G	.C.D.W.R. SEWER NOTES:		-1091		
1.	THE EXISTING UTILITIES ARE SHOWN FOR CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATION OR SIZE OF EXISTING UTILITIES. THE CONTRACTOR IS TO VERIFY THE LOCATIONS OF ALL UTILITIES AND SIZES WITHIN THE LIMITS OF THE WORK PRIOR TO RECONNING CONSTRUCTION. ALL DAMAGE MADE TO EVICTIVO	2	Gwinne	GWINN DEPÄRTMENT IOF WATERI 684 Winder Highway Llavarenceille, www.gwinneitcounty.com (www.g	1 COUNTY - 3'10" RESOURCES 0430045012 8783706 8700 wineth28 com 1.95
2. 3.	UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY EXISTING UTILITY LINE SIZE AND LOCATIONS PRIOR TO ANY SERVICE LINE INSTALLATION. USE OF PRE-CAST INVERT MANHOLES IS ACCEPTABLE PROVIDED INVERTS ARE NOT	, =	October 5, 2022 Robert Cone Gray Reil LLC 2132 Britt St. Graveon, GA 30017	Approved Denied Conditionally Approved Sewer Capacity Request #62022-15 Expiration Date: 10/05/2023 Tie-In Manhole FID: 235018	4-10
4. 5.	MODIFIED. ALL NEW PIPE TIE-INS REQUIRE NEW INVERTS AT MANHOLES. (3.5.12F) BORE WITHIN THE VICINITY OF THE MANHOLE AND CORE FROM THE INSIDE OF THE MANHOLE IN THE PRESENCE OF AN INSPECTOR.)).	RE: Sever Availability for Propos Parcel ID District 5 Land Lot: Dear Mr. Cone: At present time Gwinnett Dounty De development for sanitary sever. The development for sanitary of 3 restur	eed Development – Railyard Phase 5 - Building 5 135, Parcel(s) 065 partment of Water Resources (GCDWR) can serve the reference existing system has adequate capacity to serve the propose	red d
6.	IF 6" LINE TO TIE TO GCDWR SEWER MAIN, ADD NOTE: "TAP TO BE PERFORMED ONLY BY GCDWR TO SCHEDULE CALL 678-376-7029 72 HOURS IN ADVANCE. CONTRACTOR IS RESPONSIBLE FOR ALL EXCAVATION AND BACKFILL MATERIAL. EXCAVATION AREA MUST MEET OR EXCEED OSHA STANDARDS AND BE READY PRIOR TO SCHEDULED TIME		parcel(s). This confirmation is base marhole at Facility ID 235018. The requested capacity is valid for there are any development changes impact downstream sever capacity. updated information. Capacity is available on a first-come	ad on your anticipated peak flow of 20.3 gpm discharging to the 12 months from the date of this letter . This certification is no (e.g. land use density, sewer the in manhole, and/or rezoning) In this case the development must resubmit for a new certification of the server of t	esewer tie-in tvalid if that could ication with
7.	FOR COUNTY FORCES TO ARRIVE AND PERFORM TAP." A SEWER CONSTRUCTION PERMIT IS TO BE ACQUIRED BY A GCDWR APPROVED CONTRACTOR PRIOR TO INSTALLATION. CALL 678–518–6174 FOR INFORMATION AND COPY OF APPROVED CONTRACTOR'S LIST. A MANDATORY PRE-CONSTRUCTION		development needs. Every proposed overall system. At present, there are imposed restrictions, changes in de in temporary capacity constraints. S issuance of the Development Permi Please let me know if you have any o	Indicate of the order of the county is interesting every end to be well project is reviewed and considered for its impact locally and no sewer moratoriums in Gwinnett County. However, regular velopment threads, or delays in County infrastructure projects sever capacity is relegated to the proposed development onl its.	on the contre- ory or court- could result y upon
8.	CONFERENCE WITH INSPECTOR, BY APPOINTMENT ONLY, IS REQUIRED 48 HOURS PRIOR TO ANY UTILITY CONSTRUCTION. ANY UTILITY DESIGN CHANGES MUST BE APPROVED BY THE WATER AND SEWER REVIEW SECTION OF P&D PRIOR TO INSTALLATION. IF SETTING NEW MANHOLE ON EXISTING LINE ADD NOTE: "EXISTING PIPE CAN ONLY BE CUT IN THE PRESENCE OF A COUNTY INSPECTOR. CUT-IN MANHOLE REQUIRED UNIFSS 'DOGHOUSE MANHOLE' SPECIFICALLY APPROVED BY PROJECT INSPECTOR PRIOR))) 8	Sincerey, GWINNETT COUNTY DEPARTMENT Data B. Source Tai Yi Su, PE Division Director, Infrastructure Supp 678.376.2104 E: Evelopmet County DWR – Comine Campag Swinnett County PED – Charl Young Plan	OF WATER RESOURCES	v
9.	TO CONSTRUCTION PERMIT IS TO BE ACQUIRED BY A GCDWR APPROVED CONTRACTOR PRIOR TO INSTALLATION. CALL 678–518–6000 FOR INFORMATION AND COPY OF APPROVED CONTRACTOR'S LIST. A MANDATORY PRE–CONSTRUCTION CONFERENCE WITH INSPECTOR, BY APPOINTMENT ONLY, IS REQUIRED 48 HOURS PRIOR TO ANY UTILITY CONSTRUCTION. ANY UTILITY DESIGN CHANGES MUST BE APPROVED BY THE		Select Request Type: Mew Request Revise Existing Request Reinew Request SEWER O Gwinnett County Planning and Deyel	DWR Use Only DWR Capacity Water Resources CAPACITY CERTIFICATION REQUEST	Provide a state of the state of
10.	WATER AND SEWER REVIEW SECTION OF GC P&D PRIOR TO INSTALLATION. IN THE FIRST NEWLY INSTALLED MANHOLE UPSTREAM OF THE EXISTING THE IN MANHOLE, CONTRACTOR SHALL INSTALL TEMPORARY MECHANICAL PLUGS ON THE INFLOW AND OUTFLOW INVERTS. SAID MECHANICAL PLUGS SHALL BE TIED TO MANHOLE STEP WITH STEEL CABLE AND PADLOCKED TO PREVENT TAMPERING AND GCDWR SHALL INSTALL A LOCKING COVER.		Development Status: Rezoned. Check-iPDevelopment/Project Requir DEVELOPMENT-IPROJECT NAMES Rai DEVELOPMENT ADDRESS, 213(26m) SI PARCEL NUMBER[S]: 5135A065 PROPERTY OWNER NAME: Gray Rail LL PROPERTY OWNER NAME: Gray Rail LLO ADDRESS, 2132 Brit SI CONTACT NAME; Robert 'BD' Cone DEVELOPER NAME; Robert 'BD' Cone	Not RezonedPermitfiedAwaiting Owners res Private Pomp Station: ilyard Phase 5 - Building 5 (City) Grayson (22p) 3 (City) Grayson(24-731-7817 peoncast.net. (City)Istata) Grayson/GA(Zip) HONE#: 678-725-4631 resonance	bip Change 5017 0017
11.	PLUG TO BE INSTALLED AT THE TIE-IN MANHOLE AND FIRST MANHOLE UPSTREAM. PLUG TO BE REMOVED AT THE DIRECTION OF THE UTILITY INSPECTOR. FAILURE TO COMPLY MAY RESULT IN CITATION AND/OR SUSPENSION FROM THE CONTRACTOR'S UST.		ENGINEERING FIRM, Woodfulf Design As ADDRESS; 3301 Slowart Lake Road CONTACT NAME: Michael Woodfulf ENGINEER ENAIL: michael@woodfulfda Tofal Requested [Flow; for Develop: Flow (gpm) _20/3/gpm]	(City/State) Monroe, GA. (Zip) PHONE#: 404-285-2322 .com ment (gpm): _20/3(gpm to Tie-in Manhole Facility ID; (2350/8)	30655
12.	AS-BUILTS/RECORD DRAWINGS FOR SEWER SYSTEM REQUIRED PRIOR TO REQUESTING FINAL PLAT APPROVAL, TEMPORARY CERTIFICATE OF OCCUPANCY OR ISSUANCE OF CERTIFICATE OF OCCUPANCY. ALLOW A MINIMUM 6 WEEKS FOR INITIAL REVIEW AND ADDITIONAL TIME FOR RE-REVIEW(S). DRAWINGS TO BE SUBMITTED TO, REVIEWED AND	/	Itow (gpm) Flow (gpm) Flow (gpm) Flow (gpm) // GIS map showing proposed d // GIS map showing proposed d // Detailed Prove aclustitoms for // Detailed Prove aclustitoms for // Average mentid // Average mentid	to Tre-in Manhole Facility ID: to Tie-in Manhole Facility ID: to Tie-in Manhole Facility ID: local statement of the statem	eceived
13.	APPROVED BY DEPARIMENT OF WATER RESOURCES. ALL WORK TO BE PERFORMED ACCORDING TO GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES SANITARY SEWER STANDARDS, CURRENT EDITION. ACTUAL FIELD CONDITIONS COULD DICTATE MORE STRINGENT REQUIREMENTS, IF DEEMED NECESSARY		A Proposed utility plan Name of downstream pang at Name of Sever Sub-basin DESIGN PROFESSIONAL SIGNSEA	AR Nov (DM) for all hadanial angiess. (MAY 1) tration Lower Big Haynes Lower Big Haynes DATE:	
14. 15.	BY INSPECTOR. OWNER SHALL MAINTAIN PLUGS IN DUMPSTER DRAINS AT ALL TIMES SO AS TO PROHIBIT LIQUID DRAINAGE FROM DUMPSTER. MAINTAIN 10' (HORIZONTAL) SEPARATION BETWEEN WATER AND SEWER LINES.	Ň	REV- 96/2023	SUMMIT COMPLETED, SIGNED, SC. FORM AND DOCUMENTS TO IDVRC anactivity Crifficational area invectori (DVRC anactivity Crifficational area invectori (DVRC anactivity) Comparison of Water R 684 Winder Highway, Lawrenceville, G Roces abould be typed	LED / Com mixcom sources 20065
16. 17.	NO TREES OR PERMANENT STRUCTURES ALLOWED IN SANITARY SEWER EASEMENTS. PER THE FEE RESOLUTION THERE IS A "PENALTY FEE" OF 100% OF THE PERMIT FEE FOR SITE ACTIVITY PRIOR TO ISSUANCE OF APPROPRIATE PERMITS (LAND DISTURBANCE, DEVELOPMENT, UTILITY CONSTRUCTION, OR GREASE TRAP		SEWER CAPAC		
18. 19.	INSTALLATIONS). A COPY OF APPROVED DEVELOPMENT PERMIT IS REQUIRED FOR CITY PROJECTS BEFORE ISSUANCE OF A CONSTRUCTION PERMIT BY GCDWR. THIS SITE PLAN INDICATES POTABLE WATER SERVICE LINES AND SANITARY SEWER	1	Development/Project Name: Railyar Gwinnett County Planning and Devel GWINNETT COUNTY DEPAR	rd Phase 5 - Building 5	DATIONS
	GEORGIA LICENSED MASTER PLUMBER. THIS WORK TO BE INSTALLED BY A GEORGIA LICENSED MASTER PLUMBER. THIS WORK REQUIRES A SEPARATE SITE-PLUMBING PERMIT WHICH SHALL BE OBTAINED FROM GWINNETT COUNTY BUILDING PERMITS. ALL WORK SHALL BE INSPECTED BY THE GWINNETT COUNTY PLUMBING INSPECTION LIMIT. INSPECTIONS SHALL BE PEOLESTED BY PHONING 678, 518, 6277		APPROVED - Downstream se	wer facilities have adequate capacity to accommodate projected	Liflows.
20.	METERS FEES MUST BE PAID PRIOR TO ISSUANCE OF A BUILDING PERMIT, BEFORE ISSUANCE OF DDC CONSTRUCTION PERMIT OR CONSTRUCTION PERMIT FOR METERS 3" OR LARGER. PRICE TBD. EMAIL: P&d-STORMWATERSEWER@GWINNETTCOUNTY.COM FOR PAYMENT.		CONDITIONALLY APPROY project under the following cor	ED - Downstream sewer facilities can serve the proposed develo nditions:	ppment/
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	COUNTY WATER MAIN AND SANITARY SEWER DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS. ACTUAL FIELD CONDITIONS COULD DICTATE MORE STRINGENT REQUIREMENTS, IF DEEMED NECESSARY BY THE COUNTY INSPECTOR. IN CASE OF CONFLICT BETWEEN THE PERMITTED DOCUMENTS AND THE CURRENT GWINNETT COUNTY WATER MAIN AND SANITARY SEWER DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS.		SIGNED: Jai ga	DATE: _10/5/2022 esginee, Department of Water Resources	Fage 2 of 4
AL	THE COUNTY SPECIFICATION SHALL GOVERN THE RIGHTS AND OBLIGATIONS OF THE PARTIES.		Automobile Access Ais	sle shall be a minimum of 5 ft. wid	de, a common access aisle may
IN RE	SPECTED BY DEPARTMENT OF WATER SOURCES.	2.	Georgia Access Van Access Aisle) sha aisle of minimum 60 i to be 96 inches wide common access aisle	renicies. Surface slopes shall not ex sibility Code, 2010 ADA Standards : Ill be a minimum of 132 inches wic inches wide (5 feet). Exception: Va minimum where the access aisle is may be shared by 2 vehicles. Acce	section 502.3 le (11 feet) with an adjacent acc n parking spaces shall be permit s 96 inches wide minimum. A ess aisles shall be permitted to b
		3.	placed on either side have access aisles loc shall not exceed 1:48(Maximum Slope of the	of the parking space except for ar cated on the passenger side of the (2%). Georgia Accessibility Code, 20 e accessible parking spaces & acce	ngled van parking spaces which s parking spaces. Surface slopes 10 ADA Standards section 502.2 ss aisles shall have slopes not
		4.	steeper than 1:48 in 6 502.4 Parking Identification S International Symbol o	all directions. Georgia Accessibility Signage Parking spaces identificatio f Accessibility complying with 703.7	Code, 2010 ADA Standards section n signs shall include the 7.2.1. Signs identifying van parking
			spaces shall contain t above the finish floor handicap signage deta 502.6	he designation van accessible . Si or ground surface measured to th il on the plans. 2010 ADA Standar	gns shall be 60 inches minimum e bottom of the sign. Place ds for Accessible Design section
LE P.C	EGEND : D.B. POINT OF BEGINNING DIP DUCTILE IRON PIPE F.H.	FIRE HYD	DRANT	GE	ORG
L.L R/ N/ D.E C.T	LAND LOT PVC POLYVINYLCHLORIDE PIPE I.C.V. W RIGHT OF WAY C.B. CATCH BASIN -W - F NOW OR FORMERLY C.I. CURB INLET WM B. DEED BOOK D.I. DROP INLET WV	IRRIGATIO WATER L WATER M WATER V SPRINKLF	N CONTROL VALVE I <i>NE</i> ETER ALVE ER HEAD	Utilities F	Protection Cente
R.E 0.T A.X A.I. R.F	B.F.REBAR FOUNDW.B.WIER BUXHBT.F.OPEN TOP FOUNDJ.B.JUNCTION BOXVMK.F.AXLE FOUNDF.E.S.FLARED END SECTIONHCPF.ANGLE IRON FOUNDH.W.HEAD WALLSIR.F.RAILROAD SPIKE FOUNDW.I.WIER INLETSC	HOSE BIE VALVE MA HANDICAE SIGN POS SIAMESE	B ARKER PPED PARKING ST CONNECTION		Know what's DelC Call before y
H.T N.F S.X M.T R F	F.HUB & TACK FOUNDS.M.H.SANITARY MANHOLEG.M.F.NAIL FOUNDC/OCLEAN OUTG.V.K.F.SCRIBED "X" FOUNDSOSTUB OUT-G -N.F.MONUMENT FOUNDINV.INVERT-T -3.S.REBAR SETE.M.H.ELECTRIC MANHOLETMH	GAS MET GAS VAL GAS LINE TELEPHO TELEPHO	ER /E E NE LINE NE MANHOLE	UTILITY NULL APPROXIMATE LOCATIO SURVEY, ARE BASED U ROBBINS LAND SURVE THE ACCURACY OR CO	: NS OF UNDERGROUND UTIL JPON FIELD OBSERVATION YING, INC. IS UNABLE TO DMPLETENESS OF THIS INF
S.> М.1 Н.1 N.S	K.S. SCRIBED "X" SET ↓ OVERHEAD POWER LINE T.B. N.S. MONUMENT SET E.O. ELECTRIC OUTLET -C - T.S. HUB & TACK SET Q UTILITY POLE TM S. NAIL SET -P - UNDERGROUND POWER LINE B.L. M. MILE MARKER CL GUY WIRE CL	TELEPHO CABLE LI TELEPHO BUILDING CENTERLI	NE BOX NE NE MARKER LINE NE	UTILITY LOCATIONS MU BY THE UTILITY PROTE UNDERGROUND UTILITII THAT ARE NOT SHOWN	ST BE FIELD VERIFIED PRI ECTION CENTER AT 811. ES SERVING OR CROSSING I. ROBBINS LAND SURVEYIN
B.M CM RC	M. BENCHMARK EM ELECTRIC METER E/P IP CORRUGATED METAL PIPE P/P POWER POLE M.W. P REINFORCED CONCRETE PIPE L/P LIGHT POLF	EDGE OF MONITORI	PAVEMENT NG WELL	KNOWLEDGE OF ALL L ABOVE GROUND UTILIT	UNDERGROUND UTILITIES. Y LOCATIONS WERE OBTAIN



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- 19. THIS SITE PLAN INDICATES POTABLE WATER SERVICE LINES AND SANITARY SEWER LATERALS. GEORGIA STATE LAW REQUIRES THIS WORK TO BE INSTALLED BY A GEORGIA LICENSED MASTER PLUMBER. THIS WORK REQUIRES A SEPARATE SITE-PLUMBING PERMIT WHICH SHALL BE OBTAINED FROM GWINNETT COUNTY BUILDING PERMITS. ALL WORK SHALL BE INSPECTED BY THE GWINNETT COUNTY PLUMBING INSPECTION UNIT. INSPECTIONS SHALL BE REQUESTED BY PHONING 678-518-6277.
- 20. METERS FEES MUST BE PAID PRIOR TO ISSUANCE OF A BUILDING PERMIT, BEFORE ISSUANCE OF DDC CONSTRUCTION PERMIT OR CONSTRUCTION PERMIT FOR METERS 3 OR LARGER. PRICE TBD. EMAIL: P&d-STORMWATERSEWER@GWINNETTCOUNTY.COM FOR PAYMENT.
- 21. THE DESIGNER AND DEVELOPER ACKNOWLEDGE THAT ALL WORK REPRESENTED IN THESE CONSTRUCTION DOCUMENT HAS BEEN DESIGNED TO FULLY COMPLY WITH THE CURRENT GWINNETT COUNTY WATER MAIN AND SANITARY SEWER DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS. ACTUAL FIELD CONDITIONS COULD DICTATE MORE STRINGENT REQUIREMENTS, IF DEEMED NECESSARY BY THE COUNTY INSPECTOR. IN CASE OF CONFLICT BETWEEN THE PERMITTED DOCUMENTS AND THE CURRENT GWINNETT COUNTY WATER MAIN AND SANITARY SEWER DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS, THE COUNTY SPECIFICATION SHALL GOVERN THE RIGHTS AND OBLIGATIONS OF THE PARTIES.

ALL WATER, SANITARY SEWER TO BE INSPECTED BY DEPARTMENT OF WATER RESOURCES.

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LEGEND

P.O.B. POINT OF BEGINNING LAND LOT R/W RIGHT OF WAY N/F NOW OR FORMERLY DEED BOOK CRIMPED TOP FOUND R.B.F. REBAR FOUND 0.T.F. OPEN TOP FOUND A.X.F. AXLE FOUND A.I.F. ANGLE IRON FOUND RAILROAD SPIKE FOUND R.R.F. H.T.F. HUB & TACK FOUND N.F. NAIL FOUND S.X.F. SCRIBED "X" FOUND M.N.F. MONUMENT FOUND R.B.S. REBAR SET SCRIBED "X" SFT S.X.S. M.N.S. MONUMENT SET H.T.S. HUB & TACK SET N.S. NAIL SET М.М. MILE MARKER B.M. BENCHMARK СМР CORRUGATED METAL PIPE RCP REINFORCED CONCRETE PIPE

DUCTILE IRON PIPE POLYVINYLCHLORIDE PIPE CATCH BASIN CURB INLET DROP INLET WIER BOX JUNCTION BOX F.E.S. FLARED END SECTION H.W. HEAD WALL WIER INLET S.M.H. SANITARY MANHOLE CLEAN OUT STUB OUT INVFRT ELECTRIC MANHOLE OVERHEAD POWER LINE ELECTRIC OUTLET UTILITY POLE UNDERGROUND POWER LINE GUY WIRF ELECTRIC METER POWER POLE TRANS. TRANSFORMER LIGHT POLE

F.H. I.C.V. WATER LINE -W -WM WATER METER HCP G.M. G.V. GAS VALVE -G — GAS LINE -T-ТМН T.B. -C — B.L. Ē/P EDGE OF PAVEMENT M.W. MONITORING WELL

ТМ





IF A 6" LINE IS TO TIE TO THE GCDWR SEWER MAIN, ADD NOTE: "TAP TO BE PERFORMED ONLY BY GCDWR. TO SCHEDULE CALL 678-376-7029 72 HRS. IN ADVANCE. THE CONTRACTOR IS RESPONSIBLE FOR ALL EXCAVATION AND BACKFILL MATERIAL. EXCAVATION AREA MUST MEET OR EXCEED OSHA STANDARDS AND BE READY BEFORE THE SCHEDULED TIME FOR COUNTY FORCES TO ARRIVE AND

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Utilities Protection Center, Inc.

Know what's **below**. Call before you dig.

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- 15. MAINTAIN 10' (HORIZONTAL) SEPARATION BETWEEN WATER AND SEWER LINES.
- 16. NO TREES OR PERMANENT STRUCTURES ALLOWED IN SANITARY SEWER EASEMENTS. . PER THE FEE RESOLUTION THERE IS A "PENALTY FEE" OF 100% OF THE PERMIT FEE FOR SITE ACTIVITY PRIOR TO ISSUANCE OF APPROPRIATE PERMITS (LAND DISTURBANCE, DEVELOPMENT, UTILITY CONSTRUCTION, OR GREASE TRAP INSTALLATIONS).
- 18. A COPY OF APPROVED DEVELOPMENT PERMIT IS REQUIRED FOR CITY PROJECTS BEFORE ISSUANCE OF A CONSTRUCTION PERMIT BY GCDWR.
- 19. THIS SITE PLAN INDICATES POTABLE WATER SERVICE LINES AND SANITARY SEWER LATERALS. GEORGIA STATE LAW REQUIRES THIS WORK TO BE INSTALLED BY A GEORGIA LICENSED MASTER PLUMBER. THIS WORK REQUIRES A SEPARATE SITE-PLUMBING PERMIT WHICH SHALL BE OBTAINED FROM GWINNETT COUNTY BUILDING PERMITS. ALL WORK SHALL BE INSPECTED BY THE GWINNETT COUNTY PLUMBING INSPECTION UNIT. INSPECTIONS SHALL BE REQUESTED BY PHONING 678-518-6277.
- 20. THE DESIGNER AND DEVELOPER ACKNOWLEDGE THAT ALL WORK REPRESENTED IN THESE CONSTRUCTION DOCUMENT HAS BEEN DESIGNED TO FULLY COMPLY WITH THE CURRENT GWINNETT COUNTY WATER MAIN AND SANITARY SEWER DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS. ACTUAL FIELD CONDITIONS COULD DICTATE MORE STRINGENT REQUIREMENTS, IF DEEMED NECESSARY BY THE COUNTY INSPECTOR. IN CASE OF CONFLICT BETWEEN THE PERMITTED DOCUMENTS AND THE CURRENT GWINNETT COUNTY WATER MAIN AND SANITARY SEWER DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS, THE COUNTY SPECIFICATION SHALL GOVERN THE RIGHTS AND OBLIGATIONS OF THE PARTIES.

ALL WATER, SANITARY SEWER TO BE INSPECTED BY DEPARTMENT OF WATER RESOURCES.

SITE DESIGN SHALL COMPLY WITH CURRENT **GWINNETT CO. REGULATIONS & ORDINANCES**

- G.C.D.W.R. WATER NOTES:
- 1. METER FEES MUST BE PAID PRIOR TO ISSUANCE OF A BUILDING PERMIT OR BEFORE ISSUANCE OF DDC CONSTRUCTION PERMIT OR ISSUANCE OF CONSTRUCTION PERMIT FOR METERS 3" OR LARGER.
- 2. BEFORE C.O. IS ISSUED, AS-BUILTS FOR THE DETECTOR CHECK AND A FINAL INSPECTION BY G.C.D.W.R. ARE REQUIRED. ALLOW A MINIMUM 10 BUSINESS DAYS FOR INITIAL REVIEW AND ADDITIONAL TIME FOR RE-REVIEW(S). DRAWINGS TO BE SUBMITTED TO, REVIEWED AND APPROVED BY DEPARTMENT OF WATER RESOURCES.
- 3. DOUBLE CHECK BACKFLOW PREVENTORS FOR ALL METERS AND/OR FIRE LINES MUST BE TESTED AND APPROVED BEFORE ISSUANCE OF FINAL CERTIFICATE OF OCCUPANCY.
- 4. PER THE FEE RESOLUTION THERE IS A "PENALTY FEE" OF 100% OF THE PERMIT FEE FOR SITE ACTIVITY PRIOR TO ISSUANCE OF APPROPRIATE PERMITS (LAND DISTURBANCE, DEVELOPMENT, UTILITY CONSTRUCTION, OR GREASE TRAP INSTALLATIONS).
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AS-BUILTS/RECORD DRAWINGS FOR SEWER SYSTEM REQUIRED PRIOR TO REQUESTING FINAL PLAT APPROVAL. TEMPORARY CERTIFICATE OF OCCUPANCY OR ISSUANCE OF CERTIFICATE OF OCCUPANCY ALLOW A MINIMUM 10 BUSINESS DAYS FOR INITIAL REVIEW AND ADDITIONAL TIME FOR RE-REVIEW(S). DRAWINGS TO BE SUBMITTED TO, REVIEWED AND APPROVED BY DEPARTMENT OF WATER RESOURCES.

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PROJECT# EPN2022-01070



The Railyard: Building 5

ISSUED FOR CONSTRUCTION 2132 Britt Street Grayson, GA 30017

PROJECT DESCRIPTION:

NEW BASE BUILDING SHELL FOR MULTI-TENANT RETAIL USE. SHELL WILL CONSIST OF OPEN-WEB JOISTS SUPPORTED BY STRUCTURAL WOOD FRAMING, SLAB ON GRADE OVER SHALLOW FOUNDATIONS, WOOD STUD WALL FRAMING WITH BRICK VENEER, TPO ROOF, AND GROUND AND ELEVATED PATIOS FOR FOOD AND DRINK CONSUMPTION. COMMON AREA PUBLIC RESTROOM FACILITIES WILL BE PROVIDE IN LIEU OF INDIVIDUAL FACILITIES WITHIN THE TENANT SUITES. BUILDING AESTHETICS WILL BE INFORMED BY HISTORIC RAIL DEPOTS.

PROJECT TEAM

OWNER: **GRAYRAIL,LLC** CONTACT: JOHN LANGE EMAIL: LANGE.JOHN@COMCAST.NET 2115 LOGANVILLE HWY GRAYSON, GA 30017 404.925.1369

ARCHITECT PHASE 5 CREATIVE CONTACT: JOHN BOGGS T: 404.386.8626 EMAIL: JBOGGS@PHASE5-CREATIVE.COM 1824 CHANCERY LN. ATLANTA, GA 30341

CIVIL ENGINEERS: LAND SOLUTION ASSOCIATES, LLC CONTACT: ROBERT A CONE T: 678.725.4631 EMAIL:

LANDSOLUTIONASSOCIATES@GMAIL.COM 1772 BRISTOL FARMS CT GRAYSON, GA MEP ENGINEERS:

LEPPARD JOHNSON & ASSOCIATES CONTACT: TYGE PEACOCK, PE T: 678.221.5970 EMAIL: TYGE@LEPPARDJOHNSON.COM 100 CRESCENT CENTER PKWY, STE 520 TUCKER, GA 30084

STRUCTURAL ENGINEER: WJPA CONTACT: WILLIAM PELTIER, P.E., S.E. T: 770.963.0654 EMAIL: WJP@WILLIAMJPELTIER.COM 270 LANGLEY DR. LAWRENCEVILLE, GA 30046

ABBREVIATIONS

AFF

BD

CPT

DR

FQ

FD

нм

NOTE: CONTRACTOR TO NOTIFY PHASE 5 CREATIVE OF ANY ABBREVIATION DISCREPANCIES UPON REVIEW.

ACT ACOUSTIC CEILING TILE ABOVE FINISH FLOOR board BLDG building CENTERLINE CLG CEILING CONCRETE MASONRY UNITS OC CMU COL COLUMN CONC CONCRETE CARPET DRINKING FOUNTAIN DIMENSION DOWN DOOR **DOWNSPOUT** DRAWING DWG EQUAL EQUIPMENT FQUIP existing EXIST FLOOR DRAIN FIRE EXTINGUISHER FINISH FIRE TREATED GYP BD GYPSUM BOARD HOLLOW METAL HEATING, VENTILATION, HVAC AIR CONDITIONING LAV LAVATORY MECH MECHANICAL MFR MANUFACTURER

MINIMUM MIN MISC MISCELLANEOUS N/A NOT APPLICABLE NOT IN CONTRACT NIC NO NUMBER NTS NOT TO SCALE ON CENTER OPPOSITE OPP PLASTIC LAMINATE PLAM PR PAIR PRELIMINARY PRELIM PAINT PT **ROOF DRAIN** RD REF REFERENCE REQUIRED req'd ROOM RM ROUGH OPENING RO SCHED SCHEDULE SIM SIMILAR SPEC SPECIFICATION Stor STORAGE SQ FT SQUARE FEET TYP TYPICAL UNO UNLESS NOTED OTHERWISE VCT VINYL COMPOSITION TILE VWC VINYL WALLCOVERING W/ WITH WITHOUT W/O WC WATER CLOSET WD WOOD



All ideas, designs, arrangements, and plans indicated to represented by this drawing are owned by and the property of Phase 5 Creative, LLC and were created, evolved, and developed for use on and in connection with

the specified project. None of the ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or corporation for any purpose whatsoever without the written permission of Phase 5 Creative, LLC. Reproduction hereof is a criminal offense under 18 U.S.C. Sec. 506 and unauthorized disclosure may constitute trade secret misappropriation. The ideas, designs, arrangements, and plans disclosed herein may be patented of be the subject of pending patent application.



Y ARCHITECT, CITY OF GRAYSON	DATE
<u>PTES:</u>	
TE: NO WALL FANS, LOUVERS OR OUTSIDE EQU OWED ON THE BUILDING EXTERIOR VENEER.	IPMENT IS
IANTS ARE NOT ALLOWED TO PLACE TRASH CO VELOPE, STORE MATERIAL/BOXES OR DISPLAY IT ACE.	NTAINERS, EXPAND BUILDING TEMS OUTSIDE THE BUILDING TENANT
ER TO CIVIL DWGS FOR SIDEWALKS, EXTERIOR D MONOLITHIC STAIRS/STEPS.	
/INNETT COUNTY FIRE MARSHALL INSPECTOIN A	RE TO BE SCHEDULED ONLINE AT:
PS://ACA-PROD.ACCELA.COM/GWINNET/WE	LCOME.ASPX
% =INSPECTIONS OF VERTICAL PENETRATIONS. % =INSPECTIONS OF ANY FIRE RATED PARTITION	
0% =FINAL INSPECTION, ALL SYSTEMS AND EQU	
<u>THISPECTION REQUESTS MADE BEFORE 2.00 PM</u> SINESS DAY.	WILL DE SCHEDUELD I OK IHL NEXT
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E SPRINKLER	
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E SUPPRESSION SYSTEMS	$\tilde{\lambda}$
CK STORAGE (PRODUCT HEIGHT OVER 12 FEET))RAGE AND/OR USE OF HAZARDOUS MATERIAL	\mathbf{S}

NFPA NATIONAL ELECTRICAL CODE, 2020 EDITION WITH 2021 GEORGIA AMENDMENTS INTERNATIONAL ENERGY CONSERVATION CODE, 2015 EDITION WITH 2020 AND 2022 GEORGIA AMENDMENTS NFPA 101 LIFE SAFETY CODE 2018 EDITION (AMENDED BY 120-3-3) 2012 GWINNETT COUNTY ORDINANCE FOR FIRE PREVENTION AND PROTECTION ORDINANCE 2020 OCGA 120-3-3 GEORGIA MINIMUM FIRE SAFETY STANDARDS 2018 INTERNATIONAL FIRE CODE (AMENDED BY 120-3-3) 2010 ADA STANDARD FOR ACCESSIBLE DESIGN \sim SPECIAL INSPECTIONS REQUIRED FOR THIS PROJECT IN ACCORDANCE WITH IBC CHAPTER 17 SHALL BE AS FOLLOWS AND SHALL BE COMPILED AT THE JOB SITE FOR THE INSPECTOR'S REVIEW. REFER STATEMENT OF SPECIAL INSPECTIONS FOR SPECIFIC REQUIREMENTS FOR THE FOLLOWING CATEGORIES: 1705.2.1 STRUCTURAL STEEL CONSTRUCTION 1705.2.2 COLD-FORMED STEEL DECK 1705.2.3 OPEN-WEB STEEL JOISTS AND JOIST GIRDERS 1705.3 CONCRETE CONSTRUCTION 1705.5 WOOD CONSTRUCTION 1705.11.1 STRUCTURAL WOOD SPECIAL INSPECTIONS FOR WIND RESISTANCE 1705.11.3 WIND-RESISTING COMPONENTS 1705.12.2 STRUCTURAL WOOD SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE 1705.12.6 PLUMBING, MECHANICAL AND ELECTRICAL COMPONENTS SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE 1705.13.2 SEISMIC CERTIFICATION OF NONSTRUCTURAL COMPONENTS

1705.17 FIRE-RESISTANT PENETRATIONS AND JOINTS LIST OF DEFERRED SUBMITTALS: PRE-ENGINEERED WOOD TRUSSES

PRE-ENGINEERED CANOPIES AND/OR AWNINGS

VICINITY MAP

PROJECT LOCATION



OCCURANCY OCCUPANCY(S) GROUP CLASSIFICATION: ASSEMBLY (A2), MERCANTILE (M) CLASS C AND BUSINESS (B) **BUILDING AREAS:**

..8,273 S.F. FIRST FLOOR ... SECOND FLOOR..742 S.F. TOTAL... ..9,015 S.F.

BUILDING STORIES: 2 FIRE ALARM: YES

NFPA OCCUPANT LOAD (REFER LIFE SAFETY PLAN) GROUND FLOOR: 6,509 SF / 15 = 243 OCCUPANTS UPPER FLOOR: 742 SF / 15 = 49 OCCUPANTS TOTAL: 292 OCCUPANTS

2018 IBC OCCUPANT LOAD (ESTIMATE, BASED ON ALL ASSEMBLY USE) **GROUND FLOOR:** 6,509 SF / 15 = 243 OCCUPANTS **UPPER FLOOR:** 742 SF / 15 = 49 OCCUPANTS

TOTAL: 292 OCCUPANTS

CONSTRUCTION

CONSTRUCTION TYPE: V-B **BUILDING TOTAL HEIGHT:** 28'-0" SPIRINKLERED: NON-SPRINKLERED VB ALLOWABLE AREA: 6,000 SF BASED ON IBC TABLE 506.2; A-2 OCCUPANCY CLASSIFICATION; SEE AREA INCREASE CALCULATIONS BELOW: PER 2018 IBC; SECTION 506.3 FRONTAGE INCREASE:

If =[F/P-0.25]W/30; 100% of building faces public way or open space having 30 minimum; therefore If = .75

Aa = [At+(NSxlf)]Aa = [6,000+(6,000x.75)]

Aa = 10,500 sf

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-001 -002	COVER SHEET GENERAL NOTES	
-010 -011 -012	LIFE SAFETY PLAN ACCESSIBILITY STANDA PARTITION TYPES	١
-013 -100	PROJECT STANDARDS ARCHITECTURAL SITE P	L
-101 -102 -103	FIRST & SECOND FLOC ROOF PLAN ENLARGED PLANS ANI	
-111 -200	REFLECTED CEILING PL EXTERIOR ELEVATIONS	./
-201 -202 -300	EXTERIOR ELEVATIONS, ELEVATIONS/SECTIONS BUILDING SECTIONS	5
-301 -303	WALL SECTIONS WALL DETAILS	
-304 -305 -400	WALL DETAIL EXTERIOR DETAILS FINISH PLAN	
-500	DOOR SCHEDULE & W	11
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-101 -102	FOUNDATION & LEVE ROOF FRAMING PLAN	1
-103 -201 -210	SECTIONS & DETAILS	
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RCP GENERAL NOTES

1. ALL MATERIAL EXPOSED WITHIN A RETURN AIR CEILING PLENUM SHALL BE NONCOMBUSTIBLE OR SHALL BE LIMITED IN COMBUSTIBILITY AND HAVE A FLAME SPREAD INDEX OF 25 MAX. AND A SMOKE-DEVELOPMENT INDEX OF 50 MAX. PER ASTM E84.

 ALL CEILING MOUNTED DEVICES SHALL BE CENTERED IN BOTH DIRECTIONS IN ACOUSTICAL CEILING PANELS U.N.O. CENTER SPRINKLER HEADS IN ACOUST. CEILING PANEL WHERE THEY OCCUR.
 CEILING GRIDS SHALL BE ORIENTED WITHIN SPACES AS SHOWN U.N.O. FILL TILE (FT) WHERE INDICATED SHALL ABUT DESIGNATED WALL. LIMIT PARTIAL PANELS TO NO LESS THAN 6".
 DEVICES HAVE BEEN SHOWN FOR COORDINATION PURPOSES. ALL DEVICES MAY NOT BE SHOWN.

5. THE CONTRACTOR SHALL ENSURE THE INSTALLATION OF ALL DEVICES INDICATED ON THE ENGR. DWG. SEE MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR ITEMS NOT SHOWN ON REFLECTED CEILING PLANS. CONTACT THE ARCHITECT IF ANY CONFLICTS OCCUR.

6. COORDINATE ACCESS PANELS WITH MECHANICAL BALANCING DAMPER LOCATIONS.
7. ENGINEER/REWORK SPRINKLERS AS REQUIRED TO COMPLY WITH NFPA 13.
8. CEILING HEIGHT: (9'-0") A.F.F. THROUGHOUT, U.N.O.

9. GRID AND TILE IS EXISTING U.N.O.

10. FURNISH AND INSTALL BUILDING STANDARD STANDARD CEILING GRID AND TILE (TO MATCH EXISTING) AS NOTED ON PLAN. TIE INTO EXISTING CEILING GRID SYSTEM AS REQUIRED. 11. EXISTING CEILING GRID AND TILES TO REMAIN, REPLACE DAMAGED TILE AS REQUIRED. 12. ALL NEW OR REPLACEMENT

FINISH GENERAL NOTES

1. REFER TO THE FINISH NOTES FOR THE LISTING AND DESCRIPTIONS OF ALL FINISHES SCHEDULED.

 WHERE DISCREPANCIES EXIST BETWEEN THE DRAWINGS, SPECIFICATIONS AND THE FINISH NOTES, VERIFY ITEM OR FINISH WITH THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
 ACTUAL MEASUREMENTS TO BE MADE ON JOB SITE. ALL MEASUREMENTS FOR ESTIMATING PURPOSES ARE CONTRACTOR'S RESPONSIBILITY.

4. ALL WALL AND PARTITIONS EXPOSED TO VIEW SHALL RECEIVE A FINISH UNLESS OTHERWISE NOTED. PAINT FINISHES SHALL BE APPLIED ACCORDING TO THE SPECIFICATIONS BASED ON COLORS AND FINISHES NOTED IN THE FINISH SCHEDULE. ALL GYPSUM BOARD PARTITIONS SHALL BE PAINTED UNLESS SPECIFICALLY NOTED OTHERWISE TO RECEIVE AN ALTERNATE FINISH OR CLADDING.

5. PRIOR TO THE APPLICATION OF ANY WALL FINISH, WALLS MUST BE SMOOTH AND DRY. DRYWALL MARKINGS MUST BE SUFFICIENTLY SEALED BEFORE APPLICATION OF FINISH MATERIALS TO PREVENT BLEED THROUGH.

