Supplemental Correction Sheet
Curtain Wall (2017 LABC)

Plan Check No.: _____ **Checked by:** _____

Permit Application No.: _____

Job Address: _____

For appointment call: _____ (**email address: firstname.lastname@lacity.org**)

Supervisor Name: _____ **Phone:** _____

NOTE: Unless noted otherwise, all sections of code referenced within this article shall refer to the 2017 Los Angeles Building Code (2017 LABC)

I. APPLICATION

1. Provide fully dimensioned plot plan to scale, in ink, or copied to the application plot plan sheet provided. Show building lines, easements, lot size, zone boundaries, highway dedication lines, street center line, alley, parking spaces, fire walls, and location of all buildings. (Show type of construction, number of stories and use of all buildings) Must agree with plot plan shown on plans. (106.3.2.1)

2. Project's valuation is $ ( ). Additional plan check fee of _____.

3. Complete the following application items: _____.

4. See the Clearance Summary Worksheet of the permit application for required clearances. Early attention to the clearances is suggested to avoid potential time delays.

5. Prior to the issuance of a building permit, the following is required from the agent of the owner:
   a. An authorization letter from the owner to pull permit(s). Owner's signature must be verified by notarization or personal identification, or
   b. The following is required from the contractor or his/her agent:
      i. Certificate of Workers Compensation Insurance made out to the Contractors State License Board.
      ii. Copy of City of LA business tax registration certificate or a newly paid receipt for one.
      iii. Copy of contractor's state license or pocket ID.
      iv. Notarized letter of authorization for agents of contractor.

6. Two sets of plans and one set of calculations will be required when permit is issued. Plans shall be:
   a. Quality blue or black line drawings with uniform and light background color.
   b. Max. 36" x 48" size with minimum 1/8" lettering size
   c. Sticky back details must produce prints without contrasting shades of background color.

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.

II. PLAN DETAILS

1. All structural plan sheets and index sheet of calculations (showing number of pages) must be signed by the same civil/structural engineer licensed by the State of California. Plans and calculations for products designed by others must be reviewed and approved by the engineer of record for the project. (106.3.3)

2. If submitted as a deferred submittal, structural plans and calculations shall be reviewed and approved by the architect of record and structural engineer of record for the original permit.

3. Provide complete connection details of the exterior elements to the supporting structure showing compliance with ASCE 7-10, 13.5.3. Specify size, number, spacing, edge/end distances, and embedment of all fasteners.

4. Fasteners must have allowable load values specified by the building code or must be approved by a current Los Angeles City Research Report. (104.2.6)

5. Provide minimum vertical and horizontal reinforcement in precast concrete wall panels in accordance with ACI 318-14, Sec. 11.6.1, 11.7.2.2 and 11.7.3.2.

6. Provide veneer details. Show method of anchorage, size and spacing of anchors and type of backing to comply with Section 1405.

7. Provide details of the approved fire stop material (system) used to seal voids created at the intersection of the curtain wall and the floor. Such material shall be securely installed and capable of preventing the passage of flame and hot gases. (714.3, 714.4)

8. Specify product name and current Los Angeles City Research Report number for the following products:
   - ❒ Glass Fiber Reinforced Concrete (GFRC) Panels
   - ❒ Steel Studs - except where stud sections are completely detailed on the plans and complete design calculations are provided for each section.
   - ❒ Expansion Anchors

9. Specify product name and current Evaluation Report (ESR) or Los Angeles City Research Report (LARR) number for the following products:
   - ❒ Caulking Sealant
   - ❒ Exterior Finish and Insulation System
   - ❒ Fire-Rated Expansion Joint
   - ❒ Fire safing system for voids created between exterior curtain wall and floor intersection of rated floor/ceiling assembly.

