

COLD-FORMED METAL FRAMING

- 1. The engineering of all Cold-Formed Metal Framing, including their connections shall be the responsibility of the Contractor. Design and section properties shall be in accordance with AISI "Specification for the Design of Cold-Formed Steel Structural Members".
2. Shop drawings and sample calculations, signed and sealed by a registered engineer in the state of Pennsylvania shall be submitted for review.
3. Sizes indicated on the Contract Drawings are the minimum accepted sizes only, and the Contractor's use of them does not relieve him of the responsibility for their design.
4. All galvanized, painted or unpainted material shall conform to the following:
Studs and joists of 12, 14 and 16 gage; ASTM A 1003, Grade ST50H, Fy=50,000 PSI minimum.
Studs and joists of 18 and 20 gage, tracks, bridging, and accessories: ASTM A 1003, Grade ST33H, Fy=33,000 PSI minimum.
5. All exterior cold-formed metal walls galvanized material shall be formed from steel having a minimum G-90 galvanized coating conforming to ASTM A653. All interior load bearing walls galvanized material shall be formed from steel having a minimum G-60 galvanized coating conforming to ASTM A653. All painted material shall be primed with rust-inhibiting paint, meeting performance requirements of TT-P-636C.
6. Infill walls shall be detailed to accommodate primary frame live load deflection for 1/360 or 1" minimum or as indicated on the Contract Documents and Specifications, whichever is greater.
7. Shop drawings shall include, as a minimum, erection plans, elevations as required, erection details and general notes. Details should include dimensions, plate sizes, weld symbols, fastener size and type, etc.
8. Connections and fasteners to structural members are the responsibility of the cold-formed provider and contractor. Cold-formed metal framing manufacturer and/or contractor shall provide and install all components not shown on the structural drawings required for the attachment of the cold-formed metal framing.

SHOP DRAWINGS/SUBMITTALS

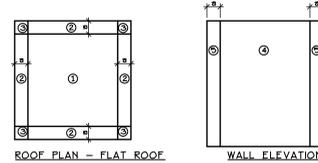
- 1. Reproduction of Contract Documents will not be accepted as shop drawings.
2. Electronic copies of structural drawings will not be made available for Contractor's use in preparing shop drawings. In the event the Contractor obtains a courtesy electronic copy from any source, it shall be used for coordination purposes only. Electronic dimensions shall not be scaled. Any use of electronic dimensions not explicitly shown on the Construction documents for construction layout purposes is at the Contractor's sole risk.
3. Shop Drawings shall be submitted for architect/engineer review for the following items:
Concrete/Grout Design Mixes
Concrete/Masonry Reinforcing Steel
Concrete/Masonry Material Certifications
Structural Steel
Metal Deck
Cold-Formed Metal Framing
Connection Calculations
Shoring
Existing information required to be field verified by contractor
New sleeves and openings in existing slabs
Shop drawings for all elements noted above and shown on the Contract Documents shall be submitted for architect and engineer review. If the Contractor or Owner fails to submit shop drawings, the engineer will not be held responsible for the design of the project. The shop drawings shall indicate any deviations or omissions from the Contract Documents.
4. The contractor shall supply the engineer with checked shop drawings bearing the contractor's stamp of approval and signature. The review of shop drawings by the engineer is only for general compliance with the structural drawings and specifications. This review does not guarantee in any way that the shop drawings are correct, complete, nor does it infer that they supersede the Contract Documents.
5. The Contractor shall review and verify all dimensions and conditions shown on these drawings and report any discrepancies to the architect. Shop drawings are an aid for field placement, and are superseded by the structural drawings. It shall be the responsibility of the general contractor to make certain that all construction is in full agreement with the latest structural drawings.
6. Submittals requiring certification by a professional engineer shall be signed and sealed prior to submittal of the submission for review.
7. Any work fabricated or installed incorrectly due to the Contractor's lack of verification shall be corrected at the Contractor's expense.
8. Shop Drawings should include sufficient information to be utilized in the shop for accurate fabrication of materials and in the field for accurate installation of the work.
9. All shop drawings used for work shall bear the stamp of the Architect/Engineer and shall be marked "Approved", "Approved as Noted", or "Reviewed".
10. Contractor shall provide a proposed submittal schedule showing anticipated shop drawing submission dates a minimum of two (2) weeks prior to the first shop drawing submittal.

