

**ASI #30** 

To: Bidding Documents

Plan-Holders of Record

Project File

Date: January 06, 2021

Addendum Number: ASI #30 Architect's Project #: 20200132

Project Name: CN Covid Projects

From: BLUE RIVER

**ARCHITECTS, LLC** 

320 South Boston, Suite 103 Tulsa, Oklahoma 74103

Tel 918.877.9036 Fax 918.587.0357

# **Professional Seal:**



# NOTICE ....

This Addendum supplements and amends the original Bidding Documents, shall be taken into account in preparing proposals, and shall become a part of the Construction Documents. The bidder shall indicate receipt of this addendum and all previously issued addenda on the Bid/Proposal Form.

# **PRIOR ADDENDA**

Addendum 2	08/20/2020
ASI #1	09/14/2020
ASI #2	09/18/2020
ASI #3	09/23/2020
ASI #4	09/28/2020
ASI #5	09/30/2020
ASI #6	10/13/2020
ASI #7	10/16/2020
ASI #8	10/26/2020
ASI #9	11/09/2020
ASI #10	11/10/2020
ASI #11	11/11/2020
ASI #12	11/13/2020
ASI #13	11/16/2020
ASI #14	11/17/2020
ASI #15	11/19/2020
ASI #16	11/19/2020
ASI #17	11/20/2020
ASI #18	11/20/2020
ASI #19	11/25/2020
ASI #20	12/02/2020



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ASI #21	12/03/2020
ASI #22	12/10/2020
ASI #23	12/11/2020
ASI #24	12/15/2020
ASI #25	12/15/2020
ASI#26	12/16/2020
ASI#27	01/05/2021
ASI#28	01/05/2021
ASI#29	01/06/2021

# **Changes / Clarifications To Specifications:**

1 None

# <u>Changes / Clarifications To Drawings:</u>

# **Hard Rock**

- 2. Sheet CS Cover Sheet
  - 1. Revised fire safety info on Life Safety Hatch Legend
- 3. Sheet C300 DEMOLITION/EROSION CONTROL PLAN
  - 1. Added note to remove some fencing
- 4. Sheet C400 SITE PLAN
  - 1. Added second drive between parking and country club road
  - 2. Added fire lane striping
- 5. Sheet C500 GRADING PLAN
  - 1. Revised grading for new drive
  - 2. Added culvert beneath new drive
- 6. Sheet C600 Utility Plan
  - 1. Revised water line
  - 2. Revised lift station note to say "private"
  - 3. Added fire hydrant per city comments
- 7. Sheet C800 DETAILS
  - 1. Added detail 12, striping for fire lane
- 8. Sheet A101 FLOOR PLAN & ELEVATIONS
  - 1. Revised wall dimensions
  - 2. Revised Toilet 122, Toilet 125, Toilet 114 layouts
  - 3. Added toilet plan K.1
  - 4. Added note for tempered glazing
  - 5. Added note about attic access panel
  - 6. Added additional snow system on roof plan
  - 7. Revised Millwork
  - 8. Added elevation P.1
  - 9. Revised Meds 116 to gypsum board ceiling
  - 10. Added note 4 to door schedule
  - 11. Added address number note
  - 12. Added Knox Vault location note
- 9. Sheet M001 HVAC NOTES



**ASI #30** 

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- 10. Sheet M101 FIRST FLOOR HVAC PLAN
  - 1. Adjusted supply diffuser location in Office 113.
- 11. Sheet M601 HVAC SCHEDULES & DETAILS
- 12. Sheet P001 PLUMBING NOTES
- 13. Sheet P101 FIRST FLOOR PLUMBING PLANS
  - 1. FIRST FLOOR SANITARY PIPING PLAN
    - A. Adjusted lavatory sink location in Toilet 114.
    - B. Added a sink in Lab 127.
    - C. Flipped the direction of the sanitary main.
  - 2. FIRST FLOOR DOMESTIC WATER PLAN
    - A. Adjusted lavatory sink location in Toilet 114.
    - B. Added a sink in Lab 127.
    - C. Added an emergency eyewash to Lab 127.
- 14. Sheet P601 PLUMBING SCHEDULES & DETAILS
  - 1. Added detail K to the sheet.
  - 2. PLUMBING FIXTURE SCHEDULE
    - A. Revised manufacturer and model number for the restroom lavatories and the exam breakroom sink.
  - 3. PLUMBING SPECIALTIES SCHEDULE
    - A. Added an emergency eyewash.
- 15. Sheet P901 PLUMBING ISOMETRICS
  - 1. PLUMBING SANITARY RISERS
    - A. Adjusted lavatory sink location in Toilet 114.
    - B. Added a sink in Lab 127.
    - C. Flipped the direction of the sanitary main.
  - 2. PLUMBING DOMESTIC WATER RISERS
    - A. Adjusted lavatory sink location in Toilet 114.
    - B. Added a sink in Lab 127.
    - C. Added an emergency eyewash to Lab 127.
- 16. Sheet E001 ELECTRICAL NOTES
  - 1. PANELBOARD SCHEDULE LP2
    - A. Added circuit to panel LP2 for touchless plumbing fixtures.
  - 2. NOTES AND LEGENDS
    - A. Added Low Voltage Notes from LV Contractor
    - B. Adjusted symbol legend for changes to data symbols
- 17. Sheet E101 LIGHTING PLAN
  - DETAIL 1 LIGHTING PLAN
    - A. Updated emergency lighting throughout building to provide proper egress lighting.
    - B. Added under cabinet lighting to all upper cabinets.
  - 2. LIGHTING FIXTURE SCHEDULE
    - A. Added type F fixture data for under cabinet lighting



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- 18. Sheet E201 POWER PLAN
  - 1. DETAIL 1 POWER PLAN
    - A. Provided power to touchless plumbing fixtures.
    - B. Moved Meds receptacles to match new refrigerator location.
    - C. Added receptacles required by LV Contractor
    - D. Added camera LV boxes on exterior of building
    - E. Adjusted data symbols to match new legend
  - 2. POWER KEYNOTES
    - A. Added note for camera box installation.
- 19. Sheet E301 HVAC POWER PLAN
  - 1. DETAIL 1 HVAC POWER PLAN
    - A. Updated to new floorplan.

# **LIST OF ATTACHMENTS**

Hard Rock: CS, C300, C400, C500, C600, C800, A101, M001, M101, M601, P001, P101, P601, P901, E001, E101, E201, E301

END OF ADDENDUM

**→** €

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ARCHITECT: Thomas Seat LICENSE #: 4183

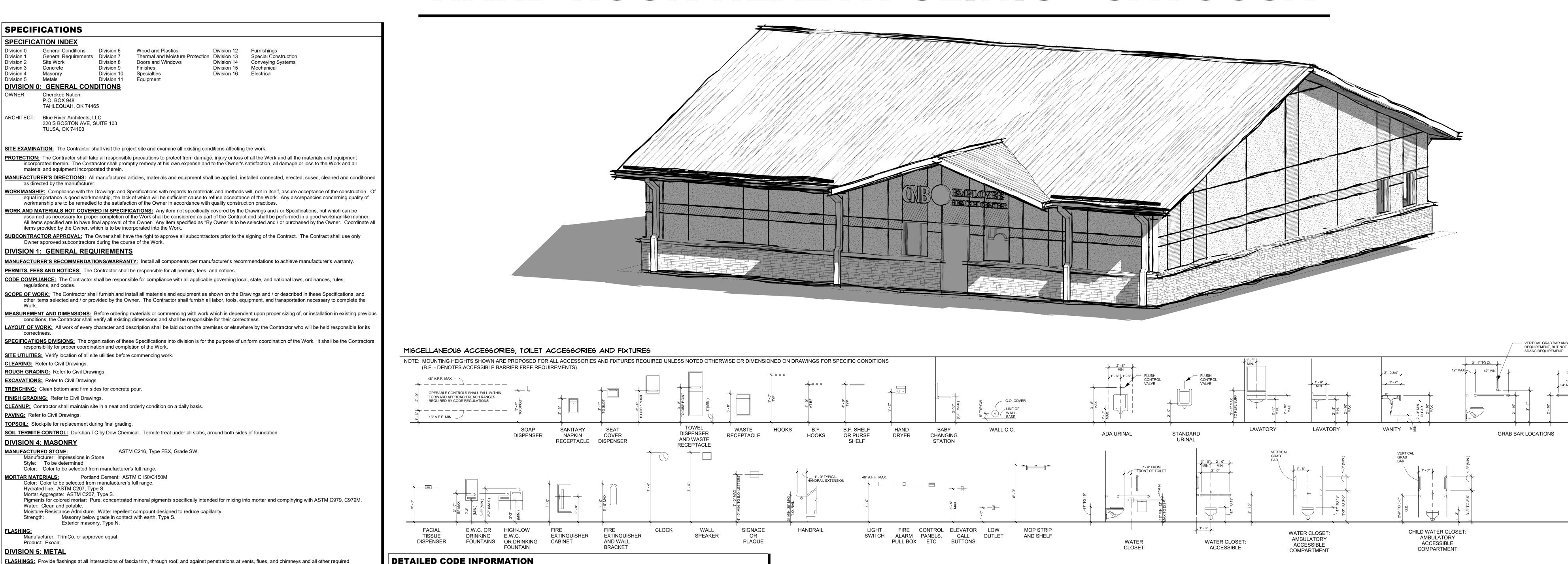
PROJECT #: 20200132 **ISSUE DATES:** 

CONSTRUCTION 12/14/2020 DOCUMENTS Description 01/06/2021 ASI #30

SHEET NUMBER:

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# CHEROKEE NATION - COVID PROJECTS HARD ROCK HEALTH CLINIC - CATOOSA

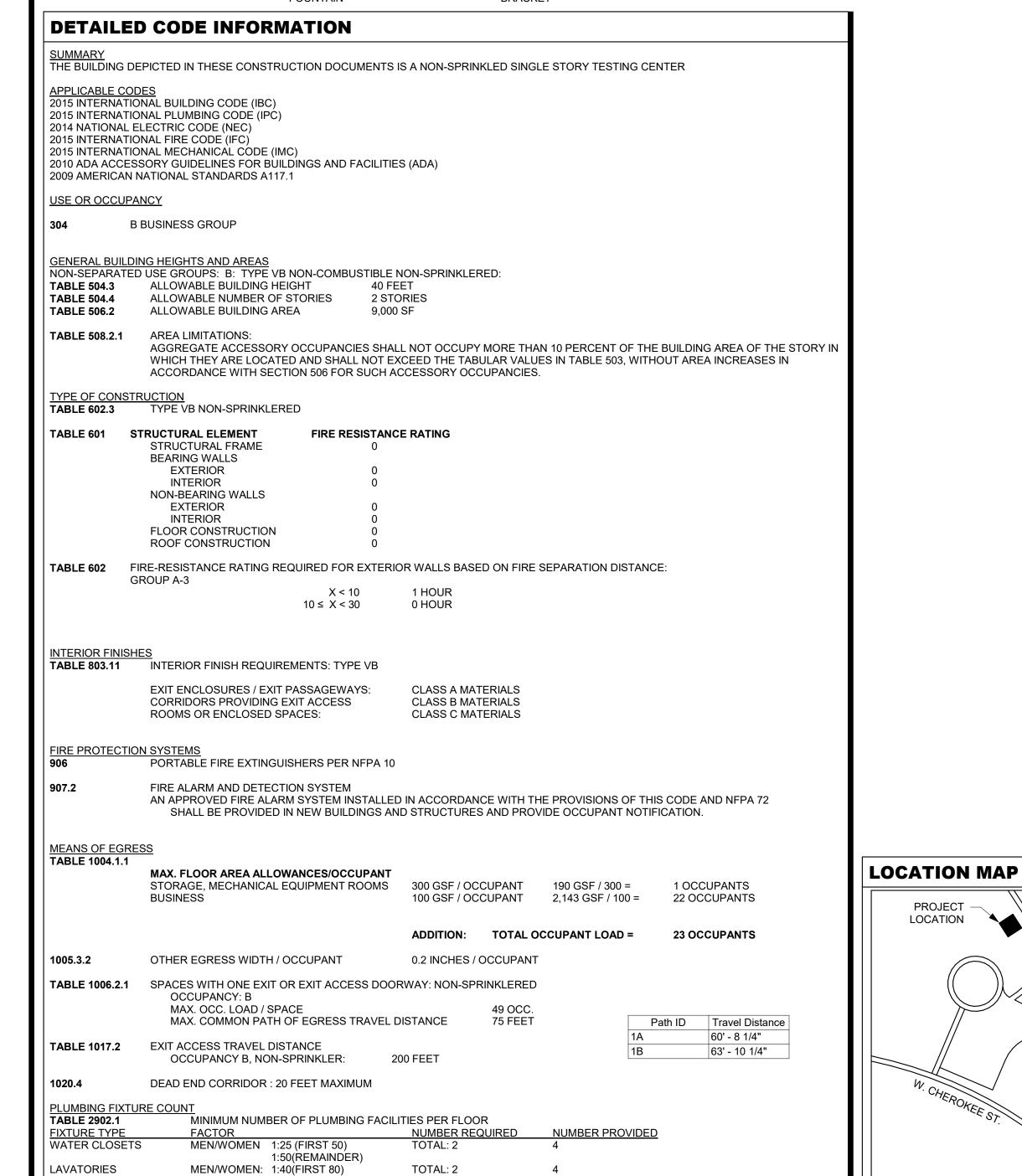


PROJECT -

MCNABB FIELD

ROBSON RD.

LOCATION



1:80(REMAINDER)

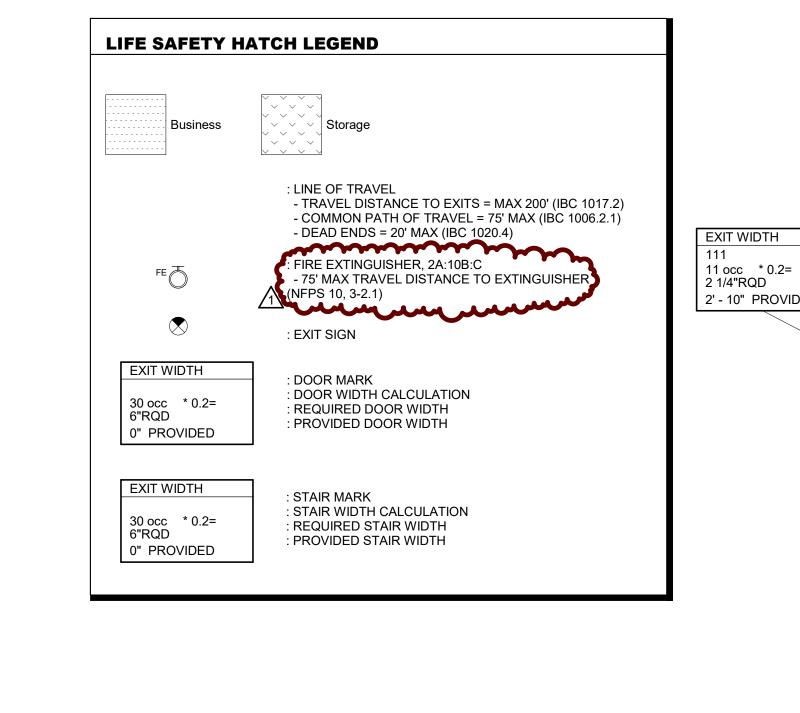
TOTAL: 1

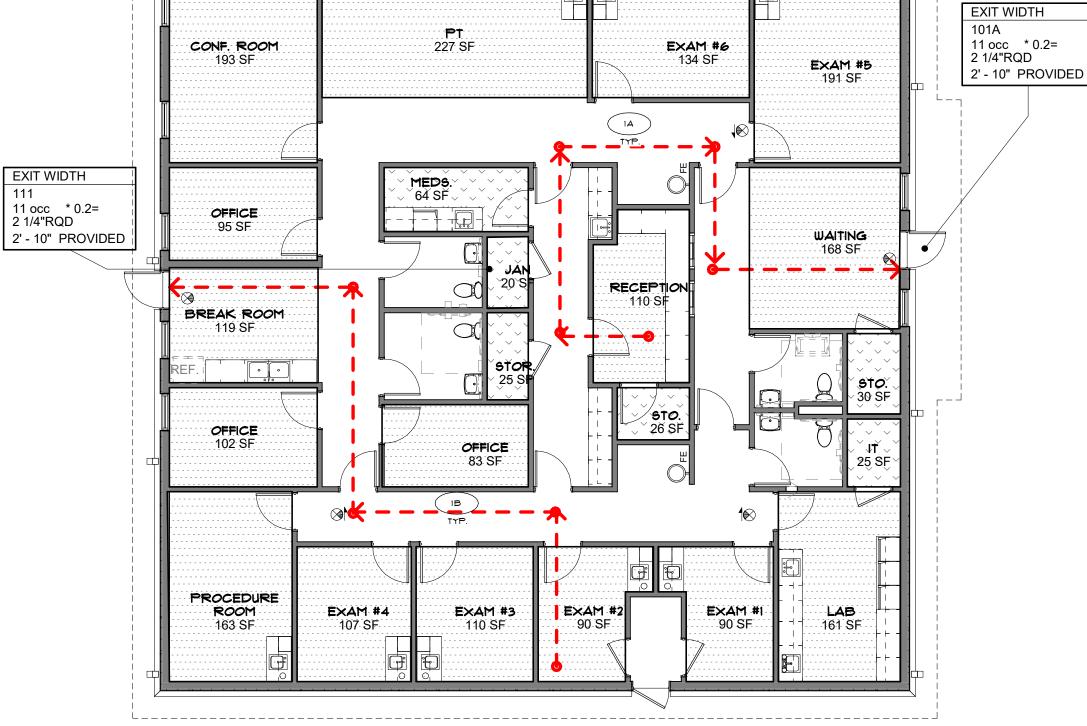
TOTAL: 1

1 (WATER COOLER)

DRINKING FOUNTAIN

SERVICE SINK





FOUNDATION PLAN

FOUNDATION DETAILS

FIRST FLOOR HVAC PLAN

PLUMBING NOTES

PLUMBING ISOMETRICS

**ELECTRICAL NOTES** 

HVAC POWER PLAN

LIGHTING PLAN

POWER PLAN

HVAC SCHEDULES & DETAILS

FIRST FLOOR PLUMBING PLANS

PLUMBING SCHEDULES & DETAILS

Sheet Name

DEOMLITION/EROSION CONTROL PLAN

SHEET INDEX

COVER SHEET

GENERAL NOTES

SURVEY PLAN

UTILITY PLAN

UTILITY DETAILS

GENERAL NOTES

LIFT STATION DETAILS

LIFT STATION SPECIFICATIONS

STRUCTURAL SPECIAL INSPECTIONS

FLOOR PLAN & ELEVATIONS

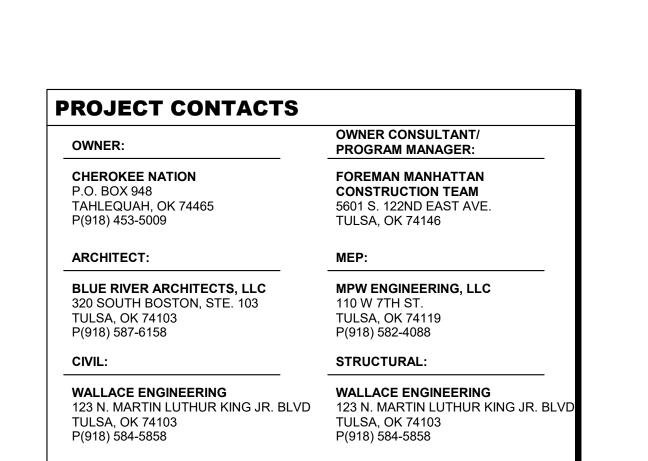
SITE PLAN **GRADING PLAN** 

DETAILS

GENERAL

ARCHITECTURAL

STRUCTURAL



# **DIVISION 14: CONVEYING SYSTEMS** Not Used **DIVISION 15: MECHANICAL** Refer to Mechanical **DIVISION 16: ELECTRICAL** Refer to Electrical **END OF SPECIFICATIONS**

**FASTENERS:** All exterior fasteners to be non-corrosive and compatible with fastener material.

Galvanized in accordance with ASTM A653/A653M G90/Z275 coating.

**CABINETS:** Custom wood cabinets, AWI premium grade; Design and style as indicated on the Drawings.

**FRAMING CONNECTIONS:** 

Exterior Wall Sheathing

THERMAL INSULATION:

Gage: As required to meet L/240 span rating.

thickness. Adhesive to be solvent release type for wet areas.

**ROUGH CARPENTRY:** Provide fire retardant treated wood. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring. 1. Lumber: S4S, No. 2 or Standard Grade.

1. Lumber: S4S, No. 2 or Standard Grade.

Roof: Fiberglass batt insualtion R-30 min.

XTERIOR WALL SHEATHING: Refer to structural S1

**ROOFING:** Standing Seam Metal , minimum 26ga

EXTERIOR INSULATION FINISH SYSTEM (EIFS):

Manufacturer: Dryvit or approved equal

**SEALANTS:** One component polyurethane by Vulkem.

**INTERIOR DOORS:** Refer to door schedule.

**EXTERIOR NON RATED WINDOWS:** 

INTERIOR NON RATED WINDOWS:

**FLOORS:** Refer to Room Finish Schedule.

**BASE:** Refer to Room Finish Schedule.

**DIVISION 10: SPECIALTIES** 

**DIVISION 11: EQUIPMENT** 

**DIVISION 12: FURNISHINGS** 

**DIVISION 9: FINISHES** 

5/8" type 'X' gypsum board.

Joint Tape: USG perf-a-tape

**THRESHOLD:** Finish to match door hardware. **HARDWARE:** Schlage cylinderical core.

**DIVISION 8: DOORS, WINDOWS, & GLASS** 

VAPOR BARRIER:

Roof: Grace Ice and Water Shield or approved equal

**DIVISION 7: THERMAL & MOISTURE PROTECTION** 

Exterior Walls: Fiberglass batt insualtion R-19 min. Interior Walls: Sound attenuation batt insulation.

Exterior Walls: Rolled composite air and vapor barrier

Color: Color to be selected from manufacturer's full range.

Color: Color to be selected from manufacturer's full range.

Product: Hollow metal frames, 1/4" tempered glazing

**EXTERIOR PAINTING AND COATINGS:** Refer to Room Finish Schedule.

**DRYWALL:** Moisture resistant gypsum board in all wet areas.

**INTERIOR PAINTING:** Refer to Room Finish Schedule.

**DIVISION 13: SPECIAL CONSTRUCTION** 

**EXTERIOR DOORS:** Hollow metal doors, design and grade selected by Owner.

Product: Exterior aluminum storefront frames with glazing to be 1" insulated low e glazing.

**PLASTIC LAMINATE:** Cabinets with plastic laminate finish: Refer to Room Finish Schedule.

FIRE EXTINGUISHERS, CABINETS AND ACCESSORIES: Semi recessed cabinet, 10lb extinguishers.

STRUCTURAL STEEL: Shall conform to ASTIm A529, ASTM A572, ASTM A992 and/or ASTM A36.

**DOOR FRAMES:** ANSI 250.8, for level 1 16 gage, factory primed for field finishing, face welded seamless with filled joints.

Manufacturer: Metal Panels Inc or approved equal

Depth: As indicated on the Drawings.

**DIVISION 6: WOOD AND PLASTICS** 

2. Boards: standard or No. 3. Miscellaneous Blocking, Furring, and Nailers

2. Boards: Standard or No. 3.

Sole Plate Sealer: Figerglass.

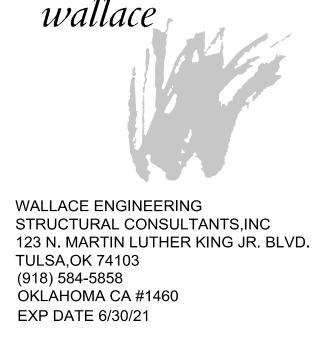
1. Span Rating: 24/0.

2. 7/16" inch, nominal.

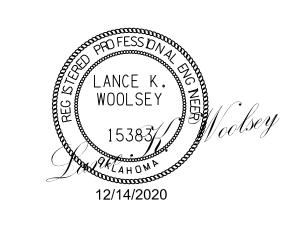
FRAMING: ASTM C955, studs formed to Channel, "C", or Sigma: shape with punched wed; U-shaped track in matchin nomial width and compatible height.

CABINETS WITH PLASTIC LAMINATE FINISH: Custom AWI premium grade; Underlayment APA rated Marine grade plywood suitable for wet locations, 3/4"

**Control Plan** 



6244 South Knoxville Avenue Tulsa, Oklahoma 74136 918.408.6686 blueriverarchitects.com



PROJECT #: 2040179

1"=20' FULL SIZE 1"=40' HALF SIZE

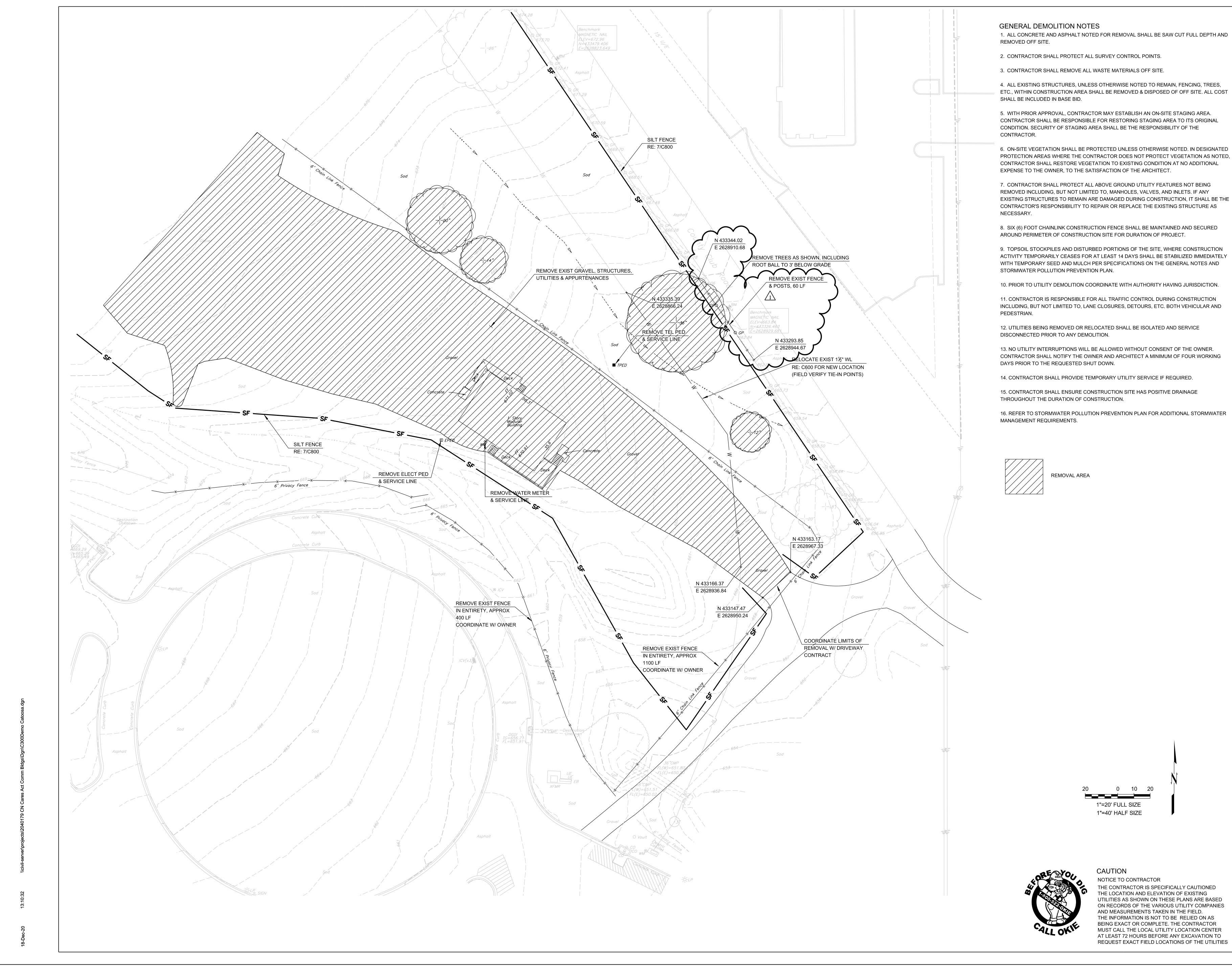
NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THE LOCATION AND ELEVATION OF EXISTING

THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES

AND MEASUREMENTS TAKEN IN THE FIELD.

UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES **ISSUE DATES:** Description ASI #30



Benchmark MAGNETIC NAIL ELEV=672.96

N=433479.406 E=2628823.649

1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL MUNICIPAL REGULATIONS AND CODES, WHICHEVER IS MORE STRINGENT.

2. ALL WORK AND MATERIALS SHALL COMPLY WITH O.S.H.A. STANDARDS.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.

4. ALL DIMENSIONS AND COORDINATES ARE FROM BACK OF CURB UNLESS SHOWN OTHERWISE.

5. RADII = 2.5' U.N.O.

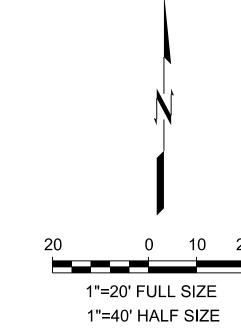
6. BUILDING COORDINATES ARE TO OUTSIDE FACE OF BUILDING, VERIFY W/ ARCH & STRUCT PLANS.

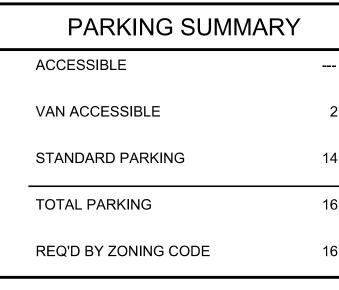
7. CONSTRUCTION JOINTS ARE TO BE DOWELED AT LOCATIONS WHERE THE CONTRACTOR STOPS CONCRETE PAVING AND RESUMES THE NEXT DAY.

8. CONCRETE PAVEMENT JOINTS SHALL BE SAW CUT AND SEALED. CONSTRUCTION JOINTS SHALL BE LOCATED PER PLAN AND SEALED. RE: 6/C800.

9. CONCRETE SIDEWALK JOINTS SHALL BE TOOLED U.N.O.

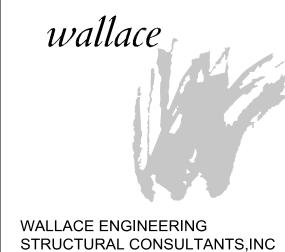
10. ALL NEW CONCRETE PAVEMENT AND SIDEWALK SHALL HAVE ISOLATION JOINTS WHERE ABUTTING BUILDINGS, EXISTING PAVEMENT, WALKS, AND





NOTICE TO CONTRACTOR THE CONTRACTOR IS SPECIFICALLY CAUTIONED THE LOCATION AND ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO

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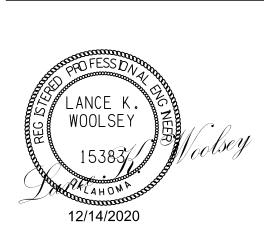
123 N. MARTIN LUTHER KING JR. BLVD.

TULSA,OK 74103 (918) 584-5858

EXP DATE 6/30/21

OKLÁHOMA CA #1460

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PROJECT #: 2040179

ISSL	JE DATES:	
No.	Description	Date
1	ASI #30	01/06/202

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WALLACE ENGINEERING

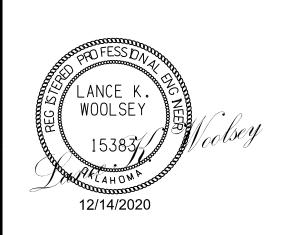
TULSA,OK 74103 (918) 584-5858

EXP DATE 6/30/21

OKLAHOMA CA #1460

STRUCTURAL CONSULTANTS,INC 123 N. MARTIN LUTHER KING JR. BLVD.

6244 South Knoxville Avenue Tulsa, Oklahoma 74136 918.408.6686



PROJECT #: 2040179

20 0 10 20 

1"=20' FULL SIZE

1"=40' HALF SIZE

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AND MEASUREMENTS TAKEN IN THE FIELD.

UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES

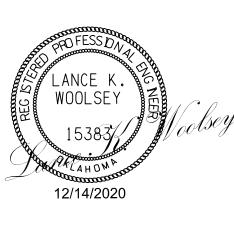
NOTICE TO CONTRACTOR

ISSUE DATES: Description ASI #30

WALLACE ENGINEERING

STRUCTURAL CONSULTANTS,INC 123 N. MARTIN LUTHER KING JR. BLVD. **TULSA, OK 74103** (918) 584-5858 OKLAHOMA CA #1460 EXP DATE 6/30/21

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PROJECT #: 2040179

CAUTION

NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED

THE INFORMATION IS NOT TO BE RELIED ON AS

BEING EXACT OR COMPLETE. THE CONTRACTOR

MUST CALL THE LOCAL UTILITY LOCATION CENTER

AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO

REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES

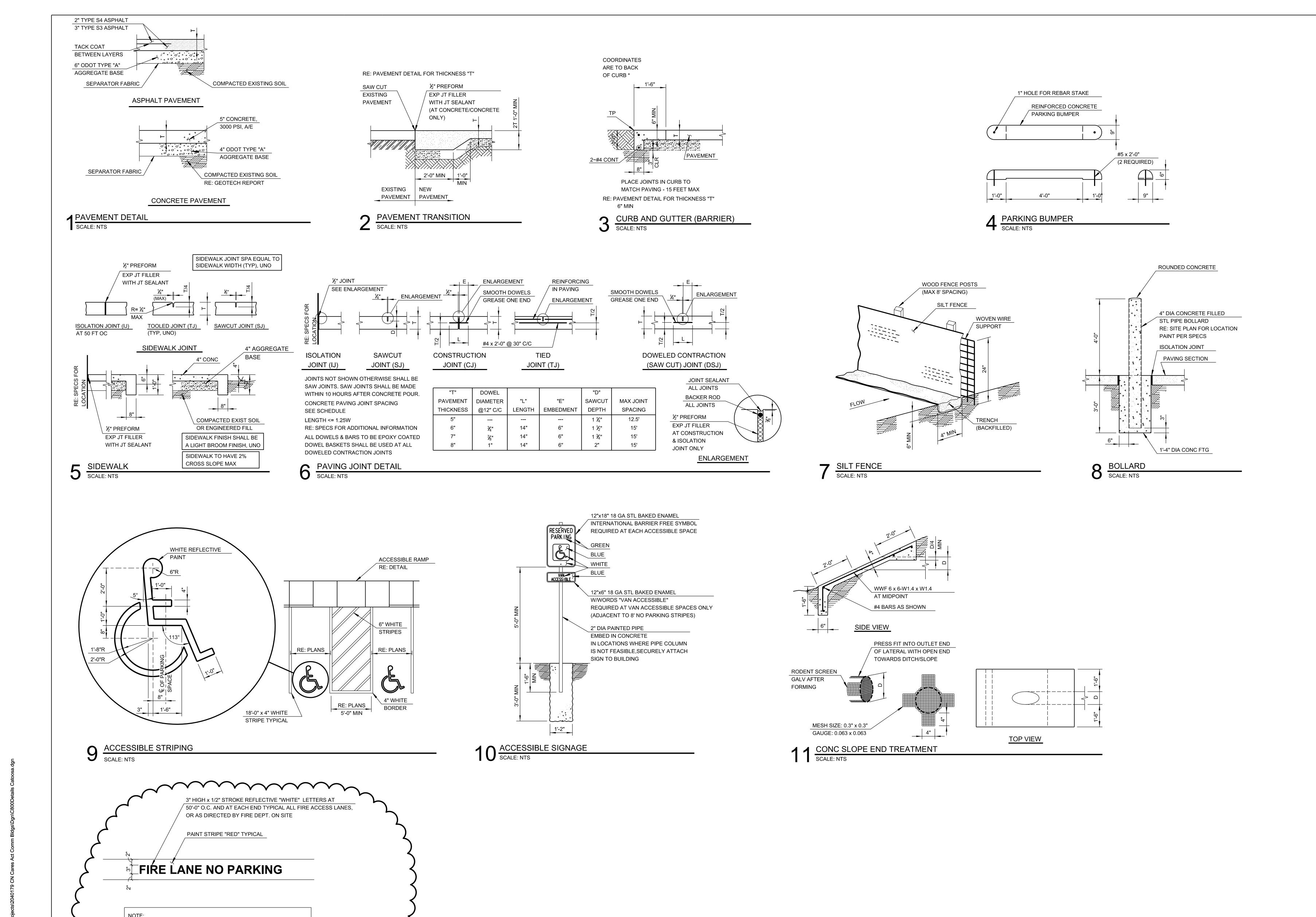
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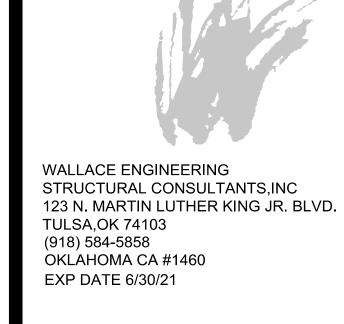
AND MEASUREMENTS TAKEN IN THE FIELD.

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No.	Description	Date
1	ASI #30	01/06/2021





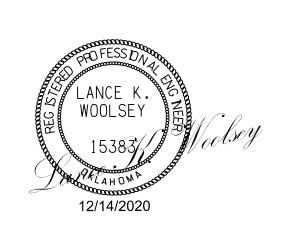
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PROJECT #: 2040179

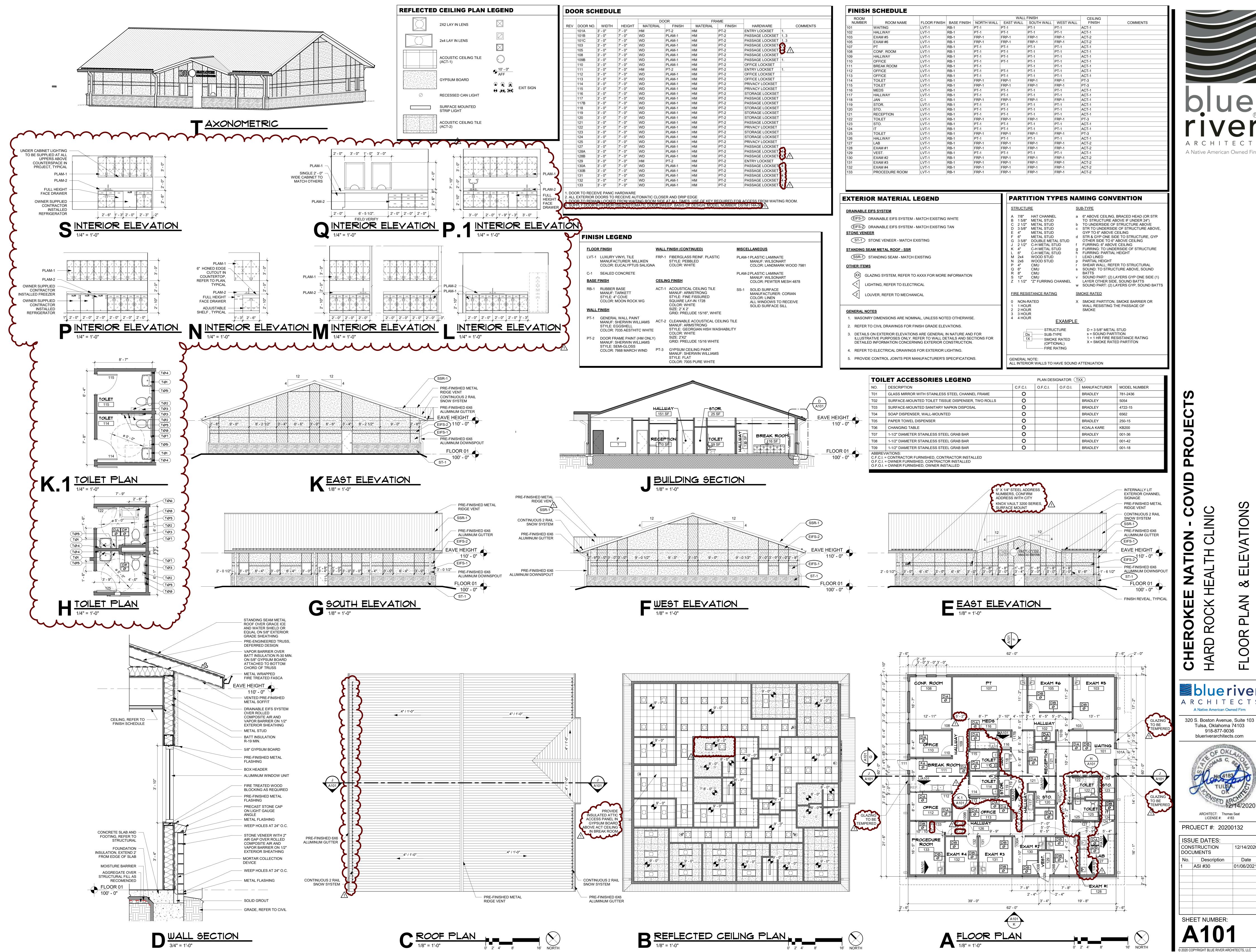
ISSU	JE DATES:	
No.	Description	Date
1	ASI #30	01/06/2021

SHEET NUMBER:

1. VERIFY AND COMPLY WITH ALL GOVERNMENTAL REQUIREMENTS.

2. LOCATE SIGNS AS DIRECTED BY FIRE DEPARTMENT.

STRIPING FOR FIRE LANE



blue river

A Native American Owned Firm

Tulsa, Oklahoma 74103 918-877-9036

blueriverarchitects.com

ARCHITECT: Thomas Seat

LICENSE #: 4183

Description

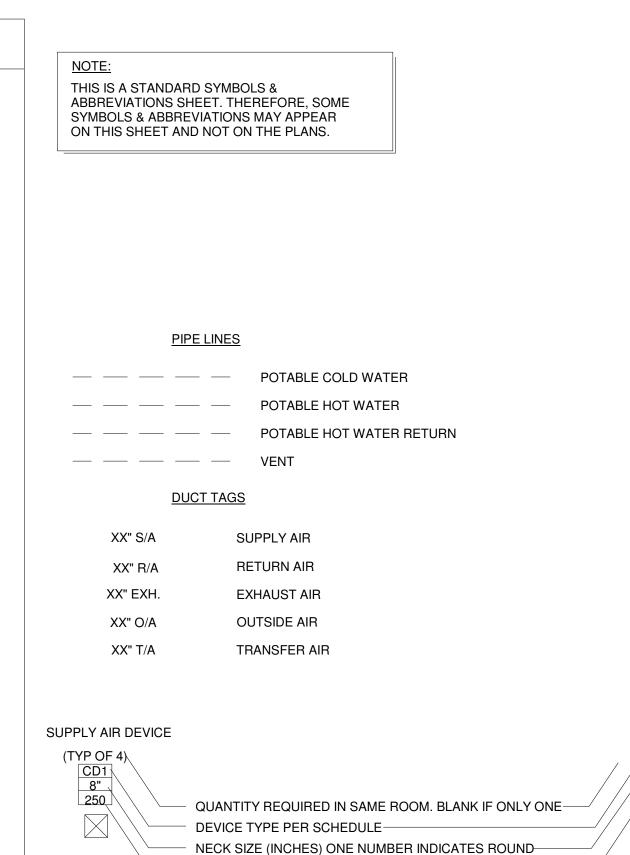
ASI #30

12/14/2020

01/06/2021

ME	CHANICAL	PIPE	AND FITTINGS		
	SUPPLY AIR DUCT, SECTION		GATE VALVE	A A	AIR
	RETURN AIR DUCT, SECTION		GLOBE VALVE	ABV ACCI	ABOVE J AIR COOLED
	EXHAUST AIR DUCT, SECTION		ANGLE GATE VALVE	ACL ACU	ACETYLENE (
OA	OUTDOOR AIR INTAKE, SECTION		SOLENOID VALVE	AD AF	ACCESS DOC AIR FILTER
20x12	DUCT, WIDTH X DEPTH, PLAN		NON SLAM CHECK VALVE	AFF AFH	ABOVE FINISI AIR FILTER, F
☐ R ☐	INCLINE DUCT RISE	——————————————————————————————————————	BUTTERFLY VALVE	AHU APD	AIR HANDLING
D	INCLINE DUCT DROP		PLUG VALVE	AR ASSY	
	FLEXIBLE CONNECTION		BALL VALVE	AUX AV	AUXILIARY AUTOMATIC
	LONG RADIUS ELBOW		TWO WAY CONTROL VALVE	B BDD BHP	BACKDRAFT BRAKE HORS
	VOLUME DAMPER	- <del>-</del>	PRESSURE REGULATOR	BP BS	BACKFLOW F
	SQUARE ELBOW W/ TURNING VANES BRANCH TAKEOFF WITH ADJUSTABLE EXTRACTOR		THREE WAY CONTROL VALVE	C C C/L CD	CONDENSAT CENTER LINE CEILING DIFF
			PRESSURE REDUCING VALVE	CFM CH	CUBIC FEET I
	SPLITTER DAMPER		BUTTERFLY VALVE	CHDI CHP	
(T)	THERMOSTAT	<b>全</b>	AUTOMATIC AIR VENT	CLG	CEILING CLEANOUT
S	SPACE TEMPERATURE SENSOR  EXHAUST AIR INLET		STRAINER, Y TYPE W/GATE VALVE OR HOSE BIBB	CON CON CON	C CONCRETE N CONNECTION T CONTINUATION
	CEILING RETURN INLET		FLEXIBLE CONNECTION	CV CV	CONDENSING CONSTANT V
	CEILING SUPPLY DIFFUSER		JOINT	CW	COLD WATER
<u> </u>	DUCT WITH INTERNAL LINING		EXPANSION JOINT	D DDC DG DIA	DIRECT DIGIT DOOR GRILLE DIAMETER
	ELECTRIC DUCT HEATER	F	FLOW METER	DIM DMP	DIMENSION
Τ',	SQUARE OR RECTANGULAR		FLOW DIRECTION	DN DPS	DOWN DIFFERENTIA
	BRANCH TAKEOFF WITH MANUAL BALANCING DAMPER		ELBOW BASE	DR DSD	DRAIN DUCT SMOKE
	ROUND BRANCH TAKEOFF WITH		ELBOW REDUCING	DSW DWG	DISTILLED W
	SCOOP EXTRACTOR AND MANUAL BALANCING DAMPER	——————————————————————————————————————	UNION	E EAT	ENTERING AI
273	CONICAL TEE WITH ROUND DUCTWORK	P	PRESSURE GAUGE WITH TRI-COCK	ED EDB EER EF	EQUIPMENT I ENTERING DI ENERGY EFF EXHAUST FA
SP	STATIC PRESSURE SENSOR		PRESSURE INDICATOR TEST PLUG	EFF EG EL ELEC ENT	EFFICIENCY EXHAUST GR ELEVATION ELECTRICAL ENTERING
	UNIT HEATER	FS FS	TEMPERATURE INDICATOR FLOW SWITCH	ENT ER EWB EWC EWT	EXHAUST RE ENTERING W
ŞD	SMOKE DETECTOR		METERED BALANCING	EXH	EXHAUST
	SUPPLY AIR FLOW		VALVE WITH PRESSURE TAP PRESSURE TEMPERATURE TEST	F FCO	FLOOR CLEA
<b>-</b>	RETURN AIR OR	T	PLUG	FD FH	FIRE DAMPER
	DOOR UNDER CUT	T	THERMOMETER	FL FLEX FOR	FLOOR
	FIXED LOUVER W/BIRD SCREEN	Ţ	THERMOMETER, DIAL	FOS FP	FUEL OIL SUF
	OPPOSED BLADE DAMPER		AUTO FLOW BALANCING VALVE	FPI FPM FT	FINS PER INC FEET PER MII FEET
**************************************	PARALLEL BLADE DAMPER		FLOOR DRAIN W/P-TRAP	FV	FACE VELOC
44444	BACKDRAFT DAMPER		FLOOR CLEANOUT	G GA GIV	GAUGE GRAVITY INTA
	FIRE DAMPER		WALL CLEANOUT	GND GPM	
M / / / / /	MOTORIZED DAMPER		BACKFLOW PREVENTER	GRV	GRAVITY REL
M /////	POINT OF CONNECTION		LUBRICATED PLUG COCK	H HB HOR	HOSE BIBB HORIZONTAL HORSE POW
DT-		T_		HP HTG HUM	HEATING
PT	PRESSURE TRANSMITTER		HOSE BIBB W/VACUUM BREAKER	HWS HWB	HOT WATER
$\mathbf{A}^{\dagger}$	AIR OUTLET		CAPPED END	HWP HWR	HOT WATER
	CADDON DIOVIDE CENCOD		DELUGE VALVE	I ID	INSIDE DIAME
CO2	CARBON DIOXIDE SENSOR		PIPE SWAY BRACING	IN INV E	INCHES
00	CARBON MONOXIDE SENSOR	$\mid \times \times \times$	PIPE ANCHOR SUPPORT		1

GS			ABBREVI	Λ-	TI∩I	VIC
GS			ADDREVI	A		NO
	Α	A ABV ACCU ACL ACU AD AF AFF AFH AHU APD AR ASSY AUX AV	AIR ABOVE AIR COOLED CONDENSING UNIT ACETYLENE GAS AIR CONDITIONING UNIT ACCESS DOOR AIR FILTER ABOVE FINISHED FLOOR AIR FILTER, HIGH EFFICIENCY AIR HANDLING UNIT AIR PRESSURE DROP ACID RESISTANT ASSEMBLY AUXILIARY AUTOMATIC AIR VENT	L L	KW LAB LAT LAV LB LD LDB LF LFD LP L/S LWB LWT	LABORATORY LEAVING AIR TEMPERATURE LAVATORY POUND LINEAR DIFFUSER LEAVING DRY BULB LINEAR FEET LAMINAR FLOW DIFFUSER LIQUID PROPANE LITERS PER SECOND LEAVING WATER TEMPERATURE
E	В	BDD BHP BP BS	BACKDRAFT DAMPER BRAKE HORSE POWER BACKFLOW PREVENTER BIRD SCREEN	M	MAU MAX MB MBH MD MECH MIN	MAKE-UP AIR UNIT MAXIMUM MIXING BOX/MOP BASIN THOUSAND BTU/HR MOTORIZED DAMPER MECHANICAL MINUTE/MINIMUM
_VE _VE	C	C C/L CD CFM CH CHP CLG CONC CONT COTG CU	CONDENSATE CENTER LINE CEILING DIFFUSER CUBIC FEET PER MINUTE CHILLER CHEMICAL DRAIN CHILLED WATER PUMP CEILING CLEANOUT CONCRETE CONNECTION CONTINUATION/CONTINUOUS CLEAN OUT TO GRADE CONDENSING UNIT/COPPER	N	MM MS N NC NG NIC NO NOX NTS O OA	MILLIMETERS MOTOR STARTER  NITROGEN NORMALLY CLOSED NATURAL GAS NOT IN CONTRACT NUMBER NITROGEN OXIDE NOT TO SCALE  OXYGEN OUTSIDE AIR
	D	CW	CONSTANT VOLUME COLD WATER  DIRECT DIGITAL CONTROL DOOR GRILLE DIAMETER DIMENSION DAMPER DOWN DIFFERENTIAL PRESSURE SWITCH DRAIN DUCT SMOKE DETECTOR	Р	OAL OBD OC OS OS&Y  PD POC PRESS PRV PSIG PVC	OUTSIDE AIR LOUVER OPPOSED BLADE DAMPER ON CENTER OVERFLOW SCUPPER OUTSIDE SCREW & YOKE  PRESSURE DROP POINT OF CONNECTION PRESSURE PRESSURE PRESSURE REDUCING VALVE POUNDS PER SQUARE INCH POLYVINYL CHLORIDE
RI-COCK	Е	DSW DWG EAT ED EDB EER EF EFF EG EL	DISTILLED WATER DRAWING  ENTERING AIR TEMPERATURE EQUIPMENT DRAIN ENTERING DRY BULB ENERGY EFFICIENCY RATIO EXHAUST FAN EFFICIENCY EXHAUST GRILLE ELEVATION	R	RA RAG RAR RC RD REF RF RL RM RTN	RETURN AIR RETURN AIR GRILLE RETURN AIR REGISTER RAIN CONDUCTOR ROOF DRAIN REFERENCE RETURN FAN RAIN LEADER ROOM RETURN
AP E TEST	F	ELEC ENT ER EWB EWC EWT EXH EWS FCO FD FH	ELECTRICAL ENTERING EXHAUST REGISTER ENTERING WET BULB ELECTRIC WATER COOLER ENTERING WATER TEMPERATURE EXHAUST EYE WASH/SHOWER STATION FLOOR CLEANOUT FIRE DAMPER/FLOOR DRAIN FUME HOOD	S	SA SAG SAN SAR SD/FD SF SH SP SQ FT SST	SUPPLY AIR SUPPLY AIR GRILLE SANITARY SUPPLY AIR REGISTER SMOKE DAMPER COMB. SMOKE DAMPER\FIRE DAMP. SUPPLY FAN SHEET STATIC PRESSURE SQUARE FEET STAINLESS STEEL
ALVE		FL FLEX FOR FOS FP FPI FPM FT FV	FLOOD FLOOR FLEXIBLE FUEL OIL RETURN FUEL OIL SUPPLY FIRE PUMP FINS PER INCH FEET PER MINUTE FEET FACE VELOCITY	T U V	TCU TEMP TG TP TYP UC	TERMINAL CONTROL UNIT TEMPERATURE TRANSFER GRILLE TRAP PRIMER TYPICAL UNDERCUT VENT
		GA GIV GND GPM GRV	GAUGE GRAVITY INTAKE VENTILATOR GROUND GALLONS PER MINUTE GRAVITY RELIEF VENTILATOR	·	VAV VD VEL VERT VFD VSD VTR	VARIABLE AIR VOLUME VOLUME DAMPER VELOCITY VERTICAL VARIABLE FREQUENCY DRIVE VARIABLE SPEED DRIVE VENT THRU ROOF
EAKER	п	HB HORIZ HP HTG HUMID HWS HWB HWP	HOSE BIBB HORIZONTAL HORSE POWER/HEAT PUMP HEATING HUMIDISTAT HOT WATER SUPPLY HOT WATER BOILER HOT WATER PUMP HOT WATER RETURN	w	W/ W/O WCO WC WH WHA WR WTR	WITH WITHOUT WALL CLEANOUT WATER COLUMN WALL HYDRANT WATER HAMMER ARRESTORS WATER RISER WATER
	I	ID IN INV EL	INSIDE DIAMETER INCHES INVERT ELEVATION			



DELIVERY (CFM) —

# **GENERAL NOTES**

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE AND OPERABLE SYSTEM IN ACCORDANCE WITH THESE DOCUMENTS, THE APPLICABLE BUILDING CODES AND ALL OTHER APPLICABLE STATE, COUNTY AND LOCAL ORDINANCES AND THE LATEST EDITION OF THE FOLLOWING PUBLICATIONS; INTERNATIONAL BUILDING CODE-MECHANICAL, SMACNA, ASHRAE, NFPA 90A, 90B, 91 & ANSI B-9.1 MECHANICAL REFRIGERATION.

2. THE TERM "PROVIDE" USED IN THE PROJECT SPECIFICATIONS AND DRAWINGS SHALL MEAN TO FURNISH, INSTALL, CONNECT, AND PLACE IN SERVICE COMPLETELY IN THE SPECIFIED OR APPROVED MANNER THE ITEM AND/OR MATERIAL DESCRIBED. 3. THE MECHANICAL PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, PLUMBING, ELECTRICAL & STRUCTURAL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS. ALL EQUIPMENT SHALL BE INSTALLED AS PER MANUFACTURER'S SPECIFIED GUIDELINES. DUCT AND PIPING OFFSETS, BENDS AND TRANSITIONS WILL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. CHANGES IN DUCTWORK SIZE AND ROUTE WILL BE REQUIRED TO AVOID STRUCTURAL, PLUMBING, FIRE SPRINKLER AND ARCHITECTURAL BUILDING FEATURES. DUCTWORK CHANGES MAY BE MADE BY CONTRACTOR USING EQUIVALENT SIZED DUCT. CONTACT ENGINEER IN WRITING IF MECHANICAL SYSTEMS WILL NOT FIT IN AREA ALLOTTED.

4. SYMBOLS IN THE LEGEND ARE APPLICABLE GENERALLY, FOR EXACT REQUIREMENTS SEE THE APPLICABLE SCHEDULES, LAYOUTS. DETAILS, AND THE SPECIFICATIONS. UNLESS OTHERWISE NOTED. ALL DUCTS, EQUIPMENT, PIPE SIZES AND DIMENSTIONS ARE IN ENGLISH 5. THE CONTRACTOR SHALL PAY ALL COSTS OF PERMIT, INSPECTIONS AND ALL OTHER COSTS INCIDENTAL TO THE COMPLETION AND

TESTING OF THIS WORK. 6. ENGINEER OF RECORD RECOGNIZES THE GENERAL CONTRACTOR AND ALL OTHER CONTRACTORS TO BE LICENSE PROFESSIONALS IN THE STATE IN WHICH WORK IS TO BE PERFORMED. GENERAL CONTRACTOR SHALL CONSIDER THE PROJECT AS ONE SET OF DOCUMENTS. GENERAL CONTRACTOR SHALL PROVIDE AN ENTIRE SET OF DOCUMENTS SHOWING ALL TRADES TO EACH SUBCONTRACTOR PRIOR TO BIDDING AND CONSTRUCTION. GENERAL CONTRACTOR SHALL COORDINATE WITH ALL OTHER CONTRACTORS TO INFORM ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR POSSIBLE CONFLICTS ON THE DOCUMENTS PRIOR TO SUBMITTING FINAL BID AND COMMENCING ANY WORK. CONTRACTOR SHALL MAKE HIMSELF AVAILABLE FOR REVIEWING DOCUMENTS WITH ARCHITECT/ENGINEER UPON REQUEST. 7. THE CONTRACTOR SHALL VISIT THE SITE AND COORDINATE WORK WITH OTHER TRADES.

8. THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH "AS-BUILT" REDLINE DRAWINGS. UPON COMPLETION OF THE PROJECT AND AUTOCAD SHOP DRAWING FILES (IF APPLICABLE).

9. THE GENERAL CONTRACTOR SHALL PROVIDE IN WRITING AND ON COMPANY LETTER HEAD, ALL ITEMS VALUE ENGINEERED OR OMITTED FROM PROJECT BIDS. THIS DOCUMENT SHALL HAVE DETAILED DESCRIPTION AND TRANSPARENCY OF ALL ITEMS IN EACH DISCIPLINE AND FOR EACH TRADE. INFORMATION SHALL BE PROVIDED TO ARCHITECT AND ENGINEER FOR REVIEW PRIOR TO SUBMITTING FINAL BID. CONTRACTOR SHALL MAKE HIMSELF AVAILABLE FOR REVIEWING DOCUMENTS WITH ARCHITECT/ENGINEER/OWNER UPON REQUEST. **DUCTWORK:** 

10. INTERIOR METAL DUCT SHALL BE CONSTRUCTED OF GALVANIZED SHEET STEEL; LOCK-FORMING QUALITY; ASTM A653/A 653M, COATING DESIGNATION; MIL-PHOSPHATIZED FINISH FOR SURFACES OF DUCT EXPOSED TO VIEW. FABRICATE DUCTS, ELBOWS, TRANSITIONS, OFFSETS, BRANCH CONNECTIONS AND OTHER CONSTRUCTIONS ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS -METAL AND FLEXIBLE". COMPLY WITH REQUIREMENTS FOR METAL THICKNESS, REINFORCING TYPES AND INTERVALS, TIE-ROD APPLICATIONS, AND JOINT TYPES AND INTERVALS. SUPPLY DUCTWORK DOWNSTREAM OF RTUS AND MAUS SHALL BE SMACNA 2"w.g. CLASSIFICATION, SEAL CLASS B. ALL OUTSIDE AIR DUCTWORK SHALL BE LOW PRESSURE CONSTRUCTION (SMACNA 2"w.g. CLASSIFICATION). ALL RETURN AIR AND EXHAUST AIR DUCTWORK SHALL BE LOW PRESSURE CONSTRUCTION (SMACNA -2"w.g. CLASSIFICATION).

11. FLEXIBLE DUCT SHALL COMPLY UL 181 CLASS 1, FACTORY FABRICATED, INSULATED, ROUND DUCT, WITH A POLYETHYLENE FILM OUTER JACKET ENCLOSING GLASS FIBER INSULATION (R-6) AROUND A CONTINUOUS POLYETHYLENE INNER LINER. THE INNER LINER SHALL HAVE AN ENCAPSULATED STEEL WIRE HELIX. FLEXIBLE DUCT SHALL BE INSTALLED IN ACCORDANCE WITH NAIMA'S "FIBROUS GLASS DUCT CONTRUCTION STANDARDS". INSULATION SHALL BE 1" (R-6) FOR USE IN CONDITIONED SPACE AND 1 1/2" (R-8) FOR USE IN UNCONDITIONED

12. EXTERIOR RECTANGULAR METAL DUCT AND FITTINGS SHALL BE DOUBLE WALL CONSTRUCTION. THE OUTER SHELL SHALL BE FABRICATED WITH GALVANIZED SHEET STEEL LOCK-FORMING QUALITY; ASTM A653/A653M, WITH ASTM G-90 GALVANIZE COATING THE INSULATION SHALL BE 2" (R-8) FIBERGLASS DUCT WRAP. THE INNER SHELL SHALL BE 24 GA PERFORATED METAL WITH 3/32" DIAMETER HOLES ON 3/16" STAGGERED CENTERS. MYLAR SHALL BE INSTALLED BETWEEN THE FIBERGLASS DUCT WRAP AND THE PERFORATED INNER SHELL. ALL JOINT CONNECTORS SHALL BE WARD ANGLE FLANGES WITH APPROPRIATE GASKETS. METAL GAUGES SHALL CONFORM TO SMACNA'S 3"W.G. STANDARDS. ALL PIECES SHALL HAVE NOSING ON BOTH ENDS. ALL SEAMS TO BE "PITTSBURGH" AND SEALED WITH SMACNA APPROVED EXTERIOR JOINT SEALANT. ALL 90 DEGREE ELBOWS SHALL HAVE DOUBLE TURNING VANES. APPROVED MANUFACTURERS; AUTODUCT/SEMCO

13. EXTERNAL DUCT INSULATION SHALL BE MINERAL FIBER BLANKET WITH GLASS FIBERS BONDED WITH THERMO SETTING RESIN. THE DUCT WRAP SHALL COMPLY WITH ASTM C553. TYPE II WITHOUT FACING AND WITH ALL SERVICE JACKET MANUFACTURED FROM KRAFT PAPER, REINFORCED SCRIM, ALUMINUM FOIL AND VINYL FILM. APPLY INSULATION MATERIALS, ACCESSORIES AND FINISHES ACCORDING TO THE MANUFACTURERS WRITTEN INSTRUCTIONS; WITH SMOOTH, STRAIGHT AND EVEN SURFACES; AND FREE OF VOIDS THROUGHOUT THE LENGTH OF DUCTS AND FITTINGS. INSULATION SHALL BE 1" (R-6) FOR USE IN CONDITIONED SPACE AND 1-1/2" (R-8) FOR USE UNCONDITIONED SPACE. 14. ALL INSULATION WILL HAVE FIRE/SMOKE RATING LESS THAN 25/50.

15. LAVATORY EXHAUST DUCTS SHALL BE GALVANIZED SHEET METAL OR CORRUGATED ALUMINUM FLEX DUCT WITH SEALED SEAMS AND JOINTS. ALL EXHAUST AIR DUCTS LOCATED IN AREAS WHERE DEWPOINT CONDITIONS COULD OCCUR SHALL BE INSULATED WITH EXTERNAL BLANKET NSULATIONS WITH A MINIMUM OF R-6.

16. ALL EXHAUST AIR FANS AND VENTS SHALL BE LOCATED BEYOND 10'-0" OF ANY OUTSIDE AIR INTAKE OR FAN. ALL EXHAUST AIR FANS SHALL BE MARKED WITH A PERMANENT PLATE TITLED "EXHAUST FAN FOR UNIT NUMBER(#) OR AREA". (E.G. "EF-1 FOR LOCKER ROOM". "EF-1-1 FOR GRD FL TOILET", ETC.) 17. ALL DUCT DIMENSIONS SHOWN ARE CLEAR INSIDE DIMENSIONS.

18. ALL BRANCH TAKE-OFFS TO BE PROVIDED W/ MANUAL VOLUME DAMPERS. ALL ELBOWS AND TEE'S MUST BE FURNISHED W/TURNING VANES. PROVIDE MANUAL VOLUME DAMPERS WITH EXTRACTOR AT ALL TAKE-OFFS. THERMOSTATS/CONTROLS:

19. LOCATION OF THERMOSTATS SHALL BE ON INTERIOR WALLS APPROXIMATELY 48" AFF AND SHALL BE COORDINATED WITH SWITCHES, ETC. AT LOCATION SHOWN ON DRAWINGS. 20. VALVES SERVING DOMESTIC WATER SYSTEMS SHALL BE BALL VALVES OR APPROVED EQUAL. ALL VALVES SHALL BE LOCATED SO AS

TO BE ACCESSIBLE BY MAINTENANCE PERSONNEL. VALVES LOCATED ABOVE ACCESSIBLE CEILINGS SHALL BE LOCATED WITHIN 18" OF THE CEILING. VALVES LOCATED IN SPACES WITHOUT CEILINGS SHALL BE ACCESSIBLE FROM THE FLOOR OR WITH A SIX OR EIGHT FOOT 21. CONTRACTOR SHALL PROVIDE OWNER/BUILDING MANAGER/BUILDING ENGINEER WITH 40 HOURS OF ONSITE AND/OR OFF SITE TRAINING IN THE CONTROL AND OPERATION OF THE HVAC SYSTEM. TIME AND LOCATION TO BE DETERMINED BY CLIENT.

22. PROVIDE TYPE "B" DYNAMIC FIRE DAMPERS IN ALL DUCTS OR OPENINGS PENETRATING FIRE RATED ASSEMBLIES. PROVIDE SMOKE

DAMPERS IN ALL DUCTS OR OPENINGS PENETRATING SMOKE RATED ASSEMBLIES. PROVIDE RADIATION DAMPERS IN DIFFUSERS OF RATED CEILINGS. REFER TO ARCHITECTURAL LIFE SAFETY DRAWINGS FOR RATED ASSEMBLIES. 23. FOR ELECTRICAL OR CONTROL PANELS PROVIDE CLEARANCE PER NEC ARTICLE 110. DUCTS, PIPES AND OTHER EQUIPMENT ARE NOT ALLOWED TO RUN OVER PANELS PER NEC. 24. THE GENERAL CONTRACTOR SHALL TEST AND BALANCE THE AIR SIDE SYSTEM UPON COMPLETION. THE FINAL TEST AND BALANCE MUST BE PERFORMED BY AN INDEPENDENT FIRM CONTRACTED BY THE GENERAL CONTRACTOR AND NOT THE MECHANICAL CONTRACTOR. THE TEST AND BALANCE FIRM SHALL HOLD A CURRENT CERTIFICATION FROM A RECOGNIZED TEST AND BALANCE ORGANIZATION. THE TEST AND BALANCE OPERATION SHALL INCLUDE ALL AIR SIDE SYSTEMS REGARDLESS OF SIZE OF EQUIPMENT AND A TEST TO CONFIRM BUILDING IS NEUTRAL OR POSITIVELY PRESSURIZED. THE T & B FIRM SHALL PROVIDE A WRITTEN REPORT TO THE

ARCHITECT AND THE ENGINEER UPON COMPLETION. 25. ALL OPERATIONS / MAINTENANCE MANUALS FOR EQUIPMENT SPECIFIED SHALL BE PROVIDED TO OWNER UPON COMPLETION OF





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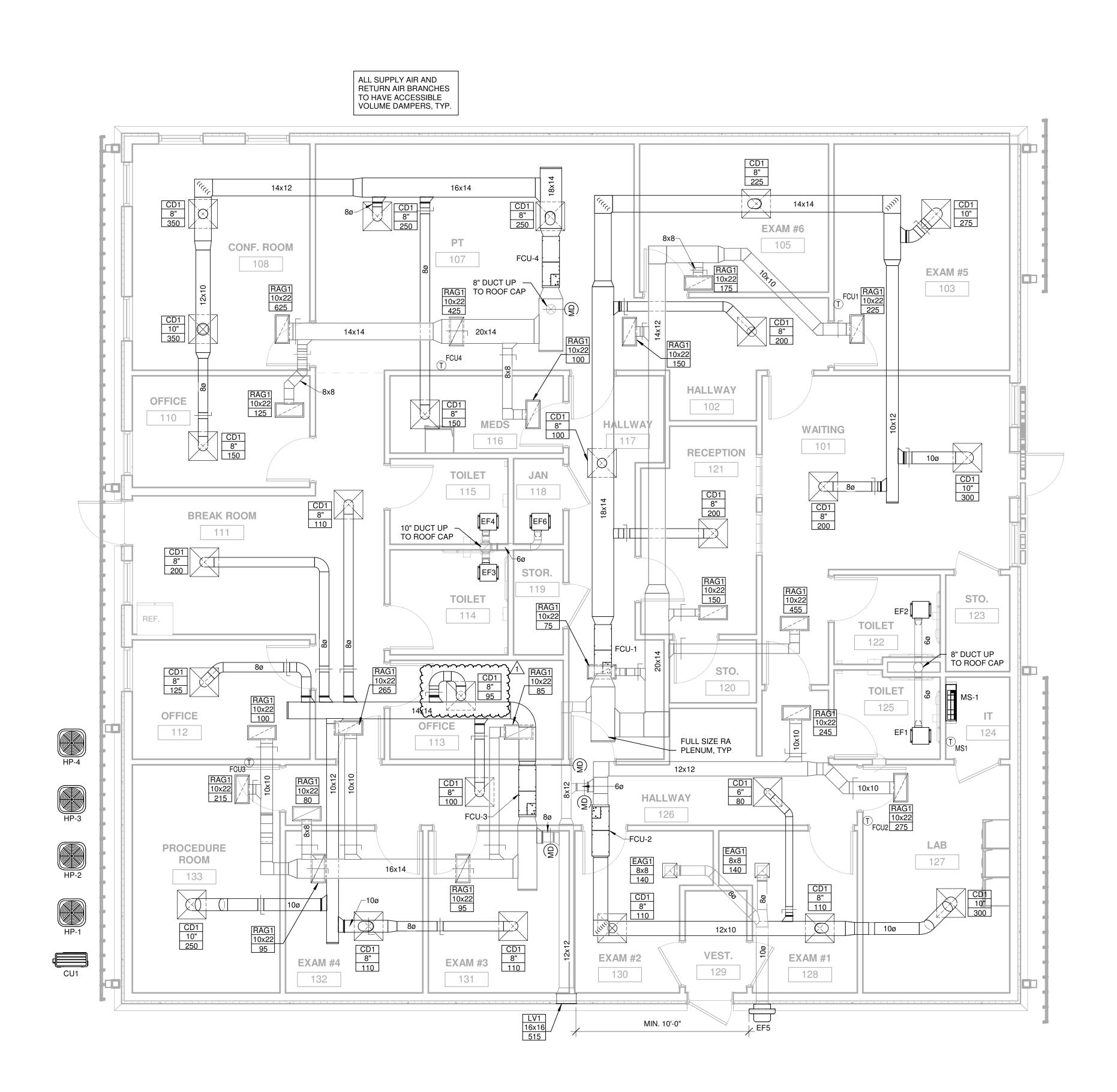
ARCHITECTS

A Native American Owned Firm

320 S. Boston Avenue, Suite 103 Tulsa, Oklahoma 74103 918-877-9036 blueriverarchitects.com

PROJECT #: 20200132 ISSUE DATES: CONSTRUCTION 12/14/2020 DOCUMENTS ASI #30 2021.01.06

SHEET NUMBER: © 2020 COPYRIGHT BLUE RIVER ARCHITECTS, LLC



FIRST FLOOR HVAC PLAN

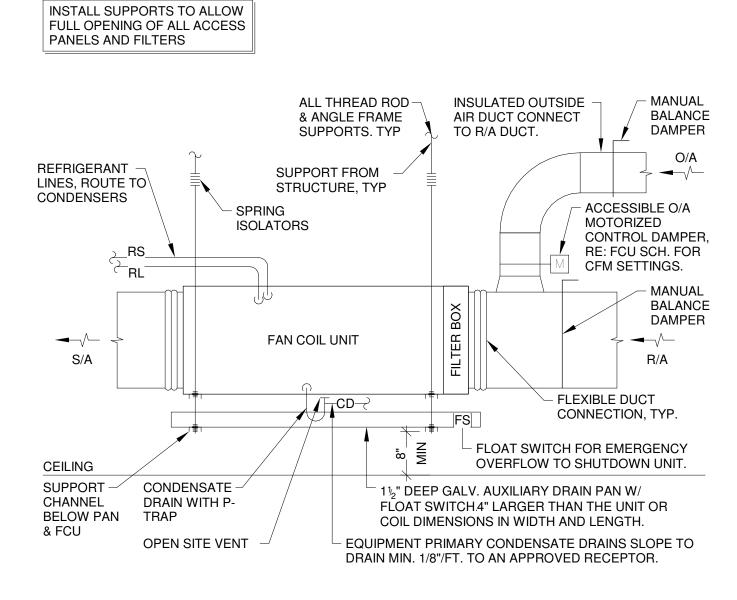
1/4" = 1'-0"

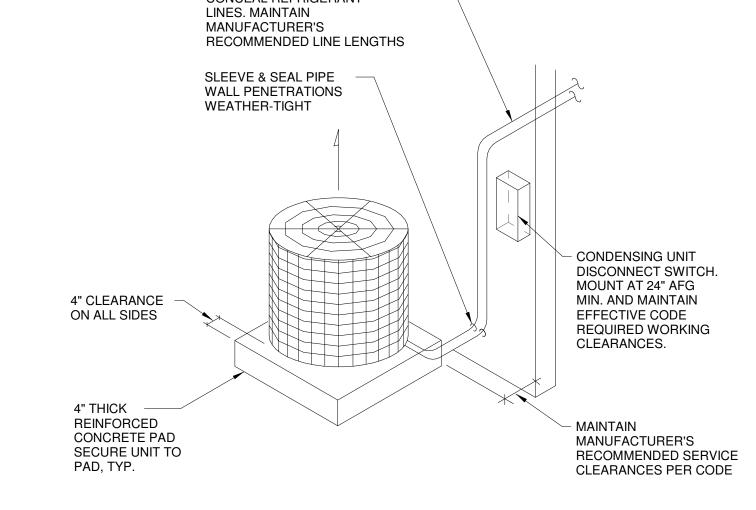




PR(	DJECT #: 202	00132
ISS	UE DATES:	
	STRUCTION UMENTS	12/14/2020
No.	Description	Date
1	ASI #30	2021.01.06
SHE	EET NUMBER:	

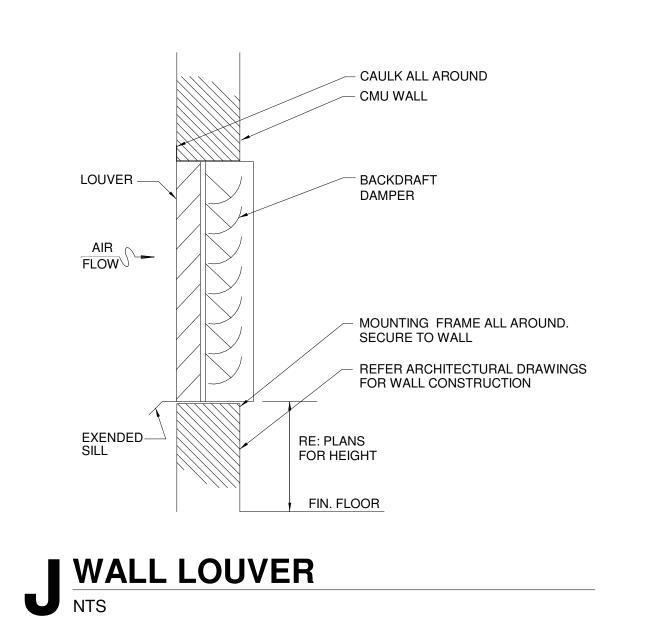
# G HORIZONTAL FAN COIL UNIT - ELEC HEAT



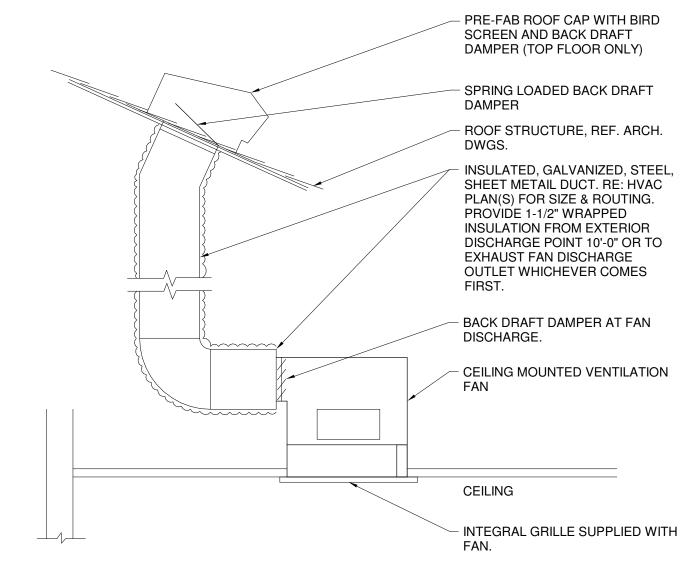


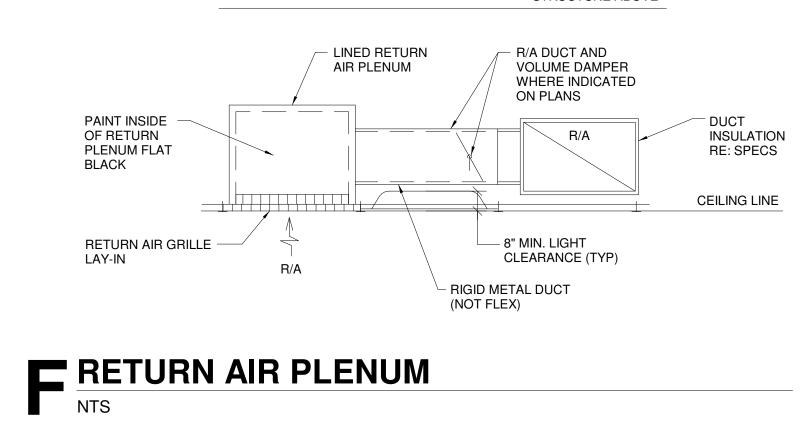
H CONDENSING UNIT (CU)

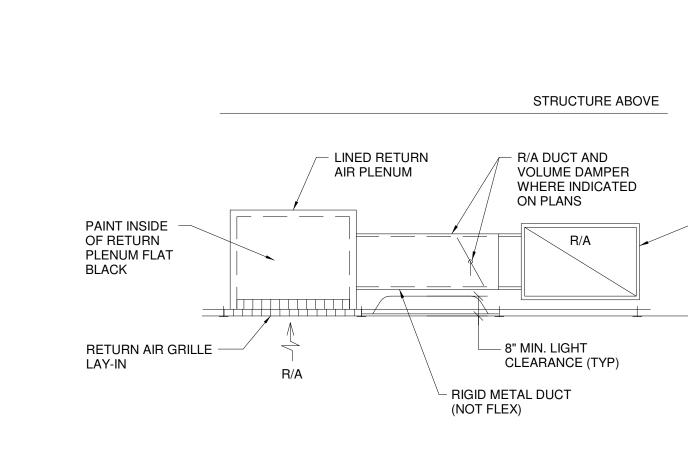
# CONCEAL REFRIGERANT



# E CEILING MOUNTED EXHAUST FAN







# A BRANCH DUCT TAKE-OFF CONNECTION NTS

GALVANIZED STEEL, MINIMUM GAGES

SHOWN MUST COMPLY WITH SMACNA

APPROVED MFR. AND MODEL NUMBERS:

RUSKIN MDRS25, BALANCE AIR AC112,

NOT A CONSTRUCTION DETAIL MUST BE

D VOLUME CONTROL DAMPER

NAILOR HART 1090

FACTORY MANUFACTURED

MIN. 22 GAUGE 12" & LARGER MIN. 20 GA.

- 11/2" INSULATION

BLADE MIN. 20 GA.

- BLADE SECURELY ATTACHED TO AXLE

— ¾" SQUARE AXLE

- END BEARINGS (TYPICAL BOTH ENDS)

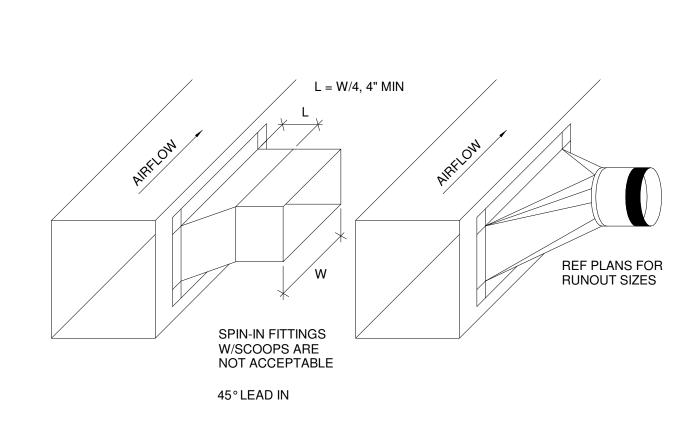
- AXLE TO ACCOMODATE VENT LOCK EXTENSION

QUADRANT

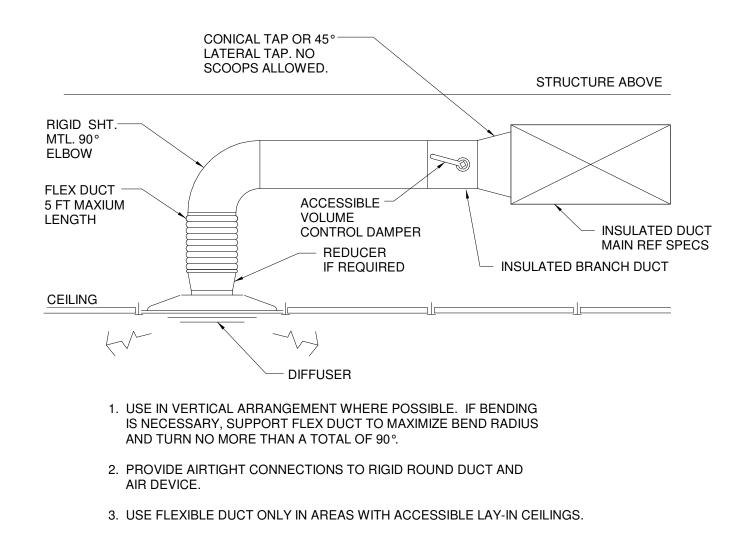
VENT LOCK #638 ELEVATED

DIAL (ONLY) & LOCKING HAND

RE: SPECIFICATIONS

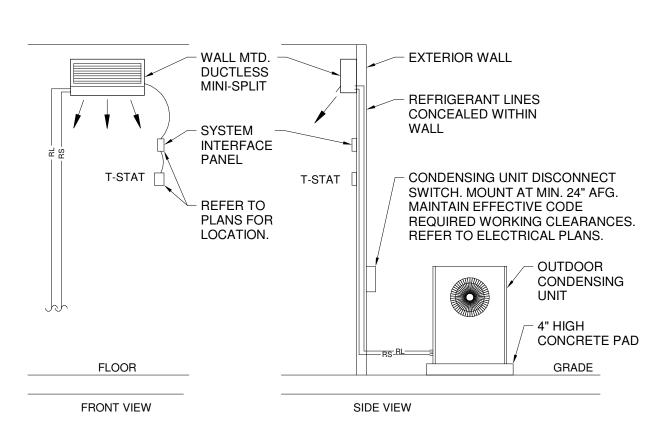






LOADS MUST BE	TOP OF PURLIN ROOF	6"	ROOF  2"x2"x 1/4" ANGLE OR 158"x158" UNISTRUT HANGER STRAP	
HUNG WITHIN 3" OF PANEL POINTS REF STRUCTURAL  BOTTOM OF		THREADED ROD, TYP		SHE
STRUCTURE	RECTANGULAR DUCT  RECTANGULAR DUCT  PERPENDICULAR TO STRUCTL	2"x2"x ½" ANGLE OR 15 <sub>8</sub> "x15 <sub>8</sub> " UNISTRUT <u>JRE</u>	RECTANGULAR DUCT PARALLEL TO STRUCTUR	<u>≀E</u>

# WALL MOUNTED DUCTLESS MINI SPLIT



ESSURE
DROP NOTES
3 in-wg ALL
$\cap$

BRANCH DUCT SIZE SHALL BE SAME AS NOTED DIFFUSER NECK SIZE UNLESS NOTED OTHERWISE. REFER TO DIVISION 23 SPECIFICATIONS FOR ACCEPTABLE ALTERNATE MANUFACTURERS.

PROVIDE OPTIONAL BIRD AND INSECT SCREEN.

COLOR SHALL BE SELECTED BY ARCHITECT PRIOR TO ORDERING.

3.	FOR SURFACE MOUNTED LAY-IN TYPE DIFFUSERS OR GRILLES PROVIDE TRIM RINGS. REFER TO ARCHITECTURAL DRAWINGS AND COORDINATE CEILING
4.	TYPES WITH AIR DEVICE MOUNTING STYLE. WHERE BACK PAN OF DIFFUSER IS EXPOSED TO NON-CONDITIONED ATTIC TYPE SPACES, PROVIDE FACTORY R-6 FOIL BACKED INSULATION TO MINIMIZE
	CONDENSATION.
5.	COORDINATE LOCATION OF GRILLES, REGISTERS AND DIFFUSERS WITH CEILING GRID, LIGHT LOCATIONS, STRUCTURAL MEMBERS AND ARCHITECTURAL FEATURES.
6.	FINAL FINISH OF ALL AIR DEVICES SHALL BE VERIFIED WITH ARCHITECT'S FINISH AND PAINTING SCHEDULE.
7.	ACCEPTABLE ALTERNATE MANUFACTURERS: CARNES, KRUEGER, PRICE, ANEMOSTAT, NAILOR, AND METALAIRE.

MARK	MANUFACTURER & MODEL#	SERVICE	MATERIAL	FACE TYPE	MOUNTING LOCATION	FACE SIZE	NOTES
CD1	TITUS TMS	SUPPLY AIR	ALUMINUM	ROUND NECK	LAY-IN	24"X24"	ALL
EAG1	TITUS 50F	EXHAUST AIR	ALUMINUM	SQUARE NECK	LAY-IN	12"X12"	ALL
RAG1	TITUS 50F	RETURN AIR	ALUMINUM	SQUARE NECK	LAY-IN	24"X12"	ALL

HARGE DU	GE DUCT CONNECTIONS TO MINIMIZE VIBRATION.								
		AID	DE) //-	05.00					
		AIR	DEAL	CE SC	HEDU	LE			
MARK	MANUFACTURER & MODEL#	SERVICE	MATERIAL	FACE TYPE	MOUNTING LOCATION	FACE SIZE	NOTES		
CD1	TITUS TMS	SUPPLY AIR	ALUMINUM	ROUND NECK	LAY-IN	24"X24"	ALL		
EAG1	TITUS 50F	EXHAUST AIR	ALUMINUM	SQUARE NECK	LAY-IN	12"X12"	ALL		
DAG1	TITLIS FOE	DETLIDNI AID	VITINIPITIV	SOLIABE	I AV INI	24"\12"	٨١١		

EF4	SP-B90	RESTROOM	CEILING	/5	.15	2.0	115 V	1	60 HZ	65 W	l I	A,B,C,E,F
EF5	GREENHECK G-090-E	EXAM ROOM 1 & 2	WALL MOUNTED	280	0.05	4.1	115 V	1	60 Hz	20 W	1	A,B,C,D,F
EF6	GREENHECK SP-B90	JANITOR	CEILING	75	.15	2.0	115 V	1	60 Hz	65 W	1	A,B,C,D,F
REFE INST, MECI PRO\ MARKS: STAN PRO\ INTE( FAN (	R TO DIVISION 23 SPACIFICATIO R TO SPECIFICATIONS FOR ACC ALL FAN SYSTEM COMPLETE PEI HANICAL CONTRACTOR SHALL C I'IDE LABEL FOR EACH PIECE OF  DARD DISCONNECT, COORDINA I'IDE ROOF CAP. GRAL BACKDRAFT DAMPER CONTROLLED BY TIME CLOCK TO CONTROLLED WITH LIGHT SWITC BLE CONNECTIONS AT DISCHAF	CEPTABLE ALTERNATE MANUFAR MANUFACTURER'S INSTRUCTOORDINATE FAN OPERATION OF MECHANICAL EQUIPMENT. CONTINUOUSLY DURING CH. REFER TO ELECTRICAL DR	TIONS. AND RELAYS REQUI CORDINATE LABEL N L CONTRACTOR. G HOURS OF OPERA AWINGS FOR LOCA	AMING CONVEI TION. REFER T	NTION WITH OW	/NER.						

								ELE	CTRICAL	_		
MARK	MANUFACTURER & MODEL	LOCATION	MOUNTING	CFM	ESP	SONES	٧	Р	Hz	WATTS	SPEEDS	REMARKS
EF1	GREENHECK SP-B90	RESTROOM	CEILING	75	.15	2.0	115 V	1	60 Hz	65 W	1	A,B,C,E,F
EF2	GREENHECK SP-B90	RESTROOM	CEILING	75	.15	2.0	115 V	1	60 Hz	65 W	1	A,B,C,E,F
EF3	GREENHECK SP-B90	RESTROOM	CEILING	75	.15	2.0	115 V	1	60 Hz	65 W	1	A,B,C,E,F
EF4	GREENHECK SP-B90	RESTROOM	CEILING	75	.15	2.0	115 V	1	60 Hz	65 W	1	A,B,C,E,F
EF5	GREENHECK G-090-E	EXAM ROOM 1 & 2	WALL MOUNTED	280	0.05	4.1	115 V	1	60 Hz	20 W	1	A,B,C,D,F
EF6	GREENHECK SP-B90	JANITOR	CEILING	75	.15	2.0	115 V	1	60 Hz	65 W	1	A,B,C,D,F

					COOLING			ELI	ECTRICAL				
MARK	MANUFACTURER & MODEL	MANUFACTURER & MODEL S/A CFM CFM ESP	CAPACITY (TONS)	v	Р	Hz	HTG INPUT (KW)	MCA	МОСР	CONFIG	NOTES		
FCU-1	CARRIER FB4CNP048L00	1500	270	.5	4	208 V	1	60 Hz	10.0	54 A	60 A	HORIZONTAL	ALL
FCU-2	CARRIER FB4CNP018L00	600	80	.5	1.5	208 V	1	60 Hz	5.0	26 A	30 A	HORIZONTAL	ALL
FCU-3	CARRIER FB4CNP036L00	1100	165	.5	2.5	208 V	1	60 Hz	8.0	45 A	45 A	HORIZONTAL	ALL
FCU-4	CARRIER FB4CNP048L00	1500	225	.5	4	208 V	1	60 Hz	10.0	54 A	60 A	HORIZONTAL	ALL
MS-1	DAIKIN FTK12NMVJU	434	0	0	1	208 V	1	60 Hz	0.0	0 A	0 A	WALL-MOUNT	ALL

PIPIN CONT ENGII INSTA	JNITS SHALL BE SUPPLIED AS COM G IN ACCORDANCE WITH MANUFA FRACTOR SHALL VERIFY WITH THI NEER IF LINE LENGTHS EXCEED T ALL NEW UNITS ON 4" THICK CONG ALLING CONTRACTOR SHALL BE CO D INSTALLED DISCONNECT SWITCH	ACTURER'S INS E UNIT MANUF. THESE REQUIR CRETE PAD SU CERTIFIED BY T	STRUCTIONS. ACTURER THAT EMENTS. ITABLE FOR HV 'HE MANUFACT	REFRIGERAN AC SYSTEMS. URER TO BID A	T LINES ARE WI ANCHOR UNIT T IND INSTALL TH	THIN THE O PAD. E EQUIPI	RECO	MMENDE			•		
			FA	N/COI	L UNIT	SC	НЕ						
MARK	MANUFACTURER & MODEL	S/A CFM	O/A CFM	ESP	COOLING CAPACITY (TONS)	v	Р	Hz	ECTRICAL HTG INPUT (KW)	MCA	МОСР	CONFIG	NOTES
FCU-1	CARRIER FB4CNP048L00	1500	270	.5	4	208 V	1	60 Hz	10.0	54 A	60 A	HORIZONTAL	ALL
FCU-2	CARRIER FB4CNP018L00	600	80	.5	1.5	208 V	1	60 Hz	5.0	26 A	30 A	HORIZONTAL	ALL
FCU-3	CARRIER FB4CNP036L00	1100	165	.5	2.5	208 V	1	60 Hz	8.0	45 A	45 A	HORIZONTAL	ALL
FCU-4	CARRIER FB4CNP048L00	1500	225	.5	4	208 V	1	60 Hz	10.0	54 A	60 A	HORIZONTAL	ALL
MS-1	DAIKIN FTK12NMVJU	434	0	0	1	208 V	1	60 Hz	0.0	0 A	0 A	WALL-MOUNT	ALL
AIR C PRO\	ALL REFRIGERANT LINES PER MAI QUANTITIES. /IDE BALANCING DAMPER ON FRE /IDE MANUFACTURER RECOMMEI	SH AIR DUCTS	TO PROVIDE (	OUTSIDE AIR CI	MS AS SCHEDU		ICING I	DAMPER	ON FRESH AIR	SUPPL	Y TO PR	OVIDE SCHEDUL	ED OUTSIDE

HEAT PUMP CONDENSING UNIT SCHEDULE

60 lb

197 lb

ALL

ALL

ELECTRICAL

208 V 3 60 Hz 15 A 25 A

60 Hz | 12 A | 20 A |

TOTAL / SEN MBH V P Hz MCA MOCP

208 V 3

NOMINAL CAPACITY

MARK CU1

HP-1

HP-2

HP-3

HP-4

DAIKIN

CARRIER

CARRIER

CARRIER 25HCE430AP03

CARRIER

RK12NMVJU

25HCE448AP05

25HCE418AP03

25HCE448AP05

MANUFACTURER & MODEL

NET COOLING CAPACITY

17.24 / 12.60

44.99 / 33.08



S

JE

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ISSUE DATES:

CONSTRUCTION DOCUMENTS

No. Description ASI #30

SHEET NUMBER:

# **GENERAL NOTES**

1. THE CONTRACTOR SHALL SUBMIT COMPLETE FIRE SPRINKLER SHOP DRAWINGS AS REQUIRED BY SPECIFICATIONS. CONTRACTOR SHALL BASE SHOP DRAWING DESIGN ON THE FIRE PROTECTION DRAWINGS AND SPECIFICATIONS. SPRINKLER SHOP DRAWINGS SHALL INCLUDE ALL NECESSARY ELEVATIONS, HANGER LOCATIONS, PIPE LENGTHS, DIMENSIONS, FABRICATION METHODS/NOTES, MATERIAL DATA, CALCULATIONS AND ANY OTHER INFORMATION NECESSARY TO CLARIFY THE INTENT OF INSTALLATION. ANY ALTERNATES IN DESIGN OF THE SYSTEM OR IN MATERIALS OR EQUIPMENT USED MUST BE APPROVED IN WRITING BY THE FIRE PROTECTION ENGINEER OF RECORD PRIOR TO ANY BIDDING, FABRICATION, OR INSTALLATION. 2. CONTRACTOR TO PROVIDE A COMPLETE FIRE SPRINKLER SYSTEM THROUGHOUT THE BUILDING, ANY CONCEALED SPACES OR EXTERIOR CANOPIES EXPOSED TO FREEZING CONDITIONS SHALL BE PROTECTED BY A DRY SYSTEM OR DRY SPRINKLERS IN LIEU OF A WET SPRINKLER SYSTEM AS REQUIRED BY NFPA 13. ALL SYSTEMS SHALL BE DESIGNED AND INSTALLED PER NFPA 13 AND NFPA 72. 3. CONTRACTOR SHALL COORDINATE LOCATIONS OF FIRE PROTECTION COMPONENTS INCLUDING PIPING, ALARMS, DRAINS, TEST POINTS, ETC., WITH ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS. OBSTRUCTIONS TO SPRINKLER DISCHARGE MUST BE CONSIDERED DURING SHOP DRAWING PRODUCTION AND INSTALLATION. EXTRA SPRINKLERS MAY BE REQUIRED AT NO ADDITIONAL COST TO OWNER. REFER TO SPECIFICATION FOR ADDITIONAL REQUIREMENTS. 4. CONTRACTOR SHALL OBTAIN CURRENT WATER FLOW TEST INFORMATION FROM WATER DEPARTMENT OR CONDUCT ADDITIONAL FLOW TESTING AS REQUIRED IN ACCORDANCE WITH NFPA 291. HYDRAULIC CALCULATIONS SHALL BE PROVIDED TO THE POINT OF TEST. COORDINATE TESTING AS REQUIRED WITH THE BUILDING MANAGEMENT, WATER DEPARTMENT, AND THE AHJ. 5. A REQUEST FOR INFORMATION SHALL BE SUBMITTED FOR ANY QUESTIONS, COMMENTS, OR REVISIONS TO THE DOCUMENTS. 6. IN OPEN CEILING AREAS ROUTE ALL SPRINKLER MAINS AS HIGH AS POSSIBLE IN STRUCTURE. ROUTE ABOVE THE BOTTOM CHORD WHEN OPEN WEB BAR JOISTS ARE PRESENT. 7. SPRINKLER SYSTEMS SHALL BE MONITORED OFF-SITE INCLUDING TAMPER SWITCHES ON ALL CONTROL VALVES AND FLOW SWITCHES. 8. PENETRATIONS OF RATED WALLS OR ASSEMBLIES SHALL BE FIRE STOPPED WITH APPROVED METHODS ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, AND PROJECT SPECIFICATIONS. 9. THE FIRE PROTECTION ENGINEER OF RECORD SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. NOR SHALL THEY BE REQUIRED TO SUPERVISE THE CONDUCT OF THE WORK, THE CONSTRUCTION PROCEDURES AS SET FORTH BY THE GENERAL CONTRACTOR, SUB-CONTRACTORS. THEIR RESPECTIVE EMPLOYEES, OR ANY OTHER PERSON AT THE JOBSITE OTHER THAN THE ENGINEERING FIRM'S OWN EMPLOYEES. 10. SPRINKLER PROTECTION IS REQUIRED ABOVE THE ELECTRICAL ROOMS. NO MAIN PIPING SHALL PENETRATE OR PASS ABOVE THE ELECTRICAL ROOMS. 11. THE CONTRACTOR SHALL REVIEW ALL CONSTRUCTION DOCUMENTS PRIOR TO BID. SHOULD MODIFICATION TO THESE PLANS BECOME NECESSARY TO PROPERLY COORDINATE THE SYSTEM WITH, OTHER TRADES, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL OF THESE CHANGES BY THE AHJ, AND THE FIRE PROTECTION ENGINEER OF RECORD. IN ADDITION TO OBTAINING THE NECESSARY APPROVALS, THE CONTRACTOR SHALL MAKE NOTE OF ALL FIELD OR COORDINATION CHANGES ON THE INSTALLATION DRAWINGS. ONCE COMPLETE, THE CONTRACTOR SHALL SUPPLY AS-BUILT DRAWINGS TO THE FIRE PROTECTION ENGINEER OF RECORD AND OWNER FOR THEIR USE. 12. THE CONTRACTOR SHALL DIVERT ALL DRAIN AND INSPECTORS TEST CONNECTION DISCHARGE AWAY FROM FINISHED SURFACES AND PIPE TO APPROVED DRAIN LOCATIONS. THE CONTRACTOR MAY BE BACK CHARGED FOR ANY REPAIR, REPLACEMENT, OR CLEANING OF RUST STAINS ON PAVEMENT/ CONCRETE DUE TO WATER DISCHARGE FROM SPRINKLER SYSTEM DRAIN 13. ALL HANGER CONNECTIONS SHALL BE MADE TO THE TOP CHORD OF STRUCTURAL JOIST UNLESS NOTED OTHERWISE. USE OF SAMMY SCREWS INTO ROOF DECK OR STRUCTURE IS PROHIBITED UNLESS APPROVED BY THE ENGINEER OF RECORD. 14. COMPLETED TEST CERTIFICATES ARE TO BE FORWARDED TO FIRE MARSHAL

AND FIRE PROTECTION ENGINEER OF RECORD.

# GATE VALVE GLOBE VALVE ANGLE GATE VALVE SOLENOID VALVE NON SLAM CHECK VALVE BUTTERFLY VALVE — +♦+ PLUG VALVE BALL VALVE TWO WAY CONTROL VALVE PRESSURE REGULATOR $\longrightarrow$ $\longrightarrow \bigvee \longrightarrow$ BUTTERFLY VALVE AUTOMATIC AIR VENT STRAINER, Y TYPE W/GATE \_\_\_\_ VALVE OR HOSE BIBB FLEXIBLE CONNECTION —**I** JOINT EXPANSION JOINT FLOW METER FLOW DIRECTION ELBOW BASE ELBOW REDUCING ———— | UNION PRESSURE INDICATOR TEST PLUG TEMPERATURE INDICATOR FLOW SWITCH — (F)— FLOW INDICATOR REDUCER, CONCENTRIC REDUCER, ECCENTRIC \_\_\_ STRAIGHT CROWN REDUCER, ECCENTRIC STRAIGHT INVERT FLOOR DRAIN W/P-TRAP —— FLOOR CLEANOUT WALL CLEANOUT +NN+BACKFLOW PREVENTER

DEPARTMENT CONNECTION

ALARM CHECK VALVE

DELUGE VALVE

BALANCING VALVE

● PIPE SWAY BRACING

Y PIPE ANCHOR SUPPORT

# PIPE AND FITTINGS THREE WAY CONTROL VALVE PRESSURE REDUCING VALVE PRESSURE GAUGE WITH TRI-COCK — | ▼ | AUTO FLOW BALANCING VALVE TYP TYPICAL FPM FEET PER MINUTE U UC UNDERCUT FV FACE VELOCITY G GA GAUGE GIV GRAVITY INTAKE VENTILATOR VARIABLE AIR VOLUME VOLUME DAMPER VEL VERT VELOCITY GND GROUND GPM GALLONS PER MINUTE VERTICAL VFD VSD VTR VARIABLE FREQUENCY DRIVE — ↓ LUBRICATED PLUG COCK GRV GRAVITY RELIEF VENTILATOR VARIABLE SPEED DRIVE VENT THRU ROOF HOSE BIBB W/VACUUM BREAKER H HB HOSE BIBB HORIZ HORIZONTAL CAPPED END HP HORSE POWER/HEAT PUMP F----W/O WCO WITHOUT HTG HEATING WALL CLEANOUT SIDEWALL SPRINKLER HEAD HUMID HUMIDISTAT WC WATER COLUMN WH WALL HYDRANT WHA WATER HAMMER ARRESTORS HWS HOT WATER SUPPLY HWB HOT WATER BOILER PENDENT SPRINKLER HEAD HWP HOT WATER PUMP WR WATER RISER HWR HOT WATER RETURN UPRIGHT SPRINKLER HEAD WTR WATER SIAMESE FIRE ID INSIDE DIAMETER

INV EL INVERT ELEVATION

		ABBREVIA	۱T	ION	IS
Α	A ABV ACCU	AIR ABOVE AIR COOLED CONDENSING UNIT	K L	KW LAB	KILOWATT LABORATORY
	ACL ACU AF AFF AFH AHU APD AR ASSY AUX AV	ACETYLENE GAS AIR CONDITIONING UNIT ACCESS DOOR AIR FILTER ABOVE FINISHED FLOOR AIR FILTER, HIGH EFFICIENCY AIR HANDLING UNIT AIR PRESSURE DROP ACID RESISTANT ASSEMBLY AUXILIARY AUTOMATIC AIR VENT		LAT LAV LB LD LDB LF LFD LP L/S LWB LWT	LEAVING AIR TEMPERATURE LAVATORY POUND LINEAR DIFFUSER LEAVING DRY BULB LINEAR FEET LAMINAR FLOW DIFFUSER LIQUID PROPANE LITERS PER SECOND LEAVING WET BULB LEAVING WATER TEMPERATUR
	BDD BHP BP BS	BACKDRAFT DAMPER BRAKE HORSE POWER BACKFLOW PREVENTER BIRD SCREEN	М	MAU MAX MB MBH MD MECH	MAKE-UP AIR UNIT MAXIMUM MIXING BOX/MOP BASIN THOUSAND BTU/HR MOTORIZED DAMPER MECHANICAL
С	C C/L CD CFM	CONDENSATE CENTER LINE CEILING DIFFUSER CUBIC FEET PER MINUTE		MIN MM MS	MINUTE/MINIMUM MILLIMETERS MOTOR STARTER
	CH CHDR CHP CLG CO CONC CONN	CHILLER CHEMICAL DRAIN CHILLED WATER PUMP CEILING CLEANOUT CONCRETE CONNECTION	N	N NG NG NIC NO NOX NTS	NITROGEN NORMALLY CLOSED NATURAL GAS NOT IN CONTRACT NUMBER NITROGEN OXIDE NOT TO SCALE
D	CONT COTG CU CV CW DDC DG	CONTINUED/CONTINUATION/CONTINUOUS CLEAN OUT TO GRADE CONDENSING UNIT/COPPER CONSTANT VOLUME COLD WATER  DIRECT DIGITAL CONTROL DOOR GRILLE	0	O OA OAL OBD OC OS OS&Y	OXYGEN OUTSIDE AIR OUTSIDE AIR LOUVER OPPOSED BLADE DAMPER ON CENTER OVERFLOW SCUPPER OUTSIDE SCREW & YOKE
	DIA DIM DMPR DN DPS DR DSD DSW	DIAMETER DIMENSION DAMPER DOWN DIFFERENTIAL PRESSURE SWITCH DRAIN DUCT SMOKE DETECTOR DISTILLED WATER	Р	PD POC PRESS PRV PSIG PVC	PRESSURE DROP POINT OF CONNECTION PRESSURE PRESSURE REDUCING VALVE POUNDS PER SQUARE INCH POLYVINYL CHLORIDE
E	DWG EAT ED EDB EER EF EFF EG EL ELEC	DRAWING  ENTERING AIR TEMPERATURE EQUIPMENT DRAIN ENTERING DRY BULB ENERGY EFFICIENCY RATIO EXHAUST FAN EFFICIENCY EXHAUST GRILLE ELEVATION ELECTRICAL	R	RA RAG RAR RC RD REF RF RL RM RTN	RETURN AIR RETURN AIR GRILLE RETURN AIR REGISTER RAIN CONDUCTOR ROOF DRAIN REFERENCE RETURN FAN RAIN LEADER ROOM RETURN
F	ENT ER EWB EWC EWT EXH EWS	ENTERING EXHAUST REGISTER ENTERING WET BULB ELECTRIC WATER COOLER ENTERING WATER TEMPERATURE EXHAUST EYE WASH/SHOWER STATION FLOOR CLEANOUT	S	SA SAG SAN SAR SD/FD SF SH SP	SUPPLY AIR SUPPLY AIR GRILLE SANITARY SUPPLY AIR REGISTER SMOKE DAMPER COMB. SMOKE DAMPER\FIRE DESCRIPTION SUPPLY FAN SHEET STATIC PRESSURE
	FD FH FL FLEX FOR FOS FP FPI	FIRE DAMPER/FLOOR DRAIN FUME HOOD FLOOR FLEXIBLE FUEL OIL RETURN FUEL OIL SUPPLY FIRE PUMP FINS PER INCH	Т	SQ FT SST TCU TEMP TG TP TYP	SQUARE FEET STAINLESS STEEL TERMINAL CONTROL UNIT TEMPERATURE TRANSFER GRILLE TRAP PRIMER TYPICAL

DOMESTIC WATER GENERAL NOTES 1. CUTOFF VALVES AND STOPS SHALL BE PROVIDED WHERE SHOWN ON DRAWINGS AND AT FIXTURE CONNECTIONS. 2. TEST ALL WATER SYSTEM IN PRESENCE OF OWNER'S REPRESENTATIVE AT MIN. 100 PSIG FOR 8 HOURS. SANITARY, WASTES, AND VENTS SHALL BE TESTED WITH 10' HEAD OF WATER FOR 8 HOURS WITH LEVEL OF WATER REMAIN UNCHANGED.

3. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS.

4. INSTALL ALL WATER PIPING SYSTEMS SO THAT THEY WILL NOT BE SUBJECT TO ANY UNDUE STRAINS OR STRESSES. PROVISIONS SHALL BE MADE FOR EXPANSION, CONTRACTION AND STRUCTURAL SETTLEMENT. 5. ALL PENETRATIONS THROUGH FIRE RATED WALLS AND FLOOR CEILING ASSEMBLY SHALL BE INSTALLED AND SEALED TO MAINTAIN FIRE RATING WITH U.L. LISTED ASSEMBLIES, MATERIALS AND SEALANTS.

6. BELOW GROUND PIPE SHALL BE INSTALLED NO LESS THAN 6" BELOW FROST LINE. REFER TO STRUCTURAL DETAILS FOR FOUNDATION PENETRATION. 7. DRAWING IS DIAGRAMMATIC IN NATURE AND IS NOT

INTENDED TO BE SCALED FOR DIMENSIONS. 8. COORDINATE LOCATION OF PLUMBING WORK WITH OTHER TRADES TO AVOID CONFLICTS AND INTERFERENCES. 9. ALL TESTING IS THE RESPONSIBILITY OF THE CONTRACTOR, WITHOUT EXTRA COST FOR THE OWNER. 10. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A WATER FLOW AND PRESSURE TEST FOR EVALUATING

11. WHERE STREET WATER MAIN PRESSURES FLUCTUATE, THE BUILDING WATER DISTRIBUTION SYSTEM SHALL BE DESIGNED FOR MINIMUM PRESSURE AVAILABLE. WHEREVER WATER PRESSURE FROM THE STREET MAIN OR OTHER SOURCE OF SUPPLY IS LESS THAN 60 PSI, A WATER PRESSURE BOOSTER SYSTEM SHALL BE INSTALLED ON THE BUILDING WATER SUPPLY SYSTEM. WHERE WATER PRESSURE WITHIN A BUILDING EXCEEDS 80 PSI STATIC, AN APPROVED WATER-PRESSURE REDUCING VALVE WITH STRAINER CONFORMING TO ASSE 1003 SHALL BE INSTALLED TO REDUCE THE PRESSURES TO BELOW 80 PSI.

<u>PIPE LINES</u>

— — POTABLE COLD WATER

— — POTABLE HOT WATER

PIPE TAGS

— — VENT

XX" HW

XX" V

XX" CA

XX" OW

— — POTABLE HOT WATER RETURN

VENT

POTABLE HOT WATER

COMPRESSED AIR

SANITARY SEWER

OIL\WASTE WATER

VENT THROUGH ROOF

NATURAL GAS

POTABLE HOT WATER RETURN

INCOMING DOMESTIC AND FIRE PROTECTION SERVICE

THIS SHEET AND NOT ON THE PLANS.

SANITARY SEWER GENERAL NOTES 1. PROVIDE CLEANOUTS AT LOCATIONS AND WITH CLEARANCES AS REQUIRED BY THE CODE NOT EXCEEDING 50 FEET IN HORIZONTAL RUNS AT EACH CHANGE OF DIRECTION, VERTICAL OR HORIZONTAL, GREATER THAN 45°, AT THE BASE OF EACH WASTE OR VENT STACK 5 FEET AFF. PROVIDE WALL CLEANOUTS IN LIEU OF FLOOR CLEANOUTS WHEREVER POSSIBLE. ALL INTERIOR

CLEANOUTS SHALL BE ACCESSIBLE FROM WALLS OR 2. THE FLOOR DRAIN IN TOILETS AND LOCKERS AREAS SHALL BE PROVIDED WITH BACKWATER VALVES. 3. MAINTAIN MINIMUM OF 10 FEET CLEARANCE BETWEEN ANY VTR AND OUTSIDE AIR INTAKES. WHERE HORIZONTAL CLEARANCE CANNOT BE PROVIDED, EXTEND VENTS A MIN OF 24" ABOVE EACH OUTSIDE AIR INTAKE.

4. VTR'S ROOF PENETRATIONS, WATER PROOFING AND FLASHINGS SHALL BE PROVIDED BY ROOF CONTRACTOR. 5. ALL TESTING IS THE RESPONSIBILITY OF THE CONTRACTOR. TEST ALL SEWER AND VENT SYSTEMS IN PRESENCE OF OWNER'S REPRESENTATIVE. 6. INVERT ELEVATION SHOWN BASED ON 100.0 FT. FF ELEVATION, REFER TO CIVIL DRAWINGS FOR ACTUAL 7. SEWER PIPE SHALL BE INSTALLED NO LESS THAN 6" BELOW THE FROST LINE.

THIS IS A STANDARD SYMBOLS & ABBREVIATIONS SHEET. THEREFORE, SOME SYMBOLS & ABBREVIATIONS MAY APPEAR ON



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ISSUE DATES: CONSTRUCTION

ASI #30

SHEET NUMBER:

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DOCUMENTS

FIRST FLOOR SANITARY PIPING PLAN

1/4" = 1'-0"

B FIRST FLOOR DOMESTIC WATER PLAN

1/4" = 1'-0"



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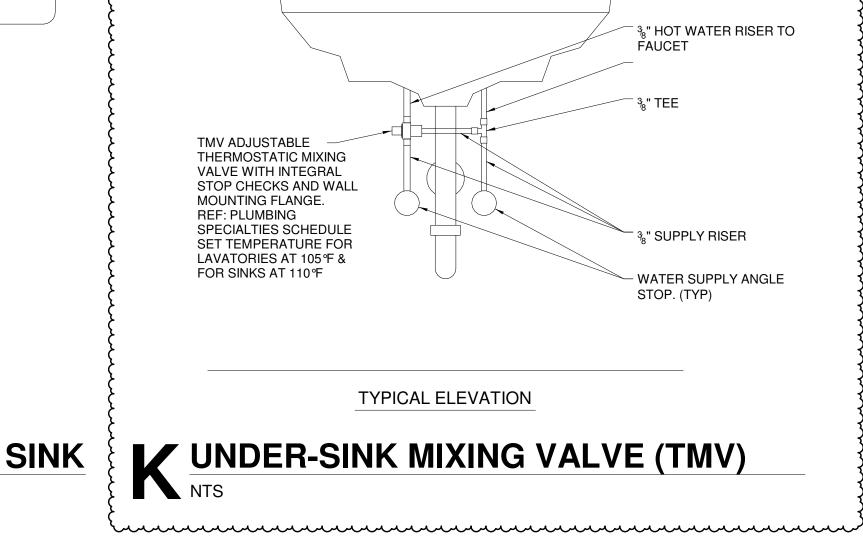
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DOCUMENTS

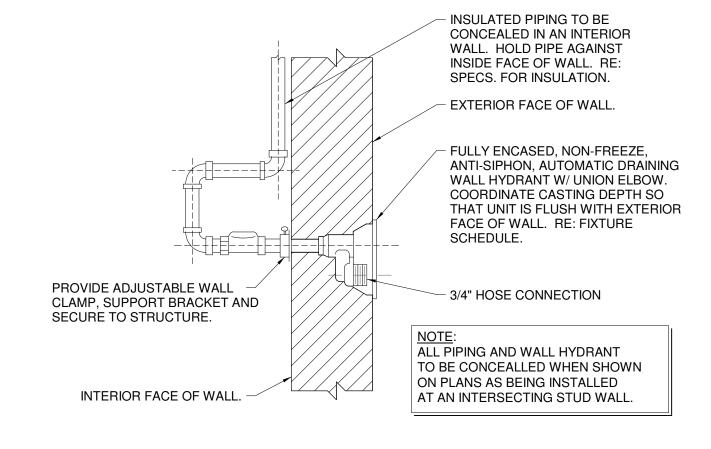
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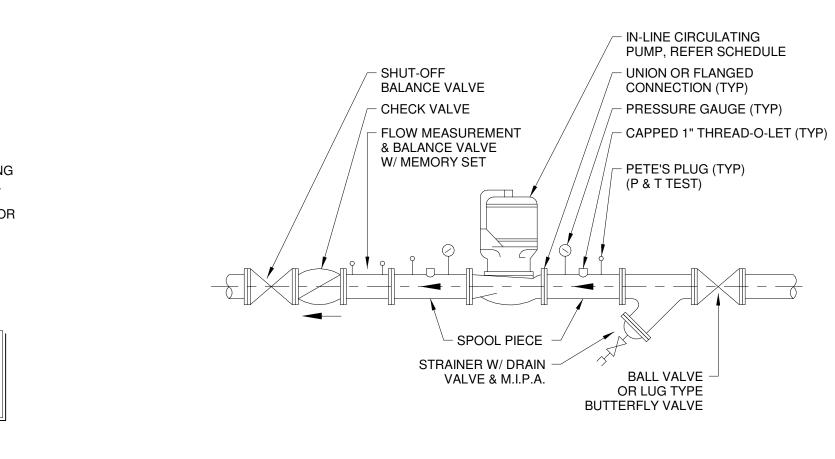
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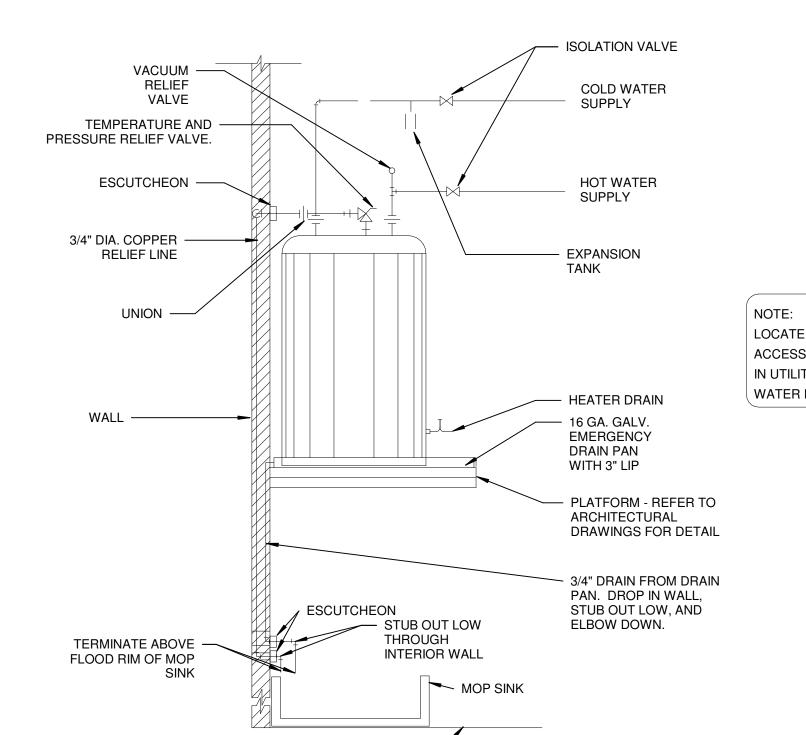
# J ELECTRIC WATER HEATER ON PLATFORM ABOVE MOP SINK NTS H INLINE CIRCULATION PUMP

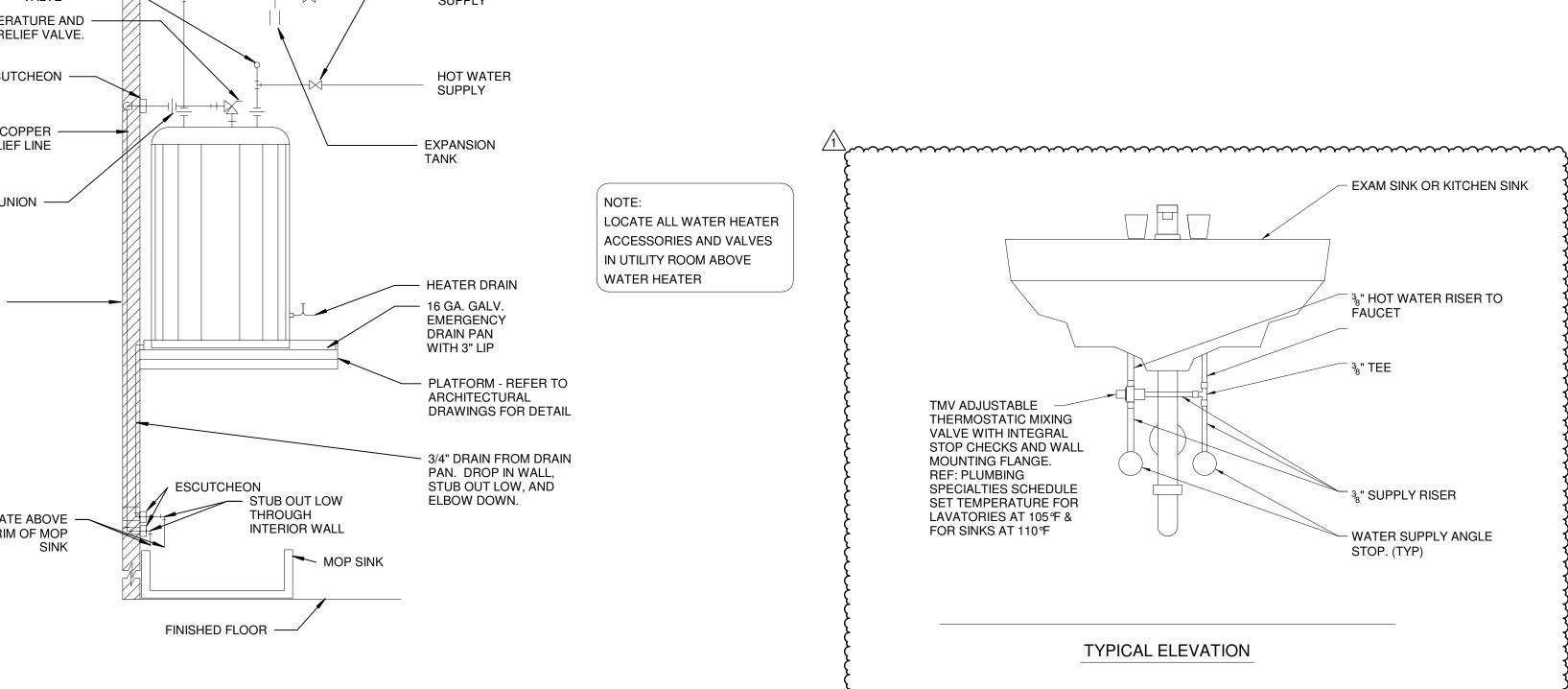


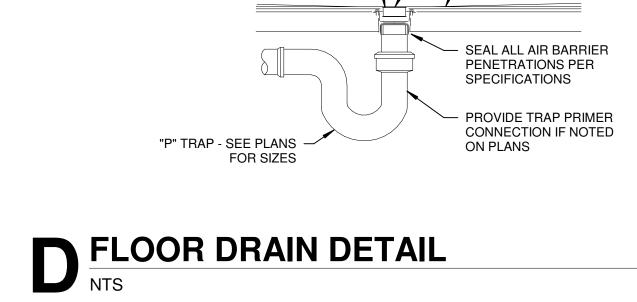




E PIPING ROOF PENETRATION NTS

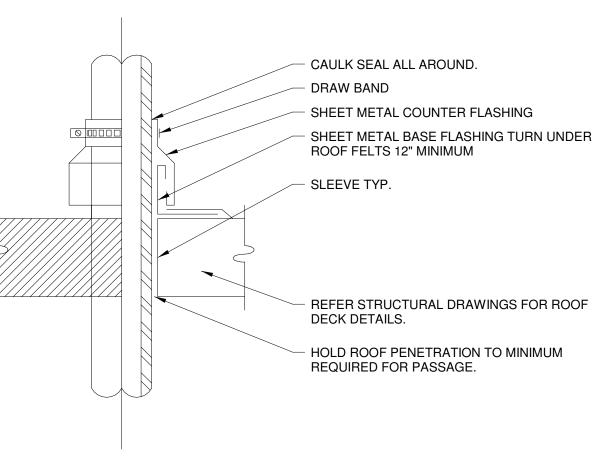


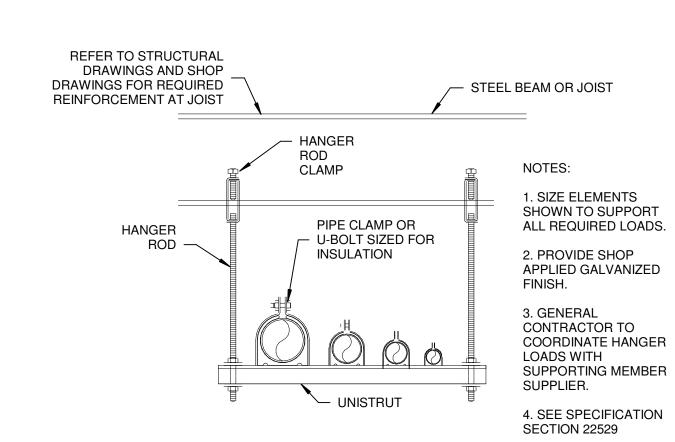




SLAB ELEVATION TO PROVIDE PROPER

FLOOR SLOPE DRAIN FOR 2 FT. DRAIN RADIUS, 1/4" DEPRESSION.





PIPING HANGERS AND SUPPORTS DETAIL

NTS



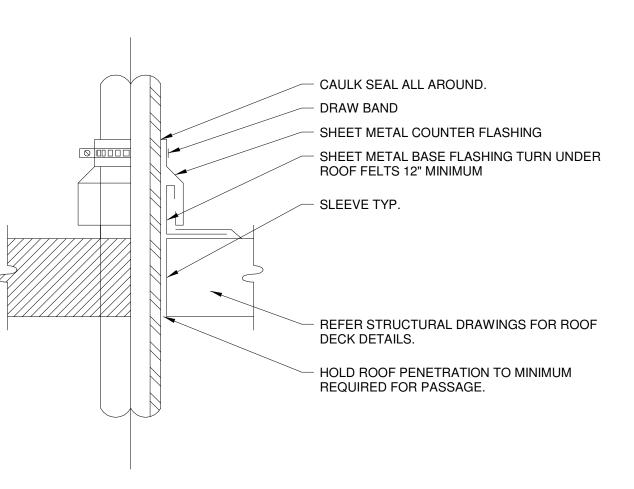
AROUND CLEANOUT

CLEANOUT PLUG

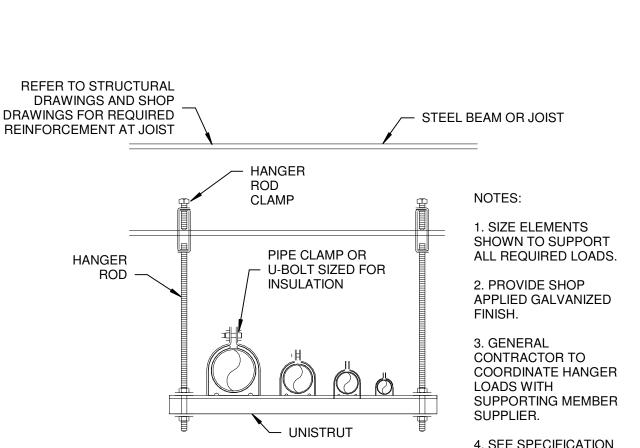
WASTE PIPE

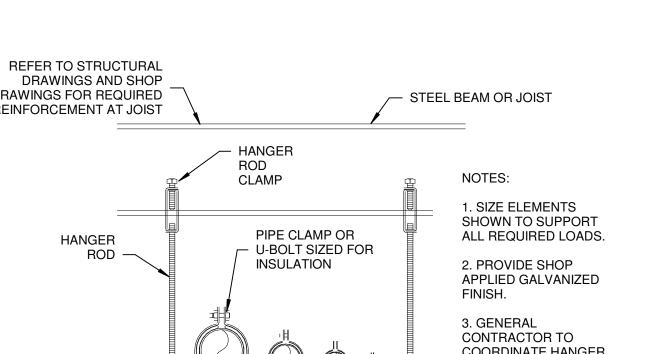
FLOOR DRAIN

FINISHED FLOOR



B FLOOR CLEAN-OUT (FCO)





— WASTE LINE			CONNECTIONS, LOCATE IN AN ACCESSIBLE LOCATION OR IF CONCEALED PROVIDE ACCESS PANEL FOR SERVICE & INSPECTION. PROVIDE AS REQUIRED PER AUTHORITY HAVING JURISDICTION.
	TMV	LEONARD 270-LF	MIXING VALVE, THERMOSTATIC TYPE, BRONZE BODY, TEMPERATURE ADJUSTMENT, INTEGRAL CHECK VALVES ON HOT AND COLD INLETS RATED 3.5 GPM AT 5 PSI AVAILABLE PRESSURE DROP.
	TECV	BEECO MI-CONTROL-LL	WATER HEATER SHUTOFF THERMAL EXPANSION CONTROL VALVE: QUARTER TURN VALVE, BRASS BODY, CHROME PLATED BALL, LOW LEAD, ASSE APPROVED AND IAPMO LISTED, ENGINEERED TO WITHSTAND INCOMING WATER PRESSURE OF UP TO 600 PSI, AND WITHSTAND TEMPERATURES UP TO 180 °F. PIPE TO DRAIN.
	ET	WATTS PLT-20	POTABLE WATER EXPANSION TANK, FLEXIBLE BUTYL DIAPHRAGM, PRE-CHARGED. INSTALL IN THE COLD WATER SERVICE LINE TO WATER HEATER.
	CP	BELL & GOSSETT PL-55	CAST IRON HIGH CAPACITY INLINE CIRCULATOR PUMP WITH 1-1/2" FLANGED CONNECTIONS. PROVIDE PUMP W/ TIMER AND AQUASTAT. PUMP SHALL CYCLE ON AND OFF WITH AQUASTAT THERMOSTATIC CONTROL.
NTS		ZURN WILKINS 375A (2.5")	REDUCED PRESSURE ZONE ASSEMBLY: PROVIDE WITH CAP AND TETHER TEST COCKS, QUARTER-TURN BALL VALVES, BRONZE STRAINER AND DRAIN LINE AIR GAP FITTING, ROUTE FULL LINE SIZE TO DRAIN. REFER TO CIVIL FOR LOCATION.
	EEW	BRADLEY S19-280W	WALL MOUNTED SWING DOWN EYE WASH. INSTALL PER MANUFACTURERS INSTALLATION INSTRUCTIONS. PROVIDE WALL MOUNTED BRACKET. PROVIDE WITH OPTIONAL NAVIGATOR \$19-2000 EFX8 EMERGENCY THERMOSTATIC MIXING VALVE PER ANSI Z358.1 TEPID WATER REQUIREMENTS.
		RAL NOTES:	
		ALL DEVICES SHAL	LL BE INSTALLED ACCORDING TO THE MANUFACTURER INSTRUCTIONS AND THE REQUIREMENTS OF THE AUTHORITY
	2	HAVING JURISDICT	FION. RIPTION IN THE SCHEDULE TAKES PRECEDENCE OVER MODEL NUMBERS. FIXTURE SUPPLIER SHALL PROVIDE THE
			SORIES AND OPTIONS FOR THE INTENDED INSTALLATION AND USE.
			TURERS OFFERING EQUIVALENT PRODUCTS ARE ACORN, JOSAM, MIFAB, WADE, J.R. SMITH, SYMMONS, POWERS, LAWLER
	4.		O FITTINGS USED TO CONVEY POTABLE WATER SHALL BE LEAD FREE. MAY BE USED ON THIS PROJECT.

		PLUMBING SPECIALTIES SCHEDULE
MARK	MFR/MODEL	DESCRIPTION
FD1	ZURN ZN-415-5S-P	LIGHT DUTY FLOOR DRAIN: 5" SQ. STRAINER. CAST IRON DRAIN W/ FLANGE, REVERSING CLAMPING COLLAR, ADJUSTABLE SQUARE NICKEL-BRONZE STRAINER, BOTTOM OUTLET, TRAP PRIMER CONNECTION. 2" TRAP AND OUTLET UNLESS NOTED OTHERWISE. WHERE APPROVED BY LOCAL AHJ, CONTRACTOR MAY INSTALL A TRAP GUARD (TG) IN LIEU OF TRAP PRIMER (TP).
FCO	ZURN ZN-1400	ADJUSTABLE FLOOR CLEANOUT: DURA-COATED CAST IRON, GAS AND WATER TIGHT ABS PLUG, ROUND SCORIATED NICKEL BRONZE TOP, VANDAL RESISTANT SCREWS.
WCO	ZURN Z-1441	WALL CLEANOUT WITH WATER-GAS TIGHT COUNTERSUNK IRON THREADED PLUG, ROUND STAINLESS STEEL ACCESS COVER.
YCO	ZURN Z-1474	CLEANOUT HOUSING: DURA-COATED CAST IRON BODY WITH ANCHOR FLANGE, SECURED SCORIATED COVER WITH LIFTING DEVICE.
TCO	ZURN Z-1474	CLEANOUT HOUSING: DURA-COATED CAST IRON BODY WITH ANCHOR FLANGE, SECURED SCORIATED COVER WITH LIFTING DEVICE.
FPWH1	ZURN Z1300	FREEZE PROOF WALL HYDRANT: ENCASED, NON-FREEZE, ANTI-SIPHON, AUTOMATIC DRAINING.
WA	ZURN Z-1700	WATER HAMMER ARRESTOR, BELLOWS TYPE, PRE-CHARGED, SIZED ACCORDING TO PLUMBING AND DRAINAGE INSTITUTE STANDARD P.D.I. WH-201.
AAV	STUDOR MINI-VENT	AIR ADMITTANCE VALVE, SCREENING ON THE INSIDE AND OUTSIDE OF VALVE, PROTECTIVE COVER FOR AIR INTAKE AND ADDITIONAL INSULATION AGAINST EXTREME TEMPERATURES.
TG	SURE SEAL DRAIN TRAP SEALER	SURE PRE-ASSEMBLED INLINE FLOOR DRAIN TRAP SEALER. 5 PIECES: COMMERCIAL GRADE ABS PLASTIC HOUSING AND KEEPER PIN, NEOPRENE RUBBER DIAPHRAGM, WITH 2 SOFT RUBBER SEALING GASKETS. FLOOR RATING ASSE - 107 AF-GW.
TP	ZURN Z-1022	SANIGUARD AUTOMATIC TRAP PRIMER, ALL BRONZE BODY WITH INTEGRAL VACUUM BREAKER, NON-LIMITING INTERNAL OPERATING ASSEMBLY WITH, GASKETED BRONZE COVER. PROVIDE NECESSARY DISTRIBUTION UNIT UP TO 4 TRAP CONNECTIONS, LOCATE IN AN ACCESSIBLE LOCATION OR IF CONCEALED PROVIDE ACCESS PANEL FOR SERVICE & INSPECTION. PROVIDE AS REQUIRED PER AUTHORITY HAVING JURISDICTION.
TMV	LEONARD 270-LF	MIXING VALVE, THERMOSTATIC TYPE, BRONZE BODY, TEMPERATURE ADJUSTMENT, INTEGRAL CHECK VALVES ON HOT AND COLD INLETS RATED 3.5 GPM AT 5 PSI AVAILABLE PRESSURE DROP.
TECV	BEECO MI-CONTROL-LL	WATER HEATER SHUTOFF THERMAL EXPANSION CONTROL VALVE: QUARTER TURN VALVE, BRASS BODY, CHROME PLATED BALL, LOW LEAD, ASSE APPROVED AND IAPMO LISTED, ENGINEERED TO WITHSTAND INCOMING WATER PRESSURE OF UP TO 600 PSI, AND WITHSTAND TEMPERATURES UP TO 180 °F. PIPE TO DRAIN.
ET	WATTS PLT-20	POTABLE WATER EXPANSION TANK, FLEXIBLE BUTYL DIAPHRAGM, PRE-CHARGED. INSTALL IN THE COLD WATER SERVICE LINE TO WATER HEATER.
СР	BELL & GOSSETT PL-55	CAST IRON HIGH CAPACITY INLINE CIRCULATOR PUMP WITH 1-1/2" FLANGED CONNECTIONS. PROVIDE PUMP W/ TIMER AND AQUASTAT. PUMP SHALL CYCLE ON AND OFF WITH AQUASTAT THERMOSTATIC CONTROL.
RPZ	ZURN WILKINS 375A (2.5")	REDUCED PRESSURE ZONE ASSEMBLY: PROVIDE WITH CAP AND TETHER TEST COCKS, QUARTER-TURN BALL VALVES, BRONZE STRAINER AND DRAIN LINE AIR GAP FITTING, ROUTE FULL LINE SIZE TO DRAIN. REFER TO CIVIL FOR LOCATION.
EEW	BRADLEY S19-280W	WALL MOUNTED SWING DOWN EYE WASH. INSTALL PER MANUFACTURERS INSTALLATION INSTRUCTIONS. PROVIDE WALL MOUNTED BRACKET. PROVIDE WITH OPTIONAL NAVIGATOR S19-2000 EFX8 EMERGENCY THERMOSTATIC MIXING VALVE PER ANSI Z358.1 TEPID WATER REQUIREMENTS.

MARK	MANUFACTURER & MODEL	TANK VOLUME	HTG INPUT (KW)	RECOVERY GPH 40°F - 140°F	VOLTAGE	PHASE	FREQUENCY	WEI
WH1	STATE SSE-20A	20.0 gal	15	61	208 V	1	60 Hz	305
	ER HEATER 1 WILL PI DEGREE WATER. PRO	OVIDE HOT WA	TER CIRCULATION			TED MIXING VA	LVES AT EACH FIXT	TURE TO F

	FORMED CONCRETE AROUND CLEANOUT
CLEANOUT COVER TO GRADE ——	
10 0111152	
V	
WASTE PIPE —	
	<u> </u>
CLEANOUT COVER —	FORMED CONCRETE

ABOVE GRADE —

DEPTH AS REQUIRED -

A CLEANOUT TO GRADE DETAIL

NTS

**SPECIFICATIONS** 

— ADJUSTABLE HOUSING

— WASTE LINE LENGTH TO SUIT

	DASIN				PFIVID2424	2019	AND LINT BASKETS OUTLET.
OTES:	CONTRACTOR TO CO	ORDINATE FINA	L SELECTIONS	OF ALL PLUMBING FIXTURES W	VITH OWNER PRIOR TO ORDER	NG.	
7	THE DEVICE DESCRIP OTHER MANUFACTUR	TION IN THE SC ERS OFFERING	HEDULE TAKES EQUIVALENT P	PRECEDENCE OVER MODEL N	Л, MIFAB, WATTS, WADE, J.R. SN	SHALL PROVIDE THE REQUIRE	D ACCESSORIES AND OPTIONS FOR THE INTENDED INSTALLATION AND USE.

- MAY EXTEND AS WASTE OR VENT - FOR WALL CONST.

REF. ARCH DWGS CLEANOUT PLUG COUNTERSUNK SCREW

POLISHED S.S. ACCESS

- C.I. CLEANOUT TEE

1/8 BEND @ END
 OF LINE CLEANOUT

	PLUMBING FIXTURE SCHEDULE									
		BRANCH SIZES (MIN)								
MARK	UNIT TYPE	WASTE	VENT	CW	HW	MANUFACTURER & MODEL	FAUCET	DESCRIPTION		
WC1	FLOOR MOUNTED WATER	3"	2"	1"	Á	KOHLER 96064		FLOOR MOUNTED, FLUSH VALVE, VITREOUS CHINA, ELONGATED BOWL, 15" HIGH, 1.6 GPF, FULLY GLAZED 2 1/8" TRAPWAY, 1 1/2" TOP SPUD, 11 1/2" ROUGH IN, WALL ESCUTCHEON PLATE. PROVIDE A TOILET SEAT WITH OPEN FRONT, LESS COVER, HIGH IMPACT SOLID PLASTIC, COMMERCIAL WEIGHT STAINLESS STEEL HINGE POSTS AND SELF SUSTAINING CHECK HINGES. PROVIDE WITH SLOAN 111 MANUAL FLUSH VALVE.		
	CLOSET							$\frac{1}{1}$		
LAV1	WALL-HUNG LAVATORY	1 1/4"	2"	1/2"	1/2"		AQUASENSE Z76915-XL-CWB	ENAMELED CAST IRON WALL HUNG LAVATORY, WITH 4" CENTER FAUCET HOLES. OPTIONAL EQUIPMENT: EXPOSED ARM CARRIER. HARDWIRED TOUCHLESS FAUCET.		
KS1	KITCHEN SINK	2"	2"	1/2"	}	COMPANY DL-2137-A-GR	7594E	DOUBLE BOWL LEDGE BACK DROP IN 18 GAUGE STAINLESS STEEL BOWL, SINGLE HANDLE SOLID BRASS FABIRCATED BODY, LEVER HANDLE, TOUCH-CLEAN SPRAYHEAD, PULL DOWN WAND WITH FLOW RATE OF 1.5 GPM MAX.		
SK1	EXAM ROOM SINK	2"	2"	1/2"	1/2"	PROFLO PFSR151562A	AMÉRICAN STANDARD 7500.170	22 GAUGE STAINLESS STEEL BAR SINK, 15" X 6", 2 HOLE. FAUCET: 6.75" GOOSENECK SPOUT WITH VANDAL RESISTANT BLADE HANDLES.		
SS	MOP SERVICE BASIN	3"	2"	3/4"	3/4"			MOP SINK, 24" X 24" X 10" DEEP, FLOOR MOUNTED, MOLDED ONE PIECE HOMOGENEOUS PRODUCT, AND INTEGRAL DRAIN WITH S.S. DOMED STRAINER AND LINT BASKET 3" OUTLET.		



-UMBING

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PROJECT #: 20200132

12/14/2020

2021.01.06

ISSUE DATES:

CONSTRUCTION

ASI #30

DOCUMENTS

320 S. Boston Avenue, Suite 103 Tulsa, Oklahoma 74103 918-877-9036 blueriverarchitects.com

PROJECT #: 20200132

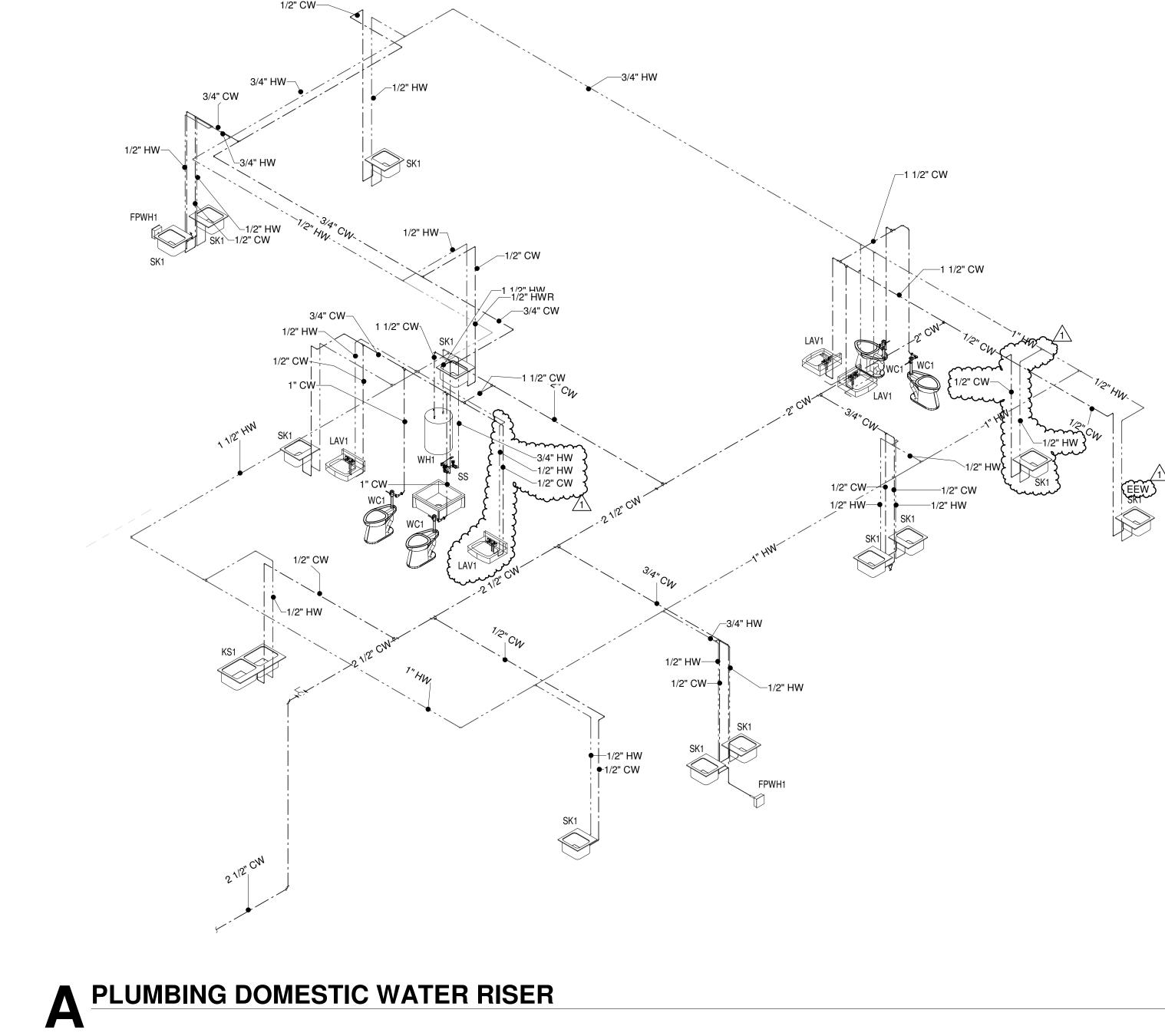
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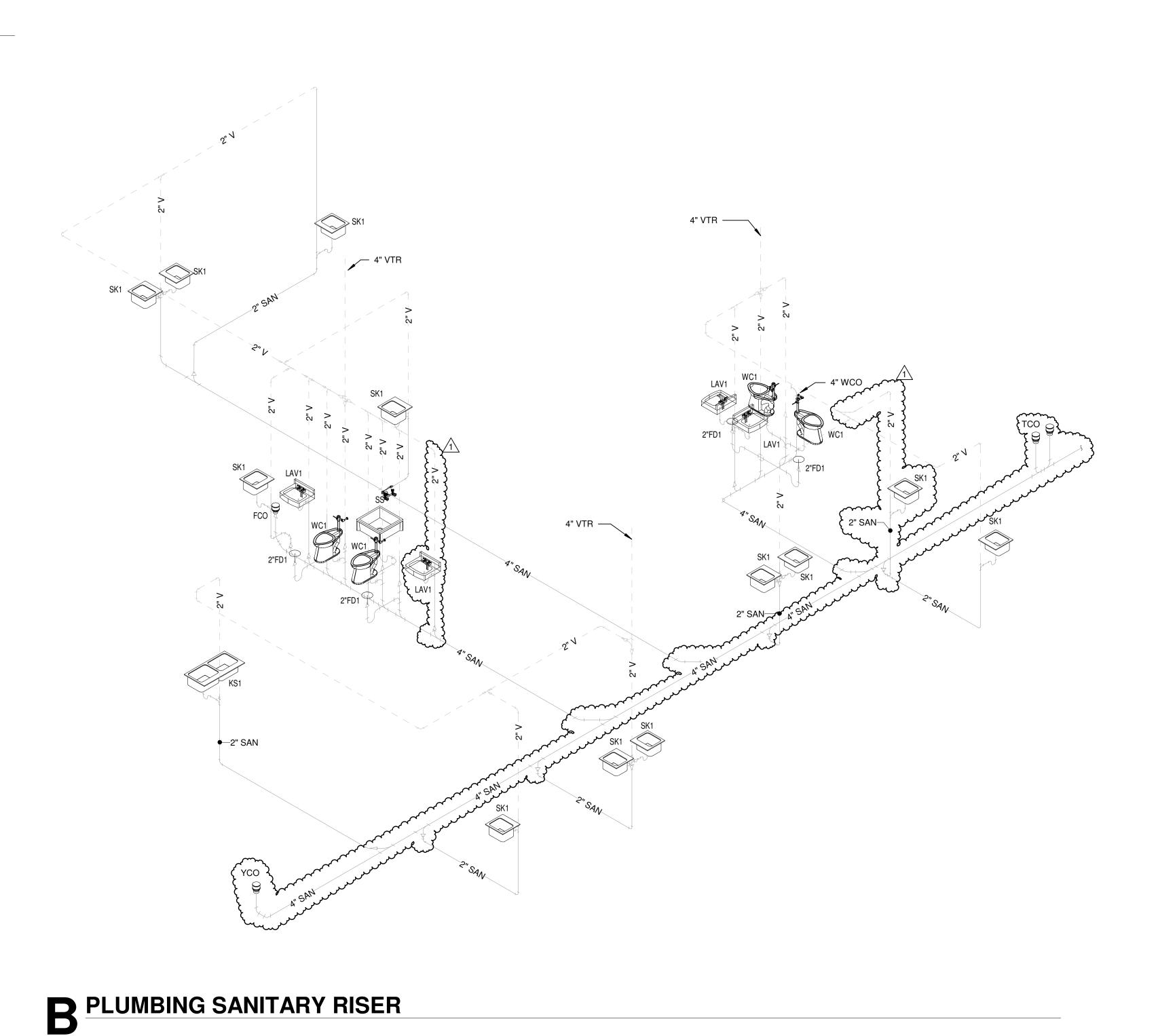
Date 2021.01.06

ISSUE DATES:
CONSTRUCTION
DOCUMENTS

ASI #30

SHEET NUMBER:
P901





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Description

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ISSUE DATES:

CONSTRUCTION

ASI #30

SHEET NUMBER.

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DOCUMENTS

# LOW VOLTAGE NOTES

au

• NETWORK, CAT 6 PANDUIT PUP6004BL-UY (BLUE AND IF EXPOSED BLACK) NETWORK, CAT 6A PANDUIT PUP6AM04BL-UG (BLACK) COPPER BB, PANDUIT PUP5525IG-UY FIBER OM3 = PANDUIT (SPECIFIC TO APPLICATION) FIBER OM4 = PANDUIT (SPECIFIC TO APPLICATION) FIBER SINGLEMODE = PANDUIT (SPECIFIC TO APPLICATION) COAXIAL CABLE, WIRELESS AUDIO ANTENNA, RG8/U COAXIAL CABLE, RF VIDEO DISTRIBUTION TO TVS, RG6 COAXIAL CABLE, RF MDF TO IDF, RG11/U RUN CABLE)

TAPPAN PART# C112115: 22-3 PAIR SHIELDED, 18-4C SHIELDED (ACCESS CONTROL HOME BELDEN 6300UE CABLE - 18/2 UNSHIELDED, BLACK, PLENUM, BOX (MAG LOCK TRIGGER ALTRONIX) BELDEN 6504FE CABLE - 22/6 SHIELDED, BLACK, PLENUM, BOX (ACCESS CONTROL DOOR PANDUIT FOCPX06Y - 6 STRAND FIBER 50 MICRON, CLAD DIAMETER: 125, INDOOR & OUTDOOR RATED (LIGHT POLE CAMERAS) PANDUIT CBX4IW-AY – SURFACE MOUNT BOX (PART OF LIGHT POLE FOR CAMERA PANDUIT CMDJLCEI – LC ADAPTER MODULE (PART OF LIGHT POLE FOR CAMERA INSTALL) AXIS T98A15-VE – PART # 5900-151 (PART OF LIGHT POLE FOR CAMERA INSTALL)

PATCH CABLES, CAT 6 PANDUIT UTP28SPYZZ Y=FT. ZZ=COLOR (BLACK IF IN EYE PATCH CABLES, CAT 6A PANDUIT UTP28XYZZ Y=FT. ZZ=COLOR (BLACK IF IN EYE SIGHT OF CUSTOMER) JACKS, CAT 6 PANDUIT CJ688TGBU (BLUE) NETWORK/DATA JACKS, CAT 6 PANDUIT CJ688TGBL (BLACK) SURVEILLANCE JACKS, CAT 6 PANDUIT CJ688TGOR (ORANGE) AP'S JACKS, CAT 6 PANDUIT CJ688TGYL (YELLOW) TV'S JACKS, CAT 6A PANDUIT CJ6X88TGBU (BLUE) NETWORK/DATA

JACKS, CAT 6A PANDUIT CJ6X88TGBL (BLACK) SURVEILLANCE JACKS, CAT 6A PANDUIT CJ6X88TGOR (ORANGE) AP'S JACKS, CAT 6A PANDUIT CJ6X88TGYL (YELLOW) TV'S WALL PLATES, PANDUIT – (SPECIFIC TO APPLICATION) PATCH PANELS(ANGLED), PANDUIT CPPLA48WBLY PATCH PANELS(ANGLED), PANDUIT CPPLA24WBLY PATCH PANELS, PANDUIT CPPL48WBLY PATCH PANELS, PANDUIT CPPL24WBLY

FIBER ENCLOSURES, PANDUIT (RACK OR WALL SPECIFIC TO APPLICATION)

FIBER ADAPTER PANELS, PANDUIT (SPECIFIC TO APPLICATION)

ALL CEILING HEIGHTS ARE MINIMUM OF 10'. ALL CABLE TRAY/LADDER RACK MINIMUM OF 18" WIDE.

ON NEW INSTALLATION/CONSTRUCTION FOR COOLING IT WILL BE OVERHEAD DUCTED TO THE COOL ISLE WITH RETURNS ON THE HOT ISLE. REQUIRE THAT WE HAVE REDUNDANT SOURCE OF COOLING. COOLING EQUIPMENT TO BE INSTALLED EITHER IN ADJACENT ROOM, IN CEILING, OR ON ROOF AND NOT IN DC/MDF/IDF. NO WATER LINES TO BE INSTALLED IN CEILING.

STARLINE T3 TRACK BUSWAY SYSTEM. ON NEW INSTALLATION/CONSTRUCTION WE RECOMMEND TWO POWER SOURCES WITH FLYWHEEL AND GENERATOR PLUS STANDBY UPS. ALL POWER RECEPTACLE COVERS ARE RED THAT ARE ON FLYWHEEL.

 APC AR3300 RACK ENCLOSURE (GAMING) CONSOLE/KVM (APC AP5816, 1 PER RACK) 6 FT. CABLE(APC AP5821, 6 PER RACK) 10 FT. CABLE(APC AP5822, 4 PER RACK) PDU (APC AP7830, 2 PER RACK)

AC POWER – (SPECIFIC TO APPLICATION)

SPACE NEEDED 4' FRONT, 3' BACK

UPS (ONLY IF STANDBY UPS NOT PROVIDED)(APC SPECIFIC TO APPLICATION) PATCH PANEL (PANDUIT, CPPL24WBLY) CAT6 (PANDUIT, PUP600BL-UY, RACK TO NETWORK CORE RACK) CAT6 (PANDUIT, PUP600BL-UY, RACK TO DMARC) HORIZONTAL MANAGEMENT (PANDUIT, WMPHF2E, 2 PER RACK) CONTAINMENT BRACKETS (APC AR7710, 1 PER RACK)

APC AR3300 RACK ENCLOSURE (SURVEILLANCE AND CORPORATE GAMING) PDU (APC AP8841, 4 PER RACK) POWER CORD KIT (APC AP8712S, 2 PER RACK) POWER CORD KIT (APC AP8714S, 2 PER RACK) POWER CORD KIT (APC AP8702S-NA, 2 PER RACK) POWER CORD KIT (APC AP8704S-NA, 2 PER RACK) UPS (ONLY IF STANDBY UPS NOT PROVIDED)(APC SPECIFIC TO APPLICATION) FIBER ENCLOSURE (PANDUIT, FRME2U W/LC ADAPTER PANELS) 24 STRAND FIBER (PANDUIT FOPPX24Y W/PANDUIT LC CONNECTORS) HORIZONTAL MANAGEMENT (PANDUIT WMPHF2E, 2 PER RACK)

CONTAINMENT BRACKETS (APC AR7710, 1 PER RACK) AC POWER – (SPECIFIC TO APPLICATION) SPACE NEEDED 4' FRONT, 3' BACK MIDDLE ATLANTIC, EIA 19", MODEL AND ASSOCIATED ACCESSORIES SPECIFIC TO APPLICATION (AV) SEE AV SOW FOR ADDITIONAL EQUIPMENT NEEDED FOR RACK AC POWER - (SPECIFIC TO APPLICATION) SPACE NEEDED 4' FRONT, 3' BACK PANDUIT R2P COMM/NETWORK/SURVEILLANCE RACKS

PANDUIT WMPVHC45E – VERTICAL MANAGEMENT (2 PER RACK) PANDUIT WMPHF2E - HORIZONTAL MANAGEMENT (SPECIFIC TO APPLICATION) SPACE NEEDED 4' FRONT AND BACK TELECOMMUNICATION BONDING AND GROUNDING, BICSI STANDARDS EQUIPMENT RACK ENCLOSURE, EIA 19" – MODEL AND ASSOCIATED ACCESSORIES SPECIFIC TO APPLICATION

AC POWER – (SPECIFIC TO APPLICATION)

PDU – APC SPECIFIC TO APPLICATION

DOCUMENT CNB-PILS01 FOR LABELING)

UPS - APC SMART-UPS SPECIFIC TO APPLICATION WALL – SURVEILLANCE/ACCESS CONTROL REQUIREMENTS FOR WALL SPACE RACK – VENDOR REQUIREMENTS FOR SPACE AND POWER ALL CONDUIT TO BE LABELED WITH PANDUIT METH187 OR EQUIVALENT WITH

ALUMINUM OR STAINLESS STEEL TAPE AND ATTACHED WITH ZIPTIES. (SEE

CABLING TELECOMMUNICATION STANDARDS:
IN GENERAL, THE FOLLOWING STANDARDS AT A MINIMUM SHALL BE OBSERVED FOR TELECOMMUNICATIONS INFRASTRUCTURE AND ARE INCORPORATED HEREIN BY ANSI/TIA/EIA - 568-B.1, COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARD PART 1: GENERAL REQUIREMENTS, APRIL, 2001 ANSI/TIA/EIA - 568-B.2, COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARD PART 2: BALANCED TWISTED-PAIR CABLING COMPONENTS, APRIL, 2001 ANSI/TIA/EIA - 568-B.2-1, COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARD PART 2: BALANCED TWISTED PAIR CABLING COMPONENTS, ADDENDUM 1 – TRANSMISSION PERFORMANCE SPECIFICATIONS FOR 4-PAIR 100 W CATEGORY 6 CABLING ANSI/TIA/EIA - 568-B.3, COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARD PART 3: OPTICAL

FIBER CABLING COMPONENTS, MARCH, 2000 ANSI/TIA/EIA – 569-A, COMMERCIAL BUILDING STANDARD FOR TELECOMMUNICATIONS PATHWAYS AND SPACES, FEBRUARY, 1998 ANSI/TIA/EIA – 570-A, RESIDENTIAL TELECOMMUNICATIONS CABLING STANDARD, OCTOBER 1999 ANSI/TIA/EIA – 606-A, ADMINISTRATION STANDARD FOR TELECOMMUNICATIONS INFRASTRUCTURE OF COMMERCIAL BUILDINGS, FEBRUARY, 2002 ANSI/TIA/EIA – 607, COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS

TELECOMMUNICATIONS, AUGUST 1994 ANSI/ TIA/EIA – 758, CUSTOMER-OWNED OUTSIDE PLANT TELECOMMUNICATIONS CABLING STANDARD, APRIL 1999 BICSI - TDMM, BUILDING INDUSTRIES CONSULTING SERVICES INTERNATIONAL, TELECOMMUNICATIONS DISTRIBUTION METHODS MANUAL (TDMM) NATIONAL FIRE PROTECTION AGENCY (NFPA – 70), NATIONAL ELECTRICAL CODE (NEC)

BE HIDDEN FROM VIEW AND/OR NEATLY INSTALLED USING CABLE MANAGEMENT RACK/IDF CABLING - ALL CABLES TO BE DRESSED NEATLY WITH APPROPRIATE SERVICE RACK EQUIPMENT – ALL EQUIPMENT SHOULD BE RACK MOUNT STYLE OR HAVE APPROPRIATE RACK MOUNTING ADAPTERS. EQUIPMENT THAT DOES NOT HAVE RACK ADAPTERS SHOULD BE NEATLY ARRANGED ON RACK SHELVING. ACCESS CONTROL – LEAVE 10' SLACK AT EACH DOOR LOCATION DATA DROPS – 2 EACH CAT 6(COLOR DEPENDENT ON LOCATION) DROPS PER LOCATION UNLESS OTHERWISE NOTED GAMING – 4 EACH CAT 6 AND OR CAT 6A DROPS PER LOCATION. 10' SLACK AT EACH LOCATION AV – 1 EACH CAT 6 AND OR CAT 6A(SOMETIMES SHIELDED) PER NETWORK, NETWORKED AUDIO, IP VIDEO LOCATION

ALL CABLES TO BE DRESSED NEATLY WITH APPROPRIATE SERVICE LOOP AND SHOULD

CAMERAS – PTZ AND FIXED(SURV) 1 CAT6 (BLACK) PER CAMERA LOCATION ALL CABLES TO HAVE APPROX. 1' SLACK AT EACH CAMERA LOCATION ALL CABLES TO BE LEFT COILED APPROX. 1' ABOVE REFLECTIVE CEILING CAMERAS - LIGHT POLES IN PARKING LOT (SURV) AXIS BOX APPROX. 4' ABOVE GRADE OR JUST ABOVE POLE BASE OPPOSITE HAND HOLE (SEE MATERIAL LISTING ABOVE) INSTALL OM3 FIBER, SURFACE BOX, LC MODULE ADAPTERS (SEE MATERIAL LISTING ABOVE) 120V AC POWER ON FLYWHEEL SINGLE GANG BOX.

EQUIPMENT INSTALL IN EXISTING RACKS PROVIDE PHYSICAL INFRASTRUCTURE MAKE/MODEL/SN AND LOCATION OF WHERE IT WILL RESIDE IN RACK FOR UPDATE PROVIDE LOCATION SITE OF INSTALL

EQUIPMENT REMOVED FOR UPDATE

CHANGE RECORD ISSUED FOR EQUIPMENT REMOVAL APPROVED EQUIPMENT REMOVAL FROM RACK UNPLUG POWER CABLES FROM SOURCE CUT THE POWER CABLE END OFF TO MAKE FOR EASE OF REMOVAL UNPLUG ALL PATCH CABLES AND CUT ENDS OFF FOR EASE OF REMOVAL DISPOSE OF ALL CUT CABLES FOR CLEAN UP PROVIDE PHYSICAL INFRASTRUCTURE WITH LOCATION SITE, MAKE/MODEL/SN OF

# 120/208 Wye, 3PH, 4W **PANELBOARD** Recessed LOCATION: BREAK ROOM 111 WIRE BRKR PL PL BRKR WIRE DESCRIPTION 20 A 12 EXHAUST FANS TOLIET 122,125 10 | 25 A | 3 | 1.80 | 0.15 60 A 6 FCU-1 10 20 A 2 1.25 4.99 8 30 A 2 20 A 12 EXHAUST FANS TOLIET 114,115 11 HP-3 15 A 12 CU-1 10 25 A 3 1.80 | 5.62 | 2 | 60 A | 8 | FCU-4 21 WH-1 2 | 30 A | 8 | FCU-2 - 5.00 0.08 27 EXTERIOR RECEPTACLES 12 20 A 1 20 A 20 A 20 A 1 0.00 0.00 33 Spare 20 A 1 35 Spare 0.00 8.27 39 Space 41 Space TOTAL CONNECTED 33.53 TOTAL CONNECTED 279.39 282.76 297.65 AMPS TOTAL LOAD 103.07 KVA 286.09 AMPS

270.40 AMPS

52.97 AMPS

PER NEC ARTICLE 220 FEEDER LOAD 97.42 KVA

PER NEC ARTICLE 220 FEEDER LOAD 19.08 KVA

L	P2					PA	NEL	BOA	RD					120/208 Wye, 3P	H, 4 100
	RVES: CATION: BREAK ROOM 111													Rec	988
	DESCRIPTION	WIRE	BRKR	PL		A		В	(		PL	BRKR	WIRE	DESCRIPTION	T
1	OFFICE 1 RECEPTACLES	12	20 A	1	0.72	0.90					1	20 A	12	HALLWAY RECEPTACLES	+
3	RECEPTS EXAM	12	20 A	1			0.72	0.18			1	20 A	12	LAB RCPT	$\top$
5	OFFICE 4 RECEPTACLES	12	20 A	1					1.26	0.18	1	20 A	12	LAB RCPT	+
7	RECEPTACLES	12	20 A	1	0.18	0.18					1	20 A	12	LAB RCPT	T
9	DISHWASHER RECEPTACLE	12	20 A	1			0.84	0.90			1	20 A	12	REFRIDGE RECEPTACLE	
11	GARBAGE DISPOSAL RCPT	12	20 A	1					0.84	1.08	1	20 A	12	MICROWAVE RECEPTACLE	T
13	LIGHTING - LOBBY/RECEPTION	12	20 A	1	0.85	0.81					1	20 A	12	LIGHITNG - EXAM/OFFICES	
15	LIGHTING - LAB/EXAM/OFFICE	12	20 A	1			1.14	0.19			1	20 A	12	LIGHTING - BUILDING EXTERIOR	
17	PROCEDURE RM RCPTS	12	20 A	1					0.54	0.54	1	20 A	12	OFFICE RCPTS	
19	PROCEDURE RM RCPTS	12	20 A	1	0.72	0.72					1	20 A	12	EXAM 8 RECEPTACLES	
21	RECEPTION STORAGE RECEPTS	12	20 A	1			0.54	0.36			1	20 A	12	RECEPTION RECEPTACLES	
23	RECEPTION RECEPTACLES	12	20 A	1					0.36	0.72	1	20 A	12	WAITING RECEPTACLES	
25	MEDS ROOM RECPTS	12	20 A	1	0.72	0.54					1	20 A	12	JANITOR MEDS RECEPTACLES	
27	OFFICE 6 RECEPTACLES	12	20 A	1			0.90	0.54			1	20 A	12	HALLWAY RECEPTACLES	
29	EXAM 1 RECEPTACLES	12	20 A	1					0.54	0.18	1	20 A	12	IT RECEPTACLES	
31	IT RECEPTACLES	12	20 A	1	0.18	0.18					1	20 A	12	IT RECEPTACLES	;
33	EXAM 2 RECEPTACLES	12	20 A	1			0.54	0.72			1	20 A	12	EXAM 3 RECEPTACLES	
35	EXAM 4 RECEPTACLES	12	20 A	1					0.72	0.72	1	20 A	12	EXAM 5 RECEPTACLES	;
37	HALLWAY RECEPTACLES	12	20 A	1	0.72	0.18					1	20 A	12	MED REFRIDGE RECEPT	
39	CONF RM RCPTS	12	20 A	1			0.54	0.18			1	20 A	12	RECEPTION RECEPTACLES	
41	RESTROOM RCPTS	12	20 A	1					0.36	0.00	1	20 A		Spare	4
<b>{</b> 43	TOUCHLESS RESTROOM	12	20 A	1	0.72	0.00					1	20 A		Spare	,
45	Spare		20 A	1			0.00	0.00			1	20 A		Spare	Τ.
47	Spare		20 A	1					0.00	0.00	1	20 A		Spare	-
49	Space				0.00	0.00			-	•				Space	;
51	Space					•	0.00	0.00						Space	į
53	Space								0.00	0.00				Space	;
	-	TOTAL C	ONNEC	TED	8	.27	8	.24	8.	04	K۷	A			
	-	TOTAL C	ONNEC	TED	69	9.21	68	3.94	67	.00	AM	IPS			
		Т	OTAL LO	DAC	24	4.55	KVA		68	.14	AM	IPS			

# GENERAL NOTES

ALL WORK SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE LATEST ADOPTED VERSION

OF THE NATIONAL ELECTRICAL CODE (NEC), AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL ELECTRICAL CONSTRUCTION DRAWINGS HAVE BEEN PREPARED BASED ON THE ENGINEER'S FIELD OBSERVATIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE PROJECT SITE PRIOR TO SUBMITTING BID IN ORDER TO VERIFY THE EXTENT OF THE CONSTRUCTION WORK AND THE ACTUAL CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. SUBMITTAL OF BID SHALL BE CONSIDERED PROOF THAT THE CONTRACTOR HAS VISITED THE JOB SITE AND IS FAMILIAR WITH THE SITE SPECIFIC CONSTRUCTION REQUIREMENTS.

PROTECT ALL ADJACENT SURFACES DURING CONSTRUCTION. ANY SURFACES DAMAGED SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL COORDINATE INSTALLATION OF ELECTRICAL SYSTEMS WITH OTHER TRADES. SEE MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS OF MECHANICAL AND PLUMBING EQUIPMENT.

PROVIDE SEALS AT RACEWAY PENETRATIONS AS FOLLOWS: FIRE RATED WALLS: SEAL PER SPECIFICATIONS FOR FIRE STOPPING.

NEUTRALIZATION AREA: SEAL PER MECHANICAL DETAIL. EXTERIOR: REFER TO ARCHITECTURAL DOCUMENTS FOR SEALING REQUIREMENTS AT ALL EXTERIOR MOUNTED DEVICES, FIXTURES, ENCLOSURES, AND RACEWAY

CONDUIT, POWER CIRCUITS, ISOLATED GROUND CIRCUITS, OR AS SHOWN ON PLANS. CONDUIT SHALL BE SIZED PER NEC BASED ON THWN 600 VOLT COPPER SINGLE CONDUCTORS, PLUS THE EQUIPMENT GROUNDING CONDUCTOR. WIRING DEVICES: DEVICE MOUNTING HEIGHTS ARE FROM FINISHED FLOOR TO CENTER OF OUTLET BOX UNLESS NOTED OTHERWISE ON PLANS. COORDINATE THE STANDARD MOUNTING

PROVIDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR (SIZE PER NEC) IN PVC TYPE

SWITCHES +48" RECEPTACLES +18" TELEPHONE +18" TELEPHONE/DATA +18"

HEIGHTS WITH MASONRY:

120/208 Wye, 3PH, 4W

WIRING SHALL INCLUDE FINAL CONNECTION TO ALL EQUIPMENT IN CONFORMANCE WITH EQUIPMENT SUPPLIER WIRING DIAGRAMS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPLETE PANELBOARD IDENTIFICATION

BRANCH CIRCUIT CONDUCTORS SHALL BE MINIMUM #12 AWG UNLESS NOTED OTHERWISE IN SCHEDULES. WHERE 20A BRANCH CIRCUITS HAVE #8 AND LARGER WIRE SPECIFIED, #10 AWG WIRE SHALL BE USED FOR THE FINAL CONNECTION (15-FT MAXIMUM). WHERE BRANCH CIRCUITS ARE GROUPED, SIZE CONDUIT AND DERATE CURRENT CARRYING

CONDUCTORS PER NEC. PROVIDE APPROPRIATE HANDLE TIES FOR EITHER TWO OR THREE SINGLE POLE BRANCH CIRCUIT BREAKERS AS REQUIRED WHEN UTILIZING MULTI-WIRE BRANCH CIRCUITS PER NEC ARTICLE 210.4 PART (B).

CONDUITS EXTENDING BEYOND EXTERIOR WALL: STUB OUT 2'-0" BELOW GRADE TO 5'-0" BEYOND EXTERIOR WALLS UNLESS NOTED OTHERWISE. COORDINATE LOCATION AND PROVIDE CONNECTION TO SITE CONDUITS.

14. ONLY FEEDER CIRCUITS SPECIFICALLY NOTED AS UNDERGROUND ON THE ONE LINE DIAGRAM AND BRANCH CIRCUITS NOTED BY LEGEND SHALL BE INSTALLED UNDER SLAB. ALL OTHER FEEDER AND BRANCH CIRCUITS SHALL BE INSTALLED OVERHEAD. ENSURE ALL PANELBOARDS HAVE REQUIRED VOLTAGE WARNING LABELS AND ARC FLASH WARNING LABELS. INSTALL NEW LABELS IF EXISTING LABEL IS DAMAGED OR MISSING FOR ALL

16. HOMERUNS ARE SHOWN SEPERATELY TO PRESERVE DRAWING CLARITY. COMBINE HOMERUNS SERVING LIGHTING AND WIRING DEVICES AS ALLOWED BY THE NEC. 18. CONTRACTOR TO INSTALL WALL BOXES AND CONDUIT WITH PULL CORD FOR DATA/PHONE

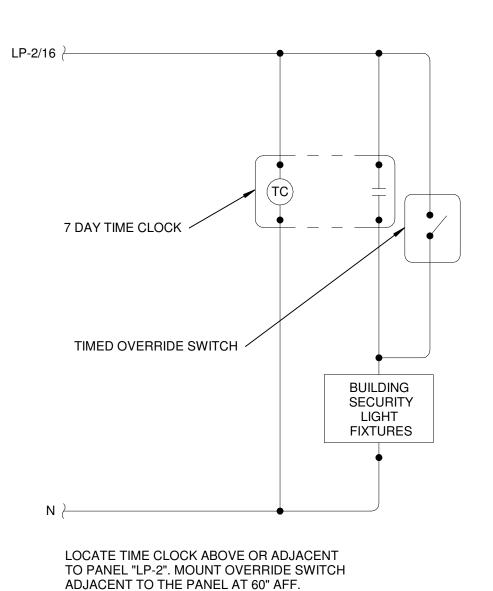
MINIMIZE SURFACE MOUNTED CONDUIT USED. MINIMIZE VISIBILITY OF SURFACE MOUNTED CONDUIT. KEEP CONDUIT TO CORNERS AND COMBINE CONDUIT RUNS WHEN POSSIBLE PER

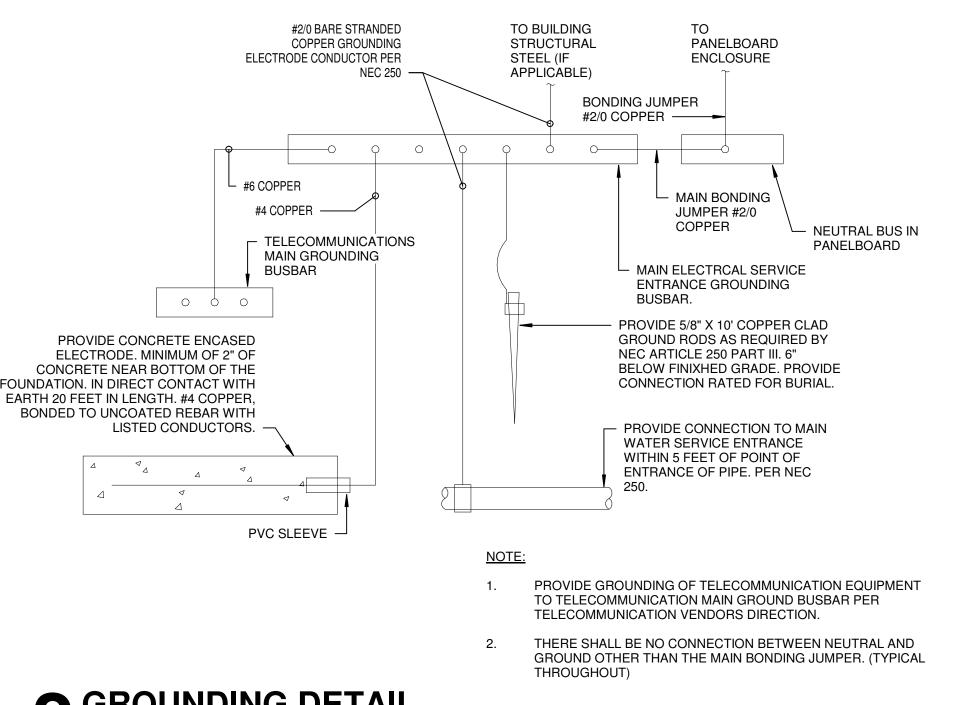
21. REFERENCE ARCHITECTURAL FOR ADDITIONAL ALTERNATE BID INFORMATION. 22. VERIFY ALL DATA/TELEPHONE LOCATIONS AND QUANTITIES WITH OWNER PRIOR TO ROUGH-IN. 23. CONCEAL ALL WORK WHEREVER POSSIBLE. WHEREVER IT IS PHYSICALLY IMPRACTICAL TO

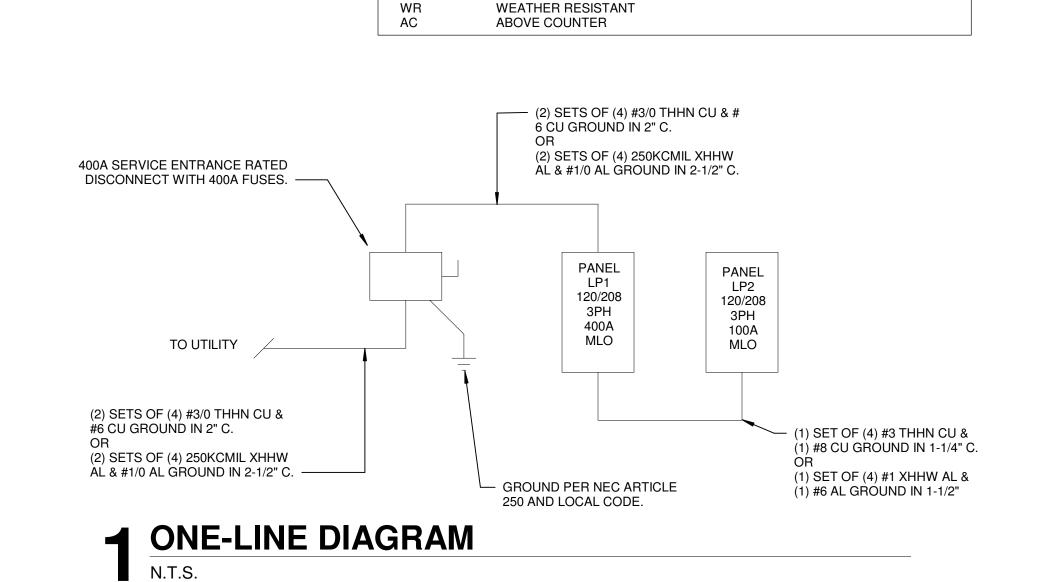
WITH THE OWNER TO DETERMINE ACCEPTABLE ALTERNATIVES. NEW EQUIPMENT SHALL BE COMPATIBLE WITH EXISTING COMPONENTS AND SYSTEMS TO 25. CONTRACTOR IS TO REMOVE LIGHT FIXTURES DEMOLISHED AND RETURN TO OWNER.

CONCEAL CONDUITS DUE TO ECONOMIC CONSIDERATIONS, THE ENGINEER SHALL CONSULT

\$	SWITCH, SINGLE POLE
\$ <sub>K</sub>	SWITCH, KEYED
\$ <sub>3</sub> \$ <sub>3/OS</sub>	SWITCH,THREE WAY SWITCH,THREE WAY/OCCUPANCY SENSOR
\$ <sub>OS</sub> Jos	OCCUPANCY SENSOR
\$ DT	DUAL TECHNOLOGY OCCUPANCY SENSOR
45	EMERGENCY LIGHT
	8' FIXTURE
	4' FIXTURE
0	RECESSED DOWNLIGHT
8	EXIT
	WET LOCATION STRIP
	STRIP
	WALL WASH
	2X2 LED RECESSED FIXTURE
	2X2 RECESSED EMERGENCY FIXTURE
	2X4 LED RECESSED FIXTURE
	2X4 RECESSED EMERGENCY FIXTURE
	CEILING FAN
	HIGH BAY
	RECEPTACLE, FLOOR MOUNTED RECESSED
$\triangle$	SINGLE DATA PORT
$\bigvee$	DUAL DATA PORT
₩	QUAD DATA PORT
WAP	CEILING MOUNTED DUAL DATA BOX
J	JUNCTION BOX
<u> </u>	RECEPTACLE, DUPLEX
	RECEPTACLE, DOUBLE DUPLEX
—————————————————————————————————————	RECEPTACLE, DUPLEX WITH USB
⇒ ∪36	RECEPTAGLE, DOPLEX WITH 03B
<u> </u>	
	PANELBOARD
<b>◎</b> H	PUSH BUTTON  SMOKE DETECTOR
(s) (H)	SMOKE DETECTOR  HEAT DETECTOR
TF	HORN STROBE







**CEILING FAN** 

NIGHT LIGHT

INVERTER

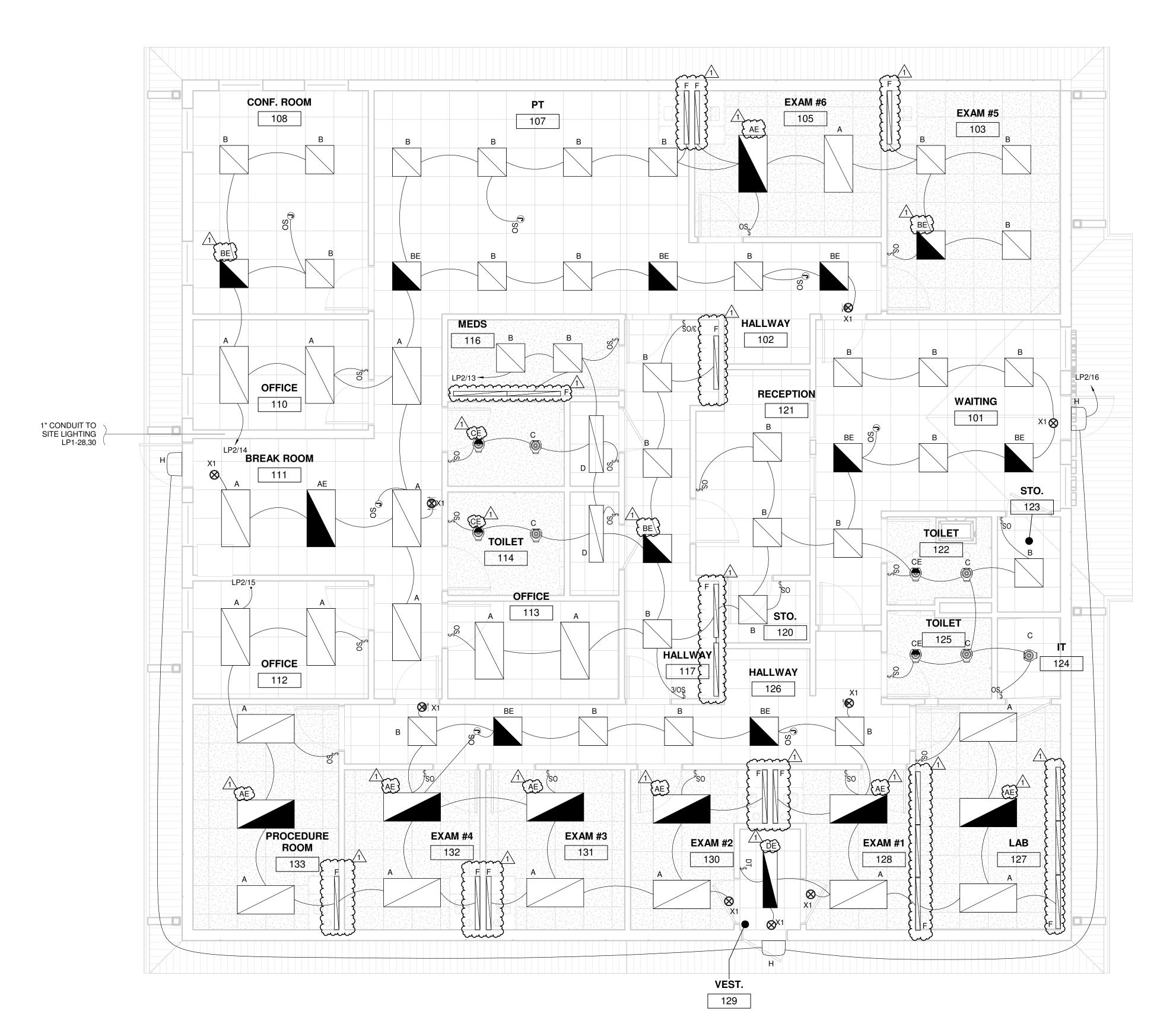
EXISTING TO REMAIN

WEATHER PROOF

ABBREVIATIONS:

ETR

FOUNDATION. IN DIRECT CONTACT WITH



1 ELECTRICAL LIGHTING PLAN

1/4" = 1'-0"





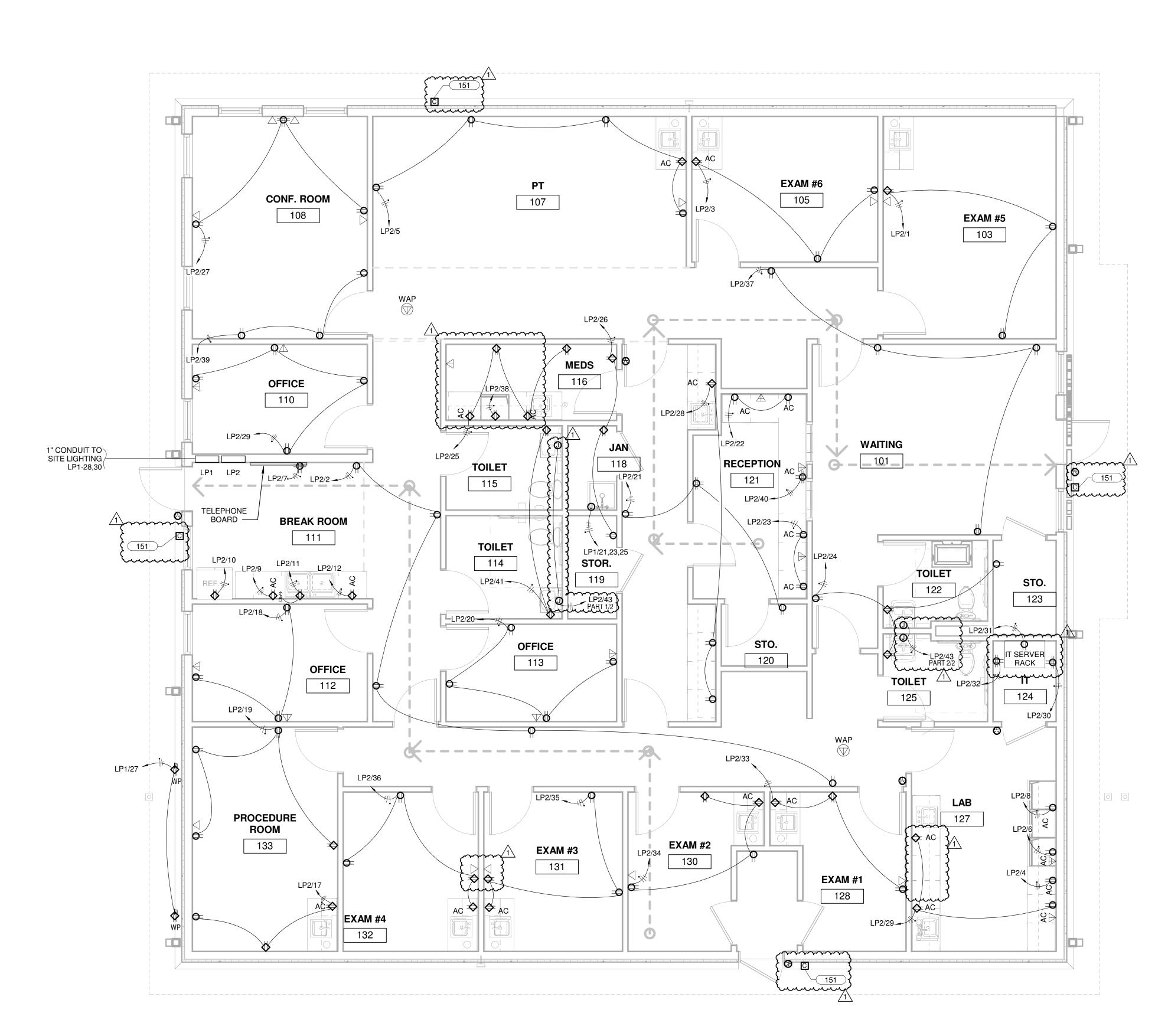
PROJECT #: 20200132

ISSUE DATES:
CONSTRUCTION 12/14/2020
DOCUMENTS

No. Description Date
1 ASI #30 2021.01.06

SHEET NUMBER:

E101
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**POWER PLAN**1/4" = 1'-0"

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blueriverarchitects.com



2		
PRO	DJECT #: 2020	00132
CON	UE DATES: STRUCTION UMENTS	12/14/2020
No.	Description ASI #30	Date 2021.01.06
	A31 #30	2021.01.00

SHEET NUMBER:
E201



HVAC POWER PLAN

1/4" = 1'-0"

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