FAN COIL UNIT/RTU SCHEDULE (ELECTRIC HEATING)

TAG	MANUFACTURER	SUPPLY FAN						COOLING COIL						HEATING COIL	ELECTRICAL			DISCONNECT	
		NOMINAL TON	CFM	OA CFM	ESP	MHP	RPM	EAT DB (°F)	EAT WB (°F)	LAT (°F)	TOTAL MBH	SENSIBLE MBH	AMBIENT TEMP (°F)	KW	MOCP	MCA	VOLT-PHASE	BY	TYPE
RTU-E	YORK	6	2000	2000	0.5	1.5	787	90	67	55	76.7	72.2	95	18	70	69	208-3	MFR	F

FAN SCHEDULE

SYMBOL	MANUFACTURER	MODEL	SERVICE LOCATION	CFM	S.P. IN. W.C.	FAN RPM	ELECTRICAL			
							MHP	VOLT-PHASE	DISCONNECT	
									BY	TYPE
EF-1	CAPTIVEAIRE	NCA	PEDICURE AREA	1800	0.75	750	0.75	208-3	MANUFACTURER	NON FUSE
EF-2	CAPTIVEAIRE	NCA	LAUNDRY	235	0.5	1270	0.16	208-1	MANUFACTURER	NON FUSE

GRILLES REGISTERS & DIFFUSERS SCHEDULE

SYMBOL	MANUFACTURER	MODEL	MATERIAL	INLET SIZE (INCH)	FACE SIZE	MOUNTING LOCATION
SD-1	PRICE	RPD	STEEL	SEE DWG.	-	SEE DWG.
EG-1	PRICE	500	STEEL	SEE DWG.	INLET SIZE + 2	SEE DWG.

NOTES:
1. ALL RUN OUT DUCTWORK TO DIFFUSERS SHALL BE NECK SIZE UNLESS OTHERWISE NOTED.
2. FRAME TYPE TO MATCH MOUNTING LOCATION CONSTRUCTION MATERIAL.

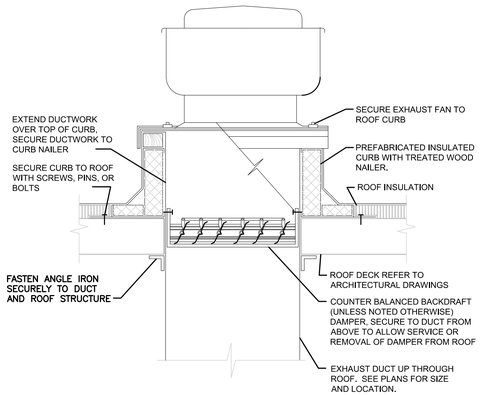
VENTILATION SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

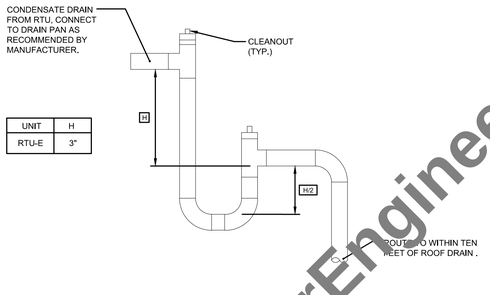
SYMBOL:	DESCRIPTION:
	NEW DUCTWORK
	MANUAL VOLUME DAMPER
	DUCT CAP
	DUCT DOWN
	DUCT UP
	ROUND DUCT UP
	ROUND DUCT DN
	SUPPLY/OUTSIDE AIR DUCT SECTION
	RETURN AIR DUCT SECTION
	EXHAUST/RELIEF AIR DUCT SECTION
SD-1 6/115	AIR TERMINAL PROPERTIES SYMBOL NECK SIZE/CFM
T	THERMOSTAT/SENSOR
CFM	CUBIC FEET PER MINUTE
EA	EXHAUST AIR
EG	EXHAUST GRILLE
EF	EXHAUST FAN
RTU-E	ROOF TOP UNIT EXISTING
SA	SUPPLY AIR
TYP	TYPICAL

MECHANICAL GENERAL NOTES:

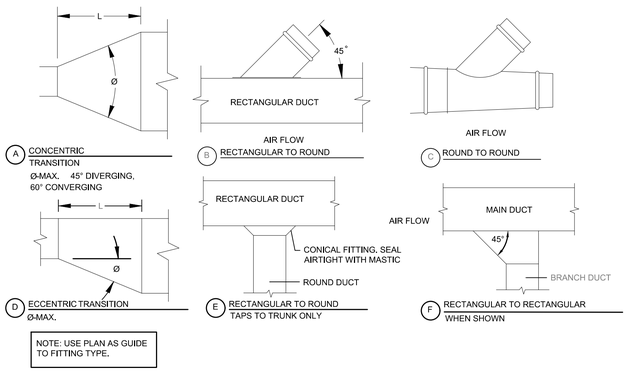
1. ALIGN TEMPERATURE SENSORS WITH LIGHT SWITCHES WHEN IN CLOSE PROXIMITY TO EACH OTHER.
2. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND PROVIDE PROPER ACCESS AND CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE
3. SEAL ALL WALL AND ROOF PENETRATIONS AIRTIGHT WHERE DUCT PENETRATE.
4. EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS. COORDINATE WITH LAYOUT OF EQUIPMENT PADS,DUCTWORK ETC.
5. MANUFACTURER SHOWN IN SCHEDULE IS BASIS OF DESIGN.
6. DUCT CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE SMACNA HVAC DUCT CONSTRUCTION STANDARD.
7. COORDINATE DIFFUSER, GRILLE AND REGISTER LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND EQUIPMENT OF ALL TRADES.
8. ALL DUCT SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS.
9. DAMPERS AND INSIDES OF DUCT VISIBLE THROUGH GRILLES, REGISTERS AND DIFFUSERS SHALL BE PAINTED FLAT BLACK.
10. CONDENSATE DRAIN FROM ALL MECHANICAL EQUIPMENT SHALL BE PROVIDED FOR PROPER DRAINAGE TO SUIT EQUIPMENT FURNISHED.
11. ALL DUCTWORK SHOWN ARE SCHEMATICALLY. PROVIDE ALL TRANSITIONS, TURNING VANES, ELBOWS, FITTINGS ETC; TO ALLOW SMOOTH FLOWS.
12. VERIFY FINISH WITH ARCHITECT PRIOR TO PURCHASING GRILLES, REGISTERS, DIFFUSER AND OTHER AIR DISTRIBUTION DEVICES.
13. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
14. EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
15. REFER TO ARCHITECTURAL DRAWINGS FOR RELATED CONSTRUCTION DETAIL AS APPLICABLE TO THE HVAC SYSTEM.
16. COORDINATE LOCATION OF ROOF MOUNTED HVAC EQUIPMENT AND ROOF PENETRATIONS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
17. BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE UNLESS NOTED OTHERWISE.



1 EXHAUST FAN DETAIL
NO SCALE

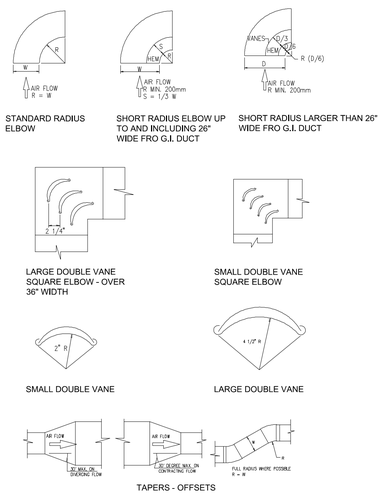


2 CONDENSATE TRAP DETAIL (DRAW THRU FAN)
NO SCALE



NOTE: USE PLAN AS GUIDE TO FITTING TYPE.

3 BRANCH TAKE OFF DETAIL
NO SCALE



4 ELBOW CONSTRUCTION DETAIL
NO SCALE

DRAWING INDEX:

PROFESSIONAL ENGINEER:
DURAK EVRIM ERCAN P.E.
ENGINEERING | CONSULTING | ESTIMATING
201-920-2899 info@AmperEngineering.com
SEAL & SIGNATURE:
REGISTERED PROFESSIONAL ENGINEER
DURAK EVRIM ERCAN
PE-28126
DATE 09/26/2020
NORTH DAKOTA

Digitally signed by Durak Evrim Ercan
DN: c=US, st=New Jersey, l=Montclair, o=Durak Evrim Ercan, cn=Durak Evrim Ercan, email=info@AmperEngineering.com
Date: 2020.09.26 15:40:01 -04'00'

REV.	DATE	DESCRIPTION
0	09/26/2020	ISSUED FOR PERMIT APPLICATION

CLIENT:

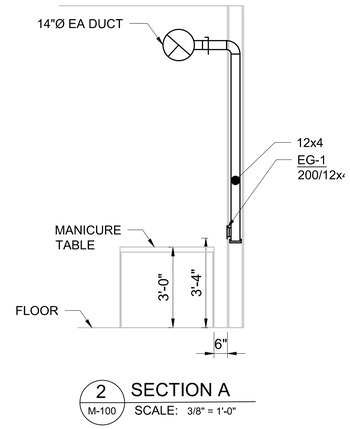
PROJECT:
NAIL SALON

ADDRESS:
STREET
EAST WILLISTON , ND

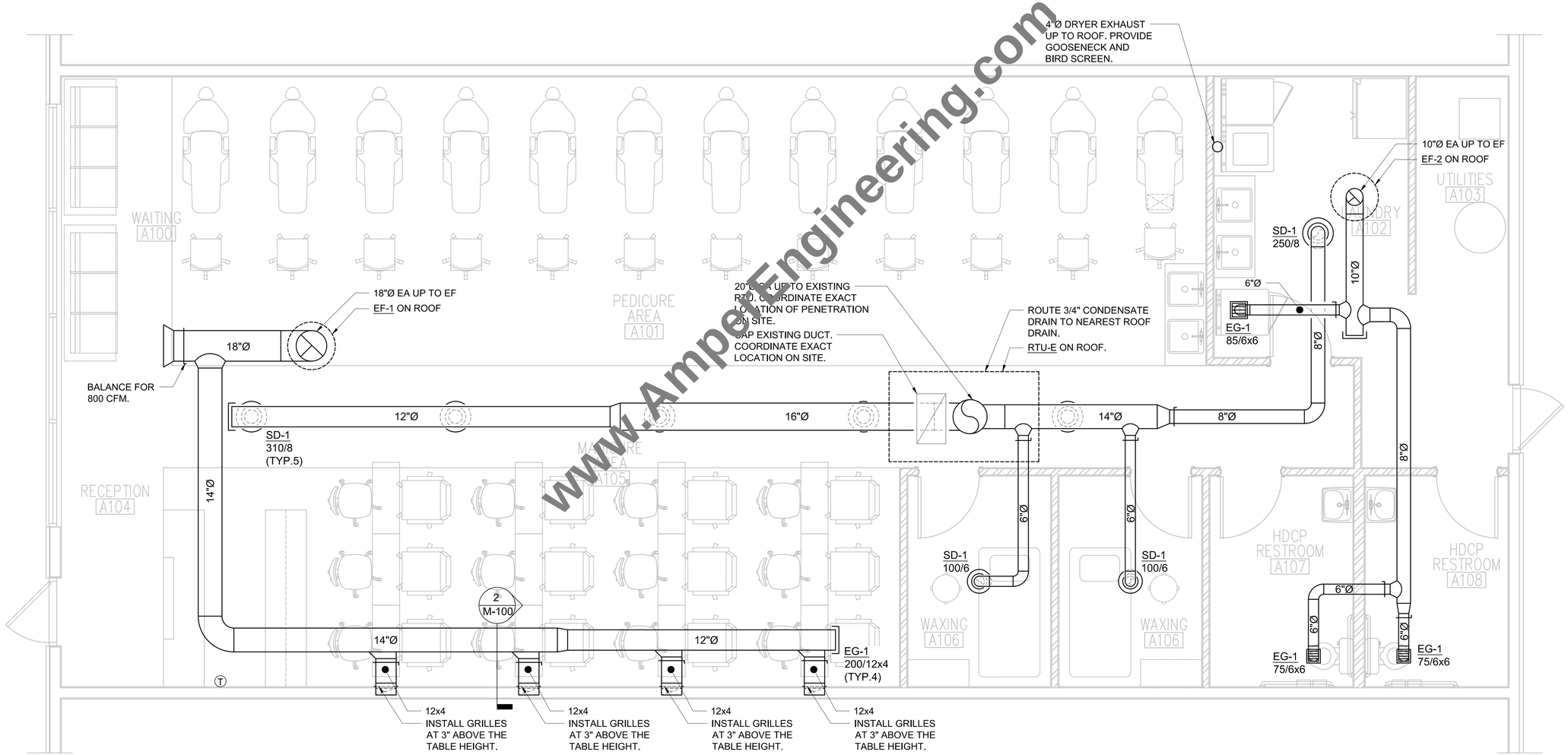
ISSUE DATE: 09/26/2020
PROJECT NUMBER: 1196
SCALE: AS NOTED
DRAWN BY: DEE
DESIGNED BY: DEE
CHECKED BY: DEE

DRAWING TITLE:
MECHANICAL COVER SHEET, DETAILS AND SCHEDULE

DRAWING NO: M-001
REVISION: .00



2 M-100 SECTION A
SCALE: 3/8" = 1'-0"



1 M-100 MECHANICAL FLOOR PLAN
SCALE: 3/8" = 1'-0"

PROFESSIONAL ENGINEER:
DURAK EVRIM ERCAN P.E.
ENGINEERING | CONSULTING | ESTIMATING
201-920-2899 info@AmperEngineering.com

SEAL & SIGNATURE:

REGISTERED PROFESSIONAL ENGINEER
DURAK EVRIM ERCAN
PE-28126
DATE 09/26/2020
NORTH DAKOTA

REV.	DATE	DESCRIPTION
0	09/26/2020	ISSUED FOR PERMIT APPLICATION

CLIENT:

PROJECT:
NAIL SALON

ADDRESS:
;TREET
EAST WILLISTON , ND

ISSUE DATE: 09/26/2020
PROJECT NUMBER: 1196
SCALE: AS NOTED
DRAWN BY: DEE
DESIGNED BY: DEE
CHECKED BY: DEE

DRAWING TITLE:
MECHANICAL FLOOR PLAN

DRAWING NO: M-100
REVISION: .00

GENERAL NOTES:

1. THIS DESIGN MAY BE USED FOR SECURING PERMITS, BID, PLANNING, THE COMPANY'S REVIEW OR SOME OTHER GOAL. THIS DESIGN DOES NOT GUARANTEE THESE APPROVALS, NOR ARE THESE APPROVALS A REQUIREMENT FOR SERVICES OR THE COMPLETITION OF THIS WORK.

2. THIS DESIGN IS NOT A COMPLETE SET OF CONSTRUCTION DRAWING OR SHOP DRAWINGS. THIS DESIGN REPRESENTS DIAGRAMMATIC REPRESENTATION OF INTENDENT SCOPE OF WORK.

3. THE SYMBOLS AND ABBREVIATIONS LIST ON THIS SHEET IS A COMPREHENSIVE STANDARD GUIDE INTENDED FOR GENERAL USE ON ALL PROJECTS, THEREFORE, NOT ALL THE SYMBOLS AND ABBREVIATIONS CONTAINED IN THIS LIST ARE NECESSARILY USED ON THIS PARTICULAR PROJECT AND SHOULD BE USED FOR CLARIFICATION ONLY.

4. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE NATIONAL ELECTRICAL CODE, IECC, LIFE SAFETY CODE, LOCAL BUILDING CODE, OSHA REGULATIONS, OCAL, STATE, FEDERAL AND AUTHORITY HAVING JURISDICTION CODES APPLICABLE AT THE TIME OF THE CONSTRUCTION.

5. GENERAL WORK PRACTICES FOR ELECTRICAL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NECA 1 STANDARD FOR GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION (ANSI)

6. ALL MATERIALS PROVIDED BY THE CONTRACTOR SHALL BE NEW AND FREE OF DEFECTS, LISTED/LABELED FOR THE INTENDED PURPOSE BY UNDERWRITERS (UL) OR OTHER ORGANIZATION THAT IS ACCEPTABLE TO THE AHJ.

7. THESE DRAWINGS AND ACCOMPANYING SPECIFICATIONS ARE INTENDED TO DESCRIBE AND ILLUSTRATE SYSTEMS WHICH WILL NOT INTERFERE WITH THE STRUCTURE OF THE BUILDING AND WHICH WILL FIT INTO THE AVAILABLE SPACES. THE CONTRACTOR IS RESPONSIBLE FOR CAREFULLY LAYING OUT ALL WORK TO CONFORM TO NATIONAL ELECTRICAL CODE CLEARANCES, ARCHITECTURAL, STRUCTURAL, MECHANICAL AND SITE CONDITIONS, TO AVOID OBSTRUCTIONS AND TO ALLOW THE PROPER INSTALLATION OF EACH ITEM.

8. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT ONLY. COORDINATE WITH DRAWINGS OF OTHER TRADES TO FIT THE ACTUAL SPACE CONDITIONS, HEADROOM AND SPACE CONDITION TO BE MAINTAINED.

9. THE DRAWINGS ARE TO BE CONSIDERED SCHEMATIC ONLY AND DO NOT NECESSARILY SHOW THE EXACT LOCATION AND DETAILS OF THE WORK TO BE INSTALLED.

10. UPON THE COMPLETION OF THE WORK, THE ENTIRE ELECTRICAL SYSTEM SHALL BE TESTED AND SHALL BE SHOWN TO BE IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE INTENT OF THE SPECIFICATIONS AND DRAWINGS, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL SYSTEM READY FOR OPERATION AND INSPECTION BY AHJ.

11. TEST AND INSPECT ALL WIRING AND EQUIPMENT INSTALLED UNDER THIS SECTION OF SPECIFICATIONS. ALL WIRING MUST BE FREE SHORTS AND BROKEN WIRE. LEAVE ALL MATERIALS AND APPARATUS IN PROPER AND SATISFACTORY WORKING CONDITIONS.

12. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE CORRECT PHASE SEQUENCE OF ALL THREE-PHASE FEEDERS AND BRANCH CIRCUITS. VERIFY PROPER ROTATION OF ALL MOTORS.

13. CONDUIT RUNS WHEN SHOWN ARE DIAGRAMMATICAL. FINAL LOCATION AND ROUTING SHALL BE ESTABLISHED BY THE CONTRACTOR BASED ON THE INSTALLATION CONDITIONS AND SHALL BE VERIFIED IN THE FIELD. ALL CONDUIT TYPES AND INSTALLATION REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.

14. CONDUIT RUNS SHALL BE PARALLEL WITH OR AT RIGHT ANGELS TO WALLS AND CEILINGS. CONDUIT SHALL BE SUPPORTED BY APPROVED MEANS. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH A DRAG WIRE.

15. PROVIDE CONDUIT EXPANSION FITTINGS WITH BONDING JUMPERS FOR ALL CONDUITS PASSING THROUGH EXPANSION JOINTS.

16. THE USE OF FLEXIBLE CONDUIT FROM LIGHTING FIXTURES TO JUNCTION BOX IS PERMITTED ONLY WHEN A SEPARATE GROUND WIRE IS INSTALLED WITH THE CONDUCTORS INSIDE FLEXIBLE CONDUIT. THE GROUND WIRE MUST BOND THE FIXTURE HOUSING TO THE JUNCTION BOX. MAXIMUM LENGTH SHALL BE 6'-0".

17. FLEXIBLE CONDUIT INSTALLED OUT OF DOORS, IN ANY MECHANICAL EQUIPMENT ROOMS, OR IN NORMALLY WET AREAS SHALL BE LIQUID TIGHT FLEX WITH SUITABLE FITTINGS.

18. PROVIDE CONDUIT, WIRING, CIRCUITING AND REQUIRED CONNECTIONS TO ALL DEVICES, FIXTURES AND EQUIPMENT. CONNECT TO CIRCUITS AS INDICATED. CIRCUIT NUMBERS ARE FOR INFORMATION PURPOSES ONLY. ACTUAL CIRCUIT NUMBERS SHALL BE DETERMINED IN THE FIELD AND REFLECTED IN THE PANEL SCHEDULE DIRECTORY AND ON THE AS-BUILT DRAWINGS.

19. CONTRACTOR SHALL VERIFY AND COORDINATE ALL MOUNTING HEIGHTS OF ALL DEVICES MOUNTED IN CASEWORK OR IN ABOVE COUNTERS WITH EXISTING EQUIPMENT.

20. UNLESS SPECIFICALLY DIRECTED OTHERWISE, FURNISH AND INSTALL EACH AND EVERY ITEM CONTAINED IN AND ASSOCIATED WITH, THE WORK INVOLVED AS SHOWN ON THE DRAWINGS AND/OR DESCRIBED IN THE ACCOMPANYING SPECIFICATIONS, TOGETHER WITH ALL APPURTENANCES, COMPONENTS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. CONTRACTOR SHALL PROVIDE CONDUIT, WIRING AND CABLING TO ALL DEVICES, FIXTURES AND ETC. FOR A COMPLETE WORKING SYSTEM BASED ON THE CIRCUITS NOTED.

21. PROVIDE INDEPENDENT SUPPORT FOR DISCONNECT SWITCHES, CONTROL STATIONS, BOXES, PANELS, ETC. WHERE NO WALLS OR OTHER STRUCTURAL SURFACE EXISTS.

22. EQUIPMENT SIZED AND LOCATIONS ARE APPROXIMATE. ACTUAL DIMENSIONS TO BE DETERMINED BY EQUIPMENT FURNISHED.

23. PROVIDE BRANCH CIRCUIT WIRING TO ALL ITEMS REQUIRING ELECTRICAL CONNECTIONS. WHERE BRANCH CIRCUIT WIRING IS NOT SHOWN, CONNECT ITEMS TO CIRCUITS INDICATED. THE CONTRACTOR SHALL DETERMINE EXACT ROUTING OF CONDUITS AND WIRING. UNLESS INDICATED OTHERWISE, ALL BRANCH CIRCUITS SHALL BE MINIMUM #12 AWG.