9. Structural observation is required by IB P/BC 2017-24. Clearly indicate elements to be observed at each construction stage where observation is required. Provide required notes on plans. (1710)

III. CALCULATIONS

1. The horizontal seismic design force (F_p) shall be determined in accordance with ASCE 7-10, 13.3.1

   $$F_P = \frac{0.4a_p S_{DS} W_p}{\left(\frac{R_p}{I_p}\right)}\left(1 + 2\frac{z}{h}\right)$$ (ASCE 7-10 Eq. 13.3-1)

   F_P is not required to be taken as greater than $1.6S_{DS}IW_P$ (ASCE 7-10 Eq. 13.3-2)
   F_P shall not be taken less than $0.3S_{DS}IW_P$ (ASCE 7-10 Eq. 13.3-3)

2. Component amplification factor, a_p, for the fasteners of the connecting system of an exterior non-structural wall element shall be taken as 1.25. (ASCE 7-10, Table 13.5-1)

3. Component response modification factor, R_p, for the fasteners of the connecting system of an exterior non-structural wall element shall be taken as 1.0. (ASCE 7-10, Table 13.5-1)

4. Exterior nonstructural wall panels or elements that are attached to or enclose the structure shall be designed to accommodate the seismic relative displacements defined in section 13.3.2 and movements due to temperature changes. Such elements shall be supported by means of positive and direct structural supports or by mechanical connections and fasteners in accordance with the following requirements: (ASCE 7-10, section 13.5.3)

   - ❒ Connections and panel joints shall allow for the story drift caused by relative seismic displacements (D_p) determined in Section 13.3.2 or 0.5in, whichever is greatest.
   - ❒ Connection to permit movement in the plane of the panel for story drift shall be sliding connections using slotted or oversize holes, connections that permit movement by bending of steel, or other connections that provide equivalent sliding or ductile capacity
   - ❒ The connecting member itself shall have sufficient ductility and rotation capacity to preclude fracture of the concrete or brittle failures at or near welds.
   - ❒ All fasteners in the connecting system such as bolts, inserts, welds, and dowels and the body of the connectors shall be designed for the force (F_p) determined by Section 13.3.1 with values of R_p and a_p taken from Table 13.5-1 applied at the center of mass of the panel.
   - ❒ Where anchorage is achieved using flat straps embedded in concrete or masonry, such straps shall be attached to or hooked around reinforcing steel or otherwise terminated so as to effectively transfer forces to the reinforcing steel or to assure that pullout of anchorage is not the initial failure mechanism.

5. Out of plane bending or deformation of a component or system shall not exceed the deflection capability of component or system (ASCE 7-10 13.5.5)

6. Nonstructural component anchorage shall be designed per ASCE 7-10, Section 13.4.

7. Wind load design should comply with Section 1609 and ASCE 7-10, Chapters 26 and 30.

8. Glass in glazed curtain walls shall be designed and installed in accordance with Section 13.5.9. (ASCE 7-10, 13.5.4)

9. Glass in glazed curtain walls shall be firmly supported on all four sides, except as allowed by 2403.2. The load resistance of glass under uniform load with continuous lateral support on four sides shall be determined in accordance with ASTM E-1300. (2404.1)

10. Where one or more sides of any pane of glass are not firmly supported, or are subject to unusual

load conditions, detailed construction documents, detailed shop drawings and analysis or test data assuring safe performance for the specific installation shall be prepared by the engineer of record for approval. (2403.2)

11. Height and fire-resistance requirements for curtain wall spandrels shall comply with Section 705.8.5 (715.5)

12. Glazing in the following areas must be impact hazard safety glass: (2406.4)
    - ❒ Guards and railings regardless of area or height above a walking surface.
    - ❒ Within 24-inches of the door vertical edge where the bottom of the exposed edge of the glazing is less than 60-inches above the walking surface. (2406.4.2)
    - ❒ Glazing less than 60-inches above the walking surface and which is within 36-inches horizontally of a stair, landing or ramp. (2406.4.6)
    - ❒ Glazing less than 36-inches above the nose of a tread and within 60-inches horizontally of the bottom tread of a stairway. (2406.4.7)

13. Provide site plan showing property lines, adjacent streets and public ways, and all buildings within the same property to verify fire resistive requirements for the exterior curtain walls. (Table 602, Section 705)

NOTES ON PLANS

1. Precast Concrete Panel shall be manufactured under controlled plant conditions by licensed fabricator approved by the City of Los Angeles. (LABC Section 108.11, 1704.2.2)

2. Corrosion of aluminum caused by contact with dissimilar metals shall be prevented by proper design considerations and installation procedures in accordance with specification for aluminum sheet metal work in building construction

3. A mockup panel is highly recommended to be reviewed by the product manufacturer's representative prior to installation and inspection to insure code compliance and proper installation. Such material or systems shall be securely installed and capable of preventing the passage of flame and hot gases in accordance with LABC Section 714.4 and the evaluation/research report approving the product.

ADDITIONAL COMMENTS: