HEATHERWILDE OFFICE CONDOS BLDG. 4

201 N. HEATHERWILDE BLVD. **PFLUGERVILLE, TEXAS 78660**

OWNER: **MILESTONE PECAN STREET** DEVELOPMENT, LTD 9800 RICHMOND AVE, SUITE 490 *HOUSTON, TX 77042* CONTACT: JACOBO MALCA 713-784-3790

TDLR REGISTRATION NUMBER: TABS2023013255

FIRE DEPARTMENT NOTES:

ADDRESS. THE ADDRESS OF THE COMPLEX MUST BE POSTED SO IT IS CLEARLY VISIBLE FROM THE PUBLIC STREET. THE ADDRESS MUST BE POSTED ON ANY SIGNS, INCLUDING ANY MONUMENTAI SIGNS, INSTALLED TO IDENTIFY THE COMPLEX. THE SIZE, DESIGN AND PLACEMENT OF ADDRESS SIGNS MUST BE APPROVED BY TRAVIS COUNTY EMERGENCY SERVICES DISTRICT 2 PRIOR TO INSTALLATION.

BUILDING NUMBER. THE BUILDING NUMBER MUST BE POSTED AT APPROVED LOCATIONS. BUILDING NUMBERS MUST BE A MINIMUM OF 6 INCHES IN HEIGHT, MUST CLEARLY CONTRAST WITH THEIR BACKGROUND, AND SIGNS MUST BE CONSTRUCTED OF A DURABLE WEATHER RESISTANT MATERIAL. THE LOCATION OF BUILDING IDENTIFICATION SIGNS MUST BE APPROVED PRIOR TO INSTALLATION.

SUITE NUMBER. THE SUITE NUMBER FOR EACH TENANT SPACE MUST BE POSTED SO IT IS CLEARLY VISIBLE FROM THE ACCESS DRIVE. THE SUITE NUMBER WILL BE REQUIRED ON BOTH SIDES OF THE BUILDING. THE SIZE, DESIGN AND PLACEMENT OF SUITE IDENTIFICATION SIGNS MUST BE APPROVED BY TRAVIS COUNTY EMERGENCY SERVICES DISTRICT 2 PRIOR TO INSTALLATION. KNOX BOX. ONE OR MORE KNOX BOXES WILL BE REQUIRED. EACH KNOX BOX MUST BE MOUNTED IN AN APPROVED LOCATION. THE GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR CONTACTING TRAVIS COUNTY EMERGENCY SERVICES DISTRICT 2 FOR

INFORMATION REGARDING INSTALLATION OF KNOX BOXES ELECTRONIC ACCESS CONTROL. WHEN PROVIDED, ELECTRONIC ACCESS CONTROL MUST BE ADDRESSED THROUGH A DEFERRED SUBMITTAL. APPROVAL OF THE BUILDING PERMIT DOES NOT IMPLY APPROVAL TO INSTALL AN ELECTRONIC ACCESS CONTROL SYSTEM.

MAIN ELECTRICAL DISCONNECT. THE MAIN ELECTRICAL DISCONNECT MUST BE LOCATED ON THE EXTERIOR OF THE BUILDING AND APPROVED SIGNAGE WILL BE REQUIRED TO IDENTIFY THE LOCATION OF THE MAIN ELECTRICAL DISCONNECT. THE DISCONNECT MUST BE A KNOX-VAULT 4500 SERIES POWER SHUTDOWN. THE SIZE, DESIGN AND PLACEMENT OF IDENTIFICATION SIGNS MUST BE APPROVED BY TRAVIS COUNTY EMERGENCY SERVICES DISTRICT 2 PRIOR TO INSTALLATION. MAIN GAS DISCONNECT. THE MAIN GAS DISCONNECT MUST BE LOCATED ON THE EXTERIOR OF THE BUILDING AND APPROVED SIGNAGE WILL BE REQUIRED TO IDENTIFY THE LOCATION OF THE

MAIN GAS DISCONNECT. THE SIZE, DESIGN AND PLACEMENT OF IDENTIFICATION SIGNS MUST BE APPROVED BY TRAVIS COUNTY EMERGENCY SERVICES DISTRICT 2 PRIOR TO INSTALLATION. EMERGENCY CIRCUITS. NORMAL BUILDING LIGHTING WILL BE SUPPLIED FROM DEDICATED LIGHTING CIRCUITS AND EMERGENCY LIGHTING WILL BE SUPPLIED FROM THE SAME CIRCUITS. A SINGLE PRIMARY HOT FROM THE BREAKER WILL BE SPLIT BETWEEN THE SWITCH AND EMERGENCY HOT. THE PRIMARY HOT WILL SUPPLY THE LIGHTING FIXTURES AND WILL BE ROUTED THROUGH THE SWITCHES LOCATED ON THIS CIRCUIT. THE EMERGENCY HOT WILL SUPPLY THE BACKUP BATTERIES ONLY. THE EMERGENCY HOT WILL BE INSTALLED AS AN UNSWITCHED, CONSTANT HOT. THE BREAKER SUPPLYING THE CIRCUIT MUST BE TURNED OFF TO CUT

POWER TO THE EMERGENCY HOT. PORTABLE FIRE EXTINGUISHERS. PORTABLE FIRE EXTINGUISHERS WILL BE INSTALLED SO THAT NO POINT IN THE BUILDING WILL BE LOCATED MORE THAN 75 FEET FROM AN EXTINGUISHER. THIS DISTANCE IS MEASURED BY PATH OF TRAVEL. THE MINIMUM RATING FOR AN EXTINGUISHER IS 2A:10BC. 5-LB DRY CHEMICAL UNITS, WHICH CARRY A 3A:40BC RATING, ARE RECOMMENDED. EXTINGUISHERS SHALL BE MOUNTED ADJACENT TO EXIT DOORS AND AT INTERMEDIATE LOCATIONS TO MEET TRAVEL DISTANCE REQUIREMENTS. EXTINGUISHERS MUST BE MOUNTED IN A VISIBLE AND ACCESSIBLE LOCATION. THE TOP OF AN EXTINGUISHER SHALL NOT BE MORE THAN 5 FEET ABOVE THE FINISHED FLOOR LEVEL. EXTINGUISHERS MUST BE PROVIDED WITH A CURRENT INSPECTION TAG ISSUED BY A LICENSED FIRE PROTECTION CONTRACTOR.

PROJECT ABBREVIATIONS

А		E		I
&	AND	ĒĀ	EACH	ĪD
AMP	AMPERES	E/A	EXHAUST AIR	IF
AB	ANCHOR BOLT	EXH FN		IN
ABV		EIFS		
A/C		EI		
AD	AREA DRAIN	EU. FLEV	ELEVATION	11 0
ADJ	ADJUSTABLE	ELEC	ELECTRICAL	1
AFF	ABOVE FINISH FLOOR	EMER	EMERGENCY	
ALUM	ALUMINUM	ENCL	ENCLOSURE	JAN
ACS. PNL.	ACCESS PANEL	EPS	EXTERIOR PAINT SYSTEM	01
APPROX	APPROXIMATE	EQ	EQUAL	K
ASB		EW		Γ
ASC	CEILING		ELECTRIC WATER COOLER	KIT
ASPH	ASPHALT	EXH	EXHAUST	
AUTO	AUTOMATIC	EXT	EXTERIOR	1
AUX	AUXILIARY			
		F		
В		FA	FIRE ALARM	LAV
BD	BOARD	FBO	FURNISHED BY OTHERS	LKR
BITUM	BITUMINOUS	FCB	FIBER CEMENT BOARD	LOC
BFF	BELOW FINISHED FLOOR	FD	FLOOR DRAIN	LPT
BL	BUILDING LINE	FDN.	FOUNDATION	LT
BLDG	BUILDING	FE	FIRE EXTINGUISHER	
BLK	BLOCK	FEC	FIRE EXTINGUISHER CABINET	IVI
BOT				MATL
BS	BACKSPLASH	FIN	FINISH	MAX
20		FL	FLOOR	
С		FOC	FACE OF CONCRETE	MDF
		FOF	FACE OF FINISH	MBI
CAB	CABINET	FOS	FACE OF STUDS	MEMB
CG	CORNER GUARD	FP	FIREPROOF	MECH
CJ	CONTROL JOINT	FI	FOOT OR FEET	MTL
CLG	CEILING	FIG		MFR
CL	CENTER LINE	FUT	FUTURE	
CO		101	1010HZ	MID
		G		MIRR
	CONCRETE			MISC
CONN	CONNECTION	GALV	GALVANIZED	МО
CONT	CONTINUOUS	GB	GRAB BAR	MOD
СТ	CERAMIC TILE	GC	GENERAL CONTRACTOR	MR
CNTR	COUNTER	GEN	GENERAL	MSB
CTR	CENTER	GFCI	GROUND FAULT INTERRUPT	
		GD	GENERAL DUTY	MBM
CW	COLD WATER PIPING	GL		MBM
П		GR	GRADE	
		GWB	GYPSUM WALL BOARD	Ν
				NEC
DE		ы		
DET	DETAIL			NEUT
DIA	DIAMETER	HB		NHCS
DIM	DIMENSION			N.I.C.
DISP	DISPENSER	HM	HOLLOW METAL	NO.
DN	DOWN	HORIZ.	HORIZONTAL	
DK		HR.	HOUR	1110
DWG	DRAWING	HT	HEIGHT	\cap
5110		HVAC	HEAT/VENTILATION/ AIR COND	$\overline{\underline{\bigcirc}}$
		HW	HOI WAIER	OBS
				000
				OCEW



INSIDE FACE INCHES INSULATION INTERIOR INTERIOR PAINT SYSTEM JANITOR JOINT	PERF PH PLAM PLAS PLBG PLYWD PNL PNT PR
KIPS (1000 POUNDS) KITCHEN	PT PRCST PTR
LABORATORY LAMINATE LAVATORY LOCKER LOCATION LOW POINT LIGHT	R R RA RAD RCP RD RECPT
MATERIAL MAXIMUM MARKER BOARD MEDICINE CABINET MEDIUM DENSITY FIBER BOARD MEMBRANE	rtu Reinf Reqd Resil R/F RVS RFP
MECHANICAL METAL MANUFACTURER MANHOLE MINIMUM MIDDLE	REG RL RM RO RWL
MIRROR MISCELLANEOUS MASONRY OPENING MOIFIED MOISTURE RESISTANT MAIN SWITCH BOARD MOUNTED MULLION METAL BUILDING MANUFACTURTER	S S/A S.C. SCD SCHED SD SECT SF SH SHR
NATIONAL ELECTRIC CODE NEUTRAI	SHT SIM SND
NON HANDICAP SHOWER NOT IN CONTRACT NUMBER NOMINAL NOT TO SCALE	SPEC SQ SST STA STD STIFF STL
OVERALL OBSCURE ON CENTER ON CENTER EACH WAY OUTSIDE DIAMETER OVERHEAD OPENING	STOR

OD OH OPNG OPP

OPPOSITE

INSIDE DIAMETER

INSIDE FACE

POLE PERFORATED PHASE PLATE PLASTIC LAMINATE PLASTER PLUMBING PLYWOOD PANEL PAINT PAIR PRESSURE TREATED PRE-CAST PAPER TOWEL RECEPTACLE
QUARRY TILE
RISER RETURN AIR RADIUS REFLECTED CEILING PLAN ROOF DRAIN RECEPTACLE ROOF TOP UNIT REINFORCED REQUIRED RESILIENT REFRIGERATOR/FREEZER REVERSE REINFORCED FIBERGLASS PANEL REGISTER RAINLEADER RAINLEADER ROOM ROUGH OPENING RAIN WATER LEADER
SUPPLY AIR SEALED CONCRETE

SEAT COVER DISPENSER SCHEDULED SOAP DISPENSER STORM DRAIN SECTION SILT FENCE SINGLE HUNG SHOWER SHEET SIMILAR SANITARY NAPKIN DISPENSER SPECIFICATION SQUARE STAINLESS STEEL STATION STANDARD STIFFENER STEEL STORAGE

SIMII AR SYMMETRICAL

SYMM

TR

TOC

TOFF

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WH

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WTR

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WWF

WWM

WSCT

W/O

W/

TP

THRU

TEMPERED TOWEL BAR TOP OF CONCRETE TOP OF FINISH FLOOR TRANSITION STRIP TELEPHONE TONGE AND GROOVE THICK THROUGH TOP OF MASONRY TOP OF PIER TOP OF STEEL TOP OF WALL TREE PROTECTION TELEPHONE TERMINAL BOARD TOILET PAPER DISPENSER TELEVISION TYPICAL

UNDERCOUNTER UNDERGROUND ELECTRIC CIRCUIT UNDERWRITER'S LABORATORIES UNFINISHED UNLESS OTHERWISE NOTED URINAL UNDERSIDE UNDERGROUND TELEPHONE

VINYL COMPOSITE TILE VESTIBULE VENT THROUGH ROOF

WALL CLEANOUT WATER CLOSET WATER HEATER WOOD WATERPROOF WEIGHT WATER WASTE WATER WELDED WIRE FABRIC WELDED WIRE MESH WAINSCOT WITH WITH OUT

N	NORTH SYMBOL
ROOM 110	ROOM SYMBOL
	WALL TYPE
	WINDOW TYPE
101	DOOR TYPE
1 A-101	— DETAIL No. DETAIL REFEREN — PAGE No.
1 A-101	ELEVATION No. ELEVATION REFE PAGE No.
1 A-101	SECTION No. SECTION REFERE PAGE No.
1 (A-101)	— INT ELEV. No. INTERIOR ELEVA [–] REFERENCE — PAGE No.

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DATE: MAR 15, 2023

CONSTRUCTION DOCUMENTS HEATHERWILDE OFFICE CONDOS BLDG

201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660

PROJECT NO: 17003

REVISIONS:

REV 2 - CoP BUILDING COMMENTS

DRAWN BY:	LC
REVIEWED BY:	SB

COVER SHEET





BUILDING CODE A	NALY	'SIS
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PROJECT NAME:	HEATH	ERW
PROJECT ADDRESS:	201 N.	
PROJECT DESCRPTION:	OFFICE	
APPLICABLE CODES:	INTERM	JATIC
	INTERN	JATIC
	INTERN	JATIC
	INTERN	
	INTER	
	NATIO	
ITEM		ALLO
USE & OCCUPANCY CLASSIFICIATIO	N	
BUILDING DATA		
TYPE OF CONSTRUCTION		
BUILDING HEIGHT		
AREA		
FLOOR AREAS		
BUILDING 3		
SUITE A		
SUITE B		
SUITE C		
SUITE D		
FRONT PORCH		
OCCUPANCY LOAD		
PER OFFICE		
MEAN OF EGRESS PER OFFICE		
EGRESS DOOR WIDTH		
COMMON PATH OF EGRESS TRAVEL		
EXIT ACCESS TRAVEL DISTANCE		
FIRE PROTECTION SYSTEMS		
FIRE ACCESS TO ROOF		
STANDPIPES		
SPRINKLER SYSTEM		
FIRE ALARM		
FIRE & SMOKE PROTECTION		
OCCUPANCY SEPARATION		
FIRE RESISTANCE		
	FFICE	

LIFE SAFETY PLAN LEGEND EGRESS EXIT PATH OF EGRESS EXIT LIGHT FE ENCLOSED SEMI-RECESSED FIRE EXTINGUISHER 1HR FIRE RATED WALL





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CONSTRUCTION DOCUMENTS HEATHERWILDE **CONDOS BLDG**

201 N. HEATHERWILDE PFLUGERVILLE,

PROJECT NO: 17003

REV 2 - CoP BLDG. REV COMMENTS

DRAWN BY:	LC
REVIEWED BY:	SB

CODE SHEET





SECTION 01 3000 - ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submittals for review, information, and project closeout.
- B. Submittal procedures.
- **1.02 RELATED REQUIREMENTS**
 - A. Section 01 7000 Execution and Closeout Requirements: Additional coordination requirements.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 SUBMITTALS FOR REVIEW

A. When the following are specified in individual sections, submit them for review:

- 1. Product data.
- 2. Shop drawings.
- 3. Samples for selection.
- 4. Samples for verification.

B. Submit to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.

C. Samples will be reviewed only for aesthetic, color, or finish selec-

3.02 SUBMITTALS FOR INFORMATION

A. When the following are specified in individual sections, submit them for information:

- 1. Design data.
- 2. Certificates.
- 3. Test reports.
- 4. Inspection reports.
- 5. Manufacturer's instructions.
- 6. Manufacturer's field reports.
- 3.03 SUBMITTALS FOR PROJECT CLOSEOUT

A. When the following are specified in individual sections, submit

- 1. Operation and maintenance data.
- 2. Warranties.

3. Other types as indicated.

B. Submit for Owner's benefit during and after project completion.

3.04 NUMBER OF COPIES OF SUBMITTALS

A. Documents for Review:

them at project closeout:

1. Small Size Sheets, Not Larger Than 8-1/2 x 11 inches : Submit the number of copies that Contractor requires, plus tions. one copy that will be retained by Architect. Electronic submission is encouraged.

B. Documents for Information: Submit two copies. Electronic submission is encouraged.

C. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.

3.05 SUBMITTAL PROCEDURES

A. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.

B. Schedule submittals to expedite the Project, and coordinate submission of related items.

> C. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.

> D. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.

E. When revised for resubmission, identify all changes made since previous submission.

F. Submittal and technical information may be electronic; coordinate 2.02 PREPARATION with Architect and Engineer.

END OF SECTION 01 3000

SECTION 01 7000 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Examination, preparation, and general installation procedures.

- B. Pre-installation meetings.
- C. Cutting and patching.
- D. Cleaning and protection.
- E. Starting of systems and equipment.
- F. Closeout procedures, except payment procedures.
- G. General requirements for maintenance service.
- 1.02 RELATED REQUIREMENTS

A. Section 01 3000 - Administrative Requirements: Submittals procedures.

> B. Section 01 7800 - Closeout Submittals: Project record documents, operation and maintenance data, warranties and bonds.

C. Section 07 8400 - Firestopping.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

1.04 PROJECT CONDITIONS

A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.

B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

C. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

1.05 COORDINATION

A. Coordinate scheduling, submittals, and work of the various sections of these Specification to ensure efficient and orderly sequence of installation of interdependent construction elements.

B. Notify affected utility companies and comply with their requirements.

C. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

D. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on Drawings and outlined in specifications on individual Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

F. Coordinate completion and clean-up of work of separate sec-

G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 EXECUTION

2.01 EXAMINATION

A. Verify that existing site conditions and substrate surfaces are ac- 2.07 PROTECTION OF INSTALLED WORK ceptable for subsequent work. Start of work means acceptance of existing conditions.

B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

> D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or mis- and soffits of openings. fabrication.

E. Verify that utility services are available, of the correct characteristics, and in the correct locations.

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

> C. Apply manufacturer required or recommended substrate primer, 2.08 SYSTEM STARTUP sealer, or conditioner prior to applying any new material or substance in contact or bond.

2.03 PRE-INSTALLATION MEETINGS

A. When required in individual specification sections or at request of Architect/Engineer, convene a pre-installation meeting at the site prior to commencing work of the section.

B. Require attendance of parties directly affecting, or affected by, work of the specific section.

2.04 GENERAL INSTALLATION REQUIREMENTS

	A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
less oth	B. Make vertical elements plumb and horizontal elements level, un- erwise indicated.
	C. Install equipment and fittings plumb and level, neatly aligned with

adjacent vertical and horizontal lines, unless otherwise indicated. D. Make consistent texture on surfaces, with seamless transitions,

unless otherwise indicated. E. Make neat transitions between different surfaces, maintaining

texture and appearance.

2.05 CUTTING AND PATCHING

A. Whenever possible, execute the work by methods that avoid cutting or patching.

B. Perform whatever cutting and patching is necessary to:

- 1. Complete the work.
- 2. Fit products together to integrate with other work.

3. Provide openings for penetration of mechanical, electri-

cal, and other services.

- 4. Match work that has been cut to adjacent work.
- 5. Repair areas adjacent to cuts to required condition.
- 6. Repair new work damaged by subsequent work.
- 7. Remove samples of installed work for testing when re-

quested.

8. Remove and replace defective and non-conforming work.

> C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing.

D. Employ skilled and experienced installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

F. Restore work with new products in accordance with requirements plete. Contract Documents.

G. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

H. At penetrations of fire rated walls, partitions, ceiling construction, completely seal voids with fire rated material in accordance with Section 07 8400, to full thickness of the penetrated element.

I. Patching:

1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

2. Match color, texture, and appearance.

3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

2.06 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Remove debris and rubbish from pipe chases, plenums, attics and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

A. Protect installed work from damage by construction operations.

B. Provide special protection where specified in individual specification sections.

> C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

> D. Provide protective coverings at walls, projections, jambs, sills,

E. Protect finished floors and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

F. Prohibit traffic or storage upon waterproofed or roofed surfaces and floor coatings and toppings. If traffic or activity is necessary, obtain recommendations for protection from waterproofing, roofing, topping and coating material manufacturer.

G. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

A. Coordinate schedule for start-up of various equipment and systems

> B. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.

> C. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.

D. Verify that wiring and support components for equipment are complete and tested.

E. Execute start-up under supervision of applicable Contractor personnel in accordance with manufacturers' instructions. F. Submit a written report that equipment or system has been prop-

erly installed and is functioning correctly.

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

2.10 FINAL CLEANING

2.09 ADJUSTING

A. Use cleaning materials that are nonhazardous.

B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces.

C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.

D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

E. Replace filters of operating equipment.

F. Clean debris from roofs, gutters, downspouts, floor trenches and drainage systems.

G. Clean site; sweep existing and new paved areas, rake clean new and existing landscaped surfaces.

H. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or burv.

2.11 CLOSEOUT PROCEDURES

A. Make submittals that are required by governing or other authorities.

1. Provide copies to Owner.

B. Notify Architect / Engineer when work is considered ready for Substantial Completion.

C. Correct items of work listed in executed Certificates of Substantial Completion and comply with requirements for access to Owneroccupied areas.

D. Notify Architect /Engineer when work is considered finally com-

E. Complete items of work determined by Architect/Engineer's final inspection

END OF SECTION 01 7000

SECTION 01 7800

CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Project Record Documents.

- B. Operation and Maintenance Data

C. Warranties and bonds.

1.02 RELATED REQUIREMENTS

A. Section 01 3000 - Administrative cedures, shop drawings, product dat

B. Section 01 7000 - Execution and tract closeout procedures.

C. Individual Product Sections: Spe

and maintenance data. D. Individual Product Sections: Wa products or Work.

1.03 SUBMITTALS

service during construction completed documents within

B. Warranties and Bonds:

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 OPERATION AND MAINTENANCE DA A. For Each Product or System: Li phone numbers of Subcontractors

3.02 WARRANTIES AND BONDS

A. Obtain warranties and bonds, ex sible Subcontractors, suppliers, and after completion of the applicable iter into use with Owner's permission, le warranty until the Date of Substantia

B. Verify that documents are in prope and are notarized. auired.

D. Retain warranties and bonds until time specified for submittal.

END OF SECTION 01 7000

SECTION 03 3000 - CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Concrete formwork.

B. Floors and slabs on grade.

C. Concrete reinforcement

D. Concrete curing.

1.02 REFERENCE STANDARDS

tional; Current Date..

International; Current Date.

tute International; Current Date.

ON 01 7800	G. ACI 308R - Guide to Curing Concrete; American Concrete Instute International; Current Date.		
EOUT SUBMITTALS	H. ACI 318 - Building Code Requirements for Structural Concreand Commentary; American Concrete Institute International; Corrent Date.		
1 GENERAL	I. ACI 347 - Guide to Formwork for Concrete; American Concre		
ECTION INCLUDES	Institute International; Current Date.		
A. Project Record Documents.	J. ASTM A185/A185M - Standard Specification for Steel Weld Wire Reinforcement, Plain, for Concrete; Current Date.		
B. Operation and Maintenance Data.	K. ASTM A615/A615M - Standard Specification for Deformed a		
C. Warranties and bonds.	Plain Billet-Steel Bars for Concrete Reinforcement; Current Date.		
ELATED REQUIREMENTS	L. ASTM C33 - Standard Specification for Concrete Aggregate Current Date.		
A. Section 01 3000 - Administrative Requirements: Submittals pro- cedures, shop drawings, product data, and samples.	M. ASTM C39/C39M - Standard Test Method for Compressi Strength of Cylindrical Concrete Specimens:		
B. Section 01 7000 - Execution and Closeout Requirements: Con- pseout procedures.	Date.		
C. Individual Product Sections: Specific requirements for operation aintenance data.	crete; Current Date.		
D. Individual Product Sections: Warranties required for specific ts or Work	o. ASTM C150 - Standard Specification for Portland Cement; C rent Date.		
IBMITTALS	1.03 SUBMITTALS		
A. Operation and Maintenance Data:	A. See Section 01 3000 - Administrative Requirements, for submit procedures.		
 For equipment, or component parts of equipment put into service during construction and operated by Owner, submit 	B. Samples: Submit samples of under slab vapor retarder to be us to Owner.		
completed documents within ten days after acceptance.	1.04 QUALITY ASSURANCE		
B. Warranties and Bonds:	A. Perform work of this section in accordance with ACI 301 and A		
1. For equipment or component parts of equipment put into service during construction with Owner's permission, sub- mit documents within 10 days after acceptance.	B. Follow recommendations of ACI 305R when concreting duri hot weather.		
2. Make other submittals within 10 days after Date of Sub- stantial Completion, prior to final Application for Payment.			
	PART 2 PRODUCTS		
2 PRODUCTS - NOT USED	2.01 FORMWORK		
	A. Formwork Design and Construction: Comply with guidelines ACI 347 to provide formwork that will produce concrete complyi with tolerances of ACI 117		
	B. Form Materials: Contractor's choice of standard products w		
A. For Each Product or System: List names, addresses and tele-	sufficient strength to withstand hydrostatic head without distortion excess of permitted tolerances.		
phone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.	2.02 REINFORCEMENT		
B. Product Data: Mark each sheet to clearly identify specific prod-	A. Reinforcing Steel: ASTM A615/A615M Grade 60 (420).		
ucts and component parts, and data applicable to installation. De- lete inapplicable information.	1. Type: Deformed billet-steel bars.		
C. Drawings: Supplement product data to illustrate relations of com- ponent parts of equipment and systems, to show control and flow	B. Steel Welded Wire Reinforcement: ASTM A 185/A 185M, platype.		
diagrams. Do not use Project Record Documents as maintenance drawings.	C. Reinforcement Accessories:		
D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.	1. Chairs, Bolsters, Bar Supports, Spacers: Sized a shaped for adequate support of reinforcement during cc crete placement.		
ARRANTIES AND BONDS	D. See notes and specifications on Structural Drawing Sheets.		
A. Obtain warranties and bonds, executed in duplicate by respon-	2.03 CONCRETE MATERIALS		
sible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put	A. Cement: ASTM C150, Type I - Normal Portland type.		
into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.	B. Fine and Coarse Aggregates: ASTM C 33.		
B. Verify that documents are in proper form, contain full information.	C. Water: Clean and not detrimental to concrete.		
e notarized. C. Co-execute submittals when re-	D. See notes and specifications on Structural Drawing Sheets.		

E. See Structural Drawings Sxxx for additional specifications. A. ACI 117 - Standard Specifications for Tolerances for Concre Construction and Materials; American Concrete Institute Interr B. ACI 211.1 - Standard Practice for Selecting Proportions for N mal, Heavyweight, and Mass Concrete; American Concrete In: C. ACI 301 - Specifications for Structural Concrete for Building American Concrete Institute International; Current Date. D. ACI 302.1R - Guide for Concrete Floor and Slab Construction American Concrete Institute International; Current Date. E. ACI 304R - Guide for Measuring, Mixing, Transporting, and Pla ing Concrete; American Concrete Institute International; Curre F. ACI 305R - Hot Weather Concreting; American Concrete Institu

2.04 ACCESSORY MATERIALS

A. Under slab Vapor Retarder: Multi-layer, fabric-, cord-, grid-, or

aluminum-reinforced polyethylene or equivalent, complying with

ASTM E1745, Class A; stated by manufacturer as suitable for in-



304 E. MAIN STREET ROUND ROCK, TX 78664 P: [512] 238 8912 F; [512] 238 8913

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CIVIL ENGINEER:

PAPE-DAWSON ENGINEERS 10801 N. MOPAC EXPRESSWAY BUILDING 3 - STE 200 AUSTIN. TX 78759 P: 512-454-8711 F: 512-459-8867

laurenanderson@pape-dawson.com STRUCTURAL ENGINEER

BLAKE WILSON

ENGINEERING. PL 637 W. HUTST BLVD. HURST, TX 76053 P: 817-268-2345 F: 817-282-1636 blakewilsoneng@sbcglobal.net

MEP ENGINEER:

AYS ENGINEERING, LLC 411 W Main Street, Suite 310 Round Rock, TX 78664 P: 512-961-6835 raleman@ayseng.com

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THIS SHEET IS ONLY ONE COMPONENT OF THE TOTAL DOCUMENT PACKAGE WHICH CONSISTS OF ALL SHEETS OF DRAWINGS AND THE PROJECT MANUAL



DATE: FEB 10, 2022

CONSTRUCTION DOCUMENTS HEATHERWILDE OFFICE **CONDOS BLDG**

201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660

PROJECT NO: 17003

REVISIONS:

DRAWN BY:	LC
REVIEWED BY:	SB

SPECS



stallation in contact with soil or granular fill under concrete slabs. The use of single ply polyethylene is prohibited.	3.09 PROTECTION	SECTION 03 3511 - CO
1. Accessory Products: Vapor retarder manufacturer's rec- ommended tape, adhesive, mastic, prefabricated boots.	A. Do not permit traffic over unprotected concrete floor surface until fully cured.	PART 1 GENERAL
etc., for sealing seams and penetrations in vapor retarder.		1.01 SECTION INCLUD
2. Products: a. Stego Industries, LLC: Stego Wran Vapor Barrier		A. Surface treat
15-mil (Class A): www.stegoindustries.com.		1.02 ADMINISTRATIVE
2.05 CURING MATERIALS		A. Coordinate th floor curing.
reduces rapid moisture loss caused by high temperature, low hu- midity, and high winds; intended for application immediately after concrete placement.		1.03 SUBMITTALS A. See Section (
B. Moisture-Retaining Sheet: ASTM C171.		procedures. B. Product Data
1. Polyethylene film, clear, minimum nominal thickness of 0.0040 in.		product, includin and limitations.
C. Water: Potable, not detrimental to concrete.		C. Maintenance applied finishes.
A. Proportioning Normal Weight Concrete: Comply with ACI 211.1		1.04 DELIVERY, STOR
B Normal Weight Concrete		application instructions.
1. Compressive Strength, when tested in accordance with		1.05 FIELD CONDITION
ASTM C39/C39M at 28 days: 3,000 pounds per square inch.		A. Maintain ligh at 8 feet above the floor finished.
tural Drawings.		C. Maintain amb
3. Maximum Aggregate Size: see Specifications and Notes on Structural Drawings.		PART 2 PRODUCTS
2.07 MIXING		2.01 POLISHED CONC
A. Transit Mixers: Comply with ACI 318.		A. Polished Co dures designed
PART 3 EXECUTION		
3.01 EXAMINATION		PART 3 EXECUTION
of this section.		3.01 EXAMINATION
3.02 PREPARATION		A. Verify that flo this section.
A. Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all applied loads until concrete is cured, and for easy removal without damage to concrete.		B. Verify that fla with methods ar
B. Coordinate placement of embedded items with erection of con- crete formwork and placement of form accessories.		3.02 GENERAL
C. Interior Slabs on Grade: Install vapor retarder under interior slabs		3.03 CONCRETE POLIS
penetrations watertight with manufacturer's recommended products and follow manufacturer's written instructions. Repair damaged va- por retarder before covering.		A. Execute usin manufacturer, u
3.03 INSTALLING REINFORCEMENT AND OTHER EMBEDDED ITEMS		1. Final included
A. Comply with requirements of ACI 301. Clean reinforcement of loose rust and mill scale, and accurately position, support, and secure in place to achieve not less than minimum concrete coverage required for protection.		sheen is of whet 2. Satin
B. Install welded wire reinforcement in maximum possible lengths,		B. Protect finish facturer of polishing sys
3.04 PLACING CONCRETE		
A. Place concrete in accordance with ACI 304R.		END OF SECTION 03 3
B. Place concrete for floor slabs in accordance with ACI 302.1R.		
C. Repair under slab vapor retarder damaged during placement of concrete reinforcing. Repair with vapor retarder material; lap over damaged areas a minimum 6-inches and seal watertight.		
D. Finish floors level and flat, unless otherwise indicated, within the tolerances specified below.		
3.05 CONCRETE FINISHING		
A. Concrete Slabs: Finish to requirements of ACI 302.1R, and as follows:		
1. Decorative Exposed Surfaces: "Steel trowel" as described in ACI 302.1R; use steel-reinforced plastic trowel blades in- stead of steel blades to avoid black-burnish marks; decora-		
tive exposed surfaces include surfaces to be polished. a. General Contractor to coordinate trades for con- crete pour and finishing prior to start of work.		
3.06 CURING AND PROTECTION		
A. Comply with requirements of ACI 308R. Immediately after place- ment, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.		
B. Maintain concrete with minimal moisture loss at relatively con- stant temperature for period necessary for hydration of cement and hardening of concrete.		
3.07 FIELD QUALITY CONTROL		
A. An independent testing agency will perform field quality control tests.		
B. Provide free access to concrete operations at project site and cooperate with appointed firm.		
3.08 DEFECTIVE CONCRETE		
A. Test Results: The testing agency shall report test results in writing to Architect/Engineer and Contractor within 24 hours of test.		

CTION 03 3511 - CONCRETE FLOOR FINISHES

RT 1 GENERAL

1 SECTION INCLUDES

A. Surface treatments for concrete floors and slabs.

2 ADMINISTRATIVE REQUIREMENTS

A. Coordinate the work with concrete floor placement and concrete 1.02 RELATED REQUIREMENTS r curing.

3 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal cedures.

B. Product Data: Manufacturer's published data on each finishing product, including information on compatibility of different products and limitations.

C. Maintenance Data: Provide data on maintenance and renewal of lied finishes.

4 DELIVERY, STORAGE, AND HANDLING A. Deliver materials in manufacturer's sealed packaging, including

5 FIELD CONDITIONS

A. Maintain light level equivalent to a minimum 200 W light source feet above the floor surface over each 20 foot square area of floor being shed

C. Maintain ambient temperature of 50 degrees F minimum.

RT 2 PRODUCTS

POLISHED CONCRETE SYSTEM

A. Polished Concrete System: Materials, equipment, and procedures designed and furnished by a single manufacturer to produce dense polished concrete of the specified sheen.

RT 3 EXECUTION

- A. Verify that floor surfaces are acceptable to receive the work of 1.07 FIELD CONDITIONS section.
- B. Verify that flaws in concrete have been patched and joints filled with methods and materials suitable for further finishes.

GENERAL

A. Apply materials in accordance with manufacturer's instructions.

3 CONCRETE POLISHING

A. Execute using materials, equipment, and procedures specified by manufacturer, using manufacturer approved installer.

- 1. Final Polished Sheen: Semigloss finish; other sheens are included as comparison to illustrate required sheen; final sheen is before addition of any sealer or coating, regardless
- of whether that is also specified or not. 2. Satin Finish: Reflecting images from side lighting.

B. Protect finished surface as required and recommended by manuurer of polishing system.

D OF SECTION 03 3511

SECTION 04 0511 - MASONRY MORTARING AND GROUTING

PART 1 GENERAL

- 1.01 SECTION INCLUDES
 - A. Mortar for masonry.
 - B. Grout for masonry.

A. Section 04 4301 - Stone Masonry Veneer: Installation of mortar.

1.03 REFERENCE STANDARDS

- A. ACI 530/530.1/ERTA Building Code Requirements and Specification for Masonry Structures; American Concrete Institute International; 2009.
- B. ASTM C91 Standard Specification for Masonry Cement; 2005. C. ASTM C94/C94M - Standard Specification for Ready-Mixed Con-
- crete; 2011. D. ASTM C270 - Standard Specification for Mortar for Unit Masonry;
- 2010. E. ASTM C476 - Standard Specification for Grout for Masonry; 2010.
- 2010.
- 1.04 SUBMITTALS
- A. See Section 01 3000 Administrative Requirements, for submittal 1.04 SUBMITTALS procedures.
 - B. Product Data: Include design mix and indicate whether the Pro-procedures. portion or Property specification of ASTM C270 is to be used. Also include required environmental conditions and admixture limitations.
- C. Samples: Submit two samples of mortar, illustrating mortar color and color range.
- 1.05 QUALITY ASSURANCE
- A. Comply with provisions of ACI 530/530.1/ERTA, except where exceeded by requirements of the contract documents.
- 1.06 DELIVERY, STORAGE, AND HANDLING
- A. Maintain packaged materials clean, dry, and protected against dampness, freezing, and foreign matter.

A. Cold and Hot Weather Requirements: Comply with requirements of ACI 530/530.1/ERTA or applicable building code, whichever is more stringent.

PART 2 PRODUCTS

2.01 MATERIALS

A. Masonry Cement: ASTM C91.

- 1. Type: as indicated by stone masonry veneer manufacturer.
- B. Water: Clean and potable.

2.02 MORTAR MIXING

- A. Thoroughly mix mortar ingredients in accordance with ASTM C270 and in quantities needed for immediate use.
- B. Maintain sand uniformly damp immediately before the mixing process.
- C. Do not use anti-freeze compounds to lower the freezing point of
- mortar. D. If water is lost by evaporation, re-temper only within two hours of
- mixing.
- 2.03 GROUT MIXING
 - A. Mix grout in accordance with ASTM C94/C94M.
 - B. Thoroughly mix grout ingredients in quantities needed for immediate use in accordance with ASTM C476 for fine and coarse grout.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install mortar and grout to requirements of section(s) in which masonry is specified.

3.02 GROUTING

A. Perform all grouting by means of low-lift technique. Do not employ high-lift grouting.

- B. Low-Lift Grouting:
 - 1. Limit height of pours to 16 inches (400 mm).
- 2. Limit height of masonry to 16 inches (400 mm) above 3.02 PREPARATION each pour.
 - 3. Pour grout only after vertical reinforcing is in place; place horizontal reinforcing as grout is poured. Prevent displacement of bars as grout is poured.
- 4. Place grout for each pour continuously and consolidate immediately; do not interrupt pours for more than 1-1/2 hours.

END OF SECTION 04 0511

SECTION 04 4301 - STONE MASONRY VENEER

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Field stone veneer at exterior walls.
- B. Metal anchors and accessories.
- C. Setting mortar and pointing mortar.

1.02 RELATED REQUIREMENTS A. Section 04 0511 - Masonry Mortaring

- pointing mortar.
- 1.03 REFERENCE STANDARDS
 - A. ACI 530/530.1/ERTA Building Code cation for Masonry Structures; America tional; 2009.
- B. ASTM A123/A123M Standard Spe Galvanized) Coatings on Iron and Steel
- C. ASTM C270 Standard Specification
- D. ASTM C568 Standard Specification Stone; 2010.
- A. See Section 01 3000 Administrative
- B. Samples: Submit two stone sample maximum stone sizes, color range, text
- C. Samples: Submit mortar color sampl
- 1.05 QUALITY ASSURANCE
 - A. Stone Fabricator Qualifications: Con cating cut stone with minimum ten years
 - B. Installer Qualifications: Company sp of the type required by this section, with ence.

1.06 MOCK-UP

PART 2 PRODUCTS

Classification I - Low Density.

2.03 ACCESSORIES

or adjacent surfaces.

for shedding water.

PART 3 EXECUTION

3.01 EXAMINATION

work of this section.

3.03 INSTALLATION

tions.

width.

2.04 STONE FABRICATION

2.01 STONE

2.02 MORTAR

1.07 DELIVERY, STORAGE, AND HANDLING A. Protect stone from discoloration duri

ION 04 4301 – STONE MASONRY VENEER	bearing surface. Use setting buttons or shims to maintain correc joint width.	
	E. Install weep/cavity vents in vertical stone joints at 36 inches or	
	shelf angles and supports, and at top of each cavity space; do no	
A. Field stone veneer at exterior walls.		
B. Metal anchors and accessories.	A. Attach wall ties to back-up to bond veneer to back-up at minimum	
C. Setting mortar and pointing mortar.	of one for every 2-2/3 sq ft .	
RELATED REQUIREMENTS	B. In addition, place wall ties at maximum 3 inches (75 mm) on cen- ter each way around perimeter of openings, within 12 inches (300	304 E. MAIN STREET ROUND ROCK TX 78664
A. Section 04 0511 - Masonry Mortaring and Grouting: Setting and ng mortar.	mm) of openings.	P: [512] 238 8912
REFERENCE STANDARDS	3.05 JOINTS	F; [512] 238 8913
A. ACI 530/530.1/ERTA - Building Code Requirements and Specifi-	1. Head joints in top courses, including copings, parapets	PLACEdesigners.com
tional; 2009.	cornices, sills, and steps.	CIVIL ENGINEER:
B. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2009.	2. Joints in projecting units.	PAPE-DAWSON ENGINEERS
C. ASTM C270 - Standard Specification for Mortar for Unit Masonry;	panels, and column covers.	10801 N. MOPAC EXPRESSWAY BUILDING 3 - STE 200
D. ASTM C568 Standard Specification for Limestone Dimension	4. Joints below lugged sills and stair treads.	AUSTIN, TX 78759 P: 512-454-8711 F: 512-459-8867
; 2010.	5. Joints below ledge and relieving angles.	
SUBMITTALS	B. Rake out mortar joints 5/8 to 3/4 inch (16 to 19 mm) and brush	
A. See Section 01 3000 - Administrative Requirements, for submittal dures.	joints clean to accommodate pointing mortar. Fill joints with pointing mortar.	ENGINEERING, PL 637 W. HUTST BLVD.
maximum stone sizes, color range, texture, and markings.	C. Pack mortar into joints and work into voids. Neatly tool surface to concave joint.	P: 817-268-2345 F: 817-282-1636 blakewilsoneng@sbcglobal.net
QUALITY ASSURANCE	D. At joints to be sealed, clean mortar out of joint before it sets Brush joints clean.	MEP ENGINEER:
A. Stone Fabricator Qualifications: Company specializing in fabri-	3.06 CLEANING	AYS ENGINEERING,LLC 411 W Main Street. Suite 310
cating cut stone with minimum ten years of experience.	A. Remove excess mortar as work progresses, and upon comple- tion of work.	Round Rock, TX 78664 P: 512-961-6835
of the type required by this section, with minimum 3 years of experi-	B. Clean soiled surfaces with cleaning solution.	raleman@ayseng.com
AOCK-UP	C. Use non-metallic tools in cleaning operations.	THESE DOCUMENTS MAY NOT BE REPRODUCED IN ANY FORM WITHOUT
A. Construct stone wall mock-up, 4 feet long by 6 feet wide; include	3.07 PROTECTION	THE WRITTEN CONSENT OF PLACE DESIGNERS, INC.
in mock-up.	A. During temporary storage on site, at the end of working day, and during rainy weather, cover stone work exposed to weather with non-staining waterproof coverings, securely anchored.	THIS SHEET IS ONLY ONE COMPONENT OF THE TOTAL DOCUMENT PACKAGE WHICH CONSISTS OF ALL SHEETS OF DRAWINGS AND THE PROJECT MANUAL
A. Protect stone from discoloration during storage on site.		
	END OF SECTION 04 4301	SERED ARCIN
2 PRODUCTS		
STONE		
A. Limestone: Selected by Contractor; complying with ASTM C568 ification I - Low Density.	2	18068 55
A Setting Mortar: ASTM C270 Type S using the Proportion Method		OF
as specified in Section 04 0511.		DATE: FEB 10, 2022
B. Pointing Mortar: Type N as specified in Section 04 0511, and us-		CONSTRUCTION
		DOCUMENTS
A. Wall Ties: Formed steel wire, 3/16" gage diameter, hot dip galva- nized per ASTM A123/A123M, eye and pintle type, with provision for vertical adjustment after attachment.		HEATHERWILDE OFFICE CONDOS BLDG
B. Weep/Cavity Vents: Polyethylene tubing.		4
C. Cleaning Solution: Type that will not harm stone, joint materials,		201 N. HEATHERWILDE
STONE FABRICATION		PFLUGERVILLE,
A. Nominal Thickness: 4 inch.		
B. Pattern and Coursing: random ashlar.		
C. Slope exposed top surfaces of stone and horizontal sill surfaces edding water.		REVISIONS:
3 EXECUTION		
EXAMINATION		
A. Verify that support work and site conditions are ready to receive		
PREPARATION		
A. Establish lines, levels, and coursing. Protect from disturbance.		
ΝSΤΑΙΙΑΤΙΩΝ		DRAWN BY: LC
A. Size stone units to fit opening dimensions and perimeter condi-		REVIEWED BY: SB
B. Arrange stone pattern to provide color uniformity and minimize		SPECS
visual variations, and provide a uniform blend of stone unit sizes.		
C. Analoge stone coursing in ashiar bond with consistent joint		
D. Set stone in full mortar setting bed to fully support stone over		A-011
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PLACE

SECTION 05 5000 - METAL FABRICATIONS	SECTIC	ON 05 5213 - PIPE AND TUBE RAILINGS
PART 1 GENERAL	PART 1	- GENERAL
1.01 SECTION INCLUDES	1.1	SUMMARY
A. Shop fabricated steel items.	A.	Section Includes:
1.02 RELATED REQUIREMENTS		1. Steel pipe and tube railings.
A. Section 03 3000 - Cast-in-Place Concrete: Placement of metal fabrications in concrete.	1.2	COORDINATION
B. Section 09 9000 - Painting and Coating: Paint finish.	Α.	Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are
1.03 REFERENCE STANDARDS		compatible with one another.
A. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; Current Date.	B.	Coordinate installation of anchorages for railings. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete. Deliver
B. SSPC-Paint 15 - Steel Joist Shop Primer; Society for Protective Coatings; Current Date.	0	such items to Project site in time for installation.
1.04 QUALITY ASSURANCE	C.	completed walls. Do not support railings temporarily by any means that do not satisfy structural performance requirements.
Engineer experienced in design of this Work and licensed in the	1.3	ACTION SUBMITTALS
State in which the Project is located.	A.	Product Data: For the following:
PART 2 PRODUCTS		1. Manufacturer's product lines of mechanically connected railings.
2.01 MATERIALS - STEEL		2. Railing brackets.
A. Pipe: ASTM A53/A53M, Grade B Schedule 40, black finish.		3. Grout, anchoring cement, and paint products.
B. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.	В.	Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
2.02 FABRICATED ITEMS	C.	Samples: For each type of exposed finish required.
A. Bollards: Steel pipe, concrete filled, crowned cap, as detailed; prime paint finish.		1. Sections of each distinctly different linear railing member, including handrails, top rails, posts, and balusters, including
2.03 FINISHES - STEEL		finish.
A. Clean surfaces of rust, scale, grease, and foreign matter prior to		2. Fittings and brackets.
finishing.	1.4	FIELD CONDITIONS
B. Prime Painting: One coat.	A.	Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication.
PART 3 EXECUTION	PART 2	- PRODUCTS
3.01 EXAMINATION	2.1	MANUFACTURERS
A. Verify that field conditions are acceptable and are ready to re- ceive work.	Α.	Steel Pipe and Tube Railings:
3.02 PREPARATION		1. Leading Edge Safety, LLC
A. Supply setting templates to the appropriate entities for steel items		2. Substitution – subject to approval
required to be cast into concrete or embedded	2.2	PERFORMANCE REQUIREMENTS
in masonry.	Α.	Structural Performance: Railings, including attachment to building construction, shall withstand the effects of gravity loads and the
3.03 INSTALLATION		following loads and stresses within limits and under conditions indicated
A. Install items plumb and level, accurately fitted, free from distortion or defects.		1. Handrails and Top Rails of Guards:
B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of		a. Uniform load of 50 lbf/ ft. applied in any direction.
erection and installation of permanent attachments.		b. Concentrated load of 200 lbf applied in any direction.
C. Obtain approval prior to site cutting or making adjustments not scheduled.		c. Uniform and concentrated loads need not be assumed to act concurrently.
END OF SECTION 05 5000		2. Infill of Guards:

anchors, that are to be embedded in concrete. Deliver ms to Project site in time for installation. ule installation so wall attachments are made only to ted walls. Do not support railings temporarily by any means not satisfy structural performance requirements. I SUBMITTALS t Data: For the following: lanufacturer's product lines of mechanically connected ailings. ailing brackets. rout, anchoring cement, and paint products. rawings: Include plans, elevations, sections, details, and ents to other work. : For each type of exposed finish required. ections of each distinctly different linear railing member, cluding handrails, top rails, posts, and balusters, including 2.7 nish ittings and brackets. CONDITIONS leasurements: Verify actual locations of walls and onstruction contiguous with metal fabrications by field ements before fabrication. CTS

- ACTURERS ipe and Tube Railings:
- eading Edge Safety, LLC
- ubstitution subject to approval
- RMANCE REQUIREMENTS

- andrails and Top Rails of Guards:
- Uniform load of 50 lbf/ ft. applied in any direction.
- Concentrated load of 200 lbf applied in any direction.
- Uniform and concentrated loads need not be assumed to act concurrently.
- nfill of Guards:
- Concentrated load of 50 lbf applied horizontally on an area of 1 sq. ft.
- Infill load and other loads need not be assumed to act
- concurrently. 2.3 METALS, GENERAL
- Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.
- B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.
- 1. Provide type of bracket with predrilled hole for exposed bolt anchorage and that provides 1-1/2-inch clearance from inside face of handrail to finished wall surface.

2.4 STEEL AND IRON

- A. Tubing: ASTM A 500 (cold formed).
- B. Pipe: ASTM A 53/A 53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.
- C. Plates, Shapes, and Bars: ASTM A 36/A 36M.
- Cast Iron: Either gray iron, ASTM A 48/A 48M, or malleable iron, D. ASTM A 47/A 47M, unless otherwise indicated.
- 2.5 FASTENERS
- A. General: Provide the following:
 - Hot-Dip Galvanized Railings: Type 304 stainless-steel or hot-dip zinc-coated steel fasteners complying with ASTM A 153/A 153M or ASTM F 2329 for zinc coating.
- Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction

indicated and capable of withstanding design loads.

- C. Fasteners for Interconnecting Railing Components:
 - 1. Provide concealed fasteners for interconnecting railing components and for attaching them to other work, unless exposed fasteners are unavoidable or are the standard fastening method for railings indicated.
 - 2. Provide Phillips flat-head machine screws for exposed fasteners.
 - Material for Interior Locations: Carbon-steel components zinc-plated to comply with ASTM B 633 or ASTM F 1941, Class Fe/Zn 5, unless otherwise indicated.

endations to ensure that shop primers and topcoats are 2.6 MISCELLANEOUS MATERIALS

- Welding Rods and Bare Electrodes: Select according to AWS 3.1 Α. specifications for metal alloy welded.
- Etching Cleaner for Galvanized Metal: Complying with MPI#25. B
- C. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.
- D. Epoxy Zinc-Rich Primer: Complying with MPI#20 and compatible with topcoat.
- Epoxy Intermediate Coat: Complying with MPI #77 and compatible with primer and topcoat.
- Polyurethane Topcoat: Complying with MPI #72 and compatible with undercoat.
- G. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound.
 - 1. Water-Resistant Product: provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended by manufacturer for exterior use.

FABRICATION

- General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural 3.3 loads.
- Shop assemble railings to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.
- C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- D. Form work true to line and level with accurate angles and surfaces.
- Fabricate connections that are exposed to weather in a manner Ε. that excludes water. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.
- F. Connections: Fabricate railings with either welded or non-welded connections unless otherwise indicated.
- Welded Connections: Cope components at connections to provide G. close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
- 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
- 2. Obtain fusion without undercut or overlap.
- 3. Remove flux immediately.

Н

- 4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.
- Fabricate splice joints for field connection using an epoxy structural adhesive if this is manufacturer's standard splicing method.
- Close exposed ends of railing members with prefabricated end fittinas.
- Provide wall returns at ends of wall-mounted handrails unless Ι. otherwise indicated. Close ends of returns unless clearance between end of rail and wall is 1/4 inch or less.
- Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.
- Provide inserts and other anchorage devices for connecting Κ. railings to concrete or masonry work. Fabricate anchorage devices capable of withstanding loads imposed by railings. Coordinate anchorage devices with supporting structure.
- For removable railing posts, fabricate slip-fit sockets from steel tube or pipe whose ID is sized for a close fit with posts; limit movement of post without lateral load, measured at top, to not more than one-fortieth of post height. Provide socket covers designed and fabricated to resist being dislodged.
- 1. Provide chain with eye, snap hook, and staple across gaps formed by removable railing sections at locations indicated. Fabricate from same metal as railings.
- Toe Boards: Where indicated, provide toe boards at railings Μ. around openings and at edge of open-sided floors and platforms. Fabricate to dimensions and details indicated.

2.8 STEEL AND IRON FINISHES

- A. Galvanized Railings:
 - Hot-dip galvanize indicated steel railings, including hardware, after fabrication.

- Do not quench or apply post galvanizing treatments that SECTION 06 16 13 INSULATING SHEA 2. might interfere with paint adhesion.
- B. For galvanized railings, provide hot-dip galvanized fittings, brackets, fasteners, sleeves, and other ferrous components.
- C. Preparing Galvanized Railings for Shop Priming: After galvanizing, thoroughly clean railings of grease, dirt, oil, flux, and other foreign matter, and treat with etching cleaner.
- D. Primer Application: Apply shop primer to prepared surfaces of railings unless otherwise indicated. Comply with requirements in SSPC-PA 1, "Shop, Field, and Maintenance Painting of Steel," for shop painting. Primer need not be applied to surfaces to be embedded in concrete or masonry.
- PART 3 EXECUTION
- EXAMINATION
- INSTALLATION, GENERAL 3.2
- A. Fit exposed connections together to form tight, hairline joints.
- Perform cutting, drilling, and fitting required for installing railings. В. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack. 1. Do not weld, cut, or abrade surfaces of railing components
 - that are coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
 - Set posts plumb within a tolerance of 1/16 inch in 3 feet.
- Align rails so variations from level for horizontal members 3. and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet.
- C. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.
- Adjust railings before anchoring to ensure matching alignment at D. abutting joints.
- E. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.
- Welded Connections: Use fully welded joints for permanently A. connecting railing components. Comply with requirements for welded connections in "Fabrication" Article whether welding is performed in the shop or in the field.
- ANCHORING POSTS 3.4

RAILING CONNECTIONS

- 1. For steel pipe railings, weld flanges to post and bolt to metal supporting surfaces.
- Install removable railing sections, where indicated, in slip-fit metal Α. sockets cast in concrete.
- ATTACHING RAILINGS 3.5
- Anchor railing ends at walls with round flanges anchored to wall construction and welded to railing ends.
- Anchor railing ends to metal surfaces with flanges bolted to metal surfaces and welded to railing ends.
- Attach railings to wall with wall brackets, except where end flanges are used. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads.
- Secure wall brackets and railing end flanges to building construction as follows:
- 1. For concrete anchorage, use drilled-in expansion shields and hanger or lag bolts.
- ADJUSTING AND CLEANING
- Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop painting to comply with SSPC-PA 1 requirements for touching up shoppainted surfaces.
- Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas, and repair galvanizing to comply with ASTM A 780/A 780M.
- Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial

END OF SECTION 05 5213

PART 1 - GENERAL

- 1.1 SUMMARY
- Α. Section includes insulating wall resistive barrier and air barrier.

REFERENCES

1.2

1.3

1.4

1.6

1.7

Α.

- A. ASTM International (ASTM): ww ASTM A153/A153M - Sp 1. Dip) on Iron and Steel Har 2. ASTM C1289 - Specific Polyisocyanurate Thermal ASTM D779 - Test Metho Paperboard, and Other Sh Method ASTM D1621 - Test Metho 4. Rigid Cellular Plastics ASTM D2247 - Practice 5. Coatings in 100% Relative 6. ASTM E96/E 96M -Transmission of Materials ASTM E331 - Test Method 7 Windows, Skylights, Doors Static Air Pressure Differe ASTM E2357 - Test Metho 8. Air Barrier Assemblies ASTM F1667 - Specificat Spikes, and Staples ACTION SUBMITTALS Product Data: For each type of s CLOSEOUT SUBMITTALS A. Warranty: Executed copy of man 1.5 DELIVERY, STORAGE, AND HA A. Comply with manufacturer's wri sheathing products from weather WARRANTY Special Manufacturer's Warranty which sheathing manufacturer ag products that demonstrate dete use due to manufacturing defects when installed according to manu 1. Warranty Period for Sheath date of Substantial Comple Warranty Conditions: 2. deterioration or failure due in stresses on sheathing p written specifications, or resulting from cladding fai PART 2 - PRODUCTS MANUFACTURERS
- Basis-of-Design Product: Provide by Huber Engineered Woods LI 933-9220; Website: www.zipsyste
- COMPOSITE INSULATING WAL 1.8
- Α. Composite Insulating Wall She Exposure 1 sheathing 7/16 ind water-resistive barrier exterior insulating board laminated to inte
- Basis-of-Design Product Woods LLC; ZIP System
- Span Rating and Performa Not less than 24/16; 7/16
- Thickness: 1 inch.
- Thermal Resistivity (R Val 4. in. at 75 deg F.
- Edge Profile: Square edg 5.

- 1. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.
- PROTECTION 3.7
- Completion.

ATHING		6. Exterior Facer: Medium-density, phenolic-impregnated polymer-modified sheet material meeting requirements fo ASTM D779 Grade D weather-resistive barrier in accordance with ICC AC38 and AC310, with fastener spacing symbols on exterior facer for 16-inch and 24-inch on center spacing with the following characteristics	
		a. Water Resistance of Coatings, ASTM D2247: Pase 14 day exposure test	
II chaothing with integral water		 b. Moisture Vapor Transmission, ASTM E96: Not less than 12 parms 	304 E. MAIN
in sheathing with integral water-		c. Water Penetration, ASTM E331: Pass at 2.86 lbf/sq ft.	ROUND ROCK P: [512] 23 F; [512] 23
		d. Wind Driven Rain, TAS-100: Pass.	PLACEdesig
ww.astm.org		e. Accelerated Weathening, ASTM G154. Fass.	CIVIL ENGINE
pecification for Zinc Coating (Hot- ardware	1.9	FASTENERS	PAPE-DAWSC ENGINEERS
cation for Faced Rigid Cellular al Insulation Board od for Water Resistance of Paper,	A.	Fasteners, General: Size and type complying with manufacturer's written instructions for Project conditions and requirements o authorities having jurisdiction.	10801 N. MOPAC BUILDING 3 - STE AUSTIN, TX 7875 P: 512-454-8711
heet Materials by the Dry Indicator		1. Corrosion Resistance: [Hot-dip zinc coating ASTM A153/A 153M] [or] [Type 304 stainless steel].	laurenanderson@p
od for Compressive Properties Of	В	Nails Brads and Staples: ICC AC116 and ICC AC201	BLAKE WILS
for Testing Water Resistance of e Humidity	с.	Power Driven Eastenere: ICC ES 1520 or NED 272	ENGINEERING 637 W. HUTST
Test Methods for Water Vapor	C.	Power-Driven Fasteners: ICC-ES-1539 of NER-272.	P: 817-268-2345 blakewilsoneng@s
d for Water Penetration of Exterior rs, and Curtain Walls by Uniform	D.	Wood Screws: ASME B18.6.1.	MEP ENGINE
od for Determining Air Leakage of	1.10	SHEATHING JOINT-AND-PENETRATION TREATMEN MATERIAL	AYS ENGINEE 411 W Main Street Round Rock, TX 7
ation for Driven Fasteners: Nails,	Α.	Self-Adhering Seam and Flashing Tape: Pressure-sensitive, self adhering, cold-applied, seam tape consisting of polyolefin film with acrylic adhesive, meeting ICC AC148.	P: 512-961-6835 raleman@ayseng.
		 Basis-of-Design Product: Provide Huber Engineerec Woods; ZIP System Tape. 	THESE DOCUMENTS REPRODUCED IN ANY THE WRITTEN CONS DESIGNERS, INC.
sheathing product specified.		2. Thickness: 0.012 inch.	THIS SHEET IS ONLY (OF THE TOTAL DOCU WHICH CONSISTS OF DRAWINGS AND THE PF
	PART 3 -	EXECUTION	STRED A
nufacturer special warranties.			Sel sel L
	1.11	EXAMINATION	
ANDLING	Α.	Examine framing spacing and alignment to determine if work is ready to receive sheathing. Proceed with sheathing work once	16068
itten instructions for protection of or prior to installation.		conditions meet requirements.	OF OF
	1.12	SHEATHING INSTALLATION	DATE: FEB 10,
y: Manufacturer's standard form in grees to repair or replace sheathing	A.	Install sheathing panels in accordance with manufacturer's writter instructions, requirements of applicable Evaluation Reports, and requirements of authorities having jurisdiction.	CONSTRU DOCUM
thing Products: 30 years following	В.	Air and Moisture Barrier: Coordinate sheathing installation with flashing and joint sealant installation and with adjacent building ai and moisture barrier components to provide complete, continuous	HEATHE
letion. Special warranties exclude		air- and moisture- barrier.	3
e to structural movement resulting products exceeding manufacturer's due to air or moisture infiltration	C.	Do not bridge expansion joints; allow joint spacing equal to spacing of structural supports.	201 N. HEATH BLVD. PFLUGERVILI
	D.	Install panels with laminated facer to exterior. Stagger end joints of adjacent panel runs.	TX 78660 PROJECT NO
	E.	Attach sheathing panels securely to substrate with manufacturer approved fasteners in compliance with the following:	REVISIONS:
		 ICC-ES ESR-1539 or ICC-NES NER-272 for power-driver fasteners. 	
esheathingproductsmanufactured _LC, Charlotte NC; Phone: (800) .tem.com.	F.	Apply seam tape at all panel seams, penetrations, and facer defects or cracks to form continuous weathertight surface. Apply tape according to manufacturer's written instructions and requirements of ICC-ES applicable to tape application.	
LL SHEATHING			
neathing: Oriented-strand-board nch thick, with factory-laminated facer, and with rigid foam plastic	END OF	SECTION 06 1613	DRAWN BY: REVIEWED BY:
t: Provide Huber Engineered			
R Sheathing. ance Category of Sheathing Layer: Performance Category.			JTE63
alue): 3.6 deg F x h x sq. ft./Btu x			Δ_0
ge.			



STREET K, TX 78664 38 8912 38 8913

gners.com

ER:

)N EXPRESSWAY E 200 F: 512-459-8867 pape-dawson.com

_ ENGINEER:

G, PL BLVD. F: 817-282-1636 sbcglobal.net

ER:

ERING,LLC et, Suite 310 8664 .com

MAY NOT FORM WITHOU

ONE COMPONENT JMENT PACKAGE ALL SHEETS OF ROJECT MANUAL



2022

UCTION **IENTS** RWILDE 6 BLDG

IERWILDE

17003

DRAWN BY:	LC
REVIEWED BY:	SB



SECTION 06 4100 - ARCHITECTURAL WOOD CASEWORK 4. Features: Provide self closing/stay closed type D. Hinges: European style concealed self-closing type, steel with satin finish. PART 1 GENERAL 2.07 FABRICATION 1.01 SECTION INCLUDES A. Assembly: Shop assemble cabinets for delivery to site in units A. Specially fabricated cabinet units easily handled and to permit passage through building openings. B. Countertops. B. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and C. Cabinet hardware. joints hairline; secure with concealed fasteners. 1.02 RELATED REQUIREMENTS C. Provide cutouts for electrical chords. Verify locations of cutouts from on-site dimensions. Prime paint cut edges. A. Section 09 9000 - Painting and Coating: Site finishing of cabinet exterior. 2.08 SHOP FINISHING 1.03 REFERENCE STANDARDS A. Sand work smooth and set exposed nails. A. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards; B. On items to receive transparent finishes, use wood filler match-2009. ing or blending with surrounding surfaces and of types recommended for applied finishes. 1.04 SUBMITTALS C. Finish work in accordance with AWI/AWMAC/WI Architectural A. See Section 01 3000 - Administrative Requirements, for submit-Woodwork Standards, Section 5 - Finishing for Grade specified tal procedures. and as follows: B. Shop Drawings: Indicate materials, component profiles, fasten-1. Transparent: ing methods, jointing details, and accessories. a. Stain: As selected by General Contractor. C. Product Data: Provide data for hardware accessories. b. Sheen: Semigloss. D. Samples: Submit actual samples of architectural cabinet construction, minimum 12 inches (300 mm) square, illustrating proposed cabinet substrate and finish. **PART 3 EXECUTION** 1.05 QUALITY ASSURANCE 3.01 EXAMINATION A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of A. Verify adequacy of backing and support framing. experience. B. Verify location and sizes of utility rough-in associated with work 1.06 DELIVERY, STORAGE, AND HANDLING of this section. A. Protect units from moisture damage. 3.02 INSTALLATION 1.07 FIELD CONDITIONS A. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level. A. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels B. Use concealed joint fasteners to align and secure adjoining planned for occupancy. cabinet units. C. Secure cabinets to floor using appropriate angles and anchorages. **PART 2 PRODUCTS** 3.03 CLEANING 2.01 CABINETS A. Clean casework, counters, shelves, hardware, fittings, and A. Quality Grade: Unless otherwise indicated provide products fixtures. of quality specified by AWI//AWMAC/WI Architectural Woodwork Standards for Custom Grade. B. Cabinets: END OF SECTION 06 4100 1. Finish - Exposed Exterior Surfaces: Wood. 2. Finish - Exposed Interior Surfaces: Wood. 3. Door and Drawer Front Edge Profiles: Square edge with thin applied band. 4. Casework Construction Type: Type A - Frameless. 5. Grained Face Layout for Cabinet and Door Fronts: Style and Rail, all Grades. a. Drawer fronts run grain either vertically or horizontally at the manufacturer's option. b. Doors: Vertical grain. 6. Cabinet Design Series: As indicated on the Drawings 7. Adjustable Shelf Loading: 50 lbs. per sq. ft. 8. Cabinet Style: Reveal overlay. 9. Cabinet Doors and Drawer Fronts: as indicated on drawings. 10. Drawer Construction Technique: Dovetail joints. 2.02 WOOD-BASED COMPONENTS A. Wood fabricated from old growth timber is not permitted. 2.03 LAMINATE MATERIALS A. Manufacturers: 1. Wilsonart International, Inc: www.wilsonart.com. 2.04 COUNTERTOPS A. Plastic Laminate Countertops: Medium density fiberboard substrate covered with HPDL, conventionally fabricated and self-edge banded. 2.05 ACCESSORIES A. Adhesive: Type recommended by fabricator to suit application.

2.06 HARDWARE

A. Adjustable Shelf Supports: Standard side-mounted system using surface mounted metal shelf standards or multiple holes for pin supports and coordinated self rests, satin chrome finish, for nominal 1 inch (25 mm) spacing adjustments.

B. Drawer and Door Pulls: __as selected by Contractor_____

C. Drawer Slides:

1. Type: Standard extension.

2. Static Load Capacity: Commercial grade.

3. Mounting: Side mounted.

SECTION 07 2100 - THERMAL INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Batt insulation in exterior wall and roof construction.

1.02 RELATED REQUIREMENTS

A. Section 07 2500 - Weather Barriers: Separate air barrier and vapor retarder materials.

1.03 REFERENCE STANDARDS

- A. ASTM C665 Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; Current Date.
- B. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials; Current Date.
- C. ASTM E136 Standard Test Method for Behavior of Materials in a Vertical Tube Furnace At 750 Degrees C; Current Date.

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
 - B. Product Data: Provide data on product characteristics, performance criteria, and product limitations.
 - C. Manufacturer's Installation Instructions: Include information on special environmental conditions required for installation and installation techniques.
- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

1.05 FIELD CONDITIONS

A. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

PART 2 PRODUCTS

2.01 BATT INSULATION MATERIALS

- A. Where batt insulation is indicated, either glass fiber or mineral fiber batt insulation may be used, at Contractor's option.
- B. Glass Fiber Batt Insulation: Flexible preformed batt or blanket,

complying with ASTM C665; friction fit.

1. Combustibility: Non-combustible, when tested in accordance with ASTM E136.

2. Formaldehyde Content: Zero

3. Thermal Resistance:

a. Exterior Walls: R-15

b. Roof: R-38

4. Facing: Un-faced.

5. Manufacturers:

- a. CertainTeed Corporation: www.certainteed.com.
- b. Johns Manville Corporation: www.jm.com.

c. Owens Corning Corp: www.owenscorning.com. C. Mineral Fiber Batt Insulation: Flexible preformed batt or blanket. complying with ASTM C665; friction fit; un-faced flame spread index of 0 (zero) when tested in accordance with ASTM E84.

1. Smoke Developed Index: 0 (zero), when tested in accordance with ASTM E84.

2. Thermal Resistance

a. Exterior Walls: R-13

b. Roof: R-19 + R-11 Liner System

3. Manufacturers:

a. Thermafiber, Inc: www.thermafiber.com.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation.

B. Verify substrate surfaces are flat, free of irregularities or materials or substances that may impede adhesive bond.

3.02 BATT INSTALLATION

- A. Install insulation in accordance with manufacturer's instructions. B. Install in exterior wall and roof spaces without gaps or voids. Do
- not compress insulation. C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps
- and voids.
- D. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation. 3.03 PROTECTION
- A. Do not permit installed insulation to be damaged prior to its concealment

END OF SECTION 07 2100

SECTION 07 2500 - WEATHER BARRIERS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Water-Resistive Barrier: Under exterior wall cladding, over sheathing or other substrate; not air tight or vapor retardant.

B. Air Barriers: Materials that form a system to stop passage of air through exterior walls, joints between exterior walls and roof, and joints around frames of openings in exterior walls.

1.02 RELATED REQUIREMENTS

- A. Section 03 3000 Cast-In-Place Concrete: Vapor retarder under concrete slabs on grade.
- B. Section 07 2100 Thermal Insulation: Vapor retarder installed in conjunction with batt insulation.
- C. Section 09 2116 Gypsum Board Assemblies: Water-resistive barrier under exterior cladding.
- 1.03 REFERENCE STANDARDS
- A. AATCC Test Method 127 Water Resistance: Hvdrostatic Pressure Test; Current Date.
 - B. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials; Current Date.
 - C. ASTM E96/E96M Standard Test Methods for Water Vapor Transmission of Materials: Current Date.
- D. ASTM E2178 Standard Test Method for Air Permeance of Building Materials; Current Date.
- E. ICC-ES AC38 Acceptance Criteria for Water-Resistive Barriers; ICC Evaluation Service, Inc.; Current Date.
- 1.04 SUBMITTALS
- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on material characteristics, performance criteria, and limitations.
- 1.05 FIELD CONDITIONS

A. Maintain temperature and humidity recommended by the materials manufacturers before, during and after installation.

PART 2 PRODUCTS

2.01 WEATHER BARRIER ASSEMBLIES

- A. Water-Resistive Barrier: Provide on exterior walls under exterior cladding
 - 1. Use building paper unless otherwise indicated.
 - B. Air Barrier:

1. On outside surface of sheathing of exterior walls at stone veneer use air barrier sheet, mechanically fastened type.

2.02 WATER-RESISTIVE BARRIER MATERIALS (NEITHER AIR BARRIER NOR VAPOR RETARDER)

A. Building Paper: Asphalt-saturated Kraft building paper complying with requirements of ICC-ES AC38 Grade D.

B. Plastic Sheet: Polymeric-based sheet complying with requirements of ICC-ES AC38 Grade D with 60-minute water-resistance; do not use polyethylene sheet.

2.03 AIR BARRIER MATERIALS (WATER VAPOR PERMEABLE AND WA-TER-RESISTIVE)

- A. Air Barrier Sheet, Mechanically Fastened:
 - 1. Air Permeance: 0.004 cubic feet per square foot maximum, when tested in accordance with ASTM E2178.
 - 2. Water Vapor Permeance: 20 perms minimum, when tested in accordance with ASTM E96/E96M Procedure A (desiccant method).
 - 3. Water Penetration Resistance: Withstand a water head of 21 inches minimum, for minimum of 5 hours, when tested in accordance with AATCC 127.
 - 4. Ultraviolet and Weathering Resistance: Approved in writing by manufacturer for minimum of 4 months weather exposure.
 - 5. Surface Burning Characteristics: Flame spread index of 25 or less, smoke developed index of 50 or less, when test-
- ed in accordance with ASTM E84.
- 2.04 SEALANTS

9005.

- A. Polyurethane Sealant: Type 1 as specified in Section 07
- B. Silicone Sealant: Type 7 as specified in Section 07 9005.
- PART 3 EXECUTION
- 3.01 EXAMINATION
- A. Verify that surfaces and conditions are ready to accept the work of this section.
- 3.02 PREPARATION
 - A. Remove projections, protruding fasteners, and loose or foreign matter that might interfere with proper installation.
- 3.03 INSTALLATION
 - A. Install materials in accordance with manufacturer's instructions.

B. Water-Resistive Barriers: Install continuous barrier over surfaces indicated, with sheets lapped to shed water but with seams not sealed.

faces.

1. Install sheets shingle-fashion to shed water, with seams

least 6 inches.

ings.

generally horizontal.

by the manufacturer.

edaes.

backer rod.

3.04 FIELD QUALITY CONTROL

have been completed.

mended by manufacturer.

END OF SECTION 07 2500

PART 1 GENERAL

1.1 SECTION INCLUDES

3. Starter shingles.

5. Fasteners.

Waterproofing.

Waterproofing.

1.2 RELATED SECTIONS

1.3 REFERENCES

longer than one week.

3.05 PROTECTION

C. Air Barriers: Install continuous air tight barrier over surfaces indicated, with sealed seams and with sealed joints to adjacent sur-

D. Mechanically Fastened Sheets - On Exterior:

2. Overlap seams as recommended by manufacturer but at

3. Overlap at outside and inside corners as recommended by manufacturer but at least 12 inches.

4. For applications specified to be air tight, seal seams, laps, penetrations, tears, and cuts with self-adhesive tape; use only large-headed, gasketed fasteners recommended

5. Install water-resistive barrier over jamb flashings. 6. Install air barrier and vapor retarder UNDER jamb flash-

7. Install head flashings under weather barrier.

8. At openings to be filled with frames having nailing flanges, wrap excess sheet into opening; at head, seal sheet over flange and flashing.

E. Openings and Penetrations in Exterior Weather Barriers:

1. Install flashing over sills, covering entire sill frame member, extending at least 5 inches onto weather barrier and at least 6 inches up jambs; mechanically fasten stretched

2. At openings to be filled with frames having nailing flanges, seal head and jamb flanges using a continuous bead of sealant compressed by flange and cover flanges with at least 4 inches wide; do not seal sill flange.

3. At openings to be filled with non-flanged frames, seal weather barrier to all sides of opening framing, using flashing at least 9 inches wide, covering entire depth of framing.

4. At head of openings, install flashing under weather barrier extending at least 2 inches beyond face of jambs; seal weather barrier to flashing.

5. At interior face of openings, seal gap between window/ door frame and rough framing, using joint sealant over

6. Service and Other Penetrations: Form flashing around penetrating item and seal to weather barrier surface.

A. Do not cover installed weather barriers until required inspections

A. Do not leave materials exposed to weather longer than recom-

B. Do not leave paper- or felt-based barriers exposed to weather for

SECTION 07 3113 - FIBERGLASS-BASED ASPHALT SHINGLES

A. Roof shingles and accessories including the following:

1. Fiberglass-based asphalt shingles

Hip and ridge shingles.

Shingle underlayment Metal flashing and trim.

B. Section 076200 – Sheet Metal Flashing and Trim.

C. Section 077123 – Manufactured Gutters and Downspouts

D. ASTM International (ASTM):

1. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

2. ASTM D226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and

3. ASTM D228 - Standard Test Method for Sampling, Testing, and Analysis of Asphalt Roll Roofing, Cap Sheets, and Shingles Used in Roofing and

4. ASTM D1079 – Standard Terminology Relating to Roofing and Waterproofing.

5. ASTM D3018 - Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules.

6. ASTM D3161 - Standard Test Method for Wind-Resistance of Asphalt Shingles (Fan-Induced Method).

7. ASTM D4869 - Standard Specification for Asphalt-Saturated Organic Felt Underlayment Used in Steep Slope Roofing.

8. ASTM D6381 - Standard Test Method for Measurement of Asphalt Shingle Mechanical Uplift Resistance.

9. ASTM D6757 - Standard Specification for Underlayment Felt Containing Inorganic Fibers Used in Steep-Slope Roofing.

10. ASTM D7158 - Standard Test Method for Wind Resistance of Sealed Asphalt Shingles (Uplift Force/ Uplift Resistance Method).

11. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings.

12. ASTM F1667 - Standard Specification for Driven Fasteners: Nails, Spikes, and Staples.

E. Underwriters Laboratories (UL):

1. UL 790 - Standard Test Methods for Fire Test of Roof Coverings.

2. UL 997 – Wind Resistance of Prepared Roof Covering Materials.

3. UL 2218 - Impact Resistance of Prepared Roof Covering Materials.

4. UL 2390 - Test Method for Wind Resistant Asphalt Shingles with Sealed Tabs.

5. UL 1897 – Uplift Tests for Roof Covering Systems 1.4 SUBMITTALS

F. Submit under provisions of Section 013300 - Submittal Procedures.

G. Submit printed copies of product data sheets indicating product characteristics, product information, installation instructions (including required preparation and installation procedures) and product limitations and color samples.

H. Warranty: Submit manufacturer's warranty and ensure forms have been completed in Owner's name and are registered with manufacturer.

I. Selection Samples: Two complete sets of samples, representing manufacturer's full range of available products and colors.

J. Verification Samples: For each product and finish specified, two samples representing actual products and colors.

1.5 QUALITY ASSURANCE

K. Manufacturer Qualifications: Provide all primary roofing products, including shingles, underlayment, by a single manufacturer.

L. Installer Qualifications: Company trained and authorized by roofing system manufacturer.



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CIVIL ENGINEER:

PAPE-DAWSON ENGINEERS 10801 N. MOPAC EXPRESSWAY BUILDING 3 - STE 200 AUSTIN. TX 78759 P: 512-454-8711 F: 512-459-8867 laurenanderson@pape-dawson.com

STRUCTURAL ENGINEER

BLAKE WILSON ENGINEERING. PL 637 W. HUTST BLVD. HURST, TX 76053 P: 817-268-2345 F: 817-282-1636 blakewilsoneng@sbcglobal.net

MEP ENGINEER:

AYS ENGINEERING, LLC 411 W Main Street, Suite 310 Round Rock, TX 78664 P: 512-961-6835 raleman@ayseng.com

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DATE: FEB 10, 2022

CONSTRUCTION DOCUMENTS **HEATHERWILDE** OFFICE **CONDOS BLDG**

201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660 PROJECT NO: 17003

REVISIONS:

DRAWN BY:	LC
REVIEWED BY:	SB

SPECS





1.6 DELIVERY, STORAGE, AND HANDLING

M. Deliver materials to site in manufacturer's unopened bundles with labels intact and legible.

N. Store all products in manufacturer's unopened, labeled packaging until they are ready for installation.

O. Store all products in accordance with manufacturer's recommendations.

P. Do not install underlayment or shingles on wet surfaces.

Q. Store and dispose of solvent-based materials in accordance with all federal, state and local regulations.

R. For rooftop loading, lay shingle bundles flat. Do not bend over the ridge.

1.7 WARRANTY S. See Section 01 7800-Closeout Submittals, for additional warranty requirements.

PART 2 PRODUCTS

1.1 MANUFACTURERS

A. Acceptable Manufacturers: Owens Corning Roofing and Asphalt, LLC., GAF, Commercial Roofing Products.

B. Requests for substitutions will be considered upon review.

- 1.2 ASPHALT SHINGLES
- C. Duration® Premium (Algae Resistant) Shingles or Equal: 1. Nominal Size: 13-1/4 in (337 mm) by 39-3/8 in (1000 mm)
- 2. Exposure: 5-5/8 in (143 mm).
- 3. Shingles per Square: 64.
- 4. Bundles per Square: 4 bundles of 16 shingles.
- 5. Coverage per Square: 98.4 sq ft (9.1 sq m).
- 6. Color: As selected from manufacturer's full range.

7. Standards/Qualifications: ASTM D228, ASTM D3018 (Type 1), ASTM D3161 (Class F Wind Resistance), ASTM D3462, ASTM D7158 (Class H Wind Resistance), ASTM E108/UL 790 (Class A Fire Resistance), ICC-ES AC438, and UL ER2453-01.

1.3 HIP AND RIDGE SHINGLES

D. DuraRidge® Hip and Ridge (Algae Resistant) Shingles with Sealant or Equal:

1. Nominal Size: 12 in (305 mm) by 10 ⁵/₈ in (270 mm) with 8 in (203 mm) exposure

2. Standards/Qualifications: ASTM D3018 (Type 1), ASTM D3161 (Class F Wind Resistance), ASTM D3462. ASTM E108/UL790 (Class A Fire Resistance), ICC-ES AC438, UL ER2453-01, Florida Product Approval, Miami-Dade County Product Approval, and CSA A123.5.

- 1.4 STARTER SHINGLES
- E. Starter Strip Shingle:

1. Nail applied starter course. Individual starter shingle is 6-5/8 in (168 mm) by 39-3/8 in (1000 mm).

2. Standards/Qualifications: ASTM D3462, ASTM D3161 (Class F Wind Resistance), ASTM E108/UL 790 (Class A Fire Resistance), CSA A123.5, ICC-ES AC438, UL ER2453-01

- 1.5 MECHANICALLY FASTENED UNDERLAYMENTS
 - F. Fiberglas™ Reinforced Felt Underlayment.

1. Wrinkle resistant, water resistant, breather type cellulose/glass fiber composite roofing underlayment.

- 2. Roll Width: 36 in (914 mm).
- 3. Roll Length: 141.5 ft (43.1 m).
- 4. Coverage Per Roll: 4 roof squares.

5. Standards/Qualifications: ASTM D226 (Type II), ASTM D4869 (Type IV), ASTM D6757.

1.6 FASTENERS

G. Fasteners: Galvanized steel, stainless steel, or aluminum nails complying with ASTM F1667, minimum 12-gauge, 0.0808 in (2.05 mm) shank with 3/8 in (9.5 mm) diameter head. Check local building code requirements.

1.7 METAL FLASHING

H. Flashing: Provide flashing as specified by Section 076200 – Sheet Metal Flashing and Trim.

PART 3 EXECUTION

1.1 EXAMINATION

A. Prior to starting work, examine all roof decks on which work will be applied for defects in materials and workmanship.

B. Do not begin installation until the roof deck has been properly prepared.

C. If another installer is responsible for roof deck preparation, notify the architect, designer-of-record on the project, or building owner of unsatisfactory preparation prior to proceeding with installation. Commencement of installation constitutes acceptance of conditions.

D. Underlayment and shingles installed directly over roof insulation or similar type decks is not approved.

1.2 PREPARATION

E. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

F. Remove all existing roofing down to the roof deck.

G. Verify that the deck is dry, structurally sound, clean and smooth. It shall be free of any depressions, waves, and projections. Cover ALL holes 1 in (25 mm) or less in diameter, cracks over 1/2 in (13 mm) in width, loose knots and excessively resinous areas with minimum 28 gauge; 0.0187 in (0.475 mm) galvanized steel, 0.0156 in (0.396 mm) stainless steel, or 0.0126 in (0.320 mm) aluminum sheet metal. Decking or deck boards with holes greater than 1 in (25 mm) in diameter shall be replaced.

H. Replace damaged deck with new materials.

I. Verify installed roof deck is acceptable to receive shingles. Acceptable roof decks include the following:

1. Wood boards: 6 in (152 mm) minimum width. 3/4 in (19 mm) minimum thickness.

2. Plywood sheathing: 3/8 in (9.5 mm) minimum thickness Exposure 1 grade plywood sheathing as recommended by APA and in compliance with local building code requirements.

3. Spacing between boards or panels shall not exceed 1/4 in (6.4 mm) between roof boards or 1/8 in (3.2 mm) between plywood panels.

1.3 UNDERLAYMENT INSTALLATION

J. General: Comply with underlayment manufacturer's written installation instructions applicable to products and applications indicated unless more stringent requirements apply.

K. Drip Edge

1. Drip edge shall be installed on all roof edges.

2. Install drip edge on eaves first with underlayment installed over the drip edge, or install per local code requirements.

3. Install drip edge on rakes after underlayment is installed, with the drip edge fastened over the underlayment.

4. Joints in drip edge shall be lapped minimum 2 in (51 mm) with the upslope piece lapped over the down slope piece, or per local building code requirements

5. Install fasteners 8 in to 10 in (203 mm to 254 m) on center, approximately 1-3/4 in (44 mm) to 3 in (76 mm) from the outside edge of the drip edge, or per local building code requirements.

L. Valleys

1. Install self-adhering ice and water barrier at least 36 in (914 mm) wide and centered on the valley. Lap ends 6 in (152 mm) and seal.

2. Where valleys are indicated to be "open valleys", install metal flashing over self-adhering ice and water barrier before roof deck underlayment is installed; DO NOT nail through the flashing. Secure the flashing by nailing at 18 in (457 mm) on center just beyond edge of flashing so that nail heads hold down the edge, or use valley metal with a formed edge and secure with clips.

M. Roof Deck

1. On roofs with slope greater than 4:12, lap horizontal edges at least 2 inches (51 mm) and at least 2 inches (51 mm) over self-adhering ice and water barrier. Lap ends at least 4 inches (102 m). End laps in succeeding course should be located at least 6 ft (1.8 m) from end laps in the preceding course.

2. On roofs with pitch between 2:12 to less than 4:12, see application instructions printed on each shingle wrapper, or follow local code requirements.

3. Lap underlayment over valley protection at least 6 inches (152 mm).

N. Penetrations

1. Vent pipes: Install a 24 in (610 mm) square piece of self-adhering ice and water barrier lapping over roof deck underlayment; seal tightly to pipe.

2. Vertical walls: Install self-adhering ice and water barrier extending at least 3 in to 4 in (76 mm to 102 mm) up the wall and 12 in (305 mm) onto the roof surface. Lap the membrane over the roof deck underlayment.

3. Chimneys: Install self-adhering ice and water barrier around entire chimney extending at least 6 in (152 mm) up the wall and 12 in (305 mm) on to the roof surface. Lap the membrane over the roof deck underlayment.

1.4 SHINGLE INSTALLATION

O. Install shingles (including started shingles as well as hip and ridge shingles) in accordance with manufacturer's installation instructions and in accordance with local SECTION 074646 - FIBER-CEMENT SIDING building code requirements.

P. Install starter course at lowest roof edge and along rake with edge of shingles extending 1/4 in (6.4 mm) over edge of roof. Sealant strip should be closest to roof edge.

Q. Install first and successive courses of shingles stepping diagonally up and across roof deck with manufacturer's recommended offset at each succeeding course. Maintain uniform exposure of shingles at each succeeding course. Use of a chalk line every other course is recommended.

R. Fasten shingles to deck with number of roofing nails per shingle and type of nails specified by manufacturer, or in accordance specified by local Authority Having Jurisdiction.

S. All fasteners must be driven flush with the shingle surface and penetrate at least 3/4 in (19.1 mm) into the wood deck. Where the deck is less than 3/4 in (19.1 mm) thick, the fastener should be long enough to penetrate fully and extend through the roof sheathing.

T. Install shingles at valleys, eaves, rakes, hips and ridges in accordance with manufacturer installation instructions and local building code requirements.

1.5 PROTECTION

U. Protect installed products until completion of project.

V. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

- Section includes fiber-cement siding and soffit.
- Related Requirements: В.
- 1. Section 061000 "Rough Carpentry" for wood furring, grounds, nailers, and blocking.
- Section 062013 "Exterior Finish Carpentry" for exterior 2. trim
- 1.2 COORDINATION
- Coordinate siding installation with flashings and other adjoining construction to ensure proper sequencing. 1.3 ACTION SUBMITTALS
- Product Data: For each type of product. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- Samples for Initial Selection: For fiber-cement siding and soffit including related accessories.
- CLOSEOUT SUBMITTALS 1.4
- Maintenance Data: For each type of product, including related accessories, to include in maintenance manuals. QUALITY ASSURANCE
- Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and to set quality standards for fabrication and installation.
- DELIVERY, STORAGE, AND HANDLING 1.6
- Deliver and store packaged materials in original containers with labels intact until time of use.
- Store materials on elevated platforms, under cover, and in a dry location.
- WARRANTY 1.7

1.5

- Special Warranty: Manufacturer agrees to repair or replace products that fail in materials or workmanship within specified warranty period.
- 1. Failures include, but are not limited to, the following
- Structural failures including cracking and deforming. a.
- b. Deterioration of materials beyond normal weathering
- Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

MANUFACTURERS 2.1

- Source Limitations: Obtain products, including related accessories, from single source from single manufacturer.
- FIBER-CEMENT SIDING 2.2
- General: ASTM C 1186, Type A, Grade II, fiber-cement board, noncombustible when tested according to ASTM E 136; with a flame-spread index of 25 or less when tested according to ASTM E 84.
 - Nominal Thickness: Not less than 5/16 inch (8 mm).
- Horizontal Pattern: Boards 6-1/4 to 6-1/2 inches wide in plain 1.4

1. Texture: Wood grain.

- D. Factory Priming: Manufacturer's standard acrylic primer.
- 2.3 FIBER-CEMENT SOFFIT
- General: ASTM C 1186, Type A, Grade II, fiber-cement board, noncombustible when tested according to ASTM E 136; with a flame-spread index of 25 or less when tested according to ASTM E 84.
- Nominal Thickness: Not less than 5/16 inch.
- Pattern: 18-inch wide sheets with wood-grain texture.
- D. Ventilation: Provide unperforated soffit.
- Factory Priming: Manufacturer's standard acrylic primer.
- ACCESSORIES 2.4
- Siding Accessories, General: Provide starter strips, edge trim, outside and inside corner caps, and other items as recommended by siding manufacturer for building configuration.
- Decorative Accessories: Provide the following fiber-cement decorative accessories as indicated:
- Corner posts.
- Door and window casings.
- 3. Fasciae.
- 4. Moldings and trim.
- C. Flashing: Provide stainless-steel flashing complying with Section 076200 "Sheet Metal Flashing and Trim" at window and door heads and where indicated.
- D. Fasteners:

1. For fastening to wood, use siding penetrate a minimum of 1 inch int

2. For fastening fiber cement, fasteners

PART 3 - EXECUTION

3.2

3.1 EXAMINATION Examine substrates for compliance Α. installation tolerances and other condition of fiber-cement siding and soffit and relat Proceed with installation only after unsati Β. been corrected. PREPARATION Clean substrates of projections and su application. INSTALLATION 3.3

- General: Comply with manufacturer's write applicable to products and applications stringent requirements apply.
- 1. Do not install damaged componer
- 2. Install fasteners no more than 24 Install joint sealants as specified in Section and to produce a weathertight installation
- ADJUSTING AND CLEANING 3.4
- Remove damaged, improperly installed materials and replace with new materials requirements.
- Clean finished surfaces according to instructions and maintain in a clean conc

END OF SECTION 074646

SECTION 076200 - SHEET METAL FLASHING A

PART 1 - GENERAL

Α.

1.3

1.5

1.6

В.

17

Α.

1.1 SUMMARY A. Section Includes: 1. Formed wall sheet metal fabrication 1.2 COORDINATION Coordinate sheet metal flashing and tri sizes and locations of penetrations to b seams in adjacent materials. Coordinate sheet metal flashing and trim roofing and wall materials, joints, and see secure, and noncorrosive installation. ACTION SUBMITTALS Product Data: For each type of product. 1. Include construction details, dimensions of individual compo finishes for each manufactured pro-CLOSEOUT SUBMITTALS Maintenance Data: For sheet metal fla accessories, to include in maintenance r QUALITY ASSURANCE Fabricator Qualifications: Employs skill

- fabricate sheet metal flashing and trim s this Project and whose products have a service performance.

Do not store sheet metal flashing and trin uncured concrete and masonry.

Protect strippable protective covering or trim from exposure to sunlight and high necessary for period of sheet metal flash

WARRANTY

Special Warranty on Finishes: Manufactu or replace sheet metal flashing and trin deterioration of factory-applied finishes period

1. Exposed Panel Finish: Deteriora limited to, the following:

- Color fading more than 5 a. according to ASTM D 2244.
- c. Cracking, checking, peelin
- 2. Finish Warranty Period: 10 years

- DELIVERY, STORAGE, AND HANDLIN
- other materials that might cause staining damage. Store sheet metal flashing and

- Chalking in excess of a N according to ASTM D 4214.
- adhere to bare metal.
- Completion.

nails of sufficient length to o substrate.			
use hot-dip galvanized	PART 2	- PRODUCTS	
	2.1	PERFORMANCE REQUIREMENTS	
	A.	Sheet Metal Standard for Flashing and Trim: Comply with NRCA's "The NRCA Roofing Manual" and SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated	
with requirements for	22		
ons affecting performance ted accessories.	Δ.2	General: Protect mechanical and other finishes on exposed	304 E. MAIN STREET ROUND ROCK, TX 78664
tisfactory conditions have	<i>.</i>	surfaces from damage by applying strippable, temporary protective film before shipping.	P: [512] 238 8912 F; [512] 238 8913
	В.	stainless-Steel Sheet: ASTM A 240/A 240M, dead soft, fully annealed; with smooth, flat surface.	PLACEdesigners.com
ubstances detrimental to	2.3	UNDERLAYMENT MATERIALS	
	Α.	Slip Sheet: Rosin-sized building paper, 3 lb/100 sq. ft. minimum.	
ten installation instructions	2.4	MISCELLANEOUS MATERIALS	ENGINEERS
s indicated unless more nts.	A.	General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal unless otherwise indicated.	10801 N. MOPAC EXPRESSWAY BUILDING 3 - STE 200 AUSTIN, TX 78759 P: 512-454-8711 F: 512-459-8867 laurenanderson@pape-dawson.com
	2.5	MANUFACTURED SHEET METAL FLASHING AND TRIM	STRUCTURAL ENGINEER:
n. d, or otherwise defective s complying with specified	A.	Through-Wall, Ribbed, Sheet Metal Flashing: Manufacture through- wall sheet metal flashing for embedment in masonry, with ribs at 3-inch intervals along length of flashing to provide integral mortar bond. Manufacture through-wall with interlocking counterflashing on exterior face, of same metal as flashing.	BLAKE WILSON ENGINEERING, PL 637 W. HUTST BLVD. HURST, TX 76053 P: 817-268-2345 F: 817-282-1636
		1. Stainless Steel: 0.016 inch thick.	blakewilsoneng@sbcglobal.net
o manufacturer's written dition during construction.	B.	Reglets: Units of type, material, and profile required, formed tc provide secure interlocking of separate reglet and counterflashing pieces, and compatible with flashing indicated with factory- mitered and -welded corners and junctions and with interlocking counterflashing on exterior face, of same metal as reglet].	MEP ENGINEER: AYS ENGINEERING,LLC 411 W Main Street, Suite 310 Round Rock, TX 78664 P: 512-961-6835
		Material: [Stainless steel, 0.019 inch thick. Surface Mauritadi Turcu, Dravide with electron fee	raleman@ayseng.com
AND TRIM		fastening to substrate, with neoprene or other suitable	THESE DOCUMENTS MAY NOT BE REPRODUCED IN ANY FORM WITHOUT THE WRITTEN CONSENT OF PLACE DESIGNERS. INC.
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			DRAWINGS AND THE PROJECT MANUAL
			Stender
ons			
m layout and seams with e flashed, and joints and			TIE OF TELES
installation with adjoining ams to provide leakproof,			DATE: FEB 10, 2022
material descriptions, onents and profiles, and roduct and accessory.			HEATHERWILDE OFFICE
ashing and trim, and its manuals.			4 201 N. HEATHERWILDE
led workers who custom			BLVD. PFLUGERVILLE,
a record of successful in-			PROJECT NO: 17003
G			REVISIONS :
n materials in contact with , denting, or other surface trim materials away from			
n sheet metal flashing and humidity, except to extent ning and trim installation.			
urer agrees to repair finish n that shows evidence of within specified warranty			
ation includes, but is not			DRAWN BY: LC REVIEWED BY: SB
Hunter units when tested			
No. 8 rating when tested			
ig, or lanure of paint to			
from date of Substantial			A-014

		weatherproofing washers, and with channel for sealant at	SECTION 07 7123 - MANUFACTURED GUTTERS AND DOWNSPOUTS	SECTION 07 8400 -
2.6	FABI	RICATION, GENERAL		
А.	Gene	eral: Custom fabricate sheet metal flashing and trim to	PART 1 GENERAL	PART 1 GENERAL
	com meta	ply with details shown and recommendations in cited sheet al standard that apply to design, dimensions, geometry, metal	1.01 SECTION INCLUDES	1.01 SECTION INCL
	thick shee	ness, and other characteristics of item required. Fabricate t metal flashing and trim in shop to greatest extent possible.	A. Pre-finished aluminum gutters and downspouts. 1.02 RELATED REQUIREMENTS	A. Firestoppin and smoke-re not.
	1.	Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not	A. Section 07 4113: Metal Roof Panels.	1.02 RELATED REQ
		less than that specified for each application and metal.	1.03 REFERENCE STANDARDS	A. Section 09
	2.	Obtain field measurements for accurate fit before shop fabrication.	A. AAMA 2604 - Voluntary Specification, Performance Require- ments and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels: Current Date	fireproofing. 1.03 REFERENCE S
	3.	excessive oil canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to	B. ASTM B209 - Standard Specification for Aluminum and Alumi- num-Alloy Sheet and Plate; Current Date.	A. ASTM E1 ² Construction
	4.	Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.	C. ASTM B209M - Standard Specification for Aluminum and Alumi- num-Alloy Sheet and Plate; Current Date.	B. ASTM E8 Penetration F
	EVE		D. SMACNA (ASMM) - Architectural Sheet Metal Manual; Sheet Metal and Air Conditioning Contractors' National Association; Cur- rent Date.	Inc.; Current Date.
PARI 3	- EXE		1.04 DESIGN REQUIREMENTS	A. See Sectio
Δ	Exa	minATION	A. Conform to SMACNA Architectural Sheet Metal Manual for sizing	procedures.
Α.	for of subs	compliance with requirements for installation tolerances, trate, and other conditions affecting performance of the	components for rainfall intensity determined by a storm occurrence of 1 in 5 years.	1.05 QUALITY ASSU A. Fire Testi
	1.	Verify compliance with requirements for installation	B. Conform to applicable code for size and method of rain water discharge.	provide the s methods indi
		tolerances of substrates.	1.05 SUBMITTALS	1.06 FIELD CONDITI
	2.	Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.	A. See Section 01 3000 - Administrative Requirements, for submittal procedures.	A. Comply w temperature minimum tem
	3.	Verify that air- or water-resistant barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.	1.06 DELIVERY, STORAGE, AND HANDLING A. Stack material to prevent twisting, bending, or abrasion, and to	tion of materi B. Provide v
В.	Proc been	eed with installation only after unsatisfactory conditions have a corrected.	provide ventilation. Slope to drain.B. Prevent contact with materials that could cause discoloration,	being installed.
3.2	UND	ERLAYMENT INSTALLATION	staining, or damage.	PART 2 PRODUCTS
Α.	Apply shee	y slip sheet, wrinkle free, directly on substrate before installing t metal flashing and trim.		2.01 FIRESTOPPING
3.3	INST	TALLATION, GENERAL	2 01 MATERIALS	A. Primers, S
А.	Gene	eral: Anchor sheet metal flashing and trim and other components	A. Pre-Finished Aluminum Sheet: ASTM B209 (ASTM B209M):	2 02 FIRESTOPPING
	of th struc sepa	the Work securely in place, with provisions for thermal and stural movement. Use fasteners[, solder], protective coatings, irators, sealants, and other miscellaneous items as required	0.032 inch thick. 1. Finish: Plain, shop pre-coated with PVDF (polyvinylidene	A. Through P tested accord
	to co	Install sheet metal flashing and trim system.	fluoride) coating.	equal to requ
	1.	and slopes. Provide uniform, neat seams with minimum	2. Color: As selected from manufacturer's standard colors.	2.03 FIRESTOPPING
	2.	Install sheet metal flashing and trim to fit substrates and	A Gutters: SMACNA square style profile	A. Firestoppii
		to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating	B. Downspouts: SMACNA Square profile.	acco
		sheet metal.	C. Anchors and Supports: Profiled to suit gutters and downspouts.	ing a
	3.	Space cleats not more than 12 inches apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.	1. Anchoring Devices: In accordance with SMACNA require- ments.	PART 3 EXECUTION
	4.	Install exposed sheet metal flashing and trim with limited oil canning, and free of buckling and tool marks.	2. Gutter Supports: Brackets.	3.01 EXAMINATION
	5.	Torch cutting of sheet metal flashing and trim is not	3. Downspout Supports: Straps.	A. Verify ope
		permitted.	D. Fasteners: Galvanized steel, with soft neoprene washers.	3.02 PREPARATION
D	6. Divo	to: Rivet isinte in [uncested eluminum] [final where	2.03 FABRICATION	A. Clean sub
D.	nece	essary for strength.	A. Form gutters and downspouts of profiles and size indicated on drawings.	or other matt terial.
3.4	ROC	OF FLASHING INSTALLATION	B. Fabricate with required connection pieces.	B. Remove bond.
Α.	Gene perfo Prov	eral: Install sheet metal flashing and trim to comply with prmance requirements and cited sheet metal standard. ide concealed fasteners where possible, and set units true to	C. Form sections square, true, and accurate in size, in maximum possible lengths, free of distortion or defects detrimental to appear- ance or performance. Allow for expansion at joints	3.03 INSTALLATION
	that a	are permanently watertight and weather resistant.	D. Hem exposed edges of metal.	cordance with
3.5	WAL	L FLASHING INSTALLATION	E. Fabricate gutter and downspout accessories; seal watertight.	1195. 3 04 CLEANING
А.	Gene	eral: Install sheet metal wall flashing to intercept and exclude	2.04 FACTORY FINISHING	A Clean adia
	unles	ss otherwise indicated. Coordinate installation of wall flashing	A. Fluoropolymer Coating: High Performance Organic Finish, AAMA	3.05 PROTECTION
	door	s, and louvers.	2604; multiple coat, thermally cured fluoropolymer finish sys- tem; color as selected from manufacturer's standard colors.	A. Protect ad
3.6	CLE	ANING AND PROTECTION		
Α.	Clea unifo	n exposed metal surfaces of substances that interfere with orm oxidation and weathering.	PART 3 EXECUTION	END OF SECTION 0
В.	Clea	n and neutralize flux materials. Clean off excess solder.	A Verify existing conditions before starting work	
C.	Clea	n off excess sealants.	 R. Verify that surfaces are ready to receive work. 	
D.	Rem as s indic com unus shee	ove temporary protective coverings and strippable films heet metal flashing and trim are installed unless otherwise ated in manufacturer's written installation instructions. On pletion of sheet metal flashing and trim installation, remove sed materials and clean finished surfaces as recommended by at metal flashing and trim manufacturer. Maintain sheet metal	3.02 INSTALLATION A. Install gutters, downspouts, and accessories in accordance with manufacturer's instructions.	
E.	flash Repl that l or sir	ing and trim in clean condition during construction. ace sheet metal flashing and trim that have been damaged or have deteriorated beyond successful repair by finish touchup milar minor repair procedures.	END OF SECTION 07 7123	
END OF	SEC	ΓΙΟΝ 076200		

N 07 8400 - FIRESTOPPING

GENERAL

CTION INCLUDES

A. Firestopping of all joints and penetrations in fire-resistance rated and smoke-resistant assemblies, whether indicated on drawings or

LATED REQUIREMENTS

- A. Section 09 2116 Gypsum Board Assemblies: Gypsum wallboard ng.
- FERENCE STANDARDS
- . ASTM E119 Standard Test Methods for Fire Tests of Building 1.03 REFERENCE STANDARDS Construction and Materials; Current Date.
- B. ASTM E814 Standard Test Method for Fire Tests of Through- rent Date. Penetration Fire Stops; Current Date.
- C. UL (FRD) Fire Resistance Directory; Underwriters Laboratories ants; Current Date. rrent Date.

BMITTALS

- . See Section 01 3000 Administrative Requirements, for submittal es.
- ALITY ASSURANCE
- A. Fire Testing: Provide firestopping assemblies of designs that provide the scheduled fire ratings when tested in accordance with 1.04 SUBMITTALS methods indicated.
- LD CONDITIONS
- A. Comply with firestopping manufacturer's recommendations for 1.05 FIELD CONDITIONS emperature and conditions during and after installation. Maintain ninimum temperature before, during, and for 3 days after installation of materials.
- Provide ventilation in areas where solvent-cured materials are stalled.

PRODUCTS

RESTOPPING - GENERAL REQUIREMENTS

- A. Primers, Sleeves, Forms, Insulation, Packing, Stuffing, and Accessories: Type required for tested assembly design.
- ESTOPPING ASSEMBLY REQUIREMENTS
- A. Through Penetration Firestopping: Use any system that has been ested according to ASTM E814 to have fire resistance F Rating equal to required fire rating of penetrated assembly.
- RESTOPPING SYSTEMS
- A. Firestopping: Any material meeting requirements.
 - 1. Fire Ratings: Use any system listed by UL or tested in accordance with ASTM E814 that has F Rating equal to fire rating of penetrated assembly and T Rating Equal to F Rating and that meets all other specified requirements.

EXECUTION

- als. A. Verify openings are ready to receive the work of this section.
- EPARATION
- A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other matter that could adversely affect bond of firestopping material.
- Remove incompatible materials that could adversely affect

STALLATION

A. Install materials in manner described in fire test report and in accordance with manufacturer's instructions, completely closing openngs.

EANING

A. Clean adjacent surfaces of firestopping materials.

- OTECTION
- A. Protect adjacent surfaces from damage by material installation.

SECTION 07 8400

SECTION 07 9200 - JOINT SEALANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Sealants and joint backing.
- 1.02 RELATED REQUIREMENTS
- A. Section 07 2500 Weather Barriers: Sealants required in con-
- junction with air barriers and vapor retarders:
- B. Section 07 8400 Firestopping
- C. Section 09 2116 Gypsum Board Assemblies
- A. ASTM C834 Standard Specification for Latex Sealants; Cur-
- B. ASTM C920 Standard Specification for Elastomeric Joint Seal-
- C. ASTM C1193 Standard Guide for Use of Joint Sealants; Current Date.
 - D. ASTM D1056 Standard Specification for Flexible Cellular Materials--Sponge or Expanded Rubber; Current Date.
 - E. SCAQMD 1168 South Coast Air Quality Management District Rule No.1168; current edition; www.aqmd.gov.
- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.
- 1.06 WARRANTY
- A. See Section 01 7800 Closeout Submittals, for additional warranty requirements.
 - B. Warranty: Include coverage for installed sealants and accessories which fail to achieve airtight seal, exhibit loss of adhesion or **END OF SECTION 07 9005** cohesion, or do not cure.

PART 2 PRODUCTS

- 2.01 SEALANTS
 - A. Sealants and Primers General: Provide only products having lower volatile organic compound (VOC) content than required by South Coast Air Quality Management District Rule No.1168.
 - B. Type 1 General Purpose Exterior Sealant: Polyurethane; ASTM C920, Grade NS, Class 25, Uses M, G, and A; single component.
 - 1. Color: Match adjacent finished surfaces.
 - 2. Applications: Use for:
 - a. Control, expansion, and soft joints in masonry.
 - b. Joints between concrete and other materials.
 - c. Joints between metal frames and other materi-
- d. Other exterior joints for which no other sealant is indicated.
 - C. Type 2 Exterior Metal Lap Joint Sealant: Butyl or polyisobutylene, nondrying, nonskinning, non-curing.
 - 1. Applications: Use for:
 - a. Concealed sealant bead in sheet metal work.
 - b. Concealed sealant bead in siding overlaps.
 - D. Type 3 General Purpose Interior Sealant: Acrylic emulsion la-
 - tex; ASTM C834, Type OP, Grade NF single component, paintable.
 - 1. Color: Match adjacent finished surfaces.
 - 2. Applications: Use for:
 - a. Interior wall control joints.
 - b. Joints between door and window frames and
- wall surfaces.
- c. Other interior joints for which no other type of sealant is indicated

E. Type 4 - Silicone Sealant: ASTM C920, Grade NS, Class 25, Uses NT, A, G, M, O; single component, solvent curing, non-sagging, non-staining, fungus resistant, non-bleeding.

- 1. Service Temperature Range: -65 to 180 degrees F.
- 2. Shore A Hardness Range: 15 to 35.
- 3. Applications: Use for:
 - a. Structural Glazing.
 - b. Weatherproofing.
- 2.02 ACCESSORIES
- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
 - B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
 - C. Joint Backing: Round foam rod compatible with sealant; ASTM D1056, sponge or expanded rubber; oversized 30 to 50 per-

cent larger than joint width.
D. Bond Breaker: Pressure sensitive tape re ant manufacturer to suit application.
PART 3 EXECUTION
3.01 PREPARATION
A. Remove loose materials and foreign math adhesion of sealant.
B. Clean and prime joints in accordance with structions.
C. Perform preparation in accordance with r tions and ASTM C1193.
D. Protect elements surrounding the work of age or disfigurement.
3.02 INSTALLATION
A. Perform work in accordance with sealant quirements for preparation of surfaces and r instructions.
B. Perform installation in accordance with A
C. Install bond breaker where joint backing i
D. Install sealant free of air pockets, foreign ridges, and sags.
E. Apply sealant within recommended applic ranges. Consult manufacturer when sealant within these temperature ranges.
F. Tool joints concave.
3.03 CLEANING

A. Clean adjacent soiled surfaces. 3.04 PROTECTION

SECTION 08 1113 - HOLLOW METAL DOORS AND

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Non-fire-rated steel doors and frames.

1.02 RELATED REQUIREMENTS

1.03 REFERENCE STANDARDS

1.04 SUBMITTALS

ing with installation.

1.05 QUALITY ASSURANCE

coverings; prevent corrosion.

1.06 DELIVERY, STORAGE, AND HANDLING

procedures

cent larger than joint width.	PART 2 PRODUCTS	
D. Bond Breaker: Pressure sensitive tape recommended by seal-	2.01 DOORS AND FRAMES	
ant manufacturer to suit application.	A. Requirements for All Doors and Frames:	
	1. Accessibility: Comply with ANSI/ICC A117.1.	
	2. Door Top Closures: Flush with top of faces and edges.	
A Remove lesse materials and foreign matter that could impair	3. Door Edge Profile: Beveled on both edges.	
A. Remove loose materials and foreign matter that could impair ion of sealant.	4. Door Texture: Smooth faces.	304 E. MAIN STREET
B. Clean and prime joints in accordance with manufacturer's in- ons.	5. Glazed Lights: Non-removable stops on non-secure side sizes and configurations as indicated on drawings.	ROUND ROCK, TX 78664 P: [512] 238 8912
C. Perform preparation in accordance with manufacturer's instruc- and ASTM C1193.	6. Finish: Factory primed, for field finishing. B. Combined Requirements: If a particular door and frame unit is	F; [512] 238 8913
D. Protect elements surrounding the work of this section from dam- disfigurement.	indicated to comply with more than one type of requirement, comply with all the specified requirements for each type; for instance, ar exterior door that is also indicated as being sound-rated must com-	
NSTALLATION	ply with the requirements specified for exterior doors and for sound- rated doors: where two requirements conflict, comply with the most	
A. Perform work in accordance with sealant manufacturer's re- quirements for preparation of surfaces and material installation instructions.	stringent.	PAPE-DAWSON ENGINEERS 10801 N. MOPAC EXPRESSWAY BUILDING 3 - STE 200
B. Perform installation in accordance with ASTM C1193.		AUSTIN, TX 78759 P: 512-454-8711 F: 512-459-8867
C. Install bond breaker where joint backing is not used.	2.02 STEEL DOORS	laurenanderson@pape-dawson.cor
D. Install sealant free of air pockets, foreign embedded matter, , and sags.	A. Exterior Doors Type:	STRUCTURAL ENGINEER
E. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied	1. Grade: ANSI A250.8 Level 3, physical performance Leve A, Model 2, seamless.	BLAKE WILSON ENGINEERING, PL
F. Tool joints concave.	2. Galvanizing: All components hot-dipped zinc-iron alloy- coated (galvannealed) in accordance with ASTM A653, A653M, with manufacturer's standard coating thickness.	HURST, TX 76053 P: 817-268-2345 F: 817-282-1636
CLEANING	B. Interior Doors, Non-Fire-Rated:	blakewilsoneng@sbcglobal.net
A. Clean adjacent soiled surfaces.	1. Grade: ANSI A250.8 Level 1, physical performance Leve	MEP ENGINEER:
PROTECTION	C, Model 1, full flush.	AYS ENGINEERING,LLC 411 W Main Street, Suite 310
A. Protect sealants until cured.	2. Thickness: 1-3/4 inches (44 mm). 2.03 STEEL FRAMES	Round Rock, TX 78664 P: 512-961-6835
DF SECTION 07 9005	A. General:	
	1. Comply with the requirements of grade specified for cor-	THESE DOCUMENTS MAY NOT BE REPRODUCED IN ANY FORM WITHOUT
	Tesponding door.	THE WRITTEN CONSENT OF PLACE DESIGNERS, INC.
ON 08 1113 - HOLLOW METAL DOORS AND FRAMES		THIS SHEET IS ONLY ONE COMPONENT OF THE TOTAL DOCUMENT PACKAGE WHICH CONSISTS OF ALL SHEETS OF
1 GENERAL		DRAWINGS AND THE PROJECT MANUAL
ECTION INCLUDES		STERED AROUND
A. Non-fire-rated steel doors and frames.		
B. Thermally insulated steel doors.		E S A B
C. Accessories, including glazing and louvers.		CHANK IF
ELATED REQUIREMENTS		16068
A. Section 08 7100 - Door Hardware.		OF TELS
 B. Section 08 8000 - Glazing: Glass for doors and borrowed lites. C. Section 00 0000 - Deinting and Continue Field a sinting 		
C. Section 09 9000 - Painting and Coating: Field painting.		DATE: FEB 10, 2022
A. ANSI/ICC A117.1 - American National Standard for Accessible and Usable Buildings and Facilities; International Code Council;		
2009. B. ANSI A250.8 - SDI-100 Recommended Specifications for Stan- dard Steel Doors and Frames: 2003.		HEATHERWILDE
C. ANSI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames: 1998 (R2004).		CONDOS BLDG
D. ASTM A653/A653M - Standard Specification for Steel Sheet.		
Zinc-Coated (Galvanized) orZinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2010.		BLVD. PFLUGERVILLE.
E. ASTM C1363 - Standard Test Method for Thermal Performance of Building Assemblies by Means of a Hot Box Apparatus; 2005.		TX 78660
F. NAAMM HMMA 840 - Guide Specifications for Installation and Storage of Hollow Metal Doors and Frames; The National Associa- tion of Architectural Metal Manufacturers; 2007.		
UBMITTALS		
A. See Section 01 3000 - Administrative Requirements for submittal lures		
B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced grade standard.		
C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and identifying location of different finishes, if any.		
UALITY ASSURANCE		
A. Manufacturer Qualifications: Company specializing in manu- facturing the products specified in this section with minimum three years experience.		DRAWN BY: LC REVIEWED BY: SB
B. Maintain at the project site a copy of all reference standards deal- n installation.		SPFCS
ELIVERY, STORAGE, AND HANDLING		
A. Store in accordance with NAAMM HMMA 840.		
B. Protect with resilient packaging; avoid humidity build-up under ags; prevent corrosion.		A-015
		© copyright 2023 PLACE designers inc.
		· · · · · · · · · · · · · · · · ·

PLACE

2. Finish: Same as for door.	SECTIO	ON 081416 - FLUSH WOOD DOORS	
B. Exterior Door Frames: Fully welded.			В.
1. Weatherstripping: Integral, recessed into door edge or frame			
C. Interior Door Frames, Non-Fire-Rated [,] Knock-down type	PART 1	- GENERAL	
D. Frames for Interior Glazing or Borrowed Lights: Construction and	1.1	SUMMARY	2.5
face dimensions to match door frames, and as indicated on draw- ings.	Α.	Section Includes:	A.
E. Transom Bars: Fixed, of profile same as jamb and head.		1. Solid-core doors with wood-veneer faces.	
2.04 ACCESSORY MATERIALS		2. Factory finishing flush wood doors.	
A. Louvers: Extruded aluminum with overlapping frame; finish same as door components; factory-installed.		 Factory fitting flush wood doors to frames and factory machining for hardware. 	
B. Glazing: Clear sheet glass, 6 mm thick, factory installed.	1.2	ACTION SUBMITTALS	2.6
C. Silencers: Resilient rubber, fitted into drilled hole; 3 on strike side of single door, 3 on center mullion of pairs, and 2 on head of pairs	A.	Product Data: For each type of door. Include details of core and edge construction and trim for openings.	Α.
without center mullions. 2.05 FINISH MATERIALS	В.	Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; and the following:	В.
A. Primer: Rust-inhibiting, complying with ANSI A250.10, door man-		1. Dimensions and locations of blocking.	2.7
ufacturer's standard.		2. Dimensions and locations of mortises and holes for	A.
PART 3 EXECUTION		naroware.	В.
3.01 INSTALLATION		4 Undercute	
A. Install in accordance with the requirements of the specified door		5 Requirements for veneer matching	
grade standard and NAAMM HMMA 840.		 Doors to be factory finished and finish requirements. 	
B. Coordinate frame anchor placement with wall construction.		 Fire-protection ratings for fire-rated doors. 	C.
C. Coordinate installation of hardware.	C.	Samples for Initial Selection: For factory-finished doors.	
D. Coordinate installation of glazing.	1.3	INFORMATIONAL SUBMITTALS	
3.02 TOLERANCES	A.	Sample Warranty: For special warranty.	
A. Maximum Diagonal Distortion: 1/16 in (1.5 mm) measured with straight edge, corner to	В.	Quality Standard Compliance Certificates: AWI Quality Certification	
corner.			
3.03 ADJUSTING	1.4	Comply with requirements of referenced standard and	
A. Adjust for smooth and balanced door movement.	A.	manufacturer's written instructions.	
	В.	Package doors individually in plastic bags or cardboard cartons.	
END OF SECTION 08 1113	C.	Mark each door on bottom rail with opening number used on Shop Drawings.	D.
	1.5	FIELD CONDITIONS	E.
	A.	Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during remainder of construction period.	2.8 A.
	B.	Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining temperature between 60 and 90 deg F and relative humidity between 25 and 55]percent during remainder of construction period.	B.
	1.6	WARRANTY	END
	A.	A. Special Warranty: Manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.	
		1. Failures include, but are not limited to, the following:	
		a. Warping (bow, cup, or twist) more than 1/4 inch in a	
		42-by-84-inch section.	
		b. Telegraphing of core construction in face veneers exceeding 0.01 inch in a 3-inch span.	
		 Warranty shall also include installation and finishing that may be required due to repair or replacement of defective doors. 	
		 Warranty Period for Hollow-Core Interior Doors: Two years from date of Substantial Completion. 	
	PART 2	2 - PRODUCTS	
	2.1	MANUFACTURERS	
	A.	Source Limitations: Obtain flush wood doors from single manufacturer.	
	2.2	FLUSH WOOD DOORS, GENERAL	
	Α.	Quality Standard: In addition to requirements specified, comply with	
		1. Provide AWI Quality Certification Labels indicating that	
		 doors comply with requirements of grades specified. Contract Documents contain selections chosen from options 	
		in quality standard and additional requirements beyond those of quality standard. Comply with those selections and requirements in addition to quality standard.	
	2.3	FABRICATION	
	A.	ractory in doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.	
	0.4	1. Comply with NFPA 80 requirements for fire-rated doors.	
	∠.4 A.	Doors for Opaque Finish: Shop prime faces, all four edges, edges	
	<i>1</i> .	of cutouts, and mortises with one coat of wood primer specified in	

Section 099123" Interior Painting."

Doors for Transparent Finish: Shop prime faces and all four edges with stain (if required), other required pretreatments, and first coat of finish as specified in Section 099300 "Staining and Transparent Finishing." Seal edges of cutouts and mortises with first coat of finish.

2.5 FACTORY FINISHING

В.

Α.

Α.

Α.

C.

General: Comply with referenced quality standard for factory finishing. Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before 1.2 finishing.

1. Finish faces, all four edges, edges of cutouts, and mortises. Stains and fillers may be omitted on top and bottom edges, edges of cutouts, and mortises.

2.6 EXAMINATION

before hanging doors. B. Proceed with installation only after unsatisfactory conditions have been corrected.

Examine doors and installed door frames, with Installer present,

INSTALLATION

Hardware: For installation, see Section 087100 "Door Hardware." Installation Instructions: Install doors to comply with manufacturer's written instructions and referenced quality standard, and as indicated.

- Install fire-rated doors according to NFPA 80.
- Install smoke- and draft-control doors according to NFPA 2. 105.

Job-Fitted Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; do not trim stiles and rails in excess of limits set by manufacturer or permitted for firerated doors. Machine doors for hardware. Seal edges of doors, edges of cutouts, and mortises after fitting and machining.

- 1. Clearances: Provide 1/8 inch at heads, jambs, and between pairs of doors. Provide 1/8 inch from bottom of door to top of decorative floor finish or covering unless otherwise indicated. Where threshold is shown or scheduled, provide1/4 inch from bottom of door to top of threshold unless otherwise indicated.
- a. 2. Bevel non-fire-rated doors 1/8 inch in 2 inches at lock and hinge edges.

D. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.

Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

ADJUSTING

Α.

Operation: Rehang or replace doors that do not swing or operate freely.

B. Finished Doors: Replace doors that are damaged or that do not comply with requirements. Doors may be repaired or refinished if Work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION 081416

SECTION 085113 - ALUMINUM WINDOWS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes aluminum windows for exterior locations.
- ACTION SUBMITTALS
- A. Product Data: For each type of product.
 - Include construction details, material descriptions glazing and fabrication methods, dimensions of individual components and profiles, hardware, and finishes for aluminum windows.
- Shop Drawings: For aluminum windows.
 - 1. Include plans, elevations, sections, hardware, accessories, insect screens, operational clearances, and details of installation, including anchor, flashing, and sealant installation.
- QUALITY ASSURANCE 1.3
- Manufacturer Qualifications: A manufacturer capable of fabricating 3.3 aluminum windows that meet or exceed performance requirements indicated and of documenting this performance by test reports and calculations.
- Installer Qualifications: An installer acceptable to aluminum window manufacturer for installation of units required for this Project.
- WARRANTY 1.4
- Manufacturer's Warranty: Manufacturer agrees to repair or replace aluminum windows that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Failure to meet performance requirements.
 - Structural failures including excessive deflection, b.
 - water leakage, condensation, and air infiltration.
 - Faulty operation of movable sash and hardware. C.
 - Deterioration of materials and finishes beyond normal d. weathering.
 - e. Failure of insulating glass.
- 2. Warranty Period:
 - Window: 10 years from date of Substantial a. Completion.
 - Glazing Units: 10 years from date of Substantial b. Completion.
 - Aluminum Finish: 10 years from date of Substantial C. Completion.

PART 2 - PRODUCTS

- 2.1 MANUFACTURERS
- A. Source Limitations: Obtain aluminum windows from single source from single manufacturer.
- 2.2 ALUMINUM WINDOWS
- A. Operating Types: Provide the following operating types in locations indicated on Drawings:
 - 1. Fixed.
- Frames and Sashes: Aluminum extrusions complying with AAMA/ WDMA/CSA 101/I.S.2/A440.
- 1. Thermally Improved Construction: Fabricate frames, sashes, and muntins with an integral, concealed, low-conductance thermal barrier located between exterior materials and window members exposed on interior side in a manner that eliminates direct metal-to-metal contact.
- C. Insulating-Glass Units: ASTM E 2190.
 - 1. Glass: ASTM C 1036, Type 1, Class 1, q3.
 - a. Tint: Gray.

 - b. Kind: Fully tempered [where indicated on Drawings] <Insert requirements>.
 - 2. Low-E Coating: Pyrolytic on second surface.
- D. Fasteners: Noncorrosive and compatible with window members, trim, hardware, anchors, and other components.
- 2.3 ALUMINUM FINISHES
- A. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
- Class I, Clear Anodic Finish: AA-M12C22A41 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, clear coating 0.018 mm or thicker) complying with AAMA 611.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- Verify rough opening dimensions, levelness of sill plate, and

operational clearances.

Examine wall flashings, vapor retard C. barriers, and other built-in component window installation.

1.08 WARRANTY

D. Proceed with installation only after unsa been corrected.

3.2 INSTALLATION

Α.

- Comply with manufacturer's written windows, hardware, accessories, and installation procedures and requirem manufacturer's written instructions, requirements in ASTM E 2112.
- Install windows level, plumb, square, tru or impeding thermal movement, anche structural support, and in proper relation adjacent construction to produce weather
- Install windows and components to d penetrating joints, and moisture migrati exterior.
- Separate aluminum and other corrodib D. of corrosion or electrolytic action at po materials.
- ADJUSTING, CLEANING, AND PROTE Adjust operating sashes and hardware points and weather stripping for smooth of closure.
- Clean exposed surfaces immediately Avoid damaging protective coatings and sealants, glazing materials, dirt, and oth
- 1. Keep protective films and cove cleaning.
- Remove and replace glass that has been abraded, or damaged during constructio
- D. Protect window surfaces from con substances resulting from construction o substances do contact window surface immediately according to manufacturer

END OF SECTION 085113

SECTION 08 7100 - DOOR HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Hardware for hollow steel doors.
- B. Thresholds.
- C. Weatherstripping, seals and door ga
- 1.02 RELATED REQUIREMENTS

A. Section 08 1113 - Hollow Metal Doors

1.03 REFERENCE STANDARDS

A. 36 CFR 1191 - Americans with Disabi lines for Buildings and Facilities; Final Standards for Accessible Design).

E. NFPA 80 - Standard for Fire Doors tives; Current Date.

F. UL (BMD) - Building Materials Direct ries Inc.; Current Date.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordinate the manufacture, fabricat ucts onto which door hardware will be in

1.05 SUBMITTALS

1.06 QUALITY ASSURANCE

1.07 DELIVERY, STORAGE, AND HANDLING

procedures.

Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure weathertight	A. See Section 01 7800 - Closeout Submittals, for additional war ranty requirements.	
Proceed with installation only after unsatisfactory conditions have	B. Provide five year warranty for door closers.	
been corrected.		
INSTALLATION	PART 2 PRODUCTS	
windows, hardware, accessories, and other components. For	2.01 DOOR HARDWARE - GENERAL	304 E. MAIN STREET
manufacturer's written instructions, comply with installation requirements in ASTM E 2112.	A. Provide all hardware specified or required to make doors full functional, compliant with applicable codes, and secure to the extent indicated.	ROUND ROCK, TX 78664 P: [512] 238 8912 F: [512] 238 8913
Install windows level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction to produce weathertight construction.	B. Provide all items of a single type of the same model by the sam manufacturer.	PLACEdesigners.com
Install windows and components to drain condensation, water	C. Provide products that comply with the following:	CIVIL ENGINEER:
penetrating joints, and moisture migrating within windows to the exterior.	1. Applicable provisions of federal, state, and local codes.	PAPE-DAWSON
Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other	 2. Fire-Rated Doors: NFPA 80. 3. All Hardware on Fire-Rated Doors: Listed and classifie by UL as suitable for the purpose specified and indicated 	ENGINEERS 10801 N. MOPAC EXPRESSWAY BUILDING 3 - STE 200
	D. Finishes: All door hardware the same finish unless otherwise ir	P: 512-454-8711 F: 512-459-8867
Adjust operating sashes and hardware for a tight fit at contact	dicated.	laurenanderson@pape-dawson.com
points and weather stripping for smooth operation and weathertight closure.	1. Finish: Match material, finish, and hardware of existin buildings.	STRUCTURAL ENGINEER:
Clean exposed surfaces immediately after installing windows. Avoid damaging protective coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances.	A. Hinges: Provide hinges on every swinging door.	ENGINEERING, PL 637 W. HUTST BLVD. HURST, TX 76053
 Keep protective films and coverings in place until final cleaning. 	1. Provide five-knuckle full mortise butt hinges unless other wise indicated.	blakewilsoneng@sbcglobal.net
Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period	2. Provide ball-bearing hinges at all doors having closers.	MEP ENGINEER:
Protect window surfaces from contact with contaminating	 Provide hinges in the quantities required for complete ir stallation. 	AYS ENGINEERING,LLC 411 W Main Street, Suite 310
substances resulting from construction operations. If contaminating substances do contact window surfaces, remove contaminants immediately according to manufacturer's written instructions.	4. Provide non-removable pins on exterior outswinging doors.	Round Rock, TX 78664 P: 512-961-6835 raleman@ayseng.com
	5. Where electrified hardware is mounted in door leaf, pro-	
F SECTION 085113	2.03 PUSH/PULLS	THESE DOCUMENTS MAY NOT BE REPRODUCED IN ANY FORM WITHOUT THE WRITTEN CONSENT OF PLACE
ION 08 7100 - DOOR HARDWARE	A. Push/Pulls: Comply with BHMA A156.6.	DESIGNERS, INC.
		OF THE TOTAL DOCUMENT PACKAGE WHICH CONSISTS OF ALL SHEETS OF
1 GENERAL		DRAWINGS AND THE PROJECT MANUAL
SECTION INCLUDES		STRED ADD
A. Hardware for hollow steel doors.		SSIE IL SE
 B. Thresholds. C. Weatherstripping, seals and door gaskets. 		
C. Weatherstripping, seals and door gaskets.		
A. Section 08 1113 - Hollow Metal Doors and Frames.		16068
REFERENCE STANDARDS		OF TELS
A. 36 CFR 1191 - Americans with Disabilities Act Accessibility Guide lines for Buildings and Facilities; Final Rule; Current Date; (AD Standards for Accessible Design).		DATE: FEB 10, 2022
B. BHMA A156.6 - American National Standard for Architectura Door Trim; Builders Hardware Manufacturers Association; Currer Date (ANSI/BHMA A156.6).		
C. BHMA A156.18 - American National Standard for Materials an Finishes; Builders Hardware Manufacturers Association, Inc.; Current Date (ANSI/BHMA A156.18).		HEATHERWILDE
D. BHMAA156.22 - American National Standard for Door Gasketin and Edge Seal Systems, Builders Hardware Manufacturers Assc ciation; Current Date (ANSI/BHMAA156.22).		CONDOS BLDG 4
E. NFPA 80 - Standard for Fire Doors and Other Opening Protec Current Date.		201 N. HEATHERWILDE BLVD.
F. UL (BMD) - Building Materials Directory; Underwriters Laboratc ac.; Current Date.		TX 78660
ADMINISTRATIVE REQUIREMENTS		PROJECTINO: 17003
A. Coordinate the manufacture, fabrication, and installation of procucts onto which door hardware will be installed		REVISIONS:
SUBMITTALS		
A. See Section 01 3000 - Administrative Requirements, for submitte		
B. Product Data: Manufacturer's catalog literature for each type (
hardware, marked to clearly show products to be furnished for thi project.		
C. Keys: Deliver with identifying tags to Owner by security shipmer direct from hardware supplier.		
D. Warranty: Submit manufacturer's warranty and ensure that form have been completed in Owner's name and registered with manu facturer.		DRAWN BY: LC
QUALITY ASSURANCE		REVIEWED BY: SB
A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum thre years of experience.		SPECS
ELIVERY, STORAGE, AND HANDLING		
A. Package hardware items individually; label and identify eac package with door opening code to match hardware schedule.		A-016

PLACE

1. On exterior entry doors, provide matching push plate and	SECTION 08 8000 - GLAZING	3. Pecora
2.04 LOCKS AND LATCHES	PART 1 GENERAL	4. BASF (buildingsystems.basf.com.
A. Locks: Provide a lock for every door, unless specifically indicated as not requiring locking.	1.01 SECTION INCLUDES	2.04 GLAZING ACCESSO
1. Hardware Sets indicate locking functions required for	A. Glass.	A. Setting Blocks: I ASTM C864 Optior
each door.	B. Glazing compounds and accessories.	ing or minimum 4 inch x height to sui
2. If no hardware set is indicated for a swinging door provide an office lockset.	1.02 RELATED REQUIREMENTS	B. Spacer Shims: N
3. Trim: Provide lever handle or pull trim on outside of all locks unless specifically stated to have no outside trim.	A. Section 07 9005 - Joint Sealers: Sealant and back-up material. 1.03 REFERENCE STANDARDS	ASTM C 864 Optic the glazing stop x t face.
 Lock Cylinders: Provide key access on outside of all locks unless specifically stated to have no locking or no outside 	A. ASTM C864 - Standard Specification for Dense Elastomeric Com-	
trim.	B ASTM C1036 - Standard Specification for Elat Glass: Current	PART 3 EXECUTION
B. Lock Cylinders: Manufacturer's standard tumbler type, six-pin standard core.	Date. C. ASTM C1048 - Standard Specification for Heat-Treated Flat	A. Verify that operation
devices required.	GlassKind HS, Kind FT Coated and Uncoated Glass; Current Date.	B. Verify that surfa
D. Latches: Provide a latch for every door that is not required to lock,	D. ASTM E1300 - Standard Practice for Determining Load Resis- tance of Glass in Buildings; Current Date.	are clear, and read
unless specifically indicated "push/pull" or "not required to latch".	E. GANA (GM) - GANA Glazing Manual; Glass Association of North	3.02 PREPARATION
2.05 GASKETING AND THRESHOLDS	E GANA (SM) - EGMA Sealant Manual: Glass Association of North	A. Clean contact s
A. Gaskets: Complying with BHMA A156.22.	America; Current Date.	
unless otherwise indicated; top and sides.	1.04 SUBMITTALS	
2. On each exterior door, provide door bottom sweep, un- less otherwise indicated.	A. See Section 01 3000 - Administrative Requirements, for submittal procedures.	B. Remove labels
B. Thresholds:	B. Product Data on Glass Types: Provide structural, physical and	C. Clean glass and
1. At each exterior door, provide a threshold unless other-	environmental characteristics, size limitations, special handling or installation requirements.	3.04 PROTECTION
wise indicated. 2.06 KEY CONTROLS	C. Product Data on Glazing Compounds: Provide chemical, func- tional, and environmental characteristics, limitations, special appli- cation requirements. Identify available colors	A. After installation tape or paste; do n
A. Fire Department Lock Box: Heavy-duty, surface mounted, solid stainless-steel box with hinged door and interior gasket seal; single drill resistant lock with dust covers and tamper alarm	D. Certificates: Certify that products meet or exceed specified re- quirements.	END OF SECTION 08 800
1. Capacity: Holds 10 keys.	1.05 QUALITY ASSURANCE	
2. Finish: Manufacturer's standard black.	A. Perform Work in accordance with GANA Glazing Manual and	
	FGMA Sealant Manual for glazing installation methods.	
PART 3 EXECUTION	B. Installer Qualifications: Company specializing in performing the work of this section approved by manufacturer.	
3.01 EXAMINATION	1.06 FIELD CONDITIONS	
A. Verify that doors and frames are ready to receive work; labeled, fire-rated doors and frames are present and properly installed, and dimensions are as indicated on shop drawings.	A. Do not install glazing when ambient temperature is less than 50 degrees F.	
3.02 INSTALLATION	B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.	
A. Install hardware in accordance with manufacturer's instructions	1.07 WARRANTY	
B Use templates provided by hardware item manufacturer	A. See Section 01 7800 - Closeout Submittals, for additional war- ranty requirements	
C. Install hardware on fire-rated doors and frames in accordance	B. Laminated Glass: Provide a five (5) year warranty to include cov-	
with code and NFPA 80. D. Mounting heights for hardware from finished floor to center line of	erage for delamination, including replacement of failed units.	
	PART 2 PRODUCTS	
A Adjust work under provisions of Section 01 7000	2.01 EXTERIOR GLAZING ASSEMBLIES	
B. Adjust hardware for smooth operation.	A. Structural Design Criteria: Select type and thickness to withstand dead loads and wind loads acting normal to plane of glass at design pressures calculated in accordance with ASCE 7.	
3.04 CLEANING	1. Use the procedure specified in ASTM E1300 to deter-	
A. Clean adjacent surfaces solled by hardware installation. Clean finished hardware per manufacturer's instructions after final adjust- ments has been made. Replace items that cannot be cleaned to	mine glass type and thickness.	
manufacturer's level of finish quality at no additional cost.	whichever is less, with full recovery of glazing materials.	
3.05 PROTECTION	3. Thicknesses listed are minimum.	
A. Protect finished Work under provisions of Section 01 7000.	2.02 GLASS MATERIALS	
B. Do not permit adjacent work to damage hardware or finish.	A. Float Glass Manufacturers:	
END OF SECTION 08 7100	glass.com.	
	2. Guardian Industries Corp: www.sunguardglass.com.	
	3. Pilkington North America Inc: www.pilkington.com/na.	
	4. PPG Industries, Inc: www.ppgideascapes.com.	
	B. Float Glass: All glazing is to be float glass unless otherwise indi- cated.	
	1. Annealed Type: ASTM C1036, Type I, transparent flat, Class 1 clear, Quality Q3 (glazing select).	
	2. Heat-Strengthened and Fully Tempered Types: ASTM C1048.	
	3. Tinted Types: Color and performance characteristics as indicated.	
	 Thicknesses: As indicated; for exterior glazing comply with specified requirements for wind load design regardless of specified thickness 	
	2.03 GLAZING COMPOUNDS	
	A. Manufacturers:	
	1. Bostik Inc: www.bostik-us.com.	
	2. Momentive Performance Materials, Inc (formerly GE Sili-	
	cones): www.momentive.com.	

3. Pecora Corporation: www.pecora.com.

4. BASF Construction Chemicals-Building Systems: www.

GLAZING ACCESSORIES

- A. Setting Blocks: Neoprene, 80 to 90 Shore A durometer hardness, ASTM C864 Option I. Length of 0.1 inch for each square foot of glazing or minimum 4 inch x width of glazing rabbet space minus 1/16 inch x height to suit glazing method and pane weight and area.
- B. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness, ASTM C 864 Option I. Minimum 3 inch long x one half the height of the glazing stop x thickness to suit application, self adhesive on one face.

RT 3 EXECUTION

EXAMINATION

A. Verify that openings for glazing are correctly sized and within rance.

B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and ready to receive glazing.

PREPARATION

A. Clean contact surfaces with solvent and wipe dry.

B. Install sealant in accordance with manufacturer's instructions.

CLEANING

A. Remove glazing materials from finish surfaces.

B. Remove labels after Work is complete.

C. Clean glass and adjacent surfaces.

A. After installation, mark pane with an 'X' by using removable plastic tape or paste; do not mark heat absorbing or reflective glass units.

ID OF SECTION 08 8000

SECTION 09 2116 - GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

- 1.01 SECTION INCLUDES
- A. Performance criteria for gypsum board assemblies.
- B. Metal stud wall framing.
- C. Acoustic insulation.
- D. Gypsum wallboard.
- E. Joint treatment and accessories.
- F. Water-resistive barrier over exterior wall sheathing.
- **1.02 RELATED REQUIREMENTS**
- A. Section 07 2100 Thermal Insulation: Acoustic insulation. B. Section 07 2500 - Weather Barriers: Water-resistive barrier over sheathing.
- C. Section 07 8400 Firestopping: Top-of-wall assemblies at fire rated walls.
- D. Section 07 9005 Joint Sealers: Acoustic sealant.
- E. Section 09 3000 Tiling (Tile): Tile backing board.
- 1.03 REFERENCE STANDARDS

A. AISI SG02-1 - North American Specification for the Design of Cold-Formed Steel Structural Members; American Iron and Steel Institute; 2001 with 2004 supplement. (replaced SG-971)

- B. ASTM C475/C475M Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2002 (Reapproved 2007).
- C. ASTM C645 Standard Specification for Nonstructural Steel Framing Members; 2009a.
- D. ASTM C665 Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2006.

E. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2009a.

F. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2008.

> G. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2010.

H. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2007.

I. ASTM C1280 - Standard Specification for Application of Gypsum Sheathing; 2009.

J. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2009a.

K. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2000 (Reapproved 2005).

L. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2009.

M. ASTM E413 - Classification for Rating Sound Insulation; 2010.

N. GA-216 - Application and Finishing of Gypsum Board; Gypsum Association; 2010.

O. GA-600 - Fire Resistance Design Manual; Gypsum Association; 2009.

P. UL (FRD) - Fire Resistance Directory; Underwriters Laboratories Inc.; current edition.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on metal framing, gypsum board, ac- 3.01 EXAMINATION cessories, and joint finishing system.

C. Product Data: Provide manufacturer's data on partition head to tion to commence. structure connectors, showing compliance with requirements.

1.05 QUALITY ASSURANCE

A. Perform in accordance with ASTM C 840. Comply with requirements of GA-600 for fire-rated assemblies.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

A. Provide completed assemblies complying with ASTM C840 and GA-216.

B. Interior Partitions Indicated as Acoustic: Provide completed assemblies with the following characteristics:

1. Acoustic Attenuation: STC of 45-49 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.

C. Shaft Walls at Elevator Shafts: Provide completed assemblies with the following characteristics:

> 1. Air Pressure Within Shaft: Intermittent loads of 5 lbf/sq ft (0.24 kPa) with maximum mid-span deflection of L/240.

2. Acoustic Attenuation: STC of 35-39 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.

D. Fire Rated Assemblies: Provide completed assemblies with the following characteristics:

hour rating. 2. UL Assembly Numbers: Pr

to that listed for the particula Fire Resistance Directory.

2.02 METAL FRAMING MATERIALS

A. Non-Loadbearing Framing System galvanized sheet steel, of size and pr with ASTM C754 for the spacing indica

of wall framing of L/240 at 5 psf (240 F 1. Studs: "C" shaped with flat

faces. 2. Runners: U shaped, sized t

B. Shaft Wall Studs and Accessories: A steel, of size and properties necessary and specified performance requirement

C. See Specifications on Structural Dr ed by Metal Building Manufacturer.

2.03 BOARD MATERIALS

A. Manufacturers - Gypsum-Based Bo

1. Georgia-Pacific Gypsum LL

2. National Gypsum Company

3. USG Corporation: www.usg

B. Gypsum Wallboard: Paper-faced in ASTM C1396/C1396M; sizes to m square cut.

1. Application: Use for vertica indicated.

2. Mold Resistance: Score of 1 with ASTM D3273.

> 3. At Assemblies Indicated w quired by indicated tested ass is indicated, use Type X board

4. Thickness:

a. Vertical Surfaces: 5

2.04 ACCESSORIES

PART 3 EXECUTION

stallation instructions.

quirements.

3.03 FRAMING INSTALLATION

to ceiling in other locations.

instructions.

facturer's instructions.

3.02 SHAFT WALL INSTALLATION

A. Acoustic Insulation: As specified in

B. Acoustic Sealant: As specified in Se

C. Water-Resistive Barrier: As specifie

D. Joint Materials: ASTM C475 and a

board manufacturer for project condition

1. Tape: 2 inch (50 mm) wide joints and corners, except as

2. Tape: 2 inch (50 mm) wide,

and corners, except as otherw

3. Ready-mixed vinyl-based jo

4. Chemical hardening type co

E. Screws for Attachment to Steel Me (0.7 mm) In Thickness, to Wood Mem ASTM C1002; self-piercing tapping ty rior locations.

F. Screws for Attachment to Steel Members From 0.033 to 0.112 inch (0.8 to 2.8 mm) in Thickness: ASTM C954; steel drill screws for application of gypsum board to loadbearing steel studs.

G. Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.

ovide construction equivalent r assembly in the current UL	A. Acoustic Insulation: Place tightly within spa ings, behind and around electrical and mecha titions, and tight to items passing through par
	B. Acoustic Sealant: Install in accordance v structions.
n Components: ASTM C645;	3.05 BOARD INSTALLATION
operties necessary to comply ated, with maximum deflection Pa).	A. Comply with ASTM C 840, GA-216, and r tions. Install to minimize butt end joints, esp locations.
or formed webs with knurled	B. Single-Layer Non-Rated: Install gypsum b cal direction, with ends and edges occurring
to match studs.	1. Exception: Tapered edges to rec
ASTM C645; galvanized sheet y to comply with ASTM C754 nts	right angles to framing. C. Fire-Rated Construction: Install gypsum
rawings and Drawings provid-	ance with requirements of assembly listing.
	D. Installation on Metal Framing: Use screw gypsum board.
bard:	E. Moisture Protection: Treat cut edges and h tant gypsum board with sealant.
_C: www.gp.com/gypsum.	3.06 INSTALLATION OF TRIM AND ACCESSORIES
y: www.nationalgypsum.com.	A. Corner Beads: Install at external corners,
g.com.	3 07 IONT TREATMENT
gypsum panels as defined hinimize joints in place; ends	A. Finish gypsum board in accordance with I
al surfaces, unless otherwise	1. Level 4: Walls and ceilings to rece coverings, unless otherwise indicated
10, when tested in accordance	2. Level 2: Restroom area to receive
vith Fire-Rating: Use type re-	Level 1: Fire rated wall areas al whether or not accessible in the completed c
sembly; if no tested assembly d, UL or WH listed.	B. Tape, fill, and sand exposed joints, edge duce smooth surface ready to receive finishe
5/8 inch (16 mm).	1. Feather coats of joint compound s mum 1/32 inch (0.8 mm).
	2. Taping, filling, and sanding is no behind adhesive applied
Section 07 2100.	ceramic tile and fixed cabinetry.
ection 07 9005.	
ed in Section 07 2500.	END OF SECTION 09 2116
as recommended by gypsum ons.	
e, coated glass fiber tape for otherwise indicated.	
creased paper tape for joints vise indicated.	
pint compound.	
ompound.	
embers Less Than 0.03 inch nbers, and to Gypsum Board: /pe; cadmium-plated for exte-	

A. Verify that project conditions are appropriate for work of this sec-

A. Shaft Wall Framing: Install in accordance with manufacturer's in-

1. Install studs at spacing required to meet performance re-

B. Shaft Wall Liner: Cut panels to accurate dimension and install sequentially between special friction studs.

A. Metal Framing: Install in accordance with ASTM C754 and manu-

B. Studs: Space studs as indicated on drawings.

1. Extend partition framing to structure where indicated and

2. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's

C. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.

D. Standard Wall Furring: Install at masonry walls scheduled to receive gypsum board, not more than 4 inches (100 mm) from floor

and ceiling lines and abutting walls. Secure in place on alternate channel flanges at maximum 24 inches (600 mm) on center. 1. Orientation: Horizontal.

1. Fire Rated Shaft Walls: UL listed assembly No. U-425; 1 3.04 ACOUSTIC ACCESSORIES INSTALLATION

aces, around cut openanical items within parrtitions.

with manufacturer's in-

manufacturer's instrucbecially in highly visible

board in most economiover firm bearing.

ceive joint treatment a

board in strict compliws for attachment of al

holes in moisture resis-

using longest practica

levels defined in ASTV

eive paint finish or wal tile finish.

bove finished ceilings construction.

es, and corners to pro-

amber is maxi-

ces

ooth surface ready to receive finishes.
1. Feather coats of joint compound so that ca 32 inch (0.8 mm).
2. Taping, filling, and sanding is not require

ehind	2. adh	Taping, nesive a	filling, pplied	and	sanding	is	not	required	at	surface
	cei	ramic tile	e and f	ixed	cabinetry					

PLACE

304 E. MAIN STREET ROUND ROCK, TX 78664 P: [512] 238 8912 F; [512] 238 8913

PLACEdesigners.com

CIVIL ENGINEER:

PAPE-DAWSON ENGINEERS 10801 N. MOPAC EXPRESSWAY BUILDING 3 - STE 200 AUSTIN. TX 78759 P: 512-454-8711 F: 512-459-8867 laurenanderson@pape-dawson.com

STRUCTURAL ENGINEER:

BLAKE WILSON ENGINEERING. PL 637 W. HUTST BLVD. HURST, TX 76053 P: 817-268-2345 F: 817-282-1636 blakewilsoneng@sbcglobal.net

MEP ENGINEER:

AYS ENGINEERING,LLC 411 W Main Street, Suite 310 Round Rock, TX 78664 P: 512-961-6835 raleman@ayseng.com

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THIS SHEET IS ONLY ONE COMPONENT OF THE TOTAL DOCUMENT PACKAGE WHICH CONSISTS OF ALL SHEETS OF DRAWINGS AND THE PROJECT MANUAL



DATE: FEB 10, 2022

CONSTRUCTION DOCUMENTS HEATHERWILDE OFFICE **CONDOS BLDG**

201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660 PROJECT NO: 17003

REVISIONS:

DRAWN BY:	LC
REVIEWED BY:	SB

SPECS



SECTION 09 3000 - TILING	2. Size and Shape: Block Random.
	3. Colors: As scheduled.
1 01 SECTION INCLUDES	C. Glazed Wall Tile: ANSI A137.1, and as follows:
A. Tile for wall applications.	Tile Corporation.
B. Cementitious backer board as tile substrate.	2. Size and Shape: 4 inch by 12 inch.
C. Ceramic accessories.	3. Surface Finish: Matte glaze.
D. Ceramic trim.	 Colors: As scheduled. Pattern: see details on Sheet 4-301
1.02 RELATED REQUIREMENTS	2.02 TRIM AND ACCESSORIES
A. Section 07 9005 - Joint Sealers.	A. Ceramic Accessories: same color and finish as adjacent field tile
1.03 REFERENCE STANDARDS	same manufacturer as tile.
A. ANSI A108 Series/A118 Series/A136.1 - American National Stan- dard Specifications for the I nstallation of Ceramic Tile (Compendium); 2011.	 Toilet Tissue Holder: Surface mounted, for single roll, with spring loaded holder. B. Ceramic Trim: Matching bullnose ceramic shapes in sizes coor
B. ANSI A108.1a - American National Standard Specifications for Installation of Ceramic Tile in the Wet-Set Method, with Portland	dinated with field tile.
Cement Mortar; 2011.	1. Applications: Use in the following locations:
Installation of Ceramic Tile on a Cured Portland Cement Mortar Set-	a. Open Edges. Builliose.
D. ANSI A108.1c - Specifications for Contractors Option: Installation	c. Floor to Wall Joints: Straight base.
of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar or Installation of Ceramic Tile on a Cured Portland Cement Mortar	2. Manufacturer: Same as for tile.
Bed with Dry-Set or Latex Portland Cement Mortar; 2011.	2.03 SETTING MATERIALS
E. ANSI A108.4 - American National Standard Specifications for In- stallation of Ceramic Tile with Organic Adhesives or Water Clean-	A. Provide setting materials made by the same manufacturer a
able Tile-Setting Epoxy Adhesive; 2011.	
F. ANSI A108.5 - American National Standard Specifications for In- stallation of Ceramic Tile with Dry-Set Portland Cement Mortar or	A. Standard Grout: ANSI A118.6 standard cement grout.
Latex-Portland Cement Mortar; 2011.	1. Applications: Use this type of grout where indicated an
stallation of Ceramic Tile with Chemical Resistant, Water Cleanable	where no other type of grout is indicated.
H ANSI A108.8 - American National Standard Specifications for	Use sanded grout for joints 1/8 inch wide and larger; us unsanded grout for joints less han 1/8 inch wide.
Installation of Ceramic Tile with Chemical Resistant Furan Resin Mortar and Grout; 2011.	3. Color(s): Provide samples from manufacturer's full lin
I. ANSI A108.9 - American National Standard Specifications for	2.05 THIN-SET ACCESSORY MATERIALS
Installation of Ceramic Tile with Modified Epoxy Emulsion Mortar/ Grout; 2011.	A. Cementitious Backer Board: ANSI A118.9; High density, cemer
J. ANSI A108.10 - American National Standard Specifications for Installation of Grout in Tilework; 2011.	titious, glass fiber reinforced, 5/8 inch thick; 2 inch (50 mm) wide coated glass fiber tape for joints and corners.
K. ANSI A108.11 - American National Standard for Interior Installa- tion of Cementitious Backer Units; 2011.	PART 3 EXECUTION
L. ANSI A118.6 - American National Standard Specifications for Standard Cement Grouts for Tile Installation: 2011.	3.01 EXAMINATION
M. ANSI A118.9 - American National Standard Specifications for Test Methods and Specifications for Cementitious Backer Units; 2011.	A. Verify that wall surfaces are smooth and flat within the tolerance specified for that type of work, are dust-free, and are ready to receive tile.
N. ANSI A137.1 - American National Standard Specifications for Ce- ramic Tile: 2008.	B. Verify that required floor-mounted utilities are in correct location
O. TCNA (HB) - Handbook for Ceramic, Glass, and Stone Tile Instal-	3.02 PREPARATION
lation; 2011.	A. Protect surrounding work from damage.
A See Section 01 3000 - Administrative Requirements for submittal	B. Vacuum clean surfaces and damp clean.
procedures.	surfaces to acceptable flatness tolerances.
B. Product Data: Provide manufacturers' data sheets on tile, mor- tar, grout, and accessories. Include instructions for using grouts and adhesives.	D. Install backer board in accordance with ANSI A108.11 and boar manufacturer's instructions. Tape joints and corners, cover with skir coat of setting material to a feather edge.
C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.	
D. Maintenance Data: Include recommended cleaning methods,	
cleaning materials, stain removal methods, and polishes and wax- es.	3.03 INSTALLATION - GENERAL
E. Samples: Provide grout color samples. 1.05 QUALITY ASSURANCE	of ANSI A108.1 through A108.13, manufacturer's instructions, an The Tile Council of North America Handbook recommendations.
A. Maintain one copy of The Tile Council of North America Hand- book and ANSI A108 Series/A118 Series on site	openings.
B. Installer Qualifications: Company specializing in performing tile	C. Cut and fit tile to penetrations through tile, leaving sealant joir space. Form corners and bases neatly. Align base and wall joints.
installation, with minimum of 5 years of documented experience.	D. Place tile joints uniform in width, subject to variance in toleranc
1.06 DELIVERY, STORAGE, AND HANDLING	allowed in tile size. Make grout joints without voids, cracks, exces mortar or excess grout, or too little grout.
A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.	E. Form internal angles square and external angles bullnosed.
	F. Install ceramic accessories rigidly in prepared openings.
1.07 FIELD CONDITIONS	G. Sound tile after setting. Replace hollow sounding units.
A. Do not install solvent-based products in an unventilated environ- ment.	H. Keep expansion joints free of adhesive or grout. Apply sealant t joints.
B. Maintain ambient and substrate temperature of 50 degrees F (10 degrees C) during installation of mortar materials.	I. Prior to grouting, allow installation to completely cure; minimur of 48 hours.
	J. Grout tile joints. Use standard grout unless otherwise indicated.
PART 2 PRODUCTS	K. Apply sealant to junction of tile and dissimilar materials and junc tion of dissimilar planes.
2.01 TILE	3.04 INSTALLATION - WALL TILE
A. Manufacturers:	A. Over gypsum wallboard on wood or metal studs install in accor
1. Dal-Tile Corporation: www.daltile.com.	dance with The Tile Council of North America Handbook Methor W243, thin-set with dry-set or latex-Portland cement bond coat, ur
D. Obrahille Mosale Hile, ANOLA 137, 1, allu as 10110WS.	less otherwise indicated.
dom Mosaic manufactured by Dal-Tile Corporation.	3.05 CLEANING

A. Clean tile and grout surfaces.

END OF SECTION 09 3000

SECTION 09 9000 - PAINTING AND COATING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints and other coatings.

C. Scope: Finish all interior and exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.

D. Do Not Paint or Finish the Following Items:

1. Items fully factory-finished unless specifically so indicated; materials and products having factory-applied primers are not considered factory finished.

- 2. Items indicated to receive other finishes.
- 3. Items indicated to remain unfinished.

4. Fire rating labels, equipment serial number and capacity

- labels, and operating parts of equipment.
- 5. Floors, unless specifically so indicated. 6. Glass.
- 7. Concealed pipes, ducts, and conduits.
- 1.02 RELATED REQUIREMENTS

A. Section 05 5000 - Metal Fabrications: Shop-primed items. 1.03 REFERENCE STANDARDS

> A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; Current Date.

B. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; Current Date.

C. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials; Current Date.

D. GreenSeal GS-11 - Paints; Current Date.

E. SSPC (PM1) - Good Painting Practice: SSPC Painting Manual, Vol. 1; Society for Protective Coatings; Current Edition.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide complete list of all products to be used, with the following information for each:

> 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").

2. MPI product number (e.g. MPI #47).

3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.

C. Certification: By manufacturer that all paints and coatings do not contain any of the prohibited chemicals specified; GreenSeal GS-11 certification is not required but if provided shall constitute acceptable certification.

D. Manufacturer's Instructions: Indicate special surface preparation procedures.

E. Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years experience.

B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum three years experience.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

> B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and in-

> C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and

1.07 FIELD CONDITIONS

are outside the temperature ranges required by the paint product

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, product manufacturer.

C. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Provide all paint and coating products used in any individual system from the same manufacturer; no exceptions.

B. Provide all paint and coating products from the same manufacturer to the greatest extent possible.

C. Paints:

1. Base Manufacturer: Sherwin-Williams.

2. Duron, Inc: www.duron.com.

3. Benjamin Moore & Co: www.be

4. PPG Architectural Finishes, Inc: www.ppgaf.com.

D. Primer Sealers: Same manufacturer as top coats.

2.02 PAINTS AND COATINGS - GENERAL

A. Paints and Coatings: Ready mixed, unless intended to be a fieldcatalyzed coating.

> 1. Provide paints and coatings of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.

> 2. Supply each coating material in quantity required to complete entire project's work from a single production run.

> 3. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.

B. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.

C. Volatile Organic Compound (VOC) Content:

quirements specified in the following:

Coatings.

2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

D. Colors: As indicated on drawing and as selected by Owner.

1. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the ceiling they are mounted on/

2.03 PAINT SYSTEMS - EXTERIOR

Gloss.

Gloss.

XP Interior Latex.

A. Paint ME-OP-3L - Ferrous Metals, Unprimed, Latex, 3 Coat:

1. One coat of latex primer; S-W All Surface Enamel Latex Primer.

2. Gloss: Two coats of latex enamel; S-W Exterior Latex

B. Paint ME-OP-2L - Ferrous Metals, Primed, Latex, 2 Coat:

1. Touch-up with rust-inhibitive primer recommended by top coat manufacturer.

2. Gloss: Two coats of latex enamel; S-W A-100 Latex

Gloss.

C. Paint MgE-OP-3L - Galvanized Metals, Latex, 3 Coat:

One coat galvanize primer.

2. Gloss: Two coats of latex enamel; S-W A-100 Latex

2.04 PAINT SYSTEMS - INTERIOR

A. Paint MI-OP-3L - Ferrous Metals, Unprimed, Latex, 3 Coat:

1. One coat of latex primer.

2. Semi-gloss: Two coats of latex enamel; S-W ProMar 200

D. Paint MgI-OP-3L - Galvanized Metals, Latex, 3 Coat:

1. Semi-gloss: Two coats of latex enamel; S-W ProMar 200 XP Interior Latex.

2.05 ACCESSORY MATERIALS

A. Accessory Materials: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required to achieve the finishes specified whether specifically indicated or not; commercial quality.

B. Patching Material: Latex filler.

C. Fastener Head Cover Material: Latex filler

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are ready to receive work as instructed by the

B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.

C. Test shop-applied primer for compatibility with subsequent cover materials.

3.02 PREPARATION

A. Clean surfaces thoroughly and correct defects prior to coating application.

> B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

> C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.

structions for mixing and reducing. as required by manufacturer's instructions. A. Do not apply materials when surface and ambient temperatures manufacturer. and humidity and temperature limitations.

enjaminmoore.com.	coat.

1. Provide coatings that comply with the most stringent re-

a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural

B. Paint MI-OP-2A - Ferrous Metals, Primed, Alkyd, 2 Coat:

C. Paint MgI-OP-3A - Galvanized Metals, Alkyd, 3 Coat:

D. Seal surfaces that might cause bleed through or staining of top

E. Remove mildew from impervious surfaces by scrubbing with so lution of tri-sodium phosphate and bleach. Rinse with clean wate and allow surface to dry.

F. Galvanized Surfaces to be Painted: Remove surface contamina tion and oils and wash with solvent. Apply coat of etching primer.

G. Corroded Steel and Iron Surfaces to be Painted: Prepare using at least SSPC-PC 2 (hand tool cleaning) or SSPC-SP 3 (power toc cleaning) followed by SSPC-SP 1 (solvent cleaning).

H. Uncorroded Uncoated Steel and Iron Surfaces to be Painted: Re move grease, mill scale, weld splatter, dirt, and rust. Where heav coatings of scale are evident, remove by hand or power tool wire brushing or sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts and nuts are similarly cleaned. Prime paint entire surface; spot pri me after repairs.

I. Shop-Primed Steel Surfaces to be Finish Painted: Sand and scra pe to remove loose primer and rust. Feather edges to make touch up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.

J. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.

> K. Remove unfinished louvers, grilles, covers, and access panels or mechanical and electrical components and paint separately.

L. Apply products in accordance with manufacturer's instructions.

M. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

N. Apply each coat to uniform appearance.

O. Sand metal surfaces lightly between coats to achieve required finish.

> P. Vacuum clean surfaces of loose particles. Use tack cloth to re move dust and particles just prior to applying next coat.

> Q. Reinstall electrical cover plates, hardware, light fixture trim, escu tcheons, and fittings removed prior to finishing.

A. General Contractor will provide field inspection.

3.05 CLEANING

3.04 FIELD QUALITY CONTROL

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.06 PROTECTION

B. Touch-up damaged coatings after Substantial Completion.

END OF SECTION 09 9000

A. Protect finished coatings until completion of project.

PLACE

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STRUCTURAL ENGINEER:

BLAKE WILSON ENGINEERING. PL 637 W. HUTST BLVD. HURST. TX 76053 P: 817-268-2345 F: 817-282-1636 blakewilsoneng@sbcglobal.net

MEP ENGINEER:

AYS ENGINEERING, LLC 411 W Main Street, Suite 310 Round Rock, TX 78664 P: 512-961-6835 raleman@ayseng.com

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DATE: FEB 10, 2022

CONSTRUCTION DOCUMENTS HEATHERWILDE OFFICE **CONDOS BLDG**

201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660

PROJECT NO: 17003

REVISIONS:

DRAWN BY:	LC
REVIEWED BY:	SB

SPECS









2023-1-SP

SHEET 07 OF 30





SUITE 401	1,068 SF
SUITE 402	1,017 SF
SUITE 403	1,068 SF
SUITE 404	1,017 SF
FRONT PORCHES	126 SF
TOTAL	4,296 SF

C
SB



DRAWN BY:	LC
REVIEWED BY:	SB







FERIALS
(ILLE UDC)
IATERIAL AREA
100% MASONRY
100% MASONRY
100% MASONRY
100% FIBER
CEMENT SIDING

ION	BLDG 3 & 4			
	19'-4"			
	14'-2"			
		\sim		
	REQUIRED		RIGHT	LEFT
	42'-6"	32'-8"	14'-0"	14'-0"
	2'-0"	2'-0"	2'-0"	2'-0"
I A TH	FRONT = 60'-0" RIGHT = 27'-0" LEFT = 27'-0"	32'-8"	14'-0"	14'-0"
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	REQUIRED		RIGHT	LEFT
	42'-6"	32'-8"	15'-2"	15'-2"
	2'-11"	3'-2"	3'-2"	3'-2"
N	FRONT = 20'-0" RIGHT = 9'-0" LEFT = 9'-0"	30'-0	10'-0"	10'-0"
N	FRONT = 60'-0" RIGHT = 27'-0" LEFT = 27'-0"	30'-0	10'-0"	10'-0"
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PLACE

DRAWN BY:	LC
REVIEWED BY:	SB

GENERAL NOTES TO ENLARGED PLANS

1) ALL DIMENSIONS ARE TO FACE OF STUD UNLESS NOTED OTHERWISE.

2) ALL INTERIOR PARTITIONS TO BE TYPE '1' UNLESS NOTED OTHERWISE.

3) ALL DIMENSIONS LOCATING FIXTURES ARE TO THE CENTER OF THE FIXTURE UNLESS NOTED OTHERWISE.

4) COORDINATE WITH PLUMBING FOR FIXTURE TYPES AND HEIGHTS, MEET CURRENT TAS WHERE APPLICABLE.

5) CONTRACTOR RESPONSIBLE FOR FIELD MEASUREMENTS FOR MILLWORK PRIOR TO FABRICATION.

6) ALL DOOR OPENINGS TO BE LOCATED 6" FROM ADJACENT PERPENDICULAR WALL UNLESS NOTED OTHERWISE.

7) CONTRACTOR TO PROVIDE AND INSTALL SUFFICIENT BLOCKING IN WALL(S) TO SUPPORT WALL MIOUNTED ITEMS.

8) ALL WET WALL(S) TO RECEIVE 5/8" MOISTURE RESISTANT GYPSUM BOARD UNLESS NOTED OTHERWISE.

10) CONTRACTOR TO COORDINATE MOUNTING HEIGHTS OF WALL MOUNTED ITEMS/EQUIPMENT PRIOR TO INSTALLATION WITH OWNER AND/OR ARCHITECT.

11) NO SUBSTITUTIONS PERMITTED WITHOUT THE APPROVAL OF THE ARCHITECT OR OWNER,

12) ANY CONFLICTS IN THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION BEFORE WORK BEGINS.

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DATE: MAR 15, 2023

CONSTRUCTION DOCUMENTS HEATHERWILDE OFFICE CONDOS BLDG

201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660 PROJECT NO: 17003

REVISIONS:

DRAWN BY:	LC
REVIEWED BY:	SB

ENLARGED PLANS

FINISH SCHEDULE -														
ROOM #	ROOM NAME	FLOOR	BASE	WALLS		1		CEILING	CLG.	REMARKS				
				NORTH	SOUTH	EAST	WEST	MATERIAL	HEIGHT					
100	RECEPTION	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
101	CONFERENCE	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
102	OFFICE	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
103	HALL	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
104	RESTROOM		CTB-1	CT1/PT-1	CT1/PT-1	CT1/PT-1	CT1/PT-1	GWB-1	10'-0''	ENAMEL PAINT ON CLG OF RESTR.				
105	KITCHEN	LVT	WB-1	PT-1	PT-1	CT1/PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
106	OFFICE	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
107	OFFICE	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
108	RECEPTION	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
109	CONFERENCE	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
110	KITCHEN	LVT	WB-1	PT-1	PT-1	PT-1	CT1/PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
111	RESTROOM		CTB -1	CT1/PT-1	CT1/PT-1	CT1/PT-1	CT1/PT-1	GWB-1	10'-0''	ENAMEL PAINT ON CLG OF RESTR.				
112	HALL	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
113	OFFICE	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
114	OFFICE	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
115	OFFICE	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
116	OFFICE	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
117	OFFICE	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
118	OFFICE	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
119	HALL	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
120	RESTROOM		CTB -1	CT1/PT-1	CT1/PT-1	CT1/PT-1	CT1/PT-1	GWB-1	10'-0''	ENAMEL PAINT ON CLG OF RESTR.				
121	KITCHEN	LVT	WB-1	PT-1	PT-1	CT1/PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
122	CONFERENCE	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
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124	OFFICE	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
125	CONFERENCE	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
126	KITCHEN	LVT	WB-1	PT-1	PT-1	PT-1	CT1/PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
127	RESTROOM		CTB -1	CT1/PT-1	CT1/PT-1	CT1/PT-1	CT1/PT-1	GWB-1	10'-0''	ENAMEL PAINT ON CLG OF RESTR.				
128	HALL	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
129	OFFICE	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
130	OFFICE	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
131	RECEPTION	LVT	WB-1	PT-1	PT-1	PT-1	PT-1	GWB-1	10'-0''	4" CROWN MOLDING/PAINT GRADE				
								GENERAL REMARKS:		NOTE: ALL RESTROOMS TO HAVE A 4'-0" WAINSCOT OF TILE FINISHED WITH A SCHLUTER TRIM AND PAINT ABOVE TO CEILING.				

1 INTERIOR HEAD DETAIL SECTION SCALE: 3"=1'-0"

GLAZING LEGEND

TYPE	DESCRIPTION
1	1/4" TINTED INSULATED GLASS
2	1/4" TINTED SAFETY INSULATED GLASS
3	1/4" FROSTED INSULATED GLASS
4	1/4" TINTED INSULATED GLASS - 45 MIN FIRE RATED

TOILET ACCESSORIES

KEY NAME	DESCRIPTION
TA-1	GRAB BAR - 42"
TA-2	GRAB BAR - 36"
TA-3	TOILET PAPER DISPENSER
TA-4	WALL MOUNTED SOAP DISPENSER
TA-5	WALL MOUNTED HAND DRYER
TA-6	FRAMED MIRROR

Α HM DOORS & FRAME w/ VISION PANEL AND BORROWED LITE

FINISH	SCHEDULE	- NOTES
--------	----------	---------

INISH SCI	HEDULE - NOTES	3																PLACE
	DESCRIPTION						RE	MAR	KS									
FLOOR																		
LVT CI-2							_											
BASE																		
WB-1	WOOD BASE						RE	FER T	O SP	ECS								
CTB-1	CERAMIC TILE BA	ASE #1					RE	FER T	o spi	ECS								ROUND ROCK, TX 78664
CEILING																		F; [512] 238 8913
GWB-1	PAINTED GWB CI	EILING					RE	FER T	0 01	VNER	FO	R PA	INT SE	ECTI	ON.			PLACEdesigners.com
																		CIVIL ENGINEER:
WALLS																		PAPE-DAWSON
PT-1	GWB, PAINTED C	COLOR					RE	F. TO										10801 N. MOPAC EXPRESSWAY
					OM FUNCT)	FUNCTION)	VCEAL ROD)				()			ID	ш			AUSTIN, TX 78759 P: 512-454-8711 F: 512-459-8867 laurenanderson@pape-dawson.con STRUCTURAL ENGINEER: BLAKE WILSON ENGINEERING, PL
IARDWAR	E SCHEDULE -		iges, pair	R LOCKSET	tt (Classro	t (Privacy	DEVICE (CON KSET		ADBOLT	ATE	stop (floor	ers (set)	ERSTRIPPING	ADA TRESHO	DPEN DEVICI			637 W. HUTST BLVD. HURST, TX 76053 P: 817-268-2345 F: 817-282-1636 blakewilsoneng@sbcglobal.net
IARDWARE	SET #		TT HIN	TERIO	CKSE	CKSE	NIC L	OSER	Y DEA	CK PL/	JOR S	ENCE	EATHE	UM. A	ECTRC DLD -C			
					ΓC	ΓC	₹ >		× KE			SIL		Y -				411 W Main Street, Suite 310 Round Rock, TX 78664 P: 512-961-6835 raleman@ayseng.com
D2 OFFICE, S	SINGLE	 20 MIN.	1.5			1				1	1	1						THESE DOCUMENTS MAY NOT BE
03 RESTROO	M	20 MIN.	1.5			1		1		1	1	1						REPRODUCED IN ANY FORM WITHOUT THE WRITTEN CONSENT OF PLACE DESIGNERS. INC.
OOR SCH	IEDULE -																	THIS SHEET IS ONLY ONE COMPONENT OF THE TOTAL DOCUMENT PACKAGE WHICH CONSISTS OF ALL SHEETS OF DRAWINGS AND THE PROJECT MANUAL
DOOR #	R # ROOM NAME TYPE		WI			Т	TYPE	E	FRA	ME	REMARKS]	STERED ARCIN				
100A	MAIN ENTRY			НM		3'-	-0''	7'	-0''		А		HM		REFER TO DETAILS.		1	AS STEN A STUDY
102A	OFFICE			HM		3'-0"		7'-0''			С		HM		REFER TO DETAILS.			
103A 104A	RESTROOM		+	HM		3'-0"		7'-0''		+	C B		HM		45 MIN FIRE RATED REFER TO DETAILS.		C	18088
106A	OFFICE			SC		3'-	-0''	7'	-0''		С		НM		REFER TO DETAILS.		1	OF TELS
107A			+	SC HAA	_	3'- 3'-	-0'' -0''	7' 7'	-0'' -0''	-	C ^		HМ		REFER TO DETAILS.		-	Conserved and
111A	RESTROOM			HM		3'-	.0''	, 7'	-0''		C		HM		REFER TO DETAILS.		1	DATE: MAR 15. 2023
112A	REAR EXIT			ΗM		3'-	-0''	7'	-0''		В		HM		45 MIN FIRE RATED]	
113A 114A	OFFICE			SC SC		3'- 3'-	-0'' -0''	7' 7'	-0'' -0''	_	C C		HM HM		REFER TO DETAILS.		-	
115A	OFFICE			SC		3'-	.0''	, 7'	-0''	+	C		HM		REFER TO DETAILS.		1	
116A	OFFICE			SC		3'-	-0''	7'	-0''		С		НM		REFER TO DETAILS.		1	
117B	OFFICE			SC		3'-	0"	7'	-0"		C		HM		REFER TO DETAILS.		-	CONDOS BLDG
118A 119B			+	HM		3- 3'-	-0''	/ 7'	-0 -0''		C B		HM		45 MIN FIRE RATED		-	4
120A	RESTROOM		+	SC		3'-	.0''	, 7'	-0''		С		HM		REFER TO DETAILS.		1	201 N. HEATHERWILDE
123A	MAIN ENTRY			ΗM		3'-	-0''	7'	-0''		А		НM		REFER TO DETAILS.			BLVD. PFLUGERVILLE.
124A	OFFICE			SC		3'-	-0''	7' ד'	-0"	_	C C		HM		REFER TO DETAILS.		-	TX 78660
130A 127A	RESTROOM		+	SC SC		3'-	-0''	7'	-0''	+	C C	_	HM		REFER TO DETAILS.		-	PROJECT NO: 17003
128A	REAR EXIT			HM		3'-	-0''	7'	-0"		В		HM		45 MIN FIRE RATED			
129A	OFFICE			SC		3'-	-0''	7'	-0"		С		HM		REFER TO DETAILS.			
127A 128A 129A 131A	RESTROOM REAR EXIT OFFICE MAIN ENTRY	<u>2"</u>	4-0" A.F.F. 3-0" .	SC HM SC HM		3'- 3'- 3'- 4'-0"	-0" -0" -0"	4:-0" A.F.F. 3:-0"	-0" -0" -0"	3'-0"	A A		HM HM HM		AS MIN FIRE RATED REFER TO DETAILS. REFER TO DETAILS.			REVISIONS:

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116A	OFFICE			SC		3'.	-0''	/ - 7'-	-0''		C		HM		REFER	R TO DETAILS.		
117B	OFFICE			SC		3'	-0''	7'-	-0''		С		HM		REFER	R TO DETAILS.		
118A 119B	OFFICE REAR EXIT			SC HM		3'. זי	-0'' -0''	-'7 יד	-0''	+	C R		НМ НМ		REFER	R TO DETAILS.		4
120A	RESTROOM			SC		3'.	-0''	7'-	-0''		C		HM		REFER	R TO DETAILS.		201 N. HEATHERWILDE
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127A	RESTROOM			SC		3'	-0''	, 7'-	-0''		C		HM		REFER	R TO DETAILS.		PROJECT NO: 17003
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PT-1	GWB, PAINTED C	COLOR					REI	=. TO	1WO	NER I	FOR	PAIN	IT SELEC		N.			PAPE-DAWSON ENGINEERS
CT-1	CERAMIC TILE				1		REI	REFER TO SPECS WAINSCOT TO BE FINISHED WITH SCHLUTER PROFILE										BUILDING 3 - STE 200 AUSTIN, TX 78759
							(Q											P: 512-454-8711 F: 512-459-8 laurenanderson@pape-dawsor
					-UNC	CTION	AL RO											STRUCTURAL ENGINE
					OM F	FUNC	NCE/				R))LD	ار ب	Į.		BLAKE WILSON ENGINEERING, PL
HARDWAR	RE SCHEDULE -		AIR	KSET	SSRO	/ACY	CO				1001:		PING	ESHO	NETIC			637 W. HUTST BLVD. HURST, TX 76053
			GES, F	2 LOC	(CLA	(PRIV	EVICE SET			ΞE	OP (F	is (sei	RTRIP (DES)	DA TR	MAG PEN D			P: 817-268-2345 F: 817-282-1 blakewilsoneng@sbcglobal.net
HARDWARE	SET #	RATED	T HINC	ERIOF	CKSET	CKSET	LOCK	DSER	, DEAI	K PLA	or si	NCER	Athef P & SI	JM. AI	CTRO			MEP ENGINEER:
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																		Round Rock, 1X /8664 P: 512-961-6835 raleman@avseng.com
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124A 130A	OFFICE		+	SC SC		3'-	.U .O''	-'/ 7'-	-0"	+	C		HM HM		REFE	R TO DETAILS.	{	TX 78660
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																		ROUND ROCK, TX 7866 P: [512] 238 8912
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124A	OFFICE			SC		3'	-0''	, 7'-	-0''	╞	C		HM		REFER	R TO DETAILS.		PFLUGERVILLE, TX 78660
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FLOOR LVT	LUXURY VINYI TI	LE																
CT-2	CERAMIC TILE FL	LOORING																
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124A	OFFICE			SC		3'-	-0''	, 7'-	-0''		С		HM		REFER TO DETAILS.			PFLUGERVILLE, TX 78660
130A	OFFICE		T	SC		3'-	·0''	7'	-0"		С		HM		REFER TO DETAILS.			PROJECT NO: 17
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PANEL					A	\rangle				В	\rightarrow							A-601
																		© copyright 2023 PLACE designed

STRUCTURAL DESIGN CRITERIA

REQUIREMENTS FOR STRUCTURAL CONCRETE, 318-02.

ACI530-02/ASCE5-02/TMS402-02, 2002.

<u>CODES</u>

1. BUILDING CODE: INTERNATIONAL BUILDING CODE (IBC), 2021.

- 2. STRUCTURAL STEEL: AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN (ASD), NINTH EDITION.
- 3. <u>STRUCTURAL CONCRETE:</u> AMERICAN CONCRETE INSTITUTE (ACI), BUILDING CODE
- 4. CONCRETE MASONRY: MASONRY STANDARDS JOINT COMMITTEE CODE,
- 5. WOOD: AMERICAN INSTITUTE OF TIMBER CONSTRUCTION, MOST RECENT EDITION APA - THE ENGINEERED WOOD ASSOCIATION, MOST RECENT EDITION.
- 6. WOOD TRUSSES: TRUSS PLATE INSTITUTE DESIGN SPECIFICATIONS FOR METAL PLATE CONNECTED PARALLEL WOOD TRUSSES, MOST RECENT EDITION.
- 7. REFER TO SOILS REPORT BY RABA-KISTNER CONSULTANTS, INC., REPORT NO. AAA08-053-00, JULY 29, 2008.

DESIGN LOADS

1. <u>DEAD_LOADS</u> :	
FLOORS ROOF MATERIAL WALLS	10 PSF 10 PSF 10 PSF
2. LIVE LOADS INCLUDE THE FOLLOWING:	
FLOORS ROOF	50 PSF 20 PSF
3. WIND LOADS PARAMETERS INCLUDE THE FOLLOWING	:
DESIGN WIND SPEED – Vult EXPOSURE DIRECTION RISK CATEGORY	115 MPH B ANY II
SEISMIC 1. SITE CLASS: D SEISMIC DESIGN CATEGORY: A	
FOUNDATION DESIGN	

1. BASED ON OWNER'S GEOTECHNICAL REPORT BY RABA KISTNER BRYTEST CONSULTANTS REPORT NO. AAA08-053-00, DATED - JULY 29, 2008.

MATERIAL STRENGTHS

1. <u>CONCRETE</u>

SLABS

SIDEWALKS PAVING & CURBS

2. <u>REINFORCING STEEL:</u> ASTM A615

GRADE 40 FOR BEAM STIRRUPS, TIES, SPIRALS AND DOWELS. GRADE 60 FOR ALL OTHER REINFORCING. WELDED WIRE FABRIC: ASTM A185

MEMBER SCHEDULE

ID MARK	SIZE (REFER TO SCHEDULE NOTES)	FRAMING TYPE	NOTES
B1	2-PLY LVL 11¼"×1¾"	BEAM	AT COVERED ENTRANCE
C1	6x6 WOOD	COLUMN	AT COVERED ENTRANCE
H1	(2) 2x6 SYP	HEADER	AT INTERIOR OPENINGS REF SPEC
H2	3-PLY 2x12	HEADER	AT EXTERIOR OPENINGS REF SPEC
H3	2-PLY LVL 11¼×1¾	HEADER	SPAN 8'-0" MAX
R1	METAL PLATE CONNECTED TRUSS	ROOF TRUSS	DESIGN BY SUPPLIER
R2	INTERMEDIATE TRUSS GIRDER	ROOF TRUSS	DESIGN BY SUPPLIER
S1	2x4 @ 1'-4"	WALL STUD INTERIOR	1'-4" SPACING
S2	2x6 @ 1'-4"	WALL STUD EXTERIOR	1'-4" SPACING
F1	(3) 2x4 SYP	WALL COLUMN	INTERIOR BEAM SUPPORT
F2	(3) 2x6 SYP	WALL COLUMN	EXTERIOR BEAM SUPPORT
F3	STEEL SADDLE	SIMPSON STRONG TIE	CCOQ4-SDS2.5 OR SIMILAR
F4	ABU66	SIMPSON STRONG TIE	STEEL BASE PLATE
J1	2x6 @ 2'-0"	CEILING JOIST	15'-0" MAX SPAN
J2	2x8 @ 2'-0"	CEILING JOIST	MECHANICAL MEZZANINE IN ATTIC
			A-

3000 PSI (W/AIR ENT.

3000 PSI (W/AIR ENT.

3000 PSI (W/AIR ENT.)

GENERAL NOTES

- SITE PREPARATION REFERENCED ABOVE.
- 2. THE SUBGRADE UNDER THE BUILDING SLAB SHALL BE MOISTURE CONDITIONED AS SPECIFIED IN THE PROJECT SOILS REPORT PAGE 6 AND 1. THE MOISTURE CONDITIONING SHALL EXTEND TO 7 FEET DEEP BELOW EXISTING GRADE. THE TOP 12 INCHES UNDER THE SLAB SHALL CONSIST OF SELECT COMPACTED BACKFILL. SEE NOTE 4 BELOW.
- 3. MAINTAIN SITE DRAINAGE DURING AND AFTER CONSTRUCTION TO DIVERT SURFACE WATER AND ROOF RUN-OFF WATER AWAY FROM THE FOUNDATION.
- 4. SELECT NON-EXPANSIVE FILL MATERIAL REQUIRED TO ELEVATE PAD SHALL BE A SAND AND GRAVEL WITH A PLASTICITY INDEX BETWEEN 5 AND 15. THE FILL MATERIAL SHALL BE PLACED IN 6 INCH LOOSE LIFTS AND UNIFORMLY COMPACTED TO A MINIMUM DENSITY OF 95% AND MOISTURE CONTENT OF ±2% OF THE OPTIMUM MOISTURE CONTENT.

FOUNDATIONS

- 2. GRADE BEAMS AND FOOTINGS SHALL BEAR A MINIMUM OF 1'-0" INTO THE FINISHED GRADE OR COMPACTED SUBGRADE.
- 4. FOOTINGS AT STRUCTURAL COLUMNS SHALL BE 2'-6" SQUARE UNLESS OTHERWISE DIMENSIONED.

- 2. JOB SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE FABRICATION OF MATERIALS.
- ENTRAINMENT.
- LOCATIONS ALL

- 2. REINFORCING STEEL SHALL BE DESIGNED, DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH THE LATEST ACL "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI-315)" AND THE CRISI "RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS", LATEST EDITION
- 3. SPLICES IN REINFORCEMENT SHALL OCCUR AT POINTS OF MINIMUM STRESS AND LAP 30 BAR DIAMETERS MINIMUM UNLESS NOTED OTHERWISE.
- 4. MINIMUM CONCRETE COVERAGE FOR REINFORCEMENT SHALL BE AS FOLLOWS: GRADE BEAMS 3" FROM BOTTOM AND

SLABS ON GRADE

- ¾" FROM TOP 5. PROVIDE CORNER BARS AT ALL CORNERS AND INTERSECTIONS, SAME SIZE AND SPACING AS LARGER REINFORCEMENT.
- OF MATERIALS.

GENERAL EPOXY NOTES

ENGINEER:

SIKA-31, HIMODGEL

- 2. APPLICATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 3. HOLE SHALL BE $\frac{1}{4}$ " LARGER THAN ANCHOR DIAMETER AND A MINIMUM OF 10" EMBEDMENT, UNLESS NOTED OTHERWISE ON DETAILS.

NOTES:

1. LUMBER – SYP OR DF NO.2

2. LVL - MICROLLAM BY TRUSJOIST OR EQUAL, E=1900 KSI

DIMENSIONS AND ELEVATIONS FOR REFERENCE ONLY. REFER TO LATEST REVISED ARCHITECTURAL PLANS BY PLACE DESIGNERS FOR BUILDING DIMENSIONS. REFER TO CIVIL PLANS FOR SLAB ELEVATIONS AND TO VERIFY SLAB STEP LOCATIONS.

1. SITE PREPARATION REQUIREMENTS ARE BASED ON THE PROJECT SOILS REPORT

5. STABILIZATION OF THE SUBGRADE SOIL SHALL EXTEND UNDER THE PORTICO SLABS AND APPROACH SLABS INTO THE BUILDING.

1. THE FOUNDATION DESIGN IS BASED UPON AN ALLOWABLE BEARING PRESSURE OF 1800 PSF IN ACCORDANCE WITH THE PROJECT SOILS REPORT.

- 3. GRADE BEAMS NOT DIMENSIONED SHALL BE CENTERED UNDER WALLS.
- 5. A 10-MIL POLY SHEETING VAPOR BARRIER SHALL BE PLACED UNDER THE SLAB.

CAST-IN-PLACE CONCRETE

1. CONCRETE WORK SHALL BE EXECUTED IN STRICT ACCORDANCE WITH THE LATEST AMERICAN CONCRETE INSTITUTE BUILDING CODE ACI 318.

3. ALL CONCRETE EXPOSED TO THE WEATHER SHALL HAVE 5% TO 6% AIR

4. CONSTRUCTION JOINTS, WHEN NECESSARY SHALL OCCUR NEAT THE MIDDLE OF THE SPAN UNLESS A BEAN INTERSECTS AT THIS POINT, IN WHICH CASE THE JOINT SHALL BE OFFSET A DISTANCE EQUAL TO TWICE THE WIDTH OF THE BEAM. ENGINEER SHALL SHALL APPROVE PROVISIONS FOR TRANSFER OF SHEAR AND OTHER FORCES THROUGH THE JOINT.

5. CONCRETE SPECIFICATIONS SHALL BE AS FOLLOWS:

28 DAY STRENGTH	AGGREGATE	SLUMP
REF STRUCTURAL DESIGN CRITERIA	1" MAXIMUM	3" TO 5"

CONCRETE REINFORCING STEEL

1. ALL REINFORCEMENT SHALL CONFORM TO ASTM A615 GRADE 60.

	SIDES
	1½"FROM TOP
ON GRADE	

- 6. SUBMIT SHOP DRAWINGS TO ENGINEER FRO APPROVAL PRIOR TO FABRICATION
- . EPOXY SHALL BE ONE OF THE FOLLOWING TYPES, UNLESS APPROVED BY

HILTI HVA ADHESIVE ANCHORS

MASTER BUILDERS, CONCRESIVE 1380

4. HOLES SHALL BE FREE OF DUST AND MOISTURE.

WOOD FRAMING

- 1. FURNISH, FABRICATE AND ERECT FRAMING IN ACCORDANCE WITH THE REQUIREMENTS OF THE MOST RECENT EDITION OF THE TIMBER CONSTRUCTION MANUAL BY THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE ADOPTED EDITION OF THE INTERNATIONAL BUILDING CODE.
- 2. BEAM TO COLUMN AND BEAM TO BEAM CONNECTIONS SHALL BE NAILED FOR BEAMS UP TO 2" IN THICKNESS AND BOLTED FOR BEAMS GREATER THAN 2" IN THICKNESS.
- 3. WHERE MULTIPLE JOISTS OR HEADERS OCCUR, THERE SHALL BE A STUD FOR EACH MEMBER OF THE BEAM (I.E. PROVIDE DOUBLE STUDS UNDER DOUBLE JOISTS).
- 4. STUD SCHEDULE PERIMETER WALLS 2X6 @ 1'-4" INTERIOR WALLS - NON LOAD BEARING 2X4 @ 2'-0" INTERIOR LOAD BEARING WALLS 2X4 @ 1'-4"
- 5. STUDDING SHALL BE DOUBLE AT ALL ANGLES, CORNERS AND AROUND ALL OPENINGS.
- 6. ALL STUDS SHALL BE CONTINUOUS FROM BOTTOM PLATE TO TOP PLATE, ALL TOP AND BOTTOM PLATES SHALL BE LATERALLY SUPPORTED.
- 7. ALL BALLOON FRAMED WALLS TALLER THAN 9'-1" SHALL BE 2x6.
- 8. ALL MEMBERS SHALL BE KILN DRIED, #2 GRADE, SOUTHERN YELLOW PINE. BEAMS AND HEADERS SHALL HAVE A MINIMUM ALLOWABLE BENDING STRESS OF 975 PSI. STUDS AND PLATES SHALL HAVE A MINIMUM ALLOWABLE BENDING STRESS OF 1250 PSI.
- 9. LVL HEADERS SHALL BE 1.9E BY TRUS-JOIST MaCMILLAN
- 10. ROOF DECK $\frac{1}{2}$ " CDX PLYWOOD OR OSB INSTALLED WITH EDGE CLIPS.

	NAILING SCHEDUL	Ε
	CONNECTION	NAILING
1.	TRUSS TO SILL OR GIRDER, TOENAIL	SPEC. BY TRUSS MFR.
2.	BRIDGING TO TRUSS, TOENAIL EACH END	SPEC. BY TRUSS MFR.
3.	SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	16d @ 16" O.C.
4.	TOP PLATE TO STUD, END NAIL	2) 16d
5.	STUD TO SOLE PLATE	4) 8d TOE NAIL OR
		2) 16d END NAIL
6.	DOUBLE STUDS, FACE NAIL	16d @ 24" O.C.
7.	DOUBLE TOP PLATES, FACE NAIL	16d @ 16" O.C.
8.	TOP PLATES, LAPS & INTERSECTIONS, FACE NAIL	2) 16d
9.	CONTINUOUS HEADER, TWO PIECES	16d @ 16" O.C.
		ALONG EACH SIDE
10.	RAFTER TO PLATE, TOENAIL	3) 8d
11.	CONTINUOUS HEADER TO STUD, TOENAIL	4) 8d
12.	CEILING JOIST LAPS OVER PARTITION, FACE NAIL	3) 16d
13.	CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3) 16d
14.	1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2) 8d
15.	BUILT UP CORNER STUDS	16d @ 24" O.C.
16.	BUILT UP GIRDER & BEAMS, FACE NAIL	20d @ 32" O.C. AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES AND 20d @ ENDS AND AT EACH SPLICE
	PLYWOOD OR OSB SUB FLOOR, ROOF AND WALL	SHEATHING (NOTE 1)
1.	1/2" THICK AND LESS	6d COMMON OR
	(REFER TO NOTE 2)	DEFORMED SHANK
2.	19/32" TO 3/4" THICK	8d COMMON OR
		6d DEFORMED SHANK
3.	7/8" TO 1" THICK	8d COMMON OR
		DEFORMED SHANK
4.	1 1/8" TO 1 1/4" THICK	10d COMMON OR
		8d DEFORMED SHANK
	GYPSUM BOARD SHEATHING	
1.	HARDBOARD SIDING 1/2" THICK x 12" NOMINAL WIDE	OR S SCREWS SPACED @ 7" ALONG EDGES AND 12" @ FIELD SPACE ¾" MIN FROM EDGE OF PANEL OR SIDES OF STUDS, BLOCKING AND TOP AND BOTTOM PLATE. 6d CORROSION RESISTENT SIDING OR CASING NAILS 2 NAILS @ EACH SUPPORT

NOTE:

1. NAILS SPACED @ 6" O.C. AT EDGES, 12" O.C. @ INTERMEDIATE SUPP. WHERE SUPPORTS ARE SPACED @ 48" RO GREATER NAIL @ 6" O.C.

2. USE 8d NAILS MINIMUM FOR ROOF SHEATHING APPLICATIONS.

HEADER SCHEDULE - WOOD FRAMING

- 1. LOAD BEARING: WINDOWS/DOORS UP TO 6'-0'' 2) 2x12
- 2. NON LOAD BEARING DOOR OR WINDOW OPENINGS 2) 2x6

WIND BRACING DETAILS:

1. SEE SHEET S4.1 AND S5.0

	\sim
SPECIAL INSPECTION SCHEDULE	
VERIFICATION AND INSPECTION TASK	FREQUENCY
1. <u>CONCRETE SLAB CONSTRUCTION</u> – PRE–POUR	
VERIFY REINFORCING STEEL PLACEMENT IN CONCRETE SLABS	PERIODIC
VERIFY SLAB THICKNESS	PERIODIC
VERIFY GRADE BEAM CONFIGURATION – GENERAL ARRANGEMENT	PERIODIC
VERIFY GRADE BEAM REINFORCING STEEL	PERIODIC
VERIFY GRADE BEAM DIMENSIONS AND DEPTH	PERIODIC
2. WOOD FRAMING	·
VERIFY FRAMING MEMBER SIZES FOR HEADERS, STUDS, JOISTS RAFTERS ETC.	PERIODIC
VERIFY GRADE AND SPECIES	PERIODIC
VERIFY NAILING AND FASTENING OF FRAMING MEMBERS	PERIODIC
VERIFY TREATED WOOD 2X SILL PLATE FASTENED TO THE SLAB	PERIODIC
VERIFY MEMBER MAXIMUM ALLOWABLE SPANS	PERIODIC
VERIFY RAFTER BRACING AND SPACING	PERIODIC
VERIFY RAFTER CONNECTIONS AND HURRICANE CLIPS	PERIODIC
VERIFY ROOF DECK SHEATHING TYPE, THICKNESS AND FASTENING	PERIODIC
VERIFY WALL SHEATHING TYPE, THICKNESS AND FASTENING	PERIODIC
VERIFY SHEAR WALL LOCATIONS AND GENERAL ARRANGEMENT	PERIODIC
VERIFY HOLD-DOWN LOCATIONS AND CONNECTION TO THE SLAB	PERIODIC
3. BRICK AND MASONRY	-
VERIFY BRICK TIE SPACING	PERIODIC
VERIFY BRICK TIE FASTENING TO STUD FRAMING	PERIODIC

NOTES:

1. NSPECTIONS SHALL BE CONDUCTED AT THE MINIMUM FREQUENCY INDICATED. 2. INSPECTION REPORTS SHALL BE PREPARED AND SUBMITTED PROMPTLY.

TESTING AND CONSTRUCTION REVIEW

- 1. SOIL COMPACTION OF SELECT FILL MATERIAL SHOULD BE CONFIRMED WITH A MINIMUM OF ONE FIELD DENSITY TEST PER 800 S.F. PER LIFT.
- 2. CONCRETE COMPRESSIVE STRENGTH SHOULD BE CONFIRMED WITH A MINIMUM OF ONE CYLINDER TEST PER DAY OR 150 CUBIC YARDS OR 5,000 SF OF SURFACE AREA FOR SLABS OR WALLS, WHICHEVER IS GREATER.
- 3. CONSTRUCTION REVIEW OF THE FOUNDATION INSTALLATION AND SLAB PREPARATION SHOULD BE PERFORMED BY A PROFESSIONAL ENGINEER.

REV NO ISSUE DATE DESCRIPTION	0 03-16-23 FOR PERMIT	1 04-25-23 REVISED PER CITY PLAN REVIEW COMMENTS	N 2 4 08-15-23 CITE DEVELOPMENT REVISION		S Blake Wilson Engineering, PLLC	1818 Norwood Diaza #111 Dhone (817) 268 2315	1040 NOI NOI NOU TIAZA #114 TIUNIG (017) 200-2343	
	GENERAL NULES AND SCHEDULE		Hasthannilda Office Condoe					
	SCALE: AS NOIED		PROJECT NO: 106506.0	FILE NAME: 106506.0.dwg	DRAWN BY: N PHILLIPS	DESIGNED BY: B WILSON	CHECKED BY: B WILSON	APPROVED BY: B WILSON
	DAIE: AUG 15, 2025	SHEET NUMBER:						

<u>NOTES</u>

1. SEE DETAIL 1/S3.0 FOR INFORMATION NOT SHOWN.

S3.0

<u>NOTES</u>

1. SEE DETAIL 1/S3.0 FOR INFORMATION NOT SHOWN.

GENERAL NOTES FOR WOOD FRAMING

(THESE NOTES SHALL CONTROL UNLESS NOTED OTHERWISE ON PLANS AND DETAILS.) TIMBER GRADES

ROOF RAFTERS:	
FLOOR JOISTS:	NO. 2 SOUTHERN YELLOW PINE (SYP), KD, S4S.
CEILING JOISTS :	NO. 2 SOUTHERN YELLOW PINE (SYP), KD, S4S.
BEAMS & HEADER S:	NO. 2 SOUTHERN YELLOW PINE (SYP), KD, S4S.
STUDS:	STUD GRADE, SYP, KD, S4S.
WOOD POSTS:	NO. 2 SYP, SURFACE GREEN.

JOISTS

- JOIST BLOCKING A) JOISTS SHALL BE LATERALLY SUPPORTED AT EACH END AND AT EACH SUPPORT BY SOLID BLOCKING EXCEPT WHERE THE ENDS OF JOISTS ARE NAILED INTO A HEADER, BAND OR RIM JOIST OR TO AN ADJOINING STUD. SOLID BLOCKING SHALL NOT BE LESS THAN TWO INCHES IN THICKNESS AND SHALL MATCH THE DEPTH OF THE JOIST. B) PROVIDE SOLID BLOCKING UNDER ALL BEARING WALLS PERPENDICULAR TO THE DIRECTION
- OF THE JOISTS. C) PROVIDE DOUBLE JOISTS UNDER ALL BEARING WALLS PARALLEL TO THE DIRECTION OF THE JOISTS.
- 2. JOIST BRIDGING
- PROVIDE BRIDGING AT ALL FLOOR JOISTS AT SPACING NOT TO EXCEED 8'-0".
- 3. JOIST HOLES AND NOTCHES A) NOTCHES IN TOP OR BOTTOM OF JOISTS SHALL NOT EXCEED ONE SIXTH (1/6) THE JOIST DEPTH AND SHALL NOT BE LOCATED WITHIN MIDDLE THIRD OF THE SPAN.
- B) HOLES SHALL NOT BE CLOSER THAN 2" TO TOP OR BOTTOM OF JOIST, THE DIAMETER OF ANY HOLE SHALL NOT EXCEED ONE FOURTH (1/4) THE JOIST DEPTH UNLESS APPROVED BY THE ENGINEER.

BEAMS AND HEADERS

- 1. AT BEAMS MADE UP OF A NUMBER OF 2x JOISTS, EACH JOIST WILL BEAR ON A WALL STUD (I.E. NUMBER OF WALL STUDS SHALL MATCH NUMBER OF JOISTS BEARING ON THESE STUDS). THE CENTERLINE OF THE BEAM SHALL BE THE CENTERLINE OF THE SUPPORTING WALL STUDS.
- 2. ALL BEAMS MADE UP OF A NUMBER OF 2x JOISTS SHALL BE FASTENED AS FOLLOWS:
- FOR THE MAXIMUM HORIZONTAL SPACING OF BOLTS: 16d NAILS @ 12" TOP & BOTTOM, STAGGER, EA. FACE
- 20d NIALS (a) 12" TOP & BOTTOM, STAGGER, EA. FACE 4-2x12 (OR MORE)5/8" Ø BOLTS @ 12" TOP & BOTTOM, STAGGER (W/ STD WASHERS)
- BOLTS SHALL BE 5/8"Ø, LOCATED 2" MINIMUM FROM BEAM EDGES AND SHALL BE STAGGERED IN TOP AND BOTTOM ROWS. PROVIDE STANDARD WASHERS @ EACH FACE.
- 3. ALL DOOR AND WINDOW HEADERS (OR HEADERS AT ANY OTHER OPENING) THAT ARE NOT SPECIFIED ON PLANS SHALL BE AS FOLLOWS:
 - FLOOR FRAMING: 2-2X12 CEILING FRAMING: 2-2X8
- 4. MINIMUM BEARING OF ANY BEAM OR HEADER AT A STUD WALL IS 3 1/2"
- STUD WALLS
- 1. STUDS SHALL BE AS FOLLOWS:
- 2x4 @ 16" AT ALL FLOORS IN ONE- OR TWO- STORY STRUCTURES. DBL 2x4 OR 2x6 @ 16" AT ALL STUD WALLS AT FIRST FLOOR AREAS DIRECTLY
- BELOW A THIRD FLOOR. 2. PROVIDE A MINIMUM OF TWO (2) STUDS AT EACH SIDE OF OPENINGS LARGER THAN 4'-0",
- FULL HEIGHT OF WALL (KING STUDS). 3. MAXIMUM STUD WALL HEIGHT SHALL BE AS FOLLOWS:
- 2x4 STUDS @ 16" o.c. 10'-0"
- 2x6 STUDS @ 16" o.c. 13'-0"
- 2x8 STUDS @ 16" o.c. 16'-0" 4. BLOCKING & LATERAL BRACING:
- A. PROVIDE BLOCKING AND/OR TEMPORARY CROSS BRACING AS REQUIRED TO ENSURE STUD STRAIGHTNESS ACCORDING TO SPECIFIED TOLERANCES. B. MAXIMUM TOLERANCE FOR STUD STRAIGHTNESS IN EITHER DIRECTION IS 1/4 INCH PER TEN (10) FEET OF STUD HEIGHT
- C. MINIMUM BLOCKING:
- 1 ROW FOR STUD HEIGHT UP TO 9'-0": 2 ROWS FOR STUD HEIGHT UP TO 15'-0";
- 3 ROWS FOR STUD HEIGHT OVER 15'-0".

ROOF DECK:

- 1. MINIMUM THICKNESS SHALL BE 1/2" THICK. MATERIAL SHALL BE CDX PLYWOOD.
- ORIENTED STRAND BOARD (OSB) MAY BE USED IN LIEU OF PLYWOOD. 3. MINIMUM NAILING SHALL BE AS REQUIERD BY THE BUILDING CODE.
- 4. PLYWOOD CLIPS SHALL BE INSTALLED @ ROOF DECKING TO RESULT IN A 1/8" GAP BETWEEN ALL PANEL EDGES. PROVIDE 1 CLIP PER SPAN (JOIST SPACING). CLIPS SHALL BE SIMPSON PSCL, OR APPROVED EQUAL, TO MATCH CORRESPONDING PLYWOOD THICKNESS.

CONNECTORS

- 1. CONNECTORS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC.,
- DUBLIN, CA. OR APPROVED EQUAL. NAIL ALL NAIL HOLES. 2. CONNECTORS SHALL BE THE MANUFACTURER-DESIGNATED SIZE FOR FRAMED MEMBERS, AND SHALL BE INSTALLED IN STRICT CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS.
- 3. ALL NAIL & BOLT HOLES SHALL BE ENGAGED, WITH MANUFACTURER-DESIGNATED
- FASTENERS. 4. CONNECTORS SHALL BE INSTALLED AT THE ENDS OF ALL JOISTS & BEAMS FRAMING
- INTO OTHER (SUPPORTING) MEMBERS (UNLESS OTHERWISE NOTED). 5. THE FOLLOWING CONNECTORS SHALL BE PROVIDED AND SHALL BE CONSIDERED THE MINIMUM: SAWN-LUMBER JOISTS U SERIES
- I-JOISTS IUS SERIES
- MULTIPLE-JOIST/BEAMS HUS SERIES
- PSL & LVL BEAMS LBV SERIES LSL (GLU-LAM) BEAMS HGUS SERIES

FASTENERS

1. BOLTS

- A. USE ASTM A-307 BOLTS, WITH STANDARD WASHERS AT ALL CONTACT SURFACES. B. PROVIDE 1/2"Ø x 0'-10" LONG ANCHOR BOLTS @ 4'-0" O.C. AT ALL EXTERIOR WALL
- SILL PLATES, WITH 2" PROJECTION AND 1" THREAD. C. ALL BOLTS, NUTS, AND WASHERS EXPOSED TO WEATHER SHALL BE GALVANIZED. 2. ADHESIVE ANCHORS
- A. USE HILTI-HIT RE500 ANCHORS, OR APPROVED EQUAL.
- B. INSTALL IN STRICT ACCORDANCE W/ MANUFACTURER'S RECOMMENDATIONS.
- 3. POWDER-ACTUATED PINS
- A. USE HILTI X-EDNI (0.145" SHANK) OR APPROVED EQUAL. B. INSTALL IN STRICT ACCORDANCE W/ MANUFACTURER'S RECOMMENDATIONS.

HURRICANE CLIPS:

PROVIDE HURRICANE CLIPS @ EVERY OTHER ROOF TRUSS OR RAFTER. (SIMPSON H2.5 OR APPROVED EQUAL)

MISCELLANEOUS:

ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE TREATED LUMBER.

TYPICAL NAILING SCHEDULE

NAILING SCHEDULE	(FLOOR & ROOF DECK)	

DECK TYPE & THICKNESS	NAIL SIZE	NUMBER OR NAILING PATTERN
PLYWOOD OR OSB		
1/2" OR LESS	8D COMMON OR EQUAL	6" O.C. @ PANEL EDGES
19/32" THRU 3/4"	8D COMMON OR EQUAL	10" O.C. @
7/8" THRU 1" (FLR.)	8D COMMON OR EQUAL	INTERMEDIATE SUPPORTS TYPICAL
1 1/8" THRU 1 1/4" (FLR.)	10D COMMON OR EQUAL	(TYPICAL)

NAILING SCHEDULE (FRAMING MEMBERS)

CONNECTED MEMBERS	NAIL SIZE	NUMBER OR NAILING PATTERN
BRIDGING TO JOIST	8D COMMON	2 TOE NAIL EA. END
SOLE PLATE TO JOIST OR BLOCKING.	16D COMMON	@ 16" O.C. FACENAIL.
TOP PLATE TO STUD	16D COMMON	2 END NAIL.
STUD TO SOLE PLATE.	8D COMMON OR 16D COMMON	4 TOE NAIL. 2 END NAIL
DOUBLE STUDS.	16D COMMON	@ 24" FACE NAIL.
DOUBLED TOP PLATES.	16D COMMON	@ 16" FACE NAIL.
TOP PLATES: LAPS & INTERSECTIONS.	16D COMMON	2 FACE NAIL.
CONTINUOUS HEADER, TWO PIECE.	16D COMMON	@ 16" FACE NAIL ALONG EA. EDGE.
CEILING JOISTS TO PLATE.	8D COMMON	3 TOE NAIL.
CONTINUOUS HEADER TO STUD.	8D COMMON	4 TOE NAIL.
CEILING JOISTS, LAPS OVER PARTITIONS.	16D COMMON	3 FACE NAIL.
CEILING JOISTS TO PARALLEL RAFTERS.	16D COMMON	3 FACE NAIL.
RAFTER TO PLATE.	8D COMMON	3 TOE NAIL.
1" BRACE TO EACH STUD & PLATE.	8D COMMON	2 FACE NAIL.
BUILT UP CORNER STUDS.	16D COMMON	@ 24" FACE NAIL.
CONTINUOUS HEADER, 3 OR MORE PIECE & BUILT UP GIRDERS OR BEAMS.	BOLTS	RE: GEN. NOTES.

NAILING SCHEDULE (WALL SHEATHING AND SIDING)

SHEATHING TYPE & THICKNESS	FASTNER SIZE & TYPE	NAILING PATTERN
PLYWOOD & OSB		6" O.C. @ PANEL EDGES
LESS THAN 1/2"	6D COMMON OR EQUAL	12" O.C. @
1/2" THRU 3/4"	8D COMMON OR EQUAL	INTERMEDIATE SUPPORTS
FIBERBOARD		3" O.C. @ PANEL EDGES
1/2" OR LESS	6D COMMON OR EQUAL	6" O.C. @
25/32"	8D COMMON OR EQUAL	SUPPORTS
GYPSUM SHEATHING		4" O.C. @ EDGES
1/2" OR 5/8"	12 GA. (4) OR EQUAL	8" O.C. @ INTERMEDIATE SUPPORTS
GYPSUM WALLBOARD		
1/2"	1 3/8" DRYWALL NAILS	7" O.C. @ CEILINGS
5/8"	1 1/2" DRYWALL NAILS	8" O.C. @ WALLS
PANEL SIDING (TO FRAMI	N <u>G)</u>	
1/2" OR LESS	6D COMMON OR EQUAL	1 EACH PANEL
5/8"	8D COMMON OR EQUAL	

NOTES ON "NAILING--WALL SHEATHING & SIDING"

- 1. CORROSION-RESISTANT SIDING OR CASING NAILS CONFORMING TO THE REQUIREMENTS
- OF IBC 2000 2. CORROSION-RESISTANT ROOFING NAILS WITH 7/16-INCH DIAMETER HEAD AND 1 1/2-INCH
- IN LENGTH FOR 1/2-INCH SHEATHING AND 1 3/4-INCH LENGTH FOR 25/32-INCH SHEATHING CONFORMIMG TO THE REQUIREMENTS OF IBC 2000
- 3. CORROSION-RESISTANT STAPLES WITH NOMINAL 7/16-INCH CROWN AND 1 1/8-INCH LENGTH FOR 1/2-INCH SHEATHING AND 1 1/2-INCH LENGTH FOR 25/32-INCH SHEATHING CONFORMING TO THE REQUIREMENTS OF IBC 2000
- 4. CORROSION-RESISTANT, LARGE HEAD.

WHERE REQ'D. (RE: SCHEDULE)

(a) SHEAR WALL ENDS

HOLDOWN ANCHOR; **RE: SHEAR WALL SCHEDULE** FOR SIZE.

@ HOLDOWNS LARGER THAN PHD2-SDS3; PROVIDE ADD'L STUD @ WALL ENDS TO COVER BOLT HEADS (DO NOT COUNTERSINK BOLTS IN DOUBLE STUDS)

CONCRETE FOUNDATION. IF NO GRADE

BEAM EXISTS UNDER SHEAR WALL, THICKEN SLAB AS REQUIRED TO PROVIDE A MINIMUM OF 3" CONCRETE PROTECTION FOR ANCHOR BOLTS.

TYPICAL SHEAR WALL ELEVATION

NOT TO SCALE

SHEAR WALL SCHEDULE

MARK	SHEATHING MATERIAL (3)	BLOCKING	NAILING PATTERN (2)3)4)	STUD POST EACH END (5)	HOLD-DOWN MARK 6
SW	7/16" PLYWOOD C-C	YES	WALL BOUNDRY - TOP, BOT AND ENDS: 8D COMMON @ 4" SHEETING EDGES:	2-2x6	HTT4

SHEAR WALL NOTES

- WHERE "BLOCKING" IS INDICATED, PROVIDE 2x4 BACK-UP AT ALL GYPBOARD OR PLYWOOD PANEL EDGES.
- 2. NAILING PATTERN APPLIES AT ALL PANEL EDGES. AT INTERMEDIATE SUPPORTS, PROVIDE NAILING @ 12" O.C. USING CORRESPONDING NAIL SIZE.
- SHEATHING MATERIAL AND NAILING PATTERN APPLY TO ONE SIDE OF SHEAR WALL ONLY. 4. WHERE A SHEAR WALL IS CALLED OUT ON A PLAN, PROVIDE SCHEDULED SHEATHING MATERIAL AND NAILING FOR THE FULL LENGTH OF THAT WALL.
- 5. PROVIDE SCHEDULED STUDS AT EACH END OF SHEAR WALL OR SEGMENT THEREOF. 6. HOLD-DOWN CONNECTORS:
- A) CONNECTORS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC., SAN LEANDRO, CA. OR APPROVED EQUAL.
- B) HOLD-DOWN SHALL BE FASTENED TO FOUNDATION WITH 5/8 INCH EPOXY BOLD EMBEDDED AT LEASE 5 INCHES INTO CONCRETE.

STRAPPING REQUIREMENTS FOR SHEAR WALL OPENINGS

(NOT TO SCALE)

RAFTER TO TO

FRAMING DETAIL SCALE: NOT TO SCALE

໌ 1 S5.0

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YP.)	
,	

ANCHOR BOLT AND TIE SCHEDULE

	TYPE	SPACING AND LOCATION
NMO	HTT5 – SIMPSON	AT LOCATIONS AS SHOWN ON PLANS
DATION	TITEN HD ½" × 6"	WITHIN 12" FROM ENDS AND AT 4 FT SPACING
TOP PLAT	DSP OR 2-SSP E	AT BUILDING CORNERS AND SPACED NO GREATER THAN 15 FEET ON CENTER
P PLATE	H2.5 A	AT CORNERS AND AT ALTERNATING RAFTERS

S5.0

(REFER TO FASTNER SCHEDULE)

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DRAW	ING ABBREVI	ATIONS	3 AND SYMBOLS			PIPIN	G SCHEE	ULE		
ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION	SYMBOL	SE	RVICE	PIPE MATERIAL	TYPE JOINT	FITTINGS	TEST
ABV CW	ABOVE	PLBG QTY	PLUMBING QUANTITY		SANITARY WASTE A	ND UNDERGROUND	SCHEDULE 40 DWV PVC	SOLVENT WELD (PER MANUFACTURER'S RECOMMENDATIONS)	SCHEDULE 40 DWV PVC	10 ft. FOR 6-HOURS
EXIST. FCO	EXISTING FLOOR CLEAN OUT	SAN V	SANITARY SEWER SANITARY VENT WITHOUT		SANITARY VENT		SCHEDULE 40 DWV PVC	SOLVENT WELD (PER MANUFACTURER'S RECOMMENDATIONS)	SCHEDULE 40 DWV PVC	10 ft. FOR 6-HOURS
HW	HOT WATER	WCO WHA	WALL CLEAN OUT WATER HAMMER ARRESTOR		DOMESTIC WATER	AND ABOVE GROUND	TYPE 'L' HARD DRAWN COPPER	SWEAT WITH LEAD FREE SOLDER,	WROUGHT COPPER	15 ft. FOR 24 HOURS
C	ENERAL SYN	/BOL L	EGEND		RING SYN			GENEF	RAL NOTE:	
SYMBOL D	ESCRIPTION	SYMBOL	DESCRIPTION					(THIS NOTE APP	LIES TO ALL SH	EETS)
(1) N	OTE BY SYMBOL DESIGNATION		CONTINUATION OF SYSTEM OR LINE	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	ALL MATERIALS, FIXTU	JRES AND DEVIC ED APPLICABLE	ES SHALL STANDARDS
NOTES: 1. AL 2. AL CC CC NO 3. SY	LL ABBREVIATIONS AND SYMBOLS LL MATERIALS, LABOR, COORDINA DNTRACTOR UNLESS SPECIFICALL DNTRACTOR SHALL COORDINATE DTED "OWNER FURNISHED".	ARE NOT NECES TION, AND SUPER Y NOTED "BY OW AND INSTALL EQU	SSARILY USED. RVISION IS BY INER" OR "NIC". JIPMENT WHEN	SAP	NITARY SEWER JMBING VENT MESTIC COLD WATER MESTIC HOT WATER	WAL	L CLEANOUT BOW TURNING DOWN BOW TURNING UP	GENER (THIS NOTE APP ALL PLUMBING SHALL	AL NOTE: LIES TO ALL SH	EETS) ANCE_WITH

PLUMBING SPECIFICATIONS

- PART I GENERAL
- MATERIALS AND INSTALLATION SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL CODES AND REQUIREMENTS.
- OBTAIN AND PAY FOR ALL REQUIRED PERMITS, INSPECTION FEES, TAPPING FEES, CONNECTION CHARGES, AND UTILITY COMPANY SERVICE CHARGES.
- 3. INSTALLATION SHALL BE DONE IN A NEAT AND WORKABLE MANNER.
- 4. DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED FOR EXACT SIZES OR LOCATIONS. THEY ARE NOT INTENDED TO DISCLOSE ABSOLUTE OR UNCONDITIONAL KNOWLEDGE OF ACTUAL FIELD CONDITIONS.
- PART 2 PRODUCTS
- 1. ALL DOMESTIC WATER PIPING INSIDE THE BUILDING ABOVE SLAB SHALL BE TYPE 'L' HARD DRAWN COPPER (TYPE 'K' FOR UNDERGROUND) WITH WROUGHT COPPER FITTINGS, SWEAT WITH LEAD FREE SOLDER.
- 2. ALL CONDENSATE PIPING ON THE ROOF SHALL BE TYPE 'M' COPPER. OR PVC WHERE ALLOWED BY CODE
- DOMESTIC WATER AND CONDENSATE DRAIN PIPING BELOW SLAB AND OUTSIDE SHALL BE TYPE "K" SOFT SEAMLESS. NO JOINTS SHALL BE ALLOWED BELOW SLAB. ALL SLAB PENETRATIONS SHALL BE SLEEVED TO PROTECT PIPING FROM CORROSION BY CONCRETE.
- 4. COPPER PIPE FITTINGS SHALL BE WROUGHT COPPER SWEEP PATTERN FITTINGS, SOLDERED USING 95-5 LEAD-FREE SOLDER OR BRAZED WITH SIL-FOS.
- 5. ALL SANITARY WASTE, VENT AND STORM DRAINAGE PIPING INSIDE AND EXTENDING 30" OUTSIDE THE BUILDING SHALL BE SCHEDULE 40 PVC DWV EQUIVALENT TO CHARLOTTE PIPE AND MEET ASTM D-2665. EXTERIOR PVC PIPING 30" FROM BUILDING SHALL BE TYPE SDR-35 AND ASTM D-3034.
- 6. JOINTS FOR PVC PIPING SHALL BE SOLVENT WELD TYPE INSIDE AND UNDERSLAB TO A POINT 30" OUTSIDE THE BUILDING AND NEOPRENE PUSH-ON TYPE JOINTS BEYOND OUTSIDE 30" FROM THE BUILDING.
- INSULATE AND HEAT TRACE ALL DOMESTIC HOT AND COLD WATER PIPING LOCATED IN AREAS SUBJECT TO FREEZING. INSULATION SHALL BE 1" THICK FIBERGLASS AS MANUFACTURED BY MANVILLE, OWENS-CORNING, OR KNAUF.
- 8. ALL NATURAL GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL WITH SCREWED OR WELDED FITTINGS AND GASKET TYPE UNIONS AND FLANGES. 2" AND SMALLER - SCREWED, 2 1/4" AND LARGER WELDED
- 9. ALL UNDERGROUND NATURAL GAS PIPING SHALL BE POLYETHYLENE (PE-2306) WITH HEAT FUSION JOINTS.

- PART 3 EXECUTION
- 1. EXCAVATION, BACKFILLING AND TRENCH WORK SHALL BE DONE IN ACCORDANCE WITH O.S.H.A. AND EXISTING SAFETY STANDARDS.
- A. PROVIDE SHORING AND CLEANING NECESSARY TO KEEP TRENCHES IN GOOD WORKING CONDITION, INCLUDING PUMPING OUT WATER.
- B. IN MOSTLY ROCK MATERIAL, TRENCHES SHALL BE EXCAVATED TO AT LEAST 6" BELOW THE ELEVATION OF THE BOTTOM OF THE PIPES. AFTER EXCAVATION, TRENCH SHALL THEN BE FILLED TO THE PROPER ELEVATION WITH CRUSHED LIMESTONE. GRAVEL SHALL BE SCOOPED OUT UNDER PIPE BELLS SO THE PIPE RESTS FIRMLY ON THE TRENCH BOTTOM.
- C. IN MOSTLY EARTH OR SAND MATERIAL, THE LAST 6" OF EXCAVATION SHALL BE DONE BY HAND. TRENCH BOTTOM SHALL BE SCOOPED OUT AT PIPE BELLS SO THE PIPE RESTS FIRMLY ON THE TRENCH BOTTOM.
- D. BACKFILLING AND TAMPING SHALL BE CAREFULLY DONE BY HAND SIMULTANEOUSLY ALONG BOTH SIDES OF THE PIPE USING ROCK FREE EARTH, CRUSHED STONE OR SAND UNTIL THE PIPE IS COVERED TO A DEPTH OF AT LEAST 12". THE REST OF THE FILL-UP TO THE TOPSOIL LAYER MAY BE GRAVEL OR ROCK FREE EARTH. ACCEPTABLE SOIL MATERIALS FOR BACK FILL AND FILL SHALL BE FREE OF CLAY, ROCK OR GRAVEL LARGER THAN 2" IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS AND OTHER DELETERIOUS MATTER HAVING A PLASTICITY INDEX LESS THAN 30. BACKFILL SHALL BE DONE IN LAYERS OF NOT MORE THAN 8" AND EACH LAYER SHALL BE COMPACTED. THE LAST 12" OF BACKFILL SHALL BE ROCK FREE TOPSOIL.
- E. SURFACE SHALL BE RESTORED TO ITS ORIGINAL CONDITION.
- 2. PRESSURE REDUCING VALVE SHALL BE SET AT 70 PSI MAXIMUM. PRESSURE RELIEF VALVE SHALL BE SET AT 80 PSI MAXIMUM.
- 3. EXPOSED HOT AND COLD WATER TRIM IN FINISHED AREAS SHALL BE CHROME FINISHED.
- 4. ALL HORIZONTAL AND VERTICAL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL CODE RECOM-MENDATIONS. SUPPORTS SHALL SECURELY HOLD PIPING, PREVENT VIBRATION. COMPENSATE FOR ALL STATIC AND OPERATIONAL CONDITIONS OF THE VARIOUS SYSTEMS AND SHALL NOT BE SUBJECT TO ELECTROLYTIC ACTION. SHOCK ABSORBERS SERVICING FIXTURES WITH FLUSH VALVES SHALL BE SECURELY ANCHORED IN THEIR VERTICAL POSITION. ACCEPTABLE METHODS OF SUPPORT WILL BE THE SUMMER SYSTEM, POSIFIX, STAKFIX, PIPEFIX, HOLDRITE OR CHANNEL.
- 5. PROVIDE J.R. SMITH OR APPROVED EQUAL SHOCK ABSORBERS #5005 THRU 5050 SIZE AS RECOMMENDED BY MANUFACTURER INSTALLED ON 16. THE ENTIRE SANITARY WASTE SYSTEM SHALL BE TESTED AGAINST HOT AND COLD WATER BRANCH LINES CONTAINING SINGLE LEVER FAUCETS, FLUSH VALVES OR EQUIPMENT WITH QUICK CLOSING VALVES

- LARGER.
- NOMI SIZE

- 9. INSULATION SHALL BE APPLIED WITH JOINTS TIGHTLY BUTTED. OPEN CRACKS, VOIDS AND DEPRESSIONS SHALL BE FILLED WITH HYDRAULIC SETTING CEMENT. LAPPING MATCHING THE FINISH SHALL BE PASTED NEATLY OVER JOINTS.
- 10. FITTINGS AND VALVES SHALL BE INSULATED WITH THE SAME TYPE INSULATION AS THE PIPING OR WITH HYDRAULIC SETTING CEMENT, BUILT-UP TO THE SAME THICKNESS AS LINES. COVER SHALL BE SAME AS ADJACENT PIPING OR PVC PREFORMED JACKET.
- 11. PROVIDE AND INSTALL A CUT-OFF VALVE, UNION AND FULL SIZE DIRT LEG AT CONNECTION TO EACH GAS-FIRED PIECE OF EQUIPMENT.
- HOWEVER, ADDITIONAL TESTS AS REQUIRED BY THE AUTHORITY HAVING
- 12. THE SYSTEM TESTS DESCRIBED HEREIN ARE MINIMUM REQUIREMENTS. JURISDICTION SHALL ALSO BE PERFORMED.
- 13. DOMESTIC WATER PIPING SHALL BE TESTED HYDROSTATICALLY AT 85 PSI. IN ADDITION PIPING SHALL BE TESTED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS.
- 14. THE DOMESTIC WATER SYSTEM SHALL BE FLUSHED OUT PROGRESSIVELY BY OPENING OUTLETS AND FLOWING WATER UNTIL IT RUNS CLEAR. AFTER PIPE CLEANING IS COMPLETED, THE STRAINERS SHALL BE REMOVED, CLEANED, AND REPLACED. THEN THE ENTIRE DOMESTIC WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION.

BETWEEN THE LAST TWO FIXTURES AS SHOWN ON THE CONTRACT DRAWINGS.

6. SANITARY WASTE LINES SHALL BE UNIFORMLY GRADED TO ELEVATIONS SHOWN. IF NO ELEVATIONS ARE GIVEN, SEWERS SHALL BE PITCHED NOT LESS THAN 1/4" PER FOOT FOR ALL PIPING 2-1/2" IN DIAMETER AND SMALLER AND 1/8" PER FOOT FOR ALL PIPING 3" IN DIAMETER AND

7. SUPPORT HORIZONTAL PIPING AS FOLLOWS:

NAL PIPE (IN.)	MAXIMUM DISTANCE BETWEEN SUPPORT (FT.)	MINIMUM HANGER DIAMETER (IN.)
1/2	6	
/4 TO 1-1/2	6	3/8
TO $2-1/2$	10	3/8
TO 6	12	1/2

8. HANGERS FOR PIPING GREATER THAN 1" SHALL PASS OVER THE INSULATION. PROVIDE SADDLES FOR INSULATED PIPING.

- 15. THE SANITARY WASTE SYSTEM SHALL BE FLUSHED OUT PROGRESSIVELY WITH FLOWING WATER UNTIL IT RUNS CLEAR.
- A HEAD PRESSURE OF 10', FOR 6 HOURS WITHOUT LEAKAGE.

|--|

- 1. FOR CONTINUATION OF WATER AND SANITARY SEWER SERVICES, REFER TO CIVIL DRAWINGS.
- 2. WATER LINES SHALL BE RUN ABOVE CEILING AND SANITARY SEWER LINES UNDER FLOOR UNLESS NOTED OTHERWISE. CONFORM TO ALL STRUCTURAL AND FINISH CONDITIONS OF BUILDING. COORDINATE WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION.

3. CONTRACTOR TO CHANGE LOCATION OF NEW PIPING, AS SHOWN, TO MEET FIELD CONDITIONS.

- 4. CONTRACTOR SHALL NOT SCALE DRAWINGS.
- 5. ANY PENETRATIONS OF THE CLG. WALLS OR FLOORS SHALL BE RESTORED TO THE ORIGINAL FIRE RATINGS, OPENING CUTS, AND CEILING SHALL BE PATCHED SLEEVE, SEALED, AND ESCUTCHEONED.
- 6. CONTRACTOR SHALL LAYOUT HIS WORK FROM ACTUAL FIELD MEASUREMENTS AND ACTUAL DIMENSIONS OF EQUIPMENT INSTALLED, ALL PIPING AND EQUIPMENT OF ALL TRADES SHALL BE PROPERLY COORDINATED AND SET TO MAINTAIN REQUIRED CLEARANCES. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL LOCATIONS SUBJECT TO APPROVAL OF ARCHITECT.
- 7. LOCATE EQUIPMENT AND FIXTURES APPROXIMATELY AS SHOWN CONFORMING TO ALL ARCHITECTURAL AND STRUCTURAL ITEMS. PROVIDE ALL SUPPORTS, HANGERS AND OPENINGS AS REQUIRED FOR A COMPLETE INSTALLATION. CONTRACTOR SHALL COORDINATE WITH ALL TRADES FOR CLEARANCES, AND EXACT LOCATIONS OF EQUIPMENT. ALL EQUIPMENT AND FIXTURES SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND IN FULL COMPLIANCE WITH ALL APPLICABLE CODES HAVING JURISDICTION.
- 8. ROUTE ALL PIPING CONCEALED, HIDDEN FROM VIEW AND AS HIGH AS POSSIBLE ABOVE CEILING LEVELS.
- 9. WATER LINES LOCATED IN EXTERIOR WALL SHALL BE INSTALLED BETWEEN INSULATION AND INTERIOR OF WALL. WATER PIPING INDICATED UNDER THIS SLAB SHALL BE SEAMLESS COPPER WITH NO JOINTS AND LONG RADIUS CURVES FOR TURNS, PROTECTED USING ARMAFLEX INSULATION. INSULATE COPPER LINES FROM CONTACT WITH CONCRETE, REINFORCING STEEL, OR OTHER PIPING AND CONDUIT.
- 10. PLUMBING VENTS AND FLUES THRU ROOF SHALL BE LOCATED 10'-0" FROM ALL OUTSIDE AIR INTAKES AND 2'-0" FROM ALL VERTICAL STRUCTURES. TERMINATIONS AR TO BE 12" MINIMUM ABOVE ROOF. IF WITH 10'-0" OF A PARAPET, TERMINATIONS SHALL BE AT TOP OF PARAPET. REFER TO ARCHITECTURAL DRAWINGS FOR PARAPET HFIGHT.
- 11.INSULATE ALL DOMESTIC WATER SUPPLY (HOT AND COLD) PIPING WITH 1-INCH THICK FIBERGLASS PIPE INSULATION. FIBERGLASS PIPE INSULATION SHALL HAVE AN ALL SERVICE JACKET (ASJ) WITH SELF-SEALING LAPS (OWENS CORNING SSL-11 OR EQUAL). ALL PIPING INSULATION USED ON THE PROJECT SHALL HAVE A FLAME SPREAD RATING NOT EXCEEDING 25 AN A SMOKE DEVELOPED RATING NOT EXCEEDING 50 AS DETERMINED BY TEST PROCEDURES ASTM E 84 NFPA 225 AND U.L. 723. THESE RATINGS MUST BE AS TESTED ON THE COMPOSITE OF INSULATION JACKET OR FACING AND ADHESIVE. COMPONENTS SUCH AS ADHESIVES MASTIC AND CEMENTS SHALL MEET THE SAME INDIVIDUAL RATINGS AS THE MINIMUM REQUIREMENTS.
- 12.SUPPORT INSULATION AT HANGERS AND SUPPORTS WITH A SHIELD OF GALVANIZED METAL EXTENDING NOT LESS THAN 4-INCHS ON EITHER SIDE OF THE SUPPORT BEARING AREA COVERING AT LEASE HALF OF THE PIPE CIRCUMFERENCE.
- 13.PERFORM WORK IN ACCORDANCE WITH APPLICABLE STATUES, ORDINANCES, CODES, AND REGULATIONS OF GOVERNMENTAL AUTHORITIES HAVING JURISDICTION. OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS. REMOVE AND REPLACE EXISTING CONSTRUCTION AS REQUIRED TO ACCOMMODATE NEW
- 14. PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL A.D.A. APPROVED INSULATION KITS TO ALL LAVATORIES IN ALL TOILET ROOMS.

				PI UMBING	FIXTURE SCHEDULE
w .	V.	C.W.	<u> </u>	ITEM C	DESCRIPTION
4"	2"	1"	_	<u>WC-1</u> – WATER CLOSET HET FLUSH TANK VITREOUS CHINA, ELONGATED BOWL, FLOOR MOUNTED, ADA COMPLIANT; 1.28 GPF	FIXTURE: ZURN #Z5555-BWL WITH Z5535-45-55 TANK, 16-1/2" HIGH, VITREOUS CHINA, ELONGATED RIM, FLOOR MOUNTED, WHITE 1.28 GPF (MOUNT LEVEL ON WIDE SIDE IF STALL) SEAT: MAINLINE ML1055SSC000, ELONGATED, OPEN FRONT SEAT LESS LID <u>CLOSET FLANGE</u> : SIOUX CHIEF #887-PM PROVIDE RESILIENT SPONGE RUBBER WATER CLOSET SEALING RINGS. DO NOT USE WAX RING GASKETS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS HOLDRITE ROUGH IN BRACKETS PROVIDE TWO SOLID BRASS CLOSET FLANGE BOLT ASSEMBLIES (NOT PLATED BRASS)
2"	2"	1/2"	1/2"	<u>LAV-1</u> – LAVATORY WALL HUNG, ADA COMPIANT, VITREOUS CHINA, SENSOR FAUCET	FIXTURE: ZURN #Z5344 20X18, WALL HUNG, ADA COMPLIANT, CHINA LAVATORY FAUCET: ZURN#Z7440-XL-CST-FC SIERRA POLISHED CHROME LEVER HANDLE, POP UP DRAIN <u>SUPPLIES:</u> BRASSCRAFT 1/2" INLET X 1/2" OUTLET, FLEXIBLE RISER ALL CHROME FINISH. <u>P-TRAP:</u> MCGUIRE #NO. 8872- P-TRAP W/ TUBING DRAIN TO WALL. <u>CARRIER:</u> ZURN Z1231-EZ, OR EQUAL <u>TRAP & SUPPLY COVERS:</u> TRUEBRO NO. 102 LAV-GUARD2 W/ NO. 105 ACCESSORY. HOLDRITE ROUGH IN BRACKETS <u>MIXING VALVE:</u> EACH LAV SHALL HAVE A POWERS #LM495 SERIES MIXER INSTALLED UNDER THE LAVE PER THE MANUFACTURERS RECOMMENDATIONS. SET TEMP TO 110"
2"	2"	1/2"	1/2"	<u>SK-1</u> – SINK DROP-IN SINGLE COMPARTMENT, STAINLESS STEEL, DOUBLE HANDLE FAUCET	FIXTURE: ELKAY #LRAD152260, WITH THREE FAUCET HOLE & OFF CENTER DRAINS. FAUCET: ELKAY #LK810GN04T6 GOOSE NECK FAUCET, LK-18 GRID STRAINER <u>SUPPLIES:</u> MCGUIRE "LAVATORY SUPPLIES – I.P.S. X OD" NO. H2167–LK; 12 INCH CHROME PLATED COPPER RISERS AND FORGED BRASS WITH SET SCREW FLANGE. INLET ½ INCH IPS AND ½ INCH IPS OUTLET. P-TRAP: MCGUIRE NO. MCGUIRE NO. 8912–C-F; P-TRAP SHALL BE CHROME PLATED CAST BRASS BODY WITH CLEANOUT, WITH 17–GAUGE SEAMLESS TUBULAR WALL BEND, CAST BRASS SLIP NUTS. ALL WITH POLISHED CHROME FINISH OFFSET STRAINER: A. MCGUIRE NO. 1151AWC, ADA COMPLIANT OFFSET WHEELCHAIR LAVATORY STRAINER WITH HEAVY CAST BRASS GRID DRAIN STRAINER, HEAVY CAST BRASS ELBOW AND 17–GAUGE TUBULAR BRASS OFFSET TAILPIECE. PROVIDE STAINLESS STEEL CONICAL STRAINER BASKET. TRAP & SUPPLY COVERS: TRUEBRO NO. 102 LAV–GUARD2 W/ NO. 105 ACCESSORY.
2"	2"	1/2"	1/2"	<u>WB-1</u> – ICE MAKER BOX	OATEY #38981 WASHER CONNECTION BOX 1/4 TURN BALL VALVES
2"	2"	1/2"	1/2"	<u>HB-1</u> – HOSE BIBB	WOODFORD #B79 WITH LOOSE KEY
AS	s noted	ON PLAN	S	WALL CLEANOUT: (WCO)	MIFAB No. C1400-R6-36, STAINLESS STEEL ROUND WALL CLEANOUT ACCESS COVER.
AS	s noted	on plan	S	CLEANOUT: (CO) (FCO)	MIFAB No. C1000 SERIES, STAINLESS STEEL ROUND FLOOR CLEANOUT ACCESS COVER. HEAVY DUTY TOP, TAPER THREAD BRONZE PLUG, NICKLE BRONZE TOP
AS	S NOTED	ON PLAN	S	WATER HAMMER ARRESTORS (WHA)	WATER HAMMER ARRESTORS MIFAB WHB-SERIES STAINLESS STEEL BELOWS TYPE
AS	s noted	ON PLAN	S	TRAP PRIMER: (TP)	MIFAB No. M-500 WITH MODEL # MI-DU DISTRIBUTION UNIT; SEE DETAIL
AS	S NOTED	ON PLAN	S	ACCESS DOOR: (AD)	MIFAB 10" X 10" SQUARE STAINCOAT STEEL ACCESS DOOR WITH ANCHOR LUGS AND SATIN SMOOTH SECURE COVER.
·			<u>כק</u>		
1. 2. 3.	or own Provide Connec Provide	ier appr 5 Solid J 5TION IS 1 5 OFFSET	oved eg oint co Jsed (S Trap f	QUAL MANUFACTURERS. INNECTIONS ON TUB WASTE AND LIP JOINT ONLY, WHERE ALLOW OR ALL ACCESSIBLE LAVATORIES	D OVERFLOW, OR ACCESS PANEL IF SLIP JOINT ED BY CODE). 5 AND SINKS.

SHOWN ON PLANS OR NOT.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TRIM AND ACCESSORIES NECESSARY FOR A COMPLETE AND WORKING INSTALLATION.