24. PROVIDE JUNCTION BOX FOR ANY DEVICE WITH PIG TAIL SUCH AS SOLENOID VALVES, LIMIT SWITCHES, SMOKE DETECTORS AND ETC. FOR PROPER ELECTRICAL CONNECTION. PROVIDE ALL HARDWARE FOR MOUNTING OF JUNCTION BOX.

25. EXACT LOCATION OF MECHANICAL AND PLUMBING EQUIPMENT THAT REQUIRE ELECTRICAL CONNECTIONS ARE SHOWN ON THE MECHANICAL AND PLUMBING DRAWINGS. COORDINATE WITH MECHANICAL AND PLUMBING CONTRACTORS.

26. WHEREVER THE INSTALLATION OF ELECTRICAL EQUIPMENT AS SHOWN ON THE DRAWINGS IS IMPRACTICAL DUE TO LOCAL INTERFERENCE OR UNFORESEEN FIELD CONDITIONS, THE CONTRACTOR SHALL INSTALL THE EQUIPMENT AT NEW LOCATIONS AS DIRECTED BY THE ENGINEER.

27. DESIGN IS BASED ON ALL CONDUCTORS TO BE THHN COPPER AND NO MORE THAN 4 CURRENT CARRYING CONDUCTORS IN THE SAME RACEWAY OR CONDUIT, UNLESS OTHERWISE NOTED.

28. WHEN EQUIPMENT IS BEING REMOVED/DEMO FROM THE FIELD, ALL WIRING ASSOCIATED WITH THE LOAD MUST BE REMOVED FROM THE JUNCTION BOX OR THE CIRCUIT BREAKER. DO NOT LEAVE UNUSED CONDUCTORS IN THE FIELD WITH ENDS TAPED WITH TAPE OR WIRE NUTS.

29. PROVIDE DISCONNECT SWITCHES FOR ELECTRICAL HEATER, HVAC EQUIPMENT AND EXHAUST FANS WITHIN EYE SIGHT OF THE EQUIPMENT.

30. PROVIDE SERVICE RECEPTACLE WITHIN 25 FEET OF EACH HVAC EQUIPMENT.

31. ELECTRICAL CONTRACTOR TO VERIFY ACTUAL INSTALLED EQUIPMENT ELECTRICAL NAME PLATE DATA BEFORE ENERGIZING THE CIRCUIT. CONFIRM ELECTRICAL DESIGN VALUES AND ACTUAL EQUIPMENT BEING INSTALLED ARE IN COMPLIANCE WITH ELECTRICAL CODE AND MANUFACTURER INSTALLATION REQUIREMENTS.

32. DISCONNECT SWITCHES SHALL BE HEAVY-DUTY, QUICK-MADE, QUICK-BREAK TYPE, NEMA 1 ENCLOSURE FOR INDOOR LOCATIONS (NEMA 3R FOR OUTDOOR LOCATIONS). SWITCHES SHALL BE AS MANUFACTURED BY SQUARE 'D', GENERAL ELECTRIC, OR SIEMENS (I.T.E.). PROVIDE FUSES AS MANUFACTURED BY BUSSMAN, GOULD-SHAWMUT, OR LITTLE-FUSE. ALL CONDUCTOR TERMINALS TO BE U.L, LISTED FOR A MINIMUM OF 75°C. SWITCHES USED AS SERVICE ENTRANCE EQUIPMENT TO BE U.L. LISTED AS "SER" RATED EQUIPMENT.

33. PANEL BOARDS SHALL BE MANUFACTURED BY SQUARE-D, EATON, GENERAL ELECTRIC, OR SIMILAR, MEETING U.L. STANDARDS 50 AND 67, WITH U.L. LABEL. PANELS USED AS SERVICE ENTRANCE EQUIPMENT TO BE U.L. LISTED AS "SER" RATED EQUIPMENT.

34. BREAKERS: THERMAL, MAGNETIC TYPE, QUICK-MAKE, QUICK-BREAK, PLUG-IN TYPE FOR LOAD CENTERS AND BOLT IN TYPE FOR PANEL BOARDS AND SINGLE UNIT CONSTRUCTION, TWO POLE BREAKERS SHALL BE SINGLE UNIT COMMON TRIP TYPE. BREAKERS USED AS SWITCHES FOR 120V LIGHTING CIRCUITS SHALL BE APPROVED FOR THAT USE AND MARKED "SWD". ALL BREAKERS FOR HVAC AND REFRIGERATION EQUIPMENT SHALL BE "HACR" RATED BREAKERS.

35. GROUNDING SYSTEM: PERMANENTLY AND EFFECTIVELY GROUND ALL METALLIC CONDUIT, SUPPORTS, CABINETS, PANEL BOARDS AND SYSTEM NEUTRAL CONDUCTORS, MAINTAIN CONTINUITY OF EQUIPMENT GROUND THROUGHOUT THE SYSTEM. GROUND CLAMPS SHALL BE APPROVED TYPE, SPECIFICALLY DESIGNED FOR GROUNDING. WHERE GROUNDING CONDUCTOR IS ENCLOSED IN CONDUIT, GROUND CLAMP SHALL BE OF A TYPE WHICH GROUNDS BOTH CONDUCTOR AND CONDUIT. ALL CIRCUITS IN FLEXIBLE METAL OR PLASTIC CONDUIT SHALL INCLUDE A GROUND WIRE SIZED AND INSTALLED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE.

36. CONDUIT SHALL BE SIZED TO COMPLY WITH NEC FOR NUMBER AND SIZE OF CONDUCTORS INSTALLED PER NEC. PROVIDE SCHEDULE 40 PVC PLASTIC OR RIGID STEEL CONDUIT BELOW GRADE, MINIMUM 3/4". PROVIDE ELECTRICAL METAL TUBING (EMT) MEETING FS W-C-563, FLEXIBLE METAL CONDUIT (IN LENGTHS 6' OR LESS) FOR INTERIOR LOCATIONS. EMT CONNECTORS AND COUPLING SHALL BE SET-SCREW TYPE. "MC" & "AC" TYPE CABLES MUST BE INSTALLED IN ACCORDANCE WITH N.E.C. AND CAN NOT BE SUPPORTED FROM CEILING SUPPORT WIRES.

37. ALL CONDUIT AND RACEWAY SYSTEMS TO BE INSTALLED WITH SEPARATE GROUND CONDUCTOR. CONDUIT SYSTEM IS NOT TO BE USED AS THE SOLE GROUNDING MEANS.

38. CONDUCTORS: INSULATED SOFT ANNEALED 98% PURE COPPER WITH COLOR CODING, B AND S GAGE, #10 AND SMALLER TO BE SOLID, #8 AND LARGER TO BE STRANDED, MINIMUM #12 UNLESS OTHERWISE INDICATED. CONDUCTORS MUST BE INSTALLED IN ACCORDANCE WITH NEC. AND CANNOT BE SUPPORTED FROM CEILING SUPPORT WIRES, THHN MAY NOT BE USED UNDERGROUND, AT SERVICE ENTRANCE, OUTSIDE, OR IN WET LOCATIONS. ALL INSULATION TO BE RATED FOR 600 V AND TYPES AS FOLLOWS:

#10 AND #12:	THWN OR THHN
#8 TO 4/0:	THWN OR THHN
SERVICE ENTRANCE:	SE-RHW OR USE-RHW
OVER #4/0 ORDINARY SERVICE:	THWN OR XHHN
OVER #4/0 WET OR HOT SERVICE:	XHHW
WIRE THRU FLUORESCENT FIXTURES OR WHITHIN OF HTG EQIP.:	THHN

39. ALL WIRING TO BE COLOR-CODED AS FOLLOWS:

120/208 VOLT SYSTEM		277/480 SYSTEM	
NEUTRAL:	WHITE	PHASE A:	BROWN
PHASE A OR L1:	BLACK	PHASE B:	ORANGE
PHASE B OR L2:	RED	PHASE C:	YELLOW
PHASE C OR L3:	BLUE	NEUTRAL:	GRAY
GROUND	: GREEN	GROUND:	GREEN

39. THE USE ALL NON-METALLIC WIRING METHODS IS PROHIBITED. USE MC CABLE OR ROUTE IN EMT RACEWAY FOR ALL WIRING.

40. WIRE CONNECTORS SHALL BE EQUAL TO "SCOTCH LOCK" FOR #8 AWG WIRE AND SMALLER AND EQUAL TO T & B "LOCK TIGHT" FOR #6 AWG AND LARGER.

41. LIGHT FIXTURES & LAMPS ARE FURNISHED BY CONTRACTOR EXCEPT AS NOTED ON THE LIGHT FIXTURE SCHEDULE. FIXTURE INSTALLATION SHALL BE BY THE ELECTRICAL CONTRACTOR ACCORDING TO LOCAL CODE AUTHORITY.

42. EMERGENCY LIGHTING SHALL HAVE A MINIMUM OF 90 MIN. BATTERY BACK-UP, OR AS REQUIRED BY LOCAL CODE AUTHORITY. PROVIDE LOCK-ON CIRCUIT BREAKERS FOR CIRCUITS SERVING EXIT SIGN FIXTURES AND EMERGENCY BATTERY PACK FIXTURES.

43. LAYOUT BRANCH CIRCUIT WIRING AND ARRANGEMENT OF HOME RUNS FOR MAXIMUM ECONOMY AND EFFICIENCY. INCREASE WIRE SIZE IF 100 FEET OF LENGTH IS EXCEEDED.

44. CONCEAL WIRING SYSTEM ABOVE SUSPENDED CEILINGS OR IN WALL OR FLOOR CONSTRUCTION WHERE POSSIBLE. INSTALL CONDUITS PARALLEL TO BUILDING LINES, AND TO CLEAR ALL OPENING, DEPRESSIONS, PIPES, DUCTS, STRUCTURE, ETC.

45. INSTALL CONDUIT CONTINUOUS BETWEEN BOXES AND CABINETS WITH NO MORE THAN FOUR (4) 90 DEGREE BENDS. SECURELY FASTEN IN PLACE WITH STRAPS, HANGERS AND STEEL SUPPORTS AS REQUIRED. DO NOT SUPPORT CONDUIT FROM SUSPENDED CEILING GRID OR SUSPENSION WIRES. REAM CONDUIT ENDS BEFORE INSTALLATION AND THOROUGHLY CLEAN BEFORE INSTALLATION. OPENINGS SHALL BE PLUGGED OR COVERED TO KEEP CONDUIT CLEAN. TERMINALS ON SWITCHES AND OUTLET SHALL NOT BE USED TO "FEED THRU" TO THE NEXT SWITCH OR OUTLET.

