

SALT LAKE CITY - HQ 524 SOUTH 600 EAST SALT LAKE CITY, UT 801.575.8800 VCBO.COM







		REVIATIONS					NOT	ALL ABBREVATIONS
l	&	AND	EJ	EXPANSION JOINT	LAV	LAVATORY	REFG	REFRIGERATOR
	@	AT	ELEC	ELECTRICAL	LB/ LBS	SPOUND (S)	REINF	REINFORCE (ED)
	лст		ELEV		МАТ			
	AD.I	ADJUSTABLE	FQUIP	EQUIPMENT	MAX	MATERIAL (3)	REOD	REQUIRED
	AFF	ABOVE FINISH FLOOR	EVAP	EVAPORATIVE	MDF	MEDIUM DENSITY FIBERBOARD	REV	REVISION (S)
	ALT	ALTERNATE	EXIST	EXISTING	MECH	MECHANICAL	RM	ROOM
	AL/ALU	M ALUMINUM	EXP	EXPANSION	MEMB	MEMBRANE	RO	ROUGH OPENING
	APPRC	X APPROXIMATE	EXT	EXTERIOR	MEZZ	MEZZANINE		
	ARCH	ARCHITECTURAL	EWC	ELECTRIC WATER COOLER	MFR	MANUFACTURER	S	SOUTH
			-		MGR	MANAGER	SALV	SALVAGE (ED)
	BDC						SECT	SECTION
	BLDG				MISC		SIM	SQUARE FOUT
	BO	BOTTOM OF	FE	FIRE EXTINGUISHER	MO	MASONRY OPENING	SINT	SEALANT
	BRG	BEARING	FEC	FIRE EXTINGUISHER CABINET	MTD	MOUNT. (ED)	SPEC	SPECIFICATION (S)
	BSMT	BASEMENT	FG	FINISH GRADE	MTL	METAL	SQ	SQUARE
	BS	BOTH SIDES	FH	FIRE HYDRANT	MW	MICROWAVE	SS	STAINLESS STEEL
	BW	BOTH WAYS					STC	SOUND TRANSMISS
			FIN	FINISHED	N	NORTH	STD	STANDARD
	CAB	CABINET	FLR	FLOOR	NIC	NOT IN CONTRACT	STL	STEEL
	CB		F.O. - ⊏⊤		NO.	NUMBER	STOR	
	CCSA						SIRUC	
	СНАМ	CHAMEER	FRT	FIRE RETARDANT TREATED WOOD	NTS	NOT TO SCALE	SYM	SYMMETRY (ICAL)
	CJ	CONTROL JOINT	FTG	FOOTING	iiiio		0110	
	CL	CENTER LINE	FV	FIELD VERIFY	OC	ON CENTER	Т	THICKNESS
	CLG	CEILING			OD	OUTSIDE DIAMETER	Т&В	TOP AND BOTTOM
	CLR	CLEAR	GA.	GAUGE	OFCI	OWNER FURNISHED/	T & G	TONGUE AND GROO
	CM	CONSTRUCTION MANAGER	GALV	GALVANIZED		CONTRACOR INSTALLED	TBD	TO BE DETERMINED
	COL	COLUMN	GB	GRAB BAR	OFD		TEMP	TEMPORARY
	COMP	COMPUTER	GC		ORC			
	CONC		GFRU				TRANS	
	CMU	CONCRETE MASONRY UNIT	GWB	GYPSUM WALLBOARD	OSB	ORIENTED STRAND BOARD	TS	TUBE STEEL
	CSBA	COLOR SELECTED BY ARCHITECT	02		ΟZ	OUNCE	TYP	TYPICAL
	СТ	CERAMIC TILE	HB	HOSE BIBB				
			HC	HANDICAP ACCESSIBLE	PERI	PERIMETER	UNF	UNFINISHED
	D	DEPTH	HDW	HARDWARE	PERM	PERMENANT	UNO	UNLESS OTHERWIS
	DB	DECK BEARING	HDF	HIGH DENSITY FIBERBOARD	PL	PLATE		
	DBL		НМ					
							VD	
	DIA	DIAMETER	HOI	HORIZONTAL	PR	PAIR	VERT	VERTICAL
	DIM	DIMENSION	ID	INSIDE DIAMETER	PT	POST TENSIONED	VEST	VESTIBULE
	DN	DOWN	ICF	INSULATED CONCRETE FORM	PART	PARTITION	VWC	VINYL WALLCOVERI
	DRN	DRAIN	IN	INCH	PLY	PLYWOOD		
	DTL/ DI	ET DETAIL	INCL	INCLUDE			W	WEST
	DW	DISHWASHER	INFO	INFORMATION	QT	QUARRY TILE	W	WIDTH
	DWG	DRAWING	INT				W/	WITH
	E	EVEL		INSULATE, (D), (ION)				WOOD
	E (F)		IINV	INVERT	REC	REFLECTED CEILING FLAN	W/O	WITHOUT
	EA	EACH	JST	JOIST	REF	REFERENCE	W.O.	WHERE OCCURS
	EIFS	EXTERIOR INSULATION SYSTEM	JT	JOINT			WSCT	WAINSCOT
							WWF	WELDED WIRE FAB

### UTILITY CONTACTS

POWER	WA
Rocky Mountain Power	Sn
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Salt Lake City, UT 84111	Par
888.221.7070	pho
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### NATURAL GAS Dominon Energy Park City, UT 84060

435.649.0670

ATER / SEWER nyderville Basin Water Reclamation District 300 Homestead Road ark City, Utah 84098 none: 435.649.7993 : 435.649.8040

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# PROJECT TEAM

FACILITY
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# VICINITY MAP





- EXCEPT WHERE DIRECTED TO PLACE ITEMS OF WORK AT THE APPROXIMATE LOCATION SHOWN; DO NOT SCALE DRAWINGS FOR DIMENSIONAL INFORMATION. ALL ELEMENTS OF THE DRAWINGS MAY NOT BE DRAWN TO EXACT SCALE. ALL DIMENSIONS REQUIRED ARE SHOWN OR MAY BE DERIVED FROM THOSE SHOWN ON THE FLOOR PLANS, DETAIL PLANS, ELEVATIONS, SECTIONS, DETAILS, SCHEDULES AND SPECIFICATIONS. IF DIMENSIONS ARE NOT PRESENT, THE ARCHITECT IS TO BE NOTIFIED SO THAT A CLARIFICATION CAN BE 5. ISSUED.
- CONTRACTOR TO FOLLOW CURRENT ANSI 117-1 STANDARDS AS REPRESENTED ON SHEET G301, GENERAL ACCESSIBILITY GUIDELINES. NOTIFY ARCHITECT IF THE DESIGN DRAWINGS CONFLICT WITH THIS SHEET.

### NOTES TO BIDDERS

NORTH

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- 1. THIS SHEET CONTAINS A LIST OF DRAWINGS WHICH COMPRISE A FULL SET OF DRAWINGS FOR THIS PROJECT. ANY CONTRACTOR, SUBCONTRACTOR, VENDOR OR ANY OTHER PERSON PARTICIPATING IN OR BIDDING ON THIS PROJECT SHALL BE RESPONSIBLE FOR THE INFORMATION CONTAINED IN ANY AND ALL SHEETS OF DRAWINGS AND SPECIFICATIONS. IF ANY PERSON, PARTY OR ENTITY ELECTS TO SUBMIT BIDS FOR ANY PORTION, OR ALL, OF THIS PROJECT, THAT PERSON, PARTY OR ENTITY SHALL BE RESPONSIBLE FOR ANY AND ALL INFORMATION CONTAINED IN THESE DRAWINGS AND SPECIFICATIONS, INCLUDING, BUT NOT LIMITED TO, ANY SUBSEQUENT ADDENDUMS OR CLARIFICATIONS THAT MAY BE ISSUED.
- 2. THESE DOCUMENTS SHOW THE DESIGN INTENT. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE EVERYTHING SHOWN ON THE DRAWINGS OR SPECIFIED REGARDLESS OF WHERE IT IS SHOWN ON THE DRAWINGS OR IN THE SPECIFICATIONS. FOR EXAMPLE; SOME MILLWORK DETAILS HAVE STEEL FRAMES WHICH MAY BE PROVIDED BY DIVISION 05 OR WITH THE MILLWORK AT THE CONTRACTOR'S DISCRETION, BUT IT SHALL BE PROVIDED AS PART OF THE CONTRACT.
- 3. EVERYTHING CALLED FOR IN THESE DOCUMENTS SHALL BE "NEW" AND PROVIDED BY THE CONTRACTOR, SUBCONTRACTOR, VENDOR OR ANY OTHER PERSON PARTICIPATING IN OR BIDDING ON THIS PROJECT UNLESS NOTED OTHERWISE AS EXISTING (EXIST), NOT IN CONTRACT (NIC) OR FOR REFERENCE ONLY. FURNISHINGS SHOWN DASHED SHALL BE FOR REFERENCE ONLY.

### SHEET INDEX SHEET NUMBER SHEET NAME GENERAL COVER GENERAL INFORMATION AND SHEET INDEX CODE + LIFE SAFETY TYPICAL ANSI ACCESSIBILITY STANDARDS ARCHITECTURAL DEMOLITION AD110 FIRST FLOOR - DEMOLITION PLAN & DEMOLITION RCP

ARCHITECT	
ASIUI	
A110	FIRST FLOOR - SLAB PLAN ANNOTATED & DIMENSION PLAN
A111	FIRST FLOOR - REFLECTED CEILING PLAN & EQUIPMENT PLAN
A112	FIRST FLOOR - FINISH PLAN & INTERIOR ELEVATIONS
A113	FIRST FLOOR - EQUIPMENT PLAN
A401	INTERIOR ELEVATIONS
A402	INTERIOR ELEVATIONS
A520	TYPICAL INTERIOR FRAMING DETAILS
A521	RADIATION SHIELDING DETAILS
A540	CEILING DETAILS
A570	TYPICAL MILLWORK + FINISH DETAILS
A600	DOOR SCHEDULE
STRUCTUR	
S-001	GENERAL STRUCTURAL NOTES
S-101	
S-102 S 102	
3-103	STRUCTURAL DETAILS
MECHANICA	41
M000	
M001	MECHANICAL GENERAL NOTES
M101	LEVEL 1 HVAC PLAN
M111	LEVEL 1 MECHANICAL PIPING PLAN
M501	MECHANICAL DETAILS
M601	MECHANICAL SCHEDULES
P000 D101	
MEDICAL G	AS
MG101	LEVEL 1 MEDICAL GAS PLAN
FIRE PROTE	ECTION
F001	FIRE PROTECTION TITLE SHEET
F101	LEVEL 1 FIRE PROTECTION PLAN
ELECTRICA	
EE001	SHEET INDEX, ABBREVIATIONS AND GENERAL NOTES
EE002	SYMBOL LEGENDS
EE003	
EE501	ELECTRICAL DETAILS
EE502	GE DRAWINGS
EE503	
EP101_1	FIRST FLOOR - POWER PLAN
EP551	
EP601	ONE-LINE DIAGRAMS
EP651	TELECOM RISER DIAGRAMS
EL101	FIRST FLOOR - LIGHTING PLAN
EL601	INTERIOR LIGHTING FIXTURE SCHEDULE
EL602	LIGHTING CONTROL SCHEDULES
EY101	FIRST FLOOR - AUXILIARY PLAN
EY601	AUXILIARY DIAGRAMS & DETAILS
FA101	FIRST FLOOR - FIRE ALARM PLAN

Grand total: 52



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GENERAL INFORMATION AND SHEET INDEX





### DESIGN DATA

### GOVERNING BUILDING CODES: IBC 2021, ANSI 117-1 2017, IECC 2021, IMC 2021, IPC2021, NEC 2020

### OCCUPANCY TYPE - (CH.3) INSTITUTIONAL I-2 - CONDITION 2 (308.3.1.2)

- CONSTRUCTION TYPE: PER TABLE 506.2: I-B
- FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (TBL 601) STRUCTURAL FRAME (INCLUDES COL, GIRDERS, TRUSSES) BEARING WALLS EXTERIOR
- INTERIOR INTERIOR SUPPORTING ROOF ONLY NON-BEARING WALLS AND PARTITION
- FLOOR CONSTRUCTION INCLUDING BEAMS AND JOISTS • ROOF CONSTRUCTION INCLUDING BEAMS AND JOISTS
- UL ASSEMBLIES TO BE AS FOLLOWS FOR RATING LISTED ABOVE: ALL WIDE FLANGE STEEL COLUMNS: UL X772
- ALL TUBE STEEL COLUMNS: UL X771 FLOOR SYSTEM: UL D888
- ROOF SYSTEM: UL P701 • SHAFT WALLS: UL U415 •
- METAL STUD WALLS: U419 SLAB PERIMETER FIRE STOP 2 HOUR PER ENGINEERING JUDGEMENTS •
- FLOOR EXPANSION JOINT 2 HOUR RATED • TOP OF RATED WALLS: HW-D-0042
- AUTOMATIC SPRINKLER SYSTEM: EXISTING SYSTEM PROVIDE SYSTEM PER IBC 903 AND NFPA 13
- EGRESS WIDTH FOR OCCUPANCY SERVED PER 1005 - STAIRS: 0.3 IN / OCC. (44" MINIMUM WIDTH)
- OTHER EGRESS: 0.2 IN / OCC. (44" MINIMUM CORRIDOR WIDTH)
- EXIT ACCESS (CH. 10)
- 2 EXITS REQUIRED (CH. 1016.1) · WHERE THE OCCUPANCY LOAD TOTALS MORE THAN 50
- EXITS PLACED FAR ENOUGH APART NOT LESS THAT 1/3 MAXIMUM DIAGONAL DIMENSION OF AREA SERVED - MEASURED STRAIGHT LINE BETWEEN EXITS
- TRAVEL DISTANCE: (TABLE 1017.2) · WITH SPRINKLER SYSTEM - 200' MAXIMUM LENGTH OF EXIT ACCESS TRAVEL

### COMMON PATH OF EGRESS TRAVEL - (TABLE 1006.2.1) · (UNTIL 2 EXITS BECOME OBVIOUS) 75 FEET

- CORRIDOR FIRE RESISTANCE RATING (TABLE 1020.2) WITH SPRINKLER SYSTEM - 0 HOUR FIRE RATED CONSTRUCTION
- DEAD ENDS (1020.5) · 20' IN SPRINKLERED BUILDING
- INTERIOR WALL & CEILING FINISH REQUIREMENTS (CH. 8 TABLE 803.13)
- IN SPRINKLERED BUILDING : · EXIT ENCLOSURES AND EXIT PASSAGEWAYS - CLASS B · CORRIDORS AND OTHER EXIT WAYS - CLASS B
- · ROOMS AND ENCLOSED SPACES CLASS B
- INTERIOR FLOORS FINISH (PER 804), IN SPRINKLERED BUILDING - CLASS I & II

### **GOVERNING BUILDING CODES:** NFPA 101 LIFE SAFETY 2018

- OCCUPANCY TYPE (SEE PLANS FOR LOCATION) (CH.19) EXISTING HEALTHCARE OCCUPANCIES
- TRAVEL DISTANCE (19.2.6) ROOM DOOR TO EXIT NOT TO EXCEED 100 FT
- ANY POINT IN ROOM TO EXIT NOT TO EXCEED 150 FT
- SUBDIVISION OF BUILDING SPACE (NFPA 2018 2019.3.7)
- SEPARATION WALLS - 1 HOUR • DOORS - SELF CLOSING - 20 MINUTE •
- SMOKE COMPARTMENTS NOT TO EXCEED 22,500 AND TRAVEL DISTANCE • FROM ANY POINT TO REACH DOOR IN SMOKE BARRIER SHALL NOT EXCEED 200 FT (20.3.7.3)

### FIRE AND LIFE SAFETY LEGEND

 EXISTING SMOKE BARRIER - WITH SMOKE PROTECTED CONSTRUTION AND 20 MINUTE OPENINGS (IBC 708)
 EXISTING 1 HOUR FIRE BARRIER - WALL CONSTRUCTIO
 EXISTING 2 HOUR FIRE BARRIER - WALL CONSTRUCTIO
 EXISTING 2 HOUR FIRE WALL - CONSTRUCTION (IBC 70
 PATH OF TRAVEL TO EXIT PER IBC TBL 1016.2



EXISTING ONE HOUR RATED ENCLOSURE, WALLS PER UL U419 EXISTING ONE HOUR RATED SHAFT ENCLOSURE, WALLS PER UL U415 EXISTING TWO HOUR RATED SHAFT ENCLOSURE

# A4 FIRST FLOOR OVERALL- LIFE SAFTEY PLAN SCALE: 1/16" = 1'-0"





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TION (IBC 707) TION (IBC 707)

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CODE + LIFE SAFETY









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SCALE: 1/4" = 1'-0"

SCALE: 1/4" = 1'-0"

### **KEYED NOTES**

2-608.1	EXISTING CABINET, REMOVE & DISPOSE IN ITS ENTIRETY
2-801.2	EXISTING DOOR AND FRAME, REMOVE DOOR ONLY & DISPOSE AS SHO
2-802.1	EXISTING HOLLOW METAL FRAME, REMOVE & DISPOSE IN ITS ENTIRE
2-901.2	EXISTING NON-STRUCTURAL METAL FRAMED WALL ASSEMBLY, REMO AS SHOWN
2-912	EXISTING CEILING SYSTEM, PROTECT AS NECESSARY, REPAIR AS REC
2-912.1	EXISTING CEILING SYSTEM, REMOVE & DISPOSE IN ITS ENTIRETY
2-912.3	EXISTING GYPSUM CEILING BOARD SYSTEM, PROTECT AS NECESSAR REQUIRED
2-912.4	EXISTING GYPSUM CEILING BOARD SYSTEM, REMOVE & DISPOSE IN IT
2-1009.1	EXISTING GRAB BAR, REMOVE & DISPOSE IN ITS ENTIRETY
2-2201.1	EXISTING SINK + FAUCET, REMOVE & DISPOSE IN ITS ENTIRETY
2-2202.1	EXISTING WATER CLOSET, REMOVE & DISPOSE IN ITS ENTIRETY

## DEMOLITION LEGEND

 REMOVE & DISPOSE ELEMENT
REMOVE & DISPOSE FLOORING AND CEILING THIS AREA (SEE DEMO PLANS)
REMOVE & DISPOSE FLOORING (ONLY) IN THI AREA (SEE DEMO PLANS)
AREA NOT IN CONTRACT

# GENERAL DEMOLITION NOTES

- 1. FIELD VERIFY CONDITIONS PRIOR TO BIDDING. BRING DIFFERING DIMENSIONS AND CONDITIONS TO ARCHITECT'S ATTENTION PRIOR TO BIDDING. 2. A HAZARDOUS MATERIAL SURVEY IS AVAILABLE FROM THE OWNER.
- ABATEMENT MUST BE COMPLETED PRIOR TO DEMOLITION OF BUILDINGS OR BUILDING ELEMENTS. 3. COORDINATION WITH OWNER'S INFECTION CONTROL SPECIALIST AND AN APPROVED ICRA MANAGEMENT PLAN IS REQUIRED PRIOR TO START OF ANY
- DEMOLITION WORK. 4. PROVIDE DUSTPROOF ENCLOSURES AT PERIMETER OF CONSTRUCTION &
- DEMOLITION FOR PROTECTION OF ADJACENT SPACES AS PER ICRA PLAN. COORDINATE MAINTENANCE OF FIRE EGRESS FOR OCCUPANTS IN EXISTING BUILDING WITH THE OWNER AND FIRE MARSHAL. PROVIDE NECESSARY TEMPORARY WALLS OR ENCLOSURES, EMERGENCY LIGHTS, ETC., FOR THE DURATION OF CONSTRUCTION.
- 6. BRING TO ARCHITECT'S ATTENTION EXISTING CONDITIONS THAT PRESENT ANY CODE VIOLATIONS, INCORRECT CONSTRUCTION OR SAFETY PROBLEMS.
- 7. MAINTAIN EXISTING FIRE RATINGS, ABOVE CEILING MARKING REQUIREMENTS AND ASSOCIATED FIRE PROTECTION SYSTEMS (I.E. FIRE SPRINKLERS AND FIRE ALARM SYSTEMS) THROUGHOUT CONSTRUCTION. COORDINATE ANY INTERRUPTION TO THESE SYSTEMS WITH THE OWNER AND FIRE MARSHAL. PROVIDE FIRE WATCH REQUIREMENTS ASSOCIATED WITH INTERRUPTIONS TO THESE SYSTEMS.
- 8. DO NOT DISTURB EXISTING FIRE RATED ELEMENTS INCLUDING FIREPROOFING ON BUILDING STRUCTURE. PATCH/REPAIR DAMAGED OR DISTURBED ITEMS.
- 9. PROTECT EXISTING STRUCTURE, FINISHES, AND SITE ELEMENTS NOT SCHEDULED FOR DEMOLITION. RESTORE DAMAGED ITEMS TO THEIR ORIGINAL
- CONDITION OR REPLACE AT CONTRACTOR'S EXPENSE. 10. REMOVE AND DISPOSE SELECTIVE DEMOLITION MATERIAL PER LOCAL REQUIREMENTS.
- 11. SALVAGE MATERIAL WHERE INDICATED. REMOVE ITEMS FROM CURRENT LOCATIONS & PREPARE FOR STORAGE BY THE OWNER.
- 12. REFER TO ELECTRICAL AND MECHANICAL PLANS FOR REQUIRED ADDITIONAL DEMOLITION.
- 13. AFTER DEMOLITION, PRIOR TO FINISH, PATCH AND REPAIR EXISTING WALLS TO PROVIDE SURFACE SUITABLE FOR PAINTING OR WALL COVERING.
- 14. PATCH & LEVEL EXISTING CONCRETE SLABS FOR NEW FINISHES WITH FLOOR LEVELING COMPOUND.
- 15. FIELD VERIFY AND COORDINATE SAW CUTTING OF THE CONCRETE FLOOR SLAB WITH PLUMBING AND ELECTRICAL.
- 16. REPLACE SLAB AND TRENCH BY COMPACTING CLEAN GRAVEL IN 8 INCH LIFTS. DRILL #4 EPOXY-COATED REBAR INTO EXISTING SLAB @ 12 INCHES OC. POUR SLAB TO PROVIDE A SMOOTH EVEN FLOOR.
- 17. WHERE ELECTRICAL CIRCUIT CONTINUITY IS INTERRUPTED, BUT MUST BE MAINTAINED, MAKE NECESSARY MODIFICATIONS TO MAINTAIN CIRCUIT INTEGRITY.
- REQUIRED. 19. CAP EXISTING DUCT WORK FOR DUST CONTROL .
- 20. CONTRACTOR IS TO COORDINATE ALL DEMOLITION AND CONSTRUCTION ACTIVITIES WITH THE ONGOING OPERATIONS OF AN ACTIVE AND ONGOING CLINIC. AFTER HOURS OR WEEKEND WORK SHALL BE EMPLOYED TO AVOID ADVERSE IMPACTS TO TENAT EMPLOYEES. CONTRACTOR TO SCHEDULE WORK AND COORDINATE ANY UTILITY SHUT OFFS OR INTERRUPTIONS WITH BUILDING OWNER 2 WEEKS PRIOR TO OCCURRENCE.
- 21. SAWCUT EXISTING SLAB AS REQUIRED FOR NEW PLUMBING AND ELECTRICAL. COORDINATE WITH PLUMBING AND ELECTRICAL DRAWINGS FOR EXACT LOCATION.

KEY PLAN



IOWN OVE & DISPOSE EQUIRED RY, REPAIR AS ITS ENTIRETY

) IN

18. REMOVE ELECTRICAL BOXES BEHIND RELOCATED MILLWORK AND CAP AS



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FIRST FLOOR - DEMOLITION PLAN & DEMOLITION RCP

AD110

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OVERALL SITE PLAN





A3 FIRST FLOOR - OVERALL PLAN SCALE: 3/64" = 1'-0"







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OVERALL PLAN - FIRST FLOOR







CT PROCEDURE - ANNOTATED & DIMENSION NORTH A3 PLAN SCALE: 1/4" = 1'-0"

# PLAN NOTES

- 1. IT IS BEYOND THE SCOPE OF THIS DRAWING TO SHOW ALL DETAIL AND ASPECTS OF EXISTING CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS AND DETERMINE THE EXACT AMOUNT OF DEMOLITION NECESSARY FOR IMPLEMENTING THE WORK AS SHOWN IN THE CONSTRUCTION DOCUMENTS. 2. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO PROTECT ANY AND ALL ITEMS TO REMAIN, REPAIR OR REPLACE SUCH ITEMS SHOULD THEY BE DAMAGED BY THE CONTRACTOR. 3. CONTRACTOR TO PROTECT EXISTING SITE, PARKING, BUILDING WALLS, STOREFRONT
- AND ROOF FROM ANY DAMAGE.
- 4. CONTRACTOR TO MAINTAIN PROTECTED EGRESS FOR STAFF AND VISITORS. 5. WHERE FLOOR DRAINS ARE INSTALLED, THE FLOOR IS NOT TO SLOPE TOWARD THE DRAIN (REMAINS FLAT) EXCEPT AT THE FOLLOWING LOCATIONS: A. THICK SET TILE LOCATED IN CONJUCTION WITH SHOWERS. B. FLOORS NOT TILED AT SLAB-ON-GRADE LOCATIONS (SUCH AS MECHANICAL
- ROOMS) WHERE FLOORS SLOPE, THE MAXIMUM FLOOR SLOPE IS NOT TO EXCEED 2% WHILE THE MINIMUM SLOPE IS NOT TO BE LESS THAN 1%, UNLESS NOTED OTHERWISE WHERE CONCRETE PADS ARE CALLED TO BE CONSTRUCTED UNDER EQUIPMENT, THE
- SLAB IS TO BE 8" THICK, U.N.O., AND IS TO HAVE #4 BARS AT 18" O.C. EACH WAY. COORDINATE DIMENSIONS OF PAD WITH ACTUAL EQUIPMENT INSTALLED. 7. AN ELECTRICAL SIGN OFF/APPROVAL IS REQUIRED DURING FRAMING BY ARCHITECT &
- OWNER OF ALL POWER/DATA/CABLE LOCATIONS PRIOR TO ROUGH-IN. 8. AT ALL ELECTRICAL HOME RUN CIRCUITS ADD A J-BOX IN AN ACCESSIBLE
- LOCATION ABOVE THE CEILING PRIOR TO BRANCHING. 9. THE CONTRACTOR IS TO ENSURE THAT BETWEEN ANY FINISH FLOOR ELEVATION TO 42" A.F.F., GUARDRAILS ARE TO BE CONSTRUCTED AND INSTALLED SO THAT A 4"
- BETWEEN THE EDGE OF A GUARDRAIL AND ALL ADJACENT BUILDING ELEMENT SUCH AS A WALL OR FLOOR. AN 8" DIAMETER SPHERE IS NOT TO PASS BETWEEN THE ABOVE MENTIONED COMPONENTS AND ELEMENTS FROM AN ELEVATION 34" A.F.F. AND HIGHER.
- 10. SEE SHEET A500 FOR WALL TYPES AND TYPICAL NOTES.
- 11. REFER TO SHEET A520 FOR TYPICAL INTERIOR WALL CONDITIONS ASSOCIATED WITH METAL STUD PARTITIONS.
- 12. SEE DETAIL ON SHEET A520 FOR TYPICAL FIRE EXTINGUISHER CABINET INSTALLATION DETAILS.
- 13. PROVIDE CONTROL JOINTS IN METAL FRAMED WALLS AT 30 FEET ON CENTER MAXIUMUM. LOCATE AT CORNER ABOVE DOORS OR INSIDE CORNER OF PILASTERS OR OTHER INCONSPICUOUS LOCATION WHERE POSSIBLE. CONSULT WITH ARCHITECT PRIOR TO COMMENCING FRAMING. INSTALL PER DETAILS ON SHEET A520 FOR CONTROL JOINTS.
- 14. CONSTRUCT ALL COLUMN WRAPS PER DETAILS A521 & A521, UNLESS NOTED OTHERWISE.
- 15. PROVIDE BLOCKING / BACKING FOR ALL WALL MOUNTED EQUIPMENT. SEE FLOOR PLANS AND INTERIOR ELEVATIONS FOR CABINETS, GRAB BARS ETC. INSTALL BLOCKING AS DETAILED OR AS REQUIRED TO MOUNT SUCH DEVICES. INSTALL PER SHEET A520.
- 16. SEE SHEET A601.2 & A601.3 FOR DOOR AND WINDOW TYPES AND NOTES.

