



BUILDING CODE SUMMARY

APPLICABLE CODES 2018 INTERNATIONAL BUILDING CODE

2018 INTERNATIONAL MECHANICAL CODE

2018 INTERNATIONAL PLUMBING CODE

2018 INTERNATIONAL FIRE CODE

2018 INTERNATIONAL ENERGY CONSERVATION CODE

FIRE SUPPRESSION SUMMARY

OCCUPANCY CLASSIFICATION M (RETAIL) & B (OFFICE)

TYPE OF CONSTRUCTION V-B, NON - SPRINKLED

FLOOR AREA^Υ BUILDING AREA: 5,110 SQ.FT.

TOILET FACILITIES REQUIRED TO BE DETERMINED

TOILET FACILITIES PROVIDED ONE UNISEX TOILET PER SPACE (ADA

INTERIOR FINISH REQUIREMENTS FLOOR FINISHES: CLASS I or CLASS II

SPECIAL KNOWLEDGE OR EFFORT.

OR ALPHABETIC LETTERS.

WALL FINISHES: CLASS A (non-sprinkled) CEILING FINISHES: CLASS A (non-sprinkled)

OCCUPANT LOAD

EXITS REQUIRED TO BE DETERMINED

EXITS PROVIDED TWO PER SPACE

NONE

SUBMITTED FOR EACH SPACE AT A LATER DATE.

2017 NATIONAL ELECTRICAL CODE

2017 ICC/ANSI A117.1



SUMMARY OF WORK NEW SHELL SPEC BUILDING. NO C.O. IS REQUESTED WITH THIS SUBMITTAL. SEPARATE TENANT FINISH PLANS WILL BE

DEFERRED SUBMITTALS TO BE COMPLETED BY OTHERS ROOF TRUSS PLANS (PLANS BY SUBCONTRACTOR)

EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR PREMISES SHALL BE IDENTIFIED ON ALL EXTERIOR DOORS, WITH NUMBERS AND/OR LETTERS. EACH CHARACTER SHALL BE NOT

LESS THAN 6" HIGH WITH A MINIMUM STROKE WIDTH OF 1.0" INCHES. THEY SHOULD BE INSTALLED ON A CONTRASTING BACKGROUND. STREET FACING DOORS SHALL HAVE ADDRESSES THAT ARE PLAINLY LEGIBLE AND VISIBLE FROM THE STREET FRONTING THE PROPERTY. ADDRESS NUMBERS AND/OR LETTERS SHALL BE ARABIC NUMBERS

			Door Schedule
Number	Family	Туре	hardware type
01	Storefront Entry Single	3'.0" x 7'.0"	
02	Storefront Entry Single	3'.0" x 7'.0"	
03	Storefront Entry Single	3'.0" x 7'.0"	
04	Storefront Entry Single	3'.0" x 7'.0"	
05	Single-Flush	3 x7 Exterior	Lockset w/ lever handles, strike plate, 1 1/2 pair hinges, closer, drip cap, gasketing, bottom sweep
06	Single-Flush	3 x 7 Toilet	Latchset w/ lever handles, strike plate, 1 1/2 pair hinges, closer
07	Single-Flush	3 x 7 Toilet	Latchset w/ lever handles, strike plate, 1 1/2 pair hinges, closer
08	Single-Flush	3 x 7 Toilet	Latchset w/ lever handles, strike plate, 1 1/2 pair hinges, closer
09	Single-Flush	3 x 7 Toilet	Latchset w/ lever handles, strike plate, 1 1/2 pair hinges, closer
10	Single-Flush	3 x7 Exterior	Lockset w/ lever handles, strike plate, 1 1/2 pair hinges, closer, drip cap, gasketing, bottom sweep
11	Single-Flush	3 x7 Exterior	Lockset w/ lever handles, strike plate, 1 1/2 pair hinges, closer, drip cap, gasketing, bottom sweep
12	Single-Flush	3 x7 Exterior	Lockset w/ lever handles, strike plate, 1 1/2 pair hinges, closer, drip cap, gasketing, bottom sweep
13	Single-Flush	3 x7 Exterior	Lockset w/ lever handles, strike plate, 1 1/2 pair hinges, closer, drip cap, gasketing, bottom sweep