TYPICAL FOR ALL RECEPTACLES, OUTLETS, JUNCTION BOXES AND EQUIPMENT: NUMBER DENOTES PANEL CIRCUIT NUMBER.

AFCI - ARC FAULT CIRCUIT INTERRUPTER
GFCI - GROUND FAULT INTERRUPTER
SS - SURGE SUPPRESSION TYPE
IG - ISOLATED GROUND TYPE,
WP - WEATHERPROOF

- FLOOR JUNCTION BOX
- WALL MOUNTED JUNCTION BOX
- JUNCTION BOX, SIZE AND MOUNT AS REQUIRED
- ELECTRIC MOTOR NUMBER INDICATES HORSEPOWER
- SURFACE PANELBOARD LETTERS & NUMERALS INDICATE EQUIPMENT TAG
- RECESSED PANELBOARD LETTERS & NUMERALS INDICATE EQUIPMENT TAG
- ELECTRICAL PANEL LETTERS AND NUMBERS INDICATE PANELBOARD IDENTIFICATION TAG SEE PANEL SCHEDULE FOR DETAILS.
- HOMERUN CIRCUITS TO PANELBOARD. NUMBER OF ARROWS INDICATES NUMBER OF CIRCUIT HOMERUNS. 1 PH 120V
- FEEDER TAG WITH CONDUIT AND WIRE SIZE AND DATA
- INDICATES NEW EQUIPMENT/CONDUIT
- INDICATES EXISTING EQUIPMENT/CONDUIT
- INDICATES EXISTING EQUIPMENT/CONDUIT TO BE DEMOLISHED AND/OR REMOVED
- DUPLEX RECEPTACLE
- SWITCHED DUPLEX RECEPTACLE - ONE OUTLET SWITCHED LOWER CASE LETTER DENOTES SWITCH CONTROL
- DOUBLE DUPLEX RECEPTACLE
- SINGLE RECEPTACLE
- SPECIAL RECEPTACLE AMPERE AND VOLTAGE RATING AS INDICATED ON DRAWING
- DUPLEX RECEPTACLE - FLOOR MOUNTED
- QUAD RECEPTACLE - FLOOR MOUNTED

FOR ALL DISTRIBUTION EQUIPMENT.
GFP - GROUND FAULT PROTECTION
ST - SHUNT TRIP
LSIG - LONG TIME, SHORT TIME INSTANTANEOUS AND GROUND FAULT PROTECTION FUNCTIONS
100% - 100% RATED EQUIPMENT.

- ELECTRIC OPERATED DEVICE
- ELECTRONIC TRIP TYPE DEVICE
- CIRCUIT BREAKER
- THERMAL MAGNETIC CIRCUIT BREAKER TOP NUMBER DENOTES TRIP AMPERE RATING BOTTOM NUMBER DENOTES FRAME SIZE AMPERE RATING #P - DENOTES NUMBER OF POLES
- UNFUSED DISCONNECT SWITCH. NUMBER DENOTES SWITCH AMPERE RATING #P - DENOTES NUMBER OF POLES
- FUSED DISCONNECT SWITCH TOP OR FIRST NUMBER DENOTES SWITCH AMPERE RATING BOTTOM OR SECOND NUMBER DENOTES AMPERE FUSE RATING #P - DENOTES NUMBER OF POLES

LIGHTING:

TYPICAL FOR ALL LIGHTING FIXTURES: CAPITAL LETTER DENOTES FIXTURE TYPE. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION, TYPE, AND DETAILS. NUMBER DENOTES BRANCH CIRCUIT NUMBER AT RESPECTIVE LIGHTING PANELBOARD, LOWER CASE LETTER DENOTES SWITCHED CIRCUIT.

- SINGLE POLE SWITCH
- DOUBLE POLE SWITCH
- THREE-WAY SWITCH
- FOUR-WAY SWITCH
- SINGLE POLE KEY SWITCH
- THREE WAY KEY SWITCH
- SINGLE POLE SWITCH WITH PILOT LIGHT
- DIMMING SWITCH
- OCCUPANCY SENSOR TYPE SWITCH
- THREE WAY DIMMING SWITCH
- MANUAL MOTOR TOGGLE TYPE STARTER WITH INTEGRAL THERMAL OVERLOAD HEATER
- EMERGENCY LIGHTING WITH EXIT SIGN
- EXIT SIGN
- MOTION SENSOR
- PHOTOCELL
- OCCUPANCY SENSOR
- TIME CLOCK
- LIGHTING CONTACTOR. NUMBER DENOTES CONTACTOR IDENTIFICATION TAG. SEE CONTACTOR SCHEDULE FOR NUMBER OF POLES AND DETAILS.
- GENERATOR REMOTE ANNUNCIATOR
- PADDLE FAN
- PENDANT LINEAR LIGHTING FIXTURE
- PENDANT DOWN LIGHT FIXTURE
- RESTROOM DOWN LIGHT FIXTURE

EM= With Emergency battery pack where required *

ABBREVIATIONS:

A	AMPERE	FIXT	FIXTURE	PP	POWER PANEL
AFF	ABOVE FINISHED FLOOR	FL	FLOOR	PWR	POWER
AFG	ABOVE FINISHED GRADE	FVNR	FULL VOLTAGE NON-REVERSING	RECEP	RECEPTACLE
AFI	ARC FLASH INTERRUPTER	G	GROUND	REL	EXISTING TO BE RELOCATED
AFCI	ARC FLASH CIRCUIT INTERRUPTER	GEN	GENERATOR	RVNR	REDUCED VOLTAGE, NON REVERSING
ASYM	ASYMMETRICAL	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SH	SHIELDED CABLE
ATS	AUTOMATIC TRANSFER SWITCH	GFI	GROUND FAULT INTERRUPTER	SP	SPARE
AWG	AMERICAN WIRE GAUGE	HID	HIGH INTENSITY DISCHARGE	SS	SURGE SUPRESSION
BIL	BASIC IMPULSE LEVEL	HOA	HAND-OFF-AUTOMATIC	SWBD	SWITCHBOARD
BKR	BREAKER BLDG BUILDING	HP	HORSE POWER	SWGR	SWITCHGEAR
CAT	CATALOG	IC	INTERRUPTING CAPACITY	SYM	SYMMETRICAL
CB	CIRCUIT BREAKER	JB	JUNCTION BOX	TEL	TELEPHONE
CCTV	CLOSED CIRCUIT TELEVISION	KV	KILOVOLT	TYP	TYPICAL
CKT	CIRCUIT	KVA	KILOVOLT AMPERE	UON	UNLESS OTHERWISE NOTED
CL	CENTER LINE	KW	KILOWATT	V	VOLT OR VOLTAGE
CLG	CEILING	KWH	KILOWATT HOUR	VA	VOLT AMPERE
CNTL	CONTROL	LCP	LOCAL CONTROL PANEL	VFD	VARIABLE FREQUENCY DRIVE
CO	CONDUIT ONLY	LIS	LOAD INTERRUPTER SWITCH	WHM	WATT HOUR METER
CPT	CONTROL POWER TRANSFORMER	LP	LIGHTING PANEL	WP	WEATHERPROOF
CT	CURRENT TRANSFORMER	LTG	LIGHTING	WW	WIREWAY
CU	COPPER	MAX	MAXIMUM	XFMR	TRANSFORMER
CUH	CABINET UNIT HEATER	MCC	MOTOR CONTROL CENTER		
D	DEMOLISH	MCS	MOLDED CASE SWITCH		
DIA	DIAMETER	MDP	MAIN DISTRIBUTION PANEL		
DISC	DISCONNECT	MIN	MINIMUM		
DN	DOWN	MSB	MAIN SWITCHBOARD		
DP	DISTRIBUTION PANEL BOARD	MSG	MAIN SWITCHGEAR		
DWG	DRAWING	MTS	MANUAL TRANSFER SWITCH		
EC	EMPTY CONDUIT	NA	NON-AUTOMATIC		
EL	ELEVATION	NC	NORMALLY CLOSED		
ELEC	ELECTRICAL	NEC	NATIONAL ELECTRIC CODE		
EQUIP	EQUIPMENT	NIC	NOT IN CONTRACT		
ER	EXISTING TO REMAIN	NO	NORMALLY OPEN		
EXIST	EXISTING	NTS	NOT TO SCALE		
FA	FIRE ALARM	P	POLE		
FBO	FURNISHED BY OTHER	PH	PHASE		
FDR	FEEDER	PNL	PANEL		
		PT	POTENTIAL TRANSFORMER		

DRAWING INDEX:

PROFESSIONAL ENGINEER:
DURAK EVRIM ERCAN P.E.
ENGINEERING | CONSULTING | ESTIMATING
201-920-2899 info@AmperEngineering.com

SEAL & SIGNATURE:

REGISTERED PROFESSIONAL ENGINEER
DURAK EVRIM ERCAN
PE-28126
DATE 09/26/2020
NORTH DAKOTA

REV.	DATE	DESCRIPTION
0	09/26/2020	ISSUED FOR PERMIT APPLICATION

CLIENT: CHENEY DO

PROJECT:
NAIL SALON

ADDRESS:
STREET
EAST WILLISTON , ND

ISSUE DATE: 09/26/2020
PROJECT NUMBER: --

SCALE:	DRAWN BY:
AS NOTED	DEE
DESIGNED BY:	CHECKED BY:
DEE	DEE

DRAWING TITLE:
ELECTRICAL NOTES AND COVER SHEET

DRAWING NO: E-001
REVISION: .00

EXISTING ELECTRICAL PANEL "LP "

MANUFACTURER:		BUS RATING:	200A
TYPE/MODEL:		MAIN:	
MOUNTING:	SURFACE	VOLTAGE:	208/120V
ENCLOSURE:	SURFACE	FED FROM:	EXISTING SERVICE
LOCATION:	UTILITY ROOM		

