# FOLDS OF HONOR OPERATIONS BUILDING

# PROGRESS SET



FOR REFERENCE ONLY

### PROJECT CONTACTS

FOLDS OF HONOR
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SUITE 100

320 SOUTH BOSTON SUITE 100 TULSA, OK 74103 P(918) 587-6158 F(918) 587-0357 CIVIL CONSULTANT:

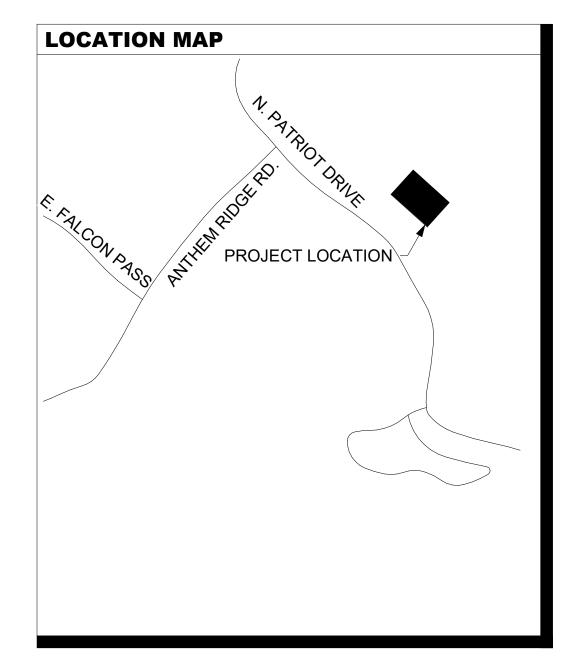
WALLACE ENGINEERING 200 EAST BRADY TULSA, OK 74103 P(918) 584-5858

STRUCTURAL CONSULTANT:

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MEP CONSULTANT:

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SHEET I	NDEX				
GENERAL		<b>ARCHITECTUR</b>		PLUMBING	
CS	COVER SHEET	A423	ENLARGED STAIR PLANS AND DIMENSIONS	P-001	NOTES, SYMBOLS AND ABBREVIATIONS
G001	LIFE SAFETY PLAN	A501	PLAN DETAILS	P-101	FIRST FLOOR - DWV PLAN
G002	GENERAL INFORMATION AND NOTES	A511	WALL DETAILS	P-102	SECOND FLOOR - DWV PLAN
CIVIL	SERENCE IIII STAIN THOU THE TO TES	A610	DOOR SCHEDULE AND DETAILS	P-103	THIRD FLOOR - DWV PLAN
C100	SITE PLAN	A620	WINDOW ELEVATIONS AND DETAILS	P-111	FIRST FLOOR - WAG PLAN
C200	SURVEY	A621	WINDOW DETAILS	P-112	SECOND FLOOR - WAG PLAN
C300	DEMOLITION & EROSION CONTROL PLAN	A701	INTERIOR ELEVATIONS	P-113	THIRD FLOOR - WAG PLAN
C400	SITE PLAN	A702	INTERIOR ELEVATIONS	P-401	ENLARGED PLUMBING PLANS
C500	GRADING PLAN	A751	MILLWORK	P-501	PLUMBING DETAILS
C600	PRELIMINARY UTILITY PLAN	<u>INTERIOR</u>		P-502	PLUMBING DETAILS
C700	DETAILS	ID101	FINISH SCHEDULE AND NOTES	P-601	PLUMBING SCHEDULES
C700	DETAILS	ID102	INTERIOR FINISH PLAN - FIRST FLOOR	MECHANICAL	I LOWIDH TO GOT ILDULLO
LANDSCAPE	DE ITALEO	ID103	INTERIOR FINISH PLAN - SECOND FLOOR	M-001	NOTES, SYMBOLS AND ABBREVIATIONS
L101	LANDSAPE PLAN	ID104	INTERIOR FINISH PLAN - THIRD FLOOR	M-101	FIRST FLOOR - MECHANICAL PLAN
L102	IRRIGATION KEY PLAN	ID201	SIGNAGE PLAN - FIRST FLOOR	M-101 M-102	SECOND FLOOR - MECHANICAL PLAN
L501	DETAILS	ID202	SIGNAGE PLAN - SECOND FLOOR	M-102 M-103	THIRD FLOOR - MECHANICAL PLAN
L502	DETAILS	ID203	SIGNAGE PLAN - THIRD FLOOR	M-111	FIRST FLOOR MECHANICAL PIPING PLAN
ARCHITECTU		ID204	SIGANGE DETAILS	M-112	SECOND FLOOR MECHANICAL PIPING PLAN
A101	FIRST FLOOR - REFERENCE PLAN	<b>STRUCTURAL</b>		M-401	ENLARGED MECHANICAL PLANS
A102	FIRST FLOOR - DIMENSION PLAN	S001	GENERAL NOTES	M-501	MECHANICAL DETAILS
A103	SECOND FLOOR - REFERENCE PLAN	S002	GENERAL NOTES	M-601	MECHANICAL SCHEDULES
A104	SECOND FLOOR - DIMENSION PLAN	S003	GENERAL NOTES	M-602	MECHANICAL SCHEDULES
A105	THIRD FLOOR - REFERENCE PLAN	S011	3D VIEWS	M-603	MECHANICAL SCHEDULES
A106	THIRD FLOOR - DIMENSION PLAN	S012	3D VIEWS	M-701	MECHANICAL CONTROLS
A111	ROOF PLAN	S101	FOUNDATION PLAN	ELECTRICAL	WEOTANIOAE OONTROEG
A121	FIRST FLOOR - REFLECTED CEILING PLAN	S102	2ND FLOOR FRAMING PLAN	E-001	NOTES, LEGENDS, AND ABBREVIATIONS
A122	SECOND FLOOR - REFLECTED CEILING PLAN	S103	3RD FLOOR AND LOW ROOF FRAMING PLAN	E-101	FIRST FLOOR LIGHTING PLAN
A123	THIRD FLOOR - REFLECTED CEILING PLAN	S104	HIGH ROOF FRAMING PLAN	E-102	SECOND FLOOR LIGHTING PLAN
A201	EXTERIOR ELEVATIONS	S201	FRAMING ELEVATIONS	E-103	THIRD FLOOR LIGHTING PLAN
A202	EXTERIOR ELEVATIONS	S202	FRAMING ELEVATIONS	E-201	FIRST FLOOR POWER PLAN
A301	BUILDING SECTIONS	S203	FRAMING ELEVATIONS	E-202	SECOND FLOOR POWER PLAN
A302	BUILDING SECTIONS	S301	COLUMN SCHEDULE	E-203	THIRD FLOOR POWER PLAN
A303	BUILDING SECTIONS	S501	FOUNDATION DETAILS	E-501	ONE-LINE DIAGRAM
A311	WALL SECTIONS	S502	FOUNDATION DETAILS	E-601	PANEL SCHEDULES
A312	WALL SECTIONS	S511	FRAMING DETAILS	E-602	PANEL SCHEDULES PANEL SCHEDULES
A420	ENLARGED TOILET PLANS AND ELEVATIONS	S512	FRAMING DETAILS	E-603	SCHEDULES AND DIAGRAMS
A421	ENLARGED TOILET PLANS AND ELEVATIONS	S513	FRAMING DETAILS	E-603 ES-101	ELECTRICAL SITE PLAN
A421 A422	ENLARGED STAIR PLANS AND DIMENSIONS	S521	FRAMING DETAILS	<b>⊑3-101</b>	ELECTRICAL SITE PLAIN
M744	LIVEARGED GTAIRT LANG AND DIMENSIONS	S601	CMU DETAILS		

ARCHITECTS

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Operations Buildi

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GH2 PROJECT NUMBER: **20170021** 

ISSUE DATE: **08/07/2020** 

PROGRESS SET

OTHER ISSUE DATES:

SHEET NAME:

COVER SHEET

SHEET NUMBER:

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PLEASURE VEHICLES SHALL BE REDUCED BY 1 HOUR BUT NOT LESS THAN 1

FIRE WALL SHALL EXTEND FROM THE FOUNDATION TO A TERMINATION POINT NOT

2. TWO HOUR FIRE-RESISTANCE-RATED WALL SHALL BE PERMITTED TO

2.1 THE LOWER ROOF ASSEMBLY WITHIN 4 FEET OF THE WALL HAS NOT

2.2 OPENINGS IN TECH ROOF SHALL NOT BE LOCATED WITHIN 4 FEET OF

2.3 EACH BUILDING SHALL BE PROVIDED WITH NOT LESS THAN A CLASS B

- SHAFT ENCLOSURES SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN

2 HOURS WHERE CONNECTING FOUR STORIES OR MORE AND NOT LESS THAN 1

INTERIOR EXIT STAIRS/EXIT PASSAGEWAYS ----- CLASS B

CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS --- CLASS B

ROOMS AND ENCLOSED SPACES ----- CLASS C

- FIRE PROTECTION SYSTEMS SHALL BE INSTALLED, REPAIRED, OPERATED AND

MAINTAINED IN ACCORDANCE WITH THIS CODE AND THE INTERNATIONAL FIRE

WHERE REQUIRED, FIRE PROTECTION SYSTEMS SHALL BE MONITORED BY AN

FIRE ALARM SYSTEMS REQUIRED BY THE PROVISION OF SECTION 907.2 OF THIS

CODE AND SECTIONS 907.2 AND 907.9 OF THE INTERNATIONAL FIRE CODE SHALL

--- A MANUAL FIRE ALARM AND SMOKE DETECTION SYSTEM TO BE INSTALLED THROUGHOUT

- FIRE PUMPS SHALL BE LOCATED IN ROOMS THAT ARE SEPARATED FROM ALL OTHER

BE MONITORED BY AN APPROVED SUPERVISING STATION IN ACCORDANCE WITH

APPROVED SUPERVISING STATION IN ACCORDANCE WITH NFPA 72

- AUTOMATIC FIRE SPRINKLER SYSTEM IS TO BE PROVIDED THROUGHOUT

ENTIRE BUILDING, NFPA 13 AUTOMATIC SPRINKLER SYSTEM

---- CLASS 1 STANDPIPE SYSTEM TO BE PROVIDED

**906 PORTABLE FIRE** ---- PORTABLE FIRE EXTINGUISHERS PER NFPA 10

TERMINATE AT THE UNDERSIDE OF THE ROOF SHEATHING, DECK OR SLAB,

LESS THAN 30 INCHES ABOVE BOTH ADJACENT ROOFS

THE FIRE WALL

ROOF COVERING.

LESS THAN 1-HOUR FIRE-RESISTANCE RATING.

HOUR WHERE CONNECTING LESS THAN FOUR STORIES.

INTERIOR FINISH REQUIREMENTS: TYPE IIA SPRINKLERED

(300 GSF) ACCESS, THEY SHALL BE PLACE A DISTANCE APART TO NOT LESS THAN ONE-HALF OF DOORWAY 18,127 SQ. FT. 1,211 SQ. FT THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE BUILDING. PER 1009.2 CONTINUITY - PER 1009.2 CONTINUITY AND COMPONENTS. EACH REQUIRED ACCESSIBLE MEANS OF ASSEMBLY UNCONSENTRATED AND COMPONENTS EGRESS SHALL BE CONTINUOUS TO A PUBLIC WAY AND SHALL CONSIST OF ONE OR TABLES AND CHAIRS MORE OF THE FOLLOWING COMPONENTS: (15 GSF) ITEM 2: INTERIOR EXIT STAIR COMPLYING WITH 1009.3 AND 1023. 4,947 SQ. FT PER 1009.3 STAIRWAYS -- IN ORDER TO BE CONSIDERED PART OF AN ACCESSIBLE MEANS OF EGRESS, A STAIRWAY BETWEEN STORIES SHALL HAVE A CLEAR WIDTH OF 48 INCHES (1219 MM) **LEGEND** MINIMUM BETWEEN HANDRAILS AND SHALL EITHER INCORPORATE AN AREA OF REFUGE LINE OF TRAVEL WITHIN AN ENLARGED FLOOR-LEVEL LANDING OR SHALL BE ACCESSED FROM AN AREA - TRAVEL DISTANCE TO EXITS = MAX 250' (IBC 1017.2) OF REFUGE COMPLYING WITH SECTION 1009.6. EXIT ACCESS STAIRWAYS THAT - COMMON PATH OF TRAVEL = 75' MAX (IBC 1006.2.1) CONNECT LEVELS IN THE SAME STORY ARE NOT PERMITTED AS PART OF AN - DEAD ENDS = 20' MAX ACCESSIBLE MEANS OF EGRESS. PER EXCEPTION 2: THE CLEAR WIDTH OF 48 INCHES (1219 MM) BETWEEN HANDRAILS IS : FIRE EXTINGUISHER NOT REQUIRED IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC - 75' MAX TRAVEL DISTANCE TO EXTINGUISHER (NFPS SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2. 10, 3-2.1) PER EXCEPTION 5: AREAS OF REFUGE ARE NOT REQUIRED AT STAIRWAYS IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2. : EXIT SIGN **EXCEPTION 7:** AREAS OF REFUGE ARE NOT REQUIRED AT STAIRWAYS IN BUILDINGS EXIT WIDTH EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN : DOOR MARK ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2. : DOOR WIDTH CALCULATION 30 occ \* 0.2= : REQUIRED DOOR WIDTH 5 31/32"RQD 1014.2 HEIGHT ----- HANDRAIL HEIGHT, MEASURED ABOVE STAIR TREAD NOSING, OR FINISH SURFACE OF : PROVIDED DOOR WIDTH 0" PROVIDED RAMP SLOPE, SHALL BE UNIFORM, NOT LESS THAN 34 INCHES AND NOT MORE THAN 38 STAIR WIDTH **1014.4 CONTINUITY** - HANDRAIL GRIPPING SURFACES SHALL BE CONTINUOUS, WITHOUT INTERRUPTION BY STAIR MARK NEWEL POSTS OR OTHER OBSTRUCTIONS : STAIR WIDTH CALCULATION 30 occ \* 0.3= **1014.6 HANDRAIL** - HANDRAILS SHALL RETURN TO WALL, GUARD OR WALKING SURFACE OR SHALL BE : REQUIRED STAIR WIDTH 5 31/32"RQD CONTINUOUS TO THE HANDRAIL OF AN ADJACENT FLIGHT OF STAIRS OR RAMP RUN **EXTENSION** : PROVIDED STAIR WIDTH O" PROVIDED 1014.7 CLEARANCE - - - - CLEAR SPACE BETWEEN A HANDRAIL AND A WALL OR OTHER SURFACE SHALL BE NOT LESS THAN 1 1/2 INCHES

----NON SPRINKLERED OCCUPANCY GROUP A-2; 250 FEET

STORY ARE NOT REQUIRED TO BE ENCLOSED

MORE THAN 20 FEET IN LENGTH.

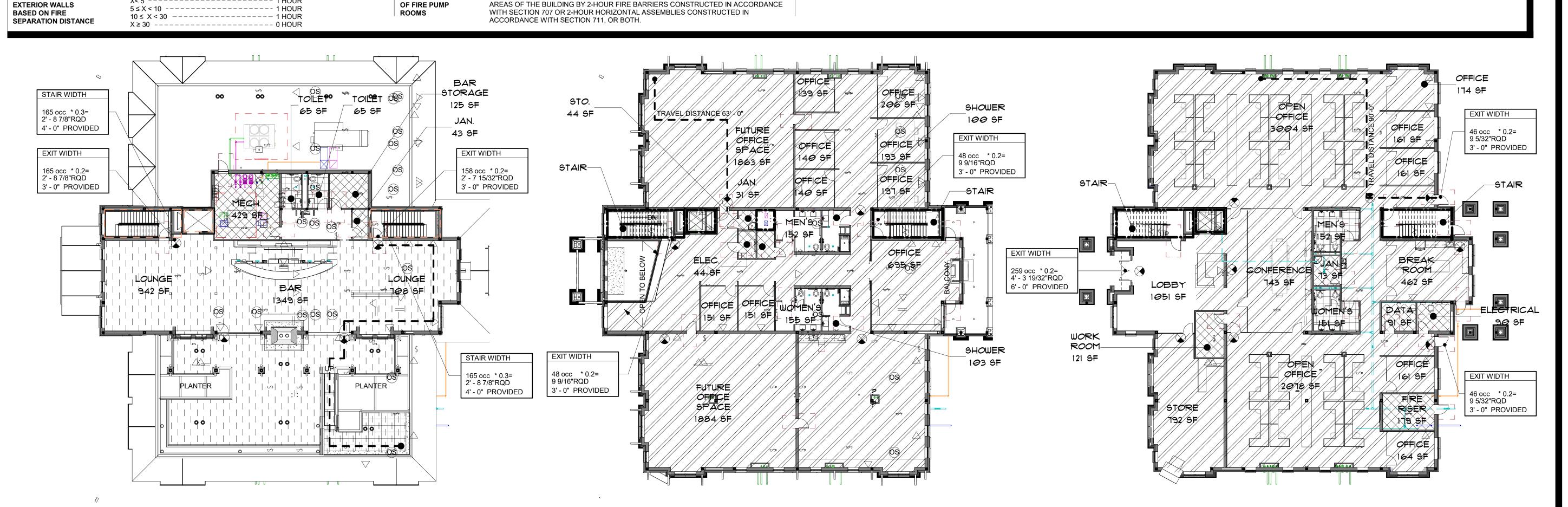
1019.2 ALL ---- EXIT ACCESS STAIRWAYS AND RAMPS THAT SERVE FLOOR LEVELS WITHIN A SINGLE

- WHERE MORE THAN ONE EXIT OR EXIT ACCESS DOOR WAY IS REQUIRED, THE EXIT

ACCESS SHALL BE ARRANGED SUCH THAT THERE ARE NO DEAD ENDS IN CORRIDORS

**PLAN RATING LEGEND** 

----- 1-HOUR RATED CONSTRUCTION



**TABLE 1017.2 EXIT** 

1020.4 DEAD ENDS -

**ACCESS TRAVEL** 

DISTANCE

OCCUPANCIES

C THIRD FLOOR - LIFE SAFETY

1/16" = 1'-0"

HAVE ADJACENT AREAS OPEN TO THE ATRIUM. IN THIS CASE, SINCE THERE IS NO

TABLE 504.3 ALLOWABLE BUILDING ------- TYPE IIB FULLY SPRINKLED BUSINESS - 75 FEET

TABLE 504.4 ALLOWABLE NUMBER OF ------TYPE IIB FULLY SPRINKLED BUSINESS - 3 STORIES

TABLE 506.2 ALLOWABLE AREA ----TYPE IIB FULLY SPRINKLED BUSINESS (SM) - 28,500 SQUARE FEET

ACTUAL = 29,479.28 SQFT IS 6,145.72 SQFT UNDER ALLOWABLE AREA

NON BEARING WALLS AND PARTITIONS 0

FLOOR CONSTRUCTION AND ASSOCIATED

WALLS BASED ON FIRE SEPARATION DISTANCE:

ROOF CONSTRUCTION AND ASSOCIATED \_\_\_\_\_

FIRE-RESISTANCE RATING REQUIRED FOR EXTERIOR -

X<5 ---- 1 HOUR

NON BEARING WALLS AND PARTITIONS

TABLE 508.4 REQUIRED -- 1 HOUR IS REQUIRED BETWEEN BUSINESS AND ASSEMBLY FOR A SPRINKLERED

OCCUPANCIES(HOURS) • B. THE REQUIRED SEPARATION FROM AREAS USED ONLY FOR PRIVATE OR

87'-7" + 123'-7" + 87'-7" + 123'-7" =422'-4" 87'-7" + 123'-7" + 87'-7" + 123'-7" =422'-4"

THE ADDED SPACE (SEE IBC INTERPRETATION NO. 54-07).

TABLE 506.3.4 MINIMUM FRONTAGE - - - - AREA OF INCREASE CALCULATION

Aa = 35,625 SQUARE FEET ALLOWABLE

- PRIMARY STRUCTURAL FRAME

INTERIOR

EXTERIOR

**EXTERIOR** 

SECONDARY MEMBERS

SECONDARY MEMBERS

**GENERAL BUILDING HEIGHTS AND AREAS** 

OPEN FRONTAGE:

If = [F/P - 0.25]W/30

 $Aa=\{At + (NS \times If)\}$ 

If = 0.75

If = [422'4"/422'-4" -0.25] 30/30

 $Aa=\{28,500 + (9,500 \times 0.75)\}$ 

**FACILITIES** 

HEIGHT IN FEET ABOVE GRADE PLANE

STORIES ABOVE GRADE PLANE

**FACTOR IN SQUARE FEET** 

DISTANCE

SEPARATION OF

TABLE 601 FIRE ----

REQUIREMENTS FOR

**ELEMENTS(HOURS)** 

TABLE 602 FIRE -

RESISTANCE RATING

REQUIREMENTS FOR

BUILDING

TYPE OF CONSTRUCTION

**RESISTANCE RATING** BEARING WALLS

REQUIRED SMOKE CONTROL SYSTEM, OBVIOUSLY THERE IS NO NEED TO ACCOUNT FOR

TOTAL PERIMETER:

PLEASURE VEHICLES SHALL BE REDUCED BY 1 HOUR BUT NOT LESS THAN 1

----- n

----- 0

706.6 VERTICAL

RESISTANCE RATING

901.2 FIRE PROTECTION –

901.6 SUPERVISORY-

**901.6.2 FIRE ALARM** 

**EXTINGUISHERS** 

907.2.2 GROUP B

913.2.1 PROTECTION

-- GROUP A3 AND S2

**FIRE PROTECTION SYSTEMS** 

**TABLE 803.11** 

SYSTEMS

SERVICE

SYSTEMS

CONTINUITY





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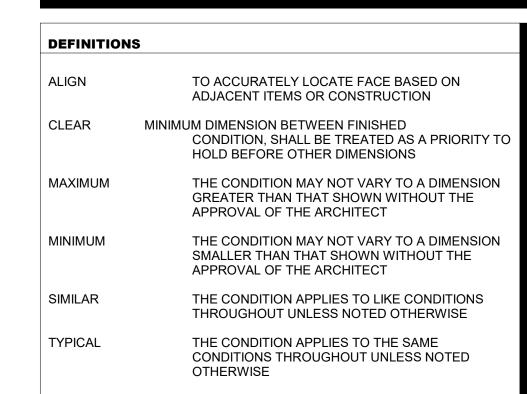
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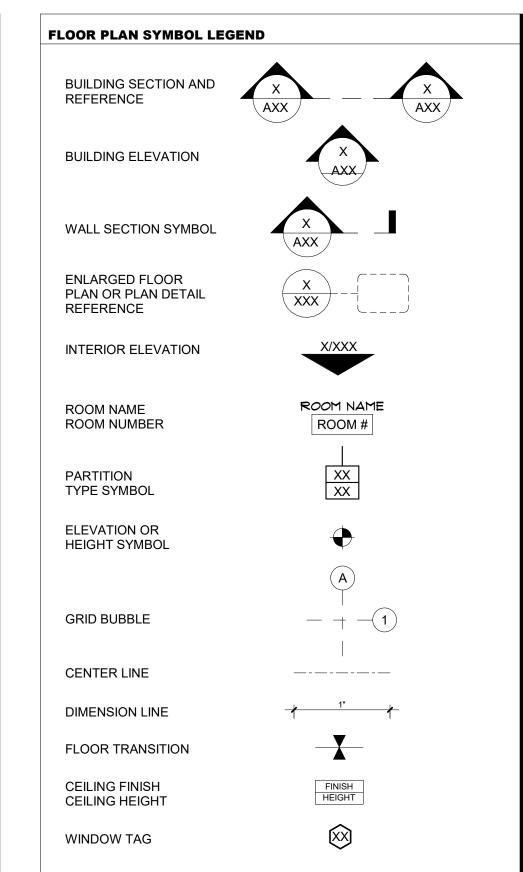
OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME: **LIFE SAFETY PLAN** 

### **GENERAL PROJECT NOTES**

- GENERAL NOTES ARE TYPICAL FOR AREAS WITHIN SCOPE OF
- THE CONTRACT DOCUMENTS IN THEIR ENTIRETY ARE THE RESPONSIBILITY OF ALL TRADES. WHERE REQUIREMENTS ARE SHOWN IN ONE SECTION OF THE SPECIFICATIONS OR DRAWINGS BUT NOT ANOTHER, THE CONTRACTOR OR SUBCONTRACTOR IS NOT RELIEVED FROM PROVIDING COMPLETELY FINISHED, COORDINATED AND PROPERLY FUNCTIONING SYSTEMS.
- ANY MISCELLANEOUS ITEMS OR MATERIALS NOT SPECIFICALLY NOTED, BUT REQUIRED FOR THE PROPER EXECUTION, INSTALLATION, OR PERFORMANCE OF THE WORK, SHALL BE PROVIDED BY THE CONTRACTOR / SUBCONTRACTOR.
- THE CONTRACTOR / SUBCONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LAYOUT AND COORDINATION OF DIMENSIONS IN THE FIELD THAT ESTABLISH WORK POINTS FOR THEIR WORK AND VARIOUS TRADES.
- THE CONTRACTOR / SUBCONTRACTOR SHALL TAKE CARE TO PROTECT ALL NEWLY INSTALLED MATERIALS AND FINISHES UNTIL WORK IS FORMALLY ACCEPTED BY THE ARCHITECT OR THE OWNER'S REPRESENTATIVE AND TRANSFERRED TO THE OWNER.
- THE CONSTRUCTION SITE IS TO BE KEPT CLEAN AND FREE OF DEBRIS. THE CONTRACTOR / SUBCONTRACTOR IS RESPONSIBLE FOR ALL PHASING, SECURING, HANDLING, TRANSPORTING AND DISPOSING OF DEBRIS.
- THE PRESENCE OF THE ARCHITECT OR AN ARCHITECT'S REPRESENTATIVE ON THE JOB SITE DOES NOT IMPLY CONCURRENCE OR APPROVAL OF THE WORK. THE CONTRACTOR SHALL CALL SPECIFIC ITEMS TO THE ATTENTION OF THE ARCHITECT IF THE CONTRACTOR WISHES TO OBTAIN THE ARCHITECT'S APPROVAL.
- IF DISCREPANCIES OCCUR BETWEEN DRAWINGS OR BETWEEN THE DRAWINGS AND SPECIFICATIONS, NOTIFY THE ARCHITECT FOR RESOLUTION PRIOR TO PROCEEDING.
- DO NOT SCALE THE DRAWINGS. WRITTEN DIMENSIONS GOVERN. IF CRITICAL DIMENSIONS DO NOT APPEAR ON CONSTRUCTION DOCUMENTS, OR CONFLICT WITH DIMENSIONS ON OTHER DETAILS, NOTIFY THE ARCHITECT.
- VERIFY EQUIPMENT ROUGH-IN DIMENSIONS WITH MANUFACTURER FOR EQUIPMENT THAT IS EXISTING, REUSED, OR FURNISHED BY OWNER.
- ALL PENETRATIONS THROUGH FLOORS, WALLS AND RATED ASSEMBLIES AS WELL AS ALONG SLAB PERIMETERS AND SEPARATION WALL PERIMETERS, SHALL BE SEALED AND PROTECTED WITH A U.L. APPROVED ASSEMBLIES AND / OR PROTECTIVE DEVICES HAVING THE SAME OR GREATER TESTED RATING AS THAT REQUIRED FOR THE ASSEMBLY BEING PENETRATED. ALL PENETRATIONS TO BE PROTECTED TO MAINTAIN FIRE RATED ASSEMBLY INTEGRITY.
- PROVIDE ELECTROLYTIC PROTECTION / ISOLATION BETWEEN ALL DISSIMILAR METALS, WHERE THEY OCCUR TO PREVENT ELECTROLYTIC REACTION AND / OR CORROSION.
- THE CONTRACTOR / SUBCONTRACTOR SHALL PROVIDE ADEQUATE BLOCKING, BACKING OR STRUCTURAL SUPPORT AS REQUIRED TO PROPERLY INSTALL ALL MOUNTED ASSEMBLIES, INCLUDING ALL ATTACHED EQUIPMENT (OWNER AND CONTRACTOR FURNISHED ITEMS), PLUMBING FIXTURES, MILLWORK, AND CASEWORK.



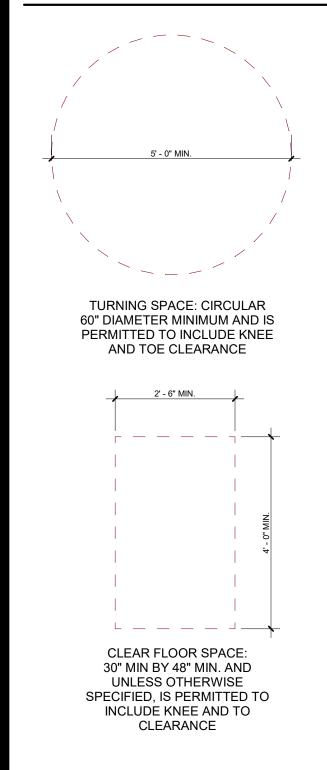


**DOOR CLEARANCES** 

FRONT APPROACH

FRONT APPROACH WITH CLOSER

AND LATCH





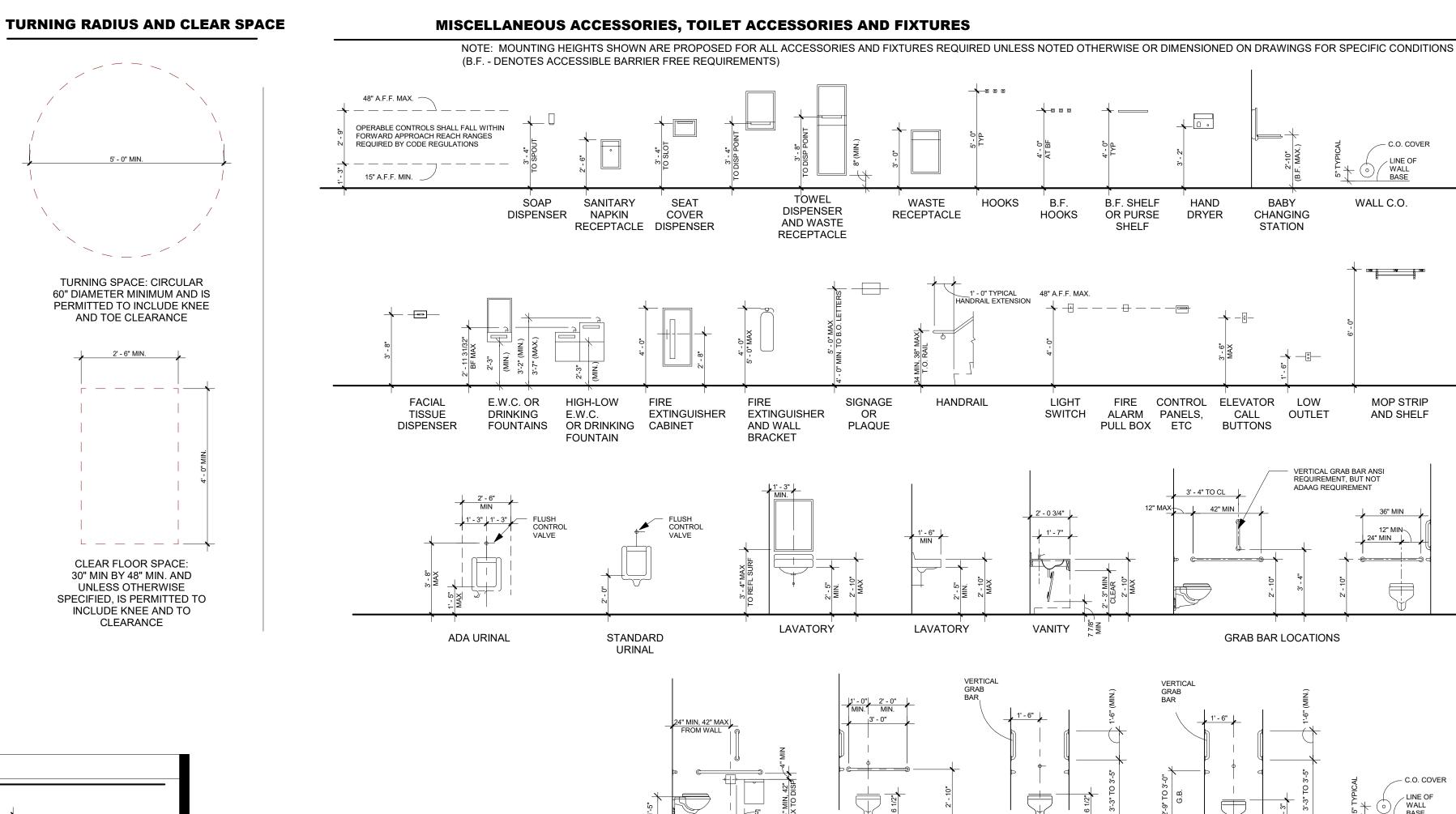
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LATCH APPROACH

LATCH APPROACH WITH CLOSER

HINGE APPROACH

HINGE APPROACH WITH CLOSER



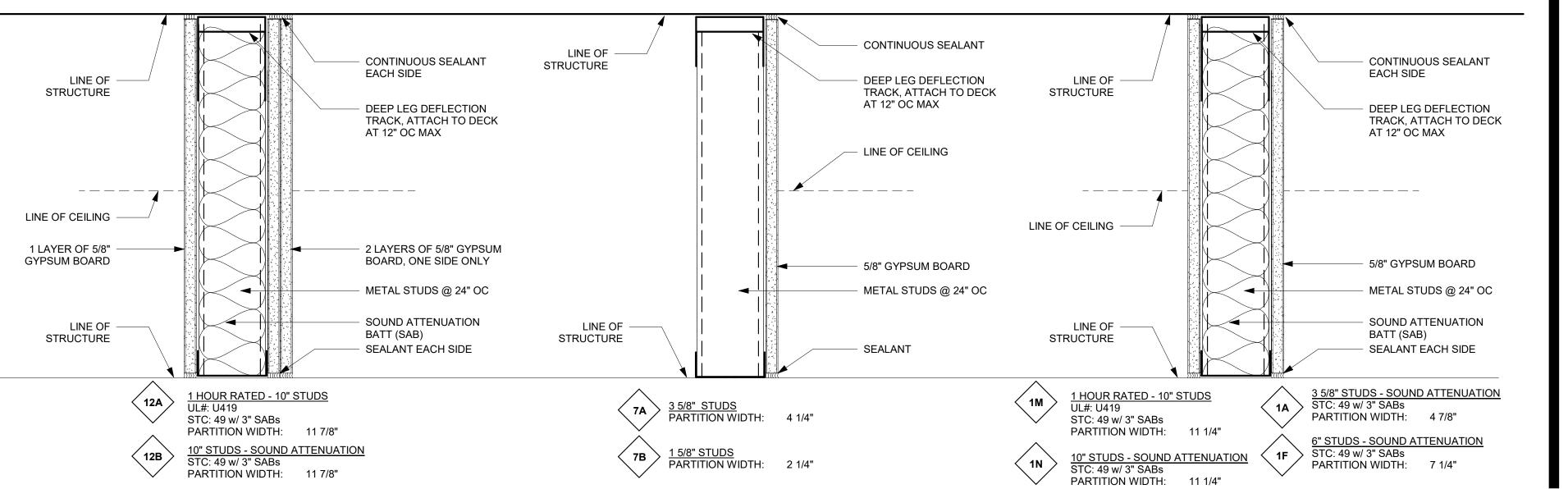
WATER CLOSET:

ACCESSIBLE

### **PARTITION TYPES GENERAL NOTES**

- SEAILNG AROUND J BOXES REQUIRED IF WALLS ARE FIRE, SMOKE, OR STC RATED. REFER TO PLANS FOR LOCATIONS OF WALLS REQUIRING ADDITIONAL LAYER OF GYPSUM BOARD.
- FOR PARTITIONS RECEIVING SOUND ATTENUATION BLANKETS, OR SABs, EXTEND SAB FULL HEIGHT OF PARTITION AND SET FLOOR TRACK IN FULL BED OF CONTINUOUS SEALANT, UNLESS NOTED OTHERWISE.

ALL GYPSUM BOARD TO BE TYPE X, UNLESS NOTED OTHERWISE.



WATER

CLOSET

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WALL C.O.

CHILD WATER CLOSET:

**AMBULATORY** 

ACCESSIBLE

COMPARTMENT

WATER CLOSET:

**AMBULATORY** 

ACCESSIBLE

COMPARTMENT

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DATE

08/07/2020

OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME: **GENERAL INFORMATION AND NOTES** SHEET NUMBER:

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### **GENERAL:**

CONDUCT SITE CLEARING OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS AND OTHER ADJACENT OCCUPIED OR USED FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS OR OTHER OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM AUTHORITIES HAVING JURISDICTION. STREETS AND ROADWAYS SHALL BE THOROUGHLY CLEANED AND/OR SWEPT ON A DAILY BASIS OR MORE FREQUENTLY AS REQUIRED BY THE GOVERNING AUTHORITY. RESTORE DAMAGED IMPROVEMENTS TO ORIGINAL CONDITION AS ACCEPTABLE TO PARTIES HAVING JURISDICTION.

THE CONTRACTOR SHALL PROVIDE DUST CONTROL MEASURES IN ACCORDANCE WITH LOCAL AUTHORITIES.

ALL STREET SURFACES, DRIVEWAYS, CULVERTS, ROADSIDE DRAINAGE DITCHES AND OTHER STRUCTURES THAT ARE DISTURBED OR DAMAGED IN ANY MANNER AS A RESULT OF CONSTRUCTION SHALL BE REPLACED IN ACCORDANCE WITH THE SPECIFICATIONS.

UNLESS SPECIFIED OTHERWISE, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH ROGERS COUNTY STANDARDS, OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY STANDARDS AND OKLAHOMA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND/OR THE APPROPRIATE LOCAL AUTHORITIES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS, PERMIT FEES, LICENSES, LICENSE FEES, AND TAP FEES, ETC.

ALL ELEVATIONS IN PAVED AREAS ARE TOP OF FINISHED PAVEMENT UNLESS OTHERWISE NOTED.

RELOCATION OF ANY UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE PROVISIONS OF THE APPROPRIATE UTILITY COMPANY AND/OR REGULATORY AGENCY. CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM ENGINEER BEFORE ANY UTILITY RELOCATION.

NO DIMENSION MAY BE SCALED. REFER UNCLEAR ITEMS TO THE ENGINEER FOR INTERPRETATION.

ALL CONTRACTORS SHALL NOTIFY UTILITY COMPANIES AND GOVERNMENT AGENCIES IN WRITING OF THE INTENT TO EXCAVATE NO LESS THAN 72 HOURS PRIOR TO SUCH EXCAVATION (EXCLUSIVE OF SATURDAYS, SUNDAYS AND HOLIDAYS) AND CALL "OKIE" AT 1-800-522-6543.

EXISTING UTILITY LOCATIONS SHOWN SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. LOCATIONS OF UNDERGROUND UTILITIES ON THESE DRAWINGS ARE APPROXIMATE ONLY AND BASED ON ACTUAL FIELD LOCATIONS OF VISIBLE STRUCTURES AND PLAN COMPUTATIONS.

### SITE WORK AND GRADING:

ALL FEATURES OF THIS PROJECT INCLUDING, BUT NOT LIMITED TO, SIDEWALKS AND CURB RAMPS SHALL COMPLY WITH THE AMERICAN DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES, AND THE INTERIM FINAL RULES FOR PUBLIC RIGHT-OF-WAY, PUBLISHED IN THE FEDERAL REGISTER, SEPTEMBER 2010. WHERE SPATIAL LIMITATIONS OR EXISTING FEATURES WITHIN THE LIMITS OF THE PROJECT PREVENT FULL COMPLIANCE WITH THIS ACT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER UPON DISCOVERY OF SUCH FEATURES. THE CONTRACTOR SHALL NOT PROCEED WITH ANY ASPECT OF THE WORK WHICH IS NOT IN FULL COMPLIANCE WITH THE ADA WITHOUT PRIOR, WRITTEN PERMISSION FROM THE ENGINEER. ANY WORK WHICH IS NOT PERFORMED WITHIN THE GUIDELINES OF THE ADA, FOR WHICH THE CONTRACTOR DOES NOT HAVE WRITTEN APPROVAL, SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.

CROSS SLOPES FOR SIDEWALKS SHALL NOT EXCEED 1:50

RAMP SLOPES SHALL NOT EXCEED 1:12 GRADES EXCEEDING 5% WILL BE TREATED AS A RAMP SLOPE

FINISHED SUBGRADE SURFACE SHALL NOT BE MORE THAN 0.05 FEET ABOVE OR BELOW ESTABLISHED FINISHED SUBGRADE ELEVATIONS AND ALL GROUND SURFACES SHALL VARY UNIFORMLY BETWEEN INDICATED ELEVATIONS. FINISHED DITCHES SHALL BE GRADED TO ALLOW FOR PROPER DRAINAGE WITHOUT PONDING AND IN A MANNER THAT WILL MINIMIZE EROSION.

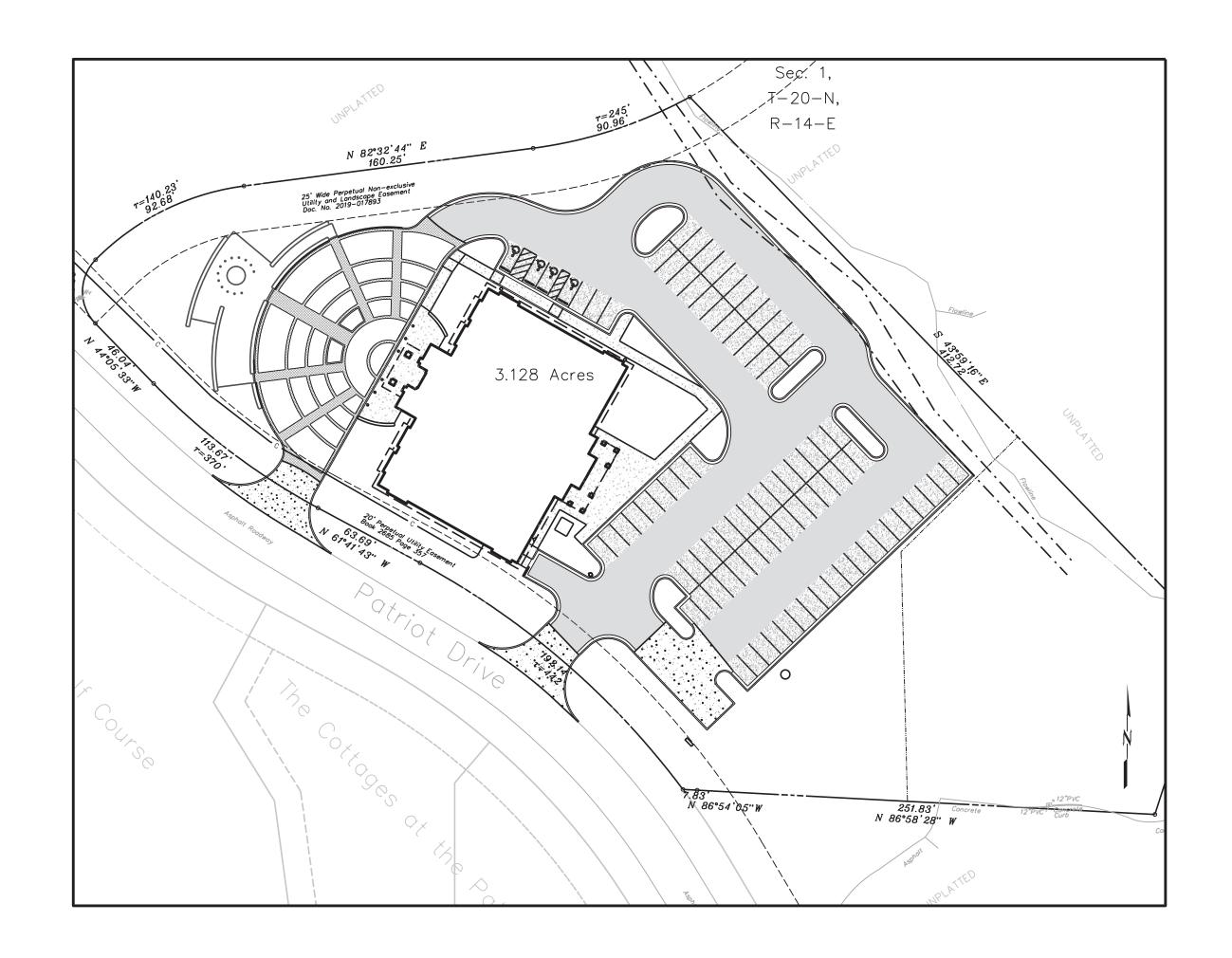
### **GEOTECHNICAL:**

SEE GEOTECHNICAL REPORTS PREPARED BY AIMRIGHT TESTING & ENGINEERING LLC, DATED 03.12.2020.

### SURVEY:

EXISTING TOPOGRAPHY IS BASED ON AN ACTUAL FIELD SURVEY PERFORMED BY BENCHMARK SURVEYING AND LAND SERVICES, INC., DATED 02.16.2020.

# Permit Set for FOLDS OF HONOR OPERATIONS BUILDING



### **LEGEND**

		LLOLIND				
 EXISTING MAJOR CONTOUR EXISTING MINOR CONTOUR NEW MAJOR CONTOUR NEW MINOR CONTOUR FENCE TELEPHONE OVERHEAD POWER LINE OVERHEAD GAS LINE OIL LINE POWER UNDERGROUND TELEPHONE UNDERGROUND TV UNDERGROUND WATER LINE SANITARY SEWER LINE STORM SEWER LINE FLOW LINE DITCH ODOT TEMPORARY SILT FENCE SILT FENCE	BM CO EP FDC FH GM LP PB SSSST TPED	BENCH MARK CLEANOUT DOWN GUY EMERGENCY PHONE FIBER OPTIC MANHOLE FIRE DEPT CONNECTION FIRE HYDRANT GAS / OIL WELL GAS METER LIGHT POLE LIGHT POLE LIGHT POLE POWER MANHOLE POWER POLE PULL BOX SANITARY MANHOLE STEAM MANHOLE TELEPHONE MANHOLE TELEPHONE PEDESTAL	BC CI CLR CJ DB DIP DGDI DO EJ EL FF FG FL HB HDPE IRR IST LF	BOT OF CURB CAST IRON CLEAR CONSTRUCTION JOINT DRAINAGE BASIN DUCTILE IRON PIPE DOUBLE GRATE CURB INLET DOOR OPENING EXPANSION JOINT ELEVATION FINISH FLOOR FINISH GRADE FLOWLINE HOSE BIB HIGH DENSITY POLYETHYLENE IRRIGATION INLET SEDIMENT TRAP LINEAR FEET	PAVT PE PVC R RD R/W RCP RJ SGDI SF SJ TC TG TOF TP TR TS TW UNO	PAVEMENT POLYETHYLENE POLY VINYL CHLORIDE RADIUS ROOF DRAIN RIGHT OF WAY REINF CONCRETE PIPE RESTRAINED JOINT SINGLE GRATE CURB INLET SQUARE FEET SAW JOINT TOP OF CURB TOP OF GRATE TOP OF FOOTING TOP OF PAVEMENT TOP OF RIM TOP OF SIDEWALK TOP OF WALL UNLESS NOTED OTHERWISE

OVERHEAD DOOR

TRANSFORMER PAD

LIFT STATION MANHOLE

WATER HYDRANT

WATER METER

WATER WELL

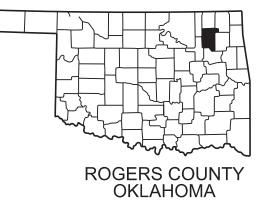
VALVE

• WН

O WM

### **BUILDING PERMITS/ZONING:**

ROGERS COUNTY PLANNING **COMMISION - DIRECTOR** MISSY RICHARDSON 200 S LYNN RIGGS BLVD TULSA, OKLAHOMA 74017 918.923.4874



### WATER:

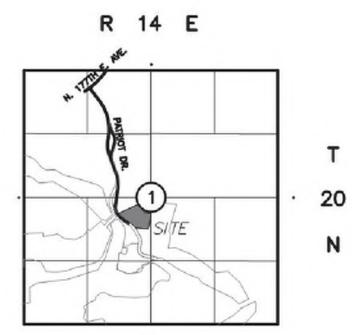
ROGERS COUNTY RURAL WATER DISTRICT NO.3 DISTRICT MANAGER RICK STULL 13277 SOUTH ASH ST. CLAREMORE, OK 74017 918.341.0851

### GAS:

OKLAHOMA NATURAL GAS COMPANY BRAD OSLUND 918.831.8320 BRAD.OSLUND@ONEGAS.COM

### ELECTRIC:

AEP/PUBLIC SERVICE COMPANY OF **OKLAHOMA** ATTN: BILLY WOOD 212 EAST SIXTH STREET TULSA, OKLAHOMA 74119 918.250.7797



Location Map

### **EROSION CONTROL NOTES:**

ALL EROSION CONTROL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN AND ROGERS COUNTY STANDARDS AND SPECIFICATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A STABILIZED CONSTRUCTION ENTRANCE, AND FOR CLEANING OF VEHICLE WHEELS IN ACCORDANCE WITH ROGERS COUNTY STANDARDS AND SPECIFICATIONS.

SILT FENCES: PLACEMENT OF SILT FENCES SHALL BE AS SHOWN ON THE DEMOLITION & EROSION CONTROL PLAN. FENCING WHICH BECOMES DAMAGED SHALL BE REPLACED PROMPTLY. DEPOSITS OF SILT WHICH BUILD UP BEHIND DIKES MAY BE DISKED INTO THE SITE BEFORE PLACEMENT OF TEMPORARY COVER. AFTER TEMPORARY COVER IS PLACED OR AFTER LANDSCAPING COMMENCES, SILT SHALL BE REMOVED AND DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.

### **TEMPORARY EROSION CONTROL:**

ALL DISTURBED EARTH SURFACES WHICH ARE NOT PAVED OR BUILDING PADS SHALL BE LANDSCAPED OR REVEGETATED IMMEDIATELY IF CONSTRUCTION CEASES FOR 14 DAYS WITH A TEMPORARY COVER, DEPENDING ON THE PLANTING SEASON, AS OUTLINED BELOW.

PLANT TYPE	PER	PER 1000	PLANTING	DEPTH OF
	ACRE	SQ. FT.	DATE	SEEDING
ANNUAL RYEGRASS ELBON RYE WHEAT OATS SORGHUMS SUDAN GRASS	40 LBS. 2 BU. 2 BU. 3 BU. 60 LBS. 60 LBS.	0.9 LBS. 3.0 LBS. 3.0 LBS. 2.5 LBS. 1.4 LBS. 1.4 LBS.	09/05-11/30 08/15-11/30 08/15-11/30 08/15-11/30 03/01-09/15 04/01-09/15	1/4 INCH 2 INCH 2 INCH 2 INCH 2 INCH 2 INCH 2 INCH

PRIOR TO SEEDING, NEEDED EROSION CONTROL PRACTICES SHALL BE INSTALLED.

THE SUBGRADE SHALL BE LOOSENED EVENLY TO A DEPTH OF 2 TO 3 INCHES AND 10-20-10 FERTILIZER (10 LBS. PER 1000 SQ. FT. OR 450 LBS. PER ACRE) SHALL BE MIXED WITH THE LOOSENED SOIL BY DISKING OR OTHER SUITABLE MEANS.

SOIL SHALL BE TESTED AND LIME TREATED IF REQUIRED BY TESTING FIRM.

SEEDS MAY BE DRILLED OR BROADCAST UNIFORMLY.

SEEDING IMPLEMENTS SHOULD BE USED AT RIGHT ANGLES TO THE SLOPE TO MINIMIZE EROSION.

MULCH SHALL BE USED ON ALL SLOPES GREATER THAN 5 PERCENT OR AS NEEDED.

THE AREA SHALL BE WATERED DAILY OR AS OFTEN AS NECESSARY TO MAINTAIN ADEQUATE SOIL MOISTURE UNTIL THE PLANTS EXCEED 1 INCH IN HEIGHT.

EXPECTED IMPERVIO	DUS	
AREA TABLE		
TOTAL DISTURBED AREA	2.27	ACRES
EXISTING IMPERVIOUS AREA	0.00	ACRES
PROPOSED IMPERVIOUS AREA	1.57	ACRES
INCREASE IN IMPERVIOUS AREA	1.57	ACRES

	LIST OF SHEETS
C100	GENERAL NOTES
C200	SURVEY
C300	DEMOLITION AND EROSION CONTROL PLAN
C400	SITE PLAN
C500	GRADING PLAN
C600	UTILITY PLAN
C700	DETAILS
C701	DETAILS

06/19/2020

**PERMIT SET** 

ISSUE DATE:

OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME:

**SITE PLAN** 

ISSUE DATE: 06/19/2020

NO. DESCRIPTION

SHEET NAME: **SURVEY** 

ISSUE: **PERMIT SET** 

OTHER ISSUE DATES:
NO. DESCRIPTION

SHEET NAME:

DEMOLITION & EROSION CONTROL PLAN

SHEET NUMBER:

C300

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GH2 PROJECT NUMBER: 20170021 ISSUE DATE: **06/19/2020** 

PERMIT SET

OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME:

**SITE PLAN** 

PERMIT SET

OTHER ISSUE DATES:
NO. DESCRIPTION

SHEET NAME:

GRADING

**PLAN** 

SHEET NUMBER:
C500
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ISSUE: **PERMIT SET** 

06/19/2020

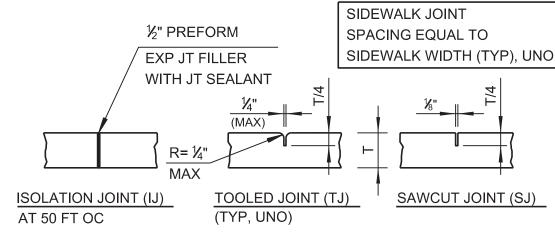
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NO. DESCRIPTION

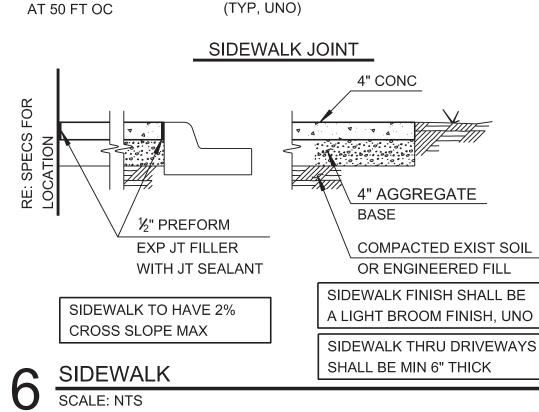
SHEET NAME:
UTILITY
PLAN

SHEET NUMBER:

C600
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SILT FENCE
SCALE: NTS





USE EVAPORATION REDUCER (MONOMOLECULAR FILM) RE: SPECS #4 @ 30" OC EW DISCONTINUE AT ALL JOINTS **EXCEPT TIED** JOINT (TJ) REINFORCED 2" TYPE B (S4) OR CONCRETE PAVEMENT C (S5) ASPHALT TYPE A (S3) ASPHALT 2" AT STANDARD DUTY 6" CONCRETE 4" AT HEAVY DUTY 7" IN DUMPSTER ENCLOSURE TACK COAT BETWEEN LAYERS 4" ODOT TYPE "A" ODOT TYPE "A" AGGREGATE BASE AGGREGATE BASE 6" AT STANDARD DUTY 10" MIN ENGINEERED FILL OR 8" AT HEAVY DUTY LIME STABILIZED SUBGRADE RE: SPECS **ASPHALT PAVEMENT** CONCRETE PAVEMENT

NOTE: FOR REINFORCED CONCRETE PAVEMENT

½" PREFORM SAW CUT EXP JT FILLER **EXISTING PAVEMENT** WITH JT SEALANT (AT CONCRETE/CONCRETE ONLY) 6" AT DUMSTER ENCLOSURE 2'-0" MIN | 1'-0" **EXISTING** NEW PAVEMENT PAVEMENT

SMOOTH DOWELS

GREASE ONE END

PAVEMENT TRANSITION SCALE: NTS

DOWELED CONTRACTION

ENLARGEMENT

RE: PAVEMENT DETAIL FOR THICKNESS "T"

PARKING STRIPES ARE DIMENSIONED COORDINATES FROM THIS POINT ARE TO BACK OF CURB \* BACK OF CURB **ISOLATION JOINT** AT CONCRETE PAVING RE: PAVING JOINT DETAIL /PAVEMENT \* UNLESS NOTED PLACE JOINTS IN CURB TO MATCH PAVING - 15 FEET MAX RE: PAVEMENT DETAIL FOR THICKNESS "T"

NOTE: IF ADJACENT PAVING

PLACE "INTEGRAL CURB"

IS CONCRETE CONTRACTOR MAY

CURB AND GUTTER (BARRIER)

24" WIDE TACTILE

6" HIGH INTEGRAL CURB

FLUSH W/

SIDEWALK

RE: DETAIL

WARNING SURFACE

COLOR: COLONIAL RED

RE: CURB DETAIL **RE: PAVEMENT** SECTION UNDISTURBED SOIL

FLUSH W/

CURB TERMINATION

RE: DETAIL

SIDEWALK

5 CURB TE SCALE: NTS **CURB TERMINATION** 

6" HIGH INTEGRAL CURB

1:12 MAX

6'-0"

SLOPE

RE: PLANS

GRADE

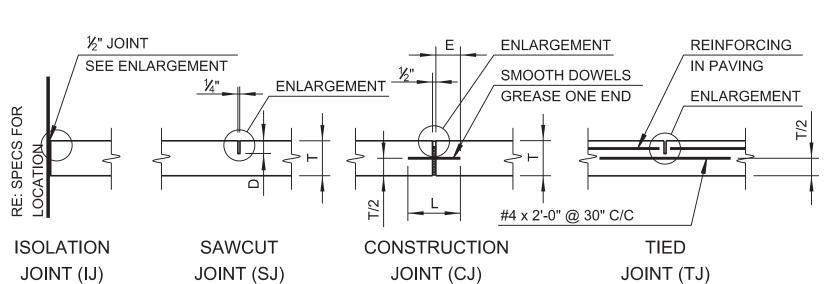
FLUSH WITH

24" WIDE TACTILE

WARNING SURFACE

COLOR: COLONIAL RED

RE: DETAIL



JOINTS NOT SHOWN OTHERWISE SHALL BE SAW JOINTS. SAW JOINTS SHALL BE MADE WITHIN 10 HOURS AFTER CONCRETE POUR. CONCRETE PAVING JOINT SPACING SEE SCHEDULE LENGTH <= 1.25W

2 PAVEMENT DETAIL
SCALE: NTS

RE: SPECS FOR ADDITIONAL INFORMATION ALL DOWELS & BARS TO BE EPOXY COATED DOWEL BASKETS SHALL BE USED AT ALL DOWELED CONTRACTION JOINTS

(SAW CUT) JOINT (DSJ) "D" DOWEL "L" SAWCUT PAVEMENT DIAMETER MAX JOINT THICKNESS @12" C/C LENGTH **EMBEDMENT** DEPTH SPACING 12.5' 1 ¼" 1 ½" 15' 1 ¾" 15' 14"

JOINT SEALANT ALL JOINTS BACKER ROD ALL JOINTS ½" PREFORM EXP JT FILLER AT CONSTRUCTION & ISOLATION 15' JOINT ONLY

**ENLARGEMENT** 

8 CURB RAMP DETAIL
SCALE: NTS

6'-0"

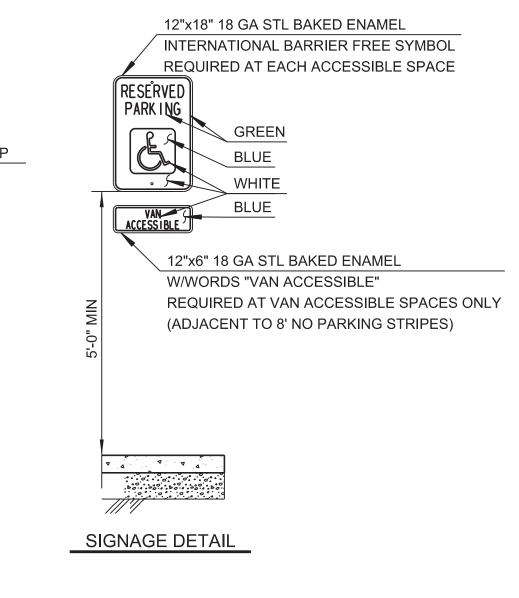
1:12 MAX

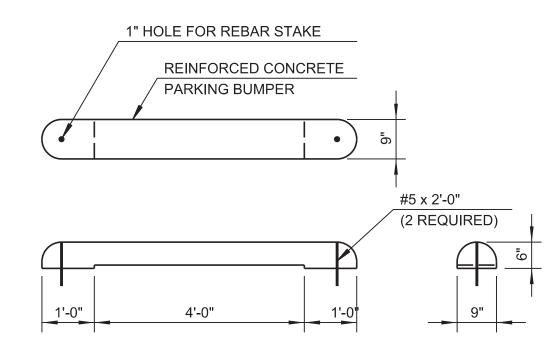
SLOPE

CURB TERMINATION

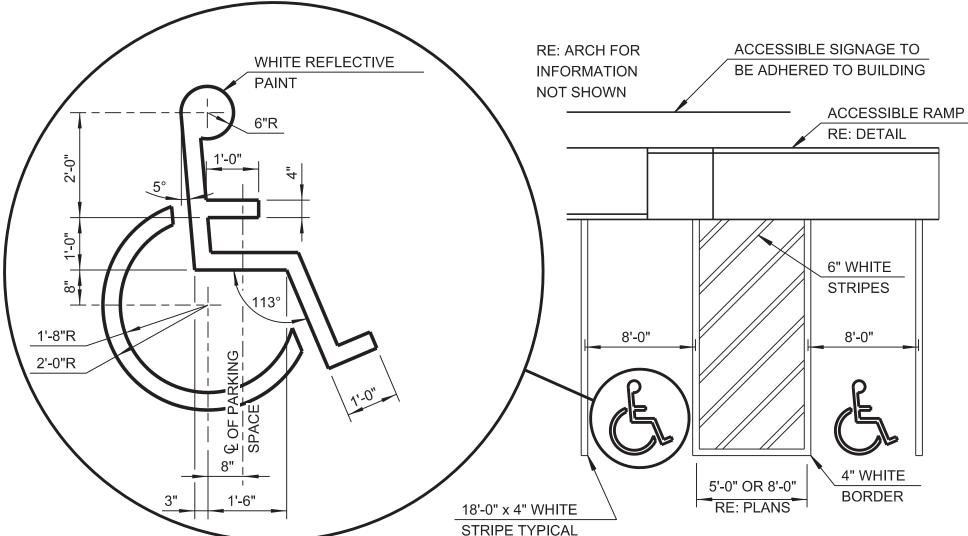
RE: DETAIL

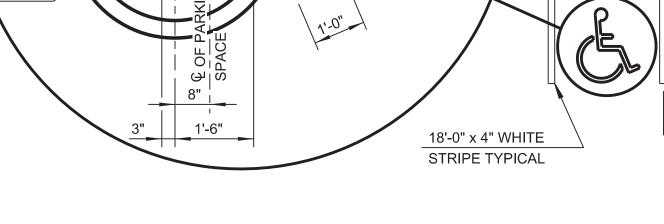
7 PAVING JOINT DETAIL
SCALE: NTS





PARKING BUMPER





ACCESSIBLE STRIPING

SHEET NUMBER:



**PERMIT SET** 

OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME: **DETAILS** 





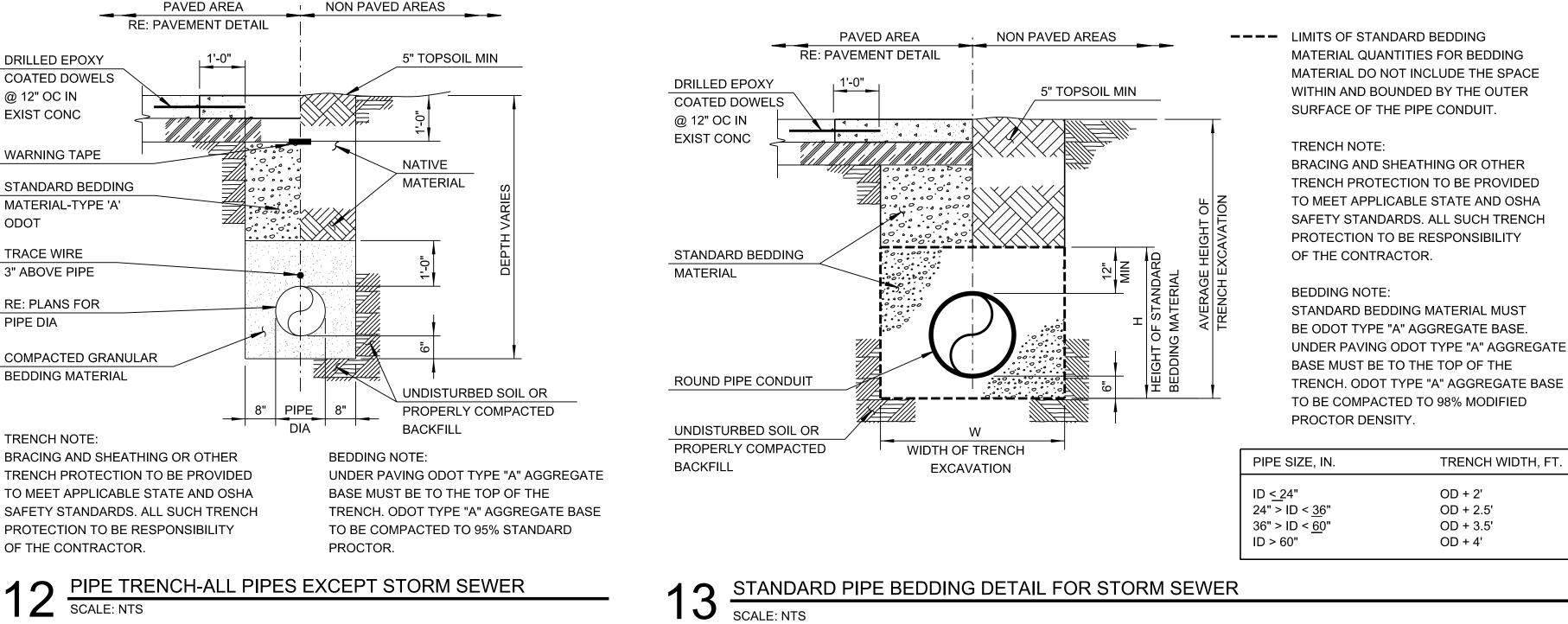
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06/19/2020

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SHEET NAME: **DETAILS** 





DOWNSPOUT RE: ARCH ALL WATERTIGHT CONNECTIONS J.R HOE. POWDER COATED DOWNSPOUT BOOT WITH CLEANOUT, OR EQUIVALENT PAVEMENT SURFACE DOWNSPOUT RE: ARCH 45° ELBOW 24"X12" PRECAST SPLASH BLOCK ----1% MIN SLOPE DOWNSPOUT TO SPLASH BLOCK LENGTH AS NECESSARY

TO CLEAR GRADE BEAM

DOWNSPOUT TO STORMDRAIN CONNECTION

**EXTEND PAVING** 

THRU OPENING

NO PAVT AT

CONC CURB

2'-0"

**ELEVATION** 

CURB CUT DRAIN

RE: PLAN TOP OF GRATE (TG)

RE: PLANS DRAIN BASIN RE: PLANS CONTRACTOR

GRATE

COORDINATE WITH MANUF FLOWLINE (FL)
RE: PLANS DRAIN BASIN

DRAIN BASINS, INLINE DRAINS, PIPE AND GRATES SHALL BE HANCOR " NYLOPLAST" OR **ENGINEER APPROVED EQUAL** ALL DRAINAGE BASINS SHALL BE H-20 COMPLIANT IN PAVEMENT AREAS SEE MANUFACTURERS INSTALLATION PLAN VIEW **DETAILS FOR PROPER PROCEDURE** 

CONTRACTOR SHALL COORDINATE STUB

ANGLE WITH MANUF

FILL IN ACCORDANCE WITH MANUF RECOMMENDATIONS **EXISTING EARTH** 

16 VALVEBOX DETAIL SCALE: NTS

1'-0"

MIN

VALVE

FINISHED GRADE

ROUND CONC

COLLAR

SIDE VIEW #3 BAR ALL AROUND (W/6" OVERLAP) VALVE BOX W/LID CONC THRUST BLOCK 1'-0" TOP VIEW

NATIONAL

BREAKABLE

CONNECTION

CONC THRUST

COARSE AGG

BLOCK

GROUND LINE

STD PENTAGON

**OPERATION NUT** 

PROVIDE RESTRAINED FITTING TO MEET THIS DEPTH

2½" STD HOSE

4" STD HOSE NOZZLE

STD VALVE BOX

WATER MAIN

6" MJ TO MJ

**GATE VALVE** 

(TO FACE STREET)

NOZZLES (2)

DRAIN NOTE:

DEPTH NOTE:

BLOCK

HYDRANT DRAIN MUST

BE LEFT CLEAN AFTER

POURING CONC THRUST

PROVIDE STANDARD NOZZLE THREADS PER CITY OF TULSA REQUIRMENTS

INTEGRATED DRAIN BASIN SYSTEM

(1" x 2" IN SIZE) MIN. 2 CUBIC FEET

- 6" CAST IRON 60" DIA. SERIES R1R ACCESS DOOR HALLIDAY PRODUCTS BRAND 6" CAST IRON DROP LID - FINISHED GRADE DROP LID 60" DIA. HP STORM PIPE NEPTUNE HIGH PERFORMANCE 6" I'VC SDR-35 MIN. -PROTECTUS III S 6" PVC SDR—35 MIN. STAINLESS STEEL 6" FIRE SERVICE METER FLG X FLG 6" RESILENT WEDGE GATE VALVE -W/ 2 ADJUSTABLE PIPE AKV GATE VALVE w/ STAINLESS SÚPPORTS 6" RESILIENT WEDGE GATE VALVE STEM & 2" SQUARE WRENCH NUT OR APPROVED EQUAL AKV GATE VALVE w/ STAINLESS STEM & 2" SQUARE WRENCH NUT FLG X MJ W/ 4" MIDCO OR APPROVED EQUAL FLG X FLG 60" MIN. 60" MIN. 6" HDPE WATER LINE 6"HDPE 6" HDPE "PRIVATE FIRE LINE" - SOLID CONC. CAP BLOCK (16"x8"x4" CONC. BLOCK) SOLID CONC. CAP BLOCK — (16"x8"x4" CONC. BLOCK) 6-SOLID CONC. CAP BLOCKS PLACED AROUND THE PERIMETER FOR THE 36" CGMP TO SIT ON 1-1/2" PVC DRAIN PIPE DRAIN TO BORROW DITCH PLACED AROUND THE PERIMETER PLACE DRAIN IN GRAVEL 2-SOLID CONC. CAP BLOCKS -CRUSHED STONE ONE UNDER EACH VALVE OR GRAVEL (16"x8"x4" CONC. BLOCKS)

RE: PLANS FOR PIPE DIA COMPACTED GRANULAR **BEDDING MATERIAL** TRENCH NOTE: BRACING AND SHEATHING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND OSHA SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE RESPONSIBILITY OF THE CONTRACTOR.

MATERIAL-TYPE 'A' ODOT TRACE WIRE 12 PIPE TRENCH-ALL PIPES EXCEPT STORM SEWER SCALE: NTS

3" ABOVE PIPE

18 DETECTOR CHECK & VAULT DETAIL SCALE: NTS

### **GENERAL NOTES**

- 1. CONTRACTOR SHALL VISIT SITE PRIOR TO BIDDING TO DETERMINE THE EXTENT AND NATURE OF THE
- CONDITIONS WITHIN WHICH WORK MUST BE ACCOMPLISHED. CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF UTILITIES PRIOR TO STARTING ANY WORK.
- MAINTAIN UTILITY SERVICES AND PROTECT THEM AGAINST DAMAGE DURING CONSTRUCTION OPERATIONS. 4. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE UTILITIES (OVERHEAD AND BURIED)
- WHICH MAY OCCUR DUE TO HIS ACTION OR LACK OF ACTION ON THE PROJECT SITE DURING CONSTRUCTION OPERATIONS. CONTRACTOR SHALL SEEK ASSISTANCE OF LOCAL UTILITIES IN LOCATING THE UTILITIES PRIOR TO PERFORMING OPERATIONS IN ANY AREA.
- 5. CONTRACTOR SHALL VERIFY LANDSCAPE MATERIAL QUANTITIES AND SHALL REPORT ANY DISCREPANCIES TO
- THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. 6. PLANT SUBSTITUTIONS ARE PERMITTED UPON APPROVAL FROM THE LANDSCAPE ARCHITECT.
- 7. CONTRACTOR SHALL LAYOUT PLANTS IN THE FIELD AND SHALL HAVE THE LAYOUT APPROVED BY THE
- LANDSCAPE ARCHITECT PRIOR TO PROCEEDING WITH THE INSTALLATION.
- 8. TREES SHALL RECEIVE 4-INCHES MINIMUM OF MULCH; 24-INCH RADIUS AROUND TRUNK. 9. TREES SHALL BE SECURED WITH BELOW-GRADE OR T-POST STABILIZATION SYSTEM - REFERENCE PLANS. 10. SEPARATE INDIVIDUAL MULCHED TREES FROM TURF AREAS WITH A 45-DEGREE, 4- TO 6-INCH DEEP, SHOVEL-CUT
- 11. CONTRACTOR SHALL GUARANTEE ALL LANDSCAPE WORK AND PLANT MATERIAL FOR A PERIOD OF ONE YEAR
- FROM DATE OF ACCEPTANCE OF THE WORK BY THE OWNER. 12. PLANT MATERIAL WHICH DIES DURING THE ONE YEAR GUARANTEE PERIOD SHALL BE REPLACED BY THE
- CONTRACTOR DURING NORMAL PLANTING SEASONS. 13. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE PLANTS UNTIL COMPLETION OF THE PROJECT
- AND ACCEPTANCE BY THE OWNER.
- 14. PLANT NAMES ON THE PLANT LIST CONFORM TO THE STANDARDIZED PLANT NAMES PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE OR TO NAMES GENERALLY ACCEPTED IN THE NURSERY TRADE.
- 15. PLANT MATERIAL SHALL BE SPECIMEN QUALITY STOCK AS DETERMINED IN THE "AMERICAN STANDARDS FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMAN, FREE OF PLANT DISEASES AND PEST, OF TYPICAL GROWTH OF THE SPECIES AND HAVING A HEALTHY, NORMAL ROOT SYSTEM.
- 16. SIZES INDICATED ON THE PLANT LIST ARE THE MINIMUM ACCEPTABLE SIZE. 17. PLANTS SHALL NOT BE PRUNED PRIOR TO DELIVERY TO THE SITE OR AFTER INSTALLATION EXCEPT FOR THOSE
- BRANCHES THAT HAVE BEEN DAMAGED IN SOME WAY.
- 18. PLANTS SHALL NOT HAVE NAME TAGS REMOVED PRIOR TO FINAL INSPECTION.
- 19. FINE GRADE AND SOD AREAS DISTURBED BY CONSTRUCTION. 20. TOPSOIL DEPTH IN SOD AREAS SHALL BE 6-INCHES, MINIMUM.
- 21. SOILS COMPACTED MORE THAN 85% STANDARD PROCTOR DENSITY AS A RESULT OF CONSTRUCTION OPERATIONS WITHIN EXISTING TREE DRIPLINES AND LANDSCAPE AREAS SHALL BE RESTORED TO A CONDITION CONDUCIVE TO PROMOTE LONG TERM PLANT HEALTH. RESTORATION METHOD(S) SHALL BE AS RECOMMENDED BY A CERTIFIED ARBORIST, AND REMEDIED AT NO COST TO THE OWNER.
- 22. REPLACE DAMAGED LANDSCAPE, OR LANDSCAPE WHICH DIES AS A RESULT OF CONSTRUCTION OPERATIONS, WITH EQUIVALENT LANDSCAPE AT NO COST TO THE OWNER.
- 23. MATURE TREES TO REMAIN REQUIRING REPLACEMENT AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE APPRAISED BY A PROFESSIONAL APPRAISER. THE VALUE ASSIGNED SHALL BE CREDITED TO THE OWNER BY THE
- 24. PLANTING FIELD CONDITIONS DO NOT INSTALL PLANT LIFE WHEN AMBIENT TEMPERATURES MAY DROP BELOW 35 DEGREES F OR
  - RISE ABOVE 90 DEGREES F. DO NOT INSTALL PLANT LIFE WHEN WIND VELOCITY EXCEEDS 30 MPH.

### STONE CANYON LANDSCAPE GUIDELINES

- 1. SOD: FRONT, BACK AND SIDE YARDS OF EACH LOT SHALL BE FULLY SODDED, INCLUDING BAR DITCHES (IF ANY), WITHIN ONE MONTH (30 DAYS) OF A CERTIFICATE OF OCCUPANCY BEING ISSUED FOR THE HOME.
- 2. TREES: THE FINAL COMBINATION OF PRE-EXISTING AND NEW PLANTED TREES SHALL BE:
- 2.1 FRONT YARD EXCEPT FOR MUNICIPAL LOTS, A MINIMUM OF THREE (3) TREES OF AT LEAST 2" CALIPER; FOR MUNICIPAL LOTS, A MINIMUM OF TWO (2) TREES OF AT LEAST 2" CALIPER.
- 2.2 BACK YARD A MINIMUM OF TWO (2) TREES OF AT LEAST 2" CALIPER, ALL MANDATORY NEW PLANTED TREES ARE TO BE A MINIMUM OF 2" CALIPER, AND CHOSEN FROM THE APPROVED TREE LIST. ANY ADDITIONAL DESIRED TREES MAY BE ANY SIZE OF HOMEOWNER'S CHOICE, BUT ALSO CHOSEN FROM THE APPROVED TREE LIST.
- 3. PLANTINGS: A GROUPING OF NATIVE AND ORNAMENTAL FAUNA CONTAINING SPECIES THAT ARE COMPATIBLE WITH THE REGION AND ADD A PLEASING AESTHETIC TO LANDSCAPING.
- 4. FENCING: ALL FENCES MUST BE APPROVED PRIOR TO INSTALLATION. FENCING MATERIAL MAY CONSIST OF POST SUBDIVISIONS ANNEXED INTO THE CITY OF OWASSO BUT ONLY ALONG COMMON PROPERTY LOT LINES. NO FENCING MUST MEET THE REQUIREMENTS OF THE ARCHITECTURAL GUIDELINES AS DEFINED IN THE MASTER DECLARATION AND APPROVED BY THE ARCHITECTURAL COMMITTEE, NO FENCES SHALL BE CONSTRUCTED. UPON WALKWAYS OR ACCESS EASEMENTS, WHICH WOULD IMPAIR OR HINDER THE INTENDED USE THEREOF. PLACEMENT OF FENCING SHALL BE AS SPECIFIED IN THE COVENANTS, CONDITIONS AND RESTRICTIONS FOR THE PARTICULAR SUBDIVISION.

### **LEGEND/ PLANT LIST**

— — — PROPERTY LINE



LANDSCAPE BED:



CONCRETE SIDEWALK



PROPOSED TREE 2" CALIPER MINIMUM

SEED MIX



EXISTING TREE TO REMAIN (PROTECT DURING CONSTRUCTION)

> OTHER ISSUE DATES: NO. DESCRIPTION

**PERMIT SET** 

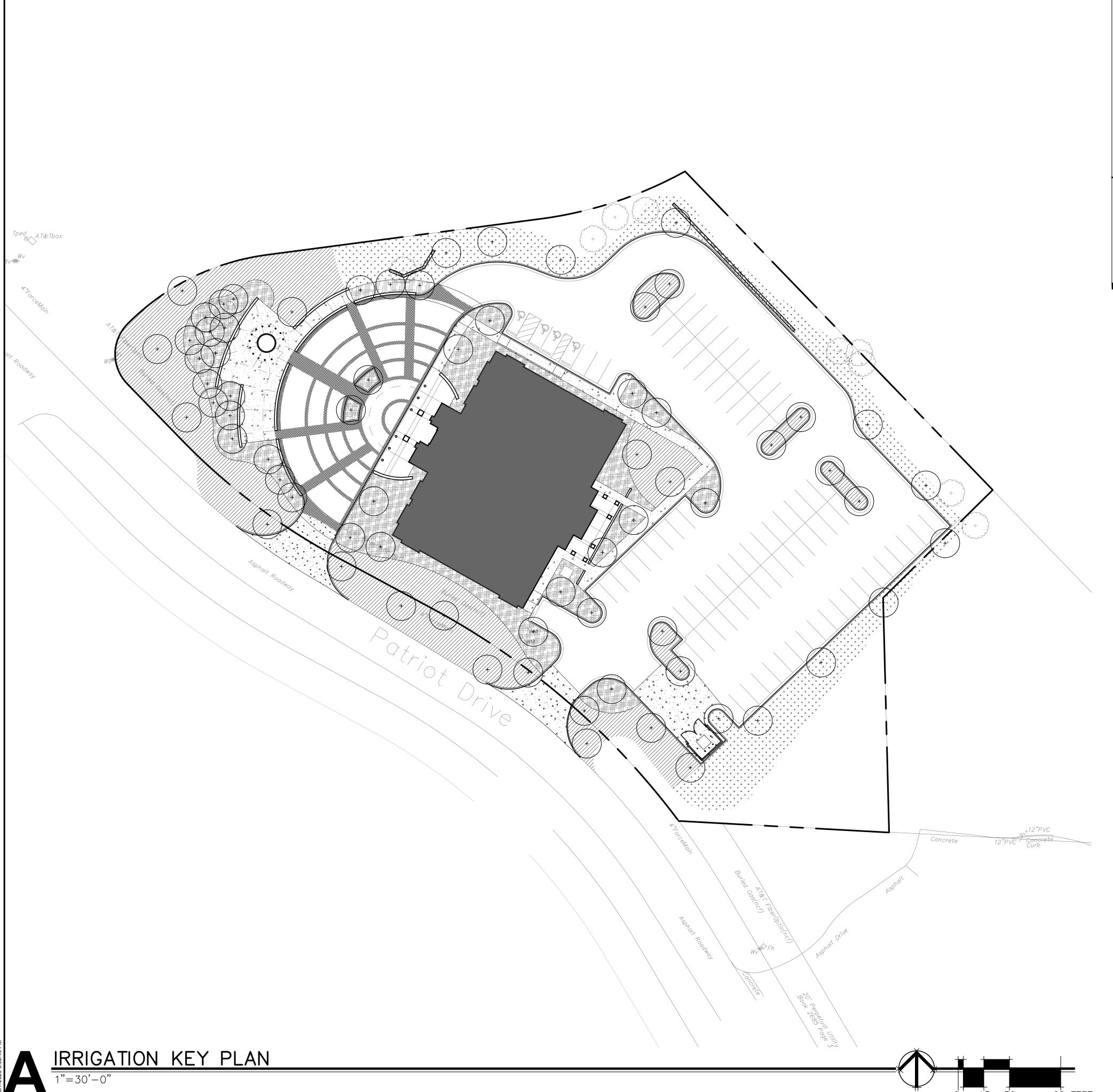
GH2 PROJECT NUMBER:

20170021 ISSUE DATE: 06/19/2020

**GH2** ARCHITECTS

GH2.COM

**LANDSCAPE PLAN** 



### **IRRIGATION NOTES**

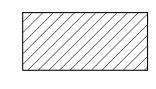
- 1. AREAS TO BE IRRIGATED:
- 1.1. LAWN (SOD) AREAS SPRINKLERS
- 1.2. LANDSCAPE BED DRIP IRRIGATION, BELOW GRADE1.3. NEW TREES DRIP IRRIGATION
- CONTRACTOR SHALL PROVIDE COMPLETE IRRIGATION SYSTEM DESIGNED FOR 100 PERCENT COVERAGE. IRRIGATION ZONE CONTROL SHALL BE AUTOMATIC OPERATION WITH CONTROLLER AND AUTOMATIC CONTROL VALVES.
   COORDINATE NEW IRRIGATION SYSTEM WITH SITE UTILITIES.
- 4. REFERENCE CIVIL FOR IRRIGATION WATER METER LOCATION AND SIZE.
- 5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CALCULATE ALL MATERIALS NECESSARY FOR A COMPLETE IRRIGATION SYSTEM.
- 6. CONTRACTOR SHALL VERIFY THE MINIMUM DYNAMIC WATER PRESSURE AVAILABLE.7. CONTRACTOR SHALL IMMEDIATELY CONSULT WITH THE OWNER'S REPRESENTATIVE WHENEVER THERE IS A CONFLICT
- BETWEEN ANY OF THE ABOVE STATED ITEMS.
- 8. FINE GRADE AND SOD AREAS DISTURBED BY CONSTRUCTION, BASED ON LOCATION.9. IRRIGATION WATER METER LOCATED ADJACENT TO BUILDING WATER METER (RE: CIVIL) WITH BACKFLOW PREVENTER.
- 10. HEATED BACKFLOW ENCLOSURE BY AQUA SHIELD.

  10.1. MILL FINISHED MARINE GRADE ALUMINUM SIZED TO ACCOMMODATE BACKFLOW PREVENTER.
- 10.1. MILL FINISHED MAKINE GRADE ALUMINUM SIZED TO ACCOMMODATE BACKFLOW FREVENTER.

  10.2. PROVIDE PROVISIONS FOR LOCKING AND OVERSIZED DRAINS AT ENCLOSURE GRADE.
- 10.3. STRUCTURALLY RIGID INSULATION, POLYISOCYANURATE, 1.5" THINK MINIMUM; FREEZE PROTECTION -30 DEGREES
- FAHRENHEIT.

  10.4. MOUNT PER MANUFACTURER'S INSTRUCTIONS ON CONCRETE SLAB.
- 10.5. INCLUDE 120 VAC 20-AMP RECEPTACLE ON AN INDEPENDENT CIRCUIT. INCLUDE WIRING AND CONNECTION TO ELECTRICAL PANEL LOCATED IN BUILDING.
- 11. IRRIGATION CONTROLLER LOCATED WITHIN BUILDING. COORDINATE SPECIFIC LOCATION WITH OWNER.

### **LEGEND**



SOD - PERMANENT SPRINKLER IRRIGATION



SEED MIX - TEMPORARY
IRRIGATION TO ESTABLISH GRASS



LANDSCAPE BED - DRIP IRRIGATION





Folds of Honor Operations Buildin

**GH2** ARCHITECTS

GH2.COI

GH2 PROJECT NUMBER: **20170021** 

ISSUE DATE: 06/19/2020

ISSUE:
PERMIT SET

OTHER ISSUE DATES:

NO. DESCRIPTION

SHEET NAME:
IRRIGATION
KEY PLAN

# LANDSCAPE BED AT SOD

SCALE: 1" = 1'-0"

PLANT, LOCATE PER PLANS

3" OF DOUBLE SHREDDED HARDWOOD MULCH OVER PREPARED PLANTING BED

ALUMINUM LANDSCAPE EDGING, 'PERMASTIP' BY PERMALOC, 3/16" X 4", MILL FINISH, V-NOTCH EDGING AT CURVED BEDS, INSTALL PER MANUFACTURER'S INSTRUCTIONS

SOD OVER 6" OF PREPARED SOIL

18" ALUMINUM STAKE

PREPARED PLANTING BED, 50% GARDEN SOIL/50% TOPSOIL MIX BY GEM DIRT OR APPROVED EQUAL

PERFORATED STORMWATER PIPE, CONNECTED TO STORM DRAIN SYSTEM, RE: CIVIL

NATIVE SOIL/ PREPARED SUBGRADE

## LANDSCAPE BED AT SOD

SCALE: 1" = 1'-0"

SOD OVER 6" OF PREPARED TOPSOIL

CURB AND GUTTER, RE:
CIVIL

NATIVE SOIL/ PREPARED
SUBGRADE

## SOD AT PARKING ISLAND DETAIL

SCALE: 1" = 1'-0"

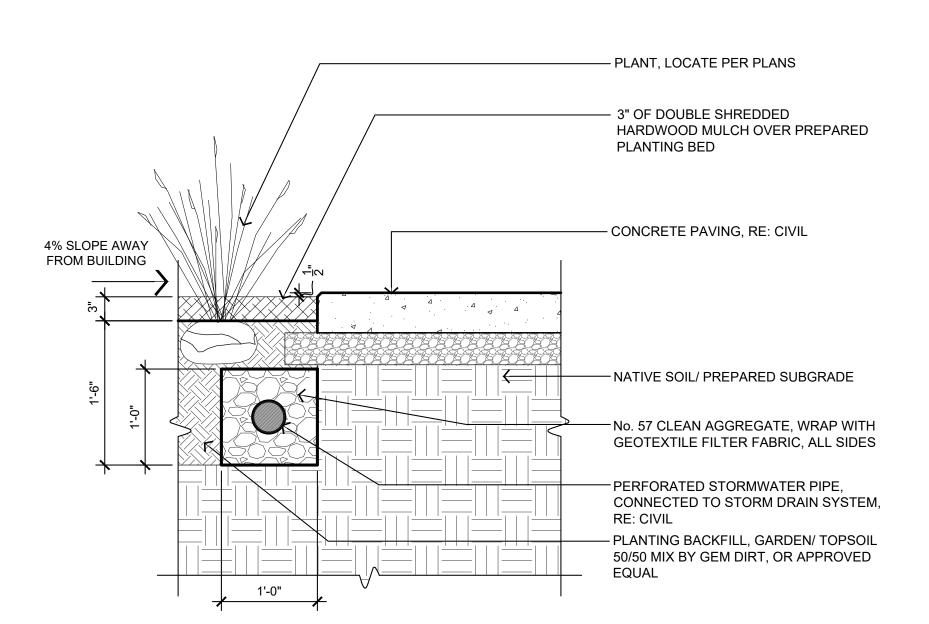
SOD OVER 6" OF PREPARED TOPSOIL

CONCRETE PAVING, RE:
CIVIL

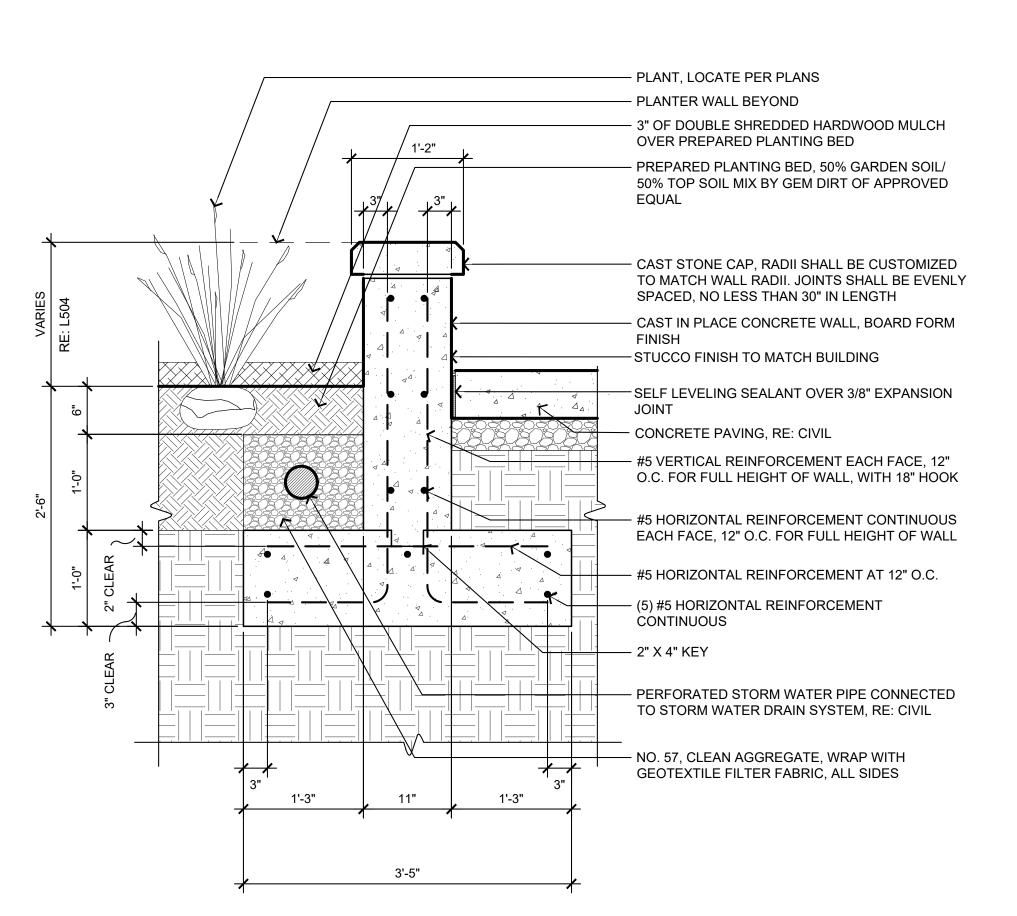
NATIVE SOIL/ PREPARED SUBGRADE

CONCRETE PAYING AT SOD

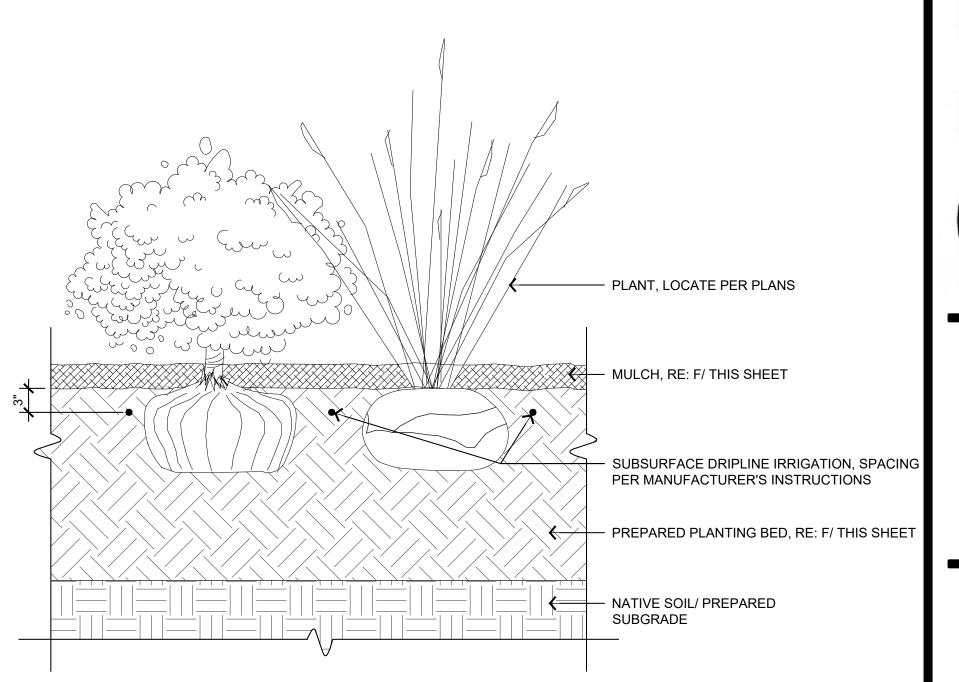
SCALE: 1" = 1'-0"



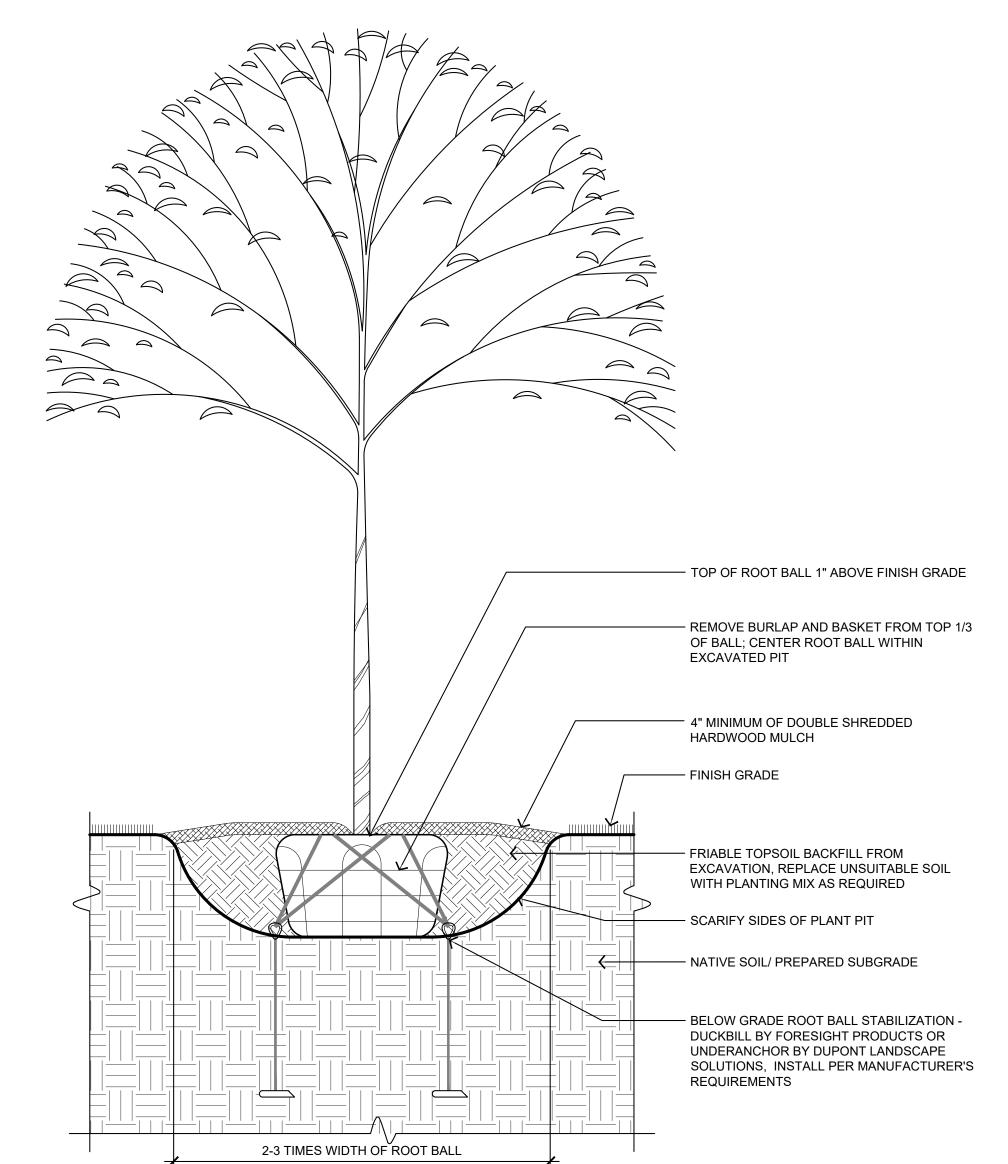
# LANDSCAPE BED AT CONCRETE PAVING SCALE: 1" = 1'-0"



SCALE: 1/2" = 1'-0"



# DRIP IRRIGATION DETAIL SCALE: 1" = 1'-0"



TREE PLANTING DETAIL

SCALE: 1/2" = 1'-0"

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## GH2 ARCHITECTS

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GH2 PROJECT NUMBER: **2020068.00** 

ISSUE:
PERMIT SET

05/19/2020

ISSUE DATE:

OTHER ISSUE DATES:

OTHER ISSUE DATES:

NO. DESCRIPTION DATE

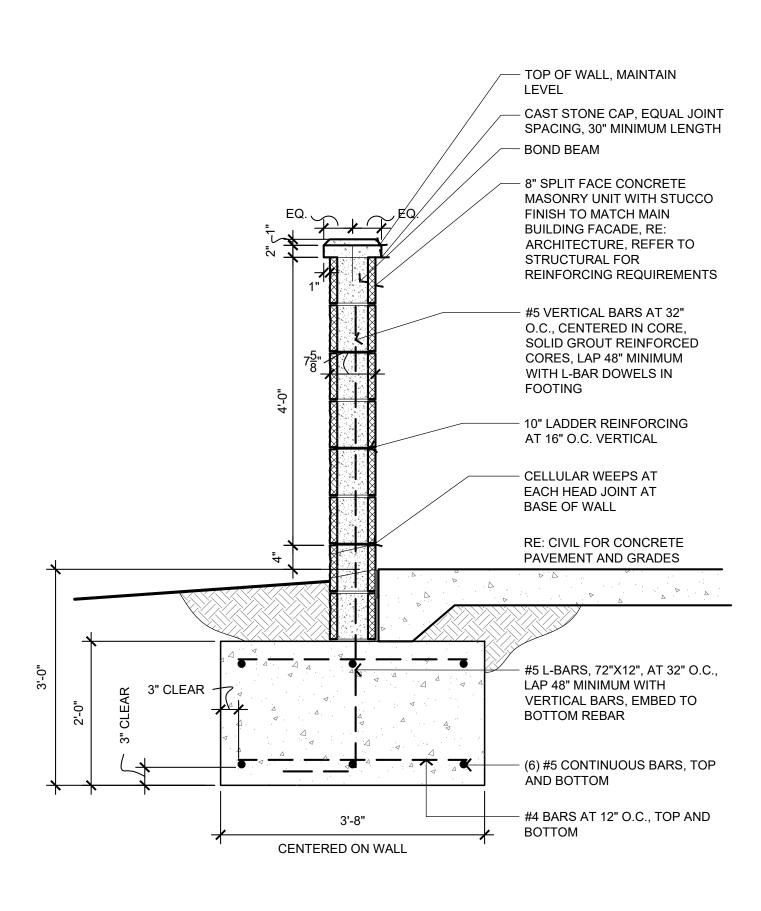
SHEET NAME:

DETAILS

SHEET NUMBER:

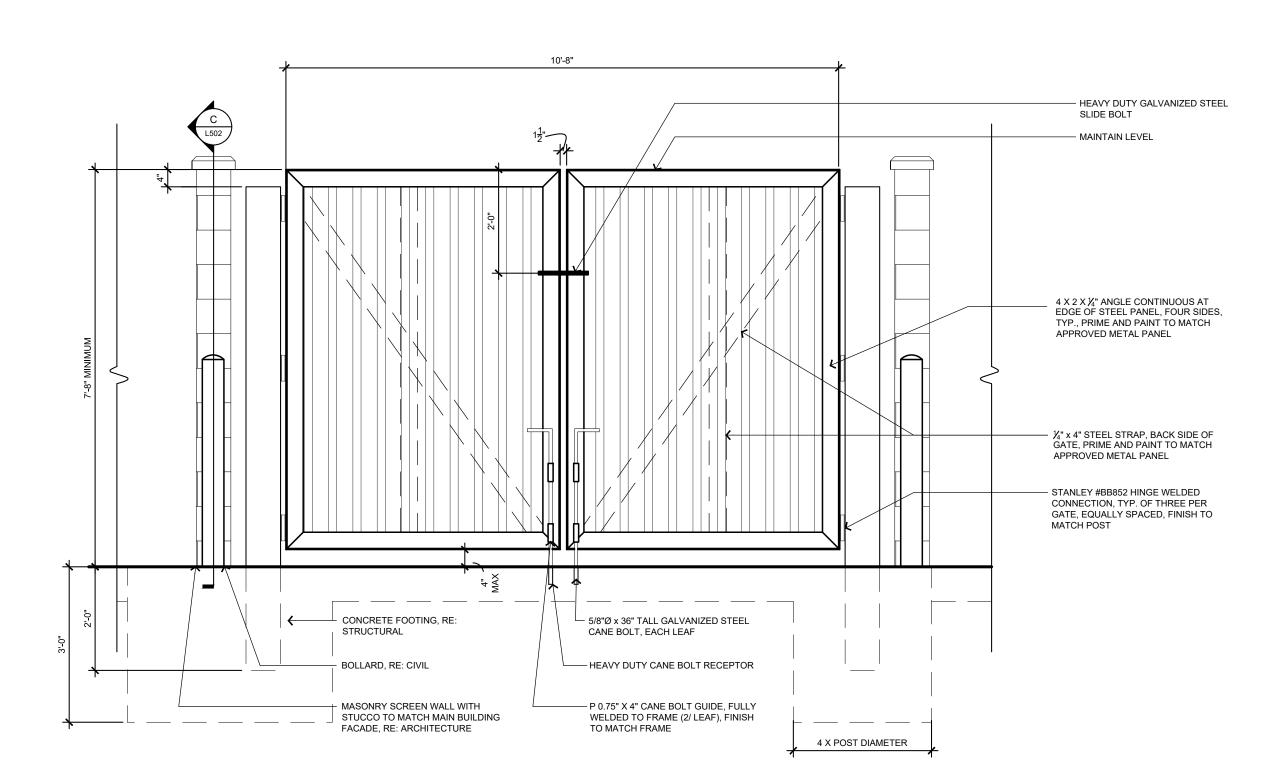
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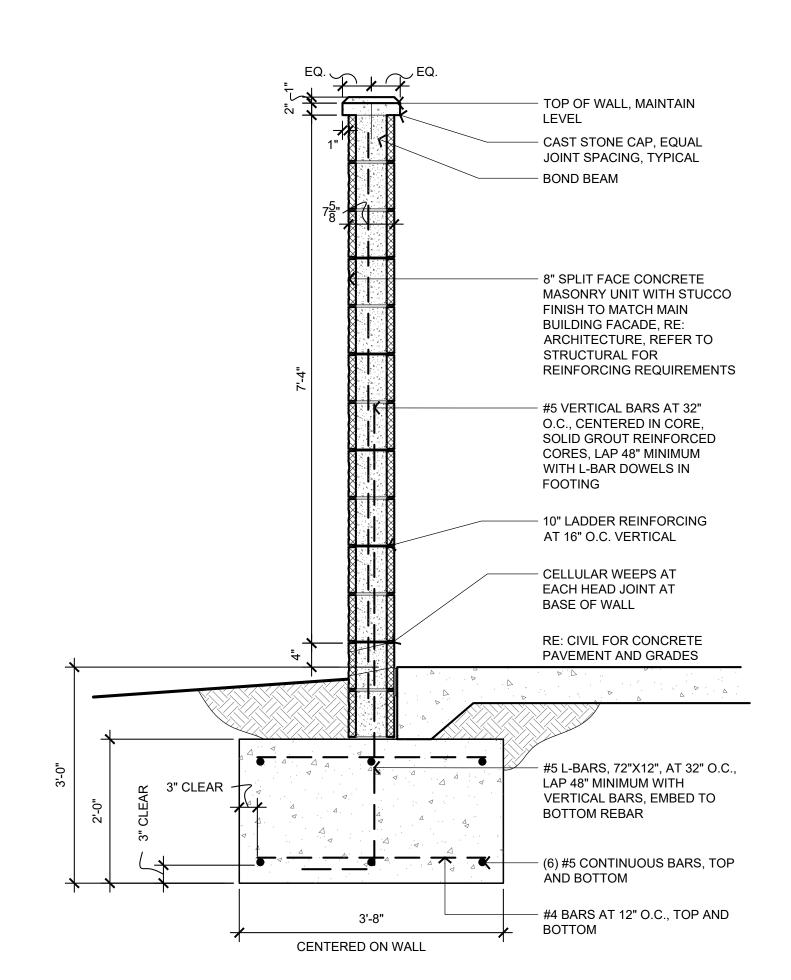
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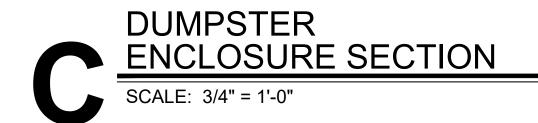


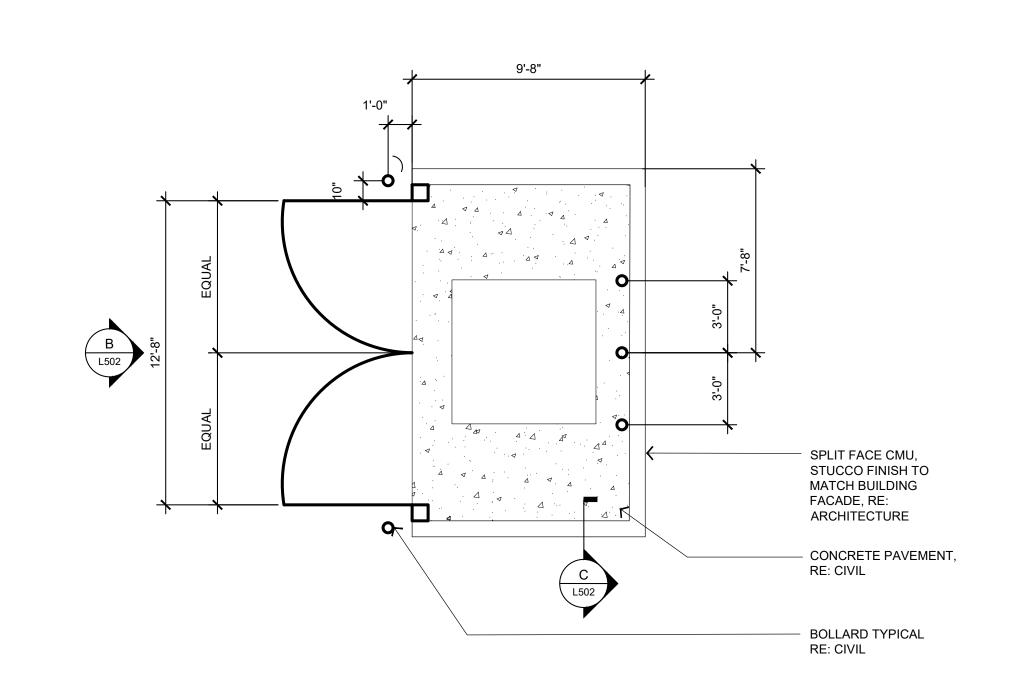
### ROCKERY **RETAINING WALL** SCALE: 1" = 1'-0"

UTILITY YARD **SCREEN WALL** SCALE: 3/4" = 1'-0"



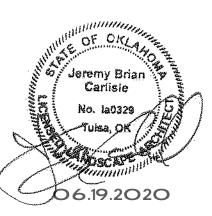












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GH2 PROJECT NUMBER: 20200068.00

ISSUE DATE:

05/19/20

ISSUE: **PERMIT SET** 

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GH2 PROJECT NUMBER: **20170021**ISSUE DATE: **08/07/2020** 

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OTHER ISSUE DATES:
NO. DESCRIPTION

SHEET NAME:
FIRST FLOOR REFERENCE PLAN

SHEET NUMBER:

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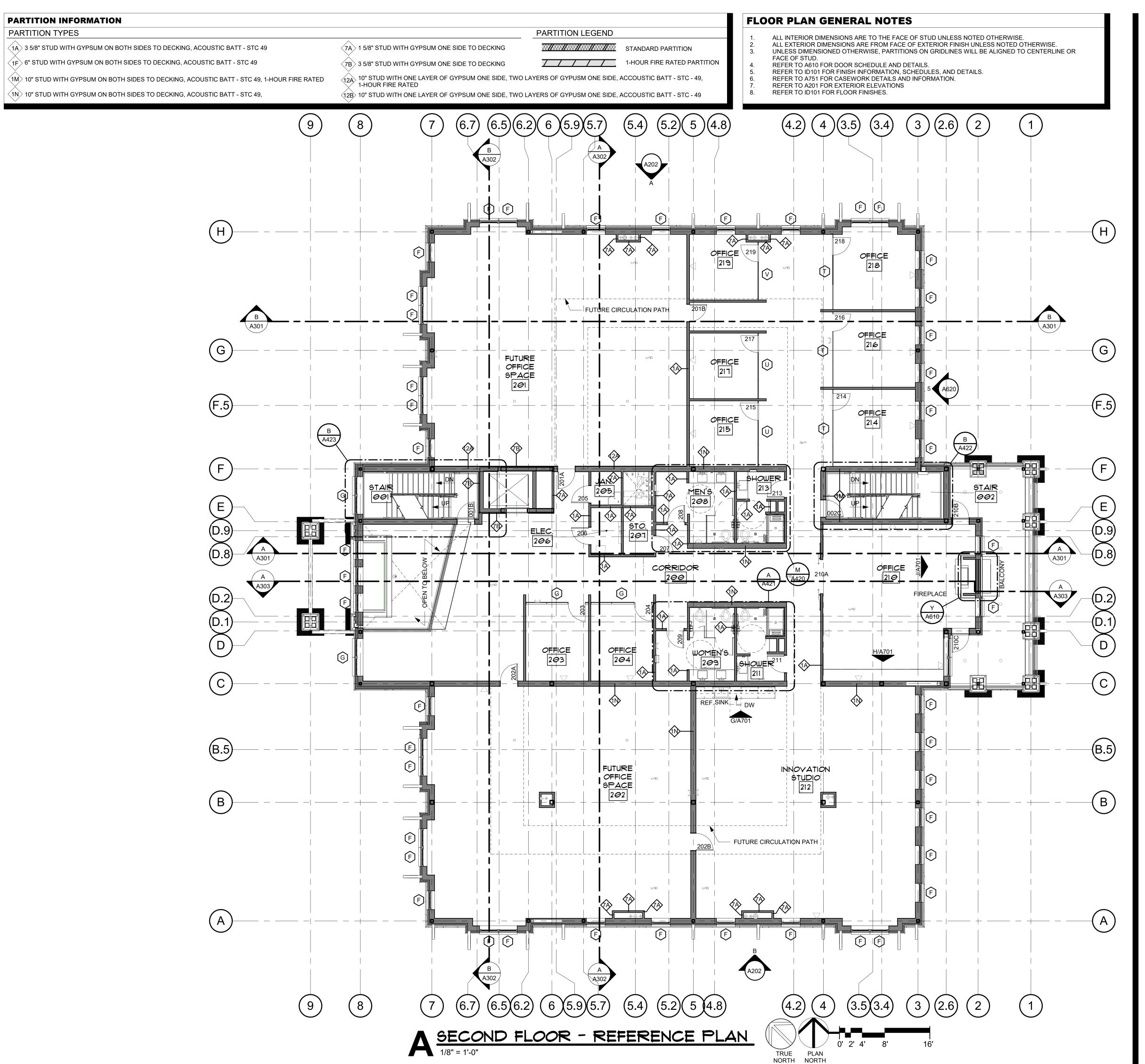
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NO. DESCRIPTION

SHEET NAME:
FIRST FLOOR DIMENSION PLAN

SHEET NUMBER:

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SECOND FLOOR REFERENCE PLAN

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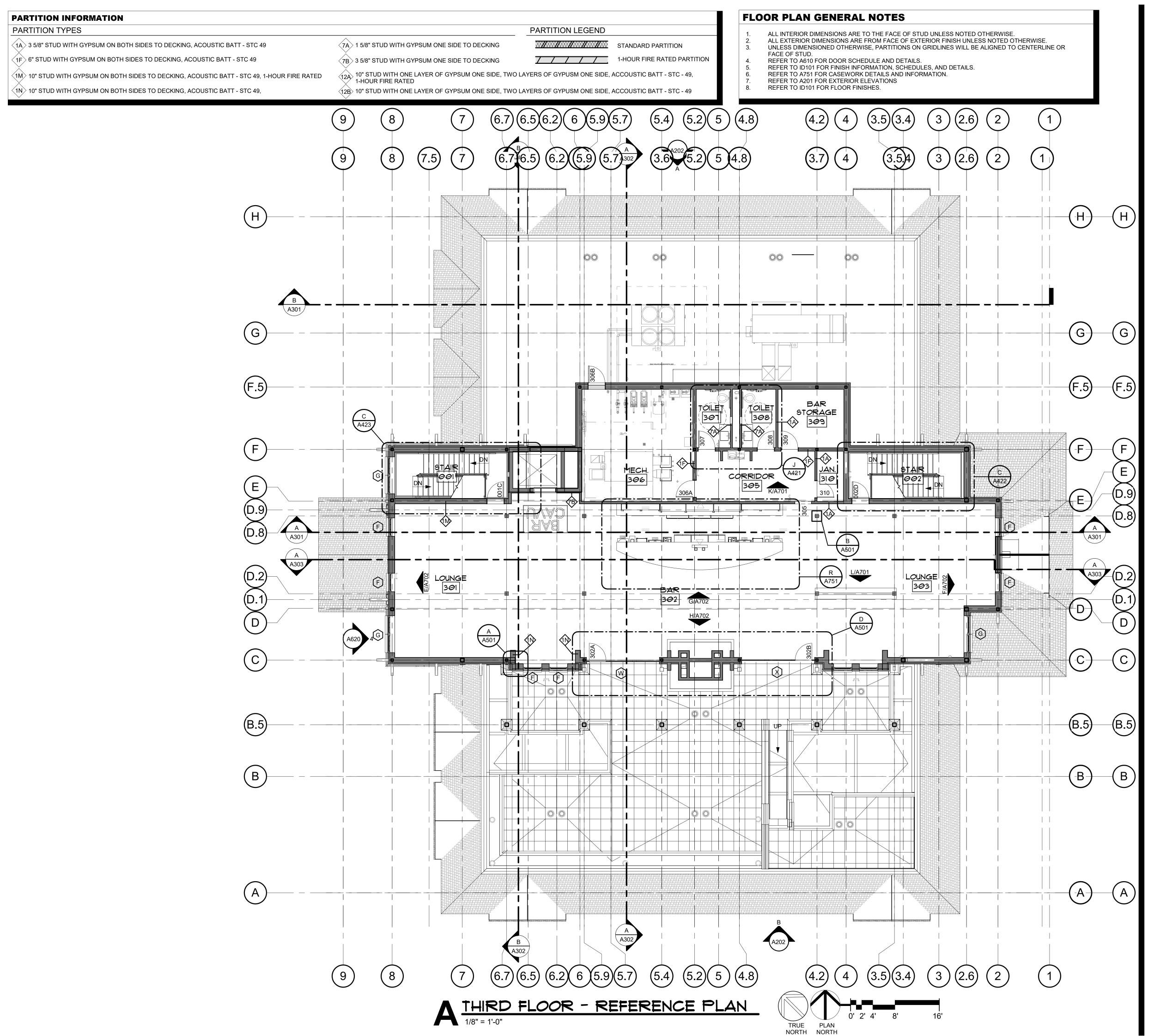
GH2 PROJECT NUMBER: 20170021

**PROGRESS SET** 

OTHER ISSUE DATES: NO. DESCRIPTION

DATE

SHEET NAME: **SECOND FLOOR -DIMENSION PLAN** 



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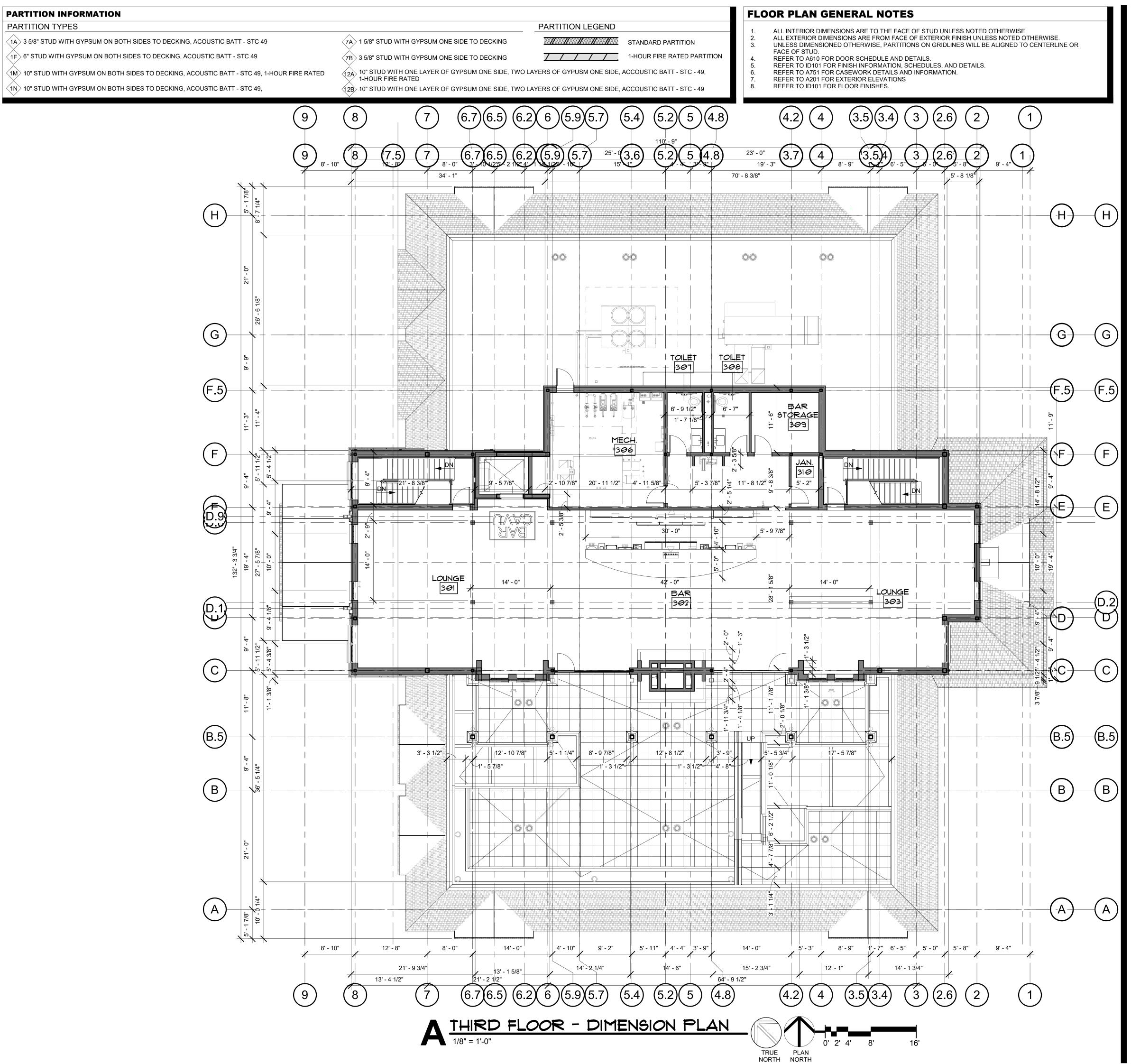
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THIRD FLOOR REFERENCE PLAN

SHEET NUMBER:

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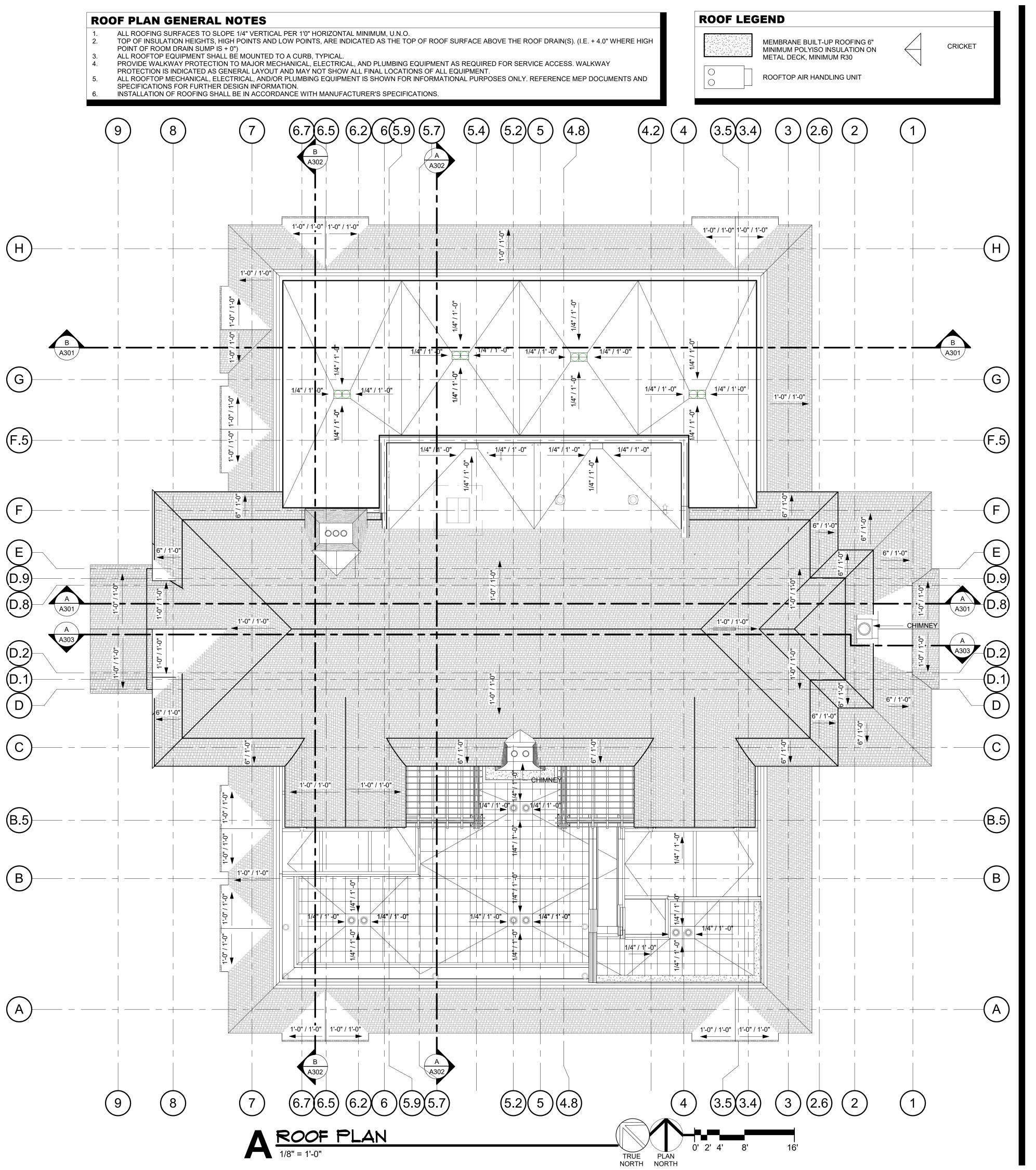
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THIRD FLOOR DIMENSION PLAN

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GH2 PROJECT NUMBER: **20170021**ISSUE DATE: **08/07/2020** 

ISSUE:
PROGRESS SET

OTHER ISSUE DATES: NO. DESCRIPTION

DATE

SHEET NAME:
ROOF PLAN

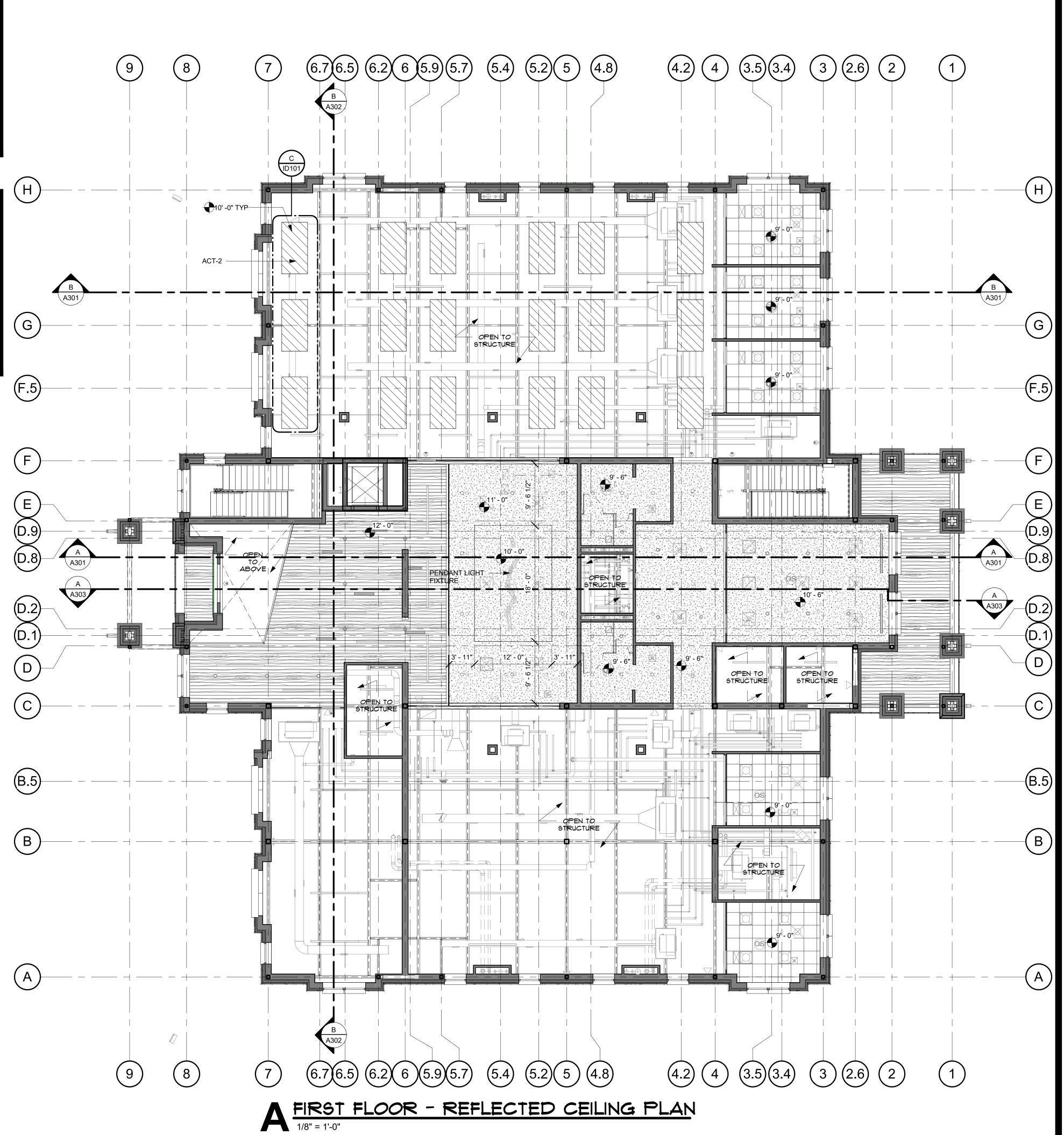
SHEET NUMBER:

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### REFLECTED CEILING PLAN GENERAL NOTES

- . ALL CEILINGS SHALL BE 10' 0" ABOVE FINISH FLOOR UNLESS NOTED OTHERWISE.
- REFERENCE MECHANICAL AND ELECTRICAL DRAWINGS FOR MOUNTING LOCATIONS OF ITEMS WHERE NO CEILING IS REQUIRED OR INDICATED.
   IN THE CASE OF MINOR DISCREPANCIES BETWEEN MECHANICAL, ELECTRICAL AND PLUMBING AND
- 3. IN THE CASE OF MINOR DISCREPANCIES BETWEEN MECHANICAL, ELECTRICAL AND PLUMBING AND ARCHITECTURAL DOCUMENTS IN THE LOCATION OF CEILING MOUNTED COMPONENTS, THE ARCHITECTURAL REFLECTED CEILING PLAN SHALL GOVERN. IN THE CASE OF MAJOR DISCREPANCIES, THE ARCHITECT SHALL BE NOTIFIED AS SOON AS THE DISCREPANCY IS DISCOVERED PRIOR TO PROCEEDING
- 4. LIGHTS, EXIT SIGNS, SMOKE DETECTORS, SPEAKERS, DIFFUSERS, STROBES, AND MISCELLANEOUS DEVICES SHALL BE CENTERED IN THE CEILING TILE IN WHICH THEY OCCUR, UNLESS NOTED OTHERWISE.
- 5. ALL CORRIDOR SPRINKLER HEADS SHALL BE ALIGNED IN THE SAME CEILING LOCATION PARALLEL TO THE WALL WITHIN EACH SPECIFIC CEILING CONSTRUCTION. SPRINKLER HEADS SHOWN ON THIS SHEET ARE WHERE ARCHITECTURALLY SIGNIFICANT AND FOR DESIGN INTENT ONLY.
- 6. EXIT SIGNS ARE SHOWN ON REFLECTED CEILING PLAN ONLY WHERE LOCATION IS ARCHITECTURALLY SIGNIFICANT; REFER TO G001 FOR MORE INFORMATION ON THE LOCATION OF THESE AND OTHER LIFE
- 7. ACCESS DOOR LOCATIONS IN GYPSUM BOARD CEILINGS ARE INDICATED ON REFLECTED CEILING PLANSS ONLY WHERE ARCHITECTURALLY SIGNIFICANT. REFERENCE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR OTHER ACCESS DOOR LOCATIONS.

REFLEC	TED CEILING PLAN LI	EGEND	
	POOL TABLE LIGHT	•	RECESSED CAN LIGHT
	GYPSUM BOARD - FOR		STRIP LIGHT
2 m 2 m 2 m 2 m 2 m 2 m 2 m 2 m 2 m 2 m	PAINT REFER TO ID SHEETS		SUPPLY DIFFUSER
	ACT-1, ACOUSTIC CEILING TILE		RETURN
	ACOUSTICAL CEILING PANELS		LINEAR DIFUSSER/RETURN REFER TO MECHANICAL DRAWINGS
			EXHAUST FAN
10' - 0" AFF	CEILING HEIGHT	0	SMOKE DETECTOR
			EXIT SIGN





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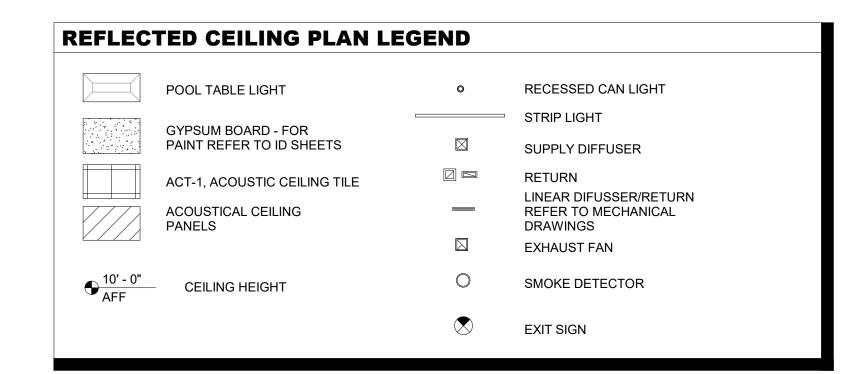
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FIRST FLOOR REFLECTED
CEILING PLAN
SHEET NUMBER:

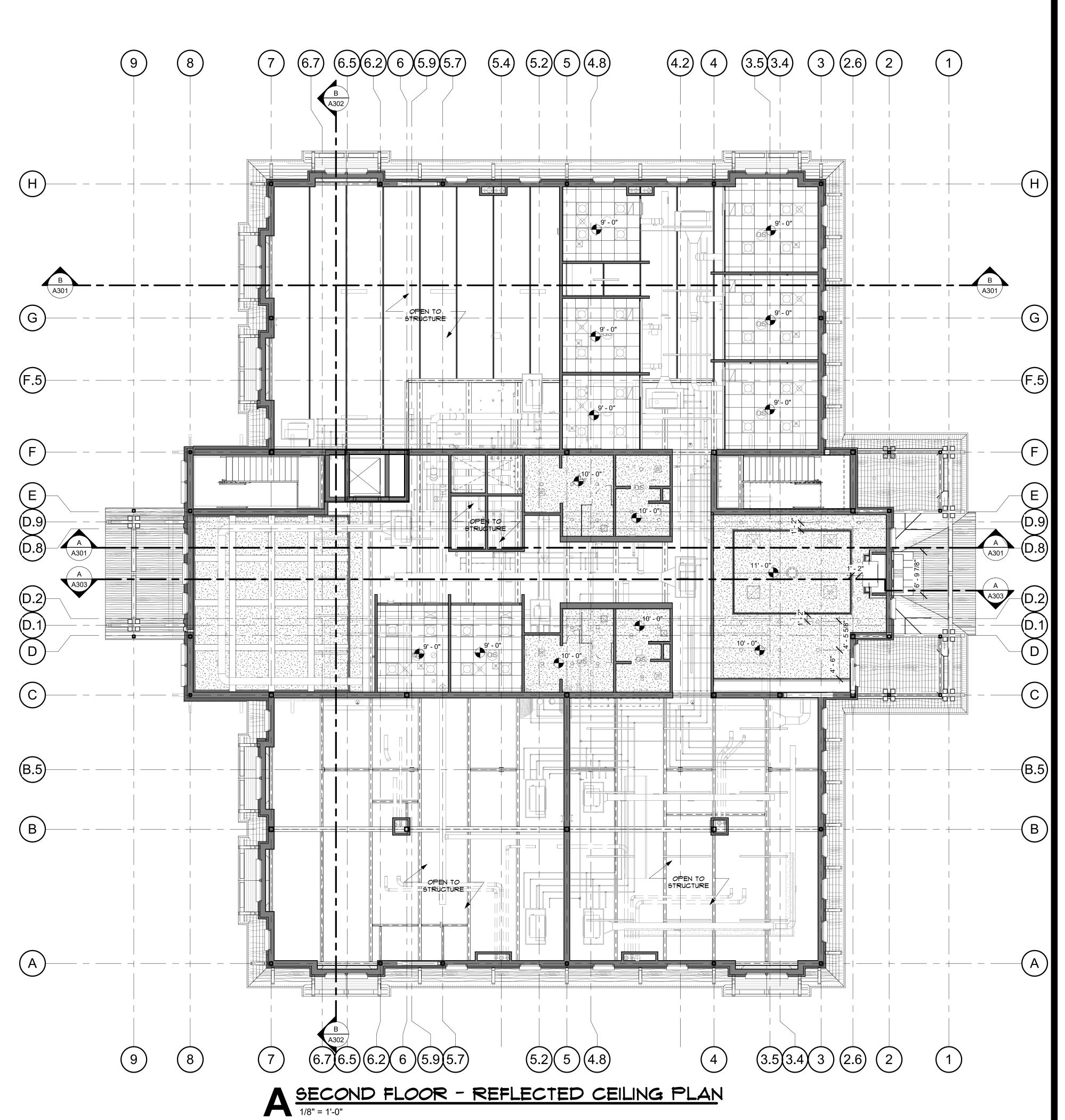
### REFLECTED CEILING PLAN GENERAL NOTES

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- IN THE CASE OF MINOR DISCREPANCIES BETWEEN MECHANICAL, ELECTRICAL AND PLUMBING AND ARCHITECTURAL DOCUMENTS IN THE LOCATION OF CEILING MOUNTED COMPONENTS, THE ARCHITECTURAL REFLECTED CEILING PLAN SHALL GOVERN. IN THE CASE OF MAJOR DISCREPANCIES, THE ARCHITECT SHALL BE NOTIFIED AS SOON AS THE DISCREPANCY IS DISCOVERED PRIOR TO PROCEEDING WITH THE WORK.
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- WALL WITHIN EACH SPECIFIC CEILING CONSTRUCTION. SPRINKLER HEADS SHOWN ON THIS SHEET ARE WHERE ARCHITECTURALLY SIGNIFICANT AND FOR DESIGN INTENT ONLY.

  6. EXIT SIGNS ARE SHOWN ON REFLECTED CEILING PLAN ONLY WHERE LOCATION IS ARCHITECTURALLY
- SIGNIFICANT; REFER TO G001 FOR MORE INFORMATION ON THE LOCATION OF THESE AND OTHER LIFE SAFETY ITEMS.

  7. ACCESS DOOR LOCATIONS IN GYPSUM BOARD CEILINGS ARE INDICATED ON REFLECTED CEILING PLANS
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SHEET NAME:
SECOND FLOOR REFLECTED
CEILING PLAN

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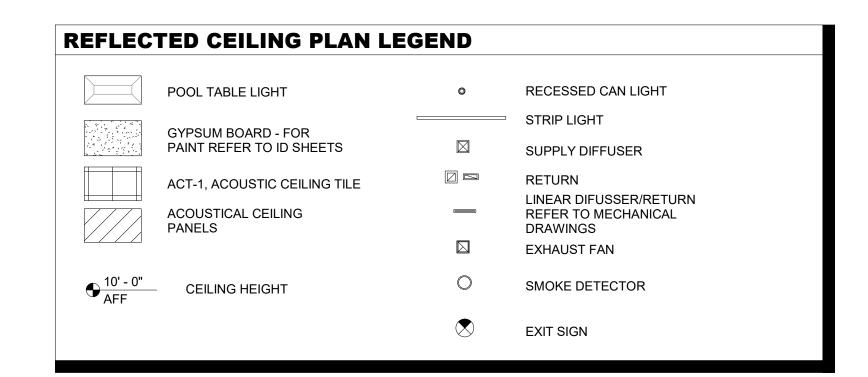
### REFLECTED CEILING PLAN GENERAL NOTES

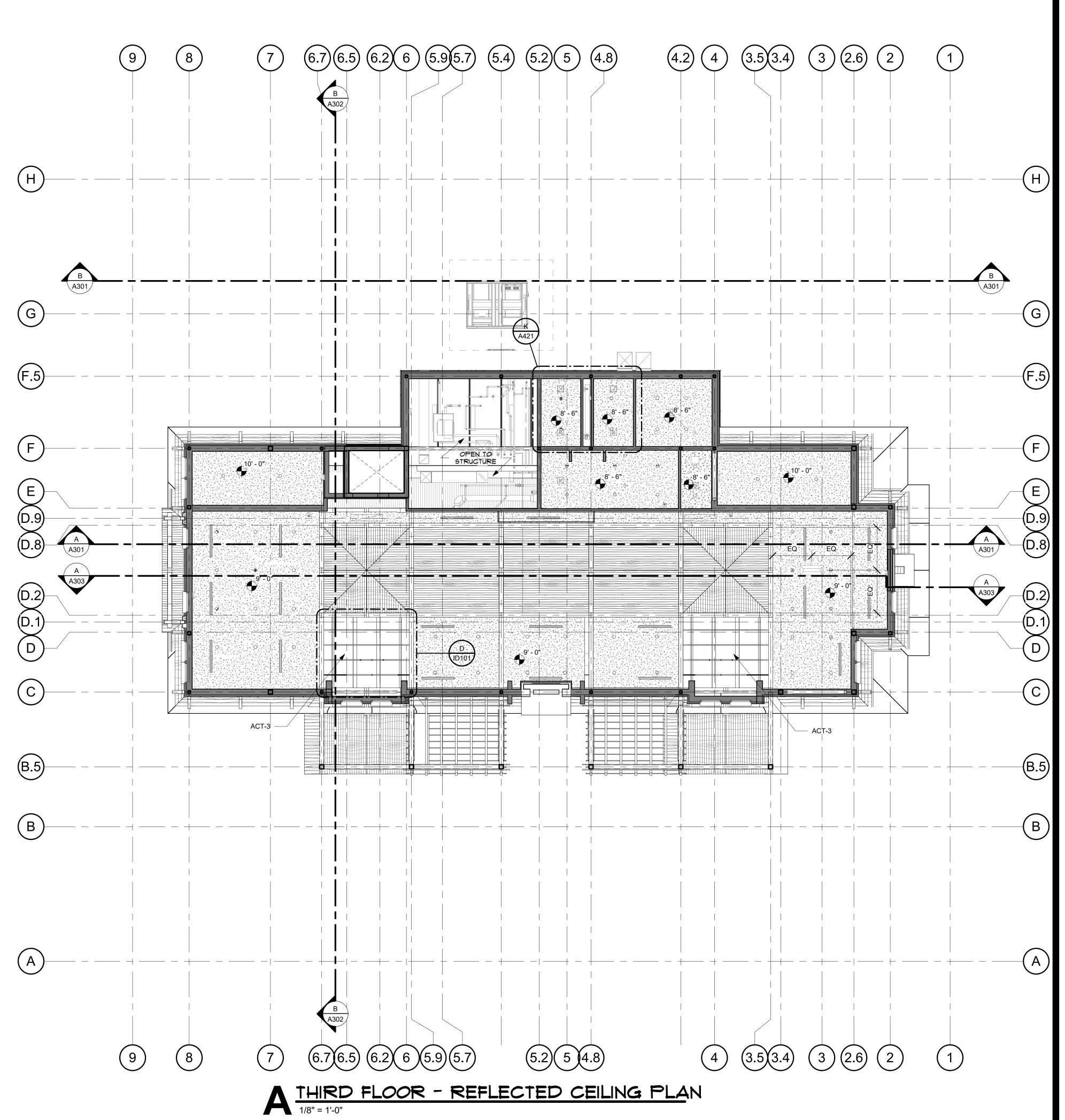
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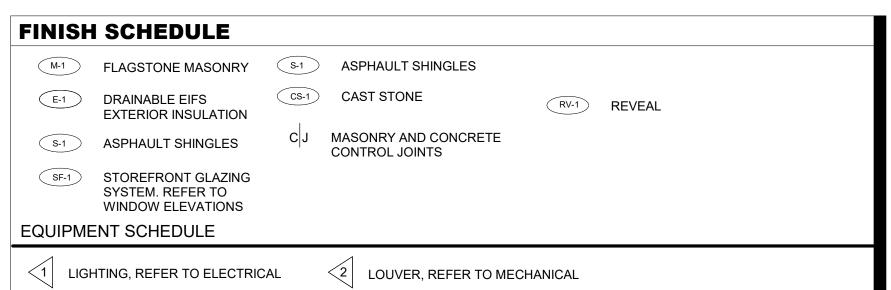
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GH2 PROJECT NUMBER: **20170021**ISSUE DATE: **08/07/2020** 

PROGRESS SET

OTHER ISSUE DATES:
NO. DESCRIPTION

SHEET NAME:
THIRD FLOOR REFLECTED
CEILING PLAN
SHEET NUMBER:



### **EXTERIOR ELEVATION GENERAL NOTES**

REFER TO SHEET A620 FOR WINDOW TYPES.

REFER TO SHEET A610 FOR DOOR SCHEDULE.
REFER TO A3 SERIES FOR EXTERIOR WALL SEC

. REFER TO A3 SERIES FOR EXTERIOR WALL SECTIONS.

ALL EXTERIOR DIMENSIONS ARE FROM FACE OF EXTERIOR FINISH, UNLESS NOTED OTHERWISE MASONRY DIMENSIONS ARE NOMINAL, UNLESS NOTED OTHERWISE

DETAILS ON EXTERIOR ELEVATIONS ARE GENERAL IN NATURE AND FOR ILLUSTRATIVE PURPOSES ONLY.

REFER TO WALL DETAILS AND SECTIONS FOR INFO CONCERNING EXTERIOR CONSTRUCTION REFER TO FLOOR PLANS, SECTIONS, WALL DETAILS, AND STRUCTURAL DRAWINGS FOR COMPLETE

INFORMATION

8. REFER TO ELECTRICAL FOR EXTERIOR LIGHTING





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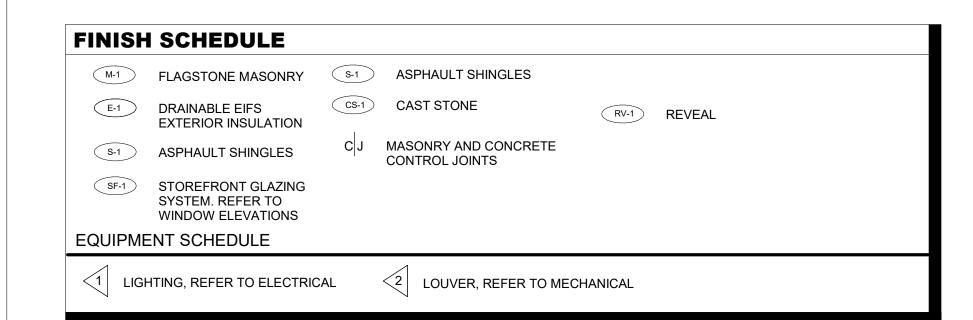
DATE

SHEET NAME: **EXTERIOR ELEVATIONS** 

SHEET NUMBER:

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### **EXTERIOR ELEVATION GENERAL NOTES**

- . REFER TO SHEET A620 FOR WINDOW TYPES.
- REFER TO SHEET A610 FOR DOOR SCHEDULE.
  REFER TO A3 SERIES FOR EXTERIOR WALL SECTIONS.
- 4. ALL EXTERIOR DIMENSIONS ARE FROM FACE OF EXTERIOR FINISH, UNLESS NOTED OTHERWISE
- 5. MASONRY DIMENSIONS ARE NOMINAL, UNLESS NOTED OTHERWISE 6. DETAILS ON EXTERIOR ELEVATIONS ARE GENERAL IN NATURE AND FOR ILLUSTRATIVE PURPOSES ONLY.
- REFER TO WALL DETAILS AND SECTIONS FOR INFO CONCERNING EXTERIOR CONSTRUCTION
- 7. REFER TO WALL DETAILS AND SECTIONS FOR INFO CONCERNING EXTERIOR CONSTRUCTION
  INFORMATION
- REFER TO ELECTRICAL FOR EXTERIOR LIGHTING

### **ELEVATION KEY NOTES**

1 STONE

2 STEEL PLATE, PIN MOUNTED SIGNAGE, REFER TO SIGNAGE





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**Folds** 

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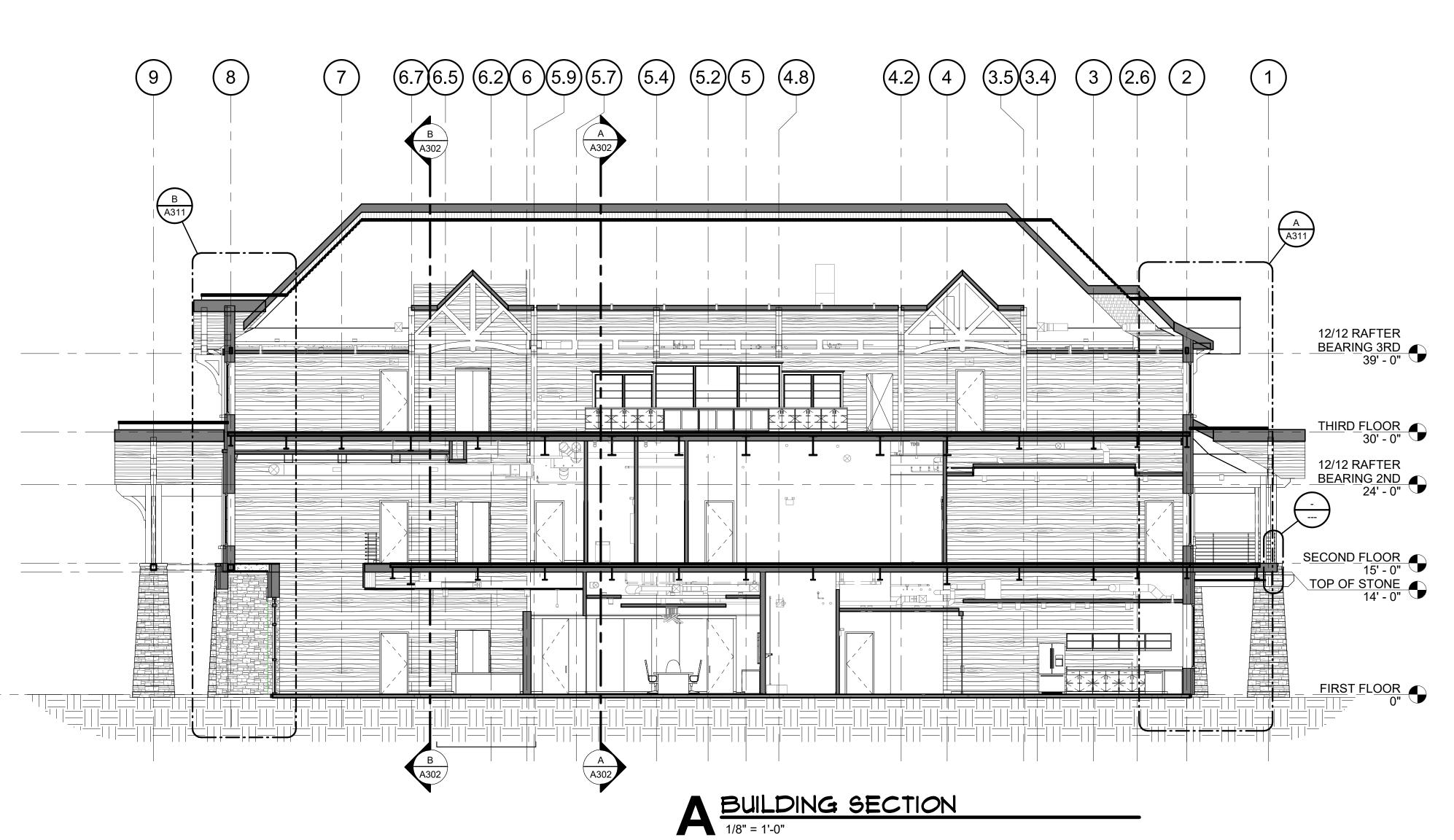
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ELEVATIONS

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A202

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GH2 PROJECT NUMBER: **20170021** 

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DATE

SHEET NAME: **BUILDING SECTIONS** 



8/7/2020 3:39:29 PM

Building

GH2 PROJECT NUMBER: **20170021** ISSUE DATE: **08/07/2020** 

**PROGRESS SET** 

OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME: **BUILDING SECTIONS** 

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SHEET NAME: **BUILDING SECTIONS** 

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DATE

ISSUE DATE: **08/07/2020** 

THIRD FLOOR
30' - 0"

VAPOR BARRIER

DRAINABLE EIFS SYSTEM

PLYWOOD SHEATHING

METAL STUDS WITH BATT INSULATION

BEARING 2ND 24' - 0"

12/12 RAFTER

WINDOW, REFER TO A620

SECOND FLOOR
15' - 0"

DRAINABLE EIFS SYSTEM

PLYWOOD SHEATHING

METAL STUDS WITH BATT INSULATION

CONTINUOUS FLUID APPLIED VAPOR BARRIER

ALUMINUM GLAZING SYSTEM, REFER TO A620

CONTINUOUS FLUID APPLIED VAPOR BARRIER

PLYWOOD SHEATHING

First Floor\_

SLAB AND FOUNDATION, REFER TO STRUCTURAL

GRANULAR BASE, REFER TO STRUCTURAL

CONTINUOUS UNDER SLAB VAPOR BARRIER

RIGID INSULATION

METAL STUDS WITH BATT INSULATION

MASONRY VENEER

2" AIR GAP

CONTINUOUS FLUID APPLIED

DRAINABLE EIFS SYSTEM

PLYWOOD SHEATHING

METAL STUDS WITH -BATT INSULATION

CONTINUOUS FLUID APPLIED -VAPOR BARRIER

ALUMINUM GLAZING SYSTEM,

DRAINABLE EIFS SYSTEM

VAPOR BARRIER

PLYWOOD SHEATHING

METAL STUDS WITH BATT INSULATION

CONTINUOUS FLUID APPLIED

SECOND FLOOR 15' - 0"

CONTINUOUS FLUID APPLIED

MASONRY VENEER

VAPOR BARRIER

PLYWOOD SHEATHING

METAL STUDS WITH -BATT INSULATION

2" AIR GAP

REFER TO A620

- DRAINABLE EIFS SYSTEM CONTINUOUS FLUID APPLIED VAPOR BARRIER PLYWOOD SHEATHING METAL STUDS WITH BATT INSULATION ALUMINUM GLAZING SYSTEM, REFER TO A620 THIRD FLOOR 30' - 0" DRAINABLE EIFS SYSTEM CONTINUOUS FLUID APPLIED VAPOR BARRIER - PLYWOOD SHEATHING - METAL STUDS WITH **BATT INSULATION** WINDOW, REFER TO A620 SECOND FLOOR 15' - 0" - MASONRY VENEER — 2" AIR GAP - CONTINUOUS FLUID APPLIED VAPOR BARRIER PLYWOOD SHEATHING METAL STUDS WITH BATT INSULATION INTERIOR SHEATHING SLAB AND FOUNDATION,
 REFER TO STRUCTURAL CONCRETE SIDEWALK,
 REFER TO CIVIL FIRST FLOOR
0" GRANULAR BASE, REFER TO STRUCTURAL RIGID INSULATION CONTINUOUS UNDER

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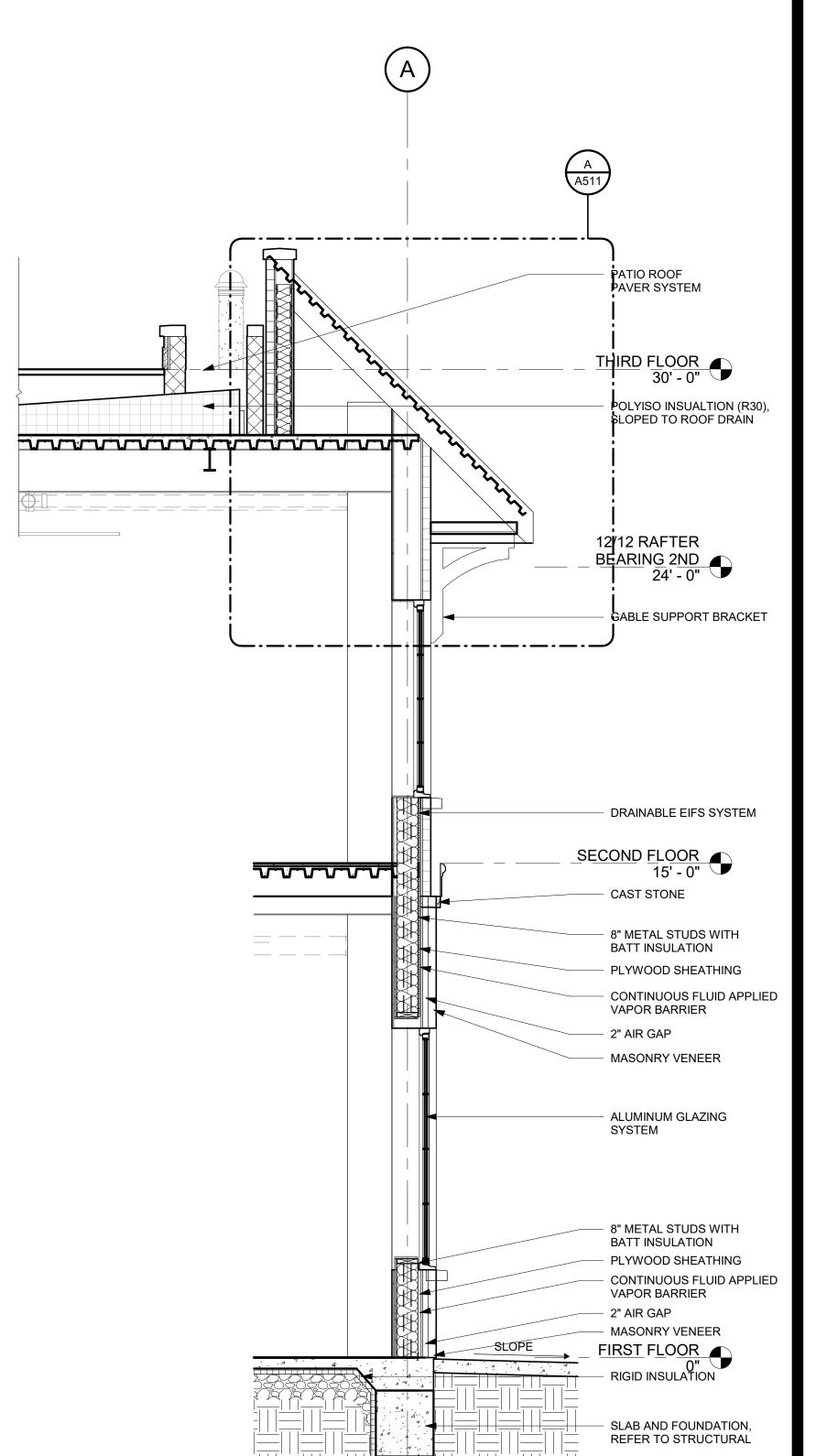
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ISSUE DATE: **08/07/2020** 

SHEET NUMBER:

SLAB VAPOR BARRIER



MALL SECTION

3/8" = 1'-0"

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Folds of Honor Operations Building

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PROGRESS SET

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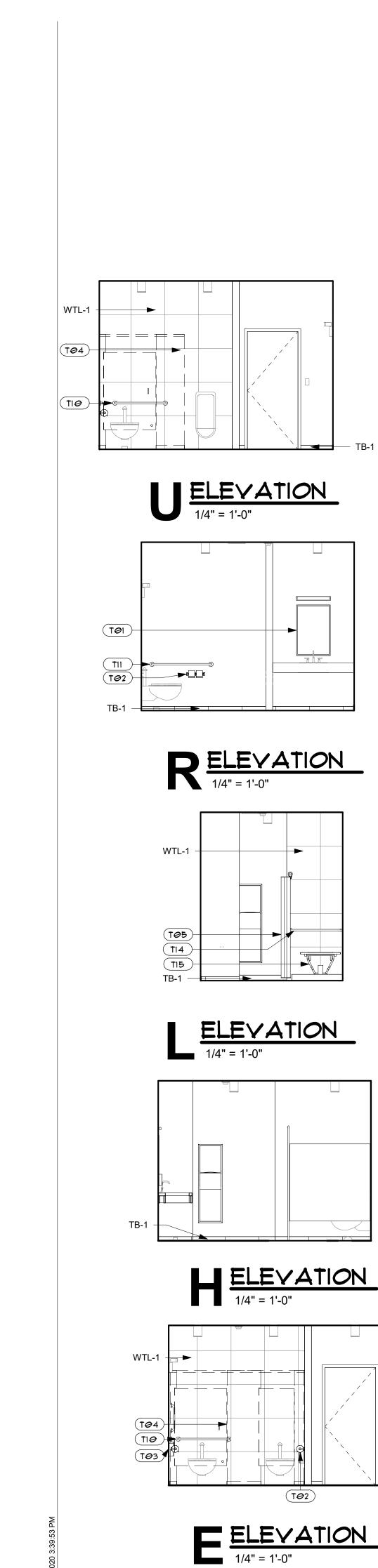
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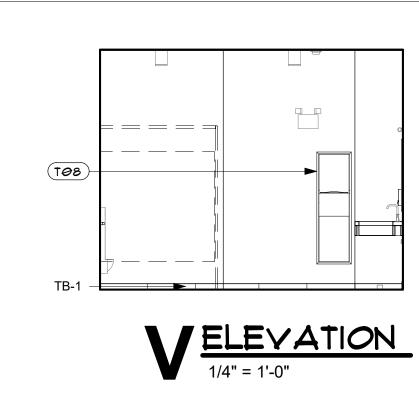
SHEET NAME:
WALL SECTIONS

SHEET NUMBER:

A312

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T06

T ELEVATION

1/4" = 1'-0"

<u>ELEVATION</u>
1/4" = 1'-0"

RB-1

T04)

TØ2

WTL-1

T05 T14 T10

TIB

T12 T11 T02

TOI

WRAP PIPES

ELEVATION

1/4" = 1'-0"

(POT)

Θ /

G ELEVATION

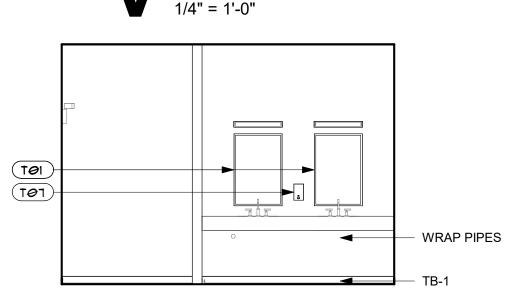
1/4" = 1'-0"

TOB

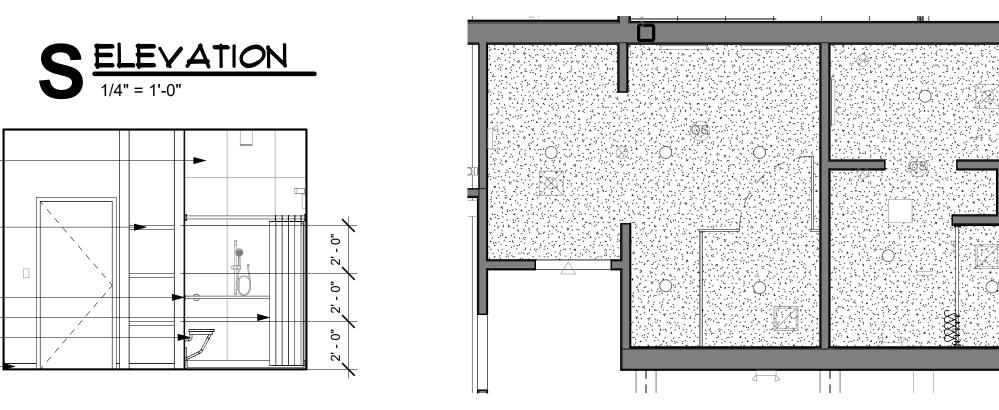
DELEVATION

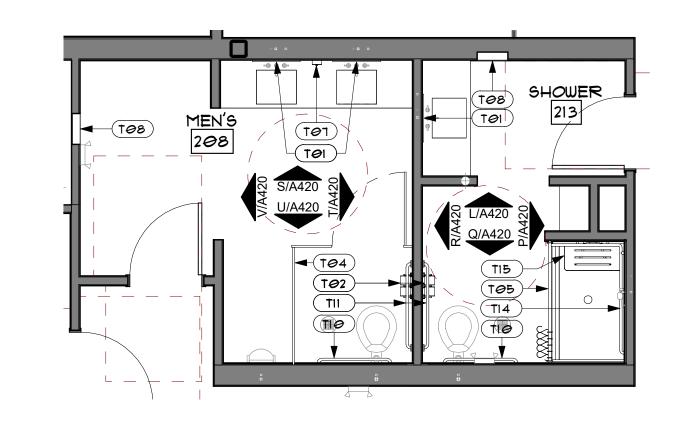
1/4" = 1'-0"

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TOI	LET ACCESSORIES	PLAN DESI	GNATOR: (TX	$\overline{\mathbf{x}}$		
TAG	DESCRIPTION	C.F.C.I	O.F.C.I.	O.F.O.I.	MANUFACTURER	MODEL NUMBER
T01	GLASS MIRROR WITH STAINLESS STEEL CHANNEL FRAME	0			BOBRICK	B-165 2436
T02	SURFACE-MOUNTED TOILET TISSUE DISPENSER, TWO ROLLS	0			BOBRICK	B-265
T03	SURFACE-MOUNTED SANITARY NAPKIN DISPOSAL	0			BOBRICK	B-270
T04	RESTROOM PARTITIONS, FLOOR MOUNTED/OVERHEAD BRACED	0			BRADLEY	700 SERIES, 5WL METAL
T05	SHOWER CURTAIN AND ROD WITH HOOKS	0			BRADLEY	9539, 60"; 9533; 9536
T06	SHELF WITH MOP AND BROOM HOLDERS AND HOOKS	0			BOBRICK	B-239X34
T07	SOAP DISPENSER, WALL-MOUNTED		0			
T08	SEMI-RECESSED PAPER TOWEL DISPENSER/WASTE RECEPTACLE	0			BOBRICK	B-3942
T09	RECESSED CHANGING TABLE, STAINLESS STEEL	0			BOBRICK	KB110-SSRE
T10	1-1/4" DIAMETER STAINLESS STEEL GRAB BARS WITH SNAP FLANGE	0			BOBRICK	B-5806X36
T11	1-1/4" DIAMETER STAINLESS STEEL GRAB BARS WITH SNAP FLANGE	0			BOBRICK	B-5806X42
T12	1-1/4" DIAMETER STAINLESS STEEL GRAB BARS WITH SNAP FLANGE	0			BOBRICK	B-5806X18
T13	INSULATED PIPE WRAP	0				
T14	ADA SHOWER GRAB BAR				BOBRICK	B-5837.99
T15	ADA SHOWER SEAT				BRADLEY	HDPE-9593
C.F.C.I O.F.C.I	. = OWNER FURNISHED, CONTRACTOR INSTALLED 2. PROVIDE . = OWNER FURNISHED, OWNER INSTALLED 3. REFER TO	IN-WALL BLOCK	KING FOR ALL F NTING HEIGHTS	PARTITIONS, GR S FOR LOCATIO	PLANS; RE: INTERIOR ELEVA AB BARS, AND SHOWER SEAT NS OF TOILET ACCESSORIES.	FIONS FOR ADDITIONAL DETAILS. S IF APPLICABLE.





ENLARGED PLAN

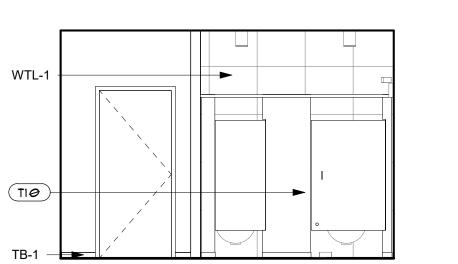
1/4" = 1'-0"

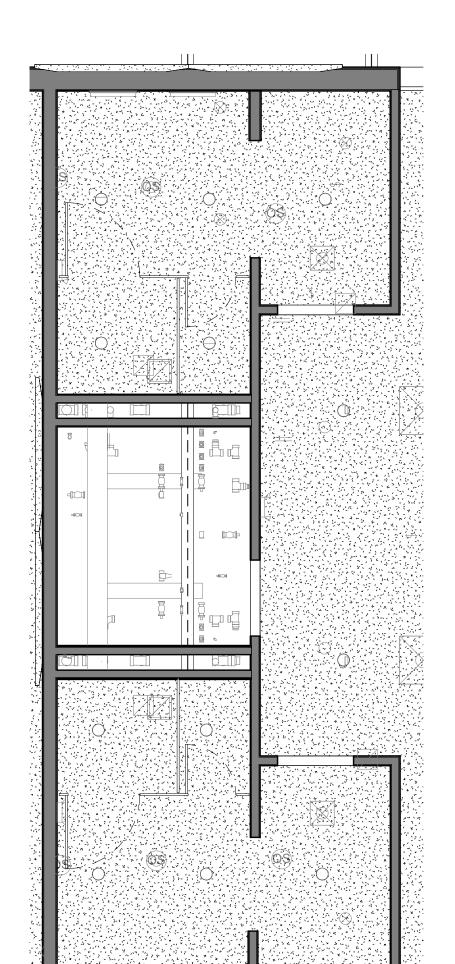
(109)



T14 T05 T15

OPEN SHELVING

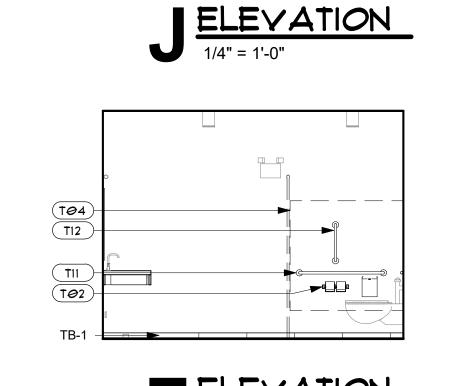


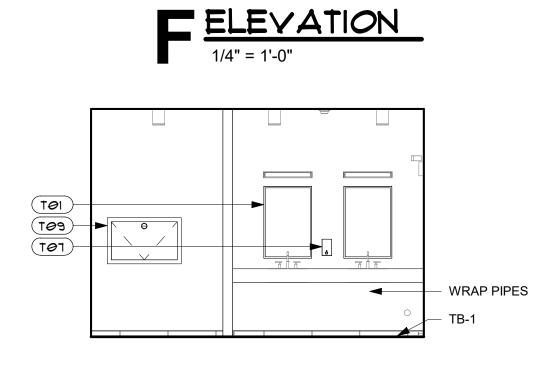


ENLARGED CEILING PLAN

1/4" = 1'-0"

 *
TO1  MEN'S  114  QQ G/A420 QQ Y  J/A420 T10  T10  T10  T10  T10  T10  T10  T1
Til Tø2 Tø4 C/A420 CZYY TØ1 TØ1 TØ1 TØ3 TØ3

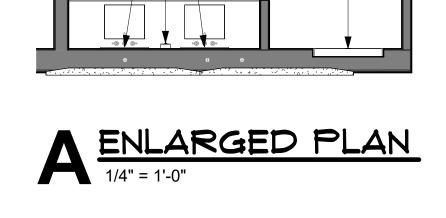


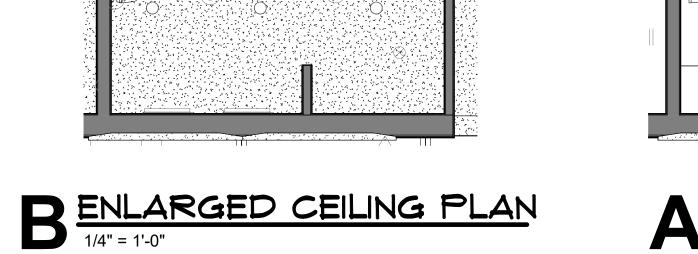


C ELEVATION

1/4" = 1'-0"







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Building **Operations** 

of

GH2 PROJECT NUMBER: **20170021** ISSUE DATE: **08/07/2020** 

**PROGRESS SET** 

OTHER ISSUE DATES: NO. DESCRIPTION

DATE

SHEET NAME: **ENLARGED TOILET PLANS AND ELEVATIONS** 

GH2 PROJECT NUMBER: **20170021** ISSUE DATE: **08/07/2020** 

**PROGRESS SET** 

OTHER ISSUE DATES:

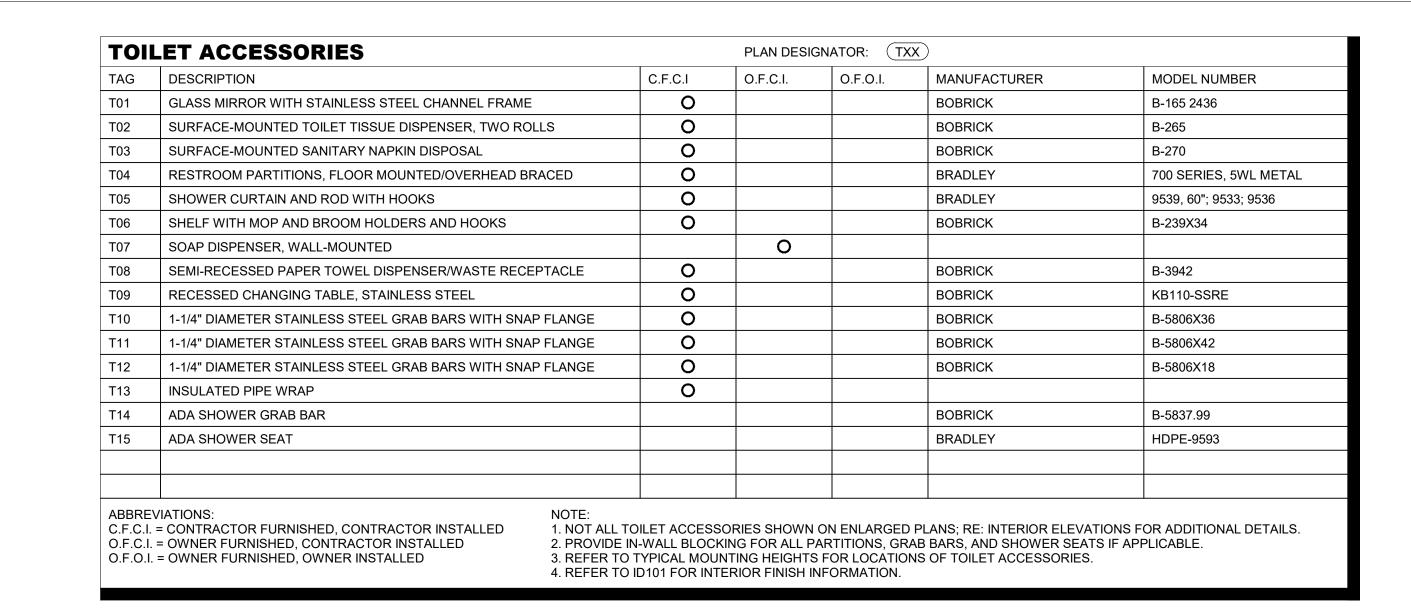
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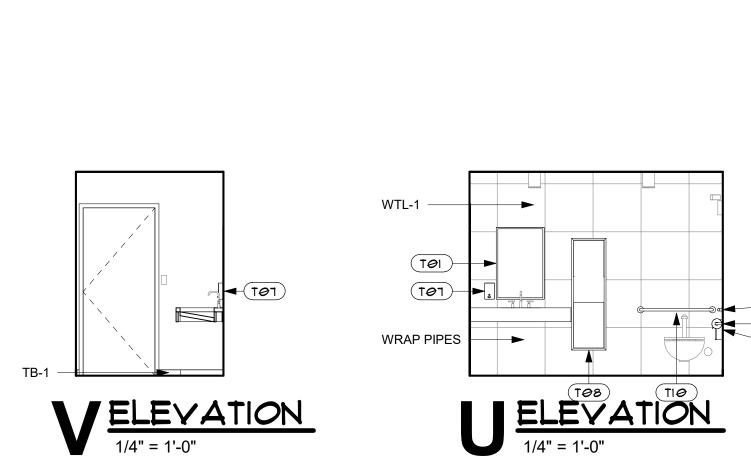
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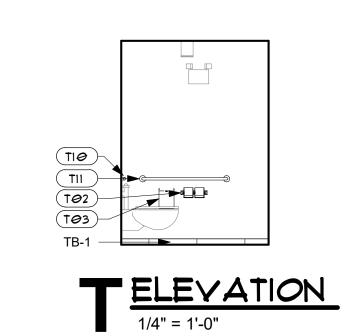
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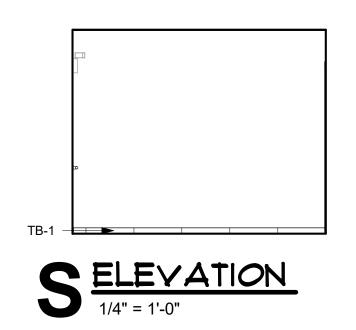
ENLARGED PLAN

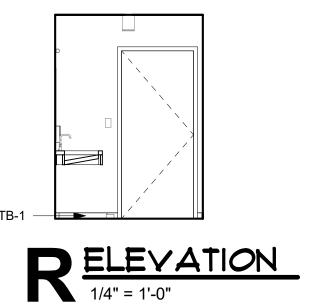
1/4" = 1'-0"

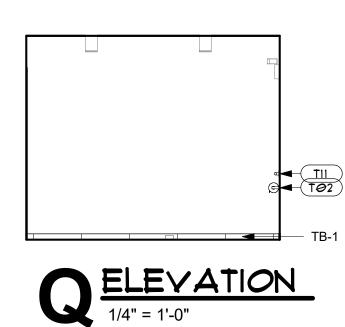


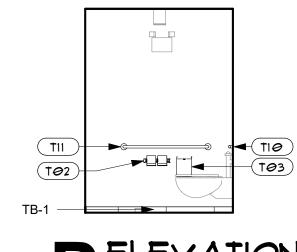


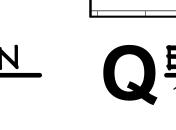


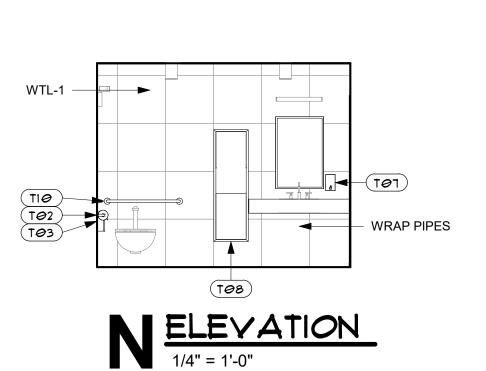


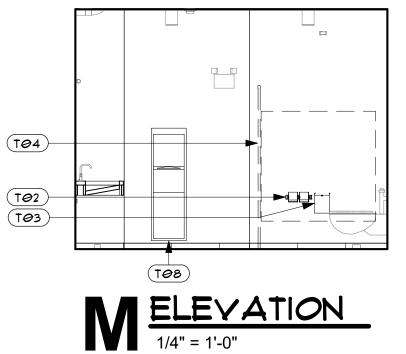


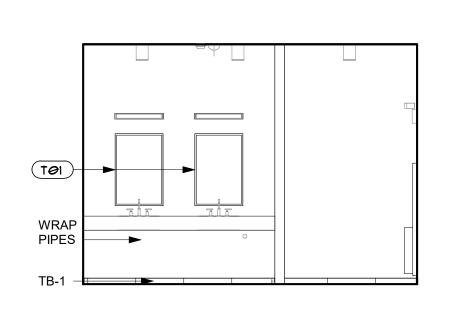




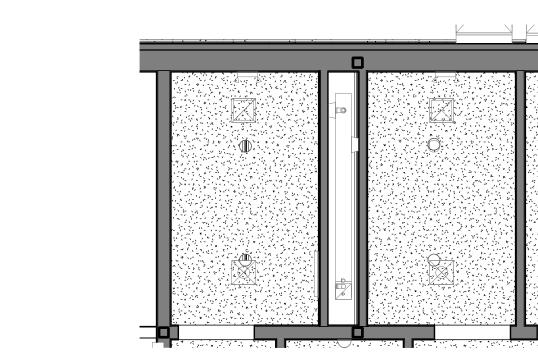


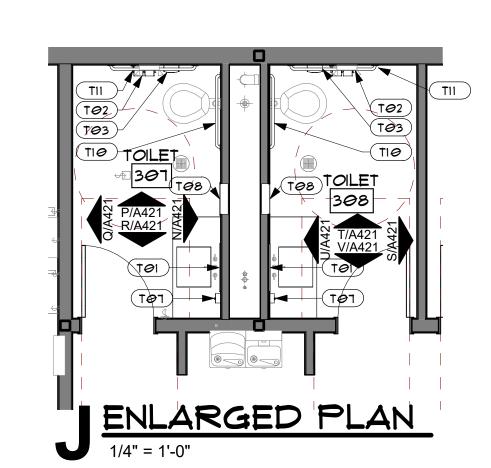


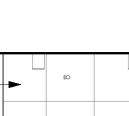


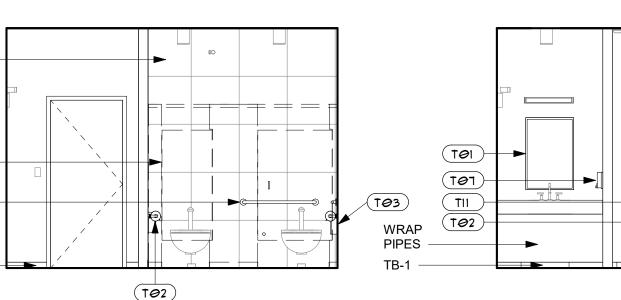


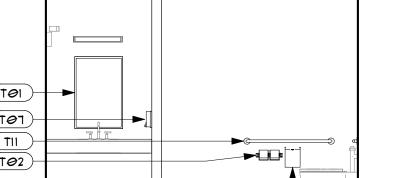
**ELEVATION**1/4" = 1'-0"

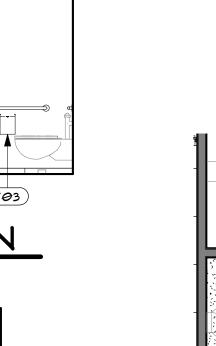


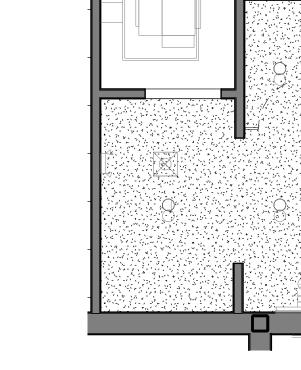


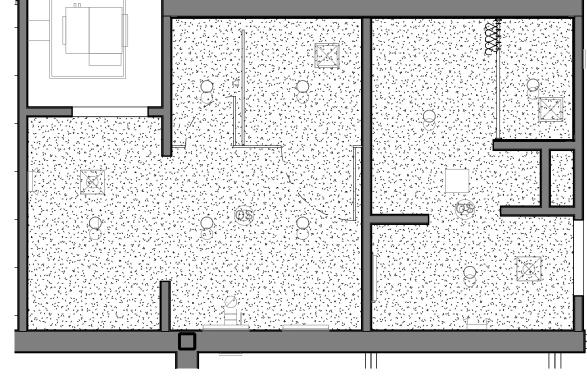






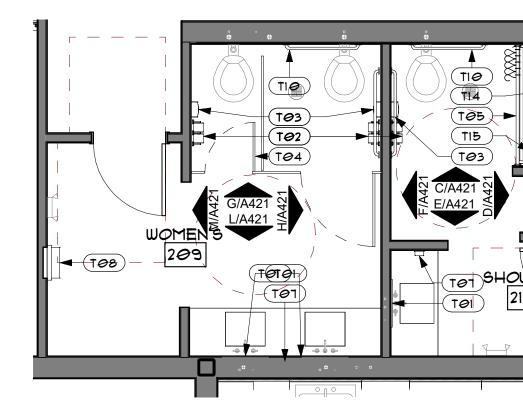


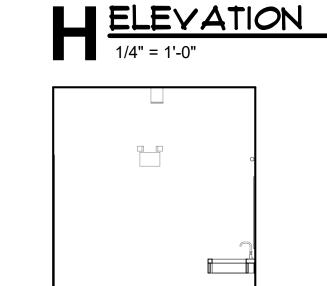


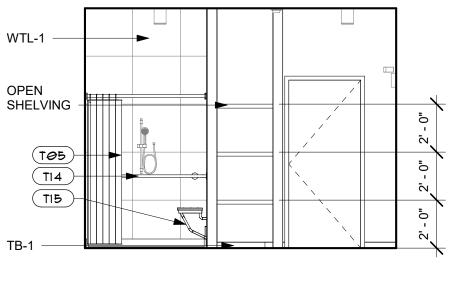


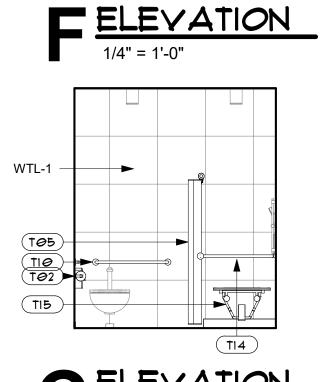
ENLARGED CEILING PLAN

1/4" = 1'-0"









B ENLARGED CEILING PLAN
1/4" = 1'-0"

ELEVATION

1/4" = 1'-0" DELEVATION
1/4" = 1'-0"

C ELEVATION
1/4" = 1'-0"

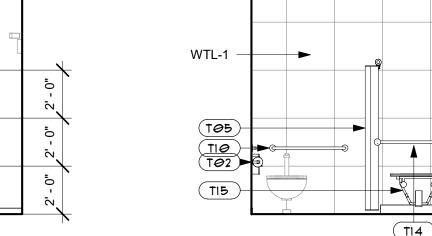
TØ4)

TII TØ2

TØ4 TIO

WTL-1

G ELEVATION
1/4" = 1'-0"





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8/7/2020 3:40:08 PM

GH2 PROJECT NUMBER: **20170021** ISSUE DATE: **08/07/2020** 

**PROGRESS SET** 

OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME: **ENLARGED STAIR PLANS AND DETIALS** 

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GH2 PROJECT NUMBER: **20170021 PROGRESS SET** OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME: **ENLARGED STAIR PLANS AND DETIALS** 

SHEET NUMBER:

ISSUE DATE: **08/07/2020** 



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rations Building

olds of Honor Operations

GH2 PROJECT NUMBER: **20170021**ISSUE DATE: **08/07/2020** 

PROGRESS SET

OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME:
PLAN DETAILS

SHEET NUMBER:

A501
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ARCHITECTS

ARCHITECTS

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Folds of Honor Operations Buildin

GH2 PROJECT NUMBER: 20170021 ISSUE DATE: 08/07/2020

ISSUE:
PROGRESS SET

OTHER ISSUE DATES: NO. DESCRIPTION

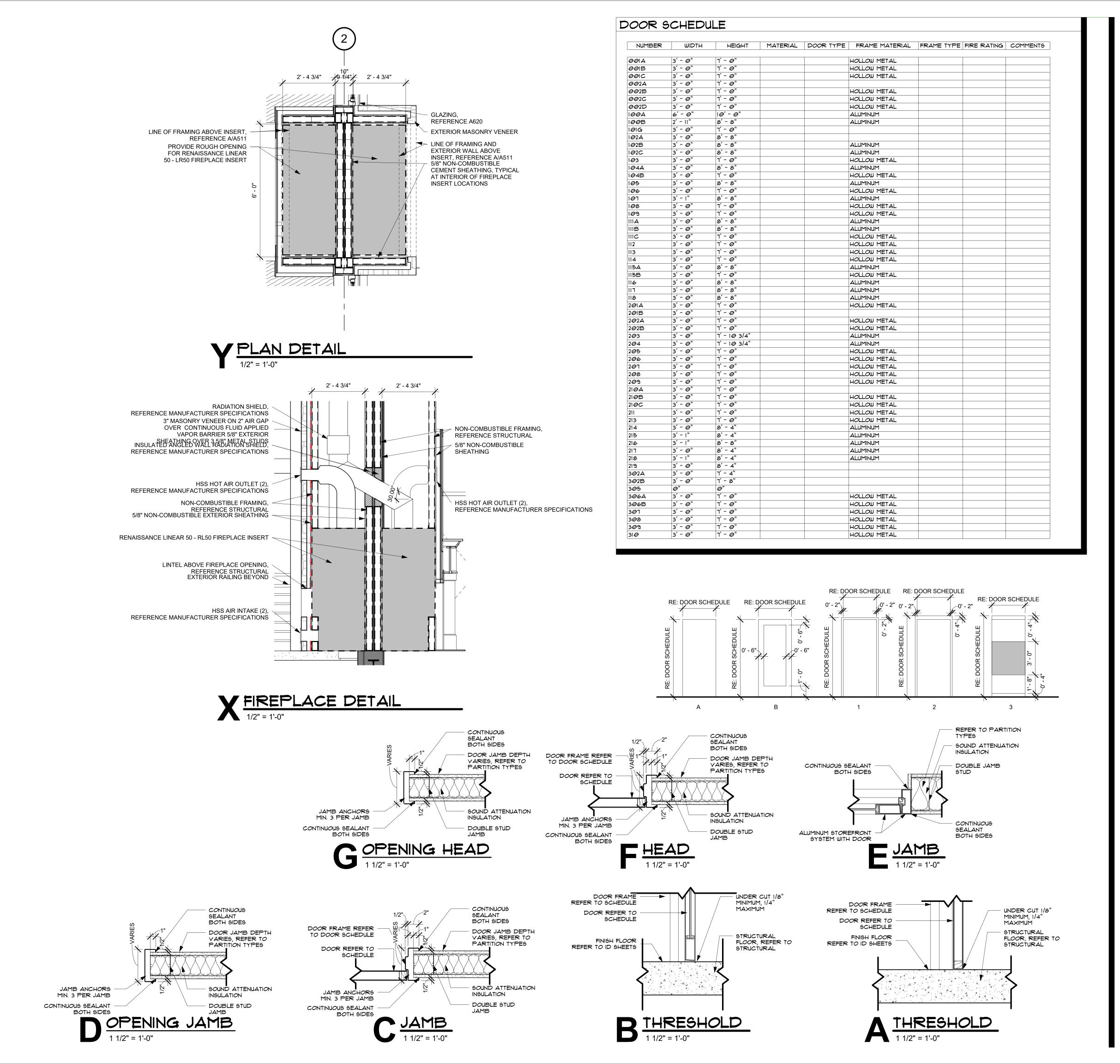
DATE

SHEET NAME:
WALL DETAILS

SHEET NUMBER:

A51

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8/7/2020 3:40:19 PM

Folds of Honor Operations Build

GH2 PROJECT NUMBER: **20170021**ISSUE DATE: **08/07/2020** 

PROGRESS SET

OTHER ISSUE DATES:
NO. DESCRIPTION

DATE

SHEET NAME:

DOOR SCHEDULE,

DOOR DETAILS,

WALL DETAILS

SHEET NUMBER:

GH2 PROJECT NUMBER: **20170021**ISSUE DATE: **08/07/2020** 

PROGRESS SET

OTHER ISSUE DATES:
NO. DESCRIPTION

DATE

SHEET NAME:
WINDOW
ELEVATIONS

SHEET NUMBER:

A620
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GH2 PROJECT NUMBER: 20170021

ISSUE DATE: 08/07/2020

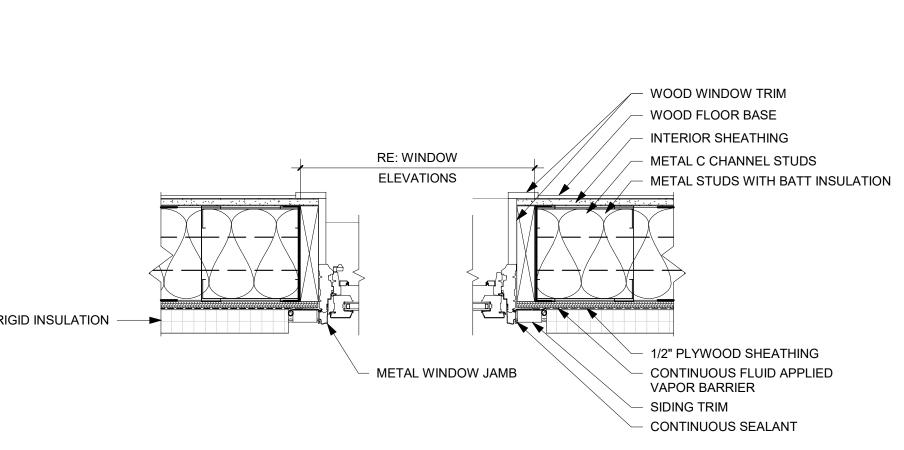
**PROGRESS SET** 

OTHER ISSUE DATES: NO. DESCRIPTION

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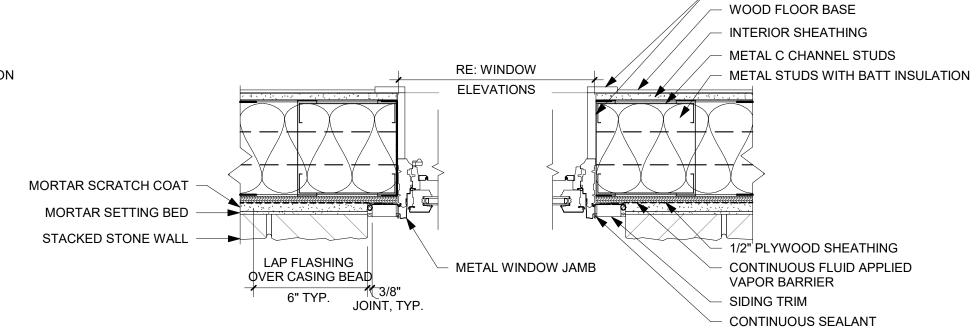
SHEET NAME: **WINDOW DETAILS** 

SHEET NUMBER:



RIGID INSULATION -





- RIGID INSULATION

Z-FLASHING

1/2" PLYWOOD SHEATHING

WOOD WINDOW TRIM



D WINDOW DETAIL - HEAD AND SILL
1 1/2" = 1'-0"

INTERIOR SHEATHING

CANT BLOCKING

WOOD WINDOW TRIM

METAL C CHANNEL STUDS

METAL STUDS WITH BATT INSULATION

METAL FLASHING METAL FLASHING CONTINUOUS SEALANT WITH BACKER ROD CONTINUOUS SEALANT
WITH BACKER ROD RIGID INSULATION WOOD WINDOW TRIM -WOOD WINDOW TRIM — FLASHING CANT BLOCKING CANT BLOCKING - CAST STONE LINTEL VAPOR BARRIER METAL C CHANNEL STUDS METAL C CHANNEL STUDS 1/2" PLYWOOD SHEATHING VAPOR BARRIER INTERIOR SHEATHING INTERIOR SHEATHING 1/2" PLYWOOD SHEATHING METAL STUDS WITH BATT INSULATION METAL STUDS WITH BATT INSULATION MORTAR SCRATCH COATMORTAR SETTING BED

RIGID INSULATION

Z-FLASHING

1/2" PLYWOOD SHEATHING

B WINDOW DETAIL - HEAD AND SILL
1 1/2" = 1'-0"

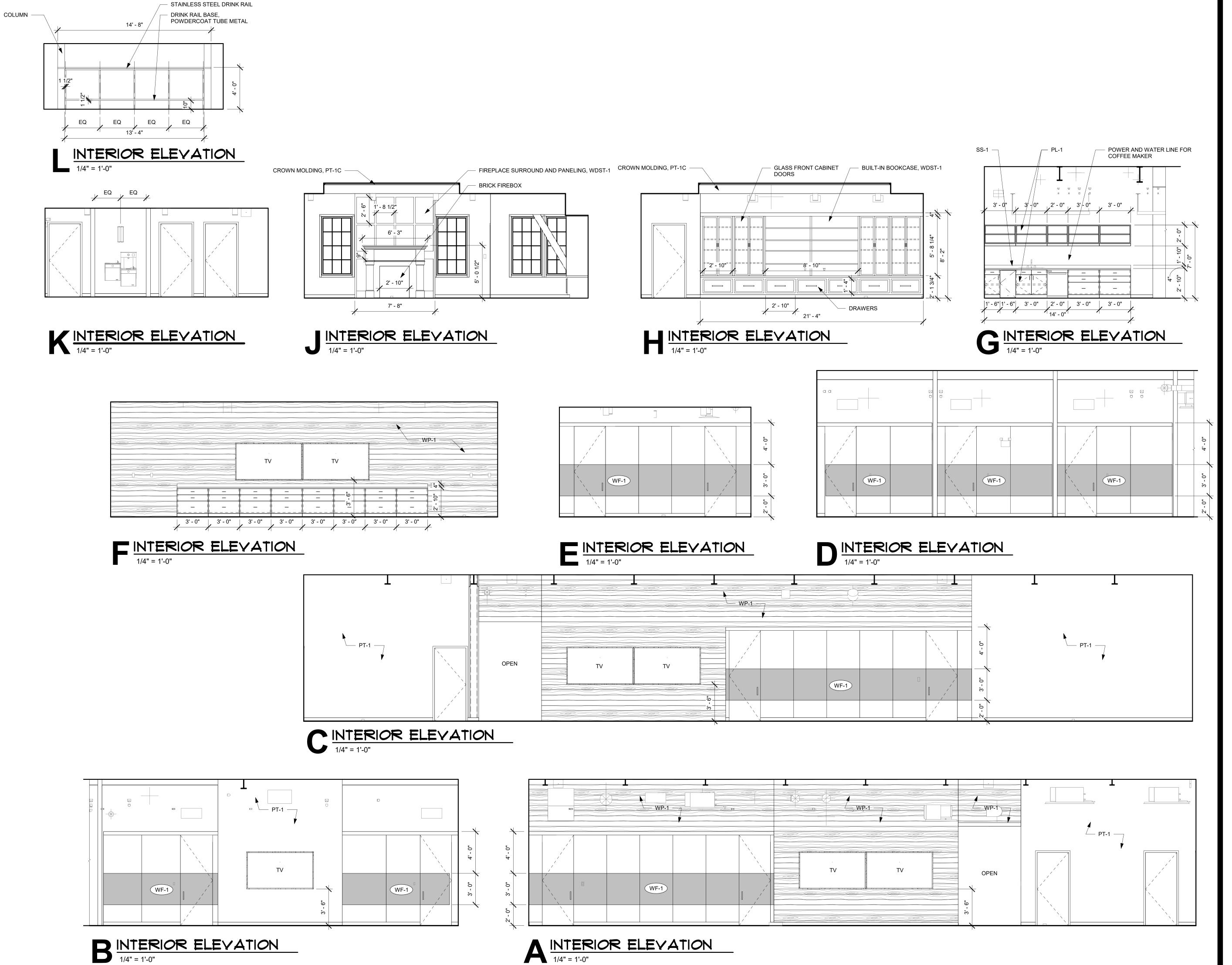
INTERIOR SHEATHING

CANT BLOCKING

WOOD WINDOW TRIM

METAL C CHANNEL STUDS

METAL STUDS WITH BATT INSULATION



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of

GH2 PROJECT NUMBER: 20170021 ISSUE DATE: **08/07/2020** 

**PROGRESS SET** 

OTHER ISSUE DATES: NO. DESCRIPTION

DATE

SHEET NAME: **INTERIOR ELEVATIONS** 

SHEET NUMBER:

B INTERIOR ELEVATION
1/4" = 1'-0"

A INTERIOR ELEVATION

1/4" = 1'-0"

BOX BEAMS, WDST-1

C INTERIOR ELEVATION

1/4" = 1'-0"

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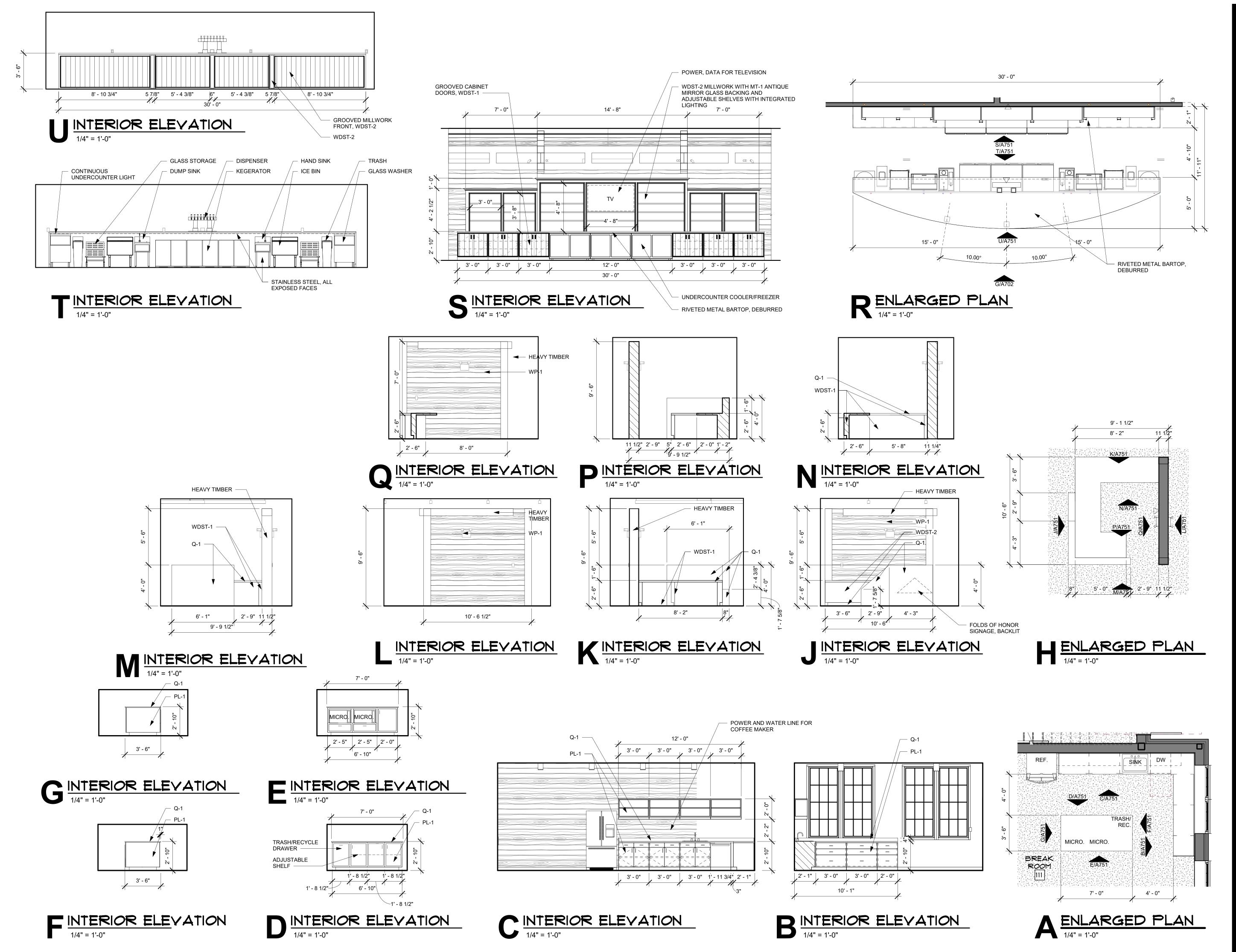
GH2 PROJECT NUMBER: **20170021** ISSUE DATE: **08/07/2020** 

**PROGRESS SET** 

OTHER ISSUE DATES: NO. DESCRIPTION

DATE

SHEET NAME: **INTERIOR ELEVATIONS** 



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GH2 PROJECT NUMBER: 20170021 ISSUE DATE: 08/07/2020

**PROGRESS SET** 

OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME: **MILLWORK** 

SHEET NUMBER:

ALL NEW BUILDING MATERIALS AND PRODUCTS SHALL NOT CONTAIN ASBESTOS.

IN AREAS WHERE MORE THAN ONE FINISH APPEARS IN INTERIOR FINISH SCHEDULE, REFER TO INTERIOR ELEVATIONS, FINISH PLANS, AND REFLECTED CEILING PLANS FOR SPECIFIC LOCATIONS AND EXTENTS OF FINISHES.

REFER TO FINISH PLANS FOR FLOORING FINISH LOCATIONS AND EXTENTS, FLOORING PATTERNS, AND TRANSITION STRIP

REFER TO REFLECTED CEILING PLANS FOR CEILING TILE PATTERNS, SOFFIT LOCATIONS AND SIZES, AND CEILING AND SOFFIT

CENTER ALL CEILING TILE PANELS AND GRID IN ROOM SO THAT NOT LESS THAN ONE HALF OF A TILE PANEL WIDTH IS INSTALLED AT ROOM PERIMETER UNLESS NOTED OTHERWISE. PROVIDE SEALANT AT ALL TILE INSIDE CORNERS AND AT DOOR FRAMES. COLOR TO MATCH ADJACENT GROUT COLOR.

PROVIDE CONTROL JOINTS AT GYPSUM BOARD WALL AT EITHER SIDE OF DOOR AND WINDOW OPENINGS. ALL GYPSUM BOARD WALLS TO BE PAINTED PT-1 UNLESS NOTED OTHERWISE. REFER TO INTERIOR ELEVATIONS AND INTERIOR

WALL BASE AT GYPSUM BOARD WALLS TO BE RB-1 UNLESS NOTED OTHERWISE.

ALL GYPSUM BOARD SOFFITS AND CEILINGS TO BE PAINTED PT-1B UNLESS NOTED OTHERWISE. REFER TO INTERIOR ELEVATIONS, REFLECTED CEILING PLANS, AND INTERIOR FINISH SCHEDULE.

ALL INTERIOR WOOD DOORS AND WINDOW TRIM TO BE STAINED TO MATCH PL-1 UNLESS NOTED OTHERWISE. ALL ELECTRICAL PANEL DOORS, ACCESS PANELS, AND WALL AND CEILING GRILLES SHALL BE FINISHED TO MATCH ADJACENT

ADHERE BY TILE MANUFACTURER'S MINIMUM GROUT JOINT RECOMMENDATION.

ALL FLOORING TRANSITIONS ARE TO OCCUR AT THE CENTERLINE OF DOOR LEAF UNLESS NOTED OTHERWISE. REFER TO INTERIOR ELEVATIONS FOR ALL TV MONITOR LOCATIONS. PROVIDE BLOCKING FOR ALL TV MONITORS.

COUNTERTOPS AND BACKSPLASHES TO RECEIVE CLEAR SEALANT AT WALL. RECEPTION DESK AND BREAK ROOM COUNTERTOPS TO BE Q-1; ALL OTHER COUNTERTOPS TO BE SS-1 UNLESS NOTED

ALL MILLWORK TO BE PL-1 UNLESS NOTED OTHERWISE.

FLOORING TO EXTEND BENEATH ALL MILLWORK, EQUIPMENT AND APPLIANCES.

PROVIDE FINISHED END PANELS AT ALL EXPOSED CABINET ENDS INCLUDING KNEE SPACES. PROVIDE KEYED LOCKS AT LOCATIONS INDICATED ON INTERIOR ELEVATIONS AND MILLWORK SECTIONS.

FRP-1 FIBERGLASS REINFORCED

**WALL FINISH** 

**FLOOR FINISH** POLISHED CONCRETE CONC-1 CONC-2 BOND BOND CPT-3

WILLIAMS STYLE: H&C CLARISHIELD WATER-BASED WET-LOOK CONCRETE SEALER COLOR: CLEAR CARPET TILE (FIELD) MANUF: MOHAWK STYLE: GROUNDCOVER COLOR: ROCKFACE SIZE: 12" X 36" INSTALLATION: STACKED CARPET TILE (RED) MANUF: MOHAWK COLOR: FIREDOT SIZE: 12" X 36" INSTALLATION: STACKED CARPET TILE (BLUE) MANUF: MOHAWK

**RUBBER BASE** MANUF: TARKET STYLE: 4" COVE COLOR: 195 ASH TILE BASE MANUF: TILEBAR STYLE: FORDHAM

COLOR: NERO SIZE: BULLNOSE 3" X 24"

FROSTED BACKGROUND, KNOCKED OUT STARS

**CEILING FINISH** 

COLOR: WDST-1 WTL-1 PORCELAIN WALL TILE MANUF: TILEBAR STYLE: FORDHAM COLOR: BIANCO SIZE: 24"X24" INSTALLATION: STACKED BOND ACT-1 ACOUSTIC CEILING TILE

MIRROR TILE MANUF: ROBINSON GLASS STYLE: ANTIQUE PLASTIC LAMINATE MANUF: WILSONART SOLID SURFACE MANUF: WILSONART

**CEILING FINISH CONT.** 

CUSTOM ACOUSTIC PANEL

COLOR: 8208 FAWN CYPRESS COLOR: 1572SL ANITIQUE WHITE

> GH2 PROJECT NUMBER: 20170021 ISSUE DATE: 08/07/2020

> > **PROGRESS SET**

DATE

of

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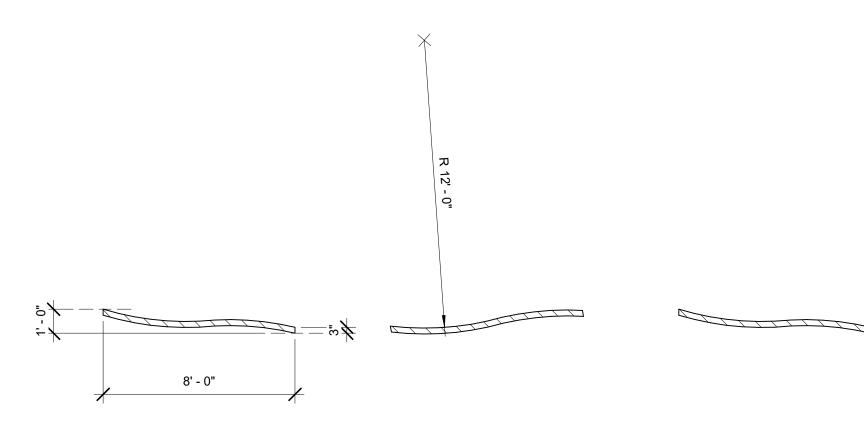
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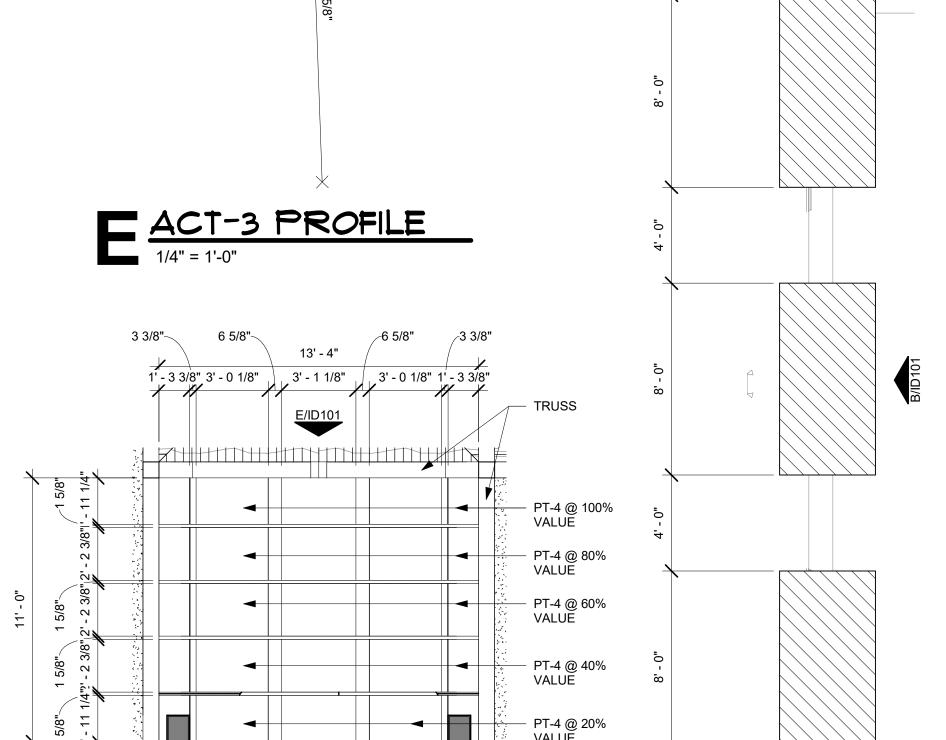
OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME: **FINISH LEGEND AND SCHEDULE** 

SHEET NUMBER:

		Finish Schedu	uie				I PLAN GE
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	2. IN AF	NEW BUILDING MATREAS WHERE MOR
004	OTAID	00N0 0	DD 4	DT 4	DT 4D	3. REFI	NS, AND REFLECTE ER TO FINISH PLAN
001 002	STAIR STAIR	CONC-2	RB-1	PT-1	PT-1B PT-1B		ATIONS. ER TO REFLECTED
100	LOBBY	CONC-2	RB-1	PT-1, MTL-1	WP-1, PT-1B,		GHTS. TER ALL CEILING TI
100	LOBBT	00140-1	IND-1	1 1-1, WII E-1	PT-1C	INST	ALLED AT ROOM P
101	STORE	CPT-1	RB-1	PT-1	ACT-1	7. PRO	VIDE SEALANT AT A VIDE CONTROL JOI
102	CONFERENCE	CPT-2, CPT-3	RB-1	PT-1, WP-1	PT-1B		GYPSUM BOARD W SH SCHEDULE.
103	WORK ROOM	CONC-1	RB-1	PT-1	OTS		L BASE AT GYPSUN GYPSUM BOARD SO
104	OPEN OFFICE	CONC-1, CPT-1, CPT-3	RB-1	PT-1, WP-1	OTS	ELE\	VATIONS, REFLECT
105	OFFICE	CPT-3	RB-1	PT-1, PT-2 (EAST WALL)	ACT-1	12. ALL I	HOLLOW METAL DO INTERIOR WOOD D
106	FIRE RISER	CONC-2	RB-1	PT-1	OTS		ELECTRICAL PANEL FACE UNLESS NOT
107	OFFICE	CPT-3	RB-1	PT-1, PT-3 (EAST	ACT-1		TCH PLATES AND E VIDE 1/2" CEMENT I
101	0.1.102	0. 1 0		WALL)	7.01	16. REFI	ER TO INTERIOR EL
108	ELECTRICAL	CONC-2	RB-1	PT-1	OTS		L TILE SHALL BE IN L TILE SHALL NOT I
109	DATA	CONC-2	RB-1	PT-1	OTS		LUTER FINEC F 110 URE LEVEL LINE OF
110	CORRIDOR	CONC-1	RB-1	PT-1	PT-1B	FLUS	SH WITH VARIATION
111	BREAK ROOM	CONC-1	RB-1	PT-1	PT-1B		ERE BY TILE MANU NGES IN FLOORING
112	WOMEN'S	TL-1	TB-1	WTL-1, PT-1	PT-5		ORING LEVEL BETW EL ARE GREATER T
113	JAN.	CONC-2	RB-1	FRP-1	OTS	23. ALL I	FLOORING TRANSIT
114	MEN'S	TL-1	TB-1	WTL-1, PT-1	PT-5	25. CON	ER TO INTERIOR EL ITRACTOR TO FIELI
115	OPEN OFFICE	CONC-1, CPT-1, CPT-2	RB-1	PT-1, WP-1	ACT-2, OTS		ER TO FLOOR PLAN INTERTOPS AND BA
116	OFFICE	CPT-2	RB-1	PT-1, PT-3 (EAST WALL)	ACT-1	28. REC	EPTION DESK AND ERWISE.
117	OFFICE	CPT-2	RB-1	PT-1	ACT-1	29. ALL I	MILLWORK TO BE F
118	OFFICE	CPT-2	RB-1	PT-1, PT-2 (EAST	ACT-1		ORING TO EXTEND VIDE SIDE, TOP, AN
				WALL)			ERIOR ELEVATIONS VIDE FINISHED END
200	CORRIDOR	CONC-1, CPT-1	RB-1	PT-1	PT-1B, PT-1C, OTS	33. PRO	VIDE KEYED LOCKS
201	FUTURE OFFICE SPACE	CONC-2	UNFINISHED	UNFINISHED	OTS	SHE	MILLWORK SHELVE LVES OVER 36" IN L
202	FUTURE OFFICE SPACE	CONC-2	UNFINISHED	UNFINISHED	OTS		METAL SUPPORT B VIDE 2" PLASTIC GF
203	OFFICE	CPT-1	RB-1	PT-1	ACT-1		
204 205	OFFICE JAN.	CPT-1 CONC-2	RB-1	PT-1 FRP-1	ACT-1 OTS		
205 206	ELEC.	CONC-2	RB-1	PT-1	OTS		
207	STO.	CONC-2	RB-1	PT-1	OTS	FINISH	l LEGEND
208	MEN'S	TL-1	TB-1	WTL-1, PT-1	PT-5	FLOOR FINIS	 SH
209	WOMEN'S	TL-1	TB-1	WTL-1, PT-1	PT-5		
210	OFFICE	CPT-1	RB-1	PT-1	PT-1, ACT-1	CONC-1	POLISHED CON
211	SHOWER	TL-1	TB-1	WTL-1, PT-1	PT-5	CONC-2	SEALED CONCE MANUF: SHERW
212	INNOVATION STUDIO	CONC-2	RB-1	PT-1	OTS		WILLIAMS STYLE: H&C CLA
213	SHOWER	TL-1	TB-1	WTL-1, PT-1	PT-5		WATER-BASED
214	OFFICE	CPT-1	RB-1	PT-1	ACT-1		CONCRETE SEA COLOR: CLEAR
215	OFFICE	CPT-1	RB-1	PT-1	ACT-1	CPT-1	CARPET TILE (F
216	OFFICE	CPT-1	RB-1	PT-1	ACT-1	01 1-1	MANUF: MOHÀV
217	OFFICE	CPT-1	RB-1	PT-1	ACT-1		STYLE: GROUNI COLOR: ROCKF
218 219	OFFICE OFFICE	CPT-1 CPT-1	RB-1	PT-1	ACT-1 ACT-1		SIZE: 12" X 36" INSTALLATION:
301	LOUNGE	CONC-1	ND-1	WP-1	WP-1, PT-4		BOND
302	BAR	CONC-1	_	WP-1	WP-1, PT-1B	CPT-2	CARPET TILE (R
303	LOUNGE	CONC-1	_	WP-1	WP-1, PT-4		MANUF: MOHAV STYLE: MACRO
304	PATIO	ELEVATED PAVERS	-	-	-		COLOR: FIREDO SIZE: 12" X 36"
305	CORRIDOR	CONC-1	RB-1	PT-1	PT-1B		INSTALLATION:
306	MECH.	CONC-2	RB-1	PT-1	OTS		BOND
307	TOILET	TL-1	TB-1	WTL-1, PT-1	PT-5	CPT-3	CARPET TILE (B MANUF: MOHAV
308	TOILET	TL-1	TB-1	WTL-1, PT-1	PT-5		STYLE: MACRO
309	BAR STORAGE	CONC-2	RB-1	PT-1	PT-5		COLOR: FELT FI SIZE: 12" X 36"
310	JAN.	CONC-2	RB-1	FRP-1	PT-5		INSTALLATION: BOND





6 5/8" 13' - 4" 6 5/8"

3' - 1 1/8"

3' - 3 1/2"

ACT-3 DETAIL

1/4" = 1'-0"

ACT-2 DETAIL

1/4" = 1'-0"

4' - 0"

B ACT-2 PROFILE

1/4" = 1'-0"

FINISH SCHEDULE.

ALL HOLLOW METAL DOORS AND FRAMES TO BE PAINTED PT-1A UNLESS NOTED OTHERWISE.

SURFACE UNLESS NOTED OTHERWISE.

PROVIDE 1/2" CEMENT BACKER BOARD AT ALL WALLS SHOWN TO RECEIVE TILE. REFER TO INTERIOR ELEVATIONS AND FINISH LEGEND FOR WALL TILE PATTERNS.

ENSURE LEVEL LINE OF TILE INSTALLATION OCCURS AT LOWEST POINT OF FLOOR SLAB TO ALLOW TILE TO BE CONTINUOUSLY FLUSH WITH VARIATION IN FLOOR SLAB.

CHANGES IN FLOORING LEVEL UP TO 1/4" MAY BE VERTICAL AND WITHOUT REDUCING EDGE TREATMENT. CHANGES IN FLOORING LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2. IF CHANGES IN FLOORING LEVEL ARE GREATER THAN 1/2", NOTIFY ARCHITECT FOR DETAIL TO PROVIDE ADA COMPLIANT RAMP.

CONTRACTOR TO FIELD MEASURE AND VERIFY ALL DIMENSIONS PRIOR TO FABRICATION AND INSTALLATION OF MILLWORK. REFER TO FLOOR PLANS AND INTERIOR ELEVATIONS FOR EXACT LOCATIONS OF MILLWORK.

PROVIDE SIDE, TOP, AND BOTTOM FILLER PANELS AS REQUIRED TO COMPLETE THE MILLWORK AS INDICATED ON THE PLANS, INTERIOR ELEVATIONS AND MILLWORK SECTIONS.

ALL MILLWORK SHELVES TO BE ADJUSTABLE ON RECESSED STANDARDS AND BRACKETS, UNLESS NOTED OTHERWISE. SHELVES OVER 36" IN LENGTH TO BE 1" THICK.

PLASTIC PANELS SIZE: 4'-0" X 8'-0"; RE: A121 SEALED CONCRETE MANUF: INPRO SHAPE: WAVE MANUF: SHERWIN FABRIC: MATCHING PT-2 STYLE: PALLADIUM RIGID SHEET CUSTOM CEILING PANEL COLOR: EGGSHELL 0111 SIZE: 4'-0" X 8'-0" SIZE: 11'-10" X 13'-4"; RE: A123 SHAPE: BARREL VAULT THICKNESS: 0.040" COLOR: GRADIENT; RE: D/ID101 PT-1 GENERAL WALL PAINT MANUF: SHERWIN WILLIAMS GYPSUM CEILING PAINT MANUF: SHERWIN WILLIAMS SHEEN: EGGSHELL COLOR: SW 7042 SHOJI WHITE STYLE: FLAT COLOR: SW 7042 SHOJI WHITE PT-1A ACCENT WALL PAINT (HOLLOW METAL DOORS AND FRAMES) CROWN MOLDING PAINT MANUF: SHERWIN WILLIAMS MANUF: SHERWIN WILLIAMS SHEEN: SATIN STYLE: SATIN COLOR: SW7042 SHOJI WHITE STYLE: MACRO BLOOM PT-2 ACCENT WALL PAINT (RED) ACCENT WALL PAINT (SKY BLUE MANUF: FARROW & BÀLL MANUF: FARROW & BALL SHEEN: MATTE SHEEN: EGGSHELL COLOR: RECTORY RED 217 COLOR: LULWORTH BLUE 89 PT-3 ACCENT WALL PAINT (BLUE) GYPSUM CEILING PAINT MANUF: FARROW & BALL MANUF: SHERWIN WILLIAMS STYLE: FLAT SHEEN: EGGSHELL COLOR: PITCH BLUE 220 COLOR: SW 7005 PURE WHITE STYLE: MACRO BLOOM COLOR: FELT FINISH SIZE: 12" X 36" MTL-1 METAL INSTALLATION: STACKED MANUF: MOZ DESIGNS STYLE: ALUMINUM METAL SHEET MT-1 TERRACE WALL PANELS PORCELAIN TILE COLOR: CLASSIC CABERNET MANUF: TILEBAR SIZE: 4'-0 X 8'-0" STYLE: FORDHAM COLOR: NERO FINISH: POLYCOAT MATTE SIZE: 24"X24" INSTALLATION: STACKED WP-1 WALL PLANKING, TRIM CARPENTRY STYLE: TONGUE AND GROOVE SIZE: 10" QUARTZ MANUF: WILSONART COLOR: QUARRY CLIFF WINDOW FILM OPACITY: TRANSLUCENT

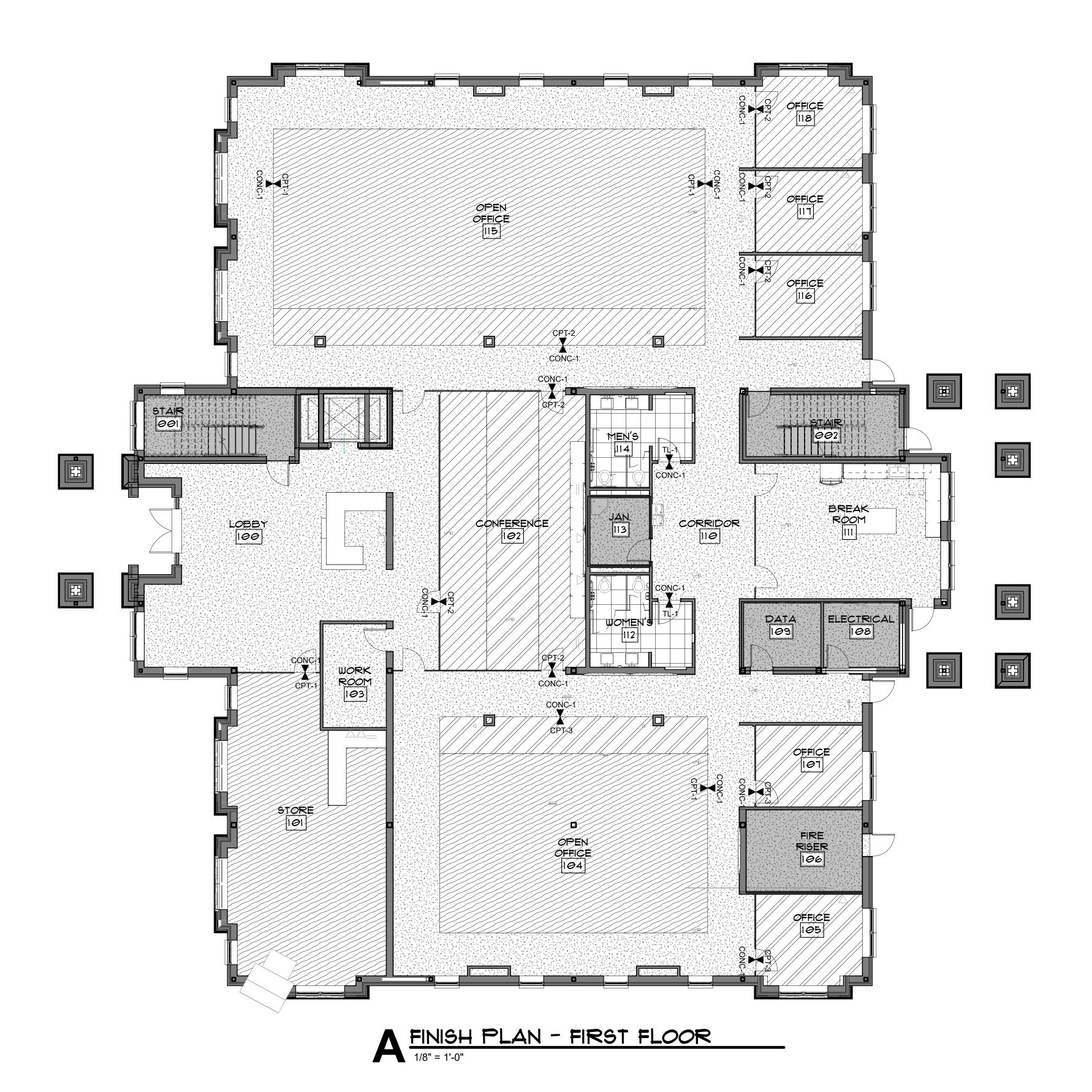
SWITCH PLATES AND ELECTRICAL DEVICES SHALL NOT BE PAINTED.

WALL TILE SHALL BE INSTALLED BEHIND ALL MIRRORS AND TOILET ACCESSORIES. WALL TILE SHALL NOT BE INSTALLED BEHIND MILLWORK CABINETS.

SCHLUTER FINEC F 110 E SHALL BE INSTALLED AT ALL VERTICAL EDGES AND OUTSIDE CORNERS OF WALL TILE.

ALL METAL SUPPORT BRACKETS TO BE PAINTED TO MATCH ADJACENT WALL FINISH, UNLESS NOTED OTHERWISE. PROVIDE 2" PLASTIC GROMMETS IN MILLWORK COUNTERTOPS AT LOCATIONS INDICATED ON PLANS AND MILLWORK SECTIONS

> NOTE: OCCURS AT ALL STOREFRONT INSTANCES WOOD STAIN CUSTOM TO MATCH PL-1 MANUF: ARMSTRONG STYLE: LYRA SQUARE LAY-IN WOOD STAIN **CUSTOM TO MATCH WILSONART** COLOR: WHITE SIZE: 2' X 2' AMBER ALONA GRID: PRELUDE 15/16", WHITE



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CONSTRUCTION.

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onor Operations Building

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GH2 PROJECT NUMBER: **20170021**ISSUE DATE: **08/07/2020** 

ISSUE:

PROGRESS SET

OTHER ISSUE DATES: NO. DESCRIPTION

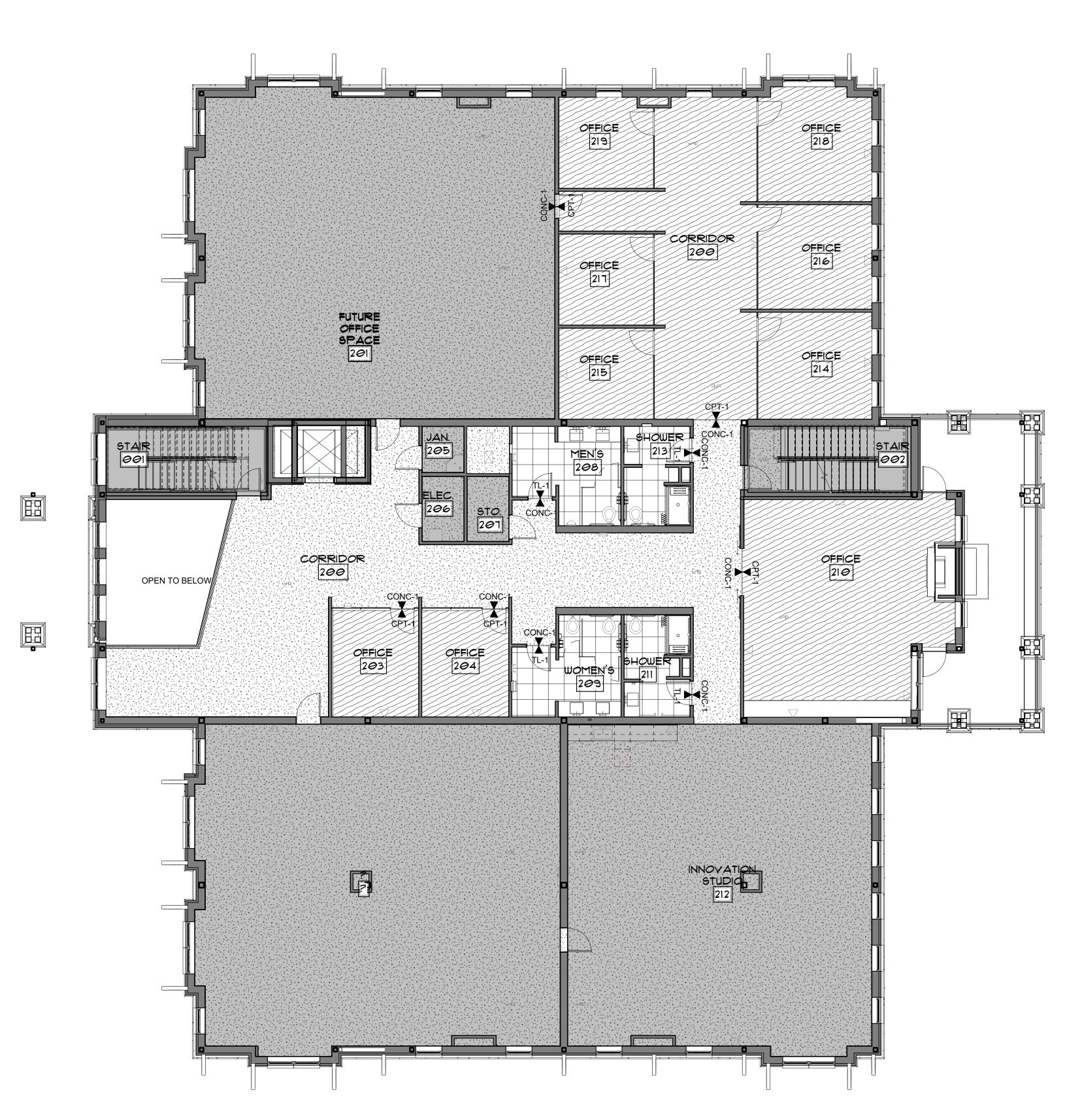
DATE

SHEET NAME:
INTERIOR FINISH
PLAN - FIRST

FLOOR
SHEET NUMBER:

ID102

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A FINISH PLAN - SECOND FLOOR

1/8" = 1'-0"

ARCHITECTS

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GH2 PROJECT NUMBER: **20170021** 

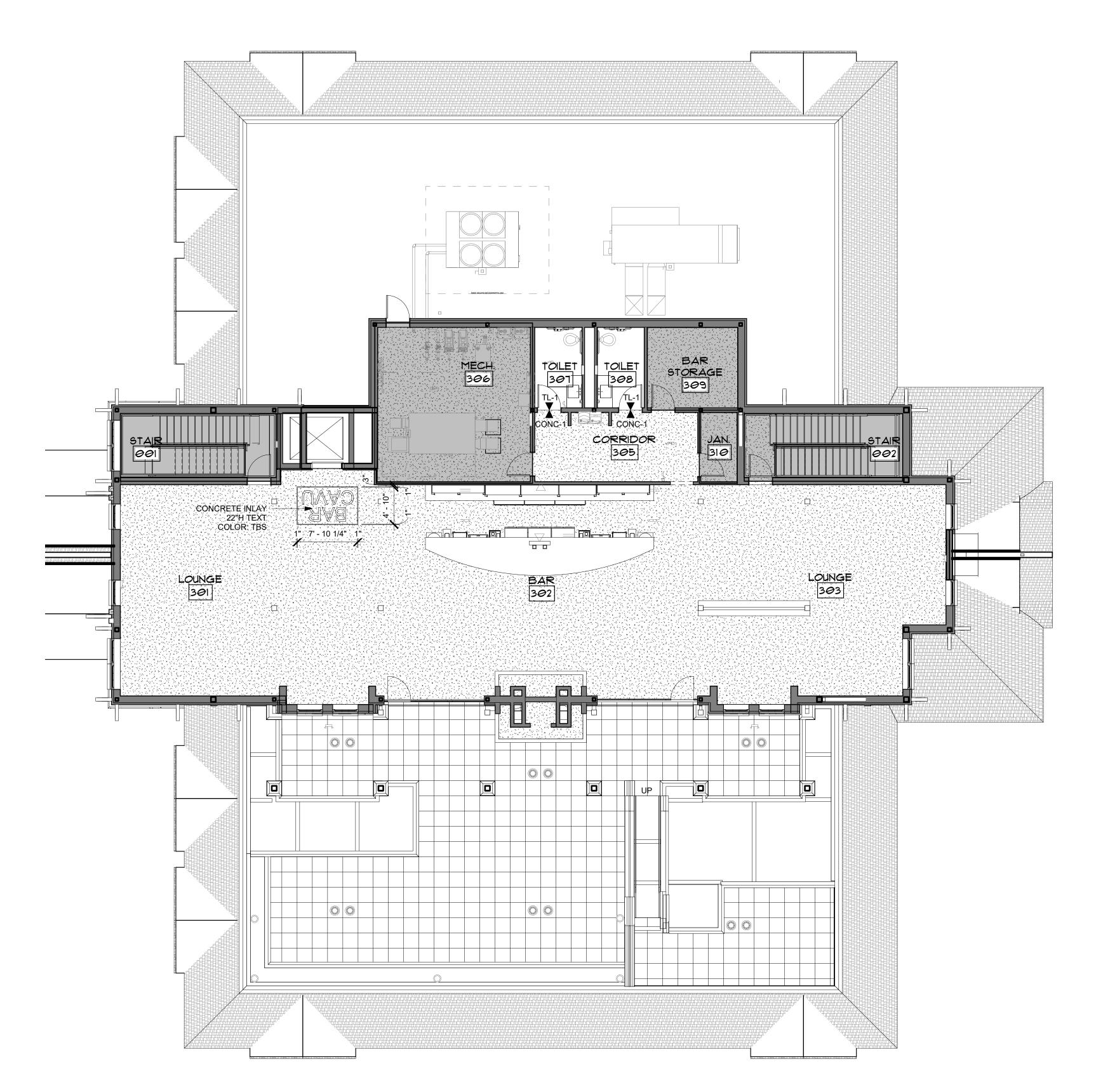
ISSUE DATE: **08/07/2020** 

**PROGRESS SET** 

OTHER ISSUE DATES:
NO. DESCRIPTION

SHEET NAME:
INTERIOR FINISH
PLAN - SECOND
FLOOR

SHEET NUMBER: ID103



A FINISH PLAN - THIRD FLOOR

1/8" = 1'-0"

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GH2 PROJECT NUMBER: **20170021** ISSUE DATE: **08/07/2020** 

**PROGRESS SET** 

OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME: **INTERIOR FINISH PLAN - THIRD FLOOR** SHEET NUMBER:

SIGNAGE PLAN - FIRST FLOOR



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CONSTRUCTION.

8/7/2020 3:41:32 PM

olds of Honor Operations Build

GH2 PROJECT NUMBER: **20170021** 

PROGRESS SET

ISSUE DATE: **08/07/2020** 

OTHER ISSUE DATES:
NO. DESCRIPTION

DATE

SHEET NAME:
SIGNAGE PLAN FIRST FLOOR

SHEET NUMBER:

1020

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SIGNAGE PLAN - SECOND FLOOR



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8/7/2020 3:41:36 PM

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GH2 PROJECT NUMBER: **20170021**ISSUE DATE: **08/07/2020** 

**PROGRESS SET** 

OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME:
SIGNAGE PLAN SECOND FLOOR

SHEET NUMBER:

10202

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SIGNAGE PLAN - THIRD FLOOR



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Folds of Honor Opera

GH2 PROJECT NUMBER: **20170021**ISSUE DATE: **08/07/2020** 

PROGRESS SET

OTHER ISSUE DATES: NO. DESCRIPTION

DATE

SHEET NAME:
SIGNAGE PLAN THIRD FLOOR

SHEET NUMBER:

10203

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olds

PROGRESS SET

ISSUE DATE:

OTHER ISSUE DATES: NO. DESCRIPTION DATE

SHEET NAME:

**SIGNAGE DETAILS** 

SHEET NUMBER:



1/8" CLEAR ACRYLIC SIGN

COLOR MATCH TO PT-6

5/8" VINYL TEXT; ARIAL

CENTER TEXT ON SIGN

EXTENTS FOR 8-1/2" X 11"

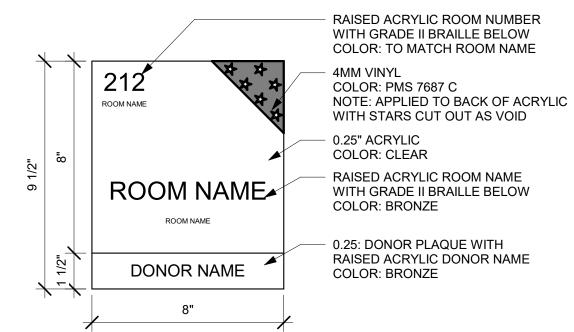
CLEAR ACRYLIC INSERT

SLOT FOR PRINTED

**EVACUATION PLAN** 

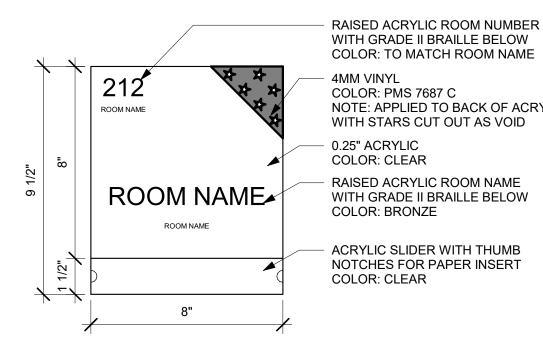
LETTERING (BLACK),

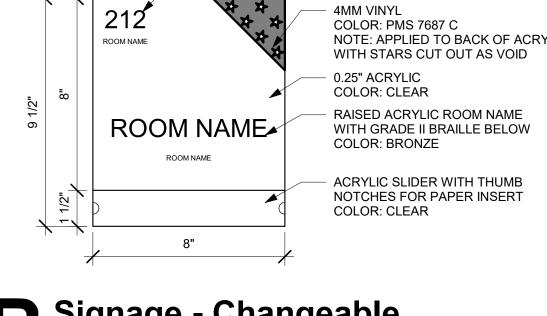
FACE; BACK-APPLIED VINYL;

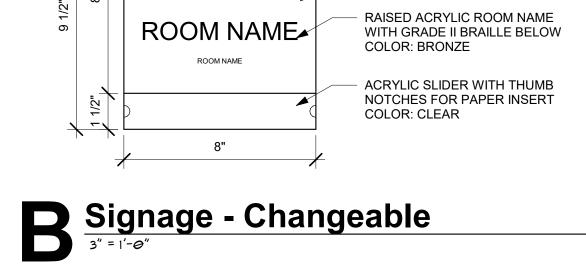


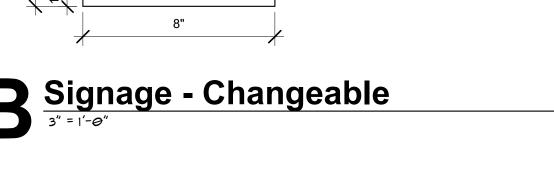
# 8"

SIGNAGE - WOMEN











0.25" ACRYLIC COLOR: WHITE RAISED ACRYLIC ROOM NAME ROOM NAME WITH GRADE II BRAILLE BELOW COLOR: BRONZE

Signage - Evacuation (SS.02) RAISED ACRYLIC ROOM NUMBER WITH GRADE II BRAILLE BELOW COLOR: TO MATCH ROOM NAME 4MM VINYL COLOR: PMS 7687 C NOTE: APPLIED TO BACK OF ACRYLIC WITH STARS CUT OUT AS VOID 0.25" ACRYLIC COLOR: CLEAR RAISED PICTOGRAMS

**→**EVACUATION PLAN

10 7/8"

1' - 0"

COLOR: TO MATCH ROOM NAME 4MM VINYL COLOR: PMS 7687 C 0.25" ACRYLIC COLOR: CLEAR

COLOR: BRONZE

RAISED ACRYLIC ROOM NUMBER

WITH GRADE II BRAILLE BELOW

COLOR: TO MATCH ROOM NAME

WITH STARS CUT OUT AS VOID

RAISED ACRYLIC ROOM NAME

RAISED ACRYLIC ROOM NUMBER

WITH GRADE II BRAILLE BELOW

WITH GRADE II BRAILLE BELOW

NOTE: APPLIED TO BACK OF ACRYLIC

4MM VINYL

0.25" ACRYLIC COLOR: CLEAR

COLOR: PMS 7687 C

RAISED PICTOGRAMS

COLOR: PMS 7687 C

COLOR: BRONZE

NOTE: APPLIED TO BACK OF ACRYLIC WITH STARS CUT OUT AS VOID RAISED PICTOGRAMS COLOR: PMS 7687 C RAISED ACRYLIC ROOM NAME WITH GRADE II BRAILLE BELOW

STAIRS ROOM NAME

**SIGNAGE - STAIRS** 

WOMEN G SIGNAGE - TOILET

NOTE: APPLIED TO BACK OF ACRYLIC

Sign Tag Number

001

002

102

103

105

106

107

109

111

112

113

114

116

117

118

204

205

206

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304

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306

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308

310

VARIES

4MM VINYL

0.25" ACRYLIC

COLOR: CLEAR

COLOR: PMS 7687 C

RAISED PICTOGRAMS

COLOR: PMS 7687 C

COLOR: BRONZE

SS.01

SS.01

S.112

S.103

S.107

S.108

S.109

S.110

S.111

S.112

S.113

S.114

S.114

S.116

S.117

S.118

S.203

S.204

S.205

S.206

S.205

S.207

S.208

S.210

S.210

S.212

S.213

S.214

S.215

S.216

S.217

S.218

S.307

S.305

S.302

S.303

S.304

S.310

8" Signage - General

ROOM NAME

ROOM NAME

Signage - MEN

212

Signage Schedule

CONFERENCE RE: A/ID204

BREAK ROOM | RE: A/ID204

Sign Type

RE: J/ID204

RE: J/ID204

RE: A/ID204

RE: B/ID204

RE: A/ID204

RE: B/ID204

RE: D/ID204

RE: D/ID204

RE: F/ID204

RE: D/ID204

RE: E/ID204

RE: B/ID204

RE: B/ID204

RE: B/ID204

RE: B/ID204

RE: B/ID204

RE: D/ID204

RE: D/ID204

RE: D/ID204

RE: E/ID204

RE: F/ID204

RE: B/ID204

RE: H/ID204

RE: H/ID204

RE: B/ID204

RE: B/ID204

RE: B/ID204

RE: B/ID204

RE: B/ID204

RE: B/ID204

RE: A/ID204

RE: D/ID204

RE: D/ID204

RE: G/ID204

RE: G/ID204

RE: D/ID204

RE: K/ID204

Qty.

Notes

**EXTERIOR INSTALLATION** 

RAISED ACRYLIC ROOM NUMBER

WITH GRADE II BRAILLE BELOW

WITH STARS CUT OUT AS VOID

RAISED ACRYLIC ROOM NAME

WITH GRADE II BRAILLE BELOW

RAISED ACRYLIC ROOM NUMBER WITH GRADE II BRAILLE BELOW

COLOR: TO MATCH ROOM NAME

WITH STARS CUT OUT AS VOID

RAISED ACRYLIC ROOM NAME

WITH GRADE II BRAILLE BELOW

NOTE: APPLIED TO BACK OF ACRYLIC

4MM VINYL

0.25" ACRYLIC

COLOR: CLEAR

COLOR: BRONZE

COLOR: PMS 7687 C

4MM VINYL

0.25" ACRYLIC

COLOR: CLEAR

COLOR: PMS 7687 C

RAISED PICTOGRAMS

COLOR: PMS 7687 C

COLOR: BRONZE

COLOR: TO MATCH ROOM NAME

NOTE: APPLIED TO BACK OF ACRYLIC

Sign Text

WORK ROOM

FIRE RISER

ELECTRICAL

CUSTODIAN

STAIR

STAIR

OFFICE

OFFICE

DATA

MEN

OFFICE

OFFICE

OFFICE

OFFICE

OFFICE

CUSTODIAN

MECHANICAL

STORAGE

WOMEN

OFFICE

SHOWER

SHOWER

OFFICE

OFFICE

OFFICE

OFFICE

OFFICE

OFFICE

PATIO

TOILET

TOILET

CUSTODIAL

CUSTODIAL

EVACUATION

MECHANICAL

MEN

WOMEN

Name

STAIR

STAIR

OFFICE

OFFICE

DATA

JAN.

MEN'S

OFFICE

OFFICE

OFFICE

OFFICE

OFFICE

MECHANICAL

JAN.

STO.

MEN'S

WOMEN'S

OFFICE

SHOWER

SHOWER

OFFICE

OFFICE

OFFICE

OFFICE

OFFICE

OFFICE

PATIO

MECH.

TOILET

TOILET

**EVACUATION** 

JAN.

RAISED ACRYLIC ROOM NUMBER

WITH GRADE II BRAILLE BELOW

COLOR: TO MATCH ROOM NAME

WITH STARS CUT OUT AS VOID

RAISED ACRYLIC ROOM NAME

WITH GRADE II BRAILLE BELOW

NOTE: APPLIED TO BACK OF ACRYLIC

JAN.

CONFERENCE

**WORK ROOM** 

FIRE RISER

ELECTRICAL

BREAK ROOM

WOMEN'S

## **GENERAL**

- STRUCTURAL DRAWINGS ARE NOT STAND-ALONE DOCUMENTS AND ARE INTENDED TO BE USED IN CONJUNCTION WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND DRAWINGS FROM OTHER DISCIPLINES. THE CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS INTO THE SHOP DRAWINGS AND FIELD WORK.
- WHERE CONFLICT EXISTS AMONG VARIOUS PARTS OF THE STRUCTURAL CONTRACT DOCUMENTS, STRUCTURAL DRAWINGS, GENERAL NOTES, AND SPECIFICATIONS, THE STRICTEST REQUIREMENTS, AS INDICATED BY THE ENGINEER, SHALL GOVERN.
- WHERE MEMBER LOCATIONS ARE NOT SPECIFICALLY DIMENSIONED, THE FOLLOWING RULES SHALL APPLY:
- A. COLUMNS ARE CENTERED ON GRID LINES.
- B. FOOTINGS ARE CENTERED BENEATH COLUMNS.
- C. CONTINUOUS FOOTINGS ARE CENTERED BENEATH WALLS. D. FRAMING MEMBERS ARE EITHER LOCATED ON GRID LINES OR ARE EQUALLY SPACED BETWEEN LOCATED MEMBERS
- I. ALL STRUCTURAL ELEMENTS OF THE PROJECT HAVE BEEN DESIGNED BY THE STRUCTURAL ENGINEER TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES THAT COULD OCCUR IN THE FINAL COMPLETED STRUCTURE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL REQUIRED BRACING DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF ALL STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PROCESS UNTIL THE LATERAL LOAD RESISTING OR STABILITY-PROVIDING SYSTEM IS COMPLETELY INSTALLED AND THE STRUCTURE IS COMPLETELY
- THE STRUCTURE HAS BEEN DESIGNED FOR THE LOADS IDENTIFIED WITHIN THESE STRUCTURAL DRAWINGS THAT ARE ANTICIPATED TO BE APPLIED TO THE FINAL STRUCTURE ONCE COMPLETED AND OCCUPIED. THE CONTRACTOR SHALL NOT OVERLOAD THE STRUCTURE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE ADEQUACY OF THE STRUCTURE TO SUPPORT ANY APPLIED CONSTRUCTION LOADS, INCLUDING THOSE DUE TO CONSTRUCTION VEHICLES OR EQUIPMENT, MATERIAL HANDLING OR STORAGE, SHORING AND RESHORING, OR ANY OTHER PROPOSED CONSTRUCTION LOADS THAT ARE IN EXCESS OF THE STATED DESIGN LOADS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE TO
- DESIGN OR CHECK THE STRUCTURE FOR LOADS APPLIED TO THE STRUCTURE FOR ANY CONSTRUCTION ACTIVITY. WEIGHTS OF MECHANICAL EQUIPMENT SHOWN ON THE STRUCTURAL PLANS ARE FOR UNITS SPECIFIED BY THE MECHANICAL ENGINEER. CONTRACTOR SHALL VERIFY THE WEIGHTS. ANY SUBSTITUTIONS THAT RESULT IN INCREASED WEIGHT SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF
- THE SIZE AND LOCATION OF EQUIPMENT PADS AND PENETRATIONS THROUGH THE STRUCTURE FOR MECHANICAL, ELECTRICAL, AND PLUMBING WORK SHALL BE VERIFIED BY THE CONTRACTOR. OPENINGS AND PENETRATIONS NOT SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE SUBJECT TO APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.
- PRIOR TO FABRICATION AND/OR ERECTION OF ANY MATERIALS, THE CONTRACTOR SHALL FIELD VERIFY ALL PERTINENT EXISTING DIMENSIONS, ELEVATIONS, AND CONDITIONS AND SHALL REPORT ANY DISCREPANCIES TO THE STRUCTURAL ENGINEER OF RECORD OR THE ARCHITECT
- BACKFILL BOTH SIDES OF ALL FOUNDATION AND RETAINING WALLS EQUALLY UNTIL LOW SIDE IS UP TO FINISH GRADE. DO NOT BACKFILL ANY WALLS
- UNTIL CONCRETE HAS REACHED ITS SPECIFIED 28-DAY COMPRESSIVE STRENGTH. CONNECTIONS OF SYSTEMS DESIGNED BY THE CONTRACTOR'S ENGINEER SUCH AS, BUT NOT LIMITED TO, CLADDING, STAIRS, ELEVATORS AND MEP LOADS ARE ASSUMED TO IMPOSE VERTICAL AND/OR HORIZONTAL LOADS ON THE BASE BUILDING STRUCTURAL MEMBERS WITHOUT GENERATING TORSION IN THE SUPPORTING STRUCTURAL MEMBERS. CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING ALL SUPPLEMENTARY
- BRACING MEMBERS AS REQUIRED TO PREVENT TORSION ON THE BASE BUILDING STRUCTURE. 11. ANY MATERIALS OR PRODUCTS SUBMITTED FOR APPROVAL THAT ARE DIFFERENT FROM THE MATERIAL OR PRODUCTS SPECIFIED IN THE STRUCTURAL CONTRACT DOCUMENTS WILL BE APPROVED ONLY IF THE FOLLOWING CRITERIA ARE SATISFIED: A. A COST SAVINGS TO THE OWNER IS DOCUMENTED AND SUBMITTED WITH THE REQUEST
- B. THE MATERIAL OR PRODUCT HAS BEEN APPROVED BY THE INTERNATIONAL CODE COUNCIL (ICC) AND THE ICC REPORT IS SUBMITTED WITH
- 12. THE ENGINEER SHALL NOT HAVE CONTROL NOR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSION OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- PERIODIC SITE OBSERVATION BY FIELD REPRESENTATIVES OF 360 ENGINEERING GROUP, PLLC. IS SOLELY FOR THE PURPOSE OF BECOMING GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF THE WORK COMPLETED AND DETERMINING, IN GENERAL, IF THE WORK OBSERVED IS BEING PERFORMED IN A MANNER INDICATING THAT THE WORK, WHEN FULLY COMPLETED, WILL BE IN ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHOULD NOT BE CONSTRUED AS AN EXHAUSTIVE OR CONTINUOUS CHECK OF THE QUALITY OR QUANTITY OF THE WORK, BUT RATHER PERIODIC IN AN EFFORT TO GUARD THE OWNER AGAINST DEFECTS OR DEFICIENCIES IN THE WORK OF THE CONTRACTOR.

#### **DIVISION 2 - FOUNDATIONS**

- 1. RECOMMENDATIONS CONTAINED IN GEOTECHNICAL REPORT WERE USED FOR DESIGN. REFER TO DESIGN PARAMETERS FOR SOIL DESIGN CRITERIA
- 2. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THE GEOTECHNICAL REPORT AND SHALL FOLLOW THE RECOMMENDATIONS SPECIFIED THEREIN, INCLUDING, BUT NOT LIMITED TO, SUBGRADE PREPARATIONS, GROUND WATER MANAGEMENT AND STEEP SLOPE BEST
- 3. THE GEOTECHNICAL ENGINEER SHALL BE PRESENT DURING PROOF ROLLING AND SHALL INSPECT THE SUBGRADE PRIOR TO ANY FILL OPERATIONS. ALL COMPACTED FILL SHALL BE CONTINUOUSLY INSPECTED BY THE OWNER'S SELECTED INDEPENDENT TESTING LABORATORY.
- 4. FOOTINGS SHALL BEAR EITHER ON COMPETENT NATIVE SOIL OR COMPACTED STRUCTURAL FILL AS PER THE GEOTECHNICAL REPORT, EXTERIOR PERIMETER FOOTINGS SHALL BEAR NOT LESS THAN 24 INCHES BELOW FINISH GRADE UNLESS OTHERWISE SPECIFIED BY THE GEOTECHNICAL ENGINEER AND/OR BUILDING OFFICIAL. IF THE SOIL AT THE BEARING ELEVATIONS SHOWN IS OF QUESTIONABLE BEARING VALUE, THE STRUCTURAL ENGINEER OF RECORD OR ARCHITECT SHALL BE NOTIFIED IMMEDIATELY.
- ALL FILL MATERIAL UNDER THE STRUCTURE SHALL COMPLY WITH REQUIREMENTS STATED IN THE GEOTECHNICAL REPORT, UNO PROVIDE A MINIMUM OF A 4-INCH CLEAN, FREE-DRAINING GRANULAR SUBBASE FILL BELOW ALL INTERIOR SLABS-ON-GRADE UNLESS NOTED OR
- DETAILED OTHERWISE. SUBBASE SHALL MEET GRADATION REQUIREMENTS OF ASTM C-33 SIZE NO. 67, UNLESS SPECIFICALLY NOTED OTHERWISE. A POLYETHYLENE FILM VAPOR RETARDER, MEETING THE REQUIREMENTS IN THE SPECIFICATIONS, SHALL BE PLACED BELOW ALL INTERIOR SLABS-ON-GRADE PER THE FOUNDATION PLAN NOTES.
- 8. THE CONTRACTOR IS CAUTIONED AGAINST LOADING SLAB-ON-GRADE WITH CONSTRUCTION EQUIPMENT. THE SLAB HAS NOT BEEN DESIGNED FOR CONSTRUCTION EQUIPMENT AND MAY REQUIRE AN INCREASE IN SLAB THICKNESS AND/OR REINFORCEMENT. IF THE CONSTRUCTION LOADING EXCEEDS THE DESIGN LOADS SHOWN IN THE DESIGN CRITERIA, THE CONTRACTOR IS REQUIRED TO SUBMIT CALCULATIONS SIGNED AND SEALED BY A REGISTERED STRUCTURAL, CIVIL, OR GEOTECHNICAL ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED VERIFYING THE ADEQUACY OF
- 9. EXTERIOR FOOTINGS FOR STAIRS AND RAMPS SHALL BEAR AT OR BELOW MINIMUM BEARING DEPTH. 10. FOUNDATION WALLS SHALL HAVE ADEQUATE TEMPORARY BRACING INSTALLED BY THE CONTRACTOR BEFORE BACKFILL IS PLACED AGAINST THEM.

## **DIVISION 3 - CONCRETE**

ALL CONCRETE SHALL CONFORM TO THE SPECIFICATIONS FOR STRUCTURAL CONCRETE, ACI 301

TEMPORARY BRACING SHALL NOT BE REMOVED UNTIL WALL IS PERMANENTLY BRACED.

- CONTRACTOR SHALL FOLLOW ACL306.1 FOR COLD WEATHER CONCRETE PLACEMENT AND CURING GUIDELINES. ARRANGEMENTS AND DETAIL OF REINFORCING BENDS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF PUBLICATION SP-66, "ACI
- DETAILING MANUAL" AND ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE." UNLESS NOTED OTHERWISE, BAR SPLICES SHALL BE CLASS B TENSION LAPS AND SHALL BE LAPPED WITH MINIMUM LENGTHS AS LISTED IN THE LAP LENGTH SCHEDULE. WHERE REQUIRED IN REINFORCING. SHORTER LAPS MAY BE ACCEPTABLE IF SPECIFIC LOCATIONS OF ALTERNATE LAPS ARE SHOWN ON THE REINFORCING PLACEMENT DRAWINGS AND CALCULATIONS ARE SUBMITTED BY A REGISTERED PROFESSIONAL ENGINEER.
- LICENSED TO PRACTICE IN THE STATE IN WHICH THE PROJECT IS LOCATED, JUSTIFYING THE ALTERNATE LAP LENGTHS PROVIDE SUITABLE WIRE SPACERS, CHAIRS, TIES, ETC. FOR SUPPORTING REINFORCING STEEL IN THE PROPER POSITION BEFORE PLACING
- ALL WELDED WIRE FABRIC SHALL BE LAPPED A MINIMUM OF 12" AT THE SIDES AND ENDS. LOCATIONS AND SIZES OF OPENINGS, SLEEVES, ETC. REQUIRED FOR OTHER TRADES MUST BE VERIFIED BY THESE TRADES BEFORE PLACING
- ALL SLOTS, SLEEVES, TRENCHES AND OTHER EMBEDDED ITEMS SHALL BE SET AND SECURED AGAINST MOVEMENT BEFORE THE CONCRETE IS PLACED. SEE ARCHITECTURAL, ELECTRICAL, MECHANICAL, PLUMBING, AND VENDOR DRAWINGS FOR SIZES, AND LOCATIONS. COORDINATE
- LOCATIONS, SPACING, AND SIZES WITH THE STRUCTURAL ENGINEER OF RECORD PRIOR TO PLACING CONCRETE AS PART OF THE SUBMITTAL PROCESS, THE ELECTRICAL AND MECHANICAL CONTRACTOR(S) SHALL SUBMIT PROPOSED ROUTING PLAN FOR ALL PIPES, CONDUITS, OR OTHER DEVICES TO BE EMBEDDED IN THE CONCRETE. THE SUBMITTAL SHALL SHOW SPECIFIC SIZES AND LOCATIONS OF ALL PROPOSED EMBED ITEMS REFERENCING PROXIMITY TO BEAM, COLUMN, AND SLAB EDGES. NO ITEMS SHALL BE ALLOWED TO BE EMBEDDED IN THE CONCRETE WITHOUT PRIOR WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.
- 10. CONDUITS AND PIPES EMBEDDED IN CONCRETE SLABS MAY BE NO LARGER THAN 1/3 OF THE SLAB THICKNESS (BASED ON THE MAXIMUM OUTSIDE DIAMETER) AND SHALL HAVE A CENTER-TO-CENTER SPACING NO LESS THAN THREE (3) CONDUIT DIAMETERS. REGARDLESS OF DIAMETER, THE MINIMUM CLEAR SPACING BETWEEN CONDUITS OR REINFORCING SHALL BE (1) INCH.
- 11. NO MORE THAN FOUR CONDUITS MAY BE PLACED ADJACENT TO EACH OTHER WITHOUT PRIOR APPROVAL IN WRITING FROM THE STRUCTURAL 12. NO ALUMINUM CONDUITS, DEVICES, OR FIXTURES MAY BE EMBEDDED INTO THE CONCRETE SO THAT THE ALUMINUM IS IN DIRECT CONTACT WITH
- THE CONCRETE. CORNER BARS SHALL BE PROVIDED FOR ALL HORIZONTAL REINFORCING BARS AT THE INTERSECTIONS AND CORNERS OF ALL STRIP FOOTINGS,
- BEAMS, AND WALLS UNLESS NOTED OTHERWISE. CORNER BARS SHALL BE OF THE SAME SIZE AND GRADE AS THE HORIZONTAL REINFORCING THEY CONNECT. MINIMUM LAP LENGTHS SHALL BE AS INDICATED ABOVE UNLESS NOTED OTHERWISE.
- 14. FOR EXTERIOR RETAINING WALLS AND BUILDING STEM WALLS EXPOSED TO VIEW ACROSS THE LENGTH OF WALL, PROVIDE FORMED "V" CONTROL JOINTS AT 15'-0" OC MAX.

AP LENGTHS FOR SPLICES		SPLICES	REQUIRED CONCRETE STRENGTHS (28	DA`
BAR SIZE	TOP BARS**	OTHER	CONCRETE ELEMENT	f"c
#3	1'-11"	1'-6"	FOOTINGS, PIERS AND GRADE BEAMS	3,
#4	2'-6"	1'-11"	FOUNDATION WALL AND PEDESTALS	4,
#5	3'-1"	2'-5"	SLABS-ON-GRADE	3,
#6	3'-8"	2'-10"	SUSPENDED SLABS AND SLABS ON COMPOSITE DECK	3,
#7	5'-3"	4'-0"	STEEL STAIR PANS (SLABS ON NON-COMPOSITE DECK)	3,
#8	6'-0"	4'-7"		
#9	6'-9"	5'-2"		

- \* BASED ON MINIMUM CONCRETE COVER OF 1 1/2". A MINIMUM CENTER-TO-CENTER BAR SPACING OF THREE BAR DIAMETERS, AND 3,000 PSI CONCRETE. CLASS A SPLICE VALUES SHOWN ASSUME CLEARANCE & SPACING REQUIREMENTS
- \*\* TOP BARS ARE HORIZONTAL BARS WITH MORE THAN (12) INCHES OF CONCRETE CAST BELOW BARS.

REINFORCEMENT MATERIALS					
REINFORCING ELEMENT	ASTM	Fy (KSI)	Fu (KSI)		
TYP REINFORCEMENT	A615	60	90		
WELDED AND BENT REINF	A706	60	80		
WELDED WIRE REINFORCING, SMOOTH	A185	65	75		
VELDED WIRE REINFORCING, DEFORMED A497 70 80					

	REINFORCEMENT COVER REQUIREMENTS	
SI)	LOCATION	COVER (IN)
	COLUMNS, GIRDERS, AND BEAMS	1 1/2
	CONCRETE CAST AGAINST EARTH	3
	CONCRETE CAST IN FORMS, EXPOSED TO WEATHER OR EARTH	2
	CONCRETE CAST ON VOID FORMS WITH MASONITE OR PLYWOOD COVERING	2
	JOISTS	1 1/2
	SLABS OR WALLS NOT EXPOSED TO EARTH OR WEATHER	1

## **DIVISION 4 - MASONRY**

- CONCRETE MASONRY UNITS SHALL MEET ASTM SPECIFICATION C90, GRADE N TYPE 1 BLOCK WITH A MINIMUM UNIT COMPRESSIVE STRENGTH OF 1900 PSI. THE SPECIFIED DESIGN COMPRESSIVE STRENGTH OF THE CONCRETE MASONRY ASSEMBLY IS SHALL BE 1,500 PSI. MORTAR SHALL MEET ASTM SPECIFICATION C270 FOR TYPE "S" MORTAR.
- GROUT SHALL MEET ASTM SPECIFICATION C476 AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2,000 PSI.
- GROUT PLACED BY THE LOW LIFT GROUTING METHOD SHALL BE MECHANICALLY CONSOLIDATED USING A VIBRATOR WITH A MAXIMUM 3/4 INCH 5. HORIZONTAL JOINT REINFORCEMENT SHALL BE LADDER TYPE (REFERENCE SPECIFICATION). JOINT REINFORCEMENT SHALL BE SPACED AT 8 INCHES
- ON CENTER BELOW FINISHED FLOOR AND IN PARAPETS, AND 16 INCHES ON CENTER ABOVE FINISHED FLOOR. CONCRETE MASONRY SHALL BE LAID IN RUNNING BOND. CONCRETE MASONRY BELOW FINISHED FLOOR SHALL BE NORMAL WEIGHT UNITS AND SHALL HAVE ALL THE CELLS FULLY GROUTED. CONCRETE
- MASONRY ABOVE FINISHED FLOOR SHALL BE MEDIUM WEIGHT OR LIGHT WEIGHT AND IS TO BE GROUTED AT REINFORCED CELLS AND BOND BEAMS. ALL CELLS WITH REINFORCING SHALL BE GROUTED SOLID. REFER TO WALL SECTIONS AND DETAILS FOR MISCELLANEOUS BOND BEAM LOCATIONS AND EMBEDDED ITEMS. USE OPEN KNOCK OUT BOND BEAM
- BLOCK. DO NOT USE THROUGH TYPE BLOCKS FOR BOND BEAMS. DO NOT CONTINUE BOND BEAM REINFORCING THROUGH CONTROL JOINTS. REINFORCING STEEL SHALL MEET ASTM SPECIFICATION A615, GRADE 60. 10. ANCHORS INSTALLED IN GROUT FILLED CONCRETE MASONRY UNITS SHALL BE USED WHERE SPECIFIED ON THE DRAWINGS. ANCHORS MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS. USE HILTI HY-270 ADHESIVE ANCHORING SYSTEM OR HILTI KWIK BOLT 3 EXPANSION ANCHOR, REFERENCE DETAILS FOR ANCHOR SIZE AND EMBEDMENT. SUBSTITUTIONS TO THE SPECIFIED ANCHORS
- MUST BE APPROVED BY THE ENGINEER OF RECORD. 1. CONSTRUCTION BRACING FOR MASONRY WALLS SHALL BE DESIGNED AND DETAILED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED.