HM = 16 GA. HOLLOW METAL, PAINTED WD = SOLID CORE RED OAK, STAINED AL = ANODIZED ALUMINUM

IRP = IMPACT RESISTANT PLASTIC

HARDWARE SHALL BE MEDIUM DUTY COMMERCIAL GRADE. DOOR HARDWARE SHALL CONSIST OF BUTTS, LATCHSET OR LOCKSET, SILENCERS, SMOKE GASKETING FOR RATED DOORS, CLOSERS WHERE NOTED, PANIC DEVICES WHERE NOTED. EXTERIOR DOORS SHALL ALSO HAVE THRESHOLD, WEATHERSTRIPPING, SWEEP AND KEYED LOCK. CONTRACTOR SHALL COORDINATE ALL LATCH/LOCK FUNCTIONS AND KEYING OF LOCKS WITH OWNER. MAX. THRESHOLD = 1/2". ALL HARDWARE TO BE LEVER TYPE OR PUSH/PULL. ALL DOORS IN EGRESS PATHWAYS SHALL BE FREE TURNING FOR EXITING. ALL EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT. FURTHER, ALL EGRESS DOORS FROM ROOMS AND EXTERIOR EGRESS DOORS, FOR GROUP A AND GROUP E OCCUPANCIES SHALL NOT HAVE A LOCK OR LATCH OTHER THAN PANIC HARDWARE. ALL DOOR THRESHOLDS SHALL BE A MAX. OF 1/2" ABOVE FLOOR LEVEL AND BOTH SIDES SHALL BE BEVELED AT A SLOPE OF 1:2. SCHLAGE OR EQUAL STANDARD DUTY HARDWARE (SATIN CHROME) WITH LEVERS.

GLASS IN DOORS AND SIDELIGHTS SHALL BE SAFETY GLASS PER IBC SEC. 2406.1





2 Entry Detail 1/2" = 1'-0"





3 Awning detail 1/2" = 1'-0"

CEILING HEIGHT TO BE 9'.0" AFF

Name

White Box

Toilet

Toilet

Toilet

Toilet

Owner's Room

Base F

None

None

6" rubber cove

6" rubber cove

6" rubber cove

6" rubber cove

Wall Schedule

Door type	Frame Type
AL	AL
HM	HM
WD	HM
HM	HM
HM	HM
HM	HM
HIVI	HIVI

Type Mark	Туре	Type Comme
1a	Interior Partition - Wood Stud	2x4 Wood studs @ 16" o.c. w/ 3 1/2" batt insulation and (1) layer 5/
1b	Interior Partition -wet wall	2x6 Wood studs at 16" o.c. w/ 6" fiberglass batt insulation and (1) la

k	Туре	Type Comme
	Interior Partition - Wood Stud	2x4 Wood studs @ 16" o.c. w/ 3 1/2" batt insulation and (1) layer 5/8
	Interior Partition -wet wall	2x6 Wood studs at 16" o.c. w/ 6" fiberglass batt insulation and (1) la

Number

ents	Function
/8" gyp. board each side. To 10'.0" aff	Interior
ayer 5/8" gyp. board each side. To 10'.0" aff	Interior

	Room Schedule			
inish	Wall Finish	Floor Finish	Ceiling Finish	_
	Painted gyp. b'd	Concrete	None	
	Painted gyp. b'd	Concrete	2x4 Suspended Acoustical	
	Epoxy Paint	LVT	2x4 Suspended Acoustical	
	Epoxy Paint	LVT	2x4 Suspended Acoustical	_
	Epoxy Paint	LVT	2x4 Suspended Acoustical	_
	Epoxy Paint	Concrete	2x4 Suspended Acoustical	



- CAULK, CONT.

PRE-FINISHED METAL FLASHING, CONT.