CKT NO.	LOAD DESCRIPTION	NO. POLES	CB AMPS	CONT.VA	NON CONT.VA	LOAD VA	WIRE SIZE	WIRE SIZE	LOAD VA	NON CONT.VA	CONT.VA	CB AMPS	NO. POLES	LOAD DESCRIPTION	CKT NO.
1	WAITING, PEDICURE,LAUNDRY, UTILITIES LIGHTING	1	20	990.00		990.00	(2) #12 AWG CU & (1) #12 AWG CU GND	(2) #12 AWG CU & (1) #12 AWG CU GND	700.00		700.00	20	1	MANICURE, WAXING & RESTROOM LIGHTING	2
3	WAITING AND RECEPTION AREA RECEPTACLES	1	20		720.00	720.00	(2) #12 AWG CU & (1) #12 AWG CU GND	(2) #12 AWG CU & (1) #12 AWG CU GND	1440.00	1440.00		20	1	PEDICURE CHAIR RECEPTACLES	4
5	PEDICURE CHAIR RECEPTACLES	1	20		1440.00	1440.00	(2) #12 AWG CU & (1) #12 AWG CU GND	(2) #12 AWG CU & (1) #12 AWG CU GND	1440.00	1440.00		20	1	PEDICURE CHAIR RECEPTACLES	6
7	PEDICURE CHAIR RECEPTACLES	1	20		1440.00	1440.00	(2) #12 AWG CU & (1) #12 AWG CU GND	(2) #12 AWG CU & (1) #12 AWG CU GND	1440.00	1440.00		20	1	PEDICURE CHAIR RECEPTACLES	8
9	PEDICURE CHAIR RECEPTACLES	1	20		1440.00	1440.00	(2) #12 AWG CU & (1) #12 AWG CU GND	(2) #12 AWG CU & (1) #12 AWG CU GND	540.00	540.00		20	1	CORRIDOR AND PEDICURE AREA RECEPTACLES	10
11	MANICURE CHAIR RECEPTACLES	1	20		1080.00	1080.00	(2) #12 AWG CU & (1) #12 AWG CU GND	(2) #12 AWG CU & (1) #12 AWG CU GND	1080.00	1080.00		20	1	MANICURE CHAIR RECEPTACLES	12
13	MANICURE CHAIR RECEPTACLES	1	20		1080.00	1080.00	(2) #12 AWG CU & (1) #12 AWG CU GND	(2) #12 AWG CU & (1) #12 AWG CU GND	1080.00	1080.00		20	1	MANICURE CHAIR RECEPTACLES	14
15	WAXING AREA RECEPTACLES	1	20		180.00	180.00	(2) #12 AWG CU & (1) #12 AWG CU GND	(2) #12 AWG CU & (1) #12 AWG CU GND	360.00	360.00		20	1	WAXING AREA RECEPTACLES	16
17	HDCP RESTROOM RECEPTACLE	1	20		180.00	180.00	(2) #12 AWG CU & (1) #12 AWG CU GND	(2) #12 AWG CU & (1) #12 AWG CU GND	1000.00	1000.00		20	1	REFRIGERATOR	18
19	MICROWAVE	1	20		1500.00	1500.00	(2) #12 AWG CU & (1) #12 AWG CU GND	(2) #12 AWG CU & (1) #12 AWG CU GND	180.00	180.00		20	1	LAUNDRY RECEPTACLE	20
21	WASHER	1	20		1600.00	1600.00	(2) #12 AWG CU & (1) #12 AWG CU GND	(2) #12 AWG CU & (1) #12 AWG CU GND	180.00	180.00		20	1	LAUNDRY MACHINE RECEPTACLE	22
23	DRYER	2	30		5000.00	5000.00	(2) #10 AWG CU & (1) #10 AWG CU GND	(2) #12 AWG CU & (1) #12 AWG CU GND	500.00	500.00		20	2	EF-2	24
25	-	-	-	-	-	-		-	-	-	-	-	-	-	26
27	EF-1	3	20		1300.00	1300.00	(3) #12 AWG CU & (1) #12 AWG CU GND	(3) #4 AWG CU & (1) #8 AWG CU GND	20400.00		20400.00	70	3	RTU-1	28
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32
33	UTILITY AREA RECEPTACLE	1	20		180	180	(2) #12 AWG CU & (1) #12 AWG CU GND	(3) #10 AWG CU & (1) #10 AWG CU GND	6000.00	6000.00	-	25	3	EWH-1	34
35	HDCP RESTROOM RECEPTACLE	1	20	-	180	180	(2) #12 AWG CU & (1) #12 AWG CU GND	-	-	-	-	-	-	-	36
37	CP-1	1	20	-	500	500	(2) #12 AWG CU & (1) #12 AWG CU GND	-	-	-	-	-	-	-	38
39	SPARE	1	20	-	-	-	-	-	-	-	-	20	1	SPARE	40
41	SPARE	1	20	-	-	-	-	-	-	-	-	20	1	SPARE	42
				990.00	**17820.00**					**15240.00**	**21100.00**				
	DEMAND LOAD:	**49142.50**													
	DEMAND AMP:	**136.41**													

LIGHTING FIXTURE SCHEDULE

SYMBOL	TYPE	DESCRIPTION	LOCATION	LAMP/POWER	WATT	REMARKS	1st Floor	Total	TOTAL WATT
	L1	LED Hanging Tubelight	Manicure & Pedicure,Reception	50W MAX LED	50	With Emergency battery pack where required	28	28	1400
P1	P1	LED Down Light	HDCR Rest Room	20W MAX LED	20	With Emergency battery pack where required	4	4	80
B1	B1	LED Pendant Light	Lobby & Utilites	30W MAX LED	30	With Emergency battery pack where required	7	7	210
									1690

PROFESSIONAL ENGINEER:
DURAK EVRIM ERCAN P.E.
ENGINEERING | CONSULTING | ESTIMATING
201-920-2899 info@AmperEngineering.com

SEAL & SIGNATURE:

REGISTERED PROFESSIONAL ENGINEER
DURAK EVRIM ERCAN
PE-28126
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CLIENT: CHENEY DO

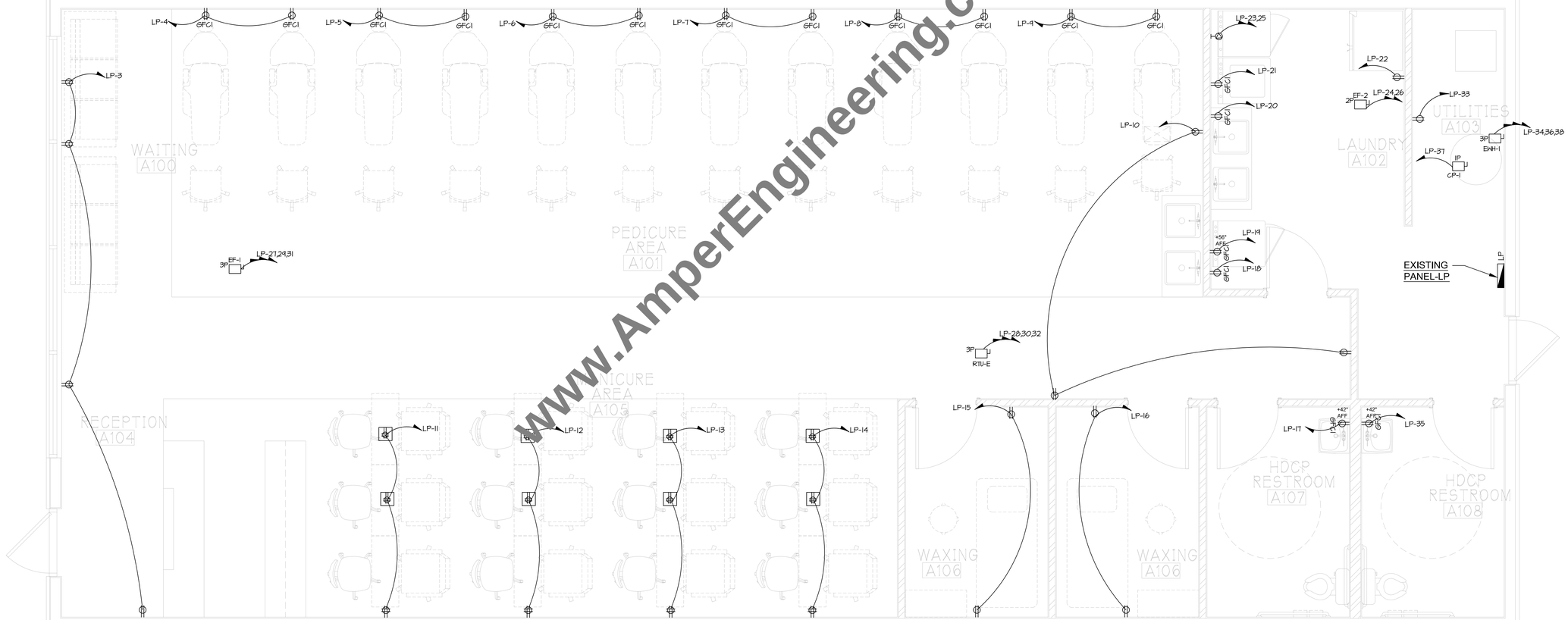
PROJECT:
NAIL SALON

ADDRESS:
;TREET
EAST WILLISTON , ND

ISSUE DATE: 09/26/2020
PROJECT NUMBER: --
SCALE: AS NOTED
DRAWN BY: DEE
DESIGNED BY: DEE
CHECKED BY: DEE

DRAWING TITLE:
ELECTRICAL SCHEDULE

DRAWING NO: **E-002**
REVISION: **.00**



1 E-100 POWER FLOOR PLAN
SCALE: 3/8" = 1'-0"

PROFESSIONAL ENGINEER:
DURAK EVRIM ERCAN P.E.
ENGINEERING | CONSULTING | ESTIMATING
201-920-2899 info@AmperEngineering.com

SEAL & SIGNATURE:

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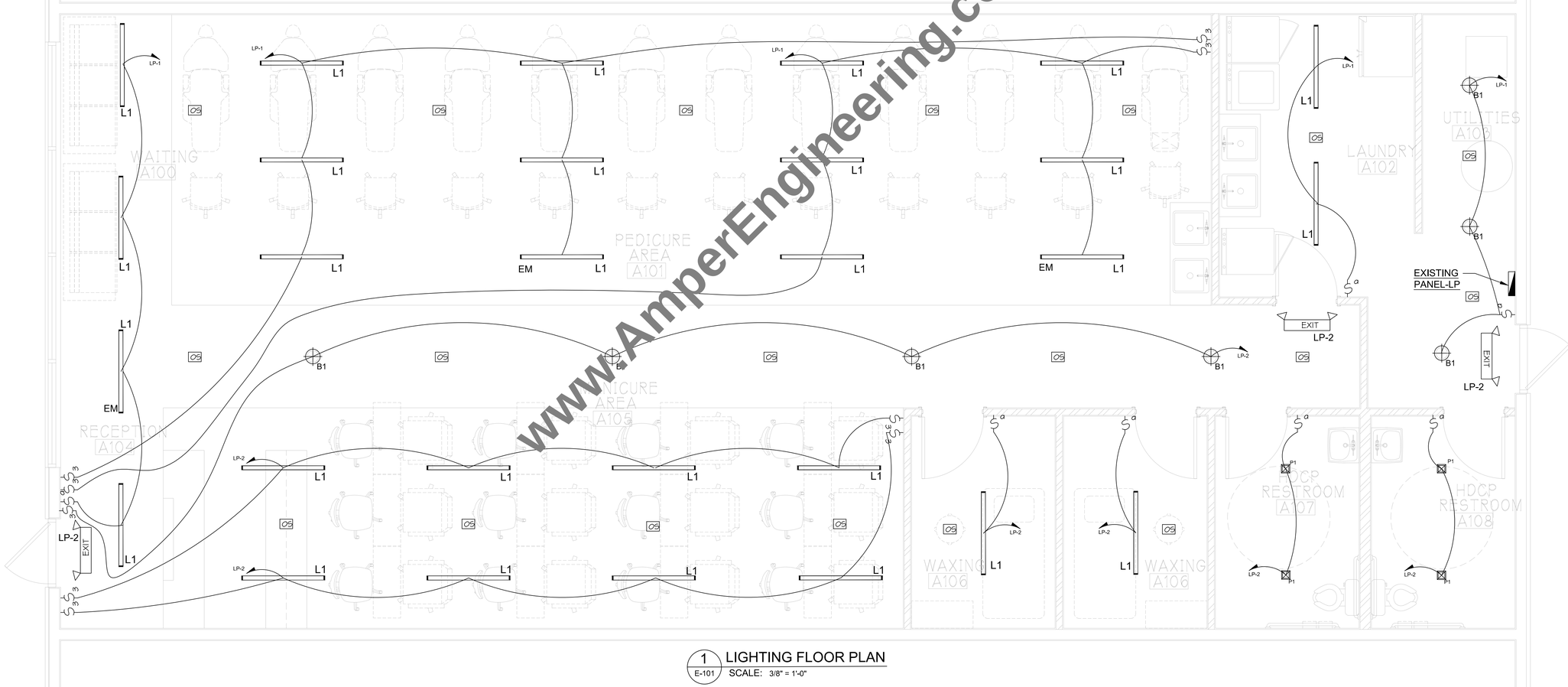
SCALE:	DRAWN BY:
AS NOTED	DEE
DESIGNED BY:	CHECKED BY:
DEE	DEE

