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F	M200 M201 Electrics	Mechanical Specification Mechanical Specification	ons ons				4. THIS PE FROM F	D. RMIT SHALL NO EQUIRING CON	T PREVENT THE BUILD STRUCTION TO BE IN (
		<u></u>					5. THIS PE	RMIT IS VALID F	OR 30 MONTHS IF AN
	E000 ED101 ED102	Electrical Symbols and Electrical Demolition P Electrical Demolition P	i Abbreviations Ian - Base Bid a Ian - Alternate 2	and Alternate 1 2					
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	E201	Power Plan							

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Electrical Schedules and Details

E301



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T X	Constructi	ion/Reflected C	ceiling Symbols	E	lectrical/D	ata/Comr	nunica
	North Arrow	w Ø	Recessed Downlight - Demo	Φ	Duplex Receptacl	e Outlet	
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	0 Column Re	eference Grid	Recessed Downlight - New	×	Blank Outlet Cove	er Plate	
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Alarm Plans	Wall Type	Indication - Extg	HVAC Supply Outlet - New		Floor In-feed, Systems Furnishir	ngs	SD SP
or Approval stallation.	Wall Type	Indication - New	HVAC Return Air Outlet - Demo		Wall In-feed, Systems Furnishir	ngs	Т
	🗕 00000.A Keynote		HVAC Return Air Outlet - Extg	d. ■	Powerpole, Systems Furnishir	ngs	
	🔶 Spot Eleva	ition	HVAC Return Air Outlet - New	S	Single Pole Switch	ı	Е
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		Ţ	Miscellaneous Item - Clg Mtd				
ALL BE KEPT ON THE JOBSITE PECTORS AT ALL TIMES. PPROVAL TO VIOLATE ANY N, STATE, OR FED LAW.		•	Sprinkler Head				

NEVER THE PERMIT IS ORRECT INFORMATION THE BUILDING OFFICIAL

N TO BE IN COMPLIANCE

NTHS IF AN INITIAL ONTHS OF ISSUANCE.

00001 - MPE (Frank Reida) CODES: NEC 2023, with Amendments





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		Standa	rd Abbreviatio	ons			
		 Q At ABV Above ADJ Adjustable AFF Above Finish Floc AL Aluminum AC Acoustical Ceilin B Butts BL Blinds 	LAV Lav LH Left LHR Left Sor LS Loc MATL Mat g MAX Max MECH Med MEZZ Mez	atory Hand Hand Reverse kset erial imum hanical zanine	inne st	erspace udios	L
		BLDG Building BLK Block BLKHD Bulkhead BM Beam BO Bottom of BRK Brick BSMT Basement C Closer CL Closet CLG Ceiling	MFR Mar MIN Mini MISC Mise MO Mas MTL Met MW Mov NIC Not NTS Not OC On OD Out	ufacturer mum cellaneous onry Opening al eable Wall Included In Contract To Scale Center side Diameter	335 n linc permission to reprod solely for the limited pi unauthorized copying permission do not scale drawing from exchitrachard and	orth 8th street, suite c oln, nebraska 68508 402.475.7234 uce all or part of this drawing is hereby granted prose of construction of this project or archiving. disdosure, or construction use without written of innerspace studios is prohibited.	K
		CMU Concrete Mason COL Column CONC Concrete COND Condition CONT Continuous CPT Carpet CRNR Corner CSK Countersunk CT Ceramic Tile DBL Double DESC Description DF Drinking Fountain DIA Diameter DISP Disposal DMW Demountable Wa	ry Unit OHD Ove OPNG Opp PL Plas PLAS Plas PLYWD Plyw P Pair QT Qua R Rad RB Res REF Refe REF Refe REFR Refe REQD Req REST Res	rhead Door ning osite tic Laminate ter vood tt rry Tile ius ilient Base erence igerator uired troom of Hand	Alv	Inclural, snop, and other appropriate drawings. Iniate all work prior to installation to provide red for operation, maintenance, and codes, nce with other work. do not fabricate prior to ation of clearances for all trades. nical/Electrical Engineers ince Engineers 1201 Cass Street Dmaha, NE 68102 402.346.7007 Structural Engineer	J
		DPR Dispenser DWG Drawing DWS Drawers DW Dishwasher EA Each ED Exit Device EL Elevation ELEC Electric ELEV Elevator EQ Equal EW Eachway EWC Electric Water Co	RHR Rigt RM Roo RO Rou RT Res S Stop SC Spe SECT Sec SHLV She SHT She SIM Sim SP Soli	nt Hand Reverse m gh Opening ilient Tile cial Coating tion lving et ilar d Polymer n	JH I	Civil Engineer Interior Designer nterior Design 721 N 98th Street	H
		EXTG Existing FD Floor Drain FF Factory Finish FIN Finish FLR Floor FND Foundation FTC Floor To Ceiling FTG Fully Tempered 0 FV Field Verify GC General Contrac GL Glass GWB Gypsum Wallboa HT Height HDWR Hardware HM Hollow Metal HORIZ Horizontal	STL Stea STOR Stor STRUCT Stru T Tile THK Thic TO Top TOW Top TOW Top Glass TYP Typ UNO Unke tor VER Veri VERT Veri ard W Wid WB Woo WC Wal WD Woo WNDW Win	age ctural k Of Of Wall ccal ess Noted Otherwise fy ical th od Base I Covering od dow		Dmaha, NE 68114 2.934.3474 ext. 108	G
<u>)nn</u>	ection	ID Inside Diameter INSUL Insulation JNT Joint L Length	WP Woo WT Win W/ With W/O With	od Paneling dow Treatment n nout	↓ I, E Coord the 6 fc Age	Dan Mulligan, am the linating Professional on th Floor Office remodel or Frankel Zacharia.	F
							E
pi co	5/8" type "X" gypsum wa metal stud fi zinc control joint – USG, iter rovide on walls over 30 feet in nfirm actual placement with Ard	Ilboard raming m 093 length chitect	<u>ax.</u>		graphic 0 1' 2	scale: $3/8" = 1'-0"$	D
<u>lan</u> - 1'-0"	Detail: Typical G	ypsum Wallboard	I Control Join	<u>t</u>	graphi	c scale: 3" = 1'-0"	С
f	4'-0"	' min.]		0 2" Frankel Sixth Fle 11404 West Doo Omaha, NE 681 7/30/2024 Con	4" 6" 8" 10" Zacharia Cor Remodel dge Road 54 nstruction Documents	B
	Doors in Series	₆ -			Typical D	etails	
					Designed: djm Drawn by: elb Reviewed: Proj: 4955	Sheet No. G001	
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	No.	NAME	MAT'L	FINISH	BASE	MAT'L	FINISH	MAT'L	FINISH	MAT'L	FINISH MA	r'l Finis	H	MAT'L	FINISH	HEIGHT	NOTES	INO.	No.	MAT'L	TYPE FINISH W	н	T MAT'l		HEAD	JAMB SILL	HAND	
L	600 601	Entry Open Office		CPT1 CPT1	RB1 RB1	GWB GWB	WC1 / P1	GWB GWB	P1	GWB GWB	P1 GW P1 GW	B P1 B P1	-	EXTG EXTG	EXTG EXTG	EXTG -		600 601	600A N	1TL/GL	2 *1 2'-10	" 8'-4"	1/2" MTL/G	iL B *1	-		RH	-
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	605	Office	CONC	EXTG	EXTG	GWB	P1	GWB	P1	GWB	P1 GW	B P1	-	EXTG	EXTG	EXTG -	-	605	626	WD	1 / PL 3'-0"	8'-4"	1 3/4" WD	A /ST1	-			
	606 607	Office Office		EXTG EXTG	EXTG EXTG	GWB GWB	P1	GWB GWB	P1	GWB GWB	P1 GW P1 GW	B P1 B P1	-	EXTG EXTG	EXTG EXTG	EXTG -		606 607	628	WD	1 EXTG / PL 3'-0"	8'-4"	1 3/4" WD	A EXTG / ST1	-		LH	-
K	608	Office	CONC	EXTG	EXTG	GWB	P1	GWB	P1	GWB	P1 GW	B P1	-	EXTG	EXTG	EXTG -	-	608	NOTES: 1. Exist	ing all-g	plass double doors with	sidelites: R	e-finish upper	and lower bronze	rails on the gla	ass doors and sid	delite glass	, uppe
	609 610	Office Meeting		EXTG EXTG	EXTG EXTG	GWB GWB	P1	GWB GWB	P1	GWB GWB	P1 GW P1 GW	B P1 B P1	-	EXTG EXTG	EXTG EXTG	EXTG -		609 610	appe 2. Re-u 3. Re-u	arance se existi se existi	and clear coat for prote ting salvaged card read ting salvaged punch key	er at this loc	ation. ation. t (cypher lock)	erformed by: Reic	iy Metal Servic	es, Inc.; 575 Nuc	ha vvay, Au	irora, u
	611	Meeting	CONC	EXTG	EXTG	GWB	P1	GWB	P1	GWB	P1 GW	B P1	-	EXTG	EXTG	EXTG -		611	К9		oor Schedu	le						
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J	617	Office	CONC	EXTG	EXTG	GWB	P1	GWB	P1	GWB	P1 GW	B P1	-	EXTG	EXTG	EXTG -	-	617	LATCH	SETS e-use or	r match existing	STR2 T	e-use or matcl	n existing. trike	CLOSER C1 Re-us	e or match existi	ina	
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	620	Office	CONC	EXTG	EXTG	GWB	P1 P1	GWB	P1 P1	GWB	P1 GW P1 GW	в Р1 В Р1	-	EXTG	EXTG	EXTG -	- -	620	С	oordinat	te function with Tenant.				S1 Type: Re-us	Wall e or match existi	ing.	
	621	Corridor	CONC	CPT	RB1	GWB	P1	GWB	P1	-	- GW	B P1	-	EXTG	EXTG	EXTG -		621			Hardware S	pecific	ations					
	622 623	Corridor	CONC	CPT CPT	RB1 RB1	GWB	P1 -	GWB	P1 -	GWB GWB	P1 GW P1 GW	B P1 B P1	-	EXTG	EXTG	EXTG -		622										
Н	624	Conference	CONC	EXTG	EXTG	GWB	P1	GWB	P1	GWB	P1 GW	B P1	-	EXTG	EXTG	EXTG -		624										
	625 626	Breakroom Supply	CONC CONC	RT1 EXTG	RB1 EXTG/RB1	GWB GWB	P2 P1	GWB GWB	P2 P1	GWB GWB	P2 GW P1 GW	B P2 B P1	-	EXTG EXTG	EXTG EXTG	EXTG - EXTG -		625			<u> </u>							
	627	Workroom	CONC	EXTG	EXTG	GWB	EXTG	GWB	EXTG	GWB	EXTG GW	B EXTO	; -	EXTG	EXTG	EXTG -	-	627										
	628 629	Corridor Workroom	CONC CONC	EXTG EXTG	EXTG EXTG	GWB GWB	EXTG EXTG	GWB GWB	EXTG EXTG	GWB GWB	P1 GW EXTG GW	B EXTO	- -	EXTG EXTG	EXTG EXTG	EXTG - EXTG -		628								1		
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	631 632	Open Office Conference		EXTG EXTG	EXTG EXTG	GWB GWB	EXTG EXTG	GWB GWB	EXTG EXTG	GWB GWB	EXTG GW EXTG GW	B EXTO	 	EXTG EXTG	EXTG EXTG	EXTG -		631								1		
G	633	Breakroom	CONC	EXTG	EXTG	GWB	EXTG	GWB	EXTG	GWB	EXTG GW	B EXTO	; ; _	EXTG	EXTG	EXTG -	-	633								1		
	634	Corridor	CONC	EXTG	EXTG	GWB	EXTG	GWB	EXTG	GWB	EXTG GW	B EXTO		EXTG	EXTG	EXTG -	-	634	1	. <u>Exis</u> i	<u> </u>	ORE: 2. [EXISTING ALL	 . GLASS, DOUBL	E w/ SIDELITE	 S A. <u>EXISTI</u>	<u></u> <u>ING</u> WOOE), SIN(
F 	3. All of Cabine 1. Pull Wall C 1. All of coa 2. All of pair 3. All 1 4. Rep Electri 1. Electri 1. Electri 1. Lux Floor F 1. Lux Floor 2. Pro 3. Ord	cabinetry toe kicks an netry Hardware: Ils on all cabinetry to b Ceiling Finishes: gypsum board surface ated with joint compou gypsum wallboard surface int. HVAC returns to be p place damaged ceiling tical Devices: ectrical devices and place Finishes: xury Vinyl Plank flooring poring substrates (i.e., ramic tile) for flush instrovide an additional 1 b der all flooring and tile	e to match the be Signature H es are to be flu ind and/or skir rfaces to be pr bainted to matc g panels with r ates shall be iv ng to be install cement board tallation. box of RT2 and types togethe	e cabinet finish m Hardware - Noval nished smooth, w m coated as requ ainted are to reco ch the wall. new panels to ma vory. Iled with direct glu d) and subfloor to a 2 boxes of CPT er to ensure mato	haterial (plastic I k Brass Cabine with any readily uired. Gypsum eive one coat p atch existing - se atch existing - se tatch existing - se atch existing - se atch existing - se atch existing - se	aminate or wo t Pull - Matte E visible imperfe board ceilings rimer (tinted to ee AC1. ee AC1.	od). Black - 3-3/4" ections in gyp are to be pai o match topco	Centers - SKI sum board su inted white, if nat color) and pe in the sam materials (i.e.	U 489717 urfaces to be applicable. two coats e plane. , carpet,	3. (4. 5 5. (6. (7. 1 8. (9. (10.5 11.) (12.1	verifying all requirem General Contractor to inish material specifi Subcontractors must baint (draw down), we and engineered quar General Contractor to General Contractor to General Contractor is scheduling orders ac General Contractor re Schop drawings and s abrication. Walk thru required wi ordering materials. f any materials are to client prior to re-select	ents with prod provide Own ed upon projec provide 1 sam bod species (v z for Owner's o verify all tile, responsible f ncies or conflic ral drawings, f responsible for ubmittals mus th contractor, o be value eng tion.	uct manufacturers. er with most curre t completion. ple each of each of <i>i</i> th finish), wallcov approval prior to o wallcovering, and or verifying all dim ts arise within this he contractor shal or verifying lead the backing, bracing,a t be provided for n designer, and sub ineered based on	nt manufacture carpet, ceramic vering, plastic la rdering. upholstery dye ensions on site s Room Finish I notify the inte mes on all finish and framing as r ew designers r -contractor to v project budget	er's recommen c tile, glass mo aminate, PVC -lots match wh / in field. Schedule or b rior designer i h materials up necessary. review prior to verify locations , our design fe	dations for care paic tile, wall ba edge banding, nen ordering. etween this Roo mmediately for on award of cor ordering materi s, dimensions, la se will be re-eva	and maintenance ase, transition mol acoustical ceiling p om Finish Schedul clarification. Instruction contract als and commenc ayouts, etc prior luated and discus:	e for each Idings, panels, le and the and eement of to sed with	F9 A		<u>DR TYPES</u> Door & Fran ™S	ne Tyr)es	>. 		FRAN	<u>1E TY</u>	<u>'PE</u>
D																												
	0641	116 PLASTIC-LAMI	INATE-FACED	D	096519 RE	SILIENT TILE	E FLOORING		099123	INTERIOR	PAINTING																	
	F	ARCHITECTUI PL1 Cabinet Front	RAL CABINET	ſS	RT1 bre Mf	eak room r: Patcraft	Enom		P1	offices, op Mfr: Sherv	en office areas vin Williams																	
		Style: Norwegi Color: 8241-38	ian Ash 3		Sty	yle: 1677V plor: Ash-V2.0	0550			Type: Late Primer Coa	ex at: as needed to insu	e adhesion																
		Finish: Fine Ve	elvet Finish	- d	Siz Ins	ze: 12" x 24" > stallation: Bric	x 1/8" tile k			Intermedia Color: SW	te Coat: same as top / 7016, Mindful Gray	o coat																
С		Material: melar Color: White	mine	90	096813 TII	LE CARPETIN	IG		P2	break roon	n Eggsnen																	
	0951	113 ACOUSTICAL	PANEL CEILI	NGS	CPT1 fie Mf	ld r: Shaw Contr	ract			Mfr: Sherv Series: Pr	vin Williams oMar 200 VOC																	
		required - to ma Mfr: Armstrong	anel replacem atch existing	ient as	Se Sty Co	ries: Ponder yle: 5T596 llor: Reveal 93	111e 3761			Primer Coa	ex at: as needed to insu te Coat: same as to	e adhesion coat																
		Series: Ultima Model: 1912	2		Siz	ze: 24" x24" ti stallation: qua	le rter turn			Color: SW Gloss Finis	/ 7017, Dorian Gray sh: Eggshell	oodt																
		Edge Profile: E Color: white	Beveled Tegula	ar	097200 W		IGS		123661.19	QUARTZ /	AGGLOMERATE																	
R		Grid: 15/16" ex	x 3/4" xposed tee, wh	hite	WC1 En Mfi Se	r: Tri-KES (Me ries: Alexand	omentum) ria		Q1	breakroom Mfr: Camb	i countertops pria																	
D	0965 F	513 RESILIENT BA RB1 field with carpe	ASE AND ACC	ESS.	Co Sk	lor: Dove (U: 2VAX-16				Color: Fog Thickness	ggy City : 2 cm															М	ark C	Juan
		Mfr: Johnsonite Color: TA4 Ga Height: 4"	e iteway WG							Edge Deta Finish: Po	II: Seacliff Edge lished															c	A-1	2
	-	Thickness: 1/8 Type: vinyl, str	s" raight																							с с	A-2	1
	ר	TS1 Resilient-to-Ca	rpet																							С	A-3	1
		Mfr: Johnsonite Model: Slim Lir Color: 40 Block	e ne k																							С	A-4	2
А			N																									
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	1000 SUMMARY	 B. Contract Modification Procedures: 1. Architect will issue supplemental instructions 	progress meetings at weekly intervals. a. Items of significance that could affect	 "Directed": Means an instruction by the Architect. Other terms include "requested", "authorized". 	 Inspect products on delivery to determine compliance with the Contract Documents and to 	remaining portion of pipe or conduit to prevent entrance of moisture or other foreign	d. Wiring diagrams. e. Recommended "turn around" cycles.	other incentives received from recycling building demolition materials shall accrue to	
	Notify Architect if discrepancies between drawings and/or specifications are encountered.	authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the	progress will be reviewed. b. Progress since the last meeting will be	 "selected", "required", and "permitted". 4. "Indicated": Means requirements expressed by 	determine that products are undamaged and properly protected.	matter after cutting. e. Proceed with patching after construction	f. Inspection procedures. g. Shop drawings and product Data.	Contractor. 3. Conduct selective demolition and debris-removal	
	Requirements of Division 01 Sections apply to the	Contract Time. 2. Architect will issue a detailed description of	reviewed to determine whether each activity is on time, ahead, or behind schedule.	graphic representations or in written form. a. Other terms include "shown", "noted",	 Comply with product manufacturer's written instructions for temperature, humidity, ventilation, 	operations requiring cutting are complete. 6. Patching: Patch construction by filling, repairing,	 h. Product maintenance information. i. Fixture lamping schedule. 	operations to ensure minimum interference with roads, streets, walks, walkways, and other	
	Work of all Sections.	proposed changes in the Work that may require adjustment to the Contract Sum or the Contract	Contractor will determine how construction behind schedule will be expedited and secure	"scheduled", and "specified". 5. "Furnish": Means to supply and deliver to the	and weather-protection requirements for storage. 3. Schedule delivery to minimize overcrowding of	refinishing, closing up, and similar operations following performance of other work. Patch with	 Do not use original Project Record Documents as part of operation and maintenance manuals. 	adjacent occupied and used facilities. 4. Protect construction indicated to remain against	linnerspace
	Cooperate fully with separate contractors so work under separate contracts may be carried out smoothly.	Time. If necessary, the description will include supplemental or revised Drawings and	commitments from parties involved to ensure that current and subsequent activities will be	Project site, ready for unloading, unpacking, assembly, installation, and similar operations.	construction space.	durable seams that are as invisible as practicable. Provide materials and comply with installation	M. Project Record Documents: Maintain a clean	damage and soiling. When permitted by Architect, items may be removed to a suitable, protected	studios
	without interfering with or delaying work under this Contract or other contracts. Coordinate the Work of	Specifications. a. Proposal requests issued by the Architect are	completed within the Contract Time. c. Architect will record and distribute the	 "Install": Describes operations at the Project site including the actual unloading, temporary storage. 	 Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations 	requirements specified in other Sections, where applicable.	undamaged set of Contract Documents and Shop Drawings. Mark the set to show the actual installation	storage location during selective demolition and cleaned and reinstalled in their original locations	STUUTUS
	this Contract with work performed under separate contracts	not instructions either to stop work in progress or to execute the proposed change.	meeting minutes to the Contractor for distribution to each subcontractor, supplier, or	unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finish.	under requirements of the Contract Documents.	a. Inspection: Where feasible, test and inspect	where the installation varies from the Work as originally shown. Give particular attention to concealed elements	after selective demolition operations are complete.	335 north 8th street, suite c lincoln, nebraska 68508
Ι	Contractor shall have use of Project site for	 If latent or changed conditions require modifications to the Contract, the Contractor may 	other entity concerned. 6. Preinstallation Conferences: Conduct	curing, protecting, cleaning, and similar	rebuilding defective Work.	demonstrate physical integrity of installation.	that would be difficult to measure and record at a later date.	site and dispose of them in an approved landfill acceptable to authorities having jurisdiction. Do	402.475.7234
	construction operations during construction period as determined by Owner. Contractor's use of Project site	initiate a claim by submitting a request for a change to the Architect.	preinstallation conferences at Project site before each activity that requires coordination with other	 "Provide": Means to furnish and install, complete and ready for the intended use. 	E. Remove, replace, patch, and repair materials and surfaces cut or damaged during Work by methods and	of patched areas and extend finish restoration	 Do not use record documents for construction purposes; protect from deterioration and loss. 	not allow demolished materials to accumulate	permission to reproduce all or part of this drawing is hereby gran solely for the limited purpose of construction of this project or archi
	is limited by Owner's right to perform work, to retain other contractors on portions of Project, or remain	a. Include a statement outlining reasons for the change and the effect of the change on the	construction.	 "Project site": The space available to the Contractor for performing construction activities. 	with materials so as not to void existing warranties.	manner that will minimize evidence of	 Mark to indicate the actual product installed with proprietary name and model number, including 	that will prevent spillage on adjacent surfaces and areas.	unauthorized copying, disclosure, or construction use without wri permission of innerspace studios is prohibited.
	operational during construction.	Work. b Provide a complete description of the	 B. Construction Progress Documentation: 1. Contractor's Construction Schedule: Submit a 	 "Regulations": The laws, ordinances, statues, and lawful orders issued by authorities having 	017000 EXECUTION AND CLOSEOUT REQUIREMENTS	c. Floors and Walls: Where walls or partitions	product options selected. 3. Provide access to record documents for the	a. Remove debris from elevated portions of building by chute, hoist, or other device that	do not scale drawings. verify all dimensions and clearances at s from architectural, structural, shop, and other appropriate drawin lay out and coordinate all work prior to installation to provide
I	Do not disturb portions of Project site beyond areas in which the Work is indicated	proposed change.	comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's construction	jurisdiction. Also, the rules, conventions, and agreements within the construction industry that	A In-Place Materials: Use materials for patching identical	into another, patch and repair floor and wall surfaces in the new space. Provide an even	Architect's reference during normal working hours.	will convey debris to grade level in a controlled descent acceptable to Owner.	clearances required for operation, maintenance, and codes. verify non-interference with other work. do not fabricate prior verification of clearances for all trades.
	 Keep driveways, parking areas, loading areas, and entrances serving the premises clear and 	the Contract Sum and Contract Time.	schedule within 5 days of date established for	control performance of the Work.	to in-place materials. For exposed surfaces, use	surface of uniform finish, color, texture, and	N. Demonstration and Training: Instruct Owner's personnel in operation, adjustment, and maintenance	 Return adjacent areas to condition existing before demolition operations began. Promptly repair 	Mechanical/Electrical Engineers
	available to Owner, Owner's employees, Owner's customers, other tenants, and emergency vehicles	Architect will issue a Change Order for signatures	a. Indicate each significant activity separately	 D. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional 	to the fullest extent possible.	coverings and replace with new materials, if	of products, equipment, and systems.	damage to adjacent construction caused by	Alvine Engineers
	at all times. Do not use these areas for parking or	G701.	 b. Indicate completion in advance of date ostablished for final completion 	quality-control activities required to verify that the Work	B. Examination and Acceptance of Conditions: Before	appearance.	024119 SELECTIVE STRUCTURE DEMOLITION	surfaces are required, patch to product surfaces	Omaha, NE 68102 402.346.7007
	minimize space and time requirements for storage	C. Payment Procedures:	c. Update schedule to reflect actual construction	 Regardless of whether original tests or inspections were Contractoria reasonability provide 	substrates, areas, and conditions, with Installer or	ceilings: Patch, repair, or renang in-place ceilings as necessary to provide an	A. Field Conditions:		Structural Engineer
	 coordinate placement of dumpster with Architect 	 Schedule of Values: a. Round amounts to nearest whole dollar, the 	progress and activities when requested.	quality-control services, including retesting and	Applicator present where indicated, for compliance with requirements for installation tolerances and other	even-plane surface of uniform appearance. e. Exterior Building Enclosure: Patch	 Conduct so Owner's and other tenant's operations will not be disrupted. 	061053 MISCELLANEOUS ROUGH CARPENTRY	To the day and the general
	 and authorities having jurisdiction. Coordinate use of dock per Building Rules 	total shall equal the Contract Sum. b. Provide a separate line item for each part of	 C. Photographic Documentation: 1. Take photographs using maximum range of depth 	that failed to comply with the Contract Documents.	conditions affecting performance. Record observations.	components in a manner that restores enclosure to a weathertight condition and	 Notify Architect of discrepancies between existing conditions and Drawings before proceeding. 	A. Concealed blocking and plywood backing panels to be fire-retardant-treated wood Interior Type A. Plywood to	
	provided by Owner or Building Manager. 4. There is no freight elevator in the building.	the Work where Application for Payment may include materials or equipment purchased or	of field, and that are in focus, to clearly show Work using a digital camera with a minimum sensor	 On completion of testing, inspecting, sample taking, and similar services, repair damaged 	 Examine roughing-in for mechanical and electrical systems to verify actual locations of connections 	ensures thermal and moisture integrity of building enclosure.	It is not expected that hazardous materials will be encountered in the Work. If suspected hazardous	be DOC PS 1, Exposure 1, C-D Plugged, not less than 3/4 inch nominal thickness, unless otherwise indicated.	
	 Use of existing passenger elevators and stairs will be permitted, provided they are 	fabricated and stored, but not yet installed. c. Each item shall be complete, including total	resolution of 8 megapixels. 2. Submit unaltered, original, full-size image file	construction and restore substrates and finishes. Provide materials and comply with installation	before equipment and fixture installation. 2. Verify space requirements and dimensions of	 Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, 	materials are encountered, do not disturb and notify Architect and Owner. Hazardous materials	Dimension lumber framing to be No. 2 grade or better with 19 percent maximum moisture content.	Civil Engineer
	protected, cleaned, and maintained in a condition acceptable to Owner or Building	cost and proportionate share of general overhead and profit.	named with unique description that indicates purpose of photograph.	requirements or match existing substrates and finishes. Restore patched areas and extend	items shown diagrammatically. 3. Examine walls, floors, and roofs for suitable	mortar, oils, putty, and similar materials from adjacent finished surfaces.	will be removed by Owner under a separate contract.	B. Provide miscellaneous lumber for support or	
	Manager per Building Rules provided by Owner or Building Manager.	 Applications for Payment: Each application for Payment shall be 	D. Submittal Procedures:	restoration into adjoining areas with durable seams that are as invisible as possible.	conditions where products and systems are to be installed.	F. Progress Cleaning:	 Provide statement of refrigerant recovery signed by refrigerant recovery technician 	attachment of other construction. Set to required levels and lines, with members plumb, true to line, cut, and	
	b. At Substantial Completion, restore passenger	consistent with previous applications and	 Electronic copy of CAD files of the Contract Drawings will not be provided by Architect for 	a. Repair and protection are Contractor's responsibility regardless of the assignment	 Verify compatibility with and suitability of substrates, including compatibility with existing 	1. Clean Project site and work areas daily, including	responsible for recovering refrigerant, stating	fitted. Fit accurately to other construction. Locate	Interior Designer
	of Work to condition existing before start of	for by the Owner.	Contractor's use in preparing submittals.	of responsibility for quality-control services.	finishes or primers.	Dispose of materials lawfully.	recovered and that recovery was performed	to comply with requirements for attaching other	JH Interior Design
	 Comply with Building Rules provided by Owner or Building Manager as apparets attachment 	Payment is one month.	submittals with performance of construction	E. Coordinate with Architect to provide mockups	conditions have been corrected. Proceeding with	of cleanliness necessary for proper execution of	and address of technician and date	 Provide continuous 2x4 wood blocking between stude at the following locations: 	Omaha, NE 68114 402.934.3474 ext, 108
	Building Manager as separate attachment.	Sheets G703.	advance of performance of related construction	where specifically indicated. Demolish and remove	conditions.	 Keep installed work clean. Clean installed 	 Maintain existing utilities indicated to remain in 	a. Top and bottom of wall-hung cabinets.	
ł	Maintain portions of existing building affected by construction operations in a weathertight condition	d. Complete every entry on the form, include notarization and execution by a person	 Pack each submittal appropriately for transmittal 	mockups when directed by Architect.	C. Field Measurements: Take field measurements as	surfaces according to written instructions of manufacturer or fabricator of product installed.	operations. Maintain fire-protection facilities.	b. vvall-mounted door hardware other than wall stops.	RCHITCH
	throughout construction period. Repair damage caused by construction operations.	authorized to sign legal documents on behalf of the Contractor.	and handling. Transmit each submittal from the Contractor to the Architect using a transmittal	015000 TEMPORARY FACILITIES AND CONTROLS	required to fit the Work properly. Recheck measurements before installing each product. Where	 Remove debris from concealed spaces before enclosing the space. 	 Remove, replace, patch, and repair materials and surfaces cut or damaged during selective 	c. Grab bars.d. Any equipment indicated to be wall-hung or	
(Perform the Work so as not to interfere with Owner's	 Entries shall match data on the Schedule of Values and the Contractor's Construction 	form. The Architect will not accept submittals received from sources other than the Contractor.	 A. Installation and removal of temporary facilities shall be included in the Contract Sum. Allow other entities to 	portions of the Work are indicated to fit to other construction, verify dimensions of other construction by	Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration	demolition, by methods and with materials and using approved contractors so as not to void	mounted to the wall.	MULLIGAN
	and other building tenant's day-to-day operations. 4. Notify the Owner not less than 72 hours in	Schedule. Use updated schedules if revisions were made.	 Allow time for submittal review, including time for resubmittals. Time for review will commence on 	use temporary facilities without cost.	field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid	at time of Substantial Completion. 6. During handling and installation, clean and protect	existing warranties.	 Provide plywood backing panels where indicated and needed for utilities. Install by fastening to studs. Paint 	A-1918
	advance of activities that will affect Owner's or other building tenant's operations, including, but	f. Include amounts of Change Orders issued prior to the last day of the construction period	receipt of submittal. No extension of the Contract Time will be authorized because of failure to	 B. Water, electric power, lighting, heating and cooling, sanitary facilities, elevator, and stairs are available for 	delaying the Work.	construction in progress and adjoining materials already in place. Apply protective covering where	 B. Examination: 1. Verify that utilities have been disconnected and 	same as adjacent wall finish, unless otherwise indicated. Coordinate sizes and locations with	NAN IN IN
	not limited to, utility interruptions, high levels of noise and vibration, or odors.	covered by the application.	transmit submittals enough in advance of the Work to permit processing, including resubmittals.	use from Owner's existing system provided they are maintained in a condition acceptable to Owner and	D. Installation: Comply with manufacturer's written instructions and recommendations for installing	required to ensure protection from damage or deterioration at Completion	capped before starting. 2. Determine whether removing any element might	Architect when not indicated on Drawings.	AT NEBRASS
	 Maintain access to existing walkways, corridors, and exits 	waivers of mechanic's liens from entities	a. Allow 10 business days for review of each	Building Manager.	products in applications indicated.	 Clean and provide maintenance on completed construction as frequently as pecessary through 	result in structural deficiency or unplanned	062023 INTERIOR FINISH CARPENTRY	I, Dan Mulligan, am the
	Smoking is not permitted within the building or within 25	construction period covered by the previous	 b. For paper submittals submit three copies, Arebitact will return two copies. 	required for construction operations.	accurately, in correct alignment and elevation, as	the remainder of the construction period. Adjust	structures.	A. Submit samples for each type of trim, for each species	Coordinating Professional on the 6th Floor Office remodel
	feet of entrances, operable windows, or outdoor air	h. When an application shows completion of an	c. For electronic submittals submit via email as	C. Where sprinkler protection exists and is functional,	a. Make vertical work plumb and make	operability without damaging effects.	structural elements are encountered, investigate	P Pafera installation condition materials to installation	tor Frankei Zacharia.
	substances within the existing building or on the Project	i. The Owner reserves the right to designate	annotated file.	performed close to sprinklers, shield them temporarily	b. Where space is limited, install components to	G. Starting and Adjusting:	Submit a written report to the Architect.	areas for a minimum of 24 hours. Hardwoods to have	
	site is not permitted.	which entities involved in the Work must submit waivers.	Contractor to review each submittal and check for coordination with other Work of the Contract and	with guards. Remove temporary guards at the end of work shifts, whenever operations are paused, and	maximize space available for maintenance and ease of removal for replacement.	 Start equipment and operating components to confirm proper operation. Remove malfunctioning 	C. Utility Services and Mechanical/Electrical Systems:	9 percent maximum moisture content.	Agency Approval
I	Contractor personnel working on Project site to wear identification tags approved by Owner and Building	 With each Application for Payment, submit Contractor's waivers of mechanics liens for 	for compliance with the Contract Documents. Note corrections and field dimensions. Mark with	when nearby work is complete.	 Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated. 	units, replace with new units, and retest. 2. Adjust equipment for proper operation. Adjust	 Maintain services/systems indicated to remain and protect against damage. 	 C. Install level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for 	
	Manager at all times. 1. Comply with Owner's and Building Manager's	the period of construction covered by the application.	approval stamp before submitting to Architect. a. Incomplete submittals are unacceptable, will	 Provide project manager and superintendent with cellular telephones. Provide project manager with 	Provide blocking and attachment plates and anchors and fasteners of adequate size and	operating components for proper operation without binding.	 Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems 	alignment. Scribe and cut to fit adjoining work. Use fine finishing nails or finishing screws, countersunk and	
	requirements for background and drug screenings of Contractor personnel working on Project site.	 Submit waivers of lien on forms, executed in a manner acceptable to Owner. 	be considered nonresponsive, and will be returned for resubmittal without review.	computer to maintain electronic communications.	number to securely anchor each component in place, accurately located and aligned with other	 Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. 	serving areas to be selectively demolished. a. Provide services/systems that bypass area of	filled flush, where face fastening is unavoidable. Install to tolerance of 1/8 inch in 96 inches for level and	
	 Maintain list of approved screened personnel with Owner's and Building Manager's representatives. 	 Include retainage in amount of 10%, unless indicated otherwise in final contract. 	Do not use Submittals without an appropriate final stamp indicating action taken.	E. Unauthorized signs are not permitted.	portions of the Work. Where size and type of attachments are not indicated, verify size and type	Replace damaged and malfunctioning controls and equipment.	selective demolition and maintain continuity of services/systems to other parts of building.	plumb. Install adjoining with 1/32 inch maximum offset.	
	Contractor's Warranty for all labor and materials to	 Administrative actions and submittals that must precede or coincide with submittal of first 	a. Distribute copies of final approved submittals as necessary for performance of construction	 F. Provide waste-collection containers in sizes adequate to handle waste from construction operations. 	required for load conditions.	H Protection of Installed Construction: Provide final	b. Cap or plug remaining piping with same or compatible piping material.	D. Install standing and running trim with minimum number of joints practical, using full-length pieces to greatest	
	have a duration of One year from date of Final	Application for Payment include the following:	activities. 7 Shon Drawings: Prenare Project-specific	G Provide facilities necessary for hoisting materials and	mount components at heights directed by Architect	protection and maintain conditions that ensure installed	c. Cap or plug ducts with same or compatible	extent possible. Miter at returns and outside corners, and cope at inside corners, to produce tight-fitting	
	 Manufacturer's warranties, or warranties specified in other Sections, of longer duration to run 	furnishing products or equipment.	information, drawn accurately to scale. Do not	personnel.	 Allow for building movement, including thermal expansion and contraction 	Substantial Completion. Comply with manufacturer's	 Disconnect equipment at nearest fitting connection to services. Remove as whole units, complete 	joints. Use scarf joints for end-to-end joints. Fill gaps	
	concurrently.	c. Schedule of Values.	Contract Documents or standard printed data.	 Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate occupied areas from 	c. Coordinate installation of anchorages.	humidity.	with all controls. Owner and/or Building Manager	smooth, and finish same as wood base.	
	relieve Contractor of obligations.	 d. Contractor's Construction Schedule. e. Schedule of unit prices. 	a. Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on	fumes and noise. Seal joints and perimeter, protect	in exposed work are not indicated, arrange joints	I. Repair of the Work:		E. For glass in wood frames, secure glass with removable	
(2000 PRICE AND PAYMENT PROCEDURES	 Submittal Schedule. List of Contractor's staff assignments. 	sneets at least 8-1/2 by 11 inches but no larger than 24 by 36 inches.	an-nanoling equipment, and provide walk-oπ mats at each entrance through temporary partition.	together to form hairline joints.	 Repair or remove and replace defective construction. Repairing includes replacing 	 Protection Provide temporary barricades and other protection 		
	Substitution Procedures:	 h. Copies of building permits. i. Certificates of insurance and insurance 	 Product Data: Collect information into a single submittal for each element of construction and 	I. Provide and manage a fire-prevention program	4. Use products, cleaners, and installation materials that are not considered hazardous.	defective parts, refinishing damaged surfaces, touching up with matching materials, and properly	adjacent buildings and facilities to remain.	064116 PLASTIC-LAMINATE-FACED ARCHITECTURAL CABINETS	
	 Requests for substitution will be considered if received within 15 days after award of the Work. 	policies. 4. Administrative actions and submittals that must	type ot product or equipment. 9. Samples: Submit manufacturer's standard sized	complying with NFPA 241.	E. Cutting and Patching:	adjusting operating equipment. Remove and replace operating components that cannot be	 Design, provide, and maintain shoring, bracing, and structural supports as required to preserve 	A. Submit the following:	
	Requests received more than 15 days after commencement of the Work may be considered or	precede or coincide with submittal of Application for Payment at Substantial Completion include the	samples for review of kind, color, pattern, and texture for a check of these characteristics with	J. Document and notity Architect of visible signs of mold that appear or are discovered during construction.	 Structural Elements: Notify Architect of locations and details, and await directions before 	repaired. 2. Remove and replace damaged surfaces that are	stability and prevent movement, settlement, or collapse of construction and finishes to remain,	 Shop drawings. Product data for cabinet hardware and 	
	rejected at the discretion of the Architect.Identify product or fabrication or installation	following: a. Documentation supporting claim that the	other elements and for a comparison of these characteristics between submittal and actual	K. Repair and clean permanent facilities used during	proceeding. Shore, brace, and support structural elements. Do not change their load-carrying	exposed to view if surfaces cannot be repaired without visible evidence of repair. Remove and	and to prevent unexpected or uncontrolled movement or collapse of construction being	accessories. 3. Samples for plastic laminates for each color,	
	method to be replaced. Include related Specification Section and Drawing numbers.	Work is substantially complete. b. Statement showing an accounting of changes	component as delivered and installed. a. Submit manufacturer's color charts showing	construction. Return them to their original condition, unless renovation work is specified.	capacities or increase deflections. 2. Operational Elements: Do not reduce their	replace chipped, scratched, and broken glass or reflective surfaces.	demolished.3. Remove temporary barricades and protections	pattern, and surface finish.	
	Show compliance with requirements for substitutions and the following, as applicable:	to the Contract Sum. 5. Administrative actions and submittals that must	the full range of colors, textures, and patterns available for selection by Architect when	016000 PRODUCT REQUIREMENTS	capacity to perform as intended or that results in increased maintenance or decreased operational	J. Final Cleaning: Employ experienced workers or	where hazards no longer exist.	B. Comply with AWI's "Architectural Woodwork Standards."	
	 Coordination information, including a list of changes or modifications needed to other 	precede or coincide with submittal of final Application for Payment include the following:	specific color selection not specified. 10. Product Schedule: Prepare written summarv	A. Provide products that comply with the Contract	life or safety. 3. Other Construction Elements: Do not change their	professional cleaners for final cleaning. Clean each surface or unit to condition expected in a commercial	E. Selective Demolition:1. Demolish and remove existing construction only to	 Cabinets to be grade Custom, unless specified elsewhere as Premium. 	
	parts of the Work and to construction performed by Owner and separate	a. Evidence of completion of Project closeout requirements.	indicating types of products required and their intended location in tabular form.	Documents, are undamaged and, unless otherwise indicated, are new at time of installation.	load-carrying capacity or that results in reducing their capacity to perform as intended or that results	building cleaning and maintenance program. 1. Replace disposable air filters and clean permanent	the extent required by new construction and as indicated.	 Cabinets to be frameless flush overlay construction, unless indicated otherwise. 	
	contractors, that will become necessary to accommodate proposed substitution	b. Updated final statement, accounting for final changes to the Contract Sum		 Provide products complete with accessories, trim, finish, fasteners, and other items needed for a 	in increased maintenance or decreased operational life or safety.	air filters. 2. Clean exposed surfaces of diffusers registers and	 Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting 	C. MDF to be Grade 130 with no urea-formaldehyde	
	b. Detailed comparison of significant qualities of proposed substitution with those of the Work	c. Evidence that claims have been settled.	A Unless the Contract Documents include more stringent	complete installation and indicated use and effect.Where products are named, provide the named	4. Visual Elements: Do not reduce the aesthetic qualities in the Architect's and Owner's opinion	grills. 3. Clean light fixtures lamps globes and reflectors	methods least likely to damage construction to remain or adioining construction. Use hand	resins. Particleboard to be Grade M-2 with no urea-formaldehyde resin. Thermoset panels thermally	
	specified. Significant qualities may include	013000 ADMINISTRATIVE REQUIREMENTS	requirements, applicable construction industry	product. Substitutions may be considered at the discretion of the Architect	Remove and replace construction that has been	Replace burned-out bulbs, those noticeably	tools or small power tools designed for sawing or grinding, not hammering and	fused, melamine-impregnated paper complying with	
	durability, visual effect, warranties, and	A. Project Management and Coordination:	or copied directly into the Contract Documents to the	 Where products are accompanied by the term "or equal" or "basis-of dosign", comparable products 	manner at no additional costs.	starters.	chopping. b Cut or drill from the exposed or finished side	D Complete febrication to maximum autority and "	
	Indicate deviations, if any, from the Work	included in different Sections for efficient and	 If compliance with two or more standards conflict, 	will be considered.	drilling, breaking, chipping, grinding, and similar	 Leave Project clean and ready for occupancy. Use cleaning materials and agents recommended 	into concealed surfaces to avoid marring	before shipment to Project site. Disassemble	Frankel Zacharia
	specified. c. Product Data, include drawings, descriptions,	orderly completion of the Work. 2. Contractor to coordinate scheduling and timing of	comply with the most stringent requirement.	a. Product description, auriputes, and characteristics may be listed to establish the	least likely to damage elements retained or	by manutacturer or tabricator of the surface to be cleaned. Do not use cleaning agents that are	c. Do not use cutting torches until work area is	installation. Where necessary for fitting at site, provide	Sixth Floor Remodel
	tabrication, and installation procedures. d. Samples, where applicable or requested.	required administrative procedures with other activities to avoid conflicts and to ensure orderly	B. The quantity or quality level shown or specified shall be the minimum provided or performed. The actual	significant qualities. b. Manufacturer's published attributes and	adjoining construction. If possible, review proposed procedures with original Installer;	potentially hazardous to health or property or that might damage finished surfaces.	cleared of flammable materials. At concealed spaces, verify condition and contents of	ample allowance for scribing, trimming, and fitting.	11404 West Dodge Road Omaha, NE 68154
	e. Detailed comparison of Contractor's Construction Schedule using proposed	progress of the Work. 3. RFIs: Immediately on discovery of the need for	installation may comply exactly with the minimum quantity or quality specified, or it may exceed the	characteristics also establish salient characteristics of product.	comply with original Installer's written recommendations.	K. Punchlist: Architect will prepare a list of items to be	hidden space before starting flame-cutting operation. Maintain portable fire-suppression	 E. Shop-cut openings to maximum extent possible. Locate correctly sized and shaped openings accurately. 	7/30/2024 Construction Documents
	substitution with products specified for the Work, including effect on the overall Contract	additional information or interpretation of the Contract Documents. Contractor to prepare and	minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum	 Comparable products will be evaluated by the Architect during the submittal review. 	 In general, use hand or small power tools designed for sawing and grinding, not 	completed and corrected at Substantial Completion. Contractor will submit a signed copy of punchlist stating	devices during flame-cutting operations. d. Maintain fire watch during and for at least two	Sand edges of cutouts to remove splinters and burrs.	
	Time. f Cost information, including a proposal of	submit an RFI. Submit in a prompt manner to	or maximum, as appropriate, for the context of	 Where products are accompanied by the term "as selected." or a visual finish is not selected 	hammering and chopping. Cut holes and slots neatly to minimum size required, and	that each item has been completed or otherwise resolved for acceptance prior to Final Completion	hours after flame-cutting operations. e. Locate equipment and remove debris and	F. Before installation, condition cabinets to installation areas for a minimum of 24 hours	
	change, if any, in the Contract Sum.	a. Allow 7 working days for Architect's response.	decision before proceeding.	Architect will make selection from manufacturer's full product line options	with minimum disturbance of adjacent	Operation and Maintonance Date: Accomplete	materials so as not to impose excessive loads on supporting walls floors or framing	G Install level nlumb true and straight. Shim as required	
	g. Contractor's certification that proposed substitution complies with requirements in the	disagrees with response or response	C. Definitions:	B. If Contractor is given option of colocting between two or	not in use.	complete set of operation and maintenance data,	f. Dispose of demolished items and materials	with concealed shims. Install straight, level, and plumb	Specifications
	Contract Documents, is compatible with related products and materials, and is	warrants a change to the Contract. b. Prepare and maintain a log of RFI's. Submit	 Experienced": Means having successfully completed a minimum of five previous projects 	more products for use on Project, select product	exposed or finished side into concealed	Inclucing warranties, in format acceptable to Architect and Owner.	 Except for items or materials indicated to be 	to tolerance of 1/8 inch in 96 inches. Scribe and cut to fit adjoining work, refinish cut surfaces, and repair	
	appropriate for applications indicated. h. Contractor's waiver of rights to additional	log when requested. 4. Preconstruction Conference: Architect will	similar in nature. 2. "Approved": When used in conjunction with the	compatible with products previously selected, even if previously selected products were also options.	surtaces. c. Concrete and Masonry: Cut using a cutting	 Include only sheets pertinent to product or component installed. 	recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property,	damaged finish at cuts.	
	payment or time that may subsequently become necessary because of the failure of	schedule and conduct a preconstruction conference before start or Work at a time	Architect's action on the Contractor's submittals, applications, and requests, is limited to the	C. Deliver, store, and handle products using means and	machine, such as an abrasive saw or a diamond-core drill.	 Include the following type of information: a. Emergency instructions. 	remove demolition waste materials from Project site and legally dispose of them. Storage or sale	 Anchor to anchors or blocking built in or directly attached to substrates. Secure with countersunk, 	Designed: djm Sheet No.
	proposed substitution to produce indicated	convenient to Owner and Contractor.	Architect's duties and responsibilities as stated in	methods that will prevent damage, deterioration, and	d. Mechanical and Electrical Services: Cut off	b. Spare parts list.	of removed items or materials on-site is not	concealed fasteners, and blind nailing. Use fine	Drawn by: elb
	results.	Progress Meetings: Architect will conduct	the conditions of the contract	loss, including theft and vandalism. Comply with	pipe or conduit in walls or partitions to be	 Copies of warranties. 	permitted.	finishing nails or finishing screws for exposed fastening	

