| DRAWING INDEX | | | | | |
|---------------|---|--|--|--|--|
| SHEET | TITLE | | | | |
| COVER | APPENDIX B AND DRAWING INDEX | | | | |
| A0.0 | GENERAL NOTES, SCHEDULES, AND UL DETAILS | | | | |
| A0.1 | ADA DETAILS | | | | |
| A1.0 | KEY PLAN, FLOOR PLAN, REFLECTED CEILING PLAN | | | | |
| A2.0 | ENLARGED TOILET PLAN, LIFE SAFETY PLAN, DETAILS, AND CABINETS | | | | |
| P1 | PLUMBING NOTES AND SCHEDULES | | | | |
| P2 | WASTE AND SUPPLY PLANS | | | | |
| P3 | WASTE AND SUPPLY RISERS | | | | |
| M1 | MECHANICAL PLAN | | | | |
| E1 | ELECTRICAL NOTES AND SCHEDULES | | | | |
| E2 | POWER AND LIGHTING PLANS | | | | |
| E3 | PANEL SCHEDULE AND ELECTRICAL RISER | | | | |

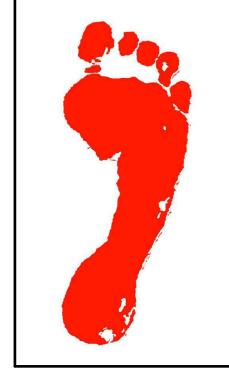
| 2010 ADDENIDIV D | | ODE | CII | N | DV I | ZOD. | AII C | | (EDCIAI | DDOID | CTC | | | | |
|--|---|---------------------|-----------|------------------------------------|----------------------------|----------------------------|-----------------------|-----------------------------------|--|---|----------------------------------|--------------------|----------------|-----------------------------------|---------------------------|
| 2018 APPENDIX B | | | <u>50</u> | MIVIA | KYI | OK A | ALL C | | | | <u>C15</u> | | | | |
| NAME OF PROJECT: BILINGUAL THERAPY SERVICES BUILDING ADDRESS: 2293 NC HIGHWAY 24-87 ZIP CODE: 28326 PROPOSED USE: THERAPY OFFICE | FIRE PROTECTION REQUIREMENT | NTS FIRE | Τ | RATING | DETAIL# | DESIGN# | SHEET# | SHEET# | PLUMBING REQUIRE | MENTS WATER CLOSET | г | | SH SH | IOWERS & TUBS | DRINKING |
| OWNER OR AUTHORIZED AGENT: BRYANT DICKINSON PHONE: (919) 868-1427 EMAIL: BRYANT@HMDDEVELOPMENT.COM | | SEPARATION DISTANCE | REQ'D | (W/ <u>NA</u> * | AND SHEET# | FOR RATED ASSEMBLY | FOR RATED PENETRATION | FOR RATED JOINTS | USE | MALE FEMA | URINALS | LAVATOR MALE FE | EMALE | | FOUNTAINS REGULAR ACCESS. |
| OWNED BY: CITY/COUNTY X PRIVATE STATE CODE ENFORCEMENT JURISDICTION: X CITY CAMERON COUNTY STATE | STRUCTURAL FRAME, INCLUDING | (FEET) | - | REDUCTION) | | | | | SPACE EXISTING NEW | 0 0 | 0 | 0 | 0 | 0 | 0 0 |
| CONTACT: | COLUMNS, GIRDERS, TRUSSES BEARING WALLS | NA | 0 | 0 | NA | NA | NA | NA | REQUIRED | 1 1 | 0 | 1 | 1 | 0 | 1 1 |
| DESIGNER COMPANY NAME LICENSE# TELEPHONE# EMAIL ARCHITECTURAL REDFOOT STUDIO RICHARD REDFOOT 9231 (919) 931-7134 RICHARD@REDFOOTSTUDIO.COM | EXTERIOR NORTH | NA | NA | NA | NA | NA | NA | NA | SPECIAL APPROVALS | : (LOCAL JURISDICT | TION, DEPARTMENT | OF INSURANCE | E, OSC, DPI, D | DHHS, ETC., DESC | RIBE BELOW) |
| CIVIL NA NA NA NA NA NA NA LA NA | EAST WEST | NA NA | NA NA | NA NA | NA NA | NA NA | NA NA | NA NA | NA | | | | | | |
| PLUMBING KILIAN ENGINEERING JACOB HAMILTON 48012 (252) 438-8778 JHAMILTON@KILIANENGINEERING.COM MECHANICAL KILIAN ENGINEERING JACOB HAMILTON 48012 (252) 438-8778 JHAMILTON@KILIANENGINEERING.COM | SOUTH INTERIOR | NA NA | NA NA | NA NA | NA NA | NA NA | NA NA | NA NA | | | | | | | |
| SPRINKLER-STANDPIPE NA NA NA NA STRUCTURAL NA NA NA NA NA RETAINING WALLS > 5' HIGH NA NA NA NA NA | NON-BEARING WALLS AND PARTITIONS | | | | | | | | ENERGY REQUIREMENTS | | | | | | |
| OTHER NA NA NA NA NA 2018 NC BUILDING CODE : NEW BUILDING ADDITION RENOVATION | EXTERIOR WALLS NORTH | 30' + | | NA NA | NA | NA NA | NA NA | NA NA | THE FOLLOWING DATA : | | | | | | |
| X 1ST TIME INTERIOR COMPLETION | EAST WEST | 30' + 30' + | 0 | NA NA | NA NA | NA NA | NA NA | NA NA | SHEET. IF PERFORMAN ANNUAL ENERGY COS | | | ST BUDGET FOR | THE STANDARI | D REFERENCE DESIG | SN VERSUS |
| SHELL/CORE - CONTACT THE LOCAL INSPECTION JURISDICTION FOR POSSIBLE ADDITIONAL PROCEDURES AND REQUIREMENTS PRACED CONTACT THE LOCAL INSPECTION JURISDICTION FOR | SOUTH INTERIOR WALLS AND PARTITIONS | 30' + NA | 0 | NA NA | NA NA | NA NA | NA NA | NA NA | EXISTING BUILDING E | NVELOPE COMPLIES | WITH CODE: | NO X | YES (THE IS NO | REMAINDER OF TH OT APPLICABLE) | IS SECTION |
| PHASED CONSTRUCTION - SHELL/CORE- CONTACT THE LOCAL INSPECTION JURISDICTION FOR POSSIBLE ADDITIONAL PROCEDURES AND REQUIREMENTS | FLOOR CONSTRUCTION, INCLUDING SUPPORTING BEAMS AND JOISTS | NA NA | † ° | 0 | NA NA | NA NA | NA NA | NA NA | EXEMPT BUILDING: | X NO | YES (PROVIDE CO | DDE OR STATUT | ORY REFERE | NCE): | NA |
| 2018 NC EXISTING BUILDING CODE : PRESCRIPTIVE REPAIR CHAPTER 14 LEVEL II LEVEL II LEVEL III | FLOOR CEILING ASSEMBLY | NA NA NA | NA 0 | NA NA | NA | NA | NA | NA | CLIMATE ZONE: METHOD OF COMPLIA | | 4A 5A | | | | |
| HISTORIC PROPERTY CHANGE OF USE CONSTRUCTED (date): 2022 CURRENT OCCUPANCY(S) (Ch. 3): NA | COLUMNS SUPPORTING FLOORS ROOF CONSTRUCTION, INCLUDING | NA NA | 0 | NA 0 | NA NA | NA NA | NA NA | NA NA | ENERGY CO | | PERFORMANCE | X PRESCRIF | | | |
| RENOVATED (date): NA PROPOSED OCCUPANCY(S) (Ch. 3): B | SUPPORTING BEAMS AND JOISTS ROOF CEILING ASSEMBLY | NA | 0 | 0 | NA | NA | NA NA | NA NA | ASHRAE 90. (IF 'OTHER' | .1 LJ SPECIFY SOURCE HE | PERFORMANCE ERE) | PRESCRIF | 'IIVE | | |
| RISK CATEGORY (TABLE 1604.5): CURRENT: | COLUMNS SUPPORTING ROOF SHAFT ENCLOSURES - EXIT | NA NA | 0 NA | 0 NA | NA NA | NA NA | NA NA | NA NA | THERMAL ENVELOPE | (PRESCRIPTIVE METI | HOD ONLY) | | | | |
| PROPOSED: I X II III IV BUILDING DATA: | SHAFT ENCLOSURES - STAIR CORRIDOR SEPARATION | NA NA | NA 0 | NA 0 | NA NA | NA NA | NA NA | NA NA | DESCIPTION | ASSEMBLY (each asso ON OF ASSEMBLY: | NA | | | | |
| CONSTRUCTION TYPE: I-A II-A III-A IV V-A | OCCUPANCY / FIRE BARRIER SEPARATION PARTY/FIRE WALL SEPARATION | NA NA | 2 NA | 2 - EXISTING NA | 1/A0.0 NA | UL U419 NA | WL 1001 NA | NA NA | U-VALUE C R-VALUE C | DF TOTAL ASSEMBLY: DF INSULATION: | : | | | | |
| SPRINKLERS: X NO PARTIAL YES NFPA 13 NFPA 13R NFPA 13D | SMOKE BARRIER SEPARATION SMOKE PARTITION | NA NA | NA NA | NA NA | NA NA | NA NA | NA NA | NA NA | 111.74 | S IN EACH ASSEMBLY ALUE OF SKYLIGHT: | | | | | |
| STANDPIPES: X NO YES CLASS I I II II WET DRY FIRE DISTRICT: X NO YES (Primary) FLOOD HAZARD AREA: X NO YES | TENANT / DWELLING UNIT / SLEEPING UNIT SEPARATION | NA | 1 | 1 | 1/A0.0 | UL U419 | WL 1001 | NA | ТОТЛ | AL SQ FT OF SKYLIGH | HTS IN EACH ASSEMB | LY: | | _ | |
| SPECIAL INSPECTIONS REQUIRED: X NO YES (contact the local inspection jurisdiction for additional procedures and requirements.) | INCIDENTAL USE SEPARATION MEDICAL GAS CLOSET | NA NA | NA NA | NA NA | NA NA | NA NA | NA NA | NA NA | DESCIPTION | LLS (each assembly): ON OF ASSEMBLY: | NA | | | | |
| GROSS BUILDING AREA: | * INDICATES SECTION NUMBER PER | | | IVA | IVA | INA | INA | 19/1 | R-VALUE C | OF INSULATION: | | | | | |
| FLOOR EXISTING (SQ FT) NEW (SQ FT) SUB-TOTAL 3RD FLOOR NA NA NA 2ND FLOOR NA NA NA | PERCENTAGE OF WALL OPENIN FIRE SEPARATION DISTANCE | | |)PENINGS | ALLOWAE | I E ADEA | ACTUAL SHOW | /N ON DLANS | U-VA | S (WINDOWS OR DOO! ALUE OF ASSEMBLY:_ | • | | | | |
| MEZZANINE NA NA NA 1ST FLOOR 17,178 2,906 (AREA OF WORK) 17,178 (2,906) | (FEET) FROM PROPERTY LINE | PROTE | ECTION (1 | TABLE 705.8) | ALLOWAL (% | | (%) | | | AR HEAT GAIN COEFF JECTION FACTOR: | FICIENT: | | | | |
| BASEMENT NA NA NA TOTAL 17,178 2,906 (AREA OF WORK) 17,178 (2,906) | NA - EXISTING BUILDING | | | | | | | | | | | | | | |
| ALLOWABLE AREA | LIFE SAFETY SYSTEM REQUIRE | MENTS | | | | | | | DESCIPTION | GRADE (each assemb ON OF ASSEMBLY: OF TOTAL ASSEMBLY: | NA | | | | |
| OCCUPANCY: ASSEMBLY A-1 A-2 A-3 A-4 A-5 | EMERGENCY LIGHTING: EXIT SIGNS: | □ NO | X YES | 3 | | | | | | OF INSULATION: | | | | | |
| BUSINESS X EDUCATIONAL F-1 MODERATE F-2 LOW | FIRE ALARM: | X NO | ☐ YES | S PARTIA | L | | | | | UNCONDITIONED SP. ON OF ASSEMBLY: | ACE (each assembly): | | | | |
| HAZARDOUS | | X NO | YES |) | | | | | U-VALUE C | OF TOTAL ASSEMBLY: | : | | | | |
| I-2 CONDITION | LIFE SAFETY PLAN REQUIREME LIFE SAFETY PLAN SHEET #: | | _ | | | | | | FLOORS SLAB | | | | | | |
| □ I-4 | X FIRE AND SMOKE RATED ASSUMED AND REAL PRO | | | | SITE PLAN) | | | | | ON OF ASSEMBLY: OF TOTAL ASSEMBLY: | NA : | | | | |
| MERCANTILE R-1 R-2 R-3 R-4 | EXTERIOR WALL OPENIN X OCCUPANCY USE FOR E. | | | | | | | | R-VALUE C | OF INSULATION: | REMENT: | | | | |
| STORAGE S-1 MODERATE S-2 LOW HIGH PILED PARKING GARAGE OPEN ENCLOSED REPAIR GARAGE | X OCCUPANT LOADS FOR I | | | | | | | | SLAB HEAT | TED: | | | | | |
| UTILITY AND MISCELLANEOUS ACCESSORY OCCUPANCY CLASSIFICATIONS: NA | COMMON PATH OF TRAVDEAD END LENGTHS (102 | 20.4) | | | 2 (1)) | | | Ì | MECHANICAL SUMMARY | | | SEE MI | ECHAN | VICAL DF | RAWINGS |
| INCIDENTAL USES (TABLE 509): NA SPECIAL USES (CHAPTER 4 - LIST CODE SECTIONS): NA | X CLEAR EXIT WIDTHS FOR X MAXIMUM CALCULATED O | | | | CAN ACCOMN | IODATE BASED | ON EGRESS WIDTH | H (1005.3) | MECHANICAL SYSTEM | MS, SERVICE SYSTEM | | | | | |
| SPECIAL PROVISIONS: (CHAPTER 5 - LIST CODE SECTIONS): NA | X ACTUAL OCCUPANT LOA A SEPARATE SCHEMATIO | C PLAN INDICAT | TING WHE | | LOOR/CEILII | NG AND/OR RO | OF STRUCTURE IS | IS PROVIDED | THERMAL ZONE WINTER DRY BUL SUMMER DRY BU | B I B | | | | | |
| MIXED OCCUPANCY: X NO YES SEPARATION: NA HR. EXCEPTION NA | FOR PURPOSES OF OCC | ITH PANIC HARI | DWARE (1 | , | IOUNT OF D | EL A.V. (4040 4 0 | . 7) | | INTERIOR DESIGN CO | NDITIONS | | | | | |
| APPLYING THE HEIGHT AND AREA LIMITATIONS FOR EACH OF THE APPLICABLE OCCUPANCIES TO THE ENTIRE BUILDING. THE MOST RESTRICTIVE TYPE OF | LOCATION OF DOORS WI LOCATION OF DOORS EG LOCATION OF EMERGEN | QUIPPED WITH I | HOLD-OPI | EN DEVICES | IOUNT OF D | ELAY (1010.1.9 | 9.() | | WINTER DRY BUL SUMMER DRY BUI RELATIVE HUMIDI | LB | | | | | |
| CONSTRUCTION, SO DETERMINED, SHALL APPLY TO THE ENTIRE BUILDING. SEPARATED USE (508.4) - SEE BELOW FOR AREA CALCULATIONS FOR EACH STORY, THE AREA OF THE OCCUPANCY | THE SQUARE FOOTAGE (| OF EACH FIRE A | AREA (202 | 2) | CHIDANICY C | I ASSIFICATION | N L-2 (407 5) | | BUILDING HEATING LO | | | | | | |
| SHALL BE SUCH THAT THE SUM OF THE RATIOS OF THE ACTUAL FLOOR AREA OF EACH USE DIVIDED BY THE ALLOWABLE FLOOR AREA FOR EACH USE SHALL NOT EXCEED 1. | NOTE ANY CODE EXCEP | | | | | | , , | OVE | MECHANICAL SPACING | | STEM | | | | |
| $\frac{\textit{ACTUAL AREA OF OCCUPANCY A}}{\textit{ALLOWABLE AREA OF OCCUPANCY B}} \hspace{0.2cm} \leq \hspace{0.2cm} 1$ | ACCESSIBLE DWELLING UNITS (| <u> </u> | | | | | LING U | | UNITARY DESCRIPTION HEATING EFF | | | | | | |
| + ≤ 1.00 | TOTAL ACCESSIBLE ACCESSIB UNITS UNITS UNITS REQUIRED REQUIRE | UN | ITS | TYPE 'A' UNITS PROVIDED | TYPE 'I UNITS REQUIR | 6 U | NITS ACCES | TOTAL SSIBLE UNITS PROVIDED | COOLING EFF SIZE CATEGO | ICIENCY | | | | | |
| STORY NO. DESCRIPTION (A) (B) (C) (E) | | | | | | | | | | DRY. IF OVERSIZED, S | STATE REASON | | | | |
| AND USE BLDG. ÁREA TABLE 506.2 AREA FOR ALLOWÁBLE PER STORY AREA FRONTAGE AREA PER | ACCESSIBLE PARKING | NA - | - EXI | STING E | BUILD | ING AN | ND PAR | KING | CHILLER SIZE CATEGO | DRY. IF OVERSIZED, S | STATE REASON | | | | |
| (ACTUAL) INCREASE 1.5 STORY OR UNLIMITED 2.3 | LOT OR TOTAL # OF PARKING | | | # OF AC | CESSIBLE S | PACES PROVI | DED | TOTAL # ACCESSIBLE | LIST EQUIPMENT | EFFICIENCIES | | | | | |
| 1 B 17,178 69,000 NOT USED 69,000 | AREA REQUIRED | PROVIDED | | JLAR WITH 5' CESS AISLE 1 | | AN SPACES WI AISLE 8' A | ІП | PROVIDED | ELECTRICAL SUMMARY | | | SEE E | I FCTF | SICAL DE | RAWINGS |
| | USE 1 USE 2 | | | | | | | | ELECTRICAL SYSTEM | | | | | | VAVIINOO |
| TRONTAGE AREA INCREASES FROM SECTION 506.2 ARE COMPUTED THUS: A PERIMETER WHICH FRONTS A PUBLIC WAY OR OPEN SPACE HAVING 20 FEET MINIMI IM WIDTH. = (F) | TOTAL USE 3 | | | | | | | | METHOD OF COMPLIA | NCE: ENERGY CO ASHRAE 90. | = | | PERFORI | | |
| A. PERIMETER WHICH FRONTS A PUBLIC WAY OR OPEN SPACE HAVING 20 FEET MINIMUM WIDTH = (F) B. TOTAL BUILDING PERIMETER = (P) C. RATIO (F/P) = (F/P) D. W = MINIMUM WIDTH OF PUBLIC WAY = (W) | STRUCTURAL DESIGN | | | N | <u>ΙΔ</u> - Ε | YICTIN | NG BUILI | DING | LIGHTING SCHEDULE LAMP TYPE REQU | (each fixture type) JIRED IN FIXTURE | | | | | |
| D. W = MINIMUM WIDTH OF PUBLIC WAY = (W) E. PERCENT OF FRONTAGE INCREASE I _f = 100 [F/P -0.25] x W/30 = (%) 2 UNLIMITED AREA APPLICABLE UNDER CONDITIONS OF SECTION 507 | DESIGN LOADS IMPORTANCE FACTORS: | SNOW (Is) | | ı | v /¬ - ∟ | ./(101111 | NO DOILI | ן | NUMBER OF LAMI BALLAST TYPE US | SED IN FIXTURE | | | | | |
| 3 MAXIMUM BUILDING AREA = TOTAL NUMBER OF STORIES IN THE BUILDING x D (MAXIMUM 3 STORIES) (506.2) 4 THE MAXIMUM AREA OF OPEN PARKING GARAGES MUST COMPLY WITH 406.5.4. THE MAXIMUM AREA OF AIR TRAFFIC | IIIIFORTANCE FACTORS. | SEISMIC (le) | | | _ | | | | NUMBER OF BALL TOTAL WATTAGE TOTAL INTERIOR | PER FIXTURE | O VS. ALLOWED (whole | building or space | e by space) | | |
| CONTROL TOWERS MUST COMPLY WITH 412.3.1. 5 FRONTAGE INCREASE BASED ON THE UNSPRINKLERED AREA VALUE IN TABLE 506.2. | LIVE LOADS: | ROOF | | | psf | | | | TOTAL EXTERIOR | R WATTAGE SPECIFIEI | D VS. ALLOWED | J -: 2past | | | _ |
| ALLOWABLE HEIGHT | 1 | FLOOR | | | psf | | | | ADDITIONAL EFFICIEN (WHEN USING THE 20 ⁻¹ C406.2 MG | | JIRED FOR ASHRAE 9 | 0.1) | | | |
| ALLOWABLE SHOWN ON PLANS CODE REFERENCE BUILDING HEIGHT IN FEET (TABLE 504.3) NA - EXISTING TO REMAIN | GROUND SNOW LOAD: | DVGIO MAIND | QDETP. | | psf | \QCE 7\ | | | C406.3 RE | EDUCED LIGHTING PONHANCED DIGITAL LIG | OWER DENSITY | | | | |
| BUILDING HEIGHT IN STORIES (TABLE 504.4) NA - EXISTING TO REMAIN | - WIND LOAD: | BASIC WIND S | _ | Y | mpn (<i>i</i> | ASCE-7) | | | C406.5 ON | N-SITE RENEWABLE E | ENERGY | | | | |
| | SEISMIC DESIGN CATEGORY PROVIDE THE FOLLOWING SEISMIC I | _ | | c [| D D | | | | | EDICATED OUTDOOR EDUCED ENERGY USE | AIR SYSTEM E IN SERVICE WATER | HEATING | | | |
| | RISK CATEGORY (Table 1604. | .5) | | | _ | _ | | ł | | | | | | | |
| | SPECTRAL RESPONSE ACCE SITE CLASSIFICATION (ASCE | | | | | | | ☐ F | | | | | | | |
| | DATA SOURC BASIC STRUCTURAL SYSTEM | CE: |] FIELD | TEST | | | _ | TA | | | | | | | |
| | ☐ BEARING WALL | | DUAL W/ S | SPECIAL MOMENT | | ן פדברי | | | | | | | | | |
| | BUILDING FRAMI | | NVERTED | NTERMEDIATE R/C) PENDULUM - | | | | | | | | | | | |
| | ANALYSIS PROCEDURE [ARCHITECTURAL, MECHANIC | | | | | | DYNAMIC | | | | | | | | |
| | 1 | | | _ | | | | 1 | | | | | | | |

LATERAL DESIGN CONTROL: EARTHQUAKE WIND WIND

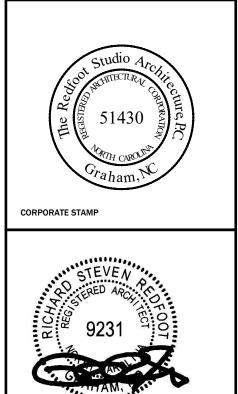
FIELD TEST (PROVIDE COPY OF TEST REPORT)

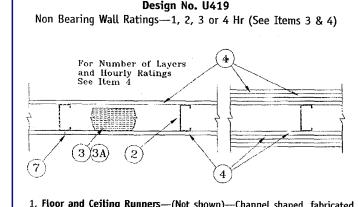
PRESUMPTIVE BEARING CAPACITY
PILE SIZE, TYPE, AND CAPACITY

SOIL BEARING CAPACITY:









. Floor and Ceiling Runners—(Not shown)—Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min width to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max. 2. Steel Studs—Channel shaped, fabricated from min 25 MSG corrosion-

protected steel, min width as indicated under Item 4, min 1-1/4 in. flanges and 1/4 in. return, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

3. Batts and Blankets*—(Required as indicated under Item 4)—Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 4. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

A. Batts and Blankets*—(Optional)—Placed in stud cavities, any glass

fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies. . Wallboard, Gypsum*—Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal edge joints and horizontal butt joints on opposite sides of studs staggered a min of 12 in. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr

ratings are as follows: Wallboard Protection on Each Side of Wall No. Of Layers And Thickness Of Panels 1 layer, 5/8 in. thick 1 layer, 1/2 in. thick 2 layers, 1/2 in. thick 1 laver, 3/4 in, thick 2 layers, 3/4 in. thick 4 layers, 1/2 in. thick 2 layers, 3/4 in. thick

Canadian Gypsum Co.—1/2 in. thick Type C, WRC or IP-X2; 5/8 in. thick Type SCX, SHX, WRX, IP-X1, AR, C, WRC or IP-X2; 3/4 in. thick ULTRACODE or Type IP-X3 United States Gypsum Co.—1/2 in. thick Type C, WRC or IP-X2; 5/8 in. thick Type SCX, SHX, WRX, IP-X1, AR, C, WRC or IP-X2; 3/4 in. thick ULTRACODE or Type IP-X3 Yeso Panamericano SA de CV—1/2 in. thick Type C, WRC or IP-X2; 5/8 in. thick Type SCX, SHX, WRX, IP-X1, AR, C, WRC or IP-X2; 3/4 in. thick ULTRACODE or Type IP-X3.

 Fasteners—(Not shown)—Type S or S-12 self-drilling, self-tapping steel screws used to attach panels to studs (Item 2) or furring channels (Item screws used to attach panels to studs (Item 2) or furring channels (Item 6). Single layer systems: 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. 0C when panels are applied horizontally, or 12 in. 0C when panels are applied vertically. Two layer systems: First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. 0C. Second layer-1-5/8 in. long for 1/2 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. 0C with screws offset 8 in. from first layer-1 in long for 1/2 in thick panels. Three-layer systems: First layer- 1 in. long for 1/2 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. Four lave spaced 12 in. U. Screws offset min 6 in. from tayer below. Four tayer systems: First layer- 1 in. long for 1/2 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in. thick panels, spaced 24 in. OC. Third tayer- 2-1/4 in. long for 1/2 in. thick panels, spaced 24 in. OC. Fourth layer- 2-5/8 in. long for 1/2 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.

6. Furring Channels—(Optional, not shown, for single or double layer systems)—Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 panhead steel screws.

Joint Tape and Compound—Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all

B. Siding, Brick or Stucco—(Optional, not shown) —Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local studs with corrugated metal wall ties attached to each stud with steel

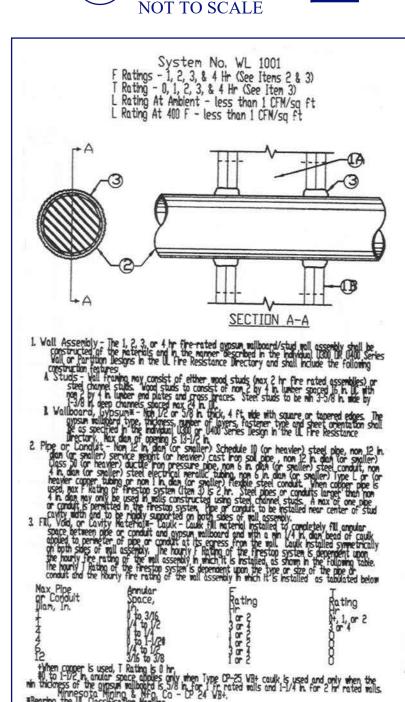
screws, not more than each sixth course of brick.

