

STRUCTURAL STEEL NOTES

1. ALL STRUCTURAL STEEL SHALL BE DESIGNED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS FOR LATEST EDITION
(a) AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATION FOR DESIGN FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS (ALLOWABLE STRESS DESIGN), WHERE THE MATERIAL USED CONSISTS OF PLATES, SHAPES, OR BARS.
(b) AMERICAN IRON AND STEEL INSTITUTE SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, FOR MEMBERS WHICH ARE FORMED FROM SHEET OR STRIP MATERIAL.
2. UNLESS NOTED OTHERWISE ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:
PLATES, SHAPES, AND BARS: ASTM A36 OR A572 (Fy=36 OR 50 ksi)
STRUCTURAL TUBING: ASTM A500, GRADE B (Fy=42 ksi)
STRUCTURAL PIPE: ASTM A63, GRADE B (Fy=36 ksi)
HIGH STRENGTH BOLTS: ASTM A325N, TYPE 1
NUTS FOR HIGH STRENGTH BOLTS: ASTM A563DH.
WASHERS: ASTM TS236.
ANCHOR BOLTS: ASTM A307, FURNISH WITH HEAVY HEX NUTS.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING MEMBER SIZES, LOCATIONS, AND SPACING FOR APPROVAL PRIOR TO MANUFACTURING.
4. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL BUILDINGS SHALL COMPLY TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, LATEST EDITION.
5. WELDS SHALL BE E70XX ELECTRODES AND SHALL MEET ASW D1.1. WELDING SHALL BE PERFORMED BY APPROVED CERTIFIED WELDERS AND SHALL CONFORM TO THE PROVISIONS OF THE "STRUCTURAL WELDING CODE - STEEL" OF THE AMERICAN WELDING SOCIETY.
6. HIGH STRENGTH BOLTS SHALL BE SNUG TIGHT UNLESS NOTED OTHERWISE AS SLIP-CRITICAL (S.C.) OR FULLY TIGHTENED (F.T.) ON DRAWINGS.
7. SURFACE PREP ALL INTERIOR STRUCTURAL STEEL WITH SSPC-PAINT 25, TYPE II, IRON OXIDE, ZINC OXIDE, RAW LINSEED OIL AND ALKYD.
8. PAINT STRUCTUAL STEEL IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. DO NOT PAINT STEEL SURFACES TO BE ENCASED IN CONCRETE. WELDED CONNECTIONS, OR CONNECTIONS DESIGNATED AS FRICTION TYPE.
9. NO OPENINGS SHALL BE CUT IN STRUCTURAL MEMBERS UNLESS SHOWN ON THE DRAWINGS AND APPROVED BY THE ENGINEER.
10. CONTRACTOR TO VERIFY ALL CONDITIONS AND ALL DIMENSIONS PRIOR TO FABRICATION OF STEEL. NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY IF ANY DISCREPANCIES EXIST.
11. CONTRACTOR IS RESPONSIBLE FOR COORDINATING MECHANICAL EQUIPMENT LOADS AND ANCHORING REQUIREMENTS WITH THE STEEL JOIST MANUFACTURER.

WOOD TRUSS NOTES

1. METAL PLATE CONNECTED WOOD TRUSSES SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH ANSI/TPI-1, NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION.
2. WOOD ROOF TRUSSES SHALL BE DESIGNED AND FABRICATED BY A MEMBER FIRM OF THE TRUSS PLATE INSTITUTE TO CARRY THE FULL DEAD AND LIVE LOADS AT THE INDICATED SPACINGS AND SPANS.
3. CONNECTIONS BETWEEN TWO OR MORE WOOD MEMBERS, ALL OF WHICH ARE DESIGNED OR SPECIFIED BY THE TRUSS DESIGNER, SHALL BE DESIGNED AND SPECIFIED BY THE TRUSS DESIGNER. CONNECTIONS BETWEEN TWO OR MORE WOOD MEMBERS, ONE OR MORE OF WHICH ARE NOT DESIGNED OR SPECIFIED BY THE TRUSS DESIGNER, SHALL BE DESIGNED AND SPECIFIED BY THE BUILDING DESIGNER. EXCEPTION TO THIS IS ALL TRUSSES TO BEAM CONNECTIONS SHALL BE SPECIFIED BY THE TRUSS DESIGNER. CONTRACTOR TO NOTIFY BUILDING DESIGNER OF ANY REQUIREMENTS AND SHALL ALLOW APPROPRIATE TIME FOR BUILDING DESIGNER TO DESIGN REQUIRED CONNECTION.
4. ENGINEERING DRAWINGS SHALL BE SUBMITTED FOR REVIEW PRIOR TO MANUFACTURING. DRAWINGS ARE TO BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF GEORGIA.
5. SEE FRAMING NOTES FOR TRUSS DESIGN LOADS
6. ALL SHAPES AND SLOPES SHALL BE IN ACCORDANCE WITH ARCHITECTURAL DRAWINGS. COORDINATE WOOD TRUSS TAILS, CANTILEVERS, AND END DIMENSIONS WITH ARCHITECTURAL WALL SECTIONS AND EAVE DETAILS.
7. TRUSSES SHALL BE INSTALLED, BRACED, AND ERECTED IN ACCORDANCE WITH ERECTION PLANS AND BRACING REQUIREMENTS SPECIFIED BY THE TRUSS MANUFACTURER. AT A MINIMUM, THE GENERAL CONTRACTOR SHALL ENSURE THE GUIDELINES LISTED IN THE LATEST VERSION OF BOSS 1, THE GUIDE TO GOOD PRACTICE FOR HAULING, INSTALLING, AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES ARE FOLLOWED
8. TEMPORARY TRUSS BRACING DURING CONSTRUCTION SHALL BE PROVIDED BY THE CONTRACTOR TO INSURE THAT ALL TRUSSES ARE STABLE AND PLUMB DURING INSTALLATION. TEMPORARY BRACING SHALL NOT IMPOSE ANY FORCE ON THE SUPPORTING STRUCTURE. PERMANENT BRACING FORCES SHALL BE TRANSFERRED TO THE ROOF DIAPHRAGM BY THE BRACING DESIGN PROVIDED BY THE TRUSS MANUFACTURER.
9. THE TOP CHORDS OF THE ROOF TRUSSES WILL BE BRACED BY THE ROOF SHEATHING.
10. THE CONTRACTOR SHALL REVIEW AND APPROVE THE TRUSS PLACEMENT PLAN AND EACH TRUSS DESIGN DRAWING FOR CONFORMANCE WITH THE REQUIREMENTS AND INTENT OF THE CONSTRUCTION DESIGN DOCUMENTS, AND THE EFFECT OF THE TRUSS PLACEMENT PLAN AND EACH TRUSS DESIGN DRAWING ON OTHER TRADES INVOLVED IN THE CONSTRUCTION OF THE STRUCTURE AND THE EFFECT OF THE OTHER TRADES ON THE TRUSSES.
11. TRUSSES SHALL BE SHIPPED AND STORED IN SUCH A WAY SO AS TO PREVENT DAMAGE, WARPING, AND PROLONGED EXPOSURE TO WEATHERING ELEMENTS THAT CAN REDUCE THE STRUCTURAL INTEGRITY OF THE TRUSSES.
12. PRE-ENGINEERED PRE-FABRICATED METAL WOOD CONNECTORS SHALL BE SIMPSON STRONG-TIE OR APPROVED EQUAL. INSTALL PER MANUFACTURERS INSTRUCTIONS TO ACHIEVE MAXIMUM NAILED LOAD CAPACITY, UNLESS NOTED OTHERWISE. SEE ROOF TRUSS CONNECTION SCHEDULE FOR CLIP REQUIREMENTS AT EACH END OF TRUSS.
13. THE FOLLOWING INFORMATION MUST ALSO BE SUPPLIED ON TRUSS SHOP DRAWINGS:
A. SPECIES OF THE THE LUMBER USED TO FABRICATE ALL TRUSS TYPES.
B. NOMINAL DIMENSIONS OF ALL TRUSS MEMBERS.
C. UNIFORM LIVE AND DEAD LOAD MAGNITUDE, INCLUDING ALL CONCENTRATED LOAD MAGNITUDES (FROM COLUMNS, BEARING PARTITIONS), ETC.) AND THEIR LOCATION.
D. MAGNITUDE OF FORCES IN ALL MEMBERS FOR EACH CRITICAL LOAD CASE.
E. BRIDGING AND BRACING DETAILS AND LOCATIONS INCLUDING PERMANENT LATERAL BRACING.
F. INTERMEDIATE AND END BEARING DETAILS AND OTHER DETAILS OF STRUCTURAL CONNECTIONS NOT ADDRESSED ON STRUCTURAL OR ARCHITECTURAL PLANS.
G. ERECTION PLANS IDENTIFYING INDIVIDUAL TRUSSES SHOWN AND DETAILED ON SHOP DRAWINGS.
H. SUPPORT REACTIONS FOR ALL LOADING CASES.
J. ALL CONNECTIONS FOR REACTIONS GREATER THAN THE CAPACITIES OF CONNECTORS SHOWN IN THE STRUCTURAL SCHEDULE.
14. TRUSS PLANS SHALL BE AVAILABLE ON JOB SITE DURING THE TIMES OF INSPECTION. THESE DRAWINGS SHALL BEAR CLEAR INDICATION THAT THEY HAVE BEEN REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
15. ROOF TRUSS LAYOUTS MUST BE FOLLOWED UNLESS ENGINEER APPROVES CHANGES PRIOR TO SHOP DRAWING SUBMITTAL. ALL LOADS GENERATED FROM THESE LAYOUTS ARE TRACKED DOWN TO FOUNDATION. CHANGES TO THE LAYOUT THAT ARE MORE EFFICIENT IN REGARD TO ROOF TRUSSES ARE NOT NECESSARILY MORE EFFICIENT TO THE PROJECT AS A WHOLE.
16. ALL ROOF GIRDER TRUSSES TO HAVE A MINIMUM OF 3 BEARING STUDS AT WALL SUPPORTS UNLESS NOTED OTHERWISE.
17. TRUSS SUPPLIER SHALL PROVIDE A TRUSS ON TOP OF UNIT SEPARATION AND BREEZEWAY WALLS AT ALL ELEVATED FLOORS OF ALL BUILDING, UNLESS NOTED OTHERWISE. THESE TRUSSES MUST BE DESIGNED TO TRANSFER THE SHEAR FORCE TO WALL BELOW. SEE SHEAR WALL NOTES AND TYPICAL DETAILS.
18. WHERE ROOF TRUSSES ARE DISCONTINUOUS AT INTERIOR BEARING WALLS CONNECT TRUSSES AT TOP, MID-HEIGHT, AND BOTTOM WITH (3) - 16d NAILS AT EACH LOCATION. PROVIDE 2x8 SCABS AS REQUIRED. SEE DRAWINGS FOR HOLD DOWN REQUIREMENTS.
19. FLOOR TRUSSES SHALL MEET THE FOLLOWING DEFLECTION REQUIREMENTS:
LIVE LOAD = L/480 OR 1/2" WHICHEVER IS MORE STRINGENT.
TOTAL LOAD = L/300 OR 3/8" WHICHEVER IS MORE STRINGENT.
20. ROOF TRUSSES SHALL MEET THE FOLLOWING DEFLECTION REQUIREMENTS:
LIVE LOAD = L/360 OR 1/2" WHICHEVER IS MORE STRINGENT.
TOTAL LOAD = L/240 OR 1" WHICHEVER IS MORE STRINGENT.

SCHEDULE OF SPECIAL INSPECTION SERVICE					
PROJECT	MADISON, GA FIRE STATION				
		Y/N	EXTENT	AGENT*	DATE COMPLETED
1704.2.5 Inspection of Fabricators					
Verify fabrication/quality control procedures.	In-plant review	N	Periodic		
1705.2 Steel Construction (I.e.w. ASCE 360)					
Material verification of high-strength bolts, nuts, and washers.	Review material markings and certificates of compliance	Y	Periodic	1	
Inspection of high-strength bolting:	Field inspection				
a. Snug-tight joints	Y	Periodic	1		
b. Pre-tensioned and slip-critical joints	-				
1) Turn-of-nut with matching markings	N	Periodic			
2) Direct tension indicator	N	Periodic			
3) Twist-of bolt	Y	Periodic	1		
4) Turn-of-nut without matching markings	N		Continuous		
5) Calibrated wrench	N		Continuous		
Material verification of structural steel:					
a. Identification markings	Field inspection	Y	Periodic	1	
b. Certified mill tests	Review submittals	Y	Each submittal	1	
Weld filler materials.	Review certificate of compliance and field verification	Y	Periodic	1	
Structural steel welding:	Shop and field inspection				
a. Complete and partial penetration groove welds	Y	Continuous	1		
b. Multi-pass fillet welds	N	Continuous			
c. Single-pass fillet welds > 5/16"	N	Continuous			
d. Single-pass fillet welds < 5/16"	Y	Periodic	1		
e. Floor and deck welds	N	Periodic			
Reinforcing steel welding	Shop and field inspection				
a. Verification of weldability of steel other than ASTM A 706	Y	Periodic	1		
b. Reinforcing steel-resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special concrete shear walls, and shear reinforcement	N		Continuous		
c. Shear reinforcement	Y	Continuous	1		
d. Other reinforcing steel	Y	Periodic	1		
Inspection of steel frame joint details for compliance with approved construction documents.	Field inspection				
a. Details such as bracing & stiffening	N	Periodic			
b. Member locations	N	Periodic			
c. Application of joint details at each connection	N	Periodic			
1705.3 Concrete Construction					
Inspection of reinforcing steel installation	Field inspection	Y	Periodic	1	
Inspection of prestressing steel installation.	In-plant or field review	N	Periodic		
Inspection of prestressed concrete:	In-plant or field review	N			
a. Application of prestressing force	N	Continuous			
b. Grouting of bonded prestressing tendons in the seismic-force-resisting system	N		Continuous		
Inspection of anchor bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased per IBC section 1911.5 or where strength design is used	Field inspection	Y		1	
Inspection of anchors and reinforcing steel installed in hardened concrete: verify anchor type, anchor dimensions, hole dimensions, hole cleaning procedures, anchor spacing, edge distances, concrete minimum thickness, anchor embedment and tightening torque	Field inspection	Y		1	
Verify use of approved design mix	Field review	Y	Periodic	1	
Fresh concrete sampling.	Field testing	Y	Continuous	1	
Inspection of concrete and shotcrete placement for proper application techniques	Field inspection	Y		Continuous	1
Concrete and shotcrete curing operations.	Field inspection	Y		Periodic	1
Erection of precast concrete members.	Field inspection	N		Periodic	
Concrete strength testing and verification of compliance with construction documents	Field testing and review of laboratory reports	Y		Periodic	1
Verification of in-situ concrete strength, prior to stressing of tendons in post tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	Review field testing and laboratory reports	N		Periodic	
Inspection of formwork for shape, lines, location and dimensions	Field inspection	Y		Periodic	1

1705.4 Masonry Construction					
Verify proportions of site prepared mortar, grout and prestressing grout for bonded tendons.	Field and submittal review	N		Periodic	
Verify construction of mortar joints.	Field inspection	Y		Periodic	1
Verify location of reinforcement and connectors, and placement of prestressing tendons and anchorages.	Field inspection	Y		Periodic	1
Verify prestressing technique	Field inspection	N		Periodic	
Verify size and location of structural masonry elements.	Field and submittal review	Y		Periodic	1
Verify type, size, and location of anchors, including details of anchorage of masonry to structural members, frames, or other construction.	Field inspection	N	Level 1 - Periodic		
		Y	Level 2 - Continuous	1	
Verify size, grade, and type of reinforcement.	Field inspection	Y		Periodic	1
Verify welding of reinforcing bars.	Field inspection	N		Continuous	
Verify protection of masonry during hot/cold weather.	Field inspection	Y		Periodic	1
Verify grout space is clean prior to grouting.	Field inspection	N	Level 1 - Periodic		
		Y	Level 2 - Continuous	1	
Verify grout placement complies with code and construction document provisions.	Field inspection	Y		Continuous	1
Testing of grout specimens, mortar specimens, and/or prisms required by construction documents	Field testing	Y		Periodic	1
Observe preparation of prisms required by construction documents	Field inspection	Y		Continuous	1
Verify compliance with required testing and inspection provisions of construction documents and the approved submittals.	Field testing and inspection	Y		Periodic	1
Verify grade and size of prestressing tendons and anchorages.	Field inspection	N		Periodic	
Verify proper grouting of prestressing tendons.	Field inspection	N		Continuous	
Verify application and measurement of prestressing force.	Field inspection	N	Level 1 - Periodic		
		N	Level 2 - Continuous		
1705.5 Wood Construction					
Inspection of the fabrication process of wood structural elements and assemblies in accordance with Section 1705.5.2	In-plant review	N		Periodic	
For high-load diaphragms, verification of grade and thickness of structural panel sheathing.	Field inspection	N		Periodic	
For high-load diaphragms, verify nominal size of framing members at adjoining panel edges, nail or staple diameter and length, number of fastener lines, and that spacing between fasteners in each line and at edge margins agrees with approved bldg plans.	Field inspection			Periodic	
		N			
1705.6 Soils					
Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	Field inspection	Y		Periodic	1
Verify excavations are extended to proper depth and have reached proper material.	Field inspection	Y		Periodic	1
Perform classification and testing of controlled fill materials.	Field inspection	Y		Periodic	1
Verify use of proper materials, densities, and fill thicknesses during placement and compaction of controlled fill	Field inspection	Y		Continuous	1
Prior to placement of controlled fill, observe subgrade and verify that site has been prepared properly	Field inspection	Y		Periodic	1
1705.7 Pile Foundations					
Verify pile materials, sizes and lengths comply with requirements.	Field inspection and submittal review.	N		Continuous	
Verify capacities of test piles and results of additional load tests, as required.	Field inspection and submittal review.	N		Continuous	
Observe pile driving operations and maintain complete and accurate records for each pile	Field inspection and submittal review. Submittal to the bldg official of the results of pile load tests.	N		Continuous	
Verify placement locations and plumbness, confirm type and size of hammer, record number of blows per foot of penetration, verify required penetrations to achieve design capacity, record tip and butt elevations, and document any pile damage.	Field inspection and submittal review	N		Continuous	
For steel piles, perform additional inspections per Section 1705	See Section 1705.7	N		See Section 1704.3	
For concrete piles and concrete-filled piles, perform additional inspections per Section 1705	See Section 1705.8	N		See Section 1704.4	
For specialty piles, perform additional inspections as determined by the registered design professional in responsible charge.	Field inspection as required by E.O.R.	N		Periodic	
		N		Continuous	

1705.13 Sprayed Fire-resistant Materials					
Verify surface condition preparation of structural members.	Field inspection	N		Periodic	
Verify application of sprayed fire-resistant materials.	Field inspection	N		Periodic	
Verify average thickness of sprayed fire-resistant materials applied to structural members.	Field inspection	N		Periodic	
Verify density of the sprayed fire-resistant material complies with approved fire-resistant design.	Field inspection and submittal review	N		Periodic	
Verify the cohesive/adhesive bond strength of the cured sprayed fire-resistant material.	Field inspection and submittal review	N		Per IBC Section 1704.10.5	
1705.11.5 Architectural Components Special Inspections for Seismic Resistance					
Inspection during the erection and fastening of exterior cladding and interior and exterior veneer.	Field inspection	N		Periodic	
Inspection during the erection and fastening of interior and exterior non load bearing walls.	Field inspection	N		Periodic	
1705.11.6 Mechanical and Electrical Components Special Inspections for Seismic Resistance					
Inspection during the anchorage of electrical equipment for emergency or standby power systems.	Field inspection	N		Periodic	
Inspection during the anchorage of other electrical equipment.	Field inspection	N		Periodic	
Inspection during installation of piping systems intended to carry flammable, combustible, or highly toxic contents and their associated mechanical units.	Field inspection	N		Periodic	
Inspection during the installation of HVAC ductwork that will contain hazardous materials	Field inspection	N		Periodic	
Inspection during the installation of vibration isolation systems.	Field inspection	N		Periodic	
Certificates of compliance used in masonry construction	Review submittals	N		Each submittal	
Verification of fm and fAAC prior to construction	Review submittals	N		Each Submittal	
Verification of fm and fAAC every 5000 SF during construction	Review submittals and field testing	N		Periodic	
Verification of proportions of materials in mortar and grout as delivered to the site	Field review	N		Periodic	
170511.8 Seismically Isolated Structures					
Test seismic isolation system in accordance with ASCE 7 Section 17.8	Prototype testing	N		Per ASCE 7	
* INSPECTION AGENTS	FIRM		ADDRESS		TELEPHONE NO.
1. T.B.D.	T.B.D.				
Notes: 1. The inspection and testing agent(s) shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official prior to commencing work. The qualifications of the Special Inspector(s) and/or testing agencies may be subject to the approval of the Building Official and/or the Design Professional.					
2. The list of Special Inspectors may be submitted as a separate document, if noted so above.					
3. Inspection of fabricators is not required where the fabricator is approved in accordance with IBC Section 1704.2.2.					
Encircle "Yes" or "No" as appropriate and date this document below:					
Are Requirements for Seismic Resistance included in the Statement of Special Inspections?				Yes	
Are Requirements for Wind Resistance included in the Statement of Special Inspections?				Yes	
			DATE:		