DRAWING TITLE:
ELECTRICAL
POWER FLOOR PLAN

DRAWING NO: E-100
REVISION: .00



1 E-101 LIGHTING FLOOR PLAN
SCALE: 3/8" = 1'-0"

PROFESSIONAL ENGINEER:
DURAK EVRIM ERCAN P.E.
ENGINEERING | CONSULTING | ESTIMATING
201-920-2899 info@AmperEngineering.com

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SCALE: AS NOTED
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DRAWING TITLE:
ELECTRICAL
LIGHTING FLOOR PLAN

DRAWING NO: E-101
REVISION: .00

COMcheck Software Version 4.1.4.0

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2012 IECC
Project Title: 1196 ND VIP NAIL SALON
Project Type: New Construction

Construction Site:
120 26TH STREET
EAST WILLISTON, ND 58801

Owner/Agent:

Designer/Contractor:

Additional Efficiency Package(s)

High efficiency HVAC. Systems that do not meet the performance requirement will be identified in the mechanical requirements checklist report.

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Nail Salon (Retail)	2248	1.40	3147
		Total Allowed Watts =	3147

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps / Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Nail Salon (Retail)				
LED 1: L1: Pendant Linear LED: Other:	1	28	50	1400
LED 2: B1: Pendant LED downlight: Other:	1	7	30	210
LED 3: P1: Rest room Downlight: Other:	1	4	20	80
			Total Proposed Watts =	1690

Interior Lighting PASSES: Design 46% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2012 IECC requirements in COMcheck Version 4.1.4.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title _____ Signature _____ Date _____

COMcheck Software Version 4.1.4.0

Inspection Checklist

Energy Code: 2012 IECC

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2.1 [EL22][1]	Automatic controls to shut off all building lighting installed in all buildings.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.1 [EL23][1]	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.2 [EL15][1]	Lighting controls installed to uniformly reduce the lighting load by at least 50%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2.3 [EL16][1]	Daylight zones provided with individual controls that control the lights independent of general area lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.3 [EL17][1]	Sleeping units have at least one master switch at the main entry door that controls wired luminaires and switched receptacles.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2.2 [EL18][1]	Occupancy sensors installed in required spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2.3 [EL20][1]	Primary sidelighted areas are equipped with required lighting controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2.3 [EL21][1]	Enclosed spaces with daylight area under skylights and rooftop monitors are equipped with required lighting controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.3 [EL4][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.3 [EL19][1]	Fluorescent luminaires with odd numbered lamp configurations that are within 10 feet center to center (if recess mounted) or are within 1 foot edge to edge (if pendant or surface mounted) shall be tandem wired.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.4 [EL6][1]	Exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.3 [EL8][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.5.1 [FI16][1]	Furnished as-built drawings for electric power systems within 30 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.3, C408.2.5.2 [FI17][1]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.5.2 [FI18][1]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

PROFESSIONAL ENGINEER:
DURAK EVRIM ERCAN P.E.
ENGINEERING | CONSULTING | ESTIMATING
201-920-2899 info@AmperEngineering.com

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ISSUE DATE: 09/26/2020
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SCALE: AS NOTED
DRAWN BY: DEE
DESIGNED BY: DEE
CHECKED BY: DEE

DRAWING TITLE:
COMCHECK REPORT

DRAWING NO: E-102
REVISION: .00

PLUMBING GENERAL NOTES:

1. THE SYMBOLS ARE FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY QUANTITIES AND FURNISH ALL MATERIALS REQUIRED FOR FULLY OPERATIONAL SYSTEM, WHETHER SPECIFIED OR NOT.
2. REFER TO ARCHITECTURAL FLOOR PLANS AND ELEVATION FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL PLUMBING FIXTURES BEFORE INSTALLATION OR MAKE-UP OF PIPE. PLUMBING FIXTURES SHALL BE MOUNTED AT HEIGHTS SHOWN ON THE ARCHITECTURAL PLANS.
3. CONTRACTOR SHALL VERIFY THAT FIXTURES SUPPLIED ARE APPROVED PER ALL APPLICABLE STATE, LOCAL AND GOVERNING AUTHORITIES.
4. REFER TO THE PLUMBING ROUGH-IN SCHEDULE FOR THE SIZES OF BRANCH PIPES TO PLUMBING FIXTURE.
5. FOR CLARITY, NOT ALL VALVES HAVE BEEN SHOWN. PROVIDE BALL VALVES FOR ALL WATER ISOLATION AND SUPPLY TAKEOFFS
6. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL FIRE RATED AND/OR SMOKE RATED WALLS AND ASSEMBLIES. PIPING PENETRATIONS OF FIRE AND SMOKE RATED WALLS AND ASSEMBLIES SHALL BE CAULKED AIR TIGHT TO THE ADJACENT STRUCTURE WITH A UL LISTED FIRE PROOF MATERIAL
7. COORDINATE ALL PLUMBING ROUTING WITH GENERAL CONTRACTOR AND OTHER TRADES. PROVIDE NECESSARY OFFSETS TO AVOID CONFLICTS AND TO MAINTAIN REQUIRED EQUIPMENT ACCESS AND SERVICEABILITY.
8. PIPING LOCATIONS HAVE BEEN SHOWN FOR CLARITY AND DO NOT NECESSARILY REFLECT THE SPECIFIC LOCATION OF PIPE. COORDINATE ROUTING OF ALL PIPING WITH ALL OTHER TRADES BEFORE INSTALLATION
9. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE.
10. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
11. VERIFY UNDERGROUND PIPE SIZES, INVERT ELEVATIONS, AND LOCATIONS PRIOR TO BEGINNING ANY WORK.
12. VALVE SHALL BE LINE SIZE UNLESS NOTED OTHERWISE.
13. PROVIDE TRAP PRIMERS WHERE REQUIRED BY LOCAL AUTHORITIES.
14. COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT INSTALL PIPING OVER ELECTRICAL PANEL.
15. COORDINATE ALL ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN MINIMUM 10' CLEARANCE FROM ALL AIR INTAKES. MAINTAIN MINIMUM 2' CLEARANCE FROM ALL OTHER EQUIPMENT.
16. VERIFY LOCATION AND DEPTH OF UTILITIES AT A POINT OF CONNECTION BEFORE START OF PIPING INSTALLATION.

PLUMBING SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
CW	COLD WATER
HW	HOT WATER
HWR	HOT WATER RETURN
SAN	SANITARY
V	VENT
	PIPE CONTINUATION
	PIPE CAP
	PIPE DOWN
	PIPE UP OR UP/DOWN
FD	PIPE SERVING FIXTURE ON FLOOR ABOVE (EXAMPLE: FD = FLOOR DRAIN)
	PITCH PIPE IN DIRECTION
	DIRECTION OF FLOW IN PIPE
	DIELECTRIC CONNECTION
	UNION/FLANGE
	SHUTOFF VALVE NORMALLY OPEN
GPM	BALANCING VALVE (NUMBER INDICATES GPM)
	CHECK VALVE
	VACUUM BREAKER
T	THERMOMETER WITH WELL (DIAL TYPE)
	REDUCER - REFERENCE SPECIFICATION FOR CONCENTRIC/ECCENTRIC AND FOT/FOB
	PUMP
M	WATER METER
BFP	BACK FLOW PREVENTER
CW	COLD WATER
CP	CIRCULATION PUMP
DFU	DRAINAGE FIXTURE UNIT
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
HW	HOT WATER
HWR	HOT WATER RETURN
LAV	LAVATORY
MV	MIXING VALVE
SAN	SANITARY
SK	SINK
V	VENT
VTR	VENT THRU ROOF
WH	WATER HEATER
WC	WATER CLOSET
WMF	WASHING MACHINE FIXTURE
WSFU	WATER SUPPLY FIXTURE UNIT
WCO	WALL CLEAN OUT
YCO	YARD CLEAN OUT

CIRCULATION PUMP SCHEDULE

TAG	MANUFACTURER	MODEL	HEAD (FEET)	GPM	MHP	VOLT-PHASE
CP-1	BELL & GOSSETT	PL SERIES	35	1	1/6	115-1

PLUMBING ROUGH-IN SCHEDULE

FIXTURE TYPE	DOMESTIC C.W.	DOMESTIC H.W.	SANITARY	VENT	REMARK
WC	3/4"	-	4"	2"	TANK TYPE-PUBLIC
LAV	1/2"	1/2"	1 1/4"	1 1/4"	NOTE 1 & 2
SK	1/2"	1/2"	1 1/2"	1 1/2"	NOTE 1 & 2
WASHING MACHINE	3/4"	3/4"	2"	1 1/4"	-
FD		-	2"	1 1/2"	-

NOTES:
1. SANITARY RISER UP IN WALL TO FIXTURE SHALL BE A MINIMUM OF 2".
2. 1/2" CW AND HW AR[illegible]S TO THE FINAL VERTICAL RISER-DROP TO EACH FIXTURE. BRANCH PIPING TO VERTICAL DROP SHALL BE A MINIMUM OF 3/4" UNLESS NOTED OTHERWISE.
3. SIZES SHOWN ARE MINIMUMS. SIZES SHOWN ON THE DRAWING THAT AREA LARGER THAN THE SIZE IS LISTED IN THE SCHEDULE SHALL DICTATE THE ROUGH-IN SIZE.

MIXING VALVE SCHEDULE

TAG	MANUFACTURER	MODEL	GPM @ 5 PSI DIFFERENTIAL PRESSURE	MIN. GPM	NOTES
MV-1	LEONARD	XL-LF SERIES	32	1	1,2,3

NOTES:
1. UNIT TO MIX 140 DEGREE F HOT WATER SUPPLY AND 40 DEGREE F COLD WATER SUPPLY FOR 120 DEGREE F OUTLET.
2. PROVIDE FIELD ADJUSTMENT BY FACTORY AUTHORIZED REPRESENTATIVE.
3. PROVIDE DIAL THERMOMETER ON OUTLET.

