MANDATORY WOOD FRAME SOFT-STORY RETROFIT PLAN REVIEW LIST			
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City of Los Angeles – Department of Building & Safety

MANDATORY WOOD FRAME SOFT STORY RETROFIT PLAN REVIEW LIST CHAPTER 93 2026 LABC

Plan Check No.:	
PCIS No.:	
Job Address:	
P.C. Engineer:	Email:
Phone:	Review Date:

Your feedback is important, please visit our website to complete a Customer Survey at: https://www.permitla.org/custsurvey/dsp_CustomerSatisfactionSurveyForm.cfm

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.

I. Instructions for Proceeding with the Plan Check (PC) Process:

1. Review corrections circled on this Plan Check Correction Sheet, the plans, and the calculation sheets.
2. Provide a written response or reference to details pursuant to the corrections. Location of any revisions on the plans shall be identified as part of your responses.
3. Phone or email the Plan Check engineer for a verification appointment after corrections have been addressed. Verification of corrections is only done by appointment.
   - Paper Plans: Please schedule an appointment. Bring the originally checked set of plans and calculations at the time of your appointment with this plan correction sheet and revised plans with any responses to plan check corrections.
   - Eplan: Projects reviewed through ePlan must upload the plan revisions and responses through the ePlanLA portal.
4. If you have any questions or need clarification on any plan check matters, please contact the Plan Check engineer.
5. For permit status, go to https://www.ladbsservices2.lacity.org/OnlineServices/?service=plr

II. 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 LA Ordinance(s), or State law.
4. Numbers in parentheses refer to Code Sections of the 2026 Edition of the Los Angeles Codes or the current Municipal Code.

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.

III. Supplemental Correction Sheets, Forms, and Information Bulletins

Forms and Affidavits:
https://dbs.lacity.gov/forms-and-publications

- ☐ 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 with documents below. Copies can be obtained at: https://dbs.lacity.gov/forms-and-publications

- ☐ Mandatory Wood Frame soft Story Retrofit, Structural Design Guidelines **P/BC 2026-137**
- ☐ Mandatory Wood Frame Soft Story Retrofit Program Permitting and Inspection Process Guidelines **P/BC 2026-136**
- ☐ Mandatory Earthquake Hazard Reduction in Existing Wood Frame Buildings with Soft, Weak, or Open Front Walls **Ordinance 183893 / 184081**
- ☐ Structural Design Guidelines for Steel Moment Resisting Frames **P/BC 2026-098**
- ☐ Standard Quality assurance Plane for Steel Moment Frames
- ☐ Structural Observation Report Form **Form.08**
- ☐ Foundation for Expansive Soils **P/BC 2026-116**
- ☐ Summary of Parking Regulation **P/BC 2026-011**

PART I: GENERAL REQUIREMENTS

A. PERMIT APPLICATION

1. ☐ Provide a fully dimensioned plot plan to scale, in ink, and copy onto the attached "Plot Plan Sheet".
2. ☐ Project valuation is revised to_____. Pay additional plan check fees of $ _____.
3. ☐ Provide complete and correct legal description (Tract, Block, Lot, Grant Deed). Provide complete information for applicant, owner, engineer, architect, and contractor.
4. ☐ The permit application must be signed by the property owner, a licensed contractor, or an authorized agent at \the time the permit is to be issued.
5. ☐ For owner-builder permits: Owner's signature can be verified with owner's driver license. Owner's representatives must present owner's approval with a notarized letter from the owner.
6. ☐ For contractor building permits: Prior to the issuance of a building permit, the contractor shall have the following:
   a. ☐ Certificate of Worker's Compensation Insurance made out to the Contractors State License Board.
   b. ☐ Notarized Letter of Authorization for agents.
   c. ☐ Copy of Contractors State License or pocket ID.
   d. ☐ Copy of City of Los Angeles business tax registration certificate or newly paid receipt for one.
7. ☐ CLEARANCES

Obtain all the clearances noted on the attached "**Clearance Summary Worksheet**". To prevent any time delay, please go to each listed agency immediately for sign-offs. Each agency's process of approval may take some time. Note that all conditions of approval must be met to obtain the permit and/or final inspection approval.

B. ADMINISTRATION

1. ☐ Each sheet of the architectural and structural plans must bear the signature, license number and expiration date of an architect or engineer licensed in the State of California.

2. ☐ The address of the building is required on all plans. Name / address of the owner is required on first sheet. The name and address of the consultants are required on their plans.

3. ☐ Two sets of plans will be required during permit issuance. Plans must be:
LABC 91.106.3.2.2, 91.106.3.3

   a. ☐ Quality blue or black line drawings with uniform and light background color.
   b. ☐ Min. 11" x 17" size with minimum 1/8" lettering size.
   c. ☐ Sticky back details must produce prints without contrasting shades of background color.

4. ☐ The final set of plans must be stamped and approved by (Fire Dept.),(_____) .

5. ☐ Provide PDF copy of the final calculation package.

6. ☐ Provide a complete description for the entire scope of work on the plans.

7. ☐ Provide the following with each set of plans:

   ☐ Floor Plans ☐ Four Elevations
   ☐ Construction Section ☐ Foundation Plans
   ☐ Framing Plans ☐ Structural Details

8. ☐ Remove all plans, details or notes that do not pertain to the project.

9. ☐ Provide a fully dimensioned plot plan to scale showing:

   ☐ Change in yard reduction ☐ Area of Work
   ☐ Building Lines ☐ Alley / Street Center
   ☐ Parking Space ☐ Legal Description
   ☐ Use/Size of all Buildings ☐ Property Lines

PART II: BUILDING CODE REQUIREMENTS

A. GENERAL PLANS

1. ☐ Provide table of contents in the calculation package, identifying the pages of each topic, i.e. seismic mass, base shear, shear transfer, drag strut, and foundation design.

