## PROJECT TEAM

## OWNER

UNION COUNTY COMMISSIONER'S OFFICE COURTHOUSE STREET BLAIRSVILLE, GEORGIA 30512

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PHONE: 678.938.5467

CONTACT: JENNIFER DUCHAC, P.E. EMAIL: JEN@PROFICIENTENGINEERING.COM PHONE: 404.850.4622

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PLUMBING ENGINEER PROFICIENT ENGINEERING, INC. 6991 PEACHTREE INDUSTRIAL BLVD BLDG 700 PEACHTREE CORNERS, GA 30092

CONTACT: JENNIFER DUCHAC, P.E. EMAIL: JEN@PROFICIENTENGINEERING.COM PHONE: 404.850.4622

## GENERAL NOTES

DO NOT SCALE DRAWINGS. USE WRITTEN DIMENSIONS ONLY. SUBMIT ANY DISCREPANCE
 ALL DIMENSIONS ARE TO FACE OF FINISH MATERIAL OR CENTERLINE OF FIXTURE UNLES
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXECUTION OF THE WORK IN ACCORDATION ISSUED AND SIGNED BY THE OWNER AND/ OR ARCHITECT.

4. THE LOCATION OF THE EXISTING UTILITIES AND STRUCTURES SHOWN IN THE DOCUMEN AND ACTUAL LOCATION OF SUCH, WHETHER SHOWN HEREON OR NOT, PRIOR TO ANY EXCAVAT
5. ALL VERTICAL AND HORIZONTAL DUCTS, PIPES, CONDUIT, AND SIMILAR ASSEMBLIES IN F CHASES SHALL MATCH ADJACENT FINISHED WALLS.

6. FURNISH ACCESS PANELS IN WALLS AND NON-ACCESSIBLE TYPE CEILINGS WHERE SERV ACCESS PANELS SHALL BE EQUAL IN FIRE RATING TO SURFACE IN WHICH THEY OCCUR. REFER

7. PROVIDE CONTROL JOINTS IN GYPSUM WALL BOARD AS SHOWN IN THE DRAWINGS. OR

8. TIGHTLY SEAL ANY OPENINGS IN FIRE RATED WALLS BY DUCTS, PIPES, CONDUIT, STRUC WITH FIRE SAFING.

. GYPSUM WALLBOARD IN ROOMS SUBJECT TO MOISTURE ACCUMULATION (TOILETS, SHO

10. ALL GYPSUM WALL BOARD MATERIAL IN FIRE RATED ASSEMBLIES SHALL BE FIRE RESIST WITH JOINTS ON OPPOSITE WALL FACES STAGGERED. FASTENERS SHALL BE OF APPROVED TY PARTITION WALLS SHALL BE TAPED AND FINISHED WITH JOINT COMPOUND, INCLUDING THOSE A SHALL BE FRAMED WITH RUNNER CHANNELS AND TIGHTLY SEALED. SUCH PENETRATIONS SHAL

11. IMMEDIATELY NOTIFY ARCHITECT IN WRITING IF ANY OMISSION, DISCREPANCY, AMBIGUI INTENT THEREOF SHOULD ARISE. CLARIFICATION WILL BE MADE BY REVISION TO THE CONTRAC

- 12. ALL ATTACHMENTS, SCREWS AND BOLTS BETWEEN STRUCTURAL STEEL AND TREATED
- 13. PAINT ALL EXPOSED DUCTWORK, PIPING, CONDUIT, ETC. PER MFG. RECOMMENDATION.

SHOP DRAWINGS AND SAMPLES SHALL BE SUBMITTED FOR APPROVAL TO THE INTERIOF OVERALL SCOPE AS WELL AS COMPLETE DETAILS OF WORK TO BE PERFORMED. ALL FABRICATI
 CONTRACTOR SHALL OBTAIN ALL PERMITS AND INSPECTIONS REQUIRED BY LOCAL AND DE ADVISOR OF ADVISO

90-A SHALL BE FOLLOWED.
16. VISIT THE JOB SITE AND CHECK ALL EXISTING CONDITIONS PRIOR TO SUBMITTING A PRIC
17. CONTRACTOR TO VERIFY WITH THE OWNER AND/OR OWNER'S REPRESENTATIVES ALL PL
18. INTERIOR CONTRACT DOCUMENTS HOLD PRECEDENCE OVER ENGINEER DOCUMENTS FO
CONTRACTOR IS TO NOTIFY THE ARCHITECT IMMEDIATELY FOR DIRECTION.

## PROJECT NOTES/ APPLICABLE CODES

INTERNATIONAL BUILDING CODE (IBC): 2018 EDITION WITH GA AMENDMENTS. NATIONAL ELECTRIC CODE (NEC): 2020 EDITION

INATIONAL ELECTRIC CODE (NEC): 2020 EDITION

INTERNATIONAL FUEL GAS CODE (IFGC): 2018 EDITION WITH GA AMENDMENT.

INTERNATIONAL MECHANICAL CODE (IMC): 2018 EDITION WITH GA AMENDMENTS INTERNATIONAL PLUMBING CODE (IPC): 2018 EDITION WITH GA AMENDMENTS

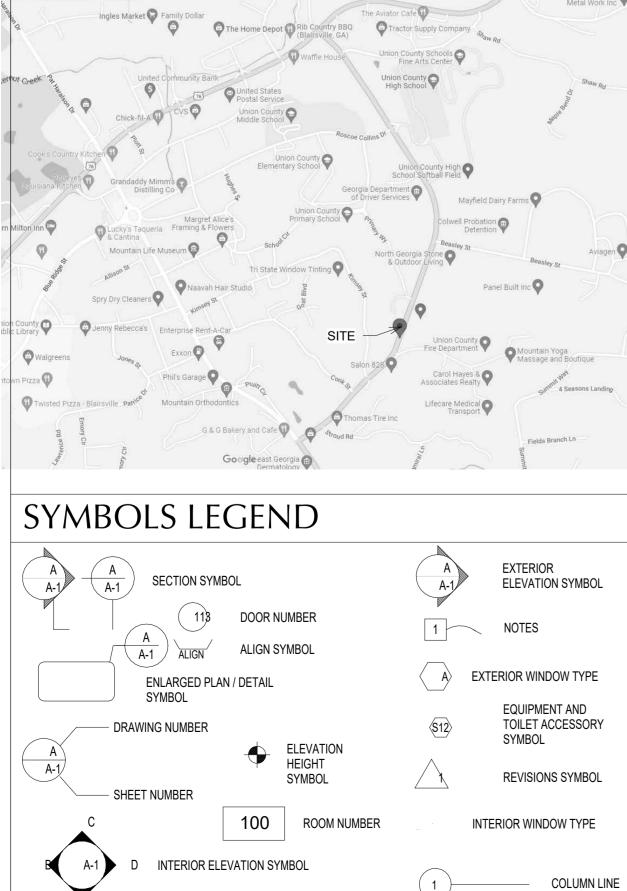
INTERNATIONAL ENERGY CONSERVATION CODE (IECC): 2015 EDITION WITH GA SUPPLEMENTS AND AMENDMENTS

INTERNATIONAL FIRE CODE (IFC): 2018 EDITION

GEORGIA ACCESSIBILITY CODE - GAC 120-3-20 - 2015 EDITION

NATIONAL FIRE PROTECTION ASSOCIATION 101 LIFE SAFETY CODE (LSC): 2018 EDITION U.S. DEPT. OF JUSTICE A.D.A. STANDARDS FOR ACCESSIBLE DESIGN (ADA): 2010 EDITION CHAPTER 120-3-3 RULES AND REGULATIONS FOR THE STATE MIN. FIRE STANDARDS IN GA

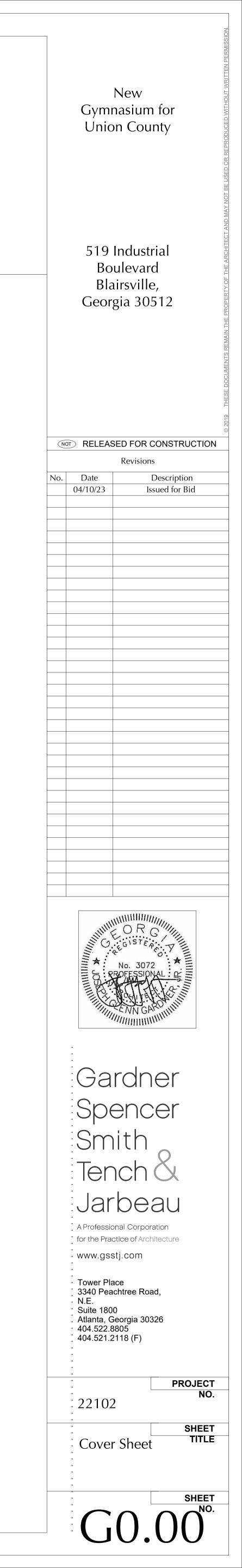
## VICINITY MAP

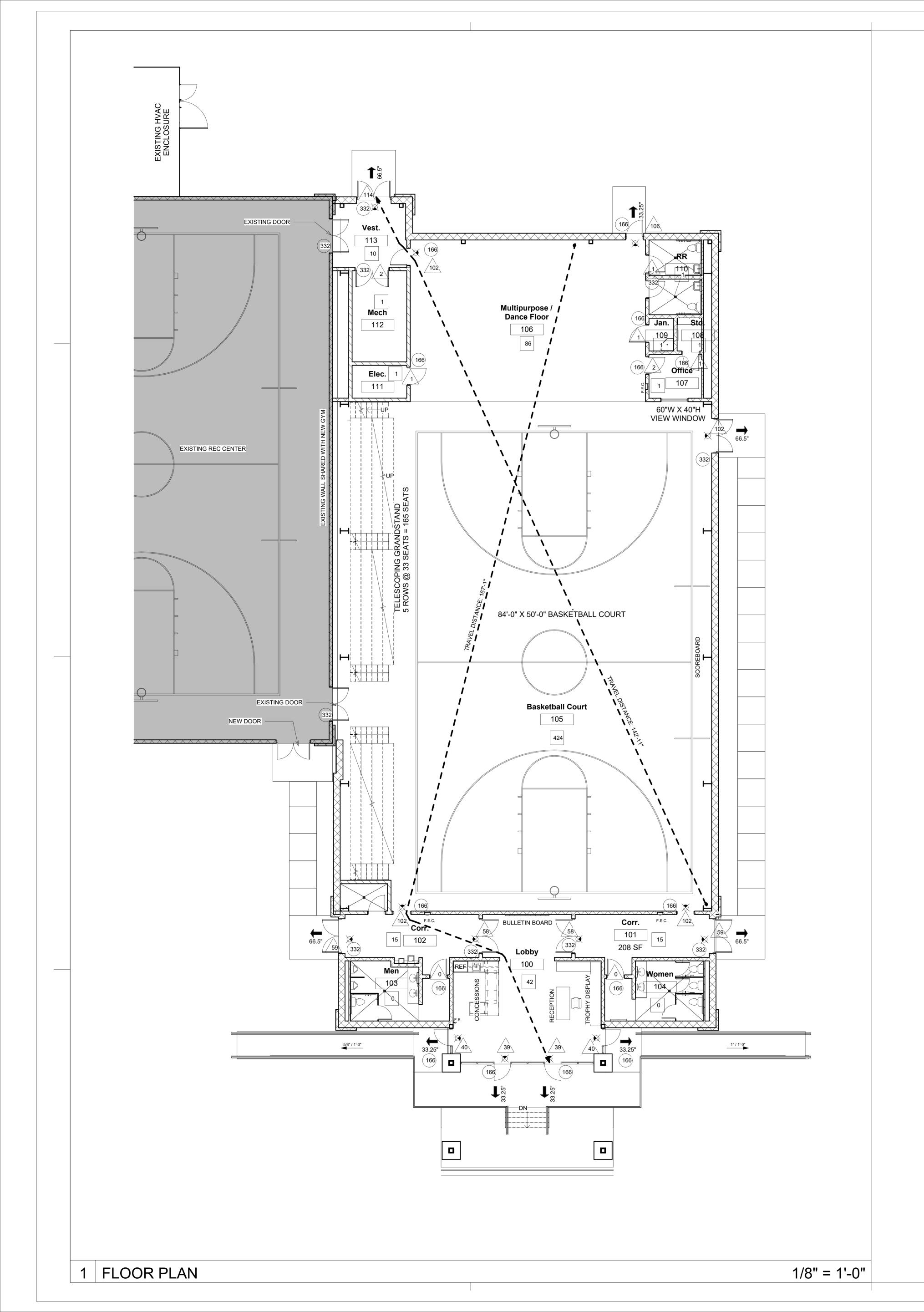


# UNION COUNTY NEW GYM 519 Industrial Boulevard Blairsville, Georgia 30512

			IDEX OF DRAWINGS
SS CLEAI	THE ARCHITECT FOR CLARIFICATION PRIOR TO EXECUTION OF THE WORK IN QUESTION. RLY SHOWN OR NOTED OTHERWISE. TH THE DRAWINGS AND SPECIFICATIONS UNLESS WRITTEN NOTIFICATION TO THE CONTRARY IS	G0.00 AS1.01 LS1.00	SHEET DESCRIPTION COVER SHEET ARCHITECTURAL SITE PLAN LIFE SAFETY PLAN
TON. FINISHEL VICE OR TO ENG IF NOT S CTURAL I	APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE O ROOMS SHALL BE ENCLOSED IN A FINISHED CHASE. THE MATERIALS AND FINISHES OF SUCH ADJUSTMENT TO MECHANICAL, PLUMBING OR ELECTRICAL EQUIPMENT MAY BE REQUIRED. INEERING DRAWINGS FOR LOCATION OF MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT. HOWN, MAXIMUM ALLOWED PER MANUFACTURERS SPECIFICATION. MEMBERS, OR ANY OTHER MATERIALS. OPENINGS IN METAL STUD PARTITIONS SHALL BE SEALED	CIVIL C1 C2 C3 D1	EXISTING SITE CONDITIONS AND DEMOLITION PLAN SITE LAYOUT AND UTILITY PLAN GRADING PLAN AND EROSION CONTROL PLAN CONSTRUCTION DETAILS
TIVE UL ( PE AND I ABOVE T LL BE TIC ITY, OR E CT DOCU WOOD, E NOOD, E NOOD, E O STATE / CE FOR	JANITORS CLOSET, ETC.) SHALL BE MOISTURE RESISTANT TYPE. CLASSIFIED MATERIAL APPLIED IN STRICT COMPLIANCE TO THE APPLICABLE FIRE TEST DESIGN INSTALLED IN ACCORDANCE WITH APPLICABLE FIRE TEST. ALL WALLBOARD JOINTS IN ALL HE FINISHED CEILING. PENETRATIONS FOR PIPES, CONDUIT, FRAMING MEMBERS, DUCTS, ETC. SHTLY PACKED WITH MINERAL FIBER SAFING INSULATION. ERROR IN THE CONTRACT DOCUMENTS BE DISCOVERED OR IF ANY DOUBT AS TO THE MEANING OR MENTS. BLOCKING AND NAILERS SHALL BE GALVANIZED. NER/ ARCHITECT PRIOR TO CONSTRUCTION AND/OR PURCHASE OF MATERIALS DESCRIBING THE LL BE BASED ON ACTUAL FIELD DIMENSIONS. AND LOCAL CODES. ALL RECOMMENDATIONS AND REQUIREMENTS OF THE STATE CODES AND NFPA PERFORMING ANY WORK. G AND ELECTRICAL REQUIREMENTS FOR EQUIPMENT PROVIDED BY THE OWNER. ATIONS, MOUNTING HEIGHTS, ETC. IF THERE IS A CONFLICT BETWEEN DOCUMENTS, THE	ARCHITEC A0.60 A1.10 A1.31 A1.60 A1.61 A2.00 A2.01 A3.00 A3.01 A3.02 A3.03 A3.04 A4.20 A4.21 A7.00	PARTITION TYPES FLOOR PLAN REFLECTED CEILING & DIMENSION PLAN ENLARGED PLANS & ELEVATIONS ENLARGED PLANS & ELEVATIONS EXTERIOR ELEVATIONS EXTERIOR ELEVATIONS WALL SECTIONS WALL SECTIONS FRONT PORCH SECTION WALL SECTIONS DETAILS DOOR SCHEDULE & ELEVATIONS DOOR HEAD, JAMB, & SILL DETAILS CASEWORK DETAILS
	PROJECT INFORMATION	STRUCTUF	RAL
-	EXISTING BUILDING: OCCUPANCY CLASSIFICATION OCCUPANCY GROUP: ASSEMBLY (A-3), - IBC 2018 ASSEMBLY - NFPA 101 2018 OCCUPANCY LOAD: 599	S0.10 S0.11 S1.10 S1.11 S2.10 S3.10 S3.11	GENERAL NOTES SPECIAL INSPECTIONS FOUNDATION AND ROOF FRAMING PLANS ROOF FRAMING PLANS FOUNDATION SECTIONS SECTIONS AND DETAILS SECTIONS AND DETAILS
		-	
	TYPE OF CONSTRUCTIONTYPE II-B, IBC 2018, TYPE II(000), NFPA 220 2018SPRINKLERED (YES OR NO)YES	MECHANIC	 AI
		M0-01	GENERAL
	BUILDING AREA FIRST FLOOR 10,459 SF	M0-02 M1-01	SCHEDULES FLOOR PLAN
	EXTERIOR CANOPY AREA 718 SF	. WIT-UT	FLOUR PLAN
-	TOTAL AREA (SQ.FT.)         11,177 SF	-	
	BUILDING HEIGHT NUMBER OF STORIES: 1	-	
	BUILDING HEIGHT (FT.): 28'-6"	-	
	SCOPE OF BUILDING PERMIT - [X] APPLICABLE BOX	-	
	PLUMBING FIXTURE DISTRIBUTION PER I.P.C. MINIMUM PLUMBING FIXTURE REQUIREMENTS         FLOOR       LOAD       TOTAL NO.       PLUMBING FIXTURES REQUIRED / PLUMBING FIXTURES PROVIDED	-	
~	OF PEOPLE PER FLOOR FEMALE MALE	-	
	1 599 FEMALE W.C. LAVATORIES W.C. URINALS LAVATORIES 300 MALE 5 2 1 2 2 2	ELECTRIC	AL
-	300 MALE 5 2 1 2 2	E0-01	GENERAL
E <sub>s Holler</sub>	DRINKING FOUNTAIN DISTRIBUTION MINIMUM REQUIREMENTS INTERNATIONAL PLUMBING CODE REQUIRES: 1 FOUNTAIN PER 100 PEOPLE FOR BUSINESS OCCUPANCY TOTAL = 2 REQUIRED / 2 FOUNTAINS PROVIDED SERVICE SINKS: 1 REQUIRED / 1 PROVIDED	E0-02 E0-03 E1-01 E1-02	SCHEDULES COMPLIANCE REPORT FLOOR PLAN - POWER FLOOR PLAN - LIGHTING
Sis Holler Sur,	PROJECT DESCRIPTION CONSTRUCTION OF A NEW GYM CONNECTED TO EXISTING UNION COUNTY RECREATION CENTER.		
		PLUMBING	
		P0-01 P0-02 P1-01 P1-02	GENERAL SCHEDULES & DETAILS OVERALL FLOOR PLAN ENLARGED PLANS

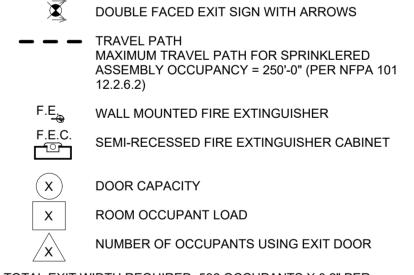
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	(	Occupancy Ch	art		
Number	Name	Occupancy	Area	Occupant Load Factor	No. Occupants
	1				
100	Lobby	ASSEMBLY	636 SF	15	43
101	Corr.	ASSEMBLY	208 SF	15	14
102	Corr.	ASSEMBLY	213 SF	15	15
103	Men	N/A	173 SF		
104	Women	N/A	178 SF		
105	Basketball Court	ASSEMBLY	6310 SF	15	421
106	Multipurpose / Dance Floor	ASSEMBLY	1273 SF	15	85
107	Office	BUSINESS	77 SF	150	1
108	Sto.	STORAGE	27 SF	300	1
109	Jan.	STORAGE	27 SF	300	1
110	RR	STORAGE	63 SF	300	1
111	Elec.	STORAGE	60 SF	300	1
112	Mech	STORAGE	167 SF	300	1
113	Vest.	ASSEMBLY	157 SF	15	11
114	RR		63 SF		
115	Mech Clo.		43 SF		
Total Occu	pants				595

TOTAL EXIT WIDTH REQUIRED: 596 OCCUPANTS X 0.2" PER PERSON = 119.2" TOTAL EXIT WIDTH PROVIDED: (33.25" PER SINGLE DOOR X 5 DOORS) + (66.5" PER DOUBLE DOOR X 4 DOORS) = 432.25"

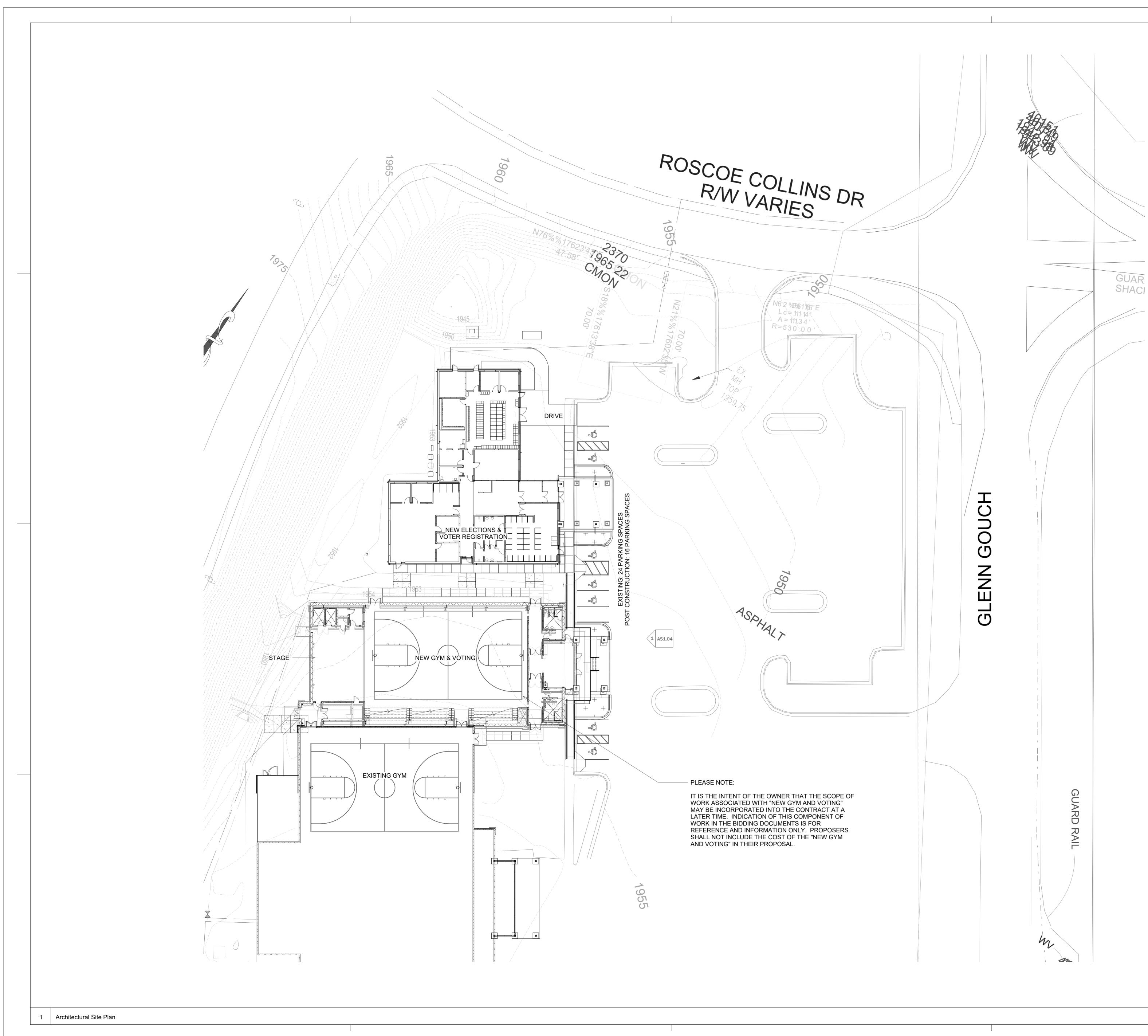


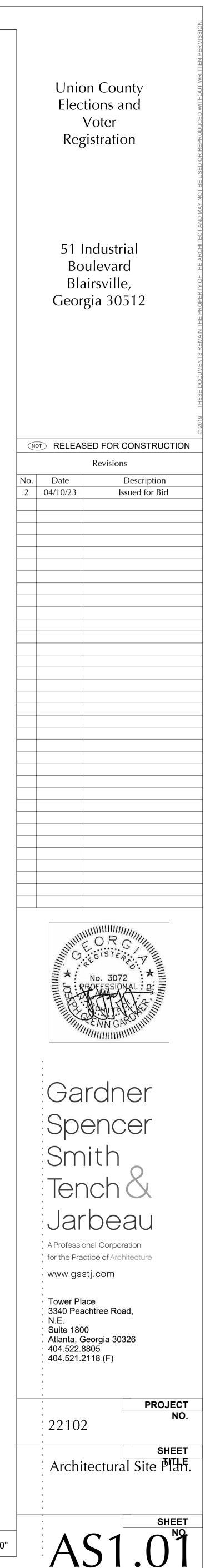
ONE HOUR RATED PARTITION TO STRUCTURE

SINGLE FACED EXIT SIGN

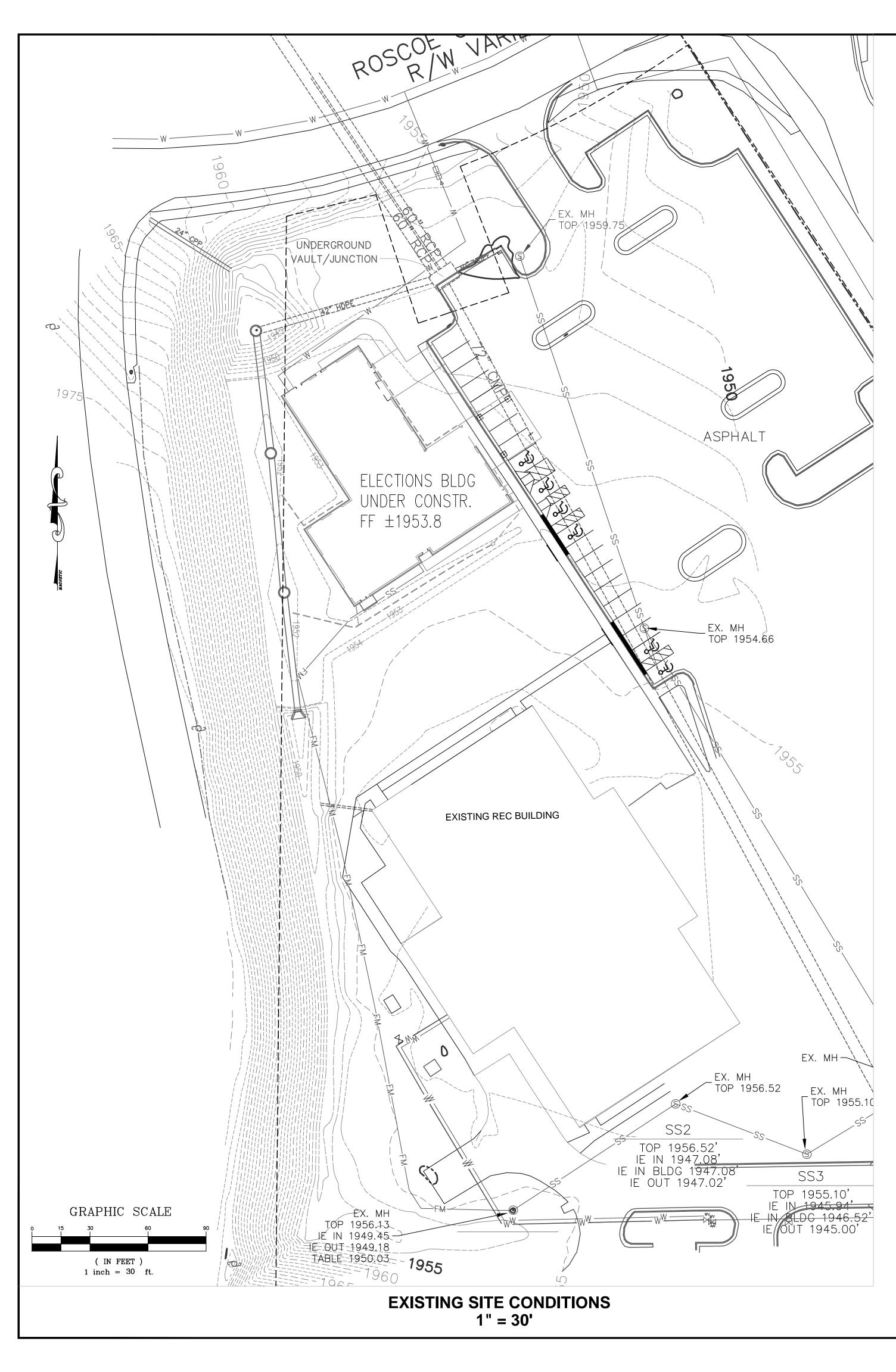
LIFE SAFETY LEGEND

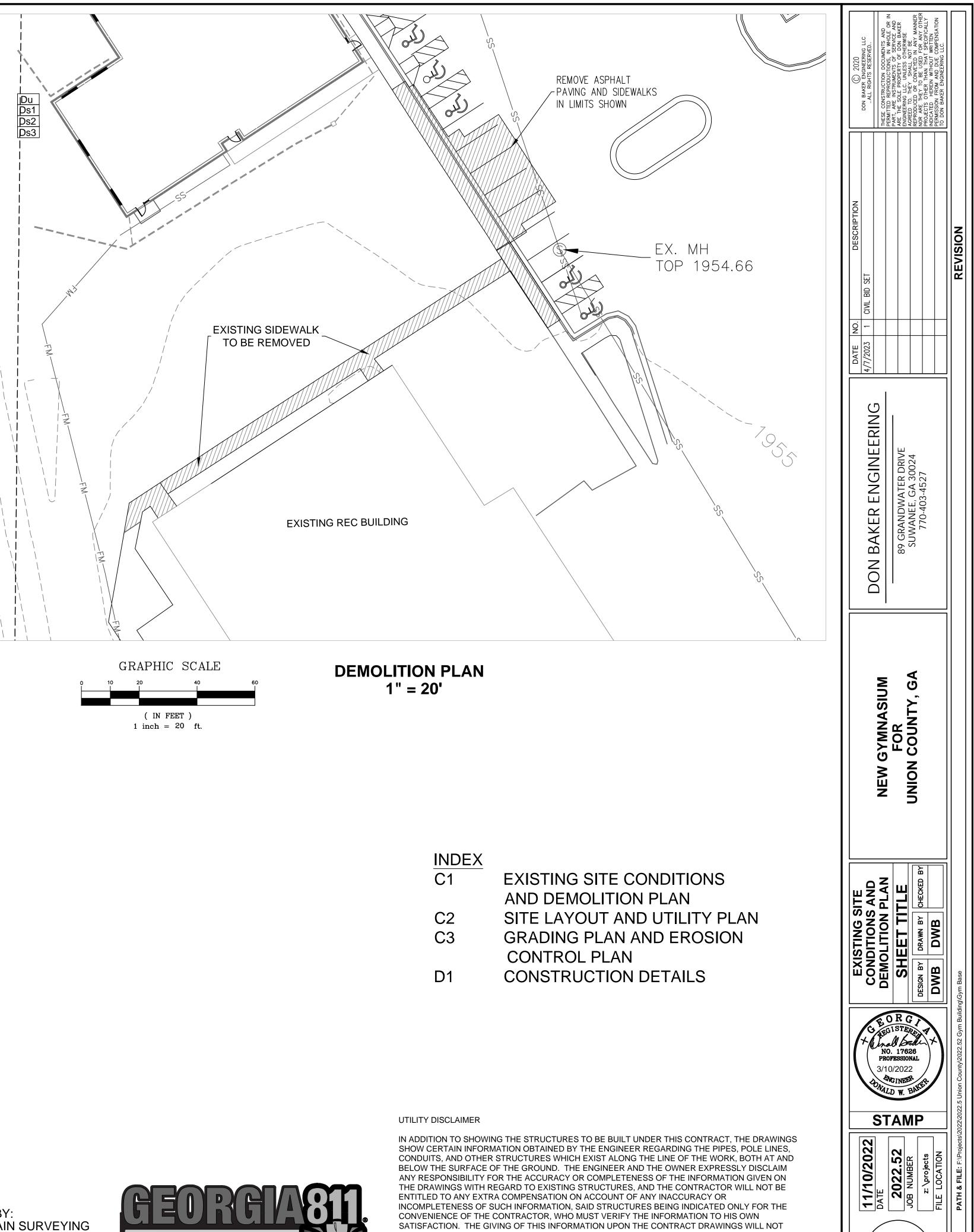
New Gymnasium for Union County 519 Industrial Boulevard Blairsville, Georgia 30512	THESE DOCUMENTS REMAIN THE PROPERTY OF THE ARCHITECT AND MAY NOT BE USED OR REPRODUCED WITHOUT WRITTEN PERMISSION.
NOT RELEASED FOR CONSTRUCTION Revisions	© 2019 THE
No. Date Description	
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Gardner	
Spencer Smith Tench &	
A Professional Corporation for the Practice of Architecture www.gsstj.com	
<ul> <li>Tower Place</li> <li>3340 Peachtree Road,</li> <li>N.E.</li> <li>Suite 1800</li> <li>Atlanta, Georgia 30326</li> <li>404.522.8805</li> </ul>	
404.521.2118 (F)	
NO.	
Life Safety Plan	
•	
LSI.00	





1" = 20'-0"





SURVEY PROVIDED BY: BLUE RIDGE MOUNTAIN SURVEYING 1365 MURPHY HWY BLAIRSVILLE, GA 30512 (706) 897-7900



Know what's below. Call before you dig.

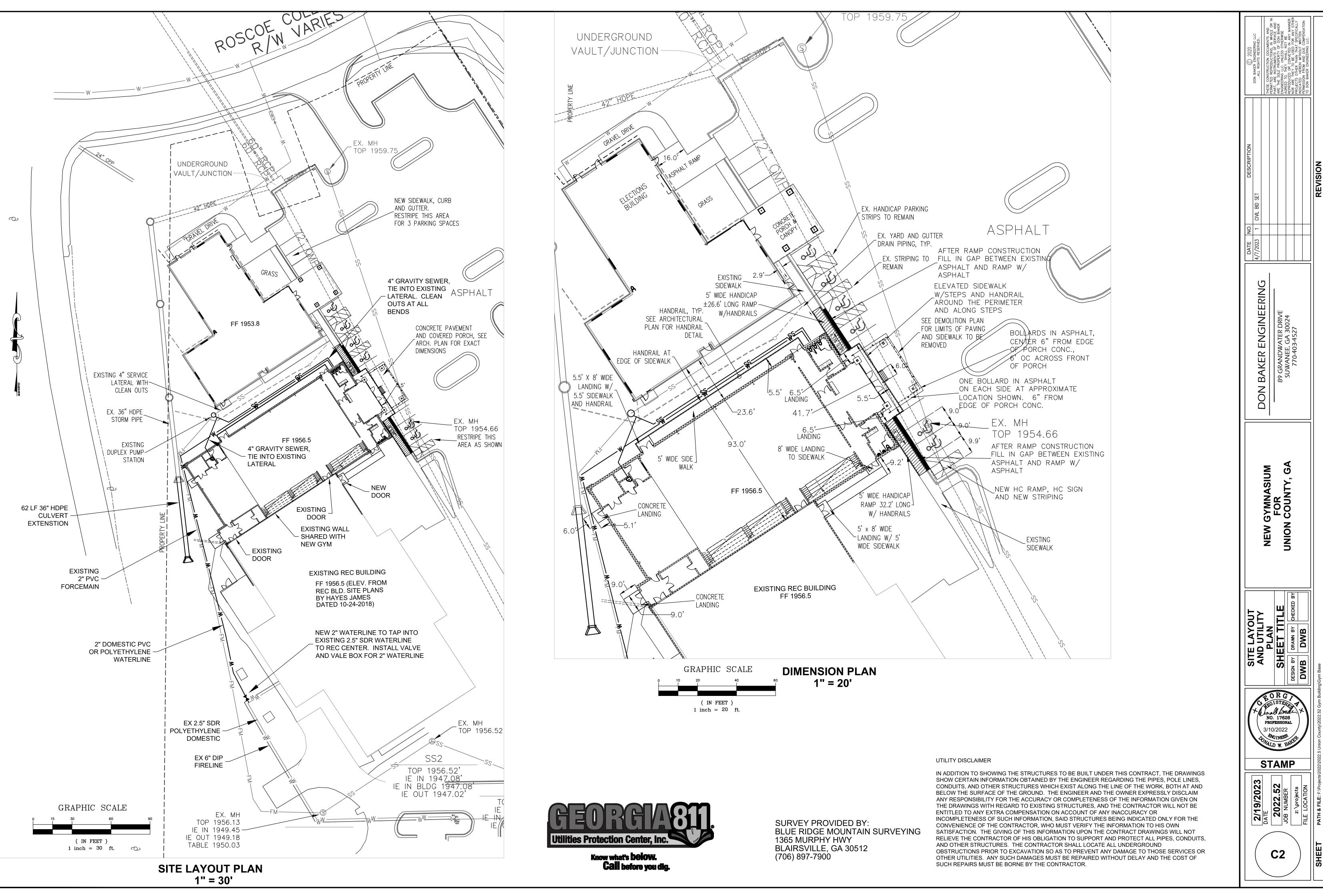
SUCH REPAIRS MUST BE BORNE BY THE CONTRACTOR.

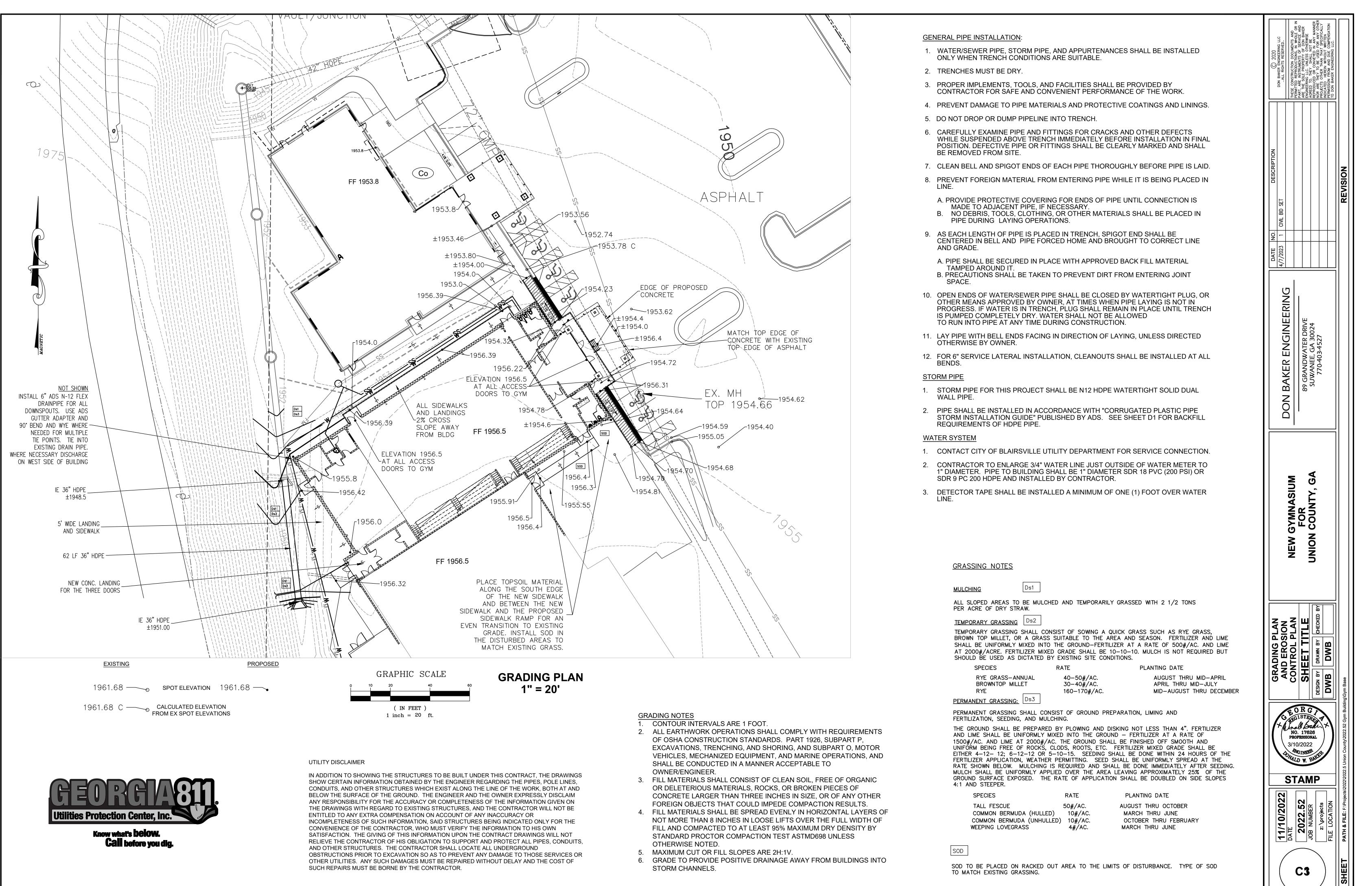
OBSTRUCTIONS PRIOR TO EXCAVATION SO AS TO PREVENT ANY DAMAGE TO THOSE SERVICES OR OTHER UTILITIES. ANY SUCH DAMAGES MUST BE REPAIRED WITHOUT DELAY AND THE COST OF

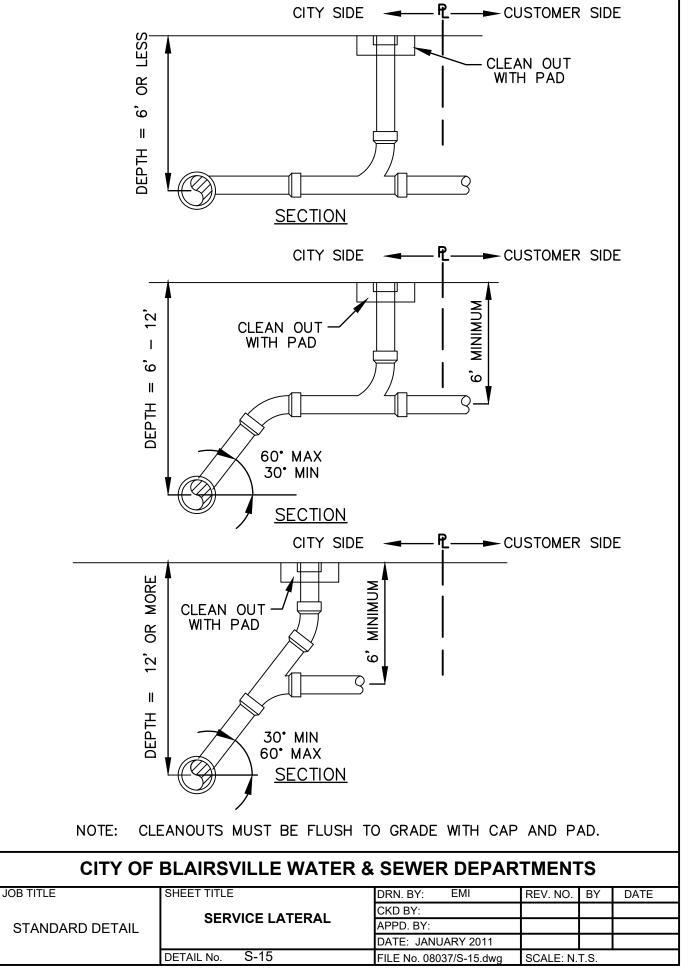
**C1** 

RELIEVE THE CONTRACTOR OF HIS OBLIGATION TO SUPPORT AND PROTECT ALL PIPES, CONDUITS,

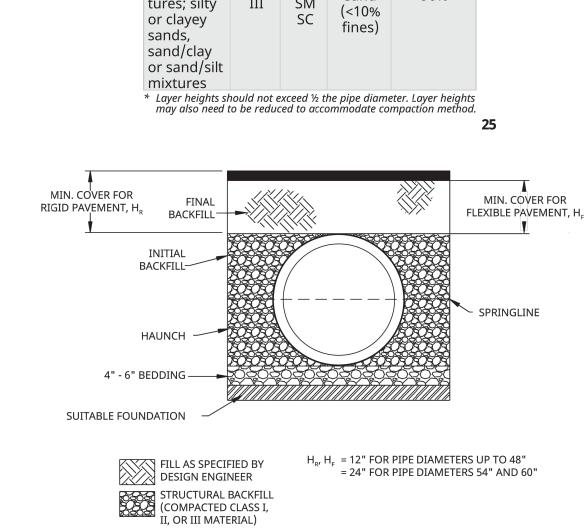
AND OTHER STRUCTURES. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND





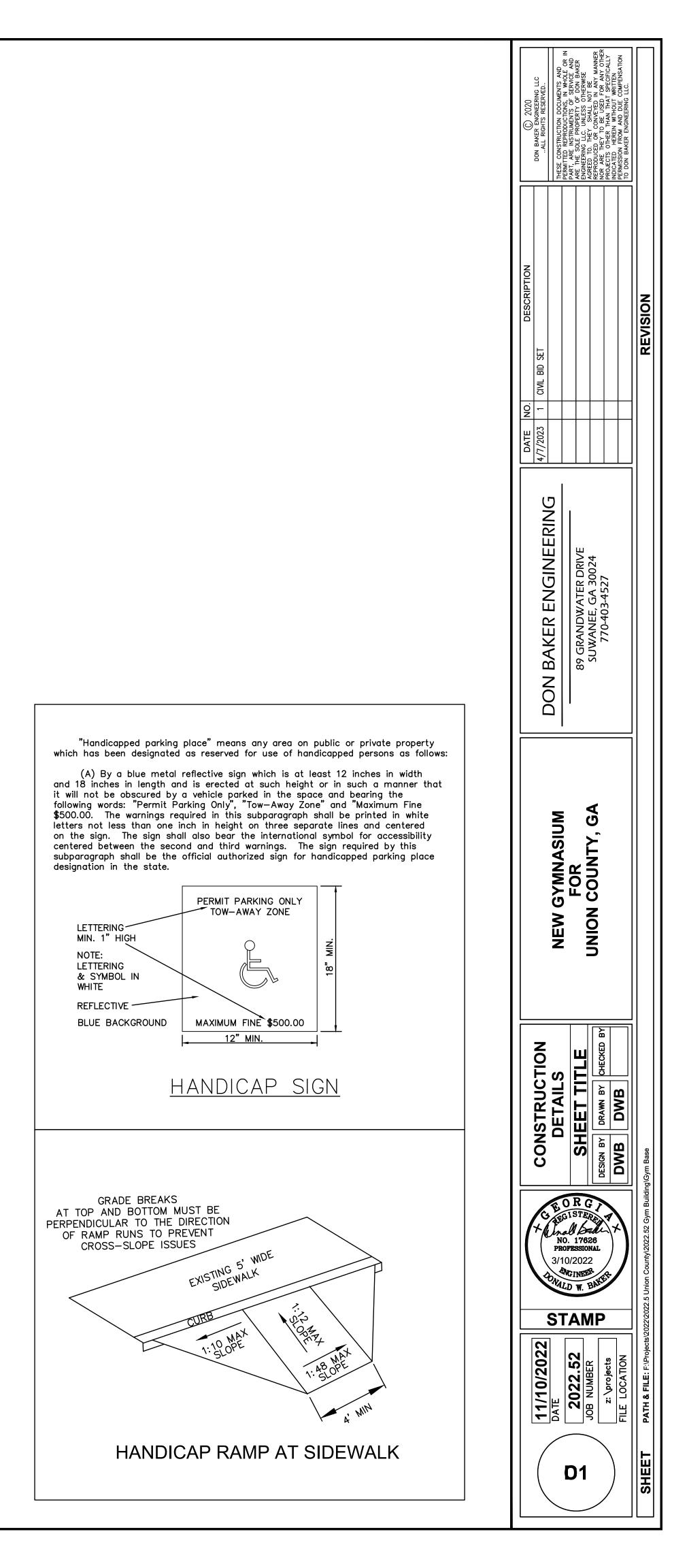


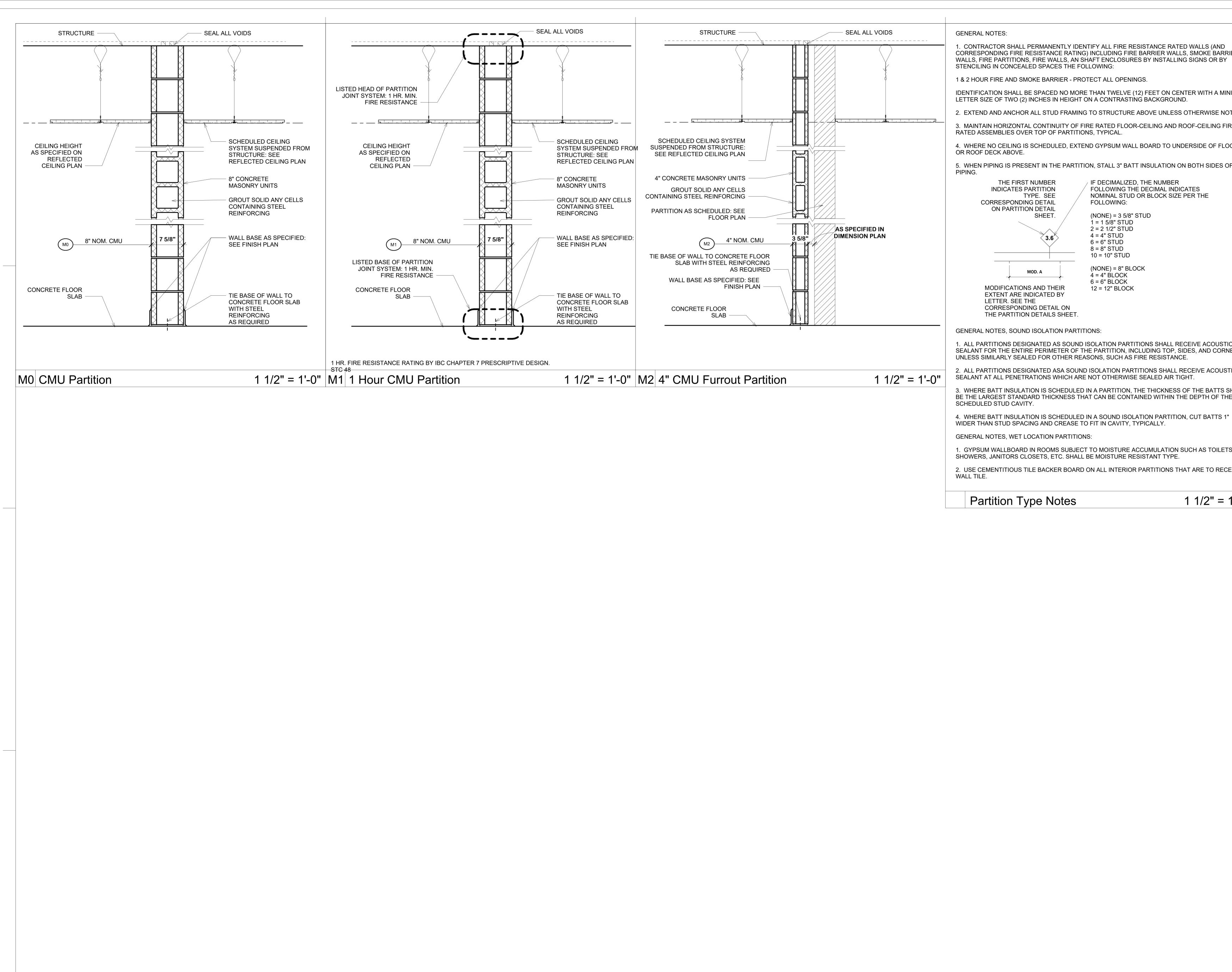
## HDPE PIPE BACKFILL MATERIALS



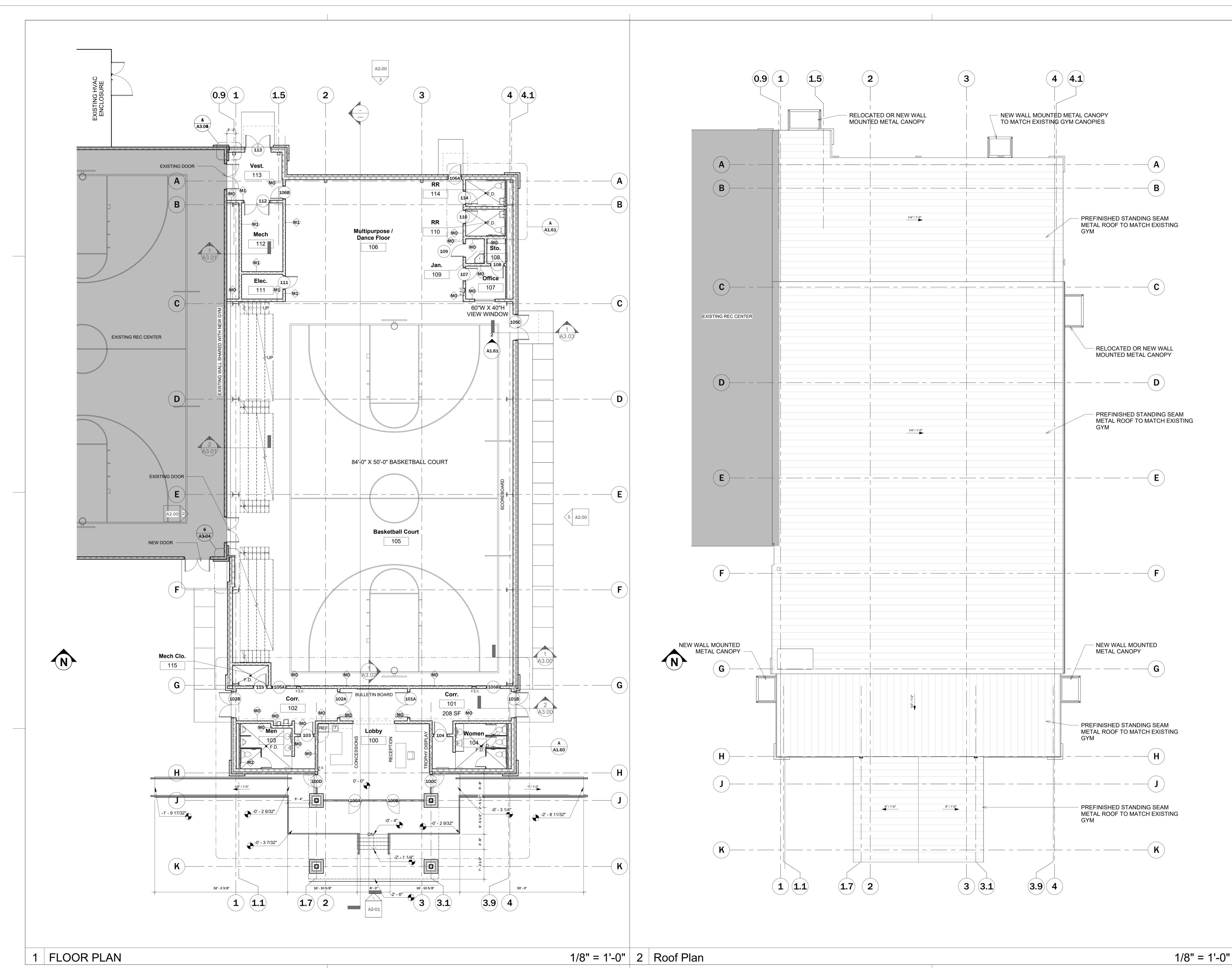
Description	Soil	Classifi	cation	Minimun Standarc Proctor Density %
	ASTM D2321	ASTM D2487	AASHTO M43	
Graded or crushed, crushed stone, gravel	Class I	-	5 56	Dumped
Well-graded sand, gravels and gravel/sand mixtures; poorly graded sand, gravels and gravel/sand mixtures; little or no fines	Class II	GW GP SW SP	57 6	85%
Silty or clayey grav- els, gravel/ sand/silt or gravel and clay mix- tures; silty or clayey sands, sand/clay or sand/silt mixtures	Class III	GM GC SM SC	Gravel and sand (<10% fines)	90%

Table 4: Acceptable Backfill Material and Compaction Requirements

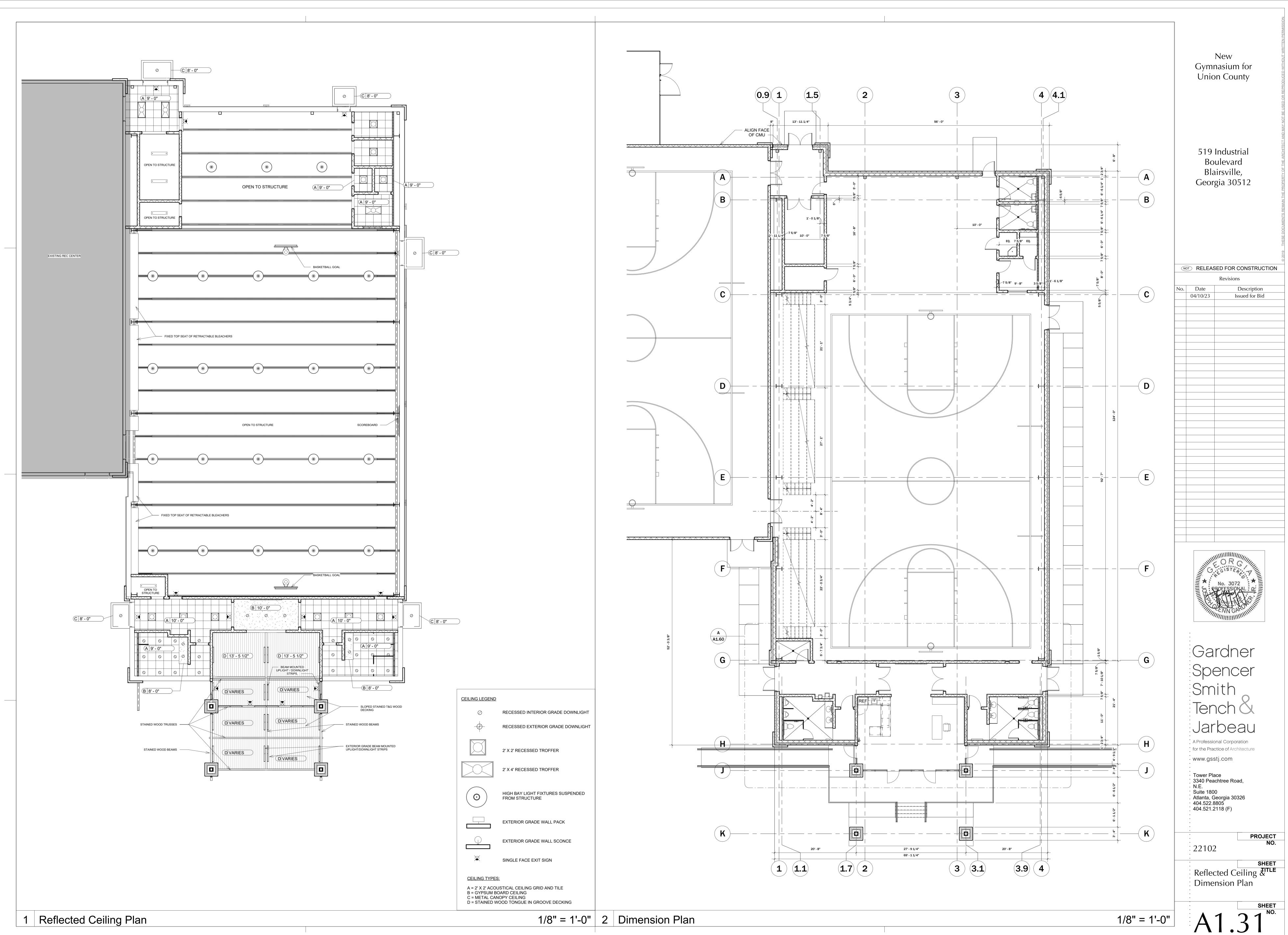


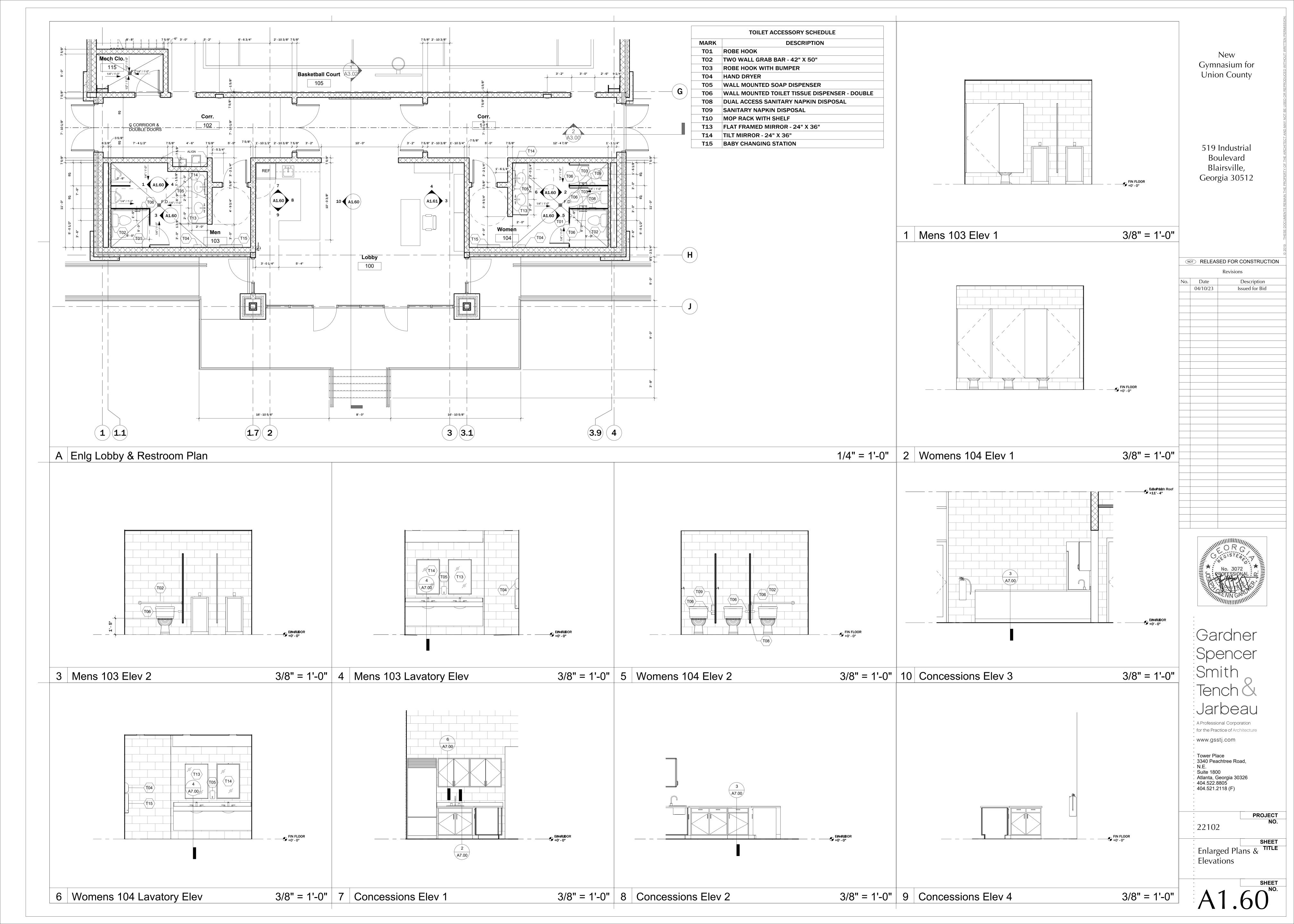


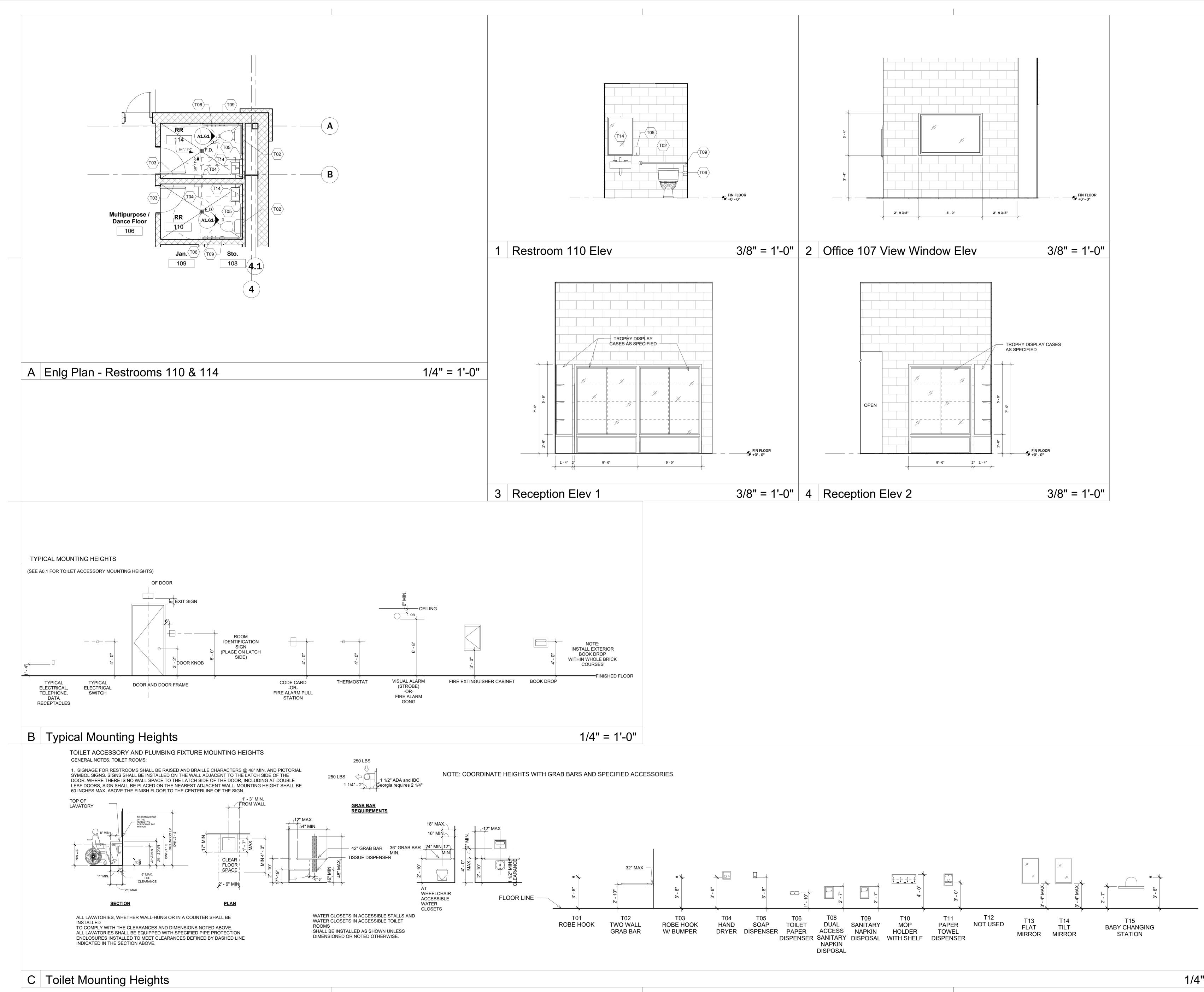
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TICAL SHALL E S, EIVE	Image: Sector
1'-0"	Image: Sector
	No. 3072 No. 3072 No. 3072 COPPOFESSIONAL OC CONTRACTOR
	Gardner Spencer Smith Smith Tench & Jarbeau A Professional Corporation for the Practice of Architecture www.gsstj.com
	Tower Place 3340 Peachtree Road, N.E. Suite 1800 Atlanta, Georgia 30326 404.522.8805 404.521.2118 (F) PROJECT NO. 22102
	Partition Types TITLE BAD.60



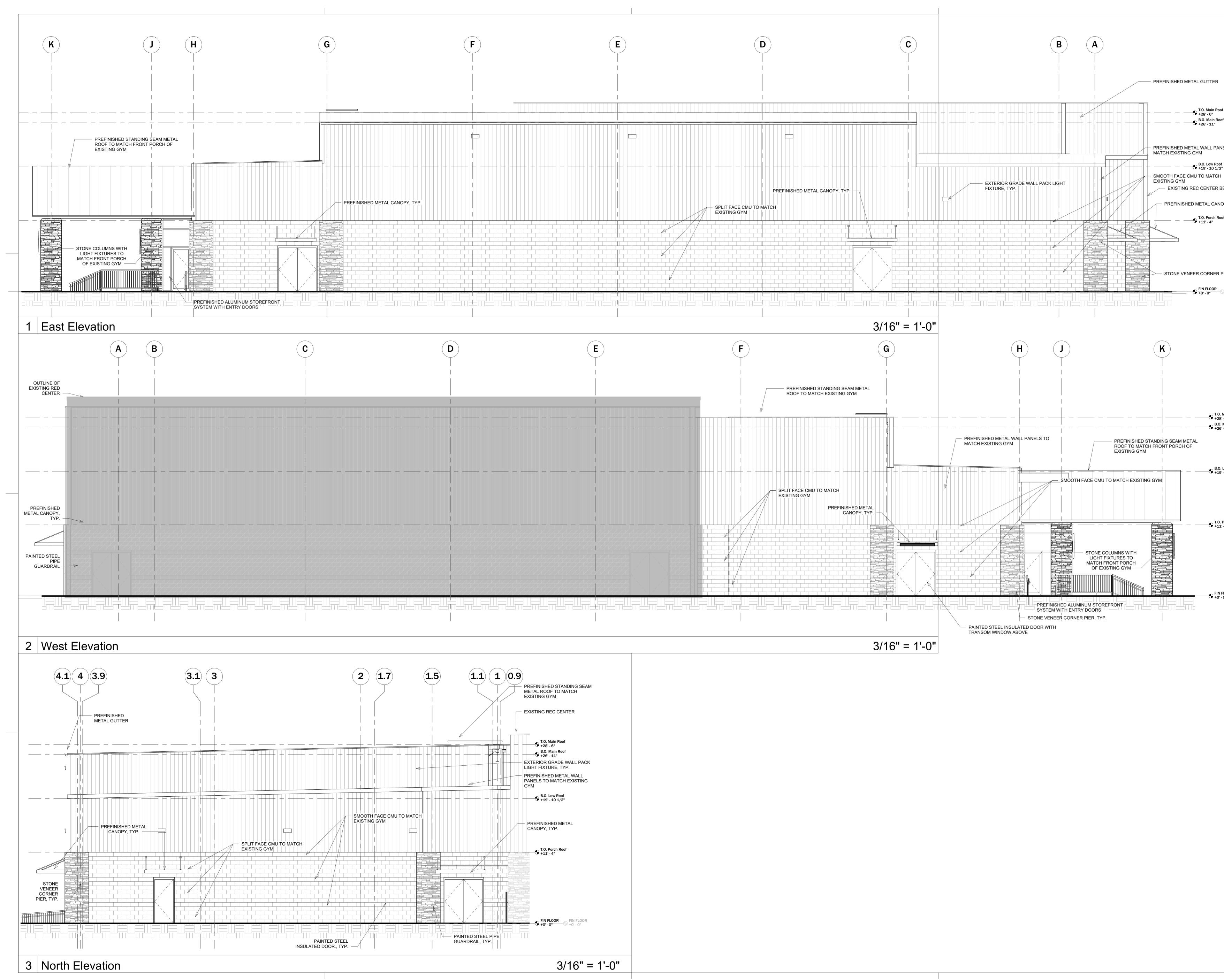
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	22102		PROJECT NO. SHEET	
	Floor	Plan -	Gym TITLE SHEET	
•	A	1.	10 <sup>NO.</sup>	



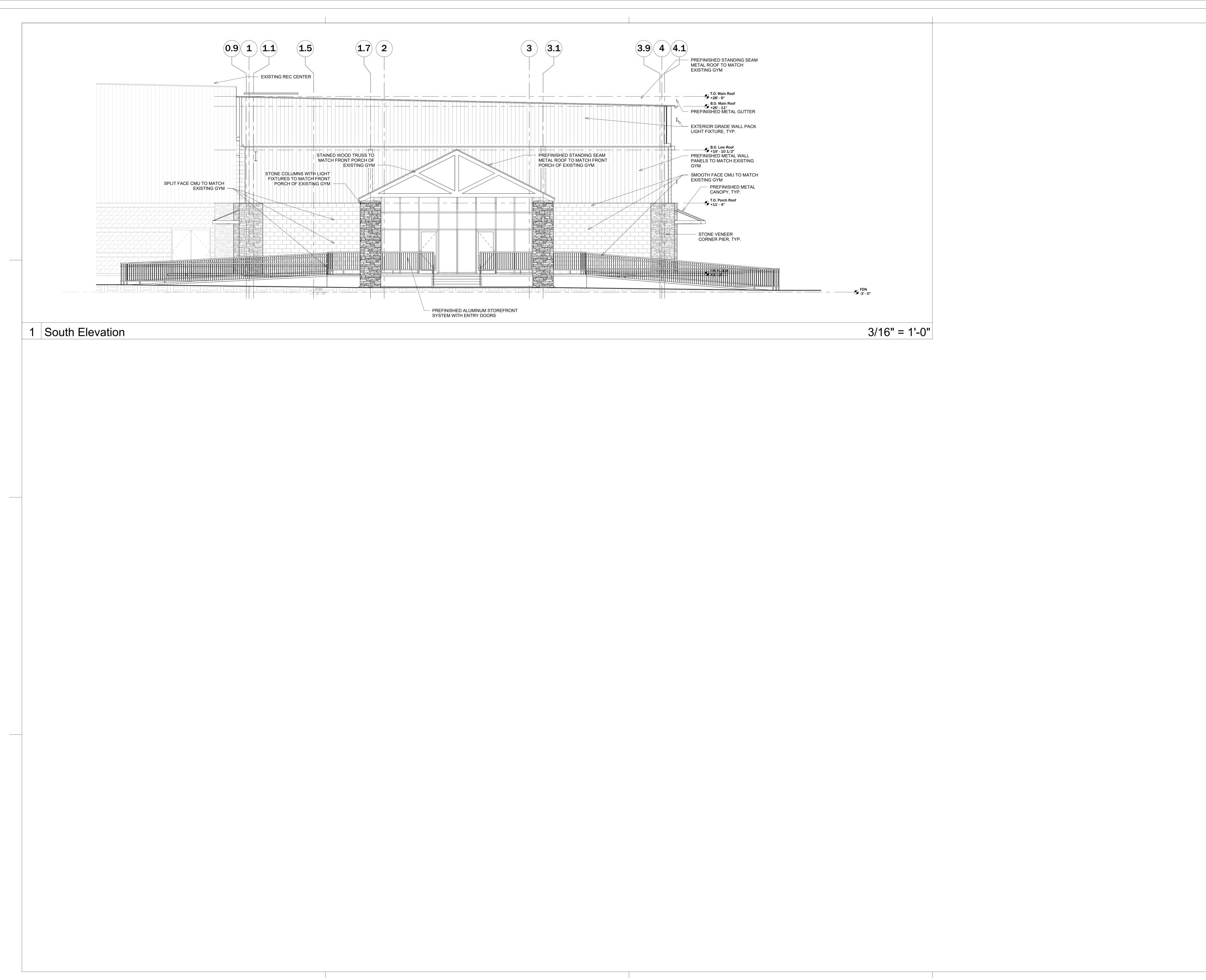




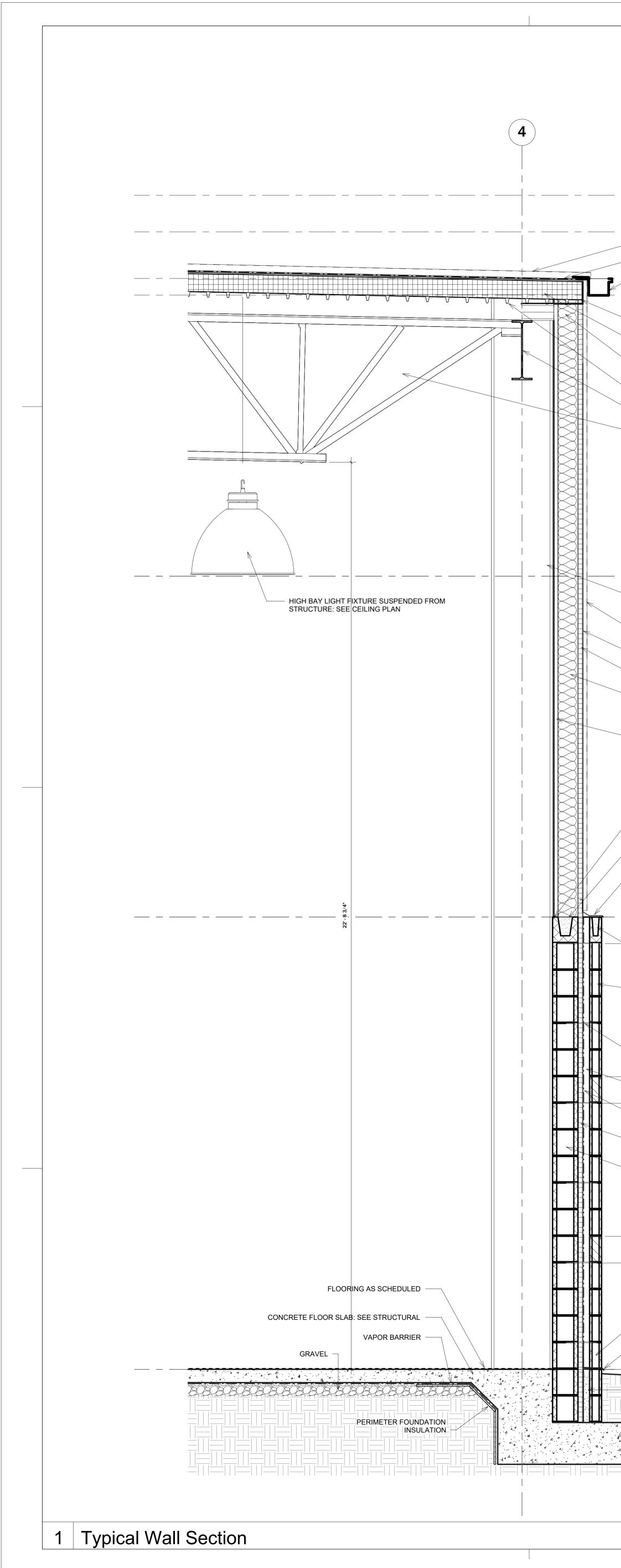
	Unic 519 Bo Bla	New nasium for on County Industrial oulevard airsville, gia 30512	THESE DOCUMENTS REMAIN THE PROPERTY OF THE ARCHITECT AND MAY NOT BE USED OR REPRODUCED WITHOUT WRITTEN PERMISSION.
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		Revisions	
No.	Date 04/10/23	Description Issued for Bid	
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	Spe Sm Ter Jar A Profession for the Pra WWW.gss Tower Pla 3340 Pea N.E. Suite 180 Atlanta, G	ace achtree Road, 0 Seorgia 30326	
	404.522.8 404.521.2	B805 2118 (F) PROJECT NO.	
	Enlarg Eleva	ged Plans & TITLE tions	
	A	1.61 <sup>NO.</sup>	



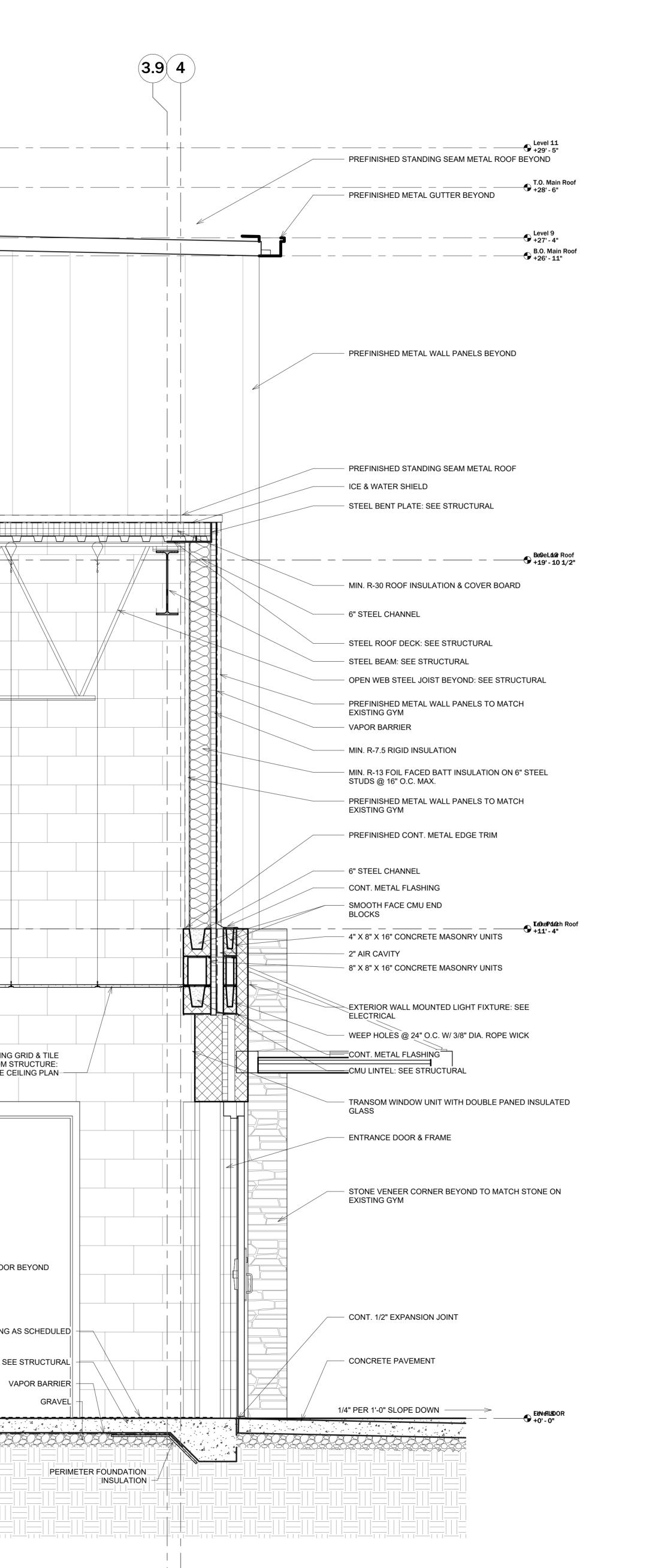
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NELS TO of 2" H BEYOND NOPY, TYP.	519 Industrial Boulevard Blairsville, Georgia 30512
PIER, TYP. FIN FLOOR +0' - 0"	NOT       RELEASED FOR CONSTRUCTION         Revisions         No.       Date
	04/10/23 Issued for Bid
0. Main Roof 8' - 6" 0. Main Roof 6' - 11"	Image: Constraint of the second se
0. Low Roof 9' - 10 1/2"	Image: Constraint of the second se
). Porch Roof 1' - 4"	
N FLOOR ' - 0"	No. 3072 PROFESSIONAL C. EGISTERO PROFESSIONAL C. EGISTERO PROFESSIONAL
	Gardner Spencer Smith Smith Tench & Jarbeau AProfessional Corporation for the Practice of Architecture www.gsstj.com
	Tower Place 3340 Peachtree Road, N.E. Suite 1800 Atlanta, Georgia 30326 404.522.8805 404.521.2118 (F)
	PROJECT NO. 22102 SHEET Exterior Elevations <sup>TITLE</sup>
	SHEET A2.00 <sup>NO.</sup>



	Gymr Unic 519 Bo Bla	New nasium for on County Industrial ulevard firsville, gia 30512	THESE DOCUMENTS REMAIN THE PROPERTY OF THE ARCHITECT AND MAY NOT BE USED OR REPRODUCED WITHOUT WRITTEN PERMISSION.
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		No. 3072	
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	N.E. Suite 180	chtree Road, 0 eeorgia 30326 8805 2118 (F) PROJECT NO.	
	Exteri	or Elevations <sup>TITLE</sup>	

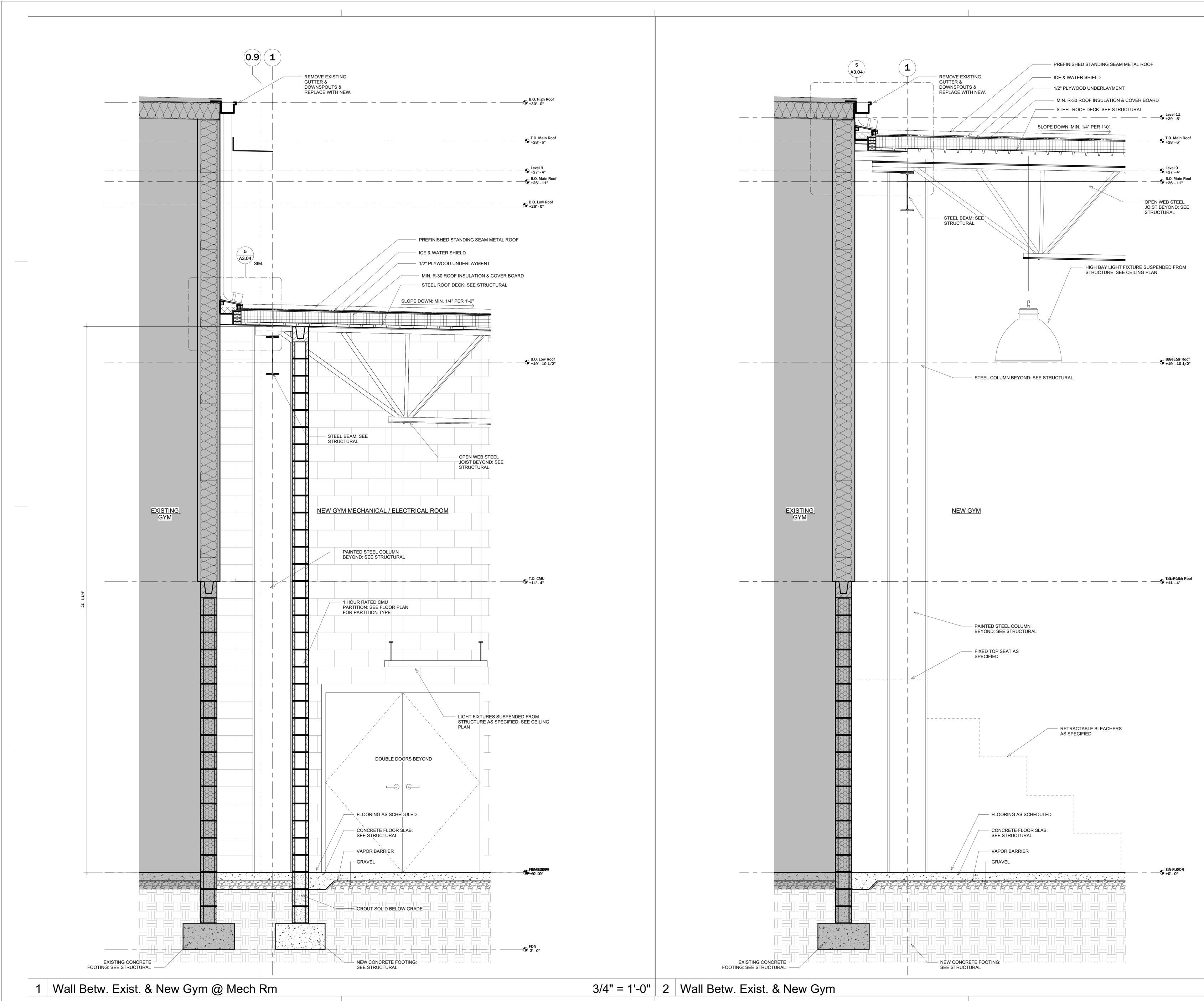


		Level 11 +29' - 5"			
		T.O. Main Roof +28' - 6"			
	PREFINISHED STANDING SEAM METAL ROO     ICE & WATER SHIELD	)F			
	PREFINISHED METAL GUTTER	Level 9 +27' - 4"			
		B.O. Main Roof +26' - 11"			
	STEEL BENT PLATE: SEE STRUCTURAL				
	MIN. R-30 ROOF INSULATION & COVER BOAI	RD			
	6" STEEL CHANNEL				
	STEEL ROOF DECK: SEE STRUCTURAL				
	STEEL BEAM: SEE STRUCTURAL OPEN WEB STEEL JOIST BEYOND: SEE STR	UCTURAL			
		Bevel And Roof			
		BegeLdig Roof +19' - 10 1/2"			
	STEEL COLUMN BEYOND: SEE STRUCTURA	L			
	PREFINISHED METAL WALL PANELS TO MAT EXISTING GYM	ГСН			
	VAPOR BARRIER MIN. R-7.5 RIGID INSULATION				
	MIN. R-13 FOIL FACED BATT INSULATION ON	N 6" STEEL			
	STUDS @ 16" O.C. MAX.				
	PREFINISHED METAL WALL PANELS TO MAT EXISTING GYM	ГСН			
	PREFINISHED CONT. METAL EDGE TRIM				
/ _	6" STEEL CHANNEL				
	CONT. METAL FLASHING				
		• <b>LavePate</b> h Roof +11' - 4"			
	<b>\</b>				
	SMOOTH FACE 4"X8"X16" CMU END BLOCK				
	4" X 8" X 16" CONCRETE MASONRY UNITS				
	T FACE C				
				ACOUSTICAL CEILING G SUSPENDED FROM ST SEE CEI	GRID & TILE RUCTURE: ILING PLAN
	2" AIR CAVITY VAPOR BARRIER VAPOR BARRIER				
	VAPOR BARRIER				
	MIN. R-7.6 RIGID INSULATION				
	8" X 8" X 16" SMOOTH FACE				
	MASONRY UNITS				
				DOOR E	BEYOND
	OR811 : SMOOTH 3'				
	CMU: COLOR8			FLOORING AS	S SCHEDULED
				CONCRETE FLOOR SLAB: SEE	STRUCTURAL
	WEEP HOLES @ 24" O.C. W/ 3/8" DIA. ROPE WICK			VA	POR BARRIER
		EthrefilsDOR +0' - 0"			GRAVEL
	CONCRETE FOOTING: SEE				        PERIN _
			3/4" = 1'-0"	2 Wall Section @ Corr. Entry D	)oor

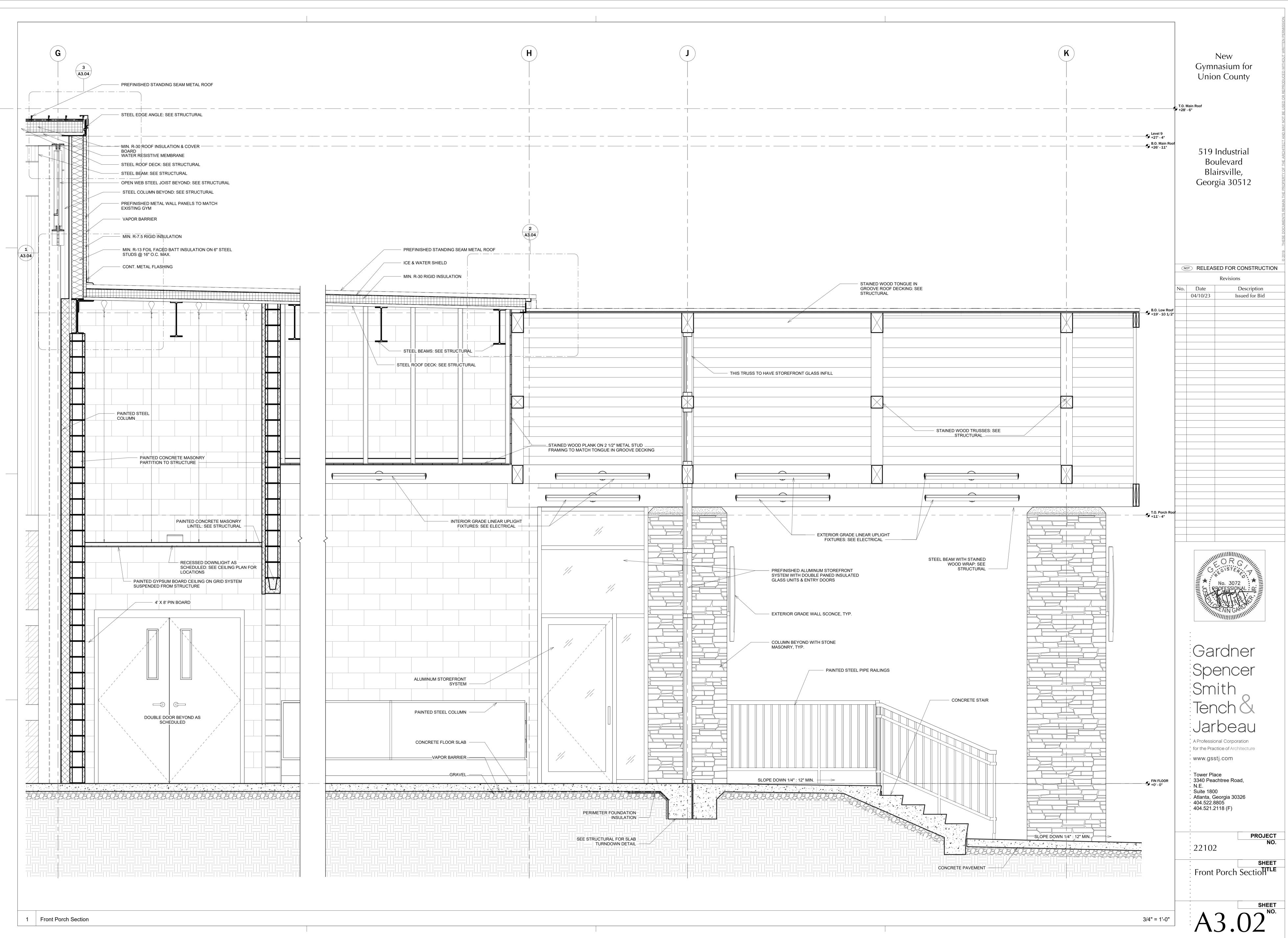


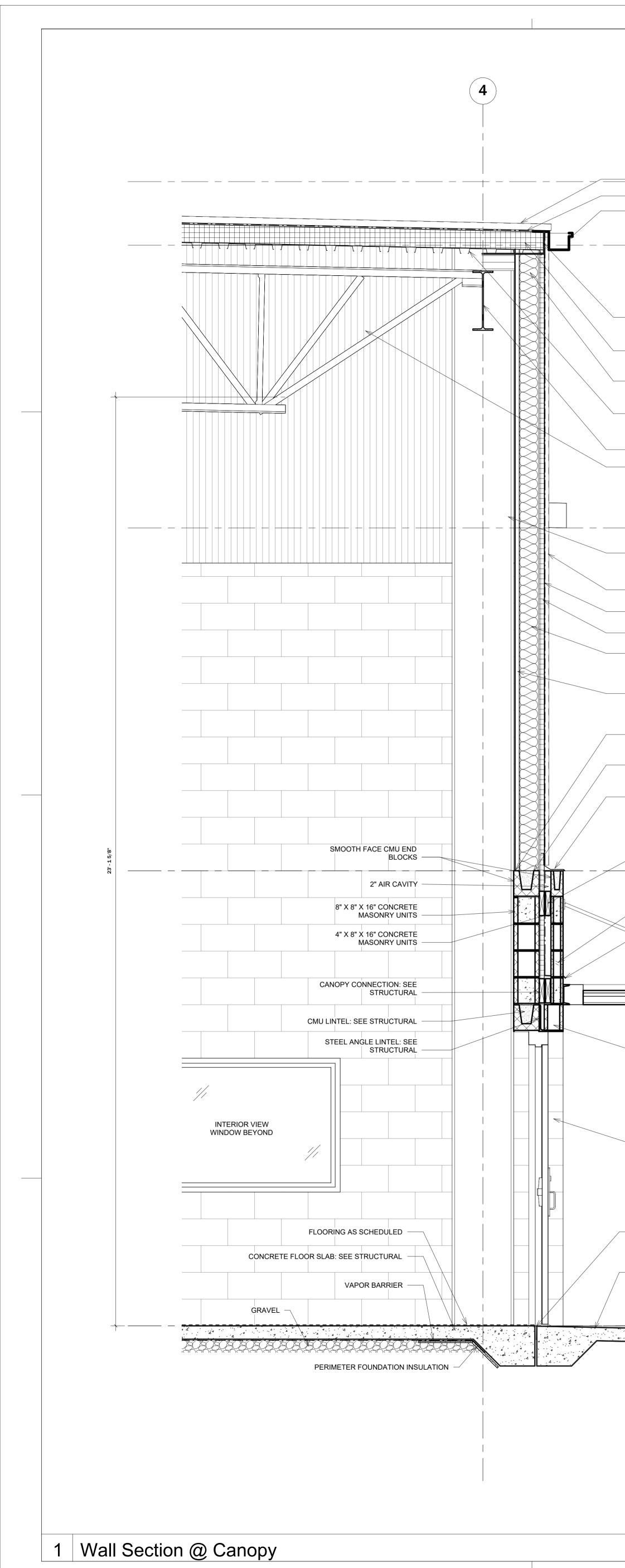
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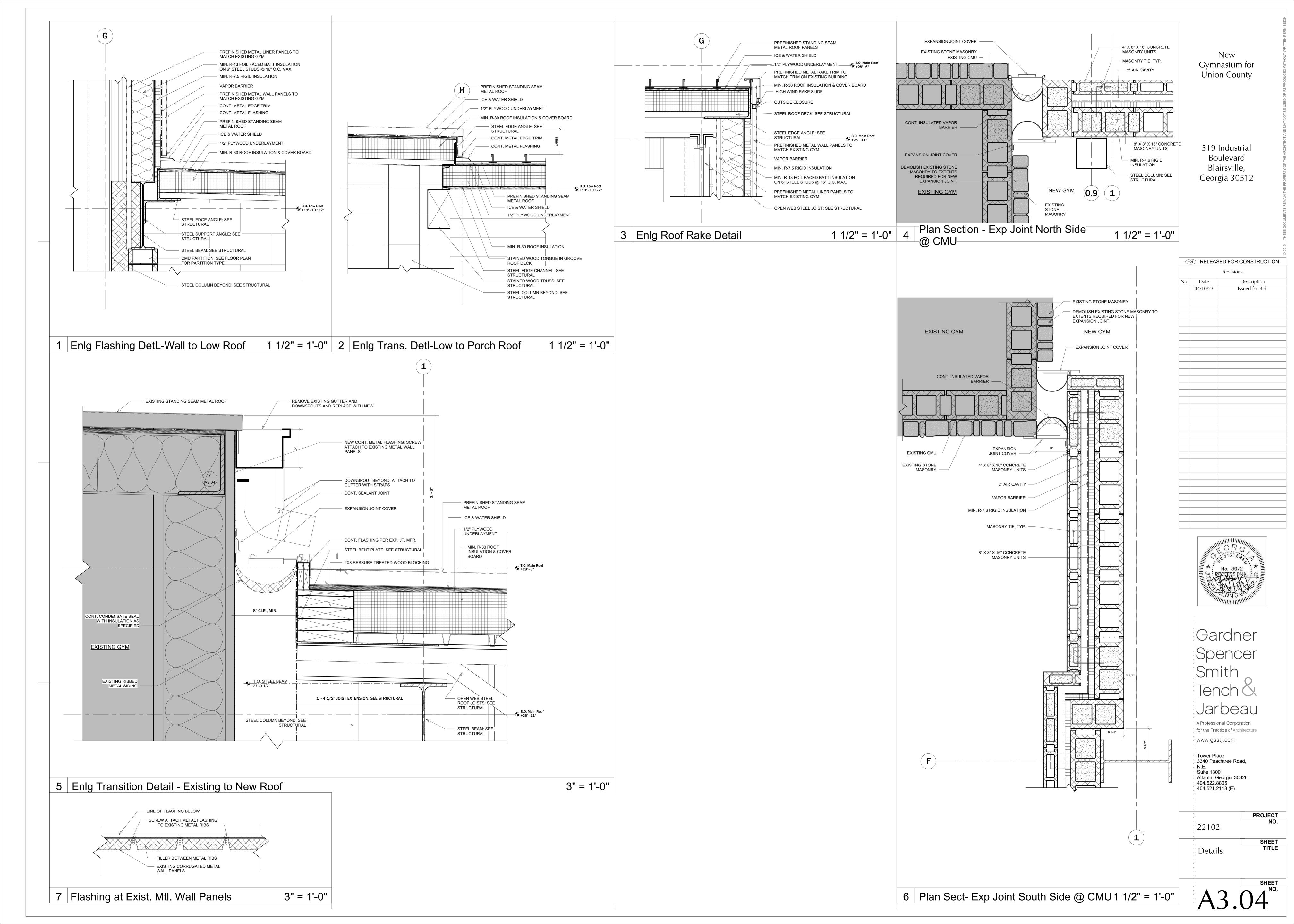