ELECTRIC WATER HEATER SCHEDULE

TAG	SERVICE	MANUFACTURER	MODEL	STORAGE (GALLONS)	RECOVERY @ 100 °F RISE (GPH)	ELECTRICAL		NOTE
						VOLT-PHASE	KW	
EWH-1	NAIL SALON	A O SMITH	DRE-52-6	50	25	208-3	6	1

NOTES:
1. HARD WIRED ELECTRICAL CONNECTION.

DRAWING INDEX:

PROFESSIONAL ENGINEER:
DURAK EVRIM ERCAN P.E.
ENGINEERING | CONSULTING | ESTIMATING
201-920-2899 info@AmperEngineering.com

SEAL & SIGNATURE:

REGISTERED PROFESSIONAL ENGINEER
DURAK EVRIM ERCAN
PE-28126
DATE 09/26/2020
NORTH DAKOTA

REV.	DATE	DESCRIPTION
0	09/26/2020	ISSUED FOR PERMIT APPLICATION

CLIENT:

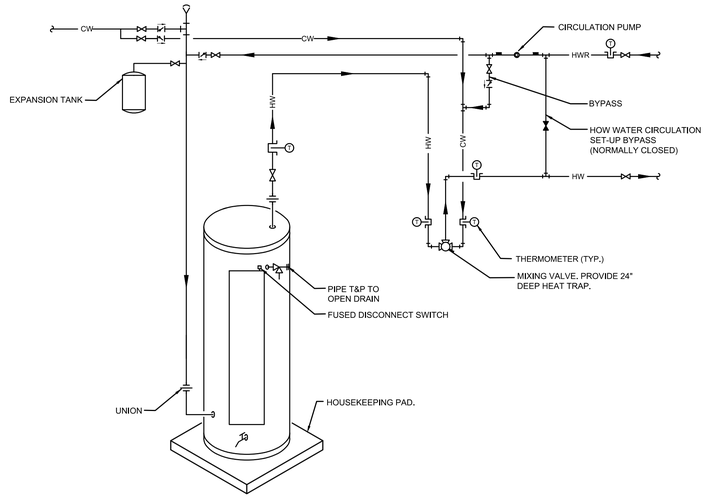
PROJECT:
NAIL SALON

ADDRESS:
;TREET
EAST WILLISTON , ND

ISSUE DATE: 09/26/2020
PROJECT NUMBER: 1196
SCALE: AS NOTED
DRAWN BY: DEE
DESIGNED BY: DEE
CHECKED BY: DEE

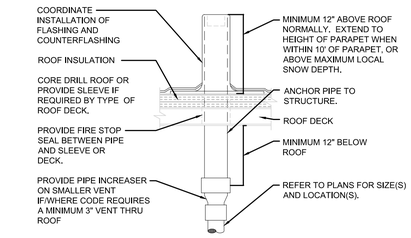
DRAWING TITLE:
PLUMBING COVER SHEET AND SCHEDULE

DRAWING NO: P-001
REVISION: .00



1 WATER HEATER AND MIXING VALVE PIPING DETAIL

NO SCALE

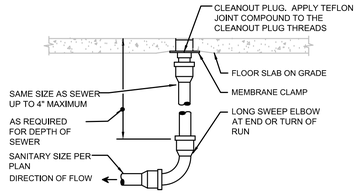


LOCATE VTR MINIMUM THREE FEET FROM PROPERTY LINE, TEN FEET HORIZONTAL OR THREE FEET VERTICAL ABOVE ANY BUILDING OPENING OR FRESH AIR INTAKE. ONE FOOT FROM ANY VERTICAL SURFACE. REFER TO LOCAL CODES FOR OTHER VENT TERMINATION REQUIREMENTS. LOCATE VTR MINIMUM 18" FROM ADJACENT WALL, PARAPET, EXPANSION JOINT, ROOF DRAIN, EQUIPMENT CURB, OR OTHER ROOF FEATURE. OFFSET IN CEILING SPACE WHERE REQUIRED TO MEET THESE CONDITIONS. INSULATE LAST SIX FEET OF VENT PIPE INSIDE BUILDING.

2 VENT THRU ROOF (VTR) DETAIL

NO SCALE

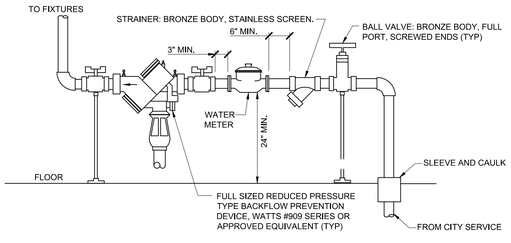
PROVIDE CLEANOUT WITH ADJUSTABLE CLEANOUT TOP WITH VARIATIONS SUITABLE FOR FLOOR COVERING (CARPET MARKER, RECESSED FOR TILE, SCORIATED FOR UNFINISHED FLOORS). CLEAN THE TOP OF EXPOSED FCO AFTER INSTALLATION.



LOCATE AT BUILDING EXIT, AT ENDS OF RUNS, AT TURNS OF PIPE GREATER THAN 45°, AT 50' INTERVALS ON STRAIGHT RUNS, AND/OR WHERE SHOWN ON PLANS AND RISERS. PROVIDE BACKFILL PER ARCHITECTURAL SPECIFICATIONS. LOCATE CLEANOUT WHERE THERE IS 18" CLEAR AROUND. FOR ACCESSIBILITY. CONSULT LOCAL CODES AND OFFICIALS FOR OTHER REQUIREMENTS.

3 FLOOR CLEANOUT

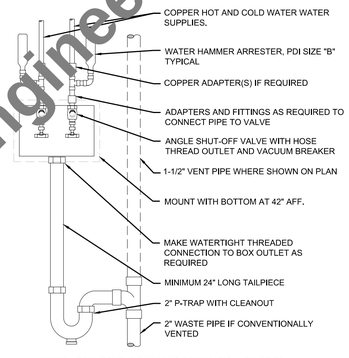
NO SCALE



DETAIL SHOWS GENERAL SCHEMATIC REQUIREMENTS. PROVIDE BACKFLOW PREVENTER OF TYPE AND MANUFACTURER APPROVED BY LOCAL AUTHORITIES.STRAINER AND REDUCING VALVE MAY BE INSTALLED IN VERTICAL PIPE IF SPACE LIMITATIONS REQUIRE IT. CLEAN STRAINER BEFORE TURNING BUILDING OVER TO OWNER. PROVIDE ANY REQUIRED CERTIFICATION OF TEST OF BACKFLOW PREVENTER TO LOCAL AUTHORITIES.

4 DOMESTIC WATER SERVICE ENTRY

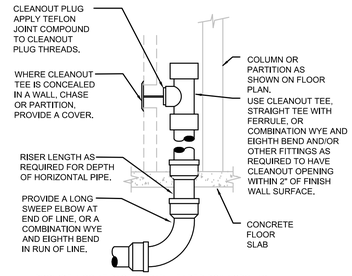
NO SCALE



PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. PROVIDE CONNECTIONS AS RECOMMENDED BY EQUIPMENT MANUFACTURER.

5 WASHING MACHINE BOX

NO SCALE



PROVIDE WCO AT BASE OF RAIN-LEADER DOWNSPOUTS AND SOIL STACKS. PROVIDE WCO WHERE SHOWN ON PLAN, AND ON SANITARY WASTE BRANCHES LONGER THAN FIVE FEET NOT SERVED WITH A FLOOR CLEANOUT. LOCATE ABOVE FIXTURE FLOOD RIM WITHIN FOUR FEET OF FLOOR. CONSULT LOCAL CODES AND OFFICIALS FOR OTHER WCO REQUIREMENTS.

6 WALL CLEANOUT

NO SCALE

PROFESSIONAL ENGINEER:
DURAK EVRIM ERCAN P.E.
ENGINEERING | CONSULTING | ESTIMATING
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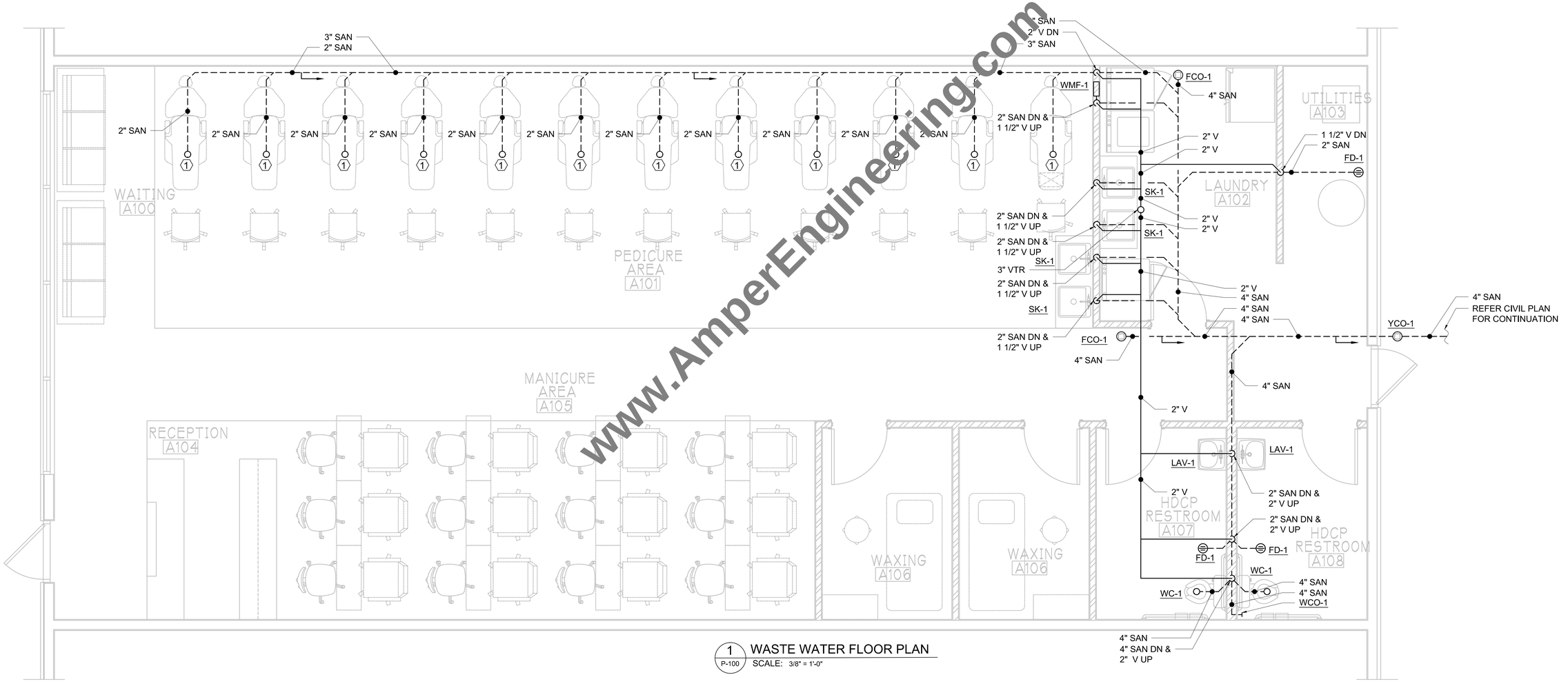
SCALE: AS NOTED
DRAWN BY: DEE
DESIGNED BY: DEE
CHECKED BY: DEE

DRAWING TITLE:
PLUMBING DETAILS

DRAWING NO: P-002
REVISION: .00

KEY NOTE ⟨#⟩
⟨1⟩ EXTEND 2" SAN UP TO CONNECTION POINT OF PEDICURE CHAIR.



