DRAWING ABBREVIATIONS

ACOUSTIC ADJUSTABLE ABOVE FINISH FLOOR ALUMINUM **ALTERNATE** APPROX. **APPROXIMATE ARCHITECTURAL** BLDG BLKG CEM CER CL CMU CONT DIA DIM EXT EXST FD BUILDING BLOCKING CEMENT **CERAMIC** CENTERLINE **CONCRETE MASONRY UNIT** CONTINUOUS DIMENSION

EXTERIOR EXISTING FLOOR DRAIN

FIRE EXTINGUISHER CABINET GYPSUM WALL BOARD HDWR HVAC INSUL INT KIT LAM

HEADER HARDWOOD **HARDWARE** HOLLOW METAL HORIZONTAL HEATING, VENTILATING & AIR CONDITIONING INSULATION

KITCHEN LAMINATED **LAVATORY VERIFY IN FIELD**

DRAWING SYMBOLS **ROOM TAG COLUMN LINE** WINDOW TYPE **ELEVATION** DOOR TAG **INTERIOR ELEVATION** REVISION INDICATION DETAIL SECTION PARTITION INDICATION

CONSTRUCTION NOTES:

- ALL DIMENSIONS ARE FROM SUBSTRATE.
- 2. DO NOT SCALE DRAWINGS.
- NOTIFY ARCHRTECT OF ANY DISCREPANCIES WITHIN
- THE DRAWINGS PRIOR TO PROCEEDING WRTH CONSTRUCTION.
- 4. ALL WORK SHALL COMPLY WUH APPLICABLE STATE, FEDERAL AND LOCAL CODES AND ALL NECESSARY UCENSESAND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR UNLESS PREVIOUSLY OBTAINED BY THE
- 5. UNLESS NOTED OTHERWISE, ALL CONCRETE SHALL BE OF NOMINAL WEIGHT AND HAVE A MIN. 20 DAY STRENGTH OF 3000 PSI.
- 6. REINFORCING STEEL SHALL CONFORM TO ASTMB15, GRADE 60.
- 7. ALL MECHANICAL EQUIPMENT REQUIRING ELECTRICAL POWER SHALL
- BE INSTALLED WITH DISCONNECT SWITCHES AT EACH PIECE OF EQUIPMENT.
- 8. ALL MECHANICAL EQUIPMENT AND SYSTEMS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE BY OWNER.
- 9. HVAC COMPRESSOR SHALL HAVE EXTENDED 5-YEAR MANUFACTURERS WARRANTY,
- 10. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL MECHANICAL EQUIPMENT, DUCTWORK, ETC. TO FIT WITHIN THE SPACE ALLOWED BY THE ARCHITECTURAL CONDITIONS.
- 11 MOUNT THERMOSTAT AND SENSORS 4'-0" A.F.F.
- 12. SANFARY AND DRAINAGE PIPING SHALL BE SLOPED AT 1/4' PER FOOT.
- 13. ALL BATHROOM FIXTURES AND VALVES SHALL BE PROVIDED W/ADDMONAL BLOCKING AS REQUIRED TO RIGIDLY SECURE TO ADJACENT STRUCTURE.
- 14. ALL PLUMBING EQUIPMENT AND SYSTEMS SHALL BE GUARANTEED FOR A MINIMUM OF ONE YEAR AFTER FINAL
- 15. ALL WORK SHALL BE PERFORMED IN A FINISHED WORKMANLIKE MANNER TO THE ENTIRE SATISFACTION OF THE OWNER, AND IN ACCORDANCE WFTH THE CONTRACT DOCUMENTS AND THE BEST RECOGNIZED TRADE PRACTICES.
- 16. ALL WORK SHALL BE COORDINATED WITH ALL TRADE DISCIPUNES TO ENSURE PROPER EXECUTION OF THE WORK.
- 17. UNLESS NOTED OTHERWISE, DOORS ARE LOCATED4" FROM FINISHED FACE OF THE WALL ADJACENT TO THE HINGE
- 18. CONTRACTOR TO PROVIDE ONE SET OF AS-BUILT DRAWINGS TO THE OWNER.
- 19. INSTALL CONTINUOUS BLOCKING BETWEEN STUDS FOR ALL HANDRAILS, GRAB BARS, ACCESSORIES, FIXTURES, BRACKETS, HUNG CABINETWORK AND MISC. SPECIALTIES UNLESS OTHERWISE NOTED.
- 20. ALL PIPE, DUCT, ETC., IN FINISH AREAS SHALL BE CONTAINED WITHIN WALLS OR FURRING UNLESS OTHERWISE
- 21 ANY WOOD IN CONTACT WITH CONCRETE, MASONRY OR SOIL, SHALL BE PRESSURE TREATED.
- 22. WHERE CONNECTIONS ARE NOT SHOWN ON THE DRAWING, COMPLY WITH NAILING SCHEDULE IN THE BUILDING CODE.
- 23. ALL NAILS AT NON-AIRCONDMQNED/HEATED AREAS SHALL BE GALVANIZED.
- 24. ALL INTERIOR FINISHES, SMOKE DEVELOPMENT, FLAME SPREAD RATINGS, ETC. SHALL COMPLY WITH 2MB INTERNATIONAL BUILDING CODE CHAPTER 8.
- 25. TENANT IS RESPONSIBLE FOR ADA LIFE SAFETY COMPLIANCE.





BUILDING CODE REFERENCE

GEORGIA STATE MINIMUM STANDARD CODES INTERNATIONAL BUILDING CODE, 2018 EDITION WITH GEORGIA STATE AMENDMENTS INTERNATIONAL MECHANICAL CODE, 2018 EDITION WITH GEORGIA STATE AMENDMENTS INTERNATIONAL PLUMBING CODE, 2018 EDITION WITH GEORGIA STATE AMENDMENTS INTERNATIONAL FUEL GAS CODE, 2018 EDITION WITH GEORGIA STATE AMENDMENTS

NFPA NATIONAL ELECTRICAL CODE, 2017 EDITION INTERNATIONAL ENERGY CONSERVATION CODE. LATEST EDITION WITH GEORGIA STATE AMENDMENTS INTERNATIONAL RESIDENTIAL CODE FOR ONE & TWO FAMILY DWELLINGS GEORGIA STATE AMENDMENTS

"A SIGN CLEARLY STATING THAT SMOKING IS PROHIBITED SHALL BE CONSPICUOUSLY POSTED BY THE BUILDING OWNER, OPERATOR, MANAGER, OR OTHER PERSON IN CONTROL IN EVERY PUBLIC PLACE AND PLACE OF EMPLOYMENT. NO SMOKING SIGNS OR THE INTERNATIONAL 'NO SMOKING' SYMBOL CONSISTING OF A PICTORAL REPRESENTATION OF A BURNING CIGARETTE ENCLOSED IN A RED CIRCLE WITH A RED BAR ACROSS IT SHALL

"SIGNS ARE NOT APPROVED WITHIN THE SCOPE OF THIS BUILDING PERMIT. A SEPARATE SIGN LOCATION PERMIT IS REQUIRED FOR EACH SIGN."

THE FOLLOWING CODE SHALL BE FOLLOWED: 2012 GWINNETT COUNTY ORDINANCE FOR FIRE PROTECTION AND LIFE SAFETY, THE CURRENT

EDITION OF THE NEPA CODES AND STANDARDS AS ADOPTED AND MODIFIED BY THE STATE FIRE MARSHAL, NEPA 101 LIFE SAFETY CODE 2012

EQUIPMENT INSTALLED AND OPERATING, READY FOR OCCUPANCY. THE INSPECTION REQUEST MUST BE PHONED IN BEFORE 2:00PM THE DAY PRIOR

TO THE DATE THE INSPECTION IS NEEDED. (EMERGENCY LIGHTING) COMPLYING WITH NFPA 101 LIFE SAFETY CODE, CHAPTER 7, SEC. 7.9, 2000 EDITION, SHALL BE INSTALLED. ADDITIONAL EMERGENCY LIGHTING MAY BE REQUIRED UPON FIELD INSPECTION (SHALL PROVIDE ON PLANS) FLUSH

CONTACT THE GWINNETT COUNTY FIRE MARSHAL'S (INSPECTION REQUEST LINE) AT (678) 518-6277 FOR INSPECTIONS AT (80%) AND (100%) COMPLETION.--NOTE: (80%) -INSPECTION-OF-ANY-FIRE RATED-BARRIERS,--FLOOR-OR CEILING: (100%) = FINAL INSPECTION: ALL SYSTEMS,

2012 GWINNETT COUNTY ORDINANCE FOR FIRE PREVENTION AND PROTECTION ORDINANCE(INCLUDE CODE YEAR)

NOTE: GWINNETT COUNTY FIRE MARSHAL INSPECTION ARE TO BE SCHEDULED ONLINE AT:

-80%=INSPECTIONS OF ANY FIRE RATED PARTITIONS,FLOOR OR CEILING,CEILING COVER UP.

-100%=FINAL INSPECTIONS,ALL SYSTEM AND EQUIPMENT ARE INSTALLED AND OPERATIONAL,

ANY INSPECTION REQUESTS MADE AFTER 2:00PM WILL BE SCHEDULED FOR THE NEXT BUSINESS DAY.

CONSTRUCTION TYPE "V-A" **EXISTING MATERIALS OF CONSTRUCTION**

ROOF - WOOD TRUSSES W/TYPE "A" ROOF INTERIOR WALLS - WOOD STUDS & GYPBD EXTERIOR WALLS - WOOD STUDS, STONE, STOREFRONT & STUCCO FLOOR - SLAB ON GRADE

(THE GWINNETT COUNTY CLEAN INDOOR AIR ORDINANCE, SECTION 42-129)

(CONTACT DEVELOPMENT REVIEW AT 678-518-6000 FOR ADDITIONAL INFORMATION)

EXISTING FIRE HYDRANTS (2) NEAR SITE BEFORE STARTING CONSTRUCTION.

HTTPS://EDDSPERMITS.GWINNETTCOUNTY.COM/CITIZENACCESS/

SEPARATE SUBMITTALS AND REVIEWS BY FIRE PLAN REVIEW FOR:

2020 OCGA 120-3-3 GEORGIA MINIMUM FIRE SAFETY STANDARDS

NFPA 101 LIFE SAFETY CODE 2018 EDITION.(AMENDED BY 120-3-3)

-50%=INSPECTIONS OF VERTICAL PENETRATIONS

-RACK STORAGE(PRODUCT HEIGHT OVER 12 FEET) -STORAGE AND/OR USE OF HAZARDOUS MATERIALS

2018 INTERNATIONAL FIRE CODE(AMENDED BY 120-3-3)

2010 ADA STANDARD FOR ACCESSIBLE DESIGN.

-FIRE SPRINKLER

-KITCHEN HOODS

-FIRE ALARM SYSTEMS

-FIRE SUPPRESSION SYSTEMS

NON SPRINKLED FIRE ALARM SYSTEM - NO

BE POSTED."

FIRE DEPARTMENT NOTES:

ADDITION ELEVATION

OCCUPANCY DATA

FUNCTION	AREA*	PERSON	PERSONS F	ACTOR		EXIT AVAILABLE	
	SF	SF		'	INCHES	INCHES	
FIRST FLOOR							
MERCANTILE	6000	30	200.00	0.2	40.00	72	
SECOND FLOOR							
OFFICE	6000	150	40.00	0.2	8.00	36	

* LARGEST SINGLE FOOR AREA

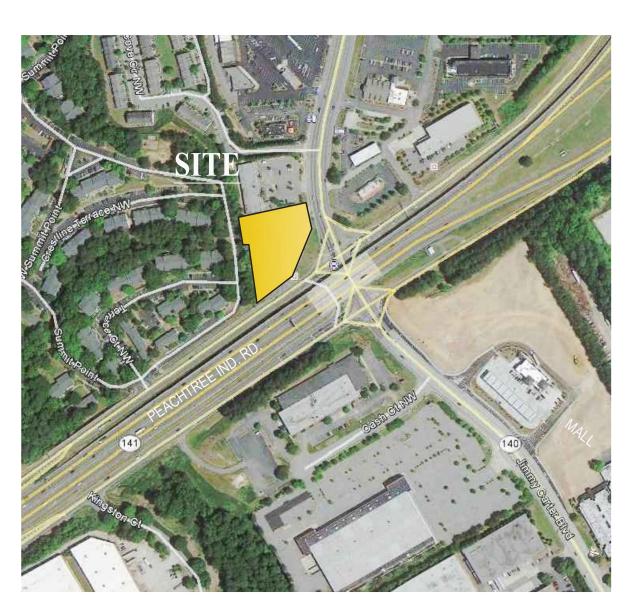
NOTE: ANY POTENTIAL RESTAURANT LEASE OVER 600sf SHALL HAVE A FLOOR FIRE RATING OF 2hrs.

RETAIL/OFFICE ADDTION

SHELL STATION

6405B PEACHTREE IND.

PEACHTREE CORNEERS, GA 30092



LOCATION MAP

GWINNETT COUNTY

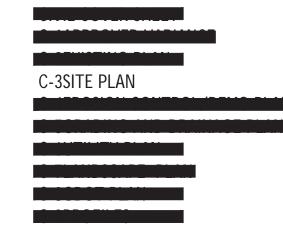
Department of Planning and Development

These project documents have been reviewed by applicable County Departments and have been found to be in substantial compliance with the applicable codes and regulations.

> Sep 02, 2020 **AUTHORIZED**

DRAWING LIST

A-000A PROJECT COVER SHEET A-000 GWINNETT FIRE APPROVAL A-006 FIRST FLR LIFE SAFETY PLAN A-007 2nd FLR LIFE SAFETY PLAN



A-101 FIRST FLOOR PLAN A-102 SECOND FLOOR PLAN A-121 REF'D GLG PLAN A-122 2ND FLR REF'D GLG PLAN A-130 ROOF PLAN A-300 ELEVATIONS A-301 ELEVATIONS A-320 BUILDING SECTIONS A-330 WALL SECTIONS A-331 WALL SECT. & COL. DET.

A-340 DETAIL BUILDING A-360 RATED ASSEMBLIES A-361 RATED ASSEMBLIES A-380 STAIR DETAILS A-381 ELEVATOR DETAILS A-570 MISC DETAILS

S-0 NOTES

S-1 FOUNDATION PLAN S-2 SECOND FLOOR PLAN

S-3 ROOF FRAMING PLAN S-4 DETAILS

M-101 1 & 2 FLR HVAC PLAN

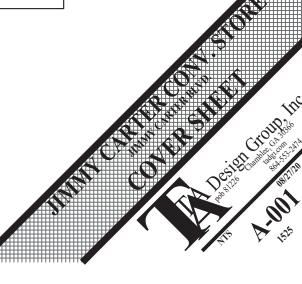
P-101 1 & 2 FLR PUMBING PLAN

E-100 ELECTRICAL NOTES E-101 1 & 2 FLR POWER PLAN E-102 1 & 2 LIGHTING PLAN

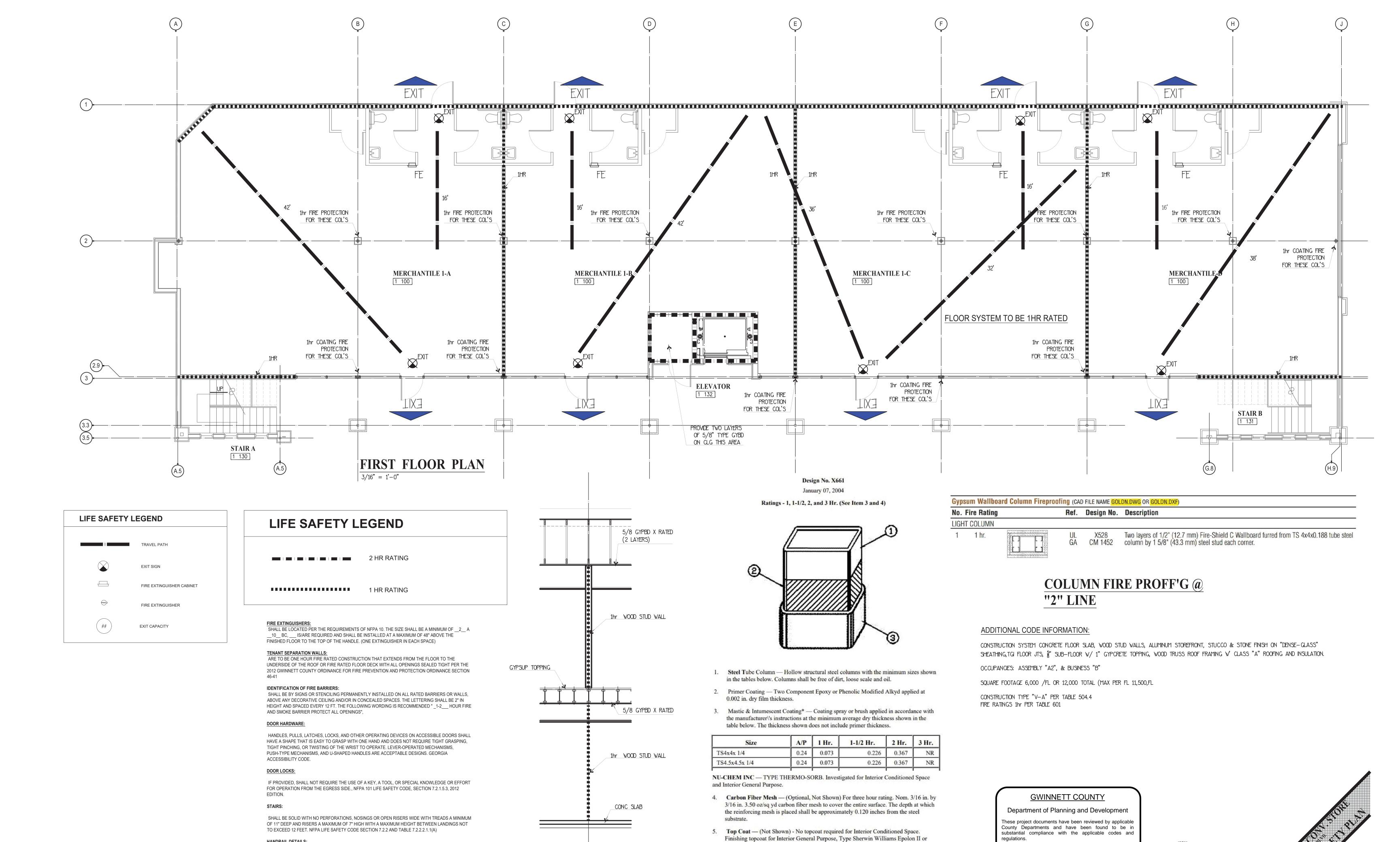
TENANT TO PROVIDE DRINKING FTNS AS PART OF "FIT-UP".PLUMBER TO PROVIDE TAP FOR VENT AND DRAIN.

SEE DRAWING A-006 FOR ADDITIONAL CODE INFORMATION.FIRE PROOF FOR COLUMNS





BLD2020-04937



TYP DEMISING WALL

Nu-Chem Type SB2P applied at 0.003 in. dry film thickness.

STOREFRONT

COLUMN FIRE PROFF'G @

Sep 02, 2020

AUTHORIZED

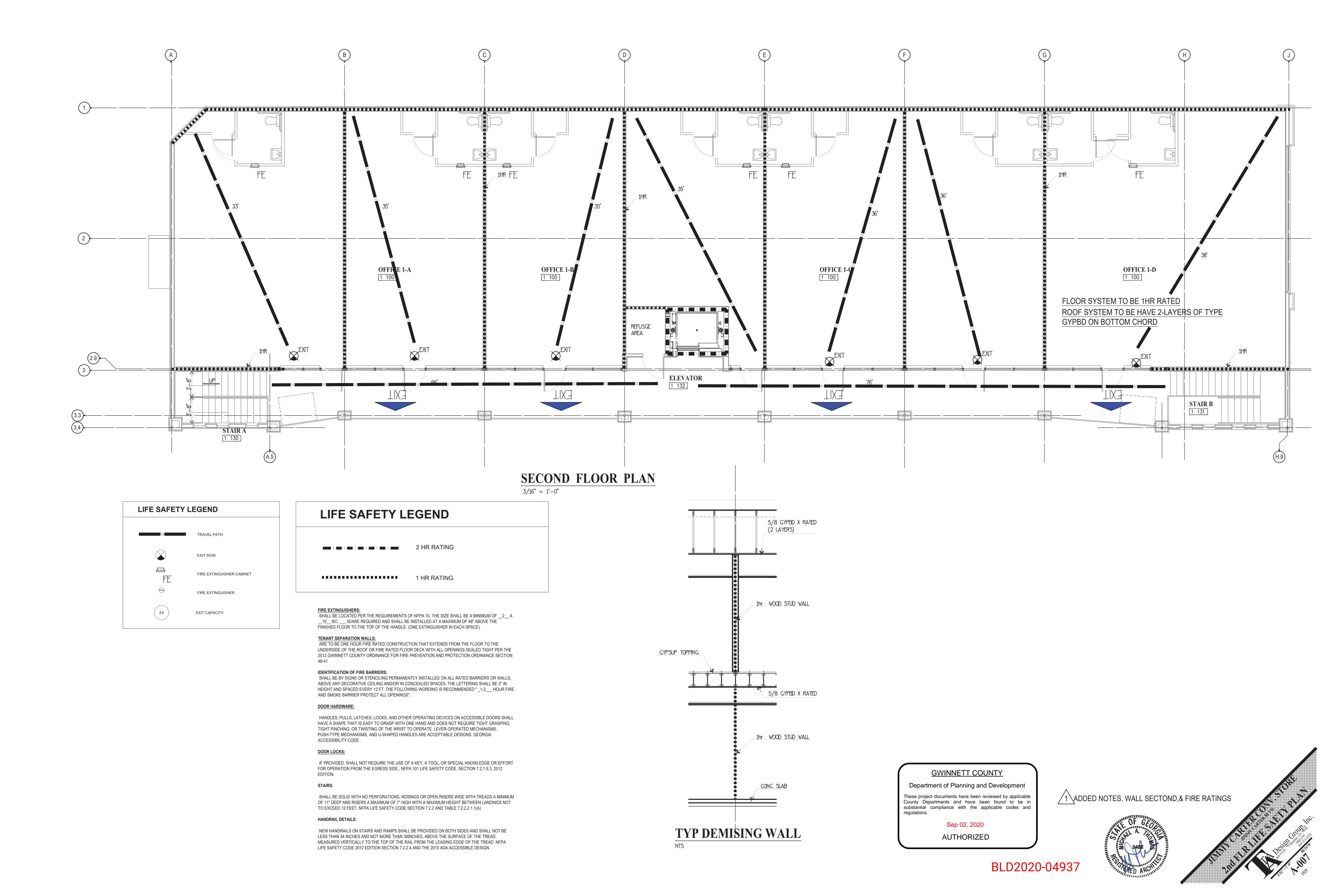
1 ADDED NOTES, WALL SECTOND,& FIRE RATINGS

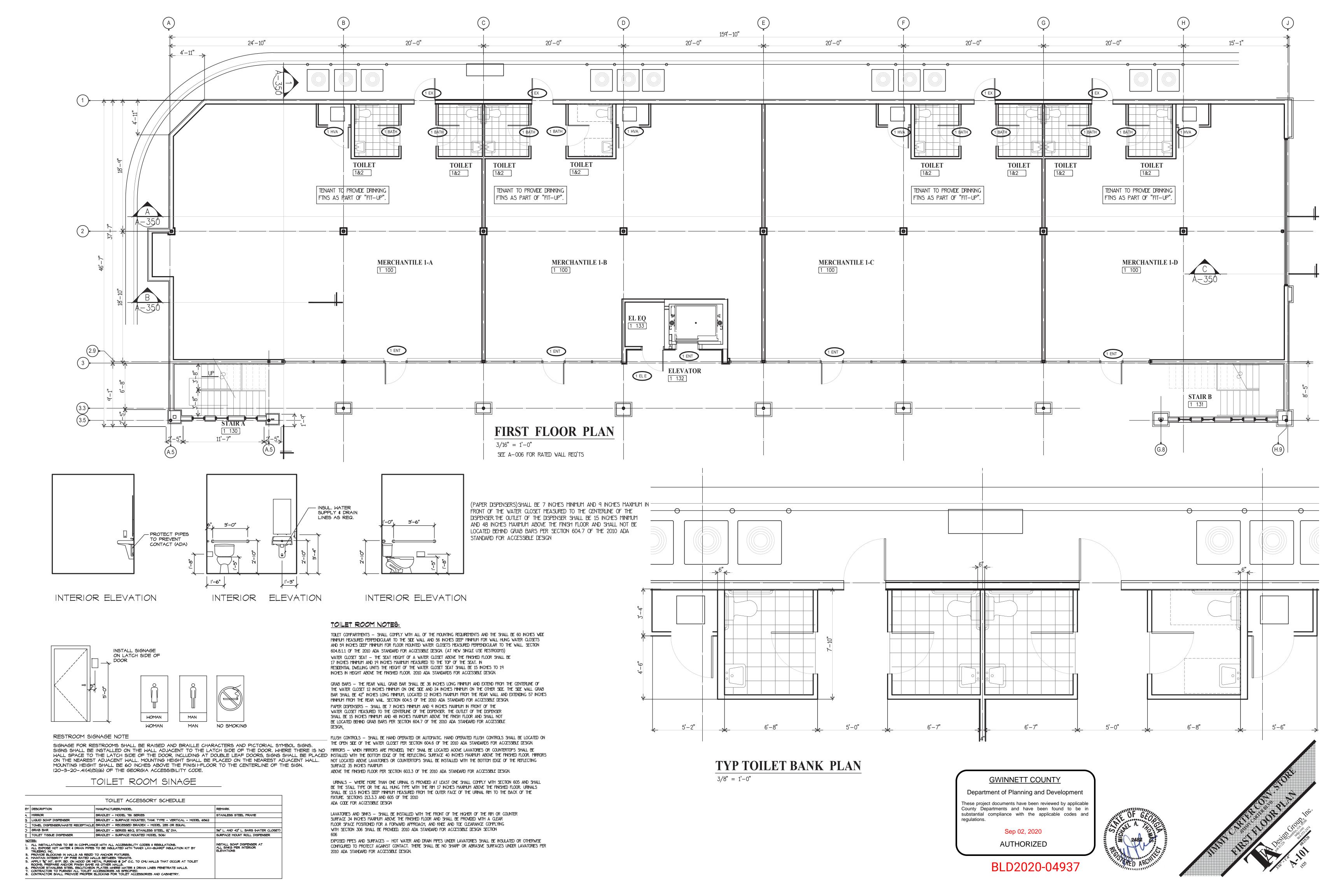
BLD2020-04937

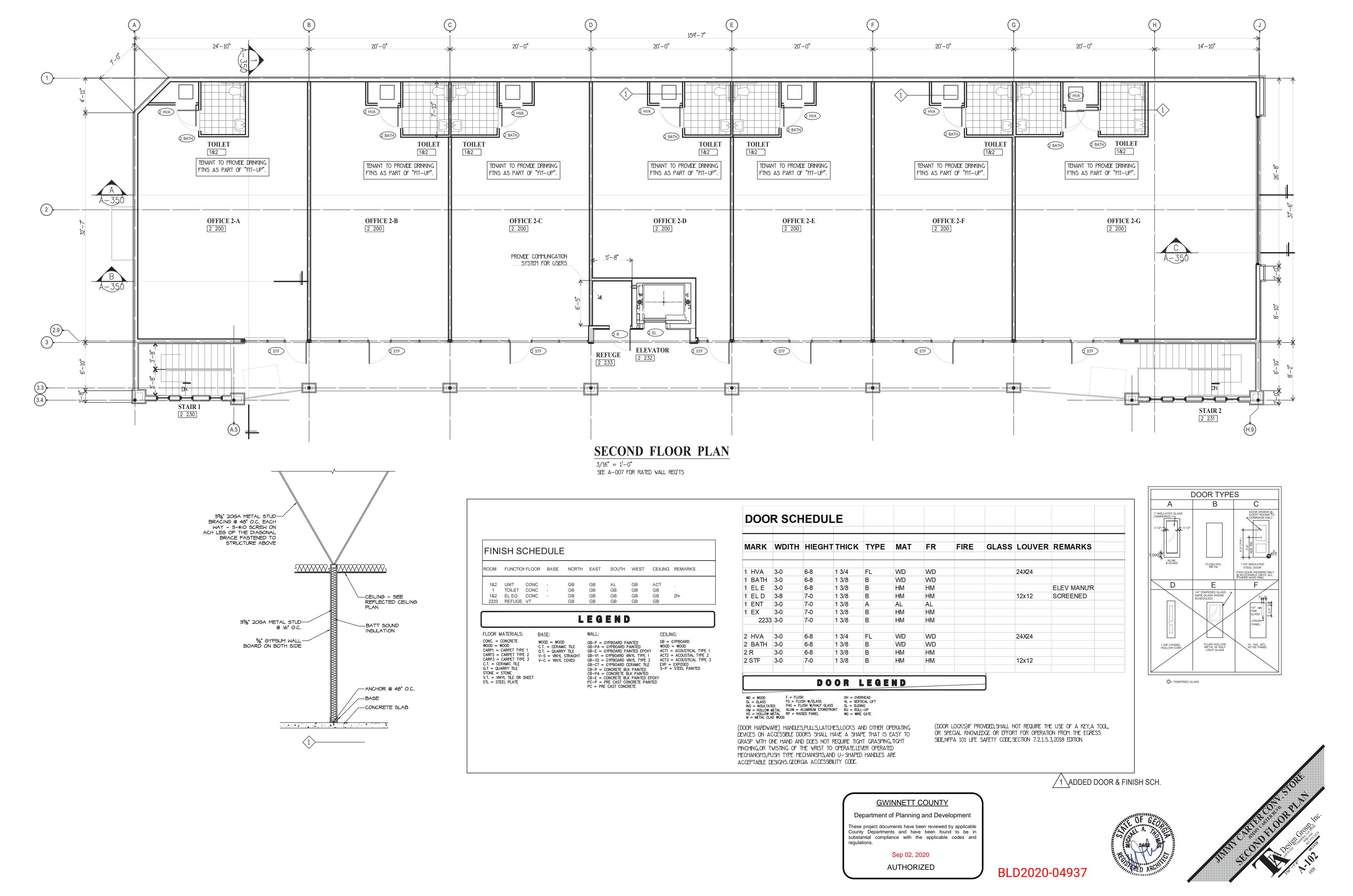
HANDRAIL DETAILS:

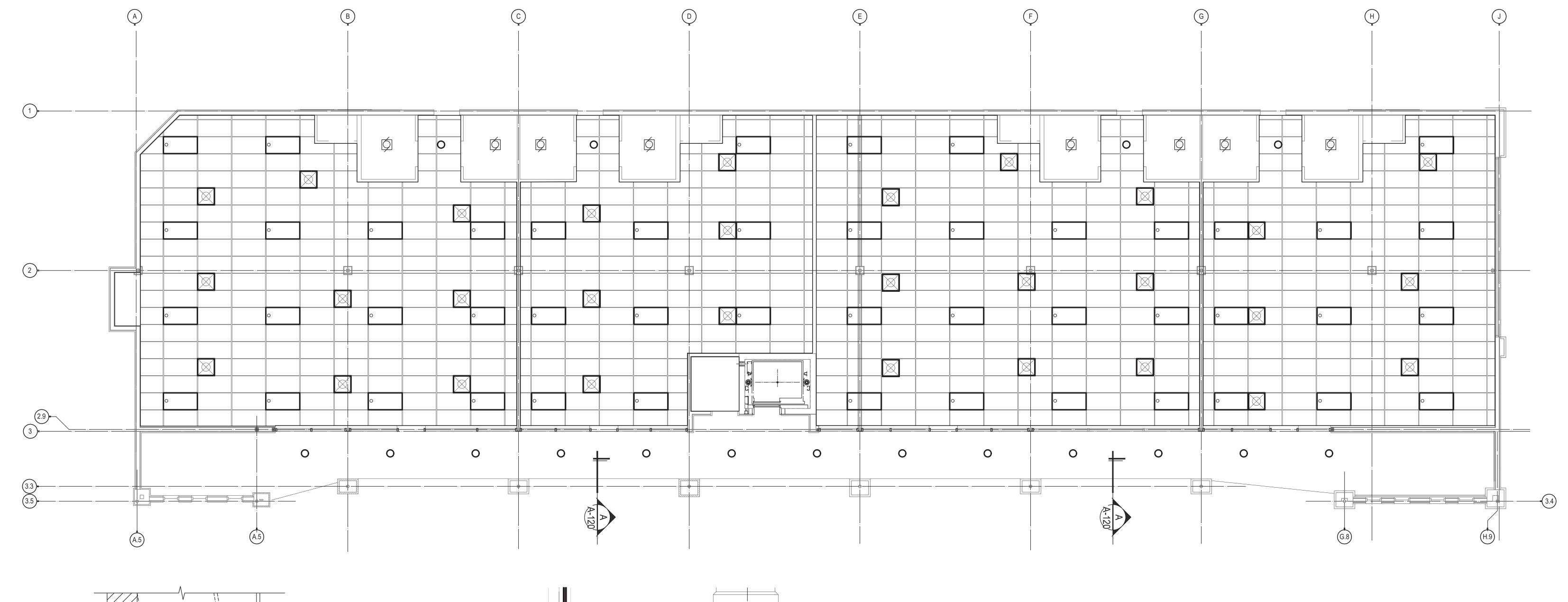
NEW HANDRAILS ON STAIRS AND RAMPS SHALL BE PROVIDED ON BOTH SIDES AND SHALL NOT BE LESS THAN 34 INCHES AND NOT MORE THAN 38INCHES, ABOVE THE SURFACE OF THE TREAD,

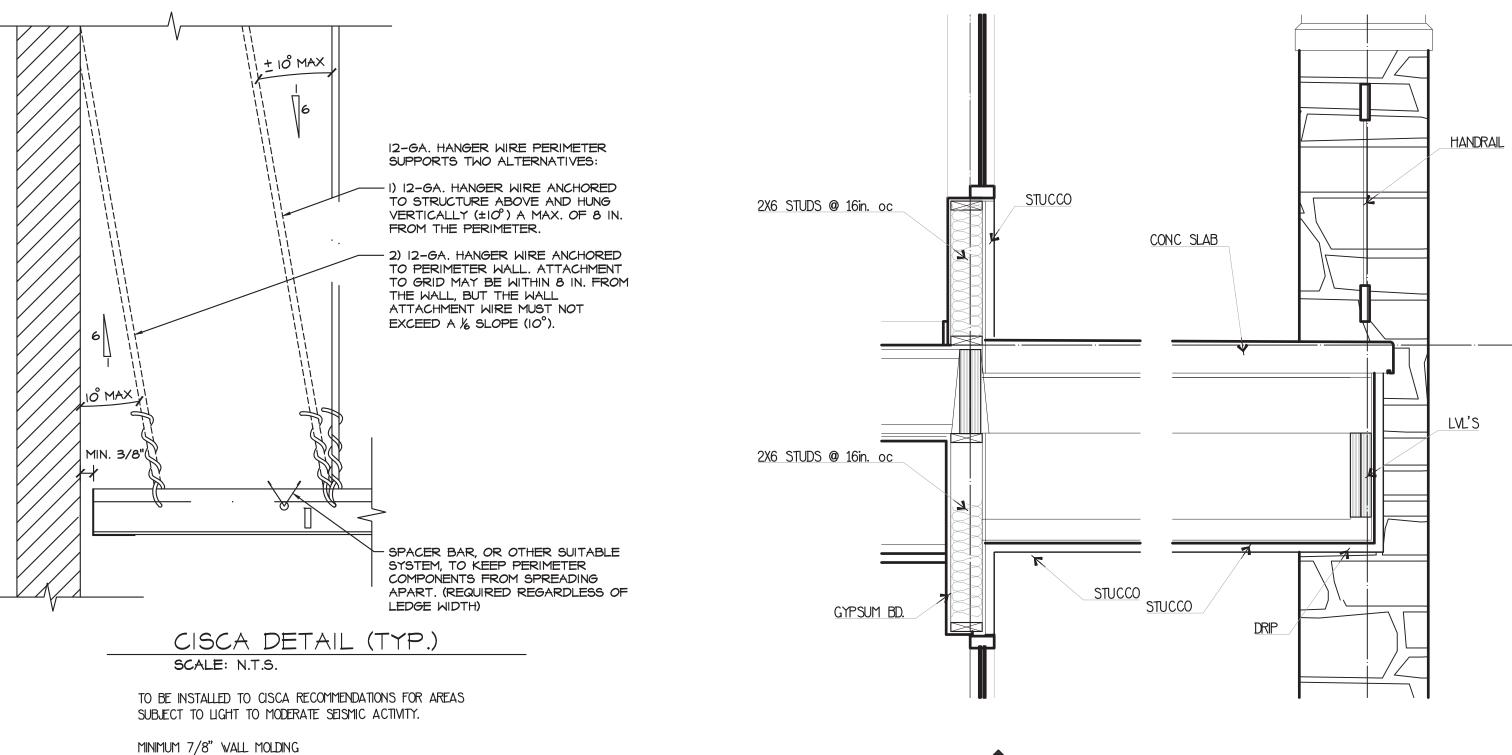
MEASURED VERTICALLY TO THE TOP OF THE RAIL FROM THE LEADING EDGE OF THE TREAD. NFPA LIFE SAFETY CODE 2012 EDITION SECTION 7.2.2.4 AND THE 2010 ADA ACCESSIBLE DESIGN.











WALKWAT DETAIL

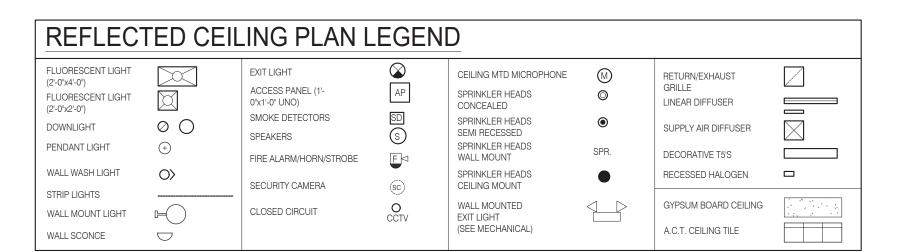
GRID MUST NOT BE ATTACHED TO THE WALL MOLDING

MINIMUM 3/8" OVERLAP OF GRID ON THE WALL MOLDING

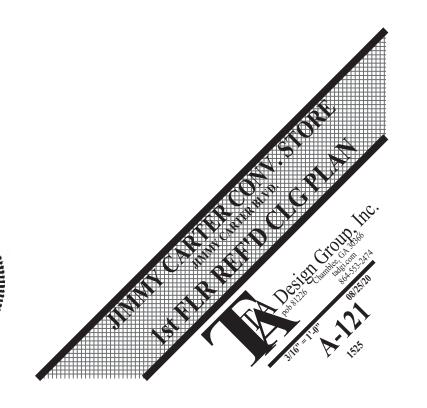
ENDS OF MAIN BEAMS AND CROSS TEES MUST BE TIED TOGETHER TO PREVENT SPREADING

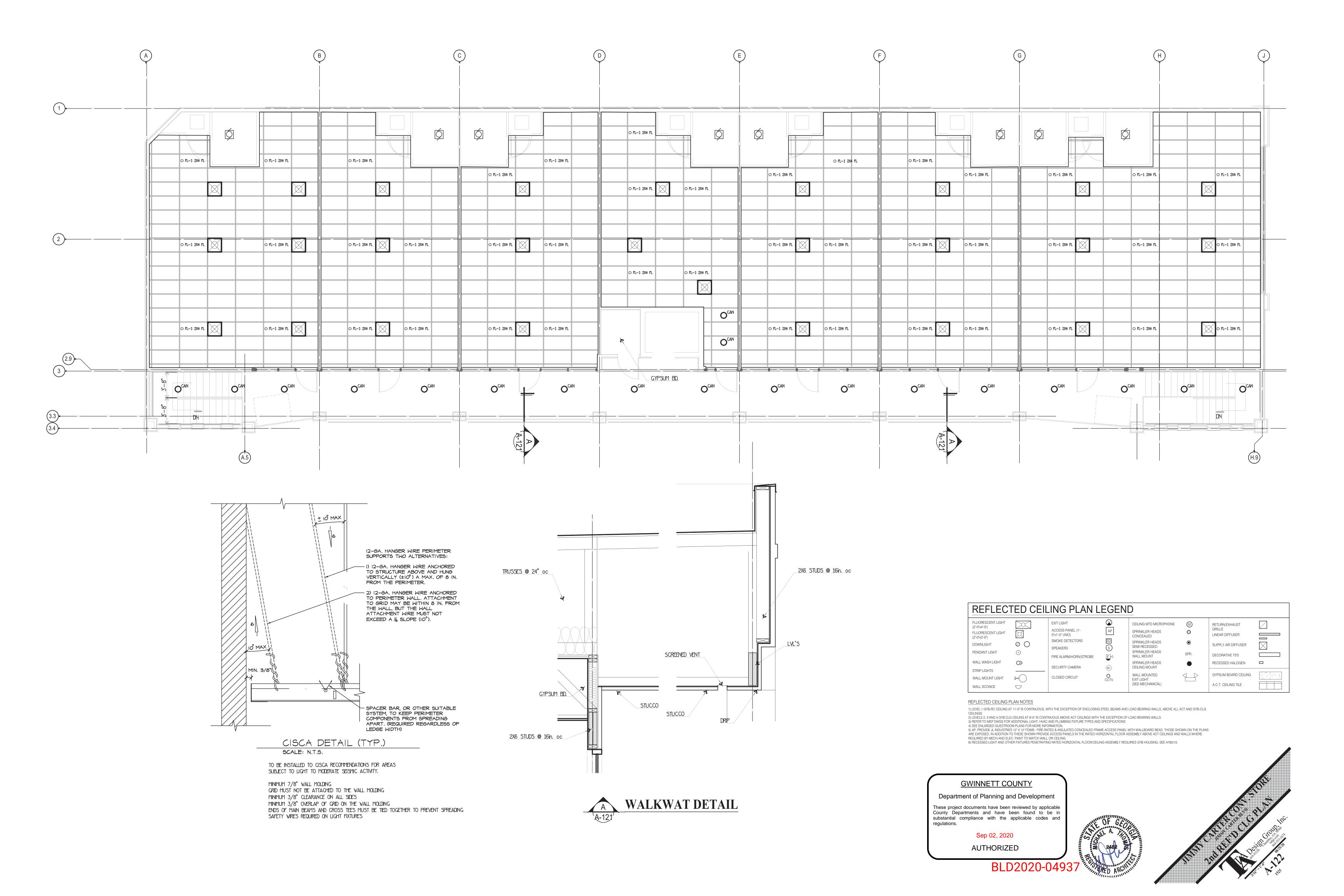
MINIMUM 3/8" CLEARANCE ON ALL SIDES

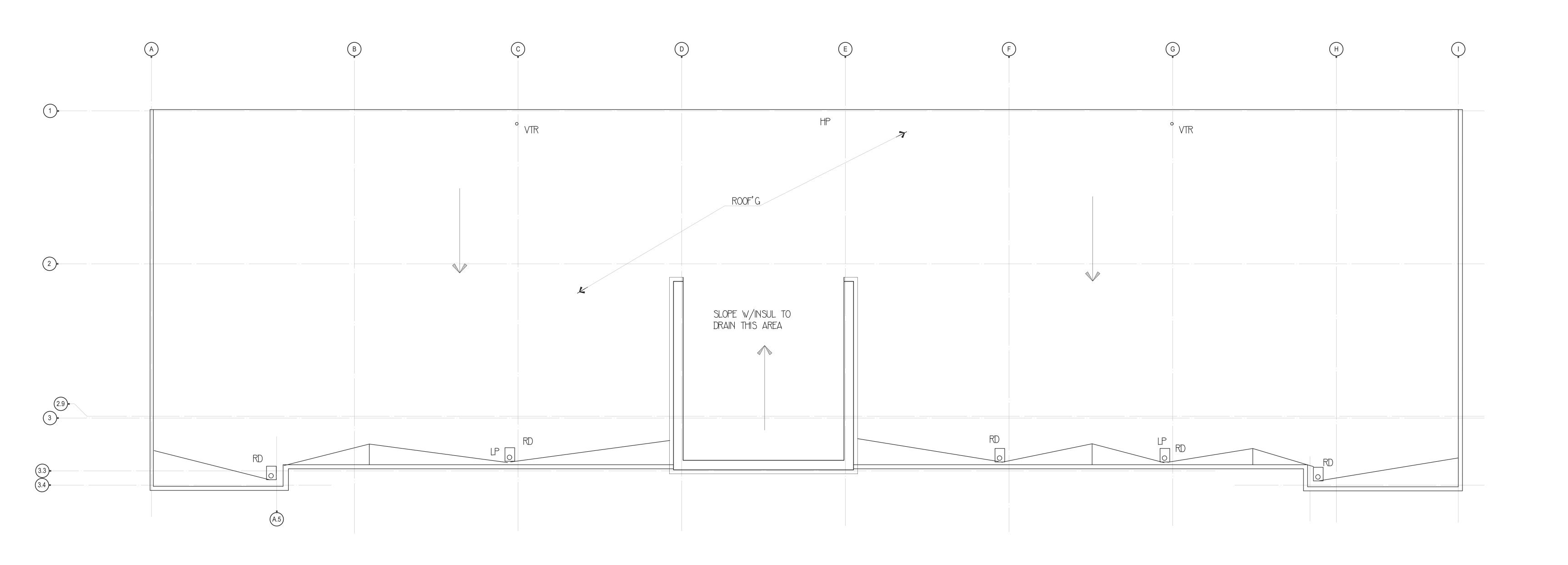
SAFETY WRES REQUIRED ON LIGHT FIXTURES

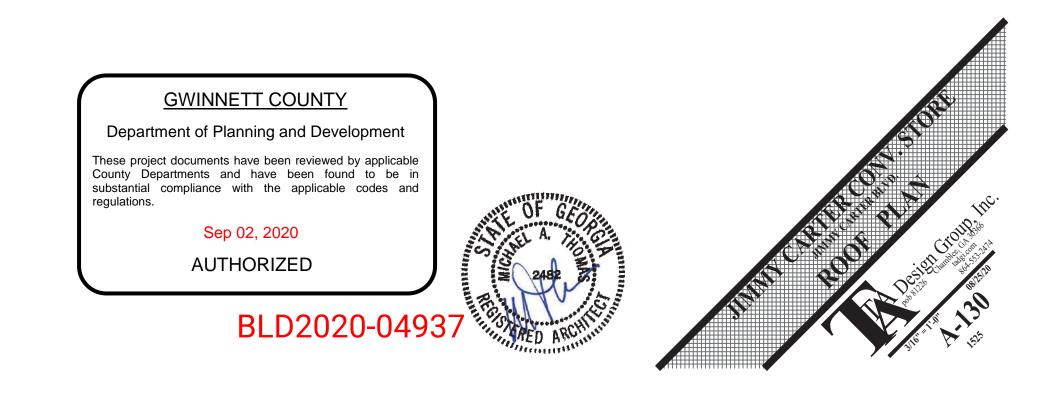




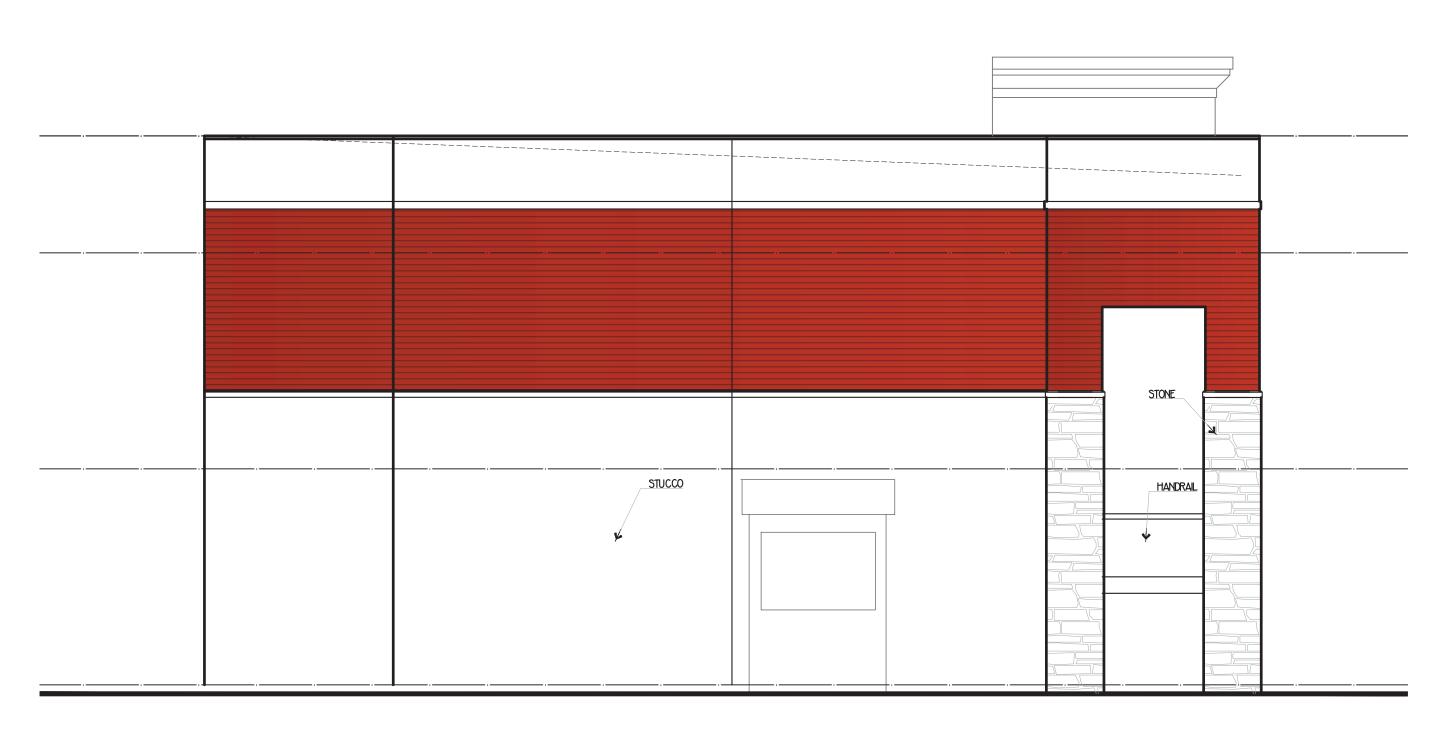


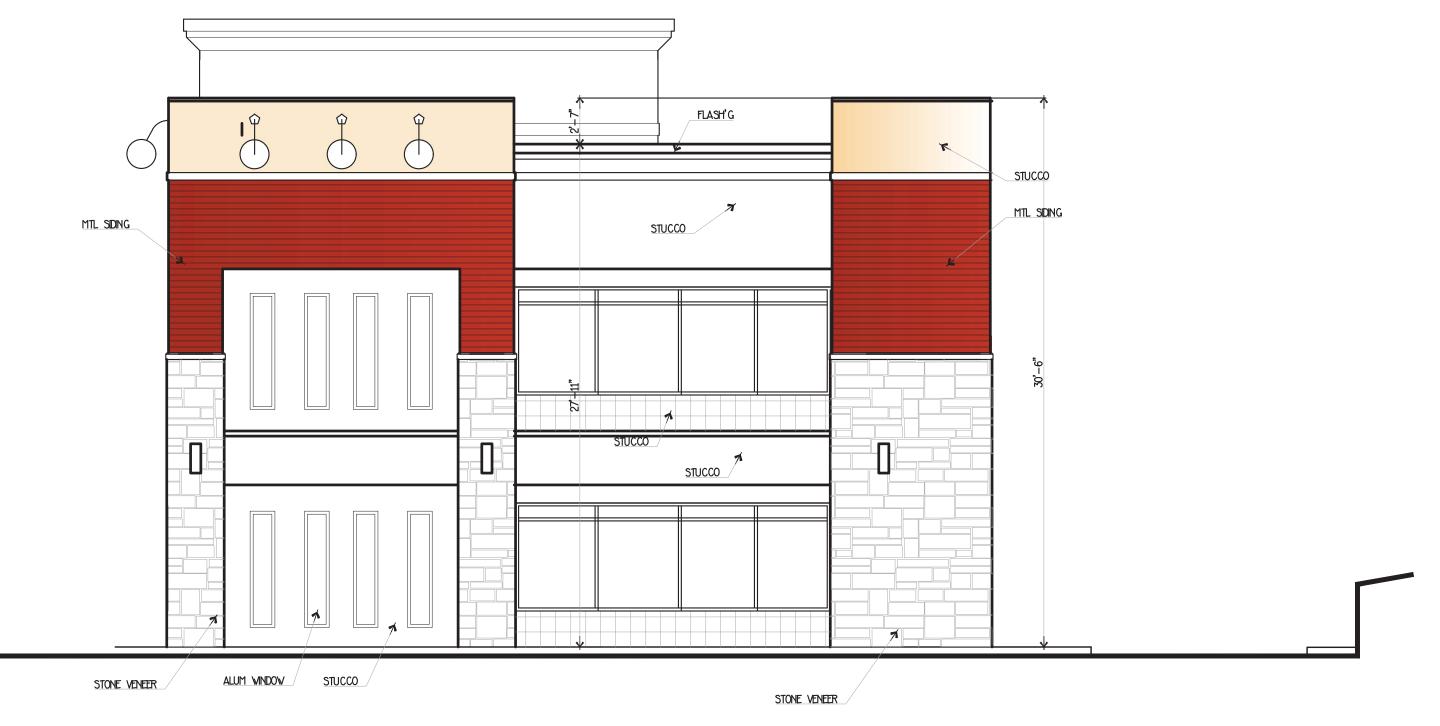






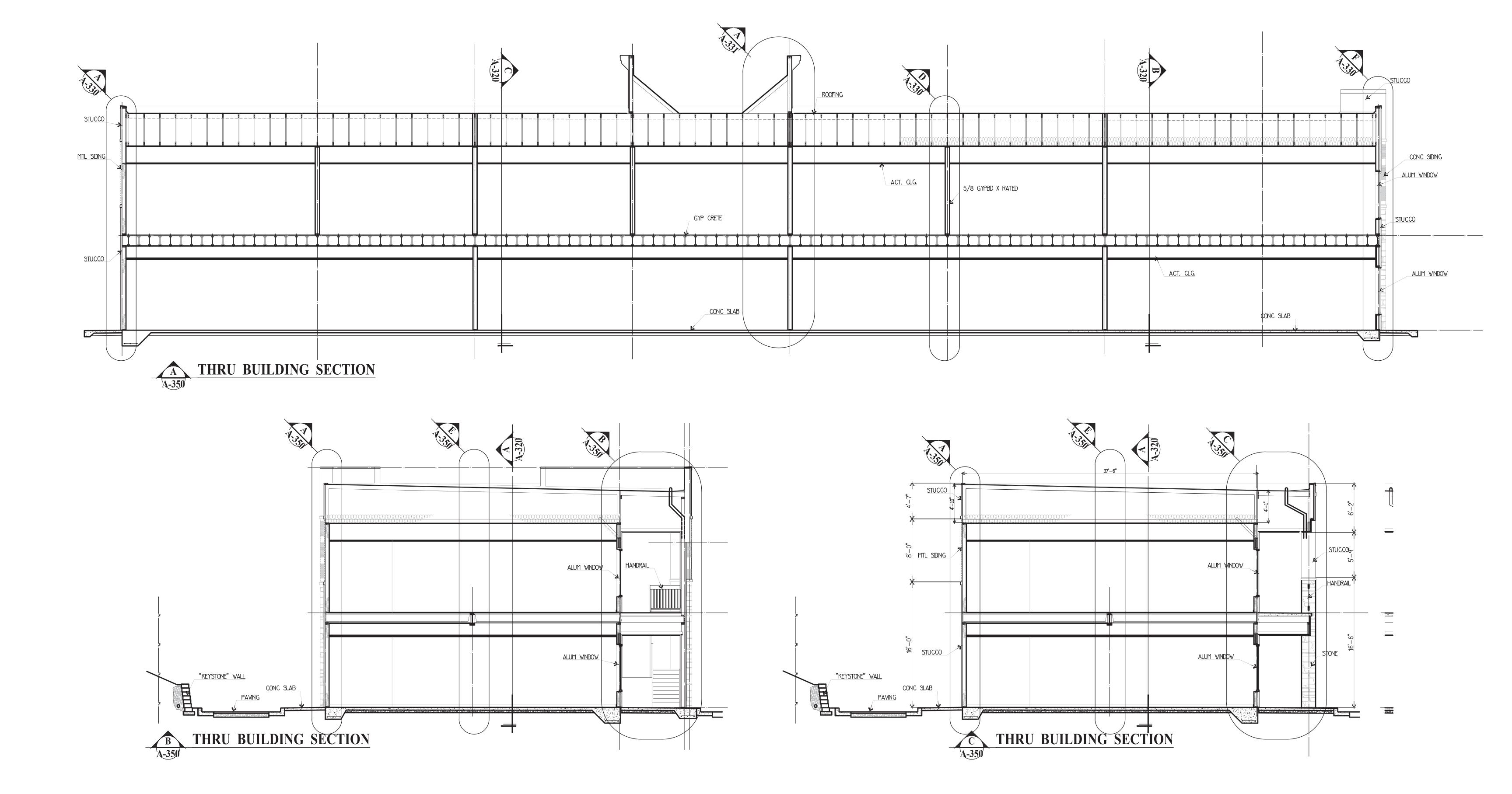




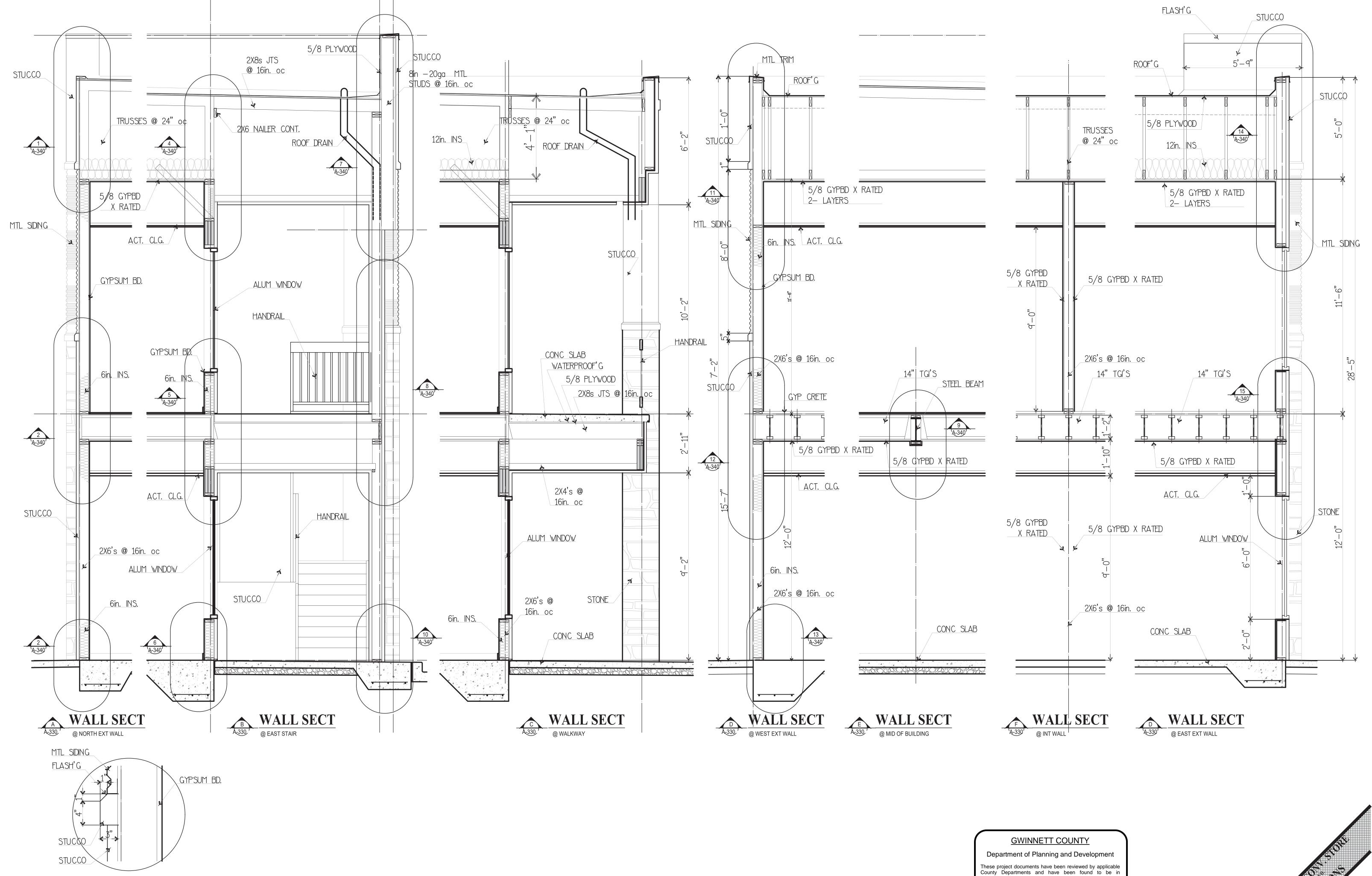


WEST ELEVATION EAST ELEVATION









TYP STUCCO TRIM

GWINNETT COUNTY

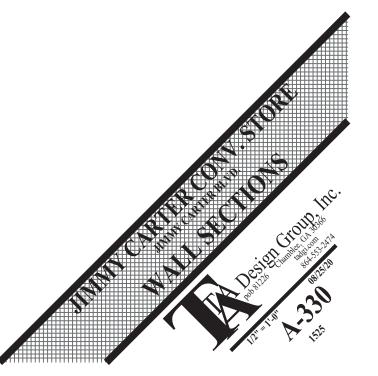
Department of Planning and Development

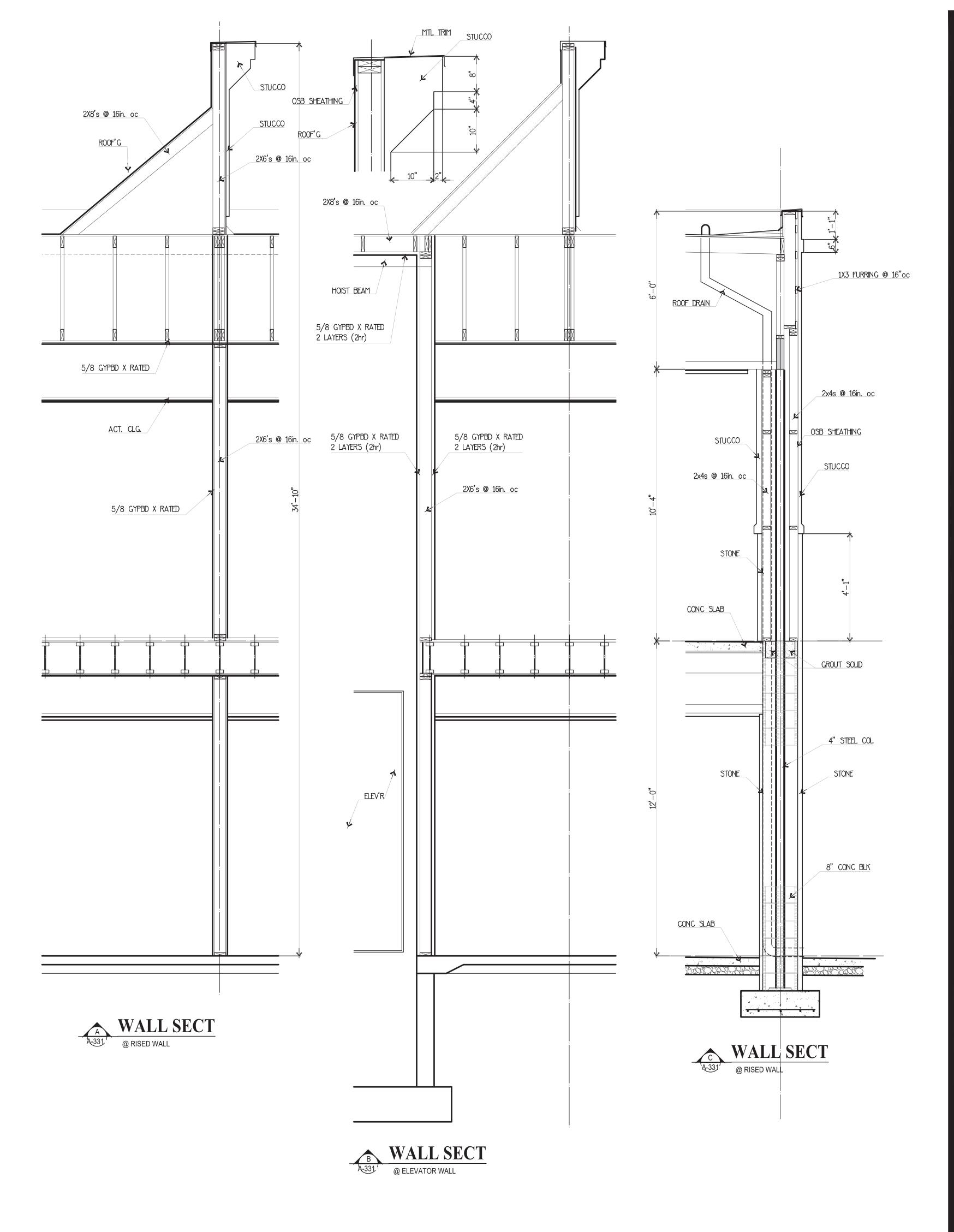
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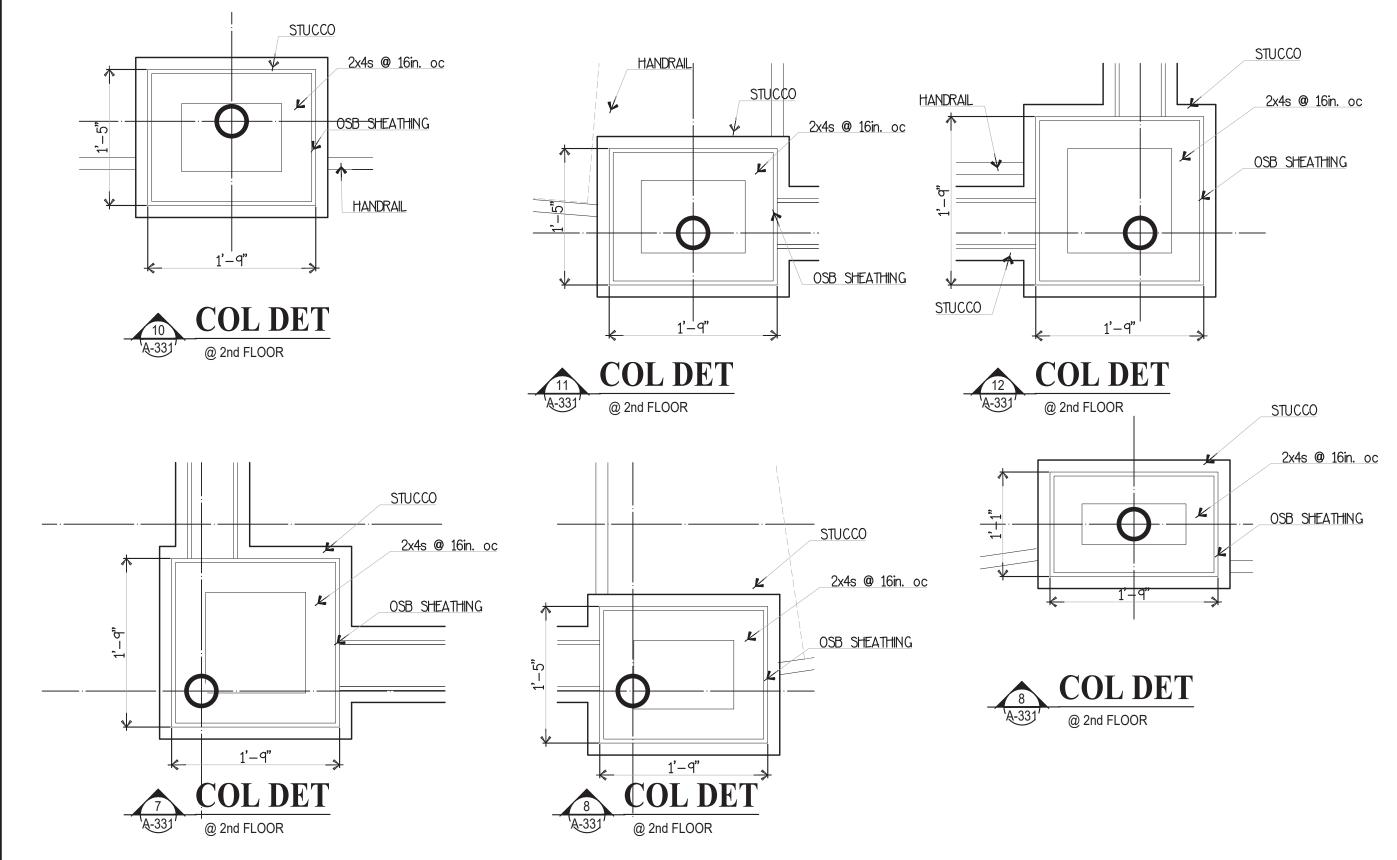
Sep 02, 2020

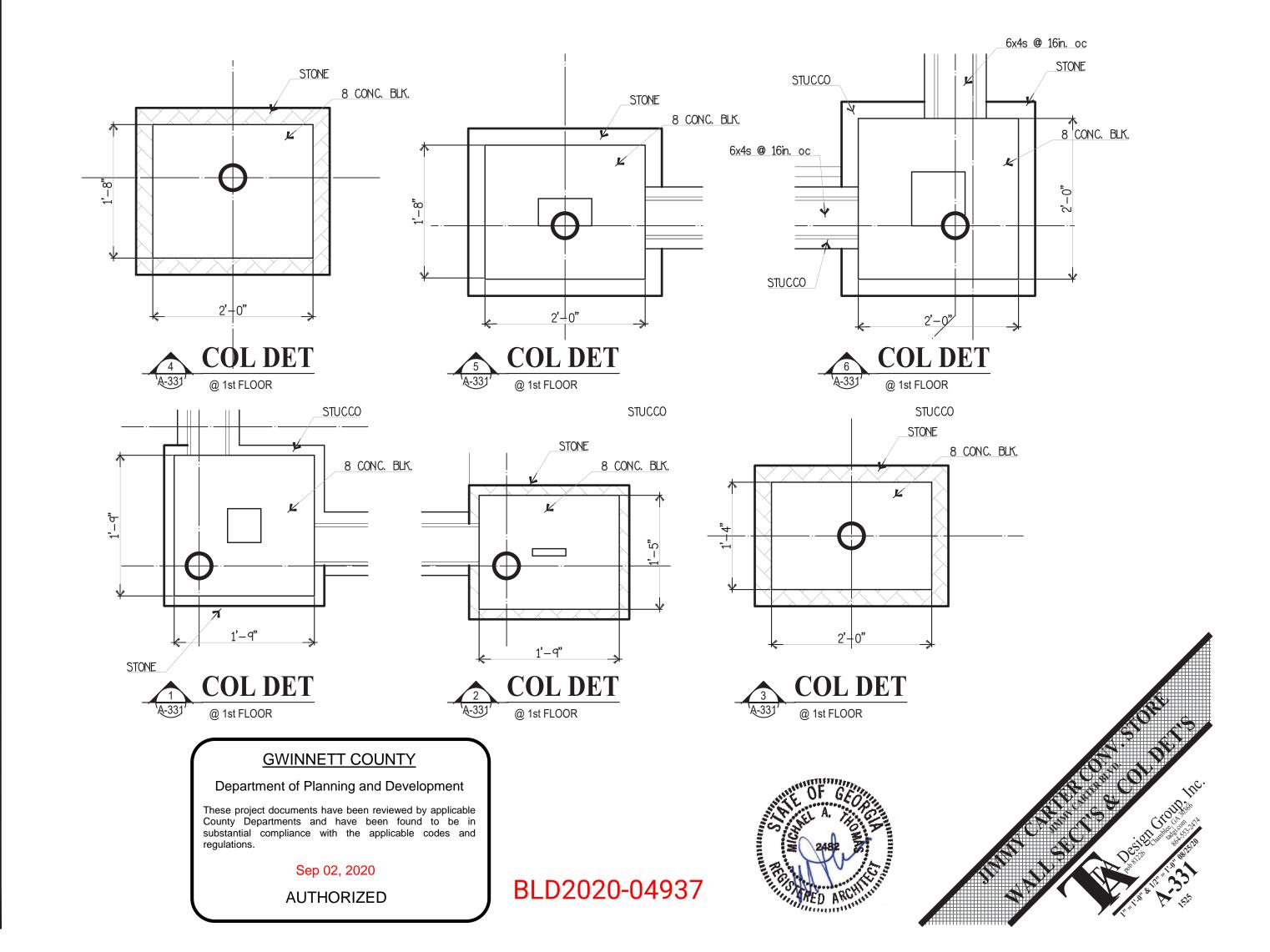
AUTHORIZED

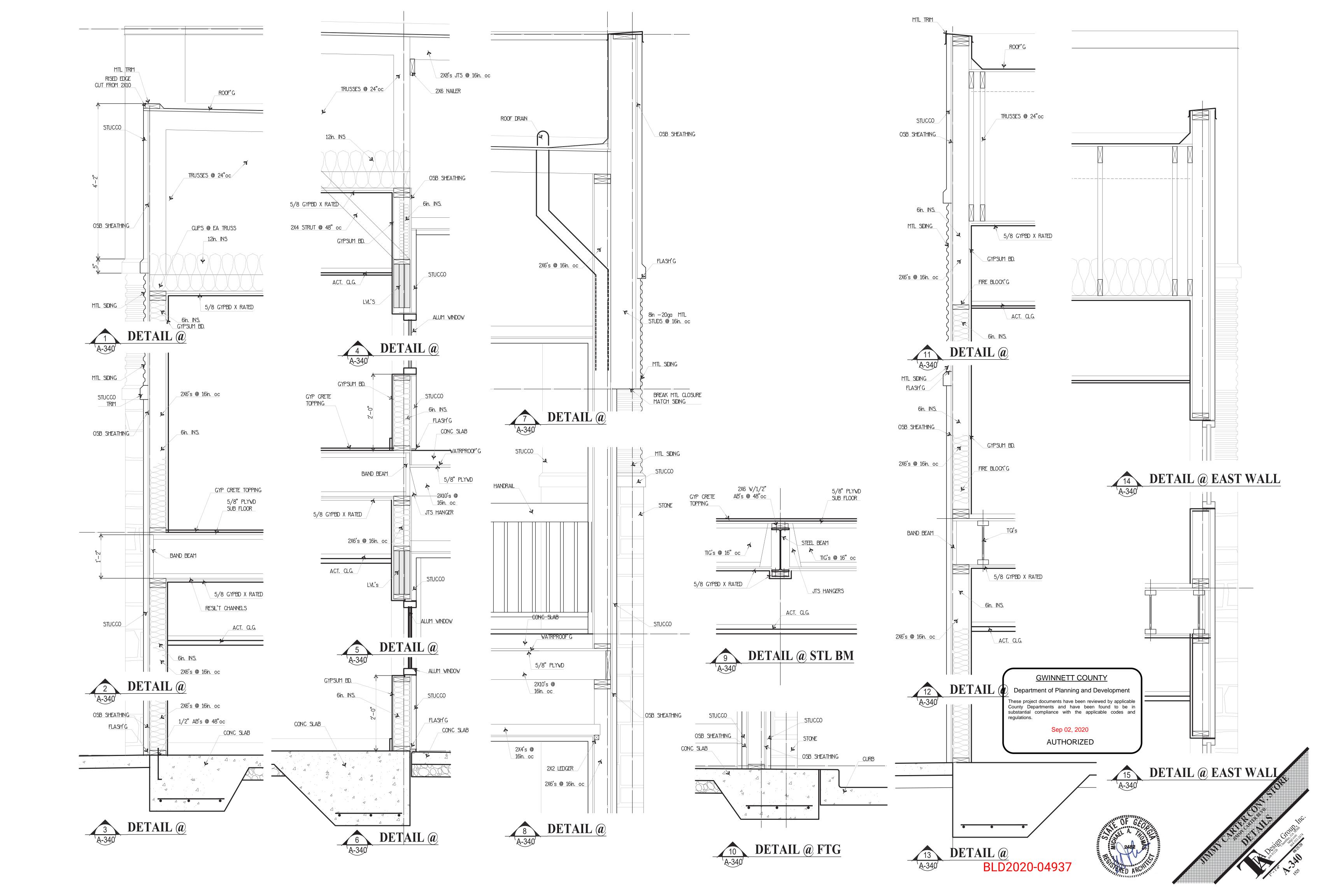
2482













APPROXIMATE CEILING WEIGHT: 5 psf FIRE TEST: FM FC 172, 2-25-72

GYPSUM ASSOCIATION

Construction Type: Wood Joists, Gypsum Wallboard - Base layer 5/8 in. type X gypsum wallboard applied at right angles to wood joists 24 in. O.C. with 1-1/4 in. type S drywall screws 24 in. O.C. Face layer 5/8 in. type X gypsum wallboard or veneer base applied at right angles to joists through base layer with 1-7/8 in. type S drywall screws 12 in. O.C. at joints and intermediate joists. Face layer joints offset 24 in. from base layer joints, 1-1/2 in. type G drywall screws placed 2 in. back on either side of face layer end joints, 12 in. O.C. 1/2 in. plywood with exterior glue applied at right angles to top of joists with 8d nails. Ceiling provides one hour fire resistance protection for wood framing.

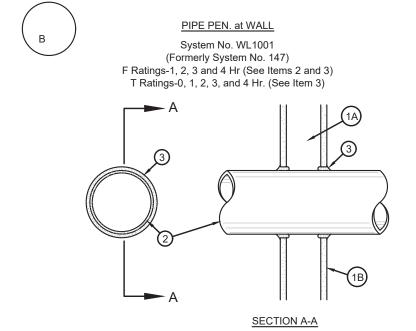
ICBO EVALUATION SERVICE, INC.

Evaluation Report	Report No. 1632
	December, 1988

Gypsum Wall and Ceiling Assemblies Sypsum Association 1800 North Highland Avenue, Suite 210 Hollywood, California 90028

D. One-hour Wallboard Floor-Ceiling or Roof-Ceiling Assembly and Wood Framing - The ceiling construction is identical to assembly FC5406 in the Gypsum Association Fire Resistance Design Manual Alternate framing may consist of lower chords of trussed rafters, or pitched or flat trusses spaced a maximum of 24 in. on center. Alternate fasteners having the same spacing as the screws may be 1-7/8 in. 6-penney cooler, box or wallboard nails for the base ply and 2-3/8 in. 8-penney cooler, box or wallboard nails for the face ply. Type G drywall screws, 1-1/2 in. long are still required at the end joints of the gypsum wallboard face layer.

*Bearing the UL Classification Marking



1. Wall Asembly-The 1, 2, 3 or 4 hr. fire-rated gypsum wallboard/ stud wall assembly shall be constructed of the materials and in the manner described in the individual LI300 or LI400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features: A. Studs-Wall framing may consist of either wood studs (max. 2 hr. fire rated assemblies) or steel channel studs. Wood studs to consist of nom. 2 by 4 lumber spaced 16 in. O.C. with nom. 2 by 4 in, lumber end plates and cross braces. Steel studs to be min 3-5/8 in. wide by 1-3/8 in. deep channels spaced max. 24 in. O.C. B. Wallboard, Gypsum*-Nom 1/2 or 5/8 in. thick, 4 ft. wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 13-1/2 in. 2 Pipe or Conduit-Nom 12 in diam (or smaller) Schedule 10 (or heavier) steel pipe, nom 6 in. diam (or smaller) steel conduit, nom 4 in. diam (or smaller) steel electrical metallic tubing or Type L or (or heavier) copper tubing or nom 1 in. diam (or smaller) flexible steel conduit. When copper pipe or flexible steel conduit is used, max F Rating of firestop system (Item 3) is 2 h. Steel pipes or conduits larger than nom 4 in. diam may only be used in walls constructed using steel channel studs. A max of one pipe or conduit is permitted in the firestop system. Pipe or conduit to be installed near center of stud cavity width and to be rigidly supported on both sides of wall assembly. 3. Fill, Void or Cavity Material*-Caulk-Caulk fill material installed to completely fill annular space between pipe or conduit and gypsum wallboard and with a min 1/4 in, diam bead of caulk applied to perimeter of pipe or conduit at its egress from the wall. Caulk installed symmetrically on both sides of wall assembly. The hourly F Rating of

assembly in which	it is installed, as tabula	ted below:	
Max Pipe	Annular	F	Т
or Conduit	Space	Rating	Rating
Diam, In	In	Hr.	Hr.
1	0 to 3/16	1 or 2	0+, 1 or 2
1	1/4 to 1/2	3 or 4	3 or 4
4	0 to 1/4	1 or 2	0
6	1/4 to 1/2	3 or 4	0
12	3/16 to 3/8	1 or 2	0

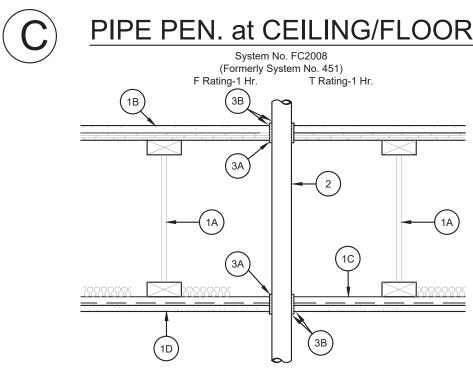
the firestop system is dependent upon the hourly fire rating of the wall

The hourly T Rating of the firestop system is dependent upon the type

assembly in which it is installed, as shown in the following table.

or size of the pipe or conduit and the hourly fire rating of the wall

+When copper pipe is used, T Rating is 0 h. Minnesota Mining & Mfg. Co.-Types CP-25 S/L, CP-25 N/S, CP-25 WB, CP-25 WB+ *Bearing the UL Classification Marking



1. Floor Assembly-The fire rated wood truss or combination wood and steel truss Floor-Ceiling assembly shall be constructed of the materials and in the manner described in the individua L500 Series Design in the UL Fire Resistance Directory and shall include the following construction features A. Trusses-Min 12 in. deep parallel chord trusses fabricated from 2 by 4 in. lumber in

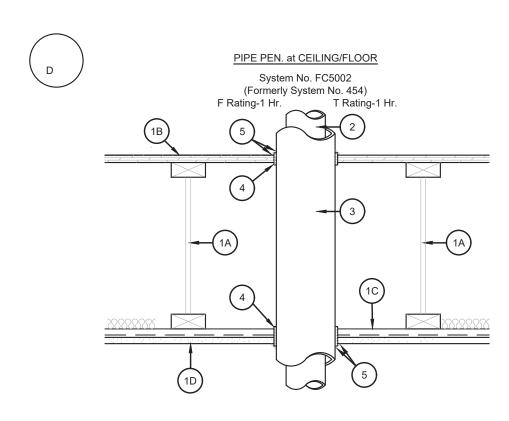
conjunction with galv steel truss plates or Structural Wood Members* with bridging as B. Flooring-Nom 3/4 in. thick plywood flooring with or without Floor Topping Mixture*. Diam of hole-sawed opening in flooring to be 1/2 in. to 3/4 in. larger than diam of pipe. Max diam of opening in flooring is 3 in. C. Furring Channels-Rigid or resilient galv steel furring channels installed perpendicular to

bottom chord of trusses D. Wallboard, Gypsum*-Nom 4 ft. wide by 5/8 in. thick, screw-attached to furring channels. Diam of hole-sawed opening in gypsum wallboard ceiling to be 1/2 in. to 3/4 in. larger than diam of pipe. Max diam of opening in ceiling is 3 in. 2. Nonmetallic Pipe-Nom 2 in. diam (or smaller) Schedule 40 polyvinyl choride (PVC), SDR 17

chorinated polyvinyl chloride (CPVC) or solid-core Schedule 40 acrylonitrile-butadiene-styrene (ABS) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. One pipe to be installed approx midway between trusses and centered in circular openings in flooring and in ceiling. A nom 1/4 in. to 3/8 in. annular space is required in the firestop system. Pipe to be rigidly supported on both sides of Floor-Ceiling assembly. 3. Firestop System -The details of the firestop system shall be as follows:

A. Fill, Void or Cavity Materials*-Wrap Strip-Nom 1/4 in. thick intumescent elastomeric material faced on one side with aluminum foil, supplied to 2 in. wide strips. Nom 2 in. wide strip tightly-wrapped around nonmetallic pipe (foil side exposed), secured with two steel tie wires and slid into hole-sawed opening in flooring (Item 1B) and in gypsum wallboard ceiling (Item 1D). Bottom edge of wrap strip to project 9/16 to 11/16 in. below bottom surface of flooring and below bottom (ceiling) surface of gypsum wallboard. Minnesota Mining & Mfg. Co.-Type FS-195

B. Fill, Void or Cavity Materials*-Caulk or Putty-Nom 1/4 in. thickness of caulk or putty to be applied to the exposed edges of the wrap strip layer (top of flooring and bottom of gypsum wallboard ceiling). Generous application of caulk or putty to be applied to fill all gaps at the wrap strip/flooring and wrap strip/gypsum wallbard ceiling interfaces. Minnesota Mining & Mfg. Co.-Type CP-25 WB, CP-25 WB+ Caulk, Type MP Putty *Bearing the UL Classification Marking



1. Floor Assembly-The fire rated wood truss or combination wood and steel truss Floor-Ceiling assembly shall be constructed of the materials and in the manner described in the individual L500 Series Design in the UL Fire Resistance Directory and shall include the following construction features

A. Trusses-Min 12 in. deep parallel chord trusses fabricated from 2 by 4 in. lumber in conjunction with galv steel truss plates or Structural Wood Members* with bridging as

B. Flooring-Nom 3/4 in. thick plywood flooring with or without Floor Topping Mixture*. Max Diam of hole-sawed opening in flooring is 7 in. C. Furring Channels-Rigid or resilient galv steel furring channels installed perpendicular to bottom chord of trusses. D. Wallboard, Gypsum*-Nom 4 ft. wide by 5/8 in. thick, screw-attached to furring channels. Diam of hole-sawed opening in gypsum wallboard ceiling is 7 in.

2. Pipe-Nom 4 in. diam (or smaller) Schedule 10 (or heavier) steel pipe or nom 3 in. diam (or smaller) Type L (or heavier) copper pipe. Pipe to be installed approximately midway between trusses and centered in circular cutouts in flooring (Item 1B) and gypsum wallboard ceiling (Item 1D). Diam of circular cutouts in flooring and gypsum wallboard ceiling to be 1/2 to 3/4 in. larger than outside diam of pipe covering (Item 3) or tube insulation (Item 3A) on pipe. Pipe to be rigidly supported on both sides of Floor-Ceiling assembly. 3. Pipe Covering*-Nom 1 in. thick hollow cylindrical heavy density (min 3.5 pcf) glass fiber

units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt strip tape supplied with the product. See Pipe and Equipment Covering-Materials* (BRGU) category in Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or

less and a Smoke Developed Index of 50 or less may by used. 3A. Tube Insulation-Plastics+-As an alternate to the glass fiber pipe covering (Item 3), nom 1/ 2 of 5/8 in. thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing with skin may be used. See Plastics (QMFZ2) category in the Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above

specifications and having a UL 94 Flammability Classification of 94-5Va may be used. 4. Fill, Void or Cavity Materials*-Wrap Strip-Nom 1/4 in. thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 2 in. wide strips. Nom 2 in. wide strip tightly wrapped around pipe covering or tube insulation (foil side exposed), secured with two steel tie wires and slid into hole-sawed opening in flooring (Item 1B) and in gypsum wallboard ceiling (Item 1D). Bottom edge of wrap strip to project 9/16 to 11/16 in. below bottom surface of flooring and below (ceiling) surface of gypsum wallboard.

Minnesota Mining & Mfg. Co.-Type FS-195 5. Fill, Void or Cavity Materials*-Caulk-Nom 1/4 in. thickness of caulk to be applied to the exposed edge of the wrap strip layer (top of flooring and bottom of gypsum wallboard ceiling). Generous application of caulk to be applied to fill all gaps at the wrap strip/flooring and wrap strip/gypsum wallboard ceiling interfaces Minnesota Mining & Mfg. Co.-Types CP-25 WB, CP-25 WB+

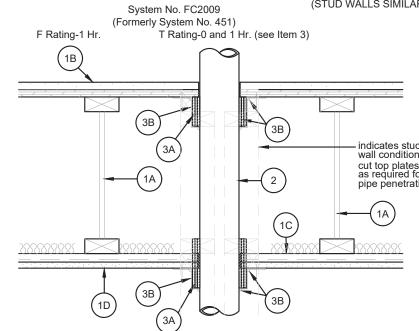
TABLE NO. 7-	B-RATED FIR	E-RESISTIVE PERIODS FOR VARIOUS WALLS AND PARTITIONS		a <u>1</u>	(Continue	ed)
MATERIAL	ITEM NUMBER	CONSTRUCTION	_	M FINISH FACE-TO (In Inc	-FACE	CKNESS 2
			4 HR	3 Hr	2 Hr	1 Hr
Wood studs- Interior partition with gypsum wall- board ea. side	17-1.3 14,19	2" x 4" wood studs 24" on center with 5/8" Type X gypsum wallboard applied vertically or horizontally nailed with 6d cooler or wallboard nails at 7" on center with end joints on nailing members. Stagger joints each side.				4 3/4

*Bearing the UL Classification Marking

¹⁴ Wood structural panels may be installed between the fire protection and the wood studs on either the interior or exterior side of the wood-frame assemblies in this table, provided the length of the fastener used to attach the fire protection are increased by an amount at

least equal to the thickness of the wood structural panel.





1. Floor Assembly-The fire rated wood truss or combination wood and steel truss Floor-Ceiling assembly shall be constructed of the materials and in the manner described in the individua L500 Series Design in the UL Fire Resistance Directory and shall include the following con-

A. Trusses-Min 12 in. deep parallel chord trusses fabricated from nom 2 by 4 in. lumber in conjunction with galv steel truss plates or Structural Wood Members* with bridging as B. Flooring-Nom 3/4 in. thick plywood flooring with or without Floor Topping Mixture*

Diam of hole-sawed opening in flooring to be max 1/2 in. larger than diam of pipe. Max diam of opening in flooring 5 in. C. Furring Channels-Rigid or resilient galv steel furring channels installed perpendicular to bottom chord of trusses.

D. Wallboard, Gypsum*-Nom 4 ft. wide by 5/8 in. thick, screw-attached to furring channels.

Diam of hole-sawed opening in gypsum wallboard ceiling to be max 1/2 in. larger than diam of pipe. Max diam of opening in ceiling is 5 in. Secondary firestop system (Item 3) must be installed at underside of flooring prior to installation of the gypsum wallboard ceiling. 2. Nonmetallic Pipe-Nom 4 in. diam (or smaller) Schedule 40 polyvinyl choride (PVC), SDR 17 chorinated polyvinyl chloride (CPVC) or solid-core Schedule 40 acrylonitrile-butadiene-styrene (ABS) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. One pipe to be installed approx midway between trusses and centered in circular openings in flooring and ceiling. Pipe to be rigidly supported on both sides of Floor-Ceiling assembly. 3. Firestop System -The hourly T Rating for the firestop system is dependent upon the type and

size of nonmetallic pipe, as tabulated below: Pipe Space, Diam, In ABS. PVC 1/2 to 2 0 to 1/8 or CPVC 0 to 1/4 ABS PVC or 2 1/2 to 4 0 to 1/4

The details of the firestop system shall be as follows: A. Fill, Void or Cavity Materials*-Wrap Strip-Nom 1/4 in. thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 2 in. wide strips. Nom 2 in. wide strip tightly-wrapped around nonmetallic pipe (foil side exposed) with the edges butted against the underside of the plywood flooring and against the bottom surface of the gypsum wallboard ceiling around the entire perimeter of the hole-sawed openings. Sufficient layers of wrap strip shall be installed to lap a min. of 3/16 in. on the plywood flooring and on the gypsum wallboard ceiling around the entire perimeter of the holesawed opening. For nom 1/2 in. to nom 2 in. diam pipes, a min of one layer of wrap strip is required. For nom 2-1/2 in. and nom 3 in. diam pipes, a min. of two layers of wrap strip. is required. For nom 3-1/2 in, and nom 4 in, diam pipes, a min of three layers of wrap strip is required. Each layer of wrap strip to be installed with butted seam, with butted seams in successive layers staggered. Wrap strip layer(s) temporarily held in position using aluminum foil tape, steel wire tie, or equivalent. Minnesota Mining & Mfg. Co.-Type FS-195

B. Steel Collar-Nom 2 in. deep collar with 1-1/4 in. wide by 2 in. long anchor tabs and min 3/4 in. long tabs to retain wrap strips layers. Coils of precut 0.016 in. thick (30 gauge) galv sheet steel are available from wrap strip manufacturer. As an alternate, collar may be field fabricated from min. 0.016 in. thick (30 gauge) sheet steel in accordance with instruction sheet applied by wrap strip manufacturer. Steel collar, with anchor tabs bend outward 90 deg, wrapped tightly around wrap strip layers with min 1 in. overlap at the seam. With steel anchor tabs pressed tightly against underside of plywood flooring or unside of gypsum wallboard ceiling, compress collar around wrap strip layers using a min 1/2 in, wide by 0.028 in, thick stainless steel band clamp with worm drive tightening mechanism at the collar midheight. Secure collar to plywood flooring using min. 3/4 in. long steel screws on conjunction with 1-1/4 in. diam. steel fender washers. Secure collar to gypsum wallboard ceiling using 3/16 in. diam steel toggle bolts (5/8 in. grip) in conjunction with 1-1/4 in. diam steel fender washers, min of three fasteners, symmetrically located, required for nom 1/2 in, to nom 3 in, diam pipes. Min of four symmetrically locatstrip retainer tabs 90 deg toward pipe to lock wrap strip layers in position. C. Fill, Void or Cavity Materials*-Caulk or Putty-Generous application of caulk or putty to be applied around the perimeter of the steel collar at its interface with the plywood flooring and gypsum wallboard ceiling. A generaous application of caulk or putty shall be applied around the perimeter of the pipe at its interface with the wrap strip layers.

Minnesota Mining & Mfg. Co.-Type CP-25 W/B, CP-25 WB+ Caulk, Type MP D. Firestop Device*-(Not Shown)-As an alternate to items A, B and C for nom 1-1/2, 2, 3 or 4 in. diam nonmetallic pipes, a firestop device consisting of a sheet-steel split collar lined with intumescent material and provided with steel clips for attachment may be used. Firestop device to be installed on underside of plywood flooring or underside of gypsum wallboard ceiling around in accordance with the accompanying installation instructions. Minnesota Mining & Mfg. Co.-Type PPD 150, PPD 200, PPD 300, PPD 400.

*Bearing the UL Classification Marking

Design No. U311 Sound Rating STC-50 to 54 Bearing Wall Rating-1 Hr. GA File No.-WP 3230 (t) Finish Rating-23 Min. Thickness-5 3/8" Fire Test-UL R1319-93,94,129 Approx. Weight-7psf Design U311,8-10-66 Sound Test-BBN 760903,9-17-66 ULC Design U311

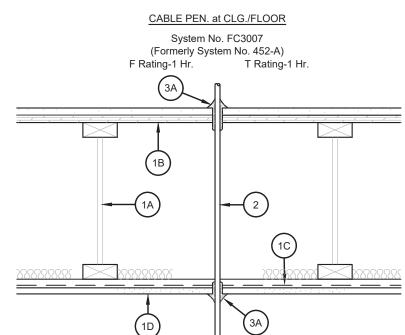
1. Wood Studs-Nom. 2 by 4 in., spaced 16" O.C., at First Floor. 2. Furring Channel-Resilient, 25 MSG galv. steel. Furring channels spaced vertically 24 in. O.C. flange portion screw attached to

one side of studs with 1-1/4 in. long diamond-shaped point, double lead Phillips head steel screws. 3. Wallboard, Gypsum*-5/8 in. thick, 4 ft. wide. Screw attached one side to furring channels with 1 in. long, self-drilling, self-tapping steel screws spaced 12 in. O.C., vertical joints located midway between studs and back-blocked with furring channels, attached with 1 in. long self-drilling, self-tapping screws, spaced 12 in. O.C., along each edge. Wallboard attached other side to studs with 1-1/4 in. long diamond-shaped point, double lead Phillips head steel screws spaced 12 in. O.C., vertical joints located over studs. Canadian Gypsum Co., Ltd.-Type C

Celotex Corp.-Type FRP Domtar Gypsum-Type 5 Georgia-Pacific Corp., Gypsum Div.-Type GPFS-C Pabco Gypsum Co.-Type C or PG-C United States Gypsum Co.-Type C or IP-X2 4. Mineral Wool Batts*-3 in. thick sheets, supplied in 15 in. widths, placed to fill interior of wall, attached to the 4 in. face of the studs with staples placed 24 in. O.C.

USG Interiors Inc. United States Gypsum Co. 5. Joints and Screwheads-Wallboard joints covered with paper tape and joint compound. Screwheads covered with joint compound. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced.

*Bearing the UL Classification Marking *GA FILE NO.- WP3230 (+) allows fiberglass insulation



1. Floor Assembly-The fire rated wood truss or combination wood and steel truss Floor-Ceiling assembly shall be constructed of the materials and in the manner described in the individual L500 Series Design in the UL Fire Resistance Directory and shall include the following construction features: A. Trusses-Min 12 in. deep parallel chord trusses fabricated from nom.

2 by 4 in. lumber in conjunction with galv steel truss plates or Structural Wood Members* with bridging as required. B. Flooring-Nom 3/4 in. thick plywood flooring with or without Float Topping Mixture*. Diam of opening hole-sawed in flooring to be 1 in. C. Furring Channels-Rigid or resilient galv steel furring channels installed

perpendicular to bottom chord of trusses. D. Wallboard, Gypsum*-Nom 4 ft, wide by 5/8 in, thick, screw attached to furring channels. Diam of hole-sawed opening in gypsum wallboard ceiling to be 1 in.

2. Cables-Max seven conductor No. 12 AWG (or smaller) power/control cables or max. 100 pair No. 22 AWG (or smaller) telecommunication cables with polyvinyl chloride insulation and jacket materials. Individual cables to be centered in nom. 1 in. daim. circular cutouts. Cables to be rigidly supported on both sides of Floor-Ceiling assembly.

3. Fill, void or Cavity Materials*-Caulk or Putty-Caulk or putty fill material forced into annular space throughout thickness of flooring and gypsum wallboard ceiling and with a min. 1/4 in. bead applied to perimeter of cable at its egress from the top of the flooring and the underside of the the gypsum wallboard ceiling. Minnesota Mining & Mfg. Co.-Type CP-25 WB Caulk, Type MP Putty *Bearing the UL Classification Marking

WALL ASSEMBLY

DESIGN NO. U305

FINISH RATING-SEE ITEM 3

1. Nailheads - Exposed or covered with joint compound.

veneer baseboard. Joints reinforced.

wallboard is to be installed horizontally

(finish rating 21 min) or FRP.

(finish rating 20 min).

No. 6d cement-coated nails.

United States Gypsum Co.

USG Interiors Inc.

Owens-Corning Fiberglas Corp.

*Bearing the U.L. Classification Marking.

26 min), Type C (finish rating 26 min).

2. Joints - Exposed or covered with fiber tape and joint compound, except

ounded-edge wallboard, joints covered with joint compound or fiber

tape and joint compound. As an alternate, nom 3/32 in. thick gypsum

veneer plaster may be applied to the entire surface of Classified

3. Wallboard, Gypsum* - 5/8 in. thick wallboard paper or vinyl surfaced.

1/4 in. diam heads. When used in widths of other than 48 in.

with beveled, square, or tapered edges. Wallboard nailed 7 in. O.C

with 6d cement-coated nails 1-7/8 in. long, 0.0915 in. shank diam and

Celotex Corp. - Type 1, Type SF3 (finish rating 20 min), Type A

(finish rating 21 min), Type B (finish rating 20 min), Type C

Domtar Gypsum - Type C (finish rating 26 min), Type 4 (finish

rating 26 min), Type 5 (finish rating 26 min), Type 6, Type 8

Georgia-Pacific Corp., Gypsum Div. - Type GPFS1 (finish rating

20 min), Type GPFS2 (finish rating 20 min), Type GPFS3 (finish

rating 20 min), Type GPFS4 (finish rating 20 min), Type GPFS6

(finish rating 26 min) or Type GPFS-C (finish rating 20 min).

Gold Bond Building Products - Type FSW (finish rating 20 min),

min), Type FSW3 (finish rating 20 min), Type FSW4 (finish

Pabco Gypsum - Type PG-2 (finish rating 20 min), PG-3 (finish

rating 20 min), PG-3W (finish rating 20 min), PG-4 (finish

rating 20 min), PG-6 (finish rating 23 min), PG-3WS (finish

Republic Gypsum Co. - Type RG-1 (finish rating 20 min), Type

RG-2 (finish rating 20 min), Type RG-3 (finish rating 20 min)

or Type RG-4 (finish rating 26 min), Type RG-6 (finish rating

Standard Gypsum Corp. - Type SGC (finish rating 20 min), Type

United States Gypsum Co. - Type SCX (finish rating 26 min), Type

SGC-3 (finish rating 20 min) or SGC-G (finish rating 20 min).

C (finish rating 26 min), Type WRX (finish rating 26 min),

min). Type IP-X1 (finish rating 26 min), Type FCV (finish

(finish rating 26 min) or Type SHC (finish rating 26 min).

rating 20 min) or Type DDDG3 (finish rating 20 min).

in. wide cleats protruding into the 5/8 in. wide channel, fabricated

from 24 gauge galv steel. Fasteners applied only to the end or cut

stud through tab using one No. 6d cement-coated nail per fastener.

Corners of wall board shall be nailed to top and bottom plate using

5. Batts and Blankets* (Not shown) - optional glass fiber or mineral wool

regulations.

4. Steel Corner Fasteners - (Optional) - For use at wall corners.

Type WR-C (finish rating 26 min), Type D (finish rating 23

rating 26 min). Type IP-X2 (finish rating 26 min), Type SHX

Weyerhaeuser Co., Gypsum Div. - Type DDN1 (finish rating 20

min), Type DDG2 (finish rating 20 min), Type DDW3 (finish

Channel shaped, 2 in. long by 1 in. high on the back side with two 1/8

edge (not along tapered edges) of the wallboard. no greater than 2 in.

from corner of wallboard, max spacing 16 in. O.C. Nailed to adjacent

rating 20 min), Type FSK (finish rating 20 min) or FSK-G

Type FSW-G (finish rating 20 min), Type FSW2 (finish rating 24

finish rating 23 min) or Type 9 (finish rating 26 min).

Canadian Gypsum Co., Ltd. - Types SCX, SHX, WRX (finish rating

where required for specific edge configuration. For tapered,

BEARING WALL RATING-1 HR.

NOTE: E.I.F.S. ON EXTERIOR

x4's FIRESTOPPED

3x4's @ FIRST FLOOR

(MINIMUM)

SIDE OF WALL

(EXTERIOR & INTERIOR WALLS)

CEILING/FLOOR ASSEMBLY (ALL AREAS EXCEPT CORRIDORS)

FLOOR/CEILING ASSEMBLY

APPROXIMATE CEILING WEIGHT: 5 psf

WOOD JOISTS, GYPSUM WALLBOARD,

Base layer 5/8" type X gypsum wallboard applied at right angles

base applied at right angles to joists with 1 7/8" Type S drywall

screws 12" o.c. at joints and intermediate joists and 1 1/2" Type G

drywall screws 12" o.c. placed 2" back on either side of end joints.

Joints offset 24" from base layer joints. Wood joists supporting 1/2"

plywood with exterior glue applied at right angles to joists with 8d

nails. Ceiling provides one hour fire resistance protection for wood

THIS ASSEMBLY MUST BE APPROVED BY LOCAL BUILDING DEPARTMENT. IF 2x8 NOT APPROVED, THEN 2x10's MUST BE USED.

to 2x10 wood joists 24" o.c. with 1 1/4" Type W or S drywall screws

24" o.c. Face layer 5/8" type X gypsum wallboard or gypsum veneer

FIRE TEST: FM FC 172, 2-25-72 SOUND TEST: ESTIMATED

framing, including trusses.

____ 1" GYPCRETE

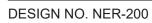
— 3/4" T & G PLYWOOD

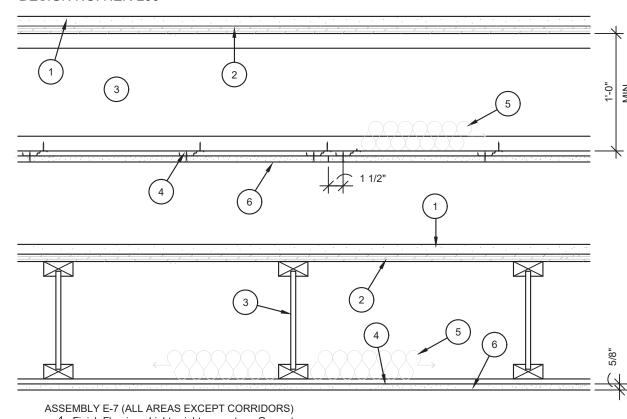
AT CORRIDOR

1 HOUR FIRE

GA FILE NO. FC 5406

35 TO 39 STC SOUND





1. Finish Flooring - Lightweight concrete or Gypcrete. 2. Single-layer floor of 3/4-inch Tongue-and-Groove plywood. TJI ioist.

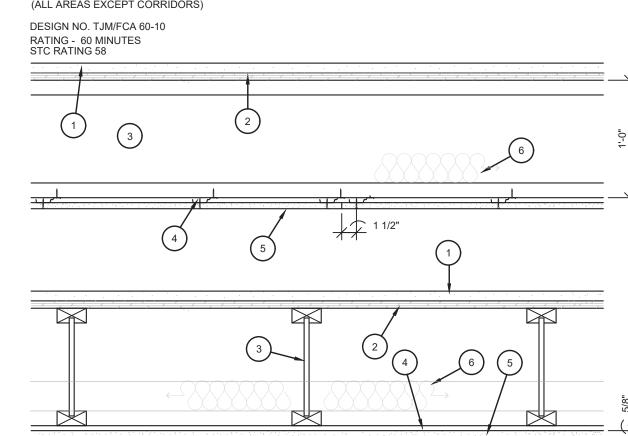
4. USG RC-1 channel at 16 inch on center. 5. USG Thermafiber mineral wool batts. (1")

6. 5/8-inch USG Type C Firecode Gypsum wallboard. One-Hour, Fire-Resistive Floor-Ceiling Rating Alternate Floor Systems - A minimum 5/8" plywood floor over joists spaced at amiximum of 24" on center with either 1-1/2" of lightweight concrete or 1" of gypsum concrete may be considered as an alternate deck for the systems described previously. When the joists or trusses topping of gypsum concrete may be used. The gypsum concrete must be covered in a current evaluation report issued by the National Evaluation Service or the Building Officals and Code Administrators Internationals, Inc., the International Conference of Building Officals, and the Southern Building Code Congress International, Inc. The evaluation must include an evaluation for fire resistance involving the replacement of the above floor systems with

the plywood and gypsum concrete system. STC = 59 TEST # TL81-105 (ASTM E90 - 75) & E413-73

CEILING/FLOOR ASSEMBLY

(ALL AREAS EXCEPT CORRIDORS)



1. Topping - 1 inch thickness "Gypcrete" or equivalent topping.

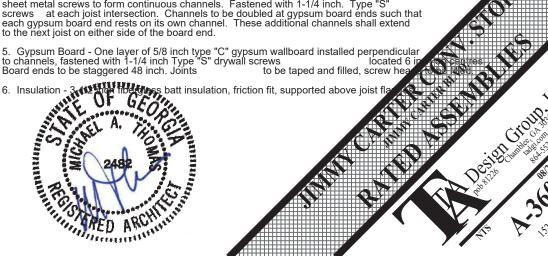
2. Sub-Flooring - 3/4 inch T & G plywood or OSB sheathing, installed perpendicular to joists and fastened with exterior construction adhesive along joist surfaces, then nailed with 1-1/2 inch common nails (or equivalent staples) spaced 6 in O.C. at board ends, 12 inch O.C. along intermediate supports.

3. Structural Members - Trus Joist MacMillan 14 inch deep, TJI/55DF or SP series I-joists constructed with 7/16 in. OSB web and 2 x 4 Microllam LVL flanges installed at 24 inch

4. Resilient Channels - Maximum 25 gauge steel, spaced 16 inch on centres and installed perpendicular to joists. Channels shall be overlapped at ends and fastened with 1/2 inch sheet metal screws to form continuous channels. Fastened with 1-1/4 inch. Type "S" screws at each joist intersection. Channels to be doubled at gypsum board ends such that each gypsum board end rests on its own channel. These additional channels shall extend to the next joist on either side of the board end.

insulation, friction fit, supported above





BLD2020-04937

GWINNETT COUNTY

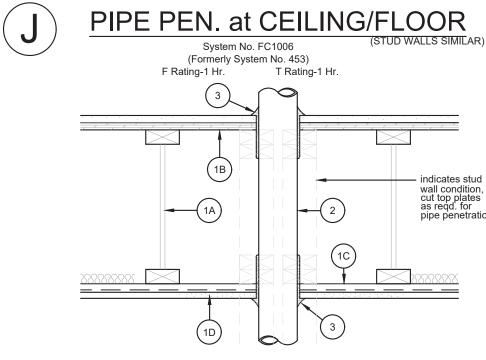
Department of Planning and Development

These project documents have been reviewed by applicable

County Departments and have been found to be in substantial compliance with the applicable codes and

Sep 02, 2020

AUTHORIZED



1. Floor Assembly-The fire rated wood truss or combination wood and steel truss Floor-Ceiling assembly shall be constructed of the materials and in the manner described in the individual L500 Series Design in the UL Fire Resistance Directory and shall include the following con-

A. Trusses-Min 12 in. deep parallel chord trusses fabricated from nom 2 by 4 in. lumber in conjunction with galv steel truss plates or Structural Wood Members* with bridging as

B. Flooring-Nom 3/4 in. thick plywood flooring with or without Floot Topping Mixture*. Max diam of opening hole-sawed in flooring is 5 in.

C. Furring Channels-Rigid or resilient galv steel furring channels installed perpendicular to bottom chord of trusses. D. Wallboard, Gypsum*-Nom 4 ft. wide by 5/8 in. thick, screw attached to furring channels. Max diam of hole-sawed opening in gypsum wallboard ceiling is 5 in.

2. Pipe or Conduit-Nom 4 in. diam (or smaller) Schedule 10 (or heavier) steel pipe, steel conduit or steel EMT, or cast iron pipe or nom 3 in, diam (or smaller) Type L (or heavier) copper tubing. Pipe to be installed approx midway between trusses and centered in circular cutouts in flooring (Item 1B) and gypsum wallboard ceiling (Item 1D). Diam of circular cutouts in flooring and gypsum wallboard ceiling to be 1/4 in. to 1/2 in. larger than diam of pipe. Pipe to be rigidly supported on both sides of Floor-Ceiling assembly.

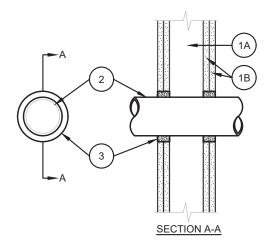
3. Fill, Void or Cavity Materials*-Caulk-Caulk forced into annular space throughout the thickness of the flooring and gypsum allboard ceiling and with a min 1/4 diam bead of caulk applied to perimeter of pipe at its egres from the top of the flooring and the underside of the gypsum wallboard ceiling Minnesota Mining & Mfg. Co.-Type CP-25 WB, CP-25 WB+



*Bearing the UL Classification Marking

PIPE PEN. at FIRESTOP

System No. W-L-2067 F Rating-1 and 2 Hr. (See Item 1) T Rating-1 and 2 Hr. (See Item 1)



1. Wall Assembly - The 1 or 2 hr. fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Stud - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom. 2 by 4 in. lumber spaced 16 in. OC Steel studs to be min 2-1/2 in wide and spaced 24 in OC B. Wallboard, Gypsum* - 5/8 in. thick, 4 ft. wide square or tapered edges. The gypsum wallboard, type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max. diam. opening is 4-3/8 in.

The hourly F and T Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed. 2. Through-Penetrants - One nonmetallic pipe or conduit to be centered within the firestop system. The max diam of the through penetrant and annular space within the firestop system is dependent upon the type of fill material (Item 3). Pipe or conduit to be rigidly supported on both sides of the wall assembly. The following types and sizes of nonmetallic pipes or conduit may be used:

A. Polyvinyl Chloride (PVC) Pipe - Nom. 2 in. diam. (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) piping

B. Chlorinated Polyvinyl Chloride (CPVC) Pipe - Nom. 2 in. diam. (or smaller) SDR 17 CPVC pipe for use in closed (process or supply) piping C. Rigid Nonmetallic Conduit+ - Nom. 2 in. diam. (or smaller) Schedule

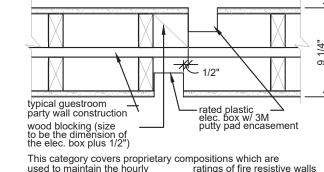
40 PVC conduit installed in accordance with Article 347 of the National Electrical Code (NFPA No. 70). 3. Fill, Void or Cavity Material*-Sealant - In 2 hr. fire rated assemblies, min. 1-1/4 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. In 1 hr. fire rated assemblies, min. 5/8 in. thickness of fill material applied within the annulus, on both surfaces of wall. Additional fill material to be installed such that a min. 5/8 in. thick crown is formed around the penetrating item and lapping a min. 1 in.

beyond the periphery of the opening. The max. diam. of the through penetrant and annular space within the firestop system is dependent upon the type of fill material as tabulated

Max. Diam. of through Nom. Annular Pennetrant In. Space In. Fill Material Type 1/2 EP Isolatek International - Types EP and I

+ Bearing the UL Listing Mark * Bearing the UL Classification Marking

PROTECTIVE MATERIALS (CLIV)



This category covers proprietary compositions which are used to maintain the hourly ratings of fire resistive walls partitions containing flush mounted devices such as outlet boxes electrical cabinets and mechanical cabinets. The individual Classifications individual cabinets are resistent as a superstantial cabinets. individual Classifications indicate the specific applications and the method of installation for which the materials nave been evaluated. The basic standard used to investigate products in this category is ANSI/UL 263, "Fire Test of Building Construction and Materials".

LOOK FOR CLASSIFICATION MARKING ON PRODUCT This Classification Marking of Underwriters Laboratories, Inc. (shown above) on the product or container is the only method provided by Underwriters Laboratories, Inc. to identify Wall Opening Protective Materials produced under its Classification and Follow-Up Service.

UNDERWRITERS LABORATORIES, INC. CLASSIFIED
WALL OPENING PROTECTIVE MATERIAL
FIRE RESISTANCE CLASSIFICATION
SEE PRODUCT CATEGORY IN UL FIRE RESISTANCE DIRECTORY BM CENTER, ST PAUL, MN 55144

Type MPP-4S+ moldable putty pads for use with max 4 11/16 by 4 11/16 in. flush device UL list Outlet Boxes in fire rated gypsum wallboard wall assemblies framed with min 3 1/2 in. wide wood or steel studs and constructed as specified in the individual U300 or U400 Series Wall and Partition Designs in the Fire Resistance Directory Moldable putty pads are to be installed to complete cover the exterior surface of the box within the stud cavity with a ball of putty material used to plug the end of each electrical metallic tube or conduit at its connection to the box. A min 1/8 in. thickness of putty material is required on the exterior surfaces of flush device boxes in 1 and 2 hr fire rated Wall and the moldable putty pad outlet box protective material is used as directed, the horizontal separation between outlet boxes on opposite sides of the wall may be less than 24 in provided that the outlet boxes are not installed back to back

HORIZONTAL

SECTION

WALL ASSEMBLY DESIGN NO. U341 BEARING WALL RATING-1 HR. FINISH RATING-MINIMUM 20 MIN.

1. Wood Studs - Nom 2 by 4 in., spaced 24 in. O.C. max. Cross-braced at mid-height and effectively fire-stopped at top and bottom of wall.

2. Wallboard, Gypsum * - 5/8 in. thick 4 ft wide. Wallboard or lath applied horizontally or vertically and nailed to studs and bearing plates 7 in. O.C. with 6d cement-coated nails, 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam head. As an alternate, No. 6 bugle head drywall screws, 1-7/8 in. long, may be substituted for the 6d

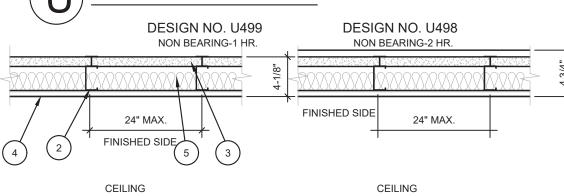
3. Joints and Nailheads - Wallboard joints of outer layer covered with tape and joint compound. Nail heads of outer layer covered with joint compound. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard.

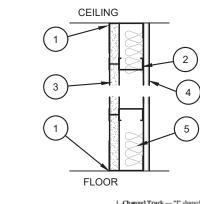
4. Sheathing - (Optional) - Septum may be sheathed with plywood or Mineral and Fiber Boards*. See Mineral and Fiber Boards (CERZ) category for names of Classified Companies.

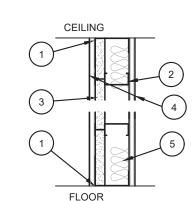
5. Batts and Blankets* - 3-1/2 in. max thickness glass or mineral fiber batt insulation. Optional when sheathing (Item 4) is used on both See Batts and Blankets (BZJZ) category for list of Classified

*Bearing the U.L. Classification Marking.

WALL ASSEMBLY







4. Gypsum Board* — 1/2 in. thick, 4 ft wide applied either horizontally or vertically and attached to studs and runners with 1 in. long Type S steel screws spaced 12 in. OC. When Furring Channels (Item 2C) are used, gypsum board attached in. long Type S steel screws spaced 12 in. OC. When Furring Channels (Item 2C) are used, gypsum board attached vertically to furring channels with 1 in. long Type S steel screws spaced 12 in. OC. Outer layer joints covered with paper ape and joint compound. Exposed screw heats covered with joint compound.

When used in widths other than 48 in., gypsum board to be installed horizontally NATIONAL GYPSUM CO - Types FSK-C, FSW-G, FSW-C, FSMR-C.

The minimum dry density shall be 4.30 lbs/ft3.
INTERNATIONAL CELLULOSE CORP — Celbar-RL

used for dry application only. 5B. Fiber, Sprayed* — As an alternate to Batts and Blankets (Item 5) and Item 5A - Spray applied cellulose in material. The fiber is applied with water to interior surfaces in accordance with the application instructions supr the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft. NU-WOOL, CO INC — Cellulose Insulation 5C. Fiber, Sprayed*—As an alternate to Batts and Blankets (ftem 5) - Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. WALL ASSEMBL **DESIGN NO U334** DESIGN NO. U334 Bearing Wall Rating - 2 Hr. STC Rating - 62 (See Item 7

1. Wood Studs - Nom 2 by 4 in., spaced 16 in. OC. Studs cross braced at mid-height and effectively fire stopped at top and bottom of wall. 2. Resilient Channel - 25 MSG galv steel, nom 2-1/2 in. wide by 1/2 in. deep. Resilient channels placed perpendicular to studs, spaced vertically max 24 in. OC, flange portion attached to each intersecting stud with 1 in. long Type S steel screws. 2A. Steel Framing Members (Optional, Not Shown)* — As an alternate to Item 2, furring channels and resilient sound isolation clip as described

> a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. b. Steel Framing Members* - resilient sound isolation clip used to attach furring channels (Item a) to studs (Item 1). Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips.

PAC INTERNATIONAL INC — Type RSIC-1.

3. Gypsum Board* — 5/8 in. thick, 4 ft wide. Attached to furring channels: base layer with 1 in. long Type S steel screws spaced max 24 in. OC, face layer with 1-5/8 in. long Type S steel screws spaced max 12 in. OC. Attached to wood studs: base layer with 1-7/8 in. long 6d coated nails spaced max 14 in. OC, face layer with 2-3/8 in. long 8d coated nails spaced max 7 in. OC. Base layers installed vertically. Face layers installed horizontally with butt joints offset 16 in. from base layers.

AMERICAN GYPSUM CO - Types AG-C BPB AMERICA INC - ProRoc Type C. BPB CANADA INC - ProRoc Type C CANADIAN GYPSUM COMPANY — Types C, IP-X2, IPC-AR.G-P GYPSUM CORP. SUB OF GEORGIA-PACIFIC CORP — Type 5. LAFARGE NORTH AMERICA INC — Types LGFC-C, LGFC-

NATIONAL GYPSUM CO — Types FSK-C, FSW-C, FSW-G. 4. Batts and Blankets* — Nom 2 in. thick mineral wool insulation, 96 in. long, cut to 15 in. widths, friction fitted between studs in wall cavity. THERMAFIBER INC — Type SAFB. 4A.. Batts and Blankets* — Glass fiber insulation. The cavities formed

by the studs friction fit with R-19 unfaced fiberglass insulation batts measuring 6-1/4 in. thick and 15-1/4 in. wide. See Batts and Blankets⁴ (BZJZ) category for names of Classified Companies. Joint Tape and Compound — Vinyl, dry or premixed joint compound, applied to joints, screw heads, and nail heads (two applications); paper tape, 2 in. wide, embedded in first layer of compound

6. Caulking and Sealants — (not shown, optional) A bead of acoustical sealant applied around the partition perimeter for sound control 7. STC Rating — The STC Rating of the wall assembly is 62 when it is constructed as described by Items 1 through 5, except: a. Item 2A, above - Steel Framing Members* Shall be used to attach wallboard to studs on either the acoustical

WALL ASSEMBLY

DESIGN NO. U344

BEARING WALL RATING-1 HR

FINISH RATING - 27 MIN.

1. Wood Studs - Nom 2 by 4 in. spaced 24 in. OC, laterally braced, and effectively fire

. Plywood Sheathing - Nom 15/32 in. thick, 4 ft. wide APA rated sheathing 32/16. Exposure 1, C-D grade plywood per PS 1-83 or PRP-108 specifications. Installed with long dimension of sheet (strength axis) or face grain of plywood, parallel with studs.

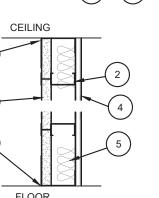
Vertical joints centered on studs, and staggered one stud space from wallboard joints. Horizontal joints backed with nom 2 by 4 in. wood backing. Attached to studs on exterior side of wall with 6d cement coated steel box nails spaced 12 in. OC along interior studs

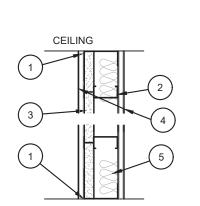
3. Batts and Blankets* - 3-1/2 in. thick foil-faced glass fiber batts. Supplied in rolls 23 in.

wide. Density to be nom 0.70 pcf. Placed in stud cavity and secured to studs with 5/8 in. long steel staples spaced nom 12 in. OC. See Batts and Blankets* (BZJZ) category for names of classified Companies.

source or receiving side of the wall assembly. b. Item 4a above - Batts and Blankets* As described above, fiberglass insulation shall be used. c. Item 6, above - Caulking and Sealants (not shown) A bead of acoustical sealant shall be applied around the partition perimeter for sound control.

*Bearing the UL Classification Mark





 Channel Track — "J" shaped channel, 2-1/2 in. wide with unequal legs of 1 in. and 2 in., fabricated from 2.5 MSG galv
steel channel attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in OC

2. Steel Studs — "T" shaped studs, min 2-1/2 in. deep by 1-1/2 in. wide, fabricated from min 25 MSG galv steel, spaced 24 in. OC. Vertically restrained walls require studs to be cut 1/2 in. less than floor to calling height.

2A. Steel Studs — (Not Shown) — "C-IT" -shaped studs, min 2-1/2 in. deep by 1-1/2 in. wide, fabricated from min 25 MSG galv steel, spaced 24 in. OC. Vertically restrained walls require studs to be cut 1/2 in. less than floor to cilling height.

2B. Steel Studs — (Not Shown) — "C-IT" -shaped studs, min 2-1/2 in. deep by 1-1/2 in. wide, fabricated from min 25 MSG galv steel, spaced 24 in. OC. Vertically restrained walls require studs to be cut 1/2 in. less than floor to ceiling height.

2C. Furring Channels — (Optional, not shown) - Resilient furring channels fabricated from min 25 MSG corrosion protected steel, installed horizontally, and spaced verifically a max. 24 in. OC. Flange portion of channel attached to each intersecting stud on side of stud opposite the orted in "I" studs. Free edge of end panels attached to long leg of channel track with 1-5/16 in. long Type S self-drilling, f-tapping bugle head steel screws spaced 1 in. from both ends.

5. Batts and Blankets* - (Optional) - Mineral wool or glass fiber batts partially or completely filling stud cavity. Any 3. Bants and Binahets* — (Optional) — Suneral Wool or glass their data partially or competerly Illing stud cavity. Any mineral wool or glass filter bath bearing the UL Classification Marking as to Fire Resistance. See Baths and blankets (BZZ)/Clategory For Names of Classified Companies.
5. A. Fiber, Sprayed* — As an atternate to Batts and Blankets (Item 5) — (100% Borate Formulation) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal day density of 2.7 [b/13]. Alternate Application Method: The fiber is applied with the density of 3.5 [b/18], in accordance with the application instructions supplied with the based on the supplication of the fiber is applied with the based on the supplication of the control of the supplication of the supplicati .C — INS735 & INS745 for use with wet or dry application. INS765LD and INS770LD are to be

> See Batts and Blankets* (BZJZ) category for names of classified Companies.
>
> 4. Wallboard Gypsum* - 5/8 in. thick, 4 ft. wide , applied horizontally or vertically. to studs through plywood sheathing with 8d cement coated nails 2-3/8 in. long, 0.113 in. shank diam, 9/32 in. diam head nails spaced 7 in. OC along studs and at perimeter of panels. When used in widths other than 48 in., wallboard is to be installed horizontally. Joints exposed or covered with tape and compound.
>
> Canadian Gypsum Company - Type AR, C, IP-X2, SCX, SHX, WRC or WRX. National Gypsum Company - Type AR, C, IP-X2, WRC, SCX, SHX, WRX. Yeso Panamericano SA de CV - Type AR, C, IP-X2, SCX, SHX, WRC or WRX.
>
> 5. Wallboard, Gypsum * - 5/8 in. thick, 4 ft wide applied horizontally or vertically. Attached to studs or blocking at 7 in. OC with 6d cement coated nails, 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam. heads. When used in widths other than 48 in., wallboard to be installed horizontally. Joints exposed or covered with tape and compound.
>
> Canadian Gypsum Company - Type C or IP-X2
>
> Canadian Gypsum Company - Type C or IP-X2
>
> Canadian Gypsum Company - Type C or IP-X2
>
> Limber ordging and with ends interestopped. Attached lumber do lumber do lumber do lumber and steel or combination under and selection contents. Attached lumber and steel or combination under an alternate to lumber goits, nom 4 in diam and election counts. Attached lumber do lumber and steel or combination under and selection contents. Attached lumber do lumber and steel or combination under an alternate to lumber goits, nom 4 in diam election contents. Attached lumber do lumber and steel or combination under model under and selection cond under an alternate to lumber and steel or combination under an alternate to lumber and seel or combination under an alternate to lumber and steel or combination under an alternate to lumber and steel or combination under an alternate to lumber and steel or combination under with endirestopped.
>
> C Furring Channels - Resilient galves teel f Canadian Gypsum Company - Type C or IP-X2. United States Gypsum Company - Type C or IP-X2 Yeso Panamericano SA de CV - Type C or IP-X2.

*Bearing the U.L. Classification Marking.

stopped at top and bottom

and 6 in. OC at perimeter of panels.

I. Wood Studs - Nom 2 by 4 in., spaced 16 in. O.C. Wallboard, Gypsum* - 5/8 in. thick, 4 ft wide, applied vertically
 Attached to studs with 1-3/4 in. long steel drywall nails with 0.102 in. diam shank and 0.29 in. diam head, spaced 7 in. O.C. Vertical joints located over studs. Joints coverec with paper tape and joint compound Nail heads covered with joint compound. See Wallboard, Gypsum (CKNX) category for names of manufacturers.

WALL ASSEMBLY

Design No. U335

(Exposed to Fire on Interior Face Only

3. Plywood Sheathing - 1/2 in. thick, 4 ft wide, APA Rated Sheathing, erior with exterior glue conforming to PS 1-74. Applied vertically with vertical joints located over studs and staggered 16 in. min from wallboard joints. Horizontal joints are backed with nom 2 by 4 in. wood backing. Attached to the studs with 2 in. long galv roofing nails with a 0.122 in. diam shank and a 3/8 in. diam head, spaced 6 in. O.C. at the perimeter of the sheet and 12 in. O.C. in the field. 3A. Gypsum Sheathing and Exterior Facings - As an alternate to Plywood

neathing (Item 3) - For exterior of wall, 5/8 in. thick (min) exterior

regular gypsum sheathing applied vertically and attached to studs and runner tracks with 1 in. long Type S-12 bugle head screws spaced 12 in. O.C. along studs and tracks 4. Foamed Plastic* - Min 1 in. thick, density of 1 pcf max, polystyrene foamed plastic insulation boards, supplied in 2 by 4 ft sheets. Positioned horizontally and staggered 16 in. O.C. vertically and attached to the Plywood Sheathing (Item 3) or as an alternate Gypsum Sheathing (Item 3A with Adhesive/Base Coat (Item 6) at a rate of 1-1/2 gal per 100 sq ft and (optional) four 2-1/4 in. long by 0.125 in. diam shank Phillip head screws with 1-3/4 in. diam plastic wafers with cap, located 2 in. from the corners of the foamed plastic.

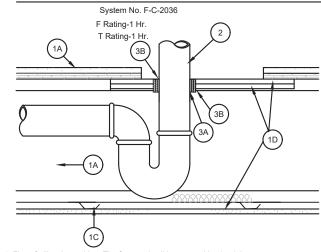
Associated Foam Manufacturers - Type WSG.

5. Non-Metallic Fabric Mesh - (Not Shown) - Glass fiber fabric mesh, weighing approx 2.5 oz per sq yd, positioned vertically over the foamed plastic (Item 4) and secured at the top with 16 guage 3/8 in. long taples randomly spaced

 Wall and Patition Facings and Accessories - Coating System - The
 base coat is trowel applied over glass fiber fabric mesh (Item 5) at a rate of 2 gal per 100 sq ft. The textured wall finish is then applied over the base coat at a rate of 2-1/2 gal per 100 sq ft. Gaco Western Inc. - Types A-5200, -5207, -5214, -5216, -5218,

7. <u>Insulation</u> - 3-1/2 in. thick kraft paper face glass fiber insulation. Supplied in rolls 15 in. wide. Density to be nom 0.75 lb per cu ft. Placed in stud cavities and secured to studs with steel staples spaced nom 12 in. * Bearing the UL Classification Marking

FLOOR PENETRATION AT TUB



 Floor-Ceiling Assembly -- The fire-rated solid or trussed lumber joist floor-ceiling assembly shall be construction of the materials and in the manner specified in individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction details of the floor-ceiling assembly are summarized below:
A. Floor System -- Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor Ceiling Design. Rectangular cutout in flooring to accommodate the bathtub drain piping (Item 2) to be max 8 by 12 in. B. Wood Joists -- Nom 2 by 10 in. lumber joists spaced 16 in. OC with nom 1 by 3 in. lumber bridging and with ends firestopped. A an alternate to lumber joists, nom 10 in. deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as equired with ends firestopped. C. Furring Channels -- Resilient galv steel furring installed perpendicular to wood joist (Item 1B) between wallboard (Item 1D) and wood joists as required in the individual Floor-Ceiling Design D. Wallboard Gypsum* -- Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design Wallboard secured to wood joists as specified in the individual Floor-Ceiling Design. Two pieces of gypsum wallboard, each min
4 in. longer and wider than the cutout in the flooring, screw-attached to bottom of flooring concentric with cutout. Diam of opening hole-sawed through both layers of the gypsum wallboard patch to be 1/2 to 5/8 in. larger than outside diam of bathtub drain piping (Item 2). 2. Drain Piping -- Nom 1-1/2 in. diam. Schedule 40 polyvinyl chloride (PVC) together and provided with PVC or ABS bathtub waste/overflow fittings. 3. Firestop System -- The firestop system shall consist of the following:

 A. Fill, Void or Cavity Materials* -- Wrap Strip -- Nom 1/4 in. thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. Nom 1-1/2 in. wide aluminum foil tape and slid into hole-sawed opening in gypsum wallboard path (Item 1D). Top edge of wrap strip to extend a nom 1/2 in. below above top surface of gypsum wallboard patch. Specified Technologies Inc. -- SpecSeal RED Strip B. Fill, Void or Cavity Materials* -- Sealant -- Nom 1/4 in. thickness of fill material to be applied to perimeter of wrap strip at it's egress from the underside of the gypsum wallboard patch. Nom 1/4 in. thickness of fill material to be applied to the exposed edge of the wrap strip layer and to fill all gaps between the wrap strip layer and the tee of the drain fitting on the top surface of the gypsum wallboard patch Specified Technologies Inc. -- Spec Seal 100, 101 or 105 Sealant *Bearing

DESIGN NO. U342 Bearing Wall Rating - 2 Hr. Finish Rating - Min 59 min. HORIZONTAL SECTION

Wood Studs - Nom 2 by 4 in. Cross braced at mid-height and effectively firestopped at top and bottom of wall. Spaced a max of 16 or 24 in. OC depending on type of wallboard. See Item 2 below.

Gypsum Board* - 5/8 in. thick, 4 ft. wide. Applied either horizontally or vertically. Inner layers nailed to studs and bearing plates 6 in. O.C. with 6d cement coated nails, 1-7/8in. long, 0.0915 in. shank diam and 1/4 in. diam head. Outer layer of double layered side nailed to studs and bearing plates 8 in. O.C. with 8d cement coated nails, 2-3/8 in. long, 0.113 in. shank diam and 9/32 in. diam head. Vertical joints located over studs. As an alternate, No. 6 bugle-head drywall screws, 1-7/8 or 2-3/8 in. long for the inner and outer layers, respectively, may be substituted for the cement coated nails. All joints in outer layer of double layer sides staggered with joints in inner layer. When Steel Framing Members* (Item 5) are used, base layer attached to furring channels, with 1 in. log Type S bugle-head steel screws spaced

max 24 in. OC; face layer attached with 1-5/8 in. long Type S bugle-head steel screws spaced max 12 in. OC. NOTE: Only board types marked with + may be used in assemblies with

24 in. OC spaced of studs. AMERICAN GYPSUM CO - Type AG-C, AGX-11, AGX-C BEIJING NEW BUILDING MATERIALS CO LTD - Type DBX-1. **BPB AMERICA INC**

BPB CELOTEX - Type 1 or FRP+. CANADIAN GYPSUM COMPANY - Types C+, IP-X1, IP-X2+, IPC-AR+, SCX, SHX, WRC+ FRX or WRX. CONTINENTAL GYPSUM COMPANY - Types CG-2, CG-3+ CG-3W, CG-3WS, CG-5W, CG-5WS, CG-6, CG-C, CG5-5+,

CG6-6, CG9-9, CGTC-C G-P GYPSUM CORP, SUB OF GEORGIA-PACIFIC CORP -Types 5+, 9 DGG, DS, C, GPFS6. JAMES HARDIE GYPSUM INC - Types Fire X, Max "C"

LAFORGE NORTH AMERICA INC - Types LFC-C, LGFC2, LGFC2A, LGFC6, LGFC6A, LGFC-C/A. NATIONAL GYPSUM CO - Type FSK, FSK-1, FSW-C+ or

NORGIPS A/S - NORFIRE XA. PABCO GYPSUM, DIV OF PACIFIC COAST BUILDING PRODUCTS INC - Type C, PG-2, PG-3+, PG-3W, PG-3WS, PG-4 PG-5W PG-5WS PG-6 or PG-C

SIAM GYPSUM INDUSTRY CO LTD - Type EX-1. STANDARD GYPSUM LLC - Type SG-C, SGC or SCG-G+. TEMPLE-INLAND FOREST PRODUCTS CORP - Type TG-C. UNITED STATES GYPSUM CO - Type C+, FRX, FRX-G, X1, IP-X2+, IPC-AR+, SCX, SHX, WRC+ or WRX. WESTROC INC - Type Fi-Rok.

USG MEXICO S A DE C V - Types C+, IP-X1, IP-X2+, IPC-AR+, SCX, SHX, WRC+, WRX. Gypsum Board* - 3/4 in. thick, 4 ft. wide. Applied vertically to stude (spaced max 16 in. OC) and bearing plates 6 in. OC with 8d cement coated nails, 2-3/8 in. long, 0.113 in. shank diam and 9/32 in. diam heads or 2-3/8 in. long No. 6 bugle head drywall screws. When this single layer

system is used Finished Rating is reduced to 26 min. CANADIAN GYPSUM COMPANY - Type ULTRACODE, ULTRACODE SHC OR ULTRACODE WRC, SHC or ULTRACODE WRC. UNITED STATES GYPSUM CO - ULTRACODE, ULTRACODE SHC or ULTRACODE WRC, SHC or ULTRACODE WRC USG MEXICO S A DE C V - ULTRACODE, ULTRACODE SHC

or ULTRACODE WRC. Joints and Nailheads - Wallboard joints or outer layer covered with tape and joint compound. Nail heads of outer layer covered with joint compound. As an alternate, nom 3/32 in, thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Batts and Blankets* - (Optional) - 3-1/2 in. max thickness glass or

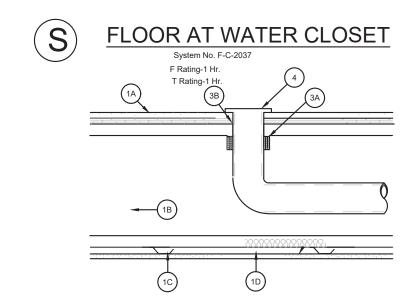
mineral fiber batt insulation. See Batts and Blankets (BZJZ) category of list of Classified companies. Fiber, Sprayed* - As an alternate to Batts and Blankets (Item 4) - Spray applied cellulose insulation material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application

instructions supplied with the product. Nominal dry density of 3.0 lb/ft3. U S GREENFIBER LLC - Cocoon stabilized cellulose insulation Steel Framing Members (Optional, Not Shown)* - Furring channels

and resilient sound isolation clip as described below; a. Furring Channels – Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Wallboard

attached to furring channels as described in Item 2. Steel Framing Members* - used to attach furring channels (Item a) to studs (Item 1). Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. PAC INTERNATIONAL - Type RSIC-1.

*Bearing the UL Classification Mark



Floor-Ceiling Assembly - The fire rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction details of the floor-ceiling assembly are summarized below:

summarized below:

A. Flooring System – Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max diam of opening is 5 in.

B. Wood Joists – Nom 2 by 10 in. lumber joists spaced 16 in OC with nom 1 by 3 in. lumber bridging and with ends firestopped. As an alternate to lumber joists, nom .

1 luin. deep (or deepen) lumber, steel or combination

fittings. Diam of circular opening
hole through flooring (Item 1A) to be max 1/2 in. larger than outside diam of pipe. Short length of pipe with 90 degree elbow fitting cemented into

bottom socket of closet flange
(Item 5). Drain piping cemented to elbow.

3. Firestop System -- The firestop system shall consist of the following:

A. Fill, Void or Cavity Material * -- Wrap Strip -- Nom 1/4 in. thick intumescent material faced on both sides with plastic film, supplied in 1-1/2 in wide strips.

Nom 1-1/2 in wide strips tightly-wrapped around

nonmetallic pipe with the edges
butted against the underside of flooring around the
entire pertimeter of the holesawed opening. Two layers of wrap strip ar required.
Each layer of wrap strip to
be installed with butted seam, butted seams in
successive layers staggered or
aligned. Wrap strip layer(s) temporarily held in positic
using aluminum foil tape.

using aluminum foil tape.

Specified Technologies Inc. – SpecSeal RED Strip

B. Steel Collar – Collar fabricated from coils of precut
0.016 in. thick (30 MSG) galv sheet steel available from wrap strip manufactu

galv sheet steel available from wrap strip manufacturer.
Collar shall be nom 1-1/2
in. deep with min four 1 in. wide by 2 in. long anchor
tabs for securement to top
surface of flooring. Retainer tabs, 3/4 in. wide
tapering down to 1/4 in. wide and
located opposite the anchor tabs, are folded 90
degrees toward though-penetrate
surface to maintain the annular space around the
though-penetrate and to retain the
wrap strips. Steel collar wrapped around wrap strips
and through-penetrate with a
1 in. wide overlap along it's perimeter joint and secured
together by means of min
1/2 in. wide by 0.028 in. thickness stainless steel hose
clamp at mid-height of the

clamp at mid-height of the steel collar. A an alternate to the steel hose clamp, the steel collar can be secured together by means of three No.8 by 3/8 in. long steel sheet metal screws. Anchor surface of flooring or underside of floor using min 3/4 in. long steel wood screws conjunction with 1/4 in., by 1-1/4

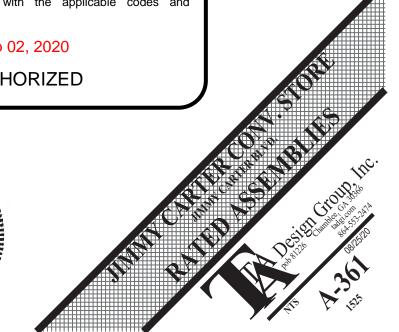
in. diam steel fender washers.

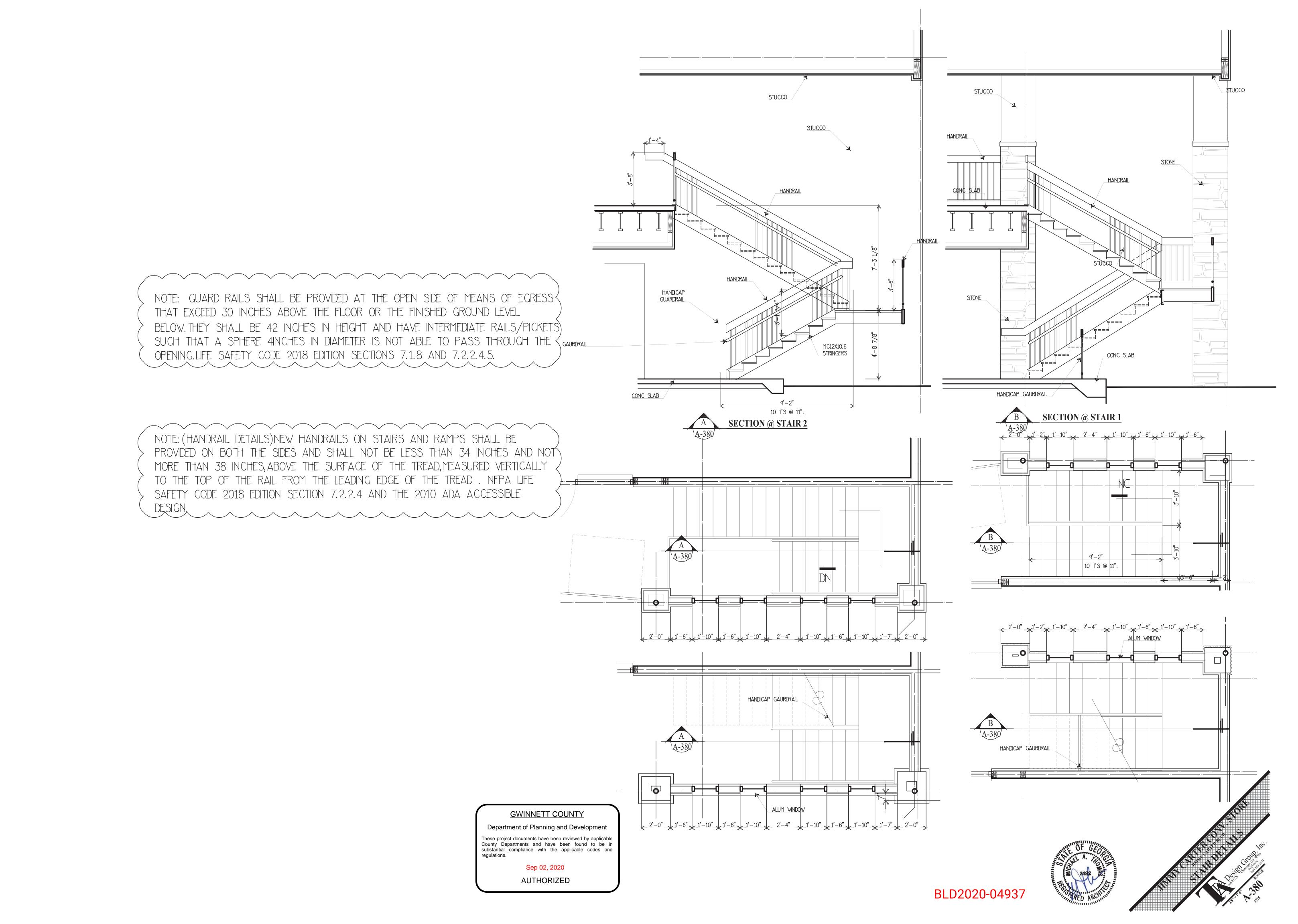
4. Closet Flange -- PVC or ABS closet stub sized to accommodate drain pipe. Closet flange installed in hole-sawed opening in flooring syste flange secured to top of flooring 5. Water Closet -- (Not Shown) -- Floor

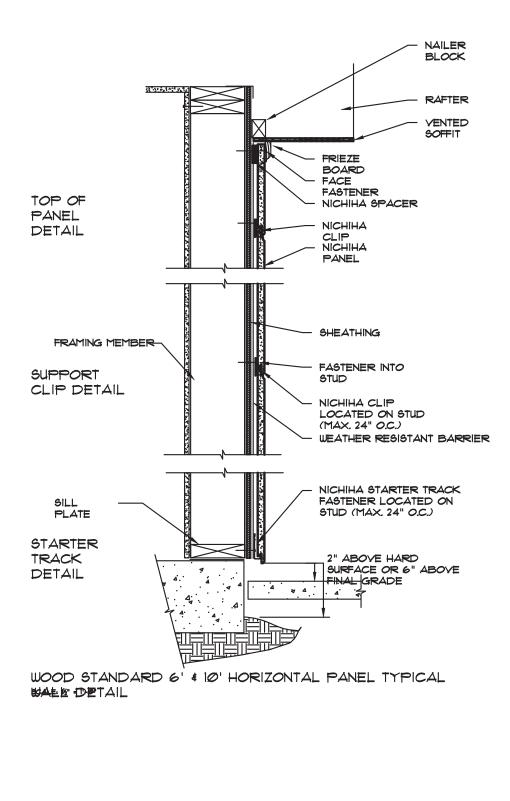
Department of Planning and Development These project documents have been reviewed by applicable County Departments and have been found to be in substantial compliance with the applicable codes and Sep 02, 2020 AUTHORIZED

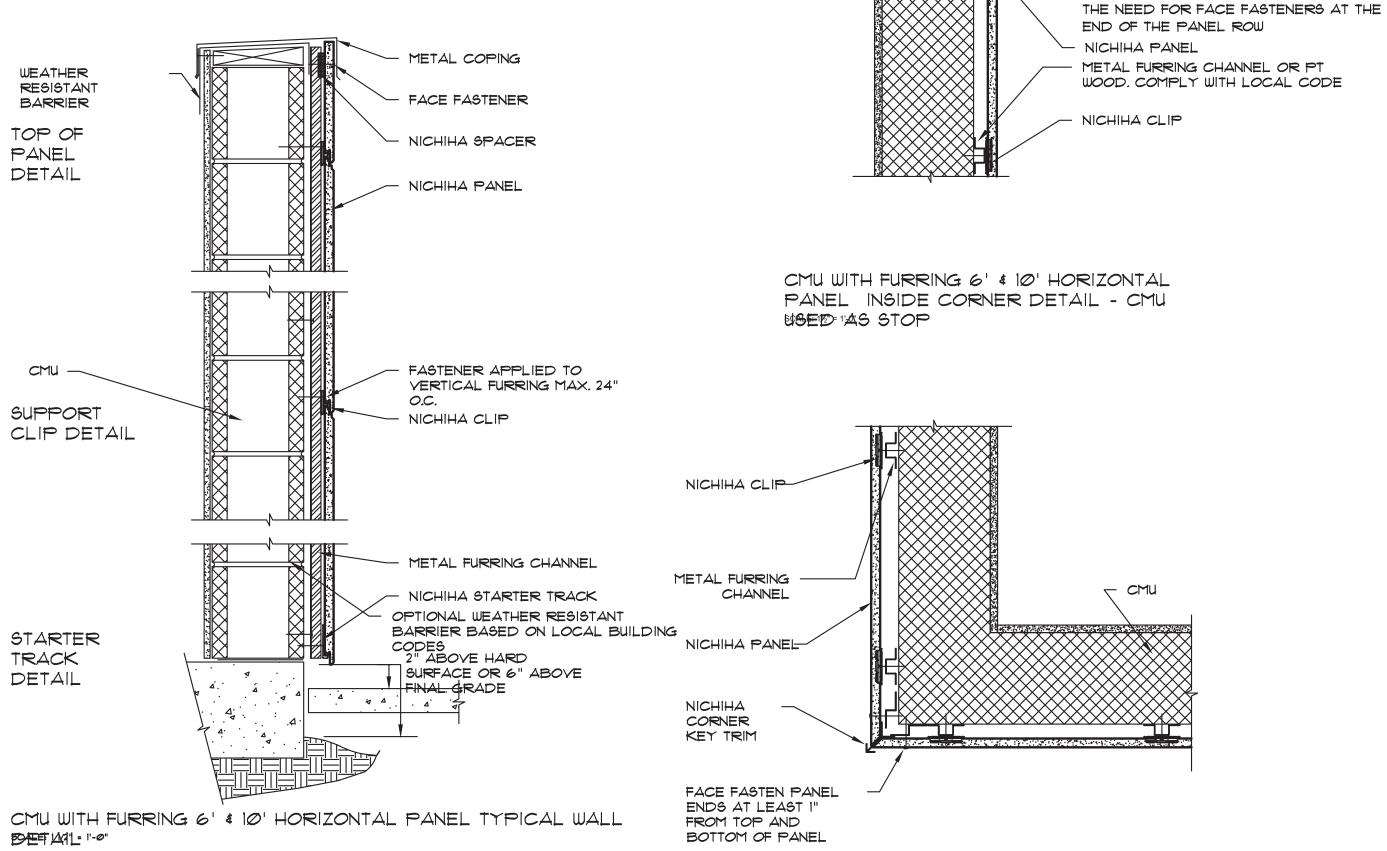
<u>GWINNETT COUNTY</u>













abla CMU

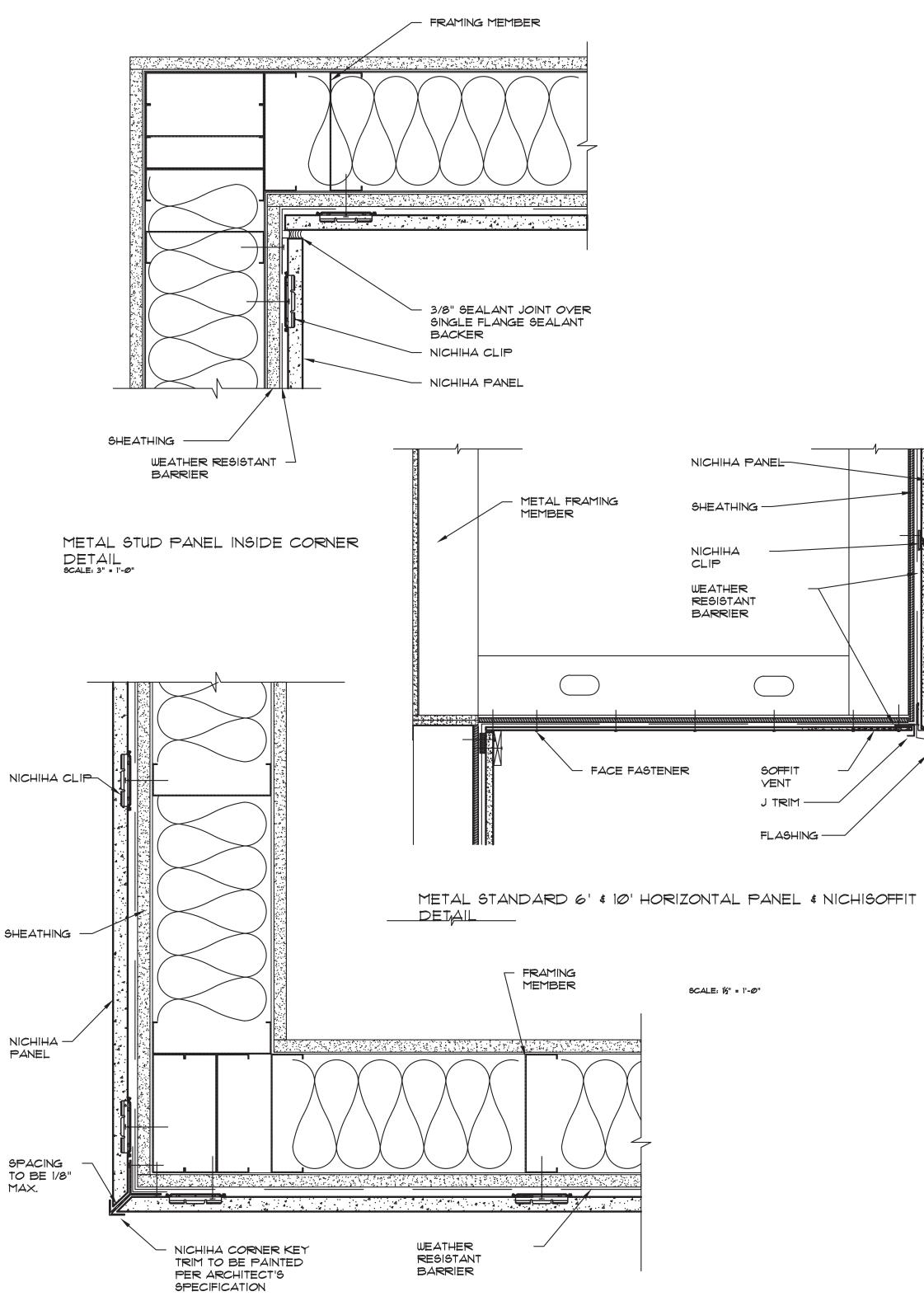
1/4" SEALANT JOINT OVER

USING THE DOUBLE EXPANSION JOINT

METHOD OF INSIDE CORNERS REPLACES

SINGLE FLANGE SEALANT

BACKER



METAL STUD PANEL OUTSIDE CORNER DETAIL - NICHIHA

AT METAL WALLS

AT CONCRETE BLK OR EXIST'G WALLS

NOTES

- THIS CONCEPTUAL DETAIL IS A GUIDE FOR INSTALLATION OF NICHIHA PRODUCTS.
- ARCHITECTS/ENGINEERS/CONTRACTORS ARE RESPONSIBLE FOR SUCCESSFUL APPLICATION WHICH DEPENDS UPON SUBSTRATE DESIGN AND CONSTRUCTION BUILT IN ACCORDANCE WITH BEST PRACTICES AND LOCAL BUILDING CODES.
- BUILDING CODES. 2. NICHIHA PANEL (REPRESENTED HERE IS 5/8" NICHIHA PRODUCT, ADJUST ACCORDINGLY FOR OTHER
- NICHIHA PRODUCT THICKNESSES).

 3. SHEATHING (REPRESENTED HERE IS 1/2" PLYWOOD OR 7/16" OSB (IF USING OTHER THICKNESSES ADJUST
- ACCORDINGLY). 4. METAL FRAMING MEMBERS MUST BE A MINIMUM OF 18 GA.
- 5. SOFFIT NOT TO BE DEEPER THAN THREE PANELS.
 6. INSIDE SOFFIT RECOMMEND PROVIDING SLIGHT SLOPE DOWNWARDS TOWARDS FLASHING TO EVACUATE
- MOISTURE.

1. NICHISOFFIT FACE FASTENED INTO FRAMING AT 8" O.C.

THESE DETAILS ARE FOR REFERANCE & EXAMPLE ONLY FIELD REQUIREMENTS PREVAIL.

GWINNETT COUNTY

Department of Planning and Development

These project documents have been reviewed by applicable County Departments and have been found to be in substantial compliance with the applicable codes and regulations.

Sep 02, 2020

AUTHORIZED





THE STRUCTURAL DRAWINGS SHOULD NOT BE USED TO SIZE OR LOCATE DOORS, WINDOWS, TOILET PARTITIONS, OR

SEE ARCHITECTURAL FOR ALL EXPANSION JOINT COVERS.

DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2012 INTERNATIONAL BUILDING CODE. DESIGN LOADS:

LIVE LOAD INFORMATION

NON-LOAD BEARING WALLS.

ROOF LIVE LOAD (REDUCED FOR TRIBUTARY AREA) = 20 PSF 2ND FLOOR LIVE LOAD = 75 PSF (TYPICAL FOR RETAIL SPACE) 1ST FLOOR LIVE LOAD = 100 PSF (SLAB ON GRADE)

ROOF DEAD LOADING INFORMATION 3.0 PSF SINGLE PLY MEMBRANE

2.0 PSF 5/8" PLYWOOD ROOF DECK 2.0 PSF INSULATION

5.0 PSF WOOD ROOF TRUSSES

2.5 PSF CEILING 4.0 PSF HVAC ALLOWANCE

2.0 PSF ELECTRICAL

FLOOR DEAD LOADING INFORMATION 10.0 PSF 1" GYPCRETE 2.5 PSF 3/4" PLYWOOD

> 4.0 PSF WOOD TRUSSES 2.5 PSF 5/8" GYPSUM BOARD

6.0 PSF COLLATERAL LOAD (LIGHTS, HVAC, SPRINKLER, ETC.) WEIGHT OF WALLS CONTRIBUTING TO DESIGN LOAD VARIES

SEE FRAMING PLAN FOR OTHER CONCENTRADED LOADS

SNOW LOAD INFORMATION

GROUND SNOW LOAD (PG) = 5 PSF SNOW EXPOSURE FACTOR (CE) = 1.0

SNOW LOAD IMPORTANCE FACTOR (IS) = 1.0 THERMAL FACTOR (CT) = 1.0

WIND LOAD INFORMATION ULT. WIND SPEED = 115 MPH

> ASD WIND SPEED = 89 MPH WIND IMPORTANCE FACTOR (IW) = 1.0

OCCUPANCY CATEGORY = II WIND EXPOSURE = B INTERNAL PRESSURE COEFFICIENT = +/- 0.18

COMPONENTS AND CLADDING = VARIES

SEISMIC DESIGN INFORMATION SEISMIC IMPORTANCE FACTOR (IE) = 1.0

SEISMIC DESIGN CATEGORY = C 0.2 SECOND SPECTRAL RESPONSE ACCELERATION (SS) = 0.193 1 SECOND SPECTRAL RESPONSE ACCELERATION (S1) = 0.093

0.2 DESIGN SPECTRAL RESPONSE ACCELERATION (SDS) = 0.206 1 DESIGN SECOND SPECTRAL RESPONSE ACCELERATION (SD1) = 0.147

SITE CLASS = D RESPONSE MODIFICATION COEFFICIENT (R) = 3 SYSTEM OVERSTRENGTH FACTOR = 3

DEFLECTION AMPLIFICATION FACTOR (CD) = 3 SEISMIC RESPONSE COEFFICIENT (CS) = 0.069

DESIGN BASE SHEAR (VX) = VARIES

BASIC SEISMIC FORCE RESISTING SYSTEM - LIGHT FRAMED WOOD WALLS SHEATHED WITH WOOD RATED FOR SHEAR RESISTANCE, AND STEEL NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE

ANALYSIS PROCEDURE - EQUIVALENT LATERAL FORCE PROCEDURE

ALL THE SAFETY REGULATIONS, METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIAL SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. IT SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SHORING, BRACING, AND FRAMEWORK, ETC. AS REQUIRED

DIMENSIONS ARE NOT TO BE DERIVED BY SCALING THESE DRAWINGS. IF THERE IS ANY QUESTION ABOUT DETAILS OR DIMENSIONS, CONTACT THE ARCHITECT AND STRUCTURAL ENGINEER FOR CLARIFICATION.

WHERE A DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL ALSO APPLY FOR ALL LIKE OR SIMILAR CONDITIONS, UNLESS NOTED

ISOMETRIC VIEWS ARE FOR ILLUSTRATIVE PURPOSES ONLY. NO INFORMATION ABOUT THE STRUCTURE OR ITS COMPONENTS SHALL BE TAKEN OR ASSUMED FROM THEM.

II. FOUNDATIONS

THE FOUNDATION IS DESIGNED USING AN ALLOWABLE SOIL BEARING CAPACITY OF 2000 PSF. IF THE BEARING CONDITIONS VARY FROM WHAT IS SHOWN, OR IF THE SOIL BEARING CAPACITY IS QUESTIONABLE, THE ARCHITECT AND STRUCTURAL ENGINEER ARE TO BE NOTIFIED IMMEDIATELY.

ALL BUILDING AREAS SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH ASTM D698, CURRENT EDITION.

A REGISTERED GEOTECHNICAL ENGINEER REPRESENTING THE OWNER SHALL BE PRESENT TO MONITOR COMPACTION AND SETTLEMENT AND VERIFY THE BEARING CAPACITY. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE ON-SITE GEOTECHNICAL ENGINEER.

REMOVE ALL TOPSOIL, ROOT SYSTEM OR OTHER DELETERIOUS MATERIAL UNDER BUILDING FOOTPRINT AND REPLACE WITH SUITABLE COMPACTED FILL OR CRUSHED STONE. STRUCTURAL ENGINEER'S DECISION ON QUESTIONABLE MATERIAL SHALL BE FINAL.

BACKFILLING SHALL BE PERFORMED IN EQUAL LIFTS AROUND THE BUILDING PERIMETER TO BALANCE LATERAL EARTH PRESSURE ON THE BUILDING. WALK BEHIND COMPACTION EQUIPMENT IS REQUIRED WITHIN A DISTANCE OF TWO TIMES THE WALL HEIGHT.

BACKFILL AGAINST STRUCTURAL WALLS SHALL NOT BE PERFORMED UNTIL WALL AND SLAB ON GRADE HAS OBTAINED SPECIFIED

STRENGTH. IF REQUIRED BY THE ON-SITE GEOTECHNICAL ENGINEER, THE GROUND WATER TABLE SHALL BE LOWERED.

ALL FOOTINGS TO BE CENTERED UNDER THE COLUMNS OR WALLS THEY SUPPORT, UNLESS NOTED OTHERWISE ON THE

UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEERS APPROVAL IN WRITING. THE CONTRACTOR SHALL LOCATE ANY EXISTING UNDERGROUND UTILITIES PRIOR TO ANY CONSTRUCTION.

INSPECTIONS BY GEOTECH FIRM ARE REQUIRED FOR EXISTING SOILS CONDITIONS, FILL PLACEMENT, AND LOAD BEARING REQUIREMENTS:

SITE PREPARATION: PRIOR TO PLACEMENT OF PREPARED FILL, THE INSPECTOR SHALL DETERMINE THAT THE SITE HAS BEEN PREPARED IN ACCORDANCE WITH THE RECCOMENDATIONS OF A REGISTERED GEOTECHNICAL PROFESSIONAL ENGINEER FOR THE REQUIRED BEARING PRESSURE NOTED ABOVE.

FILL PLACEMENT: DURING PLACEMENT AND COMPACTION OF FILL MATERIAL, THE INSPECTOR SHALL DETERMINE THAT THE PROPER FILL MATERIAL IS BEING USED AND THAT THE MAXIMUM LIFT THICKNESS IS FOLLOWED IN ACCORDANCE WITH THE RECCOMENDATIONS OF A REGISTERED GEOTECHINCAL PROFESSIONAL ENGINEER FOR THE REQUIREMENTS STATED ABOVE.

EVALUATION OF IN-PLACE DENSITY: THE INSPECTOR SHALL DETERMINE, AT THE FREQUENCIES DETERMINED IN THE SOILS REPORT AND PROJECT SPECIFICATIONS, THAT THE IN-PLACE DRY DENSITY OF THE COMPACTED FILL COMPLIES WITH THE RECCOMENDATIONS OF A REGISTERED GEOTECHINCAL PROFESSIONAL ENGINEER FOR THE REQUIREMENTS STATED ABOVE.

III. STRUCTURAL STEEL

DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE CODE-REFERENCED AISC MANUAL OF STEEL CONSTRUCTION, SPECIFICATION FOR STEEL BUILDINGS, AND CODE OF STANDARD PRACTICE.

STEEL FABRICATOR SHALL BE CURRENTLY CERTIFIED BY THE AISC QUALITY CERTIFICATION PROGRAM FOR STRUCTURAL STEEL FABRICATIONS AND DESIGNATED AS "AISC CERTIFIED FABRICATOR, CONVENTIONAL BUILDING CATEGORY." CONTRACTOR SHALL SUBMIT IN WRITING TO THE STRUCTURAL ENGINEER, AT THE TIME OF BID. PROOF OF CERTIFICATION FOR THE STEEL FABRICATOR (S) SUPPLYING

MATERIALS SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:

- W-SHAPES = ASTM 992 HOLLOW STRUCTURAL SHAPES = ASTM A500, GRADE B
- PLATES, BARS, ANGLES, C-SHAPES, MC-SHAPES = ASTM A36

PIPES = ASTM A53, GRADE B WELDING ELECTRODES = E70XX

ALL ANCHOR BOLTS SHALL BE SIZE AND STRENGTH SPECIFIED ON THESE DRAWINGS.

ALL BEAM END CONNECTIONS SHALL BE AISC DOUBLE ANGLE BOLTED-WELDED CONNECTIONS WITH 3/4" DIA. A325N BOLTS U.N.O. THE WELD SHALL BE 1/4" WELD FULL LENGTH OF ANGLE PLUS 1" TOP AND BOTTOM. DESIGN SHEAR SHALL BE THE GREATER OF:

THE SHEAR REACTION SHOWN ON DRAWINGS (IF ANY)

50% OF THE VALUE FROM THE "MAXIMUM TOTAL UNIFORM LOAD IN KIPS" TABLES OF THE AISC 13TH EDITION (BLACK BOOK) OR,

THE MINIMUM NUMBER OF BOLTS IN SINGLE SHEAR AS FOLLOWS:

BEAM SHAPE*	# OF 3/4" DIA. A325 BOLTS	LENGTH OF LL 3 1/2" X 3 1/2" X 5/16"
W8 , W10	4	5 1/2
W12 , W14	6	8 1/2
W16 , W18	8	11 1/2
W21	10	14 1/2
W24	12	17 1/2
W27	14	20 1/2
W30	16	23 1/2

WHERE CONNECTIONS ARE SKEWED OR THE DOUBLE ANGLE CONNECTIONS ABOVE WILL NOT FIT, THE FOLLOWING CONNECTIONS SHALL BE USED:

END OF BEAM CONNECTIONS*

BEAM SHAPE*	# OF 3/4" DIA. A325 BOLTS	1/2" SHEAR TAB LENGTH**
W8, W10	2	5 1/2
W12 , W14	3	8 1/2
W16	4	11 1/2
W18, W21	5	14 1/2
W24	6	17 1/2
W27	7	20 1/2
W30	8	23 1/2

* WHEN THE SHEAR TAB CONNECTION ABOVE DOES NOT FIT IN THE BEAM WEB, USE THE ADJACENT SMALLER CONNECTION AND CLOUD ON SHOP DRAWINGS.

** WELD PLATE TO SUPPORTING MEMBER WITH 1/4" WELD ALL AROUND. SHEAR TAB TO BE 3/8" THICK X 4" WIDE.

WELDS SHALL BE MADE ONLY BY OPERATORS CERTIFIED BY THE STANDARD QUALIFICATION PROCEDURE OF THE AMERICAN WELDING SOCIETY FOR THE TYPE OF WELD REQUIRED. WELDER CERTIFICATION SHALL BE SUBMITTED FOR REVIEW.

WELD LENGTHS NOT NOTED SHALL BE FULL LENGTH. TERMINATE WELDS IN ACCORDANCE WITH AISC MANUAL OF STEEL CONSTRUCTION AND AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE - STEEL (D1.1) .

HOLES LARGER THAN 1" DIA. SHALL BE COORDINATED WITH THE STRUCTURAL ENGINEER. HOLES SHALL BE PUNCHED OR DRILLED, EXCEPT AS OTHERWISE PERMITTED THE STRUCTURAL ENGINEER.

PROTECT COLUMNS, BASE PLACES, ANCHOR BOLTS, AND ANY STEEL BELOW GRADE WITH AN APPROVED INORGANIC OR EPOXY ANTI-CORROSION COATING, FIELD APPLIED PER MANUFACTURER'S INSTRUCTIONS.

A123. FASTENERS AND SMALL PARTS REQUIRING GALVANIZING SHALL BE IN CONFORMANCE WITH ASTM A153.

ALL EXPOSED STRUCTURAL STEEL INCLUDING LINTELS, AND AS NOTED ON DRAWINGS, SHALL BE GALVANIZED IN CONFORMANCE WITH ASTM

THE CONTRACTORS SHALL DETERMINE, FURNISH AND INSTALL ALL TEMPORARY SUPPORTS SUFFICIENT TO SECURE THE STRUCTURAL STEEL FRAMING AGAINST LOADS PRESENT DURING ERECTION. TEMPORARY SUPPORTS SHALL REMAIN IN PLACE UNTIL ALL CONNECTIONS TO THE LATERAL LOAD RESISTING SYSTEM, INCLUDING HORIZONTAL DIAPHRAGMS, ARE COMPLETE.

THE GENERAL CONTRACTOR SHALL VERIFY THAT THE CORRECT BEAM AND GIRDER CAMBER IS PRESENT AFTER ERECTION AND BEFORE FLOOR SLAB IS POURED.

SPLICE CONTINUOUS STEEL ANGLES AND PLATES WITH PARTIAL-JOINT-PENETRATION SQUARE GROOVE WELDS (JOINT DESIGNATION B-P1A)

STRUCTURAL STEEL FABRICATOR AND DETAILER SHALL SEE THE ARCHITECTURAL DRAWINGS FOR ANY ADDITIONAL STEEL NOT SHOWN OR CALLED OUT IN THESE DRAWINGS. IF SIZE IS NOT SHOWN IN ARCHITECTURAL DRAWINGS A REQUEST OR INFORMATION SHALL BE SENT TO THE STRUCTURAL ENGINEER THROUGH THE PROPER CHANNELS.

GENERAL CONTRACTOR SHALL COORDINATE CONNECTIONS OF JOIST AND JOIST GIRDERS TO STRUCTURAL STEEL.

IV. SUBMITTALS

THE CONTRACT DOCUMENTS ARE THE STRUCTURAL ENGINEER'S INSTRUMENTS OF SERVICE TO CONVEY DESIGN INTENT. THEY ARE NOT TO BE CONSIDERED FABRICATION OR LAYOUT DRAWINGS.

THE FOLLOW ARE REQUIRED SUBMITTALS

- CONCRETE MIX DESIGN (S)
- REINFORCING BAR DRAWINGS WOOD TRUSSES
- STRUCTURAL STEEL OTHER SUBMITTALS AS NOTED ON THE DRAWINGS AND SPECIFICATIONS

SUBMITTALS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMISSION TO THE STRUCTURAL ENGINEER AND SHALL BEAR THE CONTRACTOR'S STAMP ATTESTING TO THE SAME. DRAWINGS NOT STAMPED WILL NOT BE REVIEWED. SUBCONTRACTOR'S UNCHECKED SUBMITTAL DRAWINGS WILL NOT BE REVIEWED.

SUBMITTALS TO BE REVIEWED BY THE STRUCTURAL ENGINEER SHALL BE SUBMITTED TO THE ARCHITECT. THE STRUCTURAL ENGINEER WILL NOT ACCEPT SUBMITTALS DIRECTLY FROM CONTRACTORS WITHOUT THE STRUCTURAL ENGINEERS PRIOR APPROVAL.

UPON COMPLETION OF THE STRUCTURAL ENGINEER S REVIEW, SUBMITTALS WILL BE RETURNED TO THE ARCHITECT FOR THEIR REVIEW.

ANY DEVIATION IN DESIGN, DETAILS, DIMENSIONS, ETC. FROM THE CONSTRUCTION DOCUMENTS SHALL BE CLOUDED ON THE SUBMITTAL AND VERIFICATION OF THE CHANGE SHALL BE REQUESTED.

V. WOOD NOTES

Fc PERPENDICULAR: 750 PSI

WOOD CONNECTIONS SHALL FOLLOW THE MINIMUM REQUIREMENTS OF THE 2012 INTERNATIONAL BUILDING CODE TABLE 2304.9.1 UNLESS NOTED ON THE DRAWINGS TO REQUIRE ADDITIONAL FASTENERS.

INSTALL ALL WOOD CONSTRUCTION CONNECTORS ACCORDING TO THE REQUIREMENTS SET BY THE MANUFACTURER.

ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED.

STRUCTURAL LUMBER SHALL BE SOUTHERN PINE #2 OR EQUAL.

PROVIDE DOUBLE JOISTS UNDER ALL NON-LOAD BEARING PARTITIONS PARALLEL TO THE SPAN OF THE FLOOR JOISTS.

PROVIDE DIAGONAL OR SOLID BLOCKING @ 8'-0" O.C. MAXIMUM IN ALL FLOOR JOISTS AND SOLID BLOCKING BETWEEN FLOOR JOISTS UNDER WALLS THAT ARE PERPENDICULAR TO THE FLOOR JOISTS.

ALL STRUCTURAL WOOD USED IN THE CONSTRUCTION OF STEPS, PORCHES, AND DECKS, OR EXPOSED TO WEATHER SHALL BE PRESSURE TREATED. (U.N.O)

TJI FLOOR JOISTS ARE DESIGNED USING "TRUSS JOIST BY WEYERHAEUSER" THE USE OF ALTERNATE PRODUCTS SHALL BE SUBMITTED FOR APPROVAL. CONTRACTOR SHALL FOLLOW MANUFACTURERES WRITEN INSTRUCTION ON PROPER HADELING FOR JOISTS, STORING, ERECTING, AND ALLOWABLE HOLES IN JOIST WEB.

ALL PRE-ENGINEERED LUMBER SPECIFIED AS LVL'S ON THESE DRAWINGS SHALL BE PRODUCED BY "TRUSS JOIST BY WEYERHAEUSER" OR APPROVED EQUAL WITH MANUFACTURERS DETAILED DESIGN PROPERTIES FOR THE SECTIONS USED IN THIS SET OF DRAWINGS. THE MINIMUM DESIGN PROPERTIES SHALL E: 2,000,000 PSI Fb: 2,600 PSI

WALL SHEATHING SHALL BE CONTINUOUS OVER RIM JOIST TO TOP PLATE. ALL WALL AND FLOOR SHEATHING SHALL BE BLOCKED AT PANEL JOINTS.

THE ROOF SHEATHING SHALL BE 5/8" THICK (MIN.) 24/16 APA-RATED T&G ADVANTECH PLYWOOD, (OR OSB) WITH 0.131" DIAMETER X 2.5" LONG (RING SHANK) NAILS AT 6" ON CENTER AT ALL PANEL EDGES AND BOUNDARIES, AND 12" ON CENTER IN THE FIELD.

THE FLOOR SHEATHING SHALL BE 3/4" THICK (MIN.) 24/16 APA-RATED T&G ADVANTECH PLYWOOD, WITH 0.131" DIAMETER X 2.5" LONG (RING SHANK) NAILS AT 6" ON CENTER AT ALL PANEL EDGES AND BOUNDARIES, AND 12" ON CENTER IN THE FIELD.

INTERIOR SHEAR WALLS SHALL BE SHEATHED WITH 15/32" (MIN.) 24/16 APA-RATED OSB OR PLYWOOD, WITH 0.131" DIAMETER X 2.5" LONG (8D COMMON) NAILS AT 4" ON CENTER AT ALL PANEL EDGES AND BOUNDARIES, AND 12" ON CENTER IN THE FIELD. BLOCK ALL EDGES OF PLYWOOD. EXTERIOR WALL SHEATHING SHALL MATCH SHEAR WALL SHEATHING WITH 8d NAILS AT 6" O.C. AT BOUNDARIES AND EDGES AND 12" O.C. IN THE FIELD.

ALL CONCRETE WORK TO BE DONE IN ACCORDANCE WITH THE CODE REFERENCED EDITION OF ACI-318: BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE

CONCRETE MIX DESIGN REQUIREMENTS AND COMPRESSIVE STRENGTH AT 28 DAYS

DESCRIPTION	28 DAY STRENGTH (PSI)	WEIGHT PER CUBIC FOOT (PCF)	SLUMP AT POINT OF PLACEMENT	AGGREGATE	FIBERMESH OR WWM
FOOTING AND FOUNDATION WALLS	3000	145	4" +/- 1"	ASTM C33	NONE
SLAB ON GRADE	3000	145	4" +/- 1"	ASTM C33	WWM 6X6 W2.1 X W2.1
SIDEWALKS & EXTERIOR ON GRADE	3000	145	4" +/- 1"	ASTM C33	WWM 6X6 W2.1 X W2.1

FLY ASH SHALL NOT BE USED. WATER REDUCING ADMIXTURES MAY BE USED TO ACHIEVE SLUMP REQUIREMENTS.

SEE ARCHITECTURAL DOCUMENTS FOR JOINT SIZES AND FILLER MATERIALS.

LOCATION OF ALL CONSTRUCTION JOINS, EXCLUDING SLABS ON GRADE, SHALL BE COORDINATED WITH STRUCTURAL ENGINEER.

SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER SHOWING PROPOSED LOCATIONS OF ANY MATERIAL SUCH AS BUT NOT LIMITED TO CONDUITS, EMBEDMENTS, OR FIXTURES TO BE PLACED INSIDE ANY STRUCTURAL CONCRETE MEMBER SUCH AS BEAMS, WALLS, SLABS, COLUMNS OR FOOTINGS, THIS IS NOT REQUIRED FOR SLABS ON GRADE OF 4" OR LESS IN THICKNESS.

CONCRETE SLAB FLATNESS AND LEVELNESS TOLERANCES SHALL BE IN CONFORMANCE WITH ACI 117, AND SHALL BE SPECIFIED BY THE OWNER. UNLESS SUPERSEDED BY THE OWNERS CRITERIA, CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS:

PROVIDE A FLOOR SURFACE WHICH IS TRUE AND LEVEL AND ACHIEVES F NUMBERS OF FF = 30 AND FL = 20 MINIMUM OVERALL COMPOSITE AND FF = 20 AND FL = 15 MINIMUM AT ANY INDIVIDUAL SECTION, WHEN TESTED IN ACCORDANCE WITH ASTM E1155, REMOVE SURFACE IRREGULARITIES TO PROVIDE A CONTINUOUS SMOOTH FINISH.

ALL INTERIOR SLABS TO RECEIVE A SMOOTH TROWEL FINISH UNLESS NOTED.

UNLESS SPECIFIED OTHERWISE IN THE SPECIFICATION, TESTING OF CONCRETE SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF ACI 318

CONSTRUCTION JOINTS (CN.JT.) ARE TO BE LOCATED ON THE THRESHOLD SIDE OF A WALL.

SEE DETAIL "TYPICAL SLAB ON GRADE JOINT LAYOUT".

SECTION 5.6 EVALUATION AND ACCEPTANCE OF CONCRETE.

THE FOLLOWING PROCEDURES SHALL MEET THE REQUIREMENTS OF THE REFERENCED CODE SECTIONS:

PROCEDURE	REFERENCE SECTION
PREPARATION	ACI 304 - "GUIDE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE"
CONVEYING	ACI 318 SECTION 5.9 - "CONVEYING"
DEPOSITING	ACI 318 SECTION 5.10 - "DEPOSITING"
CONSOLIDATION	ACI 309 - "GUIDE FOR CONSOLIDATION OF CONCRETE"
CURING	ACI 308 - "STANDARD PRACTICE FOR CURING CONCRETE"
HOT WEATHER CONCRETING	ACI 305 - "HOT WEATHER CONCRETING"
COLD WEATHER CONCRETING	ACI 308 "COLD WEATHER CONCRETING"

/II. STRUCTURAL LUMBER & TRUSSES

TOP CHORD WIND UPLIFT LOAD...

PROVIDE SOUTHERN SPECIES PLYWOOD RATED FOR INDICATED SPANS AND LOADS BY AMERICAN PLYWOOD ASSOCIATION INSTALL IN ACCORDANCE WITH ALL RECOMMENDATIONS BY THE AMERICAN PLYWOOD ASSOCIATION INCLUDING SIZE AND SPACING OF FASTENERS.

ROOF TRUSS DESIGN LOADS SHALL BE AS FOLLOWS:

TOP CHORD LIVE LOAD. . 20 PSF TOP CHORD DEAD LOAD 12 PSF BOTTOM CHORD LIVE LOAD. 0 PSF BOTTOM CHORD DEAD LOAD. .

SEE GENERAL NOTES FOR OTHER DESIGN LOADS. SEE PLANS FOR ADDITIONAL POINT LOADS.

FRUSSES SHALL BE DESIGNED AND FABRICATED BY THE TRUSS MANUFACTURER. DESIGN SHALL CARRY THE SEAL OF AN ENGINEER REGISTERED IN THE STATE OF PROJECT LOCATION, CONFIGURATION AND SIZE OF WEB MEMBERS SHALL BE DETERMINED BY THE TRUSS MANUFACTURER. SHOP DRAWINGS AND CALCULATIONS FOR TRUSSES SHALL BE SUBMITTED FOR APPROVAL BEFORE FABRICATION. TRUSS SHOP DRAWINGS SHALL BE AVAILABLE AT THE

. . IN ACCORDANCE W/ ASCE7-10

MAXIMUM LIVE LOADS DEFLECTION FOR ROOF TRUSSES = L/240

LOADS ABOVE SHALL BE UTILIZED IN THE DESIGN OF GIRDER TRUSSES.

BOTTOM AND TOP CHORDS OF ALL ROOF TRUSSES SHALL BE TEMPORARILY BRACED BY 1" X 4" X 8' AT 10 FEET ON CENTER. ALL ADDITIONAL PERMANENT BRACING AS REQUIRED BY STRUCTURAL DESIGN OF THE TRUSSES AND FOR STABILITY OF THE TRUSSES SHALL BE INDICATED ON THE SHOP DRAWINGS. BRACING SHALL BE X - TYPE WITH HORIZONTAL STRUTS TOP AND BOTTOM BETWEEN NO LESS THAN 4 TRUSSES. SPACES AT 20 FEET MAXIMUM. BRACING SHALL BE ATTACHED TO EACH TRUSS.

THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY BRACING FOR THE TRUSSES DURING ERECTION.

TRUSS DESIGN SHALL ACCOUNT FOR LOAD IMPOSED UPON TRUSSES BY WEIGHT OF MECHANICAL UNITS. SEE MECHANICAL PLANS FOR UNIT LOCATION. VERIFY WEIGHT OF UNIT W/ EQUIP. SELECTED.

VIII. REINFORCING STEEL

REINFORCING STEEL SHALL BE NEW BILLET STEEL, DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60, AND SHALL BE FREE FROM ANY FORM RELEASE AGENTS.

WELDED WIRE FABRIC SHALL BE SHEETS OF NEW BILLET STEEL COLD DRAWN, CONFORMING TO ASTM

SPECIFICATION A1064, GRADE 60 MIN.

BAR SUPPORTS, DESIGN, DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 318 AND "THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE

SPLICES FOR CONTINUOUS BARS SHALL BE CLASS B, UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL BE LAPPED 12" MINIMUM.

PROVIDE BENT HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF ALL WALLS AND FOOTINGS. BENT BARS ARE TO MATCH THE SIZE AND SPACING OF HORIZONTAL BARS IN WALL OR FOOTING. USE CLASS B SPLICE EACH SIDE.

PROVIDE DIAGONAL BARS AT CORNERS OF OPENINGS IN SLABS AND CONCRETE WALLS. SEE DETAILS "RECTANGULAR OPENING WALL SLAB" AND "CIRCLE OPENING WALL SLAB". PROVIDE 2" CLEAR COVER BETWEEN THE OPENING AND THE CORNER

WALL FOOTING REINFORCEMENT SHALL BE CONTINUOUS THROUGH COLUMN FOOTING.

EXTEND ALL FOOTING REINFORCEMENT TO FAR SIDE OF FOOTING. SEE NOTE BELOW FOR CONCRETE COVERAGE.

PROVIDE DOWELS IN WALL FOOTING TO MATCH WALL VERTICALS UNLESS NOTED OTHERWISE ON DRAWINGS, PROVIDE CLASS B SPLICE, USE STANDARD ACI 90 DEGREE HOOK WITH 3" CLEAR TO BOTTOM OF FOOTING UNLESS NOTED OTHERWISE. SEE DETAIL "CORNER BAR & SPLICE LENGTH DETAIL (IN CONCRETE) "

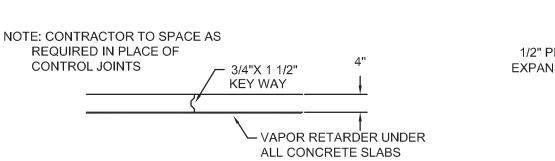
	CLA	ASS B SPLICE OR C	ORNER BAR PER	ACI 318		
	3000 PSI CONC	CRETE	4000 PSI CON	CRETE	5000 PSI CONC	RETE
BAR#	MIN. SPLICE (INCHES)	MIN. SPLICE (BAR DIAM.)	MIN. SPLICE (INCHES)	MIN. SPLICE (BAR DIAM.)	MIN. SPLICE (INCHES)	MIN. SPLICE (BAR DIAM.)
4	29		25		24	
5	36	57	31	50	28	45
6	43		37		34	
7	63		54		49	
8	72		62		56	
9	81	72	70	62	63	56
10	89		78		69	
11	98		85		76	

MINIMUM CONCRETE COVERAGE SHALL BE AS FOLLOWS. IF CONSTRUCTION DOCUMENTS INDICATE A LARGER COVERAGE, IT SHALL BE USED. IF STIRRUPS, TIES, OR SPIRALS ARE USED, COVERAGE SHALL BE TO THE OUTERMOST FACE OF THESE ELEMENTS.

FOOTINGS, CAISSONS, AND OTHER MEMBERS WHERE CONCRETE IS DEPOSITED AGAINST SOIL (EXCEPT SLABS ON GRADE) = 3"

CONCRETE EXPOSED TO WEATHER OR SOIL BUT IS NOT DEPOSITED AGAINST SOIL: #6 BAR AND LARGER = 2" #5 BAR AND SMALLER = 1 1/2" CONCRETE NOT EXPOSED TO WEATHER OR SOIL:

SLABS, WALLS, JOISTS #14 BAR AND LARGER = 1 1/2" SLABS, WALLS, JOISTS #11 BAR AND SMALLER = 3/4"



TYPICAL CONSTRUCTION JOINTS (CN.JT., N.T.S.

BEAMS AND COLUMNS = 1 1/2"

1/8"X1 1/2" DEEP SAW CUT CONTROL JOINT VAPOR RETARDER UNDER NOTE: SPACE 12' O.C. ALL CONCRETE SLABS UNLESS SHOW

ON PLAN

1/2" PRE MOLDED EXPANSION JOINT VAPOR RETARDER UNDER ALL CONCRETE SLABS

N.T.S.

TYPICAL ISOLATION JOINT (I. JT.)

SAW CUTTING CONTROL JOINTS IS AN ATTEMPT TO PARTIALLY CONTROL THE SHRINKAGE CRACKS

THAT NATURALLY OCCURS IN CONCRETE DURING THE CURING PROCESS. SOMETIMES THE CONCRETE

WILL CRACK BETWEEN CONTROL JOINTS.

