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HONEYCUTT OAKS **BATHHOUSE & POOL** ANGIER, NC





2506 RELIANCE AVE. APEX, NC 27539 (P) 919.629.7290 WWW.DCLUGSTON.COM

G0.1 G0.2 G0.3 G0.4

BOXES

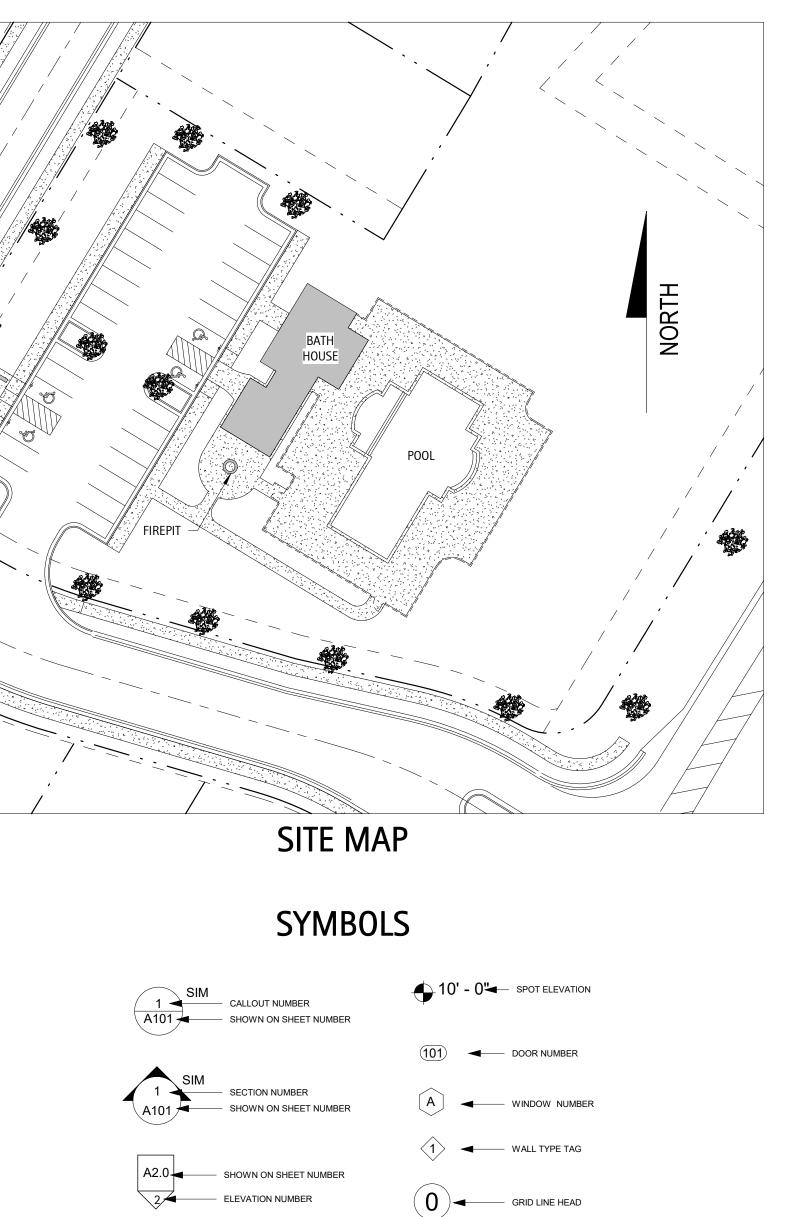
A2.0 A2.1 A3.0 A3.1 A4.0 A5.0

A1.0

A1.1

S1 S2 S3

S4



Room name

| (101) |
|----------------|
| |
| (1) |
| GRID LINE HEAD |
| |
| |
| |

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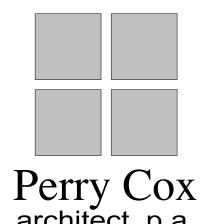
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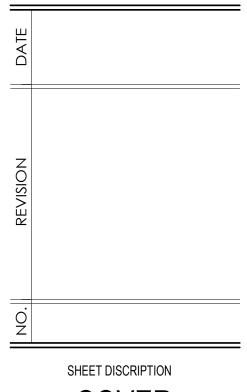






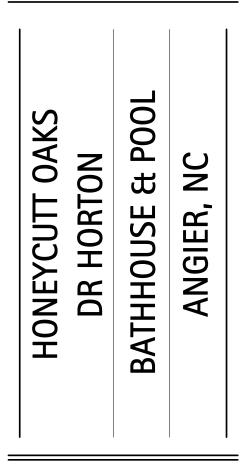


architect, p.a. 24 Salem Towne Court, Apex, NC 27502 P: 919.363.5411 www.pcoxdesign.com



COVER SHEET

| PROJECT #: | 2022038 |
|--------------|------------|
| DATE ISSUED: | 06/11/2024 |
| DRAWING BY: | JGM |
| CHECKED BY: | PGC/DSC |



G0.1



| | | | 3 | | | | | | | BUILDING |
|--|-----------------------|--|--|--|-------------------|---------------------------------|---|---|-------------------------|-------------------------------|
| Name of Project Address: <u>Angier</u> , Owner or Author | , NC | | Zip Code: Phone # | | 0 | | Construction Typ | | | TION REQUIRE |
| Email: | john@dclug | | Fax #: | | | | | | I-B □ II-/] Yes ■ N | |
| Code Enforceme | nt Jurisdicti | on: City Coun of Angier, Harnett Cou | ty City/County | | | | Sprinklers: | Yes 🔲 No 🗌 | NFPA 13 | NFPA 13 |
| PROJECT SUN | MARY: A | -3 New Building | | | | | Standpipes: Fire District: Building Height: 2 | Yes No Yes No | (Append _1_St | Class: 🗌 I lix D) 🗌 Floc |
| - | | | vn bath house Pool Amei | • | | | Basement: | Yes No Yes No | 0 | or y |
| Scope of Work | | w Building full scope of ol plans | architectural, structural | , plumbing, mechai | nical,electrical, | and | | Yes 🔲 No | Life Saf | ety Plan Shee |
| DESIGNER | | al/Project Coordinator | NAM | | | EPHONE # | FLOOR | EXISTI | NG (SQFT) | NE |
| Architectural: Civil: | | ry Cox Architect, PA | Perry Co | | | 9-393-5411 | First Floor | | 0 | |
| Electrical: Fire Alarm: | | Ilian Engineering | | | | 2-438-8778 | | | | |
| Plumbing: Mechanical: | K | llian Engineering Ilian Engineering | | | | <u>2-438-8778</u> 2-438-8778 | | | | |
| Sprinkler-Stand Structural: | • • | s Linden Engineers | Brian Ro | ss, PE25 | 539 919 | 9-832-5680 | Area of Project To Area of Construct | | NRENOVATION | 1: |
| Precast: Trusses: | | Truss Builders | Eric A Gill | pert, PE 03 | 6322 919 | 9-467-9988 | | | | ROTECTI |
| Retaining Walls Other: Note: | - | llian Engineering | Jacob L. | Hamilton 04 | 8012 252 | 2-438-8778 | THIS SECTION F | | | JECTS).3 |
| NOIC. | | | | | | | Life Safety Plan S | Sneet #, IT Prov | | |
| Building Code: | 201011011 | h Carolina State Buildir | | 2009 North Caroli | | ng Code | | | REQ'D* | ATING PROVIDED (W/* |
| | 2009 NC I 2009 Cha | | | North Carolina Bui Existing Building Co | | | ELEMENT DIS | TANCE (FEET) | neu D | REDUCTION |
| New Building: | New Build Addition | | Building | t Time Interior Cor | npletion | | North East | LATEITO | 0 | 0 |
| Existing Building | E Renova | ation 🗌 In | terior Completion | Tenant Alteration | | | West South | | 0 | 0 |
| - | Recons | | epair | Alteration to She | | | Interior Bering | | 0 | 0 |
| Original Occupa | Note: Zonin ncy: | g Review May Be Req | uired for Change of Use | or Occupancy | | | Nonbearing W North | | 0 | 0 |
| Proposed Occup | | 3) Assembly | | | | | East West | | 0 | 0 |
| | | OCCUPANCY | INFORMATION | | _ | | South Interior Bering V | | 0 | 0 |
| Primary Occup | | | | | | | Structural Fran columns, gird | ers, trusses | | |
| Assembly: Hazardous: | | A-2 🔲 A-3 🗌 A-4 -2 🗌 H-3 🗌 H-4 🗍 | | | | | Floor construction supporting beam | ns and joists. | - | - |
| Institutional: | I-1 Condit | ion 🗌 1 🗌 2 | | Business: |] | | List construction Floor Ceiling As | sembly | 0 | 0 |
| | I-2 Condit | ion 🗌 1 🗌 2 ion 🗌 1 🗌 2 🔲 3 | | Educational: |] | 0 | Columns Suppo Roof constructio | n, including | 0 | 0 |
| _ | I-3 Condit | | · | Factory: | F-1 F- | 2 | supporting beam Roof Ceiling Ass | sembly | 0 | 0 |
| Mercantile: | | | | | | | Columns Suppo Shafts- Exit Enc | losures | N/A | N/A |
| - | R-1 S-1 Mode | | | | | | Shafts- Other (d Corridor Separa | tion | N/A N/A | N/A N/A |
| | Parking G | | nclosed 🗌 Repair Gara | age | | | Occupancy Sep Party/ Fire Wall | Separation | N/A N/A | N/A N/A |
| Utility and Mis | | | | | | | Incidental Use S Dwelling/ sleepir | eparation | N/A | N/A |
| Special Occup | | 102 🗌 403 🗌 404 🛛 112 🗌 413 🗌 414 🗍 | | 408 409 418 419 | | | Separation Smoke Barrier S | eparation | N/A N/A | N/A N/A |
| Mixed Occupa | | | ation:Hr. Exce | | 4 | | Tenant Separati * Indicate section | on | | |
| | - | | The required type of con | struction for the b | - | | ** Indicate section | | | |
| | | | determined by applying each of the applicable o | ccupancies to the | entire building. | | | PER | CENTAG | E OF WA |
| | | | The most restrictive type shall apply to the entire | | o determined, | | | SEPARATION D | | DEGREE OF OP OTECTION (TAB |
| Separa | ated Mixed C | | See below for area calcu the occupancy shall be s | | | : | | N/A | | |
| | | | the actual floor area of e floor area for each use sl | ach use divided by | | | | | | WALL L |
| A = 4 | | | | | | | THIS SECTIO | | | |
| | | <u>ccupancy A</u> + Dccupancy A | <u>Actual Area of Occ</u> Allowable Area of Oc | <u>cupancy B</u> _ ≤ 1. cupancy B | | | | | Fire Walls 7 | _ |
| | | + | | + = _ | <u><</u> 1 | | | riers 709 | | |
| | ALLO | OWABLE AREA | AND HEIGHT CA | | I <u>S</u> | | | | | TY SYST |
| | FOR NEW, | | Length | | | 201 | THIS SECTION | | | |
| Exterior Wall North | Actual Le | ngtn Open | | RED ^{lic Way of} | Upen Space | 3U ⁻ | Emergency Ligh | ting: | Yes 🗌 N | 0 |
| South East | | INCREAS | DE NLOU | | | | Exit Signs: Fire Alarm: Smoke Detectio | | Yes N Yes N Yes N | о |
| West Total | ΙNΟ | P | F | | | W | Panic Hardware | | Yes N | |
| INCREASE FRONT | AGE | 0/o | | | | | | LIF | E SAFE | TY PLAN |
| FRONTAGE INCRE | | LA ALLOWABLE AREA FO | DRMULA | | | | Life Safety Plan | | | |
| $I_{F} = 100(\frac{F}{P} - 0.25)$ | 00 | | | A/ | | | | l/or smoke rate | | ons (Chapter |
| | DISCRIP BLD | G AREA TABLE 506.2 A | | LLOWABLE RATE | | M SEPARATION | Assume | d and real prop wall opening a | erty line loc | ations (if not o |
| | Et USE (AC | R STORY ALLOWABLE I | RONTAGE | AREA ALLOW | ABLE AREA | REQUIRED | Оссира | ncy Use for eac nt loads for eac | h area as it | |
| Main Level | A-3 1 | ,856 6000 | N/A N/A | N/A 0.30 | 9 6000 SF | N/A | Exit aco | ess travel distant n path of trave | ance (1017) | Tables 1006 2 |
| | | | | | | | Dead er | nd lenghts (102 kit widths for e | 0.4) | |
| 1 | · | | | | | | Maxim | um calculated o | occupant loa | d capacity eac |
| a. | Perimeter v | | y or open space having 2 | 0 feet minimum w | idth = | (F) | A separ | ate schematic | plan indicati | |
| b. c. | Ratio (F/P) | ng Perimeter = = (F/I | ²) | | | | Locatio | n of doors with n of doors with | panic hardv | |
| d. e. | Percent of | | 00 [F/P - 0.25] x W/30 = | (%) | | | Locatio | n of doors with n of doors with n of doors equi | electromag | netic egress lo |
| 3. Maximum Buil | ding Area = | | in the building x D (maxin | | 6.2) | | Locatio | n of emergency are footage of | escape win | dows (1030) |
| | | parking garages must on the unsprinklered ar | comply with Table 406.5.4 ea value in Table 506.2 | ł | | | The squ | are footage of are footage of iy code excepti | each smoke | compartment |
| | | ALLO | OWABLE HEIGH | <u> </u> | | | | · · | | |
| MOST RESTR | | ALLOWABLE BUILDING | | ACTUAL BUILD | | DE REFERENCE | NUM | | | |
| (GROUI Type of Constru | | HEIGHT (TABLE 504.3) TypeVB | SPRINKLERS TypeVB | PLANS Type <u>VB</u> | | 403.3.1 | TH | IS SECTION IS | REQUIRED FO | OR ALL PROJEC |
| Building Height | in Feet | H = 40'-0'' S= 1 | N/A | H = 22' - 4 S= 1 | | 403.3.1 403.3.1 | FLOOR, ROOM AND/OR SPACE | | | EXITS ALI |

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APPENDIX B BUILDING CODE SUMMARY

BUILDING DATA

- CTION REQUIRED FOR ALL PROJECTS -A 🗌 II-B 🗌 III-A 🗌 III-B 🗌 IV-HT 🗌 V-A 🔲 V-B
- Types NFPA 13R Partially Sprinklered Special Suppression
- Class: I I II III Wet Dry ndix D) 🗌 Floor Hazard tory
- afety Plan Sheet # (if provided): _____ G0.3__

| NEW (SQFT) | SUB-TOTAL |
|------------|-----------|
| 1,856 | 1,856 |
| | |
| | |
| | - |

PROTECTION REQUIREMENTS

| RATING PROVIDED (W/* REDUCTION) | DETAIL # & SHEET # | DESIGN # FOR RATED ASSEMBLY | Sheet # For Rated Penetration | Sheet # For rated Joints |
|--|--------------------------|-----------------------------------|-------------------------------------|--------------------------------|
| | | | | |
| 0 | | | | |
| 0 | | | | |
| 0 | | | | |
| 0 | | | | |
| 0 | | | | |
| | 1 | 1 | | |
| 0 | | | | |
| 0 | | | | |
| 0 | | | | |
| 0 | | | | |
| 0 | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| 0 | | | | |
| 0 | | | | |
| 0 | | | | |
| | | | | |
| | | | | |
| 0 | | | | |
| | | | | |
| N/A | | | | |
| | | | | |

ction eption

GE OF WALL OPENING CALCULATIONS

| DEGREE OF OPENINGS | ALLOWABLE AREA | ACTUAL SHOWN ON PLANS |
|-----------------------|----------------|-----------------------|
| OTECTION (TABLE 705.8 | (%) | (%) |
| | | . , |

WALL LEGENDS

PROJECTS

SENT AND INDICATE BY A WALL LEGEND ON ALL PLANS 705 Fire Barriers 706 Smoke Partitions 710 sure 707

ETY SYSTEMS REQUIREMENTS

ETY PLAN REQUIREMENTS

tions (Chapter 7) cations (if not on the site plan) espect to distance to assumed property lines (705.8) relates to occupant load calculation (Table 1004.1.2) (Tables 1006.2.1 & 1006.3.2(1))

ad capacity each exit door can accommodate based on egress width (1005.3) : dooi ting where fire rated floor/ceiling and/or roof structure is provided for

ware (1010.1.10) gess locks and the amount of delay (1010.1.9.7)

gnetic egress locks (1010.1.9.9)

hold-open devices ndows (1030)

area (202)

e compartment for Occupancy Classification I-2 (407.5) e notes that may have been utilized regarding the items above

MENTS

4

DESIGNATION

POOL DECK

1. Corridor dead ends (Section 1017.3) **EMENT OF EXITS** 2. Single exits (Section 1015.1; Section 1019.2) 3. Common Path of Egress Travel (Section 1014.3) FOR ALL PROJECTS F EXITS TRAVEL DISTANCE ARRANGEMENT MEANS OF EGRES ALLOWABLE ACTUAL TRAVEL REQUIRED ACTUAL IOWN ON DISTANCE DISTANCE TRAVEL DISTANCE PLANS DISTANCE SHOWN ON BETWEEN EXIT SHOWN ON (TABLE 1016.1) PLANS DOORS PLANS

200'-0" 123'-10" 67'-0" 114'-5"

OCCUPANT LOAD AND EXIT WIDTH

| | | Occupancy | | Egress Width per Occupant(1005.3) | | | | Actual Wid Shown | |
|-------------------|----------|-------------|------------|--------------------------------------|-------|-------|-------|---------------------|-------|
| Room Name | Area | Load Factor | Load Count | Level | Stair | Level | Stair | Level | Stair |
| | | | | | 1 | | | | |
| PUMP ROOM | 156 SF | 300 SF | 1 | 0.2 | | 0.2 | | | |
| CHEM. | 43 SF | 300 SF | 1 | 0.2 | | 0.2 | | | |
| ELEC. | 11 SF | 300 SF | 1 | 0.2 | | 0.2 | | | |
| ENTRY | 31 SF | 0 SF | | 0.2 | | | | | |
| HALL | 123 SF | 0 SF | | 0.2 | | | | 46 | |
| COVERED PORCH | 415 SF | 15 SF | 28 | 0.2 | | 5.6 | | 46 | |
| MENS | 164 SF | 0 SF | | 0.2 | | | | | |
| WOMENS | 162 SF | 0 SF | | 0.2 | | | | | |
| COVERED PAVILLION | 708 SF | 15 SF | 48 | 0.2 | | 9.6 | | | |
| POOL | 2688 SF | 50 SF | 54 | 0.2 | | 10.8 | | | |
| 8'-0" CLEAR AREA | 2347 SF | 15 SF | 157 | | | | | | |
| POOL DECK | 3796 SF | 15 SF | 254 | | | | | | |
| Grand total | 10644 SF | | 544 | 2 | | 26.6 | | 92 | 0 |

1. See Table 1004.1.1 to determine whether net or gross area is applicable

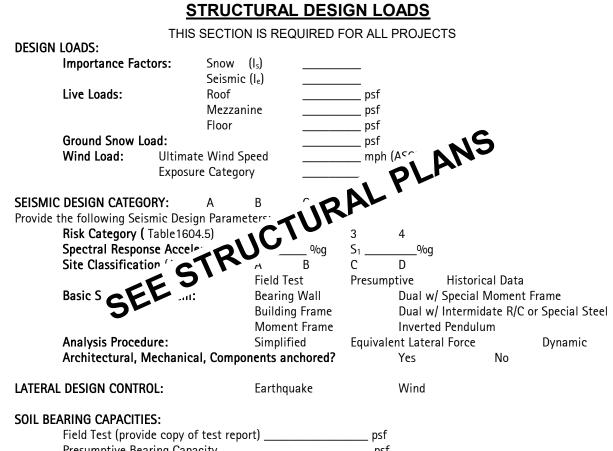
2. Minimum stairway width (Section 1009.1); min. corridor width (Section 1017.2); min. door width (Section 1008.1.1)

3. Minimum width of exit passageway (Section 1021.2) 4. The loss of 1 means of egress shall not reduce the available capacity to less than 50% of the total required (Section 1005.1)

5. Assembly occupancies (Section 1025)

| | | | Occupancy | , | Exit Width | Exit |
|----------------------|---|---------|-------------|------------|------------|----------|
| Name | Туре | Area | Load Factor | Load Count | (inches) | Quantity |
| | | | | • | • | |
| COVERED PORCH | Assembly - Unconcentrated (tables and chairs) | 415 SF | 15 SF | 28 | 5.6 | |
| Covered Pavillion | Assembly - Unconcentrated (tables and chairs) | 708 SF | 15 SF | 48 | 9.6 | |
| POOL | Swimming Pool water surface | 2688 SF | 50 SF | 54 | 10.8 | |
| Grand total | | | | 130 | 26 | |

| | | | THIS | SECTION | IS REQUI | RED FOR A | ALL PROJEC | TS | |
|----------------|----------------|--|--|--------------|----------|-----------|------------------|----------|------------|
| | | WATERC | LOSETS | | LAVAT | ORIES | DINCE | DRINKING | FOUNTAINS |
| USE | | Male | Female | URINALS | Male | Female | RINSE SHOWERS | REGULAR | ACCESSIBLE |
| SPACE | EXIST'G | | | | | | | | |
| | NEW | 1 | 4 | 1 | 2 | 2 | 1 | 1 | 1 |
| | | | | | | | | | |
| Total Required | | 2 | 4 | 0 | 2 | 2 | 1 | 1 | 1 |
| Total Provided | | 1 | 4 | 1 | 2 | 2 | 1 | 1 | 1 |
| | 0RY: <u>24</u> | <u>43 MALE / 12</u> <u>43 FEMALE /6</u> <u>43 MALE / 200</u> | 5 = <u>2</u> WC = 5 = <u>4</u> WC =) = <u>2</u> LAV. = 200 = <u>2</u> LAV. | <u>2</u> LAV | RINAL | | | | |



Presumptive Bearing Capacity _ Pile size, type, and capacity _ MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT - CHANICAL PLANS THIS SECTION FOR NEW, ADDITION, CHANGE OF USE, AND INTERIOR COMPLETION Thermal Zone: Winter Dry Bulb: Summer Dry Bulb: Interior Design Conditions: Winter Dry Bulb: _ Summer Dry Bulb: Relative Humidity: Building Heating Load: Unitary Description of Unit. Heating Efficiency: Cooling Efficiency: Size Category of Unit: Boiler Size Category. If oversized, state reason: Chiller Size Category. If oversized, state reason:

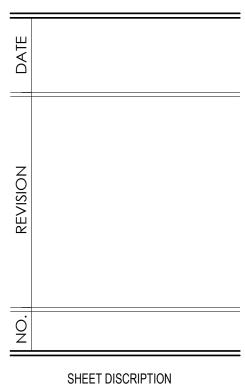
List equipment efficiencies:

| LOT OR PARKING TOTAL # OF PARKING SPACES AREA REQUIRED PROVIDE | | SPACES PROVIDED VAN SPACES WITH 32" ACCESS 8' ACCESS | TOTAL # ACCESSIBLE PROVIDED | J.CLUGSTON |
|---|----------------------------|--|-----------------------------------|------------|
| LOT OR PARKING AREA REQUIRED PROVIDE TOTAL | | | | |
| ELECTRICAL THIS SECTION FOR NEW, ADDITION, CHAI ELECTRICAL SYSTEM AND EQUIPMENT | | RIOR COMPLETION | | |
| Method of Compliance: Energy Code ASHRAE 90.1 | Performance Performance | Prescriptive Prescriptive | | |
| Lighting Schedule (each fixture type) Lamp type required in fixture Number of lamps in fixture Ballast type used in the fixture Number of ballasts in fixture Total wattage per fixture Total interior wattage specified vs. p" Total exterior wattage specifier Additional Efficiency Pach (When using the 2000 HVAC Equipmen | CAL PLA | NS ce by space) | | TOPEX, NC. |
| (When using the 20 C40° California Entrement C40° California Entrement C406.5 On-site Renewable Energy C406.6 Dedicated Outdoor Air System C406.7 Reduced Energy Use in Service | y rols | | | |
| ENERGY SU THIS SECTION FOR NEW, ADDITION, | | NTERIOR COMPLETIO | N | |
| | | | | Perry Cox |

SEASONAL DRAIN DOWN BUILDING

SPECIAL APPROVALS

(Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below) CITY OF ANGIER / HARNETT COUNTY HEALTH DEPARTMENT

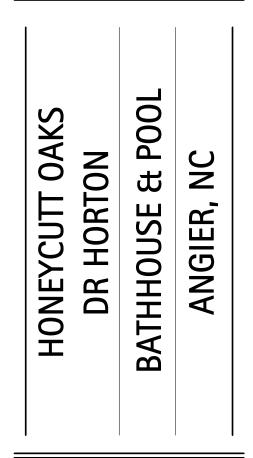


architect, p.a.

124 Salem Towne Court, Apex, NC 27502 P: 919.363.5411 www.pcoxdesign.com



| PROJECT #: | 2022038 |
|--------------|------------|
| DATE ISSUED: | 06/11/2024 |
| DRAWING BY: | JGM |
| CHECKED BY: | PGC/DSC |



G0.2

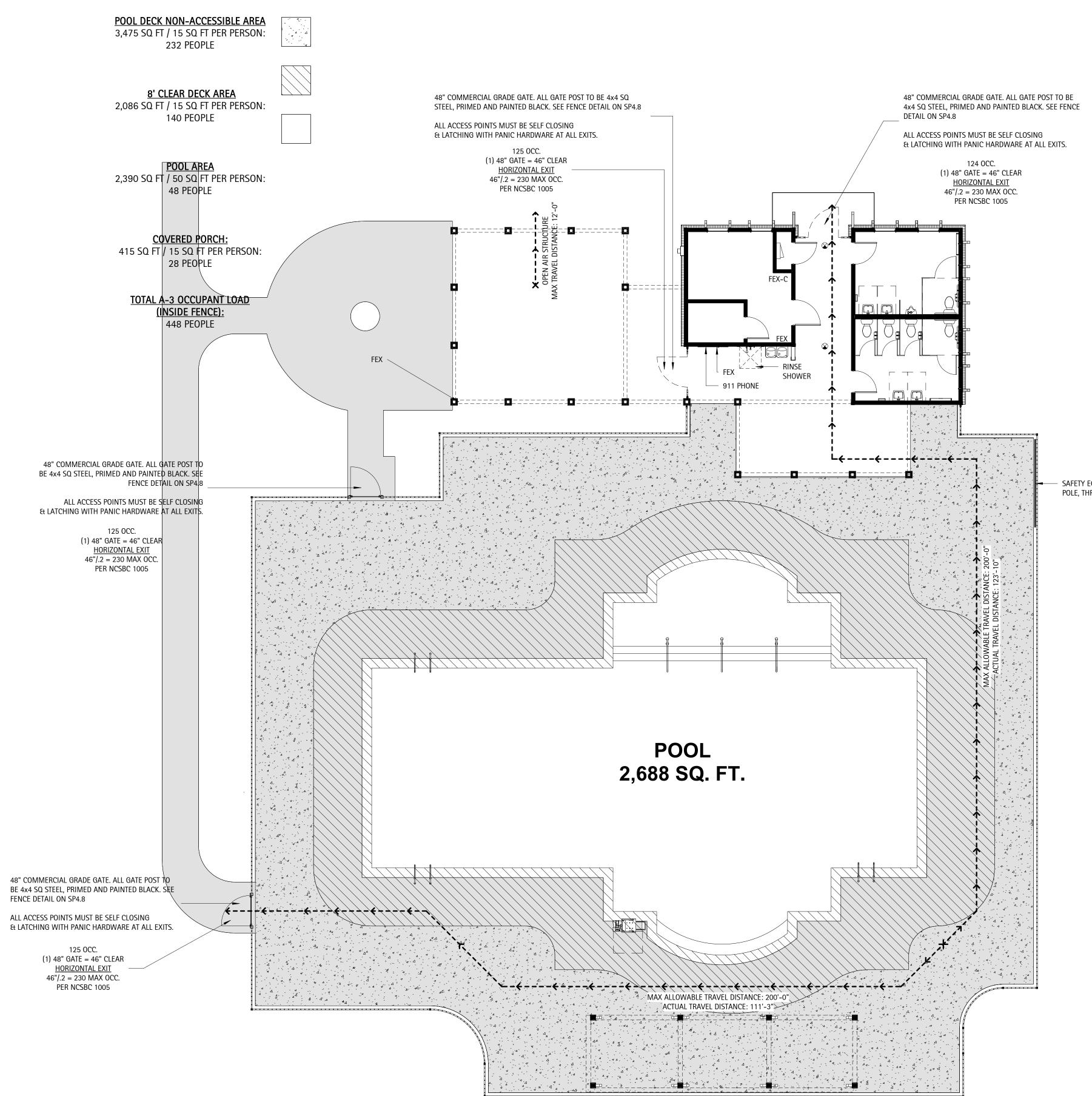




Image: Constraint of the second sec

Room Number Room Name 100 ENTRY N/A 101 N/A HALL 103 ELEC. Acces MENS N/A 104 105 PUMP ROOM Acces 106 N/A WOMENS 107 CHEM. Acces 108 COVERED PORCH Assem 109 COVERED PAVILLION Assem Grand total Room Number Room Name PL100 POOL Swim PL101 8'-0" CLEAR AREA Swimi

POOL DECK

Swim

PL102 Grand total

SAFETY EQUIPMENT LIFE HOOK & POLE, THROW ROPE, 24" LIFE RING

| OCCUPANCY SCHEDULE CLUBHOUSE | | | | | | | |
|--|---------|-------------|---------------|--|--|--|--|
| | | Occupancy | | | | | |
| Туре | Area | Load Factor | Load Count | | | | |
| | | | | | | | |
| | 31 SF | 0 SF | | | | | |
| | 123 SF | 0 SF | | | | | |
| ssory Storage Areas, Mechanical Equipment Room | 11 SF | 300 SF | 1 | | | | |
| | 164 SF | 0 SF | | | | | |
| ssory Storage Areas, Mechanical Equipment Room | 156 SF | 300 SF | 1 | | | | |
| | 162 SF | 0 SF | | | | | |
| ssory Storage Areas, Mechanical Equipment Room | 43 SF | 300 SF | 1 | | | | |
| mbly - Unconcentrated (tables and chairs) | 415 SF | 15 SF | 28 | | | | |
| mbly - Unconcentrated (tables and chairs) | 708 SF | 15 SF | 48 | | | | |
| | 1813 SF | | 79 | | | | |
| OCCUPANCY SCHEDULE POOL | | | | | | | |
| | | Occupancy | | | | | |
| Туре | Area | Load Factor | Load Count | | | | |
| | L | | | | | | |
| nming Pool water surface | 2688 SF | 50 SF | 54 | | | | |
| ning Pool Deck | 2347 SF | 15 SF | 157 | | | | |
| ning Pool Deck | 3796 SF | 15 SF | 254 | | | | |
| | 8831 SF | | 465 | | | | |
| | | | | | | | |

| G | EN | ER | AL | LIF | Ē | SA | FE | ΓY | NO | TES | 5 |
|---|----|----|----|-----|---|----|----|----|----|-----|---|
| | | | | | | | | | | | |

USE: PRIMARY LOAD FACTOR: OCCUPANT LOAD: CONSTRUCTION TYPE: SPRINKLERS:

REQUIRED EXITS:

PROVIDED EXITS: DIAGONAL DISTANCE: **REQUIRED EXIT SEPARATION: PROVIDED EXIT SEPARATION:**

REQUIRED EGRESS WIDTH PROVIDED EGRESS WIDTH:

MAXIMUM COMMON PATH OF TRAVEL: MAXIMUM ALLOWABLE TRAVEL DISTANCE: ACTUAL MAX TRAVEL DISTANCE:

GENERAL PLUMBING NOTES:

USE:

OCCUPANT LOAD:

REQUIRED MALE WATER CLOSETS: REQUIRED FEMALE WATER CLOSETS: PROVIDED MALE WATER CLOSETS: **PROVIDED FEMALE WATER CLOSETS:**

REQUIRED MALE LAVATORIES: **REQUIRED FEMALE LAVATORIES:** PROVIDED MALE LAVATORIES: PROVIDED FEMALE LAVATORIES:

REQUIRED WATERCOOLERS: PROVIDED WATERCOOLERS:

REQUIRED SERVICE SINKS: PROVIDED SERVICE SINKS:

A-3 (ASSEMBLY) UNCONCENTRATED TABLES & CHAIRS (15 SF) 544 PPL V-B NO 134'-0" 134'-0"/2 = 67'-0" 114'-5" 103.4" 184"

75'-0" 200'-0" 123'-10"

A-3 (ASSEMBLY) 544 PPL / 2 = 272 PPL

2 (1 PER 125 PPL) 4 (1 PER 65 PPL) 2 WC & 1 URINAL 4

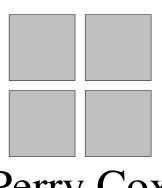
3 (1 PER 200) 2 (1 PER 200) 2 2 2 (1 PER 500) 2

1(HOSE BIB & FLOOR DRAIN)

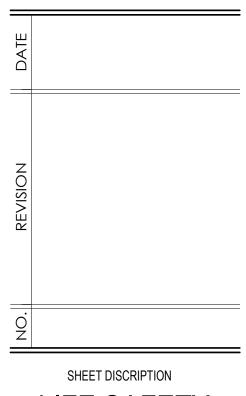








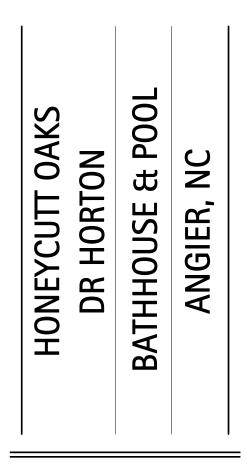
Perry Cox architect, p.a. 124 Salem Towne Court, Apex, NC 27502 P: 919.363.5411 www.pcoxdesign.com





| PROJECT #: | 2022038 |
|--------------|------------|
| DATE ISSUED: | 06/11/2024 |
| DRAWING BY: | JGM |
| CHECKED BY: | PGC/DSC |

| | LIFE SAFETY SYMBOL LEGEND |
|------------|--|
| \bigcirc | EMERGENCY EXIT |
| FEX | SEMI-RECESSED 'ABC' TYPE FIRE EXTINGUISHER TO MEET NFPA-10 STANDARDS. MOUNT @ 15" MIN 48" MAX A.F.F. |
| FEX-C | BRACKET MOUNTED WATER TYPE FIRE EXTINGUISHER TO MEET NFPA-10 STANDARDS. MOUNT @ 15" MIN 48" MAX A.F.F. |
| > | INDICATES TRAVEL DIRECTION |



G0.3

GENERAL NOTES

- The General Contractor shall be both licensed and bonded in North Carolina and shall provide documents upon the Architect's request.
- The Work shall be done in accordance with all rules and regulations of the North Carolina State Building Code 2018 along with city, county, and state regulations. The General Contractor is responsible for securing and paying for all permits required for the Work and for the scheduling of all required inspections during the course of the Work.
- General Contractor shall be responsible for the provisions for job safety. These drawoings do not contain provisions for job safety.
- Dimensions are to to face of framing unless otherwise noted.
- Do not scale drawings. Stated & written dimensions govern. The General Contractor shall verify all dimensions in the field and shall be responsible for their accuracy. No extra charge or compensation shall be allowed because of difference between actual dimensions and those indicated on the drawings, unless they contribute to a change in the scope of the Work. Any difference which may be found shall be submitted to the Architect for decision prior to ordering, manufacturing, or proceeding with the Work. Horizontal dimensions indicated are to/from face of finish, unless noted otherwise. Vertical dimensions are from top of floor slab except where noted to be above finished floor (AFF). Dimensions are not adjustable without approval of Architect unless noted +/-.
- General Contractor shall be responsible for comparing all dimensions in the construction documents and existing conditions in the field.
- Framing Subcontractor shall coordinated framing with locations of HVAC vents, plumbing and light fixtures so as to avoid conflict.
- The General Contractor shall provide protection and be responsible for any existing finishes to remain and shall repair or replace any damaged areas as a result of the work. All existing finishes to remain shall be cleaned at the completion of construction.
- All materials and systems shall be installed as per manufacturer's specifications and all construction shall be of industry standard or better. The Architect shall be ultimate judge of quality.
- Only new items of recent manufacture, of standard quality, free from defects, will be permitted in the Work, unless otherwise noted. Rejected items shall be removed immediately form the Work and replaced with items of the quality specified. Failure to remove rejected materials and equipment shall not relieve the General Contractor from the responsibility for quality of items used nor from any other obligation imposed on him by the Contract.
- General Contractor shall be responsible for notifying the Architect immeditely of construction deviating from depicted or implied information here-in. In the event of conflict between data shown on drawings and data shown in the specification, the specification shall govern. Detail drawings take precedent over drawings of larger scope. Should the General Contractor at any time discover an error in a drawing or specification, or any discrepancy, or variation between dimensions on the drawings and measurements at site, or lack of dimensions or other information, the Contractor shall not proceed with the work affected until clarification has been made by the Architect. In case of an inconsistency between Drawings and Specifications or within either Document, not clarified by addendum, the more specific provision will take precedence over less specific; more specific will take precedence over less stringent; more expensive item will take precedence over less expensive. Better quality or greater quantity of Work shall be provided in accordance with Architect's interpretation. On Drawings, figures take precedence over scaled dimensions. Scaling of dimensions, if done, is done at the Contractor's own risk.
- General Contractor shall verify that no conflicts exist in locations of any and all mechanical, telephone, electrical, plumbing and sprinkler equipment (to include all piping, duct work, sprinklers structural members and conduit) and that clearances for installation and maintenance of above equipment is provided. Elements in conflict shall be determined and reviewed with the Architect prior to work proceeding. Contractor to coordinate new work with existing conditions.
- The General Contractor shall provide shop drawings for the Architect's review and approval for the following: All shop fabricated millwork, carpet layout, flooring, light fixtures, doors, misc. steel, metal fabrication, glass/glazing, sprinkler layouts, hardware. Shop drawings shall be submitted in the form of 3 sets of prints. Shop drawings shall not be reproductions of Contract Documents. Material Submittals (3 samples) shall be provided for wood, fasteners, acrylic, carpet, tile, base, paint, laminate and any other materials indicated in the shop drawing.
- The General Contractor shall provide the Architect with manufacturer's cut sheets and specifications for all equipment including but not limited to: light fixtures, plumbing equipment, electrical equipment, fans, supplementary heating and cooling elements, all hardware and security equipment. General contractor shall be responsible for verifying all field dimensions prior to ordering equipment and/or casework.
- The General Contractor shall not proceed with work for which he expects additional compensation beyond the contract amount with out 15 written authorization from the Architect and Owner. Failure to obtain such authorization shall invalidate a claim for extra compensation. The Contractor shall not proceed with work which, if completed in strict conformance with the Construction Documents, will result in additional work beyond the scope of the Contract without written authorization from the Architect and Owner. Any field conditions that significantly vary from the Contract Documents or will result in additional work, shall be brought to the attention of the Architect prior to proceeding with work.
- Contractor shall include all x-ray and core drill costs. All core drilling of the slab shall be approved by the Landlord's Structural Engineer 16 prior to proceeding with the Work. Contractor shall submit proposed locations to Architect and Structural Engineer for review prior to proceeding with the work.
- Patch, repair and install all fireproofing as required by code. Fireproof any new penetrations required by the work. 17
- General Contractor to coordinate and review size and location of all slab penetrations. All required penetrations shall be made in 18 accordance with the Owner's standard approval procedures and methods. All penetrations shall be properly sealed according to the Architect and the Owner's requirements and applicable codes.
- The General Contractor shall continuously check architectural and structural clearances for accessibility of equipment and mechanical 19 and electrical systems. No allowances of any kind will be made for the General Contractor's negligence to foresee means of installing equipment into position.
- The finished work shall be firm, well-anchored, in true alignment, plumb, level, with smooth, clean, uniform, appearance without waves, 21 distortions, holes, marks cracks, stains, or discoloration. Jointing shall be close fitting, neat and well scribed. The finished work shall have no exposed unsightly anchors or fasteners and shall not present hazardous, unsafe corners. All work shall have the provision for expansion, contraction and shrinkage as necessary to prevent cracks, buckling, and warping due to temperature and humidity conditions.

