CITY OF [NAME OF CITY]

Department of [NAME OF DEPARTMENT]
[NAME OF DIVISION OR BUREAU]

Supplemental Structural Correction Sheet for National Design Specification for Wood Construction

(ANSI/AWC 2012 NDS)

INFORMATION	PLAN CHECK NO.:	EXPIRATION DATE:	STATUS:
	PROJECT ADDRESS:		
	WORK DESCRIPTION:		
	APPLICANT'S NAME:	TEL. NO.:	
	ADDRESS:	EMAIL:	

INSTRUCTIONS

Your application for a permit, together with plans and specifications, has been examined and you are advised that the issuance of a permit is withheld for the reasons hereinafter set forth. The approval of plans and specifications does not permit the violation of any sections of the Building Code or other local ordinances or state laws.

In an effort to streamline the plan review process, please follow the steps outlined below to ensure that there is no delay in processing your application and reviewing your responses to these plan check comments.

- Comments with circled item numbers apply to this plan check.
- Revised plans and calculations shall incorporate or address all comments marked on the original checked set of plans, calculations, and this plan review checklist. Provide a written response to each comment and show where and how it has been addressed. Identify the sheet number and detail or reference note on the revised plans where the corrections are made. Time spent searching for the corrected items on the revised plans or calculations will delay the review and approval process. Once all comments on the plans, calculations, and this checklist have been addressed, contact the plan check staff to **schedule an appointment** to review the changes made.

  PLAN REVIEWER: _____ TEL. NO.: _____

  ADDRESS: _____

  EMAIL: _____ WEBSITE: _____

  Should you have any questions or need clarification pertaining to the comments made on your project, you may contact the plan check staff by telephone from to M T W TH F.
- Bring the original checked set of plans and calculations along with this checklist to the meeting. Do not schedule an appointment meeting with the plan check staff until all comments have been addressed.
- Incomplete, indefinite or faded drawings or calculations will not be accepted.

NOTE

Numbers within the parenthesis ( ) refer to the section of the applicable code. 2012 Edition of the National Design Specification for Wood Construction (ANSI/AWC 2012 NDS). Table (T). Los Angeles Regional Uniform Code Program (LARUCP).

I. DESIGN METHODS GENERAL REQUIREMENTS

1. Engineered design of wood structures shall be by one of the following methods (Section 1.4):
    i. Allowable Stress Design (ASD)
    ii. Load And Resistance Factor Design (LRFD)
2. Identify and list on plans or specifications whether the wood products sizes are in standard nominal, standard net or special sizes (Section 1.5.1)
3. Use applicable adjusted design values for allowable stress design, ASD (Section 2.1.1.1) or strength design, LRFD (Section 2.1.1.2).
4. Use of the load duration factor, C_D, shall be applied to ASD designs only (Section 2.3.2).
5. Design values for wood treated with Fire Retardant shall be adjusted in accordance with the chemical manufacturer's approved evaluation report (Section 2.3.4).
6. Load duration factors greater than 1.6 shall not apply to members pressure-treated with fire retardant chemicals (Section 2.3.4).

II. DESIGN PROVISIONS AND EQUATIONS

1. Wood members designed in bending shall not be notched except as permitted in Section 3.2.3.
2. The actual stresses in the wood member designed for bending shall not exceed the adjusted design value for:
    a. Flexure per Section 3.3
    b. Shear per Section 3.4
    c. Deflection per Section 3.5
    d. Compression per Sections 3.6 and 3.7
    e. Tension per Section 3.8
    f. Combined bending and axial loading per Section 3.9
    g. Bearing per section 3.10
3. Designs that induce tension stress perpendicular to grain shall be avoided when possible. When applications arise and cannot be avoided, they shall be mechanically reinforced (Section 3.8.2).
4. Wood members designed for combined bending and axial loading shall be checked for flatwise bending per equation 3.9-4.
5. Fire design of wood shall be in accordance with Section 16.
6. Built-Up columns shall be designed in accordance with Section 15.3