1 P-100 WASTE WATER FLOOR PLAN
SCALE: 3/8" = 1'-0"

PROFESSIONAL ENGINEER:
DURAK EVRIM ERCAN P.E.
ENGINEERING | CONSULTING | ESTIMATING
201-920-2899 info@AmperEngineering.com

SEAL & SIGNATURE:

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DURAK EVRIM ERCAN
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EAST WILLISTON , ND

ISSUE DATE:
09/26/2020

PROJECT NUMBER:
1196

SCALE:	DRAWN BY:
AS NOTED	DEE
DESIGNED BY:	CHECKED BY:
DEE	DEE

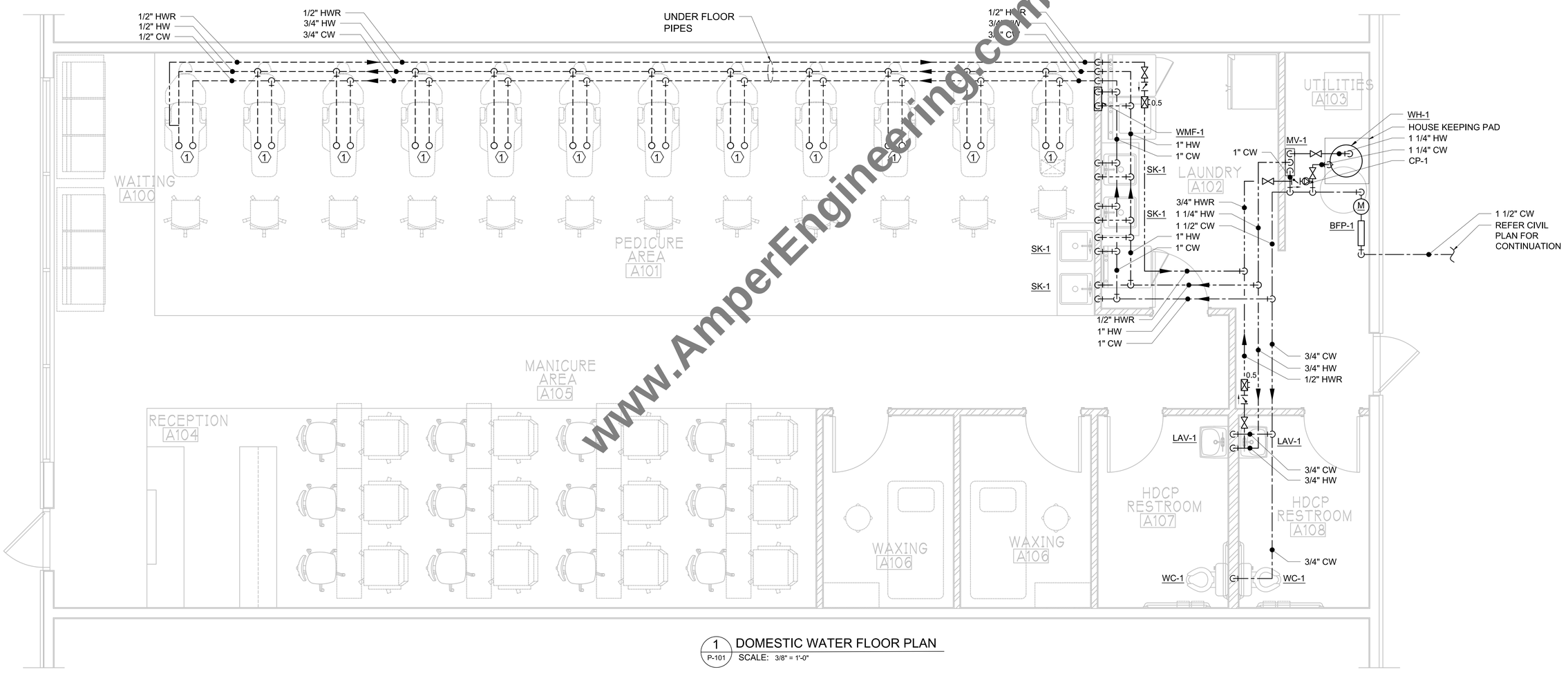
DRAWING TITLE:
WASTE WATER
FLOOR PLAN

DRAWING NO: P-100

REVISION: .00

GENERAL NOTES
1. ALL INDIVIDUAL CW AND HW CONNECTION TO INDIVIDUAL FIXTURES IS 3/4" UNLESS NOTED OTHERWISE.

KEY NOTE ⟨#⟩
⟨1⟩ EXTEND 3/4" CW AND 3/4" HW UP TO CONNECTION POINT OF PEDICURE CHAIR.



1 P-101 DOMESTIC WATER FLOOR PLAN
SCALE: 3/8" = 1'-0"

PROFESSIONAL ENGINEER:
DURAK EVRIM ERCAN P.E.
ENGINEERING | CONSULTING | ESTIMATING
201-920-2899 info@AmperEngineering.com

SEAL & SIGNATURE:

REGISTERED PROFESSIONAL ENGINEER
DURAK EVRIM ERCAN
PE-28126
DATE 09/26/2020
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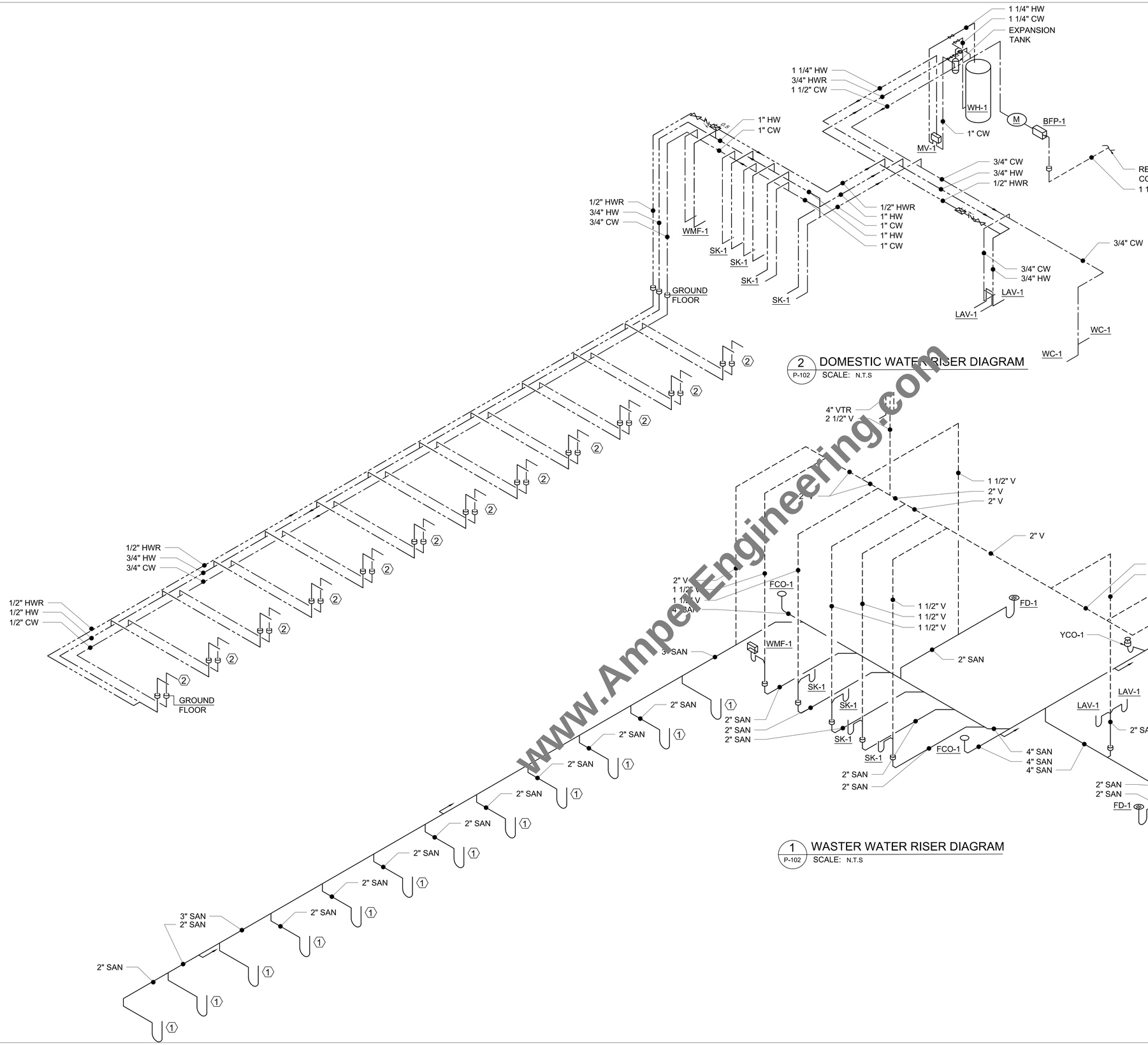
;TREET
EAST WILLISTON , ND

ISSUE DATE: 09/26/2020
PROJECT NUMBER: 1196
SCALE: AS NOTED
DRAWN BY: DEE
DESIGNED BY: DEE
CHECKED BY: DEE

DRAWING TITLE:
DOMESTIC WATER FLOOR PLAN

DRAWING NO: P-101
REVISION: .00



GENERAL NOTES
1. ALL INDIVIDUAL CW AND HW CONNECTION TO FIXTURES IS 3/4" UNLESS NOTED OTHERWISE.

KEY NOTE (#)
(1) EXTEND 2" SAN UP TO CONNECTION POINT OF PEDICURE CHAIR.
(2) EXTEND 3/4" CW AND 3/4" HW UP TO CONNECTION POINT OF PEDICURE CHAIR.

PROFESSIONAL ENGINEER:
DURAK EVRIM ERCAN P.E.
ENGINEERING | CONSULTING | ESTIMATING
201-920-2899 info@AmperEngineering.com

SEAL & SIGNATURE:

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09/26/2020

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1196

SCALE:	DRAWN BY:
AS NOTED	DEE
DESIGNED BY:	CHECKED BY:
DEE	DEE

DRAWING TITLE:
RISER DIAGRAM

DRAWING NO: P-102

REVISION: .00