PRE-FINISHED STANDING SEAM ARCH. METAL ON (3) CONT. GALVANIZED HAT SECTIONS

PAINTED 1 1/2" SQUARE
TUBE STEEL FRAMES
@ 4'.0" O.C. ANCHOR TO WALL
W/ (3) 1/2" DIA. LAG BOLTS PER FRAME







 $\bigcirc \frac{\text{Fire Extinguisher Detail}}{3/4" = 1'-0"}$









2 ADA Toilet Details 2017 1/4" = 1'-0"





RELEASED FOR CONSTRUCTION As Noted on Plans Review















PROVIDE CLEAR SILICONE SEALER FOR BRICK







2 North Color 1/8" = 1'-0"





RELEASED FOR CONSTRUCTION As Noted on Plans Review



RELEASED FOR CONSTRUCTION



MAXIMUM ANITICIPATED LOAD = 1000 AMPS

GROUNDING AND BONDING SHALL BE IN COMPLIANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRIC CODE, GROUND CONNECTION AT THE MAIN SERVICE EQUIPMENT SHALL BE MADE TO THE METALLIC WATER SERVICE AND TO A COPPER CLAD ROD 3/4" DIA. BY 10' LONG. WHEN AVAILABLE BOND TO A METAL UNDERGROUND WATER PIPE, THE METAL FRAME OF THE BUILDING, A CONCRETE ENCASED ELECTODE, GROUND RING, AND ANY MADE ELECTRODE.

AFC/AIC = 36,115 EST. AVAILABLE FAULT CURRENT. ELECTRICAL GEAR SHALL BE RATED AT 42,000 AFC/AIC



Lighting Fixture Schedule			
Type Mark	Туре	Type Comments	Count
1a	Lithonia Exterior Wall Mounted LED Fixture	WSQ LED 40KP3 MVOLT DDBXD, 40W	6
1b	Exit Light- Exterior	Combo exit and emergency LED light w/ remote exterior head. All with 90 min. battery backup. With remote head	4
1f	Lithonia LED Recessed Troffer	EPANL-2X4-5400L-80CRI-40K-MIN10-ZT-MVOLT, 40 WATT	5
1g	Emergency Light	Two sealed beam lamps, LED w/ battery backup with 90 minute miminum operation on battery, battery charger, battery test button and light. 120 volt. Wall mounted	2

ELECTRICAL NOTES:

ALL ELECTRICAL LIGHT AND POWER WIRE SHALL NOT BE SMALLER THAN #12 AWG. ALL LIGHTING AND POWER WIRING #10 AWG AND SMALLER SHALL BE SOLID. ALL CONDUCTORS SHALL BE COPPER ONLY. NO ALUMINUM IS ALLOWED

ALL CONDUITS SHALL BE SIZED IN ACCORDANCE WITH THE LATEST NEC TABLES. MINIMUM CONDUIT SIZES SHALL BE ¾". ALL CONDUIT IN AND UNDER FLOOR SLAB SHALL BE SCHEDULE 40 PVC

ALL POWER WIRING IN ALL AREAS SHALL BE IN EMT CONDUIT, BOTH IN WALLS AND THROUGH EXPOSED JOISTS. MC CABLE AND ARMORED CABLE ARE ALSO ALLOWABLE IN AREAS WHERE CONDUITS ARE NOT EXPOSED

ELECTRICAL CONTRACTOR SHALL FURNISH, INSTALL AND CONNECT, FOR WORK DESIGNATED AS HIS RESPONSIBILITY, ALL WIRE, WIRE WAY, CONDUIT, CONNECTORS, OUTLETS, ETC. NECESSARY TO ACHIEVE A COMPLETE ELECTRICAL INSTALLATION. WHERE AN ELECTRICAL DEVICE IS REQUIRED BY CODE BUT NOT SHOWN, IT SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR AS THOUGH FULLY SHOWN AND SPECIFIED. ALL LABOR, TOOLS, MATERIALS, EQUIPMENT SHALL BE PROVIDED AS NECESSARY TO PROVIDE AND INSTALL A COMPLETE SYSTEM. ALL WORK SHALL BE PER CURRENT CODE. COORDINATE ALL WORK WITH OTHER TRADES