6. UNLESS NOTED OTHERWISE IN THE FINISH LEGEND OR FINISH SCHEDULE WALLS INDICATED WITH FINISHES SHALL RECEIVE 1 COAT OF PRIMER AND 2 COATS OF FINISH PAINT IN AN

"EGGSHELL" FINISH, COORDINATE W/ FINISH SCHEDULE. 7. PAINTING PRODUCTS SHALL BE FACTORY PREPARED AND AS RECOMMENDED FOR THE SPECIFIC TYPE OF SUBSTRATE APPLICATION FOR PAINT. COLORS TO MATCH THOSE SPECIFIED. 8. ALL CAULKING PRODUCTS AND SEALANTS EXPOSED TO VIEW SHALL MATCH THE COLOR OF THE AREA TO BE CAULKED, EXCEPT THAT CAULKED JOINTS AT DOOR AND WINDOW FRAMES AND

SIMILAR FRAMING ITEMS SHALL MATCH THE WALL COLOR, NOT THE FRAME COLOR TO PRESERVE A "STRAIGHT-LINE" APPEARANCE. ALL CAULK JOINTS SHALL BE TOOLED TO ACHIEVE THE APPEARANCE REQUIRED. CAULKING COMPOUND OVERLAYS WILL NOT BE ACCEPTED. 9. FLOOR TRANSITIONS AND CARPET SEAMS AT DOORS SHALL OCCUR DIRECTLY UNDER THE CENTERLINE OF THE DOOR IN THE CLOSED POSITION UNLESS NOTED OR DETAILED OTHERWISE

FOR SPECIFIC DESIGN PURPOSES SHOWN IN THE DRAWINGS. 10. CONTRACTOR SHALL VERIFY, COORDINATE AND NOTIFY OWNER IN WRITING OF THE DATE

FOR INSTALLATION OF CARPET. 11. WHERE VINYL TERMINATES ON OUTSIDE CORNERS. USE CLEAR "DACO" CAP STRIP SCREWED

IN PLACE 12" O.C. 12. ALL FACE PLATES FOR SWITCHES AND OUTLET RECEPTACLES SHALL BE WHITE. ALL RECEPTACLES AND SWITCHES SHALL BE WHITE.

13. THE CONTRACTOR SHALL RETOUCH OR REFINISH SURFACES DAMAGED BY SUBSEQUENT WORK.

14. CONTRACTOR SHALL EXAMINE ALL SURFACES TO BE FINISHED UNDER THIS CONTRACT AND SEE THAT THE WORK OF THEIR TRADES HAS BEEN INSTALLED IN SATISFACTORY CONDITION TO RECEIVE PAINT, STAIN OR SPECIFIED FINISH. THE APPLICATION OF THE FIRST COAT OF ANY FINISH PROCESS SHALL CONSTITUTE ACCEPTANCE OF THE SURFACE.

15. MATERIALS SHALL BE DELIVERED IN THEIR ORIGINAL CARTONS OR CONTAINERS AS PACKAGED BY THE MANUFACTURER AND BEARING THE ORIGINAL MANUFACTURER'S LABELS. CONTRACTOR WILL BE RESPONSIBLE FOR RECEIVING AND STORING SUCH GOODS. 16. MATERIALS STORED ON THE SITE SHALL BE PROTECTED FROM DAMAGE BY MOISTURE, WIND, SUN, ABUSE OR ANY OTHER HARMFUL AFFECTS. DAMAGED MATERIALS WILL BE REJECTED AND MUST BE REPLACED.

17. FLOOR SUBSTRATE SHALL BE FREE OF DIRT AND DEBRIS BEFORE CARPET INSTALLATION. THE INSTALLATION OF CARPET SHALL CONSTITUTE ACCEPTANCE OF THE SLAB. CARPET INSTALLER SHALL SUBMIT SEAMING DIAGRAMS TO DESIGNER FOR APPROVAL PRIOR TO INSTALLATION. CARPET INSTALLER SHALL INSURE THAT CARPET NAP RUNS IN THE SAME DIRECTION. 18. ALL BASE AT CORNERS TO BE PRE-MOLDED, NOT WRAPPED.

19. BASE MATERIAL SHALL BE INSTALLED FLUSH TO FLOOR SURFACE UNLESS OTHERWISE NOTED.

20. CONTRACTOR SHALL SUBMIT 8" X 10" PAINT SAMPLES TO DESIGNER FOR APPROVAL PRIOR TO FIELD EXECUTION.

21. CONTRACTOR SHALL LEAVE REMAINING PAINT (1 GALLON MINIMUM) OF EACH COLOR WITH OWNER FOR FUTURE TOUCH-UP NEEDS. 22. CONTRACTOR SHALL USE MANUFACTURER'S RECOMMENDED PRIMERS, SEALERS AND

ADHESIVES. 23. UPON COMPLETION OF ALL FINISH APPLICATIONS, ALL MATERIALS AND EQUIPMENT SHALL BE REMOVED. CONTRACTOR SHALL INSURE THAT PAINT AND GLUE SPOTS ARE REMOVED AND THAT

ALL AREAS ARE LEFT CLEAN AND FREE OF DUST, DIRT OR DEBRIS. 24. INTERIOR FINISHES SHALL COMPLY WITH 2000 NFPA 101 CHAPTER 10 AND SECTION 38.3.3 FOR NEW BUSINESS OCCUPANCIES; INTERIOR WALL AND CEILING FINISH COMPLYING WITH 10.2.3 SHALL BE CLASS A OR CLASS B IN EXITS AND ENCLOSED CORRIDORS FURNISHING ACCESS TO EXITS; AND CLASS A, CLASS B OR CLASS C IN OFFICE AREAS. INTERIOR FLOOR FINISH COMPLYING WITH 10.2.7 SHALL BE CLASS I OR CLASS II IN CORRIDORS AND EXITS.

25. INTERIOR FINISHES SHALL COMPLY WITH 2000 NFPA 101 CHAPTER 10 AND SECTION 42.3.3.2 FOR STORAGE OCCUPANCIES; INTERIOR WALL AND CEILING FINISH COMPLYING WITH 10.2.3 SHALL BE CLASS A, CLASS B, OR CLASS C IN STORAGE AREAS AND SHALL BE AS REQUIRED BY 7.1.4 IN EXIT ENCLOSURES.

26. INTERIOR STEEL FRAMED GYPSUM BOARD PARTITION DESIGN CRITERIA SHALL BE BASED ON ASTM C 754 STANDARD SPECIFICATION FOR INSTALLATION OF STEEL FRAMING MEMBERS TO RECEIVE SCREW ATTACHED GYPSUM PANEL PRODUCTS, LATEST VERSION. ALLOWABLE DEFLECTION WITH A 5 PSF UNIFORM LOAD PERPENDICULAR TO THE PARTITION IS L/240. PARTITIONS WITH CERAMIC TILE FINISH SHALL HAVE AN ALLOWABLE DEFLECTION OF L/360 TO AVOID THE POTENTIAL CRACKING IN THE CERAMIC TILE. STIFFNESS MAY BE ACCOMPLISHED THROUGH HORIZONTAL STUD STIFFENERS IN ACCORDANCE WITH THE SPECIFICATIONS.

27. ALL VINYL OR RUBBER BASE SHALL BE CONTINUOUS ROLL GOODS.

28. WHERE MATERIAL ALLOWANCES IS PROVIDED, ALL ALLOWANCES INDICATED COST OF MATERIAL ONLY AND DOES NOT INCLUDE ITEMS LIKE: FREIGHT, SHIPPING, INSURANCE, HANDLING,

STORAGE, BACKING, CONTRACTORS MARKUP AND ANY ANCILLARY COSTS. 29. PREP ALL SURFACES TO MEET MANUFACTURERS INSTALLATION SPECIFICATIONS.

30. CARPET TO BE DIRECT GLUE UNLESS NOTED OTHERWISE.

31. PAINT METAL FRAME/STRIP WITH (2) COATS SEMI GLOSS FINISH PAINT.

32. FURNISH AND INSTALL (2) COATS FLAT LATEX PAINT AT ALL GYPSUM DRYWALL SURFACES TO BE PAINTED UNLESS NOTED OTHERWISE. 33. FURNISH AND INSTALL BUILDING STANDARD MINI BLINDS AS REQUIRED.

33. FURNISH AND INSTALL BUILDING STANDARD MINI BLINDS AS REQUIRE 34. DOORS TO HAVE BUILDING STANDARD (PAINT) FINISH.

35. PROVIDE TRANSITION STRIP (-TS-) AT ALL FLOOR FINISH CHANGES. TRANSITION STRIP SHALL BE INSTALLED AT CENTERLINE OF DOOR.

DEMOLITION NOTES

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREIN OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSES OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE EXECUTION OF THE WORK. INACTIVE OR ABANDONED UTILITIES SHALL BE CAPPED IN ACCORDANCE WITH LOCAL RESTRICTIONS. REMOVE INACTIVE SERVICES (PLUMBING, MECHANICAL, ELECTRICAL, ETC.) AS REQUIRED TO MAINTAIN OPERATION.

2. MAINTAIN COMPLETE SECURITY OF THE JOB SITE WHILE JOB IS IN PROGRESS AND UNTIL JOB IS COMPLETE.

ARCHITECTURAL GENERAL NOTES

1. DO NOT SCALE THESE DRAWINGS.

2. CONTRACTOR SHALL RELY ON WRITTEN DIMENSIONS AS GIVEN AND SHALL FIELD VERIFY ALL DIMENSIONS PROVIDED IN THE COMPLETE DRAWING SET AND COORDINATE WITH ALL THE WORK BY ALL TRADES. THE CONTRACTOR SHALL NOTIFY THE OWNER, IN WRITING, OF CONFLICTS DISCOVERED WITHIN THE ARCHITECTURAL DRAWINGS OR BETWEEN THEARCHITECTURAL DRAWINGS AND ANY OTHER CONSULTANT'S DRAWINGS FOR CLARIFICATIONS BEFORE COMMENCEMENT OR RESUMPTION OF WORK.

3. ALL DIMENSIONS ON FLOOR PLANS ARE FROM FACE OF STUD TO FACE OF STUD, UNLESS NOTED OTHERWISE. 4. NOT USED.

5. NOT USED.

6. SEAL ALL PENETRATIONS OF FIRE-RATED WALL ASSEMBLIES, IF APPLICABLE IN

ACCORDANCE WITH U.L. FIRE-RATED PENETRATION DETAIL(S). 7. PROVIDE FIRE EXTINGUISHERS HAVING A MINIMUM RATING OF 2-A, 10-B,C FOR EVERY 3000 SQUARE FEET OF FLOOR AREA. TRAVEL DISTANCE TO REACH AN EXTINGUISHER SHALL NOT EXCEED 75 FEET. - MOUNT BOTTOM AT 2'-9 1/2" A.F.F. - EXISTING FIRE EXTINGUISHERS AND CABINETS MAY BE RECHARGED, REFURBISHED AND REINSTALLED IN THE APPROPRIATE LOCATIONS AS DIRECTED BY THE LOCAL FIRE INSPECTION OFFICIAL IN LIEU OF PURCHASING NEW EXTINGUISHERS, HOWEVER, IF REQUIRED CONTRACTOR WILL ALSO PROVIDE AND INSTALL NEW ADDITIONAL EXTINGUISHERS TO MEET CURRENT CODES. 8. REFER TO MECHANICAL, ELECTRICAL, & PLUMBING DRAWINGS FOR ALL MECHANICAL,

8. REFER TO MECHANICAL, ELECTRICAL, & PLUMBING DRAWINGS FOR ALL MECHANICAL, PLUMBING, AND ELECTRICAL WORK REQUIRED. LOCATIONS FOR MECH. ELEC. & PLUMBING FIXTURES SHALL BE AS SHOWN ON THE ARCHITECTURAL/INTERIOR FLOOR & CEILING PLANS. 9. ALL CONSTRUCTION SHALL COMPLY WITH APPLICABLE LOCAL CODES AND RESTRICTIONS.

10. APPROVED PLANS SHALL BE KEPT IN A PLAN BOX AND SHALL BE USED ONLY BY THE SUPERINTENDENT. ALL CONSTRUCTION SETS SHALL REFLECT THE SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN, IN GOOD CONDITION, ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA AND CHANGE ORDERS, ON THE PREMISES AT ALL TIMES. THESE SHALL BE UNDER THE CARE OF THE JOB SUPERINTENDENT. 11. TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE OCCUPANTS AND

11. TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE OCCUPANTS ANDTHE WORKERS AT ALL TIMES.12. INTERIOR STEEL FRAMED GYPSUM BOARD PARTITION DESIGN CRITERIA SHALL BE BASED

ON ASTM C 754 STANDARD SPECIFICATION FOR INSTALLATION OF STEEL FRAMING MEMBERS TO RECEIVE SCREW ATTACHED GYPSUM PANEL PRODUCTS, LATEST VERSION. ALLOWABLE DEFLECTION WITH A 5 PSF UNIFORM LOAD PERPENDICULAR TO THE PARTITION IS L/240. 13. CONTRACTOR SHALL VERIFY AND COORDINATE ALL NEW AND EXISTING CONDITIONS AND DIMENSIONS AT THE JOB SITE FOR COMPARISON WITH THE DRAWINGS AND SPECIFICATIONS PRIOR TO BIDDING, START OF, AND DURING CONSTRUCTION. NOTIFY OWNER IN WRITING OF ANY DISCREPANCIES, INCONSISTENCIES OR OMISSIONS FOUND FOR CLARIFICATION BEFORE COMMENCEMENT OR RESUMPTION OF WORK.

14. NO STRUCTURAL MEMBER SHALL BE NOTCHED, CUT, ALTERED OR MOVED IN ANY WAY WITHOUT PREVIOUS AUTHORIZATION IN WRITING FROM THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT/OWNER .CONTRACTOR SHALL REFERENCE COMPLETE DOCUMENT PACKAGE FOR SCOPE OF DEMOLITION WORK, AND NOT RELY SOLELY ON THE DEMOLITION PACKAGE.

15. ELECTRICAL OUTLET BOXES LOCATED IN OPPOSITE FACES OF SOUND RATED WALLS SHALL BE SEPARATED HORIZONTALLY BY A MINIMUM OF 24". BACKS AND SIDES OF BOXES SHALL BE SEALED WITH 1/8" MINIMUM RESILIENT SEALANT AND BACKED WITH 2" OF MINERAL FIBER INSULATION.

 CONTRACTOR SHALL VERIFY CLEARANCES REQUIRED FOR ALL FIXTURES BEFORE ORDERING MATERIAL.
 FURNITURE/ FIXTURE LAYOUT IS FOR PLANNING PURPOSES ONLY.

18. ALL DRYWALL (GYPSUM WALLBOARD) CONSTRUCTION SHALL RECEIVE THE FOLLOWING JOINT & SURFACE TREATMENT. JOINTS IN FINISH ROOM SPACES SHALL RECEIVE COMPOUND AND TAPED LEVEL TO A "LEVEL 3" FINISH PER GA-214. EXTERIOR CORNERS SHALL RECEIVE METAL CORNER REINFORCED BEAD AND BE COMPOUNDED IN A CONVENTIONAL MANNER. NO HORIZONTAL JOINTS SHALL BE ACCEPTED UNLESS APPROVED BY OWNER. BUTTED, UNTAPERED GYPSUM BOARD JOINTS ARE UNACCEPTABLE EXCEPT WHERE SPECIFICALLY NOTED ON THE PLANS OR WHERE DESCRIBE IN THE SPECIFICATIONS TO RECEIVE LEVEL 1 OR 2 FINISHES. FULL HEIGHT GYPSUM BOARD SHEETS SHALL BE USED.

A. ALL NEW GYPSUM BOARD CONSTRUCTION SHALL BE PROPERLY PREPARED TO RECEIVE SPECIFIED FINISH MATERIAL IN A MANNER FULLY ACCEPTABLE TO THE OWNER. B. ALL EXISTING DRYWALL SURFACES SHALL BE CAREFULLY EXAMINED TO ASSURE THEIR INSTALLATION SATISFIES THE ABOVE REQUIREMENTS. REMEDIAL WORK NECESSARY TO UPGRADE THESE SURFACES SHALL BE UNDERTAKEN.

C. TAPED JOINTS, CORNER BEAD "DIMPLES" OR SCREW HEADS SHALL BE TROWELLED SMOOTH AND LEVEL, USING JOINT COMPOUND, TO MATCH ADJACENT GYPSUM BOARD SURFACES.

19. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES, LAWS, RULES AND REGULATIONS OF ALL CONSTITUTED PUBLIC AUTHORITIES HAVING JURISDICTION. ALL WORK WILL BE PERMITTED, INSPECTED AND THE GENERAL CONTRACTOR WILL BE REQUIRED TO OBTAIN A PERMANENT CERTIFICATE OF OCCUPANCY PRIOR TO THE TENANT MOVING IN.

20. ALL WORK IS TO MATCH BUILDING STANDARD, UNLESS NOTED OTHERWISE.
21. ALL WORK TO BE DONE IN A FIRST CLASS MANNER WITH FIRST CLASS MATERIALS AND INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
22. ALL METAL FRAMES TO BE WELDED. NO KD FRAMES WILL BE ACCEPTED

GENERAL NOTES

1. THESE DRAWINGS ARE THE PROPERTY OF PHASE5 CREATIVE, LLC AND SHALL NOT BE REPRODUCED OR COPIED (PHYSICALLY AND/OR DIGITALLY) IN PART OF WHOLE. THEY ARE TO BE USED FOR THIS PROJECT ONLY AND ARE NOT TO BE USED ON ANY OTHER PROJECT.

2. DRAWINGS AND SPECIFICATIONS ARE INTENDED TO AGREE AND BE MUTUALLY EXPLANATORY. THEY SHALL BE ACCEPTED/USED AS A WHOLE; NOT SEPARATELY. SHOULD ANY ITEMS BE OMITTED FROM THE DRAWINGS AND BE HEREIN SPECIFIED, OR VICE VERSA, IT SHALL BE EXECUTED THE SAME AS IF SHOWN AND COMBINED IN BOTH. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY ENTIRE SET TO EACH SUBCONTRACTOR.

3. THE CONTRACTOR IS TO NOTIFY ARCHITECT OF ANY DISCREPANCIES AFTER FULL REVIEW OF CONTRACT DOCUMENTS TO INCLUDE BUT NOT LIMITED TO ERRORS, OMISSIONS, INCONSISTENCIES, DISCREPANCIES, AND CONFLICTS WITH THE DRAWINGS/SPECIFICATIONS OR AS RELATED TO FIELD CONDITIONS. CONTRACTOR TO CONTACT ARCHITECT IMMEDIATELY TO DISCUSS A RESOLUTION.

4. DO NOT SCALE THE DRAWINGS UNDER ANY CONDITION.

5. WORK PERFORMED SHALL BE IN ACCORDANCE TO ALL FEDERAL, STATE AND LOCAL BUILDING CODE REQUIREMENTS PER INDUSTRY STANDARDS. ALL REQUIRED PERMITS AND FEES ASSOCIATED ARE TO BE THE RESPONSIBILITY OF THE CONTRACTOR NECESSARY FOR START AND COMPLETION OF THE PROJECT. COPIES OF INSPECTIONS AND PERMITS SHALL BE FURNISHED TO OWNER AT REQUEST AND/OR AT PROJECT CLOSEOUT.

6. CONTRACTOR TO TAKE PRECAUTIONS IN PROTECTING THE WORK DURING CONSTRUCTION. ANY DAMAGE TO BE RESTORED TO ORIGINAL CONSTRUCTION BY THE CONTRACTOR. PATCH AND REPAIR ALL ITEMS DAMAGED OR ALTERED DURING CONSTRUCTION BY THE CONTRACTOR. ALL PATCHES SHALL BLEND WITH ADJACENT MATERIAL, COLOR, FINISH, AND TEXTURE. ALL EXISTING WORK FURNISHINGS, EQUIPMENT OR MATERIAL TO REMAIN THAT ARE DAMAGED BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

7. REQUESTS FOR SUBSTITUTIONS MUST BE SUBMITTED IN WRITING TO THE ARCHITECT FOR CONSIDERATION ONLY IF IMPACT TO SCHEDULE, COST CHANGE OR QUALITY OF PRODUCT. ACCEPTANCE BY ARCHITECT DOES NOT IDENTIFY PRODUCT TO BE OF BETTER QUALITY THAN SPECIFIED PRODUCT.

8. SEAL ALL EXTERIOR PENETRATIONS AND VOIDS ON EXTERIOR BUILDING ENVELOPE.

9. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BETWEEN FIELD CONDITION/S AND CONTRACT DOCUMENTS PRIOR TO ANY CONSTRUCTION ACTIVITY IN AREA OF CONCERN.

10. THE LOCATION OF THE EXISTING UTILITIES & STRUCTURES SHOWN HEREIN ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE & ACTUAL LOCATIONS OF ALL, SHOWN OR NOT SHOWN. ANY DAMAGES RESULTING BY CONTRACTORS' ACTIVITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.

11. THE CONTRACTOR SHALL PROVIDE ADEQUATE BRACING & SHORING FOR ALL WORK DURING THE CONSTRUCTION PERIOD.

12. PROVIDE SEPARATION BETWEEN ALL DISSIMILAR METALS INCLUDING SCREWS, NAILS & OTHER FASTENING DEVICES TO AVOID GALVANIC CORROSION.

13. PROVIDE EXPANSION AND CONTROL JOINTS IN ALL WORK AS PER PRODUCT MANUFACTURER'S STANDARDS, OR SPECIFICATIONS, UNLESS NOTED OTHERWISE.

14. ALL DIMENSIONS ARE WITNESSED TO THE OUTSIDE FACE OF MASONRY, FACE OF STUD, CENTER OF COLUMN, TOP OF STRUCTURAL CONCRETE SLAB OR ROUGH WINDOW OPENING UNLESS NOTED OTHERWISE.

15. NOTES APPEAR ON VARIOUS SHEETS FOR DIFFERENT SYSTEMS AND MATERIALS. SHEETS ARE TO BE REVIEWED AND NOTES ON INDIVIDUAL SHEETS SHALL BE APPLIED TO RELATED DRAWINGS AND DETAILS.

16. INTERIOR PARTITION MOVEMENT CONTROL - VERTICAL CONTROL JOINTS FOR ANY WALL LENGTH ARE TO OCCUR AT NOT MORE THAN 30'-0" O.C. IN THE HORIZONTAL DIRECTION, UNLESS NOTED OTHERWISE.

17. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL PARTS OF THE WORK SO THAT NO WORK SHALL BE LEFT IN AN UNFINISHED OR INCOMPLETE CONDITION.

18. THE PROJECT AND ALL INTERIOR SPACES SHALL BE COMPLETELY OPERATIONAL UPON TURNOVER OF SPACE, THESE ARE TO INCLUDE SYSTEMS NOT LIMITED TO ARCHITECTURAL, INTERIORS, STRUCTURAL, CIVIL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION SYSTEMS.

19. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE LOCATIONS AND/OR ELEVATIONS OF FLOOR DRAINS, REGISTERS, GRILLES, LOUVERS, DUCTS, UNIT HEATERS, PANELS, ETC. WITH STRUCTURAL MECHANICAL AND ELECTRICAL CONTRACTORS.
20. BOLTING OF WOOD TO STRUCTURAL MEMBERS SHALL BE WITH A MINIMUM OF 1/2" BOLTS X 4'-0" O.C. UNLESS NOTED OTHERWISE ON CONSTRUCTION DOCUMENTS AND/OR SPECIFICATIONS.

21. ALL EXTERIOR LUMBER EXPOSED TO MOISTURE SHALL BE PRESSURE PRESERVATIVE TREATED.

22. CONTRACTOR SHALL COMPLY WITH STATE BUILDING CODES IN FIRESTOPPING ALL FLOOR PENETRATIONS.

23. METAL STUDS AND HANGER WIRE ARE NOT TO BE ATTACHED DIRECTLY TO FLOOR/CEILING MTL DECKING. ATTACH TO STRUCTURAL STEEL, BAR JOIST, MISCELLANEOUS STEEL OR CONCRETE STRUCTURE ONLY. IF THE TOP TRACK OF THE METAL STUDS AND HANGER WIRE MUST BE CONNECTED TO METAL DECK, SEE STRUCTURAL NOTES FOR ATTACHMENT CRITERIA.

24. GENERAL: ALL WOOD FRAMING/BLOCKING IN TYPE II CONSTRUCTION SHALL BE FIRE RETARDANT TREATED WOOD IN ACCORDANCE WITH 2012 IBC SECTION 603.

25. IF EVIDENCE SUGGESTS THE PRESENCE OF MOLD ON, BEHIND OR WITHIN SURFACES
OR MATERIALS (I.E., INCLUDING, BUT NOT LIMITED TO EXISTING GYPSUM BOARD, EXISTING
FLOOR FINISHES AND/OR EXISTING CEILING TILE), IT IS THE RESPONSIBILITY OF THE
CONTRACTOR TO IDENTIFY AREA, REMOVE PORTION OF MATERIAL WITH MOLD AND
PATCH/REPAIR TO LIKE NEW CONDITION.
26. ANY ALTERATION OR ANY INSTALLATION OF EQUIPMENT SHALL MEET AS NEARLY AS
PRACTICABLE THE REQUIREMENTS FOR NEW CONSTRUCTION IN ACCORDANCE WITH NFPA

27. ALL DEMOLITION WORK SHALL COMPLY WITH THE REQUIREMENT OF NFPA 241, STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS, 2018 EDITION.

101: 4.6.7, 2018 EDITION.

28. ALL ALTERATIONS OR MODIFICATIONS TO EXISTING BRANCH LINES OF THE EXISTING SPRINKLER SYSTEM SHALL BE SUBMITTED ALONG WITH HYDRAULIC CALCULATIONS TO THE STATE FIRE MARSHALL FOR APPROVAL IS WORK IS OUTSIDE THE SCOPE OF SECTIONS 4.4.1 THROUGH 4.4.4 OF THE RULES AND REGULATIONS OF THE SAFETY FIRE COMMISSIONER, CHAPTER 120-3-3, WHICH ADDS SECTION 4.4 TO NFPA 13.





GENERAL NOTES

. ALL FIRE RATED PARTITIONS MUST EXTEND AND SEAL TO DECK ABOVE.
2. INSTALLATION OF GYPSUM BOARD, BACKER BOARD AND BASE BOARD SHALL CONFORM TO REQUIREMENTS FOR FIRE RATINGS AND ACOUSTICAL RATINGS.
3. PROVIDE WATER RESISTANT TYPE GYPSUM BOARD AT AREAS THAT ARE NOTED IN ROOM FINISH SCHEDULE TO RECEIVE CERAMIC OR PORCELAIN TILE FINISH.
I. PROVIDE 5/8" GYPSUM BOARD UNLESS OTHERWISE NOTED.
5. PROVIDE 5/8" TYPE X GYPSUM BOARD AT FIRE RATED PARTITIONS.
5. PENETRATIONS IN RATED PARTITIONS AND CONNECTIONS OF THE PARTITIONS TO OTHER PORTIONS OF THE WORK SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED DETAILS AND IN COMPLIANCE WITH APPLICABLE TESTING AGENCY REQUIREMENTS.
". UNO, INSTALL FIRE TREATED BLOCKING OR BACKER MATERIAL FOR ATTACHMENT / MOUNTING OF WALL HUNG ITEMS OR EQUIPMENT DESCRIBED IN THE DOCUMENTS.
3. WHEN INSTALLING GYPSUM BOARD. CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF THE MOST CURRENT EDITION OF THE GYPSUM ASSOCIATION "GA-600" FIRE RESISTANCE DESIGN MANUAL AND THE MOST CURRENT EDITION OF THE UL FIRE RESISTANCE DIRECTORY.

9. PARTITIONS THAT ARE REQUIRED TO EXTEND TO THE DECK ABOVE SHALL HAVE THE GYPSUM BOARD CUT TO FIT WITHIN 1/4" MAXIMUM TOLERANCE TO THE SHAPE OF THE DECK ABOVE. GYPSUM BOARD SHALL BE CONTINUOUSLY SEALED FOR THE FULL DEPTH OF THE GYPSUM BOARD WITH FLEXIBLE SEALANT. 10. REFER TO THE FLOOR PLAN FOR EXTENT OF FIRE WALL RATINGS.

11. PARTITION TYPES DESCRIBE GENERAL REQUIREMENTS FOR PARTITIONS. REFER TO THE MANUFACTURER'S SPECIFICATIONS AND REQUIREMENTS OF APPLICABLE TESTING AGENCIES FOR SPECIFICS OF PARTITION CONSTRUCTION.

FACE OF PARTITION FINISH.

14. PROVIDE CEMENTITIOUS BACKER BOARD TO 12" ABOVE FINISHED FLOOR TYPICAL AT BASE OF ALL

15. PROVIDE MOISTURE RESISTANT GYPSUM WALLBOARD ON ALL KITCHEN AND/OR WET WALL SIDES.

CLASSIFICATION	DESCRIPTION	
ASSEMBLY (A-2)	RESTAURANTS, BANQUET HALLS AND FOOD COURTS	
MERCANTILE	RETAIL STORES, SERVICE STATIONS, SHOPS, SALESROOMS	
BUSINESS	PROFESSIONAL SERVICES, OFFICE BUILDINGS, ETC.	1 5 F

IBC LIFE SAFETY SUMMARY

REQUIRED	PROVIDED	REMARKS
	243	
N/A	14	
3' - 8''	3' - 8''	
243 X .2 = 49") 504''	
100'/150'/200' MAX.	SEE BELOW	NFPA 101;12.2.6.1
20'/75'/100' MAX.	SEE BELOW	NFPA 101;12.2.5.1.2
20'	N/A	NFPA 101; 12.2.5.1.3

IBC PLUMBING FIXTURE SUMMARY

IPC 410.1 WHERE WATER IS SERVED IN RESTAURANTS, DRINKING FOUNTAINS SHALL NOT BE REQUIRED.

REQUIRED	PROVIDED	REMARKS
3	4	
2	2	
3	4	
2	2	
	•	

ADA SEATING REQUIREMENTS

1. PER 2010 ADA, TABLE 221.2.1.1 NUMBER OF WHEELCHAIR SPACES IN ASSEMBLY AREAS SHALL BE AS FOLLOWS: NUMBER OF SEATS MINIMUM NUMBER OF REQUIRED WHEELCHAIR SPACES 4-25 26-50 51-150

151-300 301-500 2. TOTAL NUMBER OF WHEEL CHAIR SPACES EXTERIOR - 2 LEGEND X'-X'' TRAVEL DISTANCE _____ _____

(X'-X'') (COMMON PATH) 1 HOUR FIRE RATED PARTITION (POTENTIAL FUTURE DEMISING WALLS, SHALL BE WOOD STUDS AND DRYWALL TO MEET APPROPRIATE SEPARATION ____ \bigotimes EXIT SIGN W/BATTERY BACKUP AUDIO/VISUAL ANNUNCIATOR - WALL MOUNTED SEMI-RECESSED CABINET FIRE EXTINGUISHER: 10LB. A: BC (FE) DRY - CHEMICAL TYPE

WALL TO BE COMPLETED BY FUTURE TENANT

EGRESS CLEAR WIDTH

34"

BUILDING UTILITY LOCATION W/ LANDSCAPING SCREEN

SITE DEVELOPMENT

1. SURFACE SLOPES OF PARKING SPACES FOR THE PHYSICALLY DISABLED SHALL NOT EXCEED 1/4-INCH PER FOOT IN ANY DIRECTION. 2. PEDESTRIAN WAYS THAT ARE ACCESSIBLE TO THE PHYSICALLY DISABLED SHALL BE PROVIDED FROM

EACH DISABLED PARKING SPACE TO RELATED FACILITIES, INCLUDING CURBS CUTS OR RAMPS AS REQUIRED.

3. THE SURFACE OF EACH PARKING SPACE SHALL HAVE A SURFACE IDENTIFICATION DUPLICATING THE SYMBOL OF ACCESSIBILITY CONSISTING OF A WHITE FIGURE ON A BLUE BACKGROUND, AT LEAST 3' FEET SQUARE.

CURB RAMPS, WALKS AND SIDEWALKS

1. WALKS AND SIDEWALKS SHALL HAVE CONTINUOUS COMMON SURFACE, NOT INTERRUPTED BY STEPS OR BY ABRUPT CHANGES IN LEVEL EXCEEDING 1/2" AND SHALL BE A MINIMUM OF 48" IN WIDTH. 2. WHEN THE SLOPE IN THE DIRECTION OF TRAVEL OF ANY WALK EXCEEDS 1 VERTICAL TO 20 HORIZONTAL (5% GRADIENT) IT SHALL COMPLY WITH THE PROVISIONS FOR PEDESTRIAN RAMPS. 3. SURFACE CROSS SLOPES SHALL NOT EXCEED 1/4" PER FOOT.

4. ABRUPT CHANGES IN LEVEL ALONG ANY ACCESSIBLE ROUTE SHALL NOT EXCEED 1/2". WHEN CHANGES IN LEVELS DO OCCUR, THEY SHALL NOT BE BEVELED WITH A SLOPE NOT GREATER THAN 1:2 EXCEPT THAT LEVEL CHANGES NOT EXCEEDING 1/4" MAY BE VERTICAL 5. WHEN CHANGES IN LEVELS GREATER THAN 1/2" ARE NECESSARY, THEY SHALL COMPLY WITH THE

REQUIREMENTS FOR CURB RAMPS & PEDESTRIAN RAMPS. 6. CURB RAMPS SHALL BE CONSTRUCTED AT EACH CORNER OF STREET INTERSECTIONS AND WHERE A PEDESTRIAN WAY CROSSES A CURB.

7. CURB RAMPS SHALL BE A MINIMUM OF 4 FEET IN WIDTH AND SHALL LIE GENERALLY, IN A SINGLE SLOPED PLANE, WITH A MINIMUM OF SURFACE WARPING AND CROSS SLOPE.

MINIMUM PASSAGE WIDTH FOR ONE WHEELCHAIR AND ONE AMBULATORY PERSON

8. THE SLOPE OF CURB RAMPS SHALL NOT EXCEED 1 VERTICAL TO 12 HORIZONTAL. THE SLOPE OF THE FANNED OR FLARED SIDES OF CURB RAMPS SHALL NOT EXCEED ONE VERTICAL TO 10 HORIZONTAL

THE COUNTER SLOPE OF

ADJACENT GUTTER AND

IMMEDIATELY ADJACENT

ACCESSIBLE ROUTE SHALL

NOT BE STEEPER THAN 1:20

road surface

TO CURB RAMP OR

OF CONTRASTING FINISH FROM THAT OF THE ADJACENT SIDEWALK.

MEASUREMENT OF CURB RAMP SLOPES

9. A LEVEL LANDING 4 FEET DEEP SHALL BE PROVIDED AT THE UPPER END OF EACH CURB RAMP OVER ITS FULL WIDTH TO PERMIT SAFE EGRESS FROM THE RAMP SURFACE, OR THE SLOPE OF THE FANNED OR FLARED SIDES OF THE CURB RAMP SHALL NOT EXCEED ONE VERTICAL TO 12 HORIZONTAL.

10. THE LOWER END OF EACH CURB RAMP SHALL HAVE A 1/2" COUNTER SLOPE IMMEDIATELY ADJACENT TO RAMP OR ACCESSIBLE ROUTE SHALL NOT BE STEEPER THAN 1:20 11. THE SURFACE OF EACH CURB RAMP AND ITS FLARED SIDES SHALL BE SLIP-RESISTANT AND SHALL BE

ENTRANCES

1. PROVIDE A METALLIC SIGN OVER EACH STOREFRONT ENTRY DOOR STATING: "THIS DOOR MUST REMAIN UNLOCKED DURING BUSINESS HOURS". LETTERS SHALL NOT BE LESS THAN 1" HIGH ON A CONTRASTING BACKGROUND. THE SIGN SHALL BE INSTALLED BY THE GENERAL CONTRACTOR ON THE STOREFRONT ALUMINUM HEADER FRAME.

2. ALL NEW PRIMARY ENTRANCES TO THE BUILDINGS AND FACILITIES SHALL BE MADE ACCESSIBLE TO THE PHYSICALLY DISABLED.

3. ACCESSIBLE ENTRANCES SHALL BE IDENTIFIED WITH AT LEAST ONE STANDARD SIGN AND WITH ADDITIONAL DIRECTIONAL SIGNS, AS REQUIRED, VISIBLE FROM APPROACHING PEDESTRIAN WAYS. GENERAL CONTRACTOR SHALL PROVIDE STANDARD SIGNAGE.

4. EVERY REQUIRED ENTRANCE OR PASSAGE DOORWAY SHALL BE OF A SIZE AS TO PERMIT THE INSTALLATION OF A DOOR NOT LESS THAN 3 FEET IN WIDTH AND NOT LESS THAN 6 FEET - 8 INCHES IN HEIGHT. DOORS SHALL BE CAPABLE OF OPENING AT LEAST 90 DEGREES AND SHALL BE SO MOUNTED THAT THE CLEAR WIDTH OF DOORWAY IS NOT LESS THAN 32-INCHES

5. WHERE PAIR OF DOORS IS UTILIZED AT LEAST ONE OF THE DOORS SHALL PROVIDE A CLEAR UNOBSTRUCTED OPENING WIDTH OF 32-INCHES WITH THE LEAF POSITIONED AT AN ANGLE OF 90 DEGREES FROM ITS CLOSED POSITION.

6. LATCHING AND LOCKING DOORS THAT ARE HAND ACTIVATED AND WHICH ARE IN PATH OF TRAVEL SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE, THAT DOES NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF WRIST TO OPERATE, PANIC BARS, PUSH-PULL ACTIVATING BARS, OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE. REFER TO SECTION 404.2 7 OF IBC

7. HAND ACTIVATED DOOR OPENING HARDWARE SHALL BE CENTERED BETWEEN 34-INCHES MINIMUM AND 48" ABOVE THE FLOOR.

8. THE FLOOR AND LANDING ON EACH SIDE OF AN ENTRANCE OR PASSAGE DOOR SHALL BE LEVEL AND CLEAR. THE LEVEL AND CLEAR AREA SHALL HAVE A LENGTH OF 60-INCHES IN THE DIRECTION OF TRAVEL AND THE LENGTH OF 48-INCHES IN OPPOSITE DIRECTION OF TRAVEL.

9. THE WIDTH OF THE LEVEL AND CLEAR AREA ON THE SIDE TO WHICH THE DOOR SWINGS SHALL EXTEND 24-INCHES PAST THE STRIKE EDGE OF THE DOOR FOR EXTERIOR DOORS AND 18-INCHES PAST THE STRIKE EDGE FOR THE INTERIOR DOORS.

10. THE FLOOR OR LANDING SHALL BE NOT MORE THAN 1/2" LOWER THAN THE THRESHOLD OF THE DOORWAY. CHANGE IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2

11. THE BOTTOM 10" OF ALL DOORS EXCEPT AUTOMATIC AND SLIDING DOORS SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRIP OR HAZARDOUS CONDITION. WHERE NARROW FRAME DOORS ARE USED, A 10" HIGH SMOOTH PANEL SHALL BE INSTALLED ON THE PUSHED SIDE OF THE DOOR, WHICH WILL ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION.

12. A NARROW FRAME WITH A BEVELED TOP (30 DEGREES MAX. BEVEL TO VERTICAL PLANE) INSTALLED AT THE BOTTOM OF THE GLASS DOOR (WITH NO SIDE FRAMES) MAY BE USED IN LIEU OF PROVIDING THE REQUIRED 10" UNINTERRUPTED SURFACE AT THE BOTTOM OF THE DOOR.

13.MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 LBS. FOR EXTERIOR DOORS AND 5 LBS. FOR INTERIOR DOORS. SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED doors and at the center plane of sliding or folding doors. Compensating devices or AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. WHEN FIRE DOORS ARE REQUIRED, THE MAXIMUM EFFORT TO OPERATE THE DOOR MAY BE INCREASED NOT TO EXCEED 15

ENTRANCES CONT'D

(G) LATCH APPROACH, PUSH SIDE

CORRIDORS AND AISLE

1. FLOOR SURFACES SHALL BE SLIP-RESISTANT 2. EVERY PORTION OF EVERY BUILDING IN WHICH ARE INSTALLED SEATS, TABLES, MERCHANDISE, EQUIPMENT OR SIMILAR MATERIALS SHALL BE PROVIDED WITH AISLES LEADING TO AN EXIT.

3. EVERY AISLE SHALL BE NOT LESS THAN 3 FEET WIDE IF SERVING ONLY ONE SIDE, AND NOT LESS THAN 3 FEET-8 INCHES WIDE IF SERVING BOTH SIDES. SUCH MINIMUM WIDTH SHALL BE MEASURED AT THE POINT FARTHEST FROM AN EXIT, CROSS AISLE OR FOYER AND SHALL BE INCREASED BY 1-1/2" INCHES FOR EACH 5 FEET IN LENGTH TOWARD THE EXIT. CROSS AISLE OR FOYER WITH CONTINENTAL SEATING SIDE AISLES SHALL BE NOT LESS THAN 44 INCHES IN WIDTH.

SANITARY FACILITIES

ALONGSIDE THE DOOR ON LATCH SIDE AND AT DOUBLE DOORS, THE SIGN SHALL BE RIGHT OF THE RIGHT HANDED DOOR. THE SIGN CONTAINING TACTILE CHARACTERS SHALL HAVE 18" MINIMUM BY 18" MINIMUM SPACE ON THE FLOOR CENTERED ON SIGN. THE SIGN TACTILE CHARACTER SHALL BE 48" MINIMUM AND 60" MAXIMUM ABOVE FLOOR.

2. CLEARANCE AROUND THE WATER CLOSET SHALL BE 60" MINIMUM MEASURED PERPENDICULAR FROM THE SIDEWALL, AND 56" MINIMUM MEASURED PERPENDICULAR FROM REAR WALL. NO OTHER FIXTURES OR OBSTRUCTION SHALL BE WITHIN WATER CLOSET CLEARANCE.