Drawn | Proj no. M. STEFANO | 17-133 Checked

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SHEET TITLE

GENERAL NOTES

<u>REVISIONS</u>

JOB TITLE

S-0

BLD2020-04937

GWINNETT COUNTY

Department of Planning and Development

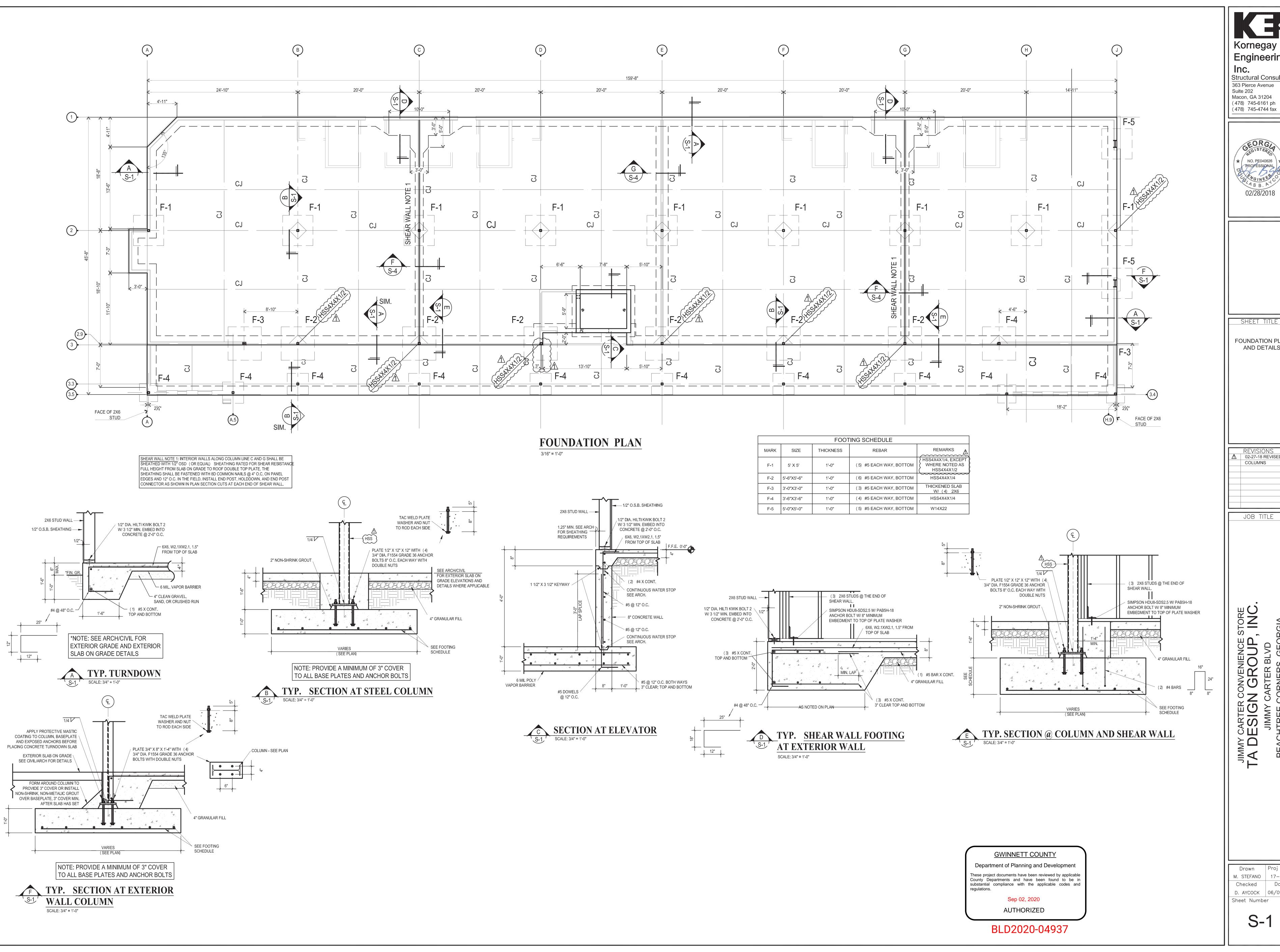
These project documents have been reviewed by applicable County Departments and have been found to be in

substantial compliance with the applicable codes and

Sep 02, 2020

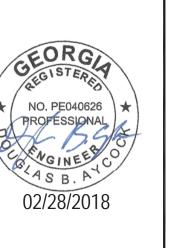
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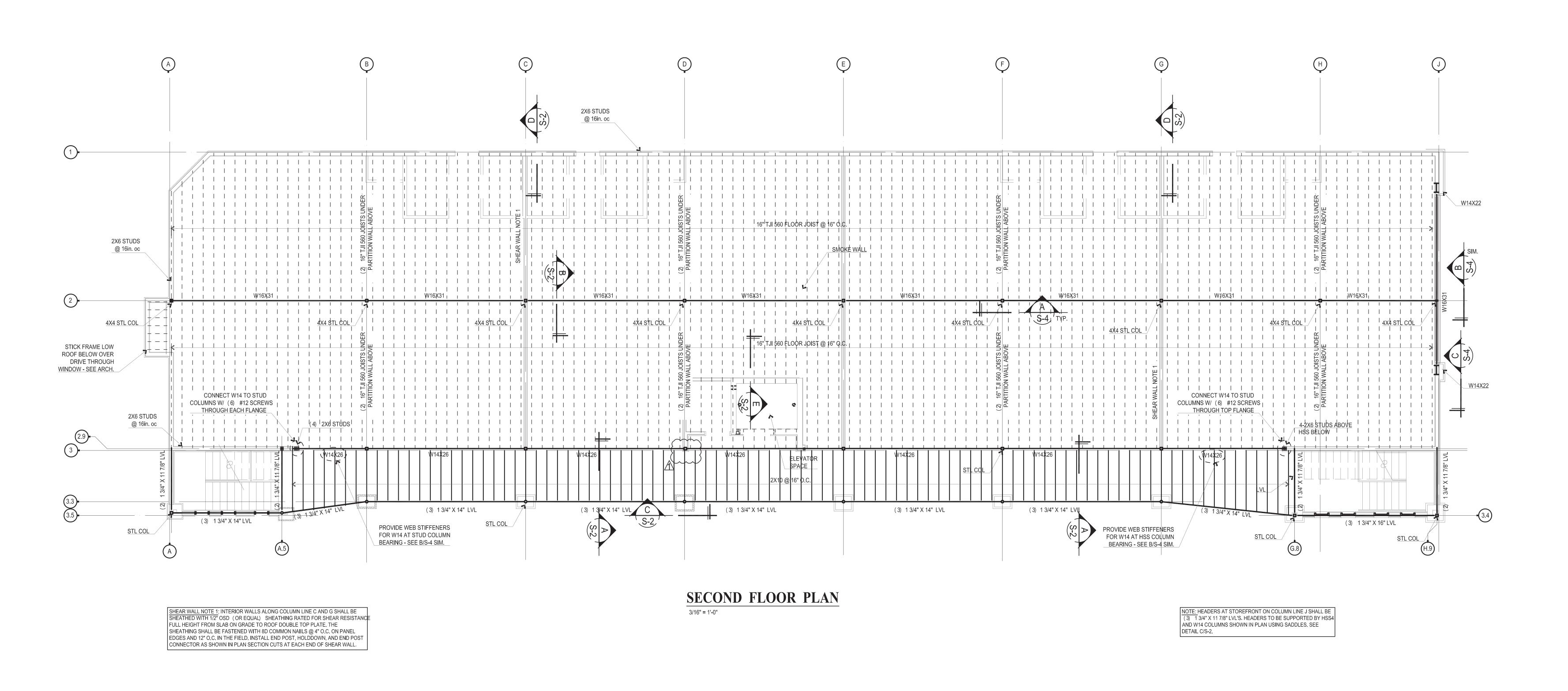
FOUNDATION PLAN AND DETAILS

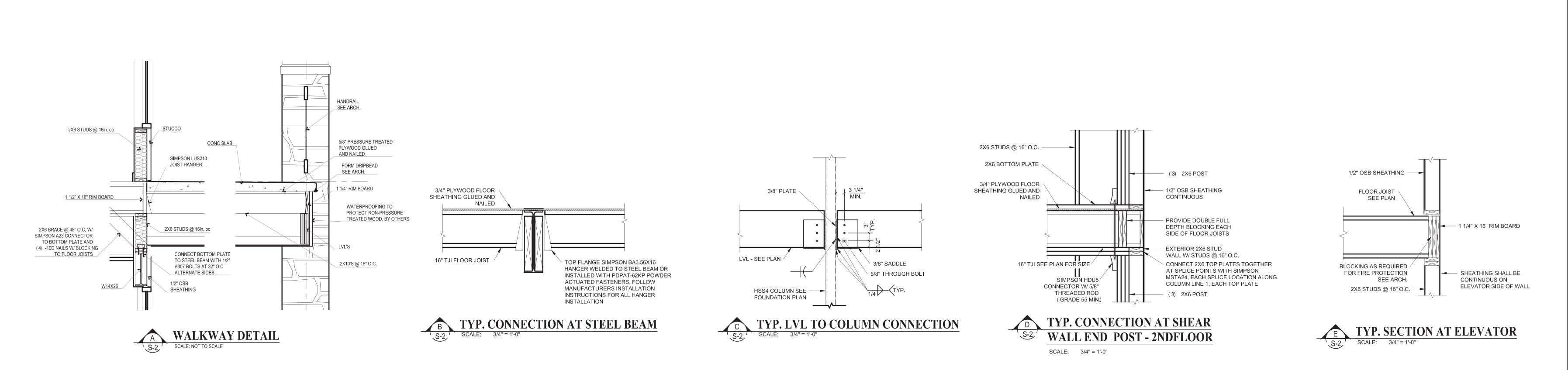
REVISIONS

02-27-18 REVISED COLUMNS

JOB TITLE

Drawn M. STEFANO 17-133 Checked D. AYCOCK 06/09/1





GWINNETT COUNTY

Department of Planning and Development

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County Departments and have been found to be in substantial compliance with the applicable codes and

Sep 02, 2020

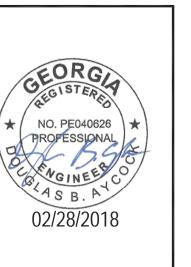
AUTHORIZED

BLD2020-04937

regulations.

Kornegay
Engineering
Inc.
Structural Consultant
363 Pierce Avenue

Structural Consultar 363 Pierce Avenue Suite 202 Macon, GA 31204 (478) 745-6161 ph (478) 745-4744 fax



SHEET TITLE

SECOND FLOOR
FRAMING PLAN
AND DETAILS

REVISIONS

02-27-18 REVISED

COLUMNS

JOB TITLE

IMMY CARTER CONVENIENCE STORE

A DESIGN GROUP, INC.

JIMMY CARTER BLVD

PFACHTREF CORNERS, GFORGIA

Drawn Proj no.

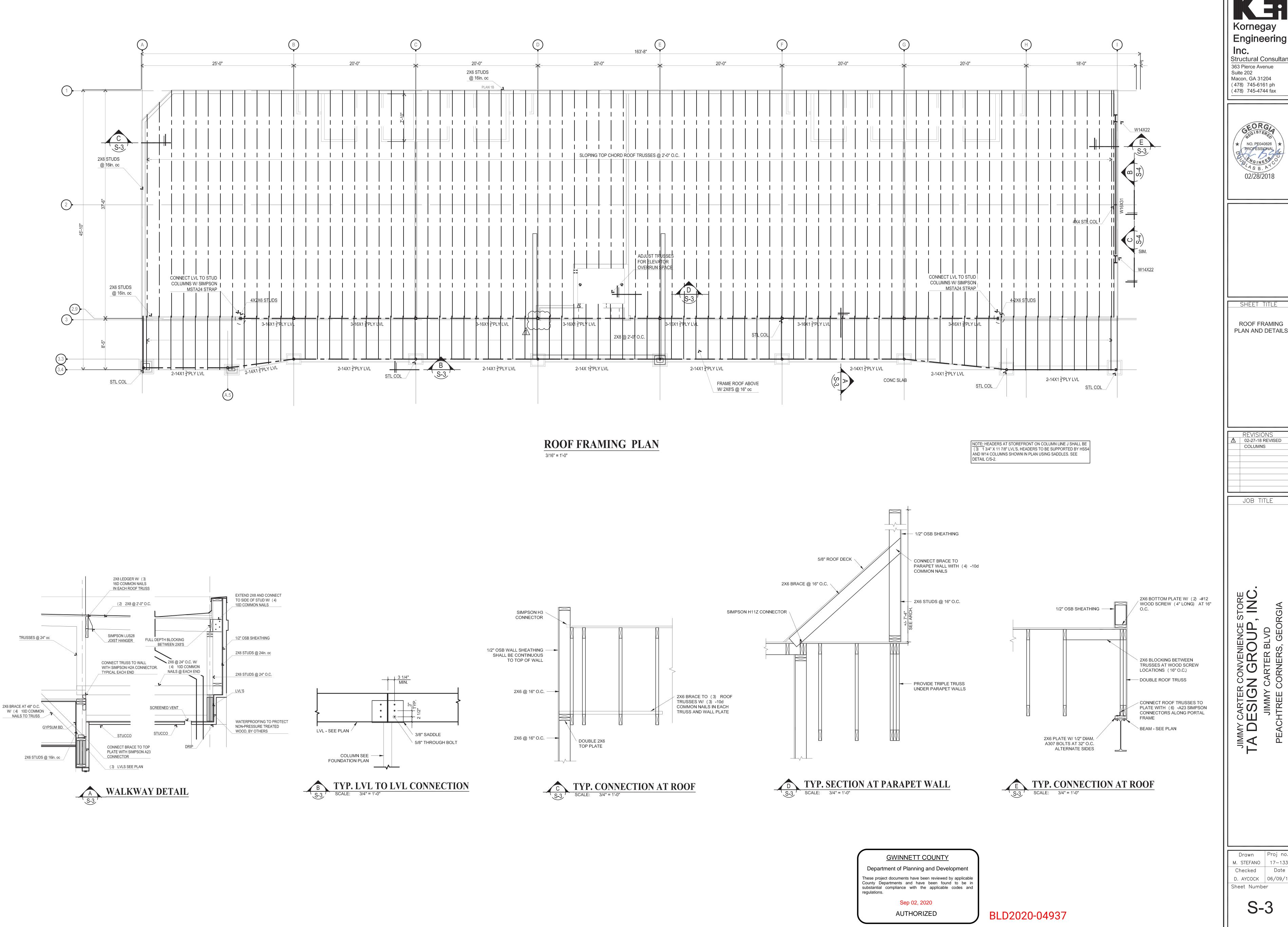
M. STEFANO 17-133

Checked Date

D. AYCOCK 06/09/17

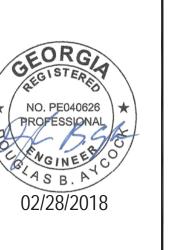
Sheet Number

S-2



Engineering

Structural Consultant 363 Pierce Avenue Suite 202 Macon, GA 31204 (478) 745-6161 ph (478) 745-4744 fax



SHEET TITLE **ROOF FRAMING** PLAN AND DETAILS

REVISIONS

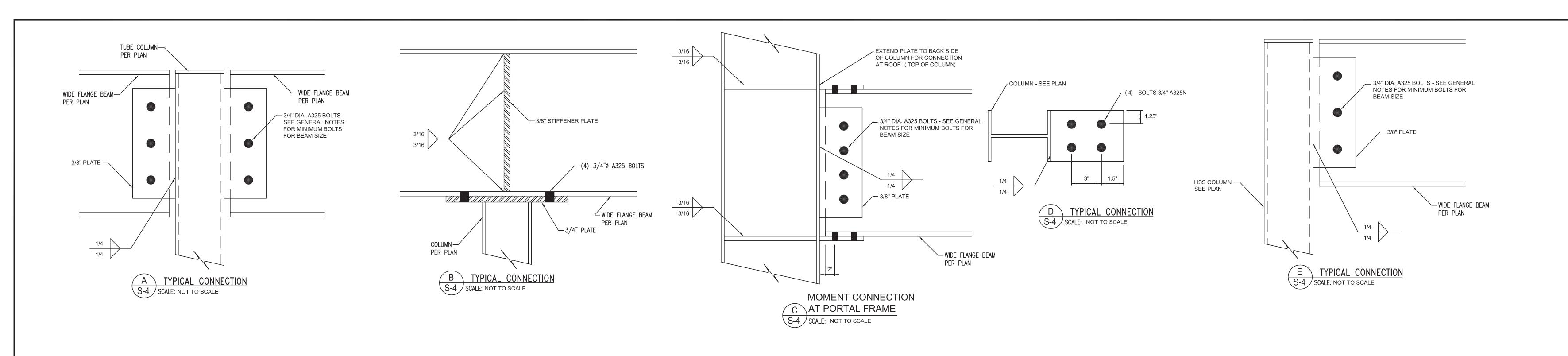
02-27-18 REVISED COLUMNS

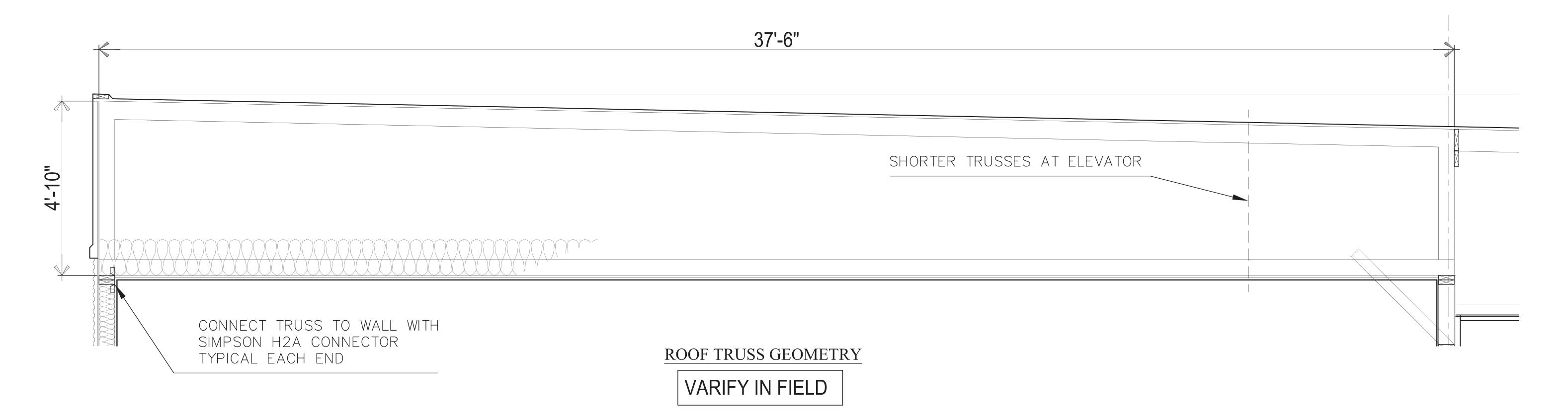
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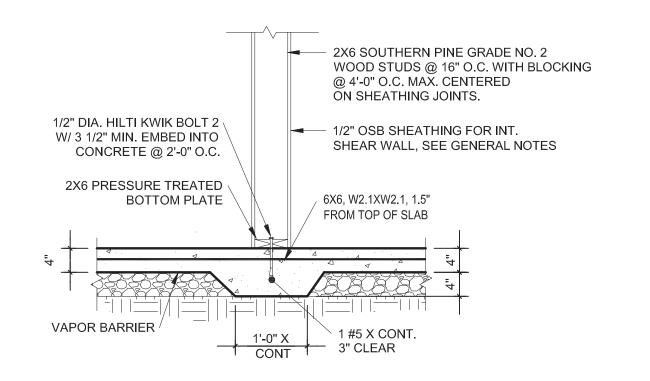
CARTER CONVENIENCE ESIGN GROUP

Drawn Proj no. M. STEFANO 17-133 Checked

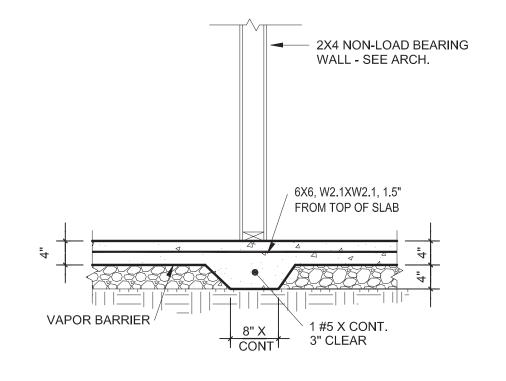
S-3











TYP. SECTION AT INTERIOR NONLOAD BEARING WALL - COL. LINE "E"

GWINNETT COUNTY

Department of Planning and Development

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Kornegay
Engineering
Inc.
Structural Consultant
363 Pierce Avenue
Suite 202
Macon, GA 31204

(478) 745-6161 ph (478) 745-4744 fax



SHEET TITLE

FRAMING DETAILS

REVISIONS

JOB TITLE

JIMMY CARTER CONVENIENCE STORE

TA DESIGN GROUP, INC.

JIMMY CARTER BLVD

PEACHTREE CORNERS, GEORGIA

Drawn Proj no.
M. STEFANO 17-133
Checked Date
D. AYCOCK 06/09/17

S-4

Sheet Number

MECHANICAL SPECIFICATIONS

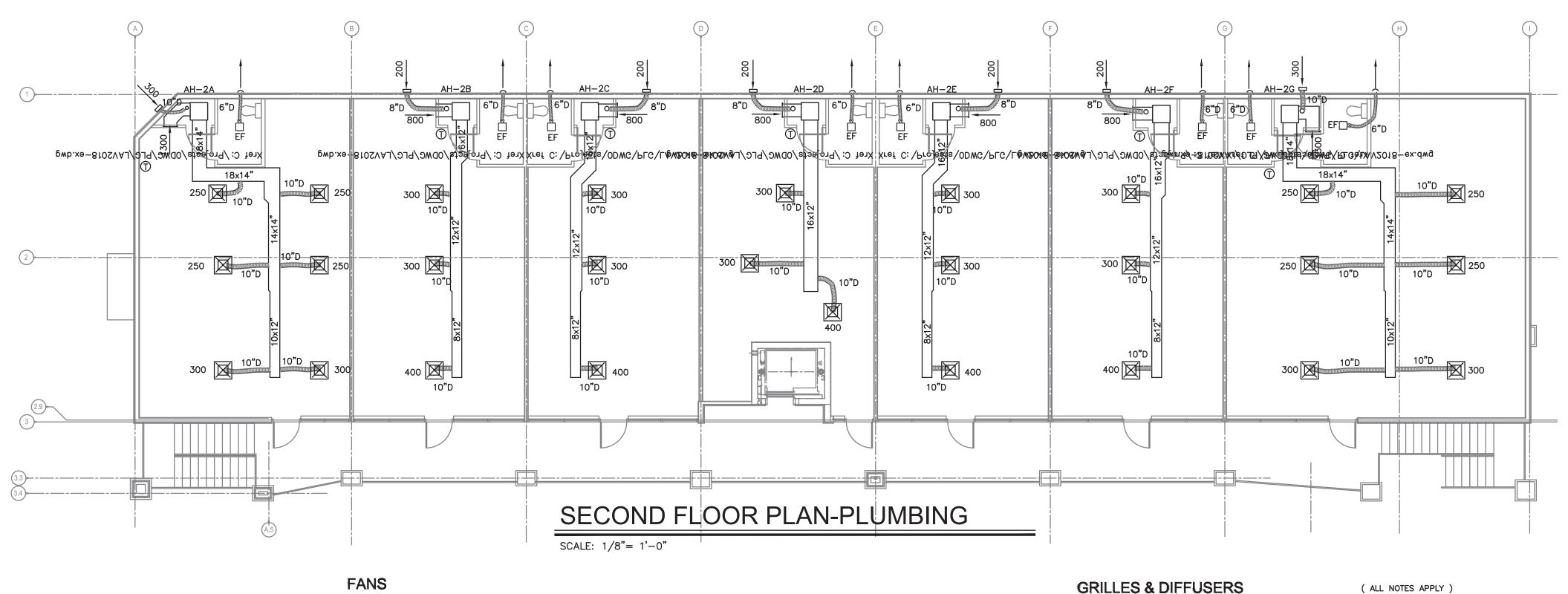
1.0 GENERAL:

- 1.1 Provide all work, equipment, services, labor, and materials necessary for the installation of complete and functional mechanical systems, equipment, and piping as described or implied by the contract documents.
- 1.2 The drawings are diagrammatic and are not intended to include every detail of construction, materials, and equipment. Take actual field measurements at the job site in lieu of scaling the drawings.
- 1.3 Review the contract documents of all trades and coordinate all work with the other trades as necessary to avoid conflicts and interferences.
- 1.4 All work and materials shall comply with applicable state, local, and national codes (including OSHA).
- 1.5 Obtain and pay for any and all required permits, inspections, certificates of inspections and approval, and the like and shall deliver such certificates to the
- 1.6 Locations shown for supply and return devices, ductwork, equipment, piping, valves, devices, etc., are approximate. Coordinate each location with all trades and actual field conditions so that all code—required servicing clearances are maintained.
- 1.7 Provide all cutting and patching necessary to properly install all work and to repair any damage done.
- 1.8 Provide only new materials and equipment listed and labeled as Underwriter's Laboratories, Inc.
- 1.9 Testing shall comply with all local, state, and national
- 1.10 Warrant all materials, equipment, and workmanship shown or implied by these documents to be free of defects for a period of one year from the time of acceptance by the
- 2.0 PIPING, PIPE FITTINGS, PIPE HANGERS/SUPPORTS, & INSULATION: 2.1 Condensate drain piping shall be Schedule 40 PVC and in accordance with Section 307.2.1 of the 2015 IMC.
- 3.0 DUCTWORK, DUCTWORK ACCESSORIES, & DUCT INSULATION:
- 3.1 Ductwork shall be fabricated from the best quality galvanized sheet steel.
- 3.2 Splitter dampers, balancing dampers, turning vanes, duct transitions, etc., shall be installed generally where shown on the drawings, and where required for the proper control of air flow.
- 3.3 Round and rectangular ductwork shall meet the gauges and construction methods indicated in the American National Standard (ANSI/SMACNA 006-2006) guide for low pressure ductwork. complying with 2" w.g.
- 3.4 Flexible ductwork shall be UL #181 Class 1.
- 3.5 Registers and grilles shall conform with the schedule on the Drawings.
- 3.6 Hangers and supports for ductwork shall be metal bands, angles, and/or rods per ASHRAE and SMACNA and Section 603.10 on the 2015 IMC.
- 3.7 Seal the spaces around all ductwork penetrations in an approved manner.
- 3.8 Joints between ductwork pieces shall comply with Section 603.9 of the 2015 IMC and shall be listed and labeled in accordance with UL 181A for metal ductwork and UL 181B for flexible ducts. All mastic used to seal joints shall also be UL 181 listed and labeled.
- 3.9 Round ducts shall have the same insulation as specified for rectangular ductwork listed in 3.10.
- 3.10 Rectangular supply and return air ducts above ceiling shall be insulated with fiberglass all—service duct wrap consisting of a blanket of 2" glass fibers factory—laminated to a reinforced foil (FRK) vapor retarder facing. A 2" stapling and taping flange shall be provided on one edge. Insulation shall meet current performance standards as published by NFPA 90. Insulation shall comply with 1.5 lb./cu.ft. density and shall meet Form B, Type 1, Class B-4 code requirements. Duct wrap will provide a minimum of a 6.0 "R" value.
- 3.11 In occupancies not required to be equipped with a fire alarm system, actuation of a smoke detector shall activate a visible and an audible signal in an approved location.
- 3.12 Refrigerant piping shall comply with ANSI B31.5 and shall be Type "K", hard drawn tempered copper; precleaned wrought-copper; solder-joint fittings; brazed joints. BCuP-4 brazing filler material. Install refrigerant piping with 1/4" per foot downward slope in direction of oil return to compressor. Provide traps and double risers where required to provide oil return. Insulation shall be a minimum of 1/2" closed cell neoprene rubber. Armaflex or Rubertex

4.0 EQUIPMENT

- 4.1 All equipment shall be that which is scheduled on the drawings or equivalent. Provide all appurtenances necessary for the complete and total installation of a system which shall perform satisfactorily under actual weather conditions and situations to be experienced.
- 5.0 TEST AND BALANCE:
 - 5.1 All air systems shall be tested and balanced by a company certified in "Testing & Balancing" per Section 403.3.4 of the 2015 IMC.
 - At the end of balancing, provide a report indicating design CFM and actual CFM for each air device as scheduled.

JNIT	MANU	MODEL	COOL-btu	HEAT-btu	SEER	VOLTAGE	AMPS
AH-1-A	RHEEM	RP1560A	60000	58000	14	240	50
AH-1-B	RHEEM	RP1548A	48000	46000	14	240	40
AH-1-C	RHEEM	RP1548A	48000	46000	14	240	40
AH-1-D	RHEEM	RP1548A	48000	46000	14	240	40
AH-2-A	RHEEM	RP1536A	30000	29200	14	240	35
AH-2-B	RHEEM	RP1536A	30000	29200	14	240	35
AH-2-C	RHEEM	RP1536A	30000	29200	14	240	35
AH-2-D	RHEEM	RP1536A	30000	29200	14	240	35
AH-2-E	RHEEM	RP1536A	30000	29200	14	240	35
AH-2-G	RHEEM	RP1548A	48000	46000	14	240	40



CFM ESP MAX MAX MAX SONES DRIVE WEIGHT, LBS MODEL # NOTES ACCESSORIES GEMINI GC-142 CEILING DIRECT | 15 TOILETS 75 |0.375" | 59W | 1100 | 2.2 1. FAN TO BE INTERLOCKED WITH LIGHT SWITCH BASIS OF DESIGN: AS NOTED; EQUAL

CONTRACTOR SHALL SELECT EQUIPMENT

TO MEET PERFORMANCE REQUIREMENTS

IN SCHEDULES AND NOT BASED ON

MODEL NUMBERS. MODEL NUMBERS

ARE A GUIDE.

1. BACKDRAFT DAMPER AT FAN DISCHARGE.

2. PROVIDE WITH WALL CAP WCA-6.

BY: COOK, ACME, PENN

MATERIAL **ACCESSORIES** DUTY BALANCING TYPE/NOTES SERIES DAMPER TITUS TMSA SQUARE LOUVERED DIFFUSER SUPPLY YES STEEL TITUS 50F 1"X1"X1" ALLUMINUM GRID, STEEL FRAME RETURN NO STEEL

BASIS OF DESIGN: AS NOTED; EQUAL

BY: KRUEGER, METAL-AIRE, PRICE

GWINNETT COUNTY Department of Planning and Development These project documents have been reviewed by applicable County Departments and have been found to be in substantial compliance with the applicable codes and regulations. Sep 02, 2020

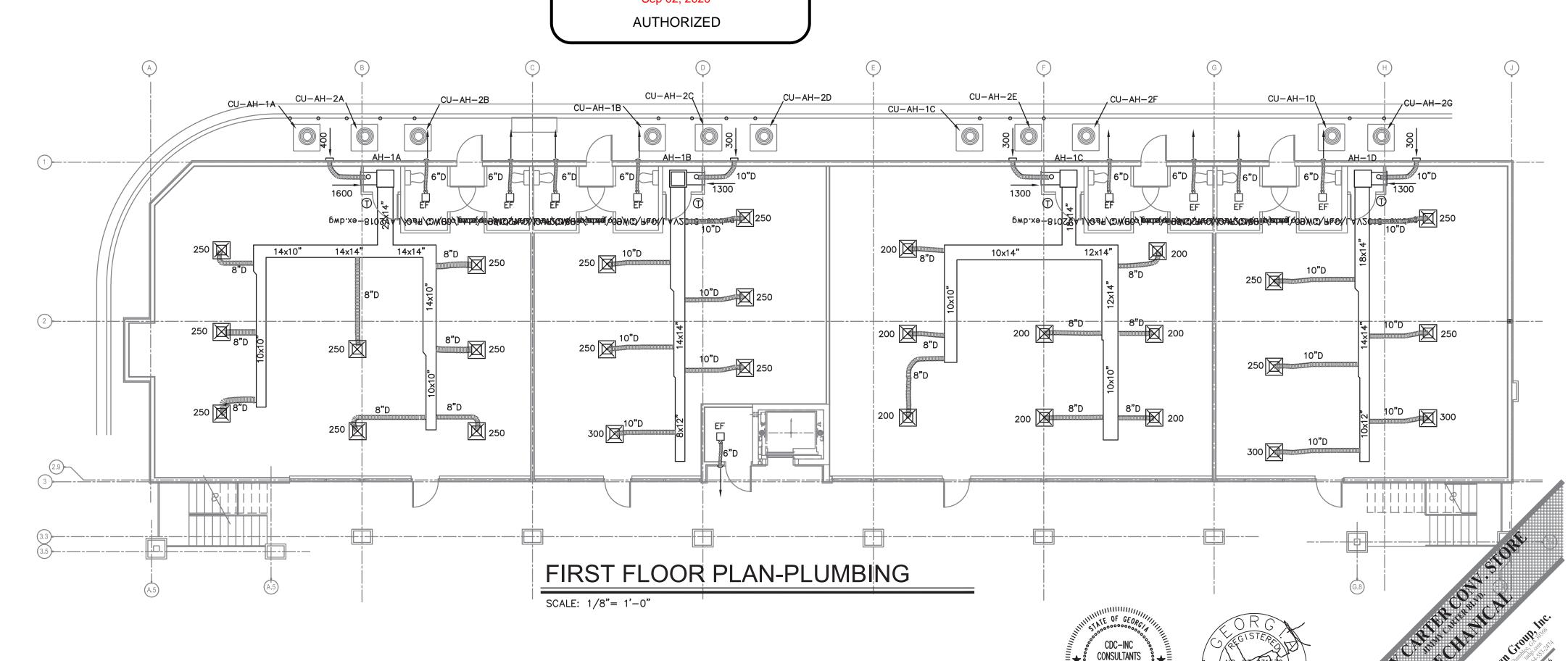
DIFFUSERS SHALL HAVE A BAKED ENAMEL FINISH.

RUNOUTS TO DIFFUSERS SHALL BE SAME SIZE AS DIFFUSER NECK UNLESS NOTED OTHERWISE. 4. PROVIDE SQUARE/RECTANGULAR TO ROUND TRANSITION WHERE INDICATED ON DRAWINGS. SEE PLANS FOR COLLAR SIZE.

REFER TO ARCHITECTURAL DRAWINGS FOR TYPE OF CEILING AND SUSPENSION SYSTEM.

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PROVIDE PATTERN CONTROLLERS FOR ADJUSTMENT TO VERTICAL & HORIZONTAL AIR DISCHARGE. 2. PROVIDE WITH 8" HIGH PLENUM WITH ROUND COLLAR (SIZE AS INDICATED) WHERE INDICATED ON DRAWINGS.



PLUMBING SPECIFICATIONS

1.0 GENERAL:

- 1.1 Provide all work, equipment, services, labor, and materials necessary for the installation of complete and functional waste, vent domestic cold water, and domestic hot water piping systems, fixtures, and equipment as described or implied by the contract documents.
- 1.2 The drawings are diagrammatic and are not intended to include every detail of construction, materials, and equipment. Take actual field measurements at the job site in lieu of scaling the drawings.
- 1.3 Review the contract documents of all trades and coordinate all work with the other trades as necessary to avoid conflicts and interferences.
- 1.4 All work and materials shall comply with applicable
- state, local, and national codes (including OSHA).

 1.5 Obtain and pay for any and all required permits, inspections, certificates of inspections and approval, and the like and shall deliver such certificates to the Owner.
- 1.6 Locations shown for fixtures, equipment, piping, cleanouts, valves, etc., are approximate. Coordinate each location with all trades and actual field conditions so that all code requirements are met.
- 1.7 Provide all cutting and patching necessary to properly install all work and to repair any damage done.
- 1.8 Perform all excavating and backfilling in a safe manner which shall not endanger the stability of any structure or any part thereof, or any work in place by other
- 1.9 Provide only new materials and equipment listed and labeled as Underwriter's Laboratories, Inc.
- 1.10 Testing shall comply with all local, state, and national
- 1.11 Warrant all materials, equipment, and workmanship shown or implied by these documents to be free of defects for a period of one year from the time of acceptance by the Owner.
- 2.0 PIPING, PIPE FITTINGS, PIPE HANGERS/SUPPORTS, & INSULATION:
 - 2.1 Domestic water piping above ground shall be seamless copper tubing, ASTM B-88-61, Type L, hard drawn copper with wrought copper fittings.
 - 2.1A Contractor shall have the option to provide and install "Flow Gaurd Gold" CPVC water piping tubing meeting ASTM D-2846 for continuous working pressure of 100 psi and at 180 degrees F. Contractor shall provide and install proper pressure regulators to maintain 100 psi or less. Contractor shall also have the option of using WaterPEX tubing manufactured in accordance with ASTM F-876 and F-877 and listed by National Sanitation Foundation NSF-61. Manufacture recommended fittings and joints shall be used.
 - 2.2 Sanitary waste and vent lines shall be ABS, DWV, and/or PVC Schedule 40.
 - 2.3 Copper pipe fittings shall be wrought metal soldered joint type conforming to ANSI B16.22.
 - 2.4 Install piping and related items neatly with routes generally chosen to be parallel and perpendicular to building lines. Horizontal sanitary piping shall be installed with a uniform slope. Piping with a diameter of 2-1/2" or less shall be sloped 1/4" per linear foot. Piping with a diameter of 3" or greater shall be sloped 1/8" per linear foot.
 - 2.5 Piping shall be arranged so that all valves, traps, and cleanouts are easily accessed. Ream piping to remove all burrs, fins, and foreign materials. Thoroughly clean all piping before soldering. Use only lead—free 95/5 solder. Seal the spaces around all piping penetrations in an approved manner. Water piping below grade shall be installed below the frost line, approximately 18" deep.
 - 2.6 All domestic hot and cold water piping shall be continuously insulated with closed cell neoprene rubber insulation, or fiberglass materials covered by an ASJ jacket, except piping below grade.
 - 2.6 Fixture traps shall be installed on every plumbing fixture except those having integral traps. Traps shall be water—seal, self cleaning "P" traps.2.7 Provide chromium—plated escutcheons with set screws for
 - all exposed water supplies, traps, and cleanouts.

 2.8 Vent pipes shall be flashed and made watertight at the
 - roof.
- 2.9 Pipe hangers shall be installed in accrodance with Table 308.5 "HANGER SPACING" of the 2015 IPC.

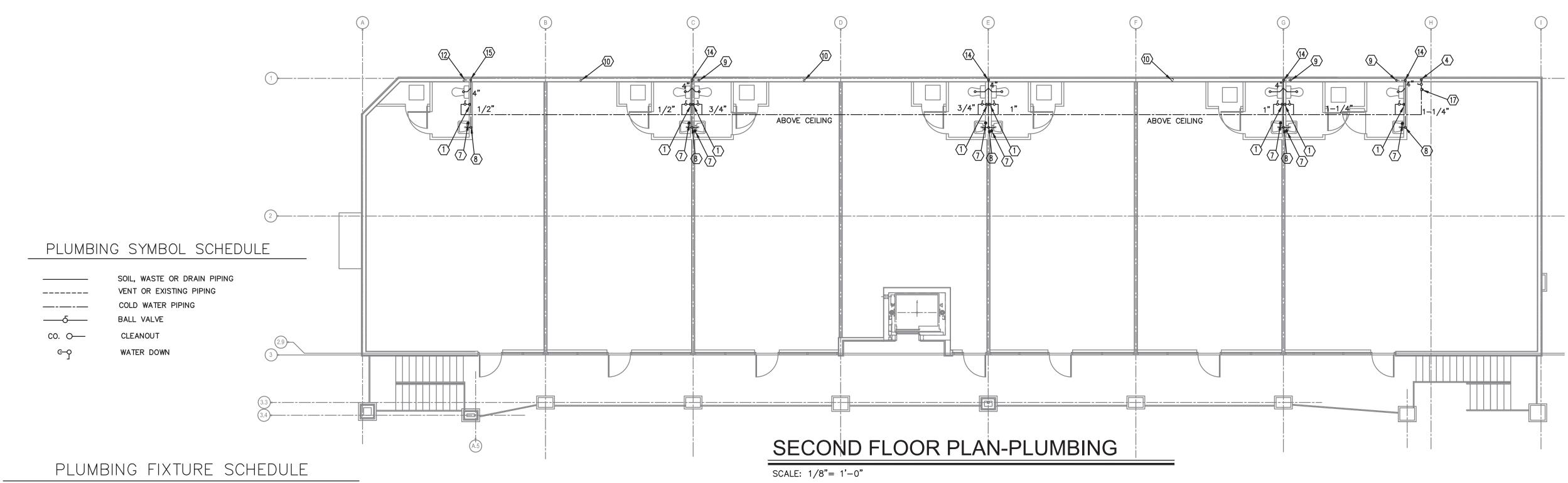
3.0 FIXTURES AND EQUIPMENT:

- 3.1 All plumbing fixtures shall be equivalent to those scheduled on the Drawings.

 All ADA Water closets shall have trip levers on open side of closet opposite side wall.
- 3.2 Water hydrants shall be key—operated types with freeze—proof features.
- 3.3 Provide water pressure reducing valve to maintain a max. water pressure of 45 psi in building where inlet pressure utility service is greater than 45 psi.

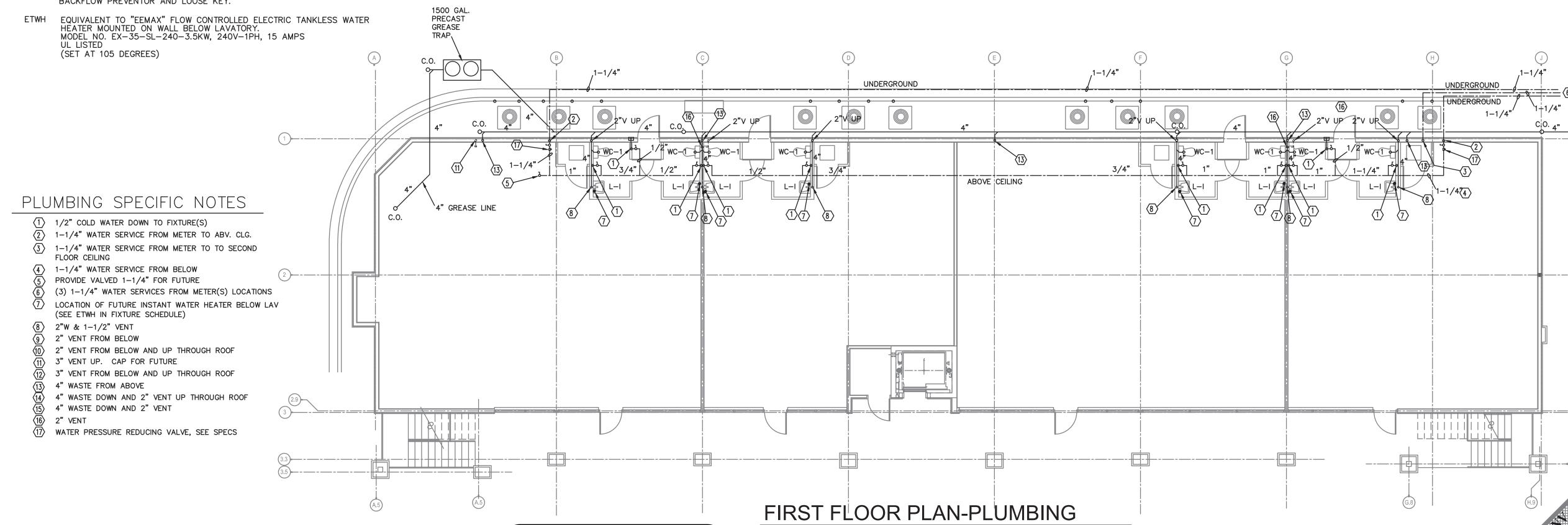
4.0 STERILIZATION:

4.1 All new domestic water pipe shall be sterilized in accordance with the State Board of health and Section 610.1 of the 2015 IPC.