BRICK LINTEL SCHEDULE						
TYPE CLEAR SPANS (S) ANGLE SIZE (EACH END)						
Α	S ≤ 4'-0"	L4x4x3/8	8"			
В	4'-0" < S ≤ 7'-0"	L6x4x3/8 (LLV)	8"			
С	7'-0" < S ≤ 10'-0"	L8x4x1/2 (LLV)	16"			

#### **DIVISION 5 - STRUCTURAL STEEL**

1. STRUCTURAL STEEL SHALL MEET THE FOLLOWING MINIMUM YIELD STRENGTHS (Fy): ASTM SPECIFICATION A. WIDE FLANGE SHAPES ------ 50 KSI OTHER SHAPES, BARS, PLATES AND RODS ------- 36 KSI SQUARE AND RECTANGULAR HSS ------46 KSI A500, GRADE B ROUND HSS -----A500, GRADE A -- 42 KSI STRUCTURAL STEEL PIPE ---A53, TYPE E, GRADE B ANCHOR RODS ---- 55 KSI F1554 ALL-THREAD RODS ------- 36 KSI A36 ---- 65 KSI (TENSILE) A108 (GRADE DESIGNATIONS 1010-1020 INCLUSIVE)

- BOLTS FOR STEEL BEAM AND COLUMN CONNECTIONS SHALL BE 3/4" DIAMETER ASTM A325 HIGH-STRENGTH BOLTS INSTALLED SNUG TIGHT, UNO. WHERE FIELD AND SHOP WELDS ARE INDICATED ON THE DRAWINGS, THEY SHALL BE THE SIZE AND TYPE NOTED. ALL WELDING OF STRUCTURAL STEEL
- SHALL BE DONE IN ACCORDANCE WITH LATEST EDITION OF AWS D1.1 CORRESPONDING TO THE AISC SPECIFICATION USED, AND ALL WELDS INCLUDING FIELD WELDS SHALL BE MADE BY CERTIFIED WELDERS USING E70XX ELECTRODES. WHERE FILLED WELD SIZES ARE NOT INDICATED ON WELD SYMBOLS, FILLET SIZE SHALL BE 1/16TH INCH SMALLER THAN THICKNESS OF THINNER
- MATERIALS BEING JOINED.
- COMPLETE PENETRATION WELDS ARE INDICATED BY NOTATION "CP" ON WELD SYMBOLS, PARTIAL PENETRATION BY "PP". PROVIDE DOUBLE NUTS AND DOUBLE WASHERS FOR STEEL COLUMN ANCHOR BOLTS TO ALLOW FOR ADJUSTMENT IN BASE PLATE ELEVATION.
- COMPOSITE CONSTRUCTION STEEL BEAMS AND GIRDERS DO NOT REQUIRE SHORING. STUD CONNECTORS FOR COMPOSITE BEAMS AND GIRDERS SHALL BE 3/4" DIA. X 4 1/2" AND SHALL BE WELDED THROUGH METAL DECK DIRECTLY TO THI
- STEEL MEMBER STUD SPACING ON COMPOSITE BEAMS AND GIRDERS SHALL NOT BE LESS THAN 4 1/2" ALONG THE LENGTH OF ANY MEMBER AND SHALL NOT EXCEED 32". MINIMUM STUD SPACING ACROSS THE WIDTH OF ANY FLANGE SHALL NOT BE LESS THAN 3".
- 10. DO NOT PAINT SURFACES WHICH RECEIVE WELDED STUDS. 11. EXPOSED STEEL LABELED AS ARCHITECTURALLY EXPOSED STEEL REQUIRES HIGHER TOLERANCES FOR CONSTRUCTION. REFER TO SPECIFICATIONS
- SECTION 051200 FOR REQUIREMENTS. FLARE BEVEL WELDS FOR ARCHITECTURALLY EXPOSED TUBE SHAPED SECTIONS SHALL BE BEVELED 45
- 12. ALL STEEL MEMBERS NOTED OR INDICATED ON PLANS, ELEVATIONS, SECTIONS OR DETAILS SHALL BE SHOP ROLLED BY THE STEEL FABRICATOR. SHOP DRAWINGS SHALL INDICATED CURVATURE DATA AND FULL PENETRATION SPLICE LOCATIONS.
- 13. REFERENCE SPECIFICATIONS FOR MISC. STEEL REQUIREMENTS NOT SHOWN ON STRUCTURAL PLANS.
- 14. TOUCH UP ALL FIELD WELDS ON GALVANIZED SURFACES WITH GALVANIZING REPAIR PAINT. . THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR INCLUDING THE COSTS FOR ALL MISCELLANEOUS STEEL IN THEIR BID, REGARDLESS OF WHETHER THOSE ITEMS ARE INDICATED ON THE STRUCTURAL DRAWINGS. THESE COSTS SHALL INCLUDE, BUT NOT LIMITED TO, MISCELLANEOUS STEE ITEMS SHOWN ON ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS.
- 16. UNLESS DETAILED OTHERWISE OR REACTIONS ARE INDICATED, BEAM CONNECTIONS SHALL BE SELECTED TO SUPPORT ONE-HALF THE TOTAL UNIFORM LOAD CAPACITY SHOWN IN THE "ALLOWABLE UNIFORM LOAD TABLES" IN PART 3 OF THE AISC STEEL CONSTRUCTION MANUAL, 13TH EDITION, FOR THE GIVEN BEAM SIZE, SPAN AND STEEL SPECIFICATION OR FOR THE BEAM REACTION SHOWN ON THE DRAWINGS, WHICHEVER IS GREATER. THE MINIMUM BEAM CONNECTION SHALL NOT BE SMALLER THAN THOSE LISTED IN TABLES 10-1 AND 10-2 OF THE AISC STEEL CONSTRUCTION MANUAL, 13TH EDITION,
- FOR THE GIVEN BEAM DEPTH, BOLT DIAMETER AND WELD SPECIFICATION. THE FABRICATOR SHALL BE RESPONSIBLE FOR THE DESIGN AND ADEQUACY OF ALL CONNECTIONS THAT ARE NOT DESIGNED OR FULLY DETAILED ON THE CONTRACT DOCUMENTS. SHOP DRAWINGS, DEPICTING THE CONFIGURATIONS AND FABRICATION DETAILS, ALONG WITH CALCULATIONS, SEALED B A REGISTERED PROFESSIONAL ENGINEER, LICENSED TO PRACTICE IN THE STATE IN WHICH THE PROJECT IS LOCATED; SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW.
- UNLESS OTHERWISE INDICATED, BEAM REACTIONS SHOWN ON THE PLANS ARE DESIGN SERVICE LEVEL (ASD) GRAVITY (DEAD LOAD PLUS LIVE LOAD) SHEAR LOADS. ANY AXIAL OR OTHER LOADS REQUIRED MUST BE CONSIDERED IN ADDITION TO THE VERTICAL REACTIONS SHOWN.
- 19. THE MINIMUM DESIGN LOAD FOR ANY CONNECTION SHALL BE 6 KIPS (ASD) OR 10 KIPS (LRFD), REGARDLESS OF THE BEAM REACTION(S) SHOWN ON THI
- 20. STEEL FRAMES ARE NON SELF-SUPPORTING AND COLUMN ANCHOR RODS ARE DESIGNED FOR A COMPLETED CONDITION ONLY. METAL ROOF DECK, BEAM-TO-COLUMN MOMENT CONNECTIONS, PORTAL FRAMES, AND DIAGONAL BRACES ARE REQUIRED TO PROVIDE LATERAL STABILITY FOR THE FRAME AND BUILDING. THIS INCLUDES RESISTANCE TO WIND AND SEISMIC FORCES DURING AND AFTER CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE
- ALL TEMPORARY BRACING REQUIRED TO MAINTAIN STABILITY UNTIL THE LATERAL FORCE RESISTING SYSTEM FOR THE BUILDING IS COMPLETE. 21. STAIR SUPPLIER TO PROVIDE POST/HANGER SUPPORTS AT INTERMEDIATE LANDINGS AS REQUIRED. POST/HANGERS ARE TO CONCENTRICALLY LOAD BEAMS.
- 22. AT ROOF ACCESS LADDERS, PROVIDE (2) C6X10.2 VERTICALS IN STUD WALL. SEE ARCH FOR LOCATIONS. 23. FIELD CUTTING, DRILLING OR OTHER MODIFICATION OF STRUCTURAL STEEL COMPONENTS IS NOT PERMITTED WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD. WHERE BEAM PENETRATIONS CANNOT BE AVOIDED OR WHERE CUTTING IS REQUIRED, THE CONTRACTOR SHALL SUBMIT TO THE STRUCTURAL ENGINEER OF RECORD ALL PERTINENT INFORMATION INCLUDING PENETRATION SHAPE, SIZE, LOCATION AND METHOD OF
- 24. ALL STEEL MEMBERS EXPOSED TO WEATHER SHALL BE GALVANIZED OR PAINTED WITH TNEMEC EPOXY SYSTEM OR SIMILAR SYSTEM MEETING THE REQUIREMENT FOR PAINTING STRUCTURAL STEEL IN THE PROJECT SPECIFICATIONS, ALL OTHER STEEL MEMBERS SHALL BE FURNISHED WITH A SHOP COAT OF TNEMEC RED OR GRAY OXIDE PRIMER OR SIMILAR SYSTEM MEETING THE REQUIREMENT FOR PAINTING STRUCTURAL STEEL IN THE PROJECT SPECIFICATIONS. ALL PRIMERS SHALL BE COMPATIBLE WITH TOP COATINGS SPECIFIED.

#### **DIVISION 5 - JOISTS**

- STEEL JOISTS SHALL BE AS INDICATED ON THE PLANS AND SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS OF THE STEEL JOIST INSTITUTE (SJI)
- A. JOISTS SHALL BE DESIGNED FOR THE UNIFORM LOAD CAPACITY (AS SPECIFIED IN THE SJI STANDARD LOAD TABLES) IN ADDITION TO THE
- CONCENTRATED LOADS SHOWN ON PLANS AND DETAILS. B. JOISTS THAT SUPPORT CONCENTRATED LOADS SHALL HAVE THEIR CHORDS DESIGNED TO WITHSTAND ALL BENDING STRESSES, OR THE LOADS
- SHALL OCCUR WITHIN 3 INCHES OF JOIST PANEL POINTS, OR THE JOIST SHALL BE REINFORCED PER THE "JOIST REINFORCING DETAIL" SHOWN HEREIN. CONCENTRATED LOADS SHALL BE CENTERED ON JOISTS AND NOT ATTACHED TO THE EDGE OF CHORD ANGLES. C. JOISTS SHALL RESIST THE NET UPLIFT PRESSURE AS INDICATED ON THE "ROOF (NET UPLIFT)" SECTION OF THE DESIGN PARAMETERS FOR "DESIGN
- WIND PRESSURE ON COMPONENTS AND CLADDING". THIS PRESSURE SHALL ACT ALONE. AN ALLOWABLE STRESS INCREASE IS NOT PERMITTED.
- D. FOR ALL MEMBERS THAT REQUIRE SPECIFIC ORIENTATION, PROVIDE TAG AT ONE END AND DEFINE LOCATION OF TAGGED END ON ERECTION
- JOIST MANUFACTURER SHALL DETERMINE THE SEAT DEPTH AND WIDTH OF BEARING AND COORDINATE THE SAME WITH THE STEEL FABRICATOR. THE FOLLOWING SEAT DEPTHS ARE ASSUMED ON THE DRAWINGS: 2 1/2 INCH FOR K-SERIES JOISTS, 5 INCH FOR LH AND DLH SERIES JOISTS, 7 1/2 INCH FOR JOIST GIRDERS)
- K-SERIES JOISTS SHALL BE WELDED TO SUPPORTING STEEL WITH MINIMUM 1/8 INCH FILLET WELDS 2 INCHES LONG EACH SIDE OR WITH TWO 1/2 INCH DIAMETER ASTM A307 BOLTS OR THE EQUIVALENT, UNLESS NOTED OTHERWISE. WHEN NEAR OR AT A COLUMN, BOLT JOIST TO SUPPORTING STEEL IN CONFORMANCE WITH OSHA.
- LH AND DLH-SERIES JOISTS SHALL BE WELDED TO SUPPORTING STEEL WITH MINIMUM 1/4 INCH FILLET WELDS 2 INCHES LONG EACH SIDE OR WITH TWO 3/4 INCH DIAMETER ASTM A307 BOLTS OR THE EQUIVALENT, UNLESS NOTED OTHERWISE IN CONTRACT DOCUMENTS.
- JOIST BRIDGING AND ERECTION STABILITY SHALL BE PROVIDED IN ACCORDANCE WITH THE OCCUPATIONAL SAFETY AND HAZARD ADMINISTRATION (OSHA) AND THE SPECIFICATIONS OF THE STEEL JOIST INSTITUTE (SJI). JOIST RTU LOADS ARE PROVIDED ON THE ROOF FRAMING PLAN, REFERENCE PLANS AND DETAILS FOR LOAD LOCATIONS, VALUES AND SUPPORT
- JOIST MANUFACTURER SHALL DESIGN THE COMPRESSION CHORD OF ALL JOISTS SUPPORTING ROOF TOP UNITS, SKY LIGHTS, AND OTHER STRUCTURES FOR AN UNBRACED LENGTH APPLICABLE TO THE CONDITIONS AT THE PROJECT WHERE THE UNBRACED LENGTH IS GREATER THAN THE SJI MAXIMUM. (REFERENCE ARCHITECTURAL AND MECHANICAL DRAWINGS)
- DESIGN JOISTS FOR INTERNAL ROOF DRAINLINE LOCATIONS, IF REQUIRED. ADD 50 PLF FOR 8 INCH DIAMETER AND SMALLER, ADD 75 PLF FOR 10 INCH DIAMETER, ADD 102 PLF FOR 12 INCH DIAMETER, ADD 122 PLF FOR 14 INCH DIAMETER, ADD 200 PLF FOR 18 INCH DIAMETER. REFERENCE MECHANICAL DRAWINGS FOR EXACT LOCATION
- JOIST DESIGNS SHALL BE PERFORMED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED, EMPLOYED OR
- RETAINED BY THE JOIST MANUFACTURER. 9. SHOP DRAWING SHALL BE REVIEWED BY THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD PRIOR TO JOIST FABRICATION.

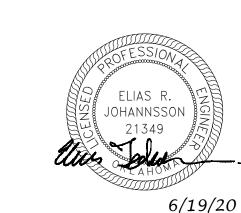
#### **DIVISION 5 - STEEL DECK**

10. PLACING CONDUIT IN SLAB ON METAL DECK IS NOT PERMITTED.

- DECK DESIGN IS IN ACCORDANCE WITH STEEL DECK INSTITUTE (SDI) PUBLICATION NO. 31 AND DIAPHRAGM DESIGN MANUAL, LATEST EDITIONS. THE CONTRACTOR SHALL FOLLOW ALL RECOMMENDED PRACTICES IN THE SDI MANUAL. WHERE DECK RIBS ARE CUT AT PENETRATIONS, PROVIDE DECK SUPPORT ANGLES OR DECK STIFFENERS AS REQUIRED. REINFORCE OPENINGS IN
- METAL DECK AND FLOOR DECK IN ACCORDANCE WITH TYPICAL DECK OPENING DETAILS. THE DECKING SPECIFIED ON THIS PROJECT ASSUMES A 3-SPAN CONDITION, UNO. THE CONTRACTOR SHALL PROVIDE HEAVIER GAUGE DECK, AS
- REQUIRED, FOR ONE OR TWO SPAN CONDITIONS TO MEET EQUIVALENT LOAD CAPACITY OF THE SPECIFIED DECK, UNDER A 3-SPAN CONDITION.
- PROVIDE A 2" MINIMUM BEARING AND A 4" LAP AT THE SPLICE POINT OF ALL PIECES OF DECK. PROVIDE DECK ATTACHMENTS AS NOTED ON DRAWINGS. ALTERNATE FASTENING OPTIONS USING MECHANICAL FASTENERS, POWDER-ACTUATED OR SCREWS, MAY BE CONSIDERED IF SUBMITTED BY THE CONTRACTOR. ALTERNATE SYSTEMS MUST BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE, AND DOCUMENTATION CERTIFYING THAT THE PROPOSED SYSTEM PROVIDES AT LEAST THE SAME UPLIFT AND DIAPHRAGM
- SHEAR RESISTANCE AS THE SYSTEM AND PATTERN SPECIFIED. FOR COMPOSITE DECK, SHEAR STUDS, WELDED THROUGH THE DECK, MAY BE COUNTED AS PART OF THE REQUIRED DECK ATTACHMENT PATTERN. HANGING ANY LOADS DIRECTLY FROM STEEL ROOF DECK SHALL BE AVOIDED WHENEVER POSSIBLE. NEVERTHELESS, NORMAL SUSPENDED ACOUSTICAL CEILINGS WITH A TOTAL WEIGHT PER WIRE NOTE EXCEEDING 50 POUNDS MAY BE HUNG FROM THE STEEL ROOF DECK IN CASES WHERE HANGING LOADS FROM THE DECK CANNOT BE AVOIDED. THE ATTACHMENT SHOULD BE STAGGERED, IF POSSIBLE, TO FURTHER DISTRIBUTE THE LOAD. DECK SHOULD BE PROVIDED WITH TABS OR OTHER BUILT-IN DEVICES FOR HANGING REFERENCED LOADS IF LOADS ARE DIRECTLY SUPPORTED BY THE DECK
- WHERE METAL DECK IS PART OF A RATED ASSEMBLY, SUPPLY ALL DECK AND COMPONENTS WHICH COMPLY WITH REQUIREMENTS OF UNDERWRITER'S LABORATORY FOR EACH TYPE OF ASSEMBLY SPECIFIED, RE: PLANS AND SPECIFICATIONS. WHERE DECK IS TO RECEIVE SPRAY FIREPROOFING, FINISHES SHALL BE COMPATIBLE WITH FIREPROOFING MATERIAL AND COMPLY WITH U.L. ASSEMBLY REQUIREMENTS. BEFORE THE FIREPROOFING MATERIAL IS APPLIED, THE DECK SURFACE TO BE TREATED SHALL BE FREE OF RUST, SCALE, OIL OR OTHER CONTAMINANTS AND ELEMENTS WHICH WILL
- SUPPLY 8" WIDE, MINIMUM, PLATES MATCHING DECK GAUGE OR HEAVIER FOR ALL RIDGE, VALLEY, AND CHANGE IN DECK DIRECTION LOCATIONS WHICH DO NOT FALL OVER A SUPPORTING MEMBER AT LEAST 4" WIDE.



Certificate of Authorization OK #5996 | EXP 6.30.2020



GH2 PROJECT NUMBER: 20170021 ISSUE DATE:

**PERMIT SET** 

06.19.2020

OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME:

**GENERAL NOTES** 



### DIVISION 5 - COLD-FORMED METAL FRAMING

- ALL METAL STUDS, JOISTS AND TRACK SHALL MEET THE FOLLOWING MINIMUM GROSS STRUCTURAL PROPERTIES BASED ON SSMA (ER #4943P) SECTIONS. YIELD STRENGTH SHALL BE AS FOLLOWS: 33 KSI FOR 18 GAGE AND LIGHTER, 50 KSI FOR 16 GAGE AND HEAVIER.
- DO NOT WELD 20 GAGE AND LIGHTER FRAMING, UNLESS SPECIFICALLY CALLED FOR IN PLANS AND DETAILS.
- MINIMUM WIDTH OF THE STUDS SHALL BE 1 5/8", AND THE LIP OF THE "C" PORTION SHALL BE A MINIMUM OF 1/2". STUD TRACK SHALL BE 18 GA. MINIMUM FOR WALL STUDS 18 GA. OR LIGHTER. STUD TRACK SHALL MATCH WALL STUD GAGE FOR WALL STUDS 16 GA. AND HEAVIER. TRACKS SHALL BE ANCHORED AS FOLLOWS UNO:
  - TO STEEL HILTI X-S16 P8TH, 0.145" DIA. PAF AT 16" OC. TO CONCRETE - HILTI X-U, 0.157" DIA PAF AT 16" OC WITH 1 1/4" EMBEDMENT.
- STEEL STUDS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. HORIZONTAL BRIDGING SHALL BE PLACED AT 4'-0" OC, OR AS PER MANUFACTURER'S RECOMMENDATION IF LESS THAN 4'-0" OC.
- ALL AXIALLY LOADED STUDS SHALL HAVE FULL FLANGE BEARING AGAINST UPPER AND LOWER TRACK WEB PRIOR TO ATTACHMENT TO TRACK. SPLICES IN AXIALLY LOADED STUDS ARE NOT PERMITTED. PROVIDE FULL DEPTH BLOCKING BETWEEN JOISTS AT SUPPORTS WHERE JOISTS ARE NOT OTHERWISE RESTRAINED FROM ROTATION, AND AS
- INDICATED IN THE SECTIONS. 8. JOISTS SHALL BE PLACED DIRECTLY OVER BEARING STUDS AND JOIST WEB STIFFENERS SHALL BE PROVIDED AT ALL REACTION POINTS AND AS
- OTHERWISE SHOWN ON THE DRAWINGS.
- 9. JOIST BRIDGING SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. JOIST BRIDGING SHALL BE INSTALLED AT 8'-0" OC MAXIMUM. APPLIED FINISH MATERIALS SHALL NOT BE CONSIDERED BRIDGING OR FLANGE BRACING, UNLESS NOTED OTHERWISE. 10. CONNECTIONS OF COLD-FORMED METAL FRAMING SHALL CONFORM TO THE FOLLOWING:
- A. ALL WELDED CONNECTIONS TO BE PERFORMED IN ACCORDANCE WITH THE LATEST VERSION OF AWS D1.3 "SPECIFICATIONS FOR WELDING SHEET STEEL STRUCTURES". CONSULT AWS D19.0 "WELDING ZINC COATED STEEL" & ANSI STANDARD Z49.1 FOR INFORMATION REGARDING SAFE WELDING PROCEDURES. WELDERS SHALL BE CERTIFIED FOR SHEET STEEL IN ALL POSITIONS REQUIRED PER AWS D1.3.
- ALL WELDS ARE TO BE TOUCHED-UP WITH A RUST INHIBITIVE GALVANIZING PAINT. SUGGESTED WELD METAL AND PROCESS FOR SHOP WELDING ARE: 60 KSI WELD METAL STRENGTH (MINIMUM) - MIG. SUGGESTED METHODS FOR FIELD WELDING: 1/8 INCH E60XX (MINIMUM) ELECTRODE - SMAW; OR "GASLESS" MIG. MINIMUM WELD THROAT THICKNESS (T) MUST MATCH OR EXCEED THE BASE STEEL THICKNESS OF THE THINNEST CONNECTED PART (U.N.O.)
- D. ALL SCREWS SHALL BE OF THE DIAMETER AND SIZE INDICATED ON THE DRAWINGS AND SHALL BE THOSE MANUFACTURED AND TESTED BY GRABBER, ITW BUILDEX, OR APPROVED EQUIVALENT. A MINIMUM OF (1.5 x) SCREW DIAMETER EDGE DISTANCE AND (3 x) SCREW DIAMETER SPACING IS REQUIRED (U.N.O.)
- E. SELECT SCREW WITH AN ADEQUATE CUTTING TIP TO ACCOMMODATE THE TOTAL THICKNESS TO BE DRILLED. DRILLING MUST BE COMPLETED
- BEFORE THE THREADS ENGAGE THE MATERIAL. F. CONNECTIONS NOT FULLY DETAILED ON THE CONTRACT DOCUMENTS SHALL BE DESIGNED BY THE CONTRACTOR PER THE SPECIFICATION.
- 11. TORCH CUTTING OF COLD-FORMED METAL FRAMING MEMBERS IS NOT PERMITTED. 12. ROOF AND FLOOR JOISTS MUST ALIGN DIRECTLY OVER STUDS (U.N.O.).
- 13. PER AISI S200, THE MAXIMUM ALLOWABLE GAP (MEASURED BETWEEN THE WEB OF THE STUD AND THE WEB OF THE TRACK) FOR A STUD SEATED IN A TRACK IS 1/4" FOR NON-AXIAL LOAD BEARING CONDITIONS AND 1/8" FOR AXIALLY LOAD BEARING CONDITIONS (U.N.O.). PRESSURE SHALL BE APPLIED TO NEST STUDS INTO THE TRACKS UNTIL THESE TOLERANCES ARE ACHIEVED. 14. PRODUCT IDENTIFICATION:
- A. THE AMERICAN IRON AND STEEL INSTITUTE STANDARDS ARE USED IN THESE DOCUMENTS. ANY MANUFACTURER WHOSE PRODUCT GEOMETRIES MEET OR EXCEED AISI STANDARDS ARE ACCEPTABLE.
- B. IDENTIFICATION:

LEG 2 LENGTH: ————				
IN 1/100 INCHES				MEMBER DEPTH:
CLIP IDENTIFIER				IN 1/100 INCHES
LEG 1 LENGTH: IN 1/100 INCHES 200 L 200	0 - 43 - 4"	800 Ś	162 - 43	<ul> <li>TYPE:</li> <li>S = STUD OR JOIST SECTIONS</li> <li>T = TRACK SECTIONS</li> <li>U = CHANNEL SECTIONS</li> <li>F = FURRING CHANNEL</li> <li>SECTIONS</li> </ul>
MATERIAL THICKNESS: IN MILS				MATERIAL THICKNESS: IN 1/1000 INCHES
CLIP LENGTH  CLIP IDENT	IFICATION	MEMBER ID	DENTIFICATION	FLANGE WIDTH: IN 1/100 INCHES
	MINIMUM <sup>1</sup>	THICKNESS		
	GAUGE DESIGN MINI	MUM AISI CO	OLOR	

	MINIMUM THICKNESS					
GAUGE	DESIGN	MINIMUM	AISI	COLOR		
20	0.0346"	0.0329"	33 MILS	WHITE		
18	0.0451"	0.0428"	43 MILS	YELLOW		
16	0.0566"	0.0538"	54 MILS	GREEN		
14	0.0713"	0.0677"	68 MILS	ORANGE		
12	0.1017"	0.0966"	97 MILS	RED		

#### DIVISION 5 - COLD-FORMED STEEL TRUSSES

- DESIGNS SHALL MEET THE REQUIREMENTS OF THE NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS (AISI S100) AND THE NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL FRAMING - TRUSS DESIGN (AISI S214). AISI EDITIONS ARE TO THE AS REFERENCED IN APPLICABLE BUILDING CODE.
- SEE DESIGN PARAMETERS FOR LOADING AND PERFORMANCE REQUIREMENTS OF COLD-FORMED STEEL TRUSSES. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL DETAILS AND DIMENSIONS NOT NOTED.
- ALL COLD-FORMED STEEL TRUSS COMPONENTS SHALL BE GALVANIZED. TOP AND BOTTOM CHORD MEMBERS TO HAVE A MINIMUM THICKNESS OF 33
- EXACT TRUSS WEB AND CHORD SIZES (SEE ABOVE FOR MINIMUMS) AND LAYOUTS ARE TO BE DETERMINED BY THE MANUFACTURER. TRUSS MANUFACTURER TO DESIGN AND FURNISH ALL TEMPORARY AND PERMANENT TRUSS BRACING REQUIRED FOR STABILITY UNDER THE IMPOSED WIND AND SEISMIC FORCES PER THE DESIGN PARAMETERS IN THESE GENERAL NOTES AS WELL AS LOADING CONDITIONS DURING CONSTRUCTION.
- ALL PERMANENT BRACING REQUIRED AT TOP AND BOTTOM CHORDS, VERTICALS AND DIAGONALS SHALL BE CLEARLY DETAILED ON THE SHOP DRAWINGS AND SHALL BE INSTALLED BY THE CONTRACTOR AS DETAILED. THE CONTRACTOR SHALL TAKE GREAT CARE IN ERECTION OF TRUSSES AND SHALL PROVIDE SUFFICIENT TEMPORARY BRACING TO PREVENT COLLAPSE DURING ERECTION. THE STRUCTURE SHOULD NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN CONNECTED IN PLACE.
- THE TRUSS MANUFACTURER SHALL SUBMIT CALCULATIONS AND DETAILED SHOP DRAWINGS FOR ALL TRUSSES TO ARCHITECT FOR REVIEW BEFORE FABRICATION IS BEGUN. CALCULATIONS AND SHOP DRAWINGS SHALL BE STAMPED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, LICENSED TO PRACTICE IN THE STATE IN WHICH THE PROJECT IS LOCATED. SHOP DRAWINGS SHALL CLEARLY INDICATE MEMBER SIZES, THICKNESS OF MATERIAL, MEMBER DESIGN FORCES, AND MEMBER END CONNECTION DETAILS AND LENGTHS.
- THE TRUSS MANUFACTURER SHALL DESIGN TRUSSES TO MEET THE OUTLINE DIMENSION(S) SHOWN ON THE DRAWINGS AND THE DESIGN LOADS NOTED. WEB MEMBERS SHALL BE DESIGNED AND CONFIGURED TO COORDINATE WITH THE MINIMUM REQUIRED OPENINGS FOR AIR DUCTS AND OTHER EQUIPMENT SHOWN ON THE MECHANICAL DRAWINGS. ALSO COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR ANY DIMENSIONS, LAYOUTS, CONFIGURATIONS, CLEAR ATTIC SPACE, OR OTHER INFORMATION NO SHOWN ON THE STRUCTURAL DRAWINGS.
- TRUSS ACCESSORIES: A. TRUSS MANUFACTURER TO DESIGN AND SUPPLY ALL CONNECTIONS FROM TRUSS TO SUPERSTRUCTURE BELOW.
- B. BLOCKING TRUSSES ARE REQUIRED TO TRANSFER DIAPHRAGM LOADS TO LATERAL FORCE RESISTING ELEMENTS PERPENDICULAR TO SPAN DIRECTION OF PRIMARY TRUSSES. SEE PLANS FOR BLOCKING TRUSS LOCATIONS AND LOADS.
- C. DRAG TRUSSES ARE REQUIRED TO TRANSFER DIAPHRAGM LOADS TO LATERAL FORCE RESISTING ELEMENTS PARALLEL TO SPAN DIRECTION OF PRIMARY TRUSSES. SEE PLANS FOR DRAG TRUSS LOCATIONS AND LOADS.
- D. MINIMUM ROOF LOADING TO BE IN ACCORDANCE WITH APPLICABLE BUILDING CODE, BUT NOT LESS THAN THE FOLLOWING: a. TOP CHORD LIVE LOAD.....
  - b. TOP CHORD NET WIND UPLIFT... ...PER COMPONENTS AND CLADDING TABLE
  - TOP CHORD DEAD LOAD.... ...5 PSF
- d. TRUSS SELF-WEIGHT DEAD LOAD.. ..PER TRUSS MANUFACTURER e. BOTTOM CHORD DEAD LOAD..
- BOTTOM CHORD LIVE LOAD... ...5 PSF (NOT TO BE INCLUDED IN SAME LOAD CASE WITH TOP CHORD LIVE
- IN ADDITION, THE TRUSS DESIGNER SHALL ALLOW FOR ALL OTHER DEAD LOADS INDICATED, NOTED, OR DETAILED ON THE PLANS, INCLUDING THE WEIGHT OF VALLEY TRUSS SETS OR OTHER RAISED FRAMING.

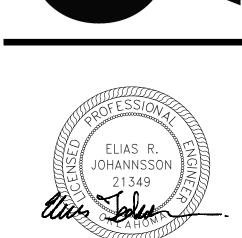
### **SUBMITTALS**

- . TRANSMIT SUBMITTALS SUFFICIENTLY IN ADVANCE OF RELATED CONSTRUCTION ACTIVITIES TO AVOID UNNECESSARY DELAY. THE STRUCTURAL ENGINEER OF RECORD MAY WITHHOLD ACTION ON A SUBMITTAL REQUIRING COORDINATION WITH OTHER SUBMITTALS UNTIL ALL RELATED SUBMITTALS
- 2. THE GENERAL CONTRACTOR SHALL SUBMIT ONE ELECTRONIC PORTABLE DOCUMENT FORMAT (PDF) COPY OF ALL REQUIRED SUBMITTALS THROUGH THE ARCHITECT FOR REVIEW. THE ELECTRONIC COPY WILL BE MARKED UP BY THE STRUCTURAL ENGINEER OF RECORD. ONE COPY WILL BE KEPT BY THE STRUCTURAL ENGINEER OF RECORD AND AN ADDITIONAL COPY WILL BE RETURNED TO THE ARCHITECT. THE ARCHITECT WILL KEEP ONE COPY AND
- RETURN A COPY TO THE CONTRACTOR. THE CONTRACTOR WILL MAKE ADDITIONAL COPIES AS REQUIRED. THE GENERAL CONTRACTOR SHALL SUBMIT, FOR ENGINEER REVIEW, SHOP DRAWINGS FOR THE FOLLOWING ITEMS:
- A. COLD-FORMED STEEL FRAMING: EXTERIOR WALL FRAMING AND ATTACHMENTS TO STRUCTURE (1, 4)
- COLD-FORMED STEEL TRUSSES AND ATTACHMENTS TO STRUCTURE (1,4)
- COMPOSITE STEEL DECK
- CONCRETE MIX DESIGNS (3) CONSTRUCTION JOINT LOCATIONS IN STRUCTURAL FLOORS, WALLS AND SLABS-ON-GRADE.
- STOREFRONT AND CURTAINWALL FRAMING, ACCESSORIES, AND ATTACHMENTS TO STRUCTURE (1, 2)
- G. EXTERIOR WINDOW WALL SYSTEMS (1,2) H. METAL ROOF DECK
- MISCELLANEOUS STEEL REINFORCING STEEL
- STRUCTURAL STEEL: SHOP AND ERECTION DRAWINGS (1) STRUCTURAL STEEL CONNECTIONS OF FRAMING AND BRACING ELEMENTS (1, 4)
- M. STEEL, SELF-SUPPORTING STAIRS (1, 4)
  - NOTES:

    1. SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED PER THE PROJECT
  - 2. SHALL BE SUBMITTED TO THE ENGINEER FOR RECORD ONLY AND WILL NOT RECEIVE THE ENGINEER'S SHOP DRAWING STAMP
  - 3. SHALL BE SUBMITTED TO THE ENGINEER AND THE OWNER'S TESTING AGENCY FOR REVIEW
  - 4. ITEM IS A DEFERRED SUBMITTAL WHICH HAS NOT BEEN COMPLETE AND IS TO BE SUBMITTED TO THE BUILDING OFFICIAL AND APPROVED PRIOR TO INSTALLATION. THE MANUFACTURER, CONSULTANT, OR CONTRACTOR, AS APPROPRIATE SHALL PROVIDE SUBMITTALS TO THE ENGINEER OF RECORD FOR REVIEW.
- 4. ALL SHOP DRAWINGS MUST BE REVIEWED AND ELECTRONICALLY STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL.



Certificate of Authorization: OK #5996 | EXP 6.30.2020



**GH2 PROJECT NUMBER:** 20170021

**PERMIT SET** 

06.19.2020

ISSUE DATE:

OTHER ISSUE DATES: NO. DESCRIPTION

DATE

SHEET NAME: **GENERAL NOTES** 



## GENERAL NOTES

## SPECIAL INSPECTIONS

- 1. SPECIAL INSPECTION SHALL BE PROVIDED BY THE OWNER ACCORDING TO SECTION 1705 OF IBC 2015. THE APPROVED SPECIAL INSPECTOR SHALL DEMONSTRATE COMPETENCE FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. THE AGENCY REGARDING INDIVIDUAL INSPECTIONS FOR ITEMS LISTED ON THE SCHEDULE AND AS NOTED ON THE BUILDING DEPARTMENT APPROVED
- 2. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING CONSTRUCTION DOCUMENTS FOR ADDITIONAL NON-STRUCTURAL SPECIAL
- 3. IN ACCORDANCE WITH IBC CHAPTER 17, THE FOLLOWING TYPES OF WORK REQUIRE SPECIAL INSPECTIONS AND TESTING:

SPECIAL INSPECTION AND VERIFICATION OF SOILS REFERENCE IBC 2015, TABLE 1705.6					
VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC			
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.		Х			
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.		Х			
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.		Х			
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	Х				
PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.		Х			

SPECIAL INSPECTION AND VERIFICATION OF CONCRETE CONSTRUCTION REFERENCE IBC 2015, TABLE 1705.3						
VERIFICATION AND INSPECTION TASK	VERIFICATION AND INSPECTION TASK CONTINUOUS PERIODIC					
INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT		X				
REINFORCING BAR WELDING:  A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706  B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"  C. INSPECT ALL OTHER WELDS	  X	X X 				
INSPECT ANCHORS CAST IN CONCRETE	X					
INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.  A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.  B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN A	X 	 X				
VERIFY USE OF REQUIRED DESIGN MIX.		Х				
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	Х					
INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	Х					
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		X				
INSPECT PRESTRESSED CONCRETE FOR: A. APPLICATION OF PRESTRESSING FORCES B. GROUTING OF BONDED PRESTRESSING TENDONS	X	 				
INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.		X				
VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.		Х				
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.		X				

SPECIAL INSPECTION AND VERIFICATION OF STEEL CONSTRUCTION PRIOR TO WELDING REFERENCE AISC 360-10, TABLE N5.4-1						
VERIFICATION AND INSPECTION TASK	PERFORM	OBSERVE				
WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	Х					
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	Х					
MATERIAL IDENTIFICATION (TYPE/GRADE)		Х				
WELDER IDENTIFICATION SYSTEM		Х				
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)  A. JOINT PREPARATION  B. DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)  C. CLEANLINESS (CONDITION OF STEEL SURFACES)  D. TACKING (TACK WELD QUALITY AND LOCATION)  E. BACKING TYPE AND FIT (IF APPLICABLE)		Х				
CONFIGURATION AND FINISH OF ACCESS HOLES		Χ				
FIT-UP OF FILLET WELDS  A. DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)  B. CLEANLINESS (CONDITION OF STEEL SURFACES)  C. TACKING (TACK WELD QUALITY AND LOCATION)		Х				
CHECK WELDING EQUIPMENT		Х				

## SPECIAL INSPECTIONS CONTINUED

SPECIAL INSPECTION AND VERIFICATION OF STEEL CONSTRUCTION  DURING WELDING  REFERENCE AISC 360-10, TABLE N5.4-2				
VERIFICATION AND INSPECTION TASK	PERFORM	OBSERVE		
USE OF QUALIFIED WELDERS		Х		
CONTROL AND HANDLING OF WELDING CONSUMABLES A. PACKAGING B. EXPOSURE CONTROL		Х		
NO WELDING OVER CRACKED TACK WELDS		Х		
ENVIRONMENTAL CONDITIONS A. WIND SPEED WITHIN LIMITS B. PRECIPITATION AND TEMPERATURE		Х		
WPS FOLLOWED A. SETTINGS ON WELDING EQUIPMENT B. TRAVEL SPEED C. SELECTED WELDING MATERIALS D. SHIELDING GAS TYPE/FLOW RATE E. PREHEAT APPLIED F. INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.) G. PROPER POSITION		Х		
FIT-UP OF FILLET WELDS A. INTERPASS AND FINAL CLEANING B. EACH PASS WITHIN PROFILE LIMITATIONS C. EACH PASS MEETS QUALITY REQUIREMENTS		Х		

SPECIAL INSPECTION AND VERIFICATION OF STEEL CONSTRUCTION  AFTER WELDING  REFERENCE AISC 360-10, TABLE N5.4-3					
VERIFICATION AND INSPECTION TASK	PERFORM	OBSERVE			
WELDS CLEANED		Х			
SIZE, LENGTH AND LOCATION OF WELDS	Х				
WELDS MEET VISUAL ACCEPTANCE CRITERIA  A. CRACK PROHIBITION  B. WELD/BASE-METAL FUSION  C. CRATER CROSS SECTION  D. WELD PROFILES  E. WELD SIZE  F. UNDERCUT  G. POROSITY	X				
ARC STRIKES	X				
K-AREA <sup>1</sup>	X				
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	X				
REPAIR ACTIVITIES	Х				
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	X				

1. WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3" OF THE WELD.

SPECIAL INSPECTION AND VERIFICATION OF STEEL CONSTRUCTION PRIOR TO BOLTING REFERENCE AISC 360-10, TABLE N5.6-1					
VERIFICATION AND INSPECTION TASK	PERFORM	OBSERVE			
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	Х				
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS		Х			
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)		Х			
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL		Х			
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS		Х			
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED		X			
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS		Х			

SPECIAL INSPECTION AND VERIFICATION OF STEEL CONSTRUCTION  DURING BOLTING  REFERENCE AISC 360-10, TABLE N5.6-2					
VERIFICATION AND INSPECTION TASK	PERFORM	OBSERVE			
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED		Х			
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION		Х			
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING		Х			
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID TOWARD THE FREE EDGES		Х			

SPECIAL INSPECTION AND VERIFICATION OF STEEL CONSTRUCTION  AFTER BOLTING  REFERENCE AISC 360-10, TABLE N5.6-3				
VERIFICATION AND INSPECTION TASK PERFORM OBSERVE				
DURING ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS X				

## SPECIAL INSPECTIONS CONTINUED

SPECIAL INSPECTION AND VERIFICATION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT REFERENCE AISC 360-10, TABLE N6.1						
VERIFICATION AND INSPECTION TASK	PERFORM	OBSERVE				
PLACEMENT AND INSTALLATION OR STEEL DECK	Х					
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	X					
DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS	V.					

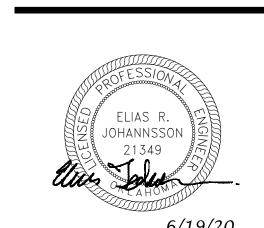
SPECIAL INSPECTION AND VERIFICATION OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS REFERENCE IBC 2015, TABLE 1705.2.3						
VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC				
INSTALLATION OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS A. END CONNECTIONS - WELDING OR BOLTED B. BRIDGING - HORIZONTAL OR DIAGONAL	 	X X				
STANDARD BRIDGING		Х				
BRIDGING THAT DIFFERS FROM THE SJI SPECIFICATIONS LISTED IN SECTION 2207.1		X				

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC				
VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERED TO THE SITE IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.5B.1.b.3 FOR SELF- CONSOLIDATING GROUT.						
VERIFICATION OF fm AND faac PRIOR TO CONSTRUCTION EXCEPT WHERE SPECIFICALLY EXEMPTED BY TMS 402-13.						
VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS		Х				
AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE: A. PROPORTIONS OF SITE-PREPARED MORTAR B. CONSTRUCTION OF MORTAR JOINTS C. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES D. LOCATION OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES E. PRESTRESSING TECHNIQUE F. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	    X <sup>1</sup>	X X X X X X				
PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE: A. GROUT SPACE B. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES C. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES D. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS E. CONSTRUCTION OF MORTAR JOINTS	  	X X X X				
VERIFY DURING CONSTRUCTION:  A. SIZE AND LOCATION OF STRUCTURAL ELEMENTS  B. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION  C. WELDING OF REINFORCEMENT	  X	X X				
D. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F (4.4°C)) OR HOT WEATHER (TEMPERATURE ABOVE 90°F (32.2°C))		X				
E. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE G. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS	X X X <sup>1</sup>	  X <sup>2</sup>				

1. REQUIRED FOR THE FIRST 5000 SQUARE FEET OF AAC MASONRY. 2. REQUIRED AFTER THE FIRST 5000 SQUARE FEET OF AAC MASONRY.



Certificate of Authorization: OK #5996 | EXP 6.30.2020



GH2 PROJECT NUMBER: 20170021 ISSUE DATE:

**PERMIT SET** 

06.19.2020

OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME: **GENERAL NOTES** 



Certificate of Authorization: OK #5996 | EXP 6.30.2020

GH2 PROJECT NUMBER: **20170021** ISSUE DATE: **06.19.2020** 

**PERMIT SET** 

OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME:

**3D VIEWS** 

Certificate of Authorization: OK #5996 | EXP 6.30.2020

GH2 PROJECT NUMBER: **20170021** ISSUE DATE: **06.19.2020** 

PERMIT SET

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SHEET NAME: **3D VIEWS** 

NOTE:
FOR REFERENCE ONLY. NOT ALL MISC.
FRAMING MEMBERS ARE PRESENTED IN
3D VIEW. REFER TO PLANS AND DETAILS
FOR ADDITIONAL INFORMATION.

#### FOUNDATION PLAN NOTES

- 1. SEE SHEET S001, S002, AND S003 FOR GENERAL NOTES.
- 2. SEE ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. COORDINATE SLAB ELEVATIONS AND SLOPES WITH ARCHITECTURAL PLANS.
- SEE MECHANICAL AND ARCHITECTURAL DRAWINGS FOR SIZES AND
   LOCATION OF PENETRATIONS NOT INDICATED ON STRUCTURAL DRAWING.
- LOCATION OF PENETRATIONS NOT INDICATED ON STRUCTURAL DRAWINGS.

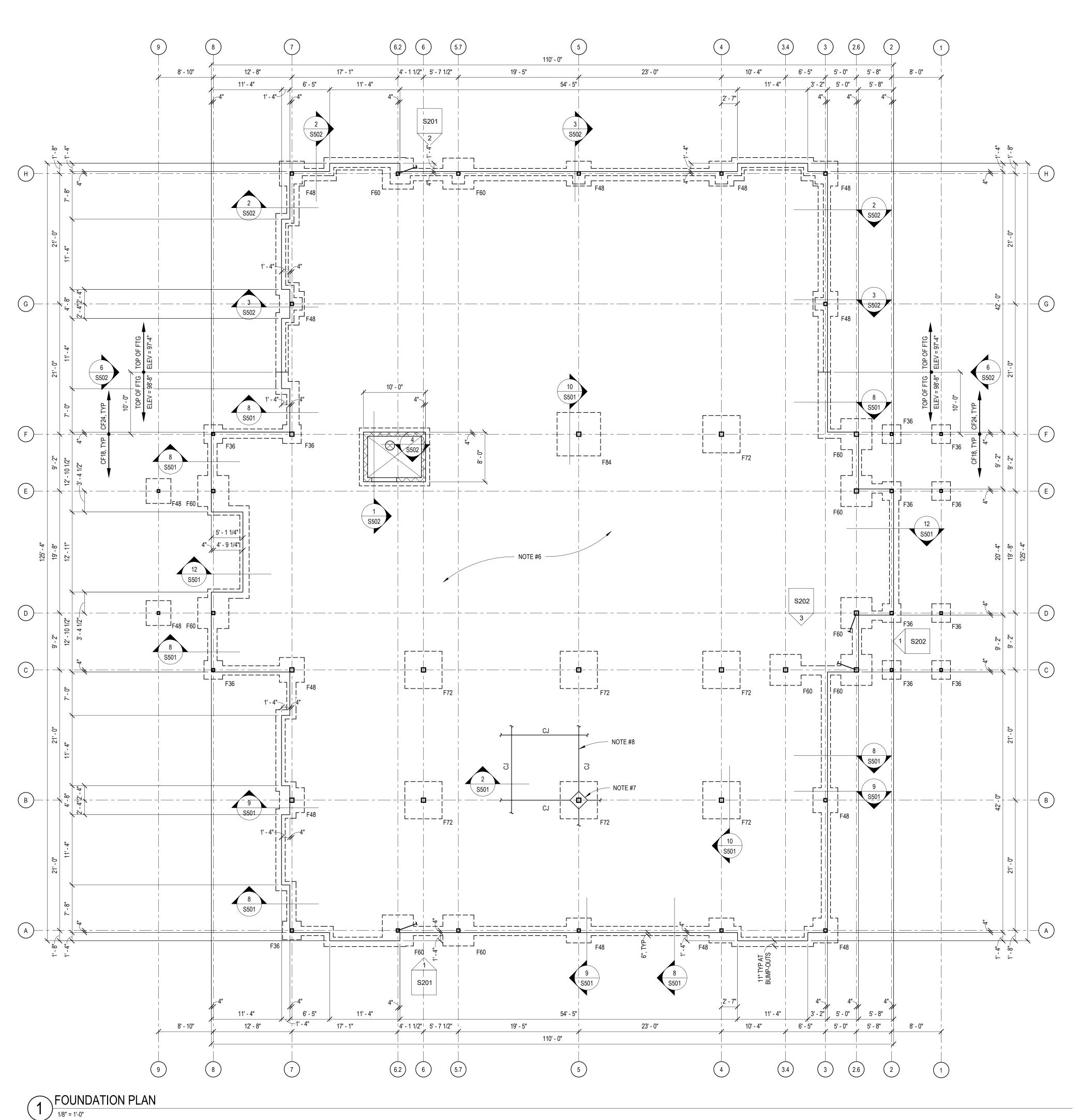
  4. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE DURING CONSTRUCTION FOR THE SLAB AREA. SLAB SUBGRADE SHALL NOT BE ALLOWED TO RETAIN WATER DURING CONSTRUCTION.
- 5. SEE SHEET S501 FOR REINFORCEMENT AT RE-ENTRANT CORNERS AND DISCONTINUOUS JOINTS.
- 6. FINISH FLOOR REFERENCE ELEVATION = 100'-0" (CIVIL ELEVATION = 766.50'). TYPICAL FLOOR SLAB SHALL BE 4" THICK CONCRETE SLAB-ON-GRADE REINFORCED WITH #4 AT 16" OC EACH WAY OVER 15 MIL MINIMUM VAPOR BARRIER OVER 4" GRANULAR BASE COURSE OVER APPROVED LOW VOLUME CHANGE ENGINEERED FILL PER THE GEOTECHNICAL REPORT.
- 7. SLAB BLOCKOUTS AT COLUMNS AND BRACED FRAMES SHALL BE SIZED AS REQUIRED TO PROPERLY INSTALL AND CONNECT COLUMNS AND DIAGONAL BRACES, SEE SHEET S501.
- 8. CONTROL JOINTS SHOULD NOT BE SPACED MORE THAN 15'-0" OC, AND THE PANELS SO FORMED BY THE CONTROL JOINTS SHOULD NOT EXCEED A LENGTH TO WIDTH RATIO OF 1.5.
- 9. STAIR STRINGERS; CONNECT EACH STRINGER TO A 12" DEEP x 2'-0" WIDE THICKENED SLAB-ON-GRADE WITH (2) #4 CONTINUOUS. USE L4x4x0'-9" AT EACH STRINGER WITH (2) 1/2" DIA HILTI HAS RODS EMBEDDED 4 1/2" WITH HILTI HIT-RE 500-SD EPOXY ADHESIVE.
- THICKENED SLAB AT FLOOR BOXES AND CONDUIT TO MAINTAIN A MINIMUM 4" SLAB THICKNESS. SEE ELECTRICAL DRAWINGS FOR LOCATIONS.
   HOUSEKEEPING PADS SHALL BE 4" N.W. CONCRETE PAD PLACED ON SLAB. REINFORCE PAD WITH #3 AT 12" OC, EW. SEE MECHANICAL DRAWINGS FOR
- SIZE AND LOCATION OF PADS.

  12. TOP OF FOOTING ELEVATION = 98'-8" UNO.

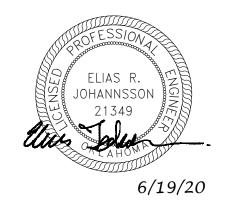
IS	OLATED FOOT	ING SCHEDULE
MARK	SIZE (LxWxD)	REINFORCEMENT
F36	3'-0"x3'-0"x1'-6"	(4)-#5 BOT BARS, EW
F48	4'-0"x4'-0"x1'-6"	(6)-#5 BOT BARS, EW
F60	5'-0"x5'-0"x1'-6"	(7)-#5 BOT BARS, EW
F72	6'-0"x6'-0"x2'-0"	(8)-#6 BOT BARS, EW
F84	7'-0"x7'-0"x2'-0"	(9)-#6 BOT BARS, EW

	CONTINUO	JS FOOTING SCHEDULE
MARK	SIZE (WxD)	REINFORCEMENT
CF18	1'-6"x1'-6"	(2)-#5 CONT T&B W/#3 TIES AT 48" OC
CF24	2'-0"x1'-6"	(3)-#5 CONT T&B W/#3 TIES AT 48" OC

ALL FOUNDATION BEARING SUBGRADES MUST BE OVER-EXCAVATED DOWN TO AND BEAR DIRECTLY ON WEATHERED LIMESTONE OR OVER-EXCAVATED TO WEATHERED LIMESTONE AND BACKFILLED WITH CONCRETE BACK TO THE PLANNED BEARING ELEVATIONS.







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GH2 PROJECT NUMBER: **20170021**ISSUE DATE: **06.19.2020** 

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OTHER ISSUE DATES:
NO. DESCRIPTION

SHEET NAME:
FOUNDATION
PLAN

SHEET NUMBER:

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1

F2. SEE ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN.

F3. SEE MECHANICAL AND ARCHITECTURAL DRAWINGS FOR SIZES AND LOCATION OF PENETRATIONS NOT INDICATED ON STRUCTURAL DRAWINGS.

F4. AT ALL EDGES OF OPENINGS WHERE EDGE ANGLE IS NOT NOTED, SEE 3/S511 F5. STEEL FABRICATOR SHALL DESIGN BEAM CONNECTIONS TO COLUMNS OR TO BEAMS FOR THE TOTAL REACTIONS SHOWN ON THE PLANS. REACTIONS INDICATED ARE FACTORED FOR USE WITH ALLOWABLE STRESS DESIGN (ASD) METHOD. IF NO REACTION IS SHOWN ON THE PLANS, DESIGN FOR THE ASD FACTORED REACTION

F6. PLACING CONDUIT IN SLAB IS NOT PERMITTED.

F7. ADDITIONAL PLATES, INCLUDED BUT NOT LIMITED TO DOUBLER PLATES AND STIFFENER PLATES, ARE THE RESPONSIBILITY OF THE CONNECTIONS ENGINEER.

SHOWN IN THE STEEL BEAM MINIMUM CONNECTION SCHEDULE.

F8. STAIR FABRICATOR TO DESIGN THE STAIR ASSEMBLY, INCLUDING ALL COMPONENTS AND CONNECTIONS TO SUPPORTING MEMBERS, IN ACCORDANCE WITH THE SPECIFICATIONS. RE: ARCH DRAWINGS FOR STAIR LAYOUT.

F9. FLOOR SLAB SHALL BE 2" NORMAL WT CONC ON 3 VLI GALVANIZED, 20 GAUGE COMPOSITE DECK (TOTAL DEPTH = 5"). REINFORCE WITH WWF 6x6-W1.4xW1.4 PLACED 3/4" BELOW TOP OF SLAB. FASTEN STEEL DECK RIBS TO SUPPORTS WITH 5/8" PUDDLE WELDS IN A 30/4 PATTERN. FASTEN DECK PANEL SIDELAPS WITH A MINIMUM OF (3)-#10 TEK SCREWS BETWEEN SUPPORTS. SEE PLAN FOR FINISH FLOOR ELEV.

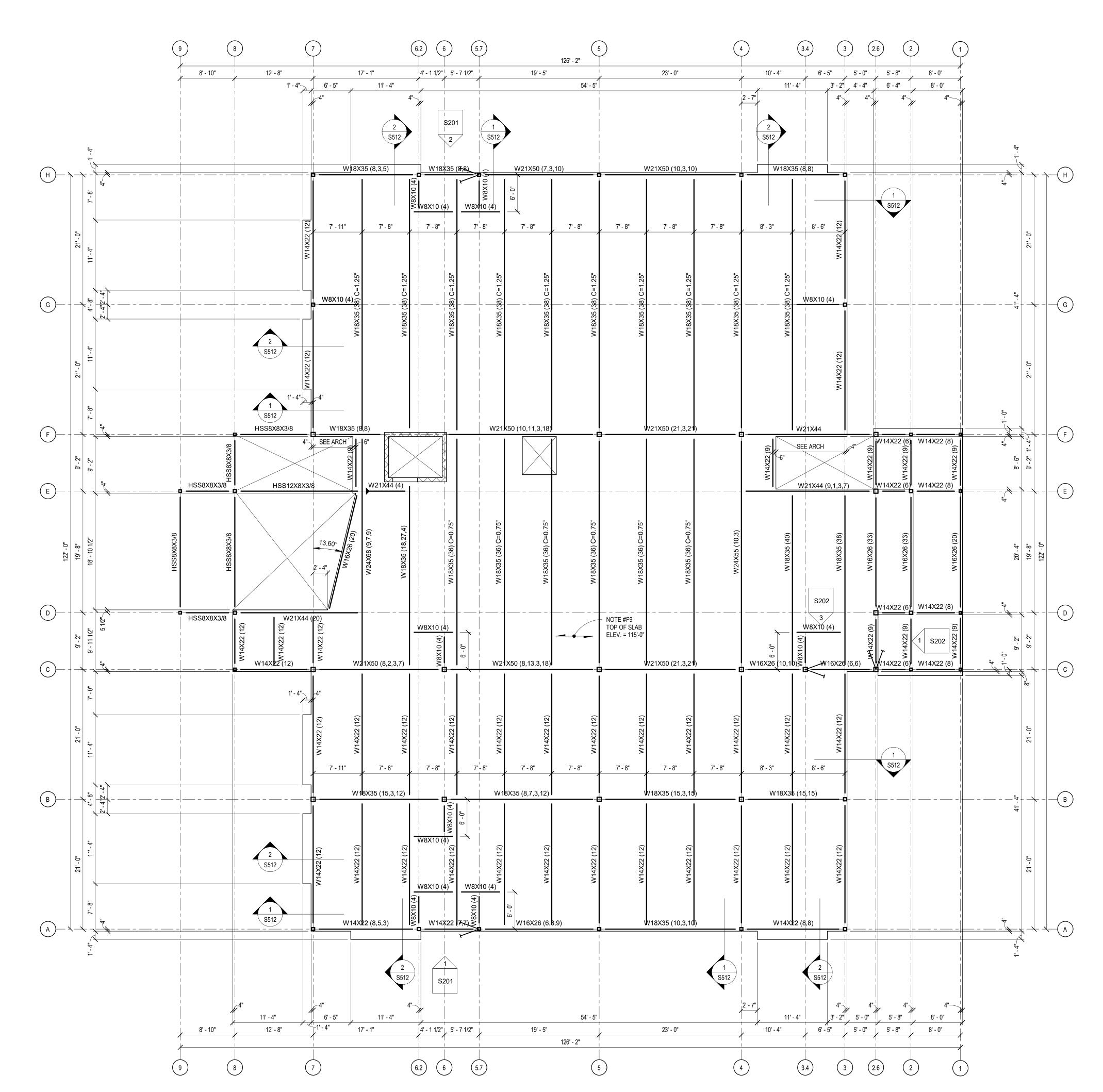
F10. FLOOR SLAB SHALL BE 2" NORMAL WT CONC ON 3 VLI GALVANIZED, 16 GAUGE COMPOSITE DECK (TOTAL DEPTH = 5"). REINFORCE WITH WWF 6x6-W1.4xW1.4 PLACED 3/4" BELOW TOP OF SLAB. FASTEN STEEL DECK RIBS TO SUPPORTS WITH 5/8" PUDDLE WELDS IN A 30/4 PATTERN. FASTEN DECK PANEL SIDELAPS WITH A MINIMUM OF (3)-#10 TEK SCREWS BETWEEN SUPPORTS. SEE PLAN FOR FINISH FLOOR ELEV.

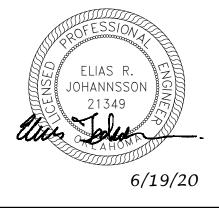
INDICATES DIRECTION OF DECK SPAN

INDICATES MOMENT CONNECTION

INDICATES CONCENTRATED LOAD

INDICATES DIAPHRAGM SHEAR COLLECTOR





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GH2 PROJECT NUMBER: 20170021 ISSUE DATE: **06.19.2020** 

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OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME: **2ND FLOOR FRAMING PLAN** 

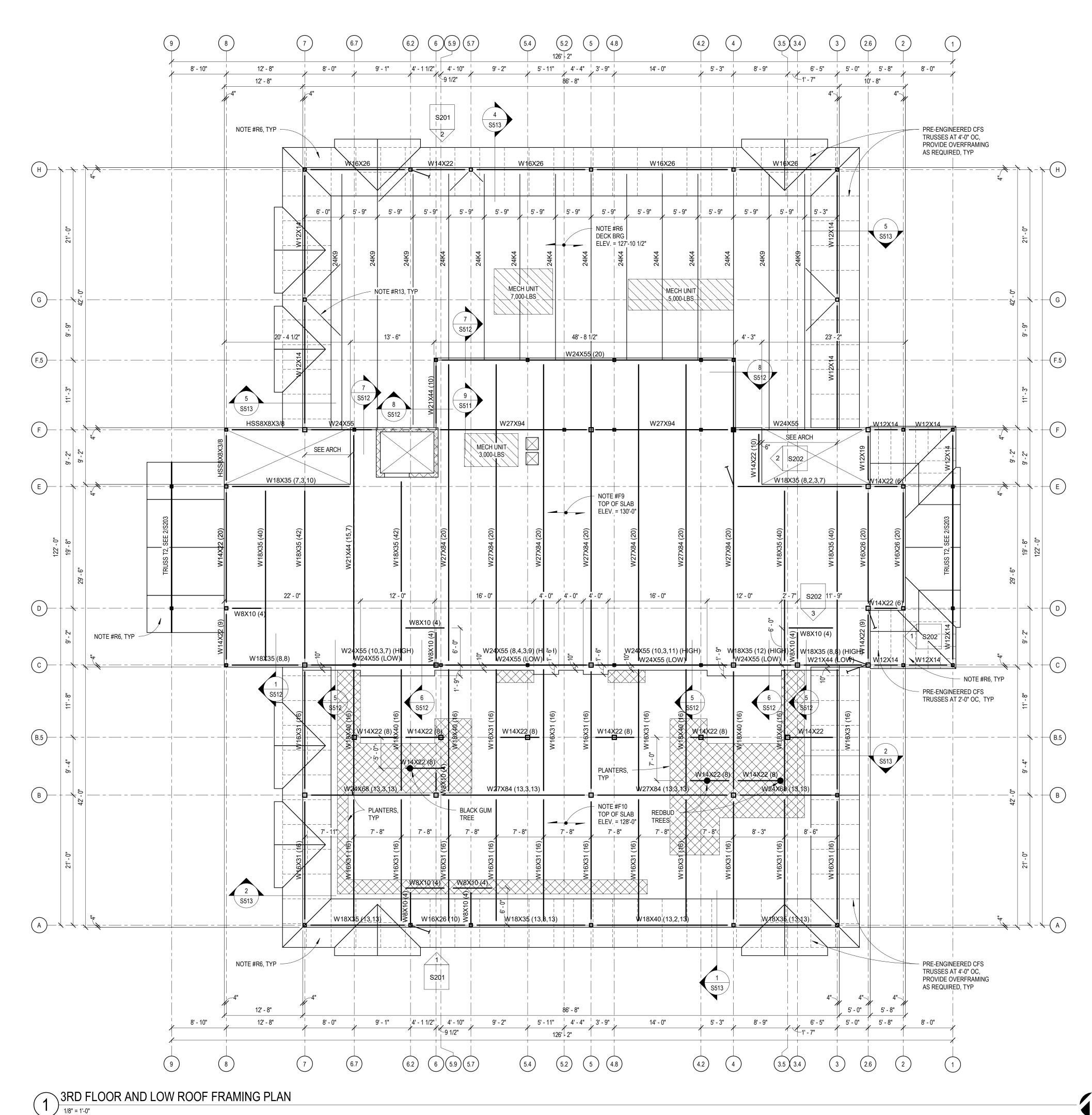


#### FLOOR FRAMING PLAN NOTES

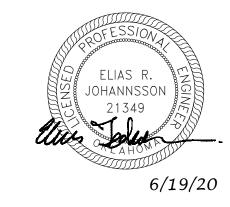
- F1. SEE SHEET S001, S002, AND S003 FOR GENERAL NOTES.
- F2. SEE ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. F3. SEE MECHANICAL AND ARCHITECTURAL DRAWINGS FOR SIZES AND LOCATION OF
- PENETRATIONS NOT INDICATED ON STRUCTURAL DRAWINGS. F4. AT ALL EDGES OF OPENINGS WHERE EDGE ANGLE IS NOT NOTED, SEE 3/S511 F5. STEEL FABRICATOR SHALL DESIGN BEAM CONNECTIONS TO COLUMNS OR TO BEAMS FOR THE TOTAL REACTIONS SHOWN ON THE PLANS. REACTIONS INDICATED ARE
- FACTORED FOR USE WITH ALLOWABLE STRESS DESIGN (ASD) METHOD. IF NO REACTION IS SHOWN ON THE PLANS, DESIGN FOR THE ASD FACTORED REACTION SHOWN IN THE STEEL BEAM MINIMUM CONNECTION SCHEDULE.
- F6. PLACING CONDUIT IN SLAB IS NOT PERMITTED.
- ADDITIONAL PLATES, INCLUDED BUT NOT LIMITED TO DOUBLER PLATES AND STIFFENER PLATES, ARE THE RESPONSIBILITY OF THE CONNECTIONS ENGINEER.
- F8. STAIR FABRICATOR TO DESIGN THE STAIR ASSEMBLY, INCLUDING ALL COMPONENTS AND CONNECTIONS TO SUPPORTING MEMBERS, IN ACCORDANCE WITH THE SPECIFICATIONS. RE: ARCH DRAWINGS FOR STAIR LAYOUT.
- F9. FLOOR SLAB SHALL BE 2" NORMAL WT CONC ON 3 VLI GALVANIZED, 20 GAUGE COMPOSITE DECK (TOTAL DEPTH = 5"). REINFORCE WITH WWF 6x6-W1.4xW1.4 PLACED 3/4" BELOW TOP OF SLAB. FASTEN STEEL DECK RIBS TO SUPPORTS WITH 5/8" PUDDLE WELDS IN A 30/4 PATTERN. FASTEN DECK PANEL SIDELAPS WITH A MINIMUM OF (3)-#10 TEK SCREWS BETWEEN SUPPORTS. SEE PLAN FOR FINISH FLOOR ELEV.
- F10. FLOOR SLAB SHALL BE 2" NORMAL WT CONC ON 3 VLI GALVANIZED, 16 GAUGE COMPOSITE DECK (TOTAL DEPTH = 5"). REINFORCE WITH WWF 6x6-W1.4xW1.4 PLACED 3/4" BELOW TOP OF SLAB. FASTEN STEEL DECK RIBS TO SUPPORTS WITH 5/8" PUDDLE WELDS IN A 30/4 PATTERN. FASTEN DECK PANEL SIDELAPS WITH A MINIMUM OF (3)-#10 TEK SCREWS BETWEEN SUPPORTS. SEE PLAN FOR FINISH FLOOR ELEV.

#### ROOF FRAMING PLAN NOTES

- R1. SEE SHEET S001, S002, AND S003 FOR GENERAL NOTES.
- R2. SEE ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN.
- R3. SEE MECHANICAL AND ARCHITECTURAL DRAWINGS FOR SIZES AND LOCATION OF PENETRATIONS NOT INDICATED ON STRUCTURAL DRAWINGS.
- R4. "BOD" INDICATES BOTTOM OF DECK ELEVATION.
- R5. NO HANGING LOADS SHALL BE APPLIED TO THE ROOF DECK. R6. TYPICAL ROOF DECK SHALL BE 1 1/2" DEEP x 22 GA. TYPE "B" GALVANIZED (G60). FASTEN STEEL DECK RIBS TO SUPPORTS WITH #10 TEK SCREWS AT 12" OC (36/4 PATTERN) FASTEN DECK PANEL SIDELAPS WITH A MINIMUM OF (3) #10 TEK SCREW BETWEEN
- R7. CONCENTRATED LOADS AT STEEL JOIST BOTTOM CHORD OR TOP CHORD MAY OCCUR UP TO 1'-0" AWAY FROM LOCATION SHOWN. LOADS INDICATED ARE FACTORED FOR USE WITH ALLOWABLE STRESS DESIGN (ASD) METHOD. REFERENCE TYPICAL MECHANICAL UNIT SUPPORT DETAIL. REFERENCE MECHANICAL FOR EXACT LOCATIONS.
- R8. STEEL JOIST MANUFACTURER SHALL COORDINATE MECHANICAL DUCT LOCATIONS TO AVOID CONFLICT WITH BRIDGING.
- R9. --- INDICATES KICKER, SEE DETAIL.
- R10. JOIST BRIDGING AND ERECTION STABILITY SHALL BE PROVIDED IN ACCORDANCE WITH THE OCCUPATIONAL SAFETY AND HAZARD ADMINISTRATION (OSHA) AND THE STEEL JOIST INSTITUTE (SJI) SPECIFICATIONS OF LATEST ADOPTION TYPICAL FOR GRAVITY AND UPLIFT LOADS SUPERIMPOSED ON ALL JOISTS. DIAGONAL BRIDGE SHALL BE PROVIDED BETWEEN ADJACENT JOISTS WHENEVER BOTTOM CHORD HORIZONTAL BRIDGING DISCONTINUES.
- R11. STEEL FABRICATOR SHALL DESIGN BEAM CONNECTIONS TO COLUMNS OR TO BEAMS FOR THE TOTAL REACTIONS SHOWN ON THE PLANS. REACTIONS INDICATED ARE FACTORED FOR USE WITH ALLOWABLE STRESS DESIGN (ASD) METHOD. IF NO REACTION IS SHOWN ON THE PLANS, DESIGN FOR THE ASD FACTORED REACTION SHOWN IN THE STEEL BEAM MINIMUM CONNECTION SCHEDULE.
- R12. ADDITIONAL PLATES, INCLUDED BUT NOT LIMITED TO DOUBLER PLATES AND STIFFENER PLATES, ARE THE RESPONSIBILITY OF THE CONNECTIONS ENGINEER.
- R13. L3x3x1/4 BRACE FROM TOP OF COLUMN TO TOP CHORD PANEL POINT. COPE VERTICAL LEG. WELD TO COLUMN AND JOIST. WELD TO DECK AT 6" OC, TYP.
  - INDICATES DIRECTION OF DECK SPAN
    - INDICATES MOMENT CONNECTION
  - INDICATES CONCENTRATED LOAD
  - INDICATES DIAPHRAGM SHEAR COLLECTOR







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OK #5996 | EXP 6.30.2020

GH2 PROJECT NUMBER: 20170021 ISSUE DATE:

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06.19.2020

OTHER ISSUE DATES: NO. DESCRIPTION

SHEET NAME: **3RD FLOOR AND LOW ROOF FRAMING PLAN** 

SHEET NUMBER:

#### ROOF FRAMING PLAN NOTES

- R1. SEE SHEET S001, S002, AND S003 FOR GENERAL NOTES.
- R2. SEE ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN.R3. SEE MECHANICAL AND ARCHITECTURAL DRAWINGS FOR SIZES AND LOCATION OF
- SEE MECHANICAL AND ARCHITECTURAL DRAWINGS FOR SIZES AND LOCATION OF PENETRATIONS NOT INDICATED ON STRUCTURAL DRAWINGS.
- R4. "BOD" INDICATES BOTTOM OF DECK ELEVATION.
- R5. NO HANGING LOADS SHALL BE APPLIED TO THE ROOF DECK.
- R6. TYPICAL ROOF DECK SHALL BE 1 1/2" DEEP x 22 GA. TYPE "B" GALVANIZED (G60). FASTEN STEEL DECK RIBS TO SUPPORTS WITH #10 TEK SCREWS AT 12" OC (36/4 PATTERN) FASTEN DECK PANEL SIDELAPS WITH A MINIMUM OF (3) #10 TEK SCREW BETWEEN SUPPORTS.
- SUPPORTS.

  R7. CONCENTRATED LOADS AT STEEL JOIST BOTTOM CHORD OR TOP CHORD MAY OCCUR UP
  TO 1'-0" AWAY FROM LOCATION SHOWN. LOADS INDICATED ARE FACTORED FOR USE
  WITH ALLOWABLE STRESS DESIGN (ASD) METHOD. REFERENCE TYPICAL MECHANICAL
- UNIT SUPPORT DETAIL. REFERENCE MECHANICAL FOR EXACT LOCATIONS.

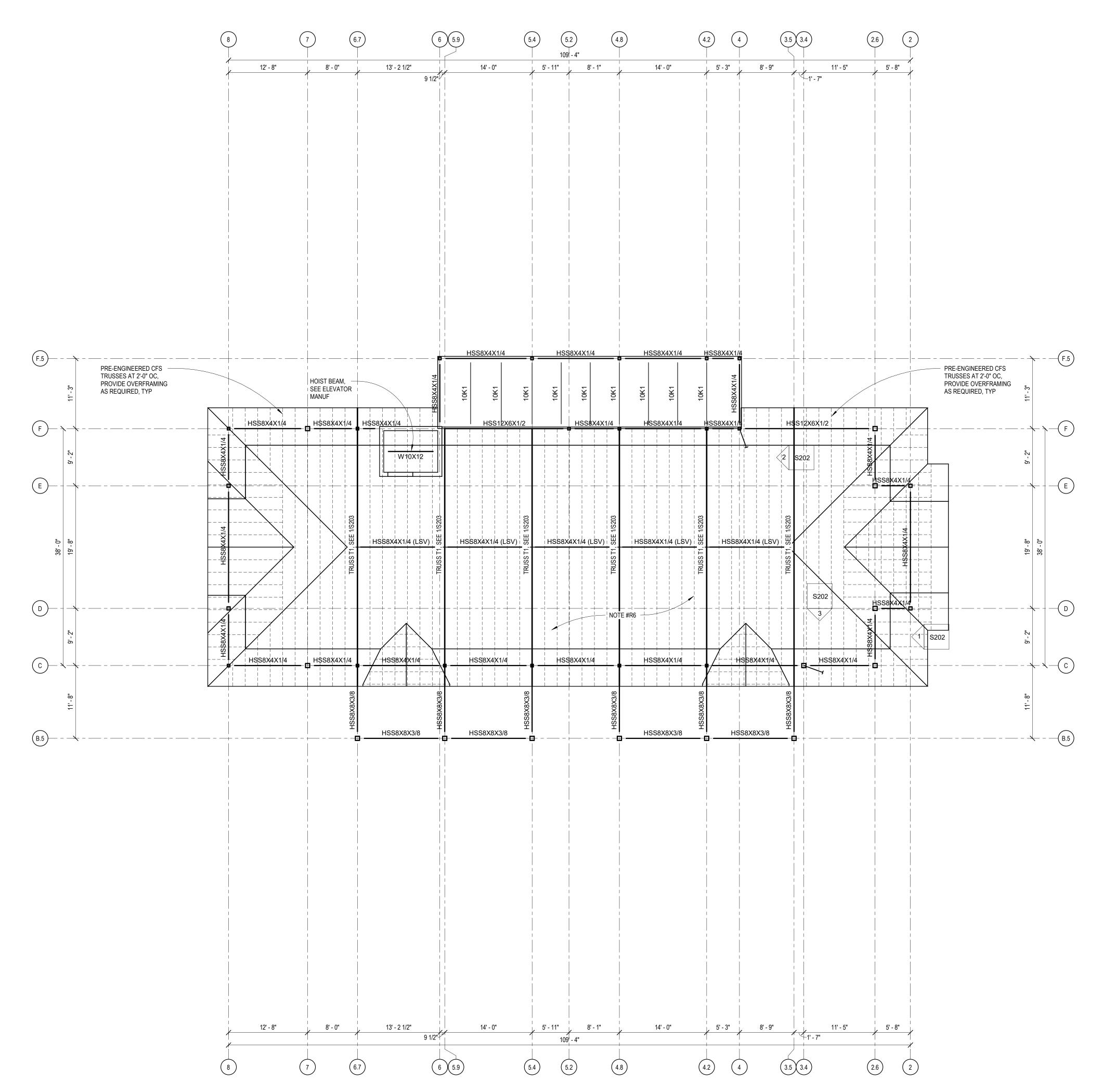
  R8. STEEL JOIST MANUFACTURER SHALL COORDINATE MECHANICAL DUCT LOCATIONS TO AVOID CONFLICT WITH BRIDGING.
- R9. --- INDICATES KICKER, SEE DETAIL.
- R10. JOIST BRIDGING AND ERECTION STABILITY SHALL BE PROVIDED IN ACCORDANCE WITH THE OCCUPATIONAL SAFETY AND HAZARD ADMINISTRATION (OSHA) AND THE STEEL JOIST INSTITUTE (SJI) SPECIFICATIONS OF LATEST ADOPTION TYPICAL FOR GRAVITY AND UPLIFT LOADS SUPERIMPOSED ON ALL JOISTS. DIAGONAL BRIDGE SHALL BE PROVIDED BETWEEN ADJACENT JOISTS WHENEVER BOTTOM CHORD HORIZONTAL BRIDGING DISCONTINUES.
- R11. STEEL FABRICATOR SHALL DESIGN BEAM CONNECTIONS TO COLUMNS OR TO BEAMS FOR THE TOTAL REACTIONS SHOWN ON THE PLANS. REACTIONS INDICATED ARE FACTORED FOR USE WITH ALLOWABLE STRESS DESIGN (ASD) METHOD. IF NO REACTION IS SHOWN ON THE PLANS, DESIGN FOR THE ASD FACTORED REACTION SHOWN IN THE STEEL BEAM MINIMUM CONNECTION SCHEDULE.
- R12. ADDITIONAL PLATES, INCLUDED BUT NOT LIMITED TO DOUBLER PLATES AND STIFFENER PLATES, ARE THE RESPONSIBILITY OF THE CONNECTIONS ENGINEER.
- R13. L3x3x1/4 BRACE FROM TOP OF COLUMN TO TOP CHORD PANEL POINT. COPE VERTICAL LEG. WELD TO COLUMN AND JOIST. WELD TO DECK AT 6" OC, TYP.

INDICATES DIRECTION OF DECK SPAN

INDICATES MOMENT CONNECTION

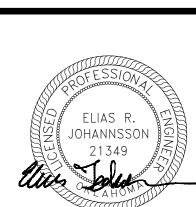
\* INDICATES CONCENTRATED LOAD

INDICATES DIAPHRAGM SHEAR COLLECTOR



Soo Engineering Group, Fize www.360enggroup.com
1201 East 3rd Street
Tulsa, OK 74120
918.518.1124

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GH2 PROJECT NUMBER: **20170021**ISSUE DATE: **06.19.2020** 

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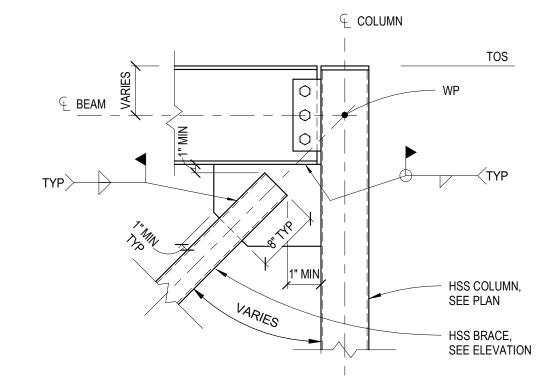
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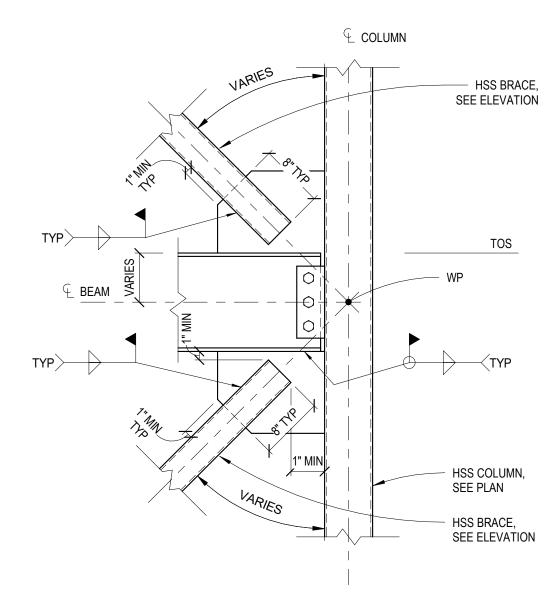
SHEET NAME:
HIGH ROOF
FRAMING PLAN

SHEET NUMBER:

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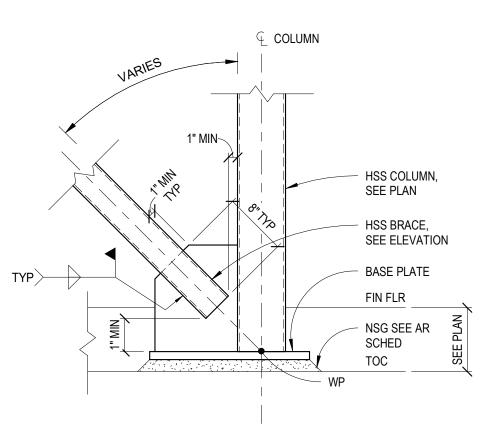
- 1. "T" REPRESENTS ASD FACTORED TENSION FORCE IN DIAGONAL BRACING MEMBERS. "C" - REPRESENTS ASD FACTORED COMPRESSION FORCE IN DIAGONAL BRACING MEMBERS.
- 3. "K" REPRESENTS A UNIT OF 1,000 LBS
- 4. SEE FRAMING PLAN FOR GRAVITY ASD FACTORED BEAM END REACTIONS FOR CONNECTION DESIGN. IF NO REACTION IS SHOWN ON PLAN, DESIGN FOR REACTION SHOWN IN THE TYPICAL BEAM CONNECTION SCHEDULE. SEE PLANS FOR ASD FACTORED AXIAL TENSION AND COMPRESSION FORCES IN BEAMS. GRAVITY ASD FACTORED BEAM END REACTIONS SHALL BE COMBINED WITH THE ASD FACTORED TENSION AND COMPRESSION FORCES DUE TO WIND AND SEISMIC AS NOTED ON THE FRAMING PLANS FOR CONNECTION DESIGN.
- CONNECTIONS SHALL BE DESIGNED BY USING THE ALLOWABLE STRESS DESIGN (ASD) METHOD (ASD) AND SHALL MEET ALL REQUIREMENTS OF ANSI/AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" IN THE STEEL
- CONSTRUCTION MANUAL, ISSUED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC). 6. CENTROIDAL AXES OF BRACED FRAME ELEMENTS SHALL INTERSECT AT COMMON WORK POINTS, UNO.





