

Humana Memphis, TN MarketPoint

Memphis, TN

CD Progress Set 03.11.2014

ARCHITECT

211 N Broadway Suite 700 St. Louis, MO 63102 USA t +1 314 421 2000 f +1 314 421 6073

MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION

Kerr-Greulich Engineers, Inc. 1534 Ormsby Station Ct. Louisville KY 40224 502.426.9457

PROJECT MANAGER DTZ

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FACILITY MANAGER

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Humana

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6515 Poplar Avenue Suites 107&108 Memphis, TN 38119

Prepared for Humana

Contract No: 13.01656.00



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KERR-GREULICH

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MEP Engineer

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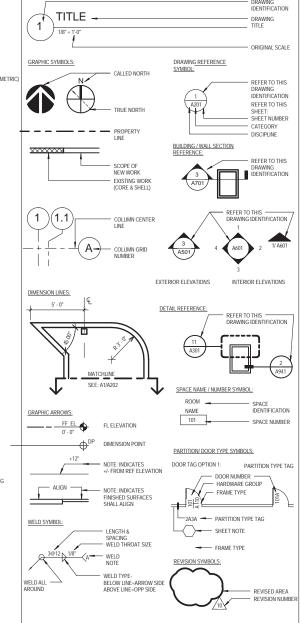
No.	Iss	ue Descriptio	n	YYYY-MM-DD
1	CD	PROGRESS	SET	2014.03.11
No.	Re	vision Descrip	otion	YYYY-MM-DD
Drawn	by	Author	Reviewed by	Checker
Projec	t No	13.01656	.00	

COVER SHEET

ARCHITECTURAL / INTERIORS ABBREVIATIONS

AB	- ANCHOR BOLT	(E)	- EXISTING	ID	- INSIDE DIAMETER / DIMENSION	OA	- OUTSIDE AIR	S	- SOUTH
AC	- AIR CONDITIONING	E	- EAST	IN	- INCH	OC	- ON CENTER	SA	- SUPPLY AIR
ACC	- ACCESSIBLE - ACOUSTICAL	EA EB	- EACH - EXPANSION BOLT (EXPANSION ANCHOR)	INCAND INCL	- INCANDESCENT - INCLUDED / INCLUDING	OCEW	- ON CENTER EACH WAY	SAN SC	- SANITARY - SOLID CORE
ACOUS AD	- AREA DRAIN	EIFS	 EXTERIOR INSULATION AND FINISH SYSTEM 	INFO	- INFORMATION	OD OFCI	OUTSIDE DIAMETER/DIMENSION OWNER FURNISHED, CONTR INSTALLED	SCHED	- SCHEDULE
ADD	- ADDITIONAL	EFS	- EXTERIOR FINISH SYSTEM	INSUL	- INSULATION	OFOI	- OWNER FURNISHED, OWNER INSTALLED	SD	- STORM DRAIN / SOAP DISPENSER
ADJ	- ADJUSTABLE - ABOVE FINISH FLOOR	EJ FI	- EXPANSION JOINT - ELEVATION	INT INTERM	- INTERIOR - INTERMEDIATE	OFF	- OFFICE - OVER HEAD	SECT SF	- SECTION - SQUARE FEET/FOOT
AFF AGGR	- AGGREGATE	ELEC	- ELECTRICAL	INV	- INVERT	OH OPH	- OVER HEAD - OPPOSITE HAND	SH	- SQUARE FEET/FOOT - SPRINKLER HEAD
ALT	- ALTERNATE	ELEV	- ELEVATOR	IPS	- INTERNATIONAL PIPE STANDARD	OPNG	- OPENING	SHT	- SHEET
ALUM	- ALUMINUM - ANCHOR	EMERG ENCL	- EMERGENCY - ENCLOSURE	IRMA	- INVERTED ROOF MEMBRANE ASSEMBLY	OPP	- OPPOSITE	SHR SIM	- SHOWER - SIMILAR
ANCH ANNO	- ANODIZED	EP	- ELECTRICAL PANEL BOARD			OPPHD ORD	- OPPOSITE HAND - OVERFLOW ROOF DRAIN	SM	- SHEET METAL OR SQUARE METER (METRIC)
APC	- ACOUSTICAL PANEL CEILING	EQ	- EQUAL			OUTS	- OUTSIDE	SMS	- SHEET METAL SCREW
APPD	- APPROVED - APPROXIMATE	EQUIP ESCAL	- EQUIPMENT - ESCALATOR	JAN	- JANITOR	OVHD	- OVERHEAD	SND SP	- SANITARY NAPKIN DISPENSER - STANDPIPF
APPROX ARCH	- APPROXIMATE - ARCHITECTURAL - ACOUSTICAL TILE CEILING	EWC	- ELECTRICAL WATER COOLER	JAN	- JANITOR - JANITOR'S CLOSET			SPEC	- STANDPIPE - SPECIFICATION
ATC	- ACOUSTICAL TILE CEILING	EXH	- EXHAUST	JC JST	- JOIST			SPR	- SPRINKLER
AUTO	- AUTOMATIC - AUDIO VISUAL	EXP FXIST	- EXPANSION - EXISTING	JT	- JOINT			SPKR SQ	- SPEAKER - SOUARE
AV	- AUDIO VISUAL	EXT	- EXTERIOR			P PAV	- PAINT - PAVING	SSE	- STRUCTURE SLAB FLEVATION
						PARTN	- PARTITION	SST	- STAINLESS STEEL
				K	- KIP (1000 LB)	PATD	- PAPER TOWEL DISPENSER	SSK STA	- SERVICE SINK - STATION
BD	- BOARD			KPL	- KICK PLATE	PBD PC	- PARTICLEBOARD - PRECAST CONCRETE	STS	- STATION - SELF TAP SHEET METAL SCREW
BEJ	- BRICK EXPANSION JOINT	FA	- FIRE ALARM	KG	- KILOGRAM	PDF	- POWDER DRIVEN FASTENER	STD	- STANDARD
BLDG	- BUILDING - BLOCK	FB FC	- FACE BRICK - FACE	KIT KO	- KITCHEN - KNOCKOUT	PERF	- PERFORATED	STL STLJST	- STEEL - STEEL JOIST
BLK BM	- BEAM	FD	- FLOOR DRAIN	KU	- NIOCKOUT	PERIM PERP	- PERIMETER - PERPENDICULAR	STOR	- STEEL JOIST - STORAGE
BOT	- BOTTOM	FDC	- FIRE DEPARTMENT CONNECTION			PF	- POINT OF FROG	STRG	- STRINGER
BRK	- BRICK - BASEMENT	FDN FE	- FOUNDATION - FIRE EXTINGUISHER			PL PLAM	- PLATE - PLASTIC LAMINATE	STRL	- STRUCTURAL BCATTRUCTURAL
BSMT RT	- BOLT	FEC	- FIRE EXTINGUISHER CABINET - FURNITURE, FINISHES & EQUIPMENT	L	- LONG OR LITER (METRIC DOCS)	PLAM PLAS	- PLASTIC LAMINATE - PLASTER	SUSP	- SUBCATEGORY
BUR	- BUILT-UP ROOFING	FF&E	 FURNITURE, FINISHES & EQUIPMENT 	LAB	- LABORATORY	PLBG	- PLUMBING	SYMM	- SUSPENDED
		FFEL FH	- FINISH FLOOR ELEVATION - FLAT HEAD	LDG LAM	- LANDING - LAMINATE / LAMINATION	PLF	- POUNDS PER LINEAR FOOT	SYS	- SYMMETRICAL - SYSTEM
		FHC.	- FIRE HOSE CABINET	LAV	- LAVATORY	PLYWD PNL	- PLYWOOD - PANEL		- STSIEW
		FIN	- FINISH	LB	- POUND	POL	- POLISHED		
CAB	- CABINET	FIXT FL	- FIXTURE - FLOOR	LF LKR	- LINEAR FOOT - LOCKER	PR	- PAIR	T&G	- TONGUE AND GROOVE
CAT CB	- CATEGORY - CATCH BASIN	FLASH	- FLASHING	LIN	- LINOLEUM	PREFAB PROJ	- PREFABRICATED - PRO JECT	T	- TREAD / THERMOSTAT
CBD	- CHALK BOARD	FLUOR	- FLUORESCENT	LLH	- LONG LEG HORIZONTAL	PSF	- POUNDS PER SQUARE FOOT	TB	- TREAD / THERMOSTAT - TOWEL BAR
CBU	- CEMENTATIONS BACKER UNIT - CEMENT	FO FP	- FACE OF - FIRE PROTECTION	LLV	- LONG LEG VERTICAL - LINF	PT	- POINT	TC TCONC	- TOP OF CURB - TOP OF CONCRETE
CEM CER	- CERAMIC	FPG	- FIREPROOFING	IT	- LIGHT	PTD PTN	- PAINTED - PARTITION	TEL	- TELEPHONE OR TELECOM
CG	- CORNER GUARD	FR	- FRAME	LPT	- LOW POINT	PTR	- PAPER TOWEL RECEPTACLE	TEMP	- TEMPERATURE
CH	- CHILLER - CHANNEL	FT FRTW	- FEET - FIRE RETARDANT TREATED WOOD					TER TGB	- TERRAZZO - TOGGLE BOLT
CHAN CI	- CAST IRON	FTG	- FOOTING					THK	- THICKNESS
CIP	- CAST-IN-PLACE	FURN	- FURNITURE	M	- METER, METRIC	QT	- QUARRY TILE	THRES	- THRESHOLD
CJ	- CONTROL JOINT / CONSTRUCTION JOINT - CENTER LINE	FURR FWC	- FURRING - FABRIC WALL COVERING	MACH MAINT	- MACHINE - MAINTENANCE	QTY	- QUANTITY	THRU TKBD	- THROUGH - TACKBOARD
CL CLG	- CEILING	FWP	- FABRIC WRAPPED PANEL	MAS	- MASONRY			TMPD	- TEMPERED
CLR	- CLEAR			MATL	- MATERIAL			TO	- TOP OF (SEE OTHER WORD)
CMU	- CONCRETE MASONRY UNIT - COUNTER			MAX MB	- MAXIMUM - MACHINE BOLT		05.00155	TOS TOSTL	- TOP OF SLAB, TOP OF STRUCTURE - TOP OF STEEL
CNTR	- CLEANOUT			MBL	- MARRI F	(R) R	- RELOCATED - RADIUS OR RISER (PIPING)	TP	- TOP OF STEEL - TOP OF PAVEMENT
COL	- COLUMN	G	- GROUND	MDF	- MEDIUM DENSITY FIBERBOARD	RA	- RETURN AIR	TPD	- TOILET PAPER DISPENSER
COMPART	- COMPARTMENT - CONCRETE	GA GALV	- GAUGE / GAGE - GAI VANIZED	MEP MDO	MECHANICAL, ELECTRICAL, PLUMBING MEDIUM DENSITY OVERLAY PLYWOOD	RAD RB	- RADIUS - RESILIENT BASE	TRACT TV	- TRACTION - TELEVISION
CONC	- CONCRETE - CONDITION	GB	- GRAB BAR	MECH	- MECHANICAL	RB RCP	- RESILIENT BASE - REFLECTED CEILING PLAN	TW	- TOP OF WALL
CONN	- CONNECTION	GC	- GENERAL CONTRACT(OR) - GLASS FIBER REINFORCED CONCRETE	MEMB	- MEMBRANE - METAI	RD	- ROOF DRAIN	TYP	- TYPICAL
CONTR	- CONTINUOUS - CONTRACTOR	GRC GRG	- GLASS FIBER REINFORCED CONCRETE - GLASS FIBER REINFORCED GYPSUM	MET ME77	- MEZZANINE	RECOM RECPT	- RECOMMENDED - RECEPTACLE		
COORD	- COORDINATE	GL	- GLASS	MFR	- MANUFACTURER	REC	- RECEPTAGLE - RECESSED		
CORR	- CORRIDOR - CERAMIC TILE / COOLING TOWER	GR	- GRADE - GROUND	MH	- MANHOLE - MINIMUM	REF	- REFERENCE	LINFIN	LINFINISHED
CT CTR	- CERAMIC TILE / COOLING TOWER - CENTER	GRD GYPBD	- GROUND - GYPSUM WALLBOARD	MISC	- MINIMUM - MISCELLANEOUS	REFL REFR	- REFLECTED / REFLECTIVE / REFLECT - REFRIGERATOR	UNFIN	- UNFINISHED - UNLESS OTHERWISE NOTED
CTSK	- COUNTER SUNK	011 00		MM	- MILLIMETER	REG	- REGISTER	UR	- URINAL
CW	- COLD WATER (PIPING)			MO MS	- MASONRY OPENING - MACHINE SCREW	REINF	- REINFORCED / REINFORCING		
				MTD	- MOUNTED	REL REM	- RELOCATE - REMOVABLE		
		Н	- HIGH / HEIGHT	MTG	- MOUNTING	REQ	- REQUIRE / REQUIRED		
_	DEED DEDTH	HB HC	- HOSE BIBB - HOLLOW CORE	MTL MULI	- METAL - MULLION	RESIL	- RESILIENT	VAC	VENTILATION AND AIR CONDITIONING VINYL COMPOSITION TILE
D DA	- DEEP, DEPTH - DISABLED	HCP	- HOLLOW CORE - HANDICAPPED	MULL	- MULLION	REV RM	- REVISION / REVISED - ROOM	VCT VERT	- VINYL COMPOSITION TILE - VERTICAL
DBL	- DOUBLE	HDW	- HARDWARE			RO	- ROUGH OPENING	VEST	- VESTIBULE
DEG	- DEGREE - DEMOLITION	HDWD	- HARDWOOD - HEAT STRENGTHENED (GLASS)			RTD	- RATED	VIF VR	- VERIFY IN FIELD - VAPOR RETARDER
DEMO DEPT	- DEMOLITION - DEPARTMENT	HS HM	- HEAT STRENGTHENED (GLASS) - HOLLOW METAL (STEEL FRAME)	N	- NORTH, OR NEWTON	RTG RWL	- RATING - RAIN WATER LEADER	VK	- VAPOR RETARDER - VINYL TILE
DET	- DETAIL	HNDRL	. HANDRAII	NA	- NOT APPLICABLE	KWL	- IONIN WATER ELABER	VWC	- VINYL WALL COVERING
DF	- DRINKING FOUNTAIN	HO HODIZ	- HOLD-OPEN - HORIZONTAI	NC	- NOISE CRITERIA - NOT IN CONTRACT				
DIA DIFF	- DIAMETER - DIFFUSER	HORIZ HPT	- HIGH POINT	NIC NO	- NUMBER				
DIM	- DIMENSION	HRC	- HOSE REEL CABINET	NOM	- NOMINAL				
DIS	- DISABLED - DISPENSER	HR HSS	- HOUR - HOLLOW STRUCTURAL SECTION	NPS NTS	- NOMINAL PIPE SIZE - NOT TO SCALE			W/	- WITH - WIDE, WIDTH/WEST, WIDEFLANGE
DISP DMPF	- DISPENSER - DAMP PROOFING	HT	- HEIGHT	NIS	-NOT TO SCALE			WC WC	- WATER CLOSET
DMT	- DEMOUNTABLE	HVAC	- HEATING, VENTILATING, AIR CONDITIONING					WD	- WOOD
DN	- DOWN - DOOR OPENING	HW HYDR	- HOT WATER - HYDRAULIC					WDS WDW	- WOOD SCREW - WINDOW
DO DP	- DIMENSION POINT	III DR						W/O	- WITHOUT
DPTN	- DEMOUNTABLE PARTITION							WP	- WATERPROOFING
DR DRN	- DOOR - DRAIN							WPM WPT	- WATERPROOF MEMBRANE - WORK POINT
DRN	- DOWNSPOUT							WR	- WATER RESISTANT/REPELLANT
DW	- DISHWASHER							WS	- WEATHERSTRIPPING
DWG DWR	- DRAWING - DRAWER							WSCT WT	- WAINSCOT - WEIGHT

DRAWING ANNOTATIONS



DRAWING LIST

A000	COVER SHEET
A001	ABBREV, ANNO, GEN'L NOTES, DRWG LIST
A002	GENERAL NOTES, RESPONSIBILITY MATRIX
A003	OUTLINE SPEC.
A004	OUTLINE SPEC.
A005	OUTLINE SPEC.
A006	LIFE SAFETY PLAN
A007	ACCESSIBLITY DIAGRAMS
A008	ACCESSIBILITY DIAGRAMS
A009	ACCESSIBILITY DIAGRAMS
2 DEMOL	ITION
D201	LEVEL 1 DEMOLITION PLAN
3 ARCHI	FECTURAL
A201	LEVEL 1 FLOOR PLAN
A211	LEVEL 1 POWER & DATA PLAN
A221	LEVEL 1 FINISH PLAN
A231	LEVEL 1 FURNITURE PLAN
A241	LEVEL 1 BRANDING PLAN
A301	LEVEL 1 REFLECTED CEILING PLAN
A601	INTERIOR ELEVATIONS
A901	DOOR, FRAME TYPES, SCHED
A902	DOOR & FRAME DETAILS
A910	PARTITION TYPES & GENERAL NOTES
A911	PARTITION FRAMING DETAILS
A960	MILLWORK DETAILS
M301	MECHANICAL SPECIFICATIONS
4 MECHA	NICAL
M001	MECHANICAL LEGEND AND SCHEDULES
M100	FLOOR PLAN - MECHANICAL DEMOLITION
M101	FLOOR PLAN - MECHANICAL
M201	MECHANICAL DETAILS
M302	MECHANICAL SPECIFICATIONS
5 ELECT	RICAL
E001	ELECTRICAL SYMBOLS, LIGHT FIXTURE SCHEDULE & NOTES
E100	FLOOR PLAN - ELECTRICAL DEMOLITION
E101	FLOOR PLAN - LIGHTING
E102	FLOOR PLAN - POWER & SYSTEMS
E201	ELECTRICAL SCHEDULES AND ONE-LINE
E301	ELECTRICAL SPECIFICATIONS
E302	ELECTRICAL SPECIFICATIONS
6 PLUMB	ING & FIRE PROTECTION
PFP001	PLUMBING & FIRE PROTECTION NOTES & DETAILS
PFP002	FIRE PROTECTION NOTES, DETAILS, & RISERS
PFP101	FLOOR PLAN - PLUMBING & FIRE PROTECTION DEMOLITION
PFP102	FLOOR PLAN - PLUMBING & FIRE PROTECTION
PFP201	GENERAL MECHANCIAL SPECIFICATIONS
	PLUMBING SPECIFICATIONS
	FIRE PROTECTION SPECIFICATIONS
Grand tota	

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No.	Issue Description	ı	YYYY-MM-DI
1	CD PROGRESS	SET	2014.03.1
No.	Revision Descrip	tion	YYYY-MM-DI
Drawn b	y Author	Reviewed by	Checker
Project N	lo 13.01656	00	

LOCATION MAP



APPLICABLE CODES:

PROJECT DESCRIPTION	
A. CONSTRUCTION TYPE:	TYPE 2B (ASSUMED)
B. OCCUPANCY CLASSIFICATION:	В
C. NO. OF FLOORS:	1
F. AUTOMATIC SPRINKLER:	YES

BUILDING SUMMARY

ROJECT ADDRESS:	
15 Poplar Ave. Suite 107&108	
emphis, TN 38119	

APPLICABLE CODES:

1. 2009 INTERNATIONAL BUILDING CODE
2. 2012 INTERNATIONAL EXISTING BUILDING CODE
3. 2006 INTERNATIONAL FIRE CODE
4. 2006 INTERNATIONAL FIRE CODE
5. 2009 INTERNATIONAL FILE CODE
6. 2009 INTERNATIONAL PLUMBING CODE
7. 2009 INTERNATIONAL AS CODE
7. 2009 INTERNATIONAL AS CODE
7. 2009 INTERNATIONAL ASCENDED
8. 2009 INTERNATIONAL PRICE CODE
9. ADAMG 2002/ADA

ABBREV, ANNO, GEN'L NOTES, DRWG LIST

GENERAL NOTES

A. GENERAL NOTES:

- THE CONTRACTOR SHALL PROVIDE COMPLETE PROJECT SYSTEMS AND COMPONENTS AND COMPLY WITH ALL REQUIREMENTS INDICATED ON THE PROJECT DOCUMENTS. ALL WORK TO BE COMPLETED IN MANNER TO PROVIDE OCCUPANCY PERMIT PRIOR TO LEASE COMMENCEMENT.
- 2. WORK WITHIN THE AREA BOUNDARIES INDICATED IN THE PROJECT DOCUMENTS, AND COMPLY WITH ALL APPLICABLE BUILDING CODE, REGULATION, & ORDINANCE REQUIREMENTS. OCCUPANTS ADJACENT TO THE PROJECT AREA BOUNDARIES SHALL CONTINUE UNINTERRUPTED OCCUPANCY DURING CONSTRUCTION OF THE PROJECT.
- VERIFY FIELD CONDITIONS AND COORDINATION WITH THE PROJECT DOCUMENTS PRIOR TO PROCEEDING WITH THE WORK.
- 4. COORDINATE THE WORK WITH ALL REQUIREMENTS INDICATED IN THE PROJECT DOCUMENTS.
- 5. PERFORM THE WORK AT THE PROJECT SITE DURING NORMAL BUSINESS HOURS, UNLESS OTHERWISE NOTED.
- 6. COORDINATE THE WORK WITH EQUIPMENT, FURNISHINGS, AND SYSTEMS PROVIDED BY THE OWNER.

- 1. "TYPICAL" OR "TYP" INDICATES IDENTICAL COMPLETE SYSTEM SHALL BE PROVIDED FOR EACH OCCURRENCE
- 1. "TYPICAL" OR "TYP INDICATES IDENTICAL COMPLETE SYSTEM SHALL BE PROVIDED FOR EACH OCCURRENCE OF THE CONDITION NOTED.
 2. "SIMILAR" INDICATES COMPLETE SYSTEM AND COMPONENTS SHALL BE PROVIDED COMPARABLE TO THE CHARACTERISTICS FOR THE CONDITION NOTED.
 3. AS REQUIRED! INDICATES COMPONENTS REQUIRED TO COMPLETE THE NOTED, SYSTEM AS INDICATED IN THE PROJECT DOCUMENTS, SHALL BE PROVIDED.
 4. ALIGN'R INDICATES ACCURATELY PROVIDE FINISH FACES OF MATERIALS IN STRAIGHT, TRUE, AND PLUMB RELATION TO ADJICENT IMMERIALS.

C. DIMENSIONS:

- DIMENSIONS ARE INDICATED TO THE CENTERLINE OF THE STRUCTURAL GRID, FACE OF CONCRETE WALL, NOMINAL FACE OF CAULWALL, FACE OF PARTITION AS SCHEDULED, UNLESS OTHERWISE NOTED.
 ALICAMBENT OF PARTITIONS AND PIRISHES AS SCHEDULED SHALL BE STRANGHT, TRUE & PLUMB. THE PRIORITY FOR PROJECT DIMENSIONS SHALL BE IN THE FOLLOWING ORDER.

- A. STRUCTURAL DRAWINGS
 B. LARGE SCALE DETAILS
 C. SMALL SCALE DETAILS
 D. ENLARGED VIEWS
 E. FLOOR PLANS AND ELEVATIONS
- MINIMUM DIMENSIONS FOR ACCESSIBILITY CLEARANCES AND BUILDING CODE REQUIREMENTS SHALL BE MAINTAINED.
- 4. FLOOR ELEVATIONS ARE INDICATED TO THE FACE OF THE STRUCTURAL SLAB, UNLESS OTHERWISE NOTED.
- 5. VERTICAL DIMENSIONS ARE INDICATED FROM THE FLOOR ELEVATION TO FACE OF FINISHED MATERIAL, UNLESS NOTED ABOVE FINISH FLOOR -"AFF".
- 6. CEILING HEIGHTS ARE INDICATED FROM THE FLOOR ELEVATION TO THE FACE OF SUSPENDED ACOUSTIC PANEL CEILING GRID OR FACE OF FINISH MATERIAL FOR OTHER CEILING TYPES, UON.
- DIMENSIONS SHOWN ON THE DRAWINGS SHALL INDICATE THE REQUIRED SIZE, CLEARANCE, AND DIMENSIONAL RELATIONSHIP BETWEEN PROJECT SYSTEMS AND COMPONENTS. DIMENSIONS SHALL NOT BE DETERMINED BY SCALING THE DRAWINGS.

D. DRAWING SET ORGANIZATION:

- EACH DRAWING SET SHEET IS IDENTIFIED BY THE SHEET NUMBER IN THE LOWER RIGHT HAND CORNER OF THE DRAWING TITLE BLOCK. THE SHEET TITLE PROVIDES A GENERAL DESCRIPTION OF THE CONTENTS OF THE SHEET.

 SHEET NUMBER EXAMPLE: A201
- HEE I NUMBER EXAMPLE: AZUI

 "A" INDICATES THE DISCIPLINE THAT CREATED THE DRAWING

 "2" INDICATES THE DRAWING CATEGORY CONTAINED ON THE SHEET

 "01" INDICATES THE SHEET NUMBER
- SHEET NUMBERS MAY INCLUDE SUPPLEMENTAL CHARACTERS TO PROVIDE ADDITIONAL INFORMATION, SUCH AS DRAWING CONTENT, PROJECT SECTOR OR PHASE. REFER TO THE DRAWING INDEX FOR A COMPLETE LIST OF SHEETS INCLUDED IN THE DOCUMENT SET.
- EXAMPLE: EL201A

 "EL" INDICATES THE DISCIPLINE THAT CREATED THE DRAWING AND THE DRAWING CONTENT =
- ELECTRICAL LIGHTING

 'A' NDICATES SECTOR A' OF PLAN SHEET "201". REFER TO THE PROJECT KEY PLAN OR COMPOSITE PLAN INDICATING THE RELATIONSHIP OF THE SECTORS.
- DRAWING SET INDEX INDICATES THE COMPLETE LIST OF SHEETS CONTAINED IN THE DRAWING SET, INDEXED BY DISCIPLINE, SHEET NUMBER AND SHEET TITLE. IN SEQUENTIAL ORDER, NOTE THAT ALL SEQUENTIAL SHEET NUMBERS MAY BE NOT USED IN THE DRAWING SET.
- 4. DISCIPLINE IDENTIFICATION, IN ORDER BOUND IN THE DRAWING SET. REFER TO THE DRAWING SET INDEX FOR DISCIPLINE CONTAINED IN THIS DRAWING SET:
- G GENERAL INFORMATION O EQUIPMENT
 C CIVIL F FIRE PROTECTION
 L LANDSCAPE P PLUMBING
 S STRUCTURAL M MECHANICAL
 A ARCHITECTURAL E ELECTRICAL
 I INTERIORS T TELECOMMUNICATIONS
- DRAWING CATEGORY IDENTIFICATION. REFER TO THE DRAWING SET INDEX FOR DISCIPLINES, CATEGORIES, AND SHEET NUMBERS CONTAINED IN THIS DRAWING SET:

	RESPONSIBILITY				VENDOR INFO			
ITEM DESCRIPTION	OWNER/OWN	IER PARTNER		GC .	L	L		COMMENTS
TIEW DESCRIPTION	FURNISH	INSTALL	FURNISH	INSTALL	FURNISH	INSTALL	VENDOR	COMMENTS
APPLIANCES								
REFRIGERATOR			•	• •			GENERAL ELECTRIC (GE)	GC TO PROVIDE WATER LINE & SHUT OFF FOR COFFEE MAKER
MICROWAVE			•	•			GC TO PROCURE EQUIPMENT	 GC TO PROVIDE WATER LINE FOR REFRIGERATOR WHERE SIDE X SIDE IS
ICE MACHINE			•	• •			THROUGH HUMANA PURCHASE AGREEMENT	SPECIFIED GC TO PROVIDE WATER LINE FOR ICE MACHINE WHERE SPECIFIED
COFFEE MAKER & AIRPOT	•	•						
VENDING	•	•						
ART WORK, BRANDING, SIGNAGE								
ART WORK	•	•						GC TO PROVIDE SIGNAGE REQUIRED BY CODE, INCLUDING BUT NOT LIMITED
INTERIOR SIGNAGE	•	•					VENDOR DETERMINED BY HUMANA INNOVATIONS PREFERRED PARTNERS: M3 GROUP&	RESTROOM, STAIRS, EXITS, OCCUPANCY GC TO COORDINATE WITH LL ON REQUIREMENTS FOR EXTERIOR SIGNAGE
EXTERIOR SIGNAGE	•	•					ICON	 PLACEMENT & DESIGN OF TO BE APPROVED BY HUMANA INNOVATIONS PRICE
BRANDING	•	•						TO ORDER
A/V SYSTEMS								
DISPLAYS / MONITORS	•	•						
CONTROL PANELS	•	•					VENDOR DETERMINED BY HUMANA PMO	GC TO COORDINATE WITH AV VENDOR & HUMANA PMO ON FINAL CONFIGURATIONS. ADDITIONAL POWER & DATA MAY BE REQUIRED.
VTC CAMERAS & SPEAKERS	•	•					 CONTACT: TREY PENNINGTON 502-476- 	 AV SHEETS CONTAINED IN SET ARE FOR REFERENCE ONLY ADDITIONAL
PROJECTOR & MOTORIZED SCREENS	•	•					1071 PREFERRED PARTNERS: LEVEL 3,	REQUIREMENTS MAY EXIST BASED ON FINAL CONFIGURATION. GC TO PROVIDE ADDITIONAL BLOCKING AS REQUIRED FOR ALL WALL
POLYCOMS, & AUDIO CONF	•	•					VIDEO SOLUTIONS, AVI	MOUNTED EQUIP
MISC. A/V SYSTEMS	•	•						
RESTROOM /BREAK ROOM ACCESS	RIES							
SOAP DISPENSERS			•	• •				
PAPER TOWEL DISPENSERS				•			•	HUMANA PMO TO DETRMINE IF BUILDING STANDARD ACCESSORIES ARE TO
				•				BE USED FOR EASE OF MAINTAINENCE.
ELEC. HAND DRYERS								
GRAB BARS TOILET TISSUE DISPENSER		_						
				• •			VENDOD AC ODFORTED	
SANITARY NAPKIN DISPOSAL				• •			VENDOR: AS SPECIFIED	
SANITARY NAPKIN DISPENSER			•	• •				
RESTROOM MIRROR								
HAND SANITIZER DISPENSER								
COAT HOOKS		_						
SEAT COVERS DISPENSER			•	• •				
MISC ACCESSORIES			•	• •				
ARCHITECURAL MATERIALS & FINIS								
LIGHTING	•			• •				GC TO COORDINATE WITH VENDOR TO DETERMINE FINAL QUATITIES & TAKE
PORCELAIN / CERAMIC TILE + GROUT	•			• •			ACCUSERV	OFFS GC TO COORDINATE WITH ALL PARTIES (ARCHITECT, DTZ PM, LL AND
RESILIENT TILE / VCT + ADHESIVE	•			• •			CONTACT: SPENCER MAXWELL	VENDOR) FOR FINAL SPECIFICATION OF BLINDS
CEILING TILE & GRID	•			• •			502-961-0096	
WINDOW SHADE / TREATMENTS	•			• •				
SOUND MASKING	•			•				
CARPET	•			• •			RODNEY BRITT SHAW INDUSTRIES RODNEY.BRITT@SHAWINC.COM CELL:859-338-8335	GC TO COORDINATE WITH VENDOR FOR FINAL TAKE OFFS AND PROVIDE MIN 5% ADDED STOCK OF ALL FLOORING
DOORS			•	•				
FRAMES			•	• •				
GLASS								
WALLTALKER / WALL COVERING			•	•				
TACK PANELS							GC DISCRETION	
PAINT								
WALL BASE								
MILLWORK / LAMINATE								
MISC FINISHES & MATERIALS								
MISC ITEMS				_				
FURNITURE	•	•					TARGET INTERIORS, ORI, EMPIRE	GC TO COORDINATE WITH FURNITURE VENDOR FOR FINAL LOCATIONS OF
IT / NETWORK SERVICES	•	•					HUMANA NETWORK SERVICES	FLOOR CORES PRIOR TO DRILLING GC TO COORDINATE WITH SECURITY VENDOR ON ALL ACCESS CONTROL
SECURITY	•	•					HUMANA GLOBAL SECURITY	ITEMS. ANY CHANGES PERTAINING TO EGRESS TO BE REVIEWED WITH
CRAC UNIT	•			• •			TIM GRAHAM - CLIMATE CONDITIONING - 502.267.4696	ARCHITECT PRIOR TO PROCEEDING WITH WORK. CRAC UNITS AND GENERATORS TO BE PURCHASED THROUGH CLIMATE
GENERATOR	•			• •				CONDITIONING, GC TO INCLUDE IN PRICE ALL LABOR & MATERIALS FOR INSTALLATION, COORDINATE ALL POWER REQUIREMENTS & LOCATION OF
DATA & LOW VOLTAGE CABLING	•	•						ROOF TOP UNITS PRIOR TO PROJECT KICK-OFF
	•	•						 GC TO COORDINATE CONDUIT SIZING AND POWER & DATA REQURIEMENTS OF SCHEDULED EQUIPMENT
COPIERS/POSTAGE MACHINES/MFD								
COPIERS/POSTAGE MACHINES/MFD CABLE OR SATELLITE	•	_						
	•	•						
CABLE OR SATELLITE	_	_						
CABLE OR SATELLITE OTHER FFE ITEMES NOT LISTED ABOVE BUILDING SERVICES & MISC	_	_						. CC TO COORDINATE WITH II FOR SITE ACCESS AND DIMESTED LOCATION
CABLE OR SATELLITE OTHER FFE ITEMES NOT LISTED ABOVE	•	•		•	• •			GC TO COORDINATE WITH LL FOR SITE ACCESS AND DUMPSTER LOCATION ALL SITE MODIFICATIONS REQUIRED TO BE APPROVED BY LL PRIOR TO
CABLE OR SATELLITE OTHER FFE ITEMES NOT LISTED ABOVE BUILDING SERVICES & MISC SHREDDING SERVICES	•	•	•	•	• •			
CABLE OR SATELLITE OTHER FFE ITEMES NOT LISTED ABOVE BUILDING SERVICES & MISC SHREDDING SERVICES SITE MODIFICATIONS	•	•	•					 ALL SITE MODIFICATIONS REQUIRED TO BE APPROVED BY LL PRIOR TO
CABLE OR SATELLITE OTHER FFE ITEMES NOT LISTED ABOVE BUILDING SERVICES & MISC SHREDDING SERVICES SITE MODIFICATIONS TEMPORARY ROLL-OFF DUMPSTER	•	•		•		•		 ALL SITE MODIFICATIONS REQUIRED TO BE APPROVED BY LL PRIOR TO

NOTE: NOT ALL ITEMS NOTED IN MATRIX ARE IN THE SCOPE OF THE PROJECT. GC TO VERIFY WITH PROJECT MANAGER THE FULL EXTENT AND SCOPING OF

Humana

Humana Memphis, TN MarketPoint

6515 Poplar Avenue Suites 107&108 Memphis, TN 38119

Prepared for Humana

Contract No: 13.01656.00



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No. Issue Description

1	CE	PROGRESS	SET	2014.03.11
No.	Re	vision Descri	ption	YYYY-MM-DI
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Project No 13.01656.00

GENERAL NOTES, RESPONSIBILITY MATRIX

OUTLINE SPECIFICATION

00 70 00 - CONDITIONS OF THE CONTRACT

1. THE AIA GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION (AIA DOCUMENT A201-97) AND SUPPLEMENTAL CONDITIONS ARE PROVIDED UNDER SEPARATE COVER, AND ARE INCORPORATED INTO THESE SPECIFICATIONS BY REFERENCE. WHERE ANY PART OF THE CONTRACT DOCUMENTS IS INCOLUMENTS OF THE CONTRACT, THE CONDITIONS OF THE CONTRACT, THE CONDITIONS OF THE CONTRACT, THE CONDITIONS OF THE CONTRACT SHALL GOVERN.

- A. "DAY": A DAY IS A CALENDAR DAY BEGINNING AND ENDING AT 12:00 MIDNIGHT.

 B. "ALIGN": MEANS TO INSTALL FINISHED FACES OF NEW MATERIAL FLUSH, PLUMB AND TRUE TO LINE WITH ADJACENT EXISTING CONSTRUCTION.
 C. "FURNISH": MEANS TO SUPPLY AND DELIVER TO PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPPERATIONS.
- -PERTIONS.
 "INSTALLS: MEANS TO UNLOAD, PROVIDE TEMPORARY STORAGE AT THE SITE, UNPACK, ASSEMBLE, ERECT, PLACE, ANCHOR, APPLY, WORK TO DIMENSION,
- D MISTALE MIRLARD CONTROLL FOR THE METERS OF THE WORK REQUIRED BY THE CONTROLL FOR MISTALE CONTROLL FOR THE WORK REQUIRED BY THE CONTROLL FOR MISTALE CONTROLL FOR THE WORK REQUIRED BY THE CONTROLL FOR THE MISTALE CONTROLL FOR THE MISTALE CONTROLL FOR THE MISTALE CONTROLL FOR THE MISTALE WORK FOR THE MISTALE WORK STEED FOR CONSTRUCTION COMPARABLE TO CONDITION FOR THE MISTALE WORK STEED FOR THE MIS
- ARCHITECT PRIOR TO PROCEEDING. G. "TYPICAL": MEANS IDENTICAL SYSTEM OR CONSTRUCTION AT SIMILAR LOCATIONS NOTED.
- 3. ALL COMMUNICATIONS FROM OWNER RELATIVE TO CHANGES IN THE WORK WILL BE THROUGH PROJECT MANAGER TO CONTRACTOR. IF CONTRACTOR CLAIMS THAT A REVISION TO CONTRACT DOCUMENTS INVOLVES EXTRA COST, CONTRACTOR SHALL SUBMIT WRITTEN NOTICE TO THE PROJECT MANAGER WITHIN 30 DAYS AFTER RECEIPT OF SUCH INSTRUCTIONS. NO CHANGE IN THE WORK SHALL BE PERFORMED WITHOUT A VALID CHANGE ORDER COVERING THE SCOPE OF THE CHANGE AND SIGNED BY THE OWNER.
- 4. BY ENTERING INTO THIS AGREEMENT WITH THE OWNER, THE CONTRACTOR REPRESENTS THAT HE HAS VISITED THE JOB SITE, FAMILIARIZED HIMSELF WITH EXISTING CONDITIONS. AND NOTED DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE OF THE CONTRACT DOCUMENTS.
- 5. SUBMIT A COMPLETE WRITTEN DESCRIPTION OF THE SCOPE OF EACH CHANGE IN THE WORK INCLUDING ROOM NUMBERS AFFECTED. PREPARE QUOTATIONS FOR PROPOSED CHANNES IN THE WORK IN A "STAR" AND SOME FORM, GIVING THE RUMENTE WORK IN A "STAR" AND STAR ALL CHANGES OF LABOR, FOR EACH OUT THE WORK IN A "STAR" AND STAR ALL CRIST THE ROLLING FOR THE STAR ALL CRIST THE WORK IN A "STAR ALL CRIST THE WORK IN A "STAR ALL CRIST THE WORK IN A STAR ALL CRIST THE WORK IN A STAR ALL CRIST THE WORK IN A STAR ALL CRIST THE WORK IN THE WORK IN A STAR ALL CRIST THE WORK IN THE WORK IN A STAR ALL CRIST THE WORK IN THE WORK IN A STAR ALL CRIST THE WORK IN THE WORK IN THE WORK IN A STAR ALL CRIST THE WORK IN THE WORK IN A STAR ALL CRIST THE WORK IN THE WORK IN A STAR ALL CRIST THE WORK IN THE WORK IN A STAR ALL CRIST THE WORK IN THE WORK IN A STAR ALL CRIST THE WORK IN THE WORK IN A WORK IN
- 5. CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONTRACT DOCUMENTS ON SITE DURING CONSTRUCTION FOR USE OF ALL TRADES. ENSURE THAT ALL SUBCONTRACTORS RECEIVE COMPLETE SETS OF CONSTRUCTION DRAWINGS. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR COORDINATION OF ALL WORK.
- 7. THE OWNER, WITHOUT INVALIDATING THE CONTRACT, MAY ORDER EXTRA WORK OR MAKE CHANCES BY ALTERING, ADDING TO, OR DEDUCTING FROM THE WORK. CONTRACT SUM AND CLAMS FOR EXTENSION OF TIME WILL BE ADJUSTED IN ACCORDANCE WITH CONTRACT CONDITIONS RELATIVE TO CHANGES IN THE WORK. CHANCES IN THE WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 8 SECTIONS OF DIVISION 1 GENERAL REQUIREMENTS, GOVERN THE EXECUTION OF THE WORK OF ALL SECTIONS OF THE SPECIFICATIONS.
- 9. GC WILL ASSIGN PM TO ATTEND WEEKLY PROJECT CALLS LASTING APPROXIMATELY ONE HOUR AND OTHER CALLS AS NEEDED.

01 10 00 - SUMMARY OF WORK

1. SCOPE OF WORK, LOCATION, AND OTHER DATA IS INDICATED BY DRAWING CONTENT.

- 2. PROVIDE WORK IN ACCORDANCE WITH REQUIREMENTS OF THE "AMERICANS WITH DISABILITIES ACT" (ADA), INCLUDING LATEST AMENDMENTS. WHERE WORK SHOWN DOES NOT COMPLY WITH THE ADA, HALT THE EFFECTED WORK AND REQUEST WRITTEN INSTRUCTIONS FROM THE ARCHITECT PRIOR TO PROCEEDING.
- 3. IDENTIFY TOILET FACILITIES WITH SIGNAGE COMPLYING WITH THE INTERNATIONAL SYMBOL OF ACCESSIBILITY (UBC CHAPTER 11).
- 4. THE PATH OF TRAVEL FROM THE DESIGNATED HANDICAP PARKING SPACES AND THE PUBLIC SIDEWALK PROVIDES A FREE AND UNOBSTRUCTED PASSAGE FOR ACCESS TO AND EGRESS FROM THE AREA OF WORK.
- 5. MOUNT LIGHT AND CONTROL SWITCHES NOT MORE THAN 4-FEET-0-INCHES ABOVE FINISHED FLOOR OR WORKING LEVEL
- 6 PROVIDE DOORS NOT LESS THAN 3-FEFT-0-INCH WIDE BY 6-FEFT -8-INCHES IN HIGH.
- 7. PROVIDE FLOORS AND LANDINGS LOCATED AT A DOORWAYS NOT MORE THAN 1/2-INCH LOWER THAN THE TOP OF THE THRESHOLD. PROVIDE THRESHOLDS WITH 1/4-INCH MAXIMUM VERTICAL EDGE AND WITH A CHANGE IN LEVEL NOT GREATER THAN 1:2.
- 8. PROVIDE A CLEAR AND LEVEL AREA ON EACH SIDE OF EXIT DOORS WITH A LENGTH OF AT LEAST 60-INCHES IN THE DIRECTION OF THE DOOR SWING AND AT LEAST 48-INCHES IN THE OPPOSITE DIRECTION, MEASURED AT RIGHT ANGLE TO DOOR IN ITS C
- 9. PROVIDE LEVER TYPE HARDWARE COMPLYING WITH ADA REQUIREMENTS.
- 10. PROVIDE BOTTOM 10-INCHES OF DOORS, EXCEPT AUTOMATIC AND SLIDING DOORS. WITH A SMOOTH, UNINTERRUPTED SURFACE.
- 11 PROVIDE EXIT DOORS TO SWING IN THE DIRECTION OF TRAVEL WHEN SERVING AN OCCUPANT LOAD OF MORE THAN 50 (LIRC CHAPTER 10)
- 12. ARRANGE EXIT DOORS TO OPERATE FROM THE INSIDE WITHOUT USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. USE ONLY SPECIAL LOCKING DEVICES OF AN APPROVED TYPE. PROVIDE EXIT DOOR CLOSERS ADJUSTED SO THAT THE DOOR TAKES AT LEAST 3 SECONDS TO CLOSE FROM AN OPEN POSITION OF 70 DEGREES TO WITHIN SINCHES OF THE LATCH.

01 31 00 - PROJECT MANAGEMENT AND COORDINATION 1 FORWARD COPIES OF EXECUTED PERMITS TO PROJECT MANAGER.

2. SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSTRUCTION STANDARD. REFER QUESTIONS REGARDING THEIR DEFINITION TO ARCHITECT FOR CLARIFICATION.

- 3. ALL DIMENSIONS ARE FROM FACE OF FINISH TO FACE OF FINISH, U.N.O.
- 4. ARRAINGE FOR EACH TRADE TO CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE RELATING TO THEIR WORK. NO ALLOWANCE SHALL BE MADE FOR MYE EXTRA EXPENSE OR EXTENSION OF TIME DUE TO CONTRACTOR'S FAILURE OR NEGLIGENCE IN COMPLETELY EXAMINING THE JOB SITE AND CONDITIONS FEREFOR
- 5. CONTACT OWNER'S REPRESENTATIVE FOR RULES FOR USE OF EXISTING FACILITIES, DELIVERIES, REMOVALS, STORAGE, TEMPORARY FACILITIES AND CONTROLS, TEMPORARY UTILITIES AND SERVICES, CONSTRUCTION OPERATIONS, WORK PERFORMED OUTSIDE REGULAR BUSINESS HOURS, AND OTHER REQUIREMENTS AFFECTING USE OF THE SITE AND PORSECUTION OF THE WORK. IF OVERTIME WORK IS REQUIRED BY ANY TRADE, APPROVAL (INCLIDING COST APPROVAL) MINUST BE OBTAINED FROM OWNER PRIOR TO EXECUTION OF THE OVERTIME WORK. THE GENERAL INTENT IS THAT ALL WORK EXCEPT FOR NOISE-GENERATING CONSTRUCTION SHALL BE PERFORMED ON REGULAR TIME.
- COORDINATE AND VERIFY SIZE, LOCATION AND CHARACTERISTICS OF OWNER SUPPLIED MATERIAL AND EQUIPMENT WITH WORK OF THIS CONTRACT TO
 PROVIDE A NEAT WORKMANLIKE INSTALLATION OF ALL WORK THAT FITS AVAILABLE SPACE, PROVIDES THE FUNCTION OR USE INTENDED, AND PROVIDES
 ADEQUATE SERVICE ACCESS.
- 7. VERIFY AND COORDINATE LOCATION OF ALL ACCESS PANELS (IN PARTITIONS, FLOORS, OR CEILINGS). CONFIRM LOCATIONS WITH ARCHITECT PRIOR TO
- 8. PROVIDE BLOCKING, BACKING, FRAMING HANGERS, OR OTHER SUPPORT FOR ALL FIXTURES, EQUIPMENT, CABINETRY, FURNISHINGS, AND OTHER HEAVY CONSTRUCTION.

- 91 32 00 CONSTRUCTION PROGRESS DOCUMENTATION
 1. SUBMIT A DETAILED CONSTRUCTION SCHEDULE TO THE OWNER INDICATING SEQUENCE AND PHASING OF WORK FROM START TO FINISH OF THE PROJECT.
- 2. SUBMITTALS SCHEDULE: TABULATE THE FOLLOWING: SCHEDULED DATE FOR FIRST SUBMITTAL: SPECIFICATION SECTION NUMBER AND TITLE; SUBMITTAL CATEGORY (ACTION OR INFORMATIONAL); NAME OF SUBCONTRACTOR: DESCRIPTION OF THE WORK COVERED; SCHEDULED DATE FOR ARCHITECTS / PROJECT MANAGER FINAL RELEASE OR APPROVAL.
- REPORTS: PROVIDE AS REQUIRED TO DOCUMENT EVENTS DAILY CONSTRUCTION REPORTS; MATERIAL LOCATION REPORTS; FIELD CONDITION REPORTS; SPECIAL REPORTS, AND WEEKLY PROGRESS PHOTOS.
- 4. GC TO PROVIDE A WEEKLY PROGRESS REPORT TO INCLUDE A TIMELINE SHOWING PERCENT COM

0133 00 - SUBMITTAL PROCEDURES
1. PROVIDE THREE (3) SETS OF SHOP DRAWINGS TO PROJECT MANAGER FOR REVIEW AND FORWARD TO ARCHITECT FOR APPROVAL AFTER THE CONTRACTOR HAS REVIEWED THEM FOR CONSTRUCTIBILITY, COORDINATION BETWEEN TRADES, AND CONFORMANCE WITH THE CONTRACT DOCUMENTS. ARCHITECT TO REVIEW AND RETURN WITHIN 5 BUSINESS DAYS UON.

- 2. SUBMIT SAMPLES OF FINISH MATERIALS TO PROJECT MANAGER FOR APPROVAL PRIOR TO INSTALLATION. THE CONTRACTOR ASSUMES RESPONSIBILITY FOR REPLACEMENT OF FINISH MATERIALS THAT HAVE NOT BEEN APPROVED.
- 3. SUBMITTALS SHALL BE NEAT AND LEGIBLE, OF UNIFORM SCALE, RESPONSIVE TO REQUIREMENTS, WITH ALL SHEETS OF SIMILAR INFORMATION OF SAME SIZE.
- 4. TRANSMIT EACH SUBMITTAL SUFFICIENTLY IN ADVANCE OF PERFORMANCE OF RELATED CONSTRUCTION ACTIVITIES TO AVOID DELAY.
- 5. PACKAGE SUBMITTALS TO COVER COMPLETE ASSEMBLIES OR SYSTEMS. PARTIAL OR INCOMPLETE SUBMITTALS WILL BE RETURNED REJECTED
- THE ARCHITECT RESERVES THE RIGHT TO WITHHOLD ACTION ON A SUBMITTAL REQUIRING COORDINATION WITH OTHER SUBMITTALS UNTIL ALL ELATED SUBMITTALS ARE RECEIVED.
- THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING DIMENSIONS AT JOB SITES FOR TOLERANCES, CLEARANCES, QUANTITIES, FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATION OF THEIR WORK WITH OTHER TRADES AND FULL

- THE CONTRACT DOCUMENTS.
 PROPOSED DEVIATIONS, FROM THE CONTRACT DOCUMENTS MUST BE CONSIDERED b. SEPARATELY FROM SUBMITTALS, USING THE "CHANGES" PROCEDURES OF THE CONTRACT C. CONDITIONS.

0140 00 - QUALITY REQUIREMENTS
1. TESTING AND INSPECTING SERVICES ARE REQUIRED TO VERIFY COMPLIANCE WITH REQUIREMENTS SPECIFIED OR INDICATED. PROVIDE SPECIAL INSPECTIONS BY INDEPENDENT TESTING AGENCY WHEN REQUIRED BY CODE AUTHORITIES. THESE SERVICES DO NOT RELIEVE CONTRACTOR OF RESPONSIBILITY FOR COMPLIANCE WITH THE CONTRACT DOCUMENT REQUIREMENTS.

014200_REFERENCES

1. ABBREVIATIONS AND ACRONYMS: WHERE ABBREVIATIONS AND ACRONYMS ARE USED IN CONTRACT DOCUMENTS, THEY SHALL MEAN THE RECOGNIZED MANE OF THE ENTITIES INDICATED IN GALE RESEARCH'S "ENCYCLOPEDIA OF ASSOCIATIONS" OR IN COLUMBIA BOOKS "NATIONAL TRADE A PROFESSIONAL ASSOCIATIONS OF THE USE "AND THE ABBREVIATION LIST INCLUDED WITH THE PROJECT DOCUMENTA."

0150 00 - TEMPORARY FACILITIES AND CONTROLS 1 PFMOVF ALL RUBBISH AND WASTE MATERIALS FROM THE PREMISES ON AT LEAST A WEEKLY BASIS, AND PROVIDE LEGAL DISPOSAL.

2. EXERCISE STRICT DUST CONTAINMENT CONTROL TO PREVENT DIRT OR DUST FROM LEAVING LIMITS OF CONSTRUCTION.

3. UNLESS OTHERWISE REQUIRED BY THE CONTRACT DOCUMENTS, WATER, GAS, LIGHTING, POWER AND TELEPHONE CONDUITS AND WIRES, SEWER LINES, STREETS, CURBS, DRIVEWAY APPROACHES, TREES, LANDSCAPING, BUILDINGS AND OTHER SUBFACE AND SUBSURFACE STRUCTURES AND LINES, OPENINGS, FINSHES, FURNISHINGS, EQUIPMENT, AND SIMILAR IMPROVEMENT ITEMS SHALL BE PROTECTED BY CONTRACTOR AND SHALL NOT BE DISTURBED, DISCONNECTED OR DAMAGED BY HIM DURING PROGRESS OF WORK. SHOULD CONTRACTOR IN PERFORMANCE OF WORK NOT BE DISTURBED, DISCONNECTED OR DAMAGED BY HIM DURING PROJECTS SO WORK. SHOULD CONTRACTOR IN PERFORMANCE OF WORK DISTURB, DISCONNECT OR DAMAGE ANY OF THE ABOVE TIERDS, REMOVE, REPAIR, OR REPLACE SUCH DISCONNECTED OR DAMAGED ITEMS WITH MATERIALS, CONSTRUCTION, AND IMPROVEMENTS MATCHING EXISTING UNDAMAGED WORK AND RESTORE TO A CONDITION AS GOOD AS OR BETTER THAN EXISTED PROTOR TO SUCH DISTURBANCE, DISCONNECTION OR DAMAGED AT ONDITIONAL EXPENSE TO OWNER. PROVIDED TEMPORARY PROTECTION OF THE WORK UNTIL REMOVAL OF TEMPORARY PROTECTION IS APPROVED BY ARCHITECT.

- A CONTRACTOR IS DESCRINGIBLE FOR THE WORK AND REPORTED OF OTHERS THAT IS IN CONTRACTOR'S CARE CLISTORY AND CONTROL AT ALL TIMES DIRING PROGRESS OF THE WORK AND LINTIL FINAL ACCEPTANCE. SECURE AND LOCK THE PREMISES WHEN WORKMEN ARE NOT PRESENT
- 5. CONTRACTOR IS RESPONSIBLE FOR LIFE SAFETY EQUIPMENT REQUIRED BY AUTHORITIES HAVING JURISDICTION.
- 6. DURING THE ENTIRE PERIOD OF DEMOLITION AND CONSTRUCTION, EXISTING EXIT SIGNS, EXIT LIGHTING, FIRE PROTECTION DEVICES AND ALARMS
- 7 MAINTAIN REQUIRED EXITS AND EXIT EGRESS ERFE FROM ALL ORSTRUCTIONS AND IMPEDIMENTS
- MAINTAIN EXISTING UTILITIES AND SERVICES TO EXISTING FACILITIES INDICATED TO REMAIN, KEEP IN SERVICE, AND PROTECT AGAINST DAMAGE DURING DEMOLITION OPERATIONS. GIVE MINIMUM 72 HOUR ADVANCE NOTICE TO OWNERS REPRESENTATIVE IF SERVICE SHUT-DOWN-DOWN IS
- 9. EXISTING WATER, PERMANENT FIRE PROTECTION, ELECTRICAL POWER SERVICE AND LIGHTING, HEATING, AIR CONDITIONING, AND TOILETS WITHIN THE VARIOUS AREAS OF WORK WILL BE MADE AVAILABLE TO CONTRACTOR WITHOUT ADDITIONAL METERING AND WITHOUT PAYMENT OF USE CHARGES FOR SERVICES. PROVIDE AND PAY FOR ALL OTHER TEMPORARY UTILITIES AND UTILITY SERVICES, TEMPORARY SUPPORT FACILITIES AND SERVICES, TEMPORARY SECURITY AND PROTECTION FACILITIES NECESSARY FOR THE PROPER AND EXPEDITIOUS EXECUTION OF THE WORK
- 10. KEEP ALL EXISTING FACILITIES AND SERVICES CLEAN AND IN GOOD WORKING CONDITION. CLEAN OR REPLACE CHANGEABLE FILTER MEDIA AND TURN OVER WITH NEW FILTER MEDIA AT COMPLETION OF WORK. CONTRACT DOCUMENTS.
- 11. COSTS FOR DELAYS BECAUSE OF NON-AVAILABILITY OF SPECIFIED ITEMS, WHEN SUCH DELAYS COULD HAVE BEEN AVOIDED BY CONTRACTOR,

01 60 00 - PRODUCT REQUIREMENTS

**MANI IFACTURERS NAME, TRADEMARK, LOGOS, ETC., SHALL NOT BE VISIBLE TO THE PUBLIC.

- 2. NO SUBSTITUTIONS OF LISTED MATERIALS OR PRODUCTS SHALL BE PERMITTED WITHOUT FIRST SUBMITTING SPECIFICATIONS, SAMPLES, AND COST
- PROJUCT FOR ARCHITECTS APPROVAL

 A USE SUBSTITUTION REQUEST FORMS AVAILABLE FROM ARCHITECT.

 A USE SUBSTITUTION REQUEST FORMS AVAILABLE FROM ARCHITECT.

 B AT THE TIME OF BIO SUBMITTAL, THE CONTRACTOR SHALL ADVISE ARCHITECT, IN WRITING OF ANY SPECIFIED MATERIAL OR EQUIPMENT THAT IS

 STHERE UNAVAILABLE OR WILL CAUSE A DELAY IN THE COMPLETION OF CONSTRUCTION.

 C. PROPOSED REVISIONS SHALL BE SUBMITTED IN THE FORM OF A WRITTEN CHANGE ORDER TO BE APPROVED AND AUTHORIZED BY ARCHITECT AND

 OWNER PRIOR TO START OF PROPOSED WORK.

 D. NO SUBSTITUTIONS ALLOWED FOR PAINT, RESILIENT BASE, PLASTIC LAMINATES, SOLID SURFACES, CARPET, VINYL COMPOSITION TILE, ACOUSTICAL

 CELLING TILE, AND UPHOLSTERY.
- 3. EXISTING MANUFACTURED ITEMS NOT BEING REMOVED SHALL BE REFURBISHED AS REQUIRED, ANY LOOSE ITEMS TIGHTENED (INCLUDING, BUT LIMITED TO, EXIT SIGNS, DOWN LIGHTS, SPEAKERS, MOLDINGS, ETC.), AND ANY MISSING PARTS REPLACED BY THE CONTRACTOR TO ACHIEVE A COMPLETE FUNCTIONING INSTALLATION WITH A NEW APPEARANCE.
- 4. COMPATIBILITY OF OPTIONS: IF CONTRACTOR IS GIVEN OPTION OF SELECTING BETWEEN TWO OR MORE PRODUCTS FOR USE ON PROJECT, PRODUCT SELECTED SHALL BE COMPATIBLE WITH PRODUCTS PREVIOUSLY SELECTED, EVEN IF PREVIOUSLY SELECTED PRODUCTS WERE ALSO OPTIONS.
- 5. RELIABILITY OF CALCULATIONS BY DATE SENSITIVE EQUIPMENT, SYSTEMS AND COMPONENTS

 A. DEFINITION: DATE SENSITIVE EQUIPMENT INCLUDES EQUIPMENT, SYSTEMS AND COMPONENTS THEREOF WHICH RELY ON OR UTILIZE COMPUTERS,
 SUBSYSTEMS, HARDWARE, SOFTWARE, FIRMWARE, INCLUDING EMBEDDED CHIP SYSTEMS OR COMPONENTS, WHICH PROCESS, SEQUENCE, CALCULATE
 UTILIZE, OR IN ANY FASHION ARE AFFECTED IN FUNCTION OR OPERATION BY DATE RELATED OR TIME AND TIME RELATED DATA, INCLUDING
- THE PASSAGE OF TIME

 B. DATE SENSITIVE EQUIPMENT, SYSTEMS AND COMPONENTS THEREOF MUST INDIVIDUALLY AND IN COMBINATION PROPERLY FUNCTION AND
 CONTINUE TO CORRECTLY PROCESS, SEQUENCE AND UTILIZE DATE AND TIME RELATED DATA FOR ALL DATES AND TIMES, WHICH OCCUR DURRING A
 REASONABLE LIFE EXPECTANCY FOR SAID EQUIPMENT, SYSTEMS AND COMPONENTS THEREOF.

 C. CORRECTLY PROCESS, SEQUENCE, AND CALCULATE ALL DATE AND DATE RELATED DATA FOR ALL DATES PRIOR TO, THROUGH AND AFTER
 JANUARY 1, 200, INCLUDING LEAP YEAR CALCULATIONS.

 D. SOFT-WARE PRODUCTS THAT PROCESS DATE OR DATE RELATED DATA SHALL RECOGNIZE, STORE AND TRANSMIT DATE DATA IN A FORMAT WHICH PASSAGE OF TIME

- D. SOFTWARE PROJUCTS THAT INSPECTS SOFTER OR DISTRICT RECEIVED DATA STATEL RECOGNIZE, STORE AND TRANSMIT DATE DATA IN A TORNIANT WE EXPLICITLY AND DIAMBEGUOUSLY SPECIALIST THE CORRECT CENTURY ACTS AND EQUIPMENT ORDERS FOR THIS PROJECT.
 F. SUBMITTALS, PROVIDE CERTIFICATION FROM SUPPLIERS AND SUB-CONTRACTORS PROVIDING DATE SENSITIVE EQUIPMENT, SYSTEMS, AND SOFTWARE. THAT THE PROPOSED EQUIPMENT, COMPONENTS AND SYSTEMS COMPLY WITH THESE REQUIREMENTS.
- 6. COMPLETE ASSEMBLIES: PROVIDE PRODUCTS COMPLETE WITH ACCESSORIES, TRIM FINISH, FASTENERS, AND OTHER ITEMS NEEDED FOR A COMPLETE
- 7. PROVIDE STANDARD PRODUCTS IF AVAILABLE, AND UNLESS CUSTOM PRODUCTS OR NON-STANDARD OPTIONS ARE SPECIFIED, PROVIDE STANDARD PRODUCTS OF THE TYPES THAT HAVE BEEN PRODUCED AND USED SUCCESSFULLY IN SIMILAR SITUATIONS ON OTHER PROJECTS. 8. THE OWNER RESERVES THE RIGHT TO LIMIT SELECTION TO PRODUCTS WITH WARRANTIES NOT IN CONFLICT WITH REQUIREMENTS OF THE CONTRACT
- 9. WHERE PRODUCTS ARE ACCOMPANIED BY THE TERM "AS SELECTED", ARCHITECT WILL MAKE SELECTION.