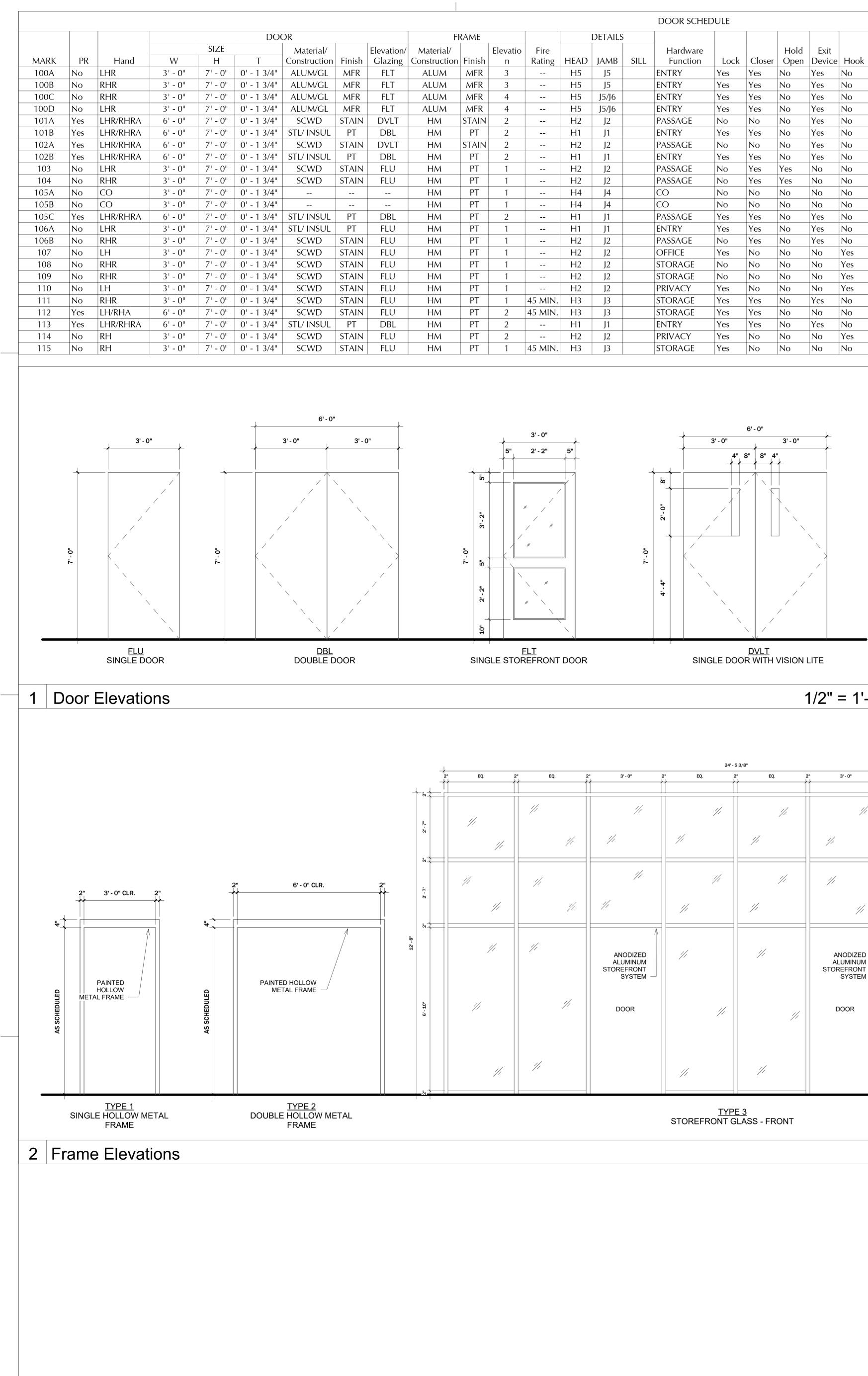


— PREFINISHED METAL GUTTER	
B.O. Main Roof +26' - 11"	
STEEL BENT PLATE: SEE STRUCTURAL	
MIN. R-30 ROOF INSULATION & COVER BOARD	
6" STEEL CHANNEL	
STEEL ROOF DECK: SEE STRUCTURAL	
STEEL BEAM: SEE STRUCTURAL     OPEN WEB STEEL JOIST BEYOND: SEE STRUCTURAL	
B.O. Low Roof +19' - 10 1/2"	
STEEL COLUMN BEYOND: SEE STRUCTURAL	
PREFINISHED METAL WALL PANELS TO MATCH	
EXISTING GYM VAPOR BARRIER	
MIN. R-7.5 RIGID INSULATION	
MIN. R-13 FOIL FACED BATT INSULATION ON 6" STEEL STUDS @ 16" O.C. MAX.	
PREFINISHED METAL WALL PANELS TO MATCH EXISTING GYM	
PREFINISHED CONT. METAL EDGE TRIM	
6" STEEL CHANNEL	
CONT. METAL FLASHING	
CANOPY BRACING CONNECTION: SEE STRUCTURAL	
WEEP HOLES @ 24" O.C. W/ 3/8" DIA. ROPE WICK	
CONT. METAL FLASHING	Y
I	
6" X 8" X 16" CONCRETE	
MASONRY UNITS	
ENTRANCE DOOR & FRAME	
CONT 1/2" EVEANSION LOINT	
CONT. 1/2" EXPANSION JOINT	
CONCRETE PAVEMENT	
SLOPE DOWN: MIN. 1/4" PER 1'-0"	
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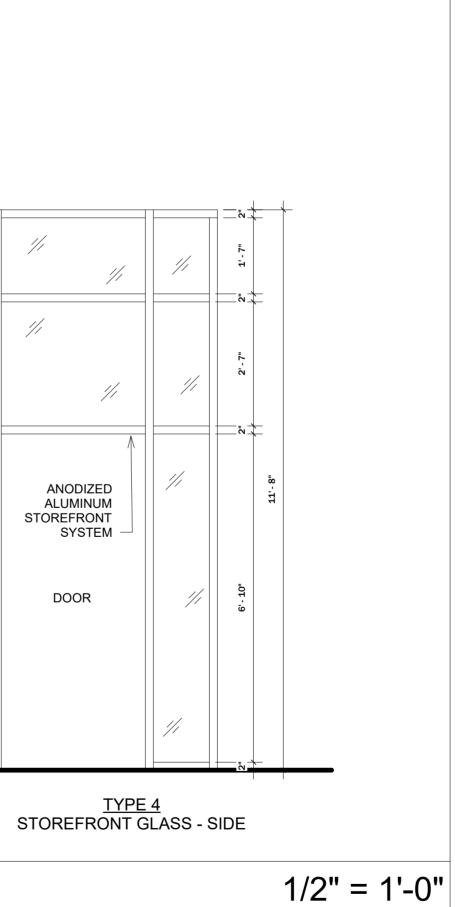




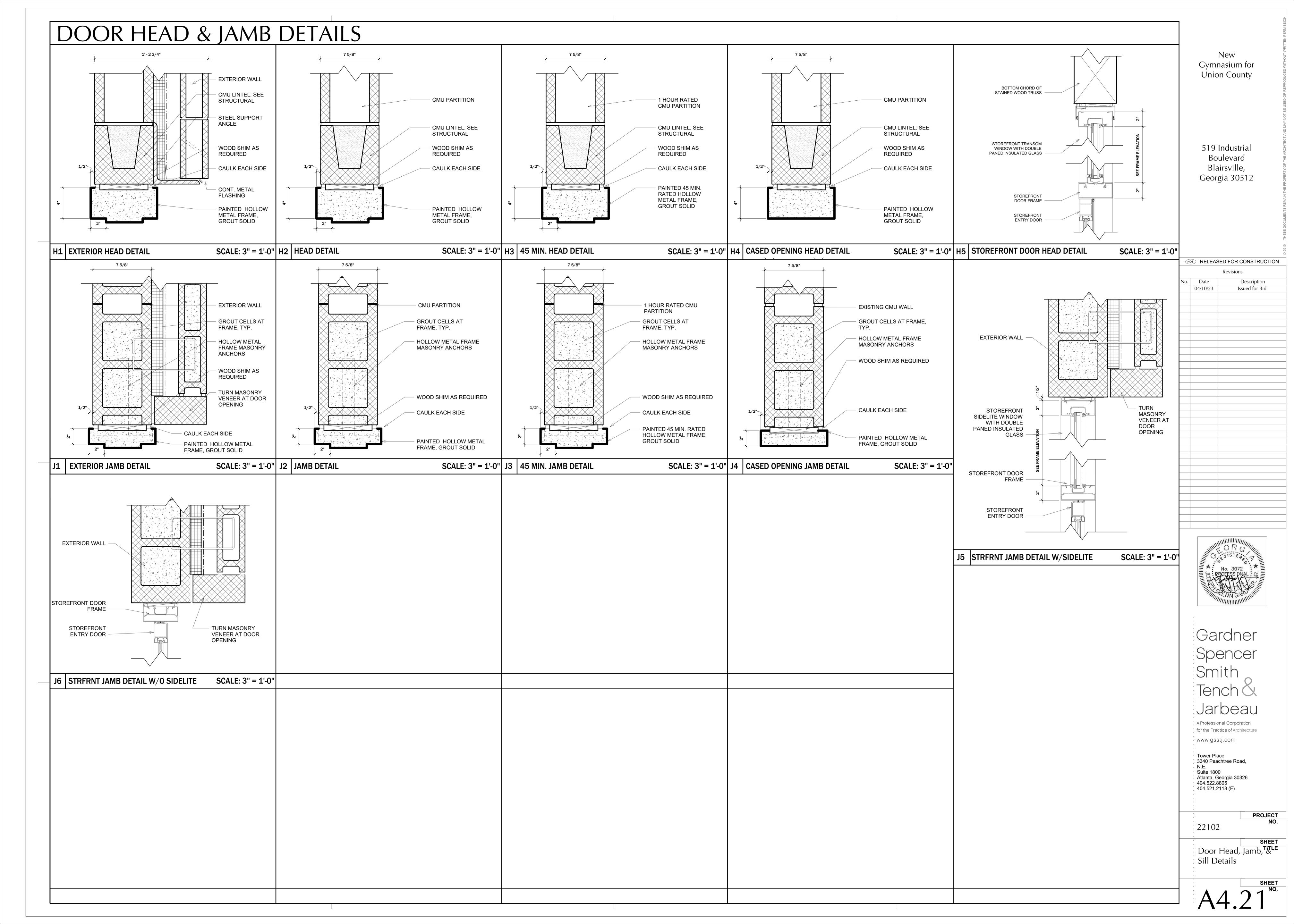
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Fire Rating	HEAD	JAMB	SILL	Hardware Function	Lock	Closer	Hold Open	Exit Device	Hook	Card Reader	Signage	Hard ware Set	NOTES	A - ACTIVE LEAF ALUM - ALUMINUM
	H5	J5		ENTRY	Yes	Yes	No	Yes	No		Ν	01.0		CO - CASED OPENING
	H5	J5		ENTRY	Yes	Yes	No	Yes	No		Ν	01.0		GL - GLASS
	H5	J5/J6		ENTRY	Yes	Yes	No	Yes	No		Ν	01.0	CONCEALED AUTOMATIC DOOR OPERATOR	HM - HOLLOW METAL INSUL - INSULATED
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	H2	J2		PASSAGE	No	No	No	Yes	No		Ν	02.0		LHR - LEFT HAND REVERSE
	H1	J1		ENTRY	Yes	Yes	No	Yes	No		Ν	03.0		MFR - MANUFACTURER PT - PAINT
	H2	J2		PASSAGE	No	No	No	Yes	No		Ν	02.0		RH - RIGHT HAND
	H1	J1		ENTRY	Yes	Yes	No	Yes	No		Ν	03.0		RHR - RIGHT HAND REVERSE
	H2	J2		PASSAGE	No	Yes	Yes	No	No		Ν	04.0		SCWD - SOLID CORE WOOD STL - STEEL
	H2	J2		PASSAGE	No	Yes	Yes	No	No		Ν	04.0		STE-STEEL
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	H1	J1		ENTRY	Yes	Yes	No	Yes	No		Ν	07.0		
	H2	J2		PASSAGE	No	Yes	No	Yes	No		Ν	08.0		
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	H2	J2		STORAGE	No	No	No	No	Yes		Ν	10.0		
	H2	J2		STORAGE	No	No	No	No	Yes		N	09.0		
	H2	J2		PRIVACY	Yes	No	No	No	Yes		N	11.0		
45 MIN.		J3		STORAGE	Yes	Yes	No	Yes	No		N	12.0		
45 MIN.	H3	J3		STORAGE	Yes	Yes	No	No	No		N	13.0		
	H1	J1		ENTRY	Yes	Yes	No	Yes	No		N	14.0		
	H2	J2		PRIVACY	Yes	No	No	No	Yes		N	11.0		
45 MIN.	H3	J3		STORAGE	Yes	No	No	No	No		Ν	09.0		

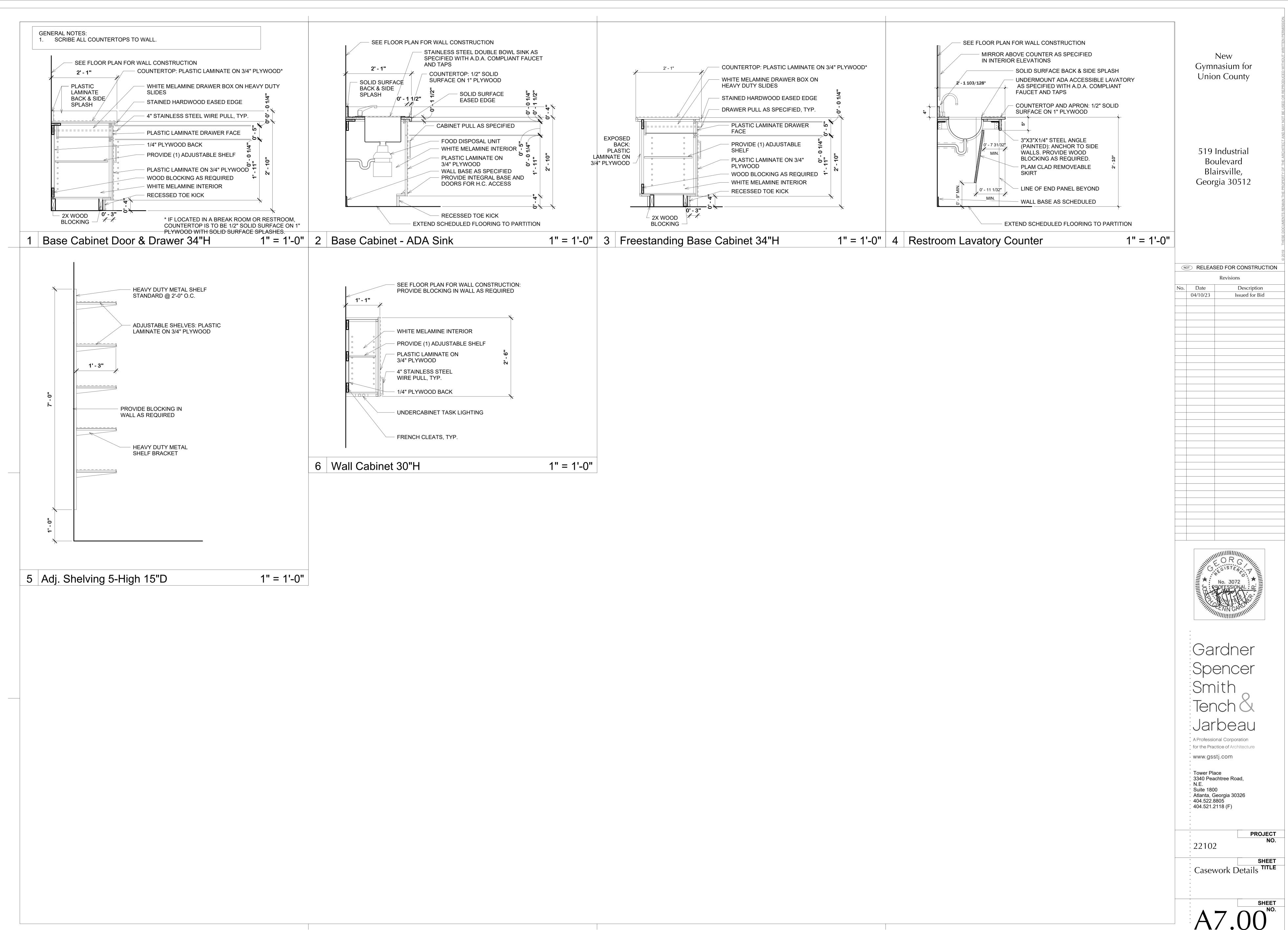
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Tower Place 3340 Peachtree Road, N.E. Suite 1800 Atlanta, Georgia 30326 404.522.8805 404.521.2118 (F) <b>PROJECT</b>	
22102 NO. Door Schedule & TITLE Elevations	
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## GENERAL:

- 1. ALL CONSTRUCTION AND DESIGN SHALL BE IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE W/ GA. AMMENDMENTS. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH PROJECT SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR ADDITIONAL INFORMATION AND DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS. 3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS (NEW AND EXISTING) BEFORE EXECUTING ANY WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE EFFECTED PART OF THE WORK. 4. CONTRACTOR SHALL COORDINATE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND SITE DRAWINGS PRIOR TO CONSTRUCTION AND REPORT ANY CONFLICTS TO THE ARCHITECT/ENGINEER. 5. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION. CONTRACTOR SHALL DESIGN AND PROVIDE TEMPORARY SUPPORT, SHORING AND BRACING FOR ALL STRUCTURAL COMPONENTS DURING CONSTRUCTION. 6. CONTRACTOR HAS SOLE RESPONSIBILITY FOR MEANS, METHODS, SAFETY, TECHNIQUES, SEQUENCES AND PROCEDURES FOR CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION
- COMPLIES WITH OSHA REGULATIONS. 7. DETAILS SHOWN OR REFERENCED ON PLAN SHALL APPLY TO ALL CONDITIONS THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED, WHETHER THEY ARE INDICATED ON PLAN OR NOT.

## LOADS

THIS STRUCTURE WAS DESIGNED IN ACCORDANCE WITH THE BUILDING CODE W/ GA. AMMENDMENTS AND ASCE 7-16. THE CRITERIA APPLY:	
RISK CATEGORY =	
ROOF LIVE LOAD = (DOES NOT INCLUDE MECHANICAL UNITS)	2
ROOF DEAD LOAD = ROOF DEAD LOAD = (AVAILABLE TO RESIST UPLIFT)	2
FLOOR LIVE LOAD =	10
GROUND SNOW LOAD, Pg = SNOW IMPORTANCE FACTOR, I =	1
SEISMIC IMPORTANCE FACTOR, I = MAPPED SPECTRAL ACCELERATIONS: Ss = $0.346$ , S1 = $0.106$	

SITE CLASS (SOIL TYPE): SPECTRAL RESPONSE COEFFICIENTS: SDs = 0.351, SD1 = 0.168

SEISMIC DESIGN CATEGORY: SEISMIC FORCE RESISTING SYSTEM: STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE **RESPONSE MODIFICATION FACTOR, R:** 

OVERSTRENGTH FACTOR, OMEGA: DEFLECTION AMPLIFICATION FACTOR, Cd: SEISMIC RESPONSE COEFFICIENT, Cs: DESIGN BASE SHEAR:

ANALYSIS PROCEDURE: BASIC WIND SPEED (ULTIMATE) BASIC WIND SPEED (SERVICE)

WIND EXPOSURE CATEGORY: INTERNAL PRESSURE COEFFICIENT:

COMPONENTS & CLADDING PRESSURES (ULTIMATE)

ZONE	1'	1	2	3	4	5
A=10	+16.0	+16.0	+16.0	+16.0	+31.4	+31.4
	-28.8	-50.1	-66.0	-90.0	-34.1	-42.1
A=20	+16.0	+16.0	+16.0	+16.0	+30.0	+30.0
	-28.8	-46.8	-21.8	-81.5	-32.6	-38.8
A=50	+16.0	+16.0	+16.0	+16.0	+28.2	+28.2
	-28.8	-42.4	-56.2	-70.3	-30.8	-35.0
A=100	+16.0	+16.0	+16.0	+16.0	+26.7	+26.7
	-28.8	-39.1	-52.0	-61.8	-29.4	-32.2

A = EFFECTIVE WIND AREA IN SQ. FT. EDGE DISTANCE, a = 17'-6'' (ROOF); 6'-9'' (WALL) SEE ASCE 7 FOR ZONE LAYOUT AND LOADS ON PARAPETS

SHOP DRAWINGS:

- 1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS THAT ADEQUATELY DEPICT THE STRUCTURAL ELEMENTS AND CONNECTIONS SHOWN IN THE CONTRACT DOCUMENTS. STRUCTURAL DRAWINGS INDICATE TYPICAL AND CERTAIN CONDITIONS ONLY. SHOP DRAWINGS SHALL DETAIL ALL CONDITIONS IN ACCORDANCE WITH SPECIFIED STANDARDS AND SPECIFIC REQUIREMENTS OF THIS PROJECT.
- 2. SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS,
- DIMENSIONS, ETC. 3. REVIEW OF SUBMITTALS OR SHOP DRAWINGS BY THE ARCHITECT/ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW AND CHECK ALL SUBMITTALS AND SHOP DRAWINGS BEFORE SUBMITTING TO THE ARCHITECT/ENGINEER. SHOP DRAWINGS SHALL BE REVIEWED, STAMPED AND SIGNED BY THE CONTRACTOR PRIOR TO SUBMITTAL
- TO THE ARCHITECT/ENGINEER. DRAWINGS SUBMITTED WITHOUT REVIEW WILL BE RETURNED UNCHECKED. 4. REVIEW OF SUBMITTALS AND SHOP DRAWINGS BY THE ARCHITECT/ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. CONTRACTOR REMAINS
- SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATIONS OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES. DETAILS AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS.
- 5. SHOP DRAWING SUBMITTALS SHALL MADE ELECTRONICALLY. ALLOW TEN (10) WORKING DAYS FOR SHOP DRAWING. CONTRACTOR SHALL SCHEDULE
- WORK ACCORDINGLY AROUND THIS REVIEW TIME 6. REPRODUCTION OF ANY PORTION OF THE CONTRACT DOCUMENTS FOR SUBMITTALS OR SHOP DRAWINGS IS NOT PERMITTED AND SHALL RESULT IN
- REJECTION OF THAT SUBMITTAL OR SHOP DRAWING 7. CONTRACT DOCUMENTS WILL GOVERN OVER SUBMITTALS AND SHOP DRAWINGS UNLESS OTHERWISE SPECIFIED IN WRITING BY THE ENGINEER.
- 8. THE FOLLOWING SYSTEMS AND COMPONENTS REQUIRE FABRICATION AND ERECTION DRAWINGS PREPARED BY A SPECIALTY ENGINEER: GLASS WALL SYSTEMS, ALUMINUM WALL SYSTEMS, AND PRE-ENGINEERED WOOD TRUSSES
- 9. SUBMITTALS SHALL CLEARLY IDENTIFY THE SPECIFIC PROJECT AND APPLICABLE CODES, LIST THE DESIGN CRITERIA, AND SHOW ALL DETAILS AND PLANS NECESSARY FOR PROPER FABRICATION AND INSTALLATION.
- CALCULATIONS AND SHOP DRAWINGS SHALL IDENTIFY SPECIFIC PRODUCTS UTILIZED. GENERIC PRODUCTS WILL NOT BE ACCEPTED 10. SHOP DRAWINGS AND CALCULATIONS SHALL BE PREPARED UNDER THE
- DIRECT SUPERVISION AND CONTROL OF THE SPECIALTY ENGINEER. AND REQUIRE THE SEAL, DATE AND SIGNATURE OF THE SPECIALTY ENGINEER COMPUTER PRINTOUTS ARE AN ACCEPTABLE SUBSTITUTE FOR MANUAL COMPUTATIONS PROVIDED THEY ARE ACCOMPANIED BY SUFFICIENT DESCRIPTIVE

INFORMATION TO PERMIT THEIR PROPER EVALUATION.

EXISTING CONDITIONS:

- 1. WHERE EXISTING CONDITIONS ARE SHOWN THEY HAVE BEEN DERIVED FROM AVAILABLE DRAWINGS AND REPRESENT THE ENGINEER'S BEST ESTIMATE OF ACTUAL CONDITIONS. DEPICTED EXISTING CONDITIONS MAY NOT, IN ALL CASES, BE CORROBORATED BY FIELD INVESTIGATIONS. 2. ALL DIMENSIONS AND DETAILS OF EXISTING WORK INDICATED ON THE
- DRAWINGS SHALL BE FIELD MEASURED AND VERIFIED BEFORE PROCEDING WITH WORK. ANY DISREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER. 3. NECESSARY PRECAUTIONS SHALL BE TAKEN NOT TO DISTURB OR UNDERMINE
- ANY EXISTING BUILDING FOUNDATIONS OR STRUCTURE AND SHORING SHALL BE PROVIDED AS REQUIRED. 4. CONTRACTOR SHALL NOT MODIFIY ANY EXISTING STRUCTURAL COMPONENTS WITHOUT PRIOR APPROVAL OF THE STRUCTUAL ENGINEER UNLESS SPECIFICALLY NOTED IN THE THESE DRAWINGS.

## **GENERAL NOTES**

### 018 INTERNATIONAL FOLLOWING

- 20 psf 20 psf
- 5 psf 100 psf
- 10 psf 1.1
- 1.25
- D (ASSUMED)

  - 3.0 30 0.146 34.0 k
- E.L.F. PROCEDURE 112 mph 87 mph ±0.18

## FOUNDATION:

- 1. THE FOUNDATION DESIGN USES MINIMUM ALLOWABLE DESIGN CRITERIA DETERMINED BY 2018 IBC
- 2. THE FOUNDATION DESIGN IS BASED ON AN ASSUMED NET ALLOWABLE SOIL BEARING PRESSURE OF 2,000 PSF FOR SHALLOW FOUNDATIONS ON EITHER PROPERLY COMPACED NATIVE SOILS OR STRUCTURAL FILL.
- 3. A REGISTERED GEOTECHNICAL ENGINEER SHALL VERIFY THE DESIGN SOIL BEARING CAPACITY AND SHALL VERIFY THE CONDITION AND/OR ADEQUACY OF ALL SUBGRADE AND FILL PRIOR TO PLACEMENT OF FOOTINGS AND SLABS.

## CONCRETE:

- 1. CONCRETE FOR ALL STRUCTURAL ELEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 psi, AND SHALL BE
- NORMAL WEIGHT. MAX W/CM SHALL NOT EXCEED 0.55. 2. UNLESS NOTED OTHERWISE, SLABS ON GRADE SHALL BE A MINIMUM OF FOUR INCHES THICK, SHALL BE REINFORCED WITH 6x6-W1.4xW1.4
- W.W.F. LOCATED 1%" BELOW THE TOP OF SLAB AND PLACED OVER A 4" GRADED AGGREGATE BASE AND A MINIMUM 6 MIL VAPOR BARRIER. 3. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE A MAXIMUM WATER/CEMENT RATIO OF 0.45 AND SHALL BE AIR ENTRAINED
- 5% +/-1. 4. ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITIONS OF ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 318 "BUILDING
- CODE REQUIREMENTS FOR STRUCTURAL CONCRETE". 5. CONCRETE TEST REPORTS SHALL BE AVAILABLE AT THE JOB SITE. 6. CURE ALL CONCRETE SURFACES FOR A PERIOD OF SEVEN DAYS UNTIL THE AVERAGE COMPRESSIVE STRENGTH HAS REACHED 70% OF THE SPECIFIED 28-DAY STRENGTH. CURING SHALL BE BY PONDING, MOIST CURING WITH SAND OR ABSORPTIVE MATS KEPT CONTINUOUSLY WET, CONTINUOUS APPLICATION OF STEAM (NOT EXCEEDING 105\* F) OR MIST SPRAY, WATERPROOF CURING PAPER. OR LIQUID MEMBRANE FORMING CURING COMPOUND. SELECTION OF CURING METHOD SHALL BE COMPATIBLE
- WITH THE FINISH TO BE APPLIED TO THE CONCRETE SURFACE. 7. WHERE REINFORCING STEEL CONGESTION PERMITS, CONDUIT AND PIPES UP TO ONE INCH IN DIAMETER MAY BE EMBEDDED IN CONCRETE PER ACI 318 SECTION 6.3. SPACE AT THREE DIAMETERS ON CENTER. PLACE BETWEEN OUTER LAYERS OF REINFOCING IF CONDUITS ARE SIGNIFICANTLY CONGESTED. ADDITIONAL REINFORCING PERPENDICULAR TO PIPING MAY BE REQUIRED. REQUESTS TO EMBED LARGER PIPES SHOULD BE ACCOMPANIED BY A DETAILED LAYOUT AND BE SUMBITTED TO THE STRUCTURAL ENGINEER FOR REVIEW.

## **REINFORCING:**

- 1. DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCING", AND
- CRSI MANUAL OF STANDARD PRACTICE. 2. REINFORCING STEEL SHALL BE ASTM A615, GRADE 60 DEFORMED BARS. UNO. LAP SPLICE LENGTH SHALL BE A MINIMUM "CLASS B" TENSION SPLICE, UNO.
- 3. WELDED WIRE FABRIC SHALL COMPLY WITH ASTM A1064 AND SHALL BE LAPPED A MINIMUM OF 8" ON ALL SIDES AND SPLICES. 4. BRICK AND CMU VENEER TIES SHOULD BE A MINIMUM 9 GAUGE
- CORROSION-RESISTANT WIRE @ 16" MAX. HORIZONATALLY, AND 16" O.C. VERTICALLY, SECURELY ATTACHED TO SUPPORT WALL.
- 5. REINFORCING STEEL SHALL HAVE THE FOLLOWING CONCRETE COVER UNLESS NOTED OTHERWISE: CONCRETE CAST AGAINST EARTH (NOT FORMED)
- FORMED CONCRETE EXPOSED TO EARTH OR WEATHER #6 BARS AND LARGER #5 BARS AND SMALLER
- 1 1/2" CONCRETE NOT EXPOSED TO EARTH OR WEATHER SLABS AND WALLS
- 6. PROVIDE CONTINUOUS REINFORCING WHEREVER POSSIBLE; SPLICE ONLY AS SHOWN OR APPROVED; STAGGER SPLICES WHERE POSSIBLE; USE CLASS "B" TENSION SPLICE UNLESS NOTED OTHERWISE. DOWELS SHALL MATCH THE SIZE AND SPACING OF THE SPECIFIED REINFORCING AND SHALL BE LAPPED WITH CLASS "B" TENSION SPLICES. UNLESS NOTED OTHERWISE LAP LENGTHS EXPRESSED IN NUMBER OF BAR DIAMETERS SHALL BE AS FOLLOWS

יוט	JIAMETERS SHALL DE AS FOLLOWS.										
	BAR SIZE		CLASS	3,0	000	4,(	000	5,0	000		
	#6 OR SMALLE	ER	A B	44 57	DIA. DIA.	38 49	DIA. DIA.	34 44	DIA. DIA.		
	#7 OR LARGE	२	A B	55 71	DIA. DIA.	47 62	DIA. DIA.	42 55	DIA. DIA.		

TABLE IS FOR NORMAL WEIGHT CONCRETE. INCREASE THE ABOVE LAP LENGTHS BY A FACTOR OF 1.3 FOR BARS WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW THEM (I.E. TOP BARS). INCREASE LAP LENGTHS BY A FACTOR OF 1.3 FOR WHEN LIGHT WEIGHT CONCRETE IS USED.

## MASONRY:

- 1. MASONRY UNITS SHALL BE LIGHTWEIGHT (100 pcf MAX) CONFORMING TO ASTM C-90 AND SHALL HAVE A NET AREA COMPRESSIVE STRENGTH (f'm) OF 2,000 psi AT 28 DAYS. MORTAR SHALL BE TYPE "S" WITH A COMPRESSIVE STRENGTH OF NOT LESS THAN 1,800 psi AT 28 DAYS, AND SHALL CONFORM TO ASTM C-270. GROUT SHALL BE 3,000 psi MINIMUM COMPRESSIVE STRENGTH AND MEET ASTM
- C-476. SUBMIT PROPOSED MIX DESIGN FOR REVIEW PRIOR TO USE. 2. VERTICAL REINFORCING BARS SHALL BE CENTERED IN GROUT FILLED BLOCK CELLS AT CORNERS, INTERSECTIONS, EACH SIDE OF OPENINGS OVER 2 FEET WIDE, AND AS SHOWN ON THE PLANS. DOWELS SHALL BE USED TO PROVIDE CONTINUITY INTO THE STRUCTURE ABOVE AND/OR BELOW, UNLESS NOTED
- OTHERWISE. USE STEEL LATH, MORTAR, OR SPECIAL UNITS TO CONFINE CONCRETE AND GROUT TO AREA REQUIRED. 3. PROVIDE HORIZONTAL 8" DEEP BOND BEAM, GROUTED SOLID, WITH (2) #5 CONT. REINFORCING BARS AT THE TOP OF ALL WALLS & AS SHOWN IN DRAWINGS. REINFORCING BARS SHALL BE CONTINUOUS THROUGH CONTROL JOINTS. PROVIDE (2)  $\#5 \times 2'-6''$  CORNER BARS AT ALL CORNERS AND INTERSECTIONS.
- 4. REINFORCEMENT IN MASONRY WALLS SHALL HAVE LAP SPLICES IN CONFORMANCE WITH THE GOVERNING BUILDING CODE
- 5. PROVIDE 9 GAUGE LADDER TYPE GALVANIZED HORIZONTAL JOINT REINFORCING (DUR-O-WALL OR ENGINEER APPROVED SUBSTITUTION) AT ALTERNATE BLOCK COURSES. 6. BLOCK SHALL BE PLACED IN RUNNING BOND.
- 7. CONTROL JOINTS SHALL BE PROVIDED IN ALL CONCRETE MASONRY CONSTRUCTION AT LOCATIONS INDICATED ON THE ARCHITECTURAL DRAWINGS HORIZONTAL WALL REINFORCING SHALL BE STOPPED EACH SIDE OF CONTROL JOINTS, BOND BEAM OR TIE BEAM REINFORCING SHALL BE CONTINUOUS THROUGH WALL CONTROL JOINTS. SEE ARCHITECTURAL DRAWINGS FOR SEALANT REQUIREMENTS AT CONTROL JOINTS. 8. UNLESS NOTED OTHERWISE, ALL MASONRY SHALL BE REINFORCED WITH
- #5 VERTICAL REINFORCEMENT IN GROUTED CELLS @ 48" O.C.

## POST-INSTALLED ANCHORS:

- 1. UNLESS NOTED OTHERWISE, POST-INSTALLED CONCRETE ANCHORS SHALL COMPLY WITH ICC-ES ACCEPTANCE CRITERIA FOR ANCHORS IN CRACKED CONCRETE 2. POST–INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE
- DRAWINGS. POST-INSTALLED ANCHORS MAY NOT BE USED TO REPLACE MISSING, DAMAGED, OR MIS-PLACED CAST-IN-PLACE ANCHORS WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
- 3. PLACE POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR AND EMBEDMENTS 4. PROPER INSTALLATION OF POST-INSTALLED ANCHORS SHALL BE VERIFIED BY A
- QUALIFIED TECHNICIAN IN ACCORDANCE WITH THE PROJECT REQUIREMENTS ANL THE ICC-ES REPORT. THE TECHNICIAN SHALL VERIFY THE INITIAL INSTALLATION OF EACH TYPE OF ANCHOR AND PERIODICALLY VERIFY INSTALLATIONS THEREAFTER. 5. MECHANICAL SCREW ANCHORS FOR USE IN CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE
- MECHANICAL SCREW ANCHORS FOR USE IN CONCRETE INCLUDE THE FOLLOWING: \* HILTI KWIK HUS-EZ (ICC-ES ESR 3027) \* DEWALT SCREW-BOLT+ (ICC-ES ESR-3889)
- \* SIMPSON STRONG-TIE TITEN HD (ICC-ES ESR 2713) 6. ADHESIVE ANCHORS FOR USE IN SOLID-GROUTED CONCRETE MASONRY SHALL HAVE BEEN TESTED AND QUALIFIED IN ACCORDANCE WITH ICC-ES AC58. ACCEPTABLE ADHESIVE ANCHORS FOR USE IN SOLID-GROUTED CONCRETE MASONRY INCLUDE THE FOLLOWING:
- \* HILTI HY-270 (ICC-ES ESR-4143) \* SIMPSON STRONG-TIE SET-XP (IAPMO UES ER-265) \* DEWALT AC100+ (ICC-ES ESR-4105)
- 7. MECHANICAL SCREW ANCHORS FOR USE IN SOLID-GROUTED CONCRETE MASONRY SHALL HAVE BEEN TESTED AND QUALIFIED IN ACCORDANCE WITH ICC-ES AC106. ACCEPTABLE MECHANICAL SCREW ANCHORS FOR USE IN SOLID-GROUTED CONCRETE MASONRY INCLUDE THE FOLLOWING:
- \* HILTI KWIK HUS-EZ (ICC-ES ESR 3056)
- \* DEWALT SCREW-BOLT+ (ICC-ES ESR-4042) \* SIMPSON STRONG-TIE TITEN HD (ICC-ES ESR 1056)

## STEEL CONSTRUCTION, INC. 2. MATERIAL REQUIREMENTS, UNO: a. WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992. CHANNELS. GRADE B, TYPE E OR S, Fy = 35 ksi. ASTM F3125 A325 HIGH STRENGTH BOLTS. (LOW-HYDROGEN FOR SMAW WELDING). RODS, UNO OF 7,000 PSI INSURED IN THE STATE OF GEORGIA. GEORGIA MANUAL OF STEEL CONSTRUCTION. CONNECTIONS DESIGNATED "SLIP CRITICAL" SHALL HAVE PROPERLY UNSTABLE UNTIL THE STRUCTURE IS COMPLETED IN ACCORDANCE WITH THE STEEL TO BE GALVANIZED ASTM A 780. SECTION UNO. 6,000 PSI) CONFORMING TO ASTM C1107 UNDER BASEPLATES AFTER SETTING AND LEVELING.

STRUCTURAL STEEL:

## STEEL ROOF DECK:

FINISHES/COATINGS.

## OPEN WEB STEEL JOISTS:

- ROLLOVER FORCE (WIND/SERVICE) UNLESS NOTED OTHERWISE.

## LIGHT GAUGE STEEL FRAMING:

- CONCEPT ONLY.
- CONNECTION DETAILS. MATERIAL SPECIFICATIONS FOR LIGHT-GAGE STEEL
- 4. GALVANIZING: MINIMUM G-60 COATING
- ANGLES SHALL BE 14 GA. MINIMUM.
- BE PERMITTED.
- 10. PROVIDE DEEP TRACK ASSEMBLY OR SLIDE CONNECTIONS AT TOPS OF
- BOARD OR SHEATHING.

## 1. STRUCTURAL STEEL SHALL CONFORM TO "THE SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" AND THE "MANUAL OF STEEL CONSTRUCTION" BY THE AMERICAN INSTITUTE OF

### PLATES AND OTHER MISC. SHAPES SHALL CONFORM TO ASTM A36. b. STRUCTURAL TUBING (HSS) SHALL CONFORM TO ASTM A500, GRADE C, Fy = 50 ksi. STRUCTURAL PIPE SHALL CONFORM TO ASTM A-53 c. BOLTED CONNECTIONS SHALL CONSIST OF A MINIMUM 3/4" DIAMETER

d. WELDING ELECTRODES SHALL CONFORM TO AWS 5.1 OR A5.5 E-70XX e. ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE 36 THREADED f. GROUT BELOW BASE PLATES SHALL BE HIGH-STRENGTH, NON-SHRINK, NONSTEELLIC GROUT, WITH A 28 DAY MINIMUM COMPRESSIVE STRENGTH

q. HEADED ANCHORS FOR OTHER THAN COMPOSITE FLOOR SYSTEM SHALL BE  $\frac{3}{4}$ " DIAMETER WITH AN AFTER WELD LENGTH OF 5" AND SHALL CONFORM TO ASTM A108, UNLESS NOTED OTHERWISE 3. BEAM CONNECTIONS SHALL BE DESIGNED BY THE FABRICATOR FOR THE REACTIONS SHOWN ON THE PLANS BUT CONNECTIONS SHALL NOT HAVE LESS THAN 2 ROWS OF BOLTS NOR BE DESIGNED FOR LESS THAN 10 KIPS (LRFD). CONNECTIONS SHALL BE DESIGNED AS BEARING-TYPE CONNECTIONS WITH THREADS IN THE SHEAR PLANE. SUBMIT CALCULATIONS, SIGNED AND SEALED, BY AN ENGINEER LICENSED AND

4. ALL BRACING CONNECTIONS SHALL DEVELOP THE FORCE NOTED ON THE DRAWINGS. IF FORCE IS NOT NOTED ON DRAWINGS, THE BRACING CONNECTION SHALL DEVELOP THE ALLOWABLE TENSION FORCE IN THE MEMBER. BRACING CONNECTIONS SHALL BE DESIGNED AND DETAILED SO THAT ALL FORCE COMPONENTS WILL BE TRANSMITTED DIRECTLY TO THE CENTER OF GRAVITY OF INTERSECTING MEMBERS. WHERE THIS IS NOT POSSIBLE, CONNECTIONS SHALL BE DESIGNED FOR ALL RESULTING ECCENTRICITIES, BOLTED BRACING CONNECTIONS SHALL BE CONNECTED WITH A MINIMUM OF TWO BOLTS. GUSSET PLATES SHALL BE DESIGNED BY THE FABRICATOR. SUBMIT CALCULATIONS, SIGNED AND SEALED, BY AN ENGINEER LICENSED AND INSURED IN THE STATE OF

5. ALL BEAM CONNECTIONS SHALL BE STANDARD FRAMED, SEATED END, OR SINGLE-PLATE SHEAR CONNECTIONS AS SHOWN IN PART 10 OF THE AISC

6. IN GENERAL, CONNECTIONS SHALL BE FIELD BOLTED. ALL BOLTS DESIGNATED "SLIP CRITICAL" OR "FULLY TIGHTENED" SHALL BE TIGHTENED TO THE MINIMUM PRETENSION VALUE SHOWN IN TABLE J3.1 OF THE AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS. IN ADDITION,

PREPARED FAYING SURFACES TO MEET CLASS A SURFACE CONDITION, U.N.O. "SLIP CRITICAL" CONNECTIONS SHALL INCLUDE ALL BOLTS IN MOMENT CONNECTIONS. "FULLY TIGHTENED" CONNECTIONS SHALL INCLUDE ALL BOLTS LOADED IN DIRECT TENSION (SUCH AS HANGERS), BRACED FRAME CONNECTIONS, GIRT CONNECTIONS & MEMBERS THAT ARE PART OF THE MAIN LATERAL RESISTING SYSTEM. DIRECT TENSION INDICATOR (DTI) WASHERS OR TENSION CONTROL BOLTS (TCB'S) SHALL BE USED AT THESE CONDITIONS. ALL OTHER BOLTS SHALL BE, AT MINIMUM, SNUG TIGHT. 7. WELDING SHALL BE PERFORMED BY WELDERS WITH CURRENT CERTIFICATION USING ASTM E70 SERIES LOW HYDROGEN ELECTRODES. WELDS SHOWN ON STRUCTURAL DRAWINGS ARE MINIMUM DESIGN REQUIREMENTS. FABRICATION

SHOP DRAWING SHALL REFLECT WELDS IN ACCORDANCE WITH AWS REQUIREMENTS. SHOP DRAWINGS SHALL DETAIL ALL SHOP AND FIELD WELDS. SHOP AND FIELD WELD SHOWN ON DRAWINGS FOR CONCEPT, GENERAL CONTRACTOR SHALL COORDINATE WELDING SEQUENCE REQUIREMENTS. 8. PROVIDE TEMPORARY BRACING OF STRUCTURAL FRAMING UNTIL ALL PERMANENT BRACING, MOMENT CONNECTIONS AND FLOOR AND ROOF DECKS DIAPHRAGMS) ARE COMPLETELY INSTALLED. THE STRUCTURAL ELEMENTS ARE

9. STEEL SHALL RECEIVE ONE SHOP COAT AND ONE FIELD TOUCH UP COAT OF APPROVED PAINT, EXCEPT WHERE STEEL IS ENCASED IN CONCRETE OR FIREPROOFING, CONNECTIONS DESIGNATED AS SLIP-CRITICAL TYPE, OR

10. UNLESS NOTED OTHERWISE, ALL EXPOSED STRUCTURAL AND MISCELLANEOUS STEEL, PLATES, BOLTS, AND ANCHORS SHALL BE GALVANIZED OR PAINTED WITH APPROVED RUST INHIBITING PRIMER. CLEAN AREAS WHERE GALVANIZING IS DAMAGED OR MISSING AND REPAIR GALVANIZING TO COMPLY WITH

11. ALL MEMBERS NOTED AS "AESS" SHALL COMPLY WITH THE CLASSIFICATION NOTED IN ACCORDANCE WITH AISC DEFINITIONS OR THE ARCHITECTURAL SPECIFICATIONS, WHICHEVER IS MORE STRINGENT. SEE ARCH. FOR ALL PAINTING AND PREPARATION REQUIREMENTS AND MATERIAL SPECIFICATIONS 12. HSS MEMBERS SHALL HAVE A MINIMUM  $\frac{1}{4}$ " PLATE WELDED TO END OF 13. PLACE A HIGH-STRENGTH NON-METALLIC NON-SHRINK GROUT (MINIMUM

1. STEEL ROOF DECK SHALL BE 1.5", 22 GAUGE, Fy=50ksi G-60 GALVANIZED WIDE RIB, ACOUSTICAL TYPE "BA" (3 SPAN MIN. CONDITION). ROOF DECK SHALL BE ATTACHED PER PLANS USING  $\frac{5}{8}$ "  $\phi$  puddle welds and #10 SIDELAP SCREWS 24" O.C. MAX. FASTEN DECK EDGES AND TO PARALLEL FRAMING AT 12" O.C. SEE ARCH. FOR REQUIRED

1. STEEL JOIST CONSTRUCTION SHALL CONFORM TO STEEL JOIST INSTITUTE LOAD TABLES, "STANDARD SPECIFICATIONS", AND "CODE OF STANDARD PRACTICE". 2. IN ADDITION TO DEAD AND LIVE LOADS, STEEL ROOF JOISTS SHALL BE DESIGNED AND FABRICATED TO RESIST A NET WIND UPLIFT OF 15 PSF (SERVICE LOAD), UNLESS NOTED OTHERWISE. 3. ALL JOISTS SHALL BE DESIGNED FOR A CONCENTRATED LIVE BEND LOAD OF 200 POUNDS LOCATED AT ANY POSITION ALONG THE TOP OR BOTTOM CHORD CONCURRENTLY WITH ALL OTHER DESIGN LOADS. 4. SUBMIT SHOP DRAWINGS COMPLETELY DETAILING THE JOISTS FOR ERECTION. INCLUDE BRIDGING AND CONNECTIONS. ANY CALCULATIONS SHALL BE SEALED SIGNED AND DATED BY A STRUCTURAL ENGINEER REGISTERED IN THE PROJECT 5. K-SERIES ROOF JOISTS SHALL HAVE SEATS DESIGNED FOR 200#

1. LIGHT GAUGE STEEL FRAMING SYSTEM SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRINCIPLES AND GOVERNING CODES. THE DESIGN SHALL BE PERFORMED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF GEORGIA SHOP DRAWINGS SHALL BE SUBMITTED WHICH BEAR THE SIGNATURE, DATE, AND SEAL OF THE ENGINEER. SHOP DRAWINGS SHALL CLEARLY INDICATE CONNECTIONS AND MATERIALS USED. SECTIONS AND DETAILS SHOWN ON THE DRAWINGS ARE FOR

2. LIGHT GAGE STEEL FRAMING SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION SHOWING WALL SECTIONS COORDINATED WITH DRAWINGS SHOWING FRAMING, ACCESSORIES, ANCHORAGE AND

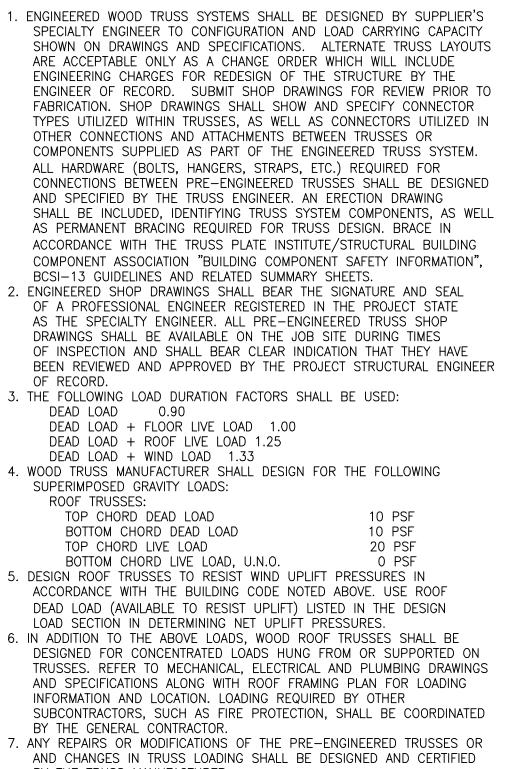
16 GA. OR HEAVIER: ASTM A-446, Fy = 50 KSI MIN. 18 GA. OR LIGHTER: ASTM A-446, Fy = 33 KSI MIN. 5. ALL STUDS AND JOIST MEMBERS SHALL BE STRUCTURAL (12 TO 20 GAUGE), AND HAVE STIFFENED FLANGES. 6. CONNECTION MATERIAL GAGE MATCH STUD GAGE U.N.O. CLIF

7. BUILT-UP MEMBERS FASTEN TOGETHER WITH 1" LONG STITCH WELDS OR #10 SCREWS AT 12" O.C. MAXIMUM, EACH FLANGE, AND EACH TRACK. 8. PROVIDE BRIDGING AT 5ft MAXIMUM VERTICAL SPACING IN WALLS. 9. SPLICING OF MEMBERS SPANNING BETWEEN SUPPORTS SHALL NOT

ALL NON-LOAD BEARING STUD WALLS TO ALLOW FOR MOVEMENT OF STRUCTURE. ARCHITECT SHALL REVIEW IN PLACE STEEL STUD CONSTRUCTION PRIOR TO THE INSTALLATION OF GYPSUM WALL

11. DESIGN COLD-FORMED STEEL FRAMING SYSTEMS TO WITHSTAND THE DESIGN LOADS WITHOUT EXCEEDING THE FOLLOWING DEFLECTION CRITERIA: MEMBERS SUPPORTING MASONRY - L/600 OR 1/2" MAXIMUM MEMBERS SUPPORTING OTHER MATERIAL - L/360 OR 1" MAXIMUM

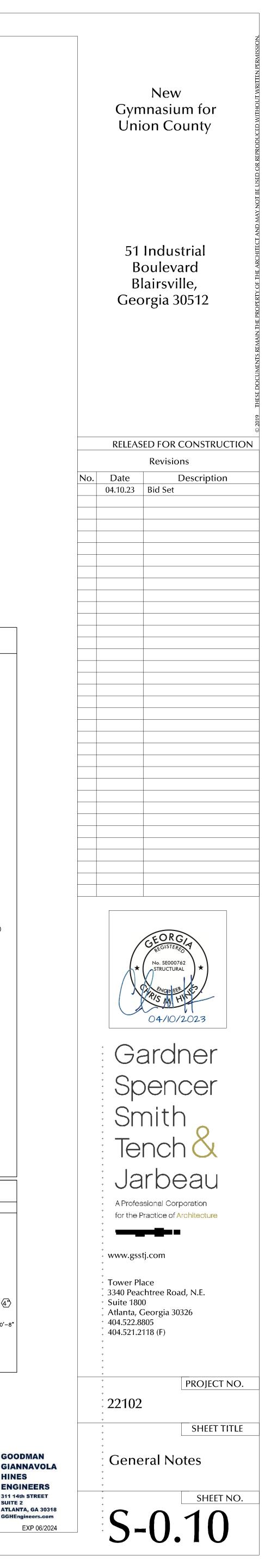
PRE-ENGINEERED WOOD TRUSSES:

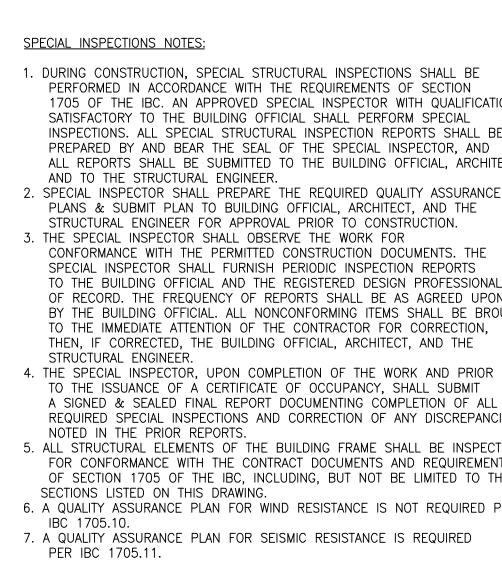


BY THE TRUSS MANUFACTURER. 8. TRUSSES SHALL BE TOE-NAILED TO DOUBLE TOP PLATE WITH A MINIMUM OF (3) 8d NAILS.