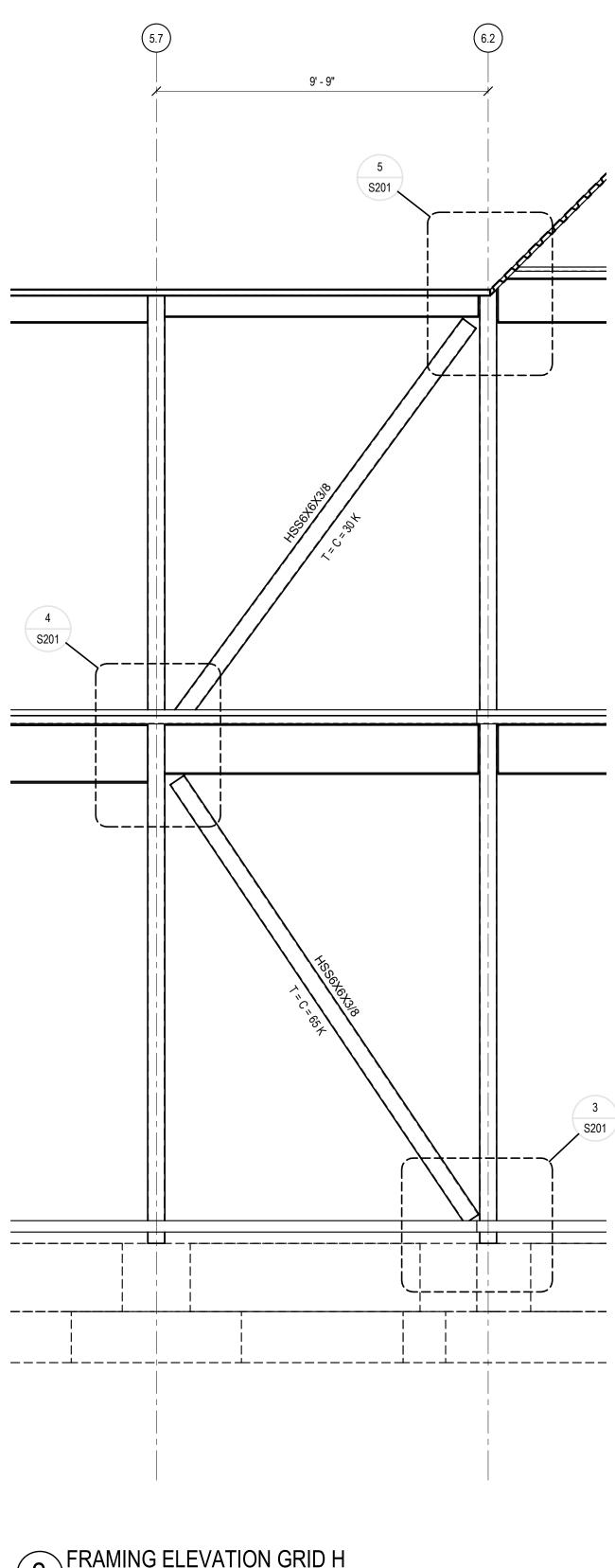
BRACE DETAIL

1" = 1'-0"

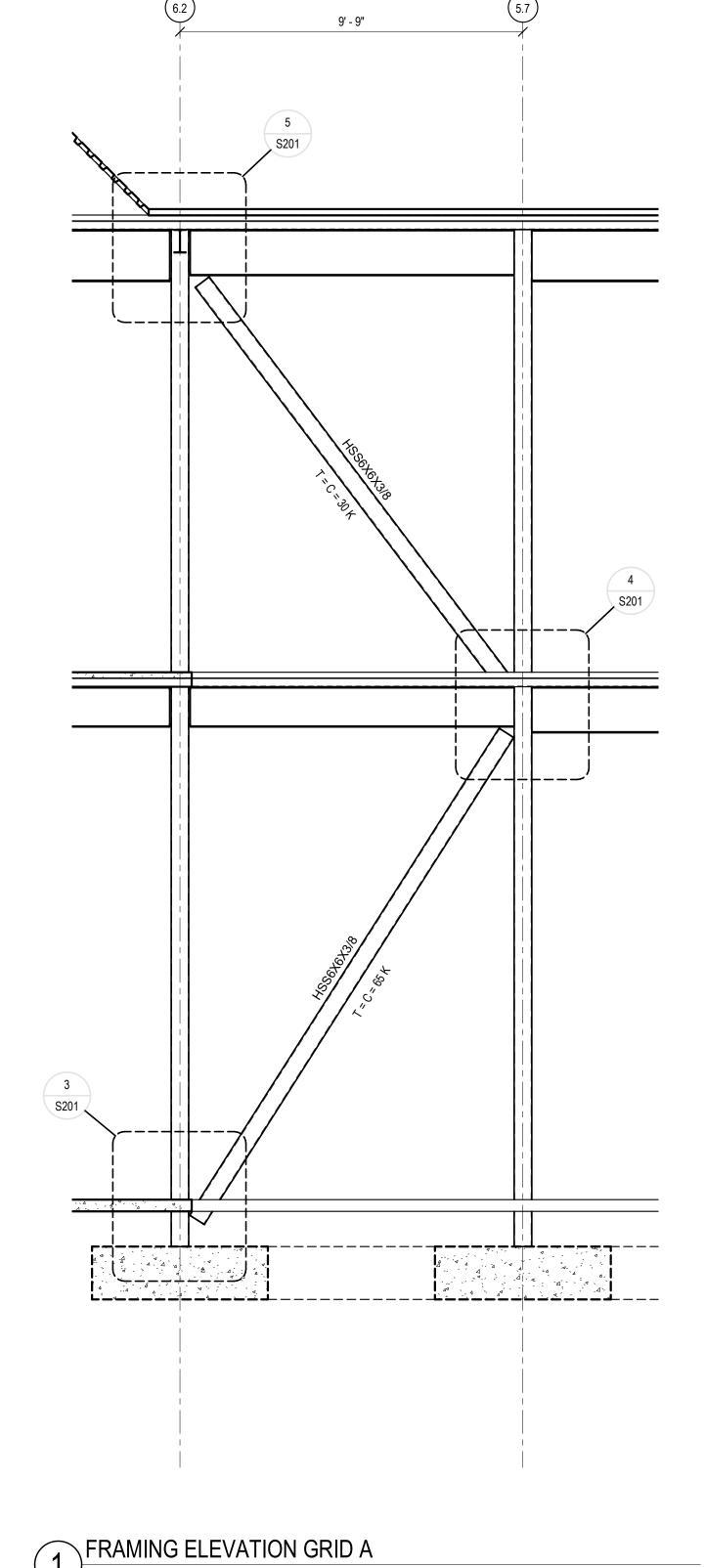


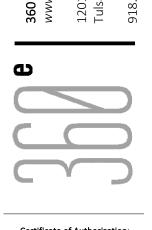
BRACE DETAIL

1" = 1'-0"



PRAMING ELEVATION GRID H
3/8" = 1'-0"





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GH2 PROJECT NUMBER: **20170021** ISSUE DATE: **06.19.2020** 

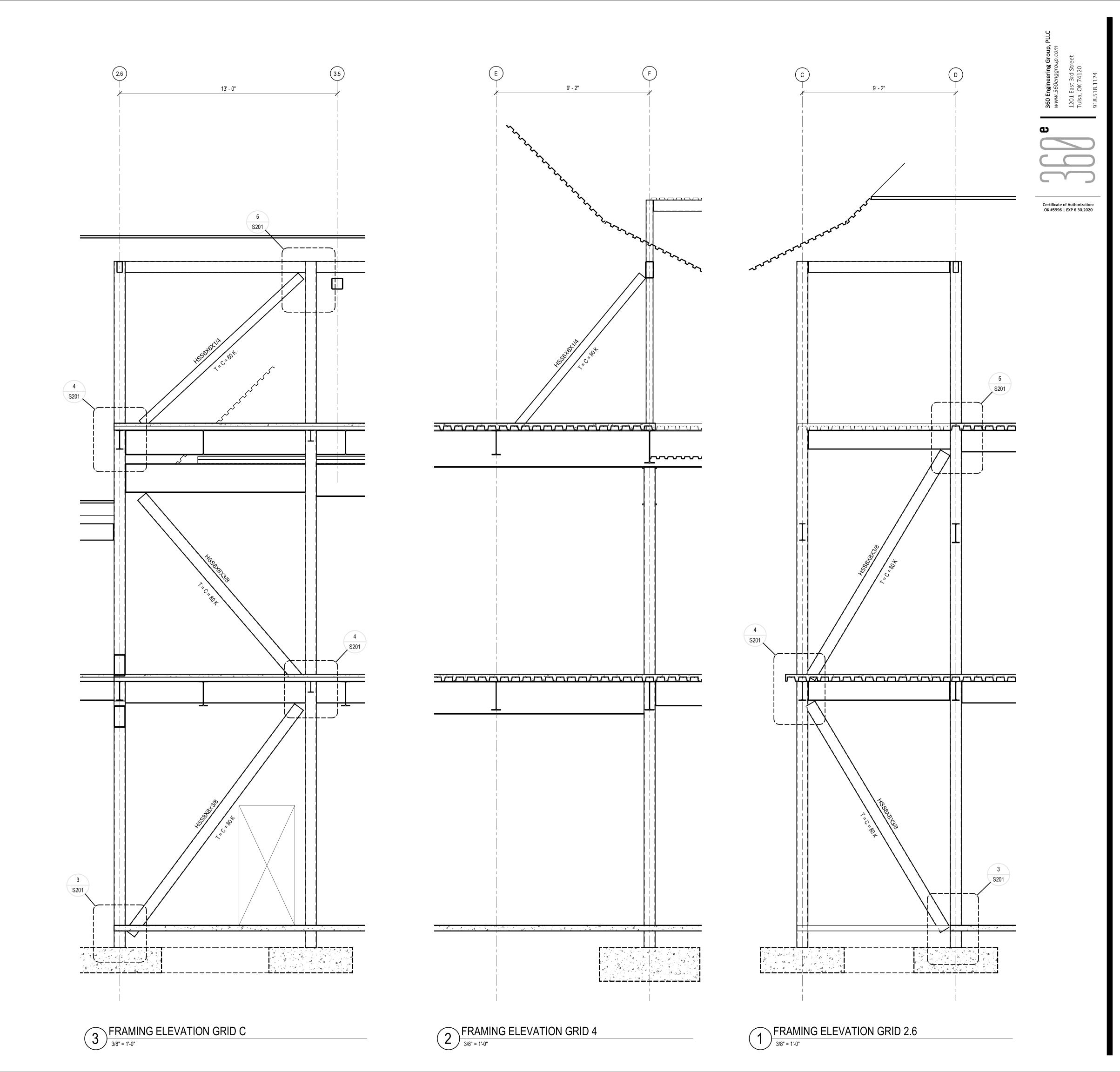
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DATE

SHEET NAME: **FRAMING ELEVATIONS** 





SHEET NAME: **FRAMING** 

GH2 PROJECT NUMBER: **20170021** 

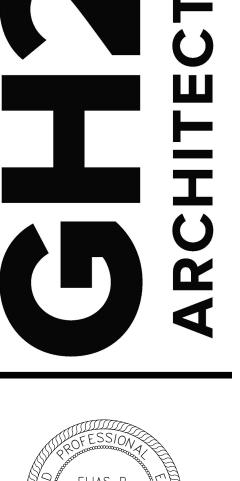
ISSUE DATE: **06.19.2020** 

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GH2 PROJECT NUMBER: **20170021**ISSUE DATE: **06.19.2020** 

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SHEET NAME:
FRAMING

**ELEVATIONS** 

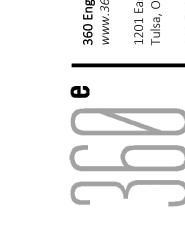
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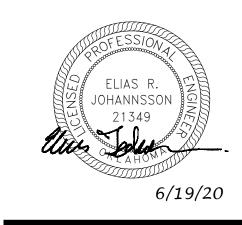
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	1															
ROOF FRAMING PLAN																ROOF FRAMING PLAN
139' - 8"				HSS8X8X3/8					HSS5X5X1/4					HSS5X5X1/4	HSS5X5X1/4	139' - 8"
3RD FLOOR FRAMING PLAN																3RD FLOOR FRAMING PLAN
130' - 0"																130' - 0"
2ND FLOOR FRAMING PLAN																2ND FLOOR FRAMING PLAN
115' - 0"	HSS6X6X1/4	HSS6X6X3/8	HSS8X8X3/8		HSS5X5X1/4	HSS8X8X3/8		HSS8X8X3/8		HSS5X5X1/4	HSS6X6X1/4		HSS5X5X1/4	HSS8X8X3/8		115' - 0"
FOUNDATION PLAN																FOUNDATION PLAN
100' - 0"														L		100' - 0"
Column Locations	A-3, A-4, A-5, A-5.7, A-6.2, A-7	B-3	B-4, B-5, B-6, B-7	B.5-3.5, B.5-4.2, B.5-4.8, B.5-5.4, B.5-5.9, B.5-6.7	C-1, C-2, D-1, E-1, F-1, I	C-2.6, C-3.4, E-2.6, F-2	C-7, D-2.6, 2.6, F-7	4, C-5, C-6	C-4.2, C-4.8, C-5.4, C-5.9, C-6.7, F-6.7	C-8,	F-8 D-2, D-8	8, E-2, E-8	D-9, E-9	F-	-4 F-4.2, F-4.8, F-5.2	

3RD FLOOR FRAMING PLAN  130' - 0"	3RD FLOOR FRAMING PLAN  130' - 0"
	130' - 0"
2ND FLOOR FRAMING PLAN	2ND FLOOR FRAMING PLAN
115' - 0"  HSS8X8X1/2	HSS6XAX144
FOUNDATION PLAN	FOUNDATION PLAN
100' - 0"	100' - 0"



Certificate of Authorization: OK #5996 | EXP 6.30.2020



of

GH2 PROJECT NUMBER: **20170021** ISSUE DATE: **06.19.2020** 

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OTHER ISSUE DATES: NO. DESCRIPTION

DATE

SHEET NAME: COLUMN

**SCHEDULE** 

SHEET NUMBER:

GH2 PROJECT NUMBER: 20170021 ISSUE DATE: 06.19.2020

**PERMIT SET** 

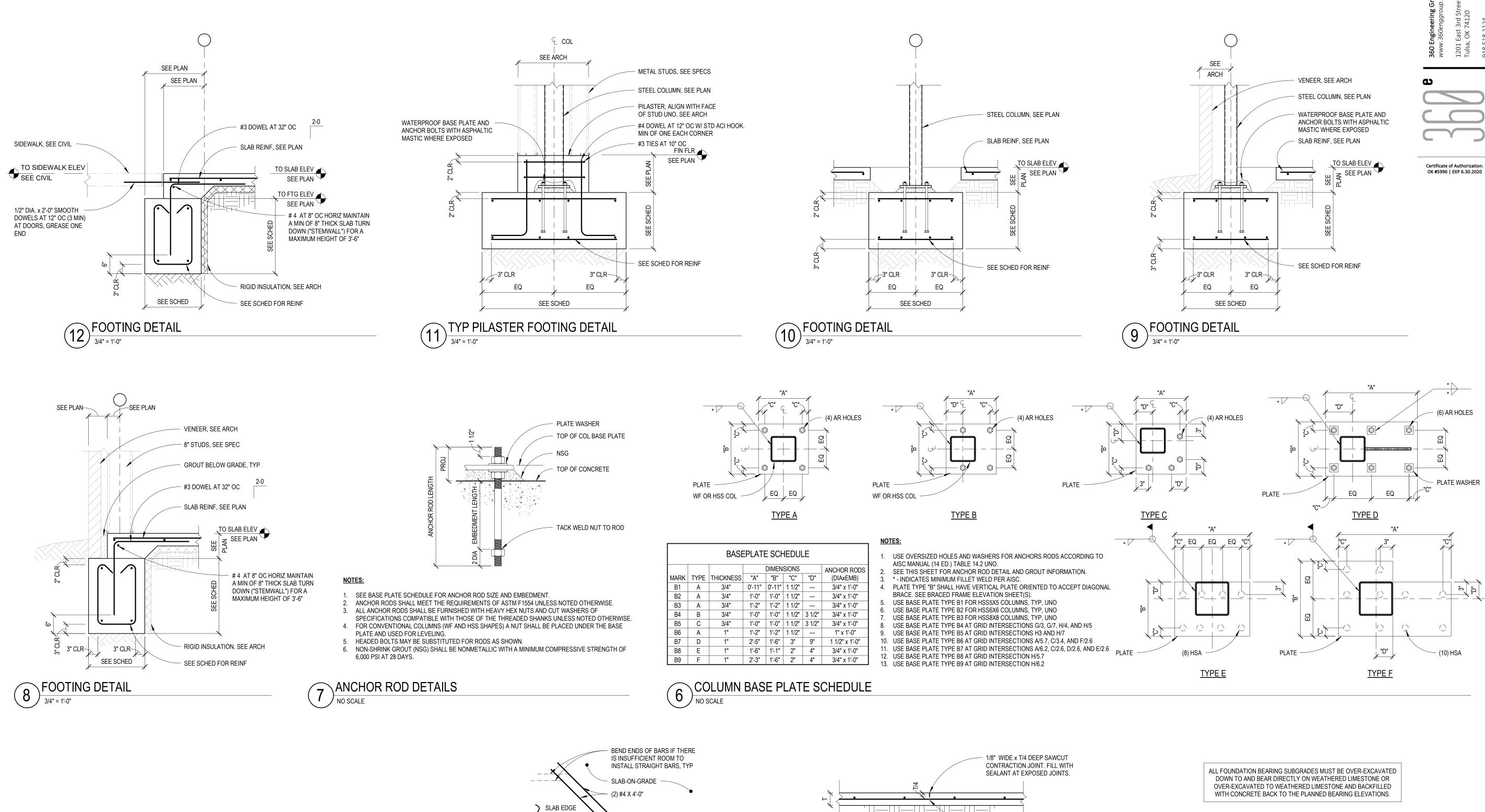
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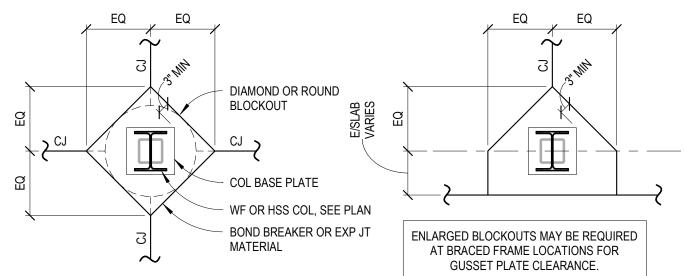
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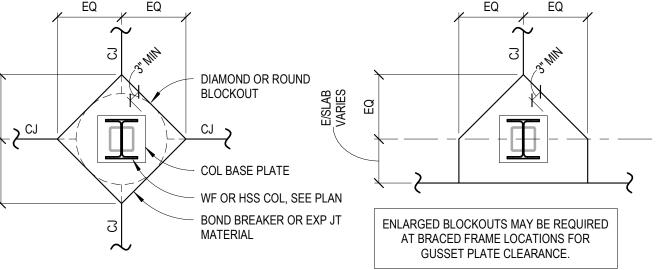
SHEET NAME: **FOUNDATION** 



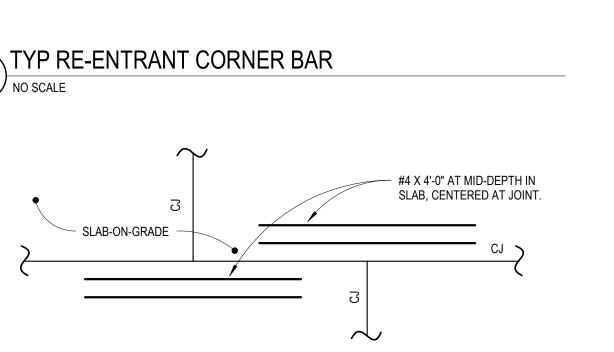




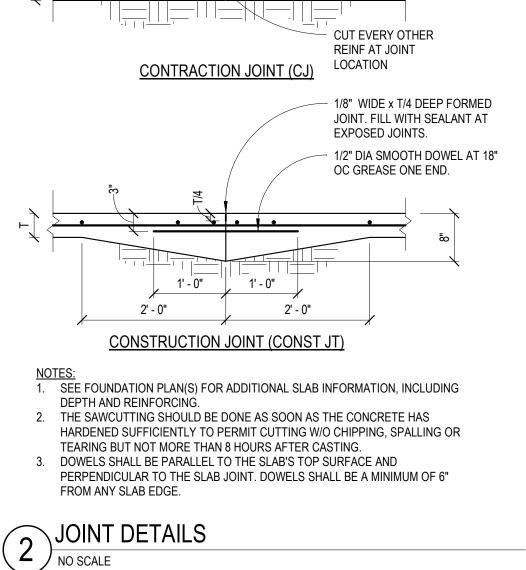


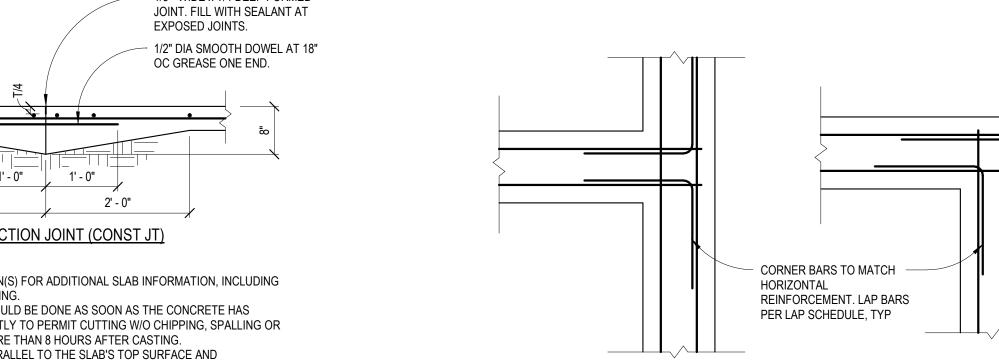












1 CORNER BAR DETAILS

NO SCALE

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06.19.2020 **PERMIT SET** 

OTHER ISSUE DATES: NO. DESCRIPTION

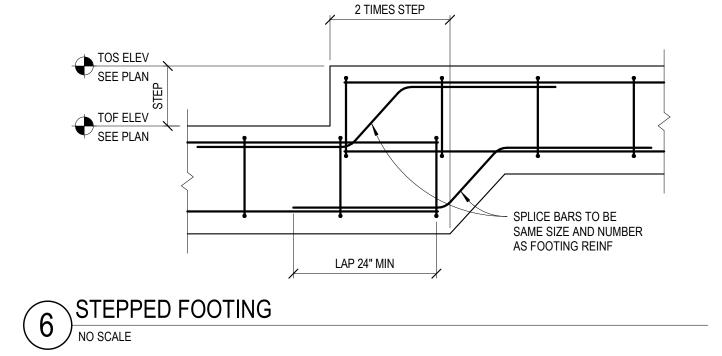
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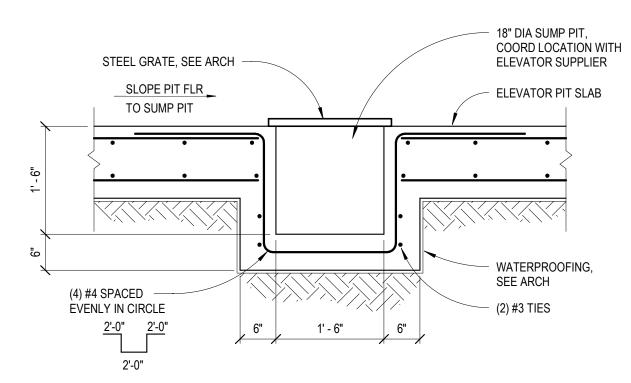
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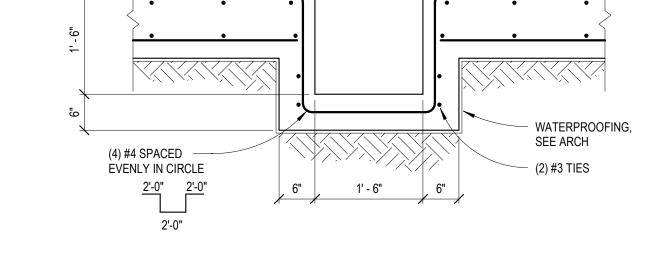
SHEET NUMBER:

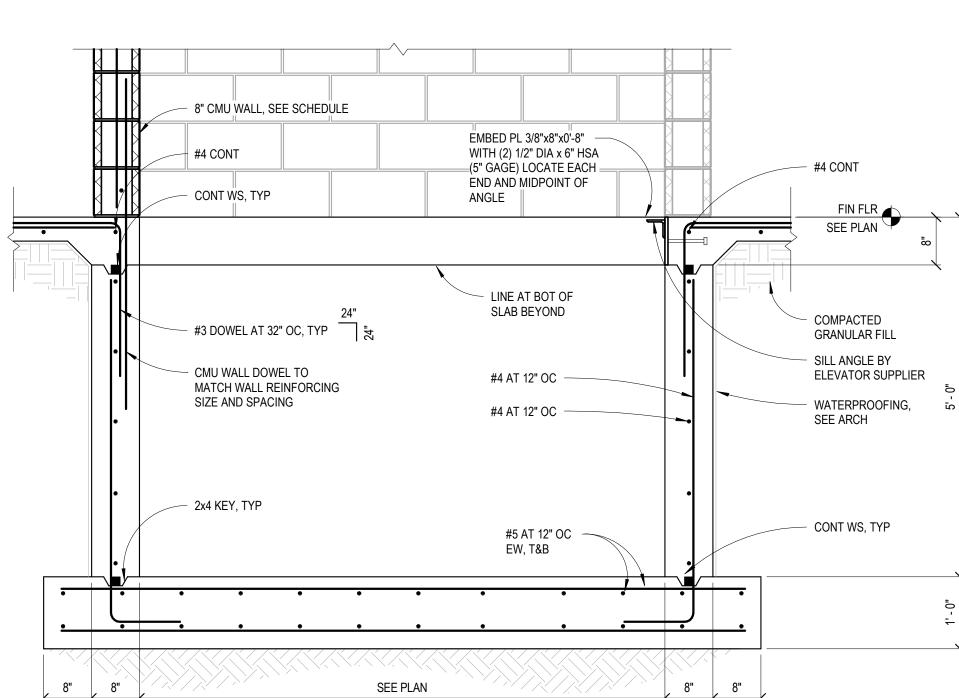
DOWN TO AND BEAR DIRECTLY ON WEATHERED LIMESTONE OR OVER-EXCAVATED TO WEATHERED LIMESTONE AND BACKFILLED WITH CONCRETE BACK TO THE PLANNED BEARING ELEVATIONS.

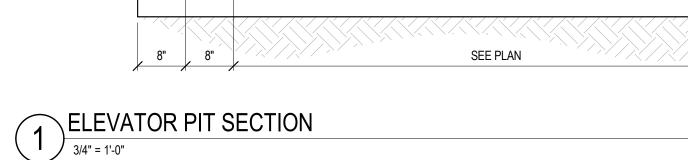
ALL FOUNDATION BEARING SUBGRADES MUST BE OVER-EXCAVATED

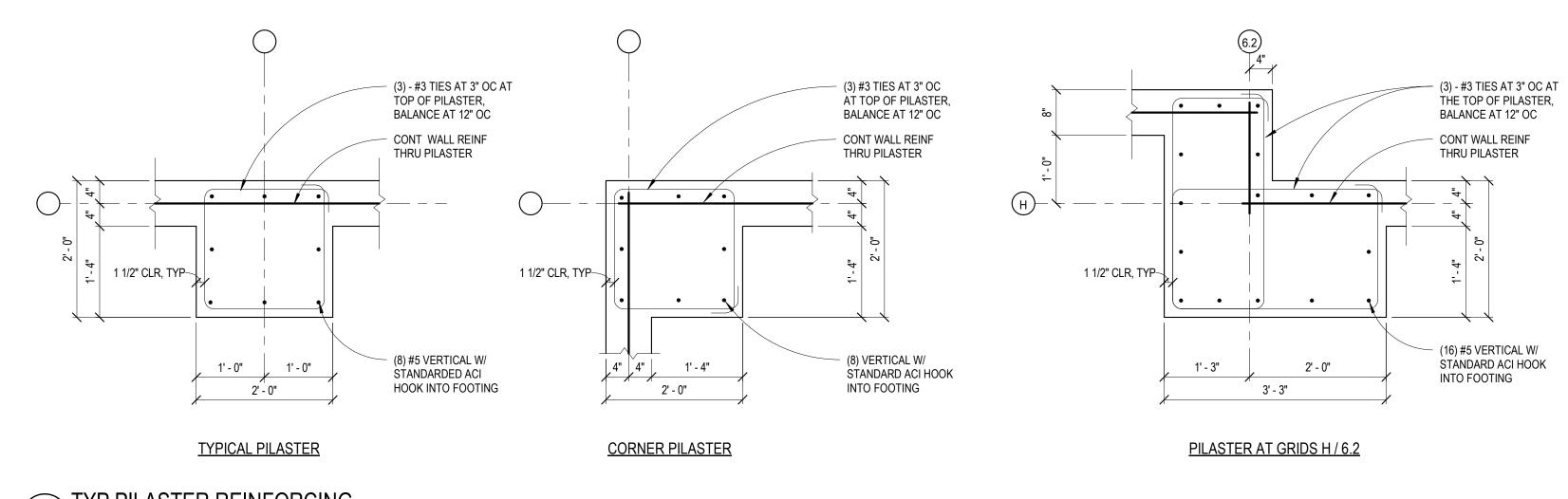




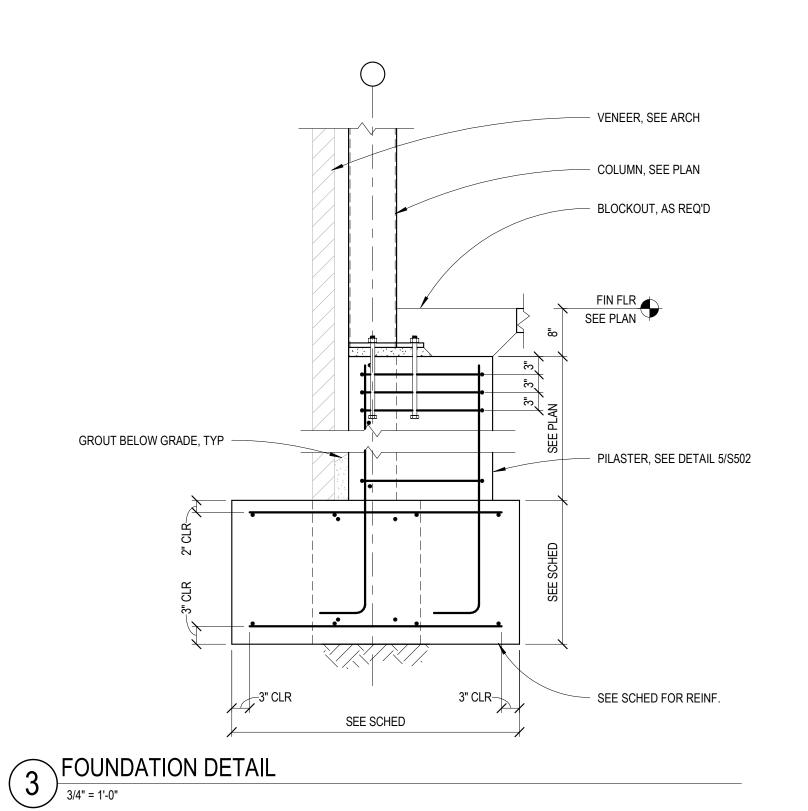












VENEER, SEE ARCH 8" STUDS, SEE SPEC #4 DOWEL AT 16" OC SLAB REINF, SEE PLAN TO SLAB ELEV SEE PLAN STD ACI HOOK AT BASE, ALTERNATE DIRECTIONS GROUT BELOW GRADE, TYP #5 HORIZONTAL AT 16" OC TO FTG ELEV SEE PLAN RIGID INSULATION, SEE ARCH 3" CLR-SEE SCHED - SEE SCHED FOR REINF

FOOTING DETAIL

3/4" = 1'-0"

Certificate of Authorization:

OK #5996 | EXP 6.30.2020



of

GH2 PROJECT NUMBER: 20170021 ISSUE DATE: 06.19.2020

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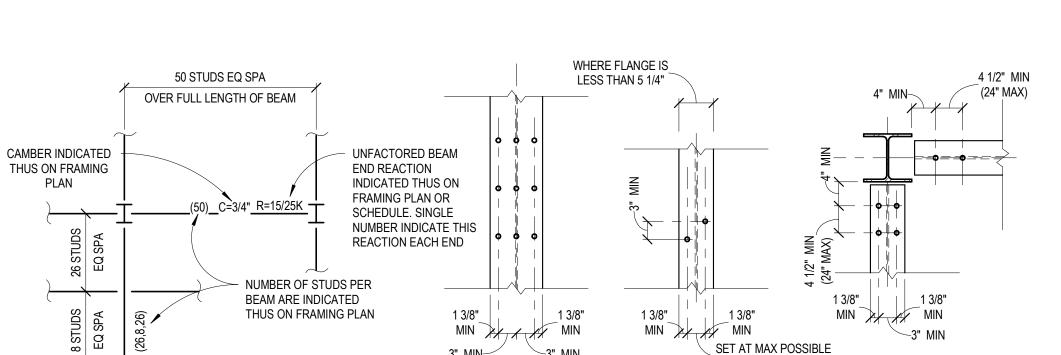
**FRAMING DETAILS** 

DATE

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SHEET NUMBER:





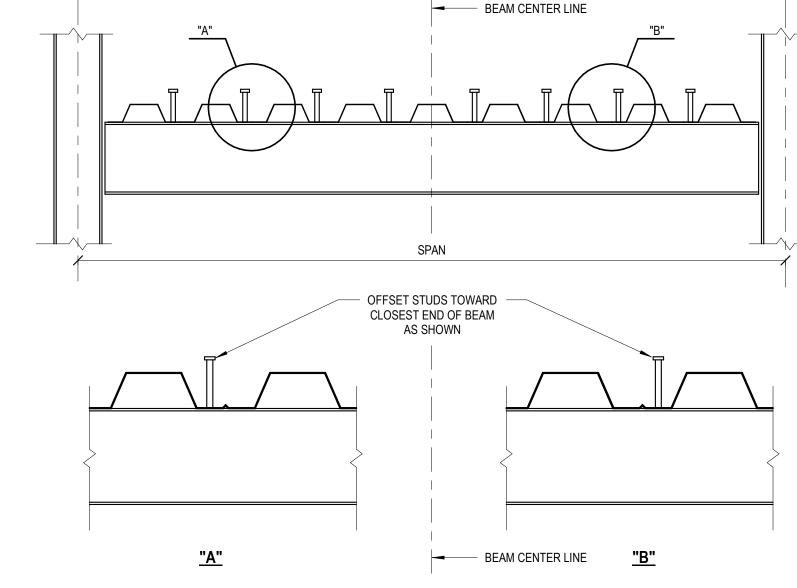
#### WITH 3" MIN **MULTIPLE LINE SPACING** SINGLE LINE SPACING

NOTES:
1. ALL STUDS ARE 3/4" x 4 1/2 DIA UNLESS NOTED OTHERWISE AND NUMBER PER BEAM IS INDICATED (#) ON FRAMING PLAN(S). 2. USE SINGLE LINE SPACING EXCEPT WHERE FIELD CONDITIONS REQUIRE MULTIPLE LINES. 3. WHERE DECK IS CONTINUOUS OVER THE BEAMS, THE DECK VALLEY MAY CONTROL AND POSSIBLY DICTATE SPACING. DECK SUPPLIER SHALL COMPLY WITH STUD CAPACITY

COMPOSITE	BEAM MIN REA	ACTION SCHEDULE, UNO
BEAM SIZE	REACTION (K)	MIN FASTENERS
W8,W10	20.4	(2) 3/4" DIA A25 BOLTS
W12,W14	31.9	(3) 3/4" DIA A25 BOLTS
W16	42.4	(4) 3/4" DIA A25 BOLTS
W18	53.0	(5) 3/4" DIA A25 BOLTS
W21,W24	63.6	(6) 3/4" DIA A25 BOLTS

NOTES: SEE PLAN NOTES FOR REACTION THAT EXCEED THIS MINIMUM REQUIRMENT.

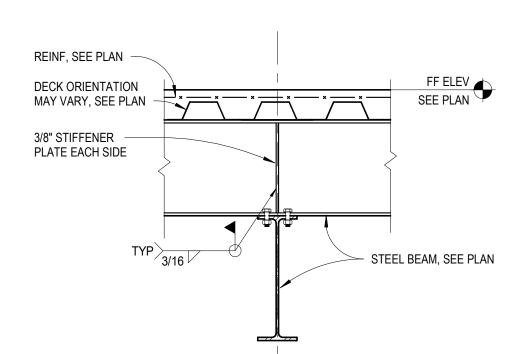
REDUCTIONS FOR MULTIPLE STUDS PER VALLEY.



- 2. IF TOTAL QUANTITY OF STUDS EXCEEDS SPAN LENGTHS IN FEET PLACE A SINGLE ROW OF STUDS AT 12" OC AND PLACE REMAINING STUDS IN EQUAL QUANTITIES FROM EACH END OF BEAM AT 12" OC IN A SECOND ROW OF STUDS. SEE DETAIL "A".
- 3. IF TOTAL QUANTITY OF STUDS IS LESS THAN THE SPAN LENGTH IN FEET PLACE STUDS AT 24" OC AND PLACE REMAINING STUDS IN EQUAL QUANTITIES FROM EACH END OF BEAM AT VACANT DECK FLUTE LOCATIONS AT 24" OC.
- 4. IN ALL CASES, THERE SHALL BE AN EQUAL NUMBER OF SHEAR STUDS ON EACH SIDE OF THE BEAM CENTER LINE.

## BEAM CONNECTION STEEL BEAM, SEE PLAN — TYPICAL CANTILEVERED BEAM CONN

CL BEAM SEE PLAN

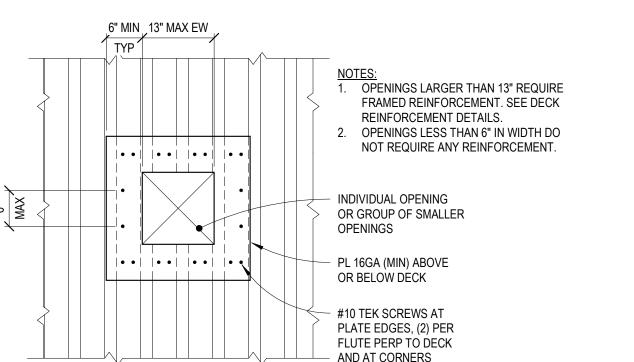




TYP @ TOP & BOT FLANGE



TYP SHEAR STUD LAYOUT



3/16 / 3@9

SLAB REINF, SEE PLAN -

DECK ORIENTATION VARIES, PROVIDE CLOSURE

PLATES AS REQ'D

BEAM CONNECTION

STEEL BEAM, SEE PLAN

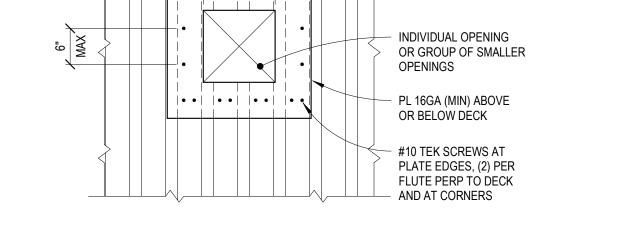
FF ELEV
SEE PLAN

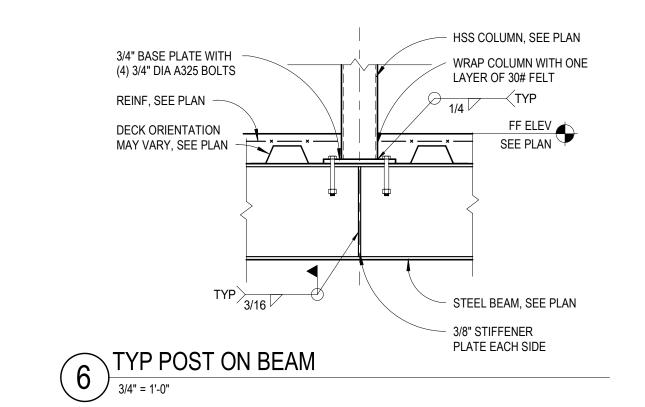
COMPOSITE FLOOR DECK.

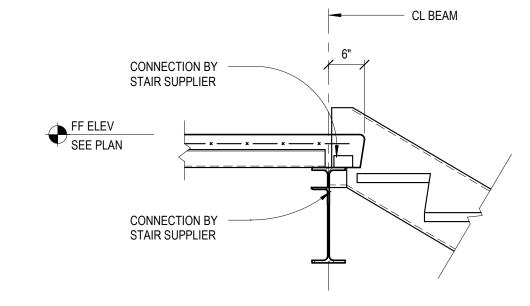
CL BEAM

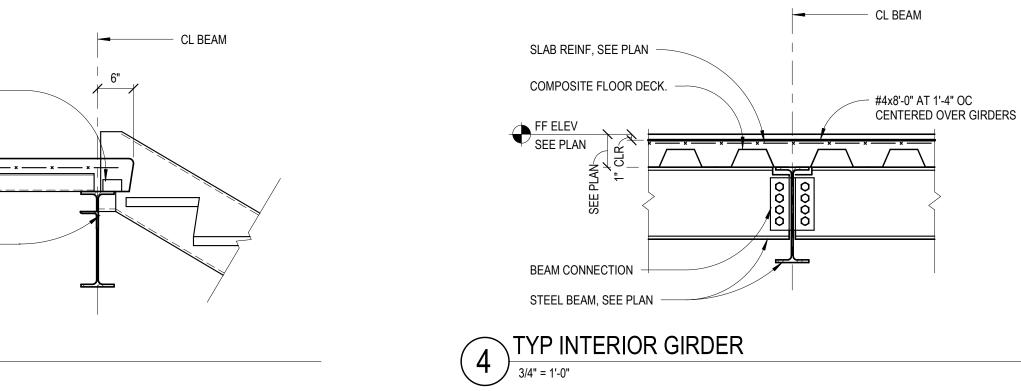
SCHEDULE

3/16 / 3@9



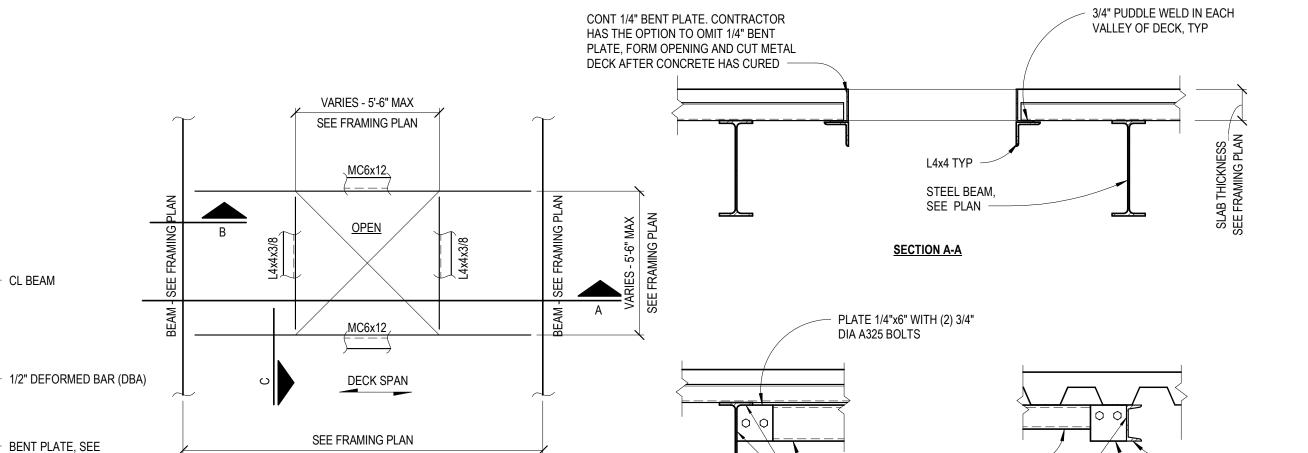






( <u>F</u> )	TYP STAIR CONN
$(\mathfrak{S})$	3/4" = 1'-0"

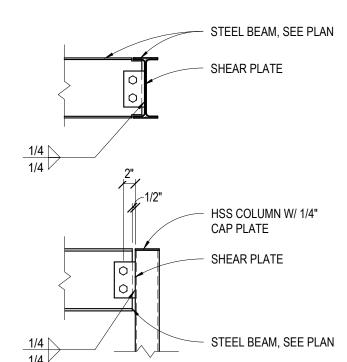
- STEEL CHANNEL



STEEL BEAM,

SECTION B-B

SEE PLAN



2" 1/2"				
HSS COLUMN W/ 1/4" CAP PLATE	- HSS COLUMN W/ 1/4" CAP PLATE BOLT S			
SHEAR PLATE	SECTION	SHEAR PLATE	FASTENERS	
	W8	3/8x3 1/2x0'-6"	(2) 3/4" DIA A25 BOLTS	
	W10	3/8x3 1/2x0'-6"	(2) 3/4" DIA A25 BOLTS	
	W12	3/8x3 1/2x0'-9"	(3) 3/4" DIA A25 BOLTS	
	W14	3/8x3 1/2x0'-9"	(3) 3/4" DIA A25 BOLTS	
STEEL BEAM, SEE PLAN	W16	3/8x3 1/2x1'-0"	(4) 3/4" DIA A25 BOLTS	
V	W18	3/8x3 1/2x1'-3"	(5) 3/4" DIA A25 BOLTS	
	W21	3/8x3 1/2x1'-6"	(6) 3/4" DIA A25 BOLTS	
	W24	3/8x3 1/2x1'-6"	(7) 3/4" DIA A25 BOLTS	

W27 3/8x3 1/2x2'-0" (8) 3/4" DIA A25 BOLTS

BENT PLATE SCHEDULE					
	BENT PL	DBA	DBA		
MAX "X"	THCK	LENGTH	SPACING	NOTES	
0'-6"	10 GA	N/A	N/A	1,2	
1'-0"	1/4"	2'-0"	2'-0"	1	
1'-11"	3/8"	3'-0"	2'-0"	1	

7 TYPICAL SMALL OPENING

#### **SCHEDULE NOTES:**

- 1. WHERE HANDRAILS OR PRECAST CONNECTION ARE MADE TO BENT PLATE, 1/4" MINIMUM THICKNESS SHALL BE MAINTAINED
- AND DBA'S PROVIDED. 2. STANDARD ANGLE SIZES MAY BE USED IN LIEU OF BENT PLATES WHEN GEOMETRY PERMITS. 3. WHERE CURVED BENT PLATE OCCURS, USE TWO FLAT PLATES WELDED AT JOINT WITH 3/16" FILLET WELD (3@12) TYP EDGE OF SLAB

  3/4" = 1'-0"

TYP FRAMED OPENING

3/4" = 1'-0"

PARTIAL PLAN AT OPENING

TYP BEAM CONN DETAIL

- PLATE 1/4"x6"

A325 BOLTS

SECTION C-C

WITH (2) 3/4" DIA

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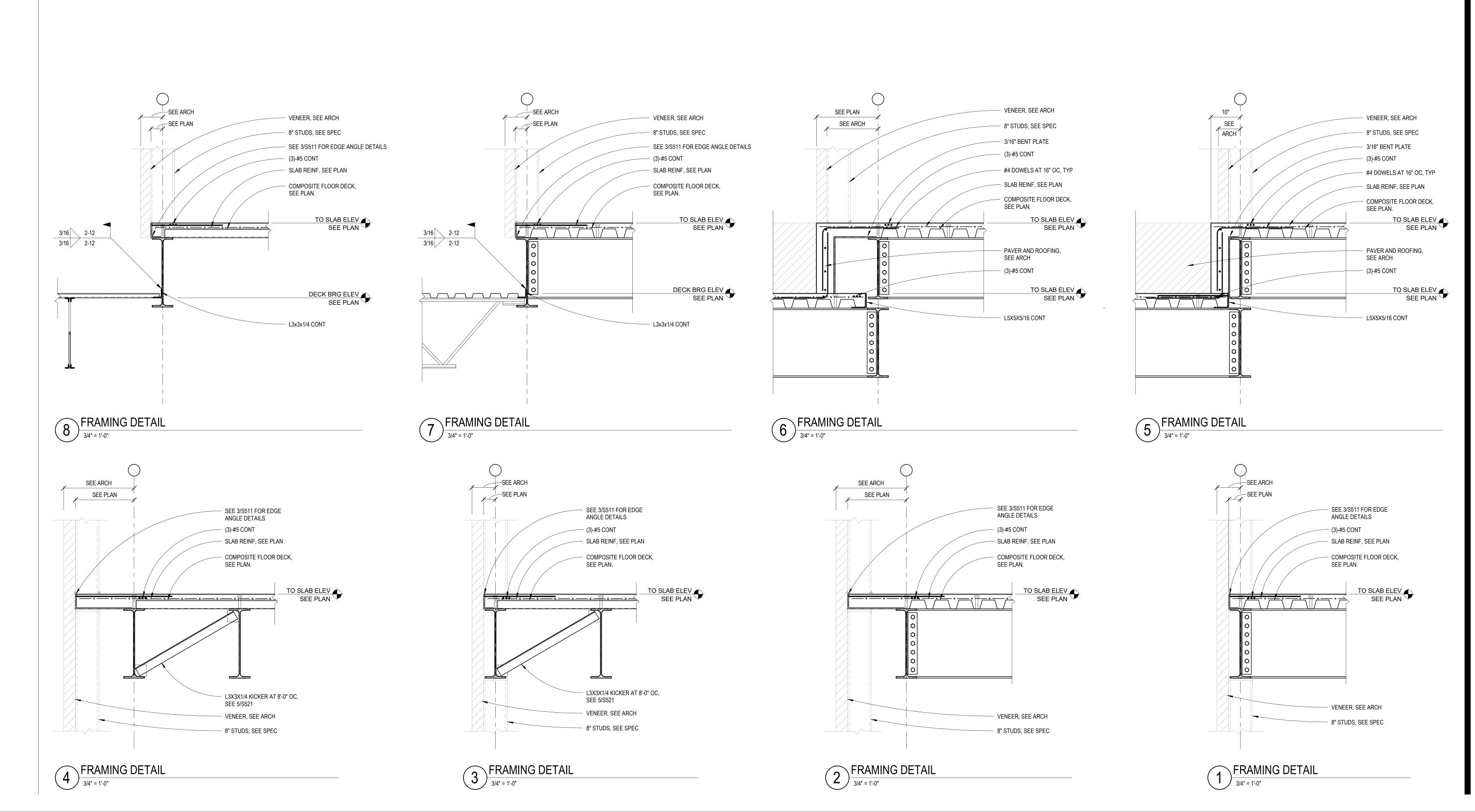
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TO WALL ELEV SEE ARCH

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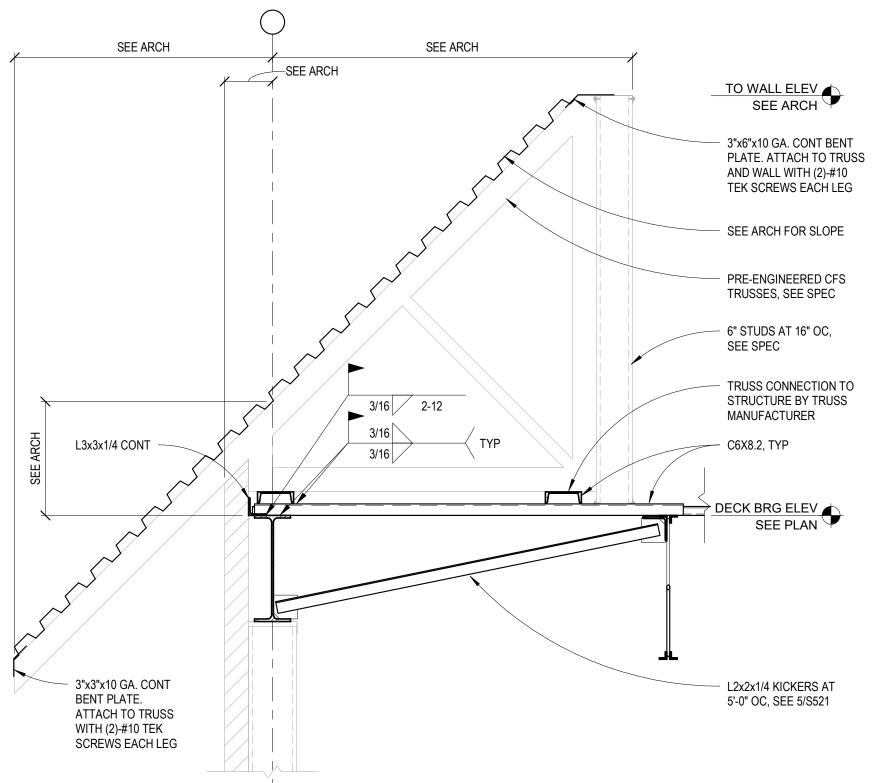
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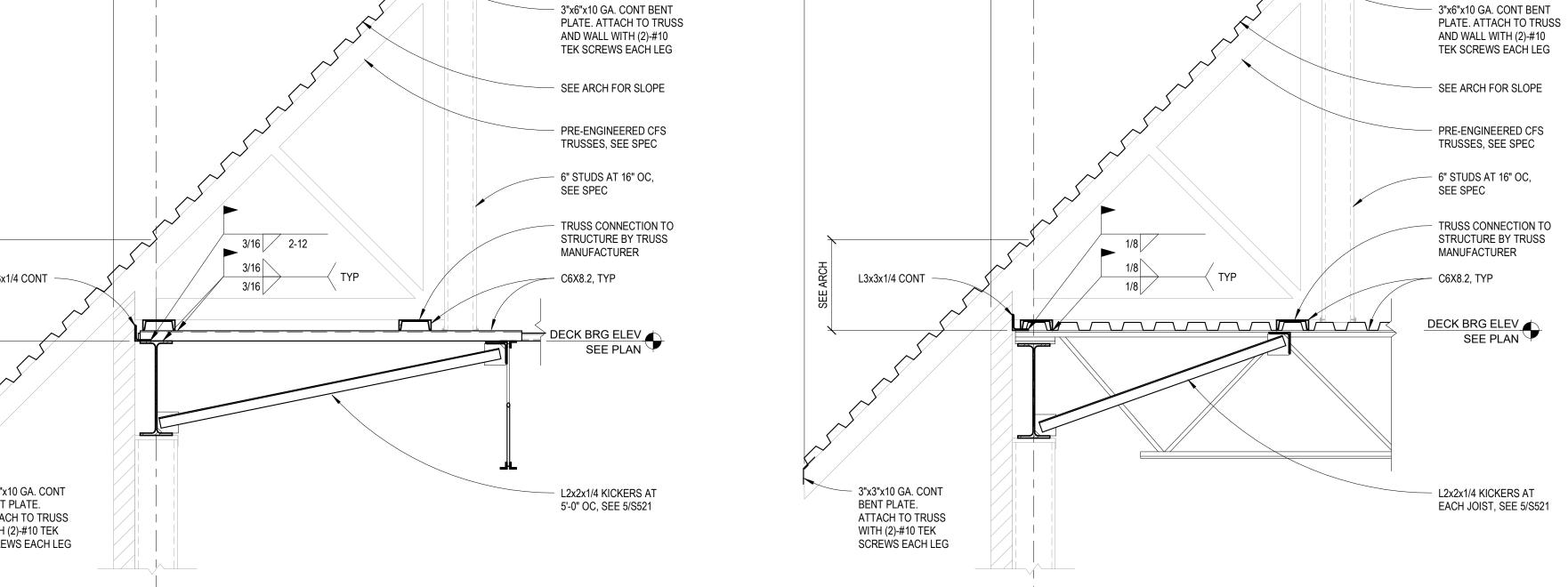
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SHEET NUMBER:





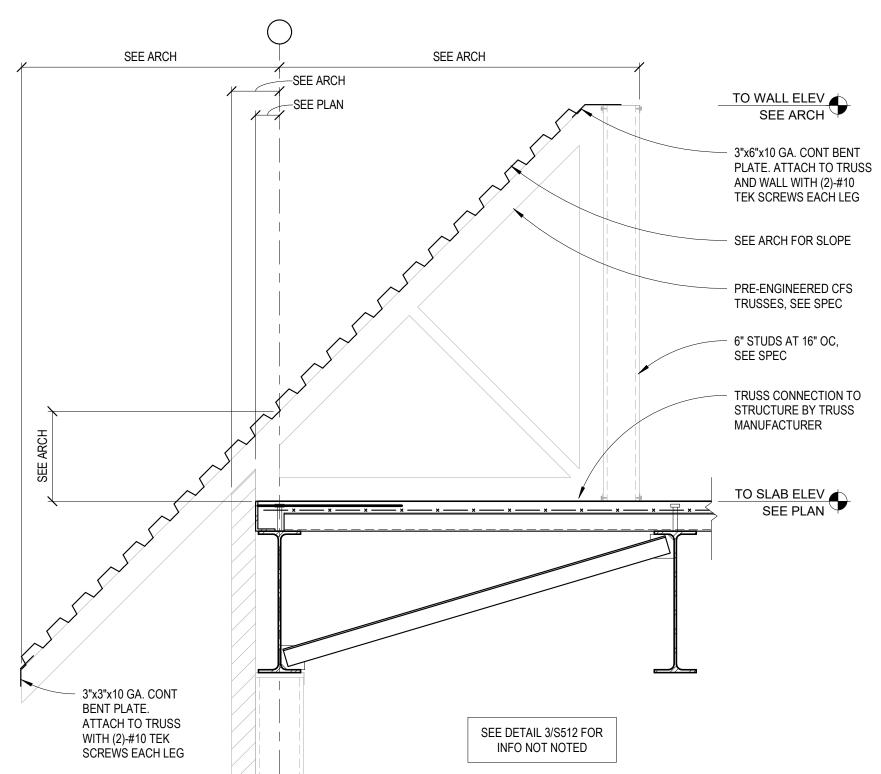
FRAMING DETAIL

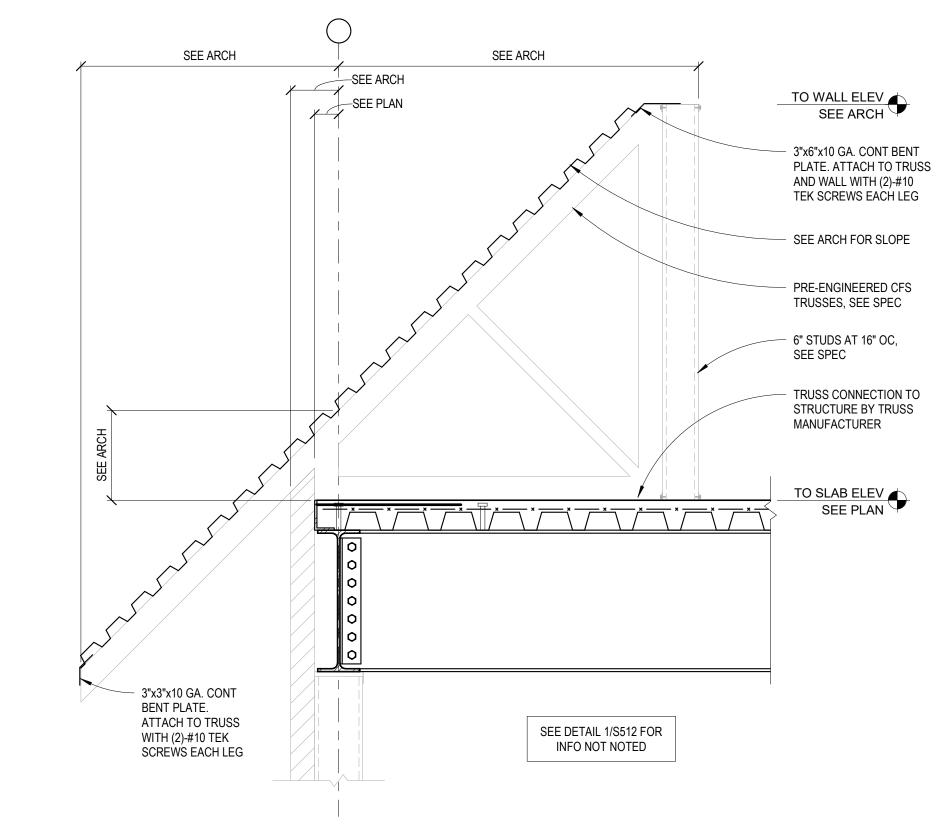
3/4" = 1'-0"

SEE ARCH

FRAMING DETAIL

3/4" = 1'-0"



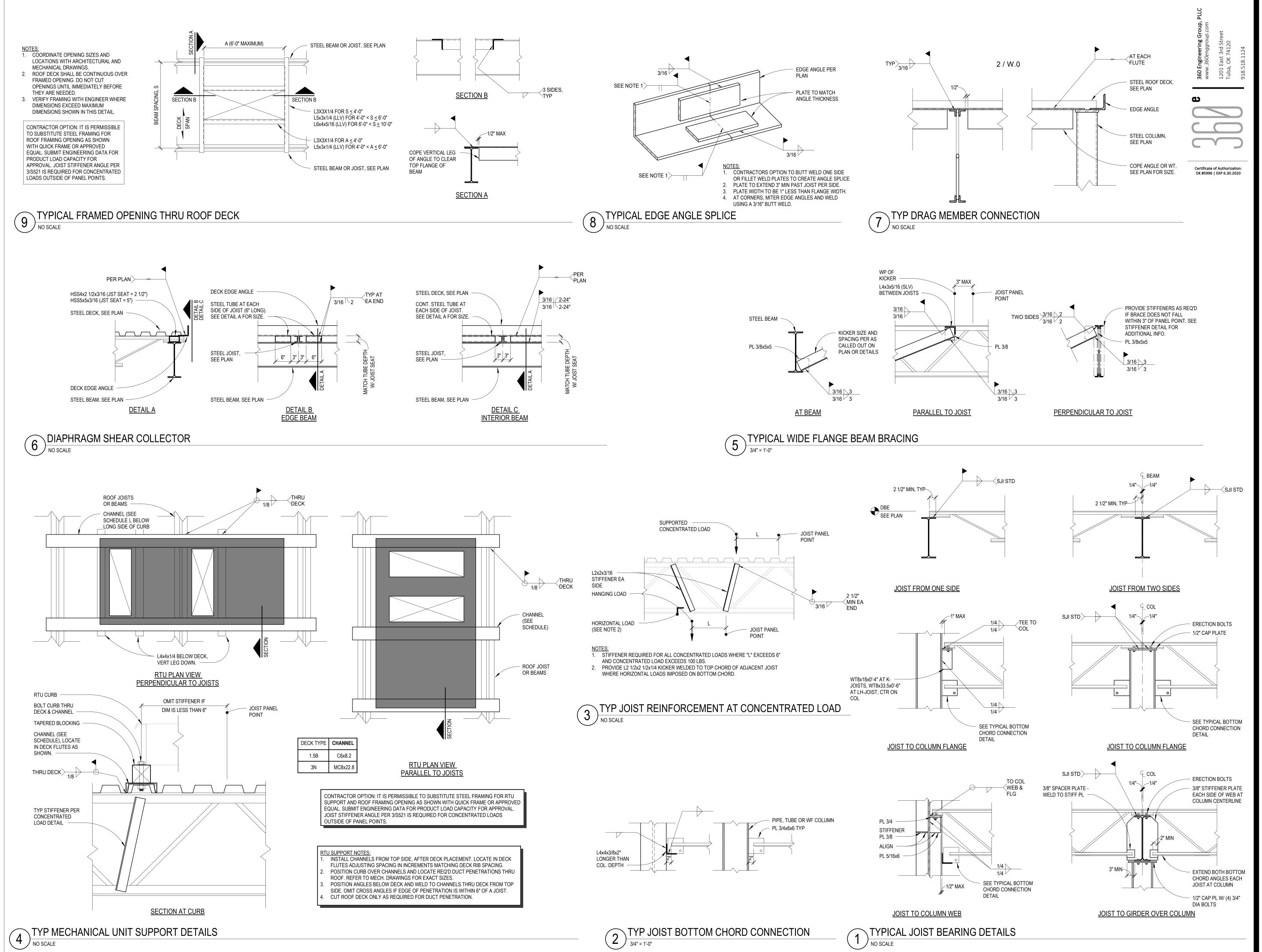


SEE ARCH

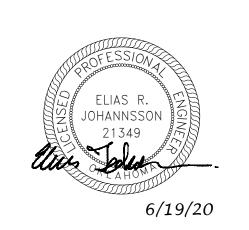
SEE ARCH

FRAMING DETAIL

3/4" = 1'-0"



ARCHIECTS



of Honor Operations Buildii

GH2 PROJECT NUMBER: **20170021**ISSUE DATE: **06.19.2020** 

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**PERMIT SET** 

NO. DESCRIPTION

DATE

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FRAMING DETAILS

SHEET NUMBER: \$\frac{5}{2}\frac{1}{2}\$\$

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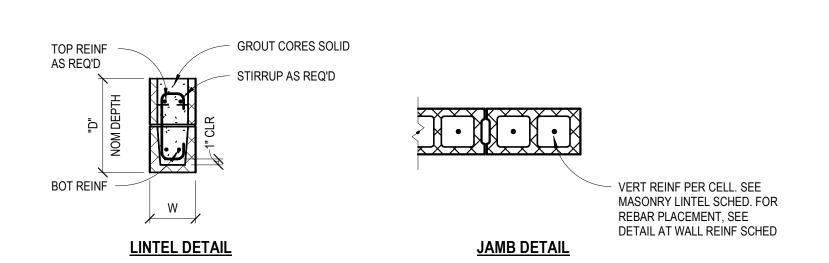
OTHER ISSUE DATES: NO. DESCRIPTION

DATE

SHEET NAME: **CMU DETAILS** 

SHEET NUMBER:





REINF

(2)-#5 T&B

STIRRUP

N/A

WIDTH

STL BEAM, SEE PLAN

BACKFILL BLOCK CAVITY WITH 3000 PSI GROUT

EMBED, SEE SCHEDULE

FILL BLOCK UNDER PLATE

WITH 3000 PSI GROUT AND

(1) #5 FOR 8" BLOCK AND

(2) #5 FOR 12" BLOCK

REMARKS

PER CELL

(2)-#5

"W"

DEPTH "D"

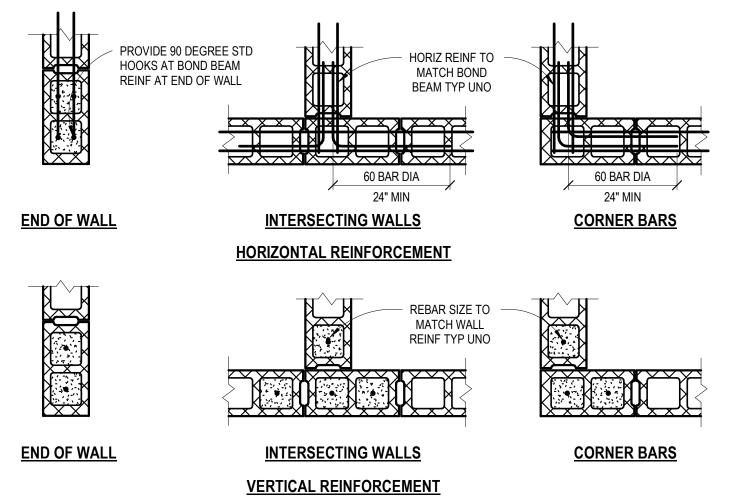
LINTEL MARK

0'-0" < S <u><</u> 6'-4"

- 1. SEE STRUCT PLANS FOR GENERAL LOCATION OF MARKED LINTELS. SIZE AND REINF OF LINTELS UNMARKED ON PLAN SHALL BE BASED ON OPENING CLEAR SPAN AS SHOWN ON THE MASONRY LINTEL SCHEDULE. SEE ARCH FOR SPECIFIC LOCATION
- AND CLEAR SPAN OF ALL LINTELS. 2. MASONRY LINTELS SHALL SPAN CONTINUOUSLY BETWEEN BEARINGS EACH SIDE. EXTEND TOP AND BOTTOM REINF 40 BAR DIAMETERS BEYOND EDGE OF OPENING OR EXTENDED (JAMB WIDTH -4", 1'-8" MIN) BEYOND EDGE OF OPENING AND
- TERMINATE WITH 90 DEGREE STD HOOK. 3. MASONRY LINTEL FRAMING INTO PERPENDICULAR MASONRY WALL SHALL BE SUPPORTED BY JAMB LOCATED ALONG PERPENDICULAR MASONRY WALL, CENTERED AT LINTEL WITH JAMB WIDTH AND REINF AS SHOWN ON MASONRY LINTEL
- 4. AT MASONRY LINTEL FRAMING INTO PERPENDICULAR CAST IN PLACE CONCRETE WALL, EXTEND DOWEL INTO CONCRETE WITH ACI STD HOOK AND MATCH DOWEL SIZE AND SPACING WITH LINTEL REINF.

# MASONRY LINTEL SCHEDULE 3/4" = 1'-0"

TOS ELEV SEE PLAN



1. REINFORCEMENT SHOWN IS IN ADDITION TO MINIMUM WALL REINFORCEMENT SHOWN IN CONC MASONRY WALL

FILL BLOCK WITH 3000 PSI

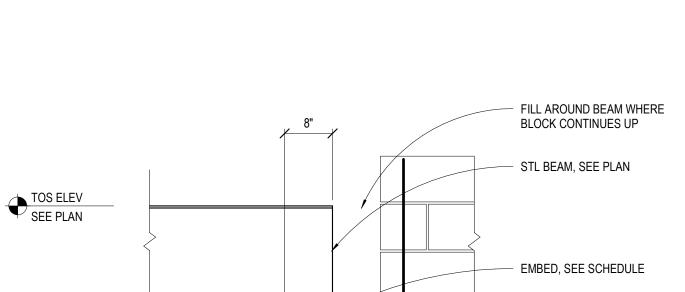
GROUT AND (1) #5 FOR 8"

BLOCK AND (2) #5 FOR 12"

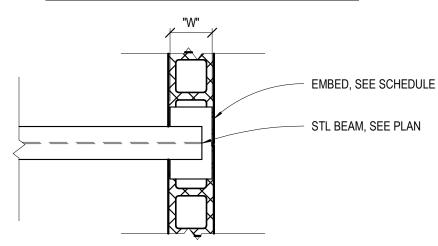
BLOCK

REINF SCHEDULE. 2. REINFORCING TO BE CONTINUOUS FROM FOOTING TO TOP OF WALL. FILL CORES SOLID WITH GROUT AS NOTED IN THE SPECIFICATIONS OR GENERAL NOTES. SEE CONCRETE MASONRY NOTES FOR REINF LAPPING LENGTH.

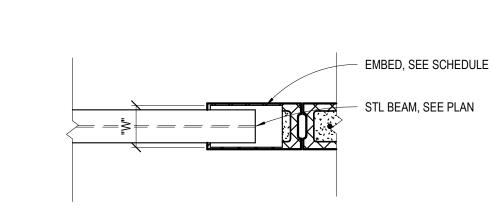




#### **ELEVATION BEAM PERPENDICULAR TO WALL**



**PLAN VIEW** 



**ELEVATION BEAM PARALLEL TO WALL** 

PLAN VIEW

SCHEDULE				
BEAM SIZE	EMBED PLATE (TxWxL)	NUMBER OF ANCHORS		
W8	5/8x8x1'-0"	4		
W10, W12	5/8x8x1'-0"	4		
W14	5/8x8x1'-0"	4		
W16	5/8x8x1'-0"	4		
W18	3/4x8x1'-0"	4		

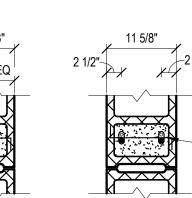
- 1. W= WIDTH OF CMU -5/8" 2. WHERE BEAM POCKET INTERRUPTS JAMB REINFORCEMENT PROVIDE
- 3. ANCHORS SHALL BE #5x2'-0" DBA'S
- ADDITIONAL JAMB TO SPAN BETWEEN FLOORS ADJACENT TO BEAM POCKET

CMU WALL REINFORCING DIAGRAM

STEEL BEAM POCKET DETAIL

3/4" = 1'-0"

BOND BEAM AT TOP OF WALL W/ (1) #5 CONT BAR POSITIONER AT 8" MAXIMUM ABOVE TOP OF GROUT LIFT, TYP BOND BEAM AT MIDDLE OF WALL W/ (1) #5 CONT SEE CMU VERTICAL REINFORCING SCHEDULE FOR SPACING USE LOW LIFT METHOD OF GROUTING



CMU VERTICAL REINFORCING SCHEDULE WALL REINFORCING 8" (1) #5 VERT AT 8" OC WITH (1) #5 DOWEL AT 8" OC

GROUT SOLID ALL CELLS WITH REINFORCING. USE BOND BEAM BLOCKS WITH OPEN BOTTOMS ONLY AT BOND BEAM LOCATIONS. DO NOT USE THROUGH-TYPE BLOCKS AT BOND BEAMS.

DO NOT CONTINUE BOND BEAM REINFORCING THROUGH CONTROL JOINTS.

4. ALL MASONRY SHALL BE LAID IN RUNNING (COMMON) BOND.

(MAX GROUT LIFT = 5'-0"). SPLICE VERTICAL REINF IN 6'-0" TO 8'-0" LENGTHS HOLD TOP OF EACH GROUT LIFT 2" DOWN BELOW TOP OF BLOCK TO PROVIDE KEY FOR NEXT LIFT, TYP FIN FLR EL SEE PLAN BOND BEAM W/ (1) #5 CONT

> PROVIDE STANDARD ACI HOOK INTO FOOTING

JAMB DETAIL

CMU SCREEN WALL AND FOUNDATION

~//>///

TYPICAL CMU SCREEN WALL DETAIL

3/4" = 1'-0"

FOOTING WIDTH

SEE SCHED

VENEER WHERE REQ'D

BOND BEAM AT TOP OF

BOND BEAM AT MIDDLE OF WALL W/ (1) #4 CONT

VERTICAL REINFORCING

USE LOW LIFT METHOD OF GROUTING

SEE ARCH AND CIVIL FOR LOCATIONS

FIN GRADE SEE ARCH/CIVIL

BOND BEAM W/ (1) #4 CONT

PROVIDE STANDARD ACI

HOOK INTO FOOTING. ALTERNATE HOOK

#5 AT 12" OC EACH WAY

DIRECTION

VERTICAL REINF IN 6'-0" TO 8'-0" LENGTHS

(MAX GROUT LIFT = 5'-0"). SPLICE

PER SCHEDULE

WALL W/ (1) #4 CONT

SEE ARCH

LAP BARS AT BAR POSITIONER

GROUT ALL REINFORCED

TO FULL HEIGHT OF WALL

CELLS AND CONTINUE REINF

SEE DETAILS FOR LOCATION OF ADDITIONAL BOND BEAMS WITH (1) #5 CONTINUOUS. 6. PROVIDE (2) #5 AT EACH LINTEL AND EXTEND 24" PAST OPENING.

### GENERAL NOTES

- 1. THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH CURRENT APPLICABLE LOCAL, STATE, FEDERAL, FIRE, AND HEALTH CODES AND ORDINANCES AND IS RESPONSIBLE TO COMPLY WITH ALL REGULATIONS OF REGULATORY AGENCIES HAVING JURISDICTION. THE CONTRACTOR SHALL ALSO CONFORM TO THE REQUIREMENTS OF THE OWNER'S INSURANCE CARRIER. NOTIFY THE ARCHITECT AND ENGINEER OF ANY CONFLICTS PRIOR TO INSTALLATION. CODES, ORDINANCES AND REGULATIONS SHALL HAVE PRECEDENCE OVER SPECIFICATIONS AND DRAWINGS WHERE THERE IS A CONFLICT. OBTAIN CURRENT COPIES OF ALL ADOPTED CODES AND ORDINANCES PRIOR TO BID AND INCLUDE ALL COSTS TO COMPLY WITH CODES AND ORDINANCES IN BID.
- 2. PAY ALL LAWFUL FEES, PERMITS OR LICENSES REQUIRED TO ACCOMPLISH WORK. OBTAIN AND PAY FOR ALL NECESSARY CERTIFICATES OF APPROVAL.
- 3. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, SERVICE AND ANYTHING REASONABLY INCIDENTAL TO COMPLETE ALL WORK INDICATED ON THE DRAWINGS AND AS SPECIFIED IN ACCORDANCE WITH THE INTENT OF THE CONSTRUCTION DOCUMENTS.
- 4. THE CONTRACTOR IS RESPONSIBLE TO VISIT AND EXAMINE THE JOB SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PERTINENT TO THE WORK TO BE PERFORMED.
- 5. INCORPORATE ALL CODE AND ORDINANCE REQUIREMENTS INTO THE BID AND INSTALLATION OF WORK. NO ADDITIONAL FUNDS WILL BE ALLOCATED FOR WORK REQUIRED TO CONFORM TO REGULATIONS AND REQUIREMENT AND/OR TO OBTAIN APPROVAL OF WORK.
- 6. THE DRAWINGS ARE DIAGRAMMATIC AND ARE ONLY INTENDED TO DEFINE THE BASIC FUNCTIONS REQUIRED. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION CONDITIONS AND COORDINATION WITH OTHER TRADES WILL ALLOW. MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND ARE A PART OF THE WORK INCLUDED; HOWEVER, CHANGES THAT ALTER THE CHARACTER OF THE WORK ARE NOT PERMITTED. APPROVAL OF ARCHITECT AND ENGINEER SHALL BE OBTAINED BEFORE DEVIATIONS FROM THESE PLANS ARE
- 7. PLUMBING AND MECHANICAL SYSTEMS ARE NOT DIMENSIONED. DO NOT SCALE FROM DRAWING(S). THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND ENSURE THERE IS AVAILABLE SPACE FOR INSTALLATION BEFORE ORDERING EQUIPMENT AND FABRICATING PIPING AND/OR
- 8. THE CONTRACTOR SHALL STUDY THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL PLANS TO ENSURE ALL MECHANICAL SYSTEMS WILL FIT WITH SUFFICIENT CLEARANCES FOR INSTALLATION, SERVICING AND MAINTENANCE. NOTIFY THE ARCHITECT AND ENGINEER OF ANY CONFLICTS PRIOR TO INSTALLATION.
- 9. THE CONTRACTOR SHALL COMPLY WITH SPECIFICATIONS AND INDUSTRY STANDARDS FOR ALL INSTALLATIONS.
- 10. PROVIDE ALL DOMESTIC POTABLE WATER EQUIPMENT AND PIPING AS "LEAD FREE" PER THE "REDUCTION OF LEAD IN DRINKING WATER ACT". NOTIFY ENGINEER OF ANY CONFLICTS PRIOR TO SUBMITTAL.
- 11. UNLESS OTHERWISE NOTED, CONTRACTOR SHALL REFER TO MECHANICAL DRAWINGS FOR MECHANICAL EQUIPMENT LOCATIONS. REFER TO PLUMBING DRAWINGS FOR PLUMBING EQUIPMENT.
- 12. SEAL ALL PENETRATIONS WATER TIGHT. SEAL AROUND ALL WALL PENETRATIONS. PROVIDE ESCUTCHEONS ON ALL PIPING ON EXTERIOR AND EXPOSED LOCATIONS. CAULK WITH REQUIRED THICKNESS 3M BRAND FIRE BARRIER CAULK CP-25 (OR OTHER APPROVED METHOD) TO MAINTAIN FIRE RESISTANCE RATING OF FIRE RATED ASSEMBLIES.
- 13. WHERE DUCTS PENETRATE NON-FIRE-RESISTANCE RATED FLOORS, SEAL SPACE AROUND DUCTS WITH AN APPROVED NONCOMBUSTIBLE FIRE
- 14. ALL CUTTING AND PATCHING OF STRUCTURE SHALL BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO PERFORMING WORK.
- 15. THE CONTRACTOR SHALL COORDINATE ALL ROUTING AND MOUNTING OF EQUIPMENT, DUCTWORK, PIPING, ETC (ALL WORK) WITH ALL OTHER TRADES.
- 16. PROVIDE ACCESS PANELS WHERE INDICATED ON DRAWINGS AND AS REQUIRED TO PROPERLY OPERATE, ADJUST AND MAINTAIN ALL EQUIPMENT, VALVES, DAMPERS AND OTHER ACCESSORIES. VERIFY EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION. COORDINATE INSTALLATION WITH ALL OTHER TRADES. ACCESS PANEL TO BE MILCOR, MATHBROOK, OR APPROVED EQUAL, HINGED WITH SCREWDRIVER LOCK.
- 17. ROUTE DUCTWORK AND PIPING AS HIGH AS POSSIBLE ABOVE FINISHED CEILING TO AVOID CONFLICT WITH LIGHTS.
- 18. INSTALL ALL PIPING PARALLEL AND PERPENDICULAR TO BUILDING WALLS AND PARTITIONS UNLESS DISTINCTLY SHOWN OR NOTED OTHERWISE. ROUTE PIPING LOCATED NEAR EACH OTHER PARALLEL IN ALL PLANES AND WITH SUFFICIENT CLEARANCE.
- 19. ALL PIPING SHALL BE INSTALLED SO THAT IT MAY EXPAND AND CONTRACT FREELY WITHOUT DAMAGES TO EQUIPMENT, OTHER WORK, OR INJURY TO PIPING SYSTEM, ALL NECESSARY SWING JOINTS, EXPANSION JOINTS, OR OFFSETS TO PROTECT PIPING, ETC. SHALL BE INSTALLED WHETHER INDICATED OR NOT.
- 20. PROPERLY SUPPORT ALL PIPING. PROVIDE ALL REQUIRED ANCHORS, GUIDES AND EXPANSION DEVICES.
- 21. PAINT ALL EXTERIOR AND EXPOSED PIPING. REFER TO AXXX FOR COLOR. (DESIGNER/ENGINEER: COORDINATE THIS REFERENCE WITH THE ARCHITECT.)
- 22. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL MATERIAL, EQUIPMENT, APPARATUS AND WORK FROM DAMAGE. FAILURE TO DO SO TO THE SATISFACTION OF THE OWNER OR OWNER'S REPRESENTATIVE WILL BE SUFFICIENT CAUSE FOR THE REJECTION OF THE MATERIAL, EQUIPMENT, APPARATUS AND WORK IN QUESTION.
- 23. THE CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT, MATERIALS AND WORKMANSHIP FOR A PERIOD OF 1 YEAR FOLLOWING THE DATE OF ACCEPTANCE. THE CONTRACTOR'S GUARANTEE INCLUDES EQUIPMENT CAPACITY, PERFORMANCE RATINGS AND NOISE RATINGS. ANY DEFICIENCIES SHALL BE PROMPTLY CORRECTED. ROUTINE MAINTENANCE SHALL NOT BE INCLUDED.
- 24. THE CONTRACTOR SHALL CLEAN ALL FIXTURES, PIPES, EQUIPMENT AND EXPOSED WORK AFTER COMPLETION OF FINAL TESTING AND BEFORE ACCEPTANCE.
- 25. ALL PLATED AND OTHER FINISHED PRODUCTS SHALL BE THOROUGHLY CLEANED AND POLISHED.
- 26. THE MANUFACTURER MODEL OR CATALOG NUMBERS INDICATED IN THE CONSTRUCTION DOCUMENTS ESTABLISH A STANDARD FOR THE GENERAL DESIGN, PERFORMANCE, AND QUALITY OF THE PRODUCT REQUIRED.
- 27. ALTERNATE MANUFACTURERS LISTED IN THE SCHEDULE OR SPECIFICATIONS ARE APPROVED TO BID; HOWEVER, THE SUBMITTED PRODUCT MUST MEET THE GENERAL DESIGN, PERFORMANCE, DIMENSIONS, WEIGHT, AND QUALITY OF THE SCHEDULED PRODUCT. EACH MANUFACTURER WILL HAVE DIFFERENCES IN INSTALLATION REQUIREMENTS. IF THE CONTRACTOR ELECTS TO GO WITH A NON-BASIS OF DESIGN MANUFACTURER, THE CONTRACTOR SHALL BE RESPONSIBLE TO INCLUDE THE COST FOR ENGINEERING TIME, AS REQUIRED, TO ADJUST THE DESIGN TO THOSE DIFFERENCES IN THEIR BID, IF THE BASIS OF DESIGN IS NOT BID. THE CONTRACTOR IS RESPONSIBLE TO IDENTIFY THE DIFFERENCES IN THE INSTALLATION REQUIREMENTS BETWEEN THE BASIS OF DESIGN AND THE SUBMITTED MANUFACTURER DURING THE SUBMITTAL PHASE.
- 28. WHERE "OR APPROVED EQUAL" IS INDICATED, OTHER PRODUCTS SIMILAR IN DESIGN AND OF EQUAL QUALITY AND PERFORMANCE, AND COMPLYING WITH THE PLANS AND SPECIFICATIONS MAY BE APPROVED IF FOUND ACCEPTABLE BY THE ARCHITECT/ENGINEER. THE CONTRACTOR MUST SUBMIT TO THE ARCHITECT/ENGINEER A LINE-BY-LINE COMPARISON BETWEEN SCHEDULED MANUFACTURER AND "OR APPROVED EQUAL" MANUFACTURER 10 DAYS PRIOR TO BID.
- 29. ALL MATERIALS, EQUIPMENT, ETC., INSTALLED UNDER THIS CONTRACT SHALL CONFORM TO ALL RULES, CODES, ETC., AS RECOMMENDED OR ADAPTED BY THE NATIONAL ASSOCIATION GOVERNING THE MANUFACTURER, RATING AND TESTING OF SUCH MATERIALS, EQUIPMENT, ETC., ALL ELECTRICALLY OPERATED EQUIPMENT SHALL BE U.L. APPROVED FOR THE USE INTENDED.
- 30. ALL FIRED AND UNFIRED PRESSURE VESSELS SHALL CONFORM TO THE RULES OF THE A.S.M.E. AND NATIONAL BOARD CODES AND SHALL BE SO LABELED. FURNISH A.S.M.E. AND NATIONAL BOARD CERTIFICATES.
- 31. MOTORS SHALL CONFORM TO THE RULES OF THE N.E.M.A. FOR THE SERVICE INTENDED AND TO THEIR STANDARDIZED FORM SIZES.
- 32. SHOP DRAWINGS, CATALOG CUTSHEETS AND PERFORMANCE DATA PERTAINING TO ALL MATERIALS AND EQUIPMENT PROPOSED FOR USE SHALL BE SUBMITTED.
- 33. JOINTS BETWEEN DISSIMILAR METALS SHALL BE MADE WITH DIELECTRIC NIPPLES DOWNSTREAM OF A VALVE.
- 34. ALL MATERIALS EXPOSED IN A RETURN AIR PLENUM SHALL COMPLY WITH NFPA 90A FLAME SPREAD UNDER 25 AND SMOKE DEVELOPED AND FUEL
- 35. THE DISCHARGE OF SAFETY VALVES, BLOWOFF PIPES AND OTHER OUTLETS SHALL BE LOCATED AND SUPPORTED SO AS TO PREVENT INJURY TO
- 36. PROVIDE RETURN AIR SMOKE DETECTOR IN EACH HVAC UNIT OVER 2,000 CFM AS REQUIRED BY THE LATEST ADOPTED INTERNATIONAL MECHANICAL CODE.
- 37. MECHANICAL EQUIPMENT SHOWN ON THE PLANS HAVE A SPECIFIC WEIGHT AND LOCATION. SHOULD THE CONTRACTOR INSTALL EQUIPMENT WITH DIFFERENT WEIGHTS OR LOCATIONS AS SHOWN, CONTRACTOR SHALL PROVIDE THIS INFORMATION TO THE STRUCTURAL ENGINEER FOR APPROVAL, PRIOR TO PURCHASING, CLEARLY INDICATING THE DIFFERENCES IN SIZE, WEIGHT AND LOCATION. THE ARCHITECT/ENGINEER SHALL
- NOT BEAR THE COSTS OF SUCH REVIEWS OR REDESIGNS. 38. DO NOT ROUTE PIPING OVER ELECTRICAL OR COMMUNICATIONS EQUIPMENT. THIS INCLUDES HYDRONICS, STEAM, DOMESTIC WATER, SANITARY SEWER AND VENTS, CONDENSATE, ROOF DRAINS, ETC.
- 39. PROVIDE TEMPORARY AIR FILTERS PRIOR TO STARTUP OF ALL FANS THAT ARE OPERATING DURING CONSTRUCTION, AND INSTALL NEW FILTERS AFTER ALL CONSTRUCTION DIRT HAS BEEN REMOVED FROM THE BUILDING, AND THE DUCTS, PLENUMS, CASINGS, AND OTHER ITEMS SPECIFIED HAVE BEEN VACUUM CLEANED. MAINTAIN SYSTEM IN THIS CLEAN CONDITION UNTIL FINAL ACCEPTANCE.

### PLUMBING SYMBOLS LEGEND

<u>SYMBOL</u>	DESCRIPTION	SYMBOL	<u>DESCRIPTION</u>
	BACKFLOW PREVENTER, SEE SPECS	—— DS ——	DISTILLED WATER
	BALL VALVE	—— DI ——	DEMINERALIZED OR DEIONIZED WATER
<del></del>	BLIND FLANGE	— DCW —	DOMESTIC COLD WATER
<del></del>	CAP	— DHW —	DOMESTIC HOT WATER
	CHECK VALVE	- DHWR $-$	DOMESTIC HOT WATER RETURN
— <del>*S</del> —	CHECK VALVE, SILENT	— 110°F —	DOMESTIC HOT WATER (110°F)
	CIRCUIT SETTER	— 140°F —	DOMESTIC HOT WATER (140°F)
	FLEXIBLE CONNECTOR	IW	IRRIGATION WATER
	GENERAL VALVE, SEE SPECS	——G——	NATURAL GAS, LOW PRESS
T'	PRESSURE AND TEMPERATURE RELIEF	MPG	NATURAL GAS, MED PRESS
	PRESSURE REDUCING VALVE	—HPG—	NATURAL GAS, HIGH PRESS
	RELIEF VALVE, ASME	—— CA ——	COMPRESSED AIR
	SOLENOID VALVE	— PRD —	PRIMARY ROOF DRAIN
— <del></del>	STRAINER	——RD——	ROOF DRAIN
	TRIPLE DUTY VALVE	— SRD —	SECONDARY ROOF DRAIN
<b>──</b>    <b>─</b>	UNION	—— SD ——	STORM DRAIN
<del></del>	RISER DOWN (ELBOW)	V	VENT, SANITARY SEWER
<del></del>	RISER UP (ELBOW)	—— AV ——	VENT, ACID WASTE
<del></del>	RISE OR DROP	—— GV ——	VENT, GREASE
<del></del>	TEE DOWN	— VAC —	VACUUM
<del></del>	TEE UP	——AW——	WASTE, ACID
	TOP CONNECTION	GW	WASTE, GREASE
<del></del>	BOTTOM CONNECTION	—— ss —	WASTE, SANITARY SEWER
	SIDE CONNECTION		
	FLOW IN DIRECTION OF ARROW		
	PIPE SLOPE IN DIRECTION OF ARROW	DEFINITION OF	LINEWEIGHTS AND LINETYPES:
<b>→</b>	REMOVE EXISTING TO THIS POINT		DEMOLITION
•	TIE-IN TO EXISTING AT THIS POINT		EXISTING TO REMAIN
	PUMP		NEW CONSTRUCTION
	EQUIPMENT TAG		DOMESTIC COLD WATER
<u>xxx-x</u> —	EQUIPMENT NUMBER		DOMESTIC HOT WATER
J			DOMESTIC HOT WATER RETURN
——————————————————————————————————————	CLEANOUT PLUG	<del></del>	OUTLINE OF NEW EQUIPMENT INSTALLED
● FCO	CLEANOUT, FLOOR		ABOVE THE FLOOR SHOWN (I.E., ROOF)

⊂∥ <u>WCO</u>

C⊢⊢ <u>HB</u>

C⊢ <u>FPWH</u>

 $-\!\!\!-\!\!\!\otimes\!\!-\!\!\!-$ 

⊕ <u>SD</u>

**FS** 

CLEANOUT, WALL

GAS REGULATOR

FLOOR DRAIN

FLOOR SINK

SHOWER DRAIN

PRIMARY ROOF DRAIN

SECONDARY ROOF DRAIN

FREEZE PROOF WALL HYDRANT

HOSE BIBB

### PLUMBING ABBREVIATIONS

A		L	
ADD ADJ	ADDENDUM ADJUSTABLE	LB	POUND, POUNDS
AFF AV	ABOVE FINISHED FLOOR ACID VENT	M	
AVTR AW	ACID VENT THRU THE ROOF ACID WASTE	M MBH MFG	THOUSAND THOUSAND BTUH MANUFACTURER
B BFF BFPD	BELOW FINISHED FLOOR BACK FLOW PREVENTION DEVICE	MPG MIN MISC MSB	NATURAL GAS, MEDIUM PRESSURE MINIMUM MISCELLANEOUS MOP SERVICE BASIN
BTM	BOTTOM	2	WOT GETTVIOL BY GITT
С		N	
CA CD CL CO	COMPRESSED AIR CONDENSATE DRAIN CENTER LINE CLEANOUT	NC NIC NO NOM NTS	NORMALLY CLOSED NOT IN CONTRACT NORMALLY OPEN or NUMBER NOMINAL NOT TO SCALE
CONT CP	CONTINUATION PUMPED CONDENSATE	Р	
D		PH	PHASE
DCW DF DHW	DOMESTIC COLD WATER DRINKING FOUNTAIN DOMESTIC HOT WATER	PRV PRD PSI PSIA PSIG	PRESSURE REDUCING VALVE PRIMARY ROOF DRAIN POUNDS PER SQUARE INCH POUNDS PER SQUARE INCH ABSOLU POUNDS PER SQUARE INCH GAGE
DHWR DI	DOMESTIC HOT WATER RETURN DEIONIZED WATER	R	
DF DN DS	DRINKING FOUNTAIN DOWN DISTILLED WATER	(R) RD	EXISTING TO REMOVE, RELOCATE ROOF DRAIN
DWG DWV	DRAWING DRAIN WASTE AND VENT	RE RM RPM	REFER TO ROOM REVOLUTIONS PER MINUTE
E		RPS RV Ø	REVOLUTIONS PER SECOND RELIEF VALVE ROUND, DIAMETER
(E) EEW ENGR	EXISTING TO REMAIN EMERGENCY EYE WASH ENGINEER	S	
EQUIP EWC EWH EWT		SD SS SQIN SQFT SRD	STORM DRAIN SANITARY SEWER or STAINLESS STE SQUARE INCH/INCHES SQUARE FOOT/FEET SECONDARY ROOF DRAIN
F	EXPANSION TAINS	Т	
		TEMP	TEMPERATURE
F FCO FD FLR	FAHRENHEIT FLOOR CLEANOUT FLOOR DRAIN	THRU TMV TYP	THROUGH THERMOSTATIC MIXING VALVE TYPICAL
FLR FPWH FPM	FLOOR FREEZE PROOF WALL HYDRANT FEET PER MINUTE	U	
FT FS	FOOT, FEET FLOOR SINK	UL UNO UR	UNDERWRITER'S LABORATORIES UNLESS NOTED OTHERWISE URINAL
G		V	
G GAL GPF GPH GPM	NATURAL GAS, LOW PRESSURE GALLON, GALLONS GALLONS PER FLUSH GALLONS PER HOUR GALLONS PER MINUTE	V VAC VFD VTR VTW	VENT or VOLT VACUUM VARIABLE FREQUENCY DRIVE VENT THRU THE ROOF VENT THRU THE WALL
GCO GW	GRADE CLEAN OUT GREASE WASTE	W	VENT THRO THE WALL
GWH 	GAS WATER HEATER	WAG	WATER AND GAS
<b>Н</b> нв	HOSE BIBB	W WB WC	WATT WASHER BOX WATER CLOSET
HD HP	HEAD HORSEPOWER	WHA Y	WATER HAMMER ARRESTOR
HPG ı	NATURAL GAS, HIGH PRESSURE	Y YH	YARD HYDRANT
I			
IN INV INWC IW	INCH, INCHES INVERT INCHES OF WATER COLUMN IRRIGATION WATER		
K			
KW	KILOWATT		

**KESSLER** GRAVES CYNTERGY ENGINEERING, PLLC CA # 3537 | EXPIRES 06/30/2020 SAMUEL KESSLER GRAVES, PE

TULSA, OK 74119 918.877.6000 www.cyntergy.com

**GH2 PROJECT NUMBER:** 20170021

08/04/2020 PROGRESS SET

ISSUE DATE:

OTHER ISSUE DATES:

NO. DESCRIPTION PERMIT SET 06/19/2020 PROGRESS SET 07/14/2020 PROGRESS SET 08/04/2020

NOTES, SYMBOLS, **AND ABBREVIATIONS** 

KEYNOTES

4" SD (PRIMARY), 6" SD (SECONDARY) DN FROM 2ND FLR. ROUTE IN ARCHITECTURAL FURR OUT. REFER TO CIVIL FOR 4" SD (PRIMARY)

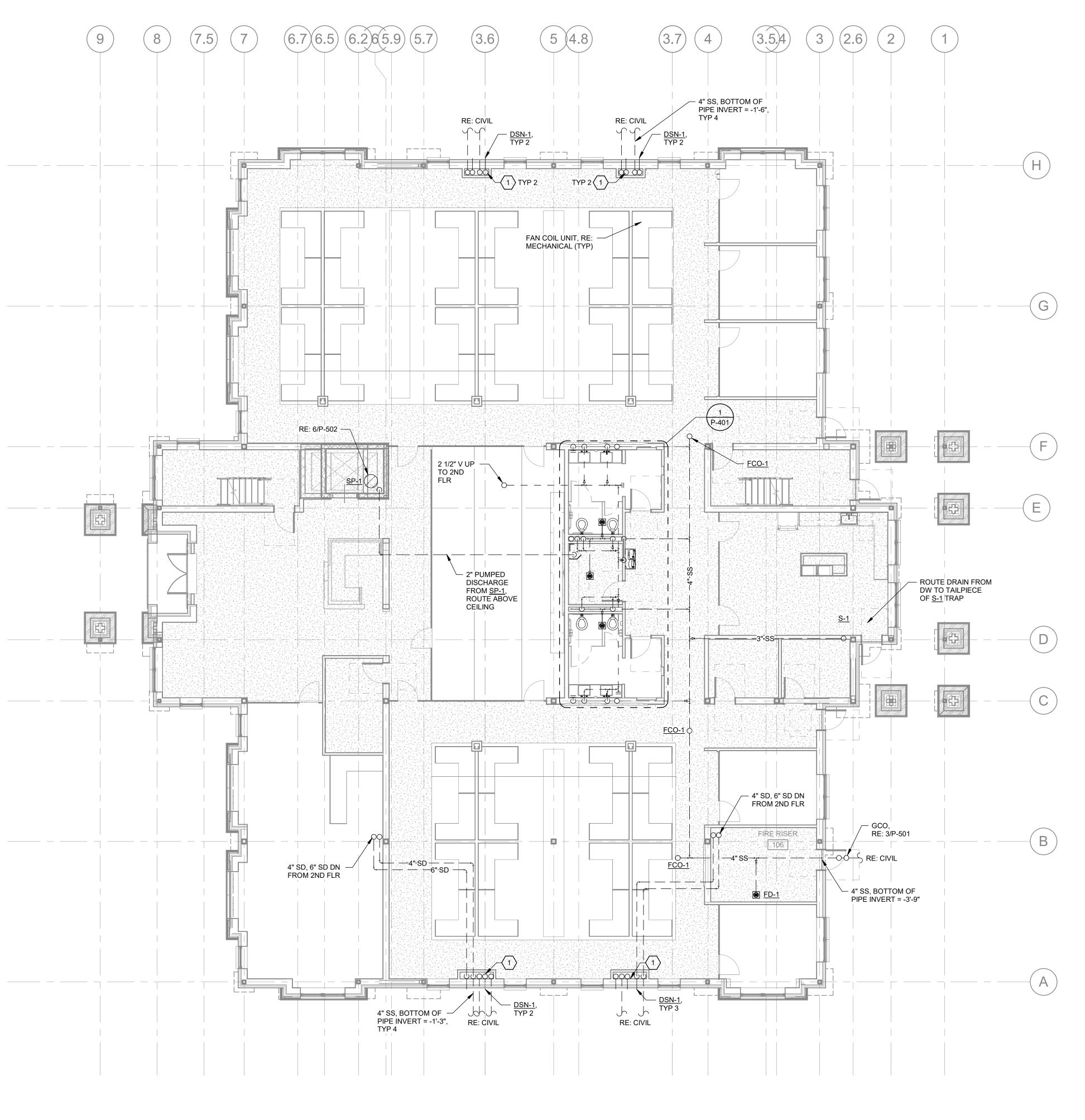
CONNECTION. TERMINATE 6" SD (SECONDARY) IN DSN AT 18" AFG.