10. WHERE PRODUCTS ARE ACCOMPANIED BY THE TERM "MATCH SAMPLE", SAMPLE IS ARCHITECT'S.

- 11. DESCRIPTIVE, PERFORMANCE, AND REFERENCE STANDARD REQUIREMENTS IN THE SPECIFICATIONS ESTABLISH "SALIENT CHARACTERISTICS" OF PRODUCTS
- 12 VERIEY PRIOR TO BIDDING THAT ALL SPECIFIED ITEMS WILL BE AVAILABLE IN TIME FOR INSTALLATION TO ASSURE COMPLETION OF THE PROJECT
- 13. COSTS FOR DELAYS BECAUSE OF NON-AVAILABILITY OF SPECIFIED ITEMS, WHEN SUCH DELAYS COULD HAVE BEEN AVOIDED BY CONTRACTOR, WILL BE

01 73 00 - EXECUTION

- CONSTRUCTION LAYOUT
 A DO NOT SCALE DRAWINGS, DIMENSIONS GOVERN. LARGE SCALE DETAILS GOVERN OVER SMALLER SCALE DETAILS.
 B. INFORM PROJECT MANAGER WHEN CHALK LINE LAYOUT OF PARTITIONS IS COMPLETED SO THAT IT CAN BE VERIFIED. MAKE REQUIRED CHANGES
 IOR TO START OF CONSTRUCTION.
 C. SUPPLY ALL NECESSARY INFORMATION ON REQUIRED CUTOUTS FOR PLUMBING FIXTURES TO MILLWORK CONTRACTOR.
- DOOR OPENINGS IN GYPSUM BOARD PARTITIONS NOT DIMENSIONED ARE TO BE LOCATED IN CENTER OF ROOM OR 4" FROM ADJOINING PARTITION
- 2. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS FOR INSTALLING PRODUCTS IN APPLICATIONS INDICATED.
- ENSURE THAT INSTALLATION CONFORMS TO BUILDING CODE REQUIREMENTS. THE MATERIALS SPECIFIED ARE INTENDED TO MEET CODE REQUIREMENTS. IMMEDIATELY NOTIFY ARCHITECT OF ALL DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND CODE REQUIREMENTS. DO NOT PROCEED WITH INSTALLATION UNTIL INSTRUCTIONS RESOLVING DISCREPANCIES HAVE BEEN RECEIVED.

9173 39 - CORRECTION OF DEFECTIVE WORK
1 PATCH, REPAIR, REPLACE, ANDIOR REFINISH EXISTING CONSTRUCTION AS NECESSARY TO REFURBISH DAMAGED AND NONCONFORMING AREA OF WORK.

017400 - CLEANING AND WASTE MANAGEMENT
1. CLEAP PREMISES WITHIN CONSTRUCTION LIMITS AND ALONG ACCESS ROUTES DAILY, INCLUDING COMMON AREAS. COORDINATE PROGRESS
CLEANING FOR JOINT-USE AREAS WHERE MORE THAN ONE INSTALLER HAS WORKED. ENFORCE REQUIREMENTS STRICTLY. DISPOSE OF MATERIALS
LAWFULLY.

- 2 KEEP INSTALLED WORK CLEAN
- 3. CONCEALED SPACES: REMOVE DEBRIS FROM CONCEALED SPACES BEFORE ENCLOSING THE SPACE.

01.75.00 - STARTING AND ADJUSTING
1. START EQUIPMENT AND OPERATING COMPONENTS TO CONFIRM PROPER OPERATION. REMOVE MALFUNCTIONING UNITS, REPLACE WITH NEW UNITS, & RETEST.

2. ADJUST OPERATING COMPONENTS FOR PROPER OPERATION WITHOUT BINDING, VIBRATING, OR PRODUCING EXCESSIVE NOISE. ADJUST EQUIPMENT FOR PROPER OPERATION.

3 DECLECT INSTALLED CONSTRUCTION

01_77 00 - CLOSEOUT PROCEDURES
1. CONTRACT CLOSE-OUT SHALL OCCUR ONLY AFTER PROJECT MANAGER HAS PREPARED THE CERTIFICATE OF SUBSTANTIAL COMPLETION AND PUNCH LIST, AND PUNCH LIST ITEMS HAVE BEEN CORRECTED. THE CONTRACTOR SHALL SUBMIT MAINTENANCE AND WARRARNY MANUALS, RELEASE OF LIENS, AND RECORD DRAWNIGST OF PROJECT MANAGER WITH HIS SHINAL APPLICATION FOR PRAYMENT, PROJECT MANAGER SHALL PREPARE ANY NECESSARY CHANGE ORDERS REQUIRED TO FINALIZE THE COST OF THE PROJECT BASED ON THE CONTRACTORS FINAL SUBMITTALS.

- 2. "EXISTING TO REMAIN", "EXISTING TO BE RELOCATED", ANDIOR NEW ITEMS INSTALLED BY THE CONTRACTOR, IN ADDITION TO BEING AMPLY PF THROUGHOUT THE PERIOD OF CONSTRUCTION, SHALL BE THOROUGHLY CLEANED TO THE SATISFACTION OF ARCHITECT PRIOR TO BEING TURNE
- 3. BEFORE ACCEPTANCE BY THE OWNER, THE COMPLETED CONSTRUCTION SHALL BE CLEANED, LABELS REMOVED, AND ALL OTHER TOUCH UP COMPLETED.
- 4. GC TO PROVIDE AS-BUILT CAD DRAWINGS UPON COMPLETION OF WORK.

01 81 13 - SUSTAINABLE DESIGN REQUIREMENTS

. COMPLY WITH GENERAL REQUIREMENTS AND PROCEDURES FOR COMPLIANCE WITH U.S. GREEN BUILDING COUNCIL'S (USGBC) LEED PREREQUISITES IND CREDITS NEEDED TO COMPLY WITH PROJECT GOALS FOR "SUSTAINABILITY" INCLUDING LEED CERTIFICATION WHEN INDICATED ON DRAWINGS.

- 2. LEED WORKBOOK INCLUDED UNDER SEPARATE COVER (AS APPLICABLE).
- LEED CREDIT FO 4.1: MANUFACTURERS PRODUCT DATA FOR CONSTRUCTION ADHESIVE INCLUDING PRINTED STATEMENT OF VOC CONTENT.
- A LEED CREDITE O.4.1: MANUFACTURERS PRODUCT DATA FOR CONSTRUCTION ADHESIVE. INCLUDING PRINTED STATEMENT OF VOC CONTENT.

 8. LEED CREDITE O.4.4: COMPOSITE WOOD MANUFACTURERS PRODUCT DATA FOR EACH COMPOSITE WOOD PRODUCT USED INDICATING THAT
 BONDING AGENT USED CONTAINS NO UREA FORMALDEHYDE.

 C. LEED CREDIT MY: CERTIFICATES OF CHAIN-OF-CUSTODY SIGNED BY MANUFACTURERS CERTIFYING THAT PRODUCTS SPECIFIED TO BE MADE
 FROM CERTIFICATION WOOD WERE MADE FROM WOOD OBTAINED FROM FORESTS CERTIFIED BY AN FSC. ACCREDITED CERTIFICATION BODY TO COMPLY WITH
 FSC 1.2. PRINCIPLES AND CRITERIA.* INCLUDIE EVIDENCE THAT MILL IS CERTIFIED FOR CHAIN-OF-CUSTODY BY AN FSC. ACCREDITED CERTIFICATION BODY.
 D. LEED REQUIREMENTS CREDIT TE O.4.2 SUBMITTAL: MANUFACTURERS PRODUCT DATA FOR PAINTS AND COATINGS, INCLUDING PRINTED
 STATEMENT OF VOC CONTENT AND CHEMICAL COMPONENTS.
 E. LEED REQUIREMENTS CREDIT EO.4.1 SUBMITTALS: FURNISH MANUFACTURERS' PRODUCT DATA FOR INTERIOR SEALANTS, INCLUDING PRINTED
 STATEMENT OF VOC CONTENT.

03 54 16 - HYDRAULIC CEMENT UNDERLAYMENT
1 IISE SELF-LEVELING UNDERLAYMENT FOR INTERIOR FINISH FLOORING AT LOCATIONS INDICATED, AND TO ACHIEVE FLATNESS WHERE STRUCTURAL SLAB DOES NOT COMPLY WITH SPECIFIED FLATNESS REQUIREMENTS

- UNDERLAYMENT: CEMENT-BASED, POLYMER-MODIFIED, SELF-LEVELING PRODUCT THAT CAN BE APPLIED IN UNIFORM THICKNESSES FROM 1/8 INCH
 3 MM) AND THAT CAN BE FEATHERED AT EDGES TO MATCH ADJACENT FLOOR ELEVATIONS.

 A. CEMENT BUNDER: ASTALC 150, PORTLAND CEMENT, OR HYDRAULIC OR BLENDED HYDRAULIC CEMENT AS DEFINED BY ASTALC 219.

 B. COMPRESSIVE STRENGTH: NOT LESS THAN 4100 PSI (28 MPA) AT 28 DAYS WHEN TESTED ACCORDING TO ASTALC 109/C 109/M.

 C. PRODUCTS:

- C. PRODUCTS:

 I. K-15 SELF-LEVELING UNDERLAYMENT CONCRETE: ARDEX, INC.

 II. SELF-LEVELING UNDERLAYMENT: W. R. BONSAL COMPANY.

 III. 300 PREMIUNI UNDERLAYMENT: BURKE GROUP, LLC (THE).

 IV. LEVELEX UNDERLAYMENT: LAM CONSTRUCTION CHEMICALS, INC.

 V. LEVEL-RIGHT: MAXXON CORPORATION.

 3. AGGREGATE: WELL-GRADED, WASHED GRAWEL, 1/8 TO 1/4 INCH (3 TO 6 MM), OR COARSE SAND AS RECOMMENDED BY UNDERLAYMENT.
- UFACTURER. A. PROVIDE AGGREGATE WHEN RECOMMENDED IN WRITING BY UNDERLAYMENT MANUFACTURER FOR UNDERLAYMENT THICKNESS REQUIRED.
- 4. WATER: POTABLE AND AT A TEMPERATURE OF NOT MORE THAN 70 DEG F (21 DEG C).
- 5. REINFORCEMENT: FOR UNDERLAYMENT APPLIED TO WOOD SUBSTRATES, PROVIDE GALVANIZED METAL LATH OR OTHER CORROSION-RESISTANT REINFORCEMENT RECOMMENDED IN WRITING BY UNDERLAYMENT MANUFACTURER.
- 6. PRIMER: PRODUCT OF UNDERLAYMENT MANUFACTURER RECOMMENDED IN WRITING FOR SUBSTRATE. CONDITIONS, AND APPLICATION INDICATED.

95.00.00 -METALS - COMMON WORK RESULTS

1 DESIGN, ENGINEER, FABRICATE, AND INSTALL METAL FABRICATIONS TO WITHSTAND THE FOLLOWING STRUCTURAL LOADS WITHOUT EXCEEDING THE
1 DESIGN, ENGINEER, FABRICATE, AND INSTALL METAL FABRICATIONS TO WITHSTAND THE FOLLOWING STRUCTURAL LOADS WITHOUT EXCEEDING THE 1. DESIGN, ENGINEER, PABRICATE, AND INSTALL, MEL MERITALS SHOULDS IN CULI INSTANLING THE COLD OWNS SHOULD SHOULD AND WITHOUT EXCLUSING THE ALL CHANGE IN ALL CHANGE OF THE ALL CHANGE IN ALL CHANGE OF THE ALL CHA

05 50 00 - METAL FABRICATIONS

1. METAL SURFACES, GENERAL: PROVIDE MATERIALS WITH SMOOTH, FLAT SURFACES WITHOUT BLEMISHES.

- 2. STEEL PLATES, SHAPES, AND BARS: ASTM A 36/A 36M
- 3. STAINLESS-STEEL BARS AND SHAPES: ASTM A 276, TYPE 304.
- 4. STEEL TUBING: COLD-FORMED STEEL TUBING COMPLYING WITH ASTM A 500.
- 5. STEEL PIPE: ASTM A 53. STANDARD WEIGHT (SCHEDULE 40), UNLESS ANOTHER WEIGHT IS INDICATED OR REQUIRED BY STRUCTURAL LOADS.
- 6. ALUMINUM: EXTRUSIONS: ASTM B 221 (ASTM B 221M). ALLOY 6063-T6
- 7. SHEAR AND PUNCH METALS CLEANLY AND ACCURATELY. REMOVE BURRS.
- 8. WELD CORNERS AND SEAMS CONTINUOUSLY. USE MATERIALS AND METHODS THAT MINIMIZE DISTORTION AND DEVELOP STRENGTH AND CORROSION RESISTANCE OF BASE METALS. OBTAIN FUSION WITHOUT UNDERCUT OR OVERLAP. REMOVE WELDING FLUX IMMEDIATELY. FINISH EXPOSED WELDS
- MISCELLANEOUS FRAMING AND SUPPORTS: FABRICATE STEEL FRAMING AND SUPPORTS THAT ARE NOT A PART OF STRUCTURAL-STEEL FRAMEWORK.
 NECESSARY TO COMPLETE THE WORK. CUT. DRILL AND TAP UNITS TO RECEIVE HARDWARE, HANGERS. AND SIMILAR ITEMS.

10. FINISH METAL FABRICATIONS AFTER ASSEMBLY. COMPLY WITH NAAMM "METAL FINISHES NAMED FOR ADCHITECTURAL AND THAT PRODUCTS.
FOR RECOMMENDATIONS FOR APPLYING AND DESIGNATING FINISHES. SHOP PRIME FERROU NOTIFIED TO THE PRODUCTS OF THE PRODUC

Humana

Humana Memphis, TN MarketPoint

6515 Poplar Avenue Suites 107&108

Memphis, TN 38119 Prepared for

Humana

Contract No: 13.01656.00



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Kerr-Greulich Engineers, Inc.



MEP Engineer 1534 Ormsby Station Ct. Louisville KY 40224

502.426.9457

Key Plan

Issue Description YYYY-MM-DI Revision Description YYYY-MM-DE

Drawn by Author Reviewed by Checker

Project No 13.01656.00 OUTLINE SPEC.

OUTLINE SPECIFICATION

06.00.00-WOOD, PLASTICS AND COMPOSITES - COMMON WORK RESULTS

1. PROVIDE WOOD PRODUCTS FOR WINICH ALL SOLID AND VENEER WOOD MATERIAL ORIGINATES FROM A SUSTAINABLY MANAGED FOREST CERTIFIED BY A FOREST STEWARDSHIP COUNCIL (FSC) ACCREDITED CERTIFICATION AGENCY. REFERENCE SECTION 018113 FOR LEED REQUIREMENTS.

2. ADHERE WOOD VENEER AND PLASTIC LAMINATE TO SUBSTRATE USING ADHESIVES THAT COMPLY WITH LOW-VOC (VOLATILE ORGANIC COMPOUND)

3. USE COMPOSITE WOOD PRODUCTS THAT CONTAIN NO UREA FORMALDEHYDE

4. USE WOOD, PLASTIC AND COMPOSITE MATERIALS WHERE APPLICABLE IN ACCORDANCE WITH LEED REQUIREMENTS FOR SPECIFIED MATERIALS RECARDLESS OF LEED CERTIFICATION STATUS, REFERENCE SECTION 01.81.13 SUSTAINABLE DESIGN RECUIREMENTS FOR APPLICABLE CREDITS AND SUSTAINABLE OF THE MOREOUS PROPERTY OF THE M

5. PROVIDE THE FOLLOWING SUBMITTALS:

A. GRADE: CUSTOM.
B. FINISH: AWI SYSTEM TR-4, CONVERSION VARNISH: WI SYSTEM #2, CONVERSION VARNISH.
C. STANING, EFFECT, SHEEN: TO MATCH APPROVED SAMPLES.
INSTALL WOODWORK PLUMB, LEVEL, TRUE AND STRAIGHT WITH NO DISTORTIONS. SHIM AS REQUIRED USING CONCEALED SHIMS. INSTALL TO A OLERANCE OF IRINGNING HIS FEET CHAMBES FOR PULLWARD AND LEVEL (INCLUDING TOPS); AND WITH NO VARIATIONS IN FLUSHNESS OF ADJOINING SURFACES. COMPLY WITH INSTALLATION REQUIREMENTS ESTABLISHED BY REFERENCED STANDARDS.

NINSH HARAUWAKE. I LEMS

D. BARWER GLIDES. NO. 8400 BOX/FILE DRAWER SLIDE – FULL EXTENSION BY KNAPE & VOGT MFG. CO OR APPROVED EQUAL

SHELF STANDARDS AND SUPPORTS (RECESSED SHELVES IN ENCLOSED CABINETS): NO. 255 STANDARD AND NO. 256 SUPPORTS BY KNAPE & VOGT

CO, NATURAL ALLUMINUM FINISH OR APPROVED EQUAL

DOORS: 1 PAIR HEAVY-DUTY INSTITUTIONAL HINGES, STANLEY HT1592, US 28, SATIN ALLUMINUM FINISH

DOORS: 1 PAIR HEAVY-DUTY INSTITUTIONAL HINGES, STANLEY HT1592, US 28, SATIN ALUMINUM FINISH

1. 1 CATCH, STANLEY 41 SERIES.

11. 1 PULL, HAFELE 124.02921 MATTE ALUMINUM FINISH

1. DRAWER PULLS HAFELE 124.02921 MATTE ALUMINUM FINISH

2. DRAWER LOCKS. SCHLAGE CL 2000 CABINET DRAWER LOCK, US260 COMPLETE WITH STRIKE PLATE

OOR LOCKS: SCHLAGE CL 1000 CABINET DOOR LOCK, US260, COMPLETE WITH STRIKE PLATE.

OOR LOCKS: SCHLAGE CL 1000 CABINET DOOR LOCK, US260, COMPLETE WITH STRIKE PLATE. PROVIDE ONE ELBOW CATCH PER PAIR DOORS. MASTER

ALL LOCKS AND PROVIDE KEY SCHEDULE TO TEMANT

A SILENCERS: NEOPRENE TYPE WITH SELE-ADHESIVE AT ALL CABINET DOORS.

US_10U - ROUGH CARPENIRY

1.— PROVIDE WOOD FOR SUPPORT OR ATTACHMENT OF OTHER WORK INCLUDING ROOFTOP EQUIPMENT CURBS AND SUPPORT BASES, CANT STRIPS, BUCKS, NAILERS, BLOCKING, FURRING, GROUNDS.

2. STRIPPING AND SIMILAR MEMBERS. PROVIDE LUMBER OF SIZES INDICATED, WORKED INTO SHAPES SHOWN

3. MOISTURE CONTENT: 19 PERCENT MAXIMUM FOR LUMBER ITEMS, INCLUDING ITEMS TO RECEIVE WOOD PRESERVATIVE TREATMENT OR FIRE

4. GRADE: STANDARD GRADE LIGHT FRAMING SIZE LUMBER OF ANY SPECIES OR BOARD SIZE LUMBER AS REQUIRED. NO. 3 COMMON OR STANDARD GRADE BOARDS PER SPIB, WCLIB OR WWPA RULES APPLICABLE TO AGENCY UNDER WHICH LUMBER IS GRADED.

5. PLYWOOD RACKING PANELS: FOR MOLINTING ELECTRICAL OR TELEPHONE FOLIDMENT, PROVIDE FIRE RETARDANT TREATED PLYWOOD PANELS WITH

GRADE DESIGNATION, APA C-D PLUGGED INT WITH EXTERIOR GLUE, IN THICKNESS INDICATED, OR, IF NOT OTHERWISE INDICATED, NOT LESS THAN 3/4-INCH

6. FIRE-RETARDANT TREATMENT: WHERE FIRE-RETARDANT TREATED WOOD IS REQUIRED BY CONSTRUCTION TYPE, PRESSURE IMPREGNATE LUMBER AND PLYWOOD WITH FIRE-RETARDANT CHEMICALS TO COMPLY WITH AWPA C20 AND C27, RESPECTIVELY.

7. PRESERVATIVE TREATMENT: PRESSURE PRESERVATIVE TREAT ALL ROOF CURBS, NAILERS AND BLOCKING WITH EXTERIOR EXPOSURE AND EXTERIOR ITEMS IN CONTACT WITH CONCRETE OR MASONRY WITH AMMONIACAL, OR AMINE, COPPER QUAT (ACQ) IN ACCORDANCE WITH AWPA C2 (LUMBER) AND AWI

06 40:00 - ARCHITECTURAL WOODWORK

1. PROVIDE HUMANA PROJECT MANAGER WITH (3) COPIES OF ALL ARCHITECTURAL WOODWORK SHOP DRAWINGS PRIOR TO FABRICATION. HUMANA PROJECT

1. PROVIDE HUMANIA PROJECT MANAGER WITH (3) COPIES OF ALL ARCHITECTURAL WOODWORK SHOP DRAWINGS PRIOR TO FABRICATION. HUMANIA PROJECT MANAGER TO FORWARD (1) COFFORMAD (1) COFFORMAD (1) COFFORMAD (1) COFFORMAD (2) COLUMNG:
 2. CUALITY STANDARDS: COMPLY WITH ONE OF THE FOLLOWING:
 3. AWS "ARCHITECTURAL WOODWORK CUALITY STANDARDS" FOR GRADES OF INTERIOR ARCHITECTURAL WOODWORK, CONSTRUCTION, FINISHES, AND OTHER REQUIREMENTS. PROVIDE AWIN CERTIFICATION LABELS OR COMPLIANCE CERTIFICATE INDICATING THAT WOODWORK, COMPLIES WITH REQUIREMENTS OF GRADES SPECIFIED.

B. WI (FORMERLY WINC) "MANUAL OF MILLWORK," FOR GRADES OF INTERIOR ARCHITECTURAL WOODWORK, CONSTRUCTION, FINISHES, AND OTHER SCULINGENITS. PROVIDE WINC-CERTIFIED COMPLIANCE CERTIFICATE INDICATING THAT WOODWORK COMPLIES WITH REQUIREMENTS OF GRADES SPECIFIED.

PROVIDE WIC-CERTIFIED COMPLIANCE CERTIFICATE FOR INSTALLATION.
3. PROVIDE MATERIALS THAT COMPLY WITH REQUIREMENTS OF THE REFERENCED PRODUCT STANDARDS FOR GRADE INDICATED.

5. MEDIUM DENSITY FIBERBOARD (MDF): ANSI A208.2: FORMALDEHYDE FREE

PARTICLEBOARD: NOT ALLOWED.

8. FORMALDEHYDE EMISSION LEVELS: PROVIDE FORMALDEHYDE FREE MATERIALS. REFERENCE SECTION 018113 FOR LEED REQUIREMENTS.

9 FABRICATION: COMPLY WITH DETAILS AND CONSTRUCTION TYPES INDICATED.

10. CABINET HARDWARE AND ACCESSORY MATERIALS: AS INDICATED ON DRAWINGS AND SCHEDULES.

11. EDGING: HPL UNLESS OTHERWISE INDICATED PER AWI

12. FACTORY FINISHING OF INTERIOR ARCHITECTURAL WOODWORK

A. AWI SECTION 1500, UNLESS OTHERWISE INDICATED.

B. WI SECTION 1, "GENERAL INFORMATION - TECHNICAL BULLETIN", REQUIREMENTS FOR "FACTORY FINISHING OF MILLWORK"

C. GRADE: CUSTOM.

D. FINISH: AWI SYSTEM TR-4, CONVERSION VARNISH; WI SYSTEM #2, CONVERSION VARNISH.

E. STAINING, EFFECT, SHEEN: TO MATCH APPROVED SAMPLES.

13. INSTALL WOODWORK PLUMB, LEVEL, TRUE AND STRAIGHT WITH NO DISTORTIONS. SHIM AS REQUIRED USING CONCEALED SHIMS. INSTALL TO A TOLERANCE OF 1/8-INCH IN 8-FEET-O-INCHES FOR PLUMB AND LEVEL (INCLUDING TOPS); AND WITH NO VARIATIONS IN FLUSHNESS OF ADJOINING SURFACES. COMPLY WITH INSTALLATION REQUIREMENTS ESTABLISHED BY REFERENCE DISTANDARDS.

14. FINISH HARDWARE ITEMS
DRAWER CLIDES: NO. 8400 BOX/FILE DRAWER SLIDE - FULL EXTENSION BY KNAPE & VOGT MFG. CO OR APPROVED EQUAL
A. SHELF STANDARDS AND SUPPORTS (RECESSED SHELVES IN ENCLOSED CABINETS): NO 255 STANDARD AND NO. 256 SUPPORTS BY KNAPE & VOGT
MFG. CO., NATURAL ALUMINUM FINISH OR APPROVED EQUAL

B. DOORS.
I. CONCEALED HINGES: CONCEALED, SELF-CLOSING TYPE HINGES OF TYPE REQUIRED BY DOOR CONSTRUCTION AND STILE APPLICATIONS. THE
I. CONCEALED HINGES: CONCEALED, SELF-CLOSING TYPE HINGES OF TYPE REQUIRED BY DOOR SIZE AND WEIGHT. HINGES SHALL COMPLY WITH THE I. CONCEALED HINGES: CONCEALED, SELF-CLOSING TYPE HINGES OF TYPE REQUIRED BY DOOR CONSTRUCTION AND STILE APPLICATIONS. THE SIZE ARD NUMBER OF HINGES FEGULAGE DETERMINED BY DOOR SIZE AND WEIGHT. HINGES SHALL COMPLY WITH THE ANSUBHING GRADE I REQUIREMENTS. FINISH: MICKEL CHROME OR STAINLESS STEEL.

MANUFACTURERS: HAFELE, GRASS OR BUILD.

II. 1 CATCH, STAINLEY 41 SERIES.

III. 1 PULL, HAFELE 1240 2921 MATTE ALUMINUM FINISH.
C. DRAWER PULLS. HAFELE 1240 2921 MATTE ALUMINUM FINISH.
D. DRAWER LOCKS, SCHLAGE CLOGO CABINET DRAWER LOCK, US26D COMPLETE WITH STRIKE PLATE.
E. DOOR LOCKS: SCHLAGE CLOGO CABINET DAWER LOCK, US26D, COMPLETE WITH STRIKE PLATE.
E. DOOR LOCKS: SCHLAGE CLOGO CABINET DAWER LOCK, US26D COMPLETE WITH STRIKE PLATE.

07 21 19 - THERMAL INSULATION

2.1 INSULATING MATERIALS:

Basis of Design: Provide the following material and manufacturer:

basis or besyler in Flore in channing intention at our minuscular in an influence in Health Ksp 200° by Demiller (USS) LLC, Afrington, TX. Sprayed Foam Insulation: Polyurethane closed-cell foam insulation: conforming to the following: Density, Core: LbsPFIS: ASTIM D-102° 20° 74° F.10° 1.90 to 2.2. Compressive Strength: ASTIM D-1621 @ 74° F. Parallel to rise, minimum, 172 – 19.

. Ire vapor transmission: Maximum 0.79 perms at 1.5 inch thickness, tested to ASTM ES

Aged Thermal Resistance, 180d days @ 23 degrees C (R-Value) ASTM C-177, R-7.4 @ 1 inch.
 Flame Spread and Smoke Developed Rating: ASTM E84; Class 1, <20/<400.

2.2 AUXILIARY INSULATING MATERIALS

Intumescent Thermal Barrier: "Blaze Lok TB, by Demilec (USA) LLC, Arlington, TX.

Comply with manufacturer's instructions for particular conditions of installation in each case. If printed instructions are not available or do not apply to project conditions, consult

A. Compy win manufacture's instructions for particular conductors on installation in each case, it is prime structuring and not available of no not apply to project conductors, consult the manufacture's technical representable for specific recommendations before proceeding with the work.

B. Apply from installation at not more than two inches in a single pass and allow adequate time for the heat within the foam to escape. In applications requiring multiple passess the time required between the passess what be extended to allow the heat to escape.

1. Apply installation in thickness as required to produce an "R' value of (35).

7. Thermal Barrier Apply themal barrier in accordance with manufacturer's and UL requirements.

97 81 95 - PATCHING DAMAGED FIREPROOFING

1. DPCN/INF MATFRIALS AND CONSTRUCTION THAT ARE IDENTICAL TO THOSE TESTED BY UNDERWRITER'S

2. LABORATORY, INC., FOR FIRE RATED ASSEMBLY DESIGN NUMBERS INDICATED

3 DO NOT REMOVE ANY SPRAYED-ON FIRE RESISTIVE MATERIAL WITHOUT PRIOR APPROVAL. RE-COAT

4. FIRE RESISTIVE MATERIALS DAMAGED BY OTHER TRADES AND SURFACES WHERE FIRE RESISTIVE

5. MATERIAL HAS BEEN REMOVED FOR INSTALLATION OF RELATED WORK: COST OF REPAIRS TO BE

6 RORNE BY RESPECTIVE TRADES

SPRAYED FIRE RESISTIVE MATERIAL: CEMENTATIOUS SPRAYED FIRE RESISTIVE MATERIAL CONSISTING OF FACTORY MIXED, DRY FORMULATION OF GYPSUM OR PORTLAND CEMENT BINDERS AND LIGHTWEIGHT MINERAL OR SYNTHETIC AGGREGATES MIXED WITH WATER AT PROJECT SITE TO FORMA SLURRY OR MORTAR FOR CONVEYANCE AND APPLICATION AND AS REQUIRED FOR THE ULD ESIGNS INDICATED.

A CONCEALED APPLICATION, MATERIALS APPLIED TO SURFACES THAT ARE CONCEALED FROM WHEN BEHIND OTHER CONSTRUCTION WHEN THE WORK IS COMPLETED, INTENDED TO BE CONCEALED BY TENANT IMPROVEMENTS, AND WHICH HAVE NOT BEEN DEFINED AS EXPOSED.

8. BASIS OF DESIGN PRODUCTS: W. R. GRACE - "MONOKOTE TYPE MK-6" FULLY CONCEALED: "RETRO-GUARD" REPAIRS

9. EXPOSED INTERIOR APPLICATION: MATERIALS ARE THOSE APPLIED TO SURFACES THAT ARE EXPOSED TO VIEW WHEN THE WORK IS COMPLETED, THAT ARE IN ELEVATOR SHAFTS AND MACHINE ROOMS, THAT ARE IN MECHANICAL ROOMS, AND THAT ARE IDENTIFIED AS EXPOSED ON DRAWINGS.

10. BASIS OF DESIGN PRODUCTS: "MONOKOTETYPE Z106 & Z106/HY" EXPOSED INTERIOR: "MONOKOTETYPE Z146" SUBJECT TO IMPACT

07 84 46 - FIRE-RESISTIVE JOINT SYSTEMS

1. PROVIDE RATED SYSTEMS PER ASTME 814 or UL 1479 AT PENETRATIONS OF RATED CONSTRUCTION.

PROFIDENCE REQUIREMENTS:

A F-RATINGS: PROVIDE FIRESTOP SYSTEMS WITH F-RATINGS EQUALING OR EXCEEDING FIRE-RESISTANCE RATING OF CONSTRUCTIONS PENETRATED

A F-RATINGS: PROVIDE FIRESTOP SYSTEMS WITH F-RATINGS EQUALING OR EXCEEDING FIRE-RESISTANCE RATING OF CONSTRUCTIONS PENETRATED

E LEKMINED PER AS IM E 814. -RATINGS: PROVIDE FIRESTOP SYSTEMS WITH T-RATINGS REQUIRED, AS WELL AS F-RATINGS, DETERMINED PER ASTM E 814, WHERE SYSTEMS TECT PENETRATING ITEMS WITH POTENTIAL TO CONTACT ADJACENT MATERIALS IN OCCUPIABLE FLOOR AREAS INCLUDING, BUT NOT LIMITED, TO

PROTECTIONS TO CONTROLLED WALL CANTIES .

PENETRATIONS LOCATED OUTSIDE PIRE, RESISTIVE SHAFT ENCLOSURES .

PENETRATIONS LOCATED .

A FOR PIRE STOP SYSTEMS EXPOSED TO THESE CONDITIONS BOTH DURING AND AFTER CONSTRUCTION.

B. FOR THROUGH-PENETRATION RIFESTOP SYSTEMS EXPOSED TO 10 YEAP, PROVIDE PRODUCTS WITH FLAME-SPREAD NICLES OF LESS THAN 25 AND SMOKE-DEVELOPED INDICES OF LESS THAN 450, WHEN TESTED PER ASTME B14.

C. FIRE-TES-FERSPONSE CHARACTERSTICS. PROVIDE RATED SYSTEMS IDENTICAL TO THOSE TESTED PER ASTME B14 AND WITH PRODUCTS BEARING THE CLASSIFICATION MARKING OF A OLULIFIED TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.

FIRESTOP SYSTEMS. COMPATIBLE WITH THE SUBSTRATES FORMING OPENINGS, AND WITH THE TENES, I ANY, PENETRATION FIRESTOP SYSTEMS, MORE CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.

A CCESSORIES. PROVIDE ACCESSORIES REQUIRED TO INSTALL HILL MATERIALS THAT COMPLY WITH THE CURREMENTS OF TESTED ASSEMBLIES, ARE APPROVED BY QUALIFIED TESTING AND INSPECTING AGENCY THAT PERFORMED TESTING, AND ARE SPECIFIED BY MANUFACTURER OF TESTED OF TESTED.

AFFROVIDED.

SSERBILLES.

9. INSTALL HIROUGH-PENETRATION FIRESTOP SYSTEMS TO MEET RATINGS REQUIRED AND TO COMPLY WITH FIRESTOP SYSTEM MANUFACTURERS WRITER INSTALLATION INSTRUCTIONS AND PUBLISHED DRAWINGS FOR PRODUCTS AND APPLICATIONS INDICATED.

07 92 00 - JOINT SEALANTS - INTERIOR WORK

1. VOC CONTENT OF INTERIOR SEALANTS: PROVIDE INTERIOR SEALANTS AND SEALANT PRIMERS THAT COMPLY WITH THE FOLLOWING LIMITS FOR VOC CONTENT WHEN CALCULATED ACCORDING TO 40 CFR 59, SUBPART D (EPA METHOD 24); 250 G/L FOR SEALANTS AND SEALANT PRIMERS FOR NONPOROUS SUBSTRATES; 775 G/L. FOR SEALANT PRIMERS FOR POROUS SUBSTRATES.

SANITARY SEALANT: ONE-PART MILDEW-RESISTANT SILICONE SEALANT: TYPE S: GRADE NS: CLASS 25: USES NT, G, A, AND, AS APPLICABLE TO
NONPOROUS JOINT SUBSTRATES INDICATED, O; FORMULATED WITH FUNCIODE: INTENDED FOR SEALING INTERIOR JOINTS WITH HOMPOROUS SUBSTRATES
AND SUBJECT TO IN SERVICE EXPOSURE TO CONDITIONS OF HIGH HUMIDITY AND TEMPERATURE EXTREMES. PRODUCT: DOW CORNING 786 OR GE SILICONES:
SANTARY TYDO.

98 11 13 - HOLLOW METAL DOORS AND FRAMES - (STEEL)
1 STFEL DOOR AND FRAME STANDARD: COMPLY WITH ANSI A 250.8, UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.

2. FIRE-RATED DOOR ASSEMBLIES: ASSEMBLIES COMPLYING WITH NFPA 80 THAT ARE LISTED AND LABELED, FOR FIRE-PROTECTION RATINGS INDICATED, BASED ON TESTING ACCORDING TO NFPA 252.

3. COLD-ROLLED STEEL SHEETS: ASTM A 366/A 366M. COMMERCIAL STEEL (CS), OR ASTM A 620/A 620M. DRAWING STEEL (DS), TYPE R: STRETCHER-

4. METALLIC-COATED STEEL SHEETS: ASTM A 653/A 653M, COMMERCIAL STEEL (CS), TYPE B, WITH AN A40 (ZF120) ZINC-IRON-ALLOY (GALVANNEALED) COATING; STRETCHER-LEVELED STANDARD OF FLATNESS.

5 DOORS AND FRAMES SHALL COMPLYING WITH ANSI 250.8 6. TYPICAL INTERIOR FRAMES SHALL BE WELDED CONSTRUCTION.

7. DOOR INSTALLATION: COMPLY WITH ANSI A250.8. SHIM AS NECESSARY TO COMPLY WITH SDI 122 AND ANSIDHI A115.1G. INSTALL FIRE-RATED DOORS WITHIN CLEARANCES SPECIFIED IN NFPA 80. INSTALL SMOKE CONTROL DOORS TO COMPLY WITH NFPA 105.

8. PLACING FRAMES: COMPLY WITH PROVISIONS IN SDI 105, UNLESS OTHERWISE INDICATED. SET FRAMES ACCURATELY IN POSITION, PLUMBED, ALIGNED, AND BRACED SECURELY UNTIL PERMANENT ANCHORS ARE SET.

18 12 16 - INTERIOR ALUMINUM FRAMES
1. ALUMINUM MEMBERS: ALLOY AND TEMPER RECOMMENDED BY THE MANUFACTURER FOR STRENGTH, CORROSION RESISTANCE, AND APPLICATION OF REQUIRED FINISH; COMPLY WITH ASTM B 221 FOR ALUMINUM EXTRUSIONS, ASTM B 209 FOR ALUMINUM SHEET OR PLATE, AND ASTM B 211 FOR ALUMINUM BARS, RODS AND WIRE.

CARBON STEEL REINFORCEMENT OF ALUMINUM FRAMING MEMBERS SHALL COMPLY WITH ASTM A 36 FOR STRUCTURAL SHAPES, PLATES AND BARS, ASTM A
611 FOR COLD ROLLED SHEET AND STEIN, OR ASTM A 570 FOR HOT ROLLED SHEET AND STRIP. HOT DIP GALVANIZE STEEL ASSEMBLIES AFTER FABRICATION
COMPLY WITH ASTM 2123, 2 OLIVICE MINIMUM COATING.

FRAMING SYSTEM: PROVIDE ALUMINUM FRAMING SYSTEMS FABRICATED FROM EXTRUDED ALUMINUM MEMBERS OF SIZE AND PROFILE INDICATED. INCLUDE SUBFRAMES AND OTHER REINFORCING MEMBERS REQUIRED FOR PERFORMANCE. OLDCASTLE BUILDING ENVELOPE SERIES 2000 FLUSH GLAZED SYSTEM, CENT

Subtravibles and other Kernetaculan members recoursed to the Performance - Coldaste Boilding Envelope Series 2000 Flush Glazed System SEE, Exterior Loaded 1-34" X-12" Million Profit Livers Standard Neopreme Gaskets.

6. Corners Sharp With All Johns Mifered Harme, Unless otherwise Shown.

6. Mirra All Corners where Open Ends of Extrusions or voids Would be Visible if Butt Joints were used. This includes sidelights and Overhead Borrowed Light Frames.

4. PROVIDE SUITABLE ANCHORAGE FOR EACH WALL CONDITION, TO INCLUDE SILL ANCHORAGE AT DOORS, HEAD ANCHORAGE AT ALL OPENINGS 3-FEET-0-INCH AND WIDER, INTERMEDIATE EVENLY SPACE JAMB ANCHORS NOT TO EXCEED 2-FEET-0-INCH IN CENTER. ALL FRAME FASTENINGS AND ANCHORS SHALL BE

5. REINFORCEMENT: PROVIDE REINFORCEMENT AT BUILDERS HARDWARE AND TO PREVENT DISTORTION OF FRAMES

6. MACHINE ALLIMINI IM FRAMES FOR MOUNTING OF HARDWARE

7. PROVIDE REINFORCEMENTS AT HINGE LOCATIONS. STRIKES. AND AT CLOSERS.

8. COMPLY WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS FOR INSTALLATION.

9. SET UNITS PLUMB, LEVEL, AND TRUE TO LINE, WITHOUT WARP OR RACK OF FRAMING MEMBERS, DOORS, OR PANELS. INSTALL COMPONENTS IN PROPER ALIGNMENT AND RELATION TO ESTABLISHED LINES AND GRADES INDICATED. PROVIDE PROPER SUPPORT AND ANCHOR SECURELY IN PLACE.

10. PROVIDE ALUMINUM CLEAR ANODIZED FINISH UNLESS OTHEWISE NOTED.

98 14 10 - FLUSH WOOD DOORS
1. QUALITY STANDARD: COMPLY WITH NAWDA IS. 1-A. "ARCHITECTURAL WOOD FLUSH DOORS."
2. FIRE-RATE WOOD DOORS: DOORS THAT ARE LISTED AND LABELED BY A TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, FOR FIRE RATINGS INDICATED
a. TEST PRESSURE: BASED ON TESTING AT POSITIVE PRESSURE ACCORDING TO APPLICABLE CODE.

3. DOORS FOR TRANSPARENT FINISH: PREMIUM GRADE, WITH GRADE AA FACES, SPECIES INDICATED.

4. DOORS FOR OPAQUE FINISH: CUSTOM GRADE, WITH FACES OF CLOSED-GRAIN HARDWOOD

5. PLASTIC-LAMINATE-FACED DOORS: CUSTOM GRADE, HIGH-PRESSURE DECORATIVE LAMINATES COMPLYING WITH NEMA LD 3, GRADE HGS.

INTERIOR DOOR CONSTRUCTION: SOLID WOOD CORE FIVE PLIES WITH STILES AND RAILS RONDED TO CORE THEN ENTIRE LINIT ARRASIVE PLANED. BEFORE VENEERING. PROVIDE EITHER GLUED-BLOCK OR STRUCTURAL COMPOSITE LUMBER CORES INSTEAD OF PARTICLEBOARD CORES AT LOCATIONS WHERE EXIT DEVICES ARE INDICATED. REFERENCE SECTION 018113 FOR LEED REQUIREMENTS.

7. FIRE-RATED DOORS: CONSTRUCTION AND CORE SPECIFIED ABOVE FOR TYPE OF FACE INDICATED OR MANUFACTURER'S STANDARD MINERAL-CORE CONSTRUCTION AS NEEDED TO PROVIDE FIRE RATING INDICATED.
a. EDGE CONSTRUCTION: INTUMESCENT SEALS CONCEALED BY OUTER STILE MATCHING FACE VENEER, AND LAMINATED BACKING FOR IMPROVED SCREWHOLDING AGRABILITY AND SPIT RESISTANCE.

PAIRS: FURNISH FORMED-STEFL FDGES AND ASTRAGALS WITH INTUMESCENT SEALS FOR PAIRS OF FIRE-RATED DOORS. LINLESS OTHERWISE

NDICATED.

C THE DOOR AND FRAME SHALL BEAR AN APPROVED LABEL OR OTHER IDENTIFICATION SHOWING THE RATING THEREOF, FOLLOWED BY THE LETTER "S", THE NAME OF THE MANUFACTURER AND THE IDENTIFICATION OF THE SERVICE CONDUCTING THE INSPECTION OF MATERIALS AND WORKMANSHIP AT THE FACTORY DURING FABRICATION AND ASSEMBLY.

8 BLOCKING: FOR MINERAL-CORE DOORS USE COMPOSITE BLOCKING WITH IMPROVED SCREW-HOLDING CAPABILITY TO PROVIDE A MINIMUM 500 LB. REW WITHDRAWAL RESISTANCE PER ASTM D 143/NWWDA TM:10 (NOW PUBLISHED BY WDMA) AND MINIMUM 200,000 SLAM CYCLES PER ANSI A I.1/NWWDA TM:7 (NOW PUBLISHED BY WDMA) WITHOUT FAILURE.

9. FINISH DOORS AT FACTORY THAT ARE INDICATED TO RECEIVE TRANSPARENT FINISH. FIELD FINISH DOORS INDICATED TO RECEIVE OPAQUE FINISH. PROVIDE PREMIUM GRADE FINISH EQUAL TO NUMBA IS.1-A SYSTEM TR.4 CONVERSION VARNISH. MATCH ARCHITECTS APPROVED SAMPLE

10. INSTALL DOORS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, REFERENCED QUALITY STANDARD, AND AS INDICATED. INSTALL FIRE-RATED DOORS IN CORRESPONDING FIRE-RATED FRAMES ACCORDING TO NFPA 80.

08 31 00 - ACCESS DOORS AND PANELS

1. PROVIDE ACCESS DOORS AND PANELS AS SHOWN ON THE DRAWINGS AND AS REQUIRED FOR ACCESS TO UTILITIES AND EQUIPMENT. FURNISH EACH ACCESS DOOR SAND PANELS AS SHOWN MAIN FOR THE WITH ALL PARTS, AND READY FOR INSTALLATION.

A. FIRE-RATED ACCESS DOORS AND FRAMES UNITS COMPLYING WITH NFPA 80 THAT ARE IDENTICAL TO ACCESS DOOR AND FRAME ASSEMBLIES TESTED FOR FIRE FLEST.FLESPORS CHARACTERISTICS PER THE FOLLOWING TEST METHOD AND THAT ARE LISTED AND LABELED BY UL.

B. VERTICAL ACCESS DOORS AND FRAMES TESTED PER NFPA 252 or UL. 108.

C. HORIZONITAL ACCESS DOORS AND FRAMES TESTED PER ASTM E 119 or UL. 263.

2. FLUSH METAL ACCESS DOORS AND FRAMES STESTED PER ASTM E 119 or UL. 263.

2. FLUSH METAL ACCESS DOORS AND FRAMES STESTED PER ASTM E 119 or UL. 263.

A. MATERIAL:

1. PAINTED GYD BD. SURFACES. PRIME-PAINTED COLD-PROLLED STEEL SHEET, ASTM A 1008/A 1008/A, COMMERCIAL STEEL (CS), EXPOSED.

II THE SURFACES (TOLET ROOMS): STANILESS STEEL, ASTM A 666, TYPE 304. REMOVE TOOL AND DIE MARKS AND STRETCH LINES OR BLEND INTO DIRECTIONAL SATIN NO. 4 FINISH.

B. DOOR. MINIMUM 0050-INCH (1.5-MM) THICK SHEET METAL, SET FLUSH WITH SURROUNDING FINISH SURFACES.

C. FRAME: MINIMUM 0050-INCH (1.5-MM) THICK SHEET METAL, SET FLUSH WITH SURROUNDING FINISH SURFACES.

D. HARDWARE:

1. HINGES: CONCEALED PIN TYPE

1. LATCH: SCREWINFEROPERATED CAM LATCH.

1. LATCH: SCREWINFEROPERATED CAM LATCH.

2. GRAD-PAICTURERS: KARP ASSOCIATES, INC., MILCOR, INC., OR APPROVED EQUAL.

3. GRAD-PAICES FOR EXPOSED OFFSUIM BOARD CEILINGS:

A. MATERIAL / CONSTRUCTION: HIGH DENSITY GYPSUM, COMPLETELY FREE OF BOTH ASBESTOS AND RESIN, REINFORCED WITH CONTINUOUS RANDOM FILMING INC. STREET ASSOCIATION. HIGH DENSITY GYPSUM, COMPLETELY FREE OF BOTH ASBESTOS AND RESIN, REINFORCED WITH CONTINUOUS RANDOM FILMING INC. SHELL THICKNESS: 1/B. 3/16-INCH.

1. SHELL THICKNESS: 1/B. 3/16-INCH.

8. FABRICATION: UNITS TO BE SUITABLY REINFORCED WITH STEEL OR WOOD. FINISH COMPATIBLE WITH LEVEL 5 GYPSUM BOARD FINISH.

C. MANUFACTURERS: INTEX FORMS, PLASTERGLASS INC., OR APPROVED EQUAL.

08 71 00 - DOOR HARDWARE

1. PROVIDE COMMERCIAL DOOR HARDWARE FOR OPENINGS SHOWN.

2. COORDINATION: COORDINATE DOOR HARDWARE WITH OTHER WORK. FURNISH SHOP DRAWINGS OF OTHER WORK WHERE REQUIRED OR REQUESTED TO COORDINATE INSTALLATION.

PREPARE DOOR HARDWARE SCHEDULE UNDER THE SUPERVISION OF SUPPLIER, DETAILING FABRICATION AND ASSEMBLY OF DOOR HARDWARE. AS WELL AS PROCEDURES AND DIAGRAMS. COORDINATE THE FINAL DOOR HARDWARE SCHEDULE WITH DOORS, FRAMES, AND RELATED WORK TO ENSURE PROPER SIZE, THICKNESS, HAND FUNCTION, AND FINISH OF DOOR HARDWARE.

 A FORMAT. COMPLY WITH SCHEDULING SEQUENCE AND VERTICAL FORMAT IN DOOR HARDWARE INSTITUTE'S "SEQUENCE AND FORMAT FOR THE HARDWARE SCHEDULE."

 B. ORGANIZATION: ORGANIZE THE DOOR HARDWARE SCHEDULE INTO DOOR HARDWARE SETS INDICATING COMPLETE DESIGNATIONS OF EVERY ITEM.

IRED FOR EACH DOOR OR OPENING. PROVIDE COMPLETE HARDWARE SETS FOR ALL OPENINGS SHOWN, IN COMPLIANCE WITH LOCAL CODES AND INDUSTRY STANDARDS.

C. PADVIDE COMPLET I PROMOVANE 21 OWALL OF PRIVATE STOWN, IN CONTINUE WAY IN CONCINCTION OF THE PROMOVED AND STANDARD.

D. WHERE REQUIRED TO MATCH EXISTING BUILDING ITEMS, PROVIDE MANUFACTURERS AND PRODUCTS I THAT MATCH BUILDING STANDARD.

E. COORDINATE DOOR FUNCTION AND KEYING WITH TENANT / OWNER.

FIRE-RATED DOOR ASSEMBLIES. PROVIDE DOOR HARDWARE FOR ASSEMBLIES COMPLYING WITH NFPA 80 THAT ARE LISTED AND LABELED BY A TESTING AND SPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, FOR FIRE RATINGS INDICATED, BASED ON TESTING ACCORDING TO NFPA 252. 5. SUPPLIER QUALIFICATIONS: DOOR HARDWARE SUPPLIER WITH WAREHOUSING FACILITIES IN PROJECT'S VICINITY AND WHO IS OR EMPLOYS A QUALIFIED

ARCHITECTURAL HARDWARE CONSULTANT, AVAILABLE DURING THE COURSE OF THE WORK TO CONSULT WITH CONTRACTOR, ARCHITECT, AND OWNER ABOUT DOOR HARDWARE AND KEYING. 6. INSTALL EACH DOOR HARDWARE ITEM TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. PROVIDE DOOR REINFORCING AND BLOCKING FOR INSTALLATION OF DOOR HARDWARE WITHOUT THRUSOLTS. DO NOT INSTALL SURFACE-MOUNTED ITEMS UNTIL FINISHES HAVE BEEN COMPLETED ON SUBSTRATES INVOLVED. SET UNITS LEVEL, PLUMB, AND TRUE TO LINE AND LOCATION. ADJUST AND REINFORCE ATTACHMENT SUBSTRATES AS NECESSARY FOR PROPER INSTALLATION AND OPERATION.

08 80 00 - GLAZING

MATERIALS: AS SCHEDULED ON THE DRAWINGS. GLAZING FOR FIRE-RATED ASSEMBLIES: GLAZING FOR ASSEMBLIES THAT COMPLY WITH NFPA 80 AND THAT ARE LISTED AND LABELED BY A TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, FOR FIRE RATINGS INDICATED, BASED ON TESTING ACCORDING TO NFPA 257.

4. GLAZING PUBLICATIONS: COMPLY WITH PUBLISHED RECOMMENDATIONS OF GLASS PRODUCT MANUFACTURERS AND ORGANIZATIONS BELOW, UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED. REFER TO THESE PUBLICATIONS FOR GLAZING TERMS NOT OTHERWISE DEFINED IN THIS SECTION OR IN REFERENCED STANDARDS

FERENCED STANDARDS.

GLASS ASSOCIATION OF NORTH AMERICA (GANA) PUBLICATIONS: GANA LAMINATED DIVISION'S "LAMINATED GLASS DESIGN GUIDE" AND GANA'S.

3. SAFETY GLAZING PRODUCTS: COMPLY WITH TESTING REQUIREMENTS IN 16 CFR 1201 AND, FOR WIRED GLASS, ANSI 297:

Humana

Humana Memphis, TN MarketPoint

6515 Poplar Avenue Suites 107&108 Memphis, TN 38119

Prepared for Humana

Contract No: 13.01656.00



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Issue Description YYYY-MM-DI Revision Description YYYY-MM-DE

Drawn by Author Reviewed by Checker Project No 13.01656.00

OUTLINE SPEC.

NOT FOR CONSTRUCTION

OUTLINE SPECIFICATION

99 00 00 - FINISHES - COMMON WORK RESULTS
1. ADHESIVES. USE WATER RESISTANT. LOW DOOR LOW VOLATILE, NON-TOXIC AND EMIT LESS THAN EPA MAXIMUM EMISSION RATE GUIDELINE OF O. MCMAYLER, FOR VOLATILES VOC CONTENT OF 65 GL. OR LESS WHEN CALCULATED ACCORDING TO 40 CFR 59, SUBPART D (FPA METHOD 24): AND MEETING GOVERNMENT REQUIREMENTS, AND AS RECOMMENDED BY MANUFACTURER TO SUIT PRODUCTS AND SUBSTRATE CONDITIONS INDICATED.

- 2. BASIS OF DESIGN FINISH PRODUCTS ARE SCHEDULED ON THE DRAWINGS.
- 3. INSTALLER QUALIFICATIONS: MINIMUM 3 YEARS EXPERIENCE IN WORK OF APPLICABLE SECTIONS
- SAMPLES: PROVIDE SAMPLES OF SIZE SUITABLE FOR REVIEW.
 A SAMPLES FOR INITIAL SELECTION: SUBMIT FOR COMPONENTS WITH FACTORY-APPLIED COLOR FINISHES NOT PRE-SELECTED.
 SAMPLES FOR VERIFICATION (PRE-SELECTED COLORS AND PRODUCT CHARACTERISTICS): SUBMIT FOR EACH COMPONENT INDICATED AND FOR
- 5. WARRANTIES: WARRANT FINISH PRODUCTS AGAINST
 A. CARPET INSTALLATION: 2 YEAR WARRANTY: DEFECTIVE MATERIALS AND WORKMANSHIP, ISSUED JOINTLY BY FINISH MATERIAL MANUFACTURER; CONTRACTOR, AND INSTALLER.
 B. CARPET MATERIAL: MANUFACTURER'S LIMITED 10-YEAR COMMERCIAL WEAROUT / DELAMINATING / TUFT-BIND WARRANTY.
- 6. EXTRA STOCK: PROVIDE 10% PERCENT OF SPECIFIED CARPET, VCT, AND FLOORING MATERIALS TO THE OWNER.
- 7. INSTALL FINISH MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS TO MEET PROJECT REQUIREMENTS INDICATED.
- 8 MOISTURE VAPOR EMISSION TESTS FLOORING: TEST FACH 1 000-SQ FT (92 9-SQ M) OF FLOORING SUBSTRATE, OR PORTION THEREOF, WITH AN PROUS CALCIUM CHLORIDE TEST KIT EQUIVALENT TO THE VAPRECISION TEST KIT PRODUCED BY VAPRECISION PROFESSIONAL VAPOR EMISSION
- ANHYDROUS CALCIUM CHLORIDE TEST KIT FOUIVALENT TO THE VAPRECISION TEST KIT PRODUCE. BY VAPRECISION PROFESSIONAL VAPONE EMISSION TESTING SYSTEMS, NEWPORT BEACH, CA (TELB BOOK 1446-144).

 A. CONDUCT TESTS FOR A MINIMUM OF 72-HOURS IN ACCORDANCE WITH THE TEST KIT MANUFACTURERS PRINTED INSTRUCTIONS.

 B. AM EMISSION RATE OF LESS THAN 3.0-LBT, 000 SO FT (14.6-KG/SO M) IN 24-HOURS INDICATES THAT SUBSTRATE IS ACCEPTABLE FOR FLOORING INSTALLATION.

 C. IF EMISSION RATES ARE 3.0-LBT, 000 SO FT (14.6-KG/SO M) in 24-HOURS OR GREATER ANYWHERE IN THE AREA TESTED. SUBMIT A WRITTEN TEST REPORT TO ARCHITECT AND OWNER WITHIN 24-HOURS, INDICATING THE TYPE OF TEST KIT USED AND THE TEST RESULTS AT EACH LOCATION
- D. IN ADDITION, SUBMIT A PROPOSAL TO FURNISH AND INSTALL A VAPOR EMISSION CONTROL PENETRATE SYSTEM, OR A VAPOR EMISSION CONTROL COATING SYSTEM, OR A VAPOR EMISSION CONTROL DISPERSAL MEMBRANE SYSTEM AS DICTATED BY TEST RESULTS AND PRODUCED BY FLOOR SEAL TECHNOLOGY, INC., SAN DISCO, CAI (TEL) BOYS 22-234, OR DINE OF THE APPROPIATE VAPASTOP FAST-CURE PEDAY CONCRETE WATER SEALER SYSTEM. PRODUCED BY DUPONT FLOORING SYSTEMS, KENNESAW, GA (TEL) BOY-187-68W, DIPONT COMMERCIAL COM

09 22 16 - NON-STRUCTURAL METAL FRAMING

- A FIRE-TEST-RESPONSE CHARACTERISTICS: FOR FIRE-RESISTANCE-RATED ASSEMBLIES THAT INCORPORATE NON-LOAD-BEARING STEEL FRAMING, PROVIDE MATERIALS AND CONSTRUCTION IDENTICAL TO THOSE TESTED IN ASSEMBLY INDICATED ACCORDING TO ASTM E 119 BY AN INDEPENDENT
- IESING AGENCY.

 B. STC-RATED ASSEMBLIES: FOR STC-RATED ASSEMBLIES, PROVIDE MATERIALS AND CONSTRUCTION IDENTICAL TO THOSE TESTED IN ASSEMBLY INDICATED ACCORDING TO ASTM E 90 AND CLASSIFIED ACCORDING TO ASTM E 413 BY AN INDEPENDENT TESTING AGENCY.
- 2 STEEL FRAMING: COMPLY WITH ASTM C 754 FOR CONDITIONS INDICATED. METAL COMPLYING WITH ASTM C 645 REQUIREMENTS. ASTM A 653/A 653M.
- 2. STEEL FRANKING COMPET WITH AS JUST OF YOR CONDITIONS INDUCATED. WE FALL COMPETING WITH AS JUST OR SPECIALIZED WITH AS JUST OR SOSIN, GOO (7180), HOT DE GALVANIZED TO MINOR OF MANUFACTURED TO ALLOW PARTITION HEADS TO EXPAND AND CONTRACT WITH MOVEMENT OF THE STRUCTURE WHILE MAINTAINING CONTINUITY OF FIRE RESISTANCE-RATED ASSEMBLY INDICATED; IN THICKNESS NOT LESS THAN INDICATED FOR STUDS AND IN WIDTH TO ACCOMMODATE DEPTH OF STUDS
- 3. GRID SUSPENSION SYSTEM FOR INTERIOR CEILINGS: ASTM C 645, DIRECT-HUNG SYSTEM COMPOSED OF MAIN BEAMS AND CROSS-FURRING MEMBERS
- FURRING CHANNELS (FURRING MEMBERS):
 A COLD-ROLLED CHANNELS: 0.0538-INCH (1.37-MM) BARE-STEEL THICKNESS, WITH MINIMUM 1/2-INCH- (12.7-MM-) WIDE FLANGES, 3/4 INCH (19.1 MM) DEEP.

99.29 to .CVPSJIM BOARD 1. FIRE-TEST-RESPONSE CHARACTERISTICS: PROVIDE MATERIALS AND CONSTRUCTION IDENTICAL TO THOSE TESTED IN ASSEMBLY INDICATED ACCORDING TO ASTM E 119 BY AN INDEPENDENT TESTING AND INSPECTING AGENCY.

- 3. GYPSUM WALLBOARD: ASTMIC 36, TYPE AND THICKNESS INDICATED.
- 4. WATER-RESISTANT GYPSUM BACKING BOARD: ASTM C 630/C 630M, WITH CORE TYPE AND IN THICKNESS INDICATED.
- 5. INTERIOR GALVANIZED METAL TRIM: ASTM C 1047.
- 6 EXTRUDED ALLIMINUM TRIM: PROFILES AND DIMENSIONS INDICATED. FRY REGIET CORP. GORDON, INC., PITTCON INDISTRIES, OR APPROVED FOLIAL
- 7. JOINT TREATMENT MATERIALS:
 a. GENERAL: PROVIDE MATERIALS COMPLYING WITH ASTM C 475, ASTM C 840, AND RECOMMENDATIONS OF MANUFACTURER OF BOTH GYPSUM BOARD AND JOINT TREATMENT MATERIALS FOR THE APPLICATION INDICATED.
 b. JOINT TAPE: PAPER REINFORCING TAPE:
 c. SETTING-TYPE JOINT COMPOUNDS: CHEMICAL-HARDENING POWDER.
 d. DRYNING-TYPE JOINT COMPOUNDS: WITY-BASED PRODUCTS.

- 8. NON-LOAD-BEARING STEEL FRAMING INSTALLATION: ASTM C 754, AND ASTM C 840 REQUIREMENTS THAT APPLY TO FRAMING INSTALLATION.
- 10. GYPSLIM BOARD INSTALLATION: COMPLY WITH ASTM C 840 AND GA.216
- 11, WATER-RESISTANT GYPSUM BACKING BOARD: INSTALL WITH 1/4-INCH (6.4-MM) GAP WHERE PANELS ABUT OTHER CONSTRUCTION OR PENETRATIONS.
- 12. LEVELS OF GYPSUM BOARD FINISH. PROWIDE THE FOLLOWING LEVELS OF GYPSUM BOARD FINISH PER GA. 214.

 a. LEVEL 1 FOR CELIURG PLENUM AREAS, CONCEALED AREAS, AND WHERE INDICATED, UNLESS A HIGHER LEVEL OF FINISH IS REQUIRED FOR FIREPRESISTIVE_REATED ASSEMBLIES.

 b. LEVEL 2 WHERE WAITER RESISTANT GYPSUM BACKING BOARD PAIRLS FORM SUBSTRATES FOR TILE, AND WHERE INDICATED.

 c. LEVEL 4 FOR GYPSUM BOARD SURFACES UNLESS OTHERWISE INDICATED.

 d. LEVEL 5 FOR GYPSUM BOARD SURFACES WHERE INDICATED TO RECEIVE SMOOTH FINISH AND/OR WALL WASH LIGHT FIXTURES.

09_30 00 - TILING
1. TILE PRODUCTS: AS INDICATED ON DRAWINGS AND SCHEDULES.

- WATERPROOFING AND CRACK-SUPPRESSION MEMBRANE: MANUFACTURERS STANDARD PRODUCT THAT COMPLIES WITH ANSI A118.10; NOBLE COMPANY (THE); NOBLESEAL TS, CHLORINATED-POLYETHYLENE-SHEET.
- 3 PORTLAND CEMENT MORTAR (THICKSET) INSTALLATION MATERIALS: ANSI A108 1A
- 4. DRY-SET PORTLAND CEMENT MORTAR (THIN SET): ANSLA118.1.
- 5. LATEX-PORTLAND CEMENT MORTAR (THIN SET): ANSI A118.4.
- 6. CHEMICAL-RESISTANT, WATER-CLEANABLE, TILE-SETTING AND -GROUTING EPOXY: ANSI A118.3.
- 7. POLYMER-MODIFIED TILE GROUT: ANSI A118.7. MAPEL COLOR #35 NAVAJO BROWN.
- 8. ONE-PART, MILDEW-RESISTANT SILICONE: ASTM C 920: TYPE S; GRADE NS; CLASS 25; FORMULATED WITH FUNGICIDE, INTENDED FOR IN-SERVICE EXPOSURES OF HIGH HUMIDITY AND EXTREME TEMPERATURES.
- 9. ANSI TILE INSTALLATION STANDARDS: COMPLY WITH PARTS OF ANSI A108 SERIES "SPECIFICATIONS FOR INSTALLATION OF CERAMIC TILE" THAT APPLY TO TYPES OF SETTING AND GROUTING MATERIALS AND TO METHODS INDICATED IN CERAMIC TILE INSTALLATION SCHEDULES.
- 1. TCA INSTALLATION GUIDELINES: TCAS "HANDBOOK FOR CERAMIC TILE INSTALLATION." COMPLY WITH TCA INSTALLATION METHODS INDICATED IN CERAMIC TILE INSTALLATION SO HEDULES.

- 09 51 00 ACOUSTICAL CEILINGS
 1. PANELS AND SUSPENSION SYSTEMS: SEE FINISH LEGEND AND SCHEDULE FOR PRODUCT SELECTIONS, COLORS, AND LOCATIONS
- 2. INSTALL ACOUSTICAL PANEL CEILINGS TO COMPLY WITH ASTM C 636 REQUIREMENTS, MANUFACTURER'S WRITTEN INSTRUCTIONS, AND CISCA'S "CEILING

09 65 13 - RESILIENT BASE AND ACCESSORIES 1. RESILIENT BASE STANDARD: ASTM F 1861.

- A. MATERIAL REQUIREMENT: TYPE TV
 B. MANUFACTURING METHOD: GROUP 1
 C. STYLE: STANDARD TOP-SET COVE
- 2. MINIMUM THICKNESS: 1/8°
- 3. HEIGHT: 4"

- 5. INSTALLATION MATERIALS
 A TROWELABLE LEVELING AND PATCHING COMPOUNDS. LATEX-MODIFIED, PORTLAND CEMENT BASED OR BLENDED HYDRAULIC-CEMENT-BASED
 FORMULATION PROVIDED OR APPROVED BY MANUFACTURER FOR APPLICATIONS INDICATED.
 B. ADHESVES. WATER-RESISTANT TYPE RECOMMENDED BY MANUFACTURER TO SUIT RESILIENT PRODUCTS AND SUBSTRATE CONDITIONS INDICATED.

- RESULENT BASE. INSTALLATION
 A. COMPLY WITH MANUPACTURERS WRITTEN INSTRUCTIONS FOR INSTALLING RESILIENT BASE.
 B. APPLY RESULENT BASE TO WALLS, COLUMNS, PILASTERS, CASEWORK AND CABINETS IN TOE SPACES, AND OTHER PERMANENT FIXTURES IN ROOMS
 AND AREAS WHERE BASE IS REQUIRED.
 C. INSTALL RESULENT BASE IN LENGTHS AS LONG AS PRACTICABLE WITHOUT GAPS AT SEAMS AND WITH TOPS OF ADJACENT PIECES ALIGNED.
 C. INSTALL RESULENT BASE IN LENGTHS AS LONG AS PRACTICABLE WITHOUT GAPS AT SEAMS AND WITH TOPS OF ADJACENT PIECES ALIGNED.
 D. TIGHTLY ADMERE RESILENT BASE TO SUBSTRATE THROUGHOUT LENGTH OF EACH PIECE. WITH BASE IN CONTINUOUS CONTACT WITH HORIZONTAL AND
- VERTICAL SUBSTRATES.
 E. DO NOT STRETCH RESILIENT BASE DURING INSTALLATION.

- 09 65 16 RESILIENT SHEET FLOORING

 1. RESILIENT SHEET FLOORING COMPLIES WITH FLOORSCORE STANDARD.

- LOW-YOC ADHESIVE
 ADHESIVE ARE LOW EMITTING FOR LEED
 SEAMING METHOD: STANDARD
 INSTALLATION MATERIALS:
 A. TROWELABLE LEVELING AND PATCHING COMPOUNDS.
- B. ADHESIVES.
 C. SEAMLESS-INSTALLATION ACCESSORIES.

09 65 19 - RESILIENT TILE FLOORING

- RESILIENT TILE ELOORING COMPLIES WITH ELOORSCORE STANDARD. 2. LOW-VOC ADHESIVE AND SEALANT

- 2. LOW-VOC ADHESIVE AND SEALANT:
 B. VIMYL COMPOSTION FLOOR TILE:
 1. SIZE: 12 BY 12 INCHES (305 BY 305 MM).
 C. INSTALLATION MATERIALS:
 1. TROWELABLE LEVELING AND PATCHING COMPOUNDS.
 2. ADHESIVES:
 3. SEAMLESS-INSTALLATION ACCESSORIES.
- FLOOR POLISH.
- FLOOR POLISH.
 FLOOR TILE INSTALLATION
 A LAY TILES SOLIARE WITH ROOM AXIS
 B. FOR STATIC DISSIPATIVE TILE, REFERENCE MANUFACTURER'S INSTALLATION REQUIREMENTS.

- 09_68 00 CARPETING / 09 68 13 TILE CARPETING / 09 68 16 SHEET CARPETING
 1. SUBMIT SHOP DRAWINGS INDICATING CARPET LOCATIONS, SYE LOT LIMITATIONS, SEAMING PLAN, METHOD OF JOINING SEAMS, DIRECTION OF CARPET IN EACH
 ROOM OR RAFE, AND TYPE AND LOCATION OT TRANSITION STRIPS. SUBMIT SAMPLES: 12X12 INCH SAMPLES IN EACH COLOR AND PATTERN. SUBMIT SAMPLE OF
 TRANSITION STRIPS, 4 INCHES LONG IN EACH COLOR.
- SEAMING MATERIALS: AS RECOMMENDED BY CAPPET MANUFACTURER. ADHESIVE WATERPROOF LATEX BASED CEMENT FORMULATED SPECIFICALLY FOR INSTALLING CAPPET: RECOMMENDED BY CAPPET MANUFACTURER. LEVELING COMPOUND: WHITE. PREMIXED. LATEX BASED.
- 3. INSTALL CARPET IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PROVIDE "LOK DOTS" FOR ALL CARPET TILE.

09 72 00 - DRY ERASE WALLCOVERING (WALLTALKER)

- 1. WRITABLE WALL COVERING: PROVIDE WALLTALKER "JUST-RITE", 21 OZ/SQ, YD, WOVEN BACK VINYL SURFACE AND FOR DRY ERASE
- MARKERS BY WALLTALKERS, FAIRFIELD, OH
 2. GENERAL: COMPLY WITH WALL-COVERING MANUFACTURERS' WRITTEN INSTALLATION INSTRUCTIONS APPLICABLE TO PRODUCTS AND
 APPLICATIONS INDICATED EXCEPT WHERE MORE STRINGENT REQUIREMENTS APPLY. PREPARE SUBSTRATES TO ACHIEVE A SMOOTH, DRY, CLEAN, STRUCTURALLY SOUND SURFACE FREE OF FLAKING, UNSOUND COATINGS.
- RACKS, AND DEFECTS.

 a. MOISTURE CONTENT: MAXIMUM OF 5 PERCENT ON NEW PLASTER, CONCRETE, AND CONCRETE MASONRY UNITS WHEN TESTED WITH NELECTRONIC MOISTURE METER.

 b. PLASTER: ALLOW NEW PLASTER TO CURE. NEUTRALIZE AREAS OF HIGH ALKALINITY. PRIME WITH PRIMER AS RECOMMENDED IN
- WRITING BY PRIMER/SEALER MANUFACTURER AND WALL-COVERING MANUFACTURER.

 c. METALS: IF NOT FACTORY PRIMED, CLEAN AND APPLY METAL AS RECOMMENDED IN WRITING BY PRIMER/SEALER MANUFACTURER AND
- WALL-COVERING MANUFACTURER.
 d. GYPSUM BOARD, PRIME WITH PRIMER AS RECOMMENDED IN WRITING BY PRIMER/SEALER MANUFACTURER AND WALL-COVERING MANUFACTURER.
- ED SURFACES: TREAT AREAS SUSCEPTIBLE TO PIGMENT BLEEDING. f. PROVIDE LEVEL 5 FINISH ON WALL ACCORDING TO SECTION 09,29.0 ITEM 12
- 4. ADHESIVE: MANUFACTURER'S STANDARD FOR USE WITH SPECIFIC WALL COVERING AND SUBSTRATE APPLICATION. MUST BE VOC COMPLIANT AND LESS THAN 250 G/L FOR SPECIAL PURPOSE CONTACT ADHESIVE.
- 5. PRIMER/SEALER: OIL BASE SEALER OR ENAMEL UNDERCOAT FOR VIRGIN DRYWALL SUBSTRATES AS RECOMMENDED BY THE RESPECTIVE WALL COVERING MANUFACTURER. MUST BE VOC COMPLIANT AND LESS THAN 150 GIL. 6. ALUMINUM TRIM: PROVIDE WALLTALKER "SNAP-ON ALUMINUM TRIM & TRAY", 5/16" X 1-3/4" WIDE. PROVIDE IN CONJUNCTION WITH WALL COVER W.C.2. FINISH: CLEAR, NATURAL ANODIZED FINISH.
- 7. INSTALL SEAMS VERTICAL AND PLUMB AT LEAST 6 INCHES FROM OUTSIDE CORNERS AND 3 INCHES FROM INSIDE CORNERS. NO HORIZONTAL SEAMS PERMITTED.
- 8 TRIM FDGES FOR COLOR LINIFORMITY, PATTERN MATCH, AND TIGHT CLOSURE AT SEAMS AND FDGES. BUTT SEAMS 9. REMOVE EXCESS ADHESIVE AT FINISHED SEAMS, PERIMETER EDGES, AND ADJACENT SURFACES.
- 10. USE CLEANING METHODS RECOMMENDED BY THE WALL COVERING MANUFACTURER.
- 11. REPLACE STRIPS THAT CANNOT BE CLEANED.
- 12 ACCESSORIES: DRY FRASE STARTER KIT

- 1.1 RELATED DOCUMENTS

 A. EXTENT OF FRP PANEL SYSTEM WORK IS INDICATED ON THE DRAWINGS AND IN THE FINISH SPECIFICATIONS ON SHT
- FIRE PERFORMANCE CHARACTERISTICS: PROVIDE FRP PANEL SYSTEM THAT IS IDENTICAL TO THOSE TESTED FOR THE FOLLOWING FIRE PERFORMANCE.

 RACTERISTICS, ACCORDING TO ASTM TEST METHOD INDICATED, BY UL OR OTHER TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES.
- HAVING JURISDICTION.

 B. SURFACE BURNING CHARACTERISTICS: AS FOLLOWS, TESTED PER ASTM E 84.

 1. FLAME SPREAD: 25 OR LESS.

 2. SMOKE DEVELOPED: 450 OR LESS.

- A MANUFACTURER'S DATA: SUBMIT MANUFACTURER'S DETAILED MATERIALS AND INSTALLATION SPECIFICATIONS AND OTHER DATA FOR ERP PANEL
- SYSTEM.

 B. SAMPLES: SUBMIT SAMPLE NOT LESS THAN 12" X 12" IN SIZE OF COLOR, GRADE AND FINISH OF FRP PANEL SYSTEM REQUIRED. SAMPLE TO INCLUDE
- C. MAINTENANCE DATA: SUBMIT MANUFACTURER'S CARE AND MAINTENANCE DATA, INCLUDING REPAIR AND CLEANING INSTRUCTIONS FOR SYNTHETIC
- 1-3 DELIVERT, 3 DEARMER AND PRINCIPIES.

 A. PROTECT FOR PANELS AND ACCESSORY ITEMS FROM DAMAGE DURING LOADING, SHIPMENT, DELIVERY AND STORAGE. USE NON-STAINING MATERIALS FOR BLOCKING AND PACKING. STACK UNITS AT THE SITE IN ACCORDANCE WITH FABRICATOR'S RECOMMENDATIONS.

- 2.1 MATERIALS: A. FRP PANEL SYSTEM: GLASLINER FRP

- A FRP PANEL SYSTEM. GLASLINER FRP
 1. THICKNESS. 0909 INCH.
 2. SURFACE TEXTURE: SMOOTH GEL COAT.
 3. WIDTH: A-0' WIDE X LONGEST POSSIBLE LENGTH TO ELIMINATE VERTICAL JOINTS.
 4. FIRE RESISTANCE: CLASS C.
 5. COLOR: SELECTED BY ARCHITECT
 B. SEALANTS: PROVIDE TYPES AS RECOMMENDED BY THE MANUFACTURER OF FRP PANELS. MUST BE VOC COMPLIANT AND LESS THAN 250 G/L. COLOR TO B. SEALANTS: PROVIDE 1145 AS RECOMMENDED BY THE MANUFACTURER OF PREPARELS, MIDS 18 YOU. COMPLIANT AND LESS THAN 250 GL. COLOR I MATCH PARELS.

 ATTACHMENT DEVICES: PROVIDE TYPE AS RECOMMENDED BY THE FRP PAREL MANUFACTURER, AND AS REQUIRED TO SUIT WALL CONSTRUCTION TO WHICH THE PARELS ARET TO BE APPELDE EXPOSED IN YOUR ORITY TASTERIES SHALL MATCH COLOR OF PAMELS SELECTED.

 D. TRIM: PROVIDE PANELING COMPLETE WITH TRIM FOR INSIDE AND OUTSIDE CORNERS AND TOP CAPPING STRIPS AND DIVIDER BARS.

PART 3 - EXECUTION

- 3.1 INSTALLATION:
 A. INSTALL SYSTEM IN ACCORDANCE WITH FRP MANUFACTURER'S INSTRUCTIONS.
 B. PANELS SHALL BE INSTALLED PLUMB, LEVEL. TRUE TO LINE, AND IN CORRECT RELATIONSHIP TO ADJACENT WORK. UNLESS OTHERWISE APPROVED BY
 THE ARCHITECT, HORIZONTAL JOINTS ENTEWER PANELS SHALL IN DIE ACCEPTABLE.
 C. VERTICAL SEAMS SHALL BE SEALED TO MATCH PARKET LOCIOR. USE OF TRIM SHALL NOT BE PERMITTED.
 D. PROTICET SURFACES FROM DAMAGE. REPLACE DAMAGED WORK.
- END OF SECTION 097300

- 99 90 00 PAINTING AND COATING
 1. SUBMIT PRODUCT DATA FROM MANUFACTURER FOR PROPOSED USE. INCLUDE PRODUCT DESIGNATION AND GRADE OF EACH PAINT AND COATING
 TYPE. SURFACE PREPARATION MATERIALS AND PROCEDURES, AND PRODUCT ANALYSIS AND PERFORMANCE CHARACTERISTICS FOR EACH PAINT AND
 COATING TYPE.
- 2. SUBMIT SAMPLES OF 8.5"X11" INCH FOR EACH TYPE PAINT SHOWING COLOR AND LUSTER, ON REPRESENTATIVE SUBSTRATE. SUBMIT 12X12 INCH TEXTURE SAMPLES ON CYPSUM BOARD BACKING.
- 3. PROVIDE 1 GALLON CONTAINERS EXTRA STOCK OF EACH COLOR FINISH COAT TO THE OWNER.
- 4. FOR GYPSUM BOARD SURFACES, USE PRODUCT SHERWIN WILLIAMS DURATION HOME INTERIOR ACRYLIC LATEX. NO SUBSTITUTIONS UNLESS APPROVED BY ARCHITECT. 5 DO NOT THIN PAINT IN EXCESS OF MANUFACTURER'S RECOMMENDATIONS.
- 6. APPLY PAINTS AND COATINGS WITHIN MINIMUM DRY FILM THICKNESS RANGE RECOMMENDED BY MANUFACTURER. MATCH FINAL COAT OF PAINT TO APPROVED COLOR. 7. THE NUMBER OF COATS AND FILM THICKNESS REQUIRED IS THE SAME REGARDLESS OF THE APPLICATION METHOD. DO NOT APPLY SUCCEEDING COATS UNTIL THE PREVIOUS COAT HAS CURED AS RECOMMENDED BY THE COATING MANUFACTURER. SAND BETWEEN APPLICATIONS WHERE SAND IS REQUIRED TO PRODUCE AN EVEN SMOOTH SURFACE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS. SAND LIGHTLY BETWEEN EACH
- APPLY ADDITIONAL COATS AND BARRIER COATS WHEN UNDERCOATS, STAINS, OR OTHER CONDITIONS SHOW THROUGH FINAL COAT OF PAINT UNTIL PAINT FILM IS OF UNIFORM SHEEN, FINISH, OCLOR, AND APPEARANCE. GIVE SPECIAL ATTENTION TO ENSURE THAT SURFACES, INCLUDING EDGES, CORNERS, GREWLECK, WELDS, AND EAPOSED ATSTERHERS, RECEIVE A GROWTH FILM THROUGH SECULDATION TO THAT OF FLAT SURFACES.
- 9. BEFORE APPLICATION OF FINISH COATS, APPLY A PRIME COAT OF MATERIAL AS RECOMMENDED BY THE MANUFACTURER TO MATERIAL THAT IS REQUIRED TO BE PAINTED OR FINISHED AND HAS NOT BEEN PRIME COATED BY OTHERS. CLEAN AND TOUCH-UP PRIME PAINT WELDS AND OTHER
- 11 PAINT INTERIOR SURFACES OF DUCTS. WHERE VISIBLE THROUGH REGISTERS OR GRILLES, WITH A FLAT NONSPECIAL ARRIVACE PAINT
- 12. PAINT BACK SIDES OF ACCESS PANELS AND REMOVABLE OR HINGED COVERS TO MATCH EXPOSED SURFACES.
- 14. FINISH EXTERIOR DOORS ON TOPS, BOTTOMS, AND SIDE EDGES SAME AS EXTERIOR FACES.

10 26 00 CORNER GUARDS

- Heavy-Duty Corner Trim: Fabricate from extruded aluminum with continuous integral 7/8" wide tapered fin with staggered hole to receive standard fasteners, and uous grooves into face of fins to improve bonding of gypsum board joint compound. Heavy-duty corner trim shall prime painted after fabrication.
- Product/Manufacturers: *DMCT* by Fry Reglet Corp., or *S0-HSE-90* by Pittcon Industries.

DAMAGED AREAS OF SHOP PRIMED ITEMS.

- 12.24 13 WINDOW SHADES
 1. PROVIDE MANUALLY OF BEATED ROLLER SHADES.
 2. CHAIN-MID-CLUTCH OPERATING MECHANISMS: WITH CONTINUOUS LOOP STAINLESS STEEL BEAD CHAIN AND CLUTCH THAT STOPS SHADE MOVEMENT WHEN BEAD CHAIN IS RELEASED. PERMANENTLY ADJUSTED AND LUBRICATED.
 3. ROLLERS, COMPRISON RELEASED. PERMANENTLY ADJUSTED AND LUBRICATED.
 5. ROLLERS, COMPRISON RELEASED. PERMANENTLY ADJUSTED AND LUBRICATED WHILE ADJUSTED AND WALL THEOXIESSES RECOURSED TO ACCOMMODATE SHADE AND WALL THEOXIESSES RECOURSED TO ACCOMMODATE OF THE PERMANENT PROPRIED WHITE PERMANENTLY LUBRICATED DRIVE. FID ASSEMBLIES AND DILE-RID ASSEMBLIES DESIGNED TO FACILITATE REMOVAL OF SHADEBANDS FOR SERVICE.
 4. MOLINITING HARDWARE: BROKENTS OR BENDGAS, CORPOSION RESISTANT AND COMPATIBLE WITH ROLLER ASSEMBLY, OPERATING MECHANISM, INSTALLATION ACCESSORIES, AND MOLINITING LOCATION AND CONDITIONS INDICATED.
 5. SHADEBAND MATERIAL FLAME-RESISTANCE RATING: COMPLY WITH HEPA 701. IDENTITY PRODUCTS WITH APPROPRIATE MARKINGS OF APPLICABLE TESTING AGENCY.
 6. PROVIDE SINISHADOW 3000 RS SERIES MANUAL SOLAR SHADES, OPENNESS FACTOR 3 PERCENT. DISTRIBUTED BY ALKENZ BY ROLLEASE. COLOR RRB2. PROVIDE WITH MANUFACTURERS STANDARD HEM BAR FOR OPERATION SPECIFIED.
- - NOT FOR CONSTRUCTION

Humana

Humana Memphis, TN MarketPoint

6515 Poplar Avenue Suites 107&108 Memphis, TN 38119 Prepared for

Contract No: 13.01656.00

Humana



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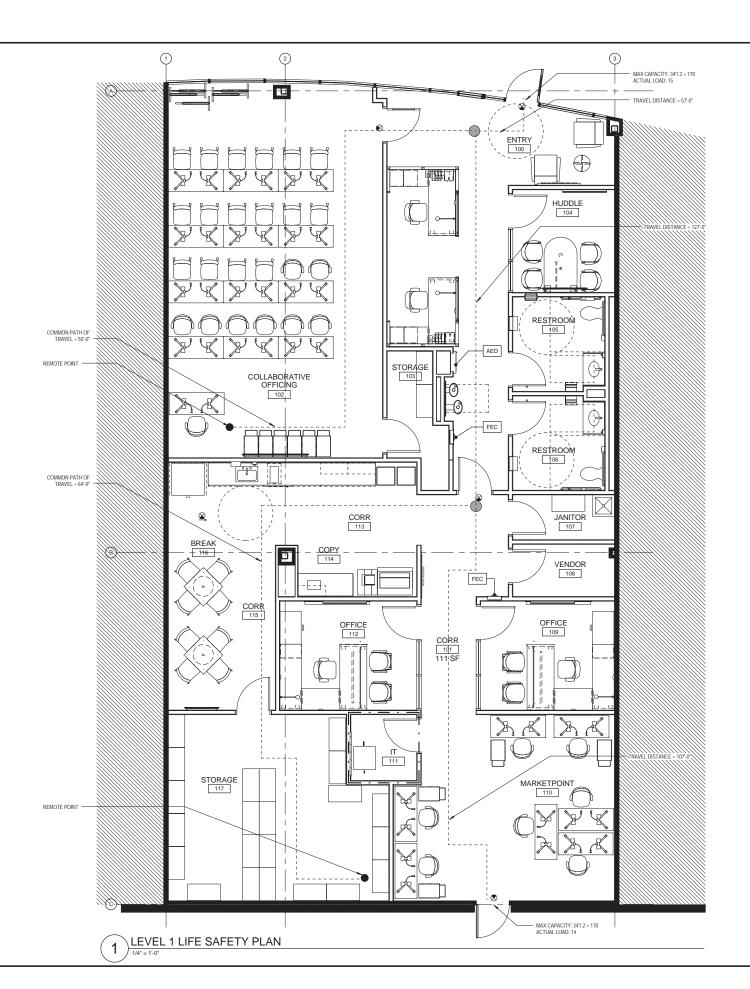
MEP Engineer 1534 Ormsby Station Ct. Louisville KY 40224 502.426.9457

No. Issue Description YYYY-MM-DI Revision Description YYYY-MM-DE

Drawn by Author Reviewed by Checker

OUTLINE SPEC.

Project No 13.01656.00



T40	OTV	T	MANUF.	MODEL
TAG	QTY	Туре		
	1	Multi Function Printer	Humana DSI	N/A
AED	1	Defribirllator		
AP-2	1	Refrigerator - Side X Side	GE	GSHS6HGDSS
AV	2			
AV	1	46" LCD		
EQ-3	2	Shredder Bin		20"x20"
FEC	2	FEC Semi Recessed	N/A	N/A
MA-1	1	Standard Unit		
MA-2	1	Soap Dispenser BRK RM Wall Mounted	American Specialites	#0361
MA-3	2	Soap Dispenser	Gojo	2799-12eeu00 / 2762-06
MA-4	2	Coat Hook	Peter Pepper	2041 Alum
MKB	3	Marker Board 4'-0"	Steelcase	N/A
RA-2	2	Grab Bar 42"	Bobrick	B-6806-42
RA-3	2	Grab Bar 36"	Bobrick	B-6806-36
RA-4	3	Toilet Tissue & Seat Cover Dispen.	Bobrick	B-3474
RA-6	2	Sanitary Napkin Vending	Bobrick	B-47064
RA-7	2	Mirror w Metal Frame	Bobrick	B-165 2436
RA-8	2	Paper Towel & Trash	Bobrick	B-3974
RA-12	2	18"		
AP-1	1	Coffee Maker 2	SODEXO	ITEM CODE #260
AP-4	1	Microwave 2	GE	JEB1860SM
MA-1	1	Towel Dispenser (BRK RM) - Surface Mounted	BOBRICK	B-4262
EQ-2	1	Postage Meter - Countertop	Humana DSI	N/A
RA-1	2	Dyson Airblade	Dyson	AB14
RA-5	2	Sanitary Napkin Disposal	Bobrick	B-270

Humana

Project

Humana Memphis, TN MarketPoint

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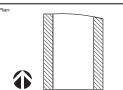
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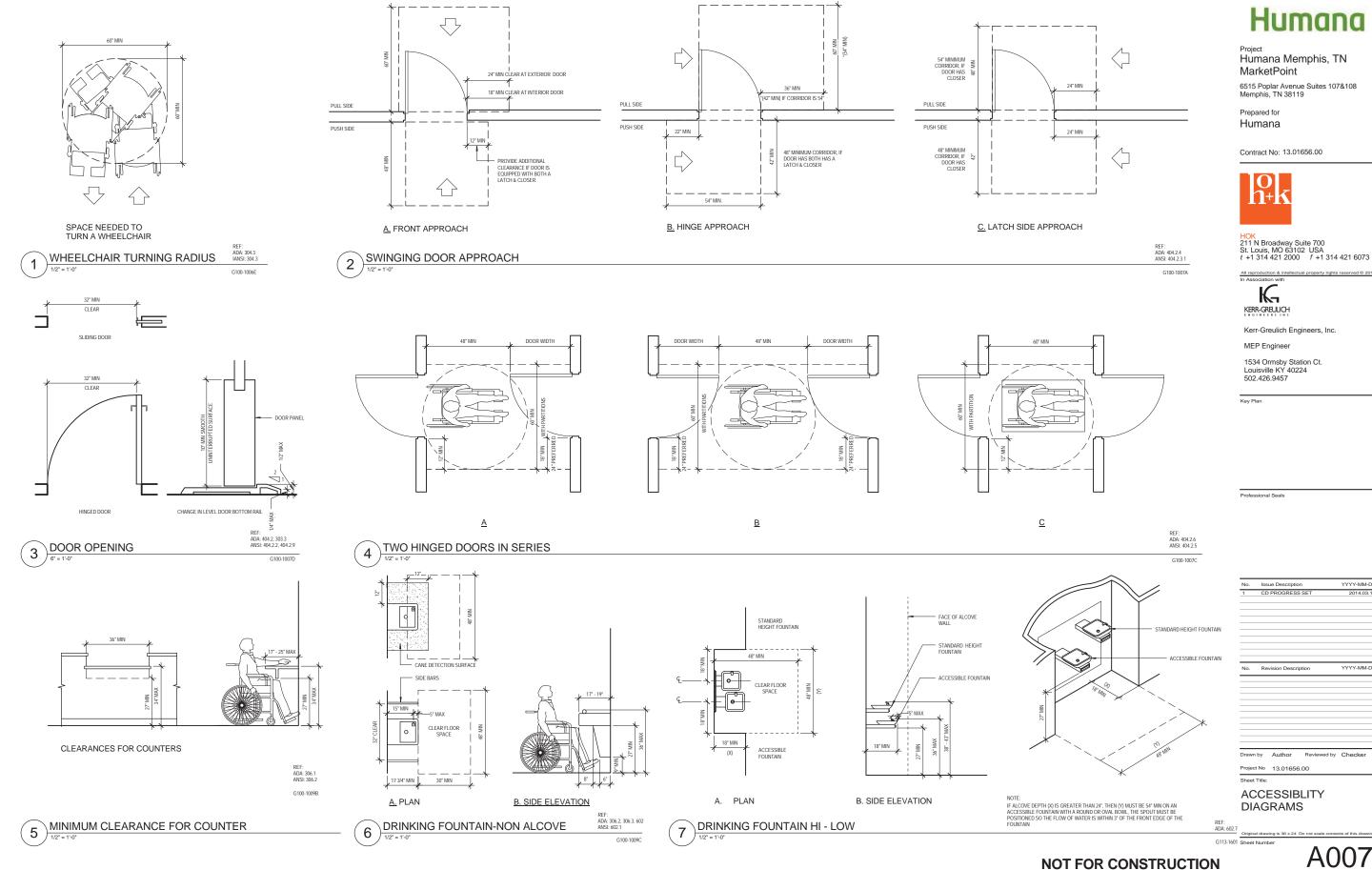


Professional Sea

LIFE S	AFETY LEGEND
(1)	- OCCUPANT LOAD - MAX CAPACITY
	FEC - FIRE EXTINGUISHER CABINET
4	AED - AUTOMATED EXTERNAL DEFRIBRILLATOR
	1HR TAPE
3	EXIT SIGN DIRECTION AS INDICATED

NOT FOR CONSTRUCTION

No.	Issu	ue Descriptio	n	,	YYYY-MM-E	DE
1	CD	PROGRESS	SET		2014.03.	11
No.	Rev	vision Descri	ption	,	YYYY-MM-E	DE
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Drawn	by	Author	Reviewed	d by (Checker	_
Projec	t No	13.01656	6.00			
	T-11					_
Sheet	Title:					



DCS PTDR WR PTD HD SND SNDU SD TTD/TSCD TTD TSCD TS CH

SANITARY ACCESSORIES LIST

DESCRIPTIONS ABBREVIATIONS

COAT HOOK DIAPER CHANGING STATION

DIAPER CHANGING STATION
HAND DRYER
PAPER TOWEL DISPENSER
PAPER TOWEL DISPENSERWASTE RECEPTACLE
COLD DISPENSER FOR THE PAPER TOWEL DISPENSER FOR THE PAPER TOWEL DISPENSER FOR THE PAPER TOWER DISPENSER FOR THE PAPER TOWER TOWER THE PAPER TOWER TOWE

SANITARY NAPKIN DISPOSAL UNIT SHOWER SEAT TOILETRY SHELF TOILET INSUE DISPENSER TOILET SEAT COVER DISPENSER TOILET SEAT GOVER DISPENSER TOILET SEAT COVER DISPENSER WASTE RECEPTACLE

MOUNTING HEIGHTS - SANITARY ACCESSORIES

REF: ADA: 308.2.1,604.7 ANSI: 604.7 G100-1010C

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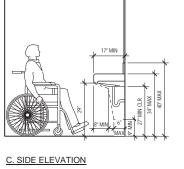
No. Issue Description

31" OC WHERE 2006 IPC APPLIES RINAL SCREEN OF FIXTURE @ URINALS 30* O((ADA 4.18.3) CLEAR FLOOR SPACE 48" CLEAR 30" MIN CLEAR 13 1/2" MIN. WHERE 2009 IPC APPLIES (IPC 310.5) B. FRONT ELEVATION C. SIDE ELEVATION A. PLAN

2 ACCESSIBLE URINAL

ACCESSIBLE LAVATORY

A. PLAN

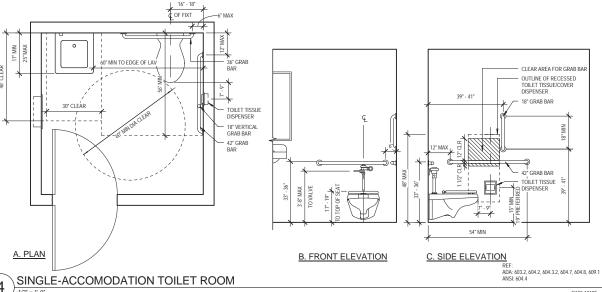


REF: ADA: 603.3, 604.3.2, 606.1, 606.5 ANSI: 606.1

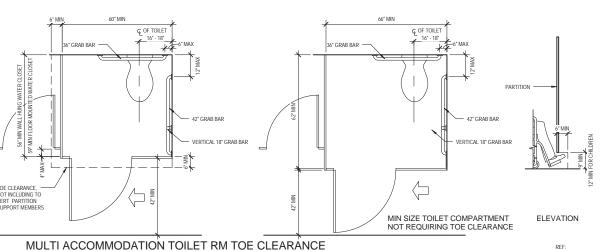
STANDARD ACCESSIBLE TOILET STALL

MULTI ACCOMMODATION TOILET RM ACCESSIBLE TOILET STALL

REF: ADA: 604.8 ANSI: 604.5.1 G100-1010H



ANSI: 605.1



800A

Drawn by Author Reviewed by Checker

Project No 13.01656.00

DIAGRAMS

ACCESSIBILITY

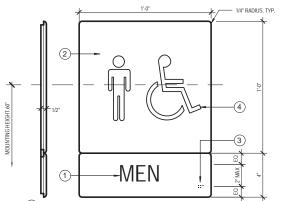
6

DISPENSER

A

B. FRONT ELEVATION

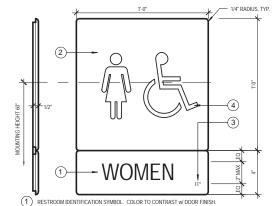
NOT FOR CONSTRUCTION



- 1 RESTROOM IDENTIFICATION SYMBOL. COLOR TO CONTRAST w/ DOOR FINISH.
- 2 SYMBOL BACKGROUND 1/4" THICK MATTE ACRYLIC BACK PAINTED COLOR TO CONTRAST w/ DOOR FINISH.
- CORRESPONDING GRADE II BRAILLE
- SYMBOL OF ACCESSIBILITY.

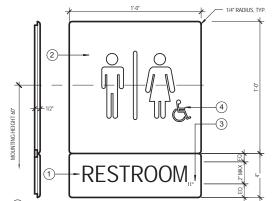
MEN'S RESTROOM 1 WALL MOUNTED SIGNAGE

ANSI: 703.5 G100-1012R



- 2) SYMBOL BACKGROUND 1/4"THICK MATTE ACRYLIC BACK PAINTED COLOR TO CONTRAST W/ DOOR FINISH.
- CORRESPONDING GRADE II BRAILLE
- SYMBOL OF ACCESSIBILITY.





- RESTROOM IDENTIFICATION SYMBOL. COLOR TO CONTRAST W/ DOOR FINISH.
- 2 SYMBOL BACKGROUND 1/4"THICK MATTE ACRYLIC BACK PAINTED COLOR TO CONTRAST W/ DOOR FINISH.
- 3 CORRESPONDING GRADE II BRAILLE
- SYMBOL OF ACCESSIBILITY.

MEN'S/WOMEN'S RESTROOM WALL MOUNTED SIGNAGE

ANSI: 703.5 G100-1012T Humana

Project Humana Memphis, TN MarketPoint

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Prepared for Humana

Contract No: 13.01656.00



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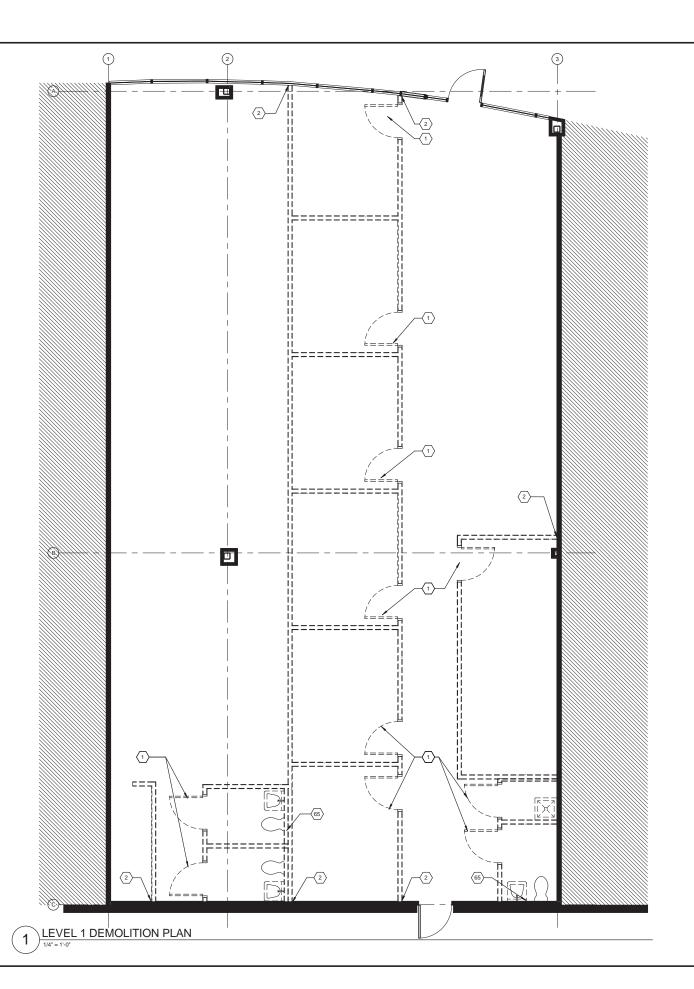
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MEP Engineer

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No.	Issue Description	on	YYYY-MM-DD
1	CD PROGRESS	SET	2014.03.11
No.	Revision Descri	ption	YYYY-MM-DD
Drawn b	y Author	Reviewed by	Checker
Project I	No 13.01656	3.00	

ACCESSIBILITY DIAGRAMS



GENERAL DEMOLITION NOTES

1. OBTAIN DEMOLITION PERMITS AND INCLUDE ALL COSTS OF SAME IN CONTRACT PRICE, IF REQUIRED.

2. PROVIDE ALL LABOR AND MATERIALS/EQUIPMENT AS REQUIRED TO COMPLETE DEMOLITION AND REMOVAL OF ALL ITEMS AS INDICATED.

3. PROVIDE STRICT CONTROL OF JOB CLEANING AND PREVENT DUST AND DEBRIS FROM REMAINING FROM DEMOLITION/ CONSTRUCTION AREA. KEEP AREA CLEAN.

4. IF ANY QUESTIONS ARISE AS TO THE REMOVAL OF ANY MATERIAL, CLARIFY THE POINT IN QUESTION WITH THE ARCHITECT BEFORE PROCEEDING.

5. DEBRIS REMOVAL SHALL BE PERFORMED USING THE BUILDING FREIGHT ELEVATOR. CONTACT THE BUILDING MGMIT OFFICE TO DETAIN SCHEDULE FOR THE USE OF THE FREIGHT ELEVATORS PRIOR TO SUBMITTING BID. AT COMPLETION OF DEMOLITION WORK, THE CONSTRUCTION AREASY, SHALL BE LEFT IN "BROOM CLEAN" CONDITION. ALL DEBRIS AND MISCELLANEOUS MATERIAL SHALL BE REMOVED. ALL DEBRIS REMOVES, SHALL BE LEFORMED IN ACCORDANCE WITH BUILDING MANAGEMENT REQUIREMENTS AND PROCEDURES.

6. ALL DOORS, FRAMES, HARDWARE, MECHANICAL ITEMS, PLUMBING FIXTURES, LIGHT FRYTURES (INCLUDING DOWNLIGHTS & FLUORESCENTS), & SPECIAL COLUMBANT SHOWN TO BE REMOVED. SHALL BE CLEAN AND FREE OP DEFECTS, PROTECTED, SAVED AND REJUSED AS DIRECTED HEREN, RETURNED TO BUILDING STOCK OR DISPOSED OF AS DIRECTED SHEED, MGMT.

8. ALL DEMOLISHED ELECTRICAL DEVICES, PLUMBING LINES, VENTS, DRAINS, APPLIANCES, TO BE REMOVED AND TERMINATED AT THEIR SOURCE UON.

10. CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING ANDIOR REPAIRING ANY DAMAGE CAUSED BY HIM OR HIS SUBCONTRACTORS TO EXISTING CONSTRUCTION IN ELEVATOR LOBBY, PUBLIC CORRIDORS, RESTROMS OR TENANT SPACES. REFINISH TO MATCH EXISTING ADJACENT FINISH, OR AS NOTED HEREIN.

11. NO EXISTING SMOKE DETECTOR, PUBLIC ADDRESS SPEAKER, FIRE ALARM BOX OR SIMILAR DEVICE, INCLUDING THE ASSOCIATED WIRING SHALL BE DAMAGED DURRING DEMOLITION AND SUBSEQUENT ONISTRUCTION, RELOCATION OF SMOKE DETECTORS, PUBLIC ADDRESS SPEAKERS AND FIRE ALARM EQUIPMENT, IF NECESSITATED BY NEW CONSTRUCTION, SHALL BE ACCOMPLISHED AS A FIRST PRIORITY, AND PER THE PLANK, NO ACTIVE SMOKE DETECTOR SHALL BE COVERED OR OTHERWISE REMOVED OR USED FOR OTHER THAN IT'S INTENDED PURPOSE.

12. ALL EXISTING FLOOR MOUNTED OUTLETS SHALL BE REMOVED AND CAPPED OFF TO THE NEAREST JUNCTION BOX. FILL AND LEVEL FLOOR TO ACCEPT NEW SCHEDULED FLOOR COVERING.

13. RE-USE OR RELOCATE ALL ABOVE CEILING DUCTWORK AS CONTAINED HEREIN INCLUDING BUT NOT LIMITED TO, DIFFUSERS, GRILLES, SPRINKLER PIPES OR OTHER EQUIPMENT, AS REQUIRED FOR PROPER DISTRIBUTION WITH NEW LAYOUT.

14. REMOVAL OF ANY EQUIPMENT, CABLING SWITCHES, AND CONDUIT PERTAINING TO DATA! COMMUNICATIONS AND TELEPHONE SHALL BE VERRIFED WITH TELEPHONE COMPANIES SERVICE OWNER OR TENANT DATA.COMMUNICATIONS REPRESENTATIVE AS REQUIRED TO PREVENT NEW CONSTRUCTION DELAYS.

15. REMOVE ALL EXISTING IRREGULAR MATERIALS WHICH CAUSE RISES OR DEPRESSIONS IN FLOORING SURFACE, SUCH AS FASTENERS, OUTLET CORES, COVER PLATES, RESILIENT FLOOR COVERINGS, CARPET, CARPET PAD, FLASH PATCH, CONCRETE FILL, PLYWOOD, ETC.

16. DEMOLITION IS NOT NECESSARILY LIMITED TO WHAT IS SHOWN ON DRAWINGS. THE INTENT IS TO INDICATE THE GENERAL SCOPE OF DEMOLITION REQUIRED TO COMPLETE THE WORK IN ACCORDANCE WITH THE CONTRACTOR SHALL VISIT SITE & PARILLARIZE THE REMEMBERS WITH VISITING CONDITIONS A NOTE ANY DISCREPANCIES IN WRITING TO PROJECT MANAGER & ARCHITECT.

17. STAIRWAYS AND EXIT PATHS MUST REMAIN ACCESSIBLE AT ALL TIMES DURING DEMOLITION.

18. REMOVE EXISTING SIGNAGE/GRAPHICS AND STORE FOR RE-USE, WHERE APPLICARI F

19. ALL CEILING AND LIGHTING TO BE REMOVED IN AREAS SHOWN IN CONTRACT.

20. ALL FLOOR AND WALL BASE TO BE REMOVED IN AREAS SHOWN IN CONTRACT

○ KEYED NOTES

REMOVE EXISTING DOOR AND FRAME AND PREPARE FOR NEW CONSTRUCTION. RETURN DOOR, FRAME, AND HARDWARE TO BUILDING OWNER.

BUILDING OWNER.

PATCH AND REPAIR AS REQUIRED IN PREPARATION FOR NEW CONSTRUCTION.

REMOVE EXISTING PLUMBING CAP AS REQUIRED. REFERENCE SHEET AGOI AND P101 FOR NEW LAYOUT AND SANITARY LOCATIONS.

DEMOLITION LEGEND





NOT FOR CONSTRUCTION

Humana

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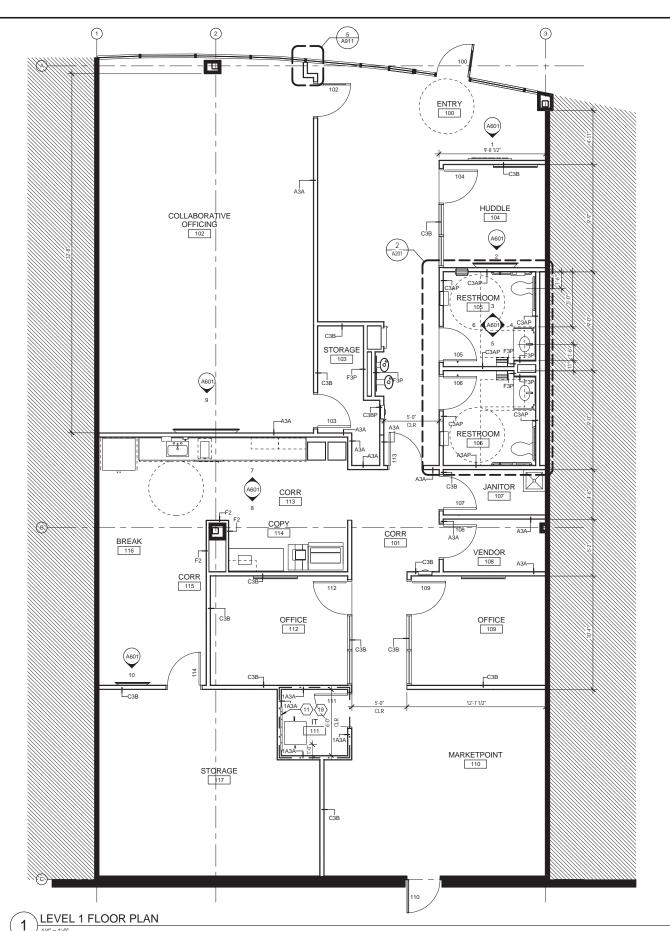


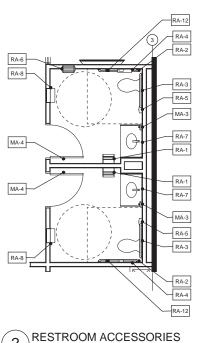
YYYY-MM-D	Issue Description	No.
2014.03.1	CD PROGRESS SET	1
YYYY-MM-D	Revision Description	No.

LEVEL 1 DEMOLITION

Drawn by Author Reviewed by Checker

PLAN





		FFE SCHE	DOLE	
TAG	QTY	Туре	MANUF.	MODEL
	1	Multi Function Printer	Humana DSI	N/A
AED	1	Defribirllator		
AP-2	1	Refrigerator - Side X Side	GE	GSHS6HGDSS
AV	2			
AV	1	46" LCD		
EQ-3	2	Shredder Bin		20"x20"
FEC	2	FEC Semi Recessed	N/A	N/A
MA-1	1	Standard Unit		
MA-2	1	Soap Dispenser BRK RM Wall Mounted	American Specialites	#0361
MA-3	2	Soap Dispenser	Gojo	2799-12eeu00 / 2762-06
MA-4	2	Coat Hook	Peter Pepper 204	
MKB	3	Marker Board 4'-0"	Steelcase	N/A
RA-2	2	Grab Bar 42"	Bobrick	B-6806-42
RA-3	2	Grab Bar 36"	Bobrick	B-6806-36
RA-4	3	Toilet Tissue & Seat Cover Dispen.	Bobrick	B-3474
RA-6	2	Sanitary Napkin Vending	Bobrick	B-47064
RA-7	2	Mirror w Metal Frame	Bobrick	B-165 2436
RA-8	2	Paper Towel & Trash	Bobrick	B-3974
RA-12	2	18"		
AP-1	1	Coffee Maker 2	SODEXO	ITEM CODE #260
AP-4	1	Microwave 2	GE	JEB1860SM
MA-1	1	Towel Dispenser (BRK RM) - Surface Mounted	BOBRICK	B-4262
EQ-2	1	Postage Meter - Countertop	Humana DSI	N/A
RA-1	2	Dyson Airblade	Dyson	AB14
RA-5	2	Sanitary Napkin Disposal	Bobrick B-270	

○ KEYED NOTES

11 GC TO PROVIDE 4X8' SHEET OF 3/4' FIRE RETARDANT PLYWOOD & PAINT TO MATCH WALL, LEAVING FIRE RATING STAMP EXPOSED AT THIS LOCATION.

19 REFERENCE MEP DRAWINGS FOR IT ROOM REQUIREMENTS

GENERAL PARTITION NOTES

- ALL GYP BD PARTITIONS SHALL BE TAPED, SPACKLED, AND SANDED WITH NO WISBLE JOINTS. PROVIDE LEVEL 4 FINISH HON, PATCH AND REPAIR SURFACES TO MATCH ADJACENT OR ADJOINING SURFACES WHERE REQUIRED. ALL SURFACES SHALL BE ALIGINED.
- 2. WHERE FURRED PARTITIONS EXCEED MAXIMUM HEIGHT, BRACE TO ADJACENT STRUCTURE.
- 3. FIRE SAFE PENETRATIONS AT RATED PARTITIONS PER APPLICABLE UL ASSEMBLY.
- 4. ALL INTERIOR PARTITION, PENETRATIONS, OTHER OPENINGS IN THE BUILDING SHELL SHALL BE SEALED, GASKETED, OR WEATHER STRIPPED.
- 5. PROVIDE METAL STUD ANCHOR BRACKETS AT LOCATIONS INCLUDING BUT NOT LIMITED TO: GRAB BARS, SHELVING, OVERHEAD CABINETS, SIGNAGE, TOILET ROOMS ACCESSORIES, ETC.
- 6. ALL DIMENSIONS TO THE EXTERIOR WALL ARE TO THE INSIDE FACE OF EXISTING SILL OR FINSH SURFACE. ALL PARTITIONS ARE DIMENSIONED FROM FACE OF PARTITION TYPE AS INDICATED BUY. ALL DIMENSIONS MARKED CLEAFOR OR "CLE" SHALL BE MAINTAINED AND SHALL ALLOW FOR THICKNESSES OF ALL WALL FINSHES. DIMENSIONS SHALL NOT VARY MORE THAN 1/- 1/8" WITHOUT WRITTEN CONSENT FROM THE ARCHITECT
- 7. ALL WOOD TO BE FIRE RETARDANT TREATED IN ACCORDANCE WITH LOCAL CODES.
- 8. ALL SIGNAGE IS NIC, UON.
- 9 EXISTING WALLS TO REMAIN TO BE FLOATED AS REQUIRED TO PROVIDE SMOOTH SUBSTRATE (LEVEL 4). PREPARE FOR INSTALLATION OF NEW FINISHES.
- 10. PATCH AND REPAIR EXISTING SLAB WITH HYDRAULIC CEMENT UNDRELAYMENT AS REQUIRED IN PREPERATION FOR NEW CONSTUCTION.
- 11. GC TO PROVIDE SHOP DRAWINGS OF ALL MILLWORK TO ARCHITECT AND HUMANA PM PRIOR TO MANUFACTURING.
- 12. GC TO INCLUDE COST TO RE-KEY ALL DOORS ACCESSING OR CONTAINED WITH IN TENANT SPACE AND COORDINATE WITH BUILDING OWNER FOR MASTER KEYING
- 13. GC TO COMPLY WITH ALL ACCESSIBILITY CODES & REQUIREMENTS UON. REFERENCE SHEETS A007-A009 FOR ADDITIONAL INFORMATION. STOP WORK & NOTIFY ARCHITECT OF ANY DISCREPANCIES.
- 14. ALL CASEWORK, TO BE PREMIUM GRADE OR BETTER AS DEFINED BY THE ARCHITECTURAL WOOD INSTITUTE. PROVIDE BRACKET STOPS AT ALL CORNER OR END CABINETS
- 15. PROVIDE ADJACENT PARTITION TYPE ABOVE ALL STOREFRONT SYSTEMS.
- 16. PROVIDE FLOOR STOPS AT ALL DOORS UON.
- 17. GC TO SUPPLY ALL RESTROOM ACCESSORIES AS INDICATED. NO SUBSTITIONS UNLESS APPROVED BY ARCHITECT & HUMANA PMO.
- 18. SOUND MASKING VENDOR TO COORDINATE SOUND MASKING WITH TENANT CALIBRATION AND BALANCING PRIOR TO OCCUPATION.
- 19. GC TO INCLUDE INSTALLATION OF DOOR CHIME IN FRONT AND REAR OF BUILDING. COORDINATE WITH TENANT ON FINAL LOCATION. PROVIDE: NUTONE MODEL LA130WH.
- 20. GC TO COORDINATE WFURNITURE VENDOR ON LOCATIONS OF WALL MOUNTED WHITE BOARDS. PROVIDE ADDITIONAL BLOCKING AS REQUIRED.
- 21. ALL WALLS RECEIVING WALLTALKER WALLCOVERING TO EB INSTALLED 18° AWAY FROM DOOR IN THE OPEN POSITION, TO CORNER OPPOSITE DOOR UON. REFERENCE ELEVATIONS FOR ADDITIONAL INFO.
- 22. PROVIDE COAT HOOKS ON BACK OF ALL OFFICE DOORS. REFERENCE FURNITURE PLAN.
- 23. REFER TO DEVICE ALIGNMENT DIAGRAMS ON SHEET A901 FOR TYPICAL LOCATIONS OF SWITCHES, CONTROLS, AND DEVICES.
- 24. GC TO INCLUDE COST FOR MANUAL BLINDS IN PRICE. VERIFY WITH TENANT & LANDLORD TO DETERMINE WINDOW BLIND SPECIFICATION. PROVIDE ADDITIONAL BLOCKING AS REQUIRED. GC TO COORDINATE WITH LANDLORD REGARDING BUILDING STANDARD EXTERIOR GLAZING AND TINTING.
- 25. PROVIDE CORNER GUARDS AT ALL OUTSIDE CORNERS UON.
- 26. GC TO PROVIDE FIRE DAMPERS AT ALL RATED PARTITIONS UON. COORDINATE WITH MECHANICAL DRAWINGS
- 27. ALL DEMISING WALLS TO EXTEND TO DECK WITH GYP BOARD EXTENDING FULL HEIGHT OF PARTITION UON.
- 28. ALL HUMANA IT ROOMS TO BE DEDICATED SPECIFICALLY FOR HUMANA IT EQUIPMENT AND NO THEIR SERVICES INCLUDING CUSTODIAL, MECHANICAL, ELECTRICAL, PLUMBING, AND OR RI HANDLING SOUPMENT. IN ADDITION WHERE APPLICABLE, NO OUTSIDE VENDORS OR EQUIPMENT SHALL SHARE MOF, IDF, OR RISER ROOMS WITHOUT THE APPROVAL OF HUMANN AFTWORK SERVICES &
- 29. NO WATER SUPPLY, DRAINAGE, OR EQUIPMENT PRODUCING WATER TO BE IN, ABOVE, OR AROUND IT & COMMUNICATION ROOMS UNLESS APPROVED BY HUMANA NETWORK SERVICES & ARCHITECT, GC TO NOTIFY PROJECT MANAGER & ARCHITECT OF ANY DISCREPANCIES PRIOR TO EXECUTION OF DOCUMENTED WHORE!
- 30. INSULATION ABOVE CEILING TO COMPLY WI IECC 2009 REQUIREMENT FOR CLIMATE ZONE 2A, TO HAVE A TOTAL R VALUE AS NDICATED BY SECTION 502. IF EXISTING R VALUE IS DEPICIENT, CONTRACTOR SHALL PROVIDE ADDITIONAL INSULATION TO COMPLY WITH IECC 2009. WHERE REQUIRED, APPLY INSULATION AND THERMAL BARRIER ACCORDING TO SPECIFICATION SECTION OT 25 THERMAL INSULATION.
- 31. PREFERRED LOCATION OF FIRE PANEL TO BE IN HUMANA VENDOR ROOM. GC TO COORDINATE WITH LOCAL JURISDICTION ON FINAL LOCATION OF PANEL PRIOR TO COMMENCEMENT OF WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES.

FLOOR PLAN LEGEND

(E) ROOM OR ZONE TO REMAIN. NOT INCLUDED IN THIS SCOPE OF WORK (E) GYP BD PARTITION TO REMAIN

NEW GYP BD PARTITION AS INDICATED

NEW GLAZED OPENING WITH ALUM OR HM FRAME AS INDICATED

NEW DOOR, DOOR IDENTIFIER ASSEMBLY AS INDICATED ON SHEET A901

 \bigcirc FRAME TYPE. REFERENCE SHEET A901

- · - NO▼ FOR CONSTRUCTION

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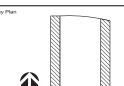
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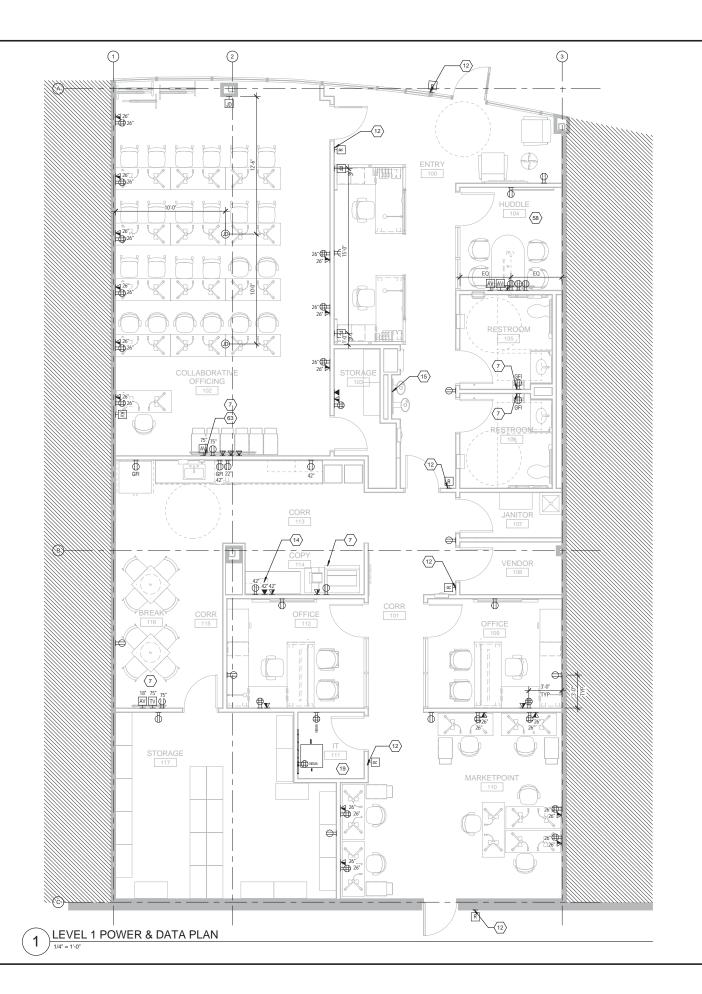
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No.	Issu	e Description	on	YYYY-MM-DD
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Drawn	by	Author	Reviewed by	Checker
Proiect	t No	13.01656	200	

LEVEL 1 FLOOR PLAN



GENERAL POWER & DATA NOTES

- 1. ARCHITECT TO VERIFY ALL POWER & SIGNAL LOCATIONS PRIOR TO INSTALLATION.
- 2. COORDINATE OUTLETS WITH MILLWORK IN ALL LOCATIONS.
- 3. PROVIDE GELOUTLETS IN ALL "WET" AREAS.
- 4. VERIFY CORE LOCATIONS WITH FURNITURE VENDOR AND SUBMIT ANY CHANGES TO ARCHITECT FOR REVIEW PRIOR TO DRILLING.
- 5. FURNITURE IS SHOWN FOR REFERENCE PURPOSES ONLY, UON.
- 6. SURVEY FIELD CONDITIONS AND VERIFY THAT WORK IS FEASIBLE AS SHOWN. VERIFY LOCATION OF ALL OUTLETS IN RELATION TO STRUCTURAL AND OTHER ELEMENTS AS REQUIRED. NOTIFY ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK.
- 7. ARCHITECTURAL DRAWINGS DETERMINE LOCATION AND TYPE (ARCHITECT TO VERIFY WERNINEER) OF ALL OUTLETS AND TAKE PRECEDENCE OVER ALL OTHERS, UON. ELECTRICAL ENGINEERS POWER PLAN SHALL GOVERN THE WIRRING LAYOUT AND INSTALLATION IN COMPLIANCE WITH ALL LAWS APPLICABLE AND ENFORCED BY GOVERNING
- 9. COORDINATE ALL WORK RELATED TO EQUIPMENT WITH MANUFACTURER'S RECOMMENDATIONS, SPECIFICATIONS AND INSTRUCTIONS.
- 10. ALL EXISTING AND NEW FLOOR SLAB PENETRATIONS FOR CONDUIT OR PLUMBING LINES SHALL BE FULLY PACKED & SEALED IN ACCORDANCE WITH THE APPLICABLE BUILDING AND FIRE CODES.
- 11. FURNISH AND INSTALL UNDERWRITERS LABORATORIES, INC. (UL) LABELED DEVICES THROUGHOUT.
- 12. INSTALL WALL MOUNTED OUTLETS 18 INCHES ABOVE FINISHED FLOOR, UON HEIGHTS SHALL BE DETERMINED FROM FINISHED FLOOR TO THE CENTERLINE OF COVER PLATE, INSTALLED VERTICALLY, GROUNDING POLE AT TOP, UON
- 13. MAINTAIN A 4-INCH HORIZONTAL CLEARANCE IN ALL DIRECTIONS, MIN. FROM EDGE OF COVER PLATE, FOR WALL MOUNTED OUTLETS, OR FROM EDGE OF MONUMENT FOR FLOOR MOUNTED OUTLETS, WHEN ADJACENT TO A WALL, COLUMN, OR SIMILAR ELEMENTS, UON.
- 14. INDICATED DIMENSIONS ARE TO THE START OF THE COVER PLATE OR MONUMENT, UON.
- 15. ELECTRICAL, SWITCH AND OUTLET COVER PLATES, SURFACE HARDWARE, ETC. SHALL BE INSTALLED AFTER PAINTING AND/OR APPLICATION OF WALL COVERINGS & CARPET
- 16. FURNISH AND INSTALL ALL FIXTURES, ASSOCIATED TRIM AND FIXTURE LAMPS AS REQUIRED. PROVIDE EXTENSION RINGS AND MOUNTING ACCESSORIES WHERE REQUIRED FOR POWER 10 ATA DEVICES AND LIGHT FIXTURES TO COORDINATE WITH INTERIOR FINISHES AND CASEWORK.
- 17. PROVIDE ADDITIONAL COURTESY OUTLETS AS REQUIRED PER APPLICABLE LOCAL CODES.
- 18. ALIGN POWER / DATA DEVICES, AND WALL MOUNTED LIGHT FIXTURES AT THE CENTERLINE OF THE WALL SECTION THEY ARE MOUNTED ON, UON.
- 19. COORDINATE POWER / DATA DEVICE & LIGHT FIXTURE MOUNTING LOCATIONS WITH INTERIOR ELEVATIONS, FINISHES, & CASEWORK.
- 28. GC TO COORDINATE WITH FURNITURE VENDOR ON FINAL LOCATIONS OF ALL FLOOR CORES, WIRNING REQUIREMENTS AND MOUNTING HEIGHT OF OUTLETS PRIOR TO EXECUTION OF ASSOCIATED WORK, PROVIDE ACCESSIBILITY TO OUTLETS WHEN FURNITURE IS IN PLACE.
- 21. ALL AN SYSTEM POWER & DATA & COMPONENTS ARE SHOWN FOR INTENT. ADDITIONAL POWER & DATA MAY BE REQUIRED. GC TO COORDINATE WITH AN VENDOR FOR FINAL SYSTEM REQUIREMENTS, INCLUDING CONDUIT AND BOX SIZES AND ASSOCIATED EQUIPMENT SPECS.
- 22. PROVIDE GROUND BUS BARS AT VENDOR ROOM & IDF ROOMS AS REQUIRED. GC TO COORDINATE WITH SECURITY, TELECOM, FIRE, AND IT VENDORS FOR REQUIREMENTS.
- 23. GC TO COORDINATE ALL SWITCHES, STROBES, AND WALL MOUNTED DEVICES WITH SCHEDULED AV EQUIPMENT. REFERENCE A901 FOR ADDITIONAL INFORMATION.
- 24. ALL CABLING ROUTING THROUGH NON-HUMANA SPACE TO BE IN CONDUIT UON. WHERE APPLICABLE PROVIDE MIN. 4" SLEEVE INTO SERVER AND VENDOR ROOMS FOR CABLE RUNS AS REQUIRED.
- 25. ALL SWITCHES, DEVICES, OUTLETS, AND COVER PLATES TO BE WHITE UON.
- 25. COORDINATE CARD READER LOCATIONS WITH TENANT'S SECURITY.