ELECTRICAL CONTRACTOR SHALL CIRCUIT FIXTURES AND SHALL PROVIDE AND INSTALL CIRCUIT DIRECTORY WITH TYPED CIRCUIT DESIGNATION CARD UNDER PLASTIC COVER ON THE INSIDE OF EACH PANEL DOOR. ELECTRICAL CONTRACTOR SHALL ALSO FURNISH AND INSTALL NAMEPLATES ON ALL DISCONNECT SWITCHES AND PANEL BOARDS

ALL CONDUIT, JUNCTION BOXES, ETC. ABOVE CEILINGS SHALL BE SUPPORTED FROM STRUCTURE

ELECTRICAL CONTRACTOR SHALL PROVIDE ALL POWER WIRING, ALL CONTROL WIRING AND ALL STARTERS, DISCONNECTS AND THERMAL OVERLOAD SWITCHES NOT SUPPLIED WITH THE EQUIPMENT



RELEASED FOR CONSTRUCTION As Noted on Plans Review



1 <u>Mechanical Plan</u> 1/8" = 1'-0"

		Mechanical Equipment Schedule
Type Mark Type		Type Comments
EF-1	75 CFM Exhaust Fan	Broan ceiling mounted exhaust fan rated at 75 duct through roof with weatherhood and birdso
RTU-1	New 5 Ton RTU	Trane 5 Ton RTU. Electric cooling and gas he curb, economizer, and programable thermosta IEER.
SA	24" x 24"Supply	As Located per plans

<u>HVAC NOTES</u>

MAIN DUCTWORK SHALL BE STEEL GALVANIZED SEALED AIR TIGHT.

DO NOT LINE TOILET/SHOWER EXHAUST DUCTS.

SHEET METAL GUAGES SHALL BE PER SMACNA AND NO LESS THAN 24 GA. INSULATED DUCTS WITH 1/2" - 3# INSULATION.

GRILLES AND DIFFUSERS SHALL BE TITUS, TUTTLE & BAILEY OR EQUAL. SEE ARCHITECTURAL OR ELECTRICAL DRAWINGS FOR CEILING GRID. ALL SHALL BE 4-WAY.

FLEX BRANCH CONNECTIONS SHALL HAVE INSULATED FLEX DUCT, SPIN COLLARS WITH ADJUSTABLE DAMPER AND 90 DEGREE ELL AT DIFFUSER TO PREVENT KINKS, IN BOTH SUPPLY AND RETURN.

COORDINATE ALL WORK WITH OTHER TRADES. ALL WORK SHALL COMPLY WITH CURRENT BUILDING CODE LISTED IN THE CODE ANALYSIS. ENTIRE SYSTEM SHALL BE TESTED AND BALANCED AT COMPLETION OF WORK.

ALL FLUES FROM GAS FIRED EQUIPMENT SHALL BE TYPE B DOUBLE METAL WALL TYPE WITH GALVANIZED EXTERIOR SHELL AND ALUMINUM INTERIOR LINER AS MANUFACTURED BY METALBESTOS OR EQUAL. ALL FLUES SHALL BE KEPT AT LEAST 1" FROM COMBUSTIBLE MATERIALS.

FLEX DUCT SIZES (MAX. 8' RUN)

500 600 CEM	
400 CFM	10" DIA. FLEX
300 – 200 CFM	8" DIA. FLEX
100 – 150 CFM	6" DIA. FLEX

RELEASED FOR

Copyright 2017 Herra All Rights Reserved. reproduced in any for mechanical means, w	HERMAN A. SCHARHAG COMPANY, ARCHITECTS	6247 Brookside Blvd, #204 Kansas City, Mo 64113 Phone: 816-656-5055 Scharhagarch@gmail.com	
NEW BUILDING FOR	SUMMIT ORCHARDS	LEES SUMMIT, MO	
THE SECTION OF THE SE	NUMBER BE-14378 SIONAL P	A CONTRACT OF THE OWNER	
1 City Com No. Do Rev	ments escription vision Scheo	3.23 Date	
Project numbe		<u>19</u> 2491	
Date P	101	03.01.2023	123 11:26:21 AM
Scale	A	s indicated	1/24/20