000 SUMMARY Notify Architect if discrepancies between drawings	 B. Contract Modification Procedures: 1. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving edjustment to the Contract Sum or the 	progress meetings at weekly intervals. a. Items of significance that could affect progress will be reviewed.	 "Directed": Means an instruction by the Architect. a. Other terms include "requested", "authorized", "selected", "required", and "permitted". 	 Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and property protocted 	remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.	 d. Wiring diagrams. e. Recommended "turn around" cycles. f. Inspection procedures. g. Shop drawings and product Data 	other incentives received from recycling building demolition materials shall accrue to Contractor.	
nd/or specifications are encountered. Requirements of Division 01 Sections apply to the	2. Architect will issue a detailed description of	 b. Progress since the last meeting will be reviewed to determine whether each activity is on time, ahead, or behind schedule. 	 "Indicated": Means requirements expressed by graphic representations or in written form. a. Other terms include "shown", "noted", "acheduled", and "anagified" 	 Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather protoction requirements for storage 	 e. Proceed with patching after construction operations requiring cutting are complete. 6. Patching: Patch construction by filling, repairing, refinishing, aloging up, and similar operations 	 g. Shop drawings and product Data. h. Product maintenance information. i. Fixture lamping schedule. 2. Do not upp criginal Project Record Decumenta on 	 Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other 	
Cooperate fully with separate contractors so work	adjustment to the Contract Sum or the Contract Time. If necessary, the description will include	behind schedule will be expedited and secure commitments from parties involved to ensure	5. "Furnish": Means to supply and deliver to the Project site, ready for unloading, unpacking,	3. Schedule delivery to minimize overcrowding of construction space.	following performance of other work. Patch with durable seams that are as invisible as practicable.	part of operation and maintenance manuals.	 4. Protect construction indicated to remain against damage and soiling. When permitted by Architect, 	linnersp
nder separate contracts may be carried out smoothly, vithout interfering with or delaying work under this Contract or other contracts. Coordinate the Work of	supplemental or revised Drawings and Specifications. a. Proposal requests issued by the Architect are	that current and subsequent activities will be completed within the Contract Time. c. Architect will record and distribute the	assembly, installation, and similar operations. 6. "Install": Describes operations at the Project site including the actual unloading, temporary storage,	D. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations	Provide materials and comply with installation requirements specified in other Sections, where applicable.	M. Project Record Documents: Maintain a clean undamaged set of Contract Documents and Shop Drawings. Mark the set to show the actual installation	items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations	studio
his Contract with work performed under separate ontracts.	not instructions either to stop work in progress or to execute the proposed change. 3 If latent or changed conditions require	meeting minutes to the Contractor for distribution to each subcontractor, supplier, or other entity concerned	unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finish, curing, protecting, cleaning, and similar	under requirements of the Contract Documents. Contractor is responsible for cost of replacing or rebuilding defective Work	a. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation	where the installation varies from the Work as originally shown. Give particular attention to concealed elements that would be difficult to measure and record at a later	after selective demolition operations are complete. 5. Remove demolition waste materials from Project site and dispose of them in an approved landfill	335 north 8th street, st lincoln, nebraska 68
Contractor shall have use of Project site for onstruction operations during construction period as	modifications to the Contract, the Contractor may initiate a claim by submitting a request for a	 Preinstallation Conferences: Conduct preinstallation conferences at Project site before 	operations. 7. "Provide": Means to furnish and install, complete	E. Remove, replace, patch, and repair materials and	 b. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration 	date. 1. Do not use record documents for construction	acceptable to authorities having jurisdiction. Do not allow demolished materials to accumulate	402.4/5./234 permission to reproduce all or part of this draw
etermined by Owner. Contractor's use of Project site s limited by Owner's right to perform work, to retain ther contractors on portions of Project, or remain	change to the Architect. a. Include a statement outlining reasons for the change and the effect of the change on the	each activity that requires coordination with other construction.	and ready for the intended use. 8. "Project site": The space available to the Contractor for performing construction activities.	surfaces cut or damaged during Work by methods and with materials so as not to void existing warranties.	Into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.	purposes; protect from deterioration and loss.2. Mark to indicate the actual product installed with proprietary name and model number, including	on-site. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.	unauthorized copying, disclosure, or construction permission of innerspace studios is j
operational during construction.	Work. b. Provide a complete description of the proposed change	 B. Construction Progress Documentation: 1. Contractor's Construction Schedule: Submit a comprehensive fully developed horizontal 	 "Regulations": The laws, ordinances, statues, and lawful orders issued by authorities having iurisdiction. Also, the rules, conventions, and 	017000 EXECUTION AND CLOSEOUT REQUIREMENTS	c. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall	product options selected.3. Provide access to record documents for the Architect's reference during normal working hours	a. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a	from architectural, structural, shop, and other a from architectural, structural, shop, and other a lay out and coordinate all work prior to inst clearances required for operation, mainten
which the Work is indicated. . Keep driveways, parking areas, loading areas, and	c. Indicate the effect of the proposed change on the Contract Sum and Contract Time.	Gantt-chart-type, Contractor's construction schedule within 5 days of date established for	agreements within the construction industry that control performance of the Work.	 A. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use 	surfaces in the new space. Provide an even surface of uniform finish, color, texture, and	N. Demonstration and Training: Instruct Owner's	controlled descent acceptable to Owner.Return adjacent areas to condition existing before	verification of clearances for all Mechanical/Electrical En
entrances serving the premises clear and available to Owner, Owner's employees, Owner's customers, other tenants, and emergency vehicles	 On Owner's approval of a Proposal Request, the Architect will issue a Change Order for signatures of the Owner and the Contractor on AIA Form 	commencement of the Work. a. Indicate each significant activity separately and in proper sequence.	D. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional	materials that visually match in-place adjacent surfaces to the fullest extent possible.	appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and	personnel in operation, adjustment, and maintenance of products, equipment, and systems.	demolition operations began. Promptly repair damage to adjacent construction caused by demolition operations. Where repairs to existing	Alvine Engine
at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage	G701.	 b. Indicate completion in advance of date established for final completion. c. Undate schedule to reflect actual construction. 	quality-control activities required to verify that the Work complies with requirements, whether specified or not.	B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates areas and conditions with lostaller or	appearance. d. Ceilings: Patch, repair, or rehang in-place	024119 SELECTIVE STRUCTURE DEMOLITION	surfaces are required, patch to product surfaces suitable for new materials.	Omaha, NE 68102 402.346.7007
of material and equipment on-site. Coordinate placement of dumpster with Architect	 C. Payment Procedures: 1. Schedule of Values: a. Round amounts to nearest whole dollar, the 	c. Opdate schedule to reflect actual construction progress and activities when requested.	 Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and 	Applicator present where indicated, for compliance with requirements for installation tolerances and other	even-plane surface of uniform appearance. e. Exterior Building Enclosure: Patch	 A. Field Conditions: 1. Conduct so Owner's and other tenant's operations will not be disrupted. 	061053 MISCELLANEOUS ROUGH CARPENTRY	Structural Enginee
and authorities having jurisdiction. Coordinate use of dock per Building Rules provided by Owner or Building Manager	total shall equal the Contract Sum. b. Provide a separate line item for each part of the Work where Application for Payment may	 C. Photographic Documentation: 1. Take photographs using maximum range of depth of field and that are in focus to clearly show Work 	reinspecting, for construction that replaced Work that failed to comply with the Contract Documents. On completion of testing inspecting sample	conditions affecting performance. Record observations. 1 Examine roughing-in for mechanical and electrical	components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of	 Notify Architect of discrepancies between existing conditions and Drawings before proceeding. It is not expected that hazardous materials will be 	A. Concealed blocking and plywood backing panels to be fire-retardant-treated wood Interior Type A. Plywood to be DOC PS 1. Exposure 1. C-D Plugged, not less than	
 There is no freight elevator in the building. a. Use of existing passenger elevators and 	include materials or equipment purchased or fabricated and stored, but not yet installed.	using a digital camera with a minimum sensor resolution of 8 megapixels.	taking, and similar services, repair damaged construction and restore substrates and finishes.	systems to verify actual locations of connections before equipment and fixture installation.	building enclosure.7. Cleaning: Clean areas and spaces where cutting	encountered in the Work. If suspected hazardous materials are encountered, do not disturb and	3/4 inch nominal thickness, unless otherwise indicated. Dimension lumber framing to be No. 2 grade or better	Civil Engineer
stairs will be permitted, provided they are protected, cleaned, and maintained in a condition acceptable to Owner or Building	 Each item shall be complete, including total cost and proportionate share of general overhead and profit. 	 Submit unaltered, original, full-size image file named with unique description that indicates purpose of photograph. 	Provide materials and comply with installation requirements or match existing substrates and finishes. Restore patched areas and extend	 Verify space requirements and dimensions of items shown diagrammatically. Examine walls, floors, and roofs for suitable 	and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.	notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.	with 19 percent maximum moisture content. B. Provide miscellaneous lumber for support or	
Manager per Building Rules provided by Owner or Building Manager.	 Applications for Payment: a. Each application for Payment shall be 	D. Submittal Procedures:	restoration into adjoining areas with durable seams that are as invisible as possible.	conditions where products and systems are to be installed.	F. Progress Cleaning:	a. Provide statement of refrigerant recovery signed by refrigerant recovery technician	attachment of other construction. Set to required levels and lines, with members plumb, true to line, cut, and fitted. Ett accurately to other construction. Levels	
elevators and stairs used during completion of Work to condition existing before start of	consistent with previous applications and payment as certified by the Architect and paid for by the Owner.	Drawings will not be provided by Architect for Contractor's use in preparing submittals.	a. Repair and protection are contractor's responsibility, regardless of the assignment of responsibility for quality-control services.	 verify comparibility with and suitability of substrates, including compatibility with existing finishes or primers. 	 Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully. 	that all refrigerant that was present was recovered and that recovery was performed	furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other	Interior Designer
Work. Comply with Building Rules provided by Owner or Building Manager as separate attachment	b. The period covered by each Application for Payment is one month.c. Use AIA Document G702 and Continuation	 Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in 	E. Coordinate with Architect to provide mockups demonstrating aesthetic effects and workmanship	 Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and 	 Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work. 	according to EPA regulations. Include name and address of technician and date refrigerant was recovered	 construction. Provide continuous 2x4 wood blocking between studs at the following locations: 	721 N 98th Street Omaha, NE 68114 402.934.3474 ext. 1
Aaintain portions of existing building affected by	Sheets G703. d. Complete every entry on the form, include	advance of performance of related construction activities to avoid delay.	where specifically indicated. Demolish and remove mockups when directed by Architect.	conditions.	 Keep installed work clean. Clean installed surfaces according to written instructions of 	 Maintain existing utilities indicated to remain in service and protect against damage during 	 a. Top and bottom of wall-hung cabinets. b. Wall-mounted door hardware other than wall 	DOCH THE
onstruction operations in a weathertight condition hroughout construction period. Repair damage caused y construction operations.	notarization and execution by a person authorized to sign legal documents on behalf of the Contractor.	 Pack each submittal appropriately for transmittal and handling. Transmit each submittal from the Contractor to the Architect using a transmittal 	015000 TEMPORARY FACILITIES AND CONTROLS	C. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where	 manufacturer or fabricator of product installed. 4. Remove debris from concealed spaces before enclosing the space. 	 operations. Maintain fire-protection facilities. Remove, replace, patch, and repair materials and surfaces cut or damaged during selective 	stops. c. Grab bars. d. Any equipment indicated to be wall-hung or	Kunnag
Perform the Work so as not to interfere with Owner's	e. Entries shall match data on the Schedule of Values and the Contractor's Construction Schedule, Use updated schedules if	form. The Architect will not accept submittals received from sources other than the Contractor.	A. Installation and removal of temporary facilities shall be included in the Contract Sum. Allow other entities to use temporary facilities without cost	portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate	 Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion 	demolition, by methods and with materials and using approved contractors so as not to void existing warranties	mounted to the wall.	MULLIGAN
 Notify the Owner not less than 72 hours in advance of activities that will affect Owner's or 	revisions were made. f. Include amounts of Change Orders issued	resubmittals. Time for review will commence on receipt of submittal. No extension of the Contract	B. Water, electric power, lighting, heating and cooling,	fabrication schedule with construction progress to avoid delaying the Work.	 6. During handling and installation, clean and protect construction in progress and adjoining materials 	B. Examination:	needed for utilities. Install by fastening to studs. Paint same as adjacent wall finish, unless otherwise	A-1918
other building tenant's operations, including, but not limited to, utility interruptions, high levels of noise and vibration, or odors.	prior to the last day of the construction period covered by the application. g. With each Application for Payment, submit	Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.	sanitary facilities, elevator, and stairs are available for use from Owner's existing system provided they are maintained in a condition acceptable to Owner and	D. Installation: Comply with manufacturer's written instructions and recommendations for installing	already in place. Apply protective covering where required to ensure protection from damage or deterioration at Completion.	 Verify that utilities have been disconnected and capped before starting. Determine whether removing any element might 	indicated. Coordinate sizes and locations with Architect when not indicated on Drawings.	CALLER RAS
 Maintain access to existing walkways, corridors, and exits. 	waivers of mechanic's liens from entities lawfully entitled to file mechanic's liens for the	a. Allow 10 business days for review of each submittal.	Building Manager. 1. Provide connections and extensions of services as	products in applications indicated. 1. Locate the Work and components of the Work	 Clean and provide maintenance on completed construction as frequently as necessary through 	result in structural deficiency or unplanned collapse of any portion of structure or adjacent	062023 INTERIOR FINISH CARPENTRY	I, Dan Mulligan, am t Coordinating Professior
Smoking is not permitted within the building or within 25 eet of entrances, operable windows, or outdoor air	construction period covered by the previous application. h. When an application shows completion of an	 b. For paper submittals submit three copies, Architect will return two copies. c. For electronic submittals submit via email as 	required for construction operations. C. Where sprinkler protection exists and is functional,	accurately, in correct alignment and elevation, as indicated. a. Make vertical work plumb and make	the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.	structures. 3. When unanticipated mechanical, electrical, or structural elements are encountered, investigate	A. Submit samples for each type of trim, for each species and cut, finished on one side.	the 6th Floor Office ren for Frankel Zacharia
ntakes. Use of tobacco products and other controlled substances within the existing building or on the Project site is not permitted	item, submit final or full waivers. i. The Owner reserves the right to designate which optities involved in the Work must	PDF electronic file. Architect will return annotated file. 5 Contractor to review each submittal and check for	maintain it without interruption. If operations are performed close to sprinklers, shield them temporarily with guards. Remove temporary guards at the end of	horizontal work level. b. Where space is limited, install components to maximize space available for maintenance	G. Starting and Adjusting:	and measure the nature and extent of the element. Submit a written report to the Architect.	B. Before installation, condition materials to installation areas for a minimum of 24 hours. Hardwoods to have 9 percent maximum moisture content	
Contractor personnel working on Project site to wear	submit waivers. j. With each Application for Payment, submit	coordination with other Work of the Contract and for compliance with the Contract Documents. Note	work shifts, whenever operations are paused, and when nearby work is complete.	and ease of removal for replacement. c. Conceal pipes, ducts, and wiring in finished	confirm proper operation. Remove malfunctioning units, replace with new units, and retest.	 C. Utility Services and Mechanical/Electrical Systems: 1. Maintain services/systems indicated to remain and 	C. Install level, plumb, true, and aligned with adjacent	
dentification tags approved by Owner and Building /anager at all times. . Comply with Owner's and Building Manager's	Contractor's waivers of mechanics liens for the period of construction covered by the application.	corrections and field dimensions. Mark with approval stamp before submitting to Architect. a. Incomplete submittals are unacceptable, will	D. Provide project manager and superintendent with cellular telephones. Provide project manager with	areas unless otherwise indicated. 2. Provide blocking and attachment plates and anchors and fasteners of adequate size and	 Adjust equipment for proper operation. Adjust operating components for proper operation without binding. 	protect against damage. 2. Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems	materials. Use concealed shims where necessary for alignment. Scribe and cut to fit adjoining work. Use fine finishing nails or finishing screws, countersunk and	
requirements for background and drug screenings of Contractor personnel working on Project site. Maintain list of approved screened personnel with	 k. Submit waivers of lien on forms, executed in a manner acceptable to Owner. Include rationage in amount of 10%, uplease 	be considered nonresponsive, and will be returned for resubmittal without review.	computer to maintain electronic communications.	number to securely anchor each component in place, accurately located and aligned with other portions of the Work - Where size and type of	 Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. 	serving areas to be selectively demolished. a. Provide services/systems that bypass area of selective demolition and maintain continuity	filled flush, where face fastening is unavoidable. Install to tolerance of 1/8 inch in 96 inches for level and plumb Install adjoining with 1/32 inch maximum offset	
Owner's and Building Manager's representatives.	indicated otherwise in final contract. 3. Administrative actions and submittals that must	stamp indicating action taken. a. Distribute copies of final approved submittals	F. Provide waste-collection containers in sizes adequate	attachments are not indicated, verify size and type required for load conditions.	equipment.	of services/systems to other parts of building. b. Cap or plug remaining piping with same or	D. Install standing and running trim with minimum number	
Contractor's Warranty for all labor and materials to ave a duration of One year from date of Final Completion.	precede or coincide with submittal of first Application for Payment include the following: a. List of sub-contractors, including those	as necessary for performance of construction activities. 7. Shop Drawings: Prepare Project-specific	to handle waste from construction operations. G. Provide facilities necessary for hoisting materials and	 a. Where mounting heights are not indicated, mount components at heights directed by Architect. 	H. Protection of Installed Construction: Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of	compatible piping material. c. Cap or plug ducts with same or compatible ductwork material.	of joints practical, using full-length pieces to greatest extent possible. Miter at returns and outside corners, and cope at inside corners, to produce tight-fitting	
Manufacturer's warranties, or warranties specified in other Sections, of longer duration to run	furnishing products or equipment. b. List of principal suppliers and fabricators.	information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the	personnel.	b. Allow for building movement, including thermal expansion and contraction.	Substantial Completion. Comply with manufacturer's written instructions for temperature and relative	3. Disconnect equipment at nearest fitting connection to services. Remove as whole units, complete with all controls. Owner and/or Building Manager	joints. Use scarf joints for end-to-end joints. Fill gaps between top of base and wall with wood filler, sand	
Concurrently. 2. Manufacturer's disclaimers and limitations do not relieve Contractor of obligations.	 c. Schedule of Values. d. Contractor's Construction Schedule. e. Schedule of unit prices. 	Contract Documents or standard printed data. a. Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on	and dirt migration and to separate occupied areas from fumes and noise. Seal joints and perimeter, protect	 Coordinate Installation of anchorages. 3. Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints 	humidity.	has right of first refusal.	E. For glass in wood frames, secure glass with removable	
00 PRICE AND PAYMENT PROCEDURES	 f. Submittal Schedule. g. List of Contractor's staff assignments. b. Conice of building permits. 	sheets at least 8-1/2 by 11 inches but no larger than 24 by 36 inches.	air-handling equipment, and provide walk-off mats at each entrance through temporary partition.	for the best visual effect. Fit exposed connections together to form hairline joints.	1. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces	 D. Protection: 1. Provide temporary barricades and other protection required to prevent injury to people and damage to 	stops located on secure side of opening.	
Substitution Procedures: Requests for substitution will be considered if	 Copies of building permits. Certificates of insurance and insurance policies. 	submittal for each element of construction and type of product or equipment.	 Provide and manage a fire-prevention program complying with NFPA 241. 	that are not considered hazardous.	touching up with matching materials, and properly adjusting operating equipment. Remove and	adjacent buildings and facilities to remain. 2. Design, provide, and maintain shoring, bracing,	ARCHITECTURAL CABINETS	
received within 15 days after award of the Work. Requests received more than 15 days after commencement of the Work may be considered or	 Administrative actions and submittals that must precede or coincide with submittal of Application for Payment at Substantial Completion include the 	 Samples: Submit manufacturer's standard sized samples for review of kind, color, pattern, and texture for a check of these characteristics with 	J. Document and notify Architect of visible signs of mold that appear or are discovered during construction.	 E. Cutting and Patching: 1. Structural Elements: Notify Architect of locations and details, and await directions before 	replace operating components that cannot be repaired. 2. Remove and replace damaged surfaces that are	and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain,	 A. Submit the following: 1. Shop drawings. 2. Product data for cabinet hardware and 	
rejected at the discretion of the Architect. 2. Identify product or fabrication or installation method to be replaced. Include related	following: a. Documentation supporting claim that the	other elements and for a comparison of these characteristics between submittal and actual	K. Repair and clean permanent facilities used during	proceeding. Shore, brace, and support structural elements. Do not change their load-carrying capacities or increase deflections.	exposed to view if surfaces cannot be repaired without visible evidence of repair. Remove and	and to prevent unexpected or uncontrolled movement or collapse of construction being demolished	accessories. 3. Samples for plastic laminates for each color, pattern, and surface finish	
Specification Section and Drawing numbers. B. Show compliance with requirements for	b. Statement showing an accounting of changes to the Contract Sum.	a. Submit manufacturer's color charts showing the full range of colors, textures, and patterns	unless renovation work is specified.	 Operational Elements: Do not reduce their capacity to perform as intended or that results in 	reflective surfaces.	 Remove temporary barricades and protections where hazards no longer exist. 	B. Comply with AWI's "Architectural Woodwork	
substitutions and the following, as applicable: a. Coordination information, including a list of changes or modifications needed to other	 Administrative actions and submittals that must precede or coincide with submittal of final Application for Payment include the following: 	available for selection by Architect when specific color selection not specified. 10. Product Schedule: Prepare written summary	A. Provide products that comply with the Contract	increased maintenance or decreased operational life or safety. 3. Other Construction Elements: Do not change their	J. Final Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in a commercial	E. Selective Demolition:1. Demolish and remove existing construction only to	Standards." 1. Cabinets to be grade Custom, unless specified elsewhere as Premium.	
parts of the Work and to construction performed by Owner and separate contractors, that will become peopsary to	a. Evidence of completion of Project closeout requirements.	indicating types of products required and their intended location in tabular form.	Documents, are undamaged and, unless otherwise indicated, are new at time of installation.	load-carrying capacity or that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased	building cleaning and maintenance program. 1. Replace disposable air filters and clean permanent	the extent required by new construction and as indicated.	 Cabinets to be frameless flush overlay construction, unless indicated otherwise. 	
accommodate proposed substitution. b. Detailed comparison of significant qualities of	c. Evidence that claims have been settled.	014000 QUALITY REQUIREMENTS	finish, fasteners, and other items needed for a complete installation and indicated use and effect.	operational life or safety. 4. Visual Elements: Do not reduce the aesthetic	 Clean exposed surfaces of diffusers, registers, and grills. 	and true to dimensions required. Use cutting methods least likely to damage construction	C. MDF to be Grade 130 with no urea-formaldehyde resins. Particleboard to be Grade M-2 with no	
proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size.	013000 ADMINISTRATIVE REQUIREMENTS	A. Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound	 Where products are named, provide the named product. Substitutions may be considered at the discretion of the Architect. 	qualities in the Architect's and Owner's opinion. Remove and replace construction that has been cut and patched in a visually unsatisfactory	 Clean light fixtures, lamps, globes, and reflectors. Replace burned-out bulbs, those noticeably dimmed by hours of use, and defective and noisy 	to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and	urea-formaldehyde resin. Thermoset panels thermally fused, melamine-impregnated paper complying with NEMA LD3, Grade VGL.	
durability, visual effect, warranties, and specific features and requirements indicated.	 A. Project Management and Coordination: 1. Contractor to coordinate construction operations 	or copied directly into the Contract Documents to the extent referenced.	 Where products are accompanied by the term "or equal" or "basis-of design", comparable products will be considered 	manner at no additional costs. 5. Cutting: Cut in-place construction by sawing, dijling breaking chipping grinding and similar	starters.4. Leave Project clean and ready for occupancy.	chopping. b. Cut or drill from the exposed or finished side	D. Complete fabrication to maximum extent possible	Frankel Zacharia
specified. c. Product Data, include drawings, descriptions,	included in different Sections for efficient and orderly completion of the Work. 2. Contractor to coordinate scheduling and timing of	 If compliance with two or more standards conflict, comply with the most stringent requirement. 	a. Product description, attributes, and characteristics may be listed to establish the	operations, including excavation, using methods least likely to damage elements retained or	 Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are 	existing finished surfaces. c. Do not use cutting torches until work area is	components only as necessary for shipment and installation. Where necessary for fitting at site, provide	Sixth Floor Remo
fabrication, and installation procedures. d. Samples, where applicable or requested.	required administrative procedures with other activities to avoid conflicts and to ensure orderly	B. The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may exactly with the minimum	significant qualities. b. Manufacturer's published attributes and characteristics also establish salient	adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written	potentially hazardous to health or property or that might damage finished surfaces.	cleared of flammable materials. At concealed spaces, verify condition and contents of hidden space before starting flame-cutting	ample allowance for scribing, trimming, and fitting.	11404 West Dodge Road Omaha, NE 68154
Construction Schedule using proposed substitution with products specified for the	 3. RFIs: Immediately on discovery of the need for additional information or interpretation of the 	quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these	characteristics of product. c. Comparable products will be evaluated by the	recommendations. a. In general, use hand or small power tools	K. Punchlist: Architect will prepare a list of items to be completed and corrected at Substantial Completion.	operation. Maintain portable fire-suppression devices during flame-cutting operations.	Locate correctly sized and shaped openings accurately. Sand edges of cutouts to remove splinters and burrs.	7/30/2024 Construction Docume
Work, including effect on the overall Contract Time. f. Cost information. including a proposal of	Contract Documents, Contractor to prepare and submit an RFI. Submit in a prompt manner to avoid delays in the Work	requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a	Architect during the submittal review. 4. Where products are accompanied by the term "as selected," or a visual finish is not selected.	designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required. and	Contractor will submit a signed copy of punchlist stating that each item has been completed or otherwise resolved for acceptance prior to Final Completion	 Maintain fire watch during and for at least two hours after flame-cutting operations. Locate equipment and remove debris and 	F. Before installation, condition cabinets to installation areas for a minimum of 24 hours.	
change, if any, in the Contract Sum. g. Contractor's certification that proposed	a. Allow 7 working days for Architect's response. Notify Architect within 3 days if Contractor	decision before proceeding.	Architect will make selection from manufacturer's full product line options.	with minimum disturbance of adjacent surfaces. Temporarily cover openings when	L. Operation and Maintenance Data: Assemble a	materials so as not to impose excessive loads on supporting walls, floors, or framing.	G. Install level, plumb, true, and straight. Shim as required	Specifications
substitution complies with requirements in the Contract Documents, is compatible with related products and materials. and is	disagrees with response or response warrants a change to the Contract. b. Prepare and maintain a log of RFI's Submit	 C. Definitions: 1. "Experienced": Means having successfully completed a minimum of five previous projects 	 B. If Contractor is given option of selecting between two or more products for use on Project, select product 	not in use. b. Finished Surfaces: Cut or drill from the exposed or finished side into concealed	complete set of operation and maintenance data, including warranties, in format acceptable to Architect and Owner.	 Dispose of demolished items and materials promptly. Except for items or materials indicated to be 	with concealed shims. Install straight, level, and plumb to tolerance of 1/8 inch in 96 inches. Scribe and cut to fit adjoining work, refinish cut surfaces. and repair	
 appropriate for applications indicated. h. Contractor's waiver of rights to additional payment or time that may subacquartly. 	Iog when requested.4. Preconstruction Conference: Architect will schedule and conduct a preconstruction	 similar in nature. 2. "Approved": When used in conjunction with the Architect's action on the Contractor's submitted. 	compatible with products previously selected, even if previously selected products were also options.	surfaces. c. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a	 Include only sheets pertinent to product or component installed. Include the following type of information: 	recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolition waste materials from Project	damaged finish at cuts.	
become necessary because of the failure of proposed substitution to produce indicated	conference before start or Work at a time convenient to Owner and Contractor.	applications, and requests, is limited to the Architect's duties and responsibilities as stated in	C. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and	diamond-core drill. d. Mechanical and Electrical Services: Cut off	 a. Emergency instructions. b. Spare parts list. 	site and legally dispose of them. Storage or sale of removed items or materials on-site is not	attached to substrates. Secure with countersunk, concealed fasteners, and blind nailing. Use fine	Designed: djm Drawn by: elb
	5 Progress Meetings: Architect will conduct	the conditions of the contract.	loss, including theft and vandalism. Comply with	pipe or conduit in walls or partitions to be	c. Copies of warranties.	permitted.	finishing nails or finishing screws for exposed fastening,	Reviewed: AU

 Fasten wall cabinets near top and bottom, and at ends not more than 16 inches o.c. for not less than 	F. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. Extend struts vertically from top of frame to overhead	 Do not connect or suspend steel framing from ducts, pipes, or conduit. Install ceiling suspension systems that are level to 	C. Suspend ceiling hangers from building's structural members, plumb and free from contact with insulation or other objects within ceiling plenum. Splay hangers	recommended by carpet manufacturer.	 A. Submit the following: 1. Product data. 2. Samples for each finish and color that is not 	before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide		
1-1/2 inch penetration into concealed wood blocking.	structural supports or substrates unless frame is anchored to structural support at each jamb. Install frames with removable glazing stops located on secure	within 1/8 inch in 12 feet measured lengthwise on each member and transversely between parallel members.	only where required to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means. Do not attach	open-bottomed obstructions, removable flanges, alcoves, and similar openings. Extend to center of door openings. Install pattern parallel to walls and	"clear."3. Maintenance data with closeout submittals.	ample allowance for scribing, trimming, and fitting.		
 Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and 	Side of opening. G. Immediately after erection, sand smooth rusted or	092900 GYPSUM BOARD	hangers to steel deck tabs, steel roof deck, or directly from permanent metal forms or floor deck.	borders, unless otherwise indicated. G. Maintain reference markers, holes, and openings that	B. Comply with requirements in "MPI Architectural Painting Specification Manual."	true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch	inn	erspc
to provide unencumbered operation. Complete installation of hardware and accessory items.	damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.	A. Apply and finish gypsum board panels to comply with ASTM C 840. Remove and replace panels that are wet, moisture damaged, and mold damaged.	D. Install edge moldings and trim at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical panels. Miter corners accurately	are in place or marked for future cutting by repeating on flooring as marked on substrates. Use nonpermanent, nonstaining marking device.	C. Provide materials for use within each finish system that are compatible with one another and substrates indicated, under conditions of service and application.	refinish cut surfaces, and repair damaged finish at cuts.	S	tudio
072100 THERMAL INSULATION A. Submit product data.	081416 FLUSH WOOD DOORS A. Submit the following:	 Isolate perimeter of gypsum board at structural abutments by providing 1/4 inch wide space. Isolate length of gypsum board at floors by 	and connect securely. Apply acoustical sealant in a continuous ribbon concealed on back of vertical legs of moldings before they are installed. Do not use exposed	 H. Where moveable wall partitions or other items are indicated for installation on top of carpet, install carpet 	 D. Verify compatibility with and suitability of substrates, including compatibility with existing finishes. Begin 	 F. Seal junctures of tops, splashes, and walls with mildew-resistant silicone sealant. 	S OM /Int	coln, nebraska 68508
B. Install insulation that is undamaged, dry, and unsoiled.	 Shop drawings including preparations for hardware and other pertinent details. Product data. 	providing 1/2 inch wide space. 3. Seal joints between edges and spaces with acoustical sealant.	fasteners, including pop rivets, on moldings and trim. E. Install suspension system runners so they are square	before installing these items. Contractor responsible for "lifting" or moving existing 	finish application only after unsatisfactory conditions have been corrected. Beginning application of finish system constitutes Contractor's acceptance of		permission to repro- solely for the limited	oduce all or part of this drawing is purpose of construction of this p
C. Use widths and lengths that fill the entire wall cavity formed by framing members to produce a friction fit. Where wall cavity heights exceed 96 inches, support	 Schedule prepared by supplier using same reference numbers for details and openings as those on Drawings. 	 B. Install water-resistant gypsum, glass-mat water-resistant, or cementitious backing panels where 	and securely interlocked with one another. Remove and replace dented, bent, or kinked members.	systems furniture, freestanding furniture, equipment, and other items as needed to complete removal of existing flooring, preparation of subsurface, and	substrates and conditions. E. Apply wood filler paste to open-grain woods to produce		do not scale drawin from architectural,	ion of innerspace studios is prohi ngs. verify all dimensions and cli structural, shop, and other appro
unfaced blankets mechanically and support faced blankets by taping flanges to flanges of studs.	 a. Indicate requirements for veneer matching. b. Indicate coordination of glazing frames and stops with glazing requirements. 	tile is installed or other areas subject to wetting. Where tile backing panels abut other types of panels in same plane, shim surfaces to produce a uniform plane across	F. For existing suspension system, remove and replace intermediate and cross runners that are damaged or have screw holes. Repair suspended ceiling mains	installation of new flooring.1. Contractor responsible for maintaining condition of existing furniture in its original locations and	smooth, glasslike finish. F. Apply finish system to produce surface films without		lay out and coo clearances req verify non-interfe verif	ordinate all work prior to installati uired for operation, maintenance erence with other work. do not fa fication of clearances for all trade
078413 PENETRATION FIRESTOPPING A. Install at all penetrations through fire-resistance-rated	c. Indicate fire ratings for fire doors.B. Interior solid-core doors to be Premium grade with	panel surfaces. C. Cover both faces of stud partition framing with gypsum	that are damaged or have screw holes; if the repair will be visually unsatisfactory, replace members as needed.	original configurations. 2. Electrical in-feeds to, and cabling thru, systems furniture will not be disconnected.	cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections.		Mecha Alv	anical/Electrical Engin vine Enginee
construction that complies with authorities having jurisdiction. 1. Install at all new penetrations and any existing	Grade A faces, unless otherwise indicated. Book match veneer leaves, Slip match for rift cut red oak. Core to be particleboard, glued wood stave, or	panels in concealed space (above ceilings, etc.), except in chases that are braced internally. 1. Except where concealed application is indicated or	G. Install acoustical panels with undamaged edges and fit accurately into suspension system edge moldings and runners. Scribe and cut panels at borders and	 Contractor responsible for maintaining integrity of existing electrical and cabling connections to equipment and other similar items. 	 G. At completion of construction activities of other trades, touch up and restore damaged or defaced finished 			1201 Cass Street Omaha, NE 68102 402.346.7007
penetrations. 2. Includes both empty openings and openings containing penetrating items.	structural composite lumber; five ply construction. C. Prepare doors to receive hardware according to the	required for sound, fire, air, or smoke ratings, coverage may include scraps of not less than 8 sq. ft. in area.	penetrations to provide a neat, precise fit. 096500 RESILIENT FLOORING	 Any necessary disassembly and reassembly of furniture to be completed by installer(s) approved by Owner and Architect. If items cannot be staged 	wood surfaces at no additional cost to the Contract Sum.		TEDI	Structural Engineer
B. Penetration firestopping to resist spread of fire, resist passage of smoke and other gases, and maintain	door hardware schedule and templates. Provide labels on doors where labeled doors are scheduled.	 Fit gypsum panels around ducts, pipes, and conduits. Where partitions intersect open concrete coffers, 	A. Submit the following:1. Product data.	on-site, Contractor responsible for transportation and storage in a facility approved by Owner and Architect.	H. Remove hardware and hardware accessories, plates and covers, light fixture trims, and similar items already installed prior to surface preparation and finish system			
original fire-resistance rating of construction penetrated. Systems shall be compatible with one another, with the substrates forming openings, and with penetrating	 Examine installed frames before hanging doors; verify that frames have been installed with plumb jambs and level heads. 	concrete joints, and other structural members projecting below underside of floor/roof slab and decks, cut gypsum panels to fit profile formed by	 Samples for each type, color, and pattern. Maintenance data with closeout submittals. 	 Contractor responsible for visiting site prior to submitting pricing to become familiar with extents of furniture and submitting questions to Architect. 	work. Remove these items to completely finish the adjacent surfaces. Have items reinstalled at completion of finish system work operations by workers			Civil Engineer
items if any. C. Install forming materials and other accessories required	E. Seal edges of doors, edges of cutouts, and mortises after fitting and machining.	coffers, joists, and other structural members; allow 1/4 to 3/8 inch wide joints to install sealant.	B. Before installation, condition materials to installation areas for a minimum of 24 hours. Close spaces to traffic during installation and for 48 hours after	099123 INTERIOR PAINTING	skilled in the trades involved. I. At the end of each workday, remove empty cans, rags,			
to support fill materials during their application. After allowing fill materials to fully cure, remove combustible forming materials and other accessories that are not	087100 DOOR HARDWARE	D. Install cornerbead at outside corners. Use LC-bead at exposed panel edges. Install control joints according to ASTM C 840, coordinate with Architect where wall	Installation. Beginning installation constitutes Contractor's acceptance of substrates and conditions.	 A. Submit the following: 1. Product data. 2. Samples for each finish, color, and texture. 	rubbish, and other discarded paint materials from the site.			Interior Designer
permanent components. D. Apply materials so they contact and adhere to	 A. Submit the following: 1. Product data. 2. Samples for each exposed finish upon request. 	length exceeds 30 lineal feet, and in specific locations approved by Architect.	C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound. Remove bumps and ridges to produce a smooth uniform	 Maintenance data with closeout submittals. B. Comply with requirements in "MPI Architectural 	104413 FIRE EXTINGUISHER CABINETS A. Maintain and protect existing cabinets.			721 N 98th Street Omaha, NE 68114
substrates. For fill materials that will remain exposed after completing the Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.	 Hardware schedule organized into "hardware sets." Include the following: a. Identification number, location, hand, fire 	E. Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum	substrate. D. For resilient tile, match for color and pattern by	Painting Specification Manual." 1. Provide primers that are compatible with finish coats used.	104416 FIRE EXTINGUISHERS		4	02.934.3474 ext. 108
078443 JOINT FIRESTOPPING	rating, and material of each door and frame. b. Type, style, function, size, quantity, and finish of each door hardware item. Include	board surfaces for decoration. Apply joint tape over gypsum board joints. Promptly remove residual joint compound from adjacent surfaces.	selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.	 Do not apply succeeding coats until previous coat has cured. Sand between applications where sanding is required to produce a smooth even 	 A. Maintain and protect existing extinguishers. 122413 ROLLER WINDOW SHADES 			ARCHI I AG
 Install at all joints in or between fire-resistance-rated construction systems that complies with authorities having jurisdiction. 	description and function of each lockset and exit device. c. Complete designations of every item required	F. Finish panels to levels indicated below:1. Level 1 for ceiling plenum areas, concealed areas,	E. For resilient sheet, unroll and allow to stabilize before installing.	surface. C. Provide materials for use within each paint system that	A. Submit the following:			MULLIGAN
 Install at exterior curtain-wall/floor intersections, if does not exist. Coordinate with Architect and Owner. 	for each door or opening. d. Keying schedule detailing Owner's final keying instructions.	and where indicated, unless a higher level of finish is required for fire-resistance-rated assemblies and sound-rated assemblies.	F. Scribe, cut, and fit to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in	are compatible with one another and substrates indicated, under conditions of service and application.	 installation details. 2. Product data. 			A-1918
B. Joint firestopping systems to resist spread of fire, resist passage of smoke and other gases, and maintain	B. For hardware on doors in an accessible route, comply with DOJ's "2010 ADA Standards for Accessible	 Level 2 for substrate for tile, unless a higher level of finish is required for acceptable lippage tolerances. 	furniture, cabinets, pipes, outlets, and door frames. Extend into toe spaces, door reveals, closets, and similar openings. Extend to center of door openings.	 Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers. Begin coating application only after 	 Samples for each exposed finish. Operation and maintenance data with closeout submittals. 			Dan Mulligan, am the
original fire-resistance rating of assemblies in or between which systems are installed. Systems to accommodate building movements without impairing	Design" and with ICC A117.1. C. Distribute door hardware templates for doors, frames,	 Level 4 at surfaces that will be exposed to view, unless otherwise indicated. Level 5 where indicated on Drawings. 	G. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on	unsatisfactory conditions have been corrected. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.	 B. Fabricate units to comply with WCMA A 100.1. Fabricate units in sizes to fill window and other 		Coor the	rdinating Professional 6th Floor Office remod for Frankel Zacharia.
ability to resist the passage of fire and hot gases. C. Install forming materials and other accessories required	and other work. Verify any questions regarding mounting heights with Architect.	093000 TILING	flooring as marked on substrates. Use nonpermanent, nonstaining marking device.	E. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible	openings.			
to support fill materials during their application. After allowing fill materials to fully cure, remove combustible forming materials and other accessories that are not	D. vvhere cutting and fitting are required to install hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal,	 A. Submit the following: 1. Product data. 2. Samples for the following: 	H Adhere to flooring substrates using a full spread of adhesive applied to substrate to produce a complete installation without open cracks, voids, raising and	paints and encapsulants. Remove incompatible primers and reprime substrate with compatible primers as required.	Adjust to operate smoothly and easily.		Ag	ency Approva
D. Apply materials so they contact and adhere to	storage, and reinstallation of surface protective trim units with finishing work. Do not install surface-mounted items until finishes have been	 a. Each type, composition, color, and finish of tile. b. Each type and color of grout. 	puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.	F. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller	A. Submit the following:			
substrates. For THI materials that will remain exposed after completing the Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.	 completed on substrates involved. Adjust door control devices to compensate for final operation of heating and ventilating equipment and 	 Maintenance data with closeout submittals. B. Comply with TCNA's "Handbook for Ceramic, Glass, and Stone Tile Installation" and MICLA (2011) 	 remove soil, visible adhesive, and surface blemishes from surfaces. Provide protective topcoat products as recommended by manufacturer. 	tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.	 Shop drawings. Product data for accessories. Samples for each color pattern and surface 			
079200 JOINT SEALANTS	088000 GLAZING	and stone the installation and ANSLA108 series. Beginning installation constitutes Contractor's acceptance of substrates and conditions.	096513 RESILIENT BASE AND ACCESSORIES	 Faint terms exposed in equipment rooms and occupied spaces. Protect work of other trades against damage from paint application. 	finish.			
Clean out joints immediately before installing sealants. Clean surfaces by means that do not stain, harm substrates, or leave residues capable of interfering with adhesion	A. Submit samples for patterned glass only.	C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound.	 A. Submit the following: 1. Product data. 2. Samples for each type and color. 	factory Mutual, or other code-required labels or equipment name, identification, performance	grade Custom. Fabricate in one piece with loose splashes for field application.			
 B. Place sealants so they directly contact and fully wet joint substates. Completely filling 	B. All glass to be tempered or safety laminate. Where safety or fire-protection-rated glazing labeling is required, permanently mark glazing with certification label.	D. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without intermulting without int	B. Before installation, condition materials to installation areas for a minimum of 24 hours.	 rating, or nomenclature plates. 2. Apply additional coats if undercoats, stains, or other conditions show through final coat of paint 	C. MDF to be Grade 130 with no urea-formaldehyde resins. Particleboard to be Grade M-2 with no			
John substrates. Completely fill recesses. Produce uniform joints that allow optimum movement capability. Tool to form smooth, uniform beads.	C. Adjust dimensions as required by Project conditions to	without interruptions, unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.	C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound. Remove	until paint tilm is of uniform finish, color, and appearance. Give special attention to ensure that surfaces, including edges, corners, crevices,	urea-formaldehyde resin. Core material at sinks made with exterior grade resins.			
 Provide concave joint profile, unless otherwise indicated. Provide acoustical sealants at both faces of portiliant 	provide necessary bite, minimum edge and face clearances, and adequate sealant thicknesses. Center glass lites in openings on setting blocks. Provide edge	E. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible	substrate.	weids, and exposed fasteners, receive a dry film thickness equivalent to that of flat surfaces.3. The term "exposed surfaces" includes area visible	 Shop-cut openings to maximum extent possible. Locate correctly sized and shaped openings accurately. Sand edges of cutouts to remove splinters and burrs. 			
 partmons. 3. Provide sealant for joint between metal frames and wall surfaces. 	Diocking where needed to prevent glass lites from moving sideways.	finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other	D. Apply to wall, columns, pllasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.	wnen permanent or built-in fixtures, convector covers, covers for finned tube radiation, grilles, and similar components are in place. Extend	seal by saturating with varnish.			
Remove excess sealant and smears from adjacent surfaces until no residue remains.	Remove and replace damaged glass.	 F. Maintain reference markers, holes, and openings that are in place or marked for future outfine human time are 	E. Install in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned. Do not use pieces less than 50" long except where	coaungs in these areas, as required, to maintain the system integrity and provide desired protection.	minimum of 24 hours. Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop			
adjoining walls, floors, and counters to be mildew-resistant silicone.	A. Comply with ASTM C754 and applicable requirements	flooring as marked or substrates. Use nonpermanent, nonstaining marking device.	not use pieces less than 50 long except where necessary.	 Paint surfaces benind movable equipment and furniture the same as similar exposed surfaces. Paint surfaces behind permanently fixed 	 F. Complete fabrication to maximum extent possible 			
081113 HOLLOW METAL DOORS AND FRAMES	 Use conventional or embossed, high-strength steel studs and tracks complying with ASTM C645. Donthy As indicated in Well Type Definition 	G. Install metal edge strips at locations indicated or where exposed edge of tile flooring meets carpet, wood, or other flooring	piece in continuous contact with horizontal and vertical substrates. Do not stretch during installation. Job form	 equipment or turniture with prime coat only. 5. Paint interior surfaces of ducts, where visible through registers or grilles, with a flat, non-precisive black with 	before snipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide			
 Submit the following. Shop drawings including door edge details, frame profiles, metal thicknesses, preparations for hardware, and other details 	 Depth. As indicated in Wall Type Definitions on Drawings. Base-Steel Thickness: 0.0296 inch (20 gauge) minimum unloss indicated otherwise in Wall Type 	 H. Comply with the following installation tolerances: 1. For vertical and horizontal linear vertication from 	G. Butt resilient molding accessories to adjacent materials	 non-specular black paint. 6. Paint backsides of access panels and removable or hinged covers to match exposed surfaces. 	ample allowance for scribing, trimming, and fitting. G. Install level, plumb, true, and straight. Shim as required			
 Product data. Submit schedule prepared by supplier using same reference numbers for datalle and even intervention. 	Definitions on Drawings or due to deflection limits. a. Deflection Limits: L/360, unless indicated	 For vertical and nonzontal lines, variation from plumb and level is not to exceed 1/8 inch in 96 inches. For vertical surfaces, variation from plumb is not to 	each piece. Install reducer strips at edges of carpet or resilient floor covering that would otherwise be	 Omit primer on metal surfaces that have been shop-primed and touch-up painted. 	with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches. Scribe and cut to fit adjoining work, refinish cut surfaces, and repair			
those on Drawings. a. Indicate coordination of glazing frames and stops with glazing requirements	Drawings.	 For vertical surfaces, variation from putfit is not to exceed 1/8 inch in 96 inches. For horizontal surfaces, variation from level is not to exceed 1/8 inch in 10 fact, or 2/8 inch 	096800 CARPETING	touch up and restore damaged or defaced painted surfaces at no additional cost to the Contract Sum.	damaged finish at cuts. H. Seal junctures of tops. splashes, and walls with		Frankel	7acharia
b. Indicate fire ratings for fire doors and frames.	 Where installed directly against masonry walls or dissimilar metals, install isolation strip between stude and surface 	 4. For flooring surfaces, variation from level is not to 	 A. Submit the following: 1. Product data. 2. Samples for each color and texture 	I. Paint exposed surfaces whether or not colors are designated in schedules, except where a surface or material is encodingely indicated patter by whether the second seco	mildew-resistant silicone sealant.		Sixth Fl	loor Remoc
 C. For welded frames, weld flush face joints continuously; grind fill dress and make smooth flush and invisible. 	 2. Install cripple studs at door and other framed openings. 3. Install so fastening surfaces your 1/9 inch 	 5. Do not vary joint widths more than 1/16 inch or 1/4 of nominal joint width, whichever is less. 6. For difference between planes of adjacent 	 3. Maintenance data with closeout submittals. B. Comply with CRI's "CRI Carpet Installation Standards." 	to remain neutral. Where an item or surface is not specifically mentioned, the Architect will select from	123661.19 QUARTZ AGGLOMERATE COUNTERTOPS		7/30/2024	ouge road 3154
Provide countersunk screws and bolts for exposed fasteners.	maximum from the plane formed by faces of adjacent framing.	 standard units (lipping), do not exceed 1/32 inch. For difference between planes of adjacent rectified and stone units (lipping), do not exceed 1/64 inch. 	Beginning installation constitutes Contractor's acceptance of substrates and conditions.	J. Remove hardware and hardware accessories, plates	 A. Submit the following: 1. Shop drawings. 2. Product data. 			
D. Except on weather-stripped frames, drill stops to receive 3 silencers on strike jambs of single-door frames and 4 silencers on boads of deathle door.	C. Suspend suspension system hangers from building structure as follows:	and stone units (lipping), do not exceed 1/64 inch. 095113 ACOUSTICAL PANEL CEILINGS	C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound. Remove humps and ridges to produce a smooth uniform	and covers, light fixture trims, and similar items already installed prior to surface preparation and painting. Remove these items to completely paint the adjacent	 Samples for each material type. Maintenance data with closeout submittals. 			
frames and 4 silencers on heads of double-door frames.	install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or	 A. Submit the following: 1. Product data. 2. Samples for each type of exact the second second	Sumps and nuges to produce a smooth uniform substrate.	surraces. Have items reinstalled at completion of painting operations by workers skilled in the trades involved.	 B. Fabricate in one piece with loose splashes for field application. 		Specifica	itions
E. Factory prepare nonow metal work to receive mortised and concealed hardware according to the door hardware schedule and templates. Reinforce doors and frames to receive surface manufacture.	suspension system. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or	 Samples for each type of acoustical panel upon request. Maintenance data with closeout submittals. 	of carpet meets other flooring of dissimilar height. Taper underlayment to 1/8 inch in 1 foot maximum.	K. At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the otto	C. Shop-cut openings to maximum extent possible. Locate correctly sized and shaped openings accurately			
and frames to receive surface-mounted hardware. Provide labels on doors and frames where labeled doors are scheduled.	other equally effective means. 2. Do not attach hangers to tabs of composite steel floor deck, steel roof deck, or permanent metal forme	B. Comply with ASTM C 636 and CISCA's "Ceiling Systems Handbook."	E. Cut and fit to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture,	SITE. 099300 STAINING AND TRANSPARENT FINISHING	Slightly ease edges and corners, unless otherwise indicated.		Designed: djm Drawn by: elb	Sheet No.
	torms.		capinets, pipes, outlets, door trames, edgings, thresholds, and nosings. Bind or seal cut edges as		D. Complete fabrication to maximum extent possible		Reviewed:	



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	F	REFERE	NCE KEYNC	DTES			
	Division 02 -	Existing Cor	nditions				
	024119 - Se	lective Demo	lition				
	024119.A	Remove gwb	wall assembly.				
	024119.B	Remove door, project	frame & hardware. Salva	ge for re-use on this	_inne	erspace	e
	024119.C	Remove sideli as required.	te assembly. Salvage to	re-use on this project	t o	u d'i o s	
	024119.D	Remove millw scheduled fini	ork. Patch wall surfaces a	as required for			
	024119.E	Remove plum	bing fixture.		— 335 r	north 8th street, suite c	
	024119.F	Remove existi	ng flooring and base. Cle	an and prepare	AS OM MIL	402.475.7234	
		Remove door	, frame and hardware. Sa	alvage for use on this	permission to reproc	duce all or part of this drawing is hereby grant	ed
	024119.G	project at new 628.	Door 626. Salvage card	reader for use on Door	solely for the limited p unauthorized copyin permissio	ourpose of construction of this project or archiv g, disclosure, or construction use without writt on of innerspace studios is prohibited.	ving. ten K
				1%	do not scale drawing from architectural, s	gs. verify all dimensions and clearances at sit tructural, shop, and other appropriate drawing	te or gs.
					lay out and coor clearances requ	dinate all work prior to installation to provide ired for operation, maintenance, and codes.	
				12h	verify non-interier	cation of clearances for all trades.	
				181	Mecha Alv	nical/Electrical Engineers	
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I					925	402.346.7007	
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					Age	ency Approval	
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					graphic	c scale: 1/8" = 1'-0"	_
					0 2' 4'	8' 12' 2	20 '
							D
							С
					Frankel	Zacharia	
		Dem	nolition Notes		Sixth Fl	oor Remodel	
	1. Carefully de	molish and remo	ve from the site those iten	ns indicated to be	0maha, NE 68	uge Koad 154	
	demolished.			, 1 4	7/30/2024 Co	pstruction Documents	
	2. By careful s and extent c	tudy of the contra of the selective de	et aocuments, determine emolition to be performed.	and verity the location Mark interface	(09/12/2024	COMMENT RESPONSE	\rightarrow
	surfaces, in items to be l	a non-damaging left in place intact	manner, as required to er	nable workers to identify			
	3. In the event	of demolition of,	or damage to, items not ir	idicated to be	Domolitic	n Dlan	
	demolished, Owner, to th	promptly replace e approval of the	e or repair such items, at r Architect and Owner.	no additional cost to the			
	4. If uncovered	l conditions are n	ot as anticipated, immedia	ately notify Architect and			
	secure need corrected	led directions. D Proceeding with the	o not proceed until unsation he Work constitutes accert	sfactory conditions are otance of conditions.	D1	Sheet No	— Α
	5. Building life	safetv svstems to	o remain operational through	ghout work. Protect	Designed: djm		
	automatic si temporary d	moke sensors fro	m dust and dust accumula th Building Manager Arch	ation. Coordinate any itect. Owner. Fire	Reviewed:		
	Marshal, and	d authorities havi	ng jurisdiction.	, 2	Proj: 4955		
13	14	4	15		16	File Path	
				F:\4955\Frankel Zacharia	a\sheets\4955-A100 Demolitio	on Plan.dwg, 4955-A100 Demolition Plan, 9/1	2/2024 9:39:46 AM, Ellen, 1:1



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	Confe 63	rence ¹²	Open 0	ffice	