○ KEYED NOTES

7	COORDINATE POWER REQUIREMENTS & MOUNTING HEIGHTS WITH SCHEDULED EQUIPMENT
12	PROVIDE POWER AS REQUIRED FOR ELECTRONIC CARD READER
14	PROVIDE ANALOG LINE FOR POSTAGE MACHINE AT 42"AFF.
15	PROVIDE POWER AS REQUIRED FOR ELECTRIC WATER COOLER.
19	REFERENCE MEP DRAWINGS FOR IT ROOM REQUIREMENTS
58	REFERENCE AV DETAILS ON SHEET A925 FOR ADDITIONAL INFORMATION
63	COORDINATE ALL POWER REQUIREMENTS WITH AV VENDOR IN THIS LOCATION.

POWER & DATA LEGEND

WALL MOUNTED QUADRUPLEX OUTLET WALL MOUNTED DUPLEX OUTLET WALL MOUNTED DEDICATED DUPLEX OUTLET WALL MTD POWER OUTLET, "GFI" INDICATES GROUND FAULT INTERRUPT, 18" AFF UON J FLUSH FLOOR JUNCTION BOX- POWER DATA AND AV WHERE REQUIRED (HARDWIRE)

WALL MOUNTED ANALOG OUTLET

FLUSH FLOOR FURNITURE FEED - POWER DATA JUNCTION BOX. VERIFY REQUIREMENTS



(ID) FLUSH FLOOR JUNCTION BOX W/ FACEPLATE-POWER DATA AND AV WHERE REQUIRED (4-POWER, 4-DATA) WALL MOUNTED COMBO VOICE & DATA WALL MOUNTED TV JACK

AV WALL MOUNTED AV SYSTEM JUNCTION

WALL MOUNTED FURNITURE FEED POWER AND DATA JUNCTION BOX. VERIFY
REQUIREMENTS WITH FURNITURE

WALL MOUNTED JUNCTION BOX - POWER, DATA, AND AV WHERE REQUIRED (4 POWER AND 4 DATA TYPICAL WHEN HARDWIRE NOT REQUIRED)

R WALL MOUNTED CARD READER NOT FOR CONSTRUCTION

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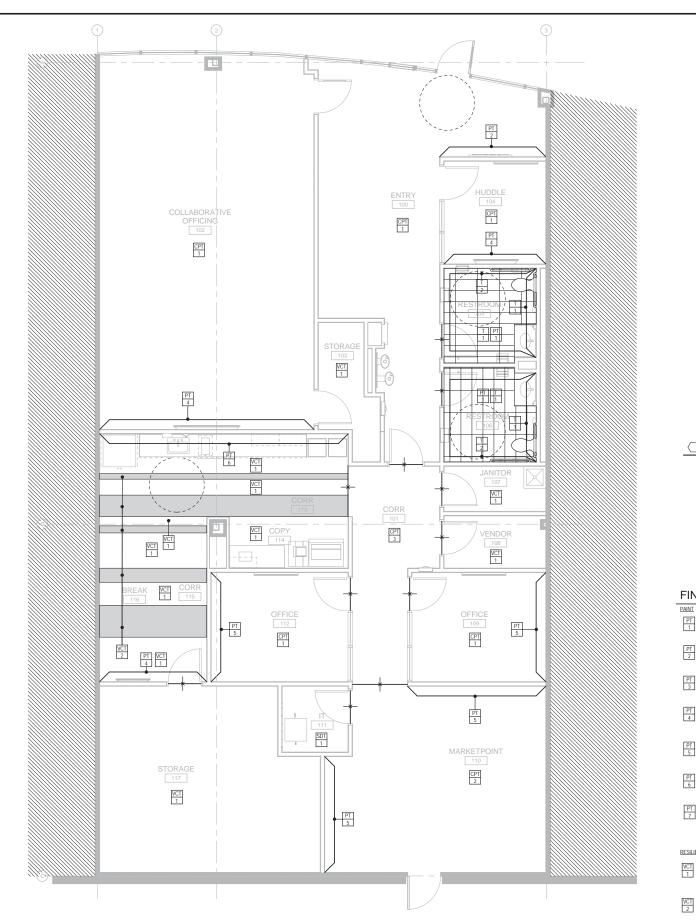
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LEVEL 1 POWER & DATA PLAN



GENERAL FINISH NOTES

NO PAINTING OR INTERIOR FINISHING SHALL BE DONE UNDER CONDITIONS WHICH WILL JEOPARDIZED THE QUALITY OR APPEARANCE OF SUCH WORK. ALL WORKMANSKIP WHICH IS JUDGED LESS THAN FIRST QUALITY BY THE ARCHITECT WILL BE REJECTED. FLAME SPREAD TO BE CLASS 1: 0.25. SMIOKE DEISNITY TO BE LESS THAN 450.

2. ALL SURFACES SHALL BE PREPARED TO RECEIVE THE SPECIFIED FINISH. ALL GYPSUM BOARD PARTITIONS SHALL BE TAPED, SPACKLED AND SANDED SMOOTH AND PREPARED TO RECEIVE THE SPECIFIED FINISH. PAINT GRADE WOODWORK SHALL BE HAND SANDED BETWEEN COATS AND DUSTED CLEAN. ALL HOLES, PITCH POCKETS OR SAPPY PORTIONS SHALL BE SCRAPED AND SHELLACKED, OR SEALED WITH KNOT SEALER. NAIL HOLES, CRACKS OR DEFECTS SHALL BE PUTTIED AFTER FIRST COAT, WITH PUTTY MATCHING COLOR OF STAIN OR PAINT FINISH. REMOVE OIL OR GREASE WITH MINERAL SPIRITS.

3. ALL CRACKS, HOLES, IMPERFECTIONS IN EXISTING WALLS, PARTITIONS OR GYP BOARD SHALL BE FILLED WITH PATCHING PLASTER AND SMOOTHED OFF TO MATCH ADJOINING SURFACES.

4. INTERIOR GYPSUM BOARD SURFACES SHALL BE WIPED WITH A DAMP CLOTH JUST PRIOR TO APPLICATION OF THE FIRST COAT, IN ORDER TO LAY FLAT ANY NAP WHICH MAY HAVE FORMED IN SANDING PROCESS.

5. UPON COMPLETION, REMOVE ALL PAINT FROM WHERE IT HAS SPILLED, SPLASHED OR SPLATTERED ON EXPOSED SURFACES.

6. ALL VENEER STAINS SHALL HAVE UNIFORM COLOR.

7. EXAMINE ALL FINISH SURFACES AFTER COMPLETION OF WORK AND PROCEED WITH "TOUCH-UP" AS REQUIRED.

8. PROVIDE ARCHITECT WITH A MINIMUM OF (3) 8" X 10" BRUSH-OUTS OF EACH COLOR & FINISH FOR ARCHITECTS APPROVAL AT LEAST 2 WEEKS PRIOR TO SITE APPLICATION. ON SITE APPLICATION WILL BE REQUIRED ONE WEEK PRIOR TO FINAL APPROVAL ARCHITECT RESERVES THE RIGHT TO ADJUST ANY COLOR/RINISH ONCE THE WALL TEST HAS BEEN MADE.

9. CONTRACTOR SHALL BE RESPONSIBLE FOR ALLOWING FOR DELIVERY LEAD TIMES FOR ALL FABRICS AND OTHER CUSTOM FINISHES WITHIN THE CONSTRUCTION SCHEDULE. ALL DELIVERY THESE MUST BE CONFIRMED, AND ANY EXCESSIVE LEAD THE MUST BE BROUGHT TO THE ARCHITECTS ATTENTION IMMEDIATELY TO ALLOW FOR RE-SPECIFICATION IF NECESSARY.

10. ALL VERTICAL SURFACES UON SHALL RECEIVE WALL BASE. INSTALL STRAIGHT BASE AT CARPET; COVE BASE AT RESILIENT FLOORING.

11. SEE FINISH PLAN, ELEVATIONS AND DETAILS FOR CLARIFICATION OF EXTENT OF FINISH MATERIALS

12. PAINT IS DEFINED AS ONE PRIMER COAT AND 2 FINISH COATS.

13. PAINT CEILING ACCESS PANELS WHERE THEY OCCUR TO MATCH ADJACENT CEILING FINISH.

14. STAINED AND PAINTED SURFACES SHALL BE FINISHED SUCH THAT JOINTS ARE NOT VISIBLE WHEN VIEWED FROM ANY ANGLE AS DETERMINED BY THE ARCHITECT.

15. APPLY FABRIC SO WALL IS DIVIDED WITH A MINIMUM NUMBER OF SEAMS. AND WITH EQUAL

16. ALL INTERSECTIONS OF FLOOR FINISH MATERIALS SHALL BE LOCATED DIRECTLY UNDER CENTER OF DOOR, WHERE OCCURS, UON

17. ALL OPEN CABINETRY SHALL BE PLASTIC LAMINATE ON ALL EXPOSED SURFACES, UON APPLY WHITE MELAMINE TO INTERIOR OF CABINETRY WITH DOORS AND DRAWERS, UON.

18. NO FINISHING IN BUILDING SERVICE / CORE AREA UON

19. PAINT ALL EXPOSED SURFACES, INCLUDING DOOR FRAMES, GRILLES, FIRE HOSE OR EXTINGUISHER CABINETS, EXPOSED PIPING, ETC. UON.

20. ALL WALLS TO RECEIVE WB-1 & PT-1 UON.

21. ALL GYP.BOARD CEILINGS AND SOFFITS TO BE PT-7 UON. 22. ALL EXTERIOR WALLS & COLUMNS TO RECEIVE PT-1 UON.

23. ALL 2X2 ACOUSTICAL CEILING TO BE ACT-1 UON.

24. ALL FLOORS TO RECEIVE CPT-2 UON.

26. ALL OUTSIDE CORNERS TO RECEIVE CORNER GUARDS CG-1

FINISH LEGEND

○ KEYED NOTES

ISH: EGGSHELL S	DT MFR: ARMSTRONG TYLE: STATIC DISS COLOR: 51951 ARMO
-----------------	--

PT PAINT (GREEN)

MFR: BENJAMIN MOORE FINISH: EGGSHELL COLOR: STEM GREEN 2029-40 PT PAINT (DARK GREEN)
MFR: SHERWIN WILLIAMS

FINISH: EGGSHELL COLOR: GRASSHOPPER SW 6733 PT PAINT (DARK GRAY)

4 MFR: SHERWIN WILLIAMS
FINISH: EGGSHELL
COLOR: ATTITUDE GRAY SW 7060

PT PAINT (GRAY)
5 MFR: SHERWIN WILLIAMS
FINISH: EGGSHELL
COLOR: MAGNETIC GRAY SW 7058

PT PAINT (PLUM)
6 MFR: SHERWIN WILLIAMS
FINISH: EGGSHELL
COLOR:FRAMBOISE SW 6566 PT CEILING PAINT
7 MFR: BENJAMIN MOORE
FINISH: FLAT

COLOR: CEILING BRIGHT WHITE

RESILIENT FLOORING

VCT VCT

MFR: ARMSTRONG
STYLE: IMPERIAL TEXTURE
COLOR: 51927 FIELD GRAY

VCT VCT MFR: ARMSTRONG STYLE: IMPERIAL TEXTURE COLOR: 51866 LITTLE GREEN APPLE

TILE FLOORING T PORCELAIN TILE
MFR: DAL TILE
STYLE: FABRIQUE
COLOR: P686 CREME LINEN
SIZE: 12X24
GROUT: 1/8" MAPEI #35
NAVAJO BROWN

T PORCELAIN TILE
MFR: DAL TILE
STYLE: FABRIOUE
COLOR: P686 CREME LINEN
SIZE: 4X24
GROUT: 1/8" MAPEI #35
NAVAJO BROWN

CARPET CPT GENERAL CARPET
MFR: SHAW
STYLE: MIRROR IMAGE
COLOR: CUSTOM Q384X
INSTALL: ASHLAR

GENERAL CARPET

MFR: SHAW

STYLE: PRISMA

COLOR: CUSTOM Q024X
INSTALL: ASHLAR

GENERAL CARPET
MFR: SHAW
STYLE: PRISMA
COLOR: CUSTOM Q023X
INSTALL: ASHLAR

ACCENT CARPET MFR: SHAW STYLE: TRU COLORS COLOR: FLANNEL INSTALL: REFERENCE A221

ACCENT CARPET
MFR: SHAW
STYLE: TRU COLORS
COLOR: GREY METAL
INSTALL: REFERENCE A221

ACCENT CARPET
MFR: SHAW
STYLE: TRU COLORS
COLOR: CALYPSO
INSTALL: REFERENCE A221 MILLWORK FINISHES

PL PLAM COUNTERTOP
MFR: PIONITE
STYLE: AG 021
COLOR: SABLE
FINISH: MATTE
INSTALL GRAIN IN LONG
DIRECTION, WITH TOP AND
FRONT EDGE BAND PARALLEL

PL PLAM CABINETS - DOORS (HORZ)
MFR: FORMICA
STYLE: 918-SP (918-58 FOR INTERIOR)
COLOR: WHITE
FINISH ON EXTERIOR: SCULPTED
FINISH ON INTERIOR: MATTE PL MAIN - MISC.
MFR: WILSONART
STYLE: KENSINGTON MAPLE 10776
FINISH: MATTE

WALL BASE CPT ACCENT CARPET

MFR: SHAW
STYLE: TRU COLORS
COLOR: CUSTOM GREEN 0029X
INSTALL: REFERENCE A221 WALL BASE
MFR. JOHNSONITE
STYLE: COVE 4*
COLOR: 20 CHARCOAL NOT FOR CONSTRUCTION

WOD VENEER - STAIN GRADE - MAPLE FINISH: TO MATCH STEELCASE CLEAR MAPLE 3222

GL GLASS 1 STYLE: VISION GLASS 1/4*- TEMPERED GL GLASS 2 STYLE: VISION GLASS 1/2*- TEMPERED

GL GLASS 3 STYLE: VISION GLASS 3/4*- TEMPERED SC SEALED CONCRETE

ACT ACOUSTICAL CEILING TILE

MFR: ARMSTRONG
STYLE: DUNE - ANGLED TEGULAR 2X2 COLOR: WHITE
GRID: ARMSTRONG - PRELUDE XL 15/16*
EXPOSED "T"

CG CORNER GUARDS

1 MFR: PITTCON REFERENCE SPEC SECTION: 10.26.00 Humana

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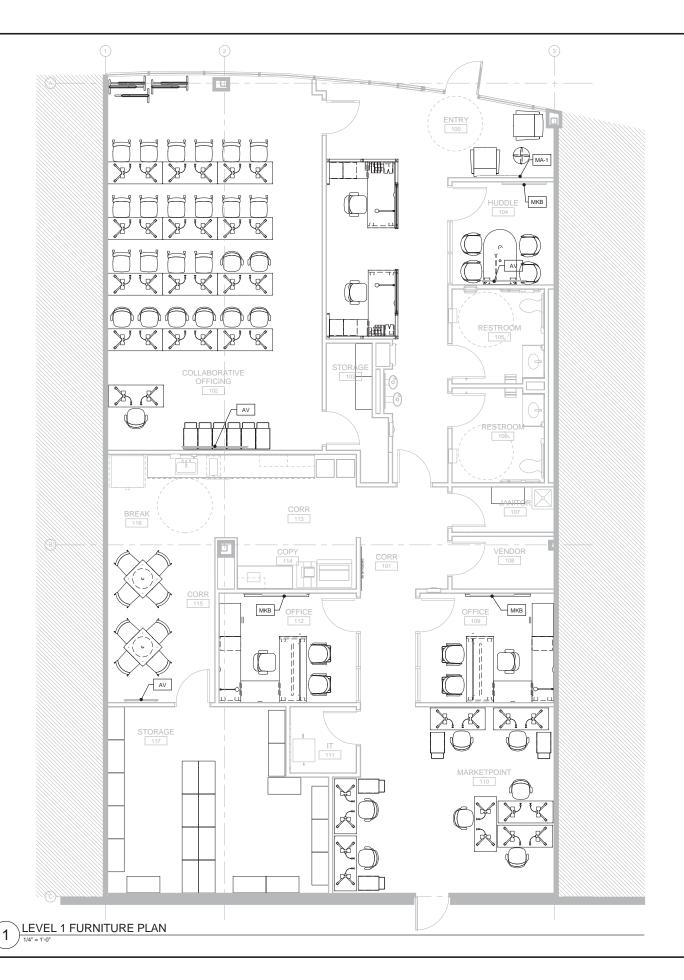
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LEVEL 1 FINISH PLAN



GENERAL FURNITURE NOTES

- 1. ALL SYSTEMS, OFFICE, & ANCILARY FURNITURE SHOWN FOR REFERENCE ONLY.
- 2. GC TO COORDINATE POWER & DATA REQUIREMENTS FOR ALL SCHEDULED EQUIRMENT. FINAL LOCATION OF FLOOR CORE TO BE VERIFIED WITH FUNITURE VENDOR PRIOR TO DRILLING.
- 3. GC TO VERIFY WITH PROJECT MANAGER THE FULL EXTENT AND SCOPING OF ITEMS NOTED PRIOR TO ORDERING.

		FFE SCHE	EDULE	
TAG QTY		Туре	MANUF.	MODEL
	1	Multi Function Printer	Humana DSI	N/A
AED	1	Defribirllator		
AP-2	1	Refrigerator - Side X Side	GE	GSHS6HGDSS
٩V	2			
٩V	1	46" LCD		
Q-3	2	Shredder Bin		20"x20"
EC	2	FEC Semi Recessed	N/A	N/A
MA-1	1	Standard Unit		
MA-2	1	Soap Dispenser BRK RM Wall Mounted	American Specialites	#0361
MA-3	2	Soap Dispenser	Gojo	2799-12eeu00 / 2762-06
/A-4	2	Coat Hook	Peter Pepper	2041 Alum
MKB	3	Marker Board 4'-0"	Steelcase	N/A
RA-2	2	Grab Bar 42"	Bobrick	B-6806-42
RA-3	2	Grab Bar 36"	Bobrick	B-6806-36
RA-4	3	Toilet Tissue & Seat Cover Dispen.	Bobrick	B-3474
RA-6	2	Sanitary Napkin Vending	Bobrick	B-47064
RA-7	2	Mirror w Metal Frame	Bobrick	B-165 2436
RA-8	2	Paper Towel & Trash	Bobrick	B-3974
RA-12	2	18"		
AP-1	1	Coffee Maker 2	SODEXO	ITEM CODE #260
\P-4	1	Microwave 2	GE	JEB1860SM
MA-1	1	Towel Dispenser (BRK RM) - Surface Mounted	BOBRICK	B-4262
Q-2	1	Postage Meter - Countertop	Humana DSI	N/A
RA-1	2	Dyson Airblade	Dyson	AB14
RA-5	2			B-270

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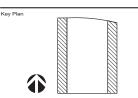


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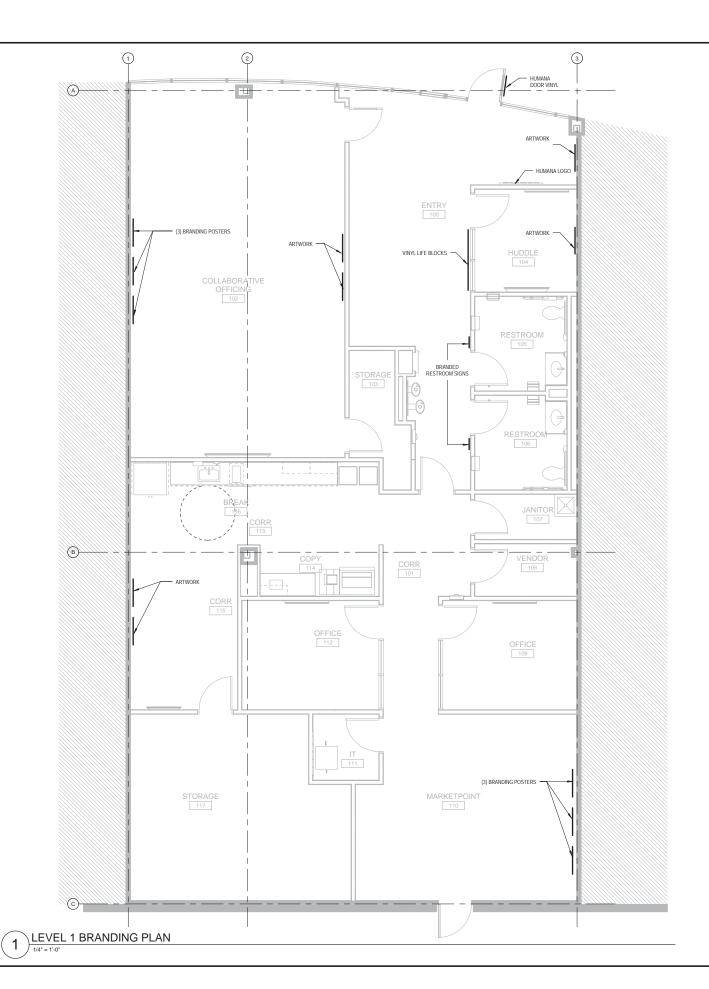
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No.	Revision Desc	ription	YYYY-MM-DD
Drawn	by Author	Reviewed by	Charles

 \bigcirc KEYED NOTES

Project No 13.01656.00
Sheet Title: LEVEL 1 FURNITURE PLAN



GENERAL BRANDING NOTES

1. LOCATIONS ARE FOR REFERENCE ONLY. GC TO COORDINATE FINAL LOCATION WITH BRANDING VENDOR.

2. ALL BRANDING ITEMS TO BE PROVIDED BY AND INSTALLED BRANDING VENDOR UON.

3. ALL DEVICES INCLUDING BUT NOT LIMITED TO SWITCHES, STROBES, TEMPERATURE CONTROLS, SECURITY, AND AV CONTROLS TO COORDINATE WITH SPECIFIED BRANDING LOCATIONS.

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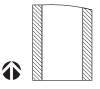


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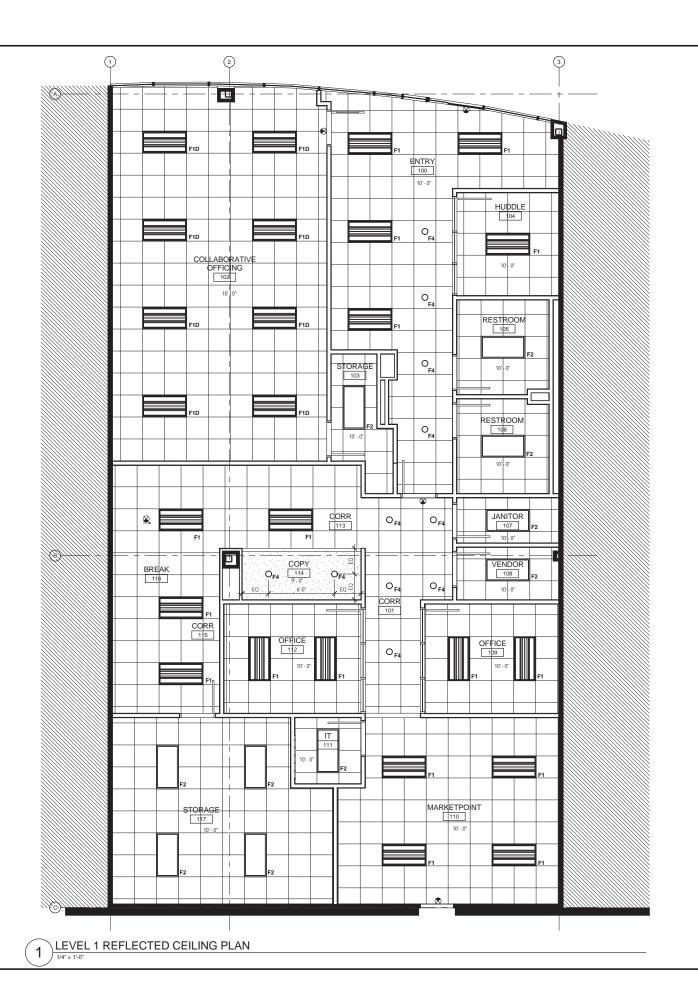
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No.	Revision Description	YYYY-MM-DD
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LEVEL 1 BRANDING PLAN



GENERAL RCP NOTES

- REFLECTED CEILING PLANS INDICATE:
 GENERAL TYPE AND SPECIFIC LOCATION OF LIGHT FIXTURES
 OF SIGNAL & EQUIPMENT DEVICES.

- ELECTRICAL ENGINEERING DRAWINGS INDICATE:
 A. CIRCUITING AND WIRING OF LIGHT FIXTURES, AND SWITCHES.
 B. LIFE SAFET YE DUIRWENT.
 C. LOCATION OF REQUIRED EMERGENCY LIGHT FIXTURES.
 D. LIGHT FIXTURE SPECIFICATIONS.
- MECHANICAL ENGINEERING DRAWINGS INDICATE:
 A. DUCTS, AIR MOVEMENT REQUIREMENTS, AND SIZES OF GRILLES AND REGISTERS.
- DESIGN BUILD FIRE PROTECTION DRAWINGS INDICATE:
 A. LAYOUT, LOCATION, AND SIZE OF SPRINKLER LINES AND HEADS.
 PRESSURE REQUIREMENTS.
 C. SPRINKLER HEAD SPECIFICATIONS.
 LOCATION OF FIRE PROTECTION RISERS AND WALL HYDRANTS.

- ${\bf 6}.$ ALL STROBES TO ALIGN VERTICALLY WITH RECEPTACLE BELOW WHERE OCCURS.
- 7. ARCHITECT TO REVIEW ALL LIGHT/CEILING FIXTURE LOCATIONS PRIOR TO INSTALLATION.
- 8. INSTALL THE SUSPENDED CEILING GRID TO BE LEVEL WITHIN A TOLERANCE OF 1/8' IN 12'-0'. ANCHOR AS REQUIRED.
- 9. ARCHITECT TO REVIEW LOCATIONS OF ALL SLOT DIFFUSERS, SPRINKLERS, SMOKE DETECTORS, ETC. IN GYP BD CEILINGS AND RETURN WITHIN 5 BUSINESS DAYS OF RECEIPT.
- 10. WHERE ACOUSTICAL PANELS ARE REQUIRED TO BE CUT, CUT THE PANELS TO MAINTAIN A SHARP AND NEAT EDGE.
- 11. INSTALL NEW SPRINKLER HEADS AND LIGHT FIXTURES AT THE CENTER OF THE ACOUSTICAL CEILING PANEL UON.
- 12. MEP & FP TO COMPLY WITH ALL APPLICABLE CODES AND SUBMIT SHOP DRAWINGS FOR ARCHITECT REVIEW OF ALL LOCATIONS OF DEVICES PRIOR TO INSTALLATION AND RETURN WITHIN 5 BUSINESS DAYS OF RECEIPT.
- 13 RELOCATE EXISTING SPRINKLER HEADS IN ACCORDANCE WITH APPLICABLE CODES AS REQUIRED TO COORDINATE WITH NEW CONSTRUCTION.
- 14. INSTALL SUSPENDED CEILING GRID TO BE CENTERED IN ROOM, UON.
- 15. COORDINATE CEILING MOUNTED SPEAKERS AND AV DEVICES WITH AV VENDOR.
- 16. ALL LIGHT FIXTURES ARE TO BE <u>OWNER FURNISHED AND CONTRACTOR</u>
 <u>INSTALLED</u>. ALL FIXTURES ARE TO BE PHILIPS SPECIFICATION, AND ARE TO BE
 <u>DISTRIBUTED</u> BY HUMANA CONTRACTED PARTNER, ACCUSERY. REFERENCE
 RESPONSIBILITY MATRIX FOR ADDITIONAL INFORMATION.

○ KEYED NOTES

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CP	LE	GEND	
_	$\overline{}$	OLV OLODID AN	_

2' X 2' GRID AND TILE SYSTEM - SEE SPECIFICATIONS AND FINISH LEGEND ON SHEET A221

GYPSUM BOARD CEILING AS INDICATED ON PLAN. SEE FINISH PLAN FOR PAINT SPECS. X' - X" AFF FINISHED CEILING HEIGHT AS INDICATED ON PLAN UON

CEILING MOUNTED EXIT SIGN - PHILIPS - CALIBER SERIES OR EQUAL

ZONE 1 LIGHT SWITCH ZONING

P CEILING MOUNTED PROJECTOR 2'x4' RECESSED FLUORESCENT LIGHT FIXTURE LIGHTOLIER - COFFAIRE II STATIC 2 LAMP 32W T8

2'x4' RECESSED FLUORESCENT LIGHT FIXTURE LIGHTOLIER - COFFAIRE II STATIC 2 LAMP 32W T8 DIMMABLE BALLAST

2'x4' RECESSED FLUORESCENT LIGHT FIXTURE LIGHTOLIER / DAY-BRITE - TG8 2 LAMP 32W, T8

F3 4' SURFACE MOUNTED FLUORESCENT LIGHT FIXTURE SEALATRON IP LOW PROFILE 2 LAMP T8, 32W

6" RECESSED CFL DOWN LIGHT LIGHTOLIER - 8031CLW 32W 4-PIN

F5 6* RECESSED CFL WALLWASH LIGHTOLIER - 8081CLW 32W 4-PIN

6* RECESSED CFL WALLWASH - DIMMABLE LIGHTOLIER - 8081CLW_CU3 32W 4-PIN

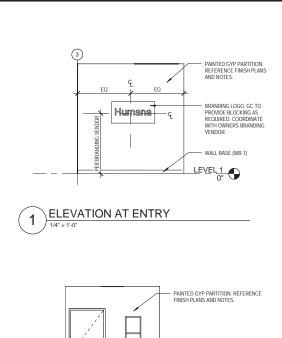
F8 DECORATIVE PENDANT

LIGHTOLIER - VETRO FA - PS26SA/SK01 BOTTOM OF FIXTURE AT 80" AFF

NOT FOR CONSTRUCTION

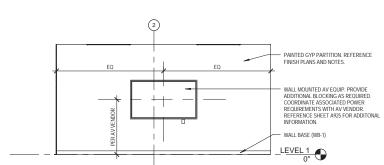
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Drawn	by	Author	Reviewed by	Checker
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LEVEL 1 REFLECTED CEILING PLAN



TILE BASE (T-2)

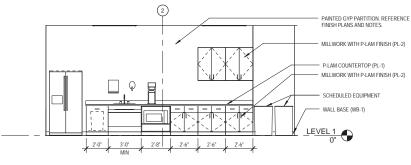
ALIGN GROUT LINES OF WALL TILES WITH FLOOR TILES



PAINTED GYP PARTITION. REFERENCE FINISH PLANS AND NOTES.

LEVEL 1

- WALL MOUNTED AV EQUIP. PROVIDE ADDITIONAL BLOCKING AS REQUIRED. COORDINATE ASSOCIATED POWER REQUIREMENTS WITH AV VENDOR. REFERENCE: SHEET A925 FOR ADDITONAL INFORMATION.



RESTROOM ELEVATION 2

PAINTED GYP PARTITION. REFERENCE FINISH PLANS AND NOTES.

LEVEL 1

ALIGN GROUT LINES OF WALL TILES
 WITH FLOOR TILES







4

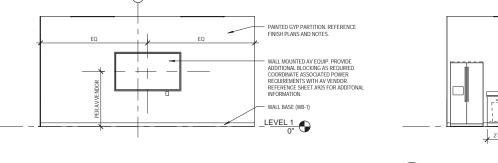
PAINTED GYP PARTITION. REFERENCE FINISH PLANS AND NOTES.

TILE BASE (T-2)

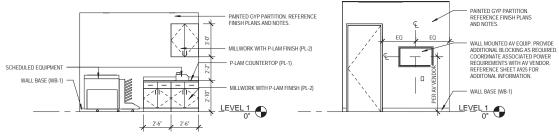
LEVEL 1

- ALIGN GROUT LINES OF WALL TILES WITH FLOOR TILES

RESTROOM ELEVATION 1



3







3

2 ELEVATION @ HUDDLE



TILE BASE (T-2)

_LEVEL 1

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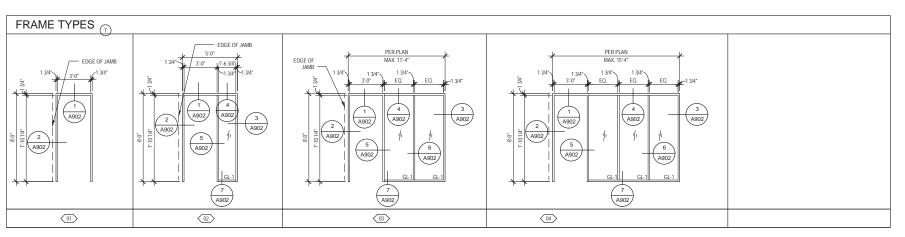
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INTERIOR **ELEVATIONS**

Sheet Title:



FRAME FRAME FRAME FRAME FRAME FRAME TYPE MATRL HEAD JAMB MULLION SILL RATING GROUP

20 MIN

DOOR SCHEDULE

GLASS TYPE

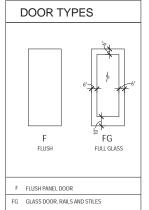
MATRL

DOOR

TYPE WIDTH 1 HEIGHT

DOOR

RM. NAME



GENERAL NOTES

ALL GLASS IN DOORS TO BE GL-1 UON. REF FINISH LEGEND ON SHEET A221 FOR ADDITIONAL INFORMATION.

3. DOOR AND FRAME ASSEMBLIES SHALL COMPLY WITH ALL GENERAL NOTES & LEGENDS, DOOR AND FRAME DETAILS, COMPONENTS INDICATED BY THE TOOOR FRAME SCHEDULE', AND PROJECT REQUIREMENTS AS SPECIFIED.

4. DOOR TYPE SYMBOLS REFERENCE 'DOOR TYPE DIAGRAMS', INDICATING LAYOUT OF THE DOOR ASSEMBLY, LOCATION AND SIZE OF GLASS AND LOUVER PANELS, AND DIMENSIONS OF RAILS AND STILES.

5. PROVIDE FLOOR MOUNTED DOOR STOPS UON.

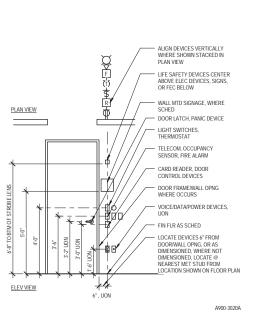
6. GL-1 = 1/4" TEMPERED, GL-2 = 1/2" TEMPERED. GC TO PREP ALL DOORS AND FRAMES AS REQUIRED FOR ELECTRONIC HARDWARE.

8. GC TO VERIFY CARD READER LOCATIONS WITH TENANT SECURITY.

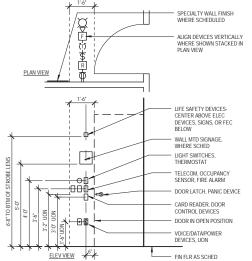
	7
COMMENTS	
EXISTING. PREP FOR CARD READER	
CARD READER	- [
	╡ 「
CARD READER	╡ 「
EXISTING: PREP FOR CARD READER	- [
CARD READER	
	⊣ ⊢

ITEM	MANUF.	MODEL	FUNCTION	FINISH	REMARKS
LEVER HARDWARE TYP.	SCHLAGE	AL SERIES - JUPITER	N/A	626 SATIN CHROMIUM	
LEVER HARDWARE (IT RM)	SCHLAGE	ND SERIES - ATHENS	N/A	626 SATIN CHROMIUM	
PASSAGE LATCHSET	SCHLAGE	AL SERIES - JUPITER	AL10S	626 SATIN CHROMIUM	
OFFICE LOCKSET	SCHLAGE	AL SERIES - JUPITER	AL50PD	626 SATIN CHROMIUM	
CLASSROOM LOCKSET	SCHLAGE	AL SERIES - JUPITER	AL70PD	626 SATIN CHROMIUM	
STOREROOM LOCKSET	SCHLAGE	AL SERIES - JUPITER	AL80PD	626 SATIN CHROMIUM	
PRIVACY LOCKSET	SCHLAGE	AL SERIES - JUPITER	AL40S	626 SATIN CHROMIUM	*OCCUPIED* INDICATOR
PIVOTS	RIXSON	340	N/A		CONCEALED NON-HANDED
HINGE	McKINNEY	TB2714	N/A	SATIN STAINLESS	3@>7' 4@<7'
ELECTRIC STRIKE	HES	5200 SERIES (8300 @ 2HR)		630 SATIN STAINLESS	
CLOSER	LCN	4040 SERIES	N/A		(ADA, NO THROUGH BOLTS
DOOR STOP	IVES	411 / 434	N/A	N/A	FLOOR MOUNTED
DOOR SILENCERS	IVES	SR66		GRAY	

HAKL	WARE GROU	ro
GROUP	HARDWARE	REMARKS
GROUP 1	LEVER HINGES PASSAGE LATCHSET DOOR STOP	TYP. OFFICE TYP. CONF. TYP. HUDDLE TYP. BREAK
GROUP 1.1	LEVER HINGES PASSAGE LATCHSET CLOSER DOOR STOP	TRAINING
GROUP 2	LEVER HINGES PRIVACY LOCKSET DOOR STOP	MOTHERS RW TOILET RW WELLNESS
GROUP 3	LEVER HINGES STOREROOM LOCKSET CLOSER DOOR STOP	STORAGE
GROUP 4	LEVER PIANO HINGES STOREROOM LOCKSET ELECTRIC STRIKE CARD READER CLOSER DOOR STOP	IDF ROOM
GROUP 4.1	LEVER PIANO HINGES STOREROOM LOCKSET ELECTRIC STRIKE CARD READER CLOSER DROP SEAL (90MIN) DOOR STOP	MDF ROOM
GROUP 5	- LEVER - HINGES - STOREROOM LOCKSET - ELECTRIC STRIKE - CARD READER - CLOSER - DOOR STOP	VENDOR ROOM
GROUP 6	LEVER HINGES STOREROOM LOCKSET ELECTRIC STRIKE CARD READER CLOSER DOOR STOP	SUITE ACCESS CONTROL



GENERAL DEVICE ALIGNMENT DIAGRAM



GEN DEVICE ALIGNMENT DIAGRAM - DOOR OPEN

(2)

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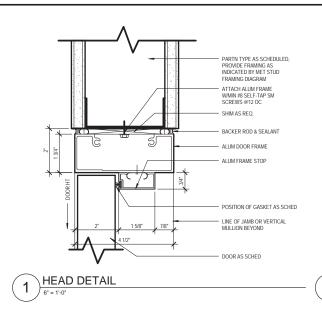
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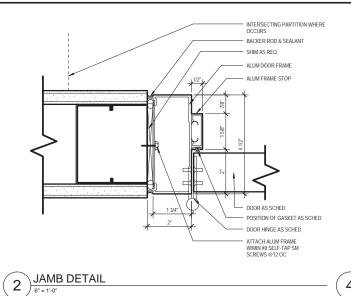
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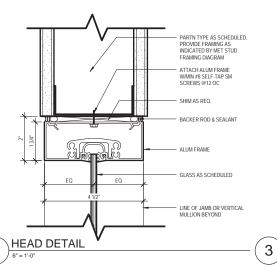
Key Plan

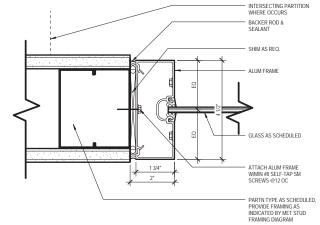
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Drawn	by	Author	Reviewed by	Checker
Project	No	13.01656	6.00	

DOOR, FRAME TYPES, SCHED









GLASS AS SCHEDULED

 LINE OF JAMB OR VERTICAL MULLION BEYOND

SCHED SEALANT & GASKET

BACKER ROD & SEALANT

ALUM FRAME

SHIM AS REQ.

ATTACH ALUM FRAME
WMMIN #8 SELF-TAP SM
SCREWS @12 OC

PARTN TYPE AS SCHEDULED,
PROVIDE FRAMING AS
INDICATED BY MET STUD
FRAMING DIAGRAM

DE FRAMING AS

IED BY MET STUD

GO DIAGRAM

HOK

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Key Plan

STRUCTURAL
REINFORCEMENT
WHERE REQUIRED

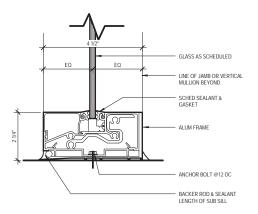
ALUM FRAME

SCHED SEALANT &
GASKET

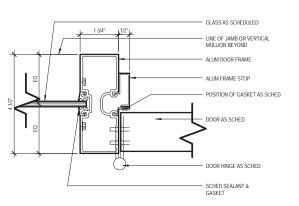
GLASS AS SCHEDULED

SCHED ASSEMBLY SCREW
REFERENCE
MANUFACTURERS
ASSEMBLY INSTRUCTIONS





7 SILL DETAIL

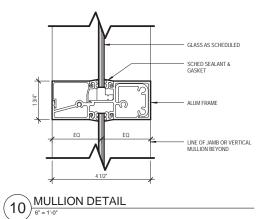


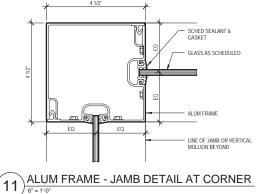
JAMB DETAIL

6"=1"-0"



JAMB DETAIL





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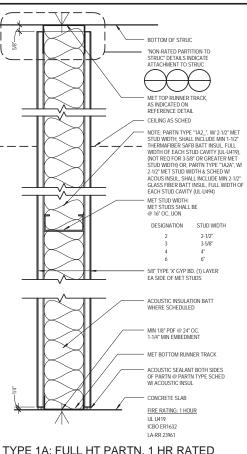
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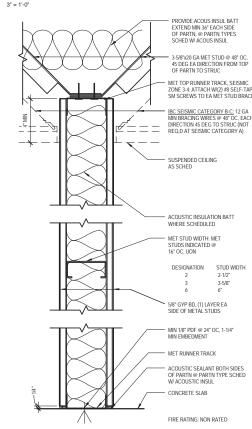
 Project No.
 13.01656.00

DOOR & FRAME DETAILS

Original drawing is 36 x 24. Do not scale contents of this drawing Sheet Number A902



TYPE 1A: FULL HT PARTN, 1 HR RATED



TYPE C: PARTIAL HT PARTN

PARTITION TYPE GENERAL NOTES

- ROTTOM OF STRUC *NON-RATED PARTITION TO

STRUC* DETAILS INDICATE ATTACHMENT TO STRUC

MET TOP RUNNER TRACK.

AS INDICATED ON REFERENCE DETAIL

CEILING AS SCHED

MET STUD WIDTH

DESIGNATION

MET STUDS SHALL BE @ 16" OC, UON

EA SIDE OF MET STUDS

ACOUSTIC SEALANT BOTH SIDES

CONCRETE SLAB

TYPE A: FULL HT PARTN, NON RATED

FIRE RATING: NON RATED

3-5/8"x20 GA MET STUD @ 48" OC, 45 DEG EA DIRECTION FROM TOP OF PARTN TO STRUC

BC SEISMIC CATEGORY B-C: 12 GA MIN BRACING WIRES @ 48" OC, EACH DIRECTION 45 DEG TO STRUC (NOT REQ'D @

BATT WHERE SCHEDULED

STUDS INDICATED @ 16" OC, UON

DESIGNATION STUD WIDTH

3-5/8"

MIN 1/8" PDF @ 24" OC, 1-1/4"

MET BOTTOM RUNNER

ACCUISTIC SEALANT @

ACOUSTIC INSUL

CONCRETE SLAB

TYPE F: PARTIAL HT FURRING

FIRE RATING: NON RATED

STUD WIDTH

THE "PARTN TYPE SYMBOL", ILLUSTRATED BELOW, REPRESENTS THE COMPLETE EXTENT OF ALL PARTNS INDICATED BY THE
SYMBOL ON THE FLOOR PLANS, AND OTHER DRAWINGS IN THE PROJECT DOCUMENTS.

REFER TO PARTN TYPE DETAILS, NIOLACIDE BY THE "PARTN TYPE" CHARACTER ON THE TAG, FOR EXAMPLE: DETAIL "TYPE A",
REFER TO THE RIRE RATING LEGEND FOR THE FIRE-RESISTANCE CLASSIFICATION NOTED BY THE "FIRE RATING INDICATION" ON THE
TAG, FOR EXAMPLE: "1" - 60M RIFE-RESISTANCE RATED ASSEMBLY.
REFER TO METAL STUD SIZE OR COMI NOW MOTH AS INDICATED BY THE "METAL STUDICMU WIDTH" CHARACTER ON THE TAG, AS
SHOWN ON PARTN TYPE DETAILS, FOR EXAMPLE: "3" - 3-58" METAL STUD.

REFER TO THE "PARTN TYPE MODIFIER" NOTES BELOW, WHICH APPLY TO EACH PARTN WHERE MODIFIER CHARACTER(S) ARE
SHAWN ON PARTN TYPE MODIFIER" NOTES BELOW, WHICH APPLY TO EACH PARTN WHERE MODIFIER CHARACTER(S) ARE

SHOWN ON THE TAG. REFER TO THE "PARTN KEYNOTES" AS INDICATED, WHICH APPLY TO EACH PARTN WHERE KEYNOTE CHARACTER(S) ARE SHOWN

GENERAL NOTES - IBC SEISMIC CATEGORY A-C;
ALL METAL STUD PARTN TYPES SHALL COMPLY WITH PARTN TYPE GENERAL NOTES, AND THE "METAL STUD SPAN SCHEDULE"

ALL METAL STUD PART IN TYPES SPIAL COMINEY WITH PART IN TYPE GENERAL WOITES, AND THE METAL STUD SPART SCHEDI MIDICATING MID RETAL STUD WOITEN, SPACING, GALOE, AND LIMITING VERT SPAN. ALL CMM PART IN TYPES STALL COMPLY WITH PARTIN TYPE GENERAL NOTES, AND "CMU LINTEL SCHEDULE" FOR MIN CMU REINFORDRING AND LIMITING LINTEL SPANS.

GENERAL NOTES - IBC SEISMIC CATEGORY D-F:
ALL METAL STUD PARTIN TYPES SHALL COMPLY W/ PARTIN TYPE GENERAL NOTES, & ALL METAL STUD SHALL BE MIN 20 GA, UON.
ALL CMU PARTIN TYPES SHALL COMPLY WITH PARTIN TYPE GENERAL NOTES, AND REINFORCING AS INDICATED ON THE STRUCTURAL
DRAWINGS, UON.
PARTITION TYPE TIAG:

PARTITION (AS INDICATED ON FLOOR PLANS) FIRE RATING INDICATION MET STUD/CMU WIDTH PARTITION TYPE MODIFIER 2A3A S50 -PARTITION KEYNOTE

FIRE RATING LEGEND

THE COMPLETE ASSEMBLY OF EACH PARTITION WITH A FIRE RATING NUICATION SYMBOL SHOWN ON THE TAG, SHALL COMPLY WITH ALL RECUIREMENTS OF THE FIRE-RESISTANCE RATING CLASSIFICATION.

RATING CLASSIFICATION:

SMRGOL RATING CLASSIFICATION

COMITED> NON-RATED PARTITION, UON

15 OHM FIRE-RESISTANCE RATED FIRE PARTITION

15 OHM FIRE-RESISTANCE RATED FIRE PARTITION

15 OHM FIRE-RESISTANCE RATED FIRE BARRIER

21 100 MM FIRE-RESISTANCE RATED FIRE BARRIER

31 100 MM FIRE-RESISTANCE RATED FIRE BARRIER

32 OHM FIRE-RESISTANCE RATED FIRE BARRIER

32 OHM FIRE-RESISTANCE RATED FIRE BARRIER

34 200 MM FIRE-RESISTANCE RATED FIRE BARRIER

ROOF INSULATION, WHERE OCCURS

SPRAY-ON EPG WHERE OCCURS

TOP OF MET STUD

PARTN TYPE AS SCHED

MET TOP RUNNER TRACK, 21/2" LONG LEGS X 20 GA MIN, ATTACH WMIN #B SELF TAP SM SCREWS @12" OC

ACOUSTIC INSUL, WHERE SCHED BY PARTN TYPE

- ACOUSTIC INSUL, FULL DEPTH OF DECK FLUTES X PARTN WIDTH @ ALL PARTN TYPES SCHED W/ ACOUSTIC INSUL

- 4" W X 18 GA MET STRIPS @24" OC, SPAN (2) DECK FLUTES MIN, ATTACH W/

MET TOP RUNNER TRACK SM SCRFWS @ 24" OC

(2) #10 SELF TAP SM SCREWS EA SIDE

MET DECK

MET DECK

PARTITION TYPE MODIFIERS:

ARE SHOWN ON THE TAG:

A PROVIDE ACQUISTIC BATT INSUL FULL DEPTH OF EACH METAL STUD CAVITY

B. PROVIDE ACQUISTIC BATT INSUL FULL DEPTH OF EACH MET STUD CAVITY, AND ACQUISTIC BATT INSUL ABOVE TOP

OF PARTN, MIN SE 'EACH DIRECTION PERPENDICULAR TO PARTN

C. P. PROVIDE (1) LYTER SIR WIR CYP BD IN PLACE OF THE OUTSIDE LAYER OF GYP BD ON SCHED PARTN TYPE,

MOUNTON EACH FACE. OF THE PARTN EXPOSED TO MINISTURE. EXTEND FULL HTO PARTN LON

O. PROVIDE (1) LYTER OF 12' CEMENT BD IN PLACE OF THE OUTSIDE LAYER OF GYP BD ON THE SCHED PARTN TYPE,

MOUNT ON EACH FACE. OF THE PARTN BOOK STEPPED FOR THE SCHED FOR THE SCHED PARTN TYPE,

MOUNT ON EACH FACE OF THE PARTN INDICATED WICE CREAMING THE OTHER PRINST

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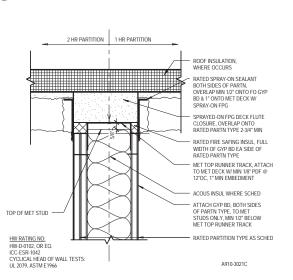
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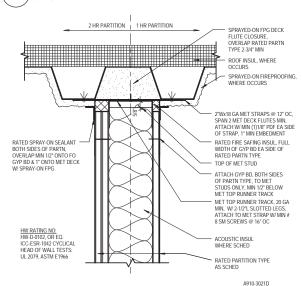
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SPRAYED-ON FPG ON MET DECK STRUC STL BEAM SPRAYED-ON FPG ON STRUC STL BEAM 3.4 EXPANDED MET LATH, ATTACH TO MET Z CLIP @ 16"OC - MET TOP RUNNER TRACK, 20 GA MIN, W/2-1/2"L SLOTTED LEGS, ATTACH TO MET Z CLIPS W/ MIN #8 SM SCREWS @ 16" OC SPRAYED-ON FPG, OVER MET LATH & MET Z CLIPS VIIIII IIIII 18GA MET 7 CLIP @ TOP OF MET STUD ATTACH GYP BD, BOTH SIDES OF PARTN TYPE, TO MET STUDS ONLY, MIN 1/2" BELOW MET TOP RUNNER TRACK ACOUSTIC INSUL WHERE SCHED NON-RATED PARTN TO STRUC@STL BEAM

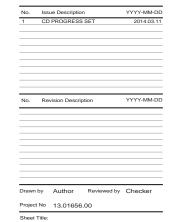
NON-RATED PARTN TO STRUC@MET DECK



RATED PARTN TO STRUC MET DECK ROOF 3



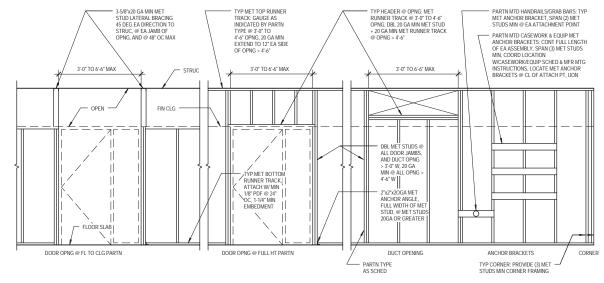
RATED PARTN TO STRUC MET DECK ROOF 4

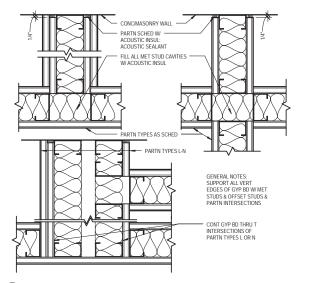


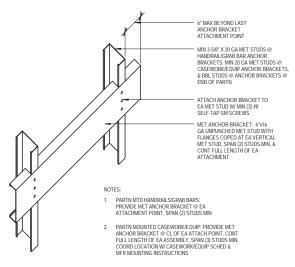
PARTITION TYPES & **GENERAL NOTES**

A910

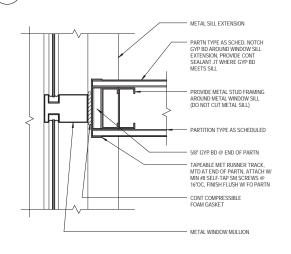
NOT FOR CONSTRUCTION







TYP MET STUD FRAMING DIAGRAM



PARTN TERMINATION @ EXT MULLION

CONT COMPRESSIBLE
FOAM GASKET
TAPEABLE MET RUNNER
TRACK, MTD AT END OF PARTN,

TAPEABLE MET RUNNER
TRACK, MTD AT END OF PARTIN
ATTACH WIN MY SELE-TAP
SM SCREW @ 16 TOC, FINISH
FLUSH WIF OF PARTIN

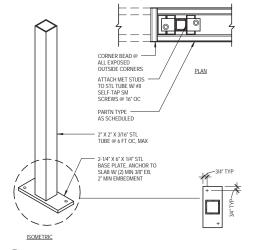
METAL CORNER BEAD @ ALL
EXPOSED OUTSIDE CORNERS

5/8" GYP BD @ END OF PARTIN
NOTCH GYP BD METAL MOY
SILL, CONT SEAANT JT WHE RE
GYP BD MEETS SILL DO NOT
CUT METAL SILL
PARTIN TYPE AS SCHED

METAL WINDOW SYSTEM

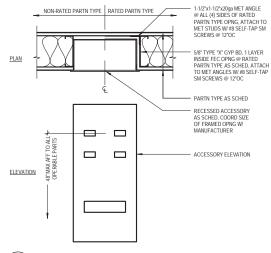
5 PARTN TERMIN OFFSET @ WDW MULLION

2 TYPE PARTN INTERSECTIONS
3° = 1'-0"



6 PARTIAL HT PARTN SUPPORT POST





7 RECESSED ACCESSORY CABINET

Humana

Project

Humana Memphis, TN MarketPoint

6515 Poplar Avenue Suites 107&108 Memphis, TN 38119

Prepared for Humana

Contract No: 13.01656.00



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Key Plan

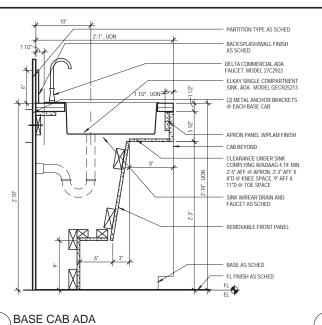
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No.	Revision Descr	ription	YYYY-MM-DE

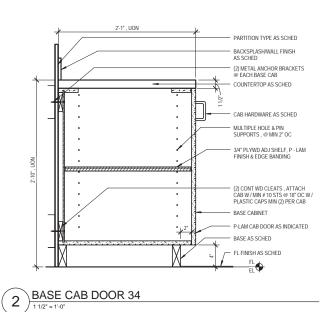
PARTITION FRAMING DETAILS

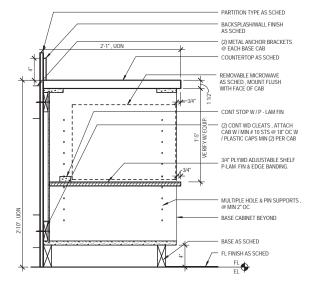
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BASE CAB MICROWAVE 3

(2) METAL ANCHOR BRACKETS @ EACH WALL CAB - P-LAM CAB DOOR AS INDICATED 3/4" PLYWD ADJ SHELF, WHITE MELAMINE FINISH & EDGE BANDING , UON - CAR HARDWARF AS SCHED WALL CAB MOUNTING HGHT AS INDICATED WALL FINISH AS INDICATED PARTITION TYPE AS SCHED PARTITION TYPE AS SCHED · BACKSPLASH/WALL FINISH AS SCHED (2) METAL ANCHOR BRACKETS @ EACH BASE CAB - COUNTERTOP AS SCHED CAB HARDWARE AS SCHED 3/4" PLYWD ADJ SHELF, WHITE MELAMINE FINISH & EDGE BANDING

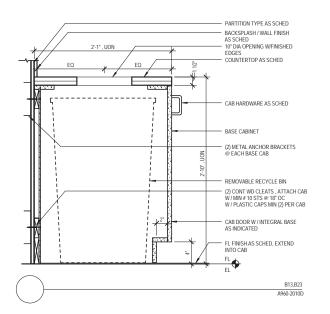
BASE CAB DOOR 34 WITH UPPER

(2) CONT WD CLEATS , ATTACH CAB W / MIN # 10 STS @ 18" OC W / PLASTIC CAPS MIN (2) PER CAB

BASE CABINET P-LAM CAB DOOR AS INDICATED

BASE AS SCHED

- FL FINISH AS SCHED



BASE CABINET - TRASH CONTAINER DET 5

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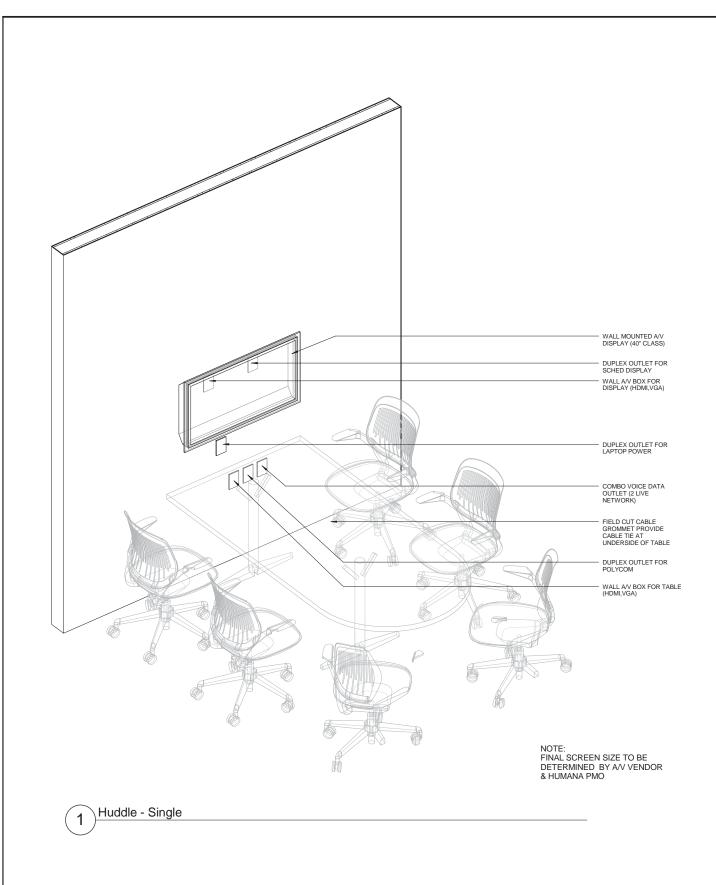
Key Plan

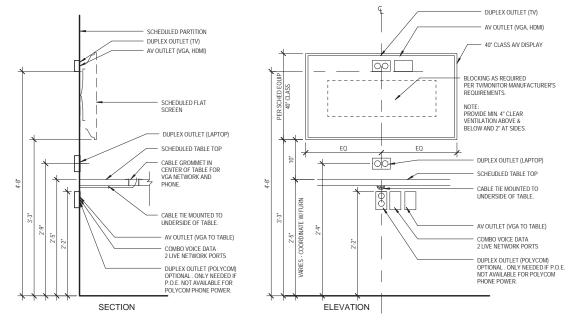
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Projec	t No	13.01656	6.00	

MILLWORK DETAILS

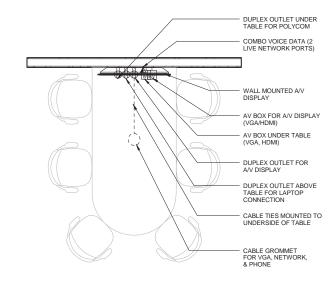
A960

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AV H - HUDDLE ROOM SINGLE MONITOR



Huddle Single Floor Plan



Humana

PROJECT STANDARDS

AV H1 - HUDDLE SGL

Sheet Title:

Sheet Number

AV-01

HVAC SYMBOLS AND ABBREVIATION LEGEND NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS MAY APPLY HZ KW KILOWATT AND LAT LEAVING AIR TEMPERATURE MC MECHANICAL CONTRACTOR MD MANUAL DAMPER NC MOSE CRITERIA NC NOSE CRITERIA NC NOT TO SCALE OA OUTSIDE AIR PC PLUMBING CONTRACTOR OTY QUANTITY RA RETURN AIR CRILLE REF REFER/REFERENCE SA SUPPLY AIR GRILLE SAG SUPPLY AIR GRILLE SAR SUPPLY AIR GRILLE SAR SUPPLY AIR GRILLE SER SERSONAL SHERRY SEPICENCY RATIO ESP EXEGRAL STATIC PRESSURE SHEAT MAR REGISTER SEER SERSONAL SHERRY SEPICENCY RATIO ESP EXEGRAL STATIC PRESSURE SMACNA OCNTRACTORS NATIONAL ASSOCIATION TYP TYPICAL AFF ABOVE FINISHED FLOOR ARCH ARCHITECT ASHRAE AMERICAN SOCIETY OF REFRIGERATION A AIR CONDITIONING ENGINEERS BBH ASEBOARD HEATER BTUH BRITISH THERMAL UNITS PER HOUR CAD CELING AIR DIFFUSER CD CONDENSATE DRAIN CFM CUBIC FEET PER MINUTE CSR CELING SUPPLY REGISTER DDC DIEGET DIGTAL CONTROL DISC SW DISCONNECT SWITCH DN DOWN T - THERMOSTAT MOUNTED @ 48" AFF. - DUCT TAKE-OFF WITH BALANCING DAMPER - CEILING AIR DIFFUSER DUCT TEE / ELL FITTINGS WITH SMACNA TURNING VANES. PLACE IN ACCORDANCE WITH SMACNA. DOWN EXHAUST AIR ENTERING AIR TEMPERATURE ELECTRICAL CONTRACTOR ENERGY EFFICIENCY RATIO - RETURN / EXHAUST AIR GRILLE ENERGY EFFICIENCY RATIO EXHAUST FAN EXTERNAL STATIC PRESSURE EXHAUST DEGREES FARENHEIT FIRE DAMPER FEET PER MINUTE FURNISH \bowtie EXHAUST / RETURN AIR DUCT UP FURNISH FURNISHED & INSTALLED GENERAL CONTRACTOR HORIZONTAL HORSEPOWER HEATING/YENTILATION/AIR CONDITIONING - EXHAUST / RETURN AIR DUCT DOWN - SUPPLY AIR DUCT UP

	GAS FIRED ROOF TOP UNIT SCHEDULE																
		CFM			COOLING				FAN			HEATING	;				
MARK	S.A.	R.A.	O.A.	SENSIBLE	TOTAL	EAT	LAT	ESP	HP	FRPM	BTUH IN	втин оит	EAT	LAT	VOLTAGE	EER/SEER	REMARKS
RTU-1	2,000	1,750	250	46,000	59,600	78/65	57/56	0.6"	1.0	1,075	130,000	104,000	63	111	208/3ø/60	13 SEER	ALL
RTU-2	2,000	1,725	275	46,000	59,600	78/65	57/56	0.6"	1.0	1,075	130,000	104,000	63	110	208/3ø/60	13 SEER	ALL
GENERAL NOTES: A. REFERENCE SPECIFICATIONS "ROOFTOP UNITS" FOR ADDITIONAL REQUIREMENTS. B. ESP. LOSS DOES NOT INCLUDE HEATER, COOLING COIL, AND INTERNAL PRESSURE LOSSES. M.C. SHALL CONSULT MFOR TO OBTAIN A FAN THAT WILL MEET THE TOTAL STATIC PRESSURE OF THE SYSTEM AT MEDIUM SPEED. C. SOUND POWER LEVELS TO BE RATED ACCORDING TO ARI 340/360 OR ARI 210/240 AND ARI 270. D. NON-REROUS DRAIN PAN AND COOPPER TUBES. G. WELTER COOLING COIL OF ALUMINUM FINS AND COPPER TUBES. G. WELTER CENARIL CARRY G. WITH ARI 210, 320. H. UNITS TO HAVE HIGH/LOW PRESSURE SWITCHES. ANIT—SHORT CYCLING DEVICE AND OVERLOAD PROTECTION. J. UNIT TO OPERATE AT PLUS/MINUS TEN PERCENT (+10%) OF RATED VOLTAGE.							ALL BE R DUAL POII PILOT AL AND R SHUT-OFF CONTROL EXCHANG ONE (1)	ESPONSI NT CONI ATING : : ER/BUR YEAR P.	BLE FOR NECTION.	ELECTRICAL	CHANGES TO			DESIGN BASIS: TRANE MANUFACTURER: CARRIER, YORK, AAON, MC	CQUAY		
REMARKS 1. BELT DRIVE MOTOR WITH ADJUSTABLE P 2. TWO INCH (2") DISPOSABLE FILTER & NEW FILTERS UPON COMPLETION OF T 3. FACTORY ASSEMBLED ROOF CURB. 4. MOTORIZED OUTSIDE AIR DAMPER. 5. ECONOMIZER WITH ENTHALPY CONTROL. 6. ECONOMIZER WITH DOWER EXHAUST.	ILTER RACK.					8. OUT		AMPER SH	ALL BE	OPEN D	IN RETURN URING OCCUI	DUCTWORK. PIED MODE AN	D				

	FAN SCHEDULE											
MARK	CFM	ESP	FRPM	DRIVE	TYPE	HP/WATTS	NC	VOLTAGE	CONTROL	REMARKS		
EF-1,2,3	75	0.25"	700	DIRECT	CLG	65 W	2.5	115/1ø/60	SWITCH WITH LIGHTS BY EC	1,2,3,4,5,6,7		
GENERAL NOTES A. N.C. LEVELS IN SONES B. TYPE: IL = IN-LUNKE CLG - CEILING C. CONTRACTOR TO PROVIDE ALL REQUIRED MOUNTING HARDWARE. D. DUTY: E - E ENHAUST F. U.L. LISTED / AMCA LISTED									DESIGN_BASIS: GREENHECK			
2. VIBRATION ISOLAT										MANUFACTURER: PENN, LOREN COOK, JENCO FAN		

	SPLII	SYSTEM SCH	IEDULE		
	INDO	DR SECTION (AHU)		OUTDOOR S	ECTION (CU)
MARK	CFM	ВТИН	VOLTAGE	COOLING	VOLTAGE
DSS-1/CU-1	305	8,500	208/1ø/60	8,500	208/1ø/60
GENERAL NOTES: ALL OUTDOOR AND INDOOR COMPONENTS TO BE MATCHED AND C SAME MANUFACTURER. A. M.C. SHALL SIZE R.LINES AND PROVIDE ALL ACCESS REQUIRED BY MANUFACTURER TO MEET SCHEDULED CAPACITES WITH EXTENDED REFRIGERANT PIPE LENG R.LINE LOSS TO BE ADDED TO CAPACITY SCHEDULE B. INDOOR UNIT SHALL BE FURNISHED WITH THE FOLL 1. DIRECT ORIVE MOTOR WITH 2 SPEED TAPS OR E MOTOR. 2. UL LISTED COMPONENTS AND REFRIGERANT. 3. NONFERROUS DRAIN PAN AND CONNECTION. 4. INSULATED CABINET AND BAKED EXAMEL EXTENS FINISH TO CONTROL OF ALUMINUM FINS AND COPPER INTERLOCKING CONTROLS FOR OUTDOOR AND IN OPERATION. 7. FAN PRESSURE LOSS DOS NOT INCLUDE COOL COIL, AND AHU PRESSURE LOSS SOS. M.C. SHALL CONSULT MERG TO OBTAIN A FAN THAT WILL M THE TOTAL STATE PRESSURE OF THE SYSTEM / 8. REMOTE WALL MOUNTED THERMOSTAT. 9. CONDENSATE PUMPS.	ORIES 5THS. D. DWING: CCM TUBES. TUBES. DOOR NG	WEATHERPROOF BAKE UL LISTED ELECTRICAL WIRED UNITS RATED SFECTORY ASSEMBLED CONDENSER COIL. C. ACCORDANCE WITH A COMPRESSOR WITH H HEATERS, SERVICE V. SWITCHOVER VALVES, AND LIME DRIER. COIL TO BE ALUMINUI HAVE REFRICERANT (SUB—COOLING PROVI COILING COILIN	M FINS AND COPPER TUBES. CONTROL DEVICES DURING HI SIGNIS FOR COOLING. RELIEF PORTS AND OVERLO SERVICE VALVES. FACTORY TESTED AND CHARC PULS/MINUS TEN PERCENT (1) YEAR PARTS/LABOR WAF ANTY ON COMPRESSOR. W 1 3.	UP DISCHARGE. FACTORY 10, 340. PRESSOR. DIN 0 270. TION, SUMP COIL TO EATING AND AD SED. (+10%)	DESIGN BASIS: DAKIN INDOOR UNIT: FDXSO9LVJU OUTDOOR UNIT: RXSO9LVJU MANUFACTURER: SANYO, MITSUBISHI, DAIKIN

BASEBOARD ELECTRIC HEATER SCHEDULE

MARK	TOTAL WATTS	LENGTH	WATTS/FT	VOLTAGE			
ввн	BBH						
ORDER. B. COPPER CLAD STEEL SHEA' C. BAKED ENAMEL FINISH, COL	GENERAL NOTES: A. M.C. SHALL FIELD VERIFY EXACT LENGTH PRIOR TO PLACING ON						
D. INTEGRAL TAMPER PROOF T E. 3" PEDESTALS; NUMBER OF	*ADD ALTERNATE NO. 1						

NOTE:
THE SUBCONTRACTORS SHALL COORDINATE WITH THE GENERAL CONTRACTOR
ANY WORK THAT WILL BE REQUIRED TO BE DONE AFTER NORMAL WORKING
HOURS PRIOR TO SUBMITTING BID. CONTRACTOR SHALL PROVIDE MIN. 48
HOURS NOTICE.