4. ALL FLOOR DRAINS, HUB DRAINS AND FLOOR SINKS SHALL BE PROTECTED WITH TRAP PRIMERS WETHER

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DATE: MAR 15, 2023

201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660

PROJECT NO: 17003

REVISIONS:

PLUMBING LEGEND NOTES AND SCHEDULE

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DATE: MAR 15, 2023

CONSTRUCTION DOCUMENTS HEATHERWILDE OFFICE **CONDOS BLDG**

201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660

PROJECT NO: 17003

REVISIONS:	
1 City Comments	4-21-2023

3 City Comments	5-9-2023
4 Site Developme	nt
Revision	8-18-2023
DRAWN BY:	ET
DRAWN BY: REVIEWED BY:	ET SL
DRAWN BY: REVIEWED BY:	ET SL
DRAWN BY: REVIEWED BY: BUILDINGS 3 -	ET SL
DRAWN BY: REVIEWED BY: BUILDINGS 3 -	ET SL
DRAWN BY: REVIEWED BY: BUILDINGS 3 - FLOOR PLAN	ET SL
DRAWN BY: REVIEWED BY: BUILDINGS 3 - FLOOR PLAN PLUMBING	ET SL

DOMESTIC WATER ENTRY DETAIL

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DATE: MAR 15, 2023

CONSTRUCTION DOCUMENTS HEATHERWILDE OFFICE CONDOS BLDG 3

201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660

PROJECT NO: 17003

REVISIONS:

DRAWN DT.	
REVIEWED BY:	SL

PLUMBING DETAILS

SY	MBOL	DESCRIPTION	SYMBOL	DESCRIPTION		
Single Line	DOUBLE LINE			FLEXIBLE CONNECTION		
	xX	RIGID DUCTWORK, 1ST NUMBER IS VISIBLE DIMENSION		CONCENTRIC PIPE REDUCER/INCREASER		
\sim	81111111111B	FLEX DUCTWORK		ECCENTRIC PIPE REDUCER/INCREASER		
	ല്ര	90 DEGREE ROUND DUCT DOWN		PIPE SLEEVE		
•		90 DEGREE ROUND DUCT UP		DIRECTION OF SLOPE (DNWARD)		
\frown		ROUND RADIUS ELBOW	— D —	EQUIPMENT OR FIXTURE DRAIN LINE		
→		SIZE OR SHAPE TRANSITION	→	DIRECTION OF FLOW		
		90 DEGREE S/A ELBOW DOWN	с і 	PIPING DOWN		
		90 DEGREE S/A ELBOW UP				
		90 DEGREE OR RADUIS RETURN AIR OR EXHAUST FLIBOW DOWN	1	THERMOSTAT		
—		90 DEGREE OR RADIUS RETURN AIR OR EXHAUST ELBOW UP	SD	DUCT MOUNTED SMOKE DETECTOR		
		SUPPLY DUCT RISER	R	REMOTE RESET		
		RETURN OR EXHAUST DUCT RISER	S	SENSOR		
<u> </u>		RECTANGULAR RADIUS ELBOW	(A) 150	DIFFUSER/REGISTER/GRILL DESIGNATION CFM		
¶		RECTANGULAR ELBOW WITH TURNING VANES		EQUIPMENT DESIGNATION NUMBER IN SEQUENTIAL ORDER		
	<u> </u>	RECTANGULAR BRANCH TAKE-OFF WITH ADJUSTABLE VANED EXTRACTOR				
\bowtie		S/A GRILLE OR REGISTER				
		R/A, E/A. T/A GRILLE OR REGISTER				
–		OPPOSED BLADE DUCT VOLUME DAMPER				
р <u>–</u>		ROUND DUCT TAKE-OFF DAMPER				

	AIR HANDLER UNIT SCHEDULE (R-410A) - WITH AUXILIARY HEAT														
				ELECTRICAL DATA			COOLING COIL (DX)			HEATING COIL (ELEC)					
MARK	LOCATION	AIR CFM	AIR CFM	"H2O	MTR HP	VOLTS/PH/HZ	MCA AMPS	MCB AMPS	MIN. SENSIBLE CAPACITY BTUH	MIN. TOTAL CAPACITY BTUH	EDB °F/ EWB °F	KW	BTUH CAPACITY	EAT°F	REMARKS
AHU-1, 2, 3, 4	REF. PLAN	800	100	0.5	1/3	240/1/60	28	30	18,550	21,875	78/64	4.8	16,380	68	TRANE TEM6A0B24

PROVIDE WITH SINGLE POINT ELECTRICAL CONNECTION.
 PROVIDE OVERFLOW DRAIN PAN WITH FLOAT SWITCH.

PROVIDE DIGITAL 7-DAY PROGRAMMABLE THERMOSTAT.
 PROVIDE CONVERTIBLE AIR HANDLER FOR VERTICAL OR HORIZONTAL POSITION.

OUTDOOR CONDENSING UNIT SCHEDULE													
	MIN.	REFRIG-	VOLTS/	MCA	МСВ			MCB MINIMUM		COMPRESSOR		CONDENS	
МАПК	BTUH	ERANT	PH/HZ	AMPS	AMPS	EER/SEER	EER/SEER	NO.	MAX. SUCT. TEMP °F	ROWS	MAX. COND. TEMP °F	AMBIENT TEMP °F	NEMARKS
HP-1, 2, 3, 4	22,700	R-410A	240/1/60	15	25	16.0 SEER	1	45	1	120	105	TRANE 4TWR6024	

PROVIDE HAIL GUARDS.
 PROVIDE LOW AMBIENT CONTROLS.

	FAN SCHEDULE									
Mark	SERVICE	TYPE	CFM	SP (INCHES WATER)	HP (W)	Volts/ Phase/ Hertz	RPM	INTERLOCK WITH	DRIVE TYPE	REMARKS
EF-1, 2, 3, 4	RESTROOM	CEILING	75	0.25	(64W)	120/1/60	700	LIGHT SWITCH	DIRECT	COOK GC-124

NOTES: 1. PROVIDE DISCONNECT AND BACKDRAFT DAMPER FOR EACH FAN.

EVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
/c	AIR CONDITIONING	кw	KILOWATT (THOUSAND WATTS)
	ABOVE FINISHED FLOOR		· · · · · · · · · · · · · · · · · · ·
	ABOVE FINISHED GRADE	LAT	LEAVING AIR TEMPERATURE
	AIR HANDLING UNIT	LBS	POUNDS
	AUXILIART	ИДЦ	
с I	BI III DING	MCA	MINIMUM CIRCUIT AMPS
	BRANCH TO CONNECTION	MCB	MAIN CIRCUIT BREAKER
, IH	BRITISH THERMAL UNIT PER HOUR	MECH	MECHANICAL
		MFR	MANUFACTURER
	CONDENSATE DRAIN	MIN	MINIMUM
	CUBIC FEET PER MINUTE	MISC	MISCELLANEOUS
	CENTER	MOCP	MAXIMUM OVER CURRENT PROTECTION
	CEILING		
·	COLUMN	NA	NOT APPLICABLE
P	COMPRESSOR	NIC	
ID U	CONDENSER	NIS	NUT TO SCALE
		۵۵	OUTSIDE AIR
	DAI DULD (IEMPERATURE) DECREES	OBD	OPPOSED BLADE DAMPER
5	DIAMETER	OC	ON CENTER
	DOWN	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
	DETAIL	OFOI	OWNER FURNISHED, OWNER INSTALLED
	DRAWING		
	DIRECT EXPANSION	PH	PHASE
		PLBG	PLUMBING
A	EXHAUST AIR		
IST	EXISTING		QUANTIT
		R	RISE
		RA	RFTURN AIR
	EXTERINAL STATIC STATEM	REF	REFERENCE
	EXTRUST	REQ	REQUIRED
	FAHRENHEIT FALL	RH	RELATIVE HUMIDITY
	FAN COIL UNIT	RPM	REVOLUTION PER MINUTE
	FINISH FLOOR	RTU	ROOFTOP UNIT
	FULL LOAD AMPS		
OR 🛛	FLUORESCENT	SEER	SEASONAL ENERGY EFFICIENCY RATING
	FEET PER MINUTE		
	COMBINATION FIRE/SMOKE DAMPER		SPEUIFIUATIONS STAINI ESS STEEL
	FEET/FOOT (')	ు	STAINLESS STEEL
	0.110 7	TEMP	TEMPERATURE
, I	GAUGE	TYP	TYPICAL
	GALVANIZED CALLONS DEP MINUTE		
M I	GALLUNS PER MINUTE	UH	UNIT HEATER
	HORSEPOWER	UL	UNDERWRITER'S LABORATORY
	HOUR	UON	UNLESS OTHERWISE NOTED
	HEIGHT	· · · · · · · · · · · · · · · · · · ·	
х I	HEATER	VAV	VARIABLE AIR VOLUME
2 I	HEATING VENTILATION AND AIR CONDITIONING		
	HERTZ-FREQUENCY IN CYCLE PER SECOND		VULUME DAMPER VARIARI E REFRICERANT FLOW
		VIAF	
		w/	WITH
	INCH/INCHES (°)	w/o	WITHOUT
		WR WR	WET BUILD (TEMPERATURE)
		WP	WATER PROÒF

	DIFFUSER AND GRILLE SCHEDULE											
	CFM SERVICE TYPE MOUNTING	OFDMOR	TYPE		VOLUME	SIZE (II	ICHES)					
малк		CONTROL	FACE	NECK	MATERI							
A	0-150	SUPPLY	GRILLE	SIDEWALL	YES	8"X8"	6"X6"	ALUMINU				
В	151–250	SUPPLY	GRILLE	SIDEWALL	YES	12 " X8"	10"X6"	ALUMINU				
С	0-1000	RETURN	GRILLE	CEILING	NO	24 " X12'	22 " X10"	ALUMINU				
D	0-170	RETURN	GRILLE	CEILING	NO	8"X8"	6"X6"	ALUMINU				

NOTES FOR ALL:

1. COORDINATE FRAME TYPE WITH CEILING TYPE AND WALL TYPE.

ALL DIFFUSERS ARE TO BE PRIMED AND PAINTED. COORDINATE WITH ARCHITECT FOR FINISH COLOR.
 CONTRACTOR TO CONFIRM ALL SIZES WITH G.C., EXISTING CONDITIONS, FRAMING, ETC PRIOR TO ORDERING.

CODE NOTES

VENTILATION FOR PUBLIC SPACE COMPLIES WITH ALL APPLICABLE CODES INCLUDING ASHRAE 62.1, 2021 IMC CHAPTER 4 AND TABLE 403.3.1.1. ASHRAE 62.1 OUTSIDE AIR CALCULATION 62.1 CFM/PERSON 62.1 CFM/SF # PEOPLE AREA REQ'D OA OA PROVIDED ROOM Reception 0.06 124 Office 1 0.06 132 Office 2 0.06 141 Hall 0.12 79 0.12 177 100 Conference 0.12 Kitchen 52 Office 3 0.06 137 TOTAL

- 2. NO DUCT MOUNTED SMOKE DETECTORS ARE NEEDED AS NO AREAS ARE SERVED BY ONE OR MORE AIR HANDLERS WITH AIR FLOWS THAT EXCEED 2000 CFM PER CODE.
- 3. MECHANICAL COMCHECK AND HVAC LOAD CALCULATIONS ARE PROVIDED IN THIS SUBMITTAL FOR NEW EQUIPMENT.
- 4. MOTORIZED VOLUME DAMPERS AND GRAVITY DAMPERS ARE SHOWN ON OUTSIDE AIR AND EXHAUST AIR PER CODE REF. PLAN.
- 5. TOILET ROOM EXHAUST FANS ARE SIZED FOR 75 CFM PER TOILET/URINAL PER CODE.
- 6. A COMPLETE AIR BALANCE SHALL BE PERFORMED IN ACCORDANCE TO SPECIFICATION SHOWN ON M4.0. THE OWNERS MANUALS SHALL BE GIVEN TO THE OWNER AT TIME OF SWITCHOVER.
- 7. ECONOMIZERS ARE NOT REQUIRED FOR ALL SYSTEMS LESS THAN 54,000 BTUH PER 2021 IECC.
- 8. FLEXIBLE DUCTWORK SHALL BE LIMITED TO 5 FEET MAXIMUM PER CODE.
- 9. ALL INTAKE AND DISCHARGE DUCTWORK MUST BE A MINIMUM OF 26 GAUGE SHEET METAL.

GENERAL NOTES (APPLIES TO ALL SHEETS)

- I. IN ANY CASE WHERE A PIPE OR DUCT SHOWN ON A PLAN SHEET DIFFERS FROM THAT SHOWN IN A SCHEMATIC OR DETAIL, USE THE LARGER OF THE TWO SIZES SHOWN.
- 2. PIPING SHOWN ON EACH PLAN IS RUN ABOVE THE CEILING ON THE FLOOR WHERE IT IS SHOWN UNLESS OTHERWISE NOTED.
- MOUNT THERMOSTATS SUCH THAT TOP OF DEVICE IS AT 48 INCHES ABOVE FINISHED FLOOR AND CENTERED ABOVE THE LIGHT SWITCHES WHERE BOTH OCCUR IN THE SAME LOCATION, UNLESS OTHERWISE NOTED.
 NORMAL DESIGN CONDITIONS ARE BASED ON ASHRAE AT THE FOLLOWING:

- 5. ALL DUCT DIMENSIONS SHOWN ARE CLEAR AIRSTREAM SHEETMETAL DIMENSIONS.
- 6. OUTSIDE AIR DUCT SYSTEMS SHALL BE SHEET METAL PER SPECIFICATIONS W/ EXTERNAL INSULATION.
- 7. DO NOT RUN AIR HANDLERS OR EXHAUST FANS UNTIL ALL INTERIOR CLEANING AND PAINTING IS COMPLETE. THE CLEANING OF FOULED COILS OR FAN ASSEMBLIES DUE TO PAINT OR CONSTRUCTION DEBRIS WILL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR.
- 8. ALL EQUIPMENT, INSTALLATION METHODS AND MATERIALS USED ARE TO MEET LOCAL, STATE AND OTHER APPLICABLE CODES.
- 9. THESE PLANS ARE DIAGRAMMATIC IN NATURE, CONTRACTORS SHALL INCLUDE APPROPRIATE ALLOWANCES FOR OFFSETS AS REQUIRED TO ACCOMMODATE VERTICAL AND HORIZONTAL VARIATIONS IN THE LOCATIONS AND ELEVATIONS OF DUCTWORK AND TERMINAL DEVICES.
- 10. PROVIDE RECTANGULAR TO ROUND DUCT TRANSITIONS AS REQUIRED.
- 11. ALL CONSTRUCTION DEBRIS SHALL BE DISPOSED OF BY THE CONTRACTOR UNLESS NOTED OTHERWISE.
- 12. FLEXIBLE DUCTWORK SHALL NOT EXCEED FIVE (5) FEET IN LENGTH. FLEXIBLE DUCT SHALL NOT REST ON LIGHTING FIXTURES. WHERE FLEXIBLE DUCTS REQUIRE SUPPORT, SUSPEND FROM STRUCTURE OVERHEAD WITH NYLON BANDS.

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DATE: MAR 15, 2023

CONSTRUCTION DOCUMENTS HEATHERWILDE OFFICE CONDOS BLDG

201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660

PROJECT NO: 17003

REVISIONS:

DRAWN BY:	MF
REVIEWED BY:	PR

MECHANICAL LEGEND, NOTES AND SCHEDULE

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201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660

PROJECT NO: 17003

REVISIONS:

DRAWN BY: REVIEWED BY: PR

BUILDINGS 3 -FLOOR PLAN -MECHANICAL

TBPE Firm F-10298

2 CONDENSATE TRAP DETAIL SCALEL NOT TO SCALE	(3) DIFFUSER C
NU CASE LESS THAN 3/4.	

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LINE ROUTED TO INDIRECT WASTE RECEPTACLE —

CLEAN OUT-

<u>NOTES</u>

DIFFUSER CONNECTION DETAIL

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201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660

PROJECT NO: 17003

REVISIONS:

DRAWN BY:	MF
REVIEWED BY:	PR

MECHANICAL DETAILS

	GENERAL SPECIFICATIONS	
1.	IT IS THE INTENT AND MEANING OF THE CONTRACT DOCUMENTS THAT THE CONTRACTOR SHALL PROVIDE A MECHANICAL INSTALLATION THAT IS COMPLETE WITH ALL ITEMS AND APPURTENANCES NECESSARY, REASONABLY INCIDENTAL, OR CUSTOMARILY INCLUDED, EVEN THOUGH EACH AND EVERY ITEM IS NOT DETAILED ON THE DRAWINGS OR SPECIFIED.	
	A. THESE PLANS ARE DIAGRAMMATIC IN NATURE, CONTRACTORS SHALL INCLUDE APPROPRIATE ALLOWANCES FOR OFFSETS AS REQUIRED TO ACCOMMODATE VERTICAL AND HORIZONTAL VARIATIONS IN THE LOCATIONS AND ELEVATIONS OF DUCTWORK AND TERMINAL DEVICES.	
	B. THE TERM "PROVIDE" IN THESE SPECIFICATIONS AND ON THE DRAWINGS MEANS; FURNISH, TRANSPORT, INSTALL, CONNECT, WARRANT AND START-UP, INCLUSIVELY.	19.
	C. THE TERM "COORDINATE" IN THESE SPECIFICATIONS AND ON THE PLANS MEANS THE CONTRACTOR SHALL CONTACT OTHERS AS IS REQUIRED TO ESTABLISH A MUTUAL UNDERSTANDING OF THE PROJECT REQUIREMENTS FOR AN ITEM AND THE RESPECTIVE COSTS FOR EACH PARTY IN ORDER TO PROVIDE A COMPLETE OPERATING PRODUCT OR LABOR FOR THIS PROJECT.	l
	D. THE INSTALLATION OF ALL SYSTEMS SHALL BE MADE BY EXPERIENCED CRAFTSMEN IN A NEAT WORKMANLIKE MANNER. ALL MATERIALS, TOOLS, PERMITS AND INSPECTIONS AND ALL OTHER COSTS AND SERVICES NECESSARY TO PROVIDE ALL MECHANICAL AND ELECTRICAL ITEMS SHALL BE FURNISHED AND PAID FOR, IN FULL, BY THE CONTRACTOR.	
2.	THE CONTRACTOR SHALL TAKE PROPER PRECAUTIONS TO PROTECT ANY EXISTING CONSTRUCTION AND ADJACENT PROPERTY, WITH WHICH WORK COMES IN CONTACT, AND OVER WHICH HE MAY TRANSPORT, HOIST OR MOVE MATERIALS, EQUIPMENT, DEBRIS, ETC., AND SHALL REPAIR SATISFACTORILY ALL DAMAGES CAUSED BY HIM DURING CONSTRUCTION.	
3.	THE CONTRACTOR SHALL, AT NO COST TO THE OWNER, REPLACE WITH NEW MATERIALS AND/OR EQUIPMENT, ANY ITEMS FAILING TO GIVE SATISFACTORY SERVICE DURING A 1-YEAR WRITTEN LABOR AND MATERIALS WARRANTY PERIOD TO BE INCLUDED AS PART OF THIS WORK.	19. 1
	A. ALL WARRANTY CERTIFICATES ISSUED SHALL BE TRANSMITTED IN WRITING TO THE OWNER	
4.	APPROVAL AND SCHEDULING OF ANY BUILDING SYSTEM INTERRUPTIONS OR WORK INVOLVING EXISTING AREAS. (INCLUDING NOISE, DUST, ETC.). THE CONTRACTOR SHALL RECOGNIZE ANY EXISTING BUILDING EQUIPMENT WARRANTIES PRIOR TO MODIFICATION OR CONNECTION TO SAME.	1
5.	ALL EQUIPMENT SHALL BE NEW, UNLESS NOTED OTHERWISE, AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED RECOMMENDATIONS FOR THE SERVICE INTENDED. PROVIDE ONLY PRODUCTS BEARING UNDERWRITERS LABORATORIES (UL) LABEL AS APPLICABLE.	I
6.	CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER OF ALL MAJOR ITEMS OF EQUIPMENT PRIOR TO PLACING ORDERS. SHOULD THE CONTRACTOR SUPPLY EQUIPMENT DIFFERING FROM THE SCHEDULED OR SPECIFIED ITEMS IN THE CONTRACT DOCUMENTS WITHOUT NOTIFICATION TO THE ENGINEER, HE SHALL BEAR ALL COST TO REMEDY ANY DEFICIENCIES ARISING FROM SAME.	20.
7.	PROVIDE TWO COPIES OF CLEARLY MARKED SUBMITTAL DATA ON THE FOLLOWING ITEMS AND SEND ONE COPY TO ENGINEER AND ONE COPY TO OWNER:	21.
	A. HVAC EQUIPMENT B. DUCTWORK C. INSULATION D. GRILLES, REGISTERS, DIFFUSERS, AND LOUVERS	22.
8.	MATERIALS, WORKMANSHIP, AND INSTALLATION METHODS SHALL COMPLY WITH THE CONTRACT DOCUMENTS AND ALL CURRENT APPLICABLE CODES AND STANDARDS. SHOULD THE CONTRACTOR PROVIDE ANY ITEM OR PERFORM ANY WORK THAT DOES NOT COMPLY WITH THE REQUIREMENTS OF CURRENT APPLICABLE CODES AND STANDARDS HE SHALL BEAR ALL COSTS APISING IN	23.
	CORRECTING ANY DEFICIENCIES. CURRENT APPLICABLE CODES AND STANDARDS SHALL INCLUDE ALL ORDINANCES, UTILITY COMPANY REGULATIONS, FEDERAL REGULATIONS AND APPLICABLE REQUIREMENTS OF CITY AND NATIONALLY ACCEPTED CODES AND STANDARDS.	24.
9.	THE CONTRACTOR SHALL VISIT THE PREMISES PRIOR TO BIDDING TO THOROUGHLY FAMILIARIZE HIMSELF WITH ALL DETAILS AND COORDINATE WITH ALL EXISTING CONDITIONS TO BE ENCOUNTERED BY ALL TRADES. HE SHALL VERIFY ALL CONDITIONS IN THE FIELD, INCLUDE ANY COSTS RELATED TO SAME IN HIS BID, AND SHALL NOTE IN WRITING, ANY EXCEPTIONS TAKEN WHEN BIDDING THE WORK.	25.
10.	THE CONTRACTOR SHALL NOTE THE WORKING CONDITION OF ALL EXISTING EQUIPMENT TO BE REUSED AND NOTIFY THE ENGINEER OF ANY DAMAGED OR MALFUNCTIONING EQUIPMENT PRIOR TO THE START OF CONSTRUCTION.	26.
11.	VERIFY ALL MEASUREMENTS. NO EXTRA COMPENSATION WILL BE ALLOWED BECAUSE OF DIFFERENCES BETWEEN WORK SHOWN ON THE DRAWINGS AND ACTUAL MEASUREMENTS AT THE SITE OF CONSTRUCTION. DO NOT SCALE THE DRAWINGS.	-
12.	EQUIPMENT SUBSTITUTIONS TO THE NAMED SPECIFIED PRODUCTS MAY BE PROPOSED BY THE CONTRACTOR. HOWEVER, THE CONTRACTOR SHALL BASE HIS BID ON THE NAMED ITEMS. THE CONTRACTOR SHALL DEMONSTRATE TO THE SATISFACTION OF THE ENGINEER THAT THE QUALITY, CAPACITY AND SUITABILITY OF THE PROPOSED ITEM EQUALS OR EXCEEDS THAT OF THE NAMED ITEM.	27.
13.	SUBSTITUTIONS ACCEPTED BY THE ENGINEER ARE REVIEWED FOR OVERALL COMPLIANCE WITH THE DESIGN INTENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE EQUIPMENT	28.
	COMPENSATION TO OTHER TRADES DUE TO CHANGES IN RATED VOLTAGE, PHASE, PHYSICAL SIZE, ARRANGEMENTS, SHAPE, COLOR AND ALL OTHER CHARACTERISTICS AND THEIR RELATED EFFECTS ARISING FROM EQUIPMENT SUBSTITUTIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR MAKING THE CHANGE.	29.
14.	IN THE CASE WHERE TWO OR MORE TRADES OR CONTRACTORS ARE INVOLVED IN THE INSTALLATION OF ANY ITEM, ALL SUCH PERSONS SHALL BE RESPONSIBLE FOR COORDINATING THEIR WORK AMONG THEMSELVES TO PROVIDE A FULLY COMPLETED, FUNCTIONING INSTALLATION.	30.
15.	WHETHER ITEMS SPECIFIED OR NOTED ARE DESCRIBED AS SINGULAR OR PLURAL SHALL NOT ALTER THE REQUIREMENT THAT SUFFICIENT QUANTITIES OF THE ITEM ARE TO BE PROVIDED IN ORDER TO RESULT IN A COMPLETE INSTALLATION AND PROJECT.	31. (
16.	THE DRAWINGS ARE DIAGRAMMATIC, BUT ARE REQUIRED TO BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION AND WORK OF OTHER TRADES WILL PERMIT. DATA INDICATED ON THE DRAWINGS AND IN THESE SPECIFICATIONS ARE AS EXACT AS COULD BE SECURED, BUT THEIR ABSOLUTE ACCURACY IS NOT WARRANTED. PIPING ARRANGEMENTS, AND MECHANICAL AND PLUMBING COMPONENT LOCATIONS AND THE LIKE HAVE BEEN DESIGNED FOR ECONOMY CONSISTENT WITH GOOD PRACTICE AND OTHER CONSIDERATIONS.	WORK INCLUE
17.	MAJOR CHANGES TO THE SYSTEMS ARRANGED AS SHOWN ON THE DRAWINGS, IF ACCEPTED, MUST BE APPROVED IN WRITING BY THE ENGINEER, PRIOR TO PROCEEDING. ALL SUCH CHANGES SHALL BE INCORPORATED INTO THE "AS BUILT" DRAWINGS AS SPECIFIED.	
18.	FILTRATION DURING CONSTRUCTION	
	A. PROVIDE PRE-MEDIA FILTER ON THE AIR HANDLER UNIT SERVICING THE CONSTRUCTION SPACE, SUCH THAT CONSTRUCTION DUST IS CONTAINED AND NOT TRANSFERRED THROUGH UNIT OR	THE BASIS O
	INTO OTHER SPACE. B. IF EQUIPMENT IS TURNED DISABLED DURING CONSTRUCTION, THEN CONTRACTOR TO PROTECT ALL INLETS, OUTLETS, DUCTWORK, ETC COMPLETE SUCH THAT NO CONSTRUCTION DUST OR CONTAMINATION ENTERS THE HVAC SYSTEMS	INSTALL ALL CAPACITY ANE

- C. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR TO PROVIDE NEW FILTERS IN ALL EQUIPMENT AND PROVIDE 2 SETS OF SPARE FILTERS FOR EACH SYSTEM. PROVIDE TO OWNER AND STORE IN DESIGNATION ALLOCATED BY OWNER.
- D. DO NOT RUN AIR HANDLERS OR EXHAUST FANS UNTIL ALL INTERIOR CLEANING AND PAINTING IS COMPLETE. THE CLEANING OF FOULED COILS OR FAN ASSEMBLIES DUE TO PAINT OR CONSTRUCTION DEBRIS WILL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR.
- **TESTING AND INSPECTION:**
- A. PROVIDE PERSONNEL AND EQUIPMENT, MAKE REQUIRED TESTS, AND SECURE REQUIRED APPROVALS FROM THE ENGINEER AND GOVERNMENTAL AGENCIES HAVING JURISDICTION.
- B. MAKE WRITTEN NOTICE TO THE ARCHITECT/ENGINEER ADEQUATELY IN ADVANCE OF EACH OF THESE:
- a. WHEN ROUGH-INS ARE COMPLETE, BUT NOT COVERED. b. AT SUBSTANTIAL COMPLETION OF THE WORK.
- C. WHEN MATERIAL AND/OR WORKMANSHIP IS FOUND TO NOT COMPLY WITH THE SPECIFIED REQUIREMENTS: WITHIN THREE DAYS AFTER RECEIPT OF NOTICE OF SUCH NON-COMPLIANCE. REMOVE THE NON-COMPLYING ITEMS FROM THE JOB SITE AND REPLACE THEM WITH ITEMS COMPLYING WITH THE SPECIFIED REQUIREMENTS, ALL AT NO ADDITIONAL COST TO THE OWNER.
- UPON COMPLETION OF THE WORK:
- A. THOROUGHLY CLEAN ALL EXPOSED PORTIONS OF THE MECHANICAL AND PLUMBING EQUIPMENT PROVIDED AND THE GENERAL AREA WHERE WORK WAS PERFORMED. REMOVE ALL TRACES OF SOIL, LABELS, GREASE, OIL, AND OTHER FOREIGN MATERIAL USING ONLY THE TYPE CLEANER RECOMMENDED BY THE MANUFACTURER OF ANY ITEM BEING CLEANED.
- B. PROVIDE MANUFACTURERS' OPERATING AND MAINTENANCE INSTRUCTIONS TO THE OWNER'S REPRESENTATIVE FOR ALL MAJOR MECHANICAL AND PLUMBING EQUIPMENT PROVIDED. C. PROVIDE (2) HOURS OF FORMAL TRAINING FOR KITCHEN HOOD AND FAN SYSTEM(S)
- OPERATION TO OWNER'S MAINTENANCE PERSONNEL IN ORDER TO FAMILIARIZE THEM WITH THE SYSTEM OPERATION AND REQUIRED PERIODIC MAINTENANCE.
- D. DOCUMENTATION OF ANY TEST AND THE "AS-BUILT" RECORD DRAWINGS SHALL BE PROVIDED TO THE BUILDING OWNER UPON COMPLETION.
- CONTRACTOR SHALL DESIGNATE ONE PERSON TO SERVE AS SOLE POINT OF COMMUNICATION WITH OWNER OR ENGINEER.
- WORK AMONG ALL TRADES SHALL BE FULLY COORDINATED AS REQUIRED IN THE FIELD TO AVOID SPACE CONFLICTS AND INTERRUPTION OF THE FLOW OF WORK.
- IN THE EVENT THAT ANY ITEM PROVIDED UNDER THIS CONTRACT IS DAMAGED PRIOR TO FINAL ACCEPTANCE THE CONTRACTOR SHALL REPLACE, NOT REPAIR, THE ITEM WITH NEW. IF AN EXISTING ITEM IS DAMAGED DURING THE CONSTRUCTION, THE CONTRACTOR SHALL RESTORE THE ITEM TO NEAR ORIGINAL CONDITION AND PRIOR OPERATING CONDITION TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
- CONTRACTOR SHALL PROVIDE ALL DIMENSIONS FOR BLOCK OUTS, SLEEVES, ETC., AND THE DIMENSIONED LOCATIONS OF SAME.
- UNLESS DETAILED OTHERWISE MAINTAIN A MINIMUM CLEARANCE FOR LIGHTS OF 7" ABOVE FINISHED CEILING AND 1" MINIMUM BELOW ALL DUCTS, PIPES, CONDUIT OR ANY OTHER EQUIPMENT IN THE CEILING SPACE. PROVIDE MANUFACTURER'S RECOMMENDED SERVICE ACCESS CLEARANCE AT ALL EQUIPMENT.
- PROVIDE ALL MATERIALS REQUIRED FOR THE SUPPORT OF SUCH ITEMS AS PIPING, DUCTS, EQUIPMENT AND SIMILAR ITEMS. THIS SHALL INCLUDE RODS, ANGLES, ETC., TO PROPERLY SUPPORT ALL ITEMS IN A PROPER AND SAFE MANNER. ALL HANGERS SHALL BE VERTICAL AND PLUMB.
- SUITABLE FLASHINGS AND THEIR WATERTIGHT SEALING FOR OPENINGS IN THE BUILDING WALLS OR ROOF SHALL BE PROVIDED BY THE CONTRACTOR PROVIDING THE PENETRATING ITEM. THE INSTALLATION OF THE FLASHING AND ITS WATERTIGHT INTEGRITY SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR OR ENGINEER. FLASHINGS FOR PENETRATIONS MAY ALSO BE PROVIDED ENTIRELY BY THE GENERAL CONTRACTOR. ALSO, REFER TO THE ARCHITECTS SPECIFICATIONS TO COORDINATE THE COMPLETENESS OF THIS ITEM.
- PROPERLY SUPPORT ALL EQUIPMENT AND PIPING WITHIN THE BUILDING AND PROVIDE ADEQUATE PROVISIONS FOR SLOPE AND ANCHORAGE. CONTRACTOR SHALL USE AND VERTICALLY ALIGN HANGERS AND RODS. INSERTS ETC. SHALL BE LISTED BY UNDERWRITERS' LABORATORIES FOR THE SERVICE INTENDED. THE USE OF PERFORATED STRAP AS HANGERS IS PROHIBITED.
- SECURELY SUPPORT ALL EQUIPMENT FROM STRUCTURAL MEMBERS PROVIDED AS NEEDED, WHICH IN TURN ARE TO BE SUPPORTED DIRECTLY FROM THE BUILDING STRUCTURE. ALL HANGERS SHALL HAVE A MINIMUM FACTOR OF SAFETY OF 5. ALL PIPING SHALL BE SUPPORTED AT PROPER INTERVALS WITH ONE HANGER OR SUPPORT WITHIN 12" OF EITHER SIDE OF EACH TURN.
- IN THE EVENT OF A CONFLICT WITHIN THE DRAWINGS AND/OR SPECIFICATIONS, PROVIDE THE GREATER QUANTITY OR HIGHER QUALITY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL CONTROLS THAT WILL COMPLETELY ACCOMPLISH THE IMPLIED OR INTENDED FUNCTIONS OF THE CONTROL SYSTEM AS SHOWN OR SPECIFIED.
- CONTRACTOR SHALL RETAIN ALL PERMITS REQUIRED TO PERFORM WORK IN SCOPE AT NO ADDITIONAL COST TO THE OWNER.

MECHANICAL SPECIFICATIONS

DES BUT IS NOT NECESSARILY LIMITED TO:

- A. AIR HANDLING UNITS
- B. HEAT PUMP CONDENSING UNIT C. FANS
- . GRILLES, REGISTERS, DIFFUSERS, AND LOUVERS
- ICAL EQUIPMENT SHALL BE OF THE BRAND, CAPACITY AND QUALITY AS SCHEDULED. IS MUST BE APPROVED IN WRITING PRIOR TO BIDDING. ANY REQUESTED SUBSTITUTION MUST BE) BY A SIDE BY SIDE COMPARISON OF THE BASIS OF DESIGN AND THE PROPOSED SUBSTITUTION. THE CONTRACTOR'S RESPONSIBILITY TO SHOW HOW THE PROPOSED SUBSTITUTION IS EQUAL TO F DESIGN IN ORDER TO BE CONSIDERED.
- EQUIPMENT AS RECOMMENDED BY EACH MANUFACTURER. PROVIDE EQUIPMENT OF THE TYPE, D QUALITY AS SCHEDULED OR APPROVED EQUAL WITH THE FOLLOWING FEATURES.

AIR HANDLERS

IN ADDITION TO THE BASIS OF DESIGN LISTED IN THE EQUIPMENT SCHEDULES, THE FOLLOWING MANUFACTURERS ARE CONSIDERED ACCEPTABLE SUBSTITUTES: CARRIER, JCI (YORK), DAIKIN OR EQUAL.

- A. THE INDOOR UNIT MANUFACTURER SHALL MATCH THE OUTDOOR UNIT MANUFACTURER.
- B. THE UNIT SHALL BE PERMANENTLY LABELED WITH THE AREA OR SPACE THAT IT SERVES. THE UNIT SHALL ALSO BE LABELED WITH THE MARK THAT IT IS IDENTIFIED BY IN THE CONSTRUCTION DRAWINGS AND SCHEDULES.
- C. THE EQUIPMENT INSTALLER SHALL LEAVE THE EQUIPMENT MANUFACTURERS INSTALLATION AND OPERATING INSTRUCTIONS ATTACHED TO THE UNIT.
- D. BLOWER COIL UNITS SHALL BE COMPLETELY FACTORY ASSEMBLED INCLUDING COIL, CONDENSATE DRAIN PAN, FAN, MOTOR, FILTERS AND CONTROLS IN AN INSULATED CASING THAT CAN BE APPLIED IN HORIZONTAL OR VERTICAL CONFIGURATION. PROVIDE "AIR-TITE" MODEL WITH 4.2 "R" VALUE INSULATION AND ADDITIONAL SEALING SYSTEMS.
- E. UNITS SHALL BE UL LISTED.
- F. UNITS SHALL HAVE A RUGGED SHEET METAL AND STEEL FRAME CONSTRUCTION AND SHALL BE PAINTED WITH ENAMEL FINISH. CASING SHALL BE INSULATED AND KNOCKOUTS FOR ELECTRICAL POWER AND CONTROL WIRING.
- G. ALUMINUM FIN SURFACE SHALL BE MECHANICALLY BONDED TO 3/8 INCH OD COPPER TUBING. COILS ARE FACTORY PRESSURE AND LEAK TESTED.
- H. FORWARD CURVED, DYNAMICALLY BALANCED AND STATICALLY BALANCED WITH 3-SPEED DIRECT DRIVE SHALL BE STANDARD, FAN MOTOR SHALL BE PREMIUM EFFICIENCY AND BEARINGS PERMANENTLY LUBRICATED.
- I. LOW VOLTAGE TERMINAL BOARD, FAN CONTACTOR, AND PLUG IN MODULE FOR ACCESSORY HEAT CONTROL SHALL BE INCLUDED.
- J. FILTERS SHALL BE INCLUDED AS STANDARD, ONE INCH LOW VELOCITY SEMI-PERMANENT TYPE.
- E. IF AIR HANDLING UNITS DO NOT INCLUDE BUILT-IN FILTER FRAMES, THEN MANUFACTURED FILTER BASE/RACK SHALL BE PROVIDED.
- F. HEATERS SHALL FIT INSIDE THE INTERNAL COMPARTMENT.
- G. MAINTAIN OPERATING, INSTALLATION AND MAINTENANCE CLEARANCES AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER, UNLESS OTHERWISE NOTED.
- H. REFERENCE CONSTRUCTION DRAWINGS, SCHEDULES AND DETAILS FOR ADDITIONAL INSTALLATION REQUIREMENTS AND/OR OPTIONAL EQUIPMENT SPECIFICATIONS AND MODIFICATIONS.

HEAT PUMP CONDENSING UNITS

IN ADDITION TO THE BASIS OF DESIGN LISTED IN THE EQUIPMENT SCHEDULES, THE FOLLOWING MANUFACTURERS ARE CONSIDERED ACCEPTABLE SUBSTITUTES: CARRIER, JCI (YORK), DAIKIN OR EQUAL.

- A. THE OUTDOOR UNIT MANUFACTURER SHALL MATCH THE INDOOR UNIT MANUFACTURER
- B. THE UNIT SHALL BE PERMANENTLY LABELED WITH THE AREA OR SPACE THAT IT SERVES. THE UNIT SHALL ALSO BE LABELED WITH THE MARK THAT IT IS IDENTIFIED BY IN THE CONSTRUCTION DRAWINGS AND SCHEDULES.
- C. SELF-CONTAINED, PACKAGED, FACTORY ASSEMBLED AND PRE-WIRED UNITS FOR OUTDOOR USE CONSISTING OF CABINET, COMPRESSORS, CONDESING COIL AND FANS, INTEGRAL SUB-COOLING COIL. CONTROLS, AND LIQUID RECEIVER.
- D. CABINET SHALL BE GALVANIZED STEEL WITH BAKED ENAMEL FINISH AND REMOVABLE ACCESS DOORS OR PANELS WITH QUICK FASTENERS. PROVIDE MANUFACTURER'S STANDARD HAIL GUARDS.
- E. CONDENSER SHALL INCLUDE THE FOLLOWING: COIL WITH SEAMLESS COPPER TUBING WITH ALUMINUM FINS. FAN WITH VERTICAL DISCHARGE, DIRECT DRIVE AXIAL FANS, RESILIENTLY MOUNTED WITH GUARD AND MOTOR. PERMANENTLY LUBRICATED BALL BEARING MOTORS WITH BUILT-IN CURRENT AND OVERLOAD PROTECTION.
- F. CONTROLS SHALL INCLUDE THE FOLLOWING: HIGH AND LOW PRESSURE CUTOUTS FOR COMPRESSOR, OIL PRESSURE CONTROL, NON-RECYCLING PUMP-DOWN, AND RESET RELAY. LOW AMBIENT CONTROLS TO PERMIT OPERATION DOWN TO 30 DEG. F. AMBIENT TEMPERATURE. TIMER CIRCUITS TO PREVENT RAPID LOADING AND UNLOADING OF COMPRESSOR.
- G. MAINTAIN OPERATING, INSTALLATION AND MAINTENANCE CLEARANCES AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER, UNLESS OTHERWISE NOTED.
- H. REFERENCE CONSTRUCTION DRAWINGS, SCHEDULES AND DETAILS FOR ADDITIONAL INSTALLATION REQUIREMENTS AND/OR OPTIONAL EQUIPMENT SPECIFICATIONS AND MODIFICATIONS.

EXHAUST FANS

IN ADDITION TO THE BASIS OF DESIGN LISTED IN THE EQUIPMENT SCHEDULES. THE FOLLOWING MANUFACTURERS ARE CONSIDERED ACCEPTABLE SUBSTITUTES: GREENHECK

- A. ALL FANS SHALL CARRY THE CERTIFIED RATING SEAL AUTHORIZED BY AMCA.
- B. CEILING MOUNTED EXHAUST FANS SALL BE DIRECT DRIVEN, CEILING MOUNTED, CENTRIFUGAL EXHAUST FAN. FAN WHEEL HOUSING AND INTEGRAL OUTLET DUCT COLLAR SHALL BE INJECTION MOLDED RESIN THAT MEETS UL REQUIREMENTS FOR SMOKE AND HEAT GENERATION. OUTLET SHALL HAVE INTEGRAL BACKDRAFT DAMPER; INLET BOX SHALL BE MINIMUM 22 GAUGE GALVANIZED STEEL. GRILLE SHALL BE A WHITE, HIGH IMPACT STYRENE INJECTION MOLDED GRILLE. WHEEL SHALL BE CENTRIFUGAL FORWARD CURVED TYPE, INJECTION MOLDED RESIN. WHEEL SHALL BE BALANCED IN ACCORDANCE WITH AMCA STANDARD 205-05. MOTOR SHALL BE PERMANENT SPLIT CAPACITOR WITH PERMANENTLY LUBRICATED SEALED BEARINGS AND INCLUDE IMPEDANCE OR THERMAL OVERLOAD PROTECTION AND DISCONNECT PLUG.

<u>DUCTWORK</u>

GENERAL REQUIREMENTS

- A. PROVIDE VIBRATION ISOLATION FOR MOTOR-DRIVEN MECHANICAL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND AS SHOWN.
- B. PROVIDE FLEXIBLE DUCTWORK CONNECTIONS AT INLET AND OUTLET OF EQUIPMENT.
- C. DUCT SYSTEMS SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF NFPA 90A AND 90B.

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DATE: MAR 15, 2023

CONSTRUCTION DOCUMENTS HEATHERWILDE OFFICE **CONDOS BLDG**

201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660

PROJECT NO: 17003

REVISIONS:

DRAWN BY:	MF
REVIEWED BY:	PR

MECHANICAL **SPECIFICATIONS**

-NSIONS.
STRUCTED AND SEALED ACCORDIN(PRESSURE. FLEXIBLE DUCT MAY E) DUCTWORK LEGEND AND DUCT D
1 N 3, EIC.
JLATION WITH FOIL JACKET AND VAPO) FIRE RATING REQUIREMENTS.
AXIMUM OF 5 FEET IN LENGTH AND
ZED SPLITTER_DAMPERS PIVOTED AT CH SUPPLY DUCT SPLIT, IN ACCORDA DUCT BRANCH TO TWO OR MORE OL
QUAL EXTRACTORS WITH AN APPROPF PLY DUCT CONNECTION IN ACCORDA
ADE VOLUME DAMPERS WITH AN APPH HAUST BRANCH DUCT, IN EXHAUST O NE UNIT DISCHARGE, AND WHERE OT MANUAL BALANCING DAMPER TO BE RAME, MANUAL HAND QUADRANT WITH TIC SLEEVE. DAMPERS SUITABLE FO 2" W.C. FOR 36" WIDTH, 2" W.C. FO
HALL BE ULTRA LOW-LEAKAGE DAMF TO 4000 FPM AND UP TO 8" W.C. FOIL. SEALS TO BE SILICONE-RUBB BEARINGS TO BE SYNTHETIC TYPE RANT WITH 1½" STANDOFF.
PORT HORIZONTAL DUCTS UP TO ANE NO. 22 U.S. GAGE BAND IRON HANGE CLAMPS, AND FASTENED TO INSERTS S. PLACE SUPPORTS ON AT LEAST ; XING ON SEALED DUCTS.
IS. SUPPORT BY MEANS OF 1—INCH R. BAND TO BE ATTACHED WITH ALL I—CLAMP. ALL DEVICES SIMILAR TO
EXTERNAL WRAP
X (A)
OIL FACED EXTERNAL INSULATION ULATION SEAMS VAPOR TIGHT WI [¬]
BE DONE BY AN INDEPENDENT AAB()R.
D SHALL BE INCLUDED UNDER THIS F VALUE SHOWN ON DRAWINGS, PRO AND SYSTEM FAN PERFORMANCE F(
ING WORK THE BALANCING SUBCONT NE IF ALL REQUIRED BALANCING DAM O NOT USE OUTLET OBD FOR BALAN OF DESIGN. REPLACE FAN DRIVE IF AS FOLLOWS: SMALL AREAS WITH 1 DUTLETS:+/-10% OF DESIGN. REPOR TO THE FOLLOWING PRIOER TO CO
E" AND SUGGESTED "SOLUTION'', IF N THE MINIMUM OUTSIDE AIR MODE. ETHOD" USED SHALL BE INCLUDED II
BE TYPE 'M' WITH WROUGHT FITT IN RETURN AIR PLENUMS) WHE
IG PER MANUFACTURERS RECOMM ER TYPE "L" PIPING WITH WROUG AND WITHIN BUILDING. USE TYPI OR SMALLER WITHOUT JOINTS BE S BETWEEN EVAPORATOR AND CO TYPE 1.

A STANDARDS NLY AS DRAWINGS

LINER. DUCT

REAS DETAILED

stream end Smacna duct

L DEVICE AT MACNA DUCT

NTROL DEVICE TO HOODS ICATED, IN GALVANIZED FOR 0 4" W.C. AND RATED

FOR 6 CFM E 16-GAUGE DES AND BLADE HEIGHT

40 INCHES IN) to the E BOLTS, ERS. USE

JAGE STEEL od and By spiral

ED R VALUE APE OR

CERTIFIED FIRM

BALANCE AIR IN BALANCE , AMPERAGE

- LL INSPECT ACCESS
- TO OBTAIN LETS:+/-5% OF GALL E BALANCING

e air e air damper Icing Report.

IED WITH CODES

- .R FITTINGS JEALED JND AND

WITH 1.5"

AIR DEVICES

A. PROVIDE AIR DEVICES AS MANUFACTURED BY: PRICE, TITUS, METALAIRE OR EQUAL.

B. DIFFUSERS, REGISTERS AND GRILLES SHALL BE AS SCHEDULED OR NOTED AND ALL SHALL BE PROVIDED WITH FRAMES COMPATIBLE WITH EACH CEILING TYPE. CONTRACTOR SHALL COORDINATE ALL DIFFUSER LOCATIONS AND FRAME TYPES WITH FINAL APPROVED REFLECTED CEILING PLAN FOR LIGHT FIXTURE AND ALL OTHER CEILING MOUNTED DEVICE LOCATIONS.

<u>NAMEPLATE</u>

A. PROVIDE ENGRAVED NAMEPLATE ATTACHED WITH SCREWS FOR ALL MAJOR EQUIPMENT PROVIDED. USE NOMENCLATURE FROM EQUIPMENT SCHEDULES.

