Quality Assurance - Masonry Material Submittals and Testing
CBC: 2019 California Building Code
TMS 402: 2016 Building Code Requirements for Masonry Structures and Commentary
TMS 602: 2016 Specification for Masonry Structures and Commentary

(DSA-SS; OSHPD 1 AND 4; OSHPD 1R, 2 and 5; DSA-SS/CC)

Masonry Veneer
TMS 402 Ch. 12
CBC Ch. 14

Seismic Design Category
D, E, F
CBC 1705A.12.5
Periodic inspection of erection and fastening

Risk Category
II, III, IV
TMS 602 Table 3
CBC 1705A.4.1

Engineered Masonry

All Risk Categories
TMS 602 Table 3
CBC 1705A.4

Level 2 Quality Assurance
TMS 602 Tables
3 - Minimum Verification Req.
4 - Min. Special Inspection Req.
- Submit Certifications
- Sample panels required by TMS 602 Article 1.6D
- Special Inspections

Level 3 Quality Assurance
TMS 602 Tables
3 - Minimum Verification Req.
4 - Min. Special Inspection Req.
- Submit Certifications
- Sample panels required by TMS 602 Article 1.6D
- Special Inspections
- Verification of slump flow for self-consolidating grout
- Verification of $f'_c$ prior to construction and every 5K sq ft.
- Verification of proportions of materials in preblended mortar and grout

CMU: ASTM C90 Certification
TMS 602 1.5. B.2.c

Mortar: ASTM C270
Proportion Specification
Mix Design / Certification
TMS 602 1.5. B.1.a.1 / 1.5 B.2.d

Mortar: ASTM C270
Property Specification
Mix Design & Test Rpt / Certification
TMS 602 1.5. B.1.a.2 / 1.5 B.2.d

Grout: ASTM C476
Proportion Specification
Mix Design / Certification
TMS 602 1.5. B.1.b.1 / 1.5 B.2.d

Grout: ASTM C476
Property Specification
Mix Design & Test Rpt / Certification
TMS 602 1.5. B.1.b.2 / 1.5 B.2.d

Self-Consolidating Grout: ASTM C1019, C1611
Property Specification
Mix Design & Test Rpt / Certification
TMS 602 1.5. B.1.b.2 / 1.5 B.2.d

See Page 2
Acceptance - Strength Requirements

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Level 3 Quality Assurance
Prior to construction and each 5K sq ft of wall area
TMS 602 Tables 3 and 4

Compressive Strength Determination
TMS 602 1.4 B.

\[ f'_m = 2000 \]

OR

\[ f'_m > 2000 \]

Prism test mandatory
CBC 2105A.2
CBC 2105.2

Prism Test Method
TMS 602 1.4 B.3

Build/test per
ASTM C1314

Unit Strength Method
TMS 602 1.4 B.2.b

CMU
ASTM C90

Test per
ASTM C140

Bed joints not more than 5/8" thick

DSA-SS
OSHPD 1 & 4
OSHPD 1R, 2 & 5
DSA-SS/CC

IF non-bearing, non-shear wall 12ft high or less, hollow cmu:
mortar tests limited to beginning of work

DSA-SS
OSHPD 1 & 4
DSA-SS/CC

IF mortar sampling and testing NOT required for approved
preblended mortars conforming to ASTM C270

Mortar & Grout Tests
CBC 2105A.3
CBC 2105.3
CBC 2115.8.1
Exceptions

Test per:
CBC 2105A.3
ASTM C1586
(C780 indicated)
CBC 2105.3
CBC 2115.8.1
ASTM C780

Test per
ASTM C1019

Mortar & Grout Tests
CBC 2105A.3
CBC 2105.3
CBC 2115.8.1

Masonry Core Testing
CBC 2105A.4
CBC 2105.4
CBC 2115.8.2
Exceptions

IF non-bearing, non-shear wall 12ft high or less,
hollow cmu f'm not exceeding 2000 psi; Core testing NOT required

Permitted to be approved as alternate to core testing: infrared thermographic survey or other non-destruct procedures

Grout

Test per
ASTM C1019

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