NOTE: VERIFY AND COORDINATE ALL EXISTING CONDITIONS OF BUILDING IN FIELD PRIOR TO BEGINNING ANY WORK. MC SHALL COORDINATE THIS WORK WITH GO

♦ CEILING AIR DIFFUSER SCHEDULE

, -				
MARK	NECK	CFM	MAX. PD. IN WG.	NC
A	6"ø	AS NOTED	0.03	
В	8"ø	AS NOTED	0.06	17
С	10"ø	AS NOTED	0.06	20

- GENERAL NOTES:
 A. REFERENCE SPECIFICATIONS "DIFFUSERS, REGISTERS, AND GRILLES" FOR ADDITIONAL REQUIREMENTS.
 B. COORDINATE MOUNTING TYPE WITH CEILING PLANS; REFER TO ARCHITECTURAL DRAWINGS.
 C. ALL TYPES AND SIZES MAY NOT APPLY.
 D. AVAILABLE MFORS: ANEMOSTAT, CARNES, TITUS, TUTTLE & BAILEY, PRICE.
 E. WHITE BAKED ENAMEL FINISH.
 F. OPPOSED BLADE DAMPES.
 G. 3 CONE FAGE (UNLESS OTHERWISE NOTED).
 H. STEEL CONSTRUCTION.

EXHAUST/RETURN AIR GRILLE

SCHEDULE				
MARK	SIZE			
1	12" X 12"			
2	24" X 12"			
3	24" X 24"			

- GENERAL NOTES:

 A. REFERENCE SPECIFICATION "DIFFUSERS, REGISTERS, AND GRILLES" FOR ADDITIONAL REQUIREMENTS.
 B. ALL TYPES AND SIZES MAY NOT APPLY
 C. APPROVED MANUFACTURERS: ANEMOSTAT, CARNES, TITUS, TUTTLE & BAILEY, PRICE.
 D. ALL GRILLES SHALL BE FURNISHED WITH OPPOSED BLADE DAMPER.
 E. ALL GRILLES TO BE FURNISHED WITH BORDER/FRAME.
 F. ALL GRILLES TO BE ALUMINUM CONSTRUCTION, WHITE BAKED ENAMEL FINISH, WITH 1/2" X 1/2"
 EGG-CRATE GRID SPACING.

INSULATION SCHEDULE						
SYSTEM	INSULATED	MATERIAL	MINIMUM THICKNESS	INSTALLED R-VALUE	INSULATION JACKET	VAPOR BARRIER
HVAC AIR SIDE						
SUPPLY AIR	YES	MINERAL FIBER	2"	8	FSK	YES
RETURN AIR	YES	MINERAL FIBER	2"	8	FSK	NO
CONDENSATE LINES	YES	CLOSED CELL ELASTOMERIC	1/2"		NONE	YES
REFRIGERANT LINES	YES	CLOSED CELL ELASTOMERIC	1/2"		NONE	YES

.....

- GENERAL NOTES:

 A. REFERENCE SPECIFICATION "HVAC INSULATION" FOR ADDITIONAL REQUIREMENTS.
 B. REFERENCE FLOOR PLAN AND DRAWING DETAILS FOR SPECIAL CONDITIONS.
 C. JACKET:
 FSK = FOIL SCRIM KRAFT
 ASJ = ALL SERVICE JACKET
 TPR THERNO PLASTIC RUBBER
 D. INSULATION INSTALLED OUTDOORS SHALL BE PROVIDED WITH A WEATHER PROOF JACKET.
 E. WHERE R-VALUE IS NOT PROVIDED, INSULATION THICKNESS IS BASED ON 3/4 PCF.
 F. INSTALLED R-VALUE IS THE INSULATION REQUIREMENT AFTER COMPRESSION IN FIELD.

HVAC DESIGN SUMMARY

THE DESIGN CRITERIA IS AS FOLLOWS WITH ALLOWANCES FOR CONVENTIONAL OFFICE SPACE IN THE MEMPHIS, TENNESSEE AREA.

DESIGN CRITERIA

1. <u>OUTDOOR:</u> SUMMER - <u>96</u> 'F DB <u>78</u> 'F WB WINTER - ___16__*F 2. <u>INDOOR:</u> SUMMER - <u>___75</u>__ +/-3*F WINTER - <u>___70</u>__ +/-3*F PRECISION HUMIDITY CONTROL IS NOT PROVIDED.

3. BUILDING CONSTRUCTION: PER SITE INSPECTION

*WINDOWS U = 1.1 SC = 0.6
WALLS U = 0.08
ROOF U = 0.07 *EXISTING WINDOWS ARE CLEAR, SINGLE PANE GLASS

4. OCCUPANCY: 35 PERSONS PER ARCHITECTURAL PLAN.

5. OUTSIDE AIR: 5.0 CFM/PERSON PER 2009 IMC 0.06 CFM/SQFT PER 2009 IMC

6. LIGHTING 1.0 WATTS/SQUARE FOOT AVERAGE

OWNER PROJECT REQUIREMENT:

PROVIDE NEW PLUMBING, ELECTRICAL AND H.V.A.C. TO ACCOMMODATE HUMANA'S DESIGN SPECIFICATIONS.

BASIS OF DESIGN:

- PROVIDE NEW GAS FIRED ROOFTOP UNITS TO CONDITION TENANT SPACE.
 PROVIDE DUCTED SPLIT SYSTEM FOR I.T. ROOM
 NO HUMIDITY CONTROL PROVIDED FOR I.T. ROOM BASED UPON LEVEL 2
 HUMANA I.T. STANDARDS.
 PROVIDE NEW EXHAUST FAN FOR TENANT TOILET ROOMS.

CODE REFERENCE:

- 2009 INTERNATIONAL BUILDING CODE WITH LOCAL AMENDMENTS (2012 MEMPHIS AND SHELBY COUNTY EXISTING BUILDING CODE)
 2009 INTERNATIONAL EXISTING BUILDING CODE WITH LOCAL AMENDMENTS (2012 MEMPHIS AND SHELBY COUNTY BUILDING CODE)
 2009 INTERNATIONAL BENERGY CONSERVATION CODE
 2009 INTERNATIONAL MECHANICAL CODE

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KERR-GREULICH

MEP Engineer

1534 Ormsby Station Ct. Louisville KY 40223 502.426.9457

Key Plan

No. Issue Description

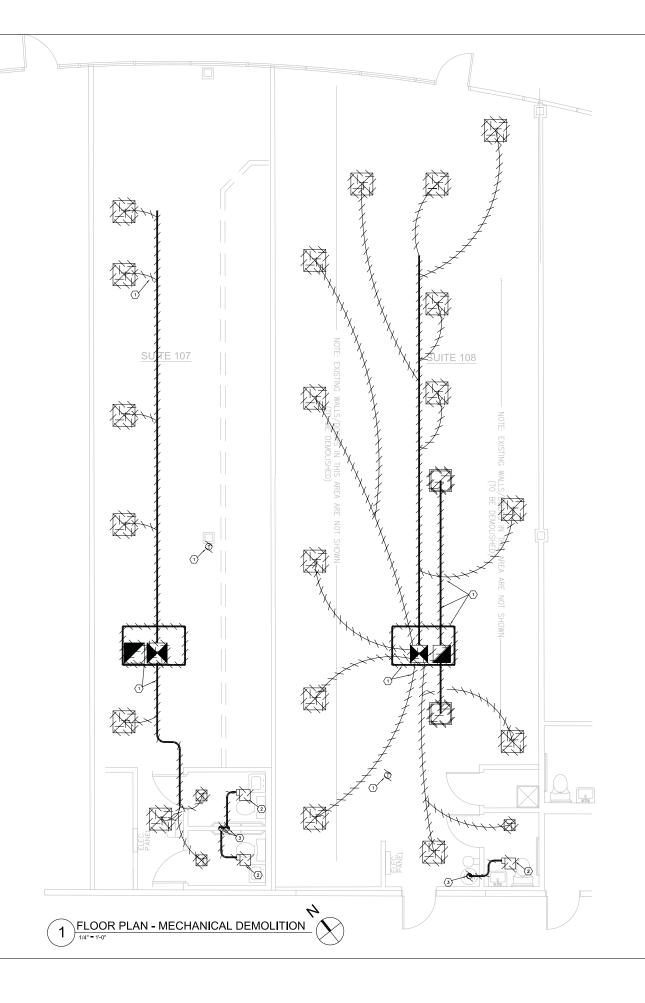
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% AND SCHEDULES

SHEET 1 OF 6

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GENERAL DEMOLITION NOTES

- A. WHERE PIPING, DUCTWORK, ETC. IS SHOWN TO BE REMOVED, IT APPLIES ONLY TO LINES SERVING FIXTURES, SUPPLIES, RETURNS, OUTLETS, EQUIPMENT, ETC. WHICH ARE TO BE REMOVED. DO NOT DISCONNECT ANY MAINS OR BRANCH LINES SERVING ITEMS WHICH ARE TO REMAIN.
- B. CARE SHOULD BE TAKEN BY ALL CONTRACTORS TO AVOID DAMAGING OR DISTURBING ELISTING CONSTRUCTION WHICH IS INDICATED TO REMAIN. CONTRACTORS SHALL BE RESPONSIBLE FOR MAKING ANY REPARTS NECESSARY TO RECTIFY DAMAGE AND REST
- C. ALL CONTRACTORS SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL ARCHITECTURAL DRAWINGS AND DETAILS PRIOR TO BEGINNING CONSTRUCTION FOR COORDINATION OF ALL DEMOLITION WORK FOR EACH RESPECTIVE TRADE.
- D. PRIOR TO BEGINNING DEMOLITION WORK, EACH TRADE SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AS REQUIRED BY LOCAL AND STATE AUTHORITIES, CODES AND ORDINANCES.
- E. UNLESS NOTED OTHERWISE, SHOWN OR SPECIFIED, ALL MATERIALS AND EQUIPMENT REMOVED OR DEMOLSHED (EXCEPT THAT WHICH IS TO BE SALVAGED OR RELOCATED) AS DIRECTED BY DRAWINGS AND SPECIFICATIONS, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LEGALLY DISPOSED OF.
- F. ALL PIPING, ETC. WHICH IS REQUIRED TO BE CUT SHALL BE CUT FLUSH WITH FINISHED FLOORS/WALLS. ALL CUTTING AND PATCHING OF EXISTING FLOORS/WALLS SHALL BE BY EACH CONTRACTOR.

- HATCHING INDICATES EXISTING ROOFTOP UNIT, THERMOSTAT, AND ALL ASSOCIATED DUCTWORK AND DIFFUSERS TO BE REMOVED. EXISTING ROOF CURB TO REMAIN AND BE REUSED.
- 2. EXISTING EXHAUST FANS AND ASSOCIATED DUCTWORK TO BE REMOVED.
- 3. EXISTING ROOF VENT TO BE REMOVED. CAP AND SEAL CURB WEATHER TIGHT.



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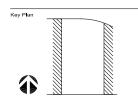
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Proje	ct No 2013-6	6741	
Froje	n by KL	Reviewed by	CB/D6

SHEET 2 OF 6

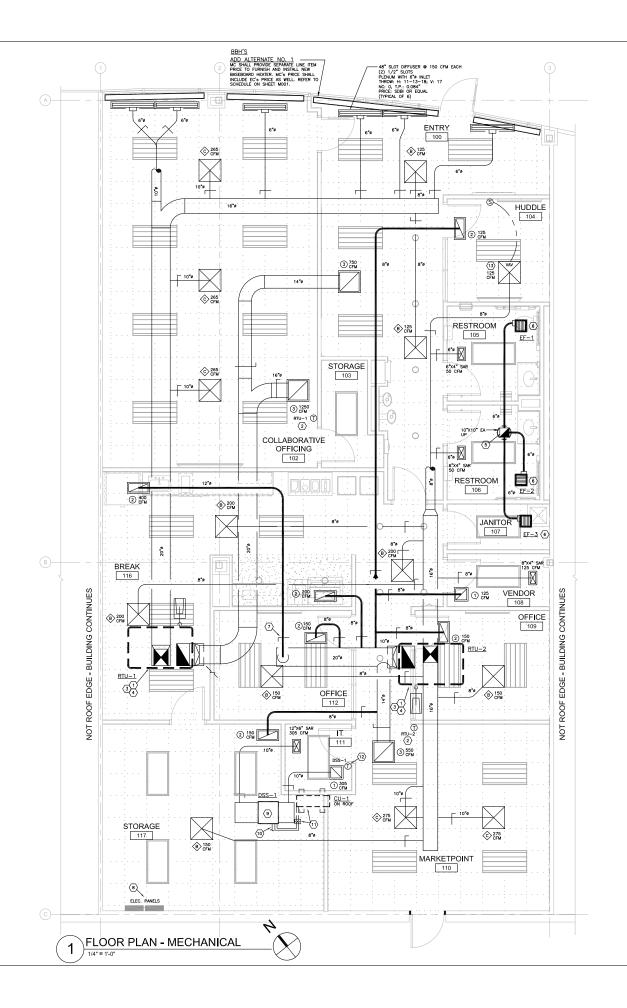
FLOOR PLAN -

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% MECHANICAL DEMOLITION

M100



HVAC GENERAL NOTES

- A. HVAC CONTRACTOR SHALL COORDINATE DUCT, DIFFUSERS, REGISTERS AND GRILLES WITH LIGHT FIXTURE AND SPRINKLER HEAD LOCATIONS.
- B. CONTRACTORS ARE TO REVIEW STRUCTURAL PLANS AND ACTUAL LAYOUT OF BEAMS, JOISTS, ETC. TO AVOID CONFLICT BETWEEN DUCT. ADJUST DUCT ROUTING TO ACCEPT STRUCTURAL CONDITIONS.
- FLEXIBLE DUCT TO BE A MAXIMUM OF 5'-0" IN LENGTH UNLESS OTHERWISE NOTED. CRIMPING OF FLEXIBLE DUCT WILL NOT BE ACCEPTED.
- ALL DIFFUSERS, REGISTERS, AND GRILLES SHALL BE FURNISHED WITH OPPOSED BLADE DAMPERS UNLESS OTHERWISE NOTED. SURFACE MOUNTED CEILING DIFFUSERS SHALL BE PROVIDED WITH FULLY INSULATED BACKING.
- ALL DUCT CONNECTIONS TO AIR HANDLING EQUIPMENT (FANS, ETC.) SHALL HAVE NEOPRENE FLEXIBLE CONNECTIONS FURNISHED AND INSTALLED COMPLETE BY THE MECHANICAL CONTRACTOR.
- . ALL 90 DEGREE ELBOWS SHALL BE INSTALLED WITH TURNING VANES; UNLESS OTHERWISE NOTED. THIS INCLUDES VERTICAL AND SINCLE LINE ELBOWS ON THE FLOOR PLANS WHERE TURNING VANES ARE NOT SHOWN.
- ALL EXHAUST DISCHARGES AND GAS FLUES WHERE INDICATED SHALL BE LOCATED A MINIMUM OF 10'-0' AWAY FROM OUTSIDE AND COMBUSTION AIR INTAKES UNLESS LOCAL AND STATE CODES MANDATE ADDITIONAL DISTANCE.
- CONTRACTOR SHALL VERIFY ELECTRICAL CHARACTERISTICS OF ALL MECHANICAL EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO PLACING EQUIPMENT ON ORDER.
- CONTRACTOR SHALL COORDINATE ROUTING OF DUCTWORK WITH ALL OTHER TRADES PRIOR TO COMMENCING INSTALLATION.
- K. EACH CONTRACTOR SHALL SEAL ALL EXTERIOR WALL PENETRATIONS IN WATER—TIGHT MANNER. CONTRACTOR SHALL INSTALL PIPE SLEEVES IN ALL EXTERIOR WALL/FOUNDATION PENETRATIONS. CUTTING AND SLEEVING FOR INSTALLATION SHALL BE COORDINATED WITH GENERAL CONTRACTOR AND ARCHITECT PRIOR TO COMMENCING WORK.

- INDICATES NEW ROOFTOP UNIT TO BE INSTALLED ON EXISTING ROOF CURB. MC SHALL PROVIDE AND INSTALL CURB ADAPTER IF NECESSARY.
- 2. THERMOSTAT; MOUNTED 48" AFF. COORDINATE EXACT LOCATION WITH OWNER. THERMOSTAT SHALL BE 7-DAY PROGRAMMABLE WITH HEAT/COOL/ON/OFF/AUTO CHANGEOVER FUNCTIONS. (TYPICAL)
- EXTEND SCHEDULE 40 PVC CONDENSATE DRAIN LINE AND SPILL ON ROOF. CONDENSATE LINE BY MC. (TYPICAL)
- 4. HOLD ALL OUTSIDE AIR INTAKES A MINIMUM OF 10'-0" FROM ALL EXHAUST DISCHARGES AND PLUMBING VENTS. (TYPICAL)
- 5. EXTEND EXHAUST DUCT UP THROUGH ROOF WITH ROOF CURB TO EXHAUST HOOD. REFER TO EXHAUST HOOD DETAIL ON SHEET M201.
- 6. NEW EXHAUST FAN. REFER TO FAN SCHEDULE ON SHEET MOO1.
- 7. PROVIDE MANUAL DAMPERS WHERE REQUIRED TO BALANCE SYSTEM. INSTALL IN ACCESSIBLE LOCATION. (TYPICAL)
- 8. AVOID ROUTING DUCTWORK ABOVE ELECTRICAL PANELS AND EQUIPMENT. COORDINATE PANEL LOCATIONS WITH EC.
- 9. INDICATES HORIZONTAL DUCTED SPLIT INDOOR UNIT. SUSPEND FROM STRUCTURE WITH ALL THREAD ROD PER MANUFACTURER'S RECOMMENDATIONS. DO NOT INSTALL ABOVE LIGHTS, REPER TO SCHEDULE ON SHEET MOOT.
- 10. EXTEND PUMPED SCHEDULE 40 PVC CONDENSATE DRAIN LINE AND SPILL TO MOP SINK IN JANITOR CLOSET 107. DO NOT ROUTE OVER IT OR VENDOR ROOMS.
- 11. EXTEND REFRIGERANT LINES FROM CONDENSING UNIT ON ROOF AND CONNECT TO INDOOR UNIT. REFRIGERANT LINE PENETRATIONS THROUGH ROOF SHALL BE THROUGH PIPE CUBB WITH RUBBER BOOTS; REFER TO ROOF PENETRATION DETAIL ON SHEET MIZOT. CONDENSING UNIT SHALL BE INSTALLED ON ROOF EQUIPMENT RALS SECURED TO ROOF, HOLD 10⁻⁰ OF TROM ROOF EDGE.
- 12. REMOTE FACTORY PROVIDED THERMOSTAT; MOUNT 48" AFF.
- 13. INDICATES THERMAL HEATING/COOLING VAV DIFFUSER WITH WALL MOUNTED ROOM SENSOR; MOUNT 48" AFF. REFERENCE SPECIFICATION ON SHEET M302.



Humana Memphis, TN MarketPoint

6515 Poplar Avenue Suites 107&108 Memphis, TN 38119

Prepared for

Humana, Inc.

Contract No: 13.01656.00

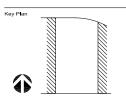


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MEP Engineer

1534 Ormsby Station Ct. Louisville KY 40223 502.426.9457



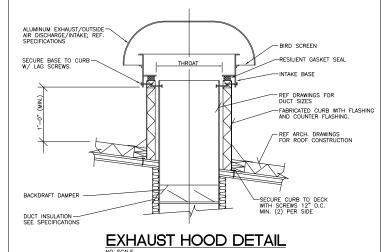
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FLOOR PLAN -% MECHANICAL

SHEET 3 OF 6

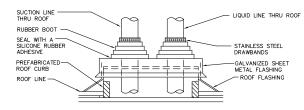
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M101

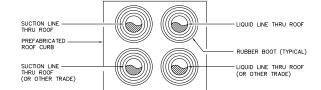


NOTES: 1. ROOF CURB AND RUBBER BOOTS TO BE PROVIDED BY MECHANICAL CONTRACTOR.

- 2. ALL FLASHING AND ROOFING TO BE PERFORMED BY GENERAL CONTRACTOR.
- 3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES PRIOR TO CURB FABRICATION FOR CURB SIZE AND NUMBER OF RUBBER BOOTS NEEDED, TO MINIMIZE ROOF FEMERIATIONS.



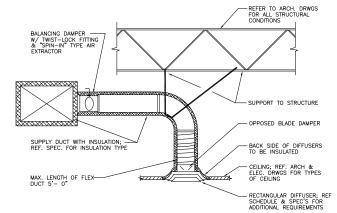
ELEVATION



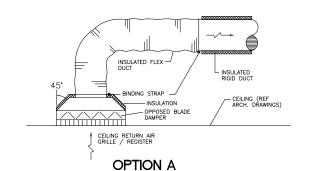
PLAN VIEW

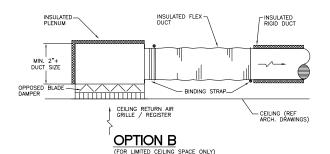
ROOF PENETRATION DETAIL

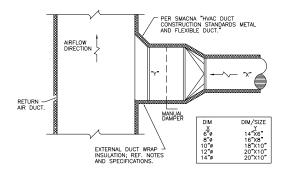
SCALE



DETAIL OF FLEXIBLE DUCT CONNECTION







RETURN BRANCH DUCT DETAIL

Humana

Project

Humana Memphis, TN MarketPoint

6515 Poplar Avenue Suites 107&108 Memphis, TN 38119

Prepared for Humana, Inc.

Contract No: 13.01656.00



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KERR-GREULICH

MEP Engineer

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Key Plan

Professiona

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M201

MECHANICAL GENERAL REQUIREMENTS

DIVISION 15 - MECHANICAL

MECHANICAL GENERAL REQUIREMENT

GENERAL

- A. The General Conditions, Supplementary General Conditions, Special Conditions, Instructions to Bidders and all other contract documents apply to these branches of the work as do all other sections of the specifications.
- B. Each Sub-Contractor shall be governed by any alternates and unit prices called for in the "Form of Proposal" insofar as they affect his part of the work.
- C. This section (Mechanical General Requirements) applies equally to heating, ventilating, air conditioning, plumbing and electrical.

2. SCOPE

A. The work covered by this division of the specifications consists of furnishing all materials, labor equipment, incidentals, and performing all operations required for a complete installation of all mechanical systems in accordance with the applicable drawings and specifications.

3. INTENT

- A. This Contract shall furnish all equipment, material and labor mentioned in this specification, unless it is specifically stated otherwise.
- B. Mention herein or indication on drawings of articles, materials or methods requires the Contractor for
- Furnish and install each article or material mentioned or indicated of quality or according to
- qualifications noted.

 Perform each operation called for according to method or condition prescribed.

 Provide all necessary labor, equipment, and incidentals.
- C. This Contractor shall furnish and install all miscellaneous equipment, material and labor which (though not specifically called for in this specification) is necessary for a complete and satisfactory operating installation. This Contractor shall leave his work in operating condition.

4. DRAWINGS AND SPECIFICATIONS

- A. For purpose of clearness and legibility, the drawings are essentially diagrammatic. Although size and location of the equipment is drawn to scale wherever possible.
- B. The drawings and specifications are intended to cover all work enumerated under the respective headings. The Sub-Contractors shall not take advantage of conflict or error between drawings specifications, but shall request a clarification of such before making his proposal should this condition exist.
- C. It is especially required that the Mechanical and Electrical Sub—Contractors shall obtain a set of the architectural and structural drawings and specifications, and consult with the Architect and General Contractor as to the general construction of the building, location of plumbing fixtures, size, location and head room of pipe chases, location and head room of pipe chases, location of walls, partitions, beams, etc., swing of doors, switches electrical outlets, and the order and time of placement of all mechanical work.
- D. The drawings accompanying these specifications determine the general design of the equipment. Exact disposition of the equipment is subject to the requirements and construction of the manufacturer's standard, but the space occupied and general design shall correspond to that shown on the plans.
- E. No Contractor shall under any circumstances scale drawings for the location of equipment and work.
- F. The drawings indicate size and points of termination of pipes and ducts, and suggest proper routing to conform to structure, avoid obstructions and preserve clearances. But it is not the intention of the drawings to indicate all necessary offsets. Install work in a manner to conform to structure, avoid obstructions, preserve headroom, and keep openings and passageways clear without further instructions or cost.

5. GENERAL FOR ALL MECHANICAL INSTALLATIONS

- A. The drawings pertaining to the installations and services generally indicate the location of radiation, accessories, piping, underground work, plumbing fixtures, ditches, etc., and other details necessary to complete the installation of each branch of work. Bidders are urged to acquaint themselves with working conditions and requirements at the building site as any and all contracts for this work will be based upon furnishing all labor and materials to entirely complete each installation ready for use.
- B. Each Contractor is urged before submitting a proposal to verify the size and location of all services, and the limitations of each

6. VISIT THE SITE

- A. Each Contractor shall (before submitting a proposal) visit and examine the site to satisfy himself as to materials and scope of the construction, alterations and remodeling, any difficulty attending the performance of the work, storage of material, access to any and all areas, etc.
- B. The submission of a proposal will be construed as evidence that such an examination has be made. Claims made subsequent to the time of submission of the proposal for labor, equip material required for difficulties encountered (which could have been foreseen had an examin been made) will not be recognized.

- A. Materials and equipment used throughout shall be new and the best of their respective kinds. No substitutions (other than those specified) shall be used unless approved by the Architect. All work shall be executed with speed and consistent with safety and good workmanship.
- B. Competent workmen shall be employed on all phases of the work. Poor workmanship will be rejected and will constitute cause for removal of the individual performing the work.
- C. Should any dispute arise as to the quality or fitness of materials, equipment or workmanship, the decision rests strictly with the Architect. Owner and Engineer.

8. SHOP DRAWINGS AND LIST OF MATERIALS

- A. See requirements for "Shop Drawings" in both General Conditions and Division 1.
- B. Each Sub-Contractor shall submit to the General Contractor for approval within thirty (30) days after the date of the contract, six (5) sets of complete cotalog data and/or shop drawings for each item of material or piece of equipment. Catalog data shall include name of the manufacturer, catalog numbers, trade names, performance data, descriptive material (sufficient to identify each item), and specify performance of the products. Shop drawings shall include specified catalogue data and shall show equipment in detail, arrangement and disposition for this particular project design.
- C. The Architect's and/or Engineer's checking and approving of the Contractor's and Sub-contractor's drawings or equipment details does not relieve the Contractor of Sub-Contractors from responsibility for errors, omissions or equipment furnished in accordance with such checked or approved drawin Where such errors or omissions are later discovered, they shall be made good by the respective Sub-Contractor (Irrespective of any approval by the Architect).

A. In the installation called for in these contracts, special attention shall be given to the accessibility of the parts and equipment. Adequate space must be given for operation and removal of any parts that may have to be examined at future periods.

10. CONCEALED WORK

- A. No work of any kind shall be covered up before it has been tested, examined and approved.
- B. All plumbing installations to be inspected by the proper administration authority to ensure compliance with the requirements of the State Plumbing Code and local ordinances.

11. EQUIPMENT

A. It shall be the responsibility of the respective Sub-Contractors to determine that the equipment and appliances (which they propose to furnish) can be installed in the available space and can be brought into the building. Equipment must be installed so that all parts are readily accessible for inspection and maintenance. No extra compensation will be allowed for dismantling of equipment to

- install in the available space or to obtain entrance into the building.
- B. The Sub-Contractor shall use extreme care in selection of equipment and its installation to ensure that noises and vibration will be held to a minimum. It is the intention that the entire system shall operate without objectionable noise or vibration, and if objectionable noise or vibration does develop, it shall be corrected by the Sub-Contractor without additional compensation.

12. PROTECTION

- A. No plumbing or heating piping shall be installed in any part of the building where danger of freezing may exist without adequate protection being given by the Contractor installing the pipe. All damages resulting from leaking pipes shall be borne by the Contractor whose work is at fault.
- B. All work shall be protected at all times. All pipe openings shall be closed with caps or plugs during construction. All equipment accessories shall be tightly covered and protected against dirt, water or other injury during the period of the respective contract.

- A. If it should be necessary to operate the equipment before a final acceptance, Owner or Contractor shall be allowed to do so, but only after proper adjustment and trial operation as hereinafter specified.
- B. Owner or Contractor shall be responsible for proper care and supervision of operation of equipment used before acceptance and safeguard the equipment in every way.

14. JOB CONDITIONS

- A. Existing Utilities Locate and protect existing utilities and other work in a manner which will ensure that no damage or interruption will result.
- B. Protect property from damage which might result from demolition.
- C. Protect persons from injury at excavations by barricades, warnings and illumination.

15. COOPERATION AMONG CONTRACTORS

- A. Owing to the nature of the construction involved and to prevent confusion and discrepancies, only approximate or general dimensions are given in several cases. It being intended that in some instances a reasonable limit of variation be permitted in order that the moking and the erection of the work of the Sub-Contractors may be thereby expedited and the best interests of the work as whole be served. Those several Sub-Contractors will be required to establish their own dimensions (each by prompt consultation as to the methods and size of construction, time of beginning and terum by prompt consultation as to the methods and size of construction, time of beginning and sequence of operations and exchange of drawings and details) with one another as the greatest measure of cooperation among the interests involved will be demanded and expected by the Owner at all times.
- B. All Mechanical and Electrical Sub-Contractors shall consult fully with the General Contractor's Superintendent regarding all matters affecting their work.
- C. Cooperate with other trades to obtain the most practical arrangement of work.
- D. Make known to other trades intended positioning of materials and intended order of work. Coordinate work with other trades and proceed with installation to assure no delays to other trades. Determine intended positions of work of other trades and intended order of installation.
- E. Agree to most practical arrangement of work within requirements of contract and consult with Architect/Engineer when there are reasons for deviations from drawings or specifications, differences of opinion between Contractors, or questions concerning intent of drawings or specifications.
- F. Failure of Contractor to make known his needs or determine requirements of others will not be cause for additional compensation to correct interferences.

16. SUB-CONTRACTOR'S RESPONSIBILITY FOR PROMPTNESS OF EXECUTIONS

- A. It is not incumbent upon the Architect to notify the Sub-Contractor when to begin, to cease or resume work, nor to give early notification of the rejection of faulty work, nor in any way to superintend to relieve the Sub-Contractor of responsibility or of any consequence of carelessness him or his subordinates.
- B. All materials and labor shall be furnished at such times (shall be to the best interest of all Contractors and Sub-Contractors concerned) to the end that the combined work may be properly and fully completed on contract time.

17. PERMITS, CODES AND APPROVALS

- A. Permits All permits necessary for the complete heating, ventilating, air conditioning, plumbing, fire protection and electrical systems shall be obtained by the respective Contractors from the authorities governing the work. The cost of all permits shall be borne by the Contractor.
- Heating, ventilating, and air conditioning work shall be done in accordance with the rules and regulations of the National Fire Protection Association (NFPA), the latest standards recognized by the American Society of Heating and Ventilating Engineers, per the latest edition enforced for state and local mechanical code.
- and local mechanical code.

 2. All plumbing work shall be installed according to the requirements of the State, City and County plumbing laws, codes, rules and regulations, and Local Ordinances.

 3. The minimum standard for all electrical work shall the latest revision of the National Electrical Code (NEC). All electrical work shall conform to the local governing utility company. However, their request shall not authorize any changes in the plans without consulting the Architect and their request small in during any changes in the plans without constituting the Actinect C Engineer's offices.

 4. All work shall meet the requirements of the Life Sofety Code, State and City Fire Marshals, Department of Housing, Buildings and Construction.

C. Approvals

All work must be approved by the Architect before final payment will be made.
 The Plumbing, Heating, Air Conditioning, Ventilating, and Electrical Contractors shall furnish the Architect with a certificate of inspection and approval from the inspecting agencies, free of charge, before certificate of substantial completion is granted. Final payment shall be contingent upon this certificate.

18. INSPECTIONS

- A. The respective Contractor shall notify the Electrical and Plumbing Inspectors, in writing, immediately upon the start of his work and a copy of the notice sent to the Architect.
- B. All cost incidental to the inspections shall be borne by the respective Contract
- C. The inspection shall be scheduled for rough as well as finished work. The rough inspection shall be divided into as many inspections as may become necessary to cover all rough—ins.
- D. All inspections to be by the inspector having jurisdiction.

19. REMOVAL OF RUBBISH

A. Each Contractor is to remove his own rubbish, but in case of dispute, the Architect shall have the right to order the General Contractor to remove said rubbish and the cost of removing same shall be charged to the guilty party as may be decided by the Architect. The rubbish shall be removed immediately when ordered by the Architect or Owner's representative. The building shall be kept as clean as possible during the progress of the work.

20. ADJUSTMENTS AND OPERATION OF SYSTEM

- A. When any work included in these specifications is completed, and at such time as directed by the Architect, the respective equipment manufacturer or Contractor shall carefully adjust all parts of h equipment and the system, advising the Architect when same is complete and ready for his final tests.
- B. The respective Contractors shall, after the work is completed, fully and corefully instruct the Owner's operator having charge of the system as to adjustment and efficient and proper methods of operation of the system and the various apparatus.

21. BUILDING CONSTRUCTION MATERIALS

A. Bidders shall carefully examine the general construction drawings and assure themselves of the type of materials used throughout the building that may in any way affect the work to be installed unde

their contract and the proper preparation of their proposals, as no contract allowance will be made for bidders' failure to acquaint themselves with the types of construction.

22. FINAL CONNECTIONS TO EQUIPMENT FURNISHED BY OTHERS

- A. The Owner and other Contractors shall furnish and set in place various pieces of equipment.
- B. The Mechanical and Electrical Sub—Contractors shall include in their bids all required roughing, finished materials and labor for final connections to all equipment furnished and specified under other sections of the specifications and/or furnished by the Owner.
- C. The equipment furnished by other Contractors shall be provided with tailpieces, faucets, and special valves, unless otherwise noted on plans and/or specified.
- D. The Mechanical and Electrical Subcontractors shall furnish and install all trops, shut—off valves, electrical boxes, electrical switches, conduit, wiring, piping, adapters, and any other material required for making final connections to equipment furnished by other Contractors.
- E. Respective Contractors shall obtain roughing—in data from equipment suppliers prior to installing any rough—in work. All locations of equipment and connections shall be verified.

23. MAINTENANCE OF UTILITIES

- A. The locations of all piping, conduits, cables, utilities and man-holes, existing temporarily or otherwise that come within the contract construction site, shall be subject to continuous uninterrupted maintenance with no other exception than Owner's permission to cut same if the need orises.
- B. Contractor's attention is directed to the fact that all of these utilities and lines are not indicated on the drawings; however, it is required that prior to any excavation being performed, that the Contractor consult the Owner's personnel to ascertain whether any utilities or lines are endangered by the excavation.
- C. If the above mentioned utilities or lines occur in the earth within the construction site, it is suggested that the Contractor first probe and make every effort to locate the lines prior to excovoting in the respective area.

24. "OR EQUAL" CLAUSE

A. Wherever the words "or approved equal" appear in the specifications or on drawings, they shall be interpreted to mean an item of material or equipment of equal quality to that named which is suited to the same use and capable of performing the same function as that named. The burden of proof of equal quality or service shall be on the Sub-Contractor. Proof of inequality is not implied by the specifications and is not a burden of the Engineer. His duty shall be to properly weigh the proven facts of equality in fairness to all parties involved. Inclusion of a certain make or type of materials or equipment in the Sub-Contractor's bid or estimate shall not obligate the Owner to accept material or equipment if it does not, in the opinion of the Engineer, meet the requirements of the plans and specifications.

25. STARTERS, ETC.

A. Any necessary starters or overload protection for mechanical equipment, shall be furnished by the Mechanical Contractor for equipment furnished by him or the Owner, unless otherwise specified.

26. ELECTRICAL CONNECTIONS

A. The Mechanical Contractor shall (regardless of voltage) furnish and install all temperature control wiring, and all interlock wiring, and equipment control wiring for the equipment that the Mechanical Contractor furnishes. Unless otherwise specified, the Mechanical Contractor shall furnish starters for shall provide and be responsible for the Nesterial Contractor for installation. The Mechanical Contractor shall provide and be responsible for the Nester in all staters that the Mechanical Contractor furnishes.

27. PREMISES

A. The Sub-Contractors shall take the premises as they now are and will be required to do all the work shown or implied in the plans and specifications so that when the building is completed, it shall be complete in every respect, except such parts as are distinctly mentioned as not being covered under these specifications.

28. QUALIFICATIONS

- A. Contractors must have five (5) years minimum experience, has a satisfactory work resume with comparable projects listed, has a sound financial basis, and is technically competent.
- B. Equipment Manufacturers must have eight (8) years of successful experience, be technically competent, and be industrial financially stable.
- C. Owner reserves the right to review and determine if the Contractors and Manufacturers meet the above categories to his satisfaction. The Owner has the authority to reject any equipment and bids if the above standards are not met.

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Humana Memphis, TN MarketPoint

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Prepared for Humana, Inc.

Contract No: 13 01656 00



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MEP Engineer

1534 Ormsby Station Ct. Louisville KY 40223 502.426.9457

Key Plan

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MECHANICAL SPECIFICATIONS

SECTION 15C - HEATING, VENTILATING AND AIR CONDITIONING

A. Complete heating, ventilating and air conditioning work as indicated and specified herein with all components in first-class operating condition.

2. WORK INCLUDED

Work included in this section of the specification consists of the furnishing of all material, labor, equipment and appurtenances, and performing all operations require for the installation of a complete system of heating, ventilating and air conditioning

3. OPERATION AND MAINTENANCE MANUALS

- A. The Contractor shall instruct the Owner's representative in the proper operation of all equipment. Furnish literature provided by the manufacturer. Printed instruction and maintenance data shall be bound with cover in duplicate and delivered to the Architect. Bound cover shall list name of project and name, address, phone number of Architect, Engineer, and Contractor.
- B. Each group shall include a complete control diagram and a sequence of operation. Control diagram and associated sequence of operation charts shall be on some sheet. Each group shall include a complete wiring of the group, including panel wiring, color coding, number coding, oiling or gressing charts, maintenance of operations listing the suggested operating methods and periods. Each device listed and identified as given above and completely described as to Manufacturer's name, type, number, working limitations, etc. Parts or repair lists shall be given for each device.

A. This Contractor shall warrant all workmanship and materials installed under this contract for a period of one year from date of substantial completion. Unless additional warranties are described in contract drawings and specifications, any material or workmanship proving to be defective during this period shall be mad good by this Contractor without any cost to the Owner.

A. Equipment shall be operated quietly. The operation of the equipment shall cause no perceptive vibration or objectionable noise in any portion of the building or structure.

6. EQUIPMENT ANCHORAGE

Provide all materials and labor required for roof mounted equipment anchorage to building structure.

7. SUBMITTAL DATA

A. Submit for approval six (6) copies of brochures, technical data and shop drawings of

- Grilles, Registers, Diffusers
 Exhaust fans
 HVAC Systems.

B. All equipment submittals shall specify electrical voltages and motor horsepower

8. SHEET METAL DUCTWORK

A. All ductwork shall be constructed and installed in strict accordance with the recommended methods, gauges and procedures as described in the latest edition of ASHRAE Guide, the National Board of Underwriters Bulletin NPUB No. 1-90A, the State Building Code, State Mechanical Code and the Low Velocity Duct Manual published by the Sheet Metal and Air Conditioning Contractors National Association, Inc.

B Duct sizes indicated on the drawings are air passage size

C. Sheet metal ductwork shall comply with the following gauge

		-	
Dimension of	Duct Diameter	Sheet Meto	al Gauges
Longest Side		Steel	Aluminum
Thru 12"	0" - 12"		24 (0.020)
13" thru 30"	13" - 18"		22 (0.025)
71" Iban E4"	10" 04"	22	00 (0 070)

- D. Provide manufactured type air turns in all right angle turns and sweeps in large or sharp bend elbows according to accepted sheet metal practices.
- E. The drawings are schematic in scope and do not necessarily show the offsets required to avoid such things as new pipes, conduits, structural members, etc. Interference with the heretofore mentioned shall be corrected at no extra cost to the Owner.
- F. Install deflector take—offs at each sheet metal supply branch takeoff to supply air device and elsewhere when indicated on the drawings.

9. DUCT HANGERS

- A. Unless otherwise specified, ducts shall be supported with strap iron not less than one inch (1") in width on maximum of four foot (4'-0") centers.
- B. Where top of duct is more than sixteen inches (16") from point of support, angle iron supports shall be used with all-thread rads.
- D. Supports shall be fastened to the building structure in an approved manner.
- E. Round duct exposed to have single all-thread support.

10. FIRE DAMPERS

- A. Where shown on the drawings or required by local ordinances or other authoritie provide fire damper with fusible links and access doors. All fire dampers to be installed in separate sleeve and fire stopped as indicated by SMACNA.
- Fire dampers shall conform to the National Board of Fire Underwriters Bulletin No. 90A (latest edition) and shall be constructed and tested in accordance with UL Safety Standard 555.
- C. Access door shall be located for easy access to damper fusible links
- D. Manufacturers Ruskin Manufacturing Company, Young Regulator Company, Airline Products Company or approved equal.
- E. Provide access door in walls and ceilings (if required) for each fusible link section installed. Doors shall be code rated in fire partitions or ceilings. Lift out ceiling will not require doors. Doors shall be equal to Milcor.
- F. All fire dampers shall be mounted out of air stream

- A. All dampers to be sixteen (16) gauge galvanized iron
- B. Sizes as indicated on drawinas.
- C. Motor operated damper to be opposed blade, sixteen (16) gauge with gasketed
- D. Legkage to be less than .05 percent (.05%) at two inches (2.0") WG.
- E. Motor to be one hundred twenty (120) volt, single (1) phase, sixty (60) HZ for interlock. Provide single point connection and interlock with exhaust fan by neither a proximity switch or end switch to start fan when damper is open.

11. MANUAL DAMPERS

A. Furnish and install (where indicated or specified) multi-bladed opposed acting manual air dampers with adjusting and locking quadrants. Where ducts are insulated, the quadrants shall be set out from ducts the thickness of insulation. Maximum damper blade width shall be six inches (6") for dampers smaller than twenty-four inches (24") and an eight inch (8") blade width for larger dampers.

12. STARTERS

- A. Unless otherwise specified, Contractor to furnish starters for HVAC equipment installed.
- B. Starters shall be delivered to the Electrical Contractor who shall mount and install power to same.

13. ELECTRICAL WIRING

- A. This Contractor shall install all necessary electrical interlock and control wiring required and specified for equipment installed by him.
- B. All wiring installed by this Contractor shall conform with governing codes. All wiring shall be run in conduit. Conduit in finished areas shall be run concealed.
- C. Electrical Contractor is to install all power wiring of motors. Heating and Air Conditioning Contractor shall furnish starters for all equipment furnished by hir

- A. Furnish and install grilles, registers and diffusers. Size as indicated on drawings.
- B. All registers and ceiling diffusers to have opposed blade dampers adjustable through
- C. Ceiling Air Diffuser (CAD) Titus Model TMS, 3 cone face with opposed blade volume and white finish. Diffusers to be lay—in type for acoustical ceilings and surface mounted type in dry—wall ceiling. Diffusers shall be steel construction.
- D. Supply Air Register (SAR) Titus Model 300FS, aluminum construction with white baked enamel finish and opposed blade damper.
- E. Return Air Grille (RAG) Titus Model 50F with one-half inch (1/2") by one-half inch (1/2") grid spacing, furnish with opposed blade volume damper and aluminum
- C. Variable Air Volume Diffuser (VAV) Titus Model T3SQ-4, Self Contained thermally powered VAV diffuser with heating/cooling changeover. Square, architectural, panel face with variable aperture damper and single thermal supply air sensing element for auto changeover. Diffusers to be lay-in type for acoustical ceilings and surface mounted type in dry-wall ceiling. Diffusers shall be steel construction and white finish. Diffuser to be furnished with wall mounted room sensor.
- D. Adjustable Air Extractors Each branch duct will be fitted with an adjustable air extractor as manufactured by Price. Each extractor to have adjustment handle exterior to duct.

15. HVAC INSULATION

- A. Insulate ductwork according to insulation schedule.
- B. Fittings to be mitred and alued in accordance with Manufacturer's recommendations.
- C. Insulation to be UL listed and ASTM E84 tested with flame spread and developed smoke not to exceed twenty—five (25) and fifty (50).
- D. Adhesives and mastics to carry same rating.
- E. Insulation to be Johns-Manville, Knauf, or Owens-Corning.
- F. Installation to be in accordance with Manufacturer's recommendation
- G. All exposed edges of insulation to be sealed and coated with mastic.
- H. Insulation to be applied after all sheet metal duct connections have been taped
- I. Installation of insulation to prevent any bagging and stick clips to be used.
- J. Return air ducts within ten feet (10'-0") of equipment to receive one-half inch internal sound liner, unless noted otherwise on drawings. Internal liner to be provided with anti-microbial coating. (This is for sound control and is in addition to external insulation specified.)
- K. General exhaust ducts do not require insulation

17. PIPE AND FITTINGS

A. Condensate Drain Lines

Lines to be run in DWV copper, insulated with one-half inch (1/2") foam plastic. Do not run PVC in any return air plenum. All piping in plenums to be copper.
 Each piece of equipment to be provided with P-trap connections. Drains to be routed to open receptacle and run parallel and perpendicular to walls.

- 1. Install a complete system connecting condensers, evaporators and compressors
- as required.

 2. <u>Piping</u> A.C.R. hard drawn copper tubing. Fittings Wrought copper with silver
- Epiging A.C.R. hard drawn copper tubing. Fittings Wrought copper with silver saddered joints.
 Walves Packless, Keratest, up to and including 1-1/8 inch; larger valves. Seal cap type, Henry.
 Install filter dryer ahead of each solenoid valve in the liquid line leaving the receiver. Install solenoid valves in the liquid line leaving the receiver. Install solenoid valves with receiver install solenoid valves when the liquid line leaving the receiver. Install solenoid valves with remostatic expansion valve. Thermostatic expansion valve. Thermostatic expansion valve. Thermostatic expansion in valves with external equalizing, Sporlan.
 Install double port sight glass in Freon liquid line of moisture indicating type at each expansion.
- 6. <u>Hangers</u> Grinnel Fig. 97, copper plated, at not more than 10' intervals. Isolate from structure with rubber in shear devices.

 7. Isolate ping from all galvanized metal to prevent electrolytic action.

 8. Submit a refrigerant piping diagram approved by the compressor manufacturer for exercise.

- A. Factory insulated flexible ducts shall incorporate a vinyl coated, spring steel wire Helix supporting a neoprene or vinyl impregnated and coated woven fiberglass fabric or a galvanized steel wire Helix supporting a polyester core. A two inch (2") thick fiberglass insulating wrapping surrounding the Helix supported fiberglass fabric, as well as a vapor barrier jacket of aluminum fail.
- C. The insulated flexible ducts shall be attached securely to the collars of connecting equipment and ductwork by means of strap clamps after an approved sealer has been applied to all joint surfaces. D. The length of flexible duct provided in each individual application shall not be greater
- E. The Contractor is advised that it will not be acceptable practice to pre-cut a batch of flexible hose to a single uniform "standard" length to any and all installation conditions by stretching, by providing turns of a radius smaller than recommended by the Manufacturers or by personal regularity screenings.

19. AUTOMATIC TEMPERATURE CONTROL

- A. This section includes the furnishing of materials, equipment and services for installation of a system of temperature controls as indicated herein. Temperature controls shall include temperature control wiring and interlock wiring necessary to make a complete and workable installation. Temperature set points mentioned in sequences shall be adjustable.
- Furnish wire, conduit, miscellaneous materials and labor as required for mounting and connecting the electrical control devices furnished under this section of the specification and equipment furnished by Others. Electrical work shall be done in accordance with Division 16 of these specifications. Wiring shall be installed in
- C. The control system shall be completely installed, tested, put into service and guaranteed for a period of one (1) year from date of substantial completion. A repairs necessary within this time due to defective materials or workmanship shall done without cost to the Owner.

20. EXISTING CONDITIONS

- A. Contractor to visit site prior to bid and to review all existing conditions
- B. Contractor to coordinate with General Contractor and all other Trades prior to commencing with work.

21, START, TEST, AND CHECK

- C. Provide Start, Test, and Check of Mechanical System to ensure system operates as
- D. Provide documentation of Start, Test, and Check results, as per equipment

22 SYSTEMS TESTING AND BALANCING

- Testing, adjusting, and balancing of the systems shall be completed by an AABC or NEBB certified contractor. The Contractor shall warrant that the system will be set to the values as established by the plans and specifications within system capabilities.
- B. Contractor shall include a one (1) year warranty after completion of test and balance work during which time the Owner or Engineer (at his discretion) may request a recheck or resetting of any valve or damper.
- C. Test and adjust supply, return and exhaust fans to design requirements
- D. Test and record electrical characteristics, RPM service factor, measured voltage, full load amperes and corrected full load amperage. Check and record starter size, heaters' sizes and rating, replacement belt sizes, etc.
- E. For rooftop units, adjust outside airflow to scheduled requirements prior to testing
- F. After airflows are balanced, record supply, return, and outside air temperatures in cooling and heating
- G. Test and adjust each diffuser, grille, and register within ten percent (10%) of design
- Size, type, flow factor and manufacturer of diffusers, grilles, registers, and all test equipment shall be identified and listed. Contractor shall provide typewritten report indicating final air quantities in each room/space. This shall be submitted to Owner's Representative for review.

- A. Contractor shall maintain "As-Built" Drawings on an ongoing manner during construction. Contractor shall make "As-Built" available to Architect/Engineer during construction meeting.
- B. "As-Built" Drawing shall be turned over to the Architect prior to final payment.

24. GAS-FIRED ROOFTOP UNITS

- A. Units shall be of the single-package type combination air-to-air cooling and gas—fired heating and mounted on a full perimeter roof curb. Unit shall be AGA
- C. Compressor The unit shall contain a welded, fully hermetic compressor(s) with suitable vibration isolators, crankcase heater and shall have a five (5) year warranty
- D. Coils shall be constructed of aluminum fins mechanically bonded to copper tubes.
- E. Fans and Motors The evaporator air fan shall be of the forward—curved centrifugal type driven by a belt—driven motor. The condenser air fan shall be of the propeller type, directly driven and discharging upward.
- F. Heat exchanger shall be constructed of heavy—gauge steel with coating, shall have a five (5) year non-prorated warranty and an optional six to ten (6 10) year prorated warranty. Burners shall be constructed of aluminized steel and shall be of the Bunsen (cerated) slotted—port type.
- G. Safety Controls Cooling section shall be protected by low pressure switch, compressor motor overloads, and a lockout circuit that prevents compressor until reset at the thermostat.
- H. Heating controls shall consist of a redundant gas valve, intermittent pilot ignition system, limit switches, centrifugal switch and rollout switch.
- Roof curb shall be of the same Manufacturer as unit, do not cut entire roof deck below RTU. Roof deck duct penetrations shall only be large enough to permit insulated duct to poss through, pack interior of curb with sound batt.
- J. Intake openings must be protected by a corrosion resistant louver, screen or grille The intake screen/grille openings must be greater than 1/4-inch and less than
- K. Provide unit with 7 day programmable thermostat, duct-mounted humidity senso
- L. Provide unit with hot-gas reheat.
- M. Provide unit with motorized outside air damper for use with economizer cycle

25. ROOF CURBS AND FOUIPMENT RAILS

- A. Louvers and Dampers, Inc., Carnes and Ruskin.
- B. Curbs shall be provided for each roof-mounted fan, roof duct penetration, intake and
- D. Provide two (2) coats of mastic or neoprene gasket between contact surfaces of the galvanized roof curbs and the aluminum so dissimilar metals do not come in contact.
- E. Outside curb dimensions shall be sized to accommodate the number of roofing plys and roof final cap between the equipment for apparatus counter flashing and the curb. All roofing plys and top caps to extend up the curb sides for nailing to wood top. All roofing curbs shall have two inch by two inch (2°x2") wood nails at top for nailing roof flashing.
- F. All roof curbs to be twelve inches (12") high unless noted otherwise and to have wood cant strip with four inch (4") bottom and vertical sides. Curbs to follow roof
- G. HVAC Contractor to flash, seal and counterflash curb and paint to match roof surface

26. CEILING MOUNT EXHAUST FANS

- A. Fans to bear AMCA seal certifying ratings.
- B. All fans to be direct drive with centrifugal fan wheels, unless noted otherwise.
- C. Fan housing to be internally lined with sound attenuating material
- D. Entire fan assembly to be removable from housing
- F. Each fan to be provided with integral back draft damper, aluminum grille and
- G. HVAC Contractor shall furnish all speed control switches and thermostats where indicated on drawings or noted in specifications.

27. SPLIT SYSTEM AIR CONDITIONING SYSTEMS

- 1. All outdoor and indoor components to be matched and of the same
- 2. Indoor air handling units to have:
- UL listed components and R-410a refrigerant.
 Belt driven, adjustable sheave motor, unless noted otherwise on equipment schedule on drawings.
- Non-ferrous drain pan and connection (primary and secondary).
- Two inch (2") throwaway filter and hous Coordinate with drawings for horizonal/vertical components Insulated cabinet and baked enamel exterior finish
- Heating/cooling coil of gluminum fins and copper tubes. Indoor fan motor relays and necessary interlocking controls for outdoor and indoor operation.
- 3. Refer to drawings for capacity.

B. Condensing unit

- Factory assembled and tested compressor condenser coil, controls, cabinet and meets ARI 270
- Outdoor cabinet to have weatherproof baked enamel finish. Full hermetic compressor (R-410a) with high/low pressure protection, sump heaters, service valves, check valves, liquid line driers and five (5) year warranty.
- Outdoor coil to be aluminum fins and copper tubes. Coil to have refrigerant control devices during heating and sub-cooling
- provisions for cooling.