# **KEYED NOTES**

2200.4 SINK (LAVATORY) + FAUCET, WALL HUNG



SPHERE WILL NOT PASS BETWEEN ANY TWO ADJACENT GUARDRAIL COMPONENTS OR



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C3 CT PROCEDURE - REFLECTED CEILING PLAN SCALE: 1/4" = 1'-0"

### **CEILING LEGEND**

A-	SUSPENDED 2' X 2' ACOUSTICAL LAY-IN TILE CEI
B-	SUSPENDED 2' X 4' ACOUSTICAL LAY-IN TILE CEI
C-	SUSPENDED 5/8" GYP. BD. CEILING SYSTEM - (1
D-	OPEN TO STRUCTURE ABOVE, PAINTED
E-	SUSPENDED 2' X 4' SOIL RESISTANT / WASHABLE LAY-IN TILE CEILING
F-	SUSPENDED 5/8" GYP. BD. CEILING SYSTEM W/ 1

### **CEILING SYMBOLS**

ELECTRICAL	
	2'X4' LED FIXTURE
	2'X2' LED FIXTURE
	LED LINEAR FIXTURE
0	RECESSED CAN LIGHT
$\Diamond$	WALL WASH
$\bigotimes$	EXIT SIGN, SINGLE-SIDED
	EXIT SIGN, DOUBLE-SIDED
F	FIRE ALARM
S	SPEAKER
P	SMOKE DETECTOR
MECHANICAL	
$\boxtimes$	SUPPLY GRILLE
	RETURN GRILLE
	EXHAUST GRILLE
	LINEAR DIFFUSER
<del>&amp;</del>	SPRINKLER HEAD - CEILING MOUNT
<b>\_</b>	SPRINKLER HEAD - WALL MOUNT
	ACCESS PANEL

### GENERAL CEILING NOTES

- 1. GRID SUSPENSION SYSTEMS SHALL BE CENTERED WITHIN AREAS INDICATED, UNLESS NOTED OTHERWISE
- 2. PAINT ALL EXPOSED STRUCTURE, MECHANICAL, DUCTS, ELECTRICAL WORK, PIPING,
- ETC. 3. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF MECHANICAL GRILLES,
- AND TO MECHANICAL DRAWINGS FOR QUANTITIES AND TYPES 4. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF LIGHT FIXTURES AND TO
- ELECTRICAL DRAWINGS FOR QUANTITY AND TYPES 5. MECHANICAL AND ELECTRICAL CONTRACTORS TO COORDINATE WORK WITH
- SPRINKLER CONTRACTOR TO AVOID CONFLICTS IN FIELD
- 6. ALL CEILING HEIGHTS ARE ELEVATION ABOVE TOP OF CONCRETE FLOOR SLAB 7. ALL GYPSUM BOARD TYPE C CEILINGS IN RESTROOMS, LOCKER ROOMS, SHOWERS,
- AND WET AREAS TO BE EPOXY PAINTED 8. SEE SHEET A540 FOR TYPICAL CEILING DETAILS







CEILING CAMERA SUPPORT DETAIL (CT SCAN) SCALE: 1 1/2" = 1'-0"

EILING

EILING

1 LAYER) PAINTED

LE ACOUSTICAL

// 1/32" LEAD



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KEY - FINISH							
Key Name	Finish - Description	Finish - Manufacturer	Finish - Name	Finish - Color	Finish - Comments		
FLOOR							
F1	HOMOGENOUS SHEET - FIELD	MANNINGTON COMMERCIAL	BIOSPEC MD	FLAX 15361			
F2	HOMOGENOUS SHEET - ACCENT	MANNINGTON COMMERCIAL	BIOSPEC MD	BEDROCK 15369			
F3	FLOOR TILE - RESTROOMS	CROSSVILLE STUDIOS	NOTORIOUS	NTR01 FEMME FATAL	12"X24"		
BASE							
B1	INTEGRAL BASE	MATCH FLOORING SPECIFIED	MATCH FLOORING SPECIFIED	MATCH FLOORING SPECIFIED	4" INTEGRAL BASE W/ METAL CAP, INCLUDE COVE STICK, REFER TO TYPICAL BASE DETAILS		
B2	BASE - RESTROOMS	SCHLUTER	DILEX-AHK	CLEAR ANODIZED ALUMINUM	PROVIDE END CAPS WHERE NEEDED, MITER ALL INSIDE AND OUTSIDE CORNERS		
PAINT		•		·			
P1	PAINT - GENERAL	SHERWIN WILLIAMS		SW7043 WORLDLY GRAY			
P2	PAINT - ACCENT	SHERWIN WILLIAMS		SW6227 MEDITATIVE			
P3	PAINT - DOOR FRAME	SHERWIN WILLIAMS		MATCH EXISTING			
SURFACE							
S1	PLASTIC LAMINATE	WILSONART	STANDARD HPL	PHANTOM COCOA 8213	28 GLOSS LINE TEXTURE, GENERAL VERTICAL SURFACES U.N.O.		
S2	SOLID SURFACE	HI-MACS		LUNAR SAND			
MISCELLANE	EOUS			1			
CG-1	CORNER GUARD 90 DEGREE	INPRO	G2-160R BIOBLEND RETAINER HIGH IMPACT	0103 WHITE SAND	4'-0"H, 2" WING, SURFACE MOUNTED PVC FREE		
CL-1	CEILING TILE - GENERAL	USG CEILINGS	RADAR BASIC ILLUSION TWO/24	WHITE	2'-0"X4'-0"		
WG-1	SHEET WALL PROTECTION	INPRO	PALLADIUM RIGID SHEET, G2 405	0103 WHITE SAND	.040" THICK, ALUMINUM TRIM TOP CAP		
WT-1	WALL TILE - RESTROOMS	CROSSVILLE STUDIOS	NOTORIOUS	NTR01 FEMME FATAL	12"X24", HORIZONTAL STACK UP TO 6'-0"H, PAINT ABOVE. CAP WITH SCHLUTER JOLLY TRIM IN CLEAR ANODIZED ALUMINUM		





SCALE: 1/4" = 1'-0"

## FINISH PLAN SYMBOLS

F



	FINISH INFORMATION
F-	SINGLE FLOOR FINISH SYMBOLS INDICATE WHERE FINISHI DIFFERENT FROM GENERAL ROOM FINISHES, OR PROVIDE FINISH INFORMATION
$\bigcirc$	CHANGE AT FLOOR MATERIAL
XXXX	SIGNAGE TAG- SEE SIGNAGE SHEETS FOR DETAILS

### ARCHITECTURAL MILLWORK KEY

SHES ARE IDE ADDITIONAL





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FIRST FLOOR - FINISH PLAN & INTERIOR ELEVATIONS

A112 12/14/2023 11:41:05 AM





A4 IMAGING - EQUIPMENT & FURNITURE PLAN SCALE: 1/4" = 1'-0"

# PLAN NOTES

- 1. IT IS BEYOND THE SCOPE OF THIS DRAWING TO SHOW ALL DETAIL AND ASPECTS OF EXISTING CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS AND DETERMINE THE EXACT AMOUNT OF DEMOLITION NECESSARY FOR IMPLEMENTING THE WORK AS SHOWN IN THE CONSTRUCTION DOCUMENTS. SPENSER, PAPER TOWELS, FOLDED
- 2. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO PROTECT ANY AND ALL ITEMS TO REMAIN, REPAIR OR REPLACE SUCH ITEMS SHOULD THEY BE DAMAGED BY THE CONTRACTOR.
- CONTRACTOR TO PROTECT EXISTING SITE, PARKING, BUILDING WALLS, STOREFRONT AND ROOF FROM ANY DAMAGE.
- 4. CONTRACTOR TO MAINTAIN PROTECTED EGRESS FOR STAFF AND VISITORS.
- 5. WHERE FLOOR DRAINS ARE INSTALLED, THE FLOOR IS NOT TO SLOPE TOWARD THE DRAIN (REMAINS FLAT) EXCEPT AT THE FOLLOWING LOCATIONS: A. THICK SET TILE LOCATED IN CONJUCTION WITH SHOWERS. B. FLOORS NOT TILED AT SLAB-ON-GRADE LOCATIONS (SUCH AS MECHANICAL ROOMS) WHERE FLOORS SLOPE, THE MAXIMUM FLOOR SLOPE IS NOT TO EXCEED 2% WHILE
- THE MINIMUM SLOPE IS NOT TO BE LESS THAN 1%, UNLESS NOTED OTHERWISE WHERE CONCRETE PADS ARE CALLED TO BE CONSTRUCTED UNDER EQUIPMENT, THE 6. SLAB IS TO BE 8" THICK, U.N.O., AND IS TO HAVE #4 BARS AT 18" O.C. EACH WAY.
- COORDINATE DIMENSIONS OF PAD WITH ACTUAL EQUIPMENT INSTALLED. 7. AN ELECTRICAL SIGN OFF/APPROVAL IS REQUIRED DURING FRAMING BY ARCHITECT &
- OWNER OF ALL POWER/DATA/CABLE LOCATIONS PRIOR TO ROUGH-IN. 8. AT ALL ELECTRICAL HOME RUN CIRCUITS ADD A J-BOX IN AN ACCESSIBLE
- LOCATION ABOVE THE CEILING PRIOR TO BRANCHING. 9. THE CONTRACTOR IS TO ENSURE THAT BETWEEN ANY FINISH FLOOR ELEVATION TO 42" A.F.F., GUARDRAILS ARE TO BE CONSTRUCTED AND INSTALLED SO THAT A 4" SPHERE WILL NOT PASS BETWEEN ANY TWO ADJACENT GUARDRAIL COMPONENTS OR BETWEEN THE EDGE OF A GUARDRAIL AND ALL ADJACENT BUILDING ELEMENT SUCH AS A WALL OR FLOOR. AN 8" DIAMETER SPHERE IS NOT TO PASS BETWEEN THE ABOVE MENTIONED COMPONENTS AND ELEMENTS FROM AN ELEVATION 34" A.F.F. AND HIGHER.
- 10. SEE SHEET A500 FOR WALL TYPES AND TYPICAL NOTES.
- 11. REFER TO SHEET A520 FOR TYPICAL INTERIOR WALL CONDITIONS ASSOCIATED WITH METAL STUD PARTITIONS.
- 12. SEE DETAIL ON SHEET A520 FOR TYPICAL FIRE EXTINGUISHER CABINET INSTALLATION DETAILS.
- 13. PROVIDE CONTROL JOINTS IN METAL FRAMED WALLS AT 30 FEET ON CENTER MAXIUMUM. LOCATE AT CORNER ABOVE DOORS OR INSIDE CORNER OF PILASTERS OR OTHER INCONSPICUOUS LOCATION WHERE POSSIBLE. CONSULT WITH ARCHITECT PRIOR TO COMMENCING FRAMING. INSTALL PER DETAILS ON SHEET A520 FOR CONTROL JOINTS.
- 14. CONSTRUCT ALL COLUMN WRAPS PER DETAILS A521 & A521, UNLESS NOTED OTHERWISE.
- 15. PROVIDE BLOCKING / BACKING FOR ALL WALL MOUNTED EQUIPMENT. SEE FLOOR PLANS AND INTERIOR ELEVATIONS FOR CABINETS, GRAB BARS ETC. INSTALL BLOCKING AS DETAILED OR AS REQUIRED TO MOUNT SUCH DEVICES. INSTALL PER SHEET A520.
- 16. SEE SHEET A601.2 & A601.3 FOR DOOR AND WINDOW TYPES AND NOTES.

**KEYED NOTES** 

![](_page_10_Picture_34.jpeg)

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![](_page_10_Picture_36.jpeg)

REV DATE DESCRIPTION

![](_page_10_Figure_39.jpeg)

![](_page_10_Picture_40.jpeg)

![](_page_11_Figure_0.jpeg)

	KEY - FINISH							
Key Name	Finish - Description	Finish - Manufacturer	Finish - Name	Finish - Color	Finish - Comments			
FLOOR								
F1	HOMOGENOUS SHEET - FIELD	MANNINGTON COMMERCIAL	BIOSPEC MD	FLAX 15361				
F2	HOMOGENOUS SHEET - ACCENT	MANNINGTON COMMERCIAL	BIOSPEC MD	BEDROCK 15369				
F3	FLOOR TILE - RESTROOMS	CROSSVILLE STUDIOS	NOTORIOUS	NTR01 FEMME FATAL	12"X24"			
BASE								
B1	INTEGRAL BASE	MATCH FLOORING SPECIFIED	MATCH FLOORING SPECIFIED	MATCH FLOORING SPECIFIED	4" INTEGRAL BASE W/ METAL CAP, INCLUDE COVE STICK, REFER TO TYPICAL BASE DETAILS			
B2	BASE - RESTROOMS	SCHLUTER	DILEX-AHK	CLEAR ANODIZED ALUMINUM	PROVIDE END CAPS WHERE NEEDED, MITER ALL INSIDE AND OUTSIDE CORNERS			
PAINT								
P1	PAINT - GENERAL	SHERWIN WILLIAMS		SW7043 WORLDLY GRAY				
P2	PAINT - ACCENT	SHERWIN WILLIAMS		SW6227 MEDITATIVE				
P3	PAINT - DOOR FRAME	SHERWIN WILLIAMS		MATCH EXISTING				
SURFACE								
S1	PLASTIC LAMINATE	WILSONART	STANDARD HPL	PHANTOM COCOA 8213	28 GLOSS LINE TEXTURE, GENERAL VERTICAL SURFACES U.N.O.			
S2	SOLID SURFACE	HI-MACS		LUNAR SAND				
MISCELLANE	EOUS			·	· · · ·			
CG-1	CORNER GUARD 90 DEGREE	INPRO	G2-160R BIOBLEND RETAINER HIGH IMPACT	0103 WHITE SAND	4'-0"H, 2" WING, SURFACE MOUNTED PVC FREE			
CL-1	CEILING TILE - GENERAL	USG CEILINGS	RADAR BASIC ILLUSION TWO/24	WHITE	2'-0"X4'-0"			
WG-1	SHEET WALL PROTECTION	INPRO	PALLADIUM RIGID SHEET, G2 405	0103 WHITE SAND	.040" THICK, ALUMINUM TRIM TOP CAP			
WT-1	WALL TILE - RESTROOMS	CROSSVILLE STUDIOS	NOTORIOUS	NTR01 FEMME FATAL	12"X24", HORIZONTAL STACK UP TO 6'-0"H, PAINT ABOVE. CAP WITH SCHLUTER JOLLY TRIM IN CLEAR ANODIZED ALUMINUM			

![](_page_11_Figure_2.jpeg)

![](_page_11_Figure_3.jpeg)

2.	TYPICAL PLAN VIEW BASE CABINETS, PER DETAILS A6 & B6/A570
3.	TYPICAL PLAN VIEW BASE END PANEL PER DETAIL D6/A570
4.	PROVIDE TYPICAL TOE KICK AND BASE FRAMING PER DETAIL E6/A570
5.	PROVIDE TYPICAL PLASTIC LAMINATE CABINET DETAILS ON SHEET AS
	INTERIOR ELEVATION SHEETS (A400'S)
6.	TYPICAL ADJUSTABLE HEIGHT SHELVES PER DETAIL D5/A570.
7.	TYPICAL SOLID SURFACE COUNTERTOP WORK SURFACE, PER DETAIL
8.	TYPICAL SOLID SURFACE CABINET WITH PASS THRU RING & FULL DOO
9.	TYPICAL SOLID SURFACE CABINET WITH FULL DOOR(S), PER DETAIL C6
10.	TYPICAL SOLID SURFACE BASE CABINET WITH FILE DRAWERS, PER DE
11.	SOLID SURFACE BASE CABINET WITH DRAWER(S), PER DETAIL B5 /A571
12.	TYPICAL SOLID SURFACE SINK BASE CABINET WITH LOCK & DOOR(S), F
13.	TYPICAL SOLID SURFACE BASE CABINET WITH DOOR(S) AND DRAWER,

![](_page_11_Figure_5.jpeg)

![](_page_11_Figure_6.jpeg)

### EQUIPMENT & ACCESSORIES **NOTES**

1) CONTRACTOR TO PROVIDE REQUIRED WALL BACKING FOR WALL MOUNTED EQUIPMENT AND/OR ACCESSORIES. 2) CONTRACTOR TO VERIFY MANUFACTURER'S REQUIREMENTS FOR FLOOR / WALL / CEILING MOUNTED EQUIPMENT AND/OR ACCESSORIES. NOTIFY ARCHITECT WITH ANY DISCREPANCIES.

### ACCESSORY (IF NOTED) ONE ADJUSTABLE SHELF ONE DRAWER BASE CABINET \*

ACCESSORY (IF NOTED) ONE ADJUSTABLE SHELF ZERO DRAWERS WALL CABINET \*

ACCESSORY (IF NOTED) FIVE ADJUSTABLE SHELVES ZERO DRAWERS TALL CABINET \*

A570 AS NOTED ON THE

\_ D6/A571 OR(S), PER DETAIL C5/A571 6/A571 ETAIL B6/A571 1, B3/A571 , PER DETAIL A5/A571 R, PER DETAIL A6/A571.

LIGHTING (MEDICAL) LS LASER SURGERY MÁCHINE MU MULTIFUNCTION MACHINE OP OPHTALMOLOGY EQUIPMENT OT OTOLARYNGOLOGY EQUIPMENT

RT RESPIRATORY TEST EQUIPMENT

![](_page_11_Picture_25.jpeg)

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![](_page_11_Picture_27.jpeg)

REV DATE DESCRIPTION

![](_page_11_Figure_30.jpeg)

INTERIOR ELEVATIONS TYP. MOUNTING HEIGHTS

![](_page_11_Picture_32.jpeg)

![](_page_12_Figure_0.jpeg)

![](_page_12_Figure_1.jpeg)

![](_page_12_Figure_2.jpeg)

# A3 CT PROCEDURE 1386 - EAST SCALE: 1/2" = 1'-0"

# INTERIOR ELEVATION GENERAL NOTES

- 1. REFER TO SHEET A410 FOR MILLWORK LEGEND AND TYPICAL MILLWORK NOTES; A111 FOR FINISH SCHEDULE & GENERAL FINISH NOTES; A1XX.5 EQUIPMENT PLANS (MULTIPLE SHEETS) FOR ALL EQUIPMENT TYPE AND LOCATIONS.
- 2. FLOOR BASE IS REQUIRED IN EVERY ROOM AND CORRIDOR AS WELL AS AT ALL CASEWORK BASES, U.N.O. 3. END PANELS AND FILLER PANELS (AS NEEDED) ARE REQUIRED AT
- EVERY WALL, BASE AND TALL CASEWORK INSTALLATION, WHETHER SHOWN IN THE ELEVATIONS OR NOT PER DETAILS ON SHEET A570. BLOCKING IS REQUIRED FOR ALL WALL MOUNTED EQUIPMENT AND MEDICAL ACCESSORIES. COORDINATE FINAL LOCATIONS WITH OWNER
- AND ARCHITECT. 5. COUNTERTOPS ARE TO BE SUPPORTED EVERY 48" BY MILLWORK OR BRACKETS.
- 6. MATCHING MILLWORK END PANELS ARE TO BE PROVIDED AT EACH UNDERCOUNTER REFRIGERATOR LOCATION PER DETAILS ON SHEET A570.
- 7. REFER TO DETAIL C3/A580 FOR TYPICAL CHAIR RAIL, WHERE OCCURS. 8. COORDINATE ALL INTERIOR ELEVATIONS WITH FINISH PLANS (SHEETS

A111) AND ROOM FINISH SCHEDULE (SHEET A111).

![](_page_12_Picture_21.jpeg)

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![](_page_12_Picture_23.jpeg)

REV DATE DESCRIPTION

![](_page_12_Figure_26.jpeg)

INTERIOR ELEVATIONS

![](_page_12_Picture_28.jpeg)

![](_page_13_Figure_0.jpeg)

# INTERIOR ELEVATION GENERAL NOTES

- 1. REFER TO SHEET A410 FOR MILLWORK LEGEND AND TYPICAL MILLWORK NOTES; A111 FOR FINISH SCHEDULE & GENERAL FINISH NOTES; A1XX.5 EQUIPMENT PLANS (MULTIPLE SHEETS) FOR ALL EQUIPMENT TYPE AND LOCATIONS.
- 2. FLOOR BASE IS REQUIRED IN EVERY ROOM AND CORRIDOR AS WELL AS AT ALL CASEWORK BASES, U.N.O. 3. END PANELS AND FILLER PANELS (AS NEEDED) ARE REQUIRED AT
- EVERY WALL, BASE AND TALL CASEWORK INSTALLATION, WHETHER SHOWN IN THE ELEVATIONS OR NOT PER DETAILS ON SHEET A570. BLOCKING IS REQUIRED FOR ALL WALL MOUNTED EQUIPMENT AND MEDICAL ACCESSORIES. COORDINATE FINAL LOCATIONS WITH OWNER
- AND ARCHITECT. 5. COUNTERTOPS ARE TO BE SUPPORTED EVERY 48" BY MILLWORK OR BRACKETS.
- 6. MATCHING MILLWORK END PANELS ARE TO BE PROVIDED AT EACH UNDERCOUNTER REFRIGERATOR LOCATION PER DETAILS ON SHEET A570.
- 7. REFER TO DETAIL C3/A580 FOR TYPICAL CHAIR RAIL, WHERE OCCURS. 8. COORDINATE ALL INTERIOR ELEVATIONS WITH FINISH PLANS (SHEETS A111) AND ROOM FINISH SCHEDULE (SHEET A111).

![](_page_13_Picture_16.jpeg)

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![](_page_13_Picture_18.jpeg)

REV DATE DESCRIPTION

![](_page_13_Figure_21.jpeg)

INTERIOR ELEVATIONS

![](_page_13_Picture_23.jpeg)

![](_page_14_Figure_0.jpeg)

![](_page_14_Picture_30.jpeg)

![](_page_14_Picture_32.jpeg)

REV DATE DESCRIPTION

![](_page_14_Figure_35.jpeg)

DETAILS

![](_page_14_Picture_37.jpeg)

![](_page_15_Figure_0.jpeg)

![](_page_15_Picture_3.jpeg)

![](_page_15_Picture_5.jpeg)

REV DATE DESCRIPTION

![](_page_15_Figure_8.jpeg)

**CEILING DETAILS** 

![](_page_15_Picture_10.jpeg)

![](_page_16_Picture_0.jpeg)

![](_page_16_Figure_1.jpeg)

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![](_page_17_Picture_0.jpeg)

![](_page_17_Figure_1.jpeg)

![](_page_17_Figure_2.jpeg)

![](_page_17_Figure_3.jpeg)

![](_page_17_Picture_5.jpeg)

![](_page_17_Picture_7.jpeg)

REV DATE DESCRIPTION

![](_page_17_Figure_10.jpeg)

RADIATION SHIELDING DETAILS

![](_page_17_Picture_12.jpeg)

![](_page_18_Picture_0.jpeg)

						DOOR A	ND FR	AME S	SCHEDU	LE
			DOOF	२				FRAM	E	
		SIZE				H			U U	
DOOR NUMBE	WIDTH	HEIGHT	THICK	ELEV. TYPE	MATERIAL	FACING / FINI	ELEV. TYPE	MATERIAL	FINISH / FACIN	
1385	48"	84"	1 3/4"	B	WD	SEALED	2	ΗМ		
1385-E	36"	84"	1 3/4"	A	WD	SEALED	1	HM	PAINTED	
1386A	72"	84"	1 3/4"	C	WD	SEALED	2	HM	PAINTED	1
1386B	36"	84"	1 3/4"	В	WD	SEALED	2	HM	PAINTED	2
1389	36"	84"	1 3/4"	А	WD	SEALED	1	HM	PAINTED	3

![](_page_18_Figure_2.jpeg)

![](_page_18_Picture_3.jpeg)

![](_page_18_Figure_4.jpeg)

- MARK DESCRIPTION

![](_page_18_Figure_10.jpeg)

HOLLOW METAL FRAME

![](_page_18_Figure_11.jpeg)

![](_page_18_Figure_12.jpeg)

![](_page_18_Figure_13.jpeg)

![](_page_18_Figure_14.jpeg)

C5 H.M. DOOR HEAD SCALE: 3" = 1'-0"

![](_page_18_Figure_16.jpeg)

B5 H.M. DOOR JAMB DTL.1 SCALE: 3" = 1'-0"

![](_page_18_Figure_19.jpeg)

![](_page_18_Figure_20.jpeg)

![](_page_18_Picture_21.jpeg)

A6 H.M. FRAME DETAIL SCALE: NOT TO SCALE

![](_page_18_Picture_24.jpeg)