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			MECHANICAL	SYMBOLS				/IECHANICAL SYMBOLS			
	SYMBOL	DESCRIPTION	PLUMBING SYMBOL DESCRIPTION		SYMBOL	DESCRIPTION	SYMBOL DESCRIPTION	PIPING SYMBOL DESCRIPTION	SYMBOL DESCRIPTION		
	——————————————————————————————————————	ACID VENT			-+O GC0	GRADE CLEAN OUT	TEE	GLOBE VALVE -	CONCENTRIC REDUCER		linnerspac
	AW	ACID WASTE (ABOVE FLOOR)		ATING 140°	0.0	DOUBLE GRADE CLEAN-OUT	ELBOW	PTT PRESS / TEMP TEST PORT	ECCENTRIC REDUCER		studios
	— — —AW— — —	ACID WASTE (BELOW FLOOR)	GG		— НВ	HOSE BIBB	UNION	GATE VALVE	├────── PRESSURE GAUGE WITH GAUGE CO	JCK	335 north 8th street, suite c
		COLD WATER (CW)	OVERFLOW STORM	DRAIN (ABOVE FLOOR)	── WH	WALL HYDRANT (NON-FREEZE TYPE)	STRAINER WITH DRAIN VALVE AND HOSE END	CHECK VALVE (ARROW INDICATES FLOW)	HI THERMOMETER, SIDE FEED		lincoln, nebraska 68508
	s	COLD SOFT WATER		DRAIN (BELOW FLOOR)	Y.H.	YARD HYDRANT	BALANCING VALVE	++++++++++++++++++++++++++++++++++++++	THERMOMETER, BOTTOM FEED		402.4/5./234
	——————————————————————————————————————	COMPRESSED AIR	SANITARY DRAIN (AE	OVE FLOOR)	BFP	BACK FLOW PREVENTER	ISOLATION VALVE (BALL OR BUTTERFLY)		ARROW INDICATES FLOW DIRECTIO	N	solely for the limited purpose of construction of this project or unauthorized copying, disclosure, or construction use witho permission of innerspace studios is prohibited
		EXISTING SANITARY DRAIN (ABOVE FLOOR)	SANITARY SEWER (B	ELOW FLOOR)	O_FD-X	FLOOR DRAIN SIZE-TYPE	-® PRESSURE RELIEF VALVE	AUTOMATIC AIR VENT	ARROW INDICATES DOWNWARD PIF	·E PITCH	do not scale drawings. verify all dimensions and clearance from architectural, structural, shop, and other appropriate (
		EXISTING SANITARY SEWER (BELOW FLOOR)	SITE STORM SEWER		<u> </u>	FLOOR SINK SIZE-TYPE	-+O ELBOW UP		(M) WATER METER		lay out and coordinate all work prior to installation to pro clearances required for operation, maintenance, and or verify non-interference with other work. do not fabricate
	S	EXISTING STORM DRAIN (ABOVE FLOOR)	STORM DRAIN (ABO)	/E FLOOR)	<u>_ RD-X</u>	ROOF DRAIN SIZE-TYPE		MANUAL AIR VENT WITH ISOLATION VALVE			Mechanical/Electrical Engineers
	S	EXISTING STORM DRAIN (BELOW FLOOR)		W FLOOR)	∆ ds	DOWN SPOUT				1	Alvine Engineers
<form></form>	S	EXISTING SUB SOIL DRAIN			Омн	MANHOLE	SYMBOLS INDICATED HERE AND NOT USED IN THE				Omaha, NE 68102 402 346 7007
	AW	EXISTING ACID WASTE (ABOVE FLOOR)	V VENT		<u> </u>		CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT. ADDITIONAL SYMBOLS AND ABBREVIATIONS				Structural Engineer
<form> Nave de la contracte de la contr</form>	— — —AW— — —	EXISTING ACID WASTE (BELOW FLOOR)			VTR	VENT THROUGH ROOF ON RISER	MAY BE INDICATED IN THE CONTRACT DOCUMENTS.				ED FEBR
		HOT WATER (HW)	VACUUM BREAKER								
						PLUMBING RISER NUMBER					Civil Engineer
							DEMOLITION NOTES:	HVAC GENERAL NOTES:	PLUMBING GENERAL NOTES:		
					SH	SHOWER	1. IHE UWNER SHALL HAVE THE FIRST RIGHT OF SALVAGE FOR ALL MECHANICAL, ELECTRICAL, AND PLUMBING ITEMS BEING REMOVED. IF OWNER DECLINES, THE CONTRACTOR SHALL REMOVE FROM THE PREMISES AND DISPOSE OF PROPERTY	 DO NOT RUN DUCTWORK, PIPING, AND PLUMBING ABOVE ELECTRICAL PANELS OR IN CODE REQUIRED CLEARANCE SPACES. COORDINATE ALL ROUTING WORK WITH ALL OTHER TRADES 	 DU NOT RUN PLUMBING, PIPING, AND DUCTWORK ABOVE I PANELS OR IN CODE REQUIRED CLEARANCE SPACES. CO ROLITING WORK WITH ALL OTHER TRADES 	JECTRICAL ORDINATE ALL	
			HEATING - VENTILATING - A	IR-CONDITIONING			VERIFY OWNER'S INTENT PRIOR TO REMOVAL OR DEMOLITION.	2. DO NOT RUN DUCTWORK, PIPING, AND PLUMBING ABOVE OR THROUGH	2. DO NOT RUN PLUMBING, PIPING, AND DUCTWORK ABOVE	JR THROUGH	
	SYMBOL	DESCRIPTION	SYMBOL DESCRIPTION		SYMBOL	DESCRIPTION	2. INFORMATION PERTAINING TO THE EXISTING BUILDING HAS BEEN OBTAINED THROUGH THE BUILDINGS ORIGINAL DRAWINGS WHERE AVAILABLE. REPORT DISCREPANCIES TO	INFORMATION TECHNOLOGY AND DATA CLOSETS, IDF, AND MDF ROOMS. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.	INFORMATION TECHNOLOGY AND DATA CLOSETS, IDF, ANI COORDINATE ALL ROUTING WITH ALL OTHER TRADES.	HDF ROOMS.	
	CWS	CHILLED WATER SUPPLY		DL VALVE, 2-WAY		TURNING VANES	THE ARCHITECT/ENGINEER PRIOR TO ANY DEMOLITION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK.	3. DRAWINGS, PLANS, SCHEMATICS, AND DIAGRAMS INDICATE THE GENERAL LOCATIONS AND THE ARRANGEMENT OF SYSTEMS. WHEREVER PRACTICAL	3. DRAWINGS, PLANS, SCHEMATICS, AND DIAGRAMS INDICAT LOCATIONS AND THE ARRANGEMENT OF SYSTEMS MUTCH	E THE GENERAL REVER PRACTICAI	MECHANIA
	— — —CWR— — —	CHILLED WATER RETURN		DL VALVE, 3-WAY		SUPPLY, OUTDOOR, OR MIXED AIR DUCT	3. COORDINATE SHUT DOWN OF ALL UTILITIES FOR DEMOLITION WORK WITH THE OWNER.	INSTALL SYSTEMS AS INDICATED. PROVIDE OFFSETS AND ELEVATION CHANGES TO DUCTWORK, PIPING, AND PLUMBING AS REQUIRED TO	INSTALL SYSTEMS AS INDICATED. PROVIDE OFFSETS AND CHANGES TO PLUMBING, PIPING, AND DUCTWORK AS REC	ELEVATION UIRED TO	The second secon
	— — —PC— — —	CONDENSATE OR BOILER FEED PUMP DISCHARGE		ING VALVE (PRV)		END OK RISER (SA) (OA) (MA) RETURN EXHAUST OR RELIEF AIR DUCT	4. DISCONNECT AND REMOVE MECHANICAL SYSTEMS, EQUIPMENT, AND COMPONENTS AS INDICATED TO BE REMOVED.	COMPLETE THE LAYOUT AND COORDINATION PROCESS AS WELL AS MEET ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS.	COMPLETE THE LAYOUT AND COORDINATION PROCESS AS ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS.	WELL AS MEET	HARRER
	CS	CONDENSER WATER SUPPLY FROM TOWER	PIPE IN SLEEVE		X/X	END OK RISER (RA) (EA) (RLFA) RECTANGULAR DUCTWORK	AND CAP REMAINING PIPING WITH THE SAME OR COMPATIBLE PIPING MATERIAL. DUCTS TO BE REMOVED: REMOVE PORTIONS OF DUCT AND CAP REMAINING DUCTS	 SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR DIFFUSER, REGISTER, GRILLE, AND CEILING MOUNTED DEVICE LOCATIONS 	 PROVIDE SEWER CLEANOUTS AS REQUIRED BY CODE AND COORDINATE LOCATION IN FIELD. 	AS INDICATED.	E-17252 & 5
	— — — CR— — —	CONDENSER WATER RETURN TO TOWER	VALVE IN VERTICAL I	PIPE	XØ	(FIKST NUMBER IS SIDE SHOWN)	WITH THE SAME OR COMPATIBLE DUCTWORK MATERIAL. EQUIPMENT TO BE REMOVED: DISCONNECT AND CAP SERVICES AND REMOVE	5. CONTRACTOR SHALL COORDINATE LOCATION OF DUCTWORK IN CEILING	5. DO NOT ROUTE PLUMBING BRANCHES OR MAINS WITHIN S	PACE REQUIRED	ATE OF NEBRAS
	— — — CD— — —	COIL OR EQUIPMENT DRAIN	F AND T TRAP CAP LI	3S/HR	Х/Х ф	FLAT OVAL (FIRST NUMBER IS THE SIDE SHOWN)	EQUIPMENT. <u>EQUIPMENT TO BE REMOVED AND REINSTALLED</u> : DISCONNECT AND CAP SERVICES AND REMOVE CLEAN, AND STORE FOLUPMENT, WHEN APPROPRIATE, REINSTALL	SPACE WITH ALL TRADES PRIOR TO FABRICATION AND INSTALLATION OF DUCTWORK.	TO SERVICE ALL HVAC EQUIPMENT ABOVE CEILINGS.	S EXISTING TO	CA-2169
	GS	GLYCOL SUPPLY	BUCKET TRAP CAP L	BS/HR	/ν// Ψ		RECONNECT, AND MAKE EQUIPMENT FULLY OPERATIONAL. EQUIPMENT TO BE REMOVED AND SALVAGED: DISCONNECT AND CAP SERVICES AND	6. FOR GENERAL DUCTWORK CONSTRUCTION, SEE DUCT FITTING DETAILS.	REMAIN. PIPING AND FIXTURES SHOWN WITH THIN LINES INDICATE:	INDICATES NEW.	07/08/2024
	— — — GR — — —	GLYCOL RETURN	AIR QUALITY SENSO	۲		VOLUME DAMPER	REMOVE EQUIPMENT AND DELIVER TO OWNER.	7. DUCTWORK AND EQUIPMENT SHOWN WITH THIN LINES INDICATES EXISTING TO REMAIN. DUCTWORK AND EQUIPMENT SHOWN WITH BOLD LINES	 COORDINATE SHUT DOWN OF EXISTING WATER SERVICE N REPRESENTATIVE. 	/ITH OWNERS	
	FOS	FUEL OIL SUPPLY	A AQUASTAT			MOTORIZED DAMPER	D. IF PIPE OR EQUIPMENT INSULATION TO REMAIN IS DAMAGED IN APPEARANCE OR IS UNSERVICEABLE, REMOVE DAMAGED OR UNSERVICEABLE PORTIONS AND REPLACE WITH NEW PRODUCTS OF FOLIAL CAPACITY AND OLIVITY	INDICATES NEW.	 FURNISH AND INSTALL SHUT-OFF VALVES FOR WATER SUI EQUIPMENT ITEMS 	PLY AT ALL	Agency Approval
	— — —FOR— — —	FUEL OIL RETURN	CO2 CO2 SENSOR		Μ		6. CONTRACTOR IS REQUIRED TO VISIT SITE AND FIELD VERIFY ALL EXISTING CONDITIONS	DIFFUSERS, REGISTERS, OR GRILLES AND IN LOCATIONS INDICATED.	9. PVC PIPING SHALL NOT BE INSTALLED IN RETURN AIR PLE	NUMS.	
	— — —FOV— — —	FUEL OIL VENT	(H) HUMIDISTAT		FRD	FIRE DAMPER WITH ACCESS DOOR		 PROVIDE CLEARANCES TO ALL EQUIPMENT AS REQUIRED BY MANUFACTURERS' INSTALLATION AND OPERATION REQUIREMENTS AND/OR BY CODE 			
	G	NATURAL GAS	S REMOTE SENSOR				UTILITIES AS REQUIRED TO ALLOW THE WORK OF OTHER TRADES TO PROCEED.	10. INSTALL ALL DUCT AND PIPING IN MECHANICAL ROOMS AS HIGH AS			
	HPWS	HEAT PUMP WATER SUPPLY	T THERMOSTAT		► FSD	COMBINATION FIRE AND SMOKE DAMPER WITH ACCESS DOOR	8. DUCTWORK, PIPING AND EQUIPMENT SHOWN WITH THIN LINES INDICATES EXISTING TO REMAIN. DUCTWORK, PIPING AND EQUIPMENT SHOWN WITH BOLD LINES INDICATES TO	POSSIBLE. PROVIDE 7'-0" MINIMUM HIGH ACCESS PATHWAYS TO ALL EQUIPMENT.			
	— — HPWR- — -	HEAT PUMP WATER RETURN	THERMOSTAT WITH	REMOTE SENSOR	M		DE NEMIUYEU.	11. CAP ENDS OF ALL INSTALLED DUCTWORK DURING CONSTRUCTION TO MINIMIZE DIRT, DEBRIS, AND FOREIGN OBJECTS FROM ENTERING THE DUCT			
	— — —HPR— — —	HIGH PRESSURE CONDENSATE RETURN	SOLENOID VALVE (RI	EFRIGERANT)	SD	SMOKE DAMPER WITH ACCESS DOOR	SPRINKI FR NOTE	SYSTEM.			
	HPS	HIGH PRESSURE STEAM	THERMOSTATIC EXP	ANSION VALVE (REFRIGERANT)			THE TENANT PROJECT AREA OF THE BUILDING SHALL HAVE FIRE PROTECTION	 COORDINATE SCHEDULE OF SHUTDOWN FOR EXISTING HVAC SYSTEMS, FOR INSTALLATION OF NEW HVAC SYSTEMS, WITH THE OWNER'S DEPRESENTATIVE DRIOD TO SHUTDOWN 			
	HWS	HOT WATER SUPPLY	SIGHT GLASS		SA SA	SOUND ATTENUATOR	THE STATE FIRE MARSHAL'S OFFICE, AND THE OWNER'S APPROVING INSURANCE AGENCY. SPRINKLER CONTRACTOR SHALL COORDINATE THE LOCATIONS OF ALL	13. ALL INSULATION SHALL MEET THE ENERGY CODE'S INSTALLED R VALUE			
	— — —HWR— — —	HOT WATER RETURN	MANUAL AIR VENT			FLEX CONNECTION	CEILING MOUNTED SPRINKLER HEADS TO AVOID ANY AND ALL INTERFERENCE WITH ALL OTHER TRADES. IF CONFLICTS DO OCCUR SUCH THAT LIGHTS, DUCTS,	REQUIREMENTS.			
	— — —LPR— — —	LOW PRESSURE CONDENSATE RETURN	P T PRESSURE OR TEMP	ERATURE MEASURING POINTS		SUPPLY REGISTER OR GRILLE	DIFFUSERS, GRILLES, OR CEILING SYSTEMS CANNOT BE INSTALLED IN THEIR REQUIRED LOCATIONS DUE TO SPRINKLER PIPING INTERFERENCE, THE PIPING SHALL BE RELOCATED OR REPOLITED AT NO ADDITIONAL EXPENSE TO THE				
	LPS	LOW PRESSURE STEAM	FLOW SWITCH		Ц		PROJECT. SPRINKLER CONTRACTOR SHALL MAINTAIN AN ADEQUATE SUPPLY OF EXTRA PIPING, FITTINGS, AND NECESSARY TOOLS TO MAKE FIELD MODIFICATIONS				
	— — — MPR— — —	MEDIUM PRESSURE CONDENSATE RETURN	1 HEATING RISER			RETURN REGISTER OR GRILLE	WITHOUT DELAY. AN APPROVED SPRINKLER SHOP DRAWING DOES NOT PRECLUDE REROUTING IF SO ORDERED BY THE ARCHITECT/ENGINEER.				graphic scale: 1/8" = 1'-0
	MPS	MEDIUM PRESSURE STEAM	ACCESS DOOR - SIZE	AS SHOWN OR PER SPEC.	Ц						0 2' 4' 8' 12'
		REFRIGERANT LIQUID	EXPANSION LOOP, LI	ENGTH AND DEPTH		TYP DIFFUSER NECK SIZE, MARK CFM					
	RS	REFRIGERANT SUCTION		HADED AREA INDICATES							
	RD	REFRIGERANT HOT GAS DISCHARGE		LEMENT LOCATION)		TYP EXHAUST/RETURN GRILLE					
	B.D.D.	BACK-DRAFT DAMPER (COUNTER BALANCED)		DNNECTION	X	MECHANICAL EQUIPMENT WITH ELEC CONNECTION SEE MECHANICAL/ELECTRICAL COORDINATION SCHEDULE					
				СТ	5 OR +	BREAK / CONTINUATION					
					· · · · · ·						
model model <td< td=""><td>·</td><td></td><td>ABBREV</td><td>IATIONS</td><td></td><td></td><td></td><td></td><td></td><td>© COPYRIGHT 2024 AE# 20241004</td><td></td></td<>	·		ABBREV	IATIONS						© COPYRIGHT 2024 AE# 20241004	
	AFF ABOVE FINISH AHJ AUTHORITY H ASHRAF AMERICAN SO	HAVING JURISDICTION DIAC DIACONNECT	GW GARAGE WASTE HGT HEIGHT HP HORSEPOWER	OFCI OWN CON PERD DED	IER FURNISHED TRACTOR INSTALLED PENDICUI AR	STD STANDARD TEMP TEMPERATURE TYP TYPICAI				granted solely for the limited purpose of construction of this project or archiving. I nauthorized conving disclosure or	
	REFRIGERAT AIR-CONDITIC	ONING ENGINEERS DPAC DRY PIPE AIR COMP	RESSOR HVAC HEATING, VENTILA	TING PLBG PLUN		UG UNDERGROUND UL UNDERWRITERS LABORATORY				construction use without written permission of Alvine Engineering is prohibited by convright law	
	ASME AMERICAN SC MECHANICAL	CUCIE LY OF DPV DRY PIPE VALVE LENGINEERS DWG DRAWING SPECIFICATIONS OF DY DIRECT EXPANSION	AND AIR CONDITIO HZ HERTZ, HIGH ZONE	NING PNL PANE	EL STER SINK NDS PER SOUMEE FOO	UNO UNLESS NOTED OTHERWISE UPS UNINTERRUPTIBLE POWER SUPPLY VA VOLT-AMPS				NOTE: DO NOT SCALE DRAWINGS VERIEV ALL DIMENSIONS	
	THE AMERICA TESTING MAT	AN SOCIETY FOR EA EXHAUST AIR TERIALS EHC ELECTRIC HEATING	COIL	COL PSI POU PVC POLY	NDS PER SQUARE INCH YVINYL CHLORIDE	VERT VERTICAL VFC VARIABLE FREQUENCY CONTROL				and clearances from ARCHITECTURAL, STRUCTURAL, shop and other appropriate drawing or at site. lav out and	Frankel Zacharia
	AUX AUXILIARY AV ACID VENT AVG AVERAGE	EL ELEVATION ELEC ELECTRICAL EMS ENERGY MANAGEM	LBS POUNDS LZ LOW ZONE WET ST MA MIYED AIP	ANDPIPE PWR POW RA RETURED	/ER JRN AIR UIRFD	VTR VENT THROUGH ROOF W WATT WG WATER GAUGE				coordinate all work prior to installation to provide clearances required for operation, maintenance, and codes and verify	Sixth Floor Remodel
UNING SULLING MARANGEDENTI GP DOLLECT MEXE RACKNOW COLLECT MEXE RACKNOW FAR FEEL ARM THE MEM HULHWAIT EDG SULLING COLLECT FEEL ARM THE MEM HULHWAIT FOR FIRE ARM THE MEM HULHWAI	AW ACID WASTE AWG AMERICAN W	EINIG EINERGENMANAGEM EOA ECONOMIZER OUTE EPO EMERGENCY POWE	OOR AIR MAX MAXIMUM R OFF MBH 1000 BTU/HOUR	RGS RIGIE RH RELA	D GALVANIZED STEEL	WP WEATHERPROOF XFMR TRANSFORMER				non-interference with other work. DO NOT FABRICATE PRIOR TO VERIFICATION OF CLEARANCE FOR ALL	Omaha, NE 68154
	BEP DOUBLE CHE	ANAGEMENT EQUIP EQUIPMENT (STEM EXH EXHAUST ECK BACKFLOW FXIST FXISTING	MECH MECHANICAL MERV MINIMUM EFFICIEN	CY REPORTING RLFA RELII	EF AIR M ERSE OSMOSIS WATER					TRADES. READ SPECIFICATIONS.	
BIU BRUISH HERMAL UNIT BUT BRUISH HERMAL UNIT CH UBIC/EET PER HOUR CH CH C	PREVENTER BLDG BUILDING	F FIRE WATER FA FIRE ALARM	MIN MINIMUM MISC MISCELLANEOUS	RPZ REDI BACK	UCED PRESSURE ZONE						
CM CM CM FM FME	BTU BRITISH THEF BTUH BRITISH THEF CFH CUBIC FEET	RMAL UNIT FCO FLOOR CLEAN OUT RMAL UNIT PER HOUR FDC FIRE DEPARTMENT PER HOUR FIRE HOSE CARINE	CONNECTION MOA MINIMUM OUTDOO MTD MOUNTED	KAIK SA SUPF SAN SANI D כראה ברייד	PLY AIR ITARY EDUI F						
CLG CLEAR FT FEET NIC NOT IN CONTRACT SIM SIMILAR CVC CHORINATED POLYVINUL CHLORIDE GALUGE NON NORMALLY OPEN SM SPRINKLER MAIN CVC CHLORINATED POLYVINUL CHLORIDE GALUGE NON NON-POTABLE WATER SM CONTRACTORS' SM SPRINKLER MAIN CVC CONSTANT VOLUME GENERATOR OA OUTDOOR AIR SPECS SPECIFICATIONS DCV DOUBLE DETECTOR CHECK VALVE ENGN STAINLESS STEEL NON Senset SS STAINLESS STEEL Engned: Sheet No. UIZ0 cos/mer 120 linch // Nol. Net Nol. Nol. Nol. SS STAINLESS STEEL Intelligence (Calugence) Sheet No. Sheet No. Mice (Calugence) Note (Calugence) SS STAINLESS STEEL Intelligence Sheet No. Intelligence DCV DOUBLE DETECTOR CHECK VALVE Intelligence Stainless Steel Intelligence Sheet No. Intelligence Sheet No. Intelligence Sheet No. Intelligence Intelligence Sheet No. Intelligence Sheet No. Intelligence Sheet No. Inteligence Sheet No. Intelligence	CFM CUBIC FEET F CL CENTER LINE	PER MINUTE FILL FILL FILL FILL FILL FILL FILL FIL	NFPA NATIONAL FIRE PR ASSOCIATION	OTECTION SCHU SCHU SCW SOFT SHW SOFT	T COLD WATER T HOT WATER						Mechanical Symbols or
CRAC COMPUTER FOOM AIR CONDITIONER CV GALV GALV GALV GALV CONTROL TO STATE TO ON AIR CONDITIONER CV CONTROL TO STATE TO ON AIR CONDITIONER CV CONTROL TO STATE TO ON AIR CONDITIONER CV CONTROL TO STATE TO ON AIR CONTRACTORS CONTROL TO SCALE CV NOW NON-POT ABLE WATER NTS NOT TO SCALE CONTROL TO SCALE CONTROL TO SCALE CONTROL TO SCALE CONTROL TO SCALE CONTROL TO SCALE CV NOW NON-POT ABLE WATER NTS NOT TO SCALE CONTROL TO SC	CLG CEILING CLR CLEAR CPVC CHI ODINATE		NIC NOT IN CONTRACT NO NORMALLY OPEN	SIM SIMIL SM SPRI	LAR INKLER MAIN						Abbreviations
DDCV DOUBLE DETECTOR CHECK VALVE ASSEMBLY BACKFLOW PREVENTER GEN GEN ERRATOR GPM OA OUTDOOR AIR OC SPECS SPECIFICATIONS SS 120 Lincoln: Omanic: Oklahoma City: 120 Lincoln Mell, Suite 200 Monore: (405) 97-6107 Oklahoma City: 120 Lincoln Mell, Suite 200 Monore: (405) 97-6107 Des Moines: 100 IV, Wikine Bird, Suite 100 Monore: (405) 97-6108 OA OUTDOOR AIR OC SPECS SPECIFICATIONS SS STAINLESS STEEL 100 IV, Wikine Bird, Suite 200 Monore: (405) 97-6108 100 IV, Wikine Bird, Suite 200 Monore: (405) 97-6108 00 End Court Avenue, Suite 130 Des Moines; (AS3480 Designed: Hone: (405) 97-6108 SPECS SPECIFICATIONS SS STAINLESS STEEL	CRAC COMPUTER R CV CONSTANT V	ROOM AIR CONDITIONER GALV GALVANIZED /OLIME GC GENERAL CONTRAC	TOR NOW NOT TO SCALE	TER SMAUNA SHEE CONI NATIO	DITIONING CONTRACTO	RS'				Enaineerina	
1201 Cass Street 1220 Lincoln Mall, Suite 200 1001 W, Wilshire Blvd., Suite 102 400 East Court Avenue, Suite 130 Drawn by: Omaha, NE 68102 Lincoln, NE 68508 Oklahoma City, OK 73116 Des Moines, IA 50309 Des Moines, IA 50309 Phone: (402) 346-7007 Phone: (402) 936-3480 Phone: (515) 233-0569 Des viewed*	DDCV DOUBLE DETI ASSEMBLY B/	GEN GENERATOR GALLONS PER MINU	TE OA OUTDOOR AIR OC ON CENTER	SPECS SPEC	CIFICATIONS NLESS STEEL				Omaha	Lincoln: Oklahoma City: Des Moines:	Designed: Sheet No.
						1	신		1201 Cass Omaha, N	street 1220 Lincoln Mall, Suite 200 1001 W, Wilshire Blvd., Suite 102 400 East Court Avenue, Suite	

				ABBREVIATIONS		
DEER	DIA DISC DIST DPAC DPV DWG DX EHC ELEC EMS EOA EQUIP EXIST FA FCO FDC FHC FHV FL FT FW GA	DIAMETER DISCONNECT DISTRIBUTION DOWN DRY PIPE AIR COMPRESSOR DRY PIPE VALVE DRAWING DIRECT EXPANSION EXHAUST AIR ELECTRIC HEATING COIL ELEVATION ELECTRICAL ENERGY MANAGEMENT SYSTEM ECONOMIZER OUTDOOR AIR EMERGENCY POWER OFF EQUIPMENT EXHAUST EXISTING FIRE WATER FIRE ALARM FLOOR CLEAN OUT FIRE DEPARTMENT CONNECTION FIRE HOSE CABINET FIRE HOSE VALVE FLOOR FEET FILTERED WATER GAUGE GALVANIZED	GW HGT HP HTG HVAC HZ IE IP KW LBS LZ MA MAX MBH MECH MERV MIN MSC MOA MTD NC NFPA NIC NOM NPW	ABBREVIATIONS GARAGE WASTE HEIGHT HORSEPOWER HEATING HEATING, VENTILATING AND AIR CONDITIONING HERTZ, HIGH ZONE WET STANDPIPE INVERT ELEVATION INTERNET PROTOCOL KILOWATT POUNDS LOW ZONE WET STANDPIPE MIXED AIR MAXIMUM 1000 BTU/HOUR MECHANICAL MINIMUM EFFICIENCY REPORTING VALUE MINIMUM MISCELLANEOUS MINIMUM OUTDOOR AIR MOUNTED NORMALLY CLOSED NATIONAL FIRE PROTECTION ASSOCIATION NOT IN CONTRACT NORMALLY OPEN NOMINAL NON-POTABLE WATER	OFCI PERP PIV PLBG PNL PS PSF PSI PVC PWR RA REQD RGS RH RLFA RM RO RPZ SA SAN SCHD SCW SIM SMACNA	OW COP POS PLU POU POU POU POU POU POU POU POU POU PO
R	GC GEN GPM	GENERAL CONTRACTOR GENERATOR GALLONS PER MINUTE	OA OC	NOT TO SCALE OUTDOOR AIR ON CENTER	SPECS SS	NA I SPE STA