 Unit to be provided with low ambient cooling to 0°F.
- 6. High/low pressure relief ports and overload protection

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Project

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Key Plan

Issue Description 2014.02.03

Revision Description YYYY-MM-DD

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> Project No 2013-6741 **™** MECHANICAL

SPECIFICATIONS SHEET 6 OF 6

Drawn by KL

Original drawing is 36 x 24 Do not scale contents of this drawing

M302

Reviewed by

CB/DG

- A. ELECTRICAL CONTRACTOR SHALL VISIT AND EXAMINE THE SITE PRIOR TO SUBMITTING BID TO BECOME FAMILIAR WITH EXISTING CONDITIONS.
- B. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES, PERMITS AND LICENSES FOR THE COMPLETE INSTALLATION OF HIS WORK.
- C. COORDINATE EXACT PHASING OF ALL WORK WITH GENERAL CONTRACTOR.
- D. EXACT DEVICE LOCATIONS (RECEPTACLES, DATA/TELEPHONE OUTLETS, LIGHT FIXTURES, ETC.) SHALL BE COORDINATED WITH ARCHITECTURAL PLANS.
- E. ELECTRICAL CONTRACTOR SHALL VERIFY EXACT MOUNTING LOCATION AND CONNECTION REQUIREMENTS OF ALL PLUMBING EQUIPMENT WITH PLUMBING CONTRACTOR PRIOR TO ROUGH—IN.
- F. ELECTRICAL CONTRACTOR SHALL VERIFY EXACT MOUNTING LOCATION AND CONNECTION REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH—IN.
- G. ALL DEVICES AND JUNCTION BOXES SHALL BE ACCESSIBLE. PROVIDE ACCESS PANEL AS REQUIRED WITH PRIOR APPROVAL OF ARCHITECT.
- H. WHERE MORE THAN ONE SWITCH OR DIMMER OCCURS AT A LOCATION, GANG THE SWITCHES TOGETHER WITH A COMMON JUNCTION BOX AND FACEPLATE.
- I. ELECTRICAL CONTRACTOR SHALL COORDINATE LOCATION OF LIGHT FIXTURES WITH MECHANICAL CONTRACTOR, PLUMBING CONTRACTOR AND FIRE PROTECTION CONTRACTOR TO AVOID CONFLICT WITH DUCTWORK, PIPING AND SPRINKLER PIPING.
- J. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY CONDUIT, WRING, JUNCTION BOXES AND EQUIPMENT FOR A COMPLETE AND FUNCTIONAL FIRE ALARM SYSTEM INSTALLATION.
- K. NOT MORE THAN THREE LIGHTING OR CONVENIENCE OUTLET CIRCUITS ARE PERMITTED IN ONE CONDUIT, UNLESS OTHERWISE INDICATED. DEDICATED NEUTRAL CONDUCTORS ARE REQUIRED FOR ALL BRANCH CIRCUITS UNLESS OTHERWISE NOTED.
- PROVIDE 4" HIGH CONCRETE BASES FOR ALL FLOOR SET ELECTRICAL EQUIPMENT, INCLUDING SWITCHBOARDS AND DRY-TYPE TRANSFORMERS. CONSTRUCT CONCRETE BASES OF DIMENSIONS INDICATED, BUT NOT LESS THAN 4 INCHES LARGER, IN BOTH DIRECTIONS, THAN SUPPORTED UNIT.

NOTE: GENERAL ELECTRICAL NOTES APPLY TO ALL ELECTRICAL DRAWINGS.

M. DISCONNECT SWITCHES SHALL BE MOUNTED ON INDIVIDUAL STRUCTURAL SUPPORTS, OR OTHERWISE DIRECTLY ON EQUIPMENT, PROVIDED NO MODIFICATION TO EQUIPMENT IS NECESSARY, ALL STRUCTURAL SUPPORTS FOR ELECTRICAL EQUIPMENT SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR, ELECTRICAL CONTRACTOR SHALL INCLUDE DESIGN FOR ALL STRUCTURAL SUPPORT.

- I. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY BALANCING ALL BRANCH CIRCUITS AMONG THE PHASES OF THE SYSTEM ACCORDING TO NEC AND PROVIDE LOAD BALANCING REPORT TO
- . ALL CABLING SHALL BE ROUTED THROUGH ACCESSIBLE CEILING SPACES WHERE POSSIBLE.
- . ALL CONDUIT PENETRATIONS THROUGH RATED WALLS, FLOORS, AND CEILINGS SHALL BE FIRE STOPPED WITH APPROVED FIRE SEALANT.
- Q. DEVICES ON EMERGENCY POWER SHALL BE RED IN COLOR, INCLUDING COVER PLATES.
- R. EMERGENCY LIGHTING, IF SWITCHED, SHALL AUTOMATICALLY ILLUMINATE DURING A POWER OUTAGE.
- S. ELECTRICAL CONTRACTOR SHALL ARRANGE FOR A JOB WALK-THROUGH WITH THE BUILDING AND FIRE DEPARTMENT INSPECTORS TO DETERMINE IF ANY ADDITIONAL EXIT SIGNS ARE REQUIRED PRIOR TO COVER UP. VERIFY ARROW REQUIREMENTS.
- T. PROVIDE PULLWIRE IN EACH EMPTY RACEWAY
- U. EC SHALL PROVIDE CONDUIT SLEEVES FOR CABLE ROUTING, AS NECESSARY, IN WALLS, FLOORS AND CEILINGS.
- V. E.C. SHALL PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH LIGHTING AND RECEPTACLE BRANCH CIRCUIT. NO MULTI-WIRE BRANCH CIRCUITS WITH SHARED NEUTRALS SHALL BE ALLOWED.
- W. AT ALL NEW FLOOR CORE DRILLS, DO NOT CUT RE-BAR LOCATE RE-BAR WITH MAGNETIC LOCATOR. SHIFT CORES AS REQUIRED. FIRE-STOP VOIDS WITH APPROVED FIRE STOPPING AND PROVIDE 3,000 PSI HIGH STRENGTH GROUT.

OWNER PROJECT REQUIREMENT:

RENOVATE EXISTING SPACE FOR HUMANA. EXISTING PLUMBING, FIRE PROTECTION ELECTRICAL AND H.V.A.C. SHALL BE RENOVATED TO ACCOMMODATE NEW FLOOR PLAN DESIGN.

BASIS OF DESIGN:

- NEW LIGHT FIXTURES SHALL BE PROVIDED OWNER FURNISHED, CONTRACTOR
 INSTALLED.
- NEW POWER AND DATA DROPS SHALL BE PROVIDED AT LOCATIONS INDICATED ON

ELECTRICAL CODE REFERENCE:

- 2008 NEC W/LOCAL AMENDMENTS
 2009 INTERNATIONAL BUILDING CODE WITH LOCAL AMENDMENTS (2012 MEMPHIS
- AND SHELBY COUNTY EXISTING BUILDING CODE)

 2009 INTERNATIONAL ENERGY CONSERVATION CODE

	LIGHT FIXTURE SCHEDULE								
FIXTURE TYPE	DESCRIPTION	CATALOG NUMBER	LAMP	VOLTAGE	INPUT WATTS	BALLAST	LENS/REFLECTOR	MOUNTING	REMARKS
F1	DIRECT/INDIRECT 2'-0"x4'-0" (2) LAMP FLUORESCENT LAY-IN TROFFER WITH PERFORATED BASKET (STATIC)	LIGHTOLIER - COFFAIRE II - CF S 2 G P F 232 UNV PI	(2) 32W T8	120	58	ELECTRONIC	PERFORATED SHIELD	RECESSED CEILING	
F1D	DIRECT/INDIRECT 2'-0"x4'-0" (2) LAMP FLUORESCENT LAY-IN TROFFER WITH PERFORATED BASKET (STATIC)	LIGHTOLIER - COFFAIRE II - CF S 2 G P F 232 UNV PI DIMMING	(2) 32W T8	120	58	DIMMABLE	PERFORATED SHIELD	RECESSED CEILING	PROVIDE W/DIMMING BALLAST
F1E	DIRECT/INDIRECT 2'-0"x4'-0" (2) LAMP FLUORESCENT LAY-IN TROFFER WITH PERFORATED BASKET (STATIC) W/EMERGENCY BATTERY PACK	LIGHTOLIER - COFFAIRE II - CF S 2 G P F 232 UNV PI W/ FBP1300LT EM. BALLAST	(2) 32W T8	120	58	ELECTRONIC	PERFORATED SHIELD	RECESSED CEILING	PROVIDE WITH EMERGENCY BATTERY OPTION
F2	2'x4' (2) LAMP RECESSED FLUORESCENT ACRYLIC LENSED TROFFER	LIGHTOLIER - XP 2G VA 232 UNV PG	(2) 32W T8	120	58	ELECTRONIC	PRISMATIC ACRYLIC	RECESSED CEILING	
F2E	2'x4' (2) LAMP RECESSED FLUORESCENT ACRYLIC LENSED TROFFER W/EMERGENCY BATTERY PACK	LIGHTOLIER - XP 2G VA 232 UNV PG	(2) 32W T8	120	58	ELECTRONIC	PRISMATIC ACRYLIC	RECESSED CEILING	PROVIDE WITH EMERGENCY BATTERY OPTION
F4	6" DIAMETER OPEN COMPACT FLUORESCENT DOWNLIGHT.	LIGHTOLIER #8031 CLW	(1) 32W TRT 4-PIN	120	32	DIMMABLE	OPEN REFLECTOR	RECESSED CEILING	
F4E	6" DIAMETER OPEN COMPACT FLUORESCENT DOWNLIGHT W/EMERGENCY BATTERY PACK	LIGHTOLIER #8031 CLW CU3 EM	(1) 32W TRT 4-PIN	120	32	ELECTRONIC	OPEN REFLECTOR	RECESSED CEILING	PROVIDE WITH EMERGENCY BATTERY OPTION
Х1	SINGLE FACE EDGE-LIT EXIT SIGN	LITHONIA #LRP-LED-1-RC-120/277 OR LIGHTOLIER EQUAL	LED	120	-	-	ACRYLIC	RECESSED CEILING	
X2	DOUBLE FACE EDGE-LIT EXIT SIGN	LITHONIA #LRP-LED-2-RMR-ARROWS-120/277 OR LIGHTÖLIER EQUAL	LED	120	-	-	ACRYLIC	RECESSED CEILING	

ELECTRICAL SYMBOLS LEGEND

ES



2' X 4' FLUORESCENT LIGHT FIXTURE WITH EMERGENCY



1' X 4' FLUORESCENT LAY-IN/SURFACE MOUNTED LIGHT FIXTURE.



RECESSED DOWNLIGHT FIXTURE.

RECESSED DOWNLIGHT FIXTURE WITH EMERGENCY POWER.



"NL" - INDICATES LIGHT FIXTURE TO BE ON NIGHT LIGHT CIRCUIT.

WALL BRACKET LIGHT FIXTURE.



"o" — INDICATES LIGHT FIXTURE SWITCH/DIMMER "SWITCH LEG" DESIGNATION. "EX" — INDICATES LIGHT FIXTURE TO REMAIN. LAMPS AND BALLASTS SHALL BE REPLACED WITH NEW. LENS SHALL BE



CEILING MUUNTED EXIT SIGN. (DARKENED AREA INDICATES FACE(S) PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS.) CEILING MOUNTED EXIT SIGN (DARKENED AREA INDICATES SINGLE FACE, BACK MOUNTED EXIT SIGN. (ARROWS AS INDICATED ON PLANS.)



DOUBLE FACE, END MOUNT EXIT SIGN. (ARROWS AS INDICATED ON PLANS.)



WALL MOUNTED EMERGENCY LIGHT. CEILING RECESSED EMERGENCY LIGHT.

0 0 SWITCH SUBSCRIPT INDICATES:

- DOUBLE POLE

- THRFF WAY

X=a - LETTER INDICATES SWITCH/DIMMER DESIGNATION FOR SPECIFIED LIGHT FIXTURE

- KEY OPERATED

- PILOT LIGHT

X=R - MOMENTARY RELAY ON/OFF

1 POLE, 20 AMP, 125 VOLT MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERLOAD PROTECTION. OCCUPANCY SENSOR — WATT STOPPER #WS-200 — PIR. WITH MANUAL ON/AUTO OFF, AUTO ON/AUTO OFF, REDUCED TURN ON. COLOR: WHITE.

FLUORESCENT DIMMER SWITCH — LIGHTOLIER VEGA OR EQUAL COMPATIBLE DIMMER.

(J) JUNCTION BOX.

PANELBOARD.

DISTRIBUTION PANELBOARD.

20A, 125V, DUPLEX RECEPTACLE, 2P-3W GROUNDING, NEMA 5-20R MOUNTED VERTICALLY. WHEN LETTERS ATTACHED TO SYMBOL, C - CEILING MOUNT, WP - WEATHER PROOF,

- WEATHER PROOF, GF/GFI - GROUND FAULT INTERRUPTER, IG - ISOLATED GROUND, AC - ABOVE COUNTER,

AC – ABOVE COUNTER,
– NON STANDARD HEIGHT NOTED IN INCHES,
TV – FOR TV, VERIFY MOUNTING HEIGHT WITH
ARCHITECT/OWNER'S REPRESENTATIVE PRIOR TO
ROUGH-IN.
D – DEDICATED DUPLEX RECEPTACLE.

B BLANK WALL COVER PLATE AND BACKBOX.

Φ THREE PHASE RECEPTACLE.

SPECIAL RECEPTACLE AS NOTED ON DRAWING.

 \bigcirc Φ SINGLE RECEPTACLE.

⊕ "EC" — INDICATES EXISTING OUTLET TO BE CAPPED AND CONDUCTORS TO BE PULLED BACK TO NEXT DEVICE OR OVER CURRENT DEVICE. ₽EC

"EX" — INDICATES OUTLET TO REMAIN. DEVICE, FACEPLATE, AND WIRING SHALL BE REPLACED WITH NEW. "ER" - INDICATES THAT THE EXISTING DEVICE SHALL BE

₽EL "EL" - INDICATES NEW LOCATION OF EXISTING DEVICE.

Т TRANSFORMER

Ф€Х

₽ER

MOTOR CONNECTION.

JUNCTION BOX IN WALL FOR FURNITURE SYSTEM POWER AND COMMUNICATIONS FEED. VERIFY LOCATION AND REQUIREMENTS WITH THE FURNITURE VENDOR FROM TO ROUGH-IN. PROVIDE AND INSTALL TWO GANG OUTLET BOX W/ (1) 3/4" CONDUIT (FOR POWER) AND (2) 1-1/4" BT STUB-UP TO CEILING WITH PULLWIRE (FOR COMMUNICATIONS). CABLING BY TENANT BASE POWER FEED TO BE PROVIDED BY FURNITURE VENDOR AND CONNECTED BY ELECTRICAL SUB-CONTRACTOR.

FIRE RATED POKE THROUGH W/ FLUSH SERVICE FITTING FOR POWER AND DATA CONNECTIONS, VERIFY EXACT LOCATION AND REQUIREMENTS WITH THE FURNITURE VENDOR PRIOR TO ROUGH—IN, PROVIDE WITH 1-1/4" E.M.T. CONDUIT STEM FOR VOICE/DATA AND 3/4" E.M.T. CONDUIT STEM FOR POWER.

ADJUSTABLE FLOOR BOX WITH DUPLEX RECEPTACLE AND DATA CONNECTIONS. BRUSHED ALUMINUM CARPET FLANGE & COVER PLATE. COORDINATE EXACT FINISH WITH ARCHITECT

SURFACE MOUNT FURNITURE SYSTEM POWER AND

COMBINATION STARTER / DISCONNECT SWITCH. (SIZE AS NOTED) ₽ EQUIPMENT DISCONNECT SWITCH. PROVIDE SWITCH AS DESIGNATED:

FUSIBLE (F) OR NON-FUSED (NF)
NEMA ENCLOSURE

ALL FUSIBLE SWITCHES SHALL BE PROVIDED WITH FUSES SIZED PER EQUIPMENT NAMEPLATE. CONTRACTOR SHALL MAKE FINAL ELECTRICAL CONNECTION TO EQUIPMENT.

DATA/TELEPHONE OUTLET - SINGLE GANG JUNCTION BOX STUB ONE INCH (1") CONDUIT WITH PULL WIRE INTO

WALL TELEPHONE OUTLET — SINGLE JUNCTION BOX STUB THREE—QUARTER INCH (3/4") CONDUIT WITH PULL WIRE INTO ACCESSIBLE CEILING SPACE.

ELECTRIC STRIKE. PROVIDE OUTLET BOX WITH 120VAC CONNECTION. MAGNETIC DOOR HOLD-OPEN. PROVIDE OUTLET BOX WITH 120VAC CONNECTION.

MAG MAGLOCK, PROVIDE OUTLET BOX WITH 120VAC CONNECTION.

CABLE TELEVISION OUTLET – SINGLE GANG JUNCTION BOX STUB THREE-QUARTER INCH (3/4") CONDUIT WITH PULL WIRE INTO ACCESSIBLE CÉLLING SPACE. VERIFY EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECT AND OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN. TV

AUDIO VISUAL/ CABLE TELEVISION OUTLET — SINGLE GANG JUNCTION BOX. STUB TWO IND. (2") CONDUIT W/PULL WIFE INTO ACCESSIBLE CELLING SPACE. VERIFY EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECT AND OWNER'S REPRESENTATIVE PRIOR TO ROUGH—IN. FSR #PWB SERIES OR EQUAL.

ELECTRONIC CARD READER. JUNCTION BOX WITH 3/4" C. AND PULLWIRE STUBBED TO ABOVE ACCESSIBLE CEILING.

 CONDUIT	RUN	UNDER:	SLAB.		
 CONDUIT IN WALLS		ABOVE	CEILING	OR	CONCEALED

———— CONDUIT DOWN. O CONDUIT UP.

> CONDUIT BARS INDICATE CONDUCTORS PHASE (HOT)

- EQUIPMENT GROUNDING ALL DIMENSIONS FOR DEVICE MOUNTING HEIGHTS ARE MEASURED FROM FINISHED FLOOR TO CENTER OF DEVICE OUTLET BOX, UNLESS OTHERWISE INDICATED, MOUNTING HEIGHTS SHALL BI AS FOLLOWS:

• WALL SWITCH - 48" AFF

 RECEPTACLE - 18" AFF
 ABOVE COUNTER RECEPTACLE/DEVICE - 3" ABOVE BACK SPLASH OF COUNTER OR 8" ABOVE FINISHED COUNTER TOP, WHICHEVER IS LOWER.

NOTE: THESE SYMBOLS COMPRISE A STANDARD LIST, NOT ALL SYMBOLS MAY APPEAR ON THESE

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Issue Description 1 ISSUE FOR PERMIT AND 2014.02.03 Revision Description YYYY-MM-DD ш \overline{S}

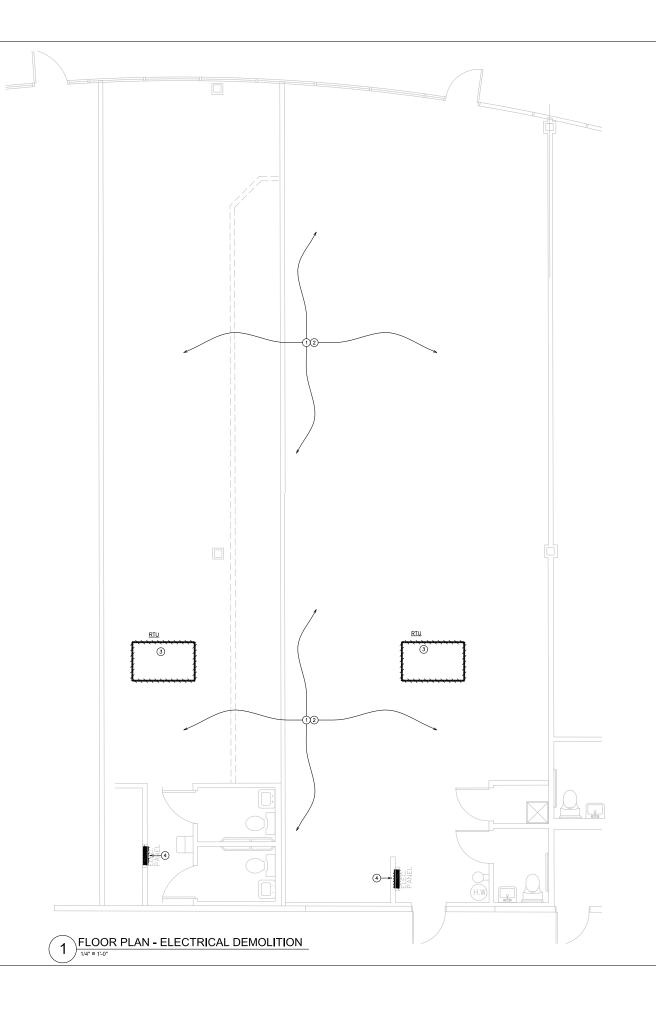
> Project No 2013-6741 ∠ LIGHT FIXTURE SCHEDULE & NOTES
SHEET 1 OF 7

Reviewed by

Original drawing is 36 x 24 Do not scale

Drawn by ND

Sheet Numbe E00



- A. WHERE EXISTING DEVICES ARE INDICATED TO BE REMOVED, EXISTING RACEWAY, CONDUIT AND ASSOCIATED WIRING SHALL BE REMOVED COMPLETE BACK TO SOURCE PANELS UNLESS NOTED OTHERWISE.
- B. EXISTING COMMUNICATIONS CABLING WITHIN EXISTING TENANT SPACE TO BE REMOVED COMPLETE BACK TO SOURCE.
- REFER TO MECHANICAL DEMOLITION DRAWINGS FOR LOCATIONS OF EQUIPMENT BEING REMOVED. COORDINATE WITH MECHANICAL DEMOLITION CONTRACTOR.

O DEMOLITION KEY NOTES:

- EXISTING LIGHT FIXTURES, SWITCHES, OUTLETS, ELECTRICAL DEVICES AND CONNECTIONS TO BE REMOVED COMPLETE FROM WITHIN EXISTING SPACE UNLESS NOTED OR INDICATED OTHERWISE.
- EXISTING RACEWAY, CONDUIT AND WIRING WITHIN EXISTING TENANT SPACE TO BE REMOVED COMPLETE UNLESS NOTED OTHERWISE.
- 3. E.C. SHALL DISCONNECT AND REMOVE EXISTING BRANCH CIRCUIT SERVING ROOF TOP HVAC UNIT TO ALLOW FOR EQUIPMENT REMOVAL BY M.C.
- EXISTING PANELBOARD TO BE REMOVED COMPLETE. ASSOCIATED FEEDER TO BE REMOVED COMPLETE BACK TO METER LOCATION. METER AND SERVICE DISCONNECT SHALL BE REMOVED COMPLETE.
- 5. LOCATION OF MAIN SERVICE ENTRANCE AND METER BANK.

GENERAL DEMOLITION NOTES

(I) INDICATES EXISTING WIRING DEVICE TO REMAIN. INDICATES EXISTING WIRING DEVICE TO BE REMOVED.

INDICATES EXISTING LIGHT FIXTURE TO REMAIN.

INDICATES EXISTING LIGHT FIXTURE TO BE REMOVED.

CROSS—HATCHING INDICATES DEVICE TO BE REMOVED COMPLETE. ALL WIRING AND CONDUIT SHALL BE REMOVED BACK TO THE POINT OF ORIGIN.

- A. CARE SHOULD BE TAKEN BY ALL CONTRACTORS TO AVOID DAMAGING OR DISTURBING EXISTING CONSTRUCTION WHICH IS INDICATED TO REMAIN. CONTRACTORS SHALL BE RESPONSIBLE FOR MAKING ANY REFAIRS NECESSARY TO RECTIFY DAMAGE AND RESTO
- B. ALL CONTRACTORS SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL ARCHITECTURAL DRAWINGS AND DETAILS PRIOR TO BEGINNING CONSTRUCTION FOR COORDINATION OF ALL DEMOLITION WORK FOR EACH RESPECTIVE TRADE.
- C. ALL CONTRACTORS SHALL REFER TO NEW CONSTRUCTION DRAWNINGS AND SPECIFICATIONS PRIOR TO BEGINNING DEMOLITION WORK FOR COORDINATION WITH SAME.
- D. UNLESS NOTED OTHERWISE SHOWN OR SPECIFIED, ALL MATERIALS AND EQUIPMENT REMOVED OR DEMOLISHED (EXCEPT THAT WHICH IS TO BE SALVAGED OR RELOCATED) AS DIRECTED BY DRAWINGS AND SPECIFICATIONS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LEGALLY DISPOSED OF.
- E. CONTRACTOR SHALL GIVE A MINIMUM NOTICE OF 48 HOURS TO GENERAL CONTRACTOR AND OWNER PRIOR TO SHUT-DOWN OF ANY EXISTING UTILITIES.
- F. CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE SCOPE OF ELECTRICAL DEMOLITION WORK.
- G. WHERE EXISTING WALLS OR PARTITIONS ARE TO BE REMOVED, THE ELECTRICAL CONTRACTOR SHALL CUT ALL BRANCH CIRCUITS AND CONDUITS FLUSH WITH FLOOR AND REMOVE CONDUCTORS.
- ELECTRICAL CONTRACTOR SHALL REWORK BRANCH CIRCUITS AS REQUIRED TO CONTINUE SERVICE TO ALL DEVICES, LIGHTING AND EQUIPMENT THAT ARE TO REMAIN AND DISCONNECTED FROM SERVICE BY DEMOLITION.
- ELECTRICAL CONTRACTOR SHALL VERIFY EXISTING CIRCUITS SERVING LIGHT FIXTURES, RECEPTACLES, AND SPECIAL POWER FOR EQUIPMENT WITHIN LIMITS OF DEMOLITION, PRIOR TO START OF ANY WORK.
- J. ELECTRICAL CONTRACTOR SHALL ELECTRICALLY DISCONNECT ALL ELECTRICAL EQUIPMENT (BEING REMOVED BY DEMOLITION) BACK AT PANELBOARD.
- . ALL CONDUIT AND WIRE FOR EQUIPMENT LOCATED OUTSIDE AREA OF DEMOLITION SHALL REMAIN IN SERVICE. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CAREFULLY COORDINATING WITH OTHER REPRESENTATIVES THE EXACT METHOD OF RE-ROUTING ANY CONDUIT AND WIRE TO EQUIPMENT REMAINING.
- L. ALL CONDUIT AND WIRE REMOVED SHALL BE REMOVED COMPLETELY BACK TO NEAREST JUNCTION BOX OR AT SOURCE PANEL AND BRANCH DEVICES PROPERLY LABELED "SPARE".
- M. REFER TO DEMOLITION DRAWINGS OF OTHER TRADES FOR ADDITIONAL WORK REQUIRED.
- N. PROVIDE TEMPORARY LIGHTING/POWER DURING AND AFTER DEMOLITION OF ALL AREAS WITHIN LIMITS OF THIS CONTRACT. SUCH DEVICES SHALL BE TAKEN FROM EXISTING PANELBOARDS AND EXISTING EQUIPMENT MAY BE UTILIZED WHERE FEASIBLE

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Contract No. 13.01656.00



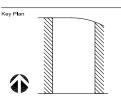
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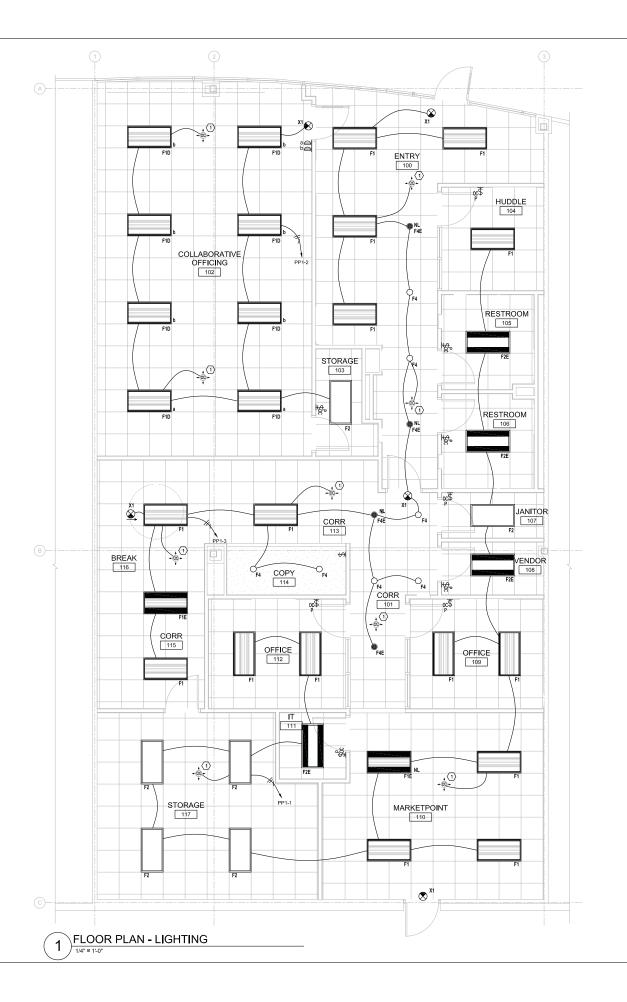
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 ✓ FLOOR PLAN -S ELECTRICAL DEMOLITION

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. ALL EXIT SIGNS, EMERGENCY EGRESS LIGHTS AND NIGHT LIGHT FIXTURES SHALL BE CONNECTED TO THE BRANCH CIRCUITS INDICATED AHEAD OF RESPECTIVE CONTROL SWITCH, IN ORDER TO PROVIDE UNSWITCHED SOURCE TO FIXTURES.

○ ELECTRICAL KEY NOTES:

E.C. SHALL PROVIDE AND INSTALL LOW VOLTAGE CEILING MOUNTED OCCUPANCY SENSOR WITH POWER PACK/AUXILIARY RELAY PACK. CONNECT LIGHTING BRANCH CIRCUIT(S) TO OCCUPANCY SENSOR FOR CONTROL.

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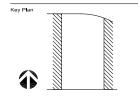


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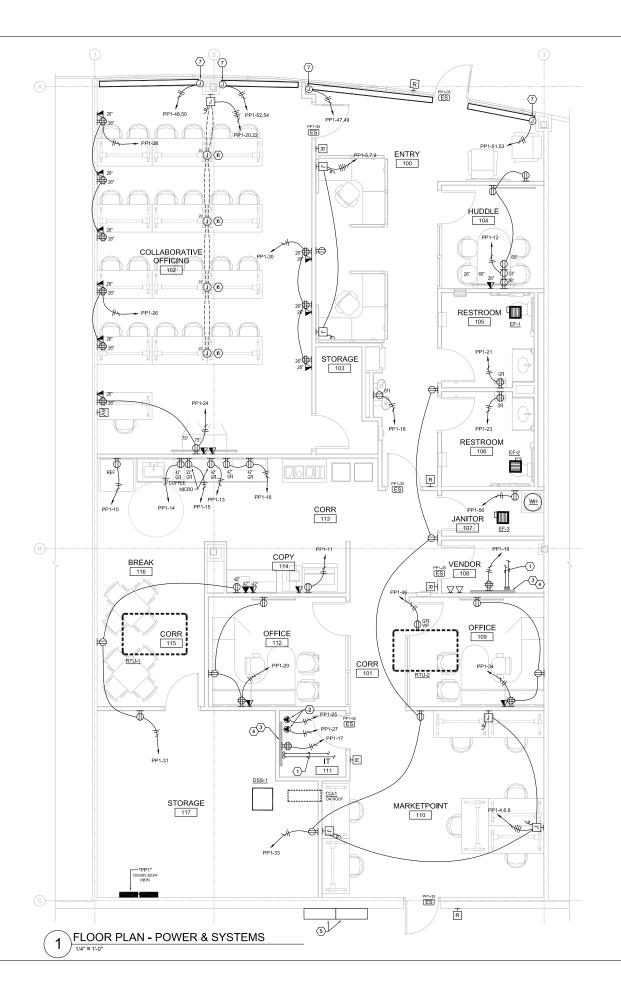
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- REFER TO ARCHITECTURAL POWER PLAN, FOR DIMENSIONS TO FLOOR MOUNTED DEVICES.
- B. WIRING DEVICES AND COVERPLATES SHALL BE WHITE IN COLOR.
- C. REFER TO "HVAC/PLUMBING EQUIPMENT CONNECTION SCHEDULE" ON SHEET E201 FOR ADDITIONAL EQUIPMENT CONNECTION INFORMATION.

○ ELECTRICAL KEY NOTES:

- E.C. SHALL PROVIDE AND INSTALL (2) 2" EMT CONDUITS IN CEILING SPACE TO MAIN TELECOMMUNICATIONS ENTRANCE LOCATION.
- 2. NEMA L5-3OR TWISTLOCK RECEPTACLE. OUTLETS ARE TO BE LOCATED BELOW THE WALL MOUNTED RACK AT 18"-24" A.F.F.
- 3. PROVIDE AND INSTALL 4'-0" X 8'-0" X 3/4" FIRE RATED PLYWOOD BACKBOARD.
- E.C. SHALL PROVIDE AND INSTALL 12" X 1/4" X 2" COPPER GROUND BUS WITH INSULATED STAND-OFFS. EXTEND (1) #6 INSULATED GROUNDING CONDUCTOR FROM TELECOMMUNICATION GROUND BUS BACK TO MAIN ELECTRICAL SERVICE GROUND.
- LOCATION OF MAIN SERVICE ENTRANCE AND METER BANK. NEW METER SOCKET SHALL BE PROVIDED AND INSTALLED BY E.C. PER LOCAL UTILITY REQUIREMENTS. REFER TO PARTIAL RISER DIAGRAM, SHEET 2201 FOR ADDITIONAL INFORMATION.
- 6. FLUSH MOUNTED DUAL SERVICE FLOOR BOX FOR POWER AND DATA CONNECTIONS —
 (EQUAL TO WIREMOLD 880 SERIES). PROVIDE WITH QUAD RECEPTACLE. DATA
 CONNECTIONS PROVIDED BY CABLING CONTRACTOR. PROVIDE WITH SUBPLATES,
 COVERS, AND DEVICES. PROVIDE (2) "E.M.T. CONDUITS WITH PULLSTRING FROM
 DUAL SERVICE FLOOR BOX, EXTEND TO NEAREST WALL AND STUB UP TO
 ACCESSIBLE CEILING SPACE FOR CABLE ROUTING TO IT ROOM LOCATION. VOICE/DATA
 CABLING PROVIDED BY OWNER.
- 7. E.C. SHALL PROVIDE ALTERNATE PRICE FOR THE INSTALLATION OF CONDUIT, WIRING AND FINAL CONNECTION TO ELECTRIC BASEBOARD HEATER (PROVIDED AND INSTALLED BY M.C.) AT THIS LOCATION. PROVIDE JUNCTION BOX IN WALL FOR CONNECTION TO BASEBOARD HEATER WITH INTEGRAL DISCONNECT.
- 8. MOUNT RECEPTACLE ABOVE CEILING FOR WATER PIPING HEAT TRACE CABLE.

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Project

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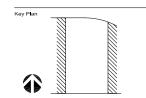
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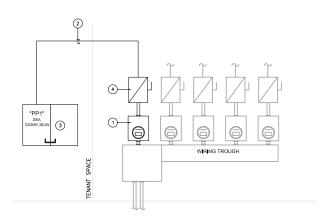
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RTU-1 23 4 FLA_208V_3PH 3602403RF (3) 86, (1) 91 0 GND 81 34" C. ROOF RTU-2 23 4 FLA_208V_3PH 3602403RF (3) 86, (1) 91 0 GND 81 34" C. ROOF DSS-10-01 3.7 FLA_208V_1PH 2302403RF (2) 912, (1) 91 0 GND 81 34" C. ROOF EF-1 65W_120V_1PH MTS (2) 912, (1) 912 0 GND 81 34" C. RESTM 105 EF-2 65W_120V_1PH MTS (2) 912, (1) 912 0 GND 81 34" C. RESTM 105 EF-3 65W_120V_1PH MTS (2) 912, (1) 912 0 GND 81 34" C. RESTM 106 EF-3 65W_120V_1PH MTS (2) 912, (1) 912 0 GND 81 34" C. JANITIR 107 WH-1 6, 6KW_206V_1PH 26024011F (3) 95, (1) 910 GND 81 34" C. JANITIR 107 NOTES: E. C. SHALL PROVIDE FUSES WITHIN ALL DISCONNECT SWITCHES AS PER UNIT NAMEPLATE RATING. E. C. SHALL VERBYE PACT MOUNTING LOCATION AND CONNECTION REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT WITH M. C. PRIOR TO ROUGHIN. E. C. SHALL VERBYE PACT MOUNTING LOCATION AND CONNECTION REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT WITH M. C. PRIOR TO ROUGHIN. E. C. SHALL VERBYE PACT OF MOUNTING LOCATION AND CONNECTION REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT WITH M. C. PRIOR TO ROUGHIN. E. C. SHALL VERBYE PACT OF MOUNTING LOCATION AND CONNECTION REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT WITH M. C. PRIOR TO ROUGHIN. E. C. SHALL VERBYE PACT OF MOUNTANG LOCATION AND CONNECTION REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT WITH M. C. PRIOR TO ROUGHIN. E. C. SHALL VERBYE PACT OF MOUNTANG LOCATION AND CONNECTION REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT WITH M. C. PRIOR TO ROUGHIN. E. C. SHALL VERBYE PACT OF MOUNTANG LOCATION AND CONNECTION REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT WITH M. C. PRIOR TO ROUGHIN. E. C. SHALL VERBYE PACT OF MOUNTANG LOCATION AND CONNECTION REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT WITH M. C. PRIOR TO ROUGHIN. E. C. SHALL VERBYE PACT OF MOUNTANG LOCATION AND CONNECTION REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT WITH M. C. PRIOR TO ROUGHIN. E. C. SHALL VERBYE PACT OF MOUNTANG LOCATION AND CONNECTION REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT WITH M. C. PRIOR TO ROUGHIN. E. M.	EQUIPMENT TAG	LOAD DATA	DISCONNECT	WIRE/CONDUIT	EQUIPMENT LOCATION	REMARKS
DSS-HOL1 3.7 FLA_208V, IPH 2/30/240/3R/F (2) #12 (ND IN 24" C. IT. 11/ROOF 1 EF-1 65W, 129V, IPH MTS (2) #12, (1) #12 (ND IN 24" C. RESTM 165 EF-2 65W, 129V, IPH MTS (2) #12, (1) #12 (ND IN 34" C. RESTM 165 EF-3 65W, 129V, IPH MTS (2) #12, (1) #12 (ND IN 34" C. JANTEN 167 WH-1 6, 6KW, 209V, IPH 2/20/240/UF (2) #8, (1) #10 (ND IN 34" C. JANTEN 167 NOTES: NOTES: LE C SHALL VERBY ENACT MOUNTRIC LOCATION AND CONNECTION REQUIREMENTS FOR ALL MICHARICAL EQUIPMENT WITH M.C. PRIOR TO ROUGHIN. E. C. SHALL VERBY ENACT MOUNTRIC LOCATION AND CONNECTION REQUIREMENTS FOR ALL MICHARICAL EQUIPMENT WITH M.C. PRIOR TO ROUGHIN. MTS' * MOTOR RATED TOGGLE SWITCH EQUIPMENT DISCONNECT SWITCH FUSBLE (F) OR NON-FUSED (NF)	RTU-1	23.4 FLA, 208V, 3PH	3/60/240/3R/F	(3) #8, (1) #10 GND IN 3/4" C.	ROOF	
EF-1 65W, 120V, 1PH MTS (2) #12, (1) #12 OND IN 34" C. RESTRI 105 EF-2 65W, 120V, 1PH MTS (2) #12, (1) #12 OND IN 34" C. RESTRI 105 EF-3 65W, 120V, 1PH MTS (2) #12, (1) #12 OND IN 34" C. RESTRI 105 WH-1 6.0KW, 208V, 1PH 200240*UF (2) #8, (1) #10 GND IN 34" C. JANITIR 107 NOTES: E.C. SHALL PROVIDE FUSES WITHIN ALL DISCONNECT SWITCHES AS PER UNIT NAMEPLATE RATING. E.C. SHALL PROVIDE FUSES WITHIN ALL DISCONNECT SWITCHES AS PER UNIT NAMEPLATE RATING. E.C. SHALL VERPY EACH MOUNTING LOCATION AND CONNECTION REQUIREMENTS FOR ALL PLUMBING EQUIPMENT WITH M.C. PRIOR TO ROUGHIN. "MTS" MOTOR RATED TOGGLE SWITCH EQUIPMENT DISCONNECT SWITCH DESIGNATED AS: 3002401/F #1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	RTU-2	23.4 FLA, 208V, 3PH	3/60/240/3R/F	(3) #8, (1) #10 GND IN 3/4" C.	ROOF	
EF-2 65W, 120V, 1PH MTS (2) #12 (1) #12 OND IN 34" C. RESTIM 106 EF-3 65W, 120V, 1PH MTS (2) #12 (1) #12 OND IN 34" C. JANIDR 107 WH-1 6.6KW, 200V, 1PH 2000/20UF (2) #8 (1) #10 GND IN 34" C. JANIDR 107 NOTES- C 5 SHALL PROVIDE FUSES WITHIN ALL DISCONNECT SWITCHES AS PER UNIT NAMEFIATE RATING. E C. SHALL PROVIDE FUSES WITHIN ALL DISCONNECT SWITCHES AS PER UNIT NAMEFIATE RATING. E C. SHALL VERIFY EACH MOUNTING LOCATION AND CONNECTION REQUIREMENTS FOR ALL MICHARICAL EQUIPMENT WITH M.C. PRIOR TO ROUGHIN. E C. SHALL VERIFY EACH MOUNTING LOCATION AND CONNECTION REQUIREMENTS FOR ALL PLUMBING EQUIPMENT WITH M.C. PRIOR TO ROUGHIN. "MTS" — MOTOR RATED TOGGLE SWITCH EQUIPMENT DISCONNECT SWITCH SUBJECT OF TO SWITCH SUBJECT OF TO SWITCH FUSIBLE (F) OR NON-FUSED (NF)	DSS-1/CU-1	3.7 FLA, 208V, 1PH	2/30/240/3R/F	(2) #12, (1) #12 GND IN 3/4° C.	LT. 111/ROOF	1
EF-3 65W, 120V, 1PH MTS (2) #12 GND IN 34" C. JANITOR 107 WH-1 6.0KW, 208V, 1PH 2002401VF (2) #8, (1) #10 GND IN 34" C. JANITOR 107 NOTES: E.C. SHALL PROVIDE FUSES WITHIN ALL DISCONNECT SWITCHES AS PER LINIT NAMEPLATE RATING. E.C. SHALL VERBY EACH MOUNTING LOCATION AND CONNECTION REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT WITH M.C. PRIOR TO ROUGHIN. E.C. SHALL VERBY EACH MOUNTING LOCATION AND CONNECTION REQUIREMENTS FOR ALL PLUMBING EQUIPMENT WITH P.C. PRIOR TO ROUGHIN. "MTS"— MOTOR RATED TOGGLE SWITCH EQUIPMENT DISCONNECT SWITCH DESIGNATED AS: 3/30/2401/F ###################################	EF-1	65W, 120V, 1PH	MTS	(2) #12, (1) #12 GND IN 3/4° C.	RESTRM 105	
WH-1 6.0KW, 208V, 1PH 2602401/F (2) #8, (1) #10 GND N 34* C. JANTIR 107 NOTES: C. SHALL PROVIDE FUSES WITHN ALL DISCONNECT SWITCHES AS PER UNIT NAMEPLATE RATING. E.C. SHALL VERRY EXACT MOUNTING LOCATION AND CONNECTION REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT WITH M.C. PRIOR TO ROUGH-IN. E.C. SHALL VERRY EXACT MOUNTING LOCATION AND CONNECTION REQUIREMENTS FOR ALL PLUMBING EQUIPMENT WITH P.C. PROR TO ROUGH-IN. *WITS* - MOTOR RATEO TOGGLE SWITCH EQUIPMENT DISCONNECT SWITCH DESIGNATED AS: 3002401/F ### ################################	EF-2	65W, 120V, 1PH	MTS	(2) #12. (1) #12 GND IN 3/4° C.	RESTRM 106	
NOTES: E. C. SHALL PROVIDE FUSES WITHIN ALL DISCONNECT SWITCHES AS PER LINIT NAMIPLATE RATING. E. C. SHALL VERIFY EXACT MOUNTING LOCATION AND CONNECTION REQUIREMENTS FOR ALL MICHARICAL EQUIPMENT WITH M.C. PRIOR TO ROUGH-IN. E. C. SHALL VERIFY EXACT MOUNTING LOCATION AND CONNECTION REQUIREMENTS FOR ALL PLUMBING EQUIPMENT WITH P.C. PRIOR TO ROUGH-IN. "MTS" — MOTOR RATIED TOGGLE SWITCH EQUIPMENT DISCONNECT SWITCH DESIGNATED AS: 3/30/2401/F # T # # # # # # # # # # # # # # # # #	EF-3	65W, 120V, 1PH	MTS	(2) #12, (1) #12 GND IN 3/4" C.	JANITOR 107	
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	ONE-LINE KEY NOTES
1.	NEW 3P, 200 AMP, METER SOCKET.
2.	NEW FEEDER FROM METER LOCATION $-$ (4) $\#3/0$, $\#6$ GND IN 2" CONDUIT.
3.	NEW 3P, 200AMP 208/120V PANELBOARD.
4.	NEW 3P, 200AMP NEMA 3R SERVICE RATED FUSED DISCONNECT.





LEGEND: EXISTING EQUIPMENT/WORK TO REMAIN - NEW EQUIPMENT/WORK

PARTIAL ONE-LINE RISER DIAGRAM

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Prepared for Humana, Inc.

Contract No: 13.01656.00



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KERR-GREULICH

MEP Engineer

1534 Ormsby Station Ct Louisville KY 40223 502.426.9457

Key Plan

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SECTION 16A - ELECTRICAL GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Furnish all materials, labor and equipment necessary to construct a complete and functional electrical system as further described in these specifications and on design drawings.
- B. Work under this section shall include final electrical connections to all equipment furnished under other sections of
- D. This section (Electrical General Requirements) applies equally to electrical, heating, ventilating, air conditioning, and

1.2 MATERIALS, EQUIPMENT AND WORKMANSHIP

- A. Materials and equipment used throughout shall be new and the best of their respective kinds. No substitutions, other than those specified, shall be used unless approved by the Architect and Engineer. All work shall be executed with speed and consistent with safety and good workmanship. Substitutions of equal equipment will be acceptable only if approved in writing by Architect and Engineer 10-days prior to bid.
- C. Competent workmen shall be employed on all phases of the work. Poor workmanship will be rejected and will constitute cause for removal of the individual performing the work.
- D. All material, equipment and locations of same shall at least conform with the standards of the Underwriters Laboratories. Inc. whenever applicable.
- E. Should any dispute arise as to the quality or fitness of materials, equipment or workmanship, the decision rests strictly with the Architect.

1.3 REFERENCES

- A. Utilize the following abbreviations and definitions for discernment within the Drawings and Specifications
- ilize the following obbreviotions and definitions for discert Abbreviotions:

 a. NECNational Electrical Code
 by Company of Health Act.
 USHA Occupational Sofety and Health Act.
 USHA Occupational Sofety and Health Act.
 by Netherland Fire Protection Association.
 by Netherland Fire Protection Association.
 f. IEEEnstitute of Electrical and Electronics Engineers.
 p. NEDA National Electrical Municroturers Association.
 by Underwriters Laboratories, Inc.
 iEZPhrasulated Coble Engineers.
 p. IEZPhrasulated Coble Engineers, Macterials.
 k. ETIL Electrical Testing Laboratories, Inc.
 ETIL Electrical Testing Laboratories, Inc.

1.4 PERMITS, CODES AND INSPECTIONS

- A. Electrical Contractor shall obtain and pay for all permits and inspections required for electrical installation
- B. All work shall be in accordance with the latest edition of the National Electrical Code (NEC), National Fire Protection Association (NFPA), Occupational Safety and Health Administration (OSHA) and local utility company requirements.
- Electrical Contractor shall furnish final inspection certification to the Owner upon completion of work. Certificate shall be from local inspection authority.
- Local Codes/Inspector
 National Electrical Code
 Specifications and Drawi

1.5 DRAWINGS AND SPECIFICATIONS

- A. DO NOT SCALE DRAWINGS. Scale of drawings is approximate. Exact locations, distances, levels and other conditions shall be governed by field conditions.
- C. The drawings and specifications are intended to cover all work enumerated under the respective headings. The Sub-Contractors shall not take advantage of conflict or error between drawings and specifications, but shall request a clarification of such before making his proposal should this condition exist.
- Contractors shall obtain a set of the Architectural drawings and specifications, and consult with the Architect and General Contractor as to the general construction of the building and the order and time of placement of all electrical work.
- F. Submit a complete list within fifteen (15) calendar days after award of contract, for all materials to be used. Note any deviations from specifications or proposed "equipments" and include Manufacturer's name, catalog number and descriptive literature for each

1.6 SURMITTALS

- A. Electrical Contractor shall refer to electrical submittal registry which is located at the end of this section. Sections identified within the registry indicate an overview of the products to be submitted. The Contractor shall reference each identified section for the specific items to be included in the submittal.
- B. Electrical Contractor shall provide submittals for review and approval on equipment and material listed in the individual technical sections of Division 16
- C. Submittals shall clearly indicate electrical characteristics, physical dimensions and pertinent data which indicate that item meets all requirements specified on drawings and in technical specifications.
- D. Each Sub-Contractor shall submit to the General Contractor for review within thirty (30) days after the date of the contract, seven (7) sets of complete catalogue data and/or shap drawings for each litem of material or piece of equipment. Catalog data shall include name of the manufacturer, catalog numbers, trade names, performance data, descriptive material (sufficient to identify each litem), and specify performance of the products. Shap drawings shall include specified catalogue data and shall show equipment in detail, arrangement and disposition for this particular
- E. The Architect and/or Engineer checking and reviewing of the Contractor's and Sub-Contractor's drawings and/or equipment details does not relieve the Contractor or Sub-Contractor from responsibility for errors, omissions or contractor and the contractor of the Contractor from responsibility for errors, omissions or contractor and the contractor and the contractor of the contractor and the contractor of the contractor of

1.7 SITE EXAMINATION

- A. Each Contractor shall, before submitting a proposal, visit and examine the site to satisfy themselves as to materials and scope of the construction, alterations and remodeling, any difficulty attending the performance of the work, storag of material, access to any and all areas, etc.
- B. The submission of a proposal will be construed as evidence that such an examination has been made. Claim subsequent to the time of submission of the proposal for labor, equipment and material required for difficultie encountered, which could have been foreseen had an examination been made, will not be recognized.

1.8 QUALIFICATIONS

- A. Contractors must have five (5) years minimum experience, has a satisfactory work resume with comparable projects listed, has a sound financial basis, and is technically competent.
- B. Equipment Manufacturers must have five (5) years of successful experience, be technically competent, and be industrial financially stable.
- A. Electrical Contractor shall be responsible for removing any dirt, boxes, paper or other debris present as a result of his
- B. Work areas shall be maintained in a clean and orderly condition at all times.
- C. Electrical Contractor shall be responsible for all cutting and patching required for his work. All work shall be by skilled
- No more cutting shall be done than is absolutely necessary. Cutting of a structural member or exposed surface of concrete will not be permitted without written approval of the Architect and Structural Engineer.
- E. Conduit openings in floor slabs shall be cut with core drill. Edges of trenches or openings in slabs shall be scribe cut with mospany saw
- G. All cutting and patching shall be done in a neat and workmanlike manner by men skilled in the various trades and with written parmission from the Architect

- A. The Electrical Contractor shall warranty all material and labor for a period of one (1) year from the date of Owner's acceptance except where warranties for longer terms are specified herein, such longer term to apply.
- B. The Electrical Contractor shall replace defective parts or equipment promptly without any cost to the Owner and done

1.11 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect, and handle products to the project site properly identified with manufacturers identification model number, types, grades, compliance labels, and other information needed for identification.
- Protect products from weather, construction traffic, dirt, water chemicals, and mechanical damage by storing in original packaging.

1.12 AS-BUILT DRAWINGS

- A. Maintain an accurate set of "as built" drawings and record any deviations from contract drawings. Submit two (2) sets of drawings (marked to show all deviations) upon completion of work to General Contractor.
- B. As-built drawings shall show all changes, additions, deletions, and deviations from contract drawings noted plainly thereon. Special emphasis is placed on recording the exact location of all underground utilities by offset distances to building corners, wells. curbs etc.

PART 2 PRODUCTS

B. All materials shall bear the UL label where such standards has been established and listed by Underwriters Laboratories, 2.1 MATERIALS

- A. All materials and equipment installed shall be new and free of defects and shall be the product of a reputable manufacturer and subject to approval.
- Applicable equipment and materials shall be listed by Underwriters Laboratories and Manufactured in accordance with ASME, NEMA, ANSI and IEEE standards, and as approved by local authorities having jurisdiction as mentioned in

2.2 MISCELLANEOUS STEEL

- A. Provide all necessary miscellaneous steel as required for mounting, hanging or otherwise supporting panelboards, wall-mounted transformers, light fixtures, conduit, etc. installed by Electrical Contractor.
- B. Supports shall be suitably fastened to structural members as approved by Architect and Structural Engineer.
- A. Provide typewritten circuit directories in panels with clear plastic protection shields and mounted in card holders. Indicate circuit number, devices or equipment being serviced. Final directories shall reflect final installation, reflect all revisions made during construction and shall reflect final "as-built" conditions.
- B. Lobel all panels, starters, and switchboards with panel designation in one-half inch (1/2") letters and voltage in one-quarter inch (1/4") letters. Use engraved immocial plates with block background and white letters. Fasten plate above door on panel timb you using aluminum screes.

A. Verify final locations for rough_ins with field measurements and with the shop drawing requirements of the actual equipment to be connected.

3.2 ELECTRICAL INSTALLATION

- A. Follow manufacturers instructions for installing, connecting, and adjusting all equipment. Provide a copy of such instructions at the equipment during any work on the equipment. Provide all special supports, connections, wiring, accessories, etc.
- B. General: Unless otherwise indicated, hook up all equipment requiring electrical services, whether such equipment is furnished under this Section or furnished by others. Comply with the following requirements:
- other Sections.

 2. Verify, all dimensions by field measurements.

 3. Arrange for chases, slots, and openings in other building components during progress of construction, to allow for electrical installations.

 4. The state of the state o electrical installations.

 Coordinate the statislation of required supporting devices and sleeves to be set in poured_in_place concrete and other structural components, as they are constructed. Sequence, coordinate, and integrate installations of electrical materials and equipment for efficient flow of the Sequence, coordinate, and integrate installations of electrical materials and equipment for efficient flow of the
- ordinate connection of electrical systems with exterior underground and overhead utilities and services. Comply a requirements of governing regulations, franchised service companies, and controlling agencies. Provide
- required connection for each service.

 7. Install systems, materials, and equipment to conform with approved submitted data, including coordination drawings, to greatest extent possible. Conform to arrangements indicated by the Controt bourners, recognizing that portions of the Work are shown only in diagramments form. Where coordination requirements conflict with portions of the Work are shown only in diagramments form. Where coordination requirements conflict with portions of the Work are shown only in diagramment form. Where coordination requirements conflict with Installa systems, materials, and equipment level and plumb, portial and perpendicular to other building systems and components, where installed exposed in finished spaces, Installe described exposed in finished spaces, Install electrical equipment for facilitate servicing, maintenance, and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations.

3.3 WORKMANSHIP, COOPERATION AND COORDINATION

- Any installation which does not present an appearance of the best trade practices shall be repaired, removed or replaced as directed by Owners Representative

3.4 CLEANING AND TESTING

3.5 EQUIPMENT CONNECTIONS

- A. Electrical Contractor shall connect all power wiring to any equipment furnished by Others, unless indicated otherwise
- Electrical Contractor shall furnish all materials (i.e. disconnect switches, junction boxes, receptacles, cords, plugs, etc.)
- D. Electrical Contractor shall be responsible for making final connection to all Owner furnished equipment indic plans. Contractor shall check list from Owner with drawings and inform Owner of any discrepancies.
- E. Electrical Contractor shall obtain shop drawings and/or cut sheets for all equipment supplied by others which requires electrical connections prior to rough-in. Electrical Contractor shall confirm that electrical services provided for equipment on drawings are correct for equipment to be installed. Inform Engineer of any discrepancies. Any work installed which does not match the requirements of the equipment to be installed shall be removed at the expense of the Electrical Contractor.

3.6 FLECTRICAL FOR HEATING, VENTUATING AND AIR CONDITIONING FOUIPMENT

The Mechanical Contractor shall furnish and install all air conditioning equipment, air handling units, exhaust fans The Mechanical Contractor shall provide starters for all HVAC equipment requiring starters, unless otherwise indict the Electrical Contractor shall mount and connect all starters and shall furnish all starch circuit sirring, motor disconnects, labor and final electrical connections as required for proper operation. Mechanical Contractor shall furnish and install all controls and control wiring, unless otherwise indicated and densings.

- B. Contractor shall be responsible for all touch-up painting. Touch-up painting shall be per manufacture

SECTION 16B - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

- A. This Section includes the following:
 Building wires and cables rated 600 V and less.
 Connectors, splices, and terminations rated 600 V and less.
 Sleeves and sleeve seals for cables.
- A. Product Data: For each type of product indicated B. Field quality-control test reports.
- 1.3 QUALITY ASSURANCE
- Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing authorities having jurisdiction, and marked for intended use.

- 2.2 CONNECTORS AND SPLICES
- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

 1. AFC Cable Systems, Inc.

 2. Hubbell Power Systems, Inc.
- Hubbell Power Systems, Inc.
 G-2/Gedney, ESS Electrical Group LLC.
 Syc Descriptions: Copy,
 Syc Description: For Exercise Systems and Systems and Systems and Systems and Service Indicated.
 Description: Foctory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

PART 3 - EXECUTION

- 3.1 CONDUCTOR MATERIAL APPLICATIONS
- 3.2 CONDUCTOR INSULATION APPLICATIONS AND WIRING METHODS
- A. Exposed Feeders: Type THHN-THWN, single conductors in raceway.

 B. Feeders Conceled in Ceilings, Walls, Partitions, and Crawlspaces: Type THHN-THWN, single conductors in raceway.

 C. Exposed Branch Circuits: Type HiHN-THWN, algole conductors in raceway.

 D. Branch Circuit Sconceaded in Ceilings, Walls, and Partitions: Type THHN-THWN, single conductors in raceway.

 E. Class I Control Circuits: Type HiHN-THWN, in raceway.
- 3.3 INSTALLATION OF CONDUCTORS AND CARLES
- Conceol cables in finished walls, ceilings, and floors, unless otherwise indicated.
 Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- values.
 C. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable arips, that will not damage cables or
- roceway.

 D. Identify and color-code conductors and cobies according to Division 26 Section "Identification for Electrical Systems."

 E. Make splices and tops that are compatible with conductor material and that possess equivolent or better mechanical strength and insulation radius than unspliced conductors.

 F. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches (150 mm) of slack.
- END OF SECTION

SECTION 16C - RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

- 1.1 RELATED DOCUMENTS
- 1.2 SUMMARY
- A. This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring
- 1.3 DEFINITIONS
- A. EMT: Electrical metallic tubing.
 B. EPDIM: Ethylene-propylene-diene terpolymer rubber.
 C. PMC: Plexible metals conduct.
 E. E. PMC: Liquidipht flexible metal conduit.
 E. L. FMC: Liquidipht flexible metal conduit.
 E. L. FMC: Liquidipht flexible metal conduit.
 C. NBR: Acrylonitrile—butodiene rubber.
 H. RNC: Rigid nometallic conduit.
 H. RNC: Rigid nometallic conduit.
- 1.4 SURMITTALS
- A Product Data: For each type of raceway, surface raceways, wireways and fittings, floor boxes, hinged-cover enclose and cabinets.
- 1.5 QUALITY ASSURANCE A Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

 8. Comply with NFPA 70.

PART 2 - PRODUCTS

- 2.1 METAL CONDUIT AND TUBING

- 2.1 METAL CONDUIT AND TUBING
 Avoidable Manyfacturers: Subject to compliance with requirements, monufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

 1. AFC Cable Systems, Inc.

 2. Affex Inc.

 3. Allies Tibe & Conduit; a Tyco International Ltd. Co.

 4. Anomal Electrical, Inc., Anaconda Metal Hose.

 6. Avainable Tube Corporation.

 7. 0-2 Gadney; a unit of General Signol.

 8. Wheatland Tube Comparation.

 8. Wheatland Tube Comparation.

 8. Wheatland Tube Comparation.

 1. Dept. ANSI C80.5.

 1. EMC. Flexible steel conduit with PVC jacket.

 Fittings for Conduit (Including all Types and Flexible and Liquiditipht), EMT, and Cable: NEMA FB 1; listed for type and size raceway with which used, and for application and environment in which installed.

 7. Joint Company and for Rigid Steel Conduit or MCL. Citadd for use in cable connector assemblies, and compounded for use to bubricate and protect threaded raceway joints from corrosion and enhance their conductivity.
- Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.

 Cast-Iron Pipe Sleeves: Cast or fabricated wall pipe, equivalent to ductile-iron pressure pipe, with plain ends and integr

3.1 RACEWAY APPLICATION

- A Outdoors: Apply raceway products as specified below, unless otherwise indicated:

 1. Exposed Conduit. Rigid steel or IMC
 2. Concooled Conduit, Acceptance: NEMA 250, Type 3R.
 3. Boxes and Enclosures, Aboveground: EMT.
 3. Boxes and Enclosures, Aboveground: NEMA 250, Type 3R.
 1. Comply with the following indoor applications; unless otherwise indicated:
 1. Exposed and Subject to Physical Damage: Rigid steel conduit. Includes raceways in the following locations:
 2. Exposed and Subject on the Conduit of the Conduit
- 5. Damp or Wet Locations: IMLV.
 6. Boxes and Enclosures: NBMA 250, Type 1, except use NBMA 250, Type 3R, stainless steel in damp or were considered to the state of the state of

3.2 INSTALLATION

- 3.2 INSTALATION

 A Comply with NECA 1 for installation requirements applicable to products specified in Part 2 except where requirements on Drawings or in this Article are stricter.

 B. Keep roceway at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal roceway runs above water and steam piping.

 C. Complete receivery installation before starting conductor installation.

 D. bronge stub-rups are curved profitors of before are not visible above the finished also.

 E. Complete receivery installation before starting conductor installation.

 F. Conceel conduit and EMT within finished walls, ceilings, and floors, unless otherwise indicated.

 F. Conceel conduit dunits. Exposed to Wet, Domp, Corrosive, or Oldobor Conditions: Apply listed compound to threads of noceway and filtings before making up joints. Follow compound manufacturer's written instructions.