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### 1. DURING CONSTRUCTION, SPECIAL STRUCTURAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 1705 OF THE IBC. AN APPROVED SPECIAL INSPECTOR WITH QUALIFICATIONS SATISFACTORY TO THE BUILDING OFFICIAL SHALL PERFORM SPECIAL INSPECTIONS. ALL SPECIAL STRUCTURAL INSPECTION REPORTS SHALL BE PREPARED BY AND BEAR THE SEAL OF THE SPECIAL INSPECTOR, AND ALL REPORTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL, ARCHITECT, 2. SPECIAL INSPECTOR SHALL PREPARE THE REQUIRED QUALITY ASSURANCE PLANS & SUBMIT PLAN TO BUILDING OFFICIAL, ARCHITECT, AND THE STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. 3. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR CONFORMANCE WITH THE PERMITTED CONSTRUCTION DOCUMENTS. THE SPECIAL INSPECTOR SHALL FURNISH PERIODIC INSPECTION REPORTS TO THE BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONALS OF RECORD. THE FREQUENCY OF REPORTS SHALL BE AS AGREED UPON BY THE BUILDING OFFICIAL. ALL NONCONFORMING ITEMS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF CORRECTED, THE BUILDING OFFICIAL, ARCHITECT, AND THE

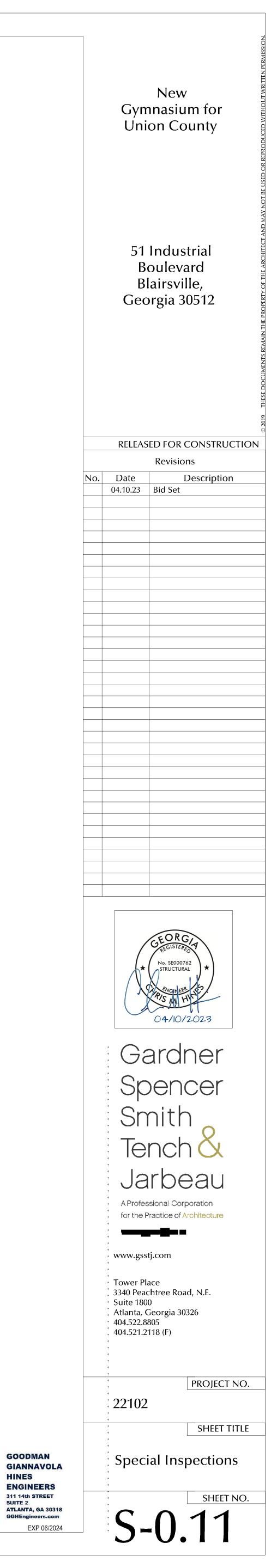
TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY, SHALL SUBMIT A SIGNED & SEALED FINAL REPORT DOCUMENTING COMPLETION OF ALL REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES 5. ALL STRUCTURAL ELEMENTS OF THE BUILDING FRAME SHALL BE INSPECTED FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS AND REQUIREMENTS OF SECTION 1705 OF THE IBC, INCLUDING, BUT NOT BE LIMITED TO THE 6. A QUALITY ASSURANCE PLAN FOR WIND RESISTANCE IS NOT REQUIRED PER 7. A QUALITY ASSURANCE PLAN FOR SEISMIC RESISTANCE IS REQUIRED

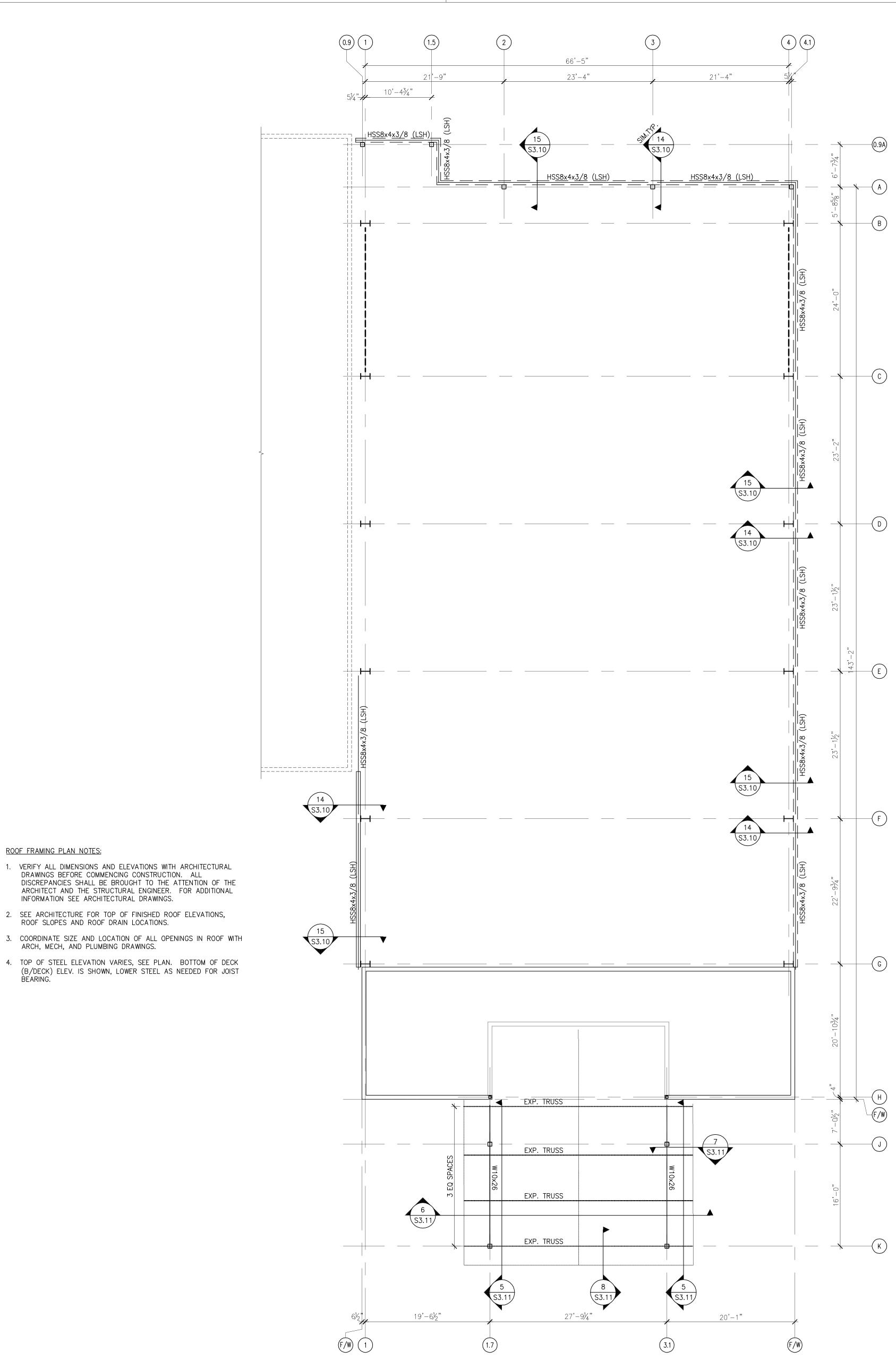
SCHEDULE OF SPECIAL INSPE	ECTIONS				ECTIONS		
MATERIAL / ACTIVITY	SERVICE	APPL Y/N	ICABLE TO THIS PROJECT	MATERIAL / ACTIVITY	SERVICE	APPLI Y/N	CABLE TO THIS PROJE EXTENT
1705.1.1 SPECIAL CASES				1705.3 CONCRETE CONSTRUCTION	I		
NSPECTION OF ANCHORS POST-INSTALLED IN				INSPECTION AND PLACEMENT VERIFICATION OF	SHOP* AND FIELD INSPECTION	Y	PERIODIC
SOLID GROUTED MASONRY: PER RESEARCH REPORTS INCLUDING VERIFICATION OF ANCHOR		PERIODIC OR AS REQUIRED BY THE INSPECTION OF ANCHORS CAST IN CONCRETE.		REINFORCING STEEL	SHOP* AND FIELD INSPECTION	Y	PERIODIC
TYPE, ANCHOR DIMENSIONS, HOLE DIMENSIONS, HOLE CLEANING PROCEDURES, ANCHOR SPACING, EDGE DISTANCES, MASONRY UNIT, GROUT, MASONRY COMPRESSIVE STRENGTH, ANCHOR EMBEDMENT AND TIGHTENING TORQUE	FIELD INSPECTION	Y	RESEARCH REPORT ISSUED BY AN APPROVED SOURCE	INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS PER RESEARCH REPORTS, OR, IF NO SPECIFIC REQUIREMENTS ARE PROVIDED, REQUIREMENTS SHALL BE PROVIDED BY THE REGISTERED DESIGN PROFESSIONAL AND			PERIODIC OR AS REQUIRED BY THE
705.2.1 STEEL CONSTRUCTION				APPROVED BY THE BUILDING OFFICIAL, INCLUDING VERIFICATION OF ANCHOR TYPE, ANCHOR	FIELD INSPECTION	Y	RESEARCH REPOR
FABRICATOR AND ERECTOR DOCUMENTS (VERIFY REPORTS AND CERTIFICATES AS LISTED IN AISC 360, SECTION N 3.2 FOR COMPLIANCE WITH CONSTRUCTION DOCUMENTS)	SUBMITTAL REVIEW	Y	EACH SUBMITTAL	DIMENSIONS, HOLE DIMENSIONS, HOLE CLEANING PROCEDURES, ANCHOR SPACING, EDGE DISTANCES, CONCRETE MINIMUM THICKNESS, ANCHOR EMBEDMENT AND TIGHTENING TORQUE			APPROVED SOURC
ATERIAL VERIFICATION OF STRUCTURAL STEEL	SHOP* AND FIELD INSPECTION	Y	PERIODIC	1. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR UPWARD-INCLINED ORIENTATION THAT RESIST SUSTAINED TENSION LOADS.		N	CONTINUOUS
STRUCTURAL STEEL WELDING:				2. MECHANICAL AND ADHESIVE ANCHORS OTHER		Y	PERIODIC
1. INSPECTION TASKS PRIOR TO WELDING PER AISC 360 TABLE N5.4-1	SHOP* AND FIELD INSPECTION	Y	OBSERVE OR PERFORM AS NOTED	THAN THOSE DEFINED IN NOTE 1.	SHOP* AND FIELD INSPECTION	Y	PERIODIC
2. INSPECTION TASKS DURING WELDING PER AISC 360 TABLE N5.4-2	SHOP* AND FIELD INSPECTION	Y	OBSERVE	PRIOR TO PLACEMENT, FRESH CONCRETE		· ·	
<ul><li>3. INSPECTION TASKS AFTER WELDING PER AISC 360 TABLE N5.4-3</li><li>4. NONDESTRUCTIVE TESTING (NDT) OF</li></ul>	SHOP* AND FIELD INSPECTION	Y	OBSERVE OR PERFORM AS NOTED	SAMPLING, PERFORM SLUMP AND AIR CONTENT TESTS AND DETERMINE TEMPERATURE OF CONCRETE AND PERFORM ANY OTHER TESTS AS SPECIFIED IN CONSTRUCTION DOCUMENTS.	SHOP* AND FIELD INSPECTION	Y	CONTINUOUS
WELDED JOINTS		N		INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION	SHOP* AND FIELD INSPECTION	Y	CONTINUOUS
A. COMPLETE PENETRATION GROOVE WELDS 5/16" OR GREATER IN RISK CATEGORY III OR IV	SHOP OR FIELD ULTRASONIC TESTING - 100%	N	PERIODIC	TECHNIQUES	SHOP AND FIELD INSPECTION	ř	
B. COMPLETE PENETRATION GROOVE WELDS 5/16" OR GREATER IN RISK CATEGORY II	SHOP OR FIELD ULTRASONIC TESTING - 10% OF WELDS MINIMUM	N	PERIODIC	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	SHOP* AND FIELD INSPECTION	Y	PERIODIC
C. WELDED JOINTS SUBJECT TO FATIGUE WHEN REQUIRED BY AISC 360, APPENDIX 3, TABLE A-3.1	SHOP OR FIELD RADIOGRAPHIC OR ULTRASONIC TESTING	N	PERIODIC	ERECTION OF PRECAST CONCRETE MEMBERS		N	PERIODIC
D. FABRICATOR'S NDT REPORTS WHEN FABRICATOR PERFORMS NDT	VERIFY REPORTS	N	EACH SUBMITTAL	VERIFICATION OF IN-SITU CONCRETE STRENGTH PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	FIELD TESTING AND REVIEW OF LABORATORY REPORTS	Y	PERIODIC
TRUCTURAL STEEL BOLTING:	SHOP AND FIELD INSPECTION	Y		INSPECTION OF FORMWORK FOR SHAPE, LINES, LOCATION AND DIMENSIONS	FIELD INSPECTION	Y	PERIODIC
1. INSPECTION TASKS PRIOR TO BOLTING (OBSERVE, OR PERFORM TASKS FOR EACH BOLTED CONNECTION, IN ACCORDANCE WITH QA TASKS LISTED IN AISC 360, TABLE N5.6-1)		Y	OBSERVE OR PERFORM AS NOTED	CONCRETE STRENGTH TESTING AND VERIFICATION OF COMPLIANCE WITH CONSTRUCTION DOCUMENTS	FIELD TESTING AND REVIEW OF LABORATORY REPORTS	Y	PERIODIC
2. INSPECTION TASKS DURING BOLTING (OBSERVE			OBSERVE	1705.4 MASONRY CONSTRUCTION			
THE QA TASKS LISTED IN AISC 360, TABLE N5.6-2) A. PRE-TENSIONED & SLIP CRITICAL JOINTS				QUALITY ASSURANCE:	1	1 1	
1) TURN-OF-NUT WITH MATCHING MARKINGS		Y	PERIODIC	1. VERIFY COMPLIANCE WITH APPROVED SUBMITTALS	SUBMITTAL REVIEW	Y	PRIOR TO CONSTRUCTION
2) DIRECT TENSION INDICATOR		Y	PERIODIC	2. VERIFICATION OF F'M AND F'AAC PRIOR TO CONSTRUCTION	TESTING BY UNIT STRENGTH METHOD OR PRISM TEST METHOD	Y	PRIOR TO CONSTRUCTION
3) TWIST-OFF TYPE TENSION CONTROL BOLT 4) TURN-OF-NUT WITHOUT MATCHING		Y Y	PERIODIC	3. VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) OF SELF-CONSOLIDATING GROUT AS DELIVERED TO THE PROJECT	TESTING BY UNIT STRENGTH METHOD OR PRISM TEST METHOD	Y	PERIODIC
MARKINGS 5) CALIBRATED WRENCH		Y	CONTINUOUS	AS MASONRY CONSTRUCTION BEGINS:			
B. SNUG TIGHT JOINTS		Y	PERIODIC	1. VERIFY PROPORTIONS OF SITE PREPARED MORTAR	FIELD INSPECTION	Y	PERIODIC
3. INSPECTION TASKS AFTER BOLTING (PERFORM TASKS FOR EACH BOLTED CONNECTION IN ACCORDANCE WITH QA TASKS LISTED IN AISC 360,		Y	PERFORM	2. VERIFY GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR RODS	FIELD INSPECTION	Y	PERIODIC
TABLE N5.6-3) ISUAL INSPECTION OF EXPOSED CUT SURFACES				3. SAMPLE PANEL CONSTRUCTION	FIELD INSPECTION	N	PERIODIC
DF GALVANIZED STRUCTURAL STEEL MAIN MEMBERS AND EXPOSED CORNERS OF THE	SHOP* AND FIELD INSPECTION	Y	PERIODIC	PRIOR TO GROUTING:	I		
RECTANGULAR HSS FOR CRACKS SUBSEQUENT TO GALVANIZING				1. VERIFY GROUT SPACE IS CLEAN PRIOR TO GROUTING	FIELD INSPECTION	Y	PERIODIC
MBEDMENTS (VERIFY DIAMETER, GRADE, TYPE, ENGTH, EMBEDMENT. SEE 1705.3 FOR ANCHORS)	FIELD INSPECTION	Y	PERIODIC	2. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS	FIELD INSPECTION	Y	PERIODIC
/ERIFY MEMBER LOCATIONS, BRACES, STIFFENERS, ND APPLICATION OF JOINT DETAILS AT EACH CONNECTION COMPLY WITH CONSTRUCTION	FIELD INSPECTION	Y	PERIODIC	3. VERIFY PROPORTIONS OF SITE PREPARED GROUT	FIELD INSPECTION	Y	PERIODIC
					NSTRUCTION:	1	
1705.6 SOILS				1. MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS	FIELD INSPECTION	Y	PERIODIC
/ERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	FIELD INSPECTION	Y	PERIODIC	2. PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION	FIELD INSPECTION	Y	PERIODIC
/ERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	FIELD INSPECTION	Y	PERIODIC	3. SIZE AND LOCATION OF STRUCTURAL MEMBERS 4. TYPE, SIZE, LOCATION OF ANCHORS, INCLUDING	FIELD INSPECTION	Y	PERIODIC
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	FIELD INSPECTION	Y	PERIODIC	OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	FIELD INSPECTION	Y	PERIODIC
/ERIFY USE OF PROPER MATERIALS, DENSITIES, ND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL	FIELD INSPECTION	Y	CONTINUOUS	5. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40*F) OR HOT	FIELD INSPECTION	Y	PERIODIC
PRIOR TO PLACEMENT OF CONTROLLED FILL, DBSERVE SUBGRADE AND VERIFY THAT SITE HAS	FIELD INSPECTION	Y	PERIODIC	6. PLACEMENT OF GROUT	FIELD INSPECTION	Y	CONTINUOUS
BEEN PREPARED PROPERLY				7. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS	FIELD INSPECTION	Y	PERIODIC
				NOTES: THE INSPECTION AND TESTING AGENT(S) SHALL BE EN CONTRACTOR OR SUBCONTRACTOR WHOSE WORK IS DISCLOSED TO THE BUILDING OFFICIAL PRIOR TO CON AND/OR TESTING AGENCIES MAY BE SUBJECT TO THE (*) SHOP INSPECTIONS OF FABRICATED ITEMS ARE NO	TO BE INSPECTED OR TESTED. ANY CONFL IMENCING WORK. THE QUALIFICATIONS OF APPROVAL OF THE BUILDING OFFICIAL AND	LICT OF IN THE SPEC	ITEREST MUST BE CIAL INSPECTOR(S) DESIGN PROFESSION/

IBC SECTION 1704.2.5.1 AND LISTED IN ACTIVITY 1709.2. OBSERVE: OBSERVE ON A RANDOM BASIS, OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS. PERFORM: THESE TASKS SHALL BE PERFORMED FOR EACH WELDED JOINT, BOLTED CONNECTION, OR STEEL ELEMENT



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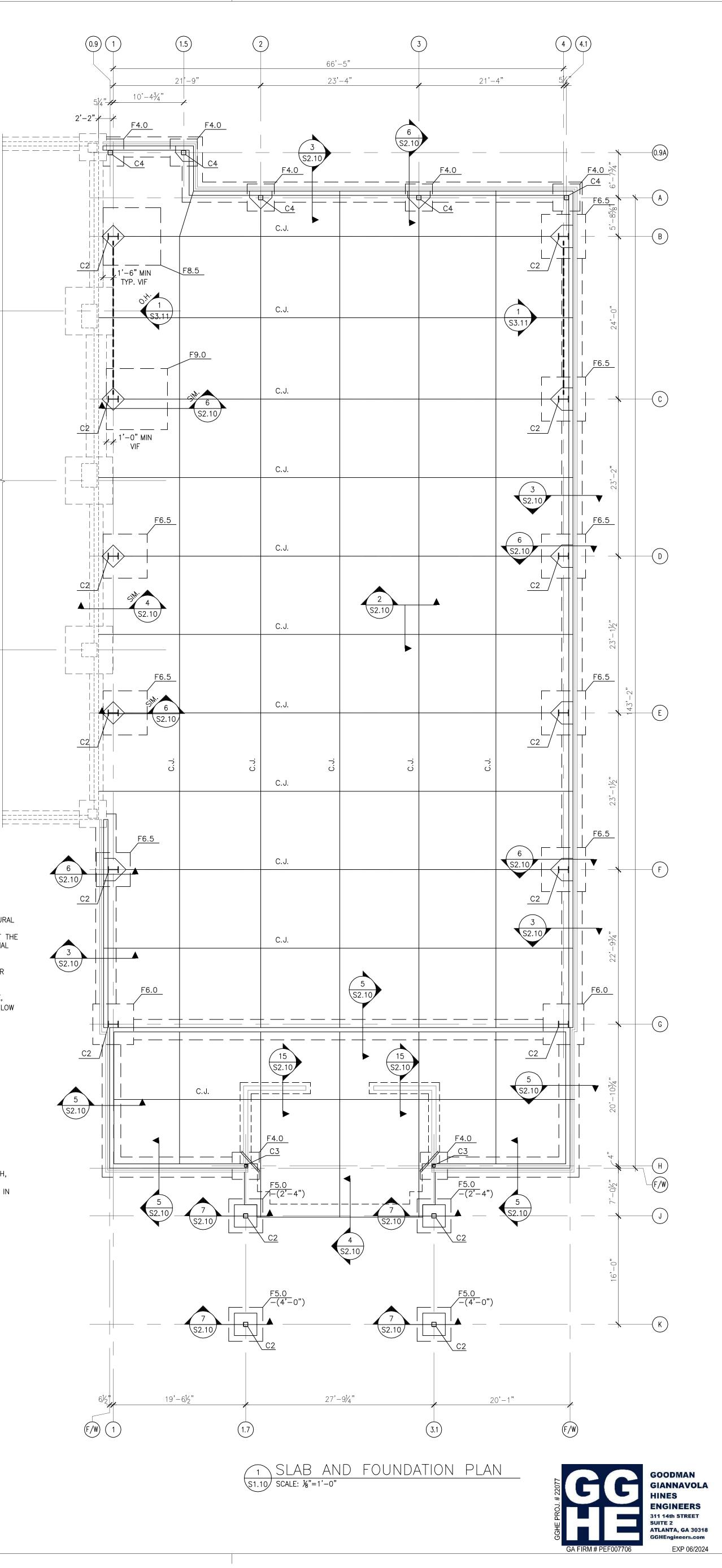


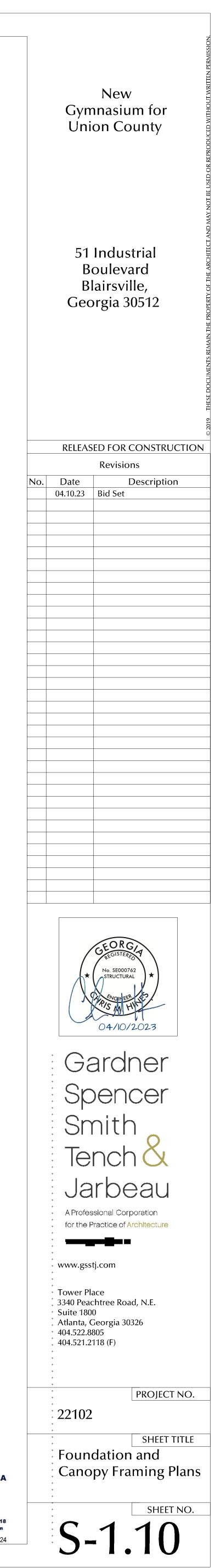


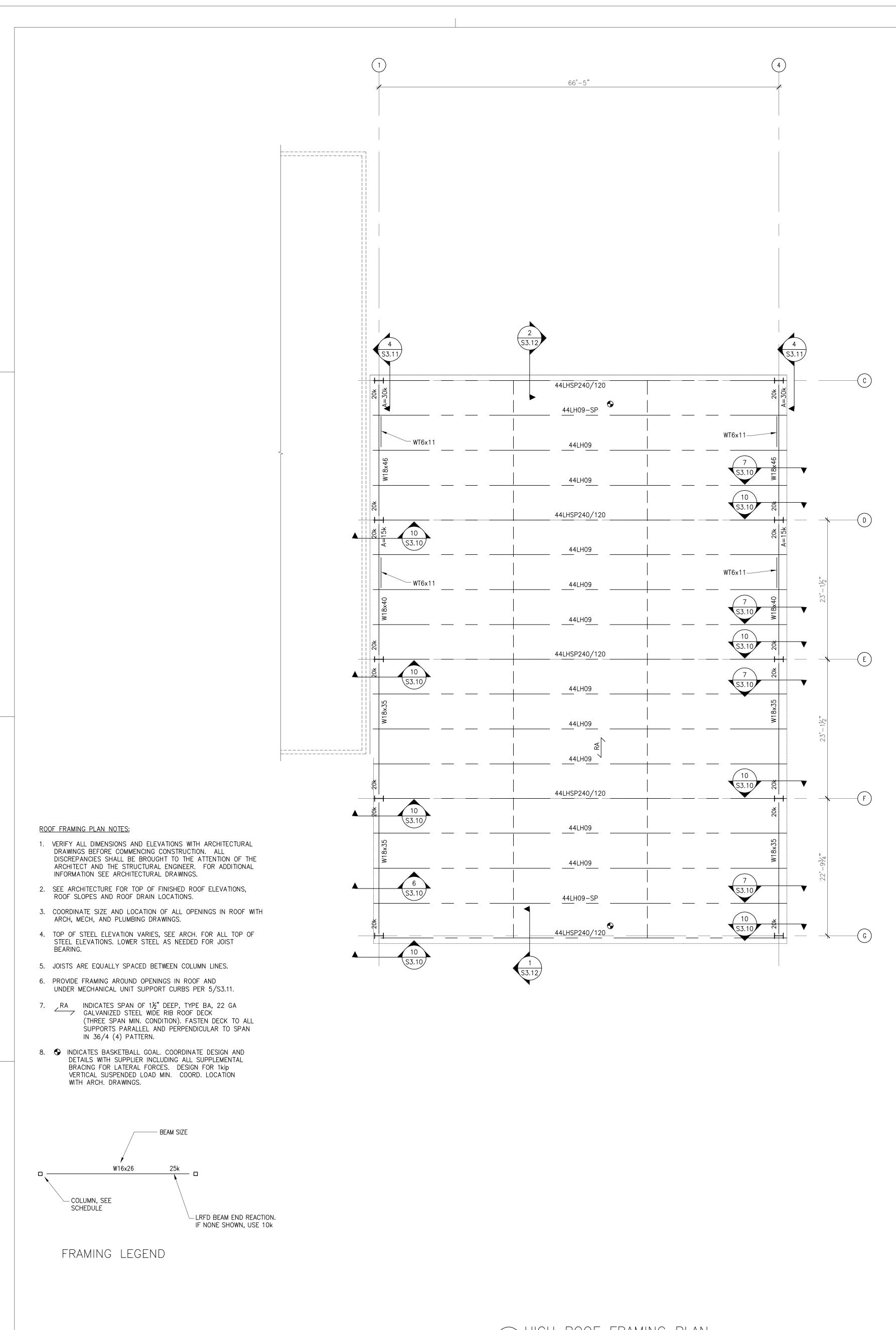
2 ROOF FRAMING PLAN S1.10 SCALE: 1/8"=1'-0"

FOUNDATION PLAN NOTES:

- 1. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS BEFORE COMMENCING CONSTRUCTION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER. FOR ADDITIONAL INFORMATION SEE ARCHITECTURAL DRAWINGS.
- 2. TOP OF CONCRETE SLAB ELEVATION = +0'-0". ALL OTHER DIMENSIONS ARE MEASURED FROM THIS DATUM.
- 3. SLAB ON GRADE SHALL BE 4" NORMAL WEIGHT CONCRETE, REINFORCED WITH 6x6 W1.4xW1.4 W.W.F. LOCATED 1½" BELOW THE TOP OF SLAB, UNO.
- 4. C.J. INDICATES CONTROL JOINT, SEE 2/S2.10
- 5. TOP OF FOOTING ELEVATION = -2'-0" U.N.O.
- 6. Fxx INDICATES FOOTING TYPE. SEE 1/S2.10 FOR FOOTING SCHEDULE. 7. Cx INDICATES COLUMN TYPE. SEE 1/S3.10 FOR COLUMN
- SCHEDULE. 8. SEE ARCHITECTURAL DRAWINGS FOR ANY SLOPES, DEPRESSIONS, TRENCHES, ETC. IN SLAB ON GRADE.
- 9. SEE S2.10 FOR TYPICAL CMU WALL DETAILS AND LINTEL SCHEDULE
- 10. INDICATES (2)  $\#4 \times 4^{2}-0^{2}$  AT SLAB MID-DEPTH, 3" APART. PROVIDE AT ALL RE-ENTRANT CORNERS AND INTERSECTIONS, AT ALL DISCONTINUOUS CONTROL JOINTS IN SLAB-ON-GRADE AND AS SHOWN ON PLAN.





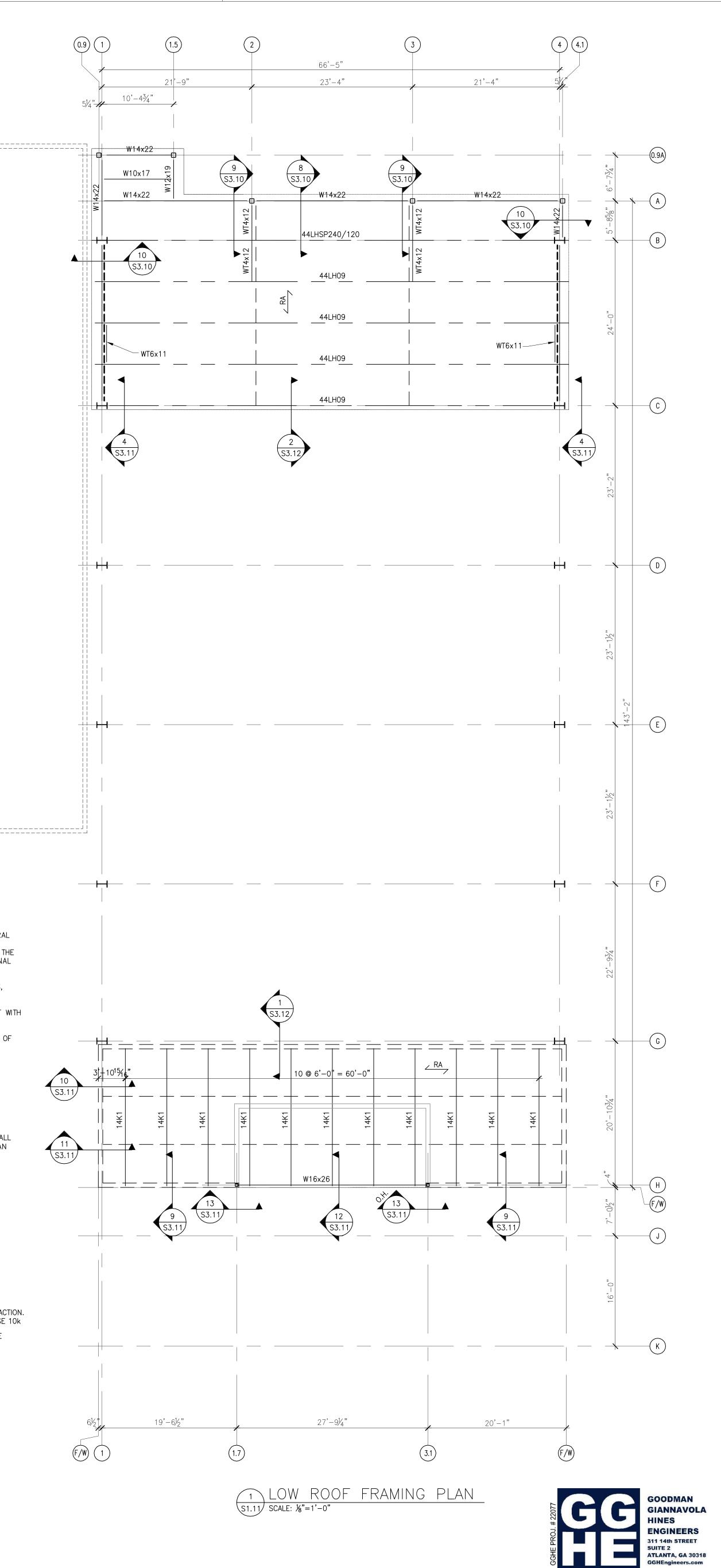


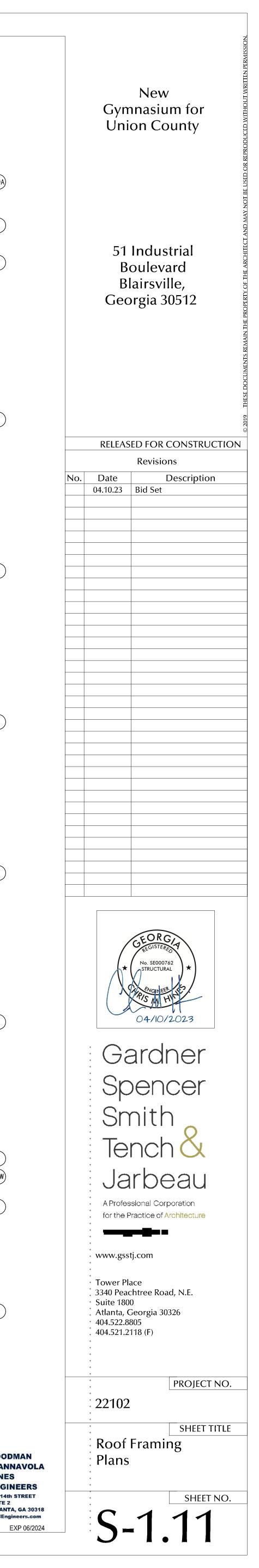
## 2 HIGH ROOF FRAMING PLAN S1.11 SCALE: 1/2-0"

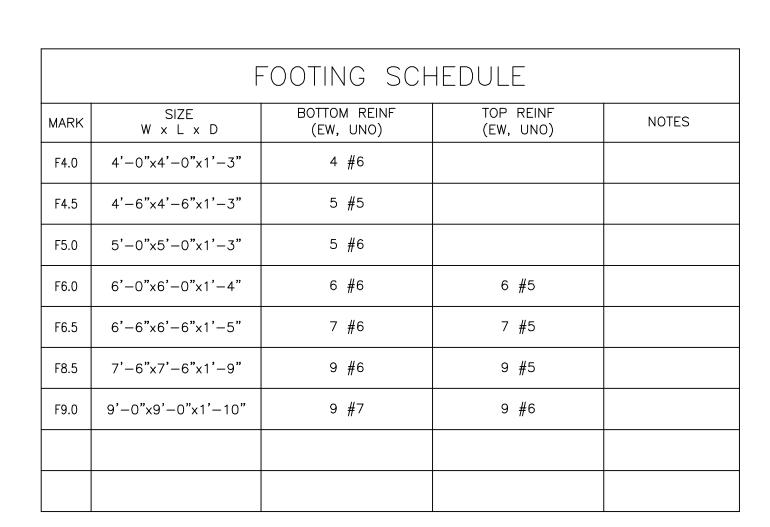
– BEAM SIZE W16x26 25k ┘<del>~−−−−−−−−−−−</del> ⊂ LRFD BEAM END REACTION. COLUMN, SEE SCHEDULE IF NONE SHOWN, USE 10k - BRACED FRAME, SEE 1/S3.11

FRAMING LEGEND

- 7. <u>RA</u> INDICATES SPAN OF 1½" DEEP, TYPE BA, 22 GA GALVANIZED STEEL WIDE RIB ROOF DECK (THREE SPAN MIN. CONDITION). FASTEN DECK TO ALL SUPPORTS PARALLEL AND PERPENDICULAR TO SPAN IN 36/4 (4) PATTERN.
- 6. PROVIDE FRAMING AROUND OPENINGS IN ROOF AND UNDER MECHANICAL UNIT SUPPORT CURBS PER 5/S3.11.
- 5. JOISTS ARE EQUALLY SPACED BETWEEN COLUMN LINES
- 4. TOP OF STEEL ELEVATION VARIES, SEE ARCH. FOR ALL TOP OF STEEL ELEVATIONS. LOWER STEEL AS NEEDED FOR JOIST BEARING.
- 3. COORDINATE SIZE AND LOCATION OF ALL OPENINGS IN ROOF WITH ARCH, MECH, AND PLUMBING DRAWINGS.
- 2. SEE ARCHITECTURE FOR TOP OF FINISHED ROOF ELEVATIONS, ROOF SLOPES AND ROOF DRAIN LOCATIONS.
- ROOF FRAMING PLAN NOTES: 1. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS BEFORE COMMENCING CONSTRUCTION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER. FOR ADDITIONAL INFORMATION SEE ARCHITECTURAL DRAWINGS.

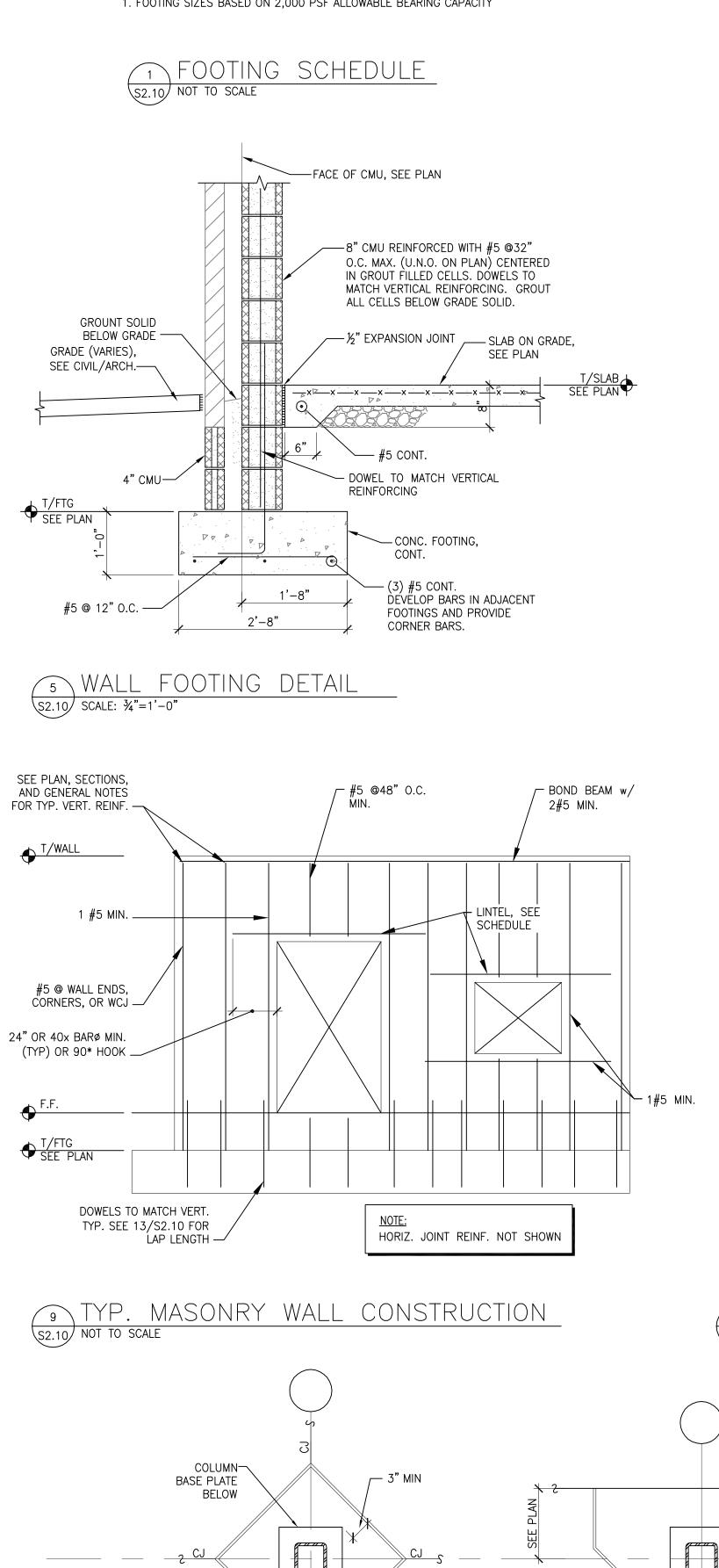






NOTES: 1. FOOTING SIZES BASED ON 2,000 PSF ALLOWABLE BEARING CAPACITY

"0 <sup>™</sup> <sup>™</sup>



TROWELED FINISH TO ALIGN -

WITH SOG (TOLERANCE OF

(2) #4 × 4'-0" AT 3" CC

PLACE AT SLAB MID-DEPTH -----

WHERE CJ DOES NOT OCCUR

SURFACE TO MATCH

ADJACENT SOG)

EXTEND COLUMN ISOLATION BLOCK AS NEEDED AT BRACED FRAMES TO ACCOMODATE THE DIAGONAL BRACE AND CONNECTION.