9. Caulking and Sealants*—(Optional, not shown)—A bead of acoustical sealant applied around the partition perimeter for sound control.

United States Gypsum Co.—Type AS

*Bearing the UL Classification Marking

UL #U419





DOOR AND FRAME SCHEDULE DOOR **HARDWARE** SIZE **FRAME** OOR NO. WDHGT THK SET KEYSIDE RM NO REMARK MATL MATL 100A 3'-0" 7'-0" 1 3/4" WOOD HMP.L., D.S., C.H. MFR'S STANDARD 3'-0" 7'-0" 1, 2, 3 101A 1 3/4" ALUM ---103A 3'-0" 7'-0" 1 3/4" WOOD P.L., D.S. 7'-0" C.L., O.C. **EXTERIOR** 3'-0" 1 3/4" ALUM 6 103B ALUM MFR'S STANDARD 1, 2, 3, 5 103C 3'-0" (PAIR) 8'-0" 1 3/4" ALUM 104A 3'-0" 8'-0" 1 3/4" ALUM ALUM P.L., D.S. 1, 2, 4 P.L., D.S. 1, 2, 4 104B 3'-0" 8'-0" 1 3/4" ALUM ALUM ---3'-0" 7'-0" HMP.L., D.S. 105A 1 3/4" WOOD 7'-0" PR.L., D.S., C.H. 106A 3'-0" 1 3/4" WOOD HM7'-0" MFR'S STANDARD 1, 2, 3 107A 3'-0" 1 3/4" ALUM 3'-0" 7'-0" 1 3/4" WOOD HMP.L., D.S., C.H. 3'-0" 7'-0" 1 3/4" HMP.L., D.S., C.H. 109A WOOD 3'-0" 7'-0" P.L., D.S., C.H. 110A 1 3/4" WOOD HM---7'-0" P.L., D.S., C.H. 3'-0" 1 3/4" WOOD HM3'-0" 7'-0" 1 3/4" HMP.L., D.S., C.H. 112A WOOD 3'-0" 7'-0" 1 3/4" WOOD P.L., D.S., C.H. 113A P.L., D.S., C.H. 7'-0" 114A 3'-0" 1 3/4" WOOD HMP.L., D.S., C.H. 3'-0" 7'-0" 1 3/4" WOOD HM115A ---3'-0" 7'-0" 1 3/4" WOOD HMC.L., D.S., C.H. 119 117A 2'-0" 7'-0" P.L., D.S., C.H. 1 3/4" WOOD HM3'-0" 7'-0" PR.L., D.S., C.H. 1 3/4" WOOD HMC.L., O.C. 3'-0" 7'-0" 1 3/4" ALUM **EXTERIOR** 119A ALUM

A. ALL DOORS ARE FACTORY FINISHED, SOLID CORE, PLAIN SLICED WHITE BIRCH.

1 3/4"

1 3/4"

WOOD

WOOD

7'-0"

7'-0"

B. PROVIDE DOUBLE JACK STUDS AT ALL DOOR JAMBS DOORS WITH NO NUMBER ARE EXISTING TO REMAIN.

3'-0"

3'-0"

HARDWARE LEGEND

GENERAL DOOR SCHEDULE NOTES

D. DOOR HARDWARE TO BE COMMERCIAL GRADE AND ADA COMPLIANT. HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERABLE PARTS ON DOORS AND GATES SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST TO OPERATE.

HM

HM

P.L., D.S., C.H.

PR.L., D.S., C.H.

| P.L. PASSAGE LATCHSET CR. PR.L. PRIVACY LOCKSET D.E C.L. CYLINDER LOCKSET AL' M.L. MORTISE LOCKSET W.S. | CLASSROOM LOCKSET O.C. DEADBOLT D.H. ALUMINUM THRESHOLD W.S. WOOD THRESHOLD D.S. | OVERHEAD CLOSER 1 1/2 HINGES WEATHER STRIPPING DOOR STOP C.H. COAT HOOK D.S. DOOR SWEEP |
|---|--|--|
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REMARKS

120A

121A

FULL GLASS DOOR(S). GLAZING TO BE TEMPERED. BLACK ANODIZED ALUMINUM STOREFRONT DOOR ASSEMBLY.

BARN DOOR AND FRAME ASSEMBLY. IN FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FOR BOTH SIDES AND WIDTH OF DOOR OPENING SHALL BE A MINIMUM OF 32" CLEAR.

DOOR PART OF BLACK ANODIZED ALUMINUM STOREFRONT WALL ASSEMBLY, SEE 2/A3.0 . GLAZING TO BE FROSTED.

6. EXISTING STOREFRONT WINDOW ASSEMBLY, MODIFY AS REQUIRED TO PROVIDE 3'-0" FULL GLASS DOOR WITH SIDELIGHT AND TRANSOM, GLAZING TO

WALLBOARD

BE TEMPERED. OVERALL OPENING SIZE TO REMAIN UNCHANGED. EXISTING HOLLOW METAL DOOR AND FRAME ASSEMBLY, MODIFY DOOR AS REQUIRED TO REVERSE HAND OF DOOR, PAINT, CASE OPENING W/ GYPSUM

| ROOM FINISH | SCHEDULE |
|-------------|----------|

| | | | | | WA | LLS | | _ | |
|---------|----------------|----------|---------|-----|-----|-----|-----|---------|---------|
| ROOM NO | ROOM NAME | FLOOR | BASE | N | S | Е | W | CEILING | REMARKS |
| 100 | WAITING | LVP | RUBBER | GWB | GWB | GWB | GWB | ACT | 1 |
| 101 | RECEPTION | CPT TILE | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 102 | HALL | LVP | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 103 | YOGA | CPT TILE | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 104 | CONFERENCE | CPT TILE | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 105 | LIFE SKILLS | CPT TILE | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 106 | UNI-SEX TOILET | LVP | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 107 | BUSINESS | CPT TILE | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 108 | THERAPY | CPT TILE | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 109 | THERAPY | CPT TILE | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 110 | THERAPY | CPT TILE | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 111 | THERAPY | CPT TILE | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 112 | THERAPY | CPT TILE | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 113 | THERAPY | CPT TILE | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 114 | THERAPY | CPT TILE | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 115 | THERAPY | CPT TILE | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 116 | OFFICE | CPT TILE | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 117 | STORAGE | CPT TILE | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 118 | PRIVATE TOILET | CERAMIC | CERAMIC | GWB | GWB | GWB | GWB | ACT | |
| 119 | HALL | LVP | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 120 | BREAK ROOM | LVP | RUBBER | GWB | GWB | GWB | GWB | ACT | |
| 121 | UNI-SEX TOILET | LVP | RUBBER | GWB | GWB | GWB | GWB | ACT | |

GENERAL FINISH SCHEDULE NOTES

COORDINATE AND VERIFY FINISHES AND COLORS WITH OWNER. WALL PAINT TO BE BENJAMIN MOORE OR APPROVED EQUAL. ONE COAT OF PRIMER TINTED TO WALL COLOR, TWO COATS OF PAINT. SATIN FINISH. COLOR

TO BE SELECTED BY OWNER. ALL NEW GYPSUM WALLBOARD TO BE 5/8". PROVIDE 5/8" GREENBOARD AT ALL WET LOCATIONS.

PROVIDE HONEY COMB SHADES AT ALL WINDOWS. GRABER, HUNTER DOUGLAS OR APPROVED EQUAL

FINISHES

CPT TILE

CERAMIC

RUBBER

GWB

ACT

| LUXURY VINYL PLANK | TO BE SELETED FROM MANUFACTURER'S STANDARD COLORS |
|--------------------|---|
| CARPET TILE | TO BE SELETED FROM MANUFACTURER'S STANDARD COLORS |
| CERAMIC TILE | TO BE SELETED FROM MANUFACTURER'S STANDARD COLORS |
| RUBBER COVE BASE | 4" RUBBER COVE BASE, MANUFACTURER'S STANDARD COLORS |
| GYPSUM WALLBOARD | NEW OR EXISTING GYPSUM WALLBOARD, PAINTED |

ACOUSTIC CEILING TILE SUSPENDED 2'X2' ACOUSTIC CEILING TILE SYSTEM, ARMSTRONG 1774 'DUNE' W/ TEGULAR EDGE, 15/16" STANDARD GRID

ALLOWANCES (INCLUDES LABOR AND MATERIAL)

PROVIDE 1X WOOD FINISH AT RECESSED SECTION AT RECEPTION COUNTER WALL FROM FLOOR TO CEILING, VERIFY AND COORDINATE FINISH W/ OWNER.

GENERAL NOTES

GENERAL NOTES APPLY TO ALL SHEETS.

THE DRAWINGS AND SPECIFICATIONS SHALL BE THOROUGHLY REVIEWED PRIOR TO ORDERING. PURCHASING AND INSTALLING MATERIALS AND SYSTEMS. ALL DISCREPANCIES, INTERFERENCES, AND OMISSIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT. ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS DURING CONSTRUCTION SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE

ARCHITECT. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE CODE, ALL LOCAL AND OTHER APPLICABLE CODES.

CONTRACTOR TO VISIT SITE PRIOR TO SUBMITTAL OF BID. CONTRACTOR TO ESTABLISH SCOPE OF WORK FROM CONSTRUCTION DOCUMENTS AND ACTUAL SITE VISIT. ANY OMISSIONS, DISCREPANCIES OR CLARIFICATIONS TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT.

CONTRACTOR TO ITEMIZE ALL COSTS AND SCOPE OF WORK RELATED TO ANY CHANGE ORDER. THIS INFORMATION MUST BE PRESENTED TO THE

OWNER AND ARCHITECT FOR APPROVAL PRIOR TO ANY WORK BEING EXECUTED. NOTED DIMENSIONS TAKE PRECEDENCE OVER OVER SCALED DIMENSIONS, DO NOT SCALE DIMENSIONS. DIMENSIONS ARE TO FACE OF METAL STUDS OR EXISTING GYPSUM WALLBOARD.

COORDINATE ALL FINISHES AND MATERIALS WITH OWNER. ALL COLORS AND MATERIALS SHALL BE APPROVED BY OWNER PRIOR TO ORDERING

O. PROVIDE BLOCKING AS REQUIRED FOR FOR INSTALLATION AND SUPPORT OF FIXTURES, GRAB BARS, TOILET ACCESSORIES, CABINETS,

TELEVISIONS, EQUIPMENT, ETC.. BLOCKING FOR ADJUSTABLE SHELVING TO BE CONTINUOUS FROM FLOOR TO 8'-0" AFF. . COORDINATE INSTALLATION OF ALL EQUIPMENT AND APPLIANCES, INCLUDING BOTH CONTRACTOR AND OWNER SUPPLIED ITEMS, WITH

MANUFACTURER'S REQUIREMENTS AND SPECIFICATIONS. 12. TOP OF PARTITIONS STOP 1" TO 6" ABOVE CEILING. PROVIDE LATERAL BRACING, SECURED TO TOP OF WALL AND ROOF STRUCTURE ABOVE, U.O.N.

13. ALL GYPSUM WALLBOARD TO BE FINISHED TO LEVEL 4 PER GYPSUM ASSOCIATION GUIDELINES AS DETAILED IN GA 214-10. 14. EXISTING BUILDING ASSEMBLIES, COMPONENTS, AND SYSTEMS TO REMAIN UNLESS OTHERWISE REQUIRED BY NEW WORK OR NOTED IN THE

CONTRACTOR TO USE LANDLORD'S ROOFING CONTRACTOR FOR ALL ROOF WORK.

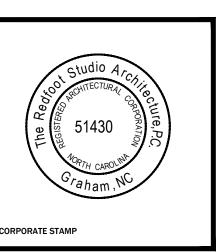
16. ANY WOOD BLOCKING, FRAMING, OR SHEATHING NOT ENCASED WITHIN GYPSUM WALLBOARD OF WALL TO BE FIRE-TREATED.

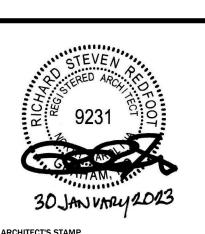
17. COORDINATE INFRASTRUCTURE AS REQUIRED FOR OFFICE AUDIO SYSTEM WITH OWNER'S SUBCONTRACTOR.

18. ALL CABINETS PROVIDED BY GENERAL CONTRACTOR. PROVIDE SHOP DRAWINGS FOR OWNER REVIEW AND APPROVAL.

19. ALL SINKS AND FAUCETS TO BE SELECTED BY OWNER. 20. ALL DOOR HARDWARE TO BE SELECTED BY OWNER.

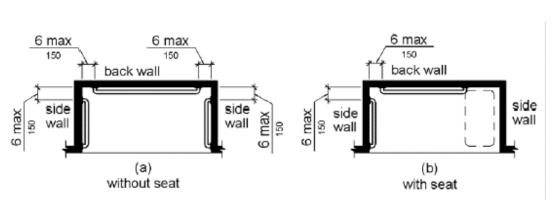
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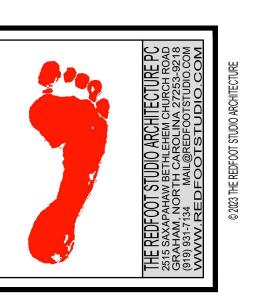


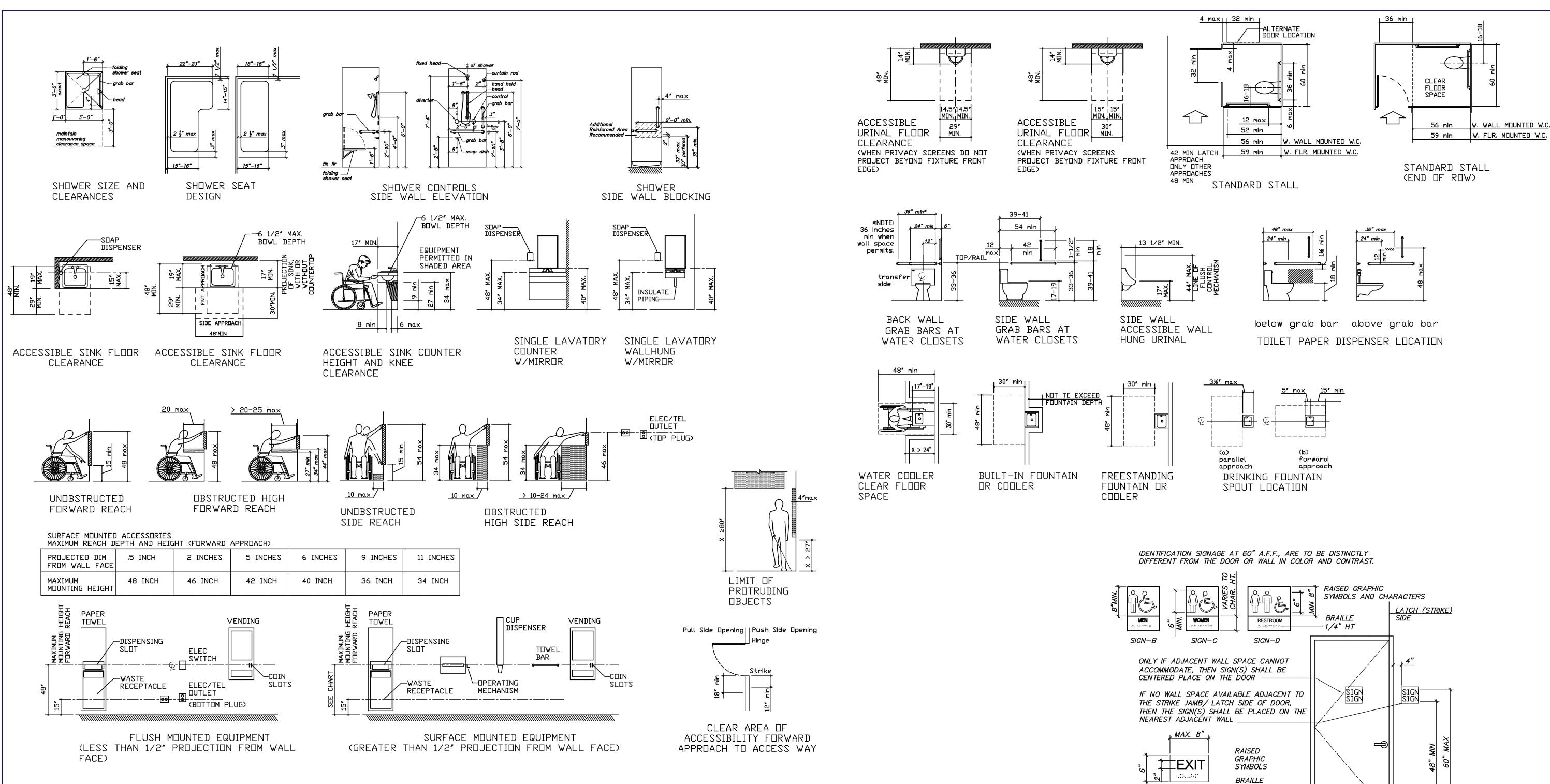


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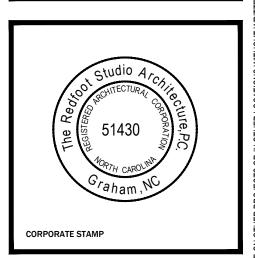
GENERAL NOTES, LEGENDS AND **SCHEDULES**

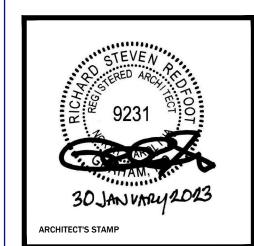






BILINGUAL THERAPY SERVICES 2293 NC HIGHWAY 24-87 CAMERON, NORTH CAROLINA





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ACCESSIBILITY DETAILS

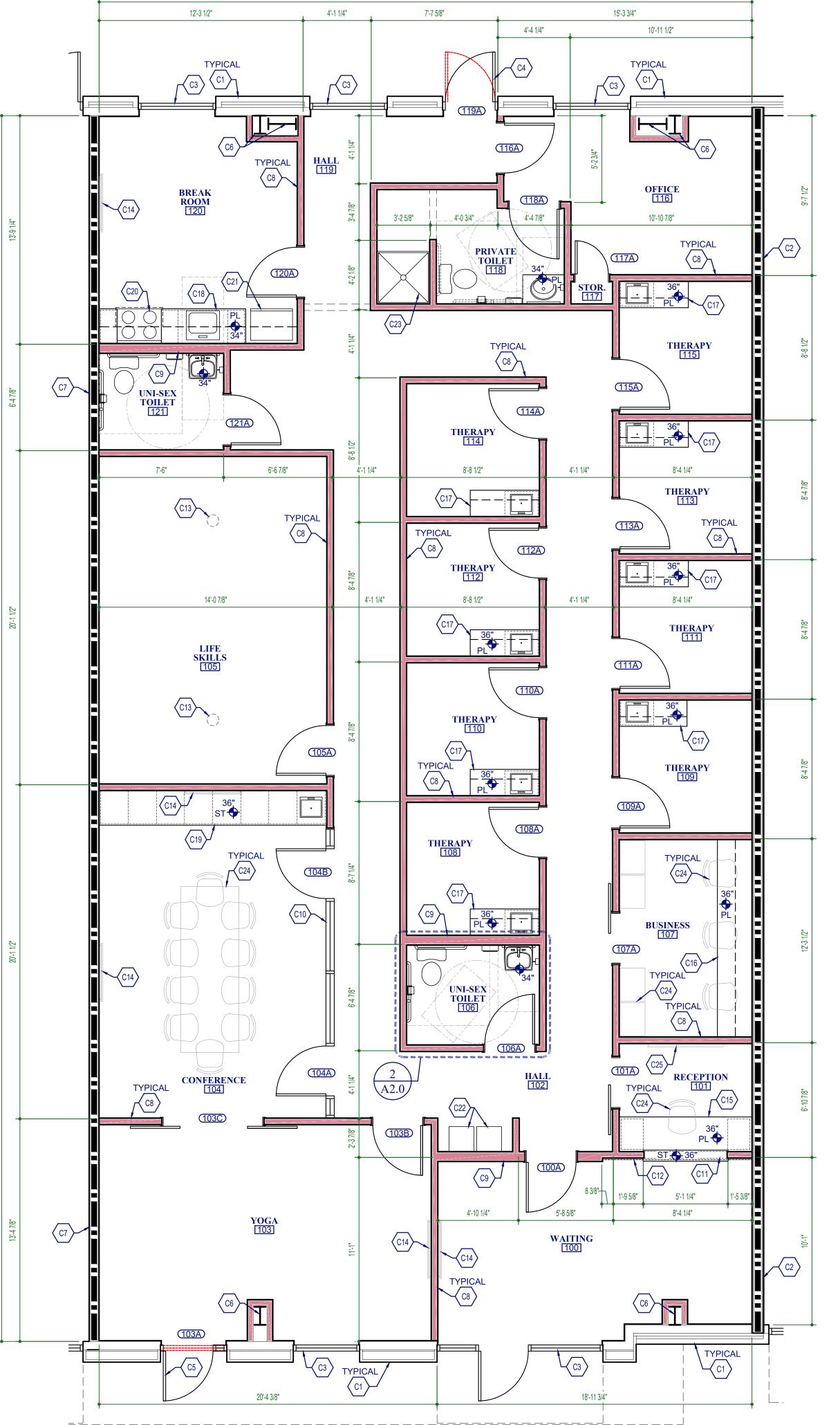
SIGN-A

REQUIRED AT DOOR(S): NOTED (EXIT HC)

EXIT SIGN:

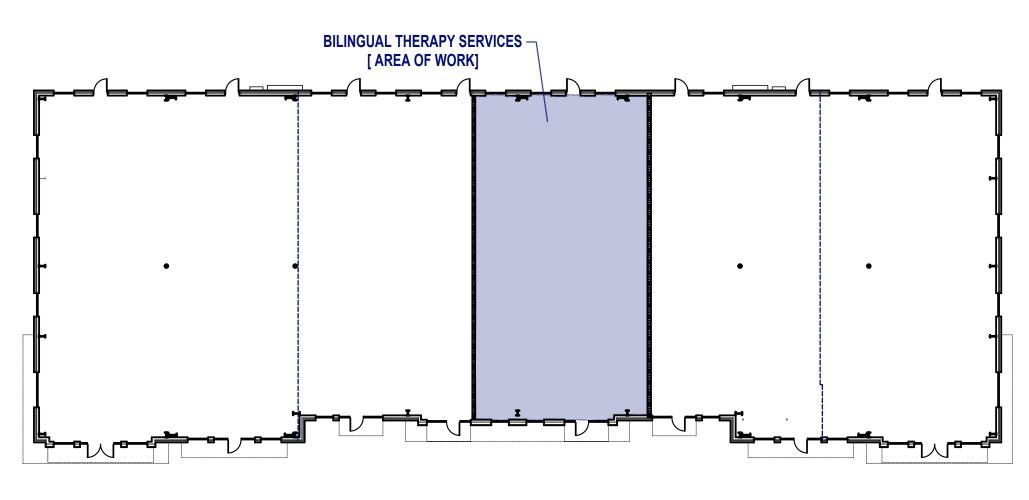
1/4" HT

SURFACE MOUNTED



39'-4 1/8"





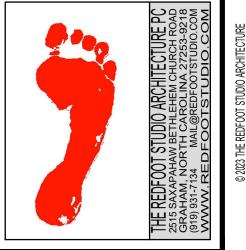


CONSTRUCTION NOTES:

- EXISTING INSULATED EXTERIOR WALL TO REMAIN, PROVIDE GYPSUM WALLBOARD $^\prime$ ON INTERIOR SIDE TO DECK ABOVE, TYPICAL
- \langle C3 \rangle EXISTING STOREFRONT WINDOW OR ENTRY ASSEMBLY TO REMAIN, CASE OPENING W/ GYPSUM WALLBOARD
- EXISTING HOLLOW METAL DOOR AND FRAME ASSEMBLY, MODIFY DOOR AS REQUIRED TO REVERSE HAND OF DOOR,
- PAINT, CASE OPENING W/ GYPSUM WALLBOARD
- EXISTING STOREFRONT WINDOW ASSEMBLY, MODIFY AS REQUIRED TO PROVIDE 3'-0" FULL GLASS DOOR WITH C5 SIDELIGHT AND TRANSOM, GLAZING TO BE TEMPERED, OVERALL OPENING SIZE TO REMAIN UNCHANGED, CASE OPENING W/ GYPSUM WALLBOARD
- EXISTING STEEL COLUMN(S) TO REMAIN, ENCASE THE COLUMN W/ FRAMING AND GYPSUM WALLBOARD, KEEP ENCLOSURE AS CLOSE TO COLUMN AS FEASIBILE
- \langle C7 \rangle PROVIDE NEW 1-HOUR FIRE-RATED TENANT DEMISING WALL TO ROOF DECK, PER UL U419, SEE 1/A0.0, TYPICAL
- \langle C8 \rangle PROVIDE NEW INTERIOR 3-5/8" METAL STUD WALL, SEE 1/A3.0, TYPICAL WHERE SHOWN THUS
- ⟨ C9 ⟩ PROVIDE NEW INTERIOR 6" METAL STUD WALL, SIMILAR TO 1/A3.0
- (C10) STOREFRONT WALL ASSEMBLY, SEE DOOR SCHEDULE AND 2/A3.0
- C11 CASED OPENING, HEAD OF OPENING AT 7'-0" AFF
- PROVIDE 1X WOOD FINISH AT RECESSED SECTION AT RECEPTION COUNTER WALL FROM FLOOR TO CEILING, VERIFY AND COORDINATE FINISH W/ OWNER
- PROVIDE STEEL EYE HOOK IN CEILING FOR SWING OR OTHER EXERCISE EQUIPMENT. COORDINATE FINAL LOCATION W/ OWNER DURING FRAMING; VERIFY ANY REINFORCING REQUIREMENTS W/ STRUCTURAL ENGINEER.
- (C14) PROVIDE BLOCKING, POWER, AND DATA FOR TELEVISION, COORDINATE FINAL LOCATION IN FIELD W/ OWNER
- RECEPTION DESK, LEVEL 2 GRANITE TRANSACTION COUNTER AT 36" AFF, PLASTIC LAMINATE WORK COUNTER AT 30" AFF, OPEN BELOW WORK COUNTER, PROVIDE (2) ROLLING BELOW COUNTER LOCKABLE FILE CABINETS
- (C16) BUSINESS DESK AND CABINETS WITH PLASTIC LAMINATE COUNTERTOP, SEE 3/A3.0
- (C17) THERAPY DESK WITH PLASTIC LAMINATE COUNTERTOP, SEE 6/A3.0
- STAFF LOUNGE CABINETS, PLASTIC LAMINATE COUNTERTOP AT 34" AFF, PROVIDE MINIMUM (1) UPPER CABINET STORAGE SHELF AT 48" AFF, FRONT APPROACH ACCESSIBLE SINK, SEE 5/A3.0
- (C19) CONFERENCE ROOM CABINETS WITH LEVEL 2 GRANITE COUNTERTOP, SEE 4/A3.0
- (C20) OVEN AND COOKTOP W/ INTEGRAL HOOD, SUPPLIED BY OWNER AND INSTALLED BY CONTRACTOR
- (C21) REFRIGERATOR, SUPPLIED BY OWNER AND INSTALLED BY CONTRACTOR
- (C22) ACCESSIBLE HIGH-LOW DRINKING FOUNTAINS, SEE PLUMBING AND ELECTRICAL DRAWINGS
- (C23) MOP SINK, SEE PLUMBING DRAWINGS
- (C24) FURNITURE OR EQUIPMENT, BY OWNER
- PROPOSED LOCATION FOR LOGO ON WALL, PROVIDE BLOCKING IN WALL, PROVIDE POWER FOR LOGO, COORDINATE W/ OWNER

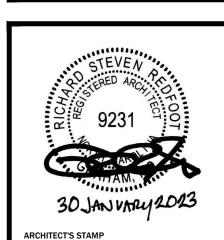
. COORDINATE SELECTION OF ALL FINISHES AND COLORS WITH OWNER.