RELEASED FOR CONSTRUCTION As Noted on Plans Review opment Services De Lee's Summit, Missouri 04/04/2023

A. <u>GENERAL</u>

GENERAL NOTES

- 1. These notes shall be read in conjunction with the Specifications and the Drawings. In the event of a conflict, notify the Architect for clarification.
- 2. Before executing anything herein shown, examine actual job conditions.Report any discrepancy, dimensional or otherwise, between architectural and structural Drawings and any other error, omission, or difficulty affecting the work to the Architect and to the Structural Engineer for review.
- 3. The Owner or his Representative reserves the right to inspect any material, fabrication, or workmanship at any time in field or shop for conformance to the Specifications and Drawings.
- 4. All details and sections are intended to be typical and shall be construed to apply to any similar situation elsewhere, except where a different detail is shown.
- B. <u>DESIGN</u>
- 1. Codes, specifications and standards (latest editions, U.N.O.)
- a. All design and construction shall conform to the International Building Code (currently adopted edition) as amended and adopted by the City of jurisdiction. b. All construction shall comply with the provisions of the following codes, specifications and standards, except where noted to the contrary on
- drawings and specifications or where more stringent requirements are
- specified or shown: ACI 117 "Standard Specifications for Tolerance for Concrete
- Construction and Materials"
- ACI 301 "Specifications for Structural Concrete for Buildings"
- ACI 318 "Building Code Requirements for Reinforced Concrete" "Building Code Requirements for Masonry Structures" ACI 530
- "Load and Resistance Factor Design (LRFD) Specification for AISC Structural Steel Buildings"
- "Steel Deck Manual for Floor Decks and Roof Decks" SDI
- AWS D1.1 "Structural Welding Code Steel" 2. Design Loads:
- a. Roof Snow (incl. rain on snow)
- Pf = 20 psf - Ce = 1.00
- I = 1.00
- Ct = 1.00
- b. Wind - Basic Wind Speed = 115 mph
- I = 1.00
- Wind Exposure B
- Internal Pressure Coefficient = 0.3 d. Floor Live Load - Office 50 psf - Entrances (exits), stairs 100 psf - Light Storage 125 psf - Heavy storage 250 psf
- e. Canopy Roof Design Dead Loads: - Roof Panels 30 psf - Steel Framing 5 psf - Roofing 5 psf Total 40 psf
- 3. Foundations are designed for the following net allowable bearing capacities: a. Isolated Footings: 2 ksf
- b. Continuous Footings: 2 ksf 4. Foundations and retaining walls have been designed for an equivalent fluid pressure of 100 pcf.