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		DI	FFUSER	REGISTE	R AND G		SCHEDU	JLE									_	/		
MARK	DESCRIPTIC	DN DEFLECTION	MAX S. P. (IN. W.C.)	MAX NC CO	ONSTRUCTION MATERIAL	FINISH	FACE SIZE (IN)	MANUFACTURE	ER MOD	DEL REMAR	ĸs									-
G-1	PERFORATED	-	0.1	30	STEEL	WHITE	24x24	KRUEGER	S80)P 1						R = 1 X (UNLES	(D SS		+ R = 1.5 X D (UNLESS SHOWN	
EMARKS: 1	1. CONTRACTOR SHALI	L VERIFY CEILING CONSTRUC	TION PRIOR TO FUF	RNISHING MATERIAL.											"V" PD		N RWISE)			Ε)
PL	UMBING E			NECTION	SCHEDUL	E				TO STRUCTURE ABC	DVE				<u>ľ BR/</u>					
IARK 0B-1	DESCRIPTION WITH HOSE CONNE	CTION AND THE FOLLOWING	BASIS OI	F DESIGN CC HIEF OX BOX WA	NNECTION DETAILS	HW				14"x10" OPENIN OF RETURN AIF					30° (MA)		45 CC	° ENTRY BRANCH DNVERGING TEE	30° (MAX	()
OUTLET OX	AND FACEPLATE: P GATE, GLOBE, OR E WATER TUBING.	LASTIC. SUPPLY FITTING: NP3 BALL VALVE AND NPS 1/2" COI	S 1/2" PPER,	REN	1/2" MARKS: .	-				16"x12" RETURI		-		NOTE:						
						P						<u>-</u>		POSSIBLE, I	USE EXTRACTOR -				{/	
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<u>- 1</u> SINK	MOUNTED, 20 GAUC STEEL WITH FAUCE UNDERCOATING, PI	GWL, SELF-RIMMING, COUNT GE TYPE 302 (18-8) STAINLES T LEDGE, SOUND DEADENING UNCHED TO MATCH FAUCET.	S STANDA G 25X22 SI DRAIN: STAINLE	RD "COLONY" 11 NGLE BOWL REI SS STEEL REI	Image: Non-Street of the street of	1/2"				CEILING ₹ GRILLE,	RETURN AIR CEILING G-1									Y
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emarks: 1. Faug	CET PROVIDED BY OW	NER. CONTRACTOR TO VERIF	Y BOWL COMPATI	BLITY WITH FAUCET.					1	<u> </u>							NO SCALE			M-MD-DuctFitt
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nase					•			// (Supply 626		Office 620
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<form> N. A. A.</form>								
<form> A. S. S.</form>	P	SECTION 21 0400 - COMMON REQUIREMENTS FOR FIRE SUPPRESSION	PART 2 - PRODUCTS 2.01 PERFORMANCE, CAPACITIES AND CHARACTERISTICS A. See Drawings for Equipment Schedules and/or notes with Equipment Performance Requirements when	 3.11 PIPING SYSTEMS - COMMON REQUIREMENTS A. General: Install as described below, unless individual Sections specify otherwise. Individual Sections specify unique installation requirements. 	SECTION 22 1005 - PLUMBING PIPING PART 1 GENERAL	SECTION 22 4000 - PLUMBING FIXTURES PART 1 GENERAL	SECTION 23 0593 - TESTING, ADJUSTING, AND BALANCING FOR HVAC	
	1.0	01 SUMMARY A. This section describes the general requirements of these specifications and shall apply to all phases of the	capacities and characteristics are not indicated in the specifications. 2.02 MATERIALS A. Unless otherwise specified, all materials and equipment shall be new, unused and undamaged. Materials and	 B. General Locations and Arrangements: Drawing plans, schematics, and diagrams indicate general, diagrammatic location and arrangement of systems. 	 SECTION INCLUDES Pipe, pipe fittings, valves, and connections for piping systems. Sanitary sewer. 	 1.01 SECTION INCLUDES A. Conventional plumbing fixtures and related components. 1.02 REFERENCE STANDARDS 	PART 1 GENERAL 1.01 SECTION INCLUDES A Testing adjustment and balancing of air systems and components	
<form> A and a standard and a sta</form>	-	work specified, shown on the drawings, or required to provide for complete installation of all systems for this project.	equipment shall be the current and standard designs of manufacturers regularly engaged in their production. 2.03 MATERIALS AND EQUIPMENT FURNISHED BY OTHERS A. Where materials and equipment are indicated as furnished by others and installed or connected under this	 Refer to architectural reflected ceiling plans for exact ceiling mounted device locations. Do not run piping above electrical panels or in code required clearance spaces. Coordinate location of civics with plantical cable trav. Dravide a minimum of fill of clear access above. 	2. Domestic water. 1.02 CODE AND PERMIT COMPLIANCE A. Work shall be in accordance with all applicable codes. Where the codes and drawings do not agree, the code	 A. ASME A112.18.1 - Plumbing Supply Fittings; The American Society of Mechanical Engineers; 2005. 1.03 SUBMITTALS A. Product Data: Provide catalog illustrations of fixtures, sizes, rough in dimensions, utility sizes, trim, and 	B. Measurement of final operating condition of HVAC systems.1.02 SUBMITTALS	
	1.1	A. The area of renovation shall have fire protection sprinkler system installed to meet the requirements of the NFPA codes, State Fire Marshal's office, Owner's approving insurance agency and all Authorities Having	 where indentias and equipment are indicated as infinited by others and installed of connected inder this contract, it shall be the Contractor's responsibility to verify installation details and requirements. 2.04 QUANTITY OF SPECIFIED ITEMS REQUIRED 	 Coordinate location of piping with electrical cable tray. Provide a minimum of of of clear access above cable tray for installation of cables. Conceal piping in walls, pipe chases, utility chases, above ceilings, below grade or floors, unless otherwise 	shall take precedence, however, code shall take precedence over what is shown only when it is more stringent than that indicated. Items that are allowed by codes which are less stringent than that shown on the Drawings	 Froduct Data. Frovide catalog indetrations of interes, sizes, rough-in dimensions, duity sizes, thin, and finishes. B. Manufacturer's Instructions: Indicate installation methods and procedures. 	 A. Final Report: Indicate deficiencies in systems that would prevent proper testing, adjusting, and balanci of systems and equipment to achieve specified performance. 1. Device TAP also to sellect a studies and submit as part of final specifications. 	
<form> A A A A A A A A A A A A A A A A A A A</form>		Jurisdiction. B. Contractor shall coordinate the locations of all ceiling mounted sprinkler heads to avoid any and all interference	A. Wherever in these specifications an article, device or piece of equipment is referred to in the singular number; such reference shall apply to as many such articles as are shown on the drawings or required to complete the installation.	noted, except in mechanical rooms or service areas. 5. Install piping free of sags or bends with ample space between piping to permit proper insulation	 shall not be substituted. B. Contractors shall familiarize themselves with all requirements as to permits, fees, etc., and shall comply. All permits, licenses, inspections, and arrangements required for the work shall be provided by the Contractors at 	 Maintenance Data: Include fixture trim exploded view and replacement parts lists. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer. 	 Revise TAB plan to renect actual procedures and submit as part of final report. Provide reports in soft cover, letter size, 3-ring binder manuals, complete with index page and indexing tabs, with cover identification at front and side. Include set of reduced drawings with air 	
<form></form>		 with all other trades. C. If conflicts do occur such that lights, ducts, diffusers, grilles, or ceiling systems cannot be installed in their required locations due to sprinkler piping interference, the piping shall be relocated or rerouted at no additional 	 2.05 PIPE AND PIPE FITTINGS A. Refer to individual piping Sections for pipe and fitting materials and joining methods. B. Pipe Threads: ASME B1 20 1 for factory threaded pipe and pipe fittings. 	 Install piping tight to slabs, beams, joists, columns, walls, and other permanent elements of the building unless otherwise indicated. Allow sufficient space above ceiling panels to allow for ceiling panel removal. 	their expense. C. All utilities shall be installed in accordance with utility company rules and regulations. D. Drawings, plans, and schematics and diagrams indicate the general location and the arrangement of piping	 1.04 QUALITY ASSURANCE A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience. 	outlets and equipment identified to correspond with data sheets, and indicating thermostat location 3. Include actual instrument list, with manufacturer name, serial number, and date of calibration.	s. 335 north 8th street, suite c lincoln, nebraska 68508
<form> A. A. A</form>		expense to the project. D. Contractor shall maintain an adequate supply of extra piping, fittings, and necessary tools to make field	 2.06 ESCUTCHEONS A. Description: Manufactured wall and ceiling escutcheons and floor plates, with an ID to closely fit around pipe, 	 Install piping to allow for expansion and contraction without stressing pipe, adjacent building structure or connecting equipment. 	systems. Wherever practical, install piping as indicated. 1.03 REFERENCE STANDARDS A ASNE D42.40. Oct Octaver Alley Octave Directory Fitters: The American Octave Machanical	 1.05 REGULATORY REQUIREMENTS A. Comply with requirements in ICC A117.1, "Accessible and Usable Buildings and Facilities"" Public Law 90-48 	 Form of Test Reports: Where the TAB standard being followed recommends a report format use that; otherwise, follow ASHRAE Std 111. Units of Measure: Report data in I-P (inch-pound) units only. 	402.475.7234
<form> A. S. A. S</form>	<	modifications without delay. E. An approved sprinkler shop drawing does not preclude rerouting if so ordered by the Architect/Engineer.	tube, and insulation of insulated piping and an OD that completely covers opening. 2.07 SEALANTS A Manufacturers:	 During construction, avoid any undue loads, forces or strains on valves, equipment, pumps flanges, or building elements with piping connections or piping systems. Install components with pressure rating equal to or greater than system operating pressure. 	 A. ASME B 16.18 - Cast Copper Alloy Solder Joint Pressure Fittings; The American Society of Mechanical Engineers; 2001 (R2005) (ANSI B16.18). B. ASME B16.22 - Wrought Copper and Copper Alloy Solder Joint Pressure Fittings; The American Society of 	"Architectural Barriers Act;" and Public Law 101-336, "American with Disabilities Act;" for fixtures for people with disabilities. B. NSF Standard: Comply with NSF 61, "Drinking Water System ComponentsHealth Effects," for fixture	 Include the following on the title page of each report: a. Name of Testing, Adjusting, and Balancing Agency. 	solely for the limited purpose of construction of this project or archiving, unauthorized copying, disclosure, or construction use without written permission of innerspace studios is prohibited.
<form> A. S. A. S</form>		 A. Warrant all materials, workmanship and equipment against defects for a period of one year after the date of substantial completion. 	 Sealants:Dow Corning, Pecora, Sonneborn, Tremco. Firestopping Materials:Dow Corning, Metacaulk, Specified Technologies, Inc., 3M Fire Protection Products, 	 D. Locate groups of pipes parallel to each other, spaced to permit insulation and valve servicing. E. Install fittings for changes in direction and branch connections. 	Mechanical Engineers ; 2001 (R2005). C. ASME B16.26 - Cast Copper Alloy Fittings for Flared Copper Tubes; The American Society of Mechanical Engineers : 2006.	materials that will be in contact with potable water. 1.06 DELIVERY, STORAGE, AND HANDLING A. Accept fixtures on site in factory packaging. Inspect for damage.	b. Address of Testing, Adjusting, and Balancing Agency.c. Telephone number of Testing, Adjusting, and Balancing Agency.	do not scale drawings. verify all dimensions and clearances at site or from architectural, structural, shop, and other appropriate drawings.
<form> A. A. A</form>		B. Repair or replace, at no additional cost to the Owner, any item which may become defective within the warranty period.	Tremco Sealants & Coatings. B. Silicone Sealant: Single component, air curing, non-staining, non-bleeding, capable of continuous water immorphic non-scaring two for application in vortical joints and in borizontal joints, only as selected	 F. Keep all pipe, duct, and equipment openings closed during construction except when actual work is being performed on that item or system. 	 D. ASME B31.9 - Building Services Piping; The American Society of Mechanical Engineers ; 2008 (ANSI/ASME B31.9). E. ASTM R22. Standard Specification for Solder Metal : 2008 	 B. Protect installed fixtures from damage by securing areas and by leaving factory packaging in place to protect fixtures and prevent use. 	 a. Project name. e. Project location. f. Project Architect 	clearances required for operation, maintenance, and codes. verify non-interference with other work, do not fabricate prior to verification of clearances for all trades.
<form> A. A. A</form>		 C. Any manufacturers' warranties concerning any item installed will run to the benefit of the Owner. D. The Contractor agrees not to void or impair, or to allow Sub-Contractors to void or impair, any warranties regarding products or items installed as part of this project. 	C. Primer: Non-staining type, recommended by sealant manufacturer to suit application. D. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with	 G. Piping branch takeotts shall be tabricated using standard manufactured welding or threaded tees. 1. Branch welds reinforced with welding saddles or by forged steel reinforcement fittings such as weldolets, threadolets and sockolets will be allowed on 2 inch and smaller branch connections. 	 F. ASTM B32 - Standard Specification for Seamless Copper Tube, Bright Annealed ; 2011. G. ASTM B75 - Standard Specification for Seamless Copper Tube ; 2002 (Reapproved 2010). 	2.01 MANUFACTURERS A. Stainless Steel Sinks: Elkay, Just, Kohler, Moen - Commercial.	g. Project Engineer.h. Project Contractor.	Mechanical/Electrical Engineers
<form></form>	1.0	 E. The repair of faulty workmanship shall be considered to be included in the contract. 04 QUESTIONS OF INTERPRETATION DURING BIDDING PHASE 	joint forming materials. E. Joint Backing: ANSI/ASTM D1056; round, closed cell, polyethylene foam rod; oversized 30% to 50% larger there is int width	I. Leaking pipe and duct joints shall be remade using new materials.J. Drill and deburr all openings which are made after erection of the piping system.	 H. ASTM B88 - Standard Specification for Seamless Copper Water Tube ; 2009. I. ASTM B302 - Standard Specification for Threadless Copper Pipe, Standard Sizes ; 2007. J. CISPI 301 - Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, 	 B. Faucets: Elkay, Kohler, Moen - Commercial, T&S Brass. C. C. Plumbing Fixtures: American Standard, Kohler, D. D. Flush Valves: Sloan. 	 i. Project altitude. j. Report date. Configuration of a standard and analytic the configuration and belowing and inclusion of the standard standard	1201 Cass Street
<form> A A A A A A A A A A A A A A A A A A A</form>	,	A. If questions arise during the bidding process regarding the meaning of any portion of the contract documents, the prospective bidder shall submit the questions to the Architect/Engineer for clarification.	 F. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application. 2.08 ACCESS DOORS 	 Joints in steel pipe 2 inches and smaller shall be threaded in accordance with ANSI B1.1. Utilize pipe joint lubricant or sealant suitable for the service for which the pipe is intended on the male threade at each joint 	 Waste and Vent Piping Applications; Cast Iron Soil Pipe Institute ; 2005. K. CISPI 310 - Specification for Coupling for Use in Connection with Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain. Waste, and Vent Piping Applications; Cast Iron Soil Pipe Institute ; 2004. 	 2.02 PERFORMANCE, CAPACITIES AND CHARACTERISTICS A. See Drawings for Equipment Schedules with Equipment Performance Requirements when capacities and characteristics are not indicated in the specifications 	 K. Certification sheet signed and sealed by the certified testing and balancing engineer. 1.03 PROJECT CONDITIONS A. Full Owner Occupancy: Owner will occupy the site and existing building during entire TAB period 	402.346.7007
<form></form>		 B. Any definitive interpretation or clarification of the contract documents will be published by addenda, properly issued to each person holding documents, prior to the bid date. C. Verbal interpretation or explanation not issued in the form of an addendum shall not be considered part of the 	A. Manufacturers: J. L. Industries, Karp Associates, Inc., Larsons Mfg. Co., Milcor, Inc., Miller Limited Partnership, Nystrom, Inc.	 K. Pipe joints and steel pipe larger than 2 inches shall be welded in accordance with ASME B31. L. Install couplings according to manufacturer's written instructions. 	 L. MSS SP-58 - Pipe Hangers and Supports - Materials, Design, Manufacture, Selection, Application, and Installation; Manufacturers Standardization Society of the Valve and Fittings Industry, Inc. ; 2009. 	PART 3 EXECUTION 3.01 EXAMINATION	Cooperate with Owner during TAB operations to minimize conflicts with Owner's operations. PART 2 EXECUTION	Structural Engineer
<form> National And State And And And And And And And And And And</form>		bidding documents. D. When submitting questions for clarification, adequate time for issuance and delivery of addenda must be	B. Prime coated 14 gauge steel, flush, with screwdriver operated cam lock, frame to accommodate construction type; size as indicated. 2.09 ELECTRICAL WIRE	 M. Piping Penetrations: 1. Install pipe escutcheons for pipe penetrations of concrete and masonry walls, wall board partitions, and 	 MSS SP-69 - Pipe Hangers and Supports - Selection and Application; Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.; 2003. N. MSS SP-89 - Pipe Hangers and Supports - Fabrication and Installation Practices; Manufacturers 	 Confirm that millwork is constructed with adequate provision for the installation of counter top lavatories and sinks. 3.02 PREPARATION 	2.01 GENERAL REQUIREMENTS A. Perform total system balance in accordance with one of the following:	
<form> A. S. A. S</form>		allowed. E. The Architect/Engineer shall be the sole judge regarding interpretations of conflicts within contract documents.	 A. All wiring materials covered by this section shall be in accordance with the latest revision of the National Electrical Code and applicable local codes and shall carry the UL label where applicable. 	suspended ceilings according to the following: a. Chrome-Plated Piping: Cast brass, one piece, with set screw, and polished chrome-plated finish. Use split costing esset theorem if required, for existing piping.	 Standardization Society of the Valve and Fittings Industry, Inc. ; 2003. MSS SP-110 - Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends; Manufacturers Standardization Society of the Valve and Fittings Industry. Inc. : 1996. 	A. Rough-in fixture piping connections in accordance with minimum sizes indicated in fixture schedule for particular fixtures. 3.03_INSTALLATION	 AABC MN-1, AABC National Standards for Total System Balance. NEBB Procedural Standards for Testing Adjusting Balancing of Environmental Systems. Maintain at least one copy of the standard to be used at project site at all times. 	Civil Engineer
<form> A A A A A A A A A A A A A A A A A A A</form>	1.0	 A. If any ambiguities should appear in the contract documents, request clarification from the Architect/Engineer before proceeding with the work. 	B. All wiring running exposed in return air plenums shall be plenum-rated cable for fire and smoke spread. PART 3 - EXECUTION	 b. Uninsulated Piping Wall Escutcheons: Cast brass or stamped steel, with set screw. c. Uninsulated Piping Floor Plates in Utility Areas: Cast-iron floor plates. 	P. NSF/ANSI 61 - Drinking Water System Components - Health Effects 1.04 SUBMITTALS	 A. Install each fixture with trap, easily removable for servicing and cleaning. B. Provide chrome plated rigid or flexible supplies to fixtures with screwdriver stops (as indicated), reducers, and 	 B. Begin work after completion of systems to be tested, adjusted, or balanced and complete work prior to Substantial Completion of the project. 	
<form> N. A. A.</form>		 B. If the Contractor fails to make such request, no excuse will thereafter be entertained for failure to carry out the work in a manner satisfactory to the Architec/Engineer. 	 3.01 GENERAL A. Fabrication, erection, and installation of the complete system shall be done by qualified personnel experienced in such work and shall proceed in an orderly manner so as not to hold up the progress of the project 	d. Insulated Piping: Cast brass or stamped steel; with concealed hinge, spring clips, and chrome-plated finish.	 A. FIGURE Data. Provide data on pipe materials, pipe fittings, valves, and accessories. Provide manufacturers catalog information. Indicate valve data and ratings. 1.05 QUALITY ASSURANCE 	escutcheons. C. Install components level and plumb, according to manufacturer's rough-in requirements. D. Assemble plumbing fixtures, trim, fittings, and other components according to manufacturers' written	 C. TAB Agency Qualifications: 1. Company specializing in the testing, adjusting, and balancing of systems specified in this section. 	
<form> A. A. A</form>	+	C. Should a contlict occur within the contract documents, the Contractor is deemed to have estimated the more expensive way of doing the work unless a written clarification from the Architect/Engineer was requested and obtained before submission of proposed methods or materials.	 B. Check all areas and surfaces where equipment or materials are to be installed and report any unsatisfactory conditions before starting work. 	 e. Piping in Utility Areas: Cast brass or stamped steel, with set-screw or spring clips. N. Sleeves are not required for core drilled holes. C. Fire Barrier Penetrations: Maintain indicated fire ratios of walls partitions and fires and fires at the set of th	 A. Perform work in accordance with applicable codes. B. Perform Work in accordance with local and/or state standards. C. Valves: Manufacturer's name and pressure rating marked on valve body. 	instructions. E. Install counter-mounting fixtures in and attached to casework. F. Install water-supply piping with stop on each supply to each fixture to be connected to water distribution piping	 z. Having minimum of five years documented experience. 3. Certified by one of the following: a. AABC. Associated Air Balance Council: www.aabcha.com: upon completion submit AABC. 	Н
	1.0	 D. The Architect/Engineer shall be the sole judge regarding interpretations of conflicts within contract documents. CODES 	 Commencement of work signifies the Contractor's acceptance of the conditions as fit and proper for the execution of the mechanical work. Equipment and systems shall be installed in accordance with manufacturer's instructions, requirements or 	c. The series renerations. Maintain indicated the fating of walls, partitions, ceilings, and floors at pipe and duct penetrations. Seal pipe and duct penetrations with firestopping materials in accordance with manufacturer's written instructions and applicable codes.	 D. Identify pipe with marking including size, ASTM material classification, ASTM specification, potable water certification, water pressure rating. F. Hub and Spirot Cast Iron pipe and fittings shall be manufactured from group and shall be including to the statement of the statement of	Attach supplies to supports or substrate within pipe spaces behind fixtures. Install stops in locations where they can be easily reached for operation.	National Performance Guaranty. b. NEBB, National Environmental Balancing Bureau: www.nebb.org.	MECHAN
<form> A. A. A</form>		 A. The work shall be performed by persons skilled in the trade involved and shall be done in a manner consistent with normal industry standards. B. All work aball appears to all applicable as the standards in the trade involved and shall be done in a manner consistent. 	 Equipment and systems shall be installed in accordance with manufacturer's instructions, requirements, or recommendations. E. Coordinate location of fire sprinkler piping and heads with all trades prior to finalization of shop drawings and 	3.12 PIPING JOINT CONSTRUCTIONA. Join pipe and fittings as follows and as specifically required in individual piping specification Sections:	ASTM A 74. All pipe and fittings shall be marked with the collective trademark of the Cast Iron Soil Pipe Institute @ and listed by NSF® International.	 G. Instan paper and cooling waste piping on grain outlet or each fixture to be directly connected to sanitary drainag system. H. Install water-supply flow-control fittings with specified flow rates in fixture supplies at stop valves. 	 D. TAB Supervisor and Technician Qualifications: Certified by same organization as TAB agency. 2.02 EXAMINATION 	the second secon
<form> A A A A A A A A A A A A A A A A A A A</form>		 B. All work shall conform to all applicable sections of currently adopted editions of the following codes, standards, and specifications: 1. International Fire Code (IFC) 	hydraulic calculations. F. See architectural reflected ceiling plans for locations of all ceiling mounted devices.	 Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly. Threaded lainte: Thread pipe with tapared pipe threads according to ASME B1 20.1. Cut threads full and 	 F. Hubless Cast Iron pipe and fittings conform to ASTM A 888 and CISPI Standard 301. All pipe and fittings shall be marked with the collective trademark of the Cast Iron Soil Pipe Institute ® and listed by NSF® International. G. Hubless Couplings shall be listed by NSF® International and conform to CISPI Standard 310 for standard 	 Install faucet flow-control fittings with specified flow rates and patterns in faucet spouts if faucets are not available with required rates and patterns. Include adapters if required. 3.04 CONNECTIONS 	 A. Verify that systems are complete and operable before commencing work. Ensure the following conditions: 1. Systems are started and operating in a safe and normal condition. 	HARRER SHARE
		 Safety and Health Regulations for Construction Occupational Safety and Health Standards (OSHA), National Consensus Standards and Established 	 G. Do not run the sprinkler piping above electrical panels or in code required clearance spaces. Coordinate with electrical and mechanical contractor. H. Coordinate shut down of existing fire service with owners representative. 	clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:	couplings or ASTM C 1540 for super duty or heavy duty couplings where indicated. Gaskets shall conform to ASTM C 564.	A. Piping installation requirements are specified in other sections. Drawings indicate general arrangement of piping, fittings, and specialties. B. Compart fittings with water supplies, store, and view trans, soil waste, and view training. Use size	 Final filters are clean and in place. If required, install temporary media in addition to final filters. Duct systems are clean of debris. 	E-17252
<form> Nature de la serie d</form>	3 ^{1.1}	Federal Standards. 07 PERMITS A. The Contractors shall familiaring the medium with all acquirements recording all commits from etc. and shall	I. All work shall comply with NFPA and the local AHJ (Authorities Having Jurisdiction), and owners insurance carrier.	 a. Note internal length of threads in fittings or valve ends, and proximity of internal seat or wall, to determine how far pipe should be threaded into joint. b. Apply appropriate tape or thread compound to external pipe threads, unless dry seal threading is 	A. Perform Work in accordance with state or municipality plumbing code. 1.07 DELIVERY, STORAGE, AND HANDLING	fittings required to match fixtures. 3.05 FIELD QUALITY CONTROL	 Air outlets are installed and connected. Duct system leakage is minimized. 	G
		 A. The Contractors shall annualize themselves with all requirements regarding all permits, rees, etc., and shall comply with them. B. All permits, licenses, inspections and arrangements required for the work shall be obtained by the Contractor at 	 3.02 COOPERATION WITH OTHER CONTRACTORS A. Perform the work in conformance with the construction called for by other trades and afford other Contractors reasonable opportunity for the execution of their work. 	specified.c. Align threads at point of assembly.	 A. Accept valves on site in shipping containers with labeling in place. Inspect for damage. B. Provide temporary protective coating on cast iron and steel valves. C. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation. 	 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. 3.06 ADJUSTING 	 Balancing dampers and devices are installed. Examine system and equipment installations to verify that they are complete and that testing, cleaning, adjusting, and commissioning specified in individual Sections have been performed. 	CA-2169
		his expense. C. All utilities shall be installed in accordance with the local rules and regulations and all charges shall be paid by	 B. Properly connect and coordinate the work with the work of other Contractors at such time and in such a manner as not to delay or interfere with their work. 	 d. Tighten joint with wrench. Apply wrench to valve end into which pipe is being threaded. e. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe or pipe fittings with threads that are corroded or damaged. 	D. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system. PART 2 PRODUCTS	 A. Adjust stops or valves for intended water flow rate to fixtures without splashing, noise, or overflow. 3.07 CLEANING A. Clean plumbing fixtures and equipment 	C. Examine systems for functional deficiencies that cannot be corrected by adjusting and balancing.D. Examine HVAC equipment to ensure that clean filters have been installed, bearings are greased, belts	07/08/2024
	1.0	the Contractor. 08 CODE COMPLIANCE A Work shall be in accordance with all applicable codes. Where the codes and drawings do not agree, the code	 Examine the contract documents for the General, Mechanical, and Electrical work and the work of other trades. Coordinate work accordingly. D. Promotiv report to the Architect/Engineer any delay or difficulties encountered in the installation of the 	FND OF SECTION	2.01 SANITARY SEWER AND VENT PIPING, ABOVE GRADE A. Cast Iron Pipe: CISPI 301, hubless, service weight.	 3.08 PROTECTION A. Protect installed products from damage due to subsequent construction operations. 	are aligned and tight, and equipment with functioning controls is ready for operation. E. Beginning of work means acceptance of existing conditions.	Agency Approval
<form> </form>		shall take precedence; however, code shall take precedence over what is shown only when it is more stringent than that indicated. Items that are allowed by codes which are less stringent than that shown on the drawings	mechanical work which might prevent prompt and proper installation of work required from other trades. 3.03 COORDINATION OF WORK	SECTION 21 1300 - FIRE SUPPRESSION SPRINKLERS	 Fittings: Cast iron. Joints: CISPI 310, ASTM C 564 neoprene gaskets and stainless steel clamp-and-shield assemblies. Shielded Couplings: ASTM C 1277 assembly of metal shied or housing, corrosion-resistant fasteners, and 	 B. Do not permit use of fixtures by construction personnel. C. Repair or replace damaged products before Date of Substantial Completion. 	 A. Air Handling Systems: Adjust to within plus or minus 5 percent of design for supply systems and plus or minus 10 percent of design for return and exhaust systems. 	
	1.0	shall not be substituted. 09 MATERIALS AND EQUIPMENT MANUFACTURERS A Options in selecting materials and equipment are limited by requirements of the contract documents and	 A. Plan all work so it proceeds with a minimum of interference with other trades. B. It shall also be the responsibility of the Contractor to inform the General Contractor of all openings required in the building required to the installation of the proceeding of the contractor. 	1.01 SECTION INCLUDES A. Wet-pipe sprinkler system.	 rubber sleeve with integral, center pipe stop. a. Standard, Shielded, Stainless-Steel Couplings: NSF listed, CISPI 310, with stainless-steel corrugated shield: stainless-steel bands and tightening devices; and ASTM C 564, rubber sleeve 	END OF SECTION	 B. Air Outlets and Inlets: Adjust total to within plus 10 percent and minus 5 percent of design to space. Adjust outlets and inlets in space to within plus or minus 10 percent of design. 	
<form> 1. N. M. M.</form>		governing regulations. They are not controlled by industry traditions or procedures experienced on previous construction projects.	 the building construction for the installation of the mechanical work. C. The Contractor shall cooperate with all other contractors in furnishing material and information, in proper sequence, for the correct location of all sleeves, inserts, foundations, wiring, etc. 	 1.02 REFERENCE STANDARDS A. ICC-ES AC01 - Acceptance Criteria for Expansion Anchors in Masonry Elements ; 2009. 	2.02 SPECIAL FITTINGS - SANITARY WASTE AND VENT A. Flexible, Nonpressure Pipe Couplings: Comply with ASTM C 1173, elastomeric, sleeve-type, reducing or	SECTION 22 0719 - PLUMBING PIPING INSULATION	C. Hydronic Systems: Adjust to within plus or minus 10 percent of design. 2.04 SCOPE A. Test adjust and balance the following:	F
<form> γ δ δ δ δ δ δ δ δ δ δ δ δ δ δ δ δ δ δ δ</form>		 B. Materials and equipment shall be provided in accordance with the following: 1. Primary Design Products: Primary design products are those products around which the project was designed in terms of capacity, performance, physical size and quality. 	D. Provisions shall be made for all special frames, openings, and sleeves as required.E. The Contractor shall pay for extra cutting and patching made necessary by his failure to properly direct such	B. ICC-ES AC193 - Acceptance Criteria for Mechanical Anchors in Concrete Elements ; 2010.C. ITS (DIR) - Directory of Listed Products; Intertek Testing Services NA, Inc. ; current edition.	transition pattern. Include shear ring, ends of same sizes as piping to be joined, and corrosion-resistant-metal tension band and tightening mechanism on each end. 1. Sleeve Materials:	PART 1 GENERAL 1.01 SECTION INCLUDES	Air Terminal Units Air Inlets and Outlets	
<form><form><form><form><form><form><form><form><form><form><form><form><form></form></form></form></form></form></form></form></form></form></form></form></form></form>		 Primary design products are indicated by use of a single manufacturer's name, model number or similar data on drawings or schedules or within the specifications. 	work at the correct time. 3.04 LAYING OUT WORK A Carefully lay out all work in advance of installation using data and measurements from the site, the appropriate	 D. NFPA 13 - Standard for the Installation of Sprinkler Systems; National Fire Protection Association ; 2010. E. UL (FPED) - Fire Protection Equipment Directory; Underwriters Laboratories Inc. ; current edition. 	 a. For Cast-Iron Soil Pipes: ASTM C 564, rubber. b. For Dissimilar Pipes: ASTM D 5926, PVC or other material compatible with pipe materials being ioined. 	A. Piping Insulation PART 2 PRODUCTS	2.05 MINIMUM DATA TO BE REPORTED A. Air Terminal Unit Data:	
<form><form><form><form><form><form><form><form><text><text></text></text></form></form></form></form></form></form></form></form>		 Provide primary design products unless substitutions are made in accordance with the following paragraphs. Acceptable Equivalent Substitutions: Acceptable equivalent substitutions are products of manufactures. 	 architectural and structural drawings, and shop drawings. B. Equipment layout and all system layouts shall confirm adequate clearances for installation, operation, 	 SUBMITTALS A. Product Data: Provide data on sprinklers, valves, and specialties, including manufacturers catalog information. Submit performance ratings, rough-in details, weights, support requirements, and piping connections. 	 B. Expansion Joints: Two or three-piece, ductile-iron assembly consisting of telescoping sleeve(s) with gaskets and restrained-type, ductile-iron, bell-and-spigot end sections complying with AWWA C110 or AWWA C153. Calent and executive superscripts indicated and the superscripts are superscripts. 	 2.01 REQUIREMENTS FOR ALL PRODUCTS OF THIS SECTION A. Surface Burning Characteristics: Flame spread/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E 24, NEDA 255, or UL 723. 	 Manufacturer Type, constant, variable, single, dual duct Identification (support 	
<form> N. S. S.</form>		• Acceptable equivalent substitutions. Acceptable equivalent substitutions are products of manufactures other than those listed for the primary design products. Equivalent acceptable substitutions shall meet each of the following requirements:	maintenance, and code-required clearances from the structure or other equipment and systems. C. Provide offsets and elevation changes in piping, conduit and ductwork as required to complete the Layout and Coordination Process. Offsets and elevation change information shall be indicated in the coordination process	B. Shop Drawings: Submit preliminary layout of finished ceiling areas indicating only sprinkler locations coordinated with ceiling installation. Indicate hydraulic calculations, detailed pipe layout, hangers and supports,	 Select and assemble components for expansion indicated. Include AWWA CTTT, ductile-iron glands, rubber gaskets, and steel bolts. C. Wall-Penetration Fittings: Compound, ductile-iron coupling fitting with sleeve and flexing sections for up to 	 B. Products shall not contain asbestos, lead, mercury, or mercury compounds. 2.02 MINERAL FIBER 	 Generation Location Model number 	
<form> N. S. S.</form>	Ξ	 a. The product shall be manufactured by one of the acceptable manufacturers listed in the Project Manual, drawings, or addenda. b. The product shall meet or exceed the requirements of the contract documents in terms of quality. 	documentation and must be submitted for review. D. The layout shall not cause problems of operation, maintenance, or clearance for items installed by other	sprinklers, components and accessories. Indicate system controls. Submit shop drawings to authority having jurisdiction for approval. Submit proof of approval to Architect/Engineer. C. Manufacturer's Certificate: Certify that system has been tested and meets or exceeds specified requirements	20-degree deflection, gaskets, and restrained-joint ends complying with AWWA C110 or AWWA C153. Include AWWA C111, ductile-iron glands, rubber gaskets, and steel bolts. 2.03 WATER PIPING. ABOVE GRADE	A. Manufacturers: Knauf Insulation, Johns Manville, Owens Corning, CertainTeed Corporation.B. Insulation: ASTM C547 and ASTM C795; rigid molded, non-combustable.	 Size Minimum static pressure 	E
<form></form>		c. The Contractor providing the substitution shall bear the total cost of all changes due to substitutions.	Contractors. E. Prior to installation of any work, make certain the location does not conflict with other items in or near the same location	and code requirements. D. Operation and Maintenance Data: Include components of system, servicing requirements, record drawings,	 A. Copper Tube: ASTM B88 (ASTM B88M), Type L (B), Drawn (H). 1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22, wrought copper and bronze. 2. Justice: ASTM B22 caller coder. 	 'K' value: ASTM C177, 0.24 at 75 degree F. Maximum Service temperature: 850 degrees F. 	 Minimum design air flow Maximum design air flow 	
<form> A Normal Series Series</form>		These costs may include additional compensation to the Architect/Engineer for redesign and evaluation services, increased cost of work by the Owner or other Contractors, and similar considerations.	 F. If the layouts so prepared indicate that the required conditions cannot be met in the space provided, inform the Architect/Engineer prior to installation and shall request clarification. 	inspection data, replacement part numbers and availability, and location and numbers of service depot. 1.04 QUALITY ASSURANCE	 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. 	 Maximum moisture absorption: 0.2 percent by volume. Insulation: ASTM C547 and ASTM C 795; semi-rigid, non-combustable, end grain adhered to jacket. 	10. Maximum actual air flow 11. Inlet static pressure B Air Distribution Tests:	
<form></form>		d. Performance Requirements: Where the contract documents list performance requirements or describe a product or assembly generically, provide products that comply with the specific	 G. Failure to properly coordinate and lay out the work will require correction by the Contractors at their own expense. 2.05. DATA AND MEASUREMENTS. 	 A. Maintain one copy or referenced design and installation standard on site. B. Conform to UL requirements. C. Designer Qualifications: Design system under direct supervision of a Professional Engineer experienced in 	 2.04 FLANGES, UNIONS, AND COUPLINGS A. Unions for Pipe Sizes 3 Inches (80 mm) and Under: 1. Ferrous pipe: Class 150 malleable iron threaded unions. 	 K Value: ASTM CT/7, 0.24 at 75 degrees F. Maximum service temperature: 650 degrees F. Maximum moisture absorption: 0.2 percent by volume 	1. Air terminal number 2. Room number/location	graphic scale: 1/8" = 1'-0"
<form> A A A A A A A A A A A A A A A A A A A</form>		 requirements indicated and that are recommended by the manufacturer for the respective application. e. Compliance with Standards, Codes and Regulations: Where the specifications require only compliance with an imposed standard, code or regulation, the Contractor has the option of selecting a 	 A. Drawings are diagrammatic or schematic. Do not scale drawings. B. The data given herein and on the drawings is as accurate as could be secured; absolute accuracy is not 	design of this type of work and licensed in the State in which the Project is located.D. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with	 Copper tube and pipe: Class 150 bronze unions with soldered joints. Dielectric Connections: Waterway fitting with water impervious isolation barrier and one galvanized or plated steel and and one connect tube and unes to match pipe joint twee used. Dielectric unions not allowed 	 D. Vapor Barrier Jacket: White Kraft paper with glass fiber yarn, bonded to aluminized film; moisture vapor transmission when tested in accordance with ASTM E96/E96M of 0.02 perm-inches. 	 Terminal type Terminal size 	0 2' 4' 8' 12' 20'
<form> I and the state of the state o</form>		product that complies with specification requirements, including the standards, codes and regulations. f. Proposed substitutions will be judged on the basis of quality, performance, appearance and on the	guaranteed. C. Obtain exact locations, measurements, levels, etc., at the site and shall adapt their work to actual conditions.	minimum five years documented experience. E. Installer Qualifications: Company specializing in performing the work of this section with minimum five years	 2.05 PIPE HANGERS AND SUPPORTS A. Provide hangers and supports that comply with MSS SP-58. 	 E. Tie Wire: 0.048 inch stainless steel with twisted ends on maximum 12 inch centers. F. Vapor Barrier Lap Adhesive: 	 Area factor Design velocity 7 Design air flow 	
<form> Prime Prime</form>	,	governing space inmitations. The reputation of the manufacturer, delivery time requirements, and the availability of repair or replacement parts may also be considered. g. The Architect/Engineer shall be the sole and final judge as to the suitability of substitution items.	 D. Examine the general construction, mechanical, electrical, and other applicable drawings and the Specifications. E. Only architectural drawings, structural drawings, and site measurements may be utilized in calculations. E. Lavout and coordinate all work prior to installation to provide electronate for expection, mechanical electronate and expective electronate and expective electronate and expective electronate elect	 F. Equipment and Components: Provide products that bear UL label or marking. G. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc. as suitable 	 If type of hanger or support for a particular situation is not indicated, select appropriate type using MSS SP-58 recommendations. 2.06 BALL VALVES 	i. ivianutacturers: ⊢osters Model 85-20/85-60, Childers Model CP-27, Marathon Industries. 2. Compatible with insulation. 3. Shall meet ASTM C916 Type I/II	 8. Test (final) velocity 9. Test (final) air flow 	
<form> A statistic distance of the st</form>	1.1	10 SUBMITTALS A. Shop Drawings, Product Data and Samples:	Verify non-interference with other work. 3.06 POSITION OF DEVICES	for the purpose specified and indicated. 1.05 DELIVERY, STORAGE, AND HANDLING	 A. Manufacturers: 1. Apollo Valves: www.apollovalves.com. 2. Conbraco Industries : www.conbraco.com. 	 G. Insulating Cement/Mastic: ASTM C195; hydraulic setting on mineral wool. H. Fibrous Glass Fabric: 	10. Percent of design air flow C. Instrument Calibration Reports:	
<form> A substant and su</form>	_	 Unless otherwise noted, submit one copy electronically of shop drawings and product data for review. Review comments will be returned electronically. A hard copy of the electronic submittal will be returned if requested. 	 A. Devices improperly located or installed shall be repaired, replaced or relocated at the Contractor's expense. B. Devices shall be set plumb or horizontal and shall extend to the finished surface of the wall, ceiling, or floor without projection beyond the surface. 	 A. Store products in shipping containers and maintain in place until installation. Provide temporary inlet and outlet caps. Maintain caps in place until installation. PART 2 PRODUCTS 	 Hammond Valve Corporation: www.hammondvalve.com. Nibco, Inc : www.nibco.com. Up to and Including 2 Inches: 	1. Manufacturers: Fosters Model Mast a Fab, Childers Model Chil Glas #10. 2. Cloth: Untreated; 9 oz/sq yd weight.	 керот Data: a. Instrument type and make. b. Serial number. 	
<form> Marken Marken Ma</form>		2. All submittals shall clearly indicate proposed items, capacities, characteristics and details in conformance with contract documents. All equipment items shall be marked with the same item number as used on drawings or schedules. Consolition dimensions and second features are sized to the the same item item and second features are sized to the same item are siz	 Coordinate their respective devices so as not to destroy the aesthetic effect of the surface in which the devices are mounted. 	2.01 SPRINKLER SYSTEM A. Sprinkler System: Provide coverage for building areas noted.	 Op to and including 2 mones. MSS SP-10, bronze, two-piece body, chrome-plated brass ball, teflon seats and stuffing box ring, lever handle, solder or threaded; 150 psig SWP rated, stainless steel trim, full port. 	3. Blanket: 1.0 lb/ cu ft density. 4. Weave: 10 x 10.	c. Application.d. Dates of use.	
<form> A A B A B A B A B A B A B A B A B A B A</form>		an awings or schedules. Capacities, dimensions and special features required shall be certified by the manufacturer.3. The Architect/Engineer shall review or take other appropriate action upon the Contractor's submittals such	 D. Coordinate the locations of all items with work furnished by other trades to avoid interference. E. If the required coordination is not done, the outlets or devices shall be removed and relocated if so directed by the Architect/Excises and the demonstrated unforce and in the trades. 	B. Occupancy: Light hazard; comply with NFPA 13.C. Water Supply: Determine volume and pressure from current water flow test data.	PART 3 EXECUTION 3.01 PREPARATION A. Ream pipe and tube ends. Remove burrs.	n. Indoor vapor barrier Finish: 1. Manufacturers: Fosters Model Vapor Fas 30-65, Childers Model CP-35, Marathon Industries. 2. Cloth: Untreated: 9 oz/so vd weight	e. Dates of calibration. END OF SECTION	
 A definition of the state of th		 as shop drawings, product data and samples, but only to determine conformance with the design concept of the work and the information given in the contract documents. Contractor shall not be reliaved of responsibility for one doviding from the requirements of the second data and the information given in the contract documents. 	ute Auditect/Engineer and the damaged surfaces repaired at the Contractor's expense. 3.07 PROTECTION OF APPARATUS A. Take such precautions as necessary to properly protect all apparatus fixtures appliances material	 D. Pipe Hanger Fasteners: Attach hangers to structure using appropriate fasteners, as follows: 1. Concrete Wedge Expansion Anchors: Complying with ICC-ES AC193. 2. Macarage Wedge Expansion Anchors: Complying with ICC-ES AC193. 	 B. Remove scale and dirt, on inside and outside, before assembly. C. Prepare piping connections to equipment with flanges or unions. 3.02 INSTALLATION 	 Source of the second sec	© COPYRIGHT 2024 AE# 20241004 Permission to reproduce all or part of this drawing is hereby	C C
 1 condition of the second secon		 contractor shall not be relieved or responsibility for any deviation from the requirements of the contract documents by the Architect/Engineer's review of shop drawings, product data or samples. Contractor shall not be relieved from responsibility for errors or omissions in the shop drawings, product 	equipment, and installations from damage of any kind. B. Failure to provide such protection to the satisfaction of the Architect/Engineer shall be sufficient cause for the	 Masonry Wedge Expansion Anchors: Complying with ICC-ES AC01. Concrete Screw Type Anchors: Complying with ICC-ES AC193. Masonry Screw Type Anchors: Complying with ICC-ES AC106 	 A. Install in accordance with manufacturer's instructions. B. Provide non-conducting dielectric connections wherever jointing dissimilar metals. Dielectric unions are not elevered. 	K. Insulating Cement: ASTM C449/C449M. PART 3 EXECUTION	granted solely for the limited purpose of construction of this project or archiving. Unauthorized copying, disclosure or construction use without written permission of Alvine	
A specific sp		data or samples by the Architect/Engineer's review of those drawings.No portion of the work requiring submission of a shop drawing, product data or sample shall be	rejection of any particular piece(s) of material, apparatus, equipment, etc., concerned. 3.08 ACCESS TO EQUIPMENT	 Masonry Screw Type Anchors: Complying with ICC-ES AC100. Concrete Adhesive Type Anchors: Complying with ICC-ES AC308. Other Types: As required. 	allowed. C. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls. D. Install piping to maintain headroom, conserve space, and not interfere with use of space.	3.01 INSULATION AND JACKET SCHEDULE A. INDOOR PIPING	Engineering is prohibited by copyright law. NOTE:	
 A darge normalized status de la darge normalized status de la darge de la dar	1.1	shall be in accordance with reviewed submittals. 11 DELIVERY, STORAGE, AND HANDLING	 Partnerses, varies, control devices, specialities, etc., snall be located to provide for easy access for operation, repair and maintenance; if concealed, access doors shall be provided. B. Access doors required for access to equipment requiring inspection or service shall be provided. 	7. Manufacturers: Powers Fasteners, Inc: www.powers.com. 2.02 SPRINKLERS	 E. Group piping whenever practical at common elevations. F. Install valves with stems upright or horizontal, not inverted. G. Install water piping to ASME B31.9. 	Domestic Cold Water: All Pipe Sizes: Insulation shall be of the following: a. Mineral Fiber Pipe Insulation, Type I: 1/2 inch thick. Domestic Hot Tempered and Recipitated Hot Water: 2 inch and employed	DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS and clearances from ARCHITECTURAL, STRUCTURAL, shop	Frankel Zacharia
 A desired and and a desired and desired and a desired and a desired and a		A. Deliver pipes and tubes with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe end damage and to prevent entrance of dirt, debris, and moisture. 12. COORDINATION	 C. Provide all access doors not already furnished by other Contractors but which are required for access to mechanical equipment. D. Doors shall be 12 inches by 12 inches upleas shows attractical 	 A. Suspended Ceiling Type: Concealed pendant type with matching push on cover plate. 1. Response Type: Quick. 2. Coverage Type: Standard 	 H. Conceal all pipe in walls, piping chases, utility spaces, above ceilings or below grade or floors unless indicated to be exposed to view. Provide drainage and work bining runs uto to plumbing futures and drains with two forwards in the second states. 	a. Mineral Fiber Pipe Insulation, Type I: 1 inch thick.	and other appropriate drawing or at site. lay out and coordinate all work prior to installation to provide clearances required for operation maintenance, and codes and verify	Sixth Floor Remodel
 A configuration of the standard sta	3	 A. Arrange for pipe spaces, chases, slots, and openings in building structure during progress of construction to allow for mechanical installations. 	E. Person access doors shall be 18 inches by 18 inches minimum. 3.09 FINISHED SURFACES PENETRATIONS	 Goverage Type: Granuard. Finish: Enamel, color White. Fusible Link: Glass bulb type temperature rated for specific area hazard. 	 A clean interior of piping. Remove dirt and debris as work progresses. 	END OF SECTION	non-interference with other work. DO NOT FABRICATE PRIOR TO VERIFICATION OF CLEARANCE FOR ALL	Omaha, NE 68154
 		B. Coordinate installation of required supporting devices and set sleeves in poured-in-place concrete and other structural components as they are constructed.	A. All piping and ductwork penetrations of finished surfaces shall have escutcheons and/or closure plates.B. Openings shall be cut only as large as required for the installation, sleeves, and/or frames installed flush with	PART 3 EXECUTION 3.01 INSTALLATION	END OF SECTION		TRADES. READ SPECIFICATIONS.	
 A specific dispersion of the specif	nilton	 C. Coordinate requirements for access panels and doors for items requiring access that are concealed behind finished surfaces. D. Drawings, plans, and schematics and diagrams indicate the general location and the arrangement of piping. 	finished surfaces and grouted in place. C. Surfaces around openings shall be left smooth and finished to match surrounding surface.	 A. Install in accordance with referenced NFPA design and installation standard, and in accordance with manufacturer's instructions. B. Please size to minimize the transition to a final standard standard				
 A vocation base and vocation and participation and pa	dwg ahan	 E. Provide offsets and elevation changes in piping, conduit and ductwork as required to complete the Layout and 	A. Provide proper sizing when providing sleeves or core-drilled holes to accommodate their work through penetrating items.	 B. Frace pipe runs to minimize obstruction to other work. Place piping in concealed spaces above finished ceilings. C. Center sprinklers in one direction only in ceiling tile with location in other direction variable, dependent upon 				Machanical Oracific ti
 	Irawing5.o	Coordination Process. Offsets and elevation change information shall be indicated in the coordination process documentation and must be submitted for review.	B. All voids between sleeve or core-drilled hole and pipe or duct passing through shall be firestopped to meet the requirements of ASTM E814.	spacing and coordination with ceiling elements, no closer than 6 inches from ceiling grid members. D. Apply masking tape or paper cover to ensure concealed sprinklers, cover plates, and sprinkler escutcheons do				Iviecnanical Specifications
Image: Properties of the set of the	Jnsaved D		C. C.Install all materials complete, attached securely and permanently in place in accordance with manufacturers' printed directions.	not receive field paint finish. Remove after painting. E. Flush entire piping system of foreign matter.				
Image: Contraction of the stand of the	2:40pm U			 G. Ensure required devices are installed and connected as required to fire alarm system. 3.02 SCHEDULES 				Designed: adw Sheet No.
Reviewed:mms Reviewed:mms Reviewed:mms Reviewed:mms 1 2 3 4 5 6 7 8 9 10 11 12 13 14 16 File Path	38, 2024 2			A. System Hazard Areas: Offices: Light Hazard.			Children Citicolii: Citianoma City: Des Moines: 1201 Cass Street 1220 Lincoln Mall, Suite 200 1001 W, Wilshire Bidd, Suite 102 400 East Court Avenue, Suite 130 Omaha, NE 68102 Lincoln, NE 68508 Oklahoma City, OK 73116 Des Moines; IA 50309 Phone: (402) 346-7007 Phone: (405) 925-3420 E62 Des Moines; IA 50309	Drawn by: adw M200
1 2 3 4 5 6 7 13 14 15 16	July C			END OF SECTION			יוטועריז די געדין אוואווי איז אייטי אייטי אייטער (געד) אוואווי איז אייטי אייטער אייטער אייטער אייטער אייטער איי גענעראין געדין אוואווי איז געדין אוואווי איז געדין אוואווי איז געדין געדין געדין געדין געדי גענער גענער גענער גע	Proj: 4955
		1 2 3	4 5	6 7 8	9 10 11	12 13	14 15	16

7	8	9	10	11	12	13	14	15	16		17	
		9501			SECTION 22 4000 - PL					<u>ا</u> ا	1	
TEMS - COMMON REQUIREMENTS nstall as described below, unless individual Sections spec inlution requirements	cify otherwise. Individual Sections specify	PART 1 GENERAL	ION 22 1003 - FLOMBING FIFING	F	PART 1 GENERAL		SECTION 23 0	593 - TESTING, ADJUSTING, AND BALANCING FOR HV	AC	l		
catation requirements: ocations and Arrangements: Drawing plans, schematics, a stic location and arrangement of systems	and diagrams indicate general,	1.01 SECTION INCLUDES C. Pipe, pipe fittings, valves, and cor	nnections for piping systems.	1	I.01 SECTION INCLUDES A. Conventional plumbing fixtures and related compo	onents.	PART 1 GENERAL 1.01 SECTION INCLUDES					
to architectural reflected ceiling plans for exact ceiling mo	ounted device locations.	Sanitary sewer. Domestic water. ODE AND PERMIT COMPLIANCE		1	I.02 REFERENCE STANDARDS A. ASME A112.18.1 - Plumbing Supply Fittings; The I.03 SUBMITTALS	American Society of Mechanical Engineers ; 2005.	A. Testing, adjustment, andB. Measurement of final ope	balancing of air systems and components. Prating condition of HVAC systems.		l		L
inate location of piping with electrical cable tray. Provide tray for installation of cables.	a minimum of 6" of clear access above	A. Work shall be in accordance with shall take precedence; however, of	all applicable codes. Where the codes and drawing code shall take precedence over what is shown only	s do not agree, the code v when it is more stringent	 A. Product Data: Provide catalog illustrations of fixtu finishes. 	ires, sizes, rough-in dimensions, utility sizes, trim, and	1.02 SUBMITTALS A. Final Report: Indicate del	ficiencies in systems that would prevent proper testing, adju	justing, and balancing	inne	erspace	2
eal piping in walls, pipe chases, utility chases, above ceilir except in mechanical rooms or service areas.	ngs, below grade or floors, unless otherwise	than that indicated. Items that are shall not be substituted.	e allowed by codes which are less stringent than tha	at shown on the Drawings	 B. Manufacturer's Instructions: Indicate installation n C. Maintenance Data: Include fixture trim exploded v 	nethods and procedures. view and replacement parts lists.	of systems and equipmer 1. Revise TAB plan to r	nt to achieve specified performance. reflect actual procedures and submit as part of final report.		s t	udios	
piping free of sags or bends with ample space between p ations.	piping to permit proper insulation	 B. Contractors shall familiarize them permits, licenses, inspections, and their expense 	selves with all requirements as to permits, tees, etc. d arrangements required for the work shall be provid	., and shall comply. All ded by the Contractors at	D. Warranty: Submit manufacturer warranty and ens registered with manufacturer. I 04 OLIALITY ASSURANCE	sure forms have been completed in Owner's name and	 Provide reports in so indexing tabs, with co outlets and equipment 	ft cover, letter size, 3-ring binder manuals, complete with in over identification at front and side. Include set of reduced at identified to correspond with data sheets, and indication is	ndex page and drawings with air thermostat locations	335 nc	orth 8th street, suite c	
piping tight to slabs, beams, joists, columns, walls, and or otherwise indicated. Allow sufficient space above ceiling	other permanent elements of the building g panels to allow for ceiling panel removal.	C. All utilities shall be installed in acc D. Drawings, plans, and schematics	cordance with utility company rules and regulations. and diagrams indicate the general location and the	arrangement of piping	 A. Manufacturer Qualifications: Company specializin section, with minimum three years of documented 	ng in manufacturing the type of products specified in this l experience.	A Form of Test Reports	nent list, with manufacturer name, serial number, and date where the TAB standard being followed recommends a	of calibration.	linco	oln, nebraska 68508	
piping to allow for expansion and contraction without stre cting equipment.	essing pipe, adjacent building structure or	systems. Wherever practical, inst 1.03 REFERENCE STANDARDS	tall piping as indicated.	1	I.05 REGULATORY REQUIREMENTS A. Comply with requirements in ICC A117.1, "Access	sible and Usable Buildings and Facilities"" Public Law 90-4	4. Form of Fest Reports that; otherwise, follow 480, 5. Units of Measure: Re	w ASHRAE Std 111. enort data in I-P (inch-pound) units only	report ionnat use	<u>/3</u> 2%	402.475.7234	
g construction, avoid any undue loads, forces or strains or g elements with piping connections or piping systems.	n valves, equipment, pumps flanges, or	A. ASME B16.18 - Cast Copper Allo Engineers ; 2001 (R2005) (ANSI I B. ASME B16.22 - Wrought Copper	y Solder Joint Pressure Fittings; The American Soci B16.18). and Copper Alloy Solder, Joint Pressure Fittings: Th	ety of Mechanical	"Architectural Barriers Act," and Public Law 101-3 with disabilities.	36, "American with Disabilities Act;" for fixtures for people	6. Include the following	on the title page of each report:	1	solely for the limited pur unauthorized copying,	ice all or part of this drawing is hereby granted rpose of construction of this project or archiving. disclosure, or construction use without written	K
ponents with pressure rating equal to or greater than syst ups of pipes parallel to each other, spaced to permit insul	tem operating pressure. lation and valve servicing.	Mechanical Engineers ; 2001 (R2 C. ASME B16.26 - Cast Copper Allo	005). y Fittings for Flared Copper Tubes; The American S	Society of Mechanical	materials that will be in contact with potable water. 1.06 DELIVERY, STORAGE, AND HANDLING		b. Address of Testin c. Telephone numb	ing, Adjusting, and Balancing Agency.	13	permission do not scale drawings	of innerspace studios is prohibited.	r
gs for changes in direction and branch connections. pe, duct, and equipment openings closed during construc	ction except when actual work is being	Engineers ; 2006. D. ASME B31.9 - Building Services I	Piping; The American Society of Mechanical Engine	ers ; 2008 (ANSI/ASME	A. Accept fixtures on site in factory packaging. Inspe B. Protect installed fixtures from damage by securing	ect for damage. g areas and by leaving factory packaging in place to prote	ct e Project name.	or of resulty, Adjusting, and Balancing Agency.		lay out and coordi clearances require	uctural, shop, and other appropriate drawings. nate all work prior to installation to provide ed for operation, maintenance, and codes.	
on that item or system. nch takeoffs shall be fabricated using standard manufactu	ured welding or threaded tees.	B31.9). E. ASTM B32 - Standard Specificatio	on for Solder Metal ; 2008.	F	fixtures and prevent use. PART 2 PRODUCTS		f. Project Rocation. g. Project Architect.		5	verify non-interierer verifica	tion of clearances for all trades.	
n welds reinforced with welding saddles or by forged steel lolets and sockolets will be allowed on 2 inch and smaller	el reinforcement fittings such as weldolets, branch connections.	G. ASTM B06 - Standard Specification G. ASTM B75 - Standard Specification H. ASTM B88 - Standard Specification	on for Seamless Copper Tube, Bright Afficiated , 20 on for Seamless Copper Tube ; 2002 (Reapproved 2 on for Seamless Copper Water Tube ; 2009.	2010).	A. Stainless Steel Sinks: Elkay, Just, Kohler, Moen - B. Faucets: Elkay, Kohler, Moen - Commercial, T&S	Commercial. Brass.	h. Project Engineer h. Project Contracto	or.	1ã	Mechan Alvi	ne Engineers	
be and duct joints shall be remade using new materials. Beburr all openings which are made after erection of the pip	ping system.	I. ASTM B302 - Standard Specifica J. CISPI 301 - Standard Specificatio	tion for Threadless Copper Pipe, Standard Sizes ; 2 on for Hubless Cast Iron Soil Pipe and Fittings for Sa	007. anitary and Storm Drain,	C. Plumbing Fixtures: American Standard, Kohler,D. Flush Valves: Sloan.	,	j. Report date.	at signed and sealed by the cartified testing and balancing	engineer		1201 Cass Street Omaha, NE 68102	
in steel pipe 2 inches and smaller shall be threaded in ac pipe joint lubricant or sealant suitable for the service for v	ccordance with ANSI B1.1. which the pipe is intended on the male	Waste and Vent Piping Applicatio K. CISPI 310 - Specification for Coup Societary and Storm Drain, Works	ns; Cast Iron Soil Pipe Institute ; 2005. pling for Use in Connection with Hubless Cast Iron S and Vent Dising Applications; Cast Iron Sail Biro Ir	Soil Pipe and Fittings for	2.02 PERFORMANCE, CAPACITIES AND CHARACTERI A. See Drawings for Equipment Schedules with Equipment Schedules with Equipment and in the specification	ISTICS ipment Performance Requirements when capacities and	1.03 PROJECT CONDITIONS	Our source will ecourse the site and existing huilding during onti	ro TAP poriod	Con Con	402.346.7007	
s at each joint. and steel pipe larger than 2 inches shall be welded in acc	cordance with ASME B31.	L. MSS SP-58 - Pipe Hangers and S Installation; Manufacturers Standa	Supports - Materials, Design, Manufacture, Selection ardization Society of the Valve and Fittings Industry,	n, Application, and F Inc. ; 2009.	PART 3 EXECUTION 3.01 EXAMINATION	nis.	Cooperate with Owner du	uring TAB operations to minimize conflicts with Owner's ope	erations.	TED	tructural Engineer	
lings according to manufacturer's written instructions. etrations:		M. MSS SP-69 - Pipe Hangers and S of the Valve and Fittings Industry,	Supports - Selection and Application; Manufacturers Inc. ; 2003.	Standardization Society	 Confirm that millwork is constructed with adequate sinks. 	e provision for the installation of counter top lavatories and	d 2.01 GENERAL REQUIREMENTS	S				
pipe escutcheons for pipe penetrations of concrete and n nded ceilings according to the following:	nasonry walls, wall board partitions, and	N. MSS SP-89 - Pipe Hangers and S Standardization Society of the Va	Supports - Fabrication and Installation Practices; Ma lve and Fittings Industry, Inc. ; 2003.	nufacturers 3	 8.02 PREPARATION A. Rough-in fixture piping connections in accordance activate fixture 	with minimum sizes indicated in fixture schedule for	A. Periorin total system bala ABC MN-1, AABC I NERB Breadurel Ste	National Standards for Total System Balance.	Sustana			
nrome-Plated Piping: Cast brass, one piece, with set scre lit-casting escutcheons if required, for existing piping.	ew, and polished chrome-plated finish. Use	O. MSS SP-110 - Ball Valves Thread Standardization Society of the Va P NSF/ANSI 61 - Drinking Water Sv	ied, Socket-weiding, Solder Joint, Grooved and Fla lve and Fittings Industry, Inc. ; 1996. //stem Components - Health Effects	red Ends; Manufacturers	particular fixtures. 3.03 INSTALLATION A Install each fixture with tran easily removable for s	servicing and cleaning	 NEBB Procedural Sta Maintain at least one 	e copy of the standard to be used at project site at all times.	Systems		Civil Engineer	
ninsulated Piping Wall Escutcheons: Cast brass or stamp ninsulated Piping Floor Plates in Utility Areas: Cast-iron fl	floor plates.	1.04 SUBMITTALS A. Product Data: Provide data on pi	pe materials, pipe fittings, valves, and accessories.	Provide manufacturers	 B. Provide chrome plated rigid or flexible supplies to escutcheons. 	fixtures with screwdriver stops (as indicated), reducers, a	nd Substantial Completion of	f the project.	iplete work prior to			
sulated Piping: Cast brass or stamped steel; with concea iish.	aled hinge, spring clips, and chrome-plated	catalog information. Indicate valv 1.05 QUALITY ASSURANCE	e data and ratings.		C. Install components level and plumb, according to r D. Assemble plumbing fixtures, trim, fittings, and other	manufacturer's rough-in requirements. er components according to manufacturers' written	C. TAB Agency Qualification Company specializin Company specializin	is. ig in the testing, adjusting, and balancing of systems specifi	fied in this section.			
ping in Utility Areas: Cast brass or stamped steel, with se e not required for core drilled holes.	et-screw or spring clips.	A. Perform work in accordance with B. Perform Work in accordance with	applicable codes. local and/or state standards. d prossure rating marked on value body.		instructions. E. Install counter-mounting fixtures in and attached to	o casework.	ADD A	ne following:				┥н
r Penetrations: Maintain indicated fire rating of walls, part s. Seal pipe and duct penetrations with firestopping mate mutices and emplicable codes	titions, ceilings, and floors at pipe and duct rerials in accordance with manufacturer's	 D. Identify pipe with marking includin certification, water pressure rating 	g size, ASTM material classification, ASTM specific	ation, potable water	Attach supplies to supports or substrate within pip they can be easily reached for operation.	be spaces behind fixtures. Install stops in locations where	National Perform	ed Air Balance Council: www.aabchq.com; upon completio nance Guaranty.	on submit AABC			
ructions and applicable codes. T CONSTRUCTION		E. Hub and Spigot Cast Iron pipe an ASTM A 74. All pipe and fittings s	σ d fittings shall be manufactured from gray cast iron a hall be marked with the collective trademark of the 0	and shall conform to Cast Iron Soil Pipe	 G. Install trap and tubular waste piping on drain outle system. 	t of each fixture to be directly connected to sanitary draina	b. NEBB, National I age D. TAB Supervisor and Tech	Environmental Balancing Bureau: www.nebb.org. hnician Qualifications: Certified by same organization as T/	AB agency.		MECHANICA	
Ind fittings as follows and as specifically required in individent of pipes and tubes and remove burrs. Bevel plain et al.	dual piping specification Sections: ends of steel pipe.	Institute ® and listed by NSF® In F. Hubless Cast Iron pipe and fitting	ternational. s conform to ASTM A 888 and CISPI Standard 301.	All pipe and fittings shall	H. Install water-supply flow-control fittings with specifiI. Install faucet flow-control fittings with specified flow	fied flow rates in fixture supplies at stop valves. w rates and patterns in faucet spouts if faucets are not	2.02 EXAMINATION A. Verify that systems are co	omplete and operable before commencing work. Ensure th	ne following		SHANESONS	
ve scale, slag, dirt, and debris from inside and outside of ded Joints: Thread pipe with tapered pipe threads accord	pipe and fittings before assembly. ding to ASME B1.20.1. Cut threads full and	be marked with the collective trad G. Hubless Couplings shall be listed	emark of the Cast Iron Soil Pipe Institute ® and list by NSF® International and conform to CISPI Stand	ed by NSF® International. ard 310 for standard 3	available with required rates and patterns. Include 3.04 CONNECTIONS	e adapters if required.	conditions: 1. Systems are started	and operating in a safe and normal condition.		HOH	HARRER	
using sharp dies. Ream threaded pipe ends to remove bu alves as follows:	urrs and restore full ID. Join pipe fittings	ASTM C 564.	per duty or neavy duty couplings where indicated. G	askets shall conform to	 A. Piping installation requirements are specified in oti piping, fittings, and specialties. B. Connect fixtures with water supplies stops and rise 	iner sections. Drawings indicate general arrangement of	 Final filters are clean Duct systems are cle 	and in place. If required, install temporary media in additice an of debris.	on to final filters.		L-17252 8-56	
ote internal length of threads in fittings or valve ends, and termine how far pipe should be threaded into joint.	proximity of internal seat or wall, to	A. Perform Work in accordance with 1.07 DELIVERY, STORAGE, AND HAND	state or municipality plumbing code. LING	3	fittings required to match fixtures. 8.05 FIELD QUALITY CONTROL		 Air outlets are installe Duct system leakage 	ed and connected. e is minimized.			TE OF NEBRAS	G
ppy appropriate tape or thread compound to external pipe recified.	e threads, unless dry seal threading is	A. Accept valves on site in shippingB. Provide temporary protective coal	containers with labeling in place. Inspect for damag ting on cast iron and steel valves.	je.	 A. Verify that installed plumbing fixtures are categorie B. Check that plumbing fixtures are complete with trip 	es and types specified for locations where installed. m, faucets, fittings, and other specified components.	 Balancing dampers a B. Examine system and equ 	and devices are installed. ipment installations to verify that they are complete and that	at testing, cleaning,	CA-216	69	
ghten joint with wrench. Apply wrench to valve end into w	which pipe is being threaded.	C. Provide temporary end caps and D. Protect piping systems from entry and isolating parts of completed s	closures on piping and fittings. Maintain in place un of foreign materials by temporary covers, completir system	til installation.	A. 06 ADJUSTING A. Adjust stops or valves for intended water flow rate A. Adjust stops or valves for intended water flow rate	e to fixtures without splashing, noise, or overflow.	adjusting, and commissio C. Examine systems for func	ning specified in individual Sections have been performed. ctional deficiencies that cannot be corrected by adjusting ar	nd balancing.		07/08/2024	
t use pipe sections that have cracked or open welds.	eads that are confided of damaged. Do	PART 2 PRODUCTS 2.01 SANITARY SEWER AND VENT PIP	ING, ABOVE GRADE		A. Clean plumbing fixtures and equipment. 3.08 PROTECTION		D. Examine HVAC equipmer are aligned and tight, and	nt to ensure that clean filters have been installed, bearings d equipment with functioning controls is ready for operation.	are greased, belts			
END OF SECTION		 A. Cast Iron Pipe: CISPI 301, huble 1. Fittings: Cast iron. 	ss, service weight.		A. Protect installed products from damage due to subB. Do not permit use of fixtures by construction personal	bsequent construction operations.	2.03 ADJUSTMENT TOLERANCE	ES		Age	ency Approval	
SECTION 21 1300 - FIRE SUPPRESSION SI	PRINKLERS	2. Joints: CISPI 310, ASTM C 3. Shielded Couplings: ASTM (rubber sleeve with integral o	564 neoprene gaskets and stainless steel clamp-and C 1277 assembly of metal shied or housing, corrosic enter nine stop	d-shield assemblies. on-resistant fasteners, and	C. Repair or replace damaged products before Date	of Substantial Completion.	A. Air Handling Systems: Air minus 10 percent of desig	djust to within plus or minus 5 percent of design for supply gn for return and exhaust systems.	systems and plus or			
CLUDES prinkler system.		a. Standard, Shielded, Stair shield; stainless-steel ba	nless-Steel Couplings: NSF listed, CISPI 310, with nds and tightening devices; and ASTM C 564, rubbe	stainless-steel corrugated er sleeve.		SECTION	Adjust outlets and inlets. Ad	n space to within plus or minus 10 percent and minus 5 percent of n space to within plus or minus 10 percent of design.	design to space.			
STANDARDS 201 - Acceptance Criteria for Expansion Anchors in Masor	nry Elements ; 2009.	2.02 SPECIAL FITTINGS - SANITARY W. A. Flexible, Nonpressure Pipe Coupl	ASTE AND VENT lings: Comply with ASTM C 1173, elastomeric, slee	ve-type, reducing or	SECTION 22 0719 - PLUN	MBING PIPING INSULATION	2.04 SCOPE					
193 - Acceptance Criteria for Mechanical Anchors in Cor	ncrete Elements ; 2010.	transition pattern. Include shear r tension band and tightening mech	ring, ends of same sizes as piping to be joined, and nanism on each end.	corrosion-resistant-metal F	PART 1 GENERAL		A. Lest, adjust, and balance 1. Air Terminal Units	the following:				
Standard for the Installation of Sprinkler Systems; Nation	nal Fire Protection Association ; 2010.	 Sleeve Materials: For Cast-Iron Soil Pipes: For Dissimilar Pipes: AS 	ASTM C 564, rubber.	nine materiale being	I.01 SECTION INCLUDES A. Piping Insulation		2. Air Inlets and Outlets 2.05 MINIMUM DATA TO BE REF	s PORTED				
- Fire Protection Equipment Directory; Underwriters Labo	oratories inc. ; current edition.	joined. B. Expansion Joints: Two or three-p	iece, ductile-iron assembly consisting of telescoping	g sleeve(s) with gaskets	PART 2 PRODUCTS 2.01 REQUIREMENTS FOR ALL PRODUCTS OF THIS SI	ECTION	A. Air Terminal Unit Data: 1. Manufacturer					-
ata: Provide data on sprinklers, valves, and specialties, in formance ratings, rough-in details, weights, support requi	ncluding manufacturers catalog information. irements, and piping connections.	and restrained-type, ductile-iron, I Select and assemble components	bell-and-spigot end sections complying with AWWA s for expansion indicated. Include AWWA C111, du	C110 or ÁWWA C153. ctile-iron glands, rubber	A. Surface Burning Characteristics: Flame spread/Si accordance with ASTM E 84, NFPA 255, or UL 72	moke developed index of 25/50, maximum, when tested in 23.	n 2. Type, constant, varia 3. Identification/number	able, single, dual duct r				
rings: Submit preliminary layout of finished ceiling areas i d with ceiling installation. Indicate hydraulic calculations, o components and accessories. Indicate system controls	Indicating only sprinkler locations detailed pipe layout, hangers and supports, Submit shop drawings to authority baying	gaskets, and steel bolts. C. Wall-Penetration Fittings: Compo	ound, ductile-iron coupling fitting with sleeve and flex	king sections for up to	 B. Products shall not contain asbestos, lead, mercury 2.02 MINERAL FIBER 	y, or mercury compounds.	 Location Model number 					
for approval. Submit proof of approval to Architect/Engin	neer. meets or exceeds specified requirements	AWWA C111, ductile-iron glands, 2.03 WATER PIPING, ABOVE GRADE	rubber gaskets, and steel bolts.	of Awwa C155. Include	 A. Manufacturers: Knauf Insulation, Johns Manville, G B. Insulation: ASTM C547 and ASTM C795; rigid mo 	Owens Corning, CertainTeed Corporation. Ided, non-combustable.	 6. Size 7. Minimum static press 	sure				E
equirements. and Maintenance Data: Include components of system, s	servicing requirements, record drawings,	A. Copper Tube: ASTM B88 (ASTM 1. Fittings: ASME B16.18, cast	B88M), Type L (B), Drawn (H). copper alloy or ASME B16.22, wrought copper and	bronze.	 'K' value: ASTM C177, 0.24 at 75 degree F. Maximum Service temperature: 850 degrees F. 		 Minimum design air f Maximum design air f 	flow flow				
data, replacement part numbers and availability, and loca	ation and numbers of service depot.	 Joints: ASTM B32, alloy Sn9 Copper Unions: MSS SP-12 	95 solder. 3, cast-copper-alloy, hexagonal-stock body, with bal	ll-and-socket,	3. Maximum moisture absorption: 0.2 percent by C Insulation: ASTM C547 and ASTM C 795; semi-ric	volume. aid_non-combustable_end grain adhered to jacket	10. Maximum actual air f 11. Inlet static pressure	flow				
ne copy of referenced design and installation standard on	n site.	metal-to-metal seating surfac 2.04 FLANGES, UNIONS, AND COUPLIN	es, and solder-joint or threaded ends. NGS 0 mm) and Lindar:		K' value: ASTM C177, 0.24 at 75 degrees F. Avinum convice temperature: 650 degrees F.		B. Air Distribution Tests:1. Air terminal number					
Qualifications: Design system under direct supervision of a	a Professional Engineer experienced in	A. Onions for Pipe Sizes 3 incles (o Ferrous pipe: Class 150 mal Copper tube and pipe: Class	leable iron threaded unions. 5 150 bronze unions with soldered ioints.		3. Maximum moisture absorption: 0.2 percent by	volume.	 Room number/location Terminal type 	on		graphic	scale: 1/8" = 1'-0"	
rer Qualifications: Company specializing in manufacturing	g the Products specified in this section with	 B. Dielectric Connections: Waterway steel end and one copper tube en 	r fitting with water impervious isolation barrier and or id, end types to match pipe joint types used. Dielec	ne galvanized or plated tric unions not allowed.	D. Vapor Barner Jacket. White Krait paper with glass transmission when tested in accordance with AST Tio Wire: 0.048 inch staipless steel with twisted or	TM E96/E96M of 0.02 perm-inches.	4. Terminal size 5. Area factor			0 2' 4'	8' 12' 20'	
ualifications: Company specializing in performing the wor	rk of this section with minimum five years	2.05 PIPE HANGERS AND SUPPORTS A. Provide hangers and supports that	at comply with MSS SP-58.		F. Vapor Barrier Lap Adhesive:		6. Design velocity 7. Design air flow					
and Components: Provide products that bear UL label o	or marking.	I. If type of hanger or support fo SP-58 recommendations.	or a particular situation is not indicated, select appro	priate type using MSS	 Manutacturers: Fosters Model 85-20/85-60, Ch Compatible with insulation. 	niders Model CP-27, Marathon Industries.	8. Test (final) velocity					
	Underwirters Laboratories inc., as suitable	A. Manufacturers: 1. Apollo Valves: www.apollova	alves.com.		 Shall meet ASTM C916 Type I/II G. Insulating Cement/Mastic: ASTM C195; hydraulic: 	setting on mineral wool.	10. Percent of design air	flow				
ucts in shipping containers and maintain in place until inst	tallation. Provide temporary inlet and outlet	 Conbraco Industries : www.c Hammond Valve Corporation 	conbraco.com. : www.hammondvalve.com.		H. Fibrous Glass Fabric:1. Manufacturers: Fosters Model Mast a Fab, Chil	lders Model Chil Glas #10.	1. Report Data:	and make				
IS NOTEM		 Nibco, Inc : www.nibco.com. Up to and Including 2 Inches: 	n hady always plated by so hall talles easts and	at the bourse love	 Cloth: Untreated; 9 oz/sq yd weight. Blanket: 1.0 lb/ cu ft density. 		 a. Instrument type a b. Serial number. 	and make.				
system: Provide coverage for building areas noted.		handle, solder or threaded; 1 PART 3 EXECUTION	50 psig SWP rated, stainless steel trim, full port.	stuning box ning, level	4. Weave: 10 x 10. H. Indoor Vapor Barrier Finish:		 c. Application. d. Dates of use. a. Dates of use. 					
r: Light hazard; comply with NFPA 13. ply: Determine volume and pressure from current water f	flow test data.	3.01 PREPARATION A. Ream pipe and tube ends. Remo	ve burrs.		1. Manufacturers: Fosters Model Vapor Fas 30-6 2. Cloth: Untreated: 9 oz/so vd weight	5, Childers Model CP-35, Marathon Industries.	e. Dates of calibrati	END OF SECTION				
er Fasteners: Attach hangers to structure using appropria ete Wedge Expansion Anchors: Complying with ICC-ES.	ate fasteners, as follows: AC193.	 B. Remove scale and dirt, on inside C. Prepare piping connections to equilate 	and outside, before assembly. uipment with flanges or unions.		3. Vinyl emulsion type acrylic, compatible with ins	sulation, white color.	<u>© CO</u> Permis	PYRIGHT 2024 AE# 20 ssion to reproduce all or part of this drawing is he	241004 ereby			С
nry Wedge Expansion Anchors: Complying with ICC-ES A ete Screw Type Anchors: Complying with ICC-ES AC193	AC01. 3.	3.02 INSTALLATION A. Install in accordance with manufa	cturer's instructions.	electric unione are not	 Fermeance shall be 0.05 perms of less at 45 m K. Insulating Cement: ASTM C449/C449M. 	nis dry lested by ASTM E90.	granted project	d solely for the limited purpose of construction of t or archiving. Unauthorized copying, disclosure o	f this or			
rry Screw Type Anchors: Complying with ICC-ES AC106 ete Adhesive Type Anchors: Complying with ICC-ES AC	5. 308.	allowed. C. Route piping in orderly manner ar	nd maintain gradient. Route parallel and perpendicu	lar to walls.	8.01 INSULATION AND JACKET SCHEDULE		constru Engine	uction use without written permission of Alvine eering is prohibited by copyright law.				
Types: As required. acturers: Powers Fasteners, Inc: www.powers.com.		 D. Install piping to maintain headroom E. Group piping whenever practical a 	m, conserve space, and not interfere with use of spa at common elevations.	ace.	 A. INDOOR PIPING 1. Domestic Cold Water: All Pipe Sizes: Insulation 	n shall be of the following:	<u>NOTE:</u> DO NO	<u>.</u> DT SCALE DRAWINGS. VERIFY ALL DIMENSIO	ONS			_
; d Ceiling Type: Concealed pendant type with matching p	ush on cover plate.	F. Install valves with stems upright o G. Install water piping to ASME B31.	r horizontal, not inverted. 9.	en fle ener um la ce tie dieste d	 a. Mineral Fiber Pipe Insulation, Type I: 1/2 2. Domestic Hot, Tempered, and Recirculated Ho 	2 inch thick. t Water: 2-inch and smaller:	and cle and oth	earances from ARCHITECTURAL, STRUCTURAL her appropriate drawing or at site. lay out and	L, shop	Frankel	Zacharia	
inse Type: Quick. age Type: Standard		to be exposed to view.	runouts to plumbing fixtures and drains with trap of	required size	a. Mineral Fiber Pipe Insulation, Type I: 1 i	inch thick.	coordir require	nate all work prior to installation to provide clearaned for operation, maintenance, and codes and ver	nces rify	Sixth Flo	or Remodel	
: Enamel, color White.	aa hazard	3.03 CLEANING A. Clean interior of piping. Remove	dirt and debris as work progresses.		END OF	- SECTION	non-int PRIOR	terference with other work. DO NOT FABRICATE	, 	Omaha, NE 681	54	
DN			END OF SECTION				TRADE	ES. READ SPECIFICATIONS.	ļ			-1
coordance with referenced NFPA design and installation s	standard, and in accordance with								ŀ			-
runs to minimize obstruction to other work. Place piping i	in concealed spaces above finished								F			1
inklers in one direction only in ceiling tile with location in o Id coordination with ceiling elements, no closer then 6 incl	other direction variable, dependent upon thes from ceiling grid members								l l	Mechanica	al Specifications	1
king tape or paper cover to ensure concealed sprinklers, field paint finish. Remove after painting	cover plates, and sprinkler escutcheons do							ALVINF	ľ			
e piping system of foreign matter.								Fnainoarina	, I			
uired devices are installed and connected as required to	fire alarm system.							Ligineening		Designed: adw	Sheet No.	
zard Areas: Offices: Light Hazard.							Umaha: Lincoln: 1201 Cass Street 1220 Lincoln Omaha, NE 68102 Lincoln NE	Oklahoma City: Des Moir In Mall, Suite 200 1001 W, Wilshire Blvd., Suite 102 400 East Co 68508 Oklahoma City. OK 73116 Der Moires	nes: purt Avenue, Suite 130 s, IA 50309	Drawn by: adw		
END OF SECTION							Phone: (402) 346-7007 Phone: (40	02) 477-6161 Phone: (405) 936-3480 Phone: (51	15) 243-0569	Reviewed:mms		
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	8	9	10	11	12	1.5	14	15	16			