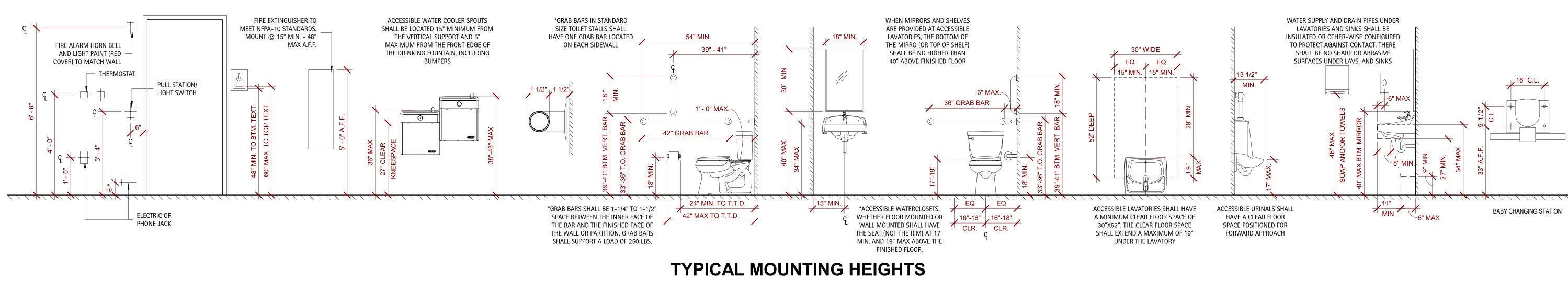
- 22 illustrate every connection. The Contractor is responsible for improving connection accordingly. 23
- 24
- 25

immediately with a proposed alternative.

- 26 be responsible for any overtime costs incurred thereby.
- 27
- 28 and conduits have been removed.
- 29 concrete. Expansion material shall be approved by the MEP Engineer.
- Substantial Completion date shall be brought to the Architect's attention immediately.
- construction. Document any existing conditions or damages prior to the start of construction
- 32 be located on street side elevation). Verify terminus type and laction with owner prior to installation.
- 33 Architect.
- from the Architect.
- All Trades to caulk with Manicapality Approved "Fire Caulk" at all top plate penitrations.

- 1 Bituminous Damp Proofing shall be applied to exterior foundations of all habitable spaces.
- 2 All treated lumber shall bear the designation AWPA C22. Pressure treated lumber shall be used in the following locations: a. Wood in contact with concrete or masonry; b.Siding within 6" of the ground; c. Wood exposed to weather.
- 4 Install 5/8" Densglass sheathing behind all tub and shower walls, use water-resistant GWB for all bathroom ceilings UNO.

- 1 be painted shall be prepared for priming in accordance with the manufacturer's specifications.
- All painted surfaces shall receive 1 prime and 2 finish coats as follows: GWB surfaces - Interior eggshell latex paint GWB ceiling surfaces - Interior flat latex paint Hollow Metal/Wood - Odorless interior semi-gloss alkyd latex
- each color for Owner's approval prior to the start of the Work.
- Verify material with room schedule and/or Architect



GENERAL NOTES

Attachments, connections or fasteners of any nature are to properly and permanently be secured in conformance with best practice and the General Contractor is responsible for improving them accordingly. The drawings highlight special conditions only and by no means

General Contractor shall waive "Common Practice" and "Common Usage" as construction criteria wherever details and Contract Documents of governing codes, ordinances, etc. require quantity or better quality than common practice or common usage would require.

The General Contractor shall submit shop drawings and submittals order and schedule delivery of materials in ample time to avoid delays in construction. If an item is found to be unavailable or to have a long lead time, the General Contractor shall notify Architect

The General Contractor shall notify the Owner, the Landlord, and the Architect in writing of any deficiencies, errors, conflicts or omissions found in the construction documents and/or specifications prior to the commencement of the work in this area. Any unreported deficiencies will become the responsibility of the General Contractor to correct.

The General Contractor shall exercise extreme care and precaution during the construction of the Work, and schedule work, to minimize disturbances to adjacent spaces and /or structures and their occupants, property, public thoroughfares, etc. The General Contractor shall take precautions and be responsible for the safety of all building occupants from construction procedures. The General Contractor shall

All debris shall be removed from the site on a daily basis when possible. Upon completion of the work, remove all debris from the building created by the work provided under this Contract and leave all areas clean. Trash is not permitted to be burned on site.

All abandoned miscellaneous nails, hangers, staples, wires, conduits and debris shall be removed from the walls and areas of exposed ceilings. Remove all abandoned pipe sleeves in floor slabs. Patch existing slab as req. to maintain UL fire rating of floor slab where pipes

Slab penetrations less than 2" around new and existing piping, conduit, ductwork, etc. shall be filled with acoustic foam and/or sealant to ensure acoustical separation between floor slabs. Slab penetrations greater than 2" around new and exiting piping, conduit, ductwork, etc. shall be filled with concrete. All piping, conduit, ductwork, etc. shall be wrapped with expansion material prior to filling with

Contractor shall provide the Team with a construction schedule showing the proposed phasing. Any long lead items that will affect the

Provide protection for existing finishes to remain, including restrooms, lobbies and corridors and repair damages as a result of

General Contractor shall be responsible for providing exhaust for dryers, bathrooms, and ranges to exterior with proper terminus (not to

The Architect shall not be responsible for constructed variations from the information contained here-in unless reviewed and approved by

Do not scale drawings, but rather inquire of Architect. Reproduction of these drawings is prohibited unless written permission is obtained

WALL SECTION NOTES

INTERIOR FINISH NOTES

Refer to Finish Schedule and Finish Plan for extent and type. All wall surfaces, metal frames, and trim shall be painted, UON. All surfaces to

Paint is to be applied by a roller or brush on all surfaces. Only the prime coat may be spray applied. Provide a 12"x12" GWB sample for

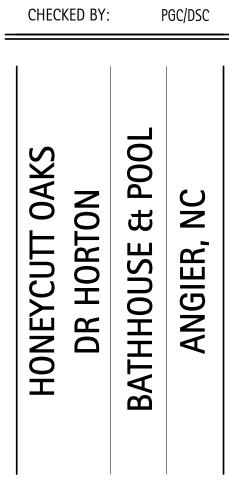
Toilet and bathing room floors shall have a smooth, hard, non-absorbant surface that extends upward onto the walls at least 6"

Walls within 2' of urinals and waterclosets shall have a smooth, hard, non-absorbant surface to the hieght of 4' above the finish floor.

*PROVIDE REQD' BLOCKING FOR GRAB BARS, WALL HUNG TOILETS, AND ACCESORIES DURING FRAMING

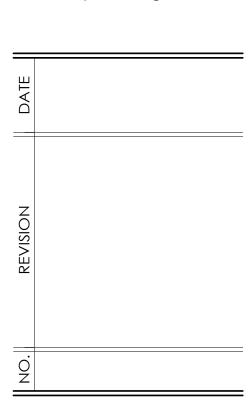
FLOOR FINISH NOTES

- Refer to Finish Plan & Schedule for extent and type of all floor finishes.
- GC to flashpatch floor to provide a level surface that shall not exceed $1/4\pm$ over 10 feet cumulative. At floor finish transitions flash patch to smooth transition of finished material to maintain level finished floor surface.
- 3. All floors to slope to floor drains 1/4" per 1'-0" U.N.O
- 4 All exterior floor slabs to recieve a light broom concrete finish. U.N.O.
- 5 SEE STRUCTURAL DRAWINGS FOR ALL FOUNDATION SPECIFICATIONS.

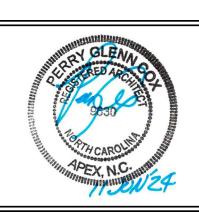


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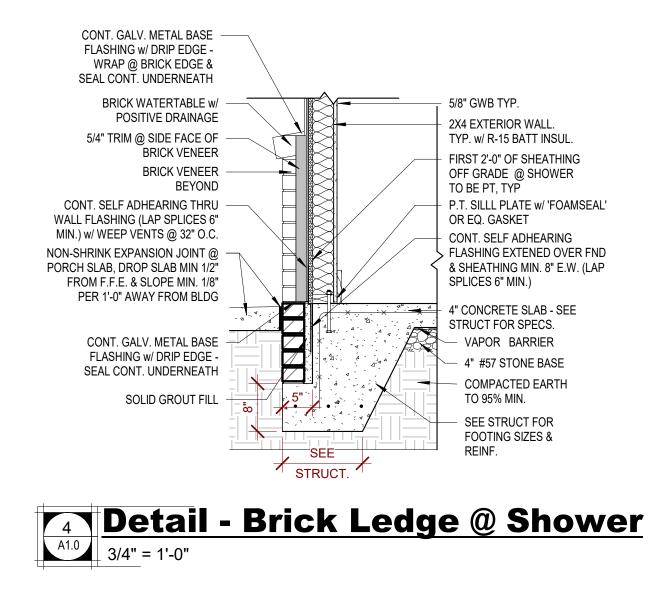


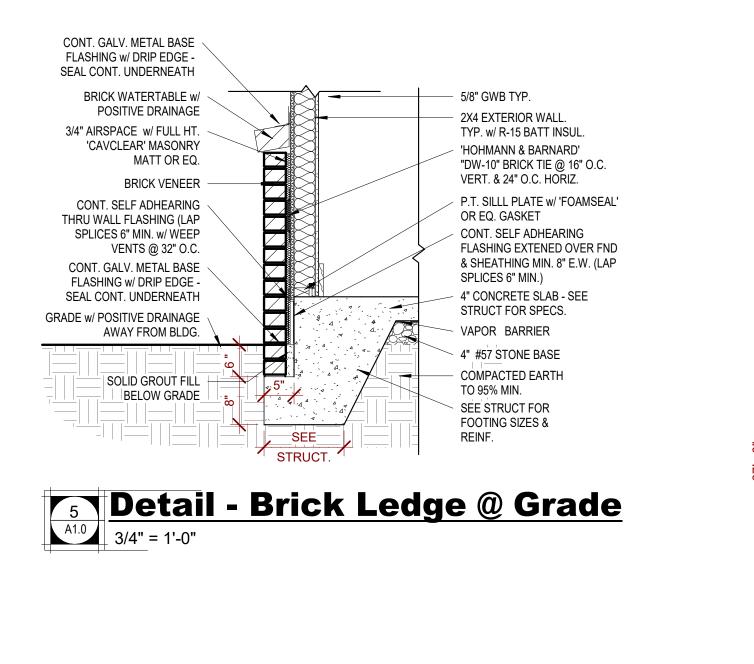












3 3

+

7' - 9 1/4"

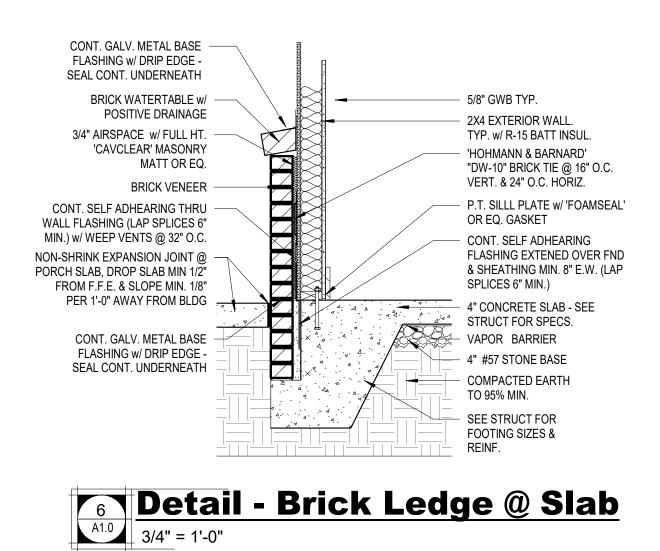
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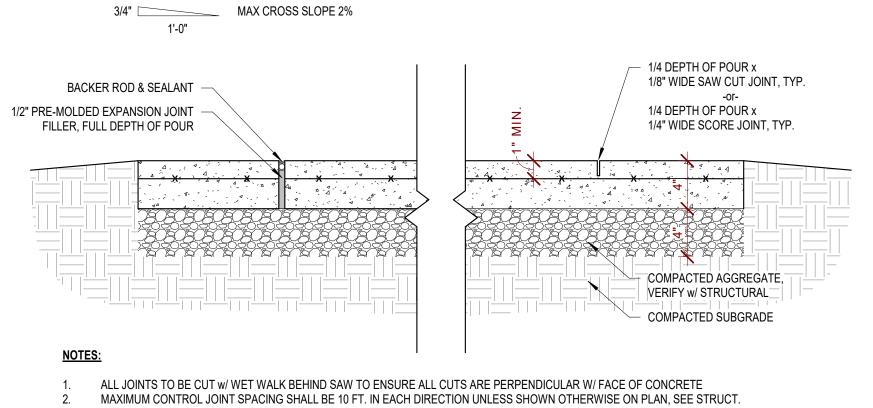
8' 8'

7' - 9 1/4"

+

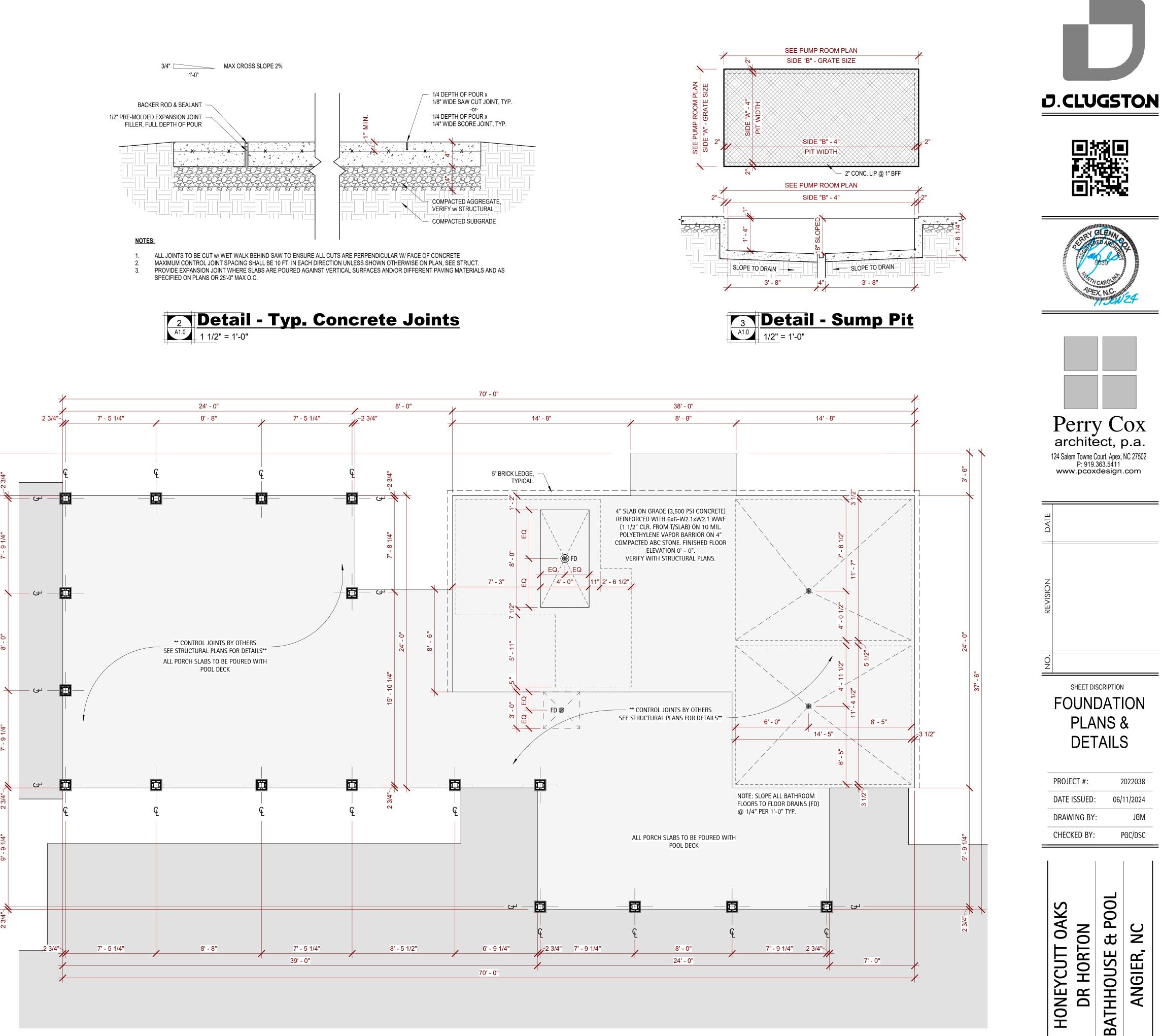
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SPECIFIED ON PLANS OR 25'-0" MAX O.C.





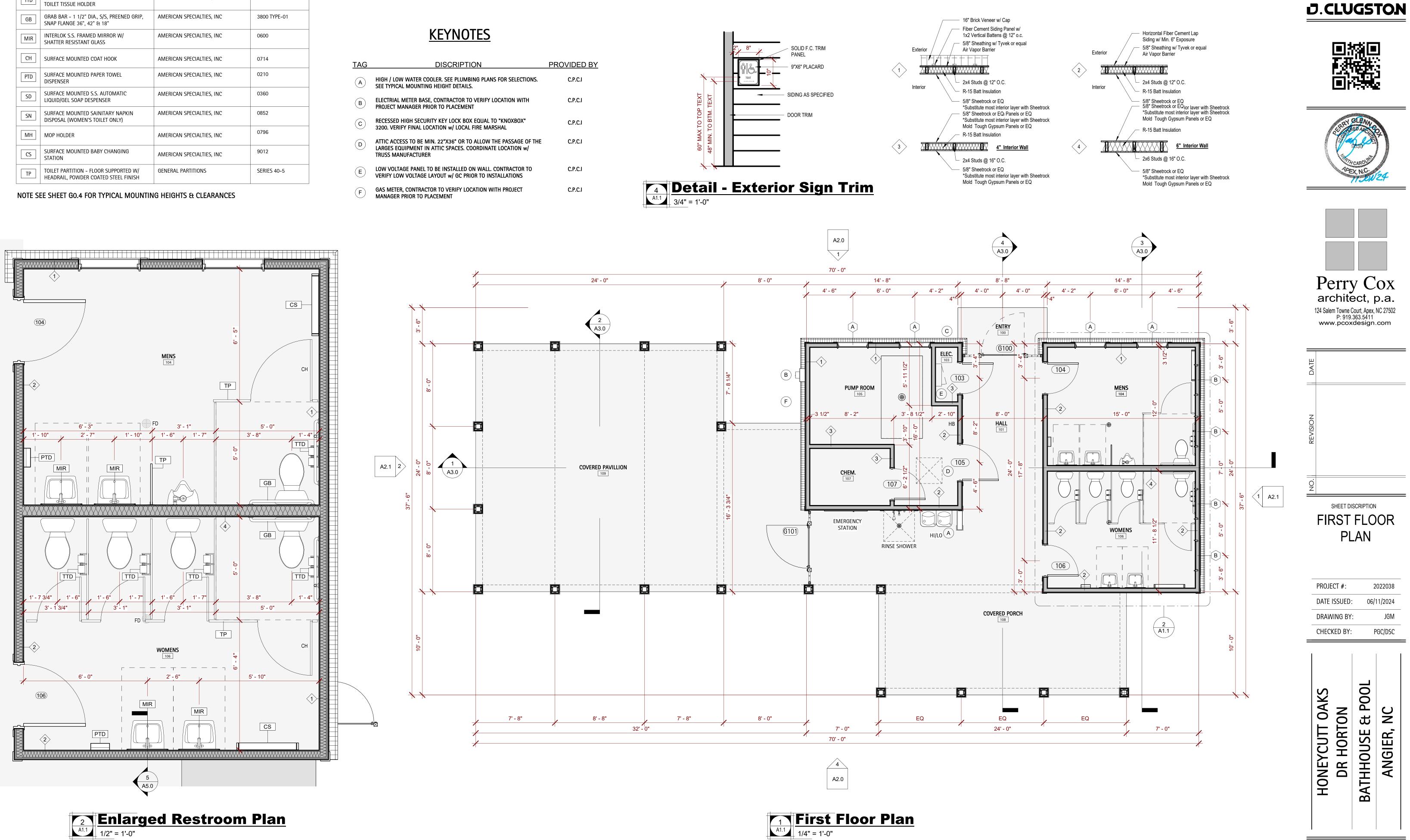


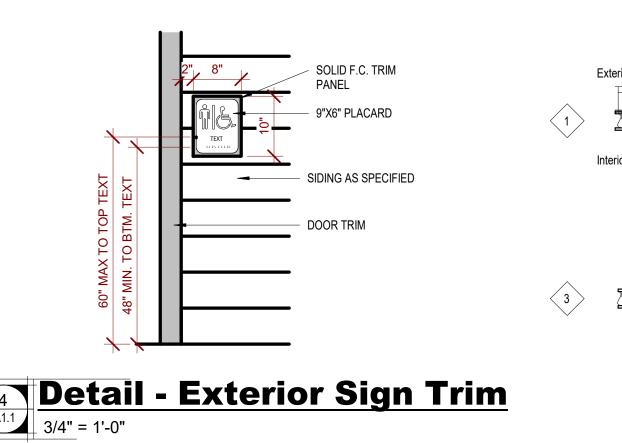
A1.0

| | TOILET AC | CESSORIES | |
|------|---|---------------------------|--------------|
| MARK | ITEM | MANUFACTURER | MODEL NUMBER |
| ΠD | SURFACE MOUNTED DUAL ROLL TOILET TISSUE HOLDER | AMERICAN SPECIALTIES, INC | 0715 |
| GB | GRAB BAR – 1 1/2" DIA., S/S, PREENED GRIP, SNAP FLANGE 36", 42" & 18" | AMERICAN SPECIALTIES, INC | 3800 TYPE-01 |
| MIR | INTERLOK S.S. FRAMED MIRROR W/ SHATTER RESISTANT GLASS | AMERICAN SPECIALTIES, INC | 0600 |
| СН | SURFACE MOUNTED COAT HOOK | AMERICAN SPECIALTIES, INC | 0714 |
| PTD | SURFACE MOUNTED PAPER TOWEL DISPENSER | AMERICAN SPECIALTIES, INC | 0210 |
| SD | SURFACE MOUNTED S.S. AUTOMATIC LIQUID/GEL SOAP DESPENSER | AMERICAN SPECIALTIES, INC | 0360 |
| SN | SURFACE MOUNTED SAINITARY NAPKIN DISPOSAL (WOMEN'S TOILET ONLY) | AMERICAN SPECIALTIES, INC | 0852 |
| MH | MOP HOLDER | AMERICAN SPECIALTIES, INC | 0796 |
| CS | SURFACE MOUNTED BABY CHANGING STATION | AMERICAN SPECIALTIES, INC | 9012 |
| ТР | TOILET PARTITION - FLOOR SUPPORTED W/ HEADRAIL, POWDER COATED STEEL FINISH | GENERAL PARTITIONS | SERIES 40-5 |



| ſAG | DISCRIPTION | PROVIDED BY |
|-----|--|-------------|
| A | HIGH / LOW WATER COOLER. SEE PLUMBING PLANS FOR SELECTIONS. SEE TYPICAL MOUNTING HEIGHT DETAILS. | C.P.C.I |
| В | ELECTRIAL METER BASE, CONTRACTOR TO VERIFY LOCATION WITH PROJECT MANAGER PRIOR TO PLACEMENT | C.P.C.I |
| С | RECESSED HIGH SECURITY KEY LOCK BOX EQUAL TO "KNOXBOX" 3200. VERIFY FINAL LOCATION w/ LOCAL FIRE MARSHAL | C.P.C.I |
| D | ATTIC ACCESS TO BE MIN. 22"X36" OR TO ALLOW THE PASSAGE OF THE LARGES EQUIPMENT IN ATTIC SPACES. COORDINATE LOCATION w/ TRUSS MANUFACTURER | C.P.C.I |
| E | LOW VOLTAGE PANEL TO BE INSTALLED ON WALL. CONTRACTOR TO VERIFY LOW VOLTAGE LAYOUT w/ GC PRIOR TO INSTALLATIONS | C.P.C.I |
| F | GAS METER, CONTRACTOR TO VERIFY LOCATION WITH PROJECT MANAGER PRIOR TO PLACEMENT | C.P.C.I |





First Floor Plan 1/4" = 1'-0"

WALL TYPE DETAILS

A1.1

ROOF NOTES

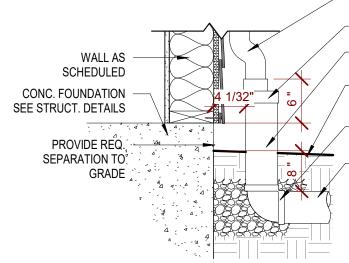
- 1. Roof decks shall be covered with approved roof coverings secured to the building or structure in accordance with the NCSBC. Roof coverings shall be designed and installed in accordance with the building code and the approved manufacturer's instructions.
- 2. Crickets or saddles shall be installed on the ridge side of any chimney or penetration greater than 30 inches wide as measured perpendicular to the slope. Cricket or saddle coverings shall be sheet metal or of the same material as the roof covering.
- 3. Asphalt shingles shall only be used on roof slopes of 2:12 or greater.
- 4. Roof slopes from 2:12 to 4:12, underlayment shall be two layers applied in the following manner. Apply a minimum 19" wide strip of underlayment felt parallel with and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide sheets of underlayment overlapping successive sheets 19 inches minimum and fasten in place.
- 5. Roof slopes from 4:12 or greater, underlayment shall be a minimum of one layer.
- 6. Flashing shall be installed at the wall and roof intersections, at gutters, and wherever there is a change in roof slope or direction and around roof openings. Where flashing is of metal, the metal shall be corrosion resistant with a thickness of not less than 0.019in (No. 26 galvanized sheet)
- 7. Areas prone to ice formation along eaves causing a backup of water shall have an ice barrier that consists of at least (2) two layers of underlayment cemented together or of a self-adhering polymer-modified bitumen sheet. Extend ice barrier min. 18" each side of valleys and other ice prone areas. .

REFLECTIVE CEILING NOTES

- 1. 5/8" GWB typical U.N.O Mold tough in Wet areas
- 2. Height of ceilings shall be measured from top of slab to finish face of GWB or face of ceiling grid as indicated on the Reflected Ceiling Plan, UON.
- 3. All light fixtures are to be installed according to the Electrical Plans.
- 4. Light fixture types, quantities and locations only are noted on Architectural Reflected Ceiling Plans. Specifications, switching, exit lights, emergency lighting, life safety equipment, and circuiting are noted on Engineering documents.
- 5. Dimensioned light fixtures are from finished face of partitions to centerline of fixture and from centerline of fixture to centerline of fixture. All fixtures shall be installed in center of ceiling tile unless noted otherwise. Any discrepancies with light fixtures, switches, thermostats, or diffusers as to location between architectural and engineering drawings or between the drawings and existing field conditions shall be clarified with the Architect before proceeding with installation.

WALL AS -SCHEDULED CONC. FOUNDATION SEE STRUCT. DETAILS NON-SHRINK EXPANSION JOINT

CONNECTION @ SLABS



ALUM. GUTTER, SEE ELEV. FOR LOCATIONS PVC DRAIN ADAPTER 4" or 6" PVC PIPE w/ SLEEVES

ALUM. GUTTER, SEE ELEV.

4" or 6" PVC PIPE w/ SLEEVES

4" CONC. SLAB ON GRADE w/

MIN. 4" COMPACTED GRAVEL

90" ELBOW EMBEDDED IN

SOLID GRAVEL FILL

4" or 6" PVC TO STORM, SLOPE @ MIN 1/4" PER 1'-0"

SEE CIVIL FOR CONT.

FOR LOCATIONS

FILL

PVC DRAIN ADAPTER

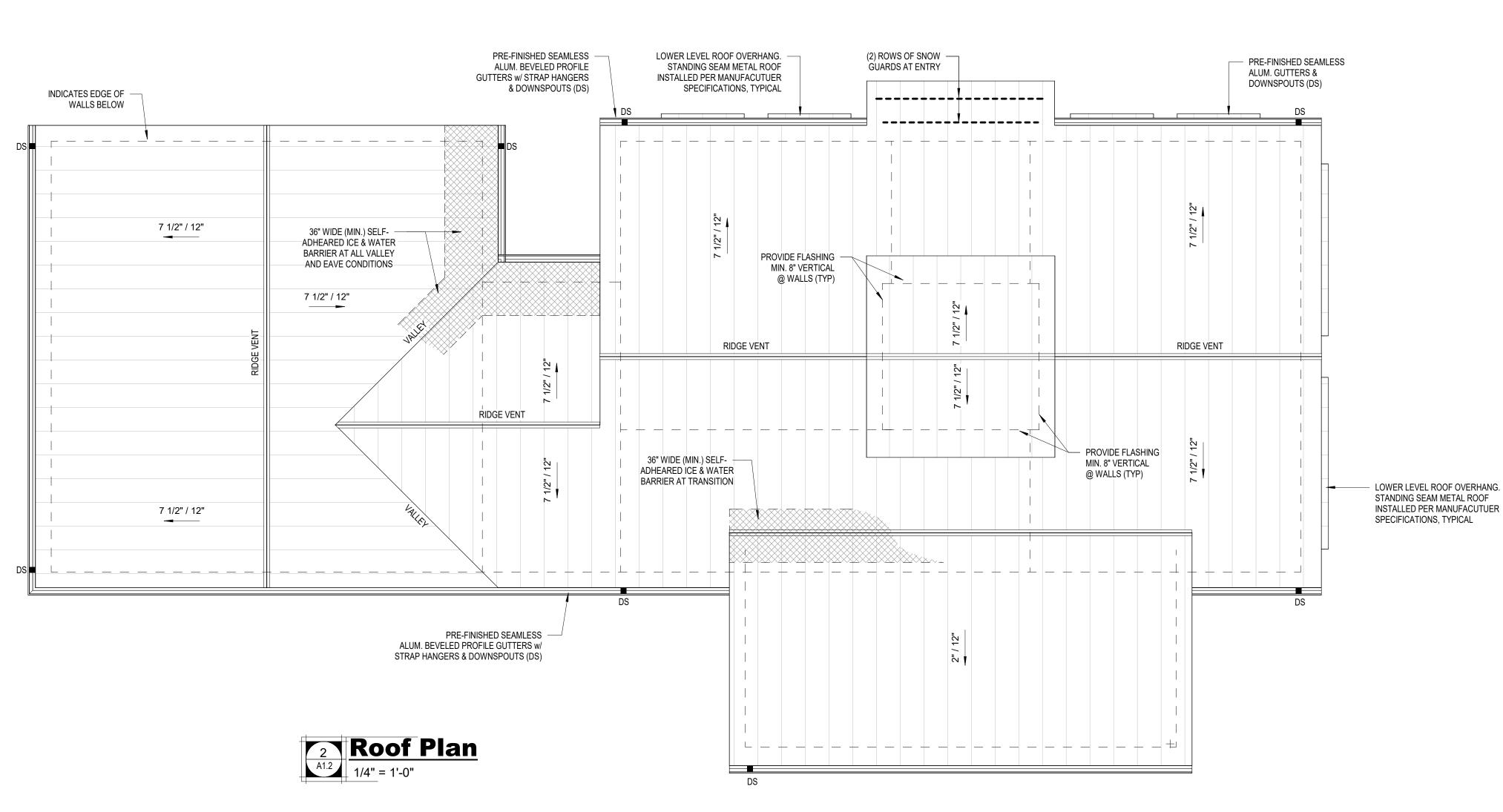
MIN. 3" GRADE COVER, SLOPE AWAY FROM BUILDING

90" ELBOW EMBEDDED IN SOLID GRAVEL FILL 4" or 6" PVC TO STORM, SLOPE @ MIN 1/4" PER 1'-0"

SEE CIVIL FOR CONT.

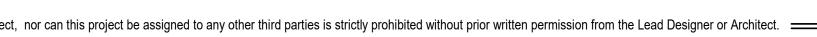
CONNECTION @ GRADE







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A1.2

POOL HONEYCUTT OAKS HORTON NC ш ANGIER, BATHHOUSE DR

***VERIFY ATTIC ACCESS LOCATIONS WITH** APPROVED TRUSS LAYOUTS AND PROFILES

WITH OWNER / GC PRIOR TO ORDER

* VERIFY ALL SELECTIONS

LOCATE IN CEILING

SHEET DISCRIPTION RCP & ROOF PLANS

2022038

JGM

PGC/DSC

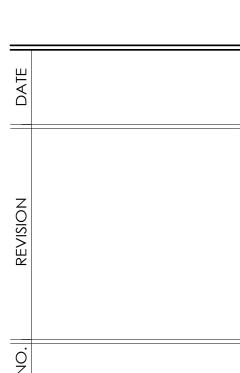
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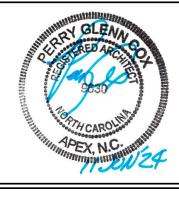
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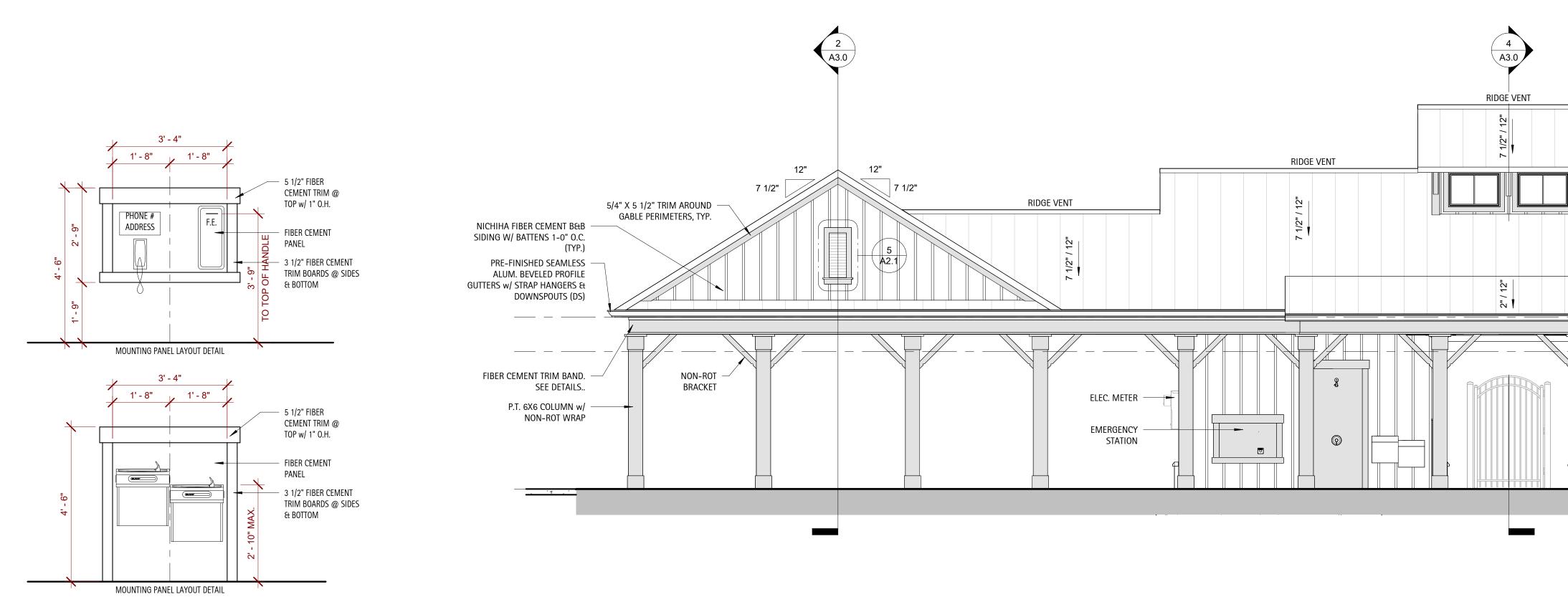


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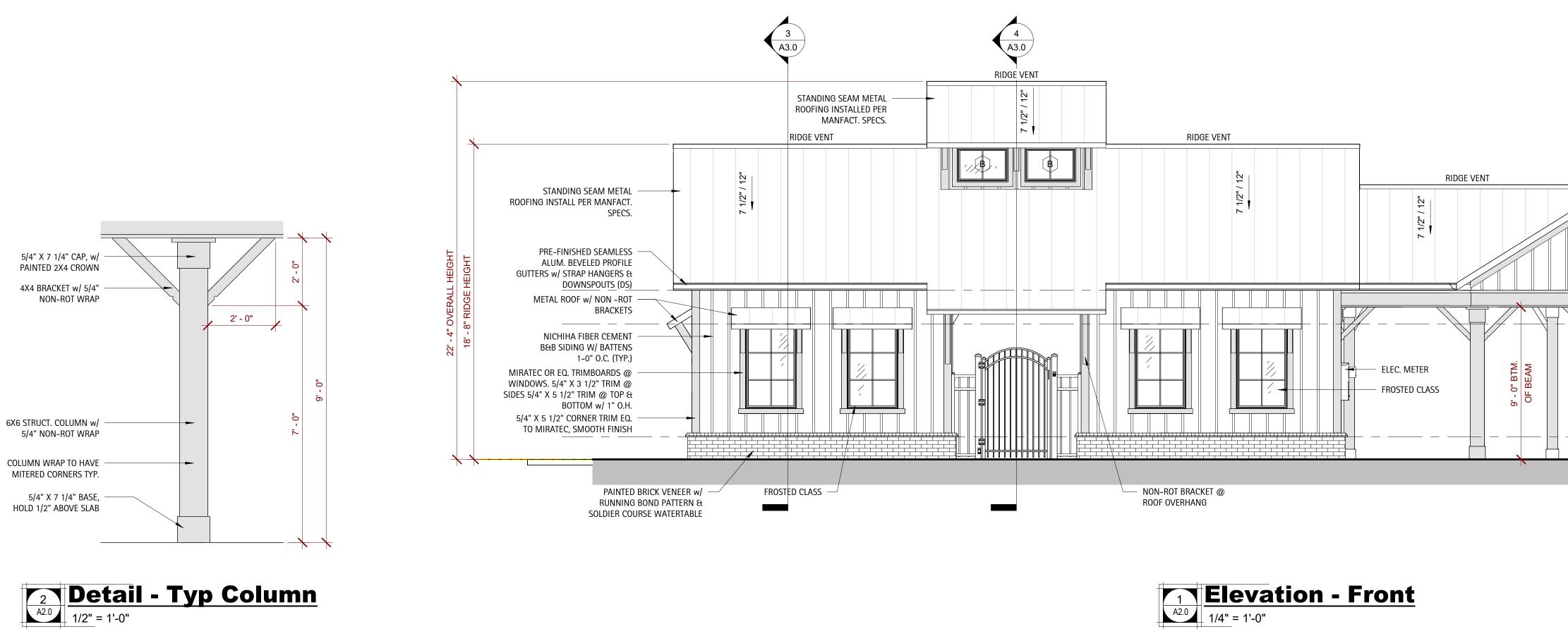








