents:

a. 36″ minimum
b. 2″ min. top and bottom
c. 6′ maximum
d. 2x2 baluster

126. Notching guard posts, as shown in Figure 25, is prohibited.

a. True
b. False

127. Bolt holes for a post must be at least 2 inches from the wood edge, at least 21/2 inches apart, and no more than 5 inches apart.

a. True
b. False

128. Using Figure 26 – Guard Post to End Joist, the letter 'E' represents:

a. hold-down anchors
b. fasteners and attachment per hold-down manufacturer
c. at first interior bay, provide full-depth 2x blocking at guardpost; toenail with 10d nails top and bottom, each side
d. end joist

129. Using Figure 26 – Guard Post to Rim Joist, the letter 'B' represents:

a. hold-down anchors
b. guard post
c. post aligned at joist
d. end joist

130. Using Figure 26 – Guard Post to End Joist, the letter 'D' represents:

a. hold-down anchors
b. fasteners and attachment per hold-down manufacturer
c. at first interior bay, provide full-depth 2x blocking at guardpost; toenail with 10d nails top and bottom, each side
d. end joist

131. Using Figure 26 – Guard Post to End Joist, the letter 'A' represents:

a. hold-down anchors
b. fasteners and attachment per hold-down manufacturer
c. at first interior bay, provide full-depth 2x blocking at guardpost; toenail with 10d nails top and bottom, each side
d. end joist

132. Using Figure 26 – Guard Post to Rim Joist, the letter 'D' represents:

a. hold-down anchors, fastener per manufacturer
b. guard post
c. post aligned at joist
d. end joist

Section 14: Stairs

133. Stair Dimensions: The minimum width of a stairway is _____.

a. 35 inches
b. 36 inches
c. 38 inches
d. 40 inches

134. Stair Dimensions: Any landing width should equal, but not exceed the total width of the stairway it serves.

a. True
b. False

135. Stair Dimensions: The minimum clear width at and below the handrail, including at treads and landings, _____ where a handrail is installed on one side, and 27 inches where handrails are provided on both sides.

a. cannot be more than 28 1/2 inches
b. cannot be less than 30 inches
c. cannot be less than 31 1/2 inches
d. cannot be more than 32 inches

136. Stair Dimensions: If the total vertical height of a stairway exceeds _____, an intermediate landing is required and must be constructed as a free–standing deck with flush beams and with posts.

a. 9 feet
b. 10 feet
c. 11 feet
d. 12 feet

137. Stair Dimensions: Within a stairway flight, the largest tread depth may not exceed the smallest tread depth by more than _____, and the largest riser height may not exceed the smallest riser height by more than _____ .

a. 3/8 inch / 3/8 inch
b.1/2 inch / 3/8 inch
c. 3/8 inch /1/2 inch
d.1/2 inch/ 1/2 inch

138. Stair Dimensions: _____ may project a maximum of 4 1/2 inches into the required width at each side of the stairway.

a. handrails
b. associated trim
c. both a. and b.
d. none of the above

139. Stair Dimensions: The minimum clear width at and below the handrail, including at treads and landings, cannot be less than 31 1/2 inches where a handrail is installed on one side, and _____ where handrails are provided on both sides.

a. 24 inches
b. 25 inches
c. 26 inches
d. 27 inches

140. Using Figure 27 – Treads and Risers, the letter 'A' is represents:

a. 4″ diameter sphere shall not pass
b. 9″ min. tread
c. 8″ max. riser
d. riser

141. Using Figure 27 – Treads and Risers, the letter 'B' is represents:

a. tread
b. 9″ min. tread
c. 8″ min. riser
d. riser

142. Using Figure 27 – Treads and Risers, the letter 'D' is represents:

a. tread
b. 9″ min. tread
c. 8″ min. riser
d. 4″ diameter sphere shall not pass

143. Solid—stringer exception: Stringers for a stairway that has a width of 40 inches may have a horizontally projected span of up to 14 feet if the stairway is framed solely with 2 solid stringers.

a. True
b. False

144. Stair Stringers: Cut stringers must be spaced no more than _____.

a. 16 inches on center
b. 17 inches on center
c. 18 inches on center
d. None of the above

145. Stair Stringers: Stringer—span length is measured using the horizontally projected distance between the centerlines of bearing at each end.

a. True
b. False

146. The span length of a cut stringer must not exceed _____, and the throat size of cut stringers must not be less than _____, as shown in _____.

a. 6′ 0″ / 5 inches / Figure 29
b. 5′12″ / 5 inches / Figure 28
c. 6′0″ / 3 inches / Figure 29
d. 5′10″ / 3 inches / Figure 28

147. Intermediate—supported stringers: If the total stringer length exceeds the above dimensions, a _____ may be provided to support the stringer and shorten its span length.

a. 2″x2″ post
b. 4″x4″ post
c. 6″x6″ post
d. 8″x8″ post

148. Using Figure 28 – Stringer Bearing, the letter 'J' represents:

a. sloped joist hanger
b. beam or outside joist
c. landing
d. deck or landing structure

149. Using Figure 28 – Stringer Bearing, the letter 'E' represents:

a. 2x ledger; attach to beam or joist with (3) 16d nails at each stringer location
b. beam or outside joist
c. toe nail to ledger with (3) 8d nails
d. deck or landing structure

150. Using Figure 28 – Stringer Bearing, the letter 'G' represents:

a. sloped joist hanger
b. beam or outside joist
c. lower bearing at landing
d. upper bearing at deck or landing

151. Using Figure 28 – Stringer Bearing, the letter 'C' represents:

a. 2x ledger; attach to beam or joist with (3) 16d nails at each stringer location
b. beam or outside joist
c. toe nail to ledger with (3) 8d nails
d. deck or landing structure

152. Using Figure 28 – Stringer Bearing, the letter 'D' represents:

a. 2″ min.
b. 3″ min.
c. landing structure
d. deck or landing structure

153. Using Figure 28 – Stringer Bearing, the letter 'Q' represents:

a. Lower Bearing at Footing
b. Lower Bearing at Landing
c. Lower Bearing at Footing – Frost Protected
d. Upper Bearing at Deck or Landing

154. Using Figure 28 – Stringer Bearing, the letter 'L' represents:

a. 8″ square or 10″ round x 48″ deep footing required
b. 12″ x 3 3/8″ octagonal or 10″ x3 1⁄2″ round precast concrete pad
c. landing structure
d. deck or landing structure

155. Using Figure 28 – Stringer Bearing (Upper Bearing at Deck or Landing), the letter 'K' represents:

a. beam or outside joist
b. deck or landing structure
c. landing structure
d. sloped joist hanger

156. Using Figure 28 – Stringer Bearing (Lower Bearing at Footing), the letter 'H' represents:

a. 8″ square or 10″ round x 48″ deep footing required
b. 12″ x 3 3/8″ octagonal or 10″ x3 1⁄2″ round precast concrete pad
c. 2x ledger; attach to beam or joist with (3) 16d nails at each stringer location
d. toe nail to ledger with (3) 8d nails

157. Using Figure 29 – Stringer Bearing, the letter 'F' represents:

a. 6″ minimum
b. frost depth
c. 10″x10″ square or 12″ dia. Footing
d. 4x4 post

158. Using Figure 29 – Stringer Bearing, the letter 'D' represents:

a. 6″ minimum
b. frost depth
c. 10″x10″ square or 12″ dia. Footing
d. 4x4 post

159. Stairs constructed using the solid—stringer exception noted above must have treads constructed of 2x wood material only and be attached in accordance with _____.

a. Figure 29
b. Figure 30
c. Figure 31
d. Figure 32

160. Using Figure 30 – Stringer Span Length , the letter 'I' represents:

a. 6″ minimum
b. 6″ maximum
c. 13′-3″ maximum
d. 5″ minimum throat

161. Using Figure 31 – Stairway Treads, the letter "E' represents:

a. stringer
b. treads: 2x _ or 5/4 board
c. 2x4 ledger, each side, full depth of tread; attach with (4)10d threaded nails or (4)#8 wood screws ≥ 3″ long
d. 36″ max

162. Using Table 7 – Minimum Tread Sizes1 and Notes, Douglas Fir/Larch, Hem/Fir, SPF2 need a _____ Solid Stringer.

a.2x4
b. 2x8
c. 3x4
d. both b. and c.