- 2. DIMENSIONS ARE TO FACE OF FRAMING EXCEPT AT DEMISING WALLS DIMENSIONS ARE TO FACE OF GYPSUM WALLBOARD. 3. 5/8" GYPSUM WALLBOARD, TYPICAL EXCEPT 5/8" GREENBOARD AT WET LOCATIONS.
- 4. PROVIDE GYPSUM WALLBOARD TO DECK ABOVE AT ALL EXTERIOR AND DEMISING WALLS.
- 5. PROVIDE TRANSITION STRIPS BETWEEN DIFFERENT FLOORING MATERIALS.
- 6. COORDINATE DESIGN OF ALL CABINETRY AND CASEWORK W/ OWNER. PROVIDE CABINETRY SHOP DRAWINGS FOR OWNER REVIEW.
- 7. ALL 3-5/8" STUD WALLS TO BE INSULATED WITH R-11 BATT INSULATION. ALL 6" METAL STUD WALLS TO BE INSULTED WITH R-19 BATT INSULATION. 8. PROVIDE TYPE 2A 10BC FIRE EXTINGUISHER AS REQUIRED FOR MAX. 75' TRAVEL DISTANCE TO EXTINGUISHER FROM ANYWHERE IN OFFICE. VERIFY FINAL LOCATION AND NUMBER OF FIRE EXTINGUISHERS WITH FIRE MARSHAL.
- 9. PROVIDE BLOCKING AS REQUIRED FOR ALL CABINETRY, EQUIPMENT, AND CASEWORK. PROVIDE CONTINUOUS BLOCKING FROM FLOOR TO CEILING AT ALL ADJUSTABLE SHELVING LOCATIONS. 10. VERIFY INSTALLATION REQUIREMENTS AND LOCATIONS OF ALL THERAPY EQUIPMENT W/ OWNER. VERIFY ANY REINFORCING OR SUPPORT REQUIREMENTS W/ STRUCTURAL ENGINEER.



THERAPY SERVICES HIGHWAY 24-87 NORTH CAROLINA **BILINGUAL**





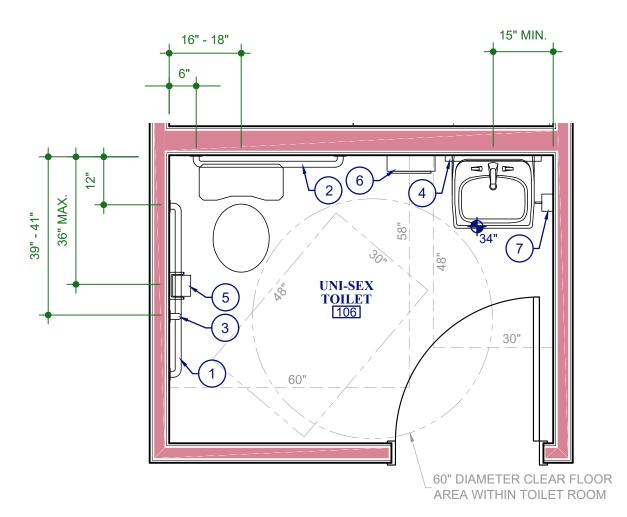
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KEY PLAN AND FLOOR PLAN



1. ALL FIXTURES AND TOILET ACCESSORIES TO MEET ADA REQUIREMENTS AND BE INSTALLED PER ADA GUIDELINES.

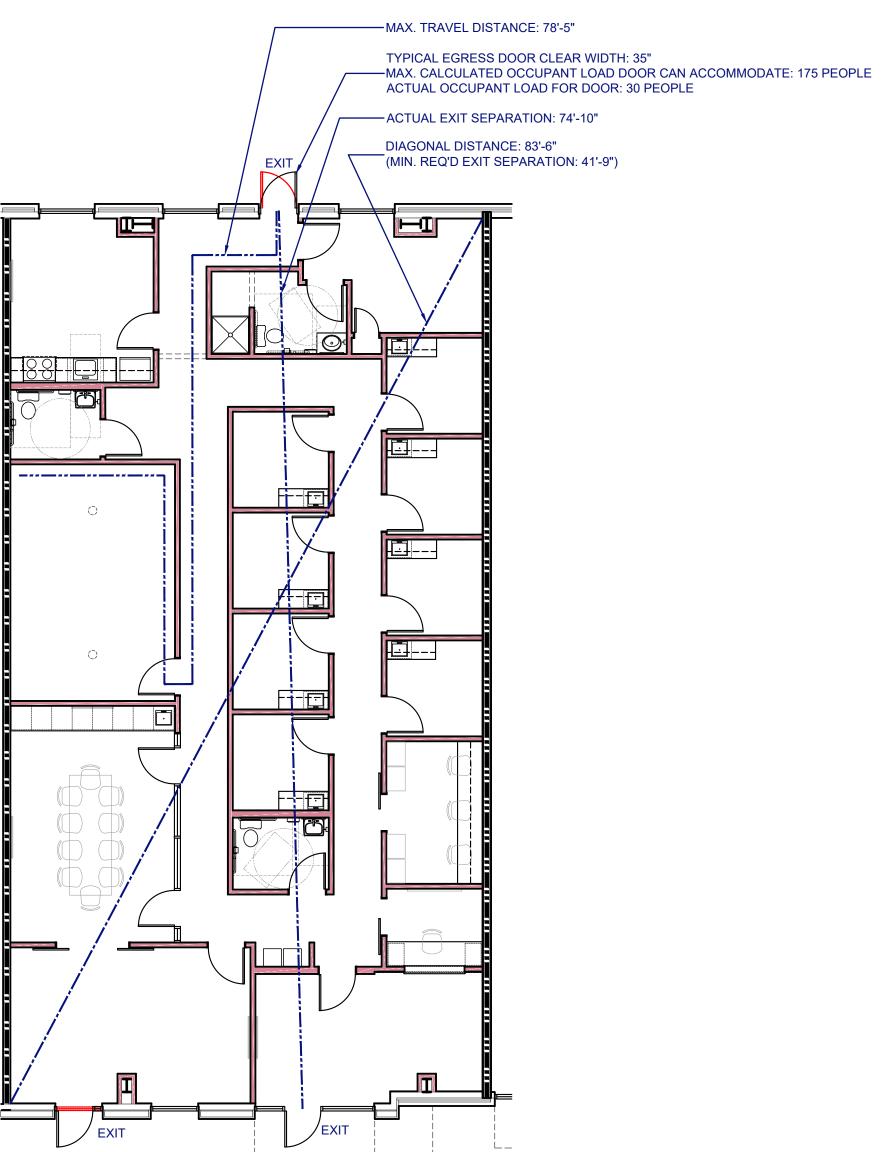
2. PROVIDE BLOCKING IN WALLS AS REQUIRED TO INSTALL ALL TOILET ACCESSORIES.



TOILET PLAN NOTES:

1. PROVIDE ALL BLOCKING REQUIRED FOR GRAB BARS AND OTHER ACCESSORIES.
2. UNI-SEX TOILET 106 IS SHOWN, ALL OTHER TOILET ROOMS ARE SIMILAR.

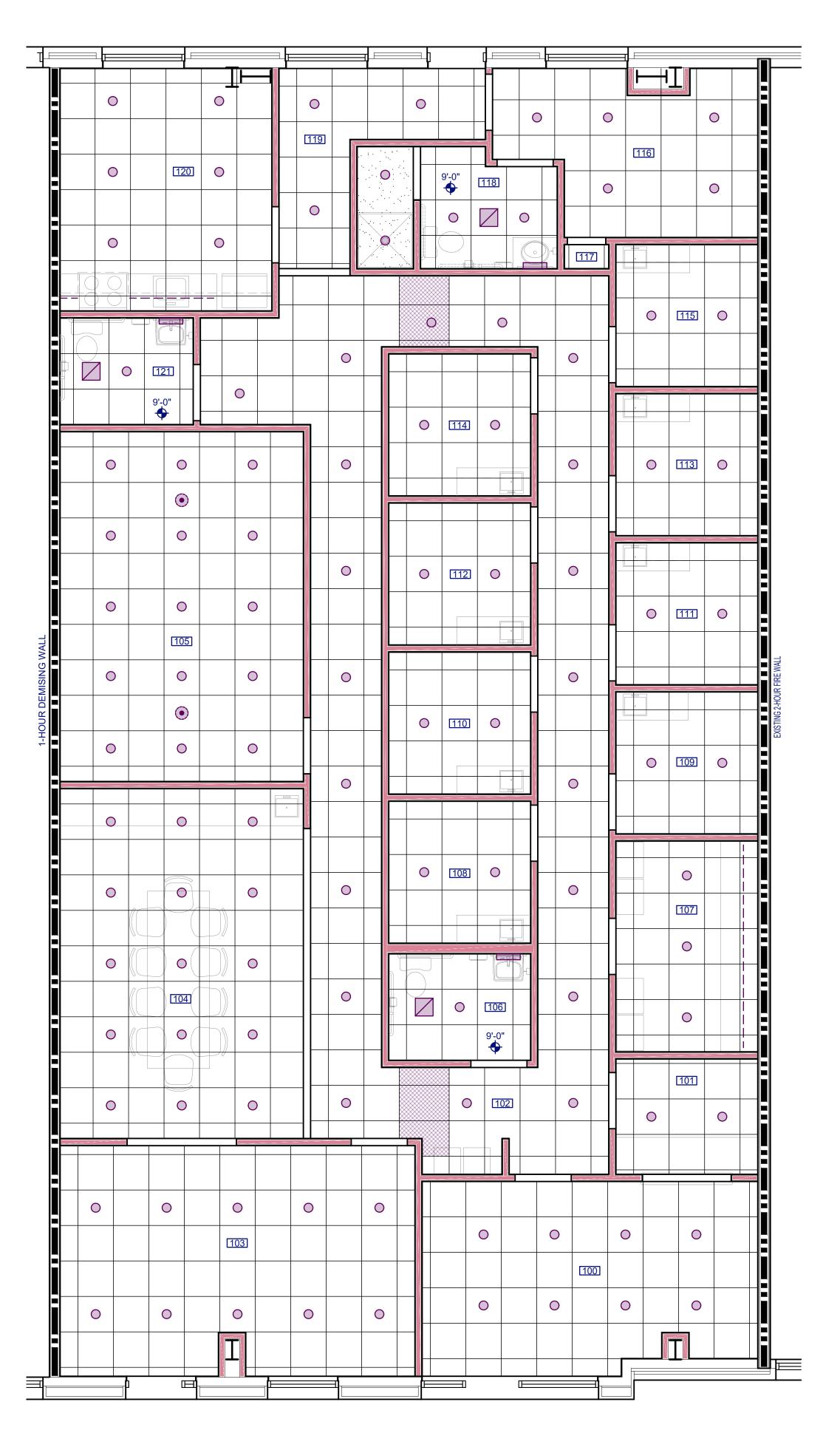
2 Enlarged Toilet Plan Scale 1/2" = 1'-0"



OCCUPANT LOADS:
BUSINESS: 2,906 SF/100 GROSS SF/PERSON = 30 PEOPLE









RECESSED CAN LIGHT VANITY LIGHT

———— BELOW CABINET LIGHT EXHAUST FAN

EXERCISE HOOK IN CEILING

Reflected Ceilng Plan_ SCALE 1/4" = 1'-0"

4. ALL LIGHTS ON DIMMER SWITCHES.

PROJECT

REFLECTED CEILING PLAN NOTES:

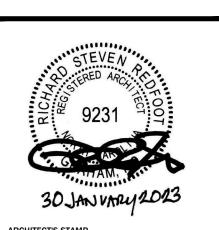
1. CEILING HEIGHT TO BE 10'-0" AFF, TYPICAL U.O.N. 2. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR ADDITIONAL NOTES AND INFORMATION. 3. BATH FANS AND LIGHTS SWITCHED SEPARATELY.



SERVICES **THERAPY**

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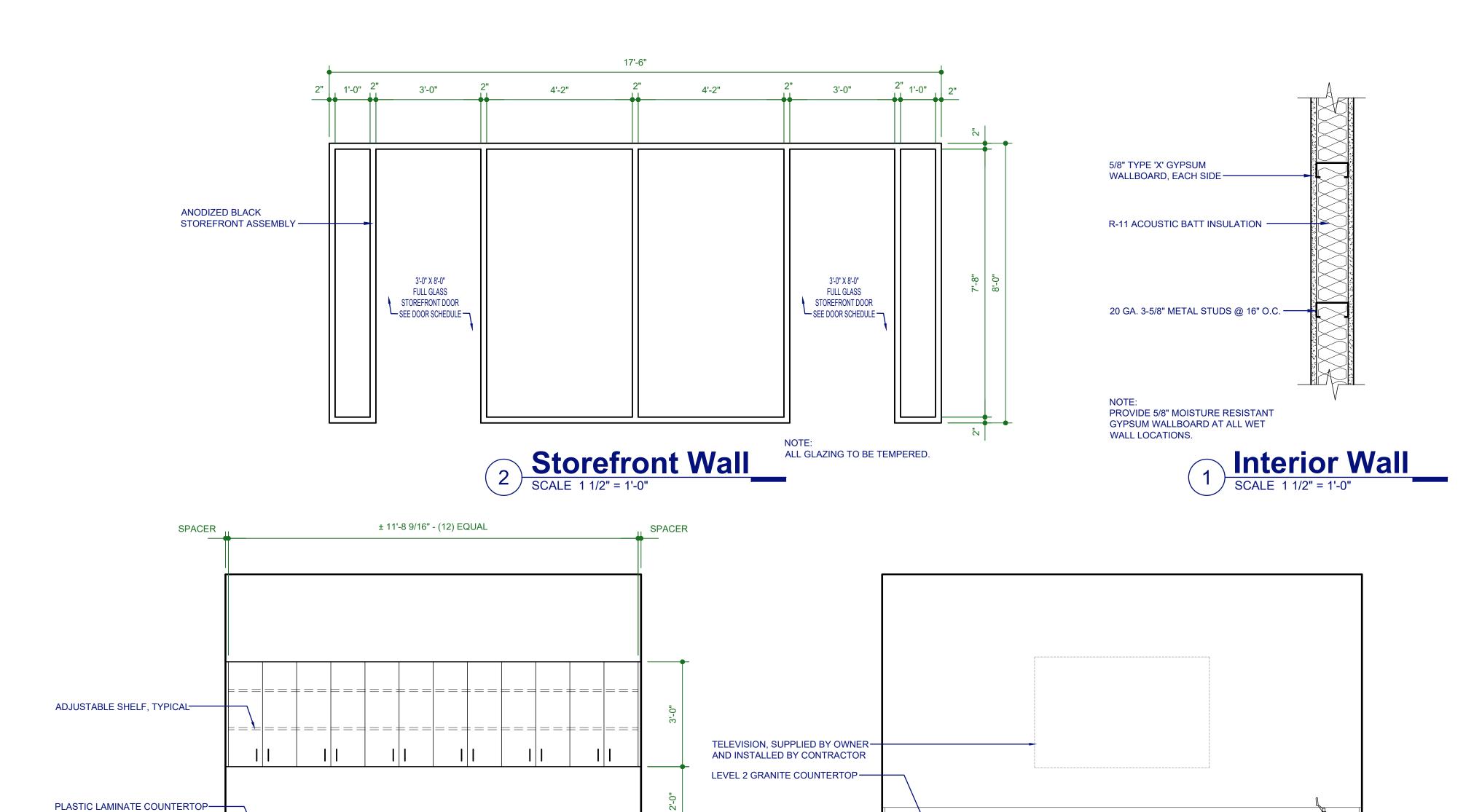




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CEILING, TOILET, AND LIFE SAFETY PLANS

A2.0



ADJUSTABLE SHELF, TYPICAL—

SPACER

Business Desk & Cabinets SCALE 1/2" = 1'-0"

PROVIDE SHOP DRAWINGS FOR OWNER REVIEW OF ALL CABINETS AND CASEWORK. 2. PLASTIC LAMINATE FINISH FOR CABINET EXTERIOR FROM MANUFACTURER'S STANDARD

3. ALL COUNTERTOPS PLASTIC LAMINATE. PROVIDE ALTERNATE FOR LEVEL 2 SOLID SURFACE OR

4. ALL CABINET HARDWARE TO BE COMMERCIAL GRADE HARDWARE TO BE SELECTED BY OWNER.

COLORS. WHITE MELAMINE FINISH AT INTERIOR OF ALL CABINETS.

LEVEL 2 GRANITE FOR RECEPTION TRANSACTION COUNTER.

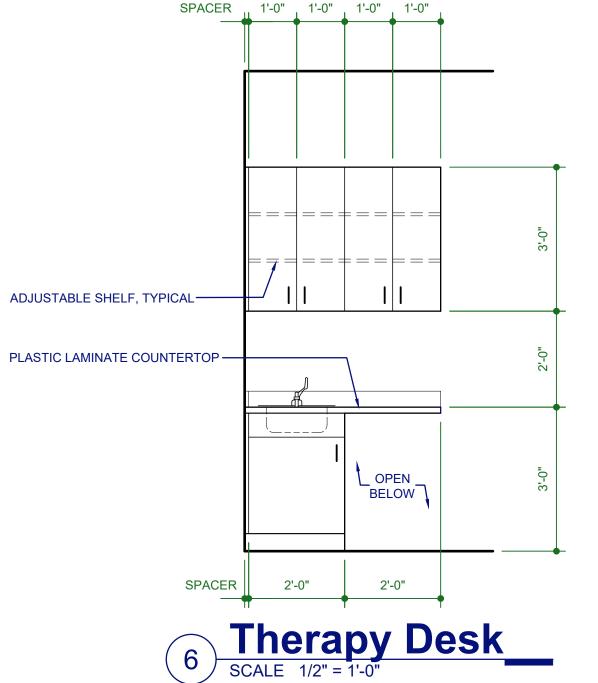
OPEN_ BELOW

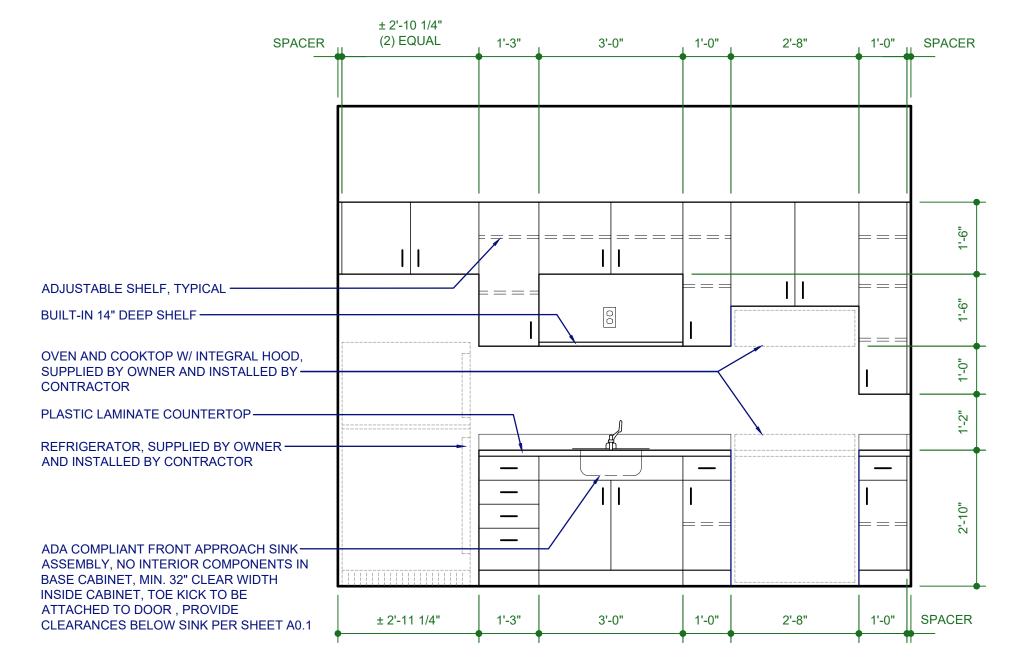
3 Conference Room_____

2'-0"

SPACER

± 11'-6 5/8" - (8) EQUAL





Staff Lounge_

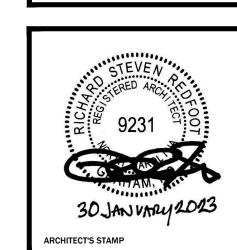
SCALE 1/2" = 1'-0"



THERAPY SERVICES

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DETAILS & CABINETS

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| | | | PLUMBING FIXTURE SCHEDULE | | | |
|--------|--|---|---|------|------|-------|
| SYMBOL | FIXTURE | MANUFACTURER | FITTING | HW | CW | WASTE |
| P1 | TWO PIECE TANK TYPE ADA WATER CLOSET | TOTO CST744EL OR EQUAL BY AMERICAN STANDARD OR KOHLER | TWO-PIECE VITREDUS CHINA TOILET WITH HIGH-PROFILE TANK, ELONGATED FRONT BOWL AND CHROME TRIP LEVER. 1.28 GPF. PROVIDE SC534 OPEN FRONT SEAT LESS COVER. ASME 112.19.2 COMPLIANCE. TOP OF SEAT SHALL BE 17-19 INCHES AFF FOR ADA. LEVER MOUNTED ON WIDE SIDE FOR ADA | - | 1/2" | 3* |
| P2 | WALL MOUNT LAVATORY | TOTO LT307. 4 OR EQUAL BY AMERICAN STANDARD OR KOHLER | VITREDUS CHINA LAVATORY WITH BACKSPLASH COMPLYING WITH ASME 112. 19. 2. TOP OF RIM SHALL BE 34 INCHES AFF FOR ADA. PROVIDE WITH LAV-GUARD PROTECTORS FOR SUPPLY AND DRAIN LINES. PROVIDE JR SMITH 0700 (CONCEALED ARMS) WITH 19' ARMS 0800 (WALL SUPPORT PLATE). USE MOEN 8430 FAUCET. | 1/2" | 1/2" | 2' |
| P3 | 1' DOUBLE CHECK VALVE | WATTS 007M1QT OR EQUAL BY CONBRACO OR WILKINS | ASSEMBLY SHALL CONSIST OF TWO POSITIVE SEATING CHECK MODULES WITH CAPTURED SPRINGS AND RUBBER SEAT DISCS. THE CHECK MODULE SEATS AND SEAT DISCS SHALL BE REPLACEABLE. SERVICE OF ALL INTERNAL COMPONENTS SHALL BE THROUGH A SINGLE ACCESS COVER SECURED WITH STAINLESS STEEL BOLTS. THE ASSEMBLY SHALL ALSO INCLUDE TWO RESILIENT SEATED ISOLATION VALVES; FOUR TOP MOUNTED, RESILIENT SEATED TEST COCKS. ASSEMBLY SHALL MEET THE REQUIREMENTS OF ASSE 1015 AND AWWA C510 | - | 1' | - |
| P4 | SINK SINGLE BOWL | JUST MFG SL-ADA-2125-A-GR DR EQUAL BY FRANKE, ELKAY DR MDEN | TOP MOUNTED 18 GA STAINLESS STEEL. MAX BOWL DEPTH 6 INCHES FOR WHEEL CHAIR ACCESSIBLITY-USE JUST MFG FAUCET SET JPD-1550 OR EQUAL BY MOEN, DELTA OR KOHLER. | 1/2* | 1/2" | 2* |
| P5 | THERMOSTATIC MIXING VALVE | WATTS LFMMV OR EQUAL BY LAWLER OR LEONARD VALVE | ASSE STANDARD 1069 OR 1070 APPROVED WITH 1/2 INCH FEMALE NPT INLET AND OUTLET CONNECTIONS, BRASS BODY, AND INTEGRAL MOUNTING HOLES. TAMPER RESISTANT THERMOPLASTIC ENCLOSURE. SINGLE REPLACEABLE CARTRIDGE DESIGN. | 1/2* | 1/2" | - |
| P6 | REFRIGERATOR VALVE BOX | DATEY OR APPROVED EQUAL | HIGH IMPACT POLYSTYRENE BOX WITH 1/4 TURN BRASS BALL VALVE. COMPLIANT WITH NSF 61, SECTION 9. | - | 1/2" | - |
| P7 | EXPANSION TANK | AMTROL ST-5 OR EQUAL BY WATTS OR BELL & GOSSETT | INSTALL ON COLD WATER LINE BETWEEN WATER HEATER AND RPZ | - | 3/4" | _ |
| P8 | MOP SINK | FIAT MSB2424 OR EQUAL BY FLORESTONE OR STERN WILLIAMS | DUTSIDE DIMENSIONS OF 24 X24 X10. 10 INCHHIGH WALLS WITH NOT LESS THAN 1 INCH WIDE. STAINLESS STEEL DRAIN BODY DESIGNED TO PROVIDE FOR A CAULK CONNECTION OR QDC-3 JOINT TO A 3 INCH DRAIN PIPE. INCLUDE A COMBINATION DOME STRAINER AND LINT BASKET OF STAINLESS STEEL. PROVIDE 830-AA CHROME PLATED SERVICE FAUCET WITH VACUUM BREAKER, INTEGRAL STOPS, ADJUSTABLE WALL BRACE, PAIL HOOK AND 3/4 INCH HOSE THREAD ON SPOUT. | 1/2* | 1/2" | 3* |
| P9 | DRINKING FOUNTAIN | DASIS PG8ACSL DR EQUAL BY ELKAY DR STERN WILLIAMS | ADA COMPLIANT FOR ADULT AND CHILD. 8.0 GPH OF 50°F WATER AT 90°F AMBIENT. PROVIDE ACCESSORY APRON FOR ADA COMPLIANCE AS NECESSARY | - | 3/8" | 2* |
| P10 | HOT WATER RE-CIRCULATION PUMP | GRUNDFOS MODEL UP10-16BU ATLC, | 2 GPM AT 2.5 FT. HEAD WITH LINE CORD, TIMER AND AQUASTAT AND CHECK VALVE. | 3/4" | 3/4" | - |
| FCO | FLOOR CLEANOUT | ZURN, WATTS, JR SMITH | EPDXY COATED CAST IRON FLOOR CLEANOUT WITH ROUND ADJUSTABLE GASKETED NICKEL BRONZE TOP, REMOVABLE GAS TIGHT GASKETED BRASS CLEANOUT PLUG, AND NO HUB INLET. | _ | _ | 4" |
| AAV | AIR ADMITTANCE VALVE | STUDOR REDIVENT OR APPROVED EQUAL | ANSI/ASSE 1051 LISTED. NSF STANDARD 14. PROVIDE PVC OR ABS CONNECTOR AS NECESSARY. CONNECT VALVE TO PIPING PER MANUFACTURER. INSTALL IN THE VERTICAL, UPRIGHT POSITION AFTER ROUGH-IN AND PRESSURE TESTING OF THE SYSTEM. PROVIDE WALL BOX IF NOT ABOVE CEILING OR OTHERWISE CONCEALED. | - | - | 2* |

| | | | PLUMBING LINE | S SIZING TAE | BLE | | | | |
|-----------------------------|-------------|-----|------------------|--------------|------------|---------|--|--------------------------|--------------------------|
| FIXTURE TYPE | DCCUPANCY | QTY | DRAINAGE FIX | KTURE UNITS | | WATER | SUPPLY FIXTU | RE UNITS | |
| | • | | EACH | TOTAL | CW | HW | CW & HW | HW TOTAL | TOTAL |
| WATER CLOSET (FLUSH TANK) | PUBLIC | 3 | 4. 00 | 12. 00 | 5. 00 | 0, 00 | 5. 00 | 0. 00 | 15. 00 |
| LAVATORY | PUBLIC | 13 | 1. 00 | 13. 00 | 1. 50 | 1. 50 | 2. 00 | 19. 50 | 26. 00 |
| WASHING MACHINE | PRIVATE | 0 | 2. 00 | 0. 00 | 1. 00 | 1. 00 | 1. 40 | 0. 00 | 0, 00 |
| MOP SINK | PUBLIC | 1 | 2. 00 | 2. 00 | 2. 25 | 2, 25 | 3, 00 | 2. 25 | 3, 00 |
| EMERGENCY FLOOR DRAIN | PUBLIC | 1 | 0.00 | 0. 00 | 0. 00 | 0. 00 | 0, 00 | 0. 00 | 0. 00 |
| DEMAND CIVILIDE | CDM | OTV | TOTAL COM | | | | TOTAL PEU | 07 | 0 |
| DEMAND FIXTURE | GPM | QTY | TOTAL GPM | | | | TOTAL DFU | 27. | 0 |
| DEMAND FIXTURE REFRIGERATOR | GPM 0. 5 | QTY | TOTAL GPM 0. 50 | | | | TOTAL DFU | 27. 21. 8 | 0 44. 0 |
| | | | | | | | | | 44. 0 |
| | | | | | | OTHER F | TOTAL WFSUs | 21. 8 | |
| | | | | | | OTHER F | TOTAL WFSUs | 21. 8 19. 60 0. 00 | 44. 0 27. 70 0. 50 |
| | | | | CD | NNECT TO E | | TOTAL WFSUs GPM IXTURES' GPM TOTAL GPM | 21. 8 19. 60 0. 00 | 44. 0 27. 70 |

DO NOT TAP WATER LINE AHEAD OF DOUBLE CHECK VALVE.

| LINETYPE LEGEND 140 D HOT WATER RECIRCULATING — |
|--|
| 140 D HOT WATER RETURN — · · · · — · · · · · · · · · · · · · |
| HOT WATER SUPPLY · · |
| VENT LINE |

| | | | | ELEC | TRIC WATER HEAT | ER SCHEDULE | | | | | |
|------|---------------|-------|----------------|------|-----------------|-------------|---------|--------|--------|---------|----------|
| MARK | ARK MFG MODEL | | TANK VOL INPUT | | RECOVERY | POV | IER | CONNEC | CTIONS | OPTIONS | |
| MAKK | Mru | MUDEL | GALS | kW | GPH @ 60° ∆T | °F | VOLTAGE | PHASE | HOT | COLD | חבווחוו? |
| WH | RHEEM | ELD40 | 40 | 4. 5 | 30 | 110 | 208 | 1 | 3/4 | 3/4 | 1-5 |

- . PROVIDE GALVANIZED STEEL SAFETY PAN
- UL 174 LISTED PROVIDE ASME LISTED TEMPERATURE AND PRESSURE RELIEF VALVE
- MEET OR EXCEED ENERGY FACTOR REQUIREMENTS OF ASHRAE 90.1-2007
- 5. OR EQUAL BY A.O. SMITH, BRADFORD WHITE, OR STATE

GENERAL PLUMBING NOTES:

- 1. THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PLANS: PC - PLUMBING CONTRACTOR, EC - ELECTRICAL CONTRACTOR, MC - MECHANICAL CONTRACTOR, GC - GENERAL CONTRACTOR,
- FASC FIRE ALARM SYSTEM CONTRACTOR. . "PROVIDE" MEANS TO FURNISH AND INSTALL. THE PLUMBING CONTRACTOR SHALL ALSO INSTALL MATERIALS FURNISHED BY OTHERS AND THE GENERAL CONTRACTOR.
- THE PC SHALL BE RESPONSIBLE FOR A COMPLETE AND OPERATIONAL SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS. 4. ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED AT AN APPROVED LOCATION. PC SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE, THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL REMAIN THE
- AND TURNED OVER TO THE OWNER. ALL MATERIALS USED SHALL BE NEW AND FREE OF DEFECTS. ANY MATERIALS FOUND TO BE DEFECTIVE SHALL BE REPLACED AT NO EXPENSE TO THE OWNER. ALL MATERIALS AND EQUIPMENT SHALL BEAR APPROVAL FROM UL OR AN APPROVED THIRD PARTY AGENCY. WHERE A MANUFACTURER AND MODEL NUMBER IS GIVEN, IT IS TO ESTABLISH A STANDARD OF QUALITY AND NOT TO LIMIT PRODUCTS TO A
- THE ENGINEER WILL BE ACCEPTED. 6. THE PLUMBING SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE 2018 NORTH CAROLINA PLUMBING CODE AND ANY APPLICABLE LOCAL CODES. WHERE A CONFLICT EXISTS BETWEEN THE ABOVE REQUIREMENTS. THE CONTRACTOR SHALL OBTAIN CLARIFICATION FROM THE ENGINEER OR IN THE EVENT ANY PART OF THESE PLANS CONFLICTS WITH THE ABOVE REQUIREMENTS.
- THE PC SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER
- 8. DO NOT SCALE THESE DRAWINGS-REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
- 9. THESE PLANS ARE DIAGRAMMATIC. THE PC SHALL ADJUST THE LOCATIONS OF EQUIPMENT, FIXTURES, PIPING, ETC, TO ACCOMMODATE PLANNED AND ENCOUNTERED INTERFERENCES. THE DRAWINGS DO NOT SHOW ALL BENDS, OFFSETS, AND FITTINGS THAT MAY BE REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. THE PC SHALL MAKE ALLOWANCES FOR SUCH DEVIATIONS AND CONTINGENCIES IN BID TO IMPLEMENT THEM WITHOUT ADDITIONAL COST TO THE OWNER. THE PC SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. CONTRACTOR SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. TO AVOID POTENTIAL CONFLICTS, COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION. ALL
- UNDERGROUND UTILITIES SHALL BE LOCATED PRIOR TO ANY DIGGING. 10. TRENCHING, COMPACTION, AND BACKFILL SHALL BE BY PC AND SHALL BE IN ACCORDANCE WITH SECTION 306 OF THE NC PLUMBING CODE. UNDERGROUND LINES SHALL BE LOCATED SUCH THAT THEY DO NOT ENDANGER FOOTINGS OR FOUNDATION WALLS.
- 11. THE PC SHALL PROVIDE FIRESTOPPING AT ALL PENETRATIONS OF RATED FLOOR/CEILING ASSEMBLIES AND RATED WALL ASSEMBLIES TO PRESERVE OR RESTORE THE FIRE RESISTANCE RATING. SEAL ALL PENETRATIONS USING A UL LISTED SYSTEM FOUND IN THE UL DIRECTORY SPECIFIC TO THE UL LISTING OF THE ASSEMBLY BEING PENETRATED. SEE ARCHITECTURAL PLANS FOR UL RATED ASSEMBLIES
- 12. SYSTEM TESTING SHALL BE PERFORMED BY PLUMBING CONTRACTOR IN ACCORDANCE WITH NORTH CAROLINA PLUMBING CODE, SECTIONS
- ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION'S SPECIFICATIONS AND LOCAL HEALTH DEPARTMENT REGULATIONS. 14. AT THE COMPLETION OF WORK AND PRIOR TO ACCEPTANCE BY
- 15. PC SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE ALL APPLICABLE CONSTRUCTION WASTE IS RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT.
- SHALL COMPLY WITH ASTM B-88. USE BRAZED JOINTS ON ALL COPPER PIPING 1-1/2 INCH AND LARGER. ALL PIPE AND PIPE FITTINGS, INCLUDING VALVES AND FAUCETS, USED IN THE WATER DISTRIBUTION SYSTEM SHALL HAVE A MAXIMUM LEAD CONTENT OF .25-PERCENT AND SHALL CONFORM TO NSF 61. HOT WATER DISTRIBUTION PIPE AND TUBING SHALL HAVE A MINIMUM PRESSURE RATING OF 100 PSI AT 180°F. COLD WATER DISTRIBUTION PIPE AND TUBING SHALL HAVE A MINIMUM PRESSURE RATING OF 160 PSI AT 73.4°F. DO NOT INSTALL PEX OR CPVC PIPING IN RETURN AIR
- BALL, WITH TEFLON SEATS, 150 PSI WSP, AND COMPLY WITH MSS SP-110. GATE VALVES SHALL HAVE BRONZE BODY, CLASS 150, AND COMPLY WITH MSS SP-80. TYPE 2 STANDARD, VALVE BODY SHALL BE ASTM B 62, BRONZE WITH INTEGRAL SEAT AND UNION RING BONNET. ENDS SHALL BE THREADED OR SOLDER WITH COPPER-SILICON BRONZE STEM AND SOLID-WEDGE BRONZE DISC. INSTALL VALVES IN LOCATIONS THAT PERMIT EASY ACCESS WITHOUT DAMAGE TO BUILDING OR FINISHED MATERIALS; PROVIDE ACCESS DOORS IF REQUIRED.

VALVES SHALL BE BY NIBCO, WATTS, OR STOCKHAM.

3. COLD WATER LINES SHALL BE INSULATED WITH 1/2 INCH THICK

ALL INSULATION CONTAINING FIBROUS MATERIALS EXPOSED TO AIRFLOW SHALL BE RATED FOR THAT EXPOSURE OR SHALL BE ENCAPSULATED. INSULATING PROPERTIES FOR ALL MATERIALS SHALL MEET OR EXCEED INDUSTRY STANDARDS. POLYSTYRENE PRODUCTS SHALL MEET ASTM C578 91. ALL INSULATION SHALL BE LOW-EMITTING WITH NOT GREATER THAN 0.05 PPM FORMALDEHYDE EMISSIONS. THE MAXIMUM FLAME SPREAD AND SMOKE DEVELOPED INDEX FOR INSULATION SHALL MEET THE REQUIREMENTS OF THE LOCAL CODES AND ORDINANCES ADOPTED BY THE JURISDICTION IN WHICH THE BUILDING IS LOCATED.

APPLYING INSULATION MATERIALS. INSULATION SHALL BE BY KNAUF,

OF THE APPROVED MANUFACTURER.

- 608.13 OF THE NC PLUMBING CODE AND THE LOCAL AUTHORITY HAVING JURISDICTION. REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTERS SHALL CONFORM TO ASSE 1013 OR AWWA C511. THE RELIEF OPENING SHALL DISCHARGE BY AIR GAP. AIR GAPS SHALL COMPLY WITH ASME A112.1.1 AND AIR GAP FITTINGS WITH ASME A112.1.3. DOUBLE CHECK VALVE ASSEMBLIES SHALL CONFORM TO ASSE 1015 OR AWWA C510. ACCESS TO BACKFLOW PREVENTERS
- PROPERTY OF THE PC UNTIL THE PROJECT HAS BEEN COMPLETED PARTICULAR MANUFACTURER. PRODUCTS DETERMINED TO BE EQUAL BY

 - - THIRD PARTY CERTIFIED; PROVIDE PANS FOR WATER HEATERS IN ACCORDANCE WITH 504.7 OF THE NC PLUMBING CODE. ELECTRICAL CONNECTIONS SHALL BE BY ELECTRICAL CONTRACTOR, PC SHALL COORDINATE WITH EC ON ELECTRICAL CHARACTERISTICS OF THE
 - 10. ALL PUMPS SHALL BE RATED FOR TRANSPORT OF POTABLE WATER. PUMPS IN AN INDIVIDUAL WATER SUPPLY SYSTEM SHALL BE CONSTRUCTED AND INSTALLED SO AS TO PREVENT CONTAMINATION FROM ENTERING THE WATER SUPPLY SYSTEM.
 - SHALL BE PROTECTED UNTIL FINAL CONNECTIONS ARE MADE. 2. ABOVE GRADE DOMESTIC WATER PIPING SHALL BE SLOPED AT A
- SPECIFIC TO THE PROJECT.
- 312.2, 312.3, AND 312.5. 13. PC SHALL DISINFECT THE ENTIRE DOMESTIC WATER PIPING SYSTEM IN
- OWNER. THE PC SHALL CLEAN ALL EXPOSED FIXTURES, MATERIALS, AND EQUIPMENT UNDER THIS CONTRACT.
- 1. ALL OVERHEAD DOMESTIC WATER PIPING SHALL BE TYPE L COPPER WITH 95/5 LEAD FREE SOLDER, AND ALL BELOW GRADE WATER PIPING SHALL BE TYPE K COPPER WITH NO JOINTS. ALL PIPING SHALL HAVE MANUFACTURER'S NAME AND THE APPLICABLE STANDARD TO WHICH IT WAS MANUFACTURED CLEARLY MARKED ON EACH LENGTH. PIPING
- BALL VALVES SHALL HAVE BRASS BODY, FULL PORT, CHROME PLATED
- FIBROUS GLASS INSULATION WITH A FLAME DENSITY RATING LESS THAN 25 AND A SMOKE DENSITY RATING LESS THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. HOT WATER LINES UP TO 2 INCHES DIAMETER SHALL HAVE 1 INCH THICK INSULATION CONFORMING TO THE SAME STANDARD. PIPING LARGER THAN 2 INCHES SHALL RECEIVE 1-1/2 INCH THICK INSULATION. CLOSED CELL RUBBER INSULATION MEETING THE SMOKE AND FLAME RATINGS ABOVE MAY BE SUBSTITUTED FOR FIBROUS GLASS TYPE IF SO DESIRED. INSULATION INSTALLED ON PIPING OPERATING BELOW AMBIENT TEMPERATURES MUST HAVE A CONTINUOUS VAPOR RETARDER. ALL JOINTS, SEAMS AND FITTINGS MUST BE SEALED. ON SYSTEMS OPERATING ABOVE AMBIENT, THE BUTT JOINTS SHOULD NOT BE SEALED. ON COLD SURFACES WHERE A VAPOR SEAL MUST BE MAINTAINED, INSULATION SHALL BE APPLIED WITH A CONTINUOUS, UNBROKEN MOISTURE AND VAPOR RETARDER. ALL HANGERS, SUPPORTS, ANCHORS, OR OTHER PROJECTIONS SECURED TO COLD SURFACES SHALL BE INSULATED AND VAPOR SEALED TO PREVENT CONDENSATION. ALL PIPE INSULATION SHALL BE CONTINUOUS THROUGH WALLS, CEILING OR FLOOR OPENINGS, OR SLEEVES EXCEPT WHERE FIRESTOP OR FIRESAFING MATERIALS ARE REQUIRED. INSULATION SHALL HAVE A FACTORY APPLIED ALL-SERVICE JACKET WITH SELF-SEALING LAP. WHITE-KRAFT PAPER BONDED TO ALUMINUM FOIL AND REINFORCED WITH GLASS FIBERS; CONFORMING TO ASTM C 1136 TYPE 1: VAPOR RETARDER; WITH A SELF-SEALING ADHESIVE. VERIFY THAT PIPING HAS BEEN TESTED, SURFACES ARE CLEAN AND DRY, AND ALL FOREIGN MATERIALS ARE REMOVED BEFORE
- ARMACELL, JOHNS-MANVILLE, OR OWENS-CORNING. 5. FAUCETS AND FIXTURE FITTINGS SHALL CONFORM TO ASME A112.18.1.

- FAUCETS AND FIXTURE FITTINGS THAT SUPPLY DRINKING WATER FOR HUMAN CONSUMPTION SHALL CONFORM TO THE REQUIREMENTS OF NSF 61, SECTION 9. FIXTURE FITTINGS, FAUCETS, AND DIVERTERS SHALL BE INSTALLED AND ADJUSTED SO THAT THE FLOW OF HOT WATER FROM THE FITTINGS CORRESPONDS TO THE LEFT HAND SIDE of the fixture fitting.
- 6. BACKFLOW PREVENTION SHALL BE IN ACCORDANCE WITH SECTION SHALL BE PROVIDED AS SPECIFIED BY THE INSTALLATION INSTRUCTIONS
- 7. FOR BELOW GRADE SANITARY WASTE PIPING, PC SHALL USE SERVICE WEIGHT CAST IRON PIPE WITH COMPRESSION JOINTS (ASTM A 74). USE MINIMUM 2 INCH SIZE UNDERGROUND. SOLID WALL SCHEDULE 40 PVC (ASTM D 2665) WITH SCHEDULE 40 SOCKET TYPE PIPE FITTINGS (ASTM D 3311) MAY ALSO BE USED. DO NOT USE PVC PIPE FOR APPLICATIONS WHERE THE WASTE WATER TEMPERATURE EQUALS OR EXCEEDS 140°F OR IF THE BUILDING HEIGHT EXCEEDS 75 FEET. 8. FOR ABOVE GRADE SANITARY WASTE AND VENT PIPING, USE SERVICE WEIGHT CAST IRON NO-HUB TYPE WITH COUPLINGS (CISPI 301). SOLID WALL SCHEDULE 40 PVC (ASTM D 2665) WITH SCHEDULE 40 SOCKET TYPE FITTINGS (ASTM D 3311) MAY BE USED IF PERMITTED BY LOCAL CODE, EXCEPT IN BUILDINGS EXCEEDING 75 FEET IN HEIGHT. DO NOT INSTALL PVC IN RETURN AIR PLENUMS. ALL VENT AND BRANCH VENT PIPES SHALL BE SO GRADED AND CONNECTED AS TO DRAIN BACK TO
- THE DRAINAGE PIPE BY GRAVITY. BRANCH VENTS EXCEEDING 40 FEET IN DEVELOPED LENGTH SHALL BE INCREASED BY ONE NOMINAL SIZE FOR THE ENTIRE DEVELOPED LENGTH OF THE PIPE. 9. PC SHALL PROVIDE ALL WATER HEATERS (WATTAGE/INPUT AND CAPACITY AS NOTED IN SCHEDULE). ALL WATER HEATERS SHALL BE
- EQUIPMENT PROVIDED.
- WATER SERVICE PIPE AND THE BUILDING SEWER SHALL BE SEPARATED BY 5 FEET OF UNDISTURBED OR COMPACTED EARTH IN ACCORDANCE WITH 603.2. PROVIDE ALL FITTINGS, VALVES, AND OTHER ACCESSORIES AS NECESSARY FOR A COMPLETE INSTALLATION. ALL DOMESTIC WATER PIPING SHALL BE CONCEALED IN FINISHED AREAS. ANY OPEN ENDS MINIMUM OF 1/32 INCH PER FOOT AND ARRANGED TO DRAIN AT LOW
- POINTS. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT. ROUTE PIPING IN AN ORDERLY MANNER-PARALLEL OR PERPENDICULAR TO WALLS WHEN POSSIBLE-AND MAINTAIN GRADIENT. EACH SUPPLY BRANCH LINE SERVING MORE THAN ONE FIXTURE SHALL HAVE A SHUTOFF VALVE INSTALLED TO ISOLATE ALL FIXTURES AND PIECES OF EQUIPMENT SUPPLIED BY THE BRANCH LINE. THE SHUTOFF VALVE
- SHALL BE LABELED AND LOCATED AS CLOSE TO THE CONNECTION TO THE SUPPLY MAIN AND RISER AS POSSIBLE. PROVIDE A FULL-OPEN VALVE ON THE BASE OF EVERY WATER RISER PIPE AND ON THE TOP OF EVERY WATER DOWN-FEED PIPE. PROVIDE VALVE HANDLE EXTENSIONS AS NECESSARY FOR INSULATION.
 - 3. IT SHALL BE THE RESPONSIBILITY OF THE PC TO SUSPEND AND SUPPORT ALL PIPING SYSTEMS FOLLOWING RECOGNIZED ENGINEERING PRACTICES AND USING STANDARD, COMMERCIALLY ACCEPTED PIPE HANGERS AND SUSPENSION EQUIPMENT. ALL FIXTURES, DEVICES, AND EQUIPMENT SHALL BE SECURELY MOUNTED TO THE BUILDING STRUCTURE AND SHALL NOT RELY ON CEILING OR WALL SURFACES FOR SUPPORT. THE SUPPORT ATTACHMENT SHALL SUPPORT THE WEIGHT OF THE FIXTURE OR EQUIPMENT PLUS THE WEIGHT OF THE SUPPORT ATTACHMENT ITSELF. SUPPORT FROM THE TOP CHORD OF THE ROOF JOISTS, GIRDERS, AND BEAMS. THE BOTTOM CHORD IS NOT TO BE USED FOR EQUIPMENT AND PIPING SUPPORT. HANGERS SHALL NOT BE ATTACHED TO CORRUGATED STEEL DECKING, USE STEEL
 - HANGERS FOR STEEL AND PLASTIC PIPE AND COPPER OR COPPER-PLATED HANGERS FOR COPPER PIPE. PROVIDE PROTECTION FOR COPPER PIPING IN CONTACT WITH DISSIMILAR METALS. WHERE COPPER PIPING IS SUPPORTED ON HANGERS WITH OTHER PIPING, PROVIDE A PERMANENT ELECTROLYTIC ISOLATION MATERIAL TO PREVENT CONTACT WITH OTHER METALS. IN GENERAL, HANGERS SHALL BE CLEVIS TYPE, STANDARD WEIGHT. FOR PIPING, HANGER SPACING SHALL BE IN ACCORDANCE WITH TABLE 308.5 OF THE NC PLUMBING CODE.
 - HANGERS AND ACCESSORIES SHALL BE GRINNEL, MASON, OR B-LINE. 4. SLEEVE ALL PIPES PASSING THROUGH PARTITIONS, WALLS, AND FLOORS. SLEEVES IN FLOORS AND INTERIOR WALLS OF POURED IN PLACE CONCRETE, BRICK, TILE, OR MASONRY SHALL BE SCHEDULE 40 STEEL PIPE, MACHINE CUT. SLEEVES IN GYPSUM BOARD WALLS SHALL BE 22 GAUGE, ROLLED GALVANIZED SHEET METAL. TACK WELD ON THE LONGITUDINAL SEAM. PROVIDE SLEEVES WHERE PIPES PASS THROUGH FLOORS AND WALLS ABOVE AND BELOW CEILINGS. PROVIDE SPLIT PIPE SLEEVES IN NEW WALLS BUILT UP AROUND EXISTING PIPES. TACK WELD SPLIT SLEEVES TOGETHER. SLEEVES IN WALLS SHALL BE INSTALLED FLUSH WITH THE WALL. SLEEVES IN FLOORS SHALL EXTEND 3/4 INCH ABOVE THE FLOOR-EXCEPT THEY SHALL BE FLUSH FOR 2 HOUR RATED FLOORS-AND SHALL BE FLUSH WITH THE STRUCTURE BELOW. EACH SLEEVE SHALL HAVE AN INSIDE DIAMETER 1 INCH LARGER THAN THE OUTSIDE DIAMETER OF THE COVERING OF EACH COVERED PIPE TO ALLOW CONTINUOUS INSULATION—BUT NOT LESS THAN TWO PIPE SIZES LARGER THAN EACH UNCOVERED. ANNULAR
 - IN AN APPROVED MANNER. 5. THE TOP OF WATER PIPES INSTALLED BELOW GRADE OUTSIDE THE BUILDING SHALL BE BELOW THE FROST LINE OR A MINIMUM OF 12 INCHES BELOW FINISHED GRADE WHICHEVER IS GREATER. WATER PIPING INSTALLED IN A WALL EXPOSED TO THE EXTERIOR SHALL BE LOCATED ON THE HEATED SIDE OF THE WALL INSULATION. WATER PIPING INSTALLED IN AN UNCONDITIONED UTILITY ROOM OR UNCONDITIONED ATTIC SHALL BE INSULATED TO A MINIMUM OF R6.5

SPACES BETWEEN SLEEVES AND PIPES SHALL BE FILLED OR CAULKED

- DETERMINED IN ACCORDANCE WITH ASTM C 177. 6. HOT WATER PROVIDED TO PUBLIC HAND-WASHING FACILITIES/LAVATORIES SHALL BE TEMPERED WATER DELIVERED THROUGH AN APPROVED WATER-TEMPERATURE LIMITING DEVICE THAT CONFORMS TO ASSE 1070 OR CSA B125.3. 7. INSULATE ALL EXPOSED WASTE AND SUPPLY PIPING UNDER
- LAVATORIES, SINKS, AND ELECTRIC WATER COOLERS WITH THE HANDI-LAV GUARD INSULATION KIT BY TRUEBRO OR EQUAL. 8. POTABLE WATER OUTLETS SHALL BE PROTECTED FROM BACKFLOW IN ACCORDANCE WITH 608.15. PRESSURE TYPE VACUUM BREAKERS SHALL CONFORM TO ASSE 1020 AND SPILPROOF VACUUM BREAKERS SHALL COMPLY WITH ASSE 1056. HOSE-CONNECTION VACUUM BREAKERS SHALL CONFORM TO ASSE 1011, ASSE 1019, ASSE 1035, OR ASSE
- 1052. CONNECTIONS TO BEVERAGE DISPENSERS, COFFEE MACHINES, AND NON-CARBONATED BEVERAGE DISPENSERS SHALL BE PROTECTED BY A BACKFLOW PREVENTER IN ACCORDANCE WITH ASSE 1022. 9. THE PC SHALL INSTALL WATER HAMMER ARRESTORS ON BRANCH LINES WITH QUICK CLOSING VALVES PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. WATER HAMMER ARRESTORS SHALL CONFORM TO ASSE
- 10. THE PC SHALL PROVIDE CHECK VALVES AT ALL FIXTURES WITH THREADED OUTLETS AS REQUIRED BY CODE. TRAP PRIMERS SHALL BE PROVIDED AS SHOWN ON THE PLANS OR AS REQUIRED. 11. ADJUST STOPS AND VALVES FOR INTENDED FLOW RATE TO FIXTURES WITHOUT SPLASHING, NOISE, OR OVERFLOW. 12. BEFORE COMMENCING WORK, CHECK INVERT ELEVATIONS REQUIRED

- FOR SEWER CONNECTIONS, CONFIRM INVERTS, AND VERIFY THESE CAN BE PROPERLY CONNECTED TO WITH SLOPE FOR DRAINAGE AND COVER TO AVOID FREEZING. ONCE INVERTS AND FALL HAVE BEEN ESTABLISHED, AND INSTALL ALL DRAINS, STACKS, VENTS, FLOOR
- DRAINS, AND CLEANOUTS NECESSARY FOR A COMPLETE INSTALLATION. 13. ALL SANITARY SEWER PIPING IS BELOW GRADE OR WITHIN WALLS UNLESS OTHERWISE NOTED. ALL SANITARY VENT PIPING IS ABOVE THE CEILING OR WITHIN WALLS UNLESS OTHERWISE NOTED. SOIL AND WASTE PIPING SHALL BE INSTALLED TO PROVIDE PROTECTION AGAINST FREEZING PER 305.6.1. WASTE AND SOIL LINES LEAVING THE BUILDING
- MUST HAVE A MINIMUM COVER OF 3 INCHES. 14. SOIL AND WASTE LINES 2-1/2 INCHES AND SMALLER SHALL BE SLOPED AT 1/4 INCH PER FOOT MINIMUM. SOIL AND WASTE LINES 3 INCHES TO 6 INCHES IN DIAMETER SHALL BE SLOPED AT 1/8 INCH
- PER FOOT MINIMUM. 15. FOR WATER CLOSET WASTE CONNECTIONS, A 4 INCH BY 3 INCH CLOSET BEND SHALL BE ACCEPTABLE. WHERE A 3 INCH BEND IS UTILIZED ON WATER CLOSETS, A 4 INCH BY 3 INCH FLANGE SHALL BE
- INSTALLED TO RECEIVE THE FIXTURE HORN. 16. FOR PLASTIC PIPE SIZES GREATER THAN 6 INCHES, AND OTHER PIPE SIZES GREATER THAN 4 INCHES, RESTRAINTS SHALL BE PROVIDED FOR DRAIN PIPES AT ALL CHANGES IN DIRECTION AND AT ALL CHANGES IN DIAMETER GREATER THAN TWO PIPE SIZES. BRACES, BLOCKS, RODDING BACKFILL AND OTHER SUITABLE METHODS AS SPECIFIED BY THE
- COUPLING MANUFACTURER SHALL BE UTILIZED. 17. BASES OF STACKS SHALL BE SUPPORTED BY THE BUILDING STRUCTURE, VIRGIN OR COMPACTED EARTH, OR OTHER SUITABLE
- MATERIAL TO SUPPORT THE WEIGHT OF THE PIPING. 18. HORIZONTAL DRAIN PIPES SHALL HAVE CLEANOUTS IN ACCORDANCE WITH 708.10. EXTEND CLEANOUTS TO FINISHED FLOOR OR WALL SURFACE. LUBRICATE THREADED CLEANOUT PLUGS WITH A MIXTURE OF GRAPHITE AND LINSEED OIL. ENSURE CLEARANCE AT ALL CLEANOUTS FOR RODDING OF DRAINAGE SYSTEM. INSTALL FLOOR CLEANOUTS AT AN ELEVATION TO ACCOMMODATE FINISHED FLOOR. EVERY CLEANOUT SHALL BE INSTALLED TO ALLOW CLEANING IN THE DIRECTION OF FLOW OF THE DRAINAGE PIPE OR AT RIGHT ANGLES THERETO. CLEANOUTS ON 6 INCH AND SMALLER PIPES SHALL BE PROVIDED WITH A
- 19. DRAINAGE PIPING FOR FUTURE FIXTURES SHALL TERMINATE WITH AN APPROVED CAP OR PLUG. 20. AIR ADMITTANCE VALVES SHALL BE INSTALLED AFTER THE DWV TESTING REQUIRED BY SECTIONS 312.2 AND 312.3. PROVIDE ACCESS TO ALL AIR ADMITTANCE VALVES PER CODE. INSTALLATION OF ALL AIR ADMITTANCE VALVES SHALL CONFORM TO SECTION 918 OF THE NC

CLEARANCE OF NOT LESS THAN 18 INCHES FOR RODDING.