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201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660

PROJECT NO: 17003

REVISIONS:

F
R

MECHANICAL SPECIFICATIONS

ELECTRICA	L LEGEND NOTE: ALL SYMBOLS SHOWN ON LEGEN	ID ARE NOT NECESSA	ARILY USED.	P SWITCH WITH PILOT LIGHT Matrix MOTOR RATED SWITCH
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	M MOTOR RATED SWITCH V VACANCY SWITCH (AUTO OFF. MANUAL ON)
A	1X4 LINEAR FIXTURE W/ DESIGNATION		ABBREVIATIONS	a LOWER CASE LETTER AT FIXTURES AND SWITCHES (a, b, ETC.)
A	2X2 LINEAR FIXTURE W/ DESIGNATION	AFC	ABOVE FINISHED CEILING	
A	2X4 LINEAR FIXTURE W/ DESIGNATION	AFF	ABOVE FINISHED FLOOR	
	NIGHT LIGHT FIXTURE	AFG	ABOVE FINISHED GRADE	CENEDAL ELECTRICAL NOTES
A	LINEAR STRIP OR 6" FIXTURE W/ DESIGNATION	AHJ	AUTHORITY HAVING JURISDICTION	GENERAL ELECTRICAL NUTES.
	RECESSED DOWNLIGHT FIXTURE W/ DESIGNATION	AL	ALUMINUM	22. VERIFY EXACT LOCATIONS OF EXISTING AND NEW UNDERGROUND 1. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS ON ARCHITECTURAL 22. VERIFY EXACT LOCATIONS OF EXISTING AND NEW UNDERGROUND
A	SURFACE OR PENDANT DOWNLIGHT FIXTURE W/ DESIGNATION	С	CONDUIT	DRAWINGS AND IN FIELD PRIOR TO COMMENCEMENT OF WORK. PROVIDE NECESSARY TRENCHING, BACKFILL, EXCAVATION, SUPPORTS, SERVICE FEEDERS (CONDUIT AND/OR WIRE), PULLBOXES,
	WALL WASH FIXTURE W/ DESIGNATION, DIRECTION INDICATED BY TRIANGLE	СКТ	CIRCUIT	2. BEFORE BEGINNING EXCAVATIONS OF ANY NATURE WHATSOEVER, CONTRACTOR SHALL LOCATE ALL SERVICES AND UTILITIES OCCURPING WITHIN THE POLINDS OF THE PROJECT THE
	WALL MOUNT LINEAR FIXTURE W/ DESIGNATION	CLG	CEILING	CONTRACTOR SHALL THEN PROCEED WITH CAUTION IN HIS WORK SO THAT NO UTILITY OR LINE SERVING AREAS THAT ARE TO REMAIN BE
<u> </u>	WALL MOUNT FIXTURE W/ DESIGNATION	CT		DAMAGED WITH A RESULTANT LOSS OF SERVICE. VERIFY THE SOURCE AND SERVICE OF EACH AND EVERY LINE ENCOUNTERED LONG SWEEP ELLS. (MINIMUM 36" RADIUS.)
	CEILING OR WALL MOUNT EXIT SIGN (INSTALL FACE AS	EOMH	ELECTRICALLT OPERATED, MECHANICALLT HELD	AND RECORD SERVICE, SIZE AND LOCATION ON RECORD DRAWINGS. 3. COORDINATE EACH AND EVERY INTERRUPTION OF SERVICES AND 3. COORDINATE EACH AND EVERY INTERRUPTION OF SERVICES AND SHALL BE WITH LIQUIDTICHT FLEX AND APPROVED FITTINGS DO NOT
 	INDICATED BY ARROWS)	EM	ELECTRIC WATER COOLER	UTILITIES WITH THE OWNER AND UTILITY COMPANIES TO ENSURE MINIMUM SHUT-DOWN TIMES ARE ACCEPTABLE. SHALL BE WITH LIQUIDIGHT FLEX AND AFFROVED FITTINGS. DO NOT SECURE CONDUITS, DISCONNECTS, OR DEVICES TO DUCTWORK OR MECHANICAL EQUIPMENT.
 ¥	CEILING FAN	(E)	EXISTING	4. VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY 25. WHERE PANELS ARE INSTALLED FLUSH WITH WALLS, EMPTY
φ	20A SIMPLEX RECEPTACLE AT 18" U.N.O.	ETR	EXISTING TO REMAIN	5 IT IS THE INTENT OF THESE DRAWINGS TO CALL FOR FINISHED CONDUITS SHALL BE EXTENDED FROM THE PANEL TO AN ACCESSIBLE SPACE ABOVE OR BELOW. A MINIMUM OF ONE 3/4"C.
ф	20A DUPLEX RECEPTACLE AT 18" U.N.O.	ER	EXISTING RELOCATED	WORK, I.E., FULLY ADJUSTED, TESTED, AND READY FOR OPERATION. WHERE THE WORD "PROVIDE" IS USED IT SHALL MEAN "FURNISH SHALL BE INSTALLED FOR EVERY THREE SINGLE POLE SPARE CIRCUIT BREAKERS OR SPACES, OR FRACTION THEREOF, BUT NOT
de de	GFCI RECEPTACLE AT 18" U.N.O. (DUPLEX / SIMPLEX)	F/A	FIRE ALARM	AND INSTALL COMPLETE AND READY FOR USE".
	20A QUADRUPLEX RECEPTACLE AT 18" U.N.O.	F/S	FIRE/SMOKE DAMPER	6. FOR EACH EQUIPMENT CONNECTION SHOWN, PROVIDE THE DEVICE, OUTLET DISCONNECT SWITCH OR JUNCTION BOX REQUIRED TO 26. ALL ELECTRICAL SYSTEMS COMPONENTS SHALL BE LISTED OR LABELED BY U.L. OR OTHER RECOGNIZED TESTING FACILITY.
¢	20A DUPLEX RECEPTACLE 8" ABOVE COUNTER U.N.O.	G OR GND	GROUND	CONNECT THE EQUIPMENT. 27. WIRE TERMINATION PROVISIONS FOR PANELBOARDS, CIRCUIT
	20A DUPLEX RECEPTACLE SPECIAL MOUNT (FLOOR, CLG)	GEC	GROUNDING ELECTRODE CONDUCTOR	7. WHERE 120 VOLT BRANCH CIRCUITS EXCEED 57', PROVIDE MINIMUM #10 AWG CONDUCTORS FROM PANEL TO FIRST DEVICE, FIXTURE, #10 AWG CONDUCTORS FROM PANEL TO FIRST DEVICE, FIXTURE, (CU/AL) OR AS NOTED IN MANUFACTURER'S INSTRUCTIONS,
<u></u>	20A ISOLATED GROUND RECEPTACLE	GF	GROUND FAULT CIRCUIT INTERRUPTER	ETC. REF. VOLTAGE DROP TABLE ON THIS SHEET FOR ADDITIONAL WHICHEVER IS GREATER. VOLTAGE DROP CONDITIONS.
WP	WEATHERPROOF "EXTRA DUTY WHILE IN USE" COVER	IG	ISOLATED GROUND	8. NO SINGLE CONDUIT SHALL CONTAIN MORE THAN 6 CURRENT CARRYING CONDUCTORS LINESS NOTED OTHERWISE AND PROPERTY 28. PROVIDE ALL PANELBOARDS WITH GROUND BUS SEPARATE FROM NEUTRAL BUS.
<u> </u>	DEDICATED DUPLEX RECEPTACLE WITH AMP RATING NOTED	MFR	MANUFACTURER	DERATED. HOMERUN CONDUIT SHALL NOT BE LESS THAN 3/4". 29. FOR EACH TELEPHONE, DATA, FIRE ALARM DEVICE, AND T.V. OUTLET, DERATED. HOMERUN CONDUIT SHALL NOT BE LESS THAN 3/4". 29. FOR EACH TELEPHONE, DATA, FIRE ALARM DEVICE, AND T.V. OUTLET, DERATED. HOMERUN CONDUIT SHALL NOT BE LESS THAN 3/4".
Ψc	VIA AUTO-ON/OFF OCCUPANCY SENSOR	N1, N3R, N	NEMA 1, NEMA 3R, NEMA RATING (AS NOTED)	9. ALL WIRING SHALL BE IN CONDUIT. ALL CONDUIT SHALL BE 1/2" EMT MINIMUM WITH STEEL TYPE FITTINGS. 1/2" STEEL FLEXIBLE ACCESSIBLE CEILING FOR COMBINATION DEVICES (LF
Ψ ^U	20A COMBINATION DUAL USB AND DUPLEX RECEPTACLE	NIES	NOT IN ELECTRICAL SECTION	METAL CONDUIT WILL BE ALLOWED IN MAXIMUM LENGTHS OF 6'. TELEPHONE/DATA) PROVIDE 1" CONDUIT (UNLESS NOTED 3/8" AND/OR NON-METALLIC FLEXIBLE CONDUIT SHALL NOT BE
R	GFCI BLANK FACE RESET BUTTON	NL	NIGHT LIGHT	USED. MC-TYPE CABLE MAY BE USED FOR INTERIOR BRANCH CIRCUIT WIRING IF ALLOWED BY THE AUTHORITY HAVING
\bigcirc	SPECIAL RECEPTACLE AS NOTED	NTS	NOT TO SCALE	JURISDICTION. UNDERGROUND CONDUIT SHALL BE RIGID GALVANIZED STEEL (RGS) OR SCHEDULE 40 PVC WITH RGS ELLS AND RGS 30. ADJUST SMOKE DETECTORS AS REQUIRED TO MAINTAIN MINIMUM 3'
∇ $$ ∇	WALL, 8" ABOVE COUNTER, FLOOR)	ОН	OVERHEAD	CONDUIT/FITTINGS WHEN EMERGING FROM GRADE, UNLESS NOTED OTHERWISE. PROVIDE CODE-SIZED GREEN GROUNDING CONDUCTOR 31. IT SHALL BE THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR
▼	TELEPHONE OUTLET, DATA OUTLET	SDE	SERVICE DISTRIBUTION ENCLOSURE	IN ALL CONDUIT. INCREASE CONDUIT SIZE AS REQUIRED. ALL TO ENSURE THAT ALL EQUIPMENT DISCONNECTS ARE PROPERLY WIRING SHALL BE #12 AWG MINIMUM COPPER CONDUCTORS. SIZED PER THE FINAL SELECTED EQUIPMENT MANUFACTURER
	J-BOX (CEILING/WALL, FLOOR)	π	TELEPHONE TERMINAL	10. UNLESS OTHERWISE NOTED, CONDUIT SHALL BE CONCEALED, IF POSSIBLE AND INSTALLED SOLIAPE TO BUILDING LINES RECOMMENDATIONS/ REQUIREMENTS AND SAID DISCONNECTS ARE PROVIDED WITH THE REQUIRED NEC WORKING CLEARANCES. TYPICAL
	SECURITY CAMERA	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR	11 ALL ENDTY DAGEWAY SYSTEMS SHALL HAVE A #12 DUILIWIDE OD 32 DOCUMENTS CEDITEVING THAT THE INSTALLED LIGHTING CONTROLS
	CONDUIT RUN EXPOSED OR CONCEALED	UG	UNDERGROUND	EQUAL, AND SHALL BE IDENTIFIED AT ALL JUNCTION, PULL AND TERMINATION POINTS LISING REPARANENT METALLIC TACS TAG SHALL SHALL BE PROVIDED TO THE BUILDING OWNER WITHIN OD DAYS
	CONDUIT RUN BELOW FLOOR OR GRADE	UNO	UNLESS NOTED OTHERWISE	INDICATE INTENDED USE OF CONDUIT, ORIGINATION, AND FROM THE DATE OF RECEIPT OF THE CERTIFICATE OF OCCUPANCY
	SWITCHLEG	WP WR	WEATHER RESISTANT	12 RECESSED LIGHT FIXTURES INSTALLED IN CYPSUM BOARD OR 33 SEE PLUMBING AND MECHANICAL DRAWINGS FOR ALL DIVISION 22
>	CIRCUIT HOMERUN, #12, THWN/THHN & QTY AS REQ'D, W/ GND, 3/4"C., U.N.O.	XFMR	TRANSFORMER	PLASTER CEILINGS SHALL HAVE PLASTER FRAMES INSTALLED PRIOR TO CEILING MATERIAL. PLASTER FRAMES INSTALLED PRIOR AND 23 EQUIPMENT LOCATIONS AND ELECTRICAL LOAD REQUIREMENTS.
 /r ►	CIRCUIT HOMERUN CONTAINING 3 HOTS, NEUTRAL, & GROUND	ХР	EXPLOSION PROOF	13. WHERE FIXTURES CONTAINING BATTERY PACKS ARE SWITCHED (BY TOCCLE SWITCH OCCUPANCY SENSOR TIMECLOCK (LICHTING
	CONDUIT STUB-UP - CAP & MARK	+18"	MOUNTING HEIGHT TO CENTERLINE OF DEVICE AFF OR AFG	CONTROL PANEL, ETC.), SUPPLY TO BATTERY PACKS SHALL BE
· 	GROUND	#	SIZE OF WIRE (EX. #3/0 IS SIZE 3/0 AWG WIRE)	BE POWERED BY AN UNSWITCHED LINE ON THAT CIRCUIT.
				14. LIGHT SWITCHES SHOWN IN ROOM CONTROL ALL LIGHTS IN THAT ROOM UNLESS NOTED OTHERWISE. WALL SWITCHES SHOWN IN
 ₽₩			FIRE ALARM SYSTEM	ROOMS WITH CEILING OCCUPANCY SENSOR SWITCHES SHALL OVERRIDE OCCUPANCY SENSOR CONTROL.
				15. REVIEW ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, PLUMBING,
	TRANSFORMER		FIRE ALARM ANNUNCIATOR PANEL	AND OTHER DRAWINGS PRIOR TO BID.
 	DISCONNECT SWITCH (NON-FUSED UNLESS NOTED OTHERWISE WITH FUSE SIZE - AF - IN DISCONNECT SWITCH CALLOUT)	Ē	MANUAL PULL STATION DOUBLE ACTION	16. INSTALL ALL MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ANY DEVIATIONS SHALL BE BROUGHT TO THE ARCHITECT (ENCINEER'S ATTENTION DRIVE TO INSTALLATION
×	MAGNETIC MOTOR STARTER		GENERAL ALARM COMBINATION HORN/STROBE (AUDIO/VISUAL)	ARCHITECT/ENGINEER S ATTENTION PRIOR TO INSTALLATION. 17. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE
<u>ч</u> х	COMBINATION DISCONNECT AND STARTER		FIRE ALARM STROBE (VISUAL DEVICE) (WALL, CLG)	SATISFACTION OF THE ARCHITECT.
Ó	MOTOR	<u> </u>	SPEAKER – CEILING MOUNTED, WALL MOUNTED	T&, JUNCTION AND PULL BOXES OF APPROPRIATE DIMENSIONS FOR CONDUITS AND CONDUCTORS NOTED SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS AND IN ADDITION WHERE NECESSARY OR
•	EQUIPMENT CONNECTION	•	SMOKE/IONIZATION DETECTOR	CONVENIENT FOR INSTALLING AND PULLING WIRE.
¹⁰ @ ¹⁰ @⊣	OCCUPANCY SENSOR (CEILING, WALL) - RATING/COVERAGE, IF SHOWN, IS IN 100'S OF SQ. FT.	● ^H	HEAT DETECTOR	19. SPLICES IN EXTERIOR PULLBOXES SHALL BE MADE WATERPROOF USING "SCOTCHCAST" SPLICE KIT OR APPROVED EQUAL. SEAL ENDS
P	PHOTOELECTRIC CELL	• • • •	DUCT DETECTOR	OF CONDULTS AND DUCTS WITH "DUCTSEAL" OR APPROVED EQUAL.
	LIGHTING CONTACTOR	FS	SPRINKLER SYSTEM FLOW SWITCH	ZU, PRUTEUT ALL REUEPTAULES SHUWN AS GEU-PRUTEUTED IN LOCATIONS THAT ARE NOT "READILY ACCESSIBLE" (PER THE NEC) WITH CECLETYPE CIRCUIT PREAMERS OF DEMOTE BLANK FACE CECL
		TS	SPRINKLER SYSTEM TAMPER SWITCH	WITH GEVITTE VIRCUIT BREAKERS OR REMOTE, BLANK-FAUE GEVI DEVICE IN LIEU OF GFCI-TYPE RECEPTACLE.
C C C C C C C C C C C C C C C C C C C	LIGHTING CONTROL PANEL	RTS	REMOTE TEST SWITCH	21. PROVIDE A PERMANENTLY AFFIXED LABEL TO EACH INDIVIDUAL
3	SUBSCRIPTS			RECEPTACLE FACE/COVER PLATE, DISCONNECTING MEANS, SWITCH COVER, ETC., INDICATING THE PANEL AND THE CIRCUIT SERVING THE DEVICE TYPICAL FOR ALL FOLLIDMENT DECEDITACLES LICHTING
3	3-WAY SWITCH			SWITCHES, AND DISCONNECTS.
4	4-WAY SWITCH			
U D	DIMMER SWITCH			
К	KEY-OPERATED SWITCH			
		l		

#12 AWG #10 AWG #8 AWG #6 AWG #4 AWG

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201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660

PROJECT NO: 17003

REVISIONS:

DRAWN BY:	GR
REVIEWED BY:	AD

ELECTRICAL LEGEND AND NOTES

	LIGHTING FIXTURE SCHEDULE						
TYPE	MANUFACTURER	CATALOG NUMBER	MOUNTING	LAMPS TYPE	VOLTS	DESCRIPTION	LOCATION
AE	LITHONIA	#DSXW1-10C-350-40K-T3M-MVOLT-PE- E20WC-VERIFY FINISH	SURFACE	13.4 WATT LED	120	WALL MOUNTED WITH AN EMERGENCY BACK-UP BATTERY AND A BUTTON CELL PHOTOCELL CONTROL.	EXTERIOR, SEE PLANS.
В	KICHLER	#11146INLED-24"	SURFACE	19 WATT LED	120	BATHROOM VANITY SCONCE.	INTERIOR, SEE PLANS.
С	KICHLER	#10784INLED-24"	SURFACE	28.5 WATT LED	120	SURFACE LED FIXTURE.	INTERIOR, SEE PLANS.
DE	LITHONIA	#WL4-30L-MVOLT-EZ1-LP840-EL41L	SURFACE	28.2 WATT LED	MVOLT	4FT LINEAR LED FIXTURE WITH AN EMERGENCY BACK-UP BATTERY.	ATTIC, SEE PLANS.
E	LITHONIA	#ELMRE-LP220L-T	SURFACE	LED INCLUDED	MVOLT	SELF-CONTAINED EMERGENCY LIGHTING UNIT WITH DUAL HEADS.	INTERIOR, SEE PLANS.
F	PROGRESS LIGHTING	#EDGEFIELD P250016-009	STEM	18 WATT LED LIGHT KIT	120	LOW PROFILE CEILING FAN WITH #P2659-20-LED LIGHT KIT.	INTERIOR, SEE PLANS.
x	LITHONIA	#LQHM-LED-R-HO-SD	SURFACE	LED INCLUDED	MVOLT	SINGLE FACE LED EXIT SIGN WITH EMERGENCY BACK-UP BATTERY.	INTERIOR, SEE PLANS.

NOTES:

1. ANY LIGHTING MANUFACTURER(S) SUBSTITUTED NOT AS SPECIFIED IN THE LIGHT FIXTURE SCHEDULE DOES NOT GUARANTEE APPROVAL. SUBSTITUTIONS MUST MEET THE QUALIFICATIONS OF THE IECC (INTERNATIONAL ENERGY CONSERVATION CODE) AND MUST BE SUBMITTED TO AYS ENGINEERING AND PLACE DESIGNERS FOR CONSIDERATION OF APPROVAL. APPROVAL WILL BE DETERMINED BY WRITTEN REQUESTS SUBMITTED TO THE ENGINEER OF RECORD AND PRIOR TO REVIEW OF SHOP DRAWINGS TO DETERMINE IF THE SUBSTITUTED FIXTURE MEETS OR EXCEEDS THE DESIGN STANDARDS AND PERFORMANCE REQUIRED OF THE ACTUAL FIXTURE SPECIFIED IN THE LIGHT FIXTURE SCHEDULE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUBMIT A PASSING IECC COMCHECK ALONG WITH ANY SUBSTITUTION LIGHT FIXTURE PACKAGE. SHOP DRAWING DELAYS AS A RESULT OF INAPPROPRIATE SUBSTITUTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND AT NO ADDITIONAL COST TO THE OWNER.

2. ALL COLORS SPECIFIED FOR FIXTURES SHALL BE COORDINATED WITH ARCHITECT/OWNER PRIOR TO PURCHASING.

3. COORDINATE AND CONFIRM ALL MOUNTING HEIGHTS AND LOCATIONS WITH THE ARCHITECT/OWNER PRIOR TO CONSTRUCTION.

4. COLOR TEMPERATURE IN DEGREES OF KELVIN SHALL BE CONFIRMED WITH ARCHITECT/OWNER PRIOR TO PURCHASING.

5. ALL LIGHTING SYSTEMS TO BE TESTED AND PROGRAMMED/CALIBRATED TO ENSURE WORKING PROPERLY.

YMBOL	SENSOR-SWITCH-		SEQUENCE OF OPERATION	MOUNTING HEIGHT
	(SEE IECC C405.2.1.1.3, C4052.2.1 &			
S0	OCCUPANCY – AUTO "ON/OFF" TIMEOUT – 20 MINUTES WALL MOUNTED DIGITAL SWITCH WITH DUAL TECHNOLOGY AND 180° DETECTION.	1. 2.	AUTO SWITCH "ON" DRIVERS IN ALL FIXTURES TO 100% AFTER OCCUPANT ENTERS SPACE. TURN OFF ALL FIXTURES WHEN TIMEOUT EXPIRES AFTER OCCUPANT LEAVES SPACE.	MOUNT TO CENTER OF JUNCTION BOX AT +48" A.F.F UNLESS NOTED OTHERWISE.
SV	VACANCY — MANUAL "ON" AUTO "OFF" TIMEOUT — 20 MINUTES WALL MOUNTED DIGITAL SWITCH WITH DUAL TECHNOLOGY AND 180° DETECTION.	1. 2.	MANUAL SWITCH "ON" DRIVERS IN ALL FIXTURES TO 100% BY OCCUPANT ENTERING SPACE. TURN OFF ALL FIXTURES WHEN TIMEOUT EXPIRES AFTER OCCUPANT LEAVES SPACE.	MOUNT TO CENTER OF JUNCTION BOX AT +48" A.F.F UNLESS NOTED OTHERWISE.
SVMD	VACANCY — MANUAL "ON" AUTO "OFF" TIMEOUT — 20 MINUTES 5—BUTTON SWITCH WITH RAISE/LOWER 0—10V DIMMING, 100%, 50%, OFF WALL MOUNTED DIGITAL SWITCH WITH DUAL TECHNOLOGY AND 180° DETECTION.	1. 2.	MANUAL SWITCH "ON" DRIVERS IN ALL FIXTURES TO 100% BY OCCUPANT ENTERING SPACE. TURN OFF ALL FIXTURES WHEN TIMEOUT EXPIRES AFTER OCCUPANT LEAVES SPACE.	MOUNT TO CENTER OF JUNCTION BOX AT +48" A.F.F UNLESS NOTED OTHERWISE.
SOMD	OCCUPANCY – AUTO "ON" AUTO "OFF" TIMEOUT – 20 MINUTES 5-BUTTON SWITCH WITH RAISE/LOWER 0–10V DIMMING, 100%, 50%, OFF, AUTO "ON" @50% WALL MOUNTED DIGITAL SWITCH WITH DUAL TECHNOLOGY AND 180° DETECTION.	1. 2.	AUTO SWITCH "ON" DRIVERS TO 100% IN ALL FIXTURES BY OCCUPANT ENTERING SPACE. TURN OFF ALL FIXTURES WHEN TIMEOUT EXPIRES AFTER OCCUPANT LEAVES SPACE.	MOUNT TO CENTER OF JUNCTION BOX AT +48" A.F.F UNLESS NOTED OTHERWISE.
S S1	OCCUPANCY - "ON/OFF" TIMEOUT - 20 MINUTES 2-BUTTON WALL MOUNTED DIGITAL SWITCH.	1. 2.	AUTO SWITCH "ON" DRIVERS IN ALL FIXTURES TO 100% AFTER OCCUPANT ENTERS SPACE. TURN OFF ALL FIXTURES WHEN TIMEOUT EXPIRES AFTER OCCUPANT LEAVES SPACE.	MOUNT TO CENTER OF JUNCTION BOX AT +48" A.F.F UNLESS NOTED OTHERWISE.
SRL	3-BUTTON WALL MOUNTED DIGITAL SWITCH WITH ON/OFF AND RAISE/LOWER 0-10V DIMMING. COORDINATE DIMMER SWITCH TYPE WITH LIGHT FIXTURE DIMMING CAPABILITY.	1.	DIMS SPECIFIED FIXTURES PER SWITCH GROUP, SEE PLANS.	MOUNT TO CENTER OF JUNCTION BOX AT +48" A.F.F UNLESS NOTED OTHERWISE.
@ _s	OCCUPANCY – AUTO "ON/OFF" TIMEOUT – 20 MINUTES. CEILING MOUNTED, STANDARD RANGE, DUAL TECHNOLOGY WITH WITH 360° DETECTION, 1500 SQUARE FEET OR LESS.	1.	SENSOR TO ACTIVATE POWER PACK WITHIN THE OCCUPIED SPACE, SEE PLANS FOR POWER PACK TYPE.	MOUNT VISIBLE IN CEILING.
0 _{EX}	OCCUPANCY – AUTO "ON/OFF" TIMEOUT – 20 MINUTES. CEILING MOUNTED, EXTENDED RANGE, DUAL TECHNOLOGY WITH WITH 360° DETECTION, 2000 SQUARE FEET OR MORE.	1.	SENSOR TO ACTIVATE POWER PACK WITHIN THE OCCUPIED SPACE, SEE PLANS FOR POWER PACK TYPE.	MOUNT VISIBLE IN CEILING.
𝔍 _s	VACANCY – MANUAL "ON" AUTO "OFF" TIMEOUT – 20 MINUTES. CEILING MOUNTED, STANDARD RANGE, DUAL TECHNOLOGY WITH WITH 360° DETECTION, 1500 SQUARE FEET OR LESS.	1.	SENSOR TO ACTIVATE POWER PACK WITHIN THE OCCUPIED SPACE, SEE PLANS FOR POWER PACK TYPE.	MOUNT VISIBLE IN CEILING.
(V _{EX}	VACANCY – MANUAL "ON" AUTO "OFF" TIMEOUT – 20 MINUTES. CEILING MOUNTED, EXTENDED RANGE, DUAL TECHNOLOGY WITH WITH 360° DETECTION, 2000 SQUARE FEET OR MORE.	1.	SENSOR TO ACTIVATE POWER PACK WITHIN THE OCCUPIED SPACE, SEE PLANS FOR POWER PACK TYPE.	MOUNT VISIBLE IN CEILING.
PO	POWER PACK WITH AUTO "ON". CLASS 2 LOW VOLTAGE WIRING. OCCUPANCY MODE – AUTO "ON/OFF"			ABOVE CEILING IN AN ACCESSIBLE AREA.
PV	POWER PACK WITH MANUAL "ON". CLASS 2 LOW VOLTAGE WIRING. VACANCY MODE – MANUAL "ON" AUTO "OFF"			ABOVE CEILING IN AN ACCESSIBLE AREA.
OTES:				
1. DISRI 2. APPF THE PROV	EGARD ANY SYMBOLS THAT ARE NOT USED ON PLA ROVED LIGHTING CONTROLS BY: COOPER GREENGAT CONTRACTOR SHALL SUBMIT TO AYS ENGINEERING IDE A LAYOUT DEMONSTRATING DESIGN CONFORMAN	NS. E, A PRO NCE	CUITY NLIGHT, HUBBELL, AND LEGRAND W DUCT DATA ON AN EQUALLY PERFORMING FOR REVIEW AND APPROVAL	ATT STOPPER. FOR AN APPROVED EQU DIGITAL LIGHTING CONTROL SYSTEM A

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DATE: MAR 15, 2023

CONSTRUCTION DOCUMENTS HEATHERWILDE OFFICE **CONDOS BLDG** 3

201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660

PROJECT NO: 17003

REVISIONS:

ELECTRICAL LEGEND, NOTES, AND SCHEDULE

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CONSTRUCTION DOCUMENTS HEATHERWILDE OFFICE **CONDOS BLDG** 3

201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660

PROJECT NO:	17003

REVISIONS:

1 City Comments	4-21-2023
3 City Comments	5-9-2023
4 Site Developme	nt
Revision	8-18-2023
DRAWN BY:	GR

AD REVIEWED BY:

BUILDINGS 3 -FLOOR PLAN -LIGHTING

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CONSTRUCTION DOCUMENTS HEATHERWILDE OFFICE **CONDOS BLDG**

201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660

PROJECT NO:	17003

REVISIONS:

1 City Comments	4-21-2023
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DRAWN BY:	GR
REVIEWED BY:	AD

BUILDING 3 - FLOOR PLAN - POWER

ELECTRICAL LOAD ANAL TENANT SPACES + HOUSE	YSIS Load
LOAD DESCRIPTION 120/240V., 10 - 3W	load kva
TENANT PANEL LA =	19.1
TENANT PANEL LB =	19.1
TENANT PANEL LC =	19.1
TENANT PANEL LD =	19.1
HOUSE LOADS	
EXTERIOR LIGHTING =	0.1
RECEPTACLES =	0.3
MISC. =	0.1
TOTAL ESTIMATED CONNECTED LOAD =	76.9
76.9 KVA / 240 = AMPS	320.4 AMPS
BUILDING SERVICE SIZE = 510 AMP GUTTER AT 240V., 10, - 3W SPARE CAPACITY = 189.6 AMPS	

	GROUNDING	ELECTRODE CON	IDUCTOR CU WIRE SIZE FOR:		
DESIGNATION RANGE (ID)	GROUND ROD	CONCRETE-ENCASED ELECTRODE	STRUCTURAL STEEL AND METAL WATER PIPING (IF ANY)		
20G-100G	# 8	# 8	# 8		
125G-150G	# 6	# 6	# 6		
175G-200G	# 6	#4	#4		
225G-300G	# 6	#4	# 2		
350G-500G	# 6	#4	# 1/0		
600G-800G	# 6	#4	# 2/0		
1000G+	# 6	#4	#3/0		
NOTES:	1. DESIGNATIONS REFER TO AMPERAGE FOLLOWED BY A "G." FOR EXAMPLE, 30G WOULD FALL WITHIN THE 20G-100G RANGE.				
2. CONDUCTOR CONNECTED TO FIRST ELECTRODE IN SYSTEM SHALL BE SIZED ACCORDING TO THE GROUNDING ELECTRODE REQUIRING THE LARGEST CONDUCTOR. ONLY AVAILABLE GROUNDING ELECTRODES IN SYSTEM SHALL BE CONSIDERED. ALL BONDING BETWEEN REMAINING ELECTRODES SHALL BE SIZED ACCORDING TO VALUE LISTED IN TABLE.					
	3. GROUNDING ELECTRODE SYSTEMS SHALL CONSIST OF ALL AVAILABLE GROUNDING ELECTRODES.				
	4. THIS TABLE IS BASED ON ARTICLE 250.66 OF THE NEC.				

ELECTRICAL LOAD ANALY TENANT SPACE FOR PANE	(SIS L la
(TENANT PANEL LA)	
LOAD DESCRIPTION 120/240V., 10 - 3W	LUAD NVA
LIGHTING CONNECTED LOAD = 0.3 KVA AT 1.25% =	0.4
RECEPTACLES – FIRST 10 KW OF 6.4 KVA AT 100% = N/A	6.4
REMAINDER N/A KVA AT 50% (N.E.C. $220-44$) = N/A	0.4
HVAC: AIR HANDLING UNIT AT 100% = *6.7* *HEATING GREATER THAN COOLING*	6.7
CONDENSING UNIT AT 100% = 3.6	-
EXHAUST FANS AT 100% =	0.1
PLUMBING EQUIPMENT AT 100% =	4.5
MISC. EQUIPMENT AT 100% =	1.0
TOTAL ESTIMATED CONNECTED LOAD =	19.1
19.1 KVA / 240 = AMPS	79.5 AMPS
TENANT SERVICE SIZE = 150 AMPS AT 240V., 1ø, – 3W SPARE CAPACITY = 70.5 AMPS	

ELECTRICAL LOAD ANALY TENANT SPACE FOR PANE	YSIS L L
(TENANT PANEL LB)	
LOAD DESCRIPTION 120/240V., 10 - 3W	LUA
LIGHTING CONNECTED LOAD = 0.3 KVA AT 1.25% =	(
RECEPTACLES – FIRST 10 KW OF 6.4 KVA AT 100% = N/A	
REMAINDER N/A KVA AT 50% (N.E.C. 220–44) = N/A	6
HVAC: AIR HANDLING UNIT AT 100% = *6.7* *HEATING GREATER THAN COOLING*	
CONDENSING UNIT AT $100\% = 3.6$	
EXHAUST FANS AT 100% =	
PLUMBING EQUIPMENT AT 100% =	4
MISC. EQUIPMENT AT 100% =	
TOTAL ESTIMATED CONNECTED LOAD =	1
19.1 KVA / 240 = AMPS	79.5
TENANT SERVICE SIZE = 150 AMPS AT 240V., 10, - 3W SPARE CAPACITY = 70.5 AMPS	

load kva

0.4

6.7

-

0.1

4.5

1.0

19.1

79.5 AMPS

SIS . LB	ELECTRICAL LOAD ANALY TENANT SPACE FOR PANE	'SIS L LC
	(TENANT PANEL LC)	
LUAD NVA	LOAD DESCRIPTION 120/240V., 10 - 3W	LUAD K
0.4	LIGHTING CONNECTED LOAD = 0.3 KVA AT 1.25% =	0.4
0.4	RECEPTACLES - FIRST 10 KW OF 6.4 KVA AT 100% = N/A	
0.4	REMAINDER N/A KVA AT 50% (N.E.C. $220-44$) = N/A	6.4
6.7	HVAC: AIR HANDLING UNIT AT 100% = *6.7* *HEATING GREATER	6.7
-	CONDENSING UNIT AT 100% = 3.6	-
0.1	EXHAUST FANS AT 100% =	0.1
4.5	PLUMBING EQUIPMENT AT 100% =	4.5
1.0	MISC. EQUIPMENT AT 100% =	1.0
19.1	TOTAL ESTIMATED CONNECTED LOAD =	19.1
79.5 AMPS	19.1 KVA / 240 = AMPS	79.5 AM
	TENANT SERVICE SIZE = 150 AMPS AT 240V., 10, - 3W	

SPARE CAPACITY = 70.5 AMPS

ELECTRICAL LOAD ANALY TENANT SPACE FOR PANE	ísis L LD
(TENANT PANEL LD)	
LOAD DESCRIPTION 120/240V., 10 - 3W	LUAD NVA
LIGHTING CONNECTED LOAD = 0.3 KVA AT 1.25% =	0.4
RECEPTACLES - FIRST 10 KW OF 6.4 KVA AT 100% = N/A REMAINDER N/A KVA AT 50% (N.E.C. 220-44) = N/A	6.4
HVAC: AIR HANDLING UNIT AT 100% = *6.7* *HEATING GREATER THAN COOLING*	6.7
CONDENSING UNIT AT $100\% = 3.6$	-
EXHAUST FANS AT 100% =	0.1
PLUMBING EQUIPMENT AT 100% =	4.5
MISC. EQUIPMENT AT 100% =	1.0
TOTAL ESTIMATED CONNECTED LOAD =	19.1
19.1 KVA / 240 = AMPS	79.5 AMPS
TENANT SERVICE SIZE = 150 AMPS AT 240V., 1ϕ , $-3W$ SPARE CAPACITY = 70.5 AMPS	

ELECTRICAL RISER/SERVICE NOTE:

GENERAL: REFER ALSO TO GENERAL ELECTRICAL NOTES ON SHEET E1.0.

- 1. THE CONTRACTOR SHALL MAKE EVERY FEASIBLE EFFORT TO INSTALL THE REPRESENTED ELECTRICAL SERVICE DESIGN IN AS LITTLE SPACE AS POSSIBLE.
- 2. IT SHALL NOT BE ACCEPTABLE TO ALTER OR DEVIATE FROM THE ELECTRICAL RISER DESIGN REPRESENTED. ANY ALTERATIONS OR DESIGN DEVIATIONS SHALL BE SUBMITTED TO AND APPROVED BY AYS ENGINEERING, LLC PRIOR TO ANY ROUGH-IN OR EQUIPMENT PURCHASES.
- 3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE ELECTRICAL INSTALLATION, EQUIPMENT, DEVICES, CONDUIT, ENCLOSURES, METERS, ETC., ARE IN ACCORDANCE WITH THE LOCAL UTILITY REQUIREMENTS AND THE LOCAL AHJ REQUIREMENTS.

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DATE: MAR 15, 2023

CONSTRUCTION DOCUMENTS HEATHERWILDE OFFICE **CONDOS BLDG**

201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660

PROJECT NO: 17003

REVISIONS: 1 City Comments 4-21-2023

3 City Comments 5-9-2023

DRAWN BY:	GR
REVIEWED BY:	AD

ELECTRICAL RISER AND DIAGRAMS

					-			-				2	5,000	AIC Rating			
			L	oad	Cei	nter	Ľ	A						Existing			
													Х	New			
	120/240	Volt,1-Phase,3-	Wire		MCB		AM	P MC	B		X	Singl	е			Mountin	g
		1 Section		X	MLO	200	AM	P BU	S (Co	opper)		Doub	le			Surface	
	1	-Nema Rating					ISO	GR	ND. E	BUS		Feed	- Thru			X Flush	
Notes	Load (VA)	Description		Туре	Wire	СВ	CKT #	PH	CKT #	СВ	Wire	Туре		Description		Load (VA)	Notes
	1080	Rec's Office		R	12	20/1	1	Α	2	20/1	12	R	Rec's	Reception		720	
	1080	Rec's Office		R	12	20/1	3	С	4	20/1	12	R	Rec's	Conf/Hall		1080	
	1080	Rec's Office		R	12	20/1	5	А	6	20/1	12	R	Rec F	Restroom		180	
	725	Refrigerator		М	12	20/1	7	С	8	20/1	12	R	Micro	wave		1200	
	3360	AHU-1		Н	10	30/2	9	Α	10	30/2	10	WH	Wate	r Heater		2250	
	3360	-		Н	-	-	11	C	12	-	-	WH	-			2250	
	1800	HP-1		С	10	25/2	13	А	14	20/1	12	ΠĽ-	Lighti	ng		386	
	1800	-		С	=:	-	15	С	16	20/1			Spare				
		Spare				20/1	17	Α	18	20/1			Spare				
		Spare				20/1	19	С	20	20/1			Spare				
		Spare				20/1	21	Α	22	20/1			Spare)			
		Spare				20/1	23	С	24	20/1			Spare)			
		Prepared Space					25	Α	26				Prepa	red Space			
		Prepared Space					27	С	28				Prepa	ired Space			
		Prepared Space					29	A	30				Prepa	red Space			
	14,285	Subtotal					0						Subtotal		8,066		
N	I. <mark>E.</mark> C.	Load Type	Co	nn.	Fct.	Divers	sity	Ν	I.E.C) <u> </u>				Conn.	Fct.	Diversity	/
2	20.44	(R) Recept.	6,4	420		6,42	20	2	220.1	2 (L) Lighting)		386	125%	<mark>6 48</mark>	3
2	20.56	(K) Kitchen		0	100%	0				(EL) Ext. L	tg.		0	125%	6 0	
2	20.60	(C) Cooling	3,6	500	0%	0		6	620.1·	4 (E) Elevato	ors		0	100%	6 0	
2	20.60	(H) Heating	6,	720	100%	6,72	20			(WH) Wate	er Ht.		4,500	100%	6 4,5	00
2	20.14	(F) Fans		0	100%	0		2	220.5	0 (MT) Lrg. N	Not.		0	125%	6 0	
2	20.14	(M) Misc.	7.	25	100%	72	5			(SP) Sub F	anel		0	100%	6 0	1
		Total Connected Total Load (Dive	Load		22,351 18,848	VA = VA =	93 78	3.1 3.5	amf Amf	PS PS	Locati	on of P	anel:	Te	nant S	uite	

			Lo	bad	Cei	nter	L	D				1	0,000 X	AIC Rating Existing New			
	120/240	Volt,1-Phase,3-	Nire		MCB		AMF	P MC	B		Х	Sing	le			Mountin	g
		1 Section		X	MLO	200	AM	P BU	S (Co	opper)		Doub	ole			Surface	
	-	1 -Nema Rating					ISO	GR	ND. E	BUS		Feed	l - Thru	I		X Flush	
Notes	Load (VA)	Description		Туре	Wire	СВ	CKT #	PH	CKT #	СВ	Wire	Туре		Description		Load (VA)	Notes
	1080	Rec's Office		R	12	20/1	1	Α	2	20/1	12	R	Rec's	Reception		720	
	1080	Rec's Office		R	12	20/1	3	С	4	20/1	12	R	Rec's	Conf/Hall		1080	
	1080	Rec's Office		R	12	20/1	5	Α	6	20/1	12	R	Rec F	Restroom		180	
	725	Refrigerator		M	12	20/1	7	С	8	20/1	12	R	Micro	wave		1200	
	3360	AHU-4		Н	10	30/2	9	Α	10	30/2	10	WH	Wate	r Heater		2250	
	3360	-		Н	-	_	11	С	12	-	-	WH	-			2250	
	1800	HP-4		С	10	25/2	13	A	14	20/1	12	L	Lighti	ng		386	
	1800	-		С	-	-	15	C	16	20/1	_		Spare	9			
		Spare				20/1	1/	A	18	20/1	_	_	Spare	;			_
		Spare				20/1	19	0	20	20/1	_	_	Spare	2			-
		Spare				20/1	21	A	22	20/1	_	_	Spare	;			
		Prenared Snace				20/1	25	Δ	24	20/1		-	Prena	red Snace			-
		Prenared Space					27	C	28		_		Prena	ared Space			
		Prepared Space					29	A	30		_	-	Prepa	ared Space			-
	14,285	Subtotal									IL	1		Subtotal		8,066	
N	.E.C.	Load Type	Co	nn.	Fct.	Divers	sity	Ν	I.E.C					Conn.	Fct.	Diversity	/
2	20.44	(R) Recept.	6.4	120		6.42	20	2	20.1	2 () Liahtin	a		386	125%	48	3
2	20.56	(K) Kitchen	,	0	100%	0				(EL) Ext.	Ltg.		0	125%	6 0	
2	20.60	(C) Cooling	3,6	600	0%	0		6	620.14	4 (E) Elevat	ors		0	100%	6 0	
2	20.60	(H) Heating	6,7	720	100%	6,72	20			Ò	WH) Wa	er Ht.		4,500	100%	4,5	00
2	20.14	(F) Fans		0	100%	0		2	220.5	0 (1	MT) Lrg.	Mot.		0	125%	6 0	
2	20.14	(M) Misc.	73	25	100%	72	5			(SP) Sub	Panel		0	100%	6 0	
		Total Connected Total Load (Dive	Load rsified		22,351 18,848	VA = VA =	93 78	3.1 3.5	amf Amf	PS PS	Locat	ion of F	anel:	Te	nant S	uite	

				SHORT	CIRCU	IT CALCUL	ATIO	NS						
	Feeder Paral	lel				L-L				Load	Upstream		Multiplier	Calculated
Equipment Name	Length (ft) Sets	Conduit	Wire Type	Wire Size	KVA	Voltage	%Z		C-Value	Served (A)	I[SCA]	f-Value	(M)	Values (A)
Utility Transformer					225	240		1.4		937.5			71.429	66964
Gutter	60	2 Non-Mag	gCopper	#250kcmil		240			18594		66964	0.780	0.562	37626
Panel LA	14	1 Steel	Copper	#1		240			7293		37626	0.521	0.657	24733
Panel LB	42	1 Steel	Copper	#1		240			7293		37626	1.564	0.390	14676
Panel LC	67	1 Steel	Copper	#1		240			7293		37626	2.495	0.286	10767
Panel LD	96	1 Steel	Copper	#1		240			7293		37626	3.574	0.219	8225
Panel HP	8	1 Steel	Copper	#6		240			2425	,	37626	0.896	0.527	19847

			Loa	ad	Cer	nter	LI	В				1	8,000 X	AIC Rating Existing New			
	120/240	Volt,1-Phase,3-W 1 Section -Nema Rating	Vire	Х	MCB MLO	200	AMF AMF ISO	P MC P BU GRI	S (Co	opper) X	Singl Doub Feed	e le - Thru	1		Mountin Surface X Flush	g
Notes	Load (VA)	Description	т	Гуре	Wire	СВ	CKT #	PH	CKT #	CE	3 Wire	Туре		Description		Load (VA)	Notes
	1080	Rec's Office		R	12	20/1	1	Α	2	20/	1 12	R	Rec's	Reception		720	
	1080	Rec's Office		R	12	20/1	3	С	4	20/	1 12	R	Rec's	Conf/Hall		1080	
	1080	Rec's Office		R	12	20/1	5	Α	6	20/	1 12	R	Rec F	Restroom		180	
	725	Refrigerator		М	12	20/1	7	С	8	20/	1 12	R	Micro	wave		1200	
	3360	AHU-2		н	10	30/2	9	Α	10	30/	2 10	WH	Wate	Heater		2250	
	3360	-		Н	-	-	11	С	12	-		WH	-			2250	
	1800	HP-2		С	10	25/2	13	Α	14	20/	1 12	L	Lighti	ng		386	
	1800	-		С	-	-	<mark>15</mark>	С	16	20/	1		Spare				
		Spare				20/1	17	Α	18	20/	1		Spare				
		Spare				20/1	19	С	20	20/	1		Spare				
		Spare				20/1	21	A	22	20/	1	Spare					
		Spare				20/1	23	С	24	20/	1		Spare				
		Prepared Space					25	A	26				Prepa	red Space			
		Prepared Space					27	С	28				Prepa	red Space			
		Prepared Space					29	Α	30				Prepa	red Space			
	14,285	Subtotal												Subtotal		8,066	
Ν	I.E.C.	Load Type	Conn	n.	Fct.	Divers	sity	N	I.E.C).				Conn.	Fct.	Diversity	l.
2	20.44	(R) Recept.	6,420	0		6,42	20	2	20.1	2	(L) Lighting	J		386	125%	6 483	3
2	20.56	(K) Kitchen	0		100%	0					(EL) Ext. L	.tg.		0	125%	6 0	
2	20.60	(C) Cooling	3,600	0	0%	0		6	20.1	4	(E) Elevato	rs		0	100%	6 0	
2	20.60	(H) Heating	6,720	0	100%	6,72	20				(WH) Wate	er Ht.		4,500	100%	6 4,50	00
2	20.14	(F) Fans	0		100%	0		2	20.5	0	(MT) Lrg. N	/lot.		0	125%	6 0	
2	20.14	(M) Misc.	725	5	100%	725	5				(SP) Sub F	anel		0	100%	6 0	
		Total Connected Total Load (Divers	Load sified		22,351 18,848	VA = VA =	93 78	3.1 3.5	amf Amf	PS PS	Locatio	on of P	anel:	Тег	nant S	uite	

			Lo	bad	Cer	nter	L	C				1	4,000	AIC Rating Existing			
	120/240	Volt, 1-Phase, 3-V 1 Section	Vire	х	MCB MLO	200	AMF AMF	P MC	B S (Co	opper)	X	Singl Doub	e le	New		Mounting Surface	g
Notes	Load (VA)	-Nema Rating Description		Туре	Wire	СВ	ISO. CKT	GRI PH	ND. E CKT #	CB	Wire	⊢eed Type	- Thru	Description		X Flush Load (VA)	Notes
	1080	Rec's Office		R	12	20/1	<i>#</i> 1	A	# 2	20/1	12	R	Rec's	Reception		720	
	1080	Rec's Office		R	12	20/1	3	С	4	20/1	12	R	Rec's	Conf/Hall		1080	
	1080	Rec's Office		R	12	20/1	5	Α	6	20/1	12	R	Rec R	estroom		180	
	725	Refrigerator		М	12	20/1	7	С	8	20/1	12	R	Micro	wave		1200	
	3360	AHU-3		Н	10	30/2	9	Α	10	30/2	10	WH	Water	Heater		2250	
	3360	-		Н	-	-	11	С	12	-	-	WH	-			2250	
	1800	HP-3		С	10	25/2	13	Α	14	20/1	12	L	Lightir	ng		386	
	1800	-		С	-	-	15	С	16	20/1			Spare				
		Spare				20/1	17	Α	18	20/1			Spare				
		Spare				20/1	19	С	20	20/1			Spare				
		Spare				20/1	21	Α	22	20/1			Spare				
		Spare				20/1	23	С	24	20/1			Spare				
		Prepared Space					25	Α	26				Prepa	red Space			
		Prepared Space					27	С	28				Prepa	red Space			
		Prepared Space					29	Α	30				Prepa	red Space			
	14,285	Subtotal												Subtotal		8,066	
N	.E.C.	Load Type	Co	nn.	Fct.	Divers	sity	Ν	I.E.C					Conn.	Fct.	Diversity	
2	20.44	(R) Recept.	6,4	120		6,42	20	2	20.1	2 (L) Lighting	J		386	125%	6 483	3
2	20.56	(K) Kitchen	(0	100%	0				(E	L) Ext. L	.tg.		0	125%	6 0	
2	20.60	(C) Cooling	3,6	500	0%	0		6	20.1	4 (E) Elevato	rs		0	100%	6 0	
2	20.60	(H) Heating	6,7	720	100%	6,72	20			(V	VH) Wate	er Ht.		4,500	100%	6 4,50	00
2	20.14	(F) Fans	(0	100%	0		2	20.5) (N	1T) Lrg. N	/lot.		0	125%	6 0	
2	20.14	(M) Misc.	73	25	100%	725	5			(S	P) Sub F	anel		0	100%	6 0	
		Total Connected Total Load (Diver	Load sified		22,351 18,848	VA = VA =	93 78	1 1.5	amf Amf	ès ès	Locatio	on of P	anel:	Ter	nant S	uite	

												2	5,000	AIC Rating	l		
			L	oad	Cer	nter	н	Ρ						Existing			
								-					Х	New			
	120/240	Volt,1-Phase,3-V	Nire		MCB		AM	P MC	В		Х	Sing	е			Mountin	g
		1 Section		Х	MLO	60	AMF	P BU	S (C	opper)	(Doub	le			X Surface	
	3F	R -Nema Rating					ISO	GR	ND. E	BUS		Feed	- Thru	l		Flush	
Notes	Load (VA)	Description		Туре	Wire	CB	CKT #	PH	CKT #	СВ	Wire	Туре		Description		Load (VA)	Notes
	104	Exterior Lighting		L	10	20/1	1	Α	2	20/1	12	R	Exter	ior Rec's		360	
		Spare				20/1	3	С	4	20/*			Spare)			
		Spare				20/1	5	A	6	20/1			Spare	;			
		Spare				20/1	7	С	8	20/1			Spare	9			
		Prepared Space					9	Α	10				Prepa	red Space			
		Prepared Space					11	С	12				Prepa	red Space			
		Prepared Space					13	Α	14				Prepa	red Space			
		Prepared Space					15	С	16				Prepa	red Space			
	104	Subtotal												Subtotal		360	
Ν	I.E.C.	Load Type	Co	nn.	Fct.	Divers	sity	Ν	I.E.C	2.				Conn.	Fct.	Diversity	/
2	20.44	(R) Recept.	3	60		36	0	2	20.1	2 (L) Lighting	ļ		104	125%	6 13	0
2	20.56	(K) Kitchen	1	0	100%	0				(EL) Ext. L	.tg.		0	125%	6 0	
2	20.60	(C) Cooling	1	0	0%	0		6	620.1	4 (E) Elevato	ors		0	100%	6 0	
2	20.60	(H) Heating		0	0%	0				(WH) Wate	er Ht.		0	100%	6 0	
2	20.14	(F) Fans		0	100%	0		2	20.5	0 (MT) Lrg. N	/lot.		0	125%	6 0	
2	20.14	(M) Misc.		0	100%	0				(SP) Sub F	anel		0	100%	6 0	1
		Total Connected Total Load (Dive	Load rsified		464 490	VA = VA =	1	.9 .0	AMF AMF	PS PS	Locati	on of P	anel:	Build	ding Ex	terior	

SHORT CIRCUIT FAULT CALCULATIONS ARE BASED ON ASSUMED POWER COMPANY TRANSFORMER SIZE AND AVAILABLE FAULT CURRENT VALUE. ELECTRICAL FEEDER LENGTHS ARE CALCULATED BASED ON UTILIZING THE SHORTEST DISTANCE BETWEEN ELECTRICAL PANELS, DISCONNECTS, GUTTERS, AND TRANSFORMERS. THE CALCULATIONS ARE STRICTLY REPRESENTED TO DEMONSTRATE A MINIMUM EXPECTATION OF A.I.C. RATINGS FOR EACH PIECE OF ELECTRICAL GEAR. DUE TO MANY UNFORESEEN CONSTRUCTION LIMITATIONS OR OBSTRUCTIONS WITH OTHER TRADES, BUILDING METHODS, AND STRUCTURE, EXACT FEEDER LENGTHS MAY BE INSTALLED WITH SHORTER OR LONGER DISTANCES. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO SUBMIT FEEDER LENGTHS TO THE ELECTRICAL GEAR MANUFACTURER/SUPPLIER (SQUARE D, GE, SIEMENS, ETC.) TO CONFIRM A.I.C. RATINGS PRIOR TO SUBMITTAL REVIEW TO PRESENT TO THE ENGINEER OF RECORD ANY DISCREPANCIES BETWEEN THE ASSUMED A.I.C. RATINGS VERSUS THE INTENDED CONSTRUCTION INSTALLATION.