06/19/2020

07/14/2020

08/04/2020

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20170021

OTHER ISSUE DATES: NO. DESCRIPTION PROGRESS SET PROGRESS SET

06/19/2020

07/14/2020

SHEET NAME:

**SECOND FLOOR** 

**DWV PLAN** 





**KEYNOTES** 

4" SD (PRIMARY), 6" SD (SECONDARY) DN TO 1ST FLR. ROUTE IN ARCHITECTURAL FURR OUT.

ROUTE SS (SIZED FOR APPLIANCE) TO NEARBY FS. TERMINATE IN INDIRECT CONNECTION.

GENERAL NOTES

ALL ABOVE-CEILING ELEMENTS IN THE BAR/LOUNGE AREA SHALL BE LISTED AND

LABELED FOR INSTALLATION IN A RETURN AIR

EXPOSED AREA.

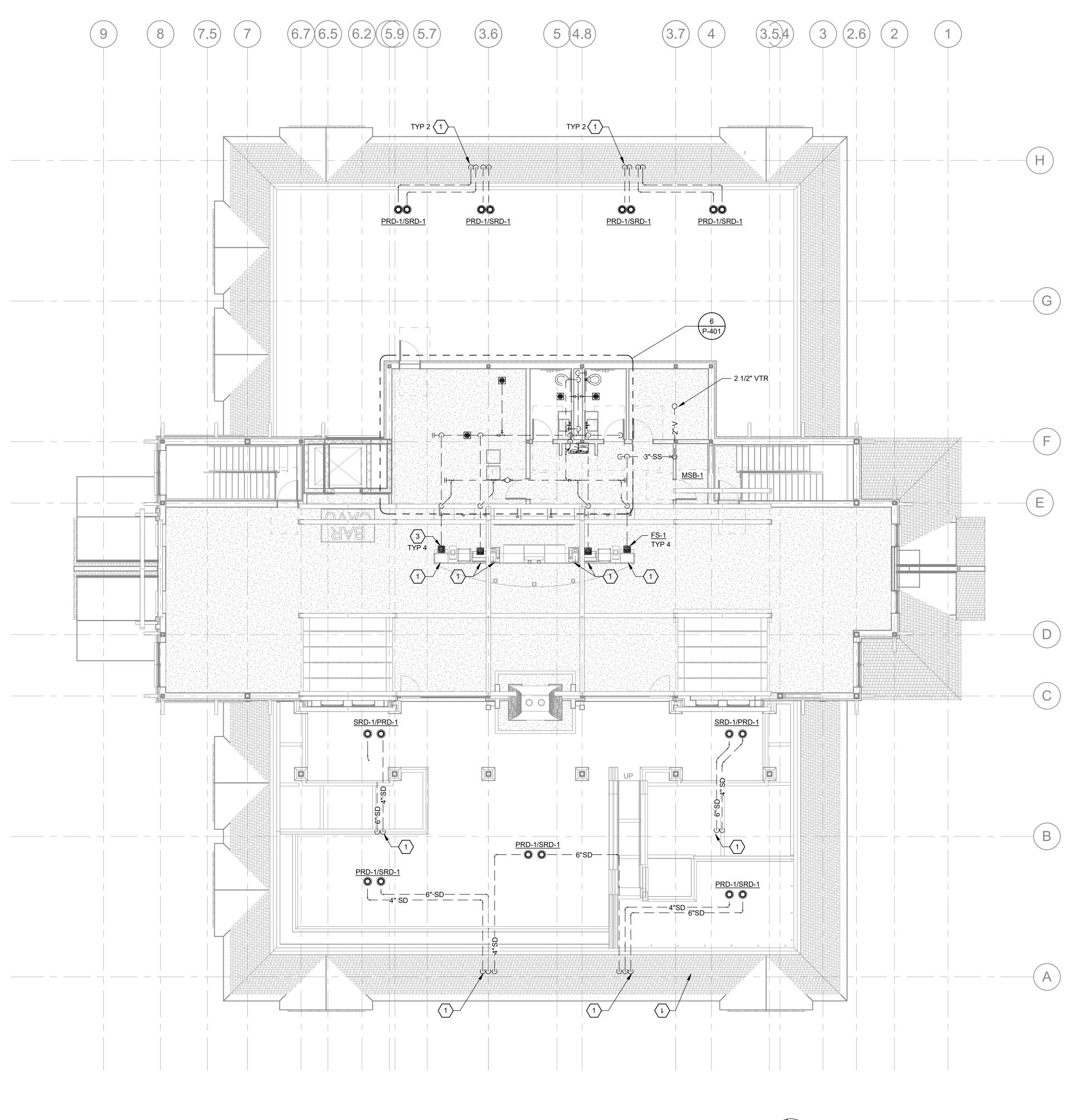
LOCATE FS 50% EXPOSED. PROVIDE GRATE OVER

ENGINEER OF RECORD

**Folds** 

06/19/2020





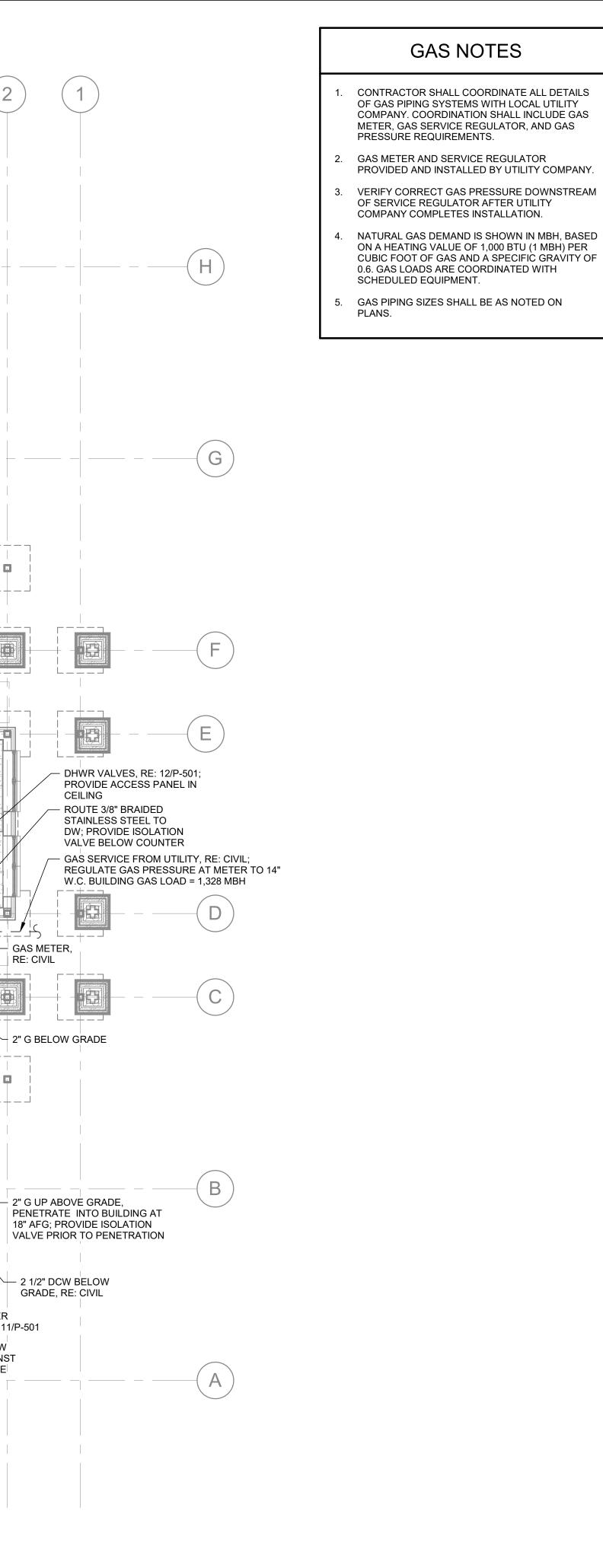
SAMUEL KESSLER **GRAVES** 

**Folds** 

DATE 06/19/2020

07/14/2020

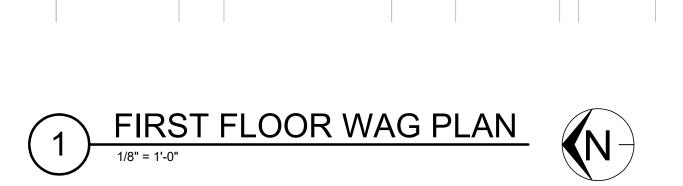
08/04/2020



i 👨

DCW WATERENTRY, RE:11/P-501

- ROUTE DCW HIGH AGAINST STRUCTURE



FPWH-1

(P-401)

CDCW/DHW/DHWR/2"

G UP TO 2ND FLR

ENGINEER OF RECORD

810 SOUTH CINCINNATI SECOND FLOOR TULSA, OK 74119

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KEYNOTES

PROVIDE DHWR VALVES PER DETAIL 12/P-501. PROVIDE ACCESS PANELS WHERE VALVES ARE LOCATED ABOVE HARD CEILINGS. COORDINATE

LOCATED ABOVE HARD CEILINGS. COORDINAT LOCATION OF VALVES WITH OTHER ACCESS PANELS REQUIRED FOR WAG AND DWV SERVICES TO MINIMIZE TOTAL NUMBER OF ACCESS PANELS IN CEILING.

2. DHW UP TO GLASS WASHER.

4. DCW/DHW UP TO HAND SINK.

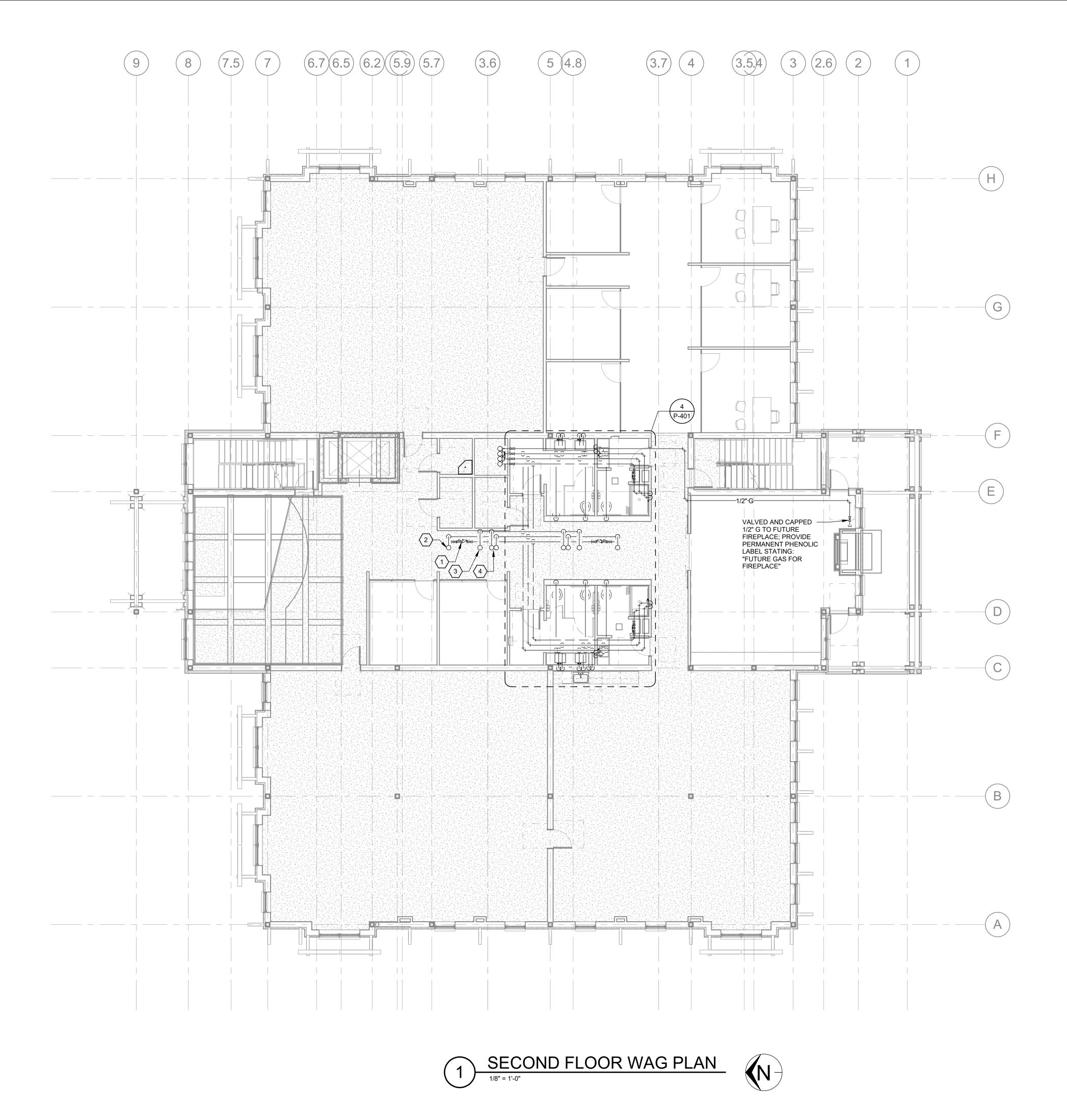
3. DCW TO ICE MAKER.

06/19/2020

07/14/2020

SHEET NAME: **SECOND FLOOR WAG PLAN** 

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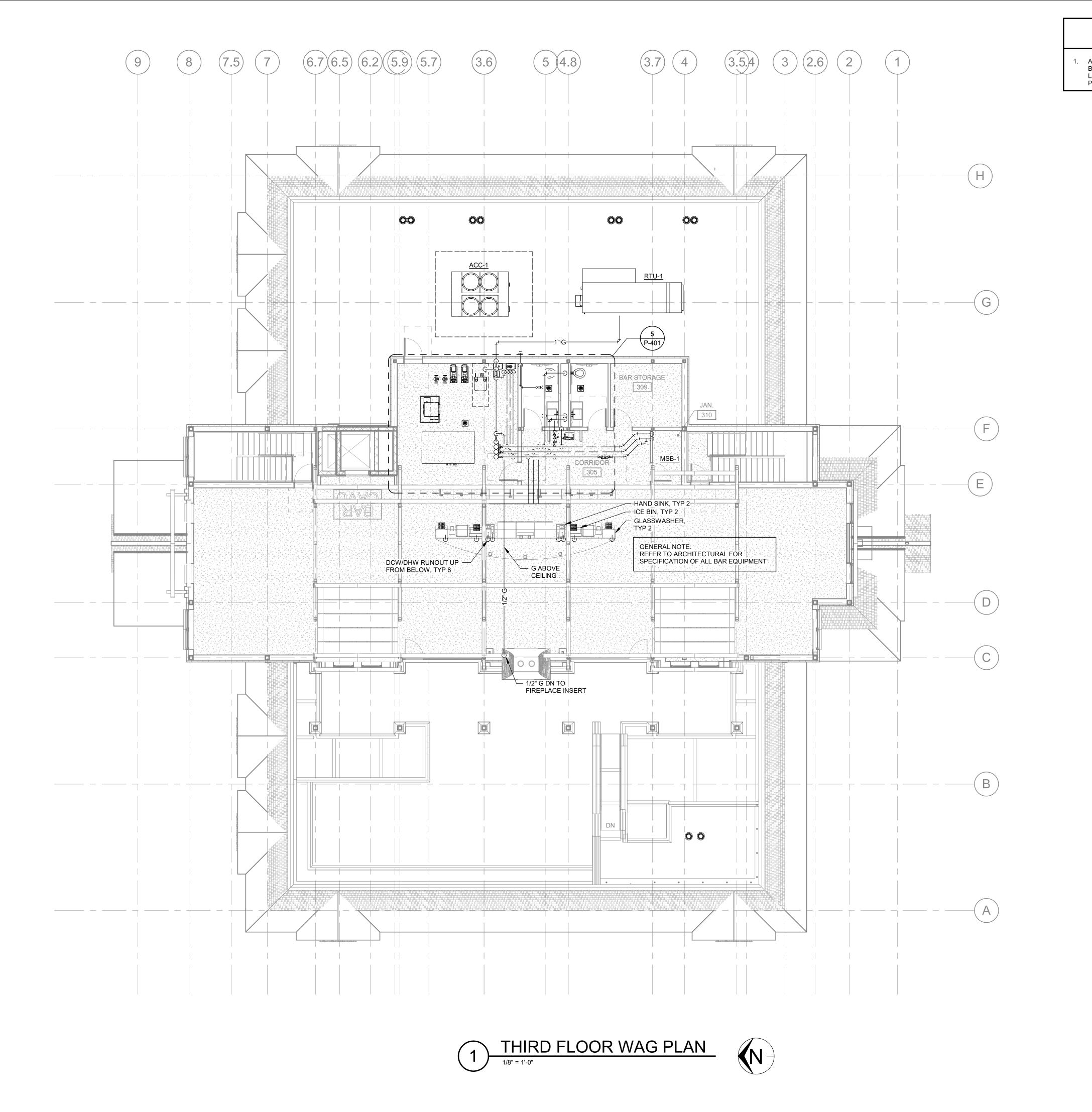


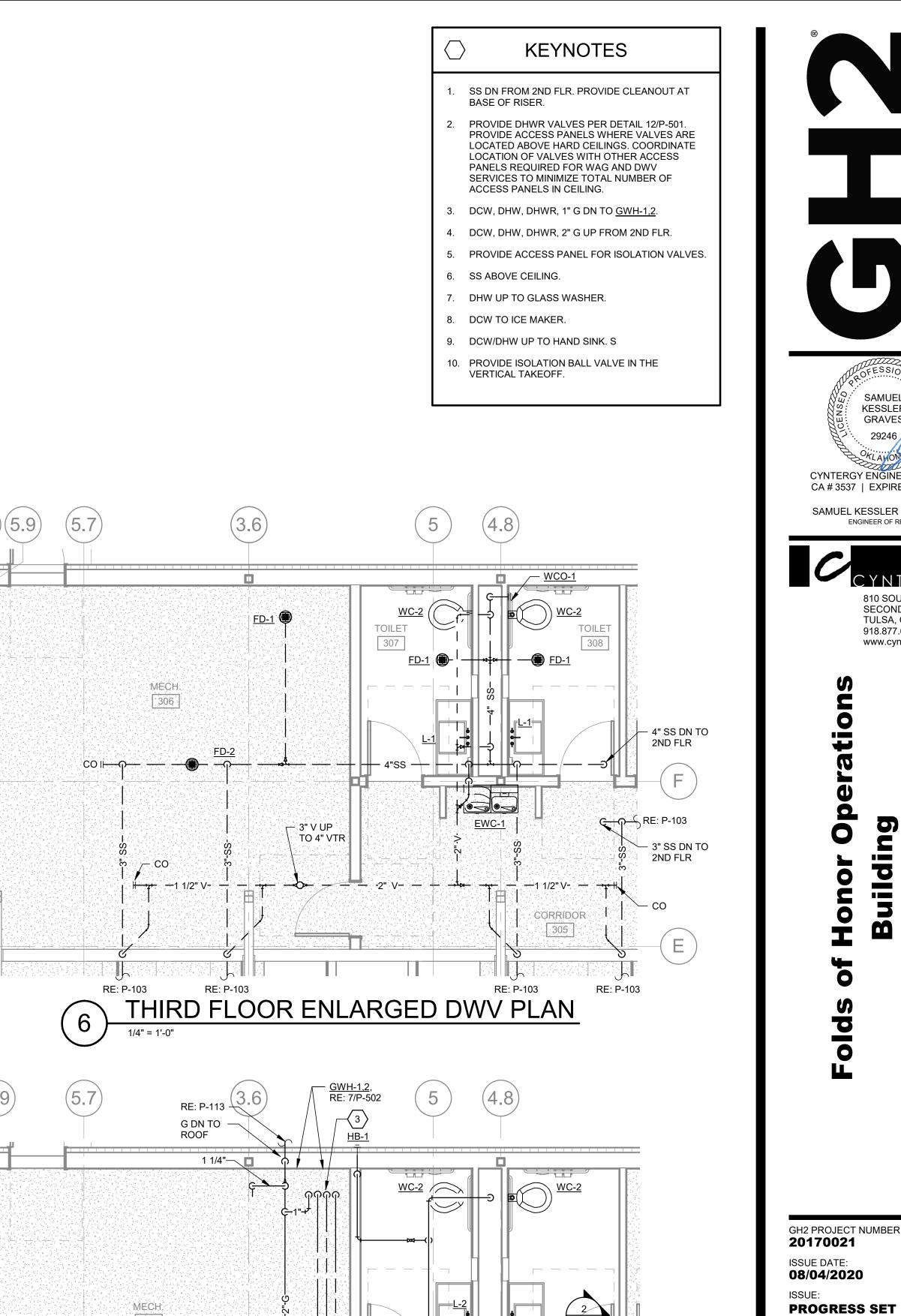
**Folds** 

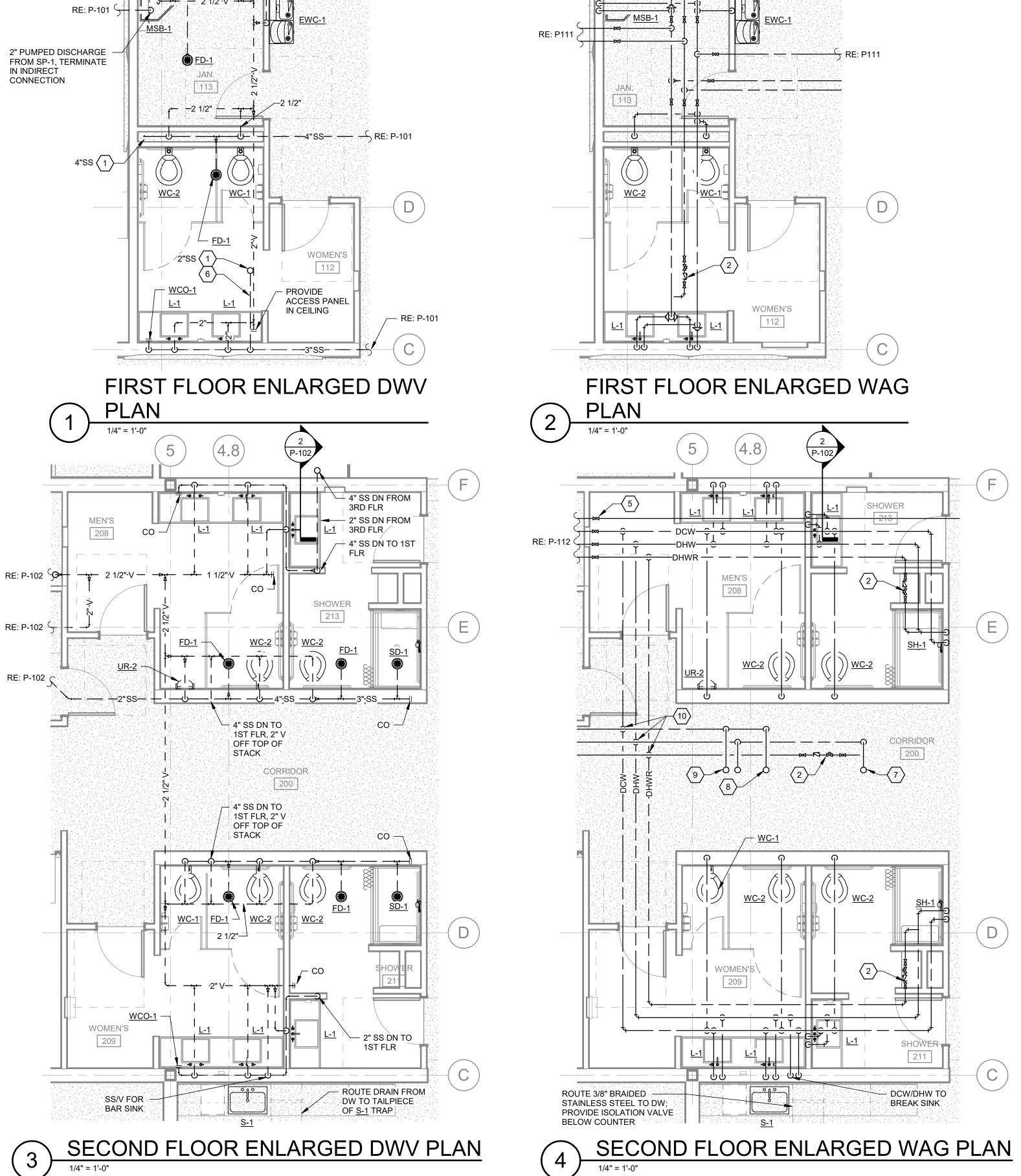
DATE 06/19/2020

SHEET NAME:
THIRD FLOOR WAG
PLAN

SHEET NUMBER:







WCO-1

4"SS (1)-

MEN'S

PROVIDE

ACCESS

PANEL IN

CEILING

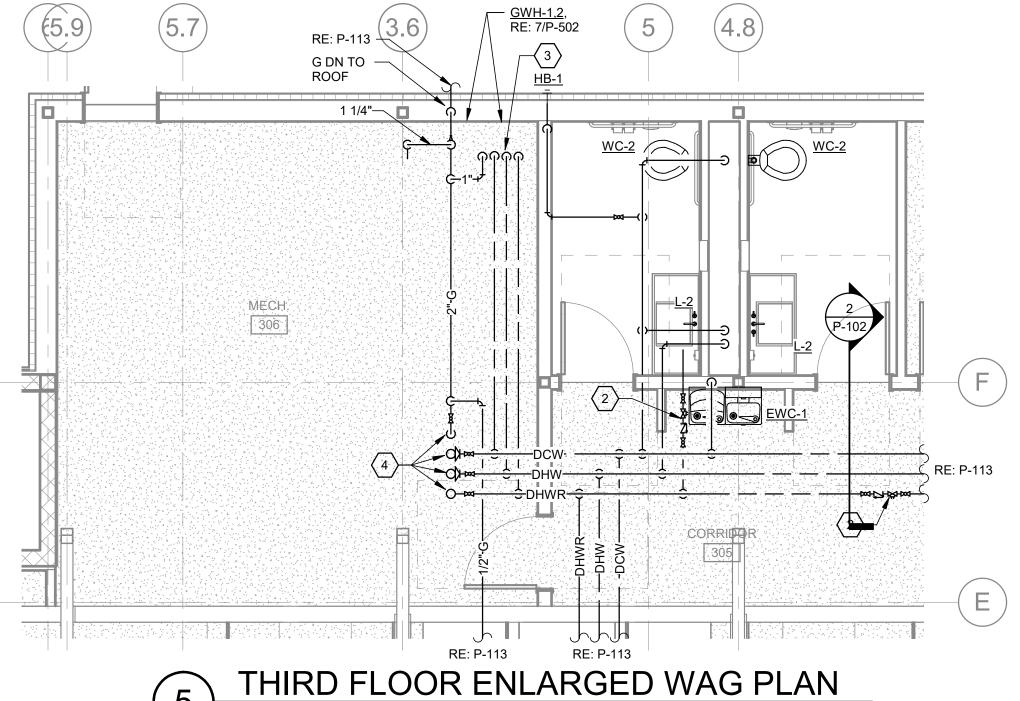
- MAIN DCW/G FEEDS TO

THROUGH RESTROOM

2ND AND 3RD FLRS PASS

 $\left(\mathsf{E}\right)$ 

(D)



**ENLARGED PLUMBING PLANS** 

SHEET NAME:

OTHER ISSUE DATES: NO. DESCRIPTION

PROGRESS SET

PROGRESS SET

**GRAVES** 

CYNTERGY ENGINEERING, PLLC CA # 3537 | EXPIRES 06/30/2020

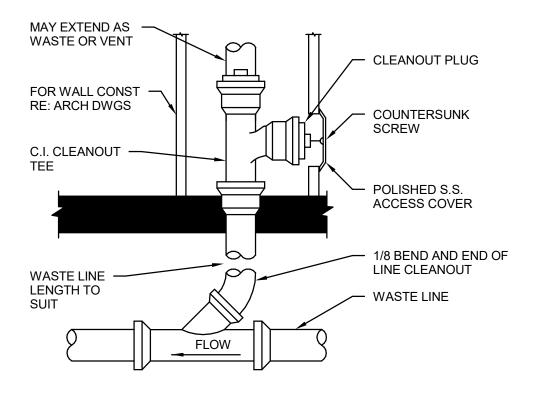
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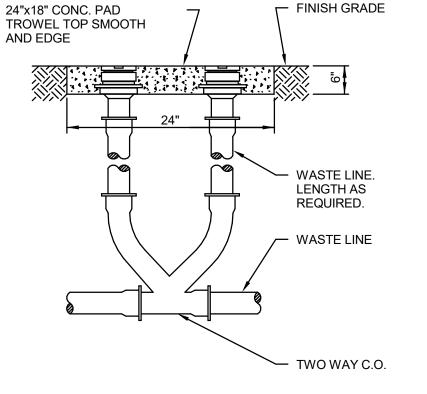
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FLOOR CLEANOUT DETAIL



WALL CLEANOUT DETAIL



**GRADE CLEANOUT DETAIL** 

PROVIDE FIRE-RATED SEALANT FOR RATED WALLS (SEE ARCHITECTURAL DRAWINGS

FOR GYP. BOARD WALLS PROVIDE MIN. 16 GAUGE GALAV. STEEL SLEEVE W/LOCK-TYPE

ALUMINUM JACKET WITH FACTORY APPLIED

SECURE BOTH ENDS WITH A BAND

MASONRY WALL

FLUSH WITH WALL

- SCHEDULE 40 STEEL OR

CAST-IRON PIPE SLEEVE CUT

MOISTURE BARRIER. EXTEND 2" BOTH SIDES &

**DETAIL NOTES:** 

FOR LOCATIONS)

MINIMUM 1/4" GAP

ALL AROUND PIPE

ROOMS. (TYP 2)

INSULATION (WHERE

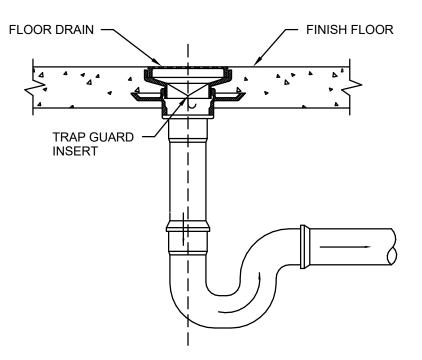
REQUIRED)

BACKUP MATERIAL

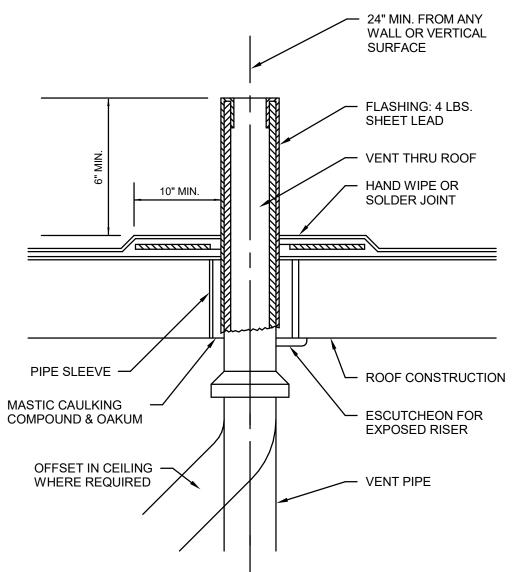
LONGITUDINAL SEAM.

OMIT ALUMINUM JACKET IF PIPING IS UNINSULATED.

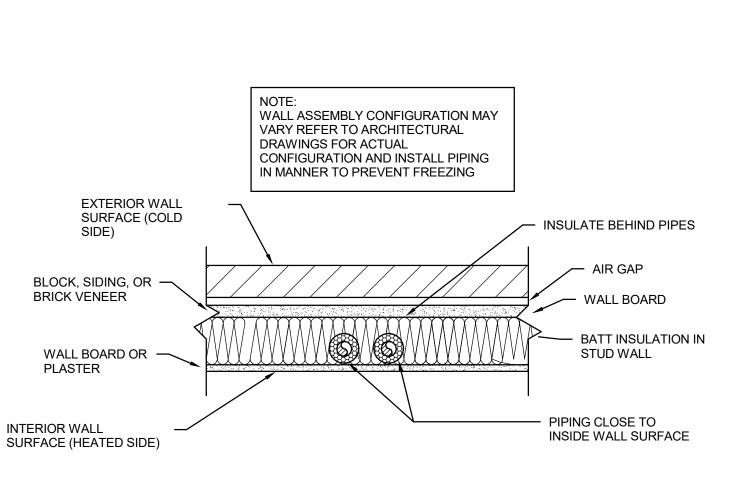
PROVIDE ESCUTCHEON FOR <u>EXPOSED</u> PIPING OMIT INSIDE MECH



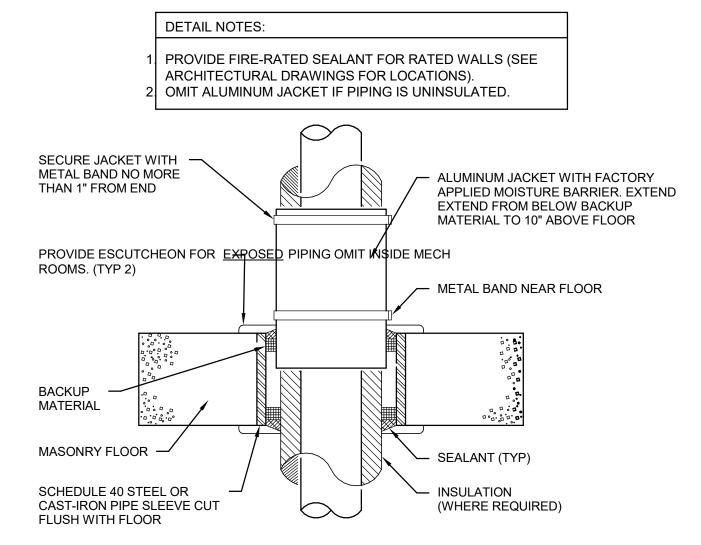
FLOOR DRAIN DETAIL



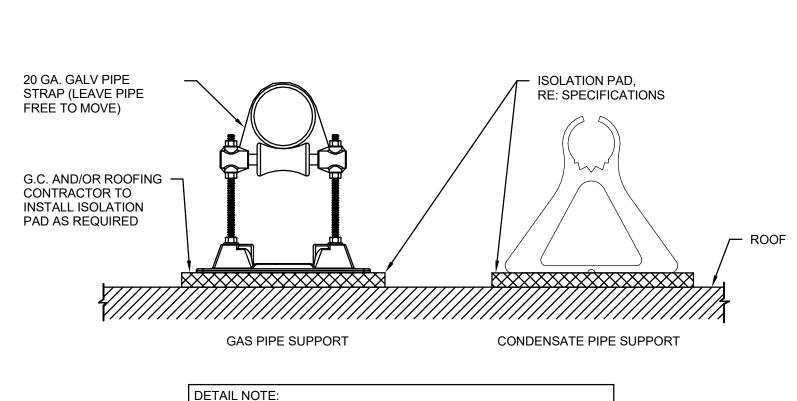
VENT THROUGH ROOF DETAIL PIPING IN EXTERIOR WALL DETAIL NOT TO SCALE



TYPICAL PENETRATION DETAIL NOT TO SCALE



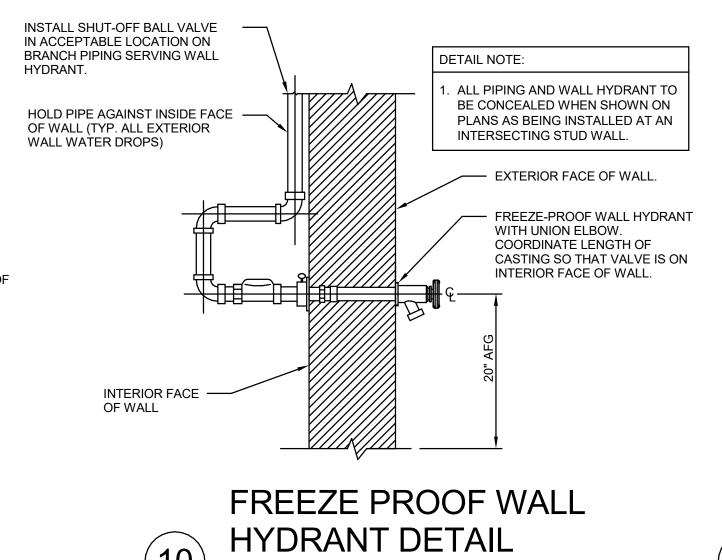
FLOOR PENETRATION DETAIL



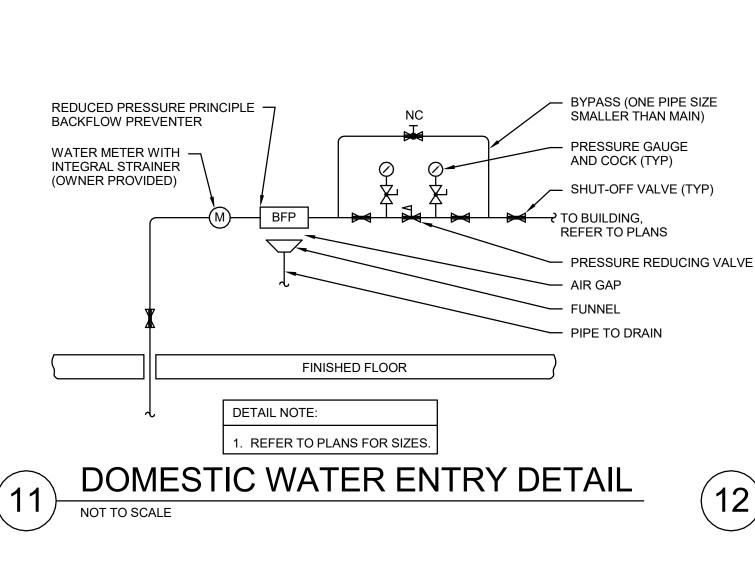
TO ROOF SLOPE. ROOF PIPE SUPPORT DETAIL NOT TO SCALE

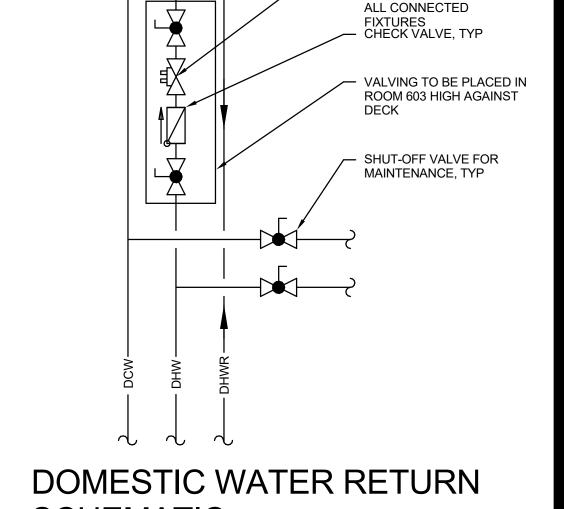
PIPE SUPPORTS TO BE SPACED PER SPECIFICATIONS FOR PIPE

SIZE. (10'-0" O.C. MAXIMUM SPACING) SUPPORT PIPE PARALLEL



NOT TO SCALE





- B&G CIRCUIT SETTER TO

BALANCE TO FLOW OF

BALANCE RISER RETURN FLOW,

> SHEET NAME: **PLUMBING DETAILS**

GH2 PROJECT NUMBER:

**PROGRESS SET** 

OTHER ISSUE DATES:

PERMIT SET

PROGRESS SET

PROGRESS SET

DATE

06/19/2020

07/14/2020

08/04/2020

NO. DESCRIPTION

20170021

ISSUE DATE:

08/04/2020

SHEET NUMBER:

SAMUEL KESSLER **GRAVES** 

CYNTERGY ENGINEERING, PLLC CA # 3537 | EXPIRES 06/30/2020

SAMUEL KESSLER GRAVES, PE

ENGINEER OF RECORD

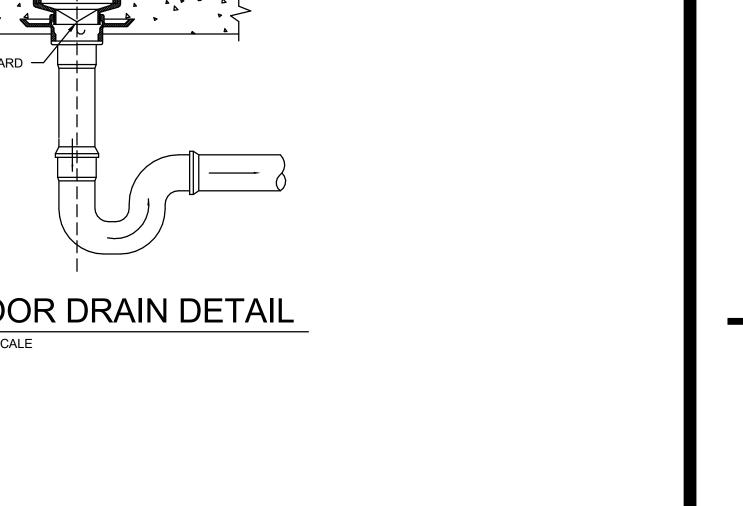
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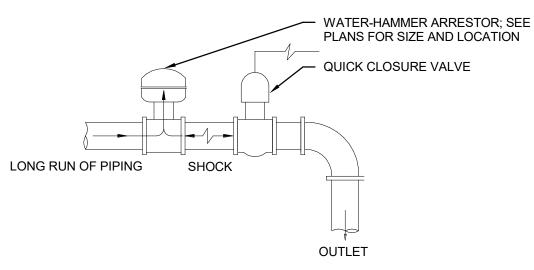
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SCHEMATIC NOT TO SCALE



1. WATER-HAMMER ARRESTOR SIZED ACCORDING TO

PLANS FOR ACCESS DOOR LOCATIONS.

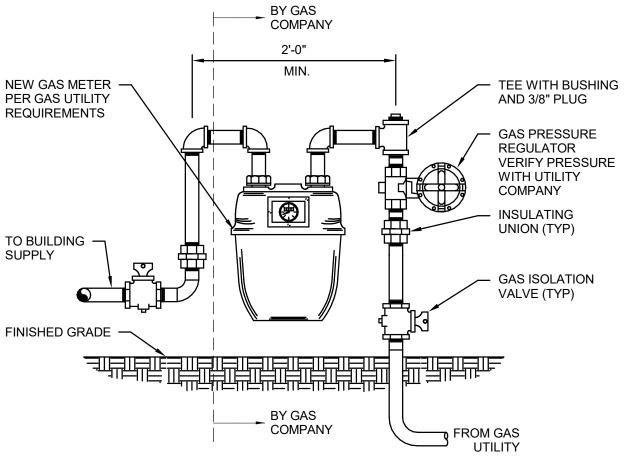
WATER HAMMER

ARRESTER WHA-1

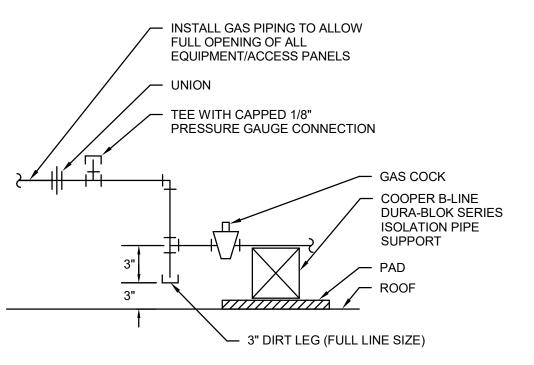
NOT TO SCALE

- PLUMBING AND DRAINAGE INSTITUTE (PDI) RATING. 2. INSTALL ACCORDING TO MANUFACTURER'S INSTRUCTIONS. 3. LOCATE WATER-HAMMER ARRESTORS CLOSE TO ACCESS DOORS PROVIDED BY ARCHITECT. SEE ARCHITECTURAL
- WATER-HAMMER ARRESTOR **DETAIL**

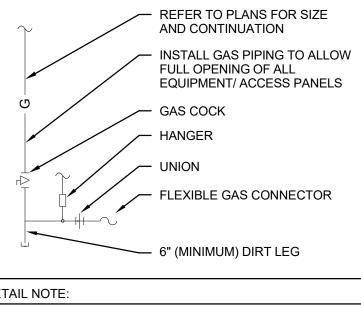
— 1/2" DCW



GAS METER DETAIL NOT TO SCALE



GAS CONNECTION DETAIL NOT TO SCALE



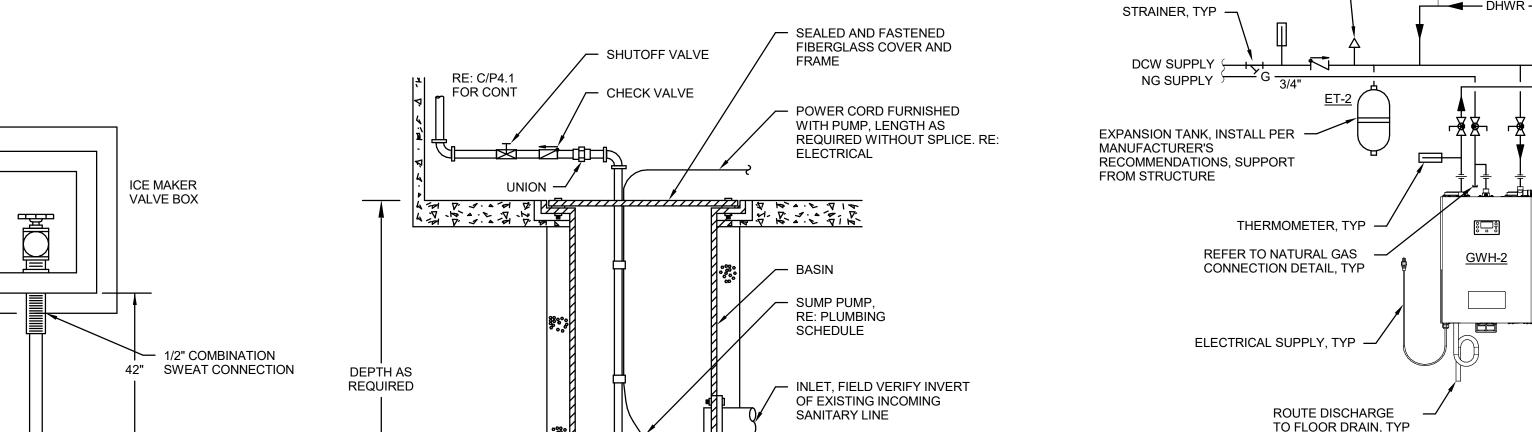
DETAIL NOTE:

. THE CONTRACTOR SHALL INSTALL THE GAS TRAIN PER THE SPECIFIC APPLIANCE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND PER ALL LOCAL CODES AND ORDINANCES. THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND CODES AND ORDINANCES SHALL TAKE PRECEDENCE OVER SPECIFICATIONS AND DRAWINGS WHERE THERE IS A CONFLICT.



GAS CONNECTION DETAIL

NOT TO SCALE



COMPACTED OR UNDISTURBED SOIL

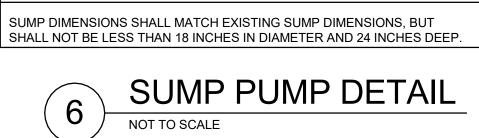
ICE MAKER UTILITY BOX DETAIL

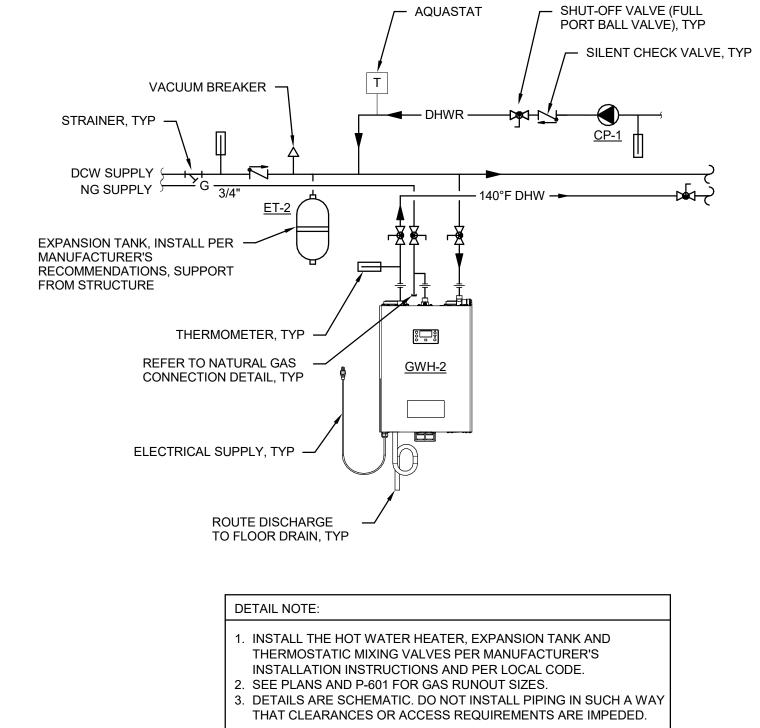
PANEL

← FLOOR

LINE

DETAIL NOTE:





GAS WATER HEATING SYSTEM DETAIL NOT TO SCALE

SAMUEL KESSLER GRAVES, PE ENGINEER OF RECORD 810 SOUTH CINCINNATI SECOND FLOOR TULSA, OK 74119 918.877.6000

SAMUEL

**KESSLER GRAVES** 

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GH2 PROJECT NUMBER: 20170021

ISSUE DATE: 08/04/2020

**PROGRESS SET** 

OTHER ISSUE DATES:

NO. DESCRIPTION DATE PERMIT SET 06/19/2020 PROGRESS SET 07/14/2020 PROGRESS SET 08/04/2020

SHEET NAME: **PLUMBING DETAILS** 

	ROOF & FLOOR DRAIN SCHEDULE									
MARK	FIXTURE	MANUFACTURER	TRIM	С	ONNEC	REMARKS				
IVICIIXIX	TIXTORE	MODEL	TIXIIVI	WASTE	VENT	DCW	DHW	INLIVIATINO		
FD-1	SQUARE FLOOR DRAIN	ZURN ZN-415-S	6" SQUARE ADJUSTABLE NICKEL-BRONZE STRAINER	3"	2"	1/2"		1,2,7		
FD-2	CONDENSATE FLOOR DRAIN	ZURN ZN-415-l	5" DIAMETER ROUND ADJUSTABLE NICKEL-BRONZE STRAINER WITH RAISED FLANGE	3"	2"	1/2"		1,2,7,8		
FS-1	FLOOR SINK	ZURN Z-1901-KC-2-23	12X12X8 DEEP CAST IRON BODY AND SLOTTED MEDIUM DUTY $\frac{1}{2}$ GRATE	3"	2"	1/2"		1,2,5,7		
PRD-1	PRIMARY ROOF DRAIN	ZURN ZC-100	15" DIAMETER ROOF DRAIN					3,9		
SRD-1	SECONDARY ROOF DRAIN	ZURN ZC-100-AW	15" DIAMETER ROOF DRAIN					4,9		
DSN-1	DOWNSPOUT NOZZLE	ZURN Z-199	ALL POLISHED BRONZE BODY					6		
SD-1	SHOWER DRAIN	ZURN Z-415-B	5" DIAMETER ROUND ADJUSTABLE NICKEL-BRONZE STRAINER	3"	2"			6		

### REMARKS:

- 1. REFER TO ARCHITECTURAL FOR FLOOR DRAIN LOCATIONS, COORDINATE WITH FLOOR FINISH AND INSTALL PER MANUFACTURERS RECOMMENDATIONS.
- 2. DURA-COATED CAST IRON BODY WITH DOUBLE FLANGE, WEEP HOLES, COMBINED TWO PIECE BODY REVERSIBLE CLAMPING DEVICE AND ADJUSTABLE NICKEL-BRONZE STRAINER. PROVIDE FUNNELS AT FLOOR DRAINS RECEIVING CONDENSATE.
- 3. DURA-COATED CAST IRON BODY WITH COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARD, UNDERDECK CLAMP AND LOW SILHOUETTE CAST-IRON DOME.
- 4. DURA-COATED CAST IRON BODY WITH COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARD, ADJUSTABLE STAND PIPE AND CAST IRON DOME STRAINER.
  5. WHITE ACID RESISTING PORCELAIN ENAMEL INTERIOR AND TOP COMPLETE WITH ABS ANTI-SPLASH INTERIOR BOTTOM DOME STRAINER.
- 6. DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH POLISHED
- NICKEL BRONZE STRAINER.
  7. PROVIDE TRAP PRIMER CONNECTION AND PRESSURE DROP ACTIVATED TRAP PRIMER MIFAB MODEL (M-500).
- 8. INSTALL DRAIN BODY SO TOP OF FLANGE IS LEVEL WITH FLOOR. DRAIN GRATE SHOULD BE RECESSED.

  9. PROVIDE INSULATION ON UNDERSIDE OF ROOF DRAIN BODY. ALL HORIZONTAL PIPING CONNECTED ROOF DRAIN SHOULD BE INSULATED.

	GAS WATER HEATER SCHEDULE								
MARK	MANUFACTURER MODEL	AREA SERVED	GPM	TEMPERATURE RISE (°F)	GAS INPUT (MBH)	LISTING	REMARKS		
GWH-1,2	RINNAI CU199IN	HOT WATER SERVICE	4.2	90	199	AGA, UL	ALL		

### REMARKS:

- 1. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR
- 2. THERMAL EXPANSION TANK FURNISHED AND INSTALLED BY CONTRACTOR.
  3. SET DISCHARGE TEMPERATURE OF WATER HEATER TO OPERATE AT 140°F.
- 4. FIELD VERIFY SITE GAS PRESSURE AND PROVIDE UNIT WITH COMPATIBLE GAS TRAIN. PROVIDE VENT FROM PRESSURE REDUCING VALVE (IF REQUIRED)
- 5. TEMPERATURE AND PRESSURE RELIEF VALVE FURNISHED AND INSTALLED BY CONTRACTOR.

	NATURAL GAS SUMMARY SCHEDULE							
APPLIANCE MARK	QUANTITY	GAS LOAD (MBH)	CONNECTION SIZE (IN)	MAX DEVELOPED DISTANCE FROM REGULATOR (FT)	MAIN SIZE (IN)			
RTU-1	1	280	1					
GWH-1	1	199	3/4					
GWH-2	1	199	3/4					
B-1	1	500	1 1/4					
LOUNGE FIREPLACE	1	75	1/2	250				
CEO FIREPLACE	1	75	1/2					
BUILDING TOTAL		1328			2"			

### NOTES:

- 1. SIZING BASED ON THE XXX FT COLUMN OF TABLE 402.4(1) OF THE 2009 INTERNATIONAL FUEL GAS CODE.
- 2. \* DENOTES FURTHEST FIXTURE FROM NATURAL GAS REGULATOR. 3. BASED UPON LOW PRESSURE NATURAL GAS 10" WC.

	PUMP SCHEDULE								
MARK	MANUFACTURER	SERVICE	GPM TDH			MOTOR		REMARKS	
IVIALXIX	MODEL	SLITVICE	Or W	(FT) H		RPM	ELEC	TEMARKS	
SP-1	GRUNDFOS AP12.40.04/A.1	SUMP	50	16	0.65		120V/1PH	1,2,3,4,7	
CP-1	GRUNDFOS MAGNA32-100FN	HOT WATER RECIRCULATION	10	10	1/6	VARIABLE	120V/1PH	1,2,6	

### EMARKS:

- 1. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR
- COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR
   REFERENCE DETAIL AND SPECIFICATIONS FOR CONTROLS AND PIPING REQUIREMENTS.
- 3. PROVIDE UNIT WITH FLOAT TYPE START/STOP SWITCH.
  4. PROVIDE WITH OPTIONAL AUTOMATIC TIMER KIT (MODEL TC-1), AQUASTAT (MODEL AQ-3/4) AND 20 FOOT PLUG TYPE POWER CORD, FURNISHED AND INSTALLED BY
- 5. PROVIDE UNIT WITH 120 VOLT LIQUID LEVEL ALARM PANEL SJE RHOMBUS MODEL TANK ALERT I WITH ALARM HORN, WARNING LIGHT, "POWER ON"
- LIGHT, AND HIGH LEVEL FLOAT SWITCH. MOUNT FLOAT SWITCH AT A LEVEL ABOVE BOTH SUMP PUMP START SETTINGS. 6. MOTOR SHALL BE VARIABLE SPEED WET ROTOR, PERMANENT-MAGNET ROTOR, STAINLESS STEEL COMPONENTS.
- 6. MOTOR SHALL BE VARIABLE SPEED WET ROTOR, PERMANENT-MAGNET ROTOR, STAINLESS STEEL COMPONENTS.

  7. PROVIDE WITH OIL SMART ALARM SIMPLEX CONTROL PANEL. (NTD: DELETE THIS OPTION IF ELEVATOR IS NOT HYDRAULIC)

### PLUMBING FIXTURE SCHEDULE

		MANUFACTURER			CONNEC	CTIONS		
MARK	FIXTURE	MANUFACTURER MODEL	TRIM	WASTE	VENT	DCW	DHW	REMARKS
WC-1	WATER CLOSET (FLOOR MOUNT, FLUSH VALVE, SIPHON JET)	ZURN Z5654-BWL	FLUSH VALVE: ZURN MODEL ZER6000PL-HET-CPM 1.28 GPF; SEAT: ZURN MODEL Z5955SS-EL OPEN FRONT ELONGATED; FIXTURE COLOR: WHITE	4"	2"	1"		1,2
WC-1	WATER CLOSET (WALL HUNG, FLUSH VALVE, SIPHON JET)	ZURN Z5615-BWL	FLUSH VALVE: ZURN MODEL ZER6000PL-HET-CPM 1.28 GPF; SEAT: ZURN MODEL Z5955SS-EL OPEN FRONT ELONGATED; CARRIER: ZURN MODEL Z1201/1202; FIXTURE COLOR: WHITE		2"	1"		1,2
WC-2	WATER CLOSET (FLOOR MOUNT, FLUSH VALVE, SIPHON JET, ADA)	ZURN Z5665-BWL	FLUSH VALVE: ZURN MODEL ZER6000PL-HET-CPM 1.28 GPF; SEAT: ZURN MODEL Z5955SS-EL OPEN FRONT ELONGATED; FIXTURE COLOR: WHITE	4"	2"	1"		1,2
WC-2	WATER CLOSET (WALL HUNG, FLUSH VALVE, SIPHON JET, ADA)	ZURN Z5615-BWL	FLUSH VALVE: ZURN MODEL ZER6000PL-HET-CPM 1.28 GPF; SEAT: ZURN MODEL Z5955SS-EL OPEN FRONT ELONGATED; CARRIER: ZURN MODEL Z1201/1202; FIXTURE COLOR: WHITE	4	2"	1"		1,2
UR-1	URINAL (WALL HUNG)	ZURN Z5755-U	FLUSH VALVE: ZURN MODEL Z6003AV-ULF-CP 0.125 GPF; CARRIER: ZURN MODEL Z1221; FIXTURE COLOR: WHITE	2"	1 1/2"	3/4"		1,2
UR-2	URINAL (WALL HUNG, ADA)	ZURN Z5755-U	FLUSH VALVE: ZURN MODEL Z6003AV-ULF-CP 0.125 GPF; CARRIER: ZURN MODEL Z1221; FIXTURE COLOR: WHITE	2"	1 1/2"	3/4"		1,2
L-1	LAVATORY (COUNTERTOP, SELF-RIMMING, ADA)	ZURN Z5114	FAUCET: ZURN MODEL Z6915-XL 2-HOLE DRILLING ON 4" CENTERS, 0.5 GPM AERATOR; GRID STRAINER DRAIN: ZURN MODEL Z8743-PC; FIXTURE COLOR: WHITE	2"	1 1/2"	1/2"	1/2"	1,4,5,6,7
L-1	LAVATORY (COUNTERTOP, UNDERMOUNT, ADA)	ZURN Z5220	FAUCET: ZURN MODEL Z6915-XL 2-HOLE DRILLING ON 4" CENTERS, 0.5 GPM AERATOR; GRID STRAINER DRAIN: ZURN MODEL Z8743-PC; FIXTURE COLOR: WHITE		1 1/2"	1/2"	1/2"	1,4,5,6,7
L-2	LAVATORY (WALL HUNG, ADA)	ZURN Z5344	FAUCET: ZURN MODEL Z6915-XL 2-HOLE DRILLING ON 4" CENTERS, 0.5 GPM AERATOR; GRID STRAINER DRAIN: ZURN MODEL Z8743-PC; CARRIER: ZURN Z1231; FIXTURE COLOR: WHITE	2"	1 1/2"	1/2"	1/2"	1,4,5,6,7
MSB-1	MOP SERVICE BASIN	ZURN Z1996-24	FAUCET: ZURN MODEL Z843M1-RC; HOSE/CLAMP, MOP HANGER; DOME STRAINER WITH LINT BASKET DRAIN; COLOR: WHITE	2"	2"	3/4"	3/4"	8
EWC-2	ELECTRIC WATER COOLER (SPLIT LEVEL, ADA)	OASIS PG8ACSL-STN	SURFACE MOUNTED STAINLESS STEEL CABINET, WITH FRONT AND SIDE PUSH BARS, AND INTEGRAL FLOW CONTROL	2"	1 1/4"	1/2"	1	1,9,10,18
SH-1	SHOWER HEAD/VALVE (HAND HELD, ADA)	ZURN Z7300	SHOWER HEAD/VALVE: ZURN MODEL Z7300-SSC-HW11-MT-VB (PRESS. BALANCE, PRESS. & TEMP. CONTROL); STAINLESS STEEL CURTAIN ROD WITH ANTI-BACTERIAL WHITE VINYL CURTAIN (WITH HOOKS).			1/2"	1/2"	1
FPWH-1	FREEZE PROOF WALL HYDRANT	ZURN Z1320-NB	AUTOMATIC DRAINING; ANTI-SIPHON VACUUM BREAKER, POLISHED NICKEL BRONZE FINISH; 3/4" HOSE THREAD; WITH FLUSH MOUNTED WALL BOX AND LOOSE TEE KEY			3/4"		1
WB-1	WATER SUPPLY WALL BOX	SIOUX CHIEF OXBOX 696-G1010MF	SINGLE SWEAT CONNECTION, QUARTER TURN VALVE, WALL FRAME, INTEGRAL WATER HAMMER			1/2"		1
WHA-1	WATER HAMMER ARRESTOR	ZURN-WILKINS 1260XL SERIES	COPPER CHAMBER WITH O-RING PISTON					11
FCO-1	FLOOR CLEANOUT	ZURN Z1400	ADJUSTABLE					13
WCO-1	WALL CLEANOUT	ZURN Z1441	ADJUSTABLE, STAINLESS STEEL WALL COVER					14
GCO-1	GRADE CLEANOUT (TWO-WAY)	ZURN Z1400-HD	ADJUSTABLE					15

- REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR FINAL FIXTURE LOCATION AND MOUNTING HEIGHTS, MOUNT PER ADA REQUIREMENTS WHERE INDICATED.
- REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR FINAL FIXTURE LOCATION AND MOUNTING HEIGHTS, MOUNT PER AD PROVIDE FLUSH VALVE WITH SWEAT SOLDER ADAPTER AND CAST WALL FLANGE (ESCUTCHEON) WITH SET SCREW.
- PROVIDE FLUSH VALVE WITH ADA COMPLIANT HANDLE.
   PROVIDE CHROME PLATED, HEAVY DUTY, COMMERCIAL GRADE, ANGLE SUPPLY (HOT AND COLD, AS REQUIRED) WITH WHEEL HANDLE STOP(S), STAINLESS STEEL FLEXIBLE RISER HOSE(S),
- AND CHROME PLATED WALL ESCUTCHEON(S).
  PROVIDE 17 GAUGE CHROME PLATED P-TRAP WITH CLEANOUT AND WALL ESCUTCHEON.
- 6. PROVIDE TRUEBRO INC. HANDI LAV-GUARD OR EQUAL UNDERSINK PROTECTIVE PIPE COVERING MODEL 103, FOR WASTE, HOT, AND COLD PIPING, COLOR: WHITE. COVERS SHALL BE SECURED WITH SNAP-CLIP FLUSH REUSABLE FASTENERS. PROVIDE ALL REQUIRED ACCESSORIES FOR A COMPLETE INSTALLATION MEETING CURRENT ADA STANDARDS WHERE REQUIRED.
- 7. PROVIDE THERMOSTATIC MIXING VALVE ZURN MODEL ZW1070XL SET TO 110° F MAXIMUM.
  8. PROVIDE MOLDED STONE MOP SERVICE BASIN WITH 12" HIGH STAINLESS STEEL SPLASH GUARD MOUNTED TO WALL, ZURN MSB MODEL SUFFIX -HH HOSE AND BRACKET, AND ZURN MSB
- MODEL SUFFIX -MH MOP HANGER BRACKET.
- 9. UNIT SHALL PROVIDE 8.0 GPH OF 50° F WATER BASED ON 80° F INLET WATER AND 90° F ROOM TEMPERATURE.

  10. PROVIDE SOLID BLOCKING IN WALL BEHIND UNIT FOR MOUNTING.
- 11. WATER HAMMER ARRESTORS SHALL BE PROPERLY SIZED, PROPERLY LOCATED IN AN EFFECTIVE RANGE FROM EQUIPMENT, AND IN ACCORDANCE WITH PDI STANDARD WH201.

  12. PROVIDE 6-1/2" DEEP SINGLE/DOUBLE COMPARTMENT, 18 GAUGE, TYPE 304 STAINLESS STEEL, SELF-RIMMING, UNDERCOATED, 4 HOLE DRILLING IN LEDGEBACK (OFFSET 4TH HOLE 6" FOR
- SPRAY), WITH ZURN STRAINER Z8741-17-SS.

  13. PROVIDE ROUND ACCESS COVER (DEPRESSED CENTER IN CARPETED AREA TO MARK LOCATION AND ACCOMMODATE FLOOR FINISH) WITH NICKEL-BRONZE SCORED FRAMES & PLATES. SIZE
- AS INDICATED ON DRAWINGS. ENSURE AMPLE CLEARANCE AT CLEANOUT FOR RODDING OF DRAINAGE SYSTEM.

  14. PROVIDE CAULKED OR THREADED CLEANOUT, EXTEND ACCESS COVER TO FINISHED WALL SURFACE. ENSURE AMPLE CLEARANCE AT CLEANOUT FOR RODDING OF DRAINAGE SYSTEM.
- 15. ADJUSTABLE GRADE CLEANOUT, DURA-COATED CAST IRON BODY WITH GAS AND WATERTIGHT ABS TAPERED THREAD PLUG AND ROUND SCORIATED SECURED HEAVY DUTY TOP, ADJUSTABLE TO FINISHED GRADE.
- 16. PROVIDE GARBAGE DISPOSAL IN-SINK-ERATOR MODEL CNTR333, 3/4 HP, 120V/1PH/60HZ, INSULATED OUTER SHELL, STAINLESS STEEL GRINDER AND CHAMBER, WITH 5 YEAR WARRANTY. COORDINATE INSTALLATION WITH ELECTRICAL CONTRACTOR.
- 17. PROVIDE EMERGENCY THERMOSTATIC MIXING VALVE, BRADLEY MODEL \$19-2100.
- 18. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
  19. PROVIDE REINFORCED FIBERGLASS INTERCEPTOR CONSTRUCTED USING ISOPHTHALIC POLYESTER RESIN RESULTING IN AN INERT, NON-CORROSIVE PRODUCT IMPERVIOUS TO RETAINED
- 20. INSTALL GREASE INTERCEPTOR PER MANUFACTURER'S RECOMMENDATIONS AND PER LATEST INTERNATIONAL PLUMBING CODE.

## VECHTECTS

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Folds of Hon

GH2 PROJECT NUMBER: **20170021** 

ISSUE DATE: **08/04/2020** 

PROGRESS SET

OTHER ISSUE DATES:

NO. DESCRIPTION DATE

PERMIT SET 06/19/2020
PROGRESS SET 07/14/2020
PROGRESS SET 08/04/2020

SHEET NAME:
PLUMBING

**SCHEDULES** 

P-601

### GENERAL NOTES

- 1. THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH CURRENT APPLICABLE LOCAL, STATE, FEDERAL, FIRE, AND HEALTH CODES AND ORDINANCES AND IS RESPONSIBLE TO COMPLY WITH ALL REGULATIONS OF REGULATORY AGENCIES HAVING JURISDICTION. THE CONTRACTOR SHALL ALSO CONFORM TO THE REQUIREMENTS OF THE OWNER'S INSURANCE CARRIER. NOTIFY THE ARCHITECT AND ENGINEER OF ANY CONFLICTS PRIOR TO INSTALLATION. CODES, ORDINANCES AND REGULATIONS SHALL HAVE PRECEDENCE OVER SPECIFICATIONS AND DRAWINGS WHERE THERE IS A CONFLICT. OBTAIN CURRENT COPIES OF ALL ADOPTED CODES AND ORDINANCES PRIOR TO BID AND INCLUDE ALL COSTS TO COMPLY WITH CODES AND ORDINANCES IN BID.
- 2. PAY ALL LAWFUL FEES, PERMITS OR LICENSES REQUIRED TO ACCOMPLISH WORK. OBTAIN AND PAY FOR ALL NECESSARY CERTIFICATES OF APPROVAL.
- 3. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, SERVICE AND ANYTHING REASONABLY INCIDENTAL TO COMPLETE ALL WORK INDICATED ON THE DRAWINGS AND AS SPECIFIED IN ACCORDANCE WITH THE INTENT OF THE CONSTRUCTION DOCUMENTS.
- 4. THE CONTRACTOR IS RESPONSIBLE TO VISIT AND EXAMINE THE JOB SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PERTINENT TO THE WORK TO BE PERFORMED.
- 5. INCORPORATE ALL CODE AND ORDINANCE REQUIREMENTS INTO THE BID AND INSTALLATION OF WORK. NO ADDITIONAL FUNDS WILL BE ALLOCATED FOR WORK REQUIRED TO CONFORM TO REGULATIONS AND REQUIREMENT AND/OR TO OBTAIN APPROVAL OF WORK.
- 6. THE DRAWINGS ARE DIAGRAMMATIC AND ARE ONLY INTENDED TO DEFINE THE BASIC FUNCTIONS REQUIRED. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION CONDITIONS AND COORDINATION WITH OTHER TRADES WILL ALLOW. MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND ARE A PART OF THE WORK INCLUDED; HOWEVER, CHANGES THAT ALTER THE CHARACTER OF THE WORK ARE NOT PERMITTED. APPROVAL OF ARCHITECT AND ENGINEER SHALL BE OBTAINED BEFORE DEVIATIONS FROM THESE PLANS ARE MADE.
- 7. PLUMBING AND MECHANICAL SYSTEMS ARE NOT DIMENSIONED. DO NOT SCALE FROM DRAWING(S). THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND ENSURE THERE IS AVAILABLE SPACE FOR INSTALLATION BEFORE ORDERING EQUIPMENT AND FABRICATING PIPING AND/OR DUCTWORK.
- 8. THE CONTRACTOR SHALL STUDY THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL PLANS TO ENSURE ALL MECHANICAL SYSTEMS WILL FIT WITH SUFFICIENT CLEARANCES FOR INSTALLATION, SERVICING AND MAINTENANCE. NOTIFY THE ARCHITECT AND ENGINEER OF ANY CONFLICTS PRIOR TO INSTALLATION.
- 9. THE CONTRACTOR SHALL COMPLY WITH SPECIFICATIONS AND INDUSTRY STANDARDS FOR ALL INSTALLATIONS.
- 10. PROVIDE ALL DOMESTIC POTABLE WATER EQUIPMENT AND PIPING AS "LEAD FREE" PER THE "REDUCTION OF LEAD IN DRINKING WATER ACT". NOTIFY ENGINEER OF ANY CONFLICTS PRIOR TO SUBMITTAL.
- 11. UNLESS OTHERWISE NOTED, CONTRACTOR SHALL REFER TO MECHANICAL DRAWINGS FOR MECHANICAL EQUIPMENT LOCATIONS. REFER TO PLUMBING DRAWINGS FOR PLUMBING EQUIPMENT.
- 12. SEAL ALL PENETRATIONS WATER TIGHT. SEAL AROUND ALL WALL PENETRATIONS. PROVIDE ESCUTCHEONS ON ALL PIPING ON EXTERIOR AND EXPOSED LOCATIONS. CAULK WITH REQUIRED THICKNESS 3M BRAND FIRE BARRIER CAULK CP-25 (OR OTHER APPROVED METHOD) TO MAINTAIN FIRE RESISTANCE RATING OF FIRE RATED ASSEMBLIES.
- 13. WHERE DUCTS PENETRATE NON-FIRE-RESISTANCE RATED FLOORS, SEAL SPACE AROUND DUCTS WITH AN APPROVED NONCOMBUSTIBLE FIRE STOP.
- 14. ALL CUTTING AND PATCHING OF STRUCTURE SHALL BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO PERFORMING WORK.
- 15. THE CONTRACTOR SHALL COORDINATE ALL ROUTING AND MOUNTING OF EQUIPMENT, DUCTWORK, PIPING, ETC (ALL WORK) WITH ALL OTHER TRADES.
- 16. PROVIDE ACCESS PANELS WHERE INDICATED ON DRAWINGS AND AS REQUIRED TO PROPERLY OPERATE, ADJUST AND MAINTAIN ALL EQUIPMENT, VALVES, DAMPERS AND OTHER ACCESSORIES. VERIFY EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION. COORDINATE INSTALLATION WITH ALL OTHER TRADES. ACCESS PANEL TO BE MILCOR, MATHBROOK, OR APPROVED EQUAL, HINGED WITH SCREWDRIVER LOCK.
- 17. ROUTE DUCTWORK AND PIPING AS HIGH AS POSSIBLE ABOVE FINISHED CEILING TO AVOID CONFLICT WITH LIGHTS.
- 18. INSTALL ALL PIPING PARALLEL AND PERPENDICULAR TO BUILDING WALLS AND PARTITIONS UNLESS DISTINCTLY SHOWN OR NOTED OTHERWISE. ROUTE PIPING LOCATED NEAR EACH OTHER PARALLEL IN ALL PLANES AND WITH SUFFICIENT CLEARANCE.
- 19. ALL PIPING SHALL BE INSTALLED SO THAT IT MAY EXPAND AND CONTRACT FREELY WITHOUT DAMAGES TO EQUIPMENT, OTHER WORK, OR INJURY TO PIPING SYSTEM, ALL NECESSARY SWING JOINTS, EXPANSION JOINTS, OR OFFSETS TO PROTECT PIPING, ETC. SHALL BE INSTALLED WHETHER INDICATED OR NOT.
- 20. PROPERLY SUPPORT ALL PIPING. PROVIDE ALL REQUIRED ANCHORS, GUIDES AND EXPANSION DEVICES.
- 21. PAINT ALL EXTERIOR AND EXPOSED PIPING. REFER TO AXXX FOR COLOR. (DESIGNER/ENGINEER: COORDINATE THIS REFERENCE WITH THE ARCHITECT.)
- 22. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL MATERIAL, EQUIPMENT, APPARATUS AND WORK FROM DAMAGE. FAILURE TO DO SO TO THE SATISFACTION OF THE OWNER OR OWNER'S REPRESENTATIVE WILL BE SUFFICIENT CAUSE FOR THE REJECTION OF THE MATERIAL, EQUIPMENT, APPARATUS AND WORK IN QUESTION.
- DATE OF ACCEPTANCE. THE CONTRACTOR'S GUARANTEE INCLUDES EQUIPMENT CAPACITY, PERFORMANCE RATINGS AND NOISE RATINGS. ANY DEFICIENCIES SHALL BE PROMPTLY CORRECTED. ROUTINE MAINTENANCE SHALL NOT BE INCLUDED.

23. THE CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT, MATERIALS AND WORKMANSHIP FOR A PERIOD OF 1 YEAR FOLLOWING THE

- 24. THE CONTRACTOR SHALL CLEAN ALL FIXTURES, PIPES, EQUIPMENT AND EXPOSED WORK AFTER COMPLETION OF FINAL TESTING AND BEFORE ACCEPTANCE.
- 25. ALL PLATED AND OTHER FINISHED PRODUCTS SHALL BE THOROUGHLY CLEANED AND POLISHED.
- 26. THE MANUFACTURER MODEL OR CATALOG NUMBERS INDICATED IN THE CONSTRUCTION DOCUMENTS ESTABLISH A STANDARD FOR THE GENERAL DESIGN, PERFORMANCE, AND QUALITY OF THE PRODUCT REQUIRED.
- 27. ALTERNATE MANUFACTURERS LISTED IN THE SCHEDULE OR SPECIFICATIONS ARE APPROVED TO BID; HOWEVER, THE SUBMITTED PRODUCT MUST MEET THE GENERAL DESIGN, PERFORMANCE, DIMENSIONS, WEIGHT, AND QUALITY OF THE SCHEDULED PRODUCT. EACH MANUFACTURER WILL HAVE DIFFERENCES IN INSTALLATION REQUIREMENTS. IF THE CONTRACTOR ELECTS TO GO WITH A NON-BASIS OF DESIGN MANUFACTURER, THE CONTRACTOR SHALL BE RESPONSIBLE TO INCLUDE THE COST FOR ENGINEERING TIME, AS REQUIRED, TO ADJUST THE DESIGN TO THOSE DIFFERENCES IN THEIR BID, IF THE BASIS OF DESIGN IS NOT BID. THE CONTRACTOR IS RESPONSIBLE TO IDENTIFY THE DIFFERENCES IN THE INSTALLATION REQUIREMENTS BETWEEN THE BASIS OF DESIGN AND THE SUBMITTED MANUFACTURER DURING THE SUBMITTAL PHASE.
- 28. WHERE "OR APPROVED EQUAL" IS INDICATED, OTHER PRODUCTS SIMILAR IN DESIGN AND OF EQUAL QUALITY AND PERFORMANCE, AND COMPLYING WITH THE PLANS AND SPECIFICATIONS MAY BE APPROVED IF FOUND ACCEPTABLE BY THE ARCHITECT/ENGINEER. THE CONTRACTOR MUST SUBMIT TO THE ARCHITECT/ENGINEER A LINE-BY-LINE COMPARISON BETWEEN SCHEDULED MANUFACTURER AND "OR APPROVED EQUAL" MANUFACTURER 10 DAYS PRIOR TO BID.
- 29. ALL MATERIALS, EQUIPMENT, ETC., INSTALLED UNDER THIS CONTRACT SHALL CONFORM TO ALL RULES, CODES, ETC., AS RECOMMENDED OR ADAPTED BY THE NATIONAL ASSOCIATION GOVERNING THE MANUFACTURER, RATING AND TESTING OF SUCH MATERIALS, EQUIPMENT, ETC., ALL ELECTRICALLY OPERATED EQUIPMENT SHALL BE U.L. APPROVED FOR THE USE INTENDED.
- 30. ALL FIRED AND UNFIRED PRESSURE VESSELS SHALL CONFORM TO THE RULES OF THE A.S.M.E. AND NATIONAL BOARD CODES AND SHALL BE SO LABELED. FURNISH A.S.M.E. AND NATIONAL BOARD CERTIFICATES.
- 31. MOTORS SHALL CONFORM TO THE RULES OF THE N.E.M.A. FOR THE SERVICE INTENDED AND TO THEIR STANDARDIZED FORM SIZES.
- 32. SHOP DRAWINGS, CATALOG CUTSHEETS AND PERFORMANCE DATA PERTAINING TO ALL MATERIALS AND EQUIPMENT PROPOSED FOR USE SHALL BE SUBMITTED.
- 33. JOINTS BETWEEN DISSIMILAR METALS SHALL BE MADE WITH DIELECTRIC NIPPLES DOWNSTREAM OF A VALVE.
- 34. ALL MATERIALS EXPOSED IN A RETURN AIR PLENUM SHALL COMPLY WITH NFPA 90A FLAME SPREAD UNDER 25 AND SMOKE DEVELOPED AND FUEL CONTRIBUTED UNDER 50.
- 35. THE DISCHARGE OF SAFETY VALVES, BLOWOFF PIPES AND OTHER OUTLETS SHALL BE LOCATED AND SUPPORTED SO AS TO PREVENT INJURY TO PERSONNEL.
- 36. PROVIDE RETURN AIR SMOKE DETECTOR IN EACH HVAC UNIT OVER 2,000 CFM AS REQUIRED BY THE LATEST ADOPTED INTERNATIONAL MECHANICAL CODE.
- 37. MECHANICAL EQUIPMENT SHOWN ON THE PLANS HAVE A SPECIFIC WEIGHT AND LOCATION. SHOULD THE CONTRACTOR INSTALL EQUIPMENT WITH DIFFERENT WEIGHTS OR LOCATIONS AS SHOWN, CONTRACTOR SHALL PROVIDE THIS INFORMATION TO THE STRUCTURAL ENGINEER FOR APPROVAL, PRIOR TO PURCHASING, CLEARLY INDICATING THE DIFFERENCES IN SIZE, WEIGHT AND LOCATION. THE ARCHITECT/ENGINEER SHALL NOT BEAR THE COSTS OF SUCH REVIEWS OR REDESIGNS.
- 38. DO NOT ROUTE PIPING OVER ELECTRICAL OR COMMUNICATIONS EQUIPMENT. THIS INCLUDES HYDRONICS, STEAM, DOMESTIC WATER, SANITARY SEWER AND VENTS, CONDENSATE, ROOF DRAINS, ETC.
- 39. PROVIDE TEMPORARY AIR FILTERS PRIOR TO STARTUP OF ALL FANS THAT ARE OPERATING DURING CONSTRUCTION, AND INSTALL NEW FILTERS AFTER ALL CONSTRUCTION DIRT HAS BEEN REMOVED FROM THE BUILDING, AND THE DUCTS, PLENUMS, CASINGS, AND OTHER ITEMS SPECIFIED HAVE BEEN VACUUM CLEANED. MAINTAIN SYSTEM IN THIS CLEAN CONDITION UNTIL FINAL ACCEPTANCE.

### HVAC SYMBOLS LEGEND

90° RECTANGULAR ELBOW

WITH SINGLE THICKNESS

45° RECTANGULAR BEND

45° RECTANGULAR BEND,

RADIUS/DIAMETER=1.5

RADIUS/DIAMETER=1.5

RADIUS/DIAMETER=1.5

90° ROUND ELBOW.

45° ROUND BEND,

**DUCTWORK 90° TAP** 

(ROUND-TO-ROUND)

(ROUND-TO-ROUND)

(ROUND-TO-ROUND)

90° ROUND ELBOW UP

DOWN WITH SINGLE

TURNING VANES

IN DUCT ELEV

END CAP

DUCTWORK CONICAL TAP

90° ROUND ELBOW DOWN

THICKNESS TURNING VANES

90° RECTANGULAR ELBOW

**UP WITH SINGLE THICKNESS** 

F=FALL IN DUCT ELEV R=RISE

DUCTWORK TOE-HEEL TAP

DUCTWORK CONICAL TAP

DUCTWORK SPIN-IN TAP

(RECTANGULAR TO ROUND)

RECTANGULAR TO ROUND

STRAIGHT SIDED BRANCH

SIZE BEFORE ELBOW.

SPLIT. TRANSITION TO FULL

BRANCH SPLIT. TRANSITION

TO SPLIT. TRANSITION TO

FULL SIZE BEFORE ELBOW.

WYE SPLIT. TRANSITION

∠ 5'-0" MAX LENGTH FOR

MAIN DUCTWORK

- RIGID ELBOW, FLEXIBLE

ELBOWS NOT ALLOWED

RIGID SUPPLY DUCTWORK

TO FULL SIZE BEFORE

FLEX DUCT

- DIFFUSER

DEFINITION OF LINEWEIGHTS AND LINETYPES:

DEMOLITION

EXISTING TO REMAIN

**NEW CONSTRUCTION** 

SHOWN (I.E., ROOF)

**OUTLINE OF NEW EQUIPMENT** 

INSTALLED ABOVE THE FLOOR

(RECTANGULAR TO ROUND)

(RECTANGULAR TO

RECTANGULAR)

TRANSITION

SIDEWALL REGISTER OR GRILLE

DUCTWORK 45° LATERAL TAP

**DESCRIPTION** 

TURNING VANES

NOTE: AIR DISTRIBUTION DEVICES ARE

ARE DENOTED AS ILLUSTRATED BELOW

SUPPLY DIFFUSER

RETURN GRILLE

**EXHAUST GRILLE** 

DRAWINGS.