- PLUMBING CODE. AIR ADMITTANCE VALVES SHALL CONFORM TO ASSE 1050 OR 1051. 21. INDIRECT WASTE PIPING THAT EXCEEDS 2 FEET IN DEVELOPED LENGTH MEASURED HORIZONTALLY, OR 4 FEET IN TOTAL DEVELOPED LENGTH, SHALL BE TRAPPED. THE AIR GAP BETWEEN THE INDIRECT WASTE PIPE AND THE FLOOD LEVEL RIM OF THE WASTE RECEPTOR SHALL BE A
- MINIMUM OF TWICE THE EFFECTIVE OPENING OF THE INDIRECT WASTE 22. THE PC SHALL PROVIDE UNIONS FOR DISASSEMBLY AND SERVICE OF ALL FIXTURES AND OTHER RELEVANT PLUMBING EQUIPMENT. UNIONS
- SHALL BE GROUND-JOINT WITH BRASS SEAT. PROVIDE INSULATING UNIONS AT EACH JUNCTION OF DISSIMILAR MATERIALS. 23. THE PC SHALL ACCURATELY ROUGH-IN ALL FIXTURES ACCORDING TO MANUFACTURER'S INSTALLATION DIMENSIONS AND INSTRUCTIONS. OFFSET ADAPTERS AND FLEXIBLE CONNECTORS ARE NOT ACCEPTABLE. FLUSH HANDLES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREAS FOR ADA COMPLIANCE. INSTALL EACH FIXTURE WITH TRAP EASILY REMOVABLE FOR SERVICING AND CLEANING. SEAL FIXTURES TO WALL AND FLOOR SURFACES WITH SEALANT. SOLIDLY ATTACH WATER CLOSETS TO FLOOR WITH LAG SCREWS. SEAL ALL SELF-RIMMING LAVATORIES AND SINKS (VITREOUS CHINA AND STAINLESS STEEL) WITH A COMMERCIAL GRADE PLUMBER'S PUTTY OR ACRYLIC LATEX CAULK APPLIED TO THE UNDERSIDE OF THE FIXTURE RIM IN A GENEROUS

AMOUNT SO THAT WHEN FIXTURE IS SET, SEALANT SHALL OOZE OUT.

- 24. ALL VENT THRU THE ROOF (VTR) PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PC SHALL PROVIDE FLASHING MATERIAL REQUIRED FOR VTRS. JOINTS AT THE ROOF AND AROUND VENT PIPES, SHALL BE MADE WATER TIGHT BY THE USE OF LEAD. COPPER. GALVANIZED STEEL. ALUMINUM. OR OTHER APPROVED FLASHINGS OR FLASHING MATERIAL. MAINTAIN MINIMUM 10 FEET FROM
- ALL OUTSIDE AIR INTAKES. 25. INSTALL FULL OPEN VALVES PER NC PLUMBING CODE 606.1. ON THE MAIN WATER LINE INTO THE BUILDING. INSTALL CUT OFF VALVES PER NCPC 606.2

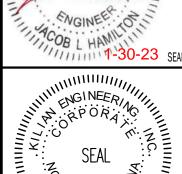


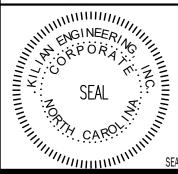
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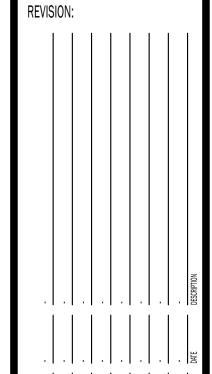
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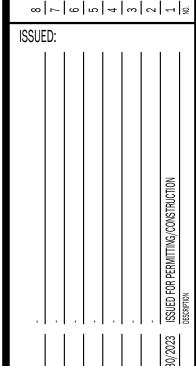
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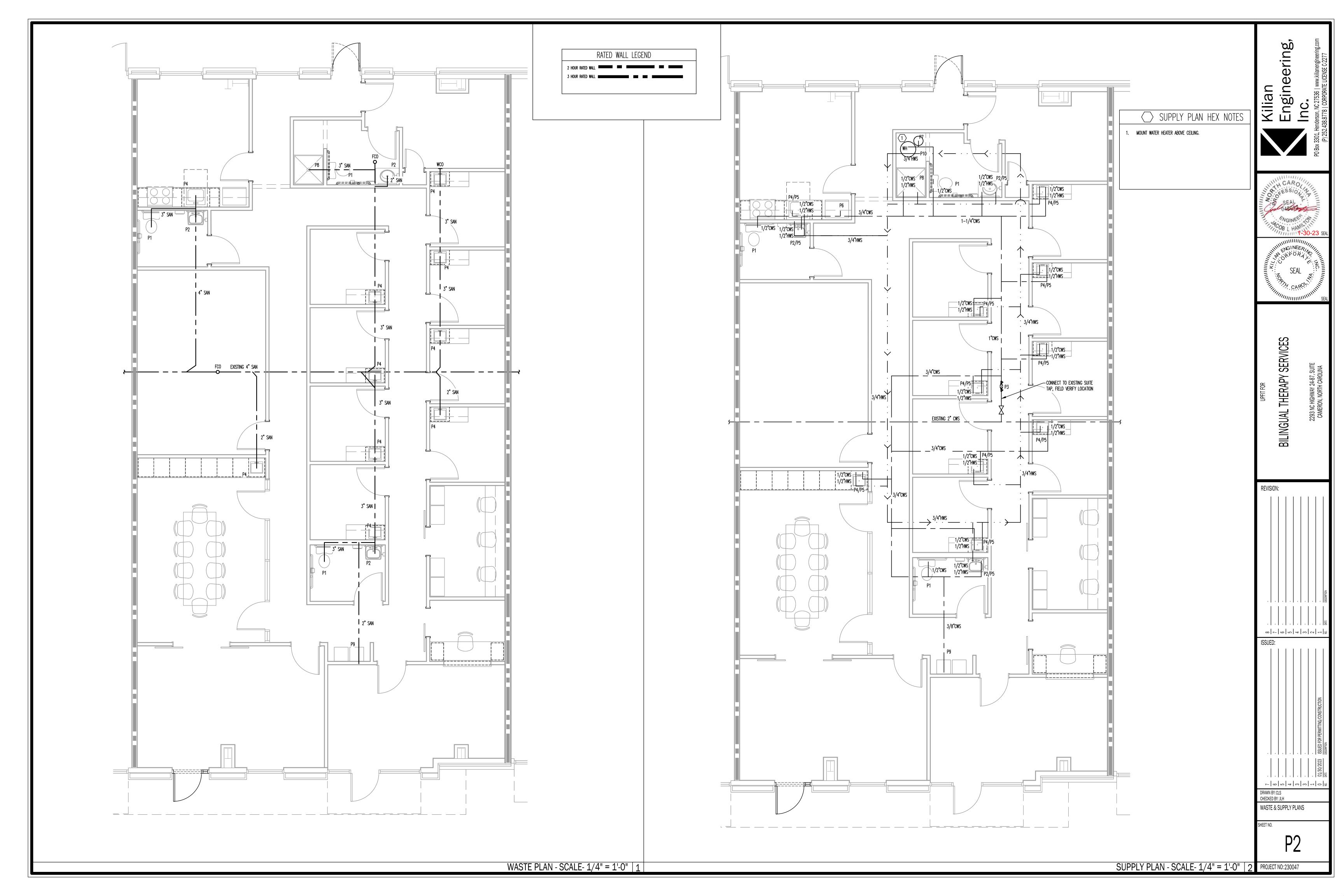


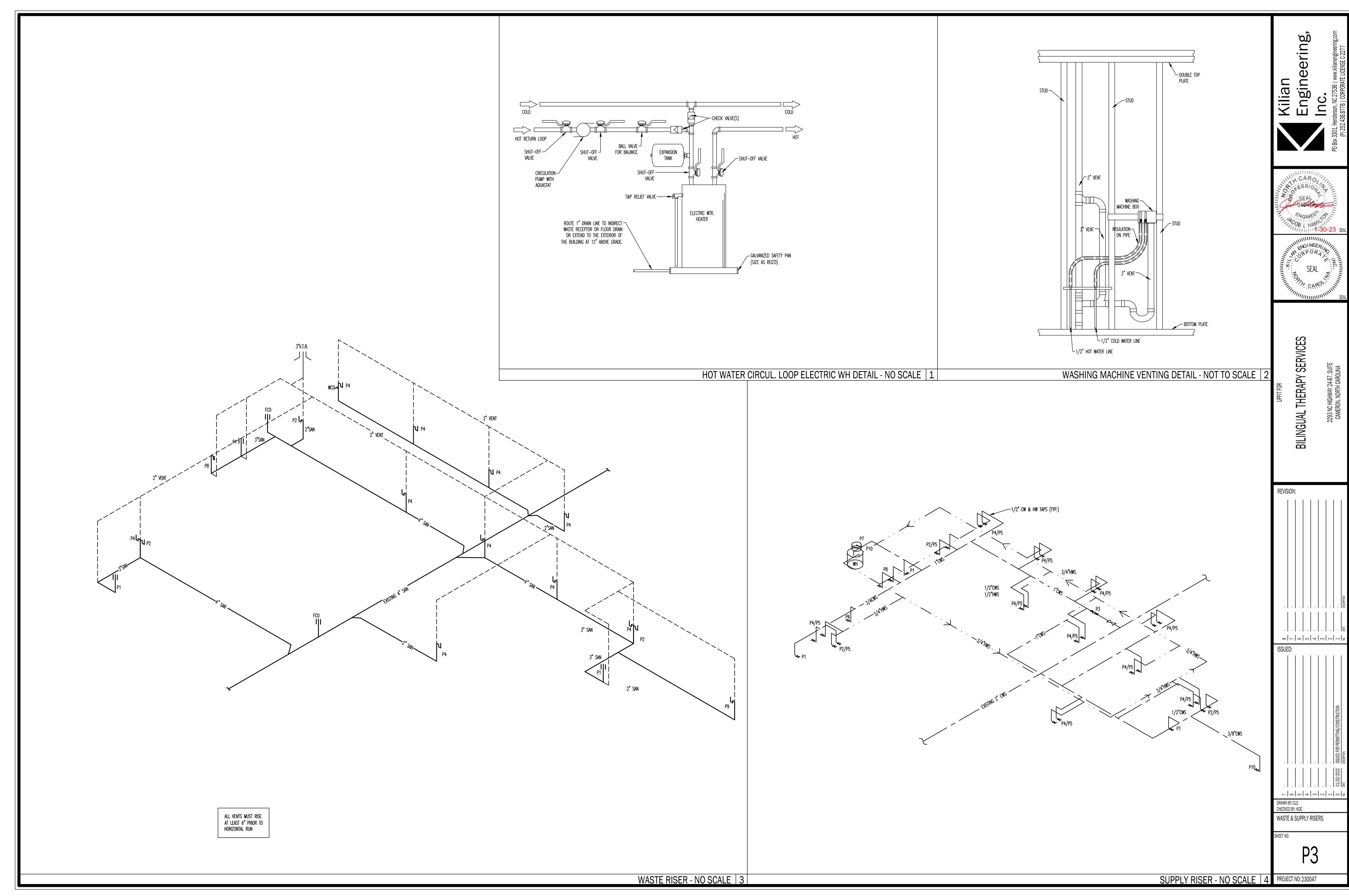


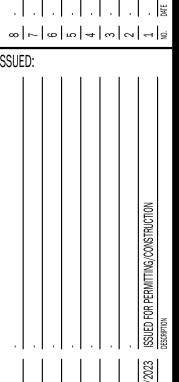
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PLUMBING NOTES & SCHEDULES







GENERAL MECHANICAL NOTES:

- THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PLANS: PC - PLUMBING CONTRACTOR, EC - ELECTRICAL CONTRACTOR, MC - MECHANICAL CONTRACTOR, GC - GENERAL CONTRACTOR.
- FASC FIRE ALARM SYSTEM CONTRACTOR. "PROVIDE" MEANS TO FURNISH AND INSTALL. MC SHALL ALSO INSTALL MATERIALS FURNISHED BY OTHERS AND GENERAL CONTRACTOR AS SHOWN ON THE PLANS OR NECESSARY FOR A COMPLETE INSTALLATION.
- 3. THE MC SHALL BE RESPONSIBLE FOR A COMPLETE AND OPERATING SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS.
- ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED BY THE CONTRACTOR AT AN APPROVED LOCATION. THE MC SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE, THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL REMAIN THE PROPERTY OF THE MC UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE
- THE MC SHALL INSTALL ALL MATERIALS AND EQUIPMENT IN ACCORDANCE WITH THE 2018 NORTH CAROLINA MECHANICAL AND BUILDING CODES AND ANY APPLICABLE LOCAL CODES. WHERE A CONFLICT EXISTS BETWEEN THE ABOVE REQUIREMENTS, THE MC SHALL OBTAIN CLARIFICATION FROM THE ENGINEER OR IN THE EVENT ANY PART OF THESE PLANS CONFLICTS WITH THE ABOVE
- THE MC SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.
- 7. DO NOT SCALE THESE DRAWINGS-REFER TO ARCHITECTURAL SHEETS FOR THE MC SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH METHODS:
- EXISTING CONDITIONS. THE MC SHALL CONTACT THE ENGINEER TO RESOLVE ANY 1. INSULATE DUCTWORK WITH FIBERGLASS DUCT WRAP; INSTALLED R-VALUE SHALL DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. THE MC SHALL COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION. ALL MECHANICAL MATERIALS SHALL BE NEW AND FREE OF DEFECT AND LISTED AND LABELED BY UL OR AN APPROVED THIRD PARTY AGENCY. ANY MATERIALS FOUND TO BE DEFECTIVE SHALL BE REPLACED BY THE MC WITHOUT ADDITIONAL
- COST TO THE OWNER. WHERE A MANUFACTURER AND MODEL NUMBER IS GIVEN. THE CITED EXAMPLE IS INTENDED TO ESTABLISH A STANDARD OF QUALITY AND NOT TO LIMIT PRODUCTS TO A PARTICULAR MANUFACTURER. SUCH EXAMPLES ARE USED TO CONVEY A GENERAL STYLE, TYPE, CHARACTER, AND QUALITY OF THE PRODUCT DESIRED; PRODUCTS DETERMINED TO BE EQUAL BY THE ENGINEER WILL BE ACCEPTED.
- 10. THESE PLANS ARE DIAGRAMMATIC. THE MC SHALL ADJUST THE LOCATIONS OF EQUIPMENT, DUCTS, REGISTERS, GRILLES, ETC, TO ACCOMMODATE PLANNED AND ENCOUNTERED INTERFERENCES. THE DRAWINGS DO NOT SHOW ALL BENDS. OFFSETS, AND FITTINGS THAT MAY BE REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. THE MC SHALL MAKE ALLOWANCES FOR SUCH DEVIATIONS AND CONTINGENCIES IN BID TO IMPLEMENT THEM WITHOUT ADDITIONAL COST TO
- 11. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POWER CONNECTIONS TO THE MECHANICAL EQUIPMENT. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONTROL WIRING.
- 12. IT IS THE MC'S RESPONSIBILITY TO VERIFY THAT ITEMS FURNISHED FOR THIS CONTRACT WILL FIT IN THE SPACE AVAILABLE. THE MC SHALL MAKE FIELD MEASUREMENTS AS NECESSARY TO DETERMINE SPACE REQUIREMENTS. IF THE MC MUST ALTER EQUIPMENT DUE TO SPACE CONSIDERATIONS, THE MC SHALL PROVIDE SIZES AND SHAPES THAT FIT THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS.
- 13. MC SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR REGARDING THE ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT BEING PROVIDED. 14. MAINTAIN CLEARANCES FOR ALL EQUIPMENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS FOR SERVICEABILITY. ALL ROOFTOP EQUIPMENT MUST BE A
- 15. MC SHALL FURNISH A BOUND SET OF OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT TO THE OWNER UPON COMPLETION OF THE PROJECT. MC SHALL PROVIDE ALL DOCUMENTATION TO THE OWNER AS NECESSARY TO SUBMIT FOR FACTORY WARRANTIES.

MINIMUM OF 10 FEET FROM ROOF EDGE.

- CONTRACTOR SHALL PROTECT ALL HVAC EQUIPMENT FROM CONSTRUCTION AND SHEET ROCK DUST DURING CONSTRUCTION. ALL FILTERS SHALL BE REPLACED WITH NEW AT THE COMPLETION OF THE PROJECT. 17. ALL EQUIPMENT INSTALLED ON ROOF MUST BE WITHIN THE ROOF SCREEN.
- 18. IF A ROOF PENETRATION IS REQUIRED AND THE ROOF IS UNDER WARRANTY, USE THE AUTHORIZED ROOFER. PROVIDE DOCUMENTATION.
- 19. ALL PIPING, WIRING, CONDUIT, INSULATION, EQUIPMENT, SUPPORTS, ETC. SHALL BE SUITABLE FOR INSTALLATION IN A RETURN PLENUM AS NECESSARY, COORDINATE WITH OTHER TRADES ON LOCATIONS OF ALL PLENUMS.
- 20. MC SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE ALL APPLICABLE CONSTRUCTION WASTE IS RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT.

- THE MC SHALL PROVIDE ALL DX UNITARY HEATING AND COOLING EQUIPMENT AS SCHEDULED ON THE DRAWINGS. AIR-COOLED SPLIT SYSTEM HEAT PUMPS AND AIR-CONDITIONERS SHALL BE BY TRANE, CARRIER, OR YORK. AIR-COOLED THE MC SHALL PROVIDE FACTORY AND FIELD INSTALLED ACCESSORIES AS SCHEDULED 10. PROVIDE BALANCING DAMPERS AT POINTS ON SUPPLY WHERE BRANCHES ARE OR AS NECESSARY FOR A COMPLETE AND OPERATIONAL HVAC SYSTEM. THE MC SHALL PROVIDE ALL EXHAUST AND SUPPLY FANS AS SCHEDULED. FANS
- SHALL BE BY GREENHECK, LOREN COOK, TWIN CITY, OR PENNBARRY. DUCTWORK IS SHOWN WITH FREE AREA DIMENSIONS. ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA LOW PRESSURE DUCT
- EXTERNAL DUCT INSULATION AND FACTORY-INSULATED FLEXIBLE DUCT SHALL BE LEGIBLY PRINTED OR IDENTIFIED AT INTERVALS NOT GREATER THAN 36 INCHES WITH THE NAME OF THE MANUFACTURER, THE THERMAL RESISTANCE R-VALUE AT THE SPECIFIED INSTALLED THICKNESS AND THE FLAME SPREAD AND SMOKE-DEVELOPED INDEXES OF THE COMPOSITE MATERIALS. ALL DUCT INSULATION 12. FRESH AIR INTAKES SHALL BE INSTALLED ON ALL UNITS AS SHOWN ON PRODUCT R-VALUES SHALL BE BASED ON INSULATION ONLY, EXCLUDING AIR FILMS, VAPOR RETARDERS OR OTHER DUCT COMPONENTS, AND SHALL BE BASED ON TESTED C-VALUES AT 75°F MEAN TEMPERATURE AT THE INSTALLED THICKNESS, IN ACCORDANCE WITH RECOGNIZED INDUSTRY PROCEDURES. THE
- SHALL BE DETERMINED AS FOLLOWS: 4.1. FOR DUCT BOARD, DUCT LINER AND FACTORY—MADE RIGID DUCTS NOT NORMALLY SUBJECTED TO COMPRESSION, THE NOMINAL INSULATION THICKNESS SHALL BE USED.
- 75 PERCENT (25-PERCENT COMPRESSION) OF NOMINAL THICKNESS. FOR FACTORY-MADE FLEXIBLE AIR DUCTS, THE INSTALLED THICKNESS SHALL BE DETERMINED BY DIVIDING THE DIFFERENCE BETWEEN THE ACTUAL
- OUTSIDE DIAMETER AND NOMINAL INSIDE DIAMETER BY TWO. 5. ALL INSULATION CONTAINING FIBROUS MATERIALS EXPOSED TO AIRFLOW SHALL BE RATED FOR THAT EXPOSURE OR SHALL BE ENCAPSULATED. INSULATING PROPERTIES FOR ALL MATERIALS SHALL MEET OR EXCEED INDUSTRY STANDARDS. POLYSTYRENE PRODUCTS SHALL MEET ASTM C578. ALL INSULATION SHALL HAVE FORMALDEHYDE EMISSIONS NOT GREATER THAN 0.05 PPM. THE MAXIMUM FLAME SPREAD AND SMOKE DEVELOPED INDEX FOR INSULATION SHALL MEET THE
- REQUIREMENTS OF THE LOCAL CODES AND ORDINANCES ADOPTED BY THE JURISDICTION IN WHICH THE BUILDING IS LOCATED. MASTIC USED TO SEAL DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A-95 OR UL 181B-98. MAINTAIN AMBIENT TEMPERATURES AND CONDITIONS REQUIRED BY MANUFACTURER OF ADHESIVES, MASTICS, AND INSULATION CEMENTS. DO NOT INSTALL DUCT SEALANT WHEN
- TEMPERATURES ARE LESS THAT THOSE RECOMMENDED BY THE SEALANT MANUFACTURER. ALL ADHESIVES AND SEALANTS SHALL HAVE VOC CONTENT BELOW 20 GRAMS PER LITER AND WHICH MEET THE REQUIREMENTS OF THE MANUFACTURER OF THE PRODUCTS BEING ADHERED OR INVOLVED. ADHESIVES AND SEALANTS SHALL
- CONTAIN NO HEAVY METALS OR FORMALDEHYDE. FACTORY-MADE AIR DUCTS AND CONNECTORS SHALL COMPLY WITH UL 181-96. FLEXIBLE DUCT SHALL BE UL LISTED CLASS 0 OR CLASS 1, INSULATED, AND COMPLY WITH UL 181. FLEXIBLE DUCT SHALL BE FACTORY FORMED, COMPOSED OF SPIRAL WOUND CORROSION RESISTANT WIRE BONDED TO AN INNER FABRIC LINER, DUCT SHALL BE FACTORY INSULATED WITH A FOIL VAPOR BARRIER JACKET. CONNECT TO RIGID DUCT WITH SPIN-IN FITTING AND DAMPER. FLEXIBLE DUCTS AND AIR CONNECTORS SHALL NOT PASS THROUGH ANY FIRE RESISTANCE RATED
- 10. THE MC SHALL PROVIDE ALL DIFFUSERS GRILLES, LOUVERS, AND OTHER AIR DISTRIBUTION OUTLETS AND INLETS. LOUVERS, GRILLES, AND DIFFUSERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, FOR LAY-IN CEILINGS, INSTALL SUPPORT FROM THE STRUCTURE

FOR EACH DIFFUSER OR DAMPER. AIR DISTRIBUTION OUTLETS AND INLETS SHALL BE BY HART & COOLEY, PRICE, METAL—AIRE, NAILOR, OR CARNES. 11. AIR FILTERS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 605 OF THE

2018 NC MECHANICAL CODE.

12. THE MC SHALL PROVIDE ALL REFRIGERATION PIPING. ALL PIPE AND FITTINGS SHALL BE TYPE ACR HARD COPPER TUBING WITH SWEAT FITTINGS. REFRIGERATION LINES SHALL BE RUN NEATLY. WHERE A GROUP OF LINES ARE RUN, TRAPEZE HANGERS MAY BE USED. DO NOT USE CHAIN OR WIRE HANGERS. WRAP TUBING WITH RUBBER TAPE AT EACH CLAMP OR HANGER. FOR COVERED PIPES, HANGERS SHALL FIT AROUND THE OUTSIDE OF THE COVERING WITH 12 GAUGE GALVANIZED STEEL SHIELDS OF A LENGTH EQUAL TO THE OUTSIDE DIAMETER OF THE INSULATION AND COVERING 3/4 OF THE CIRCUMFERENCE OF THE INSULATION. SAGS SHALL NOT BE PERMISSIBLE. HORIZONTAL LINES SHALL PITCH DOWN NOT LESS THAN 1 INCH IN 40 FEET. INSULATE WITH 1 INCH CLOSED CELL ARMAFLEX TYPE INSULATION WITH A FLAME DENSITY RATING LESS THAN 25 AND A SMOKE DENSITY RATING LESS THAN 50. ALL JOINTS AND SPLICES IN INSULATION SHALL BE TAPED AND AIR TIGHT. SOLDER REFRIGERATION LINES USING 15 PERCENT SILVER SOLDER AND EVACUATE LINES TO 300 MICRONS. PROVIDE MOISTURE INDICATING SIGHT GLASS AND FILTER DRYER IN LIQUID LINE. PROVIDE OIL TRAPS AND DOUBLE RISERS IN REFRIGERANT SUCTION AND HOT GAS LINES WHERE REQUIRED TO PREVENT OIL SLUGGING AT THE COMPRESSOR AND INSURE PROPER LUBRICATION. MC SHALL BE RESPONSIBLE FOR SEALING LINE SET PENETRATIONS OF ANY RATED ASSEMBLIES IN ACCORDANCE WITH A SYSTEM LISTED IN THE UL DIRECTORY FOR THE SPECIFIC ASSEMBLY BEING PENETRATED. SEE ARCHITECTURAL PLANS FOR A LIST OF ALL UL FIRE RATED ASSEMBLIES.