	1 2 3	4 5	6	7	8	9	10	11	12	13	14	15	16	17	
		SECTION 23 07 13 - RVAC PIPING INSULATION (WHERE EXISTING IS REMOVED OR DAWAGED)	SECTION 23 3100 - HV	AC DUCTS AND CASINGS		P. Non-Fire-Rated Partition Penetrat exposed to view, conceal space b	tions: Where ducts pass through interior partitic between construction opening and duct or duct i	is and exterior walls, and are sulation with sheet metal	2.04 FIRE DAMPERS A. Manufacturers: Greenheck, Nailor Industries Inc	Pottorff. Ruskin Company. Vent Products Company. Inc					
	1.01 SECTION INCLUDES	1.01 SECTION INCLUDES	1.01 SECTION INCLUD	DES		flanges of same metal thickness a Q. Fire-Rated Partition Penetrations:	as duct. Overlap opening on four sides by at lea Where ducts pass through interior partitions a	st 1-1/2 inches. d exterior walls, install	 B. Fabricate in accordance with NFPA 90A and UL 5 C. Curtain Type Democra: Calvanized steel with inter 	55, and as indicated.					
	A. Duct insulation. B. Duct liner.	A. Piping insulation. 1.02 REFERENCE STANDARDS	A. Metal ductwork. B. Flexible ductwo	ς. ork		appropriately rated fire damper, s R. Verify location of air outlets and in	leeve, and firestopping sealant. nlets and make necessary adjustments in position	n to conform with	C. Curtain Type Dampers: Gaivanized steel with inter- and latches for horizontal installations. Configure preserve class durts up to 10 inches (200 mm) in	riocking blades. Provide stainless steel closure springs with blades out of air stream except for 1.0 inch (250 Pa)				~
	1.02 REFERENCE STANDARDS	A. ASTM C195 - Standard Specification for Mineral Fiber Thermal Insulating Cement ; 2007.	1.02 QUALITY ASSUR	ANCE		architectural features, symmetry, material finish specification, and s	and lighting arrangement. Refer to reflected ce shop drawings.	ing plans, finish schedule,	D. Multiple Blade Dampers: 16 gage (1.5 mm) galva	neight. nized steel frame and blades, oil-impregnated bronze or			lin	nerspac) (
	 A. ASTM C518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus; 2004. 	 B. ASTM C547 - Standard Specification for Mineral Fiber Pipe Insulation ; 2007e1. C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials ; 2010b. 	A. Manufacturer Q section, with mi	Qualifications: Company specializing in manufact inimum three years of documented experience.	cturing the type of products specified in this	S. Coordinate routing with all other toT. Contractor may vary route and sh	rades to establish space requirements for each. ape of ductwork and make offsets during progre	ss of work if required to meet	stainless steel sleeve bearings and plated steel as concealed linkage, stainless steel closure spring,	les, 1/8 x 1/2 inch (3.2 x 12.7 mm) plated steel lade stops, and lock.				studios	
	B. ASTM C553 - Specification for Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications ; 2008.	D. NFPA 255 - Standard Method of Test of Surface Burning Characteristics of Building Materials; National Fire Protection Association - 2006	B. Comply with AS 1.03 REGULATORY RE	SHRAE and SMACNA Design Handbooks.		structural or other interferences. corrected at Contractor's expense	Where such changes impair the system perforn e.	ance, the changes will be	E. Fusible Links: UL 33, separate at 160 degrees F fire/balancing dampers.	71 degrees C) with adjustable link straps for combinatio	n			335 north 8th street suite c	
	C. ASTM C916 - Standard Specification for Adhesives for Duct Thermal Insulation ; 1985 (Reapproved 2007).	 E. UL 223 - Standard for Test for Surface Burning Characteristics of Building Materials; Underwriters Laborato 	ies A. Construct ductv	work to NFPA 90A standards.		 U. All ductwork shall be substantially to duct flanges and properly anch 	and neatly supported on galvanized steel strap ored to the construction so that horizontal ducts	s or angles riveted or bolted are without sag or sway,	F. Fire Rating: 1-1/2 hours.	away type, galvanized sheet steel				lincoln, nebraska 68508	
	 ASTM CT071 - Standard Specification for Florous Glass Duct Lining insulation (Thermai and Sound Absorbing Material); 2005. 	1.03 SUBMITTALS	1.04 DELIVERY, STOR A. Ductwork shall	RAGE AND HANDLING not be stored directly on the ground. Watermar	ked ductwork will not be accepted for	vertical ducts are without buckle, vibration. Supports in corrosive e	and all ducts are free from the possibility of defe environments shall be stainless steel except alur	mation, collapse or inum ductwork shall have	1. Minimum Thickness: As required by UL. Mir	mum length, 16 inches.			1	402.475.7234	
	E. ASTM C1290 - Standard Specification for Flexible Fibrous Glass Blanket Insulation Used to Externally Insulate HVAC Ducts; 2006.	A. Product Data: Provide product description, thermal characteristics, list of materials and thickness for each service, and locations.	installation.		and storage periods	aluminum supports. V. During construction, provide temp	orary closures of metal or taped polyethylene o	open ductwork to prevent	Exceptions: Omit sleeve where damper fram angles on each side of wall or floor, and thick	e width permits direct attachment of perimeter mounting ness of damper frame complies with sleeve requirement	S.		permissio	n to reproduce all or part of this drawing is hereby	y gran
	F. ASTM C1338 - Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facings; 2008	 B. Manufacturer's Instructions: Indicate installation procedures that ensure acceptable workmanship and 	PART 2 PRODUCTS	shall have all open chus sealed dufing delivery	and storage periods.	construction dust from entering du	uctwork system. Keep openings covered until r	ady for continuing duct run	H. Mounting Orientation: Vertical or horizontal as red	uired.			solely for the unauthoriz	limited purpose of construction of this project or a ed copying, disclosure, or construction use without permission of innerspace studios is prohibited	r archi out writ
	 G. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials ; 2010. 	Installation standards will be achieved. 1.04 QUALITY ASSURANCE	2.01 DUCT ASSEMBLI	IES		3.03 SEAM AND JOINT SEALING	into according to the dust processes along indication	d and as described in	 Blades: Roll-formed, interlocking, 0.028-inch-thick use full-length, 0.028-inch-thick, galvanized-steel 	, gaivanized sneet steel. In place of interlocking blades lade connectors.	,		do not sca	e drawings. verify all dimensions and clearances	es at s
	 H. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials ; 2005. NERA 255 - Standard Method of Test of Surface Burping Characteristics of Building Materials: National Fire 	A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section in not less than three years of experience	ith B. Low Pressure S	Supply: 2 inch w.g. pressure class, galvanized s	steel.	A. General: Seal duct seams and joi SMACNA's "HVAC Duct Construct	nts according to the duct pressure class indication in the second s	a and as described in	2.05 FLEXIBLE DUCT CONNECTIONS A Fabricate in accordance with SMACNA HVAC Du	t Construction Standards - Metal and Elexible, and as			from archit lay out clear:	ectural, structural, shop, and other appropriate dra , and coordinate all work prior to installation to prov ances required for operation, maintenance, and co-	Irawir rovide codes
	Protection Association ; 2006.	 B. Applicator Qualifications: Company specializing in performing the type of work specified in this section with 	C. Medium and Hi	igh Pressure Supply: 4 inch w.g. pressure class	s, galvanized steel.	 B. Ducts shall be sealed as follows: 1. Low Pressure Ductwork: SM/ 	ACNA Seal Class "C"		indicated.				verify nc	n-interference with other work. do not fabricate pr verification of clearances for all trades.	prior
	J. SMACNA (DCS) - HVAC Duct Construction Standards - Metal and Flexible; Sheet Metal and Air Conditioning Contractors' National Association ; 2005.	minimum 5 years of experience. C. Fire-Test Response Characteristics: Insulation and related materials shall have fire-test response	E. Transfer Air and	nd Sound Boots: 1/2 inch w.g. pressure class, fil	prous glass.	 Medium Pressure Ductwork: C. Seal ducts before external insulation 	SMACNA Seal Class "B" on is applied.		1. Fabric: UL listed fire-retardant neoprene coa	ed woven glass fiber fabric to NFPA 90A, minimum			2 3	Mechanical/Electrical Engineers	ŧ.
	K. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Underwriters Laboratories Inc.; Current Edition, Including All Revisions.	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	2.02 MATERIALS A Reinforcement	Shapes and Plates: Galvanized-steel reinforce	ment where installed on galvanized sheet metal	3.04 HANGING AND SUPPORTINGA. Install rigid round, rectangular, and	d flat-oval metal duct with support systems indic	ted in SMACNA's "HVAC	density 30 oz per sq yd (1.0 kg/sq m). a. Net Fabric Width: Approximately 2 inche	(50 mm) wide.			18146	Alvine Engineers	I_{-}^{g}
	1.03 SUBMITTALS	and adhesive, mastic, and cement material containers, with appropriate markings of applicable testing and inspecting agency	ducts.			Duct Construction StandardsMet B. Support horizontal ducts within 24	tal and Flexible." inches of each elbow and within 48 inches of e	ch branch intersection.	2. Metal: 3 inches (75 mm) wide, 24 gage (0.6 i	m) thick galvanized steel.			ASS.	1201 Cass Street Omaha, NE 68102	$\langle v \rangle$
	A. Product Data: Provide product description, thermal characteristics, list of materials and thickness for each service, and locations. Show details for application of field-applied jackets.	 Insulation Installed Indoors: Flame-spread index of 25 or less, and smoke-developed index of 50 or less 	B. Tie Rods: Galv diameter for ler	vanized steel, 1/4-inch minimum diameter for ler ngths longer than 36 inches.	ngths 36 inches or less; 3/8-inch minimum	C. Install powder-actuated concrete fa	asteners after concrete is placed and completel	cured. cretes or for slabs less than	D. Indoor System, Flexible Connector Fabric: Glass	abric double coated with neoprene.			No.Y	402.346.7007	/
	1.04 QUALITY ASSURANCE	Insulation Installed Outdoors: Flame-spread index of 75 or less, and smoke-developed index of 150 or less.	C. Galvanized Ste coating.	eel for Ducts: Hot-dipped galvanized steel sheet	t, ASTM A653/A653M FS Type B, with G90/Z275	4 inches thick.			 Minimum Weight: 26 oz./sq. yd. Tensile Strength: 480 lbf/inch in the warp and 	360 lbf/inch in the filling			1	Structural Engineer	
	section with not less than three years of documented experience.	1.05 DELIVERY, STORAGE, AND HANDLING	D. Joint Sealers a	and Sealants: Non-hardening, water resistant, m	ildew and mold resistant.	A. Lined ducts shall be fabricated to p	provide the net inside dimensions shown.	Ibacivo equerado et linor	 Service Temperature: Minus 40 to plus 200 d 	egrees F.				FEDE	
	B. Applicator Qualifications: Company specializing in performing the type of work specified in this section, with minimum 5 years of experience and approved by manufacturer.	PART 2 PRODUCTS	1. Type: Hea substrates,	avy mastic or liquid used alone or with tape, suit s, and recommended by manufacturer for pressu	able for joint configuration and compatible with ire class of ducts.	contact surface area. Attaining ind	dicated thickness with multiple layers of duct line	r is prohibited.	2.06 VOLUME CONTROL DAMPERS A. Fabricate in accordance with SMACNA HVAC Du	t Construction Standards - Metal and Flexible, and as					
	1.05 DELIVERY, STORAGE, AND HANDLING	2.01 REQUIREMENTS FOR ALL PRODUCTS OF THIS SECTION A Surface Burging Characteristics: Elame spread/Smoke developed index of 25/50, maximum when tested in	2. Surface Bu accordance	urning Characteristics: Flame spread of zero, so with ASTM E84.	moke developed of zero, when tested in	 C. Apply adhesive to transverse edge D. Butt transverse joints without gaps 	es of liner facing upstream that do not receive main and coat joint with adhesive.	etal nosing.	indicated. B. Single Blade Dampers: Eabricate for duct sizes u	a to 6 x 30 inch (150 x 760 mm)					
	5. Accept materials on site in original actory packaging, labelled with manufacturer's identification, including product density, thickness, and appropriate ASTM standard designation.	accordance with ASTM E 84, NFPA 255, or UL 723.	E. Hanger Rod: A	ASTM A36/A36M; steel , galvanized; threaded b	oth ends, threaded one end, or continuously	E. Fold and compress liner in cornersF. Do not apply liner in rectangular di	s of rectangular ducts or cut and fit to ensure bu ucts with longitudinal joints, except at corners of	ed-edge overlapping. ducts, unless duct size and	Single Drace Dampers. Fabricate for duct sizes u 1. Fabricate for duct sizes up to 6 x 30 inch (150	x 760 mm).				Civil Engineer	
	B. Protect insulation from weather and construction traffic, dirt, water, chemical, and mechanical damage, by storing in original wrapping.	 B. Refer to Part 3 schedule articles for requirements about where insulating materials shall be applied. C. Products shall not contain asbestos, lead, mercury, or mercury compounds. 	unreaded. 2.03 SEALANT MATER	RIALS		standard liner product dimensions G. Apply adhesive coating on all long	make longitudinal joints necessary. jitudinal seams.		 Blade: 24 gage (0.61 mm), minimum. Multi-Blade Damper: Fabricate of opposed blade 	pattern with maximum blade sizes 8 x 72 inch (200 x					
		D. Products that come in contact with stainless steel shall have a leachable chloride content of less than 50 pp when tested according to ASTM C 871	n A. Joint and Seam but includes gas	n Sealants, General: The term "sealant" is not li askets, tapes and combinations of open-weave f	mited to materials of adhesive or mastic nature abric strips and mastics.	H. Secure liner with mechanical faste transversely; at 3 inches from transversely; at 3 inche	eners 4 inches from corners and at intervals not sverse joints and at intervals not exceeding 18	exceeding 12 inches inches longitudinally.	1825 mm). Assemble center and edge crimped b suitable hardware	ades in prime coated or galvanized channel frame with					
	A. Surface Burning Characteristics: Flame spread/Smoke developed index of 25/50, maximum, when tested in	E. Insulation materials for use on austenitic stainless steel shall be qualified as acceptable according to ASTM	C B. Water-Based Jo	Joint and Seam Sealant: Flexible, adhesive seal	lant, resistant to UV light when cured, UL 723	I. Secure transversely oriented liner profiles or are integrally formed for	edges facing the airstream with metal nosings to m duct wall. Fabricate edge facings at the follo	at have either channel or "Z"	1. Blade: 18 gage (1.2 mm), minimum.						
	accordance with ASTM E 84, NFPA 255, or UL 723.	795. F. Foam insulation materials shall not use CFC or HCFC blowing agents in the manufacturing process	listed, and com C. Duct Sealing Ro	איזיזיון איוויזידי איז requirements for Class 1 duct Rolled Sealant: 15 mil. 100 percent solid elastor	.s. neric modified butyl with aluminum foil backing in	1. Fan discharges. 2. Interviele of line of the discharges.	ng unlined duct		E. End Bearings: Except in round ducts 12 inches (3 blade dampers, provide oil-impregnated nylon or s	00 mm) and smaller, provide end bearings. On multiple intered bronze bearings.					
	A. Manufacturer:	2.02 GLASS FIBER	roll form (Hardo D - Flanged Joint N	cast AFG-1402). Mastic: One-part, acid-curing silicone electory	eric joint sealant complying with ASTM C 920	 Intervals of lined duct precedil Upstream edges of transverse 	e joints in ducts where air velocities are greater	nan 2500 fpm (12.7 m/s) or	F. Quadrants:	on single and multi-blade dampers					
	 Knauf Insulation; Duct Wrap : www.knaufusa.com. Johns Manville Corporation: Microlite : www.im.com 	A. Manufacturers: 1. Knauf Insulation; 1000-degree Pipe Insulation : www.knaufusa.com	Type S, Grade	NS, Class 25, Use O.	under and the second state of the second state	where indicated. J. Terminate inner ducts with buildou	uts attached to fire-damper sleeves, dampers, tu	ning vane assemblies, or	CONDECORNIQ, INDICATING quadrant regulator On insulated ducts mount quadrant regulator	on stand-off mounting brackets, bases, or adapters.				MECHANIC	
	3. Owens Corning Corp; All Service Duct Wrap : www.owenscorning.com.	 Johns Manville Corporation; Micro-Lok : www.jm.com. Ouring One Film Inter Film Inter	E. Flange and Joir 2.04 HANGERS AND S	Int Gaskets: Butyl rubber or EPDM polymer with SUPPORTS	i polyisodutylene plasticizer.	other devices. Fabricated buildour secure buildouts to duct walls with	ts (metal hat sections) or other buildout means a bolts, screws, rivets, or welds.	re optional; when used,	 Where rod lengths exceed 30 inches (750 mr Steel Frames: Hat-shaned galvanized sheet 	i) provide regulator at both ends. steel channels, minimum of 0.064 inch thick, with				# 195 F. A	
	 CertainTeed Corporation; Duct Wrap : www.certainteed.com. Insulation: ASTM C553; flexible, noncombustible blanket. 	 Owens Corning Corp; Fiberglass Pipe Insulation : www.owenscorning.com. CertainTeed Corporation ; www.certainteed.com. 	A. Hanger Materia	als: Galvanized sheet steel, threaded steel rod on an annotation of the steel rod of the steel rod of the steel	or steel cable with adjustable and removable				mitered and welded corners; frames with flan	es where indicated for attaching to walls and flangeless				SHANKS MARKEN	-
	1. 'K' ('Ksi') value: 0.26 at 75 degrees F (0.038 at 24 degrees C), when tested in accordance with ASTM	B. Insulation: ASTM C547; rigid molded, noncombustible.	1. Cable Han	nism. nger System: (Basis of Design: Gripple and Duct	mate Clincher)	0507			 Roll-Formed Steel Blades: 0.064-inch-thick, 	alvanized sheet steel.				E-17252	
	 Maximum Service Temperature: 450 degrees F (232 degrees C). 	 K (Ksr) value: AS IM C177, 0.24 at 75 degrees F (0.035 at 24 degrees C). Maximum service temperature: 850 degrees F (454 degrees C). 	a. Produc b. SMAC	cts shall carry a 5:1 safety factor. NA compliance - Tested and verified to be an a	ccentable banger per the SMACNA HVAC Duct	SECTI	ION 23 3300 - AIR DUCT ACCESSORIES		 Blade Axles: Galvanized steel. Bearings: Oil-impregnated bronze 					the second the second s	
	3. Maximum Water Vapor Sorption: 5.0 percent by weight.	3. Maximum moisture absorption: 0.2 percent by volume.	Constr	ruction Standards.		PART 1 GENERAL			5. Tie Bars and Brackets: Galvanized steel.					TTE OF NEBRAS	
	 Vapor Barner decice. FSK: Kraft paper with glass fiber scrim yard and bonded to aluminized film; 0.0032 inch vinyl. 	 Insulation: ASTM CG47 and ASTM C 195, semi-rigid, noncombustible, end grain adhered to jacket. 'K' ('Ksi') value: ASTM C177, 0.24 at 75 degrees F (0.035 at 24 degrees C). 	c. UL List 4.	sting - UL 1598 luminaire fitting sizes 1 - 5, UL 23	289 Conduit and Cable Hardware sizes 2, 3 and	A. Combination fire and smoke damp	pers.		PART 3 EXECUTION 3.01 INSTALLATION					CA-2169	
	 Moisture Vapor Permeability: 0.02 perm inch (0.029 ng/Pa s m), when tested in accordance with ASTM E96/E96M. 	 Maximum service temperature: 650 degrees F (343 degrees C). Maximum moisture absorption: 0.2 percent by volume. 	d. Housin e Wedge	ng: Type ZA2 Zinc. e: Sintered steel bardened to min_56 Rockwell (C.	B. Duct access doors.			A. Install accessories in accordance with manufactur	er's instructions, NFPA 90A, and follow SMACNA HVAC					
	3. Secure with pressure sensitive tape.	 D. Vapor Barrier Jacket: White kraft paper with glass fiber yarn, bonded to aluminized film; moisture vapor 	f. Spring	g: Stainless Steel (Type 302).		D. Flexible duct connections.			Duct Construction Standards - Metal and Flexible. pressure class.	Refer to Section 23 3100 for duct construction and				07/08/2024	
	 D. Vapor Barrier Tape: 1. Kraft paper reinforced with glass fiber yarn and bonded to aluminized film, with pressure sensitive rubber 	transmission when tested in accordance with ASTM E96/E96M of 0.02 perm-inches (0.029 ng/Pa s m). E. Tie Wire: 0.048 inch (1.22 mm) stainless steel with twisted ends on maximum 12 inch (300 mm) centers.	g. End Ca h. Wire R	cap: UV stabilised homopolymer propylene. Rope: Grade galvanized high tensile steel wire re	ope to EN12385.	 E. Volume control dampers. F. Duct accessory hardware. 			 B. Provide duct access doors for inspection and clea dampers, at fire dampers, combination fire and sn 	ing before and after filters, coils, fans, automatic oke dampers, and elsewhere as indicated. Provide					
	based adhesive, 3 inches wide, 6.5 mils thick, 90-ounce force/inch adhesion, 40 lbf/inch tensile strength.	F. Vapor Barrier Lap Adhesive: Compatible with insulation.	i. Toggle	e Plate and End Stop: Zinc plated steel.		1.02 REFERENCE STANDARDS			minimum 8 x 8 inch (200 x 200 mm) size for hand indicated. Provide 4 x 4 inch (100 x 100 m) for ba	access, 18 x 18 inch size for shoulder access, and as ancing dampers only. Review locations prior to				Agency Approval	
	A. Manufacturers:	 G. Insulating Cement/Mastic: ASTM C195; hydraulic setting on mineral wool. H. Insulating Cement: ASTM C449/C449M. 	j. Stud E 2. Strap, Rod	Eyelet and Barrel End: Zinc plated steel. d and Cable Sizes: Comply with SMACNA's "H	AC Duct Construction StandardsMetal and	 A. NFPA 90A - Standard for the Insta Association ; 2009. 	allation of Air-Conditioning and Ventilating Syste	ns; National Fire Protection	fabrication.	quiring inspection for maintenance, including, but not					
	 Knauf Insulation : www.knaufusa.com. Johns Manville Corporation : www.jm.com. 	PART 3 EXECUTION	Flexible" fo manufactur	or steel sheet width and thickness and steel rod urer's recomendations for cable and locking mec	diameters. Comply with SMACNA and hanism sizes.	B. NFPA 92A - Standard for Smoke-(Control Systems Utilizing Barriers and Pressure	Differences ; 2009. Metal and Air Conditioning	limited to fire dampers, combination fire/smoke da	npers, coils (entering side), humidifiers (with window)					
	3. Owens Corning Corp : www.owenscorning.com.	 EXAMINATION Verify that piping has been tested before applying insulation materials. Verify that surfaces are clean and d 	3. Galvanized	d-steel straps attached to aluminum ducts shall	have contact surfaces painted with	Contractors' National Association	; 2005.	Metal and All Conditioning	and similar devices. Coordinate location devices project has been completed. Duct access doors s	n access door to allow proper access to equipment oncontration of a square and sized 2 inches less than the width of	3				
	 CertainTeed Corporation ; www.certainteed.com. B. Insulation: Incombustible glass fiber complying with ASTM C 1071; rigid board; impregnated surface and 	with foreign material removed.	B. Duct Attachmer	nate primer. ents: Sheet metal screws, blind rivets, or self-tap	ping metal screws; compatible with duct	D. UL 33 - Heat Responsive Links for Including All Revisions.	r Fire-Protection Service; Underwriters Laborato	ies Inc. ; Current Edition,	the duct. Maximum door size shall be 18 inches. equipment.	If required, provide multiple doors for adequate access	0				
	edges coated with acrylic polymer shown to be fungus and bacteria resistant by testing to ASTM G 21.	A. Install in accordance with manufacturer's instructions and with NAIMA National Insulation Standards.	materials. 2.05 DUCTWORK FAB	BRICATION		E. UL 555 - Standard for Fire Dampe	ers; Underwriters Laboratories Inc. ; Current Edit	on, Including All Revisions.	D. Provide fire dampers and combination fire and sm outlets pass through fire rated components, where	oke dampers at locations indicated, where ducts and required by codes, and where required by authorities.					
	 Apparent memory conductivity. Maximum of 0.31 at 75 degrees F (0.043 at 24 degrees C). Service Temperature: Up to 250 degrees F (121 degrees C). 	 B. Glass fiber insulated pipes conveying fluids below ambient temperature: 1. Provide vanes barries inskets, fortens applied or field applied. Secure with cell scaling lengitudinal land 	A. Fabricate and s	support in accordance with SMACNA HVAC Due	ct Construction Standards - Metal and Flexible,	A. Product Data: Provide for shop fa	bricated assemblies including volume control da	mpers. Include electrical	having jurisdiction. Install with required perimeter	nounting angles, sleeves, breakaway duct connections					
	 Rated Velocity on Coated Air Side for Air Erosion: 5,000 fpm (25.4 m/s), minimum. Minimum Noise Reduction Coefficients: 	and butt strips with pressure sensitive adhesive. Secure with outward clinch expanding staples and va	B. No variation of	eu. duct configuration or size permitted except by w	ritten permission. Size round duct installed in	characteristics and connection req 1.04 QUALITY ASSURANCE	quirements.		Contractor who will wire smoke and combination f	re and smoke dampers.					
	a. 1/2 inch (13 mm) Thickness: 0.30.	 Insulate fittings, joints, and valves with molded insulation of like material and thickness as adjacent pipe 	place of rectang C. Provide duct ma	gular ducts in accordance with ASHRAE Handb naterial, gages, reinforcing, and sealing for opera	ook - Fundamentals. ating pressures indicated.	A. Products Requiring Electrical Cont for the purpose encoding	nection: Listed and classified by Underwriters L	boratories Inc. as suitable	 E. Install smoke dampers and combination smoke an F. Demonstrate re-setting of fire dampers to Owner's 	d fire dampers in accordance with NFPA 92A. representative.					
	 b. 1 inch (25 mm) Thickness: 0.45. c. 1-1/2 inches (40 mm) Thickness: 0.60. 	Finish with PVC fitting covers. D. For hot piping conveving fluids over 140 degrees F (60 degrees C), insulate flanges and unions at equipme	D. Construct T's, b	bends, and elbows with radius of not less than 1	-1/2 times width of duct on centerline. Where	B. Comply with NFPA 90A, "Installati	ion of Air Conditioning and Ventilating Systems,	and NFPA 90B, "Installation	G. Provide balancing dampers at points on supply, re	urn, and exhaust systems where branches are taken					
	d. 2 inch (50 mm) Thickness: 0.70.	E. Glass fiber insulated pipes conveying fluids above ambient temperature:	not possible an glass fiber insul	nd where rectangular elbows must be used, prov Ilation.	ide air foil turning vanes of perforated metal with	of Warm Air Heating and Air Cond C. Compliance with ASHRAE Handb	litioning Systems." ooks.		H. Provide balancing dampers on duct take-off to diff	isers, grilles, and registers, regardless of whether					
	 D. Liner Fasteners: Galvanized steel, self-adhesive pad with integral head. 	 Provide standard jackets, with or without vapor barrier, factory-applied or field-applied. Secure with self-sealing longitudinal laps and butt strips with pressure sensitive adhesive. Secure with outward clin 	E. Increase duct s ch divergence ups	sizes gradually, not exceeding 15 degrees diverges sizes of equipment and 45 degrees convergen	gence wherever possible; maximum 30 degrees ce downstream.	D. Compliance with SMACNA Design	n Manuals.		dampers are specified as part of the diffuser, grille 3.03 ADJUSTING	or register assembly.					
	PART 3 EXECUTION	expanding staples. 2. Insulate fittings, joints, and valves with insulation of like material and thickness as adjoining pipe. Finis	F. Low Pressure D	Ductwork: Construct all ductwork using galvaniz	zed steel except as indicated.	A. Protect dampers from damage to	operating linkages and blades.		A. Adjust duct accessories for proper settings.						
	A. Verify that surfaces are clean, foreign material removed, and dry.		G. Medium Pressu 2.06 MANUFACTURED	ure Ductwork: Construct all ductwork using gaiv D DUCTWORK AND FITTINGS	anized steel except as indicated.	PART 2 PRODUCTS			C. Final positioning of manual-volume dampers is sp	cified in Section 23 0593 - Testing, Adjusting, and					
	3.02 INSTALLATION A Install in accordance with manufacturer's instructions	A. Requirements in this Article generally apply to all insulation materials except where more specific requirements	A. Flexible Ducts:	Multiple layers of aluminum laminate supported	d by helically wound spring steel wire.	A. Comply with SMACNA's "HVAC D	ouct Construction StandardsMetal and Flexible	for acceptable materials,	Balancing.						
	 B. Install in accordance with NAIMA National Insulation Standards. 	are specified in various pipe insulation material installation articles. B. Insulation Installation on Fittings, Valves, Strainers, Flanges, and Unions:	2. Insulation:	Fiberglass insulation with polyethylene vapor b	parrier film.	material thicknesses, and duct cor B. Galvanized Sheet Steel: Lock-for	nstruction methods, unless otherwise indicated. ming quality; complying with ASTM A 653/A 653	I and having G90 coating	END OF S	ECTION					
	C. Duct Liner Application:	1. Install insulation over fittings, valves, strainers, flanges, unions, and other specialties with continuous	3. Pressure R 4 Maximum V	Rating: 10 inches WG (2.50 kPa) positive and 1 Velocity: 4000 fom (20.3 m/sec)	.0 inches WG (250 Pa) negative.	designation; ducts shall have mill-	phosphatized finish for surfaces exposed to view	. on galvanized sheet metal					gr	aphic scale: 1/8" = 1'-0"	
	 Secure insulation with mechanical liner fasteners. Refer to SMACNA HVAC Duct Construction Standards Match and Elovible for apprice. 	2. Cover segmented insulated surfaces with a layer of finishing cement and coat with a mastic. Install	5. Temperatu	ure Range: -20 degrees F to 210 degrees F (-20	3 degrees C to 99 degrees C).	ducts; compatible materials for alu	uninum and stainless-steel ducts.		SECTION 23 3700 - AIR	UUILEIS AND INLETS			0 2'	4' 8' 12'	
	- Initial and Flexible for spacing.3. Seal and smooth joints. Seal and coat transverse joints.	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 con	B. Transverse Duo our. edge connectio	ict Connection System: SMACNA "E" rated rigic on system with sealant, gasket, cleats, and corn	Ily class connection, interlocking angle and duct er clips.	D. Tie Rods: Galvanized steel, 1/4-ir minimum diameter for lengths long	ncn (ö-mm) minimum diameter for lengths 36 ind ger than 36 inches.	nes or Iess; 3/8-inch	PART 1 GENERAL						
	 Seal liner surface penetrations with adhesive. Duct dimensions indicated are net inside dimensions required for air flow. Increase duct size to allow for 	 For services not specified to receive a field-applied jacket except for flexible elastomeric and polyolefin install fitted PVC cover over elbows tees strainers valves flances and unions. Terminate ends with 	PART 3 EXECUTION	ION		2.02 COMBINATION FIRE AND SMOKE [DAMPERS nc. Pottorff Ruskin Company		1.01 SECTION INCLUDES A. Diffusers.						
	insulation thickness.	PVC end caps. Tape PVC covers to adjoining insulation facing using PVC tape.	A. Field measure t	to determine exact conditions.		B. Fabricate in accordance with NFP.	A 90A, UL 555, UL 555S,		B. Registers/grilles.						
	3.03 DUCT INSULATION SCHEDULE, GENERAL A. Plenums and Ducts Requiring Insulation:	 Label the outside insulation jacket of each union with the word "UNION." Match size and color of pipe labels. 	B. Coordinate rout	ting with all other trades to establish space required and ductwork will fit available assess	irements for each.	C. Provide factory sleeve and collar for a 24-ii	or each damper. Minimum length, 16 inches. nch by 24-inch damper. full open flowing 5000	fm, shall be 0.06-inch WG	A. Product Data: For each model indicated, include	ne following:					
	1. Indoor, concealed supply and return air.	C. Insulate instrument connections for thermometers, pressure gages, pressure temperature taps, test connections, flow meters, sensors, switches, and transmitters on insulated pipes, vessels. and equipment.	D. Where no duct	work drawings are required, coordinate opening	s in floors, roof and walls prior to installation of	E. Multiple Blade Dampers: Fabricat	e with 16 gage galvanized steel frame and blad	s, oil-impregnated bronze or	 Data Sheet: For each type of air outlet and ir and mounting details. 	et, and accessory furnished; indicate construction, finis	n,				
	 Metal ducts and plenums with duct liner of sufficient thickness to comply with energy code and 	Shape insulation at these connections by tapering it to and around the connection with insulating cement ar finish with finishing cement, mastic, and flashing sealant.	d any ductwork. an acceptable s	n opsiluctions or conflicts are discovered, conta solution.	act the Design Professional immediately to reach	concealed linkage, stainless steel	closure spring, blade stops, and lock, and 1/2 ir	ch actuator shaft.	 Performance Data: Include throw and drop, so outlet and inlet 	atic-pressure drop, and noise ratings for each type of a	ir				
	ASHRAE/IESNA 90.1. 2. Factory-insulated flexible ducts.	3.04 CELLULAR-GLASS INSULATION INSTALLATION	3.02 INSTALLATION A. Install support	, and seal ducts in accordance with SMACNA H	VAC Duct Construction Standards - Metal and	 Operators: UL listed and labelled phase, 60 Hz. Provide end switch 	power open and spring closed electric type suit les to indicate damper position. Locate damper	pperator on exterior of duct	PART 2 PRODUCTS						
		 n. Insulation in statilation on straight Pipes and Tubes: 1. Secure each layer of insulation to pipe with wire or bands and tighten bands without deforming insulation 	n Plant in Starpert,	dance with monufacture in the time of		and link to damper operating shaft G. Operators shall have microprocess	t. Operators shall be listed by damper manufact sor-based motor controller providing electronic of the source o	rer for 250 degrees F. utoff at full-open position so	2.01 MANUFACTURERS A. Krueger : www.krueger-hvac.com						
	A. Insulation materials and thicknesses are identified below. If more than one material is listed for a duct system	materials. 2. Where vapor barriers are indicated, seal longitudinal seams, end joints, and protrusions with vapor-bar	B. Install in accord C. During construction	ction provide temporary closures of metal or tap	ed polyethylene on open ductwork to prevent	that no noise is generated while he position, and shall be direct couple	olding open, shall be incapable of burning out if ed over shaft. Operators shall operate in 15 sec	stalled before full-open ands or less to drive or spring	B. Price Industries : www.price-hvac.com.			PYRIGHT 2024 ∆⊑# 20244	1004		
	selection from materials listed is Contractor's option. B. Concealed, rectangular and round, supply-air duct insulation shall be any of the following:	mastic and joint sealant.	construction du	ust from entering ductwork system.	may be made with flexible ductwork Expanded	open or closed.	ive Fire Dampare: Ourtoin turo and in 10 300	ity upon actuation of closter	U. Litus : www.titus-hvac.com.D. Metal*Aire.		Permiss	sion to reproduce all or part of this drawing is hereby	<u>y</u>		
	 Mineral-Fiber Blanket: 2 inches thick and 0.75-lb/cu. ft. nominal density. 	 For insulation with factory-applied jackets on above ambient services, secure laps with outward clinche staples at 6 inches o.c. 	length of flexible	le ductwork shall not exceed 36 inches. Path of	flexible ductwork shall not exceed 45 degrees.	thermal link, flexible stainless stee	el blade edge seals to provide constant sealing p	essure.	PART 3 EXECUTION		granted proiect	solely for the limited purpose of construction of this or archiving. Unauthorized copying, disclosure or			
	 Concealed, rectangular, return-air duct insulation shall be any of the following: 1. Duct Liner: 1 inch thick. 	 For insulation with factory-applied jackets on below ambient services, do not staple longitudinal tabs bu secure tabs with additional adhesive as recommended by insulation material manufacturer and seal with 	E. Flexible ductwo to connections	ork snall be attached to metal collars or sleeves as required per duct system sealing class. Met	with araw bands. Duct adhesive shall be added al collars or sleeves 12 inches and larger shall	 Electro Thermal Link: Fusible link listed and labeled. 	melting at 165 degrees F (74 degrees C); 120 v	olts, single phase, 60 Hz; UL	A. Examine areas where diffusers, registers, and gril	es are to be installed for compliance with requirements	for Constru	ction use without written permission of Alvine			
	 D. Concealed, rectangular, return air sound trap duct insulation shall be any of the following: D. Duct line 1 dia to this to 	vapor-barrier mastic and flashing sealant. B. Insulation Installation on Pine Flances:	contain draw ba F. Flexible Duct In	and holding beads. nstallation:		J. Frame and Blades: 0.064-inch-thi blade and iamh seals	ick, galvanized sheet steel, plated steel shaft wit	n bronze bearings, airfoil	installation tolerances and other conditions affectiins affections affections affections have be	g performance of equipment. Do not proceed with n corrected.	Enginee NOTE:	anny io promonou by copyright law.			
	L. Duct Liner: 1 Inch thick. E. Supply Diffuser Plenums and Back Panels	 Install preformed pipe insulation to outer diameter of pipe flange. 	1. Low Press	sure Ductwork: Peel back vapor barrier and fold	back insulation; then secure to duct collar or	K. End Switch and Indication Light:	- leading		3.02 INSTALLATION	ne	DO NO	T SCALE DRAWINGS. VERIFY ALL DIMENSIONS	shop Eror	kal Zacharia	
	1. Mineral-Fiber Blanket: 2 inches thick and 0.75-lb/cu. ft. nominal density.	 Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of p insulation. 	pe sieve with two st	tretched wraps of approved cut tape.	feld head trend the the	 Remote mounted on ceiling or A damper two-position indicated 	r rocation easily visible above ceiling access part tor switch and light shall be included to provide	हा remote indication of smoke	B. Check location of outlets and inlets and make nec	essary adjustments in position to conform with	and oth	er appropriate drawing or at site. lay out and		nu Lauraria	1
	END OF SECTION	Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with cut sections of cellular-glass block insulation of same thickness as pipe insulation	2. Medium Pr sleeve with	ressure Ductwork: Peel back vapor barrier and h approved duct sealer; then secure with metal	roug pack insulation; then secure to duct collar or draw bands or clamps; then fold over insulation	damper position. 3. Damper position switch and in	ndicating light:		architectural features, symmetry, and lighting arra C. Install diffusers to ductwork with air tight connection	igement. n.	coordin reauire	ate all work prior to installation to provide clearances d for operation, maintenance, and codes and verifv			
		 Install jacket material with manufacturer's recommended adhesive, overlap seams at least 1 inch, and is initiative with flacking applied. 	eal and vapor vapor barri	barrier and secure with two stretched wraps of a rier while taping.	approved duct tape. Take two or three tucks in	a. Position switch: Basis of c	design: RUSKIN Model #SP100 switch package		 D. Provide balancing dampers on duct take-off to diff are specified as pet of the diffusion of	isers, and grilles and registers, despite whether damper	s non-inte	erference with other work. DO NOT FABRICATE	Omaha,	NE 68154	
		C. Insulation Installation on Pipe Fittings and Elbows:	3. Support fle	exible ductwork following manufacturer's recomr ion Standards.	nendations and SMACNA HVAC Duct	 b. Indicator light: Basis of de 2.03 DUCT ACCESS DOORS 	esign: Select-a-Switch, Model #SL53413-6-BG.		E. Ceiling-Mounted Outlets and Inlets: Drawings ind	cate general arrangement of ducts, fittings, and	PRIOR	S. READ SPECIFICATIONS.		T	_
		 Install preformed sections of same material as straight segments of pipe insulation when available. Secure according to manufacturer's written instructions 	G. Duct sizes indic	cated are inside clear dimensions. For lined due	cts, maintain sizes inside lining.	A. Manufacturers: American Warming Greenbook Noiler Industries Ind	g and Ventilating, Ductmate Industries, Inc., Fle Ruskin Company, Vent Producto	master U.S.A., Inc.,	accessories. Air outlet and inlet locations have be volume, noise criteria, airflow pattern, throw, and	en indicated to achieve design requirements for air ressure drop. Make final locations where indicated, as				1	
		 When preformed sections of insulation are not available, install mitered sections of cellular-glass Comparison for the section of the section of	H. Locate ducts wi	with sufficient space around equipment to allow n ts with or without bead for joining round dust size	ormal operating and maintenance activities. as 8 inch (200 mm) and smaller with crime in	Greenneck, Nallor Industries Inc., B. Fabrication: Rigid and close-fitting	g of galvanized steel with sealing gaskets and q	ick fastening locking	much as practicable. For units installed in lay-in c Where architectural features or other items conflic	iling panels, locate units in the center of the panel. with installation, notify Design Professional for a					_
		Insulation. Secure insulation materials with wire or bands. D. Insulation Installation on Valves and Pipe Specialties:	direction of air f	flow.	יישטע אונו אונו אונו אונו אונו אונו אונו אונ	devices. For insulated ducts, insta 1. Less Than 12 inches (300 mm	all minimum 1 inch (25 mm) thick insulation with n) Square: Secure with sash locks	sheet metal cover.	determination of final location.	ducts to all registers grillos and diffusers. It has					_
f.uwg		 Install preformed sections of cellular-glass insulation to valve body. Arrange insulation to permit second to provide and to allow up to acception without distribution in the line. 	J. Use double nut K. Install ducts. un	ts and lock washers on threaded rod supports. nless otherwise indicated, vertically and horizoni	ally, parallel and perpendicular to building lines:	2. Up to 18 inches (450 mm) Sq	uare: Provide two hinges and two sash locks.		shown otherwise, dampers shall be installed as fa	from the air distribution devices as possible.			Mech	anical Specification	<u>ן</u>
awilly		 Analyse insulation to permit access to packing and to allow valve operation without disturbing insulation Install insulation to flanges as specified for flange insulation application. 	avoid diagonal	runs.	id other structural and permanent enclosure	 Up to 24 x 48 inches (600 x 12 handles. 	200 mm): Three hinges and two compression la	uches with outside and inside		ECTION					
		3.05 INDOOR PIPING INSULATION SCHEDULE A Heating/Chilled Water 40 Degrees F and below:	L. Install ducts clo elements of bui	ilding.	io outor outoural and permanent enclosure	 Larger Sizes: Provide an addi C. Access doors with sheet metal corr 	itional hinge. rew fasteners are not accentable								
1 UIISa		 1. 1-1/2 Inches and Smaller: Insulation shall be any of the following: 	M. Install ducts wit	th a clearance of 1 inch, plus allowance for insul out with suspended ceiling, fire- and smoke-con	lation thickness. trol dampers, lighting lavouts. and similar	D. Door: Double wall, duct mounting.	, and round; fabricated of galvanized sheet met	l with insulation fill and				Engineering			
2:40pi		a. Mineral Fiber, Preformed Pipe, Type I: 2 inches thick.2. 2 Inches and Larger: Insulation shall be any of the following:	finished work.	and seams. Apply seelert to make the	and after und after und the	i-inch thickness. Include cam late 1. Frame: Galvanized sheet ste	el, with spin-in notched frame.				A · _ ·		Designer	.: adw Sheet No.	_
2uz4 .		a. Mineral Fiber, Preformed Pipe, Type I: 2 inches thick.	O. Seal all joints a entire joint and	and seams. Apply sealant to male end connection sheet metal screws.	אוט שוושניון מום מתפרשמול to cover	E. Seal around frame attachment to o	duct and door to frame with neoprene or foam ru	bber.			Umaha: Lincoln: 1201 Cass Street 1220 Lincoln	Uklahoma City: Des Moines: Mall, Suite 200 1001 W, Wilshire Blvd., Suite 102 400 East Court Av	venue, Suite 130 Drawn by		1
		END OF SECTION					- Party and round bound.				Omana, NE 08102 Lincoln, NE 6 Phone: (402) 346-7007 Phone: (402	עד או	3-0569 Reviewer		1
													Proi:	4955 	