INSPECTION

- 1. An independent inspection agency shall be retained to inspect/monitor/test the following items per IBC 2009, and local code requirements:
Earthwork operations, including verification of bearing capacity
Cast-in-place Concrete
Reinforced Masonry
Structural Steel
Metal Deck
Cold-Formed Metal Framing
2. Testing and inspection reports shall be forwarded in a timely manner. Daily reports shall be forwarded each week and deficiency reports shall be forwarded within 24 hours for review. Testing and inspection agency shall issue a final letter of certification for each building component noted above.
3. The Engineer may periodically visit the site to observe the general progress of construction or to provide assistance resolving field conditions. Such visits to the site shall not be construed as meeting the project inspection requirements.

DESIGN CRITERIA

- 1. The building has been designed to conform to applicable provisions of the 2009 International Building Code, all applicable supplements, and all applicable local building codes and amendments.
A. Design Live Loads:
New Canopy = 20 psf
Existing Floor Framing (assumed for analysis purposes) = 100 psf
New loading dock slab = 250 psf
B. Design Dead Loads:
New canopy ballasted roof plus ceiling allowance = 31 psf
Typical existing floor (assumed) = 8 psf M/E/C
Fenester wall allowance has been provided as required by architecture - loading varies.
C. Wind Loads:
Basic Wind Speed V = 90 mph
Exposure B
Importance Factor I = 1.15
Internal Pressure Coefficient GCPi = +/- 0.18 \K
\K Components + Cladding Design Wind Pressures: Contractor may use table values shown below or may calculate actual values based on the specific geometry and conditions in accordance with applicable building codes and submit signed and sealed calculations for review. Values shown are for new work only.
Wall pressures Zone Pressure Suction Zone Pressure Suction
4 (Interior) 14 PSF -15 PSF 1 (Interior) 4 PSF -14 PSF
5 (Corner) 14 PSF -18 PSF 2 (Edge) 4 PSF -23 PSF
3 (Corner) 4 PSF -35 PSF
C+G pressure notes: "a" = 3'-0" feet = distance from corner or edge for which Zone 2, 3, and 5 values apply. Reference ASCE 7 and Figure A this sheet for more information.
D. Snow Load:
Ground Snow Load Pg = 30 psf
Snow Exposure Factor Ce = 1
Snow Importance Factor Is = 1.2
Thermal Factor Ct = 1.0
Flat Roof Snow Load Pf = 31 psf + unbalanced, drifting, and sliding snow where applicable
E. Seismic Loading
This building alteration is exempt from IBC sections 16.9 and 16.1 as it conforms to 3404.4 for lateral loads.
F. Special Loads:
I. Mechanical equipment live loads
Loads for mechanical equipment are based on assumed equipment as indicated on plan (including concrete pads where indicated). Any loads greater than those indicated shall be brought to the attention of the architect/engineer in writing prior to the fabrication of supporting structural members. Supporting members will need to be reviewed and possibly redesigned if loads exceed that shown.
II. Retaining Walls:
\* Values are assumed only. Contractor shall retain geotechnical engineer to provide field verification of values listed prior to construction.
Equivalent At-Rest Earth Pressure = 65 psf
65 psf Equivalent Active Earth Pressure = 45 psf
Equivalent Passive Earth Pressure = 375 psf
Bulk Density (Wet) = 125 pcf
Angle of Internal Friction (Site soils) = 30 degrees
Cohesion (Site soils) = 0
Surcharge Loads = 250 psf
Percentage of Surcharge Loads to be applied horizontally to wall = 50%
III. Handrails: Reference IBC 1607.7
IV. Stairs: Live Load is 100 PSF or 300 pounds on a 4 square inch area, whichever produces the greatest stress



- NOTES:
1. NOTATION:
a: 3'-0"
2. IF A PARAPET EQUAL TO OR HIGHER THAN 3'-0" IS PROVIDED AROUND THE PERIMETER OF THE ROOF WITH 7", THE NEGATIVE VALUES OF GCPi IN ZONE 3 SHALL BE TREATED AS THOSE FOR ZONE 2. THE POSITIVE VALUES OF GCPi IN ZONE 2 AND 4 SHALL BE TREATED AS THOSE FOR WALL ZONES 4 AND 5 RESPECTIVELY.
3. DIMENSIONS CALCULATED FROM THIS DIAGRAM ARE CODE REQUIRED MINIMUMS. HIGHER MINIMUM DIMENSIONS MAY BE REQUIRED AS NOTED ON THE CONTRACT DOCUMENTS.
4. DIAGRAMS ARE BASED ON ASCE/SEI 7-05 FIGURE 6-11B AND 6-11C FOR ENCLOSED/PARTIALLY ENCLOSED BUILDINGS WITH h < 60'-0".