NOTE: SINGLE LINE DUCT TAP SYMBOLS ARE

DENOTED AS ILLUSTRATED BELOW:

DAMPER SYMBOLS:

(F)———

PIPE LABEL

— BFW —

— CHWS —

— CHWR —

—— ВА ——

—— CA ——

——CD—

—— CP ——

— CWS —

— HWR —

-----R-----

---RG---

—— RS ——

DUCT SECTION, SUPPLY

DUCT SECTION, RETURN

DUCT SECTION, EXHAUST

S/A DIFFUSER WITH FACTORY

CFILING DIFFUSER SQUARE

CEILING DIFFUSER ROUND

INDICATE 4-WAY AIR PATTERN

LINEAR DIFFUSER. NO ARROWS

RECTANGULAR TO RECTANGULAR

RECTANGULAR TO ROUND

ROUND TO ROUND

SIDEWALL GRILLE

FIRE/SMOKE DAMPER

MOTORIZED DAMPER

**BOILER FEED WATER** 

COMPRESSED AIR

125 PSI & ABOVE

— CWR — CONDENSER WATER RETURN

REFRIGERANT

REFRIGERANT GAS

REFRIGERANT LIQUID

REFRIGERANT SUCTION

STEAM, LOW PRESS 0-15 PSI

STEAM, MED PRESS 16-124 PSI

STEAM, HIGH PRESS 125 PSI & ABOVE

— HWS — HEATING WATER SUPPLY

CONDENSATE, DRAIN

CONDENSATE, PUMPED

CONDENSATE, HIGH PRESS

CONDENSER WATER SUPPLY

HEATING WATER RETURN

CHILLED WATER SUPPLY

CHILLED WATER RETURN

COMPRESSED AIR, BREATHING AIR

CONDENSATE, LOW PRESS 0-15 PSI

CONDENSATE, MED PRESS 16-124 PSI

FIRE DAMPER

SMOKE DAMPER

<u>DESCRIPTION</u>

DUCT SIZE TRANSITION

INDICATE 2-WAY AIR PATTERN

PATTERN. NO ARROWS

4-WAY AIR PATTERN

INSTALLED QUADRANT BLANKS. PROVIDE BLANKS AS SHOWN ON

PATTERN. NO ARROWS INDICATE

### DESCRIPTION <u>SYMBOL</u> AUTOMATIC AIR VENT BACKFLOW PREVENTER **─** BALL VALVE $-\Box$ BASKET STEAM TRAP BLIND FLANGE BUTTERFLY VALVE CHECK VALVE CHECK VALVE, SILENT **──**▷\$\$ CIRCUIT SETTER COMPRESSED AIR CONNECTION CONTROL VALVE, 2-WAY -CONTROL VALVE, 3-WAY —V— FLEXIBLE CONNECTOR **─────** GATE VALVE GATE VALVE, ANGLE GENERAL VALVE, SEE SPECS **──**>**>** GLOBE VALVE GLOBE VALVE, ANGLE $\longrightarrow \bigvee \longrightarrow$ PLUG VALVE PRESSURE AND TEMPERATURE RELIEF ---PRS PRESSURE REDUCING STATION, STEAM **───**₩ PRESSURE REDUCING VALVE RELIEF VALVE, ASME SMOKE DETECTOR SOLENOID VALVE STRAINER - PSD SUCTION DIFFUSER TH THERMOSTAT, HUMIDISTAT T H CO2 TEMPERATURE, HUMIDITY & CO2 SENSOR TRIPLE DUTY VALVE ---UNION **VENTURI** RISER DOWN (ELBOW) <del>\_\_\_</del> RISER UP (ELBOW) ---0--RISE OR DROP TEE DOWN TEE UP --TOP CONNECTION BOTTOM CONNECTION SIDE CONNECTION \_\_\_ FLOW IN DIRECTION OF ARROW PIPE SLOPE IN DIRECTION OF ARROW TYPICAL RUNOUT: REMOVE EXISTING TO THIS POINT TIE-IN TO EXISTING AT THIS POINT - EQUIPMENT TAG XXX-X — EQUIPMENT NUMBER

XXXXXX NECK SIZE IN INCHES

XXX — AIRFLOW IN CFM

X"Ø

(e.g., 6"Ø)

(e.g., 10x10)

- DEVICE TYPE, REFER TO SCHEDULE

RECTANGULAR DUCT SIZE IN INCHES

ROUND DUCT SIZE IN INCHES

### HVAC ABBREVIATIONS

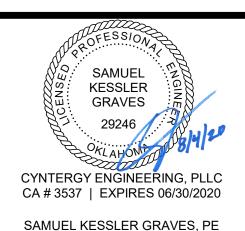
	HVAC ABE	BREVIAT	ΓIONS
А		,	
AC ACC ACFM ADD ADJ AFF AHU AFUE APD AR	AIR COMPRESSOR AIR COOLED CHILLER ACTUAL CUBIC FEET PER MINUTE ADDENDUM ADJUSTABLE ABOVE FINISHED FLOOR AIR HANDLING UNIT ANNUAL FUEL UTILIZATION EFFICIENCY AIR PRESSURE DROP AIR RECEIVER	L L LAT LB LDB LPC LPS LWB LWT	LOUVER LEAVING AIR TEMPERATURE POUND, POUNDS LEAVING DRY BULB LOW PRESSURE CONDENSATE LOW PRESSURE STEAM LEAVING WET BULB LEAVING WATER TEMPERATURE
AS B B	AIR SEPARATOR  BOILER	M MBH MFG MPG	THOUSAND THOUSAND BTUH MANUFACTURER NATURAL GAS, MEDIUM PRESSURE
BA BAC BCU BFPD BFW BTM	BREATHING AIR, COMPRESSED BREATHING AIR COMPRESSOR BLOWER COIL UNIT BACK FLOW PREVENTION DEVICE BOILER FEED WATER BOTTOM	MIN MISC MOCP MPC MPS MVD	MINIMUM MISCELLANEOUS MINIMUM OVER CURRENT PROTECTION MEDIUM PRESSURE CONDENSATE MEDIUM PRESSURE STEAM MANUAL VOLUME DAMPER
BTUH	BRITISH THERMAL UNIT PER HOUR	N	
C CA CC CD CF CFM CH	COMPRESSED AIR COOLING COIL CONDENSATE DRAIN CEILING FAN CUBIC FEET PER MINUTE CHILLER (WATER COOLED)	NC NIC NO NOM NTS O	NORMALLY CLOSED NOT IN CONTRACT NORMALLY OPEN or NUMBER NOMINAL NOT TO SCALE  OUTSIDE AIR
CHWP CHWS CHWR CL CO		OPA OBD ODU	OPPOSED BLADE DAMPER OUTDOOR UNIT
CONT CP CT CU CWP CWS	CONTINUATION PUMPED CONDENSATE COOLING TOWER CONDENSING UNIT CONDENSER WATER PUMP CONDENSER WATER SUPPLY	PH PRV PSI PSIA PSIG	PHASE PRESSURE REDUCING VALVE POUNDS PER SQUARE INCH POUNDS PER SQUARE INCH ABSOLUTE POUNDS PER SQUARE INCH GAGE
CWR	CONDENSER WATER RETURN	Q	TOTAL CARACITY
D DCW DN DOAU	DOMESTIC COLD WATER DOWN DEDICATED OUTDOOR AIR UNIT	QT QS QL R	TOTAL CAPACITY SENSIBLE CAPACITY LATENT CAPACITY
DP DWG	DEWPOINT DRAWING	(R) R R/A	EXISTING TO REMAIN, RELOCATE REFRIGERANT RETURN AIR
(E) E/A EAG EAT EDB EEW EF ENGR EPO ESP	EXISTING TO REMAIN EXHAUST AIR EXHAUST AIR GRILLE ENTERING AIR TEMPERATURE ENTERING DRY BULB EMERGENCY EYE WASH EXHAUST FAN ENGINEER EMERGENCY POWER OFF EXTERNAL STATIC PRESSURE EQUIPMENT EXPANSION TANK ENTERING WET BULB ENTERING WATER TEMPERATURE	RAD RAG RD RE RG RH RL/A RM RPM RPS RS RTU RV Ø	REFRIGERATED AIR DRYER RETURN AIR GRILLE ROOF DRAIN REFER TO REFRIGERANT GAS RELATIVE HUMIDITY/RELIEF HOOD REFRIGERANT LIQUID RELIEF AIR ROOM REVOLUTIONS PER MINUTE REVOLUTIONS PER SECOND REFRIGERANT SUCTION ROOFTOP UNIT RELIEF VALVE ROUND, DIAMETER
F FCU FH FLR FP FPM	FAHRENHEIT FAN COIL UNIT FUME HOOD FLOOR FIRE PROTECTION FEET PER MINUTE	S/A SAG SCFM SF SP SS STM SQIN SQFT	SUPPLY FAN STATIC PRESSURE STAINLESS STEEL STEAM SQUARE INCH/INCHES
FT G	FOOT, FEET	Т	
G GAL GPH GPM GCO GWH	NATURAL GAS, LOW PRESSURE GALLON, GALLONS GALLONS PER HOUR GALLONS PER MINUTE GRADE CLEAN OUT GAS WATER HEATER	T/A TAG TDH TEMP THRU TSP TSTAT TYP	TRANSFER AIR TRANSFER AIR GRILLE TOTAL DYNAMIC HEAD TEMPERATURE THROUGH TOTAL STATIC PRESSURE THERMOSTAT TYPICAL
Н		U	
HB HD HP HPC HPS HWP HWR	HOSE BIBB HEAD HORSEPOWER HIGH PRESSURE CONDENSATE NATURAL GAS, HIGH PRESSURE HIGH PRESSURE STEAM HOT WATER PUMP HEATING WATER RETURN	UH UL UNO V V VAV	UNIT HEATER UNDERWRITER'S LABORATORIES UNLESS NOTED OTHERWISE  VOLT VARIABLE AIR VOLUME
HWS HEX HT	HEATING WATER SUPPLY HEAT EXCHANGER HEIGHT	VFD VRF W	VARIABLE FREQUENCY DRIVE VARIABLE REFRIGERANT FLOW
I IDU IH IN INWC	INDOOR UNIT INTAKE HOOD INCH, INCHES INCHES OF WATER COLUMN	W WB	WATT WET BULB

KILOWATT

THOUSAND

KITCHEN HOOD

ACHITECTS



ENGINEER OF RECORD

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Suilding

GH2 PROJECT NUMBER:

ISSUE DATE: **08/04/2020** ISSUE:

PROGRESS SET

20170021

OTHER ISSUE DATES:

 NO.
 DESCRIPTION
 DATE

 PERMIT SET
 6/19/2020

 PROGRESS SET
 07/14/2020

 PROGRESS SET
 08/04/2020

SHEET NAME:

NOTES, SYMBOLS,
AND
ABBREVIATIONS
SHEET NUMBER:

810 SOUTH CINCINNATI SECOND FLOOR

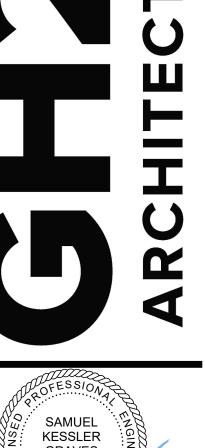
TULSA, OK 74119

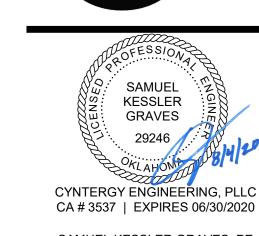
20170021

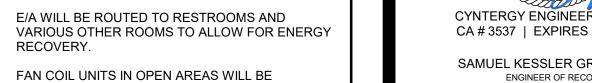
NO. DESCRIPTION PROGRESS SET PROGRESS SET

6/19/2020 07/14/2020

SHEET NAME: **FIRST FLOOR MECHANICAL PLAN** 







- OCCUPIED OVERRIDE SWITCH TO PLACE THE UNIT INTO OCCUPIED MODE FOR A DEFINED PERIOD OF

### **GENERAL NOTES**

**KEYNOTES** 

1. 14x12 E/A, 18x16 O/A DN FROM 2ND FLR.

3. PROVIDE FULL-SIZED S/A AND R/A PLENUMS.

FULL UNIT S/A PLENUM SIZE. REFER TO SCHEDULES FOR TOTAL FLOW (CFM).

4. PROVIDE SIDEWALL S/A DIFFUSERS (TYPE S2) LOCATED DIRECTLY OVER DOOR AND SIZED FOR

PROVIDE ACCESS PANEL IN CEILING SIZED FOR FULL REMOVAL OF FCU. COORDINATE LOCATION

OF FCU AND ACCESS PANEL WITH OTHER CEILING-MOUNTED ELEMENTS (LIGHTS, FIRE PROTECTION/FIRE ALARM DEVICES, ETC.)

COORDINATE WIDTH OF LINEAR SLOT WITH

2. RETURN BOOT, RE: X/M-502.

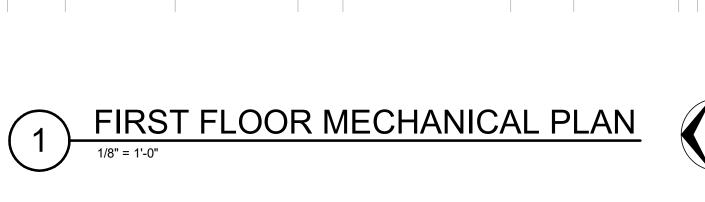
CEILING ELEMENT WIDTH.

RETURN BOOT, RE: X/M-502.

- BUILDING PRESSURIZATION. E/A WILL BE ROUTED TO RESTROOMS AND VARIOUS OTHER ROOMS TO ALLOW FOR ENERGY

O/A WILL BE ROUTED TO EACH SPACE TO MAINTAIN VENTILATION REQUIREMENTS AND

- PROVIDED WITH FREE RETURNS. FIRST 10'-0" OF SUPPLY AIR DUCT SHALL BE PROVIDED WITH INTERNAL LINER FOR ACOUSTIC PERFORMANCE. FAN COIL UNITS IN OFFICES SHALL BE PROVIDED WITH FILTER GRILLES FOR EASE OF FILTER 4. ALL THERMOSTATS SHALL BE PROVIDED WITH AN
- 5. ROUTE OUTSIDE AIR AND EXHAUST AIR SYSTEMS AS CLOSE TO STRUCTURE AS POSSIBLE.



104

(\$3) 10"x6"

OPEN OFFICE

/\_<\(\begin{align\*}
\begin{align\*}
\delta^2 & 8"x8" \ \delta^2 & 10"x10" \ \delta^2 & 100 \ \delta & \

UNDER E/A

ROUTE HIGH AGAINST

UNDERSIDE OF 2ND

FLR SLAB

(\$3) 10"x8" 167 TYP 5

 $_{100}^{6} < $4 \times 6$ 

FCU-101

FCU-102A

FCU-102B

OFFICE

OFFICE

BREAK ROOM 111

108

FCU-107

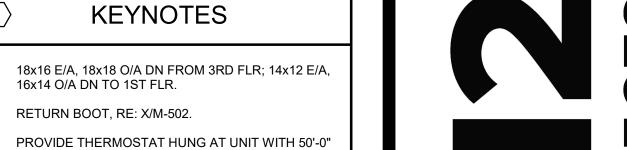
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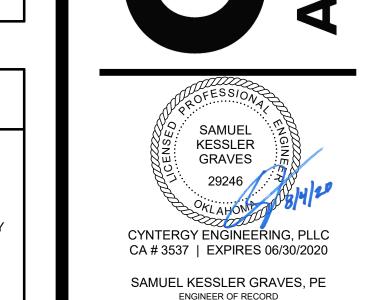
FCU-111

RETURN SHALL BE THROUGH THE DOOR (TYPICAL DATA AND ELECTRICAL); REFER TO

ARCHITECTURE. DOOR GRILLE TO HAVE MINIMUM 2.25 SQ. FT.

(B)





### **GENERAL NOTES**

O/A WILL BE ROUTED TO EACH SPACE TO MAINTAIN VENTILATION REQUIREMENTS AND BUILDING PRESSURIZATION.

FAN COIL UNITS IN OPEN AREAS WILL BE

**KEYNOTES** 

MINIMUM COILED WIRING FOR FUTURE

4. PROVIDE MVD INTEGRAL WITH AIR TERMINAL.

5. DUCT SHALL BE MOUNTED AT 45 DEGREES

16x14 O/A DN TO 1ST FLR.

2. RETURN BOOT, RE: X/M-502.

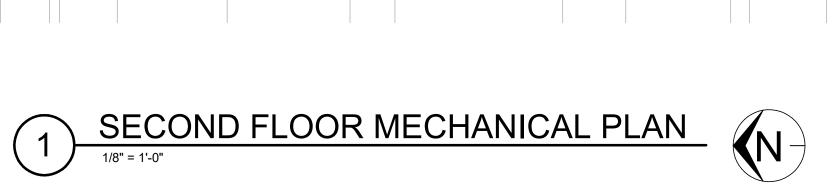
INSTALLATION.

TOWARDS GROUND.

- E/A WILL BE ROUTED TO RESTROOMS AND VARIOUS OTHER ROOMS TO ALLOW FOR ENERGY
- PROVIDED WITH FREE RETURNS. FIRST 10'-0" OF SUPPLY AIR DUCT SHALL BE PROVIDED WITH INTERNAL LINER FOR ACOUSTIC PERFORMANCE. FAN COIL UNITS IN OFFICES SHALL BE PROVIDED WITH FILTER GRILLES FOR EASE OF FILTER ALL THERMOSTATS SHALL BE PROVIDED WITH AN
- OCCUPIED OVERRIDE SWITCH TO PLACE THE UNIT INTO OCCUPIED MODE FOR A DEFINED PERIOD OF
- 5. ROUTE OUTSIDE AIR AND EXHAUST AIR SYSTEMS

AS CLOSE TO STRUCTURE AS POSSIBLE.

FOR PERMIT ONLY. NOT FOR CONSTRUCTION.



FCU-213

2 TYP 6 22"x10"  $\stackrel{\frown}{RAG}$   $\stackrel{\frown}{RAG}$ 

TYP 3 10"x6" (\$3)

FCU-208

ITURÉ OFFICE SPAC

FCU-207

10"x4" 〈\$3〉

OFFICE 203

10"x6" <\$3>

12"

16"x14"

FCU-202

(R1) (RAG) TYP 6 (2)

22"x22" (\$1)

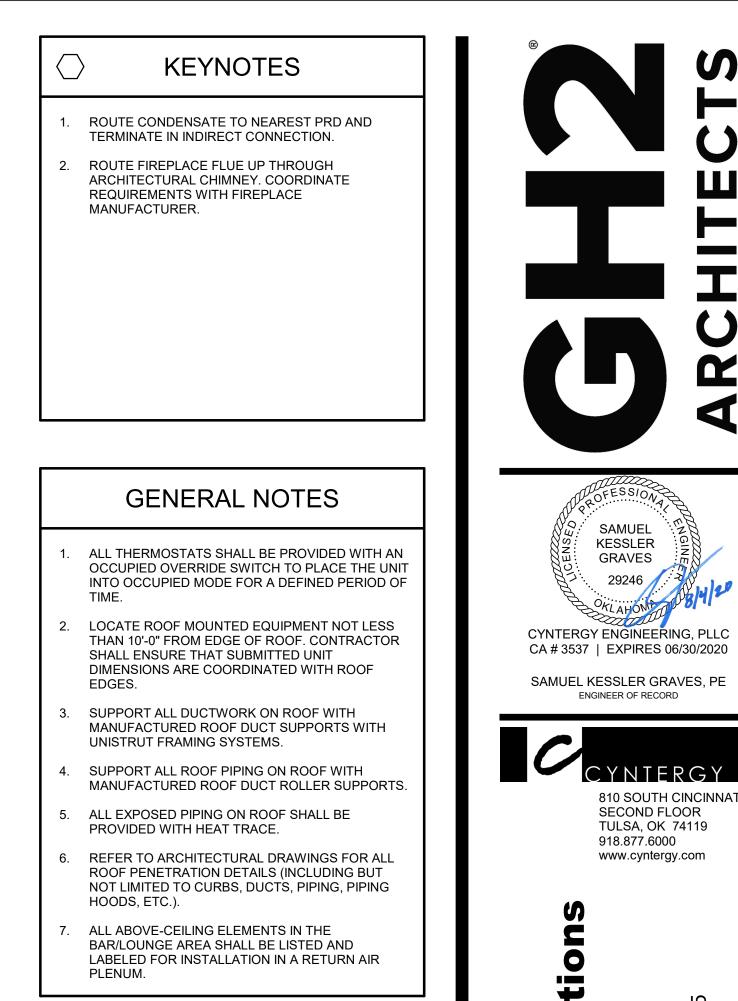
18"x10"

INNOWATION STUDIO

-(B)

SHEET NAME: **THIRD FLOOR MECHANICAL PLAN** 

FOR PERMIT ONLY. NOT FOR CONSTRUCTION.



### THIRD FLOOR MECHANICAL PLAN 1/8" = 1'-0"

10"Ø

22"x18"

PATIO 304

20"x16"

M-401

BAR STORAGE

D

STUB R/A INTO PLENUM SPACE

—18"x14"

20"x16"

GENERAL NOTES

CHWS/R WILL BE ROUTED TO EACH FCU. HWS/R WILL BE ROUTED TO ALL FCU'S SERVING EXTERIOR ZONES.

PRESSURE INDEPENDENT CONTROL VALVES WILL

CONDENSATE WILL BE ROUTED FROM EACH FCU

TO THE CENTRAL RESTROOM CORE AND TERMINATED AT AN APPROVED RECEPTACLE IN

BE PROVIDED FOR ALL FCU'S.

AN INDIRECT CONNECTION.

4. ALL CD RUNOUTS SHALL BE 3/4".

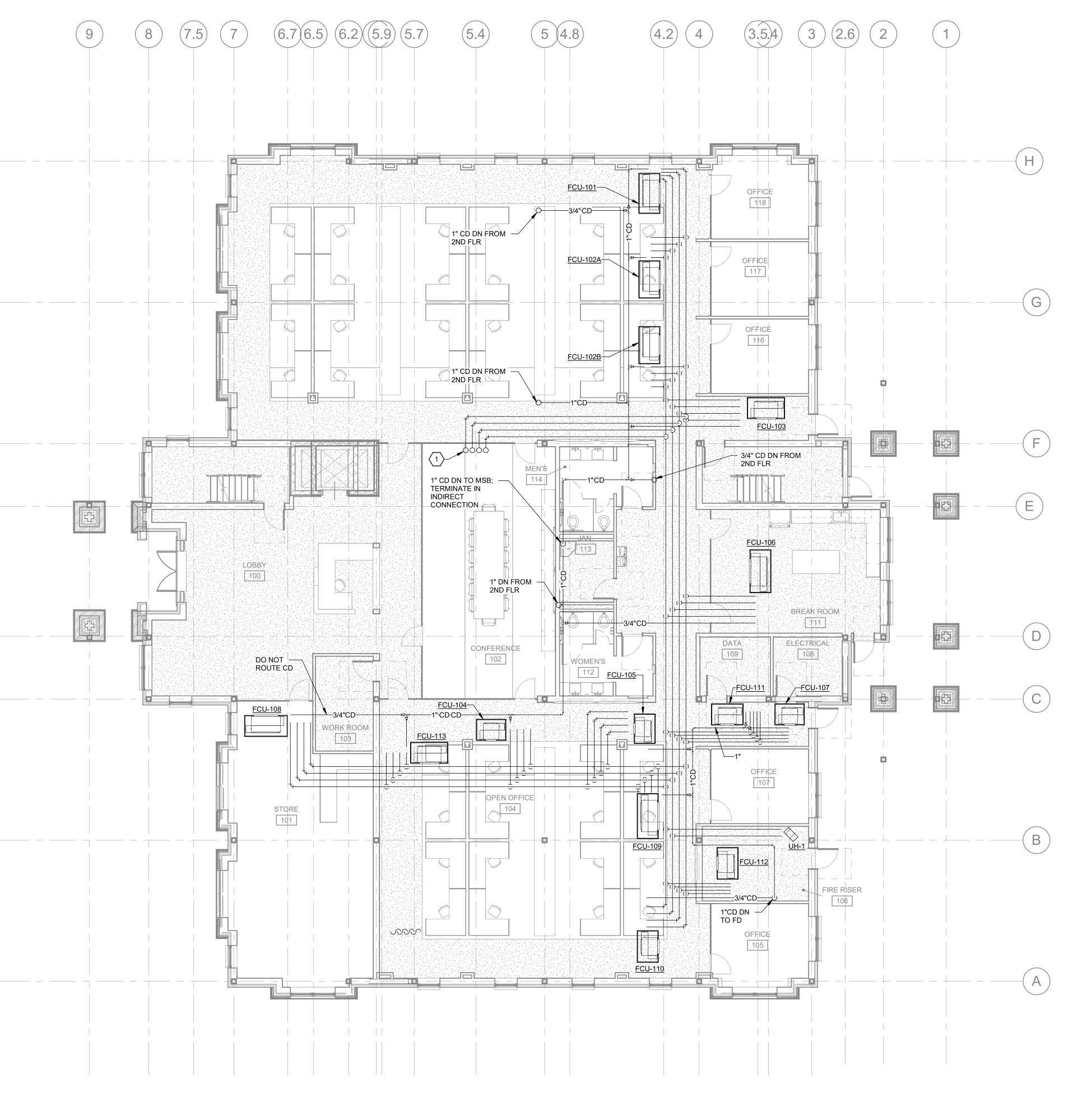
PROGRESS SET

6/19/2020 07/14/2020

PROGRESS SET

SHEET NAME: **FIRST FLOOR MECHANICAL** 

**PIPING PLAN** 



- CHWS/R WILL BE ROUTED TO EACH FCU. HWS/R WILL BE ROUTED TO ALL FCU'S SERVING EXTERIOR ZONES.
- CONDENSATE WILL BE ROUTED FROM EACH FCU

TO THE CENTRAL RESTROOM CORE AND TERMINATED AT AN APPROVED RECEPTACLE IN

AN INDIRECT CONNECTION. 4. ALL CD RUNOUTS SHALL BE 3/4".

### GENERAL NOTES

PRESSURE INDEPENDENT CONTROL VALVES WILL BE PROVIDED FOR ALL FCU'S.

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**GRAVES** 

CYNTERGY ENGINEERING, PLLC

CA # 3537 | EXPIRES 06/30/2020

SAMUEL KESSLER GRAVES, PE

ENGINEER OF RECORD

20170021 ISSUE DATE: **08/04/2020** 

GH2 PROJECT NUMBER:

**PROGRESS SET** 

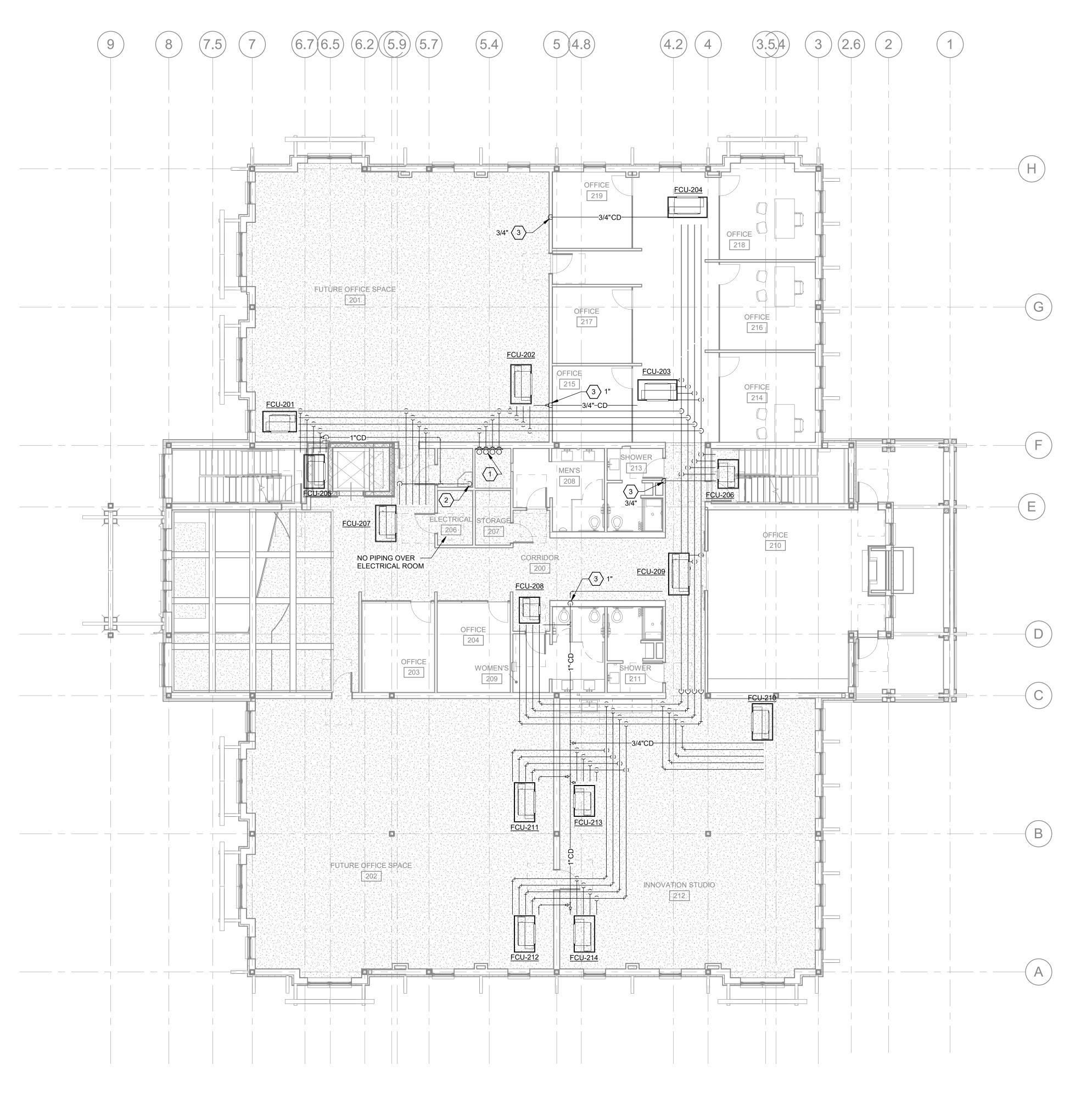
OTHER ISSUE DATES: NO. DESCRIPTION

PROGRESS SET PROGRESS SET

07/14/2020



**MECHANICAL PIPING PLAN** 





 $\langle \widehat{S1} \rangle \begin{array}{c} 6" \\ 25 \end{array}$ 



RE: M-103

L-1, E/A OUTLET TO -

BUILDING AUTOMATION SYSTEM

(BAS) PANEL; COORDINATE FINAL LOCÁTION WITH ELECTRICAL

LOCATION FOR PUMP VFD'S; -

ROUTE CD FROM FCU —

OR OTHER SOURCES OF

FROM EDGE OF ROOF.

COORDINATE FINAL LOCATION

WITH ELECTRICAL CONTRACTOR

FULL-SIZE INTAKE PLENUM DN FROM

<u>IH-1</u> ON ROOF; LOCATE <u>IH-1</u> AT LEAST 10'-0" FROM ANY VENTS, EXHAUSTS,

CONTAMINATION; AND AT LEAST 10'-0"

FULL-SIZE O/A INTAKE -PLENUM

20x20 O/A INTAKE UP TO ROOFTOP

VENTILATOR

20"x20"

RE: M-103

18x16" E/A, 18x18"

RE: M-103

14"x10"

O/A DN TO 2ND

CONTRACTOR

TO NEAREST FD

LOUVER ABOVE DOOR

### **KEYNOTES**

- 2. PROVIDE EMERGENCY POWER OFF BUTTON
- MEETING THE REQUIREMENTS OF CSD-1. 4" HOUSEKEEPNG PAD, REFER TO STRUCTURALLY
- PROVIDE FIRE STOP WHERE DUCT PENETRATES FLOOR. ALL ANNULAR SPACE AROUND DUCTWORK/PIPING SHALL BE FULLY SEALED WITH
- AN APPROVED NON-COMBUSTIBLE MATERIAL. 5. VENT PIPE THROUGH SIDEWALL, TERMINATE IN MANUFACTURER'S WALL CAP WITH BIRD SCREEN. LOCATE ALL VENT TERMINATIONS AT SAME ELEVATION. SIZE VENT PIPING PER MANUFACTURER'S REQUIREMENTS.
- 6. COMBUSTION AIR INTAKE PIPE UP THROUGH ROOF. OFFSET INTAKE PIPING SUCH THAT PIPING IS 10'-0" MINIMUM FROM EDGE OF ROOF. TERMINATE IN MANUFACTURER'S VERTICAL ROOF CAP. SIZE COMBUSTION AIR INTAKE PIPING PER MANUFACTURER'S REQUIREMENTS.
- NOTED SPACE IS RESERVED FOR ELECTRICAL PANELS AND EQUIPMENT; MAINTAIN SPACE FROM FLOOR TO CEILING FREE OF MECHANICAL EQUIPMENT, PIPING, AND ALL OTHER APPURTENANCES
- 8. 8x8 E/A UP TO <u>EF-1</u> ON ROOF. LOCATE <u>EF-1</u> 10'-0" MINIMUM FROM EDGE OF ROOF.

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GH2 PROJECT NUMBER: 20170021

**Folds** 

ISSUE DATE: 08/04/2020

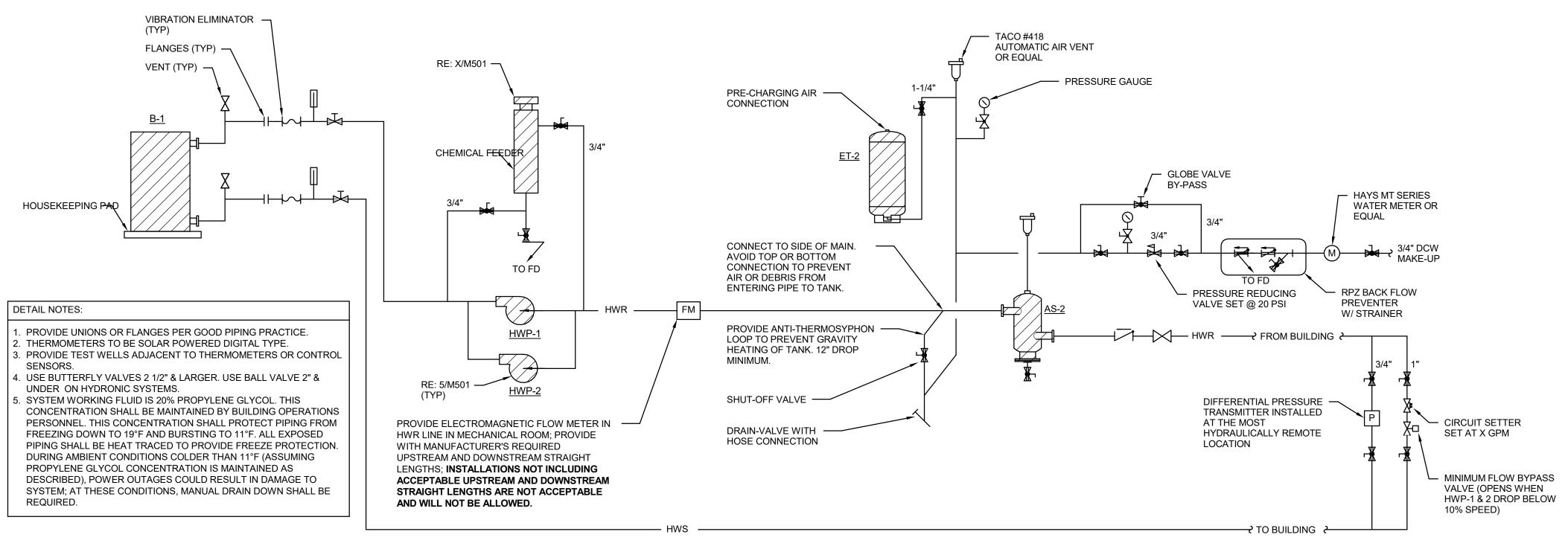
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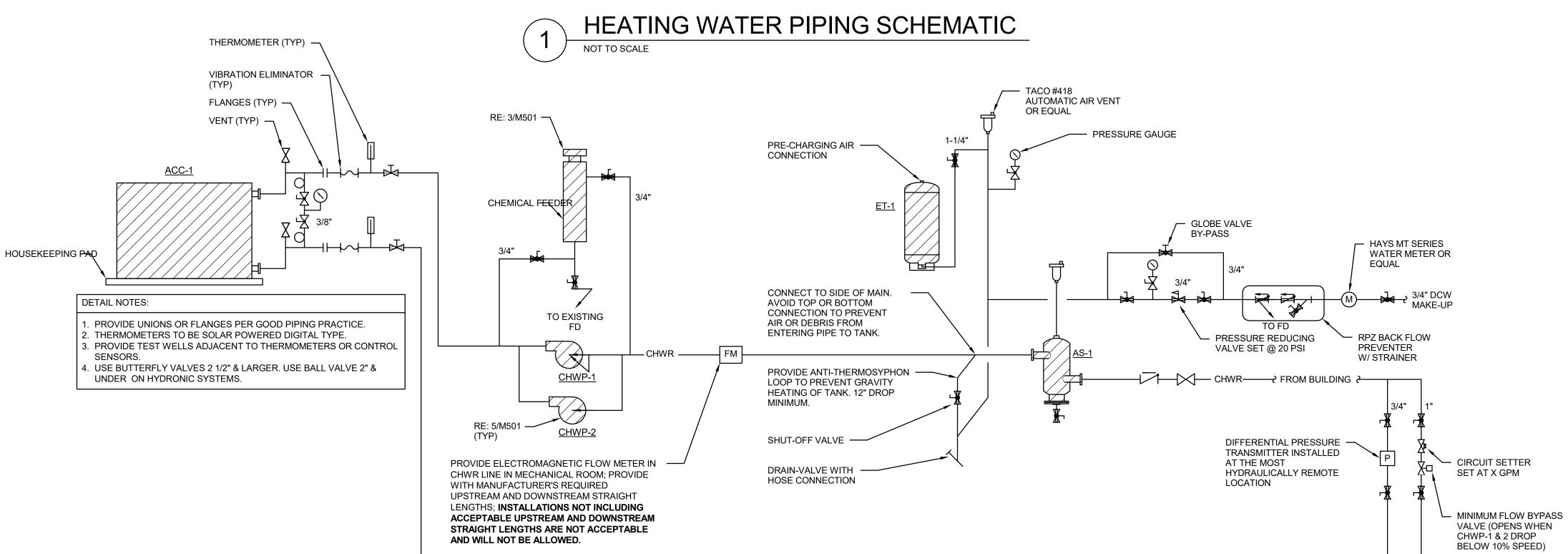
OTHER ISSUE DATES:

NO. DESCRIPTION 07/14/2020 PROGRESS SET PROGRESS SET

SHEET NAME: **ENLARGED** 

**MECHANICAL PLANS** 





CHILLED WATER PIPING SCHEMATIC

ARCHITECTS

SAMUEL KESSLER GRAVES
29246

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Building

GH2 PROJECT NUMBER: **20170021** 

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ISSUE DATE: **08/04/2020**ISSUE:

ISSUE:
PROGRESS SET

OTHER ISSUE DATES:

NO. DESCRIPTION

PERMIT SET

PROGRESS SET

PROGRESS SET

DATE 6/19/2020

07/14/2020

08/04/2020

SHEET NAME:

MECHANICAL

**DETAILS** 

SHEET NUMBER:

M-501

 $\rightarrow$  TO BUILDING  $\leftarrow$ 

### DEDICATED OUTDOOR AIR UNIT SCHEDULE (100% O/A) **FANS** COIL CAPACITIES CHILLED WATER **EXHAUST** CHILLED WATER COIL (SUMMER) HEATING HOT WATER COIL SUPPLY COIL (DEHUMID) MANUFACTURER MARK MODEL EWT / | FLOW | FLUID | EAT | EWT / | FLOW | FLUID | EAT/ QT QS PD DB/WB DB/WB (INWC) COIL QΤ APD LWT RATE LWT RATE PD LAT CFM | ESP | HP | CFM | ESP | HP DB/WB DB/WB (MBH) | (MBH) | ROWS (MBH) ROWS (INWC) (GPM) (FT) (FT) (°F) (°F) (GPM) (°F) (°F) (°F) (°F) (°F) **GREENHECK**

8.1

80.5/65.4

50.4/50.3

20.7

44/54

### DEDICATED OUTDOOR AIR UNIT SCHEDULE (100% O/A) (CONTINUED)

75.0

ENERGY RECOVERY										ELECTRICAL				
GENERAL PER	RFORMANCE		SUMMER	DESIGN		WINTER DESIGN				MCA	MOCP		WEIGHT	REMARKS
90.1 O/A ENTHALPY RECOVERY RATIO	E/A EFFECTIVENESS	O/A EAT,°F (DB/WB)	O/A LAT,°F (DB/WB)	E/A EAT,°F (DB/RH)	E/A LAT,°F (DB/WB)	O/A EAT,°F (DB)	O/A LAT,°F (DB)	E/A EAT,°F (DB)	E/A LAT,°F (DB)	(A)	(A)	V/PH/HZ	(LBS)	1 (2.77) 11 (1 (8
68.4	85.3	100.4/75.2	80.5/65.4	72/50	97.2/73.6	0	46.5	70	7.6	8	15	460/3/60	2,000	ALL

### REMARKS:

DOAU-1

UNIT SHALL BE CONTROLLED VIA THE FIELD INSTALLED DDC CONTROL SYSTEM. REFER TO CONTROLS DRAWINGS FOR SEQUENCE OF OPERATION.

1.25

1.5

99.8

1,740

CHW COIL SELECTED AT 20% GLYCOL PERCENTAGE.

ERCH-45-15L-CW-HW-01

PROVIDE WATER COILS WITH RUN AROUND PUMPS FOR FREEZE PROTECTION. REFER TO COIL DETAIL.

2,270 1.25

- PROVIDE SUPPLY AND EXHAUST FAN WITH MANUFACTURER'S PREMIUM EFFICIENCY ODP MOTORS AND VARIABLE FREQUENCY DRIVE (VFD) FAN FOR BALANCING.
- PROVIDE END CONNECTION WITH DUCT FLANGE ARRANGEMENT FOR OUTDOOR AIR INTAKE AND DISCHARGE AND FOR EXHAUST AIR INTAKE AND DISCHARGE.
- PROVIDE 2" MERV 8 OUTSIDE AIR AND EXHAUST AIR FILTRATION. PROVIDE MANUFACTURER'S MOTORIZED LOW LEAKAGE SUPPLY AND EXHAUST DAMPERS.
- PROVIDE MANUFACTURER'S SPRING ISOLATION.
- PROVIDE MANUFACTURER'S MODULATING ENTHALPY WHEEL CONTROL WITH ROTATION SENSOR.
- PROVIDE MANUFACTURER'S OUTSIDE AIRFLOW MEASURING STATION.
- 1. PROVIDE MANUFACTURER'S CONDENSATE DRAIN TRAP AND CONDENSATE OVERFLOW SWITCH WIRED TO SHUT DOWN UNIT AND GENERATE ALARM UPON DETECTION.
- 2. INSTALL UNIT ON RAILS PER MANUFACTURER'S RECOMMENDATIONS. 13. PROVIDE SMOKE DETECTORS IN UNIT RETURN AND INTERLOCK TO SHUT DOWN UNIT UPON DETECTION. FINAL CONNECTION TO FIRE ALARM PANEL SHALL BE BY FIRE ALARM CONTRACTOR.
- 14. DOUBLE WALL 1" INSULATED CONSTRUCTION.
- 15. FACTORY-WIRED NON-FUSED DISCONNECT SWITCH. 16. FACTORY-MOUNTED AND PROGRAMMED BACNET CONTROL PANEL FOR CONNECTION TO BAS.
- 7. ENERGY RECOVERY WHEEL WITH 5-YEAR WARRANTY (NOT INCLUDING MOTOR).

LIFE SAFETY DAMPER COORDINATION MATRIX								
TYPE	PROVIDED BY	INSTALLED BY	POWER & BRANCH CIRCUIT BY	CONTROL WIRING & CONTROLLED BY				
COMBINATION FIRE SMOKE DAMPERS	MC	MC	EC	FA				
SMOKE DAMPERS	MC	MC	EC	FA				

MC = MECHANICAL CONTRACTOR EC = ELECTRICAL CONTRACTOR FA = FIRE ALARM CONTRACTOR

- . THIS MATRIX IS PROVIDED AS A GUIDANCE TO THE CONTRACTORS. ULTIMATELY THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER IS RESPONSIBLE FOR THE DIVISION OF WORK DESCRIBED IN THIS
- . SMOKE DAMPERS & COMBINATION FIRE SMOKE DAMPERS SHALL BE PROVIDED WITH SMOKE DETECTORS (INTEGRAL WHERE POSSIBLE). SMOKE DETECTORS SHALL FOLLOW SAME MATRIX AS SMOKE DAMPERS.
- . PROVIDE 120V POWER CONNECTION TO COMBINATION FIRE/SMOKE DAMPERS AND SMOKE DAMPERS. CIRCUIT TO 120V FIRE ALARM POWER CIRCUIT IN ELECTRICAL ROOM. IF CIRCUIT IS NOT SHOWN, CONNECT
- TO A 120V 15A OR 20A SPARE CIRCUIT BREAKER. 4. REFER TO MECHANICAL DRAWINGS FOR DAMPER LOCATIONS AND QUANTITIES.
- 5. REFER TO SPECIFICATION SECTION 23 33 00 FOR DAMPER SPECIFICATIONS. REFER TO SPECIFICATION SECTION 28 31 11 FOR FIRE ALARM SPECIFICATIONS. 6. INSTALLATION OF DAMPER AND LOCATION OF ASSOCIATED SMOKE DETECTORS SHALL COMPLY WITH MOST
- CURRENT IMC, NEC, AND NFPA 72 CODES.

### **BUILDING PRESSURIZATION SCHEDULE** EQUIP. BUILDING E/A SERVICE (CFM) MARK (CFM) **PRESSURE** DOAU-1 1ST & 2ND FLOOR 2270 1740 RTU-1 3RD FLOOR 970 EF-1 3RD FLOOR RESTROOMS 140 EF-2 3RD FLOOR JANITOR'S CLOSET 70 3240 1950 TOTALS 1290

### HEATING WATER BOILER SCHEDULE REMARKS:

- THERMOMETER AND P WATER TEMPERATURE
- HIGH LIMIT SAFETY CONTROL.
- . LOW WATER CUT-OFF.
- MAIN MANUAL GAS SHUTOFF VALVE.
- HIGH LOW GAS PRESSURE SWITCHES.
- 2. PILOT AND MAIN GAS PRESSURE REGULATORS.
- PROTOCOL
- 6. UL, IRI, CSD, FM OR OTHER INSURANCE REQUIREMENTS.
- STANDARD LOW WATER CUTOFF).
- I. NEUTRALIZATION TANK.

	FAN SCHEDULE								
MARK	MANUFACTURER MODEL	AREA SERVED	CFM	ESP (INWC)	MOTOR HP	AMPS	V/PH/HZ	WEIGHT (LBS)	REMARKS
EF-1	GREENHECK G-070-VG	3RD FLR RESTROOMS	140	0.25	1/60		115/1/60	24	ALL
EF-2	GREENHECK SP-A50-90-VG	3RD FLOOR JANITOR	70	0.25	1/15	0.29	115/1/6	19	1,3,4,7,8,9

- COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR
- . FAN TO OPERATE IN CONJUNCTION WITH LIGHTS IN ROOM, COORDINATE WITH ELECTRICAL CONTRACTOR.
- . PROVIDE GRAVITY BACKDRAFT DAMPER. 4 PROVIDE FACTORY-MOUNTED NON-FUSED MOTOR DISCONNECT.
- PROVIDE MANUFACTURER'S BIRDSCREEN. E. PROVIDE MANUFACTURER'S INSULATED ROOF CURB (14" HIGH MINIMUM).
- PROVIDE FACTORY-MOUNTED MOTOR SPEED POTENTIOMETER CONTROLLER.

REMARKS:

B. FAN TO OPERATE CONTINUOUSLY. PROVIDE SCHEDULED EXHAUST FAN MANUFACTURER OR APPROVED EQUAL

ESIGNATION	B-1
OCATION	MECH ROOM
PERATING WEIGHT (LBS)	310
MANUFACTURER	AERCO
MODEL	AM 500
YPE	CONDENSING
UEL	NATURAL GAS
NPUT/OUPUT (MBH)	500 / 450
URNDOWN	10:1
WT/LWT (°F)	120/150
LOW RATE MIN/MAX (GPM)	22/40
DESIGN FLOW RATE (GPM)	30
LECTRICAL (V/PH/HZ)	120/1/60
LA	1.8
REMARKS:	ALL

RE	EMARKS:
	COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.

PRESSURE GAUGE.	
E CONTROL OPERATOR.	

- . ASME SAFETY RELIEF VALVE(S).
- . AUTOMATIC GAS VALVE OPERATOR AND AUXILIARY SAFETY SHUTOFF GAS VALVES.
- GAS PILOT SHUTOFF AND SOLENOID VALVES. I. GAS PILOT IGNITION ASSEMBLY WITH IGNITION TRANSFORMER.
- 3. MODULATING BURNER. 4. BOILER CONTROL PANEL. BOILER MICROPROCESSOR MUST COMMUNICATE THROUGH AN OPEN PROTOCOL WITH BACNET
- 5. MANUAL RESET TYPE HIGH LIMIT OR LOW WATER CUTOFF.
- 7. LOW WATER CUT-OFF/FEEDER (IN ADDITION TO, OR IN PLACE OF
- 8. INDICATOR LIGHTS AS SPECIFIED. 9. BAROMETRIC DAMPER.
- 20. PROVIDE WITH INTEGRAL NON-FUSED ELECTRICAL DISCONNECT.

IARK	MANUFACTURER MODEL	SERVICE	FLOW RATE (GPM)	PIPE SIZE (IN)	MAX PD (FT)	WEIGHT (LBS)	REMARKS
AS-1	SPIROTHERM VDT	CHILLED WATER	154				
AS-2	SPIROTHERM VDT	HEATING WATER	34				
	C.	· ·					

- . INSTALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND REQUIREMENTS FOR WARRANTY.
- 2. REFER TO DETAIL FOR ADDITIONAL COMPONENTS AND CONFIGURATION.
- PROVIDE FLANGED CONNECTIONS. 4. PROVIDE WELDED STEEL CONSTRUCTION.
- 5. PROVIDE WITH BLOWDOWN VALVE.
- 8. INSULATE SEPARATOR PER SPECIFICATION REQUIREMENTS.

PUMP	<b>SCHEI</b>	OUI F	

150/119.7

0.3

47/89.1

0.08

MARK	MANUFACTURER	SERVICE	FLOW	HEAD		MOTOR	REMARKS			
IVIAIXIX	MODEL	SERVICE	(GPM)	(FT)	HP	RPM	V/PH/HZ	I LIVIATO		
CHWP-1 CHWP-2	TACO KV2006D	CHILLED WATER (20% PG)	108.5	75	5	1760	460/3/60	ALL		
HWP-1 HWP-2	TACO FI1209C	HEATING WATER	30	70	2	1760	460/3/60	ALL		
REMARKS:	REMARKS:									

- . INSTALL PUMP PER THE PUMP MANUFACTURER'S INSTALLATION INSTRUCTIONS AND REQUIREMENTS FOR WARRANTY.
- 2. COORDINATE ELECTRICAL REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR. 3. VFD FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR, WIRED BY ELECTRICAL CONTRACTOR. REFER TO ELECTRICAL FOR
- VFD SPECIFICATION. 4. PROVIDE PUMP WITH PREMIUM EFFICIENCY MOTOR.

76/67

50.9/50.8

- PROVIDE SUCTION DIFFUSER.
- 5. IN ADDITION TO STANDARD MESH SCREEN, PROVIDE FINE MESH SCREEN AT SUCTION DIFFUSER FOR INITIAL STARTUP, REFERENCE . PROVIDE WITH PRESSURE GAGE AND GAGE COCKS (DISCHARGE AND UPSTREAM AND DOWNSTREAM OF STRAINER).
- 8. PROVIDE WITH FLEXIBLE PIPE CONNECTORS.

### EXPANSION TANK SCHEDULE

	_					
MARK	MANUFACTURER MODEL	SERVICE	TANK VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	WEIGHT (LBS)	REMARKS
ET-1						

### REMARKS:

- . INSTALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND REQUIREMENTS FOR WARRANTY.
- REFER TO DETAIL FOR ADDITIONAL COMPONENTS AND CONFIGURATION.
- EXPANSION TANK SIZING BASED ON EXPANSION TANK LOCATED IN FIRST FLOOR MECHANICAL ROOM AND A MAXIMUM TEMPERATURE DIFFERENCE OF 50°F.

### VID & DIDT CEDVDY LUD CUTEDI II E

	AIR & DIRT SEPARATOR SCHEDULE										
MARK	MANUFACTURER MODEL	SERVICE	FLOW RATE (GPM)	PIPE SIZE (IN)	MAX PD (FT)	WEIGHT (LBS)	REMARK				
AS-1	SPIROTHERM VDT	CHILLED WATER	154								
AS-2	SPIROTHERM VDT	HEATING WATER	34								

- 6. PROVIDE WITH MANUFACTURER'S AUTOMATIC AIR VENT AND PIPE TO NEAREST FLOOR DRAIN.
- 7. HANG SEPARATOR FROM STRUCTURE.

I IAIVI ZI	1	700-1
MFG		TRANE
MODE	EL .	CGAM-52
TYPE		SCROLL
QUAN	ITITY	1
OPEF	RATING WEIGHT (LBS)	3,422
ELEC	TRICAL SERVICE (V/PH/HZ)	460/3/60
SING	LE POINT ELEC (MCA/MOCP)	106/125
A-WE	IGHTED SPL (dBA)	87
	QUANTITY	4
ď	REFRIGERANT TYPE	R410A
COMPRESSOR	RLA/LRA	21.2/158.0
2RE	INPUT POWER (KW)	57.99
OMF	IPLV/NPLV (EER)	14.08/13.72
Ö	STARTER TYPE	X-LINE
	STARTER FURNISHED BY:	MFG
	RATED CAPACITY (TONS)	43.69
	REQUIRED MINIMUM CAPACITY (TONS)	13
PORATOR	FLUID	PROPYLENE GLYCOL (20%)
ORA	DESIGN WATER FLOW (GPM)	108.5
APC	MINIMUM WATER FLOW (GPM)	58.79
EVAI	EWT/LWT (°F)	54/44
	# OF CIRCUITS	2
	MAX PRESSURE DROP (FT)	16.3
	FAN QUANTITY	4
OND	TOTAL AIR FLOW (CFM)	33,366
. –		

AIR COOLED CHILLER SCHEDULE

### REMARKS:

REMARKS:

MARK

COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.

DESIGN CONDENSING TEMPERATURE (°F)

- DELUXE SOUND PACKAGE (COMPRESSOR, CONDENSER FANS). 3. ARCHITECTURAL LOUVERED PANELS.
- 4. HAIL GUARDS.
- 5. NON-FUSED DISCONNECT.
- . SINGLE POINT POWER CONNECTION . NEMA 4 FLOW SWITCH.
- 3. FACTORY STARTUP AND TRAINING. D. LOW AMBIENT TO 0°F.
- 10. 5 YEAR COMPRESSOR WARRANTY (PARTS ONLY). 1. SUCTION SERVICE VALVES.
- 12. ARI CERTIFIED.
- 13. ASHRAE 90.1/CSA COMPLIANT. 14. C/UL LISTING.
- 15. PROVIDE HIGH AMBIENT OPERATION TO 115°F. 16. FREEZE PROTECTION FACTORY INSTALLED AND POWERED THROUGH SINGLE POINT
- POWER CONNECTION. 7. PROVIDE MANUFACTURER'S BACNET CONTROL PANEL FOR CHILLER CONTROL. ALL
- 19. PROVIDE FLEXIBLE CONNECTION TO CHILLER.
- 0. PROVIDE ISOLATION AS REQUIRED BY CHILLER MANUFACTURER FOR MOUNTING TO ROOF STRUCTURE.

HT-1

REMARKS:

### HEAT TRACE SCHEDULE SERVICE | V/PH/HZ | W/FT | REMARKS MARK **MODEL** CHROMALOX SEE PLANS 120/1/60

- . INSTALL PER MANUFACTURER'S REQUIREMENTS.
- . COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
- . PROVIDE MANUFACTURER'S POWER CONNECTION SET KIT. I. AFFIX TO PIPE USING FIBERGLASS TAPE.
- . PROVIDE ONE MANUFACTURER'S LOCAL THERMOSTAT PER CIRCUIT WITH NEMA 4X
- ENCLOSURE RATED FOR OUTDOOR APPLICATION. HEAT TRACE TO BE ENABLED AT 40°F AMBIENT.
- . PROVIDE END SEGMENTS AND JUNCTION BOXES AS REQUIRED.
- . WRAP VALVES AND FITTINGS PER MANUFACTURER'S REQUIREMENTS, SO THAT VALVES AND FITTINGS CAN BE DISASSEMBLED AND REMOVED WITHOUT COMPLETELY
- 9. DISCONNECT BY ELECTRICAL.

KESSLER

CYNTERGY ENGINEERING, PLLC CA # 3537 | EXPIRES 06/30/2020

SAMUEL KESSLER GRAVES, PE

SECOND FLOOR

TULSA, OK 74119 918.877.6000 www.cyntergy.com

GH2 PROJECT NUMBER: 20170021

08/04/2020

**PROGRESS SET** 

ISSUE DATE:

OTHER ISSUE DATES:

NO. DESCRIPTION DATE 6/19/2020 PERMIT SET PROGRESS SET 07/14/2020

08/04/2020

PROGRESS SET

SHEET NAME: **MECHANICAL** 

**SCHEDULES** 

FOR PERMIT ONLY. NOT FOR CONSTRUCTION.

105

ALL

AVAILABLE POINTS SHALL BE PROGRAMMED AT BAS.

18. MAINTAIN MANUFACTURER'S REQUIRED CLEARANCES FOR AIRFLOW AND MAINTENANCE.

. HEAT TRACE TO MAINTAIN 40°F FLUID TEMPERATURE AT 0°F.

REMOVING HEAT TRACE FROM EACH LINE.

							FAN COIL U	INIT SCHED	ULE				
MAR	<	FCU-101	FCU-102A, 102B	FCU-103	FCU-104, 105	FCU-106	FCU-107, 301	FCU-108	FCU-109	FCU-110, 111	FCU-112	FCU-113	REMARKS:
MAN	JFACTURER	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	INSTALL EQUIPMENT PER MANUFACTURER'S INSTALL     PEGUIPEMENTS
MODI	EL	HPP	HPP	HPP	HPP	HPP	HPP	HPP	HPP	HPP	HPP	HPP	REQUIREMENTS.  2. COORDINATE ELECTRICAL REQUIREMENTS WITH ELE
	SIZE	16	14	14	08	18	08	18	20	10	12	14	CONTRACTOR.  3. PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL DUCT CONTRACTOR SHALL PROVIDE A WATER LEVEL DETICATION.
-AN	CFM	920	835	830	450	1020	400	1080	1200	600	660	900	CONFORMING TO UL 508 THAT WILL SHUT OFF THE EQ
<u> </u>	ESP	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	EVENT THAT THE PRIMARY DRAIN IS BLOCKED. THE DEVICE SHALINSTALLED IN THE PRIMARY DRAIN LINE, THE OVERFLOW DRAIN L
SUPP	HP	(2) 1/3	(2) 1/3	(2) 1/3	(1) 1/3	(2) 1/3	(1) 1/3	(2) 1/3	(2) 1/2	(1) 1/3	(1) 1/2	(2) 1/3	OR IN THE EQUIPMENT-SUPPLIED DRAIN PAN, LOCATE HIGHER THAN THE PRIMARY DRAIN LINE CONNECTION
รเ	ELECTRICAL (V/PH/HZ)	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	OVERFLOW RIM OF SUCH PAN. 5. STAINLESS STEEL DRIP PAN. 6. PROVIDE ECM MOTOR.
	TOTAL CAP. (MBH)	18.3	16.8	16.8	9.2	20.6	8.6	21.5	23.4	12.0	13.4	18.0	7. PROVIDE HINGED FILTER ACCESS. MAINTAIN ALL MANU CLEARANCES FOR FILTER CHANGE.
	SENSIBLE CAP. (MBH)	17.8	16.3	16.2	8.8	19.9	8.1	20.9	22.8	11.6	13.0	17.4	8. PROVIDE ENHANCED CABINET INSULATION FOR SOUND PERFORM 9. PROVIDE COIL PACKAGES PER DETAIL WITH PRESSURE INDEPEND CONTROL VALVE.  10. PROVIDE SPRING HANGER ISOLATION. REFER TO DETAILS.  11. PROVIDE WITH INTEGRAL NON-FUSED DISCONNECT.
OIL	ENTERING AIR (°F, DB/WB)	72/60	72/60	72/60	72/60	72/60	72/60	72/60	72/60	72/60	72/60	72/60	
$\circ$	LEAVING AIR (°F, DB/WB)	54.3/52.7	54.1/52.6	54./52.5	54.0/52.5	54.1/52.6	53.3/52.1	54.2/52.7	54.6/52.9	54.3/52.7	54.0/52.3	54.3/52.6	
OLING	ROWS	4	4	4	4	4	4	4	4	4	4	4	
00 00	FPI	12	12	12	12	12	12	12	12	12	12	12	
ပ	WATER FLOW (GPM)	4.1	3.8	3.8	2	4.5	1.9	4.8	5.1	2.6	3.2	4	
	EWT/LWT (°F)	44/54	44/54	44/54	44/54	44/54	44/54	44/54	44/54	44/54	44/54	44/54	
	WPD (FT)	3.1	4.6	4.6	4.6	1.3	4.0	3.0	1.7	3.7	3.0	5.2	
	TOTAL CAP. (MBH)	28.2		24.7		31.8		32.8	20	20.8	-	25.7	
	ENTERING AIR (°F, DB)	68		68		68		68		68		68	
COIL	LEAVING AIR (°F, DB)	94.8		93.9		95.4		94.8		98.8		92.9	
O O	ROWS	1		1		1		1		1		1	
ATING	FPI	12		12		12		12		12		12	
HEA	WATER FLOW (GPM)	1.8		1.6		2.1		2.1		1.4		1.6	
	EWT/LWT (°F)	150/120		150/120		150/120		150/120		150/120		150/120	
	WPD (FT)	0.83		0.56		1.2		1.3		1.2		0.6	
 ≀EM/	ARKS:	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	

LINIT SCI	HEDLII E (	(CONTINUED)

			FA	AN COIL UNIT	SCHEDULE	(CONTINUE	<b>-</b> D)			
MARK		FCU-201, 205	FCU-202, 211	FCU-203, 204, 212	FCU-206	FCU-207	FCU-208	FCU-209	FCU-210, 214	FCU-213
MANL	FACTURER	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC
MODE	:L	HPP	HPP	HPP	HPP	HPP	HPP	HPP	HPP	HPP
FAN	SIZE	12	16	14	08	14	06	18	14	10
	CFM	670	950	850	415	880	230	1100	750	550
	ESP	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
SUPPLY	HP	(1) 1/2	(2) 1/3	(2) 1/3	(1) 1/3	(2) 1/3	(1) 1/3	(2) 1/3	(2) 1/3	(1) 1/3
าร	ELECTRICAL (V/PH/HZ)	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60
Γ	TOTAL CAP. (MBH)	13.5	18.6	17.0	8.8	17.8	4.6	21.9	15.4	10.9
	SENSIBLE CAP. (MBH)	13.1	18.1	16.4	8.3	17.1	4.3	21.2	14.8	10.6
	ENTERING AIR (°F, DB/WB)	72/60	72/60	72/60	72/60	72/60	72/60	72/60	72/60	72/60
COIL	LEAVING AIR (°F, DB/WB)	54.1/52.4	54.5/52.8	54.3/52.6	53.4/52.2	54.1/52.5	54.7/52.6	54.3/52.7	53.9/52.4	54.4/52.7
COOLING	ROWS	4	4	4	4	4	3	4	4	4
JOC	FPI	12	12	12	12	12	12	12	12	12
$\ddot{o}$	WATER FLOW (GPM)	3.2	4.1	3.8	1.9	4	1.1	4.8	3.5	2.4
	EWT/LWT (°F)	44/54	44/54	44/54	44/54	44/54	44/54	44/54	44/54	44/54
	WPD (FT)	3.0	3.3	4.6	4.3	5.2	3.0	3.1	3.7	3.1
	TOTAL CAP. (MBH)	25.9		25.0	15.1	25.5			23.4	
	ENTERING AIR (°F, DB)	68		68	68	68			68	
COIL	LEAVING AIR (°F, DB)	100.6		93.6	100.6	93.2			95.0	
O G	ROWS	1		1	1	1			1	
Z	FPI	12		12	12	12			12	
HEATING	WATER FLOW (GPM)	1.6		1.6	1	1.6			1.5	
- <b>-</b>	EWT/LWT (°F)	150/120		150/120	150/120	150/120			150/120	
	WPD (FT)	2.07		0.57	0.58	0.59			0.51	
REMA	RKS:	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL

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Folds

GH2 PROJECT NUMBER: 20170021

ISSUE DATE: **08/04/2020 PROGRESS SET** 

OTHER ISSUE DATES:

NO. DESCRIPTION 6/19/2020 07/14/2020 PROGRESS SET PROGRESS SET

SHEET NAME: **MECHANICAL SCHEDULES** 

	LOUVER SCHEDULE										
MARK	MANUFACTURER MODEL	WIDTH (IN)	HEIGHT (IN)	MAX VELOCITY (FT/MIN)	MAX PD (INWC)	REMARKS					
L-1	GREENHECK ESD-635	26	26	850	0.10	ALL					
DEMARKS.											

REMARKS:

. PROVIDE BIRD SCREEN.

. PROVIDE GRAVITY BACKDRAFT DAMPER.

4. PROVIDE MANUFACTURER'S WALL SLEEVE.

. COORDINATE INSTALLATION WITH WALL TYPE AND PROVIDE LOUVERS WITH FACTORY PRIME COAT. FINAL FINISH COLOR SHALL BE COORDINATED WITH ARCHITECT.

	11	NTAKE &	EXHAU	ST HOO	D SCHE	DULE		
MARK	MANUFACTURER	SERVICE	CFM	MAX PD	DIMENSI	ONS (IN)	WEIGHT	REMARKS
MARK	MODEL			(INWC)	THROAT	HOOD	(LBS)	
IH-1	GREENHECK FGI 24x30	DOAU-1 O/A INTAKE	2,270	0.05	30X36	49X51	91	ALL

REMARKS:

I. PROVIDE MANUFACTURER'S ROOF CURB.

2. PROVIDE MANUFACTURER'S BIRDSCREEN. B. PROVIDE MANUFACTURER'S GRAVITY BACKDRAFT DAMPER.

			AIR	DEVICE S	CHEDUL	E.			
MARK	MANUFACTURER MODEL	SERVICE	TYPE	MOUNTING	FACE SIZE	SLOTS	SLOT WIDTH	SLOT LENGTH	REMARKS
S1	TITUS TMS	S/A	LOUVERED	LAY-IN (UNO)	24x24				1,2,3,4,5,10
В	TITUS 25RL	R/A,E/A	LOUVERED	LAY-IN (UNO)	24x24				2,3,4,5,6
S2	TITUS 300RL	S/A	SIDEWALL	SURFACE					3.4
S3	TITUS FL-10	S/A	LINEAR SLOT	SURFACE		1"	1"	60"	2,3,4,7,9
D	TITUS FL-10-HT	S/A	LINEAR SLOT	SURFACE		1"	1"	SEE PLANS	2,3,4,7,9
E	TITUS FL-10-HT	S/A	LINEAR SLOT	SURFACE		2"	1"	SEE PLANS	2,3,4,8,9
F	TITUS DL	S/A	DRUM LOUVER	SURFACE					3,4
G	TITUS ZCOM	S/A	VAV DIFFUSER	LAY-IN (UNO)					1,2,3,4
R1	TITUS 510Z	R/A	LOUVERED	LAY-IN (UNO)	60"X12"				2,3,4,5,6
REMARKS:		•							

. PROVIDE 4-WAY PATTERN EXCEPT AS OTHERWISE SHOWN ON DRAWINGS. 2. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR ACTUAL MOUNTING REQUIREMENTS.

3. PROVIDE STANDARD WHITE FINISH.

4. REFER TO PLANS FOR NECK SIZES.

5. PROVIDE 12x12 FACE SIZE AS INDICATED ON PLANS, UNO.

6. PROVIDE ALUMINUM GRILLES (600 SERIES) IN SHOWER AND RESTROOM AREAS. 7. PROVIDE INSULATED PLENUM, CONCEALED MOUNTING, END CAPS & ALIGNMENT STRIPS.

8. PLENUM & MOUNTING REQUIREMENTS VARY. SEE PLANS AND COORDINATE WITH MANUFACTURER. 9. VERIFY MOUNTING DETAILS WITH ARCHITECT AND CALL FOR ANY REQUIRED END CAPS, CLIPS, HANGER SUPPORTS, ETC. AS REQUIRED.

10. PROVIDE DIFFUSER WITH INSULATED BACK PANEL.

[NTD: FOR DUCT MOUNTED SIDEWALL GRILLES COORDINATE THE RUNOUT SIZE WITH THE FACE SIZE (NOT NECK SIZE) OF THE GRILLE. THIS WILL ENSURE THAT THE BORDER OF THE GRILLE DOES NOT EXTEND PAST THE DUCTWORK ON ALL SIDES.]

				HYD	RONIC (	JNIT HEA	ATER	SCHE	DULE						
MARK	MANUFACTURER MODEL	AREA SERVED	CFM	EAT (DB, °F)	LAT (DB, °F)	HEATING CAPACITY (BTUH)	EWT/ LWT (°F)	WATER FLOW (GPM)	WPD (FEET)	ROWS	AMPS	V/PH/HZ	WEIGHT (LB)	REMARKS	
UH-1	REZNOR WS 18	FIRE RISER	400	50	68.5	8,006	150/120	0.5	0.06	1	0.3	115/1/60	37	ALL	

5. DISCONNECT BY ELECTRICAL.

1. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.

2. UNIT HEATER TO MAINTAIN 60°F SPACE TEMPERATURE (ADJUSTABLE).

3. PROVIDE REMOTE THERMOSTAT. 4. PROVIDE WITH FACTORY MOUNTING BRACKET FOR HORIZONTAL DISCHARGE.

						PACKA	GED ROO	OFTOP H	HVAC EQI	JIPMENT								
							CAPA	ACITY					EVAP	FAN	ELE	CTRICAL	WEIGHT	
MARK	MARK MANUFACTURER AREA SERVED				COOLING					HEATING			S/A	HP	MCA/		UNIT + CURB	REMARKS
MODEL	SERVED	NOMINAL TONS	QT (MBH)	QS (MBH)	EAT (DB/WB, °F)	LAT (DB/WB, °F)	IN (MBH)	OUT (MBH)	TURNDOWN	EAT (DB, °F)	LAT (DB, °F)	O/A	ESP	MOCP	V/PH/HZ	(LBS)		
RTU-1	TRANE	BAR/LOUNGE	20	215	150.5	79.8/66	51/50.9	250	200	10:1	56.4	93.4	5,000	5	46.7/60	460/3/60	3,522 + XXX	ALL

### REMARKS:

INSTALL EQUIPMENT PER MANUFACTURER'S INSTALLATION REQUIREMENTS.

. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.

. PROVIDE WITH NON-FUSED UNIT DISCONNECT.

PROVIDE WITH FACTORY-WIRED AND FACTORY-POWERED CONVENIENCE OUTLET. . PROVIDE WITH THROUGH-THE-CURB ELECTRICAL PROVISION.

. PROVIDE WITH MANUFACTURER'S INSULATED ROOF CURB. HEIGHT OF ROOF CURB SHALL BE A MINIMUM OF 14 INCHES. CONTRACTOR SHALL PROVIDE A TALLER CURB AS REQUIRED TO PROVIDE SUFFICIENT CLEARANCE ABOVE ROOF INSULATION FOR PROPER RTU INSTALLATION. PROVIDE TIE-DOWN CLIPS.

PROVIDE WITH HINGED ACCESS DOORS AND 2" MERV 8 FILTERS. . PROVIDE WITH MANUFACTURER'S SMOKE DETECTOR FOR UNITS OVER 2,000 CFM. FIELD-INSTALL IN THE RETURN AIRSTREAM AND WIRE FOR UNIT SHUT-DOWN UPON DETECTION. CONNECT TO FIRE ALARM PANEL. FINAL CONNECTION SHALL BE BY FIRE ALARM CONTRACTOR. DETECTOR SHALL BE

RESETTABLE AT FIRE ALARM PANEL. . HORIZONTAL INTAKE/DISCHARGE (SEE PLANS).

10. STAINLESS STEEL CONDENSATE PAN AND CONDENSATE OVERFLOW SWITCH WIRED TO SHUT DOWN UNIT UPON DETECTION. 11. FAN HAIL AND SAFETY GUARDS.

12. PROVIDE FACTORY STARTUP, 1 YEAR LABOR WARRANTY, 1 YEAR PARTS WARRANTY, 5 YEAR COMPRESSOR WARRANTY, AND 10 YEAR HEAT EXCHANGER WARRANTY.

13. UNIT TO HAVE ECONOMIZER WITH DUAL ENTHALPY LOGIC. PROVIDE MOTORIZED MODULATING LOW LEAKAGE RETURN AND OUTDOOR AIR DAMPERS SUITABLE FOR ECONOMIZER OPERATION.

14. MODULATING HOT GAS REHEAT AND HUMIDITY CONTROL SEQUENCE. 15. UNIT CAPACITIES CALCULATED AT 105°F CONDENSING TEMPERATURE FOR DESIGN CONDITION.

16. DIGITAL SCROLL LEAD COMPRESSOR FOR PART LOAD OPERATION.

17. TIME DELAY BETWEEN RESTARTS. 18. SUPPLY FAN VFD AND CONTROLS FOR SINGLE ZONE OPERATION. PROVIDE BACNET INTERFACE FOR CONNECTION TO BAS.

22. BAROMETRIC RELIEF. 23. CAPACITIES NOTED ARE NET (INCLUDING FAN HEAT). SUBMITTED UNIT MUST MEET NET VALUES (SUBMITTALS BASED AROUND GROSS CAPACITY WILL BE REJECTED).

24. STAINLESS STEEL HEAT EXCHANGER WITH TURNDOWN AS NOTED.

25. 2" DOUBLE WALL CONSTRUCTION. 26. PROVIDE SCHEDULED MANUFACTURER OR APPROVED EQUAL BY: CARRIER, LENNOX, JOHNSON CONTROLS.

						PACKA	GED RUC	JETOP F	IVAC EQI	UIPIVIENI								
							CAPA	ACITY					EVAF	PFAN	ELE	CTRICAL	WEIGHT	
MARK	MARK MANUFACTURER AREA SERVED				COOLING					HEATING			S/A	HP	MCA/		UNIT + CURB	REMARKS
	WIODEL	SERVED	NOMINAL TONS	QT (MBH)	QS (MBH)	EAT (DB/WB, °F)	LAT (DB/WB, °F)	IN (MBH)	OUT (MBH)	TURNDOWN	EAT (DB, °F)	LAT (DB, °F)	O/A	ESP	MOCP		(LBS)	
RTU-1	TRANE OAKD240A4	BAR/LOUNGE	20	215	150.5	79.8/66	51/50.9	250	200	10:1	56.4	93.4	5,000 970	5 2	46.7/60	460/3/60	3,522 + XXX	ALL

GH2 PROJECT NUMBER: 20170021

ISSUE DATE:

PIO

08/04/2020

**PROGRESS SET** 

OTHER ISSUE DATES: NO. DESCRIPTION 6/19/2020 PERMIT SET PROGRESS SET 07/14/2020

08/04/2020

PROGRESS SET

CYNTERGY ENGINEERING, PLLC CA # 3537 | EXPIRES 06/30/2020

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SHEET NAME: **MECHANICAL** 

**SCHEDULES** 

THE FOLLOWING REPRESENTS A GENERAL NARRATIVE OF THE EQUIPMENT SEQUENCES. REFER TO SPECIFIC EQUIPMENT SEQUENCES AND SCHEMATICS (TO BE DEVELOPED FURTHER DURING SUBSEQUENT DESIGN PHASES) FOR MORE DETAIL.

**GENERAL** 

A BACNET PROTOCOL BUILDING AUTOMATION SYSTEM (BAS) WILL BE PROVIDED FOR CONTROL OF ALL EQUIPMENT (UNLESS OTHERWISE NOTED), AND TO ALLOW TRENDING AND ALARMS WHERE NECESSARY. A GRAPHICAL USER INTERFACE (GUI) WILL BE PROVIDED TO ALLOW OPERATOR INTERACTION WITH THE CONTROLS SYSTEM, EQUIPMENT, AND VARIOUS USER-ADJUSTABLE SETPOINTS.

THE CHILLER WILL OPERATE BASED ON ITS OWN INTERNAL SAFETIES AND CONTROLS TO MAINTAIN A CHILLED

DETERMINED DURING TEST AND BALANCE (TAB).

WATER SUPPLY TEMPERATURE SETPOINT. CHILLED WATER PUMPS THE CHILLED WATER PUMPS WILL OPERATE IN A LEAD/LAG FASHION. PUMP SPEED WILL VARY USING VFD

THE MAJORITY OF THE CHILLED WATER LOADS WILL BE PROVIDED WITH 2-WAY VALVES (EXCEPT THOSE AT THE ENDS OF THE BRANCH MAINS, WHICH WILL BE PROVIDED WITH 3-WAY VALVES TO MAINTAIN CHILLED WATER CIRCULATION). A MAIN SYSTEM BYPASS MAY ALSO BE PROVIDED TO ALLOW FOR MINIMUM FLOW TO THE CHILLER AND/OR CHILLED WATER PUMPS.

BASED ON CHILLED WATER DIFFERENTIAL PRESSURE TO MAINTAIN A DIFFERENTIAL PRESSURE SETPOINT AS

CHILLED WATER SYSTEM

THE CHILLED WATER SYSTEM WILL OPERATE IN A VARIABLE PRIMARY CONFIGURATION. PUMP SPEED WILL VARY BASED ON SYSTEM DEMAND AND THE MINIMUM FLOW THROUGH THE CHILLER WILL BE MAINTAINED AT A LL TIMES (AN ELECTROMAGNETIC FLOW METER WILL BE PROVIDED TO MEASURE TOTAL CHILLED WATER FLOW TO CONTROL ANY CHILLED WATER SYSTEM BYPASS, AS NECESSARY).

THE CHILLED WATER SYSTEM WILL BE PROVIDED WITH 20% PROPYLENE GLYCOL FOR FREEZE PROTECTION. ADDITIONALLY, ALL EXPOSED CHILLED WATER PIPING WILL BE INSULATED AND HEAT TRACED, AND THE CHILLER ITSELF WILL BE PROVIDED WITH ON-BOARD FREEZE PROTECTION. THE 20% PROPYLENE GLYCOL WILL PREVENT SYSTEM BURST DOWN TO 11 DEG. F. PART OF THE OPERATION AND MAINTENANCE OF THE BUILDING WILL BE TO MONITOR FOR LOSS OF POWER DURING CONDITIONS COLDER THAN THIS AMBIENT TEMPERATURE. A MANUAL DRAIN DOWN OF THE SYSTEM MAY BE REQUIRED DURING A LOSS OF POWER CONDITION BELOW THIS AMBIENT TEMPERATURE, AS FREEZE PROTECTION MECHANISMS (RUN AROUND PUMP, HEAT TRACE, ETC.) WILL NOT BE FUNCTIONAL DURING A LOSS OF POWER. ADDITIONALLY, REGULAR SYSTEM GLYCOL VOLUME CHECKS ARE RECOMMENDED TO AVOID LOSS OF FREEZE PROTECTION.

THE BOILER WILL OPERATE BASED ON ITS OWN INTERNAL SAFETIES AND CONTROLS TO MAINTAIN A HEATING WATER SUPPLY TEMPERATURE SETPOINT.

THE HEATING WATER PUMPS WILL OPERATE IN A LEAD/LAG FASHION. PUMP SPEED WILL VARY USING VFD BASED ON HEATING WATER DIFFERENTIAL PRESSURE TO MAINTAIN A DIFFERENTIAL PRESSURE SETPOINT AS DETERMINED DURING TEST AND BALANCE (TAB).

THE MAJORITY OF THE HEATING WATER LOADS WILL BE PROVIDED WITH 2-WAY VALVES (EXCEPT THOSE AT THE ENDS OF THE BRANCH MAINS, WHICH WILL BE PROVIDED WITH 3-WAY VALVES TO MAINTAIN HEATING WATER CIRCULATION). A MAIN SYSTEM BYPASS MAY ALSO BE PROVIDED TO ALLOW FOR MINIMUM FLOW TO THE BOILER AND/OR HEATING WATER PUMPS.

**HEATING WATER SYSTEM** 

THE HEATING WATER SYSTEM WILL OPERATE IN A VARIABLE PRIMARY CONFIGURATION. PUMP SPEED WILL VARY BASED ON SYSTEM DEMAND AND THE MINIMUM FLOW THROUGH THE BOILER WILL BE MAINTAINED AT A LL TIMES (AN ELECTROMAGNETIC FLOW METER WILL BE PROVIDED TO MEASURE TOTAL HEATING WATER FLOW TO CONTROL ANY HEATING WATER SYSTEM BYPASS, AS NECESSARY).

DEDICATED OUTSIDE AIR UNIT

THE DEDICATED OUTSIDE AIR UNIT WILL OPERATE ON A SCHEDULED BASIS. IN OCCUPIED MODE, THE DOAU WILL RUN CONTINUOUSLY AT A CONSTANT SPEED. THE UNIT WILL DELIVER NEUTRAL AIR AT ALL TIMES. WHEN COOLING IS REQUIRED FOR THE OUTSIDE AIR, THE CHILLED WATER VALVE WILL MODULATE TO MAINTAIN A SPECIFIC POST-COIL DEWPOINT AND THE REHEAT COIL WILL OPERATE AS NECESSARY TO REHEAT THE AIR TO A NEUTRAL SETPOINT.

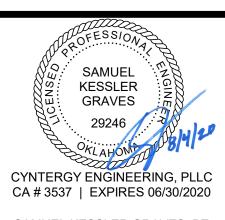
FAN COIL UNIT FANS WILL OPERATE WHEN THERE IS A CALL FOR HEATING OR COOLING BASED ON THE SPACE THERMOSTAT SETPOINT (THERMOSTAT SETPOINTS WILL BE LOCKED TO A SPECIFIC RANGE BUT WILL OTHERWISE BE ADJUSTABLE BY OCCUPANTS). DURING A CALL OF HEATING OR COOLING, THE HEATING OR CHILLED WATER VALES WILL MODULATE AS NECESSARY UNTIL THE SPACE THERMOSTAT IS SATISFIED.

ROOFTOP UNIT (3RD FLOOR BAR/LOUNGE) THE ROOFTOP UNIT SERVING THE BAR/LOUNGE WILL OPERATE BASED ON A SINGLE-ZONE VARIABLE AIR VOLUME (SZVAV) SEQUENCE. THE FAN SPEED, COOLING SYSTEM, AND HEATING SYSTEM WILL OPERATE BASED ON THE UNITS INTERNAL SAFETIES AND CONTROLS TO MAINTAIN SPACE TEMPERATURE. DEHUMIDIFICATION WILL BE PROVIDED BY MEANS OF MODULATING HOT GAS REHEAT BASED ON SPACE HUMIDITY SETPOINT. DEMAND CONTROL VENTILATION WILL BE EMPLOYED BASED ON SPACE CO2 READINGS. THE UNIT WILL BE PROVIDED WITH DUAL ENTHALPY ECONOMIZER CONTROL FOR ENERGY SAVINGS.

THE UNIT HEATER WILL BE CONTROLLED BASED ON A WALL THERMOSTAT. THE UNIT HEATER WILL NOT BE TIED INTO THE BAS.

STANDALONE EXHAUST FAN WILL BE INTERLOCKED WITH THE LIGHTS IN THE 3RD FLOOR RESTROOMS. THIS FAN WILL NOT BE TIED INTO THE BAS.

SPACE TEMPERATURE MONITORING SPACE TEMPERATURE WILL BE MONITORED AND ALARMS PROVIDED WHERE SPACE TEMPERATURE IS OUT OF



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20170021 ISSUE DATE: 08/04/2020

PROGRESS SET

GH2 PROJECT NUMBER:

OTHER ISSUE DATES: NO. DESCRIPTION 6/19/2020

PERMIT SET PROGRESS SET

PROGRESS SET 08/04/2020

07/14/2020

SHEET NAME: **MECHANICAL CONTROLS** 

	ELECTRICAL	SYMBOLS			ELECTRICAI	L ABBRE	EVIATIONS
	LIGHTING SYMBOLS	DISTRI	BUTION SYMBOLS	Α		M	
a . 42	RECESSED FIXTURE, UPPERCASE LETTER DENOTES FIXTURE TYPE, LOWER CASE	0	JUNCTION BOX	AC	ALTERNATING CURRENT	IVI MANUF	MANUFACTURER
A 42	LETTER DENOTES SWITCH DESIGNATION, NUMBER DENOTES CIRCUIT. (TYPICAL)	<b>\$</b> M	MOTOR RATED SWITCH WITH THERMAL OVERLOADS, EXCLUDE OVERLOADS IF PROVIDED WITH MOTOR	AFC AFF	ABOVE FINISHED COUNTER ABOVE FINISHED FLOOR	MAX MCB	MAXIMUM MAIN CIRCUIT BREAKER
	RECESSED FIXTURE, NL DENOTES NIGHT		NON-FUSED DISCONNECT	AFG	ABOVE FINISHED GRADE	MCC	MOTOR CONTROL CENTER
NL NL	LIGHT FOR UNSWITCHED FIXTURE			AHJ AIC	AUTHORITY HAVING JURISDICTION  AMPERE INTERRUPTING CAPACITY	MDP MIN	MAIN DISTRIBUTION PANELBOARD MINIMUM
	STRIP LIGHT		FUSED DISCONNECT	AMP	AMPERE	MLO	MAIN LUGS ONLY
0	DOWN LIGHT	⊠ı	COMBINATION STARTER/DISCONNECT	ATS AWG	AUTOMATIC TRANSFER SWITCH AMERICAN WIRE GAUGE	MTG <b>N</b>	HGT MOUNTING HEIGHT
Q	WALL MOUNTED FIXTURE	×	STARTER	С		N N	NEUTRAL
	SITE LIGHTING	M	METER	C CATV	CONDUIT CABLE ANTENNA TELEVISION	N/A NC	NOT APPLICABLE NORMALLY CLOSED
⊗ 👿 🕏	EXIT FIXTURE, BRACKET DENOTES WALL MOUNT, ARROW DENOTES DIRECTION,		TRANSFORMER	CB, C/B	CIRCUIT BREAKER	NEC	NATIONAL ELECTRICAL CODE
	SHADE DENOTES QUANTITY AND DIRECTION OF EXIT FACE.		MOTOR	CCTV CKT	CLOSED CIRCUIT TELEVISION CIRCUIT	NEMA NFPA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION NATIONAL FIRE PROTECTION ASSOCIATION
	COMBINATION EMERGENCY			CLG	CEILING	NIC	NOT IN CONTRACT
*	FIXTURE/EXIT LIGHT		PANEL, SURFACE MOUNTED	CONT COR	CONTINUATION CONTRACTING OFFICER REPRESENTATIVE	NL O	NIGHT LIGHT
RE	ECEPTACLE SYMBOLS		PANEL, FLUSH MOUNTED	D		OCPD	OVER CURRENT PROTECTION DEVICE
<b>P</b> 41	DUPLEX RECEPTACLE 18" AFF TO CENTER, UON. NUMBER DENOTES CIRCUIT (TYPICAL)	후	EARTH GROUND	DEG	DEGREE	OFCI OL	OWNER FURNISHED, CONTRACTOR INSTALLED OVERLOAD
#	DOUBLE DUPLEX RECEPTACLE 18" AFF TO CENTER, UON	<u></u>	TRANSFORMER	E (E)	EXISTING TO REMAIN	OSHA	OCCUPATIONAL SAFETY AND HEALTH ACT
•	DUPLEX GROUND-FAULT CIRCUIT-INTERRUPTER	SPD	SURGE PROTECTION DEVICE	(ER)	EXISTING TO BE RELOCATED/REWORKED	P	COCCITIONAL ON LITTAND HEALTHAND
φ	RECEPTACLE 18" AFF TO CENTER, UON SPECIAL RECEPTACLE 18" AFF TO	- <del></del>	BREAKER IN ENCLOSURE	EA EC	EACH ELECTRICAL CONTRACTOR	P/PWR	POWER
	CENTER, UON			EF EG	EXHAUST FAN EQUIPMENT GROUND	(PART) PF	PARTIAL PART OF CIRCUIT POWER FACTOR
	COMBINATION FLOOR BOX	<u>~~~</u>	BREAKER	ELEC	ELECTRICAL	PH PNL	PHASE PANEL
	RECESSED CEILING DUPLEX RECEPTACLE	~	FUSED DISCONNECT SWITCH	EMERG EMT	EMERGENCY ELECTRICAL METALLIC TUBING	R	PANEL
	SWITCH SYMBOLS	~~~	NON FUSED DISCONNECT SWITCH	ETR	EXISTING TO REMAIN	(R)	EXISTING TO BE REMOVED
<b>\$</b> a	SINGLE POLE SWITCH 46" AFF TO CENTER, UON LOWER CASE LETTER DENOTES SWITCH DESIGNATION	LOW V	OLTAGE SYMBOLS	<b>F</b>	FAUDENHEIT	REF RECEPT'S	REFERENCE RECEPTACLE(S)
<b>\$</b> 3	3-WAY SWITCH 46" AFF TO CENTER, UON	⊢B	BLANK BOX. PROVIDE 4" SQUARE BOX WITH SINGLE	FLA	FAHRENHEIT FULL LOAD AMPS	RMC	RIGID METAL CONDUIT
	4-WAY SWITCH 46" AFF TO CENTER, UON		GANG MUD RING AT 18" AFF TO CENTER (UNO) AND 3/4" CONDUIT TO ACCESSIBLE CEILING SPACE. IN EXPOSED STRUCTURE AREAS, STUB UP TO NEAR	FT	FEET	RM <b>C</b>	ROOM
\$4	+ WAT OWN ON THE TO DETAILED, DOIN		DECK WITH AN ELBOW POINTED IN THE DIRECTION OF THE TELECOMM BACKBOARD. PROVIDE	G G/GD/GND	GROUND	SPD	SURGE PROTECTION DEVICE
			CONDUIT WITH PROTECTIVE BUSHING AND PULL STRING. FACEPLATE AND DEVICE BY OTHERS.	H	GROUND	SPEC SQ FT	SPECIFICATION SQUARE FOOT (FEET)
			OTHING. FACE EATE AND DEVICE BY OTHERO.	HACR	HEATING, AIR-CONDITIONING, REFRIGERATION	STD	STANDARD
		▼	TELEPHONE OUTLET. PROVIDE 4" SQUARE BOX WITH SINGLE GANG MUD RING AT 18" AFF TO	HP HZ	HORSEPOWER HERTZ (FREQUENCY)	T	
			CENTER (UNO) AND 3/4" CONDUIT TO ACCESSIBLE CEILING SPACE. IN EXPOSED STRUCTURE AREAS,			TYP	TYPICAL
			STUB UP TO NEAR DECK WITH AN ELBOW POINTED IN THE DIRECTION OF THE TELECOMM	IG	ISOLATED GROUND	<b>U</b> UG	UNDERGROUND
			BACKBOARD. PROVIDE CONDUIT WITH PROTECTIVE BUSHING AND PULL STRING.	IMC IN	INTERMEDIATE METAL CONDUIT INCHES	UL	UNDERWRITERS LABORATORIES
			CABLING, FACEPLATE, AND DEVICE BY OTHERS.	l 1	INOTILO	UON UPS	UNLESS OTHERWISE NOTED UNINTERRUPTIBLE POWER SUPPLY
		$\nabla$	DATA OUTLET. PROVIDE 4" SQUARE BOX WITH SINGLE GANG MUD RING AT 18" AFF TO CENTER	JB	JUNCTION BOX	\ <b>/</b>	OMINICINIOF TIDLE FOWER SUPPLI
			(UNO) AND 3/4" CONDUIT TO ACCESSIBLE CEILING SPACE. IN EXPOSED STRUCTURE AREAS, STUB UP	K		<b>v</b> V	VOLT
			TO NEAR DECK WITH AN ELBOW POINTED IN THE DIRECTION OF THE TELECOMM BACKBOARD.	k komil	KILO	VA VAC	VOLT AMPS
			PROVIDE CONDUIT WITH PROTECTIVE BUSHING AND PULL STRING. CABLING, FACEPLATE, AND	kcmil kVA	1000 CIRCULAR MILS KILOVOLT AMPS	W	VOLTS ALTERNATING CURRENT
			DEVICE BY OTHERS.	kW	KILOWATT	W	WIRE
		HTV	TV OUTLET. PROVIDE 4" SQUARE BOX WITH SINGLE GANG MUD RING AT 18" AFF TO CENTER (UNO) AND	L	TS	W/	WITH
			3/4" CONDUIT TO ACCESSIBLE CEILING SPACE. IN EXPOSED STRUCTURE AREAS, STUB UP TO NEAR	LTS LIGH	10	WP <b>Y</b>	WEATHERPROOF WHILE IN USE
			DECK WITH AN ELBOW POINTED IN THE DIRECTION OF THE TELECOMM BACKBOARD. PROVIDE			XFMR	TRANSFORMER
			CONDUIT WITH PROTECTIVE BUSHING AND PULL STRING. CABLING, FACEPLATE, AND DEVICE BY OTHERS.				