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	ELEC	TRICAL SYMBOLS						CTRICAL SYMBOLS
	CVMDOI		CVMDOL		CYMPOL	DECODIDITION	TE	ECHNOLOGY SYSTEM ROUGH-IN
DESCRIPTION		DESCRIPTION		CEILING MOUNTED EXIT LIGHT WITH DIRECTIONAL		COMMUNICATIONS OUTLET		CEILING COMMUNICATIONS OUTLET
SURFACE MOUNTED CEILING LUMINAIRE (# INDICATES LUMINAIRE MARK IN SCHEDULE)	(#)	SURFACE MOUNTED WALL LUMINAIRE (# INDICATES LUMINAIRE MARK IN SCHEDULE)	⊗#	ARROW, SHADING INDICATES FACE (# INDICATES LUMINAIRE MARK IN SCHEDULE)			¥ 	
			<u>ک</u>	WALL OR END MOUNTED EXIT LIGHT WITH DIRECTIONAL ARROW, SHADING INDICATES FACE				ACCESS CONTROL DEVICE LOCATION
RECESSED MOUNTED CEILING LUMINAIRE (# INDICATES LUMINAIRE MARK IN SCHEDULE)	<i>*</i>	RECESSED MOUNTED WALL LUMINAIRE (# INDICATES LUMINAIRE MARK IN SCHEDULE)	I #	(# INDICATES LUMINAIRE MARK IN SCHEDULE)	<u></u>			
	<u>¥</u> #	LIGHTING TRACK	₩#	BATTERY LIGHT WITH DIRECTIONAL ARROW, SHADING INDICATES FACE		CABLE TRAY		
PENDANT MOUNTED CEILING LUMINAIRE (# INDICATES LUMINAIRE MARK IN SCHEDULE)		(# INDICATES LUMINAIRE MARK IN SCHEDULE) TRACK MOUNTED LUMINAIRE		(# INDICATES LUMINAIRE MARK IN SCHEDULE)		("#" INDICATES TRAY DIMENSIONS) CABLE TRAY - WALL MOUNTED		CABLE RUNWAY
	¥	(# INDICATES LUMINAIRE MARK IN SCHEDULE)		BATTERY LIGHT WITH DIRECTIONAL ARROW, SHADING INDICATES FACE		("#" INDICATES TRAY DIMENSIONS)		
IN GRADE/FLOOR LUMINAIRE (# INDICATES LUMINAIRE MARK IN SCHEDULE)	*	CEILING FAN - NUMBER OF BLADES IN SCHEDULE (# INDICATES LUMINAIRE MARK IN SCHEDULE)		(# INDICATES LUMINAIRE MARK IN SCHEDULE)		KEFE	R TO NOTES ON FLOOR PLAN	
			#	(# INDICATES LUMINAIRE MARK IN SCHEDULE)	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
		(# INDICATES LUMINAIRE MARK IN SCHEDULE)	(#)	(# INDICATES LUMINAIRE MARK IN SCHEDULE)	<u>st</u>	COMBINATION CLOCK / SPEAKER UNIT		CHIME
OF LUMINAIRE, WHERE INDICATED	SD	SECONDARY DAYLIGHT ZONE BOUNDARY	Y# D-(2#)-{ 3	LUMINAIRE MARKS IN RESPECTIVE SCHEDULES)	ARCM	AREA OF RESCUE COMMUNICATION SYSTEM MASTER UNIT	B	CHIME BUTTON
(# INDICATES LUMINAIRE MARK IN SCHEDULE)		LIGHTING CONTROL ZONE BOUNDARY		LIGHTING PANEL - FLUSH MOUNTED	ARCR	AREA OF RESCUE COMMUNICATION SYSTEM REMOTE UNIT	R	ELECTRIC SOLENOID VALVE
ARROW INDICATES WALL WASH LUMINAIRE AIMING		LIGHTING CIRCUIT/ZONE BOUNDARY		LIGHTING PANEL - SURFACE MOUNTED	ev ev	ELECTRIC VEHICLE CHARGING STATION DASHED LINES INDICATE FUTURE		
SINGLE POLE SWITCH	Φ	SIMPLEX RECEPTACLE	20000	DIMMING/RELAY PANEL	SYMPOL		SYMPOL	
LOW VOLTAGE SWITCH/CONTROL	❶ G,T,U	DUPLEX RECEPTACLE "G" SUBSCRIPT INDICATES GFCI, "T" SUBSCRIPT		DISTRIBUTION PANEL, SWITCHBOARD, OR MOTOR CONTROL CENTER	STMBOL	SUBSCRIPT "EP" APPLIED TO ANY SYMBOL	STNBOL	SUBSCRIPT "K" ADDED TO ANY SYMBOL
DOUBLE POLE SWITCH	Π	INDICATES TAMPER RESISTANT TYPE, "U" SUBSCRIPT INDICATES COMBINATION USB CHARGING STATION	Т	TRANSFORMER	EP	INDICATES EXPLOSION PROOF, CLASS, GROUP AND DIVISION AS NOTED	K	INDICATES KEY OPERATED
3-WAY SWITCH	₽ ₽	AUTOMATICALLY CONTROLLED DUPLEX RECEPTACLE	ATS	AUTOMATIC TRANSFER SWITCH	E	SUBSCRIPT "E" ADDED TO ANY SYMBOL INDICATES EXISTING	WG	SUBSCRIPT "WG" ADDED TO ANY SYMBOL INDICATES WIRE GUARD
4-WAY SWITCH	Î	ISOLATED GROUND DUPLEX RECEPTACLE		ENCLOSED CIRCUIT BREAKER	PD	SUBSCRIPT "PD" ADDED TO ANY FLOOR OUTLET INDICATES PEDESTAL MOUNTED		
DOOR SWITCH	Ф	HOSPITAL GRADE DUPLEX RECEPTACLE		SINGLE PHASE MAGNETIC MOTOR STARTER	AC	SUBSCRIPT "AC" ADDED TO ANY SYMBOL INDICAT	ES ABOVE COUNTER. LOCAT	E CENTER OF DEVICE 4" ABOVE COUNTER SURFACE C
MOMENTARY CONTACT SWITCH	••••••••••••••••••••••••••••••••••••••	RED DUPLEX RECEPTACLE		THREE PHASE MAGNETIC MOTOR STARTER				
TIMER SWITCH	•	DUPLEX RECEPTACLE - SPLIT WIRED	N	COMBINATION MAGNETIC STARTER/DISCONNECT	SYMBOLS INDICATED	HERE AND NOT USED IN THE		
SINGLE POLE MANUAL MOTOR STARTER WITH	 ₽		A/B/C/D	SAFETY SWITCH (FUSED UNLESS OTHERWISE NOTED)	PROJECT. ADDITIONAL	L SYMBOLS AND ABBREVIATIONS		
SWITCH AND FUSE	•	DRYER RECEPTACLE NEMA 14-30		"A"=AMP RATING, "B"=POLES, "C"=FUSE SIZE, "D"=NEMA ENCLOSURE; FOR FUSE SIZE, "MR"=MFGR DECOMMENDATIONS AND "INE"=NON FUSE	MAY BE INDICATED IN	THE CONTRACT DOCUMENTS.		
SWITCH AND FUSTAT		SPECIAL PURPOSE RECEPTACLE	M	MOTOR			ABBREV	IATIONS
MANUAL DIMMER OR FAN SPEED CONTROL	 	(NEMA CONFIGURATION AS NOTED)			A AMP AC ALTERNA	ATING CURRENT	/AXIMUM DEMAND	LTG LIGHTING MATV MASTER ANTENNA TELEVISION
("F" INDICATES FAN SPEED CONTROL) CEILING MOUNTED OCCUPANCY SENSOR	 መ	RANGE RECEPTACLE NEMA 14-50	 		AFF ABOVE F AHJ AUTHORI	INISHED FLOOR EMI ELECTROMA ITY HAVING JURISDICTION EPO EMERGENCY	GNETIC INTERFERENCE POWER OFF	MAX MAXIMUM MCB MAIN CIRCUIT BREAKER
(# INDICATES FIXTURE NUMBER IN SCHEDULE) WALL MOUNTED OCCUPANCY SENSOR/SWITCH	W	(125/250V 50A) WELDER RECEPTACLE NEMA 6-50	<u>Ψ</u>	JUNCTION BOX	APPROX APPROXI ATS AUTOMA AUX AUXILIAR	IMATELY EQUIP EQUIPMENT TIC TRANSFER SWITCH EXIST EXISTING EX EIRE ALARM		MECH MECHANICAL MGB MAIN GROUND BAR MIN MINIMUM
(# INDICATES FIXTURE NUMBER IN SCHEDULE)	₩w ₩	(250V 50A)	U#	("F" INDICATES FLOOR, "C" INDICATES CEILING)	AV AUDIOVIS AVG AVERAGE	SUAL FAA FIRE ALARM E FACP FIRE ALARM	ANNUNCIATOR PANEL CONTROL PANEL	MISC MISCELLANEOUS MLO MAIN LUGS ONLY
	₩			BRANCH CIRCUIT BRANCH CIRCUIT - CONCEALED BELOW FLOOR	AWG AMERICA BMCS BUILDING	AN WIRE GAUGE FB FLOOR BOX G MANAGEMENT FL FLOOR I SYSTEMS	MDC	MTD MOUNTED MTG MOUNTING
PHOTOCELL CEILING MOUNTED	₩	(1) DUPLEX, (1) DUPLEX AUTOMATICALLY CONTROLLED		(UNDERGROUND IF EXTERIOR)	BLDG BUILDING C CONDUIT	G FT FEET F FSAE FIRE SERVIC	E ACCESS ELEVATOR	N3R NEMA 3R ENCLOSURE N4X NEMA 4X ENCLOSURE
PHOTOCELL WALL MOUNTED	₩	ISOLATED GROUND DOUBLE DUPLEX RECEPTACLE		INDICATES NUMBER OF CIRCUITS)	CATV CABLE TE CB CIRCUIT	ELEVISION GALV GALVANIZED BREAKER GC GENERAL CC		NC NORMALLY CLOSED NIC NOT IN CONTRACT
TIME SWITCH	₩	RED DOUBLE DUPLEX RECEPTACLE		SPECIAL PURPOSE HOMERUN AS INDICATED	CCTV CLOSED CKT CIRCUIT CL CENTER	GEC GROUNDING GEN GENERATOR LINE GECL GROUND FAL		NO NORMALLY OPEN NTS NOT TO SCALE OC ON CENTER
RELAY	<u> </u>	RECEPTACLE IN AV BACKBOX		CONDUIT SEAL	CLG CEILING CRAC COMPUT	GND GROUND ER RM AIR CONDITIONER HP HORSEPOWE	R	OFCI OWNER FURNISHED CONTRACTOR INSTALLED
EMERGENCY LIGHTING RELAY	<u> </u>	WALL CLOCK HANGER RECEPTACLE		CIRCUIT DOWN	DIA DIAMETE DISC DISCONN DIST DISTRIBI	R HZ HERIZ)Y	PB PULLBOX PBB PRIMARY BONDING BUSBAR
	Ø	CEILING MOUNTED DUPLEX RECEPTACLE	م	CIRCUIT UP	DN DOWN DWG DRAWING	G KCMIL THOUSAND C	CIRCULAR MILS	PERP PERPENDICULAR PIV POST INDICATOR VALVE
COMBINATION POWER/DATA FLOOR OUTLET ("#" INDICATES DEVICE TYPE IN SCHEDULE)	政	CEILING MOUNTED DOUBLE DUPLEX RECEPTACLE	$\frown >$	CONDUIT STUB-OUT	EC ELECTRIC EGB ELECTRIC	CAL CONTRACTOR KVA KILOVOLT AM CAL GROUND BAR KW KILOWATT	IPERE	PNL PANEL PWR POWER
COMBINATION POWER/DATA/AV TABLETOP OUTLET ("#" INDICATES DEVICE TYPE IN SCHEDULE)	Ø	CEILING MOUNTED RED DUPLEX RECEPTACLE	\frown	CIRCUIT BREAK				
MULTI-OUTLET ASSEMBLY ~ LENGTH AS INDICATED	0	CEILING MOUNTED SPECIAL PURPOSE RECEPTACLE	\sim	CORD AND PLUG	LIGHTING CONTROL BOUNDARY DEFINES	S SEPARATION LIGHTING GENERAL N	SWITCH (SEE	- REFER TO REMARK 2
MECH EQUIPMENT WITH ELEC CONNECTION SEE MECHANICAL/ELECTRICAL COORDINATION SCHEDULE	Ø	CEILING MOUNTED SIMPLEX RECEPTACLE	#	LIGHTING CONTROL TYPE. SEE LIGHTING CONTROL SCHEDULE	WITHIN THE SAME S		GENERAL NOTES)	
	$oldsymbol{O}$	POWER FLOOR OUTLET ("#" INDICATES DEVICE TYPE IN SCHEDULE)	#	BRANCH CIRCUIT/FEEDER TAG. SEE BRANCH CIRCUIT/FEEDER SCHEDULE				
	Ø	RECEPTACLE IN CEILING AV BACKBOX	<xx-##></xx-##>	LIGHTING ZONE CIRCUIT DESIGNATION, "XX" INDICATES PANEL NAME, "##" INDICATES CIRCUIT NUMBER			№ К4	NK4
	F		CVMDOL					
FIRE ALARM AUTOMATIC SMOKE DETECTOR	F CM		(F)	WALL FIRE ALARM SPEAKER			XX-##5(P	ART)
FIRE ALARM AUTOMATIC SMOKE DETECTOR	E MM		 	CEILING FIRE ALARM LIGHT			TO XX-##	< °\$ ₽
			 	(# INDICATES CANDELA RATING WHERE INDICATED) WALL FIRE ALARM LIGHT				
			¥	(# INDICATES CANDELA RATING WHERE INDICATED)			A2 a	A2 EMERGENCY POWER CIRCUIT
			FAA				W1 bQ6'-	
	F #	FIRE ALARM HORN AND LIGHT COMBINATION	FACP				 S	CENTER OF WALL MOUNTED FIXTURE UNLESS
FIRE ALARM AUTOMATIC CEILING HEAT DETECTOR	F #		V F	FIRE FIGHTER'S TELEPHONE JACK				
FIRE ALARM AUTOMATIC WALL HEAT DETECTOR	Ĕ [#]	(# INDICATES CANDELA RATING WHERE INDICATED)	H	FIRE ALARM MAGNETIC DOOR HOLDER		REFER TO	0 b D	
CARBON MONOXIDE DETECTOR	Ĕ [#]	(# INDICATES CANDELA RATING WHERE INDICATED)	FS.D. M	COMBINATION FIRE/SMOKE DAMPER				
CARBON MONOXIDE/SMOKE DETECTOR	Ĕ [#]	WALL FIRE ALARM SPEAKER AND LIGHT COMBINATION (# INDICATES CANDELA RATING WHERE INDICATED)	S.D. M	SMOKE DAMPER				
	I			I			수 있는 것이 수 집에서 한 것이 하는 것이 가지 않는 것이 같이 있다.	
	DESCRIPTION SURFACE MOUNTED CEILING LUMINAIRE (#INDICATES LUMINAIRE MARK IN SCHEDULE) RECESSED MOUNTED CEILING LUMINAIRE (#INDICATES LUMINAIRE MARK IN SCHEDULE) PENDANT MOUNTED CEILING LUMINAIRE (#INDICATES LUMINAIRE MARK IN SCHEDULE) IN GRADE/FLOOR LUMINAIRE (#INDICATES LUMINAIRE MARK IN SCHEDULE) SHADING INDICATES LUMINAIRE MARK IN SCHEDULE) SHADING INDICATES LUMINAIRE MARK IN SCHEDULE) SHADING INDICATE ORIENTATION OF LUMINAIRE, WHERE INDICATED UNDERCABINET LIGHT (#INDICATES WITCH TORY TO REMOVE OF LUMINAIRE, WHERE INDICATED LOW VOLTAGE SWITCH LOW VOLTAGE SWITCH DUBLE POLE SWITCH 3-WAY SWITCH DUBLE POLE SWITCH 3-WAY SWITCH MOMENTARY CONTACT SWITCH TIMER SWITCH SWITCH AND FUSE SWITCH AND FUSE SWITCH AND FUSE SWITCH AND FUSE FAIL SPEED CONTROL (# INDICATES FAIL SPEED CONTROL) CELING MOUNTED OCCUPANCY SENSOR (# INDICATES FAIL SPEED CONTROL) CELING MOUNTED OCCUPANCY SENSOR/SWITCH (# INDICATES FAIL SPEED CONTROL) CELING MOUNTED OCCUPANCY SENSOR/SWITCH (# INDICATES FAIL SPEED CONTROL) PUSH BUTTON STATION PHOTOCELL CELING MOUNTED PHOTOCELL CELING MOUNTED <t< td=""><td>DESCRIPTION SYMBOL SURFACE MOUNTED CEILING LUMINAIRE (#INDICATES LUMINAIRE MARK IN SCHEDULE)</td><td>LIGHTEN STIND DESCRIPTION STIND SIGNATION IN LINUXUME STIND SIGNATION IN LINUXUME<</td><td>LLGUT INCALLOS INTERCIONS LUGUTINA CONTROLLIDATION CONTROLLIDATION BRACE VALUES CONTROLLIDATION BRACE VALUES CONTROLLIDATION Since Values Control Since Va</td><td>LICED FOR THE COLOR PERCENT 11/1000 CLANDER OF THE COLOR PERCENT PERCENT</td><td></td><td></td><td></td></t<>	DESCRIPTION SYMBOL SURFACE MOUNTED CEILING LUMINAIRE (#INDICATES LUMINAIRE MARK IN SCHEDULE)	LIGHTEN STIND DESCRIPTION STIND SIGNATION IN LINUXUME STIND SIGNATION IN LINUXUME<	LLGUT INCALLOS INTERCIONS LUGUTINA CONTROLLIDATION CONTROLLIDATION BRACE VALUES CONTROLLIDATION BRACE VALUES CONTROLLIDATION Since Values Control Since Va	LICED FOR THE COLOR PERCENT 11/1000 CLANDER OF THE COLOR PERCENT PERCENT			

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REMARKS:

- 1. WHERE INDICATED, LOWER CASE LETTERING INDICATES LUMINAIRE(S) CONTROLLED BY CONTROL DEVICE/
- CONTROL TYPE WITH THE SAME LETTER WITHIN THE SAME ROOM. 2. LIGHTING CIRCUIT/ZONE BOUNDARY. DRAWINGS INDICATE LIGHTING BRANCH CIRCUITS AND ASSOCIATED CIRCUIT
- ZONES. BOUNDARIES FOR SPECIFIC NORMAL AND/OR EMERGENCY LIGHTING CIRCUITS ARE INDICATED BY "LIGHTING CIRCUIT BOUNDARY" LINETYPE. CONNECT FIXTURES WITHIN EACH CIRCUIT ZONE TO INDICATED
- BRANCH CIRCUITS. CONNECT LIGHTING CONTROLS WITHIN EACH ROOM TO CONTROL FIXTURES WITHIN THAT ROOM UNLESS OTHERWISE NOTED.

LIGHTING CIRCUIT AND ANNOTATION LEGEND E000

NO SCALE

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 do not scale drawings.
 verify all dimensions and clearances at site or from architectural, structural, shop, and other appropriate drawings.

 lay out and coordinate all work prior to installation to provide clearances required for operation, maintenance, and codes.

 verify non-interference with other work.
 do not fabricate prior to verify and the stallation of clearances for all trades.

Mechanical/Electrical Engineers **Alvine Engineers** 1201 Cass Street Omaha, NE 68102

402.346.7007

Structural Engineer

Civil Engineer

FER

402.475.7234

	SYMBOL	DESCRIPTION
	₿	CAMERA
	♦	ELECTRONICALLY CONTROLLED AND MONITORED DOOR LOCATION
	\blacklozenge	MONITORED DOOR LOCATION
	X	CABLE TRAY DROP OUT
		CABLE TRAY - SOLID BOTTOM ("#" INDICATES TRAY DIMENSIONS)
OR EAC	H ROUGH-IN	
	SYMBOL	DESCRIPTION
	ÂQ	AQUASTAT
	$\bigcirc \checkmark$	THERMOSTAT
		BELL
	SYMBOL	DESCRIPTION
	WP	SUBSCRIPT "WP" APPLIED TO ANY SYMBOL INDICATES WEATHERPROOF NEMA 3R OR EQUIVALENT
	Р	SUBSCRIPT "P" ADDED TO ANY SYMBOL INDICATES PILOT LIGHT
	NL	SUBSCRIPT "NL" ADDED TO ANY SYMBOL INDICATES AN UNSWITCHED LUMINAIRE OPERATING AS A NIGHT LIGHT
R WHEF	RE PRESENT, 4" ABOVE B	ACKSPLASH.

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					LIGHTING D EXISTING FIXTU BE RELOCATED FIXTURES PRIO FOR REUSE IN E LIGHTING D EXISTING FIXTU BE RELOCATED FIXTURES SHAL CONSTRUCTION AREA.	EMOLITION - BASE BID RES SHALL BE REUSED. ONLY FIXTUF (R) SHALL BE REMOVED AND SALVAG R TO CONSTRUCTION COMPLETE. EXI EACH AREA. EMOLITION - ALTERNATE 1 RES SHALL BE REUSED. ONLY FIXTUF (R) SHALL BE REMOVED AND SALVAG L BE RELAMPED WITH LED T8 LAMPS COMPLETE. EXISTING CIRCUIT SHAL
				R E Phose-1 Phose-1	Phose Phose	Phose

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pse-1—Phase-1—Phase-1—Phase-1

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					LIGHTING EXISTING FIX RELOCATED FIXTURES PF LIGHTING EXISTING FIX RELOCATED SHALL BE RE COMPLETE. I (3000 LUMEN FIXTURE BAL	SCOPE - BASE BID TURES SHALL BE REUSED. FIXTURE (R) SHALL BE REINSTALLED IN INDIC RIOR TO CONSTRUCTION COMPLETE SCOPE - ALTERNATE 1 (TURES SHALL BE REUSED. FIXTURE (R) SHALL BE REINSTALLED IN INDIC ELAMPED WITH LED T8 LAMPS AND CI RETROFIT TUBES SHALL BE 4' LED T8 FIXTURE EQUIVALENT), 4000K. VERI LAST.
						se-1Phsse-1Phase
e-1	Phase 1 Phase	E Phase 1 Phase				d O O O O O O O O O O O O O O O O O O O
	R P R P R P R P R P R P R P R P R P R P R		F = P1 + C = P1		Phose-1	Prose
				phose-1 phose-1		

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	LUMINAIRE SCHEDULE													
				SO	URCE DA	ТА		DIMMINIO						
MARK	DESCRIPTION	MANUFACTURER	CATALOG NO.	LUMENS	LOAD (VA)	PER FOOT	TEMP (K)	PROTOCOL	VOLTAGE	MOUNTING	FINISH	MANUFACTURERS	REMARKS	
D1	4" DIAMETER RECESSED DOWNLIGHT	LITHONIA	LDN 4-40/07-LO4AR-LD-MVOL Z10-90CRI	^{-G} 654	8.5	_	4000	0-10V, 1%	MVOLT	RECESSED, GRID				
L1	6' LINEAR RECESSED WALL WASH	PEERLESS	OPRW-G-LOP-6FT-90CRI-40K- LMF-MIN1-0-ZT-277	-500 _		500	4000	0-10V, 1%	277V	RECESSED, GRID				
P1	ECHO LARGE PENDANT	TECH LIGHTING	700TDECPCS-LED927	707	10	_	2700	0-10V, 1%	120 V	PENDANT	SATIN NICKEL			
R1	2'X4' RECESSED LOW-PROFILE TROFFER	LITHONIA	2BLT4-30L-ADSM-EZ1-LP94	0 3000	23	_	4000	0-10V, 1%	MVOLT	RECESSED, GRID				
X1	SINGLE FACE EDGE LIT, RED ON MIRROR EXIT LIGHT	LITHONIA	LRP 1 RMR 120/277	_	2	_	_	_	277 V	UNIVERSAL				
X2	DOUBLE FACE EDGE IT, RED ON MIRROR EXIT LIGHT	LITHONIA	LRP 2 RMR 120/277	_	2	_	_	_	277 V	UNIVERSAL		1		

GENERAL NOTES

a SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

6 CONTRACTOR TO VERIFY LUMINAIRE CATALOG NUMBER AND INSTALLATION REQUIREMENTS PRIOR TO ORDERING.

C LUMINAIRE NUMBERS INDICATED WITH LETTER "E" SHALL BE PROVIDED WITH AN EMERGENCY BATTERY PACK.

d LISTED ALTERNATE MANUFACTURERS ARE PERMITTED TO BID AN EQUIVALENT LUMINAIRE WHICH COMPLIES WITH THE PRODUCT REQUIREMENTS IDENTIFIED IN THIS SCHEDULE AND THE SPECIFICATIONS WITHOUT SUBMITTING A PRIOR APPROVAL REQUEST. ALTERNATE LUMINAIRES WILL BE REVIEWED DURING THE SUBMITTAL PROCESS AND THE MANUFACTURER WILL BE RESPONSIBLE TO PROVIDE A LUMINAIRE WHICH MEETS THE PRODUCT REQUIREMENTS. e ELECTRICAL CONTRACTOR SHALL PROVIDE THE SPECIFIED LUMINAIRES DEFINED WITHIN THIS SCHEDULE AND ASSOCIATED CONTRACT DOCUMENTS. IF REQUIRED, THE ELECTRICAL CONTRACTOR MAY UTILIZE MULTIPLE DISTRIBUTORS AND/OR DISTRIBUTORS MAY UTILIZE MULTIPLE LIGHTING MANUFACTURER REPRESENTATIVES TO COMPLY WITH THE CONTRACT DOCUMENTS FOR THIS PROJECT.

	FLOOR BOX AND POKE THRU SCHEDULE													
MARK	FLOOR	POKE	ON	MANUEACTURER		COVER		COMPARTMEN	TS (QTY.)		CONDU	T (PER COMPAR	TMENT)	REMARKS
	BOX	THRU	GRADE	MANOIACIONEN	MODEL NO.	OUVER	POWER	VOICE/DATA	AV	SPARE	AV	VOICE/DATA	SPARE	
1		Х		LEGRAND	6ATC2BK	SURFACE	1	1	1	-	1"	1"	_	1,2,3

GENERAL NOTES

a CONTRACTOR TO VERIFY CATALOG NUMBER AND INSULATION REQUIREMENTS PRIOR TO ORDERING.

b PROVIDE ACCESSORIES AS REQUIRED FOR DEVICE INSTALLATION. PROVIDE MANUFACTURER'S STANDARD BLANK PLATES AS REQUIRED FOR UNUSED BOX COMPARTMENTS. c COORDINATE VOICE/DATA REQUIREMENTS WITH INSTALLING CONTRACTOR. d UNLESS NOTED OTHERWISE, ROUTE LOW-VOLTAGE AND SPARE CONDUITS TO ABOVE ACCESSIBLE CEILING IN SAME ROOM AS THE FLOOR BOX/POKE THRU. TERMINATE WITH INSULATING BUSHINGS. e COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER. f VERIFY FINISH/COLOR WITH ARCHITECT.

REMARKS

1 PROVIDE 1" AV CONDUIT FROM POKE-THRU TO DISPLAY. PROVIDE 1" DATA CONDUIT FROM POKE-THRU TO ACCESSIBLE CEILING ABOVE ROOM. 2 PROVIDE APPROPRIATE CONDUIT ATTACHMENT ACCESSORIES WITH POKE-THRU DEVICE FOR DATA AND AV COMPARTMENT. 3 VERIFY FINAL COVER FINISH WITH ARCHITECT PRIOR TO ORDERING.

		LIG	HTIN	IG C	ON	TRO	DL S	СН	EDULE	
	OCCUPANCY	SENS	OR				0			
MARK	MOUTNING	MANUAL ON	AUTO ON	OCCUPANT DETECTION TIME-OUT	LOCAL ON/OFF	DIMMING	CONNECTED TO NETWORKEE LIGHTING CONTROL SYSTEM	TIME OF DAY CONTROL	SPACE TYPE	REMARKS
А	CEILING	Х	-	20	Х	Х	-	_	OFFICE	
В	CEILING	-	100%	15	Х	Х	-	_	BREAK	
С	CEILING	-	100%	20	Х	Х	-	_	CORRIDOR	
D	CEILING	Х	-	20	Х	Х	-	_	CONFERENCE ROOM	
Е	CEILING	Х	-	5	Х	_	-	_	STORAGE ROOM	
F	CEILING	_	100%	20	Х	_	-	_	OPEN OFFICE	

REMARKS

D

LOW VOL	LOW VOLTAGE SWITCH SCHEDULE										
UTTON ENGRAVED LABEL	ROOM ZONES CONTROLLED	FUNCTION	REMARKS								
ON/OFF		ON/OFF									
RAISE	SEE PLANS	DIM UP									
LOWER		DIM DOWN									
ON/OFF	SEE PLANS	ON/OFF									

a PROVIDE EACH LOW-VOLTAGE SWITCH WITH PRE-ENGRAVED FACTORY LABELED BUTTONS INDICATING FUNCTION. WHERE MULTIPLE SWITCHES ARE

GROUPED IN A SINGLE LOCATION OR FACEPLATE, PROVIDE ENGRAVED FACEPLATE INDICATING ZONE OR SPACE CONTROLLED. b EACH SPACE SHALL HAVE MINIMUM OF ONE ZONE OF CONTROL. WHERE MORE THAN ONE LIGHTING ZONE IS PRESENT, LOWERCASE LETTERING

INDICATES SEPARATE LIGHTING ZONE WITHIN A ROOM.

C DIMMING CONTROLS ON SCENE CONTROLLERS SHALL BE CAPABLE OF CONTROLLING ALL ZONES WITHIN SPACE.

d VERIFY INTEGRAL WALL SWITCH OCCUPANCY SENSOR REQUIREMENTS WITH LIGHTING CONTROL SCHEDULE.