- WC-1 EQUIVALENT TO AMERICAN STD. NO. 2002.012, CHAMPION ELONGATED COMBINATION. 1.6 gpf, 16-1/2" HIGH, TANK WITH FLOAT VALVE AND VACUUM BREAKER, TANK COVER AND CHROME PLATED TRIP HANDLE. PLASTIC SEAT WITH OPEN FRONT AND COVER. ANGLE SUPPLY WITH STOP. ADA. WHITE.
- L-1 EQUIVALENT TO AMERICAN STANDARD MODEL NO. 0355.012, LUCERNE, VITREOUS CHIAN, WALL HUNG, 20x18" SIZE WITH BACK SPLASH, FAUCET HOLES 4" ON CENTER, PROVIDE WALL BRACKET INSTALL 34" HIGH FOR HANDICAP. PROVIDE 3/8"ANGLE STOPS AND SUPPLIES, 1-1/4" CAST BRASS "P" TRAP WITH C.O. PLUG. WHITE PROVIDE DELTA FAUCET MODEL NO. 520-WFHDF WASHERLESS SINGLE LEVER (6") WITH 1/2" I.P.S. POP-UP WASTE, CHROME FINISH. PROVIDE SKAL+ GARD INSULATION KIT MODEL NO. 200B
- BY "TCI PRODUCTS" ON WASTE AND WATER PIPING BELOW LAVATORY.

 WH-1 EQUIVALENT TO ZURN MODEL NO. Z-1310, "ANTI SIPNON"
- WH-1 EQUIVALENT TO ZURN MODEL NO. Z-1310, "ANTI SIPNON"
 AUTOMATIC DRAINING WALL HYDRANT WITH NON-FREEZE INTEGRAL
 BACKFLOW PREVENTOR AND LOOSE KEY.



SCALE: 1/8"= 1'-0"

CDC-INC

CONSULTANTS

BLD2020-04937

GWINNETT COUNTY

Department of Planning and Development

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Sep 02, 2020

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GENERAL ELECTRICAL NOTES:

1. ALL WORK IS TO BE PERFORMED USING THE FOLLOWING CODES:

NFPA NATIONAL ELECTRIC -2014 EDITION 2015 EDITION INTERNATIONAL MECHANICAL -INTERNATIONAL BUILDING -2015 EDITION INTERNATIONAL FUEL GAS -2015 EDITION INTERNATIONAL PLUMBING -2015 EDITION INTERNATIONAL ENERGY CONSERVATION -2009 EDITION 2015 EDITION INTERNATIONAL FIRE -NFPA 101 LIFE SAFETY -2015 EDITION CURRENT LOCAL FIRE AND LIFE SAFETY ORDINANCE CURRENT NFPA CODES AS ADOPTED BY STATE FIRE

2. ELECTRICAL CONTRACTOR SHALL VERIFY ELECTRICAL CHARACTERISTICS OF ALL MECHANICAL AND PLUMBING EQUIPMENT PRIOR FURNISHING ELECTRICAL COMPONENTS SERVING SUCH EQUIPMENT.

2015 EDITION

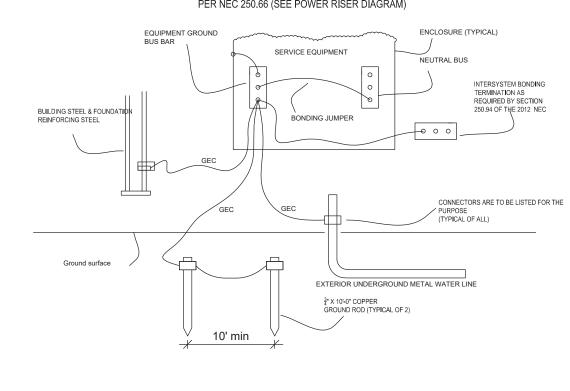
- 3. ANY MATERIAL, EQUIPMENT, METHOD, OR PROCEDURE CALLED OUT ON THIS DRAWING DOES NOT RESTRICT THE CONTRACTORS FROM USING ALTERNATE MATERIAL, EQUIPMENT, METHODS, OR PROCEDURES WHICH MEET ALL APPLICABLE BUILDING CODES AND WILL PROVIDE A REASONABLE COMPARABLE LEVEL OF QUALITY AND FUNCTION. SUBMIT REQUEST AND EXPLANATION OF CHANGES TO ARCHITECT OR ENGINEER FOR APPROVAL BEFORE PROCEEDING WITH WORK.
- 4. EXIT & EMERGENCY LIGHTING SHALL BE SUPPLIED POWER BY UN-SWITCHED CONDUCTERS FROM A CIRCUIT SERVING THE NORMAL LIGHTING FOR EACH AREA COVERED TO THE FULLEST EXTENT POSSIBLE.

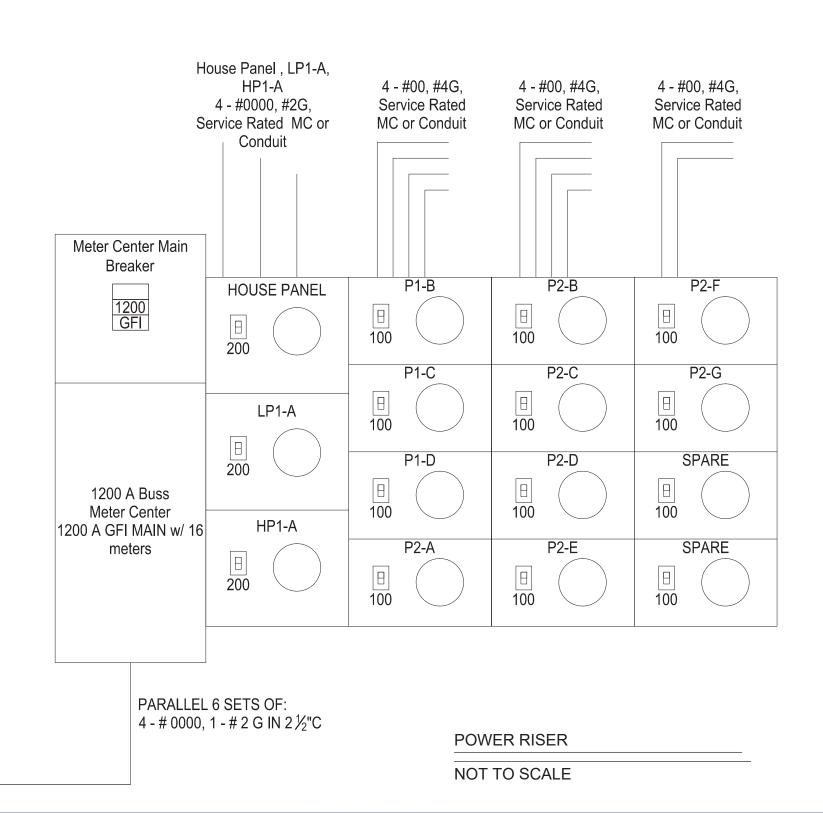
DESIGN STANDARDS FOR ACCESSIBILITY -

- ALL WIRING TO BE #12 GA UNLESS NOTED OTHERWISE.
 BOND SERVICE GROUNDING CONDUCTOR TO A 10 FOOT LENGTH OF BUILDING
- FOUNDATION REINFORCING WITH
 AN APPROVED EXOTHERMIC WELDING PROCEDURE.
 BOND SERVICE GROUNDING CONDUCTOR TO STEELSTRUCTURE IN AN ACCESSIBLE LOCATION WITH A LISTED AND APPROVED CLAMPING DEVICE USING APPROVED
- 5. BOND SERVICE GROUNDING CONDUCTOR TO METAL WATER PIPES WITH A LISTED AND APPROVED CLAMPING DEVICE USING APPROVED ATTACHMENT PROCEDURES.(WHERE
- 6. ALL ELECTRICAL SERVICE ENTRANCE EQUIPMENT SHALL HAVE A MINIMUM INTEGRATED EQUIPMENT RATING CAPACITY THAT EXCEEDS THE AVAILABLE FAULT CURRENT FROM THE LOCAL UTILITY BUT NOT LESS THAN A MINIMUM CAPACITY OF 10,000 AMPERES RMS SYMMETRICAL.

ATTACHMENT PROCEDURES.

ALL GROUNDING ELECTRODE CONDUCTORS (GEC) SHOWN BELOW ARE FULL SIZE GROUNDING CONDUCTORS





10								P	anel	HOU	ISE F	ANE	L								
				BUSS:	200	VOLT	AGE / P	HASE:	208	120	MOU	NTING:	S	URFACE		SERVICE EI	NTRY: BO	MOTTC			
				MAIN:	200																
		F	EEDER SIZ	ZE, SEE RI	SER		SHORT	CIRCUIT	CAPACI	TY: SER	VICE EN	TRANCE	RATED								
OID OILLT II	WIRE	GND		COND	AIRCUIT DESCRIPTION	LOA	D KVA /	POLE	BRE	AKER	BRE	AKER	LOAD	KVA /	POLE	0.00.007.000.007.00	COND		GND	WIRE	OIDOUE
CIRCUIT#	SIZE	SIZE	# WIRES	SIZE "	CIRCUIT DESCRIPTION	# A	# B	# C		POLE			#A	#B	#C	CIRCUIT DESCRIPTION	SIZE "	# WIRES	SIZE	SIZE	CIRCUIT#
1	12	12	3	0.50	EXTERIOR LIGHTS 1'ST FLOOR	1.5			20	1	1	20	1.0			RECEPTICAL WALK WAY 1'ST	0.5	3	12	12	2
3	12	12	3	0.50	EXTERIOR LIGHTS 2'ST FLOOR		1.5		20	1				1.0		RECEPTICAL WALK WAY 2'ST	0.5	3	12	12	4
5	12	12	3	0.50	EXTERIOR LIGHTS WALL TOP			1.5	20	1	1	20			0.3	PHOTO CELL POWER	0.5	3	12	12	6
7	12	12	3	0.50	EXTERIOR LIGHTS WALL TOP	1.5			20	1	1	20	1.5			EXTERIOR LIGHTS REAR 1'ST FLOOR	0.5	3	12	12	8
9	12	12	3	0.50	ELEVATOR PIT LIGHT		0.5		20	1	1	20		1.0		ELEVATOR ROOM SERVICE RECEPT	0.5	3	12	12	10
11	12	12	3	0.50	ELEVATOR ROOM LIGHT			0.5	20	1	-					SPARE			-	7	12
13	10	10	3	0.75	ELEVATOR ROOM HEATER	1.5			30	2						SPARE					14
15		1					1.5						- 3			SPARE	Q.		ģ.		16
17	12	12	3	0.50	PIT SERVICE RECEPTICAL			0.5	20	1						SPARE		3	3	9	18
19	12	12	3	0.50	PIT SUMP PUMP	1.0			20	1						SPARE					20
21	12	12	3	0.50	ELEVATOR CAB LIGHT		0.8		20	1						SPARE					22
23		7			SPARE											SPARE					24
25		Į.			SPARE											SPARE					26
27					SPARE											SPARE					28
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33					SPARE											SPARE					34
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37					SPARE											SPARE					38
39					SPARE											SPARE					40
41					SPARE											SPARE					42
					PHASE SUB TOTALS:	5.5	4.3	2.5					2.5	2.0	0.3	PHASE SUB TOTALS:					
					TOTAL PHASE A:	8.0		тот	AL PHAS	E B:	6.3				2.8	TOTAL PHASE C:					
							TOTAL	CONNEC	TED KV	A:	1	7.0	KVA								
					TOTAL PHASE A LINE CURRENT =	66.6		TOTA	AL PHAS	SE B LII	NE CURF	RENT =	52.0			TOTAL PHASE C LINE CURRENT =	22.9	1			

SHORT CIRCUIT CAPACITY: SERVICE ENTRANCE RATED

SIZE SIZE WINES SIZE WINES SIZE CROUND LESCAPINOS FA 8 8 8 TO TOP POLE TOP FA 8 8 8 C TOP POLE TOP FA 8 8 8 C CROUND LESCAPINOS SIZE SIZ				Li.														2				
1 4 8 3 1.25 HVAC COMPRESSOR 5.4 54 54 7 7 2 60 5 65 RECENTIALS 6.50 3 172 12 2 2 5 5 7 12 12 3 0.59 RESTROOM RECEPTICALS 9.3 1 2 12 12 3 0.59 RESTROOM RECEPTICALS 9.3 1 2 12 12 3 0.59 RESTROOM RECEPTICALS 9.3 1 2 12 12 3 0.59 RESTROOM RECEPTICALS 9.3 1 2 12 12 3 0.59 RESTROOM RECEPTICALS 9.3 1 1 2 12 12 3 0.59 RESTROOM RECEPTICALS 9.3 1 1 2 12 12 3 0.59 RESTROOM RECEPTICALS 9.3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	CIRCUIT #			# WIRES		CIRCUIT DESCRIPTION											CIRCUIT DESCRIPTION	COND	# WIRES		WIRE	CIRCUIT
3	THE STATE OF THE S	SIZE	SIZE	Townson eco	SIZE "	CHARGE SET OF A DECEMBER OF A SECTION	# A	# B	# C	TRIP	POLE	POLE	IRIP	#A	#B	#C		SIZE "	g someone	SIZE	SIZE	
3 12 12 3 0.56 NEST ROCM RECEPTICALS 0.3 0.5	1.	4	8	3	1 25	HVAC COMPRESSOR	5.4			50HRAC	3	1	20	0.5			RECEPTICAL S	0.50	3	12	12	2
\$ 12 12 3 650 RESTROW RECEPTICALS 3 5 4 7 2 60 8 5 MARRIAGRER 175 3 8 4 6 6 6 6 6 6 6 6 6	3			-	1.20	#	0.1	5.4		*	*			0.0	0.5							
7 12 12 3 9.99 RESTROOM RECEPTICALS 0.3		_	_			*	_	0.4	5.4		.91				0.0	5.0						
9	7	12	12	3	0.50	REST ROOM RECEPTICALS	0.3	 	0.4	20	- 1	*	*	5.0		0.0	*	1.20				
### 1	Q	12	12	3	0.30	KEST ROOM RECEPTIONES	0.5	1	_	20	- 1	2	30	3.0	2.5	-	WATER HEATER	0.75	3	10	10	
13				_			_	_	_	-	-	и и	и.		2.0	2.5	WATER HEATER	0,10	,	10	10	
157 177		-					+		_	_	_		_	_	_	2.3			-			
1		+		_			+	_	_		_					_		-	+			
19		-			-		-	_	_	_	_				_	-		-	+	_		
22 23 24 25 25 25 25 25 25 25			_				-	_	_	_	_					_						
23		_		_			1		_		-				_	_			1			
25 27 27 28 28 28 28 28 28					-	,	-			-	-	-	-			-						
272		-					-		_										1			
29				-			-	_	_				_			_		_			-	
31		-	_				-	-	_		_								-			
33		-	_				-											_	-		3	
35 37 37 37 38 38 38 38 38							1	-												9		
37							1									_		-	1	_		
39							-									_			-		-	
### PHASE SUB TOTALS: \$ 57 \$ 54 \$ 54 \$ 54 \$ 55 \$ 30 \$ 7.5 \$ PHASE SUB TOTALS: TOTAL PHASE A		1					-		_									-	-	-	-	
PHASE SUB TOTALS: 5.7 5.4 5.4 5.4							-			-	-					-		-		-		
TOTAL PHASE A: 11.2 TOTAL PHASE B: 8.4 12.9 TOTAL PHASE C:	41	-				DHACE CUR TOTAL C:	6.7	E 4	E 4		-			E.E.	2.0	7.5	DUACE CUD TOTAL C	-	+			42
TOTAL PHASE A LINE CURRENT = 92.85 TOTAL PHASE B LINE CURRENT = 89.95 TOTAL PHASE CLINE CURRENT = 107.42						PHASE SUB TOTALS.	3.1	3.4	3.4		-			0.0	3.0	1.5	PHASE SUB TOTALS.					
TOTAL PHASE A LINE CURRENT = 92.85 TOTAL PHASE B LINE CURRENT = 89.95 TOTAL PHASE CLINE CURRENT = 107.42																						
TOTAL PHASE A LINE CURRENT = 92.85 TOTAL PHASE B LINE CURRENT = 69.95 TOTAL PHASE C LINE CURRENT = 107.42						TOTAL PHASE A:	11.2		101	AL PHAS	E B:	8.4				12.9	TOTAL PHASE C:					
TOTAL PHASE A LINE CURRENT = 92.85 TOTAL PHASE B LINE CURRENT = 69.95 TOTAL PHASE C LINE CURRENT = 107.42													-									
Panel LP1-A								TOTAL (CONNEC	TED KVA	A¢.	32	.5	KVA								
Panel LP1-A		-			-	TOTAL BHASE A LINE CURRENT -	02.85	1	TOTA	AI DHAS	E B III	IE CUDDI	ENT -	60.05		_	TOTAL PHASE CLINE CUPPENT -	107.42	1			
BUSS: 200						OTAL PHASE A LINE CORRENT -	92.03		1017	AL PHAS	C D LIN	IL CURRI	LIVI -	09.90		_	TOTAL PHASE C LINE CORRENT =	107.42	4			
MAIN: 200										Р	anal											
SHORT CIRCUIT # STATE SHORT CIRCUIT CAPACITY: SERVICE ENTRANCE RATED					BUSS	200	VOLT	AGE / PI	HASE	208				S	URFACE	=	SERVICE EL	VTRY: BO	TTOM			
CIRCUIT # WIRE SIZE SIZE SIZE CIRCUIT DESCRIPTION LOAD KVA / POLE BREAKER BREAKER LOAD KVA / POLE SIZE SIZ							VOLT	AGE / PI	HASE:	208				S	URFACE		SERVICE EI	NTRY: BO	TTOM	0		
SIZE SIZE WIRCS SIZE WIRCS SIZE WIRCS SIZE WIRCS SIZE WIRCS SIZE WIRCS SIZE S					MAIN:	200	VOLT				120	MOUN	TING:		URFACE		SERVICE EI	NTRY: BO	TTOM			
SIZE SIZE WIRCS SIZE WIRCS SIZE WIRCS SIZE WIRCS SIZE WIRCS SIZE WIRCS SIZE S		1	FI		MAIN:	200	VOLT				120	MOUN	TING:		URFACE		SERVICE EI	NTRY: BO	OTTOM			
SPARE 1 1 20 1.0 EXTERIOR LIGHTING 0.5 3 12 12 4	OIDOUUT #	WIRE		EEDER SIZ	MAIN: E, SEE RI	200 SER		SHORT	CIRCUIT	CAPACIT	120 Y: SERV	MOUN /ICE ENT	TING:	RATED						GND	WIRE	O DOWN
SPARE 1 1 20 1.0 EXTERIOR LIGHTING 0.5 3 12 12 4	CIRCUIT#		GND	EEDER SIZ	MAIN: E, SEE RI	200 SER	LOA	SHORT DKVA/	CIRCUIT	CAPACIT	120 Y: SERV	MOUN /ICE ENT	TING: RANCE	RATED LOAD) KVA /	POLE		COND				CIRCUIT
5 12 12 3 0.5 SIGN CIRCUIT 1.6 20 1 SPARE 6 7 8 SPARE 8 SPARE 8 9 SPARE 9 SPARE 9 10 11 SPARE 9 SPARE 12 12 13 SPARE 12 SPARE 14 12 13 SPARE 14 SPARE 14 14 SPARE 14 14 14 SPARE 14		SIZE	GND SIZE	#WIRES	MAIN: E, SEE RI COND SIZE "	200 SER CIRCUIT DESCRIPTION	LOA	SHORT D KVA / I	CIRCUIT	CAPACIT BREA TRIP	120 Y: SERV AKER POLE	MOUN /ICE ENT	RANCE KER TRIP	RATED LOAD	KVA /	POLE	CIRCUIT DESCRIPTION	COND SIZE "	# WIRES	SIZE	SIZE	
SPARE SPAR	1	SIZE	GND SIZE	#WIRES	MAIN: E, SEE RI COND SIZE "	200 SER CIRCUIT DESCRIPTION LIGHTING	LOA	SHORT D KVA / I	CIRCUIT	CAPACIT BREA TRIP	120 Y: SERV AKER POLE	MOUN /ICE ENT BREA POLE	RANCE KER TRIP	RATED LOAD	KVA /	POLE #C	CIRCUIT DESCRIPTION	COND SIZE "	#WIRES	SIZE 12	SIZE 12	2
9 SPARE SPARE SPARE SPARE 112 13 SPARE SPARE 155 15 SPARE SPARE 1615 17 SPARE 1616 17 SPARE 1616 19 PHASE SUB TOTALS: 1.6 1.5 0.0 0.0 1.2 1.0 PHASE SUB TOTALS: 1.6 TOTAL PHASE B: 2.7 1.0 TOTAL PHASE C: TOTAL PHASE C: TOTAL CONNECTED KVA: 5.3 KVA	1 3	SIZE 12	GND SIZE	#WIRES	MAIN: E, SEE RI: COND SIZE "	200 SER CIRCUIT DESCRIPTION LIGHTING SPARE	LOA # A	SHORT D KVA / I	CIRCUIT	CAPACIT BREA TRIP	120 TY: SERV AKER POLE 1	MOUN /ICE ENT BREA POLE	RANCE KER TRIP	RATED LOAD	KVA /	POLE #C	CIRCUIT DESCRIPTION LIGHTING EXTERIOR LIGHTING	COND SIZE "	#WIRES	SIZE 12	SIZE 12	2 4
11 SPARE SPARE 12 SPARE 14 SPARE 15 SPARE 14 SPARE 15 SPARE 15 SPARE 16 SPARE 16 SPARE 16 SPARE 16 SPARE 16 SPARE 16 SPARE 19 PHASE SUB TOTALS: 1.6 1.5 0.0 0.0 1.2 1.0 PHASE SUB TOTALS: 20 TOTAL PHASE A: 1.6 TOTAL PHASE B: 2.7 1.0 TOTAL PHASE C: TOTAL PHASE C: TOTAL CONNECTED KVA: 5.3 KVA	1 3	SIZE 12	GND SIZE	#WIRES	MAIN: E, SEE RI: COND SIZE "	200 SER CIRCUIT DESCRIPTION LIGHTING SPARE SIGN CIRCUIT	LOA # A	SHORT D KVA / I	CIRCUIT	CAPACIT BREA TRIP	120 TY: SERV AKER POLE 1	MOUN /ICE ENT BREA POLE	RANCE KER TRIP	RATED LOAD	KVA /	POLE #C	CIRCUIT DESCRIPTION LIGHTING EXTERIOR LIGHTING SPARE	COND SIZE "	#WIRES	SIZE 12	SIZE 12	2 4 6
13 SPARE 14 SPARE 16 17 18 SPARE 18 19 SPARE 18 SPARE 18 SPARE 18 SPARE 18 SPARE 18 SPARE 18 SPARE SPARE	1 3 5 7	SIZE 12	GND SIZE	#WIRES	MAIN: E, SEE RI: COND SIZE "	200 SER CIRCUIT DESCRIPTION LIGHTING SPARE SIGN CIRCUIT SPARE	LOA # A	SHORT D KVA / I	CIRCUIT	CAPACIT BREA TRIP	120 TY: SERV AKER POLE 1	MOUN /ICE ENT BREA POLE	RANCE KER TRIP	RATED LOAD	KVA /	POLE #C	LIGHTING EXTERIOR LIGHTING SPARE SPARE	COND SIZE "	#WIRES	SIZE 12	SIZE 12	2 4 6 8
15 SPARE 16 SPARE 18 19 PHASE SUB TOTALS: 1.6 1.5 0.0 0.0 1.2 1.0 PHASE SUB TOTALS: 1.6 TOTAL PHASE B: 2.7 1.0 TOTAL PHASE C: TOTAL CONNECTED KVA: 5.3 KVA SPARE 18 20 20 20 20 20 20 20 2	3 5 7	SIZE 12	GND SIZE	#WIRES	MAIN: E, SEE RI: COND SIZE "	200 SER CIRCUIT DESCRIPTION LIGHTING SPARE SIGN CIRCUIT SPARE SPARE SPARE	LOA # A	SHORT D KVA / I	CIRCUIT	CAPACIT BREA TRIP	120 TY: SERV AKER POLE 1	MOUN /ICE ENT BREA POLE	RANCE KER TRIP	RATED LOAD	KVA /	POLE #C	LIGHTING EXTERIOR LIGHTING SPARE SPARE SPARE SPARE	COND SIZE "	#WIRES	SIZE 12	SIZE 12	2 4 6 8
17	1 3 5 7 9	SIZE 12	GND SIZE	#WIRES	MAIN: E, SEE RI: COND SIZE "	200 SER CIRCUIT DESCRIPTION LIGHTING SPARE SIGN CIRCUIT SPARE SPARE SPARE	LOA # A	SHORT D KVA / I	CIRCUIT	CAPACIT BREA TRIP	120 TY: SERV AKER POLE 1	MOUN /ICE ENT BREA POLE	RANCE KER TRIP	RATED LOAD	KVA /	POLE #C	LIGHTING EXTERIOR LIGHTING SPARE SPARE SPARE SPARE SPARE SPARE SPARE	COND SIZE "	#WIRES	SIZE 12	SIZE 12	2 4 6 8
19 PHASE SUB TOTALS: 1.6 1.5 0.0 0.0 1.2 1.0 PHASE SUB TOTALS: 1.6 TOTAL PHASE B: 2.7 1.0 TOTAL PHASE C: 1.0	1 3 5 7 9 11	SIZE 12	GND SIZE	#WIRES	MAIN: E, SEE RI: COND SIZE "	200 SER CIRCUIT DESCRIPTION LIGHTING SPARE SIGN CIRCUIT SPARE SPARE SPARE	LOA # A	SHORT D KVA / I	CIRCUIT	CAPACIT BREA TRIP	120 TY: SERV AKER POLE 1	MOUN /ICE ENT BREA POLE	RANCE KER TRIP	RATED LOAD	KVA /	POLE #C	CIRCUIT DESCRIPTION LIGHTING EXTERIOR LIGHTING SPARE SPARE SPARE SPARE SPARE SPARE SPARE	COND SIZE "	#WIRES	SIZE 12	SIZE 12	2 4 6 8 10 12
PHASE SUB TOTALS: 1.6 1.5 0.0 0.0 1.2 1.0 PHASE SUB TOTALS: TOTAL PHASE A: 1.6 TOTAL PHASE B: 2.7 1.0 TOTAL PHASE C: TOTAL CONNECTED KVA: 5.3 KVA	1 3 5 7 9 11	SIZE 12	GND SIZE	#WIRES	MAIN: E, SEE RI: COND SIZE "	200 SER CIRCUIT DESCRIPTION LIGHTING SPARE SIGN CIRCUIT SPARE SPARE SPARE	LOA # A	SHORT D KVA / I	CIRCUIT	CAPACIT BREA TRIP	120 TY: SERV AKER POLE 1	MOUN /ICE ENT BREA POLE	RANCE KER TRIP	RATED LOAD	KVA /	POLE #C	CIRCUIT DESCRIPTION LIGHTING EXTERIOR LIGHTING SPARE SPARE SPARE SPARE SPARE SPARE SPARE	COND SIZE "	#WIRES	SIZE 12	SIZE 12	2 4 6 8 10
TOTAL PHASE A: 1.6 TOTAL PHASE B: 2.7 1.0 TOTAL PHASE C: TOTAL CONNECTED KVA: 5.3 KVA	1 3 5 7 9 11 13	SIZE 12	GND SIZE	#WIRES	MAIN: E, SEE RI: COND SIZE "	200 SER CIRCUIT DESCRIPTION LIGHTING SPARE SIGN CIRCUIT SPARE SPARE SPARE	LOA # A	SHORT D KVA / I	CIRCUIT	CAPACIT BREA TRIP	120 TY: SERV AKER POLE 1	MOUN /ICE ENT BREA POLE	RANCE KER TRIP	RATED LOAD	KVA /	POLE #C	LIGHTING EXTERIOR LIGHTING SPARE	COND SIZE "	#WIRES	SIZE 12	SIZE 12	2 4 6 8 10 12
TOTAL CONNECTED KVA: 5.3 KVA	1 3 5 7 9 11 13 15	SIZE 12	GND SIZE	#WIRES	MAIN: E, SEE RI: COND SIZE "	200 SER CIRCUIT DESCRIPTION LIGHTING SPARE SIGN CIRCUIT SPARE SPARE SPARE	LOA # A	SHORT D KVA / I	CIRCUIT	CAPACIT BREA TRIP	120 TY: SERV AKER POLE 1	MOUN /ICE ENT BREA POLE	RANCE KER TRIP	RATED LOAD	KVA /	POLE #C	LIGHTING EXTERIOR LIGHTING SPARE	COND SIZE "	#WIRES	SIZE 12	SIZE 12	2 4 6 8 10 12 14
TOTAL CONNECTED KVA: 5.3 KVA	1 3 5 7 9 11 13 15	SIZE 12	GND SIZE	#WIRES	MAIN: E, SEE RI: COND SIZE "	200 SER CIRCUIT DESCRIPTION LIGHTING SPARE SIGN CIRCUIT SPARE SPARE SPARE SPARE	LOA # A	SHORT DKVA/I #8	POLE # C	CAPACIT BREA TRIP	120 TY: SERV AKER POLE 1	MOUN /ICE ENT BREA POLE	RANCE KER TRIP	LOAD #A) KVA / #B	POLE #C	LIGHTING EXTERIOR LIGHTING SPARE	COND SIZE "	#WIRES	SIZE 12	SIZE 12	2 4 6 8 10 12 14 16
	1 3 5 7 9 11 13 15	SIZE 12	GND SIZE	#WIRES	MAIN: E, SEE RI: COND SIZE "	200 SER CIRCUIT DESCRIPTION LIGHTING SPARE SIGN CIRCUIT SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE	LOA # A	SHORT DKVA/I #8	POLE # C	BREA TRIP	120 WER OUT TY: SERV WER POLE 1 1 1	MOUN /ICE ENT BREA POLE 1 1	RANCE KER TRIP	LOAD #A) KVA / #B 1.2	POLE #C	LIGHTING EXTERIOR LIGHTING SPARE	COND SIZE "	#WIRES	SIZE 12	SIZE 12	2 4 6 8 10 12 14 16
	1 3 5 7 9 11 13 15	SIZE 12	GND SIZE	#WIRES	MAIN: E, SEE RI: COND SIZE "	200 SER CIRCUIT DESCRIPTION LIGHTING SPARE SIGN CIRCUIT SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE	LOA # A	SHORT DKVA/I #8	POLE # C	BREA TRIP	120 WER OUT TY: SERV WER POLE 1 1 1	MOUN /ICE ENT BREA POLE 1 1	RANCE KER TRIP	LOAD #A) KVA / #B 1.2	POLE #C	LIGHTING EXTERIOR LIGHTING SPARE	COND SIZE "	#WIRES	SIZE 12	SIZE 12	2 4 6 8 10 12 14 16
TOTAL PHASE A LINE CURRENT = 13.32 TOTAL PHASE B LINE CURRENT = 22.48 TOTAL PHASE C LINE CURRENT = 8.33	1 3 5 7 9 11 13 15	SIZE 12	GND SIZE	#WIRES	MAIN: E, SEE RI: COND SIZE "	200 SER CIRCUIT DESCRIPTION LIGHTING SPARE SIGN CIRCUIT SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE	LOA # A	SHORT D KVA / 1 # B 1.5	CIRCUIT POLE # C 0.0	BREATRIP 20 20	120 TY: SERV AKER POLE 1 1 1 E B:	MOUN /ICE ENT BREA POLE 1 1 2.7	TING: RANCE KER TRIP 20 20	LOAD #A) KVA / #B 1.2	POLE #C	LIGHTING EXTERIOR LIGHTING SPARE	COND SIZE "	#WIRES	SIZE 12	SIZE 12	4 6 8 10 12 14 16
	1 3 5 7 9 11 13 15	SIZE 12	GND SIZE	#WIRES	MAIN: E, SEE RI: COND SIZE "	200 SER CIRCUIT DESCRIPTION LIGHTING SPARE SIGN CIRCUIT SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE	LOA # A	SHORT D KVA / 1 # B 1.5	CIRCUIT POLE # C 0.0	BREATRIP 20 20	120 TY: SERV AKER POLE 1 1 1 E B:	MOUN /ICE ENT BREA POLE 1 1 2.7	TING: RANCE KER TRIP 20 20	LOAD #A) KVA / #B 1.2	POLE #C	LIGHTING EXTERIOR LIGHTING SPARE	COND SIZE "	#WIRES	SIZE 12	SIZE 12	2 4 6 8 10 12 14 16

									P	anel	P1-E	}									
				BUSS:	100	VOLT	AGE / PH	HASE:	208	120	MOUN	TING:	SI	JRFACE	Ē	SERVICE EI	NTRY: BO	TTOM			
				MAIN:	100															li .	1
		F	EEDER SIZ	E, SEE RIS	BER		SHORT	CIRCUIT	CAPACIT	Y: SERV	ICE ENT	RANCE	RATED								
	WIRE	GND		COND		LOAD	KVA / F	POLE	BREA	KED	BREA	KER	LOAD	KVA /	POLE		COND		GND	WIRE	
UIT#	SIZE	SIZE	# WIRES	SIZE "	CIRCUIT DESCRIPTION	#A	#B	#C	TRIP	POLE	POLE		#A	#B	#C	CIRCUIT DESCRIPTION	SIZE "	# WIRES	SIZE	SIZE	CIRCUIT#
	12	12	3	0.5	RECEPTICALS	0.8			20	- 1	1	20	0.8	_		RECEPTICALS	0.5	3	12	12	2
	12	12	3	0.5	LIGHTING	0.0	1.5		20	1	1	20	0.0	1.2	\vdash	LIGHTING	0.5	3	12	12	4
	12	12	3	0.5	REST ROOM RECEPTICALS		1,0	0.5	20	1	1	20	_	1.2	1.0	EXTERIOR LIGHTING	0.5	3	12		6
						4.0		0.5					2.5	_	1.0			_		12	
	12	12	3	0.5	SIGN CIRCUIT SPARE	1.6		-	20	1	2	30	2.5	2.5	-	WATER HEATER	0.8	3	10	10	8
								-		-	_		_	2.5	0.0	AID HANDLED		-			
1					SPARE						2	60	0.0		6.6	AIR HANDLER	1.0	3	8	4	12
3	_				SPARE	- 9					- "		6.6		$\overline{}$						14
	- 6	10	4	1.0	HVAC COMPRESSOR		4.8		50HRAC	3			-			SPARE					16
								4.8								SPARE					18
					*	4.8										SPARE					20
					PHASE SUB TOTALS:	7.2	6.3	5.3					9.9	3.7	7.6	PHASE SUB TOTALS:					
					TOTAL PHASE A	17.0		TOTA	AL PHAS	E B:	10.0				12.9	TOTAL PHASE C:					
							TOTAL C	CONNECT	ED KVA		39	9	KVA								
							TOTAL	OHITEO	LD I(V)												
				1	OTAL PHASE A LINE CURRENT =	141.56		TOTA	L PHAS	E B LIN	IE CURR	ENT =	83.27			TOTAL PHASE C LINE CURRENT =	107.42				
				-							P1-C					She had a little below					
				BUSS:	100	VOLT	AGE / PH	HASE:	208	120	MOUN	TING:	SI	JRFACE	E	SERVICE EI	NTRY: BO	TTOM			
				MAIN:	100																
			EEDER SIZ	E, SEE RIS	SER		SHORT	CIRCUIT	CAPACIT	Y: SER	ICE ENT	RANCE	RATED								
		F							2000	WEB	nnr.	urn	1040	1014 11	DOLE		COND		GND	14HDE	
	WIRE			COND		LOAD	KWA / D													I WIRE	
IT#	WIRE SIZE	GND SIZE	# WIRES	COND SIZE "	CIRCUIT DESCRIPTION	# A	#B	#C	TRIP	POLE	POLE		#A	KVA / I	#C	CIRCUIT DESCRIPTION	SIZE "	# WIRES	SIZE	SIZE	CIRCUIT#
1242	SIZE	GND SIZE	3.6	SIZE "		# A			TRIP	POLE	POLE	TRIP	#A				SIZE "		SIZE	SIZE	100000000000000000000000000000000000000
132502	SIZE 12	GND SIZE	3	SIZE "	RECEPTICALS		#8		TRIP 20		POLE 1	TRIP 20		#B		RECEPTICALS	SIZE "	3	SIZE 12	SIZE 12	2
	12 12	GND SIZE 12	3 3	0.5 0.5	RECEPTICALS LIGHTING	# A		#C	20 20	POLE	POLE 1	TRIP 20 20	#A		#C	RECEPTICALS LIGHTING	0.5 0.5	3 3	12 12	12 12	4
UIT#	SIZE 12	GND SIZE	3	SIZE "	RECEPTICALS	# A	#8		TRIP 20	POLE	POLE 1	TRIP 20	#A	#B		RECEPTICALS	SIZE "	3	SIZE 12	SIZE 12	2

