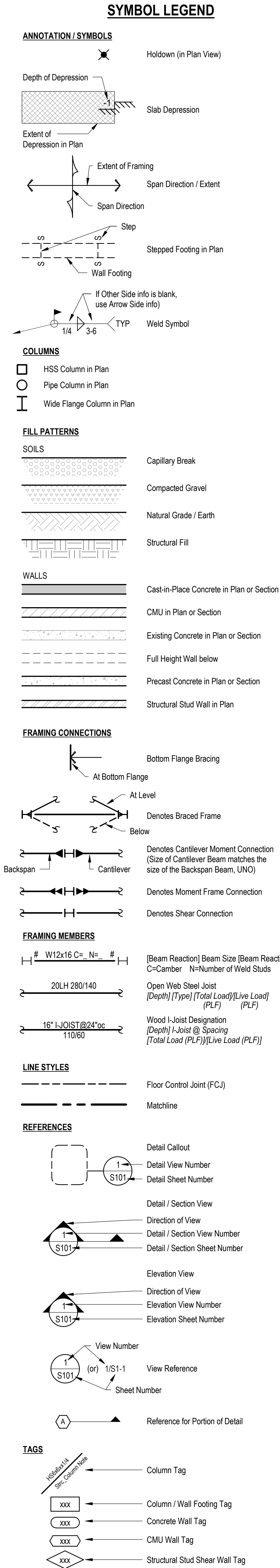


ABBREVIATIONS		ABBREVIATIONS	
*Code References		I	
ACI	AMERICAN CONCRETE INSTITUTE	IN	INCH, INCHES
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	INCL	INCLUDED, INCLUDING
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	INSUL	INSULATION
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	INT	INTERIOR
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	IP	INTERLOCKING PUNCH
AWS	AMERICAN WELDING INSTITUTE	J	JOIST
CRSI	CONCRETE REINFORCING STEEL INSTITUTE	JT, JTS	JOINT, JOINTS
IBC	INTERNATIONAL BUILDING CODE	K	KIP
ICBO	INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS	k, KIP	KILOPOUND
ICC-ES	ICC EVALUATION SERVICE	ksi	KIPS PER SQUARE INCH
UBC	UNIFORM BUILDING CODE	L	ANGLE OR LENGTH
WABO	WASHINGTON ASSOCIATION OF BUILDING OFFICIALS	LAT	LATERAL
WPS	WELDING PROCEDURES SPECIFICATIONS	LF	LINEAR FOOT
*MISC		LFRS	LATERAL FORCE RESISTING SYSTEM
-	DEGREE	LGT, LONG	LONGITUDINAL
±	PLUS OR MINUS	LIN	LINEAR
Ø	DIAMETER	LL	LIVE LOAD
A	ANCHOR BOLT	LLH	LONG LEG HORIZONTAL
AB	ADDENDUM	LLV	LONG LEG VERTICAL
ADD	ADDITIONAL	LOC	LOCATION
ADL	ADHESIVE	LSH	LONG SLOTTED HOLE
ADJ	ADJACENT	LSL	LAMINATED STRAND LUMBER
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	LVL	LAMINATED VENEER LUMBER
AFF	ABOVE FINISH FLOOR	M	MAXIMUM
AHU	AIR HANDLING UNIT	MC	MISCELLANEOUS CHANNEL
ALT	ALTERNATE	MECH	MECHANICAL
ANCH	ANCHOR, ANCHORAGE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
APPROX	APPROXIMATE	MEZZ	MEZZANINE
AR	ANCHOR ROD	MF	MOMENT FRAME
ARCH	ARCHITECT, ARCHITECTURAL	MFR	MANUFACTURER
B		MIN	MINIMUM
BAL	BALANCE	MISC	MISCELLANEOUS
BF	BRACED FRAME	MTL	METAL
BLDG	BUILDING	N	NON-SHRINK GROUT
BLKG	BLOCKING	NB	NON-LOAD BEARING
BM	BEAM	NLB	NEAR SIDE
BOD	BOTTOM OF DECK	NTS	NOT TO SCALE
BOF	BOTTOM OF FOOTING, FOUNDATION	O	ON CENTER
BOS	BOTTOM OF STEEL	OD	OUTSIDE DIAMETER
BOT	BOTTOM	OPNG	OPENING
BP	BASE PLATE	OPP	OPPOSITE
BRB	BUCKLING RESTRAINED BRACE	OSB	ORIENTED STRAND BOARD
BRG	BEARING	OWJ	OPEN WEB JOIST
BTWN	BETWEEN	P	POWDER ACTUATED FASTENERS
C		PAF	PERIMETER
(c)	COLLECTOR	PERIM	PERPENDICULAR
C	CAMBER or CHANNEL	PERP	PARTIAL JOINT PENETRATION
CANT	CANTILEVER	PJ	PLATE
CIP	CAST-IN-PLACE	PLF	POUNDS PER LINEAL FOOT
CJ	CONTROL JOINT	PLYWD	PLYWOOD
CJP	COMPLETE JOINT PENETRATION	PREFAB	PREFABRICATED