2. ☐ Identify and reference all sections and details as to their location on the plan and elevation views.

3. ☐ Include the following summary in the calculation package for wall line along gridline(s) _____, _____, _____and_____.

   a. ☐ Number of stories
   b. ☐ Tributary Area
   c. ☐ Tributary Width – ½ of the distance to next shear wall line plus length of cantilever (if any)
   d. ☐ Tributary Length
   e. ☐ Roof Dead Load
   f. ☐ Dead Load of each floor
   g. ☐ Partition load
   h. ☐ Exterior wall load
   i. ☐ Solid wall percentage
   j. ☐ Length – include perpendicular direction
   k. ☐ Height of the wall

4. ☐ Justify that the wall line along gridline ____ or (N, S, E, W) elevation is/are not weak, soft, or open-front wall lines.

5. ☐ Provide pier/wall lengths and weak story calculations on the plans for each building elevation for field verification. Include type of wall construction material for verification.

6. ☐ Provide key plan to verify tributary area.

7. ☐ Submit structural calculations / design details for (_____)

8. ☐ Provide calculations and detailing for complete load path.

9. ☐ floor plan of the building is required to show the location of proposed retrofit. The floor plan must also show exiting scheme from the building in which moment frames will be placed.

10. ☐ The plans and/or structural analysis are incomplete. A resubmittal is required and additional fees will apply.

11. ☐ Structural plans, details, and calculations are required for the construction of moment frames.

12. ☐ The engineer or architect shall provide the following statement on the approved plans:

    "I am responsible for designing this building's seismic strengthening in compliance with the minimum regulations of the Mandatory Earthquake Hazard Reduction. In Existing Wood-Frame Buildings with Soft, Weak, or Open-Front Walls (LABC Chapter 93)."

B. MATERIAL SPECIFICATION & INSPECTION

1. ☐ Specify the following items on plans:
   a. ☐ Type of soil and bearing value
   b. ☐ Standard 2,500 psi concrete (>2 stories 3000 psi)
   c. ☐ 3,000 psi min. for grade beams and piles/piers.
   d. ☐ Type and f'_m of masonry units. Proportions of mortar and grout mixes.
   e. ☐ Type of Structural Steel, Structural Pipe, Tubing, Reinforcing bars.
   f. ☐ Grade, species, and moisture content of all lumber. Type and grade of plywood sheeting.
2. ☐ Structural Observation is required for this project. The engineer of record shall prepare an inspection program, including the name(s) of the individuals or firms who will perform the work. The inspection program shall be shown on the first sheet of the structural plans. Owner to sign Structural Observation form prior to permit issuance. **LABC 91.1704**
3. ☐ Include the following (Steel Moment Frame)
   a. ☐ Connected components
   b. ☐ Removal of backing bars
   c. ☐ Placement of reinforcing fillets
   d. ☐ Presence of continuity plates
   e. ☐ Welding of continuity plates
   f. ☐ Presence and type of doubler plates
   g. ☐ Welding of doubling plates
   h. ☐ Configuration and finish of access holes
   i. ☐ Placement of beam stiffeners
   j. ☐ Contour and finish of RBS profile
   k. ☐ Placement of weld for web connection
   l. ☐ Type and placement of bolts
   m. ☐ Inaccessible conditions
4. ☐ The following structural products shall comply with a product approval report from a nationally recognized testing agency. Copy the report and conditions of approval onto the plans and show compliance with those conditions.

   ☐ Holdowns ☐ Prefab Shear Wall Panels
   ☐ Epoxy Anchors ☐ Expansion Anchor Bolts
   ☐ Straps ☐ Moment Frames
   ☐ Others such as _____
5. ☐ **Add the following notes onto plans:**
   a. ☐ Contractors responsible for the construction of a seismic force resisting system/component listed in the "Statement of Special Inspection" shall submit a written statement of responsibility to the LADBS Inspectors and the owner prior to the commencement of work on such system or component. **LABC 91.1709.11**
   b. ☐ **Pre-Construction Meeting:** Upon excavation and exposure of existing structural elements and connections and prior to installation of any new structural elements or members, the owner or owner's representative shall arrange a pre-construction meeting to be attended by the engineer or architect responsible for the structural design, contractor and the building inspector. The purpose of the meeting shall be to identify the major structural elements, connections and existing conditions that affect the vertical and lateral load systems of the structure and to review scheduling of the required observations.
   c. ☐ Contractor is responsible for temporary shoring design by registered design engineer
   d. ☐ Temporary shoring not to be removed until new foundation is capable of taking gravity loads
   e. ☐ Provide lead hole 40% - 70% of threaded shank diameter and full diameter for smooth shank portion.
   f. ☐ Special inspection by a deputy inspector is required for shear panels where the fastener spacing of the sheathing is 4 inches on center or less.
   g. ☐ A copy of the Evaluation Service Report or Approved Certification and/or conditions of listing shall be made available at the job site.
   h. ☐ Provide standard details of splice, hooks and development length for all sizes of reinforcing bars.
   i. ☐ Gas pipes not allowed in grade beam unless approval is obtained from Gas Company.
   j. ☐ Provide details for possible pipe intrusion