BE A MINIMUM R-6. COVERINGS AND LININGS. INCLUDING ADHESIVES WHEN USED, SHALL HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. ALL NEW DUCTWORK SHALL RECEIVE INSULATION ON THE OUTSIDE. INSTALL DUCT WRAP INSULATION WITH FACING OUTSIDE SO THAT TAPE FLAP OVERLAPS INSULATION AND FACING OF ADJACENT PIECE OF DUCT WRAP. INSULATION SHALL BE TIGHTLY BUTTED. FOR RECTANGULAR DUCTS. INSTALL SO INSULATION IS NOT EXCESSIVELY COMPRESSED AT DUCT CORNERS. STAPLE SEAMS APPROXIMATELY 6 INCHES ON CENTER WITH OUTWARD CLINCHING STAPLES. SEAL SEAMS WITH PRESSURE SENSITIVE TAPE MATCHING THE FACING. FOR RECTANGULAR DUCTS 24 INCHES IN WIDTH OR GREATER. SECURE DUCT WRAP TO THE BOTTOM OF THE DUCT WITH MECHANICAL FASTENERS SPACED 18 INCHES ON CENTER TO PREVENT SAGGING OF INSULATION. ADJACENT SECTIONS OF DUCT WRAP SHALL BE TIGHTLY BUTTED WITH THE 2 INCH TAPE FLAP OVERLAPPING. ALL TEARS, PUNCTURES. ETC. OF THE DUCT WRAP INSULATION SHALL BE SEALED WITH TAPE OR MASTIC TO PROVIDE A VAPOR TIGHT SYSTEM. INSULATION SHALL BE BY KNAUF INSULATION, OWENS CORNING CORP, OR CERTAINTEED CORPORATION. VERIFY THAT DUCTS HAVE BEEN TESTED BEFORE APPLYING INSULATION MATERIALS. VERIFY THAT DUCT SURFACES ARE CLEAN, DRY AND FREE OF FOREIGN MATERIAL PRIOR TO INSULATING. DUCT COVERINGS SHALL NOT PENETRATE A WALL OR FLOOR REQUIRED TO HAVE A FIRE—RESISTANCE RATING OR REQUIRED TO BE FIRE

WHERE DUCTS ARE CONNECTED TO EXTERIOR WALL LOUVERS AND DUCT OUTLET IS SMALLER THAN LOUVER FRAME, PROVIDE BLANK-OUT PANELS SEALING LOUVER AREA AROUND DUCT. USE SAME MATERIAL AS DUCT, PAINTED BLACK ON EXTERIOR

SIDE; SEAL TO LOUVER FRAME AND DUCT. PROVIDE DUCT ACCESS DOORS FOR INSPECTION AND CLEANING BEFORE AND AFTER FILTERS, COILS, FANS, AUTOMATIC DAMPERS, AT FIRE DAMPERS, COMBINATION FIRE AND SMOKE DAMPERS.

CONSTRUCT T's, BENDS, AND ELBOWS WITH RADII OF NOT LESS THAN 1-1/2 TIMES THE WIDTH OF THE DUCT ON CENTERLINE. WHERE NOT POSSIBLE AND WHERE RECTANGULAR ELBOWS MUST BE USED, PROVIDE TURNING VANES. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 15 DEGREES DIVERGENCE; MAXIMUM OF 30 DEGREES DIVERGENCE UPSTREAM OF EQUIPMENT AND 45 DEGREES CONVERGENCE DOWNSTREAM.

IT SHALL BE THE RESPONSIBILITY OF THE MC TO SUSPEND AND SUPPORT ALL EQUIPMENT. DUCTWORK, DIFFUSERS, AND OTHER MATERIALS FOLLOWING RECOGNIZED ENGINEERING PRACTICES AND USING STANDARD, COMMERCIALLY ACCEPTED HANGERS AND SUSPENSION EQUIPMENT. ALL HVAC EQUIPMENT SHALL BE SECURELY MOUNTED TO THE BUILDING STRUCTURE AND SHALL NOT RELY ON CEILING OR WALL SURFACES FOR SUPPORT. THE SUPPORT ATTACHMENT SHALL SUPPORT THE WEIGHT OF THE EQUIPMENT PLUS THE WEIGHT OF THE SUPPORT ATTACHMENT ITSELF. SUPPORT FROM THE TOP CHORD OF THE ROOF JOISTS, GIRDERS. AND BEAMS. THE BOTTOM CHORD IS NOT TO BE USED FOR EQUIPMENT OR PIPING SUPPORT. HANGERS SHALL NOT BE ATTACHED TO CORRUGATED STEEL DECKING

DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA AT INTERVALS NOT EXCEEDING 10 FEET. DUCTS 36 INCHES OR LARGER SHALL HAVE TRAPEZE TYPE HANGERS SUSPENDED WITH THREADED ROD. SUPPORT DUCTS FROM BAR JOISTS, GIRDERS, OR BEAMS.

CHECK LOCATIONS OF AIR OUTLETS AND INLETS AND MAKE NECESSARY ADJUSTMENTS IN POSITION TO CONFORM WITH ARCHITECTURAL FEATURES, SYMMETRY, AND LIGHTING ARRANGEMENT. COORDINATE WITH SPRINKLER CONTRACTOR IF APPLICABLE.

TAKEN FROM LARGER DUCTS AS REQUIRED FOR AIR BALANCING. INSTALL MINIMUM 2 DUCT WIDTHS FROM DUCT TAKE-OFF. PROVIDE BALANCING DAMPERS ON DUCT TAKE-OFFS TO DIFFUSERS. AND REGISTERS. REGARDLESS OF WHETHER DAMPERS ARE SPECIFIED AS PART OF THE DIFFUSER OR REGISTER ASSEMBLY. ADJUST AIR HANDLING AND DISTRIBUTION SYSTEMS TO PROVIDE DESIGN SUPPLY, RETURN, AND EXHAUST AIR QUANTITIES AT SITE ALTITUDE.

MC SHALL INSTALL PROGRAMMABLE THERMOSTATS AS SHOWN ON THE PLANS. THERMOSTAT SHALL BE MOUNTED AT 48 INCHES AFF. THERMOSTATS SHALL MEET THE REQUIREMENTS OF SECTION C403.2.4 OF THE 2018 NORTH CAROLINA ENERGY CONSERVATION CODE.

DRAWINGS. MAINTAIN 10 FEET OF DISTANCE BETWEEN FRESH AIR INTAKES AND ALL EXHAUST TERMINATIONS AND PLUMBING VENT THRU ROOFS. 13. MC SHALL INSTALL ALL EXHAUST FANS AND VENT TO THE BUILDING'S EXTERIOR. EC SHALL SWITCH FANS WITH LIGHTS OR ON SEPARATE SWITCH AS SHOWN. INSTALLED THICKNESS OF DUCT INSULATION USED TO DETERMINE ITS R-VALUES 14. P-TRAPS MUST BE INSTALLED ON ALL UNITS. MC SHALL INSTALL AUXILIARY DRAIN PANS UNDER OVERHEAD AIR HANDLERS AND AN AUTOMATIC CUT-OFF FLOAT

P-TRAPS AND CONDENSATE LINES MAY BE PVC WHERE NOT LOCATED IN PLENUMS; OTHERWISE, THEY SHALL BE TYPE M COPPER. FOR DUCT WRAP, THE INSTALLED THICKNESS SHALL BE ASSUMED TO BE 15. INSTALL BACKDRAFT DAMPERS ON FRESH AIR AND EXHAUST DUCTS WHERE THEY PENETRATE THE THERMAL ENVELOPE PER NORTH CAROLINA ENERGY CONSERVATION

SWITCH FOR EACH. P-TRAPS AND CONDENSATE LINES SHALL BE 1 INCH.

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| | TONS | uAS | LIW | N□. | ND. | EER | 17° | H2LL | V/FH | MLA | MUCP | LBS | |
| YORK / YH2E48TB21S | 4 | 7/8 ″ | 3/8" | 1 | 1 | 14. 3/10. 5 | 2. 4? | 7. 5 | 208/1 | 26. 1 | 45 | 215 | 1, 5, 6, 8-10 |
| | | MFG / MODEL # CAPACITY TONS | MFG / MDDEL # CAPACITY TONS GAS | MFG / MODEL # NOMINAL CAPACITY GAS LIQ | $ \frac{NDMINAL}{CAPACITY} \underbrace{ \frac{REF LINES}{CAPACITY} }_{GAS} \underbrace{ \frac{CDMPRESSDR}{ND.} }_{ND.} $ | MFG / MODEL # NOMINAL CAPACITY GAS LIQ NOL FAN | MFG / MODEL # CAPACITY TONS GAS LIQ COMPRESSOR COND. FAN SEER NO. NO. EER | $ \frac{\text{NDMINAL CAPACITY}}{\text{TDNS}} = \frac{\text{REF LINES}}{\text{GAS}} = \frac{\text{MDTDRS}}{\text{CDMPRESSDR}} = \frac{\text{EFFICIENCIES}}{\text{CDND. FAN}} = \frac{\text{CDP}}{17^{\circ}} $ | $ \frac{\text{NDMINAL CAPACITY}}{\text{TDNS}} = \frac{\text{REF LINES}}{\text{COMPRESSOR}} = \frac{\text{COND. FAN}}{\text{COND. FAN}} = \frac{\text{COP}}{17^{\circ}} = \text{$ | $ \frac{NDMINAL}{CAPACITY} + \frac{REF\ LINES}{GAS} + \frac{NDH\ DDL\ FAN}{DDL} + \frac{REF\ LINES}{NDL} + \frac{CDMPRESSDR\ CDND\ FAN}{NDL} + \frac{CDP}{NDL} + \frac{CDP}{CPP} + \frac{CDP}{$ | $ \frac{NDMINAL}{CAPACITY} \underbrace{ \begin{array}{c} REF\ LINES \\ CAPACITY \end{array}}_{TDNS} \underbrace{ \begin{array}{c} REF\ LINES \\ CDMPRESSOR \end{array}}_{NDL} \underbrace{ \begin{array}{c} CDND.\ FAN \\ SEER \end{array}}_{NDL} \underbrace{ \begin{array}{c} CDP \\ e \\ 17° \end{array}}_{17°} \underbrace{ \begin{array}{c} NDH\ DCAMPESSOR \\ NCAMPESSOR \end{array}}_{NDL} \underbrace{ \begin{array}{c} CDND.\ FAN \\ NDL \end{array}}_{NDL} \underbrace{ \begin{array}{c} CDP \\ e \\ 17° \end{array}}_{NP} \underbrace{ \begin{array}{c} NDH\ DCAMPESSOR \\ NDL \end{array}}_{NDL} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} CDP \\ e \\ 17° \end{array}}_{NP} \underbrace{ \begin{array}{c} NDH\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} CDP \\ e \\ 17° \end{array}}_{NP} \underbrace{ \begin{array}{c} NDH\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR \end{array}}_{NDL\ DCAMPESSOR} \underbrace{ \begin{array}{c} NDL\ DCAMPESSOR \\ NDL\ DCAMPESSOR$ | $ \frac{\text{NDMINAL CAPACITY}}{\text{TDNS}} = \frac{\text{REF LINES}}{\text{GAS}} = \frac{\text{MDTDRS}}{\text{CDMPRESSDR}} = \frac{\text{EFFICIENCIES}}{\text{CDND. FAN}} = \frac{\text{EFFICIENCIES}}{\text{EFFICIENCIES}} = \frac{\text{ELECTRICAL}}{\text{ELECTRICAL}} = \frac{\text{ELECTRICAL}}{\text{MDCP}} $ | $ \frac{\text{NDMINAL CAPACITY}}{\text{TONS}} = \frac{\text{REF LINES}}{\text{GAS}} = \frac{\text{MDTDRS}}{\text{LIQ}} = \frac{\text{MDTDRS}}{\text{DID.}} = \frac{\text{EFFICIENCIES}}{\text{EER}} = \frac{\text{CDP}}{\text{PQ}} = \frac{\text{CDP}}{17^{\circ}} = \frac{\text{ELECTRICAL}}{\text{ND.}} = \frac{\text{ELECTRICAL}}{\text{ND.}} = \frac{\text{NDMINAL COMPRESSOR}}{\text{ELIQ}} = \frac{\text{CDMPRESSOR}}{\text{ND.}} = \frac{\text{CDND. FAN}}{\text{EER}} = \frac{\text{CDP}}{17^{\circ}} = \frac{\text{PQ}}{\text{ND.}} = \frac{\text{NDMINAL CAPACITY}}{\text{ND.}} = \frac{\text{ELECTRICAL}}{\text{MDCP}} = \frac{\text{NDMINAL CAPACITY}}{\text{ELBS}} = \frac{\text{ELECTRICAL}}{\text{ELBS}} = \frac{\text{ELECTRICAL}}{ELBS$ |

| SPLIT SYSTEM AIR HANDLER SCHEDULE | | | | | | | | | | | | | | | | | |
|-----------------------------------|-----------------------|----------|--------|---------|--------|-------|--------|-----------------|--------|-------------|---------|----------|---------------|---------|------|----------|-----------|
| | NE | | AIR | FLOW | FAN MO | TORS | H | EATING CAPACITY | | COOLI | ng capa | CITY | ELE | CTRICAL | | - WEIGHT | |
| MARK | MFG / MODEL # | CAPACITY | SUPPLY | MIN. DA | SUPPLY | ESP | DUTPUT | AUX ELEC H | EAT | EAT WB/DB | TOTAL | SENSIBLE | V/PH | MCA | MOCP | WEIGHT | REMARKS |
| | | TONS | CFM | CFM | ND. | in wg | MBH | kW | STAGES | • F | MBH | МВН | 1 //ГП | MCH | MUCF | LBS | |
| AHU-1,2 | YORK / JHETC48GBCS2N1 | 4 | 1600 | 325 | 1 | 0. 5 | 15. 0 | 4. 4 | 1? | 65. 7/79. 1 | 46. 7 | 34. 8 | 208/1 | 30. 7 | 30 | 129 | 2-5, 7-10 |

- PROVIDE CONCRETE PAD FOR UNIT TO SIT ON
- PROVIDE HEAT STRIP DUTDOOR TEMPERATURE LOCKOUT TO PREVENT SUPPLEMENTAL HEAT OPERATION IN RESPONSE TO THE
- THERMOSTAT BEING CHANGED TO A WARMER SETTING. SET NO LOWER THAN 35°F AND NO HIGHER THAN 40°F REPLACE ALL FILTERS AT PROJECT'S COMPLETION
- PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT WITH NIGHT-TIME SET BACK CONSULT MANUFACTURER ON LINE SET LENGTHS EXCEEDING 60FT
- PROVIDE HARD START KIT
- HEATER RATED AT 208V OR EQUAL BY CARRIER, LENNOX, DAIKIN OR TRANE
- ANY EQUIPMENT SUBSTITUTIONS MUST EQUAL OR EXCEED EFFICIENCIES LISTED (RATINGS PER ARI) 10. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES

| | | EXHAUST | FAN SCHEDULE | | | | | |
|--------|-------------------|---------|--------------|-----|---------|-------|-------|-------|
| MARK | MFG / MODEL # | TYPE | ESP (in WG) | CFM | VOLT/PH | FLA | SONES | NOTES |
| EF-1,2 | GREENHECK SP-B110 | CEILING | 0. 40 | 96 | 120/1 | 1. 14 | 2. 0 | 1-3 |
| EF-3 | GREENHECK SP-A200 | CEILING | 0. 40 | 179 | 120/1 | 0. 43 | 3. 0 | 1-3 |

- 1. PROVIDE WITH PITCHED ROOF CURB & CAP FOR FLAT OR SLOPED ROOF, OR HOODED WALL WITH
- BACKDRAFT DAMPER CAP AS APPLICABLE. PROVIDE WITH SQUARE TO ROUND DUCT ADAPTER AS NECESSARY
- 3. OR EQUAL BY LOREN COOK OR PENNBARRY OR TWIN CITY

| | | | REGISTE | R & GRILLE | SCHEDULE | |
|------|---------------|---------|---------|------------|---|-------|
| MARK | MFG | MODEL # | SIZE | MOUNTING | DESCRIPTION | NOTES |
| Α | HART & COOLEY | SAH | 24X24 | LAY-IN | 4-WAY DIFFUSER, BRIGHT WHITE | 1,2 |
| В | HART & COOLEY | ARE | 24X24 | LAY-IN | ALUMINUM, 4 WAY DIFFUSER, BRIGHT WHITE | 1,2 |
| R | HART & COOLEY | RH45T | 24X24 | LAY-IN | ALUMINUM, LAY IN RETURN GRILLE | 1 |

OR EQUAL BY PRICE, METAL-AIRE, CARNES, TITUS OR NAILOR. PROVIDE WITH FOIL LINED, MOLDED INSULATION BLANKET.

MECHANICAL SYSTEM, SERVICE SYSTEMS, AND EQUIPMENT

| METHOD OF COMPLIANCE THERMAL ZONE | PRESCRIPTIV ZONE 3A |
|--------------------------------------|------------------------|
| EXTERIOR DESIGN CONDITIONS | |
| HEATING DESIGN DRY BULB | 22. 9° F |
| COOLING DESIGN DRY BULB | 91. 3°F |
| COOLING DESIGN WET BULB | 74. 7°F |
| INTERIOR DESIGN CONDITIONS | |
| HEATING DESIGN DRY BULB | 70 ° F |
| COOLING DESIGN DRY BULB | 75 ° F |
| COOLING RELATIVE HUMIDITY | 50% |
| HEATING LOAD: | 28, 770 BTU, |
| SENSIBLE COOLING LOAD: | 36, 975 BTU |
| LATENT COOLING LOAD: | 9. 700 RTIL |

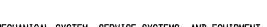
TOTAL BOILER OUTPUT N/A TOTAL CHILLER CAPACITY EQUIPMENT EFFICIENCIES: SEE SCHEDULES

DESIGNER STATEMENT:

TO THE BEST OF MY KNOWLEDGE. THE MECHANICAL DESIGN FOR THIS BUILDING COMPLIES WITH MECHANICAL AND EQUIPMENT REQUIREMENTS OF THE 2018 NORTH CAROLINA STATE BUILDING CODE AND 2018 NORTH CAROLINA ENERGY CONSERVATION

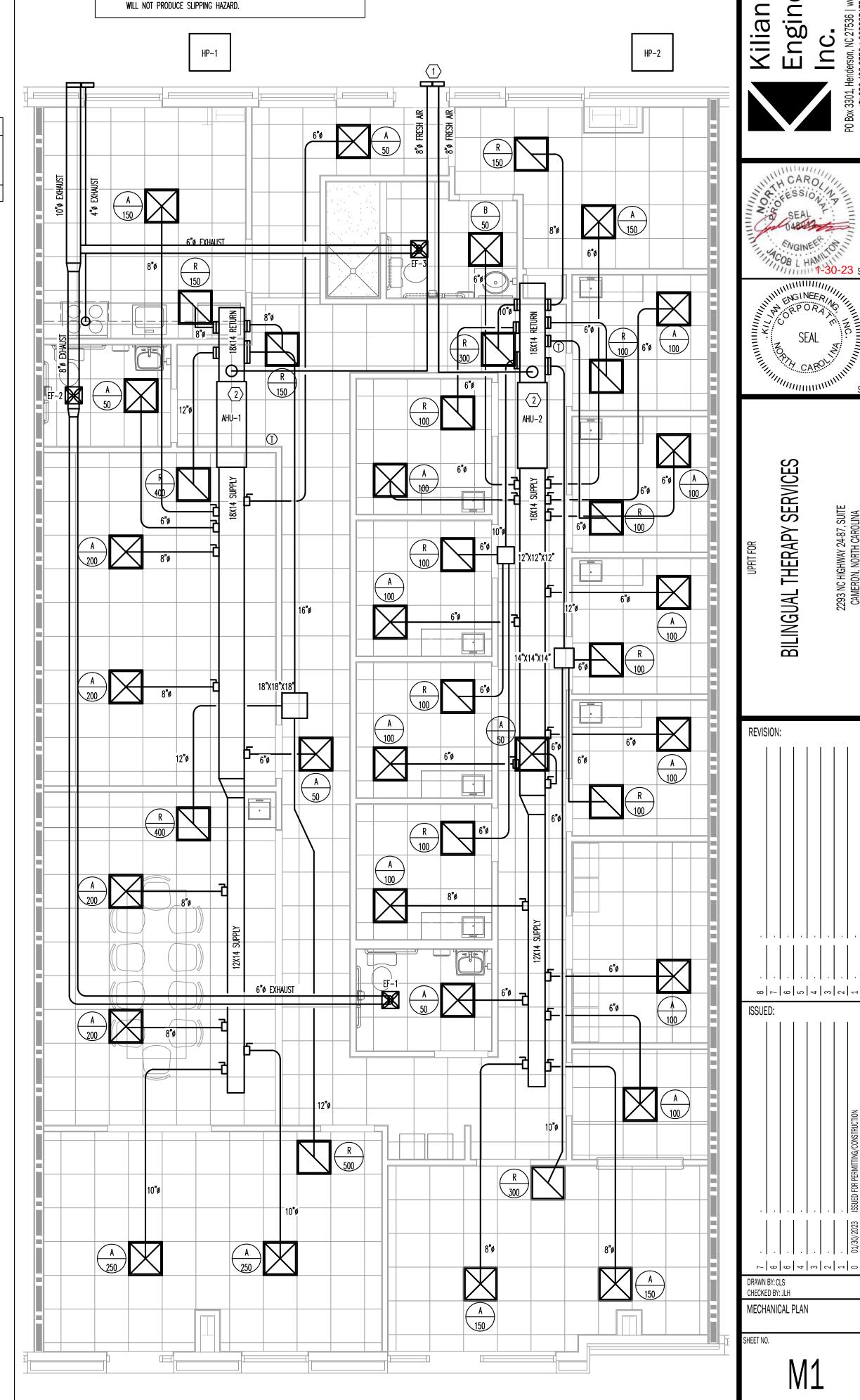
| | | ventilatio | on Calculation (Bilingual S | services Cen | terj | | | | |
|---------------------|---------|--------------|-----------------------------|--------------|------|----------------------|-------|-----|--------------------------|
| Room N | lame(s) | Zone Type | Area (sq.ft.) | Rp | Ra | Default Occupancy | Pz | Ez | Airflow to Zone (cfm) |
| Office | Areas | Office Space | 2010 | 5 | 0.06 | 5 | 10.05 | 0.8 | 1275 |
| Rece | ption | Reception | 52 | 5 | 0.06 | 30 | 1.56 | 0.8 | 250 |
| Stor | rage | Storage | 96 | 0 | 0.12 | 0 | 0.00 | 0.8 | 0 |
| Rest | room | N/A | 166 | 0 | 0 | 0 | 0.00 | 0.8 | 75 |
| | | N/A | 0 | 0 | 0 | 0 | 0.00 | 0.8 | 0 |
| | | | Maximum Zp: | 0.1675 | | | | | |
| K-12 School? | No | | Ev: | 0.9 | | | | | |
| | | | Actual System Population: | 15 | | | | | |
| Uncorrected Intake | | 210 cfm | | | | | | | |
| Outdoor Air Intake | | 234 cfm | | | | | | | |
| Percent of Unit Air | 1 | 15% | | | | | | | |

THERMOSTAT LOCATION MOUNT AT 48" A.F.F.



| Theorem of order of the contribution of the contribution | |
|---|---------------------------------------|
| METHOD OF COMPLIANCE THERMAL ZONE | PRESCRIPTIVE ZONE 3A |
| EXTERIOR DESIGN CONDITIONS HEATING DESIGN DRY BULB COOLING DESIGN DRY BULB COOLING DESIGN WET BULB | 22. 9° F 91. 3° F 74. 7° F |
| INTERIOR DESIGN CONDITIONS HEATING DESIGN DRY BULB COOLING DESIGN DRY BULB COOLING RELATIVE HUMIDITY | 70° F 75° F 50% |
| HEATING LOAD: | 28,770 BTU/H |
| SENSIBLE COOLING LOAD: LATENT COOLING LOAD: | 36, 975 BTU/H 9, 700 BTU/H |
| MECHANICAL SPACING CONDITIONING SYSTEM: UNITARY DESCRIPTION OF UNIT(S) BOILER | AIR COOLED DX SEE SCHEDULES N/A |

EQUIPMENT SCHEDULES WITH MOTORS (MECHANICAL SYSTEMS): SEE SCHEDULES



MECHANICAL PLAN HEX NOTES

CONNECT FRESH AIR DUCT TO EXISTING BUILDING FRESH AIR LOUVER WITH

ROUTE CONDENSATE TO EXTERIOR OF BUILDING. TERMINATE IN LOCATION THAT

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COB L HAMIL

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048000

RATED WALL LEGEND

NO RATED WALLS IN JOB SCOPE AND/OR SHOWN ON PLAN VIEWS.