CL	CENTERLINE	PRELIM	PRELIMINARY
CLR	CLEAR, CLEARANCE	PSF	POUNDS PER SQUARE FOOT
CMU	CONCRETE MASONRY UNIT	PSI	POUNDS PER SQUARE INCH
COL	COLUMN	PSL	PARALLEL, STRAND LUMBER
COMP	COMPOSITE or COMPRESSION	PT	POINT, POST TENSION
CONC	CONCRETE	Q	QUANTITY
CONN	CONNECTION	QTY	QUANTITY
CONT	CONTINUOUS	R	REFERENCE
CONTR	CONTRACTOR	REF	REFERENCE
COORD	COORDINATE	REIN	REINFORCE(D), (ING), (MENT)
CTR	CENTER, CENTERED	REQD	REQUIRED
D		REV	REVISION, REVISED
d	PENNY (NAIL)	S	SCHEDULE
D&E	DRILL AND EPOXY	SCHED	SCHEDULE
DBA	DEFORMED BAR ANCHOR	SECT	SECTION
DBL	DOUBLE	SF	SQUARE FOOT
DC	DEMAND CRITICAL	SHGT	SHEATHING
DEMO	DEMOLISH, DEMOLITION	SIM	SIMILAR
DIA	DIAMETER	SOG	SLAB ON GRADE
DIAG	DIAGONAL	SPA	SPACING
DIAPH	DIAPHRAGM	SPEC	SPECIFICATION
DIM	DIMENSION	SQ	SQUARE
DL	DEAD LOAD	SS	STAINLESS STEEL
DN	DOWN	SSH	SHORT SLOTTED HOLE
DTL	DETAIL	STD	STANDARD
DWG, DWGS	DRAWING, DRAWINGS	STGD	STAGGERED
DWL, DWLS	DOWEL, BOWELS	STIFF	STIFFENER
E		STL	STEEL
EA	EACH	STRUCT	STRUCTURAL
EF	EACH FACE	SYM	SYMMETRICAL
EL, ELEV	ELEVATION	T	TOP AND BOTTOM
ELECT	ELECTRICAL	T&B	TONGUE AND GROOVE
EMBED	EMBEDMENT	TEMP	TEMPERATURE, TEMPORARY
ENGR	ENGINEER	THRD	THREAD, THREADED
EOD	EDGE OF DECK	TO	TOP OF
EOS	EDGE OF SLAB	TOB	TOP OF BEAM
EQ	EQUAL	TOC	TOP OF CONCRETE
EQUIP	EQUIPMENT	TOF	TOP OF FOOTING
ES	EACH SIDE	TOP	TOP OF PARAPET
EW	EACH WAY	TOS	TOP OF STEEL
EXIST, (E)	EXISTING	TOW	TOP OF WALL
EXP	EXPANSION	TRA	THREADED ROD IN ADHESIVE ANCHOR
EXT	EXTERIOR	TRANS	TRANSVERSE
F		TYP	TYPICAL
FCJ	FLOOR CONTROL JOINT	U	UNLESS NOTED OTHERWISE
FDN	FOUNDATION	UNO	ULTRASONIC TEST
FFE	FINISH FLOOR ELEVATION	UT	ULTRASONIC TEST
FIN	FINISH	V	VERTICAL
FLR	FLOOR	VIF	VERIFY IN FIELD
FO	FACE OF	W	WIDE FLANGE
FRMG	FRAMING	W, WF	WIDE FLANGE
FS	FAR SIDE	W	WITH
FT	FOOT, FEET	W/O	WITHOUT
FTG	FOOTING	WCJ	WALL CONTROL JOINT
G		WO	WOOD
GA	GALVE, GAGE	WF	WIDE FLANGE
GALV	GALVANIZED	WP, WPT	WORKING POINT
GC	GENERAL CONTRACTOR	WS	WELD STUD
GLB	GLUE LAMINATED BEAM	WT	WEIGHT or STRUCTURAL TEE CUT FROM WY SECTION
GR	GRADE, GRADING	WWF	WELDED WIRE FABRIC
GWB	GYPSUM WALL BOARD	X	EXTRA STRONG
H		XS	DOUBLE EXTRA STRONG
HAS	HEADED ANCHOR STUD	XXS	DOUBLE EXTRA STRONG
HCP	HOLLOW CORE PLANK		
HDR	HEADER		
HORIZ, H	HORIZONTAL		
HSS	HOLLOW STRUCTURAL SECTION		
HT	HEIGHT		