LISOLATION JOINT

(4 SIDES)

NOTE:

14 SLAB ISOLATION JOINT AT COLUMN S2.10 SCALE: 3/4"=1'-0"

ISOLATION ------

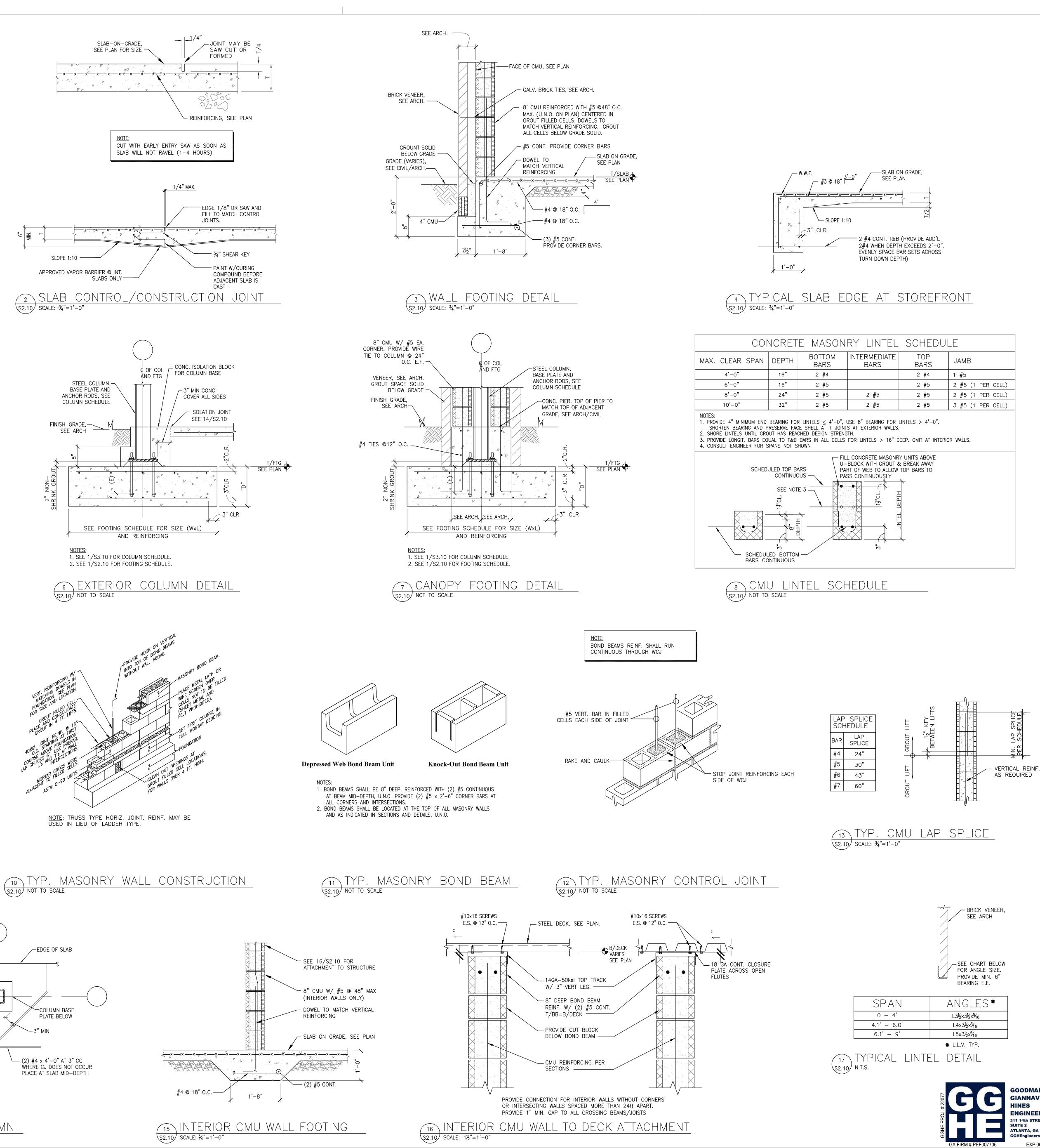
JOINT

TROWELED FINISH TO ALIGN -

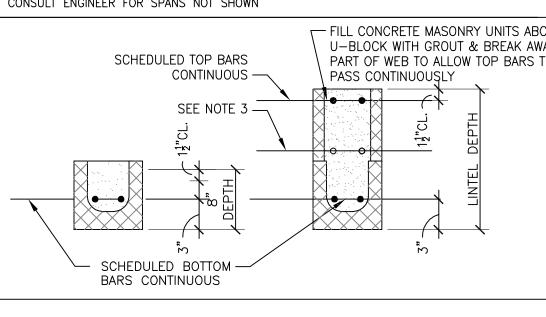
SURFACE TO MATCH

ADJACENT SOG)

WITH SOG (TOLERANCE OF



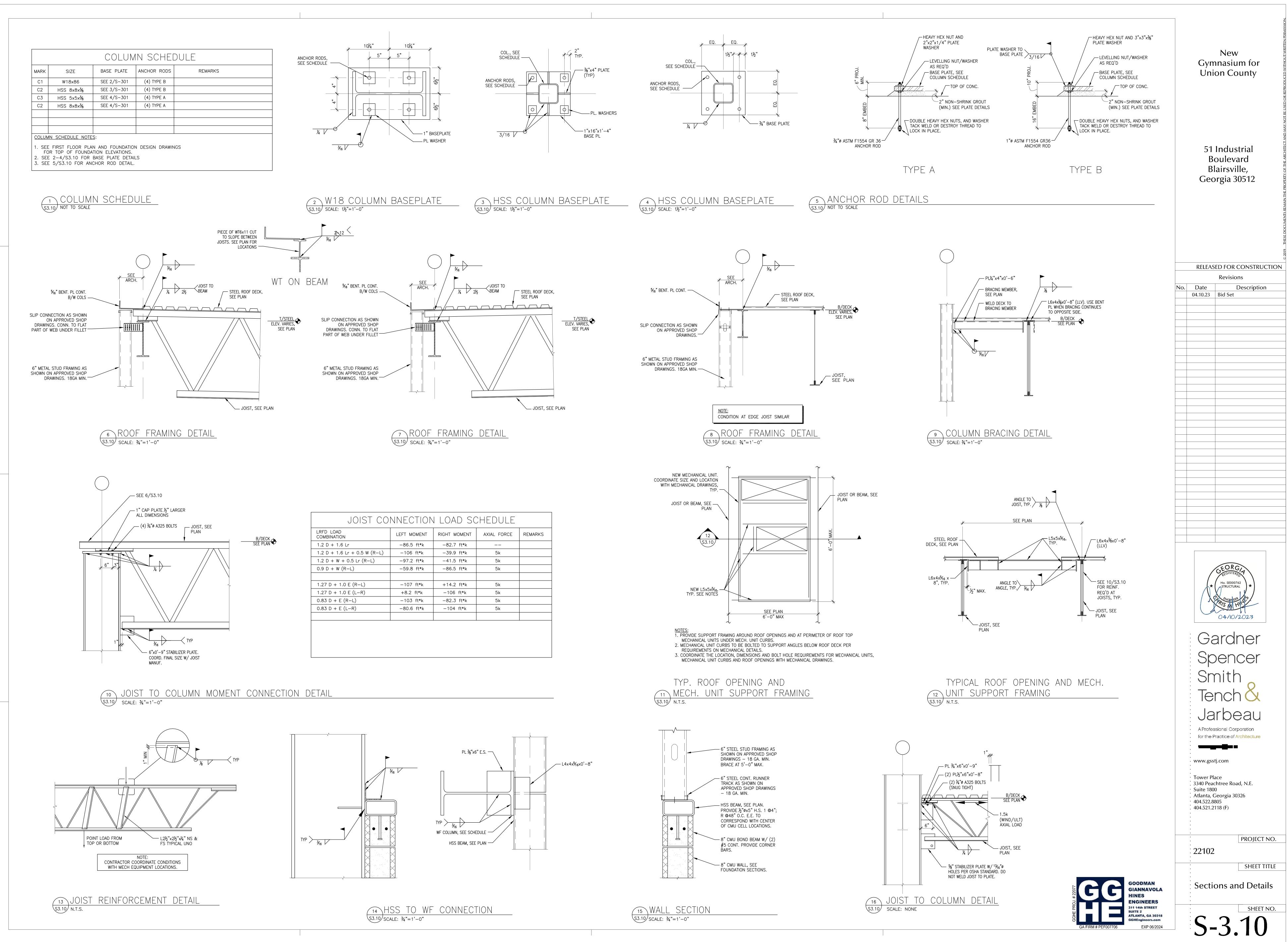
CONCRETE MASONRY LINTEL SCHEDULE												
MAX. CLEAR SPAN	DEPTH	BOTTOM BARS	INTERMEDIATE BARS	TOP BARS	JAMB							
4'-0"	16"	2 #4		2 #4	1 #5							
6'-0"	16"	2 #5		2 #5	2 #5 (1 PER CELL)							
8'-0"	24"	2 <b>#</b> 5	2 #5	2 #5	2 #5 (1 PER CELL)							
10'-0"	32"	2 <b>#</b> 5	2 #5	2 #5	3 #5 (1 PER CELL)							
NOTES:				NTE  S > 4' - 0"								



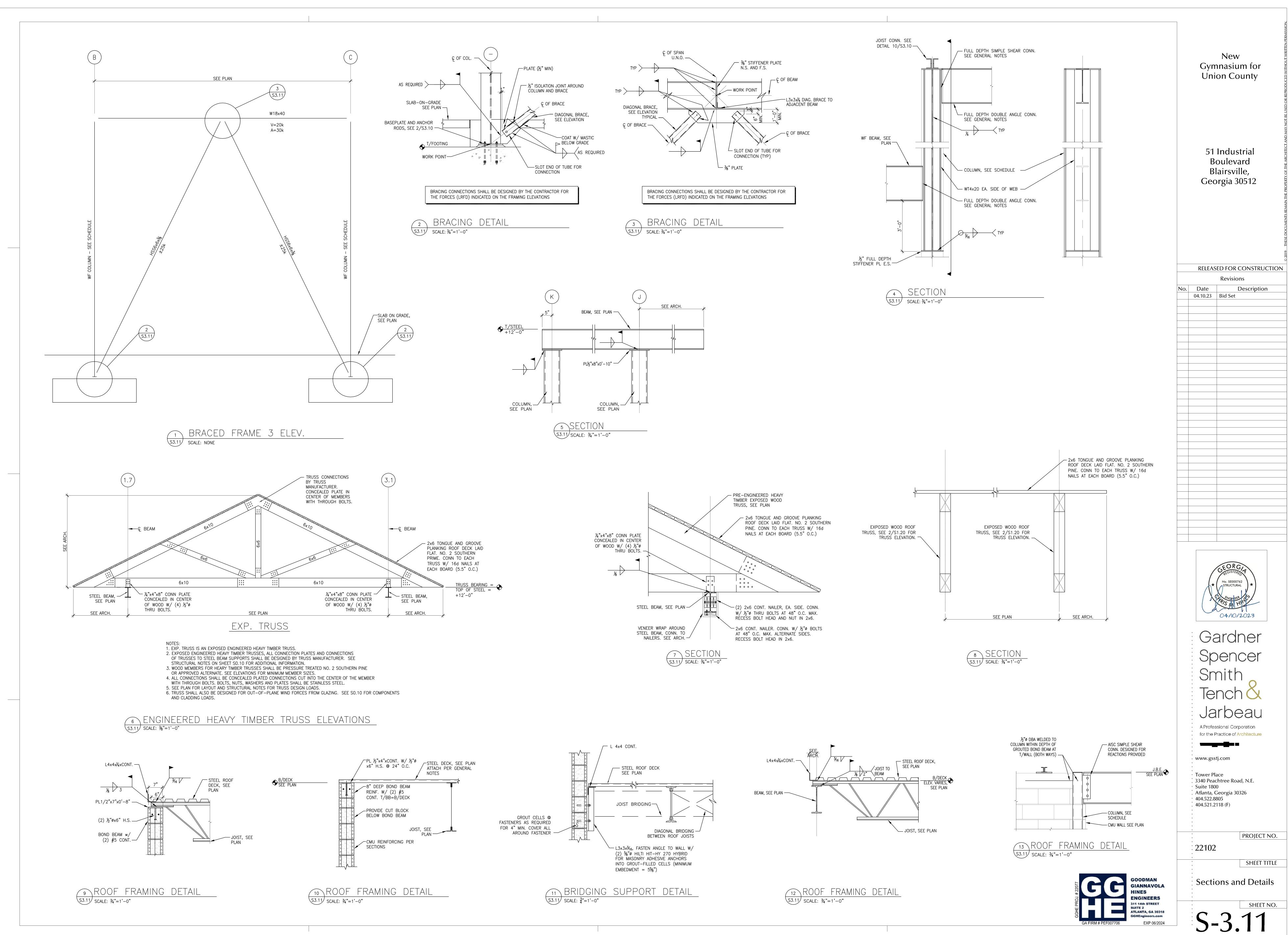
		BRICK VENEER, SEE ARCH SEE CHART BELOW FOR ANGLE SIZE. PROVIDE MIN. 6" BEARING E.E.
	SPAN	ANGLES*
Ī	0 – 4'	L3½×3½×516
Ī	4.1' – 6.0'	L4×3½×516
Ī	6.1' – 9'	L5x3½x5/16
•		* L.L.V. TYP.
17	typical linte	el detail

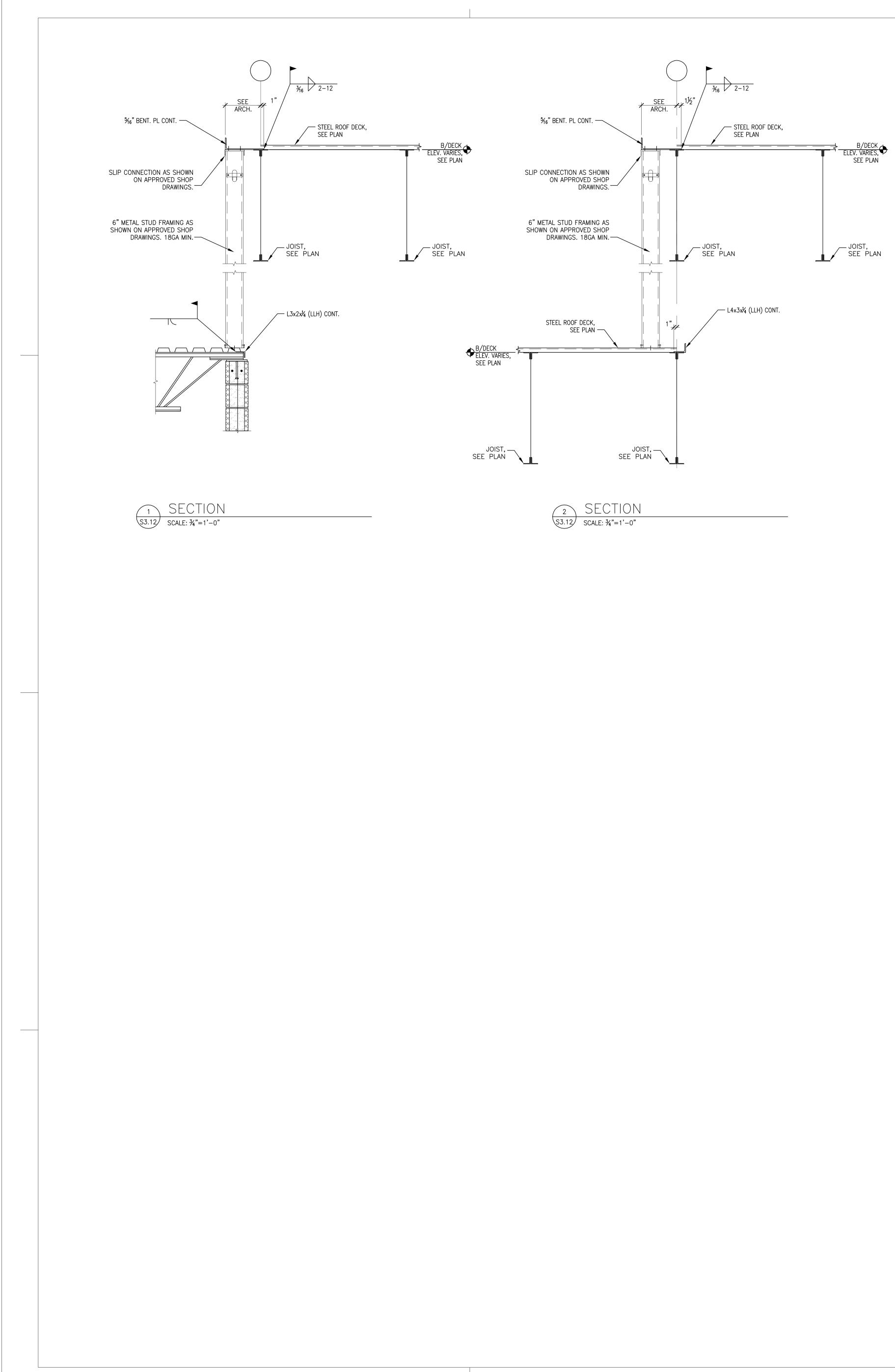
GOODMAN GIANNAVOLA HINES ENGINEERS 311 14th STREET SUITE 2 ATLANTA, GA 30318 **GGHEngineers.com** EXP 06/2024





	LEFT MOMENT	RIGHT MOMENT	AXIAL FORCE	REMARKS
	—86.5 ft*k	—82.7 ft*k		
- 0.5 W (R-L)	-106 ft*k	—39.9 ft*k	5k	
Lr (R–L)	-97.2 ft*k	-41.5 ft*k	5k	
)	—59.8 ft*k	—86.5 ft*k	5k	
(R-L)	-107 ft*k	+14.2 ft*k	5k	
(L-R)	+8.2 ft*k	—106 ft*k	5k	
_)	—103 ft*k	-82.3 ft*k	5k	
?)	—80.6 ft*k	—104 ft*k	5k	

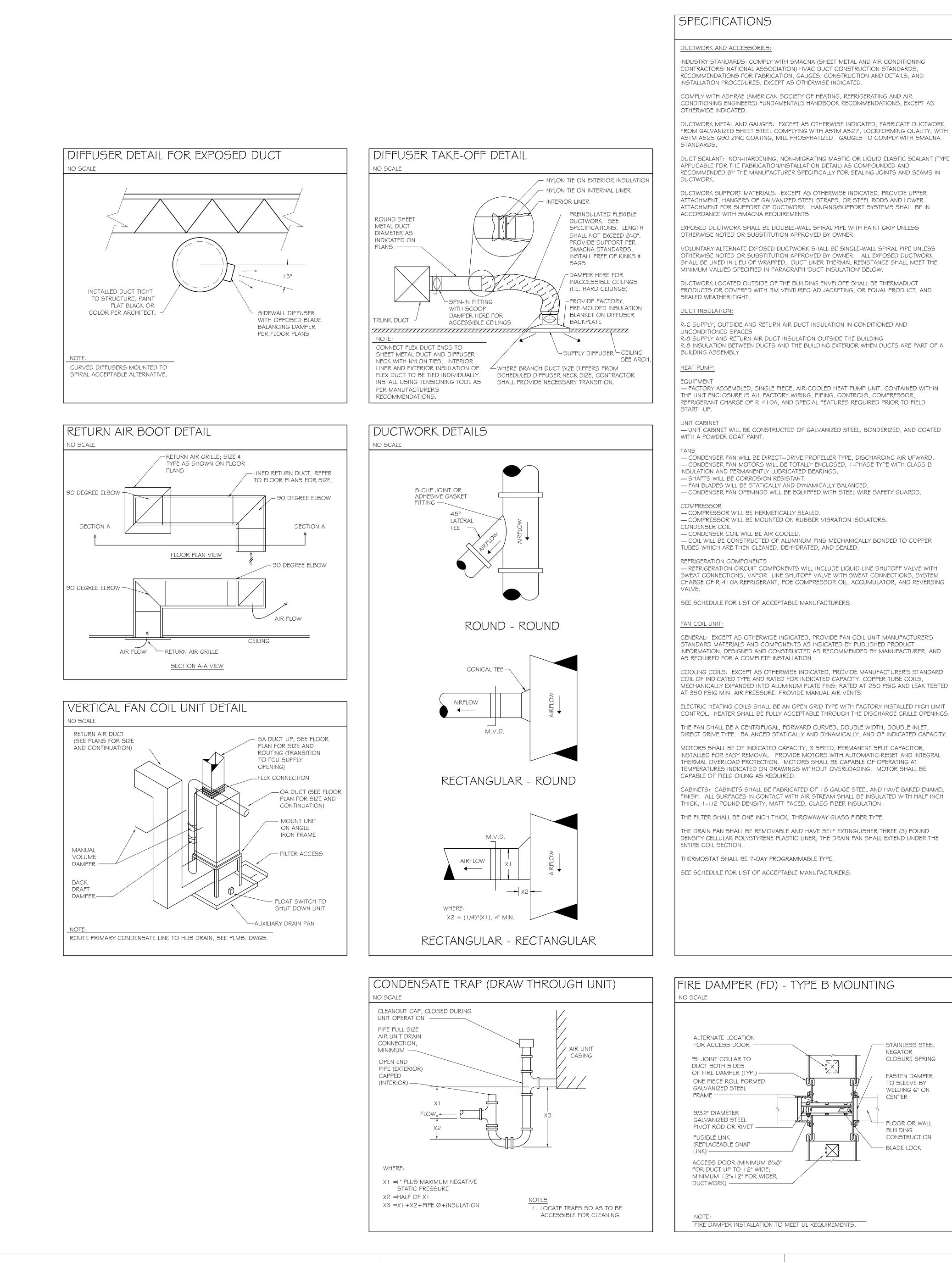






ENGINEERS EXP 06/2024





## SPECIFICATIONS

ALL MATERIAL IN PLENUM MUST MEET FIRE AND SMOKE SPREAD AS REQUIRED BY NFPA 90A.

INCH, OR I X I X I INCH SHALL BE AVAILABLE.

OPTIONAL ROUND DAMPER SHALL BE CONSTRUCTED OF HEAVY GAUGE STEEL. DAMPER MUST BE OPERABLE FROM THE FACE OF THE DIFFUSER. OPTIONAL DIRECTIONAL BLOW CLIPS SHALL BE AVAILABLE TO RESTRICT THE DISCHARGE AIR IN CERTAIN DIRECTIONS. OPTIONAL MOLDED INSULATION BLANKET SHALL BE AVAILABLE. THE INSULATION WILL BE R-G, FOIL-BACKED, AND PROVIDE AN ADDITIONAL 1-INCH GAP AROUND THE NECK TO INSTALL INSULATED FLEX DUCT. THE MANUFACTURER SHALL PROVIDE PUBLISHED PERFORMANCE DATA FOR THE SQUARE

CEILING FAN:

WALL LOUVERS:

## GUARANTEE:

GUARANTEE THAT EACH PIECE OF APPARATUS SHALL BE OF THE CUSTOMARY STANDARD AND QUALITY FURNISHED BY THE DESIGNED MANUFACTURER FOR THAT CATALOG NUMBER.

GUARANTEE THAT THE AIR SYSTEMS SHALL OPERATE WITHOUT AERODYNAMIC NOISE GENERATED FROM THE FAULTY INSTALLATION OF DUCT WORK OR ANY COMPONENT OF THE AIR DISTRIBUTION SYSTEM.

GUARANTEE THAT ALL SYSTEMS AND COMPONENTS SHALL BE PROVIDED WITH A ONE YEAR WARRANTY FROM THE TIME OF DATE OF SUBSTANTIAL COMPLETION. THE WARRANTY SHALL COVER ALL MATERIALS AND WORKMANSHIP. DURING THIS WARRANTY PERIOD, ALL DEFECTS IN MATERIALS AND WORKMANSHIP SHALL BE CORRECTED BY REPAIR OR REPLACEMENT WITHOUT INCURRING ADDITIONS TO THE CONTRACT.

## GENERAL NOTES:

REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL CEILING MOUNTED EQUIPMENT. ALL DUCT DIMENSIONS INDICATED IN THESE DOCUMENTS ARE INSIDE-CLEAR DIMENSIONS.

PORTIONS OF DUCTWORK OR PIPING VISIBLE THROUGH GRILLES AND REGISTERS IN FINISHED AREAS SHALL BE PAINTED FLAT BLACK. PAINT BLACK BEHIND ALL GRILLES.

ALL WIRING IN THE CEILING PLENUM SHALL BE PLENUM RATED CABLE. MOUNTING FRAME OF CEILING MOUNTED AIR DISTRIBUTION DEVICES SHALL BE COMPATIBLE

WITH CEILING TYPE. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPE. ALL FIRE SEPARATIONS MUST BE PROTECTED WHEN APPLICABLE.

PROVIDE NEW FILTERS (MERV 7 OR BETTER PER OWNER) FOR ALL APPLICABLE HVAC

EQUIPMENT AT THE END OF CONSTRUCTION.

ALL ROOF PENETRATIONS TO BE 12" APART AND AT LEAST 12" AWAY FROM CURBS, WALLS, AND DRAIN SUMPS TO PROVIDE ROOFING CONTRACTOR WITH SUFFICIENT ACCESS FOR FLASHING EACH ROOF PENETRATION.

SUBSTITUTIONS MUST BE APPROVED IN WRITING BY ARCHITECT PRIOR TO BID SUBMISSION.

CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS AND SHALL BE FAMILIAR WITH THE SCOPE AND REQUIREMENTS OF THIS PROJECT. ANY DISCREPANCIES OR LACK OF CLARITY IN THE DOCUMENTS SHALL BE IDENTIFIED TO THE ARCHITECT OR ENGINEER PRIOR TO THE SUBMISSION OF PRICING BIDS. WITH A SUBMITTED BID, CONTRACTOR IS ACCEPTING THESE DOCUMENTS AS SUFFICIENT DEFINITION OF THE SCOPE OF WORK, AND ANY ADDITIONAL COSTS BASED ON UNCLARITY OF CONTRACT DOCUMENTS WILL NOT BE CONSIDERED.

THE CONTRACTOR SHALL REFERENCE THE FULL SET OF CONSTRUCTION DOCUMENTS DURING PRICING AND CONSTRUCTION FOR COORDINATION BETWEEN DISCIPLINES RELATIVE TO THE MECHANICAL SCOPE.

## DIFFUSERS, GRILLES, & REGISTERS:

## EGGCRATE GRILLE:

RETURN GRILLES SHALL BE TITUS MODEL 50F FOR THE SIZES AND MOUNTING TYPES AS SHOWN ON THE PLANS AND OUTLET SCHEDULE. RETURN GRILLES MUST PROVIDE A FREE AREA OF AT LEAST 90%. OUTER BORDERS SHALL BE CONSTRUCTED OF HEAVY EXTRUDED ALUMINUM WITH A THICKNESS OF 0.040-0.050 INCH AND SHALL HAVE COUNTERSUNK SCREW HOLES FOR A NEAT APPEARANCE. BORDER WIDTH SHALL BE 11/4 INCHES ON ALL SIDES AND SHALL BE INTERLOCKED AT THE FOUR CORNERS AND MECHANICALLY STAKED TO FORM A RIGID FRAME. CHOICE OF THREE SIZES OF ALUMINUM GRID: 1/2 X 1/2 X 1/2 INCH. 1/2 X 1/2 X 1

ED-BLADE VOLUME DAMPER SHALL BE CONSTRUCTED STEEL OR ALUMINUM. DAMPER MUST BE OPERABLE FROM THE FACE OF THE GRILLE.

## DOUBLE DEFLECTION REGISTERS:

ALUMINUM SUPPLY GRILLES SHALL BE OF THE SIZES AND MOUNTING TYPES SHOWN ON THE PLANS AND OUTLET SCHEDULE. THE DEFLECTION BLADES SHALL BE AVAILABLE PARALLEL TO THE LONG OR SHORT DIMENSION OF THE GRILLE OR REGISTER. CONSTRUCTION SHALL BE OF ALUMINUM WITH A 11/4-INCH WIDE BORDER ON ALL SIDES. SIZES 24 X 24 INCHES AND BELOW SHALL HAVE ROLL-FORMED BORDERS WITH A MINIMUM THICKNESS OF 0.032 INCH. LARGER SIZES SHALL BE CONSTRUCTED USING CONTINUOUS ALUMINUM EXTRUSIONS WITH A NOMINAL THICKNESS OF 0.040 THROUGH 0.050 INCH AND SHALL BE INTERLOCKED AT THE FOUR CORNERS AND MECHANICALLY STAKED TO FORM A RIGID FRAME. SCREW HOLES SHALL BE COUNTERSUNK FOR A NEAT APPEARANCE.

DEFLECTION BLADES SHALL BE CONTOURED TO A SPECIFICALLY DESIGNED AND TESTED CROSS-SECTION TO MEET PUBLISHED TEST PERFORMANCE DATA. BLADES SHALL BE SPACED ON ¾-INCH CENTERS. BLADES SHALL HAVE FRICTION PIVOTS ON BOTH SIDES TO ALLOW INDIVIDUAL BLADE ADJUSTMENT WITHOUT LOOSENING OR RATTLING OR BE INSERTED THROUGH THE FRAME AND HELD TIGHT WITH STEEL FRICTION WIRE INTERLOCKED TO THE FRAME ON BOTH ENDS OF EACH SIDE. PLASTIC BLADE PIVOTS ARE NOT ACCEPTABLE.

OPTIONAL OPPOSED BLADE VOLUME DAMPER SHALL BE CONSTRUCTED OF HEAVY GAUGE STEEL OR ALUMINUM. DAMPER MUST BE OPERABLE FROM THE FACE OF THE GRILLE.

THE GRILLE FINISH SHALL BE #26 WHITE. THE FINISH SHALL BE AN ANODIC ACRYLIC PAINT, BAKED AT 3 I 5° F FOR 30 MINUTES. THE PENCIL HARDNESS MUST BE HB TO H. THE PAINT MUST PASS A 100-HOUR ASTM B117 CORROSIVE ENVIRONMENTS SALT SPRAY TEST WITHOUT CREEPAGE. BLISTERING OR DETERIORATION OF FILM. THE PAINT MUST PASS A 250-HOUR ASTM D870 WATER IMMERSION TEST. THE PAINT MUST ALSO PASS THE ASTM D2794 REVERSE IMPACT CRACKING TEST WITH A 50-INCH POUND FORCE APPLIED.

THE MANUFACTURER SHALL PROVIDE PUBLISHED PERFORMANCE DATA FOR THE GRILLE. THE GRILLE SHALL BE TESTED IN ACCORDANCE WITH ANSI/ASHRAE STANDARD 70-2006. PLAQUE DIFFUSERS:

## ARCHITECTURAL SQUARE PANEL CEILING DIFFUSERS SHALL BE OF THE SIZES AND MOUNTING

TYPES SHOWN ON THE PLANS AND OUTLET SCHEDULE. THE FACE PANEL IS REMOVABLE BY MEANS OF FOUR HANGER BRACKETS. THE EXPOSED SURFACE OF THE FACE PANEL SHALL BE SMOOTH, FLAT, AND FREE OF VISIBLE FASTENERS. THE BACK OF THE FACE PANEL SHALL HAVE AN AERODYNAMICALLY SHAPED. ROLLED EDGE TO ENSURE A TIGHT HORIZONTAL DISCHARGE PATTERN. CEILING DIFFUSERS WITH A 24 X 24-INCH FULL FACE SHALL HAVE NO LESS THAN AN 18 X 18-INCH FACE PANEL SIZE. CEILING DIFFUSERS WITH A 12 X 12-INCH FULL FACE SHALL HAVE NO LESS THAN A 9 X 9-INCH FACE PANEL SIZE.

THE BACKPAN SHALL BE ONE PIECE PRECISION DIE-STAMPED AND SHALL INCLUDE AN INTEGRALLY DRAWN INLET. THE DIFFUSER NECK SHALL HAVE A MINIMUM OF 11/4-INCH DEPTH AVAILABLE FOR DUCT CONNECTION.

THE FINISH SHALL BE #26 WHITE. THE FINISH SHALL BE AN ANODIC ACRYLIC PAINT, BAKED AT 3 | 5°F FOR 30 MINUTES. THE PENCIL HARDNESS MUST BE HB TO H. THE PAINT MUST PASS A 100-HOUR ASTM B117 CORROSIVE ENVIRONMENTS SALT SPRAY

TEST WITHOUT CREEPAGE. BLISTERING OR DETERIORATION OF FILM. THE PAINT MUST PASS A 250-HOUR ASTM D870 WATER IMMERSION TEST. THE PAINT MUST ALSO PASS THE ASTM D2794 REVERSE IMPACT CRACKING TEST WITH A 50-INCH POUND FORCE APPLIED.

PANEL DIFFUSER. THE DIFFUSER SHALL BE TESTED IN ACCORDANCE WITH ANSI/ASHRAE STANDARD 70-1991.

CEILING MOUNTED EXHAUST FANS SHALL BE OF THE CENTRIFUGAL DIRECT DRIVE TYPE. THE FAN HOUSING SHALL BE CONSTRUCTED OF STEEL. THE PLASTIC DUCT COLLAR SHALL BE A TAPERED SLEEVE FOR EASE OF CONNECTION TO 3 IN AND 4 IN ROUND DUCTWORK AND SHALL INCLUDE A BACKDRAFT DAMPER. THE GRILLE SHALL BE CONSTRUCTED OF NON-YELLOWING HIGH STRENGTH POLYMER AND ATTACHED TO THE HOUSING WITH TORSION SPRINGS. THE WHEELS SHALL BE CONSTRUCTED OF HIGH STRENGTH POLYMER. THE ACCESS FOR WIRING SHALL BE EXTERNAL. THE MOTOR DISCONNECT SHALL BE INTERNAL AND OF THE PLUG IN TYPE. ALL FANS SHALL BEAR THE AMCA CERTIFIED RATINGS SEALS FOR SOUND AND AIR

PERFORMANCE AND SHALL BE U.L. LISTED.

### THE WALL LOUVER SHALL BE AMCA CERTIFIED. THE WALL LOUVER SHALL BE A STATIONARY, DRAINABLE BLADE TYPE. THE LOUVER SHALL INCORPORATE DRAIN GUTTERS IN THE HEAD MEMBER AND HORIZONTAL BLADES TO CHANNEL WATER TO THE JAMBS WHERE WATER IS FURTHER CHANNELED THROUGH VERTICAL DOWNSPOUTS AND OUT A SLOPED SILL. THE FRAME AND BLADES SHALL BE CONSTRUCTED FROM HEAVY GAUGE, EXTRUDED,

ALUMINUM. THE LOUVER SHALL BE OF MECHANICALLY FASTENED CONSTRUCTION. REFER TO THE EQUIPMENT SCHEDULE FOR A FULL LISTING OF REQUIRED LOUVER ACCESSORIES.

SYMBOLS	DESCRIPTION
<u>XI</u> X2	DIFFUSER, GRILLE, REGISTER OR LOUVER TAG XI = TYPE, X2 = CFM
$\square$	POSITIVE PRESSURE (AIR GOES OUT) DIFFUSER OR REGISTER, 4-W/ AIR PATTERN (UNLESS OTHERWISE NOTED)
	NEGATIVE PRESSURE (AIR GOES IN) GRILLE
$\rightarrow$	POSITIVE PRESSURE AIRFLOW (TYP. SUPPLY)
√->	NEGATIVE PRESSURE AIRFLOW (TYP. RETURN/EXHAUST)
11	FLEXIBLE DUCT
Γ	MANUAL VOLUME DAMPER (MVD)
	BACKDRAFT DAMPER (BDD)
L FD	VERTICAL (TYP. WALL) FIRE DAMPER
L FSD	VERTICAL (TYP. WALL) COMBINATION FIRE/SMOKE DAMPER
L FD	HORIZONTAL (TYP. FLOOR/CEILING) FIRE DAMPER
L FSD	HORIZONTAL (TYP. FLOOR/CEILING) COMBINATION FIRE/SMOKE DAMPER
T	THERMOSTAT
H	HUMIDISTAT
(5)	REMOTE TEMPERATURE SENSOR
	INTERNALLY LINED DUCT
	DUCT UP
	DUCT UP
	DUCT DOWN
	SUPPLY DUCT
UNIT #	EQUIPMENT TYPE EQUIPMENT NUMBER. WHERE A LETTER IS USED, THERE ARE MULTIF INSTANCES.

## ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	М	MOTOR
BDD	BACKDRAFT DAMPER	MA	MAKE-UP AIR
AHU	AIR HANDLING UNIT	MAU	MAKE-UP AIR UNIT
CO2	CARBON DIOXIDE	MAV	MANUAL AIR VENT
CU	CONDENSING UNIT	MBH	I ,000 BTU PER HR
D	CONDENSATE DRAIN	MFCU	MINI FAN COIL UNIT
DB	DRY BULB	MHP	MINI HEAT PUMP
DH	DEHUMIDIFIER	MVD	MANUAL VOLUME DAMPER
EA	EXHAUST AIR	NC	NORMALLY CLOSED
EAT	ENTERING AIR TEMPERATURE	NO	NORMALLY OPEN
EDH	ELECTRIC DUCT HEATER	OA	OUTSIDE AIR
EF	EXHAUST FAN	OBD	OPPOSED BLADE DAMPER
ESP	EXTERNAL STATIC PRESSURE	PIU	POWER INDUCTION UNIT
EWH	ELECTRIC WALL HEATER	RA	RETURN AIR
F	DEGREES FAHRENHEIT	RH	RELIEF HOOD
FCU	FAN COIL UNIT	RTU	ROOFTOP UNIT
FD	FIRE DAMPER	SA	SUPPLY AIR
FSD	COMBINATION FIRE/SMOKE DAMPER	SP	STATIC PRESSURE
FURN	FURNACE	U.N.O	UNLESS NOTED OTHERWISE
Η	HUMIDISTAT	UC	UNDER CUT DOOR
IH	INTAKE HOOD	VAV	VARIABLE AIR VOLUME
LAT	LEAVING AIR TEMPERATURE	WB	WET BULB
LWT	LEAVING WATER TEMPERATURE	WL	WALL LOUVER

## SPECIFICATIONS

APPLICABLE CODES

INTERNATIONAL FIRE CODE (IFC), 2018 EDITION

2020 IFC GA AMENDMENTS INTERNATIONAL PLUMBING CODE (IPC), 2018 EDITION

2022 IPC GA AMENDMENTS INTERNATIONAL MECHANICAL CODE (IMC). 2018 EDITION

2020 IMC GA AMENDMENTS INTERNATIONAL FUEL GAS CODE (IFGC), 2018 EDITION

2022 IFGC GA AMENDMENTS INTERNATIONAL ENERGY CONSERVATION CODE (IECC), 2015 EDITION

2022 SUPPLEMENTS AND AMENDMENTS

SHOP DRAWINGS

SUBMIT SHOP DRAWINGS FOR REVIEW. PDF FILES PREFERRED. SHOP DRAWINGS SHALL BE BOUND INTO VOLUMES (FILES), WITH EACH VOLUME (FILE) CONTAINING ONE COPY OF ALL SHOP DRAWINGS. ALL SHOP DRAWINGS SHALL BE SUBMITTED SIMULTANEOUSLY; NO SHOP DRAWINGS WILL BE CHECKED UNTIL ALL HAVE BEEN SUBMITTED.

SUBMITTALS SHALL BE SUPPORTED BY DESCRIPTIVE MATERIAL, SUCH AS CATALOG CUTS, DIAGRAMS, PERFORMANCE CURVES AND CHARTS PUBLISHED BY THE MANUFACTURER, TO SHOW CONFORMANCE TO SPECIFICATION AND DRAWING REQUIREMENTS, MODEL NUMBERS ALONE WILL NOT BE ACCEPTABLE. ALL LITERATURE SHALL CLEARLY INDICATE THE SPECIFIED MODEL NUMBER, DIMENSIONS, ARRANGEMENT, RATING AND CHARACTERISTICS OF THE PROPOSED EQUIPMENT. CAPACITIES AND RATINGS SHALL BE BASED ON CONDITIONS INDICATED OR SPECIFIED HEREIN. ANY DEVIATIONS FROM SPECIFIED EQUIPMENT (PARTICULARLY THOSE WHICH REQUIRE COORDINATION WITH OTHER TRADES) SHALL BE CLEARLY NOTED IN A CONCISE LIST ON A SEPARATE SHEET.

## TEST AND BALANCE:

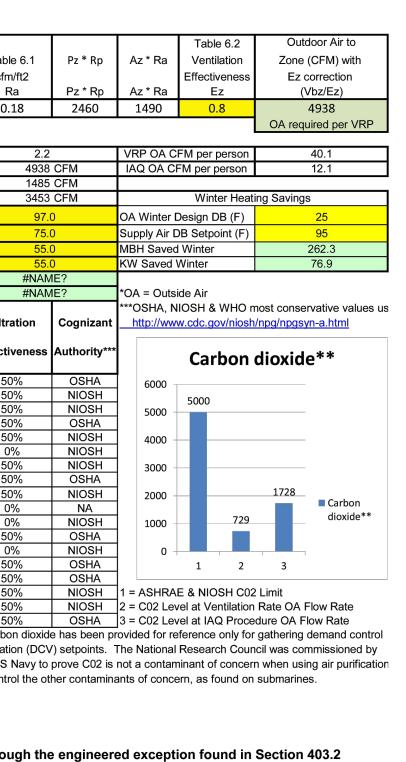
TEST AND BALANCE (TAB) CONTRACTOR SHALL HOLD A CURRENT NATIONAL BALANCING COUNCIL (NBC) CERTIFICATION AND POSSESS ACCURATE AND CALIBRATED INSTRUMENTS. TAB WORK AND REPORTS SHALL BE PER NBC PRACTICAL STANDARDS, PROCEDURES AND FORMS. ACCEPTIBLE ALTERNATIVE TAB FIRM CERTIFICATIONS/PROCEDURES: NEBB, AABC, OR TABB.

PRIOR TO COMMENCEMENT OF THE TAB WORK. THE MECHANICAL SYSTEMS ARE TO BE STARTED AND FULLY FUNCTIONING. A CHECKLIST PRIOR TAB WORK IS TO BE SENT TO THE INSTALLING CONTRACTOR AND RETURNED ATTESTING TO THE READINESS OF THE SYSTEMS FOR BALANCING.

PREFERRED TAB FIRM: P-TAB.COM

/AY	Union County Gymnasium 51 Industrial Boulevard Blairsville, Georgia 30512	
	51 Industrial Boulevard Blairsville, Georgia 30512	
	RELEASED FOR CONSTRUCTION Revisions No. Date Description - 04/10/23 Issued for Bid	
PLE		
	No. 034608 PROTEESSIONAL MGINEER DUCKTONING	
	<b>PROFICIENT</b> ENGINEERING 6991 Peachtree Industrial Blvd Building 700 Peachtree Corners, Georgia 30092 404.330.9798 PROJECT # 122609	
	Tower Place 3340 Peachtree Road, N.E. Suite 1800 Atlanta, Georgia 30326 404.522.8805 404.521.2118 (F)	
	PROJECT NO. 22102 SHEET TITLE GENERAL SHEET NO.	

			10 Ma	l Plasma Solutio				
G P S		Email: in	Phone: (912) 3: fo@globalplasmasoluti	vannah, GA 31406 56-0115 Fax: (912) 3 ons.com Web: www. 1.6 running ASHRAE 62.1-2	globalplasmasolutions.	com		
			Zone Floor Area (square ft)	Zone Max Occupancy	Table 6.1 OA per Occupant	Table 6.1 cfm/ft2	Pz * Rp	Az * Ra
Zone Tag	Facility Type	Zone Use	Az	Pz	Rp	Ra	Pz * Rp	Az * Ra
FCU / HP - 2	Sports & Entertainment y	<mark>m, Sports Arena (Play Are</mark>	8,280.0	123.0	20.0	0.18	2460	1490
Zone Height (feet)	26							
Desired Outside Air (Vo) IAQP		(1-R)V,		~	Air Changes Per Hour	2.2		VRP OA CF
Supply Air (Vs)	8,000				Outside Air Per VRP		CFM	IAQ OA CF
Return Air (Vr)	6515		•	V.	Outside Air Per IAQ		CFM	
Recirc. Flow Factor (R)	0.81	V.C.		4	Outside Air Savings		CFM	
Ventilation Effectiveness (Ez)	0.8		$(\mathbf{V}_r + \mathbf{V}_o)$	v = = = = = = = = = = = = = = = = = = =	OA Summer Drybulb	97.		OA Winter D
Level of Physical Activity	Exhausting Effort				OA Summer Wetbulb	75.		Supply Air D
Filter Location	В		e, N, C		Coil Leaving Air Drybulb (F)			MBH Saved
HVAC Flow Type	Constant	 7 a			Coil Leaving Air Wetbulb (F			KW Saved W
Outdoor Air Flow Type	Constant	· · · ·			OA MBH Saved Summer*	#NAM		
		Oto a due Ototo	Oteo du Otete	la Otaa du Otata Laval	OA Tons Saved Summer*	#NAM	/IE?	*OA = Outsid
Indoor Contaminants		Steady State Using the VRP*	Steady State Using the IAQ Method	Is Steady State Level Acceptable at Reduced	Contaminant Generation	Filtration	Cognizant	***OSHA, NI http://www
Generated By People & From Outdoors	Maximum Threshold Value (PPM)	(Prescribed OA) Plasma Off	(Reduced OA) Plasma On	OA Levels?	Rate (PPM)	Effectiveness	Authority***	
Acetaldehyde	100.0	0.01118	0.00183	Yes	0.00296	50%	OSHA	6000
Acetone	250.0	0.00251	0.00150	Yes	0.04013	50%	NIOSH	6000 -
Ammonia	25.00	0.04272	0.04295	Yes	1.31660	50%	NIOSH	5000 -
Benzene	1.0000	0.00255	0.00044	Yes	0.00135	50%	OSHA	
	200.0	0.00036	0.00028	Yes	0.00819	50%	NIOSH	4000 —
		729 0.00011	1728	Yes	2706	0% 50%	NIOSH	
Carbon dioxide**	5000		0.00002	Yes Yes	0.00025	50%	NIOSH OSHA	3000 —
2- Butanone (MEK) Carbon dioxide** Chloroform Dioxane	2.0000		1 ()()()()()() 1	100		1 0070		2000 -
Carbon dioxide** Chloroform Dioxane	2.0000 100.0	0.00000	0.00000			50%	NIOSH	1 2000
Carbon dioxide** Chloroform Dioxane Hydrogen Sulfide	2.0000		0.00000 0.00000 1.68094	Yes Yes	0.00000	50% 0%	NIOSH NA	
Carbon dioxide** Chloroform Dioxane Hydrogen Sulfide Methane Methanol	2.0000 100.0 10.0 NA 200.0	0.00000 0.00000 1.68094 0.00000	0.00000 1.68094 0.00000	Yes Yes Yes	0.00000 0.00000 0.00000	0% 0%	NA NIOSH	1000 —
Carbon dioxide** Chloroform Dioxane Hydrogen Sulfide Methane Methanol Methylene Chloride	2.0000 100.0 10.0 NA 200.0 25.0	0.00000 0.00000 1.68094 0.00000 0.00092	0.00000 1.68094 0.00000 0.00035	Yes Yes Yes Yes	0.00000 0.00000 0.00000 0.00744	0% 0% 50%	NA NIOSH OSHA	
Carbon dioxide** Chloroform Dioxane Hydrogen Sulfide Methane Methanol Methylene Chloride Propane	2.0000 100.0 NA 200.0 25.0 1000.0	0.00000 0.00000 1.68094 0.00000 0.00092 0.00998	0.00000 1.68094 0.00000 0.00035 0.00998	Yes Yes Yes Yes Yes	0.00000 0.00000 0.00000 0.00744 0.00000	0% 0% 50% 0%	NA NIOSH OSHA NIOSH	1000
Carbon dioxide** Chloroform Dioxane Hydrogen Sulfide Methane Methanol Methylene Chloride Propane Tetrachloroethane	2.0000 100.0 NA 200.0 25.0 1000.0 5.0000	0.00000 0.00000 1.68094 0.00000 0.00092 0.00998 0.00000	0.00000 1.68094 0.00000 0.00035 0.00998 0.00000	Yes Yes Yes Yes Yes Yes	0.00000 0.00000 0.00000 0.00744 0.00000 0.00000	0% 0% 50% 0% 50%	NA NIOSH OSHA NIOSH OSHA	
Carbon dioxide** Chloroform Dioxane Hydrogen Sulfide Methane Methanol Methylene Chloride Propane Tetrachloroethane Tetrachloroethylene	2.0000 100.0 10.0 NA 200.0 25.0 1000.0 5.0000 100.0000	0.00000 0.00000 1.68094 0.00000 0.00092 0.00998 0.00000 0.00000	0.00000 1.68094 0.00000 0.00035 0.00998 0.00000 0.00000	Yes Yes Yes Yes Yes Yes Yes	0.00000 0.00000 0.00000 0.00744 0.00000 0.00000 0.00000	0% 0% 50% 0% 50%	NA NIOSH OSHA NIOSH OSHA OSHA	0 +
Carbon dioxide** Chloroform Dioxane Hydrogen Sulfide Methane Methanol Methylene Chloride Propane Tetrachloroethane Tetrachloroethylene Toluene	2.0000 100.0 10.0 NA 200.0 25.0 1000.0 5.0000 100.0000 100.0000	0.00000 0.00000 1.68094 0.00000 0.00092 0.00998 0.00000 0.00037 0.00537	0.00000 1.68094 0.00000 0.00035 0.00998 0.00000 0.00006 0.00089	Yes Yes Yes Yes Yes Yes Yes Yes	0.00000 0.00000 0.00744 0.00000 0.00000 0.00000 0.00008 0.00194	0% 0% 50% 50% 50% 50%	NA NIOSH OSHA OSHA OSHA NIOSH	0
Carbon dioxide** Chloroform Dioxane Hydrogen Sulfide Methane Methanol Methylene Chloride Propane Tetrachloroethane Tetrachloroethylene Toluene 1,1,1 - Trichloroethane	2.0000 100.0 10.0 NA 200.0 25.0 1000.0 5.0000 100.0000	0.00000 0.00000 1.68094 0.00000 0.00092 0.00998 0.00000 0.00037 0.00537 0.00084	0.00000 1.68094 0.00000 0.00035 0.00998 0.00000 0.00000	Yes Yes Yes Yes Yes Yes Yes	0.00000 0.00000 0.00000 0.00744 0.00000 0.00000 0.00000	0% 0% 50% 0% 50%	NA NIOSH OSHA NIOSH OSHA OSHA NIOSH	0 +
Carbon dioxide** Chloroform Dioxane Hydrogen Sulfide Methane Methanol Methylene Chloride Propane Tetrachloroethane Tetrachloroethylene	2.0000 100.0 10.0 NA 200.0 25.0 1000.0 5.0000 100.0000 100.0000 350.0000	0.00000 0.00000 1.68094 0.00000 0.00092 0.00998 0.00000 0.00037 0.00537	0.00000 1.68094 0.00000 0.00035 0.00998 0.00000 0.00006 0.00089 0.00023	Yes Yes Yes Yes Yes Yes Yes Yes Yes	0.00000 0.00000 0.00000 0.00744 0.00000 0.00000 0.00008 0.00194 0.00355	0% 0% 50% 50% 50% 50% 50%	NA NIOSH OSHA OSHA OSHA NIOSH NIOSH OSHA	0 + 1 = ASHRAE 2 = C02 Leve 3 = C02 Leve
Carbon dioxide** Chloroform Dioxane Hydrogen Sulfide Methane Methanol Methylene Chloride Propane Tetrachloroethane Toluene 1,1,1 - Trichloroethane Xylene Building materials and furnishir	2.0000 100.0 10.0 NA 200.0 25.0 1000.0 100.0000 100.0000 350.0000 100.0000 350.0000 100.0000 350.0000 100.0000 350.0000 100.0000 350.0000 100.00000 100.00000 100.000000 100.000000 100.00000 100	0.00000 0.00000 1.68094 0.00000 0.00092 0.00998 0.00000 0.00037 0.00537 0.00537 0.00084 0.00230	0.00000 1.68094 0.00000 0.00035 0.00998 0.00000 0.00006 0.00089 0.00023 0.00023 0.00036 Is IAQ acceptable at reduce	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes	0.00000 0.00000 0.00000 0.00744 0.00000 0.00000 0.00008 0.00194 0.00355 0.00000	0% 0% 50% 50% 50% 50% 50% **Carbon dioxid ventilation (DCV	NA NIOSH OSHA OSHA OSHA NIOSH NIOSH OSHA e has been p /) setpoints.	0 1 = ASHRAE 2 = C02 Lev 3 = C02 Lev rovided for re The National
Carbon dioxide** Chloroform Dioxane Hydrogen Sulfide Methane Methanol Methylene Chloride Propane Tetrachloroethane Toluene 1,1,1 - Trichloroethane Xylene	2.0000 100.0 10.0 NA 200.0 25.0 1000.0 100.0000 100.0000 350.0000 100.0000 350.0000 100.0000 350.0000 100.0000 350.0000 100.0000 350.0000 100.00000 100.00000 100.000000 100.000000 100.00000 100	0.00000 0.00000 1.68094 0.00000 0.00092 0.00998 0.00000 0.00037 0.00537 0.00537 0.00084 0.00230	0.00000 1.68094 0.00000 0.00035 0.00998 0.00000 0.00006 0.00089 0.00023 0.00036	Yes Yes Yes Yes Yes Yes Yes Yes Yes	0.00000 0.00000 0.00000 0.00744 0.00000 0.00000 0.00008 0.00194 0.00355 0.00000	0% 0% 50% 50% 50% 50% **Carbon dioxid ventilation (DC\ the US Navy to	NA NIOSH OSHA NIOSH OSHA NIOSH NIOSH OSHA e has been p /) setpoints. prove C02 is	0 1 = ASHR/ 2 = C02 Le 3 = C02 Le rovided for r The Nationa not a conta
Carbon dioxide** Chloroform Dioxane Hydrogen Sulfide Methane Methanol Methylene Chloride Propane Tetrachloroethane Toluene 1,1,1 - Trichloroethane Xylene Building materials and furnishir	2.0000 100.0 10.0 NA 200.0 25.0 1000.0 100.0000 100.0000 350.0000 100.0000 350.0000 100.0000 350.0000 100.0000 350.0000 100.0000 350.0000 100.00000 100.00000 100.000000 100.000000 100.00000 100	0.00000 0.00000 1.68094 0.00000 0.00092 0.00998 0.00000 0.00037 0.00037 0.00037 0.00084 0.00230 nd off-gassing is complete	0.00000 1.68094 0.00000 0.00035 0.00998 0.00000 0.00006 0.00089 0.00023 0.00023 0.00036 Is IAQ acceptable at reduced outside air levels? GLOBAL PLASMA SOLU PYRIGHT 2008 GLOBAL PLA	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes	0.00000 0.00000 0.00744 0.00000 0.00000 0.00008 0.00194 0.00355 0.00000	0% 0% 50% 50% 50% 50% 50% **Carbon dioxid ventilation (DCV	NA NIOSH OSHA NIOSH OSHA NIOSH NIOSH OSHA e has been p /) setpoints. prove C02 is	1 = ASHRA $2 = C02 Lev$ $3 = C02 Lev$ rovided for re The National not a contan
Carbon dioxide** Chloroform Dioxane Hydrogen Sulfide Methane Methanol Methylene Chloride Propane Tetrachloroethane Toluene 1,1,1 - Trichloroethane Xylene Building materials and furnishir All yellow shaded boxes re	2.0000 100.0 10.0 NA 200.0 25.0 1000.0 5.0000 100.0000 100.0000 350.0000 100.0000 0 350.0000 0 0 0 0 0 0 0 0 0 0 0 0	0.00000 0.00000 1.68094 0.00000 0.00998 0.00000 0.00037 0.00537 0.00084 0.00230 nd off-gassing is complete	0.00000 1.68094 0.00000 0.00035 0.00998 0.00000 0.00006 0.00089 0.00023 0.00036 Is IAQ acceptable at reduced outside air levels? GLOBAL PLASMA SOLU PYRIGHT 2008 GLOBAL PLA	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes	0.00000 0.00000 0.00744 0.00000 0.00000 0.00008 0.00194 0.00355 0.00000	0% 0% 50% 50% 50% 50% **Carbon dioxid ventilation (DC\ the US Navy to	NA NIOSH OSHA NIOSH OSHA NIOSH NIOSH OSHA e has been p /) setpoints. prove C02 is	1 = ASHRAE 2 = C02 Lev 3 = C02 Lev rovided for re The National not a contam
Carbon dioxide** Chloroform Dioxane Hydrogen Sulfide Methane Methanol Methylene Chloride Propane Tetrachloroethane Toluene 1,1,1 - Trichloroethane Xylene Building materials and furnishir All yellow shaded boxes re	2.0000 100.0 10.0 NA 200.0 25.0 1000.0 100.0000 100.0000 350.0000 100.0000 350.0000 0 4/14/20	0.00000 0.00000 1.68094 0.00000 0.00998 0.00000 0.00037 0.00537 0.00084 0.00230 nd off-gassing is complete	0.00000 1.68094 0.00000 0.00035 0.00998 0.00000 0.00006 0.00089 0.00023 0.00036 Is IAQ acceptable at reduce outside air levels? GLOBAL PLASMA SOLU PYRIGHT 2008 GLOBAL PLA UNAUTHORIZED US	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes	0.00000 0.00000 0.00000 0.00744 0.00000 0.00008 0.00194 0.00355 0.00000 ITY SOFTWARE© ALL RIGHTS RESERVED PROHIBITED	0% 0% 50% 50% 50% 50% **Carbon dioxid ventilation (DCV the US Navy to to control the ot	NA NIOSH OSHA OSHA OSHA NIOSH NIOSH OSHA e has been pr /) setpoints. prove C02 is her contamina	1 = ASHRAE 2 = C02 Lev 3 = C02 Lev rovided for rei The National not a contam ants of conce
Carbon dioxide** Chloroform Dioxane Hydrogen Sulfide Methane Methanol Methylene Chloride Propane Tetrachloroethane Toluene 1,1,1 - Trichloroethane Xylene Building materials and furnishir All yellow shaded boxes re Date Job Name	2.0000 100.0 10.0 NA 200.0 25.0 1000.0 100.0000 100.0000 350.0000 100.0000 350.0000 100.0000 4/14/20	0.00000 0.00000 1.68094 0.00000 0.00998 0.00000 0.00037 0.00537 0.00084 0.00230 nd off-gassing is complete	0.00000 1.68094 0.00000 0.00035 0.00998 0.00000 0.00006 0.00089 0.00023 0.00023 0.00036 Is IAQ acceptable at reduced outside air levels? GLOBAL PLASMA SOLU <sup>T</sup> PYRIGHT 2008 GLOBAL PLA UNAUTHORIZED US	Yes Yes Yes Yes Yes Yes Yes Yes Yes TIONS INDOOR AIR QUALI SMA SOLUTIONS, LLC - E OR COPYING STRICTLY IMC 2006 & later allov	0.00000 0.00000 0.00000 0.00744 0.00000 0.00008 0.00194 0.00355 0.00000 0.00000	0% 0% 50% 50% 50% 50% **Carbon dioxid ventilation (DC\ the US Navy to to control the ot	NA NIOSH OSHA OSHA OSHA NIOSH NIOSH OSHA e has been p /) setpoints. prove C02 is her contamina	0 1 = ASHRAE 2 = C02 Leve 3 = C02 Leve rovided for ref The National I not a contam ants of conce ed exception
Carbon dioxide** Chloroform Dioxane Hydrogen Sulfide Methane Methanol Methylene Chloride Propane Tetrachloroethane Toluene 1,1,1 - Trichloroethane Xylene Building materials and furnishir All yellow shaded boxes re Date Job Name Representative	2.0000 100.0 10.0 NA 200.0 25.0 1000.0 5.0000 100.0000 350.0000 100.0000 350.0000 4/14/20 4/14/20	0.00000 0.00000 1.68094 0.00000 0.00998 0.00000 0.00037 0.00537 0.00084 0.00230 nd off-gassing is complete COF	0.00000 1.68094 0.00000 0.00035 0.00998 0.00000 0.00006 0.00089 0.00023 0.00023 0.00036 Is IAQ acceptable at reduced outside air levels? GLOBAL PLASMA SOLU <sup>T</sup> PYRIGHT 2008 GLOBAL PLA UNAUTHORIZED US	Yes Yes Yes Yes Yes Yes Yes Yes Yes TIONS INDOOR AIR QUALI SMA SOLUTIONS, LLC - E OR COPYING STRICTLY IMC 2006 & later allov	0.00000 0.00000 0.00000 0.00744 0.00000 0.00008 0.00194 0.00355 0.00000 ITY SOFTWARE© ALL RIGHTS RESERVED PROHIBITED	0% 0% 50% 50% 50% 50% **Carbon dioxid ventilation (DC\ the US Navy to to control the ot	NA NIOSH OSHA OSHA OSHA NIOSH NIOSH OSHA e has been p /) setpoints. prove C02 is her contamina	0 1 = ASHRAE 2 = C02 Leve 3 = C02 Leve rovided for refi- The National F not a contami ants of concer ed exceptio
Carbon dioxide** Chloroform Dioxane Hydrogen Sulfide Methane Methanol Methylene Chloride Propane Tetrachloroethane Toluene 1,1,1 - Trichloroethane Xylene Building materials and furnishir All yellow shaded boxes re Date Job Name	2.0000 100.0 10.0 NA 200.0 25.0 1000.0 100.0000 100.0000 350.0000 100.0000 350.0000 100.0000 4/14/20	0.00000 0.00000 1.68094 0.00000 0.00998 0.00000 0.00037 0.00537 0.00084 0.00230 nd off-gassing is complete COF	0.00000 1.68094 0.00000 0.00035 0.00998 0.00000 0.00006 0.00089 0.00023 0.00023 0.00036 Is IAQ acceptable at reduced outside air levels? GLOBAL PLASMA SOLU <sup>T</sup> PYRIGHT 2008 GLOBAL PLA UNAUTHORIZED US	Yes Yes Yes Yes Yes Yes Yes Yes Yes TIONS INDOOR AIR QUALI SMA SOLUTIONS, LLC - E OR COPYING STRICTLY IMC 2006 & later allov	0.00000 0.00000 0.00000 0.00744 0.00000 0.00008 0.00194 0.00355 0.00000 0.00000	0% 0% 50% 50% 50% 50% **Carbon dioxid ventilation (DC\ the US Navy to to control the ot	NA NIOSH OSHA OSHA OSHA NIOSH NIOSH OSHA e has been p /) setpoints. prove C02 is her contamina	0 1 = ASHRAE 2 = C02 Leve 3 = C02 Leve rovided for refi- The National F not a contami ants of concer ed exceptio



