DESIGN LOADS	LIGHT GAGE STEEL FRAMING:
All design and construction work for this project shall conform to the 2018 edition of the International Building Code (IBC).	 All light gage structural joists, studs, track and accessories shall be designed in accordar the latest edition of the American Iron and Steel Institute (AISI) "Specification for the Des
2. Design Loads: A. Roof Loads:	Cold Formed Steel Structural Members", and shall be of the type, size, gage and spacing on the drawings.
 Dead load	2. All 16 gage and heavier study and joists shall be formed from corresponding to the requirements of ASTM A1003 or A653, with a minimum yield streng ksi. All 18 gage and lighter study, joists, track and accessories shall be formed from correspondence.
 Flat roof snow load (snow drifting additional) 20 psf Snow importance factor ls = 1.0 	resistant steel corresponding to the requirements of ASTM A1003 or A653, with a minimus strength of 33 ksi.
 Snow exposure factor Ce = 1.0 Thermal factor Ct = 1.0 Wind Loads: 	 The design and details provided on these drawings are for the final in-place conditions. T General Contractor shall be responsible for temporary bracing, as required, prior to comp of all lateral support systems.
 Risk category II Ultimate design wind speed (3 sec gust) 109 mph 	 Fastening of components shall be with self-drilling screws, powder actuated fasteners (P welding. Screws and PAF's shall be installed such that a minimum 3/4" on center spacing
 Service design wind speed (3 sec gust)	3/4" edge distance is maintained. Fasteners in concrete shall have a minimum spacing o5. All welding shall be according to the American Welding Society (AWS) D1.3 specification
 Wind internal pressure coefficient +/-0.18 Wind pressure for components and cladding 21.9 psf (Ultimate) 	"Structural Welding Code - sheet steel"; and shall be performed by certified welders. Cor AWS D19.0, "Welding Zinc Coated Steels" and ANSI standard Z49.1 for information rega safe welding procedures. Weld sizes shall match the thickness of the thinner part. All we
 5% Damped mapped acceleration parameter Ss = 0.100 1-Sec period mapped acceleration parameter S1 = 0.068 	 be touched up with a zinc-rich paint on each side of the stud. 6. Prior to fabrication of framing, the General Contractor shall submit fabrication and erectic
 5% Damped spectral response coefficient	drawings to the Architect/Engineer for review.7. All framing components shall be cut squarely for attachment to perpendicular members,
 Site class D (Assumed) Risk category II Seismic importance factor 	required, for an angular fit against abutting members. All field cutting shall be done by sa shearing.
Seismic design category	 of the same width and thickness and (3) #10 screws per flange on each side of the splice 9. Axially loaded studs shall be installed in a manner which will ensure that their ends are
CONSTRUCTION:	positioned against the inside of the track web prior to fastening. Studs shall be securely f to both flanges of the top and bottom track with (1) #10 screw.
 Furnish all labor, materials and equipment necessary to complete the work shown or implied by these drawings 	 Wall stud bridging shall be attached in a manner to prevent stud rotation. Bridging rows s installed at 4'-0" on center unless otherwise noted on drawings. Wall stud and joist bridging shall be installed at the time of light gage erection. Member r
 The General Contractor shall be responsible for verifying all dimensions and elevations with the Architectural and Mechanical drawings and the existing conditions. Ref Architectural and 	outs shall be aligned to allow bridging installation. 12. Sheathing shall be attached to the flange of each framing member as noted on the drawi
Mechanical drawings for embedded items not shown herein and to verify size and location of all openings. Before executing work shown herein, the General Contractor shall examine actual job	Where attachment is not noted, a maximum attachment spacing of 12" on center shall be 13. Sample Member Designation: 600S162-43:
 The structure is designed to be self-supporting and stable after erection of the structure has been fully completed. It is the General Contractor's responsibility to determine erection sequencing and 	 S - Member type; S - stud, T - track 162 - Flange size (1 5/8")
provide shoring and bracing as required to erect the structure. 4. The General Contractor shall provide adequate shoring or bracing during construction to resist	• 43 - Member thickness (mils); 33 - 20 gage, 43 - 18 gage, 54 - 16 gage 14. Acceptable Fasteners (UNO): (Substitutions shall be submitted for review)
