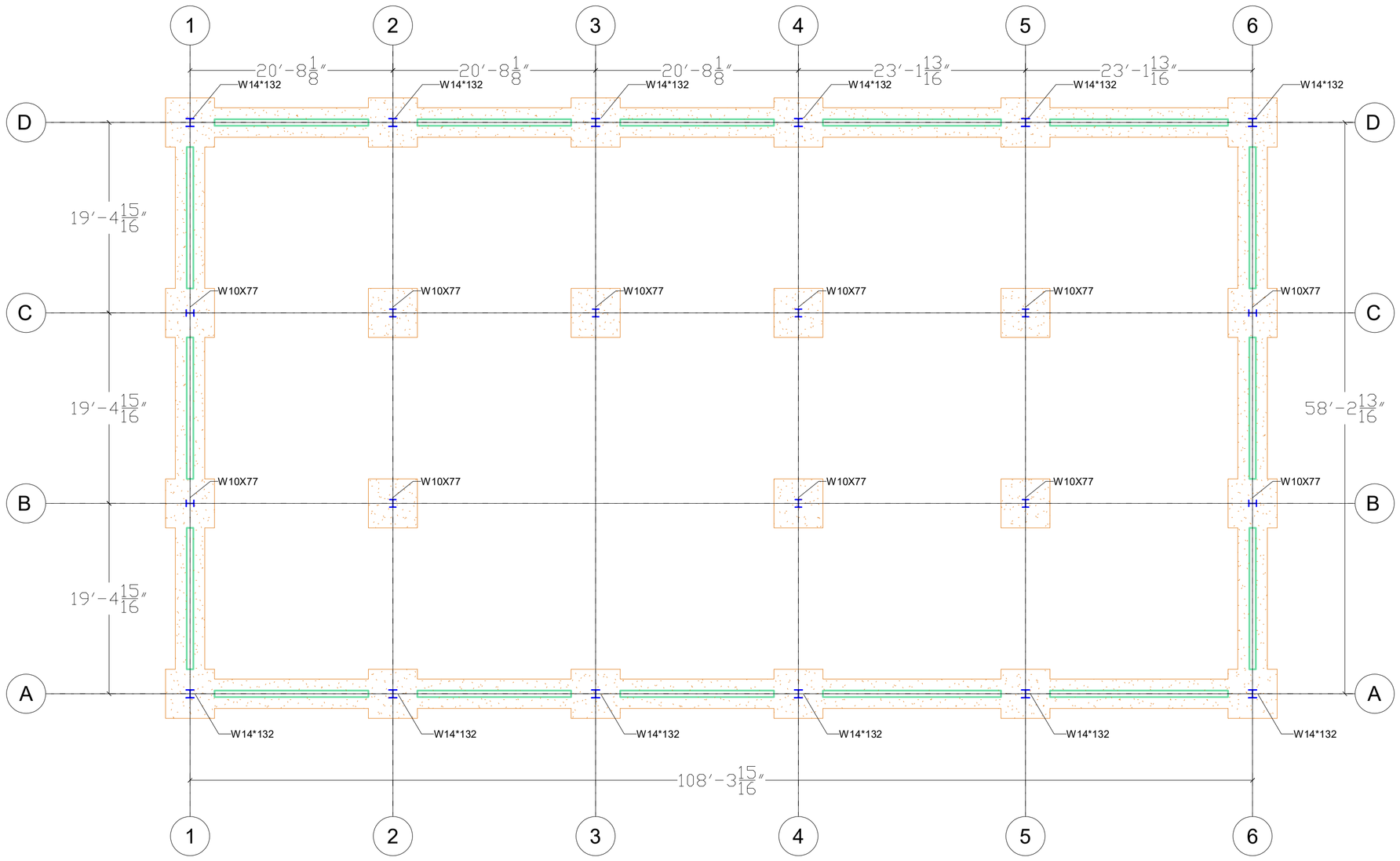
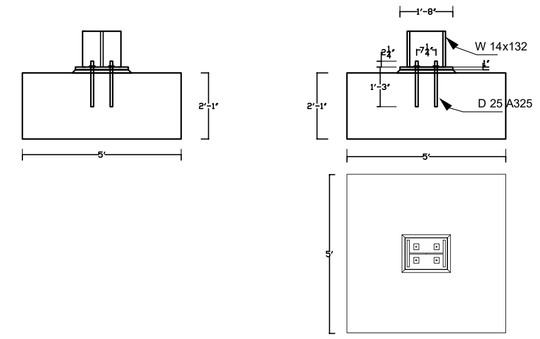
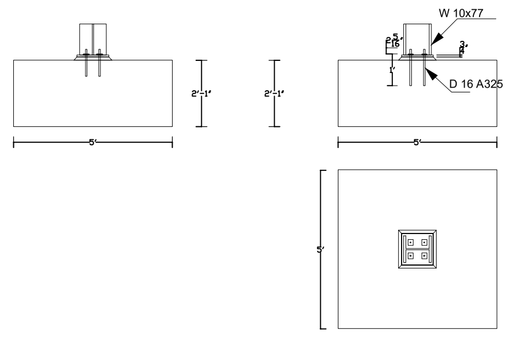


GENERAL STRUCTURAL NOTES (ACI / AISC / ASCE)
1. Codes and Standards
Design is in accordance with the following codes:
ACI 318 –Building Code Requirements for Structural Concrete
AISC 360 –Specification for Structural Steel Buildings
ASCE 7 –Minimum Design Loads for Buildings and Other Structures
IBC –International Building Code (latest adopted edition)
2. Materials
Concrete:
Minimum concrete compressive strength:
Footings & Foundations: f'c = 4000 psi
Slabs on grade: f'c = 3500 psi
Concrete shall be normal weight concrete unless noted otherwise.
Maximum water-cement ratio = 0.45.
Concrete shall be placed in accordance with ACI 301.
Reinforcing Steel:
Reinforcing bars shall be ASTM A615 Grade 60 (fy = 60 ksi), unless noted otherwise.
All reinforcement shall be free from oil, rust, and dirt before placing.
Minimum concrete cover:
Footings in contact with soil: 3 inches
Columns & beams: 1.5 inches
Slabs: 1 inch
Structural Steel:
Structural steel shall conform to ASTM A992 (Fy = 50 ksi) unless noted otherwise.
All bolts shall be ASTM A325 (or A490 where required).
Welding shall conform to AWS D1.1.
3. Loads
Design loads are in accordance with ASCE 7:
Dead Load (D)
Live Load (L)
Wind Load (W)
Seismic Load (E) (if applicable)
Load combinations shall be per ASCE 7.
Roof live load = as per ASCE 7 and local jurisdiction.
4. Foundations
All foundations shall be placed on undisturbed soil or engineered fill.
Excavations shall be inspected before concrete placement.
Provide anchor bolts embedded minimum 12 inches unless noted otherwise.
Base plates shall be grouted with non-shrink grout.
5. Steel Columns
Steel columns shall be erected plumb and true.
All connections shall be designed per AISC.
Provide fireproofing where required by code.
Protect exposed steel from corrosion (primer paint or galvanizing).
6. Slabs on Grade
Subgrade shall be compacted to at least 95% of maximum dry density (ASTM D1557).
Provide vapor barrier under slabs where required.
Control joints shall be provided at spacing not exceeding 12 feet unless noted otherwise.
7. Construction Requirements
Contractor shall verify all dimensions and elevations before construction.
Any discrepancies shall be reported to the engineer before proceeding.
Do not scale drawings.
Shop drawings shall be submitted for approval before fabrication.
8. Inspections and Testing
Concrete testing shall be performed in accordance with ASTM standards.
Special inspections shall be provided per IBC requirements.
Welding and bolting inspections shall comply with AWS and AISC.
9. Safety and Responsibility
Contractor is responsible for construction safety and temporary bracing.
Engineer is not responsible for construction means and methods





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Civil Engineer

Project:
Lapoynor
Date:
1 / 22 / 2026
Drawn By:
Abdullah Al-jahoush

Scale : 1/100

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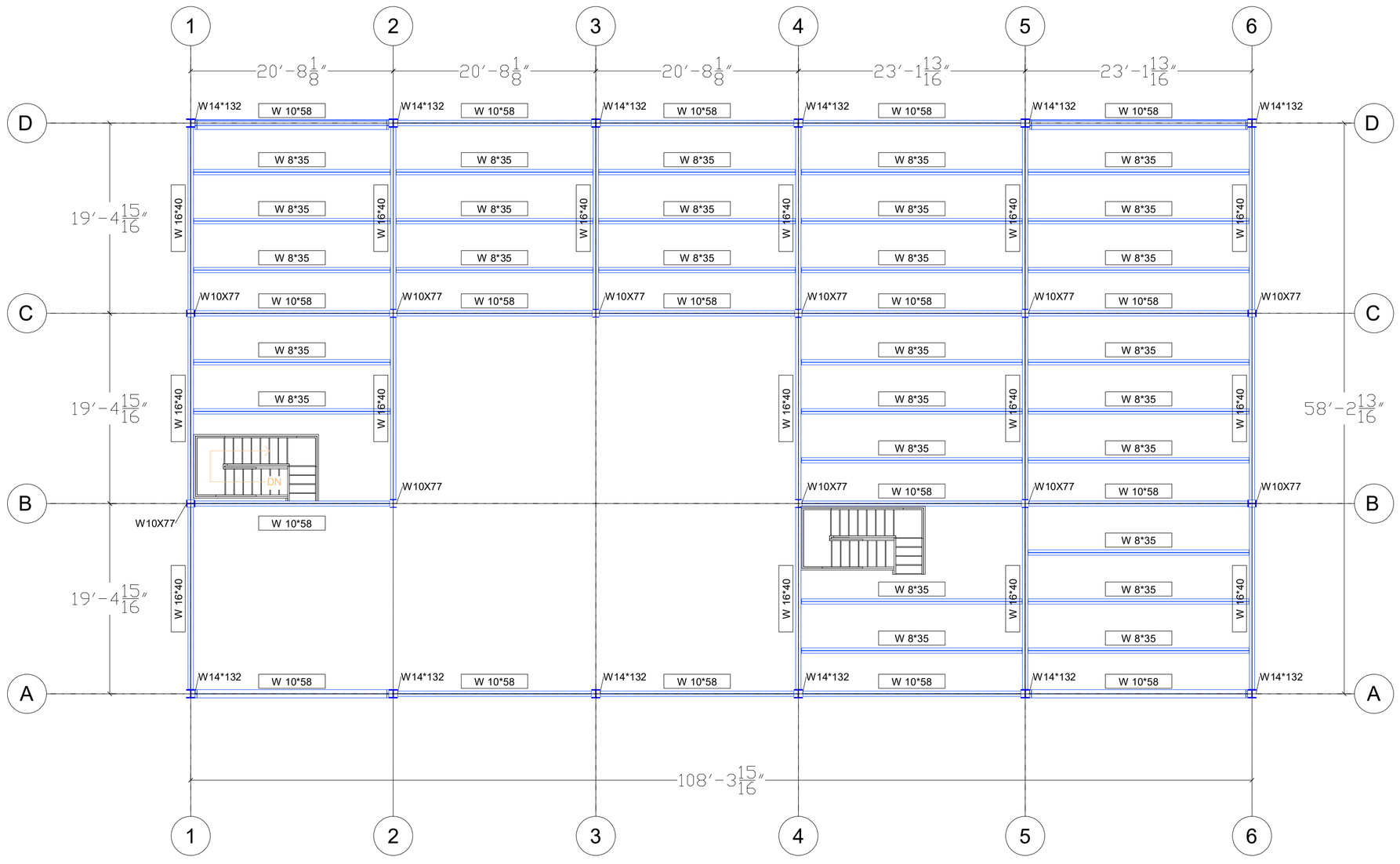

GENERAL STRUCTURAL NOTES
(According to ACI / AISC / ASCE / IBC Codes)
1. Codes and Standards
Design is in accordance with the following codes:
ACI 318 –Building Code Requirements for Structural Concrete
AISC 360 –Specification for Structural Steel Buildings
ASCE 7 –Minimum Design Loads for Buildings and Other Structures
IBC –International Building Code (latest adopted edition)
2. Materials
Structural Steel:
Structural steel shall conform to ASTM A992 (Fy = 50 ksi) unless noted otherwise.
All bolts shall be ASTM A325 or A490 where required.
Welding shall conform to AWS D1.1.
Provide corrosion protection for exposed steel (primer paint or galvanizing).
Reinforcing Steel (if applicable):
Reinforcing bars shall be ASTM A615 Grade 60 (fy = 60 ksi).
Concrete (if applicable):
Minimum concrete compressive strength f'c = 4000 psi unless noted otherwise.
Concrete shall be placed in accordance with ACI 301.
3. Loads
Design loads are in accordance with ASCE 7 and include:
Dead Load (D)
Live Load (L)
Wind Load (W)
Load combinations shall be per ASCE 7.
Mezzanine live load shall be as required by IBC for intended occupancy.
Equipment loads, if any, shall be verified by the contractor.