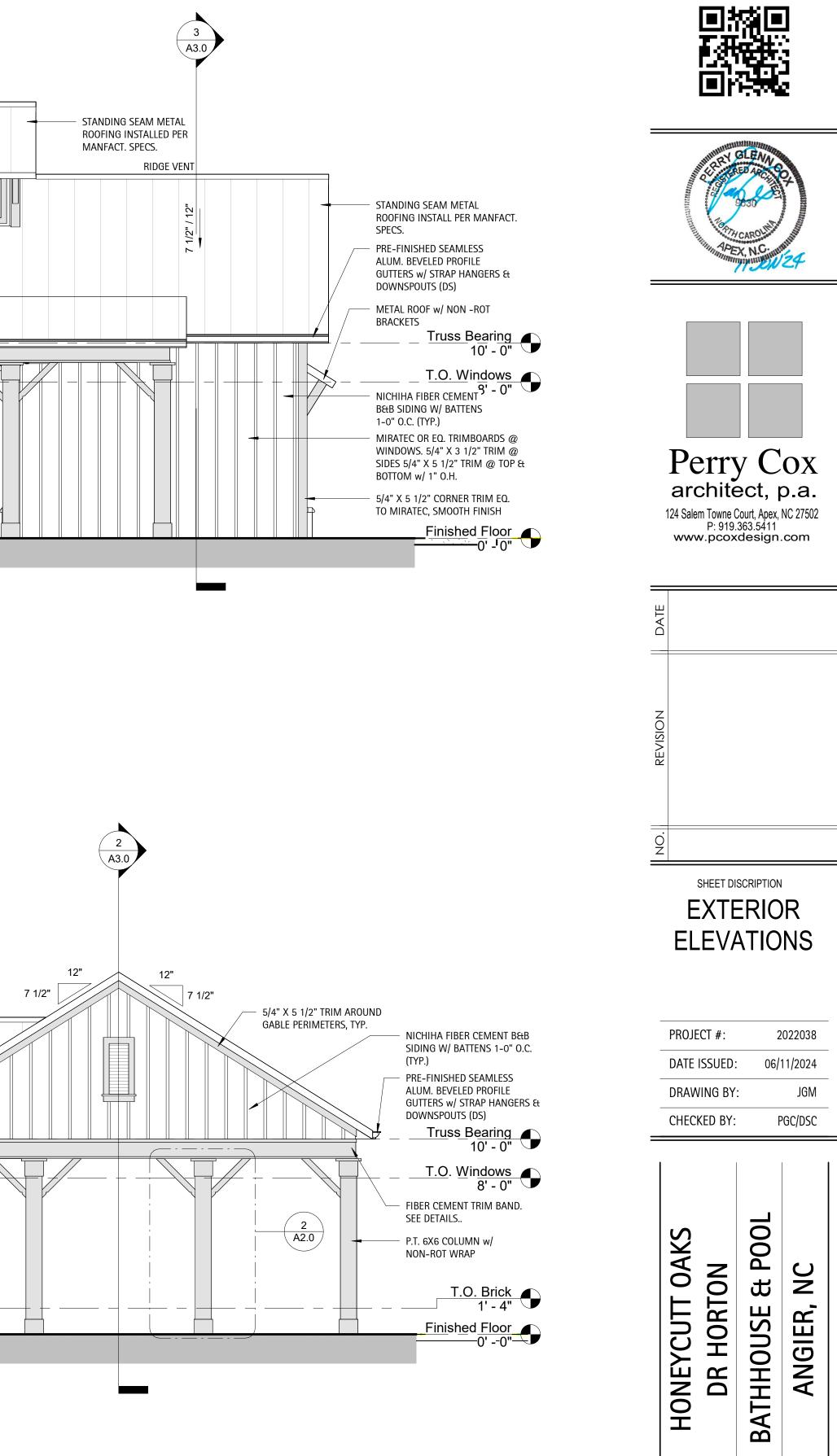




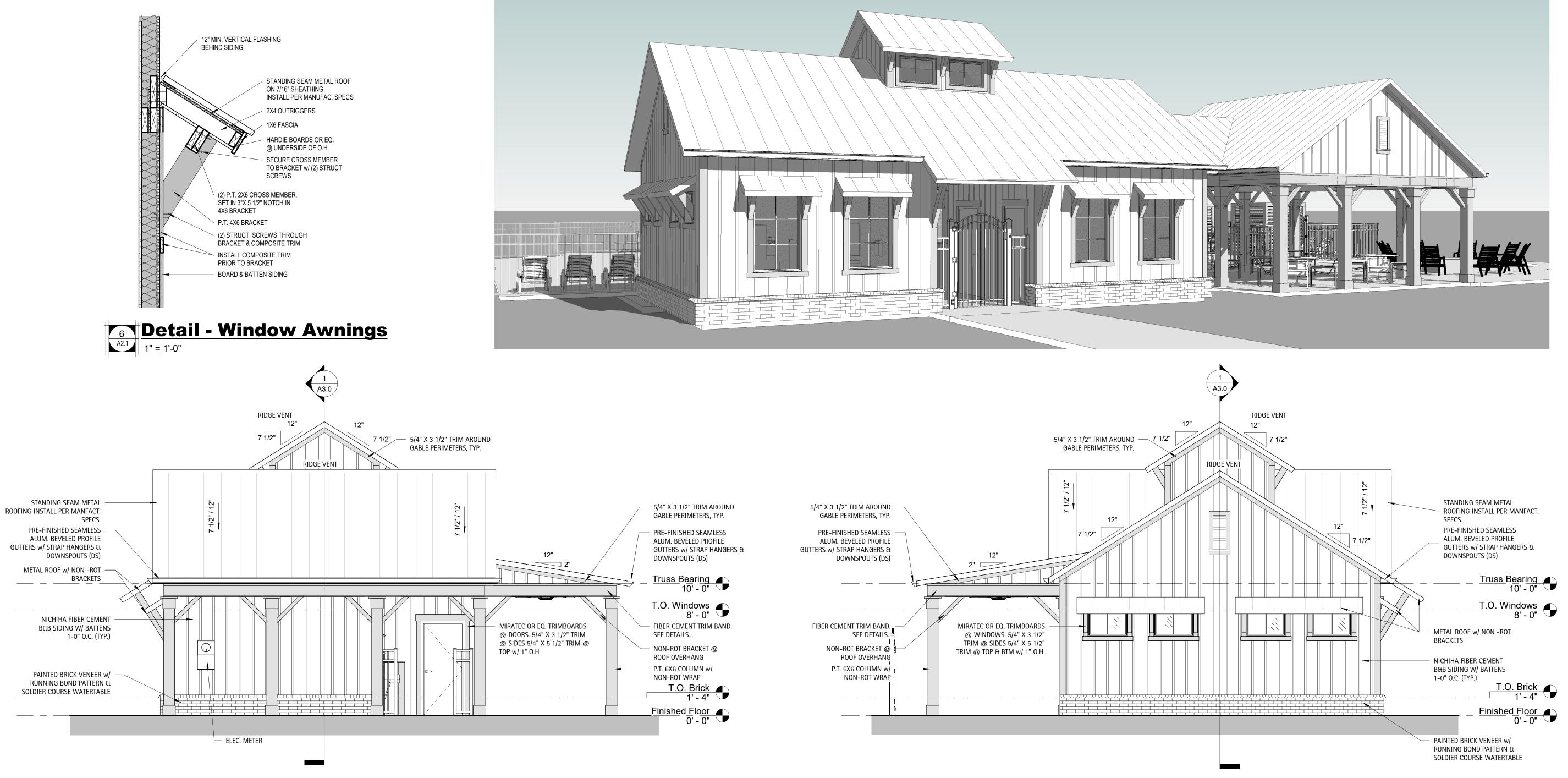
4 **Elevation - Rear** 1/4" = 1'-0"



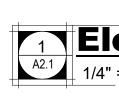
A2.0





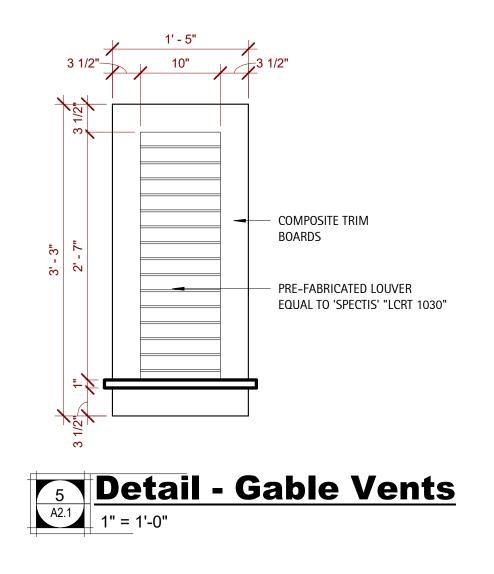


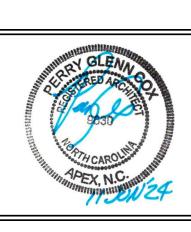




1Elevation - RightA2.11/4" = 1'-0"

A2.1









SHEET DISCRIPTION EXTERIOR ELEVATIONS

2022038

JGM

NC

ANGIER,

PGC/DSC

Et POOL

BATHHOUSE

06/11/2024

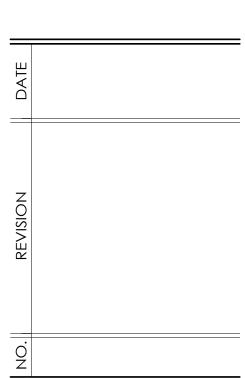
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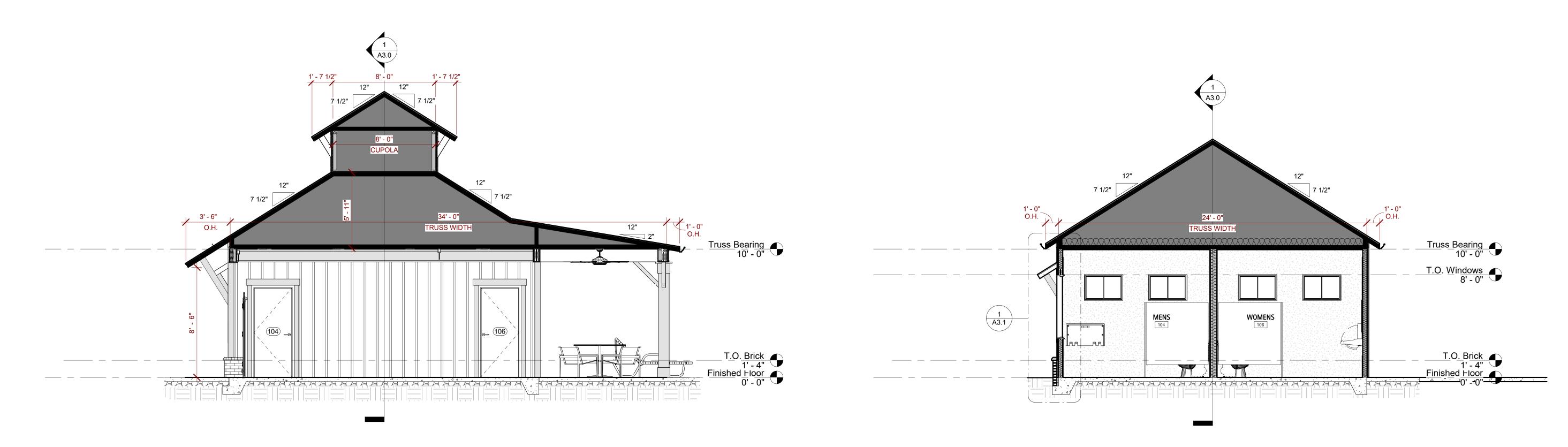
DRAWING BY:

CHECKED BY:

HONEYCUTT OAKS DR HORTON



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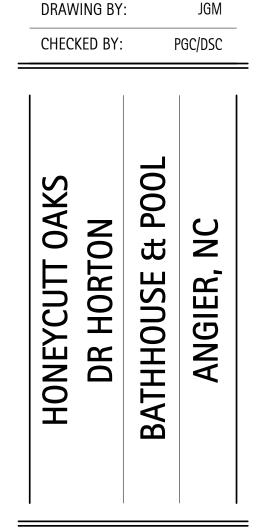








A3.0



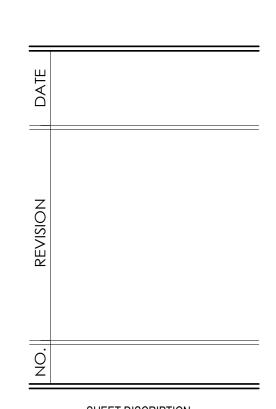


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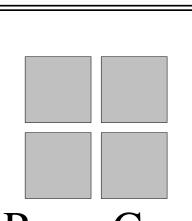
06/11/2024

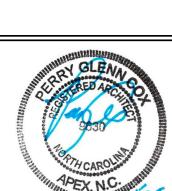
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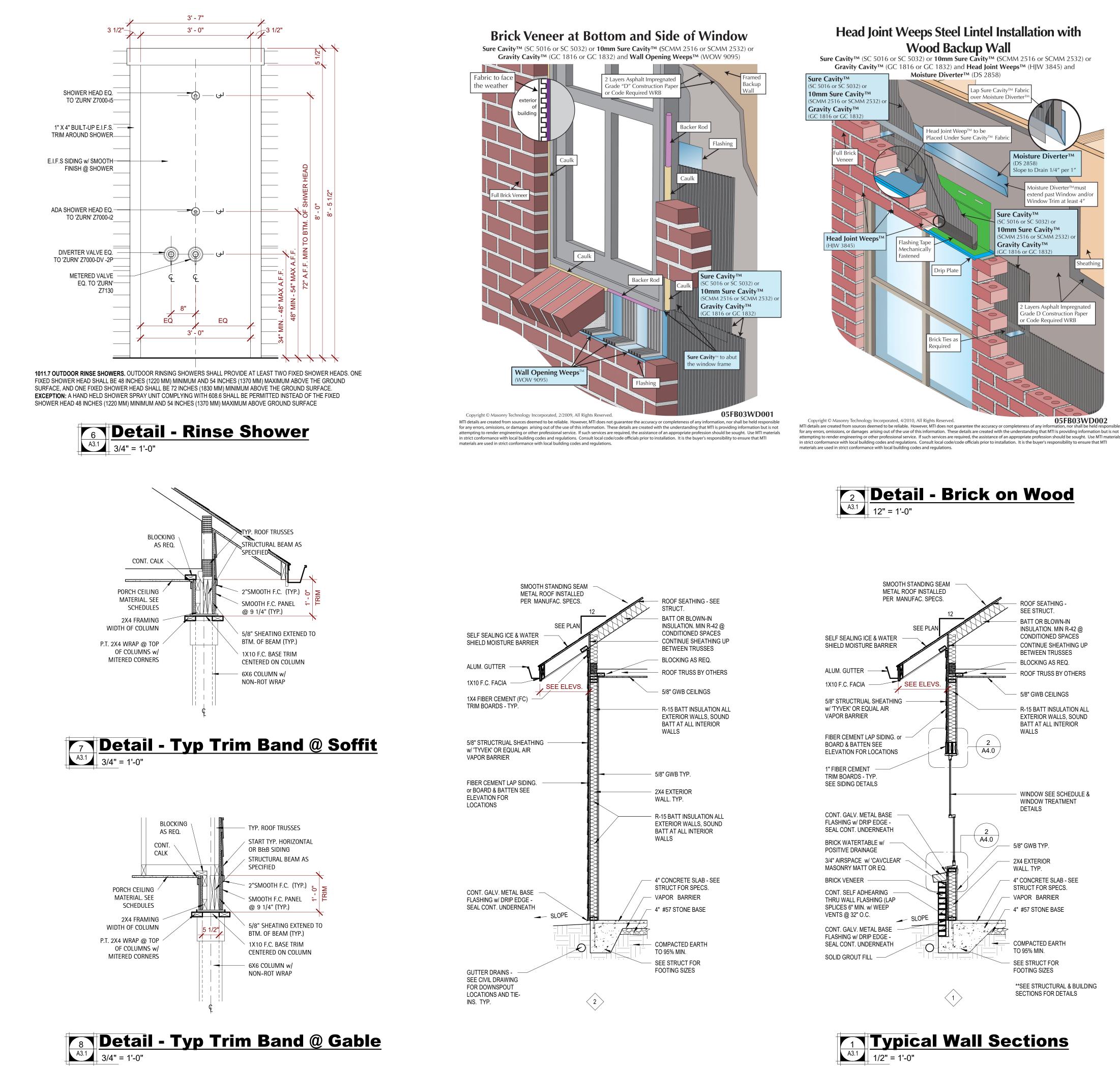
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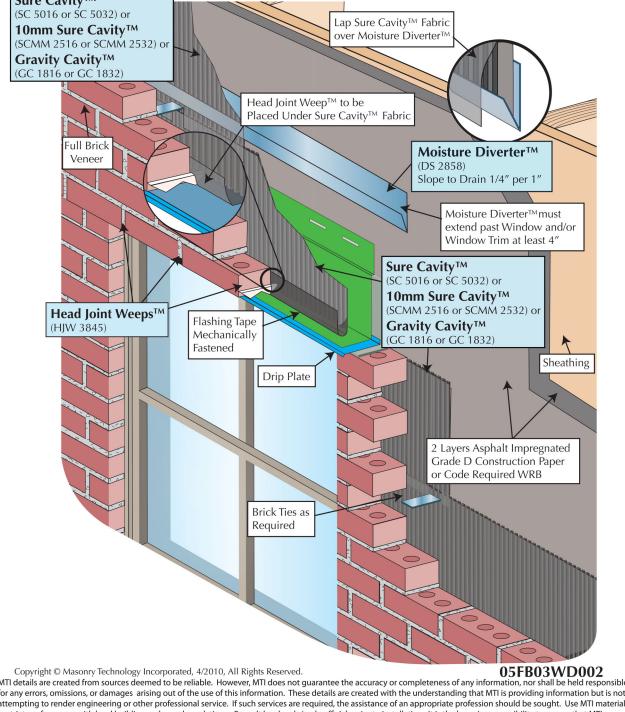






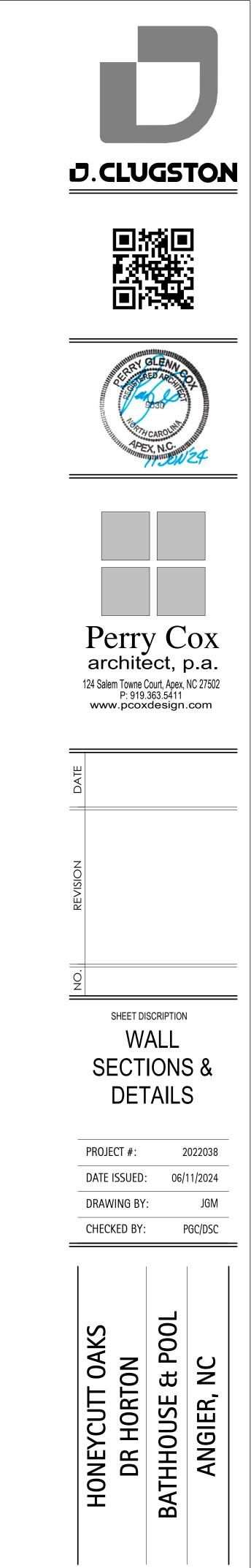




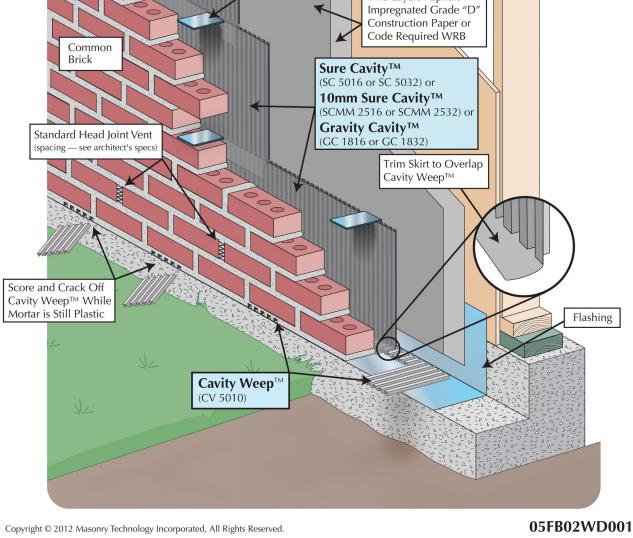




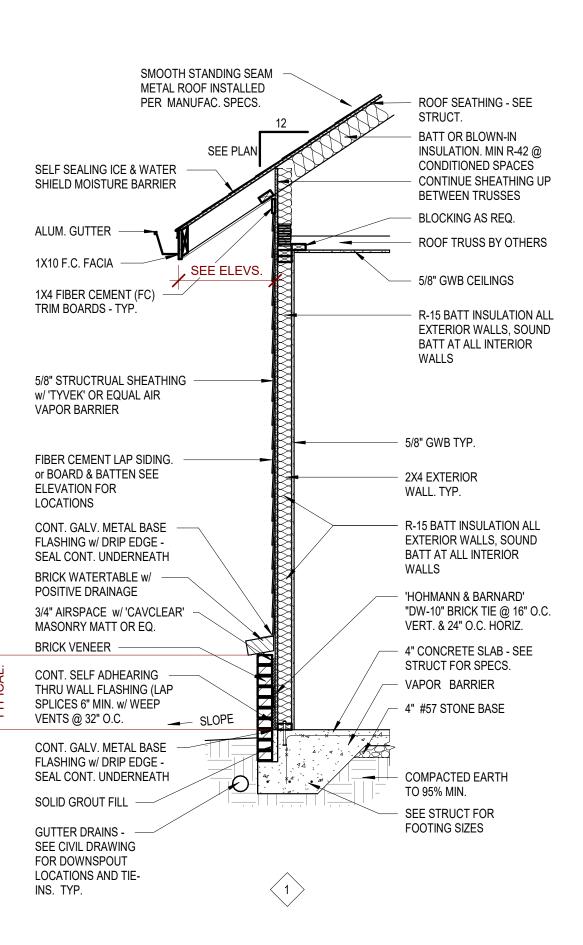
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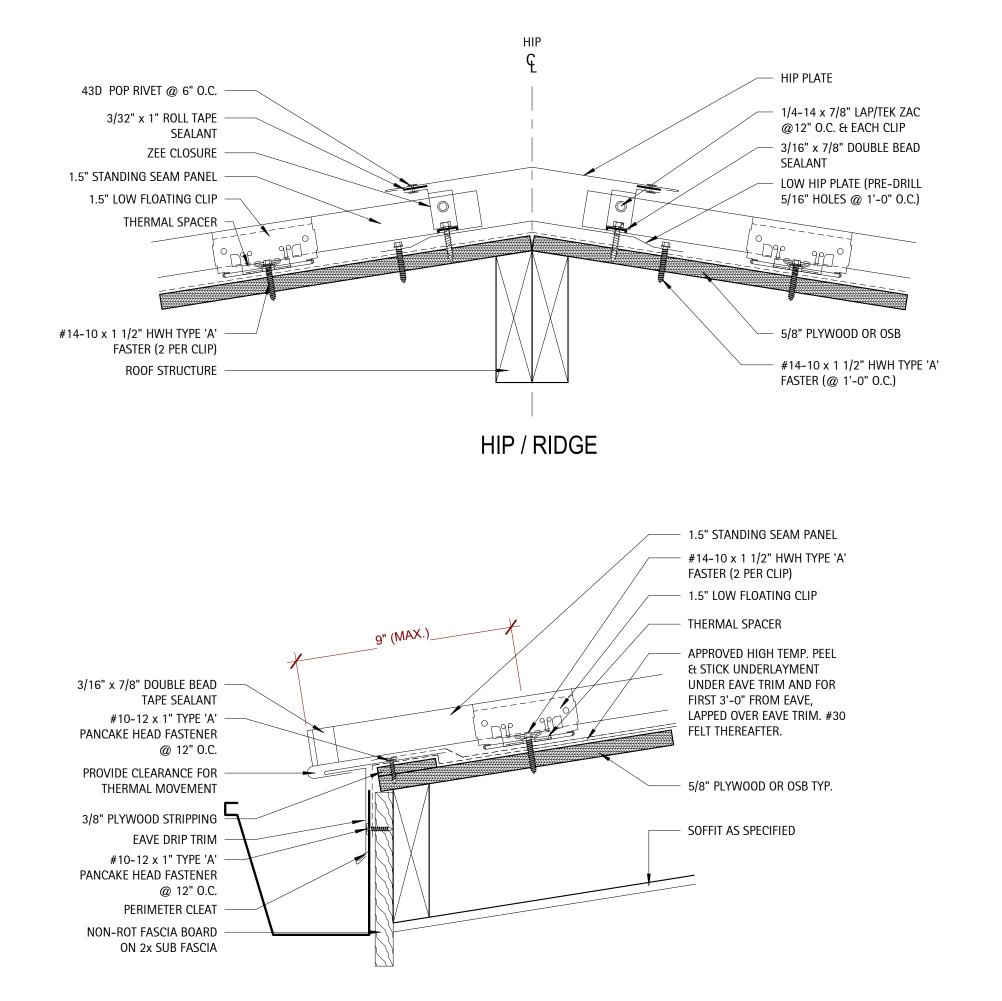


Full Brick Veneer at Bottom of Wood Backup Wall Cavities With Less Than 2" of Remaining Airspace **Sure Cavity**[™] (SC 5016 or SC 5032) and **Cavity Weep**[™] (CV 5010) Sure Cavity ™ Fab o Face the Weather avity Less than Brick Tie vo Layers Asphalt pregnated Grade "E



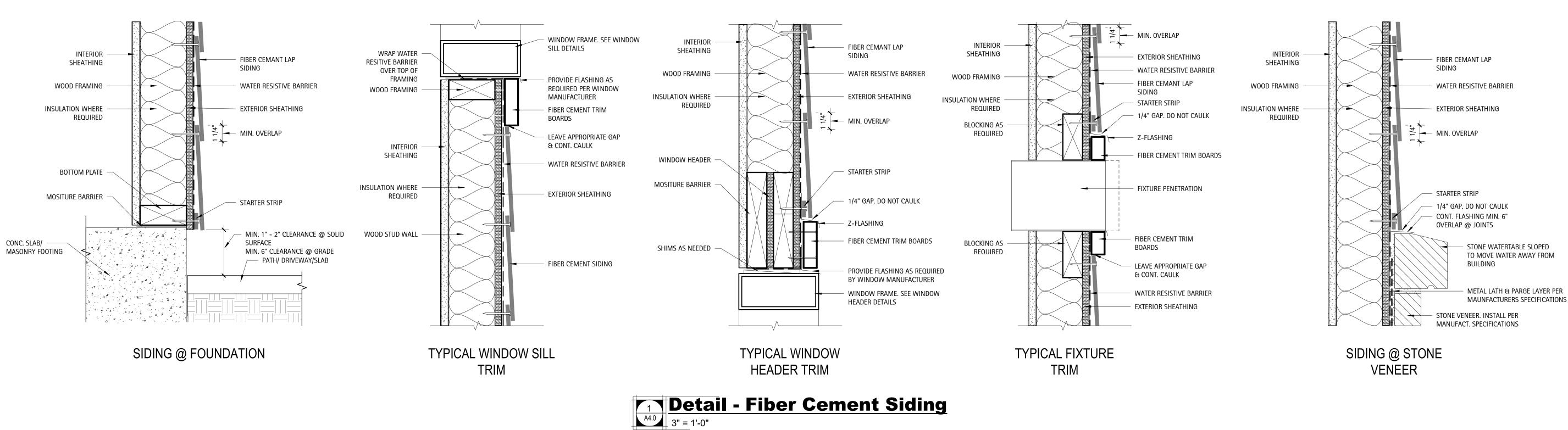
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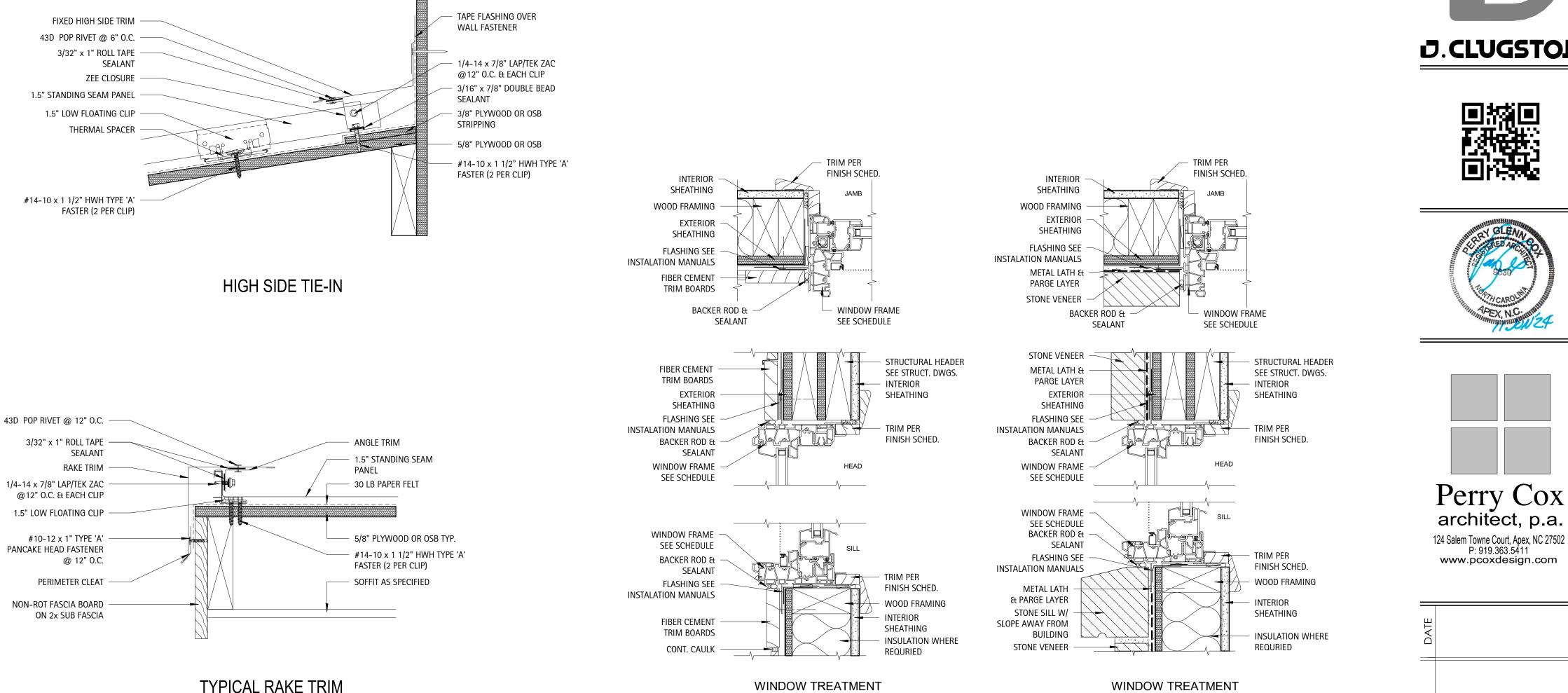




EAVE WITH GUTTER







TYPICAL RAKE TRIM

@ SIDING

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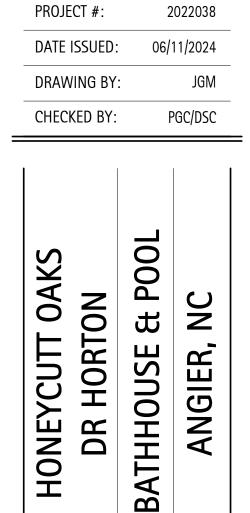


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@ STONE

Detail - Window Treatments 3" = 1'-0"



SHEET DISCRIPTION

GENERAL

BUILDING

DETAILS

A4.(

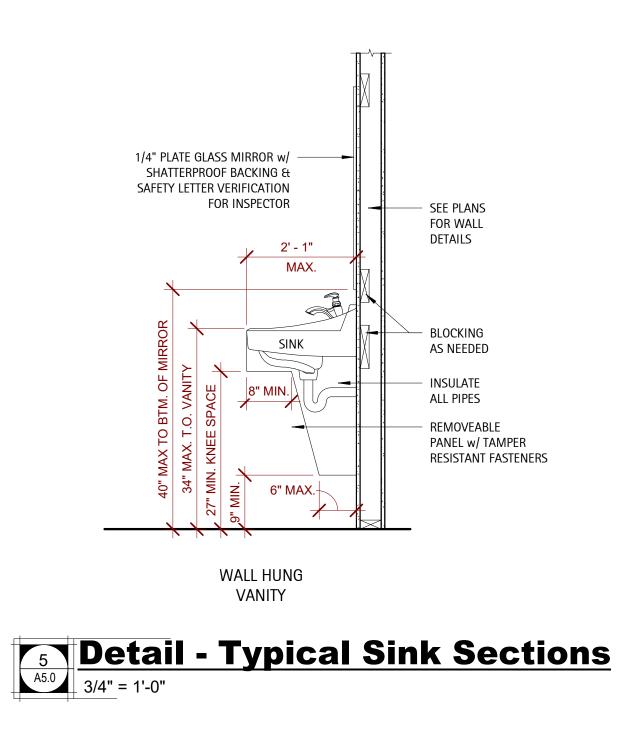
DR

DOORS, FRAMES, HARDWARE NOTES

- Refer to Door and Hardware Schedule for extent, type and additional notes. Acceptable wood door manufacturers to be Weyerhaeuser, Eggers, 1 Mohawk or Architect approved equal. General Contractor shall provide a hardware schedule and catalogue cuts for all finish hardware for approval by the Architect indicating location of hardware set, cross-referenced to indications on Drawings, manufacturer's name and product number, finish, and other similar information describing hardware to be provided. Items of hardware not definitely specified, but needed for satisfactory installation of hardware shall be provided. Such items shall be of type and quality suitable for service needed and comparable to adjacent hardware.
- 2 All doors shall be set 6" off adjacent perpendicular wall, UON. Doors shall not be undercut, UON. All levers, pulls, and locks are to be provided per the schedule. All hinges and other miscellaneous exposed hardware shall be in similar and compatible finishes as indicated on Hardware Schedule.
- 3 General Contractor shall coordinate keying system with Owner (Building Management), Landlord, and Architect. General Contractor shall coordinate security system with system vendor and scheduled hardware and the submittal of all security hardware specifications and cut sheets to the proper authorities for review and approval during building permit process
- 4 Provide hardware, door pulls, hinges, closers, electromagnetic devices, etc. needed to provide a full and complete installation. Provide silencers at metal frame doors. Provide floor mounted door stops unless existing conditions require wall mounted. Ensure adequate blocking for wall mounted stops. Submit to Architect for approval.
- Provide 4 1/2 x 4 1/2, full mortise, template, 5-knuckle, heavy duty, button tip hinges with non-rising loose pins and anti-friction, ball type bearing. Doors with locksets shall be furnished with non-removable pins hinges. Provide 1-1/2" pair hinges for doors up to 90" in height. Add 1 hinge for every additional 30" in height.
- Heavy duty cylindrical locksets and latchsets shall conform to ANSI A156.2, Series 4000, Grade 1. Functions as listed in schedule. Heavy duty mortise locksets and latchsets, levers shall conform to ANSI A156.13 Series, 1000, Grade 1. Overhead Closers shall be surface mounted or concealed overhead as noted in the hardware schedule and shall be heavy duty, fully hydraulic, rack and pinion action and sized to be in compliance with requirements for accessibility for handicapped and recommendations of manufacturer. Furnish complete with all necessary hardware. Furnish 2 keys per lock with a maximum of 8 keys per keyed alike set. Before final completion, adjust hardware so that doors operate in perfect order. Test and adjust hardware for quiet, smooth operation and adjust closers for proper operation. At final completion, properly tag and identify keys and deliver to Owner.
- 7 All Hardware shall be medium grade commercial if not otherwise noted or specified. See allowance per door.
- 8 All interior egress doors and a minimum of one exterior egress door shall be readible openalbe from the egress side without use of a key or special knowledge.
- 9 All Glazing within 24" of either side of a door in a closed position, and on the same wall plane shall be tempered. Tempered glass shall be installed by code in the following locations:
 - a. Door Glazing; b. Glazingfor bathroom fixture enclosures(showers, etc)
 - c. Glazing less than 60" above tub and shower drains;
 - d. Glazing within24" of an adjacent door w/ sill less than 60 degrees; e. Individual panels of Glazing greater than 9 sqft and sill less than 18" above floor and top edge greater than 36".
- 10 Provide an interior door signage allowance of \$25.00 per door.
- 11 Fire Extinusisher cabinets shall be similar to JL Industries Mod. Clear VU 1525F26 with a clear bubble and A#10 S/S Finish. ADA approved and mounted. Place where shown on plans (FX)
- 12 Door closers shall be LCN series 4040 or equivalent

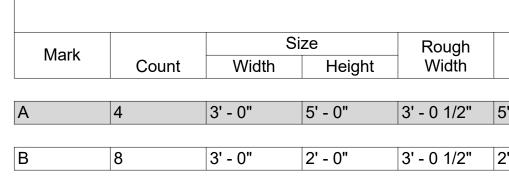
Room Number Room Name 100 ENTRY Cc 101 HALL Col 102 STORAGE Col 103 Co ELEC. 104 Acr MENS 105 Col PUMP ROOM 106 Acr WOMENS 107 CHEM. Coi 108 Co COVERED PORCH 109 COVERED PAVILLION Co

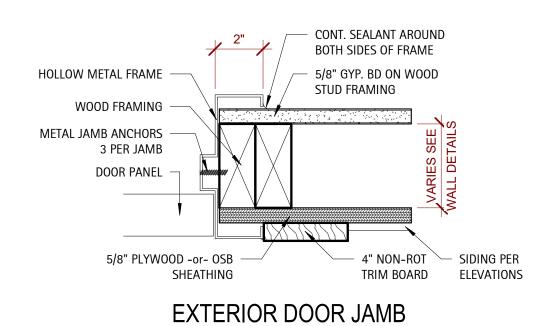
| | DOOR SCHEDULE | | | | | | | | | | | | | | | | | | | | | | |
|-----------|---------------|---------|---------|-------------|-------------|-------------|----------|--------|----------|--------|--------|---------|-----|--------|---------|----------|----------|--------|---------|-----------|--------|------|--|
| | | | Door | - | | | Do | or | Frame | | | | | | | H | lardware | | | | | | |
| Door | | | | | Rough | Rough | | | | Fire | Push / | Passage | | Office | Storage | | Panic | | Weather | | FOB | Time | |
| Number | Style | Width | Height | Thickness | Width | Height | Material | Finish | Material | Rating | Pull | Set | Set | Set | Set | Deadbolt | Hardware | Closer | strip | Threshold | Access | Lock | Comments |
| | | | | | | | | | | | | | | | | | | | | _ | | | |
| 103 | Type A | 3' - 0" | 7' - 0" | 0' - 1 3/4" | 3' - 2 1/2" | 7' - 1 1/4" | Metal | Paint | HM | N/A | No | No | No | No | Yes | No | No | No | Yes | Yes | No | No | |
| 104 | Type A | 3' - 0" | 7' - 0" | 0' - 1 3/4" | 3' - 2 1/2" | 7' - 1 1/4" | Metal | Paint | HM | N/A | Yes | No | No | No | No | Yes | No | Yes | Yes | Yes | No | Yes | Timelock from dawn to dusk. Coordinate with H.O.A. |
| 105 | Туре В | 3' - 6" | 7' - 0" | 0' - 1 3/4" | 3' - 8 1/2" | 7' - 1 1/4" | Metal | Paint | HM | N/A | No | No | No | Yes | No | No | No | No | Yes | Yes | No | No | See Mech for Vent Req w/ Placards per NFPA704 |
| 106 | Type A | 3' - 0" | 7' - 0" | 0' - 1 3/4" | 3' - 2 1/2" | 7' - 1 1/4" | Metal | Paint | HM | N/A | Yes | No | No | No | No | Yes | No | Yes | Yes | Yes | No | Yes | Timelock from dawn to dusk. Coordinate with H.O.A. |
| 107 | Туре В | 3' - 0" | 7' - 0" | 0' - 1 3/4" | 3' - 2 1/2" | 7' - 1 1/4" | Metal | Paint | HM | N/A | No | Yes | No | No | No | No | No | Yes | No | No | No | No | See Mech for Vent Req w/ Placards per NFPA704 |
| G100 | Type C | 4' - 0" | 6' - 0" | | | | Metal | Paint | Metal | N/A | Yes | No | No | No | No | No | Yes | Yes | No | No | Yes | No | Gate: See Pool Details |
| G101 | Type C | 4' - 0" | 6' - 0" | | | | Metal | Paint | Metal | N/A | Yes | No | No | No | No | No | Yes | Yes | No | No | Yes | No | Gate: See Pool Details |
| G104 | Туре С | 4' - 0" | 6' - 0" | | | | Metal | Paint | Metal | N/A | Yes | No | No | No | No | No | Yes | Yes | No | No | Yes | No | Gate: See Pool Details |
| G105 | Туре С | 4' - 0" | 6' - 0" | | | | Metal | Paint | Metal | N/A | Yes | No | No | No | No | No | Yes | Yes | No | No | Yes | No | Gate: See Pool Details |
| Grand tot | al: 9 | · | | | | | | | | | | | | | | | | | | | | | |