6. ☐ Special Inspection or testing is required. The registered design professional in "responsible charge" shall include a "Statement of Special Inspections" noted on the plan as follows:
LABC 91.1705

   a. ☐ The owner or the registered design professional in responsible charge acting as the owner's agent shall employ one or more deputy inspectors to perform inspections during construction on the types of work that require special inspections
   b. ☐ Continuous Special Inspection by a registered deputy inspector is required for:
      i. ☐ Field welding
      ii. ☐ Special moment resisting concrete frame
      iii. ☐ High load wood diaphragms
      iv. ☐ Driven deep foundation
      v. ☐ Cast-in place deep foundations
      vi. ☐ Concrete strength f'_c>2,500 psi
      vii. ☐ High strength bolting
      viii. ☐ Sprayed-on fireproofing
      ix. ☐ High-lift grouting
      x. ☐ _____ **LABC 91.1705**
   c. ☐ Periodic Special Inspection by a registered deputy inspector is required for
      i. ☐ Wood shear wall
      ii. ☐ Special moment resisting concrete frame
      iii. ☐ High load wood diaphragms
      iv. ☐ Shear panels
      v. ☐ Cast-in place deep foundations
      vi. ☐ Concrete strength f'_c>2,500 psi
      vii. ☐ High strength bolting
      viii. ☐ Sprayed-on fireproofing
      ix. ☐ High-lift grouting
      x. ☐ _____ **LABC 91.1705**
   d. ☐ Foundation sills shall be naturally durable or preservative-treated wood.
LABC 91.2304.12.1
   e. ☐ Field welding to be done by welders certified by LADBS for:
      i. ☐ Structural Steel
      ii. ☐ Reinforcing Stee
      iii. ☐ Light Gauge Steel
   f. ☐ Shop welds must be performed in a LADBS licensed fabricator's shop.
   g. ☐ LADBS licensed fabricator is required for
      i. ☐ Structural Steel
      ii. ☐ _____

C. LATERAL LOADS

1. ☐ Earthquake design data - The following information related to seismic loads shall be shown on the plan
LABC 91.1603.1.5, 91.1603.1.6

   a. ☐ Seismic importance factor I, and risk category.
   b. ☐ Mapped spectral response accelerations, Ss and S1.
   c. ☐ Site class.
   d. ☐ Spectral response coefficients, SD_s and SD_1.
   e. ☒ Seismic design category.
   f. ☐ Basic seismic-force-resisting system(s).
   g. ☐ Design base shear. Total weight of building.
   h. ☐ Seismic response coefficient(s), C_s.
   i. ☐ Response modification factor(s), R.
   j. ☐ Analysis procedure used.
   k. ☐ Redundancy factor used.
   l. ☐ The design load bearing value of soils

2. ☐ Structures shall be assigned to a Seismic Design Category based on one of the following methods unless the authority having jurisdiction or geotechnical data determines that Site Class DE, E, or F soils are present at the site: 1) Based on the structure risk category using Figure 1613.2; 2) Determined in accordance with ASCE 7-22. Where Site Class DE, E, or F soils are present, the seismic design category shall be determined in accordance with ASCE 7-22.
LABC 91.1613

*Per ASCE 7-22 when S1, is greater than or equal to 0.75, the building shall be assigned to SDC E for Risk Category I, II, or III and assigned to SDC F for Risk Category IV.

3. ☐ Design Base Shear
   a. ☐ The design base shear shall be 75 percent of the value **per Eq (12.8-1)of ASCE 7-22. LABC 91.9309.2**
   b. ☐ The upper system has a lower response modification coefficient, the design coefficients (R, Ω_0, C_d) of the upper system shall be used for the strengthening system. **ASCE 7-22 Sec.12.2.3.1.** Note: However, R need not be less than 3.5 provided the strengthened structure will not have any vertical structural irregularities as defined in ASCE 7-22. The deflection amplification factor C_d value shall be 3 and overstrength factor, Ω_0, shall be 3 which are consistent with the R value of 3.5 as specified in the seismic provisions of ASCE 7-22 for the lateral resisting system. Cantilever Column Systems shall still use the corresponding values.
   c. ☐ Where a combination of different structural systems is utilized to resist lateral forces in the same direction, the value of R used for design in that direction shall not be greater than the least value of R for any of the systems utilized in that direction. **ASCE 7-22 Sec. 12.2.3.3.**

4. ☐ Seismic Mass
   a. ☐ Consider 10psf partition load per floor area. **ASCE 7-22 Sec.12.7.2**
   b. ☐ Consider 15 psf roof and floor dead load
   c. ☐ Include roof and floor dead load, psf, on drawings and next to framing plan on each level.
   d. ☐ Consider ceiling framing and finishing weight for sloped roofs.
   e. ☐ Add 15 psf to floor dead load for concrete topping.
   f. ☐ Add note under the floor and roof dead load on plans that there is no concrete topping assumed in dead load calculations. Contractor to verify in field.
   g. ☐ Consider 15 psf, exterior wall weight, per sf of wall, (direct or perpendicular to the grid line) or provide detailed exterior wall dead load calculations.
   h. ☐ Consider 5 psf for existing or possible future installation of solar panels on the roof.
   i. ☐ Consider exterior walls both in direction and perpendicular to the direction of soft wall line in seismic mass.
   j. ☐ Consider 8 psf for existing or new stucco cover under the existing ceiling above parking area.

5. ☐ Strengthening system with concrete walls or masonry walls or steel braced frames shall not be permitted **LABC 91.9309.3**

6. ☐ Horizontal Structural Irregularities in buildings with 3 or more stories shall meet the additional requirements of ASCE7-22 12.3.2.1, referenced in Table 12.3-1 “Horizontal Structural Irregularities” **LABC 91.9309.4**

7. ☐ Vertical Distribution of Seismic Forces over the height of the structure shall be based on **ASCE 7-22 Section 12.8.3.**

8. ☐ **Anchorage Requirements for Buildings on Hillsides**. Any portion of a building constructed on or into a slope steeper than one unit vertical in three units horizontal (33% slope), must comply with the provisions of LAMC Division 94. **LABC 91.9309.6**

9. ☐ Story Drift Limitations
   a. ☐ The calculated story drift for each retrofitted story shall not exceed the allowable deformation compatible with all vertical load-resisting elements and 0.025 time the story height **91.9309.7**
   b. ☐ Calculate seismic drift based on deflections of each level with Cd and I factors using strength level forces in accordance with **ASCE 7-22 Sec.12.8.6.**
   c. ☐ Verify that the stiffness of the strengthened system is greater than 70% of the Stiffness of the floor above or limit the drift ratio to 2.0%.

10. ☐ **Direction of Loading**. Resisting systems used in multiple shear lines shall meet the requirements of **ASCE 7-22 Sec.12.5**

11. ☐ **Deformation Compatibility**. Every structural component not included in the seismic force-resisting system in the direction under consideration shall be designed for the gravity load effects and seismic forces from displacement due to design story drift per Section 12.8.6. **ASCE 7-22 Sec. 12.12.4**

D. HORIZONTAL DIAPHRAGM

1. ☐ Provide calculations and details to show diaphragm adequacy and shear transfer to the seismic resisting element.
   a. ☐ Diaphragm cantilever is greater than 25% of diaphragm depth.
   b. ☐ Diaphragm exceeds allowable values for existing diaphragms

2. ☐ Diaphragm aspect ratio shall not exceed 3:1.

3. ☐ Provide calculations and details on the plans for the sub-diaphragm and continuous cross-tie system required for all wood diaphragms providing lateral support to existing masonry or concrete walls. The spacing of continuous ties shall not exceed 40 The maximum diaphragm shear used to determine the depth of the sub-diaphragms shall not exceed 75 percent of the maximum diaphragm shear per **LABC 91.1613.5.3.**

4. ☐ Ties, Continuity, and Collectors All parts of the structure shall be interconnected and capable of resisting the seismic force required. Provide calculations and details to show that collector elements, splices, and connections to resisting elements have the strength to resist the combined loads resulting from the load combinations with overstrength factor per **ASCE 7-22 Sec.12.10.2.1 and Sec.12.14.7.3.**

   a. ☐ Where cantilever diaphragm is required to transfer seismic forces from above vertical resisting elements, the forces shall be added to F_{px}

   b. ☐ The design forces shall be increased to 25% per **ASCE 7-22 Sec. 12.3.3.5**

   c. ☐ Where the existing LFRS above the SWOF wall line consists of stucco, drywall or other shear wall systems, the EOR shall provide analysis and details demonstrating how shear transfer is maintained at the existing shear walls.

   d. ☐ Provide analysis and details to demonstrate that additional demands on elements are properly transferred due to an offset. Demands shall be amplified per **ASCE 7-22 Section 12.4.3.**

5. ☐ Lumber and structural wood panel diaphragms shall not be considered as transmitting lateral forces by rotation.

6. ☐ Shear transfer using wood screw connection to diaphragm sheathing shall have a minimum penetration of 6D **2024 NDS Sec 12.1.5.6**

E. ALTERNATIVE DESIGN METHODS

Pursuant to Section 104.2.6, LADBS has approved the following alternative design methodologies whose objective is to improve the whole first story seismic performance. **91.9309.5**

1. ☐ Appendix Chapter A4, 2026 Los Angeles Existing Building` Code with the following conditions:

2. ☐ Comply with all standards as prescribed.

3. ☐ ASCE 41-17, Seismic Evaluation and Retrofit of Existing Buildings with the following conditions

4. ☐ Perform Tier 3 systematic evaluations and retrofits to meet the Basic Performance Objective for Existing Buildings (BPOE)

5. ☐ Retrofit strength need not exceed 1.3 times the strength of story above.

6. ☐ FEMA P-807, Seismic Evaluation and Retrofit of Multi-Unit Wood-Frame Buildings with Weak First Stories with the following conditions.

7. ☐ The entire story must be analyzed and designed.

8. ☐ The spectral demand shall be $0.5S_{MS}$, calculated in accordance with **ASCE 7-22 Section 11.4.**

9. ☐ Acceptable performance level shall be based on drifts corresponding to Onset of Strength Loss in the seismic force-resisting wood-frame elements.

10. ☐ The maximum limit probability of exceedance (POE) for evaluation/retrofit design shall be 20%.

11. ☐ Limit diaphragm ratio to 2:1.

F. SHEAR WALLS

1. ☐ Provide a shear wall schedule on the plans and specify the maximum design shear load for each shear wall type. Limit the design shear wall loads to those allowed by Code. Clearly indicate on the plans all plywood and drywall shear walls.

2. ☐ The _____is inadequate to resist lateral/ uplift forces. Show roof/floor diaphragm nailing, wall bracing, shear connections, tie downs and hold-down anchors. Submit lateral design.

3. ☐ Provide shear connection details, properly referenced, at the top and bottom of all shear walls.

4. ☐ The horizontal distribution of seismic shear to wood structural panel shear walls shall be in accordance to **ASCE 7-22 Section 12.3.1.**

5. ☐ Wood structural panel shear walls shall meet the story drift limitation of **ASCE 7-22 Section 12.12.1** Conformance shall be determined by testing or calculations. Calculated deflection shall be determined according to **Equation 4.3-1 of SDPWS-2021. 91.2305.3**

6. ☐ Limit the height-width ratio of the plywood (wood structural panels) shear walls, perforated shear wall segments, perforated shear walls and shear wall piers to 2:1. Provide complete calculations (including deflection) and details for shear wall with openings. **Table 4.3.3 SDPWS-2021**

7. ☐ The following applies to all shear walls with a shear values using allowable stress design (ASD) exceed 350 plf or load and resistance factor design (LRFD) exceed 500 plf. These walls shall be clearly identified on the plans and provided with the following: **LABC 91.2306.3**
   a. ☐ 3 x studs and blocks for all framing members receiving edge nailing from abutting panels.
   b. ☐ 1/2" edge distance from the panel edges and 3/8" from the edge of the connecting members.
   c. ☐ All wood structural panel joint and sill plate nailing shall be staggered at all panel edges.
8. ☐ Provide calculations and details for drag struts and drag strut connections to shear walls.
9. ☐ Provide referenced calculations showing the overturning moments in the shear wall segments.
10. ☐ Per structural calculations, show size, location and embedment length of all anchor bolts (including HD bolt anchors) on foundation plan.
11. ☐ Provisions under **Section 1901.3** do not apply to anchors installed in hardened concrete subject to earthquake loads. Justify the capacity of tie down bolt in concrete footing/wall/deck per **ACI 318-19 Chapter 17** with factored design loads. **LABC 91.1901.3**
12. ☐ When bolting to an existing footing, provide a copy of the Evaluation Service Report/Approved Certification approval for the type of bolt, allowable design loads and required edge distances. Deputy inspection is required.
13. ☐ Provide Evaluation Service Report/Approved Certification for hold-down connectors. The capacity of hold-down connectors that do not consider cyclic loading of the product shall be reduced to 75% of the allowable earthquake load values. **91.2305.5**
14. ☐ Hold-down straps - Include the following in design and detailing between floors:
   a. ☐ Design and detail straps installation when used as hold-downs across floor joists. Account for reduced number of nails across joist.
   b. ☐ Determine the allowable load based on the number of nails through the strap into the posts above and below the "Dead Space" between floors. Specify the number of nails required.
   c. Design and detail straps so that the minimum nail spacing will be provided when the strap nailing is combined with the shear wall edge nailing (i.e. provide 4x member wherever a strap and shear wall edge nailing occur or detail strap nailed over and through un-nailed plywood--show nailing pattern on plan).
15. ☐ Add the following notes on the plans:
   a. ☐ Hold-down connector bolts into wood framing require approved plate washers; and hold-downs shall be finger tight and ½ wrench turn just prior to covering the wall framing. Connector bolts into wood framing require steel plate washers on the post on the opposite side of the anchorage device. Plate size shall be a minimum of 0.299 inch by 3″x3″. **LABC 91.2305.5**
   b. ☐ Roof diaphragm nailing must be inspected before covering. Face grain of plywood shall be perpendicular to supports. Floor shall have tongue and groove or blocked panel edges. Plywood spans shall conform to **Table 2304.7.**
   c. ☐ All diaphragm and shear wall nailing shall utilize common nails or galvanized box.
   d. ☐ All bolt holes shall be drilled 1/32" to 1/16" oversized. **Sec. 12.1.3.2, 2024 NDS**
   e. ☐ Hold-down hardware must be secured in place prior to foundation inspection.

G. STEEL MOMENT FRAME

1. ☐ Structural design drawings and specifications shall indicate the work to be performed, and include items required by **AISC 341-22, AISC Code of Standard Practice for Steel Buildings and Bridges, and the 2026 LABC**. Obtain a copy “Standard Quality Assurance Plan for Steel Moment Frames” sheet 1, 2, and 3; and include with the final set of plans.

2. ☐ Clearly identify in the structural calculations and structural plans what type of steel moment frame system the building is designed for. Note on plan "The Lateral Force Resisting System for this building is a (Special Moment Frame) (Intermediate Moment Frame) (Ordinary Moment Frame).

3. ☐ Steel Moment Frame Limitations **ASCE 7-22 Table 12.2-1**

   a. ☐ Ordinary Moment Frame is not permitted in Seismic Design Category D, E, or F unless the conditions below are met. (Refer to Structural Design Guidelines for Steel Moment Frames for more information).

      i. ☐ Structural Height of 35 feet

      ii. ☐ Maximum 35 psf dead load per floor (including partitions)

      iii. ☐ Exterior wall weight does not exceed 20 psf

   b. ☐ Intermediate Moment Frame is not permitted in Seismic Design Category E or F unless the conditions below are met (Refer to Structural Design Guidelines for Steel Moment Frames for more information.

      i. ☐ Structural Height of 35 feet

      ii. ☐ Maximum 35 psf dead load per floor (including partitions)

      iii. ☐ Exterior wall weight does not exceed 20 psf of wall

4. ☐ Variations/alterations to prequalified connections and connections qualified by cyclic tests, such as additional haunches or cover plates and additional welds, or deviations/alterations from the tested weld access hole configuration at moment connections are not permitted.

5. ☐ (Column Weak Axis) (Skewed) (Dual Axis) moment connection is not permitted.

6. ☐ For Reduced Beam Section (RBS) moment connections, comply with AISC 358-22 Section 5.3 for prequalification limits.