		BRANCH CIRC	CUIT SCHEDULE		
OVERCURRENT DEVICE	1 POLE/1 PHASE	1 POLE/1 PHASE WITH IG	2 POLE/1 PHASE	3 POLE/3 PHASE OR 2 POLE/1 PHASE WITH NEUTRAL	3 POLE/3 PHASE WITH NEUTRAL
20 AMP	2#12, 1#12G, 1/2"C	2#12, 1#12G, 1#12IG, 1/2"C	2#12, 1#12G, 1/2"C	3#12, 1#12G, 1/2"C	4#12, 1#12G, 1/2"C
25 AMP	2#10, 1#10G, 1/2"C	2#10, 1#10G, 1#10IG, 1/2"C	2#10, 1#10G, 1/2"C	3#10, 1#10G, 1/2"C	4#10, 1#10G, 1/2"C
30 AMP	2#10, 1#10G, 1/2"C	2#10, 1#10G, 1#10IG, 1/2"C	2#10, 1#10G, 1/2"C	3#10, 1#10G, 1/2"C	4#10, 1#10G, 1/2"C
35 AMP	2#8, 1#10G, 1/2"C	2#8, 1#10G, 1#10IG, 1/2"C	2#8, 1#10G, 1/2"C	3#8, 1#10G, 3/4"C	4#8, 1#10G, 3/4"C
40 AMP	2#8, 1#10G, 1/2"C	2#8, 1#10G, 1#10IG, 1/2"C	2#8, 1#10G, 1/2"C	3#8, 1#10G, 3/4"C	4#8, 1#10G, 3/4"C
45 AMP	2#8, 1#10G, 1/2"C	2#8, 1#10G, 1#10IG, 1/2"C	2#8, 1#10G, 1/2"C	3#8, 1#10G, 3/4"C	4#8, 1#10G, 3/4"C
50 AMP	2#8, 1#10G, 1/2"C	2#8, 1#10G, 1#10IG, 1/2"C	2#8, 1#10G, 1/2"C	3#8, 1#10G, 3/4"C	4#8, 1#10G, 3/4"C
60 AMP	2#6, 1#10G, 3/4"C	2#6, 1#10G, 1#10IG, 3/4"C	2#6, 1#10G, 3/4"C	3#6, 1#10G, 3/4"C	4#6, 1#10G, 1"C
70 AMP	2#4, 1#8G, 3/4"C	2#4, 1#8G, 1#8IG, 1"C	2#4, 1#8G, 3/4"C	3#4, 1#8G, 1"C	4#4, 1#8G, 1 1/4"C
80 AMP	2#4, 1#8G, 3/4"C	2#4, 1#8G, 1#8IG, 1"C	2#4, 1#8G, 3/4"C	3#4, 1#8G, 1"C	4#4, 1#8G, 1 1/4"C
90 AMP	2#3, 1#8G, 1"C	2#3, 1#8G, 1#8IG, 1"C	2#3, 1#8G, 1"C	3#3, 1#8G, 1"C	4#3, 1#8G, 1 1/4"C
100 AMP	2#3, 1#8G, 1"C	2#3, 1#8G, 1#8IG, 1"C	2#3, 1#8G, 1"C	3#3, 1#8G, 1"C	4#3, 1#8G, 1 1/4"C

A. CONDUIT SIZES ARE BASED ON 75°C, COPPER CONDUCTORS, AND EMT. CONTRACTOR SHALL PROVIDE LARGER CONDUITS AS REQUIRED.

B. CONDUCTOR AND CONDUIT SIZES LISTED ARE THE MINIMUM REQUIRED FOR THE ASSOCIATED OVERCURRENT DEVICE SHOWN, CONTRACTOR MAY UPSIZE CONDUCTORS AND/OR CONDUIT. C. ADJUST CONDUCTOR AND CONDUIT SIZES AS REQUIRED PER NEC IN ACCORDANCE WITH NFPA AND ENERGY CODES TO LIMIT VOLTAGE DROP.

### **GENERAL NOTES**

- ALL MATERIAL SHALL FIT THE SPACE AVAILABLE. VERIFY DIMENSIONS AND CLEARANCES AT BUILDING PRIOR TO ORDERING. ALL WORKING CLEARANCES AT ELECTRICAL EQUIPMENT SHALL BE MAINTAINED IN ACCORDANCE WITH THE NEC. COORDINATE WITH OTHER TRADES AS REQUIRED.
- REFER TO MECHANICAL DRAWINGS FOR MECHANICAL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS. NOTIFY ENGINEER, IN WRITING, TEN DAYS PRIOR TO BID IF MECHANICAL DOCUMENTS REQUIRE ELECTRICAL CONNECTIONS THAT ARE NOT INDICATED ON ELECTRICAL DOCUMENTS.
- . ELECTRICAL DISCONNECTS, STARTERS, DEVICES, OR RACEWAYS MOUNTED ON OR ADJACENT TO EQUIPMENT SHALL NOT IMPEDE ACCESS TO THAT EQUIPMENT. DISCONNECTS AND STARTERS SHALL BE INSTALLED IN A LOCATION TO MEET THE NEC WORKING SPACE REQUIREMENTS.
- 4. LABEL ALL DISCONNECTS WITH EQUIPMENT DESIGNATION, SERVING PANELBOARD DESIGNATION AND CIRCUIT NUMBER. INTERIOR EQUIPMENT MAY BE LABELED WITH SELF-ADHESIVE VINYL LABELS THAT ARE PREPRINTED. FLEXIBLE, LAMINATED WITH A CLEAR, WEATHER-AND CHEMICAL-RESISTANT COATING. EXTERIOR EQUIPMENT SHALL BE LABELED WITH SCREW RETAINED, UV STABILIZED PHENOLIC LABELS.
- COORDINATE WITH MECHANICAL FOR ELECTRICAL CONTROLS WORK NOT PART OF CONTROLS CONTRACTOR SCOPE OF WORK.
- 6. PRIOR APPROVAL REQUESTS: ALL MANUFACTURER PRIOR APPROVAL REQUESTS FOR EQUIPMENT AND MATERIALS NOT LISTED IN THE CONTRACT DOCUMENTS SHALL BE SUBMITTED FOR ENGINEER AND ARCHITECT REVIEW PRIOR TO BID IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. UNLESS NOTED OTHERWISE, PRIOR APPROVAL REQUESTS SHALL BE SUBMITTED NOT LESS THAN TEN CALENDAR DAYS PRIOR TO BID. ENGINEER'S PRIOR APPROVAL REVIEW WILL BE LIMITED TO A CURSORY REVIEW FOR GENERAL CONFORMANCE. ENGINEER WILL ISSUE AN ADDENDUM IDENTIFYING ANY ADDITIONAL MANUFACTURERS THAT ARE APPROVED FOR BIDDING. AFTER PROJECT AWARD, THE CONSTRUCTION MANAGER, ARCHITECT, AND ENGINEER WILL DO A DETAILED REVIEW OF THE EQUIPMENT SUBMITTALS. PROVIDED PRODUCTS SHALL COMPLY WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS REGARDLESS OF WHAT WAS SUBMITTED FOR THE PRIOR APPROVAL REQUEST. MANUFACTURERS THAT ARE SUBMITTED AFTER PROJECT AWARD THAT ARE NOT LISTED IN THE BID DOCUMENTS (DRAWINGS, SPECIFICATIONS, AND OR ADDENDUMS) WILL BE REJECTED.
- . ALL BRANCH CIRCUITS LARGER THAN 20A SHALL BE INSTALLED IN DEDICATED CONDUITS.
- 8. SLEEVE ALL WALL, FLOOR AND CEILING PENETRATIONS FOR CABLE INSTALLATIONS. SUPPORT SLEEVES ACCORDINGLY. FIRESTOP AROUND AND IN SLEEVES AS REQUIRED. FIRESTOP MATERIAL IN SLEEVE SHALL BE REMOVABLE FOR FUTURE INSTALLATION OF CABLES.
- CONTRACTOR SHALL REVIEW ALL SPECIFICATIONS/PROJECT MANUAL, ARCHITECTURAL, INTERIORS, CIVIL, LANDSCAPE, STRUCTURAL, FIRE PROTECTION, AND MECHANICAL DOCUMENTS, PRIOR TO BID, INCLUDING, BUT NOT LIMITED TO, DOOR SCHEDULES, REFLECTED CEILING PLANS, ARCHITECTURAL DETAILS, MECHANICAL PLANS, AND MECHANICAL SCHEDULES. REQUIREMENTS AND INFORMATION NECESSARY FOR THE ELECTRICAL MAY BE FOUND IN OTHER DISCIPLINE'S DOCUMENTS. NOTIFY ENGINEER, IN WRITING, TEN DAYS PRIOR TO BID IF OTHER DISCIPLINE'S DOCUMENTS REQUIRE ELECTRICAL CONNECTIONS THAT ARE NOT INDICATED ON ELECTRICAL DOCUMENTS.
- 10. COORDINATE MOUNTING HEIGHTS/LOCATIONS OF ALL WALL MOUNTED DEVICES WITH ARCHITECTURAL DOCUMENTS.
- 11. COORDINATE MOUNTING HEIGHTS OF WALL MOUNTED DEVICES WITH MASONRY AND ARCHITECTURAL WALL FINISHES (I.E. TILE). NOTIFY ENGINEER AND OR ARCHITECT IF MOUNTING HEIGHTS SHOULD BE ADJUSTED.
- 12. COORDINATE EXACT LOCATION OF FLOOR DEVICES WITH ARCHITECTURAL AND STRUCTURAL PRIOR TO PROCEEDING WITH THE INSTALLATION.
- 13. ALL 15A AND 20A, 120V CIRCUITS WITH CIRCUIT LENGTH GREATER THAN 100' SHALL BE #10 AWG MINIMUM.
- 14. A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED WITH THE CIRCUIT CONDUCTORS, WHETHER INDICATED ON THE DRAWINGS OR NOT. METAL RACEWAY, CABLE ARMOR OR SHEATH SHALL NOT BE USED AS THE PREFERRED EQUIPMENT GROUNDING CONDUCTOR. RACEWAY SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONTINUOUS AND SHALL BE BONDED AT ALL POINTS TO THE INSULATED EQUIPMENT GROUNDING CONDUCTOR IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF NEC ARTICLE 250.
- 15. THE WORD "PROVIDE" AS USED IN THE CONTRACT DOCUMENTS SHALL MEAN TO FURNISH AND INSTALL, UNLESS OTHERWISE NOTED.
- 16. PROVIDE THREE SPARE 3/4" CONDUITS FROM ALL FLUSH MOUNTED PANELBOARDS TO AN ACCESSIBLE CEILING SPACE.
- 17. PROVIDE PULL STRING IN ALL EMPTY CONDUITS.
- 18. CONTRACTOR SHALL UPDATE ALL PANELBOARD DIRECTORIES WITH ALL NEW CIRCUITS. DIRECTORIES SHALL BE TYPED. ALL SPARE CIRCUIT BREAKERS SHALL BE LABELED AS "SPARE" AND TURNED OFF.
- 19. PROVIDE ALL LIGHTING CONTROL DEVICES, AT ONE LOCATION, UNDER A COMMON COVER PLATE, UNLESS NOTED OTHERWISE. PROVIDE BARRIER IN BOX WHERE DEVICES ARE SHOWN SIDE BY SIDE CONTROLLING DIFFERENT
- 20. DIMMERS SHALL BE SLIDE-TO-OFF TYPE. DIMMERS SHALL NOT BE LOADED MORE THAN 80% OF THE RATED (OR DE-RATED) CAPACITY. DE-RATE DIMMERS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL COORDINATE EXACT DIMMER TYPE IN ACCORDANCE WITH THE TYPE OF LOAD SERVED. PROVIDE DEDICATED NEUTRAL FOR ALL DIMMING PHASE CONDUCTORS. IF ADJUSTABLE HIGH LEVEL TRIM IS PROVIDED WITH THE DIMMER, THE CONTRACTOR SHALL ADJUST TO 100%. DIMMERS AND OR SWITCHES AT ONE LOCATION SHALL BE UNDER ONE COMMON COVER PLATE, UNLESS NOTED OTHERWISE. LIMIT DIMMERS TO NO MORE THAN THREE IN ONE BOX. DEVICE AND COVER PLATE FINISH SHALL MATCH THE SPECIFIED LIGHT SWITCH AND COVER PLATE FINISH, OR AS DIRECTED BY THE ARCHITECT.
- 21. ALL EQUIPMENT/DEVICES (INCLUDING LIGHTING ASSEMBLIES) SHALL BE UNDERWRITER LABORATORY (OR OTHER APPROVED NATIONALLY RECOGNIZED TESTING LABORATORY) LISTED AND LABELED FOR INSTALLATION AND
- 22. VERIFY EXACT POWER REQUIREMENTS AND NEMA CONFIGURATION OF OUTLET REQUIRED FOR OWNER FURNISHED EQUIPMENT BEFORE ROUGH-IN.
- 23. OUTLETS SHALL NOT BE MOUNTED BACK TO BACK. A MINIMUM OF 2" SHALL BE PROVIDED BETWEEN OUTLETS.
- 24. SURFACE MOUNTED RACEWAYS AND DEVICES WILL BE ALLOWED IN MECHANICAL AREAS AND ELECTRICAL ROOMS ONLY, UNLESS NOTED OTHERWISE.
- 25. PROVIDE DEDICATED NEUTRALS FOR GFCI CIRCUITS. GFCI OUTLETS ARE SHOWN FOR ALL OUTLETS REQUIRED TO BE PROTECTED. HOWEVER, ONLY ONE GFCI DEVICE ON EACH CIRCUIT MAY BE INSTALLED TO PROTECT THE GFCI OUTLETS SHOWN. LOCATE GFCI DEVICE IN CIRCUIT TO PROTECT ALL GFCI OUTLETS SHOWN. GFCI SHALL HAVE A 4-6
- 26. PROVIDE LISTED HANDLE-TIE OR MULTI-POLE CIRCUIT BREAKER FOR CIRCUITS SHARING A COMMON NEUTRAL. HANDLE-TIED OR MULTI-POLE CIRCUIT BREAKERS SHALL SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS, THAT SHARE THE COMMON NEUTRAL.
- 27. ALL EXTERIOR UNDERGROUND CONDUITS THAT ARE INSTALLED AT A HIGHER ELEVATION THAN WHERE THEY ENTER THE BUILDING/FLOOR SHALL BE MOISTURE SEALED, AFTER CONDUCTOR INSTALLATION, TO PREVENT WATER FROM ENTERING THE BUILDING.
- 28. CIRCUIT BREAKERS SERVING FIRE ALARM SYSTEM COMPONENTS SHALL HAVE RED IDENTIFICATION ON THE CIRCUIT
- 29. REFER TO THE BRANCH CIRCUIT SCHEDULE FOR BRANCH CIRCUIT SIZES, UNLESS OTHERWISE NOTED.
- 30. EMERGENCY SYSTEMS SHALL BE INSTALLED IN RACEWAYS SEPARATE FROM OTHER SYSTEMS.
- 31. PROVIDE PVC COATED GALVANIZED RIGID CONDUIT ELBOWS ON ALL UNDERGROUND CONDUITS AND USE PVC COATED GALVANIZED RIGID CONDUIT WHERE STUBBED UP THROUGH A SLAB. ALL METALLIC SURFACES, INCLUDING FITTINGS, SHALL BE PVC COATED. COATED SURFACES DAMAGED DURING INSTALLATION AND OR CONSTRUCTION SHALL HAVE THE DAMAGED SURFACE TOUCHED-UP WITH MANUFACTURER APPROVED COMPOUND. ALL EXPOSED EXTERIOR CONDUIT SHALL BE GALVANIZED RIGID STEEL UNLESS NOTED OTHERWISE.

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> MATTHEW J. RUTKOWSKI ENGINEER OF RECORD



TULSA, OK 74119 918.877.6000 www.cyntergy.com 0

GH2 PROJECT NUMBER:

08/04/2020

20170021

ISSUE DATE:

OTHER ISSUE DATES:

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06/19/2020 07/14/2020 08/04/2020

NOTES, LEGENDS, **ABBREVIATIONS** 

В

**KEYNOTES** 

NOTE

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MATTHEW J. RUTKOWSKI ENGINEER OF RECORD

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SHEET NAME: FIRST FLOOR LIGHTING PLAN

MDP-7 FIRST FLOOR REFLECTED CEILING PLAN

OPEN OFFICE

MDP-9

d MDP-7

D8 d MDP-7

WORK ROOM

D8 d MDP-7

f MDP-9

MDP-9

MDP-9

MDP-7

MDP-9 ▼E

FIRE RISER

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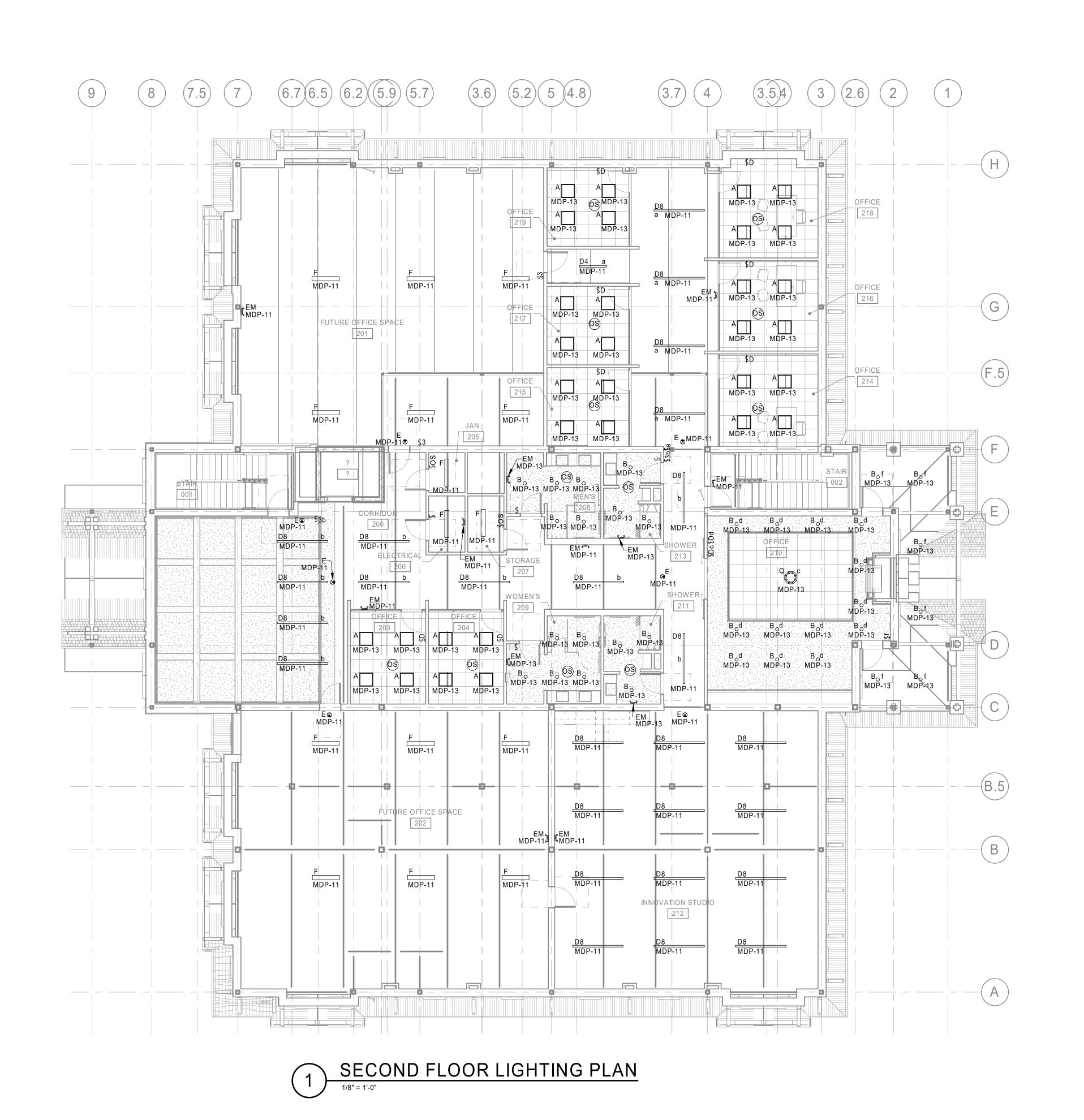
SHEET NAME:

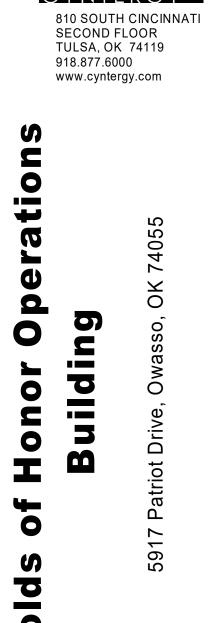
**SECOND FLOOR** 

LIGHTING PLAN

06/19/2020

07/14/2020





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E-103

THIRD FLOOR

LIGHTING PLAN



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olds

**EQUIPMENT SUPPLIER AND PLUMBING CONTRACTO** PRIOR TO INSTALLATION. PROVIDE A DEDICATED 120V 20A CIRCUIT. 806 PROVIDE GFCI RECEPTACLE IN MACHINE ROOM, COORDINATE EXACT LOCATION WITH ELEVATOR EQUIPMENT SUPPLIER.

COORDINATE EXACTION LOCATION WITH ELEVATOR

**KEYNOTES** 

201 INSTALL OUTLET ABOVE COUNTER AT +44" AFF. 210 TELE/POWER POLE FURNISHED WITH FURNITURE. COORDINATE LOCATION WITH LIGHTING AND DIFFUSERS. THE ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL ELECTRICAL CONNECTIONS TO THE FURNITURE. VERIFY LOCATION OF ALL SERVICES

WITH FURNITURE SUPPLIER PRIOR TO

217 PROVIDE FLUSH IN-FLOOR BOX WITH DUPLEX RECEPTACLE AND DATA CUBICLE. PROVIDE 1" CONDUIT FROM FLOOR BOX TO ACCESSIBLE CEILING SPACE. PROVIDE CONDUIT WITH BUSHING AND PULL

302 PROVIDE GFCI NEMA 5-20 RECEPTACLE FOR

DETAIL FOR ADDITIONAL INFORMATION. 407 PROVIDE TWO 4" BELOW GRADE CONDUITS FROM THE MAIN TELECOMM ROOM TO 5' OUTSIDE OF THE

ELECTRIC WATER COOLER. COORDINATE EXACT LOCATION WITH EQUIPMENT SUPPLIER AND PLUMBING CONTRACTOR PRIOR TO INSTALLATION.

401 | TELECOMMUNICATION MAIN GROUND BAR. REFER TO SERVICE ENTRANCE GROUNDING AND BONDING

BUILDING FOR CONNECTION BY TELECOMM UTILITIES. PROVIDE WITH PULL STRING AND CAP.

PROVIDE NAMEPLATE ON DISCONNECT STATING

COORDINATE EXACTION LOCATION WITH ELEVATOR

EQUIPMENT SUPPLIER PRIOR TO INSTALLATION. IF

THE DISCONNECT IS INSTALLED IN A SPRINKLERED

OF ELEVATOR PRIOR TO ELEVATOR MACHINE ROOM, HOISTWAY AND PIT SPRINKLER HEAD ACTIVATION. CIRCUIT BREAKER SHALL BE BACK-FED RATED AND

RECEPTACLE". INSTALL IN ACCORDANCE WITH

RECOMMENDATIONS/REQUIREMENTS, ASME

REQUIREMENTS AND NEC ARTICLE 620.

HOISTWAY, THE DISCONNECT SHALL BE

804 SHUNT TRIP, LSI CIRCUIT BREAKER FOR SHUTDOWN

BE CAPABLE OF BEING LOCKED IN THE OPEN

CIRCUIT BREAKER SHALL BE PROVIDED WITH

CIRCUIT BREAKER IS IN THE OPEN POSITION.

RECOMMENDATIONS/REQUIREMENTS, ASME

REQUIREMENTS AND NEC ARTICLE 620.

ELEVATOR CONTROL CABINET PER ANSI'S REQUIREMENTS AND NEC ARTICLE 620. CONTACT SHALL BE POSITIVELY OPEN WHEN THE SHUNT TRIP

WITH MANUFACTURER'S

ELEVATOR SUPPLIER. CONTRACTOR IS

POSITION. OVERCURRENT DEVICE AND BRANCH CIRCUIT RATINGS SHOWN ON THE DOCUMENTS ARE

BASED ON ONE MANUFACTURER; CONTRACTOR SHALL COORDINATE EXACT RATINGS WITH

RESPONSIBLE FOR ALL ELECTRICAL CONNECTIONS.

AUXILIARY CONTACTS WITH CONNECTIONS TO THE

COORDINATE CONTACT RATING AND CONNECTION TO ELEVATOR CONTROL CABINET WITH ELEVATOR EQUIPMENT SUPPLIER. INSTALL IN ACCORDANCE

COORDINATE EXACTION LOCATION WITH ELEVATOR

EQUIPMENT SUPPLIER PRIOR TO INSTALLATION. PROVIDE FUSED DISCONNECT AND SHUNT TRIP CAPABILITIES, IN LIEU OF A CIRCUIT BREAKER AS INDICATED ABOVE, IF REQUIRED BY THE ELEVATOR

EQUIPMENT SUPPLIER. THE CIRCUIT BREAKER

ENCLOSURE OR FUSED DISCONNECT SHALL BE

WEATHER PROOF/IN-USE COVER FOR ELEVATOR

SUMP PUMP/CONTROLLER. PROVIDE CONTROLS RACEWAY AND ELECTRICAL RACEWAY BETWEEN CONTROLLER AND COUPLING ON WELL AS REQUIRED. INSTALL IN ACCORDANCE WITH ASME

NEMA 3R IF INSTALLED IN A SPRINKLERED

805 PROVIDE NON-GFCI SINGLE RECEPTACLE WITH

REQUIREMENTS AND NEC ARTICLE 620.

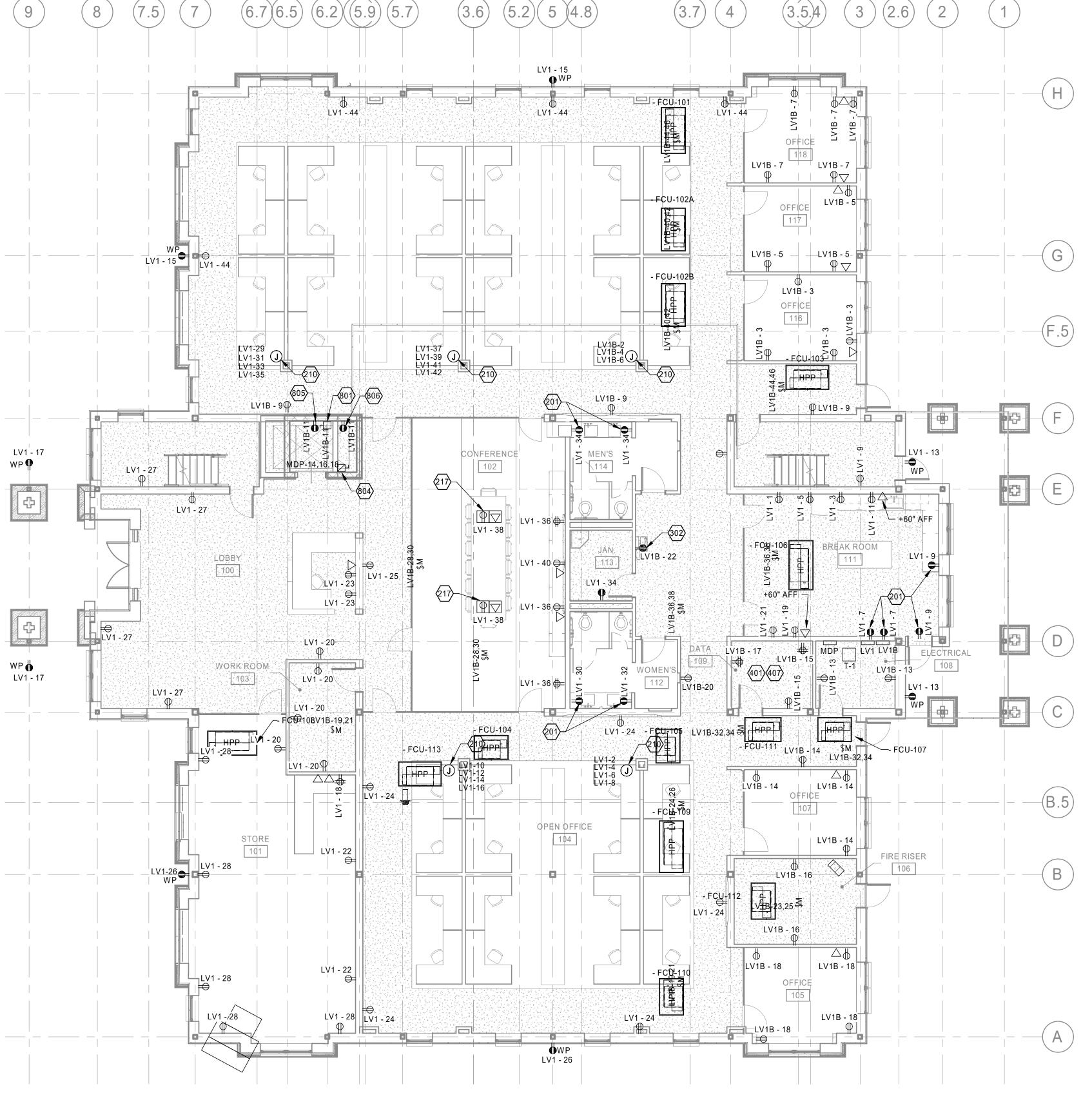
801 LOCKABLE DISCONNECT FOR ELEVATOR CAR LIGHTING, RECEPTACLE AND VENTILATION.

"ELEV. CAR LIGHTING, VENTILATION AND

MANUFACTURER'S

WEATHERPROOF.

INSTALLATION.



FIRST FLOOR POWER PLAN

ISSUE DATE: ISSUE:

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20170021

OTHER ISSUE DATES:

NO. DESCRIPTION PERMIT SET PROGRESS SET PROGRESS SET

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07/14/2020

08/04/2020

SHEET NAME: FIRST FLOOR

**POWER PLAN** 

**KEYNOTES** 

219 PROVIDE FIRE RATED POKE THROUGH WITH DUPLEX RECEPTACLE AND DATA CUBICLE. PROVIDE 3/4" CONDUIT FOR DATA FROM THE POKE THROUGH TO ACCESSIBLE CEILING SPACE ON THE FLOOR BELOW.

SYSTEMS FURNITURE. INSTALL JUNCTION BOX AT CEILING WITH CIRCUITS PULLED. LABEL JUNCTION

CONTRACTOR INSTALLED TRANSFORMERS/POWER SUPPLIES FOR HARDWIRED PLUMBING FIXTURE SENSORS. ELECTRICAL CONTRACTOR TO PROVIDE

TRANSFORMERS/POWER SUPPLIES TO SENSORS. PROVIDE WALL MOUNTED JUNCTION BOXES FOR

INSTALLATION REQUIREMENTS WITH EQUIPMENT SUPPLIER. REFER TO PLUMBING DRAWINGS FOR

303 JUNCTION BOX WITH 120V CIRCUIT LOCATED ABOVE CEILING FOR ELECTRICAL SERVICE TO PLUMBING

232 PROVIDE POWER CONNECTION FOR FUTURE

CONTRACTOR FURNISHED, ELECTRICAL

WALL MOUNTED SENSORS. COORDINATE

QUANTITIES, LOCATIONS, AND ADDITIONAL

BOX "SYSTEM FURNITURE POWER".

LOW-VOLTAGE CONDUCTORS FROM

INFORMATION.

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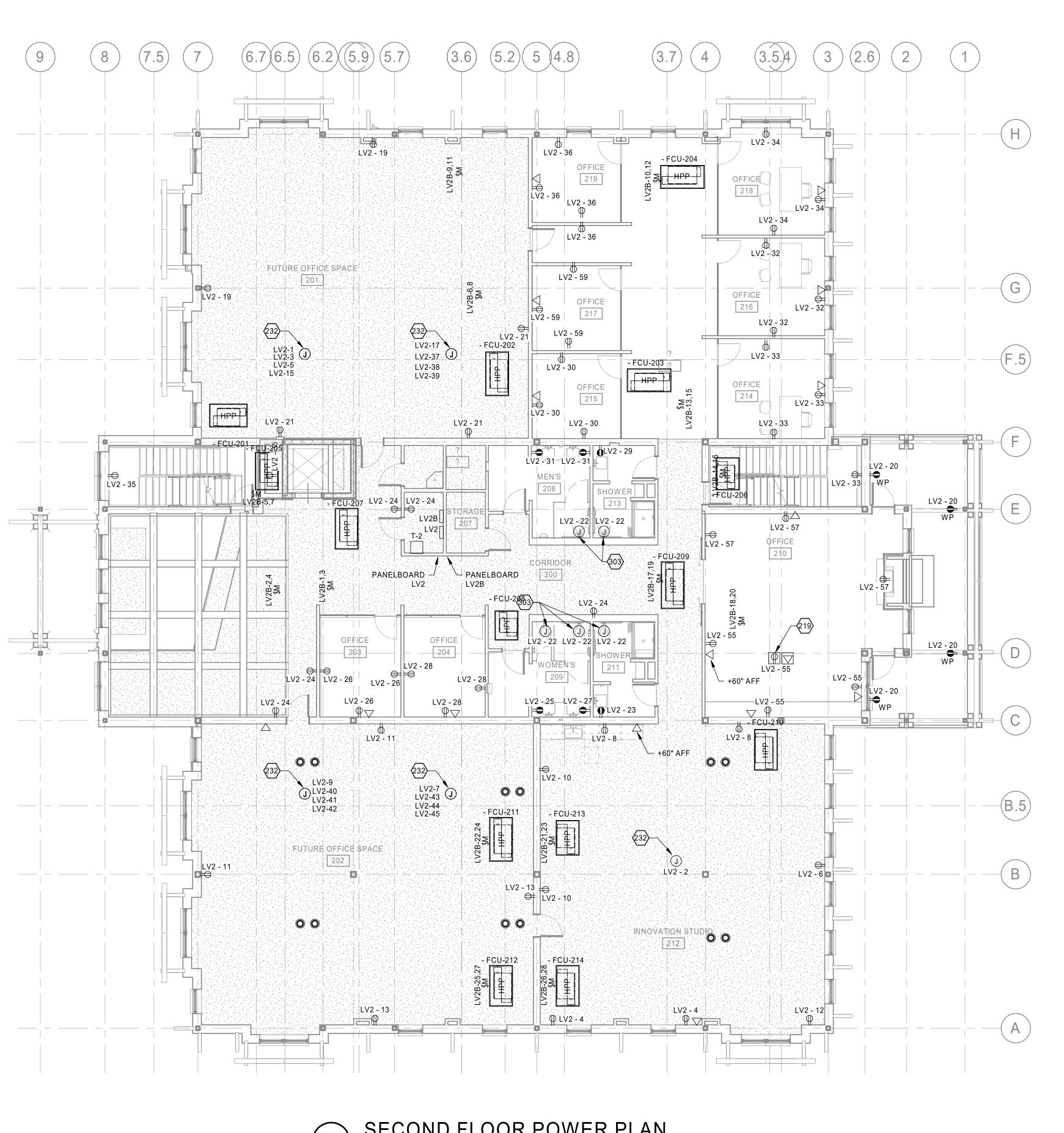
06/19/2020

07/14/2020

SHEET NAME:

**SECOND FLOOR** 

**POWER PLAN** 



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GH2 PROJECT NUMBER:

DATE

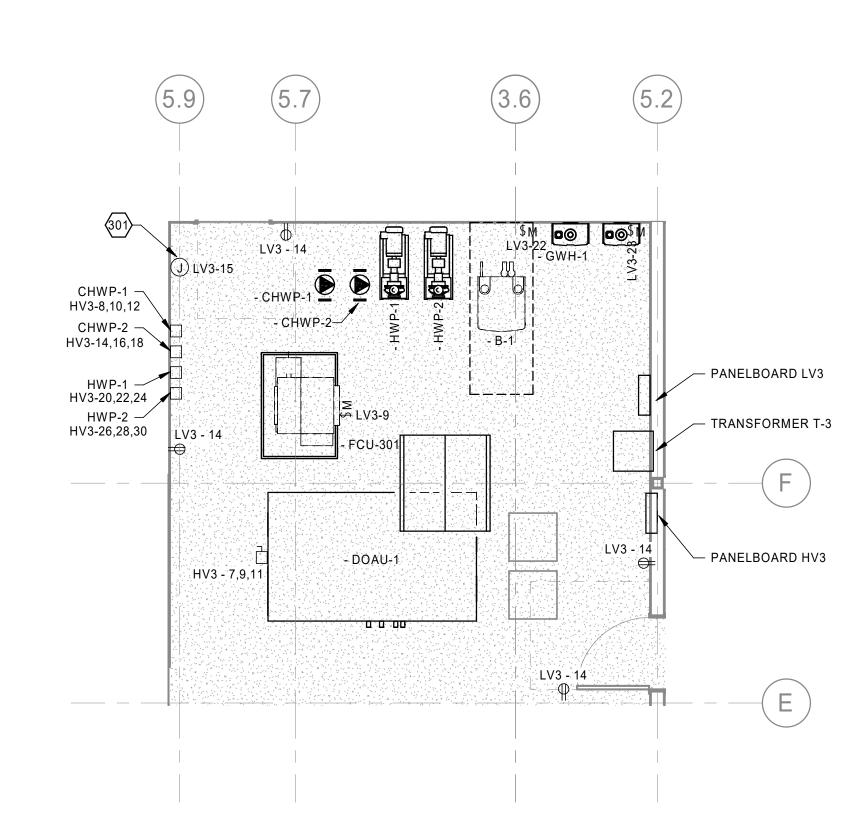
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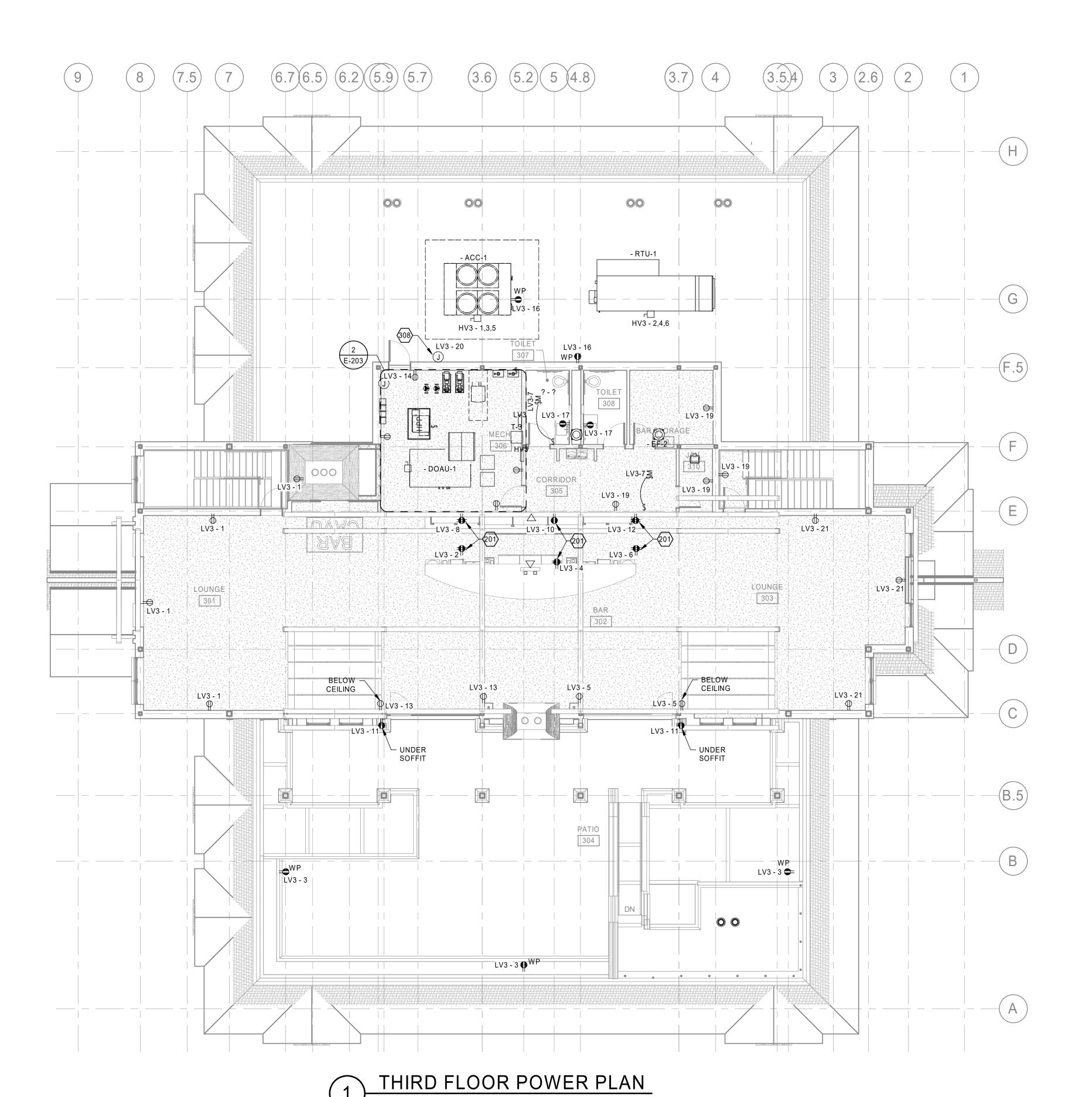
SHEET NAME: THIRD FLOOR **POWER PLAN** 

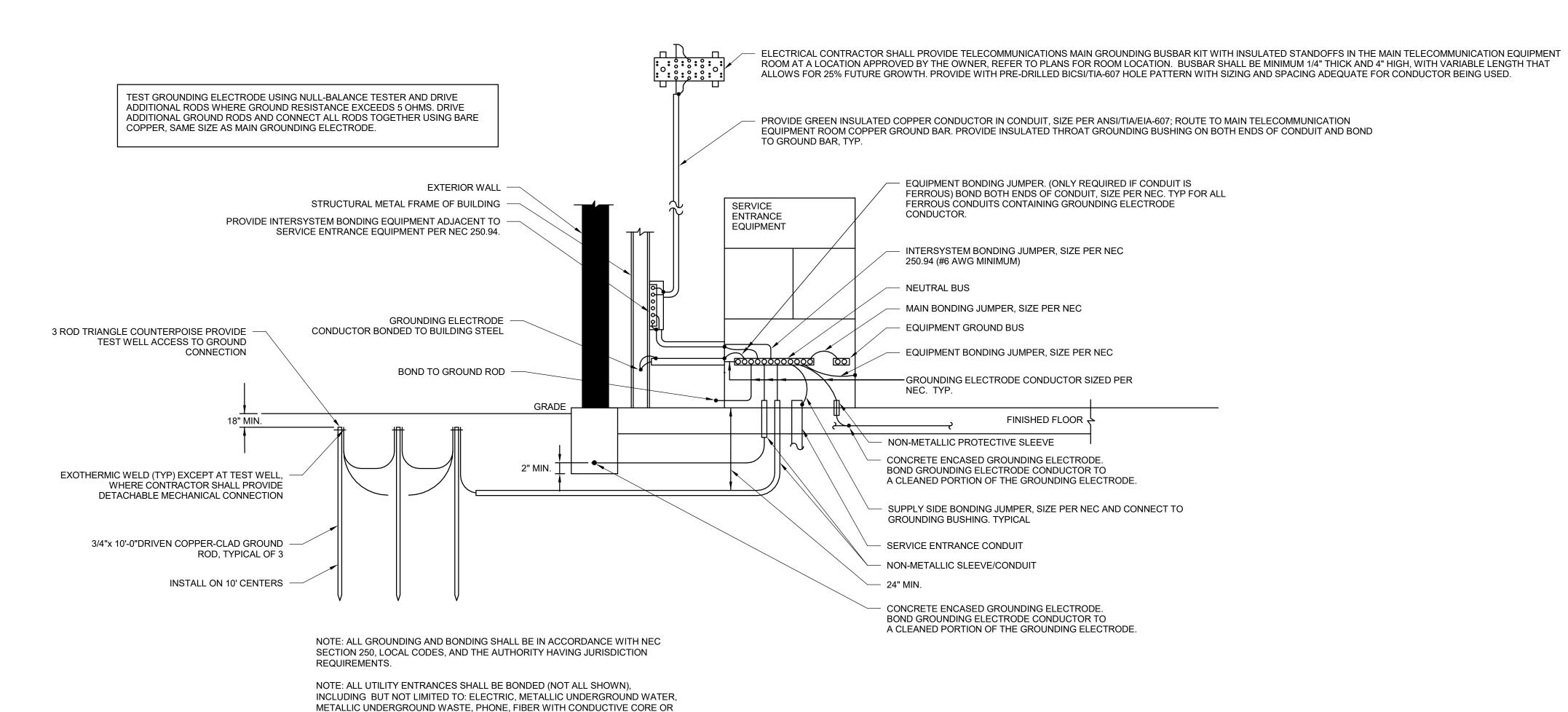


201 INSTALL OUTLET ABOVE COUNTER AT +44" AFF. 301 PROVIDE 120V CIRCUIT TO HVAC CONTROL EQUIPMENT. COORDINATE EXACT LOCATION WITH CONTROLS CONTRACTOR. 308 PROVIDE POWER CONNECTION TO HEAT TRACE. REFER TO MECHANICAL SCHEDULES FOR INFORMATION ON HEAT TRACE. COORDINATE EXACT LOCATION AND QUANTITY OF POWER CONNECTIONS WITH MECHANICAL CONTRACTOR. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.









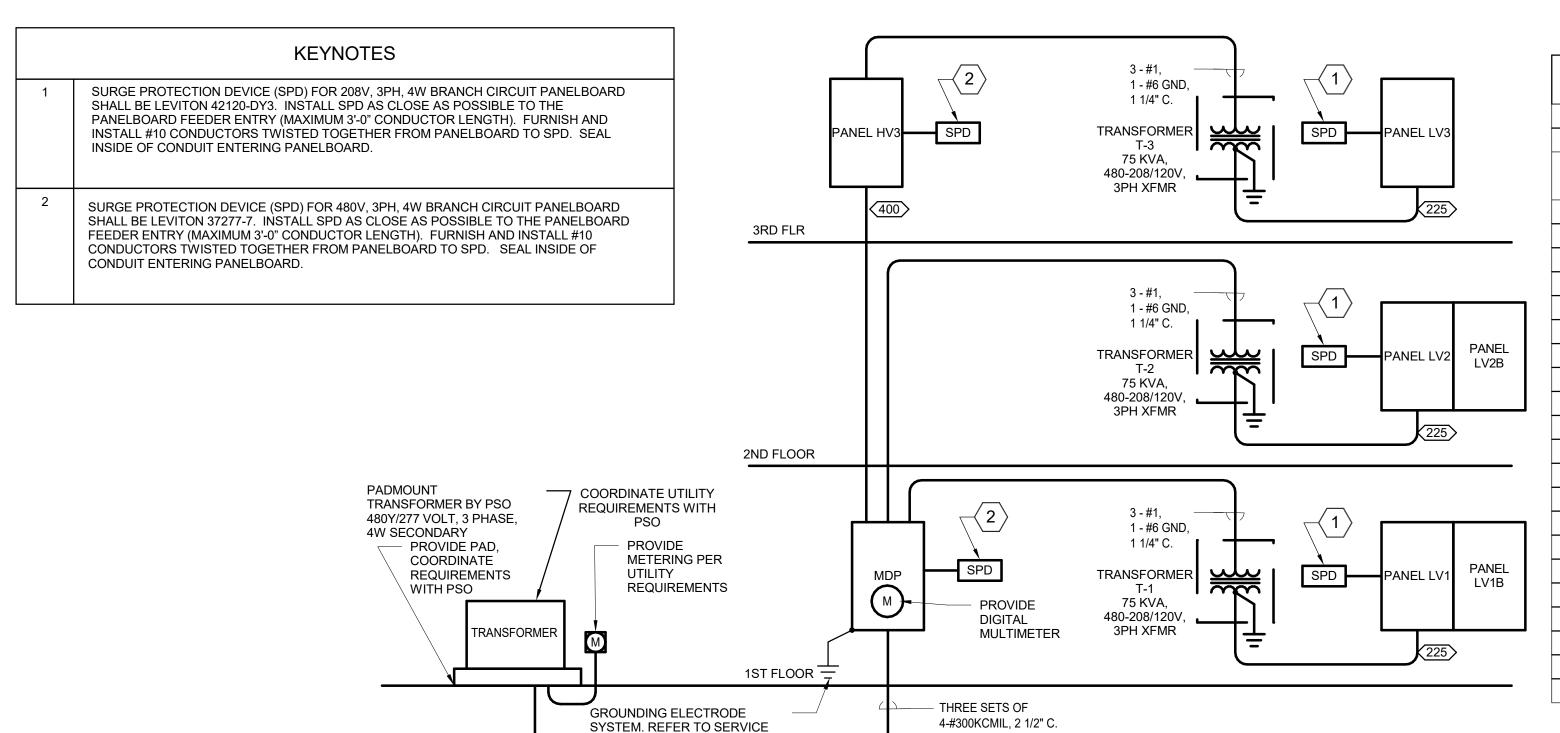
SERVICE ENTRANCE GROUNDING AND BONDING
NOT TO SCALE

SHEATH, AND CATV. METALLIC UNDERGROUND GAS PIPING SHALL NOT BE USED

NOTE: ALL GROUNDING ELECTRODE/BONDING CONDUCTORS EXPOSED TO PHYSICAL DAMAGE SHALL BE INSTALLED IN CONDUIT. BONDING SHALL COMPLY

AS A GROUNDING ELECTRODE.

WITH UTILITY BONDING REQUIREMENTS.



ENTRANCE GROUNDING DETAIL

NOTE: BA	SED ON COPP	ER 75º THWN	AND EMT OF	R RIGID PVC (S	CHEDULE 40)
		3 PHA	SE, 4 WIRE		
		480, 240	AND 208 VOL	т	
ITEM #	CIRCUIT BREAKER	4#	1 # GROUND	EMT CONDUIT	RIGID PVC CONDUIT
20	20	12	12	1/2	1/2
25	25	10	10	1/2	1/2
30	30	10	10	1/2	1/2
40	40	8	10	3/4	3/4
45	45	8	10	3/4	3/4
50	50	8	10	3/4	3/4
60	60	6	10	1	1
70	70	4	8	1 1/4	1 1/4
80	80	4	8	1 1/4	1 1/4
90	90	3	8	1 1/4	1 1/4
100	100	3	8	1 1/4	1 1/4
110	110	2	6	1 1/4	1 1/4
125	125	1	6	1 1/2	1 1/2
150	150	1/0	6	1 1/2	1 1/2
175	175	2/0	6	2	2
200	200	3/0	6	2	2
225	225	4/0	4	2 1/2	2 1/2
250	250	250KCMIL	4	2 1/2	2 1/2
300	300	350KCMIL	4	2 1/2	3
350	350	400KCMIL	3	3	3
400	400	500KCMIL	3	3	3 1/2

**BRANCH CIRCUIT AND FEEDER SIZE** 



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SHEET NAME: ONE-LINE

**DIAGRAM** 

	SUPPLY FROM REFER T MOUNTING: SURFAC ENCLOSURE: TYPE 1		GRAM				277/480\ 3					A.I.C. RATING: 35,000 MAIN TYPE: MLO MAIN RATING: 600 A		
СКТ	DESCRIPTION	CB TRIP RATING	POLES	A			 В			POLES	CB TRIP RATING	DESCRI	PTION	ск
1	HV-3 3RD FLOOR	400 A	3	50666 VA 303	884 VA					3	250 A	LV-1 VIA X	FMR T-1	2
3	<del></del>					48971 VA	31400 VA							4
5								49327 VA	30956 VA					6
7	LTG - FIRST FLOOR	20 A	1	3139 VA 265	32 VA		05050374			3	250 A	LV-2 VIA X		8
9	LTG - FIRST FLOOR	20 A	1 1			1942 VA	25252 VA		10256 \/A					10
11 13	LTG - SECOND FLOOR LTG - SECOND FLOOR	20 A 20 A	1	2022 VA 55	22 \/\			2431 VA	19356 VA	3	30 A	ELEVATOR	EO DANEI	12 14
15	LIG-SECOND FLOOR	20 A	ı	2022 VA 33	33 VA		5533 VA					ELEVATOR		16
17							3333 VA		5533 VA					18
19									0000 V/ (					20
21														22
23														24
25														26
27														28
29														30
31														32
33														34
35														36
37														38
39														40
41	CONNECT	FED VA LOAD DE	DILAGE:	440450)	, A	4400	00.1/4	4070	00.1/4					42
		TED VA LOAD PER MPERE LOAD PER			'A		90 VA 1 A		03 VA 8 A					
LOAD CLASSI			CTED LO			D FACTOR	₹		ED DEMAI	ND		PANEL TO	TALS	
LIGHTING LOAD		6641 V			25.00%			8302 VA				221 221 22	10040344	
MOTOR LOAD		206778			0.00%			206778 V				OTAL CONNECTED VA: 33		
NONCONTINU		71300 \			0.00%			71300 VA				AL DEMAND VA LOAD: 32		
RECEPTACLE	LOAD	49400 \	/A	60	).12%			29700 VA				ONNECTED AMPERES: 40		
Lighting		4926 V	Ą	10	0.00%	ò		4926 VA			TOTA	AL DEMAND AMPERES: 38	6 A	
NOTES:				1						I		<b>'</b>		

	SUPPLY FROM REFER TO MOUNTING: SURFACE ENCLOSURE: TYPE 1		GRAM			(NE NELBOAR OLTAGE: PHASE: WIRE:	EW) D SCHEDI 208/120V 3	JLE				A.I.C. RATING: 10,000 MAIN TYPE: MCB MAIN RATING: 250 A		
СКТ	DESCRIPTION	CB TRIP RATING	POLES		<b>A</b>	E	3	(		POLES	CB TRIP RATING	DESC	RIPTION	CK
1	REC - VENDING MACHINE	20 A	1	1920 VA	1920 VA					1	20 A	WORK S	TATION 104	2
3	REC - VENDING MACHINE	20 A	1			1920 VA	1920 VA			1	20 A		TATION 104	4
5	REC - VENDING MACHINE	20 A	1					1920 VA	1920 VA	1	20 A		TATION 104	6
7	REC - BREAK ROOM	20 A	1	360 VA	1920 VA					1	20 A		TATION 104	8
9	REC - BREAK ROOM	20 A	1			540 VA	1920 VA			1	20 A		TATION 104	1
11	REC - VENDING MACHINE	20 A	1					1920 VA	1920 VA	1	20 A		TATION 104	1
13	REC - EXTERIOR	20 A	1	360 VA	1920 VA	0001/4	10001/4			1	20 A		TATION 104	1.
15	REC - EXTERIOR	20 A	1			360 VA	1920 VA	0001/4	4001/4	1	20 A		TATION 104	1
17	REC - EXTERIOR	20 A	1	4000 \ / 4	000 \ / 4			360 VA	180 VA	1	20 A		RE CASH REG.	1
19 21	REC - VENDING MACHINE (1) REC - VENDING MACHINE (1)	20 A 20 A	1 1	1920 VA	900 VA	1920 VA	260 \/A			1	20 A 20 A		ORK ROOM - STORE	2
23	REC - VENDING MACHINE (1)	20 A	1			1920 VA	360 VA	360 VA	900 VA	1	20 A		FFICE 104	2
25	REC - LOBBY	20 A	1	180 VA	360 VA			300 VA	900 VA	1	20 A		EXTERIOR	2
27	REC - LOBBY	20 A	1	100 VA	300 VA	720 VA	900 VA			1	20 A		- STORE	2
29	WORK STATION	20 A	1			120 VA	300 VA	1920 VA	180 VA	1	20 A		N'S RESTROOM	3
31	WORK STATION	20 A	1	1920 VA	180 VA			1020 77	100 77	1	20 A		N'S RESTROOM	32
33	WORK STATION	20 A	1	1020 171	100 171	1920 VA	540 VA			1	20 A		STROOM & JANITOR	3,
35	WORK STATION	20 A	1				0.0.7.	1920 VA	540 VA	1	20 A		NFERENCE	3
37	WORK STATION	20 A	1	1920 VA	360 VA					1	20 A		FLOOR BOXES	3
39	WORK STATION	20 A	1			1920 VA	180 VA			1	20 A	REC -	CONF TV	4
41	WORK STATION	20 A	1					1920 VA	1920 VA	1	20 A		STATION	4
43					720 VA					1	20 A	REC - OF	PEN OFFICE	4
45														4
47														4
49														5
51														5
53										_				5
55					13524 VA					3	150 A	L	V1B	5
57							14360 VA		4007014					5
59	001115075	-		2222	4 ) (4	0.4.40	0.14		13076 VA				<u></u>	6
	CONNECTED AMI	ED VA LOAD PER PERE LOAD PER				26	0 VA 2 A		66 VA 9 A					
AD CLAS	SSIFICATION	CONNE	ECTED LO	AD	DEMAN	FACTOR	1	ESTIMATI	ED DEMAN	ND		PANEL <sup>1</sup>	TOTALS	
OTOR LO		25940 \			100.00%			25940 VA					-	
	NUOUS LOAD	36480 \			100.00%			36480 VA			•	TOTAL CONNECTED VA:	92740 VA	
CEPTAC		30320 \			66.49%			20160 VA				TAL DEMAND VA LOAD:		
LOLITAG		30320	v / \		00.4870			20100 VA						
												CONNECTED AMPERES:		
					1						TO1	TAL DEMAND AMPERES:	229 A	

PROVIDE WITH FEED THROUGH LUGS

CKT  1 3 5 7 9 11 13 15 17	DESCRIPTION OCC-1 DOAU-1 LV-3 VIA XFMR T-3	CB TRIP RATING 125 A   15 A	<b>POLES</b> 3	24358 VA	4						1		
1 3 5 7 9 11 13 15	OCC-1 DOAU-1	125 A   15 A	3		•		В	(	•	POLES	CB TRIP RATING	DESCRIPTION	СКТ
3 5 7 9 11 13 15	  DOAU-1 	  15 A			11002 \/Δ	ļ -			,	3	60 A	RTU-1	2
5 7 9 11 13 15	 DOAU-1  	 15 A	1	21000 171			11902 VA						4
7 9 11 13 15	 							24358 VA	11902 VA				6
11 13 15 17	 		3	2214 VA	2103 VA					3	15 A	CHWP-1	8
13 15 17	LV-3 VIA XFMR T-3					2214 VA	2103 VA						10
15 17	LV-3 VIA XFMR T-3							2214 VA	2103 VA				12
17		125 A	3	4440 VA	2103 VA					3	15 A	CHWP-2	14
	<b></b>					4104 VA	2103 VA						16
19	<del></del>							4764 VA	2103 VA			<b></b>	18
	LTG - THIRD FLOOR	20 A	1	1722 VA	941 VA					3	15 A	HWP-1	20
21	LTG - THIRD FLOOR PATIO	20 A	1			306 VA	941 VA					<b></b>	22
23									941 VA			<b></b>	24
25					941 VA		244344			3	15 A	HWP-2	26
27							941 VA		0.4.4.3.4.4				28
29									941 VA			<del></del>	30
31													32
33													34
35 37													36 38
39													40
41													42
71	CONNECT	ED VA LOAD PER	DHASE.	5066	66 VA	4807	71 VA	4932	7 \/Δ				
	CONNECTED AN				3 A		7 A	178					
OAD CLASSIFICATI	ION	CONNE	CTED LO	)AD	DEMANI	D FACTOR	₹	ESTIMATE	ED DEMAN	ID		PANEL TOTALS	
LIGHTING LOAD		2026 V			125.00%			2533 VA					
MOTOR LOAD		138798			100.00%			138798 VA	\		TOTAL C	ONNECTED VA: 148963 VA	
NONCONTINUOUS LO	OAD	1180 V/			100.00%			1180 VA				MAND VA LOAD: 149455 VA	
RECEPTACLE LOAD								7020 VA				TED AMPERES: 179 A	
NECEPTAGLE LOAD		7020 V/	<del>-1</del>		100.00%	)		7020 VA				AND AMPERES: 180 A	
NOTES:											TOTAL DEIVI	AND ANTERLO. 100 A	

	SUPPLY FROM REFER TO MOUNTING: SURFACE ENCLOSURE: TYPE 1	ONE-LINE DIA	GRAM			LV (NE NELBOAR 'OLTAGE: PHASE: WIRE:	<b>D SCHED</b> 208/120V 3	JLE				I.C. RATING: 10,000 MAIN TYPE: MLO AIN RATING: 225 A		
СКТ	DESCRIPTION	CB TRIP RATING	POLES		4	ı	3	(	:	POLES	CB TRIP RATING	DESC	RIPTION	СКТ
1					1920 VA					1	20 A	WORK	STATION	2
3	REC - OFFICE 116	20 A	1			720 VA	1920 VA			1	20 A		STATION	4
5	REC - OFFICE 117	20 A	1					540 VA	1920 VA	1	20 A	WORK	STATION	6
7	REC - OFFICE 118	20 A	1	900 VA										8
9	REC - WORK STATION UTILITY	20 A	1			540 VA		000						10
11	ELEVATOR CONTROLLER	20 A	1	000111	7001/4			860 VA		4	00.1	BEQ 0==	105 400 11411	12
13	REC - ELEC ROOM, DATA	20 A	1	360 VA	720 VA	4000 \ / 4	000 \ / 4			1	20 A		ICE 109, HALL	14
15	REC - DATA	20 A	1			1680 VA	360 VA	4500 \ / 4	700 \ / A	1	20 A		IRE RISER	16
17	REC - DATA	20 A	1	4700 \ / A	200 \ / 4			1500 VA	720 VA	1	20 A		OFFICE 107	18
19 21	FCU-108, 110 	20 A	2	1728 VA	360 VA	1728 VA	500 \/A			1	20 A 20 A		HALLWAY	20 22
23	 FCU-112	20 A	2			1720 VA	300 VA	1176 VA	1176 \//	2	20 A		VC (1) :U-109	24
25		20 A		1176 \//	1176 VA			1176 VA	1176 VA		20 A	FU		26
27				1170 VA	1170 VA		1728 VA			2	20 A	FCII-	104, 113	28
29							1720 VA		1728 VA			1 00-		30
31					1728 VA				1720 771	2	20 A	FCU-	111, 107	32
33					1720 771		1728 VA					100		34
35							1720 171		1728 VA	2	20 A	FCU-	105, 106	36
37					1728 VA									38
39							1728 VA			2	20 A	FCU-1	02A, 102B	40
41									1728 VA					42
43					1728 VA					2	20 A	FCU-	101, 103	44
45							1728 VA							46
47														48
49														50
51														52
53														54
	CONNECTEI CONNECTED AMP	D VA LOAD PER PERE LOAD PER			24 VA 3 A		0 VA 0 A	1307 109						
OAD CL	ASSIFICATION	CONNE	CTED LO	AD	DEMAN	D FACTOR	<u> </u>	ESTIMATE	ED DEMAN	ND		PANEL 7	TOTALS	
OTOR L		25940 \			100.00%			25940 VA	· u				-	
	TINUOUS LOAD	5760 V			100.00%			5760 VA			TO	TAL CONNECTED VA:	40960 VA	
	CLE LOAD	9260 V			100.00%			9260 VA				AL DEMAND VA LOAD:		
		3200 V			100.0070	•		0200 VA				NNECTED AMPERES:		
		l l			1						IUIAL	_ DEMAND AMPERES:	114 A	



THIS DOCUMENT IS
PRELIMINARY
IN NATURE AND IS NOT
A FINAL, SIGNED AND
SEALED DOCUMENT

MATTHEW J. RUTKOWSKI ENGINEER OF RECORD



810 SOUTH CINCINNATI SECOND FLOOR TULSA, OK 74119 918.877.6000 www.cyntergy.com

Honor Opera Building

GH2 PROJECT NUMBER: **20170021** 

Folds

SSUE:

ISSUE DATE:

OTHER ISSUE DATES:

PERMIT SET 06/19/2020
PROGRESS SET 07/14/2020
PROGRESS SET 08/04/2020

SHEET NAME:
PANEL
SCHEDULES

SHEET NUMBER:

E-601

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	SUPPLY FROM REFER TO MOUNTING: SURFACE ENCLOSURE: TYPE 1		GRAM				208/120\ 3					A.I.C. RATING: 10,000 MAIN TYPE: MCB MAIN RATING: 225 A					
СКТ	DESCRIPTION	CB TRIP RATING	POLES		A		В	(	<b>:</b>	POLES	CB TRIP RATING		CRIPTION	CK			
1	FUTURE OFFICE SPACE	20 A	1	1920 VA	1920 VA					1	20 A		ON STUDIO	2			
3	FUTURE OFFICE SPACE	20 A	1			1920 VA	360 VA			1	20 A		VATION STUDIO	4			
5	FUTURE OFFICE SPACE	20 A	1					1920 VA	180 VA	1	20 A		VATION STUDIO	6			
7	FUTURE OFFICE SPACE	20 A	1	1920 VA	360 VA					1	20 A		VATION STUDIO	8			
9	FUTURE OFFICE SPACE	20 A	1			1920 VA	360 VA			1	20 A		VATION STUDIO	10			
11	REC - FUTURE SPACE	20 A	1					360 VA	180 VA	1	20 A	REC - INNO	VATION STUDIO	12			
13	REC - FUTURE SPACE	20 A	1	360 VA										14			
15	FUTURE OFFICE SPACE	20 A	1			1920 VA								16			
17	FUTURE OFFICE SPACE	20 A	1					1920 VA						18			
19	REC - FUTURE SPACE	20 A	1	360 VA	720 VA					1	20 A		E 211 EXTERIOR	20			
21	REC - FUTURE SPACE	20 A	1			540 VA	1000 VA			1	20 A		USH VALVES	22			
23	REC - WOMEN'S SHOWER	20 A	1					180 VA	900 VA	1	20 A		HALL, STORAGE	24			
25	REC - WOMEN'S RESTROOM	20 A	1	180 VA	540 VA					1	20 A		OFFICE 203	26			
27	REC - WOMEN'S RESTROOM	20 A	1			180 VA	540 VA	100111	- 12 ) / 1	1	20 A		OFFICE 204	28			
29	REC - MEN'S SHOWER	20 A	1					180 VA	540 VA	1	20 A	1	OFFICE 214	30			
31	REC - MEN'S RESTROOM	20 A	1	360 VA	540 VA					1	20 A		OFFICE 215	32			
33	REC -OFFICE 213 & STAIRS	20 A	1			720 VA	540 VA	2221/4		1	20 A		OFFICE 217	34			
35	REC - STAIR	20 A	1	4000144	4000144			360 VA	720 VA	1	20 A		OFFICE 218	36			
37	FUTURE OFFICE SPACE	20 A	1	1920 VA	1920 VA	400014	4000144			1	20 A		FFICE SPACE	38			
39	FUTURE OFFICE SPACE	20 A	1			1920 VA	1920 VA		4000144	1	20 A		FFICE SPACE	40			
41	FUTURE OFFICE SPACE	20 A	1	4000144	400014			1920 VA	1920 VA	1	20 A		FFICE SPACE	42			
43	FUTURE OFFICE SPACE	20 A	1	1920 VA	1920 VA	1222111				1	20 A		FFICE SPACE	44			
45	FUTURE OFFICE SPACE	20 A	1			1920 VA	0 VA		0.144	1	20 A		PARE	46			
47	ODADE	00.4	4	0.1/4	0.1/4				0 VA	1	20 A		PARE	48			
49	SPARE	20 A	1	0 VA	0 VA		0.1/4			1	20 A	1	PARE	50			
51							0 VA		0.1/4	1	20 A		PARE	52			
53	DEO. OFFICE 044	00.4	4	700 \ / 4					0 VA	1	20 A	5	PARE	54			
55	REC - OFFICE 211	20 A	1	720 VA		E40.\/A						+		56			
57	REC - OFFICE 211	20 A	1			540 VA		540.1/4				+		58			
59	REC - OFFICE 216	20 A	 	4756	\	4000	20.144	540 VA	0.1/4					60			
	CONNECTED AMI	ED VA LOAD PER PERE LOAD PER			30 VA 2 A	ļ	00 VA 2 A		0 VA A								
OAD CLA	SSIFICATION	CONNE	ECTED LO	)AD	DEMAN	D FACTOR	₹	ESTIMATE	ED DEMAN	ND		PANEL	TOTALS				
	INUOUS LOAD	33640 \			100.00%			33640 VA									
	CLE LOAD	12060 \			91.46%	<u> </u>		11030 VA				TOTAL CONNECTED VA:	45700 VA				
	<del></del>	12000			2 1. 10 / 0					+		TAL DEMAND VA LOAD:					
												CONNECTED AMPERES:					
								1			TO	TAL DEMAND AMPERES:	1124 A				

	SUPPLY FROM REFER TO C MOUNTING: SURFACE ENCLOSURE: TYPE 1	NE-LINE DIA	GRAM			(NE NELBOAR OLTAGE: PHASE: WIRE:	<b>D SCHED</b> 208/120V	_			M	C. RATING: 10,000 IAIN TYPE: MCB N RATING: 225 A	
СКТ	DESCRIPTION	CB TRIP RATING	POLES		4		В		C	POLES	CB TRIP RATING	DESCRIPTION	СКТ
1	REC - LOUNGE AND STAIRS	20 A	1	720 VA				•		1	20 A	REC - BAR	2
3	REC - PATIO	20 A	1	120 VA	300 VA	540 VA	360 VA			1	20 A	REC - BAR	4
5	REC - BELOW CEILING	20 A	1			070 VA	300 VA	360 VA	360 VA	1	20 A	REC - BAR	6
7	EF-1,2	20 A	1	200 VA	360 VA			JUU VA	J00 VA	1	20 A	REC - BAR	8
9	FCU-301	20 A	1	200 VA	300 VA	1728 VA	180 VA			1	20 A	REC - KEGER	10
11	REC - PATIO UNDER SOFFIT	20 A	1			1720 VA	100 VA	360 VA	360 VA	1	20 A	REC - BAR	12
13	REC - BELOW CEILING	20 A	1 1	360 VA	720 VA			300 VA	300 VA	1	20 A	REC - MECH ROOM	14
15	HVAC CONTROL POWER	20 A	1 1	300 VA	120 VA	180 VA	360 VA			1	20 A	REC - MAINT. RECEPTS	16
17	REC - TOILET 303 & 304	20 A	1			100 171	000 171	360 V/A	1392 VA	1	20 A	2 PUMPS	18
19	REC - BAR STORAGE, CLOSET, STAIRS	20 A	1	720 VA	1000 VA			000 171	1002 771	1	20 A	HEAT TRACE (2)	20
21	REC - LOUNGE	20 A	1	720 171	1000 171	540 VA	216 VA			1	20 A	HOT WATER BOILER	22
23	GWH-1	20 A	1			0.0.0		180 VA	1392 VA	1	20 A	2 PUMPS	24
25	SPARE	20 A	1	0 VA	0 VA				7442	1	20 A	SPARE	26
27	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	28
29	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	30
31	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	32
33	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	34
35	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	36
37	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	38
39	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	40
41	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	42
	CONNECTED CONNECTED AMPE			37	O VA ' A		4 VA I A		4 VA ) A				
	ASSIFICATION		ECTED LO	AD		D FACTOR			ED DEMAI	ND		PANEL TOTALS	
MOTOR L		5108 V			100.00%			5108 VA					
NONCON.	TINUOUS LOAD	1180 V	Ά		100.00%	)		1180 VA			TOTA	AL CONNECTED VA: 13308 VA	
RECEPTA	CLE LOAD	7020 V	Ά		100.00%	)		7020 VA				DEMAND VA LOAD: 13308 VA	
												NECTED AMPERES: 37 A	
											TOTAL	DEMAND AMPERES: 37 A	

NOTES: 1) GFCI BREAKER

2) GFEP BREAKER

PROVIDE WITH FEED THROUGH LUGS

	MOUNTING: SURF	SUPPLY FROM REFER TO ONE-LINE DIAGRAM MOUNTING: SURFACE ENCLOSURE: TYPE 1					<b>2B</b> EW) D SCHED 208/120V 3 4				A.I.C. RATING: 10,000  MAIN TYPE: MLO  MAIN RATING: 225 A			
СКТ	DESCRIPTION	CB TRIP RATING	POLES		<b>A</b>	E	В		C	POLES	CB TRIP RATING	DESCRIPTION	СКТ	
1	FCU-208	20 A	2	864 VA	864 VA					2	20 A	FCU-207	2	
3			1			864 VA	864 VA						4	
5	FCU-205	20 A	2					1176 VA	864 VA	2	20 A	FCU-202	6	
7			-	1176 VA	864 VA							<del></del>	8	
9	FCU-201	20 A	2			1176 VA	864 VA		221111	2	20 A	FCU-204	10	
11				0041/4	00414			1176 VA	864 VA				12	
13	FCU-203	20 A	2	864 VA	864 VA	0041/4	0041/4			2	20 A	FCU-206	14	
15 17	 ECIL 200	20 A				864 VA	864 VA	9643/4	964 \/A		20 A	 FCU-210	16	
19	FCU-209 	20 A	2	864 VA	864 VA			864 VA	864 VA	2	20 A	FCU-210	18 20	
21	 FCU-213	20 A	2	004 VA	004 VA	864 VA	864 VA			2	20 A	 FCU-211	22	
23						004 77	00 <del>+</del> VA	864 VA	864 VA				24	
25	FCU-214	20 A	2	864 VA	864 VA			001 171	001 77	2	20 A	FCU-215	26	
27				00.17.	30.17.	864 VA	864 VA						28	
29	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	30	
31	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	32	
33	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	34	
35	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	36	
37	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	38	
39	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	40	
41	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	42	
	CONNE	ECTED VA LOAD PEF	R PHASE:			8952		7536						
	CONNECTED	AMPERE LOAD PER	R PHASE:	76	Α	76	6 A	63	3 A					
LOAD CLASSIFICATI	ON		CTED LO	AD	D DEMAND FACTOR				ED DEMAN	ND	PANEL TOTALS			
MOTOR LOAD		25440 \	/A		100.00%			25440 VA						
												ONNECTED VA: 25440 VA		
											TOTAL DEN	MAND VA LOAD: 25440 VA		
						<u> </u>	<u> </u>		<u> </u>		TOTAL CONNEC	TED AMPERES: 71 A		
											TOTAL DEM	AND AMPERES: 71 A		



THIS DOCUMENT IS **PRELIMINARY** IN NATURE AND IS NOT A FINAL, SIGNED AND SEALED DOCUMENT

MATTHEW J. RUTKOWSKI ENGINEER OF RECORD

810 SOUTH CINCINNATI SECOND FLOOR TULSA, OK 74119 918.877.6000 www.cyntergy.com

GH2 PROJECT NUMBER: 20170021 ISSUE DATE: **06/18/20** 

Folds

OTHER ISSUE DATES:

NO. DESCRIPTION PERMIT SET 06/19/2020 07/14/2020

DATE

08/04/2020

PROGRESS SET PROGRESS SET

SHEET NAME: **PANEL** SCHEDULES

	OCCUPANCY SENSOR SCHEDU	JLE
SYMBOLS	DESCRIPTION	MODEL NUMBER
<b>©</b> <sub>a</sub>	CEILING MOUNTED, 360 DEGREE, DUAL TECHNOLOGY OCCUPANCY SENSOR (2000SF). LOWER CASE LETTER DENOTES SWITCH DESIGNATION, EXAMPLE "a".	GREENGATE: OAC-DT-2000 SERIES (OR EQUAL BY LUTRON, LEVITON, OR SENSOR SWITCH)
<b>\$</b> OSa	WALL BOX DUAL TECHNOLOGY OCCUPANCY SENSOR SWITCH. LOWER CASE LETTER DENOTES SWITCH DESIGNATION, EXAMPLE "a". "3" DENOTES 3-WAY CONFIGURATION.	GREENGATE: ONW-D-1001 SERIES (OR EQUAL BY LUTRON, LEVITON, OR SENSOR SWITCH)

### COMMENTS

TIME DELAY SHALL BE SET AT 30 MINUTES. SENSITIVITY SHALL BE AT MAXIMUM SETTINGS. CONNECT TO LIGHT FIXTURES INSIDE ROOM/AREA AS INDICATED BY SWITCH DESIGNATION SHOWN AT OCCUPANCY SENSOR AND/OR WHERE SENSOR IS PLACED. MULTIPLE OCCUPANCY SENSORS MAY CONTROL ROOM/AREA. CONNECT PER MANUFACTURERS WIRING INSTRUCTIONS.

WALL BOX OCCUPANCY SENSOR SHALL BE SET TO 'MANUAL' FOR VACANCY SENSOR OPERATION (MANUAL ON/OFF WITH ADDITIONAL OCCUPANCY SENSING OFF CONTROL).

LOCATIONS OF DEVICES SHOWN ON DRAWINGS ARE BASED ON COVERAGE AREAS OF MANUFACTURER AND MODEL NUMBER SHOWN IN OCCUPANCY SENSOR SCHEDULE. IF OTHER APPROVED MANUFACTURER'S DEVICES ARE USED, THE CONTRACTOR AND MANUFACTURER SHALL CONFIRM THAT THE COVERAGE AREA IS EQUAL TO OR LARGER THAN THE SPECIFIED. CONTRACTOR OR MANUFACTURER SHALL COMMISSION (AIM, ADJUST, ETC.) THE OCCUPANCY SENSORS AFTER INSTALLATION FOR MAXIMUM PERFORMANCE.

DO NOT EXCEED LOAD LIMITATIONS (IN PARTICULAR WALL BOX DEVICES) OF LIGHTING CONTROL DEVICES. IF DEVICE LOAD LIMITATIONS ARE EXCEEDED, THEN PROVIDE A RELAY AND OR CONTACTOR SYSTEM (NOT SHOWN) CONTROLLED BY THE LIGHTING CONTROL DEVICE.

PROVIDE DUAL CONTACTS WHERE REQUIRED FOR CONTROL OF HVAC SYSTEMS.

			LIGHT FIXTURE SO		<b>L</b>		
			CATALOG NUMBER OR ENGINEER APPROVED				
MARK	DESCRIPTION	MANUFACTURER	EQUAL	MOUNTING	LAMP TYPE		COMMENTS
A	2x2 RECESSED LED	COOPER	22CZ2-39-UNV-L840	RECESSED	LED, 4000K		
В	6" RECESSED DOWNLIGHT	HALO	DL-HC6-20-DO10-HM6-12-840-61-MD-H	RECESSED	LED, 4000K		
B2	6" RECESSED DOWNLIGHT	EATON	HC620D010-HM612840-61MDH	RECESSED	LED, 4000K	+	
В3	6" RECESSED DOWNLIGHT	COOPER	LD6B15D010-EU6B10208040-6LB1LI	RECESSED	LED, 4000K		
С	DECORATIVE PENDANT	COOPER	S122DIP-C-675D-330U-840-C10-JB-4F-1-U-DD-F   1-W	PENDANT	LED, 4000K	183 VA	
D4	4' LED PENDANT	COOPER	SQ4-F-050U-050D-840-1-D-UNV-STD-W-AC48-U M-4	PENDANT	LED, 4000K	32 VA	
D6	6' LED PENDANT	COOPER	SQ4-F-050U-050D-840-1-D-UNV-STD-W-AC48-U M-6	PENDANT	LED, 4000K	48 VA	
D8	8' LED PENDANT	COOPER	SQ4-F-050U-050D-840-1-D-UNV-STD-W-AC48-U M-8	PENDANT	LED, 4000K	64 VA	
Е	LED EXIT SIGN	EATON	APX7R	UNIVERSAL	LED	2 VA	FACES AND ARROWS AS SHOWN ON DRAWINGS.
EM	EMERGENCY EGRESS LIGHT	EATON	APELH2	SURFACE	LED	8 VA	
F	4' LED STRIP LIGHT	METALUX	4SLSTP4040D-UNV	SURFACE	LED, 4000K	44 VA	
G1	25' LED POLE LIGHT	VISIONAIRE LIGHTING	PRV-PA2B-740-U-T4W		LED, 4000K	177 VA	25' SQUARE STRAIGHT POLE
G2	25' LED POLE LIGHT WITH 2 FIXTURES	VISIONAIRE LIGHTING	(2) PRV-PA2B-740-U-5WQ	POLE	LED, 4000K	177 VA	25' SQUARE STRAIGHT POLE
J	EXTERIOR WALL MOUNTED LED FIXTURE	VISIONAIRE LIGHTING	VMS-1-T3-48LC-3-4K-UNV-WM-BZ		LED, 4000K	52 VA	MOUNT FIXTURE 10' AFF, UNO
L	PEDESTRIAN WALL LIGHTING	COOPER	XTOR1B-W		LED, 4000K	12 VA	
N	LED BOLLARD	LUSSO	LSO-B-S41-T3-20LC-3-4K-UNV-AB-BZ	BOLLARD	LED, 4000K	22 VA	
Q	DECORATIVE CHANDELIER	TBD	TBD	PENDANT		100 VA	
S	EXTERIOR SCONCE	COOPER	HCC4W15D010MB-HM412840-41MDC		LED, 4000K	15 VA	MOUNT FIXTURE 70" AFF, UNO
Т	ADJUSTABLE RECESSED DOWNLIGHT	EATON	MRZ-1-REC-FLN-4-L40-80-WFL-UNV-W-STD	RECESSED	LED, 4000K	16 VA	FIX FIXTURE AT A 45DEG ANGLE UPON INSTALLATION

FIXTURE SCHEDULE NOTES

### NOTES

NOTES:
- PRIOR APPROVAL REQUESTS FOR EQUALS: ALL PRIOR APPROVAL REQUESTS SHALL BE SUBMITTED FOR ENGINEER REVIEW PRIOR TO BID IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. UNLESS NOTED OTHERWISE, PRIOR APPROVAL REQUESTS SHALL BE SUBMITTED TEN DAYS PRIOR TO BID. REFER TO GENERAL NOTES AND OR SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

- ALL FIXTURES SHALL HAVE A MINIMUM WARRANTY OF FIVE YEARS.
- CORRELATED COLOR TEMPERATURE SHALL BE LESS THAN OR EQUAL TO ONE MACADAM ELLIPSE FOR COVE LIGHTING AND LESS THAN OR EQUAL TO THREE MACADAMS ELLIPSES FOR ALL OTHER LIGHTING.

- FIXTURES (INCLUDING LED'S AND DRIVERS) SHALL HAVE A MINIMUM 50,000HR LIFE AT A LUMEN MAINTENANCE OF GREATER THAN OR EQUAL TO 70% FOR THE INSTALLED APPLICATION AND TEMPERATURE FOR THIS PROJECT.

- UNLESS OTHERWISE APPROVED, FIXTURE SUBSTITUTIONS SHALL BE PROVIDED WITH "LIGHTING FACTS", "DESIGNLIGHTS CONSORTIUM" (DLC), OR OTHER THIRD PARTY PERFORMANCE VALIDATION.
- LIGHTING CONTROL DEVICES AND FIXTURE DRIVERS/BALLASTS/POWER SUPPLIES/ETC. SHALL BE COMPATIBLE AND BE PROVIDED FOR A COMPLETE/OPERABLE SYSTEM.

- LIGHTING CONTROL DEVICES AND FIXTURE DRIVERS/BALLASTS/POWER SUPPLIES/ETC. SHALL BE COMPATIBLE AND BE PROVIDED FOR A COMPLETE/OPERABLE SYSTEM.
- AFTER AWARD, IF A SUBMITTED FIXTURE IS DIFFERENT FROM THE EXACT SPECIFIED FIXTURE, LIGHTING PHOTOMETRICS FOR ALL INTERIOR AND EXTERIOR AREAS SHALL BE PROVIDED BY THE CONTRACTOR TO THE ENGINEER WITH THE SUBMITTALS.

- ALL FIXTURE ASSEMBLIES SHALL BE UL OR OTHER APPROVED NATIONALLY RECOGNIZED TESTING AGENCY LISTED AND LABELED.

# ARCHITECTS

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MATTHEW J. RUTKOWSKI ENGINEER OF RECORD



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GH2 PROJECT NUMBER: **20170021** 

ISSUE DATE:

OTHER ISSUE DATES:

 NO.
 DESCRIPTION
 DATE

 PERMIT SET
 06/19/2020

 PROGRESS SET
 07/14/2020

 PROGRESS SET
 08/04/2020

SHEET NAME:
SCHEDULES AND

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ISSUE DATE: **07/14/20** ISSUE:

GH2 PROJECT NUMBER: **20170021** 

OTHER ISSUE DATES:

NO. DESCRIPTION DATE

PERMIT SET 06/19/2020
PROGRESS SET 07/14/2020

PROGRESS SET

SHEET NAME:
ELECTRICAL SITE

PLAN

SHEET NUMBER:
ES-10