1. Design Criteria	5. Special Instructions
1.1. Governing Building Code	5.1 The project specifications are not superseded by the General Structural Notes but are intended to be
A. Risk ČategoryIV	complementary to them. Consult the specifications for additional requirements in each section. Notes
1.2. Floor Live Loading	details.
	5.2. The architectural drawings are the prime contract drawings. Consultant drawings by other disciplines
1.3. Eartriquake A. Analysis ProcedureASCE 7 Chapter 13 – Seismic Design	are supplementary to the architectural drawings. All omissions or conflicts, including dimensions, between the various elements of the consultants' drawings and/or specifications shall be brought to
Requirements for Nonstructural Components B. Spectral Response Acceleration, S <sub>DS</sub> 0.502	the attention of the Architect before proceeding with any work involved. In case of conflict, follow the most stringent requirement as directed by the Architect without additional cost to the Owner. Any work
C. Component Importance Factor, Ip10 D. Seismic Coefficients for Architectural Components.Medical Equipment	done by the Contractor after discovery of such discrepancy shall be done at the Contractor's risk.
$a_p = 1$ $R_p = 2.5$ $\Omega_0 = 2$	5.3. The structural drawings shall be used in conjunction with the architectural drawings. Primary structural
	elements and overall structural layout are indicated within the structural plans and details. Some secondary elements, architectural layouts, alcoves, elevations, slopes, depressions, curbs,
2. Structural Steel	mechanical equipment and electrical equipment, are not indicated within the structural drawings. Detailing and shop drawing production for structural elements will require information (including
2.1. Material: A. All Plates: ASTM A36 (Fy = 36 ksi), except as noted otherwise	dimensions) contained in the architectural, structural and/or other consultants' drawings.
2.2 Exprise tion and construction shall comply with the following Codes and Standards:	5.4. Existing conditions A The contract structural drawings represent the reconfigured structure and do not indicate the
A. American Institute of Steel Construction (AISC) 360-16, "Specification for Structural Steel Buildings"	method or means of construction. The Contractor shall supervise and direct the work and shall
B. American Welding Society (AWS) D1.1:2015, "Structural Welding Code – Steel" (specific items	sequence.
do not apply when they conflict with the AISC requirements)	B. The Contractor is responsible for being knowledgeable on information presented in available new or existing drawings and shall field verify all relevant information. Information available in existing
2.3. Structural shapes and plates shall be fabricated from newly rolled (milled) one-piece sections without splices, unless specifically noted otherwise on the structural drawings. Connections for structural steel	drawings may be incomplete. Contractor shall familiarize themselves with information available in the existing and new drawings, and shall field verify all pertinent information.
shall comply with the structural drawings, unless written approval is given by the Structural Engineer.	C. Contractor shall field verify all existing conditions prior to performing any work, including but not limited to: bidding and estimating, shoring, detailing, fabricating, manufacturing, erecting, or
2.4. Welding:	installing any given structural element indicated in the contract drawings.
A. It is recommended the steel erection contractor and steel tabricator contact the Quality Assurance Agency prior to beginning any welds. A program of joint preparation and welding procedures	gathered from existing drawings and during limited site observations. If conditions shown do not match existing conditions contact the Architect/Engineer prior to performing any work. Do not
should be worked out between the two parties before the welding is started so that correct welds will be made from the beginning.	proceed until instructions in writing are provided by the Architect/Engineer.
B. Certification of Welders: All shop and field welding shall be executed by AWS certified welders who have been specifically certified for the process of welding being performed. The welder's	information and reference purposes only, and shall not be used for detailing and construction.
certification will be considered as being current unless the welder is not engaged in the process of welding being performed for a period exceeding six months or there is a specific reason to	protect the existing still constructure, vehicles, building interior, building patrons and other persons for
question a welder's ability as required by AWS. Certification and records must comply with AWS Standards. Certification and appropriate records must be provided to the Architect prior to	G. Contractor shall refer to existing drawings of the existing facility to verify:
beginning work. C. Electrodes: E-70 XX or as noted otherwise. E60 XX may be used for welding steel floor and roof	<ul> <li>a. Structural member sizes and locations, slab thickness</li> <li>b. Location of previous additions, alterations, or repairs performed at the facility</li> </ul>
decks. D. Minimum Welds: All intersecting steel shapes that are not bolted shall be connected by a fillet	c. Location of expansion joint systems d. Location of interior architectural items
weld all around, unless noted otherwise. Fillet weld sizes that are not shown shall be 1/16" less than the thinnest of the connected parts for thicknesses 1/4" and larger. Fillet welds on plates	<ul> <li>H. Demolition at existing conditions</li> <li>1. Demolition, cutting, drilling, etc. work shall be performed as to not damage existing structure</li> </ul>
less than 1/4" shall be of the same size as the thinnest of the connected parts.	that is to remain and shall not jeopardize the structural integrity of the existing building. If any architectural, structural, or MEP members not designated for removal interfere with the new
specifically detailed in the drawings.	work, the Owner, Architect, and Engineer shall be notified immediately and approval obtained prior to their removal.
3. Slotted Channel Framing (Strut)	<ol> <li>Contractor shall coordinate location, number and sizes of openings through existing roofs, and walls for air shafts, ducts, piping, and/or conduit with the Architectural, Mechanical, Electrical.</li> </ol>
3.1. Unistrut channels and connectors are used as the basis of design.	Plumbing, and Fire Protection drawings and the respective subcontractors.
A. Other manufacturer's members and connectors must be submitted for review and approved by the Engineer prior to use, and shall clearly indicate all code reports, load capacities and	repaired and restored with similar materials and workmanship to levels acceptable to the Owner.
engineering associated with their use. Follow all manufacturers' recommendations for the use of these products	5.5. Submittals: A copy of all shop drawings that have been submitted for review must be kept at the
3.2. Materials and Finish: A Cold-formed to size from low carbon strip steel	construction site for reference. These drawings must bear the appropriate review stamps. The shop drawing review shall not relieve the Contractor of the responsibility of completing the project according
B. Manufactured from raw steel in accordance with:	to the contract documents. The General Contractor shall review and mark all shop drawings prior to submitting them to the Architect for review. Shop Drawings made from reproductions of (these)
<ol> <li>12 Gauge sections: ASTM AS70 Grade 33 or ASTM A653 Grade 33</li> <li>14 Gauge sections: ASTM A570 Grade 33 or ASTM A653 Grade 33</li> <li>16 Gauge sections: ASTM A266 or ASTM A652 Grade 33</li> </ol>	contract drawings will be rejected.
4. 19 Gauge sections: ASTM A300 of ASTM A005 Grade 35 4. Constant Astronomy	5.6. Project Coordination: It shall be the responsibility of the General Contractor to coordinate with all trades any and all items that are to be integrated into the structural system. Openings or penetrations
<ol> <li>Soluted Charmer Fittings shall be.</li> <li>Punch press made from hot rolled, pickled and oiled steel plates, strip or coil, and conform to</li> </ol>	through, or attachments to the structural system that are not indicated on these drawings shall be the responsibility of the General Contractor and shall be coordinated with the Architect/Engineers. The
2. Used with fitting steel meeting the physical requirement of ASTM A570 Grade 33.	order of construction is the responsibility of the General Contractor. It is the Contractor's obligation to provide all items necessary for the chosen procedure.
<ul> <li>B. Free from scale with a smooth surface</li> <li>D. Screws shall conform to SAE J429 Grade 2 or ASTM A307.</li> </ul>	5.7 Contractor shall field varify all dimensions, and conditions. If the contract drawings do not represent
<ul> <li>Boits shall conform to the following ASTM Standards:</li> <li>a. 1/4" &amp; 5/16" Diameter – A1011 SS Grade 33.</li> </ul>	actual conditions, Contractor shall notify Architect/Engineer prior to fabrication or construction within
b. 3/8", 7/16" & 1/2" Diameter – A576 Grade 1015 Modified c. 5/8" & 3/4" Diameter – A36 or A675 Grade 60.	
2. 7/8" Diameter – A36 bolts shall be machined/manufactured to meet the Unified Screw Thread Standard, ANSI B1.1, coarse series (UNC) class 2.	5.8. Notice of Copyright: The structural drawings, plans, schedules, notes and details are hereby copyrighted by Reaveley Engineers. Submission or distribution of documents to meet official
F. Channel nuts shall be case hardened after machining, assuring positive biting action into the inturned edge of slotted channel framing.	regulatory requirements or for similar purposes in connection with the project is not to be construed as publication in derogation of Reaveley Engineers' reserved rights. The documents defining the
G. Epoxy Painted: Strut shall be made from steel meeting the minimum mechanical properties of ASTM A1011 SS Grade 33, then painted with water born epoxy applied by a cathodic electro-	structure are instruments of service prepared by Reaveley Engineers for one use only. Furthermore, these documents shall not be reproduced, or copied, in whole or in part by the Contractor or
deposition process. Fittings shall be manufactured from steel meeting the minimum requirements of ASTM A907 SS, Grade 33. All fittings and hardware shall be zinc plated in	subcontractors for preparation of shop drawings or other submittals.
accordance with ASTM B633 (SC3 for fittings, SC1 for threaded hardware). H. Pre-galvanized Steel: Strut shall be made from steel meeting the minimum mechanical	6. Quality Assurance
properties of ASTM A653 SS, Grade 33, and mill galvanized in accordance with coating designation G90. Fittings shall be manufactured from steel meeting the minimum requirements	6.1. Quality Assurance Agency Requirements:
of ASTM A907 SS, Grade 33. All fittings and hardware shall be zinc plated in accordance with ASTM B633 (SC3 for fittings, SC1 for threaded hardware).	A. The Owner shall engage a qualified Quality Assurance Agency (QAA) to provide all special inspection and quality assurance testing for the project. The QAA shall provide all information
3.3. Fabrication and construction shall comply with the following Codes and Standards:	necessary for the building official to determine that the agency meets the applicable requirements. 1. The QAA shall be objective, competent and independent from the Contractor responsible for
A. ASTM A123 - Specification for Zinc (Hot-Galvanized) Coatings on Products Fabricated from Rolled Pressed and Forged Steel Shapes Plates Bars and Strip	the work being inspected. The agency shall disclose to the building official and the registered design professional in responsible charge possible conflicts of interest so that objectivity can
B. ASTM A653 - General Requirements for Steel Sheet, Zinc-Coated Galvanized by the Hot-Dip Process	be confirmed. 2 The QAA shall have adequate equipment to perform required tests. The equipment shall be
C. ASTM A1011 - Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High- Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability (Formerly ASTM	periodically calibrated.
A570) D ASTM E1126 Standard Specification for Chromium/Zine Correction Bratestive Costings for	evaluating tests and special inspections. Experience or training shall be considered relevant where the decumented experience or training is related in complexity to the same type of
Fasteners	special inspection or testing activities for projects of similar complexity and material qualities.
Carbon, Hot-Rolled, Structural Quality	Architect, Engineer and Contractor. Reports shall indicate that the work inspected was or was
G. MFMA - Metal Framing Manufacturers Association	be brought to the immediate attention of the Contractor for correction. If they are not corrected,
H. AISI - American Iron and Steel Institute	the discrepancies shall be brought to the attention of the, Architect and Engineer. 5. The QAA shall submit a final report documenting required special inspections and tests, and
3.4. Strut member shall be fabricated from new one-piece sections without splices, unless specifically noted otherwise on the structural drawings.	correction of any discrepancies noted in the inspections or tests. The final report shall be distributed to the building official, Owner, Architect and Engineer in a timely manner prior to
3.5. Existing strut members, connectors, and fasteners may not be re-used unless specifically noted on	the completion of the project.
the structural drawings.	6.2. Contractor Responsibilities: A. The Contractor shall submit a written statement of responsibility to the building official and the
<ul><li>3.6. Connections</li><li>A. All nuts and bolts shall be tightened to the following values:</li></ul>	Owner or the owner's authorized agent prior to the commencement of work on the systems or components listed in the statement of special inspections. The Contractor's statement of
Bolt Size Required Torque (ft-lbs) Max Torque (ft-lbs)	responsibility shall contain acknowledgement or awareness of the special requirements contained in the statement of special inspections
1/4-20     6     7       5/16-18     11     15	B. Notification of QAA: The Contractor shall notify the QAA in a timely manner so that inspection and testing may be performed as outlined in the statement of special inspections
3/8-1619251/2-135070	6.3 Structural Observations by the Engineer of Pecerd
5/8-11     100     125       3/4-10     125     135	A. The Engineer of Record will perform a structural observation at a critical phase of the project Copies of the Engineer's report will be distributed to the Architect. Contractor, Owner, and OAA
B All wolds to clotted channel framing members and fittings shall conform to ANAS D1.2. Structural	B. The contractor shall notify the Structural Engineer at least 24 hours in advance before completing
Welding Code – Sheet Steel.	<ul> <li>C. Observation visits to the site by the Engineer's field representatives shall not be construed as</li> </ul>
3.7. The contactor shall submit shop drawings with complete elevations and details defining framing	inspection of approval of construction.
to fabrication.	7. Statement of Special Inspections
4. Miscellaneous	17 of the International Building Code (IBC).
4.1. Post-Installed Anchors in Concrete	7.2. For items requiring continuous inspection, a special inspector must be present onsite during the
A. Anchorage to hardened concrete shall include all mechanical and adnesive anchors and epoxy doweled reinforcing bars of size, quantity, spacing, and embedment as shown on the drawings.	performance of that task. In most cases, periodic inspections/tests shall be performed prior to commencing the task, intermittently during the task, and at the completion of the task. Frequency
B. Special inspection is required during the installation of all post-installed anchors. Refer to	marked with (E) designates periodic inspections that must be performed prior to or upon completion of every task.
applicable code evaluation reports and the Quality Assurance and Statement of Special Inspections sections of the General Structural Notes.	
C. Alternate anchors or adhesives are permitted with approval of the Engineer. The Contractor shall submit the proposed anchor product data and code evaluation report demonstrating the anchor	Structural Steel per IBC Section 1705.2.1, 1705.12.1 & 1705.13.1
is equivalent to or exceeds the capacity of the specified anchor. D. Installation of adhesive anchors horizontally or upwardly inclined to support sustained tension	
loads shall be performed by personnel certified by an applicable certification program. Certification shall include written and performance tests in accordance with the ACI/CRSI	Prior to Weiding (Table N5.4-1, AISC 360-16):Welder qualification recordsPeriodicVerify welder qualification records and
Adhesive Anchor Installer Certification program, or equivalent. Proof of current certification shall be submitted to the Engineer for approval prior to commencement of installation.	Verify welding procedures (WPS)     Periodic (F)
E. Anchors shall be installed according to the Manufacturer's Printed Installation Instructions and applicable code evaluation reports including:	and consumable certificates
<ol> <li>Hole diameter, depth, and cleaning procedure</li> <li>Adhesive mixing, preparation, and placement</li> </ol>	Invite nanoentificationPeriodicVerify type and grade of material.Welder identificationPeriodicConfirm a system is in place by which a welder.
<ol> <li>Installation torque</li> <li>E. Locate all existing reinforcement and embedded items prior to drilling into concrete elements. Do</li> </ol>	who has welded a joint or member can be identified
not damage rebar or embeds while drilling or installing anchors. G Grout all defective or abandoned holes with non-shrink drout or an injectable opeyy adhesive	Fit-up of fillet welds     Periodic     Verify dimensions, cleanliness and tacking.
matching the surrounding concrete compressive strength. Consult the Architect for additional requirements at architecturally exposed concrete	During Welding (Table N5.4-2, AISC 360-16):
Heles for post installed anabora may not be care drilled unless analificative discussion in the destination of the second drilled unless analificative discussion in the second drilled unless and the second drilled drilled unless and the second drilled	Use of qualified welders Periodic Verify that welders are appropriately qualified.
manufacturer's installation instructions and the code evaluation report.	Control and handling of welding Periodic Verify packaging and exposure control.
	Cracked tack welds Periodic Verify that welding does not occur over cracked tack welds
	Environmental conditions Periodic Verify wind speed is within limits as well as

Item	Frequency	Detailed Instructions			
WPS followed	Periodic	Verify items such as settings on welding equipment, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained, and prope position.			
Welding techniques	Periodic	Verify interpass and final cleaning, each pass is within profile limitations, and quality of each pass.			
After Welding (Table N5.4-3, AISC 3	860-16):				
Welds cleaned	Periodic	Verify that welds have been properly cleaned.			
Size, length, and location of welds	Periodic (E)	Verify the size, length and location of welds.			
Welds meet visual acceptance criteria	Periodic (E)	Verify that welds meet crack prohibition, base metal fusion, profile, size, undercut, and porosity provisions.			
Arc strikes	Periodic (E)	Verify that arc strikes do not exist outside the permanent weld areas.			
Repair activities	Periodic (E)	Verify that repair activities are performed in accordance with AISC 360 and AWS D1.1.			
Documentation	Periodic (E)	Document the acceptance or rejection of the welded joint or member.			
Prohibited welds	Periodic (E)	Verify no prohibited welds have been added without approval of the EOR.			

@ ^ P	
AB ABV	ABOVE
ALT	ALTERNATE
	APPROXIMATE ARCHITECT(URAL)
BLDG	BUILDING
BLW	BELOW
BOT	BOTTOM
BRG	BEARING
BTWN	BETWEEN
00	JOINT
CJP	COMPLETE JOINT PENETRATION
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONTR	CONTRACTOR
CTR D B	CENTER DECK BEARING
db	DIAMETER OF REINFORCING BAR
DBA	DEFORMED BAR ANCHORS
DET	DETAIL
DIA (OR Ø)	DIAMETER
DIAG DIM	DIAGONAL
DK	DECK
DN DWG	DOWN
DWL	DOWEL
E.F.	
E.J.	SEPARATION JOINT (SEISMIC
E.W.	EACH WAY
EL	ELEVATION
ELEC	ELECTRICAL
ELEV ENG	ELEVATOR
EQ	EQUAL
EQUIP EXIST (E)	EQUIPMENT
EXP	EXPANSION / EXPOSED
EXT	
F.F.	FINISH FLOOR
F.V.	FIELD VERIFY
FIN	FINISH
FL	FLOOR
FTG	FOOTING
GALV	
GLB	GLU-LAMINATED BEAM
GR	GRADE GENERAL STRUCTURAL NOTES
HB	HORIZONTAL BRIDGING
HORIZ HSA	HORIZONTAL HEADED STUD ANCHORS
HSS	HOLLOW STRUCTURAL STEEL
HT I F	HEIGHT INSIDE FACE
IBC	INTERNATIONAL BUILDING CODE
ICC IN	INTERNATIONAL CODE COUNCIL
INSUL	INSULATION
INT JST	JOIST
JT	JOINT
K KI F	KIPS - 1,000 POUNDS KIPS PER LINEAL FOOT
KSF	KIPS PER SQUARE FOOT
KSI LBS	KIPS PER SQUARE INCH
Ld, Lt, Lsb,	SEE CONCRETE REINFORCING BAR
LOUI, LUC, LSC	SCHEDULE
LF I FRS	LINEAL FOOT
	(SFRS & WFRS)
	LONG LEG HORIZONTAL
LSH	LONG SIDE HORIZONTAL
LSV MAS	LONG SIDE VERTICAL
MAX	MAXIMUM
MCJ MECH	MASONRY CONTROL JOINT
MFGR	MANUFACTURER
MIN MISC	MINIMUM MISCELLANEOLIS
NIC	NOT IN CONTRACT
NORM	NORMAL NOT TO SCALE
0.C.	ON CENTER
O.F.	OUTSIDE FACE
OPP	OPPOSITE
OWSJ P T	OPEN WEB STEEL JOIST POST-TENSIONED
PAF	POWDER ACTUATED FASTENER
PCF P.IP	POUNDS/CUBIC FOOT
PL	PLATE
PLF PNI	POUNDS/LINEAL FOOT PANFI
PSF	POUNDS/SQ FOOT
PSI R D	POUNDS/SQ INCH ROOF DRAIN

ABBREVIATIONS

	ABBREVIATIONS
REINF	REINFORCING
REQD	REQUIRED
DS	SELF-DRILLING SCREW
FRS	SEISMIC FORCE RESISTING SYSTEM
ЭHT	SHEET
51	SPECIAL INSPECTION (SP. INSP.)
SIM	SIMILAR
OG	SLAB ON GRADE
Q	SQUARE
TAG	STAGGERED
TD	STANDARD
STIFF	STIFFENER
TL	STEEL
TRUCT	STRUCTURAL
&В	TOP AND BOTTOM
.0.	TOP OF
EMP	TEMPERATURE
HDS	THREADS
OC	TOP OF CONCRETE
OCP	TOP OF CONCRETE PIER
OF	TOP OF FOOTING
OS	TOP OF SLAB
OST	TOP OF STEEL
OW	TOP OF WALL
ΥP	TYPICAL
INO	UNLESS NOTED OTHERWISE
'ERT	VERTICAL
V.P.	WORK POINT
V/	WITH
VF	WIDE FLANGE
VFRS	WIND FORCE RESISTING SYSTEM
VT	WEIGHT
VWF	WELDED WIRE FABRIC
Ď	YARD
	PLAN MARKS

	PLAN MARKS
F-#	BRACED FRAME
B-#	CONCRETE BEAM
C-#	CONCRETE COLUMN
CSS-#	CANTILEVERED CONCRETE SUSPENDED SLAB
DP-#	CONCRETE DRILLED PIER
FW-#	CONCRETE FOUNDATION WALL
GB-#	CONCRETE GRADE BEAM
:J <i>-</i> #	CONCRETE JOIST
JC-#	CONCRETE JAMB COLUMN
:L-#	CONCRETE LINTEL
;P-#	CONCRETE PIER
RW-#	CONCRETE RETAINING WALL
SG-#	CONCRETE SLAB ON GRADE
SH-#	CONCRETE SHEAR HEAD
SS-#	CONCRETE SUSPENDED SLAB
SW-#	CONCRETE SHEAR WALL
W-#	CONCRETE WALL
C#	CONTINUOUS FOOTING
M#	MAT FOOTING
R#	RECTANGULAR FOOTING
S#	SQUARE FOOTING
TS#	THICKENED SLAB FOOTING
ID-#	HOLD DOWN ANCHOR
1C-#	MASONRY COLUMN
1F-#	MOMENT FRAME
1L-#	MASONRY LINTEL
1P-#	MASONRY PIER
1W-#	MASONRY WALL
TB-#	POST-TENSIONED CONCRETE BEAM
BP-#	STEEL BASE PLATE
C-#	STEEL COLUMN
CP-#	STEEL CAP PLATE
D-#	STEEL DECK
DA-#	STEEL DECK ATTACHMENT
G-#	STEEL GIRDER
J-#	STEEL JOIST
ND-#	SNOW DRIFT
VB-#	WOOD BEAM
VBW-#	WOOD BEARING WALL
VC-#	WOOD COLUMN
VD-#	WOOD DIAPHRAGM
/J-#	WOOD JOIST
VSW-#	WOOD SHEAR WALL

S	TRUCTURAL DRAWING LIST
SHT NO.	SHT NAME
S-001	GENERAL STRUCTURAL NOTES
S-101	PARTIAL FRAMING PLANS
S-102	STRUCTURAL ELEVATIONS
S-103	STRUCTURAL DETAILS

![](_page_19_Picture_45.jpeg)

![](_page_20_Figure_0.jpeg)

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![](_page_21_Figure_0.jpeg)

![](_page_21_Figure_1.jpeg)

1" MAX OFFSET

FROM CENTER OF FLUTE, TYP

EXSITING CONCRETE OVER

STEEL DECK

![](_page_21_Picture_2.jpeg)

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![](_page_22_Figure_0.jpeg)

![](_page_22_Figure_1.jpeg)

![](_page_22_Figure_2.jpeg)

**S-103** 

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### GENERAL MECHANICAL SYMBOLS HVAC SYMBOLS 18"x8" SQUARE DUCT SIZE TAG (WIDTH x HEIGHT) **REVISION NUMBER - SHOWN ON PLANS** POINT WHERE NEW CONNECTS TO EXISTING 18"/8"FO OVAL DUCT SIZE TAG (WIDTH / HEIGHT) POINT WHERE EXISTING IS TO BE DEMOLISHED ROUND DUCT SIZE TAG (DIAMETER) - NUMBER OF DETAIL ON SHEET EXISTING DUCT TAG --- /---NUMBER OF SHEET WHERE DETAIL APPEARS DUCT BEING DEMOLISHED $-\langle 1 \rangle$ KEYNOTE SUPPLY AIR - LOW PRESSURE CONTINUATION SYMBOL SUPPLY AIR - MEDIUM PRESSURE ROOM NAME AND NUMBER 11 CONDITIONED OUTSIDE AIR ITEM TO BE DEMOLISHED OUTSIDE AIR AREA NOT IN CONTRACT **RETURN AIR** TRANSFER AIR EXHAUST AIR ABOVE GROUND PIPING **RELIEF AIR** 2" VTR PIPE SLOPE TAG GREASE EXHAUST AIR BELOW GROUND PIPING ----INVERT: -105' - 1" PIPE INVERT ELEVATION TAG SMOKE EXHAUST AIR (E) EXISTING PIPE TAG EXHAUST GAS FLUE PIPING BEING DEMOLISHED COMBUSTION AIR DROP ABBREVIATIONS DROP Ø ROUND DROP LVR LOUVER ABV ABOVE AC AIR CONE LWT LEAVING WATER TEMPERATURE AIR CONDITIONING M/A MIXED AIR DROP MAX MAXIMUM AD AREA DRAIN ADD ADDENDUM MBH ONE THOUSAND BTU PER HOUR DROP AFF ABOVE FINISHED FLOOR MCF ONE THOUSAND CUBIC FEET AFUE ANNUAL FUEL UTILIZATION EFFICIENCY MD MOTORIZED DAMPER ALT ALTERNATE MECH MECHANICAL DROP AP ACCESS PANEL MFR MANUFACTURER **GRILLES, REGISTERS & DIFFUSERS SYMBOLS AND TAGS** ARCH ARCHITECT/ARCHITECTURAL MIN MINIMUM CEILING SQUARE SUPPLY DIFFUSER RECTANGULAR SUPPLY DIFFUSER ROUND SUPPLY CD5./400 BFF BELOW FINISHED FLOOR MISC MISCELLANEOUS BLW BELOW MTR MOTOR MU/A MAKE-UP/AIR BTU BRITISH THERMAL UNITS BTUH BRITISH THERMAL UNITS PER HOUR NC NOISE CRITERIA CAP CAPACITY NORMALLY CLOSED NC CB CATCH BASIN NIC NOT IN CONTRACT CFM CUBIC FEET PER MINUTE NO NUMBER CLG CEILING CO CLEAN OUT NO NORMALLY OPEN CD5/400 12"Ø 2-WAY ROUND SUPPLY NTS NOT TO SCALE LB1/300 48"x6" DIFFUSER D DEGREE OXYGEN CORNER DB DRY BULB O/A OUTSIDE AIR RG1/500 12"x12" 1-WAY SQUARE DCW DOMESTIC COLD WATER PD PRESSURE DROP **RETURN GRILLE** PIV POST INDICATOR VALVE DHW DOMESTIC HOT WATER DIA DIAMETER RECTANGULAR RETURN GRILLE SQUARE EXHAUST GRILLE RECTANGULAR B"Ø SUBEWALL SWS1/300 12"Ø SWS1/600 PLBG PLUMBING DN DOWN PRESS PRESSURE DW DISTILLED WATER PRV PRESSURE REDUCING VALVE POUNDS PER SQUARE INCH EA PSI EACH EAT ENTERING AIR TEMPERATURE PSIG POUNDS PER SQUARE INCH GAUGE -∿► SWR1 /600 28"x12" RECTANGULAR EXHAUST GRILLE ELEC ELECTRICAL PWR POWER R DUCT RISER EQUIP EQUIPMENT EWC ELECTRIC WATER COOLER R/A RETURN AIR EWT ENTERING WATER TEMPERATURE RCP RADIANT CEILING PANEL TYP. X 3 - TYPICAL COUNT E/A EXHAUST AIR ROOF DRAIN LINEAR SLOT RD EXIST EXISTING RDO ROOF DRAIN OVERFLOW TYPE (SEE SCHEDULE) ∕——CFM F DEGREES FAHRENHEIT REC RECESSED I S1 /200 [NUMBER OF SLOTS / SLOT WIDTH / FCO FLOOR CLEAN OUT RED REDUCER 2/1.00"/5'-0"/10"Ø ACTIVE SLOT LENGTH (PLENUM LENGTH) FD FLOOR DRAIN RH RELATIVE HUMIDITY FD FIRE DAMPER RL/A RELIEF AIR <u>/ NECK SIZE</u> FDV FIRE DEPARTMENT VALVE RM ROOM 5' - 0" SECTION TOTAL TRACK LENGTH FL FLOOR RPM REVOLUTIONS PER MINUTE FO FUEL OIL RW RAIN WATER FOV FUEL OIL VENT SF SQUARE FOOT S/A SUPPLY AIR FOR FUEL OIL RETURN FOS FUEL OIL SUPPLY SANITARY SAN MECHANICAL EQUIPMENT TAGS FPM FEET PER MINUTE SQUARE FOOT RTU-XX HEATING FS FLOOR SINK SMOKE DAMPER SD VAV-XX COIL FT FOOT/FEET SURFACE MOUNT SM FLOW Htg: 3.7 GPM VAV BOX FTR FIN TUBE RADIATION SP STANDPIPE NOT INCLUDING CURB STATIC PRESSURE GAL GALLON SP VAV-XX GC GENERAL CONTRACTOR STM STEAM BOTTOM OF EQUIPMENT RTU-XX GPM GALLONS PER MINUTE THERMOSTAT Т 0 4.0 ton TRENCH DRAIN GW GREASE WASTE TD HB HOSE BIB TDR TEMPERATURE DROP ROOFTOP UNIT EXISTING EQUIPMENT HP HORSE POWER TEMP TEMPERATURE ΓΟ REMAIN – (E)VAV-XX NOMINAL COOLING HTG HEATING TYP TYPICAL CAPACITY HTR HEATER HYD HYDRANT ID INDIRECT UG VAC UNDERGROUND RTU-XX VACUUM VENT EXISTING RELOCATED FUEL INPUT 115000 Btu/h EQUIPMENT ------(R)VAV-XX GAS PIPE FLOW ------ 115 CFH INCH IN VAV VARIABLE AIR VOLUME VENT VENTILATION VTR VENT THROUGH ROOF QUIPMENT BY OTHERS INV INVERT (REFER TO OTHER DISCIPLINE FOR ADDITIONAL INFORMATION) LB POUND LB/HR POUNDS PER HOUR W WASTE WB WET BULB LAT LEAVING AIR TEMPERATURE LOW PRESSURE WCO WALL CLEAN OUT LP LPG LIQUEFIED PETROLEUM GAS WH WALL HYDRANT DATA DEVICE TAGS -----SYMBOL HVAC SYMBOLS EQUIPMENT ID CARBON DIOXIDE SENSOR CO2 TH RTU-XX TEMPERATURE & HUMIDITY SENSOR DAMPER TAGS CARBON MONOXIDE SENSOR CO TS VAV-XX TEMPERATURE SENSOR BALANCING DAMPER (MANUAL) FIRE DAMPER FD – – NITROGEN DIOXIDE SENSOR NO2 THERMOSTAT SMOKE DAMPER SD----—BDD BACKDRAFT DAMPER HUMIDITY SENSOR MANUAL SWITCH ATC AUTOMATIC TEMPERATURE CONTROL DAMPER (MOTORIZED) HUMIDISTAT SENSOR