7. ☐ For Bolted Unstiffened/Stiffened Extended End Plate (BUEEP, BSEEP) moment connections, comply with **AISC 358-22 Section 6.3** for Prequalification limits. **Note**: SMF systems in direct contact with concrete structural slabs are not prequalified, unless they comply with **AISC 358-22 6.2.**

8. ☐ For other prequalified moment connections, comply with **AISC 358-22 Section 7.3, 8.3, 9.3, 10.3, 11.3, 12.3, and 13.3** for pre-qualification limits

9. ☐ Clearly identify on the plan the location and length of the expected plastic hinging zone. No welded, screwed, bolted, or shot-in attachment is permitted within this zone. **AISC 341-22 Sec. I2-1 and D1-3**

10. ☐ Column and beam members used in SMF or IMF shall meet the width-to-thickness (l_{hd}) limitations of **Table D1.1a per AISC 341-22 Chapter D. AISC 341-22 Sec.D1-1b**

11. ☐ Provide a beveled transition detail where changes in thickness and width of flanges and webs occur in complete joint penetration groove welded column splices. **AWS D1.1 2.7.1, 2.16.1.1**

12. ☐ Column splices shall be located 4 ft or more away from the beam-to-column flange connections, except: **AISC 341-22 D2-5a**

    a. ☐ When the column clear height between beam-to-column flange connections is less than 8 ft. (2.4 m), splices shall be at half the clear height.

    b. ☐ Column splices with webs and flanges joined by complete-joint-penetration groove welds are permitted to be located closer to the beam-to-column flange connections, but not less than the depth of the column.

    c. ☐ Splices in composite columns.

13. ☐ Splice plates or channels used for making web splices in the SFRS columns shall be placed on both sides of the column web. Detail this on the plan. **AISC 341-22 Sec.D2-5d**

14. ☐ Groove welds for column splices shall be complete -joint-penetration groove welds that meet the requirement of **AISC 341-22 A3-4b and I2-3** for demand critical welds. Weld tabs shall be re-moved upon completion of weld. **AISC341-22 E3-6a**

15. ☐ Panel zone doubler plates shall comply with the requirements per **AISC 341-22 E3-6e(3)** as:

    a. ☐ Doubler plates in contact with the column web.

    b. ☐ Spaced doubler plates.

    c. ☐ Doubler plates used with continuity plates.

    d. ☐ Doubler plates used without continuity plates.

16. ☐ Continuity plate for SMF or IMF connections shall be detailed on the plan to match the prequalified connections in **AISC 358-22** or connection prequalified in accordance with Section K1 or tested in accordance with **Section K2. AISC 341-22 Sec.E3-6f**

    a. ☐ For two-sided connections, the minimum thickness of continuity plate shall be equal to that of the thicker of beam flanges (or beam-flange connection plate). For one-sided connections, continuity plate thickness shall be at least one half of the thickness of the beam flange (or beam-flange connection plate).

    b. ☐ Continuity plates shall be welded to column webs using groove welds or fillet welds. **AISC 341-22 Sec.E3-6f**

17. ☐ Continuity plate for OMF connection shall be detailed on the plan in accordance with sections **J10.1, J10.2 and J10.3 of AISC 360.** **AISC 341 Sec. E1–6b**

18. ☐ **SMF** When the beam-to-column moment ratio calculated using **Equation (E3-1)** is more than 2 (column remains elastic), the column flanges shall be laterally supported at the level of the top flanges of the beams. **AISC 341-22 Sec.E3-4c**

19. ☐ **SMF** When the beam-to-column moment ratio calculated using **Equation (E3-1)** is less than or equal to 2 (column does not remain elastic), the following requirements shall apply:

    a. ☐ Column flanges shall be laterally braced at the levels of both the top and bottom beam flanges. Stability bracing shall be either direct by attaching the lateral bracing element to the column flange at or near the desired bracing point to resist lateral buckling or, alternatively shall be indirect by attached to the column flanges, or rather act through the column web or stiffener plates. **AISC 341-22 Sec.E3-4c(1)**

    b. ☐ Each column-flange lateral brace shall be designed for a required strength that is equal to 2 percent of the available beam flange strength $F_y b_{ft} b_f$ (LRFD) or $Fyb_{yt}b_f/1.5$ (ASD), as appropriate. **AISC 341-22 Sec.E3-4c(1)**

20. ☐ **SMF** Where unbraced connections occur in special cases such as two-story frames, atriums and similar architectural spaces. Comply **with AISC 341-22 E3-4c(2)** for unbraced Beam-to-Column connections to avoid lateral-torsional buckling of column. **AISC 341-22 Sec.E3-4c(2)**

21. ☐ **SMF** Beams shall be braced to satisfy the requirements for highly ductile members per **AISC 341-22 D1- 2b; AISC 341-22 Sec.E3-4b**

    a. ☐ Both flanges of beams shall be laterally braced or the beam cross section shall be torsionally braced.

    b. ☐ The unbraced length between lateral supports shall not exceed $0.086r_yE/F_y$. **AISC 341-22 Sec.D1-2b**

    c. ☐ Lateral supports shall be provided near concentrated forces, changes in cross-section and other locations where analysis indicates that a plastic hinge will form during inelastic deformations.

    d. ☐ The required strength of lateral bracing shall be $M_r=R_yF_yZ$ (LRFD) or $M_r=R_yF_yZ/1.5$ (ASD), and the required strength of lateral bracing of each flange provided adjacent to plastic hinges shall be at least; $P_u= 0.06R_yF_yZ/ho$ (LRFD) or $P_u= (0.06/1.5)R_yF_yZ/ho$ (ASD) and required stiffness shall meet the requirements of **Appendix 6 of the AISC 360-22.** **AISC 341-22 D1-2c**

    e. ☐ The required strength of lateral bracing provided adjacent to plastic hinges for concrete encased composite beams shall be $P_u = 0.06M_{p,exp}/h_o$.