C. <u>CONCRETE</u>

- 1. Concrete used in the Work shall have the following minimum 28-day ultimate
- compressive strengths: a. Columns 4000 psi
- b. Retaining walls, slabs on grade, and footings 4000 psi
- c. Framed slabs 4000 psi Air entrain all exterior concrete (admixture: ASTM C 260).
- Do not use calcium chloride admixtures under any circumstances.
- 4. Reinforcing bars: ASTM A 615 Specifications, Grade 60, deformed. Bend
- bars cold. Welded wire fabric (WWF): ASTM A 185.
- Maintain minimum concrete coverage for reinforcing as indicated, unless noted otherwise. Reference details 17/S1.0 and 18/S1.0 for placement of reinforcement
- in typical framed slabs.
- a. 3 in. clear where concrete is deposited directly against earth. b. 2 in. clear where concrete is exposed to earth or weather but poured against forms for bars larger than #5.
- c. 1-1/2 in. clear where concrete is exposed to earth or weather, but
- poured against forms for bars #5 or smaller. d. 3/4 in. clear for slabs and walls formed above grade not exposed to weather.
- e. 1-1/2 in. clear for beam and columns formed above grade and not exposed to weather.
- 7. Lap all bars at splices in accordance with ACI 318, unless specifically
- noted otherwise.
- 8. Top and bottom bars in continuous grade beams shall run continuous through multiple spans, where possible. Otherwise, top bars shall splice within the middle 1/3 span and bottom bars shall splice over supports.
- 9. Pour columns, walls, and pilasters to be monolithic.
- 10. All concrete walls shall be properly braced and held in line until supporting slabs or floors are in place.
- 11. All bar steel and WWF shall be properly supported and held accurately in place as recommended by the Concrete Reinforcing Steel Institute, except that maximum spacing of any bar or mesh support shall be 3 feet.
- a. Support top slab bars with continuous high chairs.
- b. Support beam bars on heavy beam bolsters.
- c. Support footing and grade beam bottom reinforcing on concrete bricks, concrete blocks, or mounds of poured concrete. d. Support WWF in slab-on-grade properly at the mid-depth of the slab. Hooking
- and pulling up mesh after concrete has started to take its initial set is prohibited. e. Supports for reinforcement for exposed-to-view concrete surfaces shall have
- legs that are in contact with forms plastic protected (CRSI, Class 1) or stainless steel (CRSI, Class 2).

12. Where slabs-on-grade make an abrupt change in direction, such as at doors and corners or ends of walls, provide 2-#4 by 4 feet across the reentrant corner.

- 13. Provide the following minimum concrete cover for fire rating:
 - Interior load bearing walls and columns 2 hrs $1 \frac{1}{2} \text{ cover}$ Concrete beams 2 hrs 1/2" cover Concrete joists 2 hrs 1 1/2" cover
- Floor slab 2 hrs 3/4" cover
- D. <u>MASONRY</u>
- 1. Concrete masonry units (CMU): ASTM C 90, lightweight units (105 pcf or less), with the minimum net area compressive strength of 2200 psi.
- 2. Mortar: Portland cement and lime, and proportioned in accordance with
- ASTM C 270 for the following types:
- Type N for all walls above grade Type S - for all walls below grade, in contact with earth
- 3. f'm = 1500 psi.
- Provide mortar bed on webs between grouted cells and hollow cells.
- Grout: ASTM C 476, 3000 psi minimum 28-day compressive strength. Grout all vertical cells and spaces containing reinforcing bars (as detailed) bond
- beams, and lintels. Vertically reinforce walls as shown on drawings. However, if not indicated on the
- drawing, reinforce wall as indicated below, at each corner, at ends of 48 inches horizontally throughout the wall, of walls, each side of control joints and openings, and at a maximum spacing unless noted otherwise. 8" or 6" wall
 - (2) #6 12" or 10" wall

- 8. Horizontally provide continuous bond beam with 2 #5 minimum for 12" or 10" CMU; 1 #5 minimum for 8" or 6" CMU at floor/roof, near midheight (10'-0 maximum spacing) and top of wall, unless noted otherwise. Provide #5 corner bar for each horizontal bond beam corners.
- 9. Place reinforcement prior to grouting. Hold vertical reinforcement in position with rebar positioner. 10. Provide horizontal joint reinforcement as indicated on the drawings and
- specifications, at a minimum provide at 16"o.c.
- 11. Lap joint reinforcement a minimum of 12 in.
- 12. In no case shall shores and forms at lintels be removed until it is certain that the masonry has hardened sufficiently to carry its own weight and all other reasonable temporary loads that may be placed on it during construction. 13. Do not wet concrete masonry units.
- 14. Do not use calcium chloride.
- 15. Do not use masonry cement.
- 16. Keep masonry walls shored during construction until the roof deck and floor slabs are in place to provide lateral stability.