3. WATER CLOSET COMPARTMENTS SHALL BE EQUIPPED WITH A DOOR THAT HAS AN AUTOMATIC CLOSING DEVICE, AND SHALL HAVE A CLEAR UNOBSTRUCTED OPENING WIDTH OF 32-INCHES WHEN LOCATED AT THE END AND 34-INCHES WHEN LOCATED AT THE SIDE WITH THE DOOR POSITIONED AT AN ANGLE OF 90 DEGREES FROM ITS CLOSED POSITION.

4. EXCEPT FOR DOOR OPENING WIDTH AND DOOR SWINGS; A CLEAR UNOBSTRUCTED ACCESS NOT LESS THAN 44-INCHES SHALL BE PROVIDED TO WATER CLOSET COMPARTMENTS DESIGNED FOR USE BY THE DISABLED. THE SPACE IMMEDIATELY IN FRONT OF A WATER CLOSET COMPARTMENT SHALL BE NOT LESS THAN 48-INCHES AS MEASURED AT RIGHT ANGLES TO THE COMPARTMENT DOOR IN IT'S CLOSED position.

5. THE HEIGHT OF ACCESSIBLE WATER CLOSETS SHALL BE A MINIMUM OF 17-INCHES AND A MAXIMUM OF 19-INCHES MEASURED TO THE TOP OF TOILET SEAT.

6. TOILET FLUSH CONTROLS SHALL BE OPERABLE WITH ONE HAND, AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. CONTROLS FOR THE FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREAS, NO MORE THAN 44-INCHES ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS.

INCHES LONG IN FRONT OF THE URINAL.

8. WHERE URINALS ARE PROVIDED, AT LEAST ONE SHALL BE THE STALL-TYPE OR THE WALL-HUNG TYPE WITH THE RIM 17" MAXIMUM ABOVE THE FINISH FLOOR. URINALS SHALL BE 13-1/2" DEEP MINIMUM MEASURED FROM THE OUTER FACE OF THE URINAL RIM TO THE BACK OF THE FIXTURE.

9. A CLEAR FLOOR FORWARD APPROACH, AND KNEE AND TOE CLEARANCE SHALL BE PROVIDED. A SPACE 30-INCHES MINIMUM WIDE X 48-INCHES MINIMUM LONG SHALL BE PROVIDED IN FRONT OF A LAVATORY TO ALLOW A FORWARD APPROACH. ONE FULL UNOBSTRUCTED SIDE OF THE CLEAR FLOOR SHALL ADJOIN AN ACCESSIBLE ROUTE OR ADJOIN ANOTHER CLEAR FLOOR SPACE. SUCH CLEAR FLOOR SPACE SHALL BE PERMITTED TO INCLUDE KNEE AND TOE CLEARANCE UNDERNEATH THE LAVATORY.

10. LAVATORIES SHALL BE INSTALLED WITH THE FRONT OF THE HIGHEST RIM OR COUNTER SURFACE 34-INCHES MAXIMUM ABOVE THE FINISH FLOOR. SEE LAVATORY / VANITY ELEVATION UNDER "ADA MOUNTING HEIGHTS DIAGRAM".

11. TOE CLEARANCE: SPACE UNDER AN ELEMENT BETWEEN THE FINISH FLOOR AND 9-INCHES ABOVE THE FINISH FLOOR SHALL BE CONSIDERED TOE CLEARANCE. TOE CLEARANCE SHALL EXTEND 17-INCHES MINIMUM TO 25-INCHES MAXIMUM UNDER AN ELEMENT WITH A WIDTH OF 30-INCHES MINIMUM. SPACE EXTENDING GREATER THAN 6-INCHES BEYOND THE AVAILABLE KNEE CLEARANCE AT 9-INCHES ABOVE THE FINISH FLOOR SHALL NOT BE CONSIDERED TOE CLEARANCE.

1 BS

(B) FRONT APPROACH, PUSH SIDE

(F) LATCH APPROACH, PULL SIDE

1. ACCESSIBLE SIGN CONTAINING TACTILE CHARACTER IS PROVIDED AT DOOR, THE SIGN SHALL BE

7. WHERE URINALS ARE PROVIDED, AT LEAST ONE SHALL HAVE A CLEAR SPACE 30-INCHES WIDE X 48-

SANITARY FACILITIES CONT'D

12. KNEE CLEARANCE: SPACE UNDER AN ELEMENT BETWEEN 9-INCHES AND 27-INCHES ABOVE THE FINISH FLOOR SHALL BE CONSIDERED KNEE CLEARANCE. KNEE CLEARANCE SHALL EXTEND 25-INCHES MAXIMUM UNDER AN ELEMENT AT 9-INCHES ABOVE THE FINISH FLOOR AND BE 30-INCHES WIDE MINIMUM. KNEE CLEARANCE SHALL BE 11-INCHES DEEP MINIMUM AT 9-INCHES ABOVE FINISH FLOOR, AND 8-INCHES DEEP MINIMUM AT 27-INCHES ABOVE FINISH FLOOR. BETWEEN 9-INCHES AND 27-INCHES ABOVE FINISH FLOOR, THE KNEE CLEARANCE SHALL BE PERMITTED TO REDUCE AT A RATE OF 1-INCH IN DEPTH FOR EACH 6-INCHES IN HEIGHT.

13. HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.

14. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST, THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM. LEVER-OPERATED, PUSH-TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGN. HAND OPERATED METERING FAUCETS SHALL REMAIN OPEN FOR 10 SECONDS MINIMUM.

15. MIRRORS SHALL BE MOUNTED WITH THE BOTTOM EDGE NO MORE THAN 40-INCHES FROM THE FLOOR.

16. LOCATE TOWEL, SANITARY NAPKIN, AND WASTE RECEPTACLES WITH ALL OPERABLE PARTS NOT MORE THAN 40-INCHES FROM THE FLOOR.

17. LOCATE TOILET TISSUE DISPENSERS ON THE WALL WITHIN 7-9 INCHES IN FRONT OF THE WATER CLOSET MEASURED TO THE CENTERLINE OF THE DISPENSER. THE OUTLET SHALL BE 15 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE THE FLOOR, AND SHALL NOT BE LOCATED BEHIND THE GRAB BARS. DISPENSERS SHALL NOT BE OF A TYPE THAT CONTROLS DELIVERY, OR DO NOT ALLOW CONTINUOUS PAPER FLOW.

18. FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. FLUSH CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE TOILET PER SECTION 604.7 OF THE ADA 2010 STANDARDS FOR ACCESSIBLE DESIGN.

TOILET SIDE ELEVATION

15" MIN.

1 1

MIRROR

- SOAP DISPENSER

URINAL ELEVATION

LAVATORY / VANITY ELEVATION

ADA MOUNTING HEIGHTS DIAGRAM 4' - 0'' CLR. 0' - 8'' 4' - 0'' 56" MIN ___!__. 60" MIN.

> MINIMUM REQUIREMENTS FOR ACCESSIBLE SANITARY FACILITIES

GRAB BARS

1. GRAB BARS, FASTENERS AND MOUNTING DEVICES SHALL BE DESIGNED FOR 250 LBS. PER LINEAR FEET LOAD.

INCHES ABOVE FINISH FLOOR.

3. GRAB BARS AT THE SIDE WALL SHALL BE AT LEAST 42-INCHES LONG MINIMUM, LOCATED 12-INCHES MAXIMUM FROM THE REAR WALL AND EXTENDING 54-INCHES MINIMUM FROM THE REAR WALL. THE REAR WALL GRAB BAR SHALL BE 36-INCHES LONG MINIMUM AND EXTEND FROM THE CENTERLINE OF THE WATER CLOSET 12-INCHES MINIMUM ON ONE SIDE AND 24-INCHES MINIMUM ON THE OTHER. 4. GRAB BARS WITH CIRCULAR CROSS-SECTIONS SHALL HAVE AN OUTSIDE DIAMETER OF 1-1/4 INCHES MINIMUM TO 2 INCHES MAXIMUM. GRAB BARS WITH NON-CIRCULAR CROSS SECTIONS SHALL HAVE A CROSS-SECTION DIMENSION OF 2 INCHES MAXIMUM AND A PERIMETER DIMENSION OF 4 INCHES

MINIMUM AND 4.8 INCHES MAXIMUM.

BAR SHALL BE 1-1/2 INCHES. 6. GRAB BARS AND ANY WALL OR OTHER SURFACES ADJACENT TO GRAB BARS SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS AND SHALL HAVE ROUNDED EDGES.

7. GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS.

INCHES MINIMUM ABOVE THE FINISH FLOOR.

WITH DIAMETER OF 60-INCHES.

ADDITIONAL REQUIREMENTS

WORKING PLATFORMS.

LETTERING NOT LESS THAN 1-INCH IN HEIGHT.

TOE CLEARANCES

5. IF THE GRAB BAR IS MOUNTED ADJACENT TO A WALL, THE SPACE BETWEEN THE WALL AND THE GRAB

8. COAT HOOKS SHALL BE LOCATED WHERE A FORWARD REACH IS UNOBSTRUCTED. THE HIGH FORWARD REACH SHALL BE 48-INCHES MAXIMUM AND THE LOW FORWARD REACH SHALL BE 15-

9. WHERE LOCKERS ARE PROVIDED, AT LEAST ONE AND NOT LESS THAN ONE PERCENT OF ALL LOCKERS SHALL BE MADE ACCESSIBLE TO THE PHYSICALLY DISABLED. A PATH OF TRAVEL NOT LESS THAN 36-INCHES IN CLEAR WIDTH SHALL BE PROVIDED TO THESE LOCKERS AND A CLEAR SPACE FOR A CIRCLE

- FT BLOCKING

GRAB BAR DETAIL

1. THE CENTER OF RECEPTACLE OUTLETS SHALL BE NOT LESS THAN 15- INCHES ABOVE THE FLOOR OR

2. THE CENTER OF THE GRIP OF THE OPERATING HANDLE OF SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF THE ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES, OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL BE 48" MAX HEIGHT FOR UNOBSTRUCTED FORWARD AND SIDE REACH. 48" MAX HEIGHT WITH 10" MAX. OBSTRUCTION AT SIDE REACH. 46" MAX HEIGHT AT 24" MAX OBSTRUCTION AT SIDE REACH.

3. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE THE STANDARD USED TO IDENTIFY FACILITIES THAT ARE ACCESSIBLE TO AND USABLE BY PHYSICALLY DISABLED PERSONS. THE SYMBOL SPECIFIED ABOVE SHALL CONSIST OF A WHITE FIGURE ON A BLUE BACKGROUND. THE BLUE SHALL BE EQUAL TO COLOR NO. 15090 IN FEDERAL STANDARD 595A.

4. EACH PARKING SPACE RESERVED FOR PERSONS WITH PHYSICAL DISABILITIES SHALL BE IDENTIFIED BY A REFLECTORIZED SIGN PERMANENTLY POSTED IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH STALL OR SPACE CONSISTING OF A PROFILE VIEW OF A WHEELCHAIR WITH OCCUPANT IN WHITE ON DARK BLUE BACKGROUND. THE SIGN SHALL NOT BE SMALLER THAN 70 SQUARE INCHES IN ARE AND WHEN IN PATH OF TRAVEL, SHALL BE POSTED AT A MINIMUM OF 60-INCHES FROM THE BOTTOM OF THE SIGN TO THE PARKING SPACE FINISHED GRADE. AN ADDITIONAL SIGN SHALL ALSO BE POSTED AT ENTRANCE TO OFF-STREET PARKING FACILITY OR IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH STALL OR SPACE. THE SIGN SHALL NOT BE LESS THAN 12-INCHES BY 18-INCHES IN SIZE WITH

5. AT KITCHEN: SINKS, FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBS. LEVER- OPERATED, PUSH-TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGN. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS FOR AT LEAST 10 SECONDS.

8" MIN

KNEE CLEARANCES

TOE & KNEE CLEARANCES

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Min Thkns of Insulation (Item 4)
Optional

- Design/System/Construction/Assembly Usage Disclaimer
- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials. • Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field. • When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product
- manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction
- Only products which bear UL's Mark are considered Certified.

UL Product **iQ**[®]

XHEZ - Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems System No. W-L-1172 December 09, 2008

. Wall Assembly — The 3 or 4 hr fire-rated gypsum wallboard/steel stud wall assembly shall be constructed of the materials and in the manner specified in the individual U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

B. **Gypsum Board*** — Multiple layers of min 1/2 in. thick gypsum wallboard. The gypsum wallboard type, thickness, number of layers and orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 13-1/2 in.

A. Studs — Wall framing shall consist of steel channel studs. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. Through Penetrants — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space between the pipe, conduit or tubing and the periphery of the opening shall be min 1/4 in. to max 1/2 in. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used: A. Steel Pipe — Nom 12 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Iron Pipe — Nom 12 in. diam (or smaller) cast or ductile iron pipe.

C. Conduit — Nom 6 in. diam (or smaller) rigid steel conduit, nom 4 in. diam (or smaller) electrical metallic tubing or nom 1 in. diam (or smaller) flexible steel conduit.

- D. **Copper Tubing** Nom 6 in. diam (or smaller) Type M (or heavier) copper tubing.
- E. **Copper Pipe** Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.

3. Fill, Void or Cavity Materials* - Sealant — Min 1 in. thickness of fill material applied within the annulus, flush with both surfaces of

SPECIFIED TECHNOLOGIES INC — SpecSeal Series SSS Sealant or SpecSeal LCI Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Last Updated on 2008-12-09

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RELEASED FOR CONSTRUCTION

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RELEASED FOR CONSTRUCTION

GENERAL NOTES

1. ALL FIRE RATED PARTITIONS MUST EXTEND AND SEAL TO DECK ABOVE.

- 2. TYPICAL FLOOR PLAN DIMENSIONS OF PARTITIONS ARE TO THE NOMINAL FINISH FACE OF GWB UNLESS NOTED TO THE CENTERLINE OF THE PARTITION.
- 3. INSTALLATION OF GYPSUM BOARD, BACKER BOARD AND BASE BOARD SHALL CONFORM TO REQUIREMENTS FOR FIRE RATINGS AND ACOUSTICAL RATINGS.
- 4. PROVIDE WATER RESISTANT TYPE GYPSUM BOARD AT AREAS THAT ARE NOTED IN ROOM FINISH SCHEDULE TO RECEIVE CERAMIC OR PORCELAIN TILE FINISH.
- 5. PROVIDE 5/8" GYPSUM BOARD UNLESS OTHERWISE NOTED. 6. PROVIDE 5/8" TYPE X GYPSUM BOARD AT FIRE RATED PARTITIONS.
- 7. PENETRATIONS IN RATED PARTITIONS AND CONNECTIONS OF THE PARTITIONS TO OTHER PORTIONS OF THE WORK SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED DETAILS AND IN COMPLIANCE WITH APPLICABLE TESTING AGENCY REQUIREMENTS.
- 8. INSTALL BLOCKING OR BACKER MATERIAL FOR ATTACHMENT / MOUNTING OF WALL HUNG ITEMS OR EQUIPMENT DESCRIBED IN THE DOCUMENTS.
- 9. WHEN INSTALLING GYPSUM BOARD. CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF THE MOST CURRENT EDITION OF THE GYPSUM ASSOCIATION "GA-600" FIRE RESISTANCE DESIGN MANUAL AND THE MOST CURRENT EDITION OF THE UL FIRE RESISTANCE DIRECTORY.
- 10. PARTITIONS THAT ARE REQUIRED TO EXTEND TO THE DECK ABOVE SHALL HAVE THE GYPSUM BOARD CUT TO FIT WITHIN 1/4" MAXIMUM TOLERANCE TO THE SHAPE OF THE DECK ABOVE. GYPSUM BOARD SHALL BE CONTINUOUSLY SEALED FOR THE FULL DEPTH OF THE GYPSUM BOARD WITH FLEXIBLE SEALANT. 11. GYPSUM BOARD SHALL BE CUT SO THAT THE CLEARANCE BETWEEN METALLIC ELECTRICAL OUTLET
- BOXES AND THE GYPSUM BOARD DOES NOT EXCEED 1/8" 12. THE BOTTOM OF THE GYPSUM BOARD AT INTERIOR PARTITIONS SHALL BE 1/4" MINIMUM AND 1/2" MAXIMUM ABOVE THE CONCRETE FLOOR SLAB AND SHALL BE SEALED FOR THE FULL DEPTH OF THE GYPSUM BOARD WITH FLEXIBLE SEALANT.
- 13. REFER TO THE FLOOR PLAN FOR EXTENT OF FIRE WALL RATINGS.
- 14. ALL ELEMENTS OF ACOUSTIC RATED PARTITIONS SHALL EXTEND TO ROOF STRUCTURE OR FLOOR DECK ABOVE. 15. REFER TO "PARTITION TYPE SUBSCRIPT KEY" FOR SYMBOLS USED TO IDENTIFY ADDITIONAL
- REQUIREMENTS AND MODIFICATIONS TO BASIC PARTITION TYPES. 16. PARTITION TYPES DESCRIBE GENERAL REQUIREMENTS FOR PARTITIONS. REFER TO THE MANUFACTURER'S SPECIFICATIONS AND REQUIREMENTS OF APPLICABLE TESTING AGENCIES FOR
- SPECIFICS OF PARTITION CONSTRUCTION. 17. WHERE A CLEAR DIMENSION OR OPENING AS REQUIRED OR NOTED, MEASURE DIMENSION TO
- 18. REFER TO INTERIOR FINISH SCHEDULE FOR ALL WALL FINISHES.

KEYED NOTES

FACE OF PARTITION FINISH.

INSTALL SOUND ATTENUATION BATT INSULATION ABOVE CEILING WHERE INDICATED

RCP NOTES

1. ALL MATERIAL EXPOSED WITHIN A RETURN AIR CEILING PLENUM SHALL BE NONCOMBUSTIBLE OR Shall be limited in combustibility and have a flame spread index of 25 maximum and a SMOKE-DEVELOPMENT INDEX OF 50 MAXIMUM PER ASTM E84.

- 2. ALL CEILING MOUNTED DEVICES SHALL BE CENTERED IN BOTH DIRECTIONS IN ACOUSTICAL CEILING PANELS U.N.O. CENTER SPRINKLER HEADS IN ACOUSTIC CEILING PANEL WHERE THEY OCCUR. 3. CEILING GRIDS SHALL BE ORIENTED WITHIN SPACES AS SHOWN UNLESS NOTED OTHERWISE. FILL TILE
- (FT) WHERE INDICATED SHALL ABUT DESIGNATED WALL. LIMIT PARTIAL PANELS TO NO LESS THAN 6". 4. DEVICES HAVE BEEN SHOWN FOR COORDINATION PURPOSES. ALL DEVICES MAY NOT BE SHOWN.
- 5. THE GENERAL CONTRACTOR SHALL ENSURE THE INSTALLATION OF ALL DEVICES INDICATED ON THE ENGINEERING DRAWINGS. SEE MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR ITEMS NOT SHOWN ON REFLECTED CEILING PLANS. CONTACT THE ARCHITECT IF ANY CONFLICTS OCCUR.
- 6. COORDINATE ACCESS PANELS WITH MECHANICAL BALANCING DAMPER LOCATIONS.
- 7. ENGINEER/REWORK SPRINKLERS AS REQUIRED TO COMPLY WITH NFPA 13. 8. ALL NEW OR REPLACEMENT FIXTURES, BALLASTS AND TUBES MUST MEET CURRENT ENERGY MISER guidelines.
- 9. GC TO PROVIDE ALL LIGHT FIXTURES AND LAMPS (INCLUDING DECORATIVE) AS NOTED.
- 10. FOR REFLECTED CEILING PURPOSES THE CEILING HEIGHTS ARE BEING CALLED OUT AS ABOVE FINISHED FLOOR.
- 11. ALL LIGHTING, GENERAL AND DECORATIVE, TO BE FULLY DIMMABLE TO ZERO, UNLESS OTHERWISE NOTED, AND ON A SINGLE CENTRAL DIMMING SYSTEM.
- 12. GC TO PROVIDE BLOCKING AT ALL WINDOW SHADE LOCATIONS. COORDINATE WITH WINDOW POCKETS AS INDICATED. SEE INTERIOR SECTIONS AND ELEVATIONS.
- 13. GC TO PROVIDE BLOCKING AND REINFORCEMENT IN ALL HARD CEILINGS FOR ALL DECORATIVE FEATURES AND AV EQUIPMENT. 14. SPRINKLER SHOP DRAWINGS TO BE SUBMITTED TO ARCHITECT FOR COORDINATION. ARCHITECT TO
- SELECT FACTORY APPLIED COLOR FOR VISIBLE SPRINKLER CAPS. 15. SEE ELECTRICAL DRAWINGS FOR FIXTURE SCHEDULE, CIRCUITING, ZONING, ETC.- ARCHITECTURAL DRAWINGS ARE FOR INFORMATION AND LOCATION ONLY.

EXTERIOR ELEVATION LEGEND

1 EIFS	16 DENTIL MOLDING
2 STEPPED BRICK 1	(17) CLOCK
3 BRICK PILASTER W/ SOLDIER COURSE ACCENT @ TOP	18 BRICK 3 PATTERN
4 BRICK 3 BASE	
5 PREFABRICATED METAL CANOPY	IP BRICK I
6 STANDING SEAM METAL ROOF	20 DECORATIVE CANOPY SUPPORTS
7 COACH LANTERN, WALL SCONCE	21 BRICK 3 SOLDIER COURSE W/ KEY STONE, TYP.
8 DEVELOPMENT SIGN	22 BRICK 3 SOLDIER COURSE
9 METAL COPING	23 STEPPED BRICK 1, ARCH
10 NOT USED	24 DECORATIVE SOLDIER COURSE, BRICK 3
11 BRICK 3 ROWLOCK COURSE	25 FIBER CEMENT FAUX WOOD AND GLASS DECORATIVE CARRIAGE DOORS NON- OPERABLE
12 FUTURE TENANT SIGNAGE, TYP. 37.5' SF MAX.	
13 SOLDIER COURSE ACCENT W/ HERRING BONE PATTERN ARCH INSET, BRICK 2	26 DECORATIVE LOUVER VENT
14 HARDI PANEL GABLE	27 BRICK 3
15 STANDING SEAM METAL ROOF CANOPY	28 SCUPPER AND DOWNSPOUT
NOTES:	29 BRICK CONTROL JOINT
roof drainage will consist of thru-wall scuppers and d roof portions, and gutters and downspouts on the slot	POWNSPOUTS ON THE FLAT PED ROOF AND CANOPIES.
SATELLITE DISHES SHALL BE LOCATED AND PAINTED TO BLEND WIT AS MUCH AS PRACTICAL.	'H THE BACKGROUND
ALL DOORS AND WINDOWS SHALL BE ALUMINUM CLAD WOOD. EXCHANGE BASE BUILDING WINDOWS WITH OPERABLE WALK-UP STYLE AND BE REVIEWED AND APPROVED DURING TENANT PLAN	TENANT SHALL HAVE THE OPTION TO SERVICE WINDOWS TO MATCH SAME SUBMISSION.
WINDOWS WILL HAVE SIMULATED DIVIDED LITES W/ HISTORIC PRO IF NOT CLEAR, WINDOW TINT SHALL BE LIGHT GRAY ONLY	OFILE, NOT INTERNAL GRILLS.
DOWNSPOUTS FROM SCUPPERS TO PASS STRAIGHT DOWN WALL. AWNING AROUND SCUPPERS. AWNING DOWNSOUTS TO DISCH	INSTALL AND FLASH STANDING SEAM ARGE DIRECTLY FROM GUTTER

	EXTERIOR ELEVAT	ION LEGEND
	1 EIFS 2 STEPPED BRICK 1 3 BRICK PILASTER W/ SOLDIER COURSE ACCENT @ TOP 4 BRICK 3 BASE 5 PREFABRICATED METAL CANOPY 6 STANDING SEAM METAL ROOF 7 COACH LANTERN, WALL SCONCE 8 DEVELOPMENT SIGN	 16 DENTIL MOLDING 17 CLOCK 18 BRICK 3 PATTERN 19 BRICK 1 20 DECORATIVE CANOPY SUPPORTS 21 BRICK 3 SOLDIER COURSE W/ KEY STONE, TYP. 22 BRICK 3 SOLDIER COURSE
	 9 METAL COPING 10 NOT USED 11 BRICK 3 ROWLOCK COURSE 12 FUTURE TENANT SIGNAGE, TYP. 37.5' SF MAX. 13 SOLDIER COURSE ACCENT W/ HERRING BONE PATTERN ARCH INSET, BRICK 2 14 HARDI PANEL GABLE 15 STANDING SEAM METAL ROOF CANOPY 	 23 STEPPED BRICK 1, ARCH 24 DECORATIVE SOLDIER COURSE, BRICK 3 25 FIBER CEMENT FAUX WOOD AND GLASS DECORATIVE CARRIAGE DOORS NON- OPERABLE 26 DECORATIVE LOUVER VENT 27 BRICK 3 28 SCUPPER AND DOWNSPOUT
$UPPER PARAPET 22' - 4'' B.O. SOLDIERCOURSE 18' - 5 1/8'' - \frac{FLOOR PLAN}{1' - 0''} $	<text><text><text><text><text></text></text></text></text></text>	ASPOUTS ON THE FLAT COOF AND CANOPIES. BACKGROUND ANT SHALL HAVE THE OPTION TO ICCE WINDOWS TO MATCH SAME AISSION. NOT INTERNAL GRILLS. ALL AND FLASH STANDING SEAM DIRECTLY FROM GUTTER

RELEASED FOR CONSTRUCTION

T A

A T L A N

WOMEN'S RESTROOM

FINISH NOTES

4. ALL WALL AND PARTITIONS EXPOSED TO VIEW SHALL RECEIVE A FINISH UNLESS OTHERWISE NOTED. PAINT FINISHES SHALL BE APPLIED ACCORDING TO THE SPECIFICATIONS BASED ON COLORS AND FINISHES NOTED IN THE FINISH SCHEDULE. ALL GYPSUM BOARD PARTITIONS SHALL BE PAINTED UNLESS SPECIFICALLY NOTED OTHERWISE TO RECEIVE AN ALTERNATE FINISH OR CLADDING. 5. PRIOR TO THE APPLICATION OF ANY WALL FINISH, WALLS MUST BE SMOOTH AND DRY. DRYWALL

BLEED THROUGH. 6. UNLESS NOTED OTHERWISE WALLS INDICATED WITH PAINT FINISHES SHALL RECEIVE 1 COAT OF PRIMER AND 2 COATS OF FINISH PAINT IN AN "EGGSHELL" FINISH, COORDINATE W/ FINISH SCHEDULE. 7. PAINTING PRODUCTS SHALL BE FACTORY PREPARED AND AS RECOMMENDED FOR THE SPECIFIC TYPE OF SUBSTRATE APPLICATION FOR PAINT. COLORS TO MATCH THOSE SPECIFIED.

NOT BE ACCEPTED. INSTALLATION OF CARPET. SCREWED IN PLACE 12" O.C. PRIOR TO PROCUREMENT AND INSTALLATION. WORK.

REPLACED.

to installation.

20. ALL BASE AT CORNERS TO BE PRE-MOLDED, NOT WRAPPED.

PRIOR TO FIELD EXECUTION.

ADHESIVES.

RELATED TO OCCUPANCY TYPE.

ACCORDANCE WITH THE SPECIFICATIONS.

30. CARPET TO BE DIRECT GLUE UNLESS NOTED OTHERWISE. 31. PAINT METAL FRAME WITH (2) COATS SEMI GLOSS FINISH PAINT. 32. DOORS TO HAVE NEW BUILDING STANDARD (STAIN/PAINT) FINISH. 33. ALL INTERIOR FINISHES SHALL BE CLASS "B" OR BETTER.

FOR ALL PLUMBING FIXTURES SANDY KOUZES ARCHITECTURAL SALES SOUTHERN SPECIFICATIONS 678.373.9338 PAINT (OWNER TO APPROVE)

COLOR NUMBER: SW7005 FINISH: FLAT (WALL, DOORS AND FRAMES) **PT-2** MANUFACTURER: SHERWIN WILLIAMS COLOR NAME: TONY TAUPE COLOR NUMBER: SW7038 FINISH: SEMI-GLOSS

COLOR NAME: BRIGHT WHITE LOCATIONS: RESTROOMS GROUT: MAPEI; CHARCOAL

<u>BASE</u> BS-1 MANUFACTURER: SCHLUTER LOCATIONS: RESTROOMS LINK:

MIRRORS MR-1 MANUFACTURER: BOBRICK

LOCATIONS: RESTROOMS LINK: BREALW_WCB

PAPER TOWER AND TRASH COMBO MANUFACTURER: BOBRICK LOCATIONS: RESTROOMS LINK:

https://www.globalindustrial.com/p/bobrick-classicseries-recessed-convert-automatic-toweldispense-recept? infoParam.campaignId=T9F&gclid=Cj0KCQjw29CRBhCUARIsAOboZbJih0iCztWPElkLIwID4dRUFgLG13F XPs1EzzlPhpOvu3OscScUBU0aAsWaEALw_wcBDtandard Bobrick toilet paper holder, sanitary napkin dispenser and receptacle

1. REFER TO THE FINISH NOTES FOR THE LISTING AND DESCRIPTIONS OF ALL FINISHES SCHEDULED. 2. WHERE DISCREPANCIES EXIST BETWEEN THE DRAWINGS, SPECIFICATIONS AND THE FINISH NOTES, VERIFY ITEM OR FINISH WITH THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.

3. ACTUAL MEASUREMENTS TO BE MADE ON JOB SITE. ALL MEASUREMENTS FOR ESTIMATING PURPOSES ARE GENERAL CONTRACTOR'S RESPONSIBILITY.

MARKINGS MUST BE SUFFICIENTLY SEALED BEFORE APPLICATION OF FINISH MATERIALS TO PREVENT

8. ALL CAULKING PRODUCTS AND SEALANTS EXPOSED TO VIEW SHALL MATCH THE COLOR OF THE AREA TO BE CAULKED, EXCEPT THAT CAULKED JOINTS AT DOOR AND WINDOW FRAMES AND SIMILAR FRAMING ITEMS SHALL MATCH THE WALL COLOR, NOT THE FRAME COLOR TO PRESERVE A "STRAIGHT-LINE" APPEARANCE. ALL CAULK JOINTS SHALL BE TOOLED. CAULKING COMPOUND OVERLAYS WILL

9. FLOOR TRANSITIONS AND CARPET SEAMS AT DOORS SHALL OCCUR DIRECTLY UNDER THE CENTERLINE OF THE DOOR IN THE CLOSED POSITION UNLESS NOTED OR DETAILED OTHERWISE FOR SPECIFIC DESIGN PURPOSES SHOWN IN THE DRAWINGS.

10. CONTRACTOR SHALL VERIFY, COORDINATE AND NOTIFY OWNER IN WRITING OF THE DATE FOR

11. WHERE VINYL WALLCOVERING TERMINATES ON OUTSIDE CORNERS. USE CLEAR "DACO" CAP STRIP

12. CONFIRM COLOR OF FACE PLATES, SWITCHES, OUTLETS AND OTHER DEVICES WITH ARCHITECT

13. THE GENERAL CONTRACTOR SHALL RETOUCH OR REFINISH SURFACES DAMAGED BY SUBSEQUENT

14. THE GENERAL CONTRACTOR SHALL EXAMINE ALL SURFACES TO BE FINISHED UNDER THIS CONTRACT AND SEE THAT THE WORK OF ALL TRADES HAS BEEN INSTALLED IN SATISFACTORY CONDITION TO RECEIVE PAINT, STAIN OR SPECIFIED FINISH. THE APPLICATION OF THE FIRST COAT OF ANY FINISH PROCESS SHALL CONSTITUTE ACCEPTANCE OF THE SURFACE.

15. MATERIALS SHALL BE DELIVERED IN THEIR ORIGINAL CARTONS OR CONTAINERS AS PACKAGED BY THE MANUFACTURER AND BEARING THE ORIGINAL MANUFACTURER'S LABELS. THE GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR RECEIVING AND STORING SUCH GOODS.

16. MATERIALS STORED ON THE SITE SHALL BE PROTECTED FROM DAMAGE BY MOISTURE, WIND, SUN, ABUSE OR ANY OTHER HARMFUL AFFECTS. DAMAGED MATERIALS WILL BE REJECTED AND MUST BE

17. FLOOR SUBSTRATE SHALL BE FREE OF DIRT AND DEBRIS BEFORE FINISH FLOORING INSTALLATION. THE INSTALLATION OF FINISH FLOORING SHALL CONSTITUTE ACCEPTANCE OF THE SLAB.

18. GENERAL CONTRACTOR SHALL SUBMIT SEAMING DIAGRAMS TO DESIGNER FOR APPROVAL PRIOR

19. GENERAL CONTRACTOR SHALL ENSURE NAP RUNS IN THE SAME DIRECTION.

21. BASE MATERIAL SHALL BE INSTALLED FLUSH TO FLOOR SURFACE UNLESS OTHERWISE NOTED.

22. THE GENERAL CONTRACTOR SHALL SUBMIT 8" X 10" PAINT SAMPLES TO DESIGNER FOR APPROVAL

23. THE GENERAL CONTRACTOR SHALL LEAVE REMAINING PAINT (1 GALLON MINIMUM) OF EACH COLOR WITH OWNER FOR FUTURE TOUCH-UP NEEDS.

24. THE GENERAL CONTRACTOR SHALL USE MANUFACTURER'S RECOMMENDED PRIMERS, SEALERS AND

25. UPON COMPLETION OF ALL FINISH APPLICATIONS, ALL MATERIALS AND EQUIPMENT SHALL BE REMOVED. THE GENERAL CONTRACTOR SHALL INSURE THAT PAINT AND GLUE SPOTS ARE REMOVED AND THAT ALL AREAS ARE LEFT CLEAN AND FREE OF DUST, DIRT OR DEBRIS.

26. INTERIOR FINISHES SHALL COMPLY WITH CURRENT NFPA 101 CHAPTER 10 AND SPECIFIC CHAPTER

27. INTERIOR STEEL FRAMED GYPSUM BOARD PARTITION DESIGN CRITERIA SHALL BE BASED ON ASTM C 754 STANDARD SPECIFICATION FOR INSTALLATION OF STEEL FRAMING MEMBERS TO RECEIVE SCREW ATTACHED GYPSUM PANEL PRODUCTS, LATEST VERSION. ALLOWABLE DEFLECTION WITH A 5 PSF UNIFORM LOAD PERPENDICULAR TO THE PARTITION IS L/240. PARTITIONS WITH CERAMIC TILE FINISH SHALL HAVE AN ALLOWABLE DEFLECTION OF L/360 TO AVOID THE POTENTIAL CRACKING IN THE CERAMIC TILE. STIFFNESS MAY BE ACCOMPLISHED THROUGH HORIZONTAL STUD STIFFENERS IN

28. ALL VINYL OR RUBBER BASE SHALL BE CONTINUOUS ROLL GOODS.

29. PREP ALL SURFACES TO MEET MANUFACTURERS INSTALLATION SPECIFICATIONS.

PLEASE CONTACT THE FOLLOWING SLOAN REPRESENTATIVE:

PT-1 MANUFACTURER: SHERWIN WILLIAMS COLOR NAME: PURE WHITE PRIMER

LOCATION: INTERIOR DOORS, FRAMES, AND PARTITIONS U.N.O.

LOCATION: EXTERIOR HOLLOW METAL DOORS AND FRAMES, STAIRS

TILE (BASIS OF DESIGN FULL HEIGHT TILE ON ALL WALLS WITH A DEDUCTIVE ALTERNATE FOR FULL HEIGHT ONLY ON THE WET WALL AND 4'-0" WAINSCOT ON ALL OTHERS WITH PAINT ABOVE) T-1 MANUFACTURER: DALTILE; 3"X12" RUNNING BOND

HTTPS://WWW.SCHLUTER.COM/SCHLUTER-US/EN_US/SCHLUTER-US/EN_US/PROFILES/COVE-SHAPED-PROFILES/SCHLUTER%C2%AE-DILEX-AHKA/P/DILEX_AHKA?FACETS=FALSE

HTTPS://WWW.WEBSTAURANTSTORE.COM/BOBRICK-B-165-2436-24-X-36-WALL-MOUNTED-MIRROR-WITH-STAINLESS-STEEL-CHANNEL-FRAME/179B1652436.HTML? UTM_SOURCE=GOOGLE&UTM_MEDIUM=CPC&UTM_CAMPAIGN=GOOGLESHOPPING&GCLID=CJ0KC QJW29CRBHCUARISAOBOZBJCX4H3ZODYBYUMC2LJXNSQMXB4HTQRTRHPRCKCUJKU1FS8JZBR3RUAAS

GENERAL NOTES

1. ALL FIRE RATED PARTITIONS MUST EXTEND AND SEAL TO DECK ABOVE.

2. TYPICAL FLOOR PLAN DIMENSIONS OF PARTITIONS ARE TO THE NOMINAL FINISH FACE OF GWB UNLESS NOTED TO THE CENTERLINE OF THE PARTITION.

3. INSTALLATION OF GYPSUM BOARD, BACKER BOARD AND BASE BOARD SHALL CONFORM TO REQUIREMENTS FOR FIRE RATINGS AND ACOUSTICAL RATINGS.

4. PROVIDE WATER RESISTANT TYPE GYPSUM BOARD AT AREAS THAT ARE NOTED IN ROOM FINISH SCHEDULE TO RECEIVE CERAMIC OR PORCELAIN TILE FINISH.

5. PROVIDE 5/8" GYPSUM BOARD UNLESS OTHERWISE NOTED.

6. PROVIDE 5/8" TYPE X GYPSUM BOARD AT FIRE RATED PARTITIONS.

7. PENETRATIONS IN RATED PARTITIONS AND CONNECTIONS OF THE PARTITIONS TO OTHER PORTIONS OF THE WORK SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED DETAILS AND IN COMPLIANCE WITH APPLICABLE TESTING AGENCY REQUIREMENTS.

8. INSTALL BLOCKING OR BACKER MATERIAL FOR ATTACHMENT / MOUNTING OF WALL HUNG ITEMS OR EQUIPMENT DESCRIBED IN THE DOCUMENTS.

9. WHEN INSTALLING GYPSUM BOARD. CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF THE MOST CURRENT EDITION OF THE GYPSUM ASSOCIATION "GA-600" FIRE RESISTANCE DESIGN MANUAL AND THE MOST CURRENT EDITION OF THE UL FIRE RESISTANCE DIRECTORY.

10. PARTITIONS THAT ARE REQUIRED TO EXTEND TO THE DECK ABOVE SHALL HAVE THE GYPSUM BOARD CUT TO FIT WITHIN 1/4" MAXIMUM TOLERANCE TO THE SHAPE OF THE DECK ABOVE. GYPSUM BOARD SHALL BE CONTINUOUSLY SEALED FOR THE FULL DEPTH OF THE GYPSUM BOARD WITH FLEXIBLE SEALANT. 11. GYPSUM BOARD SHALL BE CUT SO THAT THE CLEARANCE BETWEEN METALLIC ELECTRICAL OUTLET

BOXES AND THE GYPSUM BOARD DOES NOT EXCEED 1/8" 12. THE BOTTOM OF THE GYPSUM BOARD AT INTERIOR PARTITIONS SHALL BE 1/4" MINIMUM AND 1/2" MAXIMUM ABOVE THE CONCRETE FLOOR SLAB AND SHALL BE SEALED FOR THE FULL DEPTH OF THE GYPSUM BOARD WITH FLEXIBLE SEALANT.

13. REFER TO THE FLOOR PLAN FOR EXTENT OF FIRE WALL RATINGS.

14. ALL ELEMENTS OF ACOUSTIC RATED PARTITIONS SHALL EXTEND TO ROOF STRUCTURE OR FLOOR DECK ABOVE.

15. REFER TO "PARTITION TYPE SUBSCRIPT KEY" FOR SYMBOLS USED TO IDENTIFY ADDITIONAL REQUIREMENTS AND MODIFICATIONS TO BASIC PARTITION TYPES.

16. PARTITION TYPES DESCRIBE GENERAL REQUIREMENTS FOR PARTITIONS. REFER TO THE MANUFACTURER'S SPECIFICATIONS AND REQUIREMENTS OF APPLICABLE TESTING AGENCIES FOR SPECIFICS OF PARTITION CONSTRUCTION.