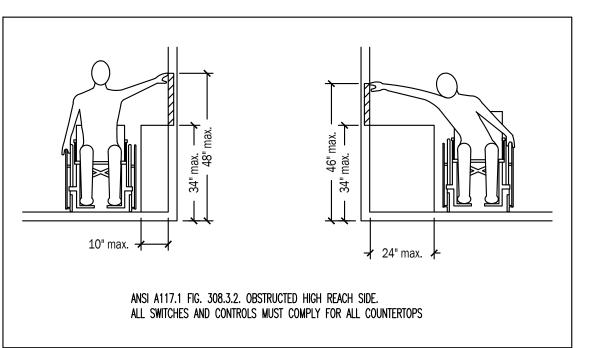
| | | | LED LIGHT | FIXTURE S | CHEDULE | | | | | |
|------|-----------------------------------|---------------|-----------|-----------|---------|---------|----------|---------|----------|----------------------------------|
| MARK | DESCRIPTION | LOUVER/LENS | LAMPS | | VOLTAGE | INPUT | MOUNTING | REMARKS | MFG | MODEL |
| MAKK | DESCRIFITION | LUUVER/ LEINS | TYPE | CCT | VULTAGE | WATTAGE | MUUNTING | KEMAKKS | Mru | PILIPEL |
| Α | LED DOWNLIGHT | - | LED | 4000K | 120 | 17. 5 | RECESSED | 2 | LITHONIA | LDN6-40/15-L06-AR-LSS-MVDLT-EZ10 |
| A | LED DOWNLIGHT | - | LED | 4000K | 120 | 8. 9 | RECESSED | 2 | LITHONIA | LDN6-40/07-L06-AR-LSS-MVDLT-EZ10 |
| DE | EXTERIOR OVAL LED EMERGENCY LIGHT | - | LED | N/A | 120 | 2. 8 | SURFACE | 2 | LITHONIA | AFD-DB-MVDLT-N-SD |
| EX | LED EXIT SIGN W/ BATTERY BACKUP | - | LED | N/A | 120 | 0. 71 | SURFACE | 1,2 | LITHONIA | LQM-S-W-3-R-120/277-EL-N-SD |
| EXH | LED EXIT/COMBO W/ BATTERY BACKUP | - | LED | N/A | 120 | 4. 3 | SURFACE | 1,2 | LITHONIA | LHQM-LED-R-SD |
| EM | DUAL HEAD EMERGENCY FIXTURE | _ | LED | N/A | 120 | 1. 09 | SURFACE | 1, 2 | LITHONIA | ELM2L-M12 |

- 1. FIXTURE SHALL HAVE BATTERY BACKUP FOR 90 MINUTE ILLUMINATION.
- 2. OR EQUAL BY COOPER, PHILIPS OR DAY-BRITE LIGHTING
- 3. FIXTURE IS SELECTABLE. SET COLOR TEMPERATURE TO 4000K AND NOMINAL LUMENS TO 6000LM.
- 4. FIXTURE IS SELECTABLE. SET COLOR TEMPERATURE TO 4000K AND NOMINAL LUMENS TO 5000LM.

| | | LIGHTING DEVICE LEGEND |
|------------------|--------------------------------|--|
| SYMBOL | DESCRIPTION | REMARKS |
| \$ | SINGLE POLE WALL SWITCH | HEAVY DUTY, AC ONLY, COMMERCIAL GRADE GENERAL USE SNAP SWITCH COMPLYING WITH NEMA WD 6 AND WD 1. IVORY PLASTIC BODY WITH TOGGLE HANDLE. 120-277V, 20A. MEET FEDERAL SPECIFICATION W-S-896. |
| \$ _{MD} | OCCUPANCY SENSOR/DIMMER SWITCH | LUTRON MS-Z101 |
| \$ _M | WALL MOUNTED OCCUPANCY SENSOR | LUTRON MS-OPS6M2-DV-VH |
| \$ _P | LOW VOLTAGE SWITCH | LUTRON PJ-2B-GXX-YY |
| O S | CEILING OCCUPANCY SENSOR | LURTON LRF2-DCR2B-P-WH |
| RMJ | POWER PACK | LUTRON RMJS-16R-DV-B |
| 7 | JUNCTION BOX | GALVANIZED METAL BOX CONSTRUCTED IN ACCORDANCE WITH 314.40 OF THE NEC. |
| \mathbb{X} | exhaust fan | VENT FAN, 120V, CFM AS NOTED MC TO PROVIDE AND VENT, EC TO WIRE. |

- <u>General Lighting Sensor Notes:</u>
 1. Install Pico Switches in Locations Shown.
- 2. ALL SWITCHES AND SENSORS TO BE WHITE
- 3. RMJ'S WITH A NUMBER ASSOCIATE WITH THE WALL OR CEILING MOUNT DEVICE
- WITH THE SAME NUMBER (IE RMJ1 ASSOCIATES WITH WW1, WC1, WH1 ETC.)
 4. EC TO ORDER ALL WALL PLATES AND ACCESSORIES FOR COMPLETE INSTALLATION.

| | POWER DEVICE LEGEND | | | | | | | |
|---------------|---------------------------|--|--|--|--|--|--|--|
| SYMBOL | DESCRIPTION | REMARKS | | | | | | |
| > | DATA AND TELEPHONE JACK | PHONE/DATA OUTLET. EC TO INSTALL 3/4" WITH PULL-STRING FROM OUTLET BOX TO ABOVE CEILING FOR FUTURE USE. JACKS AND COMMUNICATION CAGELING BY OTHERS | | | | | | |
| \Rightarrow | DUPLEX RECEPTACLE | NEMA 5-20R, HEAVY DUTY, COMMERCIAL GRADE, 125V, 20A COMPLYING WITH NEMA WD 6 AND WD 1. GFCI OR AFCI IF NOTED. 'WP' DENOTES WEATHERPROOF COVER. 'CH' DENOTES COUNTER HEIGHT. LISTED TAMPERPROOF IF NOTED. MEET FEDERAL SPECIFICATION W-C-596 | | | | | | |
| — | QUAD RECEPTACLE | QUAD RECEPTACLE OF SAME CHARACTERISTICS AS DUPLEX TYPE ABOVE. | | | | | | |
| → | DEDICATED RECEPTACLE | NEMA 5-20R, HEAVY DUTY, COMMERCIAL GRADE, 125V, 20A COMPLYING WITH NEMA WD 6 AND WD 1 UNLESS OTHERWISE NOTED ON PLANS. VERIFY PLUG TYPE PRIOR TO PURCHASE & INSTALLATION GFCI OR AFCI IF NOTED. 'WP' DENOTES WEATHERPROOF COVER. 'CH' DENOTES COUNTER HEIGHT. LISTED TAMPERPROOF IF NOTED. MEET FEDERAL SPECIFICATION W-C-596. MAY BE EITHER SIMPLEX, DUPLEX, OR QUAD. | | | | | | |
| Ф | DUPLEX FLOOR RECEPTACLE | DUPLEX RECEPTACLE OF SAME CHARACTERISTICS AS ABOVE WITH BRASS COVER. MOUNT IN FLOOR. ALL FLOOR BOXES MUST BE LISTED FOR FLOOR APPLICATION. | | | | | | |
| # | QUAD FLOOR RECEPTACLE | QUAD RECEPTACLE OF SAME CHARACTERISTICS AS ABOVE WITH BRASS COVER. MOUNT IN FLOOR. ALL FLOOR BOXES MUST BE LISTED FOR FLOOR APPLICATION. | | | | | | |
| | FUSIBLE DISCONNECT SWITCH | HEAVY DUTY TYPE. TYPE 1 ENCLOSURE IN INTERIOR APPLICATIONS, TYPE 3R ENCLOSURE IN EXTERIOR APPLICATIONS, FUSE ACCORDING TO NAMEPLATE DATA. | | | | | | |
| | DISCONNECT SWITCH | HEAVY DUTY TYPE. TYPE 1 ENCLOSURE IN INTERIOR APPLICATIONS, TYPE 3R ENCLOSURE IN EXTERIOR APPLICATIONS. | | | | | | |
| | JUNCTION BOX | GALVANIZED METAL BOX CONSTRUCTED IN ACCORDANCE WITH 314, 40 OF THE NEC. | | | | | | |



| | <u>CTRICAL SYSTEM AND EQU</u> TIVE _X_ PERFORMAN | | | | | | | | |
|--|---|---------------------|-----------------|--|--|--|--|--|--|
| LIGHTING SCHEDULE: | | | | | | | | | |
| LAMP TYPE REQUIRE | D IN FIXTURE: | SEE LIGHTING LEGEND | | | | | | | |
| NUMBER OF LAMPS P | ER FIXTURE: | SEE LIGHTING LEGEND | | | | | | | |
| BALLAST TYPE USED | IN FIXTURE: | SEE LIGHTING LEGEND | | | | | | | |
| NUMBER OF BALLAST | S IN FIXTURE: | SEE LIGHTING LEGEND | | | | | | | |
| TOTAL WATTAGE PER | FIXTURE: | SEE LIGHTING LEGEND | | | | | | | |
| TOTAL INTERIOR WA | TTAGE SPECIFIED VS | WATTS SPECIFIED | WATTS ALLOWED | | | | | | |
| ALLOWED: | | 2100. 0 2610. 00 | | | | | | | |
| DCCUPANCY | AREA (sf) | ALLOWANCE (W/sf) | WATTAGE ALLOWED | | | | | | |
| HEALTH CARE | 2900 | 0. 90 2610. 00 | | | | | | | |
| TOTAL | 2900 | 2610. 00 | | | | | | | |
| MOTOR HORSEPOWER: NUMBER OF PHASES: MINIMUM EFFICIENC MOTOR TYPE: N/A NUMBER OF POLES: | N/A Y: N/A | | | | | | | | |

FOR THE ADDITIONAL PRESCRIPTIVE REQUIREMENT REQUIRED BY C406 OF 2018 NORTH CAROLINA ENERGY CONSERVATION CODE, WE ARE CHOOSING C406.3 — REDUCED LIGHTING POWER DENSITY.

2100 W SPECIFIED <= 234.9 W (2610.00 W ALLOWED X 90%)

GENERAL ELECTRICAL NOTES:

ADMINICTDATIVE.

- 1. THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PLANS:
 PC PLUMBING CONTRACTOR, EC ELECTRICAL CONTRACTOR,
 MC MECHANICAL CONTRACTOR, GC GENERAL CONTRACTOR,
 FASC FIRE ALARM SYSTEM CONTRACTOR, AHJ AUTHORITY HAVING
- "PROVIDE" MEANS TO FURNISH AND INSTALL. THE ELECTRICAL CONTRACTOR
 SHALL ALSO INSTALL MATERIALS AND EQUIPMENT FURNISHED BY OTHERS
 AND THE GENERAL CONTRACTOR AS REQUIRED.
- 3. EC SHALL PROVIDE LABOR, MATERIALS, EQUIPMENT, AND SERVICES
 NECESSARY AND REASONABLY INCIDENTAL TO INSURE A COMPLETE AND
 OPERATIONAL ELECTRICAL SYSTEM IN ACCORDANCE WITH THESE PLANS AND
 SPECIFICATIONS. MINOR ITEMS, ACCESSORIES, AND DEVICES REASONABLY
 INFERABLE AS NECESSARY FOR THE COMPLETION AND PROPER OPERATION
 OF ANY ELECTRICAL SYSTEM SHALL BE PROVIDED BY THE ELECTRICAL
 CONTRACTOR.
- 4. WORKMANSHIP SHALL BE IN ACCORDANCE WITH NECA 1 "STANDARD
- PRACTICE FOR GOOD WORKMANSHIP IN ELECTRICAL CONTRACTING."

 5. ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED BY THE ELECTRICAL CONTRACTOR AT AN APPROVED LOCATION. THE ELECTRICAL CONTRACTOR SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE, THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL REMAIN THE PROPERTY OF THE ELECTRICAL CONTRACTOR UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED
- OVER TO THE OWNER.

 THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS,
 FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK
 UNDER THIS CONTRACT.
- DO NOT SCALE THESE DRAWINGS—REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.

 TRADE NAMES AND MANUFACTURERS ARE SPECIFIED TO ESTABLISH A QUALITY STANDARD. SUBSTITUTIONS SHALL BE PERMITTED IF APPROVED BY
- THE ENGINEER PRIOR TO INSTALLATION. ALL LISTED MODEL NUMBERS SHALL BE VERIFIED WITH THE MANUFACTURER FOR PROPER APPLICATION OF EQUIPMENT.

 THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. THE ELECTRICAL CONTRACTOR
- THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. THE ELECTRICAL CONTRACTOR SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION.
- CONSTRUCTION.

 10. GROUNDING AND BONDING SHALL BE PER NEC ARTICLE 250. THE RACEWAY SYSTEM SHALL NOT BE RELIED UPON FOR GROUNDING CONTINUITY. A GREEN EQUIPMENT GROUNDING CONDUCTOR, SIZED PER NEC TABLE 250–122, SHALL BE RUN IN ALL POWER RACEWAYS. FOR NON-ISOLATED GROUND CIRCUITS PROVIDE ONE EQUIPMENT GROUNDING CONDUCTOR PER CONDUIT RUN. FOR ISOLATED GROUND CIRCUITS, PROVIDE ONE NEUTRAL AND ONE ISOLATED GROUND WIRE FOR EACH CIRCUIT; IN ADDITION, PROVIDE ONE EQUIPMENT GROUNDING CONDUCTOR PER CONDUIT RUN. MAIN BONDING JUMPERS AND SYSTEM BONDING JUMPERS SHALL BE INSTALLED IN ACCORDANCE WITH 250.28 OF THE NEC. FOR BUILDINGS OR STRUCTURES SUPPLIED BY FEEDERS OR BRANCH CIRCUITS, GROUNDING AND BONDING SHALL BE IN ACCORDANCE WITH 250.32. SEPARATELY DERIVED AC SYSTEMS SHALL BE GROUNDED IN ACCORDANCE WITH 250.30. RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHMS; ADDITIONAL
- GROUNDING ELECTRODES SHALL BE INSTALLED PER 250.56 AS NECESSARY.

 11. ALL MATERIALS AND EQUIPMENT SHALL COMPLY WITH THE UNDERWRITERS'
 LABORATORIES, INC. STANDARDS OR HAVE UL APPROVAL, OR BEAR UL
 RE-EXAMINATION LISTING WHERE SUCH APPROVAL HAS BEEN ESTABLISHED
- FOR THE TYPE OF DEVICE IN QUESTION.

 12. CONDUCTORS, FUSES, CIRCUIT BREAKERS, AND DISCONNECT SWITCHES SHOWN ON THESE PLANS HAVE BEEN SIZED FOR THE SPECIFIED EQUIPMENT. BEFORE ORDERING ELECTRICAL EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS ON THE SITE AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES SHOULD CONDUCTOR, ORDER OF THE ENGINEER OF THE PROPERTY OF THE PROPER
- CIRCUIT BREAKER, OR FUSE SIZES REQUIRE CHANGE.

 13. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE THE FOLLOWING MATERIALS ARE RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT: LIGHT FIXTURES, INCLUDING PROPER DISPOSAL OF BALLASTS, FLUORESCENT LIGHT BULBS, AND TRANSFORMERS, WIRING AND ELECTRICAL EQUIPMENT, AND INSULATION. WASTE MATERIALS CONTAINING LEAD, ASBESTOS, PCBs (FLUORESCENT LAMP BALLASTS), OR OTHER HARMFUL SUBSTANCES SHALL BE HANDLED AND DISPOSED OF IN ACCORDANCE WITH FEDERAL AND STATE LAWS AND
- REQUIREMENTS CONCERNING HAZARDOUS WASTE.

 14. ALL WORK SHALL CONFORM TO 2020 NATIONAL ELECTRIC CODE, 2018
 STATE BUILDING CODE, AND ALL APPLICABLE LOCAL CODES.

ATERIALS: 1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY DISCONNECTS, SWITCHES, RECEPTACLES, TERMINALS, ETC, UNDER THE ELECTRICAL BID AND SHALL INCLUDE ALL NECESSARY CIRCUITS AND CONNECTIONS TO THE EQUIPMENT PROVIDED BY ALL SUPPLIERS, UNLESS

- NOTED OTHERWISE BY OTHER DISCIPLINES. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SERVICE ENTRANCE EQUIPMENT, SUB PANELS, AND OTHER ELECTRICAL DISTRIBUTION EQUIPMENT AS NECESSARY FOR A COMPLETE INSTALLATION. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH UTILITY REGARDING SERVICE AND METERING DETAILS. PRIOR TO ORDERING EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL OBTAIN THE AVAILABLE FAULT CURRENT OR TRANSFORMER SIZE AND IMPEDANCE FROM THE UTILITY AND CONTACT THE ENGINEER IF THE VALUE EXCEEDS THE EQUIPMENT SPECIFIED. PANEL BOARDS AND SWITCH BOARDS SHALL BE SQUARE D, CUTLER-HAMMER, SIEMENS, OR GE. BUSES SHALL BE COPPER UNLESS OTHERWISE APPROVED BY THE ENGINEER. RECESSED PANEL BOARDS SHALL BE INSTALLED FLUSH WITH THE WALL FINISH. METER BASES SHALL COMPLY WITH THE UTILITY'S SPECIFICATIONS AND SHALL BE MOUNTED AT A HEIGHT APPROVED BY THE UTILITY. ALL EQUIPMENT IDENTIFIED FOR SERVICE ENTRANCE USE SHALL BE SO LABELED AND UL LISTED FOR SUCH USE. ELECTRICAL CONTRACTOR SHALL INSTALL ALL
- ELECTRICAL EQUIPMENT WITH CLEARANCES PER NEC 110.26. ELECTRICIAN SHALL PERMANENTLY LABEL EQUIPMENT PER NEC 110.24.

 3. ENCLOSED SAFETY SWITCHES SHALL BE HEAVY DUTY TYPE BY SQUARE D, EATON, OR GE. ENCLOSED SWITCHES SHALL HAVE A HANDLE LOCKABLE IN THE OFF POSITION AND SHALL HAVE A HANDLE INTERLOCKED TO PREVENT OPENING THE FRONT COVER WHILE IN THE ON POSITION. ENCLOSED SWITCHES OF THE FUSIBLE TYPE SHALL BE FUSED IN ACCORDANCE WITH NAMEPLATE DATA WITH DUAL ELEMENT TYPE FUSES BY BUSSMAN,
- LITTELFUSE, OR MERSEN.
 4. OCCUPANCY SENSORS SHALL BE BY WATTSTOPPER, LUTRON, LEVITON,
- SENSOR SWITCH, HUBBELL, OR APPROVED EQUAL.

 5. CIRCUIT BREAKERS SHALL BE MOLDED—CASE, THERMAL MAGNETIC TYPE WITH QUICK—MAKE, QUICK—BREAK MECHANISM, COMMON TRIP ON MULTI—POLE BREAKERS, AND UL LISTED FOR BOTH COPPER AND ALUMINUM CONDUCTORS. CIRCUIT BREAKERS IN PANELS SHALL BE SERIES RATED WITH THE MAIN BREAKER, FULLY RATED FOR THE SYSTEM, OR SERIES RATED
- WITH THE BREAKER FEEDING THE PANEL FROM THE FACTORY.

 6. ALL WIRE, CONNECTORS, TERMINALS, AND LUGS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. WHERE CONDUCTORS ARE RUN IN PARALLEL, LUGS SHALL BE LISTED FOR PARALLEL CONDUCTORS. PUSH WIRE CONNECTORS ARE NOT ALLOWED FOR BUILDING WIRE. PUSH CONNECTORS ARE ONLY ALLOWED, WHEN APPROVED, AS PART OF MANUFACTURED LISTED PRODUCTS. ALL WIRE SHALL BE INSTALLED IN CONDUIT UNLESS SPECIFICALLY NOTED OTHERWISE.
- THE INSULATION TYPE FOR INTERIOR WIRING SHALL BE DUAL RATED THHN/THWN OR XHHW; ALL WIRING INSTALLED BELOW GRADE OR IN MOIST OR WET LOCATIONS SHALL HAVE TYPE THWN OR XHHW INSULATION. INSULATION VOLTAGE RATING SHALL BE 600 VOLTS AND A MINIMUM TEMPERATURE RATING OF 75°C. CONDUCTORS SHALL BE SOLID OR STRANDED COPPER FOR #10 AWG AND #12 AWG, AND STRANDED COPPER FOR #8 AWG AND LARGER SIZES. ALL WIRING AND CABLE SHALL BE UL LISTED. ALL TERMINATIONS AND DEVICES SHALL BE RATED FOR USE WITH 75°C CONDUCTORS. FINAL CONNECTIONS TO ALL MOTORS AND EQUIPMENT SUBJECT TO VIBRATION OR MOVEMENT SHALL BE MADE WITH STRANDED COPPER CONDUCTORS. CONDUCTORS SHALL BE BY CERRO WIRE, INC, INDUSTRIAL WIRE & CABLE, INC, ENCORE WIRE CORPORATION, OR
- SOUTHWIRE COMPANY.

 JOINTS IN SOLID CONDUCTORS SHALL BE SPLICED USING IDEAL "WIRE NUTS", 3M "SCOTCH LOCK", OR T&B "PIGGY" CONNECTORS IN JUNCTION BOXES, OUTLET BOXES, AND LIGHTING FIXTURES. JOINTS IN STRANDED

- CONDUCTORS SHALL BE SPLICED BY APPROVED MECHANICAL CONNECTORS AND GUM RUBBER TAPE OR FRICTION TAPE. SOLDERLESS MECHANICAL CONNECTORS FOR SPLICES AND TAPS, PROVIDED WITH UL APPROVED INSULATING COVERS, MAY BE USED INSTEAD OF MECHANICAL CONNECTORS PLUS TAPE. IN ALL CASES, CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET AND NO SPLICING SHALL BE MADE EXCEPT WITHIN OUTLET OR JUNCTION BOXES, TROUGHS, OR GUTTERS. WHERE CONCENTRIC, ECCENTRIC, OR OVERSIZED KNOCKOUTS ARE ENCOUNTERED, A GROUNDING
- TYPE INSULATED BUSHING SHALL BE PROVIDED.

 9. ALL LUMINAIRES SHALL BE LISTED. LUMINAIRES IN WET OR DAMP LOCATIONS SHALL BE MARKED AS SUITABLE FOR THE RESPECTIVE USE. EMERGENCY LIGHTING SHALL BE INSTALLED AS SHOWN. FINAL LOCATIONS OF ALL EXIT AND EMERGENCY LIGHTS SHALL BE VERIFIED WITH THE BUILDING INSPECTOR PRIOR TO INSTALLATION. ALL FLUORESCENT FIXTURES SHALL HAVE ELECTRONIC BALLASTS MEETING ANSI C82.11 FOR ELECTRONIC BALLAST PERFORMANCE. ALL BALLASTS SHALL BE UL LISTED AND MEET FEDERAL AND STATE EFFICIENCY REQUIREMENTS.
- 10. ALL CONDUIT, FITTINGS, COUPLINGS, AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. CONDUIT FITTINGS AND COUPLINGS SHALL BE BY APPLETON, RACO, OR 0-Z/GEDNEY. COUPLINGS SHALL BE THREADED, SET-SCREW, OR COMPRESSION TYPE. INDENTER OR CRIMP TYPE ARE NOT PERMITTED. CONDUIT FITTINGS AT ALL ELECTRICAL BOXES INCLUDING PULL, JUNCTION, AND OUTLET BOXES, SHALL HAVE INSULATED THROATS TO PREVENT INSULATION SCORING. DIE CAST FITTINGS ARE NOT PERMITTED
- 11. EMT SHALL BE MANUFACTURED IN ACCORDANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE—AMERICAN NATIONAL STANDARD FOR STEEL ELECTRICAL METALLIC TUBING (EMT), ANSI C80.3 AND UL 797. RIGID METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI—AMERICAN NATIONAL STANDARD FOR ELECTRICAL RIGID STEEL CONDUIT (ERSC), ANSI C80.1 AND UL 6. INTERMEDIATE METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI—AMERICAN NATIONAL STANDARD FOR
- INTERMEDIATE METAL CONDUIT ANSI C80.6 AND UL 1242.

 2. METAL CONDUIT SHALL BE BY ALLIED TUBING & CONDUIT, BECK MANUFACTURING, INC, OR WHEATLAND TUBE COMPANY. FLEXIBLE METAL CONDUIT, LIQUID—TIGHT FLEXIBLE METAL CONDUIT, AND NONMETALLIC CONDUIT SHALL BE BY AFC CABLE SYSTEMS, INC, ELECTRI—FLEX COMPANY, OR INTERNATIONAL METAL HOSE.

1. EC SHALL REVIEW THE MECHANICAL PLANS TO ESTABLISH POINTS OF CONNECTION AND THE EXTENT OF THE ELECTRICAL WORK TO BE PROVIDED

- IN THE CONTRACT.