### PIPING SYMBOLS

CONDENSATE DRAINAGE GEOTHERMAL WATER RETURN GEOTHERMAL WATER SUPPLY HEATING WATER RETURN HWS-HWS-HEATING WATER SUPPLY NG-NG-NATURAL GAS PG—PG—PG—PROPANE GAS -------REF-L-------REFRIGERANT-LIQUID ------STM-------STEAM CDR CONDENSATE RETURN CA-CA-COMPRESSED AIR ------DCW---- DOMESTIC COLD WATER -------S-CW------SOFT COLD WATER ------F-CW------FILTERED COLD WATER ------NPCW---- NON-POTABLE COLD WATER ------RO----- REVERSE OSMOSIS WATER ------DHW----- HOT WATER — — — ·GV — — — GREASE VENT ------GW-------GREASE WASTE ---- IW ---- INDIRECT WASTE — — — — OV — — — OIL VENT -----OW-----OIL WASTE PD—PD—PUMP DISCHARGE — — — — –V<sup>.</sup> — — — — SANITARY VENT SHWR SOLAR HOT WATER RETURN RD-ROOF DRAIN RDO ROOF DRAIN OVERFLOW -PIPE DROP -----PLUG DEGREE TEE CAP PIPE ACCESSORY TAGS 2" DOM. WM —2" M-CNTRL MOTORIZED CONTROL VALVE 2" 3-WAY CNTRL 3 WAY MOTORIZED CONTROL 2" BALANCING BALANCING VALVE VALVE 2" PRV PRESSURE REDUCING VALVE -2" SHUTOFF 1/4 TURN BALL VALVE 2" CHECK CHECK VALVE 3/8" SOLENOID REFRIGERANT SOLENOID VALVE 2" TMV 3-WAY MIXING VALVE 2" BUTTERFLY BUTTERFLY VALVE DRAIN TAGS -DRAIN SIZE FLOOR DRAIN • 4" FD-1 - TYPE (SEE SCHEDULE) - 4" AD-6 - • AREA DRAIN FLOOR DRAIN - 4" FD-3P - "P" - INDICATES PRIMER CONNECTION 4" DD-29 - O DECK DRAIN FLOOR SINK 4" FS-4 4" RD-12 FLOW CONTROL DRAIN HUB DRAIN •-- 4" FD-13 8 WFU --- FIXTURE UNITS 4" RD-15 - ROOF DRAIN 6" RD-1 4000 SF COMBINATION DRAINS ROOF AREA 6" RD-1 SERVED BY DRAIN - 4000 SF PLUMBING FIXTURE TAGS TYPE (SEE SCHEDULE)-►{ L-1 FIXTURE UNITS -1.5 CWFU L-1 WATER CLOSET -WC-1 WC-1A 1 WFU WALL HUNG - ADA U-1 PIPE ACCESORY-TAG

4" WCO

4" WCO

<u>\* NOTE \*</u> THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

### MECHANICAL SHEET INDEX

M000 MECHANICAL TITLE SHEET M001 MECHANICAL GENERAL NOTES M101 LEVEL 1 HVAC PLAN M111 LEVEL 1 MECHANICAL PIPING PLAN M501 MECHANICAL DETAILS M601 MECHANICAL SCHEDULES P000 PLUMBING TITLE SHEET P101 LEVEL 1 PLUMBING PLAN MG101 LEVEL 1 MEDICAL GAS PLAN F001 FIRE PROTECTION TITLE SHEET

F101 LEVEL 1 FIRE PROTECTION PLAN

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### FIRE PROTECTION GENERAL NOTES

- 1. NO FIRE PROTECTION LINE SHALL BE DESIGNED OR INSTALLED PRIOR TO CLOSE COORDINATION WITH ALL OTHER DISCIPLINES. DUCTWORK, MECHANICAL PIPING AND PLUMBING TAKE SPACE PRECEDENCE OVER FIRE PROTECTION REMOVAL AND REINSTALLATION AT THE FIRE PROTECTION CONTRACTORS EXPENSE.
- 2. ALL WORK DONE SHALL BE PERFORMED WITH WATER CONTROL IN MIND. CONTAINMENT OF WATER IS NECESSARY TO PREVENT WATER FROM DAMAGING SURROUNDING AREA.
- 3. COORDINATE EXACT LOCATION OF PIPING WITH STRUCTURAL MEMBERS, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUITS, DUCTWORK, MECHANICAL AND PLUMBING

PIPING, AND ALL OTHER TRADES AND ALL EXISTING CONDITIONS.

CONTRACTORS UNTIL SUBSTANTIAL COMPLETION OF PROJECT

- 4. FIRE SUPPRESSION CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE AND/OR REROUTE ANY AND ALL FIRE PROTECTION PIPING, VALVING, SUPPORTS OR SYSTEMS, OTHERWISE WITHIN THE FIRE SUPPRESSION DISCIPLINE REGARDLESS OF WHO INSTALLED THEM OR WHEN THEY WERE INSTALLED, IN ORDER TO ACCOMMODATE MECHANICAL, PLUMBING, ELECTRICAL OR OTHER SYSTEMS. COORDINATE WORK WITH MECHANICAL, ELECTRICAL, PLUMBING OR OTHER
- 5. PROVIDE ALTERATIONS TO THE EXISTING FIRE PROTECTION SYSTEM AS REQUIRED TO ACCOMMODATE THE NEW FLOOR PLAN AND NEW CEILING TYPES. PROVIDE A COMPLETE WET TYPE SYSTEM INCLUDING NEW MAINS, BRANCHES, HEADS, VALVES, AND ACCESSORIES AS REQUIRED. REUSE EXISTING SYSTEM EQUIPMENT WHERE APPLICABLE. THE SYSTEM SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS AND AS PER REQUIREMENTS OF THE STATE BUILDING CODE, LOCAL FIRE DEPARTMENT, AND ALL FEDERAL, STATE, AND LOCAL AUTHORITIES, NFPA, AND FACTORY MUTUAL.
- 6. THE BUILDINGS COMPLETE OPERATIONAL FIRE PROTECTION SYSTEMS SHALL REMAIN IN PLACE. THIS CONTRACTOR SHALL REPAIR ANY DAMAGE TO THIS SYSTEM CREATED BY THE REMOVAL OF ANY OTHER MECHANICAL SYSTEMS OR COMPONENTS.
- 7. THIS CONTRACTOR SHALL COORDINATE PHASING OF SPRINKLER WORK WITH THE GENERAL CONTRACTOR PRIOR TO STARTING WORK.
- 8. PROVIDE A COMPLETE WET TYPE FIRE PROTECTION SYSTEM AS REQUIRED TO ACCOMMODATE THE FLOOR PLAN AND CEILING TYPES INCLUDING MAINS, BRANCHES, HEADS, VALVES, AND ACCESSORIES AS REQUIRED. THE SYSTEM SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS OF THE STATE BUILDING CODE, LOCAL FIRE DEPARTMENT, AND ALL FEDERAL, STATE, AND LOCAL AUTHORITIES, NFPA, AND FACTORY MUTUAL.
- 9. THE SPRINKLER SYSTEM SHALL BE DESIGNED BASED UPON ACTUAL WATER FLOW TEST DATA OBTAINED AT OR NEAR THE JOB SITE IF THE EXISTING DESIGN BASIS IS ALTERED.
- 10. DIVISION 21 CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR PROPER INSTALLATION OF THE FIRE PROTECTION SYSTEMS ALARM DEVICES INVOLVED WITH FIRE SPRINKLER SYSTEM.
- 11. ALL SPRINKLER SYSTEM PIPING SHALL BE CONCEALED ABOVE THE SUSPENDED CEILING SYSTEM, UNLESS NOTED OTHERWISE. WRITTEN AUTHORIZATION SHALL BE OBTAINED FROM THE ARCHITECT PRIOR TO EXPOSING ANY PIPING IN ANY ROOM WHICH HAS A SUSPENDED CEILING.
- 12. THIS CONTRACTOR SHALL PROVIDE ALL ADDITIONAL SPRINKLER HEADS AS REQUIRED TO ENSURE AN APPROVED FIRE PROTECTION SYSTEM AT NO ADDITIONAL COST TO THE OWNER.
- 13. AUXILIARY DRAINS SHALL BE EXPOSED WITH 1" DRAIN VALVES. WHEN 5 OR MORE GALLONS ARE TRAPPED, THIS CONTRACTOR SHALL PROVIDE FIXED PIPING TO AN ADEQUATELY SIZED RECEPTOR WHICH IS CAPABLE OF ACCEPTING THE FULL FLOW OF THE DRAIN. WHEN LESS THAN 5 GALLONS ARE TRAPPED, A HOSE BIB SHALL BE PROVIDED AT THE DRAIN VALVE.
- 14. AUXILIARY DRAINS SHALL NOT BE LOCATED ABOVE PLASTER OR GYPSUM BOARD CEILING SYSTEMS. ONLY BY A SPECIFIC WRITTEN INSTRUCTION FROM THE ENGINEER WILL A VARIANCE BE PROVIDED.
- 15. AN INSPECTOR'S TEST CONNECTION SHALL BE PROVIDED FOR EACH FIRE SPRINKLER ZONE. THIS CONTRACTOR SHALL PROVIDE FIXED PIPING FROM THE TEST CONNECTION TO AN ADEQUATELY SIZED RECEPTOR WHICH IS CAPABLE OF ACCEPTING THE FULL FLOW OF THE TEST. (EXTERIOR DISCHARGE OF THE TEST CONNECTION SHALL BE PERMITTED ONLY BY SPECIFIC WRITTEN INSTRUCTION FROM THE ENGINEER.)
- 16. SHOW ALL ROOM NUMBERS ON SHOP DRAWING PLANS.
- 17. ROUTE SPRINKLER PIPING SUCH THAT IT DOES NOT RUN ABOVE ELECTRICAL PANELS, SWITCHGEAR, OR SIMILAR EQUIPMENT. SPRINKLER MAINS SHALL NOT RUN THROUGH ELECTRICAL OR COMMUNICATION ROOMS. SPRINKLER HEADS IN THESE ROOMS SHALL BE SERVED BY A DEDICATED BRANCH LINE FOR EACH ROOM. BRANCH LINE TO ENTER ROOM ABOVE DOOR.
- 18. THIS DRAWING INDICATES A GENERAL PIPING ARRANGEMENT AND SUGGESTED SIZING ONLY. THIS CONTRACTOR SHALL DETERMINE THE ACTUAL PIPE SIZING REQUIRED AND COORDINATE WORK WITH ALL OTHER TRADES TO AVOID CONFLICTS.
- 19. THIS CONTRACTOR SHALL PREPARE HYDRAULIC CALCULATIONS BASED UPON THE CONFIGURATION OF THE ACTUAL SYSTEM DESIGN AS SHOWN ON THIS CONTRACTOR'S SHOP DRAWINGS.

- 2. MEDICAL GAS PIPING IS SCHEMATIC IN NATURE. FIELD VERIFY EXACT PIPE ROUTING AND COORDINATE WITH ALL OTHER TRADES.
- MOUNT ALL SERVICE VALVES NEAR CEILING HEIGHT FOR ACCESSIBILITY.

### 1. UNLESS OTHERWISE NOTED, SLOPE PIPE AS FOLLOWS: WASTE BRANCHES: 1/4" PER FOOT; WASTE MAINS: 1/4" PER FOOT; ROOF DRAIN/ROOF DRAIN OVERFLOW: 1/8" PER FOOT. VERIFY ALL SLOPING

PLUMBING GENERAL NOTES

3. PLUMBING DRAWINGS ARE SCHEMATIC IN NATURE. FIELD VERIFY EXACT PIPE ROUTING AND

4. ALL PIPING IN PLUMBING CHASES SHALL BE ARRANGED TO ALLOW MAINTENANCE ACCESS.

6. COORDINATE FAN ROOM FLOOR DRAIN AND FLOOR SINK LOCATIONS WITH COOLING COIL,

5. NO PIPING TO RUN OVER ELECTRICAL PANELS, VFD'S OR MCC'S. PROTECT EQUIPMENT WITH A 42"

CONTRACTOR TO PROVIDE VALVE IDENTIFICATION AND LOCATION ON ALL CEILING TILES WHERE

8. PIPING AND ROUTING SHOWN, INCLUDING ALL BELOW FLOOR DECK PIPING IS APPROXIMATE. IT IS UP

9. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS, DIMENSIONS AND OTHER

10. CONTRACTOR TO VERIFY CONNECTION SIDE OF ADA FIXTURES AND ADJUST ACCORDINGLY. INSTALL

13. INSTALL A 24" X 24" ACCESS DOOR BELOW ALL ISOLATION VALVES, BALANCING VALVES AND WATER

14. MOUNT ALL ISOLATION VALVES, CONTROL VALVES, BALANCING VALVES, ETC. NEAR CEILING HEIGHT

15. INSTALL ALL EQUIPMENT WITH SUFFICIENT CLEARANCE FOR MAINTENANCE PER MANUFACTURERS

16. COORDINATE ALL FLOOR PENETRATIONS WITH STRUCTURAL AND PROVIDE SLEEVES AS

17. COORDINATE THE LOCATION OF THE FLOOR DRAIN, SHOWER DRAIN, OR FLOOR SINK WITH

18. SEE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZES OF WASTE, VENT AND DOMESTIC WATER

19. HOSE BIBBS SHOWN AT LAVATORIES ARE TO BE MOUNTED AT AN ACCESSIBLE LOCATION UNDER

20. LOCATE CIRCUIT SETTERS, VALVES, WATER HAMMER ARRESTORS, ETC. IN ACCESSIBLE LOCATIONS.

PROVIDE 24" X 24" ACCESS PANEL WHERE ITEM IS LOCATED ABOVE A HARD CEILING. PROVIDE

APPROPRIATELY SIZED ACCESS DOORS TO ANY OF THESE ITEMS INSTALLED IN A WALL.

22. FIELD VERIFY ALL NEW WATER, WASTE AND VENT PIPING CONNECTIONS AND PROVIDE NEW

24. INSTALL CLEANOUTS IN DRAIN PIPING AS INDICATED, AND WHERE NOT INDICATED, ACCORDING TO

A. SIZE SAME AS DRAINAGE PIPING UP TO 4" NPS. USE 4" NPS FOR LARGER. DRAINAGE PIPING

B. LOCATE AT MINIMUM INTERVALS OF 50 FT FOR PIPING 4" NPS AND SMALLER AND 100 FT FOR

COORDINATE ACCESS DOOR SIZE, LOCATION, AND STYLE WITH ARCHITECT.

21. FIELD VERIFY LOCATION AND INVERTS OF SITE UTILITIES PRIOR TO INSTALLATION.

23. WASTE AND VENT PIPING BELOW FLOOR AND THROUGH FLOOR TO BE 2" MINIMUM.

CONNECTIONS AS REQUIRED FOR PROPERLY OPERATING SYSTEMS.

UNLESS LARGER CLEANOUT IS INDICATED.

C. LOCATE AT THE BASE OF EACH VERTICAL STACK.

TO THE CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION AND SIZE OF ALL PIPING.

- WITH LOCAL CODES.

- 2. ALL WORK DONE SHALL BE PERFORMED WITH WATER CONTROL IN MIND. CONTAINMENT OF WATER

COORDINATE WITH ALL OTHER TRADES.

VALVES ARE LOCATED.

REQUIREMENTS.

FOR ACCESSIBILITY.

RECOMMENDATION.

TO/FROM SINGLE FIXTURE.

NECESSARY.

THE LAVATORY.

THE FOLLOWING.

LARGER PIPING.

DEEP ZONE IN FRONT OF PANELS, VFD'S, AND MCC'S.

EVAPORATIVE SECTION, AND HEATING COIL LOCATIONS.

FLUSH VALVES HANDLES ON WIDE SIDE OF ALL FIXTURES.

11. LOCATE ALL VENTS MINIMUM 25' AWAY FROM AIR INTAKES.

12. INSTALL ALL DOMESTIC WATER LINES BELOW DUCTWORK.

ARCHITECTURAL AND STRUCTURAL, TYPICAL.

HAMMER ARRESTORS WHERE MOUNTED ABOVE HARD CEILINGS.

- IS NECESSARY TO PREVENT WATER FROM DAMAGING AREAS ON FLOORS BELOW.

### MEDICAL GAS GENERAL NOTES

MEDICAL GAS PIPING IS TO BE RUN ABOVE THE CEILING, UNLESS NOTED OTHERWISE.

4. ALL SERVICE VALVES SHALL BE LOCKABLE. PROVIDE FRANGIBLE LOCK FOR ALL SERVICE VALVES.

5. ALL ZONE VALVE BOXES REQUIRE SOURCE AIR FROM LEFT SIDE AND CONTROLLED AIR FROM RIGHT

# DOOR. 20. SUPPLY AND RETURN PIPING TO COILS ARE THE SAME SIZE. COORDINATE EXACT LOCATIONS WITH ARCHITECT. SENSOR LOCATIONS.

SPECIFICATIONS.

AS REQUIRED BY CODE.

TIGHT TO UNDERSIDE OF STRUCTURE.

APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE.

PIPING ON EQUIPMENT SIDE OF VALVE IS REMOVED.

- 21. CONTRACTOR SHALL LOCATE THERMOSTATS AND TEMPERATURE SENSORS AT 5'-0" AFF, A MINIMUM OF 8" FROM LIGHT SWITCH, UNLESS OTHERWISE NOTED ON THE ARCHITECT'S ELEVATIONS.
- 22. REFER TO MECHANICAL PIPING OR ZONING DRAWINGS FOR THERMOSTAT AND TEMPERATURE

23. CONDENSATE DRAINS SHALL BE SUPPLIED FOR ALL COOLING EQUIPMENT. CONTRACTOR SHALL

ENSURE PROPER INSTALLATION AND DRAINAGE AS REQUIRED BY FEDERAL, STATE, AND LOCAL

CODES. CONDENSATE PIPINE SHALL BE TYPE "L" COPPER UNLESS OTHERWISE NOTED IN THE

24. PROVIDE A 4" HOUSEKEEPING PAD FOR EACH PIECE OF MECHANICAL EQUPMENT THAT IS FLOOR

26. THIS CONTRACTOR SHALL BE REQUIRED TO REPLACE FILTERS ON HVAC EQUIPMENT AFTER ALL

PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL

3. INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES, AND OTHER

4. ALL VALVES SHALL BE INSTALLED SO THAT VALVES REMAINS IN SERVICE WHEN EQUIPMENT OR

5. PROVIDE AIR VENT AT HIGH POINT OF EACH DROP IN THE HEATING AND CHILLED WATER PIPING

7. PROVIDE ISOLATION VALVES AT EACH EXIST/ENTRANCE INTO SHAFT WHETHER OR NOT SHOWN.

8. COORDINATE LOCATION OF THERMOSTAT WITH ARCHITECTURAL FURNISHING PLANS. MOUNT

THERMOSTAT AT HEIGHT AS SPECIFIED ON ARCHITECTURAL PLANS OR SPECIFICATIONS.

6. ALL VALVES SHALL BE ADJUSTED FOR SMOOTH AND EASY OPERATION AND TAGGED.

DUST PRODUCING CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO THE FINAL PUNCH.

MECHANICAL PIPING GENERAL NOTES

COMPLETE AND OPERABLE PIPING SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND

UNLESS OTHERWISE NOTED: ALL MECHANICAL PIPING IS OVERHEAD TO RUN ABOVE DUCTWORK AND

25. ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESSURE CLASS OF 2" W.G.

MOUNTED. COORDINATE SIZES WITH MECHANICAL EQUIPMENT SELECTED.

UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS.

- LOCATION. WHERE THERE ARE HARD CEILINGS THE CONTRACTOR SHALL PROVIDE 24" X 24" ACCESS
- CONTRACT DOCUMENTS. 19. PROVIDE ACCESS TO ALL TEMPERATURE CONTROLS ABOVE CEILING. LOCATE IN ACCESSIBLE
- 18. THE CONTRACTOR SHALL INFORM THE DESIGNER OF ANY PROPOSED DEVIATIONS FROM THE
- DIFFUSERS AND GRILLES IN HARD LID CEILINGS, THE DUCTWORK SHALL BE EXTENDED ALL THE WAY TO THE DIFFUSER AND SHALL BE CONNECTED WITH A HARD CONNECTION OR A FLEX DUCT CONNECTION WITH A MUD RING AND LAY-IN DIFFUSER AS SHOWN ON PLANS.
- 16. PROVIDE ACCESS DOORS TO ACCESS VAV BOX CONTROLS ABOVE HARD CEILINGS. PROVIDE MINIMUM 24" X 24". 17. FLEX DUCT IS REQUIRED FOR ALL DIFFUSERS AND GRILLES INSTALLED IN LAY-IN CEILINGS. FOR
- 15. ALL VAV BOXES TO HAVE REHEAT COILS, EXCEPT AS NOTED. PROVIDE EQUIPMENT TAG TO MATCH SCHEDULE. PROVIDE A MINIMUM OF TWO DUCT DIAMETERS OF STRAIGHT ROUND DUCT TO INLET OF VAV BOX. BOX SHALL BE HARD CONNECTED (CONICAL) TO MEDIUM PRESSURE DUCT, TYPICAL.
- INSTALLATIONS WITH LATEST ARCHITECTURAL REFLECTED CEILING PLANS.
- 14. THE MECHANICAL CONTRACTOR SHALL PROVIDE CEILING MOUNTED ACCESS DOORS FOR ALL FIRE, SMOKE AND COMBINATION FIRE/SMOKE DAMPERS INSTALLED ABOVE INACCESSIBLE CEILING. FIELD VERIFY EXACT INSTALLATION LOCATIONS PRIOR TO COMMENCING WORK AND COORDINATE
- FABRICATE TRANSITION BOOT FROM FLEX CONNECTION TO DIFFUSER OR GRILLE WITH BALANCING DAMPER, TYPICAL.
- DUCT. RETURN DUCTWORK IS USUALLY BELOW EXHAUST DUCTS. 13. AT LOCATIONS WHERE DIFFUSERS OR GRILLES ARE UNDER DUCTWORK, CONTRACTOR TO
- MEDIUM PRESSURE DUCTWORK. 12. WHERE DUCTWORK CROSSES, SUPPLY DUCTWORK IS USUALLY BELOW RETURN AND EXHAUST
- BRANCH TAKE OFF TO SERVE DIFFUSER OR GRILLE AS WELL AS WHERE INDICATED. 11. PROVIDE AND INSTALL HIGH EFFICIENCY OR CONICAL TAKE-OFFS AT ALL BRANCH CONNECTIONS TO
- TYPICAL 10. PROVIDE AND INSTALL HIGH EFFICIENCY TAKE-OFF FITTINGS AND BALANCING DAMPER AT ALL BRANCH CONNECTIONS TO LOW PRESSURE DUCTWORK, PROVIDE BALANCING DAMPERS AT EACH
- 9. PROVIDE AND INSTALL REMOTE DAMPER OPERATORS FOR ALL DAMPERS INSTALLED ABOVE INACCESSIBLE CEILING, SEE MECHANICAL SPECIFICATIONS FOR EQUIPMENT REQUIREMENTS,
- 8. DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS. REFER TO MECHANICAL SPECIFICATIONS FOR EXTENT OF DUCT INSULATION AND LINER AND ADJUST SHEET METAL DIMENSION.
- MANUFACTURERS REQUIRED CLEARANCES ON EACH SIDE, SEE DETAILS, TYPICAL.
- 7. INSTALL ALL TERMINAL BOXES IN EASILY ACCESSIBLE AND SERVICEABLE LOCATIONS, MEETING ALL
- PROVIDE AND INSTALL TURNING VANES IN ALL SQUARE LOW PRESSURE DUCTWORK AT ELBOWS OR TEES. TYPICAL
- DAMPERS AT ALL LOCATIONS SHOWN ON THE CONTRACT DOCUMENTS AND AS REQUIRED TO MEET THE INTEGRITY OF ALL SMOKE AND FIRE PARTITIONS. THE CONTRACTOR SHALL REFER TO THE LATEST ARCHITECTURAL LIFE SAFETY PLANS FOR ALL FIRE AND SMOKE PARTITION LOCATIONS. DAMPERS ARE TO BE PROVIDED WITH SHUTOFF/TEST SWITCH AT EACH LOCATION.
- ARCHITECTURAL ELEVATION AND FURNISHINGS PLANS, TYPICAL. 5. THE MECHANICAL CONTRACTOR SHALL PROVIDE FIRE, SMOKE OR COMBINATION FIRE/SMOKE
- 4. COORDINATE EXACT MOUNTING LOCATION OF ALL THERMOSTATS WITH LATEST REVISION OF
- BRANCH DUCTWORK SHALL BE SIZED TO MATCH THE NECK INLET SIZE OF THE DIFFUSERS, REGISTER OR GRILLE IT SERVES UNLESS NOTED OTHERWISE, TYPICAL.

**MECHANICAL GENERAL NOTES** 

- 2. SEE DETAIL FOR DIFFUSER CONNECTIONS TO DUCTWORK, TYPICAL.
- 1. COORDINATE EXACT PLACEMENT OF DIFFUSERS, GRILLES AND REGISTERS WITH ARCHITECTURAL REFLECTED CEILING PLAN, TYPICAL.
- 1. THE PROJECT GENERAL NOTES APPLY TO ALL DISCIPLINES.

AUTHORITY HAVING JURISDICTION.

PROJECT TO PREVENT CONFLICTS.

PROVIDE PANS IF REQUIRED UNDER PIPING.

15. REFER TO PLUMBING SERIES DRAWINGS FOR GAS PIPING.

TO DETAILS, SCHEDULES, AND SPECIFICATIONS.

INVOLVED ON THIS PROJECT.

PLUMBING CODE.

WALLS, AND ROOF.

ANOTHER SIZE IS SHOWN.

SPECIFICATIONS.

CONTRACT DOCUMENTS.

BELOW THE CEILING ACCESS.

WITH ARCHITECT.

VALVES ARE LOCATED.

EXISTING CONDITIONS THAT MAY AFFECT THE DESIGN.

UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.

9. LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.

10. ALL ROOF MOUNTED EQUIPMENT SHALL BE A MINIMUM 10'-0" FROM EDGE OF ROOF.

11. COORDINATE INSTALLATION OF DUCTWORK, PIPING AND MECHANICAL EQUIPMENT WITH NEC

CLEARANCES INCLUDING THE SPACE ABOVE ELECTRICAL PANELS, TRANSFORMERS AND OTHER

MCC'S. PROTECT EQUIPMENT WITH A 42" DEEP ZONE IN FRONT OF PANELS, VFD'S AND MCC'S.

12. FIRE SEAL AROUND DUCT AND PIPING PENETRATIONS OF FIRE RATED WALLS. THE MECHANICAL

AND SMOKE RATED PARTITIONS TO MAINTAIN RATINGS. REFER TO SPECIFICATION.

ELECTRICAL EQUIPMENT. NO PIPING OR DUCTWORK TO RUN OVER ELECTRICAL PANELS, VFD'S OR

CONTRACTOR SHALL BE RESPONSIBLE FOR CAULKING AND SEALING ALL PENETRATIONS IN FIRE

13. PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS,

14. TRANSITION PIPING AND DUCTWORK SIZES TO MATCH THE SIZE OF EQUIPMENT CONNECTION.

16. ALL PIPE AND DUCT SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL

17. FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER

18. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN

19. MECHANICAL CONTRACTOR SHALL ENSURE THAT ALL EQUIPMENT IS PROVIDED AND INSTALLED

20. INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.

PROPER SERVICE SPACE FOR COIL PULLS, BAS DEVICES, MAINTENANCE ACCESS, ETC.

21. LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE

WITH CLEARANCES PER MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL MAINTAIN

INSTALLATION INSTRUCTIONS, AT A LEVEL OF WORKMANSHIP CONSISTENT WITH THE

2. REMOVE ALL UNUSED PIPING, DUCTWORK, EQUIPMENT, AND ACCESSORIES.

PROJECT GENERAL NOTES

3. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING

4. THE MECHANICAL CONTRACTOR SHALL PERFORM SERVICE AND REPAIR ON THE EXISTING

CONDITIONS FOR PLUMBING AND MECHANICAL SYSTEMS WITHIN THE TENANT SPACE AND WITHIN

CLOSE PROXIMITY TO THE TENANT SPACE. THE CONTRACTOR WILL FIELD VERIFY AS MUCH AS IS

REASONABLE BEFORE THE FINAL BID. AFTER THE FINAL BID THE CONTRACTOR WILL NOTIFY THE

OWNER, ARCHITECT, AND MECHANICAL DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF

EQUIPMENT AND ITS ACCESSORIES AS FOLLOWS: CLEAN ALL COILS, REPLACE THE FILTERS AND BELTS. INSPECT, REPAIR, OR REPLACE THE ECONOMIZERS, DRIVERS AND FAN BEARINGS, MOTORS,

CONTROL COMPONENTS, VALVES, AND ANY OTHER ITEM NECESSARY FOR A COMPLETE AND

5. WHERE FLOOR DRAINS OCCUR WITH THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION

DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK.

6. COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, EQUIPMENT, CEILINGS, ARCHITECTURAL COMPONENTS, AND ANYTHING ELSE PERTAINING TO THE

7. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL THE CONDITIONS BOTH EXISTING AND THOSE

8. FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM. AND SHALL CONFORM TO ALL

ILLUSTRATED BY THESE DOCUMENTS AND THOSE OF OTHER DISCIPLINES, INCLUDING, BUT NOT

LIMITED TO ARCHITECTURAL, CIVIL, ELECTRICAL, VENTILATION, PLUMBING, AND OTHER SYSTEMS

REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED

TO THE INTERNATION BUILDING CODE, INTERNATIONAL MECHANICAL CODE, AND INTERNATIONAL

PROPER OPERATING SYSTEM. THIS CONTRACTOR SHALL ALSO VISIT THE SITE, PRIOR TO FINAL

BIDDING, AND VERIFY ALL EXISTING SITE CONDITIONS. PROVIDE ALL MATERIAL AND COMPONENTS AS NEEDED TO BRING THE UNITS TO FULL COMPLIANCE OF THE LANDLORD'S CRITERIA AND LOCAL

APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD, INCLUDING, BUT NOT LIMITED TO. OFFSETS AND TRANSITIONS. NEW DUCTWORK, PIPING AND EQUIPMENT SHALL BE COORDINATED WITH STRUCTURE, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUIT, PLUMBING, MECHANICAL AND FIRE PROTECTION PIPING, MEDICAL GASES, ALL OTHER TRADES AND ALL OTHER EXISTING CONDITIONS TO AVOID INTERFERENCE IN THE FIELD.

22. THE CONTRACTOR SHALL INFORM THE DESIGNER OF ANY PROPOSED DEVIATIONS FROM THE 23. IF CONTRACTOR ENCOUNTERS MATERIAL WHICH MAY CONTAIN ASBESTOS, IMMEDIATELY STOP WORK IN THIS AREA AND NOTIFY THE OWNER.

24. DETAILS REFERENCE ALL SHEETS. 25. INSTALL ALL PIPING AND DUCTWORK WITHOUT FORCING OR SPRINGING.

26. ROUTE DOMESTIC WATER, FIRE PROTECTION, SANITARY WASTE, ROOF DRAIN, CAMPUS CHILLED OR HOT WATER, AND ANY OTHER UTILITY SERVICES TO SITE UTILITIES 5'-0" FROM BUILDING UNLESS NOTED OTHERWISE. REFER TO CIVIL PLANS.

27. LOCATE VALVING, ACCESSORIES, AND EQUIPMENT IN ACCESSIBLE LOCATIONS. WHERE LOCATED ABOVE HARD CEILING PROVIDE AN ACCESS DOOR IN CEILING. MINIMUM ACCESS DOOR SIZE OF 24" X 24". COORDINATE EXACT LOCATION AND STYLE WITH ARCHITECT. EQUIPMENT SHALL BE LOCATED IN THE CEILING CAVITY SO IT CAN BE SAFELY SERVICED FROM SOMEONE STAND ON A LADDER PLACE

28. WHERE VALVING, ACCESSORIES, OR EQUIPMENT IS LOCATED IN A WALL, PROVIDE AN APPROPRIATELY SIZED ACCESS DOOR. COORDINATE ACCESS DOOR SIZE, LOCATION, AND STYLE

29. CONTRACTOR TO PROVIDE VALVE IDENTIFICATION AND LOCATION ON ALL CEILING TILES WHERE

ALL OF THE GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.

![](_page_24_Picture_116.jpeg)

![](_page_24_Picture_117.jpeg)

![](_page_25_Figure_0.jpeg)

![](_page_25_Picture_3.jpeg)

![](_page_25_Picture_5.jpeg)

![](_page_25_Picture_6.jpeg)

181 East 5600 South Murray, Utah 84107 O: (801)530-3148 VBFA Project #: 23696

REV DATE DESCRIPTION

![](_page_25_Picture_10.jpeg)

![](_page_26_Figure_0.jpeg)

![](_page_26_Picture_2.jpeg)

![](_page_26_Picture_4.jpeg)

![](_page_26_Picture_5.jpeg)

181 East 5600 South Murray, Utah 84107 O: (801)530-3148 VBFA Project #: 23696

REV DATE DESCRIPTION

![](_page_26_Picture_9.jpeg)

![](_page_27_Picture_0.jpeg)

![](_page_27_Figure_3.jpeg)

![](_page_27_Figure_4.jpeg)

![](_page_27_Figure_5.jpeg)

7 TYPICAL PIPE SUPPORT DETAIL M501 12" = 1'-0"

![](_page_27_Figure_7.jpeg)

-SEE CONNECTION SCHEDULE AND DETAILS

![](_page_27_Figure_9.jpeg)

![](_page_27_Figure_10.jpeg)

M501 12" = 1'-0"

![](_page_27_Figure_11.jpeg)

![](_page_27_Figure_12.jpeg)

4 VAV/CV TERMINAL UNIT WITH 2-WAY CONTROL VALVE DETAIL M501 12" = 1'-0"

![](_page_27_Picture_14.jpeg)

M501 12/7/2023 1:22:56 PM

GRILLE, REGISTER, AND DIFFUSER SCHEDULE					
ID	MANUFACTURER AND MODEL	Count	DESCRIPTION	IMAGE	
CD1	TITUS OMNI	7	STYLE: SQUARE PLAQUE FACE CEILING DIFFUSER CONSTRUCTION: STEEL FINISH: POWDER COAT WITH COLOR SELECTED BY ARCHITECT MOUNTING: SURFACE OR LAY-IN BASED ON CEILING TYPE. PROVIDE FRAME TYPE 1 FOR SURFACE MOUNT AND FRAME TYPE 3 FOR LAY-IN. FACE SIZE: 24"X24", 20"X20", OR 12"X12". VERIFY FACE SIZE WITH ARCHITECT AND ENGINEER. CORE: REMOVABLE MAX NC: 25 DAMPER: NONE CONNECTION: ROUND OR RECTANGULAR OF SIZE SHOWN ON DRAWINGS. PROVIDE ADAPTER FITTINGS AS REQUIRED. APPLICATION: VARIABLE AIR VOLUME SUPPLY		
EG1	TITUS PAR	1	STYLE: SQUARE PERFORATED FACE CEILING GRILLE CONSTRUCTION: STEEL FINISH: SELECTED BY ARCHITECT MOUNTING: SURFACE OR LAY-IN BASED ON CEILING TYPE. PROVIDE FRAME TYPE 1 FOR SURFACE MOUNT AND FRAME TYPE 3 FOR LAY-IN. FACE SIZE: 48"X24", 24"X24", 24"X12", 20"X20", 16"X16", OR 12"X12" AS SHOWN ON PLANS. VERIFY FACE SIZE WITH ARCHITECT AND ENGINEER. MAX NC:25 DAMPER: NONE CONNECTION: ROUND OR RECTANGULAR OF SIZE SHOWN ON DRAWINGS. PROVIDE ADAPTER FITTINGS AS REQUIRED. APPLICATION: EXHAUST OR RELIEF MINIMUM FREE AREA: 50%		
RG1	TITUS PAR	2	STYLE: SQUARE PERFORATED FACE CEILING GRILLE CONSTRUCTION: STEEL FINISH: SELECTED BY ARCHITECT MOUNTING: SURFACE OR LAY-IN BASED ON CEILING TYPE. PROVIDE FRAME TYPE 1 FOR SURFACE MOUNT AND FRAME TYPE 3 FOR LAY-IN. FACE SIZE: 48"X24", 24"X24", 24"X12", 20"X20", 16"X16", OR 12"X12" AS SHOWN ON PLANS. VERIFY FACE SIZE WITH ARCHITECT AND ENGINEER. MAX NC:25 DAMPER: NONE CONNECTION: ROUND OR RECTANGULAR OF SIZE SHOWN ON DRAWINGS. PROVIDE ADAPTER FITTINGS AS REQUIRED. APPLICATION: RETURN OR TRANSFER MINIM IM FREE AREA: 50%		

CW       HW       W       V       DESCRIPTION         ID       FIXTURE       (IN)       (IN)       (IN)       (IN)       (IN)         WC-1       WATER CLOSET       1        4       2       FLOOR MOUNTED, MANUAL FLUSH VALVE, ADA       WATER CLOSET: KOHLER K-96057 HIGHCLIFF ULTRA VITREOUS CHINA, FLOOR MOUNTED, ELONGATED BOWL, 1-1/2" TOP SPUD, AE WITH K-4670-C LUSTRA OPEN-FRONT SEAT. PROVIDE SLOAN ROYAL 111-1.28 MANUAL FLUSHOMETER 1.28 GPF.         Image: Closet in the state of the stat	
ID       FIXTURE       (IN)	
WC-1       WATER CLOSET       1        4       2       FLOOR MOUNTED, MANUAL FLUSH VALVE, ADA       WATER CLOSET: KOHLER K-96057 HIGHCLIFF ULTRA VITREOUS CHINA, FLOOR MOUNTED, ELONGATED BOWL, 1-1/2" TOP SPUD, AL WITH K-4670-C LUSTRA OPEN-FRONT SEAT. PROVIDE SLOAN ROYAL 111-1.28 MANUAL FLUSHOMETER 1.28 GPF.         Image: Close transmission of the state of	
LAVATORY: KOHLER K2030, GREENWICH, 20" X 18", VITREOUS CHINA, WALL MOUNTED LAVATORY WITH FRONT OVERFLOW. PROV	ATULET
L-1 LAVATORY 1/2 1/2 1 1/2 1 1/2 1 1/2 WALL HUNG, WRIST BLADES WALL HUNG, WRIST BLADES STEEL SUPPLIES WITH WRIST BLADE HANDLES, GN2FC RIGID/SWING GOOSE NECK SPOUT WITH 1.5 GPM LAMINAR FLO SPOUT; FLEXIBLE STAINLESS STEEL SUPPLIES WITH WITH LOOSE KEY 1/4 TURN ANGLE STOPS. CHICAGO 327-XCP OPEN-GRID ST CAST BRASS P-TRAP. SMITH 0700-Z CONCEALED ARM CHAIR CARRIER WITH FOOT SUPPORT. PROVIDE ADA COMPLIANT UNDER COMPLIA	DE CHICAGO W CONTROL IN RAINER AND DUNTER
FD-1 FLOOR DRAIN 2 1 1/2 FLOOR DRAIN FLOOR DRAIN FLOOR DRAIN: SMITH FIGURE 2005Y-P050 FLOOR DRAIN WITH CAST IRON BODY AND FLASHING COLLAR WITH 6-INCH ROUND NICK ADJUSTABLE STRAINER HEAD WITH SECURED GRATE. PROVIDE TRAP GUARD TYPE TRAP SEAL DEVICE.	EL BRONZE

### MEDICAL GAS OUTLETS SCHEDULE

		#	OF OUTLET	S	PIPE DRO	P SIZE TO C	)UTLET(S)	
'MBOL	ROOM TYPE	O2	MA	MV	O2	MA	MV	REMARKS
MO-1	SEE PLANS	1	1	1	1/2	1/2	3/4	1,2
MO-2	SEE PLANS	1	1	1	1/2	1/2	3/4	1,3

UNLESS NOTED OTHERWISE, ALL OUTLETS ARE CHEMETRON-STYLE QUICK-CONNECTS REFER TO ARCHITECTURAL ELEVATIONS AND REFLECTED CEILING PLANS FOR EXACT LOCATION AND PLACEMENT OF ...

1. PIPE DROP SIZES ARE FOR ONE SET OF OUTLETS 2. PROVIDE CHEMETRON OUTLETS IN CEILING WITH RETRACTABLE HOSES AND QUICK DISCONNECT FITTINGS.

3. WALL MOUNTED OUTLETS

![](_page_28_Picture_8.jpeg)

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GENERAL MECH	IANICAL SYMBOLS	PLUMBING AND	PIPING SYMBOLS
# REVISION I	IUMBER - SHOWN ON PLANS		
	RE NEW CONNECTS TO EXISTING	CHWR	CHILLED WATER RETURN
	RE EXISTING IS TO BE DEMOLISHED	CHWS	CHILLED WATER SUPPLY
		CD	
	F SHEET WHERE DETAIL APPEARS	CWS	CONDENSER WATER RETURN
		GWR	GEOTHERMAL WATER RETURN
		GWS	GEOTHERMAL WATER SUPPLY
2 CONTINUA	TON SYMBOL	HWR	HEATING WATER RETURN
Room ROOM NAM	E AND NUMBER	HWS	HEATING WATER SUPPLY
		NG	NATURAL GAS
	DEMOLISHED	PG	
AREA NOT			REFRIGERANT-SUCTION
2"	PIPE SIZE TAG (DIAMETER)		REFRIGERANT-HOT GAS
	ABOVE GROUND PIPING	STM	STEAM
2" VTR	PIPE SLOPE TAG	CDR	CONDENSATE RETURN
	BELOW GROUND PIPING	CWV	COMBINATION WASTE & VENT
└──INVERT: -105' - 1"		CA	COMPRESSED AIR
(E)		DCW	
			NON-PUTABLE COLD WATER
۸RRPF	VIATIONS		FILTERED COLD WATER
			REVERSE OSMOSIS WATER
ABV ABOVE	LVK LOUVER LWT LEAVING WATER TEMPERATURE	— DHW	HOT WATER
AC AIR CONDITIONING AD AREA DRAIN	M/A MIXED AIR MAX MAXIMUM	——————————————————————————————————————	HOT WATER 140°
ADD ADDENDUM AFF ABOVE FINISHED FLOOR	MBH ONE THOUSAND BTU PER HOUR MCF ONE THOUSAND CUBIC FEET	——————————————————————————————————————	HOT WATER RECIRCULATION
AFUE ANNUAL FUEL UTILIZATION EFFICIEI ALT ALTERNATE	ICY MD MOTORIZED DAMPER MECH MECHANICAL		HOT WATER RECIRCULATION 140°
AP ACCESS PANEL ARCH ARCHITECT/ARCHITECTURAL	MFR MANUFACTURER MIN MINIMUM		GREASE VENT
BFF BELOW FINISHED FLOOR BLW BELOW	MISC MISCELLANEOUS	GW	GREASE WASTE
BTU BRITISH THERMAL UNITS	MU/A MAKE-UP/AIR	IW	INDIRECT WASTE
CAP CAPACITY	NC NORMALLY CLOSED	— — — — •OV — — — —	OIL VENT
CFM CUBIC FEET PER MINUTE	NO NUMBER	OW	OIL WASTE
CLG CEILING CO CLEAN OUT	NO NORMALLY OPEN NTS NOT TO SCALE	PD	
CW COLD WATER D DEGREE	O OXYGEN O/A OUTSIDE AIR		SANITARY VENT
DB DRY BULB DIA DIAMETER	ORD OVERFLOW ROOF DRAIN PD PRESSURE DROP		SOLAR HOT WATER RETURN
DN DOWN DW DISTILLED WATER	PIV POST INDICATOR VALVE	SHWS	SOLAR HOT WATER SUPPLY
EA EACH EAT ENTERING AIR TEMPERATURE	PRESS PRESSURE	RD	ROOF DRAINAGE
	PSI POUNDS PER SQUARE INCH	RDO	ROOF DRAIN OVERFLOW
EQUIT EQUIT MENT EWC ELECTRIC WATER COOLER	PWR POWER	CO2	CARBON DIOXIDE
E/A EXHAUST AIR	R/A RETURN AIR	HE	HELIUM
F DEGREES FAHRENHEIT	RD ROF DRAIN	IA	
FCO FLOOR CLEAN OUT FD FLOOR DRAIN	REC RECESSED RED REDUCER	MV	MEDICAL VACUUM
FD FIRE DAMPER FDV FIRE DEPARTMENT VALVE	RH RELATIVE HUMIDITY RL/A RELIEF AIR	N2	NITROGEN
FL FLOOR FO FUEL OIL	RM ROOM RPM REVOLUTIONS PER MINUTE	N2O	NITROUS OXIDE
FOV FUEL OIL VENT FOR FUEL OIL RETURN	RW RAIN WATER SF SQUARE FOOT		OXYGEN
FOS FUEL OIL SUPPLY EPM FEET PER MINITE	S/A SUPPLY AIR SAN SANITARY	WAGD	WASTE ANESTHESIA GAS DISPOSAL
FS FLOOR SINK	SF SQUARE FOOT		
FTR FIN TUBE RADIATION	SM SURFACE MOUNT		" 2"- <u>`</u>
GAL GALLON GC GENERAL CONTRACTOR	SP STANDFIPE SP STATIC PRESSURE		PLUG
GREASE WASTE	STM STEAM T THERMOSTAT		4"REDUCING 45
HB HOSE BIB HP HORSE POWER	TDR TRENCH DRAIN	CAP	DEGREE TEE 45 DEGRFF TFF
HIG HEATING HTR HEATER	I EMP TEMPERATURE TYP TYPICAL	PIPE ACCESSOR	Y TAGS
HW HOT WATER HYD HYDRANT	UG UNDERGROUND VAC VACUUM	2" DOM. WM	2" M-CNTRL
ID INDIRECT IN INCH	V VENT VAV VARIABLE AIR VOLUME	DOMESTIC WATER METER	
INV INVERT LB POUND	VENT VENTILATION VTR VENT THROUGH ROOF	2" BALANCING BALANCING VALVE	2" 3-WAY CNTRL 3 WAY MOTORIZED CONTRO
LB/HR POUNDS PER HOUR	W WASTE WB WET BUILB	2" SHUTOFF	2" PRV
	WCO WALL CLEAN OUT	1/4 TURN BALL VALVE 2" CHECK	PRESSURE REDUCING VAL
LEG LIQUEFIED PETRULEUM GAS			
		2" I MV 3-WAY MIXING VALVE	2" BUTTERFLY BUTTERFLY VALVE
PLUMBING AND	PIPING SYMBOLS		
		DRAIN TA	<u>\GS</u>
PLUMBING FIX	<u>FURE TAGS</u>	DRAIN SIZE	
TYPE (SEE SCHEDULE)	L-1	FLOOR DRAIN - 4" FD-1 - TYPE (SEE	SCHEDULE) - 4" AD-6 - AREA D
FIXTURE	UNITS 1.5 CWFU 1.5 HWFU	FLOOR DRAIN - 4" FD-3P - "P" - INDICA	TES INNECTION 4" DD-29 - (6) DECK D
WATER CLOSET -		FLOOR SINK - 4" FS-4	4" RD-12 - FLOW CO
	WC-1 1 WFU		
WALL HUNG - ADA		HUB DRAIN	
VALL HUNG - ADA		HUB DRAIN • (4" FD-13) 8 WFU FIXTURE UN	NITS 4" RD-15 - ROOF D

	PLUMBING GENERAL NOTES				
1.	UNLESS OTHERWISE NOTED, SLOPE PIPE AS FOLLOWS: WASTE BRANCHES: 1/4" PER FOOT; WASTE MAINS: 1/4" PER FOOT; ROOF DRAIN/ROOF DRAIN OVERFLOW: 1/8" PER FOOT. VERIFY ALL SLOPING WITH LOCAL CODES.				
2.	ALL WORK DONE SHALL BE PERFORMED WITH WATER CONTROL IN MIND. CONTAINMENT OF WATER IS NECESSARY TO PREVENT WATER FROM DAMAGING AREAS ON FLOORS BELOW.				
3.	PLUMBING DRAWINGS ARE SCHEMATIC IN NATURE. FIELD VERIFY EXACT PIPE ROUTING AND COORDINATE WITH ALL OTHER TRADES.				
4.	ALL PIPING IN PLUMBING CHASES SHALL BE ARRANGED TO ALLOW MAINTENANCE ACCESS.				
5.	NO PIPING TO RUN OVER ELECTRICAL PANELS, VFD'S OR MCC'S. PROTECT EQUIPMENT WITH A 42" DEEP ZONE IN FRONT OF PANELS, VFD'S, AND MCC'S.				
6.	COORDINATE FAN ROOM FLOOR DRAIN AND FLOOR SINK LOCATIONS WITH COOLING COIL, EVAPORATIVE SECTION, AND HEATING COIL LOCATIONS.				
7.	CONTRACTOR TO PROVIDE VALVE IDENTIFICATION AND LOCATION ON ALL CEILING TILES WHERE VALVES ARE LOCATED.				
8.	PIPING AND ROUTING SHOWN, INCLUDING ALL BELOW FLOOR DECK PIPING IS APPROXIMATE. IT IS UP TO THE CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION AND SIZE OF ALL PIPING.				
9.	REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS, DIMENSIONS AND OTHER REQUIREMENTS.				
10.	CONTRACTOR TO VERIFY CONNECTION SIDE OF ADA FIXTURES AND ADJUST ACCORDINGLY. INSTALL FLUSH VALVES HANDLES ON WIDE SIDE OF ALL FIXTURES.				
11.	LOCATE ALL VENTS MINIMUM 25' AWAY FROM AIR INTAKES.				
12.	INSTALL ALL DOMESTIC WATER LINES BELOW DUCTWORK.				
13.	INSTALL A 24" X 24" ACCESS DOOR BELOW ALL ISOLATION VALVES, BALANCING VALVES AND WATER HAMMER ARRESTORS WHERE MOUNTED ABOVE HARD CEILINGS.				
14.	MOUNT ALL ISOLATION VALVES, CONTROL VALVES, BALANCING VALVES, ETC. NEAR CEILING HEIGHT FOR ACCESSIBILITY.				
15.	INSTALL ALL EQUIPMENT WITH SUFFICIENT CLEARANCE FOR MAINTENANCE PER MANUFACTURERS RECOMMENDATION.				
16.	COORDINATE ALL FLOOR PENETRATIONS WITH STRUCTURAL AND PROVIDE SLEEVES AS NECESSARY.				
17.	COORDINATE THE LOCATION OF THE FLOOR DRAIN, SHOWER DRAIN, OR FLOOR SINK WITH ARCHITECTURAL AND STRUCTURAL, TYPICAL.				
18.	SEE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZES OF WASTE, VENT AND DOMESTIC WATER TO/FROM SINGLE FIXTURE.				
19.	HOSE BIBBS SHOWN AT LAVATORIES ARE TO BE MOUNTED AT AN ACCESSIBLE LOCATION UNDER THE LAVATORY.				
20.	LOCATE CIRCUIT SETTERS, VALVES, WATER HAMMER ARRESTORS, ETC. IN ACCESSIBLE LOCATIONS. PROVIDE 24" X 24" ACCESS PANEL WHERE ITEM IS LOCATED ABOVE A HARD CEILING. PROVIDE APPROPRIATELY SIZED ACCESS DOORS TO ANY OF THESE ITEMS INSTALLED IN A WALL. COORDINATE ACCESS DOOR SIZE, LOCATION, AND STYLE WITH ARCHITECT.				
21.	FIELD VERIFY LOCATION AND INVERTS OF SITE UTILITIES PRIOR TO INSTALLATION.				
22.	FIELD VERIFY ALL NEW WATER, WASTE AND VENT PIPING CONNECTIONS AND PROVIDE NEW CONNECTIONS AS REQUIRED FOR PROPERLY OPERATING SYSTEMS.				
23.	WASTE AND VENT PIPING BELOW FLOOR AND THROUGH FLOOR TO BE 2" MINIMUM.				
24.	INSTALL CLEANOUTS IN DRAIN PIPING AS INDICATED, AND WHERE NOT INDICATED, ACCORDING TO THE FOLLOWING.				

### A. SIZE SAME AS DRAINAGE PIPING UP TO 4" NPS. USE 4" NPS FOR LARGER. DRAINAGE PIPING UNLESS LARGER CLEANOUT IS INDICATED.

- B. LOCATE AT MINIMUM INTERVALS OF 50 FT FOR PIPING 4" NPS AND SMALLER AND 100 FT FOR LARGER PIPING.
- C. LOCATE AT THE BASE OF EACH VERTICAL STACK.

### MEDICAL GAS GENERAL NOTES

- MEDICAL GAS PIPING IS TO BE RUN ABOVE THE CEILING, UNLESS NOTED OTHERWISE.
   MEDICAL GAS PIPING IS SCHEMATIC IN NATURE. FIELD VERIFY EXACT PIPE ROUTING AND COORDINATE WITH ALL OTHER TRADES.
- 3. MOUNT ALL SERVICE VALVES NEAR CEILING HEIGHT FOR ACCESSIBILITY.
- 4. ALL SERVICE VALVES SHALL BE LOCKABLE. PROVIDE FRANGIBLE LOCK FOR ALL SERVICE VALVES.
- 5. ALL ZONE VALVE BOXES REQUIRE SOURCE AIR FROM LEFT SIDE AND CONTROLLED AIR FROM RIGHT SIDE.

### PROJECT GENERAL NOTES

- 1. THE PROJECT GENERAL NOTES APPLY TO ALL DISCIPLINES.
- 2. REMOVE ALL UNUSED PIPING, DUCTWORK, EQUIPMENT, AND ACCESSORIES.
- 3. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS FOR PLUMBING AND MECHANICAL SYSTEMS WITHIN THE TENANT SPACE AND WITHIN CLOSE PROXIMITY TO THE TENANT SPACE. THE CONTRACTOR WILL FIELD VERIFY AS MUCH AS IS REASONABLE BEFORE THE FINAL BID. AFTER THE FINAL BID THE CONTRACTOR WILL NOTIFY THE OWNER, ARCHITECT, AND MECHANICAL DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF EXISTING CONDITIONS THAT MAY AFFECT THE DESIGN.
- 4. THE MECHANICAL CONTRACTOR SHALL PERFORM SERVICE AND REPAIR ON THE EXISTING EQUIPMENT AND ITS ACCESSORIES AS FOLLOWS: CLEAN ALL COILS, REPLACE THE FILTERS AND BELTS, INSPECT, REPAIR, OR REPLACE THE ECONOMIZERS, DRIVERS AND FAN BEARINGS, MOTORS, CONTROL COMPONENTS, VALVES, AND ANY OTHER ITEM NECESSARY FOR A COMPLETE AND PROPER OPERATING SYSTEM. THIS CONTRACTOR SHALL ALSO VISIT THE SITE, PRIOR TO FINAL BIDDING, AND VERIFY ALL EXISTING SITE CONDITIONS. PROVIDE ALL MATERIAL AND COMPONENTS AS NEEDED TO BRING THE UNITS TO FULL COMPLIANCE OF THE LANDLORD'S CRITERIA AND LOCAL AUTHORITY HAVING JURISDICTION.
- 5. WHERE FLOOR DRAINS OCCUR WITH THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.
- COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, EQUIPMENT, CEILINGS, ARCHITECTURAL COMPONENTS, AND ANYTHING ELSE PERTAINING TO THE PROJECT TO PREVENT CONFLICTS.
- 7. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL THE CONDITIONS BOTH EXISTING AND THOSE ILLUSTRATED BY THESE DOCUMENTS AND THOSE OF OTHER DISCIPLINES, INCLUDING, BUT NOT LIMITED TO ARCHITECTURAL, CIVIL, ELECTRICAL, VENTILATION, PLUMBING, AND OTHER SYSTEMS INVOLVED ON THIS PROJECT.
- FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATION BUILDING CODE, INTERNATIONAL MECHANICAL CODE, AND INTERNATIONAL PLUMBING CODE.
- 9. LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.
- 10. ALL ROOF MOUNTED EQUIPMENT SHALL BE A MINIMUM 10'-0" FROM EDGE OF ROOF.
- 11. COORDINATE INSTALLATION OF DUCTWORK, PIPING AND MECHANICAL EQUIPMENT WITH NEC CLEARANCES INCLUDING THE SPACE ABOVE ELECTRICAL PANELS, TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT. NO PIPING OR DUCTWORK TO RUN OVER ELECTRICAL PANELS, VFD'S OR MCC'S. PROTECT EQUIPMENT WITH A 42" DEEP ZONE IN FRONT OF PANELS, VFD'S AND MCC'S. PROVIDE PANS IF REQUIRED UNDER PIPING.
- 12. FIRE SEAL AROUND DUCT AND PIPING PENETRATIONS OF FIRE RATED WALLS. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CAULKING AND SEALING ALL PENETRATIONS IN FIRE AND SMOKE RATED PARTITIONS TO MAINTAIN RATINGS. REFER TO SPECIFICATION.
- 13. PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.
- TRANSITION PIPING AND DUCTWORK SIZES TO MATCH THE SIZE OF EQUIPMENT CONNECTION.
   REFER TO PLUMBING SERIES DRAWINGS FOR GAS PIPING.
- 16. ALL PIPE AND DUCT SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.
- 17. FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.
- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
- 19. MECHANICAL CONTRACTOR SHALL ENSURE THAT ALL EQUIPMENT IS PROVIDED AND INSTALLED WITH CLEARANCES PER MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL MAINTAIN PROPER SERVICE SPACE FOR COIL PULLS, BAS DEVICES, MAINTENANCE ACCESS, ETC.
- INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.
   LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD, INCLUDING, BUT NOT LIMITED TO, OFFSETS AND TRANSITIONS. NEW DUCTWORK, PIPING AND EQUIPMENT SHALL BE COORDINATED WITH STRUCTURE, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUIT, PLUMBING, MECHANICAL AND FIRE PROTECTION PIPING, MEDICAL GASES, ALL OTHER TRADES AND ALL OTHER EXISTING CONDITIONS TO AVOID INTERFERENCE IN THE FIELD.
- 22. THE CONTRACTOR SHALL INFORM THE DESIGNER OF ANY PROPOSED DEVIATIONS FROM THE CONTRACT DOCUMENTS.
- 23. IF CONTRACTOR ENCOUNTERS MATERIAL WHICH MAY CONTAIN ASBESTOS, IMMEDIATELY STOP WORK IN THIS AREA AND NOTIFY THE OWNER.
- 24. DETAILS REFERENCE ALL SHEETS.
- 25. INSTALL ALL PIPING AND DUCTWORK WITHOUT FORCING OR SPRINGING.
- 26. ROUTE DOMESTIC WATER, FIRE PROTECTION, SANITARY WASTE, ROOF DRAIN, CAMPUS CHILLED OR HOT WATER, AND ANY OTHER UTILITY SERVICES TO SITE UTILITIES 5'-0" FROM BUILDING UNLESS NOTED OTHERWISE. REFER TO CIVIL PLANS.
- 27. LOCATE VALVING, ACCESSORIES, AND EQUIPMENT IN ACCESSIBLE LOCATIONS. WHERE LOCATED ABOVE HARD CEILING PROVIDE AN ACCESS DOOR IN CEILING. MINIMUM ACCESS DOOR SIZE OF 24" X 24". COORDINATE EXACT LOCATION AND STYLE WITH ARCHITECT. EQUIPMENT SHALL BE LOCATED IN THE CEILING CAVITY SO IT CAN BE SAFELY SERVICED FROM SOMEONE STAND ON A LADDER PLACED BELOW THE CEILING ACCESS.
- 28. WHERE VALVING, ACCESSORIES, OR EQUIPMENT IS LOCATED IN A WALL, PROVIDE AN APPROPRIATELY SIZED ACCESS DOOR. COORDINATE ACCESS DOOR SIZE, LOCATION, AND STYLE WITH ARCHITECT.
- 29. CONTRACTOR TO PROVIDE VALVE IDENTIFICATION AND LOCATION ON ALL CEILING TILES WHERE VALVES ARE LOCATED.

\* NOTE \* ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

# PLUMBING SHEET INDEX

P000 PLUMBING TITLE SHEET P101 LEVEL 1 PLUMBING PLAN

![](_page_29_Picture_41.jpeg)

![](_page_29_Picture_42.jpeg)

![](_page_30_Figure_0.jpeg)

![](_page_30_Picture_4.jpeg)

![](_page_30_Picture_6.jpeg)

![](_page_30_Picture_7.jpeg)

181 East 5600 South Murray, Utah 84107 O: (801)530-3148 VBFA Project #: 23696

REV DATE DESCRIPTION

![](_page_30_Picture_11.jpeg)

![](_page_30_Picture_12.jpeg)

![](_page_31_Figure_0.jpeg)

![](_page_32_Figure_0.jpeg)

### FIRE PROTECTION GENERAL NOTES

- NO FIRE PROTECTION LINE SHALL BE DESIGNED OR INSTALLED PRIOR TO CLOSE COORDINATION WITH ALL OTHER DISCIPLINES. DUCTWORK, MECHANICAL PIPING AND PLUMBING TAKE SPACE PRECEDENCE OVER FIRE PROTECTION REMOVAL AND REINSTALLATION AT THE FIRE PROTECTION CONTRACTORS EXPENSE.
- 2. ALL WORK DONE SHALL BE PERFORMED WITH WATER CONTROL IN MIND. CONTAINMENT OF WATER IS NECESSARY TO PREVENT WATER FROM DAMAGING SURROUNDING AREA.
- . COORDINATE EXACT LOCATION OF PIPING WITH STRUCTURAL MEMBERS, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUITS, DUCTWORK, MECHANICAL AND PLUMBING PIPING, AND ALL OTHER TRADES AND ALL EXISTING CONDITIONS.
- 4. FIRE SUPPRESSION CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE AND/OR REPOUTE ANY AND ALL FIRE PROTECTION PIPING, VALVING, SUPPORTS OR SYSTEMS, OTHERWISE WITHIN THE FIRE SUPPRESSION DISCIPLINE REGARDLESS OF WHO INSTALLED THEM OR WHEN THEY WERE INSTALLED, IN ORDER TO ACCOMMODATE MECHANICAL, PLUMBING, ELECTRICAL OR OTHER SYSTEMS. COORDINATE WORK WITH MECHANICAL, ELECTRICAL, PLUMBING OR OTHER CONTRACTORS UNTIL SUBSTANTIAL COMPLETION OF PROJECT.
- 5. PROVIDE ALTERATIONS TO THE EXISTING FIRE PROTECTION SYSTEM AS REQUIRED TO ACCOMMODATE THE NEW FLOOR PLAN AND NEW CEILING TYPES. PROVIDE A COMPLETE WET TYPE SYSTEM INCLUDING NEW MAINS, BRANCHES, HEADS, VALVES, AND ACCESSORIES AS REQUIRED. REUSE EXISTING SYSTEM EQUIPMENT WHERE APPLICABLE. THE SYSTEM SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS AND AS PER REQUIREMENTS OF THE STATE BUILDING CODE, LOCAL FIRE DEPARTMENT, AND ALL FEDERAL, STATE, AND LOCAL AUTHORITIES, NFPA, AND FACTORY MUTUAL.
- 6. THE BUILDINGS COMPLETE OPERATIONAL FIRE PROTECTION SYSTEMS SHALL REMAIN IN PLACE. THIS CONTRACTOR SHALL REPAIR ANY DAMAGE TO THIS SYSTEM CREATED BY THE REMOVAL OF ANY OTHER MECHANICAL SYSTEMS OR COMPONENTS.
- 7. THIS CONTRACTOR SHALL COORDINATE PHASING OF SPRINKLER WORK WITH THE GENERAL CONTRACTOR PRIOR TO STARTING WORK.
- 8. PROVIDE A COMPLETE WET TYPE FIRE PROTECTION SYSTEM AS REQUIRED TO ACCOMMODATE THE FLOOR PLAN AND CEILING TYPES INCLUDING MAINS, BRANCHES, HEADS, VALVES, AND ACCESSORIES AS REQUIRED. THE SYSTEM SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS OF THE STATE BUILDING CODE, LOCAL FIRE DEPARTMENT, AND ALL FEDERAL, STATE, AND LOCAL AUTHORITIES, NFPA, AND FACTORY MUTUAL.
- 9. THE SPRINKLER SYSTEM SHALL BE DESIGNED BASED UPON ACTUAL WATER FLOW TEST DATA OBTAINED AT OR NEAR THE JOB SITE IF THE EXISTING DESIGN BASIS IS ALTERED.
- 10. DIVISION 21 CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR PROPER INSTALLATION OF THE FIRE PROTECTION SYSTEMS ALARM DEVICES INVOLVED WITH FIRE SPRINKLER SYSTEM.
- 11. ALL SPRINKLER SYSTEM PIPING SHALL BE CONCEALED ABOVE THE SUSPENDED CEILING SYSTEM, UNLESS NOTED OTHERWISE. WRITTEN AUTHORIZATION SHALL BE OBTAINED FROM THE ARCHITECT PRIOR TO EXPOSING ANY PIPING IN ANY ROOM WHICH HAS A SUSPENDED CEILING.
- 12. THIS CONTRACTOR SHALL PROVIDE ALL ADDITIONAL SPRINKLER HEADS AS REQUIRED TO ENSURE AN APPROVED FIRE PROTECTION SYSTEM AT NO ADDITIONAL COST TO THE OWNER.
- 13. AUXILIARY DRAINS SHALL BE EXPOSED WITH 1" DRAIN VALVES. WHEN 5 OR MORE GALLONS ARE TRAPPED, THIS CONTRACTOR SHALL PROVIDE FIXED PIPING TO AN ADEQUATELY SIZED RECEPTOR WHICH IS CAPABLE OF ACCEPTING THE FULL FLOW OF THE DRAIN. WHEN LESS THAN 5 GALLONS ARE TRAPPED, A HOSE BIB SHALL BE PROVIDED AT THE DRAIN VALVE.
- 14. AUXILIARY DRAINS SHALL NOT BE LOCATED ABOVE PLASTER OR GYPSUM BOARD CEILING SYSTEMS. ONLY BY A SPECIFIC WRITTEN INSTRUCTION FROM THE ENGINEER WILL A VARIANCE BE PROVIDED.
- 15. AN INSPECTOR'S TEST CONNECTION SHALL BE PROVIDED FOR EACH FIRE SPRINKLER ZONE. THIS CONTRACTOR SHALL PROVIDE FIXED PIPING FROM THE TEST CONNECTION TO AN ADEQUATELY SIZED RECEPTOR WHICH IS CAPABLE OF ACCEPTING THE FULL FLOW OF THE TEST. (EXTERIOR DISCHARGE OF THE TEST CONNECTION SHALL BE PERMITTED ONLY BY SPECIFIC WRITTEN INSTRUCTION FROM THE ENGINEER.)
- 16. SHOW ALL ROOM NUMBERS ON SHOP DRAWING PLANS.
- 17. ROUTE SPRINKLER PIPING SUCH THAT IT DOES NOT RUN ABOVE ELECTRICAL PANELS, SWITCHGEAR, OR SIMILAR EQUIPMENT. SPRINKLER MAINS SHALL NOT RUN THROUGH ELECTRICAL OR COMMUNICATION ROOMS. SPRINKLER HEADS IN THESE ROOMS SHALL BE SERVED BY A DEDICATED BRANCH LINE FOR EACH ROOM. BRANCH LINE TO ENTER ROOM ABOVE DOOR.
- 18. THIS DRAWING INDICATES A GENERAL PIPING ARRANGEMENT AND SUGGESTED SIZING ONLY. THIS CONTRACTOR SHALL DETERMINE THE ACTUAL PIPE SIZING REQUIRED AND COORDINATE WORK WITH ALL OTHER TRADES TO AVOID CONFLICTS.
- 19. THIS CONTRACTOR SHALL PREPARE HYDRAULIC CALCULATIONS BASED UPON THE CONFIGURATION OF THE ACTUAL SYSTEM DESIGN AS SHOWN ON THIS CONTRACTOR'S SHOP DRAWINGS.

### AUTOMATIC SPRINKLER SYSTEM DESIGN CRITERIA

	OCCUPANCY HAZARD	DESIGN DENSITY	
SYMBOL	CLASSIFICATION	(GPM/SF)	DESIGN AREA
R	RESIDENTIAL (DWELLING) OCCUPANCY	0.05	400 SF
LH	LIGHT HAZARD OCCUPANCY	0.10	1500 SF
OH1	ORDINARY HAZARD, GROUP 1 OCCUPANCY	0.15	1500 SF
OH2	ORDINARY HAZARD, GROUP 2 OCCUPANCY	0.20	1500 SF
EH1	EXTRA HAZARD, GROUP 1 OCCUPANCY	0.30	2500 SF
EH2	EXTRA HAZARD, GROUP 2 OCCUPANCY	0.40	2500 SF
S	SPECIAL HAZARD		

1

MECHANICAL SHEET INDEX

F001 FIRE PROTECTION TITLE SHEET F101 LEVEL 1 FIRE PROTECTION PLAN

![](_page_32_Picture_26.jpeg)

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![](_page_33_Figure_0.jpeg)

![](_page_33_Picture_1.jpeg)

SYMBOLS LEGEND					
SYMBOL	DESCRIPTION				
REFERENC	E AND LINE SYMBOLS				
A5 E-501	DETAIL INDICATOR: A5 INDICATES DETAIL NUMBER, E-501 INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.				
A5 E-201	ELEVATION OR SECTION INDICATOR, EXTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.				
A5 E-201	ELEVATION OR SECTION INDICATOR, INTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.				
	ROOM IDENTIFIER WITH ROOM NAME AND NUMBER.				
	KEYNOTE INDICATOR.				
	REVISION INDICATOR.				
CU-1	EQUIPMENT INDICATOR.				
X-X XMDP	MECHANICAL EQUIPMENT INDICATOR. "X-X" INDICATES EQUIPMENT MARK SHOWN ON EQUIPMENT SCHEDULE. "XMDP" IDENTIFIES PANEL EQUIPMENT IS CIRCUITED TO. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.				
	BREAK, STRAIGHT: TO BREAK PARTS OF DRAWING				
$\sim$	BREAK, ROUND				
MATCH LINE SEE XX/X-XXX	MATCH LINE INDICATOR: CENTER, EXTRA WIDE LINE.				
	NEW LINE: MEDIUM LINE.				
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE				
	EXISTING TO REMAIN LINE: THIN LINE.				
	DEMOLITION LINE: DASHED, MEDIUM LINE				
	PROPERTY LINE: DASHED, WIDE LINE.				
	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE.				
XXX EF-X	ELECTRICAL EQUIPMENT INDICATOR. "XXX" INDICATES TYPE OF EQUIPMENT OR EQUIPMENT ID. "EF-X" IDENTIFIES MECHANICAL EQUIPMENT BEING SERVED. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.				
<u>X-X</u> 1LA-3	EQUIPMENT INDICATOR. "X-X" INDICATES EQUIPMENT MARK SHOWN ON EQUIPMENT SCHEDULE. "1LA-3" IDENTIFIES PANEL EQUIPMENT IS CIRCUITED TO. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.				
	THODS				
	WIRING.				
	WIRING TURNED UP OR TOWARDS OBSERVER.				
	WIRING TURNED DOWN OR AWAY FROM OBSERVER.				
	SINGLE BRANCH CIRCUIT HOME RUN TO PANELBOARD WITH				
A-1	DEDICATED NEUTRAL CONDUCTOR. LETTER AND NUMBER NOTATION IDENTIFY PANEL AND CIRCUIT NUMBER.				
A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS.				
1 A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. NUMBER IN BOX REFERS TO THE CONDUCTOR AND CONDUIT SCHEDULE.				
	LOW VOLTAGE WIRING: DIVIDE, MEDIUM LINE.				
+	CONDUIT STUB. DIMENSION RECORD DRAWINGS AND MARK.				
1	CONDUCTOR & CONDUIT ("CC") SCHEDULE INDICATOR. REFER TO ONE-LINE DIAGRAM.				
НС	ADA ACCESS PUSH PLATE				
0	JUNCTION BOX.				
Ф <sub>с</sub>	JUNCTION BOX, CEILING.				
0 <sub>SC</sub>	JUNCTION BOX, SYSTEMS FURNITURE COMMUNICATION CONNECTION.				
Ø <sub>SP</sub>	JUNCTION BOX, SYSTEMS FURNITURE POWER CONNECTION.				
PB	PULL BOX.				
A"xB" +/-C'-D"	CABLE TRAY ABOVE ACCESSIBLE CEILING. "A" DENOTES CABLE TRAY WIDTH, "B" DENOTES CABLETRAY DEPTH. +/-C'-D" DENOTES CABLE TRAY ELEVATION ABOVE OR BELOW FINISHED SURFACE.				
LADDER RACK.					
	CABLE J-HOOKS ABOVE ACCESSIBLE CEILING.				
•	MECHANICAL EQUIPMENT CONNECTION. REFER TO EQUIPMENT SCHEDULE FOR REQUIREMENTS.				
	ELECTRIC VEHICLE CHARGING STATION.				
ΤI	GROUND BUSBAR. REFER TO GROUNDING RISER DIAGRAM FOR ADDITIONAL INFORMATION.				

	SYMBOLS LEGEND		SYMBOLS LEGEND
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
		SITE ELEC	TRICAL AND COMMUNICATIONS UTILITIES
<u>Ф</u> Ш	RECEPTACLE, SINGLE: NEMA 5-20R.	—3ØUP—	ELECTRIC LINE: THIN LINE. $1\emptyset$ = SINGLE PHASE, $2\emptyset$ = 2-PHASE, $3\emptyset$ = 3-PHASE, $0$ = OVERHEAD, U = UNDERGROUND, P = PRIMARY, S = SECONDARY
	RECEPTACLE, DUPLEX. NEMA 5-20R.		
A	RECEPTACLE, DUPLEX, CEILING: NEMA 5-20R.		
 ₩	RECEPTACLE, DUPLEX, DEDICATED CIRCUIT: NEMA 5-20R.		UTILITY, DISTRIBUTION SWITCH OR SWITCHING STATION.
ΨD	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT	E	UTILITY, PRIMARY ELECTRICAL HAND HOLE.
$\bigoplus$ DF	RECEPTACLE BEHIND WATER COOLER. SEE MECHANICAL/PLUMBING SHOP DRAWINGS FOR INSTALLATION		UTILITY SERVICES, MANHOLE.
	REQUIREMENTS. RECEPTACLE, DUPLEX, ISOLATED GROUND: NEMA 5-20R.	(C)	UTILITY, COMMUNICATIONS MANHOLE.
s	RECEPTACLE, DUPLEX, SWITCHED: NEMA 5-20R.	(E)	UTILITY, ELECTRICAL MANHOLE.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT		UTILITY, TELEPHONE MANHOLE.
⊕w	NTERRUPTER, WET LABEL, "WEATHERPROOF IN USE": NEMA 5-20R.	C	PRECAST CONCRETE, COMMUNICATION VAULT.
	RECEPTACLE, DUPLEX, HOSPITAL GRADE: NEMA 5-20R.	E	PRECAST CONCRETE, ELECTRICAL VAULT.
0	RECEPTACLE, DUPLEX ON EMERGENCY POWER: NEMA 5-20R.	T	PRECAST CONCRETE, TELEPHONE VAULT.
⊌	RECEPTACLE, DUPLEX, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.	ТМ	PRECAST CONCRETE, MANHOLE, TRANSFORMER VAULT.
Φ	RECEPTACLE, DUPLEX, CONNECTED TO UPS: NEMA 5-20R.	ТР	PRECAST CONCRETE, TRANSFORMER PAD.
₿	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.	Н	HAND HOLE.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE: NEMA 5-20R.	S	SUBSTATION.
Ш	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE ON EMERGENCY POWER:	Т	TRANSFORMER.
•	NEMA 5-20R.	ELECTRIC	AL POWER AND DISTRIBUTION
₩P	NEGEPTAGLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WEATHERPROOF: NEMA 5-20R.		FUSE WITH RATING (ONE-LINE DIAGRAM).
<u>.</u>	RECEPTACLE, DUPLEX, RECESSED: NEMA 5-20R.		DISCONNECT, FUSED (ONE-LINE DIAGRAM).
₫ s	RECEPTACLE, DUPLEX, SWITCHED, RECESSED: NEMA 5-20R.		
<u></u>	RECEPTACLE, QUADRAPLEX: NEMA 5-20R.	<u>\</u>	DISCONNECT, NONFUSED (ONE-LINE DIAGRAM).
<b>-</b>	POWER: NEMA 5-20R.		
 □	RECEPTACLE, QUADRAPLEX, HOSPITAL GRADE: NEMA 5-20R.		
*	POWER: NEMA 5-20R.	Ę	DISCONNECT WITH FUSE AND MOTOR STARTER COMBINATION (ONE-LINE DIAGRAM).
 □	RECEPTACLE, QUADRAPLEX, CONNECTED TO UPS. NEWA 5-20R. RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT		
 ↓	INTERRUPTER: NEMA 5-20R. RECEPTACLE, SPECIAL PURPOSE. PROVIDE RECEPTACLE TO		
$\bigcirc$	MATCH EQUIPMENT PLUG. RECEPTACLE, SPECIAL PURPOSE ON EMERGENCY POWER.	Ç	
 ∦⊓	PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.		
₩_R	RECEPTACLE, RANGE: NEMA 14-50R.	Ę	STARTER (ONE-LINE DIAGRAM).
	MULTI-OUTLET ASSEMBLY: NEMA 5-20R.		
	DROP CORD. SEE DETAIL.		CIRCUIT BREAKER, MOLDED CASE (ONE-LINE DIAGRAM).
	THERMOSTAT.	لم	
	FLUSH FLOOR BOX. "#" SHOWN ON DRAWINGS. REFER TO	↓ ↓	(ONE-LINE DIAGRAM).
FB#	SPECIFICATIONS FOR CONFIGURATION AND DEVICES.	/ MCP	
	POWER POLE. "#" SHOWN ON DRAWINGS. REFER TO WIRING		(ONE-LINE DIAGRAM).
	CONFIGURATION AND DEVICES.	( #AF	CIRCUIT BREAKER, ADJUSTABLE TRIP. "225AF" REPRESENTS
PT#	FLUSH FIRE RATED POKE THRU. "#" SHOWN ON DRAWINGS.		(ONE-LINE DIAGRAM).
	SPECIFICATIONS FOR CONFIGURATION AND DEVICES.		CIRCUIT BREAKER, SOLID STATE (ONE-LINE DIAGRAM).
Ф 	SWITCH, DIMMER.		
\$ 	SWITCH, SINGLE POLE ("x" INDICATES FIXTURES CONTROLLED).		CIRCUIT BREAKER, SOLID STATE WITH GROUND FAULT
\$2 X	SWITCH, DOUBLE POLE ("x" INDICATES FIXTURES CONTROLLED).		
\$3 X	SWITCH, THREE-WAY ("x" INDICATES FIXTURES CONTROLLED).		MOTOR.
\$4	SWITCH, FOUR-WAY ("x" INDICATES FIXTURES CONTROLLED).		TRANSFORMER (ONE-LINE DIAGRAM).
\$DS			
\$K			BATTERY (ONE-LINE DIAGRAM)
¢۲ ⊅۲	SWITCH, TIMER OPERATED		CAPACITOR (ONE-LINE DIAGRAM)
¢/\\\D ⊅ I	SWITCH, WEATHERPROOF.		DELTA CONNECTION (ONE-LINE DIAGRAM)
₩₩-	RECEPTACLE, DUPLEX, TAMPER RESISTANT: NEMA 5-20R		,,
<u>₩</u> т	RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT		WYE CONNECTION (ONE-LINE DIAGRAM).
	RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT	"1DPHA"	
	INTERRUPTER, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.		DISTRIBUTION PANELBOARD, MOTOR CONTROL CENTER, PLUG-IN BUSWAY, MEDIUM VOLTAGE SWITCHBOARD
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, CONNECTED TO UPS: NEMA 5-20R.		
₿.	RECEPTACLE, SINGLE PLEX, WITH USB OUTLET		
₫	RECEPTACLE, DULEX, RECESSED, NEMA 5-20R, AUTOMATICALLY CONTROLLED THROUGH TIME OR OCCUPANCY BASED CONTROLS (REFER TO PLANS FOR CONTROL METHOD)	"1H"	PANELBOARD (ONE-LINE DIAGRAM).
#	RECEPTACLE, QUADRAPLEX, RECESSED, NEMA 5-20R, AUTOMATICALLY CONTROLLED THROUGH TIME OR OCCUPANCY BASED CONTROLS (REFER TO PLANS FOR CONTROL METHOD)	225/3 "1H"	PANELBOARD WITH MAIN LUGS ONLY. BUS SIZE AND PHASE AS
#	INDICATES A RECEPTACLE IS AUTOMATICALLY CONTROLLED THROUGH TIME OR OCCUPANCY BASED CONTROLS (REFER TO		
		)225/3 "1H"	PANELBOARD WITH MAIN CIRCUIT BREAKER. SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
		)225/3 "1H" 60/3	PANELBOARD WITH MAIN AND SUB FEED CIRCUIT BREAKER (ONE-LINE DIAGRAM).

	SYMBOLS LEGEND
SYMBOL	DESCRIPTION
	AL POWER AND DISTRIBUTION
	PANELBOARD WITH MAIN LUGS ONLY AND SURGE PROTECTION WITH CIRCUIT BREAKER (ONE-LINE DIAGRAM).
225/3 "1H" 225/3 "1H"	PANELBOARD WITH SUB FEED LUGS (ONE-LINE DIAGRAM).
)225/3 "1H" "1H"	PANELBOARD WITH CIRCUIT BREAKER AND SUB FEED LUGS (ONE-LINE DIAGRAM).
	CT CABINET PER UTILITY'S REQUIREMENTS (ONE-LINE DIAGRAM).
	CT CABINET PER UTILITY'S REQUIREMENTS (ONE-LINE DIAGRAM).
	TRANSFER SWITCH (ONE-LINE DIAGRAM).
	DIGITAL MULTIMETER (ONE-LINE DIAGRAM).
<u> </u>	EARTH GROUND (ONE-LINE DIAGRAM).
•	SERVICE ENTRANCE SURGE PROTECTION (ONE-LINE DIAGRAM).
-\$	GENERATOR, ANNUNCIATOR (ONE-LINE DIAGRAM).
EPO	PUSH BUTTON, REMOTE EMERGENCY STOP.
 	GENERATOR, POWER (ONE-LINE DIAGRAM).
K	KIRK-KEY MECHANICAL INTERLOCK (ONE-LINE DIAGRAM)
M	METER.
BBE	BROAD BAND FILTER (ONE-LINE DIAGRAM)
	VARIABLE FREQUENCY MOTOR CONTROLLER (ONE-LINE
	DISCONNECT SWITCH, FUSED.
	DISCONNECT SWITCH, UNFUSED.
	STARTER, COMBINATION WITH DISCONNECT SWITCH.
	STARTER OR MOTOR CONTROLLER.
	PUSHBUTTON.
	PUSHBUTTONS, MOTOR CONTROL.
<u>rzz</u>	PANELBOARD CABINET, FLUSH MOUNTED.
	PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION.
	PANELBOARD CABINET, SURFACE MOUNTED, 2 SECTION.
DP#	DISTRIBUTION PANEL OR SWITCHBOARD.
	LIGHTING RELAY, CONTACTOR PANEL, OR DIMMING ENCLOSURE.
\$ST	PROTECTION.
	TRANSFORMER (SEE ONE-LINE FOR SIZE)
BB	BUSWAY.
	RELAY CONTACT, NORMALLY CLOSED (ONE-LINE DIAGRAM).
	RELAY CONTACT, NORMALLY OPEN (ONE-LINE DIAGRAM).
مله	PUSHBUTTON, NORMALLY CLOSED (ONE-LINE DIAGRAM).
	PUSHBUTTON, NORMALLY OPEN (ONE-LINE DIAGRAM).
∑°	PRESSURE SWITCH, CLOSE ON INCREASE (ONE-LINE DIAGRAM).
T	PRESSURE SWITCH, OPEN ON INCREASE (ONE-LINE DIAGRAM).
To	SWITCH, NORMALLY CLOSED FLOAT (ONE-LINE DIAGRAM).
$\sim$	SWITCH, NORMALLY OPEN FLOAT (ONE-LINE DIAGRAM).
-040-	SWITCH, NORMALLY CLOSED LIMIT (ONE-LINE DIAGRAM).
-0~0-	SWITCH, NORMALLY OPEN LIMIT (ONE-LINE DIAGRAM).
-0-10-	SWITCH, NORMALLY CLOSED TEMPERATURE ACTIVATED
	SWITCH, NORMALLY OPEN TEMPERATURE ACTIVATED
-010-	SWITCH, NORMALLY CLOSED TIME DELAY (ONE-LINE DIAGRAM).
-010-	SWITCH, NORMALLY OPEN TIME DELAY (ONE-LINE DIAGRAM).
-070-	SWITCH, NORMALLY CLOSED FOOT OPERATED (ONE-LINE
0.0-	SWITCH, MULTIPOSITION (ONF-LINE DIAGRAM)
	SWITCH, SINGLE BREAK (ONF-I INF DIAGRAM)
	SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM).
	CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM).
GESM	GENERATOR ENGINE START MONITORING SYSTEM GENERATOR MODULE (ONE-LINE DIAGRAM). GENERATOR ENGINE START MONITORING SYSTEM ATS MODULE
GESM	GENERATOR ENGINE START MONITORING SYSTEM GENERATOR MODULE (ONE-LINE DIAGRAM). GENERATOR ENGINE START MONITORING SYSTEM ATS MODULE (ONE-LINE DIAGRAM).
GESM ESM PRM	GENERATOR ENGINE START MONITORING SYSTEM GENERATOR MODULE (ONE-LINE DIAGRAM). GENERATOR ENGINE START MONITORING SYSTEM ATS MODULE (ONE-LINE DIAGRAM). PHASE ROTATION MONITOR (ONE-LINE DIAGRAM).

		5		
1D		ABBREV	IAT	IONS
		NOTE: ALL ABBREVIAT	IONS MAY	Y NOT BE USED.
	1P	SINGLE POLE		
	1PH 1WAY	SINGLE-PHASE ONE-WAY	kVAR	KILOVOLT AMPERE REACTIVE
	2/C	TWO-CONDUCTOR	kWh	KILOWATT HOUR
JRGE PROTECTION ).	3/C	THREE-CONDUCTOR	LED LFMC	LIGHT EMITTING DIODE LIQUID TIGHT FLEXIBLE METAL
	3WAY 4OUT	THREE-WAY QUADRUPLE RECEPTACLE	I FNC	CONDUIT LIQUID TIGHT ELEXIBLE
	4PDT	OUTLET FOUR-POLE DOUBLE THROW		
NE DIAGRAM).	4PST	FOUR-POLE SINGLE THROW	LPS LRA	LOCKED ROTOR AMPS
	4VV 4WAY	FOUR-WIRE FOUR-WAY	LTG LV	LIGHTING LOW VOLTAGE
	A	ABOVE COUNTER	MATV	MASTER ANTENNA TELEVISION
SUB FEED LUGS	ADA	AMERICANS WITH DISABILITIES	MAX	MAXIMUM
	ADJ	ADJACENT	MC MCA	METAL CLAD MINIMUM CIRCUIT AMPS
	AFF	ABOVE FINISHED FLOOR ABOVE FINISHED GRADE	MCB	MAIN CIRCUIT BREAKER
ONE-LINE DIAGRAM).	AIC	AMPERE INTERRUPTING	MCC	MOTOR CONTROL CENTER MOTOR CIRCUIT PROTECTION
	ALUM	ALUMINUM	MDP MG	MAIN DISTRIBUTION PANEL MOTOR GENERATOR
	AMP ANN	AMPERE ANNUNCIATOR	MH	MANHOLE
	AP	ACCESS POINT (WIRELESS	MIN MLO	MINIMUM MAIN LUGS ONLY
ONE-LINE DIAGRAM).	AR	AS REQUIRED	MOCP	MAXIMUM OVERCURRENT PROTECTION
	ASC ATS	AMPS SHORT CIRCUIT AUTOMATIC TRANSFER	MTS	MANUAL TRANSFER SWITCH
		SWITCH	NA NC	NOT APPLICABLE NORMALLY CLOSED
	AWG	AMERICAN WIRE GAGE	NEC NEMA	NATIONAL ELECTRICAL CODE
	BB XFMR	BUCK-BOOST TRANSFORMER		MANUFACTURERS
	BFF	BELOW FINISHED FLOOR	NFC	NATIONAL FIRE CODE
	C	CEILING MOUNTED	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
	CAT CATV	CATEGORY COMMUNITY ANTENNA		
	CB	TELEVISION CIRCUIT BREAKER	NO	NORMALLY OPEN
	ССВА	CUSTOM COLOR AS SELECTED	NTS OC	NOT TO SCALE ON CENTER
NE-LINE DIAGRAM).	ссти	CLOSED CIRCUIT TELEVISION	OCP	
RAM).	CF/CI	CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED	OE OF/CI	OWNER FURNISHED/
	CF/OI	CONTRACTOR FURNISHED/	OF/OI	CONTRACTOR INSTALLED OWNER FURNISHED/ OWNER
	CFBA	CUSTOM FINISH AS SELECTED		
	СКТ	CIRCUIT	OH DR	OVERHEAD (COILING) DOOR
E DIAGRAM)		CONSTRUCTION MANAGER	OL PB	OVERLOAD PUSHBUTTON
	CO	CONVENIENCE OUTLET	PF	POWER FACTOR
	COR	CONTRACTING OFFICER'S REPRESENTATIVE	PNL	PANEL
	CP CT	CONTROL PANEL CURRENT TRANSFORMER	PNM PR	PLENUM PAIR
R (ONE-LINE	CTV	CABLE TELEVISION	PS	POWER SUPPLY
	dBA	UNIT OF SOUND LEVEL	PTZ	PAN/TILT/ZOOM
	DPDT	DOUBLE POLE, DOUBLE THROW	QTY R	QUANTITY REMOVE
	DS	DISCONNECT SWITCH	RCP	REFLECTED CEILING PLAN
	E	EACH	RMC RNC	RIGID METAL CONDUIT RIGID NONMETAL CONDUIT
SWITCH	EM EMT	EMERGENCY	RPM RPP	REVOLUTIONS PER MINUTE
	ENT		RR	REMOVE AND RELOCATE
	EPO	EMERGENCY POWER OFF	S/S SCA	START/STOP SHORT CIRCUIT AMPS
	EQUIP ER	EQUIPMENT EQUIPMENT ROOM	SCBA	STANDARD COLOR AS
	EX		SF	SQUARE FOOT (FEET)
	F FA	FIRE ALARM	SFBA	STANDARD FINISH AS SELECTED BY ARCHITECT
	FCP FLA	FIRE ALARM CONTROL PANEL	SPD SPDT	SURGE PROTECTIVE DEVICE SINGLE POLE. DOUBLE THROW
, 1 SECTION.	FMC	FLEXIBLE METAL CONDUIT	SPEC	SPECIFICATION
. 2 SECTION.	FOB FPP	FREIGHT ON BOARD FIBER PATCH PANEL	SPP	SINGLE POLE, SINGLE THROW
<u></u>	FVNR	FULL VOLTAGE NON-REVERSING	ST SWBD	SINGLE THROW SWITCHBOARD
	FVR	FULL VOLTAGE REVERSING	SWGR	SWITCHGEAR
	GFCI	GROUND FAULT INTERRUPTER	TP	TELEPHONE POLE
MMING ENCLOSURE.	GFP GIG	GROUND FAULT PROTECTION GIGA HERTZ	TP TR	TWISTED PAIR
ERLOAD	GND	GROUND	ттр	
	HD HID	HEAVY DUTY HIGH INTENSITY DISCHARGE	TV	TELEPHONE TERMINAL BOARD
	HOA	HAND-OFF-AUTOMATIC	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
	HPF	HIGH POWER FACTOR	TYP	
	HPS HV	HIGH PRESSURE SODIUM HIGH VOLTAGE	UGND	UNDERGROUND
LINE DIAGRAM).	HWM	HORIZONTAL WIRE MANAGEMENT	UPS	UNINTERRUPTIBLE POWER SUPPLY
E DIAGRAM).	HZ	HERTZ	V	
E DIAGRAM).	I/O IG	ISOLATED GROUND	VFC/VF	VARIABLE FREQUENCY MOTOR
	IMC	INTERMEDIATE METAL CONDUIT	VWM	VERTICAL WIRE MANAGEMENT
MAGKAIVI).	IN/IS	INSULATED/ ISOLATED	W/ W/O	WITH WITHOUT
NE-LINE DIAGRAM).	IR   J-BOX	INFRAKED JUNCTION BOX	WP	WEATHERPROOF
IE-LINE DIAGRAM).	kV k\/A	KILOVOLT KILOVOLT AMPERE	WPP XFMR	WIRELESS PATCH PANEL TRANSFORMER
//				
NE DIAGRAM).			-	
DIAGRAM).		DEFIN	TIO	NS
		NOTE: ALL DEFINITIO	NS MAY I	NOT BE USED.
	INDIC	ATED: THE TERM "INDICATED" RE	FERS TO	GRAPHIC REPRESENTATIONS,
IAGRAM).	NOTE SCHF	S, OR SCHEDULES ON THE DRAW DULES IN THE SPECIFICATIONS	INGS, OT	HER PARAGRAPHS OR AR REQUIREMENTS IN THE
ACTIVATED	CONT "SCHE	RACT DOCUMENTS. WHERE TER	MS SUCH	AS "SHOWN", "NOTED", TO HELP THE READER LOCATE
CTIVATED	THE R	REFERENCE, NO LIMITATION ON LO	CATION	IS INTENDED.
		TED: TERMS SUCH AS "DIRECTE		IESTED" AUTHORIZED"

E POLE MUNICATIONS E TERMINAL BOARD VOLTAGE SURGE UND PTIBLE POWER REQUENCY MOTOR /IRE MANAGEMENT ROOF PATCH PANEL MER EPRESENTATIONS, RAPHS OR MENTS IN THE ", "NOTED", IE READER LOCATE THORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES. APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS

STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS. FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS." INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT

SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS." PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE

AND READY FOR THE INTENDED USE." INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

TECHNOLOGY SYSTEMS: THE TERM "TECHNOLOGY SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...

### CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS, MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC, SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR, THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE INTENT OF THE DOCUMENTS SHALL BE ENFORCED. OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM. A. THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT. B. THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES. AND THE DELIVERY OF

- C. THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE. THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.
- EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL, ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.
- SUBMITTALS: PROVIDE ORIGINAL ELECTRONIC PDF FORMAT, BOUND, BOOKMARKED (EACH SECTION AND PRODUCT), AND HIGHLIGHTED. JOB NAME AND SUBCONTRACTOR SHALL BE ON THE FRONT COVER. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.
- REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.
- ALL WORK SHALL BE DONE ACCORDING TO THE CURRENT NATIONAL ELECTRIC CODE (NEC), IBC, NFPA, AND IFC. COMPLIANCE AND FINAL APPROVAL IS SUBJECT TO THE ON SITE FIELD INSPECTION OF THE AHJ.

### ELECTRICAL SHEET INDEX EE001 SHEET INDEX, ABBREVIATIONS, AND GENERAL NOTES EE002 SYMBOLS LEGEND

EEUUZ	STMBOLS LEGEND
EE003	TELECOM SCHEDULES AND NOTES
EE501	ELECTRICAL DETAILS
EE502	GE DRAWINGS
EE503	GE DRAWINGS
EE701	TYPICAL MOUNTING HEIGHT DETAILS
ED101	FIRST FLOOR - DEMOLITION PLANS
EP101	FIRST FLOOR - OVERALL POWER PLAN
EP101-1	FIRST FLOOR - POWER PLAN
EP551	TELECOM EQUIPMENT RACK ELEVATION
EP601	ONE-LINE DIAGRAMS
EP651	TELECOM RISER DIAGRAMS
EL101	FIRST FLOOR - LIGHTING PLAN
EL601	INTERIOR LIGHTING FIXTURE SCHEDULE
EL602	LIGHTING CONTROL SCHEDULES
EY101	FIRST FLOOR - AUXILIARY PLAN
EY601	AUXILIARY DIAGRAMS & DETAILS
FA101	FIRST FLOOR - FIRE ALARM PLAN

# GENERAL ELECTRICAL NOTES

MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER.

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![](_page_34_Picture_29.jpeg)

REV DATE DESCRIPTION

![](_page_34_Figure_33.jpeg)

SHEET INDEX, ABBREVIATIONS, AND GENERAL NOTES **EE001** 

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![](_page_35_Picture_0.jpeg)

SYMBOLS   EGEND					
SYMBOL	DESCRIPTION				
LIGHTING					
(W-3)	FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.				
(W-3E)	FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR CENTRALIZED UPS CONNECTION AS INDICATED IN PLANS. (W-3E) INDICATES FIXTURE TYPE AS SCHEDULED.				
EM	EMERGENCY.				
NL	NIGHT LIGHT: DO NOT SWITCH.				
¢	EGRESS DIRECTION ARROW (EXIT SIGNS).				
$\bigotimes$	EXIT SIGN: SINGLE FACE; CEILING MOUNTED				
$\mathbf{x}$	EXIT SIGN: SINGLE FACE; WALL MOUNTED				
$\mathbf{\Theta}$	EXIT SIGN: DOUBLE FACE; CEILING MOUNTED				
Ŷ	EXIT SIGN: DOUBLE FACE; WALL MOUNTED				
LIGHTING (	CONTROL				
>	OCCUPANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING.				
峑	OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL.				
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, DIRECTIONAL.				
(P)	PHOTOCELL.				
H(P)	PHOTOCELL, WALL MOUNTED.				
*	VACANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING,				
<b>↓</b>	VACANCY SENSOR, DUAL TECHNOLOGY, WALL.				
H	CEILING FAN.				
* \$	SWITCH/OCCUPANCY SENSOR COMBO, DUAL TECHNOLOGY, WALL.				
÷.	SWITCH/VACANCY SENSOR COMBO, DUAL TECHNOLOGY, WALL.				
 *	DIMMER SWITCH/OCCUPANCY SENSOR COMBO,				
	DIMMER SWITCH/VACANCY SENSOR				
a,b	LOW VOLTAGE DIGITAL LIGHTING CONTROL SWITCH: LETTER "a,b" INDICATES ZONING WHERE SHOWN (REFER TO PLANS, SCHEDULES, AND DETAILS FOR EXACT BUTTON CONFIGURATION AND PROGRAMMING REQUIREMENTS)				
RC	DIGITAL LIGHTING ROOM CONTROLLER				
DC	DIGITAL LIGHTING DIMMING CONTROLLER				
LC	DIGITAL PLUG LOAD CONTROLLER				
LS	LIGHTING NETWORK SWITCH.				
NR	LIGHTING NETWORK ROUTER.				
SM	LIGHTING NETWORK SEGMENT MANAGER				
NB	LIGHTING NETWORK BRIDGE				
ET	LIGHTING EMERGENCY TRANSFER DEVICE				
	LIGHTING SPACE CONTROL TYPE. X INDICATES TYPE. SEE SCHEDULE / DIAGRAM.				
TWO-WAY	COMMUNICATIONS				
2WA	TWO-WAY COMMUNICATIONS MAIN CONTROL STATION (ANNUNCIATOR)				
RCS	TWO-WAY COMMUNICATIONS REMOTE CALL STATION				
$\mathbf{\nabla}$	DATA CONNECTION: TWO-WAY EMERGENCY				

	5
	SYMBOLS LEGEND
'MBOL	DESCRIPTION
E ALAR	Μ
FAA	FIRE ALARM ANNUNCIATOR PANEL.
ACP	FIRE ALARM CONTROL PANEL, SEMI-RECESSED.
ATC	FIRE ALARM TERMINAL CABINET: NAC, SLC, SPEAKER CIRCUITS; AMPLIFIERS, BATTERIES
IVAC	CONTROL PANEL FOR HVAC: SMOKE CONTROL, STAIR PRESSURIZATION.
VAC	VOICE EVACUATION PANEL.
PRE	PRE-ACTION CONTROL PANEL.
MIC	REMOTE VOICE EVACUATION MICROPHONE.
FPC	FIRE PUMP CONTROLLER.
JPC	JOCKEY PUMP CONTROLLER.
С	AUTOMATIC DOOR CLOSERS: DOOR CLOSERS SHALL BE FURNISHED WITH DOOR HARDWARE AND CONNECTED BY FIRE ALARM INSTALLER.
СМ	CONTROL MODULE.
ММ	MONITOR MODULE.
F	FIRE ALARM MANUAL PULL STATION.
R	SHUT DOWN RELAY: INSTALL RELAY IN CONTROL CIRCUIT OF EQUIPMENT TO BE CONTROLLED IN THE EVENT OF A FIRE.
	WATER FLOW SWITCH. FLOW SWITCHES SHALL BE

S

С	AUTOMATIC DOOR CLOSERS: DOOR CLOSERS SHALL BE FURNISHED WITH DOOR HARDWARE AND CONNECTED BY FIRE ALARM INSTALLER.
СМ	CONTROL MODULE.
ММ	MONITOR MODULE.
F	FIRE ALARM MANUAL PULL STATION.
R	SHUT DOWN RELAY: INSTALL RELAY IN CONTROL CIRCUIT OF EQUIPMENT TO BE CONTROLLED IN THE EVENT OF A FIRE.
FS	WATER FLOW SWITCH. FLOW SWITCHES SHALL BE PROVIDED AND INSTALLED BY FIRE SPRINKLER CONTRACTOR AND SHALL BE CONNECTED TO LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS.
VS	VALVE SUPERVISORY SWITCH, TAMPER SWITCH. TAMPER SWITCHES SHALL BE PROVIDED AND INSTALLED BY FIRE SPRINKLER CONTRACTOR AND SHALL BE CONNECTED TO LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS.
PS	PRESSURE SUPERVISORY SWITCH. PRESSURE SWITCHES SHALL BE PROVIDED AND INSTALLED BY FIRE SPRINKLER CONTRACTOR AND SHALL BE CONNECTED TO LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS
<u>5</u>	MAGNETIC DOOR HOLDER.
(2)	DETECTOR, SMOKE.
H <b>2</b> )	DETECTOR, SMOKE, WALL MOUNTED.
	DETECTOR, SMOKE WITH AUXILIARY CONTACT.
(2) <sub></sub>	DETECTOR, SMOKE, BEAM RECEIVER.
	DETECTOR, SMOKE, BEAM TRANSMITTER,
	DETECTOR SMOKE ELEVATOR RECALL DESIGNATION
	DETECTOR, SMOKE RESIDENTIAL WITH SOUNDER BASE
	DETECTOR, SMOKE, RESIDENTIAL WITT SOUNDER BASE.
	DETECTOR, SMOKE, DUCT WITH HOUSING AND SAMPLING TUBE.
	SMOKE DAMPER. 120V POWER FROM ELECTRICAL SYSTEM.
   @ FSD	COMBINATION FIRE/SMOKE DAMPER. 120V POWER FROM ELECTRICAL SYSTEM.
RTS	REMOTE ALARM INDICATING AND TEST SWITCH.
	DETECTOR, HEAT.
co	DETECTOR, CARBON MONOXIDE.
X	STROBE, WALL MOUNTED.
75	STROBE, WALL MOUNTED. SUBSCRIPT INDICATES CANDELA RATING.
	ALARM, HORN/SPEAKER, WALL MOUNTED, WEATHERPROOF.
$\boxtimes \subset$	ALARM, HORN/STROBE, WALL MOUNTED, ONE ASSEMBLY.
75	ALARM, HORN/STROBE, WALL MOUNTED, ONE ASSEMBLY. SUBSCRIPT INDICATES CANDELA RATING.
	ALARM, CHIME/STROBE, WALL MOUNTED, ONE ASSEMBLY.
⊠√G	ALARM, HORN/STROBE WITH GUARD, WALL MOUNTED, ONE ASSEMBLY.
M	ALARM, MINI HORN/STROBE, WALL MOUNTED, ONE ASSEMBLY.
	SPEAKER, WALL MOUNTED, EVACUATION.
<u>,</u>	SPEAKER, WALL MOUNTED, EVACUATION, COMBINATION STROBE.
75	SPEAKER, WALL MOUNTED, EVACUATION, COMBINATION
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	ALARM, HORN/STROBE, ONE ASSEMBLY, CEILING MOUNTED.
>\\]75	ALARM, HORN, CEILING MOUNTED. SUBSCRIPT INDICATES
<u> </u>	SPEAKER/STROBE, CEILING MOUNTED. SUBSCRIPT INDICATES
$\frac{1}{1}$	SPEAKER, CEILING MOUNTED.
<u>M</u> 75	ALARM, STROBE, CEILING MOUNTED. SUBSCRIPT
$\overline{\bigcirc}$	INDICATES CANDELA RATING. BELL, ELECTRIC, 120V FROM ELECTRICAL SYSTEM OR
52	24V FROM FIRE ALARM SYSTEM

### SYMBOLS LEGEND

SYMBOL	DESCRIPTION
CLOCK	
нC	CLOCK.
FC	CLOCK, SURFACE WITH WIRE GUARD.
	LL
0	JUNCTION BOX.
$\bigcirc$	CORRIDOR LIGHT.
<u>B</u>	
<u>P</u>	
E CB	
P	PATIENT STATION.
Ś	STAFF STATION.
	TOUCH SCREEN NURSE CALL MASTER STATION.
	ZONE LIGHT CONTROLLER.
CU	NURSE CALL AREA CONTROL UNIT & POWER SUPPLIES.
CCTV	
P∕_	CCTV CABLE, POWER.
V	CCTV CABLE, VIDEO SIGNAL.
CCTV	CCTV HEADEND EQUIPMENT.
Μ	CCTV MONITOR.
	CCTV CAMERA/ENCLOSURE WITH LENS, TYPICAL. SEE SCHED
PTZ 🗁	CCTV CAMERA WITH PAN, TILT AND ZOOM.
<u>`</u>	
360°	PANNING CAMERA TRANSVERSE ANGLE.
SECURITY	
X	SECURITY CABLE. SEE EQUIPMENT SCHEDULE FOR CABLE
ACC	ACCESS CONTROL HEADEND EQUIPMENT.
	SECURITY CONTROL PANEL.
SEC	INTRUSION DETECTION HEADEND EQUIPMENT.
<u> </u>	CARD ACCESS DOOR TYPE #1 OR AS NOTED. SEE
	SCHEDULE.
er	
	REMOTE DOOR RELEASE BUTTON.
	BUZZER.
	BUZZER, COMBINATION BELL.
	SENSOR, BURIED VEHICULAR.
	SENSOR, GLASS BREAK.
$\bigcirc$	SENSOR, VOLUMETRIC.
(CA)	CONTROLLED ACCESS POINT.
	INTERCOM STATION.
(IRU)	DUAL TECHNOLOGY PASSIVE INFRARED SENSOR AND ULTRASONIC MOTION DETECTOR.
IR	PASSIVE INFRARED SENSOR.
Р	PANIC DURESS SWITCH.
U	ULTRASONIC MOTION DETECTOR.
AP	ANNUNCIATOR PANEL.
MSI	MASTER STATION, INTERCOM.
TV DISTRIE	BUTION
_T	TV DISTRIBUTION CABLE, INDIVIDUAL DROPS.
TR	TV DISTRIBUTION CABLE, TRUNK.
СМВ	COMBINER.
DC	DIRECTIONAL COUPLER.
DA	DISTRIBUTION AMPLIFIER (ONE-LINE DIAGRAM).
	SPLITTER (ONE-LINE DIAGRAM).
7	TV OUTLET.
	SATELLITE ANTENNA.
 F	TV ANTENNA (ONE-LINE DIAGRAM).
<b>I</b>	TERMINATOR, 75 OHM (TV DISTRIBUTION).

![](_page_35_Picture_6.jpeg)

![](_page_35_Picture_7.jpeg)

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![](_page_35_Picture_9.jpeg)

REV DATE DESCRIPTION

![](_page_35_Figure_12.jpeg)

SYMBOLS LEGEND

۱		1 ——			2
			CLINIC/HOSPITAL COLOR TYPE BLUE DATA	CABLE/OUTLET	COLOR SCHEDULE
E					
C					
E	3				
Ĥ					

### COPPER PATCH CORD SCHEDULE

(CATEGORY 6A F/UTP CABLES W/RJ-45 CONNECTORS)								
LENGTH (FEET)	COLOR	QUANTITY	UNIT COST (EACH)					
5'	BLUE	20% OF TOTAL PORTS IN TDR'S						
7'	BLUE	60% OF TOTAL PORTS IN TDR'S						
10'	BLUE	20% OF TOTAL PORTS IN TDR'S						

THE ITEMS INDICATED BELOW SHALL NOT BE CONSTRUED AS A "BILL OF MATERIALS". THIS LIST IDENTIFIES ITEMS OF SIGNIFICANCE USED DURING THE DESIGN OF THE CABLING INSTALLATION. WHERE THE ITEMS INDICATED ARE ONE PORTION OF AN ASSEMBLY, THE ENTIRE ASSEMBLY SHALL BE PROVIDED UNLESS SPECIFIED OTHERWISE. PROVIDE ALL MISCELLANEOUS HARDWARE AND SUPPORTS WHICH MAY NOT BE LISTED HERE, FOR A COMPLETE INSTALLATION. COMPARE CATALOG NUMBERS WITH DESCRIPTIONS AND NOTIFY ENGINEER OF DISCREPANCIES PRIOR TO BID. IF CATALOG NUMBERS DO NOT MATCH DESCRIPTIONS, THE DESCRIPTIONS TAKE PRECEDENCE. PROVIDE COMPLETE SUBMITTAL FOR APPROVAL PRIOR TO PURCHASING ANY EQUIPMENT OR CABLE. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. SYMBOL ITEM DESCRIPTION STATION CABLE, DATA - CATEGORY 6A FUTP RISER, DATA OUTLET, SINGLE GANG FACEPLATE, WHITE,  $\mathbf{\nabla}$ CATEGORY 6A JACK - DATA, BLUE BLANK INSERT, WHITE DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, ▼ CATEGORY 6A JACK - DATA, BLUE BLANK INSERT, WHITE

SPP1 48 PORT, 1RU ANGLE PATCH PANEL WITH OUTLETS NOTE: ALL RACKS, LADDER, PATCH PANELS AND ACCESSORIES SHALL BE BLACK IN COLOR.

# CLINIC/HOSPITAL - EQUIPMENT/CABLE LIST

ACCEPTABLE TYPES
SIEMON 9A6R4-A5-06-R1A
SIEMON 10GMX-FPS04-02
SIEMON Z6A-S06
SIEMON MS-BL-02
SIEMON 10GMX-FPS04-02
SIEMON Z6A-S06
SIEMON MS-BL-02
SIEMON Z6AS-PA-48

# CLINIC/HOSPITAL -GENERAL PROJECT NOTES

- 1. UNLESS OTHERWISE NOTED, INSTALL ALL CABLE INSIDE RACEWAY SYSTEMS. WHERE RACEWAY SYSTEMS HAVE NOT BEEN PROVIDED OR SPECIFIED, INSTALL CABLE THROUGH THE SPECIFIED "CADDY" CLIPS AT THE MINIMUM INTERVALS IDENTIFIED IN THE SPECIFICATIONS. SUPPORT "CADDY" CLIPS DIRECTLY FROM THE BUILDING STRUCTURE, NOT FROM OTHER BUILDING SYSTEM SUPPORT WIRES OR CABLE.
- 2. PROVIDE PLENUM RATED CABLE IN ALL AIR PLENUMS. IF A PLENUM RATED CABLE IS NOT SPECIFIED, PROVIDE THE PLENUM RATED EQUIVALENT TO THE SPECIFIED CABLE.
- 3. LABEL ALL CABLE INSTALLED UNDER THIS CONTRACT REGARDLESS OF LENGTH.
- 4. THE EQUIPMENT LABELING IDENTIFIED ON DETAILS IN THESE DRAWINGS ARE EXAMPLES ONLY OF THE ACTUAL LABELING WHICH IS REQUIRED AS PART OF THIS CONTRACT. PRIOR TO FABRICATION, SUBMIT THE NOMENCLATURE FOR ALL LABELS TO THE OWNER FOR REVIEW. THIS REQUIREMENT INCLUDES BUT IS NOT LIMITED TO ALL CABLE LABELING, AND ALL EQUIPMENT LABELING.
- 5. IF OUTLET IS TERMINATED IN CEILING SPACE, LABEL THE T-BAR GRID WITH THE OUTLET NUMBER FOR EASY LOCATION AND IDENTIFICATION.
- 6. GROUND ALL EQUIPMENT RACKS INSTALLED UNDER THIS CONTRACT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- 7. FOR EVERY CABLE PULL SPECIFIED, COIL 15' OF EXCESS CABLE AT THE STATION END FOR FUTURE USE. NEATLY COIL 15' ABOVE THE CEILING OR BELOW FLOOR WHERE APPLICABLE.
- 8. PROVIDE THE QUANTITY OF PATCH PANELS REQUIRED +20% FOR THE TOTAL DATA OUTLETS SHOWN ON FLOOR PLANS FOR THE PARTICULAR LEVEL.
- 9. RACK SPACE ALLOCATION SHOULD BE FOLLOWED PER DRAWINGS. IF YOU HAVE A SYSTEM THAT HAS NOT RACK ALLOCATION PLEASE CALL BOE SAUSEDO AT 801-707-3805.
- 10. COORDINATE WITH ALL SUBS TO ENSURE THAT ALL CABLES ARE PROTECTED FROM ANY DIRECT PAINT, OR INCIDENTAL OVERSPRAY.

![](_page_36_Picture_29.jpeg)

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![](_page_36_Picture_31.jpeg)

REV DATE DESCRIPTION

![](_page_36_Figure_34.jpeg)

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![](_page_37_Figure_0.jpeg)

![](_page_37_Picture_1.jpeg)

![](_page_37_Figure_2.jpeg)

NOTE: TIE WIRE SHALL NOT BE USED AS A COMPONENT OF ANY RACEWAY HANGER SYSTEM.

STRUCTURAL UNI

-RACEWAY -

.5" THROUGH 1"

# A5 TYPICAL ROUGH-IN REQUIREMENTS DETAIL SCALE: 1/8" = 1'-0"

- 4. IN ACCORDANCE WITH IBC 714.3.2 EXCEPTION 1, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE IN A RATED FIRE SEPARATION LISTED, SOUND AND FIRE RATED PUTTY PADS SHALL BE USED ON THE OUTLET BOXES. IN NON-RATED WALLS, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY 16" FOR SOUND ATTENUATION.
- 3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND WITH ALL APPLICABLE SHOP DRAWINGS. WALL MUST BE SEPARATED BY A MINIMUM OF 24" HORIZONTAL DISTANCE OR

- 2. PLASTER RINGS NOT SHOWN.
- 1. TYPICAL FOR WOOD AND METAL STUD ROUGH-IN.
- NOTES:

![](_page_37_Figure_25.jpeg)

PROVIDE CONDUIT SUPPORTS IN ACCORDANCE WITH NEC

SPACING REQUIREMENTS FOR

TYPE OF RACEWAY REQUIRED.

# C5 RECESSED FIXTURE MOUNTING DETAIL

/TYPICAL WALL

OUTLETS

![](_page_37_Figure_27.jpeg)

![](_page_37_Picture_28.jpeg)

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![](_page_37_Picture_30.jpeg)

REV DATE DESCRIPTION

![](_page_37_Figure_33.jpeg)

EE501

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CONDICCTIVITY	DEGUUDENAENITC
CONNECTIVITY	REQUIREMENTS

All Digital systems are equipped with Broadband fast Ethernet hardware for Service Diagnostics. The equipped with Digital Imaging are capable of placing electronic images on the Hospital image Ethern (DICOM).

The Digital PC (part of the Digital subsystem) is the connectivity point between the system and the h Broadband connection, it is the purchaser's responsibility to provide the connection at the Ethernet Digital PC via a Cat 5 Ethernet cable and the hospital Ethernet connection.

Note: System hardware is rated at 100/1000Mbs transfer rate. Hospital connections must be rated 100/1000Mbs for optimal performance. One RJ45 Ethernet plus should be present in the room.

Park City Hospital

PRECISION 180

<ol> <li>All wires specified shall be copper stranded, flexible, thermo-plastic, color coded, cut 10 foot long at on boxes, duct termination points or stubbed conduit ends. All conductors, power, signal and ground, murrun in a conduit or duct system. Electrical contractors shall ring out and tag all wires at both ends. Wire must be continuous copper stranded and free from splices.</li> <li>Hospital. For a tip for an end of use of equipment. Larger sizes may be required by local codes.</li> <li>If or diversites and that all wires be color coded, as required in accordance with national and local elec codes.</li> <li>If is recommended that all wires be color coded, as required in accordance with antional and local elec codes.</li> <li>Conduit sizes shall be verified by the architect, electrical engineer or contractor, in accordance with location are to be specified by others. Locat least one convenience outlet sare not illustrated. Their number and location are to be specified by others. Locat least one convenience outlet approved out or equivalent.</li> <li>General room illumination is not illustrated. Caution should be taken to avoid weeksive heat from over spotlights. Damage can occur to celling mounting components and wiring if high wattage bubs are use Recommend low wattage bubs route celling mounted accessories will be parked.</li> <li>Routing of cable ductwork, conduits, etc., must run direct as possible otherwise may result in the need greater than standard cable lengths (refer to the interconnection diagram for maximum usable lengths to point).</li> <li>Conduit turns to have large, sweeping bends with minimum radius in accordance with national and local codes. It is recommended in areas where patients might be examined or threat dunder present, future, or emerge conditions. Consult the governing lectrical code on the daving must not be exceeded.</li> <li>Physical connection of affer presentative. The GF representative would be required to identify the physic connection</li></ol>		ELECTRICAL NOTES
<ul> <li>thospital. For a target of the control of</li></ul>	he systems rnet Network	1. All wires specified shall be copper stranded, flexible, thermo-plastic, color coded, cut 10 foot long at outlet boxes, duct termination points or stubbed conduit ends. All conductors, power, signal and ground, must be run in a conduit or duct system. Electrical contractor shall ring out and tag all wires at both ends. Wire runs must be continuous copper stranded and free from colices.
<ul> <li>I for</li> <li>Conduit sizes shall be verified by the architect, electrical engineer or contractor, in accordance with loc national codes.</li> <li>Convenience outlets are not illustrated. Their number and location are to be specified by others. Locat least one convenience outlet close to the system control, the power distribution unit and one on each the procedure room. Use hospital approved outlet or equivalent.</li> <li>General room lilumination is not illustrated. Caution should be taken to avoid excessive heat from over spotlights. Damage can occur to ceiling mounting components and wiring if high wattage bulbs are use Recommend low wattage bulbs no higher than 75 watts and use dimmer controls (except MR). Do not lights directly above areas where ceiling mounted accessories will be parked.</li> <li>Routing of cable ductwork, conduits, etc., must run direct as possible otherwise may result in the need greater than standard cable lengths (refer to the interconnection diagram for maximum usable length to point).</li> <li>Conduit turns to have large, sweeping bends with minimum radius in accordance with national and loca electrical codes.</li> <li>A special grounding system is required in all procedure rooms by some national and local codes. It is recommended in areas where patients might be examined or treated under present, future, or emergy conditions. Consult the governing electrical code and confer with appropriate customer administrative personnel to determine the areas requiring this type of grounding system.</li> <li>The maximum point to point distances illustrated on this drawing must not be exceeded.</li> <li>Physical connection of primary power to GE equipment.</li> <li>GEHC conducts power audits to verify quality of power being delivered to the system. The customer's electrical contractor is required to be available to support this activity.</li> <li>Conduit and duct truns shall have sweep radius bends</li> <li>Conduit and duct truns shall have sweep radius bends</li> <li>Conduits and duct</li></ul>	e hospital. For a et port on the	<ol> <li>Aluminum or solid wires are not allowed.</li> <li>Wire sizes given are for use of equipment. Larger sizes may be required by local codes.</li> <li>It is recommended that all wires be color coded, as required in accordance with national and local electrical</li> </ol>
<ul> <li>All junction boxes, conduit, duct, duct dividers, switches, circuit breakers, cable tray, etc., are to be sugardly the physic contractor.</li> <li>GHC conduits power audits to verify quality of power being delivered to the system. The customer's electrical contractor is sugardly of power being delivered to the system. The customer's electrical contractor is not electractor.</li> <li>All junction boxes, conduit, duct, duct dividers, switches, circuit breakers, cable tray, etc., are to be sugardly the physic contractor is required to be available to sugard the physic contractor is required to be available to sugard the physic contractor is required to be available to sugard.</li> <li>All junction boxes, conduit, duct, duct dividers, switches, circuit breakers, cable tray, etc., are to be sugard the physic contractor is required to be available to sugard the physic contractor is required to be available to sugard the physic contractor.</li> <li>Conduit and duct runs shall have sweep radius be not be prevised.</li> <li>All junction boxes, conduit, duct, duct dividers, switches, circuit breakers, cable tray, etc., are to be sugard and installed by customers electrical contractor.</li> <li>Conduit and duct runs shall have sweep radius bends</li> <li>Conduits and duct above ceiling or below finished floor must be installed as near to ceiling or floor as p to reduce run length.</li> <li>All junction boxes, conduit, duct, duct dividers, switches, circuit breakers, cable tray, etc., are to be sugard and installed by customers electrical contractor.</li> <li>Conduit and duct runs shall have sweep radius bends</li> <li>Conduits and duct above ceiling or below finished floor must be installed as near to ceiling or floor as p to reduce run length.</li> <li>Ceiling mounted junction boxes illustrated on this plan must be installed flush with finished ceiling.</li> <li>All ductor shall be ental with dividers and have removable, accessible cov</li></ul>	d for	<ul> <li>codes.</li> <li>4. Conduit sizes shall be verified by the architect, electrical engineer or contractor, in accordance with local or national codes.</li> </ul>
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<ul> <li>Grounding is critical to equipment function and patient safety. Site must conform to wiring specificatio shown on this plan.</li> </ul>		<ul> <li>Grounding is critical to equipment function and patient safety. Site must conform to wiring specifications shown on this plan.</li> </ul>

E1 - Electrical Notes

| 12/16

RF-M384261-FIN-00-A.DWG | |Rev AlDate 01/Nov/2023 |

Park City Hospital

			Item		<b>Electrical Layout Item List</b>			
			1	Power Distribution Box (PD	9B)			
			2	10" x 3 1/2" [250 x 100] Su	rface wall duct to bottom of PDB with	minimu	m 2 divider	s
			3	10" x 3 1/2" [250 x 100] Su	rface wall duct with minimum 2 divide	ers		
			4	12" x 3" [300 x 100] Trench	duct with minimum 2 dividers			
			5	10" x 3 1/2" [250 x 100] Flu	ish wall duct with minimum 2 dividers			
			6	Box above ceiling - size per	local code			
			7	Box flush in ceiling - size pe	er local code (Intercom Microphone)			
			8	Flush box - size per local co	de (Operator and Intercom Consoles)			
			9	2 1/2" [64] Conduit above	ceiling			
			10	4" x 4" x 4" [100 x 100 x 10	0] Box attached to duct (TIMS Reading	ess Kit)		
			11	Grommeted opening (Tran	sformer)			
			12	Grommeted opening (Mon	itor)			
			13	Grommeted opening (Inter	rcom Loudspeaker)			
			14	Grommeted opening (Digit	al Systems Cabinet)			
1 I	-		15	Grommeted opening (Gen	erator Cabinet)			
	te nie		16	Suitable chase nipples, refe	er to Table Floor Mounting detail on sl	neet S3	(Table)	
Ð								
			under .		Electrical Outlet Legend	2539	77 8Po 14	
CONTROL			ITEM	QTY Custon Heig	ner/contractor supplied and installed items unless ht above floor determined by local codes unless ot	otherwise herwise sp	specified. ecified.	
CONTROL		Ø	1	System emergency of	off (SEO), (recommended height 1.2m	[48"] ab	ove floor)	
				X-Ray room warning	light control panel			
				X-Ray ON lamp (L1)	- 24V			
8	(7)	5	$\overline{\diamond}$	Door interlock switch	n (needed only if required by state/loc	al codes	5)	
	EXAM ROOM		Ť	Duplex hospital grad	e, dedicated wall outlet 120-v, single	phase po	ower	
	1385		Ä	Network outlet				
1-3								
9 8'-4"	-							
5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		PATIENT TOILET/ DRESSING 1389	Routin for p	ig of cable ductwork, conduit greater than standard cable l	<u>Cable Length Note:</u> s, etc., <b>must run direct as possible</b> oth engths (refer to the interconnection d lengths point to point).	nerwise iagram f	may result i or maximu	n th m us
H 6 12 6 13 10 11 3 14 15 0'-9" 9'-2"	4 16 A 1 2 1 4 16 A 1 2 1 4 16 A 1 2							
				(	Additional Conduit Runs Contractor Supplied and Installed)	-1	1	2
				From (Bubble # / Item)	To (Bubble # / Item)	Qty	S In.	ize
				3 phase power	1 Power Distribution Box	1	As req'd	A
				Power Distribution Poy	Emergency off	1	1/2	
			1	Fower Distribution Box	OTS On/off switch	1	1/2	
				Warning light		1	1/2	
				1 phase power	Warning light control	1	As req'd	A
			6	Generator	Door Switch	1	1/2	_
					6 Intercom Loudspeaker	1	1	+
			8	Intercom Console	7 Intercom Microphone	1	1	+
Park City Hospital	PRECISION 180	RE-M384261-EINLOO-A DWG	1/4"=1'-0" Roy ALD:	ate 01/Nov/2022	F2 - Electrical Law		1	1
rain city mospital		NF-WI304201-FIN-00-A.DWG	11/4 -1 -0 INEV AID2	10 01/100/2023		Jul		- 1

![](_page_38_Figure_9.jpeg)

![](_page_38_Picture_10.jpeg)

![](_page_38_Picture_11.jpeg)

SALT LAKE CITY - HQ 524 SOUTH 600 EAST SALT LAKE CITY, UT 84102 801.575.8800 ST. GEORGE 20 N. MAIN ST. #103 ST. GEORGE, UT 84770 435.522.7070 VCBO.COM VCBO NUMBER: 22545 CLIENT NUMBER: -DATE: 12-08-2023

![](_page_38_Picture_13.jpeg)

REV DATE DESCRIPTION

![](_page_38_Figure_16.jpeg)

GE DRAWINGS

EE502 12/14/2023 12:55:33 PM

![](_page_39_Figure_0.jpeg)

POWER REQUIREMENTS			

PRECISION 180

	2011										
	65 kW	80 kW			SEO		480	OV Main sup	ply		
	Wye 3 PHASE	+ G 480V ±10%				7	3 p	ohase + grou	ind		
	50/60	Hz ± 2%			<b>I</b>	111					
к)	95 kVA	119 kVA							1		
	65 kW	80 kW			SDT		V OUT		100 A		
power line. should	distribution box (PDB) containing th be calculated in accordance with it:	e protective units and controls. The s length and the maximum	WL 14 Bla 14 W 14 Gr	ack hite een		]-400 ]-400 480 V	V IN / 24 V	Powe	er distr Dox (P[	ributio DB) 230 V	n
etweer side) ar	supply cable protective device at t ad the protective devices in the PDB	he beginning of the installation	RML1 14 Bit 14 W 14 Gr	hite een		Ţ	(2)	L,			
d from high sp er outle	any others which may generate tr beed film changers) ets, etc) installed with GE syste	ansients (elevators, air conditioning, em components must be powered	1 phase 14 Bia 1 phase 14 W power 14 Gr	een WLC	14 Black 14 White 14 Green	G	EN	UPS	ТАВ	OTS (option)	
l link w earth c ng up al	ill be by means of an equipotential onductors in the ducts of the no I the conducting units in the rooms	bar. This equipotential bar should be on GE cableways and to additional where GE units are located.	DLK1 Door In GEN Genera OTS Overhe PDB Power RML1 Room I SEO Emerge [1.22m TAB Patient	aterlock Switc tor cabinet ad Tube Susp Distribution I ight dimmer ency OFF butt ] above floor Table	bension (Opt Box switch con, located	ion) 4 ft	14 Black 14 White 14 Green	DLK1	WS (option)	OTS On/Off (Option)	12 Black 12 White
ist com and fle	ply with the distribution diagram be xible, cable color codes must co	elow. omply with standards for electrical	SDT Step-de UPS Uninter WLC Warnin	own Transfor rruptible Pow ng Light Contr	mer, 15kVA ver Supply coller				Cable su — Cable su	pplied by cus pplied by GE	tomer HC
cables nected	for signals and remote control (Y, S during installation. Each conductor	SEO, L) will go to PDB with a pigtail will be identified and isolated (screw	WL Warnin WS Wall St Notes :	and (Option)			22 N		installed Equipme custome	by customer ent supplied b	ογ
iys shoi (cablev	uld meet the conditions laid down i vays should be waterproof)	n current standards and regulations,	(1) Dry cor Max. vo (2) H07RN back of (3) Max lug (4) Fourth	ntact: "X-Ray oltage = 30 V -F cable with generator ca g size 8 AWG wire only new	ON", release 6.56 ft (2m) abinet (only i eded with UI	ed by the sys extra length if required p PS option fo	stem. n on the floor er local requi r USA	r behind the irements)	— Equipme	ent supplied b	by GEHC
mal ter	nperatures (proximity to heating pi	pes or ducts)				FE	EDER TABLE				
erature	shocks	cod)		MINIMUM FEEDER WIRE SIZE IN mm <sup>2</sup> AND (AWG)							
unded	large enough for capies to be repla	ceuj				Ν	MINIMUM FEED	ER WIRE LENGT	н		
mucu.				15m (50')	30m (100')	46m (150')	61m (200')	77m (250')	92m (300')	107m (350')	122m (400')
			480 VAC	*35 (3)	*35 (3)	*35 (3)	*35 (3)	35 (2)	50 (1)	70 (1/0)	70 (1/0)
			,	* MINIMUM WI	RE SIZE FOR CIR	CUIT BREAKER,	BASED ON RECO	DMMENDED O	VERCURRENT PR	ROTECTION	
				GENERAL NOTES							
			In all cases qualified personnel must verify that the feeder (at the point of take-off) and the run to the Radiology system meet all the requirements stated in the PIM.								
			For a single unit transient volt	installation, the age excursions a	minimum trans are 2.5% of rate	sformer size is d line voltage a	112.5kva, synthe at a maximum du	esized power fe uration of 5 cyc	ed is not accept les and frequen	table. Maximum cy of 10 times pe	allowable er hour.
			Ground wire will always travel in the	be same size as e same conduit v	power cable. G with the feeders	around will run s and neutral. N	from the equipr leutral must be t GE cabinet.	ment back to th terminated insi	te power source de the main dis	/main groundin connect panel a	g point and nd not at any

RF-M384261-FIN-00-A.DWG | |Rev AlDate 01/Nov/2023 |

**POWER DISTRIBUTION** 

![](_page_39_Figure_3.jpeg)

E5 - Power Requirements

![](_page_39_Picture_4.jpeg)

SALT LAKE CITY - HQ 524 SOUTH 600 EAST SALT LAKE CITY, UT 84102 801.575.8800 ST. GEORGE 20 N. MAIN ST. #103 ST. GEORGE, UT 84770 435.522.7070 VCBO.COM VCBO NUMBER: 22545 CLIENT NUMBER: -DATE: 12-08-2023

![](_page_39_Picture_6.jpeg)

REV DATE DESCRIPTION

![](_page_39_Figure_9.jpeg)

GE DRAWINGS

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**EE503** 

![](_page_40_Figure_0.jpeg)

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![](_page_40_Picture_2.jpeg)

TYPICAL MOUNTING HEIGHT DETAILS

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**EE701** 

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![](_page_40_Picture_4.jpeg)

SALT LAKE CITY - HQ 24 SOUTH 600 EAST SALT LAKE CITY, UT 84102 801.575.8800 T. GEORGE 20 N. MAIN ST. #103 T. GEORGE, UT 84770 35.522.7070 /CBO.COM /CBO NUMBER: 22545 CLIENT NUMBER: -DATE: 12-08-2023

![](_page_40_Picture_6.jpeg)

![](_page_41_Figure_0.jpeg)

![](_page_41_Figure_1.jpeg)

# **GENERAL SHEET NOTES**

- UNLESS NOTED OTHERWISE REMOVE ALL LIGHTING FIXTURES DEVICES AND EQUIPMENT SHOWN DASHED. REMOVE CONDUIT AND WIRING BACK TO PANELBOARD OF ORIGIN OR TO FIRST ACTIVE DEVICE THAT REMAINS.
- SALVAGE ALL LIGHT FIXTURES, TWIST-LOCK RECEPTACLES AND WALLPLATES, CEILING SPEAKERS AND SECURITY AND FIRE ALARM DEVICES TO OWNER. PROTECT SALVAGED EQUIPMENT FROM DAMAGE.
- PRIOR TO SUBMITTING BID, VISIT THE SITE AND FIELD VERIFY THE EXTENT OF ELECTRICAL DEMOLITION WORK TO MEET THE INTENT OF THE BID DOCUMENTS AND INCLUDE ALL COSTS IN BID.
- PRIOR TO REMOVAL OF ANY ELECTRICAL EQUIPMENT OR WIRING, FIELD VERIFY THAT THE EQUIPMENT OR WIRING IS INACTIVE OR NO LONGER IN USE.
- REMOVE ALL DEVICES, RACEWAYS AND WIRING FROM WALLS TO BE REMOVED. WHERE ACTIVE RACEWAYS OCCUR IN WALLS TO BE REMOVED, RE-ROUTE THE RACEWAY WITH ASSOCIATED WIRING TO KEEP THE CIRCUIT OPERATIONAL.
- REMOVE ALL FIRE ALARM DEVICES WHERE EXISTING WALLS AND CEILINGS ARE BEING REMOVED, WITH ASSOCIATED CONDUIT AND WIRING. EXISTING FIRE ALARM DEVICES AND SYSTEM NOT INDICATED FOR REMOVAL SHALL REMAIN ACTIVE THROUGHOUT DEMOLITION AND CONSTRUCTION UNTIL THE NEW SYSTEM IS TESTED
- LOOPS WHERE EXISTING DEVICES ARE REMOVED. REMOVE ALL ABANDONED RACEWAY, CONDUIT, WIRING AND CABLING WHETHER ABANDONED PREVIOUS TO THIS PROJECT OR AS A RESULT OF THIS PROJECT. NOT
- DEMOLITION SCOPE EXTENT IS REQUIRED. DEVICES MARKED "RR" ARE TO BE REMOVED AND RELOCATED PER NEW PLANS. EXTEND CIRCUITING AS REQUIRED FOR RELOCATION.
- REFER TO ARCHITECTURAL DRAWINGS FOR REMOVAL OF MOTORS, CONDUIT, CONDUCTOR AND CONTROL WIRING ASSOCIATED WITH EXISTING MOTORIZED
- DOORS, PARTITIONS AND LIGHTING. DEMOLISH ALL WI-FI ACCESS POINTS WHETHER SHOWN ON DRAWINGS OR NOT
- WITHIN SCOPE OF WORK AREA. REMOVE FEEDERS FOR ALL DEMOLISHED PANELS, DISCONNETS, ETC. BACK TO
- SOURCE 12 ALL ITEMS INDICATED TO REMAIN SHALL BE PROTECTED DURING ALL PHASES OF
- CONSTRUCTION. 13 CONTRACTOR TO TRACE AND LABEL ALL EXISTING LOADS TO REMAIN, THAT ARE CURRENTLY FED FROM PANELS THAT ARE BEING DEMOLISHED IN THIS PHASE. THESE LOADS TO BE RE-FED FROM NEW PANELS IN NEXT PHASE.
- ALL HVAC UNITS TO BE REMOVED BY MECHANICAL CONTRACTOR UNLESS NOTED OTHERWISE. REMOVE ALL ASSOCIATED RACEWAYS AND CONDUCTORS BACK TO SOURCE.

# ⊖ SHEET KEYNOTES

![](_page_41_Figure_18.jpeg)

![](_page_41_Figure_20.jpeg)

AND OPERATIONAL. MAINTAIN ALL CLASS A FIRE ALARM INITIATING AND INDICATING

ALL ABANDONED ITEMS ARE SHOWN ON THESE PLANS AND FIELD VERIFICATION OF

![](_page_41_Picture_30.jpeg)

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![](_page_41_Picture_32.jpeg)

REV DATE DESCRIPTION

![](_page_41_Figure_35.jpeg)