E. <u>STEEL</u>

- 1. Qualifications for Welding Work:
- a. Perform all welding by a certified welder.
- Qualify welding processes and welding operators in accordance with AWS "Standard Qualification Procedure".
- c. Provide certifications that welders to be employed in work have satisfactorily passed AWS qualification tests within previous 12 months.
- d. If recertification of welders is required, retesting will be
- Contractor's responsibility. 2. Erector must examine areas and conditions under which structural steel work is to
- be installed, and notify Contractor in writing of conditions detrimental to proper and timely completion of Work.Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to the Erector.
- 3. Submit shop drawings prepared under supervision of a registered professional engineer, including complete details and schedules for fabrication and assembly of structural steel members procedures and diagrams. Include details of cuts, connections, camber, holes, and other pertinent data. Indicate welds by standard AWS symbols, and show size, length, and type of each weld. Show size and type of bolt for all bolted connections.
- 4. Provide setting drawings, templates, and directions for installation of anchor bolts and other anchorages to be installed by others.
- 5. Paragraph 4.2.1 of the (AISC) "Code of Standard Practice for Steel Buildings and Bridges" is hereby modified by deletion of the following sentence: "This approval constitutes the owner's acceptance of all responsibility for the design adequacy of any detail configuration of connections developed by the fabricator as a part of his preparation of these shop drawings."
- 6. If required cut edges of backing strips, extension bars, or run-off plates flush with edge of abutting parts.
- Where framing members and/or connections for steel stairs are not indicated on either structural or architectural drawings, Design the members and/or connections and submit calculations or supporting data to verify their adequacy.A live load of 125 psf shall be used in the design. Fully detail stair connections,
- including attachments to supporting members. 8. Structural steel: ASTM A 572 - wide flange sections, ASTM A 36 - angles, channels, and plates, ASTM A 501 - pipes, and ASTM A 500, Grade B - tubes.
- 9. High Strength Bolts (steel-to-steel connections): ASTM A 325N, with twist-off load indicator type heads.
- 10. Anchor bolts: ASTM A 307, sizes indicated are based on preliminary reactions and spacing.
- 11. Welded connections: AWS Standards and Specifications using E70xx electrodes, unless noted otherwise.
- 12. Expansion Bolts: Stud type expansion anchors...(Hilti Kwik Bolt II). 13. Injection Adhesive: Hilti Dowelling Anchor (HY-150); Rawl/Sika
- Foil-Fast;Ramset/Redhead Epcon Ceramic 6. 14. Drill holes for anchors using a bit incapable of cutting steel. Do not cut existing
- concrete reinforcing steel. If, while drilling, reinforcing steel is encountered, notify the Structural Engineer for approval of new location. Cleaned and patch the abandoned hole grout.
- 15. Ends of beams which have copes to the extent that allowable shear or bending stress of steel is exceeded shall have web plates of sufficient size welded to the heam to reduce such stresses
- 16. Provide holes required for securing other work to structural steel framing, and for passage of other work through steel framing members, as shown on final shop drawings.
- 17. Do not flame cut holes or enlarge holes by burning.

to surfaces. Clean bottom surface of base plates.

nonstaining.

side, u.n.o.

each side, u.n.o.

service building.

Minimum thickness 0.358

properties:

O.S.H.A.with erection bolts.

requires additional bridging.

Minimum thickness 0.0295

Minimum thickness 0.0358

Moment of Inertia 0.195 in ^4

Section Modulus 0.240 in ^3

Moment of Inertia 0.212 in ^4

Section Modulus 0.234 in ^3

Moment of Inertia 0.024 in ^4 Section Modulus 0.070 in ^3

building and main building penthouse.

18. Set structural frames accurately to lines and elevations indicated. Align and adjust various members forming apart of a complete frame or structure before permanently fastening.Perform necessary adjustments to compensate for discrepancies in elevations and alignment.

19. Provide temporary shoring and bracing members with connections of sufficient

20. Clean bearing surfaces of bond-reducing materials and roughen to improve bond

21. Grout plates are prohibited. Tighten anchor bolts after supported members have

23. Provide open-web joists (K-series), longspan joists (LH-series), and joist girders

as indicated on the Drawings and in accordance with specifications of SJI.

cut off flush with edge of base plate prior to packing with grout.