FIGURE A. COMPONENTS AND CLADDING WIND ZONE DIAGRAM

Table with 5 columns: ITEM, EXPOSURE CATEGORY AND CLASS - SEE NOTE 1., F, S, P, C. Rows include Interior Concrete, U.N.O., All Footings, Interior Piers, Exterior Walls, etc.

ABBREVIATION LIST

- + AND
@ AT
Ø DIAMETER
E PLATE
E CENTER LINE
A ABOVE, ANCHOR
A.B. ANCHOR BOLT
ADD'L ADDITIONAL
ARCH ARCHITECT, ARCHITECTURAL
B BELOW
B.E. BOTH ENDS
B.O. BOTTOM OF
B.S. BOTH SIDES
B/ BOTTOM OF
BLDG BUILDING
BM BEAM
BOTT BOTTOM OF
BP BASEPLATE, BEARING PLATE
BRG BEARING
C.E. CONTINUOUS END
C.J.P. CAST IN PLACE
CANT CANTILEVER
C.J. CONSTRUCTION JOINT, CONTROL JOINT
CLR CLEAR
CMU CONCRETE MASONRY UNIT
COL COLUMN
CONC CONCRETE
CONN, CONNX CONNECTION
CONT CONTINUOUS
CVR COVER
DL DEAD LOAD
DN DOWN
E.E. EACH END
E.F. EACH FACE
E.O.D. EDGE OF DECK
E.O.S. EDGE OF SLAB, EDGE OF STEEL
E.S. EACH SIDE
EL, ELEV ELEVATION, ELEVATOR
EMBED EMBEDMENT
EQ EQUAL, EQUIVALENT
EX, EXIST EXISTING
EXT EXTERIOR
FNDN FOUNDATION
FTG FOOTING
GA GAUGE, GAGE
GALV GALVANIZED
GG GENERAL CONTRACTOR
I.F. INSIDE FACE
JT JOINT
KLF KIPS PER LINEAL FOOT
KSF KIPS PER SQUARE FOOT
KSI KIPS PER SQUARE INCH
L ANGLE
L.E. LEFT END
LL LIVE LOAD
LBS POUNDS
LL DOUBLE ANGLE
LLH LONG LEG HORIZONTAL
LLV LONG LEG VERTICAL
LSH LONG SIDE HORIZONTAL
LSV LONG SIDE VERTICAL
LWC LIGHT WEIGHT CONCRETE
M.E.P. MECHANICAL, ELECTRICAL, PLUMBING
M.O. MASONRY OPENING
M/E/C/L MECHANICAL, ELECTRICAL, CEILING, LIGHTING
MAX MAXIMUM
MECH MECHANICAL
MIN MINIMUM
MISC MISCELLANEOUS
MPH MILES PER HOUR
N.T.S. NOT TO SCALE
NO NUMBER
NWC NORMAL WEIGHT CONCRETE
O.C. ON CENTER
O.F. OUTSIDE FACE
OPNG OPENING
OPP OPPOSITE
PLF POUNDS PER LINEAL FOOT
PSF POUNDS PER SQUARE FOOT
PSI POUNDS PER SQUARE INCH
R.E. RIGHT END
REF REFERENCE
REIN REINFORCEMENT
REQ'D REQUIRED
REQMTS REQUIREMENTS
RET RETAINING
REV REVISION
S.O.G. SLAB ON GRADE
SM SIMILAR
SLH SHORT LEG HORIZONTAL
SLV SHORT LEG VERTICAL
SP SPACING
STD STANDARD
STL STEEL
STRUCT STRUCTURAL
T + B TOP AND BOTTOM
T.O. TOP OF
T/ TOP OF
TYP TYPICAL
UNO UNLESS NOTED OTHERWISE
V.I.F. VERIFY IN FIELD
VT VERTICAL TRUSS
W.W.R. WELDED WIRE REINFORCEMENT
W/ WITH
W/O WITHOUT
WF WIDE FLANGE
WP WORK POINT

Vertical scale markers on the left side of the page: three eighths inch = one foot, one half inch = one foot, one quarter inch = one foot, etc.

FULLY SPRINKLERED BID DOCUMENTS

Project information table including Drawing Title (GENERAL NOTES), Project Title (BUILDING 9 - SECOND FLOOR RENOVATION), Project Number (542-13-105), Building Number (9), Drawing Number (S002), Date (05/12/14), Checked (SLS), Drawn (MTH), and Revisions table.