III. ADJUSTED REFERENCE DESIGN VALUES (MEMBERS)

1. Reference design values for Solid Sawn lumber shall be in accordance with Table 4.3.1 with all applicable adjustment factors. Member reference design values shall be obtained from the Supplement as such:
    a. Table 4A for visually graded dimensional lumber which is 2"-4" thick.
    b. Table 4B for visually graded dimensional Southern Pine
    c. Table 4C for mechanically graded dimensional lumber
    d. Table 4D for visually graded dimensional lumber 5"x5" or larger.
    e. Table 4E for visually graded decking
2. Reference design values for Structural Glued Laminated Timber shall be in accordance with Table 5.3.1 with all applicable adjustment factors. Member reference design values shall be obtained from the Supplement as such:
    a. Table 5A for Softwood Timber members stressed primarily in bending
    b. Table 5B for Softwood Timber members stressed primarily in axial tension or compression
    c. Table 5C for Hardwood Timber members stressed primarily in bending
    d. Table 5D for Hardwood Timber members stressed primarily in axial tension or compression

3. Reference design values for Round Timber Poles and Piles shall be in accordance with Table 6.3.1 with all applicable adjustment factors. Member reference design values shall be obtained from the Supplement as such:
    a. Table 6A for round timber piles graded per ASTM D25
    b. Table 6B for round timber piles graded per ASTM D3200
4. Reference design values for Prefabricated Wood I-Joists shall be in accordance with Table 7.3.1 with all applicable adjustment factors.
5. Reference design values for Structural Composite Lumber shall be in accordance with Table 8.3.1 with all applicable adjustment factors.

IV. CONNECTIONS

1. Analysis for connections made from more than one type of fastener shall not be permitted unless tests or other analysis is submitted to the building department for approval (Section 10.1.4).
2. Reference design values for connections shall be in accordance with Table 10.3.1 with all applicable adjustment factors.
3. Reference design values for connections of members containing Fire Retardant Treatment chemicals shall be adjusted in accordance with the company providing the treatment and redrying service (Section 10.3.5).
4. Reference withdrawal design values for various fasteners shall be in accordance with the following:
    a. Lag screws: Equation 11.2-1 or Table 11.2A
    b. Wood Screws: Equation 11.2-2 or Table 11.2B
    c. Nails and Spikes: Equation 11.2-3 or Table 11.2C
5. Wood screws, nails, and spikes may not be loaded in withdrawal from end grain of wood (Sections 11.2.2.3, 11.2.3.5).
6. Lead holes for lag screws loaded laterally and in withdrawal (excludes 3/8” diameter or smaller in wood with specific gravity 0.5 or less) shall be in accordance with Section 11.1.4.2.
7. Lead holes for wood screws loaded in withdrawal and laterally shall be in accordance with Sections 11.1.5.2 and 11.1.5.3, respectively.
8. Reference lateral design values for single and double shear configurations shall be computed from the yield limit equations in Table 11.3.1.A or below for more common applications:
    a. Bolts: Tables 11A-11I
    b. Lag screws: Tables 11J and 11K
    c. Wood screws: Tables 11L and 11M
    d. Nails and spikes: Tables 11N -11R
    e. Post-frame ring shank nails: Tables 11S and 11T
9. Combined lateral and withdrawal loads of lag screws, wood screws, nails and spikes shall be computed in accordance with Section 11.4.
10. Fastener end distances, edge distances, and spacing requirements shall be in accordance with Section 11.5 to prevent splitting of the wood.
11. Where fire endurance is required, connectors and fasteners shall be protected from fire exposure by wood, fire-rated gypsum board, or any coating approved for the required endurance time (Section 16.3).

V. FIRE RETARDANT LUMBER

1. Design values for wood treated with Fire Retardant shall be adjusted in accordance with the chemical manufacturer’s approved evaluation report (Section 2.3.4).
2. Load duration factors greater than 1.6 shall not apply to members pressure-treated with fire retardant chemicals (Section 2.3.4).
3. Reference design values for connections of members containing Fire Retardant Treatment chemicals shall be adjusted in accordance with the company providing the treatment and redrying service (Section 10.3.5).

4. The induced stress calculated using reduced section properties determined in Section 16.2.1. shall not exceed the member strength determined in Section 16.2.2 (Section 12.2.3).
5. Where fire endurance is required, connectors and fasteners shall be protected from fire exposure by wood, fire-rated gypsum board, or any coating approved for the required endurance time (Section 16.3).

VI. LATERAL FORCE-RESISTING SYSTEMS (Wood-Frame Diaphragms and Shear Walls)

1. Shear walls and diaphragms shall be designed in accordance with the Special Design Provisions for Wind and Seismic (Section 14.1)

VII. ADDITIONAL WRITTEN COMMENTS

No.	Comment	Code Sec. No.