									000	100		198 h f -00 -					Commence of the commence	mmont.			
				BUSS:	100	VOLT	AGE / PI	HASE:	208	120	MOUN	ITING:	S	URFACE		SERVICE E	VTRY: BO	TTOM			
				MAIN:	100																
		F	EEDER SIZ	E, SEE RIS	ER		SHORT	CIRCUIT	CAPACI	TY: SER	ICE ENT	RANCE	RATED								
IRCUIT#	WIRE	GND	# WIRES	COND	CIRCUIT DESCRIPTION	LOAI	KVA / I	POLE	BREA	AKER	BREA	KER	LOAD	KVA/	POLE	CIRCUIT DESCRIPTION	COND	# WIRES	GND	WIRE	CIRCUIT
ACOII #	SIZE	SIZE	# WIRLS	SIZE "	CIRCUIT DESCRIPTION	# A	#B	#C	TRIP	POLE	POLE	TRIP	#A	#B	#C	CIRCUIT DESCRIPTION	SIZE "	# WIRES	SIZE	SIZE	CIRCUIT
1	12	12	3	0.5	RECEPTICALS	0.8			20	1	1	20	0.8			RECEPTICALS	0.5	3	12	12	2
3	12	12	3	0.5	LIGHTING		1.5		20	1	1	20		1.2		LIGHTING	0.5	3	12	12	4
5	12	12	3	0.5	REST ROOM RECEPTICALS			0.5	20	1	1	20			1.0	EXTERIOR LIGHTING	0.5	3	12	12	6
7	12	12	3	0.5	SIGN CIRCUIT	1.6			20	1	2	30	2.5			WATER HEATER	0.8	3	10	10	8
9	71.51				SPARE						72.7			2.5		-					10
11					SPARE	1					2	60			6.6	AIR HANDLER	1.0	3	8	4	12
13					SPARE								6.6					- 4			14
15	6	10	4	1.0	HVAC COMPRESSOR		4.8		50HRAC	3						SPARE					16
17								4.8								SPARE					18
19					*	4.8		1		м.						SPARE					20
					PHASE SUB TOTALS:	7.2	6.3	5.3					9.9	3.7	7.6	PHASE SUB TOTALS:					
					TOTAL PHASE A:	17.0		TO	TAL PHAS	E B:	10.0				12.9	TOTAL PHASE C:					
							TOTAL	CONNEC	CTED KV	A:	39	9	KVA								
				7	OTAL PHASE A LINE CURRENT =	141.56		TOT	AL PHAS	SE B LI	IE CURR	ENT =	83.27			OTAL PHASE C LINE CURRENT =	107.42				

									P	anel	P1-0)									
				BUSS:	100	VOLT	AGE / P	HASE:	208	120	MOUN	TING:	S	URFAC	E	SERVICE E	NTRY: BO	MOTTO			
				MAIN:	100																
		F	EEDER SIZ	ZE, SEE RIS	SER		SHORT	CIRCUIT	CAPACIT	Y: SER	ICE ENT	RANCE	RATED								
IRCUIT#	WIRE	GND	# WIRES	COND	CIRCUIT DESCRIPTION	LOAI	D KVA /	POLE	BREA	AKER	BREA	KER	LOAD	KVA /	POLE	CIRCUIT DESCRIPTION	COND	#WIRES	GND	WIRE	CIRCUIT
IRCUIT#	SIZE	SIZE	# WIRES	SIZE "	CIRCUIT DESCRIPTION	# A	#B	#C	TRIP	POLE	POLE	TRIP	#A	#B	#C	CIRCUIT DESCRIPTION	SIZE "	# WIRES	SIZE	SIZE	CIRCUIT
1	12	12	3	0.5	RECEPTICALS	0.8			20	1	1	20	0.8		_	RECEPTICALS	0.5	3	12	12	2
3	12	12	3	0.5	LIGHTING		1.5		20	1	1	20	0.0	1.2		LIGHTING	0.5	3	12	12	4
5	12	12	3	0.5	REST ROOM RECEPTICALS			0.5	20	1	1	20		1,7.04	1.0	EXTERIOR LIGHTING	0.5	3	12	12	6
7	12	12	3	0.5	SIGN CIRCUIT	1.6			20	1	2	30	2.5			WATER HEATER	0.8	3	10	10	8
9					SPARE									2.5		Ħ					10
11					SPARE						2	60			6.6	AIR HANDLER	1.0	3	8	4	12
13					SPARE								6.6			*				3	14
15	6	10	4	1.0	HVAC COMPRESSOR		4.8		50HRAC	3						SPARE				1	16
17								4.8		- 44						SPARE					18
19					*	4.8				M						SPARE					20
					PHASE SUB TOTALS:	7.2	6.3	5.3					9.9	3.7	7.6	PHASE SUB TOTALS:					
					TOTAL PHASE A:	17.0		TOT	TAL PHAS	EB:	10.0				12.9	TOTAL PHASE C:					
							TOTAL	CONNEC	TED KVA	A:	39	9	KVA								
				Т	OTAL PHASE A LINE CURRENT =	141.56		тот	AL PHAS	E B LI	E CURR	ENT =	83 27			TOTAL PHASE C LINE CURRENT =	107.42				

				BUSS:	100	VOL.	TAGE / P	HASE:	208	120	MOUN	ITING:	SI	URFACI	E	SERVICE E	NTRY: BO	ттом			
				MAIN:	100																
		F	EEDER SIZ	E, SEE RIS	ER		SHORT	CIRCUI	CAPACI	TY: SER	VICE EN	TRANCE	RATED								
CIRCUIT#	WIRE	GND	# WIRES	COND	CIRCUIT DESCRIPTION	LOA	D KVA /	POLE	BREA	AKER	BRE	AKER	LOAD	KVA /	POLE	CIRCUIT DESCRIPTION	COND	# WIRES	GND	WIRE	CIRCUIT#
CIRCUIT#	SIZE	SIZE	# WIKES	SIZE "	CIRCUIT DESCRIPTION	# A	# B	# C	TRIP	POLE	POLE	TRIP	#A	#B	#C	CIRCUIT DESCRIPTION	SIZE "	# WIRES	SIZE	SIZE	CIRCUIT#
1	12	12	3	0.5	RECEPTICALS	0.8		_	20	1	1	20	0.8			RECEPTICALS	0.5	3	12	12	2
3	12	12	3	0.5	LIGHTING	10000	1.5	1	20	1	1	20		1.2		LIGHTING	0.5	3	12	12	4
5	12	12	3	0.5	REST ROOM RECEPTICALS			0.5	20	1	1	20			1.0	EXTERIOR LIGHTING	0.5	3	12	12	6
7	12	12	3	0.5	SIGN CIRCUIT	1.6			20	1	2	30	2.5			WATER HEATER	0.8	3	10	10	8
9					SPARE									2.5					11773		10
11					SPARE						2	60			6.6	AIR HANDLER	1.0	3	8	4	12
13					SPARE							**	6.6			**	1				14
15	6	10	4	1.0	HVAC COMPRESSOR		4.8		50HRAC	3						SPARE					16
17								4.8								SPARE					18
19						4.8			"							SPARE					20
					PHASE SUB TOTALS:	7.2	6.3	5.3					9.9	3.7	7.6	PHASE SUB TOTALS:					
					TOTAL PHASE A:	17.0		TO	TAL PHAS	SEB:	10.0				12.9	TOTAL PHASE C:					
							TOTAL	CONNEC	CTED KV	Δ:	35	9.9	KVA								
												CS-O	0.0000000								
				T	OTAL PHASE A LINE CURRENT =	141.56		TOT	AL PHAS	E B LIN	NE CURR	ENT =	83.27		T	OTAL PHASE C LINE CURRENT =	107.42				

GND SIZE #W	NIDES NIDES	BUSS: MAIN: SEE RIS	100 100 ER		AGE / PI		208	120	MOUN	ITING:	SI	JRFACE		SERVICE E	NTRY: BO	TTOM			
GND SIZE #W	ER SIZE	COND COND			SHORT	CIRCUIT	CADACI												
GND SIZE #W	NIDES	COND	ER		SHORT	CIRCUIT	CADACI												
SIZE #W							CAPACI	TY: SER	/ICE ENT	RANCE	RATED								
SIZE 12	VIIALO		CIRCUIT DESCRIPTION	LOAI	D KVA / I	POLE	BRE	AKER	BREA	KER	LOAD	KVA / F	POLE	CIRCUIT DESCRIPTION	COND	# WIRES	GND	WIRE	CIRCUIT
		SIZE "	GROOT BESCHI TION	# A	#B	# C	TRIP	POLE	POLE	TRIP	#A	#B	#C	OKCOTT DESCRIPTION	SIZE "	" WILLS	SIZE	SIZE	CINCOTT
	3	0.5	RECEPTICALS	0.8	_		20	- 1	- 1	20	0.8			RECEPTICALS	0.5	3	12	12	2
12	3	0.5	UGHTING	0.0	1.5	_	20	1	1	20	0.0	1.2		LIGHTING	0.5	3	12	12	4
	3	0.5	REST ROOM RECEPTICALS		1.0	0.5	20	1	1	20		1.6	1.0	EXTERIOR LIGHTING	0.5	3	12	12	6
Chicago Inc.	3	0.5	SIGN CIRCUIT	1.6	1	0.0	20	1	2	30	2.5	-	1.0	WATER HEATER	0.8	3	10	10	8
		0.0	SPARE	1.0		-	20	-	-	50	2.0	2.5		, milesticates	0.0				10
_	_			_					2	60		2.0	6.6	AIR HANDLER	1.0	3	8	4	12
			SPARE							н	6.6			H					14
10	4	1.0	HVAC COMPRESSOR		4.8		50HRAC	3						SPARE					16
			*			4.8		*						SPARE					18
				4.8		-	*	*						SPARE					20
			PHASE SUB TOTALS:	7.2	6.3	5.3					9.9	3.7	7.6	PHASE SUB TOTALS:		7			
			TOTAL PHASE A:	17.0		тот	AL PHAS	SE B:	10.0				12.9	TOTAL PHASE C:					
					TOTAL (CONNEC	TED KV	A:	39	.9	KVA								
		TC	OTAL PHASE A LINE CURRENT =	141.56		TOTA	AL PHAS	SE B LIN	NE CURR	ENT =	83.27		T	OTAL PHASE C LINE CURRENT =	107.42				
	10	10 4		SPARE SPARE SPARE 10 4 1.0 HVAC COMPRESSOR " PHASE SUB TOTALS: TOTAL PHASE A:	SPARE SPARE 10 4 1.0 HVAC COMPRESSOR " 4.8 PHASE SUB TOTALS: 7.2	SPARE SPARE 10 4 1.0 HVAC COMPRESSOR 4.8 PHASE SUB TOTALS: 7.2 6.3 TOTAL PHASE A: 17.0	SPARE SPARE 10 4 1.0 HVAC COMPRESSOR 4.8 " 4.8 PHASE SUB TOTALS: 7.2 6.3 5.3 TOTAL PHASE A: 17.0 TOT	SPARE SPARE 10 4 1.0 HVAC COMPRESSOR 4.8 50HRAC " 4.8 " 4.8 " PHASE SUB TOTALS: 7.2 6.3 5.3 TOTAL PHASE A: 17.0 TOTAL PHASE TOTAL CONNECTED KV	SPARE SPARE 10 4 1.0 HVAC COMPRESSOR 4.8 50HRAC 3 " 4.8 " 4.8 " " PHASE SUB TOTALS: 7.2 6.3 5.3 TOTAL PHASE A: 17.0 TOTAL PHASE B: TOTAL CONNECTED KVA:	SPARE SPARE 2 9 10 4 1.0 HVAC COMPRESSOR 4.8 50HRAC 3 9 10 4 1.0 HVAC COMPRESSOR 4.8 50HRAC 3 9 10 4 1.0 TOTAL PHASE SUB TOTALS: 7.2 6.3 5.3 10 10 0 10 TOTAL PHASE A: 17.0 TOTAL PHASE B: 10.0 10 TOTAL CONNECTED KVA: 38	SPARE SPARE 2 60 8 7 8 7 8 8 8 9 8 9 9 9 9 9 9 9 9 9 9 9	SPARE SPARE 2 60 10 4 1.0 HVAC COMPRESSOR 4.8 50HRAC 3 1	SPARE SPARE 2 60	SPARE SPARE 2 60 6.6 10 4 1.0 HVAC COMPRESSOR 4.8 50HRAC 3	SPARE 2 60 6.6 AIR HANDLER SPARE 10 4 1.0 HVAC COMPRESSOR 4.8 50HRAC 3 SPARE SPA	SPARE 2 60 6.6 AIR HANDLER 1.0	SPARE 2 60 6.6 AIR HANDLER 1.0 3 SPARE 7 6.6 7 6.6 8.6 AIR HANDLER 1.0 3 10 4 1.0 HVAC COMPRESSOR 4.8 50HRAC 3 SPARE SPARE 9.9 3.7 7.6 PHASE SUB TOTALS: TOTAL PHASE A. 17.0 TOTAL PHASE B. 10.0 12.9 TOTAL PHASE C.	SPARE 2 60 6.6 AIR HANDLER 1.0 3 8 SPARE 8 8 6.6 8 AIR HANDLER 1.0 3 8 10 4 1.0 HVAC COMPRESSOR 4.8 50HRAC 3 SPARE 8	SPARE 2 60 6.6 AIR HANDLER 1.0 3 8 4 SPARE 8 8 6.6 SPARE 8 8 9 8 9 8 9 8 8 9 8 8 9 8 8 9 8 8 9 8 8 9 8 8 9 8 8 9 8 8 9 8 9 8 9 8 9 9 8 9 9 8 9 9 8 9

									F	anel	P2-0										
				BUSS:	100	VOLT	AGE / PI	HASE:	208	120	MOU		S	URFACE		SERVICE E	NTRY: BO	TTOM			
				MAIN:	100						-										
		F	EEDER SIZ	E, SEE RIS	SER		SHORT	CIRCUIT	CAPACI	Y: SERV	VICE EN	RANCE	RATED								
	WIRE	GND		COND		LOA	D KVA / I	POLE	BREA	AKER	BRE	AKER	LOAD	KVA /	POLE		COND		GND	WIRE	
CIRCUIT#	SIZE	SIZE	#WIRES	SIZE "	CIRCUIT DESCRIPTION	# A	#B	#C	-	POLE	POLE	-	#A	#B	#C	CIRCUIT DESCRIPTION	SIZE "	# WIRES	SIZE	SIZE	CIRCUIT
1	12	12	3	0.5	RECEPTICALS	0.8		_	20	- 1	1	20	0.8			RECEPTICALS	0.5	9	12	12	2
3	12	12	3	0.5	LIGHTING	0.0	1.5	-	20	1	1	20	0.0	1.2	—	LIGHTING	0.5	3	12	12	4
5	12	12	3	0.5	REST ROOM RECEPTICALS	_	1.0	0.5	20	1	1	20		7.4	1.0	EXTERIOR LIGHTING	0.5	3	12	12	6
7	12	12	3	0.5	SIGN CIRCUIT	1.6			20	1	2	30	2.5		1.0	WATER HEATER	0.8	3	10	10	8
9		- 100		7.0	SPARE	1								2.5			10.00				10
11					SPARE						2	60			6.6	AIR HANDLER	1.0	3	8	4	12
13					SPARE								6.6								14
15	6	10	4	1.0	HVAC COMPRESSOR		4.8		50HRAC	3						SPARE					16
17					*			4.8	*	*						SPARE					18
19						4.8			*	96						SPARE					20
					PHASE SUB TOTALS:	7.2	6.3	5.3					9.9	3.7	7.6	PHASE SUB TOTALS:					
					TOTAL PHASE A:	17.0		TOT	AL PHAS	E B:	10.0				12.9	TOTAL PHASE C:					
							TOTAL	CONNEC	TED KV	A:	3	9.9	KVA								
				Т.	OTAL PHASE A LINE CURRENT =	141.56	1	TOT	AL PHAS	E B LIN	NE CURF	ENT =	83.27		Т	OTAL PHASE C LINE CURRENT =	107.42				

				BUSS:	100	1 1/017	TA OF A DI	TAOE.			P2-E		- 0	URFACI	- 1	SERVICE E	NITOM: DO	TTOM			
						VOL	AGE / PI	HASE.	208	120	MOUN	IING:	5	URFACI	E .	SERVICE E	NIRY BC	HOM			
				MAIN:	100	-															
		F	EEDER SIZ	E. SEE RIS	SER	1	SHORT	CIRCUIT	CAPACIT	Y: SER	ICE ENT	RANCE	RATED								
IDOLUT#	WIRE	GND	# WIRES	COND	CIDCUIT DECODIDATON	LOA	D KVA / F	POLE	BREA	KER	BREA	KER	LOAD	KVA /	POLE	OIDQUIT DE CODIDTON	COND	# 1411050	GND	WIRE	OLDGUITA
IRCUIT#	SIZE	SIZE	# WIRES	SIZE "	CIRCUIT DESCRIPTION	# A	#B	# C	TRIP	POLE	POLE	TRIP	#A	#B	#C	CIRCUIT DESCRIPTION	SIZE "	#WIRES	SIZE	SIZE	CIRCUIT#
1	12	12	3	0.5	RECEPTICALS	0.8		-	20	1	1	20	0.8		1	RECEPTICALS	0.5	3	12	12	2
3	12	12	3	0.5	LIGHTING	-	1.5	-	20	1	1	20		1.2	+	LIGHTING	0.5	3	12	12	4
5	12	12	3	0.5	REST ROOM RECEPTICALS			0.5	20	1	1	20			1.0	EXTERIOR LIGHTING	0.5	3	12	12	6
7	12	12	3	0.5	SIGN CIRCUIT	1.6			20	1	2	30	2.5		-	WATER HEATER	0.8	3	10	10	8
9		100			SPARE									2.5							10
11					SPARE				-		2	60			6.6	AIR HANDLER	1.0	3	8	4	12
13					SPARE						**	*	6.6			*					14
15	6	10	4	1.0	HVAC COMPRESSOR		4.8		50HRAC	3						SPARE					16
17								4.8	*	*						SPARE					18
19						4.8				Mr.						SPARE					20
					PHASE SUB TOTALS:	7.2	6.3	5.3					9.9	3.7	7.6	PHASE SUB TOTALS:					
					TOTAL PHASE A:	17.0		TOT	TAL PHAS	E B:	10.0				12.9	TOTAL PHASE C:					
							TOTAL	CONNEC	TED KVA	4:	39	9	KVA								
					OTAL PHASE A LINE CURRENT =	141.56		тот	AL PHAS	E B LI	E CURR	ENT =	83 27			TOTAL PHASE C LINE CURRENT =	107.42				

						147					P2-E				_						
				BUSS:	100	VOLT	AGE / P	HASE:	208	120	MOUN	ITING:	S	URFAC	E	SERVICE I	ENTRY: BO	MOTT			
				MAIN:	100																
		F	EEDER SIZ	E, SEE RIS	SER		SHORT	CIRCUIT	CAPACIT	Y: SER	/ICE ENT	RANCE	RATED								
	WIRE	GND		COND		LOA	D KVA /	POLE	BREA	KER	BREA	AKER	LOAD	KVA /	POLE		COND		GND	WIRE	**********
RCUIT#	SIZE	SIZE	# WIRES	SIZE "	CIRCUIT DESCRIPTION	# A	#B	#C	200	POLE	POLE	TRIP	#A	#B	#C	CIRCUIT DESCRIPTION	SIZE "	#WIRES	SIZE	SIZE	CIRCUIT#
1	12	12	3	0.5	RECEPTICALS	0.8	-	_	20	1	1	20	0.8			RECEPTICALS	0.5	3 1	12	12	2
3	12	12	3	0.5	LIGHTING	0.0	1.5		20	1	1	20	0.0	1.2		LIGHTING	0.5	3	12	12	4
5	12	12	3	0.5	REST ROOM RECEPTICALS			0.5	20	- 1	1	20			1.0	EXTERIOR LIGHTING	0.5	3	12	12	6
7	12	12	3	0.5	SIGN CIRCUIT	1.6	1		20	1	2	30	2.5			WATER HEATER	0.8	3	10	10	8
9	- 120				SPARE	1	_							2.5		-	-				10
11					SPARE	1	1				2	60			6.6	AIR HANDLER	1.0	3	8	4	12
13					SPARE							*	6.6			*				S .	14
15	6	10	4	1.0	HVAC COMPRESSOR		4.8		50HRAC	3						SPARE					16
17					-			4.8		*						SPARE					18
19					*	4.8				W						SPARE					20
					PHASE SUB TOTALS:	7.2	6.3	5.3					9.9	3.7	7.6	PHASE SUB TOTALS:					
					TOTAL PHASE A:	17.0		TOT	AL PHAS	E B:	10.0				12.9	TOTAL PHASE C:					
							TOTAL	CONNEC	TED KVA	A:	39	9	KVA								
				7	OTAL PHASE A LINE CURRENT =	141.56		TOT	AL PHAS	SE B LI	NE CURR	ENT =	83.27			TOTAL PHASE C LINE CURRENT =	107.42	J			

									P	anel	P2-F										
				BUSS:	100	VOLT	AGE / P	HASE:	208	120	MOUN	ITING:	SI	URFAC	E	SERVICE E	NTRY: BO	TTOM			
				MAIN:	100																
		F	EEDER SIZ	E, SEE RIS	SER		SHORT	CIRCUIT	CAPACIT	Y: SER	ICE ENT	RANCE	RATED								
2772011-271-274	WIRE	GND		COND	TORONO MONORI NACIONAMI SECRECI MINOROLIO	IOAI) KVA /	POLE	BREA	KER	BREA	KER	LOAD	KVA /	POLE		COND		GND	WIRE	
CIRCUIT#	SIZE	SIZE	# WIRES	SIZE "	CIRCUIT DESCRIPTION	#A	#B	#C	100,000,000	POLE	POLE	TRIP	#A	#B	#C	CIRCUIT DESCRIPTION	SIZE "	#WIRES	SIZE	SIZE	CIRCUIT#
1	12	12	3	0.5	RECEPTICALS	0.8	-		20	1	1	20	0.8		_	RECEPTICALS	0.5	3	12	12	2
3	12	12	3	0.5	LIGHTING	-	1.5		20	1	1	20		1.2		LIGHTING	0.5	3	12	12	4
5	12	12	3	0.5	REST ROOM RECEPTICALS			0.5	20	1	1	20			1.0	EXTERIOR LIGHTING	0.5	3	12	12	6
7	12	12	3	0.5	SIGN CIRCUIT	1.6			20	1	2	30	2.5			WATER HEATER	0.8	3	10	10	8
9					SPARE									2.5		*			10000		10
11					SPARE						2	60	T		6.6	AIR HANDLER	1.0	3	8	4	12
13					SPARE								6.6								14
15	6	10	4	1.0	HVAC COMPRESSOR		4.8		50HRAC	3						SPARE	7				16
17					*			4.8	*	86						SPARE					18
19					*	4.8			*				()			SPARE					20
					PHASE SUB TOTALS:	7.2	6.3	5.3					9.9	3.7	7.6	PHASE SUB TOTALS:					
					TOTAL PHASE A:	17.0		TO	TAL PHAS	EB:	10.0				12.9	TOTAL PHASE C:					
							TOTAL	CONNEC	TED KVA	4	39	1.9	KVA								
							TOTAL	OUTTE	TED KI												
				1	OTAL PHASE A LINE CURRENT =	141.56		TOT	AL PHAS	E B LI	IE CURR	ENT =	83.27		1	OTAL PHASE C LINE CURRENT =	107.42				

					_	VC				anei	P2-0	,	21								100
				BUSS:	100	VOLT	AGE / PI	HASE:	208	120	MOUN	TING:	S	URFACE	E	SERVICE E	NTRY: BC	MOTTO			
				MAIN:	100																1
		F	EEDER SIZ	E, SEE RIS	BER		SHORT	CIRCUIT	CAPACIT	Y: SER	/ICE ENT	RANCE	RATED								
IDOLUT #	WIRE	GND	# WIRES	COND	CIDALIT DECORPOSA	LOAD	D KVA / I	POLE	BREA	KER	BREA	KER	LOAD	KVA /	POLE	OIDQUIT DECODIRTION	COND	# WHEE	GND	WIRE	CIRCUIT#
IRCUIT#	SIZE	SIZE	# WIRES	SIZE "	CIRCUIT DESCRIPTION	# A	#B	#C	TRIP	POLE	POLE	TRIP	#A	#B	#C	CIRCUIT DESCRIPTION	SIZE "	#WIRES	SIZE	SIZE	CIRCUIT#
1	12	12	3	0.5	RECEPTICALS	0.8			20	1	1	20	0.8			RECEPTICALS	0.5	3	12	12	2
3	12	12	3	0.5	LIGHTING		1.5		20	1	1	20		1.2	1	LIGHTING	0.5	.3	12	12	4
5	12	12	3	0.5	REST ROOM RECEPTICALS			0.5	20	- 1	1	20			1.0	EXTERIOR LIGHTING	0.5	3	12	12	6
7	12	12	3	0.5	SIGN CIRCUIT	1.6			20	1	2	30	2.5	500-10W		WATER HEATER	0.8	3	10	10	8
9					SPARE									2.5		-					10
11					SPARE						2	60			6.6	AIR HANDLER	1.0	3	8	4	12
13					SPARE							*	6.6			*				5	14
15	- 6	10	4	1.0	HVAC COMPRESSOR		4.8		50HRAC	3						SPARE					16
17								4.8		*						SPARE					18
19					*.	4.8				M						SPARE					20
					PHASE SUB TOTALS:	7.2	6.3	5.3					9.9	3.7	7.6	PHASE SUB TOTALS:					
					TOTAL PHASE A:	17.0		TO	TAL PHAS	EB:	10.0				12.9	TOTAL PHASE C:					
							TOTAL	CONNEC	CTED KV	Α.	39	9	KVA								
				Т	OTAL PHASE A LINE CURRENT =	141.56		TOT	TAL PHAS	E B LI	NE CURR	ENT =	83.27		T	OTAL PHASE C LINE CURRENT =	107.42				

	ELECTRICAL SYMBOL TABLE	
SYMBOL	DESCRIPTION	MISCELLANEOU
M	NEMA 3-R SERVICE DISCONNECT. SIZE AND CIRCUIT SHOWN. REFER TO PANEL SCHEDULES FOR WIRE AND CONDUIT SIZES. HVAC UNITS TO BE CONNECTED TO AN HACR RATED CIRCUIT BREAKER.	
	NEMA 1 SERVICE DISCONNECT. SIZE AND CIRCUIT SHOWN. REFER TO PANEL SCHEDULES FOR WIRE AND CONDUIT SIZES. HVAC UNITS TO BE CONNECTED TO AN HACR RATED CIRCUIT BREAKER.	
Ф	20 AMP, 120V, DUPLEX OUTLET, FLUSH MOUNTED @ 18" (A.F.F).	
•	20 AMP, 120V, DUPLEX GFI OUTLET, FLUSH MOUNTED @ 18" ABOVE FINISHED FLOOR (A.F.F.) OR 6" ABOVE COUNTER TOP (A.C.T).	
₽ MR	20 AMP, 120V, GFI DUPLEX OUTLET FLUSH MOUNTED WITH A MOISTURE RESISTANT MARKED (MR) COVER. MOUNTED @ 18" (A.F.F.).	

GWINNETT COUNTY

Department of Planning and Development

These project documents have been reviewed by applicable County Departments and have been found to be in substantial compliance with the applicable codes and

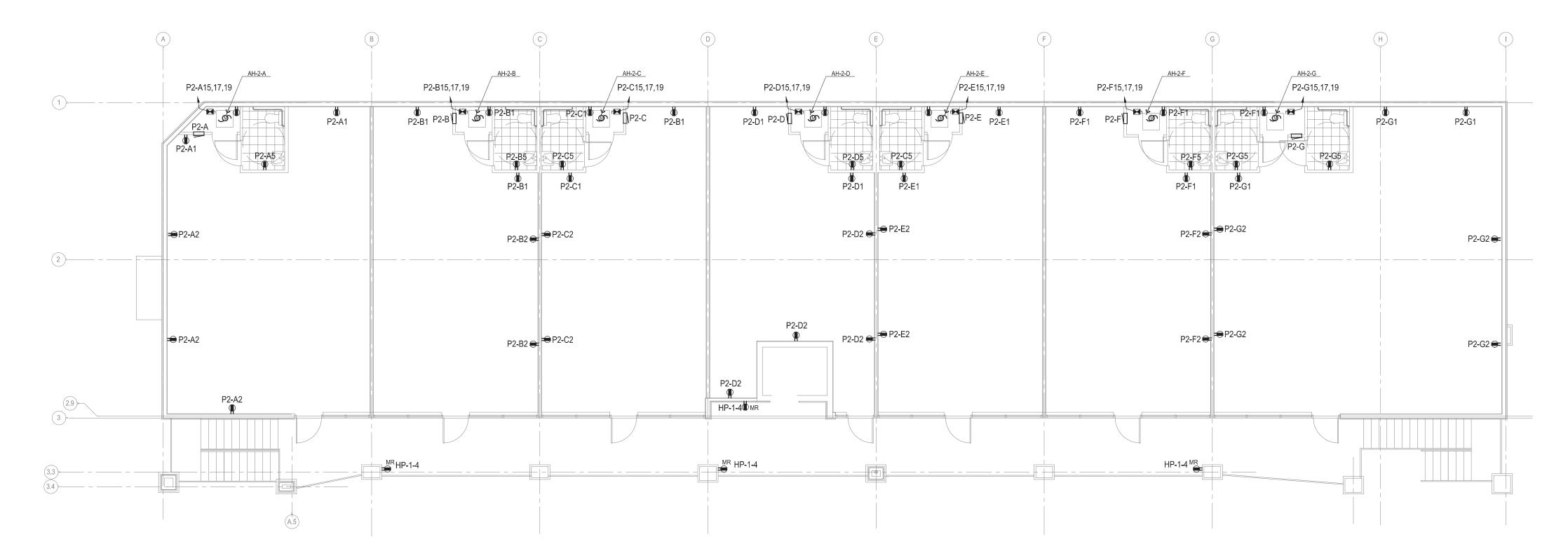
Sep 02, 2020

regulations.

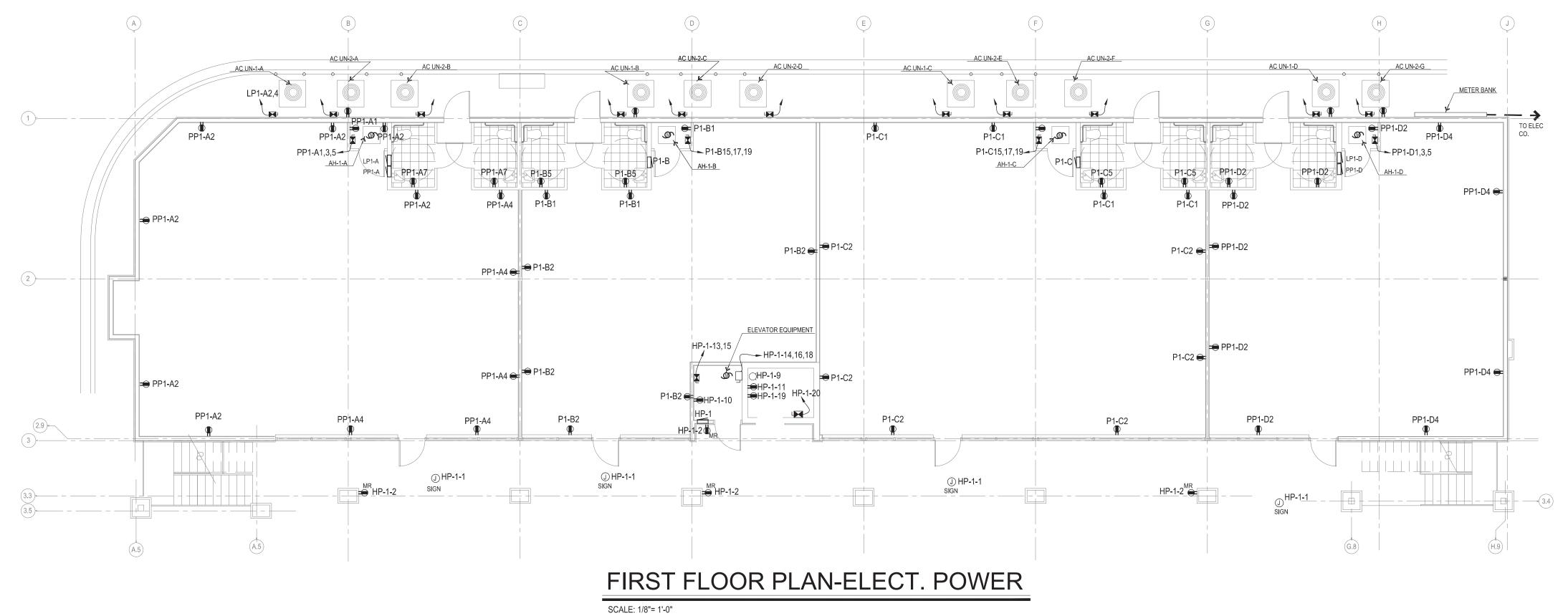
AUTHORIZED

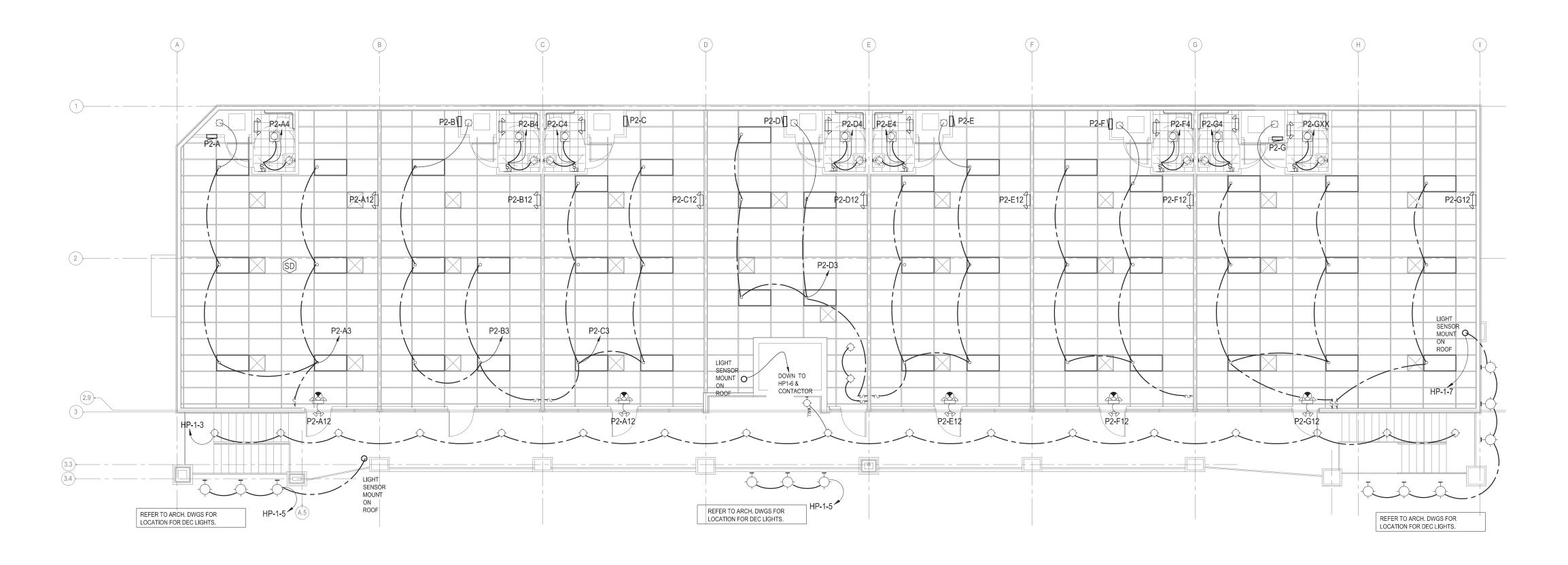
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BLD2020-04937

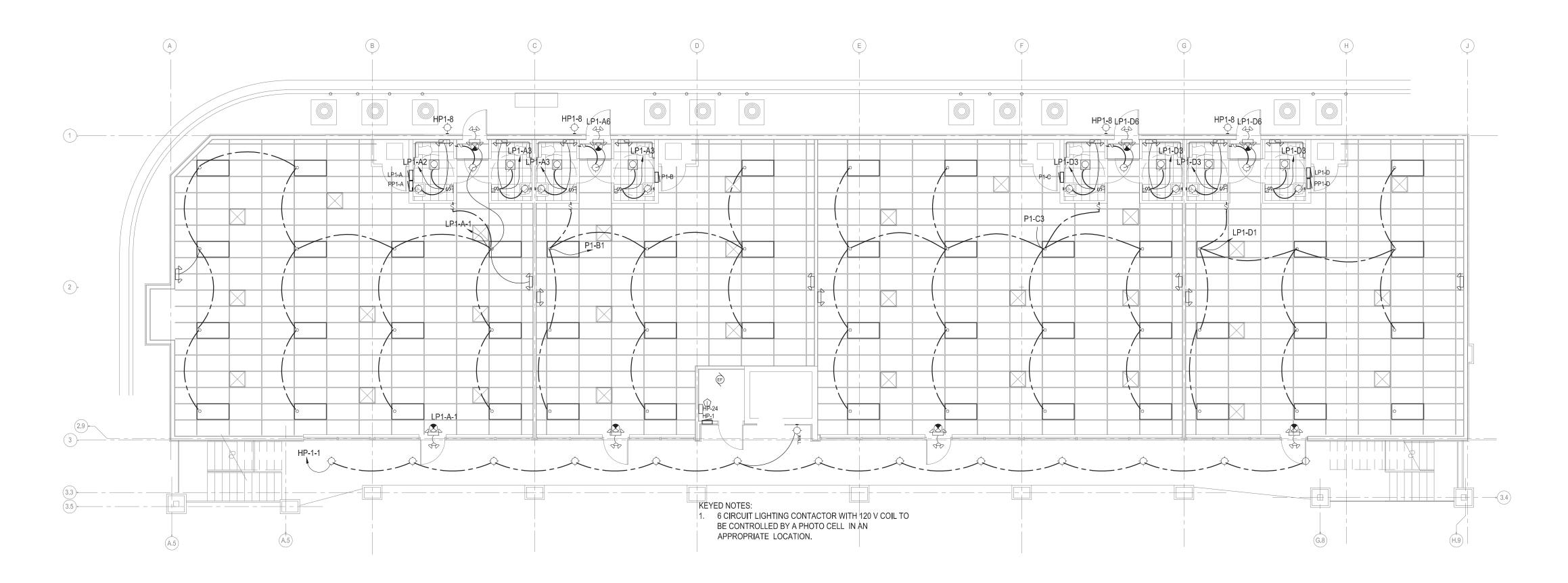


SECOND FLOOR PLAN-ELECT. POWER





SECOND FLOOR PLAN-ELECT. LIGHTING SCALE: 1/8"= 1'-0"



FIRST FLOOR PLAN-ELECT. LIGHTING

SCALE: 1/8"= 1'-0"



GWINNETT COUNTY

Department of Planning and Development

These project documents have been reviewed by applicable County Departments and have been found to be in substantial compliance with the applicable codes and

Sep 02, 2020

AUTHORIZED