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DATE: MAR 15, 2023

CONSTRUCTION DOCUMENTS HEATHERWILDE OFFICE CONDOS BLDG

201 N. HEATHERWILDE BLVD. PFLUGERVILLE, TX 78660

PROJECT NO: 17003

REVISIONS:

ELECTRICAL PANEL SCHEDULES

<u>El</u>	ECTRICAL SPECIFICATIONS:		
PART	1 – GENERAL	1 1 1	ROUTINGS
1.01	SCOPE OF WORK: FURNISH AND INSTALL ALL MATERIALS AND EQUIPMENT AND PROVIDE ALL LABOR, TOOLS, TRANSPORTATION, SUPERINTENDENCE AND SERVICES REQUIRED AND NECESSARY TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND/OR SPECIFIED HEREIN.	1.11	ALL CONDUIT ROUTINGS, INCLUDING MC C PERPENDICULAR TO THE BUILDING STRUCTU BE CONCEALED WHERE POSSIBLE UNLESS APPEARANCE IS VERY IMPORTANT FOR THE CONTRACTOR WILL BE REQUIRED TO REMON
	ALSO INCLUDED WILL BE ALL OTHER WORK AND MISCELLANEOUS ITEMS, NOT SPECIFICALLY MENTIONED, BUT REASONABLY INFERRED FOR A COMPLETE INSTALLATION INCLUDING ALL ACCESSORIES AND APPURTENANCES REQUIRED FOR TESTING THE SYSTEM. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS THAT ALL SYSTEMS BE COMPLETE AND READY FOR OPERATION	1.12	NOT NEAT AND ACCURATE. UNDERGROUNI BUILDINGS MAY TAKE MOST DIRECT ROUTE. CUTTING AND PATCHING: ALL CUTTING AND PATCHING REQUIRED F
1.02	REGULATORY REQUIREMENTS: ALL WORK AND MATERIALS SHALL COMPLY WITH THE LATEST RULES, CODES AND REGULATIONS, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:		INCLUDED HEREIN. COORDINATION WITH GE TRADES IS IMPERATIVE. CONTRACTOR SHALL AND THE ADDED EXPENSE OF ADJUSTING F ETC.
	 A. 2021 INTERNATIONAL BUILDING CODE B. 2021 INTERNATIONAL FIRE CODE C. 2021 INTERNATIONAL PLUMBING CODE D. 2021 INTERNATIONAL FUEL GAS CODE E. 2021 INTERNATIONAL MECHANICAL CODE F. 2021 INTERNATIONAL ENERGY CONSERVATION CODE/ASHRAE 90.1–2019 	1.13	ACCEPTANCE DEMONSTRATION: UPON COMPLETION OF THE WORK, AT A T OWNER, THE CONTRACTOR SHALL DEMON OPERATION OF THE ELECTRICAL INSTALLA SPECIAL ITEMS INSTALLED BY HIM/HER SUPERVISION
	 G. 2020 NATIONAL ELECTRIC CODE H. LOCAL CODE ORDINANCES AND AMENDMENTS I. NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION (NEMA) J. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) K. NATIONAL ELECTRICAL SAFETY CODE (NESC) L. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE) M. UNDERWRITERS' LABORATORIES (UL) N. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) O. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) P. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) 	1.14	RECORD DRAWINGS, EQUIPMENT DATA: MAINTAIN ONE SET OF CLEAN WORKING D ENTER DAILY SUCH "AS-BUILTS" INFORMA ROUTES, PULL BOX LOCATIONS AND CHANG WHICH OCCUR DURING CONSTRUCTION. DE THE OWNER. DELIVER TO THE OWNER'S REPRESENTATIVE
.03	Q. AMERICANS WITH DISABILITIES ACT (ADA) R. APPLICABLE UTILITY COMPANIES LICENSE, FEES AND PERMITS: ELECTRICAL CONTRACTOR SHALL PAY FOR ALL LICENSES PERMITS AND		OR OTHER CURRENT MANUFACTURERS' PU ELECTRICAL EQUIPMENT FURNISHED FOR TH THESE DATA: A. TECHNICAL DESCRIPTION AND REPLACEA
.04	INSPECTION FEES REQUIRED BY THE AUTHORITY HAVING JURISDICTION AND SHALL ARRANGE FOR ALL REQUIRED INSPECTIONS.	1.15	 DESCRIPTION AND INSTALLATIC C. USER'S MANUAL AND OPERATING INSTRUD. MANUFACTURER'S WARRANTY. CLEAN-UP:
	CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.		RID THE PREMISES OF SCRAP MATERIALS, T CONSTRUCTION AND AT COMPLETION OF TH AND SURROUNDING AREA IN A CLEAN AND (
	NO ACT, SERVICE, DRAWING REVIEW OR CONSTRUCTION REVIEW BY THE OWNER, THE ENGINEERS OR THEIR CONSULTANTS, IS INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON, OR NEAR THE CONSTRUCTION SITE.	1.16	TEMPORARY SERVICES: PROVIDE ADEQUATE AND SAFE TEMPORARY THROUGHOUT THE CONSTRUCTION AND FIN BENEFICIAL OCCUPANCY. IN ADDITION
1.05	DRAWINGS AND SPECIFICATIONS: ALL DRAWINGS AND SPECIFICATIONS SHALL BE CONSIDERED AS A WHOLE AND WORK OF THIS DIVISION SHOWN ANYWHERE THEREIN SHALL BE FURNISHED UNDER THIS DIVISION.		REQUIREMENTS, PROVIDE AT LEAST THESE IT A. SIX 20-AMP CIRCUITS FOR CONSTRUCT TEMPORARY CIRCUITS WITH COVERPLATE
	DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF EQUIPMENT AND WIRING. MOST DIRECT ROUTING OF CONDUITS AND WIRING IS NOT ASSURED. EXACT REQUIREMENTS SHALL BE GOVERNED BY CONDITIONS OF THE JOB. CONSULT ALL OTHER DRAWINGS IN PREPARATION OF THE BID. EXTRA LENGTHS OF WIRING OR ADDITION OF PULL OR JUNCTION BOXES, ETC. NECESSITATED BY SUCH CONDITIONS SHALL BE INCLUDED.		B. EIGHT OR MORE LIGHT STRINGS SUSPE BELOW THE HEIGHT OF FINISH CEILING THAN TWELVE FEET ON CENTERS. STR OF THE BUILDING FOOTPRINT WITH ON EACH WALL AND ONE (OR MORE) INT TO LIMIT THE SPACING BETWEEN ROWS
1.06	CONDITIONS AT SITE: THE ELECTRICAL CONTRACTOR SHALL HAVE EXAMINED THE SITE AND FAMILIARIZED THEMSELVES WITH ALL DISCERNIBLE EXISTING CONDITIONS. NO EXTRA PAYMENT WILL BE ALLOWED FOR WORK REQUIRED BECAUSE OF THESE CONDITIONS, WHETHER SPECIFICALLY MENTIONED OR NOT.		C. FLOOD LIGHTING AND TASK LIGHTING F WORK. WHEN PERMANENT ELECTR DISCONNECT AND REMOVE FROM THE EQUIPMENT USED FOR TEMPORARY POV MODIFICATIONS AND REPAIR DAMAGE CA OR REMOVAL OF TEMPORARY SERVICE F
.07	WORKMANSHIP AND CONTRACTOR'S QUALIFICATIONS: ONLY QUALITY WORKMANSHIP WILL BE ACCEPTED. HAPHAZARD OR POOR INSTALLATION WILL BE CAUSE FOR REJECTION OF WORK. THE CONTRACTOR SHALL BE LICENSED IN THE STATE IN WHICH THE JOB IS LOCATED.	1.17	WARRANTY: THE CONTRACTOR SHALL UNCONDITIONALLY
1.08	SHOP DRAWINGS AND MATERIALS LIST: SUBMIT TO OWNER IN A SINGLE PACKAGE SIX (6) COPIES OF COMPLETE SHOP DRAWINGS AND MATERIALS LIST, AS NOTED BELOW, FOR REVIEW WITHIN FIFTEEN (15) DAYS AFTER AWARD OF CONTRACT. SUBMITTALS REQUIRED AS FOLLOWS:		OF DEFECTS IN MATERIAL AND WORKMANSI YEAR FROM THE DATE OF FINAL ACCEPTANC ANY DEFECTIVE WORK PROMPTLY AND WITH OTHER EXISTING WORK DAMAGED IN THE C MATERIALS AND WORKMANSHIP.
	 A. WIRING DEVICES: SWITCHES, RECEPTACLES, DEVICE PLATES. B. ENCLOSURES FOR UTILITY COMPANY METERING. C. MAIN FUSED DISCONNECT SWITCH OR ENCLOSED CIRCUIT BREAKER. D. PANELBOARDS F. DISCONNECT SWITCHES. 	<u>PART</u> 2.01	<u>2 – PRODUCTS</u> MATERIAL APPROVAL:
.09	F. LIGHTING FIXTURES, AND LIGHTING CONTROL EQUIPMENT. SUBSTITUTIONS:		LABEL. MATERIALS THAT ARE NOT COVER SHALL BE TESTED AND APPROVED BY AN IN OR A GOVERNMENTAL AGENCY.
	ONE OR MORE MAKES OF MATERIALS OR METHODS MAY HAVE BEEN SPECIFIED TO ESTABLISH THE STANDARD OF QUALITY, WORKMANSHIP, FINISH AND DESIGN REQUIRED, BUT OTHER MATERIALS OR METHODS EQUAL IN QUALITY, WORKMANSHIP, FINISH, DESIGN, AND GUARANTEED PERFORMANCE WILL BE ACCEPTED. HOWEVER, ALL CHANGES AND SUBSTITUTIONS SHALL BE REQUIRED IN LETTER FORM AND SHALL BE ACCOMPANIED WITH A STATEMENT OF THE AMOUNT OF MONEY TO BE RETURNED TO THE CONTRACT IF THE SUBSTITUTION IS PERMITTED	2.02	MATERIAL NOT IN ACCORDANCE WITH T REJECTED EITHER BEFORE OR AFTER INSTAL CONDUITS AND OTHER RACEWAYS: A. RIGID STEEL: HOT-DIPPED GALVANIZED.
	NO WORK INVOLVING MATERIALS SUBMITTED FOR SUBSTITUTION SHALL PROCEED UNTIL WRITTEN ACCEPTANCE IS RECEIVED FROM THE OWNER. THE OWNER IS THE SOLE JUDGE OF ACCEPTABILITY OF PREFERRED SUBSTITUTIONS. IF A SUBSTITUTION ITEM IS PERMITTED, AND ANY RE-DESIGN EFFORT IS THEREBY NECESSITATED, THE REQUIRED RE-DESIGN SHALL BE AT THE CONTRACTOR'S EXPENSE		 B. INTERMEDIATE METAL CONDUIT (IMC): HO C. ELECTRICAL METALLIC TUBING (EMT): EL D. WIREWAY: CODE GAUGE STEEL, WITH I CORROSION RESISTANT, GRAY BAKED EN
.10	COORDINATION: COORDINATE WORK WITH OTHER TRADES TO AVOID CONFLICT AND TO PROVIDE CORRECT ROUGH-IN AND CONNECTION FOR EQUIPMENT FURNISHED		E. PROVIDE FITTINGS AND ACCESSORIES EQUAL IN ALL RESPECTS TO THE CONNECTORS AND COUPLINGS SHAL INDOORS AND STEEL COMPRESSION OUTDOORS.
	UNDER OTHER TRADES THAT REQUIRE ELECTRICAL CONNECTIONS. INFORM CONTRACTORS OF OTHER TRADES OF THE REQUIRED ACCESS TO AND CLEARANCES AROUND ELECTRICAL EQUIPMENT TO MAINTAIN SERVICE ABILITY AND CODE COMPLIANCE.	2.03	WIRES AND CABLES: A. FOR POWER AND LIGHTING SYSTEM 600 1 CONDUCTOR: MINIMUM SIZE //10.11
	VERIFY EQUIPMENT DIMENSIONS AND REQUIREMENTS WITH PROVISIONS SPECIFIED UNDER THIS SECTION. CHECK ACTUAL JOB CONDITIONS BEFORE FABRICATING WORK. REPORT NECESSARY CHANGES IN TIME TO PREVENT NEEDLESS WORK. CHANGES OR ADDITIONS, SUBJECT TO ADDITIONAL COMPENSATION, WHICH ARE MADE WITHOUT WRITTEN AUTHORIZATION AND IN		a. #12 AND #10 AWG SOLID CO b. #8 AWG AND LARGER SHAI BRANCH CIRCUITS, ALUMINUM

CABLE, SHALL BE PARALLEL AND URE AND LINES. CONDUITS SHALL S NOTED OTHERWISE. AESTHETIC WORK OF THIS PROJECT - THE OVE AND REPLACE WORK THAT IS IND ROUTINGS, IF ANY, BETWEEN

FOR WORK OF THIS DIVISION IS ENERAL CONTRACTOR AND OTHER BEAR THE RESPONSIBILITY FOR FOR IMPROPER HOLES, SUPPORTS,

TIME TO BE DESIGNATED BY THE NSTRATE FOR THE OWNER THE TION, INCLUDING ANY AND ALL OR INSTALLED UNDER THEIR

DRAWINGS AT THE JOB SITE AND IATION AS FEEDER AND SERVICE GES IN LAYOUT OR ARRANGEMENT ELIVER COMPLETED DRAWINGS TO

THREE COPIES OF DATA SHEETS JBLICATIONS FOR EACH ITEM OF HE PROJECT INCLUDING AT LEAST

ABLE PARTS LIST. ION INSTRUCTIONS. UCTIONS.

TRASH AND DEBRIS BOTH DURING HE PROJECT. LEAVE THE BUILDING ORDERLY CONDITION.

ELECTRICAL POWER AND LIGHTING INISHING OF THE PREMISES FOR TO SPECIAL OR UNUSUAL TEMS:

CTION POWER TOOLS. PROVIDE GFI ES TO MEET OSHA REQUIREMENTS.

ENDED APPROXIMATELY ONE FOOT WITH LAMPS SPACED NOT MORE RINGS SHALL BE RUN THE LENGTH NE STRING WITHIN EIGHT FEET OF TERMEDIATE STRING(S) ARRANGED TO SIXTEEN FEET OR LESS.

FOR PAINTING AND OTHER FINISH RICAL SERVICE IS OPERABLE, PREMISES THE MATERIALS AND WER AND LIGHTING, AND RESTORE AUSED BY THE INSTALLATION, USE PROVISIONS.

WARRANT ALL WORK TO BE FREE HIP FOR A PERIOD OF ONE (1 CE AND WILL REPAIR OR REPLACÉ HOUT CHARGE AND RESTORE ANY COURSE OF REPAIRING DEFECTIVE

R UNDERWRITER'S LABORATORIES RED BY UL TESTING STANDARDS NDEPENDENT TESTING LABORATORY

THESE SPECIFICATIONS MAY BE I ATION

OT-DIPPED GALVANIZED.

- LECTRO-GALVANIZED.
- KNOCKOUTS AND HINGED COVER, NAMEL FINISH.

APPROVED FOR THE PURPOSE CONDUIT OR RACEWAY. EMT ALL BE STEEL SETSCREW TYPE TYPE IN WET LOCATIONS AND

OV OR LESS:

WG.

)PPER.

LL BE STRANDED COPPER FOR FOR SERVICE AND FEEDERS.

- 2. INSULATION TYPE:
- a. #12 TO #1 AWG: THWN FOR WET OR UNDERGROUND AND THHN FOR DRY LOCATIONS.
- b. #1/0 THROUGH #4/0 AWG: XHHW (55 MILS).
- c. #250 KCMIL AND LARGER: XHHW (65 MILS). d. GROUNDING WIRE: TW.
- B. FOR SIGNAL AND COMMUNICATIONS CIRCUIT:
- 1. CONDUCTORS FOR GENERAL USE SHALL BE STRANDED COPPER CONDUCTOR. #16 AWG MINIMUM, WITH THWN INSULATION FOR UNDERGROUND OR WET LOCATIONS AND THHN INSULATION FOR DRY LOCATIONS.
- C. ACCEPTABLE PRODUCTS: GENERAL ELECTRIC, ANACONDA, OKONITE, PARANITE OR TRIANGLE PRODUCTS CONFORMING OR EXCEEDING APPLICABLE IPCEA STANDARDS.

2.04 OUTLET BOXES, JUNCTION AND PULL BOXES:

- A. OUTLET BOXES: 4" SQUARE X 1-1/2" DEEP (OR LARGER) GALVANIZED SHEET STEEL KO-TYPE WITH PLASTER RING AND COVER FOR GENERAL INTERIOR USE AND CAST METAL TYPE FS OR FD WITH MATCHING SCREW COVERS FOR EXTERIOR AND EXPOSED INTERIOR LOCATIONS (GASKETED IN DAMP OR WET LOCATIONS).
- B. JUNCTION BOXES SHALL BE SAME AS OUTLET BOXES UP TO 42 CU. IN. AND CODE-GAUGE STEEL IN LARGER SIZES WITH SURFACE OR FLUSH-TYPE SCREW-MOUNTED TRIM COVERS, BOTH BOXES AND COVERS INHIBITOR-PRIMED AND PAINTED INSIDE OUT.
- C. PULL BOXES SHALL BE SAME AS JUNCTION BOXES UNLESS INDICATED OTHERWISE ON THE DRAWINGS, WITH COVERS.
- D. TELEDATA OUTLET BOXES SHALL BE THE TYPE AND SIZE REQUIRED BY THE SERVING TELEDATA COMPANY BUT NOT SMALLER THAN 4-11/16" SQUARE X 2-1/8" DEEP WITH SINGLE-GANG RING AND FACE PLATE AS DICTATED BY TELEDATA COMPANY.
- E. ALL BOXES AND ASSOCIATED COMPONENTS SHALL BE STEEL CITY 663 SERIES, WITH P60-3B COVERPLATE OR EQUAL.

2.05 WIRING DEVICES AND PLATES SHALL BE HUBBELL, ARROW HART, LEVITON, GE OR P&S WITH HUBBELL NUMBERS USED TO SPECIFY TYPE USED.

- A. STANDARD DESIGN:
- 1. SWITCH AND RECEPTACLE DEVICES SHALL BE AS SPECIFIED BY ARCHITECT.
- 2. WALL PLATES SHALL BE AS SPECIFIED BY ARCHITECT.
- 3. SWITCHES SHALL BE 20 AMP, 120/277 VOLT A.C. RATED: SINGLE POLE SWITCHES SHALL BE #1221, (HUBBELL NUMBERS).
- 4. RECEPTACLES SHALL BE GROUNDING TYPE #5362 (HUBBELL NUMBER).
- 5. WALL-SWITCH OCCUPANCY/VACANCY SENSORS SHALL BE DUAL-RELAY, MULTI-TECHNOLOGY WALL-SWITCH TYPE, 120/277V, ADJUSTABLE TIME DELAY UP TO 30 MINUTES, 180-DEGREE FIELD OF VIEW, EQUAL TO WATTSTOPPER LSVW-10X. LUTRON OR NLIGHT PRODUCTS ARE ALSO ACCEPTABLE.
- 6. CEILING OR WALL MOUNT AREA OCCUPANCY OR VACANCY SENSORS SHALL BE MULTI-TECHNOLOGY, 360-DEGREE, SELF-ADJUSTING, ADJUSTABLE TIME DELAY UP TO 20 MINUTES, COMMERCIAL GRADE, EQUAL TO WATTSTOPPER. NOTATIONS OF 5, 10, AND 20 SHOWN ON DRAWINGS REPRESENT SENSORS EQUAL TO WATTSTOPPER DT-200, DT-300, AND UT-300, RESPECTIVELY. UTILIZE POWER PACKS EQUAL TO WATTSTOPPER BZ-250. LUTRON OR NLIGHT PRODUCTS ARE ALSO ACCEPTABLE.

2.06 CONDUIT HANGERS:

FOR INDIVIDUAL CONDUIT RUNS NOT DIRECTLY FASTENED TO THE STRUCTURE, USE ROD HANGERS MANUFACTURED BY CADDY, UNISTRUT, OR POWERSTRUT. FOR MULTIPLE CONDUIT RUNS, USE UNISTRUT OR POWERSTRUT TRAPEZE TYPE CONDUIT SUPPORT DESIGNED FOR MAXIMUM DEFLECTION NOT GREATER THAN 1/8".

2.07 WIRE CONNECTORS:

FOR WIRE SIZES #8 AWG AND SMALLER: INSULATED PRESSURE TYPE (WITH LIVE SPRING) RATED 105 DEGREES C., 600V. FOR BUILDING WIRING AND 1000V IN SIGNS OR FIXTURES: SCOTCHLOK OR IDEAL. FOR WIRE SIZE #6 AWG AND LARGER: T & B OR EQUIVALENT COMPRESSION TYPE WITH 3M #33+ OR PLYMOUTH "SLIPKNOT GRAY" TAPE INSULATION.

2.08 PANELBOARDS:

- CONSTRUCTION: CABINETS SHALL BE OF CODE GAUGE, GALVANIZED STEEL, SURFACE OR FLUSH MOUNTED AS INDICATED. DOORS SHALL BE OF COLD-ROLLED STEEL WITH CONCEALED HINGES AND FLUSH CATCH AND LOCK. ALL PANELS SHALL BE KEYED ALIKE. PANELS LOCATED ADJACENT TO EACH OTHER SHALL HAVE IDENTICALLY SIZED ENCLOSURE AND TRIMS. MINIMUM PANEL WIDTH SHALL BE 20". FINISH EXPOSED PART WITH ONE COAT OF PRIMER AND ONE COAT OF LIGHT GRAY ENAMEL SUITABLE FOR OVERPAINTING IN FIELD IF DESIRED.
- B. BUS BARS: PROVIDE GROUND BLOCK WITH FULL COMPLEMENT OF TERMINALS IN ADDITION TO INSULATED NEUTRAL BUS. FUTURE BREAKER SPACES SHALL HAVE COMPLETE PROVISION INCLUDING BUSSES AND CONNECTING HARDWARE.
- C. MANUFACTURERS: PANELBOARDS SHALL BE GENERAL ELECTRIC, SQUARE D, EATON, OR SIEMENS-ITE.
- D. CIRCUIT BREAKERS: SHALL BE QUICK-MAKE, QUICK-BREAK, MOLDED CASE TYPE:
- 1. 120/208–240 VOLT PANELS: SHALL BE BOLT-ON TYPE WITH MINIMUM SYMMETRICAL INTERRUPTING CAPACITY AS SHOWN ON THE PLANS.
- 2. ALL BREAKERS MUST BE FULLY RATED. SERIES RATING NOT ALLOWED.
- 3. PROVIDE MULTI-POLE UNITS WITH COMMON TRIP ELEMENT.
- IDENTIFICATION: PROVIDE SCREWED-ON (NO ADHESIVES) BAKELITE OR PHOTO-ETCHED METALLIC NAMEPLATE IDENTIFICATION ON OUTSIDE OF EACH PANEL SHOWING PANEL DESIGNATION. VOLTAGE, AND PHASE IN

- MINIMUM 1/4" HIGH LETTERS. EACH PANEL SHALL CONTAIN A METAL-FRAMED CIRCUIT DIRECTORY INSIDE COVER, WITH PLASTIC PROTECTOR.
- F. COMPLETE SHOP DRAWINGS ARE REQUIRED. SEE ARTICLE 1.08.
- 2.09 INDIVIDUALLY MOUNTED MOTOR CONTROLLERS:
- A. STARTERS FOR FRACTIONAL HORSEPOWER 120V MOTORS SHALL BE MANUAL TYPE UNLESS SHOWN OTHERWISE, EQUIPPED WITH BUILT-IN OVERLOAD PROTECTION.
- B. ACCEPTABLE MANUFACTURERS: GENERAL ELECTRIC, EATON, SIEMENS, SQUARE D, AND ALLEN BRADLEY.
- MOTORS, FUSED OR NON-FUSED AS REQUIRED. MOUNT IN ENCLOSURE WITH NEMA RATING AS REQUIRED FOR THE SPECIFIC APPLICATION. GENERAL ELECTRIC, SQUARE D, EATON OR SIEMENS-ITS.

- A. LIGHTING TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR AS INDICATED ON THE DRAWINGS. SUBCONTRACTORS TO INSTALL ALL FIXTURES COMPLETE, INCLUDING LAMPS AND BALLASTS, READY FOR SERVICE.
- B. SUPPORTS: PROPER SUPPORTS AND MOUNTING ACCESSORIES, SUCH AS HANGERS, STEMS, YOKES, PLASTER FRAMES, ETC. SHALL BE PROVIDED AS REQUIRED BY THE TYPE OF CEILING INSTALLED. FIXTURES SHALL HANG PLUMB REGARDLESS OF CEILING SLOPE.
- C. FIXTURE DESIGNATION: FIXTURE TYPES ARE DESIGNATED ON DRAWINGS. FOR EXACT FIXTURE COUNT AND LOCATION, REFER TO REFLECTED CEILING PLAN.

<u>PART 3 – EXECUTION</u>

3.01 GENERAL:

- A. ELECTRIC SYSTEM LAYOUTS INDICATED ON THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND SHALL BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION AND WORK OF OTHER TRADES WILL PERMIT. GOVERN EXACT ROUTING OF CABLE AND WIRING AND THE LOCATIONS OF OUTLETS BY THE STRUCTURE AND EQUIPMENT SERVED. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS.
- CONSULT ALL OTHER DRAWINGS, VERIFY SCALES AND REPORT ANY DIMENSIONAL DISCREPANCIES OR OTHER CONFLICTS WITH THE ARCHITECT BEFORE SUBMITTING BID.
- C. ALL HOME RUNS TO PANELBOARDS ARE INDICATED AS STARTING FROM THE OUTLET NEAREST THE PANEL AND CONTINUING IN THE GENERAL DIRECTION OF THAT PANEL. CONTINUE SUCH CIRCUITS TO THE PANEL AS THOUGH THE ROUTES WERE COMPLETELY INDICATED. TERMINATE HOMERUNS OF SIGNAL, ALARM, AND COMMUNICATION SYSTEMS IN A SIMILAR MANNER.
- AVOID CUTTING AND BORING HOLES THROUGH STRUCTURE OR STRUCTURAL MEMBERS WHEREVER POSSIBLE. OBTAIN PRIOR APPROVAL OF OWNER AND CONFORM TO ALL STRUCTURAL REQUIREMENTS WHEN CUTTING OR BORING THE STRUCTURE IS NECESSARY AND PERMITTED.
- FURNISH AND INSTALL ALL NECESSARY HARDWARE, HANGERS, BLOCKING, BRACKETS, BRACING, RUNNERS, ETC. REQUIRED FOR EQUIPMENT SPECIFIED UNDER THIS SECTION.
- F. PROVIDE NECESSARY BACKING REQUIRED TO INSURE RIGID MOUNTING OF OUTLET BOXES. 3.02 WIRING METHODS:
 - A. NO "ROMEX" OR ARMORED CABLE WIRING IS PERMITTED ALL ELECTRICAL WIRING MUST BE IN CONDUIT.
 - B. CONDUIT SHALL BE RIGID STEEL, IMC, EMT, METAL CLAD (MC) CABLE, OR SCHEDULE 40 PVC AS FOLLOWS:
 - ABOVE GROUND: USE RIGID STEEL, IMC, MC, OR EMT. MC CABLE SHALL BE INSTALLED ONLY WHERE PERMITTED BY CODE AND THE AUTHORITY HAVING JURISDICTION.
 - a. WET LOCATIONS: RIGID STEEL OR IMC ONLY. b. LOCATIONS SUBJECT TO MECHANICAL DEFORMATION: RIGID
 - STEEL OR IMC ONLY. c. DRY INTERIOR LOCATIONS FOR BRANCH CIRCUIT WIRING AND
 - NOT SUBJECT TO MECHANICAL DEFORMATION: EMT, IMC, MC, OR RIGID STEEL CONDUIT. d. DRY INTERIOR LOCATIONS FOR OTHER THAN BRANCH CIRCUIT
 - WIRING AND NOT SUBJECT TO MECHANICAL DEFORMATION: EMT, IMC, OR RIGID STEEL CONDUIT.
 - 2. UNDERGROUND: USE RIGID STEEL OR SCHEDULE 40 PVC WITH RIGID STEEL ELLS AND RIGID STEEL CONDUIT/FITTINGS WHEN EMERGING FROM GRADE, UNLESS NOTED OTHERWISE.
- C. USE FLEXIBLE CONDUITS IN THE FOLLOWING APPLICATIONS (MAX 6-FT):
- 1. RECESSED LIGHTING FIXTURES.
- 2. MOTOR CONNECTIONS.
- 3. AT WET LOCATIONS, FLEXIBLE CONDUIT SHALL BE LIQUIDTIGHT TYPE.
- D. LIGHT FIXTURES INSTALLED IN GYP BOARD CEILINGS MAY BE WIRED FROM FIXTURE TO FIXTURE USING MC CABLE UNLESS PROHIBITED BY THE AHJ. VERIFY THAT LIGHT FIXTURES ARE PROVIDED WITH JUNCTION BOXES APPROVED FOR THIS PURPOSE. MC TYPE CABLE TO MEET ANSI/NFPA 70 REQUIREMENTS. CABLE ARMOR TO BE INTERLOCKED STEEL METAL TAPE. MC TYPE CABLE MANUFACTURED BY AFC CABLE SYSTEMS, PIRELLI CABLE CORPORATION AND SOUTHWIRE COMPANY ARE APPROVED. MC CABLE SHALL NOT BE USED TO WIRE LIGHT FIXTURES INSTALLED IN EXPOSED CEILINGS FROM FIXTURE TO FIXTURE (6-FT LIGHT FIXTURE WHIPS ARE PERMITTED).
- E. ALL WIRING SHALL BE IN CONDUIT.
- F. ALL CONDUIT AND MC CABLE SHALL BE SUPPORTED AS REQUIRED BY THE NEC.
- 3.03 INSTALLATION OF CONDUITS:
- A. GENERAL:
 - 1. RUN ALL CONDUIT CONCEALED, IF POSSIBLE, UNLESS NOTED OTHERWISE ON THE PLANS.

- 2.10 MISCELLANEOUS MATERIALS:
 - SAFETY SWITCHES: HEAVY DUTY TYPE, 600V, HORSEPOWER RATED FOR
- 2.11 LIGHTING:

	ELECTRICAL SPE
	2. RUN ALL CONDUIT F LINES OF COLUMNS
	3. CONDUITS ABOVE C CEILING TILES, LIGHT
	4. CONDUITS SHALL DESIGNATED AS FU RISERS, WHEN ALLO
	5. INSTALL NO MORE BENDS IN ANY C CONDUITS, FOR WHI
	J-BOXES AS NEEDER B. CONDUIT SUPPORTS:
	1. SUPPORT CONDUITS STEEL CONDUIT SU NATIONAL ELECTRIC NOT ACCEPTABLE FO FOR ALL CONDUITS FOR ALL MULTIPLE TO MECHANICAL DUC
	2. AVOID ATTACHING C NECESSARY TO SU PROVIDE A LENGTH ATTACHED TO AIR M BUILDING TO MINII BUILDING STRUCTURE
	3. AN NFPA 251 TEST USED TO SUPPORT I THE AHJ.
	C. CONDUIT PENETRATION:
	1. PENETRATING FIRE CONDUIT IN CONE PENETRATION WITH F
	OR EXTERIOR WALL NECESSARY, BUILD PRESERVED. CONDUL ROOF FLASHING WITH
	3. PENETRATING NON-F NOT REQUIRED. PEI PRIOR TO PAINTING. APPLIED MUST BE ESCUTCHEONS, ONE
	4. PENETRATING SUSPI POSSIBLE TO PERMI ^T FOR EACH CONDUIT
3.04	CONNECTIONS TO EQUIPMENT:
	1. FURNISH AND INST/ WIRING TO ALL E REQUIRED.
	2. FURNISH AND INSTA OF AND ADJACENT APPLIANCE UNLESS AND WITHIN SIGHT O OR SWITCH. VERIFY PRIOR TO INSTALLAT!
	3. INSTALL ALL ROUGH SHOP DRAWINGS TO EQUIPMENT.
	4. FURNISH AND INST MOTORS NOT INTEGR
	5. FURNISH 120 VOLT SWITCH REQUIRING A
3.05	INSTALLATION OF CONDUCTORS
	CONSTRUCTION WORK W COMPLETED.
	TO TERMINAL. SPLICES IN HAND HOLES, PULL BO CIRCUIT SPLICES IN COLOR-CODED TAILS LEF
	C. SPLICES IN WIRES AND AND METHODS DESCRIBED
	D. MAKE ALL GROUND, NEU AND WIRING DEVICE TERM
	E. PROVIDE BRADY WIRE MA BOX EXCEEDS FOUR.
	F. MEGGER AND RECORD INSULATED CONDUCTORS MEGGER FOR ONE MINUT SOURCE AND LOAD. MANUFACTURER'S RESIST/ ENGINEER.
3.06	WIRE COLOR CODE:
	Color Coding Shall be CC Phase Conductors #8 and Cable Assemblies May Hav Color Code Wires as foll(
	VOLTAGE PHASE A 120/240V RED
3.07	IDENTIFICATION:
	A. PROVIDE NAMEPLATES F(NAMEPLATES SHALL BE S OR PHOTO-ETCHED ME PANEL DESIGNATION, VC LETTERS

CAL SPECIFICATIONS:

- CONDUIT PARALLEL TO OR AT RIGHT ANGLES TO CENTER OF COLUMNS AND BEAMS.
- ITS ABOVE CEILINGS SHALL NOT OBSTRUCT REMOVAL OF G TILES, LIGHTING FIXTURES, AIR DIFFUSERS, ETC.
- ITS SHALL NOT CROSS ANY DUCT SHAFT OR AREA ATED AS FUTURE DUCT SHAFT HORIZONTALLY. CONDUIT WHEN ALLOWED IN DUCT SHAFT, MUST BE COORDINATED 3.08 GROUNDING: ECHANICAL WORK TO AVOID ANY CONFLICT.
- NO MORE THAN THE EQUIVALENT OF THREE 90-DEGREE IN ANY CONDUIT RUN EXCEPT FOR COMMUNICATIONS ITS, FOR WHICH ONLY TWO BENDS ARE ALLOWED. PROVIDE ES AS NEEDED WHERE MORE BENDS ARE NEEDED. JPPORTS:
- RT CONDUITS WITH UNDERWRITER'S LABORATORIES LISTED CONDUIT SUPPORTS AT INTERVALS REQUIRED BY THE AL ELECTRIC CODE. WIRES OR SHEET METAL STRIPS ARE CCEPTABLE FOR CONDUIT SUPPORT. USE CONDUIT HANGERS _ CONDUITS NOT DIRECTLY FASTENED TO STRUCTURE AND MULTIPLE CONDUIT RUNS. DO NOT ATTACH ANY CONDUIT CHANICAL DUCTS OR PIPES.
- ATTACHING CONDUIT TO AIR MOVING SYSTEM. WHEN IT IS SARY TO SUPPORT CONDUIT FROM AIR MOVING SYSTEM. A LENGTH OF FLEXIBLE CONDUIT BETWEEN PORTION IED TO AIR MOVING SYSTEM AND PORTION ATTACHED TO THE NG TO MINIMIZE TRANSMISSION OF VIBRATION TO THE NG STRUCTURE.
- PA 251 TESTED AND APPROVED CEILING SYSTEM CAN BE TO SUPPORT BRANCH CIRCUIT CABLING WHERE APPROVED BY HJ.
- ENETRATION:
- RATING FIRE RATED FLOOR, CEILING OR WALL: INSTALL IN CONDUIT SLEEVE OR FRAMED OPENING. SEAL RATION WITH FIRE RETARDANT SEALANT.
- RATING ROOF OR EXTERIOR WALL: AVOID PENETRATING ROOF TERIOR WALL WHERE POSSIBLE. WHERE PENETRATIONS ARE SARY, BUILDING WEATHERPROOF INTEGRITY MUST BE RVED. CONDUITS PENETRATING THROUGH ROOF SHALL HAVE FLASHING WITH CAULK TYPE COUNTERFLASHING SLEEVE.
- RATING NON-FIRE RATED DRY WALL: CONDUIT SLEEVES ARE REQUIRED. PENETRATIONS MUST BE SEALED WITH PLASTER TO PAINTING. PENETRATIONS MADE AFTER WALL FINISH IS MUST BE AS SMALL AS POSSIBLE AND PROVIDED WITH CHEONS, ONE ON EACH SIDE OF WALL.
- RATING SUSPENDED CEILING: CUT HOLE AS SMALL AS LE TO PERMIT CONDUIT PENETRATION. PROVIDE ESCUTCHEON ACH CONDUIT BELOW CEILING.
- AND INSTALL REQUIRED POWER SUPPLY CONDUIT AND TO ALL EQUIPMENT. SEE BELOW FOR OTHER WIRING
- AND INSTALL A DISCONNECT SWITCH IMMEDIATELY AHEAD D ADJACENT TO EACH MAGNETIC MOTOR STARTER OR NCE UNLESS THE MOTOR APPLIANCE IS LOCATED ADJACENT ITHIN SIGHT OF THE SERVING PANELBOARD, CIRCUIT BREAKER /ITCH. VERIFY ALL EQUIPMENT NAMEPLATE CURRENT RATINGS TO INSTALLATION.
- ALL ROUGH-IN WORK FOR EQUIPMENT FROM APPROVED DRAWINGS TO SUIT THE SPECIFIC REQUIREMENTS OF THE (FNT
- AND INSTALL MANUAL THERMAL PROTECTION FOR ALL NOT INTEGRALLY EQUIPPED WITH THERMAL PROTECTION.
- 120 VOLT POWER TO EACH CONTROL PANEL AND TIME REQUIRING A SOURCE OF POWER TO OPERATE. CONDUCTORS:
- IRE INTO ANY PORTION OF THE CONDUIT SYSTEM UNTIL ALL ION WORK WHICH MIGHT DAMAGE THE WIRE HAS BEEN
- WIRE CONTINUOUS FROM OUTLET TO OUTLET OR TERMINAL .. SPLICES IN CABLES WHEN REQUIRED SHALL BE MADE IN ES, PULL BOXES OR JUNCTION BOXES. MAKE BRANCH PLICES IN OUTLET BOXES WITH 8" OF CORRECTLY DED TAILS LEFT IN THE BOX.
- WIRES AND CABLES SHALL BE MADE UTILIZING MATERIALS DS DESCRIBED HEREIN BEFORE.
- GROUND, NEUTRAL AND LINE CONNECTIONS TO RECEPTACLE DEVICE TERMINALS AS RECOMMENDED BY MANUFACTURER.
- RADY WIRE MARKERS WHERE NUMBER OF CONDUCTORS IN A DS FOUR.
- ND RECORD INSULATING RESISTANCE OF ALL 600 VOLT CONDUCTORS SIZE #4/0 AND LARGER USING 500 VOLT R ONE MINUTE. MAKE TESTS WITH CIRCUITS ISOLATED FROM ND LOAD. VERIFY THAT RESULTS ARE WITHIN THE RER'S RESISTANCE SPECIFICATIONS. SUBMIT ALL RESULTS TO
- SHALL BE CONTINUOUS FOR WIRE #12 THROUGH #10 AWG. FORS #8 AND LARGER AND CONDUCTORS OF ANY SIZE IN IES MAY HAVE COLORED PHASING TAPE AT TERMINATIONS. RES AS FOLLOWS:
- PHASE A PHASE C NEUTRAL GND RED BLUE WHITE GREEN
- AMEPLATES FOR PANELBOARDS, AND ALL SIMILAR DEVICES. S SHALL BE SCREWED (NO ADHESIVES) ENGRAVED BAKELITE -ETCHED METALLIC NAMEPLATE IDENTIFICATION SHOWING SIGNATION, VOLTAGE AND PHASE IN MINIMUM 1/4" HIGH

- B. EACH PANELBOARD SHALL CONTAIN A METAL-FRAMED CIRCUIT DIRECTORY INSIDE COVER, WITH PLASTIC PROTECTOR.
- C. PANELBOARD SCHEDULE: AFTER COMPLETION OF WORK, PROVIDE TYPEWRITTEN UPDATED PANELBOARD SCHEDULES FOR ALL PANELBOARDS. INCLUDE ROOM/EQUIPMENT DESIGNATIONS TO IDENTIFY ROOM/EQUIPMENT SERVED BY CIRCUIT.
- A. ELECTRICAL SERVICE AND ALTERNATING CURRENT SYSTEMS SHALL BE GROUNDED IN ACCORDANCE WITH NEC ARTICLE 250.3 TO 250.30, INCLUSIVE.
- B. GROUND NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL ENCLOSURES, FRAMES, OR CONDUCTOR RACEWAYS TO PROVIDE A LOW IMPEDANCE PATH FOR LINE-TO-GROUND FAULT CURRENT AND TO BOND ALL NON-CURRENT CARRYING METAL PARTS TOGETHER. PROVIDE GROUND CONDUCTOR IN EACH RACEWAY SYSTEM, WHETHER GROUND WIRE IS SPECIFICALLY LISTED OR NOT. EQUIPMENT GROUND CONDUCTOR SHALL BE ELECTRICALLY AND MECHANICALLY CONTINUOUS FROM THE ELECTRICAL CIRCUIT SOURCE TO THE EQUIPMENT TO BE GROUNDED. SIZE GROUND CONDUCTORS PER NEC ARTICLE 250.122 UNLESS LARGER CONDUCTORS ARE SHOWN ON DRAWINGS.
- C. GROUNDING CONDUCTORS SHALL BE IDENTIFIED WITH GREEN INSULATION. WHERE GREEN INSULATION IS NOT AVAILABLE ON LARGER SIZES, BLACK INSULATION SHALL BE USED AND SUITABLY IDENTIFIED WITH GREEN TAPE AT EACH JUNCTION BOX OR DEVICE ENCLOSURE.

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ELECTRICAL SPECIFICATIONS