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	L	PART 1 GENERAL 1.1 SUMMARY A. THIS SECT SHALL APF REQUIRED B. THIS SECT 26 SECTIC	NS AND S, OR PROJECT. R DIVISION	12. NATI 13. INST 14. INSU 15. TELE 16. BUIL 17. APPI C. WHERE TH CODE SHA DOCUMEN 1. ITEM SPEC	ONAL ELECTRICAL MAI ITUTE OF ELECTRICAL ILATED POWER CABLE ECOMMUNICATIONS INE DING INDUSTRY CONSI LICABLE NATIONAL, ST/ HERE IS A CONFLICT BE ALL HAVE PRECEDENCI NTS. IS THAT ARE ALLOWED CIFIED SHALL NOT BE S	NUFACTURERS ASSOC AND ELECTRONICS EN ENGINEERS ASSOCIAT DUSTRY ASSOCIATION ULTING SERVICE INTER ATE AND LOCAL CODES ETWEEN THE CODE AN E ONLY WHEN IT IS MO	IATION (NEMA) IGINEERS (IEEE) TON (IPCEA) (TIA) RNATIONAL (BICSI) S ID THE CONTRACT DOCI IRE STRINGENT THAN TH E LESS STRINGENT THA	UMENTS, THE HE CONTRACT AN THOSE	0 6 6 112 ODEDATING	EQUIPMENT ACCESSORY SCHEI THE OWNER WITH A COMPLETE PIECE OF EQUIPMENT AND THE MANUFACTURER OF RENEWABL MANUFACTURER'S OPERATION ONE COPY OF SHOP DRAWINGS ITEM FURNISHED USING THE DE DRAWINGS. MANUFACTURERS' WARRANTY I NORMAL MAINTENANCE SCHEDI PERFORMED AT VARIOUS TIME I	DULE. UPON COMPLETION OF T EQUIPMENT ACCESSORY SCHE RELATED SIZE, TYPE, NUMBER E ITEMS. AND MAINTENANCE MANUALS A AND PRODUCT DATA, CLEARLY SIGNATION LABEL SPECIFIED O NFORMATION. ULE. INCLUDE A LISTING OF WC INTERVALS; I.E., 30, 90, 180 DAYS	THE WORK, FURNISH EDULE LISTING EACH REQUIRED AND THE ND PARTS LISTS. (MARKED FOR EACH OR INDICATED ON ORK TO BE S AND YEARLY.	A. B. C. D. 3.3 COO	MAKE PROVISIC REQUIRED ARR, BUILDING OF EC MATERIALS SHA WORK AS A WH CHECKED AND I ADEQUATELY P PROTECT ITEMS STORING IN A H	INS FOR THE DELIVER ANGEMENTS WITH OT QUIPMENT TOO LARGE ALL BE DELIVERED AT OLE AND SHALL BE M. NSPECTED. ROTECT SUPPLIES AN S SUBJECT TO COLD V EATED SPACE. OTHER CONTRACTOR	RY AND SAFE STORA THER CONTRACTOR E TO PASS THROUG SUCH STAGES OF T ARKED AND STOREI ND EQUIPMENT DUR WEATHER DAMAGE I	AGE OF MATERIALS. MAKE S FOR THE INTRODUCTION H FINISHED OPENINGS. THE WORK AS WILL EXPED D IN SUCH A WAY AS TO B ING COLD WEATHER. BY COVERING, INSULATING		
 A. S. A. S.	к	1.2 WARRANTIES A. WARRANT ONE YEAR B. CERTAIN E OR FOR LC MANUAL. C. REPAIR OF BECOME L D. ANY MANL BENEFIT (MATERIALS, WORKMANSHIP AND EC AFTER THE DATE OF SUBSTANTIAL EQUIPMENT SHALL BE WARRANTED E ONGER PERIODS OF TIME AS SPECIF R REPLACE, AT NO ADDITIONAL COS [®] DEFECTIVE WITHIN THE WARRANT PE UFACTURERS' WARRANTIES CONCEF DF THE OWNER.	QUIPMENT AGAINST DEFECTS FOR A F COMPLETION. BEGINNING AT THE TIME OF FINAL ACC IED IN THOSE DIVISIONS OF THE PRO- TO THE OWNER, ANY ITEM WHICH M RIOD. NING ANY ITEM INSTALLED WILL RUN	PERIOD OF CEPTANCE DJECT MAY	 1.10 PERMITS A. THE CONT PERMITS, B. PERMITS, BE OBTAIN 1.11 MATERIALS ANI A. OPTIONS CONTRAC INDUSTRY 	TRACTORS SHALL FAMI FEES, ETC., AND SHAL LICENSES, INSPECTION NED BY THE CONTRACT D EQUIPMENT MANUFA IN SELECTING MATERIA T DOCUMENTS AND GO	ILIARIZE THEMSELVES L COMPLY WITH THEM. NS AND ARRANGEMEN TOR AT HIS EXPENSE. ACTURERS ALS AND EQUIPMENT A OVERNING REGULATIO CEDURES EXPERIENCE	WITH REQUIREMENTS F TS REQUIRED FOR THE RE LIMITED BY REQUIR NS. THEY ARE NOT COI ED ON PREVIOUS CONST	REGARDING WORK SHALL EMENTS OF THE NTROLLED BY IRUCTION	A. COMP BE PR B. OPER/ ARCHI C. TRAIN HOUR: D. TRAIN 1. S 2 F	ETE OPERATING INSTRUCTIONS FO DVIDED TO THE OWNER'S DESIGNAT ATION AND MAINTENANCE MANUALS TECT/ENGINEER AND PROVIDED TO NG SHALL BE SCHEDULED AT THE C OF TRAINING SHALL BE PROVIDED. NG SHALL INCLUDE INSTRUCTIONS TARTUP AND SHUTDOWN PROCEDU FRIODIC MAINTENANCE	OR EACH SYSTEM AND ITEM OF E TED PERSONNEL. MUST BE REVIEWED AND ACCE THE OWNER PRIOR TO OPERAT CONVENIENCE OF THE OWNER.	Equipment shall Epted by the Fing training. A minimum of 4	А. В. С. D.	PERFORM THE E BY OTHER TRAE THE EXECUTION PROPERLY CON CONTRACTORS WITH THEIR WO EXAMINE THE C WORK AND THE PROMPTLY REP ENCOUNTERED	ELECTRICAL WORK IN DES AND AFFORD OTH N OF THEIR WORK. INECT AND COORDIN/ AT SUCH TIME AND IN RK. ONTRACT DOCUMENT WORK OF OTHER TR ORT TO THE ARCHITE IN THE INSTALLATION	I CONFORMANCE WI HER CONTRACTORS ATE THE ELECTRICA N SUCH A MANNER A TS FOR THE GENERA ADES. COORDINATI ECT/ENGINEER ANY N OF THE ELECTRICA	TH THE CONSTRUCTION O REASONABLE OPPORTUN AL WORK WITH THE WORK AS NOT TO DELAY OR INTE AL, MECHANICAL, AND ELE E WORK ACCORDINGLY. DELAY OR DIFFICULTIES AL WORK WHICH MIGHT PF
 a min many and a min ma	J	E. THE CONTI VOID OR IN THIS PROJ F. THE REPAI CONTRAC ⁻ 1.3 ALTERNATES A. ALTERNAT PROJECT DRAWING 1.4 QUESTIONS OF	RACTOR AGREES NOT TO VOID OR I MPAIR, ANY WARRANTIES REGARDIN JECT. IR OF FAULTY WORKMANSHIP SHALL T. TES, IF REQUIRED, SHALL BE AS DES MANUAL, AS DESCRIBED ON THE PRO S. INTERPRETATION DURING BIDDING	MPAIR, OR TO ALLOW SUB-CONTRACT G PRODUCTS OR ITEMS INSTALLED A BE CONSIDERED TO BE INCLUDED IN CRIBED IN THE "ALTERNATES" SECTIC DPOSAL FORM, OR AS INDICATED ON PHASE	TORS TO AS PART OF N THE ON OF THIS I THE	B. MATERIAL 1. PRIM ARO PHYS 2. PRIM NAM THE 3. PRO ACC 4. ACC	S. IS AND EQUIPMENT SH, IARY DESIGN PRODUC UND WHICH THE PROJI SICAL SIZE AND QUALIT IARY DESIGN PRODUC E, MODEL NUMBER OR SPECIFICATIONS. VIDE PRIMARY DESIGN ORDANCE WITH THE FO EPTABLE EQUIVALENT PRODUCTS OF MANUE	ALL BE PROVIDED IN A TS: PRIMARY DESIGN F ECT WAS DESIGNED IN TY. TS ARE INDICATED BY I SIMILAR DATA ON DRA I PRODUCTS UNLESS S OLLOWING PARAGRAPH SUBSTITUTIONS: ACC	CCORDANCE WITH THE PRODUCTS ARE THOSE I TERMS OF CAPACITY, I USE OF A SINGLE MANU AWINGS OR SCHEDULES UBSTITUTIONS ARE MAI HS. EPTABLE EQUIVALENT S	FOLLOWING: PRODUCTS PERFORMANCE, JFACTURER'S S OR WITHIN DE IN SUBSTITUTIONS	3. E 4. S E. IN ADE OPER/ F. AT TH SPECI ITS US 1.14 QUALITY AS A. CONFO	MERGENCY OPERATION AFETY ITION TO THE INSTRUCTIONS REQU ITIONS BEING DESCRIBED IN ORDER E COMPLETION OF TRAINING, TURN (AL TOOLS FOR INSTALLED EQUIPMEN E. SURANCE ORM TO THE REQUIREMENTS OF NFR	IRED ABOVE, WHEREVER POSSI TO FULLY ILLUSTRATE SYSTEM OVER TO THE OWNER REQUIRE NT. EACH KEY OR TOOL SHALL PA 70.	IBLE PERFORM THE M OPERATION. D KEYS AND BE LABELED WITH	3.4 COO A. B. C. D. F	PROMPT AND PI PRDINATION OF W PLAN WORK SO INFORM THE GE CONSTRUCTION COOPERATE WI PROPER SEQUE WIRING, ETC. MAKE PROVISIC THE ELECTRICA	ROPER INSTALLATION /ORK IT PROCEEDS WITH A NERAL CONTRACTOR FOR THE INSTALLAT TH OTHER CONTRAC ENCE, FOR THE CORR INS FOR SPECIAL FRA	N OF WORK REQUIRI A MINIMUM OF INTER R OF ALL OPENINGS TON OF THE ELECTF TORS IN FURNISHIN ECT LOCATION OF S AMES, OPENINGS, AN	ED FROM OTHER TRADES. REFERENCE WITH OTHER TH REQUIRED IN THE BUILDIN RICAL WORK. G MATERIAL AND INFORM SLEEVES, INSERTS, FOUND ND SLEEVES AS REQUIRED CUTTING AND PATCHING N
 A BARE AND AND AND AND AND AND AND AND AND AND	н	 A. IF QUESTION PORTION C QUESTION B. ANY DEFIN BE PUBLIS PRIOR TO C. VERBAL IN SHALL NO D. WHEN SUF DELIVERY 	ONS ARISE DURING THE BIDDING PR OF THE CONTRACT DOCUMENTS, TH IS TO THE ARCHITECT/ENGINEER FO NITIVE INTERPRETATION OR CLARIFIC SHED BY ADDENDA, PROPERLY ISSUE THE BID DATE. ITERPRETATION OR EXPLANATION N T BE CONSIDERED PART OF THE BID BMITTING QUESTIONS FOR CLARIFIC OF ADDENDA MUST BE ALLOWED.	DCESS REGARDING THE MEANING OF E PROSPECTIVE BIDDER SHALL SUBM R CLARIFICATION. CATION OF THE CONTRACT DOCUMEN ED TO EACH PERSON HOLDING DOCUI OT ISSUED IN THE FORM OF AN ADDE DING DOCUMENTS. ATION, ADEQUATE TIME FOR ISSUANC	F ANY MIT THE NTS WILL IMENTS, ENDUM CE AND	ARE DESI THE a. b. c.	IGN PRODUCTS OF MANUF IGN PRODUCTS. EQUIV FOLLOWING REQUIREN THE PRODUCT SHALL MANUFACTURERS LIS THE PRODUCT SHALL DOCUMENTS IN TERM AND PHYSICAL CHARA THE CONTRACTOR PR OF CHANGES DUE TO COMPENSATION TO TI SERVICES, INCREASE	ACTORERS OTHER TH/ /ALENT ACCEPTABLE S MENTS: . BE MANUFACTURED B STED IN THE PROJECT M . MEET OR EXCEED THE IS OF QUALITY, PERFOR ACTERISTICS. ROVIDING THE SUBSTIT SUBSTITUTIONS. THE HE ARCHITECT/ENGINE ED COST OF WORK BY T	AN THOSE LISTED FOR SUBSTITUTIONS SHALL N MANUAL, DRAWINGS, OF E REQUIREMENTS OF TH RMANCE, SUITABILITY, A TUTION SHALL BEAR THE SE COSTS MAY INCLUDI EER FOR REDESIGN AND THE OWNER OR OTHER	ABLE R ADDENDA. HE CONTRACT APPEARANCE, E TOTAL COST E ADDITIONAL D EVALUATION CONTRACTORS,	В. РКОЛ FIRM / PURP(1.15 COORDINAT A. COOR 1. Т 5 2. Т 11 3. Т 4. 5	CCEPTABLE TO THE AUTHORITY HA DESE SPECIFIED AND INDICATED. ION DINATE ARRANGEMENT, MOUNTING, O ALLOW MAXIMUM POSSIBLE HEAD EDUCE HEADROOM ARE INDICATED O PROVIDE FOR EASE OF DISCONNE ITERFERENCE TO OTHER INSTALLA O ALLOW RIGHT OF WAY FOR PIPING O CONNECTING RACEWAYS, CABLE	AND SUPPORT OF ELECTRICAL OROOM UNLESS SPECIFIC MOUN ECTING THE EQUIPMENT WITH N TIONS. G AND CONDUIT INSTALLED AT F S, WIREWAYS, CABLE TRAYS, AI	EQUIPMENT. TING HEIGHTS THAT MINIMUM REQUIRED SLOPE. ND BUSWAYS WILL	3.5 LAYI A. B. C. D.	NECESSARY BY NG OUT WORK CAREFULLY LAY FROM THE SITE AND SHOP DRAY CONFIRM CODE DO NOT INFRING FOR ITEMS INST PRIOR TO INSTA WITH OTHER ITE	HIS FAILURE TO PRO OUT WORK IN ADVAI , THE APPROPRIATE (WINGS. REQUIRED CLEARAN GE UPON SPACE REQ ALLED BY OTHER CO ALLATION OF ANY WO EMS IN OR NEAR THE	IPERLY DIRECT SUC NCE OF INSTALLATIC CIVIL, ARCHITECTUR ICES. UIRED FOR OPERAT INTRACTORS. RK, MAKE CERTAIN SAME LOCATION.	H WORK AT THE CORRECT ON USING DATA AND MEAS AL, AND STRUCTURAL DR ION, MAINTENANCE, OR C THE LOCATION DOES NOT
 He should be the should be the	G	E. THE ARCHI CONFLICTS 1.5 CONTRACT DOC A. IF ANY AME CLARIFICA B. IF THE COI ENTERTAII ARCHITEC C. SHOULD A DEEMED T WRITTEN	ITECT/ENGINEER SHALL BE THE SOL S WITHIN CONTRACT DOCUMENTS. CUMENT DISCREPANCIES BIGUITIES SHOULD APPEAR IN THE C ATION FROM THE ARCHITECT/ENGINE NTRACTOR FAILS TO MAKE SUCH RE NED FOR FAILURE TO CARRY OUT TH T/ENGINEER. CONFLICT OCCUR WITHIN THE CON TO HAVE ESTIMATED THE MORE EXPL CLARIFICATION FROM THE ARCHITEC	E JUDGE REGARDING INTERPRETATION ONTRACT DOCUMENTS, REQUEST ER BEFORE PROCEEDING WITH THE ' QUEST, NO EXCUSE WILL THEREAFTE IE WORK IN A MANNER SATISFACTOR TRACT DOCUMENTS, THE CONTRACTOR ENSIVE WAY OF DOING THE WORK UN CT/ENGINEER WAS REQUESTED AND O	IONS OF WORK. ER BE RY TO THE TOR IS NLESS A OBTAINED	5. PERI PERI GEN INDIO RESI 6. COM SPEO REG COM AND C. PROPOSE	AND SIMILAR CONSIDI FORMANCE REQUIREM FORMANCE REQUIREM ERICALLY, PROVIDE PF CATED AND THAT ARE F PECTIVE APPLICATION. IPLIANCE WITH STANDA CIFICATIONS REQUIRE ULATION, THE CONTRA IPLIES WITH SPECIFICA REGULATIONS. ED SUBSTITUTIONS WIL	ERATIONS. IENTS: WHERE THE CO IENTS OR DESCRIBE A I RODUCTS THAT COMPL RECOMMENDED BY TH ARDS, CODES AND REG ONLY COMPLIANCE WI ACTOR HAS THE OPTION ATION REQUIREMENTS, L BE JUDGED ON THE E	DNTRACT DOCUMENTS L PRODUCT OR ASSEMBL Y WITH THE SPECIFIC F E MANUFACTURER FOR GULATIONS: WHERE TH TH AN IMPOSED STAND N OF SELECTING A PRO INCLUDING THE STAND BASIS OF QUALITY, PER	LIST Y REQUIREMENTS THE E MARD, CODE OR DUCT THAT DARDS, CODES FORMANCE,	B. COOR CONS CONS 1. S C C. COOR ITEMS TESTE D. PROVI	QUIPMENT. DINATE CHASES, SLOTS, INSERTS, S RUCTION WORK AND ARRANGE IN E RUCTION TO FACILITATE THE ELEC ET INSERTS AND SLEEVES IN POURI THER STRUCTURAL COMPONENTS / DINATE ELECTRICAL TESTING OF ELI SO EQUIPMENT AND SYSTEMS THAT D TO DEMONSTRATE SUCCESSFUL IN DE OFFSETS AND ELEVATION CHANG	LEEVES, AND OPENINGS WITH O BUILDING STRUCTURE DURING F TRICAL INSTALLATIONS THAT FO ED-IN-PLACE CONCRETE, MASO AS THEY ARE CONSTRUCTED. ECTRICAL, MECHANICAL, OR AR T ARE FUNCTIONALLY INTERDEF INTEROPERABILITY. GES IN CONDUIT AND CABLE TR	GENERAL PROGRESS OF OLLOW. WNRY WORK, AND RCHITECTURAL PENDENT ARE	E. F. 3.6 DAT/ A. B.	IF THE LAYOUTS IN THE SPACE P REQUEST CLAR FAILURE TO PRO THE CONTRACT A AND MEASURED MECHANICAL AN SCALE DRAWING THE DATA GIVED ABSOLUTE ACC	S SO PREPARED INDIC ROVIDED, INFORM TH IFICATION. OPERLY COORDINATE OR AT THE CONTRAC MENTS ND ELECTRICAL DRAV GS. N HEREIN AND ON THI URACY IS NOT GUAR/	CATE THAT THE REG HE ARCHITECT/ENGI E AND LAY OUT WOR CTOR'S EXPENSE VINGS ARE DIAGRAM E DRAWINGS IS AS / ANTEED.	UIRED CONDITIONS CANN NEER PRIOR TO INSTALLA K WILL REQUIRE CORREC IMATIC OR SCHEMATIC. E ACCURATE AS COULD BE S
 A Marcine Structure Present A Structure Structure	F	BEFORE SI D. THE ARCHI CONFLICTS 1.6 DEFINITIONS A. THE FOLLO 1. ARCH 2. CODE 3. MECH CON 4. ELEC DOCI 5. CON	UBMISSION OF PROPOSED METHOD ITECT/ENGINEER SHALL BE THE SOL S WITHIN CONTRACT DOCUMENTS. OWING DEFINITIONS SHALL APPLY TI HITECT/ENGINEER: ARCHITECT OR E E: APPLICABLE NATIONAL, STATE AN HANICAL: PLUMBING, HVAC, AND FIR TRACT DOCUMENTS CTRICAL: ELECTRICAL AND FIRE ALA UMENTS TRACTOR: ANY CONTRACTOR PERF	S OR MATERIALS. E JUDGE REGARDING INTERPRETATION IROUGHOUT THE CONTRACT DOCUM NGINEER D LOCAL CODES E PROTECTION WORK REQUIRED BY RM WORK REQUIRED BY THE CONTRA DRMING WORK REQUIRED BY THE CO	IONS OF IENTS: THE ACT DNTRACT	APPEARA MANUFAC REPLACEI D. THE ARCH SUBSTITU 1.12 SUBMITTALS A. SHOP DRA 1. OTHI STRI 2. WHE DRA 3. SUBI RETI	NCE AND ON THE GOVE TURER, DELIVERY TIME MENT PARTS MAY ALSO HITECT/ENGINEER SHAL ITION ITEMS. AWINGS, PRODUCT DAT INGENT THAN THE POLI SIN REQUIRED BY OTHE WINGS, PRODUCT DAT/ MITTALS DEEMED UNNI JENED INDICATING "NO	ERNING SPACE LIMITAL E REQUIREMENTS, AND O BE CONSIDERED. LL BE THE SOLE AND FI TA AND SAMPLES: PROJECT MANUAL SHAL LOWING PARAGRAPHS R SECTIONS OF THIS P A OR SAMPLES TO THE ECESSARY BY THE ARC D ACTION TAKEN"	TIONS. THE REPUTATIO D THE AVAILABILITY OF I INAL JUDGE AS TO THE LL BE ADHERED TO IF M C. PROJECT MANUAL, SUBN E ARCHITECT/ENGINEER SHA	IN OF THE REPAIR OR SUITABILITY OF ORE MIT SHOP FOR REVIEW. ALL BE	1.16 STRUCTURA A. IN CAS SUSPE EXCEE SHALL WITH B. DISTR ELECT A WAY DOCU PROVI ALLOV	AL COORDINATION ES WHERE THE CONTRACTOR DETE NDED OR FLOOR MOUNTED ELECTR D DESIGN LOADS INDICATED ON STI SUBMIT LOAD DATA TO ARCHITECT/ VORK. BUTE THE MAXIMUM LOAD HUNG FR RICAL, PLUMBING, DUCTWORK, PIPII THAT THE DESIGN SUPERIMPOSED //ENTS ARE NOT EXCEEDED. THE CC DE ADDITIONAL SUPPORT OR DISTR //ABLE LOAD DISTRIBUTION.	ERMINES THAT SUPERIMPOSED RICAL SYSTEM OR EQUIPMENT E RUCTURAL CONTRACT DOCUME /ENGINEER FOR REVIEW PRIOR ROM ANY STRUCTURAL MEMBER NG, ETC. OVER THE MEMBER'S T DEAD LOADS LISTED IN STRUCT DNTRACTOR SHALL COORDINAT IBUTION FRAMING AS REQUIRED	LOADS SUCH AS EXIST WHICH ENTS, CONTRACTOR TO PROCEEDING R FOR MECHANICAL, TRIBUTARY AREA IN TURAL CONTRACT TURAL CONTRACT THE LOADS AND D ACHIEVING THE	C. D. E. F. G. H.	OBTAIN EXACT I WORK TO ACTU EXAMINE THE G APPLICABLE DR UTILIZE ONLY AI MEASUREMENT LAYOUT AND CC OPERATION, MA LOCATE OUTLE PANELING, FUR INSTALL DOVES	LOCATIONS, MEASUR AL CONDITIONS. ENERAL CONSTRUCT AWINGS AND THE SP RCHITECTURAL DRAW S IN CALCULATIONS. OORDINATE WORK PR INTENANCE AND COE TS AND DEVICES MOL RING, TRIM, ETC. TS AND DEVICES WITH	EMENTS, LEVELS, E TION, MECHANICAL, I ECIFICATIONS. VINGS, STRUCTURA RIOR TO INSTALLATIO DES. VERIFY NON-IN JNTED ON FINISHED H VERTICAL EDGES	TC., AT THE SITE AND ADA ELECTRICAL, AND OTHER L DRAWINGS, AND SITE ON TO PROVIDE CLEARAN ITERFERENCE WITH OTHE SURFACES WITH REGARE OF PLATES PLUMB.
 A Normal Control Control	E	DOCL 6. INDIC 7. SELE 8. PRO 9. FURN 10. INST/ REQI 11. FINIS ROO'	UMENTS CATED: NOTED, SCHEDULED OR SPE CTED: SELECTED BY THE ARCHITEC VIDE: FURNISH, INSTALL, CONNECT / VISH: SUPPLY AND DELIVER TO THE ALL: INSTALL COMPLETE, PER CONTI JIREMENTS. CHED SPACES: SPACES OTHER THAM MS, FURRED SPACES, PIPE AND DUC	CIFIED T/ENGINEER. AND TESTED COMPLETE AND READY F SITE READY FOR INSTALLATION RACT DOCUMENTS AND MANUFACTUF MECHANICAL AND ELECTRICAL EQUIT T SHAFTS, UNHEATED SPACES IMMET	FOR USE RER'S JIPMENT DIATELY	4. A CC MAN 5. SUBI 6. UNLE AND ELEC IF RE 7. PRO INST	DMPLETED COPY OF TH UAL SHALL ACCOMPAN MITTALS SHALL BE NUM ESS OTHERWISE NOTE PRODUCT DATA FOR F CTRONICALLY. A HARD EQUESTED. DUCT DATA ARE ILLUS RUCTION BROCHURES	HE TRANSMITTAL FORM NY EACH SUBMITTAL. MBERED CONSECUTIVE D, SUBMIT ONE COPY E REVIEW. REVIEW COMP COPY OF THE ELECTR TRATIONS, STANDARD S, DIAGRAMS AND OTHE	I INCLUDED WITH THE P ELY. ELECTRONICALLY OF SH MENTS WILL BE RETURN RONIC SUBMITTAL WILL SCHEDULES, PERFORM ER INFORMATION FURNI	PROJECT HOP DRAWINGS NED BE RETURNED MANCE CHARTS, ISHED BY THE	C. Conn Limite Verti Witho Is res Memb Part 2 produc 2.1 performa	ECTIONS OF SYSTEMS DESIGNED BY D TO MECHANICAL, ELECTRICAL, PL CAL AND/OR HORIZONTAL LOADS ON UT GENERATING TORSION IN THE S PONSIBLE FOR FURNISHING AND IN ERS AS REQUIRED TO PREVENT TOF TS NCE, CAPACITIES AND CHARACTERIS	(CONTRACTOR'S ENGINEER SU UMBING LOADS ARE ASSUMED N THE BASE BUILDING STRUCTU UPPORTING STRUCTURAL MEM STALLING ALL SUPPLEMENTARY RSION ON THE BASE BUILDING S	ICH AS, BUT NOT TO IMPOSE IRAL MEMBERS BERS. CONTRACTOR Y BRACING STRUCTURE.	J. K.	SURFACE OF TH INSTALL RECEP SYMMETRICALL PLATE HORIZON COORDINATE LO TO DESTROY TH DEVICES ARE M FURNISHED BY	IE WALL, CEILING OR TACLES, SWITCHES, E Y AND, WHERE NECE ITAL. DCATIONS OF OUTLET IE AESTHETIC EFFEC OUNTED. COORDINA OTHER TRADES TO A	FLOOR WITHOUT PF ETC., ON WOOD TRII SSARY, INSTALL WIT TS AND DEVICES WI T OF THE SURFACE TE THE LOCATIONS VOID INTERFERENC	TH OTHER CONTRACTORS IN WHICH THE OUTLETS A OF ELECTRICAL ITEMS WI E.
 If a second biology of the product of	D	BELO TUNN 12. EXPO FINISI 13. CONC FROM CEILI 14. DRY I LOC <i>A</i> WETI 1.7 SYMBOLS A. ITEMS OF WITH THE	DW ROOF, SPACES ABOVE CEILINGS, NELS. DSED, INTERIOR INSTALLATIONS: EX SHED OCCUPIED SPACES AND MECH/ CEALED, INTERIOR INSTALLATIONS: M PHYSICAL CONTACT BY BUILDING (INGS AND IN DUCT SHAFTS. LOCATIONS: A LOCATION NOT NORM ATION CLASSIFIED AS DRY MAY BE TH NESS, AS IN THE CASE OF A BUILDIN EQUIPMENT AND MATERIALS ARE IN SYMBOLS ON THE PLANS.	UNEXCAVATED SPACES, CRAWL SPA POSED TO VIEW INDOORS. EXAMPLE NICAL EQUIPMENT ROOMS. CONCEALED FROM VIEW AND PROTE DCCUPANTS. EXAMPLES INCLUDE AB MALLY SUBJECT TO DAMPNESS OR WE EMPORARILY SUBJECT TO DAMPNESS G UNDER CONSTRUCTION.	ACES, AND ES INCLUDE ECTED BOVE ETNESS. A S OR DRDANCE	CON MATI 8. EACH CHAI EQU DRA REQ 9. SUBI REVI 10. THE THE SAM THE	TRACTOR, MANUFACTU ERIAL, PRODUCT OR S' H SUBMITTAL SHALL CL RACTERISTICS AND DE IPMENT ITEMS SHALL E WINGS OR SCHEDULES UIRED SHALL BE CERTI MITTALS SHALL INDICA IEW BY THE ARCHITECT ARCHITECT/ENGINEER CONTRACTOR'S SUBM PLES, BUT ONLY TO DE WORK AND THE INFOR	URER, SUPPLIER, OR D YSTEM FOR SOME POR LEARLY INDICATE PROF TAILS IN CONFORMANC BE MARKED WITH THE S S. CAPACITIES, DIMENS IFIED BY THE MANUFAC ITE MANUFACTURER'S T/ENGINEER. & SHALL REVIEW OR TA ITTALS SUCH AS SHOP ETERMINE CONFORMAN RMATION GIVEN IN THE	ISTRIBUTOR TO ILLUST TION OF THE WORK. POSED ITEMS, CAPACIT CE WITH CONTRACT DO SAME ITEM NUMBER AS SIONS AND SPECIAL FEA CTURER. DELIVERY TIME FOR TH KE OTHER APPROPRIAT DRAWINGS, PRODUCT NCE WITH THE DESIGN (CONTRACT DOCUMENT	RATE A IES, DCUMENTS. USED ON ATURES IE ITEM AFTER IE ACTION UPON DATA AND CONCEPT OF 'S.	A. SEE D REQUI SPECI 2.2 MATERIALS A. UNLES AND U DESIG 2.3 MATERIALS A. WHER INSTAI RESPO 2.4 QUANTITY (RAWINGS FOR EQUIPMENT SCHEDU REMENTS WHEN CAPACITIES AND C FICATIONS. S OTHERWISE SPECIFIED, ALL MATE NDAMAGED. MATERIALS AND EQUIF NS OF MANUFACTURERS REGULARL AND EQUIPMENT FURNISHED BY OT E MATERIALS AND EQUIPMENT ARE LED OR CONNECTED UNDER THIS C INSIBILITY TO VERIFY INSTALLATION OF SPECIFIED ITEMS REQUIRED	LES FOR EQUIPMENT PERFORM HARACTERISTICS ARE NOT INDI PMENT SHALL BE THE CURRENT Y ENGAGED IN THEIR PRODUCT HERS INDICATED AS FURNISHED BY O CONTRACT, IT SHALL BE THE CO I DETAILS AND REQUIREMENTS.	IANCE ICATED IN THE BE NEW, UNUSED AND STANDARD TION. OTHERS AND ONTRACTOR'S	L. M. N. O. P.	HEIGHTS OF OU ADJUST HEIGHT CONVECTORS, I MOUNTING HEIC INSTALL OUTLE 1. WALL SWI 2. RECEPTAC 3. COMMUNIC 4. PUSHBUTT THE MOUNTING CONTROLLERS, VARY DEPENDIN	TLETS ARE MEASURE TS AS NECESSARY TO JNIT HEATERS, ETC. GHTS SHALL BE IN CO TS AT THE HEIGHTS IN TCHES: 46 INCHES. CLE OUTLETS (GENER CATIONS OUTLETS: 1 TONS: 46 INCHES. HEIGHTS OF DISCON PUSHBUTTON STATION NG UPON LOCATION A	ED FROM FINISHED F CLEAR WALL-MOUN MPLIANCE WITH AD, NDICATED BELOW U AL): 18 INCHES. 8 INCHES. INECT SWITCHES, C ONS AND OTHER SIM	ELOOR TO CENTERLINE OF NTED CABINETS, FIN TUBE A REQUIREMENTS. NLESS OTHERWISE NOTE IRCUIT BREAKERS, MOTOF MILAR DEVICES AND EQUIF (IDUALLY OR GROUP MOU
 A RELINOUTS ANALYSE THOM A RESINCEMENT OF WORK RAVERSES AND AND ANALYSE THE RESINCE AND AND AND AND AND AND AND AND AND AND	с	1.8 ABBREVIATIONS A. REFER TO B. THE FOLLO 1. ADA: 2. ANSI: 3. ASHF ENGI 4. ASMF 5. ASTM TEST 6. FM:	S ABBREVIATIONS LIST ON THE DRAW OWING ABBREVIATIONS APPLY THRO AMERICANS WITH DISABILITIES ACT : AMERICAN NATIONAL STANDARDS RAE: AMERICAN SOCIETY OF HEATIN NEERS E: AMERICAN SOCIETY OF MECHANI M SPECIFICATION: STANDARD SPECI 'ING MATERIALS FACTORY MUTUAL ENGINEERING CO	INGS. UGHOUT THE CONTRACT DOCUMENT INSTITUTE G, REFRIGERATING AND AIR CONDITI CAL ENGINEERS FICATIONS OF THE AMERICAN SOCIET RPORATION	TS: IONING TY FOR	11. CON THE REVI 12. CON OMIS ARC 13. NO F DATA BY T ACC 14. THE AUT(DRA)	TRACTOR SHALL NOTE REQUIREMENTS OF TH IEW OF SHOP DRAWING TRACTOR SHALL NOT E SSIONS IN THE SHOP DI HITECT/ENGINEER'S RE PORTION OF THE WORK A OR SAMPLE SHALL BE HE ARCHITECT/ENGINE ORDANCE WITH REVIEV SUCCESSFUL CONTRA OCAD DWG ELECTRON WINGS.	BE RELIEVED OF RESP HE CONTRACT DOCUME GS, PRODUCT DATA OR BE RELIEVED FROM RE RAWINGS, PRODUCT D EVIEW OF THOSE DRAV K REQUIRING SUBMISSI E COMMENCED UNTIL T EER. SUCH PORTIONS WED SUBMITTALS. ACTOR/SUPPLIER MAY, IIC DRAWING FILES FOR	ONSIBILITY FOR ANY DE ENTS BY THE ARCHITEC SAMPLES. SPONSIBILITY FOR ERR DATA OR SAMPLES BY TH WINGS. ION OF A SHOP DRAWIN THE SUBMITTAL HAS BE OF THE WORK SHALL BI AT THEIR OPTION, OBTA R USE IN PREPARATION	AIN DXF OR OF SHOP	A. WHER REFEF SUCH INSTAI 3.1 GENERAL A. FABRI BE DO AN OR B. CHECI INSTAI	EVER IN THESE SPECIFICATIONS AN RED TO IN THE SINGULAR NUMBER; ARTICLES AS ARE SHOWN ON THE D LATION. ON CATION, ERECTION, AND INSTALLATI NE BY QUALIFIED PERSONNEL EXPE DERLY MANNER SO AS NOT TO HOLI & AREAS AND SURFACES WHERE ELE LED AND REPORT ANY UNSATISFAC	ARTICLE, DEVICE OR PIECE OF SUCH REFERENCE SHALL APPL PRAWINGS OR REQUIRED TO CO ON OF THE COMPLETE ELECTRI RIENCED IN SUCH WORK AND S D UP THE PROGRESS OF THE PI ECTRICAL EQUIPMENT OR MATE CTORY CONDITIONS BEFORE ST	EQUIPMENT IS LY TO AS MANY MPLETE THE ICAL SYSTEM SHALL SHALL PROCEED IN ROJECT. ERIALS ARE TO BE ARTING WORK.	Q. R. S. 3.7 PRO A.	FOR CONVENIER LEVERS, HANDL LOCATE INDIVID THE OPERATING FINISHED FLOOI OTHER TRADES IMPROPERLY LO AT THE CONTRA TECTION OF APP TAKE NECESSA APPLIANCES, M	NCE AND SAFETY, MO ES OR BUTTONS NO I UAL DEVICES OR PIE HANDLE, LEVER OR COORDINATE HEIG TO AVOID INTERFER OCATED DEVICES OR ACTOR'S EXPENSE IN ARATUS RY PRECAUTIONS TO ATERIAL, EQUIPMENT	DUNT EQUIPMENT W MORE THAN 72 INCH CES OF EQUIPMENT BUTTON IS LOCATE GHTS OF ELECTRICA ENCES. OUTLETS SHALL BE CLUDING NECESSAF	ITH THE CENTER OF OPER IES ABOVE THE FINISHED , UNLESS OTHERWISE SP D APPROXIMATELY 5 FEE IL ITEMS WITH WORK FURI RELOCATED BY THE CON RY PATCHING. CT APPARATUS, FIXTURES NS FROM DAMAGE.
 A THE WORK SHALL CONFORM TO ALL APPLICABLE SECTIONS OF CURRENTLY ADOPTED EDITIONS OF CURRENTLY ADOPTED TO THE ARCHITECTE INGINEER FOR REVIEW AND DAYS SHALL BE SUBMITTED TO THE ARCHITECTE INGINEER FOR REVIEW AND DAYS SHALL BE SUBMITTED TO THE ARCHITECTE INGINEER FOR REVIEW AND DAYS SHALL BE SUBMITTED TO THE ARCHITECTE INGINEER FOR REVIEW AND DAYS SHALL BE SUBMITTED TO THE ARCHITECTE INGINEER FOR REVIEW AND DAYS SHALL BE SUBMITTED TO THE ARCHITECTE INGINEER FOR REVIEW AND DAYS SHALL BE SUBMITTED TO THE ARCHITECTE INGINEER FOR REVIEW AND DAYS SHALL BE SUBMITTED TO THE ARCHITECTE INGINEER FOR REVIEW AND DAYS SHALL BE SUBMITTED TO THE ARCHITECTE INGINEER FOR REVIEW AND DAYS SHALL BE SUBMITTED TO THE ARCHITECTE INGINEER FOR REVIEW AND DAYS SHALL BE SUBMITTED TO THE ARCHITECTE INGINEER FOR REVIEW AND DAYS SHALL BE SUBMITTED TO THE ARCHITECTE INGINEER FOR REVIEW AND DAYS SHALL BE SUBMITTED TO THE ARCHITECTE INGINEER FOR REVIEW AND DAYS SHALL BE SUBMITTED TO THE ARCHITECTE INGINEER FOR REVIEW AND DAYS SHALL BE SUBMITTED TO THE ARCHITECTE INGINEER FOR REVIEW AND DAYS SHALL BE SUBMITTED TO THE ARCHITECTE INGINEER FOR REVIEW AND DAYS SHALL BE SUBMITTED TO THE ARCHITECTE INGINEER FOR REVIEW AND DAYS SHALL BE SUBMITTED TO THE ARCHITECTE INGINEER FOR REVIEW AND TO THE BUILDING. INTERNATIONAL ENERGY CONSTRUCTION A COMPLETE INDEX. CONTRACTOR MAY SUBMITTE INDEXTO THE ARCHITECTE INGINEER FOR REVIEW RIGHT OF COMPONENTS INSTALL DAY AND FOR INFORMATION FOR CONSTRUCTION WITH ARCHITES OF SOTIONES OF BOTHELECTRICAL COMPONENTS INSTALL DAY AND FOR INFORMATION OF SUCH MANTANIAN THE VICINITY AND AND AND SHALL BE SUBMITTED TO THE ARCHITES FOR INFORMATION OF SUCH MANTANIAN THE REPREVEE TO THE ARCHITES OF SUBMITAL OF COMPONENTS INSTALL DAY AND FOR INFORMATION OF SUCH MANTANIAN THE REPREVERT AND DAYS SHALL BE SUBMITTED TO THE ARCHITES OF SUBMITAL OF COMPONENTS INSTALL DAY AND FOR INFORMATION OF SUCH MANTANIAN THE SUBMITATION OF SUCH AND AND AND AND AND AND AND AND AND AND	в	7. IRI: IN 8. NEC: 9. NEM# 10. NFPA 11. UL OI 1.9 CODES A. THE WORI BE DONE I	NDUSTRIAL RISK INSURERS NATIONAL ELECTRICAL CODE, LATE A: NATIONAL ELECTRICAL MANUFAC A: NATIONAL FIRE PROTECTION ASS(R UNDERWRITERS: UNDERWRITERS A SHALL BE PERFORMED BY PERSON N A MANNER CONSISTENT WITH NOF	ST EDITION TURERS ASSOCIATION DCIATION LABORATORIES, INC. IS SKILLED IN THE TRADE INVOLVED A RMAL INDUSTRY STANDARDS.	AND SHALL	a. b. c. d. B. OPERATIO 1 PREI	REQUEST. THE USE OF THESE DI OF DRAWINGS AS REC ANY OTHER USE IS ST THE USER OF THESE I RESPONSIBILITY FOR ON AND MAINTENANCE PARE THREE (3) OPERA	RAWING FILES IS INTEN QUIRED BY THESE CON IRICTLY PROHIBITED B ELECTRONIC DRAWING THEIR ACCURACY AND MANUALS:	NDED SOLELY FOR THE ITRACT DOCUMENTS. Y COPYRIGHT LAWS. FILES ASSUMES FULL) SCALE.	PREPARATION	C. COMM COND D. INSTAI REQUI E. COMP F. UNLES FOR S	ENCEMENT OF WORK SIGNIFIES THE TIONS AS FIT AND PROPER FOR THE L EQUIPMENT AND SYSTEMS IN ACC REMENTS, OR RECOMMENDATIONS. Y WITH NECA 1. S OTHERWISE NOTED, MEASURE INI JSPENDED ITEMS AND TO CENTER (E CONTRACTOR'S ACCEPTANCE E EXECUTION OF THE ELECTRIC CORDANCE WITH MANUFACTUR DICATED MOUNTING HEIGHTS T DF UNIT FOR WALL-MOUNTING I	OF THE AL WORK. ER'S INSTRUCTIONS, TO BOTTOM OF UNIT TEMS.	B. 3.8 FIRE A. 3.9 WOF	FAILURE TO PRO ARCHITECT/ENO PARTICULAR PIE STOPPING APPLY FIRESTO ASSEMBLIES TO RK IN EXISTING B	DVIDE SUCH PROTEC GINEER SHALL BE SUF ECE(S) OF MATERIAL, PPING TO ELECTRICA MAINTAIN FIRE-RESI UILDINGS	TION TO THE SATISF FFICIENT CAUSE FO APPARATUS, EQUIF AL PENETRATIONS C ISTANCE RATING OF	FACTION OF THE R THE REJECTION OF ANY MENT, ETC., CONCERNED OF FIRE-RATED FLOOR ANI ASSEMBLY.
	A	B. THE WORK EDITIONS (1. INTEF 2. INTEF 3. INTEF 4. SAFE 5. OCCL STAN 6. NATIO 7. NATIO 8. NATIO 9. LIFE 10. FACT 11. UNDE	K SHALL CONFORM TO ALL APPLICAE OF THE FOLLOWING CODES, STAND/ RNATIONAL BUILDING CODE (IBC) RNATIONAL FIRE CODE (IFC) RNATIONAL ENERGY CONSERVATION TY AND HEALTH REGULATIONS FOR UPATIONAL SAFETY AND HEALTH ST, NDARDS AND ESTABLISHED FEDERAL ONAL ELECTRICAL CODE (NEC) ONAL ELECTRICAL SAFETY CODE (NE ONAL ELECTRICAL SAFETY CODE (NE ONAL FIRE PROTECTION ASSOCIATION SAFETY CODE (NFPA 101) "ORY MUTUAL GLOBAL ENGINEERING ERWRITERS' LABORATORIES, INC. (U	LE SECTIONS OF CURRENTLY ADOPT RDS, AND SPECIFICATIONS: I CODE (IECC) CONSTRUCTION ANDARDS (OSHA), NATIONAL CONSEN STANDARDS SSC) DN (NFPA) 6 (FMG) -) 3	TED	1. PRE FURI REVI SUB: REQ 2. MAN a. b.	NISHED. MANUALS SHA IEW AND DISTRIBUTION STANTIAL COMPLETION UIREMENTS MAY BE RE UAL SHALL INCLUDE, B A COMPLETE INDEX. (ARCHITECT/ENGINEEF IF DESIRED. NAMES, ADDRESSES A MANUFACTURER AND REPAIR PARTS FOR AI PAGE IN FRONT OF TH	ALL BE SUBMITTED TO N TO THE OWNER NOT I N OF THE PROJECT. MA EJECTED BY THE ARCH BUT SHALL NOT BE LIMI CONTRACTOR MAY SUI R FOR REVIEW PRIOR T AND TELEPHONE NUME D LOCAL REPRESENTAT LL ITEMS OF EQUIPMENTE HE BINDER.	THE ARCHITECT/ENGINI LESS THAN 30 DAYS PRI ANUALS NOT MEETING T ITECT/ENGINEER. TED TO, THE FOLLOWIN BMIT THE INDEX TO THE TO SUBMITTAL OF COMF BERS. THIS LIST SHALL IVE WHO STOCKS OR FI NT AND SHALL BE TYPEI	E & TO EER FOR IOR TO THE FOLLOWING IG: E PLETE MANUALS INCLUDE THE URNISHES D ON A SINGLE	G. HEADF INDICA POSSI H. EQUIP REPLA INSTAI MINIM I. RIGHT SLOPE J. MATEF PERPE INDICA 3.2 DELIVERY A	COOM MAINTENANCE: IF MOUNTING TED, ARRANGE AND INSTALL COMPO BLE HEADROOM CONSISTENT WITH MENT: INSTALL TO FACILITATE SERV CEMENT OF COMPONENTS OF BOTH LATIONS. CONNECT IN SUCH A WAY JM INTERFERENCE WITH OTHER ITE OF WAY: GIVE TO RACEWAYS AND I MALS AND COMPONENTS: INSTALL L NDICULAR TO OTHER BUILDING SYS TED. ND STORAGE OF MATERIALS	HEIGHTS OR OTHER LOCATION ONENTS AND EQUIPMENT TO PF THESE REQUIREMENTS. VICE, MAINTENANCE, AND REPA HELECTRICAL EQUIPMENT AND Y AS TO FACILITATE FUTURE DIS MS IN THE VICINITY. PIPING SYSTEMS INSTALLED AT LEVEL, PLUMB, AND PARALLEL A STEMS AND COMPONENTS, UNLE	I CRITERIA ARE NOT ROVIDE MAXIMUM IR OR OTHER NEARBY SCONNECTING WITH A REQUIRED AND ESS OTHERWISE	A. B. C. D.	EXECUTE WORK HEREIN, WITH A OCCUPANTS OF SCHEDULE WORK WRITTEN APPRO UTILITIES: 1. DO NOT IN REGARDIN 2. DO NOT DI FACILITIES NECESSAF BY THE OV FIRE ALARM SYS 1. AS A MININ THROUGH	IN THE EXISTING BU MINIMUM AMOUNT O THE BUILDING. IN ADVANCE WITH OVAL. TERRUPT UTILITIES W G THE TIME AND DUR SCONNECT UTILITIES ARE INSTALLED EXC RY FOR THE PERFORM VNER. STEM: MUM, MAINTAIN THE E OUT CONSTRUCTION. 11	ILDING, INDICATED (F INTERFERENCE W THE OWNER AND PI WITHOUT THE OWNE ATION OF SUCH INT TO EXISTING FACIL EPT FOR SHORT PE MANCE OF THE NEW	UN THE DRAWINGS OR SP ITH THE NORMAL ACTIVIT ROCEED ONLY WITH THE O R'S PRIOR WRITTEN APPR ERRUPTIONS. ITIES UNTIL NEW OR TEMP RIODS OF INTERRUPTION WORK AND WHICH ARE A F PROTECTION FOR ALL A

	1 2 3	4	5	6	7	8	9	10	11	12
	SECTION 26 0519 LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES	B. INSTAL C. PERFO	L PRODUCTS IN ACCORDANCE WITH M	ANUFACTURER'S INSTRUCTIONS.	F. INSTALI EACH E	L GROUNDING CONDUCTORS IN EMT CONDUCTORS IN EMT CONDUIT TO THE GROUND	ONDUIT UNLESS OTHERWISE INDICATED. BOND	D 2.2 CONDUIT - A. COMF	GENERAL REQUIREMENTS	I
	PART 1 GENERAL	D. INSTAL			GROUN G. MAKE G	IDING BUSHING. GROUNDING AND BONDING CONNECTIC	ONS USING SPECIFIED CONNECTORS.	B. PROV	IDE CONDUIT, FITTINGS, SUPPOF	RTS, AND ACCESSORIES REQUIRED FOR COM
	1.1 SECTION INCLUDES A. SINGLE CONDUCTOR BUILDING WIRE	ו. 19 2. Du	O NOT DAMAGE CONDUCTORS AND CABLES TO O NOT DAMAGE CONDUCTORS AND CA ECOMMENDED MAXIMUM PULLING TEN	BLES OR EXCEED MANUFACTURER'S SION AND SIDEWALL PRESSURE	1. RE CC	EMOVE APPROPRIATE AMOUNT OF CON DNNECTIONS WITHOUT CUTTING, NICK	NDUCTOR INSULATION FOR MAKING ING OR DAMAGING CONDUCTORS. DO NOT	C. PROV	IDE PRODUCTS LISTED, CLASSIF	FIED, AND LABELED AS SUITABLE FOR PURPO
	B. WIRING CONNECTORS.	3. U	SE SUITABLE WIRE PULLING LUBRICAN	T WHERE NECESSARY, EXCEPT AS BELOW:	RE 2. RE	EMOVE CONDUCTOR STRANDS TO FAC	ILLI A LE INSERTION INTO CONNECTOR. IEL, OR SIMILAR COATING AT THREADS,	D. MINIM	UM CONDUIT SIZE, UNLESS OTH	IERWISE INDICATED:
	C. ELECTRICAL TAPE.D. HEAT SHRINK TUBING.	a.	MANUFACTURER.		3. EX	UNTAGE POINTS, AND CONTACT SURFA	AUES. DNS USING MOLDS AND WELD MATERIAL	1. E 2. ⁻	KANCH CIRCUITS: 1/2-INCH TRA FELECOMMUNICATIONS PATHW/	ADE SIZE. AYS: 1 INCH TRADE SIZE.
	PART 2 PRODUCTS	F. NEATLY	Y TRAIN AND BUNDLE CONDUCTORS IN	SIDE BOXES, WIREWAYS, PANELBOARDS AND	RE A ME	ECOMMENDATIONS.		p E. Wher _{Is} Than	.E CONDUIT SIZE IS NOT INDICAT APPLICABLE MINIMUM SIZE REC	FED, SIZE TO COMPLY WITH NFPA 70 BUT NOT QUIREMENTS SPECIFIED.
	2.1 CONDUCTOR AND CABLE GENERAL REQUIREMENTS A PROVIDE PRODUCTS THAT COMPLY WITH REQUIREMENTS OF NEPA 70	OTHER G. GROUF	R EQUIPMENT ENCLOSURES. P OR OTHERWISE IDENTIFY NEUTRAL/G	ROUNDED CONDUCTORS WITH ASSOCIATED	4. Mi RE 5. CC	ECOMMENDED TORQUE SETTINGS. COMMENDED TORQUE SETTINGS.	CONNECTIONS USING MANUFACTURER'S	2.3 GALVANIZE	D STEEL ELECTRICAL METALLIC	; TUBING (EMT)
	 B. PROVIDE PRODUCTS LISTED, CLASSIFIED, AND LABELED AS SUITABLE FOR THE PURPOSE INTENDED 	UNGRC H. MAKE V	DUNDED CONDUCTORS INSIDE ENCLOS WIRING CONNECTIONS USING SPECIFIE	URES IN ACCORDANCE WITH NFPA 70.	RE	ECOMMENDED TOOLS AND DIES.		A. DESC COMP	LYING WITH ANSI C80.3 AND LIS	TED AND LABELED AS COMPLYING WITH UL 7
	C. UNLESS SPECIFICALLY INDICATED TO BE EXCLUDED, PROVIDE ALL REQUIRED CONDUIT,	1. M R/	IAKE SPLICES AND TAPS ONLY IN ACCE ACEWAYS OR MAKE SPLICES IN CONDU	SSIBLE BOXES. DO NOT PULL SPLICES INTO JIT BODIES.		END OF SEC	IION	B. COLO	ANUFACTURER: ALLIED TUBE /	AND CONDUIT.
	BOXES, WIRING, CONNECTORS, ETC. AS REQUIRED FOR A COMPLETE OPERATING SYSTEM. D. COMPLY WITH NEMA WC 70.	2. RI Ci	EMOVE APPROPRIATE AMOUNT OF CO ONNECTIONS WITHOUT CUTTING, NICK	NDUCTOR INSULATION FOR MAKING ING OR DAMAGING CONDUCTORS.		SECTION 26 HANGERS AND SU	0529 UPPORTS	2. (COLOR CODE: a. FIRE ALARM: RED	
	E. THERMOPLASTIC-INSULATED CONDUCTORS AND CABLES: LISTED AND LABELED AS COMPLYING WITH UL 83.	3. D 4. C	O NOT REMOVE CONDUCTOR STRANDS LEAN CONTACT SURFACES ON CONDU	S TO FACILITATE INSERTION INTO CONNECTOR. CTORS AND CONNECTORS TO SUITABLE	PART 1 GENERAL			C. FITTIN 1. [GS: DESCRIPTION: FITTINGS COMPL	_YING WITH NEMA FB 1 AND LISTED AND LABE
	F. THERMOSET-INSULATED CONDUCTORS AND CABLES: LISTED AND LABELED AS COMPLYING WITH UL 44	RI O	EMOVE CORROSION, OXIDES, AND OTH N PLATED CONNECTOR SURFACES.	IER CONTAMINATES. DO NOT USE WIRE BRUSH	1.1 SECTION INC	CLUDES RT AND ATTACHMENT REQUIREMENTS	AND COMPONENTS FOR FOUIPMENT. CONDUIT	- 2. I	COMPLYING WITH UL 514B. MATERIAL: USE STEEL, MALLEAF	BLE IRON, OR DIE CAST ZINC.
	G. CONDUCTOR MATERIAL:	I. INSULA METHO	ATE SPLICES AND TAPS THAT ARE MAD DDS SUITABLE FOR THE APPLICATION, \	E WITH UNINSULATED CONNECTORS USING WITH INSULATION AND MECHANICAL STRENGTH	CABLE,	BOXES, AND OTHER ELECTRICAL WOR	K.	, 3. (a	CONNECTORS AND COUPLINGS: a. DO NOT USE INDENTER TYF	USE COMPRESSION/GLAND OR SET-SCREW PE CONNECTORS AND COUPLINGS.
	1. PROVIDE COPPER CONDUCTORS ONLY. ALUMINUM CONDUCTORS ARE NOT ACCEPTABLE FOR THIS PROJECT. CONDUCTOR SIZES INDICATED ARE BASED ON COPPER	AT LEA 1. DI	AST EQUIVALENT TO UNSPLICED CONDI RY LOCATIONS: USE INSULATING COV	JCTORS. ERS SPECIFICALLY DESIGNED FOR THE	PART 2 PRODUCT 2.1 SUPPORT AN	S		2.4 ACCESSOF		
	2. COPPER CONDUCTORS: SOFT DRAWN ANNEALED, 98 PERCENT CONDUCTIVITY, UNCOATED COPPER CONDUCTORS COMPLYING WITH ASTM B3, ASTM B8, OR ASTM	CI J. INSULA	ONNECTORS OR HEAT SHRINK TUBING	NG VINYL INSULATING ELECTRICAL TAPE.	A. GENER			A. PULL NOT L	ESS THAN 200 LBF.	STER TAPE WITH AVERAGE BREAKING STREE
	B787/B787M UNLESS OTHERWISE INDICATED. 3. TINNED COPPER CONDUCTORS: COMPLY WITH ASTM B33.	K. FIELD-A	APPLIED COLOR CODING: WHERE VINY	L COLOR CODING ELECTRICAL TAPE IS USED IN	I. CC ST	IRINGENT. NEPA 70	REQUIREMENTS DIFFER, COMPLET WITH WOST	PART 3 EXECUT	iON	
	H. MINIMUM CONDUCTOR SIZE:	CODING	G", APPLY HALF OVERLAPPING TURNS ION CONDUCTORS ARE ACCESSIBLE.	OF TAPE AT EACH TERMINATION AND AT EACH	b. 2 DE		AVING JURISDICTION.	A. INSTA	LL PRODUCTS IN ACCORDANCE	WITH MANUFACTURER'S INSTRUCTIONS.
	 2. CONTROL CIRCUITS: 14 AWG. 	L. INSTAL ELEME	L FIRESTOPPING TO PRESERVE FIRE F	ESISTANCE RATING OF PARTITIONS AND OTHER	Z. Fr A(EL	CCESSORIES, AND HARDWARE AS NEC CCESSORIES, AND HARDWARE AS NEC ECTRICAL WORK.	ESSARY FOR COMPLETE INSTALLATION OF	B. INSTA C. COND	LL CONDUIT IN ACCORDANCE W	/ITH NECA 1.
	 CONDUCTOR COLOR CODING: 1. COLOR CODE CONDUCTORS AS INDICATED UNLESS OTHERWISE REQUIRED BY THE 	M. UNLES	S SPECIFICALLY INDICATED TO BE EXC		3. PF IN	ROVIDE PRODUCTS LISTED, CLASSIFIEL TENDED, WHERE APPLICABLE.	D, AND LABELED AS SUITABLE FOR PURPOSE	1. l	JNLESS DIMENSIONED, CONDUIT	T ROUTING INDICATED IS DIAGRAMMATIC.
	AUTHORITY HAVING JURISDICTION. MAINTAIN CONSISTENT COLOR CODING THROUGHOUT PROJECT.	COMPL	LETE OPERATING SYSTEM.	TORNISHED BY UTHERS, AS REQUIRED FOR A	4. W IN	HERE SUPPORT AND ATTACHMENT CO DICATED, SELECT IN ACCORDANCE WI	MPONENT TYPES AND SIZES ARE NOT TH MANUFACTURER'S APPLICATION CRITERIA	2. E 3. (EXACT ROUTING REQUIRED.	
	 COLOR CODING METHOD: INTEGRALLY COLORED INSULATION. a. CONDUCTORS SIZE 4 AWG AND LARGER MAY HAVE BLACK INSULATION COLOR 		END OF SEC	HON	AS EC	S REQUIRED FOR LOAD TO BE SUPPOR QUIPMENT OPERATION, AND SHOCK LO	TED. INCLUDE CONSIDERATION FOR VIBRATION DADS WHERE APPLICABLE.	N, 4. (CONDUITS IN THE FOLLOWING AI	REAS MAY BE EXPOSED, UNLESS OTHERWIS
	CODED USING VINYL COLOR CODING ELECTRICAL TAPE. 3. COLOR CODE:		SECTION 26 GROUNDING AND	0526 BONDING	5. DC AN	D NOT USE PRODUCTS FOR APPLICATION ND PRODUCT LISTING.	ONS OTHER THAN AS PERMITTED BY NFPA 70	5. l	a. ELECTRICAL ROOMS.). DO NOT ROUTE EXPOSED CONDUITS:
	a. 480Y/277 V, 3 PHASE, 4 WIRE SYSTEM: 1) PHASE A: BROWN.	PART 1 GENERAL	-		6. D0 SL	D NOT USE WIRE, CHAIN, PERFORATED JPPORTS UNLESS SPECIFICALLY INDIC) PIPE STRAP, OR WOOD FOR PERMANENT ATED OR PERMITTED.	e. A	a. ACROSS FLOORS. ACROSS ROOFS	,
	 PHASE B: ORANGE. PHASE C: YELLOW. 	1.1 SECTION INC			7. ST EN	TEEL COMPONENTS: USE CORROSION- NVIRONMENT WHERE INSTALLED.	-RESISTANT MATERIALS SUITABLE FOR	(ACROSS TOP OF PARAPET ' ACROSS BUILDING EXTERI	WALLS. OR SURFACES
	4) NEUTRAL/GROUNDED: GRAY.b. 208Y/120 V, 3 PHASE, 4 WIRE SYSTEM:	B. CONDU	JCTORS FOR GROUNDING AND BONDIN	G.	a. b.	ZINC-PLATED STEEL: ELECTROPLA GALVANIZED STEEL: HOT-DIP GALV	ANIZED AFTER FABRICATION IN ACCORDANCE	6. <i>1</i> 7		N ADEQUATE HEADROOM, CLEARANCES, AND
	 PHASE A: BLACK. PHASE B: RED. 	C. CONNE	ECTORS FOR GROUNDING AND BONDIN	G.	B. CONDU	IT AND CABLE SUPPORTS: STRAPS AN	ID CLAMPS SUITABLE FOR CONDUIT OR CABLE	8. /	SENDS BETWEEN PULL POINTS. ARRANGE CONDUIT TO PREVEN	IT MOISTURE TRAPS. PROVIDE DRAIN FITTING
	 PHASE C: BLUE. NEUTRAL/GROUNDED: WHITE. 	2.1 GROUNDING	G AND BONDING REQUIREMENTS		10 BE S	SUPPORTED. DNDUIT STRAPS: ONE-HOLE OR TWO-H	HOLE TYPE; STEEL.	F 9. 1	'OINTS AND AT SEALING FITTING MAINTAIN MINIMUM CLEARANCE	3S WHERE MOISTURE MAY COLLECT. OF 12 INCHES BETWEEN CONDUITS AND HO
_	c. EQUIPMENT GROUND, ALL SYSTEMS: GREEN.d. FOR CONTROL CIRCUITS, COMPLY WITH MANUFACTURER'S RECOMMENDED	A. DO NO PRODU	T USE PRODUCTS FOR APPLICATIONS (JCT LISTING.	OTHER THAN AS PERMITTED BY NFPA 70 AND	2. CO C. OUTLET	DNDUIT CLAMPS: BOLTED TYPE UNLES FBOX SUPPORTS: HANGERS AND BRA	SS OTHERWISE INDICATED. CKETS SUITABLE FOR BOXES TO BE	10. (3URFACES. GROUP PARALLEL CONDUITS IN	SAME AREA ON COMMON RACK.
	COLOR CODE. 2.2 SINGLE CONDUCTOR BUILDING WIRE	B. UNLES CONDU	S SPECIFICALLY INDICATED TO BE EXC JCTORS, CONNECTORS, CONDUIT, BOX	LUDED, PROVIDE ALL REQUIRED COMPONENTS, ES, FITTINGS, SUPPORTS, ACCESSORIES, ETC.	SUPPOI D. METAL	RTED. CHANNEL/STRUT FRAMING SYSTEMS:		D. COND 1. S	UIT SUPPORT: SECURE AND SUPPORT CONDUI ^T	ITS IN ACCORDANCE WITH NFPA 70 USING SU
	A. DESCRIPTION: SINGLE CONDUCTOR INSULATED WIRE.	AS NEC C. WHERE	CESSARY FOR A COMPLETE GROUNDIN E CONDUCTOR SIZE IS NOT INDICATED,	IG AND BONDING SYSTEM. SIZE TO COMPLY WITH NFPA 70 BUT NOT LESS	1. De An	ESCRIPTION: FACTORY-FABRICATED, C ND ASSOCIATED FITTINGS, ACCESSORI	CONTINUOUS-SLOT, METAL CHANNEL/STRUT IES, AND HARDWARE REQUIRED FOR FIELD		3UPPORTS AND METHODS APPR SECTION 26 0529.	OVED BY AUTHORITIES HAVING JURISDICTIO
	FEEDERS AND BRANCH CIRCUITS: SIZE 10 AWG AND SMALLER: SOLID	THAN A D. BONDIN	APPLICABLE MINIMUM SIZE REQUIREME NG AND EQUIPMENT GROUNDING:	ENTS SPECIFIED.	AS 2. CC	SSEMBLY OF SUPPORTS. OMPLY WITH MFMA-4.		2. F	'ROVIDE INDEPENDENT SUPPOR SUPPORT FROM PIPING, DUCTW	RT FROM BUILDING STRUCTURE. DO NOT PRO IORK, OR OTHER SYSTEMS.
	C. INSULATION VOLTAGE RATING: 600 V.	1. PI	ROVIDE BONDING FOR EQUIPMENT GR USSES, METALLIC EQUIPMENT ENCLOS	OUNDING CONDUCTORS, EQUIPMENT GROUND GURES, METALLIC RACEWAYS AND BOXES,	3. Cł a.	HANNEL MATERIAL: INDOOR DRY LOCATIONS: USE PAIN	NTED STEEL, ZINC-PLATED STEEL, OR	3.	NSTALLATION ABOVE SUSPENDE CEILING SUPPORT SYSTEM. DO N	ED CEILINGS: DO NOT PROVIDE SUPPORT FR NOT PROVIDE SUPPORT FROM CEILING GRID
	 D. INSULATION: 1. COPPER BUILDING WIRE: TYPE THHN/THWN, THHN/THWN-2, OR XHHW-2, EXCEPT AS 	DI Ci	EVICE GROUNDING TERMINALS, AND O ONDUCTIVE MATERIALS ENCLOSING EI	THER NORMALLY NON-CURRENT-CARRYING LECTRICAL CONDUCTORS/EQUIPMENT OR	E. HANGE	GALVANIZED STEEL. R RODS: THREADED, ZINC-PLATED STE	EEL UNLESS OTHERWISE INDICATED.	4. l	JSE OF SPRING STEEL CONDUIT	iles. CLIPS FOR SUPPORT OF CONDUITS IS PERM
	INDICATED BELOW. 2.3 WIRING CONNECTORS	LI 2. PI	IKELY TO BECOME ENERGIZED AS INDI ROVIDE INSULATED EQUIPMENT GROU	CATED AND IN ACCORDANCE WITH NFPA 70. NDING CONDUCTOR IN EACH FEEDER AND	F. ANCHO 1. UN	RS AND FASTENERS: NI ESS OTHERWISE INDICATED AND WH	IERE NOT OTHERWISE RESTRICTED. USE	á	a. SUPPORT OF ELECTRICAL CONCEALED ABOVE ACCES	METALLIC TUBING (EMT) 1-1/2 INCH TRADE SIZ
	A. DESCRIPTION: WIRING CONNECTORS APPROPRIATE FOR THE APPLICATION, SUITABLE FOR USE WITH THE CONDUCTORS TO BE CONNECTED, AND LISTED AS COMPLYING WITH UI	BI	RANCH CIRCUIT RACEWAY. DO NOT US ONDUCTOR.	E RACEWAYS AS SOLE EQUIPMENT GROUNDING	AN 2. CC	NCHOR AND FASTENER TYPES INDICAT ONCRETE: USE PRESET CONCRETE IN	ED FOR SPECIFIED APPLICATIONS. SERTS, EXPANSION ANCHORS, OR SCREW	5. (CONDUITS IS PERMITTED ONLY AS FOLLOWS
	486A-486B OR UL 486C AS APPLICABLE.	S. W SI W	IZE OF EQUIPMENT GROUNDING COND	UCTOR PROPORTIONALLY IN ACCORDANCE	AN 3. SC	NCHORS. DLID OR GROUT-FILLED MASONRY: USI	E EXPANSION ANCHORS OR SCREW ANCHORS.		WHERE SPECIFICALLY INDIC	CATED OR PERMITTED.
	 COPPER CONDUCTORS SIZE 8 AWG AND SMALLER: USE TWIST-ON INSULATED SPRING CONNECTORS. 	4. UI BI	NLESS OTHERWISE INDICATED, CONNE RANCH CIRCUIT EQUIPMENT GROUNDI	CT WIRING DEVICE GROUNDING TERMINAL TO	4. HC 5. HC	DLLOW MASONRY: USE TOGGLE BOLTS DLLOW STUD WALLS: USE TOGGLE BO	S OR EXPANSION ANCHORS. LTS.	E. CONN 1. l	JSE SUITABLE ADAPTERS WHER	₹ REQUIRED TO TRANSITION FROM ONE TYP
	C. WIRING CONNECTORS FOR TERMINATIONS:	B(5. TI	ONDING JUMPER. ERMINATE BRANCH CIRCUIT EQUIPMEN	IT GROUNDING CONDUCTORS ON SOLIDLY	6. ST 7. SH	TEEL: USE BEAM CLAMPS, MACHINE BO HEET METAL: USE SHEET METAL SCRE	DLTS, OR WELDED THREADED STUDS. WS.	2. F	PROVIDE INSULATED BUSHINGS	ON BOX CONNECTORS 1-INCH AND LARGER, ACCESSIBLE CELLING, AND ON CONDUITS US
	 PROVIDE TERMINAL LOGS FOR CONNECTING CONDUCTORS TO EQUIPMENT FURNISHED WITH TERMINATIONS DESIGNED FOR TERMINAL LUGS. WHERE OVER SIZED CONDUCTORS ARE LARGER THAN THE FOLUEMENT TERMINATIONS 	B((G	ONDED EQUIPMENT GROUND BUS ONL GROUNDED) OR ISOLATED/INSULATED (Y. DO NOT TERMINATE ON NEUTRAL GROUND BUS.	8. W	OOD: USE WOOD SCREWS.		3.	ELECOMMUNICATIONS PATHWA	AYS. IONS TO PROVIDE MECHANICAL STRENGTH A
	CAN ACCOMMODATE, PROVIDE CONNECTORS SUITABLE FOR REDUCING TO APPROPRIATE SIZE, BUT NOT LESS THAN REQUIRED FOR THE RATING OF THE	6. Pl Pl	ROVIDE BONDING JUMPER ACROSS EX ROVIDED TO ACCOMMODATE CONDUIT	PANSION OR EXPANSION/DEFLECTION FITTINGS	3.1 INSTALLATIO	n N		F PENE	LECTRICAL CONTINUITY.	
	OVERCURRENT PROTECTIVE DEVICE.	7. PI 2.2 GROUNDING	KOVIDE BONDING FOR METAL BUILDIN GAND BONDING COMPONENTS	FRAME.	A. INSTALI	L PRODUCTS IN ACCORDANCE WITH M	ANUFACTURER'S INSTRUCTIONS.	1. [JO NOT PENETRATE OR OTHERV NCLUDING FOOTINGS AND GRAF	WISE NOTCH OR CUT STRUCTURAL MEMBERS DE BEAMS, WITHOUT APPROVAL OF STRUCTU
	FOR USE WITH CONDUCTORS WITHOUT STRIPPING INSULATION.	A. GENER 1. PI	RAL REQUIREMENTS: ROVIDE PRODUCTS LISTED. CLASSIFIE	D. AND LABELED AS SUITABLE FOR THE	C. PROVID		DING STRUCTURE. DO NOT PROVIDE SUPPORT	. E 2. I	INGINEER. MAKE PENETRATIONS PERPEND	ICULAR TO SURFACES UNLESS OTHERWISE I
	SPRING CONNECTORS.	2. PI	URPOSE INTENDED. ROVIDE PRODUCTS LISTED AND LABEL	ED AS COMPLYING WITH UL 467 WHERE	D. UNLESS	S SPECIFICALLY INDICATED OR APPROV	VIG. VED BY ARCHITECT/ENGINEER, DO NOT	3. I	NSTALL FIRESTOPPING TO PRES OTHER ELEMENTS.	SERVE FIRE RESISTANCE RATING OF PARTITI
	APPLICATIONS AND 302 DEGREES F FOR HIGH TEMPERATURE APPLICATIONS; PRE-FILLED WITH SEALANT AND LISTED AS COMPLYING WITH UL 486D FOR DAMP AND WET LOCATIONS.	Al B. CONDU	PPLICABLE. JCTORS FOR GROUNDING AND BONDIN	G. IN ADDITION TO REQUIREMENTS OF SECTION	E. UNLESS	S SPECIFICALLY INDICATED OR APPRO	VED BY ARCHITECT/ENGINEER, DO NOT	G. TELEC AND V	COMMUNICATIONS RACEWAYS: 1 NITH A MAXIMUM OF TWO 90-DE(INSTALL RACEWAYS IN MAXIMUM LENGTHS C GREE BENDS OR EQUIVALENT BETWEEN BOX
1	2.4 ACCESSORIES	26 0526 1. U	6: SE INSULATED COPPER CONDUCTORS	UNLESS OTHERWISE INDICATED.	PROVID F. DO NOT	DE SUPPORT FROM ROOF DECK. I PENETRATE OR OTHERWISE NOTCH (OR CUT STRUCTURAL MEMBERS WITHOUT	POINT COMF	S. SEPARATE LENGTHS WITH PI	ULL OR JUNCTION BOXES WHERE NECESSAR S. LOCATE JUNCTION BOXES IN STRAIGHT CO
	A. ELECTRICAL TAPE: 1. VINYL COLOR CODING ELECTRICAL TAPE: INTEGRALLY COLORED TO MATCH COLOR 2005 NUDIATED LIGTED AD COMPLYING WITH HIS FED MINIMUM THOMATED COLOR	C. CONNE 1 DI	ECTORS FOR GROUNDING AND BONDIN	G: IATE FOR THE APPLICATION AND SUITABLE FOR	APPRO' G. EQUIPM	VAL OF STRUCTURAL ENGINEER. IENT SUPPORT AND ATTACHMENT:		RUNS TELEC TRAN	DO NOT INSTALL JUNCTION BO COMMUNICATIONS RACEWAYS A SECOMMERS DANEL BOARDS ANI	AT LEAST 5 INCHES AWAY FROM LIGHT FIXTUF
	CODE INDICATED; LISTED AS COMPLYING WITH UL 510; MINIMUM THICKNESS OF 7 MIL; RESISTANT TO ABRASION, CORROSION, AND SUNLIGHT; SUITABLE FOR CONTINUOUS TEMPERATURE ENVIRONMENT UP TO 221 DECREES E	TI W	HE CONDUCTORS AND ITEMS TO BE CO	DNNECTED; LISTED AND LABELED AS COMPLYING	1. US CH	SE METAL, FABRICATED SUPPORTS OR HANNEL/STRUT TO SUPPORT EQUIPME	SUPPORTS ASSEMBLED FROM METAL NT AS REQUIRED.	TELEC	COMMUNICATIONS RACEWAYS A	AT LEAST 24 INCHES AWAY FROM ELECTRICAL S.
	 VINYL INSULATING ELECTRICAL TAPE: COMPLYING WITH ASTM D3005 AND LISTED AS COMPLYING WITH UL 510: MINIMUM THICKNESS OF 7 MIL: RESISTANT TO ABRASION 	2. UI HI	NLESS OTHERWISE INDICATED, USE EX IGH-PRESSURE COMPRESSION CONEC	OTHERMIC WELDED CONNECTIONS OR TIONS FOR UNDERGROUND, CONCEALED AND	2. US SL	SE METAL CHANNEL (STRUT) SECURED JRFACE-MOUNTED ON WALLS WHEN W	TO STUDS TO SUPPORT EQUIPMENT VALL STRENGTH IS NOT SUFFICIENT TO RESIST	H. COND	UIT MOVEMENT PROVISIONS: W	VHERE CONDUITS ARE SUBJECT TO MOVEMEN
	CORROSION, AND SUNLIGHT; CONFORMABLE FOR APPLICATION DOWN TO 0 DEGREES F AND SUITABLE FOR CONTINUOUS TEMPERATURE ENVIRONMENT UP TO 221 DEGREES F.	0 3. UI	THER INACCESSIBLE CONNECTIONS. NLESS OTHERWISE INDICATED, USE CO	DMPRESSION CONNECTORS FOR ACCESSIBLE	PL H. SECURI	JLL-OUT. E FASTENERS IN ACCORDANCE WITH N	ANUFACTURER'S RECOMMENDED TORQUE	ENCL TO:	SED CONDUCTORS OR CONNEC	CTED EQUIPMENT. THIS INCLUDES, BUT IS NO
	B. HEAT SHRINK TUBING: HEAVY-WALL, SPLIT-RESISTANT, WITH FACTORY-APPLIED ADHESIVE; RATED 600 V; SUITABLE FOR DIRECT BURIAL APPLICATIONS; LISTED AS COMPLYING WITH UL	Ci LA	ONNECTIONS. FOR #6 AWG AND SMAL ARGER, USE TWO-HOLE LUGS.	LER, USE ONE-HOLE LUGS. FOR #4 AWG AND	I. REMOV	GS. E TEMPORARY SUPPORTS.		1. (NHERE CONDUITS CROSS STRUC	CTURAL JOINTS INTENDED FOR EXPANSION,
	486D.	a.	EXCEPTIONS: USE EXOTHERMIC WELDED C COMPRESSION CONNECTION	ONNECTIONS OR HIGH-PRESSURE	J. IDENTIF	TY INDEPENDENT ELECTRICAL COMPON	NENT SUPPORT WIRES ABOVE ACCESSIBLE	2. V I. COND	VHERE CONDUITS ARE SUBJECT	T TO EARTH MOVEMENT BY SETTLEMENT OR
	PART 3 EXECUTION 3.1 INSTALLATION	<i>4</i> M	FRAME.		WIRES	IN ACCORDANCE WITH NFPA 70.		1.	WHERE CONDUITS CROSS BARR TEMPERATURE DIFFERENTIAL, U	(IERS BETWEEN AREAS OF POTENTIAL SUBST JSE FOAM CONDUIT SEALANT, JUNCTION BO>
	A. CIRCUITING REQUIREMENTS:1. WHEN CIRCUIT DESTINATION IS INDICATED WITHOUT SPECIFIC ROUTING, DETERMINE	т. M а. h	BURNDY: WWW.BURNDY.COM; HY	GROUND SYSTEM		END OF SEC		(CONDULET AT ACCESSIBLE PC THIS INCLUDES, BUT IS NOT LIMI)INT NEAR PENETRATION TO PREVENT COND ITED TO:
	EXACT ROUTING REQUIRED. 2. ARRANGE BRANCH CIRCUITING TO MINIMIZE SPLICES.	D. PART 3 EXECUTIO	ON			SECTION 26 0 CONDUIT	533.13 T	6	WHERE CONDUITS PASS FR CONDITIONED INTERIOR SF	ROM UNCONDITIONED INTERIOR SPACES INTO PACES.
tiel	3. MAINTAIN SEPARATION OF CLASS 1, CLASS 2, AND CLASS 3 REMOTE-CONTROL, SIGNALING, AND POWER-LIMITED CIRCUITS IN ACCORDANCE WITH NFPA 70.	3.1 INSTALLATIO			PART 1 GENERAL			J. PROV AND C	DE PULL STRING IN EACH EMPT CABLES ARE TO BE INSTALLED B	Y CONDUIT AND IN CONDUITS WHERE CONDU 3Y OTHERS. LEAVE MINIMUM SLACK OF 12 INC
vg amont	4. MAINTAIN SEPARATION OF WIRING FOR EMERGENCY SYSTEMS IN ACCORDANCE WITH NFPA 70.	A. INSTAL B. PERFO	RM WORK IN ACCORDANCE WITH M	A 1 (GENERAL WORKMANSHIP).	1.1 SECTION INC	CLUDES	JBING (EMT).	EACH K. PROV	END. IDE GROUNDING AND BONDING;	; SEE SECTION 26 0526.
14E402.dv	5. CIRCUITING ADJUSTMENTS: UNLESS OTHERWISE INDICATED, WHEN BRANCH CIRCUITS ARE INDICATED AS SEPARATE, COMBINING THEM TOGETHER IN A SINGLE RACEWAY IS DEDMITTED LINDER THE FOLLOWING CONDITIONS:	C. INSTAL PERPE	L EACH BONDING CONDUCTOR IN A DI	RECT ROUTE, AND PARALLEL OR IR SURFACES, WITHOUT INTERFERING WITH	B. ACCES	SORIES.	、 /		END	OF SECTION
2024100	a. PROVIDE NO MORE THAN 6 #12 AWG CURRENT-CARRYING CONDUCTORS IN 1/2	OTHER D. INSTAL	SYSTEMS OR EQUIPMENT.	CONDUCTORS WITH A MINIMUM BENDING		S PLICATIONS			SECT	ION 26 0533.16
4:41pm	CONDUIT. 6. COMMON NEUTRALS: UNLESS OTHERWISE INDICATED. SHARING OF	RADIUS E. INSTAL	S OF 12 INCHES. L INTERIOR GROUNDING CONDUCTOR	S WITH A MINIMUM BENDING RADIUS OF 8	A. DO NOT	USE CONDUIT AND ASSOCIATED FITTI	INGS FOR APPLICATIONS OTHER THAN AS	PART 1 GENERA	٨L	DUVES
y 08, 202	NEUTRAL/GROUNDED CONDUCTORS AMONG SINGLE PHASE BRANCH CIRCUITS OF DIFFERENT PHASES INSTALLED IN THE SAME RACEWAY IS NOT PERMITTED. PROVIDE	INCHES	S.		B. DRY LO	CATIONS:		1.1 SECTION IN		
	DEDICATED NEUTRAL/GROUNDED CONDUCTOR FOR EACH INDIVIDUAL BRANCH CIRCUIT.			· · · · · · · · · · · · · · · · · · ·	1. CC 2. EX	UNCEALED: USE ELECTRICAL METALLIN (POSED: USE ELECTRICAL METALLIC T I	u iusing. UBING. I	A. OUTLI AND F	1 AND DEVICE BOXES UP TO 10 <u>ULL BOXES.</u>	U CUBIC INCHES, INCLUDING THOSE USED AS
	1 2 3	4	5	6	7	8	9	10	11	12