4. Structural System
The mezzanine structure consists of steel columns, main beams, and secondary beams as shown on drawings.
All members shall be erected plumb and properly aligned.
5. Connections
All steel connections shall be designed in accordance with AISC.
Bolted connections shall use high-strength bolts.
All welds shall comply with AWS D1.1.
Shop drawings for connections shall be submitted for engineer approval prior to fabrication.
6. Floor System
Floor deck (if used) shall be installed according to manufacturer's specifications.
Concrete slab on metal deck (if applicable) shall have minimum thickness as shown on drawings.
Provide shear connectors where required.
7. Columns and Beams
Columns shall be erected vertically and anchored securely.
Main beams and secondary beams shall be installed as indicated on the drawings.
Do not cut or drill structural members without written approval from the engineer.
8. Construction Requirements
Contractor shall verify all dimensions and elevations prior to construction.
Any discrepancies shall be reported to the engineer before proceeding.
Do not scale drawings.
Shop drawings shall be submitted and approved before fabrication.
9. Inspections and Testing
Special inspections shall be provided as required by IBC.
Welding and bolting inspections shall comply with AWS and AISC.
Material test certificates shall be provided upon request.
10. Safety and Responsibility
Contractor is responsible for construction safety and temporary supports.
Engineer is not responsible for construction means and methods.

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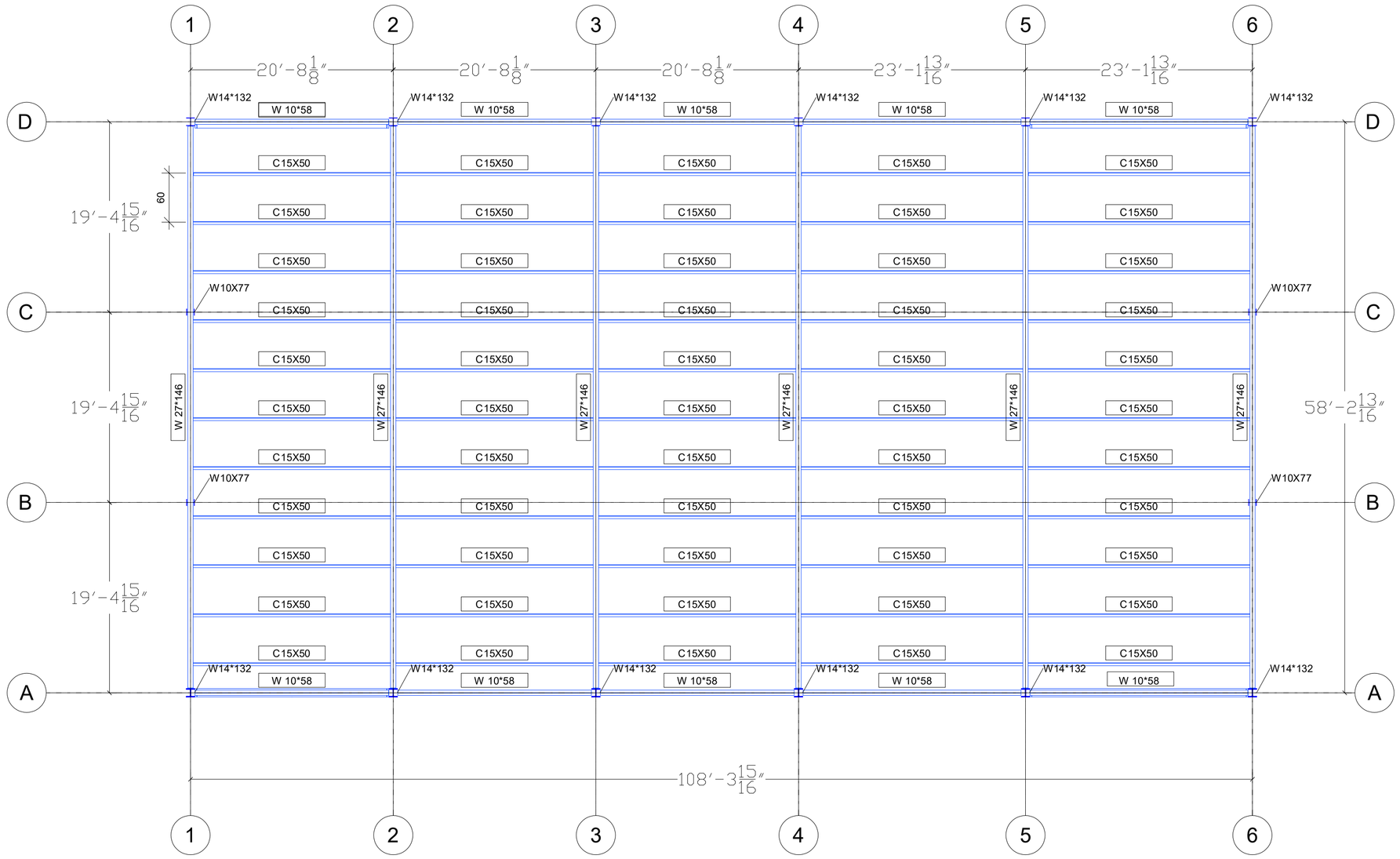

GENERAL STRUCTURAL NOTES –ROOF FRAMING

All design and construction shall comply with the latest editions of:

IBC (International Building Code)

ASCE 7 (Minimum Design Loads for Buildings and Other Structures)

AISC 360 (Specification for Structural Steel Buildings)

AWS D1.1 (Structural Welding Code –Steel)

Steel material shall conform to ASTM standards:

Structural steel: ASTM A992 (Fy = 50 ksi) unless noted otherwise.

Bolts: ASTM A325 or A490.

Welding electrodes: E70XX.

All dimensions shall be verified at site before fabrication. Contractor shall report any discrepancies to the engineer.

Roof framing consists of main beams, secondary beams (joists/purlins), and metal deck as shown on drawings.

Provide adequate lateral bracing for beams and joists as required by AISC specifications.

All steel connections shall be designed for governing load combinations per ASCE 7 unless noted otherwise.

Metal deck shall be installed in accordance with manufacturer's recommendations and SDI (Steel Deck Institute) standards.

Metal deck thickness and profile shall be as specified on drawings. Provide minimum bearing of 1.5 inches on steel supports unless noted otherwise.

Deck fastening:

Welded or screwed to supporting steel members as specified.

Provide side lap fastening per manufacturer requirements.

Provide shear connectors or composite action only where specifically indicated on drawings.

All field welding shall be performed by certified welders in accordance with AWS D1.1.

All bolts shall be installed and tightened in accordance with AISC and RCSC specifications.

Provide corrosion protection for all exposed steel members (shop primer or galvanization as specified).

Roof loads shall include:

Dead load (self-weight of deck, beams, insulation, and roofing materials).

Live load and wind load per ASCE 7.

Additional loads as indicated on drawings.

Openings in metal deck for ducts or services shall be coordinated with the structural engineer and properly reinforced.

Do not cut or drill structural members without approval from the engineer of record.

Temporary construction loads shall not exceed the design capacity of the structure.

All work shall be inspected in accordance with IBC requirements.

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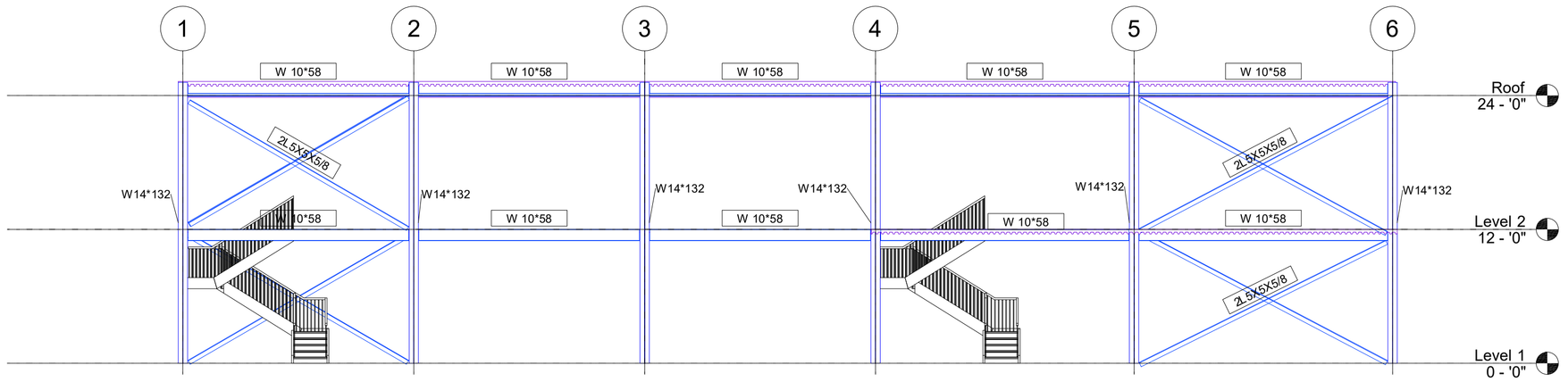
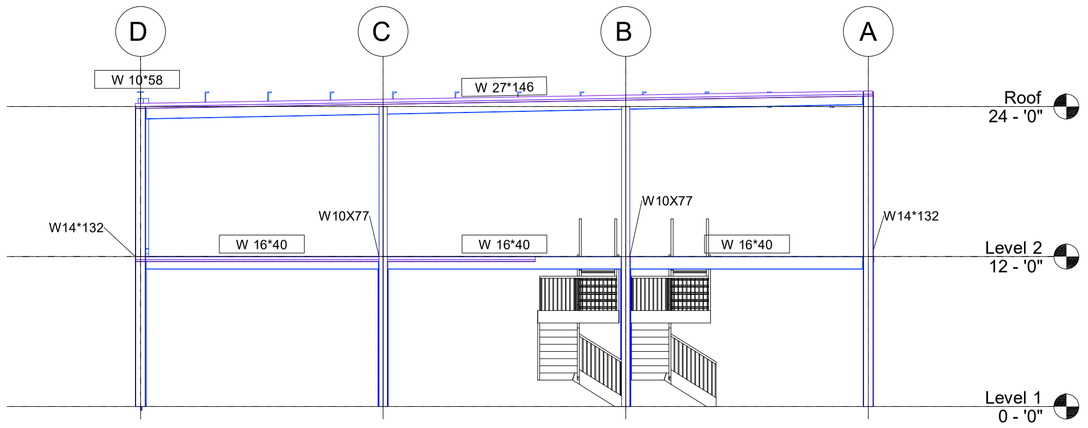
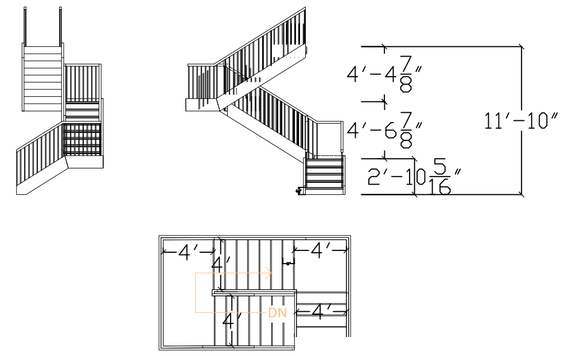
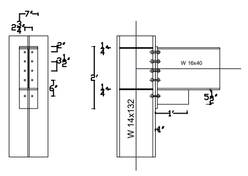
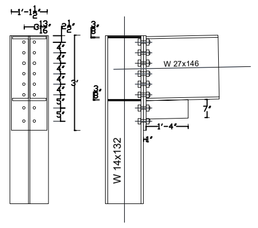




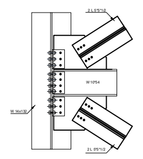




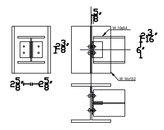
Beam to Column Flange Connection



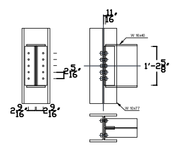
Beam-to-Column Connection (Top Beam)



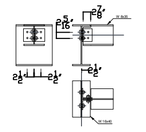
Bracing Connection



Beam to Column Web Connection



Beam to Column Web Connection



Beam to Beam Connection

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