22. ☐ **SMF** The individual thicknesses of column webs and doubler plates, shall not be less than that specified in equation (E3-7). **AISC 341-22 E3-6e (2)**

23. ☐ Column members shall satisfy the requirements of **AISC 341-22 D1-1** for highly ductile members. The compressive axial strength and tensile strength as determined using the load combinations stipulated in the 2026 LABC including the amplified seismic load. **AISC 341-22 Sec.E3-5 and D1-4a**

24. ☐ The measured flexural resistance of the connection, determined at the column face, shall equal at least $0.80M_p$ of the connected beam at an inter-story drift angle of 0.04 (SMF) or 0.02 (IMF) radians. **AISC 341-22 Sec.E3-6b**

25. ☐ The required shear strength, Vu, of the connection shall be based on load combinations per the 2026 LABC that include the amplified seismic load, where the amplified seismic load due to the effect of horizontal forces is $E_{mh} = 2(1.1R_yM_p)/L_h$. **AISC 341-22 Sec.E3-6d**

26. ☐ Provide calculations to show that the required shear strength, R_u, of the panel-zone is less than the design shear strength, $\Phi_y R_y$, of the panel zone. **AISC 341-22 Sec.E3-6e**

27. ☐ Members shall be sized to provide strong column/ weak beam in accordance with equation (E3-1) per **AISC 341-22 E3-4a.**

28. ☐ Where column splice occurs, provide calculation to show that the required flexural and shear strength of column splices satisfy **AISC 341-22 E3-6g**, and **AISC 341-22 D2-5.**

29. ☐ The shape of web access holes shall be in accordance with subclause **6.11.1.2 of AWS D1.8/ D1.8M**. Weld access hole quality requirements shall be in accordance with subclause **6.11.2 of AWS D1.8/D1.8M. AISC 341-22 Sec.E1-6b(c)**

30. ☐ Column and beam members are limited to wide flanges only, except for steel moment frame with "Symmetrical Shapes" in **IB P/BC 2026-098 T'1, 2, 3.**

31. ☐ Fully restrained moment connections that are part of the SFRS shall satisfy at least one of the following requirements:
AISC 341-22 Sec.E1-6b

    a. ☐ The required flexural strength shall be equal to $1.1R_yM_p$ (LRFD) or $(1.1/1.5)\ R_yM_p$ (ASD). The required shear strength, V_u or V_a, shall be based on the load combinations stipulated in 2026 LABC including the amplified seismic load, where the amplified seismic load due to the effect of horizontal forces, including overstrength is $E_{mh}= 2(1.1R_yM_p)/L_{cf}$.

    b. ☐ Fully restrained moment connections shall be designed for a required flexural strength and a required shear strength equal to the maximum moment and corresponding shear that can be transferred to the connection by the system, including the effects of material overstrength and strain hardening.

    c. ☐ Fully restrained moment connections between wide flange beams and the flanges of wide flange columns shall either satisfy the requirements of section E2.6 or E3.6, or satisfy all conditions listed on E1.6b(c)

32. ☐ Provide width-to-thickness ratios of members for OMF to comply with **AISC 360** requirements.
AISC 341-22 Sec.E1 - 5a

33. ☐ Provide detail for top of column bracing per **AISC 360-22 App. 6**

34. ☐ Provide calculations for design of members for combined forces and torsion per **AISC 360-22 Chapter H (AISC Design Guide 9)**

H. STEEL SPECIAL INSPECTION CANTILEVERED COLUMN

1. ☐ Pole Structures shall include the effects of rotation and soil stiffness. Deflection calculations shall be based on approved Soils/Geology Report. Provide a copy of the approved report and the Department's approval letter.
ASCE 7-22 Sec.12.13.8.1

2. ☐ P-Delta Effect - shall comply with **ASCE 7-22 Sec. 12.8.7**

3. ☐ Stress analysis of cantilevered columns shall have an effective length factor of 2.1 for the direction normal to the axis of the beam.
LABC 91.9309.9

4. ☐ Steel Ordinary Cantilever Column System is not permitted in Seismic Design Category D, E, or F per **ASCE 7-22 Table 12.2-1** unless the conditions below are met:

    a. ☐ Structural Height of 35 feet

5. ☐ Steel Special Cantilever Column System is limited to a Structural Height of 35 feet in Seismic Design Category D, E, and F per **ASCE 7-22 Table 12.2-1**

6. ☐ Special cantilevered columns used as part of the seismic-force resisting system, shall comply with the following:

    a. ☐ Maximum axial stress of 15% of allowable. **AISC 341-22 Sec. E5, E6**

    b. ☐ Columns designed as SCCS shall use R, C_d and Ω_o factors as per **Section G.1 of T' 12.2-1 of ASCE 7-22.**

    c. ☐ The lowest R value shall be used in the same direction unless the building is a Risk Category I or II building that does not exceed 2 stories in height and light frame construction or flexible diaphragms are used. **ASCE 7 Sec. 12.2.3.3**

    d. ☐ Columns designed as SCCS shall comply with the requirements of **T' D1.1 of AISC 341-22** for highly ductile members.

    e. ☐ Columns designed as SCCS shall be braced to satisfy the moderately ductile bracing requirements of **D1.2a of AISC 341-22.**

        i. ☐ Spacing: $L_b = 0.17r_yE/F_y$

        ii. ☐ Flexural Strength: $M_r = R_yF_yZ$ (LRFD) or $M_r = R_yF_yZ/1.5$ (ASD)

    f. ☐ Label and Dimension Protected Zones

7. ☐ Provide calculations for design of members for combined forces and torsion per **AISC 360-22 Chapter H (AISC Design Guide 9)**

8. ☐ Where new columns are installed below existing gravity members, these existing members shall be analyzed and detailed to resist the additional rotational moment in each orthogonal direction.

I. SOFT/WEAK/OPEN FRONT WALL LINE

1. ☐ Wall lines with ratio of less than 80% for total full height length piers of the first floor over the second floor are weak and will require retrofit.
2. ☐ Only piers with **h/b < 2** will qualify for weak story calculation. This does not apply to open front wall line condition comparison.
3. ☐ Provide dimensions of piers at the first and second floor to match calculations.