17. WHERE A CLEAR DIMENSION OR OPENING AS REQUIRED OR NOTED, MEASURE DIMENSION TO FACE OF PARTITION FINISH.

18. REFER TO INTERIOR FINISH SCHEDULE FOR ALL WALL FINISHES.

LEGEND

FLOORING INSTALLATION DIRECTION

— — — — — — TRANSITION STRIP

NOT IN SCOPE

BABY CHANGING STATION

MANUFACTURER: FOUNDATIONS LOCATIONS: RESTROOMS

LINK: https://www.globalindustrial.com/p/horizontal-baby-changing-table-stainless-steel-37-1-2-w-250lbcap-100ssc-r? infoParam.campaignId=T9F&gclid=Cj0KCQjw29CRBhCUARIsAOboZbJc4HIHAIbJAQGaNR8O3NWIpfh BAu87IeEI3DmBbp3BuTzaKa40HnMaAkDWEALw wcB

TOILET PARTITIONS MANUFACTURER: SCRANTON PRODUCTS LOCATIONS: RESTROOMS

DESCRIPTION: FLOOR-MOUNTED/OVERHEAD BRACED

<u>TOILETS</u> MANUFACTURER: SLOAN LOCATIONS: RESTROOMS DESCRIPTION:

WETS-2023.1006 ST-2029 WATER CLOSET AND CROWN 111 FLUSHOMETER

<u>URINALS</u> MANUFACTURER: SLOAN LOCATIONS: RESTROOMS DESCRIPTION:

SU-1009 VITREOUS CHINA WASHDOWN URINAL

----->

BUILDING	CODE:	INTERNATIONAL BUILDING CODE 2018 (IBC) W/ STATE OF
		GEORGIA AMENDMENTS.
WIND:		
BASIC DE ALLOWAE RISK CATI WIND EXP INTERNAL	SIGN WIND 3LE STRES: EGORY: II 'OSURE CA PRESSURI) SPEEED (VuH) = 106 MPH (3-SECOND GUST) S DESIGN WIND SPEED (Vasd) = 82.1 MPH (3-SECOND GUST) NTEGORY: B E COEFFICIENT: ± 0.18
COMPONI DESIGNEI STIPULAT	ENTS AND O ON THES ED BY IBC	CLADDING: COMPONENTS AND CLADDING ELEMENTS NOT SPECIFICAL E DRAWINGS SHALL BE DESIGNED ACCORDING TO THE WIND PRESSURI 2018 FOR THE TRIBUTARY AREA OF THE SPECIFIC COMPONENT.
MIN ULT D	ESIGN PRE	ESSURE = 37.0 PSF (WALLS, 100 SQ FT, NON-END ZONE)
SNOW:		
GR	OUND SNC	DW LOAD = 5 PSF
SEISMIC:		
RIS SE Ss SIT Sd SE	K CATEGC ISMIC IMPC = 0.187 E CLASS = = 0.200 ISMIC DESI)RY)RTANCE FACTOR (_e) = 1.0 S1 = 0.085 D SD1 = 0.136 IGN CATEGORY = C
BA LIG SH	SIC SEISMI HT-FRAME EAR RESIS	IC FORCE-RESISTING SYSTEM: (WOOD) WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED F TANCE.
DE N/S E/V	SIGN BASE 3 = 4.4 KIPS V = 4.4 KIPS	E SHEAR 3 3
SE RE	ISMIC RESP SPONSE M	PONSE COEFFICIENT (C5): 0.031 IODIFICATION COEFFICIENT (R): 6 1/2

- . THE FOLLOWING NOTES APPLY TO ALL PROJECT RELATED STRUCTURAL DRAWINGS. THIS INCLUDES THESE DRAWINGS, FIELD SKETCHES AND RESPONSES TO REQUESTS FOR INFORMATION (RFIS), UNLESS OTHERWISE INDICATED.
- THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 STRUCTURAL DRAWINGS SHALL BE COORDINATED WITH ARCHITECTURAL AND MECHANICAL
- DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING PERTINENT ASPECTS OF ALL DISCIPLINES INTO THEIR SHOP DRAWINGS AND WORK, AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR OMISSIONS.
- 4. NO OPENINGS OR MODIFICATIONS SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ARCHITECT.
- NO CHANGE IN SIZE OR DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ARCHITECT.
 THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR
- IS RESPONSIBLE FOR FURNISHING ALL DESIGN, ADEQUACY, SAFETY AND STABILITY OF TEMPORARY BRACING AND SHORING THAT MAY BE REQUIRED AS A RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED ON THE STRUCTURAL FRAMING. APPLIED CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF ANY STRUCTURAL BUILDING ELEMENT.
- 7. THE CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION LIFECYCLE.
- 8. DO NOT SCALE THESE DRAWINGS; USE DIMENSIONS. FOR DIMENSIONS NOT SHOWN ON THE STRUCTURAL CONTRACT DOCUMENTS, SEE ARCHITECTURAL DRAWINGS.
- 9. THE CONTRACTOR SHALL INFORM THE PROFESSIONAL OF RECORD IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY OF SUCH DEVIATION BY THE PROFESSIONAL OF RECORD, REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC. UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE PROFESSIONAL OF RECORD OF SUCH DEVIATION AT THE TIME OF SUBMISSION AND THE ARCHITECT HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.
- 10. WHERE A SECTION OR DETAIL IS CUT ON THE PLAN, IT IS UNDERSTOOD TO BE REPRESENTATIVE OF ALL LIKE OR SIMILAR CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING SUCH REQUIREMENTS INTO THEIR SHOP DRAWINGS AND WORK.
- 11. AT ALL TIMES THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONDITIONS OF THE JOBSITE INCLUDING SAFETY OF PERSONS AND PROPERTY. THE ARCHITECT'S OR ENGINEER'S PRESENCE AT THE JOB SITE OR REVIEW OF WORK DOES NOT IMPLY CONFIRMATION OF THE ADEQUACY OF THE CONTRACTOR'S MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLIANCE WITH OSHA REGULATIONS.
- 12. CONSULT ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR LOCATION, SIZES, AND EXTENT OF CHASES, INSERTS, RECESSES, RIDGES, FINISHES, DEPRESSIONS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- 13. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF RECORD IN WRITING OF ALL CONDITIONS ENCOUNTERED IN THE FIELD THAT ARE CONTRADICTORY TO THOSE SHOWN ON THE STRUCTURAL DRAWINGS.
- 14. STRUCTURAL CONTRACT DOCUMENTS SHALL NOT INCLUDE SHOP DRAWINGS, VENDOR DRAWINGS, OR ANY MATERIAL PREPARED AND SUBMITTED BY THE CONTRACTOR OR SUBCONTRACTOR.
- 15. REFERENCE TO STANDARD SPECIFICATIONS OF ANY TECHNICAL SOCIETY, ORGANIZATION OR ASSOCIATION OR TO CODES OF LOCAL OR STATE AUTHORITIES, SHALL MEAN THE LATEST STANDARD, CODE, SPECIFICATION OR TENTATIVE SPECIFICATION ADOPTED AND PUBLISHED AT THE DATE OF TAKING BIDS, UNLESS SPECIFICALLY STATED OTHERWISE.
- 16. SEE ARCHITECTURAL DRAWINGS FOR FLOOR ELEVATIONS, SLOPE, AND LOCATION OF DEPRESSED FLOOR AREAS. THE CONTRACTOR SHALL COMPARE STRUCTURAL SECTIONS WITH THE ARCHITECTURAL SECTIONS AND REPORT ANY DISCREPANCY TO THE ARCHITECT PRIOR TO FABRICATING OR INSTALLING STRUCTURAL MEMBERS.
- 17. PRINCIPAL OPENINGS THROUGH THE FRAMING ARE SHOWN ON THESE DRAWINGS. OPENINGS 1-4" IN WIDTH OR LENGTH (AND LESS) ARE GENERALLY NOT SHOWN ON THE STRUCTURAL DRAWINGS. THE GENERAL CONTRACTOR SHALL EXAMINE THE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ALL ALL REQUIRED OPENINGS. ALL MECHANICAL OPENING LOCATIONS, UNIT OPERATING WEIGHTS, AND SIZES SHALL BE VERIFIED WITH THE MECHANICAL CONTRACTOR PRIOR TO FABRICATION. ANY DEVIATION FROM THE OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR APPROVAL.
- 18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES IN ORDER TO COMPLY WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS.

SUBMITTALS:

- 1. STRUCTURAL DRAWINGS GIVE REPRESENTATIVE DETAILS AND ARE NOT INTENDED TO SHOW ALL CONDITIONS THAT MAY BE PRESENT. SHOP DRAWINGS SHALL DETAIL ALL CONDITIONS IN ACCORDANCE WITH THE SPECIFIC REQUIREMENTS AS INDICATED IN THE PROJECT DOCUMENTS.
- 2. CONTRACTOR SHALL SUBMIT A SCHEDULE OF SHOP DRAWING SUBMITTAL DATES TO ARCHITECT AT LEAST 30 DAYS PRIOR TO FIRST SUBMITTAL. FAILURE TO SUBMIT DRAWINGS ON DESIGNATED DATE MAY IMPACT REVIEW SCHEDULE.
- 3. ANY MATERIALS OR PRODUCTS SUBMITTED FOR APPROVAL THAT ARE DIFFERENT FROM THE MATERIALS OR PRODUCTS SPECIFIED IN THE STRUCTURAL CONTRACT DOCUMENTS WILL BE CONSIDERED ONLY IF THE FOLLOWING CRITERIA ARE SATISFIED: A. A COST SAVINGS TO THE OWNER IS DOCUMENTED AND SUBMITTED WITH THE
 - REQUEST. B. THE MATERIAL OR PRODUCT HAS BEEN APPROVED BY THE INTERNATIONAL CODE COUNCIL (ICC) AND THE ICC-ES REPORT IS SUBMITTED WITH THE REQUEST. SUBMITTALS NOT SATISFYING THE ABOVE CRITERIA WILL NOT BE CONSIDERED.
- 4. REVIEW OF SUBMITTALS OR SHOP DRAWINGS BY THE STRUCTURAL ENGINEER OF RECORD DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW AND CHECK SHOP DRAWINGS BEFORE SUBMITTAL TO THE STRUCTURAL ENGINEER OF RECORD. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS.
- 5. COMPLETE SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL FABRICATED AND SPECIALTY BUILDING COMPONENTS INCLUDING (BUT NOT LIMITED TO) PRECAST CONCRETE, COLD-FORMED METAL FRAMING, GUARDRAILS, SKYLIGHTS, WINDOW SYSTEMS AND STAIRS. SHOP DRAWINGS SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF GEORGIA.
- 6. ALL APPROVED SUBMITTALS, INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, SHALL BE MADE AVAILABLE ON THE JOBSITE FOR REVIEW BY THE INSPECTOR.
- 7. REPRODUCTION OF CONTRACT DOCUMENTS FOR USE AS SHOP DRAWINGS IS NOT PERMITTED.
- 8. THE CONTRACTOR SHALL MAINTAIN RECORDS AND RECORD ALL CHANGES MADE ON A SET OF CONTRACT STRUCTURAL DRAWINGS DURING THE PROGRESS OF THE WORK. THE IN-PROGRESS 'RECORD DRAWINGS' SHALL BE MAINTAINED IN THE CONSTRUCTION OFFICE AT THE SITE AND SHALL BE CLEARLY MARKED 'RECORD DRAWINGS'. "RECORD DRAWINGS' SHALL BE UP-TO-DATE AND AVAILABLE FOR USE AT ANY TIME BY THE ENGINEER OR ARCHITECT. FINAL ELECTRONIC 'RECORD DRAWINGS' SHALL INCLUDE ALL CHANGES MADE INCLUDING PROJECT ADDENDA AND CHANGE ORDER MODIFICATIONS. ALL CHANGES SHALL BE IDENTIFIED WITH REVISION CLOUDS AND APPROPRIATE REVISION TRIANGLES. SUBMITTAL FOR ELECTRONIC 'RECORD DRAWINGS' SHALL BE MADE ON COMPACT DISK IN AUTOCAD FORMAT ALONG WITH ONE FULL SIZE SET OF BOND PLOTS TO THE ENGINEER. PLOTS SHALL BE GENERATED FROM THE COMPACT DISK OF ELECTRONIC FILES. CONTRACTOR SHALL MAINTAIN ELECTRONIC FILE NAMES AND PLOT SHEET NUMBERING PERSUANT TO THE ORIGINAL CONTRACT DOCUMENT FORMAT.

FOUNDATIONS:

- 1. SPREAD FOOTINGS SHALL BEAR ON SOIL CAPABLE OF SUSTAINING AN ASSUMED NET ALLOWABLE BEARING PRESSURE OF 1.5 KSF FOR INDIVIDUAL COLUMN FOOTINGS AND CONTINUOUS WALL FOOTINGS UNDER FULL SERVICE LIVE AND DEAD LOAD.
- 2. THE SITE SHALL BE PREPARED IN ACCORDANCE WITH THE CIVIL DRAWINGS AND PROJECT SPECIFICATIONS. A GEOTECHNICAL INVESTIGATION HAS NOT BEEN PERFORMED ON THIS SITE PRIOR TO THE ISSUANCE OF THESE DRAWINGS. A QUALIFIED GEOTECHNICAL ENGINEER SHALL VERIFY ALL ASSUMPTIONS AND REPORT ANY VARIATIONS OR DISCREPANCIES TO THE ENGINEER OF RECORD.
- 3. THE FOOTINGS HAVE BEEN POSITIONED AT THE ESTIMATED ELEVATION WHICH WILL PROVIDE SUITABLE BEARING. HOWEVER, IF ADEQUATE BEARING CAPACITY IS NONEXISTENT AT THESE ESTIMATED ELEVATIONS, THE FOOTING SHALL BE LOWERED TO AN ELEVATION WHERE THE PRESCRIBED SAFE BEARING CAPACITY EXISTS (AS RECOMMENDED BY A QUALIFIED GEOTECHNICAL ENGINEER).
- 4. FOOTINGS MAY BE CAST INTO AN EARTH-FORMED TRENCH IF SOIL CONDITIONS PERMIT
- 5. EXCAVATION FOR FOOTINGS SHALL BE CUT TO ACCURATE SIZE AND DIMENSIONS AS SHOWN ON PLANS. ALL SOIL BELOW SLABS AND FOOTINGS SHALL BE PROPERLY COMPACTED AND SUBGRADE BROUGHT TO A REASONABLE TRUE AND LEVEL PLANE BEFORE PLACING CONCRETE.
- 6. IN AREA OF THE BUILDING, EXISTING ORGANIC MATERIAL, UNSUITABLE SOIL, ABANDONED FOOTINGS AND ANY OTHER EXISTING UNSUITABLE MATERIALS SHALL BE REMOVED. ANY CUT AND FILL REQUIREMENTS SPECIFIED BY CIVIL SHALL BE AS INSTALLED PURSUANT TO THE GEOTECHNICAL REPORT NOTED IN ITEM 2 OF THIS SECTION.
- FOOTING CONCRETE SHALL BE CAST ON THE SAME DAY THE EXCAVATION IS APPROVED. IF THE BEARING SURFACE IS ALLOWED TO BECOME DISTURBED IN ANY WAY, IT SHALL BE REWORKED TO THE SATISFACTION OF AN INDEPENDENT TESTING AGENCY PRIOR TO CASTING OF THE CONCRETE.
- 8. ALL EXCAVATIONS AND STRUCTURE BEARING PADS SHALL BE INSPECTED BY AN INDEPENDENT TESTING AGENCY PRIOR TO CONCRETE PLACEMENT. THE INDEPENDENT TESTING AGENCY SHALL BE THE SOLE JUDGE AS TO THE SUITABILITY OF THE BEARING MATERIAL.
- 9. BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BEAR A MINIMUM OF 2'-0" BELOW FINAL GRADE FOR FROST PROTECTION.
- 10. NO EXCAVATION SHALL BE CLOSER THAN AT A SLOPE OF 2:1 (2 HORIZONTAL TO 1 VERTICAL) TO A FOOTING. PROVIDE SHORING AND PROTECTION FOR EXCAVATION BANKS AS NECESSARY TO PRESERVE SAFETY AND PREVENT CAVING.
- 11. ALL BEARING STRATA SHALL BE ADEQUATELY DRAINED BEFORE FOUNDATION CONCRETE IS PLACED.
- 12. BACKFILL AGAINST WALLS SHALL BE PLACED IN 8" LIFTS AND SHALL BE DEPOSITED EVENLY AGAINST EACH SIDE OF WALL UNTIL THE LOWER FINAL GRADE IS REACHED. BACKFILL SHALL NOT BE PLACED AGAINST WALLS DEPENDENT UPON TOP AND BOTTOM SLABS/FOUNDATION FOR SUPPORT UNTIL SUCH SLABS HAVE ATTAINED MINIMUM SUFFICIENT BRACING AND SHORING FOR ALL WORK DURING THE CONSTRUCTION PROCESS. RETAINING WALLS ARE NOT DESIGNED TO CANTILEVER AT ANY TIME UNLESS EXPLICITLY NOTED ON DRAWINGS.
- THE CONTRACTOR SHALL PROVIDE AN ADEQUATE DRAINAGE SYSTEM FOR ALL BACKFILL CONDITIONS PER CIVIL AND ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
 COLUMN FOOTINGS AND WALL FOOTINGS SHALL BE POURED MONOLITHIC WITH TOPS
- OF ADJACENT FOOTINGS AND WALL FOUTINGS SHALL BE POL
- 15. THERE SHALL BE NO HORIZONTAL CONSTRUCTION JOINTS IN ANY FOOTING WITHOUT PRIOR WRITTEN APPROVAL FROM ENGINEER.

1.	ALL CONCRETE DESIGN 318-14 AND ACI 301-16.	AND CONSTRUC	FION SHALL BE IN ACC	CORDANCE WITH ACI
2.	CEMENT USED SHALL B DEVELOP A MINIMUM 28	E TYPE I OR III CON DAY STRENGTH	NFORMING TO ASTM (AND DENSITY AS FO! STRENGTH (PSI)	C-150. CONCRETE SHALL LLOWS: DENSITY (PCF)
	FOOTINGS, SLAB ON EXTERIOR SLAB ON G ELEVATED SLABS	GRADE RADE	3000 4000 4000	145 - 150 (NORMAL WEIGHT) 145 - 150 (NORMAL WEIGHT) 110 - 115 (LIGHTWEIGHT)
3.	AGGREGATE SHALL BE	WELL GRADATED	AND SHALL CONFOR	RM TO THE FOLLOWING:
	NORMAL WEIGHT CO LIGHTWEIGHT CONCR	NCRETE RETE	1" COARSE AGGREG 3/4" COARSE AGGR	FATE (ASTM C-33) REGATE (ASTM C-330)
4.	CONTRACTOR SHALL SU CONCRETE PLACEMENT DATA NECESSARY TO S EITHER THE TRIAL BATCH A PROFESSIONAL ENGIN ALL COMPRESSIVE STR FOR REVIEW BY THE INS CONCRETE MIX DESIGN WATER/CEMENT RATIO EXTERIOR CONCRETE IN	JBMIT CONCRETE CONCRETE MIX HOW COMPLIAN HOR FIELD EXPER NEER REGISTERED ENGTH TEST SHA PECTOR. WATER SUBMITTAL. SITE OF 0.45. PROVIDE ACCORDANCE W	MIX DESIGNS FOR RE DESIGN SHALL INCLU CE WITH THE PROJECT IENCE METHOD AND S D IN THE STATE OF GE LL BE MADE AVAILAB CEMENT RATIOS SHA RETAINING WALLS SH E AIR ENTRAINED CON /ITH THE AMERICAN C	VIEW IN ADVANCE OF DE ALL STRENGTH I SPECIFICATIONS BY BHALL BE CERTIFIED BY ORGIA. RESULTS OF LE AT THE JOB SITE LL BE SPECIFIED IN THE HALL HAVE A MAXIMUM CRETE FOR ALL ONCRETE INSTITUTE
5.	ALL MIXING, TRANSPORT ACCORDANCE WITH THE INSTITUTE.	TING, PLACING AN E RECOMMENDAT	ID CURING OF CONCR IONS OF THE AMERIC,	ETE SHALL BE DONE IN AN CONCRETE
б.	NO ADDITIONAL WATER	SHALL BE ADDED	TO CONCRETE AT TH	IE JOB SITE.
7.	MINIMUM CONCRETE CO A. #11 BARS AND SM, B. UNFORMED SU C. BASEMENT WALL	VER UNLESS NO ⁻ ALLER: RFACE IN CONTA S:	TED OTHERWISE: CT WITH THE GROUNE	3/4 INCHES 3 INCHES 2 INCHES EXTERIOR 3/4 INCHES INTERIOR
	D. FORMED SURFACE #6 BARS AND L #5 BARS AND SMA	ARGER: ALLER:	AKTH UK WEATHEK:	2 INCHES 11/2 INCHES
	E. FORMED SURFACE BEAMS, GIRDERS / SLABS, WALLS, AI	S NOT EXPOSED AND COLUMNS: ND JOISTS:	TO EARTH OR WEATH	IER: 1 1/2 INCHES 3/4 INCHES
8.	SLAB-ON-GRADE SHALL FINISHED. CONTRACTOR NTERNATIONAL OR SIM.)	BE SAW CUT NO TO SUBMIT LAYO	MORE THAN 12 HOUR UT AND CONSTRUCTI	S AFTER CONCRETE HAS BEE ON SCHEDULE ('SOFT-CUT'
9.	PROVIDE TEMPORARY S ELEMENTS UNTIL CONCR PERMANENT BRACING EI	HORING AND BRA RETE HAS OBTAIN LEMENTS ARE INS	CING OF ALL STRUCT ED 75% OF DESIGN S ⁻ STALLED.	URAL AND MISCELLANEOUS IRENGTH AND ALL
10.	PLACEMENT OF CONCRE MATERIAL AND PROPOR CONFORM TO REQUIREM	ETE, COLD WEATH FIONING REQUIREI ENTS OF THE AM	HER AND HOT WEATHS MENTS, REBAR COVES ERICAN CONCRETE IN	ER PRECAUTIONS, R AND DETAILING SHALL STITUTE (ACI) 318-14.
11.	REFER TO ARCHITECTUR FINISHES, SLAB DEPRESS	AL AND MECHANI SIONS, ELEVATIOI	CAL DRAWINGS AND NS AND ENCASED OF	SPECIFICATIONS FOR SLAB EMBEDDED ITEMS.
12.	PIPES AND CONDUITS EN REQUIREMENTS: A. NO MATERIAL	MBEDDED IN CON HARMFUL TO CON	CRETE SHALL CONFC NCRETE (SUCH AS , BL	IRM TO THE FOLLOWING
	PERMITTED. B. NO EMBEDMEN	NT OR PENETRATI	ON WHICH IMPAIRS TH	HE STRUCTURAL STRENGTH O
	INTEGRITY IS P C. CONDUITS ANI OVERALL THIC	ERMITTED. D PIPES SHALL NO KNESS OF THE ST	DT HAVE A DIAMETER IRUCTURAL ELEMENT	THAT EXCEEDS 1/3 THE IN WHICH THEY ARE
	D. MINIMUM CENT	ER TO CENTER SI	PACING SHALL NOT B	E CLOSER THAN 3 DIAMETERS
	OR WIDTHS. E. PLACEMENT S BELOW TOP LA	HALL OCCUR ABO AYER OF REINFOR	OVE BOTTOM LAYER (CEMENT AND SHALL	DF REINFORCEMENT AND NOT CAUSE REINFORCEMENT
	F. PLACEMENT S REINFORCING	NT OR DISPLACED HALL MAINTAIN A BAR DIAMETERS () IN ANY MANNER. MINIMUM CLEARANC DR 3/4" FROM WELDEI	E FROM REINFORCEMENT OF : D WIRE FABRIC REINFORCEME
13.	UNLESS NOTED OTHER 15 FEET ON CENTER IN E	WISE, PROVIDE CO EACH DIRECTION,	ONTROL JOINTS IN SL UNLESS OTHERWISE	ABS ON GRADE NOT TO EXCE APPROVED BY THE STRUCTU
14.	FORMING SHALL BE OF CONDITION.	WOOD, STEEL, O	R FIBERGLASS OF SA	TISFACTORY QUALITY AND
15.	NO ADMIXTURES SHALL	. BE ADDED TO TH	E CONCRETE UNLES	5 APPROVED BY THE ENGINEE
16.	REINFORCING SHALL CO	ONFORM TO AST	1 A615, GR60 UNLES	5 NOTED OTHERWISE.
17.	WELDED WIRE FABRIC	SHALL CONFORM	TO ASTM A185 GRAD	E 60.
18.	REINFORCING STEEL AN (MANUAL OF STANDAR (MANUAL OF STANDAR	ND ACCESSORIES D PRACTICE FOR D PRACTICE), LAT	SHALL BE DETAILED DETAILING CONCRETE EST EDITION.	IN ACCORDANCE WITH ACI 315 E STRUCTURES) AND CRSI MSI
19.	ALL "CONTINUOUS" REIN 25.5.2 AT SPLICES UNLE	IFORCEMENT SHA ESS NOTED OTHE	ALL HAVE MINIMUM LA RWISE.	.P OF "B" TYPE (ACI 318-14, SEC
20.	PROVIDE REINFORCING	CHAIRS FOR ALL	SLAB-ON-GRADE REIN	NFORCING.
21.	SUBMIT REINFORCING P REINFORCING BARS SH AND RETURNED.	LACEMENT AND E ALL BE INSTALLE	DETAIL (SHOP) DRAWII D UNTIL THE SHOP DR	NGS FOR REVIEW. NO AWINGS HAVE BEEN REVIEW
22.	ALL REINFORCING SHAL AND SHALL BE SECURE STANDARD PRACTICE (L	LL BE SUPPORTED LY WIRED TOGET ATEST EDITION).) IN FORMS SPACED V HER IN ACCORDANCE	VITH NECESSARY ACCESSOR WITH CRSI "MANUAL OF
23.	ALL REINFORCING SPLIC PLAN OR SECTION.	ES SHALL BE CO	NSIDERED CLASS "B"	JNLESS NOTED OTHERWISE IN
24.	WHERE WELDED WIRE F SHALL BE 1' BELOW TOP	ABRIC REINFORCE OF SLAB. OVERL	EMENT IS SPECIFIED IN AP EACH REINFORCIN	N SLABS ON GRADE PLACEME IG SHEET TWO FULL PANELS .

25. SCHEDULED OR DETAILED REINFORCING STEEL SHALL NOT BE TACK WELDED FOR ANY REASON. WELDED REINFORCING STEEL AND/OR SPLICES ARE PERMITTED ONLY WHERE SHOWN ON DRAWINGS. WHERE WELDING IS PERMITTED IT SHALL CONFORM TO AWS D1.4, STRUCTURAL WELDING CODE - REINFORCING STEEL.

26. BASE PLATES, ANCHOR RODS, SUPPORT ANGLES, ETC. BELOW GRADE SHALL BE COVERED WITH A MINIMUM OF 4" OF CONCRETE.

27. WHERE FOOTINGS, WALLS, OR OTHER STRUCTURAL ELEMENTS INTERSECT, CORNER OR TEE, PROVIDE CORNER BARS WITH REQUIRED LAP LENGTHS TO PROVIDE CONTINUITY OF HORIZONTAL STEEL REINFORCING UNLESS NOTED OTHERWISE.

28. WHERE DOWELS, BOLTS OR INSERTS ARE CALLED TO BE ANCHORED TO CAST IN PLACE OR PRECAST CONCRETE ELEMENTS USING EPOXY ADHESIVES, USE ANCHORAGE SYSTEM EQUAL TO HILTI HIT DOWELING (HY-200). FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS. ALTERNATE ANCHORAGE SYSTEMS MAY BE PERMITTED WITH STRUCTURAL ENGINEER'S APPROVAL.

29. RESULTS FOR ALL CONCRETE COMPRESSIVE STRENGTH TEST SHALL BE AVAILABLE ON THE JOB SITE FOR REVIEW BY THE INSPECTOR.

STRUCTURAL STEEL:

1. AMERICAN INSTITUTE OF STEEL CONSTRUCTION 'SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS 15TH EDITION (AISC)

- 2. STEEL SHALL CONFORM TO THE FOLLOWING GRADES: STRUCTURAL W-SHAPES ASTM A992 (Fy=50ksi) ALL CHANNELS, ANGLES, PLATES, ETC. (UNO) ASTM A36 (Fy=36ksi) UNO STRUCTURAL TUBES ASTM A500 GRADE C (Fy=50ksi) STEEL PIPE ASTM A501 (Fv=36ksi) ANCHOR RODS ASTM F1554 (Fy=55ksi) HIGH STRENGTH BOLTS ASTM A325 HEX NUTS - GRADE A ASTM A563 WELDING ELECTRODES E70xx HARDENED STEEL WASHERS - TYPE | ASTM F436
- ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE (2016) EXCEPT AS MODIFIED IN THESE NOTES AND THE PROJECT SPECIFICATIONS.
- 4. THE STEEL STRUCTURE IS A NON-SELF-SUPPORTING STEEL FRAME AND IS DEPENDENT UPON DIAPHRAGM ACTION OF THE METAL ROOF DECK AND ATTACHMENT TO THE MASONRY WALLS FOR STABILITY AND FOR RESISTANCE TO WIND AND SEISMIC FORCES. PROVIDE ALL TEMPORARY SUPPORTS REQUIRED FOR STABILITY AND FOR RESISTANCE TO WIND AND SEISMIC FORCES UNTIL THESE ELEMENTS ARE COMPLETE AND ARE CAPABLE OF PROVIDING THIS SUPPORT.
- 5. THE FABRICATOR IS RESPONSIBLE FOR THE DESIGN OF ALL CONNECTIONS SHOWN ON THE STRUCTURAL DRAWINGS. CONNECTIONS SHOWN ARE SCHEMATIC AND ARE ONLY INTENDED TO SHOW THE RELATIONSHIP OF MEMBERS CONNECTED. CONNECTION DETAILS INDICATED ON THE DRAWINGS SHALL BE INCORPORATED INTO FABRICATOR'S CONNECTION DESIGN ONLY AS THEY ARE DEEMED APPROPRIATE AND ADEQUATE. BOLTED CONNECTIONS SHALL BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH AISC 13TH EDITION "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR ASTM A490 BOLTS".
- 6. SPLICING OF STEEL MEMBERS UNLESS SHOWN ON THE DRAWINGS IS PROHIBITED WITHOUT WRITTEN APPROVAL OF THE ARCHITECT.
- 7. NO HOLES SHALL BE CUT IN ANY STEEL ELEMENT UNLESS THEY ARE DETAILED ON THE DRAWINGS.
- UNLESS NOTED OTHERWISE, BEAMS SHALL BEAR 8" MINIMUM ON CONCRETE OR MASONRY. ANCHOR BEAMS TO MASONRY WITH TWO 5/8" DIAMETER ANCHOR RODS WITH 1-0" EMBEDMENT INTO GROUT FILLED MASONRY.
- 9. WHERE BEAMS INTERSECT AT THE TERMINATING ELEVATION OF A COLUMN, THE BEAM WITH THE GREATEST REACTION SHALL BEAR ON TOP OF THE COLUMN UNLESS NOTED OTHERWISE ON DRAWINGS. WHERE BEAMS INTERSECT AT THE INTERMEDIATE ELEVATION OF A COLUMN, THE FRAMING BEAMS SHALL BE CONNECTED TO THE COLUMNS WITH A WT CONNECTION. FIN PLATE CONNECTIONS ARE NOT PERMITTED.
- 10. CONNECTIONS FOR NON-COMPOSITE BEAMS WHICH CANNOT CONFORM TO AISC TYPICAL CONNECTION DETAILS SHALL BE DETAILED IN ACCORDANCE WITH THE FOLLOWING:
- A. WHERE BEAM REACTIONS ARE NOT SHOWN ON THE DRAWINGS, CONNECTIONS SHALL BE DESIGNED FOR ONE-HALF THE MAXIMUM UNIFORM LOAD WHICH THE BEAM WILL SUPPORT (AS SIMPLE SPAN) FOR THE SPAN SHOWN ON THE DRAWINGS. (TABLE 3-6, AISC 15TH EDITION)
- B. WHERE CONNECTIONS ARE SUBJECT TO ECCENTRICITY, SUCH ECCENTRICITY SHALL BE TAKEN INTO ACCOUNT WHEN DESIGNING THE CONNECTION.
- C. WHERE CONNECTIONS SUPPORT BEAMS WHICH ARE SUBJECT TO CONCENTRATED LOADS, SUCH CONCENTRATED LOADS SHALL BE TAKEN INTO
- ACCOUNT WHEN DESIGNING THE CONNECTION. D. BOLTED CONNECTIONS SHALL BE BEARING TYPE WITH A325 BOLTS. MINIMUM
- DIAMETER OF ALL BOLTS SHALL BE 3/4", MAX. DIA. 11/8". PROVIDE AT LEAST 2 BOLTS PER CONN. TIGHTENED "SNUG TIGHT".
- E. END CONNECTIONS OF FLOOR MEMBERS SHALL ACCOMMODATE END ROTATIONS OF SIMPLE, UNRESTRAINED BEAMS. FOR THIS PURPOSE, INELASTIC ACTION IN THE
- CONNECTION IS PERMITTED. F. COPED OR CUT ENDS OF MEMBERS SHALL BE REINFORCED WHERE REQUIRED TO SUSTAIN THE SPECIFIED REACTIONS.
- 11. TENSILE CONNECTIONS SHALL BE DESIGNED FOR A FORCE RESULTING FROM
- MULTIPLYING THE GROSS AREA BY 20 KSI.
- 12. FABRICATE AND ERECT MEMBERS WITH NATURAL CAMBER UP
- 13. STRUCTURAL STEEL CONTRACTOR TO PROVIDE DECK SUPPORT ANGLES AS REQ'D (L3x3x1/4 MINIMUM, UNO). THE CONTINUOUS ANGLE AT THE ROOF PERIMETER SHALL BE SPLICED SUCH THAT THE FULL TENSION FORCE THAT CAN BE DEVELOPED BY THE ANGLE WILL BE TRANSFERRED THROUGHOUT THE SPLICE.
- 14. UNLESS OTHERWISE SHOWN ON DRAWINGS, SIZE OF WELDS SHALL NOT BE SMALLER THAN 3/16". ALL WELDED JOINTS SHALL CONFORM TO THE PROVISIONS OF AWS D1.1, STRUCTURAL WELDING CODE BY AMERICAN WELDING SOCIETY. PROOF OF WELDER CERTIFICATION SHALL BE AVAILABLE AT THE JOB SITE DURING TIMES OF INSPECTION.
- 15. THE CONTRACTOR SHALL PROVIDE, AT NO ADDITIONAL COST, ALL ADDITIONAL STEEL CONNECTIONS, GUYING, ETC. REQUIRED FOR ERECTION.
- 16. OBTAIN ALL FIELD MEASUREMENTS REQUIRED FOR PROPER FABRICATION AND INSTALLATION OF WORK PRIOR TO DETAILING. PRECISE MEASUREMENTS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 17. PROVIDE STIFFENERS FINISHED TO BEAR UNDER ALL LOAD CONCENTRATIONS ON SUPPORTING MEMBERS, ON ALL MEMBERS FRAMING OVER COLUMNS, AT BEAM COLUMN JOINTS (AS REQUIRED BY THE AISC SPECIFICATIONS) AND WHERE SHOWN ON THE DRAWINGS.
- 18. SEE ARCHITECTURAL DRAWINGS FOR LOCATION AND ELEVATIONS OF LOOSE LINTELS.19. THE FABRICATOR SHALL BE RESPONSIBLE FOR ALL ERRORS OF DETAILING ON THE
- SHOP DRAWINGS, ERRORS IN FABRICATION, AND FOR THE CORRECT FITTING OF STRUCTURAL STEEL MEMBERS. 20. WELDING INSPECTION SHALL MEET REQUIREMENTS AS STATED IN THE SCHEDULE OF
- SPECIAL INSPECTIONS. 21. ALL BOLTED CONNECTIONS SHALL BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH RCSC-2014 (SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS).
- 22. ALL STRUCTURAL WELDED JOINTS SHALL CONFORM TO THE PROVISIONS OF AWS D1.1-10, STRUCTURAL WELDING CODE BY AMERICAN WELDING SOCIETY. WELDER CERTIFICATION RECORDS SHALL BE MADE AVAILABLE AT THE JOBSITE DURING TIMES OF INSPECTION.
- 23. ALL STRUCTURAL STEEL NOT RECEIVING FIRE PROOFING SHALL RECEIVE ONE SHOP COAT OF RUST INHIBITIVE PRIMER.
- 24. SEE ARCHITECTURAL CONTRACT DOCUMENTS FOR REQUIREMENTS REGARDING ARCHITECTURALLY EXPOSED STRUCTURAL STEEL. ALL EXPOSED WELDED CONNECTIONS SHALL BE GROUND SMOOTH AND SUBJECT TO APPROVAL BY ARCHITECT. FABRICATOR SHALL ALTER JOINT AS NECESSARY TO MAINTAIN MINIMUM REQUIRED EFFECTIVE THROAT.

METAL ROOF DECK

- THE METAL DECK WORK SHALL CONSIST OF FURNISHING EVERYTHING (LABOR, MATERIALS, ACCESSORIES, EQUIPMENT, ETC.) NECESSARY AND INCIDENTAL TO THE EXECUTION AND COMPLETION OF ALL METAL DECK WORK AS INDICATED AND SPECIFIED ON THE DRAWINGS.
- 2. SUBMIT PLACEMENT AND DETAILED ('SHOP') DRAWINGS FOR REVIEW. NO METAL DECK SHALL BE INSTALLED UNTIL THE SHOP DRAWINGS HAVE BEEN REVIEWED AND RETURNED.
- 3. METAL DECK SHALL CONFORM TO STEEL DECK INSTITUTE'S CURRENT STANDARDS.
- 4. METAL DECK SHALL BE OF THE CONFIGURATION, DEPTH AND MINIMUM GAGE AS SHOWN ON THE DRAWINGS. ATTACHMENT TO THE SUPPORTING STRUCTURE SHALL BE AS SHOWN ON THE DRAWINGS AS A MINIMUM. SEE PLAN NOTES.
- 5. DO NOT HANG OR SUPPORT ANY LOADS FROM METAL ROOF DECK.
- 6. WHERE POSSIBLE, METAL ROOF DECK SHALL BE CONTINUOUS OVER A MINIMUM OF 3 SPANS. TWO SPAN DECK SHALL BE USED ONLY WHERE DECK LAYOUT DOES NOT PERMIT THE USE OF THREE SPANS. SINGLE SPAN DECK IS NOT PERMITTED.
- 7. ROOF OPENINGS LESS THAN 6' SQUARE OR DIAMETER REQUIRE NO REINFORCEMENT. OPENINGS 6' TO 10' INCLUSIVE SHALL BE REINFORCED WITH A 20 GAUGE GALVANIZED PLATE WELDED TO THE DECK AT EACH CORNER AND 6' MAXIMUM CENTERS WITH A 5/8'' DIAMETER PUDDLE WELD OR SHEET METAL SCREWS. SEE DRAWINGS FOR REINFORCEMENT OF OPENINGS LARGER THAT 10'.
- 8. DECK SHALL BE POSITIONED SO THAT A COMPLETE RIB BEARS ON STEEL SUPPORT.

STEEL JOISTS (K SERIES):

- 1. STEEL JOISTS SHALL BE DESIGNED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE 'STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS, K-SERIES' OF THE STEEL JOIST INSTITUTE (SJI).
- 2. STEEL JOISTS SHALL BE DESIGNED BY THE MANUFACTURER. THE MANUFACTURER'S ENGINEER SHALL BE RESPONSIBLE FOR THE DESIGN, ADEQUACY AND SAFETY OF ALL STEEL JOISTS. ALL SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF GEORGIA.
- 3. UNLESS OTHERWISE NOTED, STEEL JOISTS SHALL BE DESIGNED AS SIMPLY SUPPORTED UNIFORMLY LOADED TRUSSES WITH THE TOP CHORD BRACED AGAINST LATERAL BUCKLING. THE UNIFORM DESIGN LOAD SHALL BE THE TOTAL SAFE UNIFORMLY DISTRIBUTED LOAD AS SHOWN IN THE SJI STANDARD LOAD TABLE.
- 4. WHEN NET UPLIFT FORCES DUE TO WIND ARE SHOWN ON THE DRAWINGS, THE MANUFACTURER SHALL DESIGN THE JOISTS, BRIDGING, AND CONNECTIONS OF THE JOISTS TO THE SUPPORTING STRUCTURE FOR THE NET UPLIFT. A SINGLE LINE OF BOTTOM CHORD BRIDGING MUST BE PROVIDED NEAR THE FIRST BOTTOM CHORD PANEL POINTS WHENEVER UPLIFT DUE TO WIND FORCES IS SHOWN ON THE DESIGN DRAWINGS.
- 5. WHEN NON-UNIFORM OR CONCENTRATED LOADS ARE SHOWN ON THE DRAWINGS, THE MANUFACTURER SHALL DESIGN THE JOISTS IN ACCORDANCE WITH THE SJI STANDARD SPECIFICATION FOR OPEN WEB STEEL JOISTS, K-SERIES.
- 6. STEEL JOIST BRIDGING SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE SJI SPECIFICATION. ALL BRIDGING AND BRIDGING ANCHORS SHALL BE PLACED AND STEEL JOIST ENDS FIXED PRIOR TO THE APPLICATION OF ANY LOADS. BRIDGING THAT TERMINATES AT, OR IS INTERRUPTED BY, STRUCTURAL STEEL BEAMS, MASONRY WALLS OR CONCRETE WALLS SHALL BE ATTACHED THERETO. COORDINATE BRIDGING LOCATIONS TO AVOID INTERFERENCE WITH ALL MECHANICAL, ELECTRICAL, FIRE PROTECTION EQUIPMENT, AND ARCHITECTURAL CONDITIONS.
- MINIMUM BEARING REQUIREMENTS FOR K-SERIES JOISTS, UNLESS NOTED OTHERWISE, SHALL BE 2-1/2" ON STRUCTURAL STEEL AND 4" ON STEEL BEARING PLATES OVER MASONRY.
- 8. UNLESS NOTED OTHERWISE, K-SERIES STEEL JOISTS SHALL BE ATTACHED TO SUPPORTING STEEL WORK OR STEEL BEARING PLATE WITH TWO 1/8" FILLET WELDS (ONE EACH SIDE), 2" LENGTH MINIMUM, OR WITH (2) 1/2" DIAMETER BOLTS (ONE EACH SIDE).
- 9. STEEL JOISTS AT COLUMN CENTER LINES SHALL BE BOLTED TO STRUCTURAL STEEL WITH TWO 1/2' DIAMETER BOLTS. WHERE STEEL JOISTS DO NOT SPACE TO COLUMN CENTER LINES, USE BOLTED CONNECTIONS FOR THE STEEL JOIST CLOSEST TO THE CENTERLINE.
- 10. HOLES IN STEEL JOIST CHORDS ARE NOT PERMITTED, EXCEPT FOR BOLTED CONNECTIONS AT THE BEARING END OF THE STEEL JOIST.
- 11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING JOIST ANCHORAGE THAT MEETS ALL OSHA REQIUIREMENTS.
- 12. ALL ITEMS SUCH AS MECHANICAL EQUIPMENT, DUCT WORK, PIPES, CEILING FIXTURES, ETC. THAT ARE TO BE SUPPORTED OR HUNG FROM THE STEEL JOISTS SHALL BE FRAMED WITH AUXILIARY FRAMING TO THE PANEL POINTS OF THE STEEL JOISTS. METHODS OF FRAMING THAT INDUCE BENDING TO THE STEEL JOIST CHORDS OR WEB MEMBERS WILL NOT BE PERMITTED.
- 13. ALL JOISTS SHALL RECEIVE RUST-INHIBITIVE PRIMER PER PROJECT SPECIFICATIONS.

METAL FLOOR DECK

- 1. METAL FLOOR DECK SHALL BE DESIGNED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE STANDARD FOR STEEL FLOOR DECK.
- 2. THE METAL DECK WORK SHALL CONSIST OF FURNISHING EVERYTHING (LABOR, MATERIALS, ACCESSORIES, EQUIPMENT, ETC.) NECESSARY AND INCIDENTAL TO THE EXECUTION AND COMPLETION OF ALL METAL DECK WORK AS INDICATED AND SPECIFIED ON THE DRAWINGS.
- SUBMIT PLACEMENT AND DETAILED ('SHOP') DRAWINGS FOR REVIEW. NO METAL DECK SHALL BE INSTALLED UNTIL THE SHOP DRAWINGS HAVE BEEN REVIEWED AND RETURNED.
- 4. METAL DECK SHALL CONFORM TO STEEL DECK INSTITUTE'S CURRENT STANDARDS.
- 5. METAL DECK SHALL BE OF THE CONFIGURATION, DEPTH AND MINIMUM GAGE AS SHOWN ON THE DRAWINGS. ATTACHMENT TO THE SUPPORTING STRUCTURE SHALL BE AS SHOWN ON THE DRAWINGS AS A MINIMUM. SEE PLAN NOTES.
- 6. DO NOT HANG OR SUPPORT ANY LOADS FROM METAL ROOF DECK.
- 7. DECK SHALL BE POSITIONED SO THAT A COMPLETE RIB BEARS ON STEEL SUPPORT.

ROOF SHEATHING:

- DECKING SHALL BE 5/8' APA-CDX RATED PLYWOOD SHEATHING 32/16 (EXPOSURE 1).
 ORIENT LONG SIDE OF PANEL PERPENDICULAR TO SUPPORT. END JOINT SHALL BE ALIGNED WITH THE MIDPOINT OF THE TWO ADJACENT PANELS. NO CONTINUOUS PANEL JOINTS ARE PERMITTED. PANELS SHALL BE CONTINUOUS OVER TWO OR MORE SPANS (NO SINGLE SPAN CONDITIONS).
- ATTACHMENT OF PANEL TO WOOD FRAMING MEMBERS SHALL BE 10d NAILS AT THE FOLLOWING SPACINGS, UNLESS OTHERWISE NOTED: 6" AT ROOF PERIMETER 6" AT PANEL EDGES

12" AT INTERMEDIATE SUPPORTS

2. ALL UNSUPPORTED EDGES SHALL BE BLOCKED WITH 2x STUDS.

4. EDGE SUPPORTS SHALL BE PROVIDED AS RECOMMENDED BY THE AMERICAN PLYWOOD ASSOCIATION (APA) BY USE OF PANEL CLIPS OR WOOD BLOCKING BETWEEN TRUSSES. PANEL END JOINTS SHALL OCCUR OVER FRAMING. PANELS SHALL BE BLOCKED AT PERIMETER OF ROOF AND AT DIRECTIONAL CHANGES.

WALL SHEATHING: 1. EXTERIOR WALL SHEATHING SHALL BE 15/32" APA-CDX RATED WOOD SHEATHING (EXPOSURE 1).

PRE-ENGINEERED WOOD ROOF TRUSSES:

- TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE NATIONAL DESIIGN SPECIFICATIONS FOR WOOD CONSTRUCTION (ANSI / AWC NDS - 2018) & RELATED SUPPLEMENTS.
- 2. WOOD TRUSSES SHALL BE FULLY DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH THE LOAD CONDITIONS AND DESIGN PARAMETERS INDICATED ON THE STRUCTURAL DRAWINGS. THE MANUFACTURER'S ENGINEER SHALL BE RESPONSIBLE FOR THE DESIGN, ADEQUACY, AND SAFETY OF THE TRUSSES.
- 3. MANUFACTURER SHALL SUBMIT DESIGN CALCULATIONS AND SHOP DRAWINGS BEARING THE SEAL AND SIGNATURE OF MANUFACTURER'S ENGINEER WITH THE ENGINEER'S SEAL FOR PROJECT STATE.

WOOD FRAMING:

- ALL WOOD DESIGN AND CONSTRUCTION SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION (ANSI/AWC NDS-2018) AND RELATED SUPPLEMENTS.
- 2. UNLESS NOTED, USE SOUTHERN PINE (E=1600 KSI MIN), 19% MAX MOISTURE CONTENT, AS FOLLOWS:
 - USE SPECIES: GRADE: LOAD BEARING STUDS SPRUCE/PINE.FIR (SPF) No 2 (INTERIOR & EXTERIOR) NON-LOAD BEARING STUDS SPRUCE/PINE.FIR (SPF) STUD GRADE BEAMS & HEADERS SOUTHERN PINE No 2 JOISTS & PURLINS SOUTHERN PINE No 2 PLATES, BLOCKING & SUB-PURLINS SOUTHERN PINE No 2
- 3. ALL WOOD IN CONTACT WITH CONCRETE, MASONRY OR SOIL OR PERMANENTLY EXPOSED TO WEATHER SHALL BE PRESSURE TREATED.
- 4. AT STUD WALL OPENINGS, THE TOTAL NUMBER OF DISPLACED AND/OR CUT STUDS SHALL BE INSTALLED AND ATTACHED TO THE JAMBS, ONE-HALF OF THE TOTAL TO EACH SIDE OF THE OPENING (TOTAL NUMBER INCLUDING JACK AND KING STUDS.)
- METAL CONNECTORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS SO THAT THE MAXIMUM PUBLISHED CAPACITY IS DEVELOPED.
- 6. WHERE NO CONNECTION IS INDICATED ON THE DRAWINGS, ATTACHMENT SHALL BE MADE IN ACCORDANCE TO TABLE 2304.10.1 FASTENING SCHEDULE IN THE INTERNATIONAL BUILDING CODE.
- 7. ALL CONNECTORS SHALL BE G90 GALVANIZED STEEL, EXCEPT CONNECTORS IN CONTACT WITH PRESSURE TREATED, FIRE-RETARDANT OR WOLMANIZED WOOD SHALL BE COATED WITH G185 ZINC COATING.
- 8. FURNISH BOLTS AND ANCHOR RODS WITH STANDARD NUT WASHER.
- 9. TOE NAILS SHALL BE DRIVEN AT A 30° ANGLE RELATIVE TO PIECE. START NAIL AT ONE-THIRD NAIL LENGTH FROM THE END OF PIECE.
- 10. ALL LOAD BEARING STUD WALLS (INTERIOR & EXTERIOR) SHALL HAVE CONTINUOUS HORIZONTAL BLOCKING AT 4'-0" O.C. (MAX.) VERTICALLY PRIOR TO APPLYING ANY LOADS (INCLUDING FRAMING FOR FLOORS ABOVE).
- 11. WHERE (2)-2x AND (2)-2x + 1/2" PLYWOOD PLATE BEAMS ARE DESIGNATED, SPIKE PLATES TOGETHER WITH 12d NAILS @ 12' O.C., 1' FROM TOP AND 1' FROM BOTTOM OF PLATE.
- 12. WHERE (3)-2x AND LARGER BEAMS ARE DESIGNATE, PLATES SHALL BE BOLTED TOGETHER WITH 1/2'Ø BOLTS @ 30" O.C., 1 1/2" FROM TOP AND BOTTOM. BOLTS SHALL HAVE MINIMUM BENDING YIELD (Fyb) OF 45,000 PSI.
- 13. WHERE STUD PACK WOOD COLUMNS ARE DESIGNATED, SPIKE STUDS TOGETHER WITH 16d NAILS @ 12" O.C. (VERTICALLY).
- 14. STUD PACK OR SOLID SAWN WOOD COLUMNS SHALL BE CONTINUOUS FROM LOCATION SHOWN TO THE FOUNDATION. BLOCK FLOOR CAVITY SOLID BELOW WOOD COLUMN (WIDTH EQUAL TO WOOD COLUMN) TO ACHIEVE CONTINUITY.
- 15. FINGER-JOINTED LUMBER IS PERMISSIBLE AT WALL STUDS ONLY.
- 16. STRUCTURAL ELEMENTS SHALL NOT BE CUT TO INSTALL PLUMBING OR WIRING UNLESS METAL OR WOOD SIDE PLATES ARE PROVIDED TO STRENGTHEN THE MEMBER. PENETRATIONS IN FLOOR AND WALL SHEATHING IS PERMITTED PROVIDED THAT 2x BLOCKING IS INSTALLED AT OPENING PERIMETER (FOR OPENINGS LARGER THAN 10' IN LENGTH/DIAMETER) AND WALL FRAMING IS NOT INTERRUPTED.
- 17. DOUBLE TOP PLATES ((2)-2x) AT ALL WALLS SHALL BE LAPPED AT CORNERS AND INTERSECTIONS AND FASTENED IN ACCORDANCE WITH TABLE 2304.10.1 FASTENING SCHEDULE IN THE INTERNATIONAL BUILDING CODE, UNLESS NOTED OTHERWISE. OFFSET DOUBLE PLATE END JOINTS 24" (MIN.).
- 18. WALL SHEATHING NOTED ON STRUCTURAL DRAWINGS SHALL BE ATTACHED DIRECTLY TO THE FACE OF FRAMING MEMBERS. SEE ARCHITECTURAL DRAWINGS FOR ALL NON STRUCTURAL SHEATHING REQUIREMENTS. WHERE ARCHITECTURAL DRAWINGS REQUIRE ADDITIONAL SHEATHING, SUCH SHEATHING SHALL BE ATTACHED TO THE OUTSIDE FACE OF STRUCTURAL SHEATHING.
- 19. ANCHOR ALL EXTERIOR, INTERIOR LOAD BEARING AND SHEAR WALLS TO ANCHOR RODS OR EPOXY ANCHORS PER STRUCTURAL DRAWINGS. OTHER WALLS (WALLS NOT ON THICKENED SLABS OR TURNDOWNS) SHALL BE ANCHORED TO SLAB USING POWDER ACTUATED FASTENERS WITH 0.144'Ø AND EMBEDMENT OF 3/4'AT 12' O.C. (MAX.).
- 20. PROVIDE ONE ROW OF BRIDGING FOR EACH 8'-0' LENGTH OF ROOF FRAMING MEMBERS.21. COMPOSITE BEAMS SHALL BE MICROLLAM LAMINATED VENEER LUMBER (LVL), U.N.O.

22. TIMBER SIZES SHOWN ARE NOMINAL SIZES.

(2.0E-2600Fb MIN)

BRICK VENEER:

BRICK TIES/ANCHORS SHALL BE SPACED NO MORE THAN 32" HORIZONTALLY AND 18"
 VERTICALLY.

	Structural Foundation Schedule			
	Type Marl	с Туре	Type Comments	
	F3	3' x 3' x 12"	#5 @ 8" O.C. E.W.	
	F5	5' x 5' x 12"	#5 @ 8" O.C. E.W.	
	= -			
	F8	8' x 8' x 24"	#6 @ 8" O.C. E.W.	
	F8	8' x 8' x 24" Structural Colur	mn Schedule	
Type Mark	Type	8' x 8' x 24" Structural Colur Base Plate	mn Schedule Anchor Rod	I Remarks
Type Mark C5	F8 Type HSS5X5X3/8	8' x 8' x 24" Structural Colur Base Plate 3/4"x1'-0"x12"	mn Schedule Anchor Rod (4)-3/4" DIA.	Remarks

20005.00

- DBL. STUDS @ CANOPY CONNECTION

	CONNECT TO STRUCTURE ABOVE SUPPORT ROD ALL THREAD ROD SIZE AS SPECIFIED ROD STIFFENER IF REQUIRED NUT AND WASHER
	SWAY ASSEMBLY ON BOTH SIDES
	CLEVIS HANGER
ΡĒ	

CTR	IC		
5	kW	BASIS OF DESIGN	SCHEDUL NOTES
	4.2	CHRONOMITE CM-20L/208	
	4.2	CHRONOMITE CM-20L/208	

GENERAL NOTES: (Applies to complete drawing set)

- 1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LOCAL GOVERNING CODES, STANDARDS AND ORDINANCES AS ADOPTED AND ENFORCED BY THE AUTHORITY HAVING JURISDICTION. DRAWINGS, IN GENERAL, ARE DIAGRAMMATIC IN NATURE AND ARE INTENDED TO CONVEY, IN CONJUNCTION WITH THE COMPLETE
- CONTRACT DOCUMENTS, A COMPLETE AND FUNCTIONAL SYSTEM. COORDINATION OF WORK WITH OTHER TRADES IS REQUIRED BEFORE PROCEEDING WITH WORK. DO NOT SCALE DRAWINGS - USE DIMENSIONS ONLY. FOR DIMENSIONS NOT SHOWN OR IN QUESTION, CONTRACTOR SHALL REQUEST CLARIFICATION FROM ARCHITECT BEFORE PROCEEDING. CONTRACTOR SHALL PROVIDE A COMPLETE OPERATIONAL AND
- FUNCTIONING SYSTEM AS DESCRIBED IN THESE DOCUMENTS. CONTRACTOR SHALL PROVIDE CONNECTIONS TO OWNER'S EQUIPMENT OR OTHER PARTY'S EQUIPMENT AND DEVICES, UNLESS OTHERWISE NOTED. REFERENCE COMPLETE CONTRACT DOCUMENTS (ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC.) PRIOR TO COMMENCING WORK FOR ADDITIONAL INFORMATION AND REQUIREMENTS. ANY
- DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE OWNER'S/ARCHITECT'S ATTENTION BEFORE PROCEEDING WITH WORK. CONTRACTOR SHALL MAINTAIN ON SITE, AVAILABLE FOR REVIEW, A MASTER SET OF MARKED UP DRAWINGS REFLECTING "AS BUILT"
- CONDITIONS. UPON CONCLUSION OF PROJECT, "AS BUILT" DRAWINGS SHALL BE TURNED OVER TO OWNER. DETAILS AND SECTIONS ARE INTENDED TO BE TYPICAL AND INDICATE BASIC DESIGN INTENT AND SHALL APPLY TO SIMILAR SITUATIONS. ADAPTATIONS TO SPECIFIC PROJECT CONDITIONS MAY BE REQUIRED. BASIC DESIGN INTENT IS TO BE RETAINED. AFTER COMPLETION OF WORK ALL ADDITIONAL MATERIALS REMAINING DUE TO CONSTRUCTION SHALL BECOME THE PROPERTY
- OF THE GENERAL CONTRACTOR AND SHALL BE DISPOSED OF AND REMOVED FROM THE SITE IN ACCORDANCE WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, AND REGULATIONS UNLESS NOTIFIED OTHERWISE. CONTRACTOR SHALL ALSO REMOVE ALL WASTE DEBRIS, RUBBISH, TOOLS, EQUIPMENT AND SURPLUS MATERIALS UPON COMPLETION OF WORK THROUGHOUT CONSTRUCTION, SITE SHALL BE ORGANIZED AND CLEANED BY CONTRACTOR ON A DAILY
- PENETRATIONS INTO OR THROUGH VERTICAL OR HORIZONTAL FIRE 9. RATED BARRIERS SHALL BE PROTECTED BY A SYSTEM LISTED BY A RECOGNIZED TESTING AGENCY. PROVIDE A DETAIL AND LISTING NUMBER PER NFPA 101 LIFE SAFETY CODE. 10. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF EQUIPMENT AND DEVICES AT CEILING. IF AN ITEM IS
- NOT SHOWN, SUBMIT RECOMMENDED LOCATION FOR ARCHITECT'S APPROVAL. MATERIALS EXPOSED WITHIN SPACES ABOVE A CEILING BEING UTILIZED AS A RETURN AIR PLENUM SHALL BE NON-COMBUSTIBLE, OR SHALL 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.
- 12. REFER TO ARCHITECTURAL DRAWINGS FOR PLUMBING FIXTURE LOCATION AND MOUNTING HEIGHT. SHOP DRAWINGS AND PRODUCT DATA SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR REVIEW AND SHALL INCLUDE ALL 12. FIXTURES, PIPING, AND EQUIPMENT SCHEDULED. 13. NO PLUMBING WATER PIPING IS TO BE ROUTED IN AN EXTERIOR WALL EXCEPT WHEN SERVING A HOSE BIBB OR WALL HYDRANT. THE
- CONTRACTOR SHALL NOTIFY THE ARCHITECT IF CHASE SPACE IS INADEQUATE OR IF FIXTURES ARE LOCATED ON OUTSIDE WALLS. ANY PIPING REQUIRED TO BE ROUTED IN EXTERIOR WALLS SHALL BE INSTALLED ON THE WARM SIDE OF BUILDING INSULATION.

COMMERCIAL KITCHEN NOTES:

- PLUMBING CONTRACTOR TO MOUNT ALL DISPOSERS, FAUCETS, BASKET DRAINS, AND LEVER DRAINS TO/ON KITCHEN EQUIPMENT WITH FINAL
- CONNECTIONS TO ROUGH IN(S) AFTER EQUIPMENT IS SET IN PLACE. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL "WATTS 9D" (OR EQUAL)
- CHECK VALVE ON CARBONATOR SUPPLY INLET LINES. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL WATER HAMMER ARRESTORS AND PRESSURE REDUCING VALVES (PRV) IN LINE BEFORE ALL
- SOLENOID VALVES AT DISH MACHINES, DISPOSERS, ICE MAKERS, HOT WELLS, ETC. WHERE APPLICABLE. COORDINATE WITH EQUIPMENT SUPPLIER AND INSTALLATION INSTRUCTIONS.

	PLUMBING SCHEDULE
WC-1	WATER CLOSET, FLUSH TANK, FLOOR MOUNTED, 15" RIM HEIGHT
	FIXTURE SLOAN MODEL ST-2029 ONE PIECE, VITREOUS CHINA, ELONGATED BOWL, TANK COVER,
	VALVE SLOAN "CROWN" MODEL 111 MANUAL TYPE FLUSH VALVE, 1.28 GALLONS PER FLUSH POLISHED CHROME FINISH.
	SUPPLY 1" SUPPLY
\bigcirc	SEAT CHURCH MODEL 383SS SOLID PLASTIC, WHITE, CLOSED FRONT SEAT WITH COVER, STAINLESS STEEL HINGE.
WC-1A	WATER CLOSET, FLUSH TANK, FLOOR MOUNTED, 15" RIM HEIGHT
	FIXTURE SLOAN MODEL ST-2029 ONE PIECE, VITREOUS CHINA, ELONGATED BOWL, TANK COVER, 1.28 GPH
	VALVE SLOAN "CROWN" MODEL 111 MANUAL TYPE FLUSH VALVE, 1.28 GALLONS PER FLUSH POLISHED CHROME FINISH.
\bigcirc	SUPPLY 1" SUPPLY
	SEAT CHURCH MODEL 383SS SOLID PLASTIC, WHITE, CLOSED FRONT SEAT WITH COVER, STAINLESS STEEL HINGE.
	INSTALL IN CONFORMANCE WITH REQUIREMENTS OF ANSI 117.1 AND THE AMERICANS WITH DISABILITIES ACT WHERE INIDICATED.
UR-1	URINAL, FLUSH VALVE - CONCEALED SENSOR OPERATED, WALL MOUNTED
·	FIXTURE SLOAN MODEL SU-1009 ONE PIECE VITREOUS
	CHINA URINAL, 3/4" TOP SPUD, SUITABLE FOR FLUSHING WITH 1.0 GALLONS PER FLUSH. WHEN INDICATED AS ACCESSIBLE, INSTALL RIM NO HIGHER THAN 17" FROM FINISHED FLOOR.
	VALVE SLOAN "OPTIMA" MODEL 186-ES-S DIAPHRAGM TYPE FLUSH VALVE, 0.5 GALLONS PER FLUSH, CONCEALED SENSOR ACTIVATED, 24 VAC TRANSFORMER, POLISHED CHROME FINISH.
	INSTALL IN CONFORMANCE WITH REQUIREMENTS OF ANSI 117.1 AND THE AMERICANS WITH DISABILITIES ACT WHERE INDICATED.
L-1	LAVATORY, UNDER COUNTER MOUNT, ACCESSIBLE
	FIXTURE SLOAN ELGR-82000 WALL MOUNTED, SLOAN STONE, 60" X 22" X 5" D.
	FITTINGS SLOAN "EAF" MODEL 150, 4" CENTER-SET DECK MOUNTED BATTERY POWERED FAUCET, 0.5 GPM.
	GRID STRAINER, POLISHED CHROME FINISH.
	SUPPLY 1/2" SUPPLY TO WALL WITH WHEEL HANDLE STOPS AND FLEXIBLE RISERS.
	P-TRAP POLISHED CHROME P-TRAP.
	INSULATION TRUEBRO MODEL 102-E-Z PREFORMED PLASTIC, WHITE, WITH ONE P-TRAP AND TWO ANGLE VALVES
	INSTALL IN CONFORMANCE WITH REQUIREMENTS OF ANSI 117.1 AND THE AMERICANS WITH DISABILITIES ACT.
F-1	DRINKING FOUNTAIN
(\circ) (\circ)	FIXTURE BARRIER-FREE, FREEZE-PROOF, VANDAL-RESISTANT, WITH STEEL CONSTRUCTION. FINISH AS APPROVED BY ARCHITECT.
	INSTALL IN CONFORMANCE WITH REQUIREMENTS OF ANSI 117.1 AND THE AMERICANS WITH DISABILITIES ACT.

PL	JMBING LEGEND
	ENCE ONLY AND MAY OR MAY NOT BE USED
	DESCRIPTION
	DOMESTIC COLD WATER PIPING (CW)
	DOMESTIC HOT WATER PIPING (HW)
	SANITARY PIPING (SS.)
	CONDENSATE DRAIN
	VENT PIPING (VENT, SV.)
	GAS PIPING (NG)
	GAS COCK
	CLEAN OUT PLUG
	FLOOR CLEAN OUT (CO)
	FLOOR CLEAN OUT (GCO)
	WALL CLEAN OUT (WCO)
	SHUT-OFF VALVE
	GAS PRESSURE REGULATOR
	BALANCING VALVE
	TEMPERING VALVE
	VERTICAL PRESSURE REDUCING VALVE
	HORIZONTAL PRESSURE REDUCING VALVE
	STRAINER
	CHECK VALVE
	RECIRCULATION PUMP
	FLOW CONTINUATION
	PIPE UP / PIPE RISER
	PIPE DOWN-TURN
	PIPE DOWN TAKEOFF
	HOSE BIBB
	NON-FREEZE WALL HYDRANT
	SHOCK ABSORBER (SA)
	FLOOR DRAIN
	FLOOR SINK
	HUB DRAIN, FIXTURE TRAP
	FIXTURE SUPPLY WITH BFP or WATER FILTER
	TRAP PRIMER
	WATER HAMMER ARRESTOR

ABBREVIATIONS

AAV AFF BOS CU CW CM D DW EH EWH EWH EWT E	AUTOMATIC AIR VENT ABOVE FINISHED FLOOR BOTTOM OF STRUCTURE CONDENSING UNIT COLD WATER COFFEE MAKER DRAIN DISHWASHER ELECTRIC HEATER ELECTRIC WATER HEATER ENTERING WATER TEMPERATURE EXISTING	HWP IM KW LBS LWT MAX MIN NTS PD RIM RPBP	HOT WATER PUMP ICEMAKER KILOWATT POUNDS (WEIGHT) LEAVING WATER TEMPERATURE MAXIMUM MINIMUM NOT TO SCALE PRESSURE DROP REFRIGERATOR ICEMAKER RED. PRES. BACKFLOW PREVENT
FCU FD FT G GCO GPM HA HD HP	FAN COIL UNIT FLOOR DRAIN FEET FILTERED WATER GAS GROUND CLEANOUT GALLONS PER MINUTE HEAT OF ABSORPTION HUB DRAIN HORSEPOWER	SEER TOS TYP VTR WD WF WG WH WHA	SEASONAL ENERGY EFFICIENCY RATIO TOP OF STRUCTURE TYPICAL VENT THROUGH ROOF WATER DISPENSER WATER FILTER WATER GAUGE WATER HEATER WATER HAMMER ARRESTOR

PLUMBING SPECIALTIES			
TP-1	TRAP PRIMERVALVEPRECISION PLUMBING PRODUCTS MODEL P2-500 TRAP PRIMER VALVE FOR A MAXIMUM OF 4 DRAINS WHEN EQUIPPED WITH A DISTRIBUTION UNIT.		
FCO	FLOOR CLEANOUT DRAIN J.R. SMITH MODEL 4020 FINISHED FLOOR CLEANOUT WITH ADJUSTABLE POLISHED BRONZE COVER.		
GCO	GRADE CLEANOUT DRAIN J.R. SMITH MODEL 4237 UNFINISHED FLOOR CLEANOUT WITH NON-TILT TRACTOR COVER.		
FD	FLOOR DRAIN DRAIN MIFAB MODEL F1100-ER LACQUERED CAST IRON BODY, ANCHOR FLANGE, WEEPHOLES, 9" DIA SATIN NICKEL BRONZE STRAINER, VANDAL RESISTANT. ACCESSORIES: #6-SECURITY SCREWS.		

	PLUMBING SHEET INDEX				
NUMBER	NAME				
P0-00	PLUMBING LEGEND, SCHEDULES, NOTES, AND DETAILS				
P0-01	PLUMBING SPECIFICATIONS				
P0-02	PLUMBING SPECIFICATIONS				
P1-10	PLUMBING FLOOR PLAN				
P1-11	PLUMBING ENLARGED PLAN AND RISER DIAGRAMS				
P1-12	PLUMBING GAS RISER DIAGRAM				

SECTION 220500 - BASIC PLUMBING MATERIALS AND METHODS PART 1 - GENERAL (APPLIES TO ALL SECTIONS)

- 1.1 SUMMARY A. This Section includes the following:
- 1. General requirements.
- Piping materials and installation instructions common to most piping systems.
 Dielectric fittings.
 Masharing along angle
- Mechanical sleeve seals.
 Sleeves.
- 6. Escutcheons.
- Equipment installation requirements common to equipment sections.
 Supports and anchorages.
- 1.2 SUBMITTALS A. Provide submittals for the following items
- Water heaters.
 Plumbing fixtures.
- B. Provide a letter for the following items, verifying that materials provided comply with the drawings and specifications.
 1. Domestic Water Piping.
- Sanitary and Vent Piping.
 Hangers and Supports
- 1.3 DEFINITIONSA. Steel Support Welding: Qualify processes and operators according to AWS D1.1,
- "Structural Welding Code--Steel."
 B. Electrical Characteristics for Mechanical Equipment: Equipment of higher electrical characteristics may be furnished provided such proposed equipment is approved in writing and connecting electrical services, circuit breakers, and conduit sizes are appropriately modified. All equipment shall comply with requirements of ASHRAE Standard 90.1-2007.
- 1.4 PRODUCTSA. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.B. Products: Subject to compliance with requirements, provide one of the products
- b. Froducts: Subject to compliance with requirements, provide one of the products specified.
 1.5 DELIVERY AND STORAGE
 All equipment and materials shall be delivered to the site in new condition and be
- A. All equipment and materials shall be delivered to the site in new condition and be protected and stored to negate damage due to weather or job site conditions. Any equipment or material that is damaged in transit or at the site shall be replaced at no cost to the Owner.
 PART 2 PRODUCTS
- 2.1 PIPE, TUBE, AND FITTINGS
- A. Refer to individual Division 15 piping Sections for pipe, tube, and fitting materials and joining methods.B. Pipe Threads: ASME B1.20.1 for factory-threaded pipe and pipe fittings.
- 2.2 JOINING MATERIALSA. Solder Filler Metals: ASTM B 32, lead-free alloys. Include water-flushable flux
- according to ASTM B 813.
 B. Brazing Filler Metals: AWS A5.8, BCuP Series, copper-phosphorus alloys for general-duty brazing, unless otherwise indicated; and AWS A5.8, BAg1, silver alloy for refrigerant piping, unless otherwise indicated.
- 2.3 MECHANICAL SLEEVE SEALS
 A. Description: Modular sealing element unit, designed for field assembly, to fill annular
- space between pipe and sleeve.B. Sealing Elements: EPDM interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.
- C. Pressure Plates: Carbon steel. Include two for each sealing element.D. Connecting Bolts and Nuts: Carbon steel with corrosion-resistant coating of length required to secure pressure plates to sealing elements. Include one for each sealing element.
- 2.4 SLEEVESA. Galvanized-Steel Sheet: 0.0239-inch minimum thickness; round tube closed with welded longitudinal joint.
- B. Steel Pipe: ASTM A 53, Type E, Grade B, Schedule 40, galvanized, plain ends.
 C. Cast Iron: Cast or fabricated "wall pipe" equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.
 2.5 ESCUTCHEONS
- A. Description: Manufactured wall and ceiling escutcheons and floor plates, with an ID to closely fit around pipe, tube, and insulation of insulated piping and an OD that completely covers opening.
 B. Split-Casting, Cast-Brass Type: With concealed hinge and set screw.
- 1. Finish: Polished chrome-plated.
- PART 3 EXECUTION 3.1 PIPING SYSTEMS - COMMON REQUIREMENTS
- A. Install piping according to the following requirements and Division 15 Sections specifying piping systems.
- B. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, pump sizing, and other design considerations. Install piping as indicated unless deviations to layout are approved on Coordination Drawings.
- C. Install piping in concealed locations, unless otherwise indicated and except in equipment rooms and service areas.D. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless
- E. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.
 F. Install piping to permit valve servicing.
- G. Install piping at indicated slopes.
- H. Install piping free of sags and bends.I. Install fittings for changes in direction and branch connections.
- J. Install piping to allow application of insulation.K. Select system components with pressure rating equal to or greater than system
- operating pressure. L. Install escutcheons for penetrations of walls, ceilings, and floors.
- M. Install sleeves for pipes passing through concrete and masonry walls, gypsum-board
- partitions, and concrete floor and roof slabs.
 N. Fire-Barrier Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at pipe penetrations. Seal pipe penetrations with firestop materials. Refer to Division 7.0 of the With the State State
- Division 7 Section "Through-Penetration Firestop Systems" for materials. O. Verify final equipment locations for roughing-in.
- P. Refer to equipment specifications in other Sections of these Specifications for roughing-in requirements.
- 3.2 PIPING JOINT CONSTRUCTION A Join pipe and fittings according to th
- A. Join pipe and fittings according to the following requirements and Division 15 Sections specifying piping systems.
 B. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
 C. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before
- assembly. D. Soldered Joints: Apply ASTM B 813, water-flushable flux, unless otherwise indicated, to tube end. Construct joints according to ASTM B 828 or CDA's "Copper Tube
- Handbook," using lead-free solder alloy complying with ASTM B 32. E. Brazed Joints: Construct joints according to AWS's "Brazing Handbook," "Pipe and
- Tube" Chapter, using copper-phosphorus brazing filler metal complying with AWS A5.8. 3.3 PIPING CONNECTIONS A. Make connections according to the following, unless otherwise indicated:
- Install unions, in piping NPS 2 and smaller, adjacent to each valve and at final connection to each piece of equipment.
 Wet Piping Systems: Install dielectric coupling and nipple fittings to connect piping
- materials of dissimilar metals. 3.4 EQUIPMENT INSTALLATION - COMMON REQUIREMENTS A. Install equipment to allow maximum possible headroom unless specific mounting
- heights are not indicated. B. Install equipment level and plumb, parallel and perpendicular to other building systems
- and components in exposed interior spaces, unless otherwise indicated.C. Install mechanical equipment to facilitate service, maintenance, and repair or replacement of components. Connect equipment for ease of disconnecting, with
- minimum interference to other installations. Extend grease fittings to accessible locations.
- D. Install equipment to allow right of way for piping installed at required slope.
 3.5 ERECTION OF METAL SUPPORTS AND ANCHORAGES
- A. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor mechanical materials and equipment.
 END OF SECTION 220500

SECTION 220529 - HANGERS AND SUPPORTS FOR PLUMBING PIPING PART 1 - GENERAL

1.1 REFER TO SECTION 220500

PART 2 - PRODUCTS 2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements
- apply to product selection:
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified
- of the manufacturers specified. 2.2 STEEL PIPE HANGERS AND SUPPORTS A. Description: MSS SP-58, Types 1 through 58, factory-fabricated components. Refer to Part 3 "Hanger and Support Applications" Article for where to use specific hanger and
- support types. B. Galvanized, Metallic Coatings: Pregalvanized or hot dipped. C. Padded Hangers: Hanger with fiberglass or other pipe insulation pad or cushion for
- support of bearing surface of piping. 2.3 TRAPEZE PIPE HANGERS
- A. Description: MSS SP-69, Type 59, shop- or field-fabricated pipe-support assembly made from structural-steel shapes with MSS SP-58 hanger rods, nuts, saddles, and U-bolts.
- 2.4 METAL FRAMING SYSTEMS
- A. Description: MFMA-3, shop- or field-fabricated pipe-support assembly made of steel channels and other components.B. Coatings: Manufacturer's standard finish, unless bare metal surfaces are indicated.
- C. Nonmetallic Coatings: Plastic coating, jacket, or liner.2.5 THERMAL-HANGER SHIELD INSERTS
- A. Description: 100-psi minimum, compressive-strength insulation insert encased in sheet metal shield.
 D. Insulation Insert Material for Control in the strength insulation insert encased in sheet metal shield.
- B. Insulation-Insert Material for Cold Piping: Water-repellent treated, ASTM C 533, Type I calcium silicate with vapor barrier.
 C. Insulation-Insert Material for Hot Piping: Water-repellent treated, ASTM C 533, Type I
- calcium silicate. D. For Trapeze or Clamped Systems: Insert and shield shall cover entire circumference of
- pipe.
 E. For Clevis or Band Hangers: Insert and shield shall cover lower 180 degrees of pipe.
 F. Insert Length: Extend 2 inches beyond sheet metal shield for piping operating below
- ambient air temperature.
- 2.6 EQUIPMENT SUPPORTS A. Description: Welded, shop- or field-fabricated equipment support made from
- structural-steel shapes.2.7 MISCELLANEOUS MATERIALS
- A. Structural Steel: ASTM A 36/A 36M, steel plates, shapes, and bars; black and galvanized.

PART 3 - EXECUTION 3.1 HANGER AND SUPPORT APPLICATIONS

- A. Specific hanger and support requirements are specified in Sections specifying piping systems and equipment.
 B. Comply with MSS SD 60 for pipe hor provident in the section of the section o
- B. Comply with MSS SP-69 for pipe hanger selections and applications that are not specified in piping system Sections.
- C. Use hangers and supports with galvanized, metallic coatings for piping and equipment that will not have field-applied finish.
 D. Use nonmetallic coatings on attachments for electrolytic protection where attachments.
- D. Use nonmetallic coatings on attachments for electrolytic protection where attachments are in direct contact with copper tubing.
 E. Use padded hangers for piping that is subject to scratching.
 F. Horizontal-Piping Hangers and Supports: Unless otherwise indicated and except as
- Honzontal-Enping mangers and Supports: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 Adjustable, Steel Clevis Hangers (MSS Type 1): For suspension of noninsulated or insulated stationary pipes, NPS 1/2 to NPS 30.
- G. Hanger-Rod Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 1. Steel Turnbuckles (MSS Type 13): For adjustment up to 6 inches for heavy loads.
 H. Building Attachments: Unless otherwise indicated and except as specified in piping
- System Sections, install the following types:
 Top-Beam C-Clamps (MSS Type 19): For use under roof installations with bar-joist
- construction to attach to top flange of structural shape.
 Side-Beam or Channel Clamps (MSS Type 20): For attaching to bottom flange of beams, channels, or angles.
 Center-Beam Clamps (MSS Type 21): For attaching to center of bottom flange of
- Gener-Beam Gramps (WISG Type 21): For attaching to center of bottom flange of beams.
 Welded Beam Attachments (MSS Type 22): For attaching to bottom of beams if loads are considerable and rod sizes are large.
- 5. C-Clamps (MSS Type 23): For structural shapes.
- I. Saddles and Shields: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 1. Steel Pipe-Covering Protection Saddles (MSS Type 39): To fill interior voids with insulation that matches adjoining insulation.
- 2. Protection Shields (MSS Type 40): Of length recommended in writing by manufacturer to prevent crushing insulation.
- Thermal-Hanger Shield Inserts: For supporting insulated pipe.
 HANGER AND SUPPORT INSTALLATION
- A. Steel Pipe Hanger Installation: Comply with MSS SP-69 and MSS SP-89. Install hangers, supports, clamps, and attachments as required to properly support piping from building structure.
 B. Metal Framing System Installation: Arrange for any structure in the formation of the structure.
- B. Metal Framing System Installation: Arrange for grouping of parallel runs of piping and support together on field-assembled metal framing systems.
 C. Thermal-Hanger Shield Installation: Install in pipe hanger or shield for insulated piping.
 D. Install hangers and supports complete with necessary inserts, bolts, rods, nuts,
- E. Equipment Supports complete with necessary inserts, poils, rods, nuts, washers, and other accessories.
 E. Equipment Support Installation: Fabricate from welded-structural-steel shapes.
 F. Install hangers and supports to allow controlled thermal and seismic movement of piping
- Instan nangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.
 G. Install lateral bracing with pipe bangers and supports to provent support.
- G. Install lateral bracing with pipe hangers and supports to prevent swaying.H. Load Distribution: Install hangers and supports so piping live and dead loads and
- stresses from movement will not be transmitted to connected equipment.
 I. Pipe Slopes: Install hangers and supports to provide indicated pipe slopes and so maximum pipe deflections allowed by ASME B31.9 (for building services piping) are not
- maximum p exceeded.
- J. Insulated Piping: Comply with the following:
- 1. Attach clamps and spacers to piping. a. Piping Operating above Ambient Air
- a. Piping Operating above Ambient Air Temperature: Clamp may project through insulation.b. Piping Operating below Ambient Air Temperature: Use thermal-hanger shield insert with clamp sized to match OD of insert.
- c. Do not exceed pipe stress limits according to ASME B31.1 for power piping and ASME B31.9 for building services piping.
 a limit MACO OD 50. The according to ASME B31.1 for power piping and according to ASME B31.9 for building services piping.
- Install MSS SP-58, Type 39, protection saddles if insulation without vapor barrier is indicated. Fill interior voids with insulation that matches adjoining insulation.
 Install MSS SP-58, Type 40, protective shields on cold piping with vapor barrier.
- 3. Install MSS SP-58, Type 40, pro Shields shall span an arc of 180
- Shields shall span an arc of 180 degrees. 3.3 EQUIPMENT SUPPORTS A. Fabricate structural-steel stands to suspend equipment from structure overhead or to
- support equipment above floor. B. Provide lateral bracing, to prevent swaying, for equipment supports.
- 3.4 METAL FABRICATIONS
- A. Cut, drill, and fit miscellaneous metal fabrications for and equipment supports.B. Fit exposed connections together to form hairline joints. Field weld connections that
- cannot be shop welded because of shipping size limitations.C. Field Welding: Comply with AWS D1.1 procedures for shielded metal arc welding, appearance and quality of welds, and methods used in correcting welding work, and with the following methods.
- with the following: 1. Use materials and methods that minimize distortion and develop strength and
- corrosion resistance of base metals. 2. Obtain fusion without undercut or overlap.
- Remove welding flux immediately.
 Finish welds at exposed connections so no roughness shows after finishing and

achieve indicated slope of pipe. END OF SECTION 220529

- SECTION 220719 PLUMBING PIPING INSULATION PART 1 - GENERAL
- 1.1 REFER TO SECTION 220500 PART 2 - PRODUCTS
- 2.1 MANUFACTURERS
- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.
- 2.2 INSULATION MATERIALS
 A. Refer to Part 3 schedule articles for requirements about where insulating materials shall be applied.
- B. Products shall not contain asbestos, lead, mercury, or mercury compounds.
 C. Fire-Test-Response Characteristics: Insulation and related materials shall have fire-test-response characteristics indicated, as determined by testing identical products
- per ASTM E 84, by a testing and inspecting agency acceptable to authorities having jurisdiction. Factory label insulation and jacket materials and adhesive, mastic, and cement material containers, with appropriate markings of applicable testing and inspecting agency.
- Insulation Installed Indoors: Flame-spread index of 25 or less, and smoke-developed index of 50 or less.
- D. Products that come in contact with stainless steel shall have a leachable chloride content of less than 50 ppm when tested according to ASTM C 871.
- E. Insulation materials for use on austenitic stainless steel shall be qualified as acceptable according to ASTM C 795.
- F. Foam insulation materials shall not use CFC or HCFC blowing agents in the manufacturing process.
- G. Flexible Elastomeric: Closed-cell, sponge- or expanded-rubber materials. Comply with ASTM C 534, Type I for tubular materials and Type II for sheet materials.
 1. Products:
- a. Aeroflex USA Inc.; Aerocel.b. Armacell LLC; AP Armaflex.
- c. RBX Corporation; Insul-Sheet 1800 and Insul-Tube 180.
- H. Mineral-Fiber, Preformed Pipe Insulation:1. Products:
- a. Fibrex Insulations Inc.; Coreplus 1200.b. Johns Manville; Micro-Lok.
- c. Knauf Insulation; 1000 Pipe Insulation.
- d. Manson Insulation Inc.; Alley-K.e. Owens Corning; Fiberglas Pipe Insulation.
- Type I, 850 deg F Materials: Mineral or glass fibers bonded with a thermosetting resin and vapor barrier. Comply with ASTM C 547, Type I, Grade A, with factory-applied ASJ. Factory-applied jacket requirements are specified in Part 2 "Factory-Applied Jackets" Article.
- 2.3 INSULATING CEMENTS (LOW VOC)
 A. Mineral-Fiber, Hydraulic-Setting Insulating and Finishing Cement: Comply with ASTM C 449/C 449M.
- 2.4 ADHESIVESA. Materials shall be compatible with insulation materials, jackets, and substrates and for bonding insulation to itself and to surfaces to be insulated, unless otherwise indicated.
- B. Flexible Elastomeric: Comply with MIL-A-24179A, Type II, Class I.
 C. Mineral-Fiber Adhesive: Comply with MIL-A-3316C, Class 2, Grade A.
- D. ASJ Adhesive and FSK Adhesive: Comply with MIL-A-3316C, Class 2, Grade A for bonding insulation jacket lap seams and joints.
 2.5 MASTICS (LOW VOC)
- A. Materials shall be compatible with insulation materials, jackets, and substrates: Comply with MIL-C-19565C, Type II.
- B. Vapor-Barrier Mastic: Water based; suitable for indoor and outdoor use on below ambient services.C. Breather Mastic: Water based; suitable for indoor and outdoor use on above ambient
- services.
- 2.6 SEALANTS (LOW VOC) A. FSK Flashing Sealants:

Materials shall be compatible with insulation materials, jackets, and substrates.
 Fire- and water-resistant, flexible, elastomeric sealant.
 Service Temperature Range: Minus 40 to plus 250 deg F .

- 4. Color: Aluminum.
 B. ASJ Flashing Sealants:

 Materials shall be compatible with insulation materials, jackets, and substrates.
- Fire- and water-resistant, flexible, elastomeric sealant.
 Service Temperature Range: Minus 40 to plus 250 deg F.
- Color: White.
 FACTORY-APPLIED JACKETS
- A. Insulation system schedules indicate factory-applied jackets on various applications. When factory-applied jackets are indicated, comply with the following:

 ASJ: White, kraft-paper, fiberglass-reinforced scrim with aluminum-foil backing; complying with ASTM C 1136, Type I.
 FSK Jacket: Aluminum-foil, fiberglass-reinforced scrim with kraft-paper backing; complying with ASTM C 1136, Type I.
- 2.8 TAPES A. ASJ Tape: White vapor-retarder tape matching factory-applied jacket with acrylic
- adhesive, complying with ASTM C 1136 and UL listed. B. FSK Tape: Foil-face, vapor-retarder tape matching factory-applied jacket with acrylic
- adhesive; complying with ASTM C 1136 and UL listed. 2.9 SECUREMENTS
- A. Aluminum Bands.
- B. Self-Sticking-Base Insulation Hangers: Baseplate welded to projecting spindle that is capable of holding insulation, of thickness indicated, securely in position indicated when self-locking washer is in place. Comply with the following requirements:
- C. Insulation-Retaining Washers: Self-locking washers formed from 0.016-inch- thick, aluminum sheet, with beveled edge sized as required to hold insulation securely in place but not less than 1-1/2 inches in diameter.
- D. Staples: Outward-clinching insulation staples, nominal 3/4-inch wide, stainless steel or Monel.
 E. Wire: 0.062-inch soft-annealed, stainless steel.
- 2.10 CORNER ANGLES

requirements for heat tracing that apply to insulation.

3.2 COMMON INSTALLATION REQUIREMENTS

including fittings, valves, and specialties.

insulation system schedules.

either wet or dry state.

vapor-barrier mastic.

and shield.

material manufacturer.

and wet and dry film thicknesses

specialties.

contact with stainless-steel surfaces, use demineralized water.

- A. Aluminum Corner Angles: 0.040 inch thick, minimum 1 by 1 inch aluminum, according to ASTM B 209, Alloy 3003, 3005, 3105 or 5005; Temper H-14.
 PART 3 - EXECUTION
- 3.1 PREPARATIONA. Surface Preparation: Clean and dry surfaces to receive insulation. Remove materials
- that will adversely affect insulation application. B. Coordinate insulation installation with the trade installing heat tracing. Comply with

C. Mix insulating cements with clean potable water; if insulating cements are to be in

A. Install insulation materials, accessories, and finishes with smooth, straight, and even

continuous. Before installing jacket material, install vapor-barrier system.

E. Install insulation with longitudinal seams at top and bottom of horizontal runs.

F. Install multiple layers of insulation with longitudinal and end seams staggered.

H. Keep insulation materials dry during application and finishing.

J. Install insulation with least number of joints practical.

with adhesive recommended by insulation material manufacturer.

G. Do not weld brackets, clips, or other attachment devices to piping, fittings, and

I. Install insulation with tight longitudinal seams and end joints. Bond seams and joints

K. Hangers and Anchors: Where vapor barrier is indicated, seal joints, seams, and

penetrations in insulation at hangers, supports, anchors, and other projections with

1. Install insulation continuously through hangers and around anchor attachments.

2. For insulation application where vapor barriers are indicated, extend insulation on

anchor legs from point of attachment to supported item to point of attachment to structure. Taper and seal ends at attachment to structure with vapor-barrier mastic.Install insert materials and install insulation to tightly join the insert. Seal insulation to insulation inserts with adhesive or sealing compound recommended by insulation

4. Cover inserts with jacket material matching adjacent pipe insulation. Install shields

L. Apply adhesives, mastics, and sealants at manufacturer's recommended coverage rate

over jacket, arranged to protect jacket from tear or puncture by hanger, support,

surfaces; free of voids throughout the length of equipment, ducts and fittings, and piping

B. Install insulation with tightly butted joints free of voids and gaps. Vapor barriers shall be

C. Install insulation materials, forms, vapor barriers or retarders, jackets, and thicknesses

D. Install accessories compatible with insulation materials and suitable for the service.

required for each item of equipment, duct system, and pipe system as specified in

Install accessories that do not corrode, soften, or otherwise attack insulation or jacket in

SECTION 220719 - PLUMBING PIPING INSULATION (CONTINUED)

- M. Install insulation with factory-applied jackets as follows: 1. Draw jacket tight and smooth.
- 2. Cover circumferential joints with 3-inch-wide strips, of same material as insulation jacket. Secure strips with adhesive and outward clinching staples along both edges of strip, spaced 4 inch o.c.
- Overlap jacket longitudinal seams at least 1-1/2 inches. Install insulation with
- longitudinal seams at bottom of pipe. Clean and dry surface to receive self-sealing lap. Staple laps with outward clinching staples along edge at 2 inches o.c.
- a. For below ambient services, apply vapor-barrier mastic over staples.4. Cover joints and seams with tape as recommended by insulation material
- manufacturer to maintain vapor seal.
- Where vapor barriers are indicated, apply vapor-barrier mastic on seams and joints and at ends adjacent to duct and pipe flanges and fittings.
 N. Cut insulation in a manner to avoid compressing insulation more than 75 percent of its nominal thickness.
- O. Finish installation with systems at operating conditions. Repair joint separations and cracking due to thermal movement.
 P. Repair damaged insulation facings by applying same facing material over damaged
- areas. Extend patches at least 4 inches beyond damaged areas. Adhere, staple, and seal patches similar to butt joints.
- Q. For above ambient services, do not install insulation to the following:
 1. Vibration-Control Devices.
- Testing Agency Labels and Stamps.
 Nameplates and Data Plates.

4. Cleanouts. 3.3 PENETRATIONS

- A. Insulation installation at interior wall and partition penetrations (that are not fire rated): Install insulation continuously through walls and partitions.
- 3.4 PIPE INSULATION INSTALLATION
 A. Requirements in this article generally apply to all insulation materials except where more specific requirements are specified in various pipe insulation material installation articles. where pipe expansion is anticipated, detail expansion compensation for insulation on drawings and indicate intervals for its occurrence. See MICA's "National Nommercial & Industrial Insulation Standards," Plate no. 41a.
- B. Secure single-layer insulation with bands at 12-inch (300-mm) intervals and tighten bands without deforming insulation materials.
- C. Install 2-layer insulation with joints tightly butted and staggered at least 3 inches. secure inner layer with 0.062-inch wire spaced at 12-inch intervals. Secure outer layer with bands at 12-inch intervals.
- D. Install insulation over fittings, valves, strainers, flanges, unions, and other specialties with continuous thermal and vapor-retarder integrity, unless otherwise indicated.
 E. Cover segmented insulated surfaces with a layer of insulating cement and coat with a mastic. Install vapor-barrier mastic for below ambient services and a breather mastic for above ambient services. Reinforce the mastic with fabric-reinforcing mesh. Trowel the mastic to a smooth and well-shaped contour.
- F. Stencil or label the outside insulation jacket of each union with the word "union." Match size and color of pipe labels.
- G. Insulation Installation on Straight Pipes and Tubes:
 1. Secure each layer of preformed insulation to pipe with wire or bands and tighten bands without deforming insulation materials. orient longitudinal joints between half
- sections in 3 and 9 o'clock positions on the pipe.
 Where vapor barriers are indicated, seal longitudinal seams, end joints, and
- protrusions with vapor-barrier mastic and joint sealant. 3. For insulation with factory-applied jackets on above ambient services, secure laps
- with outward clinched staples at 6 inches o.c.
- 4. For insulation with factory-applied jackets with vapor barriers, do not staple longitudinal tabs but secure tabs with additional adhesive or tape as recommended
- by insulation material manufacturer and seal with vapor-barrier mastic.
 5. For insulation with factory-applied jackets on below ambient services, do not staple longitudinal tabs but secure tabs with additional adhesive as recommended by insulation material manufacturer and seal with vapor-barrier mastic and flashing sealant.

H. Insulation Installation on Pipe Flanges:1. Install preformed pipe insulation to outer diameter of pipe flange.

- Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.
 Fill voids between inner circumference of flange insulation and outer circumference
- of adjacent straight pipe segments with cut sections of same insulation material and thickness as pipe insulation.
- Install jacket material with manufacturer's recommended adhesive, overlap seams at least 1 inch (25 mm), and seal joints with flashing sealant.
 Secure insulation to flanges and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.
- I. Insulation Installation on Pipe Fittings and Elbows:
- Insulate pipe elbows using preformed fitting insulation or mitered fittings made from same material and density as adjacent pipe insulation. Each piece shall be butted tightly against adjoining piece and bonded with adhesive. Fill joints, seams, voids, and irregular surfaces with insulating cement finished to a smooth, hard, and uniform contour that is uniform with adjoining pipe insulation.
 Insulate tee fittings with preformed fitting insulation or sectional pipe insulation of
- same material and thickness as used for adjacent pipe. Cut sectional pipe insulation to fit. Butt each section closely to the next and hold in place with tie wire. Bond pieces with adhesive.
- J. Insulation installation on valves and pipe specialties:1. install preformed sections of same material as straight segments of pipe insulation
- when available.
 Insulate valves using preformed fitting insulation or sectional pipe insulation of same material, density, and thickness as used for adjacent pipe. Overlap adjoining pipe insulation by not less than two times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. for valves, insulate up to and including the bonnets, valve stuffing-box studs, bolts, and nuts. Fill joints, seams, and irregular surfaces with insulating cement.
- Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
 Insulate strainers using preformed fitting insulation or sectional pipe insulation of same material, density, and thickness as used for adjacent pipe. Overlap adjoining
- pipe insulation by not less than two times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. fill joints, seams, and irregular surfaces with insulating cement. Insulate strainers so strainer basket flange or plug can be easily removed and replaced without damaging the insulation and jacket. Provide a removable reusable insulation cover. For below ambient services, provide a design that maintains vapor barrier.
- Install insulation to flanges as specified for flange insulation application.
 Insulate instrument connections for thermometers, pressure gages, pressure temperature taps, test connections, flow meters, sensors, switches, and transmitters on insulated pipes, vessels, and equipment. Shape insulation at these connections by tapering it to and around the connection with insulating cement and finish with finishing cement, mastic, and flashing sealant.
- L. Install removable insulation covers at locations indicated. Installation shall conform to the following:
 1. Make removable flange and union insulation from sectional pipe insulation of same thickness as that on adjoining pipe. Install same insulation jacket as adjoining pipe
- When flange and union covers are made from sectional pipe insulation, extend insulation from flanges or union long at least two times the insulation thickness over adjacent pipe insulation on each side of flange or union. Secure flange cover in place with stainless-steel or aluminum bands. Select band material compatible with insulation and jacket.
- Construct removable valve insulation covers in same manner as for flanges except divide the two-part section on the vertical center line of valve body.
 When covers are made from block insulation, make two halves, each consisting of mitered blocks wired to stainless-steel fabric. Secure this wire frame, with its attached insulation, to flanges with tie wire. Extend insulation at least 2 inches over adjacent pipe insulation on each side of valve. Fill space between flange or union cover and pipe insulation with insulating cement. Finish cover assembly with insulating cement applied in two coats. After first coat is dry, apply and trowel second coat to a smooth finish.

- SECTION 220719 PLUMBING PIPING INSULATION (CONTINUED) M. Special Installation Requirements for Flexible Elastomeric:
- Seal longitudinal seams and end joints with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.
- Insulation installation on pipe flanges:
- a. Install pipe insulation to outer diameter of pipe flange.b. Make width of insulation section same as overall width of flange and bolts, plus
- twice the thickness of pipe insulation.c. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with cut sections of sheet
- d. Secure insulation to flanges and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface
- being insulated. 3. Insulation installation on pipe fittings and elbows:
- a. Install mitered sections of pipe insulation.b. Secure insulation materials and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface
- being insulated.
 3.5 FINISHES
 A. Flexible Elastomeric Thermal Insulation: After adhesive has fully cured, apply two coats of insulation manufacturer's recommended protective coating.
- 3.6 PIPING INSULATION SCHEDULE, GENERAL
 A. Acceptable preformed pipe and tubular insulation materials and thicknesses are identified for each piping system and pipe size range. If more than one material is listed for a
- piping system, selection from materials listed is contractor's option.
 B. Items not insulated: Unless otherwise indicated, do not install insulation on the following:

 Fire-Suppression Piping.
- Chrome-plated pipes and fittings unless there is a potential for personnel injury.
 INDOOR PIPING INSULATION SCHEDULE

 Domestic Hot and Cold Water: Mineral-fiber pipe insulation, Type I, 1 inch thick.
 Expected capitary drains, demestic water, demestic het water, and stops for plumbing.
- B. Exposed sanitary drains, domestic water, domestic hot water, and stops for plumbing fixtures for people with disabilities: flexible elastomeric.
 END OF SECTION 220719

SECTION 220523 - VALVES PART 1 - GENERAL

1.1 REFER TO SECTION 220500

- PART 2 PRODUCTS 2.1 VALVES, GENERAL
- A. Refer to Part 3 "Valve Applications" Article for applications of valves.B. NSF Compliance: NSF 61 for valve materials for potable-water service.
- C. Valve Pressure and Temperature Ratings: Not less than indicated and as required for system pressures and temperatures.
- D. Valve Sizes: Same as upstream pipe, unless otherwise indicated. E. Valve Actuators:
- 1. Lever Handle: For quarter-turn valves NPS 6 and smaller.
- F. Extended Valve Stems: On insulated valves.2.2 COPPER-ALLOY BALL VALVES
- A. Copper-Alloy Ball Valves, General: MSS SP-110.B. Two-Piece, Copper-Alloy Ball Valves: Bronze body with chrome-plated bronze ball,
- PTFE or TFE seats, and minimum CWP rating. PART 3 - EXECUTION 3.1 VALVE APPLICATIONS
- A. Refer to piping Sections for specific valve applications. If valve applications are not indicated, use the following:
 1. Shutoff Service: Ball valves.
- B. Domestic Water Piping: Use the following types of valves:
- Ball Valves, NPS 2 and Smaller: One-piece, 400-psig CWP rating, copper alloy.
 VALVE INSTALLATION

 Piping installation requirements are specified in other Division 15 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install valves with unions or flanges at each piece of equipment arranged to allow service, maintenance, and equipment removal without system shutdown.
 C. Locate valves for easy access and provide separate support where necessary.
- D. Install valves in horizontal piping with stem at or above center of pipe.E. Install valves in position to allow full stem movement.
- 3.3 JOINT CONSTRUCTION
 A Defects Section 220500 "Decis Diumbing Materials and Methods"
- A. Refer to Section 220500 "Basic Plumbing Materials and Methods" for basic piping joint construction.
 B. Soldered Joints: Use ASTM B 813, water-flushable, lead-free flux; ASTM B 32,
- lead-free-alloy solder; and ASTM B 828 procedure, unless otherwise indicated.3.4 ADJUSTING
- A. Adjust or replace valve packing after piping systems have been tested and put into service but before final adjusting and balancing. Replace valves if persistent leaking occurs.

END OF SECTION 220523

PLUMBING SPECIFICATION SHEET INDEX

SECTION 220500 BASIC PLUMBING MATERIALS AND METHODS SECTION 220523 VALVES SECTION 220529 HANGERS AND SUPPORTS FOR PLUMBING EQUIPMENT SECTION 220548 VIBRATION ISOLATION FOR PLUMBING EQUIPMENT SECTION 220719 PLUMBING PIPE INSULATION

P0-02 SECTION 221116 DOMESTIC WATER PIPING SECTION 221119 PLUMBING SPECIALITIES SECTION 221316 SANITARY WASTE AND VENT PIPING SECTION 223300 ELECTRIC WATER HEATERS SECTION 224100 PLUMBING FIXTURES

SECTION 221116 - DOMESTIC WATER PIPING PART 1 - GENERAL 1.1 REFER TO SECTION 220500

PART 2 - PRODUCTS 2.1 PIPING MATERIALS

- A. Refer to Part 3 "Pipe and Fitting Applications" Article for applications of pipe, tube, fitting, and joining materials.
 B. Comply with NSF 61, "Drinking Water System Components Health Effects; Sections 1 through
- 9," for potable domestic water piping and components.
 C. Transition Couplings for Aboveground Pressure Piping: Coupling or other manufactured fitting
- the same size as, with pressure rating at least equal to and ends compatible with, piping to be joined.2.2 COPPER TUBE AND FITTINGS
- A. Soft Copper Tube: ASTM B 88, Types K and L, water tube, annealed temper.
 1. Copper Pressure Fittings: ASME B16.18, cast-copper-alloy or ASME B16.22,
- Copper Pressure Fittings. Admit B10.10, cast-copper and of Admit B10.22, wrought-copper, solder-joint fittings. Furnish wrought-copper fittings if indicated.
 Bronze Flanges: ASME B16.24, Class 150, with solder-joint ends. Furnish Class 300
- Bronze Franges: Freme Brozer, class roo, with solder-joint ends. Furnish class occ flanges if required to match piping.
 Copper Unions: MSS SP-123, cast-copper-alloy, hexagonal-stock body, with
- ball-and-socket, metal-to-metal seating surfaces, and solder-joint or threaded ends.
 B. Hard Copper Tube: ASTM B 88, Types L and M, water tube, drawn temper.
 1. Copper Pressure Fittings: ASME B16.18, cast-copper-alloy or ASME B16.22, wrought-copper solder-ioint fittings. Furnish wrought-copper fittings if indicated
- copper, solder-joint fittings. Furnish wrought-copper fittings if indicated.
 Bronze Flanges: ASME B16.24, Class 150, with solder-joint ends. Furnish Class 300 flanges if required to match piping.
 Copper Unions: MSS SP-123, cast-copper-alloy, hexagonal-stock body, with
- ball-and-socket, metal-to-metal seating surfaces, and solder-joint or threaded ends. 2.3 VALVES
- A. Bronze and cast-iron, general-duty valves are specified in Division 15 Section "Valves."
 B. Balancing and drain valves are specified in Division 15 Section "Plumbing Specialties."
 PART 3 EXECUTION
 3.1 EXCAVATION

3.1 EXCAVATION A. Excavating, trenching, and backfilling

- A. Excavating, trenching, and backfilling are specified in Division 2 Section "Earthwork."
 3.2 PIPE AND FITTING APPLICATIONS
 A. Transition and special fittings with pressure ratings at least equal to piping rating may be used in applications below, unless otherwise indicated.
 B. Flanges may be used on aboveground piping, unless otherwise indicated.
- C. Fitting Option: Extruded-tee connections and brazed joints may be used on aboveground copper tubing.
 D. Aboveground Demostic Water and Compressed Air Bining: Lee the following nining materials for
- D. Aboveground Domestic Water and Compressed Air Piping: Use the following piping materials for each size range:
 1. NPS 1/2 and NPS 2: Hard copper tube, Type L; copper pressure fittings; and soldered joints.
 3.3 VALVE APPLICATIONS
- A. Drawings indicate valve types to be used. Where specific valve types are not indicated, the following requirements apply:
 1. Shutoff Duty: Use bronze ball or gate valves for piping NPS 2 and smaller.
 2. Therefine Duty: Use bronze ball or gate valves for piping NPS 2 and smaller.
- Throttling Duty: Use bronze ball or globe valves for piping NPS 2 and smaller.
 Hot-Water-Piping, Balancing Duty: Memory-stop balancing valves.
- 4. Drain Duty: Hose-end drain valves.B. Install shutoff valve close to water main on each branch and riser serving plumbing fixtures or equipment, and on each water supply to equipment.
- equipment, on each water supply to equipment, and on each water supply to plumbing fixtures that do not have supply stops. Use ball or gate valves for piping NPS 2 and smaller.C. Install drain valves for equipment at base of each water riser, at low points in horizontal piping, and where required to drain water piping.
- and where required to drain water piping.
 1. Install hose-end drain valves at low points in water mains, risers, and branches.
 2. Install stop-and-waste drain valves where indicated.
- Install stop-and-waste drain valves where indicated.
 PIPING INSTALLATION

 A. Basic piping installation requirements are specified in Division 15 Section "Basic Mechanical
- Materials and Methods."
 B. Install cast-iron sleeve with water stop and mechanical sleeve seal at each service pipe penetration through foundation wall. Select number of interlocking rubber links required to make installation watertight. Sleeves and mechanical sleeve seals are specified in Division 15 Section
- "Basic Mechanical Materials and Methods."
 C. Install shutoff valve, hose-end drain valve, pressure gage, and test tee with valve, inside the building at each domestic water service entrance. Pressure gages are specified in Division 15 Section "Meters and Gages," and drain valves are specified in Division 15 Section "Plumbing
- Specialties." D. Install domestic water piping level and plumb. 3.5 JOINT CONSTRUCTION
- A. Basic piping joint construction requirements are specified in Division 15 Section "Basic Mechanical Materials and Methods."
- B. Soldered Joints: Use ASTM B 813, water-flushable, lead-free flux; ASTM B 32, lead-free-alloy solder; and ASTM B 828 procedure, unless otherwise indicated.
- C. Extruded-Tee Connections: Form tee in copper tube according to ASTM F 2014. Use tool designed for copper tube; drill pilot hole, form collar for outlet, dimple tube to form seating stop,
- and braze branch tube into collar.
 3.6 HANGER AND SUPPORT INSTALLATION
 A. Pipe hanger and support devices are specified in Division 15 Section "Hangers and Supports."
- Install the following: 1. Vertical Piping: MSS Type 8 or Type 42, clamps. 2. Individual, Straight, Horizontal Piping Runs: According to the following:
- a. 100 Feet and Less: MSS Type 1, adjustable, steel clevis hangers.
 3. Multiple, Straight, Horizontal Piping Runs 100 Feet or Longer: MSS Type 44, pipe rolls.
- B. Install supports according to Division 15 Section "Hangers and Supports."
- C. Rod diameter may be reduced 1 size for double-rod hangers, to a minimum of 3/8 inch.D. Install hangers for copper tubing with the following maximum horizontal spacing and minimum rod diameters:
- NPS 3/4 and Smaller: 60 inches with 3/8-inch rod.
 NPS 1 and NPS 1-1/4: 72 inches with 3/8-inch rod.
- 3. NPS 1-1/2 and NPS 2: 96 inches with 3/8-inch rod.
 E. Install supports for vertical copper tubing every 10 feet.
- F. Support piping and tubing not listed above according to MSS SP-69 and manufacturer's written instructions.
- 3.7 CONNECTIONS
 A. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to equipment and machines to allow service and maintenance.
 C. Connect domestic water piping to exterior water-service piping. Use transition fitting to join dissimilar piping materials.
- D. Connect domestic water piping to water-service piping with shutoff valve, and extend and connect to the following:
- Water Heaters: Cold-water supply and hot-water outlet piping in sizes indicated, but not smaller than sizes of water heater connections.
 Plumbing Fixtures: Cold- and hot-water supply piping in sizes indicated, but not smaller than
- Plumbing Pluttes. Cold- and not-water supply piping in sizes indicated, but not smaller than required by plumbing code. Refer to Division 15 Section "Plumbing Fixtures."
 Equipment: Cold- and hot-water supply piping as indicated, but not smaller than equipment connections. Provide shutoff valve and union for each connection.
 FIELD QUALITY CONTROL
- A. Inspect domestic water piping as follows:
 1. Do not enclose, cover, or put piping into operation until it has been inspected and approved
- by authorities having jurisdiction.
 During installation, notify authorities having jurisdiction at least 24 hours before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction:
- a. Roughing-in Inspection: Arrange for inspection of piping before concealing or closing-in after roughing-in and before setting fixtures.b. Final Inspection: Arrange final inspection for authorities having jurisdiction to observe tests specified below and to ensure compliance with requirements.
- Reinspection: If authorities having jurisdiction find that piping will not pass test or inspection, make required corrections and arrange for reinspection.
- 4. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.
 B. Test domestic water piping as follows:

 Fill domestic water piping. Check components to determine that they are not air bound and that piping is full of water.
- Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired. If testing is performed in segments, submit separate report for each test, complete with diagram of portion of piping tested.
- 3. Leave new, altered, extended, or replaced domestic water piping uncovered and unconcealed until it has been tested and approved. Expose work that was covered or
- concealed before it was tested.
 Cap and subject piping to static water pressure of 50 psig above operating pressure, without exceeding pressure rating of piping system materials. Isolate test source and allow to stand
- for four hours. Leaks and loss in test pressure constitute defects that must be repaired.5. Repair leaks and defects with new materials and retest piping or portion thereof until action defects are activitiend.
- satisfactory results are obtained.6. Prepare reports for tests and required corrective action.
- 3.9 ADJUSTINGA. Perform the following adjustments before operation:1. Close drain valves, hydrants, and hose bibbs.
- Open shutoff valves to fully open position.
 Open throttling valves to proper setting.
- Adjust balancing valves in hot-water-circulation return piping to provide adequate flow.
 Manually adjust ball-type balancing valves in hot-water-circulation return piping to provide flow of hot water in each branch.
- 6. Remove plugs used during testing of piping and plugs used for temporary sealing of piping during installation.
- Remove and clean strainer screens. Close drain valves and replace drain plugs.
 Remove filter cartridges from housings and verify that cartridges are as specified for
- application where used and are clean and ready for use.9. Check plumbing specialties and verify proper settings, adjustments, and operation.

SECTION 221116 - DOMESTIC WATER (CONTINUED) 3.10 CLEANING

- A. Clean and disinfect potable domestic water piping as follows:
- 1. Purge new piping and parts of existing domestic water piping that have been altered, extended, or repaired before using.
- Use purging and disinfecting procedures prescribed by authorities having jurisdiction or, if methods are not prescribed, procedures described in either AWWA C651 or AWWA C652 or as described below:

 a. Flush piping system with clean, potable water until dirty water does not appear at outlets.
- a. Fills in piping system with clean, potable water until dirly water does not appear at outlets
 b. Fill and isolate system according to either of the following:

 Fill system or part thereof with water/chlorine solution with at least 50 ppm of chlorine. Isolate with valves and allow to stand for 24 hours.
 Fill system or part thereof with water/chlorine solution with at least 200 ppm of
- chlorine. Isolate and allow to stand for three hours.c. Flush system with clean, potable water until no chlorine is in water coming from system after the standing time.d. Submit water samples in sterile bottles to authorities having jurisdiction. Repeat
- B. Prepare and submit reports of purging and disinfecting activities.
- C. Clean interior of domestic water piping system. Remove dirt and debris as work progresses. END OF SECTION 221116

SECTION 221119 - PLUMBING SPECIALTIES PART 1 - GENERAL

- 1.1 REFER TO SECTION 220500 PART 2 - PRODUCTS
- 2.1 QUALITY ASSURANCE A. Product Options: Drawin
- A. Product Options: Drawings indicate size, profiles, and dimensional requirements of plumbing specialties and are based on the specific system indicated. Refer to Division 1 Section "Product Requirements."
 B. Plumbing specialties shall bear label, stamp, or other markings of specified testing agency.
 C. ASME Compliance: Comply with ASME B31.9, "Building Services Piping," for piping materials and
- installation.
 D. NSF Compliance:
 1. Comply with NSF 61, "Drinking Water System Components--Health Effects, Sections 1 through 9," for
- potable domestic water plumbing specialties. 2.2 MANUFACTURERS A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for
- product selection:
 Products: Subject to compliance with requirements, provide one of the products specified.
 Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.
 BACKFLOW PREVENTERS
- A. Manufacturers: 1. Mueller Co.; Hersey Meters Div.
- Watts Industries, Inc.; Water Products Div.
 Zurn Industries, Inc.; Wilkins Div.
- B. General: ASSE standard, backflow preventers.
 1. NPS 2 and Smaller: Bronze body with threaded ends.
- Interior Components: Corrosion-resistant materials.
 Exterior Finish: Polished chrome plate if used in chrome-plated piping system.
- C. Hose-Connection Vacuum Breakers: ASSE 1011, nickel plated, with nonremovable and manual drain features, and ASME B1.20.7, garden-hose threads on outlet. Units attached to rough-bronze-finish hose
- connections may be rough bronze. D. Dual-Check-Valve-Type Backflow Preventers: ASSE 1024, suitable for continuous pressure application. Include union inlet and two independent check valves.
- 2.4 BALANCING VALVES
 A. Memory-Stop Balancing Valves, NPS 2 and Smaller: MSS SP-110, ball valve, rated for 400-psig minimum CWP. Include two-piece, copper-alloy body with standard or full-port, chrome-plated brass ball, replaceable seats and seals, threaded or solder-joint ends, and vinyl-covered steel handle with memory-stop device.
- Manufacturers:
 a. Conbraco Industries, Inc.
- b. Crane Co.; Crane Valve Group; Crane Valves.c. Crane Co.; Crane Valve Group; Jenkins Valves.
- d. Crane Co.; Crane Valve Group; Stockham Div.
 e. Grinnell Corporation.
- f. Hammond Valve.g. Milwaukee Valve Company.
- h. NIBCO INC. 2.5 TRAP SEAL PRIMER VALVES
- A. Supply-Type Trap Seal Primer Valves: ASSE 1018, water-supply-fed type, with the following characteristics:
- Manufacturers: a. Josam Co.
- b. MIFAB Manufacturing, Inc.c. Precision Plumbing Products, Inc.
- d. Smith, Jay R. Mfg. Co.
 e. Watts Industries, Inc.; Drainage Products Div.
- f. Watts Industries, Inc.; Water Products Div. g. Zurn Industries, Inc.; Jonespec Div.
- A. Zurn Industries, Inc.; Specification Drainage Operation.
 2. 125-psig minimum working pressure
- Bronze body with atmospheric-vented drain chamber.
- Inlet and Outlet Connections: NPS 1/2 threaded, union, or solder joint.
 Gravity Drain Outlet Connection: NPS 1/2 threaded or solder joint.
- 6. Finish: Chrome plated, or rough bronze for units used with pipe or tube that is not chrome finished.
 2.6 DRAIN VALVES
 A. Hose-End Drain Valve: MSS SP-80, gate valve, Class 125, ASTM B 62 bronze body, with NPS 3/4
- A. Hose-End Drain Valve: MSS SP-80, gate valve, Class 125, ASTM B 62 bronze body, with NPS 3/4 threaded or solder-joint inlet and ASME B1.20.7, garden-hose threads on outlet and cap. Hose bibbs are prohibited for this application.
- A. Open Drains: Shop or field fabricate from ASTM A 74, Service class, hub-and-spigot, cast-iron, soil-pipe fittings. Include P-trap, hub-and-spigot riser section; and where required, increaser fitting, joined with
- ASTM C 564, rubber gaskets.B. Floor-Drain Inlet Fittings: Cast iron, with threaded inlet and threaded or spigot outlet, and trap seal primer valve connection.
- 2.8 CLEANOUTS A. Cleanouts, "FCO": Comply with ASME A112.36.2M. See Fixture Schedule for specifications.
- 2.9 FLOOR DRAINSA. Floor Drains, "FD": Comply with ASME A112.21.1M. See Fixture Schedule for specifications.
- PART 3 EXECUTION 3.1 PERFORMANCE REQUIREMENTS
- A. Provide components and installation capable of producing piping systems with following minimum working-pressure ratings, unless otherwise indicated:
- Domestic Water Piping: 125 psig.
 Sanitary Waste and Vent Piping: 10-foot head of water.
- 3.2 INSTALLATION

 A. Refer to Division 15 Section "Basic Mechanical Materials and Methods" for piping joining materials, joint construction, and basic installation requirements.
 B. Install backflow preventers in each water supply to mechanical equipment and systems and to other equipment and water systems that may be sources of contamination. Comply with authorities having jurisdiction.
- Locate backflow preventers in same room as connected equipment or system.
 Do not install bypass piping around backflow preventers.
 Install pressure regulators with inlet and outlet shutoff valves and balance valve bypass. Install pressure
- gages on inlet and outlet.D. Install trap seal primer valves with outlet piping pitched down toward drain trap a minimum of 1 percent and connect to floor-drain body, trap, or inlet fitting. Adjust valve for proper flow.
- E. Install cleanouts in aboveground piping and building drain piping according to the following, unless otherwise indicated:
 1. Size same as drainage piping up to NPS 4. Use NPS 4 for larger drainage piping unless larger cleanout is indicated.
- Locate at each change in direction of piping greater than 45 degrees.
 Locate at minimum intervals of 50 feet for piping NPS 4 and smaller and 100 feet for larger piping.
 Install cleanout deck plates with top flush with finished floor, for floor cleanouts for piping below floors.
- G. Install vent flashing sleeves on stacks passing through roof. Secure over stack flashing according to manufacturer's written instructions.
 H. Install floor drains at low points of surface areas to be drained. Set grates of drains fluck with finished file.
- H. Install floor drains at low points of surface areas to be drained. Set grates of drains flush with finished floor, unless otherwise indicated.
 1. Position floor drains for easy access and maintenance.
 2. Out flue drained in the structure of the str
- Set floor drains below elevation of surrounding finished floor to allow floor drainage.
 a. Radius, 30 Inches or Less: Equivalent to 1 percent slope, but not less than 1/4-inch total depression.
 b. Padius 20 to 50 Inchest. Equivalent to 1
- b. Radius, 30 to 60 Inches: Equivalent to 1 percent slope.
 c. Radius, 60 Inches or Larger: Equivalent to 1 percent slope, but not greater than 1-inch total depression.
- Install floor-drain flashing collar or flange so no leakage occurs between drain and adjoining flooring. Maintain integrity of waterproof membranes where penetrated.
 Install individual traps for floor drains connected to sanitary building drain, unless otherwise indicated.
- Install wood-blocking reinforcement for wall-mounting and recessed-type plumbing specialties. Install individual shutoff valve in each water supply to plumbing specialties. Use ball, gate, or globe valve if specific valve is not indicated. Install shutoff valves in accessible locations. Refer to Division 15 Section "Valves" for general-duty ball, butterfly, check, gate, and globe valves.
- K. Install traps on plumbing specialty drain outlets. Omit traps on indirect wastes unless trap is indicated.
 L. Install escutcheons at wall, floor, and ceiling penetrations in exposed finished locations and within cabinets and millwork. Use deep-pattern escutcheons if required to conceal protruding pipe fittings.
- 3.3 CONNECTIONSA. Piping installation requirements are specified in other Division 22 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to equipment to allow service and maintenance.C. Connect plumbing specialties to piping specified in other Division 22 Sections.

- SECTION 221119 PLUMBING SPECIALTIES (CONTINUED) 3.4 FLASHING INSTALLATION
- A. Install sheet flashing on pipes, sleeves, and specialties passing through or embedded in floors and roofs with waterproof membrane.
 1. Pipe Flashing: Sleeve type, matching pipe size, with minimum length of 10 inches, and skirt or flange extending at least 8 inches around pipe.
- Sleeve Flashing: Flat sheet, with skirt or flange extending at least 8 inches around sleeve.
 Embedded Specialty Flashing: Flat sheet, with skirt or flange extending at least 8 inches around specialty.
- E. Set flashing on floors and roofs in solid coating of bituminous cement.
 F. Secure flashing into sleeve and specialty clamping ring or device.
 G. Install flashing for piping passing through roofs with counterflashing or commercially made flashing fittings,
- according to Division 7 Section "Sheet Metal Flashing and Trim."H. Extend flashing up vent pipe passing through roofs and turn down into pipe, or secure flashing into cast-iron sleeve having calking recess.I. Fabricate and install flashing and pans, sumps, and other drainage shapes.
- 3.5 PROTECTIONA. Protect drains during remainder of construction period to avoid clogging with dirt and debris and to prevent
- damage from traffic and construction work. B. Place plugs in ends of uncompleted piping at end of each day or when work stops. END OF SECTION 221119

SECTION 221316 - SANITARY WASTE AND VENT PIPING

- PART 1 GENERAL 1.1 REFER TO SECTION 220500
- PART 2 PRODUCTS 2.1 PIPING MATERIALS
- A. Piping materials shall bear label, stamp, or other markings of specified testing agency.
 B. Hubless Cast-Iron Pipe and Fittings: ASTM A 888 or CISPI 301.
 1. Shielded Couplings: ASTM C 1277 assembly of metal shield or housing, corrosion-resistant
- a. Standard, Shielded, Stainless-Steel Couplings: CISPI 310, with stainless-steel corrugated shield; stainless-steel bands and tightening devices; and ASTM C 564, rubber
- sleeve. b. Heavy-Duty, Shielded, Stainless-Steel Couplings: With stainless-steel shield,
- stainless-steel bands and tightening devices, and ASTM C 564, rubber sleeve. C. Copper DWV Tube: ASTM B 306, drainage tube, drawn temper.
- Copper Drainage Fittings: ASME B16.23, cast copper or ASME B16.29, wrought-copper, solder-joint fittings.
- PART 3 EXECUTION 3.1 PIPING APPLICATIONS
- A. Flanges and unions may be used on aboveground pressure piping, unless otherwise indicated.
 B. Components and installation shall be capable of withstanding the following minimum working pressure, unless otherwise indicated:
- Soil, Waste, and Vent Piping: 10-foot head of water.
 Underground, soil and waste piping NPS 4 and smaller shall be the following:
- 1. PVC pipe, PVC socket fittings, and solvent-cemented joints .
- D. Aboveground, soil and waste piping NPS 4 and smaller shall be the following:Aboveground, soil and waste piping NPS 4 and smaller shall be the following:
 1. Hubless cast-iron soil pipe and fittings; standard, shielded, stainless-steel couplings; and hubless-coupling joints.
- E. Aboveground, vent piping NPS 4 and smaller shall be any of the following:
 1. Hubless cast-iron soil pipe and fittings; standard, shielded, stainless-steel couplings; and hubless-coupling joints.
- 3.2 PIPING INSTALLATION
 A. Basic piping installation requirements are specified in Division 15 Section "Basic Mechanical Materials and Methods."
- B. Install wall-penetration fitting at each service pipe penetration through foundation wall. Make installation watertight.
 C. Install watertight according to CICPUs "Cost loss Seil Disc and Fittings Londback."
- C. Install cast-iron soil piping according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook," Chapter IV, "Installation of Cast Iron Soil Pipe and Fittings."
 D. Make changes in direction for soil and waste drainage and vent piping using appropriate branches, bends, and long-sweep bends. Sanitary tees and short-sweep 1/4 bends may be used on vertical stacks if change in direction of flow is from horizontal to vertical. Use long-turn, double Y-branch and 1/8-bend fittings if 2 fixtures are installed back to back or side by side with common drain pipe. Straight tees, elbows, and crosses may be used on vent lines. Do not change direction of flow more than 90 degrees. Use proper size of standard increasers and reducers if pipes of different sizes are connected. Reducing size of drainage piping in direction
- of flow is prohibited.
 E. Install soil and waste drainage and vent piping at the following minimum slopes, unless otherwise indicated:

 Building Sanitary Drain: 2 percent downward in direction of flow for piping NPS 3 and smaller; 1 percent downward in direction of flow for piping NPS 4 and larger.
 Horizontal Sanitary Drainage Piping: 2 percent downward in direction of flow.
- Vent Piping: 1 percent down toward vertical fixture vent or toward vent stack.
 F. Do not enclose, cover, or put piping into operation until it is inspected and approved by authorities having jurisdiction.
- 3.3 JOINT CONSTRUCTIONA. Basic piping joint construction requirements are specified in Division 15 Section "Basic
- Mechanical Materials and Methods." B. Join hubless cast-iron soil piping according to CISPI 310 and CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for hubless-coupling joints.
- C. Soldered Joints: Use ASTM B 813, water-flushable, lead-free flux; ASTM B 32, lead-free-alloy solder; and ASTM B 828 procedure, unless otherwise indicated.
- 3.4 HANGER AND SUPPORT INSTALLATION
 A. Pipe hangers and supports are specified in Division 15 Section "Hangers and Supports." Install the following:

 Vertical Piping: MSS Type 8 or Type 42, clamps.
- Install individual, straight, horizontal piping runs according to the following:
 a. 100 Feet and Less: MSS Type 1, adjustable, steel clevis hangers.
- B. Install supports according to Division 15 Section "Hangers and Supports."
 C. Support vertical vision and tubing at basis
- C. Support vertical piping and tubing at base.
 D. Rod diameter may be reduced 1 size for double-rod hangers, with 3/8-inch minimum rods.
 E. Install hangers for cast-iron soil piping with the following maximum horizontal spacing and minimum rod diameters:
- 1. NPS 1-1/2 and NPS 2: 60 inches with 3/8-inch rod.
- NPS 3: 60 inches with 1/2-inch rod.
 NPS 4: 60 inches with 5/8-inch rod.
- F. Support piping and tubing not listed above according to MSS SP-69 and manufacturer's written instructions.
- 3.5 CONNECTIONSA. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Connect soil and waste piping to exterior sanitary sewerage piping. Use transition fitting to join dissimilar piping materials.
- C. Connect drainage and vent piping to the following:
 1. Plumbing Fixtures: Connect drainage piping in sizes indicated, but not smaller than required by plumbing code.
- Plumbing Specialties: Connect drainage and vent piping in sizes indicated, but not smaller than required by plumbing code.
 Equipment: Connect drainage piping as indicated. Provide shutoff valve, if indicated, and
- union for each connection. Use flanges instead of unions for connections NPS 2-1/2 and larger.
 3.6 FIELD QUALITY CONTROL
 A. During installation, notify authorities having jurisdiction at least 24 hours before inspection must
- be made. Perform tests specified below in presence of authorities having jurisdiction.
 Roughing-in Inspection: Arrange for inspection of piping before concealing or closing-in after roughing-in and before setting fixtures.
 Final Inspection: Arrange for final inspection by authorities having jurisdiction to observe

B. Reinspection: If authorities having jurisdiction find that piping will not pass test or inspection,

C. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.