CONSTRUCTION ADMIN

Deferred Submittals

- Concrete Mix
- Metal Stud Systems
- Temporary Shoring/Bracing of Existing Structure

1. Deferred Submittal components are intended to be vendor designed and have not been designed by the Architect/Engineer. Refer to the drawings, the specifications, and the material sections of these general notes for design and submittal requirements.

2. Deferred Submittal components have not been permitted under the base building application. The contractor shall submit the approved submittals for the Deferred Submittal components to the building official. Deferred Submittal components shall not be installed until the building official has permitted the Deferred Submittal.

3. When the manufacturer is registered and approved to perform work without special inspection, the Contractor is to submit to the Building Official certificates of compliance from the manufacturers at the completion of manufacture stating that the work was performed in accordance with the approved construction documents.

Structural Observations

1. Structural Observation by the Structural Engineer is for the purpose of confirming general conformance of the construction with the design intent of the structure.

2. Structural observations will occur as required to confirm general conformance of the construction with the design intent of the structure.

3. Structural Observation is not intended to review the Contractor's construction procedures or the Contractor's conformance with the contract.

4. Structural Observation is not intended to replace the required Special Inspection program.

Special Inspection

Special inspections shall be performed by an agency which:

- Is employed by the owner;
- Is qualified to perform special inspection activities in accordance with IBC Section 1704.2;
- Has been approved by the building official to perform special inspections.

The special inspector shall provide written documentation of qualifications per IBC Section 1704.2.1.

The special inspector shall furnish inspection reports and a final report in accordance with IBC Section 1704.2.4.

The construction or work for which special inspection is required shall remain accessible and exposed of special inspection purposes until completion of the required special inspections.

Each contractor responsible for the construction of a main wind- or seismic force-resisting system, designated seismic system or a wind- or seismic-resisting component listed in the statement of special inspections shall submit a written statement of responsibility to the building official and the owner prior to the commencement of work on the system or component. The contractor's statement of responsibility shall contain acknowledgement of awareness of the special requirements contained in the statement of special inspection.

Fabricators

The special inspector shall verify fabrication and implementation procedures of the following items per IBC Section 1704.2.5 unless the fabricator is registered and approved by the building official to perform such work without special inspection. At the completion of fabrication, the approved fabricator shall submit a certificate of compliance to the building official stating that the work was performed in accordance with the approved construction documents.

- Structural Steel - to include the requirements of AISC 360 Chapter N.
- Ready Mix Concrete
- Light-gage Steel Studs
- Light-gage Metal Deck

SUBMITTALS TO SPECIAL INSPECTOR

Welding

Structural Steel	AWS D1.1 Prequalification
Light Gage Steel Reinforcing	AWS D1.3 Prequalification
Welding	WABO or AWS Certified

CMU Walls

Block Units	Manufacturer's Letter of Certification
Grout	Manufacturer's Letter of Certification
Mortar	Manufacturer's Letter of Certification

Adhesive Anchor

Epoxy Adhesive	Manufacturer's Letter of Certification
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Concrete

All Concrete Material	All trip tickets, including water/cement ratio in truck
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Slab-on-Grade

Concrete	In place water/cement ratio test results
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Metal Deck Topping

Concrete	In place water/cement ratio test results
----------	--

Inspector to review submittals before installation begins. Inspector must inspect job from approved & stamped design & shop drawings, including all clarifications, both written & in drawing form.

STATEMENT OF SPECIAL INSPECTIONS

Seismic Requirements (IBC 1704.3.2)

Special Inspections for Seismic Resistance (IBC 1705.12)

Seismic Structural Steel and Steel Elements (IBC 1705.12.1, 1705.12.1.2 and AISC 341 Chapter J):

- The special inspector for structural steel seismic force-resisting systems (moment frames, braced frames, steel plate shear walls, etc) and structural steel elements (struts, collectors, chords, foundation elements, etc) shall be in accordance with the quality assurance (QA) requirements of AISC 341 and as noted below:
- The special inspector shall provide written documentation of practices and personnel as required by AISC 341 sections J3 and J4.
- Inspection of high-strength bolting shall be in accordance with AISC 341 Section J6 and Tables J6-1, J6-2, and J6-3, inspection tasks prior, during, and after welding.
- Inspection of high-strength bolting shall be in accordance with AISC 341 Section J7 and Tables J7-1, J7-2, and J7-3, inspection tasks prior, during, and after bolting.
- Inspection of protected zones and reduced beam section moment frames shall be in accordance with AISC 341 section J8 and table J8-1.
- Inspection of composite structures shall be in accordance with AISC 341 section J9 and table J9-1, J9-2, and J9-3, inspection tasks prior, during and after concrete placement.

Structural Wood Construction (IBC 1705.12.2):

Structural Wood seismic force-resisting systems (shear walls, diaphragms, collectors, drag struts, hold downs, etc) shall be inspected in accordance with IBC Section 1705.12.2.

Structural Cold-Formed Steel Light Frame Construction (IBC 1705.12.3):

Cold-formed steel light frame seismic force-resisting systems (shear walls, braces, diaphragms, collectors, drag struts, hold downs, etc) shall be inspected in accordance with IBC Section 1705.12.3.

Designated Seismic Systems (IBC 1705.12.4):

The special inspector shall examine architectural, mechanical, and electrical components, supports, and attachments indicated in Table 13.2.1 of ASCE 7 and verify that the label, anchorage or mounting conforms to the certificate of compliance required by Sections 13.2.1 and 13.2.2 of ASCE 7.

Architectural Components (IBC 1705.12.5):

Periodic special inspection is required during erection and fastening of exterior cladding, interior and exterior veneer, and interior and exterior non-bearing walls over 30 feet in height above grade or walking surface, and for anchorage of access floors. Inspection and limitations to be per IBC Section 1705.12.5.

Mechanical, Electrical and Plumbing Components (IBC 1705.12.6):

Periodic special inspection is required during the installation and anchorage of the following items:

- Electrical equipment for emergency or standby power systems.
- Piping systems designed to carry hazardous materials and their associated mechanical units.
- Ductwork designed to carry hazardous materials.
- Vibration isolation systems where a nominal clearance of 1/4 inch (6.4 mm) or less is required between the equipment support frame and restraint.
- Minimum clearances of Mechanical and electrical equipment, including duct work, piping systems and their structural supports per IBC section 1705.12.6.6 and ASCE 7 Section 13.2.3

Storage Racks (1705.12.7):

Periodic special inspection is required during the anchorage of storage racks 8 feet (2438 mm) or greater in height per IBC Section 1705.12.7.

Seismic Isolation Systems (IBC 1705.12.8)

Periodic special inspection is required during the fabrication and installation of seismic isolation systems in accordance with IBC Section 1705.12.8.

Cold-Formed Steel Special Bolted Moment Frames (IBC 1705.12.9)

Periodic special inspection is required during the installation of cold-formed special bolted moment frames in accordance with IBC Section 1705.12.9.

Testing and Qualification for Seismic Resistance (IBC 1705.13)

Seismic Structural Steel and Steel Elements (IBC 1705.13.1 and AISC 341):

- Nondestructive testing for welded joints within the structural steel seismic force-resisting system shall be in accordance with section J6.2 of AISC 341. This includes testing of k-area welds, CJP Groove welds, where base material is greater than 1.5" thick, welded splices, thermally cut surfaces or beam copes and access holes, reduced beam section repairs, and weld tab removals.

Concrete Reinforcement (IBC 1705.12 Item 1 and 1705.12.1):

Certified mill test reports indicating compliance with Section 20.2.2 of ACI 318 shall be provided for each shipment of reinforcement used in those elements designated in the drawings as shear walls, moment frames, and coupling beams.

Seismic Certification of Designated Seismic Systems (IBC 1705.13.3)

Manufacturer's certification of seismic qualification in accordance with Section 13.2.2 of ASCE 7 shall be provided for active mechanical and electrical equipment that must remain operable following the design earthquake ground motion and for components with hazardous substances.

Seismic Certification of Architectural, Mechanical and Electrical Components (IBC 1705.13.2):

Manufacturer's certification of seismic qualification by analysis, testing or experience data in accordance with ASCE 7 Section 13.2 as well as the applicable sections indicated in ASCE 7 Table 13.2.1 shall be provided for architectural, mechanical and electrical components, supports and attachments per IBC Section 1705.13.2.

Wind Requirements (IBC 1705.11)

Special inspections for wind resistance are not required.

STATEMENT OF SPECIAL INSPECTIONS (cont.)

Steel Construction (IBC 1705.2 and AISC 360 Chapter N)

Special inspection for structural steel shall be in accordance with the quality assurance (QA) requirements of AISC 360.

Inspection of welding shall be in accordance with:

- AISC 360 sections N4.2 and N5.4
- AISC 360 Table N5.4.1 - Inspection Tasks Prior to Welding
- AISC 360 Table N5.4.2 - Inspection Tasks During Welding
- AISC 360 Table N5.4.3 - Inspection Tasks After Welding
- Nondestructive testing of welded joints shall be in accordance with AISC 360 sections N4.3 and N5.5

Inspection of high-strength bolting shall be in accordance with:

- AISC 360 sections N5.6
- AISC 360 Table N5.6.1 - Inspection Tasks Prior to Bolting
- AISC 360 Table N5.6.2 - Inspection Tasks During Bolting
- AISC 360 Table N5.6.3 - Inspection Tasks After Bolting

Other inspection tasks, including inspection of anchor rods and embedments supporting structural steel shall be in accordance with AISC 360 N5.8.

Inspection of composite construction, including steel deck, headed stud anchors shall be in accordance with:

- AISC 341 Section J9
- AISC 341 Tables J8.1 - J9.3 - Inspection of Steel Elements of Composite Construction Prior to Concrete Placement

Quality assurance inspections, testing and report submittal shall be in accordance with AISC 360 sections N5.2 and N7.

Cold-Formed Steel Deck (IBC 1705.2.2)

Special inspections and qualification of welding special inspectors for cold-formed steel floor and roof deck shall be in accordance with the quality assurance inspection requirements of SDI QA/QC and in accordance with IBC Section 1705.2.2.

Open-Web Steel Joists and Joist Girders (IBC 1705.2.3)

Special inspections for open-web steel joists and joist girders shall be in accordance with:

- IBC Section 1705.2.3
- IBC Table 1705.2.3 - Required Special Inspection of Open-Web Steel Joists and Joist Girders

Cold-Formed Steel Trusses Spanning 60 feet or Greater (IBC 1705.2.4)

Special inspections for cold-formed steel trusses with a span greater than 60 feet shall be in accordance with IBC Section 1705.2.4.

Concrete Construction (IBC 1705.3)

Special inspection for concrete construction shall be in accordance with IBC Table 1705.3 - Required Verification and Inspection of Concrete Construction.

Masonry Construction (IBC 1705.4)

Special inspections and tests for masonry construction shall be in accordance with the quality assurance requirements of TMS 402-16 section 1.3 and TMS 602-16 section 1.6.

(see for risk category I, II, or III)

- Inspection and testing of CMU shall be in accordance with TMS 602-16 Table 3 and Table 4 (Level 2 Quality Assurance)
- Inspection of Masonry Veneer shall verify compliance with the approved submittals. (Level 1 Quality Assurance)

(see for risk category III)

- Inspection and testing of CMU shall be in accordance with TMS 602-16 Table 3 and Table 4 (Level 3 Quality Assurance)
- Inspection and testing of Masonry Veneer shall be in accordance with TMS 602-16 Table 3 and Table 4 (Level 2 Quality Assurance)

Wood Construction (IBC 1705.5)

Special inspections for wood construction shall be in accordance with IBC 1705.5

Per IBC Section 1705.5.1, diaphragm special inspection shall include inspection of:

- Wood structural panel sheathing grade and thickness.
- Nominal size of framing members at adjoining structural panel sheathing
- Fastener (nail or staple) diameter and length, the number of fastener lines, and the spacing between fasteners in each line and at edge margins

Metal-plate connected wood trusses:

Special inspections of wood trusses with overall heights of 60 inches (1524 mm) or greater shall be performed to verify that the installation of the permanent individual truss member restraint/bracing has been installed in accordance with the approved truss submittal package per IBC Section 1705.5.2. For wood trusses with a clear span of 60 feet (18 288 mm) or greater, the special inspector shall verify during construction that the temporary installation restraint/bracing is installed in accordance with the approved truss submittal package per IBC Section 1705.5.2.

Soils (IBC 1705.6)

Special inspection for existing site soil conditions, fill placement and load-bearing requirements shall be in accordance with:

- IBC 1705.6
- IBC Table 1705.6 - Required verification and Inspection of Soils

Driven Deep Foundations (IBC 1705.7)

Special inspections and tests during installation of driven deep foundation elements shall be in accordance with IBC Section 1705.7.

Cast-in-Place Deep Foundations (IBC 1705.8)

Special inspections and tests during installation of cast-in-place deep foundation elements shall be in accordance with IBC Section 1705.8.

Helical pile Foundations (IBC 1705.9)

Continuous special inspections during installation of helical pile foundation elements shall be in accordance with IBC Section 1705.9.

Fabricated Items (IBC 1705.10)

Special inspections of fabricated items shall be in accordance with IBC Section 1705.10.

Sprayed Fire-Resistant Materials (IBC 1705.14)

Special inspection for sprayed fire-resistant materials shall be in accordance with IBC Sections 1705.14.1 through 1705.14.6

Mastic and Intumescent Fire-Resisting Coatings (IBC 1705.15)

Special inspection for mastic and intumescent fire-resistant materials shall be in accordance with IBC Sections 1705.15 and AWCI 12-B

Exterior Insulation and Finish Systems (IBC 1705.16)

Special inspection for exterior insulation and finish systems shall be in accordance with IBC Sections 1705.16

Fire-Resistant Penetrations and Joints (IBC 1705.17)

Special inspection for fire-resistant penetrations and joints shall be in accordance with IBC Sections 1705.17, 1705.17.1, and 1705.17.2

Smoke Control (IBC 1705.18)

Special inspection for smoke control systems shall be in accordance with IBC Sections 1705.18

LONGVIEW SCHOOL DISTRICT HVAC CHILLER REPLACEMENTS AND INDOOR AIR QUALITY IMPROVEMENTS

2715 LILAC STREET
LONGVIEW, WA 98632

integrusARCHITECTURE

10 SOUTH CEDARS SPOKANE, WA 99204
TELEPHONE (509)325-5845 FAX (509)325-7144

Date: 11/14/22

Job No.: 22220.00

Drawn By: AM

Checked by: TD

Revisions

#	Date	Description
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STRUCTURAL GENERAL NOTES

S1-2