



SUPPLEMENTAL CORRECTION SHEET FOR MASS TIMBER (2023 LABC)

Plan Check Submittal Date: _____

Plan Check #: _____ Permit Application Number: _____

Job Address: _____

Applicant: _____ Phone: _____

Plan Check Engineer: _____ Phone: _____

Plan Check Supervisor: _____ Phone: _____

E-mail: firstname.lastname@lacity.org

Your feedback is important, please visit our website to complete a Customer Survey at www.ladbs.org/LADBSWeb/customer-survey.jsf.

If you have any questions or need clarification on any plan check matters, please contact your plan check engineer and/or his or her supervisor.

INSTRUCTIONS FOR PROCEEDING WITH THE PLAN CHECK (PC) PROCESS:

1. Review corrections circled on this Plan Check Correction Sheet and on the plans and calculation sheets.
2. Provide a written response or reference to details pursuant to the corrections. The location of any revisions on the plans shall be identified as part of your responses. For any questions related to the corrections, email or call the Plan Check Engineer.
3. Phone or email the PC engineer for a verification appointment after you have addressed the corrections. Verification of corrections is only done by appointment.
4. Complete item #2 above and bring the originally checked set of plans and calculations to the appointment along with this plan correction sheet. Unprepared responses with incomplete plans or calculations may result in cancellation of the appointment.
5. During the appointment, the plan check engineer review the corrections and comments.
6. Once all the items have been corrected to comply with the code requirements and clearances are obtained, the permit will be ready to be issued

IMPORTANT ITEMS TO READ:

1. Your early attention is suggested to the approval process from other Departments as listed on the Plan Check Correction Sheet or the Clearance Summary Worksheet due to possible delays resulting from a public hearing or other processes required by other Departments. The City Planning Department, the Community Redevelopment Agency, and others may have requirements that could significantly affect the final design of the project.
2. The permit application will expire 18 months from the plan check submittal date.
3. Please be advised that the permit will be issued upon verification of compliance with the corrections included herein. The approval of plans does not permit the violation of any section of the Building Code, Zoning Code, other ordinance, or State law.
4. Italicized numbers refer to Code Sections of the 2023 Edition of the Los Angeles Codes or the current Zoning Code.

THE FOLLOWING SUPPLEMENTAL CORRECTION SHEETS ARE ATTACHED AND SHALL BE CONSIDERED A PART OF THIS REVIEW. COMPLIANCE WITH THESE CORRECTIONS MUST BE OBTAINED PRIOR TO THE ISSUANCE OF THE PERMIT.

SUPPLEMENTAL CORRECTION SHEETS ATTACHED:

- | | |
|---|--|
| <input type="checkbox"/> Fire District | <input type="checkbox"/> Grading and Shoring - General |
| <input type="checkbox"/> Flood Hazard | <input type="checkbox"/> Sound Insulation near Airport |
| <input type="checkbox"/> Methane Seepage Regulation | <input type="checkbox"/> Sound requirements between units |
| <input type="checkbox"/> Storm Water Requirements | <input type="checkbox"/> Structural – General |
| <input type="checkbox"/> Energy Conservation | <input type="checkbox"/> Hillside Ord. and Seismic Design (slope >3:1) |
| <input type="checkbox"/> High wind area | <input type="checkbox"/> Bicycle Parking Ordinance |
| <input type="checkbox"/> Security Requirements | |

As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activities. For efficient handling of information internally and in the internet, conversion to this new format of code related and administrative information bulletins including MGD and RGA that were previously issued will allow flexibility and timely distribution of information to the public

FORMS AND AFFIDAVITS:

- Summary Clearance Worksheet (attached)
- Community Driveway: PC/STR/Aff.13
- Impact Hazard Glazing: PC/STR/Aff.19
- Protection of adj. property: PC/GRAD/App.13
- Grading Bond: PC/GRAD/Bond 03 and 04
- Lot Tie: PC/STR/Aff.22
- Building Maintenance: PC/STR/Aff.23
- Drainage Easement: PC/GRAD/Aff.17
- Structural Observation
- Graffiti Removal: PC/STR/Aff.42

Review the following checked information bulletins and forms. Revise plans to show compliance (Copies can be obtained at www.ladbs.org).

- P/GI 2023-024 Instructions for Preparing and Recording Covenants with the Los Angeles County
- P/GI 2023-025 How to Obtain Copies of City of Los Angeles Ordinances
- P/BC 2020-011 Illumination and Lock Requirements
- P/BC 2020-016 Dwellings in High Wind Velocity Areas (HWA)
- P/BC 2023-023 Fire Retardant Roof Coverings for Open Walking Decks and Space Roof Construction
- P/BC 2023-027 Onsite Wastewater treatment system
- P/BC 2023-044 Exemptions from Liquefaction, Earthquake Induced Landslide, and Fault-rupture Hazard Zone Investigations
- P/BC 2023-057 Drainage Across Lot Property Line
- P/BC 2023-060 30-Day Notification of Intent to Excavate
- P/BC 2023-064 Flood Hazard Management Specific Plan Guidelines
- P/BC 2023-065 Coastal Development Permit
- P/BC 2020-069 Sound-Rated Partitions and Floor-Ceiling Construction
- P/BC 2023-073 Policy for Stamped Plans by Engineer or Architect
- P/BC 2020-074 Sound Insulation Requirements for Noise Sensitive Structures near LAX
- P/BC 2020-081 Conversion into Heavy Duty Equipment Room
- P/BC 2020-096 6 Inch Concrete Block Masonry Wall
- P/BC 2020-102 Methane Hazard Mitigation Standard Plan Simplified Method for Small Additions
- P/BC 2020-103 Use of Sump Pumps for Surface and Subsurface Drainage
- P/BC 2020-105 Guardrail Requirements Adjacent to Openable Windows
- P/BC 2020-106 Water Curtain in Lieu of Protected Exterior Openings
- P/BC 2020-113 Contents of Reports for Submittal to the LADBS Grading Division
- P/ZC 2023-001 Parking Lot Design with Mechanical Lift
- P/ZC 2023-002 Heights of Fences in Residential Zones
- P/ZC 2023-004 Allowable Projection for Decks and Built-Up Platforms in Required Yards
- P/ZC 2023-005 Guidelines for Consideration of Yard Reduction Requests
- P/ZC 2023-006 Allowable Projections and Improvements in Required Yards
- P/ZC 2023-008 Determination of the Zoning Height of a Building or Structure
- P/ZC 2023-011 Summary of Parking Regulations

PART I: BUILDING CODE REQUIREMENTS

A. BUILDING LIMITATION

1. The building as shown is a Type IV mixed-occupancy (separated occupancy) building.
 1. In each story, the sum of the ratios of the actual building area of each separate occupancy divided by the allowable building area per story of each occupancy must not exceed one. 508.4.2
 2. For the maximum area of a building, the sum of the ratios of the total actual area for each separate occupancy divided by the allowable area per story for each separate occupancy must not exceed two. 506.2.2
2. Unobstructed yards of minimum 20' must be maintained at minimum 25% of the building perimeter to permit a (_____) % floor area increase. Provide calculation of determination. (506.3) Allowable area per story is defined as:
 1. Single occupancy, multistory building with maximum of three stories above grade plane
 $A_a = A_t + [(NS \times I_f)]$ 506.2.1
 2. Single occupancy, multistory building with more than

- three stories above grade plane
 $A_a = A_t + [(NS \times I_f)] \times S_a$ 506.2.1
3. Mixed occupancy, multistory building
 $A_a = [A_t + (NS \times I_f)]$ 506.2.2

- Where:
- A_a** = Allowable area (square feet).
 - A_t** = Tabular allowable area factor (NS, S1, S13R, OR SM value as applicable) in accordance with T506.2
 - NS** = Tabular allowable floor area factor in accordance with T506.2 for non-sprinklered building (regardless of whether the building is sprinklered)
 - I_f** = Area factor increase due to frontage (percent) as calculated in accordance with section 506.3
 - S_a** = Actual number of building stories above grade plane, not to exceed two for multistory.
3. Building exceeds allowable height limit of T 504.3 for Type (_____) construction. Max (_____) feet in height and Max (_____) stories in height. 503
 4. Maximum 4 stories allowed for R1 and R2, type IVA

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IVB construction if using S13-R Sprinkler.