D. Test sanitary drainage and vent piping according to procedures of authorities having jurisdiction

1. Test for leaks and defects in new piping and parts of existing piping that have been altered,

2. Leave uncovered and unconcealed new, altered, extended, or replaced drainage and vent

3. Roughing-in Plumbing Test Procedure: Test drainage and vent piping, except outside

starts to completion of inspection, water level must not drop. Inspect joints for leaks.

4. Finished Plumbing Test Procedure: After plumbing fixtures have been set and traps filled

with water, test connections and prove they are gastight and watertight. Plug vent-stack

openings on roof and building drains where they leave building. Introduce air into piping

closet to measure this pressure. Air pressure must remain constant without introducing

5. Repair leaks and defects with new materials and retest piping, or portion thereof, until

B. Protect drains during remainder of construction period to avoid clogging with dirt and debris and

system equal to pressure of 1-inch wg. Use U-tube or manometer inserted in trap of water

additional air throughout period of inspection. Inspect plumbing fixture connections for gas

extended, or repaired. If testing is performed in segments, submit separate report for each

piping until it has been tested and approved. Expose work that was covered or concealed

leaders, on completion of roughing-in. Close openings in piping system and fill with water to

point of overflow, but not less than 10-foot head of water. From 15 minutes before inspection

tests specified below and to ensure compliance with requirements.

make required corrections and arrange for reinspection

test, complete with diagram of portion of piping tested.

or, in absence of published procedures, as follows:

before it was tested

and water leaks.

3.7 CLEANING

END OF SECTION 221316

satisfactory results are obtained.

6. Prepare reports for tests and required corrective action.

to prevent damage from traffic and construction work.

A. Clean interior of piping. Remove dirt and debris as work progresses.

C. Place plugs in ends of uncompleted piping at end of day and when work stops.

SECTION 223300 - ELECTRIC WATER HEATERS PART 1 - GENERAL

1.1 REFER TO SECTION 220500. PART 2 - PRODUCTS

- QUALITY ASSURANCE
 A. Source Limitations: Obtain same type of electric water heaters through one source from a single manufacturer.
- B. Product Options: Drawings indicate size, profiles, and dimensional requirements of electric water heaters and are based on the specific system indicated. Refer to Division 1 Section "Product Requirements."
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- D. ASME Compliance: Where indicated, fabricate and label commercial water heater storage tanks to comply with ASME Boiler and Pressure Vessel Code: Section VIII, Division 1.
 E. Comply with NSF 61, "Drinking Water System Components Health Effects; Sections 1 through 9," for all components that will be in contact with potable water.
- 2.2 WARRANTY
 A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace
- components of electric water heaters that fail in materials or workmanship within specified warranty period. 1. Failures include, but are not limited to, the following:
- a. Structural failures including storage tank and supports.b. Faulty operation of controls.
- c. Deterioration of metals, metal finishes, and other materials beyond normal use.2. Warranty Period(s): From date of Substantial Completion:
- a. Tankless Electric Water Heaters: 1) Controls and Other Components: Three years.
- B. Flow-Control, Electric, Tankless, Domestic-Water Heaters:
 1. Manufacturers: Subject to compliance with requirements, provide products by the following:
- a. Chronomite Laboratories, Inc.2. Standard: UL 499 for electric, tankless, (domestic-water heater) heating appliance.3. Construction: Copper piping or tubing complying with NSF 61 barrier materials for potable
- water, without storage capacity. a. Connections: ASME B1.20.1 pipe thread.
- b. Pressure Rating: 150 psig.c. Heating Element: Resistance heating system.
- d. Temperature Control: Flow-control fitting.
 e. Safety Control: High-temperature-limit cutoff device or system.
- f. Jacket: Aluminum or steel with enameled finish or plastic.4. Support: Bracket for wall mounting.
- 5. Capacity and Characteristics: See drawings for schedule.
- PART 3 EXECUTION 3.1 WATER HEATER INSTALLATION
- A. Install water heaters level and plumb, according to layout drawings, original design, and referenced standards. Maintain manufacturer's recommended clearances. Arrange units so controls and devices needing service are accessible.
- 3.2 CONNECTIONS A. Piping installation requ
- A. Piping installation requirements are specified in other Division 15 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.
 B. Install piping adjacent to water heaters to allow service and maintenance. Arrange piping for easy removal of water heaters.
 C. Ground equipment according to Division 16 Section "Grounding and Bonding."
- D. Connect wiring according to Division 16 Section "Conductors and Cables."
 3.3 FIELD QUALITY CONTROL
- A. Perform the following field tests and inspections and prepare test reports:
 1. Leak Test: After installation, test for leaks. Repair leaks and retest until no leaks exist.
- Operational Test: After electrical circuitry has been energized, confirm proper operation.
 Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
 B. Remove and replace water heaters that do not pass tests and inspections and retest as specified above.
 END OF SECTION 223300

- SECTION 224100 PLUMBING FIXTURES PART 1 - GENERAL 1.1 REFER TO SECTION 220500
- PART 2 PRODUCTS A. Source Limitations: Obtain plumbing fixtures, faucets, and other components of each category
- through one source from a single manufacturer.
 B. Regulatory Requirements: Comply with requirements in ICC A117.1, "Accessible and Usable Buildings and Facilities"; Public Law 90-480, "Architectural Barriers Act"; and Public Law
- 101-336, "Americans with Disabilities Act"; for plumbing fixtures for people with disabilities. Regulatory Requirements: Comply with requirements in Public Law 102-486, "Energy Policy Act," about water flow and consumption rates for plumbing fixtures.
- D. NSF Standard: Comply with NSF 61, "Drinking Water System Components--Health Effects," for fixture materials that will be in contact with potable water.
- E. Select combinations of fixtures and trim, faucets, fittings, and other components that are compatible.
 F. Comply with the following applicable standards and other requirements specified for plumbing
- Enameled, Cast-Iron Fixtures: ASME A112.19.1M.
 Stainless-Steel Residential Sinks: ASME A112.19.3.
 G. Comply with the following applicable standards and other requirements specified for lavatory and
- faucets: 1. Backflow Protection Devices for Faucets with Hose-Thread Outlet: ASME A112.18.3M. 2. Faucets: ASME A112.18.1. 3. Hose-Connection Vacuum Breakers: ASSE 1011. 4. Hose-Coupling Threads: ASME B1.20.7.
- Integral, Atmospheric Vacuum Breakers: ASSE 1001.
 NSF Potable-Water Materials: NSF 61.
 Pipe Threads: ASME B1.20.1.
- 8. Supply Fittings: ASME A112.18.1.
 9. Brass Waste Fittings: ASME A112.18.2.
 H. Comply with the following applicable standards and other requirements specified for
- miscellaneous fittings: 1. Atmospheric Vacuum Breakers: ASSE 1001. 2. Brass and Copper Supplies: ASME A112.18.1. 3. Brass Waste Fittings: ASME A112.18.2.
- Drass Waste Fittings. ASME AT12.18.2.
 Comply with the following applicable standards and other requirements specified for miscellaneous components:

 Flexible Water Connectors: ASME A112.18.6.
 Hose-Coupling Threads: ASME B1.20.7.
 Pipe Threads: ASME B1.20.1.
- Pipe Threads: ASME B1.20.1.
 Supply and Drain Protective Shielding Guards: ICC A117.1.
 EXTRA MATERIALS
- 2.2 EXTRA MATERIALS
 A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 1. Faucet Washers and O-Rings: 2 of each type and size installed.
 2. Faucet Cartridges and O-Rings: 2 of each type and size installed.
 3. Provide hinged-top wood or metal box, or individual metal boxes, with separate compartments for each type and size of extra materials listed above.
- 3 See drawings for Fixture Schedule. ART 3 - EXECUTION 1 EXAMINATION
- A. Examine roughing-in of water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before plumbing fixture installation.
 B. Examine cabinets, counters, floors, and walls for suitable conditions where fixtures will be
- C. Proceed with installation only after unsatisfactory conditions have been corrected.
- 3.2 INSTALLATION
 A. Assemble plumbing fixtures, trim, fittings, and other components according to manufacturers' written instructions.
- B. Install floor-mounting fixtures on closet flanges or other attachments to piping or building substrate.C. Install wall-mounting fixtures with tubular waste piping attached to supports.
- D. Install counter-mounting fixtures in and attached to casework.
 E. Install fixtures level and plumb according to roughing-in drawings.
 F. Install water-supply piping with stop on each supply to each fixture to be connected to water distribution piping. Attach supplies to supports or substrate within pipe spaces behind fixtures. Install stops in locations where they can be easily reached for operation.
 1. Exception: Use ball, gate, or globe valves if supply stops are not specified with fixture. Valves are specified in Division 15 Section "Valves."
- G. Install trap and tubular waste piping on drain outlet of each fixture to be directly connected to sanitary drainage system.H. Install flushometer valves for accessible water closets and urinals with handle mounted on wide
- side of compartment. Install other actuators in locations that are easy for people with disabilities to reach.
 I. Install toilet seats on water closets.
 I. Install faucet-spout fittings with specified flow rates and patterns in faucet spouts if faucets are
- J. Install faucet-spout fittings with specified flow rates and patterns in faucet spouts if faucets are not available with required rates and patterns. Include adapters if required.
 K. Install water-supply flow-control fittings with specified flow rates in fixture supplies at stop valves.
 L. Install traps on fixture outlets.
- Exception: Omit trap on fixtures with integral traps.
 Install escutcheons at piping wall ceiling penetrations in exposed, finished locations and within cabinets and millwork. Use deep-pattern escutcheons if required to conceal protrucing fittings. Escutcheons are specified in Division 15 Section "Basic Mechanical Materials and Methods." AA. Set receptors and service basins in leveling bed of cement grout. Grout is specified in Division 15 Section "Basic Mechanical Materials and Methods."
- AB. Seal joints between fixtures and walls, floors, and countertops using sanitary-type, one-part, mildew-resistant silicone sealant. Match sealant color to fixture color. Sealants are specified in Division 7 Section "Joint Sealants."
 3.3 CONNECTIONS

 A. Piping installation requirements are specified in other Division 15 Sections. Drawings indicate
- general arrangement of piping, fittings, and specialties.
 B. Connect fixtures with water supplies, stops, and risers, and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.
 3.4 FIELD QUALITY CONTROL
- A. Verify that installed plumbing fixtures are categories and types specified for locations where installed.
 B. Check that plumbing fixtures are complete with trim, faucets, fittings, and other specified components.
- C. Inspect installed plumbing fixtures for damage. Replace damaged fixtures and components.
 D. Test installed fixtures after water systems are pressurized for proper operation. Replace malfunctioning fixtures and components, then retest. Repeat procedure until units operate properly.
 3.5 ADJUSTING
- A. Operate and adjust faucets and controls. Replace damaged and malfunctioning fixtures, fittings, and controls.
 B. Adjust water pressure at faucets and flushometer valves to produce proper flow and stream.
 C. Replace washers and seals of leaking and dripping faucets and stops.
- A. Clean fixtures, faucets, and other fittings with manufacturers' recommended cleaning methods and materials. Do the following:
 1. Remove faucet spouts and strainers, remove sediment and debris, and reinstall strainers and
- 2. Remove sediment and debris from drains.
 A. After completing installation of exposed, factory-finished fixtures, faucets, and fittings, inspect exposed finishes and repair damaged finishes.
 3.7 PROTECTION
- A. Provide protective covering for installed fixtures and fittings.
 B. Do not allow use of plumbing fixtures for temporary facilities unless approved in writing by Owner.
 END OF SECTION 224100

1. REFER TO SHEET P0-00 FOR GENERAL NOTES.

- $\begin{array}{|c|c|c|} \hline \hline 1 & PROVIDE 2" GAS SERVICE WITH PRESSURE REGULATOR AND SHUT-OFF \\ \hline 1 & VALVE AT EACH TENANT SPACE. \end{array}$
- $\langle 2 \rangle$ PROVIDE 1 " GAS LINE (ESTIMATED) TO RADIANT HEATERS.
- $\langle \overline{3} \rangle$ 4" GREASE CAPPED FOR FUTURE USE. PROVIDE CLEANOUT.
- $\langle 4 \rangle$ 4" SANITARY CAPPED FOR FUTURE USE. PROVIDE CLEANOUT.
- $\langle 5 \rangle$ 1" CAPPED CW BRANCH TO TENANT SPACE. PROVIDE SHUT-OFF VALVE.

- $\langle 7 \rangle$ 4" VENT UP AND THROUGH ROOF. COORDINATE LOCATION WITH MECHANICAL EQUIPMENT.
- 8 PROVIDE GAS SUPPLY, SHUT-OFF VALVE AND PRESSURE REGULATOR TO RADIANT HEATER. (50 CFH).
- $\langle 9
 angle$ 3/4" GAS UP TO SHUT-OFF VALVE AND CAP FOR FUTURE RADIANT HEATERS ABOVE. (100 CFH)

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<u>/1</u>

GENERAL NOTES:

1. REFER TO SHEET P0-00 FOR GENERAL NOTES.

- KEY NOTES:
- $\langle 1 \rangle$ 1" CW,3" SAN & 2" VENT TO WATER CLOSET.
- 2 3/4" CW, 2" SAN & 2" VENT TO URINAL.
- $\langle 3 \rangle$ 1/2" HW & CW, 2" SAN & V TO LAVATORY.
- $\langle 4 \rangle$ INSTANTANEOUS WATER HEATER MOUNTED BELOW SINK.
- 1/2" CW, 2" SAN, 1-1/2" VENT FOR DRINKING FOUNTIAN. INSTALL CW AND SANITARY TRAP IN HEATED SIDE OF WALL INSULATION.

	GAS LOA	D SUMMARY
	RADIANT HEATER RH-1	50 CFH
	RADIANT HEATER RH-2	50 CFH
	RADIANT HEATER RH-3	50 CFH
ብ	RADIANT HEATER RH-4	50 CFH
<u> </u>	FUTURE HEATERS	100 CFH
	RETAIL (AREAS 1-6)	2,500 CFH EACH (ESTIMATED)
	TOTAL GAS LOAD	15,300 CFH
	NOTES: 1. DEVELOPED LENGTH OF IN CUBIC FEET GAS/HR A 1.0 PSIG , BASED ON 0.6 2. COORDINATE GAS LOAD CONTRACTOR SHALL CO APPLICATIONS AND PAY	200' SIZED FOR MEDIUM PRESSURE AT 2 PSIG AND A PRESSURE DROP OF SPECIFIC GRAVITY. S WITH GAS COMPANY. OMPLETE ALL REQUIRED ALL ASSOCIATED FEES.

	FAN SCHEDULE							
FAN MOTOR BASIS OF DESIG					BASIS OF DESIGN			
MARK	SERVES	TYPE	CFM	ESP	HP	DRIVE	"MANUFACTURER"	NOTES
EF-01	MENS RESTROOM	INLINE	280	.250	1/8	DIRECT	COOK SQN-D	1-3
EF-02	WOMENS RESTROOM	INLINE	280	.250	1/8	DIRECT	COOK SQN-D	1-3

NOTES: 1. REFER TO ELECTRICAL DRAWINGS FOR SERVICE VOLTAGE CHARACTERISTICS. 2. REFER TO SPECIFICATIONS FOR ADDITIONAL UNIT REQUIREMENTS. 3. FAN SHALL BE CONTROLLED BY LIGHT SWITCH.

ELECTRIC HEATER SCHEDULE					
MARK SERVES		TYPE	ĸw	BASIS OF DESIGN "MANUFACTURER"	NOTES
EH-01	MENS RESTROOM	WALL HEATER	3	MARKEL HF3326TD	1-4
EH-02	H-02 WOMENS RESTROOM WALL HEATER 3		3	MARKEL HF3326TD	1-4

1. REFER TO ELECTRICAL DRAWINGS FOR SERVICE VOLTAGE CHARACTERISTICS. 2. REFER TO SPECIFICATIONS FOR ADDITIONAL UNIT REQUIREMENTS.

3. MAINTAIN ALL MANUFACTURER RECOMMENDED CLEARANCES. 4. PROVIDE BUILT-IN DISCONNECT AND UNIT MOUNTED THERMOSTAT SET TO

MAINTAIN SPACE TEMPERATURE OF 60°F, ADJUSTABLE.

NATURAL GAS UNIT HEATER SCHEDULE							
MARK SERVES TYPE EMMITER INPUT OUTPUT BASIS OF DESIGN						NOTES	
RH-1	LOWER PATIO	RADIANT HEATER	15'	50	40	SPACE RAY CB50-15-N7	ALL
RH-2	LOWER PATIO	RADIANT HEATER	15'	50	40	SPACE RAY CB50-15-N7	ALL
RH-3	LOWER PATIO	RADIANT HEATER	15'	50	40	SPACE RAY CB50-15-N7	ALL
RH-4	LOWER PATIO	RADIANT HEATER	15'	50	40	SPACE RAY CB50-15-N7	ALL

1. REFER TO ELECTRICAL DRAWINGS FOR SERVICE VOLTAGE CHARACTERISTICS.

2. MAINTAIN ALL MANUFACTURER RECOMMENDED CLEARANCES. 3. PROVIDE BUILT IN DISCONNECT AND UNIT MOUNTED THERMOSTAT SET TO MAINTAIN SPACE TEMPERATURE OF 65°F

ADJUSTABLE. 4. UNIT HEATER SHALL BE SUSPENDED FORM STRUCTURE, BOTTOM AT 10'-0" AFF. PROVIDE MOUNTING BRACKET FOR UNIT HEATER.

5. MINIMUM EFFICIENCY SHALL BE 80%.

				Mechanical Compliance St	tatement	
Project I	nformation			Compliance Statement: The pr specifications, and other calcul	oposed mechanical design represented in this docu ations submitted with this permit application. The p	ment is consistent with the building plans proposed mechanical systems have been
Energy Cod	le:	90.1 (2015) Standard		designed to meet the 90.1 (201 mandatory requirements listed	 Standard requirements in COMcheck Version 4.3 in the Inspection Checklist. 	1.5.5 and to comply with any applicable
ocation:	:	Grayson, Georgia		Name - Title	Signature	Date
Climate Zor Project Typ	he: e:	3a New Construction				
Constructio 2115 Log Grayson,	n Site: janville Hwy GA 30017	Owner/Agent:	Designer/Contractor: Jenson Fahie Leppard Johnson & Associates 100 Crescent Centre Parkway Tucker, GA 30084 770-270-1588 jenson@leppardjohnson.com			
Mechani	cal Systems List					
Quantity 1	System Type & Descrip EH-01 (Single Zone): Heating: 1 each - Unit Heat No minimum efficiency m Fan System: None	ption ler, Electric, Capacity = 10 kBtu/h equirement applies				
1	EH-02 (Single Zone): Heating: 1 each - Unit Heat No minimum efficiency re Fan System: None	ter, Electric, Capacity = 10 kBtu/h equirement applies				
1	RH-1 (Single Zone): Heating: 1 each - Radiant H No minimum efficiency re Fan System: None	Heater, Gas, Capacity = 50 kBtu/h equirement applies				
1	RH-2 (Single Zone): Heating: 1 each - Radiant H No minimum efficiency re Fan System: None	Heater, Gas, Capacity = 50 kBtu/h equirement applies				
1	RH-3 (Single Zone): Heating: 1 each - Radiant H No minimum efficiency re Fan System: None	Heater, Gas, Capacity = 50 kBtu/h equirement applies				
1	RH-4 (Single Zone): Heating: 1 each - Radiant H No minimum efficiency re Fan System: None	Heater, Gas, Capacity = 50 kBtu/h equirement applies				
1	RH-5 (Single Zone): Heating: 1 each - Radiant H No minimum efficiency re Fan System: None	Heater, Gas, Capacity = 50 kBtu/h equirement applies				
1	RH-6 (Single Zone): Heating: 1 each - Radiant H	Heater, Gas, Capacity = 50 kBtw/h				

ABBREVIATIONS

	ADDILLA	
 AC	ABOVE CEILING	LAT
AD	ACCESS DOOR	LBS
AFF	ABOVE FINISHED FLOOR	MA
AHU	AIR HANDLING UNIT	MAU
ARCH	ARCHITECT	MAX
BD	BALANCING DAMPER	MBH
BOS	BOTTOM OF STRUCTURE	MIN
CAP		MOD
CD		NC
	CONCRETE	
COP		PILI
001	PERFORMANCE	PRV
CU		PTAC
CW	COLD WATER	
D	DRAIN	RA
dB	DECIBLE	RAG
DB	DRY BULB	RAR
DN	DOWN	RPM
DIA	DIAMETER	RTU
EAT	ENTERING AIR	SA
	TEMPERATURE	SAR
EDH	ELECTRIC DUCT HEATER	SC
EER	ENERGY EFFICIENCY RATIO	SD
EF	EXHAUST FAN	
EFF	EFFICIENCY	SEER
EH	ELECTRIC HEATER	
ESP	EXTERNAL STATIC	SP
	PRESSURE	Т
EXH	EXHAUST	TC
EWH		IE TOO
EVVI		TOS
°⊏		
г с		TVD
F		
FD		пн
FD		V
FPB	PAN POWERED BOX	VAV
FSD	FIRE SMOKE DAMPER	VEL
FT	FEET	VFD
GPM	GALLONS PER MINUTE	W
н	HOOD, HEATER	WB
HA	HEAT OF ABSORPTION	WC
HC	HEATING CAPACITY	WG
HD	HEAD	WSHF
HD	HUB DRAIN	
HP	HORSEPOWER	
HP	HEAT PUMP	
HR	HEAT OF REJECTION	
HW		
KW	KILOWATI	

LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS (WEIGHT)
MA	MAKEUP AIR
MAU	MAKEUP AIR UNIT
MAX	MAXIMUM
MBH	THOUSAND BTUH
MIN	MINIMUM
MOD	MOTOR OPERATED DAMPER
NC	NOISE CONTROL
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAU	OUTSIDE AIR UNIT
PD	PRESSURE DROP
PIU	POWERED INDUCTION UNIT
PRV	PRESSURE REDUCING VALVE
PTAC	PACKAGED TERMINAL AIR
	CONDITIONER
RA	RETURNAIR
RAG	RETURN AIR GRILLE
RAR	RETURN AIR REGISTER
RPM	REVOLUTIONS PER MINUTE
RTU	
SA	
SAR	SUPPLY AIR REGISTER
SC	SENSIBI E CAPACITY
SD	
50	
SEED	
OLLIN	
SP	
т	THERMOSTAT
т ТС	
TOS	
103 те	
TOD	
TVD	
V	
v \/A\/	
WSHP	WATER SOURCE HEAT PUMP

LEGEND THERMOSTAT SUPPLY AIR REGISTER HUMIDITY SENSOR **RETURN AIR GRILLE** Ç02 CARBON DIOXIDE SENSOR EXHAUST REGISTER LINEAR SLOT DIFFUSER SMOKE DETECTOR POINT OF NEW/EXISTING SIDEWALL SUPPLY REGISTER (+)CONNECTION SIDEWALL RETURN AIR REGISTER SP- STATIC PRESSURE SENSOR — MOTOR OPERATED DAMPER - FD FIRE DAMPER FLEXIBLE CONNECTION <u>∖</u>R►Y **RISE IN DUCTWORK** BALANCING DAMPER ELEVATION → FSD FIRE/SMOKE DAMPER DROP IN DUCTWORK SUPPLY AIR DIFFUSER TAG ELEVATION – MARK <u>A</u> BB – AIRFLOW, CFM LINED DUCTWORK NN ----- NECK SIZE NEW DUCTWORK (BOLD) SUPPLY AIR SLOT TAG — MARK <u>A</u> BB- AIRFLOW, CFM (SCREENED) NN LL – LENGTH NECK SIZE EXISTING TO BE REMOVED (HATCHED) RETURN /EXHAUST AIR REGISTER TAG A = AIRFLOW, CFMNN ----- NECK SIZE RETURN AIR GRILLE TAG A ----- MARK NN FACE SIZE LOUVER TAG

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	6.	IN S
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SPECIFICATIONS:

1.

SHEET METAL WORK - GENERAL A. CONSTRUCT DUCTWORK OF G90 GALVANIZED STEEL IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS, 2005 EDITION, UNLESS OTHERWISE SPECIFIED.

B. ELBOWS IN RECTANGULAR SUPPLY DUCTWORK SHALL BE RECTANGULAR, WITH TURNING VANES AS MANUFACTURED BY TUTTLE & BAILEY "DUCTURNS", DURO-DYNE "DUROVANES", OR AERO-DYNE "HEP".

a — Mark

NN FREE AREA

- C. ELBOWS IN ROUND SUPPLY, RETURN AND EXHAUST DUCTWORK SHALL HAVE AS INSIDE RADIUS EQUAL TO THE DUCT WIDTH EXCEPT WHERE OTHERWISE SHOWN OR NECESSITATED BY SPACE CONDITIONS.
- D. CONSTRUCT DUCTWORK TO THE STATIC PRESSURE CLASSES AS INDICATED BELOW: SUPPLY DUCTS: 2" WG RETURN DUCTS: 1" WG

EXHAUST DUCT: 1" WG

- DUCT INSULATION A. DUCT INSULATION SHALL BE FIBER GLASS INSULATION WITH THERMOSETTING
- RESIN AND VAPOR BARRIER. B. INSULATION AND ADHESIVE SHALL HAVE A COMPOSITE FLAME SPREAD RATING 25
- AND A COMPOSITE SMOKE-DEVELOPED RATING OF NOT MORE THAN 50. INSULATION SHALL COMPLY WITH ASTM C553 AND BE PROVIDED WITH
- FACTORY-APPLIED FSK JACKET.
- D. SECURE INSULATION WITH ADHESIVE AND STICK PINS. PROVIDE INSULATION ON SUPPLY AIR DUCTWORK ONLY.
- INDOOR DUCT INSULATION SCHEDULE G. CONCEALED, SUPPLY-AIR DUCT: MINERAL-FIBER BLANKET, 1-1/2 INCHES THICK AND 1.5-LB/CU. FT. NOMINAL DENSITY; THERMAL CONDUCTIVITY NOT TO EXCEED 0.27
- BTU-IN./SQ.FT-°F-HR. EXPOSED (NOT 1" LINED), SUPPLY-AIR DUCT (MP DUCTWORK IN TENANT SPACE AND INLETS TO VAV/PIU BOXES): FLEXIBLE ELASTOMERIC TYPE II SHEET MATERIAL 1" THICK, MINIMUM R=4.2.
- 3. VOLUME DAMPERS
- A. DAMPERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS, 2005 EDITION. B. PROVIDE SINGLE-BLADE DAMPER UP TO SIX (6) INCHES IN WIDTH. PROVIDE MULTIBLADE OPPOSED BLADE DAMPER ABOVE SIX (6) INCHES
- IN WIDTH. C. DAMPER AND BEARINGS SHALL BE SIMILAR TO VENTLOCK NO. 609; DIAL REGULATOR SHALL BE SIMILAR TO VENTLOCK NO. 637, 638, AND 639 WITH COLLAR TO CLEAR INSULATION THICKNESS INSTALLED ON DUCTWORK.

DUCT WORK NOTES:

1. EXHAUST AIR DISCHARGE SHALL BE A MINIMUM OF THREE FEET HIGHER THAN OR A MINIMUM OF TEN FEET FROM INTAKE HOODS.

2. ALL LAY-IN DIFFUSERS SHALL HAVE FOUR-WAY BLOW UNLESS NOTED OTHERWISE.

3. MOUNTING FRAME OF CEILING MOUNTED AIR DISTRIBUTION DEVICES SHALL BE COMPATIBLE WITH CEILING TYPE. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPE.

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

5. MOUNT THERMOSTATS AND/OR TEMPERATURE SENSORS WHERE INDICATED ON PLANS, 48" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.

6. TRANSITION RECTANGULAR DUCTWORK ON THE BOTTOM AND THE SIDES. MAINTAIN DUCTWORK LEVEL AS HIGH AS POSSIBLE UNLESS NOTED OTHERWISE.

7. ALL DUCT TRANSITIONS FROM SQUARE TO ROUND SHALL BE SMOOTH TRANSITION. SPIN-INS AT THE END OF CAPPED DUCTS ARE NOT ACCEPTABLE.

9. DUCT SIZES ARE SHOWN AS INSIDE CLEAR DIMENSIONS.

10. BRANCH ROUND DUCTWORK LOCATED ABOVE INACCESSIBLE CEILING OR SERVING MORE THAN ONE DIFFUSER SHALL HAVE MANUAL DAMPER OMITTED AND HAVE FACE OPERATED DAMPER IN EACH DIFFUSER UNLESS NOTED OTHERWISE.

11. FLEXIBLE DUCT RUNOUTS TO DIFFUSERS SHALL BE INSTALLED FREE OF KINKS AND SAGS. ALL DIFFUSER RUNOUTS SHALL BE SIZED TO MATCH THE INLET OF THE DIFFUSER SERVED. MAX. LENGTH OF FLEXIBLE DUCT IS 6'-0".

12. ACOUSTICALLY SEAL ALL DUCTWORK AND PIPING PENETRATIONS AT DEMISING PARTITIONS TO STRUCTURE.

13. ALL FIRE DAMPERS, IF REQUIRED, SHALL MEET OR EXCEED RATING OF PARTITION IN WHICH INSTALLED AS REQUIRED BY INTERNATIONAL

14. KITCHEN EXHAUST, DRYER EXHAUST, AND COMBUSTION AIR DUCTS SHALL BE SHEET METAL.

15. CONTRACTOR SHALL BALANCE THE AIR AND WATER SYSTEMS AND SUBMIT THREE (3) COPIES OF THE REPORT TO THE ARCHITECT.

16. CEILING HEIGHTS SHOWN ON ARCHITECTURAL DRAWINGS MUST BE MAINTAINED. NO DUCTWORK SHALL BE FABRICATED PRIOR TO RECEIPT OF ACCEPTABLE SHOP DRAWINGS.

EQUIPMENT NOTES:

MECHANICAL CODE, 2006.

1. DASHED DOT LINE AROUND EQUIPMENT INDICATES MANUFACTURER'S RECOMMENDED CLEARANCES FOR SERVICE, MAINTENANCE AND ACCESS. CONTRACTOR SHALL MAINTAIN ALL REQUIRED CLEARANCES FOR ACTUAL EQUIPMENT INSTALLED.

ROOF PLAN NOTES:

1. CURB MOUNTED EQUIPMENT ROUTE PIPING AND CIRCUITING WITHIN CURB.

2. SEAL RACEWAYS AT BOUNDARIES OF COLD AND WARM ENVIRONMENTS.

3. ROOF PENETRATIONS SHALL BE IN ACCORDANCE WITH ROOFING SYSTEM'S INSTRUCTIONS.

4. INSTALL PIPING, RACKS, AND EQUIPMENT AWAY FROM ROOF'S EDGE AND BELOW PARAPET TO PREVENT BEING VISIBLE FROM PUBLIC AREAS. PAINT EQUIPMENT AND RACEWAYS AS NECESSARY TO MATCH SURROUNDING AREAS.

MAINTAIN SEPARATION OF EXHAUST AND INLETS.

NSTALL EQUIPMENT AND DUCTWORK TO PREVENT STANDING WATER ON FLAT SURFACES.

AINTAIN WORKING CLEARANCES FOR ACCESS PANELS AND EQUIPMENT DOORS.

JSE CORROSION RESISTANCE MATERIALS AND FASTENERS. PAINT CUT FERROUS METALS WITH ZINC RICH PAINT.

GENERAL NOTES: (APPLIES TO ENTIRE DRAWING SET)

- 1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LOCAL GOVERNING CODES, STANDARDS AND ORDINANCES AS ADOPTED AND ENFORCED BY THE AUTHORITY HAVING JURISDICTION, INCLUDING LOCAL AMENDMENTS.
- DRAWINGS, IN GENERAL, ARE DIAGRAMMATIC IN NATURE AND ARE INTENDED TO CONVEY, IN CONJUNCTION WITH THE COMPLETE CONTRACT DOCUMENTS, A COMPLETE AND FUNCTIONAL SYSTEM. COORDINATION OF WORK WITH OTHER TRADES IS REQUIRED BEFORE PROCEEDING WITH WORK.
- DO NOT SCALE DRAWINGS USE DIMENSIONS ONLY. FOR DIMENSIONS NOT SHOWN OR IN QUESTION, CONTRACTOR SHALL REQUEST CLARIFICATION FROM ARCHITECT BEFORE PROCEEDING.
- CONTRACTOR SHALL PROVIDE A COMPLETE OPERATIONAL AND 4. FUNCTIONING SYSTEM. CONTRACTOR SHALL PROVIDE CONNECTIONS TO OWNER OR OTHER PARTY'S EQUIPMENT AND DEVICES, UNLESS OTHERWISE NOTED.
- REFERENCE COMPLETE CONSTRUCTION DOCUMENTS (ARCHITECTURAL, PLUMBING, ELECTRICAL, ETC.) PRIOR TO COMMENCING WORK FOR ADDITIONAL INFORMATION AND REQUIREMENTS. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE OWNER'S/ARCHITECT'S ATTENTION BEFORE PROCEEDING WITH WORK.
- CONTRACTOR SHALL MAINTAIN ON SITE, AVAILABLE FOR REVIEW, A MASTER SET OF MARKED UP DRAWINGS REFLECTING "AS BUILT" CONDITIONS. UPON CONCLUSION OF PROJECT, "AS BUILT" DRAWINGS SHALL BE TURNED OVER TO OWNER.
- DETAILS AND SECTIONS ARE INTENDED TO BE TYPICAL AND INDICATE BASIC DESIGN INTENT AND SHALL APPLY TO SIMILAR SITUATIONS. ADAPTATIONS TO SPECIFIC PROJECT CONDITIONS MAY BE REQUIRED. BASIC DESIGN INTENT IS TO BE RETAINED.
- AFTER COMPLETION OF WORK ALL ADDITIONAL MATERIALS REMAINING DUE TO CONSTRUCTION SHALL BECOME THE PROPERTY OF THE GENERAL CONTRACTOR AND SHALL BE DISPOSED OF REMOVED FROM THE SITE IN ACCORDANCE WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, AND REGULATIONS UNLESS NOTIFIED OTHERWISE CONTRACTOR SHALL ALSO REMOVE ALL WASTE DEBRIS, RUBBISH, TOOLS, EQUIPMENT AND SURPLUS MATERIALS UPON COMPLETION OF WORK THROUGHOUT CONSTRUCTION, SITE SHALL BE ORGANIZED AND CLEANED BY CONTRACTOR ON A DAILY BASIS.
- PENETRATIONS INTO OR THROUGH, OF EITHER VERTICAL OR HORIZONTAL FIRE RATED BARRIERS SHALL BE PROTECTED BY A SYSTEM LISTED BY A RECOGNIZED TESTING AGENCY. PROVIDE A DETAIL AND LISTING NUMBER PER NFPA 101 LIFE SAFETY CODE.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT 10. LOCATION OF EQUIPMENT AND DEVICES AT CEILING . IF AN ITEM IS NOT SHOWN SUBMIT RECOMMENDED LOCATION FOR ARCHITECT'S APPROVAL.
- 11. WHERE SPACE ABOVE SUSPENDED CEILING IS BEING UTILIZED FOR RETURN AIR PLENUM. MATERIALS EXPOSED WITHIN PLENUMS SHALL BE NON-COMBUSTIBLE, OR SHALL 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.
- CONTRACTOR SHALL COORDINATE VOLTAGE AND PHASE OF EACH ITEM OF 12. EQUIPMENT PRIOR TO ORDERING.
- 13. SMOKE DETECTORS SHALL BE LOCATED AS INDICATED IN THE MECHANICAL SCHEDULES AND IN CONFORMANCE WITH NFPA 90A.

DESIGN NOTES:

7.

9.

1. OUTDOOR AIR DESIGN CONDITIONS: ATLANTA, GA ASHRAE FUNDAMENTALS HANDBOOK - 2017 SUMMER - 91.6°F DB / 73.6°F WB (1% COLUMN) WINTER - 26.4°F (99% COLUMN)

2. INDOOR DESIGN CONDITIONS: SUMMER - 75°F WINTER - 70°F

CODES:

INTERNATIONAL MECHANICAL CODE 2018 INTERNATIONAL ENERGY CONVERSATION CODE 2015

MECHANICAL LEGENDS, SCHEDULES AND NOTES PROJECT NUMBER: M0-00 20005.00

GENERAL NOTES:

1. REFER TO SHEET M0-00 FOR GENERAL NOTES. KEY NOTES:

1 TENANT MECHANICAL EQUIPMENT SHALL BE LOCATED ON THE ROOF. TENANT SHALL BE RESPONSIBLE FOR COORDINATING OUTSIDE AIR INTAKES AND EXHAUST OUTLETS WITHIN THEIR OWN SPACE TO ADJACENT SPACES AT LEAST 10'-0" FROM EACH OTHER (TYPICAL).