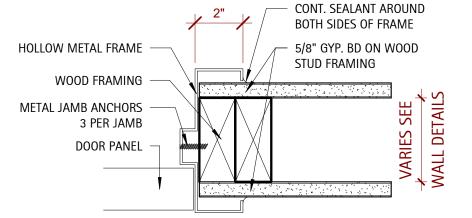


| ROOM SCHEDULE | | | | | | | | | | |
|------------------------|----------------------------|------------------|-------------------------------|----------------|-------|--|--|--|--|--|
| Floor Finish | Base Finish | Wall Finish | Ceiling Finish | Ceiling Height | Crown | Comments | | | | |
| Concrete - Light Broom | N/A | N/A | Hardie Panels or EQ - Painted | 10'-0" | No | Slope all floors away from builidng walls at min. 1/8" per 1'-0" | | | | |
| Concrete - Light Broom | N/A | N/A | Hardie Panels or EQ - Painted | 10'-0" | No | | | | | |
| Concrete - Light Broom | 1x8 Fiber Cement - Painted | MR GWB - Painted | MR GWB - Painted | 10'-0" | No | | | | | |
| Concrete - Light Broom | 1x8 Fiber Cement - Painted | MR GWB - Painted | MR GWB - Painted | 10'-0" | No | | | | | |
| Acrylic Chip Flooring | 1x8 Fiber Cement - Painted | MR GWB - Painted | MR GWB - Painted | 10'-0" | No | Slope all floors to drain | | | | |
| Concrete - Light Broom | 1x8 Fiber Cement - Painted | MR GWB - Painted | MR GWB - Painted | 10'-0" | No | Slope all floors to sump | | | | |
| Acrylic Chip Flooring | 1x8 Fiber Cement - Painted | MR GWB - Painted | MR GWB - Painted | 10'-0" | No | Slope all floors to drain | | | | |
| Concrete - Light Broom | 1x8 Fiber Cement - Painted | MR GWB - Painted | MR GWB - Painted | 10'-0" | No | Provide non-rot chemical shelf at 16" A.F.F. | | | | |
| Concrete - Light Broom | N/A | N/A | Hardie Panels or EQ - Painted | 10'-0" | No | Slope all floors away from builidng walls at min. 1/8" per 1'-0" | | | | |
| Concrete - Light Broom | N/A | N/A | Hardie Panels or EQ - Painted | Varies | No | | | | | |

| | SCHEDUL | |
|------|---------|--|
| DOOR | SCHEDUL | |

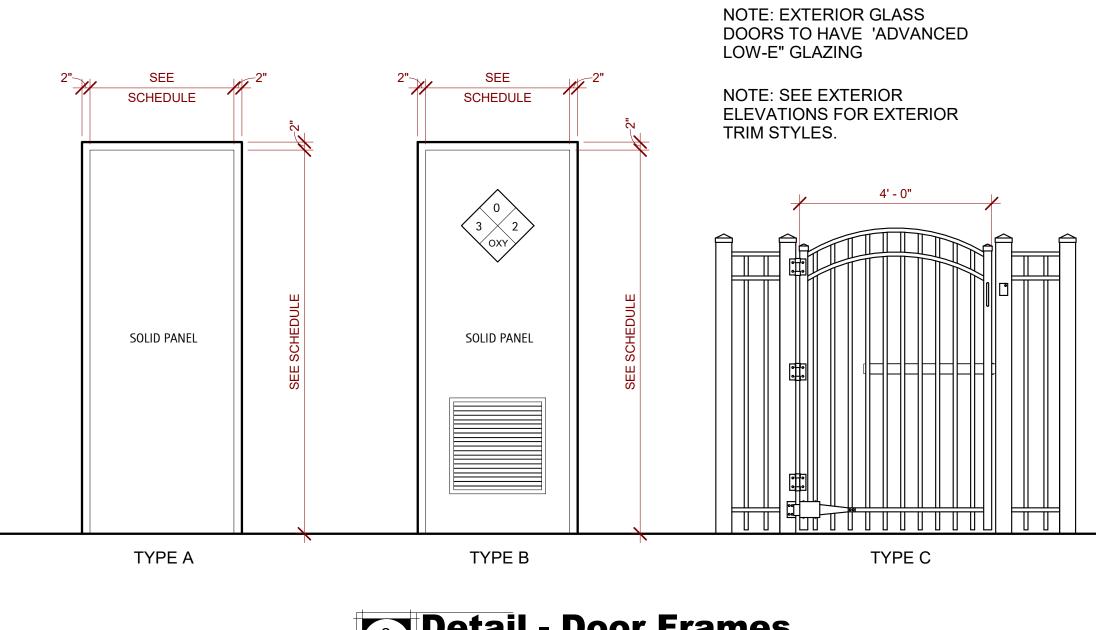






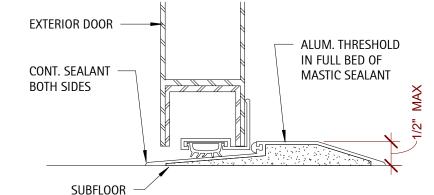






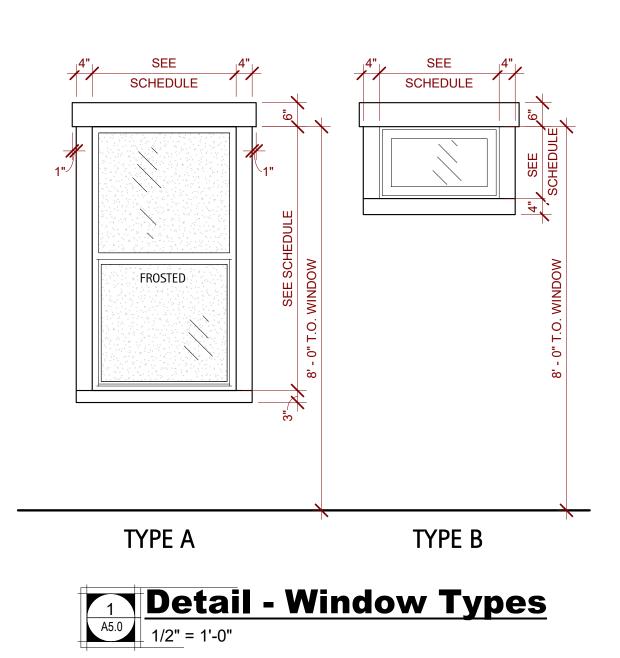
Detail - Door Frames 1/2" = 1'-0"

| WINE | DOW SCHEDULE | | | |
|-----------------|--------------|--------|-------------|----------|
| Rough Height | Туре | Finish | Head Height | Comments |
| | | | | |
| 5' - 0 1/2" | TYPE A | | 8'-0" | Frosted |
| | | | | |
| 2' - 0 1/2" | TYPE B | | Varies | |



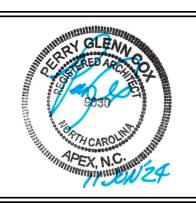
EXTERIOR DOORS THRESHOLD

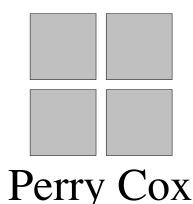




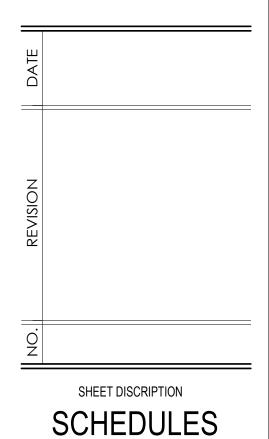








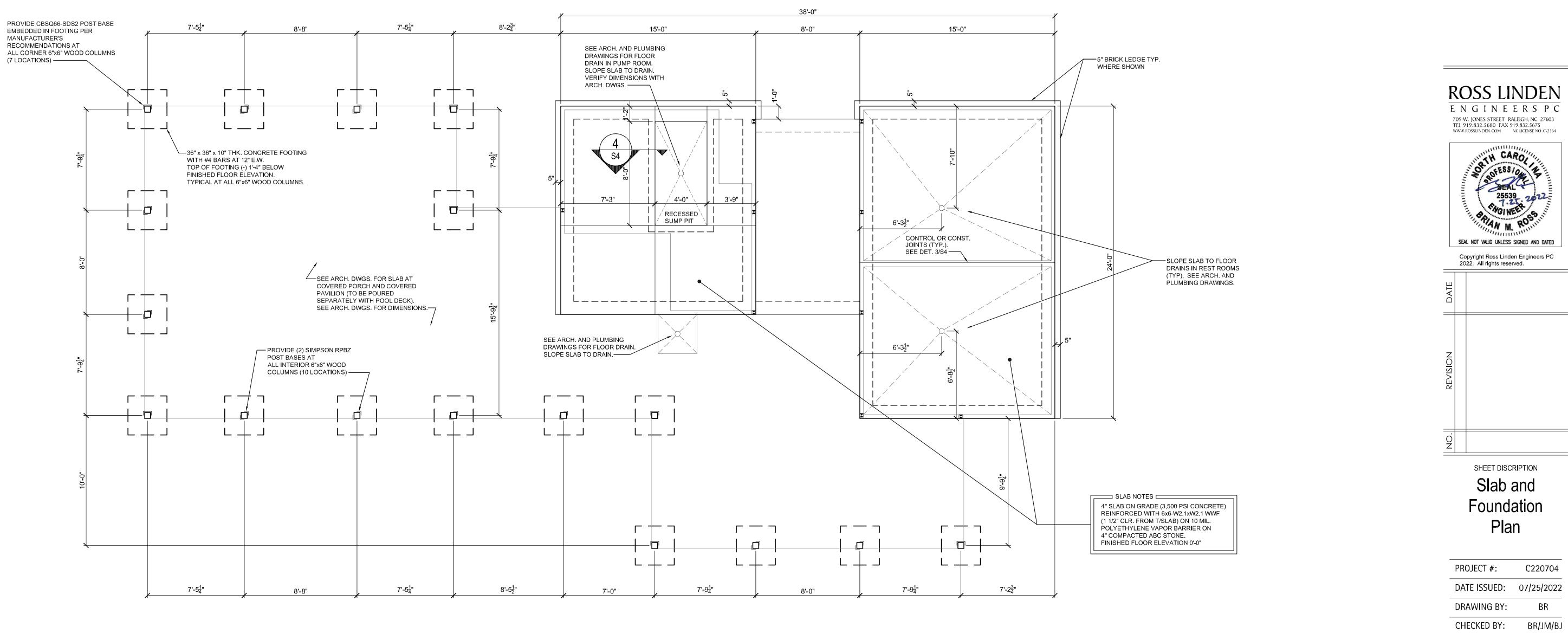
architect, p.a. 124 Salem Towne Court, Apex, NC 27502 P: 919.363.5411 www.pcoxdesign.com



& DETAILS PROJECT #: 2022038

| DRAW | ISSUED: /ING BY: KED BY: | : | JGM JGC/DSC | |
|----------------|--------------------------------|-----------------------------|----------------|--|
| HONEYCUTT OAKS | DR HORTON | BATHHOUSE & POOL | ANGIER, NC | |

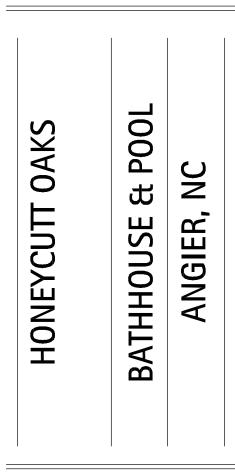
A5.0





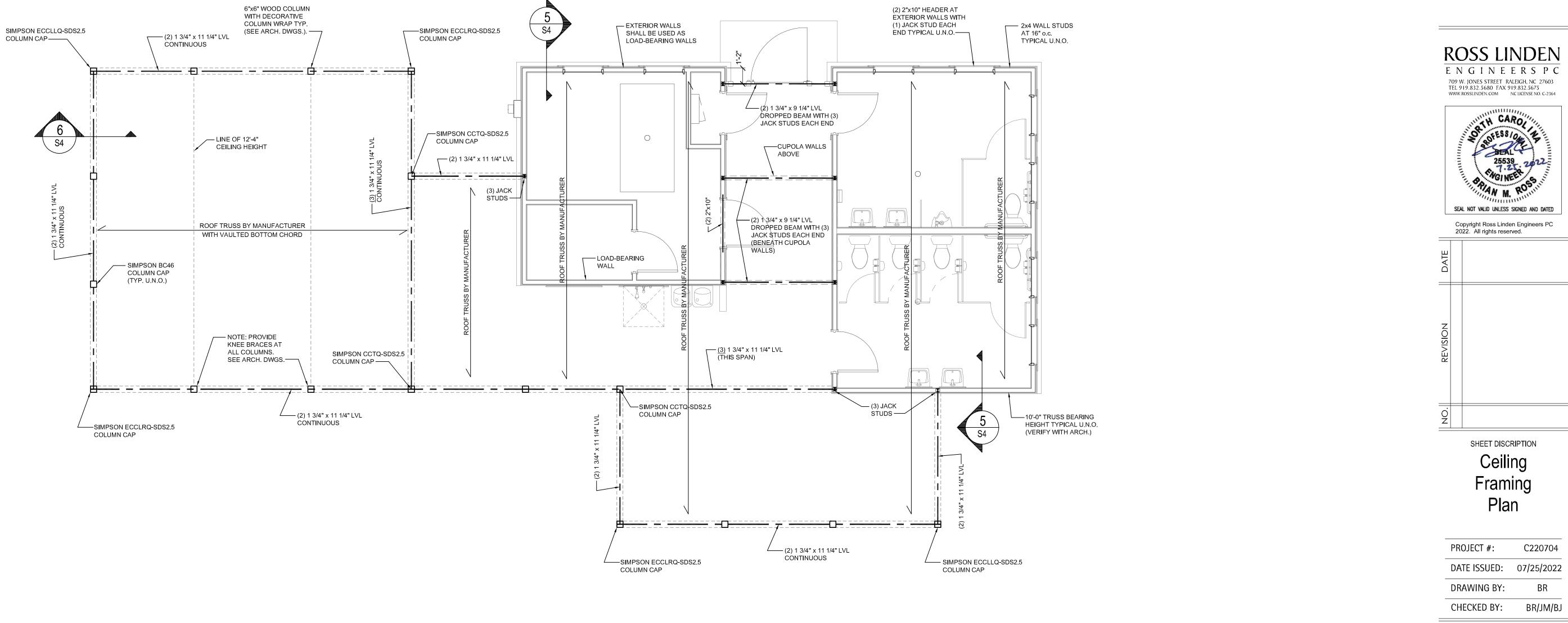
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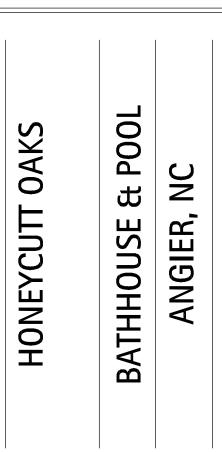
S1



WALL AND CEILING FRAMING PLAN 1/4" = 1'-0" S2

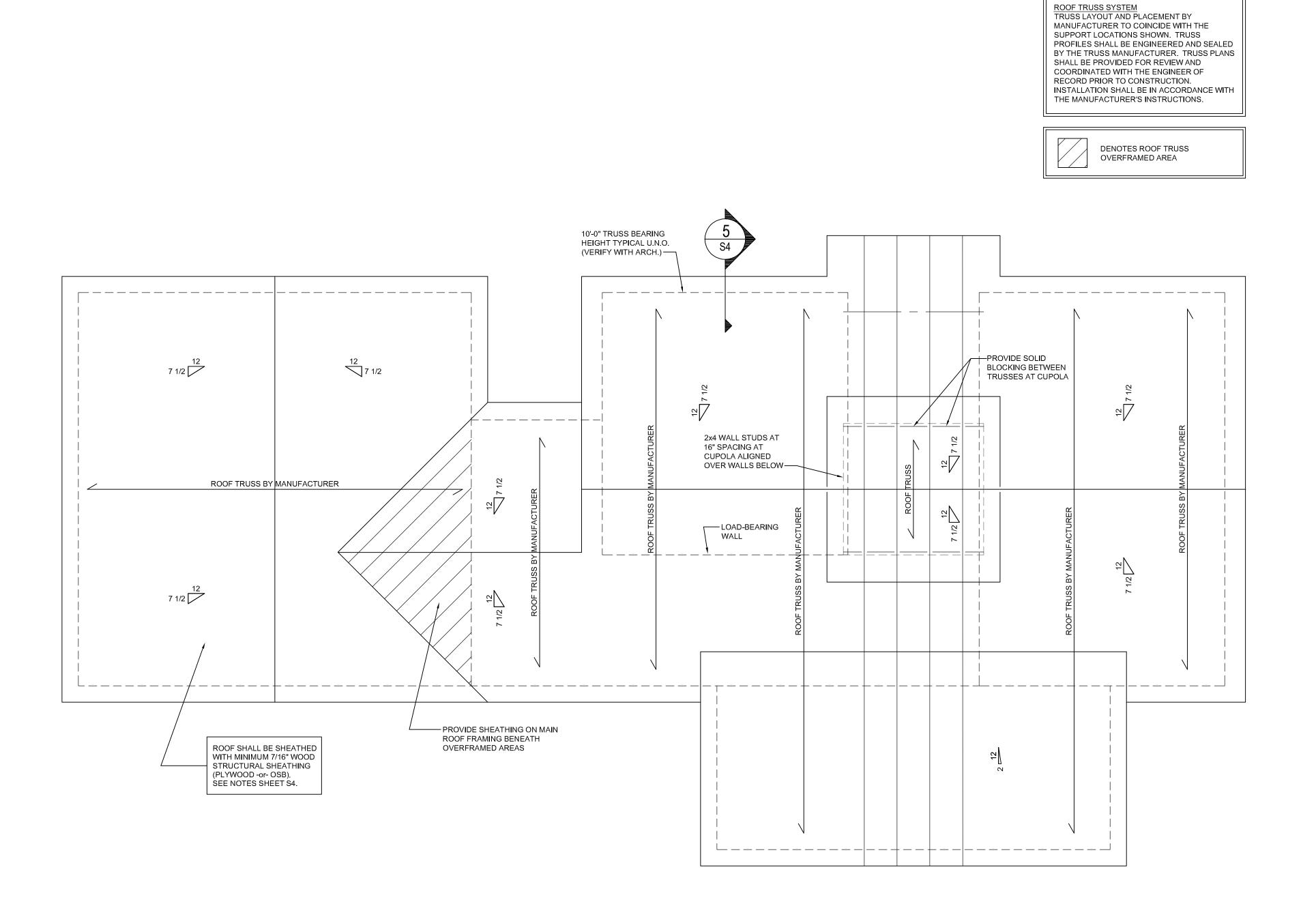






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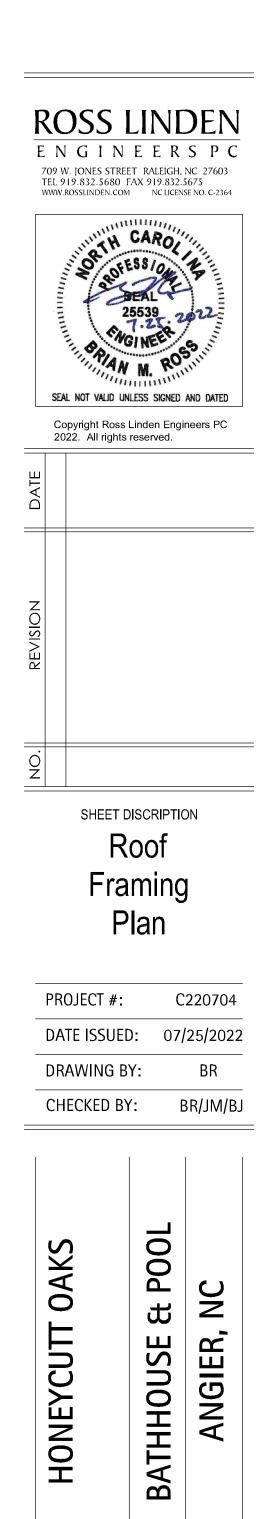
S2



1 ROOF FRAMING PLAN S3 1/4" = 1'-0"







S3

STRUCTURAL NOTES

I. GENERAL

1. DESIGN CODES

NORTH CAROLINA BUILDING CODE, 2018 EDITION (AMENDED 2015 INTERNATIONAL BUILDING CODE)

ACI BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

(ACI 318-14)

AISC MANUAL OF STEEL CONSTRUCTION - ALLOWABLE STRESS DESIGN NINTH EDITION

ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES

2. DESIGN LOADS

FLOOR: 100 PSF LIVE LOADS: ROOF: 20 PSF

ULTIMATE DESIGN WIND SPEED: 116 MPH

GROUND SNOW LOAD 15 PSF

SEISMIC DESIGN CATEGORY B SITE CLASS D

Ss = 0.172 S1 = 0.083

3. ALL ELEVATIONS ARE REFERENCED FROM FINISHED FLOOR ELEVATION OF 0'-0". SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

4. DETAILED SHOP DRAWINGS SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

5. ENGINEER'S SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY AND DOES NOT CERTIFY ARCHITECTURAL LAYOUT OR DIMENSIONAL ACCURACY. 6. ROSS LINDEN ENGINEERS PC ASSUMES NO LIABILITY FOR CHANGES OR

MODIFICATIONS MADE TO THESE DRAWINGS BY OTHERS, OR FOR CONSTRUCTION METHODS, OR FOR ANY DEVIATION FROM THESE DRAWINGS.

II. CONCRETE

1. UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL HAVE THE FOLLOWING STRENGTH AND SLUMP REQUIREMENTS: 3,500 PSI 28-DAY COMPRESSIVE STRENGTH, MAX. 5" SLUMP.

2. ALL CONCRETE SHALL BE MOIST CURED PER ACI 301 OR CURED WITH AN APPROVED CURING COMPOUND. CONTRACTOR SHALL VERIFY THAT THE CURING COMPOUND IS COMPATIBLE WITH FLOOR COVERING ADHESIVES, COATINGS, OR TOPPINGS TO BE USED. CONCRETE SHALL BE CURED FOR A MINIMUM OF 7 DAYS.

3. UNLESS OTHERWISE NOTED, ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL, CONFORMING TO ASTM A-615, GRADE 60, DEFORMED.

4. UNLESS OTHERWISE NOTED, ALL DETAILING, FABRICATION, AND PLACING OF REINFORCING STEEL SHALL CONFORM TO THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES. (ACI 315)

5. ALL BAR SPLICES SHALL BE CLASS "B" TENSION SPLICES PER ACI 318-14, UNLESS OTHERWISE SHOWN.

6. ANCHOR BOLTS TO BE ASTM A36 OR A307.

Pile size, type, and capacity

7. CONTRACTOR SHALL REFER TO DRAWINGS OF OTHER TRADES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON THE STRUCTURAL DRAWINGS.

8. ALL SPREAD FOOTINGS BEARING ON NATIVE SOIL OR STRUCTURAL FILL ARE DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 2,500 PSF. A GEOTECHNICAL REPRESENTATIVE SHALL INSPECT ALL FOOTING EXCAVATIONS TO CONFIRM ALLOWABLE BEARING PRESSURES.

9. PROVIDE TWO (2) #5 x 4'-0" LONG DIAGONAL BARS IN TOP FACE OF ALL SLABS (1" CLEAR) AT ALL RE-ENTRANT CORNERS. SEE PLAN FOR LOCATIONS.

10. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, PROTECTING, AND RELOCATING AS REQUIRED ALL SERVICE AND UTILITY LINES IN VICINITY OF THE WORK SITE.

11. CONTRACTOR SHALL VERIFY ALL SIZES AND LOCATIONS OF ALL MECHANICAL AND ELECTRICAL OPENINGS AND EQUIPMENT PADS WITH THE MECHANICAL AND ELECTRICAL DETAILS AND SHOP DRAWINGS BY OTHERS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL OPENINGS AND SLEEVES FOR PROPER DISTRIBUTION FOR ALL UTILITIES THROUGHOUT THE BUILDING.

12. ALL DOWELS WHICH ARE TO BE DRILLED AND GROUTED INTO EXISTING CONCRETE SHALL BE DONE WITH AN EPOXY GROUT. DRILL HOLE WITH DIAMETER 1/8" LARGER THAN DOWEL OR AS RECOMMENDED BY GROUT SUPPLIER. USE HIT-RE 500 V3 BY HILTI OR APPROVED EQUAL.

STRUCTURAL DESIGN

| DESIGN LOADS: | | | |
|---|---|----------------------------------|---|
| Occupancy Category | II | | |
| Occupancy Category | | | |
| Importance Factors: | Wind (IW) | 1.0 | |
| | Snow (IS) | | |
| | Seismic (IE) | 1.0 | |
| | | | |
| Live Loads: | Roof | 20 psf | |
| | Mezzanine | N/A psf | |
| | Floor | 100 psf | |
| | 11001 | <u> </u> | |
| Ground Snow Load: | | | |
| Ground Show Loud. | P51 | | |
| Wind Load: Ultin | nate Wind Sneed | <u>116</u> mph (ASCE 7-10) | |
| | osure Category | B | |
| | | VWFRS Vx = 4.4K Vy = 10.0K | |
| | | | - |
| SEISMIC DESIGN CATEGOR | $\mathbf{Y} \square \mathbf{A} \mathbf{X} \mathbf{B}$ | | |
| | | | |
| Provide the following Seismic | Design Parameters: | | |
| e | C | | |
| Spectral Response Accel | eration SS 0.172 | %g S1 <u>0.083</u> %g | |
| Site Classification D | Field Test | Resumptive Historical Data | |
| | | | |
| Basic structural system (| check one) | | |
| X Bearing Wall | Dual w/Spe | ecial Moment Frame | |
| Building Frame | Dual w/Inte | ermediate R/C or Special Steel | |
| Moment Frame | Inverted Pe | ndulum | |
| Saismia basa shaar V | V – 15K | VV - 1.5k | |
| Analysis Procedure | Simplified | X Equivalent Lateral Force Modal | |
| Architectural, Mechanica | <u>I. Components anch</u> | ored? | |
| | in, components unen | | |
| Lateral design Control: Earth | nquake | Wind X | |
| Soil Bearing Capacities: | | | |
| Soil Bearing Capacities: Field Test (provide copy Presumptive Bearing cap | of test report) | psf | |
| Presumptive Rearing or | vacity | psi 2500 psf | |
| Pile size type and capac | | par | |

III. WOOD

1. FRAMING LUMBER SHALL BE #2 SPRUCE PINE FIR (SPF) WITH THE FOLLOWING DESIGN PROPERTIES: Fb = 875 PSI Fv = 70 PSI E = 1.4E6 PSI

2. FRAMING LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND, CONCRETE OR MASONRY SHALL BE #2 SOUTHERN YELLOW PINE (SYP) TREATED IN ACCORDANCE WITH AWPA C22 WITH THE FOLLOWING DESIGN PROPERTIES: Fb = 1050 PSI Fv = 95 PSI E = 1.6E6 PSI

3. ENGINEERED WOOD BEAMS SHALL BE LAMINATED VENEER LUMBER (LVL) OR PARALLEL STRAND LUMBER (PSL) WITH THE FOLLOWING MINIMUM DESIGN PROPERTIES:

Fb = 2600 PSI Fv = 285 PSI E = 1.9E6 PSI 4. ENGINEERED WOOD BEAMS SHALL BE INSTALLED WITH ALL CONNECTIONS PER MANUFACTURER'S INSTRUCTIONS.

5. SOLID BLOCKING SHALL BE PROVIDED AT ALL POINT LOADS TO TRANSFER LOADS THROUGH FLOOR LEVELS. COLUMNS SHALL BE CONTINUOUS TO THE FOUNDATION OR TO OTHER STRUCTURAL ELEMENTS.

6. WOOD SILL PLATES SHALL BE ANCHORED TO THE FOUNDATION WITH 1/2" DIAMETER ANCHOR BOLTS SPACED A MAXIMUM OF 2'-8" o.c. AND WITHIN 12" FROM THE ENDS OF EACH PLATE SECTION. PROVIDE 1/2" DIAMETER HILTI HIT-RE 500 V3 INJECTION ADHESIVE ANCHORS WITH MINIMUM 4 1/2" EMBEDMENT INTO THE FOUNDATION AT ALL EXTERIOR, LOAD-BEARING, AND SHEAR WALLS AS SHOWN ON THE PLAN.

7. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH MINIMUM 7/16" WOOD STRUCTURAL SHEATHING (PLYWOOD -or- OSB) WITH BLOCKING AT ALL JOINTS. FASTEN ALL PANELS WITH 8d NAILS AT 3" o.c. AT ALL EDGES AND AT 6" o.c. AT INTERMEDIATE FRAMING. AT DOUBLE TOP PLATE, FASTEN PANELS WITH A DOUBLE ROW OF 8d NAILS STAGGERED AT 3" o.c. ALL FASTENERS SHALL HAVE 1 3/8" PENETRATION INTO THE FRAMING MEMBERS.

8. PROVIDE MINIMUM 1/2" GYPSUM BOARD ON BOTH SIDES OF FULL-HEIGHT INTERIOR WALLS WITH INTERMEDIATE SUPPORT AT ALL JOINTS. FASTEN ALL PANELS WITH 1 1/4" SCREWS AT 7" o.c. AT TOP AND BOTTOM PLATES AND ALL STUDS. GYPSUM SHALL BE APPLIED PERPENDICULAR TO FRAMING.

9. SEE TYPICAL WALL SECTION FOR ADDITIONAL INFORMATION.

IV. WOOD TRUSSES

1. ENGINEERED ROOF TRUSS SYSTEMS SHALL BE PROVIDED FOR REVIEW AND COORDINATED WITH THE ENGINEER OF RECORD. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ROOF TRUSS DRAWINGS SHALL BE SIGNED AND SEALED BY THE MANUFACTURER AND REVIEWED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

2. ALL TRUSSES SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH BCSI 1-03 "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES."

3. THE TOP CHORD OF ALL ROOF TRUSSES SHALL BE SHEATHED WITH MINIMUM 7/16" WOOD STRUCTURAL SHEATHING (PLYWOOD -or- OSB). PROVIDE PLYWOOD EDGE CLIPS BETWEEN PANELS.

4. PROVIDE PERMANENT BOTTOM CHORD TRUSS BRACING AND WEB MEMBER PLANE BRACING IN ACCORDANCE WITH BCSI-B2 "TRUSS INSTALLATION AND TEMPORARY BRACING" AND BCSI-B3 "WEB MEMBER PERMANENT BRACING/WEB REINFORCEMENT."

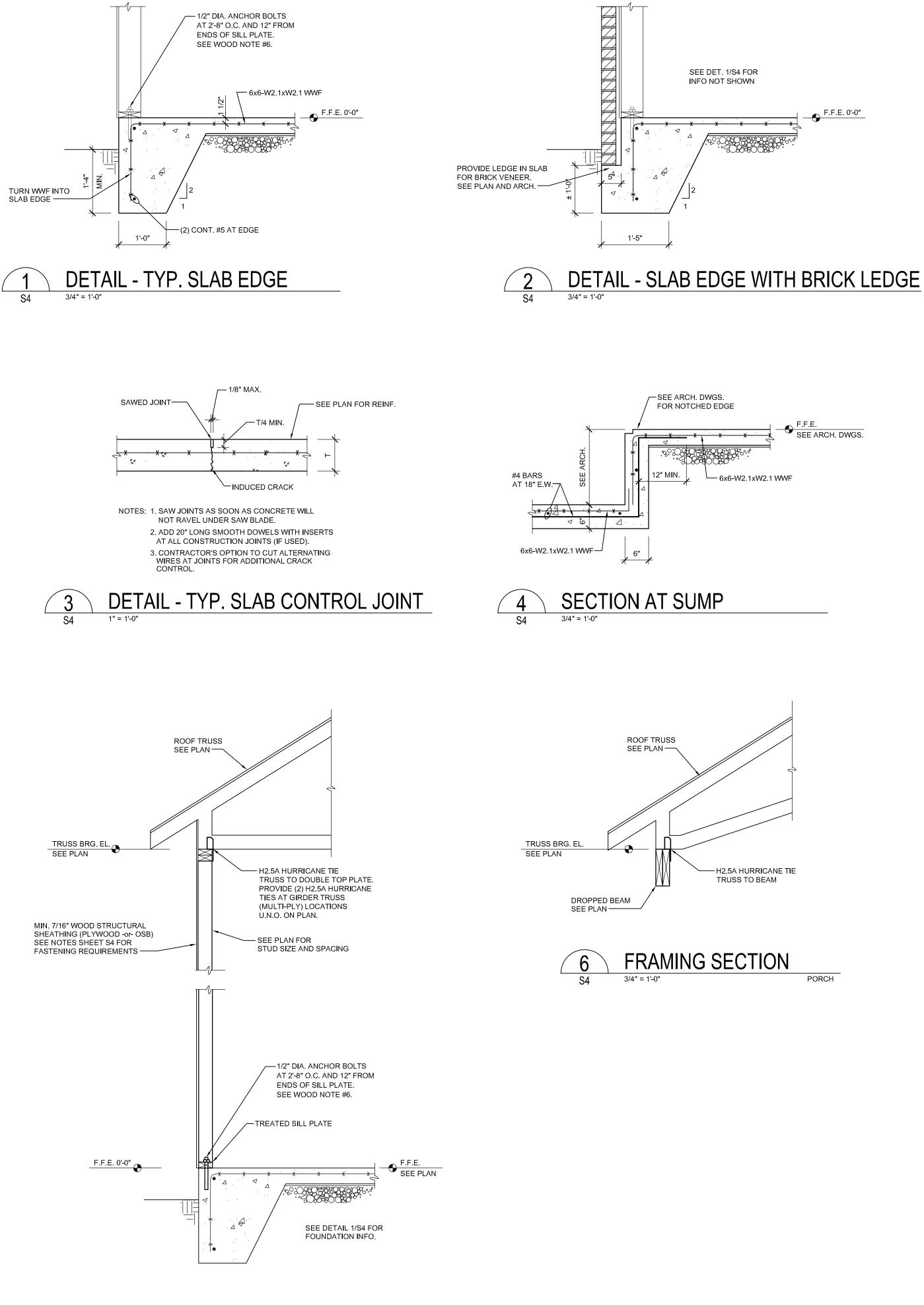
ABBREVIATIONS

CONCRETE

CONC CONT DBL DJ DSP FL PT FTG HGR LVL NTS OC PT RS SC SP TYP

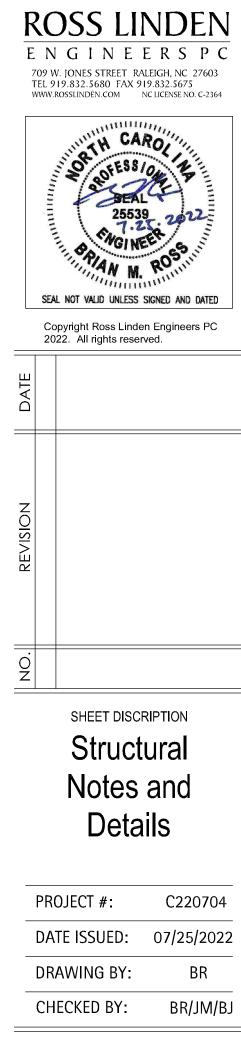
UNO

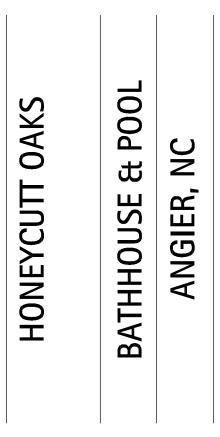
CONTINUOUS DOUBLE DOUBLE JOIST DOUBLE STUD POCKET EACH FLAT PLATE FOOTING HANGER LAMINATED VENEER LUMBER NOT TO SCALE ON CENTER PRESSURE TREATED RAFTER SUPPORT STUD COLUMN STUD POCKET TRIPLE JOIST TYPICAL UNLESS NOTED OTHERWISE EXTRA JOIST



TYPICAL WALL SECTION 3/4" = 1'-0" S4







GENERAL PLUMBING NOTES

ADMINISTRATIV

- 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.
- 2. "PROVIDE" MEANS TO FURNISH AND INSTALL. THE PLUMBING CONTRACTOR SHALL ALSO INSTALL MATERIALS FURNISHED BY OTHERS AND THE GENERAL CONTRACTOR.
- 3. 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 PROPERTY OF THE PC UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE OWNER.
- 5. 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 PARTICULAR MANUFACTURER. PRODUCTS DETERMINED TO BE EQUAL BY 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 7. THE PC SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND
- INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT
- 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 SPECIFIC TO THE PROJECT.
- 12. SYSTEM TESTING SHALL BE PERFORMED BY PLUMBING CONTRACTOR IN ACCORDANCE WITH NORTH CAROLINA PLUMBING CODE, SECTIONS 312.2, 312.3, AND 312.5.
- 13. PC SHALL DISINFECT THE ENTIRE DOMESTIC WATER PIPING SYSTEM IN 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 OWNER, THE PC SHALL CLEAN ALL EXPOSED FIXTURES, MATERIALS, AND EQUIPMENT UNDER THIS CONTRACT.
- 15. PC SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE ALL APPLICABLE CONSTRUCTION WASTE IS RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT.
- 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 SHALL COMPLY WITH ASTM B-88. USE BRAZED JOINTS ON ALL COPPER PIPING 1-1/2 INCH AND LARGER. *** PC MAY USE PEX (ASTM F 877) WITH APPROVED FITTINGS (ASTM F 1807) WITH OWNER'S APPROVAL. *** CPVC PIPING (ASTM D 2846 OR ASTM F 441) WITH APPROVED FITTINGS (ASTM D 2846, ASTM F 438, OR ASTM F 439) MAY ALSO BE USED WHERE NOT LOCATED IN PLENUMS. ALL PLASTIC PIPE, FITTINGS, AND COMPONENTS SHALL BE THIRD PARTY CERTIFIED AS CONFORMING TO NSF 14. 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 PLENUMS. 2. BALL VALVES SHALL HAVE BRASS BODY, FULL PORT, CHROME PLATED 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 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 APPLYING INSULATION MATERIALS. INSULATION SHALL

- BE BY KNAUF, ARMACELL, JOHNS-MANVILLE, OR OWENS-CORNING. 4. 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. 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 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 SHALL BE PROVIDED AS SPECIFIED BY THE INSTALLATION INSTRUCTIONS OF THE APPROVED MANUFACTURER.
- 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 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 EQUIPMENT PROVIDED. 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.

- 1. EXTEND DOMESTIC WATER PIPE FROM FIVE (5) FEET OUTSIDE THE BUILDING INTO THE BUILDING AS INDICATED ON THE PLANS AND INSTALL DOMESTIC WATER DISTRIBUTION PIPING TO ALL FIXTURES AND EQUIPMENT REQUIRING THE SAME. 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 SHALL BE PROTECTED UNTIL FINAL CONNECTIONS ARE MADE.
- 2. ABOVE GRADE DOMESTIC WATER PIPING SHALL BE SLOPED AT A 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 SPACES BETWEEN SLEEVES AND PIPES SHALL BE FILLED OR CAULKED 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 DETERMINED IN ACCORDANCE WITH ASTM C 177.

- 6. HOT WATER PROVIDED TO PUBLIC HAND-WASHING TO ASSE 1070 OR CSA B125.3.
- INSULATION KIT BY TRUEBRO OR EQUAL 8. POTABLE WATER OUTLETS SHALL BE PROTECTED FROM BACKFLOW IN SHALL CONFORM TO ASSE 1011, ASSE 1019, ASSE 1035, OR ASSE 1052. BACKFLOW PREVENTER IN ACCORDANCE WITH ASSE 1022.
- 1010. 10. THE PC SHALL PROVIDE CHECK VALVES AT ALL FIXTURES WITH THREADED
- 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 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 PER 305.6.1. WASTE AND SOIL LINES LEAVING THE BUILDING MUST HAVE A MINIMUM COVER OF 3 INCHES.
- RECEIVE THE FIXTURE HORN.
- AND OTHER SUITABLE METHODS AS SPECIFIED BY THE COUPLING MANUFACTURER SHALL BE UTILIZED.
- 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 LESS THAN 18 INCHES FOR RODDING. 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 AIR ADMITTANCE VALVES SHALL CONFORM TO ASSE 1050 OR 105 21. INDIRECT WASTE PIPING THAT EXCEEDS 2 FEET IN DEVELOPED LENGTH
- EACH JUNCTION OF DISSIMILAR MATERIALS. 23. THE PC SHALL ACCURATELY ROUGH-IN ALL FIXTURES ACCORDING TO FLUSH HANDLES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET WHEN FIXTURE IS SET, SEALANT SHALL OOZE OUT. WITH THE GENERAL CONTRACTOR. PC SHALL PROVIDE FLASHING PIPES, SHALL BE MADE WATER TIGHT BY THE USE OF LEAD, COPPER, FLASHING MATERIAL. MAINTAIN MINIMUM 10 FEET FROM ALL OUTSIDE AIR INTAKES.

FACILITIES/LAVATORIES SHALL BE TEMPERED WATER DELIVERED THROUGH AN APPROVED WATER-TEMPERATURE LIMITING DEVICE THAT CONFORMS

7. INSULATE ALL EXPOSED WASTE AND SUPPLY PIPING UNDER LAVATORIES, SINKS, AND ELECTRIC WATER COOLERS WITH THE HANDI-LAV GUARD

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

CONNECTIONS TO BEVERAGE DISPENSERS, COFFEE MACHINES, AND NON-CARBONATED BEVERAGE DISPENSERS SHALL BE PROTECTED BY A 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

OUTLETS AS REQUIRED BY CODE. TRAP PRIMERS SHALL BE PROVIDED AS

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, EXTEND SANITARY SEWER PIPING TO 5 FEET OUTSIDE THE BUILDING AND

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

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

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

17. BASES OF STACKS SHALL BE SUPPORTED BY THE BUILDING STRUCTURE, VIRGIN OR COMPACTED EARTH, OR OTHER SUITABLE MATERIAL TO

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 CLEARANCE OF NOT

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 917 OF THE NC PLUMBING CODE 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

MANUFACTURER'S INSTALLATION DIMENSIONS AND INSTRUCTIONS. OFFSET ADAPTERS AND FLEXIBLE CONNECTORS ARE NOT ACCEPTABLE 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

24. ALL VENT THRU THE ROOF (VTR) PENETRATIONS SHALL BE COORDINATED MATERIAL REQUIRED FOR VTRS. JOINTS AT THE ROOF AND AROUND VENT GALVANIZED STEEL, ALUMINUM, OR OTHER APPROVED FLASHINGS OR

| | i | I | PLUMBING FIXTURE SCHEDULE | | | |
|--------|--|--|---|------|------|-----------|
| SYMBOL | FIXTURE | MANUFACTURER | FITTING | HW | cw | WAST E |
| P1 | TWO PIECE TANK TYPE WATER CLOSET | KOHLER 4369 OR EQUAL BY AMERICAN STANDARD OR TOTO | TWO-PIECE VITREOUS CHINA TOILET WITH HIGH-PROFILE TANK, KOHLER K-5309 ELONGATED FRONT BOWL AND CHROME TRIP LEVER. 1.28 GPF. PROVIDE SC534 OPEN FRONT SEAT LESS COVER. ASME 112.19.2 COMPLIANCE. | - | 1/2" | 3" |
| P1H | TWO PIECE TANK TYPE ADA WATER CLOSET | KOHLER 4369 OR EQUAL BY AMERICAN STANDARD OR TOTO | TWO-PIECE VITREOUS CHINA TOILET WITH HIGH-PROFILE TANK, KOHLER K-5309 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 | KOHLER K-2005 OR EQUAL BY AMERICAN STANDARD OR TOTO | VITREOUS 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 A METERING TYPE FAUCET SIMILAR TO CHICAGO 3300-E280SAB (VERIFY EXACT FAUCET WITH OWNER). | 1/2" | 1/2" | 2" |
| Р3 | URINAL | KOHLER K-4991-ET OR EQUAL BY AMERICAN STANDARD OR TOTO | VITREOUS CHINA, WALL-MOUNTED, ADA COMPLIANT, LOW CONSUMPTION WASHOUT URINAL COMPLYING WITH ASME 112.19.2. 1 GPF. KOHLER K-76319 FLUSHOMETER VALVE OR EQUAL BY ZURN OR TOTO. TOP OF RIM SHALL BE 17 INCHES AFF FOR ADA. | - | 3/4" | 2" |
| P4 | FREE STANDING SHOWER | OSC PS-900-ADA OR APPROVED EQUAL | 2.5 GPM METERED FREE STANDING SHOWER. | 1/2" | 1/2" | - |
| P5 | DRINKING FOUNTAIN | ELKAY VRCTLFRDDSC | 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. VANDAL AND FROST RESISTANT. | - | 3⁄8" | 2" |
| P6 | FLOOR DRAIN | WATTS FD-200-A OR EQUAL BY ZURN OR JR SMITH | ON GRADE EPOXY COATED CAST IRON FLOOR DRAIN WITH ANCHOR FLANGE, WEEP HOLES, ADJUSTABLE ROUND NICKEL BRONZE STRAINER, AND NO HUB OUTLET. PROVIDE TRAP PRIMER CONNECTION OPTION IF NOTED. | - | - | 3" |
| P7 | FREEZEPROOF HOSE BIBB | ZURN Z1346 OR EQUAL BY WOODFORD OR MIFAB | EXPOSED NON-FREEZE ANTI-SIPHON AUTOMATIC DRAINING WALL FAUCET COMPLETE WITH EXTERIOR CHROME FINISH, BRASS CASING, ALL BRONZE INTERIOR PARTS, Z1399-VB ANTI-SIPHON INTEGRAL VACUUM BREAKER, OPERATING ROD WITH FREE FLOATING COMPRESSION CLOSURE VALVE, REPLACEABLE SEAT WASHER,COMBINATION 1/2 FEMALE SOLDER INLET AND 1/2 MALE IP INLET CONNECTION STANDARD, AND 3/4 MALE HOSE CONNECTION. | - | 1/2 | - |
| P8 | INTERIOR HOSE BIBB | ZURN Z1341-BFP OR EQUAL BY MIFAB OR WOODFORD | PROVIDE CHECK VALVE AND ANTI-SIPHON PROTECTION IF NOT INTEGRAL TO UNIT | | 1/2" | |
| Р9 | 1" RPZ BACKFLOW PREVENTER | WATTS LF909 QT OR EQUAL BY CONBRACO OR WILKINS | RPZ ASSEMBLY CONSISTING OF A PRESSURE DIFFERENTIAL RELIEF VALVE LOCATED IN A ZONE BETWEEN TWO POSITIVE SEATING CHECK VALVES. THE ASSEMBLY SHALL INCLUDE TWO TIGHTLY CLOSING SHUTOFF VALVES BEFORE AND AFTER THE ASSEMBLY, TEST COCKS AND A PROTECTIVE STRAINER UPSTREAM OF THE FIRST SHUTOFF VALVE. THE ASSEMBLY SHALL MEET THE REQUIREMENTS OF ASSE 1013 AND AWWA C511 | - | 1" | - |
| P10 | EXPANSION TANK | AMTROL ST-5 OR EQUAL BY WATTS OR BELL & GOSSETT | INSTALL ON COLD WATER LINE BETWEEN WATER HEATER AND RPZ | - | 3/4" | - |
| P11 | 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" | - |
| P12 | 3/4" RPZ BACKFLOW PREVENTER | WATTS LF909 QT OR EQUAL BY CONBRACO OR WILKINS | RPZ ASSEMBLY CONSISTING OF A PRESSURE DIFFERENTIAL RELIEF VALVE LOCATED IN A ZONE BETWEEN TWO POSITIVE SEATING CHECK VALVES. THE ASSEMBLY SHALL INCLUDE TWO TIGHTLY CLOSING SHUTOFF VALVES BEFORE AND AFTER THE ASSEMBLY, TEST COCKS AND A PROTECTIVE STRAINER UPSTREAM OF THE FIRST SHUTOFF VALVE. THE ASSEMBLY SHALL MEET THE REQUIREMENTS OF ASSE 1013 AND AWWA C511 | - | 3/4" | - |
| FC0 | FLOOR CLEANOUT | ZURN, WATTS, JR SMITH | EPOXY COATED CAST IRON FLOOR CLEANOUT WITH ROUND ADJUSTABLE GASKETED NICKEL BRONZE TOP, REMOVABLE GAS TIGHT GASKETED BRASS CLEANOUT PLUG, AND NO HUB INLET. | - | - | 4" |
| WCO | WALL CLEANOUT | ZURN, WATTS, OR JR SMITH | CAST IRON CLEANOUT FERRULE WITH THREADED BRASS COUNTERSUNK CLEANOUT PLUG, STAINLESS STEEL ACCESS COVER, AND VANDAL PROOF STAINLESS STEEL SCREW | - | - | 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" |

| | | PLU | MBING LINES SIZ | ING TABLE | | | | | |
|-----------------------------|-----------|-----|------------------------|-----------|----------------------------|-----------|------------|-------------|-------|
| FIXTURE TYPE | OCCUPANCY | QTY | DRAINAGE FIXTURE UNITS | | WATER SUPPLY FIXTURE UNITS | | | | |
| | | | EACH | TOTAL | CW | НW | CM & HM | HW TOTAL | TOTAL |
| WATER CLOSET (FLUSH TANK) | PUBLIC | 5 | 4.00 | 20.00 | 5.00 | 0.00 | 5.00 | 0.00 | 25.00 |
| SHOWER | PUBLIC | 1 | 2.00 | 2.00 | 3.00 | 3.00 | 4.00 | 3.00 | 4.00 |
| LAVATORY | PUBLIC | 4 | 1.00 | 4.00 | 1.50 | 1.50 | 2.00 | 6.00 | 8.00 |
| URINAL (¾" FLUSH VALVE) | PUBLIC | 1 | 2.00 | 2.00 | 5.00 | 0.00 | 5.00 | 0.00 | 5.00 |
| DRINKING FOUNTAIN | PUBLIC | 1 | 0.50 | 0.50 | 0.25 | 0.00 | 0.25 | 0.00 | 0.25 |
| DEMAND FIXTURE | GPM | QTY | TOTAL GPM | | | | TOTAL DFU | 28 | .5 |
| DEMAND FIXTURE | GPM | QTY | TOTAL GPM | | | | | | |
| | | | | | | I | OTAL WFSUs | 9.0 | 42.3 |
| | | | | | | | GPM | 13.70 | 26.90 |
| | | | | | | OTHER FIX | TURES' GPM | 0.00 | 0.00 |
| | | | | | | | TOTAL GPM | 13.70 | 26.90 |
| | | | | | | | | | |
| | | | | | | | | | |
| | 1 | | | | | | | | |
| MINIMUM BUILDING DRAIN SIZE | 4" | | | | | | | | |

| | ELECTRIC WATER HEATER SCHEDULE | | | | | | | | | | | |
|---|--------------------------------|-------|-------------|----------|-------------|----------|-----------|-------|-----|-------|---------|---------|
| ſ | MADK | MEG | MODEL | TANK VOL | INPUT | RECOVERY | SET POINT | POW | ER | CONNE | CTIONS | OPTIONS |
| | MARK MFG MODEL | | GALS | kW | GPH @ 60°∆T | °F | VOLTAGE | PHASE | HOT | COLD | OFTIONS | |
| | WH-1 | STATE | ES6-20-SOMS | 20 | 4.5 | 30 | 110 | 240 | 1 | 3/4 | 3/4 | 1-5 |

1. PROVIDE GALVANIZED STEEL SAFETY PAN

2. UL 174 LISTED 3. PROVIDE ASME LISTED TEMPERATURE AND PRESSURE RELIEF VALVE

4. MEET OR EXCEED ENERGY FACTOR REQUIREMENTS OF ASHRAE 90.1-2007

5. OR EQUAL BY A.O. SMITH, BRADFORD WHITE, OR STATE

DO NOT TAP WATER LINE AHEAD OF RPZ.

COLI HO SANI

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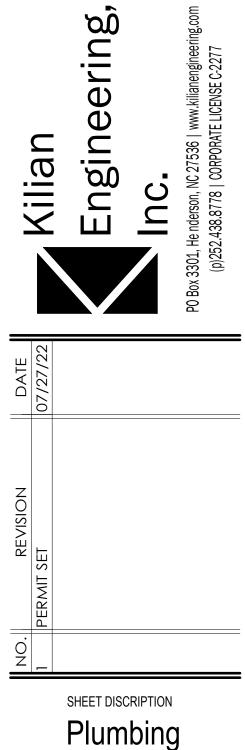
LINETYPE LEGEND

| D WATER SUPPLY | |
|-----------------|-------------|
| T WATER SUPPLY | · · · · · · |
| TARY SEWER LINE | |
| VENT LINE | |
| | |









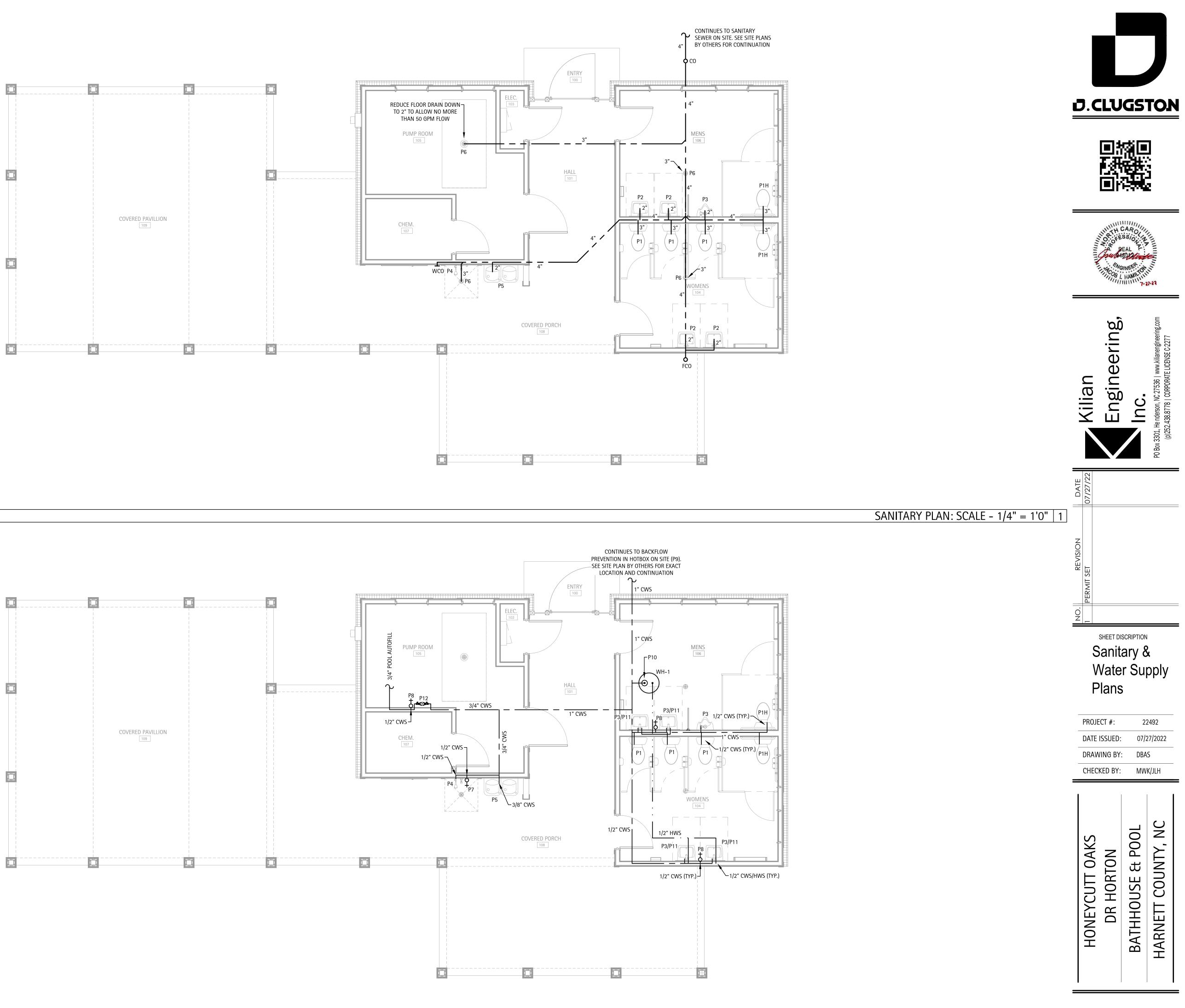
DDO LEOT # 22402

| DATE ISSUED: | 07/27/2022 |
|--------------|------------|
| DRAWING BY: | DBAS |
| CHECKED BY: | MWK/JLH |

| HONEYCUTT OAKS DR HORTON | BATHHOUSE & POOL | HARNETT COUNTY, NC |
|-----------------------------|------------------|--------------------|
|-----------------------------|------------------|--------------------|

PLUMBING FIXTURE SCHEDULE | 2

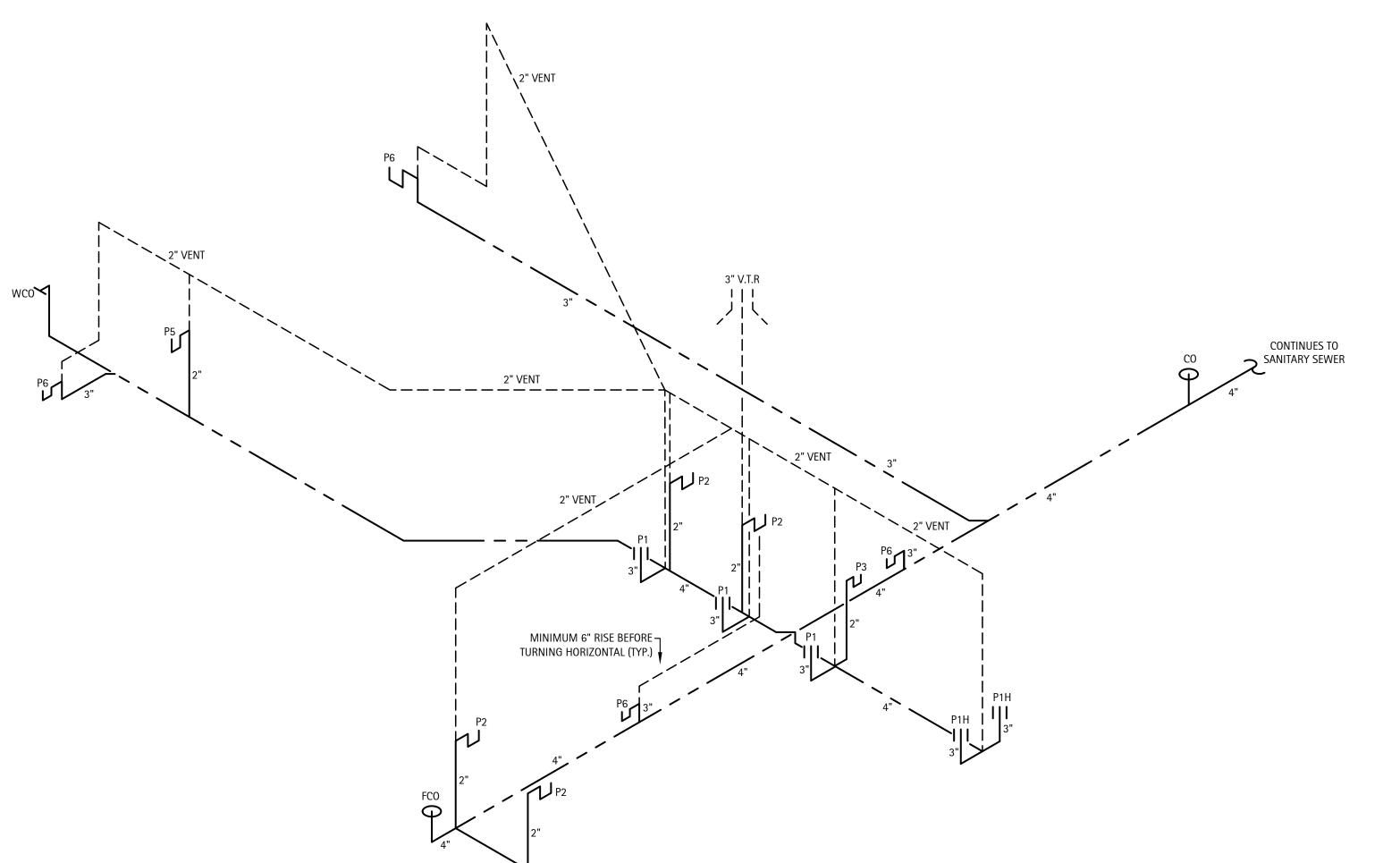


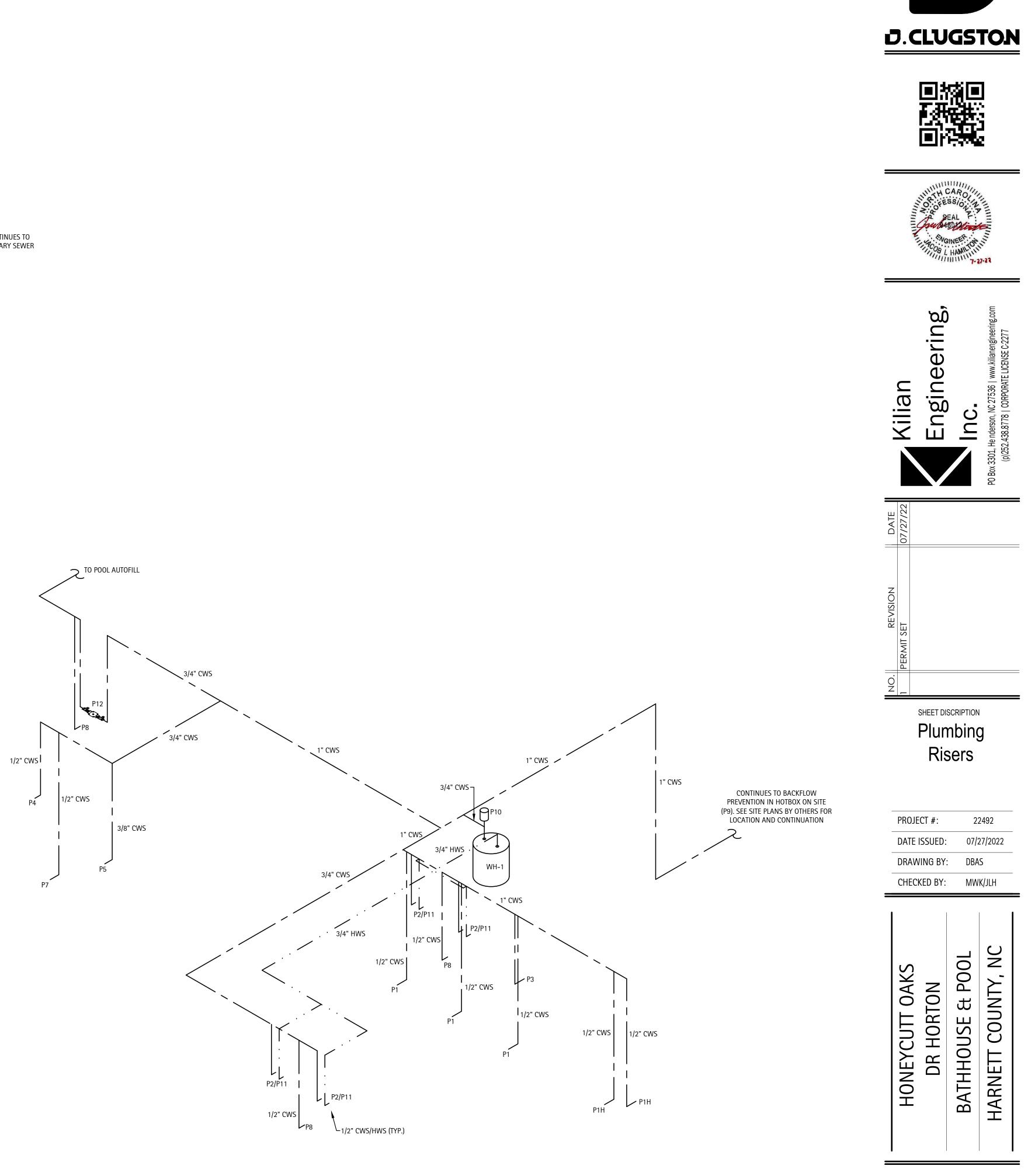


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WATER SUPPLY PLAN: SCALE - 1/4'' = 1'0'' 2

P2





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DWV AND WATER SUPPLY RISERS: NO SCALE 1

P3

GENERAL MECHANICAL NOTES:

ADMINISTRATIVE

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. 2. "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. 4. 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 OWNER.
- 5. 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 REQUIREMENTS.
- 6. 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 DIMENSIONS
- 8. THE MC SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. THE MC SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. THE MC SHALL COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION.
- 9. 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 THE OWNER.
- 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 MINIMUM OF 10 FEET FROM ROOF EDGE. 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. 16. 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. THE MC SHALL PROVIDE FACTORY AND FIELD INSTALLED ACCESSORIES AS SCHEDULED 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 STANDARD, 2 INCH S.P.
- 4. 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 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 INSTALLED THICKNESS OF DUCT INSULATION USED TO DETERMINE ITS R-VALUES 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.
- 4.2. FOR DUCT WRAP, THE INSTALLED THICKNESS SHALL BE ASSUMED TO BE 75 PERCENT (25-PERCENT COMPRESSION) OF NOMINAL THICKNESS
- 4.3. 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.
- 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.
- 7. 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 FORMAL DEHYDE
- FACTORY-MADE AIR DUCTS AND CONNECTORS SHALL COMPLY WITH UL 181-96.
- 9. 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 ASSEMBLY.

- 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.

1. INSULATE DUCTWORK WITH FIBERGLASS DUCT WRAP; INSTALLED R-VALUE SHALL 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.

- 2. 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 BLOCKED.
- 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.
- 5. 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
- 6. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 15 DEGREES DIVERGENCE: MAXIMUM OF 30 DEGREES DIVERGENCE UPSTREAM OF FOUIPMENT 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.
- 8. 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.
- 9. 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.
- 10. PROVIDE BALANCING DAMPERS AT POINTS ON SUPPLY WHERE BRANCHES ARE 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.
- 11. MC SHALL INSTALL FIRE DAMPERS AT EACH PENETRATION OF A RATED WALL AS INDICATED ON THE DRAWINGS OR AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. FIRE DAMPERS SHALL BE UL LABELED (UL 555), CURTAIN TYPE, WITH INTEGRAL FACTORY SLEEVE AND BLADES LOCATED OUTSIDE THE AIR STREAM. INSTALLATION OF ALL FIRE DAMPERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SECTION 607 OF THE 2018 NC MECHANICAL CODE. PROVIDE ACCESS PANELS FOR TESTING AND SERVICE AS NECESSARY. MC SHALL PROVIDE RADIATION DAMPERS AND THERMAL BLANKETS FOR ALL PENETRATIONS OF RATED CEILING ASSEMBLIES. RADIATION DAMPERS SHALL BE UL LABELED (UL 555C) AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC INSTALLATION INSTRUCTIONS. FIRE DAMPERS, COMBINATION FIRE/SMOKE DAMPERS, AND CEILING RADIATION
- DAMPERS SHALL BE BY RUSKIN, NAILOR, OR LLOYD INDUSTRIES. 12. 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
- 13. FRESH AIR INTAKES SHALL BE INSTALLED ON ALL UNITS AS SHOWN ON DRAWINGS. MAINTAIN 10 FEET OF DISTANCE BETWEEN FRESH AIR INTAKES AND ALL EXHAUST TERMINATIONS AND PLUMBING VENT THRU ROOFS. 14. 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. 15. P-TRAPS MUST BE INSTALLED ON ALL UNITS. MC SHALL INSTALL AUXILIARY
- DRAIN PANS UNDER OVERHEAD AIR HANDLERS AND AN AUTOMATIC CUT-OFF FLOAT SWITCH FOR EACH. P-TRAPS AND CONDENSATE LINES SHALL BE 1 INCH. P-TRAPS AND CONDENSATE LINES MAY BE PVC WHERE NOT LOCATED IN PLENUMS; OTHERWISE, THEY SHALL BE TYPE M COPPER.
- 16. INSTALL BACKDRAFT DAMPERS ON FRESH AIR AND EXHAUST DUCTS WHERE THEY PENETRATE THE THERMAL ENVELOPE PER NORTH CAROLINA ENERGY CONSERVATION CODE C402.5.5

MECHANICAL NOTES | 1

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VENTILATION CALCS

CHEMICAL STORAGE:

43 SQFT X 10' HIGH CEILING = 430 CU. FT @ 10 ACH = 72 CFM *50 CFM PROVIDED

PUMP ROOM:

156 SQFT X 10' HIGH CEILING = 1560 CU. FT @ 10 ACH = 260 CFM *175 CFM PROVIDED

\bigcirc Hex plan notes

- EXHAUST DUCT TO TURTLE BACK ROOF VENT ON BACK SIDE OF ROOF PITCH. PROVIDE WITH INSECT SCREEN. COORDINATE EXACT LOCATION WITH G.C.
- LOUVERED EXHAUST GRILLE INSTALLED IN GYPSUM CEILING. TURN LOUVERED BLADES TOWARDS WALL.
- SUSPENDED INLINE EXHAUST FAN TO BE INSTALLED IN ATTIC. ENSURE ALL MANUFACTURER CLEARANCES ARE MAINTAINED. COORDINATE WITH G.C. TO PROVIDE ACCESS FOR MAINTENANCE.
- DOOR WITH WEATHER PROOF LOUVER BY G.C. LOUVER TO BE 18"X18".
- GRILLES AND DUCTWORK TO ALLOW FOR OUTSIDE AIR TO REDUCE NEGATIVE PRESSURE WHEN BATHROOM EXHAUST FANS ARE IN OPFRATION.
- COMBINE BATHROOM EXHAUST TO ONE 12" EXHAUST DUCT. PROVIDE BACKDRAFT DAMPER AT EACH FAN PRIOR TO COMBINING. EXHAUST FAN TO BE WIRED FOR CONTINUOUS OPERATION.

EXHAUST FAN SCHEDULE MARK MFG / MODEL # TYPE | ESP (in WG) | CFM | VOLT/PH | FLA 120/1 0.43 EF-1 GREENHECK SP-A200 CEILING 0.40 179 EF-2 GREENHECK SP-A510 CEILING 0.40 364 120/1 3.30 EF-3 GREENHECK SQ-90 INLINE 0.47 362 120/1 1.20

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

WIRED FOR CONTINUOUS OPERATION

5. INTEGRAL DISCONNECT

6. CORROSION RESISTANT

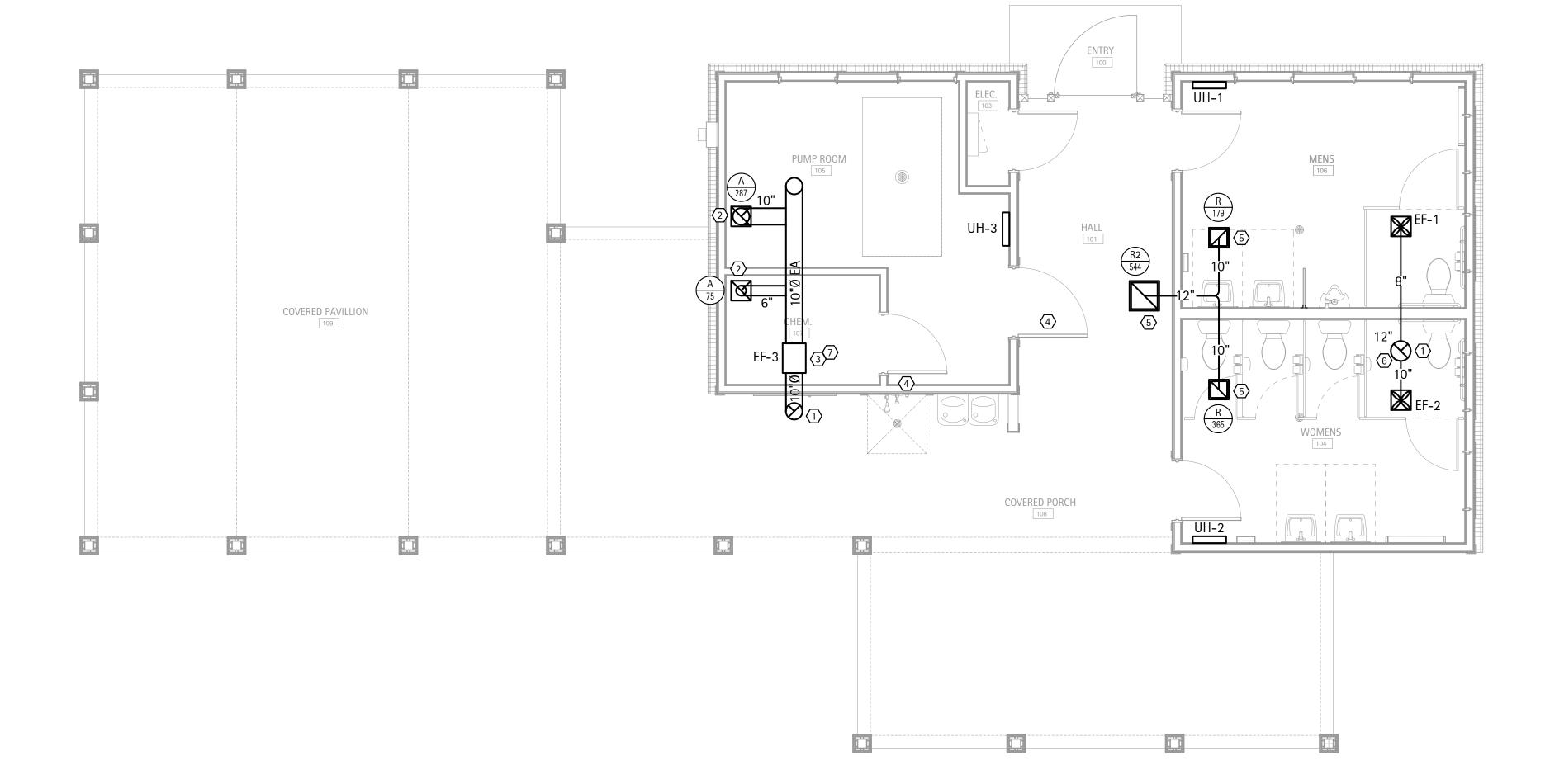
| | REGISTER & GRILLE SCHEDULE | | | | | | | | | |
|---|--|---------------|---------|-------|----------|---------------------------|--|--|--|--|
| | MARK | MFG | MODEL # | SIZE | MOUNTING | DESCRIPTION | | | | |
| | А | NAILOR | 5145H | 12X12 | CEILING | ALUMINUM LOUVERED RETURN | | | | |
| | R | HART & COOLEY | RH45 | 12X12 | SURFACE | ALUMINUM SURFACE MOUNT RE | | | | |
| | R2 | HART & COOLEY | RH45 | 18X18 | SURFACE | ALUMINUM SURFACE MOUNT RE | | | | |
| í | 1. OR EQUAL BY PRICE, METAL-AIRE, CARNES, TITUS, HART AND COOLEY, OR NAILOR. | | | | | | | | | |

| | ELECTRIC UNIT HEATER SCHEDULE | | | | | | |
|--------|-------------------------------|--------|---------|------|------|-------|--|
| MARK | MFG / MODEL # | HEATER | VOLT/PH | HEAT | MOCP | NOTES | |
| | | KW | | KW | AMPS | | |
| UH-1-3 | MARKEL/ H3317T2RPW | 4.8 | 240/1 | 4.8 | 30.0 | 1-4 | |

1. BUILT-IN THERMOSTAT. 2. BUILT-IN DISCONNECT SWITCH.

3. PROVIDE WITH SURFACE MOUNTING SLEEVE KIT (BATHROOMS ONLY)

4. BUILT IN SUMMER FAN SWITCH (BATHROOMS ONLY)



| SONES | NOTES |
|-------|-------|
| 3.0 | 1-3 |
| 4.0 | 1-3 |
| 7.4 | 1-6 |
| | |

| NOTES |
|-------|
| 1 |
| 1 |
| 1 |
| |

| MECHANICAL SYSTEM, SERVICE SYSTEMS, AND EQUIPMENT | Г |
|---|----------------------------|
| METHOD OF COMPLIANCE THERMAL ZONE | PRESCRIPTIVE ZONE 4A |
| EXTERIOR DESIGN CONDITIONS HEATING DESIGN DRY BULB COOLING DESIGN DRY BULB COOLING DESIGN WET BULB | 20.4°F 95.0°F 75.5°F |
| INTERIOR DESIGN CONDITIONS HEATING DESIGN DRY BULB COOLING DESIGN DRY BULB COOLING RELATIVE HUMIDITY | 50°F 75°F 50% |
| MENS BATHROOM | |
| HEATING LOAD: | 9,364 BTU/H |
| WOMENS BATHROOM | |
| HEATING LOAD: | 11,237 BTU/H |
| PUMP ROOM | |
| HEATING LOAD: | 13,053 BTU/H |
| MECHANICAL SPACING CONDITIONING SYSTEM: | |
| UNITARY | AIR COOLED DX |
| DESCRIPTION OF UNIT(S) | UNIT HEATERS |
| BOILER | N/A |
| TOTAL BOILER OUTPUT | N/A |
| CHILLER TOTAL CHILLER CAPACITY | N/A N/A |
| EQUIPMENT EFFICIENCIES: | SEE SCHEDULES |
| EQUIPMENT SCHEDULES WITH MOTORS (MECHANICAL SYS | TEMS): |

SEE SCHEDULES

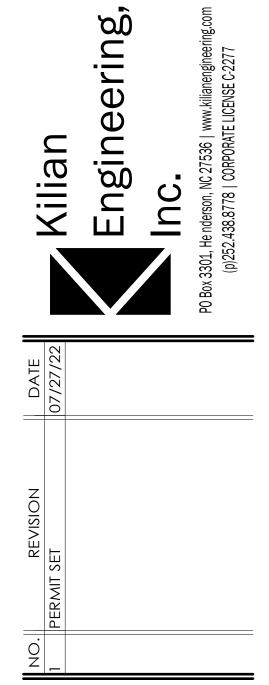
DESIGNER STATEMENT:

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 CODE.



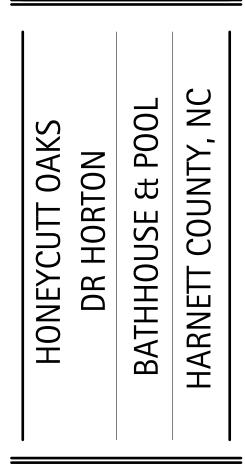






SHEET DISCRIPTION Mechanica Schedules & Plan

| PROJECT #: | 22492 |
|--------------|------------|
| DATE ISSUED: | 07/27/2022 |
| DRAWING BY: | DBAS |
| CHECKED BY: | MWK/JLH |



MECHANICAL SCHEDULES, DESIGNER'S STATEMENT, AND PLAN: SCALE – 1/4'' = 1'0'' 2

GENERAL ELECTRICAL NOTES:

ADMINISTRATIV

- 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.
- 2. "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. 6. THE ELECTRICAL CONTRACTOR 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 DIMENSIONS.
- 8. 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.
- 9. 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.
- 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. THE ELECTRICAL CONTRACTOR SHALL ALSO COORDINATE WITH THE GENERAL CONTRACTOR REGARDING THE BONDING OF THE FOOTING REBAR, SO THAT IT WILL BE IN PLACE AND READY AT TIME OF FOOTING INSPECTION.
- 12. 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 OUFSTION.
- 13. 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, CIRCUIT BREAKER, OR FUSE SIZES REQUIRE CHANGE
- 14. 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
- 15. ALL WORK SHALL CONFORM TO 2020 NATIONAL ELECTRIC CODE, 2018 STATE BUILDING CODE, AND ALL APPLICABLE LOCAL CODES.

- 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.
- 2. 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.
- 7. 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, OR SOUTHWIRE COMPANY.

- 8. 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 O-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. 12. 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 AND RED FOR PHASES A AND B RESPECTIVELY ON 120/240 VOLT SINGLE-PHASE 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(B).
- 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 COMPLY WITH NEMA WD 6 AND WD 1.
- 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

- 4X4 OCTAGONAL OR SQUARE BOXES.
- NORTH CAROLINA GENERAL CONSTRUCTION BUILDING CODE. 13. WHERE CONDUCTORS ARE RUN IN PARALLEL, THE EC SHALL COMPLY WITH NEC 310.4.
- 14. ISOLATED-GROUND TYPE RECEPTACLES SHALL BE INSTALLED IN BE ORANGE IN COLOR.
- METHODS SHALL COMPLY WITH NEC 518. SERVICE WITH PULL WIRES. ELECTRICAL CONTRACTOR SHALL
- FACILITIES REQUIRED FOR THE SERVICE INSTALLATION. SYSTEM. PROVIDE A 120 VOLT RECEPTACLE ADJACENT TO THE
- CIRCUITS PER NEC 800. SHALL BE A 4 in SQUARE BY 2-1/8 in DEEP BOX WITH 3/4 in BLANK COVER PLATE ON ALL OUTLET BOXES.
- 19. ELECTRICAL CONTRACTOR SHALL INSTALL DISCONNECT SWITCHES IN
- PER 110.16 OF NEC.
- 21. ELECTRICAL CONTRACTOR SHALL PROVIDE NAMEPLATES FOR NOT ACCEPTABLE.

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 712.3.2 (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

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

ACCORDANCE WITH 250.146(D). ISOLATED GROUND RECEPTACLES SHALL

15. IN ASSEMBLY AREAS EXCEEDING 100 PERSONS OCCUPANCY, WIRING 16. PROVIDE AN UNDERGROUND PVC CONDUIT SYSTEM FOR TELEPHONE COORDINATE WITH TELEPHONE UTILITY REGARDING ADDITIONAL

17. INSTALL ONE (1) 3/4 in FIRE RETARDANT TREATED PLYWOOD BACKBOARD

WHERE INDICATED ON THE DRAWINGS FOR THE USE BY THE TELEPHONE TELEPHONE BOARD. GROUND ALL TELEPHONE AND COMMUNICATIONS

18. ALL TELEPHONE AND COMMUNICATIONS OUTLETS AND RACEWAYS ARE ROUGH-INS ONLY. EACH TELEPHONE AND COMMUNICATIONS OUTLET KNOCK-OUTS AND A 3/4 in CONDUIT STUBBED FROM THE OUTLET BOX

TO ABOVE THE CEILING. PROVIDE A NON-METALLIC INSULATING BUSHING ON ALL CONDUITS STUBBED ABOVE THE CEILING. PROVIDE A

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 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

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

ELECTRICAL NOTES 1

| | ELECTRICAL DES | IGNER'S STATEMENT | |
|---|--|--------------------|--------------------|
| | ICAL SYSTEM AND EQU IVE _X_ PERFORMAN | | |
| LIGHTING SCHEDU | ILE: | | |
| LAMP TYPE REQUI | RED IN FIXTURE: | | SEE LIGHTING LEGEN |
| NUMBER OF LAME | PS PER FIXTURE: | | SEE LIGHTING LEGEN |
| BALLAST TYPE USE | D IN FIXTURE: | | SEE LIGHTING LEGEN |
| NUMBER OF BALL | ASTS IN FIXTURE: | | SEE LIGHTING LEGEN |
| TOTAL WATTAGE F | PER FIXTURE: | | SEE LIGHTING LEGEN |
| TOTAL INTERIOR V | VATTAGE SPECIFIED | WATTS SPECIFIED | WATTS ALLOWED |
| VS ALLOWED: | | 770.0 | 1715.00 |
| | | | |
| OCCUPANCY | AREA (sf) | ALLOWANCE (W/sf) | WATTAGE ALLOWED |
| BATHROOM | 1750 | 0.98 | 1715.00 |
| TOTAL | 1750 | | 1715.00 |
| EQUIPMENT SCHE MOTOR HORSEPO NUMBER OF PHAS MINIMUM EFFICIE MOTOR TYPE: N/A NUMBER OF POLE | es: N/A NCY: N/A | (NOT USED FOR MECH | HANICAL SYSTEMS) |
| | IENT: TO THE BEST OF COMPLIES WITH THE ODE. | | |
| NORTH CAROLINA | NAL PRESCRIPTIVE REC ENERGY CONSERVATI IG POWER DENSITY. | | |

770 W SPECIFIED <= 1543 W (1715 W ALLOWED X 90%)

| SYMBOL | DESCRIPTION |
|------------------|-------------------------------|
| \$ | SINGLE POLE WALL SWITCH |
| \$ _M | WALL MOUNTED OCCUPANCY SENSOR |
| \$ _{LV} | LOW VOLTAGE SWITCH |
| \$ ₃ | 3 WAY SWITCH |
| | CEILING OCCUPANCY SENSOR |
| P | POWER PACK |
| \bigcirc | JUNCTION BOX |
| \mathbb{X} | EXHAUST FAN |

| SYMBOL | DESC |
|------------|------------------------|
| | data and te |
| φ | DUPLEX RECE |
| ₽ | QUAD RECEP |
| P | DEDICATED R |
| Ň | FUSIBLE DISC SWITCH |
| | DISCONNECT |
| \bigcirc | JUNCTION BO |
| | |

| | LIGHT FIXTURE SCHEDULE | | | | | | | | | | |
|--------|-----------------------------------|---------------|-------|-------|-----|---------|--------------|----------|---------|-------------|---------------------------------|
| MARK | C DESCRIPTION LOUV | LOUVER/LENS | LAMPS | | | VOLTAGE | MAX INPUT | | | 1150 | MODEL |
| IVIANK | | LOOVEN/LENS | ТҮРЕ | QTY. | CCT | VULIAUL | WATTAGE | MOUNTING | REMARKS | MFG | MODEL |
| А | 4' 2 LAMP VAPOR PROOF STRIP LIGHT | - | LED | - | - | 120 | 64 | SURFACE | 2 | EPCO | G-4-LED-FX-S-41-34 |
| В | 6" CAN LIGHT | - | LED | 1 | - | 120 | 12 | RECESSED | 2 | JUNO | IC22LED-G4-09LM-35K-90CRI-MVOLT |
| С | OUTDOOR FAN W/O LIGHT KIT | - | LED | - | - | 120 | 67 | SURFACE | 2 | ZOONIX | MA4660 |
| EXH | LED EXIT/COMBO W/ BATTERY BACKUP | ACRYLIC | LED | MULT. | N/A | 120 | 4 | VARIES | 1,2 | EMERGI-LITE | LSNX42NGC |
| OE | EXTERIOR OVAL LED EMERGENCY LIGHT | POLYCARBONATE | LED | 2 | - | 120 | 2 | SURFACE | 1 | EELP | DEM-EM |

1. FIXTURE SHALL HAVE BATTERY BACKUP FOR 90 MINUTE ILLUMINATION.

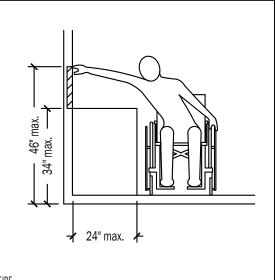
SELECTION 3. TO BE LAMPED WITH LED EQUIVALENT BULB

10" max. 🖌 🗕 ANSI A117.1 FIG. 308.3.2. OBSTRUCTED HIGH REACH SIDE.

| \$ ₃ : | 3 WAY SWITCH | | 3-WAY TYPE SWITCH WITH SAME CHARACTERISTICS AS SINGLE POLE SWITCH AB |
|-------------------|--|--|---|
| | CEILING OCCUPANCY SENSOR | | WATTSTOPPER, DT-300 LOW VOLTAGE OCCUPANCY SENSOR. 360° ULTRA SONIC A |
| P | POWER PACK | | WATTSTOPPER, BZ-150 LOW VOLTAGE POWER PACK FOR CEILING PACK SENSORS. |
| | IUNCTION BOX | | GALVANIZED METAL BOX CONSTRUCTED IN ACCORDANCE WITH 314.40 OF THE N |
| Б. | EXHAUST FAN | | VENT FAN, 120V, CFM AS NOTED MC TO PROVIDE AND VENT, EC TO WIRE. |
| | | F | OWER DEVICE LEGEND |
| SYMBOL | DESCRIPTION | | REMARKS |
| | DATA AND TELEPHONE JACK | | OUTLET. EC TO INSTALL 3/4"C WITH PULL-STRING FROM OUTLET BOX TO NG FOR FUTURE USE. JACKS AND COMMUNICATION CABLING BY OTHERS. |
| Ð | DUPLEX RECEPTACLE | 6 AND WD 1 | R, HEAVY DUTY, COMMERCIAL GRADE, 125V, 20A COMPLYING WITH NEMA WD . GFCI OR AFCI IF NOTED. 'WP' DENOTES WEATHERPROOF COVER. 'CH' DENOTES EIGHT. LISTED TAMPERPROOF IF NOTED. MEET FEDERAL SPECIFICATION |
| \blacksquare | QUAD RECEPTACLE | QUAD RECEP | TACLE OF SAME CHARACTERISTICS AS DUPLEX TYPE ABOVE. |
| | | NEMA 5-20F | R, HEAVY DUTY, COMMERCIAL GRADE, 125V, 20A COMPLYING WITH NEMA WD |
| - | DEDICATED RECEPTACLE | PURCHASE & COVER. 'CH' | UNLESS OTHERWISE NOTED ON PLANS. VERIFY PLUG TYPE PRIOR TO INSTALLATION. GFCI OR AFCI IF NOTED. 'WP' DENOTES WEATHERPROOF DENOTES COUNTER HEIGHT. LISTED TAMPERPROOF IF NOTED. MEET FEDERAL DN W-C-596. MAY BE EITHER SIMPLEX, DUPLEX, OR QUAD. |
| | DEDICATED RECEPTACLE FUSIBLE DISCONNECT SWITCH | PURCHASE & COVER. 'CH' SPECIFICATIO HEAVY DUTY | UNLESS OTHERWISE NOTED ON PLANS. VERIFY PLUG TYPE PRIOR TO INSTALLATION. GFCI OR AFCI IF NOTED. 'WP' DENOTES WEATHERPROOF DENOTES COUNTER HEIGHT. LISTED TAMPERPROOF IF NOTED. MEET FEDERAL |
| | FUSIBLE DISCONNECT | PURCHASE & COVER. 'CH' SPECIFICATIO HEAVY DUTY EXTERIOR AP | UNLESS OTHERWISE NOTED ON PLANS. VERIFY PLUG TYPE PRIOR TO E INSTALLATION. GFCI OR AFCI IF NOTED. 'WP' DENOTES WEATHERPROOF DENOTES COUNTER HEIGHT. LISTED TAMPERPROOF IF NOTED. MEET FEDERAL DN W-C-596. MAY BE EITHER SIMPLEX, DUPLEX, OR QUAD. TYPE. TYPE 1 ENCLOSURE IN INTERIOR APPLICATIONS, TYPE 3R ENCLOSURE IN PLICATIONS, FUSE ACCORDING TO NAMEPLATE DATA. TYPE. TYPE 1 ENCLOSURE IN INTERIOR APPLICATIONS, TYPE 3R ENCLOSURE IN |

| | LIGHT FIXTURE SCHEDULE | | | | | | | | | | |
|------|-----------------------------------|---------------|-------|-------|---------|---------|------------------|----------|---------|-------------|---------------------------------|
| MARK | K DESCRIPTION | | LAMPS | | VOLTAGE | MAX | | | | 11055 | |
| WARK | | LOUVER/LENS | TYPE | QTY. | CCT | VOLTAGE | INPUT WATTAGE | MOUNTING | REMARKS | MFG | MODEL |
| Α | 4' 2 LAMP VAPOR PROOF STRIP LIGHT | - | LED | - | - | 120 | 64 | SURFACE | 2 | EPCO | G-4-LED-FX-S-41-34 |
| В | 6" CAN LIGHT | - | LED | 1 | - | 120 | 12 | RECESSED | 2 | JUNO | IC22LED-G4-09LM-35K-90CRI-MVOLT |
| С | OUTDOOR FAN W/O LIGHT KIT | - | LED | - | - | 120 | 67 | SURFACE | 2 | ZOONIX | MA4660 |
| EXH | LED EXIT/COMBO W/ BATTERY BACKUP | ACRYLIC | LED | MULT. | N/A | 120 | 4 | VARIES | 1,2 | EMERGI-LITE | LSNX42NGC |
| OE | EXTERIOR OVAL LED EMERGENCY LIGHT | POLYCARBONATE | LED | 2 | - | 120 | 2 | SURFACE | 1 | EELP | DEM-EM |
| | | | | | | | | | | | |

2. OR EQUAL BY COOPER, PHILIPS, DAY-BRITE LIGHTING, GE, LITHONIA, OR OWNER APPROVED



ALL SWITCHES AND CONTROLS MUST COMPLY FOR ALL COUNTERTOPS





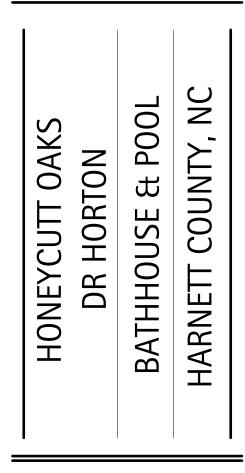


| | LIGHTING DEVICE LEGEND |
|---|--|
| | REMARKS |
| | HEAVY DUTY, AC ONLY, COMMERCIAL GRADE GENERAL USE SNAP SWITCH COMPLYING WITH NEMA WD 6 AND WD 1. IVORY PLASTIC BODY WITH TOGGLE HANDLE. 120-277V, 20A. MEET FEDERAL SPECIFICATION W-S-896. |
| | WATTSTOPPER DW-100 LINE VOLTAGE OCCUPANCY SENSOR. ULTRA SONIC AND INFRARED. |
| | WATTSOPPER LVS-1 LOW VOLTAGE MOMENTARY CONTROL SWITCH. |
| | 3-WAY TYPE SWITCH WITH SAME CHARACTERISTICS AS SINGLE POLE SWITCH ABOVE. |
| | WATTSTOPPER, DT-300 LOW VOLTAGE OCCUPANCY SENSOR. 360° ULTRA SONIC AND INFRARED. |
| | WATTSTOPPER, BZ-150 LOW VOLTAGE POWER PACK FOR CEILING PACK SENSORS. |
| | GALVANIZED METAL BOX CONSTRUCTED IN ACCORDANCE WITH 314.40 OF THE NEC. |
| | VENT FAN, 120V, CFM AS NOTED MC TO PROVIDE AND VENT, EC TO WIRE. |
| - | |
| | |
| | |

SHEET DISCRIPTION Electrical Schedules

PROJECT #:

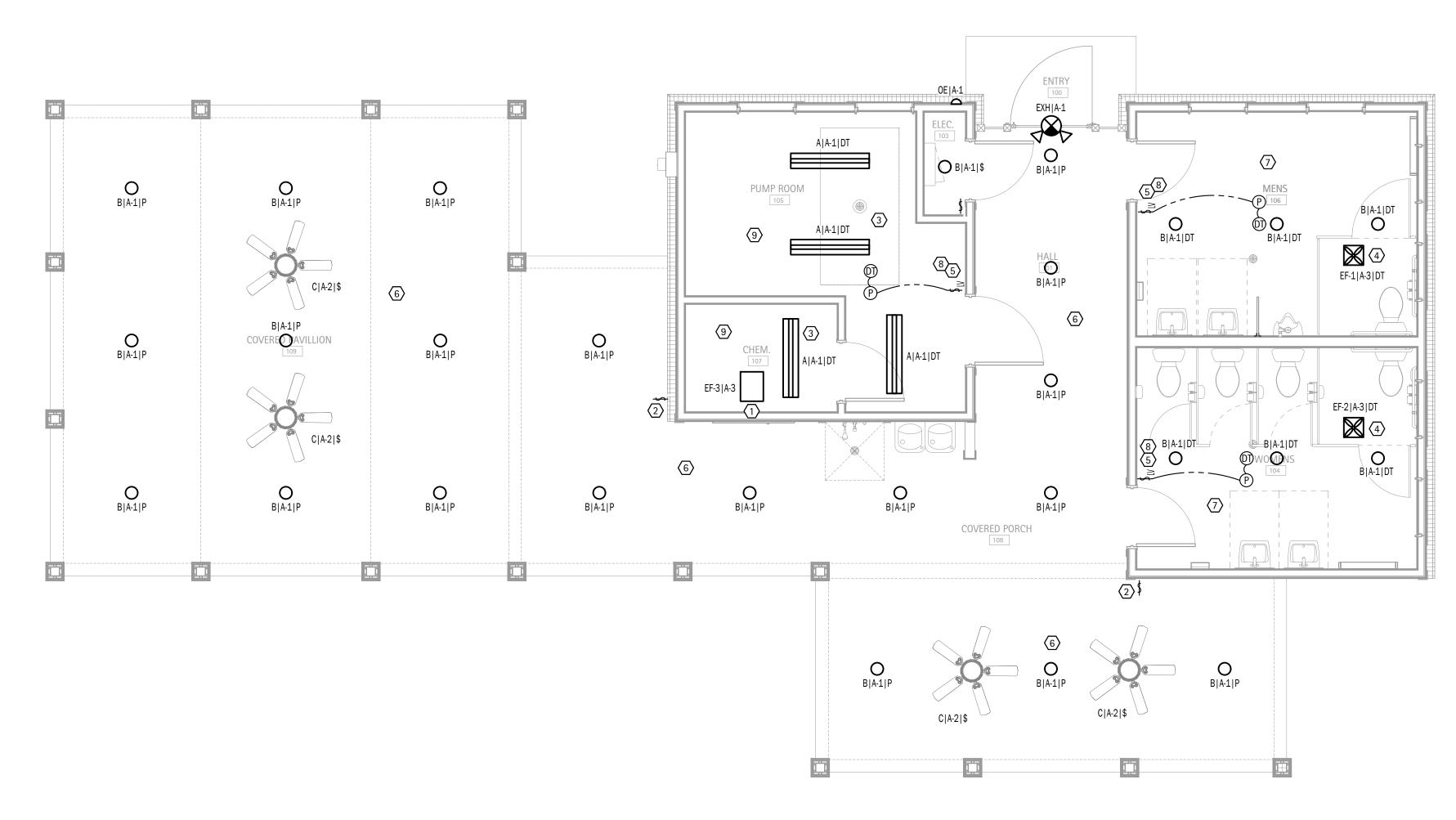
| DATE ISSUED: | 07/27/2022 |
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| DRAWING BY: | DBAS |
| CHECKED BY: | MWK/JLH |



LIGHTING FIXTURE SCHEDULE | 2

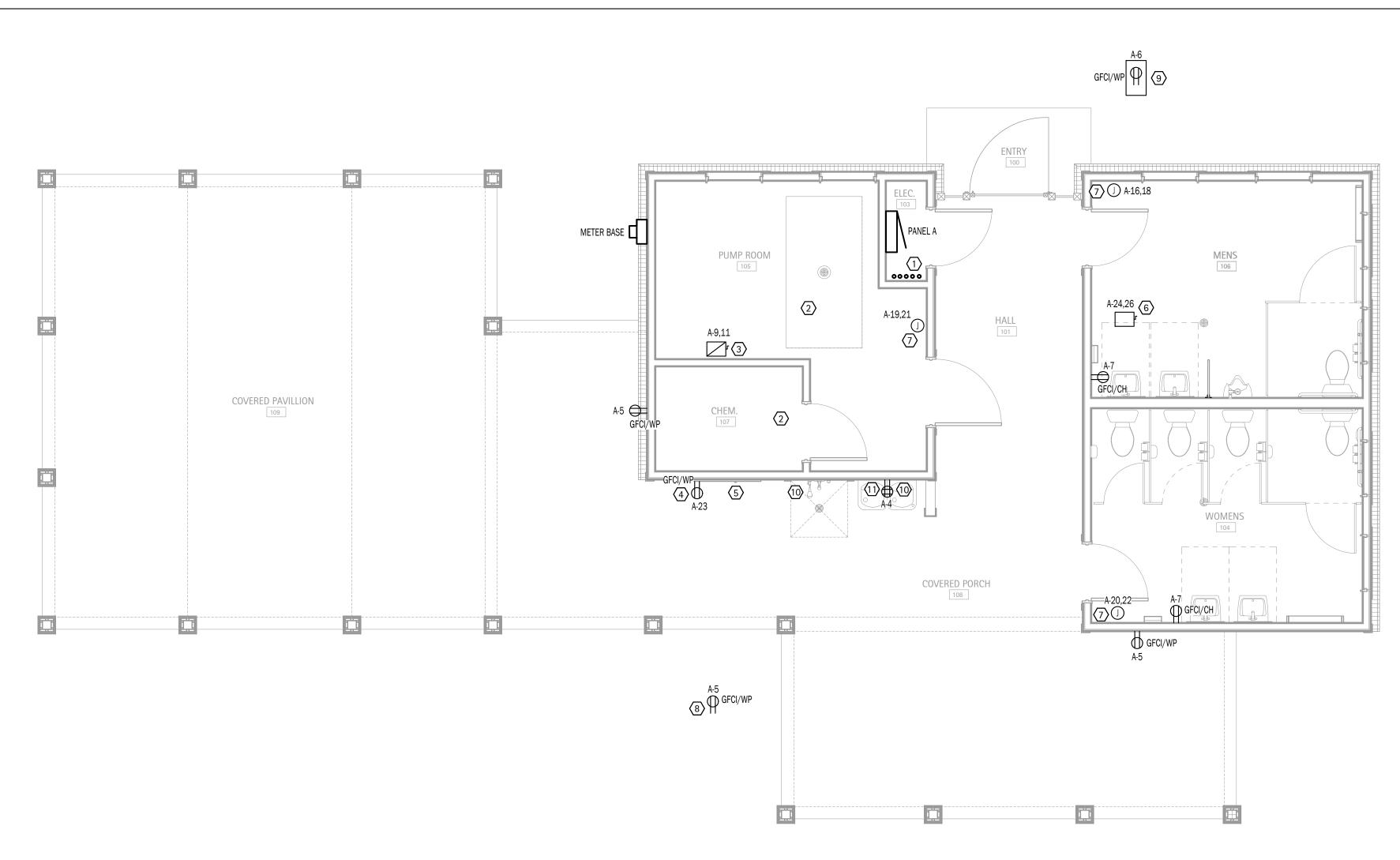
\supset LIGHTING PLAN HEX NOTES

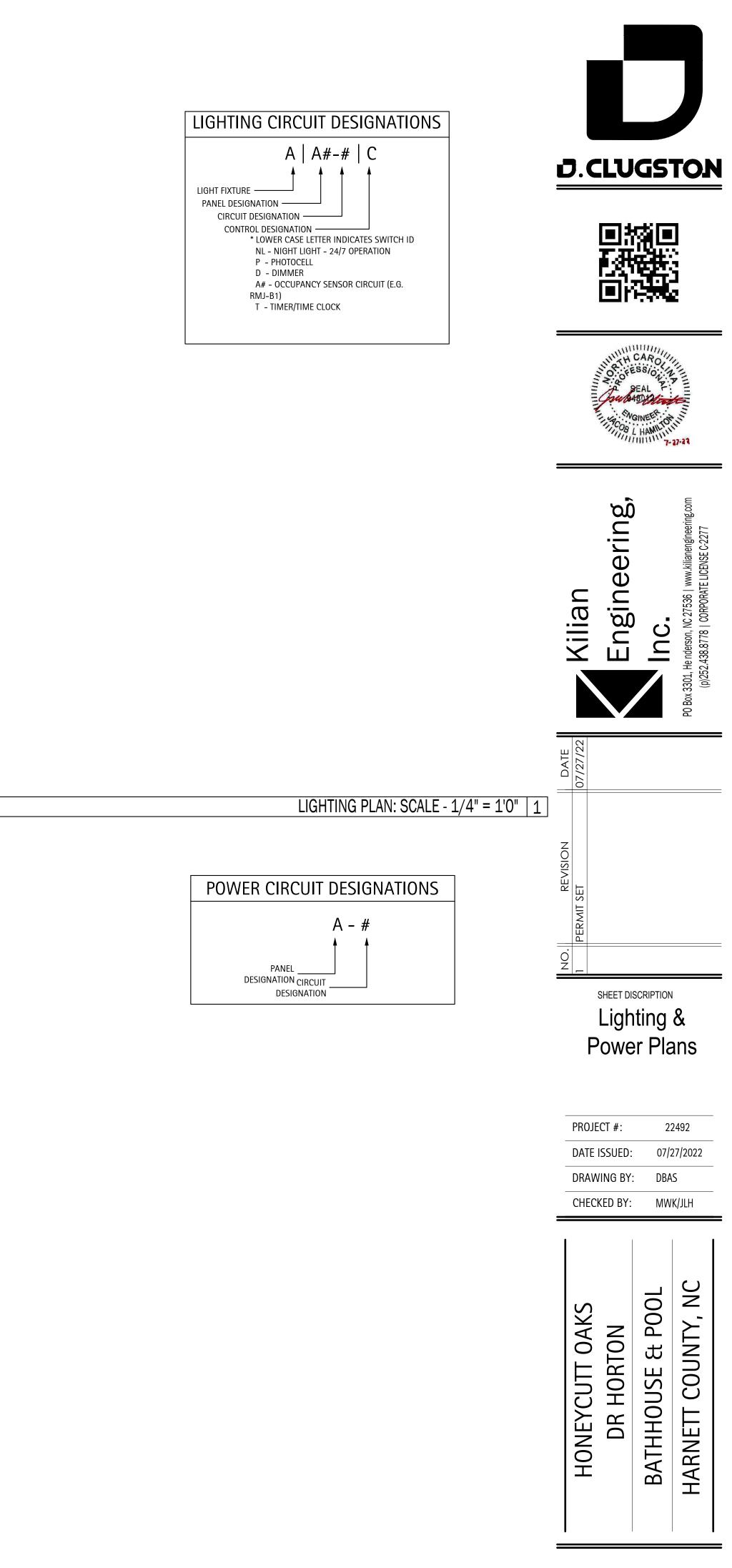
- EXHAUST FAN SUSPENDED IN ATTIC TO BE WIRED FOR CONTINUOUS OPERATION. COORDINATE WITH M.C.
- 2. PROVIDE 60 MINUTE SWITCH FOR FAN. PROVIDE IN WEATHERPROOF ENCLOSURE.
- 3. PUMP ROOM AND CHEM. ROOM LIGHTS TO BE TIED TO SAME
- MOTION SENSOR.
- 4. EC TO TIE EXHAUST FAN AND LIGHTING FIXTURES TO SAME CONTROL SWITCH.
- 5. MOTION SENSOR TO BE SET ON 20 MINUTE TIMER.
- 6. PORCH/PAVILION/HALL LIGHTING FIXTURE CONTROLLED VIA PHOTOCELL LOCATED ON NORTH FACE OF BUILDING.
- EGRESS LIGHTING EXEMPT FROM RESTROOMS PER NC BUILDING CODE 1008.3.3.
- 8. PROVIDE LOW VOLTAGE OVERRIDE SWITCH AS SHOWN.
- 9. AREA IS CORROSIVE ENVIRONMENT PER NEC 680.14. FOLLOW WIRING METHODS IN NEC 680.14(B).



> POWER PLAN HEX NOTES

- PROVIDE (2) 1" CONDUITS WITH CIRCUITS AS SHOWN TO POOL FOR POOL LIGHTS AND OTHER POOLSIDE EQUIPMENT. PROVIDE (3) 1" CONDUITS FROM SPARE POOL CIRCUITS AS SHOWN AND CAP RIGHT OUTSIDE ELECTRICAL ROOM. COORDINATE EXACT LOCATIONS WITH G.C. AND POOL CONTRACTOR. CIRCUIT TO BE CONTROLLED VIA TIME CLOCK AT PANEL. POOL LIGHTS TO BE WIRED VIA INTERMATIC JUNCTION BOX TRANSFORMER (MODEL PJBX52100). REFER TO PANEL SCHEDULE FOR CIRCUIT DESIGNATIONS.
- AREA IS CORROSIVE ENVIRONMENT PER NEC 680.14. FOLLOW WIRING METHODS IN NEC 680.14(B).
- PROVIDE POWER TO NON-FUSED DISCONNECT FOR POOL AND FEATURE PUMPS. PUMPS MUST HAVE GFCI PROTECTION. PROVIDE GFCI BREAKER IN PANEL. DISCONNECT MUST HAVE NEMA 4X RATED ENCLOSURE. COORDINATE EXACT LOCATION AND SPEC WITH G.C. AND POOL CONTRACTOR BEFORE BEGINNING WORK. FINAL CONNECTIONS BY E.C.
- 4. PROVIDE POWER TO EMERGENCY PHONE RECEPTACLE. FIELD VERIFY LOCATION WITH LOCAL AHJ.
- PROVIDE EMERGENCY "PUSH IN" POWER OFF SWITCH FOR POOL PUMPS. VERIFY LOCATION WITH LOCAL AHJ. WIRE TO SHUNT TRIP BREAKERS IN PANEL. SEE PANEL SCHEDULE. SEE ARCHITECTURAL PLANS FOR LOCATION OF "PUSH IN" POWER OFF SWITCH.
- 6. WATER HEATER DISCONNECT LOCATED ABOVE CEILING.
- 7. FLUSH MOUNT JUNCTION BOX FOR UNIT HEATER.
- 8. E.C. TO COORDINATE WITH POOL CONTRACTOR TO ENSURE A GFCI/WEATHER PROOF RECEPTACLE IS WITHIN 20' OF EDGE OF POOL (BUT NO CLOSER THAN 6') AS REQUIRED BY NEC 680.22(A)(1). PROVIDE ON CIRCUIT 3 IN PANEL A.
- RECEPTACLE IN HOTBOX FOR FREEZE PROTECTION. VERIFY EXACT LOCATION OF HOTBOX WITH UTILITY PLANS BY OTHERS.
- 10. EC TO COORDINATE WITH PC FOR HEAT TRACE ON COLD WATER SUPPLY LINES. SEE CIRCUIT IN PANEL A (A-8).
- 11. GFCI PROTECTED BY BREAKER AT PANEL.





POWER PLAN: SCALE - 1/4" = 1'0" 2

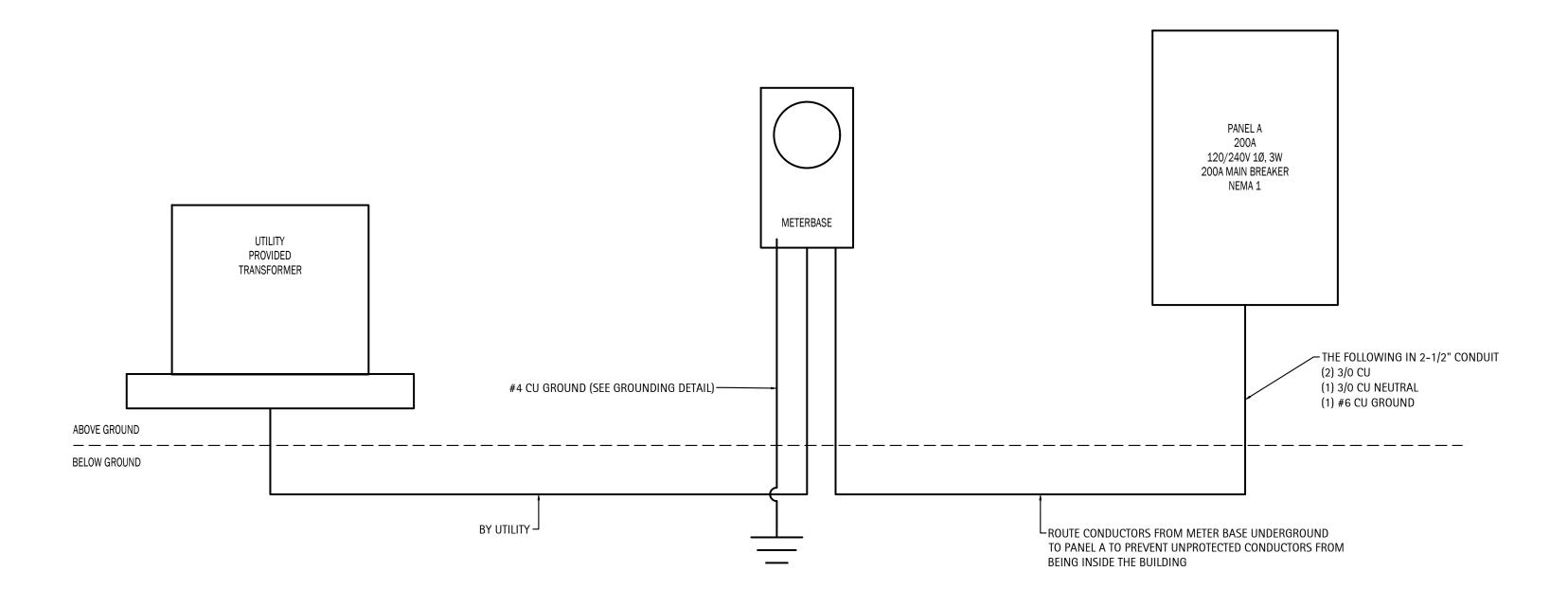
E2

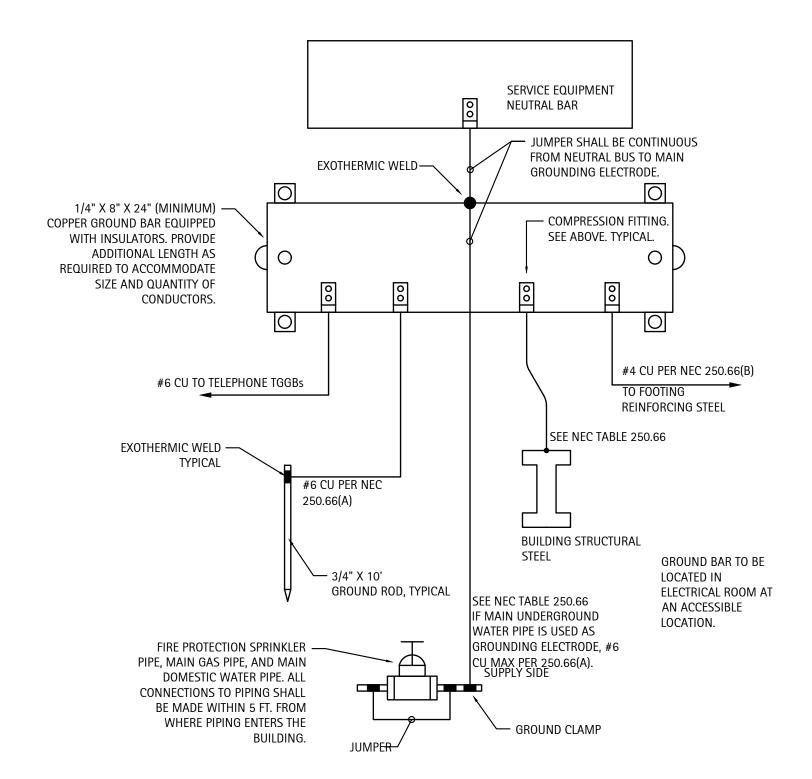
| | | | | PANEL | A | | | |
|-----|-------------------------|----------|--------|-------|---------|---------|-----------------------------|-----|
| | | | LOAD | | LOAD | | | |
| CKT | LOAD | BKR | kVA | PH | kVA | BKR | LOAD | CKT |
| 1 | LIGHTS | 20/1 | 0.77 | Α | 0.34 | 20/1 | PORCH/PAVILION FANS | 2 |
| 3 | EXHAUST FANS | 20/1 | 1.06 | В | 0.36 | 20/1 | WATER FOUNTAIN | 4 |
| 5 | PORCH/DECK RECEPTACLES | 20/1 | 0.54 | А | 0.18 | 20/1 | HOTBOX RECEPTACLE | 6 |
| 7 | BATHROOM RECEPTACLE | 20/1 | 0.36 | В | 1.20 | 20/1 | HEAT TRACE | 8 |
| 9 | 5 HP POOL PUMP | | 3.36 | Α | 1.20 | 20/1 | POOL LIGHTS AND ACCESSORIES | 10 |
| 11 | 1 3 SHUNT TRIP | 60/2 | 3.36 | В | 1.20 | 20/1 | POOL LIGHTS AND ACCESSORIES | 12 |
| 13 | | | 0.00 | А | 0.00 | 20/1 | POOL SPARE | 14 |
| 15 | POOL SPARE | 20/1 | 0.00 | В | 2.40 | 20/2 | UNIT HEATER 1 | 16 |
| 17 | POOL SPARE | 20/1 | 0.00 | А | 2.40 | 20/2 | | 18 |
| 19 | UNIT HEATER 2 | 20/2 | 2.40 | В | 2.40 | 20/2 | UNIT HEATER 3 | 20 |
| 21 | UNIT HEATER 2 | 20/2 | 2.40 | А | 2.40 | 20/2 | UNIT HEATEN 3 | 22 |
| 23 | EMERGENCY PHONE RECEPT. | 20/1 | 0.18 | В | 2.25 | 30/2 | | 24 |
| 25 | SPARE | 20/1 | 0.00 | А | 2.25 | 30/2 | WATER HEATER | 26 |
| 27 | SPARE | 20/1 | 0.00 | В | 0.00 | 20/1 | SPARE | 28 |
| 29 | SPACE | | 0.00 | А | 0.00 | | SPACE | 30 |
| 31 | SPACE | | 0.00 | В | 0.00 | | SPACE | 32 |
| 33 | SPACE | | 0.00 | А | 0.00 | | SPACE | 34 |
| 35 | SPACE | | 0.00 | В | 0.00 | | SPACE | 36 |
| 37 | SPACE | | 0.00 | А | 0.00 | | SPACE | 38 |
| 39 | SPACE | | 0.00 | В | 0.00 | | SPACE | 40 |
| 41 | SPACE | | 0.00 | А | 0.00 | | SPACE | 42 |
| | | | kVA | PH | AMPS | | | |
| | | | 15.8 | A | 132 | | | |
| | | | 17.2 | В | 143 | | | |
| | | | | | | | | |
| | V | OLTAGE/ | /PHASE | | 120/24 | 0,1P,3W | | |
| | | BUS F | RATING | | 200A | | | |
| | MAIN CIRCUIT B | REAKER F | RATING | | 200A N | IAIN BR | EAKER | |
| | | AIC F | RATING | | 22K - E | C TO VE | RIFY | |
| | SERVICE EN | ITRANCE | RATED | | YES | | | |
| | | ENCL | .OSURE | 1 | NEMA | 1 | | |
| | | MOL | JNTING | 1 | SURFA | CE | | |

NEC ELECTRIC DEMAND SUMMARY 120/240V,1P,3W

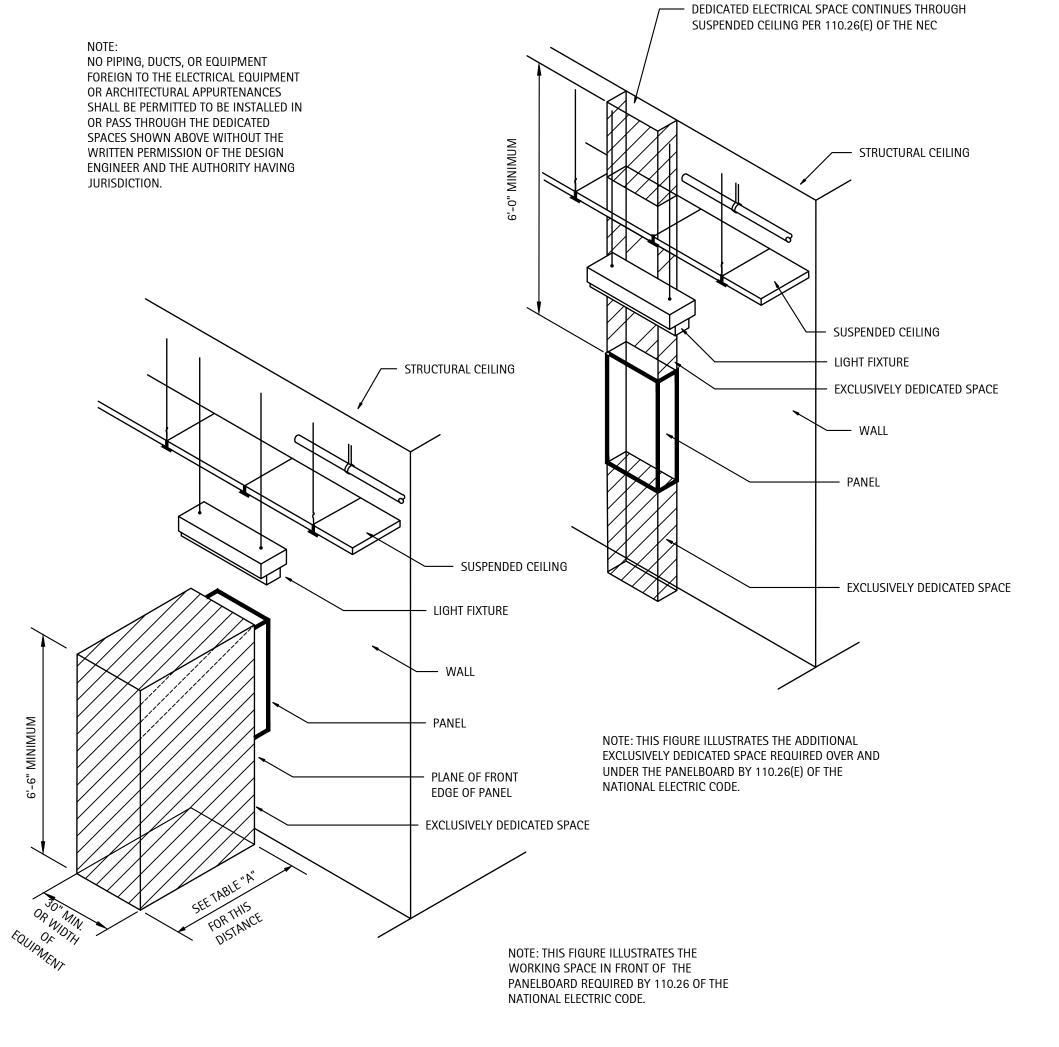
| EQUIPMENT | DEMAND | kVA | | load kva | NEC | NOTES/CALCULATIONS | | |
|----------------------|--------|-------|-------|----------|-----------|------------------------------|--|--|
| | FACTOR | А | В | LUAD KVA | REFERENCE | NOILS/CALCOLATIONS | | |
| LIGHTING | 125% | 1.23 | 1.23 | 2.45 | 220.12 | 1750 SF X 1.4 VA/SF | | |
| RECEPTACLES < 10 kVA | 100% | 0.72 | 0.72 | 1.44 | 220.44 | | | |
| HVAC | 100% | 7.20 | 8.26 | 15.46 | | BASED ON MCA | | |
| WATER HEATER | 125% | 2.81 | 2.81 | 5.62 | 422.13 | STORAGE TANK <120 GAL @ 125% | | |
| POOL EQUIPMENT | 100% | 5.40 | 6.60 | 12.00 | 430.24 | LARGEST MOTOR @ 125% | | |
| DEMAND kVA PER PHASE | | 17.36 | 19.62 | | | | | |
| DEMAND AMP | 145 | 163 | | | | | | |

THE CALCULATED LIGHTING LOAD EXCEEDS THE CONNECTED LIGHTING LOAD.





GROUNDING DETAIL-NO SCALE



CONDITION 1 - EXPOSED LIVE PARTS ON ONE SIDE OF THE WORKING SPACE INSULATING MATERIALS.

SHALL BE CONSIDERED AS GROUNDED.

WORKING SPACE.

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NOTE: WHERE THE CONDITIONS ARE AS FOLLOWS:

AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE THAT ARE EFFECTIVELY GUARDED BY

CONDITION 2 - EXPOSED LIVE PARTS ON ONE SIDE OF THE WORKING SPACE AND GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE. CONCRETE, BRICK, OR TILE WALLS

CONDITION 3 - EXPOSED LIVE PARTS ON BOTH SIDES OF THE

REQUIRED CLEARANCES-NO SCALE

TABLE 110.26(A)(1) WORKING SPACE

CONDITON

3

3

1

VOLTAGE TO GROUND,

NOMINAL

0-150

151-600

MINIMUM CLEAR DISTANCE (FEET)

3

3-1/2

3

4

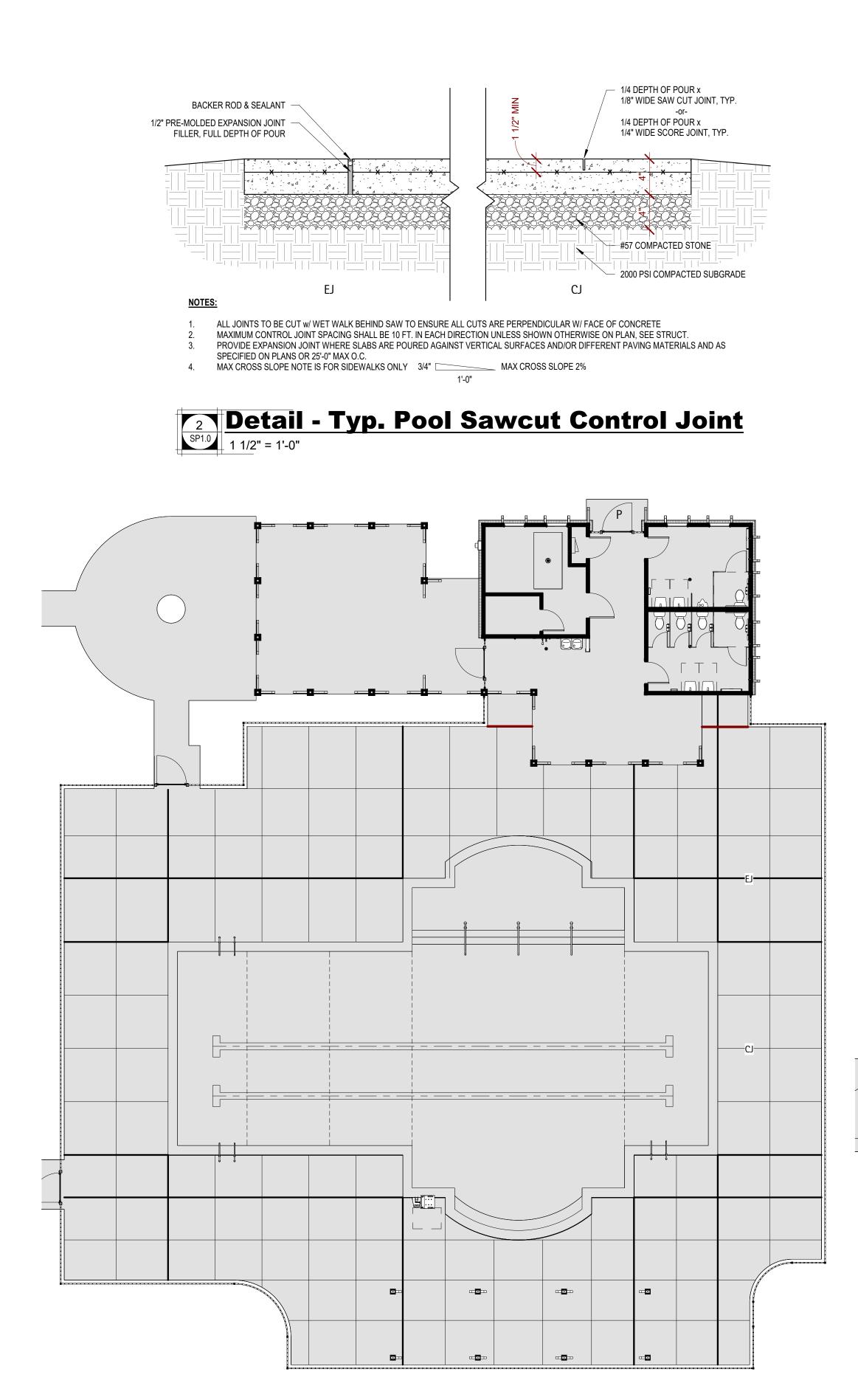


| DRAWING BY: DBA | 2492 |
|-----------------|---------|
| | 27/2022 |
| CHECKED BY: MW | S |
| | K/JLH |

| HONEYCUTT OAKS DR HORTON | BATHHOUSE & POOL | HARNETT COUNTY, NC |
|-----------------------------|------------------|--------------------|
|-----------------------------|------------------|--------------------|

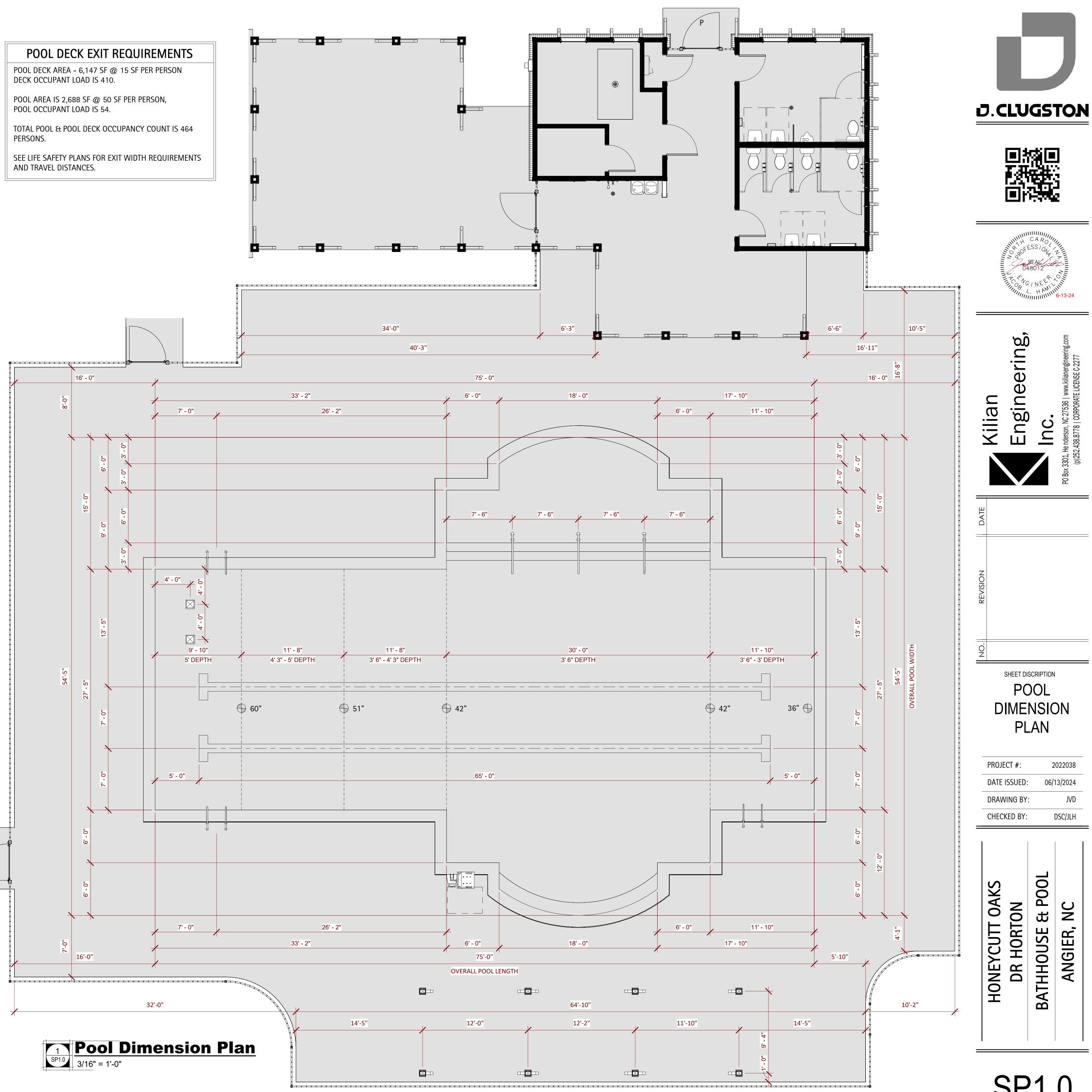
PANEL SCHEDULES AND POWER RISER: NO SCALE 1

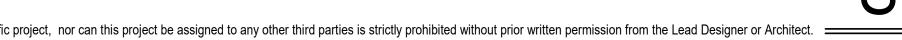
E3

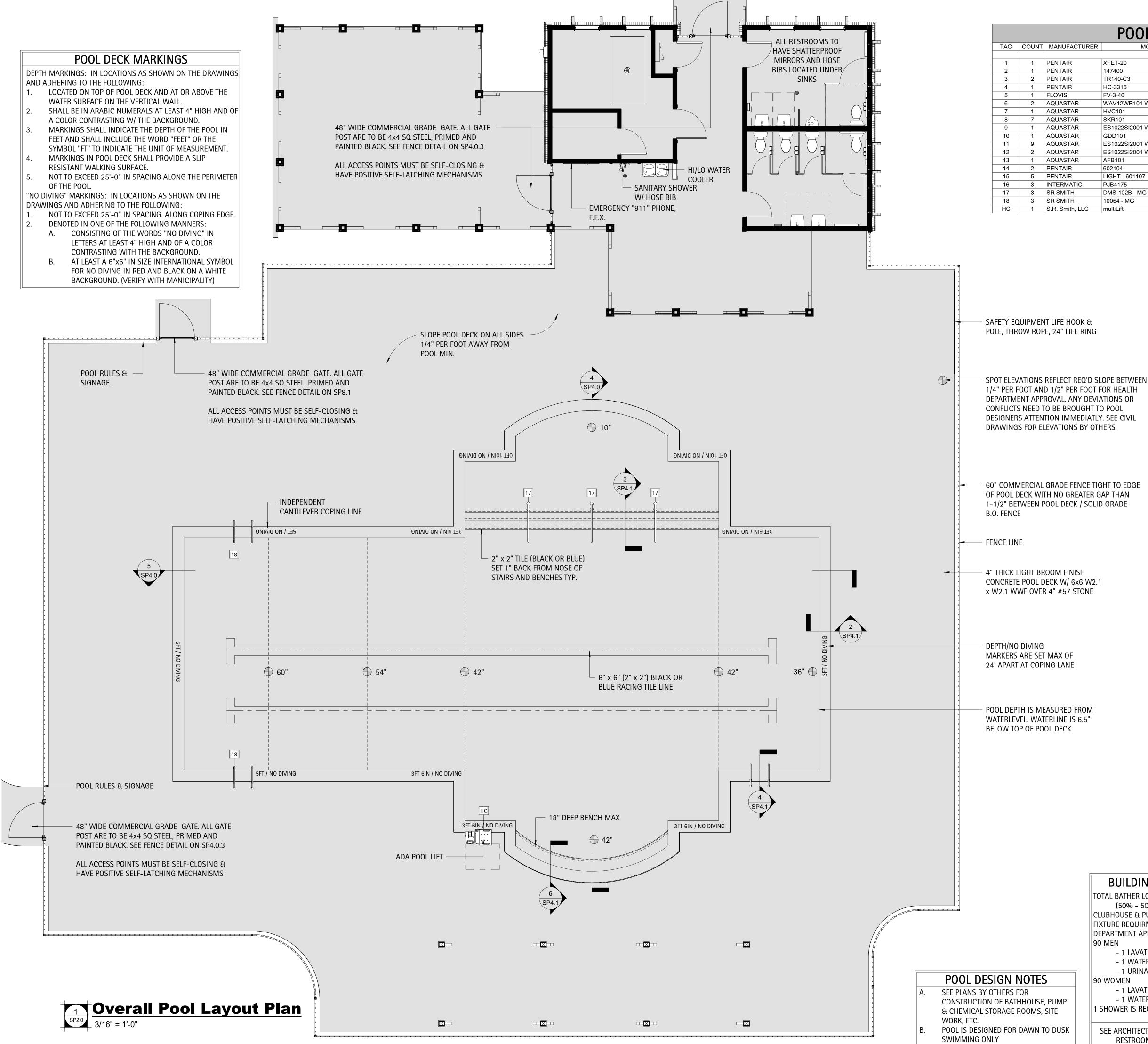




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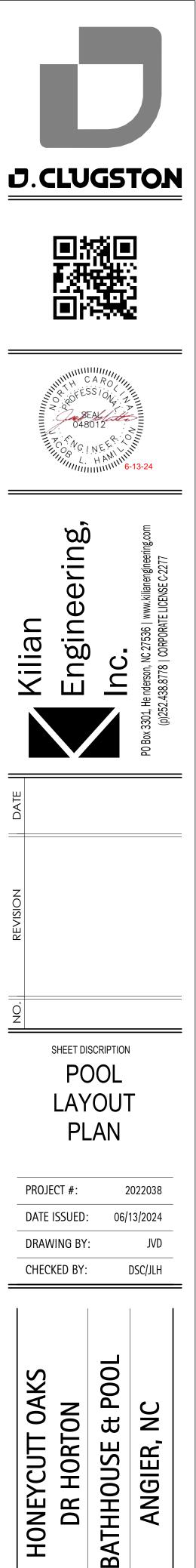




POOL EQUIPMENT SCHEDULE MODEL COMMENTS

| | XFET-20 | 5 HP SELF-PRIMING PUMP W/ STRAINER BASKET + EXTRA STRAINER BASKET |
|-----|----------------------------|---|
| | 147400 | TANDEM FILTER PIPING KITS FOR 2 & 3 IN FILTERS |
| | TR140-C3 | 36" DIA HIGH RATE SAND FILTER W/ 7.06 SF OF MEDIA |
| | HC-3315 | HIGH CAPACITY CHLORINE/BROMINE FEEDER |
| | FV-3-40 | 3 INCH INLINE COMMERCIAL FLOWMETER |
| र | WAV12WR101 W/ FBS-50-812-4 | 12" x 12" VGB SUCTION OUTLET COVER W/ A.S.A. MFG FIBERGLASS SUMP |
| र | HVC101 | SELF-CONTAINED HYDROSTATIC RELIEF VALVE ASSEMBLY |
| र | SKR101 | WHITE COMMERCIAL GRADE SKIMMER |
| २ | ES1022SI2001 W/ VLK15T01 | VACUUM LINE FITTING W/ LOCK CAP |
| र | GDD101 | COMMERCIAL OVERFLOW DRAIN |
| २ | ES1022SI2001 W/ 8101 | RETURN WALL INLET - DIRECTIONAL |
| र | ES1022SI2001 W/ BP101 | FLOOR RETURN INLET W/ BUBBLER PLATE |
| र | AFB101 | FILLSTAR - AUTOFILL LINE - WHITE |
| | 602104 | 190W EQUIVALENT GLOBRITE WHITE LED LIGHT |
| | LIGHT - 601107 | 300W EQUIVALIENT INTELLIBRITE WHITE LED LIGHT |
| IC | PJB4175 | 4 LIGHT CONNECTION POOL & SPA JUNCTION BOX |
| | DMS-102B - MG | MARINE GRADE DECK MOUNTED HANDRAIL |
| | 10054 - MG | MARINE GRADE DECK MOUNTED COMMERCIAL LADDER |
| LLC | multiLift | ADA COMPLIANT MULTILIFT WITH FOLDING SEAT |
| | | |

| | - | | |
|---|---|--|--|
| | | | |
| POC | L DECK | SIGNAGE | REQUIREMENTS |
| POOL SIG | NAGE TO BE | POSTED IN TH | E MAIN POOL AREA: |
| SIGN "A" | - 4" TALL LET | TERS WARNIN | ig - No lifeguard on duty |
| SIGN "B" | - 1" TALL LET | TERS - A MIN. | OF (2) THIS PROJECT |
| W 2. AD 3. PE 4. GL | LDREN SHO Thout Adul Ults Shoul S Are Proh Ass Contain | T SUPERVISION D NOT SWIM A IIBITED IN THE | THE SWIMMING POOL N. ALONE. POOL AREA. HIBITED IN THE POOL AREA. |
| ENCLOSU | | | JPON ENTERING THE POOL TO SHOWER BEFORE |
| POOL ENT | RANCE. VER | | "POOL CLOSED" FOR EVERY L POOL ENCLOSURE DESIGN |
| | | | |
| MINIMUI A. 12 SE TE B. M 1 W GL C. TV PR (1) EMERGEN A. TE 0T PR B. TH LO TH EN C. TH PO IN D. AT | SAFETY PRO BEING: LONG (MIN CURELY ATTA ESCOPING, I NIMUM 1/4" 1/2 TIMES TH ICHEVER IS ARD APPROV O UNITS OF OVIDED FOR 36 SQ M) OF ICY TELEPHONE CATION INSI E ENCLOSUR TRANCE. E TELEPHONI CATION INSI E ENCLOSUR TRANCE. E TELEPHONI OL ENCLOSU DICATING TH THE TELEPHO ICATING TH THE TELEPHO ICATING TH THE TELEPHO | VISIONS PER S IMUM) METAL ACHED. THE PO NON-ADJUSTA DIA THROWIN IE MAX WIDTH LESS, ATTACHI VED RING BUO LIFESAVING EC ANY POOL THA TOTAL SURFAC ONE SERVICE: PABLE OF DIRE ENCY NOTIFICA ACCESSIBLE T E SHALL BE PEI DE THE POOL E E SHALL BE VISI RE OR A VISIB E LOCATION O ONE - PROVIDE DING THE FOLL IG INSTRUCTIO ESS OF THE POO | SECTION .2530. THE POLE WITH A BODY HOOK LE SHALL BE NON- BLE & NON-COLLAPSIBLE. IG ROPE AS LONG AS OF THE POOL OR 50', ED TO A U.S. COAST Y. DUIPMENT MUST BE AT EXCEEDS 3,000 SQ FT CE AREA. CTLY DIALING 911 OR TION SYSTEM SHALL BE O ALL POOL USERS. RMANENTLY AFFIXED TO A ENCLOSURE OR OUTSIDE OF THE BATHER SIBLE FROM WITH THE LE SIGN SHALL BE POSTED F THE EMERGENCY PHONE. E A SIGN WITH LEGIBLE OWING INFORMATION. NS |
| | HOUSE PLAN HONE SERVI | | FOR EXACT LOCATION OF |
| | | | |
| | POOL POOL | DIMENSIONS: DEPTHS: VOLUME: ACE AREA: IETER: | OOL DATA 54'-5" X 75'-0" OVERALL IRREGULAR SHAPE. 10" SHELF w/ 3' 6"-5' POOL 70,353 GALLONS 2,688 SQFT. 239 LF BULLNOSE INDEPENDENT |
| FIXTURE DATA | REQUI | RED FLOW: | 195 GPM @ 65 TDH 210 GPM @ 65 TDH |
| D = 2,688 /15 = 180 | SHELL | MATERIAL: | 250 PSI SHOTCRETE |
|) SPLIT) = 90 /IP HOUSE MINIMUM | | IOR FINISH: R LOAD: | QUARTZ PLASTER 180 PERSONS |
| ENTS FOR HEALTH | BACK | WASH TO: | SANITARY SEWER |
| OVAL ARE: | | R SOURCE: | IN-LINE AUTOFILL |
| | | | 1 |



| BUILDING FIXTURE DATA |
|---------------------------------------|
| TOTAL BATHER LOAD = 2,688 /15 = 180 |
| (50% - 50% SPLIT) = 90 |
| CLUBHOUSE & PUMP HOUSE MINIMUM |
| FIXTURE REQUIRMENTS FOR HEALTH |
| DEPARTMENT APPROVAL ARE: |
| 90 MEN |
| - 1 LAVATORIES |
| - 1 WATER CLOSET(S) |
| – 1 URINAL(S) |
| 90 WOMEN |
| - 1 LAVATORIES |
| - 1 WATER CLOSET(S) |
| 1 SHOWER IS REQUIRED |
| |
| SEE ARCHITECTURAL PLANS BY OTHERS FOR |

RESTROOM LOCATION & LAYOUTS

PIPE SIZING: MAIN DRAINS:

SKIMMERS:

INLETS:

VACUUM LINE

FILTER TYPE:

SIZE PROVIDED:

SIZE REQUIRED:

BACKWASH RATE:

MEDIA CIRC. RATE: | 15 GPM/SF

TURNOVER RATE: 6 HOURS

(2) 4" SCH 40 PVC

(7) 4" SCH 40 PVC

(1) 2" SCH 40 PVC

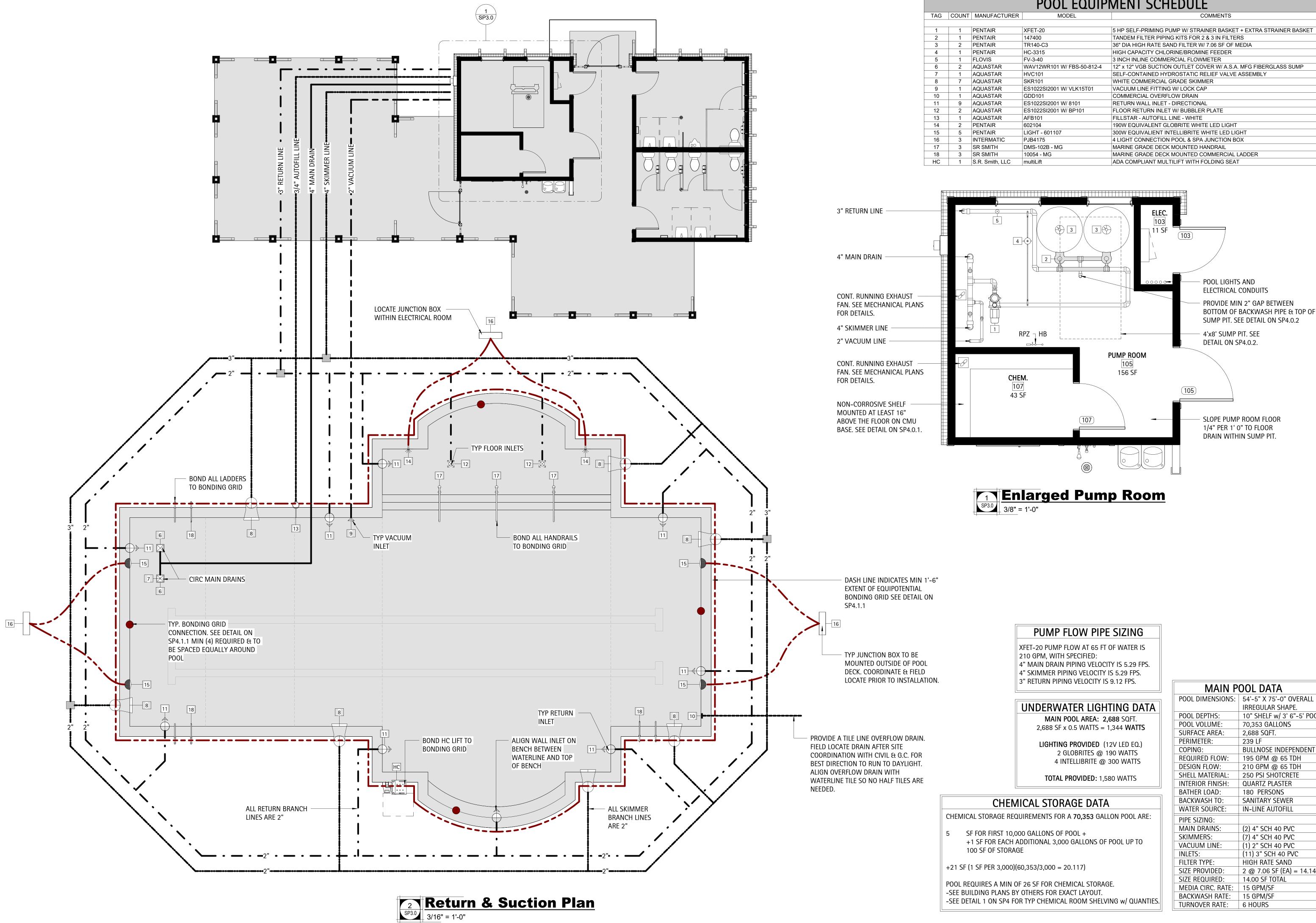
HIGH RATE SAND

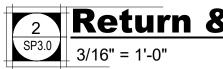
14.00 SF TOTAL

15 GPM/SF

(11) 3" SCH 40 PVC

2 @ 7.06 SF (EA) = 14.14





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POOL EQUIPMENT SCHEDULE 5 HP SELF-PRIMING PUMP W/ STRAINER BASKET + EXTRA STRAINER BASKET 12" x 12" VGB SUCTION OUTLET COVER W/ A.S.A. MFG FIBERGLASS SUMP **J.CLUGSTON**

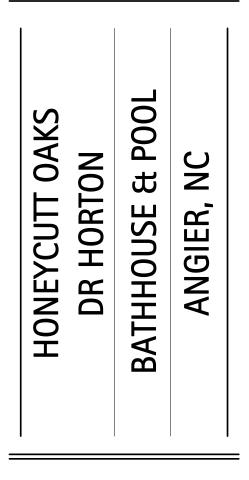
| | PUMP FLOW PIPE SIZING |
|-----|---|
| | XFET-20 PUMP FLOW AT 65 FT OF WATER IS 210 GPM, WITH SPECIFIED: 4" MAIN DRAIN PIPING VELOCITY IS 5.29 FPS. 4" SKIMMER PIPING VELOCITY IS 5.29 FPS. 3" RETURN PIPING VELOCITY IS 9.12 FPS. |
| | UNDERWATER LIGHTING DATA |
| | MAIN POOL AREA: 2,688 SQFT. 2,688 SF x 0.5 WATTS = 1,344 WATTS |
| | LIGHTING PROVIDED (12V LED EQ.) 2 GLOBRITES @ 190 WATTS 4 INTELLIBRITE @ 300 WATTS |
| | TOTAL PROVIDED: 1,580 WATTS |
| EN | IICAL STORAGE DATA |
| REC | DUIREMENTS FOR A 70,353 GALLON POOL ARE: |
| • | 000 GALLONS OF POOL + ADDITIONAL 3,000 GALLONS OF POOL UP TO GE |
| 00) | (60,353/3,000 = 20.117) |
| S B | DF 26 SF FOR CHEMICAL STORAGE. Y OTHERS FOR EXACT LAYOUT. OR TYP CHEMICAL ROOM SHELVING w/ QUANTIES. |

| MAIN P | OOL DATA |
|-------------------|----------------------------|
| POOL DIMENSIONS: | 54'-5" X 75'-0" OVERALL |
| | IRREGULAR SHAPE. |
| POOL DEPTHS: | 10" SHELF w/ 3' 6"-5' POOL |
| POOL VOLUME: | 70,353 GALLONS |
| SURFACE AREA: | 2,688 SQFT. |
| PERIMETER: | 239 LF |
| COPING: | BULLNOSE INDEPENDENT |
| REQUIRED FLOW: | 195 GPM @ 65 TDH |
| DESIGN FLOW: | 210 GPM @ 65 TDH |
| SHELL MATERIAL: | 250 PSI SHOTCRETE |
| INTERIOR FINISH: | QUARTZ PLASTER |
| BATHER LOAD: | 180 PERSONS |
| BACKWASH TO: | SANITARY SEWER |
| WATER SOURCE: | IN-LINE AUTOFILL |
| PIPE SIZING: | |
| MAIN DRAINS: | (2) 4" SCH 40 PVC |
| SKIMMERS: | (7) 4" SCH 40 PVC |
| VACUUM LINE: | (1) 2" SCH 40 PVC |
| INLETS: | (11) 3" SCH 40 PVC |
| FILTER TYPE: | HIGH RATE SAND |
| SIZE PROVIDED: | 2 @ 7.06 SF (EA) = 14.14 |
| SIZE REQUIRED: | 14.00 SF TOTAL |
| MEDIA CIRC. RATE: | 15 GPM/SF |
| BACKWASH RATE: | 15 GPM/SF |
| THERE AND A TE | |

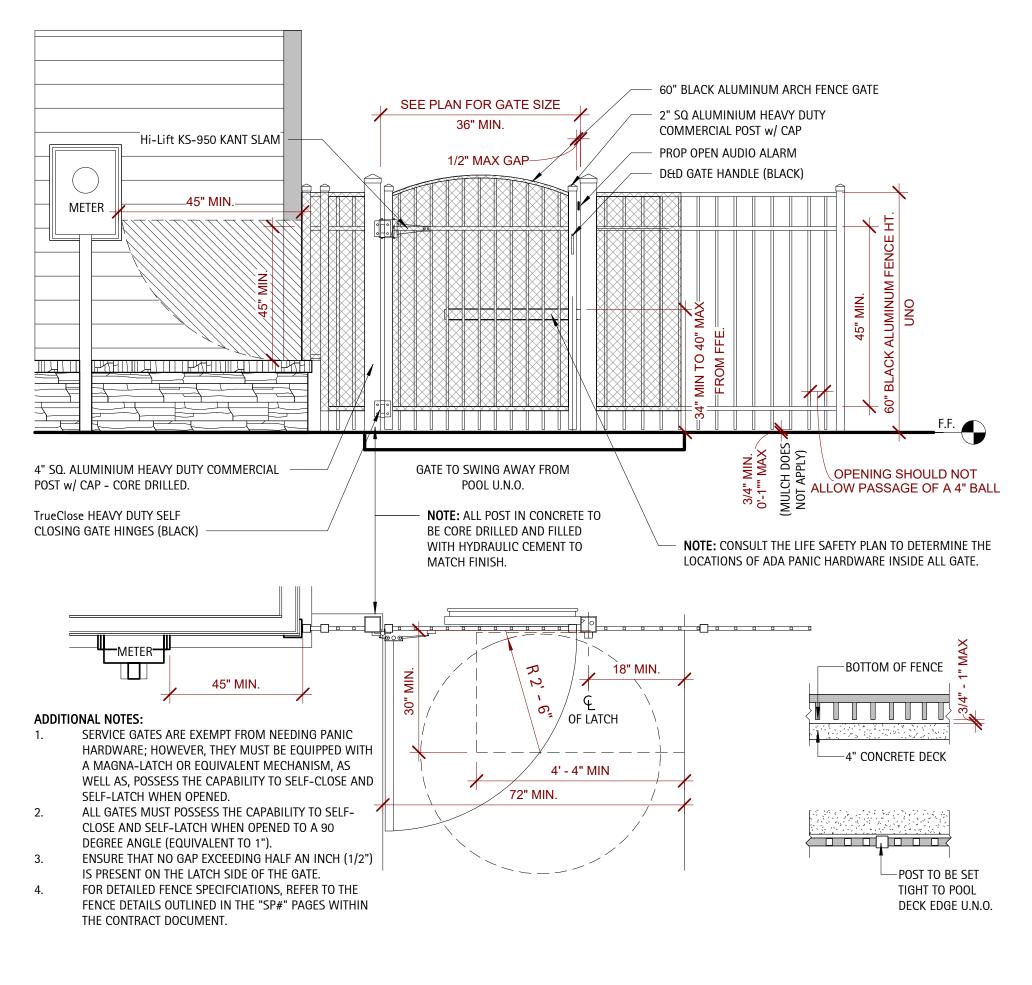
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|----------|---|---|
| | ORDERAT ORDERAT ORDERAT ORDERAT ORDERAT ORDERAT ORDERAT ORDERAT ORDERAT ORDERAT ORDERAT ORDERAT ORDERAT | о Чя 2 М М 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
| Kilian | Engineering, | PO Box 3301, He nderson, NC 27536 www.kilianengineering.com (p)252.438.8778 CORPORATE LICENSE C-2277 |
| DATE | | |
| REVISION | | |

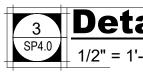


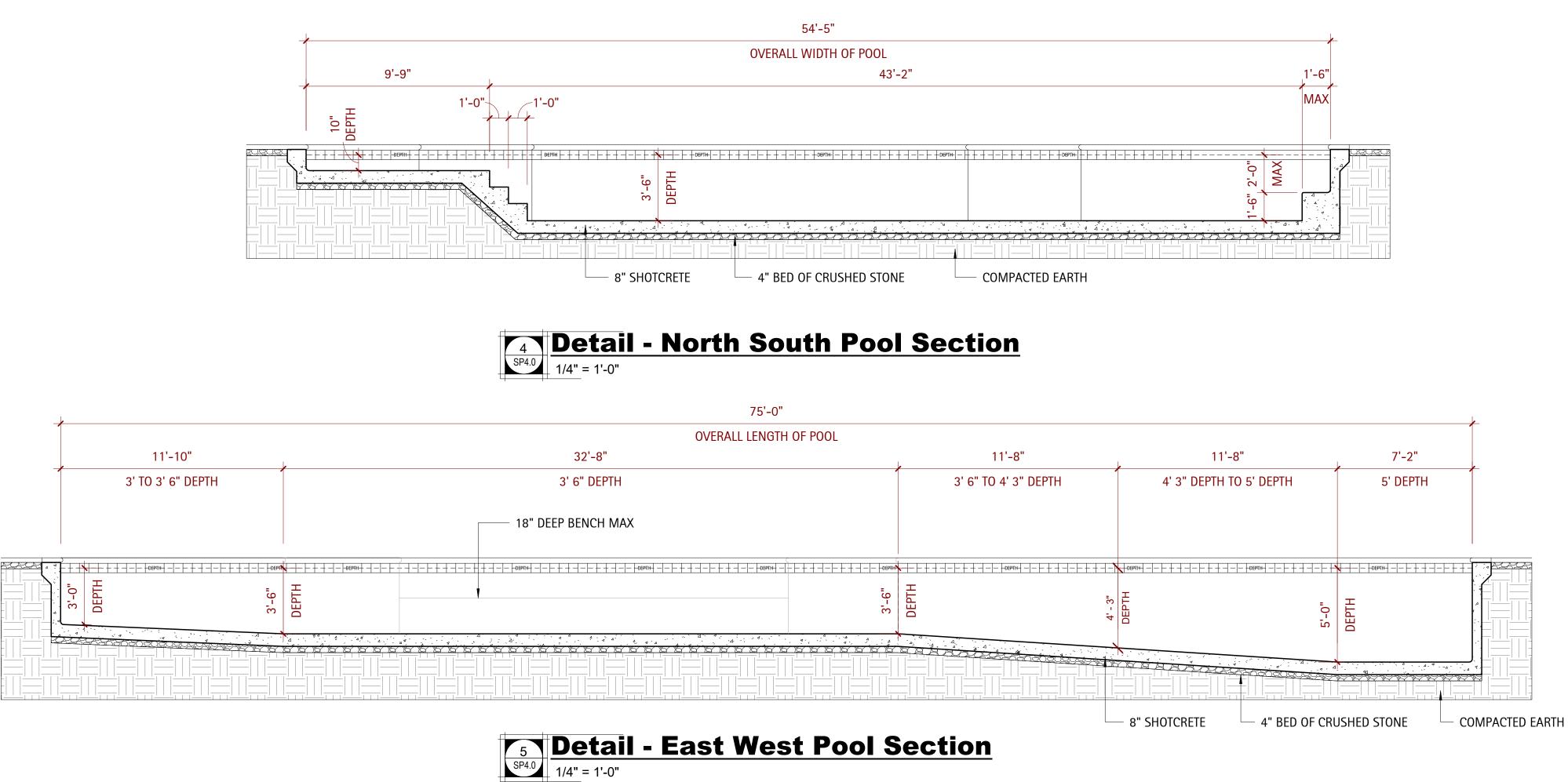
| PROJECT #: | 2022038 |
|--------------|------------|
| DATE ISSUED: | 06/13/2024 |
| DRAWING BY: | JVD |
| CHECKED BY: | DSC/JLH |



SP3.0

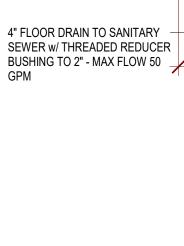






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3 SP4.0 **Detail - Fence** 1/2" = 1'-0"