163. Using Figure 31 – Stairway Treads, the letter "B' represents:

a. stringer
b. treads: 2x _ or 5/4 board
c. 18″ max
d. 36″ max

164. Stair handrails: The handrail must be located at least _____, but no more than _____ above the nosing of the treads – except that a volute, turnout, starting easing, or transition fitting may depart from these dimensions. Measurement must be taken from the nosing to the top of the rail.

a. 30 inches / 38 inches
b. 28 inches/ 40 inches
c. 30 inches/ 40 inches
d. 28 inches / 38 inches

165. Using Figure 32 – Stair Guards, the letter 'D' represents:

a. 30″ (measured from nosing of step to top of stair guard)
b. provide blocking between stair stringers at guard post locations; toe nail with (2)10d nails each side
c. triangular opening shall not permit the passage of a 6″ diameter sphere
d. 6′ maximum

166. The handrail and connecting hardware must be decay— and corrosion—resistant.

a. True
b. False

167. The handrail can be attached to an interior wall acting as a barrier as shown in Figure 33.

a. True
b. False

168. Using Figure 32 – Stair Guards, the letter 'A' represents:

a. 30″ (measured from nosing of step to top of stair guard)
b. provide blocking between stair stringers at guard post locations; toe nail
with (2)10d nails each side
c. triangular opening shall not permit the passage of a 6″ diameter sphere
d. 6′ maximum

169. Using Figure 33 – Stair Handrails, the letter 'H' represents:

a. 34″-38″ to nosing of stairs
b. guard post or wall
c. 2x blocking
d. corrosion-resistant handrail hardware

170. Spiral stairs are allowed at decks when designed in accordance with the provisions of Chapter SPS 321.04.

a. True
b. False

171. Using Figure 33 – Stair Handrails, the letter 'D' represents:

a. 34″-38″ to nosing of stairs
b. guard post or wall
c. 2x blocking
d. corrosion-resistant handrail hardware

172. The handrail must have a smooth surface with no sharp corners and must be graspable, as shown in _____.

a. Figure 32
b. Figure 33
c. Figure 34
d. Figure 35

173. Using Figure 33 – Stair Handrails, the letter 'G' represents:

a. 34″-38″ to nosing of stairs
b. guard post or wall
c. 2x blocking
d. corrosion-resistant handrail hardware

Section 15: Framing Plan

174. A typical framing plan shows a bird's—eye or plan view of the joist and beam layout; the location of the ledger board, diagonal bracing or hold—down devices, posts, and footings; and the type, size, and spacing of the ledger board fasteners.

a. True
b. False

Appendix C and Attachment of Residential Deck Ledger to Metal Plate Connected Wood Truss Floor System

175. Using Table C-2 – Maximum Joist-Span Length1 for Redwood, Western Cedars, Ponderosa Pine2, and Red Pine2, a 16" joist spacing on center with a 2x8 joist size requires a maximum_____ joist span length (without overhang).

a. 7′-8″
b. 10′-7″
c. 13′-0″
d. 15′-1″

176. Framing around a chimney or bay window: All members at a chimney or bay window must be framed in accordance with _____.

a. Figure C-1
b. Figure C-2
c. Figure C-3
d. Figure C-4

177. Framing around a chimney or bay window: Plan _____ is required for headers with a span length greater than 6′—0″.

a. submittal
b. approval
c. both a. and b.
d. None of the above

178. Framing around a chimney or bay window: Joist hangers must each have a minimum download capacity in accordance with _____.

a. Table C-1
b. Table C-2
c. Table C-3
d. Table C-4

179. Framing Around a Chimney or Bay Window: Triple trimmer joists are _____ on each side of the header if joist spacing is 12" or 16" on center or if the trimmer joist span exceeds 8'–6"; otherwise, double trimmer joists are_____.

a. permitted/ permitted
b. required/ permitted
c. required/ required
d. permitted/ required

180. Using Table C-3 – Trimmer Joist Hanger Download Capacity, the minimum capacity, lbs. for a 2x8 joist size is:

a. 1500
b. 1380
c. 1225
d. 1050