 forces such as wind and unbalanced loading due to construction. Johnston Burkholder Associates, LLC, its employees, and representatives shall not be responsible 	A. Screws: a. Light gage to light gage
procedures, or for safety precautions and programs in connection with construction; nor will they be responsible for any failure by the contractor to perform or complete construction in accordance	 Hilti Kwik-Pro Simpson XS or FPHSD
with the contract documents. Jobsite visits by Johnston Burkholder Associates, LLC shall not constitute approval, awareness or liability for any hazardous conditions.	 b. Light gage Stud/Track to Concrete; 1/4" diameter Simpson Titen HD-Mini
 5. The General Contractor shall be responsible for protecting the existing building during construction. Johnston Burkholder Associates assumes responsibility for the design of the new elements and the second secon	 Hilti Kwik Con II+ Buildex Tapcon Powers Tapper
systems shown on these drawings only. Johnston Burkholder Associates has not designed nor reviewed the design of the existing building in areas unaffected by new construction and accepts	 B. Powder Actuated Fasteners (PAF); a. Light gage Stud/Track to Concrete; 0.145" dia x 1" (Minimum)
no responsibility for the structural adequacy or performance of the existing building in areas unaffected by new construction.	 Hilti X-U Simpson PDP
CONCRETE:	 Ramset Power Point SP114 Light gage Stud/Track to Steel, 0.157" diameter with length based on steel thick Hilti X_I I
 All concrete and reinforcement has been designed in accordance with the American Concrete Institute (ACI) Standard Building Code Requirements for Reinforced Concrete (ACI 318). All concrete work shall conform to the ACI 2011 (Section 2010) (Section 2010) 	 Simpson PDP 15. Prefabricated panels shall be square, with components attached in a manner to prevent
concrete work snall conform to the ACI Specifications for Structural Concrete (ACI 301) and the latest applicable recommendations of the ACI Manual of Standard Practice for Detailing Reinforced Concrete (ACI 315).	and minimize distortion while lifting. The General Contractor shall provide temporary brac where required.
2. Materials shall conform with: A. Cement-ASTM C150 Type I or II	MASONRY:
B. Aggregate-ASTM C33 C. Water - Potable	1. All concrete masonry units shall conform to ASTM C 90 specifications and shall be place running bond unless noted otherwise. Concrete masonry units above finished grade sha
 All concrete used in the work shall have the following properties: A. Footings 3000 psi strength (f'c) at 28 days 	either light weight or medium weight density. Concrete masonry units below finished grad be fully grouted normal weight density.
 0.50 maximum water/cement ratio less than 3% air content 	 Concrete masonry shall have a minimum prism compressive strength, f'm, of 2000 psi. M unit compressive strength shall be 1900 psi. All mortar for masonry shall be Type S, mor compart in accordance with ASTM C 270. Maconry compart is not allowed. Provide material
 4" ± 1" slump at point of placement B. Interior slabs-on-grade 	 web between grouted cell and hollow cell. Masonry grout shall have a 28 day compressive strength of 2000 psi. Masonry Contractor
 4000 psi strength (f'c) at 28 days 0.53 maximum water/cement ratio less than 3% air content 	submit grout mix design for review prior to construction. Grouted cells shall be placed in not to exceed 5'-4". High lift grouting may be used if Masonry Contractor submits written
 4" ± 1" slump at point of placement C. Exterior slabs-on-grade 	procedure to Engineer for review prior to construction of walls. All grouted cells shall be mechanically vibrated using a low energy device not greater than 1" diameter. Do not us
 4000 psi strength (f'c) at 28 days 0.40 maximum water/cement ratio 	 All reinforcing steel shall meet ASTM A615 Grade 60 or ASTM A706 Grade 60 and locat the center of CMU walls (+- 1/2") unless noted otherwise. Use wire rebar placement devi
 6% ± 1.5% air content 4" ± 1" slump at point of placement Chlorides in any form or concentration shall not be added to any concrete 	other approved means to properly locate and secure reinforcement in place. 5. All bond beams and cells containing reinforcing steel, anchors, embedments, etc. shall b
	 with grout. All hollow concrete masonry in contact with earth shall be grouted full. 6. All vertical reinforcement and continuous steel shall be lapped 52 bar diameters (2'-0" m at splices unless noted otherwise on the drawings.