J. PERPENDICULAR TO OPEN WALL LINE

1. ☐ Justify wall line perpendicular to open wall line is not a weak and/or soft wall line or provide retrofit design.
2. ☐ New lateral load bearing system to be designed to take seismic load of entire length of building not just the open area.
3. ☐ Maximum allowable shear of stucco walls with h/b < 2.0 is 100plf.
4. ☐ Limit the deflection of new lateral system to 1.25% for deformation compatibility with existing **stucco wall.**

K. FOUNDATION AND GRADING

1. ☐ All foundations shall be designed for expansive soil conditions unless a soil report is provided and approved by LADBS Grading Division (see Information Bulletin for more information). Provide details on foundation plans to comply with the requirements.

2. ☐ Detail (and reference location on foundation plan) typical foundation sections for:
   a. ☐ Bearing/shear walls
   b. ☐ Spread and/or post pads
   c. ☐ Grade beams
   d. ☐ New to existing footing connections
   e. ☐ Existing footing to new grade beam`

3. ☐ Concrete grade beams that are part of a moment frame or cantilever column system shall provide transverse reinforcement over a length equal to twice the member depth measured from the face of the supporting member. The spacing of such reinforcement shall not exceed: (a) d/4, (b) 6 times the diameter of the smallest primary flexural rebar excluding longitudinal skin rebar, or (c) 6 inches. The remainder of the grade beam shall have transverse reinforcement spaced not more than d/2. **ACI 318-19 Sec 18.4.2.4, 18.4.2.5, 18.6.3, 18.6.4, and 18.6.5**
   a. ☐ Grade beams supporting special moment frames shall use A706 reinforcing steel.

4. ☐ Foundations designed to support cantilevered columns used as part of the SFRS shall have the strength to resist the load combinations with overstrength factor of **Section 12.2.5.2 of ASCE 7-22.**

5. ☐ Provide justification that the embedded column/grade beam connection detail is fixed as assumed in your design.

6. ☐ Provide calculations for required transfer reinforcement per **AISC 341-22 Section H5.5c.**

7. ☐ Run analysis including grade beam and calculate the deflection of moment frame/ cantilevered columns based on cracked moment of inertia of grade beam.

8. ☐ Justify grade beam concrete bearing pressure at fixed base column flange location.

9. ☐ Foundations shall be designed accordingly
   a. ☐ Bearing capacity shall not exceed the allowable **LABC 1806.2**
   b. ☐ Resist seismic overturning**LABC 1808.3.1**
   c. ☐ Resist sliding **LABC 1605.1.1, 1806.2, 1806.3**
      i. ☐ Sliding resistance is limited to half the dead load **LABC 1806.3.2**
      ii. ☐ Limit cohesion to 130 psf
      iii. ☐ Limit passive pressure to 100 psf/ft
      iv. ☐ Coefficient of friction=0 (without an approved soils report)
      v. ☐ Do NOT use sides in sliding calculations
   d. ☐ Punching shear **ACI 318-19 Sec. 22.6**

10. ☐ If fixed end condition is assumed, the concrete grade beam shall be designed as a moment reaction.

11. ☐ Individual spread footings shall be interconnected by concrete tie beams unless site class is confirmed not to be E or F by a LADBS approved soils report

12. ☐ Anchorage to Concrete in shear and tensions should be designed for the following:

    a. ☐ Ductility check must first be performed to provide a reasonable expectation, based on nominal strengths, that the anchor element will have yielded when ultimate load is reached **ACI 318-19 Sec. 17.10.5.3(a)**

    b. ☐ The anchorage design to be controlled by ductile yielding of the attachment. **ACI 318-19 Sec. 17.10.5.3(b)/17.10.6.3(a)**

    c. ☐ The anchorage design to be controlled by the strength of a non-yielding attachment **ACI 318-19 Sec. 17.10.5.3(c)/ 17.10.6.3(b)**

    d. ☐ The anchor design strengths to be greater than or equal to the factored tension load inclusive of an Ω_0 overstrength factor in the earthquake component (E) of the factored load. **ACI 318-19 Sec.17.10.5.3(d)/ 17.10.6.3(c).**

13. ☐ Foundations with stem walls shall be reinforced with a minimum of two No. 4 bars at the top of the wall and two No. 4 bars at the bottom of the footing. **LABC 91.1905.1.7**

14. ☐ Site drainage: Show on plans how concentrated drainage is being conveyed to the street via non-erosive devices. **LABC 91.7013.10**

15. ☐ Add note on the plans:

    a. ☐ If adverse soil conditions are encountered, a soils investigation report may be required. **LABC 91.1803.5.2**

    b. ☐ No impact tools shall be permitted when removing existing footing. Saw cutting the existing footing only is allowed.

L. FIRE LIFE SAFETY

1. ☐ Fire resistance rated construction. Where Columns are required to have protection to achieve a fire resistance rating, the entire column shall be provided individual protection by protecting it on all sides for the full height including connections to other structural members, with materials having the required fire resistance rating. Members of the primary structural frame other than columns that are required to have protection to achieve a fire resistance rating and support more than two floors or one floor and roof, or support a load bearing wall or a non-load bearing wall more than two stories high, shall be provided individual case protection by protecting them on all sides for the full height including connections to other structural members with materials having the required fire resistance rating **LABC 91.704.2, 91.704.3, 91.704.4**

2. ☐ The means of egress has been compromised due to the strengthening system(s). Provide an alternative path of egress or relocate the strengthening system. **LABC 2026 Ch.10**

3. ☐ Provide/dimension the required minimum 7′-0″ clear height within the parking area. **LABC 91.406.2.2**

ADDITIONAL CORRECTIONS	CODE SECTION

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