GENERAL NOTES:

1. FUTURE TENANTS SHALL COORDINATE LOCATIONS OF ROOF MOUNTED EQUIPMENT WITH STRUCTURE AND LANDLORD.

	ABBREVIATIONS					
ABBREV	IATIONS ARE FOR REFERENCE ONLY AND N IN CONSTRUCTION DC	MAY OR MAY OCUMENTS.	NOT BE USED ELSEWHERE			
A	AMPERE	LED	LIGHT EMMITTING DIODE			
AC AFCI	ALTERNATING CURRENT ARC-FAULT PROTECTION		LIQUIDTIGHT FLEXIBLE			
		LV LTG	LIGHTING			
AFG	ABOVE FINISHED GRADE	LRA	LOCK ROTOR AMPS			
		M MATV	MOTOR MASTER ANTENNA TELEVISIO			
AWG	AMERICAN WIRE GAUGE	MCB	MAIN CIRCUIT BREAKER			
ATS	AUTOMATIC TRANSFER SWITCH	MCC MIN	MOTOR CONTROL CENTER			
BKR	BREAKER	MISC	MISCELLANEOUS			
BLDG	BUILDING BUILDING MANAGEMENT SYSTEM		MAIN LUGS ONLY			
С	CONDUIT	NC	NORMALLY CLOSED			
	CIRCUIT BREAKER	NEC	NATIONAL ELECTRICAL			
CL	CENTERLINE	NFPA	NATIONAL FIRE PROTECTION			
CKT		NIC	ASSOCIATION			
CT	CURRENT TRANSFORMER	NO	NORMALLY OPEN			
CU		NTS	NOT TO SCALE			
	DEDICATED	P	POLE/PHASE			
DN		PNL	PANEL BOARD OR PANEL			
DWG	DRAWING	PVC	POLY-VINYL CHOLRIDE			
	A EMERGENCY	R	RELOCATED			
ELEC	ELECTRICAL	REC	ROOM			
ELEV		RMC	RIGID METAL CONDUIT			
	ELECTRICAL METALLIC TOBING ELECTRICAL NONMETALLIC TUBING	SOFT	SOLIARE FOOT			
EX	EXISTING PANEL	STD	STANDARD			
		SUSP CLG	SUSPENDED CEILING)			
FACP	FIRE ALARM CONTROL PANEL	ТВ	TERMINATION BLOCK			
FL FLA	FLOOR FULL LOAD AMPS	TC				
G OR GI	NGROUND	TEMP	TEMPERATURE			
GEN		TV TYP	TELEVISION TYPICAI			
GFI	(GROUND FAULT CIRCUIT INTERRUPTER)	UG	UNDERGROUND			
НОА	HAND OFF AUTOMATIC	UL	UNDERWRITERS LABORATOR			
HP	HORSEPOWER	UPS	UNINTERRUPTED POWER			
HVAC	CONDITIONING		SUPPLY			
HZ	HERTZ	V VA	VOLIS VOLT-AMPERE			
LED		Ŵ	WATTS			
IG IMC	ISOLATED GROUND INTERMEDIATE METAL CONDUIT	WP	WEATHERPROOF			
J OR JB	JUNCTION BOX	XFMR XP	TRANSFORMER			
KVA		Y	WYE			
KCMIL	THOUSAND CIRCULAR MILLS	Z	IMPEDANCE			

	ELECTRICAL SYMBOL LEGE	ΝD			
SYMBOLS LISTED BELOW ARE FOR REFERENCE AND FOR THE USE IN					
SYMBOL	UNDERSTANDING THE DESIGN INTENT. I S LISTED BELOW ARE NECESSARILY USED CONSTRUCTION DOCUMENTS.	NOT ALL ELSEWHERE IN TI	HE		
SYMBOL(S)	DESCRIPTION	MOUNTING HEIGHT	NOTES		
¢∕₽/₽	WALL (SINGLE/DUPLEX/QUAD)	E3 OR 18" A.F.F	E2		
๎๎๎๎๎๎๎ฌ/⊞	FLOOR (SINGLE/DUPLEX/QUAD)	E3	E2		
@/@/⊕	CEILING (SINGLE/DUPLEX/QUAD)	E3	E2		
\$ /∯/ \$	SPECIAL HEIGHT RECEPTACLES (WALL/FLOOR/CEILING)	E4 OR 43" A.F.F	E2		
•	HALF SWITCHED DUPLEX	E3 OR 18" A.F.F	E2		
₽/₩	GROUND FAULT DUPLEX RECEPTACLE	E3 OR 18"/43" A.F.F	E2		
₽/⊠/⊘	SPECIAL PURPOSE RECEPTACLE(S) (WALL/FLOOR/CEILING)	E3	E2		
₽/ᡚ/ወ	JUNCTION BOX (WALL/FLOOR/CEILING)	E3	E2		
®	2 COMPARTMENT POWER / COMMUNICATIONS POLE				
Ŷ	CLOCK RECEPTACLE				
H-1,3,5	HOMERUN TO PANEL "H" AND TERMINATED ON POLES 1, 3 & 5		E1		
\frown	CIRCUITING INSTALLED CONCEALED OR ABOVE CEILING				
/~~`	CIRCUITING INSTALLED CONCEALED IN SLAB OR BELOW GRADE (DASHED)				
	CIRCUITING INSTALLED EXPOSED				
u⊫	GROUND				
\$/⊅/K	SWITCH - TOGGLE/DIMMER/KEYED TOGGLE	E3 OR 42" A.F.F	E2		
\$ ₃ / ⊅ ₃ / ₭ ₃	THREE-WAY SWITCH - TOGGLE/DIMMER/KEYED	E3 OR 42" A.F.F	E2		
₽L	LOW VOLTAGE DIMMER SWITCH	E3 OR 42" A.F.F	E2		
\$4	FOUR-WAY SWITCH	E3 OR 42" A.F.F	E2		
\$₀	WALL MOUNTED OCCUPANCY SENSOR WITH INTEGRAL SWITCH	E3 OR 42" A.F.F	E2		
0•	CEILING MOUNTED OCCUPANCY SENSOR - CLOSED CIRCLE INDICATES SWITCH LEG				
@•	WALL MOUNTED OCCUPANCY SENSOR - CLOSED CIRCLE INDICATES SWITCH LEG				
хх 🗗	NON-FUSED DISCONNECT - XX DESIGNATES AMP RATING				
XX/YY⊠J	FUSED DISCONNECT - XX DESIGNATES AMP RATING AND YY FUSE SIZE. * FUSE PER EQUIPMENT MANUFACTURES RECOMMENDATIONS.				
	FLUSH MOUNTED PANELBOARD				
	SURFACE MOUNTED PANELBOARD				
GEN	REMOTE GENERATOR CONTROL PANEL				
ELEV	ELEVATOR CONTROL PANEL				
Т	DRY TYPE TRANSFORMER				
NOTES: E1. CIRCUIT NUMBERS SEPARATED BY COMMAS INDICATE MULTIWIRE BRANCH CIRCUIT IN COMMON RACEWAY. CIRCUIT NUMBERS SEPARATED BY BACKSLASH INDICATE MULTIPLE BRANCH CIRCUITS. E2. MOUNTING DIMENSIONS ARE TO THE CENTER OF THE DEVICE OR OUTLET MEASURED ABOVE GRADE OR FINISHED FLOOR, UNLESS OTHERWISE NOTED. E3. CONTRACTOR SHALL CONFIRM ELECTRICAL DEVICE MOUNTING					

DESIGN, ETC. DOCUMENTS, WHICH SHALL TAKE PRECEDENCE E4. IN WALL, 6" ABOVE COUNTER TOP OR BACKSPLASH U.N.O

GRAPHICAL STANDARDS					
DRAWING CALLOUT DRAWING NUMBER					
	X1 SCALE: 1/8" = 1'-0" >				
SHEET NUMBER					
ENLARGED C	ALLOUT				
	DRAWING NUMBER CENLARGED				
	DRAWING				
SECTION CAL	LOUT				
		DAMINIO			
	SHEET NUMBER	RAWING			
PLAN & TRUE	NORTH				
	PLAN NORTH				
		TH			
REVISION CL	OUD				
	INDICATES GENERAL				
	REGION WITH REVISIONS				
REVISION TR					
	LIGHTING FIXTURE SYMBOL LEGEND				
SYMBO	LS LISTED BELOW ARE FOR REFERENCE AND FOR	R THE USE	IN		
SYMBOL	S LISTED BELOW ARE NECESSARILY USED ELSEV	LL VHERE IN	THE		
		MOUNT	NOTES		
		HEIGHT			
•	RECESSED FIXTURE W/ EMERGENCY BACKUP		L1 L1&L2		
• •	SURFACE FIXTURE		L1		
	FLUORESCENT STRIP		L1		
●	FLUORESCENT STRIP WITH EMERGENCY		L1&L2		
	FLUORESCENT TROFFER		L1		
	FLUORESCENT TROFFER W/ EMERGENCY		L1&L2		
	FLUORESCENT WALL FIXTURE W/		L1&L2		
			11		
	FLUORESCENT WALL FIXTURE		L1&L2		
	FIXTURE				
	FLUORESCENT OVERHEAD FIXTURE		L1		
¥	WALL OR SCONCE FIXTURE W/		L1&L2		
▼			1.4		
<u>6</u>	DIRECTIONAL FIXTURE		L1 L1		
<u> </u>					
	PENDANT FIXTURE		L1		
			L1		
ा∯1 छ ≜_ल≜			L1		
오 ▲ ►	EGRESS LIGHT HEADS		L1		
*	EGRESS FIXTURE		L1		
â	STEP OR RECESSED WALL FIXTURE W/		L1		
~			1 4		
			LI		
	PADDLE FAN (SHOWN WITH LIGHTS)		L1		
•	EXHAUST FAN				
♀ ↓→			11		
	EXTERIOR WALL PACK FIXTURE		L1		
 	POLE AND FIXTURE		L1		
•	BOLLARD FIXTURE		L1		
NOTES:					
L1. CAP	PITAL LETTERS ADJACENT FIXTURES DESIGNATES	S FIXTURE	TYPE IN		
	VER CASE LETTER DESIGNATES DIMMING ZONE C		LEG.		
LZ. SH/		, LIGHTING	J.		

FIRE ALARM SYMBOL LEGEND										
SYMBOLS LISTED BELOW ARE FOR REFERENCE AND FOR THE USE IN UNDERSTANDING THE DESIGN INTENT. NOT ALL SYMBOLS LISTED BELOW ARE NECESSARILY USED ELSEWHERE IN THE CONSTRUCTION DOCUMENTS.										
SYMBOL(S)	DESCRIPTION	MOUNT HEIGHT	NOTES							
S	SMOKE DETECTOR		F1							
E	PULL STATION	48" AFF								
Ľ	WALL MOUNTED HORN OR SPEAKER		F2							
X	WALL MOUNTED STROBE		F2							
FACP	FIRE ALARM PANEL		F2							
NOTES:										
F1. MOUNTING HEIGHT IS TO CENTER OF DEVICE.										
F2. DEVICE SHALL BE MOUNTED AT +80" ABOVE THE HIGHEST FLOOR LEVEL WITHIN THE SPACE OR 6" BELOW THE CEILING, WHICHEVER IS LOWER. MOUNTING HEIGHTS ARE TO BOTTOM OF DEVICE. STROBES SHALL BE 75CD. UNLESS OTHERWISE NOTED.										

WING SCAL	.E
D	
DRAWING	
PRTH	
or the Use All Where In	E IN THE
MOUNT	NOTE

GENERAL NOTES: (APPLIES TO ENTIRE DRAWING SET)

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, LOCAL GOVERNING CODES, STANDARDS AND ORDINANCES AS ADOPTED AND ENFORCED BY THE AUTHORITY HAVING JURISDICTION.
- DRAWINGS, IN GENERAL, ARE DIAGRAMMATIC IN NATURE AND ARE INTENDED TO CONVEY, IN CONJUNCTION WITH THE COMPLETE CONTRACT DOCUMENTS, A COMPLETE AND FUNCTIONAL SYSTEM. COORDINATION OF WORK WITH OTHER TRADES IS REQUIRED BEFORE PROCEEDING WITH WORK
- DO NOT SCALE DRAWINGS USE DIMENSIONS ONLY. FOR DIMENSIONS NOT SHOWN OR IN QUESTION, CONTRACTOR SHALL REQUEST CLARIFICATION FROM ARCHITECT BEFORE PROCEEDING.
- METHODS, MATERIALS AND PROVISIONS OF DIVISION 26 SPECIFICATIONS, GENERAL CONDITIONS AND DIVISION 1 SPECIFICATION SECTIONS ARE AN INTEGRAL PART OF THE BID AND CONSTRUCTION DOCUMENTS AND MUST BE RIGIDLY ADHERED TO.
- CONTRACTOR SHALL PROVIDE A COMPLETE OPERATIONAL AND FUNCTIONING SYSTEM. CONTRACTOR SHALL PROVIDE CONNECTIONS TO OWNER, OR OTHER PARTY'S EQUIPMENT AND DEVICES, UNLESS OTHERWISE NOTED.
- REFERENCE COMPLETE CONSTRUCTION -DOCUMENTS (ARCHITECTURAL, MECHANICAL, PLUMBING, ETC.) PRIOR TO COMMENCING WORK FOR ADDITIONAL INFORMATION AND REQUIREMENTS. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE OWNER'S/ARCHITECT'S ATTENTION BEFORE PROCEEDING WITH WORK.
- CONTRACTOR SHALL MAINTAIN ON SITE, AVAILABLE FOR REVIEW, A MASTER SET OF MARKED UP DRAWINGS REFLECTING "AS BUILT" CONDITIONS. UPON CONCLUSION OF PROJECT, "AS BUILT" DRAWINGS SHALL BE TURNED OVER TO OWNER.
- DETAILS AND SECTIONS ARE INTENDED TO BE TYPICAL AND INDICATE BASIC DESIGN INTENT AND SHALL APPLY TO SIMILAR SITUATIONS. ADAPTATIONS TO SPECIFIC PROJECT CONDITIONS MAY BE REQUIRED. BASIC DESIGN INTENT IS TO BE RETAINED.
- AFTER COMPLETION OF WORK ALL ADDITIONAL MATERIALS REMAINING DUE TO CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF REMOVED FROM THE SITE IN ACCORDANCE WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, AND REGULATIONS UNLESS NOTIFIED OTHERWISE CONTRACTOR SHALL ALSO REMOVE ALL WASTE DEBRIS, RUBBISH, TOOLS, EQUIPMENT AND SURPLUS MATERIALS UPON COMPLETION OF WORK THROUGHOUT CONSTRUCTION, SITE SHALL BE ORGANIZED AND CLEANED BY CONTRACTOR ON A DAILY BASIS.
- PENETRATIONS INTO OR THROUGH, OF EITHER VERTICAL OR HORIZONTAL FIRE RATED BARRIERS SHALL BE PROTECTED BY A SYSTEM LISTED BY A RECOGNIZED TESTING AGENCY. PROVIDE A DETAIL AND LISTING NUMBER PER NFPA 101 LIFE SAFETY CODE.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF EQUIPMENT AND DEVICES AT CEILING. IF AN ITEM IS NOT SHOWN SUBMIT RECOMMENDED LOCATION FOR ARCHITECT'S APPROVAL.
- SPACE ABOVE SUSPENDED CEILING IS BEING UTILIZED FOR RETURN AIR PLENUM. MATERIALS EXPOSED WITHIN PLENUMS SHALL BE NON-COMBUSTIBLE, OR SHALL 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.
- CONTRACTOR SHALL REVIEW CONSTRUCTION DOCUMENTS TO IDENTIFY MISCELLANEOUS POWER REQUIREMENTS AND PROVIDE CIRCUITING AS REQUIRED. COORDINATE POWER REQUIREMENTS WITH OTHER INSTALLERS, MISCELLANEOUS POWER REQUIREMENTS FOR CONTROL PANELS AND SMALL EQUIPMENT IS MANUFACTURER DEPENDENT AND MAY NOT BE SHOWN OR WILL BE DEFINED BY OTHERS. TYPICAL SYSTEMS INCLUDE, BUT NOT LIMITED TO FIRE ALARM SYSTEMS - FACP POWER (DEDICATED CIRCUIT), FAAP POWER, REMOTE POWER SUPPLIES,
- DOOR HOLDS, ETC. PROVIDE GROUNDING CONDUCTOR FOR EACH CIRCUIT IN
- ADDITION TO ANY RACEWAY GROUNDING. PROVIDE A SEPARATE NEUTRAL FOR EACH BRANCH CIRCUIT.
- DO NOT SHARE NEUTRALS. 16. GFI DEVICES SHALL BE READILY ACCESSIBLE IN ACCORDANCE WITH NEC ARTICLE 210.8. SHOULD RECEPTACLES BE RENDERED INACCESSIBLE BY INSTALLATION OF EQUIPMENT (I.E. VENDING MACHINES, KITCHEN EQUIPMENT, ETC.), GFI PROTECTION SHALL BE PROVIDED BY THE CIRCUIT BREAKER AT THE PANEL.
- 17. OUTLET BOX HEIGHTS SHALL BE ADJUSTED TO AVOID INSTALLATION OF BOXES ON MULTIPLE SURFACE PLANES (I.E. TRANSITION OF TILE MOUNTED ON TOP OF SHEET ROCK). FACEPLATES SHALL BE INSTALLED SO AS TO COMPLETELY COVER THE OPENING AND SEAT AGAINST MOUNTING SURFACE PER NEC 404.9(A) AND NEC 406.5. COORDINATE CHANGES WITH OWNER/ARCHITECT.
- FINAL SELECTION OF EQUIPMENT MAY VARY FROM BASIS OF DESIGN. CONTRACTOR IS TO COORDINATE EQUIPMENT BRANCH CIRCUIT REQUIREMENTS (VOLTAGE, AMPERAGE, CIRCUIT CONDUCTORS, OVER CURRENT PROTECTION, AND METHOD OF TERMINATION) WITH ACTUAL EQUIPMENT TO BE PURCHASED BEFORE COMMENCING ASSOCIATED WORK.
- MAKE FINAL CONNECTIONS TO MOTORS, VIBRATING EQUIPMENT AND WATER HEATERS WITH LIQUID-TIGHT FLEXIBLE METAL CONDUIT(LFMC) AND CONNECTORS. MAKE FINAL CONNECTIONS TO LIGHT FIXTURES WITH TYPE MC CABLE OR FLEXIBLE METAL CONDUIT(FMC) AND CONNECTORS.
- LOCATE ALL STRUCTURAL MEMBERS PRIOR TO CORING ANY HOLES. NO STRUCTURAL MEMBERS SHALL BE PENETRATED. UTILIZE GROUND PENETRATING RADAR TO LOCATE ALL REINFORCEMENT AT CORE LOCATIONS. STRUCTURAL ENGINEER TO REVIEW THESE AREAS PRIOR TO CORING OPERATIONS. NO REINFORCEMENT SHALL BE CUT WITHOUT

AUTHORIZATION.

ELECTRICAL SPECIFICATIONS

- PART 1 GENERAL
- 1.1 GENERAL A. The Contract's general provisions including General, Supplementary and other Conditions apply to this Division. **1.2 DESCRIPTION**
- A. Systems as indicated on Drawings and specified herein cover the labor, materials, equipment and supervision for complete and functional electrical svstems. **1.3 QUALITY ASSURANCE**
- A. Work shall be in accordance with the latest edition of governing Codes, Agencies and Standards adopted where the Work is performed: 1. State and Local Building Codes 2. Life Safety Code - NFPA 101
- 3. 2020 National Electrical Code NFPA 70
- 4. National Electrical Manufacturers Association NEMA 5. Underwriter's Laboratories, Inc. - UL
- 6. Standard on Accessible and Usable Buildings and Facilities ANSI A117.1
- 1.4 PERMITS AND FEES A. Work requiring permits and fees shall be paid by Contractor including any incidental charges, additional work, equipment, etc.. Contractor shall deliver to the Owner certificates and inspection reports issued by the authority having jurisdiction and inspections.
- 1.5 DRAWINGS AND COORDINATION OF WORK A. Drawings are graphical in nature and indicate the general requirements for the work. Review complete Contract Documents, such as Architectural, Interior Design, Civil, Structural, Mechanical, Plumbing, etc.. drawings before commencing work. B. Coordinate electrical work with other equipment and systems to avoid conflicts with other work, provide equipment access, and obtain clean and
- professional installation. C. Reference other contract documents for dimensions to layout equipment unless dimensions are indicated in electrical documents. Any discrepancies shall be immediately brought to the owner's/architect's attention before proceeding with work. Do not scale drawings. D. Provide electrical connections of the proper voltage and ampacity to equipment requiring electrical power indicated throughout Contract Documents. E. Provide service and metering per utility company requirements.
- **1.6 SUBSTITUTIONS**
- A. Substitution of material and equipment other than as specified requires prior approval by Architect. 1.7 SUBMITTALS, MANUALS AND WARRANTIES A. Submit to Architect prior to purchase equipment cut sheets and/or shop drawings clearly indicating specific details and information to clearly demonstrate contractor's understanding and compliance with Construction Documents requirements. The following submittals are required: Light fixtures, lamps and associated control devices.
- Panelboards Devices requiring color coordination with interior finishes including floorboxes and pokethrus. Power metering
- Fire Alarm B. Prior to project completion submit to Architect equipment operation manuals, recommended spare parts list, certificates and warranties. C. Contractor shall warrant materials and workmanship from final date of acceptance for a period of one year. Contractor shall promptly repair, remedy, or replace defects without cost to Owner.
- PART 2 PRODUCTS
- 2.1 MATERIALS
- A. Materials are to be new and in good condition suitable for intended application.
- 22 RACEWAYS A. Metallic conduit shall be Electric Metallic Tubing (EMT) or Intermediate Metal Conduit (IMC). EMT connections shall be compression type and IMC connections shall be threaded. Connectors shall be insulated throat. B. Non-Metallic conduit shall be Rigid Non-Metallic Conduit (RNC) PVC schedule 40 and 80 and Electrical Non-Metallic Tubing (ENT). RNC connections shall be solvent welded and ENT connectors shall be of the snap-on type. C. Flexible conduit shall be non-jacketed Flexible Metal Conduit (FMC) for light fixtures and dry locations. Corrosive and wet locations shall be Liquidtight Flexible Non-Metallic Conduit (LFNC).
- 2.3 CONDUCTORS AND CABLES (600 VOLT OR LESS)
- A. Conductors shall be a minimum of No. 12 AWG. Emergency system's conductors shall be a minimum of No. 10 AWG. B. Conductor insulation shall be rated for 600 Volts C. Conductors No. 10 and smaller shall be solid, rated 90 degree C., Type THHN/THHW. (Increase conductor by one size for every 75' increment of distance from the panel board for every 120 volt circuit and for every 200' for 277 volt circuits.) Conductors No. 8 and larger shall be stranded, rated 90 degree C., Type THHN/THHW-2 or XHHW-2. Conductors No. 4 and larger shall be type XHHW. D. Conductors shall be copper, except conductors 2/0 AWG and larger may be aluminum. Aluminum conductors shall be terminated with compression connectors and conductive grease. Design is based on copper conductors. Use of aluminum requires Contractor to make adjustments for conductor
- ampacity and conduit fill. E. Hardware and supports shall consist of non-corrosive materials or zinc coating. F. Wire connectors shall be equal to scotch lock for #8 and smaller and equal to T & B "Lock Tite" for #6 and larger. 2.4 OUTLET BOXES
- A. Interior outlet boxes shall be galvanized sheet steel metal, cast aluminum or PVC. B. Light fixture outlet boxes shall be four-inch octagon 1 - 1/2inch deep. Exception: 3 1/2inch octagon box can be used when fixture will not provide adequate cover
- C. Switch, receptacle, and wall junction boxes shall be four-inch square and 1 1/2 inch deep. GFI receptacle boxes shall be 2 3/4 inch deep. Single light switch locations may use single gang 3 1/2inch deep box. D. Plaster rings shall be galvanized steel and selected for installed devices.
- E. Fan outlet boxes shall be rated for fan service. F. Floor boxes shall be PVC with cover and fitting color and style selected by Architect
- 2.5 DEVICES
- A. Unless otherwise noted, all light switches and receptacles shall be "Nova T" style by Lutron with plastic cover plates or equal: "Sierraplex" series by Pass & Seymour/Legrand or "Stylebeine" series by Hubbell. Refer to architectural documents for color and finishes. B. Wall plates shall be one piece selected for number and type of devices. Architect shall select material and color. C. Switches shall be quiet action type with strap steel with integral ground.
- D. Dimmers shall be of Lutron Nova NT series. Switches shall be Lutron Nova NT series where adjacent to Nova series dimmers. E. Isolated ground receptacles shall have integral TVSS 3 mode protection with LED indicator. F. GFCI receptacles shall be non-circuit protection type with LED trip indicator. G. Weatherproof covers are to be of the in use type.
- 2.6 LIGHT FIXTURES
- A. Reference Lighting Fixture Schedule. Catalog numbers shall be confirmed for intended use, such as mounting, quantity and type of lamps, dry/damp/wet location ratings, etc.. Provide fixture suitable for intended use and application. B. Provide supports, back boxes, plaster frames, globes, lamps, transformers, ballasts, etc.. for a complete installation and suitable to cover surface
- C. Provide integral thermal protection for recessed incandescent fixtures. D. Recessed fixtures installed in non-accessible ceilings shall be completely serviceable through fixture. 2.7 DISTRIBUTION AND PANELBOARDS
- A. Provide Nema PB 1, 6 inches deep, 20 inches wide for 240 volt and less; type 1 cabinet box enclosure. Provide proper surface cabinet front with concealed trim clamps, concealed hinge, and flush lock all keyed alike, finished manufacturer's standard enamel. B. Busbars shall be copper or tin plated aluminum.
- C. Breakers shall be bolt-on type with 75 degree C rated terminations.
- D. Provide equipment with proper AIC rating.
- 2.8 FIRE ALARM A. Fire alarm system shall be of the addressable type, voice annunciation for places of assemble, and compliant with NFPA and local codes. Battery backup shall be integral within Fire Alarm Control Panel and sized per code to accommodate additional devices. B. Strobes shall be synchronized and level of candelas shall be field adjustable. C. Wiring shall be a minimum of #18 AWG.

G. Provide access panels as necessary to maintain equipment and device accessibility. Group equipment and devices together to minimize number of access panels. Obtain Architect's approval before commencing work. 3.2 RACEWAYS A. Conduits shall be run straight or at right angles to walls, ceiling and structural members. Support conduit directly to structure (e.g., studs,

stop materials and methods. C. Conduits shall be a minimum of 1/2 inch. Exceptions are minimum 3/4 inch conduit installed below grade or in concrete and minimum 3/8 inch flexible conduit whips for light fixture.

ELECTRICAL SPECIFICATIONS

A. Equipment and materials are to be installed per applicable Codes, Standards, and manufacturers recommendations.

disconnects, panels, etc. Labels shall indicate equipment type, name, equipment served and supply source.

I. Install #18 AWG galvanized wire in empty conduits for future use or for other trades (telephone, data, etc.).

A. Review Contract Documents for equipment and systems requiring electrical power and make connections.

C. Back to back outlet boxes in the same wall cavity are to be offset by a minimum of 12 inches.

B. Install receptacles above countertops and backsplash with major axis horizontal and neutral up.

E. GFCI receptacles are to be installed so that a trip does not de-energize another downstream device.

G. Install multiple switches in the same location in multiple gang box and common single piece cover plate.

oversized plates and, when used, oversized plates shall be installed throughout the room.

D. Verify lighting fixture mounting compatibility with ceiling type before purchasing fixtures.

D. Seal unused openings. Use snap in for sheet metal boxes and screw type for cast boxes.

clamps which wrap around entire face of stud. Do not support using screws on face of stud.

F. Suspend outlet boxes with 3/8 inch all thread rod and double nut connections.

backsplash, joints in masonry walls or tile, to avoid conflict with equipment, etc.

I. Install in use cover plates for weatherproof location unless otherwise noted.

A. Fixtures are to be properly rated for location installed: dry, damp, wet.

E. Install blanks for unused breaker locations and seal any unused opening.

smoke detectors for smoke dampers, etc. Provide remote test and reset panel for duct detectors.

2015 IECC

Area Category

1-1 Story Shell Bldg (Common Space Types: Dining Area - General)

ELECTRICAL SHEET INDEX

ELECTRICAL LEGENDS AND NOTES

E1-10 ELECTRICAL FLOOR PLAN

E1-11 ELECTRICAL RISER & DETAILS

nterior Lighting PASSES: Design 79% better than code

mandatory requirements listed in the Inspection Checklist.

Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast

1-1 Story Shell Bldg (Common Space Types:Dining Area - General)

The Railyard: Building 5

New Construction

Owner/Agent:

COMcheck Software Version COMcheckWeb

B. Protect smoke and heat detectors from dust until final acceptance.

G. Mount flush mounted boxes to within 1/8inch of surface but not protruding.

K. Interior feeders in dry locations shall be EMT, in wet locations, mechanical rooms or exposed to damage shall be IMC.

E. After work completion clean work of construction debris, dirt, paint, etc.

H. Provide wet or rain tight connectors in wet locations.

O. Provide insulated bushings for conduit and sleeve ends.

Switch legs and traveler - Distinctly different than above

D. Install wall switches within 12 inches of door strike.

H. Install blank cover plates on unused outlet boxes.

finished floor unless a warning element is at 27 inch AFF.

G. Aim, adjust, and position fixtures per Architect's direction.

3.7 DISTRIBUTION AND PANELBOARDS

system is in compliance for governing authorities.

ad provide a pigtail within outlet box for device conne

A. Provide extension rings as necessary to support device at surface.

3.3 CONDUCTORS AND CABLES

208/120 Volt Phases- Black, Red, Blue

Isolated Ground - Green w/Yellow stripe

Neutral - White (240 and 208 V),

Equipment Ground - Green

standards shall be:

3.4 OUTLET BOXES

before device installation

3.5 DEVICES

3.6 LIGHT FIXTURES

fixtures in ceiling grids.

otherwise

3.8 FIRE ALARM

Project Information

Additional Efficiency Package(s)

Allowed Interior Lighting Power

Proposed Interior Lighting Power

"D2" LED Downlights: LED A Lamp 25W:

"C" 4' LED Strip Light: LED Panel 38W:

Interior Lighting Compliance

Project Title: The Railyard: Building 5

Statement

Name - Title

Data filename:

E0-00

Credits: 1.0 Required 1.0 Proposed

Reduced Lighting Power, 1.0 credit

Energy Code:

Project Title:

Project Type:

Construction Site:

J. Service entrance raceways shall be IMC above grade and RNC underground.

M. Branch circuits in dry locations shall be EMT and in wet locations shall be RNC.

B. Test conductor insulation (megger) for shorts and grounds before energizing.

L. Exterior feeders shall be IMC. Underground feeders shall be RNC.

B. Protect equipment and devices. Equipment, light fixtures, devices and cover plates are to be clean, unscratched, and undamaged. C. Provide permanently fastened white plastic laminate labels with black letters for major equipment, such as panelboards, transformers,

F. Test all motors & electrical equipment for proper voltage and power draw. Supply results to landlord as part of equipment start-up.

joists, rafters, truss) and at intervals per governing codes. Fasten to steel members using beam clamps and non-metallic structural

G. Raceways are to be protected against entrance of debris, dirt and foreign matter. Plug raceway opening during construction. Protect

conduit stub-ups against damage during construction. Damaged raceway is to be replaced. Raceways shall be clean before installing

N. All data & communication cabling must be tied off and hung as high above ceiling tiles or suspended on ceiling support system as

C. Conductor insulation for different applications and voltages shall be different colors and shall meet local practices or in absence of local

D. Type MC cable may be used for feeder and branch circuits above grade and interior dry locations. Cable shall be installed 1-1/4 inch

from stud and rafter surfaces. Provide protective plate when distance is less than 1-1/4 inch. Type NM (Romex) cable is not allowed.

B. Provide protective covers for floor boxes until installation of device(s). Adjust floor boxes to be level and flush with floor. Clean boxes

H. All junction boxes will be labeled with a permanent marker, to reflect circuit voltage and source (i.e. 120/208; 5L-7,9,11).

E. Support outlet boxes back to structure. Do not support from drywall or ceiling tiles. Support to steel studs using side plates or spring steel

A. Mount devices as indicated in Construction Documents. Small adjustments in height and location can be made to allow for countertop

C. Install devices and outlet boxes to allow outlet box or surrounding surface to support device. Cover plate shall not support device. Wall

plates are to be flat, in contact with surrounding surface on all sides, and completely cover wall opening. Architect must approve use of

F. Devices are to be installed so that their removal does not de-energize other parts of a circuit. Do not use device feed thru provisions,

C. Corridor and passageway wall mounted fixtures shall not project more than 4 inches from wall when mounted less than 80 inches above

E. Do not support fixtures from drywall or ceiling tiles. Provide struts or bridging to structure or ceiling grid. Provide hold down clips for

A. Panel board directory holder shall be a metal frame with transparent cover and type written list of circuits showing points supplied.

C. Measure steady state load currents at each panel board feeder. Rearrange circuits to balance phase loads to within 10 percent of each

D. Panel board-mounting height shall be 6'-6" maximum from finished floor to center line of top switch or circuit breaker unless indicated

A. Contractor shall obtain Fire Alarm Permits, prepare design documents, certify design is code compliant, and perform test to satisfy

C. Install a complete and functioning system and make interconnections with other systems as necessary for a complete and functioning

D. Provided smoke detectors for HVAC equipment to make system code compliant. Example, provide duct detectors for ducted air, provide

Interior Lighting Compliance Certificate

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans. specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2015 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable

Signature

Designer/Contractor:

Allowed

Watts / ft2

Total Allowed Watts = 5408

с р

Lamps/ # of Fixture (C X D)

Total Proposed Watts = 1161

Date

Report date: 05/27/22

100 CRESCENT CENTRE PARKWAY.

TUCKER, GEORGIA 30084

C PROJECT NO: 21058

Page 1 of 4

SUITE 520

(770)270-1588

0.59

Fixture Fixture Watt.

Floor Area

(ft2)

9166

Allowed

Watts

5408

325

836

B. Fixtures installed in ceiling grids are to have sufficient lead length to allow fixture to be placed on any adjacent grid location.

F. Essential egress or exit unit fixtures shall have battery chargers wired ahead of any room switches and/or contactors.

B. Panel board nameplates shall be laminated micarta and furnished on each panel to indicate the panel and panel voltage.

D. Support equipment and materials directly to structure. Provide blocking, bridging and other materials as necessary to provide proper

PART 3 - EXECUTION

support to structure.

conductors.

3.1 GENERAL

members using embedded anchors, toggle bolts, bolt and nut with washer. Size support system for load with appropriate safety factor. B. Obtain approval from Architect before penetrating structural members. Maintain wall and floor fire and smoke ratings using approved fire

F. Provide separate equipment grounding conductor in addition to grounding provided by raceway.

D. Flexible conduit used to make connections to light fixtures shall have a maximum length of 6 feet.

E. Motors and vibrating/rotating equipment shall be connected using flexible conduit not to exceed 3 feet in length.

Panel: HP																	
Location: pply From: Mounting: SURFACE Enclosure: TYPE 3R		Volts: 120/208 Wye Phases: 3 Wires: 4								A.I.C. Rating: Mains Type: MLO Frame Rating: 400 A					FIRE ALARM		
														1.	WALL MO ACCESSI		
														2.	FINAL FIR REPRESI		
t Description	Trip	Poles		Α		В		0	Poles	Trip	Circuit D	escription	СКТ	з.	WEATHER		
121 THRU 125	20 A	1	0.9	0.5					1	20 A	LIGHTING - TENANT 12	6 THRU 129	2	4	FIRE AL AL		
RESTRM'S & CORR	20 A	1			0.3	2.1			2	30 A	WH-2		4	г.	DWG E0-0		
	30 A	2	0.4	0.0			2.1	2.1					6		FOR EAC		
ΡΛΤΙΟ			2.1	0.2	0.2	1.5			1	20 A		HTING	8				
TACLES	20 A	1			0.2	1.5	0.4	1.5		20 A			10				
/ER/UPPER PATIO	20 A	1	0.7	0.2			0.4	1.0	1	20 A	CEILING FANS-LOWFR	ΡΑΤΙΟ	14				
ER PATIO	20 A	1	0.1	0.2	0.2	0.2			1	20 A	EXTERIOR LIGHTING-N	ORTH & CONTACTOR	16				
G-NORTH OF BLDG	20 A	1					0.2	0.2	1	20 A	EXTERIOR LIGHTING-S	OUTH OF BLDG	18				
G-SOUTH OF BLDG	20 A	1	0.2	1.5					2	20 A	EH-02		20				
RH-3, RH-4	20 A	1			1.2	1.5							22				
	20 A	1					0.0	0.0	1	20 A	SPARE		24				
N	20 A	1	0.4	0.4					1	20 A	1ST FLOOR DECK HVA	C DUPLEX RECEPTS.	26				
	20 A	1			0.0	0.0			1	20 A	SPARE		28				
	20 A	1					0.0	0.0	1	20 A	SPARE		30				
	20 A	1	0.0	0.0					1	20 A	SPARE		32				
	20 A	1			0.0	0.0			1	20 A	SPARE		34				
	20 A	1					0.0	0.0	1	20 A	SPARE		36				
	20 A	1	0.0	0.0					1	20 A	SPARE	1	38				
	20 A	1			0.0	0.0			1	20 A	SPARE		40				
	20 A	1					0.0	0.0	1	20 A	SPARE		42				
													44				
													40				
													40 50				
													52				
													54				
									-				56				
									-				58				
													60				
													62				
													64				
													66				
	Tota	al Load:	71	«VΑ	7 k	ΧVA	6 k	VA		I	1						
	Tota	I Amps:	59	9 A (60) A	54	A	_								
	Con	nected L	oad	De	mand Fa	ctor	Estim	nated De	emand		Panel	Totals					
6000 W 266 W			100.00%)		6000 W											
			125.00%)		333 W			Total Conn. Load:	20561 W							
		1776 W			100.00%)		1776 W			Total Est. Demand:	21680 W					
		11 W			125.00%)		14 W			Total Conn.:	57 A					
		8400 W			112.50%)		9450 W			Total Est. Demand:	60 A					
		1510 W			100.00%)		1510 W									
		1248 W			100.00%			1248 W									
		1080 W			100.00%)		1080 W									

	LIGHTING FIXTURE SCHEDULE											
	MANUFACTURER / MODEL	VOLTAGE	Apparent Load	Description	Lamp							
	Lithonia Lighting-cds-l48-mvolt-dm-80cri	120 V	38 W	48" Strip light	LED							
y Architect)	TBD	120 V	18 W	Wet Location	ТВD							
ght	Lithonia Lighting / LDN6 35/20 MVOLT GZ10 HSG LO6AR (PS1055CP FOR EMERGENCY)	120 V	22 W	6" Can Light	LED							
	RP Lighting / RXL17	120 V	14 W	Exit Sign	LED Included							
	Lithonia Lighting / ELM6L	120 V	12 W	Emergency Light Unit , Battery, 6V 12W	LED							
ack	Lithonia Lighting / WST LED P1 27K VW MVOLT (E20WC FOR EMERGENCY)	120 V	12 W	Weather Proof Emergency Unit, Battery, 6∨ 12W	LED							
once	Lamps Plus/Nyack-17-1/2	k-17-1/2 120 V		Outdoor Wall MT.	LED							
	mINKAAIRE-xtreme-h20-65	120 V	32 W	outdoor smoked iron ceiling fanw/remote	A-19							
ack	Lithonia Lighting / WST LED P1 27K VW MVOLT (E20WC FOR EMERGENCY)	120 V	11 W	Wet Location / with Integral Photocell	LED Included							

CONTACT #

E1-11 /// SCALE: N.T.S.

BUILDING FACP

GENERAL NOTES:

- 1. BASE BUILDING SYSTEM SHALL HAVE ONE (1) 8 AMP POWER SUPPLY FOR EVERY 10,000 SQUARE FEET OF SHELL TENANT SPACE.
- 2. BASE BUILDING SYSTEM SHALL HAVE 20 WATTS OF AMPLIFICATION AVAILABLE FOR EVERY 25,000 SQUARE FEET OF SHELL TENANT SPACE.

3 Fire Alarm Shell Space

LIGHTING CONTACTOR SCHEDULE										
LOAD DESCRIPTION	CONTACTOR CIRCUIT(S)			CONTROL		ON	OFF			
	VOLT	AMPS	POLE(S)	CKT #'S	VOLT	CKT. #	PHOTO / TC	PHOTO / TC		
TERIOR LIGHTING-NORTH	120	7.5	1	HP-16	120	16	PHOTO	TC		
TERIOR LIGHTING-NORTH	120	7.5	1	HP-17	120	16	PHOTO	TC		
TERIOR LIGHTING-SOUTH	120	7.5	1	HP-18	120	16	PHOTO	TC		
TERIOR LIGHTING-SOUTH	120	7.5	1	HP-19	120	16	PHOTO	TC		

2 FIRE ALARM D E1-11 SCALE: N.T.S.

10- 4" CONDUITS ROUTED ON CEILING TO DROP INTO EACH TENANT

METER CENTER NOTE:

1. THE METER CENTER SHOWN HAS A 400A METER FRAME. ONLY THE HOUSE PANEL IS INSTALLED WITH A DISCONNECT FOR UP TO 400A MAX. THE OTHER DISCONNECTS SHALL BE PROVIDED/ INSTALLED ACCORDING TO THE LOAD OF FUTURE TENANTS BUT NOT TO EXCEED 400A. FOR FLEXIBILTY, ONLY 2 TENANTS CAN HAVE UP TO 400A AT THE SAME POINT. IF THE THIRD TENANT NEEDS UP TO 400A THEN CONTRACTOR SHALL MEASURE ELECTRICAL LOAD OF THE METER CENTER FOR 30 DAYS TO DETERMINE IF AVAILABLE CAPACITY IS AVAILABLE. PER OWNERS APPROVAL, SMALLER LOAD TENANTS MAY HAVE THE OPTION TO CONNECT TO THE HOUSE PANEL IF ADDITIONAL CAPACITY IS AVAILABLE.

FIRE ALARM DEVICE MOUNTING HEIGHTS