All concrete is reinforced unless specifically noted as "unreinforced". Reinforce all concrete not	 The Masonry Contractor shall be responsible for the temporary bracing of masonry walls permanent lateral support is in place.
otherwise shown with the same steel as shown in similar sections. Comply with ACI 304, "Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete".	 Masonry may be placed using normal procedures when temperatures are between 40-90 degrees
expected to be below 40 deg F and the air temperature does not exceed 50 deg F for more than 12 consecutive hours during this time, all concrete placement shall comply with the provisions of	 A. When temperatures are above or below this range, not and cold weather masonry procedures outlined in the Specification for Masonry Structures (TMS 602) shall be f B. When temperatures are above 100 degrees or 90 degrees with an 8 mph wind. "Hot
ACI 306 and as herein specified. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.	 When temperatures are below 40 degrees, "Cold weather procedures" must be followed. C. When temperatures are below 40 degrees, "Cold weather procedures" must be followed.
 Hot weather conditions: When elevated temperatures, humidity, and wind factors exist, all concrete shall comply with the provisions of ACI 305 and as here in specified. Perform curing of concrete by curing and sealing compound, by moist curing, moisture-retaining. 	a. Building with frozen materials is not allowed. Using calcium chloride is not allowed walls shall be covered at the end of each day.
 cover curing, or by combinations thereof. Maintain minimum concrete coverage for reinforcing as indicated unless otherwise noted in the 	 Work in progress shall be inspected and materials, equipment and procedures evaluated quality and acceptability by qualified personnel. Requirements for materials and construct masonry shall be in accordance with the Specifications for Masonry Structures (TMS 60)
drawings: A. Earth formed/cast directly against soil	SPECIAL INSPECTIONS:
 cast against forms but exposed to earth or weather: a. #6 and larger b. #5 and smaller 	 Special inspections shall be performed in accordance with Chapter 17 of the 2018 Interna Building Code (IBC). All special inspectors shall be qualified for inspection of the particulus
C. Slabs and walls not exposed to earth/weather	construction requiring special inspection and must be approved by the building official. S inspectors shall perform the duties and responsibilities outlined in Chapter 17 of the 2018
6. Control joints in slab-on-grade shall be as shown on the drawings. Where not shown, limit controlled areas to not more than 12'-0" on any side. Do not interchange construction and saw	of the IBC. Reports shall be submitted to the building official, architect, and engineer of re a timely manner.
joints where a particular joint detail is specified on the drawings. A saw joint must terminate at a construction joint.	 Types of work requiring special inspection: A. Concrete per Section 1705.3: Derived is inspective of the section of the section of the section.
 coordinate concrete infishes, recessed areas, reveals, embedded items, special joint patterns, etc. with the Architectural drawings and specifications. Provide a 3/4" chamfer at all exposed edges of concrete. No aluminum items shall be embedded in concrete 	 a. Periodic inspection of the placement of reinforcing steel. b. Periodic inspection of all post-installed anchors and continuous inspection of adh anchors installed horizontal or overhead in hardened concrete. Inspections sholl
 QUALITY CONTROL TESTING DURING CONSTRUCTION A. General: The Owner shall employ a testing laboratory to perform tests and to submit test 	hole size and depth, cleaning procedure, materials, and location. All anchors ins hardened concrete are subject to inspection.
reports. B. Sampling and testing for quality control during placement of concrete shall include the	c. Periodic verification of concrete mix design.d. Continuous sampling of fresh concrete. Perform tests for slump, air content, and
TOIIOWING, as directed by the Architect. C. Sampling Fresh Concrete: ASTM C 172, except modified for slump to comply with ASTM C 94	temperature. Cast specimens for strength tests (ref Cast-in-Place Concrete - Ex notes).