## SPLIT DIRECT EXPANSION (DX) EQUIPMENT

				INDOOF	R UNIT					Ol	JTDOOR UNIT				COME	BINED COC	DLING CAPA	CITIES								
		TOTAL				AUXILIARY		BASIS				BASIS	NOMINAL				COOLIN	G					REM	ARKS		
MARK	SERVES	S.A.	0.A.	E.S.P.	MOTOR	HEATER	WEIGHT	OF	MIN.	MIN.	WEIGHT	OF	TONNAGE	TOTAL	SENS	LAT	Ent. Tdb	Ent. Twb	Lvg. Tdb	Lvg. Twb						
		(CFM)	(CFM)	(IN WG)	(hp)	(kW)	(LBS)	DESIGN	SEER	HSPF	(LBS)	DESIGN	(TONS)	(MBH)	(MBH)	(MBH)	(°F)	(°F)	(°F)	(°F)	1 2	3 4	5	6 7	89	10
CU-1 / IP-1	LOBBY	1,990	135	0.50	3/4 ECM	11.3	175.0	FX4DNFOG	14.0	8.2	250.0	25HCE460	5.0	57.3	42.5	14.7	76.3	64.7	55.8	54.8	x x	x x	X	x x		
CU-2 / P-2	BASKETBALL COURT	8,000	1,485	0.50	5	50.0	720.0	40RUQA24	12.5		1,015.0	38AUQ25	20.0	241.0	180.4	60.6	78.5	66.0	56.8	55.8	x x	x x	x	x x	x x	X

### NOTES (APPLY TO ALL):

A. SEE ELECTRICAL DRAWINGS FOR POWER REQUIREMENTS.

B. SUBMITTED UNIT CAPACITIES SHOULD BE WITHIN +/- 10% OF SCHEDULED CAPACITIES.

C. BASIS OF DESIGN: CARRIER. REFER TO SPECIFICATIONS. ACCEPTABLE ALTERNATES: JCI/YORK, TRANE, DAIKIN/MCQUAY, LENNOX

D. ALL EVAPORATORS AND COOLING COILS LOCATED ABOVE THE LOWEST LEVEL FINISHED FLOOR SHALL BE INSTALLED WITH AN AUXILIARY CONDENSATE DRAIN PAN UNDER THE UNIT. PROVIDE AN ELECTRONIC WATER LEVEL DETECTOR WIRED TO SHUTDOWN THE UNIT UPON DETECTION OF WATER IN THE AUXILIARY DRAIN PAN.

E. AS AN ALTERNATIVE TO THE AUXILIARY CONDENSATE DRAIN PAN, AN ELECTRONIC WATER LEVEL DETECTOR WIRED TO SHUTDOWN THE UNIT UPON DETECTION OF WATER MAY BE INSTALLED IN THE PRIMARY DRAIN LINE, THE OVERFLOW DRAIN LINE OR THE EQUIPMENT SUPPLIED DRAIN PAN. THE WATER LEVEL DETECTOR SHALL BE LOCATED AT A POINT HIGHER THAN THE PRIMARY DRAIN LINE CONNECTION AND BELOW THE OVERFLOW RIM OF SUCH PAN.

F. UNITS SHALL BE DOE 2023 COMPLIANT.

CALLOUT	DESCRIPTION	FACE SIZE (IN)	INLET SIZE (IN)	NOISE CRITERIA @ MAX CFM	MODEL
RC1812	EGGCRATE GRILLE	8x 2	8x 2	25	TITUS 50F
RC2424	EGGCRATE GRILLE	24x24	24x24	25	TITUS 50F
R51206	EGGCRATE GRILLE	I 2xG	I 2x6	25	TITUS 50F
R54824	EGGCRATE GRILLE	48x24	48x24	25	TITUS 50F
SC   206	DOUBLE DEFLECTION REGISTER	4x8	1 2x6	25	TITUS 300FS
SC1806	DOUBLE DEFLECTION REGISTER	20x8	1 8x6	25	TITUS 300FS
SCP06	SUPPLY CEILING PLAQUE DIFFUSER	24x24	бØ	25	TITUS OMNI
SCP08	SUPPLY CEILING PLAQUE DIFFUSER	24x24	8Ø	25	TITUS OMNI
551206	DOUBLE DEFLECTION SUPPLY	4x8	2x6	25	TITUS 300FS
551806	DOUBLE DEFLECTION SUPPLY	20x8	18x6	25	TITUS 300FS
SSD1204	DRUM LOUVER	4x6	2x4	0	TITUS DL
SSD3608	DRUM LOUVER	38x10	36x8	0	TITUS DL

ION SHALL BE MADE BY ARCHITECT. CONTRACTOR SHALL SUBMIT COLOR/FINISH CHARTS FOR ARCHITECTURAL REVIEW AND SELECTION. B. THE CONTRACTOR SHALL COORDINATE AIR DEVICE FRAME AND/OR SUSPENSION TYPE WITH THE ARCHITECTURAL REFLECTED CEILING PLAN

## REMARKS (APPLY AS SCHEDULED):

I. PROGRAMMABLE THERMOSTAT.

2. LOW AMBIENT PACKAGE

3. DISPOSABLE FILTER. 4. ANTI-SHORT CYCLE TIMER.

5. INDOOR FAN DELAY KIT.

6. DISCONNECT SWITCH PROVIDED BY ELECTRICAL SUBCONTRACTOR AT BOTH THE INDOOR AND OUTDOOR UNIT. REFER TO THE ELECTRICAL DOCUMENTS.

7. MOUNT OUTDOOR HEAT PUMP ON CONCRETE HOUSEKEEPING PAD. PAD SHALL BE A MINIMUM 4" THICK AND

8. PROVIDE AND INSTALL BIPOLAR IONIZATION UNIT. REFER TO AIR PURIFICATION SCHEDULE.

GPS MODEL

GPS-IMOD

I.O. IONIZATION SYSTEMS WITH MULTIPLE ION MODULES MOUNTED TO A BAR SHALL NOT BE AN ACCEPTABLE SUBSTITUTE

1. IONIZATION SYSTEMS THAT DO NOT USE EPOXY TO PROTECT THE ION CIRCUITRY SHALL NOT BE ACCEPTABLE.

14. IONIZATION BAR SHALL BE MODULAR AND DESIGNED TO COVER THE ENTIRE COIL WIDTH IN 6 INCH INCREMENTS

12. IONIZATION POWER SUPPLY SHALL HAVE POWER ON AND PLASMA ON INDICATION LIGHT

9. 2 STAGE COOLING.

I O. FIELD PROVIDED AND FIELD INSTALLED SMOKE DETECTOR. SMOKE DETECTOR SHALL BE MOUNTED IN THE SUPPLY DUCT.

I. CONTRACTOR TO PROVIDE AND FIELD INSTALL AIRSIDE ENTHALPY ECONOMIZER WITH MOTORIZED RETURN

AND OUTDOOR AIR DAMPERS AND CONTROLS.

SHALL EXTEND 6" BEYOND UNIT ON ALL SIDES.

## FAN SCHEDULE

MARK	DUTY	TYPE	CFM	ESP (IN WG)	MOTOR (W / HP*)	DRIVE	MAX NOISE (SONES)	CONTROL BY	BASIS OF DESIGN MODEL	REI	MAR	KS
							(,			Ţ	2	3
EF-A	EXHAUST	CEILING CABINET	210	0.5	240	DIRECT	4.0	SWITCHED WITH LIGHTS	GREENHECK SP	x	Х	>
EF-1	EXHAUST	CEILING CABINET	140	0.5	150	DIRECT	3.5	SWITCHED WITH LIGHTS	GREENHECK SP	x	х	>
EF-2	EXHAUST	CEILING CABINET	70	0.5	100	DIRECT	2.0	SWITCHED WITH LIGHTS	GREENHECK SP	X	Х	>

NOTES (APPLY TO ALL):

FCU-2

A. SEE ELECTRICAL PLANS FOR POWER CHARACTERISTICS

AIR PURIFICATION SCHEDULE

8000

1485

ZONE TAG FLOW S/A FLOW O/A FLOW

CV

8. PROVIDE STEP-DOWN TRANSFORMER.

B. DESIGN IS BASED ON PRODUCTS BY GREENHECK. ACCEPTABLE

ALTERNATES SHALL BE BY LOREN-COOK. TWIN-CITY, PENN BARRY.

REMARKS (APPLY AS SCHEDULED):

I. INTEGRATED FAN SPEED CONTROLLER INSIDE FAN FOR BALANCING.

12

MOUNTING MIN ION DENSITY

(IONS/CC)

140 MILLION PER

INCH

LOCATION

AHU

2. FACTORY DISCONNECT SWITCH/PLUG.

3. GRAVITY BACKDRAFT DAMPER.

PRESSURE DROP VOLTAGE (AC) WATTS

24-240

0.05" W.C.

## LOUVERS

SYMBOL	MODEL / SERIES	SERVES	SIZE (WxH) (IN)	MIN FREE AREA (SF)	CFM	MAX PRESS. DROP (IN WC)	OPERATOR	INTERLOCK	FRAME	RE	EMAR	۲. ۲.
										1	2	
WL- I	ESD-635	FCU-2 OUTSIDE AIR	60x60	13.8	8,000	0.05	N/A	N/A	ALUMINUM	Х	X	
WL-2	ESD-635	FCU-2 ECONOMIZER RELIEF	60x60	13.8	8,000	0.05	N/A	N/A	ALUMINUM	X	X	>
NOTES (APP	LY TO ALL):			-	REMARKS (/	APPLY AS SCHEI	DULED):			_		

9. IONIZATION BAR TO HAVE A MINIMM OF | NEEDLEPOINT EVERY 0.50" OF COIL WIDTH. SYSTEMS WITH NEEDLES FURTHER APART SHALL NOT BE ACCEPTABLE

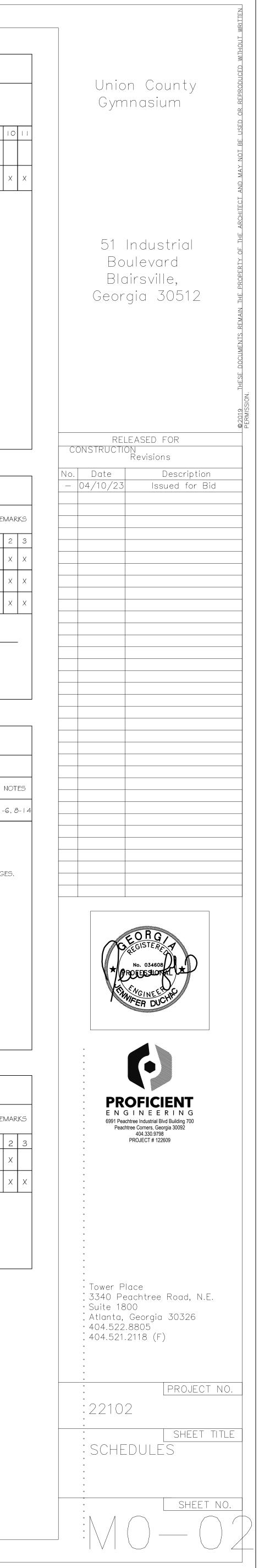
13. IONIZATION BARS SHALL BE PROVIDED WITH MAGNETS FOR EASE OF MOUNTING AND SHALL ONLY TAKE UP ONE INCH IN THE DIRECTION OF AIRFLOW

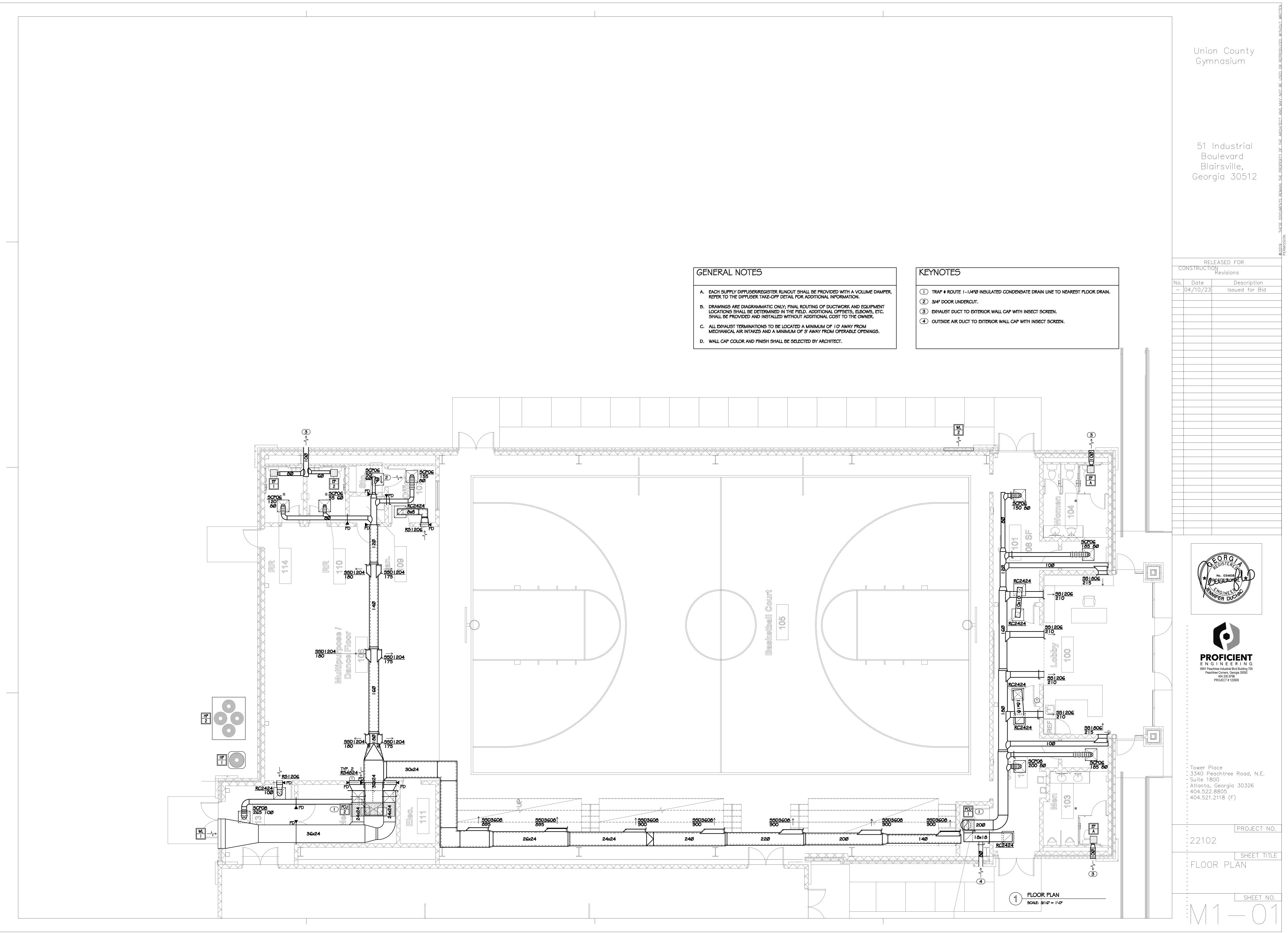
A. FINAL COLOR SELECTION SHALL BE MADE BY ARCHITECT AT TIME OF SHOP DRAWING APPROVAL. PROVIDE COLOR/FINISH CHARTS AS PART OF SUBMITTAL. 2. BAKED ON ENAMEL FINISH.

SHALL BE BY UNITED ENERTECH, ARROW, RUSKIN.

B. DESIGN IS BASED ON PRODUCTS BY GREENHECK. ACCEPTABLE ALTERNATES 3. BAROMETRIC RELIEF DAMPER.

I. BASIS OF DESIGN: GLOBAL PLASMA SOLUTIONS: APPROVED EQUALS BY AIRGENICS AND BIOXGEN SUBJECT TO SPECIFICATION COMPLIANCE 2. MOUNT BI-POLAR ION GENERATOR WHERE INDICATED ON SCHEDULE \_\_\_\_\_ 3. IF CONTRACTOR SUBSTITUTES BASIS OF DESIGN WITH ANOTHER MANUFACTURER, CONTRACTOR SHALL COORDINATE ALL ELECTRICAL AND MECHANICAL CHANGES. 4. BI-POLAR IONIZATION SYSTEMS REQUIRING PERISHABLE GLASS TUBES ARE NOT ACCEPTABLE 5. ALL MANUFACTURERS MUST PASS UL-867-2007 OZONE CHAMBER TESTING BY EITHER UL OR ETL 6. PROVIDE WITH WEATHERPROOF ENCLOSURE. 7. PROVIDE WITH SELF-CLEANING FEATURE. SYSTEMS WITHOUT SELF-CLEANING SHALL NOT BE ACCEPTABLE.







## SPECIFICATIONS

## GENERAL

OF CONSTRUCTION.

CONTRACTOR SHALL REFER TO ALL RELATED DOCUMENTS, ARCHITECTURAL, STRUCTURAL, CIVIL AND MEP DRAWINGS, AND FULLY UNDERSTAND THE SCOPE OF WORK AND CONDITION THE WORK UNDER THIS SPECIFICATIONS AND DRAWINGS SHALL INCLUDE ALL LABOR. ALL INSTALLATION OF DEVICES AND CONNECTION OF CONDUCTORS SHALL BE PERFORMED BY LICENSED AND SKILLED ELECTRICIAN OR JOURNEYMAN. ALL WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE OWNER. IF ANY PORTION OF THE WORK IS FOUND UNSATISFACTORY BY THE OWNER, IT SHALL BE REMOVED AND REINSTALLED WITHOUT DELAY AT NO COST TO THE OWNER. THE WORK INCLUDES, BUT NOT LIMITED TO: THE COMPLETE ELECTRICAL DISTRIBUTION SYSTEM.

## INCLUDING OWNER PROVIDED EQUIPMENT. LIGHTING CONTROL LIGHTING FIXTURES

EACH CONTRACTOR SHALL OBTAIN ALL PERMITS AND INSPECTIONS REQUIRED BY THE REGULATORY AUTHORITIES. ALL FEES RELATED TO OBTAINING PERMITS AND INSPECTION SHALL BE PAID FOR BY EACH CONTRACTOR IN HIS TRADE.

ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH LOCAL, COUNTY, STATE, AND NATIONAL ELECTRICAL CODE 2020, SPECIFICATIONS, UTILITY COMPANY REQUIREMENTS AND ALL INDUSTRY STANDARDS.

ANY DIFFERENCES IN ABOVE MENTIONED REQUIREMENTS, THE MOST STERN SHALL OVERRULE ALL OTHERS.

STANDARDS SHALL BE COMPLIED IF THEY ARE MORE STRINGENT. IEEE IES

IECC 2015 ASHRAE 90. NFPA NEMA ADA

STORAGE, PROTECTION, INSTALLATION AND WIRING OF ALL EQUIPMENT AND MATERIAL. THE DRAWINGS SHOW DIAGRAMMATICALLY THE LOCATIONS OF THE VARIOUS LINES,

LIMITED TO THE ITEMS SHOWN ON THE DRAWINGS. EXACT LOCATIONS OF THESE ITEMS BUILDING AND IN COOPERATION WITH THE OTHER SUBCONTRACTORS, AND IN ALL CASES, SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER. THE OWNER RESERVES THE RIGHT TO MAKE ANY REASONABLE CHANGE IN THE LOCATION OF ANY PART OF THIS WORK WITHOUT

ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL SEEK APPROVAL FROM THE OWNER FOR ANY CHANGES TO THE SPECIFICATIONS OR CONTRACT DOCUMENTS. ANY EXCEPTIONS, INCONSISTENCIES AND CONFLICTS IN CONTRACT DOCUMENTS, SPECIFICATIONS AND CONTRACT DOCUMENTS BY OTHER TRADE SHALL BE BROUGHT TO

ATTENTION TO THE OWNER PRIOR TO BID. CONTRACTOR SHALL COORDINATE AND VERIFY THE WORK WITH EXISTING CONDITIONS AND THE WORK OF OTHER TRADE PRIOR TO ANY FABRICATIONS OR INSTALLATION IF THE LAYOUT OF THE DEVICES ON DRAWINGS ARE IMPRACTICAL TO THE CONDITION IN FIELD, CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY PRIOR TO ANY FABRICATION OR

INSTALLATION. ELECTRICAL DEVICES ARE INDICATED ON DRAWINGS AT APPROXIMATE LOCATIONS. THE OWNER RESERVE THE RIGHT TO MAKE REASONABLE CHANGES IN LOCATIONS WITHOUT ADDITIONAL COSTS. THE LINES INDICATING BRANCH CIRCUITS DO NOT REPRESENT THE ROUTING OF ELECTRICAL

CONDUITS. THEY INDICATE THE LAYOUT AND CONTROL OF CIRCUITS. PRODUCTS AND WORK

MATERIALS FURNISHED SHALL BE NEW AND BY STANDARD MANUFACTURERS AND MUST CONFORM TO THE NATIONAL BOARD OF FIRE UNDERWRITER'S REQUIREMENTS AND BEAR THE UNDERWRITER'S LABORATORIES' SEAL OF APPROVAL. LISTED MANUFACTURERS, MODELS, OR CATALOGUE NUMBERS IN PART OR ALL SHALL ENTAIL

TO INCLUDE THE PUBLISHED MANUFACTURER'S DESCRIPTION AND SPECIFICATION. CONTRACTOR SHALL NOT INTERPRET THAT THE LISTED MANUFACTURERS IN SPECIFICATIONS OR DRAWINGS TO EXCLUDE ALL OTHER MANUFACTURERS.

CONTRACTOR SHALL MAKE CERTAIN THAT ALL EQUIPMENT FIT IN THE SPACE DESIGNATED AND DESIGNED FOR THE SURROUNDINGS IT OCCUPIES.

COMPLETE CATALOGUE ILLUSTRATION AND DESCRIPTIONS OF ALL EQUIPMENT SHALL BE

SUBMITTED TO THE OWNER PRIOR TO ORDERING ANY EQUIPMENT. ALL HORIZONTAL RUNS OF CONDUITS SHALL BE SUPPORTED BY MEANS OF APPROVED HANGER FROM THE STRUCTURAL CEILING. COORDINATE THE WORK UNDER THIS SECTION WITH ALL OTHER TRADES. CONDUITS AND RACEWAYS

MANUFACTURERS: SQUARE D, B-LINE, ALLIED TUBE & CONDUIT, HOFFMAN, CARLON ELECTRICAL, WIREMOLD.

OUTDOORS EXPOSED: RIGID STEEL. OUTDOORS CONCEALED ABOVE GROUND: RIGID STEEL. OUTDOORS UNDERGROUND: TYPE EPC-40-PVC OUTDOORS CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND MOTOR DRIVEN EQUIPMENT): LFMC. BOXES AND ENCLOSURES ABOVE GROUND: NEMA 3R UNLESS NOTED OTHERWISE ON PLANS. SUBJECT TO SEVERE PHYSICAL DAMAGE: EMT.

INDOORS EXPOSED NOT SUBJECT TO PHYSICAL DAMAGE: EMT. INDOORS EXPOSED NOT INDOORS EXPOSED SUBJECT TO SEVERE PHYSICAL DAMAGE: RIGID STEEL CONDUIT. INDOORS CONCEALED IN CEILINGS AND INTERIOR WALLS AND PARTITIONS: EMT. INDOORS CONNECTION TO VIBRATING EQUIPMENT: FMC, EXCEPT USE LFMC IN DAMP OR WET LOCATIONS. INDOORS DAMP OR WET LOCATIONS: IMC. INDOORS LOW-VOLTAGE CABLES: EMT.

CONDUCTORS:

COPPER CONDUCTORS #10 AND SMALLER: LABELED PER UL 83, TYPE THHN/THWN, SOLID COPPER 600 VOLT INSULATION, UNIFORM COLOR CODED JACKET WITH JACKET DATA. METAL CLAD (TYPE MC) CABLE WHERE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 330. COPPER CONDUCTORS #8 OR LARGER: LABELED PER UL 83. TYPE THHN/THWN. STRANDED COPPER, 600VOLT INSULATION, UNIFORM COLOR CODED JACKET WITH JACKET DATA.

ACCEPTABLE MANUFACTURERS OF CONDUCTORS: PIRELLIE SOUTHWIRE AETNA REPUBLIC AFC ENCORE WIRE KERITE

EQUIVALENT AMPACITY AND SHALL COMPENSATE FOR VOLTAGE DROP. CONTRACTOR SHALL MAKE ADEQUATE ADJUSTMENT TO CONDUIT SIZES INDICATED SHOULD ALTERNATIVE CONDUCTOR INSULATION OR MATERIAL BE UTILIZED.

CONTRACTOR MAY USE ALUMINUM CONDUCTORS FOR #4 AWG OR LARGER IN THE PLACE OF CONTRACTOR SHALL REFER TO NEC TABLE 3 | 0- | 6 FOR

CONDUITS, FIXTURES, AND EQUIPMENT AND THE METHOD OF CONNECTING AND CONTROLLING THEM. IT IS NOT INTENDED TO SHOW EVERY CONNECTION IN DETAIL AND ALL FITTINGS REQUIRED FOR A COMPLETE SYSTEM. THE SYSTEMS SHALL INCLUDE BUT ARE NOT SHALL BE DETERMINED BY REFERENCE TO THE GENERAL PLANS AND MEASUREMENTS AT THE

THE MANUFACTURER'S PUBLISHED DIRECTIONS SHALL BE FOLLOWED IN THE DELIVERY,

IN ADDITION TO ABOVE MENTIONED CODES AND SPECIFICATIONS, THE FOLLOWING INDUSTRY

ROUGH-IN AND FINAL CONNECTIONS TO ALL DEVICES REQUIRING ELECTRICAL POWER.

SPECIFICATIONS

STANDARD PRODUCTS.

APPROVED MANUFACTURERS:

NON-REMOVABLE MONOLITHIC TIE-HANDLE.

BREAKERS" AT THE APPLIED CIRCUIT VOLTAGE.

DESCRIPTIONS AND MANUFACTURER TYPES.

GENERAL ELECTRIC

CUTLER HAMMER

SQUARE D SIEMENS

CONDUCTORS.

LIGHTING FIXTURE

SUBMITTAL

LAMP DATA.

INSTALLED.

PANELBOARD

SUBMITTAL

CURVES.

APPROVED MANUFACTURERS:

20-A BALLAST LOAD, 120/240VAC.

INDOOR OCCUPANCY SENSORS:

ULTRASONIC DETECTION METHOD.

AUTHORITIES HAVING JURISDICTION.

LOW VOLTAGE TRANSFORMERS

WITHSTAND SEISMIC FORCES.

TEST PARAMETERS.

AT I I MONTHS. PROVIDE CERTIFIED REPORT.

GROUNDING AND BONDING

#6 OR LARGER.

OVERRIDES THE WEEKLY OPERATION ON HOLIDAYS.

ADJUSTABLE TIME-DELAY OVER A RANGE OF 1 TO 30 MINUTES.

TURN LIGHTS OFF WHEN SELECTED LIGHTING LEVEL IS PRESENT.

ALL GROUNDING AND BONDING SHALL CONFORM TO NEC ARTICLE 250.

MANUFACTURERS: CUTLER-HAMMER, SIEMENS, GE AND SQUARE D.

MAXIMUM OF 150 DEG C RISE ABOVE 40 DEG C AMBIENT TEMPERATURE.

UL773A. SENSOR IS POWERED FROM POWER PACK.

GENERAL ELECTRIC

CUTLER HAMMER

SQUARE D

LIGHTING CONTROL

SIEMENS

TIME SWITCHES:

A PROGRAM.

TIME CLOCK.

POWER PACK.

MOLDED CASE CIRCUIT BREAKER:

INCLUDE SCHEDULE OF ALL FUSES, RATINGS, TIME COORDINATION DATA, MANUFACTURER'S

STANDARD DATA AND TIME-CURRENT CURVES. ALL DATA SHALL BE BASED ON TEST OF

THERMAL-MAGNETIC BOLT-IN TYPE CIRCUIT BREAKERS WITH QUICK-MAKE, QUICK-BREAK

MULTI-POLE BREAKERS SHALL HAVE INTERNAL COMMON TRIP AND COMMON RESET WITH A

BREAKER TERMINALS SHALL BE RATED TO ACCOMMODATE A MINIMUM OF 75 DEGREE C.

SINGLE POLE BREAKERS RATED 15 AND 20 AMPERES SHALL BE UL LABELED AS "SWITCHING

SCHEDULE BY TYPE DESIGNATION ALL LIGHTING FIXTURES, EACH COMPLETE WITH DATA SHEET

WITH COMPLETE PHYSICAL, ELECTRICAL AND LIGHTING CHARACTERISTICS, LAMP TYPE AND

REFER TO THE "LIGHTING FIXTURE SCHEDULE" \IN THE DRAWINGS FOR INDIVIDUAL FIXTURE

PROVIDE LAMPS FOR EACH FIXTURE OF QUANTITY, TYPE AND COLOR AS LISTED IN LIGHTING

EACH LIGHTING FIXTURE SHALL BE UL LABELED FOR PROPER OPERATION IN THE TYPE OF

FIELD VERIFY ACTUAL CEILING SLOPE FOR FIXTURES INSTALLED IN SAME AND ACTUAL FIELD

DIMENSIONS AND ANGLES OF CONSTRUCTION FOR ANY FIXTURE CONFORMING THE SHAPE

INCLUDE SCHEDULE OF EACH PANELBOARD WITH ALL DEVICES AND COMPLETE WITH PHYSICAL AND ELECTRICAL DATA AND WITH RATINGS FOR EACH COMPONENT INCLUDING BREAKER/FUSE OVERLAY

LABELED PER UL #67 AND #50, CONFORM WITH NEMA #250 AND PB1, NFPA #70-384 AND 70-373.

PROVIDE TYPED CIRCUIT DIRECTORY WITH EACH CIRCUIT SERVING DEVICES AND AREA IT'S SERVING.

SOLID STATE, PROGRAMMABLE, WITH ALPHANUMERIC DISPLAY; COMPLYING WITH UL 917.

TWO ON-OFF SET POINTS ON A 24-HOUR SCHEDULE AND ANNUAL HOLIDAY SCHDULE THAT

ALLOW CONNECTION OF A PHOTOELECTRIC RELAY AS SUBSTITUTE FOR ON-OFF FUNCTION OF

BATTERY BACKUP FOR NOT LESS THAN SEVEN DAYS RESERVE TO MAINTAIN SCHEDULES AND

WALL OR CEILING MOUNTED SOLID-STATE INDOOR OCCUPANCY SENSORS WITH A SEPARATE

SENSOR OUTPUT: CONTACTS RATED TO OPERATE THE CONNECTED RELAY, COMPLYING WITH

POWER PACK: DRY CONTACTS RATED FOR 20-A BALLAST LOAD AT 120 OR 277 VAC.

DUAL SENSOR TYPE: DETECT OCCUPANCY AREA USING PIR (PASSIVE INFRA-RED) AND

AUTOMATIC LIGHT-LEVEL SENSOR: ADJUSTABLE FROM 2 TO 200 FC (21.5 TO 2152 LUX);

COPPER WIRE OR CABLE INSULATED FOR GOOV UNLESS REQUIRED BY APPLICABLE CODE OR

INSTALL SOLID CONDUCTOR FOR #8 AWG AND SMALLER AND STRANDED CONDUCTORS FOR

PROVIDE PRODUCT DATA FOR EACH TRANSFORMER. INDICATE DIMENSIONS AND WEIGHTS.

PROVIDE CERTIFICATION THAT TRANSFORMERS, ACCESSORIES, AND COMPONENTS WILL

INSULATION CLASS: 220 DEG C. UL COMPONENT RECOGNIZED INSULATION SYSTEM WITH

COMPLY WITH NEMA TPI, CLASS I EFFICIENCY LEVELS AND TESTED ACCORDING TO NEMA

TESTING AND INSPECTION: PERFORM VISUAL AND MECHANICAL INSPECTION AND ELECTRICAL TEST STATED IN NETA ACCEPTANCE TESTING SPECIFICATION. CERTIFY COMPLIANCE WITH

SUBSTANTIAL COMPLETION, PLUS 2 FOLLOW UP SCANS. ONE AT 4 MONTHS AND THE OTHER

PERFORM AN INFRARED SCAN OF TRANSFORMER CONNECTIONS TWO MONTHS AFTER

INSTALL INSULATED EQUIPMENT GROUNDING CONDUCTORS FOR ALL EQUIPMENT.

CEILING CONSTRUCTION AND FOR THE MOUNTING ARRANGEMENT ON/IN WHICH IT IS

AND LENGTH OF SAME, FOR COORDINATION OF FIXTURE CONSTRUCTION.

ALL JUNCTION BOXES SHALL BE LABELED WITH PANEL AND CIRCUIT DESIGNATION.

BREAKER SHALL BE RATED FOR MOUNTING AND OPERATION IN ANY POSITION; SHALL

MULTI-POLE BREAKERS RATED 100 AMPERES AND LARGER SHALL BE MOLDED CASE

THERMAL-MAGNETIC BOLT-IN TYPE BREAKER WITH ADJUSTABLE INSTANTANEOUS TRIP.

CONTACTS; TRIP-FREE OPERATION WITH OVER-THE-CENTER TOGGLE HANDLE OR

SINGLE TOGGLE HANDLE OR NON-REMOVABLE MONOLITHIC TIE-HANDLE.

TRIP RATINGS SHALL BE MOLDED ON THE HANDLE OR FACE OF BREAKER.

ACCOMMODATE AND MATCH THE TYPE OF TERMINATIONS REQUIRED.

FIXTURE SCHEDULE. GE, SYLVANIA OR PHILIPS ARE ACCEPTABLE.

## ELECTRICAL GENERAL NOTES

DIMENSIONS.

TYPICAL.

TRIM

SWITCHING DEVICES.

ELECTRICAL SERVICE.

PROPER LOCATION.

ACCESSIBILITY.

MASTS

OPERATIONAL STATUS.

THE AREA.

RATED WALL.

PLENUM.

LISTED PER NEC 240.87(B).

FROM PUBLIC VIEW.

IS EXPOSED.

THE DESIGN OF THIS SET OF DOCUMENT IS BASED ON NEC 2020. ELECTRICAL CONTRACTOR SHALL REFER TO ALL OTHER DESIGN DRAWINGS PRIOR TO BID AND RETAIN FULL UNDERSTANDING OF THE SCOPE OF WORK. FIXTURE TYPE INDICATED BY UPPER CASE CHARACTERS. SWITCHING AND GROUPING

DESIGNATED BY LOWER CASE LETTER AND CIRCUIT BY NUMBER (WHERE APPLICABLE). REFER TO THE ARCHITECTURAL/INTERIORS REFLECTED CEILING PLANS FOR EXACT FIXTURE PLACEMENT AND DIMENSIONS.

REFER TO THE ARCHITECTURAL/INTERIORS DOCUMENTS FOR ACTUAL DEVICE LOCATIONS AND

COORDINATE THE INSTALLATION OF ALL CEILING MOUNTED DEVICES (FIRE ALARM SYSTEM DEVICES AND SPEAKERS, SOUND SYSTEM SPEAKER, ETC.) TO BE SYMMETRICAL ABOUT LIGHT FIXTURES AND SPRINKLER HEADS. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN.

ALL MOUNTING OF EQUIPMENT IS AS SHOWN UNLESS OTHERWISE NOTED. COORDINATE WITH ARCHITECT THE COLOR/FINISHES OF ALL ELECTRICAL DEVICES, OUTLETS, COVERPLATES AND

EMERGENCY BATTERY PACKS AND EXIT SIGNS SHALL BE CONNECTED AHEAD OF ANY

REFER TO MECHANICAL DRAWINGS FOR DUCT SMOKE DETECTOR LOCATIONS AND QUANTITIES OPERATION SHALL INCLUDE DUAL CONTACT BASE WITH LOCAL EQUIPMENT SHUTDOWN AND FIRE ALARM SIGNAL INITIATION.

WHEN CONDUCTOR OR CONDUIT SIZE IS INDICATED FOR BRANCH CIRCUIT HOME RUN, THE CONDUCTOR AND CONDUIT SIZE INDICATED SHALL BE USED FOR THE COMPLETE CIRCUIT. REFER TO THE APPROPRIATE DRAWINGS FOR THE EXACT LOCATION AND REQUIREMENTS OF EQUIPMENT INSTALLED UNDER OTHER DIVISIONS OF THE DOCUMENTS, WHICH REQUIRE

EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSTALLED IN ALL RACEWAYS. WALL SWITCHES CONTROLLING CIRCUITS OF OPPOSITE PHASES SHALL NOT BE INSTALLED IN COMMON BOX UNLESS PERMANENT BARRIER IS PROVIDED. ALL HOME RUNS SHALL RUN PARALLEL TO STRUCTURE AS MUCH AS POSSIBLE WHERE CEILING

ALL RACEWAY AND EQUIPMENT SUPPORTS AND HANGERS SHALL BE FULLY COORDINATED WITH STRUCTURAL DRAWINGS TO INSURE LOCATION OF SAME OCCURS WITHIN FOUR (4) INCHES OF PANEL POINT ON BAR JOISTS.

COORDINATE LOCATION OF ALL FLOOR MOUNTED MECHANICAL AND PLUMBING EQUIPMENT IN ORDER TO VERIFY POWER & CONTROL RACEWAY CONCEALED IN SLABS TERMINATED AT

DISCONNECT SWITCHES. MOTOR STARTERS AND OTHER ELECTRICAL EQUIPMENT INSTALLED ABOVE ACCESSIBLE CEILINGS, AND REQUIRING ACCESS FOR MAINTENANCE, SHALL BE INSTALLED WITH BOTTOM OF DEVICE ONE (1) FOOT ABOVE CEILING TO PROVIDE READY

MECHANICAL, PLUMBING, FIRE PROTECTION AND OTHER EQUIPMENT ARE SHOWN ON FLOOR PLAN IN APPROXIMATE LOCATION. COORDINATE WITH M, P, FP AND CONTRACT DRAWINGS/SUBMITTALS FOR EXACT LOCATION OF EQUIPMENT.

GENERAL DIAGRAMMATIC RACEWAY INTERCONNECTIONS OF EQUIPMENT, FIXTURES AND DEVICES ARE INDICATED ON FLOOR AND REFLECTED CEILING PLANS, REFER TO STRUCTURAL AND ARCHITECTURAL PLANS FOR ELEVATION CHANGES AND RACEWAY ROUTES. RACEWAY FOR EXTERIOR LIGHTING MAY BE INDICATED OUTSIDE OF BUILDING FOOTPRINT FOR

CLARITY. ROUTE ALL EXTERIOR LIGHTING RACEWAY WITHIN BUILDING STRUCTURE. POWER AND COMMUNICATIONS/DATA CONDUITS CAN CROSS AT 90°, BUT WHERE PARALLEL, SHALL BE A MINIMUM OF 8" APART.

PROVIDE TVSS FOR FIRE ALARM CONTROL PANEL.

TELEVISION AND RADIO ANTENNAS CABLES SHALL HAVE SURGE PROTECTION. GROUND ALL

FIELD COORDINATE MECHANICAL AND PLUMBING EQUIPMENT ELECTRICAL CHARACTERISTICS WITH DIV. 15 CONTRACTOR PRIOR TO ROUGH-IN. ADJUST ELECTRICAL CONNECTIONS IF NECESSARY TO MATCH ACTUAL EQUIPMENT IN FIELD. FOR EXAMPLE, COORDINATE THE NAMEPLATE OVERCURRENT PROTECTION DEVICE RATING OF MECHANICAL EQUIPMENT AMONG MECHANICAL AND ELECTRICAL SUBCONTRACTORS. ADJUST CIRCUIT BREAKER TO MATCH NAMEPLATE RATING OF EQUIPMENT AT NO ADDITIONAL COST.

### FIELD COORDINATE MECHANICAL AND PLUMBING EQUIPMENT REQUIREMENTS FOR ANY SUPPLEMENTAL POWER REQUIREMENTS, INCLUDING BUT NOT LIMITED TO CONTROL CIRCUITS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BRING ALL EQUIPMENT TO ITS INTENDED

REFER TO FIRE PROTECTION DRAWINGS FOR LOCATIONS OF FLOW AND TAMPER SWITCHES. EACH PENETRATION OF A FIRE RESISTANT RATED ASSEMBLY BY A PIPE, TUBE WIRE OR CONDUIT SHALL BE PROTECTED BY A THROUGH PENETRATION FIRE STOP SYSTEM THAT HAS BEEN TESTED ACCORDING TO ASTME 814 OR E199.

ELECTRIC RECEPTACLES, SWITCHES, OUTLETS, ETC. SHALL NOT BE INSTALLED BACK TO BACK ON FIRE RESISTANCE RATED WALLS. THEY SHALL BE AT LEAST 24-INCHES APART.

LIGHT SWITCHES AND ELECTRICAL OUTLETS, LOCATED IN ROOMS ACCESSIBLE TO THE DISABLED SHALL BE LOCATED NO HIGHER THAN 48 INCHES AND NO LOWER THAN 15 INCHES ABOVE THE FINISHED FLOOR SURFACE. IF THE REACH OR THE CONTROL IS OVER AN OBSTRUCTION, THE MINIMUM HEIGHT SHALL BE REACHED TO 44 INCHES FOR A FORWARD APPROACH OR 46 INCHES FOR A SIDE APPROACH.

REFER TO LOW VOLTAGE CONSULTANT'S DRAWINGS FOR VOICE. DATA AND CATV OUTLET LOCATIONS. REFER TO LV CONSULTANT'S DRAWINGS FOR ANY ADDITIONAL INFORMATION. CONNECT ALL EXIT SIGNS TO NEAREST UNSWITCHED PORTION OF THE LIGHTING CIRCUIT IN

ELECTRICAL BOXES INSTALLED IN FIRE RATED WALLS SHALL MAINTAIN THE INTEGRITY OF THE

SUPPORT ALL VERTICAL RACEWAY PER NEC TABLE 300.19(A). MAKE ELECTRICAL CONNECTIONS TO ELECTRIC WATER COOLERS FROM GFCI PROTECTED OUTLET IN WALL BEHIND COOLER HOUSING. THE OUTLET AND CORD SHALL NOT BE VISIBLE

COORDINATE WITH CUTSHEETS OF ALL EQUIPMENT TO BE INSTALLED AND PROVIDE ADDITIONAL CIRCUITS FOR CONTROLS IF REQUIRED BY MANUFACTURER.

FINAL COLOR. FINISH AND OTHER AESTHETIC PORTIONS OF ALL DEVICES SHALL BE COORDINATED WITH ARCHITECT OR OWNER'S REPRESENTATIVE. THIS SET OF DRAWINGS DOES NOT SUPERCEDE ARCHITECTURAL OR INTERIOR DOCUMENTS.

ALL EXPOSED HORIZONTAL RUNS OF CONDUITS SHALL BE EITHER PARALLEL OR PERPENDICULAR TO EXTERIOR WALLS.