 2. ALL CIRCUIT BREAKERS FEEDING HVAC EQUIPMENT SHALL BE HACR BREAKERS. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE MINIMUM #12 AWG IN 3/4 in CONDUIT. EACH MULTI-WIRE BRANCH CIRCUIT SHALL BE PROVIDED WITH A MEANS TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE SOURCE PER NEC 210.4(B). GROUP ALL CONDUCTORS OF EACH MULTI-WIRE BRANCH CIRCUIT PER 210.4(D) WITH WIRE TIES OR SIMILAR MEANS. DO NOT EXCEED THREE HOMERUNS PER CONDUIT. DO NOT INSTALL ISOLATED GROUND AND NON-ISOLATED GROUND CIRCUITS IN THE SAME CONDUIT. INSTALL CONDUCTORS OF DIFFERENT VOLTAGES IN SEPARATE CONDUITS.
- 3. COLOR CODE CONDUCTORS PER NEC. FEEDERS SHALL BE IDENTIFIED IN ACCORDANCE WITH NEC 215.12. USE BLACK, RED, AND BLUE FOR PHASES A, B, AND C RESPECTIVELY ON 208Y/120 VOLT THREE-PHASE Y SYSTEMS AND WHITE FOR THE NEUTRAL. THIS IDENTIFICATION SHALL BE MADE AT EACH POINT WHERE A CONNECTION IS MADE. COLORS SHALL BE FACTORY APPLIED FOR CONDUCTORS #6 AWG AND SMALLER. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN IN COLOR AND MINIMUM #12 AWG. THE EC SHALL PROVIDE PLENUM RATED CABLE FOR ANY ELECTRICAL, TELEPHONE, COMMUNICATION, OR OTHER CABLE THAT ENTERS CEILING RETURN PLENUMS.
- 4. ALL LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENTLY OF THE SUSPENDED CEILING. COORDINATE LIGHTING LAYOUT WITH CEILING GRID, MECHANICAL EQUIPMENT, DUCTWORK AND SPRINKLER HEADS AS NECESSARY. SEE REFLECTED CEILING PLAN FOR DETAILS. FLUORESCENT FIXTURES UTILIZING DOUBLE-ENDED LAMPS MUST HAVE A DISCONNECTING MEANS COMPLYING WITH NEC 410.130(G).
- 5. MOUNT LIGHT SWITCHES AT 48 in AFF. MULTIPLE SWITCHES AT SAME LOCATION SHALL BE UNDER ONE WALL PLATE. VERIFY WALL PLATE COLOR AND MATERIAL WITH THE ARCHITECT/OWNER. INSTALL SWITCHES WITH off POSITION DOWN. ALL SWITCHES SHALL BE HEAVY DUTY, IVORY PLASTIC WITH TOGGLE HANDLE, RATED 120-277V AC, AND COMPLYING WITH NEMA WD 6 AND WD 1. SWITCHES SHALL BE BY COOPER WIRING DEVICES, LEVITON MANUFACTURING, PASS & SEYMOUR, OR HUBBELL. PROVIDE BOX DEVICE PARTITION/DIVIDERS FOR MULTI-GANG BOXES FOR COMPLIANCE WITH NEC 404 8(R)
- 6. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE—STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE—RESISTANCE RATING. SEAL PENETRATIONS USING A UL LISTED SYSTEM FOUND IN THE UL DIRECTORY SPECIFIC TO THE UL LISTING OF THE ASSEMBLY BEING PENETRATED. SEE ARCHITECTURAL PLANS FOR UL RATED ASSEMBLIES SPECIFIC TO THIS PROJECT.
- 7. ELECTRICAL CONTRACTOR SHALL PROVIDE GFCI RECEPTACLES IN KITCHENS, RESTROOMS, OUTDOORS, AND IN SHOP AREAS AS REQUIRED BY NEC. REFRIGERATORS AND WATER COOLERS MUST HAVE A DEDICATED GFCI BREAKER. EACH OUTDOOR HVAC UNIT MUST HAVE A GFCI RECEPTACLE WITHIN 25 FEET FOR SERVICING. GFCI RECEPTACLES SHALL CONFORM TO UL 943 CLASS A AND UL 498 STANDARDS. RECEPTACLES SHALL BE BY COOPER WIRING DEVICES, LEVITON MANUFACTURING, PASS & SEYMOUR, OR HUBBELL. ALL RECEPTACLES SHALL BE 125V RATED, HEAVY DUTY, AND COMPTON OF AND UL 498 STANDARDS.
- 8. LOCATIONS AND HEIGHTS OF ALL WALL-MOUNTED DEVICES SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO INSTALLATION.
- 9. CONCEAL ALL CONDUIT EXCEPT IN MECHANICAL ROOMS OR UNFINISHED AREAS AS NOTED. USE EMT CONDUIT FOR ALL BRANCH CIRCUITS AND FEEDERS INSIDE THE BUILDING. TYPE MC CABLE AND TYPE AC CABLE MAY BE INSTALLED WITHIN WALLS IF ALL NEUTRAL WIRES, ISOLATED GROUND WIRES, AND EQUIPMENT GROUND WIRES AS LISTED ABOVE ARE CONTAINED IN THE CABLE. FLEXIBLE CONNECTIONS TO MOTORS AND OTHER EQUIPMENT SHALL BE MADE USING WEATHERPROOF FLEXIBLE CONDUIT. FOR LAY-IN LIGHT FIXTURES, USE MAXIMUM OF SIX (6) FEET OF FLEXIBLE MC CABLE (OR THE FLEXIBLE CONDUIT PROVIDED BY THE FIXTURE MANUFACTURER). SCHEDULE 40 PVC CONDUIT MAY BE USED FOR THE SECONDARY UNDERGROUND SERVICE, UNDERGROUND TELEPHONE SERVICE, AND BRANCH AND FEEDER CIRCUITS UNDER SLAB OR EXTERIOR TO THE BUILDING. EXPOSED EXTERIOR CONDUIT SHALL BE SCHEDULE 80 PVC. ALL UNDERGROUND RACEWAYS SHALL BE IDENTIFIED WITH UNDERGROUND LINE MARKING TAPE 6-8 in BELOW GRADE DIRECTLY ABOVE THE RACEWAY. PROVIDE PULL WIRE IN EMPTY CONDUITS. UPSIZE CONDUIT FROM MINIMUM SIZE AS NECESSARY FOR LONGER PULLS. UNDERGROUND RACEWAYS THAT STUB INTO THE BOTTOM OF SWITCHBOARDS, OUTDOOR TRANSFORMERS, GENERATORS, ETC., SHALL RISE AT LEAST 2 in ABOVE THE FINISHED SLAB TO PREVENT WATER FROM DRAINING INTO THE RACEWAYS. RACEWAYS THAT PENETRATE EXTERIOR WALLS OR INTERIOR PARTITIONS SEPARATING SPACES THAT WILL BE AT SIGNIFICANTLY DIFFERENT TEMPERATURES SHALL BE SEALED IN ACCORDANCE WITH 300.5(G), 300.7(A), AND 300.50(E) OF THE NEC. ROUTE CONDUIT IN AND UNDER SLAB FROM POINT-TO-POINT. ROUTE EXPOSED CONDUIT AND CONDUIT INSTALLED ABOVE ACCESSIBLE CEILINGS PARALLEL AND PERPENDICULAR TO WALLS. COMPLETELY AND THOROUGHLY SWAB ALL RACEWAYS BEFORE INSTALLING WIRE. PULL ALL CONDUCTORS INTO EACH RACEWAY AT ONE TIME. USE A SUITABLE WIRE PULLING LUBRICANT FOR BUILDING WIRE #4 AWG AND LARGER.
- 10. CABLES, RACEWAYS, OR BOXES, INSTALLED IN EXPOSED OR CONCEALED LOCATIONS UNDER METAL—CORRUGATED SHEET ROOF DECKING, SHALL BE INSTALLED AND SUPPORTED SO THERE IS NOT LESS THAN 1–1/2 in MEASURED FROM THE LOWEST SURFACE OF THE ROOF DECKING TO THE TOP OF THE CABLE, RACEWAY, OR BOX. A CABLE, RACEWAY, OR BOX SHALL NOT BE INSTALLED IN CONCEALED LOCATIONS IN
- METAL-CORRUGATED, SHEET DECKING-TYPE ROOF. SEE NEC 300.4(E).

 11. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL OUTLET, JUNCTION, PULL BOXES, FITTINGS, AND SUPPORTS. ALL OUTLET AND JUNCTION BOXES SHALL BE GALVANIZED STEEL TYPE BY APPLETON, STEEL CITY, OR RACO. EXTERIOR BOXES SHALL BE TYPE FS. VAPORTITE BOXES SHALL BE TYPE GS. WHERE SURFACE MOUNTED BOXES ARE USED, THOSE BOXES AND THEIR FACEPLATES SHALL HAVE ROUNDED CORNERS. BOXES INSTALLED IN FLOORS SHALL BE RATED FOR THE APPLICATION. MOUNT JUNCTION AND OUTLET BOXES FLUSH WITH FINISH SURFACES UNLESS OTHERWISE NOTED. WHERE MOUNTING HEIGHTS ARE GIVEN, THEY SHALL BE MEASURED FROM

THE FINISHED FLOOR TO THE CENTER OF THE BOX. ALL BOXES SHALL BE SIZED PER NEC ARTICLE 314. ALL OUTLET AND JUNCTION BOXES SHALL HAVE A COVER PLATE, PROVIDED BY THE ELECTRICAL CONTRACTOR. OUTLET BOXES IN RATED WALLS SHALL BE INSTALLED IN ACCORDANCE WITH NORTH CAROLINA BUILDING CODE 714.3.2 (MAXIMUM BOX SIZE IS 16 SQUARE IN AND MAXIMUM OF SIX (6) BOXES PER 100 SQUARE FEET). INSTALL OUTLET BOXES IN RATED WALLS SUCH THAT OPENINGS OCCUR IN ONE SIDE ONLY WITHIN ANY GIVEN STUD SPACE. ALL CLEARANCES BETWEEN THE OUTLET BOX AND THE GYPSUM BOARD SHALL BE FILLED WITH JOINT COMPOUND OR OTHER APPROVED FIRE STOP MATERIAL. FLUSH MOUNTED JUNCTION BOXES IN ADJACENT ROOMS SHALL NOT BE MOUNTED BACK—TO—BACK. SURFACE MOUNTED FIXTURES SHALL BE FED THROUGH FLUSH MOUNTED

- 4X4 OCTAGONAL OR SQUARE BOXES.

 12. ALL CONDUIT, BOXES, AND ELECTRICAL EQUIPMENT SHALL BE FIRMLY AND SECURELY FASTENED TO OR SUPPORTED FROM THE BUILDING STRUCTURAL MEMBERS OR EMBEDDED IN CONCRETE OR MASONRY. ELECTRICAL SUPPORTS SHALL NOT BE ATTACHED TO DUCTWORK, PIPING, OR THEIR SUPPORTS. HANGERS SHALL BE CATALOG ITEMS COMPATIBLE WITH AND SUITABLE FOR THE INTENDED USE. FOR METAL ROOF DECK INSTALLATIONS, 1 in EMT CONDUIT MAXIMUM AND 4 in JUNCTION BOXES MAXIMUM MAY BE SUPPORTED BY DECKING. THE SUSPENDED CEILING SYSTEM SHALL NOT BE USED FOR THE SUPPORT OF ELECTRICAL RACEWAY SYSTEMS OR SUPPORT OF COMMUNICATIONS OR DATA SYSTEMS WIRING. CONTRACTOR SHALL COMPLY WITH 1613 OF THE NORTH CAROLINA GENERAL CONSTRUCTION BUILDING CODE.
- 13. WHERE CONDUCTORS ARE RUN IN PARALLEL, THE EC SHALL COMPLY WITH NEC 310.4.
- PROVIDE AND INSTALL LISTED TAMPER PROOF RECEPTACLES IN WAITING AREAS, THERAPY AREAS, AND OFFICES.
 IN PATIENT CARE AREAS, EQUIPMENT GROUNDING SHALL COMPLY WITH NEC
- 517.13 (THIS INCLUDES LIGHTS AND SWITCHES). THE METAL RACEWAY
 SYSTEM, METALLIC CABLE ARMOR, OR SHEATH ASSEMBLY SHALL ITSELF
 QUALIFY AS AN EQUIPMENT GROUNDING CONDUCTOR PER NEC 250.118.

 16. PROVIDE AN UNDERGROUND PVC CONDUIT SYSTEM FOR TELEPHONE
 SERVICE WITH PULL WIRES. ELECTRICAL CONTRACTOR SHALL CONDINATE
- WITH TELEPHONE UTILITY REGARDING ADDITIONAL FACILITIES REQUIRED FOR THE SERVICE INSTALLATION.

 17. INSTALL ONE (1) 3/4 in FIRE RETARDANT TREATED PLYWOOD BACKBOARD WHERE INDICATED ON THE DRAWINGS FOR THE USE BY THE TELEPHONE SYSTEM. PROVIDE A 120 VOLT RECEPTACLE ADJACENT TO THE TELEPHONE
- SYSTEM. PROVIDE A 120 VOLT RECEPTACLE ADJACENT TO THE TELEPHONE BOARD. GROUND ALL TELEPHONE AND COMMUNICATIONS CIRCUITS PER NEC 800.

 18. ALL TELEPHONE AND COMMUNICATIONS OUTLETS AND RACEWAYS ARE ROUGH—INS ONLY. EACH TELEPHONE AND COMMUNICATIONS OUTLET SHALL BE A 4 in SQUARE BY 2—1/8 in DEEP BOX WITH 3/4 in KNOCK—OUTS
- STUBBED ABOVE THE CEILING. PROVIDE A BLANK COVER PLATE ON ALL OUTLET BOXES.

 19. ELECTRICAL CONTRACTOR SHALL INSTALL DISCONNECT SWITCHES IN SIGHT OF ALL HARDWIRED EQUIPMENT AND APPLIANCES OR PROVIDE BREAKERS CAPABLE OF BEING LOCKED IN THE OPEN POSITION PER NEC 422.31. FOR MOTOR DRIVEN APPLIANCES, PROVIDE A DISCONNECTING MEANS PER NEC 422.31 AND 430 PART IX. WHERE AN INDIVIDUAL DISCONNECT SWITCH, CIRCUIT BREAKER, STARTER, ETC, IS SHOWN ON THE PLANS ADJACENT TO

AND A 3/4 in CONDUIT STUBBED FROM THE OUTLET BOX TO ABOVE THE

CEILING. PROVIDE A NON-METALLIC INSULATING BUSHING ON ALL CONDUITS

ITS LOAD AND NOT LOCATED ON A WALL, PROVIDE NECESSARY MATERIALS

- AND LABOR TO SUPPORT THE DEVICE.

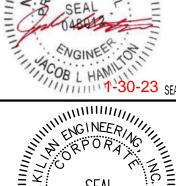
 20. ELECTRICAL CONTRACTOR SHALL FIELD IDENTIFY ALL SWITCH BOARD, PANEL BOARDS, CONTROL PANELS, METER SOCKETS, ETC., TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRICAL ARC FLASH HAZARDS PER 110.16 OF
- 21. ELECTRICAL CONTRACTOR SHALL PROVIDE NAMEPLATES FOR IDENTIFICATION OF ALL EQUIPMENT, SWITCHES, PANELS, ETC. THE NAMEPLATES SHALL BE LAMINATED PHENOLIC PLASTIC, BLACK FRONT, AND BACK WITH WHITE CORE, WHITE ENGRAVED LETTERS (1/4 in MINIMUM) ETCHED INTO THE WHITE CORE. ELECTRICAL CONTRACTOR SHALL PROVIDE A TYPE WRITTEN DIRECTORY CARD THAT ACCURATELY IDENTIFIES CIRCUITS INSIDE EACH PANEL. HANDWRITTEN LABELS ARE NOT ACCEPTABLE.

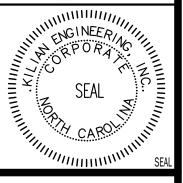
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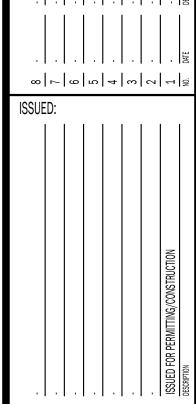




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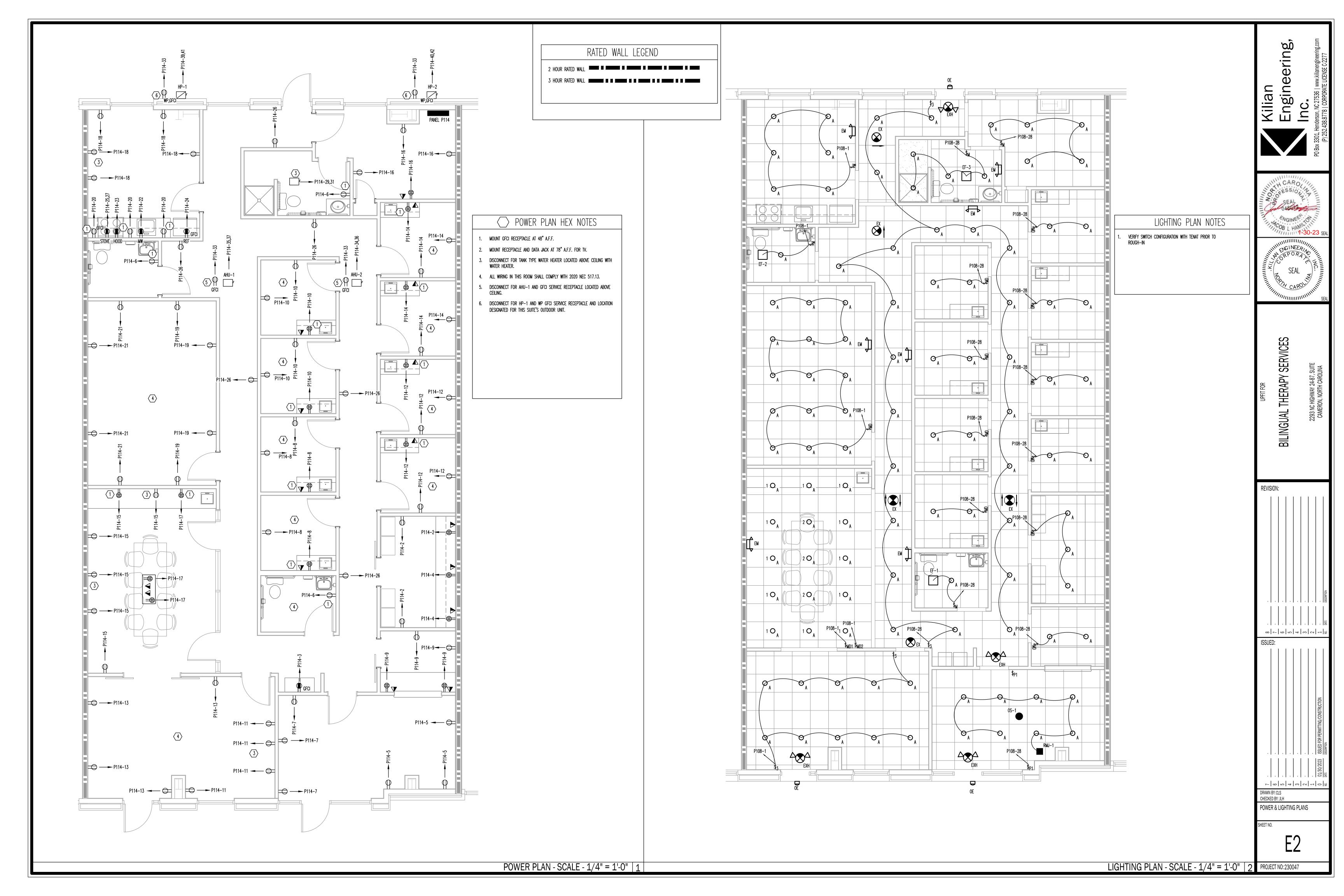


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ELECTRICAL NOTES & SCHEDULES

SHEET NO.

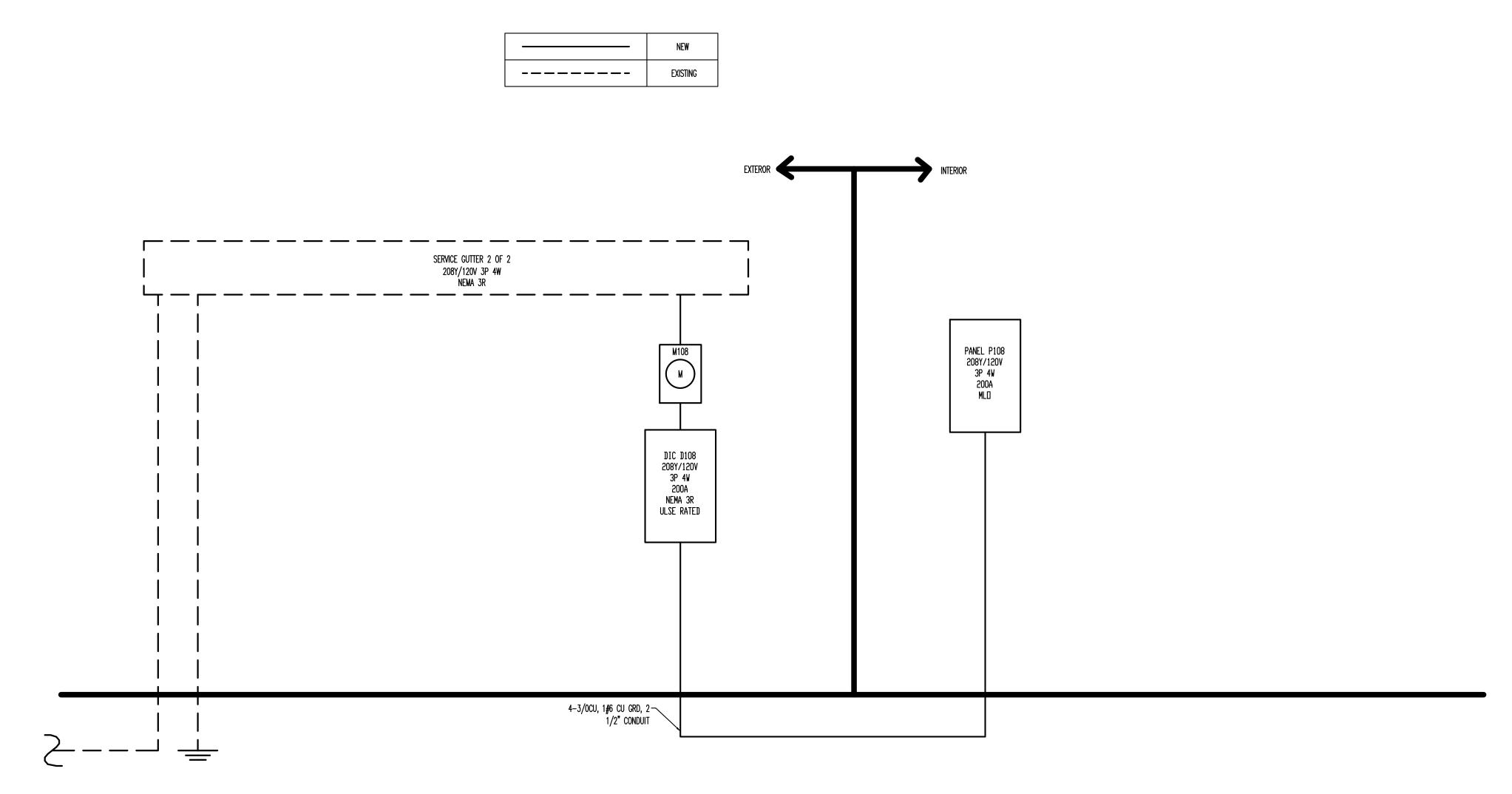
ELECTRICAL SCHEDULES 1



| | | | P | ANEL P1 | 08 | | | | |
|-----------------------------|------------------------|--------|-------|---------|-------------------|-------|----------------------|-----|--|
| OVT | LOAD | DI/D | LOAD | | LOAD | DVD. | LEAD | OUT | |
| CKT | | BKR | kVA | PH | kVA | BKR | LOAD | CKT | |
| 1 | 108 LIGHTS | 20/1 | 1. 09 | Α | 0. 72 | 20/1 | REC-BUSINESS | 2 | |
| 3 | WATER COOLER | 20/1 | 0. 18 | В | 0. 72 | 20/1 | REC-BUSINESS | 4 | |
| 5 | REC- RECEPTION AREA | 20/1 | 0. 54 | С | 0. 72 | 20/1 | REC-UNI-SEX TOILET | 6 | |
| 7 | REC- RECEPTION AREA | 20/1 | 0. 54 | Α | 1. 44 | 20/1 | REC-108, 110 THERAPY | 8 | |
| 9 | REC- RECEPTION OFFICE | 20/1 | 1. 08 | В | 1. 44 | 20/1 | REC-112, 114 THERAPY | 10 | |
| 11 | REC-YDGARDDM | 20/1 | 0. 72 | С | 1. 44 | 20/1 | REC-109, 111 THERAPY | 12 | |
| 13 | REC-YDGARDDM | 20/1 | 0. 72 | Α | 1. 44 | 20/1 | REC-113, 115 THERAPY | 14 | |
| 15 | REC-CONFERENCE | 20/1 | 1. 26 | В | 0, 90 | 20/1 | REC-OFFICE | 16 | |
| 17 | REC-CONFERENCE | 20/1 | 0. 08 | С | 0, 90 | 20/1 | REC-BREAK ROOM | 18 | |
| 19 | REC-LIFESKILLS ROOM | 20/1 | 0. 72 | Α | 0, 54 | 20/1 | REC-BREAK ROOM | 20 | |
| 21 | REC-LIFESKILLS ROOM | 20/1 | 0. 72 | В | 0. 18 | 20/1 | MW-BREAK ROOM | 22 | |
| 23 | HOOD | 20/1 | 0. 18 | С | 1. 00 | 20/1 | REFRIGERATOR | 24 | |
| 25 | DANCE | F0./0 | 4. 16 | Α | 1. 26 | 20/1 | REC-HALL | 26 | |
| 27 | RANGE | 50/2 | 4. 16 | В | 1. 02 | 20/1 | 108 LIGHTS | 28 | |
| 29 | WATER HEATER-TANK TYPE | 05.40 | 2. 81 | С | 0.00 | - | SPACE | 30 | |
| 31 | | 25/2 | 2. 81 | Α | 0.00 | - | SPACE | 32 | |
| 33 | REC-HVAC SERVICE | 20/1 | 0. 72 | В | 3. 19 | 20.72 | AUU O | 34 | |
| 35 | AIHI 4 | 100,00 | 3. 19 | С | 3. 19 | 30/2 | AHU-2 | 36 | |
| 37 | AHU-1 | 30/2 | 3. 19 | Α | 0.00 | - | SPACE | 38 | |
| 39 | UD 4 | F0./0 | 2. 71 | В | 2. 71 | 50/2 | un a | 40 | |
| 41 | HP-1 | 50/2 | 2. 71 | С | 2. 71 | | HP-2 | 42 | |
| | | | kVA | PH | AMPS | | | - | |
| | | | 18. 6 | Α | 155 | | | | |
| 21. 0 | | | | | 175 | | | | |
| 20. 2 | | | | | 168 | | | | |
| | | | | • | | | | | |
| VDLTAGE/PHASE | | | | | 208Y/120V, 3P, 4W | | | | |
| BUS RATING | | | | | 200A | | | | |
| MAIN CIRCUIT BREAKER RATING | | | | | MLO | | | | |
| AIC RATING | | | | | 22K | | | | |
| SERVICE ENTRANCE RATED | | | | | ND | | | | |
| ENCLOSURE | | | | | NEMA 1 | | | | |
| MDUNTING | | | | | RECESSED | | | | |

| | | NEC ELE | CTRIC DEMAND | SUMMARY 20 | 8Y/120V, 3P, 4 | W | |
|----------------------|-----------------------|---------------|--------------|------------|----------------|-----------|------------------------------|
| COLLIDACIA | DEMAND | kVA | | | L DAD LAVA | NEC | MULLE AND CHILATIONS |
| EQUIPMENT | FACTOR | Α | В | С | LOAD kVA | REFERENCE | NOTES/CALCULATIONS |
| LIGHTING | 125% | 1. 55 | 1. 55 | 1. 55 | 4. 65 | 220. 12 | 2900 SF X 1.6 VA/SF |
| RECEPTACLES < 10 kVA | 100% | 7. 4 0 | 7, 2 | 5, 4 | 20, 00 | 220. 44 | |
| RECEPTACLES > 10 kVA | 50% | 0. 00 | 0. 00 | 0. 00 | 0.00 | 220. 44 | |
| HVAC | 100% | 6, 40 | 5, 40 | 11. 80 | 23. 60 | | BASED ON MCA |
| WATER HEATER | 125% | 2. 81 | 0. 00 | 2. 81 | 5, 62 | 422. 13 | STORAGE TANK <120 GAL @ 125% |
| EQUIPMENT | 100% | 4. 20 | 4, 2 | 0. 20 | 8, 60 | | BASED ON MCA |
| DEMAND kVA | 22. 36 | 18. 35 | 21. 76 | | | | |
| DEMAND AMPS | DEMAND AMPS PER PHASE | | | 181 | | | |

THE CALCULATED LIGHTING LOAD EXCEEDS THE CONNECTED LIGHTING LOAD.





PANEL SCHEDULE & ELECTRICAL RISER SHEET NO.