 Including conductors smaller than No. 4 AMC.

 Install pull wires in empty roceways. Use polypropylene or monofiliament plastic line with not less than 200—1b tensile strength. Leve of tleast 12 clinices of slock of each end of pull wise conduit for recessed and semineraseased lighting forms and the conductors and motors.

 I was INFA for independent of the control of the conductors and conductors and motors.

 Less INFA for independent conductors and the conductors and conductors and the conductors and the conductors and the c

- 3.3 SLEEVE INSTALLATION FOR ELECTRICAL PENETRATIONS
- A. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.

 B. Fire-floted Assemblies: install sleeves for penetrations of fire-roted floor and will assemblies unless openings compatible.

 C. Lut sleeves to length for mounting flush with both surfaces of voids.

 D. Extend sleeves installed in floors 2 inches doove finished floor level.

 E. Stee pipe sleeves to provide 1/4-inch annular claer space between sleeve and raceway unless sleeve seal is to be installed or unless asientic arterial require different clearance.

 See pipe sleeves to provide 1/4-inch annular clear space between sleeve and raceway unless sleeve seal is to be installed or unless asientic criteria require different clearance.
- sea space outside of sleeves with grout for penetrations of concrete and mosonry and with approved joint compound follogreys board assemblies. Interior Penetrations of Non-Fire-Rated Walls and Floors: Seal annular space between sleeve and raceway, using joint sealant appropriate for size, depth, and location of joint. Refer to Division 07 Section "Joint Sealants" for materials and installation.
- Aboveground, Exterior-Wall Penetrations: Seal penetrations using sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.
- A Provide final protection and maintain conditions that ensure coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion. deterioration at time of Substantial Competion.

 1. Repair damage to golvanized finishes with zinc-rich point recommended by manufacturer.

 2. Repair damage to PVC or paint finishes with matching touchup coating recommended by manufacturer.

SECTION 16D - IDENTIFICATION FOR ELECTRICAL SYSTEMS PART 1 - GENERAL

1.1 SUMMARY Section Includes:
 1. Identification for conductors.

3.4 PROTECTION

1.2 SUBMITTALS

A. Product Data: For each electrical identification product indicated

- 1.3 QUALITY ASSURANCE
- A. Comply with AISI 11.1.

 8. Comply with PR-70:

 10. Comply with PR-70:

 10. Comply with PR-70:

 10. Comply with AISI 253.54 for safety signs and labels.

 10. Comply with AISI 253.54 for safety signs and labels.

 11. Adhesive—attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 999.
- 2.1 CONDUCTOR IDENTIFICATION MATERIALS

PART 2 - PRODUCTS

- A. Color-Coding Conductor Tape: Colored, self-adhesive vinyl tape not less than 3 mils thick by 1 to 2 inches wide 2.2 IDENTIFICATION SCHEDULE

- Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, manholes, a handholes, use color-coding conductor tope to identify the phase.

 1. Color-Coding for Phase and Voltage Level Identification, 600 V or Less: Use colors listed below for ungrounded as a Color shall be factory applied.

 a. Color shall be factory applied.

 b. Colors or 208/120-V Circuits:

 1) Phase A: Block.

 2) Phase B: Red.

 3) Phase C: Blue.

 4) Neutrol: White.
- B. Install instructional sign including the color-code for grounded and ungrounded conductors using adhesive-film-typ labels.
- C. Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections. 1. Identify conductors, cobies, and terminals in enclosures and at junctions, terminals, and pull points. Identify be system and circuit designation.
 2. Use system of morker tape designations that is uniform and consistent with system used by manufacturer for factory-installed connections.

3. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance

- A. Nameplates: Engraved three_layer laminated plastic, black letters on white backgroun
- B. Locations:
 1. Each electrical distribution and control equipment enclosure.
 2. Service Disconnects.
 3. All feeder overcurrent protection device at switchboard.
- C. Letter Size

 1. Use 1/8" letters for identifying individual equipent and loads.

 2. Use 1/4" letters for identifying grouped equipment and loads
- 2.4 RECEPTACLES A. All receptacles shall have the coverplate engraved with the specific panel designation and circuit branch circuit serving the device. Receptacles provided for specific purpose or equipment shall be engraved labels as indicated on plans.

PART 3 - EXECUTION

- 3.1 INSTALLATION
- D. Location: Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.

 Apply identification devices to surfaces that require finish after completing finish work.
- END OF SECTION 16

Humana

Humana Memphis, TN MarketPoint 6515 Poplar Avenue Suites 107&108

Memphis, TN 38119 Prepared for Humana. Inc.

Contract No: 13.01656.00



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Revision Description YYYY-MM-DD ш \overline{S} Drawn by ND Reviewed by

Issue Description

SPECIFICATIONS SHEET 6 OF 7 Original drawing is 36 x 24 Do not scale

Project No 2013-6741

™ ELECTRICAL

2014.02.03

SECTION 16E - PANELBOARDS

1.1 SUMMARY

A. Section includes distribution panelboards and lighting and appliance branch-circuit panelboards

A. Product Data: For each type of product indicated.

B. Shop Drawings: For each panelboard and related equipment.

Include dimensioned plans, elevations, sections, and details. Show tabulations of installed devices, equipment features, and ratings.

Detail enclosure types and details for types other than NFMA 250. Type 1.

Detail bus configuration, current, and voltage ratings.
 Short-circuit current rating of panelboards and overcurrent protective devices.

5. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.

C. Panelboard schedules for installation in panelhoards

1.3 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing 1.4 COORDINATION agency, and marked for intended location and application.

C. Comply with NFPA 70.

1.4 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace transient voltage suppression devices that fail in materials or workmanship within specified warranty period.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS FOR PANELBOARDS

A Fabricate and test panelboards according to IEEE 344 to withstand seismic forces defined in Division 28 Section Vibration and Seismic Controls for Electrical Systems."

B. Enclosures: Flush- and surface-mounted cabinets.

Rated for environmental conditions at installed locat

g. Indoor Dry and Clean Locations: NEMA 250, Type 1.

1. Warranty Period: Five years from date of Substantial Completion.

Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box.

3. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover. 4. Directory Card: Inside panelboard door, mounted in transparent card holder.

C. Incoming Mains Location: Top and bottom.

D. Phase, Neutral, and Ground Buses: Hard-drawn copper, 98 percent conductivity.

E. Conductor Connectors: Suitable for use with conductor material and sizes.

Material: Hard-drawn copper, 98 percent conductivity.

Main and Neutral Lugs: Compression type.
 Ground Lugs and Bus Configured Terminators: Compression type

2.3 LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following: 1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.

2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.

3. Siemens Energy & Automation, Inc. 4. Square D; a brand of Schneider Electric.

B. Panelboards: NEMA PB 1, lighting and appliance branch-circuit type

C. Mains: luas only.

. Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units

E. Doors: Concealed hinges; secured with flush latch with tumbler lock; keyed alike.

2.4 DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

1. Eaton Electrical Inc.; Cutler-Hammer Business Unit. 2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.

3. Siemens Energy & Automation, Inc.

4. Square D; a brand of Schneider Electric. B. Molded-Case Circuit Breaker (MCCB): Comply with UL 489, with interrupting capacity to meet available fault

 Thermal-Magnetic Circuit Breakers: Inverse time-current element for low-level overloads, and instantaneous
magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A
and larger. 2. Adjustable Instantaneous—Trip Circuit Breakers: Magnetic trip element with front—mounted, field—adjustable trip

3. Electronic trip circuit breakers with rms sensing; field-replaceable rating plug or field-replicable electronic trip; and the following field-adjustable settings:

b. Long- and short-time pickup levels.

d. Ground-fault pickup level, time delay, and 12t response.

4. Current-Limiting Circuit Breakers: Frame sizes 400 A and smaller; let-through ratings less than NEMA FU 1, RK-5.

5. Molded-Case Circuit-Breaker (MCCB) Features and Accessories

a. Standard frame sizes, trip ratings, and number of poles.

b. Lugs: Compression style, suitable for number, size, trip ratings, and conductor materials.

c. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HID for feeding fluorescent and high-intensity discharge (HID) lighting circuits.

d. Ground-Fault Protection: Integrally mounted relay and trip unit with adjustable pickup and time-delay settings, push-to-lest feature, and ground-fault indicator.

e. Handle Padlocking Device: Fixed attachment, for locking circuit-breaker handle in on position f. Handle Clamp: Loose attachment, for holding circuit-breaker handle in on position

3.1 INSTALLATION

A. Receive, inspect, handle, store and install panelboards and accessories according to NEMA PB 1.1.

B. Comply with mounting and anchoring requirements specified in Division 26 Section Vibration and Seismic Controls for Electrical Systems."

C. Mount top of trim 72 inches above finished floor unless otherwise indicated.

D. Mount panelboard cabinet plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish and mating with back box.

E. Install overcurrent protective devices and controllers not already factory installed. 1. Set field-adjustable, circuit-breaker trip ranges.

3.2 IDENTIFICATION

A Identify field-installed conductors, interconnecting wiring, and components; provide warning signs complying with Division 26 Section "Identification for Electrical Systems."

B. Create a directory to indicate installed circuit loads and incorporating Owner's final room designations. Obtain approval before installing. Use a computer or typewriter to create directory; handwritten directories are not

C. Panelboard Nameplates: Label each panelboard with a nameplate complying with requirements for identification specified in Division 26 Section "Identification for Electrical Systems."

D. Device Nameplates: Label each branch circuit device in distribution panelboards with a nameplate complying with requirements for identification specified in Division 26 Section "identification for Electrical Systems."

END OF SECTION

SECTION 16E - WIRING DEVICES

PART 1 - GENERAL

A. This Section includes the following:
 Receptacles, receptacles with integral GFCI, and associated device plates.

Receptacles, receptacles with integral Grot, and a
 Snap switches.
 Wall—switch and ceiling occupancy sensors.
 pake—through assemblies.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.
 B. Shop Drawings: List of legends and description of materials and process used for premarking wall plates.
 C. Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing label warnings and instruction manuals that include labeling conditions.

1.3 QUALITY ASSURANCE

A. Source Limitations: Obtain each type of wiring device and associated wall plate through one source from a single manufacturer. Insofar as they are available, obtain all wiring devices and associated wall plates from a single B. Electrical Components, Device, and Accessories: Listed and lobeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
C. Comply with NFPA 70.

A. Receptacles for Owner-Furnished Equipment: Match plug configurations.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles:
 Cooper Wiring Devices; a division of Cooper Industries, Inc. (Cooper).
 Hubbell Incorporated; Wiring Device-Heilerns (Hubbel).
 Pass & Seymour/Legrand; Wiring Device & Accessories (Pass & Seymour).

2.2 STRAIGHT BLADE RECEPTACLES

A. Convenience Receptodies, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 configuration 5-20R, and UL 498.

1. Products: Subject to compliance with requirements, provide one of the following:
a. Cooper; 5351 (single), 5352 (duplex),
b. Hubbell; HBL3351 (single), CR5352 (duplex),
c. Pass & Seymour; 5381 (single), 5352 (duplex).

2.3 GCT RECEPTRACES

A. GENERAL DESCRIPTION: STRAIGHT BLADE, FEED—THROUGH TYPE. COMPLY WITH NEMA WD 1, NEMA WD 6, UL 498, AND UL 943, CLASS A, AND INCLIDE INDICATOR LIGHT THAT IS LIGHTED WHEN DEVICE IS TRIPPED.

1. PRODUCTS: SUBJECT TO COMPLIANCE RECEPTACLES, 125 V, 20 A:

1. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:

0. COOPER; GF2.0.

b. PASS & ESPMOUR; 2084.
c. HUBBELL; GFRESOO.

2.4 SNAP SWITCHES

A. COMPLY WITH NEMA WO 1 AND UL 20.

8. SWITCHES, 120/277 V, 20 A:

1. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:

a. COOPER, 2221 (SINGLE FOLE), 2222 (TWO POLE), 2223 (THREE WAY), 2224 (FOUR WAY).

b. HUBBELL; CS1221 (SINGLE FOLE), 2022 (TWO POLE), 2023 (SIZE) (THEE WAY), CS1224 (FOUR WAY).

c. PASS & SEYMOUR; 20AC1 (SINGLE POLE), 20AC2 (TWO POLE), 20AC3 (THREE WAY), 20AC4 (FOUR WAY).

BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCT BY ONE OF THE FOLLOWING:

E FOLLOWING:
LUTRON ELECTRONICS CO., INC.
SENSOR SWITCH, INC.
WATT STOPPER.

WALL SIGNEYER.
 GENERAL REQUIREMENTS FOR SENSORS: WALL, OR CEILING-MOUNTED, SOLID-STATE INDOOR OCCUPANCY SENSORS WITH A SEPARATE POWER PACK.

EXENSIVE WITH A SEMANIE POWER PACK.

I. Listed and lobeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

OFPEATION: Unless otherwise indicated, turn lights on when coverage area is occupied, and turn them off when unoccupied, with a time delay for turning lights off, adjustable over a minimum range of 1 to 15 minutes.

SENSOR OUTPUT: Contacts rated to operate the connected relay, complying with UL 773A. Sensor is powered from the power pack.

powered from the power pack.

4. POWER PACK: Dy contacts rated for 20-A ballast load at 120- and 277-V AC, for 13-A tungsten at 120-V AC, and for 1 HP at 120-V AC. Sensor has 24-V DC, 150-MA, CLASS 2 power source, as defined by NFPA 70.

5. MOUNTING:
a. SENSOR: Suitable for mounting in any position on a standard outlet box.
b. RELAY: Externally mounted through a 1/2-inch knockout in a standard electrical enclosure.
c. TIME-DELAY AND SENSITINY ADJUSTINSTIS: Recessed and conceled behind hinged door.

6. INDICATOR: Digital display, to show when motion is detected during testing and normal operation of sensor.

BYPASS SWITCH: Override the "ON" function in case of sensor failure.

AUTOMATIC LIGHT-LEVEL SENSOR: Adjustable from 2 to 200 FC; Turn lights off when selected lighting

ceiling.

D. ULTRASONIC TYPE: Ceiling mounted; detect occupants in coverage area through pattern changes of reflected

D. ULTRASONIC TYPE: Celling mounted; detect occupants in coverage area through pottern changes of reflected ultrasonic energy.

4. DETECTOR SENSITIVITY: Detect a person of average size and weight moving not less than 12 inches in either a horizontal or a vertical manner at an approximate speed of 12 inches/s.

5. DETECTON COVERAGE (SMALL ROOM): Detect occupancy anywhere within a circular area of 600 sq. ft. when mounted on a 9-inch—high celling.

6. The system of the system

Detection Schollivity. Detect occurrences of 6-inch- minimum movement of any portion of a human body that presents a target of not less than 35 sq. in.sq. cm), and detect a person of overage size and weight moving not less than 12 inches in either a horizontal or a vertical manner at an approximate speed of 12 inches/s. DETECTION COVERAGE (STANDARD ROOM): Detect occupancy anywhere within a circular area of 1000 sq. ft. when mounted on a 96-inch- high ceiling.

2.6 WALL PLATES

A. SINGLE AND COMBINATION TYPES TO MATCH CORRESPONDING WIRING DEVICES.

1. PLATE-SECURING SCREWS: Metal with head color to match plote finish.

2. MATERAL FOR RINISHED SPACES: 5 Smooth, high-impact thermoplastic.

3. MATERAL FOR INNINSHED SPACES: Golvonized steel.

4. MATERAL FOR DAMP LOCATIONS: Cost olimnium with spring-loaded lift cover, and listed and labeled for use in "WET."

2.7 SAFFTY SWITCHES

A. CHARACTERISTICS

INSCRIPTION TO THE TOTAL TYPE 1, 12 OR 3R, AS INDICATED ON DRAWINGS, FABRICATED FROM CODE GAUGE STEEL. FINSH IN GRAY ENAMEL APPLIED BY BAKING PROCESS AFTER STEEL HAS BEEN THOROUGHLY DEGRESSED. NEMA 3R SWITCHES SHALL HAVE 3R RATING CLEARLY DISPLAYED. ALTERED NEMA 12 SWITCHES WILL NOT BE ACCEPTED AS SUBSTITUTE FOR 3R RATING.

2. PROVIDE PROVISIONS FOR THREE (3) PADLOCKS WHEN HANDLE IS IN THE "OFF" POSITION.

3. SWITCHBLADES TO OPEN IN A FORWARD POSITION FOR VISIBLE INDICATION THAT THE SWITCH IS

4. REJECTION TYPE FUSES OF THE SIZE AND VOLTAGE CHARACTERISTICS AS INDICATED. B. APPROVED MANUFACTURERS: SQUARE D. SIEMENS AND GENERAL ELECTRIC.

J. Install clips to secure recessed grid-supported light fixtures in place.

K. Install wall-mounted light fixtures of height as scheduled.

M. Connect recessed fixtures with flexible metallic conduit of approximately 6-feet in length to an accessible junction box above ceiling.

Make wiring connections to branch circuit using building wire with insulation suitable for temperature conditions within light fixture.

conditions within light fixture.

secure to prevent movement.

A. Color: Wiring device catalog numbers in Section Text do not designate device color

Wiring Devices and associated coverplates Connected to Normal Power System: WHITE or As selected by Owner or Architect, unless otherwise indicated or required by NFPA 70 or device listing. Device plate color shall match device Wiring Devices and associated coverplates Connected to Emergency Power System shall be red

PART 3 - EXECUTION

3.1 INSTALLATION

Comply with NECA 1, including the mounting heights listed in that standard, unless otherwise noted.
 Coordination with Other Trades:
 Install device boxes in brick or block walls so that the cover plote does not cross a joint unless the joint is troweled flush with the face of the wall.
 Install wiring devices after all wall preparation, including pointing, is complete.
 Conductors:

Conductors:
 1. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting stronds from stranded wire.
 2. The length of free conductors at outlets for devices shall meet provisions of NFPA 70, Article 300, without pigtalis.

Device Installation:

Replace all devices that have been in temporary use during construction or that show signs that they were installed before building finishing operations were complete.

Keep each wring device in its package or otherwise protected until it is time to connect conductors.

Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.

Connect devices to branch circuits using pigtals that are not less than 6 inches (152 mm) in length.

S. When conductors larger than No. 12 owage installed on 15- or 20-a circuits, splice No. 12 owage pigtals for device

connections.

6. When mounting into metal boxes, remove the fiber or plastic washers used to hold device mounting screws in yokes,

allowing metal—for-metal contact.

E. Controctor solid coordinate exocut location of poke—through with architect and furniture supplier:

F. Receptacle Orientation:

I. install ground pin of vertically mounted receptacles down, and on horizontally mounted receptacles to the right.

C. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.

3.2 FIFLD QUALITY CONTROL

A. TESTS FOR CONVENIENCE RECEPTACLES:
 1. Line voltage: Acceptable range is 105 to 132 V.
 2. Ground impedance: voluse of up to 2 ohms are acceptable.
 3. GFCI trip: Test for tripping values specified in UL 1435 and UL 943.
 4. Using the test pluy, evrify that the device and its outlet box are securely mounted.

SECTION 16G - LIGHTING

PART 1 - GENERAL 1.1 SUMMARY

A. This Section includes the following:
 1. Interior lighting fixtures, lamps, and ballasts.
 2. Exit signs.

1.2 SUBMITTALS

A. Product Data: For each type of lighting fixture, arranged in order of fixture designation. Include data on features, accessories, finishes.
 B. Shop Drawings: Show details of nonstandard or custom lighting fixtures. Indicate dimensions, weights, methods of field assembly, components, features, and accessories.

1.3 QUALITY ASSURANCE A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use. 8. Comply with NFPA 70.

PART 2 - PRODUCTS A. In Interior Lighting Fixture Schedule where titles below are column or row headings that introduce lists, the following requirements apply to product selection:

I. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2.2 LIGHTING FIXTURES AND COMPONENTS, GENERAL REQUIREMENTS A Recessed fixtures: Comply with NEMA LE for ceiling compatibility for recessed fixtures.

B. Fluorescent Fixtures: Comply with NEMA LE for ceiling compatibility for recessed fixtures.

B. Fluorescent Fixtures: Comply with UL 1598. Where LER is specified, test according to NEMA LE 5 and NEMA LE 5 as applicable.

C. Sheet Metal Components: Steel, unless otherwise indicated. Form and support to prevent warping and sagging.

D. Doors, Fromes, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and other components from failing accidentally during relamping and when secured in operating position.

1. White Surfaces: 85 percent.

2. Speculor Surfaces: 85 percent.

3. Diffusing Specular Surfaces: 75 percent.

4. Laminated Sirver Metalized Film: 90 percent.

2.4 EXIT SIGNS A. Internally Lighted Signs: Comply with UL 924; for sign colors, visibility, luminance, and lettering size, comply with authorities having jurisdiction.

1. Lamps for AC Operation: LEDs. 70,000 hours minimum rated lamp life.

2.5 LAMPS

A. Approved Manufacturers:
 1. Osram Sylvania.
 2. Philips.
 3. General Electric.
 B. T8 Rajal-Start low-mercury Fluorescent Lamps: Rated 32 W maximum, nominal length 48 inches, 2800 initial lumens (minimum), CRI 82 (minimum), color temperature 3500 K, and average rated life 20,000 hours, unless otherwise indicated.

2.6 LIGHTING FIXTURE SUPPORT COMPONENTS

A. Single-Stem Hangers: 1/2-inch steel tubing with swivel ball fittings and ceiling canopy. Finish same as fixture.

re. —Stem Hangers: Two, 1/2—inch steel tubes with single canopy designed to mount a single fixture. Finish e as fixture. same as fixture.

C. Wires: ASTM A 641/A 641M, Class 3, soft temper, zinc-coated steel, 12 gage.

D. Rod Hangers: 3/16-inch minimum diameter, cadmium-plated, threaded steel roc

PART 3 - EXECUTION

3.1 INSTALLATION

A. All equipment, wirring and installation shall be in accordance with the National Electrical Code, applicable local codes, and accepted industry standard of care and practice, and shall be thermally protected where necessing and shall not void any U.I. listings or lobels. This shall include the integration of lighting equipment and

controls.

B. Install light fixtures and equipment at locations and heights as indicated, in accordance with fixture

B. Install light fixtures and equipment at locations and helights as indicated, in accordance with fixture manufacturer's written instructions and recommendations, applicable requirements of NCC, NCCA's "Standard of Installation", NEMA standards, and with recognized industry practices to ensure that light fixtures furfill requirements.

C. Set light fixtures level, plumb and square with ceiling and walls.
D. Secure all fixtures to structural support members of building. Provide all steel supports necessary for lighting D. Secure all fixtures to structural support members of building. Provide all steel supports necessary for lighting E. Support surface mounted light fixtures independent of ceiling framing.

E. Support surface mounted light fixtures greater than 2 feet in length at a point in addition to the outlet box fixture stud.

E. Exposed Grid Ceilings: Support surface—mounted light fixtures on grid ceiling directly from building structure.

H. Fluorescent light fixtures installed in lay-in ceilings shall be supported by additional wire support at two corners attached to being grid. and anchored to structural members. This additional wire support shall be the order of the corners attached to being grid. and anchored to structural members. This additional wire support shall be the fixtures into the corners attached to being grid. And anchored to structural members. This additional wire support shall be the fixed into the corners attached to selling fixed parts and selections and firestopping materials to meet regulatory requirements for fire rating.

Humana

u. misual surroce-mounted exit signs plumb and adjust to align with building lines and with each other, secure to prevent movement, install with dampers closed and ready for adjustment.

Air-handling lighting fixtures: install with dampers closed and ready for adjustment.

Light fixture whips shall be supported from the building structure. Do not clip to lay-in ceiling support

A. Inspect each installed fixture for damage. Replace damaged fixtures and components.

B. Operate each light fixture noting failed ballosts at substantial completion.

C. Reballost light fixtures having failed ballosts at substantial completion.

D. Relamp light fixtures and exit signs having failed alongs or which are observed to be noticeably dimmed, as judged by architect or engineer, at substantial completion.

E. Test for emergency lighting: Interrupt power supply to demonstrate proper operation. Verify transfer from normal power to battery and retransfer to normal.

3.2 FIELD QUALITY CONTROL

FND OF SECTION

Humana Memphis, TN MarketPoint

6515 Poplar Avenue Suites 107&108 Memphis, TN 38119

Prepared for Humana, Inc.

Contract No: 13.01656.00



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MEP Engineer

1534 Ormsby Station Ct. Louisville KY 40223 502.426.9457

Key Plan

2014.02.03 Revision Description Drawn by ND Reviewed by

> SPECIFICATIONS SHEET 7 OF 7

> Project No 2013-6741

∠ ELECTRICAL

 \overline{S}

Original drawing is 36 x 24 Do not scale

PLUMBING FIXTURE/EQUIPMENT SCHEDULE

- ALL VITREOUS FIXTURES SHALL BE BEST QUALITY, REGULAR SELECTION, VITREOUS CHINA THOROUGHLY FUSED AND VITRIFIED, PRODUCING A MATERIAL WHICH WHEN FRACTURED SHALL SHOW A HOMOGENEOUS MASS WITH CLOSE GRAIN AND FREEDOM FROM PORES. ALL SURFACES COMING IN CONTACT WITH WALLS, FLOORS OR SURFACES OF OTHER FIXTURES SHALL BE REASONABLY FLAT. ALL FIXTURES REQUIRING BOTH HOT AND COLD WATER SHALL HAVE THE COLD WATER FAUCET ON THE RIGHT—HAND SIDE OF THE FIXTURE AND THE HOT WATER FAUCET ON THE LEFT—HAND SIDE OF THE FIXTURE AND THE HOT WATER FAUCET ON THE FIXTURE AND THE PROPERTY OF THE FIXTURE AND

1/2"

1-1/2

1/2"

CHROME PLATED CASTING WITH CHROME PLATED VACUUM BREAKER, POLISHED CHROME LOOSE KEY HANDLE, 1/2" FPT INLET SIZE WITH STANDARD GARDEN HOSE THREADS

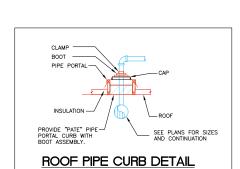
24"X24"X10" MOLDED STONE FIAT, 830-AA FAUCET WITH VACUUM BREAKER, PAIL HOOK.

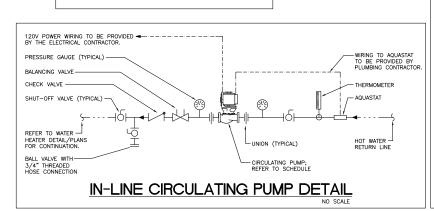
FIAT, MSB2424

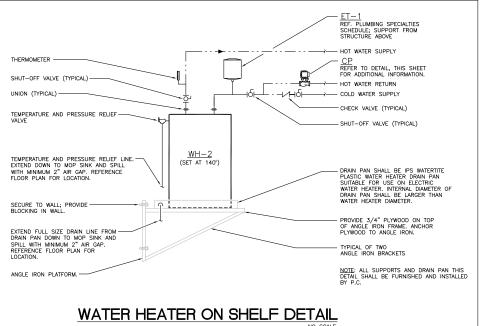
HOSE BIBE

- THE FIXTURE.
 ALL FIXTURES SHALL BE SECURELY SUPPORTED SO THAT NO STRAIN IS PLACED ON THE CONNECTED PIPING.
 PROVIDE FIXTURES COMPLETE WITH SOIL, WASTE AND VENT CONNECTIONS, FAUCETS, TRAPS, HOT AND COLD WATER SUPPLIES, HANGERS, CARRIERS, BRACKETS AND OTHER WORK NECESSARY TO MAKE
 COMPLETE INSTALLATION.
 MINIMUM TRAP SIZE FOR ALL LAVATORIES AND SINKS SHALL BE 1-1/2".
 ALL HANDICAP TYPE FIXTURES SHALL COMPLY WITH THE AMERICAN DISABILITIES ACT.
 NOTE TO PLUMBING CONTRACTOR: COORDINATE SINKS WITH COUNTERTOP CONSTRUCTION. ADVISE GENERAL CONTRACTOR THAT BACK SPLASH MUST REST ON TOP OF COUNTER TOP AND NOT BE BUTTED
 TO IT.
- FIXTURE SCHEDULE WHERE ZURN FIXTURES ARE SPECIFIED, FIXTURES BY KOHLER, AMERICAN STANDARD OR SLOAN WILL BE ACCEPTABLE, PROVIDED THEY ARE FOUND. IN ALL RESPECTS.

PLUMBING SPECIALTIES							
DESIGNATION	MANUFACTURER AND MODEL	TYPE	MATERIAL	MOUNTING	REMARKS		
IV	POWERS, E480	TEMPERING VALVE	BRONZE	WALL	PROVIDE WITH WALL MOUNTING BRACKET. LEAD FREE COMPLIANT.		
IMC	WATER-TITE, 9700	ICE MAKER OUTLET BOX	PLASTIC	WALL	PROVIDE WITH QUARTER TURN BALL VALVE AT OUTLET; PROVIDE METAL BOX WHERE LOCATED IN FIRE RATED WALL. BOX TO BE CONCEALED BEHIND REFRIGERATOR.		
CMC	IPS CORP., FR-12	COFFEE MAKER OUTLET BOX	METAL BOX, WITH 1/2" SWEAT CONNECTION AND 1/4 TURN BALL VALVE	WALL	BOX TO BE LOCATED ABOVE TOP EDGE OF COUNTER TOP; VERIFY WITH OWNER/ARCHITECT PRIOR TO INSTALLATION.		
FD	ZURN, ZN-415B	3" CAST IRON FLOOR DRAIN	3" CONNECTION, 6" DIA. TYPE "B" NICKLE BRONZE STRAINER	FLOOR			
ET-1.	AMTROL, ST-5	EXPANSION TANK	-	PIPE	2.0 GALLON CAPACITY; SUPPORT FROM STRUCTURE		
CP-1	TACO, 003	CIRCULATING PUMP	BRONZE	PIPE	115V, 1/40HP, 1 PHASE 2 GPM AT 4 FFFT HEAD		







GENERAL PLUMBING NOTES

- THE PLUMBING CONTRACTOR SHALL MAKE CONTACT WITH ALL APPLICABLE LOCAL UTILITY COMPANIES FOR ACTUAL LOCATION OF CONNECTION POINTS AND INCLUDE ALL FEES, PERMITS, ETC. IN BID PRICE.
- B. THE PLUMBING CONTRACTOR SHALL DETERMINE NECESSARY INVERT ELEVATIONS FOR PROPER DRAINAGE AND CONNECTION INTO SEWERS. ALL INVERT ELEVATIONS SHALL BE SET PRIOR TO INSTALLATION.
- C. THE PLUMBING CONTRACTOR SHALL PROVIDE ALL ITEMS, ARTICLES AND MATERIALS AS REQUIRED, INCLUDING ALL LABOR AND INCIDENTALS NECESSARY FOR A COMPLETE PLUMBING INSTALLATION.
- D. THE PLUMBING CONTRACTOR SHALL CLEAN ALL FIXTURES, POLISH ALL METAL PARTS, CHECK AND ADJUST ALL FITTINGS, FAUCETS AND VALVES. ALL OPERATING INSTRUCTIONS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR FOR PRESENTATION TO THE OWNER.
- E. UNLESS OTHERWISE NOTED, ALL PIPING INCLUDING NATURAL GAS, SOIL, WASTE AND VENT, COLD AND HOT WATER SHALL BE CONCEALED WITHIN THE BUILDING STRUCTURE. NATURAL GAS PIPING SHALL NOT BE ROUTED BELOW CONCRETE SLAB ON GRADE WITHIN BUILDINGS.
- . ALL PIPING PASSING THROUGH FIRE RATED OR FIRE AND SMOKE RATED ASSEMBLIES SHALL BE SLEEVED AND FIRE STOPPED. FIRESTOPPING SHALL COMPLY WITH U.L. LISTING AND REQUIREMENTS FOR ASSEMBLY TYPE BEING PENETRATED.
- G. PLUMBING CONTRACTOR SHALL NOT CORE DRILL OR DISTURB ANY STRUCTURAL MEMBERS WITHOUT WRITTEN AUTHORIZATION BY THE ARCHITECT AND/OR STRUCTURAL ENGINEER.
- H. PLUMBING CONTRACTOR SHALL COORDINATE PIPING LOCATIONS AND ROUTING WITH THE FIRE PROTECTION PIPING, HVAC DUCTWORK AND ELECTRICAL CONDUIT INSTALLATIONS. PLUMBING CONTRACTOR SHALL REVIEW THE ARCHITECTURAL DRAWINGS TO ESTABLISH WHERE FURR-DOWNS AND SOFFITS OCCUR AND DIMENSIONS OF SAME SO THAT DISTANCES AND PIPE ROUTING CAN BE PROPERLY COORDINATED. ALL PIPING SHALL BE ROUTED IN A CONCEALED MANNER.
- . ALL ADA ACCESSIBLE LAVATORIES AND SINKS WITH EXPOSED WATER AND DRAIN PIPES SHALL BE INSULATED TO PROTECT AGAINST CONTACT PER ADA REQUIREMENTS. THERE SHALL BE NO SHARP OR ABRASIVE SUFFACES.
- . PLUMBING CONTRACTOR SHALL SEAL ALL EXTERIOR WALL AND FOUNDATION PENETRATIONS IN WATER-TIGHT MANNER. CUTTING FOR INSTALLATION SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND ARCHITECT PRIOR TO COMMENCING WORK.
- . LOCATE AND INSTALL WATER HAMMER ARRESTERS PER PLUMBING AND DRAINAGE INSTITUTE STANDARD POI-WH 201 FOR ALL FLUSH VALVE FIXTURES WHETHER SHOWN OR NOT ON THE DRAWINGS. PROVIDE ARRESTORS AT ALL EQUIPMENT WHICH HAVE QUICK CLOSING VALVES, INCLUDING COMMERCIAL WASHERS AND DISHWASHERS. ARRESTORS SHALL BE EQUAL TO ZURN Z-1700 AND SHALL BE READLY ACCESSIBLE FOR SERVICING.
- M. PLASTIC PIPING SHALL NOT BE INSTALLED IN A RETURN AIR PLENUM. COORDINATE PLENUM LOCATIONS WITH THE HVAC CONTRACTOR PRIOR TO SUBMITTING BID.
- N. WHERE USED, THE TERM "PROVIDE" SHALL MEAN TO "FURNISH AND INSTALL".
- O. ALL PLUMBING WORK SHALL BE INSTALLED IN COMPLIANCE WITH ALL STATE AND LOCAL CODES.
- P. PLUMBING VENT THROUGH ROOF LOCATIONS SHALL BE COORDINATED WITH THE HVAC COUTRACTOR. CLEARANCES TO OUTSIDE AIR INTAKES AND HVAC EQUIPMENT SHALL BE MAINTAINED PER ALL STATE, LOCAL AND HEALTH CARE REGULATIONS.
- Q. ALL WATER CLOSET FLUSHING MECHANISMS ON HANDICAP WATER CLOSETS SHALL BE INSTALLED ON THE "WIDE SIDE" OF EACH WATER CLOSET TO MAINTAIN ADA ACCESSIBILITY.
- S. WHERE APPLICABLE, THE EXISTING CONDITIONS INDICATED ON THESE PLANS SHALL BE VERRIED IN THE FIELD FOR EXACT LOCATIONS, QUANTITY AND PIPE SIZES. ANY DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER/ARCHITECT.
- PROVIDE GAS PIPING COMPLETE WITH ALL REQUIRED FITTINGS, STRAPS HANGERS SUPPORTS, SHUT-OFF VALVES, ETC. OBTAIN ALL REQUIRED INSPECTIONS AND APPROVALS. WHERE GAS PIPING CONNECTS TO EQUIPMENT, IT SHALL BE PROVIDED WITH A SEDIMENT LES THE FULL SIZE OF THE SUPPLY PIPE, A 100% SHUT OFF GAS COCK AND UNION. ALL GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL AND SHALL BE STALLED IN ACCORDANCE WITH THE LATEST BASED OF THE SUPPLY PIPE, A 100% STRAIL BE STATE OR LOCAL CODES. THE APPLICABLE STATE OR LOCAL CODES. THE PLUMBING CONTRACTOR.
- U. ALL PLUMBING COMPONENTS THAT ARE INSTALLED BY THE PLUMBING CONTRACTOR, TO CONVEY OR DISPENSE POTABLE WATER, SHALL BE IN COMPLIANCE WITH FEDERAL AND STATE REGULATIONS WHICH REQULATE LEAD FREE INSTALLATIONS. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST AND REPLACEMENT OF ANY NON-CONPLIANT COMPONENTS AND/OR PRODUCTS.

NOTE:
THE SUBCONTRACTORS SHALL COORDINATE WITH THE GENERAL CONTRACTOR
ANY WORK THAT WILL BE REQUIRED TO BE DONE AFTER NORMAL WORKING
HOURS PRIOR TO SUBMITTING BID.

<u>NOTE:</u>
VERIFY AND COORDINATE ALL EXISTING CONDITIONS OF BUILDING IN FIELD PRIOR TO BEGINNING ANY WORK. PC SHALL COORDINATE THIS WORK WITH GC.

OWNER PROJECT REQUIREMENT:

 EXISTING PLUMBING, FIRE PROTECTION, ELECTRICAL AND H.V.A.C. SHALL BE RENOVATED TO ACCOMMODATE HUMANA'S DESIGN SPECIFICATION

- PROVIDE WASTE, VENT, AND WATER CONNECTIONS FOR NEW FIXTURES. EXTEND AND CONNECT TO EXISTING.
- · REWORK SPRINKLER HEADS AND PIPING TO ACCOMMODATE NEW CEILING LAYOUT.

CODE REFERENCE:

- 2009 INTERNATIONAL PLUMBING CODE WITH LOCAL AMENDMENTS (2012 MEMPHIS AND SHELBY COUNTY PLUMBING CODE)
 2009 INTERNATIONAL BUILDING CODE WITH LOCAL AMENDMENTS (2012 MEMPHIS AND SHELBY COUNTY EXISTING BUILDING CODE)
 2009 INTERNATIONAL EXISTING BUILDING CODE WITH LOCAL AMENDMENTS (2012 MEMPHIS AND SHELBY COUNTY BUILDING CODE)
 2002 NFPA 13 SPRINKLER SYSTEMS

Humana

Humana Memphis, TN MarketPoint

6515 Poplar Avenue Suites 107&108 Memphis, TN 38119

Prepared for Humana, Inc.

Contract No: 13.01656.00



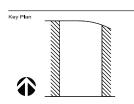
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KERR-GREULICH

MEP Engineer

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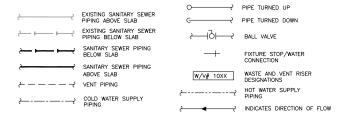


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PLUMBING SYMBOLS LEGEND



ABBREVIATION LEGEND

CMC	_	COFFEE MAKER CONNECTION	NIC	_	NOT IN CONTRACT
CW	_	COLD WATER	PC	_	PLUMBING CONTRACTOR
EX	_	EXISTING	RAC	_	ROUTE ABOVE CEILING
FD	_	FLOOR DRAIN	RAF	_	ROUTE ABOVE FLOOR
FPC	_	FIRE PROTECTION CONTRACTOR	S	_	SINK
HB	_	HOSE BIBB	TP	_	TRAP PRIMER
HC	_	HANDICAP WATER CLOSET	TV	_	TEMPERING VALVE
HL	_	HANDICAP LAVATORY			
HD	_	HUB DRAIN	TYP	_	TYPICAL
HW	_	HOT WATER	WH	_	WATER HEATER
IMC	_	ICE MAKER CONNECTION			

WASTE & VENT RISER DIAGRAM 1001

REPRESENTS EXISTING PIPING REPRESENTS NEW PIPING

GENERAL FIRE PROTECTION NOTES

- A. WHERE PIPING PASSES THRU WALLS BELOW GRADE CONTRACTOR SHALL PROVIDE PIPE SLEEVE AND SEAL PENETRATION WATER—TIGHT.
- B. CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE FIRE PROTECTION SYSTEM TO PROVIDE COVERAGE FOR THE ENTIRE PREMISES. INCLUDE ALL PIPING AND ACCESSORIES PER THE REQUIREMENTS OF ALL APPLICABLE CODES, NFPA-13, NFPA-14, NFPA 25 AND OWNER'S FIRE AND CASUALTY INSURER IF APPLICABLE.
- C. CONTRACTOR SHALL COORDINATE FIRE PROTECTION PIPING ROUTING SO AS NOT TO INTERFERE WITH OTHER TRADES, NEW CEILINGS OR STRUCTURE.
- D. FIRE PROTECTION PIPING SYSTEMS SHALL BE FLUSHED, TESTED AND INSPECTED IN ACCORDANCE WITH NFPA 13 AND NFPA 25. DEMONSTRATE THAT ALL PARTS ARE WORKING PROPERLY.
- FIRE PROTECTION PIPING, ABOVE GROUND AND INSIDE BUILDING, SHALL BE STEEL, NEW, CONFORMING TO NFPA SPECIFICATIONS, AND HAVE THE MANUFACTURER'S NAME OR BRAND ALONG WITH THE PIPE APPLICABLE ASTM STANDARD MARKED ON EACH LENGTH OF PIPE. REFER TO SPECIFICATIONS FOR PIPE SCHEDULE.
- G. DRAINS, DRAIN VALVES, FLUSHING CONNECTIONS, TEST CONNECTIONS, GAUGES, GUARDS, SHIELDS, AND SIMILAR ITEMS NECESSARY TO COMPLY WITH APPLICABLE CODES, STANDARDS AND/OR NFPA-13 SHALL BE FURNISHED AND INSTALLED.
- WHERE LAY-IN ACOUSTICAL TILE CEILINGS OCCUR, SPRINKLER HEADS SHALL BE CENTERED IN CEILING TILES (QUARTER POINTED IN FOUR (4) FOOT DIMENSION WHERE APPLICABLE), SYMMETRICAL WITH MECHANICAL, ELECTRICAL AND ALL OTHER BUILDING COMPONENTS.
- WHERE REQUIRED BY LOCAL AND STATE CODES, CONTRACTOR SHALL FURNISH AND INSTALL DEFLECTOR SHIELD ON SPRINKLER HEADS ADJACENT TO ELECTRIC PANELS, TELEPHONE BOARDS AND ELECTRICAL EQUIPMENT.
- K. PRIOR TO INSTALLATION, CONTRACTOR SHALL SUBMIT PRINTS OF FIRE PROTECTION DESIGN TO OWNERS FIRE AND CASUALTY INSURER FOR APPROVAL. CONTRACTOR SHALL OBTAIN ALL APPROVALS FROM APPLICABLE STATE AND LOCAL AUTHORITES. CONTRACTOR SHALL ALSO SUBMIT FIRE PROTECTION DESIGN TO ARCHITECT AND ENGINEER FOR REVIEW.
- L. UPON COMPLETION OF ALL FIRE PROTECTION SYSTEMS TESTS, CONTRACTOR SHALL SUBMIT A WRITTEN CERTIFICATE FROM THE UNDERWRITER STATING THE FIRE PROTECTION SYSTEMS WERE INSPECTED AND APPROVED.
- M. ALL PIPING SHALL BE CONCEALED, WHERE APPLICABLE AND PITCHED FOR POSITIVE DRAINAGE.
- N. COORDINATE SPRINKLER HEAD PLACEMENT WITH LIGHTS AND DIFFUSERS. WHEN SUBMITTING SHOP DRAWINGS OF LAYOUT, LOCATE EACH SPRINKLER HEAD SO AS NOT TO CONFLICT WITH LIGHTS OR DIFFUSERS.
- O. SPRINKLER CONTRACTOR SHALL INCLUDE NECESSARY ARCHITECTURAL ACCESS DOORS WITH APPROPRIATE FIRE RATING AND SHALL MATCH ARCHITECTURAL FINISH WHERE NECESSARY ACCESS DOORS SHALL BE INDICATED ON SHOP DRAWINGS.
- P. CONTRACTOR SHALL REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION OF DEVICES THAT MAY INTERFERE WITH SPRINKLER INSTALLATION.
- Q. CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL DRAWINGS FOR AREAS WITH ATTICS AND UNINSULATED SPACES.
- R. PIPING PASSING THROUGH FIRE RATED SURFACES SHALL BE PROVIDED WITH SCHEDULE 40 CARBON STEEL SLEEVES FIRESTOPPED WITH FIRE SEALANT APPROVED BY AUTHORITY HAVING JURISDICTION FOR ASSEMBLY BEING PENETRATED.
- S. NO PIPING SHALL BE ROUTED DIRECTLY BELOW ROOF/ATTIC ACCESS DOORS. REFERENCE ARCHITECTURAL DRAWINGS FOR ROOF/ATTIC ACCESS DOORS.
- WHERE SIDEWALL SPRINKLER HEADS ARE INSTALLED THRU WALL/SOFFIT, CONTRACTOR SHALL INSTALL ESCUTCHEON PLATES FLUSH WITH WALL/SOFFIT.
- U. REFER TO ELECTRICAL DRAWINGS FOR LOCATION OF ALL ELECTRICAL PANELS, DISCONNECT SWITCHES AND TRANSFORMERS; DO NOT ROUTE FIRE PROTECTION PIPING ACROSS THE TOP OF SAME.
- V. ALL CEILING CAVITIES WITH COMBUSTIBLE CONSTRUCTION MATERIALS SHALL BE PROVIDED WITH SPRINKLER COVERAGE WHERE REQUIRED BY NFPA-13, STATE AND LOCAL CODES.
- W. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL FIRE RATED WALL AND CEILING INFORMATION.

SPRINKLER HEAD SCHEDULE

OF THE TREE OF	<u> </u>
DESCRIPTION	REMARKS
WHITE SEMI-RECESSED TYPE SPRINKLER HEADS	THROUGHOUT ALL SPACES WITH CEILINGS

- SPRINKLER HEAD STYLE SHALL BE AS INDICATED OR AS REQUIRED BY THE APPLICATION. UNLESS NOTED OR INDICATED OTHERWISE, PROVIDE WHITE FINISH IN PUBLIC AREAS AND BRASS FINISH IN NON-PUBLIC AREAS.
- PROVIDE EXTENDED COVERAGE (EC) TYPE SPRINKLER HEADS WHERE REQUIRED BY THE APPLICATION.
- PROVIDE ESCUTCHEONS FOR ALL SPRINKLER HEADS OR PIPING WHERE SAME PENETRATES WALL AND/OR CEILING. PROVIDE WHITE FINISH IN PUBLIC AREAS AND CHROME FINISH IN NON-PUBLIC AREAS.
- 4. CONTRACTOR SHALL CONFIRM SPRINKLER HEAD FINISH WITH ARCHITECT PRIOR TO PLACING ORDER.
- CENTER SPRINKLER HEADS IN TWO DIRECTIONS WHERE LOCATED IN LAY—IN 2^*-0^* X 2^*-0^* ACOUSTICAL TILE CEILINGS. FOR 2^*-0^* X 2^4-0^* ACOUSTICAL TILES, CENTER SPRINKLER HEADS IN TWO (2) FOOT DIMENSION AND AT QUARTER POINTS AND/OR CENTER IN FOUR (4) FOOT DIMENSION.
- 6. CONFIRM COLORS OF COVERS FOR ALL CONCEALED SPRINKLER HEADS WITH ARCHITECT PRIOR TO PLACING ORDER.

NOTE: THERE IS A SIGNIFICANT AMOUNT OF LIGHTING, DIFFUSER LAYOUT AND CEILING ADJUSTMENTS WITHIN THE NEW CEILING GRID. FP CONTRACTOR SHALL FIELD VERIET AND COORDINATE ALL NEW AND EXISTING LOCATIONS PRIOR TO INSTALLATION AND LAYOUT OF NEW SPRINKLER HEADS AND PIPING.

 ${\color{red} {\rm NOTE:}}\ {\color{blue} {\rm ALL}}$ NEW SPRINKLER PIPING SHALL BE GALVANIZED IRON PIPE AND FITTINGS.

Humana

Humana Memphis, TN MarketPoint

6515 Poplar Avenue Suites 107&108 Memphis, TN 38119

Prepared for Humana, Inc.

Contract No: 13.01656.00



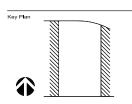
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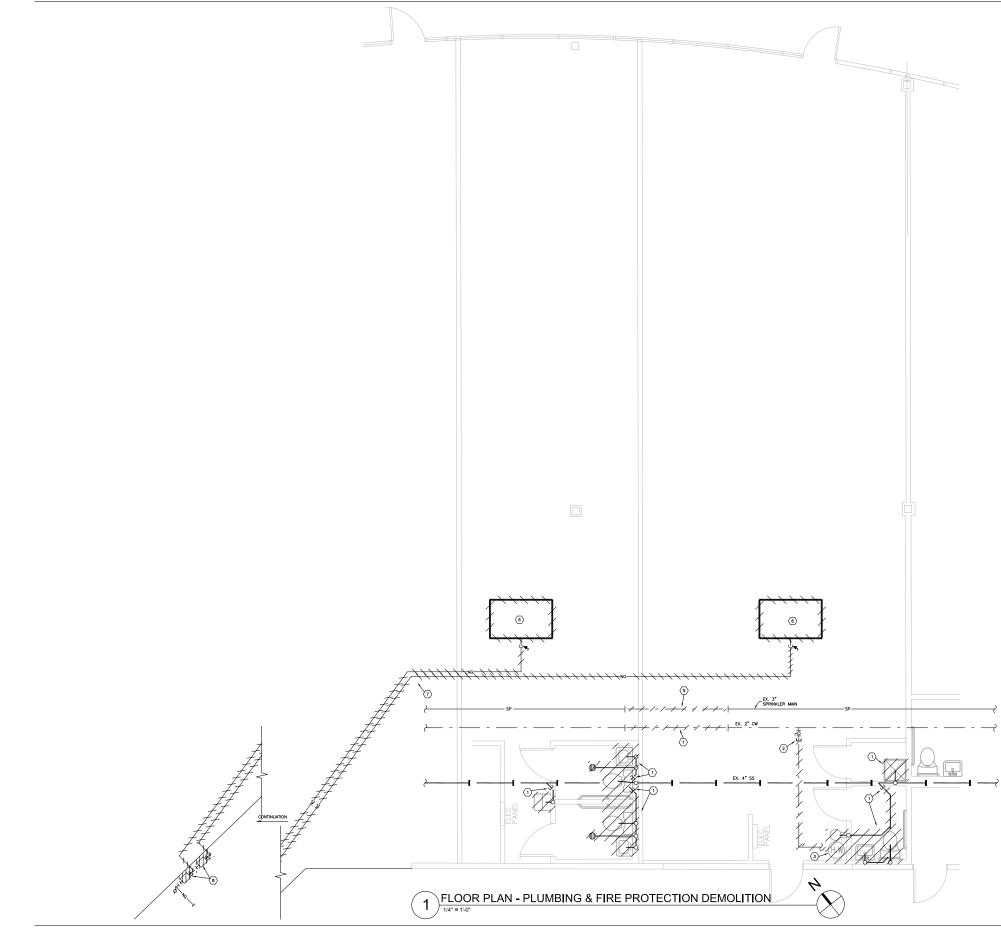
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1	SSUE FOR PERM	IT AND BID	2014.02.03
No.	Revision Descri	ption	YYYY-MM-DD
Drawn by	, JM	Reviewed by	BG/SS
Project N	0 2013-674	1	

SHEET 2 OF 7

Original drawing is 36 x 24 Do not scale or

FIRE PROTECTION NOTES, DETAILS & RISERS

PFP002



GENERAL DEMOLITION NOTES

- A. WHERE PIPING, DUCTWORK, ETC. IS SHOWN TO BE REMOVED, IT APPLIES ONLY TO LINES SERVING FIXTURES, SUPPLIES, RETURNS, OUTLETS, EQUIPHENT, ETC. WHICH ARE TO BE REMOVED. DO NOT DISCONNECT ANY MAINS OR BRANCH LINES SERVING ITEMS WHICH ARE TO REMAIN.
- B. CARE SHOULD BE TAKEN BY ALL CONTRACTORS TO AVOID DAMAGING OR DISTURBING EXISTING CONSTRUCTION WHICH IS INDICATED TO REMAIN. CONTRACTORS SHALL BE RESPONSIBLE FOR MAKING ANY REPARIS. NECESSARY TO RECTIFY DAMAGE AND RESTORE EXISTING CONSTRUCTION TO UNDAMAGED STATE UPON COMPLETION OF WORK AT NO EXPENSE TO THE OWNER.
- C. ALL CONTRACTORS SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL ARCHITECTURAL DRAWINGS AND DETAILS PRIOR TO BEGINNING CONSTRUCTION FOR COORDINATION OF ALL DEMOLITION WORK FOR EACH RESPECTIVE TRADE.
- D. PRIOR TO BEGINNING DEMOLITION WORK, EACH TRADE SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AS REQUIRED BY LOCAL AND STATE AUTHORITIES, CODES AND ORDINANCES.
- E. ALL CONTRACTORS SHALL REFER TO NEW CONSTRUCTION DRAWINGS AND SPECIFICATIONS PRIOR TO BEGINNING DEMOLITION WORK FOR COORDINATION WITH SAME.
- F. UNLESS NOTED OTHERWISE, SHOWN OR SPECIFIED, ALL MATERIALS AND EQUIPMENT REMOVED OR DEMOLISHED (EXCEPT THAT WHICH IS TO BE SALVAGED OR RELOCATED) AS DIRECTED BY DRAWINGS AND SPECIFICATIONS, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LEGALLY DISPOSED OF.
- G. ALL PIPING, ETC. WHICH IS REQUIRED TO BE CUT SHALL BE CUT FLUSH WITH FINISHED FLOORS/WALLS. ALL CUTTING AND PATCHING OF EXISTING FLOORS/WALLS SHALL BE BY EACH CONTRACTOR.
- H. CONTRACTOR SHALL GIVE A MINIMUM NOTICE OF 48 HOURS TO GENERAL CONTRACTOR AND OWNER PRIOR TO SHUT-DOWN OF ANY EXISTING UTILITIES, PIPING SYSTEMS, ETC.
- I. CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING BID TO CONFIRM EXISTING CONDITIONS INDICATED. CONTRACTOR SHALL INCLUDE ALL REQUIRED DEMOLITION.

○ PLUMBING KEY NOTES:

- 1. HATCHING INDICATES EXISTING PLUMBING FIXTURES AND ALL RELATED PIPING SHALL BE REMOVED COMPLETE. CAP WASTE LINES BELOW FLOOR AT APPROXIMATE LOCATION INDICATED. VENT LINES SHALL BE CAPPED ABOVE CELING IN A CONCEALED MANNER. EXISTING FIXTURES SHALL BE TUNNED OVER TO THE OWNER.
- 3. HATCHING INDICATES EXISTING WATER HEATER AND ALL HOT WATER PIPING FEEDING FIXTURES SHALL BE REMOVED COMPLETE.
- 4. HATCHING INDICATES THIS PORTION OF COLD WATER MAIN ABOVE CEILING TO BE REMOVED. REFER TO NEW PLAN FOR NEW CONNECTION.
- 5. HATCHING INDICATES THIS PORTION OF SPRINKLER MAIN ABOVE CEILING TO BE REMOVED. REFER TO NEW PLAN FOR NEW CONNECTION.
- HATCHING INDICATES EXISTING ROOF TOP UNITS TO BE REMOVED. REFER TO MECHANICAL PLANS FOR INFORMATION. ANY CONNECTING GAS PIPING, VALVES. UNIONS, ETC. SHALL BE REMOVED COMPLETE.
- 7. HATCHING INDICATES EXISTING GAS PIPING ON ROOF TO BE REMOVED.
- HATCHING INDICATES EXISTING GAS METERS TO BE REMOVED AND CAPPED AT EXISTING GAS HEADER PER LOCAL GAS COMPANY REQUIREMENTS.

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Contract No. 13.01656.00



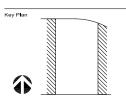
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% & FIRE PROTECTION DEMOLITION
SHEET 2 OF 6

FLOOR PLAN - PLUMBING

5 STIELE 2019 to 101 scale contents of this drawing Sheet Number PFP101 PFP101

OFIRE PROTECTION KEY NOTES:

THE FIRE PROTECTION CONTRACTOR SHALL MAKE ALL NECESSARY MODIFICATIONS REQUIRED TO PROVIDE 100% COVERAGE OF NEW REMOVATED SPACE. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWNIGS FOR LOCATIONS OF LIGHTS, DIFFUSERS, GRILLES. ETC. THE FIRE PROTECTION CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES.

OPLUMBING KEY NOTES:

- CONNECT NEW 3" WASTE LINE TO EXISTING WASTE LINE BELOW FLOOR. CUT AND PATCH FLOOR AS REQUIRED. VERIFY EXACT LOCATION ON SITE
- EXTEND CONNECT NEW 3" VENT LINE TO EXISTING VENT LINE ABOVE CEILING OR EXTEND THROUGH ROOF USING EXISTING ROOF PENETRATION. VERIFY EXACT LOCATION ON SITE.
- CONNECT NEW 1" COLD WATER LINE TO EXISTING COLD WATER LINE ABOVE CEILING. PROVIDE AND LABEL MAIN SHUT OFF VALVE ABOVE ACCESSIBLE CEILING. VERIFY EXACT LOCATION ON SITE.
- 4. CONNECT NEW WATER LINE TO EXISTING WATER LINE AT APPROXIMATELY THIS LOCATION ABOVE CEILING.
- CONNECT NEW SPRINKLER MAIN TO EXISTING SPRINKLER MAIN AT APPROXIMATELY THIS LOCATION ABOVE CEILING.
- EXTEND 3/4" HOT AND COLD WATER LINES DOWN IN WALL AND CONNECT TO FIXTURES.
- EXTEND 1" COLD WATER AND 1/2" HOT WATER LINES DOWN IN WALL AND CONNECT TO FIXTURES IN RESTROOMS.
- CONNECT 1/2" COLD WATER LINE IMC AND CMC AND CONNECT. PC SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER PRIOR TO INSTALLATION.
- 9. PC SHALL PROVIDE NEW EVERPURE A-11 WITH OPAQUE HOUSING MODEL #EV9100-02 OR EQUAL IN WATER LINE TO SINK, ICE MAKER CONNECTIONS AND COFFEE MAKER CONNECTIONS. LOCATE BELOW SINK IN BASE CABINET.
- 10. PROVIDE ELECTRIC WATER HEATER ON SHELF ABOVE MOP SINK. EXTEND DRAIN LINE TO MOP SINK AND SPILL. REFER TO DETAIL.
- 11. EXTEND 3/4" HOT AND COLD WATER LINES DOWN IN INTERIOR WALL TO MOP SINK AND CONNECT. PROVIDE SHUT-OFF VALVES ABOVE ACCESSIBLE CEILING.
- 12. DROP WASTE LINE DOWN IN WALL TO BELOW FLOOR
- 13. PROVIDE SHUT-OFF VALVES ABOVE ACCESSIBLE CEILING. (TYPICAL)
- 14. 1/2" COLD WATER LINE DOWN IN WALL TO ELECTRIC WATER COOLER.
- 15. INSTALL NEW GAS METER, VALVES, ETC. AT EXISTING GAS HEADER PER LOCAL GAS COMPANY REQUIREMENTS.
- 16. 1–1/2" GAS LINE UP ON WALL TO ROOF TOP. SECURE TO WALL WITH STAND OFF BRACKETS.
- 17. PROVIDE A 1-1/4" GAS CONNECTION TO ROOF TOP UNIT. PROVIDE GAS VALVE, UNION AND MIN. 6" DIRT LEG IN CONNECTION.
- 18. PROVIDE ROOF PIPE SUPPORT MIN. 8'-0" ON CENTER. REFER TO DETAIL. (TYPICAL)
- 19. ALL GAS PIPING EXPOSED TO WEATHER SHALL BE PAINTED WITH (2) COATS OF RUSTOLEUM PAINT AND PRIMER. COLOR TO BE SELECTED BY ARCHITECT.
- EXISTING AND/OR NEW PLUMBING PIPING SHALL NOT BE ROUTED OVER IT OR VENDOR STORAGE ROOMS.
- 21. ELECTRICAL EQUIPMENT SHOWN FOR COORDINATION ONLY.

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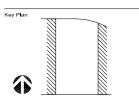
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Issue Desci	Iption ERMIT AND BID	YYYY-MM-D 2014.02.0
ISSUE FOR F	PERMIT AND BID	2014.02.0
Revision De	escription	YYYY-MM-D
by JW	Reviewed by	BG/SS
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	oy JW	No 2013-6741

% PLUMBING & FIRE PROTECTION
SHEET 3 OF 6

Original drawing is 36 x 24 Do not scale of Sheet Number PFP102

GENERAL MECHANICAL REQUIREMENTS

MECHANICAL GENERAL REQUIREMENTS

- GENERAL
 A. The General Conditions, Supplementary General Conditions, Special Conditions, Instructions to Bidders and all other contract documents apply to these branches of the work as do all other sections of the specifications.
- B. Each Sub-Contractor shall be governed by any alternates and unit prices called for in the "Form of Proposal" insofar as they affect his part of the work.
- C. This section (Mechanical General Requirements) applies equally to heating, ventilating, air conditioning, plumbing and electrical.

- SCOPE
 A. The work covered by this division of the specifications consists of furnishing all materials, labor equipment, incidentals, and performing all operations required for a complete installation of all mechanical systems in accordance with the applicable drawings and specifications.
- 3. INTENT
 A. This Contract shall furnish all equipment, material and labor mentioned in this specification, unless it is specifically stated otherwise.
 - B. Mention herein or indication on drawings of articles, materials or methods requires the Contractor for this
 - Furnish and install each article or material mentioned or indicated of quality or according to qualifications

 - noted.

 Perform each operation called for according to method or condition prescribed.

 Provide all necessary labor, equipment, and incidentals.
- C. This Contractor shall furnish and install all miscellaneous equipment, material and labor which (though not specifically called for in this specification) is necessary for a complete and satisfactory operating installation. This Contractor shall leave his work in operating condition.

- DRAWINGS AND SPECIFICATIONS
 A. For purpose of clearness and legibility, the drawings are essentially diagrammatic. Although size and location of the equipment is drawn to scale wherever possible.
 - The drawings and specifications are intended to cover all work enumerated under the respective headings. The Sub-Contractors shall not take advantage of conflict or error between drawings and specifications, but shall request a clarification of such before making his proposal should this condition exist.
- C. It is especially required that the Fire Protection and Plumbing Sub-Contractors shall obtain a set of the it is especially required that the rise Protection and Planning Sup—Contractors stain about of set of contractor are arranged from a contractor as to the general construction of the building, location of plumbing fixtures, size, location and head room of pipe chases, location of walls, partitions, beams, etc., swing of doors, switches electrical outlets, and the ord and time of placement of all mechanical work.
- D. The drawings accompanying these specifications determine the general design of the equipment. Exact of the equipment is subject to the requirements and construction of the manufacturer's standard, but occupied and general design shall correspond to that shown on the plans.
- No Contractor shall under any circumstances scale drawings for the location of equipment and work
- The drawings indicate size and points of termination of pipes and ducts, and suggest proper routing to conform to structure, avoid obstructions and preserve clearances. But it is not the intention of the drawings to indicate all necessary offsets. Install work in a manner to conform to structure, avoid obstructions, preserve headroom, and keep openings and passageways clear without further instructions or cost.
- G. It is intended that materials shall be located symmetrically with architectural element, although locations indicated by drawings may be distorted for clearness or presentation.