 a. Slump: ASTM C 143; one test at point of discharge for each days pour of each type of concrete; additional tests when concrete consistency appears to have changed. 	 commutation inspection of concrete placement for proper application techniques. f. Periodic inspection for maintenance of curing and temperature techniques. g. Periodic inspection of formwork for shape. location, and dimensions
 b. Air Content: ASTM C 173, volumetric method for lightweight or normal weight concrete; ASTM C 231 pressure method for normal weight concrete; one for each days pour of 	 B. Masonry per Section 1705.4 and The Masonry Society (TMS) Building Code Require and Specification for Masonry Structures 402/602:
each type of air-entrained concrete. c. Concrete Temperature: Test hourly when air temperature is 40 deg F (4 deg C) and	a. At the beginning of masonry construction, one masonry unit and one grout samp be taken for testing. Masonry units shall be tested in accordance with ASTM C1-
below, when δυ deg F (27 deg C) and above, and each time a set of compression test specimens is made. d Compression Test Specimen: ASTM C 31: one set of 4 standard avlinders for each	 Grout shall be tested in accordance with ASTM C1019. b. If high lift grouting procedures are used, continuous inspection is required. c. During construction, three masonry units and three grout complex shall be taken.
compression rest operiment. As the UST, one set of 4 standard cylinders for each compressive strength test, unless otherwise directed. Mold and store cylinders for laboratory-cured test specimens except when field-cure test specimens are required	 during construction, three masonry units and three grout samples shall be taker d. The placement of vertical reinforcement and the grouting of walls shall be obser during the initial and final grout pours.
e. Compressive Strength Tests: ASTM C 39; one set for each days pour plus additional sets for each 50 cu. yards. more than the first 25 cu. yards. of each concrete class	e. CMU mortar samples and inspection of joints shall occur at the beginning of mac construction.
placed in any one day; one specimen tested at 7 days, two specimens tested at 28 days, and one specimen retained in reserve for later testing if required.	 Anchor bolt placement and grouting below beams or bearing plates at all beam l locations shall be inspected prior to the initial and final grout pours.
consecutive strength test results equal or exceed specified compressive strength, and no individual strength test result falls below specified compressive strength by	 g. Tenous inspection of the preparation, construction, and protection of masonry c cold or hot weather conditions. C. Structural Steel per Section 1705.2:
more than 500 psi.	a. Periodic inspection for material verifications.1. High strength bolts, nuts and washer.
POST-INSTALLED ANCHORS:	 Structural steel identification. Cold formed steel deck identification.
Installation Instructions shall be installed in accordance with the Manufacturers Printed Installation Instructions (MPII). If anchors are to be installed in a horizontal or upward direction personnel shall be trained to install adhesive anchors through the ACI/CRSI Adhesive Anchor	 Periodic inspection of bearing-type bolted connections. Bolts shall be tightened t snug-tight condition and observed only to ensure that all plies of the connected e have been brought into spug contact.
Installer Certification Program. 2. Post-installed anchors shall only be used where noted on the drawings. The use of post-	 c. Qualifications of welding procedures and welders shall be verified prior to start o Periodic inspections shall be made of work in progress and a visual inspection of
installed anchors for repairs requires approval from the Engineer of Record.	welds shall be made prior to completion. 1. Periodic inspection of single-pass welds.
STRUCTURAL STEEL:	 Periodic inspection of welded steel deck attachments. Periodic inspection of weld filler materials.
 All structural steel shall be ASTM A36 for shapes and plates, ASTM A53 Grade B for pipes, ASTM A500, Grade B or C for rectangular and square HSS members and ASTM 1085 for round HSS members, unless noted attorning, Wighterses shall be ASTM ASSO in ASTM ASSO. 	 D. Snop Fabrication per 1705.10: a. Special inspection is required for shop fabricated members unless the fabricator registered and approved to perform work without special inspections. Approved to perform work without special inspections.
כפח mempers, unless noted otnerwise. W shapes shall be ASTM A992 or ASTM A572, Grade 50. Fabrication and erection shall be in accordance with the latest edition of the American Institute of Steel Construction (AISC) Manual of Steel Construction	based on the fabricator's written procedural and quality control manuals and peri auditing of fabrication practices by an approved agency
 All welding shall conform to the current American Welding Society Specifications and be performed by certified welders. 	