PROVIDE PLENUM RATED CABLES IF THE CABLES ARE EXPOSED AND ROUTED THROUGH

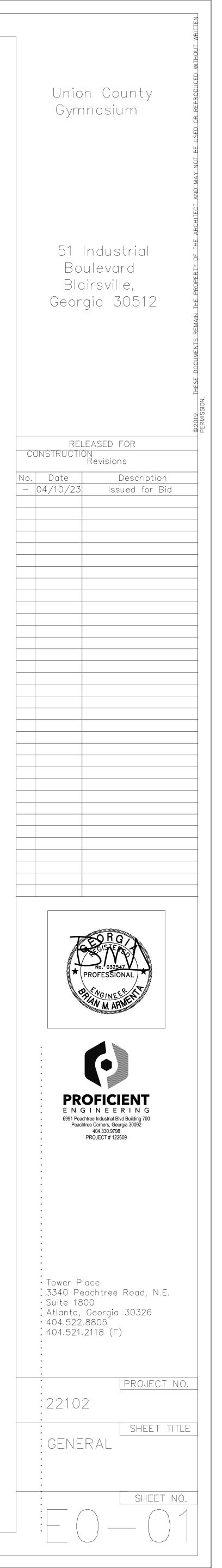
FOR ALL FUSES 1,200A OR HIGHER, PROVIDE ARC ENERGY REDUCTION PER NEC 240.67. WHERE HIGHEST TRIP SETTING IN INSTALLED OVERCURRENT DEVICE IS 1,200A OR HIGHER, CONTRACTOR TO PROVIDE DOCUMENTATION OF CIRCUIT BREAKER(S) LOCATION AND PROVIDE AT LEAST ONE METHOD TO REDUCE CLEARING TIME VIA ENERGY-REDUCING MAINTENANCE SWITCH, INSTANTANEOUS TRIP SETTING, OR OTHER APPROVED METHOD AS

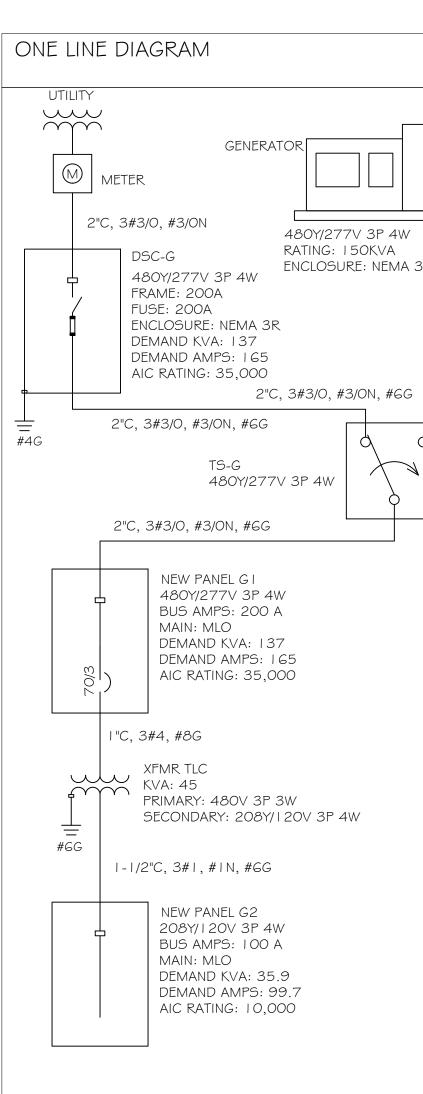
## LECEND

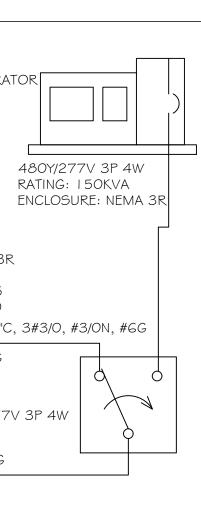
SYMBOLS	DESCRIPTION	TYPICAL MOUNTING HEIGH UNLESS NOTED OTHERWIS
Φ	DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	18" AFF
$\oplus$	DUPLEX RECEPTACLE, I 20V, 20A, NEMA 5-20R	42" AFF OR 6" ABO COUNTER TOP
₽	QUADRAPLEX RECEPTACLE, I 20V, 20A, NEMA 5-20R	18" AFF
₽AC	QUADRAPLEX RECEPTACLE, I 20V, 20A, NEMA 5-20R	42" AFF OR 6" ABO COUNTER TOP
$\square$	DUPLEX RECEPTACLE, I 20V, 20A, NEMA 5-20R	FLUSH WITH FINISH
$\overline{\mathbb{Q}}$	DUPLEX RECEPTACLE, I 20V, 20A, NEMA 5-20R	IN CEILING
$\Diamond$	SPECIAL RECEPTACLE, CONFIGURATION AND ELECTRICAL CHARACTERISTIC AS NOTED ON DWG	18" AFF
	JUNCTION BOX FLUSH IN WALL WITH COVER. SIZE PER NEC.	18" AFF
J	JUNCTION BOX FLUSH IN CEILING WITH COVER. SIZE PER NEC.	IN CEILING
J	JUNCTION BOX FLUSH IN FINSHED FLOOR WITH COVER. SIZE PER NEC.	FLUSH WITH FINISH FLOOR
\$	SWITCH	42" AFF
<b>\$</b> / \$ <sub>3</sub>	SWITCH - 3 WAY	42" AFF
¢ / \$ <sub>05</sub>	SWITCH - WALL MTD, INTEGRAL OCCUPANCY SENSOR	42" AFF
\$ <sub>LV</sub>	SWITCH - WALL MTD, LOW VOLTAGE, PILOT LIGHT	42" AFF
Ф / \$ <sub>D</sub>	SWITCH - WALL MTD, DIMMING	42" AFF
69	SWITCH - CEILING MOUNTED OCCUPANCY SENSOR	IN CEILING
P	TV OUTLET	18" AFF
▼	TELEPHONE OUTLET	18" AFF
₹	TELEPHONE OUTLET. SUBSCRIPT: F - FIREMAN'S PHONE, H - HOUSE PHONE, P - PAY PHONE	42" AFF OR 6" ABC COUNTER TOP
V	TELEPHONE / DATA COMBINATION OUTLET	18" AFF
	TELEPHONE / DATA COMBINATION OUTLET	FLUSH WITH FINISH FLOOR
4	TELEPHONE / DATA COMBINATION OUTLET	42" AFF OR 6" ABC COUNTER TOP
$\bigtriangledown$	DATA OUTLET	18" AFF
$\overline{\nabla}$	DATA OUTLET	42" AFF OR 6" ABC COUNTER TOP
	DISCONNECT SWITCH. SUBSCRIPT: AMP / # OF POLES / ENCLOSURE	AS INDICATED ON DWG
	FUSED DISCONNECT SWITCH. SUBSCRIPT: AMP / # OF POLES / ENCLOSURE / FUSE	AS INDICATED ON DWG
	ELECTRICAL PANELBOARD. REFER TO PANELBOARD SCHEDULE.	SURFACE MOUNTED
	EQUIPMENT AS NOTED ON DRAWING.	SURFACE MOUNTED
	MOTOR	
×-#	HOME RUN WITH WIRE TICKS. XX - PANEL DESIGNATION, # - CIRCUIT DESIGNATION. WIRE TICKS - (1) NEUTRAL  , (3) HOT III ¢ (1) GROUND •	
0/0-	SMOKE DETECTOR. CEILING / WALL MOUNTED	
 (F) / (F) -	HEAT DETECTOR. CEILING/WALL MOUNTED	
	FIRE ALARM NOTIFICATION DEVICE. AUDIO AND VISUAL.	80" AFF
 X	FIRE ALARM NOTIFICATION DEVICE. AUDIO.	80" AFF
¤ X	FIRE ALARM NOTIFICATION DEVICE. VISUAL.	80" AFF
$\boxtimes$	FIRE ALARM INITIATION DEVICE. PULL STATION.	42" AFF

## ABBREVIATIONS

AC	6" ABOVE COUNTER SPACE OR 42" AFF	IG	ISOLATED GROUND
AF	AMP FUSE	ISC	SHORT CIRCUIT CURRENT
AFF	ABOVE FINISHED FLOOR	LTG	LIGHTING
AL	ALUMINUM	MTD	MOUNTED
BFC	BELOW FINISHED CEILING	Ν	NEUTRAL
BKR	BREAKER	NL	NIGHT LIGHT
CND	CONDUIT	NEC	NATIONAL ELECTRICAL CODE
CONN	CONNECTED OR CONNECTION	PNL	PANEL
СТВ	CABLE TV TERMINAL BACKBOARD	RECPT	RECEPTACLE
СИ	COPPER	TEL	TELEPHONE
DN	DOWN	TTB	TELEPHONE TERMINAL BOARD
EC	EMPTY CONDUIT	TV	TELEVISION
ELEC	ELECTRICAL	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
FACP	FIRE ALARM CONTROL PANEL	TYP	TYPICAL
FAA	FIRE ALARM ANNUNCIATOR PANEL	XFMR	TRANSFORMER
G OR GRND	GROUND	UG	UNDERGROUND
GFCI OR GF	GROUND FAULT CIRCUIT	WP	WEATHERPROOF





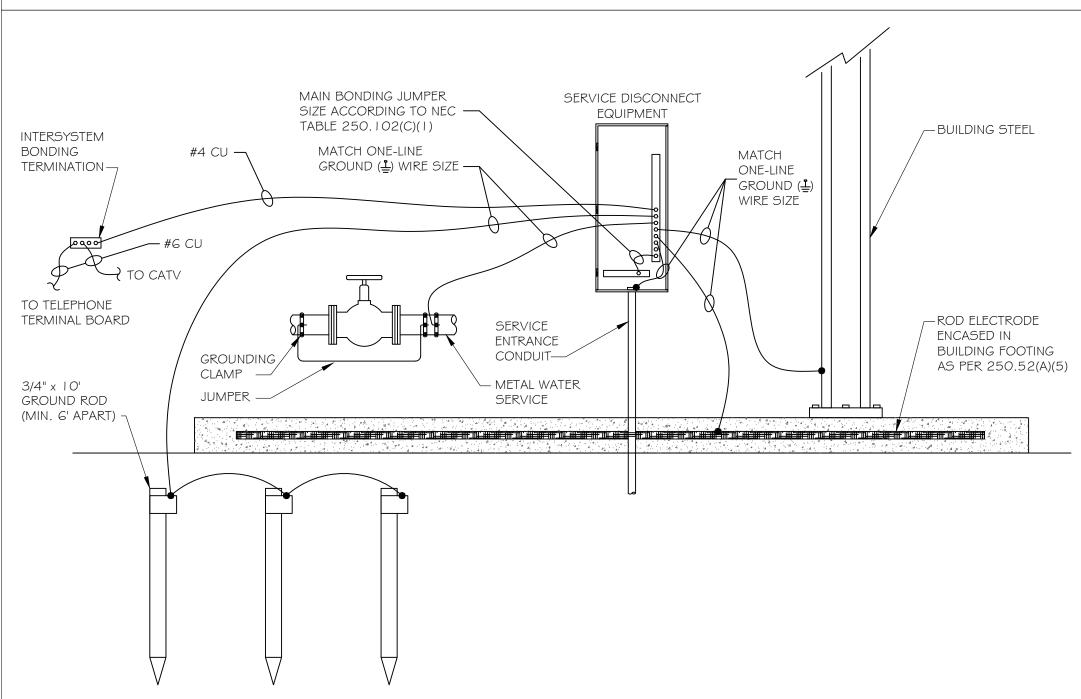


CALLOUT	SYMBOL	DESCRIPTION	MODEL	VOLTS
A		2X4 RECESSED TROFFER	LITHONIA LIGHTING: 2BLT4 48L ADP MVOLT EZ I O LP835	277V IP 2W
AE		2X4 RECESSED TROFFER WITH BATTERY BALLAST	LITHONIA LIGHTING: 2BLT4 48L ADP MVOLT EZ I LP835 EL I 4L	MULTIPLE
В	0	2X2 LED LIGHT FIXTURE	LITHIONIA 2BLT2 40L ADP MVOLT EZ I LP835	277V IP 2W
BE	0	2X2 LED LIGHT FIXTURE W/ EMERGENCY BATTERY PACK	LITHIONIA 2BLT2 40L ADP MVOLT EZ I LP835 EL I 4L	277V IP 2W
F	0	G'; OPEN LED DOWNLIGHT	LITHONIA #LDNG 35/10 LOG WR LSS MVOLT EZ10	277V IP 2W
G	Ф	EXTERIOR GRADE DOWNLIGHT	TBD	MULTIPLE
Н	0	LED HIGH BAY FIXTURE	LITHIONIA #JBHL 35000LM ACL WD MVOLT GZ I O 35K 80CRI WGX CS89 DWHXD	277V IP 2W
HE	0	LED HIGH BAY FIXTURE W/BATTERY BACKUP	LITHIONIA #JBHL 35000LM ACL WD MVOLT GZ10 35K 80CRI WGX CS89 DWHXD BSL722	277V IP 2W
J	HOI	4' GENERAL PURPOSE LED STRIP LIGHT	LITHIONIA #CLX L48 5000LM SEF FDL MVOLT EZ I 35K 80CRI WH WGCLX4848	277V IP 2W
JE	HOI	4' GENERAL PURPOSE LED STRIP LIGHT	LITHIONIA #CLX L48 5000LM SEF FDL MVOLT EZ I 35K 80CRI WH WGCLX4848 E I OWLCP	277V IP 2W
K	$\bigcirc$	EXTERIOR WALL PACK	LITHIONIA #WST-LED2-10A700/40K-SR3-277-SF-DNAXD	277V IP 2W
P2	<b>├</b> ────┤	BEAM MOUNTED UPLIGHT STRIP	PEERLESS #EGCW4L LLP	277V IP 2W
P2E	<b>⊢−−−−−</b> I	BEAM MOUNTED UPLIGHT STRIP	PEERLESS #EGCW4L LLP EIOWLCP	277V IP 2W
51	Ŷ	EXTERIOR SCONCE	VISA #OW1315 L35K-H-MVOLT-BRNZ-BRNZ	277V IP 2W
52	Q	INTERIOR SCONCE	VISA #CV2029 L35K-H-MVOLT-BRNZ-BRNZ	277V IP 2W

GYM E	Equipm	ENT SCHED	DULE				
CALLOUT	SYMBOL	VOLTS	KVA	BREAKER	CIRCUIT	WIRE CALLOUT	DISCONNECT DESCRIPTION
EF-A	Ø	277V IP 2W	0.24	20/1	GI-8	/2"C, # 0,# 0N,# 0G	FACTORY DISCONNECT SWITCH/PLUG
EF-A	Ø	277V IP 2W	0.24	20/1	GI-8	/2"C, # 0,# 0N,# 0G	FACTORY DISCONNECT SWITCH/PLUG
FCU-1	8 Ū	208/120V 2P 3W	15.87	80/2	G2-35,37	- /4"C,2#2,#2N,#8G	I OOA/2P/NEMA I
FCU-2	8° "L"	480V 3P 4W	72	90/3	G -7,9,	- /4"C,3#2,#2N,#8G	GOA/2P/NEMA I
HP-1	8 Ū	208/120V 2P 3W	6.66	50/2	G2-39,41	3/4"C,2#6,#6N,#10G	GOA/2P/NEMA 3R
HP-2	8 Ū	480V 3P 4W	33.92	50/3	GI-1,3,5	"C,3#6,#6N,#10G	GOA/3P/NEMA 3R
IWH-I	8 Ū	277V IP 2W	2.3	20/1	G   -   O	/2"C, # 0,# 0N,# 0G	30A/2P/NEMA I
IWH-2	8 U	277V IP 2W	2.3	20/1	GI-12	/2"C, # 2,# 2N,# 2G	30A/2P/NEMA I
IWH-3	8 Ū	277V IP 2W	3.07	20/1	G - 4	/2"C, # 2,# 2N,# 2G	30A/2P/NEMA I
WH-I	0° <sup>-</sup> L'	277V IP 2W	3	20/1	GI-15	/2"C, # 2,# 2N,# 2G	30A/2P/NEMA I

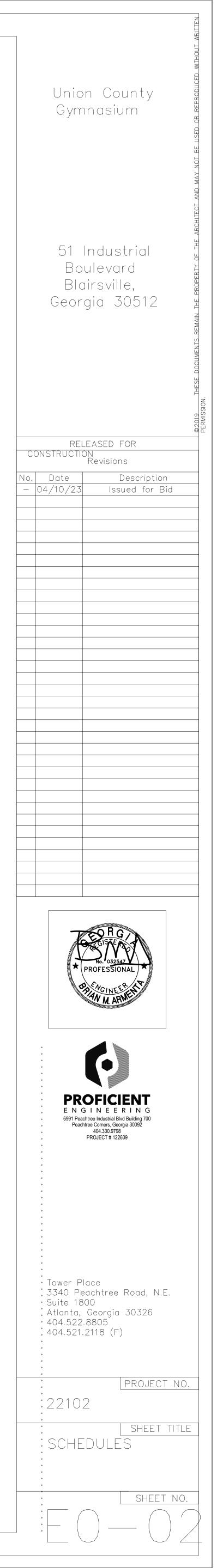
DEVICE	FAULT	AIC RATING	L-L VOLTS	L-N VOLTS		UTILITY	
					FAULT	Х	R
DSC-G	7,988	35,000	480V	277V	7,790	0.03343	0.01212
GI	28,864	35,000	480V	277V	28,665	0.004631	0.008481
TLC	6,599	10,000	208V	120V	6,525	0.01747	0.005735
G2	6,245	10,000	208V	120V	6,170	0.01798	0.0074
DSC-A	21,065	35,000	208V	120V	20,735	0.004893	0.00309
A	32,620	35,000	208V	120V	32,289	0.001619	0.003345

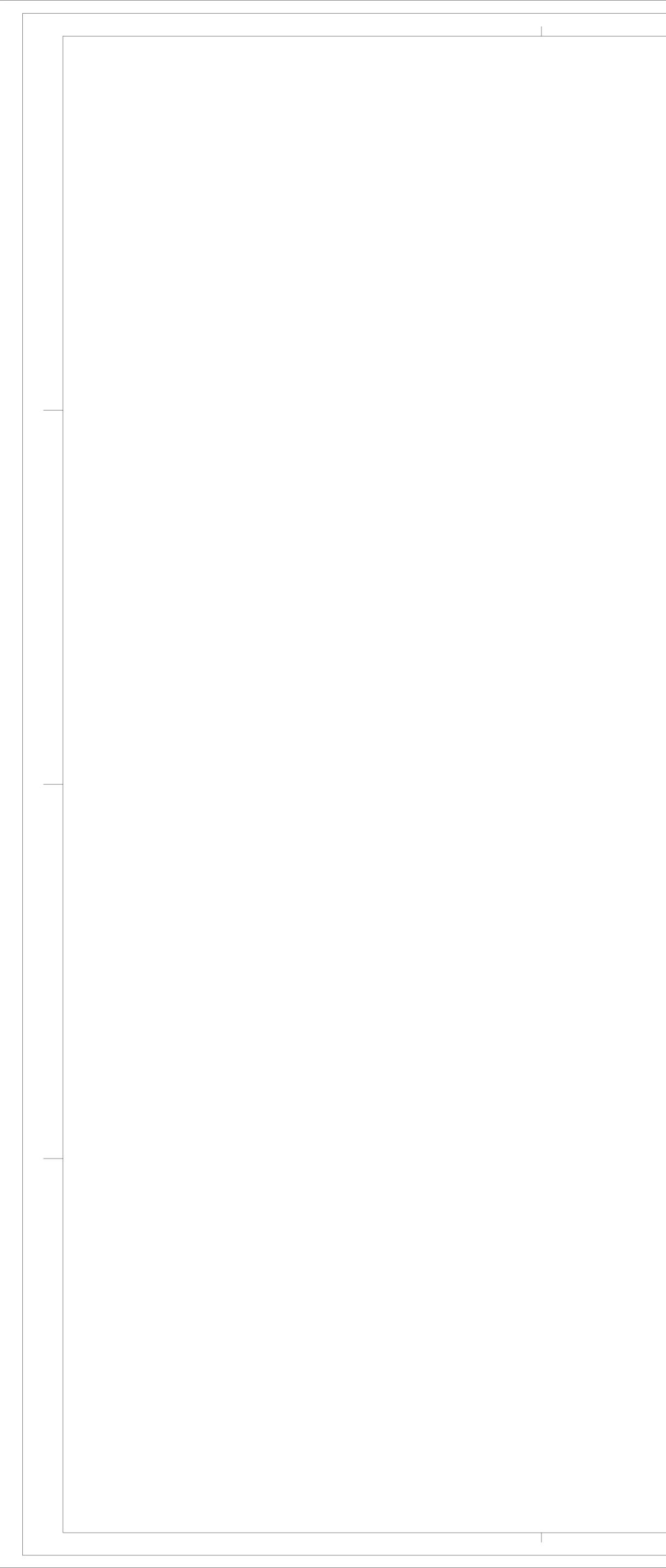
## GROUNDING AND BONDING DETAIL



ROON MOUN FED F NOTE	NTING S ROM T	URFACE S-G			VOLTS BUS AMF NEUTRAL		$\mathbf{C}$	W			AIC 35,000 MAIN BKR N LUGS STAND				
СКТ	CKT				l	LOAD KV	Ą	СКТ	СКТ					OAD KVA	4
#	BKR	CIRCUIT	DESCRIPTION		A	В	С	#	BKR	CIRCUIT	DESCRIPTION		A	В	С
 3 5	50/3   	HP-2			.3	.3	.3	2 4 6	20/3   	SPACE			0.0	0.0	0.0
7 9	90/3 	FCU-2			24.0	24.0	24.0	8 10 12	20/1 20/1 20/1	EF-A, LIC IWH-I IWH-2	GHTING		2.1	2.3	2.3
13 15	1 20/1 20/1	WH-I	-2, LIGHTING		1.5	3.0		4  6	20/1 20/1	IWH-3 LIGHTING			3.1	2.9	
17 19 21 23	20/1 20/1 20/1	SPACE SPACE	3		0.0	0.0	0.5	18 20 22 24	20/1 20/1 20/1 20/1	LIGHTING SPACE SPACE SPACE	2		0.0	0.0	2.9
25 27	20/1 20/1 20/1	SPACE SPACE			0.0	0.0		26 28	20/1 20/1	SPACE SPACE			0.0	0.0	
29 31 33	20/1 20/1 20/1	SPACE SPACE SPACE			0.0	0.0	0.0	30 32 34	20/1 20/3 	SPACE SPACE			0.0	0.0	0.0
35 37 39	20/1 20/1 20/1	SPACE SPACE SPACE			0.0	0.0	0.0	36 38 40	 70/3 	XFMR TL	_C		17.6	13.9	0.0
41	20/1	SPACE					0.0	42							15.5
										TOTAL C	CONNECTED KV	A BY PHASE	59.6	57.4	56.5
										TOTAL CO	NNECTED AMPS	6 BY PHASE	215.0	207.2	204.0
			CONN KV	CALC K	VA						CONN KVA	CALC KVA	4		
LARC	TING GEST MO <sup>T</sup> ORS	ΓOR	9.0 33.9 0.8	.2 8.5 0.8	(25	25%) 5%) DO%)				DUS	22.3   2.9 87.9 40.6	6.2   2.9 87.9 0.0	(50%) (100 (100) (0%)	)%)	
									L LOAD NCED 3-P	'HASE LOA	D	37.4  65.3 A			

FED F	NTING S	URFACE LC I		VOLTS BUS AMF NEUTRAL		$\mathbf{C}$	-W		AIC I 0,00 MAIN BKR LUGS STA	MLO			
CKT	CKT				_OAD KVA	Ą	CKT	CKT			L	.OAD KVA	4
#	BKR	CIRCUIT DESCRIPTION		A	В	С	#	BKR	CIRCUIT DESCRIPTIC	2N	A	В	С
1	20/1	RECEPTACLE		0.2			2	20/1	RECEPTACLE		0.2		
3	20/1	FUTURE TROPHY LIGHTIN	1G		0.4		4	20/1	RECEPTACLE			0.9	
5	20/1	MOTORIZED BLEACHERS	5			0.5	6	20/1	RECEPTACLE				0.9
7	20/1	SPACE		0.0			8	20/1	RECEPTACLE		0.5		
9	20/1	RECEPTACLE			0.7		10	20/1	RECEPTACLE			0.2	
	20/1	WATER COOLER				0.6	12	20/1	RECEPTACLE				0.1
13	20/1	WATER COOLER		0.6			14	20/1	RECEPTACLE		.		
15	20/1	RECEPTACLE			0.7		16	20/1	RECEPTACLE			0.5	
17	20/1	HAND DRYER				0.4	18	20/1	GOAL MOTOR				
19	20/1	HAND DRYER		0.4			20	20/1	GOAL MOTOR		1.6		
21	20/1	SCOREBOARD			1.0		22	20/1	GOAL MOTOR			1.6	
23	20/1	VOTING EQUIPMENT				0.4	24	20/1	GOAL MOTOR				1.
25	20/1	TEL BACKBOARD		1.0			26	20/1	VOTING EQUIPMENT		0.4		
27	20/1	SPACE		1.0	0.0		28	20/1	VOTING EQUIPMENT		0.1	0.4	
29	20/1	SPACE			0.0	0.0	30	20/1	VOTING EQUIPMENT			0.1	0.
31	20/1	VOTING EQUIPMENT		0.4		0.0	32	20/1	VOTING EQUIPMENT		0.4		0.
33	20/1	VOTING EQUIPMENT		0.4	0.4		34	20/1	VOTING EQUIPMENT		0.4	0.4	
35	80/2	FCU-1			0.4	7.9	36	20/1	VOTING EQUIPMENT			0.4	0.
37	00/2			7.9		1.5	38	20/1	VOTING EQUIPMENT		0.4		0.
39	ا 50/2	   HP-1		1.5	3.3		40	20/1	VOTING EQUIPMENT		0.4	0.4	
41	50/2	111 - 1			0.0	3.3	42	20/1	VOTING EQUIPMENT			0.4	0.
43	ا 20/1	VOTING EQUIPMENT		0.4		5.5	42	20/1	VOTING EQUIPMENT		0.4		0.
45		VOTING EQUIPMENT		0.4	0.4		44	20/1	VOTING EQUIPMENT		0.4	0.4	
47	20/1				0.4		46 48					0.4	0.
	20/1	VOTING EQUIPMENT				0.4		20/1	VOTING EQUIPMENT				0.
49	20/1	VOTING EQUIPMENT		0.4			50	20/1	SPACE		0.0		
51	20/1	VOTING EQUIPMENT			0.4		52	20/1	SPACE			0.0	
53	20/1	SPACE				0.0	54	20/1	SPACE				0.
55	20/1	SPACE		0.0			56	20/1	SPACE		0.0		
57	20/1	SPACE			0.0		58	20/1	SPACE			0.0	
59	20/1	SPACE				0.0	60	20/1	SPACE				0.
									TOTAL CONNECTED I	KVA BY PHASE	16.0	11.9	19
									TOTAL CONNECTED AN	IPS BY PHASE	138.6	100.2	16
		CONN KVA	CALC K	/A					CONN KV	A CALC KVA	4		
LARC	GEST MO	TOR 6.7	1.7	(25	5%)		NONC	CONTINUC	DUS 2.2	2.2	(  00	)%)	
RECI	EPTACLES	22.3	16.2		0%>10)		HEATI	NG	15.9	15.9	(100	)%)	
							COOL	ING	6.7	0.0	(0%)		
							TOTA						
								L LOAD NCED 3-F		35.9 99.7 A			





	COMcheck Softwa	
[V	Interior Light	ing
-	formation	_
Energy Code Project Title: Project Type		
Construction		Agent:
redits: 1.0 Reduced I	I Efficiency Package(s) Required 1.0 Proposed Lighting Power, 1.0 credit nterior Lighting Power A	
-Gymnasiur	Area Category	
Proposed	Interior Lighting Power A	
	Fixture ID : Description / Lamp / Watt	age Per L
LED: A (G LED: BE: LED: F (G LED: H (G LED: HE: LED: P2: I LED: B (G LED: P2E LED: J (G	PEI): 2X4 RECESSED TROFFER WITH BA 'YM): 2X4 RECESSED TROFFER: Other: 2X2 LED LIGHT FIXTURE W/ EMERGE: Oth 'YM): 6'; OPEN LED DOWNLIGHT: Other: SYM): LED HIGH BAY FIXTURE: Other: LED HIGH BAY FIXTURE W/BATTERY : Oth BEAM MOUNTED UPLIGHT STRIP: Other: 'YM): 2X2 LED LIGHT FIXTURE: Other: Elec : BEAM MOUNTED UPLIGHT STRIP: Other: 'YM): 4' GENERAL PURPOSE LED STRIP LI 4' GENERAL PURPOSE LED STRIP LI: Othe	ner: Electror ner: tronic: : Other: Ele
Interior L	ighting PASSES: Design 1% bette	r than co
designed to requiremer	ns, and other calculations submitted wi o meet the 2015 IECC requirements in C ats listed in the Inspection Checklist. M. Armenta -PE e	
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Section # & Req.ID C405.2.1 [EL15] <sup>1</sup>	me: P:\Public\122\122609 Union Co Ele COMCHECK_GYM.cck Rough-In Electrical Inspection Lighting controls installed to uniformly reduce the lighting load by at least 50%. Occupancy sensors installed in	Compli Compli Does N Not Ob Not App
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Section           & Req.ID           C405.2.1           [EL15] <sup>1</sup> C405.2.1           [EL23] <sup>2</sup> C405.2.1           [EL23] <sup>2</sup> C405.2.2.           1           [EL23] <sup>2</sup> C405.2.3.           [EL20] <sup>1</sup> C405.2.3.           [EL20] <sup>1</sup> C405.2.3.           2           C405.2.3.           1           C405.2.3.           2           C405.2.3.           3           [EL21] <sup>1</sup> C405.2.4	me: P:\Public\122\122609 Union Co Ele COMCHECK_GYM.cck Rough-In Electrical Inspection Lighting controls installed to uniformly reduce the lighting load by at least 50%. Occupancy sensors installed in required spaces. Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants. Automatic controls to shut off all building lighting installed in all buildings. Daylight zones provided with individual controls that control the lights independent of general area lighting. Primary sidelighted areas are equipped with required lighting controls. Enclosed spaces with daylight area under skylights and rooftop monitors are equipped with required lighting	Complice Complice Complice Complice Complice Not Ob. Not Applice Not Applice Complice Complice Complice Complice Complice Complice Complice Complice Complice Not Applice Complice Comp
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Section           & Req.ID           C405.2.1           [EL15] <sup>1</sup> C405.2.1           [EL23] <sup>2</sup> C405.2.2.1           [EL23] <sup>2</sup> C405.2.2.1           [EL23] <sup>2</sup> C405.2.3.1           [EL22] <sup>2</sup> C405.2.3.1           [EL20] <sup>1</sup> C405.2.3.2.3.1           (C405.2.3.3.1)           C405.2.3.3.1           C405.2.3.3.1           C405.2.3.3.1           C405.2.3.2.3.1           C405.2.3.1           C405.2.3.2.3.1           C405.2.3.2.3.1           C405.2.3.3.1           C405.2.3.4           [EL21] <sup>1</sup> C405.2.4           [EL28] <sup>1</sup>	me: P:\Public\122\122609 Union Co Ele COMCHECK_GYM.cck Rough-In Electrical Inspection Lighting controls installed to uniformly reduce the lighting load by at least 50%. Occupancy sensors installed in required spaces. Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants. Automatic controls to shut off all building lighting installed in all buildings. Daylight zones provided with individual controls that control the lights independent of general area lighting. Primary sidelighted areas are equipped with required lighting controls. Enclosed spaces with daylight area under skylights and rooftop monitors are equipped with required lighting controls. Separate lighting control devices for specific uses installed per approved lighting plans.	Compli Does N Not Ob Not App Compli Does N Not Ob Not App Compli
Section         & Req.ID         C405.2.1         [EL15] <sup>1</sup> C405.2.1         [EL23] <sup>2</sup> C405.2.1         [EL23] <sup>2</sup> C405.2.2.3         [EL22] <sup>2</sup> C405.2.3.1         (C405.2.3.2.3)         [EL20] <sup>1</sup> C405.2.3.1         (C405.2.3.2.3)         [EL20] <sup>1</sup> C405.2.3.3         [EL21] <sup>1</sup> C405.2.4         [EL4] <sup>1</sup> C405.2.4         [EL6] <sup>1</sup>	me: P:\Public\122\122609 Union Co Ele COMCHECK_GYM.cck Rough-In Electrical Inspection Lighting controls installed to uniformly reduce the lighting load by at least 50%. Occupancy sensors installed in required spaces. Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants. Automatic controls to shut off all building lighting installed in all buildings. Daylight zones provided with individual controls that control the lights independent of general area lighting. Primary sidelighted areas are equipped with required lighting controls. Enclosed spaces with daylight area under skylights and rooftop monitors are equipped with required lighting controls. Separate lighting control devices for specific uses installed per approved lighting plans. Additional interior lighting power allowed for special functions per the approved lighting. Exit signs do not exceed 5 watts per	Compli Does N Not Ob Not Appl Compli Does N Not Ob Not Appl Compli
#         & Req.ID         C405.2.1         [EL15] <sup>1</sup> C405.2.1         [EL23] <sup>2</sup> C405.2.2.3         [EL22] <sup>2</sup> C405.2.3         [EL20] <sup>1</sup> C405.2.3.1         (C405.2.3.1         (C405.2.3.3         (C405.2.3.3.1         (C405.2.4         [EL21] <sup>1</sup> C405.2.4         (EL8] <sup>1</sup>	me: P:\Public\122\122609 Union Co Ele COMCHECK_GYM.cck Rough-In Electrical Inspection Lighting controls installed to uniformly reduce the lighting load by at least 50%. Occupancy sensors installed in required spaces. Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants. Automatic controls to shut off all building lighting installed in all buildings. Daylight zones provided with individual controls that control the lights independent of general area lighting. Primary sidelighted areas are equipped with required lighting controls. Enclosed spaces with daylight area under skylights and rooftop monitors are equipped with required lighting controls. Separate lighting control devices for specific uses installed per approved lighting plans. Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting. Exit signs do not exceed 5 watts per face.	Compli Does N Not Ob Not Appl Compli Does N Not Ob Not Appl Compli

## Software Version 4.1.5.5 Lighting Compliance Certificate

							& Req.ID		an Kevlew	Complies?	
Owner/	Agent:	Design	ner/Contractor:				C103.2 [PR4] <sup>1</sup>	Plans, specifica	tions, and/or ovide all information	□Complies □Does Not	Requirement will b
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<b>ge(s)</b>								and electrical s	ystems and equipment where exceptions to	□Not Applicable	
it								the standard ar	e claimed. Information		
ower A		в	с		D			lighting power	calculations, wattage of sts, transformers and		
rea Category		Floor Area	Allowed		wed Watts			control devices		_	
		(ft2)	Watts / ft		BXC)		C406 [PR9] <sup>1</sup>	Plans, specifica calculations pro	ovide all information	□Complies □Does Not	Requirement will b
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Power								efficiency pack	age options.	□Not Applicable	1
A		В		D	Е		Addition	al Comments	/Assumptions:		
tion / Lamp / Watt	age Per Lamp / Ba	allast Lam Fixtu	•	Fixture Watt.	(C X D)						
				Watt.							
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TROFFER: Other: RE W/ EMERGE: Oth	er: Electronic:		1 1 1 2	38 39	38 78						
WNLIGHT: Other: IXTURE: Other:			1 35 1 12	13	455						
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C requirements in C		cation. The proposed in I.1.5.5 and to comply w									
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		on M man )	Date	2-27-20	23						
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	· · · · · · · · · · · · · · · · · · ·			Report dat	e: 02/27/23		Project Title	e:			
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ical Inspection	Complies?	Con	nments/Assum	nptions			Section #		l Inspection	Complies?	
talled to uniformly		Requirement will be m	net.			-	& Req.ID C303.3,		instructions for	Complies	Requirement will b
oad by at least	Does Not	nequirement win be n					C408.2.5.	systems and ed	uipment to the	Does Not	
	Not Observable						2 [FI17] <sup>3</sup>	building owner representative.		□Not Observable	
installed in	□Not Applicable □Complies	Requirement will be m	net.			_				□Not Applicable	
	Does Not						C405.4.1 [FI18] <sup>1</sup>		d lamp and fixture is consistent with what	□Complies □Does Not	See the Interior Light
	□Not Observable □Not Applicable						[[1120]	is shown on the	approved lighting trating proposed watts	□Does Not	- - 
controls installed		Requirement will be m	net.					are less than or	r equal to allowed	□Not Applicable	
g plans and all dily accessible and	Does Not	- -					C408.2.5.	watts. Furnished as-bu	uilt drawings for		Requirement will b
	Not Observable						1 [FI16] <sup>3</sup>		systems within 90 days	Does Not	
	_					_	[[10]-	or system acce	plance.	□Not Observable □Not Applicable	
o shut off all alled in all	□Complies □Does Not	Requirement will be m	net.				C408.3	Lighting system	ns have been tested to		Requirement will b
	□Not Observable						[FI33] <sup>1</sup>		calibration, adjustment,	Does Not	
dod with	□Not Applicable □Complies	Exception: Poquirom	ont door not on	nly		_		programming,	and operation.	□Not Observable □Not Applicable	
ded with nat control the		Exception: Requirem	ient does not ap	ргу.				al Comments	/Assumptions:		1
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red lighting		Requirement will be fr	iet.								
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h daylight area rooftop monitors	Complies	Exception: Requirem	ient does not ap	ply.							
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ntrol devices for		Requirement will be m	net.								
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n Impact (Tier 1)	2 Medium Imp	act (Tier 2) 3 Lov	w Impact (Tier 3	3)				1	High Impact (Tier 1)	2 Medium Impa	act (Tier 2) 3
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Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided. Plan Review Complies? **Comments/Assumptions** ill be met. ill be met.

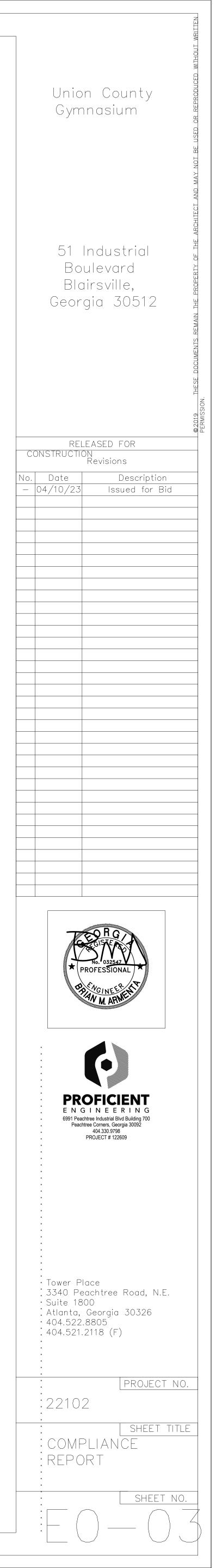
COMcheck Software Version 4.1.5.5 Inspection Checklist Energy Code: 2015 IECC

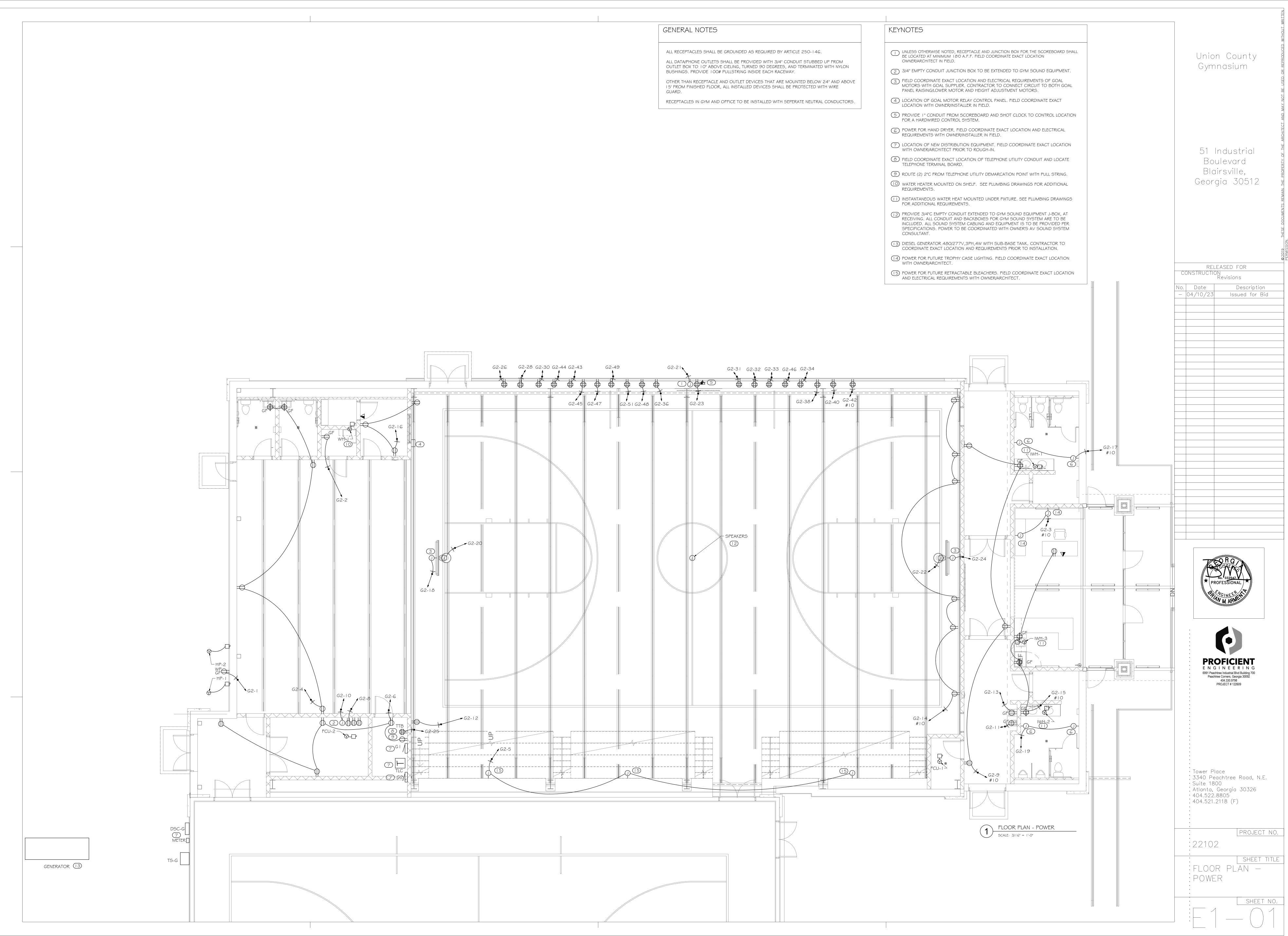
Requirements: 100.0% were addressed directly in the COMcheck software Section # & Req.ID

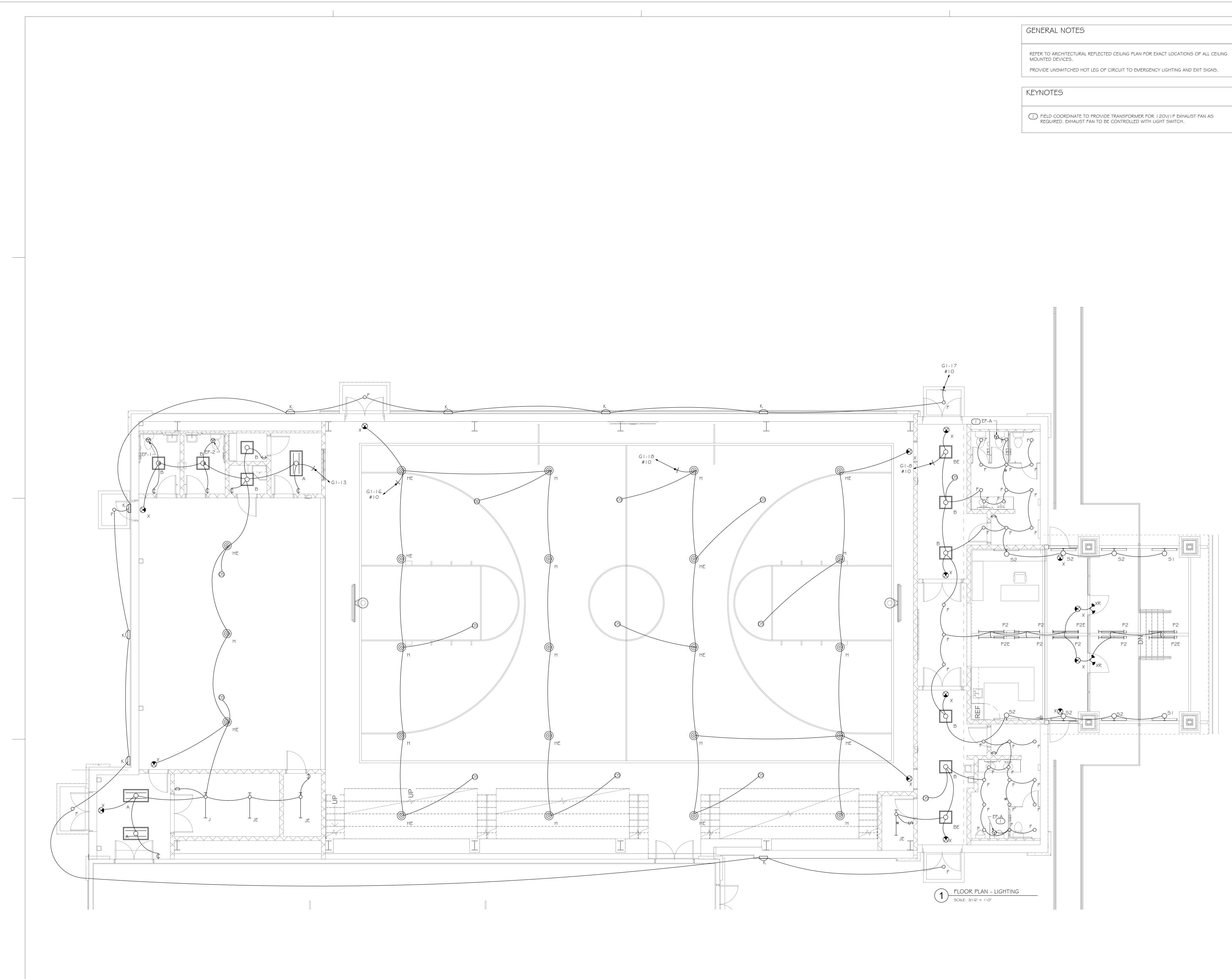
3 Low Impact (Tier 3) Report date: 02/27/23 ille GA 22102\122609 Page 2 of 5

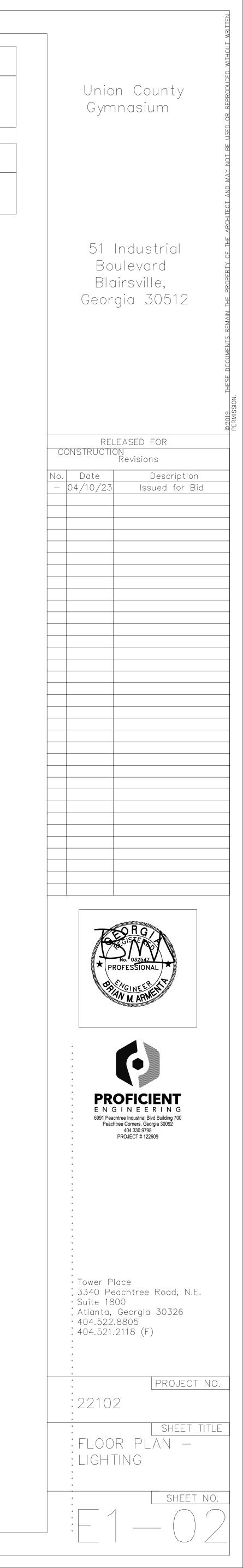
**Comments/Assumptions** ll be met. ighting fixture schedule for values. ll be met. ill be met.

3 Low Impact (Tier 3) Report date: 02/27/23 sville GA 22102\122609 Page 4 of 5









ABBRE	VIATIONS		
AAV	AIR ADMITTANCE VALVE	IMB	ICE MACHINE BOX
A/C	ABOVE CEILING	IE	INVERT ELEVATION
A/F	ABOVE FLOOR	IWH	INSTANTANEOUS WATER HEATER
AFF, AFG	ABOVE FINISHED FLOOR/GRADE	L, LAV	LAVATORY
B/F, B/G	BELOW FLOOR/GRADE	MBH	I OOO BTU/HR
BFP	BACKFLOW PREVENTER	MS	MOP SINK
CD	CONDENSATE DRAIN	MV	MIXING VALVE
CONT	CONTINUATION	O/H	OVERHEAD
CW	COLD WATER	G	NATURAL GAS
DN	DOWN	PD	PUMPED DISCHARGE
ET	EXPANSION TANK	PRV	PRESSURE REDUCING VALVE
EWC	ELECTRIC WATER COOLER	RP	RECIRCULATION PUMP
ex.	EXISTING	S, SAN	SANITARY
FCO	FLOOR CLEANOUT	SH	SHOWER
FD	FLOOR DRAIN	SK	SINK
FHB	FREEZEPROOF HOSE BIBB	TP	TRAP PRIMER
FS	FLOOR SINK	TYP	TYPICAL
FRH	FREEZEPROOF ROOF HYDRANT	UR	URINAL
FWH	FREEZEPROOF WALL HYDRANT	V	VENT
GCO	GRADE CLEANOUT	VTR	VENT THROUGH ROOF
GI	GREASE INTERCEPTOR	WC	WATER CLOSET
HB	HOSE BIBB	W.C.	WATER COLUMN
HD	HUB DRAIN	WCO	WALL CLEANOUT
HW	HOT WATER	WHA	WATER HAMMER ARRESTER
HWR	HOT WATER RETURN	WMB	WASHING MACHINE BOX

LEGEND	
	COLD WATER PIPE
	HOT WATER PIPE
	HOT WATER RETURN PIPE
<b></b> 5 <b></b>	SANITARY PIPE
	VENT PIPE
G	NATURAL GAS PIPE
GW	GREASE WASTE PIPE
——— F ———	FIRE SPRINKLER PIPE
ST	STORM PIPE
EST	EMERGENCY STORM PIPE
IW	INDIRECT WASTE PIPE
PD	PUMPED DISCHARGE
	FILTERED WATER PIPE
0 G	PIPE UP / PIPE DOWN
	PIPE TEE FROM TOP / TEE FROM BOTTOM
E	PIPE CAP / PIPE CONTINUATION
_ <b>-</b>	DIRECTIONAL FLOW ARROW
	BALL VALVE / CHECK VALVE
	MIXING VALVE / PRESSURE REDUCING VALVE
	BACKFLOW PREVENTER ASSEMBLY
[ <b>c</b>	WALL HYDRANT / HOSE BIBB
	FLOOR DRAIN / FLOOR SINK
<b>e</b>	WATER HAMMER ARRESTOR
È₩₩	GAS COCK / GAS SOLENOID VALVE
D	P-TRAP
©c	HUB DRAIN
م <u>ن</u>	TRAP PRIMER
۲	FLOOR CLEANOUT / GRADE CLEANOUT
$\otimes$	VENT THROUGH ROOF
	PIPE CLEANOUT / WALL CLEANOUT

## SPECIFICATIONS

ALL WORK SHALL COMPLY WITH ALL STATE, CITY AND LOCAL CODES, RULES AND REGULATIONS. CONTRACTOR SHALL SECURE ALL REQUIRED PERMITS AND INSPECTIONS ASSOCIATED WITH THIS WORK, AND SHALL PAY ALL COSTS AND FEES INVOLVED.

ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE BEST RECOGNIZED PRACTICE IN THE FIELD CONCERNED. MANUFACTURED ITEMS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED DIRECTIONS, SPECIFICATIONS AND RECOMMENDATIONS.

CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS AND SHALL BE FAMILIAR WITH THE SCOPE AND REQUIREMENTS OF THIS PROJECT. ANY DISCREPANCIES OR LACK OF CLARITY IN THE DOCUMENTS SHALL BE IDENTIFIED TO THE ARCHITECT OR ENGINEER PRIOR TO THE SUBMISSION OF PRICING BIDS. WITH A SUBMITTED BID, CONTRACTOR IS ACCEPTING THESE DOCUMENTS AS SUFFICIENT DEFINITION OF THE SCOPE OF WORK, AND ANY ADDITIONAL COSTS BASED ON UNCLARITY OF CONTRACT DOCUMENTS WILL NOT BE CONSIDERED.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LOCATIONS FOR EQUIPMENT INSTALLATION PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS. ALL EQUIPMENT AND DEVICES SHALL BE INSTALLED SUCH THAT THEY ARE EASILY ACCESSIBLE AND SERVICABLE. THIS EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO: PLUMBING FIXTURES, WATER HEATERS, EXPANSION TANKS, PUMPS, BACKFLOW PREVENTERS, VALVES, MIXING VALVES, THERMOMETERS, GAUGES, TRAP PRIMERS AND CLEANOUTS.

THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE FULL SET OF CONSTRUCTION DOCUMENTS, INCLUDING ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL & ELECTRICAL DRAWINGS (AS APPLICABLE) TO ENSURE ALL PLUMBING WORK IS COORDINATED WITH PHYSICAL CONDITIONS AND ALL OTHER TRADES.

THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE ARCHITECTURAL DRAWINGS TO ENSURE THERE IS ADEQUATE WALL THICKNESS SUCH THAT ALL PIPING, FIXTURE CARRIERS, WALL CLEANOUTS, WALL BOXES, WALL HYDRANTS AND ACCESS PANELS WILL FIT IN THE WALL SPACE. CONTRACTOR SHALL NOTIFY THE ARCHITECT IF WALL SPACE IS INADEQUATE PRIOR TO COMMENCING WORK.

THE CONTRACTOR SHALL OBTAIN EXACT WALL, FIXTURE, AND LAYOUT DIMENSIONS FROM THE ARCHITECTURAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ROUGH-IN AND INSTALLATION DRAWINGS FOR ALL PLUMBING FIXTURES, KITCHEN EQUIPMENT AND OWNER FURNISHED EQUIPMENT (AS APPLICABLE), AND SHALL COORDINATE THE PLUMBING INSTALLATION PRIOR TO COMMENCING THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING ALL NECESSARY VALVES, CONNECTIONS, TRAPS, ACCESS PANELS, UNIONS, ESCUTCHEONS, WATER HAMMER ARRESTORS, VACUUM BREAKERS, RELIEF VALVES, PIPE INSULATION, AND EQUIPMENT SPECIALTY DEVICES AS REQUIRED TO FACILITATE COMPLETE AND OPERATIONAL CONDITIONS WHICH ARE IN STRICT COMPLIANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

THESE DRAWINGS ARE DIAGRAMMATIC AND DO NOT REFLECT ALL POSSIBLE PHYSICAL CONDITIONS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS AND EXACT LOCATIONS OF EQUIPMENT AND FIXTURES. PROVIDE NECESSARY PIPING OFFSETS TO COORDINATE WITH THE BUILDING STRUCTURE, WORK OF OTHER TRADES, AND CONNECTION TO SITE UTILITIES (AS APPLICABLE).

COORDINATE THE ELECTRICAL REQUIREMENTS AND CHARACTERISTICS OF ALL PLUMBING EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO ISSUING SUBMITTALS OR PURCHASING EQUIPMENT.

UNLESS NOTED OTHERWISE, ALL DRAINAGE PIPING SHALL BE SLOPED AT A MINIMUM OF 🄏 "PER FOOT. 2" SANITARY PIPING AND ALL GREASE WASTE PIPING SHALL BE SLOPED AT 🔏 " PFR FOOT

DOMESTIC WATER PIPING SHALL BE PURGED OF DELETERIOUS MATTER AND DISINFECTED PRIOR TO UTILIZATION. PIPING TO BE FLUSHED AND STERILIZED IN ACCORDANCE WITH IPC 610.1 AND ALL APPLICABLE LOCAL AND STATE HEALTH DEPARTMENT STANDARDS. ALL DOMESTIC WATER PIPING, SANITARY P-TRAPS AND GREASE WASTE PIPING SUBJECT TO FREEZING SHALL BE INSULATED AND PROVIDED WITH HEAT TRACE. CONDENSATE PIPING

SUBJECT TO FREEZING WITHIN WALK-IN FREEZERS SHALL BE INSULATED AND PROVIDED WITH HEAT TRACE. PIPING INSTALLED IN EXTERIOR WALLS SHALL BE WRAPPED IN 1" THICK PIPE INSULATION AND BE LOCATED ON THE INTERIOR SIDE OF THE BUILDING INSULATION. IF INSTALLED IN EXTERIOR BLOCK WALLS, INTERSTITIAL SPACES SHALL BE FILLED WITH FOAM INSULATION.

IN CONCEALED LOCATIONS WHERE PIPING, OTHER THAN CAST-IRON OR GALVANIZED STEEL, IS INSTALLED THROUGH HOLES OR NOTCHES IN STUDS, JOISTS, OR SIMILAR MEMBERS LESS THAN 1/2" FROM THE NEAREST EDGE OF MEMBER, PIPE SHALL BE PROTECTED BY STEEL SHIELD PLATES IN ACCORDANCE WITH IPC 305.6. PIPE PENETRATIONS THROUGH FIRE RATED WALLS OR FLOORS SHALL HAVE EQUIVALENTLY RATED SLEEVES AND SHALL BE SEALED AND FIRE CAULKED WITH A U.L. LISTED FIRE STOPPING SYSTEM INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LISTED DETAILS AND SPECIFICATIONS.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE REQUIREMENTS OF THE COUNTY HEALTH DEPARTMENT AND OTHER LOCAL AUTHORITIES HAVING JURISDICTION REGARDING CROSS CONNECTION CONTROL OR OBTAINING A FOOD SERVICE PERMIT (AS APPLICABLE). REPORT ANY OBSERVED DISCREPANCIES TO THE ARCHITECT OR ENGINEER PRIOR TO COMMENCING WITH THE WORK.

CONTRACTOR SHALL CONFIRM PLUMBING FIXTURE FINISHES WITH THE ARCHITECTURAL SCHEDULES & DETAILS (AS APPLICABLE).

URNISH SHOP DRAWINGS FOR MANUFACTURED PRODUCTS. ALL ITEMS SHALL BE CLEARLY MARKED TO MATCH EQUIPMENT MARKS ON THE PLUMBING DRAWINGS. ALL OPTIONS MUST BE CLEARLY MARKED ON THE SUBMITTAL SHEET. A MODEL NUMBER LISTING ON A COVER SHEET IS NOT AN ACCEPTABLE SUBSTITUTE FOR MARKING THE ACTUAL SUBMITTAL SHEET. ELECTRICAL DATA FOR POWERED EQUIPMENT MUST BE INDICATED ON THE SUBMITTAL SHEET FOR THAT ITEM. SUBMITTAL REVIEW IS CONSIDERED A GENERAL ACCEPTANCE OF THE BASIC APPLICABILITY OF THE EQUIPMENT. CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND/OR ALTERNATE ARRANGEMENT OF THE EQUIPMENT WITHIN A GIVEN SPACE. WHEN SUBSTITUTED EQUIPMENT IS INSTALLED, CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION OR ADDITIONAL COST BROUGHT ON BY THE USE OF THIS EQUIPMENT.

SI FEV/ES SLEEVES SHALL BE PROVIDED WHERE PIPES PASS THROUGH WALLS, FLOORS AND ROOFS.

PROVIDE STANDARD WEIGHT STEEL SLEEVES IN CONCRETE AND MASONRY CONSTRUCTION, PROVIDE 26GA GALVANIZED SHEET METAL SLEEVES IN INTERIOR DRYWALL CONSTRUCTION. SLEEVES SHALL BE THE FULL THICKNESS OF WALLS AND SHALL ALLOW FOR THE FULL THICKNESS OF PIPE INSULATION. WHERE APPLICABLE. SLEEVES MAY BE OMITTED WHEN OPENINGS ARE CORE DRILLED FOR CONCEALED VERTICAL AND HORIZONTAL PIPING. SLEEVES ARE NOT REQUIRED AT INDIVIDUAL PLUMBING FIXTURES OR IN CONCRETE FLOOR SLABS ON GRADE, UNLESS OTHERWISE NOTED.

SLEEVES FOR ALL PIPING PENETRATING FIRE RATED WALLS AND FLOORS SHALL BE PROVIDED WITH 3M PIPE BARRIER NO. CP-25 FIRE PROOFING CAULKING, OR EQUAL, IN ANNULAR SPACE BETWEEN SLEEVE AND PIPING. CONTRACTOR SHALL VERIFY THE RATING OF THE WALL AND CONFIRM THE PENETRATION PROTECTION PROVIDED MEETS THAT RATING. PENETRATIONS THROUGH OUTSIDE WALLS SHALL BE WATERTIGHT. CAULK BETWEEN PLUMBING PIPE AND SLEEVE. PACK WITH FIBERGLASS AND CAULK, I" DEEP AT EACH FACE WITH NON-HARDENING SEALANT BETWEEN PIPE AND SLEEVE.

WASTE AND VENT PIPING SYSTEMS AND ACCESSORIES BANITARY PIPING SHALL BE PVC SCHEDULE 40 SOLID WALL PIPE AND DWV FITTING SYSTEM.

PIPE AND FITTINGS SHALL BE MANUFACTURED FROM PVC COMPOUND WITH A CELL CLASS OF 12454 PER ASTM D-1784 AND CONFORM WITH NATIONAL SANITATION FOUNDATION (NSF) STANDARD 14. PIPE SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM D-1785 AND ASTM D-2665. INJECTION MOLDED FITTINGS SHALL CONFORM TO ASTM D-2665. FABRICATED FITTINGS SHALL CONFORM TO ASTM F-1866. SOLVENT CEMENTS SHALL CONFORM TO ASTM D-2564. PRIMER SHALL CONFORM TO ASTM F-656. BURIED PIPE SHALL CONFORM TO ASTM D-2321.

WASTE AND VENT PIPING SHALL BE TESTED IN ACCORDANCE WITH THE GOVERNING CODES. AT A MINIMUM, WASTE PIPING SHALL BE TESTED WITH AT LEAST 10 FOOT OF WATER HEAD PRESSURE APPLIED. ALL VENTS THROUGH ROOF SHALL BE LOCATED AT LEAST 10'-O" AWAY FROM ANY AIR INTAKE, EVAPORATIVE COOLER, OR ANY OTHER DEVICE THAT WOULD DRAW AIR FROM THE VENT. FLASH AROUND ALL PIPES PENETRATING THROUGH ROOF WITH STANDARD MANUFACTURED FLASHINGS. FLASHING SHALL BE SHEET METAL WITH RUBBER GASKETS AND SHALL EXTEND

INTO ROOFING AND UP PIPE DISTANCES IN ACCORDANCE WITH THE LOCAL CODE. NO DOUBLE COMBINATION FITTINGS MAY BE UTILIZED IN THE HORIZONTAL.

WHERE TWO HORIZONTAL PIPES (BACK-TO-BACK WATER CLOSETS OR TWO SANITARY BRANCHES) COMBINE IN THE VERTICAL, A DOUBLE COMBINATION WYE EIGHTH BEND FITTING SHALL BE INSTALLED. DOUBLE SANITARY TEE OR SANITARY CROSS IS NOT ACCEPTABLE.

WHERE DRAWINGS REQUIRE CONNECTION TO EXISTING SANITARY SEWER PIPING IN BUILDING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD DETERMINE EXACT LOCATION. DEPTH AND DIRECTION OF FLOW PRIOR TO COMMENCING WORK. CONTRACTOR SHALL ALERT ARCHITECT/ENGINEER IF THERE IS A POTENTIAL ISSUE MAINTAINING PROPER SLOPE IN CONNECTING TO EXISTING, OR IF THERE IS A MORE DIRECT CONNECTION POSSIBLE. CONTRACTOR SHALL CONFIRM THAT ANY EXISTING PIPING TO BE REUSED IS CLEAN, FREE OF DEFECTS, ADEQUATELY SLOPED 🕼 "/FT MINIMUM) AND THAT THERE ARE NO DIPS THAT COULD HOLD WATER. PROVIDE CAMERA SCOPING TO DOCUMENT THIS INFORMATION. CONTRACTOR SHALL ALERT ARCHITECT/ENGINEER OF ANY DEFICIENCIES.

## SPECIFICATIONS

RETURN AIR PIFNIJMS

PROTECTION OF PIPIN

### DOMESTIC WATER SYSTEMS AND ACCESSORIES

WATER PIPING ABOVE SLAB: TYPE 'L' HARD DRAWN COPPER TUBING, ASTM B88, WROUGHT SOLDER JOINTS, ANSI BI 6.22.

WATER PIPING BELOW SLAB: TYPE 'K' SOFT DRAWN COPPER TUBING, WITH NO JOINTS BELOW SLAB, ASTM B88.

ALL DOMESTIC HOT WATER PIPING SHALL HAVE A MINIMUM PRESSURE RATING OF LOOPSI AT 180°F.

DOMESTIC WATER PIPING SHALL BE TESTED IN ACCORDANCE WITH ALL GOVERNING CODES. PIPING SHALL BE PURGED OF DELETERIOUS MATTER AND DISINFECTED PRIOR TO UTILIZATION. PIPING TO BE FLUSHED AND STERILIZED IN ACCORDANCE WITH IPC 610.1 AND ALL APPLICABLE LOCAL AND STATE HEALTH DEPARTMENT STANDARDS. BALL VALVES SHALL BE TWO-PIECE BRONZE BODY, LARGE PORT WITH SOLID, SMOOTH BORE CHROME PLATED BRASS BALL. SEATS SHALL BE REINFORCED TFE WITH TEFLON PACKING RING AND THREADED ADJUSTABLE PACKING NUT. PROVIDE STEM EXTENSION AS NEEDED TO PROVIDE HANDLE ON OUTSIDE OF PIPE INSULATION. VALVES SHALL BE APOLLO 70 OR EQUAL.

BACKFLOW PREVENTERS SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS FOR EASE OF TESTING AND SERVICING. FOR BACKFLOW PREVENTERS WITH VENT CONNECTIONS, ROUTE VENT LINE TO NEAREST DRAIN AND DISCHARGE WITH AIR GAP. BACKFLOW PREVENTERS SHALL BE TESTED IN ACCORDANCE WITH IPC 312.10.2. CONTRACTOR SHALL PROVIDE CERTIFICATIONS THAT STATE DEVICES HAVE BEEN TESTED AND APPROVED.

THERMOMETERS SHALL BE 9" ADJUSTABLE ANGLE, 30°-180°F RANGE (TRERICE BX9 OR EQUAL). PRESSURE GAUGES SHALL BE 4/2" DIAL SIZE, 0-160PSI (TRERICE GOOCB OR EQUAL). CONTRACTOR SHALL FIELD VERIFY INCOMING DOMESTIC WATER PRESSURE TO CONFIRM ADEQUATE PRESSURE TO SERVE THE DOMESTIC WATER SYSTEM. CONTRACTOR SHALL ALERT ENGINEER TO A POTENTIAL LOW PRESSURE CONDITION. WHERE PRESSURE EXCEEDS 80PSI, PROVIDE PRESSURE REGULATING VALVE (WATTS LF223) AND UPSTREAM STRAINER (WATTS LSF777).

CONTRACTOR SHALL FIELD COORDINATE LOCATION OF ACCESSIBLE ISOLATION VALVES ON DOMESTIC HOT & COLD WATER SUPPLIES TO FIXTURES OR GROUPS OF FIXTURES SUCH THAT THEY MAY BE SHUT OFF FOR SERVICING. SERVICE AND HOSE BIBB VALVES SHALL BE IDENTIFIED. ALL OTHER VALVES INSTALLED IN LOCATIONS THAT ARE NOT ADJACENT TO THE FIXTURE(S) SHALL BE IDENTIFIED, INDICATING THE FIXTURE(S) SERVED.

ALL EXPOSED MATERIALS WITHIN RETURN AIR PLENUMS SHALL BE NONCOMBUSTIBLE OR HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50, AS DETERMINED IN ACCORDANCE WITH ASTM E84/UL723. COPPER AND CAST IRON PIPING IS APPROVED. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL RETURN AIR PLENUM LOCATIONS WITH THE MECHANICAL CONTRACTOR.

INSULATE ALL DOMESTIC HOT WATER AND HOT WATER RECIRCULATION PIPING IN ACCORDANCE WITH IECC TABLE C403.2.10. PIPE UP TO 1/4": 1" THICK INSULATION. PIPE 1/2" OR LARGER: 12" THICK INSULATION INSULATE ALL HORIZONTAL COLD WATER PIPING LOCATED ABOVE CEILING, VERTICAL PIPING LOCATED IN AN EXTERIOR WALL, EXPOSED PIPING (I.E. MECH ROOMS). PIPE UP TO I ": ""

THICK. PIPING 12" AND OVER: I "THICK INSULATION. ALL WATER AND DRAINAGE PIPING INSTALLED IN EXTERIOR WALLS SHALL BE WRAPPED IN I "THICK PIPE INSULATION AND BE LOCATED ON THE INTERIOR SIDE OF THE BUILDING INSULATION. IF INSTALLED IN EXTERIOR BLOCK WALLS, INTERSTITIAL SPACES SHALL BE FILLED WITH FOAM INSULATION. ALL JOINTS SHALL BE SEALED WITH MATCHING VAPOR BARRIER TAPE.

INSULATION SHALL HAVE A K-FACTOR (AVERAGE THERMAL CONDUCTIVITY) NOT TO EXCEED 0.27 BTU-IN/HR × SQFT × °F.

PIPING PASSING UNDER FOOTINGS OR THROUGH FOUNDATION WALLS SHALL BE PROVIDED WITH A SLEEVE TWICE THE DIAMETER OF THE PIPE. OPEN ENDS OF SLEEVES SHALL BE SEALED. PIPING PASSING THROUGH CONCRETE OR CINDER WALLS AND FLOORS OR OTHER CORROSIVE MATERIAL SHALL BE PROTECTED IN ACCORDANCE WITH IPC 305.1. ALL PIPING INSTALLED THROUGH HOLES OR NOTCHES IN STUDS, JOISTS, RAFTERS OR SIMILAR MEMBERS SHALL BE PROTECTED BY STEEL SHIELD PLATES IN ACCORDANCE WITH IPC 305.6. VERTICAL STACKS IN WOOD CONSTRUCTION SHALL BE PROTECTED FROM BUILDING SETTLING WITH COMPRESSION/EXPANSION FITTINGS AND PIPE CLAMPS INSTALLED PER MANUFACTURER'S RECOMMENDATIONS (FERNCO XJ SERIES OR EQUAL).

TANK TYPE WATER HEATERS WATER HEATERS SHALL BE U.L. LISTED AND SHALL MEET OR EXCEED THE STANDBY LOSS REQUIREMENTS OF U.S. DEPT. OF ENERGY AND CURRENT EDITION OF ASHRAE/IESNA 90.1. WATER HEATERS SHALL HAVE I 50PSI WORKING PRESSURE AND BE EQUIPPED WITH EXTRUDED HIGH DENSITY ANODE ROD AND HIGH TEMPERATURE CUTOFF SWITCH. WATER HEATERS SHALL BE THERMOSTATICALLY CONTROLLED AND SET TO 120° UNLESS OTHERWISE NOTED. WATER HEATERS SHALL BE INSTALLED ON SUSPENDED PLATFORM, STEEL STAND OR CONCRETE PAD, AS INDICATED ON DRAWINGS.

WATER HEATERS SHALL HAVE A MINIMUM 3 YEAR LIMITED WARRANTY.

WATER HEATERS SHALL BE INSTALLED LEVEL AND PLUMB. FIELD COORDINATE EXACT WATER HEATER LOCATION. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES, AND INSTALL SUCH THAT CONTROLS AND DEVICES ARE ACCESSIBLE FOR SERVICING.

INSTALL SHUTOFF VALVES IN COLD WATER INLET AND HOT WATER OUTLET. INSTALL THERMOMETER ON HOT WATER OUTLET. WATER HEATER SHALL HAVE ASME RATED COMBINATION TEMPERATURE AND PRESSURE RELIEF VALVE IN TOP PORTION OF TANK (FACTORY OR FIELD INSTALLED). PIPE RELIEF VALVE OUTLET TO FLOOR DRAIN, MOP SINK, INDIRECT WASTE RECEPTOR OR TO EXTERIOR. MAINTAIN CONTINUOUS DOWNWARD PITCH TOWARD DISCHARGE LOCATION, AND PROVIDE AIR GAP AT DISCHARGE LOCATION. WHERE WATER HEATER DRAIN PAN IS INDICATED ON PLANS, ROUTE DRAIN TO SAME LOCATION AS RELIEF VALVE AND DISCHARGE WITH AIR GAP.

## HANGERS AND SUPPORTS

HANGERS SHALL BE COMPLETE WITH RODS AND SUPPORTS PROPORTIONED TO THE SIZE OF PIPE TO BE SUPPORTED, IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

SIZE HANGERS FOR INSULATED PIPING TO BEAR ON OUTSIDE OF INSULATION. PROVIDE INSULATION PROTECTORS AT HANGERS BEARING ON THE OUTSIDE OF INSULATION. PROVIDE A RIGID INSERT OR RIGID INSULATION AT EACH INSULATION PROTECTOR.

WHERE SEVERAL PIPES 2/2" AND SMALLER RUN PARALLEL AND IN THE SAME PLANE, THEY MAY BE SUPPORTED ON GANG OR MULTIPLE HANGERS. LARGER PIPING SHALL BE INDEPENDENTLY HUNG, RUN PARALLEL AND BE EQUALLY SPACED.

PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH IPC SECTION 308, AND SPACING OF HANGERS SHALL NOT EXCEED THE LIMITS SET FORTH IN TABLE 308.5. PIPES SHALL BE SUPPORTED WITHIN 1'-O" OF EACH ELBOW.

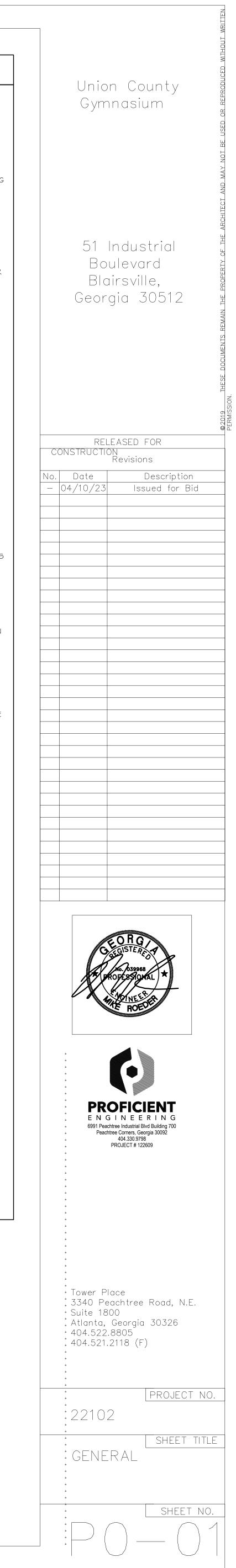
VERTICAL PIPE SUBJECT TO MOVEMENT SHALL BE SUPPORTED FROM THE WALL BY MEANS OF A PIPE CLAMP.

SUPPORT DOMESTIC WATER PIPING IN SPACES BEHIND PLUMBING FIXTURES BY BRACKETS AND U-BOLTS SECURED TO WASTE AND VENT STACKS. SIZE U-BOLTS TO BEAR ON THE PIPING. AFTER HANGER RODS ARE INSTALLED IN FINISHED CONCRETE CEILING. FILL THE REMAINING OPENING WITH CEMENT SO THAT NO HOLE SHOWS AT THE CEILING.

WHERE COPPER PIPING IS USED, NONFERROUS METAL SUPPORT(S) OR PROPER ISOLATION BETWEEN DISSIMILAR MATERIALS SHALL BE PROVIDED.

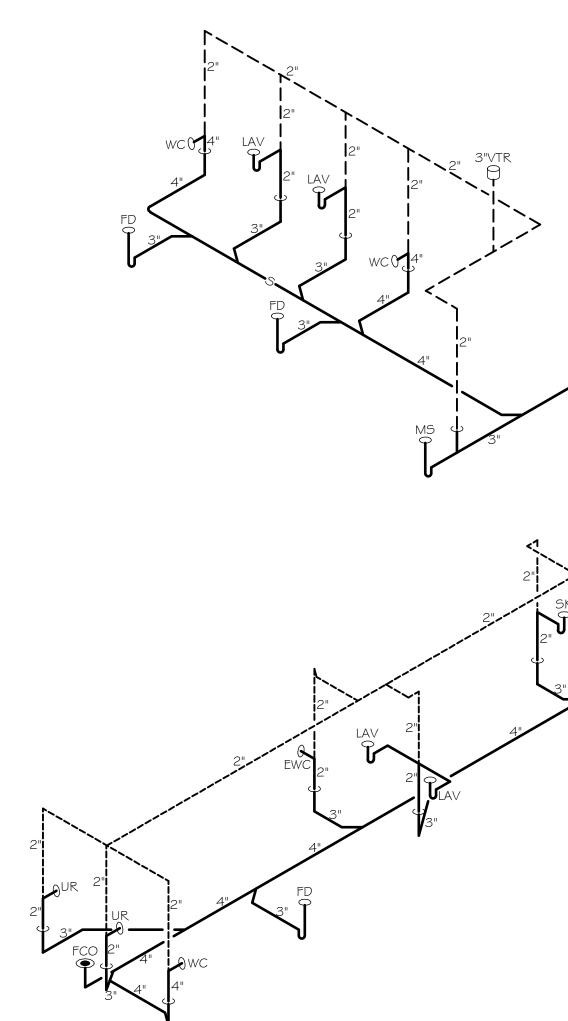
PIPE HANGERS AND SUPPORTS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH RECOMMENDATIONS SET FORTH IN MANUFACTURER'S STANDARDIZATION SOCIETY

STANDARD PRACTICES NO. SP-69 AND SP-58.



## INSTA





IARK	HEATING	ACTIVATION FLOW	SETPOINT	ELECTRICAL INPUT	BASIS		NOTES	MARK	
WH-1,2	43° RISE @ 1.0 GPM	.35 GPM	0°F	6.2 KW	CHRONOMITE M-30L / 208		COCESSOR CONTROLLED PERATURE SETPOINT		
IWH-3 O SUBMITTAL (	38° RISE @ 1.5 GPM DR PURCHASE, THE PLUMBI	.35 GPM NG CONTRACTOR SHALL	I I O°F CONFIRM THAT HAND SI 0.5 GPM AERA		CHRONOMITE M-40L / 208 ETS TO BE SERVED BY THIS	TEMF	ROCESSOR CONTROLLED PERATURE SETPOINT TER IS EQUIPPED WITH A	L-1	LA
ELECT	RIC WATER I	1EATER SCI	TEDULE					L-2	LA
MARK	TANK CAPACITY	RECOVER	Y SETPOINT	ELECTRICAL	L BASIS		TYPE		
WH-I	30 GAL	15 GPH @ 80° R	RISE I 20°	3.0 KW	A.O. SMITH DEI	V-30	TALL	WC-I	W/
PRIOR -					RICAL CHARACTERISTICS OF				
								WC-2	W M
						2		UR-I	U
						2"	2"	EWC-1	
						2" WC (*	2"	EWC-1 SK-1	V
>				2"	2" LAV 5"	2"	4" WC 4" 2"		S U
>		3"VTR		2"		2" WC (*	4" WC 4" 2"	SK-1	N S U
		3"VTR		2"LAV		2" WC (*	4" WC 4" 2"	SK-1 MS-1	V C L N F
5		3"VTR		2"		2" WC (*	4" WC 4" 2"	SK-1 MS-1 FD-1	
5		3"VTR	4"			2" WC (*	4" WC 4" 2"	SK-1 MS-1 FD-1 FCO	V C L L F F F
5		3"VTR	40	2"		2" WC (*	4" WC 4" 2"	SK-1 MS-1 FD-1 FCO WHA-X	V C L N F F C F
5.4"		3"VTR	4"			2" WC (*	4" WC 4" 2"	SK-1 MS-1 FD-1 FCO WHA-X ET-1	V S S S S S S S S S S S S S S S S S S S
5 4"		3"VTR	40			2" WC (*	4" WC 4" 2"	SK-1 MS-1 FD-1 FCO WHA-X ET-1 IMB-1	V S S S S S S S S S S S S S S S S S S S
Í, "		3"VTR	40			2" WC (*	4" WC 4" 2"	SK-1 MS-1 FD-1 FCO WHA-X ET-1 IMB-1 WF-1	V S L F F F I ( V
Í, "			4"			2" WC (*	4" WC 4" 2"	SK-1 MS-1 FD-1 FCO WHA-X ET-1 IMB-1 WF-1	
Í, "			4	2ª		2" WC (*	4" WC 4" 2"	SK-1 MS-1 FD-1 FCO WHA-X ET-1 IMB-1 WF-1	
SK 2" 3"			4"			2" WC (*	4" WC 4" 2"	SK-1 MS-1 FD-1 FCO WHA-X ET-1 IMB-1 WF-1	STUN FL FL PC

MBING FIXTURE SCHEDULE					RUNOUT	WATER	CONN.	
DESCRIPTION	WASTE RUNOUT	WASTE CONN.	VENT	сw	нw	CW	нw	SPECIFICATION
LAVATORY (ADA) - UNDERMOUNT	2"	/2"	2"	/2"	/2"	3/8"	3/8"	UNDERMOUNT LAVATORY (AMERICAN STANDARD "OVALYN," 0496.221) AND HANDLE FAUCET WITH POLISHED CHROME FINISH (ZURN Z81000-XL-3M). H OFFSET W/GRID DRAIN (ZURN 8746-PC) AND CHROME PLATED P-TRAP (ZURN CHROME PLATED BRASS ANGLE SUPPLY STOPS WITH 12" LONG X 3/8" FLEX S (MCGUIRE H I 65). WHERE NOT CONCEALED BY COUNTER SHROUD, INSULAT AND SUPPLY LINES (TRUEBRO "LAVGUARD," #103 E-Z). PROVIDE THERMOST/ VALVE TO TEMPER HOT WATER TO 110 DEGREES (LEONARD 170-LF). LEAD 1070.
LAVATORY (ADA) - WALL HUNG	2"	/2"	2"	/2"	/2"	3/8"	3/8"	WALL HUNG LAVATORY (AMERICAN STANDARD "LUCERNE," 0355.012) WITH ARM CARRIER MOUNTING (ZURN Z1231). PROVIDE 0.5GPM SINGLE HANDLE POLISHED CHROME FINISH (DELTA 501LF-HGMHDF). HANDICAP DRAIN OFFE DRAIN (ZURN Z8746-PC) AND CHROME PLATED P-TRAP (ZURN Z8701-PC). ( BRASS ANGLE SUPPLY STOPS WITH FLEX SUPPLIES (MCGUIRE H165). INSUL TRAP AND SUPPLY LINES (TRUEBRO "LAVGUARD," #103 E-Z). PROVIDE THERN MIXING VALVE TO TEMPER HOT WATER TO 110 DEGREES (LEONARD 170-LF) ASSE 1070.
WATER CLOSET - WALL MOUNT W/FLUSH VALVE	4"	3"	2"	-   /4"		"		WALL MOUNTED, FLUSH VALVE WATER CLOSET (AMERICAN STANDARD "AFWA 2257.001), 1.28 GPF, WHITE VITREOUS CHINA. TOP OF RIM AT 15" AFF. F DUTY OPEN FRONT SEAT, LESS COVER, (AMERICAN STANDARD 5905.100). EXPOSED WATER CLOSET FLUSHOMETER, CHROME PLATED, 1.28 GPF (SLOP
WATER CLOSET (ADA) - WALL MOUNT W/FLUSH VALVE	4"	3"	2"	- /4"		1		WALL MOUNTED, ADA FLUSH VALVE WATER CLOSET (AMERICAN STANDARD " FLOWISE," 2257.001), 1.28 GPF, WHITE VITREOUS CHINA. TOP OF RIM AT PROVIDE HEAVY DUTY OPEN FRONT SEAT, LESS COVER, (AMERICAN STANDAR PROVIDE EXPOSED WATER CLOSET FLUSHOMETER, CHROME PLATED, 1.28 ( 128). FLUSH CONTROL MUST BE LOCATED ON OPEN SIDE OF WATER CLOSE
 URINAL - HIGH FEFICIENCY WALL								WALL MOUNTED, FLUSH VALVE URINAL (AMERICAN STANDARD "WASHBROOK 0.5 GPF, WHITE VITREOUS CHINA. HIGH EFFICIENCY 'WATERSENSE' LISTED. 1

							1		TEO, TEODITOUTINOL MOOT DE LOOMTED ON OFEN OIDE OF WATER OLOGET.
	URINAL - HIGH EFFICIENCY, WALL MOUNTED W/FLUSH VALVE	2"	2"	2"	l n		3/4"		WALL MOUNTED, FLUSH VALVE URINAL (AMERICAN STANDARD "WASHBROOK," 6590.001), 0.5 GPF, WHITE VITREOUS CHINA. HIGH EFFICIENCY 'WATERSENSE' LISTED. PROVIDE ZURN 1222 SUPPORT SYSTEM. COORDINATE MOUNTING HEIGHT(S) AND ADA DESIGNATIONS WIT ARCHITECTURAL DRAWINGS. PROVIDE CHROME PLATED URINAL FLUSHOMETER, 0.5 GPF (AMERICAN STANDARD "FLOWISE" 6045.051.002).
C- I	WATER COOLER (ADA) - BI-LEVEL	2"	/2"	2"	/2"		/2"		BI-LEVEL WATER COOLER (ELKAY EZSTL&LC). ORIFICES AT 38 3/8" AND 32 7/8" AFF. 8.0 GPH OF 50DEG WATER @ 80DEG INLET TEMP. PROVIDE ACCESSORY APRON (LKAPREZL) IF INSTALLED ON AN EXPOSED WALL FOR CANE DETECTION. MOUNT WITH WALL CARRIER (ZUR I 225-BL).
_	STAINLESS STEEL SINK, UNDERMOUNT, SINGLE BOWL (ADA)	2"	/2"	2"	/2"	/2"	3/8"	3/8"	STAINLESS STEEL SINGLE BOWL UNDERMOUNT SINK (ELKAY ELUHAD 2   1555PD). BOWL DIMENSIONS: 23.5"L, 18.25"W, 5.5"D. ADA COMPLIANT 1.5 GPM FAUCET WITH PULL-OU SPRAY (ELKAY LK5000), SINGLE HOLE MOUNTING. MCGUIRE CHROME PLATED P-TRAP W/C.O., CHROME PLATED BRASS ANGLE SUPPLY STOPS, 12"LONG X 3/8" FLEX SUPPLIES. PROVIDE 3/4 HP GARBAGE DISPOSAL (INSINKERATOR 'EVOLUTION COMPACT' OR EQUAL)
)	MOP SINK	3"	3"	2"	/2"	/2"	/2"	/2"	24"X24" FLOOR BASIN (FIAT MSB-2424) AND SERVICE FAUCET WITH VACUUM BREAKER, INTEGRAL STOPS, PAIL HOOK AND 3/4" HOSE THREAD ON SPOUT (830-AA). PROVIDE HOSE AND BRACKET (832-AA), MOP HANGER (889-CC), STAINLESS STEEL BUMPERGUARD (E-88- AA) AND STAINLESS STEEL WALL GUARD (MSG2424).
-	FLOOR DRAIN - GENERAL PURPOSE	3"	3"	2"					GENERAL PURPOSE FLOOR DRAIN (J.R. SMITH #2005) WITH FLASHING COLLAR, ADJUSTABL STRAINER HEAD # 5" ROUND NICKEL BRONZE STRAINER. PROVIDE SQUARE STRAINER FOR TILE APPLICATIONS. PROVIDE ASSE 1072 TRAP SEALER (ZURN Z1072).
0	FLOOR CLEANOUT	see plan	see plan						FLOOR CLEANOUT WITH CAST IRON BODY AND ADJUSTABLE NICKEL BRONZE TOP (J.R. SMIT 4031). CLEANOUT SIZE SHALL MATCH LINE SIZE.
A-X	WATER HAMMER ARRESTOR				see plan		see plan		WATER HAMMER ARRESTOR, ASSE 1010 (J.R. SMITH SERIES 5005-5050), 'X' IN 'WHA-X' REFERS TO PDI SIZE INDICATED ON DRAWINGS.
-	POTABLE WATER EXPANSION TANK				3/4"		3/4"		LEAD-FREE POTABLE WATER EXPANSION TANK (WATTS PLT-5). 2.1 GALLONS TOTAL VOLUM O.8 GALLONS MAXIMUM ACCEPTANCE VOLUME. TANK SHALL BE PRE-CHARGED TO THE SYSTEM PRESSURE PRIOR TO INSTALLATION (CONTRACTOR TO FIELD-VERIFY).
3-	ICE MAKER/REFRIGERATOR BOX				/2"		/2"		ICE MAKER CONNECTION BOX (OATEY #385xx/386xx SERIES), 6"X6". LOW LEAD, 1/4 TURN BRASS VALVE WITH INTEGRAL FACTORY INSTALLED WATER HAMMER ARRESTOR. WHERE BC IS TO BE INSTALLED IN FIRE RATED WALL, PROVIDE OATEY 391xx SERIES. PROVIDE BACKFLOW PREVENTER IN SUPPLY LINE (WATTS 'SD3,' ASSE 1022).
									3/4" FAUCET HOSE CONNECTION WITH INTEGRAL BACKFLOW PREVENTER (ASSE 1052), IN

PRIOR TO SUBMITTAL OR PURCHASE, THE PLUMBING CONTRACTOR SHALL VERIFY FIXTURE SPECIFICATIONS WITH ARCHITECT/OWNER

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3/4"

3/4"

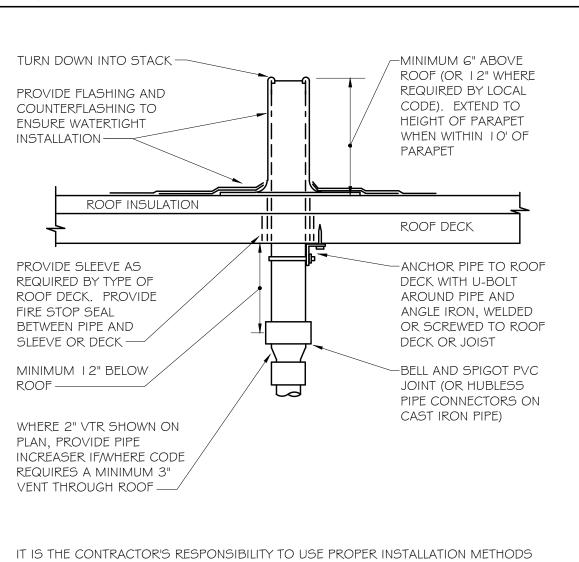
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## VENT THROUGH ROOF (VTR) NO SCALE

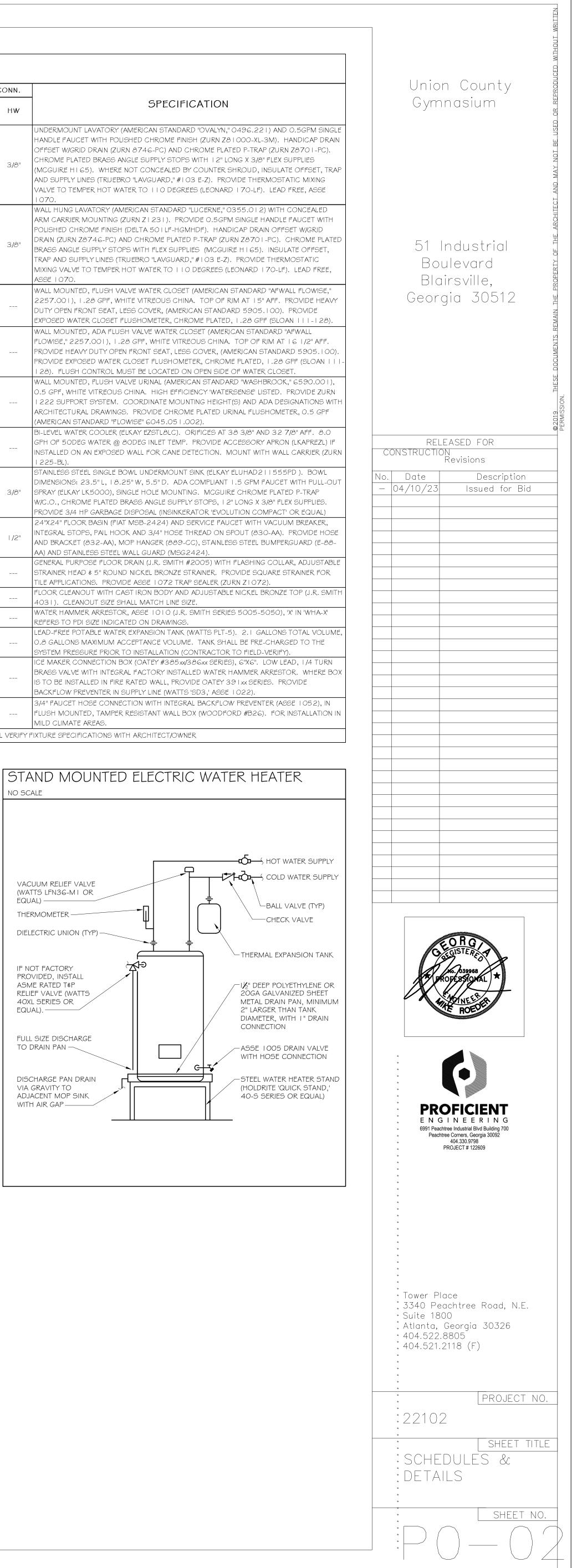
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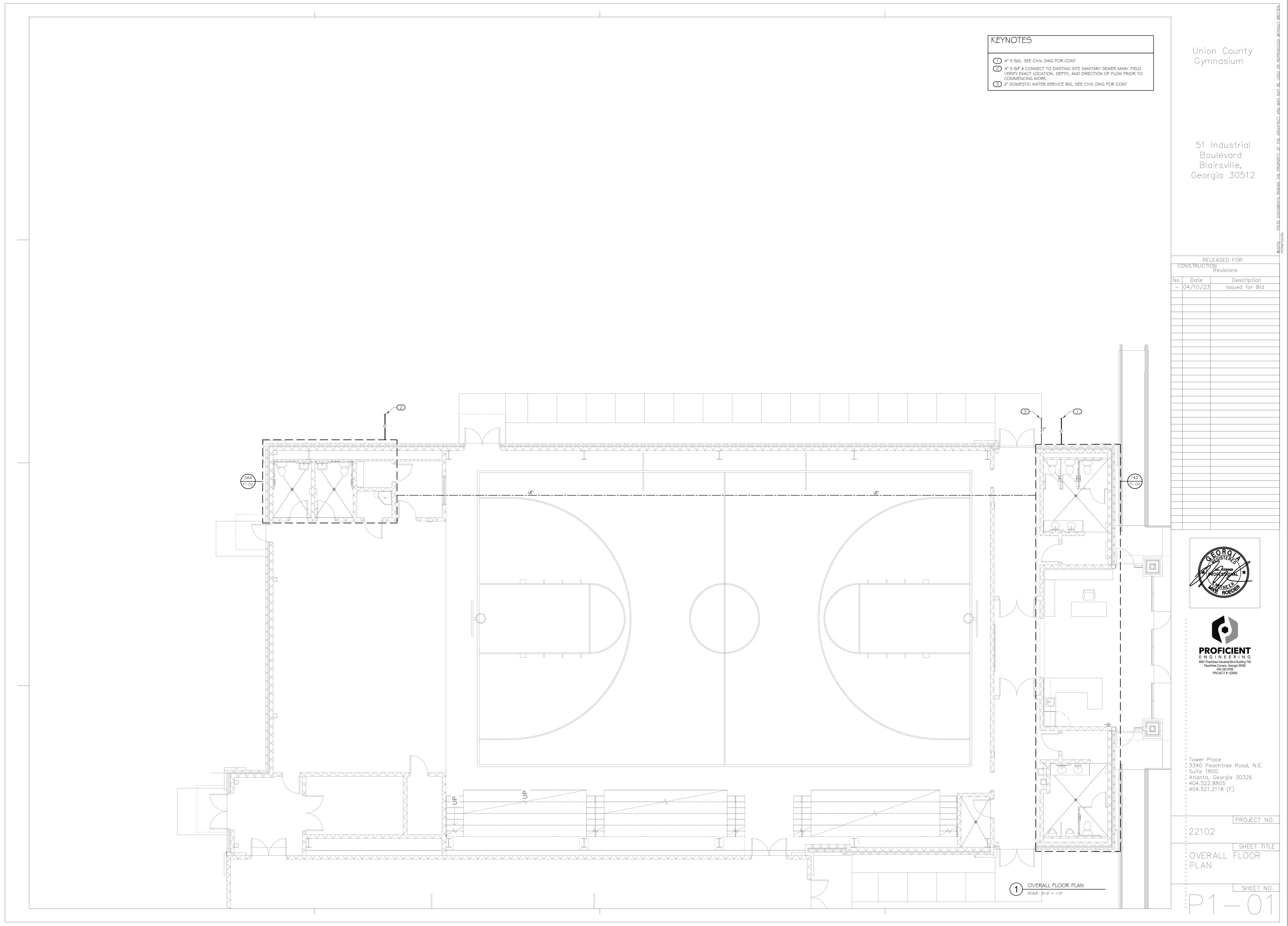
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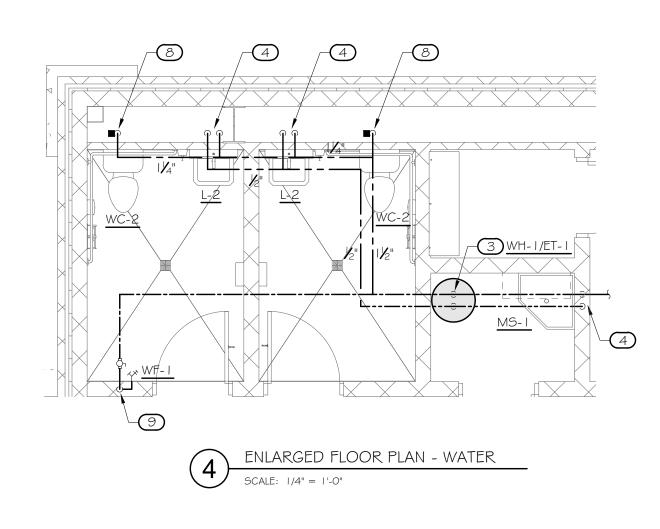
WALL FAUCET IN WALL BOX



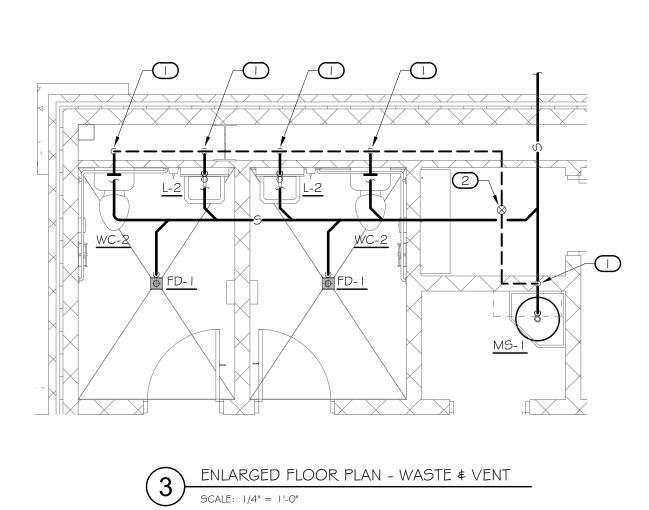
TO ENSURE ROOF PENETRATION IS WATERTIGHT. LOCATE VTR MINIMUM FIFTEEN FEET (15'-0") HORIZONTAL FROM ANY FRESH AIR INTAKE, AND ONE FOOT FROM ANY VERTICAL SURFACE. LOCATE VTR MINIMUM 18" FROM PARAPET, EXPANSION JOINT, EQUIPMENT CURB, ETC. OFFSET IN CEILING SPACE WHERE REQUIRED TO MEET THESE CONDITIONS.

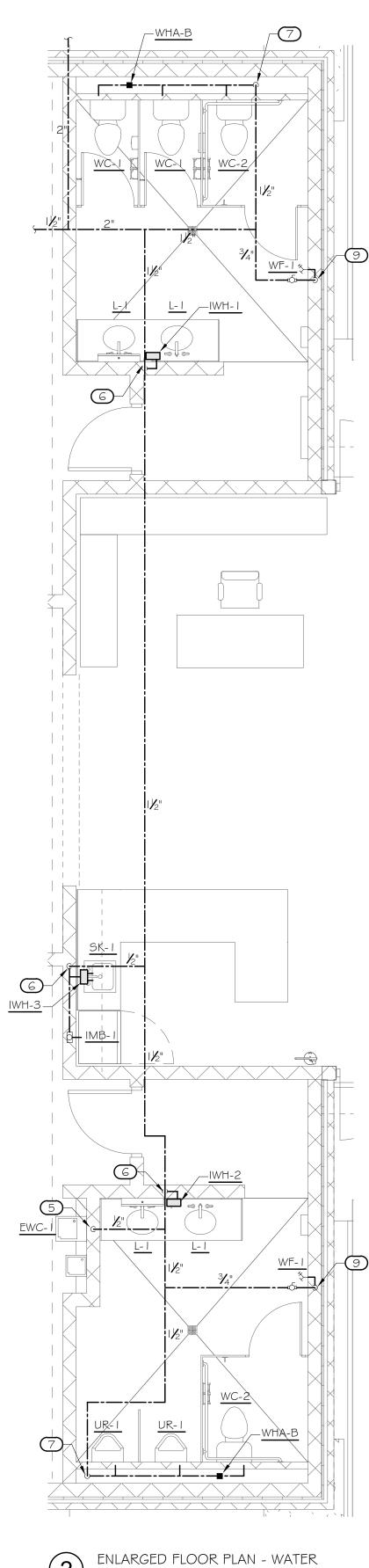






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## KEYNOTES

- 1 2" V DN
   2 3" V UP TO 3" VTR
- 3  $\frac{3}{4}$  CW #  $\frac{3}{4}$  HW TO SHELF MOUNTED WATER HEATER, SEE DETAIL
- (4) ½" CW ∉ ½" HW DN
- 5 ½" CW DN
- Q 2 CW DN
   Q 2 CW DN
   Q 2 CW DN
   Q 2 CW DN
   Q 2 CW TO INSTANTANEOUS WATER HEATER MOUNTED UNDER FIXTURE. Z'' CW # Z'' HW TO FAUCET.
   I Z'' CW DN
   I Z'' CW DN
   I Z'' CW DN TO WATER CLOSET, PROVIDE WHA-A AT BASE OF DROP
   I Z'' CW DN

2 ENLARGED FLOOR PLAN - WATER SCALE: 1/4" = 1'-0"