- GENERAL FOR ALL MECHANICAL INSTALLATIONS
 A. The drawings pertaining to the installations and services generally indicate the location of radiation, accessories, piping, underground work, purphing fixtures, ditches, etc., and other details necessary to complete the installation of each branch of work. Bidders are urged to acquaint themselves with working conditions and requirements at the building site as any and all contracts for this work will be based upon furnishing all labor and materials to entirely complete each installation ready for use.
- B. Each Contractor is urged before submitting a proposal to verify the size and location of all services, and the

- HE SITE
 Cach Contractor shall (before submitting a proposal) visit and examine the site to satisfy himself as to materials and scope of the control, afterations and remodeling, any difficulty attending the performance of the work, storage of material, access to any and all areas, etc.
- B. The submission of a proposal will be construed as evidence that such an examination has been made. Claims made subsequent to the time of submission of the proposal for labor, equipment and material required for difficulties encountered (which could have been forseen had on examination been made) will not be recognized.

- 7. MATERIALS, FOUIPMENT AND WORKMANSHIP
 A. Materials and equipment used throughout shall be new and the best of their respective kinds. No substitutions
- B. Competent workmen shall be employed on all phases of the work. Poor workmanship will be rejected and will constitute cause for removal of the individual performing the work. C. Should any dispute arise as to the quality or fitness of materials, equipment or workmanship, the decision rests

SHOP DRAWINGS AND LIST OF MATERIALS A. See requirements for "Shop Drawings" in both General Conditions and Division 1.

- A. See requirements for shop Drawings in both General Conditions and Division 1.
 B. Each Sub-Contractor shall submit to the General Contractor for approval within thirty (30) days after the date of the contract, six (6) sets of complete catalog data and/or shop drawings for each item of material or piece of equipment. Catalog data shall include name of the manufacture, catalog numbers, trade names, performance data, descriptive material (sufficient to identify each item), and specify performance of the products. Shop drawings shall include specified catalogue data and shall show equipment in detail, arrangement and disposition for this particular project design.
- C. The Architect's and/or Engineer's checking and approving of the Contractor's and Sub-Contractor's drawings or equipment details does not relieve the Contractor of Sub-Contractors from responsibility for errors, omissions or equipment furnished in accordance with such checked or approved drawings. Where such errors or omissions are latter discovered, they shall be made good by the respective subcontractor (irrespective of any approval).

WORKING SPACE
 A. In the installation called for in these contracts, special attention shall be given to the accessibility of the parts and equipment. Adequate space must be given for operation and removal of any parts that may have to be examined at future periods.

- 10. CONCEALED WORK Δ No work of any kind shall be covered up before it has been tested, examined and approved.
- B. All plumbing installations to be inspected by the proper administration authority to ensure compliance with the requirements of the State Plumbing Code and local ordinances.

- R. It shall be the responsibility of the respective Sub-Contractors to determine that the equipment and appliances (which they propose to furnish) can be installed in the available space and can be brought into the building. Equipment must be installed so that all parts are readily accessible for inspection and maintenance. No extra compensation will be allowed for dismantling of equipment to install in the available space or to obtain entrance into the building.
- B. The Sub-Contractor shall use extreme care in selection of equipment and its installation to ensure that noises and vibration will be held to a minimum. It is the intention that the entire system shall operate without objectionable noise or vibration, and if objectionable noise or vibration does develop, it shall be corrected by the Sub-Contractor without additional compensation.

- No plumbing or heating piping shall be installed in any part of the building where danger of freezing may exist without adequate protection being given by the Contractor installing the pipe. All damages resulting from leaking pipes shall be borne by the Contractor whose work is at fault.
- B. All work shall be protected at all times. All pipe openings shall be closed with caps or plugs during construction. All equipment accessories shall be tightly covered and protected against dirt, water or other injury during the period of the respective contract.

- 13. <u>TEMPORARY USE OF EQUIPMENT</u>

 A. If it should be necessary to operate the equipment before a final acceptance, Owner or Contractor shall be allowed to do so, but only after proper adjustment and trial operation as hereinafter specified.
- B. Owner or Contractor shall be responsible for proper care and supervision of operation of equipment used before acceptance and safeguard the equipment in every way.

- 14. JOB CONDITIONS

 A. Existing Utilities Locate and protect existing utilities and other underground work in a manner which will ensure that no damage or interruption will result
- B. Protect property from damage which might result from excavating and backfilling.
- C. Protect persons from injury at excavations by barricades, warnings and illumination
- Coordinate excavations with weather conditions to minimize the possibility of washouts, settlements and other damages and hazards.
- Provide temporary covering or enclosure and temporary heat as necessary to protect bottoms of excavations from freezing and frost action. Do not install mechanical work on frozen excavation

- 15. <u>COOPERATION AMONG CONTRACTORS</u>
 A Owing to the nature of the construction involved and to prevent confusion and discrepancies, only opportunate or general dimensions are given in several cases. It being intended that in some instances a reasonable limit of variation be permitted in order that the making and the exection of the work of the Sub-Contractors may be thereby expedited and the best interests of the work as a whole be served. Those several Sub-Contractors will be required to establish their own dimensions (each by prompt consultation as to the methods and size of construction, time of beginning and sequence of operations and exchange of drawings and details) with one another as the greatest measure of cooperation among the interests involved will be demanded and expected by the Owner of all times.
 - B. All Mechanical and Electrical Sub-Contractors shall consult fully with the General Contractor's Superintendent regarding all matters affecting their work.
 - C. Cooperate with other trades to obtain the most practical arrangement of work.
 - Make known to other trades intended positioning of materials and intended order of work. Coordinate work with other trades and proceed with installation to assure no delays to at trades. Determine intended positions of work of other trades and intended order of insta
- E. Agree to most practical arrangement of work within requirements of contract and consult with Architect/Engineer when there are reasons for deviations from drawings or specifications, differences of opinion between Contractors, or questions concerning intent of drawings or specifications.
- F. Failure of Contractor to make known his needs or determine requirements of others will not be

- 16. <u>SUB-CONTRACTOR'S RESPONSIBILITY FOR PROMPTNESS OF EXECUTIONS</u>
 A. It is not incumbent upon the Architect to notify the Sub-Contractor when to begin, to cease or resume work, nor to give early notification of the rejection of faulty work, nor in any way to superintend to relieve the Sub-Contractor of responsibility or of any consequence of carelessne by him or his subordinates.
- B. All materials and labor shall be furnished at such times (shall be to the best interest of all Contractors and Sub-Contractors concerned) to the end that the combined work may be properly and fully completed on contract time.

17. PERMITS. CODES AND APPROVALS
A. Permits – All permits necessary for the complete heating, ventilating, air conditioning, plumbing, fire protection and electrical systems shall be obtained by the respective Contractors from the authorities governing the work. The cost of all permits shall be borne by the Contractor.

- Codes
 Heating, ventilating, and oir conditioning work shall be done in accordance with the rules and regulations of the National Fire Protection Association (NFPA), the latest standards recognized by the American Society or Heating and Ventilating Engineers.per the latest edition enforced for state and local mechanical code.
 - All plumbing work shall be installed according to the requirements of the State, City and County plumbing laws, codes, rules and regulations, and Local Ordinances.
 - 3. The minimum standard for all electrical work shall the latest revision of the National The minimum standard for all electrical work shall the latest revision of the National Electrical Code (NEC). All electrical work shall conform to the local governing utility company. However, their request shall not authorize any changes in the plans without consulting the Architect and Engineer's offices.
 - All work shall meet the requirements of the Life Safety Code, State and City Fire Marshals. Department of Housing, Buildings and Construction.
- C. Approvals

 1. All work must be approved by the Architect before final payment will be made.
 - The Plumbing, Heating, Air Conditioning, Ventilating, and Electrical Contractors shall furnish the Architect with a certificate of inspection and approval from the inspecting agencies, free of charge, before certificate of substantial completion is granted. Final payment shall be contingent upon this certificate.

- B. All cost incidental to the inspections shall be borne by the respective Contractor
- C. The inspection shall be scheduled for rough as well as finished work. The rough inspection shall be divided into as many inspections as may become necessary to cover all rough-ins.
- D. All inspections to be by the inspector having jurisdiction.

19. <u>REMOVAL OF RUBBISH</u>
A. Each Contractor is to remove his own rubbish, but in case of dispute, the Architect shall have the right to order the General Contractor to remove said rubbish and the cost of removing same shall be charged to the guilty party as may be decided by the Architect. The rubbish shall be removed immediately when ordered by the Architect or Owner's representative. The building shall be kept as clean as possible during the progress of the work.

- 20. ADJUSTMENTS AND OPERATION OF SYSTEM

 A. When any work included in these specifications is completed, and at such time as directed by the Architect, the respective equipment manufacturer or Contractor shall carefully adjust all parts of his equipment and the system, advising the Architect when same is complete and ready for his final tests.
- B. The respective Contractors shall, after the work is completed, fully and carefully instruct the Owner's operator having charge of the system as to adjustment and efficient and proper methods of operation of the system and the various apparatus.

BUILDING CONSTRUCTION MATERIALS
 A. Bidders shall carefully examine the general construction drawings and assure themselves of the type of materials used throughout the building that may in any way affect the work to be installed under their contract and the proper preparation of their proposals, as no contract allowance will be made for bidders' failure to acquaint themselves with the types of construction.

22. FINAL CONNECTIONS TO EQUIPMENT FURNISHED BY OTHERS

- The Owner and other Contractors shall furnish and set in place various pieces of equipment.
- B. The Mechanical and Electrical Sub-Contractors shall include in their bids all required roughing, finished materials and labor for final connections to all equipment furnished and specified under the connection of the conne other sections of the specifications and/or furnished by the Owner
- C. The equipment furnished by other Contractors shall be provided with tailpieces, faucets, and special valves, unless otherwise noted on plans and/or specified.
- The Mechanical and Electrical Subcontractors shall furnish and install all traps, shut-off valves, electrical boxes, electrical switches, conduit, wiring, piping, adapters, and any other required for making final connections to equipment furnished by other Contractors.
- E. Respective Contractors shall obtain roughing—in data from equipment suppliers prior to installing any rough—in work. All locations of equipment and connections shall be verified.

- 23. MANTENANCE OF UTILITIES

 A. The locations of all piping, conduits, cables, utilities and man-holes, existing temporarily or otherwise that come within the contract construction site, shall be subject to continuous uninterrupted maintenance with no other exception than Owner's permission to cut same if the
- Contractor's attention is directed to the fact that all of these utilities and lines are not indicated on the drawings, however, it is required that prior to any excavation being performed, that the Contractor consult the Owner's personnel to ascertain whether any utilities or lines are endangered by the excavation.
- If the above mentioned utilities or lines occur in the earth within the construction site, it is suggested that the Contractor first probe and make every effort to locate the lines prior to excavating in the respective area.

EQUAL" CIAISE
Wherever the words "or approved equal" appear in the specifications or on drawings, they shall be interpreted to mean an item of material or equipment of equal quality to that named which is suited to the same use and capable of performing the some function as that named. The burden of proof of equal quality or service shall be on the Sub-Contractor. Proof of inequality is not implied by the specifications and is not a burden of the Engineer. His duty shall be to properly weigh the proven facts of equality in fairness to all parties involved. Inclusion of a certain make or type of materials or equipment in the Sub-Contractor's bid or estimate shall not obligate the Owner to accept material or equipment if it does not, in the opinion of the Engineer, meet the requirements of the plans and specifications.

26. STARTERS, ETC.

A. Any necessary starters or overload protection for mechanical equipment, shall be furnished by the Mechanical Contractor for equipment furnished by him or the Owner, unless otherwise specified.

27. ELECTRICAL CONNECTIONS

A. The Mechanical Control The Mechanical Contractor shall (regardless of voltage) furnish and install all temperature control wiring, and all interfock wiring, and equipment control wiring for the equipment that the Mechanical Contractor furnishes. Unless otherwise specified, the Mechanical Contractors shall furnish starters for all equipment furnished by him to the Electrical Contractor for installation. The Mechanical Contractor shall provide and be responsible for the heater in all starters that the

28. PREMISES

A This Sub-Contractors shall take the premises as they now are and will be required to do all the work shown or implied in the plans and specifications so that when the building is completed, it shall be complete in every respect, except such parts as are distinctly mentioned as not being covered under these specifications.

29. QUALIFICATIONS

Contractors must have five (5) years minimum experience, has a satisfactory work resume with comparable projects listed, has a sound financial basis, and is technically competent

- Equipment Manufacturers must have eight (8) years of successful experience, be technically competent, and be industrial financially stable.
- C. Owner reserves the right to review and determine if the Contractors and Manufacturers meet the above categories to his satisfaction. The Owner has the authority to reject any equipment and bids if the above standards are not met.

30. FIRESTOPPING

A. PRODUCTS

- Firestopping materials and systems shall meet the requirements specified herein.
- b. Engineer must approve in writing any alternates to the materials and systems specified herein.
- c. All firestop products and systems shall be designed and installed so that the basic sealing system will allow the full restoration of the thermal and fire resistance properties of the barrier being penetrated with minimal repair if penetratis are subsequently removed. d. For applications where combustible penetrants are involved, i.e., insulation and plastic pipe, a suitable intumescent material must be used.
- 2. Acceptable Manufacturers
- Acceptable Manufacturers

 a. Specified Technologies Inc./GE Pensil (STI), Somerville, NJ 08876, Phone: (800) 992–1180.

 b. 3M Fire Protection Products/Dow Corning, St. Paul, MN

B. REFERENCES

- American Society for Testing and Material Standords (ASTM):

 a. ASTM E 814: Standord Test Method for Fire Tests of Through-Penetration Firestops.

 b. ASTM E 84: Standord Test Method for Fire Tests of Building Materials.
- UL 1479 Fire Tests of Through-Penetration Firestops.

 b. UL 723 Surface Burning Characteristics of Building Materials
- UL Fire Resistance Directory:
 a. Through-Penetration Firestop Devices (XHJI)
 b. Fire Resistive Ratings (BXUV)

1. Firestopping systems (materials and design):

c. Through-Penetration Firestop Systems (XHEZ)
d. Fill, Void, or Cavity Material (XHHW)

C. QUALITY ASSURANCE

- a. Shall conform to both Flame (F) and Temperature (T) ratings as required by local building codes and as tested by nationally accepted test agencies per ASTM E814 or UL 1479 fire tests in a configuration that is representative of field conditions. b. The F rating must be a minimum of one (1) hour but not less than the fire resistance rating of the assembly being penetrated. T rating when required by code authority shall equal to the required "F" rating.
- c. For joints, must be tested to UL 2079 with movement capabilities equal to those of the
- Firestopping materials and systems must be capable of closing or filling through-openings creater) the burning or melting of combustible pipes, cable jacketing, or pipe insulation materi eflection of sheet metal due to thermal expansion (electrical and mechanical duct work)
- Firestopping material shall be asbestos and lead free and shall not incorporate nor require the use of
- 4. Firestopping sealants must be flexible, allowing for normal pipe movement.
- 5. Firestopping materials shall not shrink upon drying as evidenced by cracking or pulling back from contact surfaces
- 6. Firestopping materials shall be moisture resistant, and may not dissolve in water after curing. All firestopping materials shall be manufactured by one manufacturer (to the maximum extent
- Installation of firestopping systems shall be performed by a contractor trained or certified by the
- Material used shall be in accordance with the manufacturer's written installation instructions

D. PROJECT CONDITIONS

- Conform to manufacturer's printed instructions for installation and when applicable, curing in accordance with temperature and humidity. Conform to ventilation and safety requirements
- Verify the condition of the substrates before starting work.
- Weather Conditions: Do not proceed with installation of firestop materials when temperatures fall outside the manufacturer's suggested limits.
- Care should be taken to ensure that firestopping materials are installed so as not to

- CONDITIONS REQUIRING FIRESTOPPING
 General: Provide firestopping for conditions specified whether or not firestopping is indicated, and if indicated, whether such material is designed as insulation, safing, or otherwise.
- Through-Penetrations: Firestopping shall be installed in all open penetrations and in the annular space in all penetrations in any bearing or non-bearing fire-roted barrier.

G. FIELD QUALITY CONTROL

- Correct unacceptable firestops and provide additional inspection to verify compliance with this specification.

- 2. Leave finished work in neat, clean condition with no evidence of spill overs or

- 32. PROJECT CLOSEOUT, START UP OF SYSTEMS AND TRADE COMPLETION
- B. Upon completion, contractor shall notify, in writing, that the work has been completed and reviewed for compliance by their supervisory staff and is ready for final review (purch list).
- C. An integral part of the contractor's completion process is a start—up log per manufacturers installation recommendations for each piece of plumbing equipment, including, but not limited to the following.

- D. Upon receipt of the above, the engineer will visit the site and prepare the final review comments (punch list). E. This list will be returned to the contractor and after each item has been corrected the contractor shall initial/sign off that the work has been completed prior to final payment.

- Membrane-Penetrations: All membrane-penetrations in rated walls shall be protected with firestopping products that meet the requirements of third party time/temperature testing.
- Smoke-Stopping: As required by the other Sections, Smoke-Stops shall be provided for Through-Penetrations and Membrane-Penetrations, with a materia approved and tested for such applications.

F. INSTALLATION

Installation of firestops shall be performed by an applicator/installer qualified and trained by the manufacturer. Installation shall be performed in strict accordance with manufacturer's detailed installation procedures.

- Prepare and install firestopping systems in accordance with manufacturer's printed instructions and recommendations.
 Follow safety procedures recommended in the Material Safety Data Sheets.
- Times survey procedures recommended in the Material Safety Data Sheets.
 Finish surfaces of firestopping which are to remain exposed in the completed work to a uniform and level condition.
 All areas of work must be accessible until inspection by the applicable Code Authorities

- Remove spilled and excess materials adjacent to firestopping without damaging
- AS_BUILT DRAWINGS

 A. Furnish marked—up prints and shop drawings of mechanical systems and equipment to General Contractor for inclusion in bound sets of as-built drawings.

B. As-built drawings shall show all changes, additions, deletions and deviations from contract drawings noted plainly thereon. Special emphasis is placed on recording the exact locatio of all underground utilities by offset distances to building corners, walls, curbs, walls, curbs,

- A Each trade contractor shall complete all work as herein specified and indicated or

No.	Issue Description	YYYY-MM-E
1	ISSUE FOR PERMIT AND BID	2014.02.
No.	Revision Description	YYYY-MM-E

Drawn by .IW Reviewed by

> Project No 2013-6741

 □ GENERAL MECHANICAL SPECIFICATIONS

SHEET 5 OF 7 Original drawing is 36 × 24 Do not scale contents of this drawing

Humana

6515 Poplar Avenue Suites 107&108

Humana Memphis, TN

Prepared for Humana. Inc.

MarketPoint

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MEP Engineer

K

KERR-GREULICH

1534 Ormsby Station Ct. Louisville KY 40223 502.426.9457 Key Plan

PLUMBING SPECIFICATIONS

GENERAL

- Applicable provisions of the Mechanical and Electrical General Requirements, General and Special Conditions, and all other contract documents govern work under this section.
- B. The General Conditions, Supplementary General Conditions, Special Conditions, "Instructions to Bidders", and all other contract documents apply to these branches of the work as do all other sections of the specifications.
- C. The Contractor shall provide all items, articles, materials, operations or methods listed, mentioned or scheduled on the drawings and/or herein, including all labor, materials, equipment and incidentals necessary and required for their completion.
- D. Each Sub-Contractor shall be governed by any alternates and unit prices called for in the architectural specifications or contract drawings insofar as they affect his part of the work.
- F. All work to be inspected and approved by the Local Plumbing Inspector and the Plumbing Office of the State Board of Health.
- F. Special reference to be made to painting, marking and identification in this section of the Specifications as well as in the General Mechanical Section of the Specifications
- G. All piping, plumbing fixtures and appurtenances shall meet the lead-leaching test specifications of the National Sanitation Foundation (N.S.F.). Standard 61. Section 9.

2. WORK INCLUDED

- A. This section includes the furnishing and installation of all necessary labor, materials, tests and fees and equipment incidental to complete installation of all plumbing and drainage as shown on drawings and herein specified.
- B. This section includes the removal of all existing plumbing from the premises. Where demolition is required in an existing building, all materials shall be disposed of in a legal manner.
- C. Also, included are any materials or devices in accordance with the best methods of first-class practice and all applicable laws of the
- D. Obtain and pay for all permits and inspection fees required. Deliver to the Architect certificates of inspections issued by the governing

SUBMITTAL DATA

- A. Submit for approval seven (7) copies of brochures, technical data and shop drawings of the following: (where applicable)
- Plumbing Fixtures and Trim
 Floor Drains
 Piping Insulation
 Firestopping

- NOTES:

 A. Submittal data shall use same nomenclature as indicated on drawings and plumbing fixture schedule. Failure to do so may cause rejection of shop drawings, time delays at contractors expense.
- B. The Plumbing Contractor shall forward one copy of all Submittal Data on all plumbing equipment requiring electrical connections to the Electrical Contractor for voltage coordination purposes prior to placing the equipment on order.

4. OPERATION AND MAINTENANCE MANUALS

- A. The Contractor shall instruct the Owner's representative in the proper operation of all equipment. Furnish literature provided by the manufacturer. Printed instruction and maintenance data shall be bound with cover in duplicate and delivered to the Architect. Bound cover shall list name of project and name, address, phone number of Architect, Engineer, and Contractor.
- B. Instruction books to include complete spare parts listing and maintenance information on each plumbing item furnished

WARRANTY
 A. Reference General Mechanical Specifications and Requirements

6. STORED MATERIALS

- The Contractor shall deliver, store and protect all materials related to the completion of all plumbing work
- B. Any damage occurring to stored materials either on or off site shall be the responsibility of the Plumbing Contractor

7. <u>FIRESTOPPING</u>

A. Reference General Mechanical Specifications and Requirements

8. FLOOR DRAINS

- A. Floor drains shall have P-trap of same size as outlet, unless otherwise indicated. Tops of drains shall be level and conform to surface of finished floor. Drains shall have cast iron body. Install test plua in floor drains until slabs are finished, cleaned and completed. B. Drains shall be of type and size indicated on drawings and shall be Zurn, Wade, Smith, Josam or equal to hereinafter scheduled products
- C. Floor slabs to have uniform slope to drains. Coordinate with General Contractor.

9. CLEANOUTS AND ACCESS COVERS

- Zurn Industries Inc. Wade. Smith or Josam Manufacturing Company equal to the following listed products by Zurn
- B. Interior cleanouts shall be located in run not more than fifty feet (50'-0") on centers and at each change in direction.
- Exterior cleanouts in concrete pads or pavement shall be Zurn Z-1400-HD heavy duty cast-iron cleanout with scoriated nickel bronze access cover. Cleanout plug same as specified above. Unless noted or indicated otherwise, exterior cleanouts shall be located in run not more than one hundred feet (100-07) on center and at each change in direction.
- Unless noted or indicated otherwise, cleanouts shall be same size as pipe served up to 6". For pipe over 6", cleanouts shall be 6".

10. TRAPS

- Unless noted or indicated otherwise, each plumbing fixture and piece of equipment requiring connections to sewage shall be separately trapped and vented.
- B. Traps shall be placed as near the fixture as possible and always within the limits permitted by the State Code.
- Traps for cast-iron hub and spigot pipe shall be service weight cast-iron. Traps on threaded steel pipe shall be cast-iron, screwed recessed drainage pattern. No flat years will be permitted

- 11. <u>HANGERS</u>
 A. All horizontal and vertical piping above ground supported as herein specified or detailed on drawings.
- B. Horizontal piping shall be supported as per the following schedules or per state and local codes; whichever has more stringent requ

1. Horizontal Steel Nominal Pipe : (Inches)		Minimum Rod Diameter (Inches)	2.	Horizontal Copper Nominal Pipe size (Inches)		Minimum Rod Diameter (Inches)
1/2	5.00	1/4		1/2	5.00	3/8
3/4	6.00	3/8		3/4	5.00	3/8
1	7.00	3/8		1	6.00	3/8
1 1/2	9.00	3/8		1 1/4	6.00	3/8
2	10.00	3/8		1 1/2	8.00	3/8
3	12.00	1/2		2	8.00	3/8
3 1/2	13.00	1/2		2 1/2	9.00	1/2
4	14.00	5/8		,		,

3.	Horizontal Schedule	40 PVC Piping	
	Nominal Pipe size	Maximum Span	Minimum Rod Diamete
	(Inches)	(Feet)	(Inches)

Nominal Pipe size (Inches)	Maximum Span (Feet)	Minimum Rod Diamete (Inches)
1/2 3/4	3.50	1/4
3/4	3.50	1/4
1	4.00	1/4
1 1/2	4.50	3/8
2	4.50	3/8
3	5.50	3/8
4	6.26	3/8
5	6.50	1/2
6	6.75	1/2

- C. Hanger rods supported from concrete inserts, beam clamps, Phillips shields, expansion bolts or lag screws as directed or detailed
- D. Horizontal pipe hangers equal to Elcen Figure 10-C (split ring hanger with swivel adjuster) or Figure 12 (adjustable steel clevis hanger) for copper pipe shall be copper plated and sized so that they fit snugly ground the pipe.
- E. This Contractor shall furnish and install any additional steel supports which may be required to span structural members in order to provide means of supporting hanger rods.

- F. All exposed risers shall be securely anchored to the walls with extended ring hangers or other approved manner.
- G. Water lines shall be insulated per other sections of this specification. Hangers to be enlarged to accept insulation. Water lines to receive saddles twelve inches (12") long (sized for increase from insulation).
- H. Where copper piping is installed and in direct contact with a pipe hanger support, copper pipe hangers shall be use

- NIS_ADU_FLASHINS.

 Vents passing through roof flashed with four (4) pounds sheet lead extending twelve inches (12") all around pipe. Flashing shall be carried to top of pipe and turned down inside same. All vents under three inches (3") in size shall be increased in size before passing through roof. No vents through roof shall be less than three inches (3") unless local or state plumbing codes indicates a larger minimum size.
- B. All vents occurring near breaks in roof shall be offset below roof before passing through same.

- 13. WATER VALVES

 A. Furnish and install valves where indicated on drawings. Also, install cutoff valve on each piece of equipment so that same may be isolated from the system.
- B. Valves shall be pressure rated as specified below, unless otherwise indicated on drawings. Where valve specification numbers are based on Nibco, approved equal (Crane, Powell) will be acceptable.

C. <u>Ball Valves (Shut-Off Type)</u>
Copper Pipe: One-half inch to two inches (1/2" to 2") - Nibco S-585-70.
Copper Pipe: Two and one-half inches to four inches (2-1/2" to 4") - Red White 5044F or 5049F

D. <u>Gate Valves</u>
Copper Pipe: One-half inch to three inches (1/2" to 3") - Nibco S-113.

Copper Pipe: One-half inch to three inches (1/2" to 3") - Nibco S-413-B. Copper Pipe: Two inches and larger (2" and larger) - Nibco F918 or F968-

- F. $\underline{Drain\ Valves}$ Copper Pipe: One-half inch to one and one-half inches (1/2" to 1-1/2") Nibco T-113-HC. G. All valves listed herein before shall have rising stem or outside screw and yoke pattern. Exceptions would be in locations where space and access are limited. In these instances, non-rising stems in valves with the same rating and pattern will be permissible. All bronze gate valves shall be of the type and design which can be replaced under pressure when fully open.
- H. Valving to be accessible.

14. WATER_PIPING

- Unless noted or indicated otherwise, other water piping shall be Type "L" hard capper with wrought solder fittings. Lead-free solder shall be used throughout. PEX piping and/or schedule 80 CPVC piping is also acceptable, provided the products are approved by Local Authority Having Jurisdiction. Cold water piping to extend through building and to connect to all fixtures.
- C. Each fixture shall have a stop valve for all supplies.
- D. All interior water piping shall be pitched and routed so complete drainage may be obtained. Provide accessible hose end drain valves where required to drain system
- - All threads on pipe, fittings, valves, flanges, and similar appurtenances shall conform to the American Standard for Pipe Threads, ANSI B2.1 and shall be made up with an approved thread compound or lubricant.
- Required gaskets shall be made of material approved for the pressure and temperature to which they are to be subjected. Rubber shall not be used
 where pressure exceeds 15 psig steam and 125 psig water or on temperature greater than 250° F.
- 3. Flanges, screw type, cast iron or steel, or of the forged integral type may be used to their working pressure and temperature ratings. All companion
- 4. All pipe fittings and valves shall be of the type designed for the pressures and temperatures of the installation.

- Cross-linked polyethylene (PFX) manufactured by the Silane method
- Non-barrier type.

 a. Shall have a pressure and temperature rating of 160 PSI at 73°F, 100 PSI at 180°F and 80 PSI at 200°F
- b. Tubing shall have a minimum of 6 months UV protection.

 Manufactured in accordance with ASTM F876 and ASTM F877 and tested for compliance by an independent third-party agency

- Fitting shall be manufactured by Zurn PEX Inc, identified by the letters "Q" or "Z". 2. Manufactured in accordance with ASTM F1807 or ASTM F2159 and/or comply with ASTM F877 system standard as identified on the fitting.
- instantation:

 1. Install Zurn PEX tubing in accordance with tubing manufacturer's recommendations and as indicated in the Zurn PEX Plumbing Installation Guide

 2. Do not solder within 18 inches of PEX tubing in the same waterline. Make sweat connections prior to making PEX connections.
- Use grommets or sleeves at the penetration or PEX tubing passing through metal studs.

 Protect PEX tubing with sleeves where obrasion may occur.

 Horizontal PEX piping shall be supported every 32" on center.
- F. Install all water piping per manufacturer's recommendations.

- PIPING:
 All gas piping shall be standard weight black steel and using black malleable iron fittings or standard weight steel weld
 titings and installed per local gas company requirements, where acceptable to local gas company and state/local
 sodes, polyethylene pipe will be acceptable on underground service from the street to the gas meter
 Contractor shall have on site one (1) copy of the local utility company's "installation and inspection manual for
 cultamental follow the directions of the gas utility.

 Cost piping inside building to be welded construction for two and one—half inches (2—1/2") and larger, screwed pipe carbon steel for two inches (2") and smaller.

 D. All gas piping 1.0 psi and higher shall be welded where black steel is installed.

 E. Furnish and install gas shutoff valves where shown on the drawings and at each piece of equipment requiring gas service, also, all necessary valves at gas meter (along with bypass, etc.) as required by the gas company.

 F. GAS VALVES

 - One-half inch to one inch (1/2" to 1") McDonald model 525b. One and one-fourth inches to two inches (1-1/4" to 2") McDonald model 560 series. Two and one-half inches and larger (2-1/2" and larger) Powell model 2201.

- Final connection of gas fired equipment, including HVAC equipment shall be by the plumbing contractor.

 A 6" long dirt leg and gas shut-off valve shall be installed at each gas-fired appliance.

 Gas piping shall be tested as required by the local utility company.

 Exterior gas piping exposed to weather shall be primed and painted with two (2) coats of rust inhibitor paint. Color to be selected by Architect.

- A. Water piping shall be tested to one hundred fifty (150) pound hydrostatic pressure and made tight. The pressure shall be held for a minimum of thirty (30) minutes or as long as required to permit the inspection of all joints. Testing shall comply with all State/Local Codes.
- B. Soil, waste and vent piping shall be given a water test before fixtures are installed and a smoke test after they are installed. All tests shall meet the
- C. Backflow prevention devices and valves shall be tested prior to completion of the project. Test report shall be given to the General Contractor and one copy included in operation and maintenance manuals. Where required by the Local Water Company or Health Department, the Plumbing Contractor shall forward a copy of the test report to these agencies.

17. CLEANING AND FINISHING

- A. After all fixtures are installed and before final acceptance of work, the Contractor shall go over all fixtures, cleaning up and polishing all metal parts, checking and adjusting all fittings, faucets, valves, etc. Check over the entire system to guarantee that all valves, controls and other operating parts are in good working.
- R. Clean up all rubbish caused by the plumbing work and remove all rubbish surplus materials etc. from the premises

18. DIELECTRIC PIPE UNIONS

- A. This Contractor shall furnish and install line size dielectric insulating pipe unions of type recommended by the Manufacturer at all points of connection between dissimilar metals in plumbing system and where indicated on the drawings.
- B. Dielectric pipe unions shall be equal to EPCO Sales, Inc.

- A. The following lines and material shall be insulated as herein specified:
- 1. All Aboveground Water Lines.

 B. Water Piping specified above shall be covered with 1/2 thick flexible, closed cell polyolefin form insulation. All joints to be sealed and taped in a neat manner insulation shall meet requirements of ASTM C-1427, and be equal to IMOCA IMCOLOCK.
- C. Insulation must be applied by a Representative of the Manufacturer or a Contractor regularly engaged in the application of insulation with a minimum of 5 years of experience on projects of similar size.

- D. Insulation shall be tested in accordance with ASTM E84, NFPA 255 and UL 723. Insulation shall not exceed 25 flame spread or 50 smoke developed.

 E. All piping shall be tested and free from leaks prior to application of insulation.

Paint all unfinished metal and piping exposed to weather with two (2) coats of "Rust-o-Leum" or equal rust inhibitive paint. Color to be selected by the Architert

21. SOIL, WASTE AND VENT PIPING

- a inside and outside building shall be hub and spigot service weight cast-iron,
- B. Fittings and connecting methods shall be as stipulated by Plumbing Code and Building Code.
- C. Connections shall be in conjunction with State and Local Plumbing Code and Pipe Manufacturer's recommendation
- D. Unless noted or indicated otherwise, horizontal piping shall be pitched with a minimum of one eighth inch (1/8") per foot.
- E. All fixtures revented according to Code.
- E Vertical stacks shall be firmly supported
- G. <u>Materials and Equipment</u> All materials and equipment installed shall be new and free of defects, and shall be the product of reputable manufacturers and subject to approval of the Engineer and Architect. Where ASTM reference is made,
- H. <u>Cast Iron Pipe and Fittings</u> Sanitary and other drain and vent lines shall conform to ASTM Designation A74 and Cast Iron Soil Pipe Institute Standards. Pipe and fittings shall be coated inside and out with asphaltum or cool tar pitch and shall be service weight, and hubless or hub and spigot type as specified hereinafter. Any piping exposed in the building will be uncoated.
- PVC DW Pipe and Fittings Where allowed by Code, shall conform to ASTM Designation D-2665 and may be used inside and outside of building and below floor slob unless noted otherwise in drawings or Specifications. Where return air plenums are used, the Contractor shall not use PVC piping. This shall be coordinated with Mechanical Contractor prior abmitting bid on project. Use of PVC piping shall also be limited by restrictions imposed by local and state l'Imming Code.
- J. PVC DWV Solvent Cement For PVC-DWV, pipe and fittings shall conform to ASTM Designation D-2564.

All pipes through walls, within the building, shall be furnished with chrome plated escutcheon plates. This shall include all branch connections to fixtures and equipment. Plates on piping in finished areas including piping below counter tops and in adhine work shall be one piece, brass chromium plated, of the proper size to fit the pipe and of the size to conceal the opening in the wall.

23. FIELD QUALITY CONTROL

A. Tests shall be conducted at such places and with timing to permit the work to proceed with as little interruption as possible. Tests shall be made before any of the work is concealed or covered. All testing equipment shall be furnished by the Contractor who shall conduct the tests in the presence of the Architect, Engineer or General Contractor.

A After water piping has been tested, all potable water piping shall be disinfected by a mixture containing not less than 0.6 pounds of high-test calcium hypochlorite, or 2 pounds of chlorinated lime to each 1000 gallons of water to provide not less than 30 PPM of orabidobe chlorine. The mixture shall be injected into the system shall then be disinted, flusted with a containing the provided of the provided provided into the system shall than be disinted, flusted with a containing the provided provided

25. IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT

- torment Capets tal Labels for Equipment: 1. Material and Thickness: Brass, 0.032—inch minimum thickness, and having predrilled or stamped holes
- Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch.
- 2-1/2 by 3/4 inch.
 3. Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.
 4. Fasteners: Stainless-steel rivets or self-tapping screws.
 5. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.
- B. Plastic Labels for Equipment:

- 1. Material and Thickness: Multilayer, multicolor, plastic labels for mechanical engraving, 1/16 inch thick, thick, and having predrilled holes for attachment hardware.

 2. Letter Color: White.

 3. Background Color: Black.

 4. Maximum Temperature: Able to withstand temperatures up to 160 deg F.

 5. Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch.
- 3/4 inch.
 6. Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.
 7. Fasteners: Stainless-steel rivets or self-tapping screws.
 8. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.
- C. Label Content: Include equipment's Drawing designation or unique equipment number as noted or
- D. Equipment Label Schedule: For each item of equipment to be labeled, on 8-1/2-by-11-inch bond paper Tabulate equipment identification number and identify Drawing numbers where equipment is indicated (plans, details, and schedules).
- PIPE LABELS
 Ceneral Requirements for Manufactured Pipe Labels: Preprinted, color-coded, with lettering indicating service,
- A centeral requirements for maintacture ripe tables: Preprinted, color-coded, with retering indicating servi and showing flow direction.

 B. Pretensioned Pipe Labels: Precoiled, semirigid plastic formed to cover full circumference of pipe and to attach to pipe without fasteners or adhesive.

 C. Self-Adhesive Pipe Labels: Printed plastic with contact—type, permanent—adhesive backing.
- i. Self-Adhesive Pipe Lobels: Printed plastic with contact-type, permanent-adhesive backing. Pipe Lobel Contents: Include identification of piping service using same designations or obbreviations as used on Drawings, pipe size, and an arrow indicating flow direction.
 1. Flow-Direction Arrows: Integral with piping system service lettering to accommodate both directions or as separate unit on each pipe label to indicate flow direction.
 2. Lettering Size: At least 1-1/2 incluse high.

- 5 PREPARATION
 A. Clean piping and equipment surfaces of substances that could impair bond of identification devices, including dirt, oil, grease, release agents, and incompatible primers, paints, etc.
- EQUIPMENT LABEL INSTALLATION
 A. Install or permanently fasten labels on each major item of mechanical equipment.
 B. Locate equipment labels where accessible and visible.

- PIPE LABEL INSTALLATION
 A. Locate pipe labels where piping is exposed or above accessible ceilings in finished spaces; machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums; and exterior exposed locations as follows:
- follows:

 1. Near each valve and control device.
 2. Near each branch connection, excluding short takeoffs for fixtures and terminal units. Where flow pattern is not obvious, mark each pipe at branch.
 3. Near pentertations through walls, floors, ceilings, and inaccessible enclosures.
 4. At access doors, manholes, and similar access points that permit view of concealed piping.
 5. Near major equipment items and other points of origination and termination.
 6. Spaced at maximum intervals of 50 feet along each run. Reduce intervals to 25 feet in areas of congested piping and equipment. And at least once in every room.
 7. On piping above removable acoustical ceilings. Omit intermediately spaced labels.

- l. Use the following pipe label color schedule unless otherwise noted, or the owner has a facility pipe labeling standard in which case that standard shall be adhered to:
 - Domestic Water Piping:
 a. Background Color: Blue.
- b. Letter Color: White.
 Sanitary Waste and Storm Drainage Piping:
 a. Background Color: Black.
 b. Letter Color: Yellow. 26. EXISTING CONDITIONS
- B. Contractor to coordinate with General Contractor and all other Trades prior to commencing with work

Humana

Humana Memphis, TN MarketPoint 6515 Poplar Avenue Suites 107&108

Contract No: 13 01656 00

Humana, Inc.

Prepared for



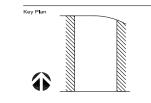
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No. Issue Description YYYY-MM-DE 2014.02.03

YYYY-MM-DD

ш \overline{S} .IW Reviewed by

No. Revision Description

> Project No 2013-6741 PLUMBING SPECIFICATIONS

SHEET 6 OF 7

Original drawing is 36 x 24 Do not scale or

Contractor to visit site prior to bid and to review all existing conditions.

FIRE PROTECTION SPECIFICATIONS

SPRINKLER SYSTEMS

- 1. SECTION INCLUDES
- A. System design, installation, and certification,
- B. Pipe, fittings, valves, and connections for sprinkler systems
- 2. RELATED DOCUMENTS
- 3. WORK INCLUDED
- A. Code compliance, research, design, coordination, and installation of a complete and functional hydroulically calculated sprinkler (and standpipe system, if required,) that meets the approval of, and is in accordance with the requirements of Owner's Insuring Agency, NFPA 101 Life Safety Code, NFPA Fire Protection Standards, Underwriters Laboratory (UL), all local and state regulations, and these specifications.
- B. Alarm system devices including alarm check valves, flow switches/pressure switches, tamper switches, electric bells and coordination with the Electrical Contractor.
- C. Shop drawings and hydraulic calculations prepared and submitted in accordance with the requirements of all Authorities Having Jurisdiction.
- D. All permits and approvals of the fire protection system
- E. Field acceptance testing
- 4. REFERENCES
- A. NFPA 13 Installation of Sprinkler Systems.
- B NEPA 25 Inspection Testing and Maintenance of Water-Based Fire Protection Systems
- C. NFPA 70 National Electrical Code
- D. UL Fire Resistance Directory.
- F. ASME B16.1 Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250, and 800.
- G. ASME B16.3 Malleable Iron Threaded Fittings, Class 150 and 300.
- H. ASME B16.4 Cast Iron Threaded Fittings, Class 125 and 150.
- I. ASME B16.5 Steel Pipe Flanges and Flanged Fittings.
- J. ASME B16.11 Forged Steel Fittings, Socket-welding and Threaded.
- K ASTM A47 Malleable Iron Castinas
- L. ASTM A53 Pipe, Steel, Black and Hot-Dipped, Zinc-coated Welded and Seamless.
- M. UL Fire Resistance Directory.
- A. Provide system to NFPA 13 occupancy requirements and in accordance with State Fire Prevention Code.
- B. Determine volume and pressure of incoming water supply from water flow test data. Provide current flow test and base design results on this test.
- C. Interface system with building fire and smoke alarm system.
- D. Extent of the fire protection work includes the installation of a complete automatic fire extinguishing system to provide one hundred percent (100%) coverage of the area in work scope as indicated on drawings.

6. SUBMITTALS

- A. Submittals The following documents shall be provided:
- Flow Test Data Complete Hydraulic Calculations Pre-action system Complete Stamped and Coordinated Shop Drawings Pipe and Fittings

- Valves
 Sprinkler Heads
 Escutcheons
 All Applicable Devices, Alarms, and Specialties
- B 1 All Submittal data shall be in BOUND SETS and be submitted at one time. Transmit all fire protection submittal data to the Engineer, Owner's Fire and Casualty Insurer and to the state or local Authorities Having Jurisdiction for review and approval.
- 2. After securing the approval of the Authorities Having Jurisdiction, forward the required sets of submittal data bearing all review stamps to the Owner's Fire and Casualty Insurer representative for final review.
- a. Submittals to Owner's Fire and Casualty Insurer may be made concurrently with submittals to Engineer and Authority Having Jurisdiction. Authority Having Jurisdiction's review comments are to be forwarded to Fire and Casualty Insurer representative upon receipt and must be received prior to Fire and Casualty Insurer approval.
- C. The Contractor shall not proceed with any work without final approved submittal data bearing all approval stamps, including the Owner's Fire and Casualty Insurer.
- D. The Contractor shall be held responsible for any delays caused by not following the above procedure and/or not completing the design portion of the work in a timely manner.
- E. Shop Drawings:
- Submit layout of finished ceiling areas indicating sprinkler locations coordinated with ceiling installation, lights, diffusers, etc.
- Indicate hydraulic calculations, detailed pipe layout, hangers and supports, sprinklers, components and accessories. Indicate system controls.
- Indicate pipe materials used, jointing methods, supports, floor and wall penetratiseals. Indicate installation, layout, weights, mounting and support details, and p connections. Provide all details, calculations, and information necessary for approby authorities having jurisdiction and owners fire and casualty insurer.
- F. A complete set of installation drawings shall be prepared and submitted to the Authority Having Jurisdiction for approval and as shop drawings before installation begins.
- G. Product Data: Provide manufacturers catalog information. Indicate valve data and ratings
- 7. SUBMITTALS AT PROJECT CLOSEOUT
- A. Project Record Documents: Record actual locations of sprinklers and deviations of piping from drawings. Indicate drain and test locations.
- B. Manufacturer's Certificate: Certify that system has been tested and meets or exceeds specified requirements and code requirements.
- C. Operation and Maintenance Data: Include components of system, servicing requirements, record drawings, inspection data, replacement part numbers and availability.
- D. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.
- E. Contractor shall guarantee all labor and materials for a period of one (1) year from date of conductor shall guidnite all floor and infertions of a period of order (7) year form occeptionce by the Owner. At the end of the first six (6) months of operation, Contractor shall review the system with the Owner to verify that the system is properly operating and that all allarms, valves and similar equipment are working correctly.

- F. Project Record Documents: Record actual locations of components and tag numbering.
- G. Submit all original approvals and inspection reports from all authorities having jurisdiction

8. DESIGN CRITERIA

- A. The Contractor shall be responsible for all code research and obtaining all required flow test data and hydroulically designing a fire protection system that meets all applicable requirements. The Contractor shall arrange for, and conduct, a flow test and coordinate its validity with Owner's Fire and Casualty Insurer.
- B. The Fire Protection documents were prepared to be in compliance with all applicable codes, and flow test data provided. The Contractor shall review all documents provided and report any modifications required to these documents to the Design Engineer including any necessary modifications during the shop drawing preparation stage.
- C. Design Densities (unless noted or indicated otherwise):
- Offices and public areas: Wet pipe system with 0.10 gpm per square foot over the most remote 1,500 square feet plus 100 gpm for hose.
- Storage and similar areas: Wet pipe system with 0.15 gpm per square foot over the most remote 1.500 square feet plus 250 gpm for hose.

- The fire protection Contractor shall be responsible for reviewing the complete set of project documents and coordinate his work with all other trades involved.
- Sprinkler head locations shall be coordinated with the architectural reflected ceiling plans and located in the center (quarter pointed where applicable) of any tiles where lay—in ceilings are installed. If the Contractor calculates that more heads are required to coordinate his work, then the Contractor shall proceed with the additional heads at no cost to the Owner.
- The fire protection piping and head layout shall function in such a manner so as not to interfere with lighting fixtures, air distribution devices, equipment, piping and ductwork. The work under this Section shall yield to all other trades.

9. QUALITY ASSURANCE

- A. All sprinkler work shall be performed by a Sprinkler Contractor approved by the Authority Having Jurisdiction for Sprinkler Work. Sprinkler Contractor must maintain a full-time service organization for service in area where the project is taking place for emergency and/or service calls for response with one (1) hour or less.
- B. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- C. Installer Qualifications: Company specializing in performing the work of this section with minimum five years documented experience and approved by manufacturer.
- D. Drawings and general provisions of this contract, including general and supplementary conditions and specifications, apply to work in this section.

- A Perform Work in accordance with NEPA 13
- B. Equipment and Components: Bear UL label or marking.
- C. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratorie Inc., or testing firm acceptable to the Authority Having Jurisdiction as suitable for the purpose specified and indicated.
- D. Conform to requirements of the applicable Fire Prevention Code
- F. Sprinkler Systems: Conform work to NFPA 13 and applicable Fire Prevention Code
- G. Welding Materials and Procedures: Conform to ASME Code and AWS D10.9.
- H. Valves: Bear UL label or marking. Provide manufacturer's name and pressure rating marked
- I, Products Requiring Electrical Connection: Listed and classified as suitable for the purpose specified and indicated.

11. DELIVERY, STORAGE, AND PROTECTION

- B. Deliver and store valves in shipping containers, with labeling in place.
- C. Provide temporary protective coating on cast iron and steel valves.
- D. Provide temporary end caps and closures on piping and fittings. Maintain in place until

- A. The following manufacturers of material and equipment are acceptable:
- 1. Sprinkler Heads Grinnell, Reliable, Viking, Globe, Star Grinnell, Reliable, Viking, Globe, Star

13 MATERIALS

- A. Pipe and Fittings (above ground)
- 1. Piping Class I, schedule 40 ASTM A-53 black steel piping for branches 2" and smaller and Class I schedule 10 ASTM A-53 black steel for mains 2-1/2" and larger. galvanized piping shall be used for pre-action system.
- Fittings under 2-1/2", shall be threaded, cast iron or malleable iron, standard weight pattern; 2-1/2" and larger, shall be flanged, or grooved pipe and fittings to accept bolted type clarmy with gasket.
- Clamps cast iron with gasket and two bolts, 300 psi working pressure. Victaulic, Model 75.
- 4. Flanges cast iron, 175 pound S.W.P., with threaded inlet.
- 5. Grooved couplings shall be equal to VICTAULIC Style 75 or 77 with Grades "H" or "E" gaskets, and standard nuts and boits. Reduced couplings shall be Style 750 reducing couplings with Crade "H" gaskets, and standard nuts and boits. Couplings installed in exposed and easily accessible locations shall be installed with tamper resistant nuts requiring pre-torque with special three (3) point sockets. All grooved flonged connections shall be VICTAULIC Style 741 or 742 VICT-FLANGS VICTAULIC steel or

B. Sprinkler Heads:

- Sprinkler heads shall be fusible link or glass bulb type, style and finish as indicated or required by the application. Where applicable, sprinkler heads may be extended
- Sprinkler heads shall have 1/2" orifice unless application dictates otherwise and is approved by NFPA. Sprinkler heads shall be of required temperature rating.
- Sprinkler heads shall be quick response type unless application dictates otherwise and is approved by NEPA

- C. Sprinkler Head Escutcheons
- 1. Finish for all escutcheons shall match the finish of sprinkler heads on which they are
- Provide two (2) piece adjustable type escutcheons for all semi-recessed and extended escutcheon style sprinkler heads.

14. PREPARATION A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.

- B. Remove scale and foreign material, from inside and outside, before assembly

15 INSTALLATION

- A. Install equipment in accordance with manufacturers instructions
- B. Place pipe runs to minimize obstruction to other work.
- C. Place piping in concealed spaces above finished ceilings.
- D. Center sprinklers in two directions where located in lay-in 2'-0" X 2'-0" and 4'-0" X 4'-0" acoustical tile ceilings and provide piping offsets as required. For 2'-0" X 4'-0" acoustical tiles, center sprinklers in two (2) foot dimension and at quarter points and/or center in four (4) foot dimension.
- E. Apply masking tape or paper cover to ensure concealed sprinklers, cover plates, and sprinkler escutcheons do not receive field paint finish. Remove after painting. Replace
- F. Flush entire piping system of foreign matter.
- G. Install guards on sprinklers where exposed piping occurs to upright and/or pendent type heads where same are less than 7"-0" above finished floor and/or subject to mechanical injury.
- H. Hydrostatically test entire system.
- I. Required test shall be witnessed by Authority Having Jurisdiction and Owner's insurance
- J. Install system as per approved shop drawings and NFPA Pamphlet No. 13. Coordinate work with other trades as directed by the General Contractor
- K. Piping must be routed to clear ductwork, lighting fixtures, plumbing lines, etc. as shown on the construction documents. Components listed herein are for standard quality only. Equal items manufactured by other recognized Manufacturers will be considered on application.
- M. Material changes where required or provided, shall be at fittings turning up to the fire protection system riser entering the building. The change of material will occur prior to the elbow preceding it. Necessary control rods and mechanical fosteners will be required.
- nstall piping in accordance with NFPA 13 for sprinkler systems, applicable Fire Prevention Code and requirements of Authority Having Jurisdiction.
- O. Route piping in orderly manner, plumb and parallel to building structure. Maintain gradient
- P. Install piping to conserve building space, to not interfere with use of space and other work.
- Q. Group piping whenever practical at common elevations
- R. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected environment
- 1. Provide inserts for placement in concrete formwork.
- Provide hooked rod to concrete reinforcement section for inserts carrying pipe over 4 inches (100 mm).
- 4. Where concrete slabs form finished ceiling, locate inserts flush with slab surface.

- 1. Install in accordance with NFPA 13 and applicable Fire Prevention Code. Provide protection from damage where subject to earthquake, where applicable and/or as required by Authority Having Jurisdiction.
- 2. Install hangers to provide minimum 1/2 inch space between finished covering and
- 3. Place hangers within 12 inches of each horizontal elbow.
- Use hangers with 1-1/2 inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
- Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze banders
- 6. Provide copper plated hangers and supports for copper piping and sheet lead packing between hanger or support and piping.
- Slope piping and arrange systems to drain at low points. Use eccentric reducers to maintain top of pipe level.
- U. Do not penetrate building structural members unless indicated and approved by structural
- Provide sleeves when penetrating footings, floors, and walls. Seal pipe and sleeve penetrations to achieve fire resistance equivalent to fire separation required.
- W. When installing more than one piping system material, ensure system components are compatible and joined to ensure the integrity of the system. Provide necessary joining fittings. Ensure flanges, union, and couplings for servicing are consistently provided.
- X. Die cut threaded joints with full cut standard taper pipe threads with red lead and linseed oil or other non-toxic joint compound applied to male threads only. Y. Install valves with stems upright or horizontal, not inverted. Remove protective coatings after
- AA. Threaded and capped connections shall be located at the ends of sprinkler piping to facilitate flushing and cleaning of the system.
- BB. Piping arrangements shall be complete with valves, tamper switches, and flow switches. Inspector test valves will be located at the hydraulically remote end of the system in accessible locations. Provide drain pipes and connect to sewer or roof drainage system, or other location approved by the Architect/Engineer, to allow full flow tests.

A. Examine areas of conditions under which work is to be performed. Report in writing to

B. Starting work constitutes acceptance of the conditions under which work is to be performed and this Contractor shall, at his expense, be responsible for correcting all unsatisfactory and defactive work accountered.

17. INTERFACE WITH OTHER PRODUCTS

A. Ensure required devices are installed and connected as required to fire alarm system

18. CLEANING A. Remove all trash and debris from site and dispose of legally

19. EXISTING CONDITIONS

. Contractor shall visit site prior to bid and to review all existing conditions. B. Contractor to coordinate with General Contractor and all other Trades prior to commencing

- A. Contractor shall maintain "As-Built" Drawings on an ongoing manner during construction. Contractor shall make "As-Built" available to Architect/Engineer during construction meetings.
- B. "As-Built" Drawings shall be turned over to the Architect prior to final payment

Humana

Humana Memphis, TN MarketPoint 6515 Poplar Avenue Suites 107&108

Memphis, TN 38119 Prepared for

Contract No: 13 01656 00

Humana. Inc.



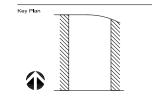
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MEP Engineer

1534 Ormsby Station Ct. Louisville KY 40223 502.426.9457



Issue Description 2014.02.03

YYYY-MM-DD

BG/DG

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Revision Description

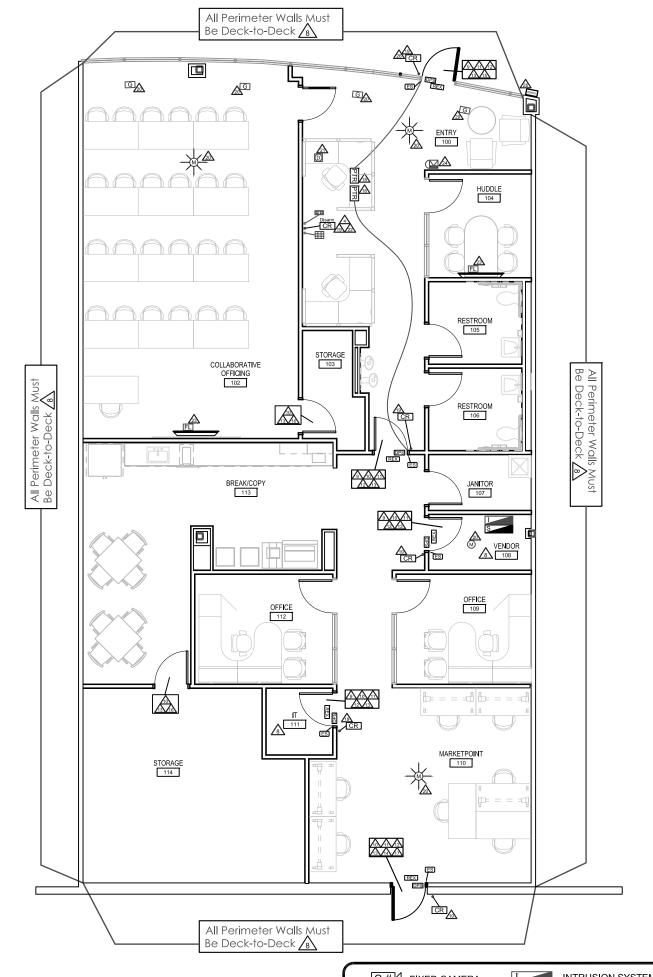
> Project No 2013-6741 ☐ FIRE PROTECTION

SPECIFICATIONS SHEET 7 OF 7

Drawn by

Original drawing is 36 x 24 Do not scale of

JW Reviewed by



General Site Notes:

- > Humana Global Security plans to connect the access control system to the enterprise access control system
- > Valid credential disarms Humana alarm system and allows for access.
- > Alarm is set 24/7 for duress alarms.
- Intrusion alarm system to be monitored by Stanley.
 All card reader doors must include the following (unless otherwise
- specified individually):

 a. Alarm contact (two for sets of double doors) (provided by Stanley)
- b. Fail-secure electric strike (provided by Stanley
- c. Storeroom lock (a lock that cannot be set in an unlocked state)
 (provided by General Contractor)
- d. Automatic door closing device (provided by General Contractor)
 e. Fixed pin hinges if hinges are exposed to the unprotected side of the
- door (provided by General Contractor)
 f. Latch guard or astragal on exterior doors (provided by Genera
- Contractor).
- Alarm system auto arm times to be determined by Site Management.
 Hours of Operation: Monday through Friday from 8:00 am until 5:00 pm.
 No CCTV.

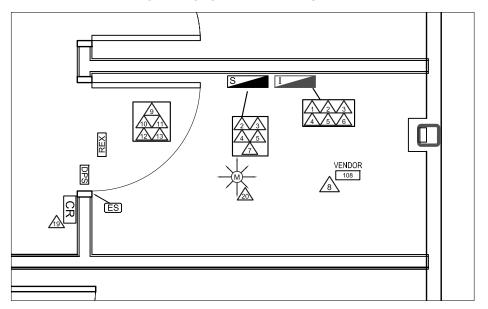
DEVICE COUNT:

- 5 x Card Reader (Entry)
- 5 x Door Position Switch
- 1 x Horn/Strobe Alarm (105dB+)
- 5 x Request to Exit (PIR)
- 4 x 360° Motion Detector

4 x Glass Break

- 5 x Electric Strike
- 1 x Duress Button
- 1 x Intrusion Keypad
- 2 x Push-to-Release Button
- 1 x Card Reader (Disarm)
- 2 x Flat Screen Cable Lock
- 1 x LED Alarm System Indicator
- 1 x Knox Box

VENDOR ROOM ENLARGEMENT



Humana MarketPoint 6515 Poplar Avenue Memphis, TN 38119

KEY NOTES: 🚁

- Intrusion system requires a dedicated POTS line for reporting and monitoring and connection must be protected (e.g., inside a panel).
- 2. Network drop required for both access control panel and intrusion pane
- 3. All security systems must be on the UPS and the generator
- 5. All access and intrusion panels must be equipped with a tamper switch.
- 6. Intrusion alarm system is to have 8 hours of battery backup and is to be monitored by Stanley.
- 7. Access control system to utilize Lenel 2220 controller and have 8 hours of battery backup.

8. The perimeter walls, vendor room walls and IT room walls must be deck-to-deck (true floor to

true ceiling).

- 9. Door must have keyway (provided by General Contractor) in the event the access control
- 11. All doors with alarm points are to be equipped with fixed-pin hinges or approved
- 12. Door is to be equipped with latch guard (provided by General Contractor).
- 13. Door is to be equipped with automatic door closer (provided by General Contractor).
 - Double doors are to have auto-closer on both leaves
- 14. Door is to have no exterior keyway (e.g., blank cylinder provided by General Contractor). 15. Door is to be unlocked during business hours.
- 16. Door is to be equipped with a storeroom lock with a keyway only (provided by General
- 17. Door must be made of metal and is to be equipped with a multi-directional peephole (provided by General Contractor)

OTHER EQUIPMENT

10. Door is to be locked 24/7.

- 18. Door release button (provided by Stanley) only functional during business hours.
- 19. All card readers are to have a 25 foot service loop coiled above the ceiling.
- 20. All motion detectors and glass breaks are to have a 20 foot service loop coiled above the
- 21. Duress button mounted under receptionists desk must be hard-wired, <u>no wireless devices</u>
- 22. Card reader and associated intrusion input to be utilized to disarm the associated
- 23. Flat-screen TVs must be secured with cable-lock or equivalent method (provided by General Contractor). 24 Horn/Strobe alarm in reception area is to be ceiling-mounted and positioned so as to be
- visible through the front windows of the building and must be 105dB or greater.
- Knox Box is to be installed at main entrance for fire department emergency access (provided by General Contractor).
- 26. Card reader is to be mullion-style.

GENERAL CONTRACTOR REQUIREMENTS:			
Note #:	Required:		
8	Deck-to-deck wall coverage		
9	Keyway		
11	Fixed-pin hinges for door		
12	Latch guard for door		
13	Automatic door closer		
14	Blank cylinder		
16	Storeroom Lock with Keyway		
17	Metal Door with Multi-directional peephole		
23	Flat screen cable lock		
25	Knox Box		





STATUS INDICATOR

Louisville, KY 40217 PHONE: (502) 636-2402 FAX: (502) 636-0105



RECORDER

- INTRUSION SYSTEM DATA PANEL (ISDP) REX - INFARED MOTION REQUEST TO EXIT

- ACCESS SYSTEM DATA PANEL (SSDP) - PRESS TO

RELEASE BUTTON

DPS - DOOR POSITION SWITCH

CR - CARD READER - PIEZO SOUNDER ES - ELECTRIC STRIKE KNOX - KNOX BOX

D - DURESS BUTTON G - GLASS

- HORN /

M - 360° MOTION DETECTOR - INTRUSION

M - LINEAR MOTION **DETECTOR** ☐☐ - ALARM SYSTEM

LB - LATCH BOLT MONITOR

- SECURE FLAT SCREEN LOCK