 All structural steel shall have one shop coat of rust inhibitor primer paint conforming to the specifications. Field touch up all unpainted, nicked and welded areas. 	
4. All unpainted, exterior steel shall be galvanized.5. No permanent suspended loads are to be supported by metal deck.	
STEEL JOISTS AND JOIST GIRDERS:	
1. Existing steel joists and joist girders are assumed to be in good condition and in compliance with	
the Steel Joist Institute Specifications. Any damage to existing joists or joist girders shall be	

ABBREVIATIONS

ACI AMERICAN CONCRETE INSTITUTE

AB ANCHOR BOLT

AFF ABOVE FINISHED FLOOR

AISC	AMERICAN INSTITUTE OF STEEL CONS
	AMERICAN IRON AND STEEL INSTITUT
ASTM	AMERICAN SOCIETY FOR TESTING AN
AWS	AMERICAN WELDING SOCIETY
BFF	BELOW FINISHED FLOOR
BL	BLOCK LINTEL
BIM	
BOM	BOTTOM OF MASONRY
BOS	BOTTOM OF STEEL
BRG	BEARING
CJ	CONTRACTION JOINT
CL	CENTER LINE
	CLEAR CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
COND	CONDENSER UNIT
CONST	CONSTRUCTION
FF	EXHAUST FAN
EIFS	EXTERIOR INSULATION AND FINISH SY
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
EQ FTR	EQUAL EXISTING TO REMAIN
EW	EACH WAY
FDN	FOUNDATION
FF	FINISHED FLOOR
FS	FAR SIDE
FIG	
гv GA	GAUGE
GC	GENERAL CONTRACTOR
Н	HEIGHT
HORIZ	HORIZONTAL
HSA	
HSS INFO	INFORMATION
ISO	ISOLATION
JBE	JOIST BEARING ELEVATION
JST	JOIST
JT	
KSI	KIPS PER SQUARE INCH
LB	POUNDS
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANOUS
MO	MASONRY OPENING
NIC	
NO	NUMBER
NS	NEAR SIDE
NTS	NOT TO SCALE
OD	OPPOSITE HAND
PAF	POWER ACTUATED FASTENER
PCF	POUNDS PER CUBIC FOOT
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
	PREMOLIDED EXPANSION JOINT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
QTY	QUANITY
REINE	REINFORCING
REQD	REQUIRED
REV	REVERSE
RO	ROUGH OPENING
SDI	SCHEDULE STEEL DECK INSTITUTE
SIM	SIMILAR
SJI	STEEL JOIST INSTITUTE
SPCS	SPACES
SPECS	SPECIFICATIONS
SIKUC T&R	STRUCTURAL TOP AND BOTTOM
THK	THICKNESS
то	TOP OF
TOC	TOP OF CONCRETE
TOF	
I OM	I OP OF MASONRY
TOW	TOP OF WALL
TRANS	TRANSVERSE
TYP	TYPICAL
UNO Vedt	UNLESS NOTED OTHERWISE
v 🗆 i \ i	

W WIDTH WP WORK POINT WWF WELDED WIRE FABRIC





INFURGING SCHEDULE											
"A"	"B"	"C"	"D"	"E"	"F"	GRID X	GRID Y	NOTES			
' - 0"	0' - 0"	0' - 0"	10' - 0"	0' - 0"	0' - 0"	E	F	1,2,3,6,7			
' - 0"	0' - 0"	0' - 0"	10' - 0"	0' - 0"	0' - 0"	F	Е	1,2,3,6,7			
' - 0"	0' - 0"	0' - 0"	10' - 0"	0' - 0"	0' - 0"	G	F	1,2,3,6,7			
' - 0"	0' - 0"	0' - 0"	13' - 0"	0' - 0"	0' - 0"	B.1	D	1,2,3,6,7			
' - 0"	32' - 9"	6' - 0"	19' - 0"	5' - 9"	20' - 0"	8	7	1,2,3,4,5,6,7			