D

	1	2	3		4 5	6	7		8	9	1	0	11	12	
	10.	LOCATE JUNCTION AND PULL BOXES AS	INDICATED, AS REQUIRED TO FACILI		2.3 WALL PUSHBUTTON STATIONS			3. L	OCATE SENSORS SO THAT COVERAG	GE DOES NOT EXTEND BEYOND THE ARE	EA	A. COORI		S PROVIDED UNDER SECTION 26 0533.16	AS
	11.	BENDS BETWEEN PULLING POINTS IN AC LOCATE JUNCTION AND PULL BOXES IN	CORDANCE WITH SECTION 26 0533. THE FOLLOWING AREAS, UNLESS OT	13. THERWISE	A. GENERAL REQUIREMENTS: LOW VOLTAGE, QU DRAWINGS, COMPATIBLE WITH LOAD TYPES B LABELED DUSURITIONS	JIET OPERATING, TYPES AS INDICATED C EING CONTROLLED. PROVIDE FACTORY	N ,	J. UNLES	S OTHERWISE INDICATED, INSTALL P ACCESSIBI E CEILING NEAR THE SEI	POWER PACKS FOR LIGHTING CONTROL	DEVICES	REQUIE 1. P	RED FOR INSTALLATION OF WIRING D PROVIDE MINIMUM OF 24 INCHES HOR	EVICES PROVIDED UNDER THIS SECTION. IZONTAL SEPARATION BETWEEN FLUSH W	MOUNTED
L	1	INDICATED OR APPROVED BY THE ARCH a. CONCEALED ABOVE ACCESSIBLE S b. MITHIN LODGE IN UNENNOLED APP	IITECT: SUSPENDED CEILINGS.		B. PROVIDE DEVICES AND PLATES WITH FINISHE	S MATCHING WIRING DEVICES.		K. WHER	E INDICATED, INSTALL SEPARATE CO ROL INTERFACE WITH LIGHTING CONT	MPATIBLE WALL SWITCHES FOR MANUA TROL DEVICES OR ASSOCIATED POWER	AL R PACKS.	2. V N	WHERE MULTIPLE DEVICES ARE INSTA MOUNTING HEIGHT, GANG DEVICES TO	LLED AT THE SAME LOCATION AND AT TH JGETHER UNDER A COMMON WALL PLATE	IE SAME E.
		 WITHIN JUISTS IN UNFINISHED ARE C. ELECTRICAL ROOMS. ELEDRORTS: 	AS WITH NO CEILING.		2.4 OCCUPANCY SENSORS A. ALL OCCUPANCY SENSORS:			L. UNLES AREAS	S OTHERWISE INDICATED, INSTALL L S WITH EXPOSED STRUCTURE AND AB	OW VOLTAGE CONTROL CABLING IN CO BOVE INACCESSIBLE CEILINGS.	onduit in	B. INSTAL	LL WIRING DEVICES IN ACCORDANCE	WITH MANUFACTURER'S INSTRUCTIONS.	F
	1.	SECURE AND SUPPORT BOXES IN ACCO USING SUITABLE SUPPORTS AND METH	RDANCE WITH NFPA 70 AND SECTION	N 26 0529 HAVING	a. OFFICES: DUAL TECHNOLOGY.	SOR PER AREA, UNLESS INDICATED		M. LOW V CONCE	OLTAGE CONTROL CABLING MAY BE EALED ABOVE AN ACCESSIBLE CEILIN	INSTALLED WITHOUT CONDUIT WHERE NG. FOR WALL-MOUNTED DEVICES, PRO	OVIDE	D WHER	E FERMANENT BARRIER BETWEEN G EEN ADJACENT DEVICES EXCEEDS 30	0 V. CES LISING PIGTAILS NOT LESS THAN 6 IN	
	2.	JURISDICTION. PROVIDE INDEPENDENT SUPPORT FROM METAL BOYES (OTHER THAN BOYES US		R CAST	b. CORRIDORS: PASSIVE INFRARED.c. OTHER AREAS: AS RECOMMENDED	BY MANUFACTURER.		PARAL J-HOO	LEL OR PERPENDICULAR TO BUILDIN K CABLE HANGERS OR PLENUM RATE	IG STRUCTURE OR SURFACES. SUPPOR ED CABLE TIES ATTACHED TO CONDUIT	RT USING SUPPORTS	E CONN	DO NOT CONNECT MORE THAN ONE	CONDUCTOR CLOCKWISE 3/4 TURN AROU	ALS.
		THREADED CONDUIT CONNECTIONS IN A SUPPORT FROM PIPING, DUCTWORK, OF	ACCORDANCE WITH NFPA 70. DO NO R OTHER SYSTEMS.	T PROVIDE	2. DESCRIPTION: FACTORY-ASSEMBLED CO FOR INDOOR USE CAPABLE OF SENSING MINOR MOTION. SUCH AS SMALL DESKTO	DMMERCIAL SPECIFICATION GRADE DEV BOTH MAJOR MOTION, SUCH AS WALKIN DP LEVEL MOVEMENTS. ACCORDING TO	/ICES NG, AND	OR TO MAXIM SYSTE	BRANCH CIRCUIT CONDUITS AS ALL IUM SPACING OF 10 FEET. DO NOT SU IMS. DO NOT PROVIDE SUPPORT FRO	OWED BY CODE. LOCATE SUPPORTS W UPPORT FROM PIPING, DUCTWORK OR (DM CEILING GRID OR ALLOW CONDUCT(/ITH A OTHER ORS AND	SCREV OR BY	W TERMINAL AND TIGHTENING TO PRO	PRE TORQUE SPECIFIED BY THE MANUF/ E PLATE. WHERE PRESENT, DO NOT USE I	ACTURER PUSH-IN
К	3.	INSTALLATION ABOVE SUSPENDED CEIL CEILING GRID OR CEILING SUPPORT SYS	INGS: DO NOT PROVIDE SUPPORT F STEM. LISH-MOUNTED BOXES SUPPORTED I	ROM	PUBLISHED COVERAGE AREAS, FOR AUT 3. PROVIDE LED TO VISUALLY INDICATE MO	OMATIC CONTROL OF LOAD INDICATED. TION DETECTION.	3.2	CABLE 2 SYSTEM ST	S TO LAY ON CEILING TILES. ARTUP AND PROGRAMMING			F. UNLES	SURE TERMINALS THAT DO NOT RELY	WIRING DEVICE GROUNDING TERMINAL T	ΤΟ
		SINGLE STUD IN HOLLOW STUD WALLS. THAT PERMIT EXCESSIVE MOVEMENT.	REPAIR OR REPLACE SUPPORTS FOI	R BOXES	4. OPERATION: UNLESS OTHERWISE INDIC WHEN OCCUPANT PRESENCE IS DETECT OCCUPANT PRESENCE IS DETECTED DUI	ATED, OCCUPANCY SENSOR TO TURN L(ED AND TO TURN LOAD OFF WHEN NO RING AN ADJUSTABLE TURN-OFF DELAY	OAD ON TIME	A. COORI B. PROVII	DINATE SYSTEM PROGRAMMING AND DE FACTORY STARTUP AND PROGRA	DEVICE ENGRAVING WITH OWNER.	RDING TO		ER. DE GECL RECEPTACI ES WITH INTEGR		N
	I. INSTA J. FLUSI	ALL BOXES PLUMB AND LEVEL. H-MOUNTED BOXES:			INTERVAL. 5. DUAL TECHNOLOGY OCCUPANCY SENSO	DRS: FIELD CONFIGURABLE TURN-ON AN		OWNE C. COORI	R'S REQUIREMENTS. DINATE HIGH END AND/OR LOW END	TRIM LEVELS WITH OWNER AND		INDICA UNLES	ATED. DO NOT USE FEED-THROUGH W SS OTHERWISE INDICATED.	IRING TO PROTECT DOWNSTREAM DEVIC	;ES
	1.	INSTALL BOXES IN NONCOMBUSTIBLE M PLASTER, ETC. SO THAT FRONT EDGE O SET BACK FROM FINISHED SURFACE MC	ATERIALS SUCH AS CONCRETE, TILE F BOX OR ASSOCIATED RAISED COV DRE THAN 1/4 INCH OR DOES NOT PR	E, GYPSUM, /ER IS NOT ROJECT	TECHNOLOGIES. 6. PASSIVE INFRARED LENS FIELD OF VIEW	: FIELD CUSTOMIZABLE BY ADDITION OF	F 3.3	ARCHI 3 FUNCTIONA	L PERFORMANCE TESTING	OGRAMMING.		H. INSTAL I. INSTAI	LL WIRING DEVICES PLUMB AND LEVE	L WITH MOUNTING YOKE HELD RIGIDLY IN ON DOWN.	√ PLACE.
J	2.	BEYOND FINISHED SURFACE.	RIALS SUCH AS WOOD SO THAT FROM	NT EDGE OF	FACTORY MASKING MATERIAL, ADJUSTM MEANS TO BLOCK MOTION DETECTION IN 7 TURN-DEE DELAY: FIELD ADJUSTABLE M	ENT OF INTEGRAL BLINDERS, OR SIMILA I SELECTED AREAS. VITH TIME DELAY SETTINGS UP TO 30 MII	AR	A. PRIOR DOCUM ARE C	TO FINAL INSPECTION, PERFORM FU MENTATION TO THE ARCHITECT/ENGI ALIBRATED, ADJUSTED, PROGRAMME	INCTIONAL PERFORMANCE TESTING AN INEER THAT CONTROL HARDWARE AND ED AND IN PROPER WORKING CONDITIO	ID SUBMIT) SOFTWARE)N IN	J. INSTAL	LL VERTICALLY MOUNTED RECEPTAC	LES WITH GROUNDING POLE ON BOTTOM.	
	3.	BOX OR ASSOCIATED RAISED COVER IS REPAIR ROUGH OPENINGS AROUND BOX CONCRETE, TILE, GYPSUM, PLASTER, E	FLUSH WITH FINISHED SURFACE. XES IN NONCOMBUSTIBLE MATERIAL IC. SO THAT THERE ARE NO GAPS OF	S SUCH AS R OPEN	 SENSITIVITY: FIELD ADJUSTABLE. COMPATIBILITY (NON-DIMMING SENSORS) 	S): SUITABLE FOR CONTROLLING	NOTES.	ACCOF	RDANCE WITH THE CONSTRUCTION D JCTIONS.	OOCUMENTS AND MANUFACTURER'S		K. INSTAL OPENII IMPRO	NG COMPLETELY COVERED WITHOUT PERLY INSTALLED OUTLET BOXES OF	STRAIN ON WALL PLATE. REPAIR OR REIN RIMPROPERLY SIZED ROUGH OPENINGS.	INSTALL . DO NOT
	K. INSTA	SPACES GREATER THAN 1/8 INCH AT TH ALL BOXES AS REQUIRED TO PRESERVE	E EDGE OF THE BOX. INSULATION INTEGRITY.		INCANDESCENT LIGHTING, LOW-VOLTAGI TRANSFORMERS, FLUORESCENT LIGHTIN BALLASTS, AND FRACTIONAL MOTOR LOA	E LIGHTING WITH ELECTRONIC AND MAG NG WITH ELECTRONIC AND MAGNETIC ADS. WITH NO MINIMUM LOAD REQUIREN	GNETIC	1. C	. CERTIFY THAT EACH OCCUPANC ACCORDANCE WITH MANUFACTU	Y SENSOR HAS BEEN LOCATED AND AIM	MED IN	USE O\ L. INSTAI	VERSIZED WALL PLATES IN LIEU OF N	EETING THIS REQUIREMENT.) WIRING
	L. INSTA BETW	ALL PERMANENT BARRIER BETWEEN GAI /EEN ADJACENT DEVICES EXCEEDS 300	NGED WIRING DEVICES WHEN VOLTA V.	AGE	10. LOAD RATING FOR LINE VOLTAGE OCCUP THE LOAD INDICATED ON DRAWINGS.	PANCY SENSORS: AS REQUIRED TO CON	NTROL	b c	. TEST EACH OCCUPANCY SENSO . VERIFY THE FOLLOWING:	R.		DEVICE M. INSTAL	ES INSTALLED OR DESIGNATED FOR F	UTURE USE.	
	M. INSTA ELEM	ALL FIRESTOPPING TO PRESERVE FIRE F IENTS, USING MATERIALS AND METHODS	RESISTANCE RATING OF PARTITIONS S SPECIFIED.	AND OTHER	11. ISOLATED RELAY FOR LOW VOLTAGE OC DRY CONTACTS, RATINGS AS REQUIRED	CUPANCY SENSORS: WHERE INDICATED FOR INTERFACE WITH SYSTEM INDICAT	D, SPDT ED.		 WHERE INCLUDED, STATUS THE CONTROLLED LIGHTS 1 WITHIN THE REQUIRED TIMI 	S INDICATORS OPERATE CORRECTLY. TURN OFF OR DOWN TO THE PERMITTEL F	D LEVEL	UNFINI	END OF SE	ECTION	
н	N. CLOS O. INSTA	SE UNUSED BOX OPENINGS. ALL BLANK WALL PLATES ON JUNCTION E CES OR EQUIRMENT INSTALLED OR DESI	BOXES AND ON OUTLET BOXES WITH	I NO	 a. DESCRIPTION: LOW PROFILE OCCUPANCY SENSORS. 1. ALL CEILING MOUNTED OCCUPANCY SENSORS. a. DESCRIPTION: LOW PROFILE OCCU 	ISORS: IPANCY SENSORS DESIGNED FOR CEILIN	NG		3) FOR AUTO-ON OCCUPANCY THE PERMITTED LEVEL WHI	 'SENSOR CONTROLS, THE LIGHTS TURN EN AN OCCUPANT ENTERS THE SPACE.	N ON TO		SECTION	26 5100	
	P. PROV	IDE GROUNDING AND BONDING IN ACCO	DRDANCE WITH SECTION 26 0526.		INSTALLATION. b. OCCUPANCY SENSOR TO BE FIELD	SELECTABLE AS EITHER			 FOR MANUAL-ON OCCUPAN ONLY WHEN MANUALLY ACT THE LIGHTS ARE NOT INCOME 	ICY SENSOR CONTROLS, THE LIGHTS TU TIVATED. RRECTI Y TURNED ON BY MOVEMENT IN	URN ON N ADJACENT		INTERIOR L	GHTING	
	Q. ORIEN 2726. R. ORIEN	NT EACH BOX LOCATED ABOVE AN ACCE	ESSIBLE CEILING SO THE BOX OPENI	NG FACES	c. FINISH: WHITE UNLESS OTHERWISE 2. PASSIVE INFRARED (PIR) CEILING MOUNT	E INDICATED. FINDICATED. FED OCCUPANCY SENSORS:		2. P	AREAS OR BY HVAC OPERA ROVIDE A REPORT OF THE TEST RES	TION. SULTS. INCLUDE THE FOLLOWING:		1.1 SECTION IN	CLUDES		
	DOWN S. COOF	N OR TO ONE SIDE. RDINATE MOUNTING HEIGHTS AND LOCA	TIONS OF OUTLETS MOUNTED ABOV	/E	a. STANDARD RANGE SENSORS: CAP OF 450 SQUARE FEET AT A MOUNTI	ABLE OF DETECTING MOTION WITHIN AN NG HEIGHT OF 9 FEET, WITH A FIELD OF	NAREA VIEW	a b	 RESULTS OF FUNCTIONAL PERFO DISPOSITION OF DEFICIENCIES F CORRECTIVE MEASURES USED (ORMANCE TESTS. OUND DURING TESTING, INCLUDING DE OR PROPOSED.	ETAILS OF	A. INTERIO B. DRIVE	IOR LUMINAIRES. RS		
	COUN T. LOCA	NTERS, BENCHES, AND BACKSPLASHES. TE OUTLET BOXES TO ALLOW LUMINAIR	ES POSITIONED AS SHOWN ON REFL	ECTED	 b. EXTENDED RANGE SENSORS: CAP/ OF 1,200 SQUARE FEET AT A MOUN⁻ 	ABLE OF DETECTING MOTION WITHIN AN TING HEIGHT OF 9 FEET, WITH A FIELD O	AREA 3.4 DF VIEW	4 CLOSEOUT		N OPERATION ADJUSTMENT PROGRAM	IMING AND	C. ACCES	SSORIES. S		
G	U. SUPP TWO	NG PLAN. PORT BOXES INDEPENDENTLY OF CONDU RIGID METAL CONDUITS BOTH SUPPORT	JIT, EXCEPT CAST BOX THAT IS CONI	NECTED TO	OF 360 DEGREES. 3. ULTRASONIC CEILING MOUNTED OCCUP/ STANDARD RANCE SENSORS: CAR	ANCY SENSORS:		MAINTI 1. U	ENANCE OF LIGHTING CONTROL DEV ISE OPERATION AND MAINTENANCE N	ICES. MANUAL AS TRAINING REFERENCE,		A. PRODL SHEET	JCT DATA: PROVIDE MANUFACTUREF IS INCLUDING DETAILED INFORMATIO	"S STANDARD CATALOG PAGES AND DAT/ N ON LUMINAIRE CONSTRUCTION, DIMEN!	Ă ISIONS,
		END OF SEC	CTION		OF 500 SQUARE FEET AT A MOUNTI OF 360 DEGREES.	NG HEIGHT OF 9 FEET, WITH A FIELD OF	VIEW	S 2. P 3 IN	SUPPLEMENTED WITH ADDITIONAL TR ROVIDE MINIMUM OF TWO HOURS OF NSTRUCTOR: MANUFACTURER'S AUT	AINING MATERIALS AS REQUIRED. - TRAINING. HORIZED SERVICE REPRESENTATIVE		RATING PHOTC INCLU	GS, FINISHES, MOUNTING REQUIREME DMETRIC PERFORMANCE, INSTALLED DE MODEL NUMBER NOMENCLATURE	INTS, LISTINGS, SERVICE CONDITIONS, ACCESSORIES, AND CEILING COMPATIBIL CLEARLY MARKED WITH ALL PROPOSED	LITY;
		SECTION 26	0923 NTROLS		 MEDIUM RANGE SENSORS: CAPABL 1,000 SQUARE FEET AT A MOUNTING 360 DEGREES. 	LE OF DETECTING MOTION WITHIN AN AR G HEIGHT OF 9 FEET, WITH A FIELD OF VI	REA OF IEW OF 3.5	4. L 5 MAINTENAN	OCATION: AT PROJECT SITE.			FEATU 1. L	IRES. ED LUMINAIRES:		
	PART 1 GENERA	AL			c. EXTENDED RANGE SENSORS: CAP/ OF 2,000 SQUARE FEET AT A MOUNT	ABLE OF DETECTING MOTION WITHIN AN TING HEIGHT OF 9 FEET.	I AREA	A. OCCUF ON-SIT	PANCY ADJUSTMENTS: WITHIN ONE Y	YEAR OF SUBSTANTIAL COMPLETION, PI R'S AUTHORIZED SERVICE REPRESENTA	PROVIDE ATIVE TO	a. b	 INCLUDE ESTIMATED USEFUL LIF INCLUDE COLOR TEMPERATURE, 	E, CALCULATED BASED ON IES LM-80 TES CRI, LUMINAIRE INPUT WATTAGE AND DE	FT DATA. ELIVERED
F	1.1 SECTION IN A. OCCU	NCLUDES JPANCY SENSORS.			 PASSIVE INFRARED/ULTRASONIC DUAL T SENSORS: a. STANDARD RANGE SENSORS: CAP/ 	ECHNOLOGY CEILING MOUNTED OCCUP ABLE OF DETECTING MOTION WITHIN AN	JANCY	MAKE : APPRC THIS P	SYSTEM ADJUSTMENTS OR TO PROV DXIMATELY THREE, SIX AND TWELVE 'URPOSE.	IDE TRAINING. PROVIDE THREE VISITS, MONTHS AFTER SUBSTANTIAL COMPLE	, AT ETION FOR	2. D E	DOMEN OUTPOT. DRIVERS: INCLUDE PRODUCT DATA, D INVIRONMENTAL RATING.	IMMING PROTOCOL, VOLTAGE AND	
	B. WALL 1.2 SUBMITTAL	. PUSHBUTTON STATIONS. LS			OF 450 SQUARE FEET AT A MOUNTI OF 360 DEGREES.	NG HEIGHT OF 9 FEET, WITH A FIELD OF	VIEW		END OF SI	ECTION		B. OPERA INFOR	ATION AND MAINTENANCE DATA: INST MATION ON REPLACEMENT PARTS.	RUCTIONS FOR EACH PRODUCT INCLUDI	ING
	A. PROD DIMEN PROD	DUCT DATA: INCLUDE RATINGS, CONFIG NSIONS, COLORS, SERVICE CONDITION I DUCTS BEING PROVIDED.	URATIONS, STANDARD WIRING DIAGE REQUIREMENTS, AND INSTALLED FE/	RAMS, ATURES OF	OF 1,200 SQUARE FEET AT A MOUNT OF 360 DEGREES.	TING HEIGHT OF 9 FEET, WITH A FIELD O	DF VIEW		SECTION : WIRING D	26 2726 EVICES		C. MAINTE OF PR [,]	ENANCE MATERIALS: FURNISH THE F OJECT.	OLLOWING FOR OWNER'S USE IN MAINTE	INANCE
	B. SHOP 1. I	P DRAWINGS: PROVIDE LIGHTING PLAN, DRAWN TO SC	CALE, INDICATING LOCATION, MODEL	NUMBER,	 PASSIVE INFRARED/ACOUSTIC DUAL TEC SENSORS: a STANDARD RANGE SENSORS: CAP/ 	HNOLOGY CEILING MOUNTED OCCUPAN	NCY PA	ART 1 GENERAL				1. E2 N	EXTRA DRIVERS: TWO PERCENT OF TO NOT LESS THAN ONE OF EACH TYPE.	JTAL QUANTITY INSTALLED FOR EACH TYP	'PE, BUT
	2.	AND ORIENTATION OF EACH DEVICE BEI PUSHBUTTON STATIONS: PROVIDE ELE INDICATING BUTTON LABELING	ING PROVIDED. VATION OF EACH UNIQUE PUSHBUTT	TON STATION	OF 450 SQUARE FEET AT A MOUNTIL OF 360 DEGREES.	NG HEIGHT OF 9 FEET, WITH A FIELD OF	VIEW	A. RECEP	PTACLES.			D. PROJE LUMIN/	ECT RECORD DOCUMENTS: RECORD / AIRES AND ANY ASSOCIATED REMOT	CTUAL CONNECTIONS AND LOCATIONS C E COMPONENTS.	ЭF
E	3. I C. FUNC	INTERCONNECTION DIAGRAM OF FIELD	INSTALLED WIRING. RTS.		OF 1,200 SQUARE FEET AT A MOUNT C. POWER PACKS FOR OCCUPANCY SENSORS:	TING HEIGHT OF 9 FEET.	1.2	2 SUBMITTAL	S			A. PROVI		RER WARRANTY FOR ALL LED LUMINAIRE	.S,
	D. OPER CERT	RATION AND MAINTENANCE DATA: SUBM IFICATE OF OCCUPANCY. INCLUDE THE	IT WITHIN 90 DAYS OF RECEIPT OF T FOLLOWING:	ΉE	1. DESCRIPTION: PLENUM RATED, SELF-CC COMPATIBLE WITH SPECIFIED OCCUPAN	NTAINED CLASS 2 TRANSFORMER AND I CY SENSORS FOR SWITCHING OF LINE	RELAY	A. PRODU DIMEN	SIONS, COLORS, AND CONFIGURATIC	CS CATALOG INFORMATION SHOWING DNS.		PART 2 PRODUC	TS		
	1. 2	NAME AND ADDRESS OF NOT LESS THAI EQUIPMENT.	NONE SERVICE AGENCY FOR INSTAL	LLED	2. PROVIDE QUANTITY AND CONFIGURATIO ASSOCIATED WIRING AND ACCESSORIES	N OF POWER AND SLAVE PACKS WITH A S AS REQUIRED TO CONTROL THE LOAD	ALL 2.1	ART 2 PRODUC 1 MANUFACTU	TS JRERS			2.1 LUMINAIRE	TYPES SH PRODUCTS AS INDICATED IN SCHE	EDULE INCLUDED ON THE DRAWINGS.	
	3.	RECOMMENDED SETPOINTS. SUBMITTAL DATA INDICATING ALL SELEC	CTED OPTIONS FOR EACH PIECE OF I	LIGHTING	INDICATED ON DRAWINGS. 3. INPUT SUPPLY VOLTAGE: DUAL RATED F	OR 120/277 V AC.		A. COOPEB. HUBBE	er wiring devices: www.cooper Ell incorporated: www.hubbell	WIRINGDEVICES.COM. -WIRING.COM.		2.2 LUMINAIRES			4
D	4.	CONTROL EQUIPMENT AND LIGHTING CO MANUAL FOR EACH PIECE OF LIGHTING ROUTINE MAINTENANCE ACTIONS AND (ONTROLS. CONTROL EQUIPMENT INDICATING R CLEANING.	REQUIRED	 LOAD RATING: AS REQUIRED TO CONTRO PROVIDE AUXILIARY CONTACT CLOSURE RATED LIFE OF RELAY: ONE MILLION CY(JE THE LOAD INDICATED ON DRAWINGS. OUTPUT WHERE INDICATED. CLES.	i.	C. LEVITO D. PASS &	DN MANUFACTURING COMPANY, INC: & SEYMOUR, A BRAND OF LEGRAND N	WWW.LEVITON.COM. NORTH AMERICA, INC: WWW.LEGRAND.U	US	B. PROVIL B. PROVIL	DE PRODUCTS THAT COMPLET WITH R DE PRODUCTS THAT ARE LISTED AND CARLE	LABELED AS COMPLYING WITH UL 1598, 1	WHERE
	5. E. MAIN	SCHEDULE FOR INSPECTING AND RECA TENANCE MATERIALS: FURNISH THE FO	LIBRATING LIGHTING CONTROLS. LLOWING FOR OWNER'S USE IN MAIN	NTENANCE	PART 3 EXECUTION			E. SOURO	CE LIMITATIONS: WHERE POSSIBLE, F E PRODUCED BY A SINGLE MANUFAC	PROVIDE PRODUCTS FOR EACH TYPE O TURER AND OBTAINED FROM A SINGLE	of Wiring Supplier.	C. UNLES WHICH	S OTHERWISE INDICATED, FOR EACH ARE CONSISTENT IN PERCEIVED CO	TYPE OF LAMP/LUMINAIRE, PROVIDE PR	ODUCTS
	OF PF 1. 1	ROJECT. EXTRA OCCUPANCY SENSORS, POWER PUSHBUITTON STATIONS (WITHOUT LAB)	PACKS, ROOM CONTROLLERS, AND V		3.1 INSTALLATION A. INSTALL LIGHTING CONTROL DEVICES IN ACCO WORKMANSHIP) AND WHERE APPLICABLE NE	ORDANCE WITH NECA 1 (GENERAL	2.2	2 WIRING DEV A. DEVICI REQUI	/ICE FINISHES E COLOR: IVORY, TO MATCH EXISTIN RED BY CODE: BROWN IN DARK BRIC	G DEVICES, UNLESS OTHERWISE INDIC	ATED OR	LAMPS INCON	S/LUMINAIRES THAT ARE DETERMINED SISTENT IN PERCEIVED COLOR TEMP	⁹ BY THE ARCHITECT/ENGINEER TO BE ERATURE.	
	1.3 WARRANT	INSTALLED FOR EACH TYPE, BUT NOT LE	ESS THAN ONE OF EACH TYPE.	57 ((()))	SPECIFIED IN THOSE STANDARDS UNLESS OT B. COORDINATE LOCATIONS OF OUTLET BOXES I	HERWISE INDICATED. PROVIDED UNDER SECTION 26 0533.16 A	2.3 AS	3 WALL SWITC	CHES SWITCHES, CENEDAL DECHIDEMENT			D. PROVIE INTENE	DE PRODUCTS LISTED, CLASSIFIED, A DED.	ND LABELED AS SUITABLE FOR THE PURP	POSE
	A. PROV	/IDE FIVE YEAR MANUFACTURER WARRA	NTY FOR LIGHTING CONTROL COMP	PONENTS.	REQUIRED FOR INSTALLATION OF LIGHTING C SECTION. 1 ORIENT OUTLIET ROYES FOR VERTICAL IN		IIS	SNAP SWALLS	SWITCHES WITH SILVER ALLOY CONT AND LISTED AS COMPLYING WITH UL	ACTS, COMPLYING WITH NEMA WD 1 AN 20; TYPES AS INDICATED ON THE DRAW	ND NEMA VINGS.	E. UNLES SOCKE APPUF	DE UTHERWISE INDICATED, PROVIDE L ETS, BALLASTS/DRIVERS, REFLECTOR RTENANCES REQUIRED FOR A COMPL	UMINAIRES INCLUDING LAMP(S) AND ALL .S, LENSES, HOUSINGS, WIRING AND OTHE .ETE AND OPERATIONAL SYSTEM.	ER
С	2.1 MANUFACT	rurers			UNLESS OTHERWISE INDICATED. 2. LOCATE WALL SWITCH OCCUPANCY SEN	SORS ON STRIKE SIDE OF DOOR WITH E	EDGE OF	1. V B	VIRING PROVISIONS: TERMINAL SCRE	EWS FOR SIDE WIRING AND SCREW ACT TH SEPARATE GROUND TERMINAL SCRE	TUATED REW.	F. UNLES BOXES	SS SPECIFICALLY INDICATED TO BE EX 3, WIRING, CONNECTORS, HARDWARE	CLUDED, PROVIDE ALL REQUIRED CONDU 2, SUPPORTS, TRIMS, ACCESSORIES, ETC.	UIT, J. AS
	A. ACUIT B. HUBB	TY BRANDS LIGHTING: WWW.ACUITYBR/ BELL: WWW.HUBBELL.COM.	ANDS.COM.		WALL PLATE 3 INCHES FROM EDGE OF D INDICATED OTHERWISE, NOTIFY ARCHITE PROCEEDING WITH WORK.	OOR FRAME. WHERE LOCATIONS ARE ECT/ENGINEER TO OBTAIN DIRECTION PI	RIOR TO 2.4	B. ACCEF 4 RECEPTACL	ES	JW FOR SPECIFIC DEVICE TYPES.		NECES G. PROVI	SSARY FOR A COMPLETE OPERATION	AL SYSTEM. AND NORMAL HANDLING, INSTALLATION, F	AND
	C. WATT D. SOUR	ISTOPPER: WWW.LEGRAND.US/WATTST	OPPER. PRODUCED BY A SINGLE MANUFACT		C. INSTALL LIGHTING CONTROL DEVICES IN ACCO INSTRUCTIONS.	ORDANCE WITH MANUFACTURER'S		A. RECEF AND N DRAWI	PTACLES - GENERAL REQUIREMENTS: EMA WD 6, AND LISTED AS COMPLYIN INGS.	: SELF-GROUNDING, COMPLYING WITH I IG WITH UL 498; TYPES AS INDICATED O	NEMA WD 1 DN THE	H. SHEET	CE WITHOUT ANY DAMAGE, DISTORTI	, ON, CORROSION, FADING, DISCOLORING, SS OTHERWISE INDICATED, WITHOUT SHi	ETC. IARP
	E. SUBS CONS	STITUTIONS AND PRIOR APPROVAL REQU	JESTS: MANUFACTURERS NOT LISTE STITUTION REQUEST. PROVIDE THE	ED WILL BE	D. UNLESS OTHERWISE INDICATED, CONNECT LIC TERMINAL OR CONDUCTOR TO BRANCH CIRCU	GHTING CONTROL DEVICE GROUNDING JIT EQUIPMENT GROUNDING CONDUCTO	OR AND	1. V B	VIRING PROVISIONS: TERMINAL SCRE VINDING CLAMP FOR BACK WIRING WI	EWS FOR SIDE WIRING OR SCREW ACTU TH SEPARATE GROUND TERMINAL SCRE RE ACCORDING TO NEMA WD 6	UATED REW.	I. DOOR	ERS OR EDGES. S AND FRAMES: FREE OF LIGHT LEAK	íS.	
	FOLLO	OWING: MANUFACTURER'S CUT SHEETS FOR PR	OPOSED COMPONENTS.	-	E. INSTALL LIGHTING CONTROL DEVICES PLUMB	AND LEVEL, AND HELD SECURELY IN PL	ACE.	B. ACCEF	PTABLE PRODUCTS ARE LISTED BELC	W FOR SPECIFIC DEVICE TYPES.		J. RECES 1. C	SSED LUMINAIRES: CEILING COMPATIBILITY: COMPLY WIT	H NEMA LE 4.	
В	2. 3.	EXAMPLE WIRING SCHEMATIC. UPON REQUEST, A WORKING SAMPLE.			F. WHERE REQUIRED AND NOT FURNISHED WITH PLATE IN ACCORDANCE WITH SECTION 26 2720	1 LIGHTING CONTROL DEVICE, PROVIDE 6. ICE WITH SECTION 26 0529	WALL	C. STRAIG	COOPER HUBBELL LEVI	7. TON P&S		K. LED LU 1. C	JMINAIRES: COMPONENTS: UL 8750 RECOGNIZED	OR LISTED AS APPLICABLE.	
	2.2 LIGHTING C A. SYSTI דשאד	CONTROL SYSTEM - GENERAL REQUIRE EM DESCRIPTION: NON-NETWORKED, LO CONTROL LIGHTING WITHIN POOMS/SP	IMEINES OW VOLTAGE, DIGITAL STAND ALONE ACES.	E DEVICES	H. WHERE APPLICABLE, INSTALL LIGHTING CONT TO FIT COMPLETELY FLUSH TO MOUNTING SU	ROL DEVICES AND ASSOCIATED WALL P RFACE WITH NO GAPS AND ROUGH OPE	PLATES DU ENING DU	JPLEX JPLEX GFCI	BR20 BR20 5362 SGF20 GFRST20 GFN	CRB5362 T2 2097		2. T 3. L	ESTED IN ACCORDANCE WITH IES LM ED ESTIMATED USEFUL LIFE: MINIMU	-79 AND IES LM-80.	EN
g amontiel	B. PROV	/IDE SYSTEM CONSISTING OF WIRED CO	MPONENTS.		COMPLETELY COVERED WITHOUT STRAIN ON IMPROPERLY INSTALLED OUTLET BOXES OR IN USE OVERSIZED WALL PLATES IN LIEU OF MEE	WALL PLATE. REPAIR OR REINSTALL MPROPERLY SIZED ROUGH OPENINGS. D	DO NOT 2.5	5 WALL PLATE				M 2.3 DRIVERS	MAINTENANGE, GALGULATED BASED C	IN IES LIVI-OU TEST DATA.	
004E403.dw	D. UNLES	NDE PRODUCTS LISTED, CLASSIFIED, AN NDED. ISS SPECIFICALLY INDICATED TO BE EXC	CLUDED. PROVIDE ALL REQUIRED CO	NDUIT.	I. OCCUPANCY SENSOR LOCATIONS: 1. DRAWINGS ARE DIAGRAMMATIC AND ONI	LY INTENDED TO INDICATE WHICH ROOM	MS OR	A. WALLI 1. C	CONFIGURATION: ONE PIECE COVER . CORRESPONDING WIRING DEVICES.	AS REQUIRED FOR QUANTITY AND TYPE	ES OF	A. DRIVEF 1. P	RS - GENERAL REQUIREMENTS: PROVIDE DRIVERS CONTAINING NO PO)LYCHLORINATED BIPHENYLS (PCBS).	
m 202410	WIRIN	NG, CONNECTORS, HARDWARE, COMPOI PLETE OPERATING SYSTEM COMPATIBLE	NENTS, ACCESSORIES, ETC. AS REQUERNMENTS, ACCESSORIES, ETC. AS REQUERNMENTES.	UIRED FOR A	AREAS REQUIRE DEVICES. PROVIDE QUA COMPLETE COVERAGE OF RESPECTIVE I	ANTITY AND LOCATIONS AS REQUIRED FOR ROOM OR AREA BASED ON MANUFACTU	OR IRER'S	2. S B. WALLI	CREWS: METAL WITH SLOTTED HEAD	DS FINISHED TO MATCH WALL PLATE FIN	NISH.	2. M A	AINIMUM EFFICIENCY/EFFICACY: PRO APPLICABLE FEDERAL AND STATE DRI ARIVERS: INDUSH CURRENTS NOT 51	VIDE DRIVERS COMPLYING WITH ALL CUR VER EFFICIENCY/EFFICACY STANDARDS.	RENT
2024 4:415	E. PROV AS RE 1	VIDE PLENUM RATED CABLES FOR INTER ECOMMENDED BY MANUFACTURER. SELECT CABLE FIENGTHS BASED ON ACT		ENTS, TYPES	2. LOCATE ULTRASONIC AND DUAL TECHNO OCCUPANCY SENSORS A MINIMUM OF 4	DLOGY PASSIVE INFRARED/ULTRASONIC FEET FROM AIR SUPPLY DUCTS OR OTH) IER PA	ART 3 EXECUTI	ON			3. DI 4	10. 10.	JEDING FEAR OURKEN IS SPECIFIED IN I	
July 08,	2. (3.	CABLES SHALL BE AS SHORT AS PRACT PROVIDE WHITE CABLES UNLESS NOTEI	ICAL. D OTHERWISE.		SOURCES OF HEAVY AIR FLOW AND AS P ORDER TO MINIMIZE FALSE TRIGGERS.	PER MANUFACTURER'S RECOMMENDATION	ONS, IN 3.1	1 INSTALLATIO	N						
	1	2	3		4 5	6	7		8	9	1	0	11	12	1
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	13	14		15	16	17	
.16 ON H M ATE NS.	AS B. I. MOUNTED HE SAME E. 2.4 AG E A.	 DIMMABLE LED DRIVERS: 1. DIMMING RANGE: CONTIN RELATIVE LIGHT OUTPUT WITHOUT FLICKER. 2. CONTROL COMPATIBILITY INSTALLED. CCESSORIES PROVIDE ACCESSORIES AND F PROPERLY AND COMPLETELY 	IUOUS DIMMING FROM 100 F UNLESS DIMMING CAPABILI : FULLY COMPATIBLE WITH ITTINGS AS RECOMMENDED NSTALL AND WIRE LUMINAI	PERCENT TO TEN PERCE TY TO LOWER LEVEL IS I THE DIMMING CONTROL	nt NDICATED, S TO BE I n n R TO	l erspace tudios	L
6 IN 1111 00 10F SE AL ⁻ TH	ICHES B. ALS. IND C. FACTURER PUSH-IN TO PART 3 BONDING 3.1 IN A. N	 PROVIDE ACCESSORY PLASTE PRECLUDE THE POSSIBILITY O FIXTURE WHIPS: FLEXIBLE WH CONDUCTORS, #18 AWG MINIM UNLESS OTHERWISE INDICATE EXECUTION ISTALLATION VERIFY CEILING AND WALL DE ORDERING LUMINAIRES. PROV 	R FRAMES AS REQUIRED, DE FRUST STAINS ON SURROU IPS INCLUDING PHASE, NEU UM; MINIMUM LENGTH, 4 FEI D. TAILS FROM GENERAL CONS IDE PROPER MOUNTING AC	ESIGNED AND FINISHED NDING SURFACES. TRAL AND GROUNDING ET; MAXIMUM LENGTH, 6 STRUCTION DOCUMENTS CESSORIES FOR THE IN	FEET, FEET, PRIOR TO TENDED TO 33 permission to solely for the lim unauthorized c permission to solely for the lim solely for the lim solely for the lim solely out and clearances verify non-in	85 north 8th street, suite c lincoln, nebraska 68508 402.475.7234 eproduce all or part of this drawing is hereby granted ited purpose of construction of this project or archiving. opying, disclosure, or construction use without written nission of innerspace studios is prohibited. wings. verify all dimensions and clearances at site or rral, structural, shop, and other appropriate drawings. coordinate all work prior to installation to provide required for operation, maintenance, and codes. terference with other work, do not fabricate prior to writingting of clostpropers for all traden	ĸ
VIC Y II OM REI GS. NC	CES N PLACE. B. I. C. UGH D. INSTALL E. DO NOT F. D WIRING G. H.	 INSTALLATION. INSTALL FIXTU PREVENT MOVEMENT. COORDINATE LOCATIONS OF C REQUIRED FOR INSTALLATION PERFORM WORK IN ACCORDAN INSTALL PRODUCTS IN ACCORDAN INSTALL LUMINAIRES SECUREL NECA 500 (COMMERCIAL LIGHT PROVIDE REQUIRED SUPPORT INSTALL LUMINAIRES PLUMB AI ADJACENT LUMINAIRES. SUSPENDED CEILING MOUNTE 	RE TRIM TIGHT TO SURROUN UTLET BOXES PROVIDED UN OF LUMINAIRES PROVIDED IN ICE WITH NECA 1 (GENERAL DANCE WITH MANUFACTURE Y, IN A NEAT AND WORKMAN ING) AND NECA 502 (INDUST AND ATTACHMENT IN ACCO ND SQUARE AND ALIGNED W	NDING SURFACES. SECUNDER SECTION 26 0533.1 UNDER THIS SECTION. WORKMANSHIP). ER'S INSTRUCTIONS. NLIKE MANNER, AS SPEC RIAL LIGHTING). RDANCE WITH SECTION /ITH BUILDING LINES ANI	JRE TO 6 AS CIFIED IN 26 0529. D WITH	verification of clearances for all trades. chanical/Electrical Engineers L201 Cass Street Omaha, NE 68102 402.346.7007 Structural Engineer Civil Engineer	J
		 DO NOT USE CEILING TILE SUPPORT LUMINAIRES FF CLIPS AS REQUIRED. DO NOT USE CEILING SUF CEILING SUPPORT SYSTE LUMINAIRES SMALLER TH OTHERWISE INDICATED C MEMBERS AS REQUIRED. 	S TO BEAR WEIGHT OF LUM OM GRID. PROVIDE ADDITIC PORT SYSTEM TO BEAR WE M IS CERTIFIED AS SUITABL AN GRID OPENINGS: CENTE N REFLECTED CEILING PLAP	INAIRES. DNAL SUPPORTS OR SUF GHT OF LUMINAIRES UN TO DO SO. R IN ACOUSTICAL PANE N. PROVIDE SUPPORTIN	PPORT NLESS LS UNLESS G	NA ELECTRICA NA ELECTRICA S POOLOGIAS P. 88 E. 10	н
DAT EN , IBII ED	J. K. SIONS, LITY;	 INSTALL TRIMS TIGHT TO INSTALL ACCESSORIES FURNIS MAKE WIRING CONNECTIONS T SUITABLE FOR TEMPERATURE FIXTURE WHIPS: USE FOR RECESSED LUM ANCHOR ACCORDING TO INSTALL BETWEEN EACH WIRE FROM FIXTURE TO F 	MOUNTING SURFACE WITH I SHED WITH EACH LUMINAIRE O BRANCH CIRCUIT USING E CONDITIONS WITHIN FIXTUF NAIRES INSTALLED IN AN AG CODE. FIXTURE AND A JUNCTION B	NO VISIBLE LIGHT LEAKA E. BUILDING WIRE WITH INS RE. CCESSIBLE CEILING. OX LOCATED ABOVE THI I BALLAST INSTALLATION	IGE. IULATION E CEILING. IS.	ALVINE E-5769 <i>Composed</i> <i>ALVINE</i> <i>E-5769</i> <i>ALVINE</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Composed</i> <i>Co</i>	G
TES DE UD	M ST DATA. ELIVERED N. ING ENANCE	 BOND PRODUCTS AND METAL / CONDUCTOR. REMOTE BALLASTS AND DRIVE REQUIRED TO COMPLETE INST RECOMMENDATIONS NOT EXCL CONDUCTOR LENGTH TO LUMI 	ACCESSORIES TO BRANCH (RS: INSTALL IN ACCESSIBLE ALLATION, USING CONDUCT EEDING MANUFACTURER'S F NAIRE. END OF SECTION	CIRCUIT EQUIPMENT GRO E LOCATION AS INDICATE ORS PER MANUFACTUR RECOMMENDED MAXIMU	DUNDING / ED OR AS ER'S M	gency Approval	F
I TY	(PE, BUT OF S,						E
10 [.] 98, PR	1. WHERE RODUCTS				grap 0 2' 4	ohic scale: 1/8" = 1'-0"	D
UR ALL TH ND TC N, <i>I</i>	POSE ER UIT, AS AND , ETC.		© COPYRIGHT 2024 Permission to reproduce all granted solely for the limited project or archiving. Unauthor construction use without wri Engineering is prohibited by NOTE:	AE# 20 or part of this drawing is he purpose of construction o prized copying, disclosure o tten permission of Alvine copyright law.)241004 ereby f this or		с
SH	ARP		DO NOT SCALE DRAWING and clearances from ARCHI and other appropriate drawin coordinate all work prior to in required for operation, maint non-interference with other w PRIOR TO VERIFICATION TRADES. READ SPECIFIC	S. VERIFY ALL DIMENSIC TECTURAL, STRUCTURA ng or at site. lay out and installation to provide cleara tenance, and codes and ver work. DO NOT FABRICATE OF CLEARANCE FOR ALL ATIONS.	NS L, shop nces rify Sixth 11404 West Omaha, NE	el Zacharia Floor Remodel Dodge Road 68154	B
CUF DS. IN	RRENT NEMA	Omaha: 1201 Cass Street Omaha, NE 68102 Phone: (402) 346-7007	Lincoln: 1220 Lincoln Mall, Suite 200 Lincoln, NE 68508 Phone: (402) 477-6161	VINE neering na City: /lshire Blvd., Suite 102 City. OK 73116 105) 936-3480	nes: Designed: Drawn by: r Reviewed:	al Specifications	A
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