



City of Santa Monica
Building and Safety Division

Masonry Wall Checklist

This is to be used as a general checklist; it is not inclusive of all code requirements and inspection criteria.

**Per California Building Code (CBC) Chapters 1, 17, 18, 21
American Concrete Institute (ACI) 530.1 (masonry) and 318 (concrete)
And applicable ASTM referenced standards**

FOOTING INSPECTION

- Approved plans on site CBC 2101.3
- Location per approved plans CBC 107
- Slope setback maintained 5' to daylight CBC 1808.7
- Clean of foreign debris ACI 318 7.5.1(d)
- Size per approved plans: depth and width, key way if required.
- Stepped, if slope exceeds 1/10. CBC 1809.3
- Reinforcing steel per CBC 1907 and ACI 318
 - Minimum grade per plans (mill certification required for foreign rebar)
 - Properly sized and placement per plan ACI 318 7.5.1
 - Minimum clearances to earth maintained. 3" per ACI 318
 - Adequately secure from displacement ACI 318 7.5.1
 - Lap splice requirements maintained. Length, staggered splices, etc.
 - Minimum length of lap splices (30db in concrete, 40/48 db. in masonry)
 - Location, type, and installation of mechanical splices (manufacturer's data required)
 - Location, type of welded splices (certified welder required/deputy inspection and materials identification required per CBC 1704.3.1.3 and 1708.2)
 - Double dowels at jambs, wall ends and corners as required by plans and ACI 530
- Plumbing piping and electrical conduits Per ACI 318 6.3 and SEOR (structural. Engineer).
- If pipes or conduits run through stem/masonry wall then:
 - Sleeved with schedule 40 steel
 - Protect from concrete
 - ≥ 3 diameter on center
 - Clearances to reinforcement minimum $\frac{3}{4}$ "
- Structural Observation per plan and CBC 1710
- Soils engineer approval per plan and CBC 1803.5.11



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MASONRY (LAYUP) Materials per ACI 530 and ASTM standards Execution per ACI 530.1

- Rebar and footing clean of over pour and laitance per ACI 530.1 3.2
- Type of masonry per approved plans (density). No blemished, cracked or broken units per ASTM standard C 90
- Deputy inspection requirements of materials and layup-periodic for Level 1
- Strength testing (prisms) per CBC 1704.5 for Level 2
- Wall height per approved plans
- Head and bed joints solidly mortar filled, except beveled end of open-end units.
- Initial bed joint $> \frac{1}{4}'' < \frac{3}{4}''$. ACI 530.1 3.3B.1
- Bed and head joints $\frac{3}{8}''$ thick +/- $\frac{1}{8}''$ ACI 350.1 3.3.B
 - Max mortar fin projection of $\frac{1}{2}''$. ACI 530.1 3.3B.1c
 - Clean of foreign debris and mortar droppings per ACI 530.1
- Clean-outs required for grout pours $> 5'$ ACI 530.1 3.2F
 - At all cells with vertical reinforcing bars
 - 3" minimum dimension ACI 530 3.2F.2
 - Max 32" O.C. if solidly grouted
 - Max 48" if partially grouted
- Max grout pour height per ACI 530 3.5 and table 7 (based on cell size/grout space)
- Anchor bolts $> \frac{1}{4}''$ minimum grout surrounding per ACI 530 3.4D
- Plumb and line of masonry layup- within $\frac{1}{4}''$ in 10' ($\frac{1}{2}''$ max.) per ACI 530 3.3F

REINFORCING STEEL (in masonry wall) per ACI 530.1

- Minimum grade per plan (mill cert required)
- Properly sized per plans (special requirements for shear walls)
 - Maximum size #11 (36mm)
 - Minimum #4 at 2' o.c. each way in Seismic Design Category D
- Maximum reinforcement 6% of cell area without splice or 12% of cell area with splice
- Placed per plans and within tolerances (vertical rebar within $\frac{1}{2}''$ sideways, 2" long way)
- Adequately secured from displacement ACI 530.1 3.4B.1 and 3.2E (no drop in bars)
- Lentil bars minimum 2' past openings each side ACI 530 1.17.3.2.3.1
- Double jamb bars at openings
- Vertical steel within 16" of wall openings $> 16''$ and corners. Within 8" of joints and end of wall ACI 530 1.17.3.2.3.1
- Dowels embedded in concrete not bent more than 1 in 6. ACI 530.1 3.4B.8.6
- Minimum 40 db (40 bar diameters) lap slice, 48db for grade 60 rebar (typical)
- Minimum clearance to masonry maintained. ACI 530.1 3.4B
 - $\frac{1}{4}''$ for fine grout – $\frac{1}{2}''$ for course grout.



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PRE-GROUT INSPECTION

- All grout per ASTM C476, 8-10" slump, mix design and psi per SEOR (structural engineer of record)
- Grout consolidation **and reconsolidation** per ACI 530.5E
- Maximum pour height per Approved plans and ACI 530
- Maximum lift height per ACI 530 3.5D
- Periodic deputy inspection of reinforcement (and materials) per CBC1704.5.1
- Special inspection requirements apply to all masonry per CBC 1704.5.1(all grouting requires continuous deputy inspection and periodic inspection of reinforcement)***
- Deputy(s) registered with the City of Santa Monica (S.M.M.C.)
- Verify permit description reflects actual work being performed.
- Minimum grout key of 1 ½" per ACI 530 3.5F
- Bed and head joints 3/8"+/- 1/8" and initial bed joints ¼"min.and 3/4" max. per ACI
- Hot/cold weather precaution requirements in place per CBC 21

FINAL INSPECTION

- Wall construction complete, wall capped
- Appropriate curing time for retaining wall prior to backfill (28 days typical)
- Wall height and length per approved plans
- All grout lifts signed off, all city agencies approved
- Final deputy inspector's report per CBC 1704
- Wall passes the visual acceptance criteria of ACI 530
- Smoke alarms per CBC 907
- Carbon Monoxide detectors per CBC 420
- Seismic gas shutoff valve if permit valuation is over \$10,000