T504.4

5. R2 occupancy above S2, type I or type IV construction may measure the height in terms of stories from above the parking area when building complies with Section 510.4
6. Provide calculations for establishing grade plane as per Section 202. Attach calculations and established grade planes on elevations plans and site plan. 202
7. Show maximum height of the structure (in feet and stories) from top of roof to grade plane (to the average height of the highest roof surface) on all elevation views. 202
8. Lowest level is determined not to be a basement. This level is considered as 1st story above grade plane. Include this story in total building height. 202
9. Automatic sprinkler system (NFPA-13) may be used for only one of the following purposes:
 1. Height increase 504.2
 2. Area increase 506.3
10. Automatic sprinkler system (NFPA-13) may be used for both height and area increase for R2 occupancy, type VA construction only. T504.3, T506.2
11. Indicate area increase method on plan. Indicate if automatic sprinkler system is used for area increase, height increase or fire-resistance rating substitution.
12. Required separations shall be fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both, so as to completely separate adjacent occupancies. Mass timber elements serving as fire barriers or horizontal assemblies to separate occupancies in Type IV-B or IV-C construction shall be separated from the interior of the building with an approved thermal barrier consisting of a minimum of 1/2-inch gypsum board or a material that is tested in accordance with and meets the acceptance criteria of both the Temperature Transmission Fire Test and the Integrity Fire Test of NFPA 275. 508.4.4.1
13. Where Table 509 specifies a fire-resistance-rated separation, mass timber elements serving as fire barriers or a horizontal assembly in Type IV-B or IV-C construction shall be separated from the interior of the incidental use with an approved thermal barrier consisting of a minimum of 1/2 inch gypsum board or a material that is tested in accordance with and meets the acceptance criteria of both the Temperature Transmission Fire Test and the Integrity Fire Test of NFPA 275. 509.4.1.1
14. Minimum fire-resistance rating requirements for building elements. 3 hours for type IVA construction, and 2 hours for type IVB IVC construction. T601
15. Minimum fire-resistance rating requirements for exterior walls based on fire separation distance for Type IV construction with occupancy groups A, B, E, F-2, I, R, S-2 and U. (Distance = X (feet))

$X < 5$	=	1 hour
$5 \leq X < 10$	=	1 hour
$10 \leq X < 30$	=	1 hour
$X \geq 30$	=	0 hour

T705.5
16. Mass timber elements shall meet the fire resistance rating requirements of this section based on either the fire resistance rating of the noncombustible protection, the mass timber, or a combination of both and shall be determined in accordance with Section 703.2 or 703.3.
 1. The minimum dimensions and permitted materials for building elements shall comply with the provisions of this section and Section 2304.11.

2. Cross-laminated timber shall be labeled as conforming to PRG 320-18 as referenced in Section 2303.1.4
3. Mass timber elements of Types IV A, IV B and IV C construction shall be protected with noncombustible protection applied directly to the mass timber in accordance with Sections 602.4.1 through 602.4.3.
4. The time assigned to the noncombustible protection shall be determined in accordance with Section 703.6 and comply with 722.7.
5. Exterior load-bearing walls and non-load-bearing walls shall be mass timber construction., or shall be of noncombustible construction.
6. Combustible concealed spaces are not permitted except as otherwise indicated in Sections 602.4.1.5, 602.4.3.5, and 602.4.4.3
7. Combustible stud spaces within light frame walls of Type IV-HT construction shall not be considered concealed spaces, but shall comply with Section 718.
8. In buildings of Type IV-A, B, and C, construction with an occupied floor located more than 75 feet above the lowest level of building access, up to and including 12 stories or 180 feet above grade plane, mass timber interior exit and elevator hoist-way enclosures shall be protected in accordance with Section 602.4.1.2.
9. In buildings, greater than 12 stories or 180 feet above grade plane, interior exit and elevator hoist-way enclosures shall be constructed of non-combustible materials. 602.4
17. Building elements in Type IV-A construction shall be protected in accordance with Sections 602.4.1.1 through 602.4.1.6. The required fire resistance rating of noncombustible elements and protected mass timber elements shall be determined in accordance with Section 703.2 or Section 703.3. 602.4.1
 1. The outside face of exterior walls of mass timber construction shall be protected with noncombustible protection with a minimum assigned time of 40 minutes, as specified in Table 722.7.1(1). Components of the exterior wall covering shall be of noncombustible material except water-resistive barriers having a peak heat release rate of less than 150kW/m², a total heat release of less than 20 MJ/m² and an effective heat of combustion of less than 18MJ/kg as determined in accordance with ASTM E1354 and having a flame spread index of 25 or less and a smoke-developed index of 450 or less as determined in accordance with ASTM E84 or UL 723. The ASTM E1354 test shall be conducted on specimens at the thickness intended for use, in the horizontal orientation and at an incident radiant heat flux of 50 kW/m² 602.4.1.1
 2. Interior faces of all mass timber elements, including the inside faces of exterior mass timber walls and mass timber roofs, shall be protected with materials complying with Section 703.3. 602.4.1.2
 3. Noncombustible protection shall contribute a time equal to or greater than times assigned in Table 722.7.1(1), but not less than 80 minutes. The use of materials and their respective protection contributions listed in Table 722.7.1(2) shall be permitted to be used for compliance with Section 722.7.1. 602.4.1.2.1
 4. The floor assemblies shall contain a noncombustible material not less than one inch in thickness above the mass timber. Floor finishes in accordance with Section 804 shall be permitted on top of the noncombustible material. The underside of floor assemblies shall be

- protected in accordance with 602.4.1.2. 602.4.1.3
5. The interior surfaces of roof assemblies shall be protected in accordance with Section 602.4.1.2. Roof coverings in accordance with Chapter 15 shall be permitted on the outside surface of the roof assembly. 602.4.1.4
 6. Concealed spaces shall not contain combustibles other than electrical, mechanical, fire protection, or plumbing materials and equipment permitted in plenums in accordance with Section 602 of the California Mechanical Code, and shall comply with all applicable provisions of Section 718. Combustible construction forming concealed spaces shall be protected in accordance with Section 602.4.1.2. 602.4.1.5
 7. Shafts shall be permitted in accordance with Sections 713 and Section 718. Both the shaft side and room side of mass timber elements shall be protected in accordance with Section 602.4.1.2. 602.4.1.6
18. Building elements in Type IV-B construction shall be protected in accordance with Sections 602.4.2.1 through 602.4.2.6. The required fire resistance rating of noncombustible elements or mass timber elements shall be determined in accordance with Section 703.2 or Section 703.3. 602.4.2
 - a) The outside face of exterior walls of mass timber construction shall be protected with noncombustible protection with a minimum assigned time of 40 minutes, as specified in Table 722.7.1(1). Components of the exterior wall covering shall be of noncombustible material except water-resistive barriers having a peak heat release rate of less than 150kW/m², a total heat release of less than 20 MJ/m² and an effective heat of combustion of less than 18MJ/kg as determined in accordance with ASTM E1354, and having a flame spread index of 25 or less and a smoke-developed index of 450 or less as determined in accordance with ASTM E84 or UL 723. The ASTM E1354 test shall be conducted on specimens at the thickness intended for use, in the horizontal orientation and at an incident radiant heat flux of 50 kW/m². 602.4.2.1
 - b) Interior faces of all mass timber elements, including the inside face of exterior mass timber walls and mass timber roofs, shall be protected, as required by this section, with materials complying with Section 707.3. 602.4.2.2
 - c) Noncombustible protection shall contribute a time equal to or greater than times assigned in Table 722.7.1(1), but not less than 80 minutes. The use of materials and their respective protection contributions specified in Table 722.7.1(2) shall be permitted to be used for compliance with Section 722.7.1. 602.4.2.2.1
 - d) Interior faces of mass timber elements, including the inside face of exterior mass timber walls and mass timber roofs, shall be protected in accordance with Section 602.4.2.2.1 with exceptions. 602.4.2.2.2
 - e) In each dwelling unit of mixed unprotected area or fire area, where both portions of ceilings and portions of walls are unprotected, the total allowable unprotected area shall be determined in accordance with Equation 6-1:

$$(U_{tc}/U_{ac}) + (U_{tw}/U_{aw}) \leq 1 \quad \text{(Equation 6-1)}$$
 where:
 U_{tc} = Total unprotected mass timber ceiling areas.
 U_{ac} = Allowable unprotected mass timber ceiling area conforming to Exception 1.1 of Section
 U_{tw} = Total unprotected mass timber wall areas.
 U_{aw} = Allowable unprotected mass timber wall area conforming to Exception 1.2 of Section 602.4.2.2.2. 602.4.2.2.3
 - f) In each dwelling unit or fire area, unprotected portions of mass timber walls and ceilings shall be not less than 15 feet from unprotected portions of other walls and ceilings, measured horizontally along the ceiling and from other unprotected portions of walls measured horizontally along the floor. 602.4.2.2.4
 - g) The floor assembly shall contain a noncombustible material not less than one inch in thickness above the mass timber. Floor finishes in accordance with Section 804 shall be permitted on top of the noncombustible material. The underside of floor assemblies shall be protected in accordance with Section 602.4.1.2. 602.4.2.3
 - h) The interior surfaces of roof assemblies shall be protected in accordance with Section 602.4.2.2 except, in non-occupiable spaces, they shall be treated as a concealed space with no portion left unprotected. Roof coverings in accordance with Chapter 15 shall be permitted on the outside surface of the roof assembly. 602.4.2.4
 - i) Concealed spaces shall not contain combustibles other than electrical, mechanical, fire protection, or plumbing materials and equipment permitted in plenums in accordance with Section 602 of the California Mechanical Code, and shall comply with all applicable provisions of Section 718. Combustible construction forming concealed spaces shall be protected in accordance with Section 602.4.1.2. 602.4.2.5
 - j) Shafts shall be permitted in accordance with Section 713 and Section 718. Both the shaft side and room side of mass timber elements shall be protected in accordance with Section 602.4.1.2. 602.4.2.6
 19. Building elements in Type IV-C construction shall be protected in accordance with Sections 602.4.3.1 through 602.4.3.6. The required fire resistance rating of building elements shall be determined in accordance with Section 703.2 or Section 703.3. 602.4.3
 - a) The exterior side of walls of combustible construction shall be protected with noncombustible protection with a minimum assigned time of 40 minutes, as determined in Table 722.7.1(1). Components of the exterior wall covering shall be of noncombustible material except water-resistive barriers having a peak heat release rate of less than 150 kW/m², a total heat release of less than 20 MJ/m² and an effective heat of combustion of less than 18 MJ/kg as determined in accordance with ASTM E1354 and having a flame spread index of 25 or less and a smoke-developed index of 450 or less as determined in accordance with ASTM E84 or UL 723. The ASTM E1354 test shall be conducted on specimens at the thickness intended for use, in the horizontal orientation and at an incident radiant heat flux of 50 kW/m². 602.4.3.1
 - b) Mass timber elements are permitted to be unprotected. 602.4.3.2
 - c) Floor finishes in accordance with Section 804 shall be permitted on top of the floor construction. 602.4.3.3
 - d) Roof coverings in accordance with Chapter 15 shall be permitted on the outside surface of the roof assembly. 602.4.3.4
 - e) Concealed spaces shall not contain combustibles other than electrical, mechanical, fire protection, or plumbing

materials and equipment permitted in plenums in accordance with Section 602 of the California Mechanical Code, and shall comply with all applicable provisions of Section 718. Combustible construction forming concealed spaces shall be protected with noncombustible protection with a minimum assigned time of 40 minutes, as specified in Table 722.7.1(1).

602.4.3.5

- f) Shafts shall be permitted in accordance with Sections 713 and 718. Shafts and elevator hoistway and interior exit stairway enclosures shall be protected with noncombustible protection with a minimum assigned time of 40 minutes, as specified in Table 722.7.1(1), on both the inside of the shaft and the outside of the shaft.

602.4.3.6

20. Type IV construction (Heavy Timber, HT) is that type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of solid wood, laminated heavy timber or structural composite lumber (SCL), without concealed spaces or with concealed spaces complying with Section 602.4.4.3. The minimum dimensions for permitted materials including solid timber, glued-laminated timber, structural composite lumber (SCL) and cross laminated timber (CLT) and details of Type IV construction shall comply with the provisions of this section and Section 2304.11. Exterior walls complying with Section 602.4.4.1 or 602.4.4.2 shall be permitted. Interior walls and partitions not less than one-hour fire resistance rating or heavy timber conforming with Section 2304.11.2.2 shall be permitted.

602.4.4

- a) Fire-retardant-treated wood framing and sheathing complying with Section 2303.2 shall be permitted within exterior wall assemblies with a 2-hour rating or less.

602.4.4.1

- b) Cross-laminated timber not less than 4 inches in thickness complying with Section 2303.1.4 shall be permitted within exterior wall assemblies with a 2-hour rating. Heavy timber structural members appurtenant to the CLT exterior wall shall meet the requirements of Table 2304.11 and be a fire-resistance rated as required for the exterior wall. The exterior surface of the cross-laminated timber and heavy timber elements shall be protected by one the following:

1. Fire-retardant-treated wood sheathing complying with Section 2303 and not less than 15/32 inch thick;
2. Gypsum board not less than 1/2 inch thick; or
3. A noncombustible material.

602.4.4.2

- c) Concealed spaces shall not contain combustible materials other than building elements and electrical, mechanical, or plumbing materials and equipment permitted in plenums in accordance with Section 602 of the California Mechanical Code. Concealed spaces shall comply with applicable provisions of Section 718. Concealed Spaces shall be protected in accordance with one or more of the following:

1. The building shall be sprinklered throughout in accordance with Section 903.3.1.1 and automatic sprinklers shall also be provided in the concealed space.
2. The concealed space shall be completely filled with noncombustible insulation.
3. Surfaces within the concealed space shall be fully sheathed with not less than 5/8-inch Type X gypsum board.

Exception: concealed spaces within interior walls and partitions with a one hour or greater fire resistance rating complying with Section 2304.11.2.2, shall not require additional protection. 602.4.4.3

21. Where a horizontal separation of 20 feet or more is provided, wood columns and arches conforming to heavy timber sizes complying with Section 2304.11 shall be permitted to be used externally. 602.4.4.4

22. In determining of noncombustible protection time contribution, the time, in minutes, contributed to the fire resistance rating by the noncombustible protection of mass timber building elements, components, or assemblies, shall be established through a comparison of assemblies tested using procedures set forth in ASTM E 119 or UL 263. The test assemblies shall be identical in construction, loading, and materials, other than the noncombustible protection. The two test assemblies shall be tested to the same criteria of structural failure.

1. Test Assembly 1 shall be without protection.
2. Test Assembly 2 shall include the representative noncombustible protection. The protection shall be fully defined in terms of configuration details, attachment details, joint sealing details, accessories and all other relevant details.
3. The noncombustible protection time contribution shall be determined by subtracting the fire resistance time, in minutes, of Test Assembly 1 from the fire resistance time, in minutes, of Test Assembly 2. 703.6

23. In buildings of Type IVA, IVB, and IVC construction, sealant or adhesive shall be provided to resist the passage of air in the following locations:

1. At abutting edges and intersections of mass timber building elements required to be fire resistance-rated
2. At abutting intersections of mass timber building elements and building elements of other materials where both are required to be fire resistance-rated.

Sealants shall meet the requirements of ASTM C920. Adhesives shall meet the requirements of ASTM D3498.

Exception: Sealants or adhesives need not be provided where they are not a required component of a tested fire resistance-rated assembly. 703.7

24. Provide installation of fire blocking in combustible construction to cut off concealed draft openings (both vertical and horizontal) and to form an effective barrier between floors, between a top story and a roof or attic space. Fire blocking shall be installed in the locations specified in Sections 718.2.2 through 718.2.7. 718.2

25. Fire blocking shall consist of the following materials:

1. Two-inch nominal lumber.
2. Two thicknesses of 1-inch nominal lumber with broken lap joints.
3. One thickness of 0.719-inch wood structural panels with joints backed by 0.719-inch wood structural panels.
4. One thickness of 0.75-inch particleboard with joints backed by 0.75-inch particleboard.
5. One-half-inch gypsum board.
6. One-fourth-inch cement-based millboard.
7. Batts or blankets of mineral wool, mineral fiber or other approved materials installed in such a manner as to be securely retained in place.
8. Cellulose insulation installed as tested for the specific application.
9. Mass timber complying with Section 2304.11.

718.2.1

26. The required fire resistance of mass timber elements in Section 602.4 shall be determined in accordance with Section 703.2 or Section 703.3. The fire resistance rating of building elements shall be as required in Tables 601 and 705.5 and as specified elsewhere in this code. The fire resistance rating of the mass timber elements shall consist of the fire resistance of the unprotected element added to the protection time of the noncombustible protection. 722.7
27. Provide minimum protection from noncombustible covering material based on the required fire-resistance rating per Table 722.7.1(1). T722.7.1(1)
28. Provide noncombustible covering material per Table 722.7.1(2). T722.7.1(2)
29. Gypsum board complying with Table 722.7.1(2) shall be installed in accordance with this section. 722.7.2
30. Layers of Type X gypsum board serving as noncombustible protection for **interior surfaces of wall and ceiling assemblies** determined in accordance with Table 722.7.1(1) shall be installed in accordance with the following:
1. Each layer shall be attached with Type S drywall screws of sufficient length to penetrate the mass timber at least 1 inch when driven flush with the paper surface of the gypsum board. Exception: The third layer, where determined necessary by Section 722.7, shall be permitted to be attached with 1 inch #6 Type S drywall screws to furring channels in accordance with AISI S220.
 2. Screws for attaching the base layer shall be 12 inches on center in both directions.
 3. Screws for each layer after the base layer shall be 12 inches on center in both directions and offset from the screws of the previous layers by 4 inches in both directions.
 4. All panel edges of any layer shall be offset 18 inches from those of the previous layer.
 5. All panel edges shall be attached with screws sized and offset as in items 1 through 4 above and placed at least 1 inch but not more than 2 inches from the panel edge.
 6. All panels installed at wall-to-ceiling intersections shall be installed such that ceiling panels are installed first and the wall panels are installed after the ceiling panel has been installed and is fitted tight to the ceiling panel. Where multiple layers are required, each layer shall repeat this process.
 7. All panels installed at a wall-to-wall intersection shall be installed such that the panels covering an exterior wall or a wall with a greater fire resistance rating shall be installed first and the panels covering the other wall shall be fitted tight to the panel covering the first wall. Where multiple layers are required, each layer shall repeat this process.
 8. Panel edges of the face layer shall be taped and finished with joint compound. Fastener heads shall be covered with joint compound.
 9. Panel edges protecting mass timber elements adjacent to unprotected mass timber elements in accordance with Section 602.4.2.2 shall be covered with 1 1/4-inch metal corner bead and finished with joint compound. 722.7.2.1
31. Layers of Type X gypsum board serving as **noncombustible protection for the outside of the exterior heavy timber walls** determined in accordance with Table 722.7.1(1) shall be fastened 12 inches on center each way and 6 inches on center at all joints or ends. All panel edges shall be attached with fasteners located at least 1 inch but not more than 2 inches from the panel edge. Fasteners shall comply with one of the following:
1. Galvanized nails of minimum 12 Gage with a 7/16-inch head of sufficient length to penetrate the mass timber a minimum of 1 inch.
 2. Screws which comply with ASTM C1002 (Type S, Type W, or Type G) of sufficient length to penetrate the mass timber a minimum of 1 inch. 722.7.2.2
32. Special inspections of Mass Timber elements in Types IV-A, IV-B and IV-C construction shall be in accordance with Table 1705.5.3. 1705.5.3
33. Provide special inspections of mass timber elements per 1705.5.3 and Table 1705.5.3. T1705.5.3
34. Continuous special inspection is required during field gluing operations of elements of the main wind force-resisting system. Periodic special inspection is required for nailing, bolting, anchoring and other fastening of elements of the main wind force-resisting system, including wood shear walls, wood diaphragms, drag struts, braces and hold-downs.
- Exception: Special inspections are not required for wood shear walls, shear panels and diaphragms, including nailing, bolting, anchoring and other fastening to other elements of the main wind force-resisting system, where the lateral resistance is provided by the structural sheathing and the specified fastener spacing at panel edges is more than 4 inches on center. 1705.12.1
35. For the seismic force-resisting systems of structures assigned to Seismic Design Category C, D, E or F:
1. Continuous special inspection shall be required during field gluing operations of elements of the seismic force-resisting system.
 2. Periodic special inspection shall be required for nailing, bolting, anchoring and other fastening of elements of the seismic force-resisting system, including wood shear walls, wood diaphragms, drag struts, braces, shear panels and hold-downs.
- Exception: Special inspections are not required for wood shear walls, shear panels and diaphragms, including nailing, bolting, anchoring and other fastening to other elements of the seismic force-resisting system, where the lateral resistance is provided by structural sheathing, and the specified fastener spacing of at the sheathing panel edges is more than 4 inches on center. 1705.13.2
36. Periodic special inspections of sealants or adhesives shall be conducted where sealant or adhesive required by Section 703.7 is applied to mass timber building elements as designated in the approved construction documents. 1705.20
37. Fire resistance ratings for connections in Type IV-A, IV-B, or IV-C construction shall be determined by one of the following:
1. Testing in accordance with Section 703.2 where the connection is part of the fire resistance test.
 2. Engineering analysis that demonstrates that the temperature rise at any portion of the connection is limited to an average temperature rise of 250°F and a maximum temperature rise of 325° F for a time corresponding to the required fire resistance rating of the structural element being connected. For the