22. Nonshrink grout: CRD-621 Type A, premixed, nonmetallic, noncorrosive,

strength to bear imposed loads.Remove temporary members and connections

when permanent members are in place and final connections are made. Provide

temporary guy line to achieve proper alignment of structure as erection proceeds.

been positioned and plumbed. Do not remove wedges or shims. but if protruding,

a. Weld K-series joists to supporting steel with 1/8 in. fillet welds in. long, each

b. Weld LH-series joists to supporting steel with 1/4 in. fillet welds 2 in. long,

c. Bolt joists at or nearest a column to supporting steel in conformance with

d. Provide continuous horizontal bridging for joists (u.n.o.) and bottom chord

e. Provide horizontal bridging to resist 10psf uplift for main roof at service

f. Extend bottom cord to brace beam bottom flange at mid-span of beams in

24. Form deck: 9/16 in.galvanized deck with the following minimum properties:

25. Composite floor deck: 1-1/2 in. galvanized deck with the following minimum

26. Roof deck: 1-1/2" painted wide rib deck with the following minimum properties:

28. Provide 2-1/2" x 2-1/2" x 1/4" angles as required to support deck at columns,

27. Roof deck shall be welded to supports to resist a net uplift of 20 PSF.

29. Provide 1,500 # misc. steel for use by Engineer, as needed.

ends of beams, around openings, etc. Except as noted otherwise.

braces for joist girders as required by SJI, except where the net uplift loading

E. EPOXY AND MECHANICAL ANCHORS

- 1. For concrete, grouted CMU, and solid masonry use Hilti HIT HY 150 two-part hybrid adhesive. For hollow CMU and masonry use Hilti HIT HY20 two-part hybrid adhesive with screen tubes. Equivalent adhesives may be used with prior written approval by the Structural Engineer.
- 2. Thoroughly clean holes with nylon brush and pressurized air per manufacturers instructions.
- 3. Drill holes to the embedment depths indicated on the drawings. If no depths are indicated, use 9 bolt or bar diameters with HY150 and 12 bolt diameters for HY 20.
- 4. "Wedge" or "Expansion" anchors shall be Hilti Kwik bolt II expansion anchors. Embed anchor 7 bolt diameters unless noted otherwise. Equivalent anchors may be substituted with prior written approval of the Structural Engineer.
- F. <u>METAL STUDS</u>
- 1. Install cold-formed metal studs per drawings and manufacturer's recommendations. See Structural Plan for sizes and gauges.

G. CONSTRUCTION

- 1. See architectural and mechanical requirements for embedded items not shown herein and to verify size and location of all openings.
- 2. Coordinate the sizes and locations of all miscellaneous metal items required for mechanical and electrical.
- 3. Requirements for embedded items, sleeves, block outs, duct openings, etc., in the concrete frame shall be submitted (plans and details) to the structural engineer for approval at least two weeks prior to the proposed date of casting concrete. No such items, other than those shown, shall be provided in the structure without the approval of the structural engineer.
- 4. Provide adequate shoring or bracing during construction to resist forces such as wind and unbalanced loading due to construction. 5. Field verify the location and depth (or height) of all utilities prior to beginning
- construction in order to provide adequate clearances and to insure noninterruption of service.

NOTE: TRUSS PROVIDER TO ALLOW 1500# RTU AT MID SPAN.

3 Snow Load Plan ✓ 1/16" = 1'-0"

2 Snow load 1/2" = 1'-0"

RELEASED FOR CONSTRUCTION As Noted on Plans Review opment Services Depart Lee's Summit, Missouri 04/04/2023

Structural Foundation Schedule				
Type Mark	Туре	Type Comments		
A	6'x 6' x 2'.0" deep	(7) #6's each way		
В	4' x 4' x 3'.0" deep	(5) #5's each way at T &B w/ (1) #6 vert. @ each co		
С	Bearing Footing	2'.0" w x 3'.0" deep w2/ (4) #5's cont. & #3 ties # 36'		

RELEASED FOR CONSTRUCTION As Noted on Plans Review velopment Services Departmen Lee's Summit, Missouri 04/04/2023