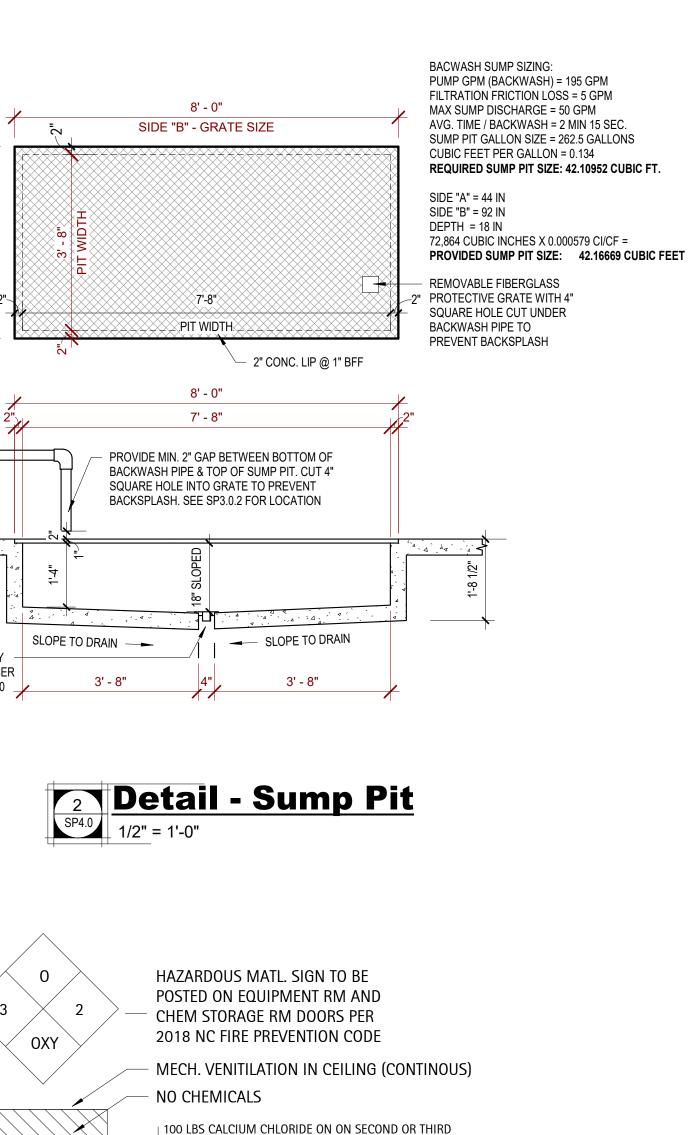


TYPICAL CHEMICAL ROOM SHELVING w/ QUANITIES A. Unless otherwise stated, all code references are to the 2018 North Carolina State Building Codes (NCSBC). B. North Carolina Building Code (NCBC) applicable portions include but are not limited to: 1. Chapter 3, Section 307 and Tables 307.7(1), 307.1(2) 2. Chapter 4, Section 414, 415 and Tables 414.2.2, 414.2.5, 415.8.2.1.1 C. North Carolina Fire Code (NCFPC) applicable portions include but are not limited to:

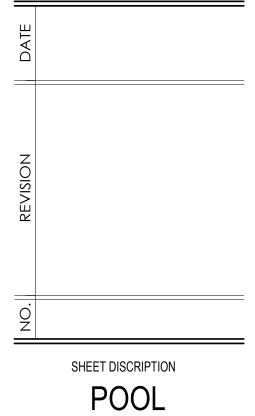






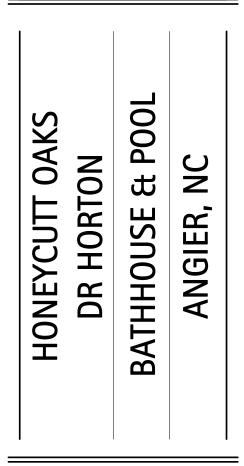


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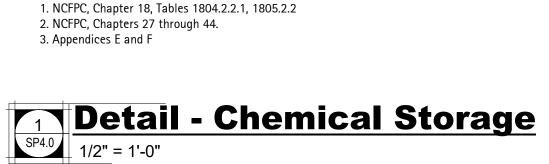




| PROJECT #: | 2022038 |
|--------------|------------|
| DATE ISSUED: | 06/13/2024 |
| DRAWING BY: | JVD |
| CHECKED BY: | DSC/JLH |



SP4.(



SHELF ONLY

SHELF ONLY

SHELF ONLY

_ SHELF FLOOR ONLY

ONLY

ONIY

100 LBS CYANURIC ACID ON SECOND OR THIRD SHELF ONLY 100 LBS SODIUM CARBONATE ON SECOND OR THIRD SHELF

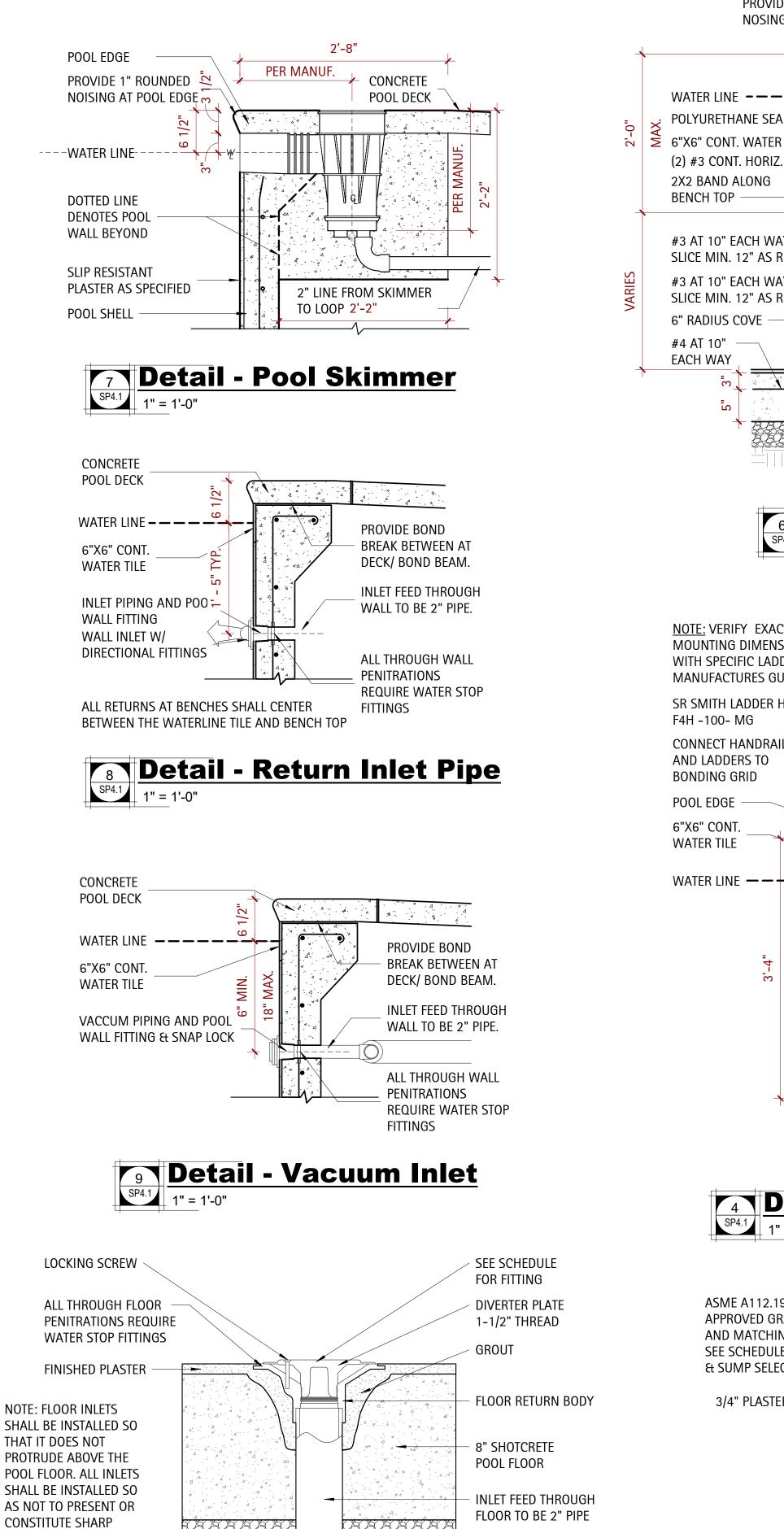
100 LBS SODIUM THIOSULFATE ON SECOND OR THIRD SHELF

50 LBS CALCIUM HYPOCHLORITE ON SECOND OR THIRD

100 LBS SODIUM BICARBONATE ON SECOND OR THIRD

- 30 GALS HYDROCHLORIC ACID ON LOWEST SHELF ONLY

TYPICAL NON-CORROSIVE SHELF TO START 1'-4" AFF

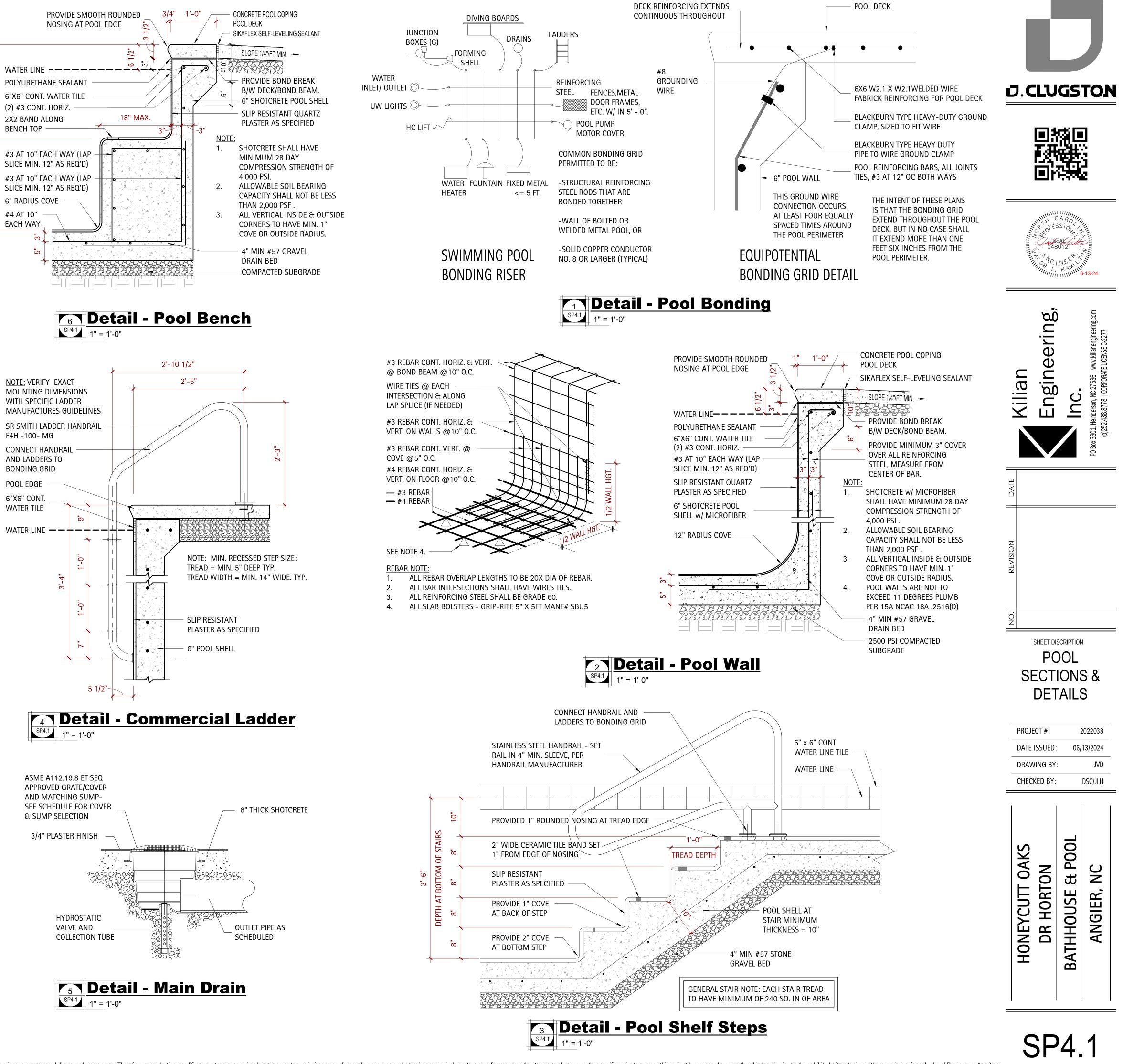


4" MIN #57 STONE **GRAVEL BED**



EDGES OR PROTRUSION

HAZARDS TO BATHERS.





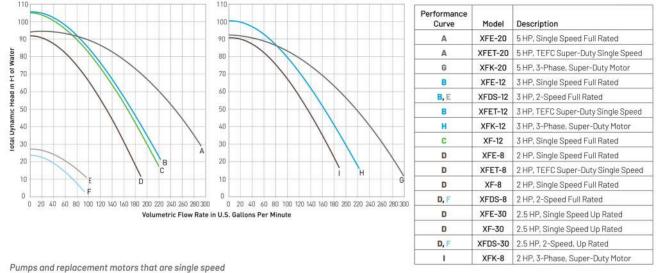
KEY FEATURES

Cam and Ramp[™] Lid Makes inspection and cleaning simple and quick Built-in handle For easy installation Union connectors

2.5" or 3" union connectors included Oversized strainer basket Extends time between cleanings

TEFC/Super-Duty motor options Provide superior performance and longevity

PERFORMANCE CURVES



and one (1) Total HP or greater cannot be sold, offered for sale, or installed in a residential pool for filtration use in California, Title 20 CCR sections 1601-1609.

PENTAIR

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TAG 1 - CIRCULATION PUMP - XFET-20 - 5 HP HIGH EFFICIENCY PUMP

WHEN ACCURACY IS CRITICAL, DON'T JUST TAKE OUR WORD FOR IT!

FlowVis® was the first - and is now the most - NSF 50 certified flow meter in the

world! Because when accuracy matters, you should put your trust in the experts.

FLOWVIS® MODELS

| Feature | FV-15 | FV-15-U | FV-2 | FV-2-U | FV-25 | FV-3 | FV-3-40 | FV-4 | FV-6 | FV-8 |
|-----------------------|-------|----------|--------|--------|--------|--------|---------|---------|----------|----------|
| | 239 | <u>n</u> | | | THE . | | Ľ. | | | |
| NSF 50 Certified | ~ | 1 | 7 | 1 | 1 | ~ | ~ | ~ | 1 | 1.000 |
| Pipe Size | 1.5" | 1.5" | 2" | 2" | 2.5" | 3" | 3" | 4" | 6" | 8" |
| Operating Range (GPM) | 10-80 | 10-90 | 10-110 | 10-110 | 10-110 | 70-240 | 70-240 | 150-460 | 300-1000 | 600-1800 |
| Average Accuracy | 98.7% | 98.7% | 99.4% | 99.0% | 99.2% | 98.9% | 99.2% | 99.6% | 98.1% | N/A* |
| NSF 50 Level | L1 | L1 | L1 | L1 | L1 | L1 | L1 | L1 | L1 | L1 |

NSF

NSF - 50 CERTIFIED

table below.

FLOWVIS® DIGITAL MODELS

| Feature | FV-15 | FV-15-U | FV-2 | FV-2-U | FV-25 | FV-3 | FV-3-40 | FV-4 | FV-6 | FV-8 |
|-----------------------|-------|---------|--------|--------|--------|--------|---------|---------|----------|----------|
| NSF 50 Certified | V | ~ | V | 4 | Ý | J. | ~ | V. | Ý | ~ |
| Pipe Size | 1.5* | 1.5" | 2" | 2" | 2.5" | 3" | 3" | 4" | 6" | 8" |
| Operating Range (GPM) | 10-80 | 10-90 | 10-110 | 10-110 | 10-110 | 70-240 | 70-240 | 150-460 | 300-1000 | 600-1800 |
| Average Accuracy | 98.6% | 99.0% | 98.8% | 98.5% | 98.3% | 98.4% | 98.0% | 98.3% | 98.9% | 98.9% |
| NSF 50 Level | LI | L1 | L1 | L1 | L1 | L1 | L1 | L2 | L1 | L1 |

NOTE: FlowVis is the only NSF 50 certified Level 1 flow meter in the world today.

Guide for NSF 50 Accuracy Levels

Level 1 (L1): Average of absolute values of all single point deviations must be $\leq 2\%$. Single point deviations shall not exceed $\pm 4\%$. Level 2 (L2): Average of absolute values of all single point deviations must be ≤5%. Single point deviations shall not exceed ±7.5%. Level 3 (L3): Average of absolute values of all single point deviations must be ≤10%. Single point deviations shall not exceed ±12.5%. Level 4 (L4): Average of absolute values of all single point deviations must be ≤12.5%. Single point deviations shall not exceed ±15%. Level 5 (L5): Average of absolute values of all single point deviations must be ≤15%. Single point deviations shall not exceed ±20%.

4 FlowVis

TAG 5 - FLOW METER - FV-3-40 - 3 INCH INLINE COMMERCIAL FLOWMETER

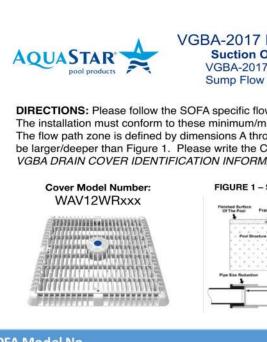
| ЗСП 40 | & OU FUR IRIUUL | • |
|--|--|---|
| | TANDEM FILTER PIPI | N |
| specifically for u TR140C, Triton T | Filter Piping Kits are designed use with the Triton [®] TR100C, R100C-3 and TR140C-3 Sand he best even better. | |
| | this additional service for your stop shopping. Pipe and filters | |

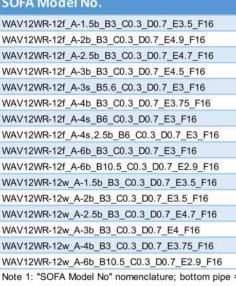
Pipe is not included in kits.

are all you need.

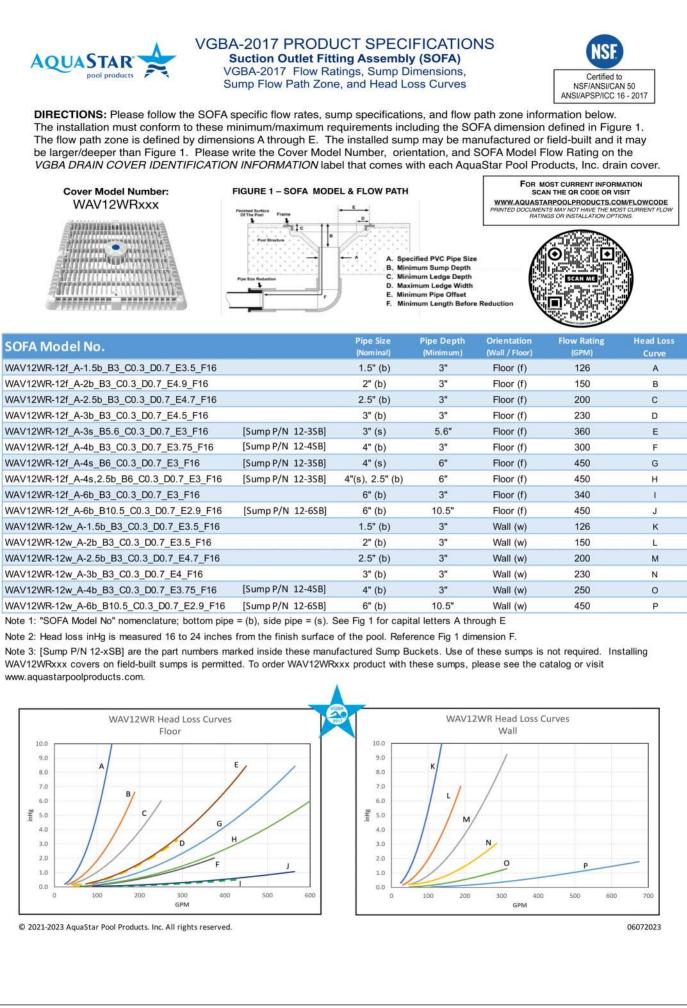
| ering Inf | ormation | | CALIFORNIA PROPOSITION 65 WARNING WARNING: Cancer and Reproductive Harm. AVERTISSEMENT: Peut Causer le Cancer et des Dommages au Système Reproducteu ADVERTENCIA: Cáncer y Daño Reproductivo www.p65warnings.ca.gov. |
|-------------|--|----------------------|---|
| Product | Model | Product | Model |
| For Plumb | ing Two TR100C or TR140C Filters | Adder Kits | s for TR100C and TR140C Filters ¹ |
| 146400 | 3 in. Two filter kit, SCH 40 (200 GPM) | 146406 | 4 in. Single filter kit, SCH 40 |
| 146402 | 4 in. Two filter kit, SCH 40 (300 GPM) | 146408 | 6 in. Single filter kit, SCH 40 |
| 146404 | 6 in. Two filter kit, SCH 40 (700 GPM) | 146407 | 4 in. Single filter kit, SCH 80 |
| 146403 | 4 in. Two filter kit, SCH 80 (300 GPM) | 146409 | 6 in. Single filter kit, SCH 80 |
| 146405 | 6 in. Two filter kit, SCH 80 (700 GPM) | Adder Kits | for TR100C-3 and TR140C-3 Filters |
| or Plumbing | g Two TR100C-3 or TR140C-3 Filters | 147406 | 4 in. Single filter kit, SCH 40 |
| 147400 | 3 in. Two filter kit, SCH 40 (200 GPM) | 147408 | 6 in. Single filter kit, SCH 40 |
| 147402 | 4 in. Two filter kit, SCH 40 (300 GPM) | 147407 | 4 in. Single filter kit, SCH 80 |
| 147404 | 6 in. Two filter kit, SCH 40 (700 GPM) | 147409 | 6 in. Single filter kit, SCH 80 |
| 147401 | 3 in. Two filter kit, SCH 80 (200 GPM) | Note: All kits inclu | de hardware, fittings, gaskets. |
| 147403 | 4 in. Two filter kit, SCH 80 (300 GPM) | | |
| 147405 | 6 in. Two filter kit, SCH 80 (700 GPM) | | |

| Filters | Filter Area | Manifold Pipe Dia. | Filter Rate Sq. Ft. | | Turnover Capacity | | |
|---------------|-------------|-----------------------|---------------------|----------------|-------------------|---------|----------|
| | Sq. Ft. | | 15 GPM | 20 GPM | 6 Hours | 8 Hours | 10 Hours |
| | | TAN | DEM TRITON 14 | 0C FILTER INST | LLATION | | |
| 6 TR 140's 42 | 42.36 | 6 in. | 635 | _ | 228,600 | 304,800 | 381,000 |
| | 42.30 | 8 in. | | 847 | 304,920 | 406,560 | 508,200 |
| 7 TR 140's | 49.42 | 6 in. | 741 | | 266,760 | 355,680 | 444,600 |
| | 49.42 | 8 in. | _ | 988 | 355,680 | 474,240 | 592,800 |
| 8 TR 140's | 50.40 | 8 in. | 847 | | 304,920 | 406,560 | 508,200 |
| | 56.48 | 8 in. | _ | 1130 | 406,800 | 542,400 | 678,000 |



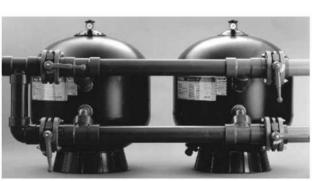


WAV12WR Head Loss Curves Floor



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SCH 40 & 80 FOR TR100C, TR140C, TR100C-3 & TR140C-3 NG KITS FOR 2 & 3 IN. FILTERS



Tandem Filter Piping Kits for Triton TR100C, TR140C, TR100C-3 and TR140C-3 Sand Filters

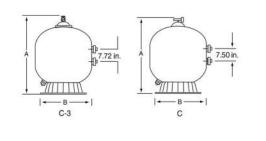
Note: All kits include hardware, fittings, gaskets and butterfly valves.

TAG 2 - TANDEM BACKWASH KIT - 147400

TRITON® C SERIES COMMERCIAL SAND FILTERS

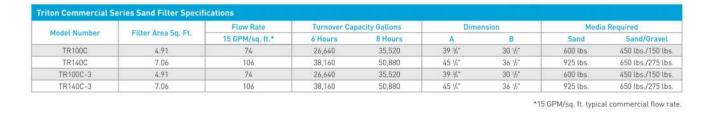
TRITON HD FILTER

The Triton heavy duty (HD) filter is a thirty-inch fiberglass filter that offers a maximum operating pressure of 75 PSI. This filter is specifically designed for special high-pressure commercial applications that require up to 98 gpm, and is ideal for all heavy-duty commercial applications.

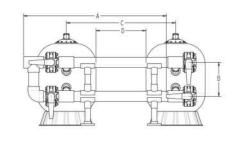


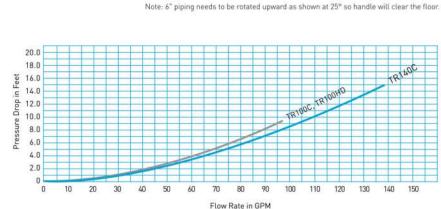


TR100 HD



6" -TR140C





48" Mir 17 ™(a* 54" Min. 18" Min.

111 ¼" 24 ½" 54" Min. 18" Min. 3,550 lbs.

PENTAIR

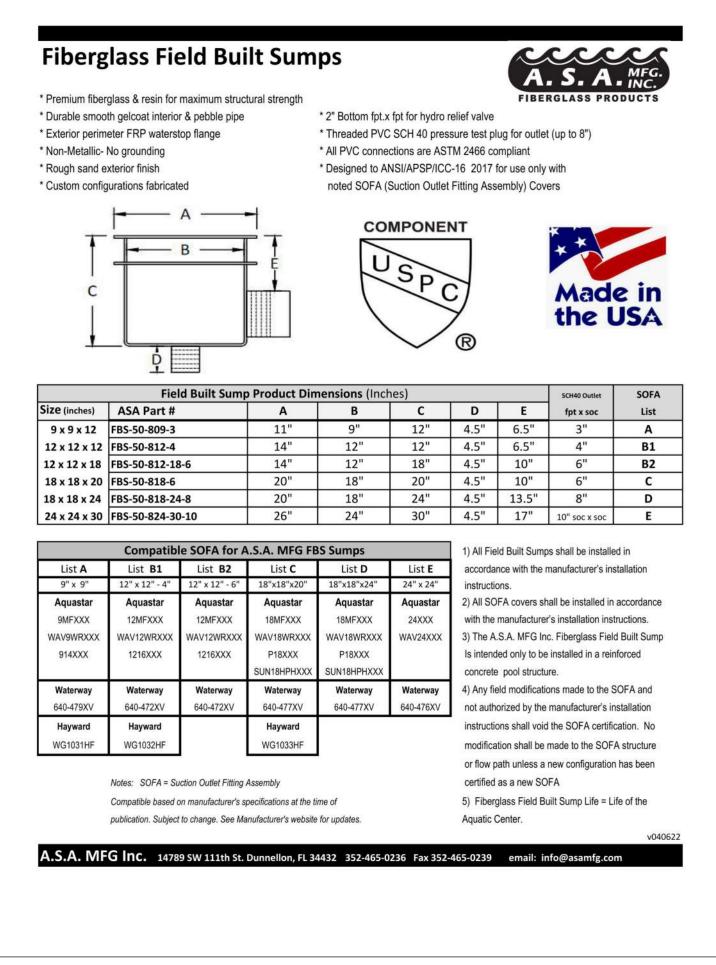
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TAG 3 - SAND FILTER - TR140-C3 - HIGH RATE SAND FILTER



TAG 6 - MAIN DRAIN - WAV12WR101 - 12 INCH SQUARE VGB SUCTION OUTLET

TAG 6 - MAIN DRAIN SUMP - FBS-50-812-4 - A.S.A MFG FIBERGLASS SUMP

RAINBOW[®] HIGH CAPACITY CHLORINE/ BROMINE FEEDERS

- Designed for ease of use and simple maintenance
- Drain valve allows easier draining for safer recharging or winterizing
- Standard threaded inlet and outlet fittings included for easy installation

THE PERFORMANCE LEADER IN AUTOMATIC SANITIZATION MODELS & SPECIFICATIONS FOR LARGE RESIDENTIAL AND COMMERCIAL POOLS

The INLET control valve side of the feeder connects to the plumbing on the discharge side of the pump, before the filter. The OUTLET side of the feeder connects to the pool return line after the filter and/or heater, pool cleaner, diverter valves, or any other installed equipment. Installation of a corrosionresistant check valve such as #R172288 by Pentair between the feeder inlet and outlet and the equipment is strongly recommended to check backflow of chemicals. This helps ensure equipment longevity.

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TAG 4 - CHLORINATOR - HC3315 - HIGH CAPACITY CHLORINE/BROMINE FEEDER

Hyrdostatic Relief Valves AQUASTAR 🗲 Self-Contained Hydrostatic Valve Assembly Hydrostatic valve and collection tube Shotcrete/ (lowest point of pool) gunite Ø 1/8 Max Opening 1 aal E HI 13-17/32 = 1 - 1/4 max opening Collector Tube Housin Collector Tube Cap Hwtrostatic Value Ass Part # HVCxxx Gravel FEATURES STANDARD COLORS Self-contained unit has a built-in collector tube HVC101 HVC104 Installs directly into the pool finish with no additional plumbing connection required HVC105 HVC102 Helps prevent swimming pool damage due to hydrostatic pressure beneath the pool shell when the pool is drained HVC103 HVC108 12 per case HVC05xxx – Cap and Screws " Hydrostatic Relief Valve Hydrostatic Relie Valve Body Valve Body Valve Cap Soring, Hydrostatic Relief Valve Retainer Aspring, Hydrostatic Relief Valve S. O-Ring, Hydrostatic Relief Valve Reducer Bushing, 1-12² MPT 1-1/2 - 11-1/2 MPT also Part # HVxxx FEATURES STANDARD COLORS Equalizes pressure for high water tables HV104 HV101 Fins enable easy twist for installation and removal Fits any AquaStar and most other manufacturers' 2" threads HV102 HV105 Manufactured from superior UV-resistant engineered HV103 Includes 2" x 11/2" reducer bushing HV108 Reducer bushing must be glued into hydrostatic relief valve using ABS glue 25 per case **P** 877-768-2717 **F** 877-276-POOL Outside the US: **P** +1-805-620-5060 **F** +1-949-336-1940 A IN THE USA info@aquastarpoolproducts.com www.aquastarpoolproducts.com

TAG 7 - HYDROSTATIC RELIEF - HVC101 - HYDROSTATIC RELIEF VALVE



HC-3340

HC-3315

15 lb. capacity

40 lb. capacity

HC-3330

-

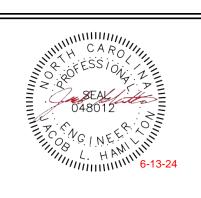
30 lb. capacity

| Mod | el | HC-3315 | HC-3330 | HC-3340 | |
|----------------|--|---------|---------|---------|--|
| Part | Number | R171215 | R171230 | R171240 | |
| Heig | ht | 21.5" | 39.125" | 49.75 | |
| Widt | h | 8" | 8" | 8" | |
| Dept | h | 15" | 15" | 15" | |
| Main | itenance Clearance | 22.75" | 40.375" | 51" | |
| Сара | acity (lbs.) | 15 | 30 | 40 | |
| | Flow rate (GPM) | 34 | 34 | 11.5 | |
| etting | Maximum Output Rate, Chlorine' (lbs./hr.)-Pool at listed flowrate | 2.8 | 4.6 | 3.0 | |
| @ 100% Setting | Maximum Output Rate, Chlorine* [lbs./hr.]-Spa at listed flowrate | 4.8 | 7.9 | 5.7 | |
| 0 | Maximum Output Rate, Bromine* [lbs./hr.]-Pool at listed flowrate | 0.6 | 1.1 | 1.7 | |
| | Flow rate (GPM) | 17.8 | 17.8 | 9.2 | |
| etting | Output Rate, Chlorine* (lbs./hr.)-Pool at listed flowrate | 2.1 | 3.4 | 2.6 | |
| 50% Setting | Output Rate, Chlorine* (lbs./hr.)-Spa at listed flowrate | 1.8 | 3.0 | 5.4 | |
| 0 | Output Rate, Bromine (lbs./hr.)-at listed flowrate | 0.3 | 0.6 | 0.9 | |
| | mum Pool Size @ 34 GPM prine-Gals] | 224,000 | 369,000 | 658,500 | |
| | imum Pool Size @ 34 GPM mine-Gals) | 99,200 | 164,000 | 292,600 | |

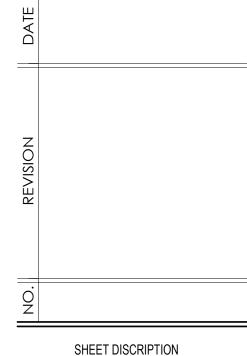
Maximum working pressure – 50 psi * Results based on use of 1" Trichlor tablet

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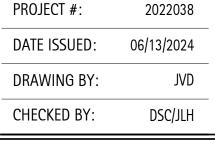


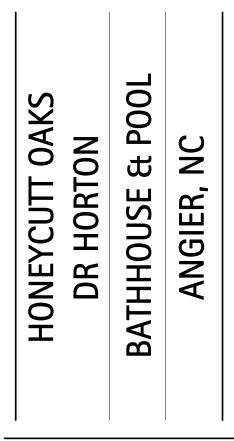






POOL **SPECIFICATIONS**





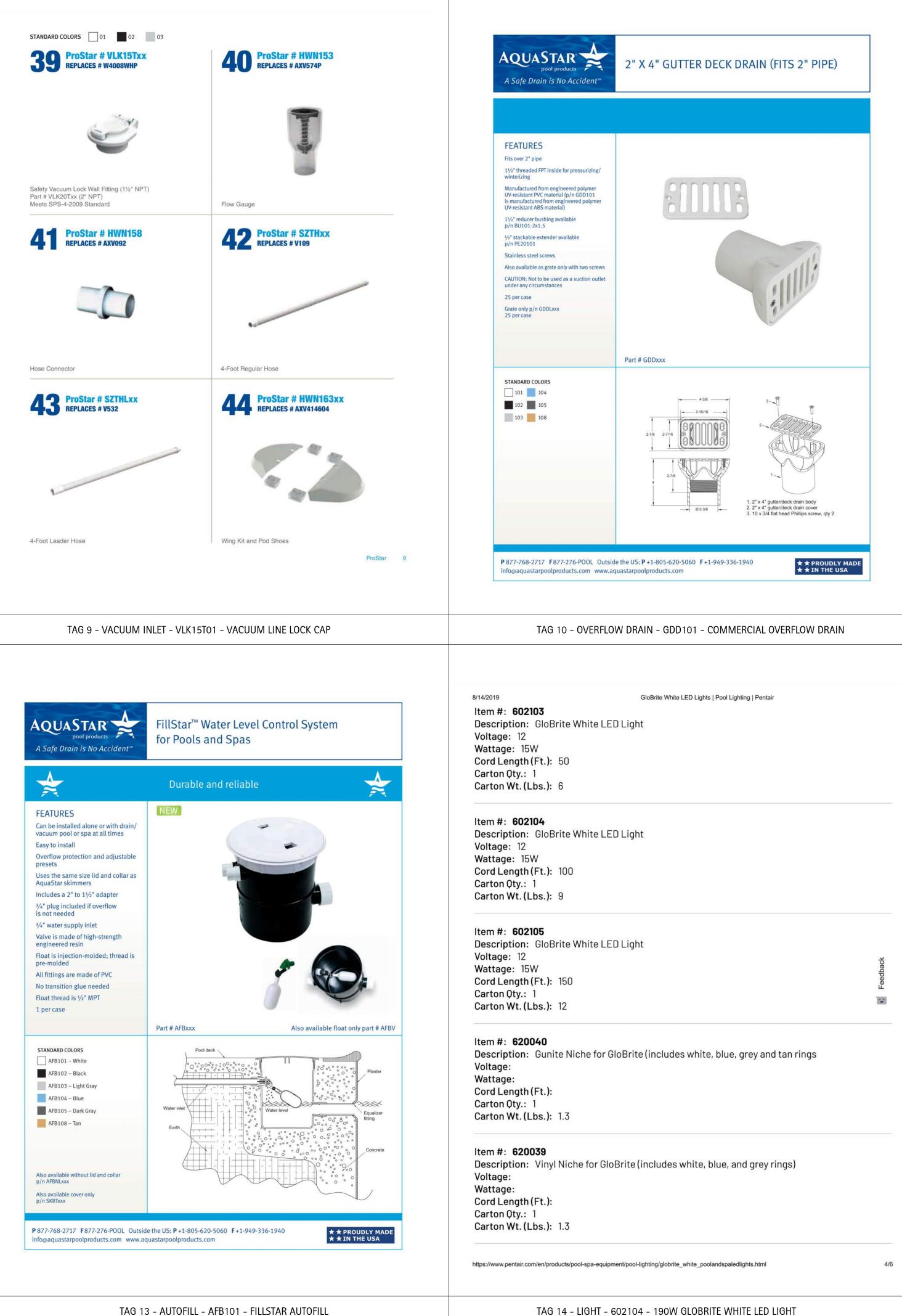




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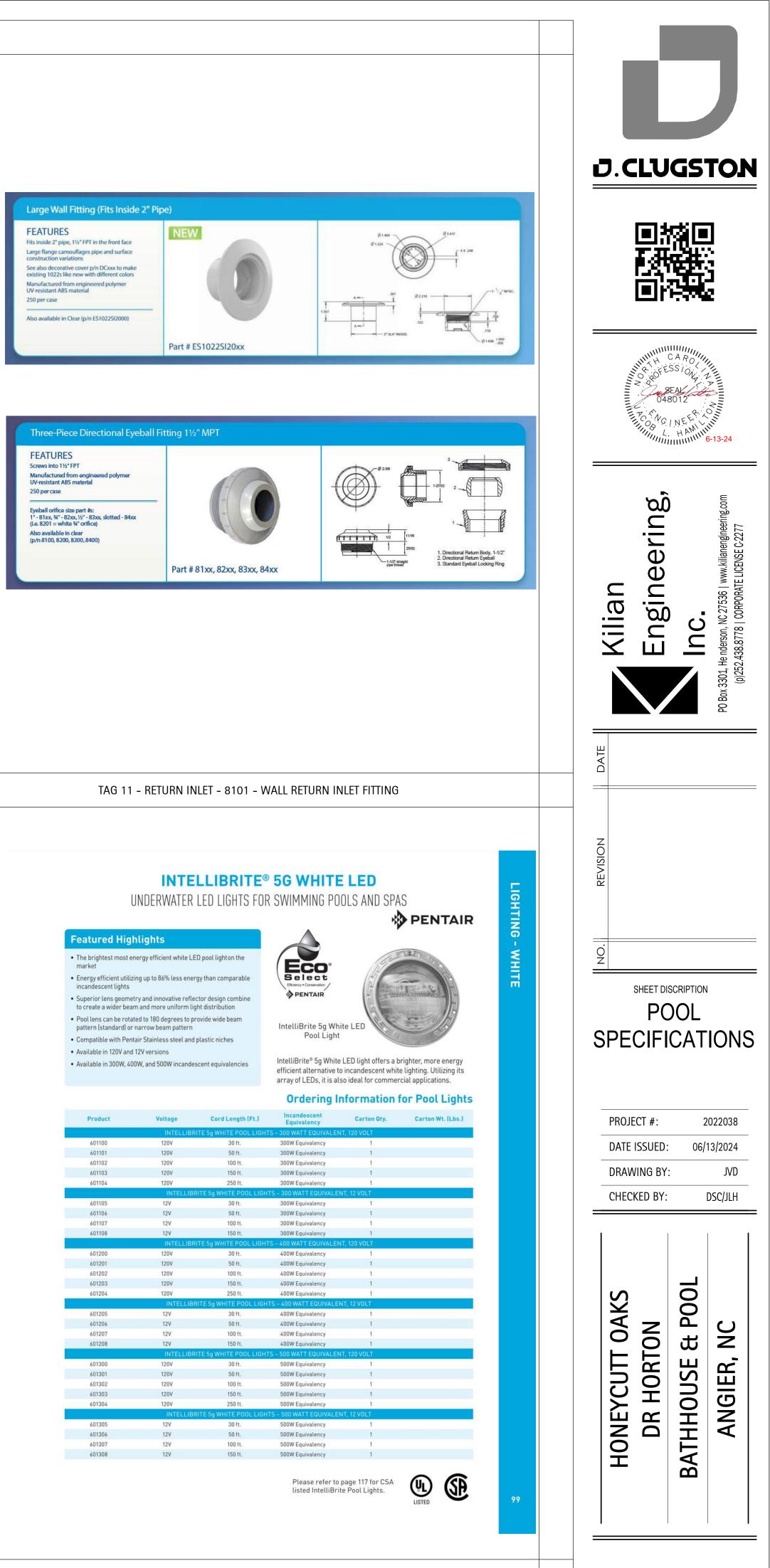
TAG 8 - SKIMMER - SKR101 - WHITE COMMERCIAL GRADE SKIMMER

| FEATURES Available in six standard colors No exposed components Installs flush with bottom of pool/spa | |
|---|---|
| STANDARD COLORS | Ø 2.17 Ø 0000 |
| P 877-768-2717 F 877-276-POOL Outsic info@aquastarpoolproducts.com www.ad | the the US: $P + 1-805-620-5060$ $F + 1-949-336-1940$ $\star \star PROUDLY MAI \star \star IN THE USA$ |



TAG 12 - KETUKN INLET - BPTUT - FLOOK KETUKN INLET W/ BUBBLEK PLATE

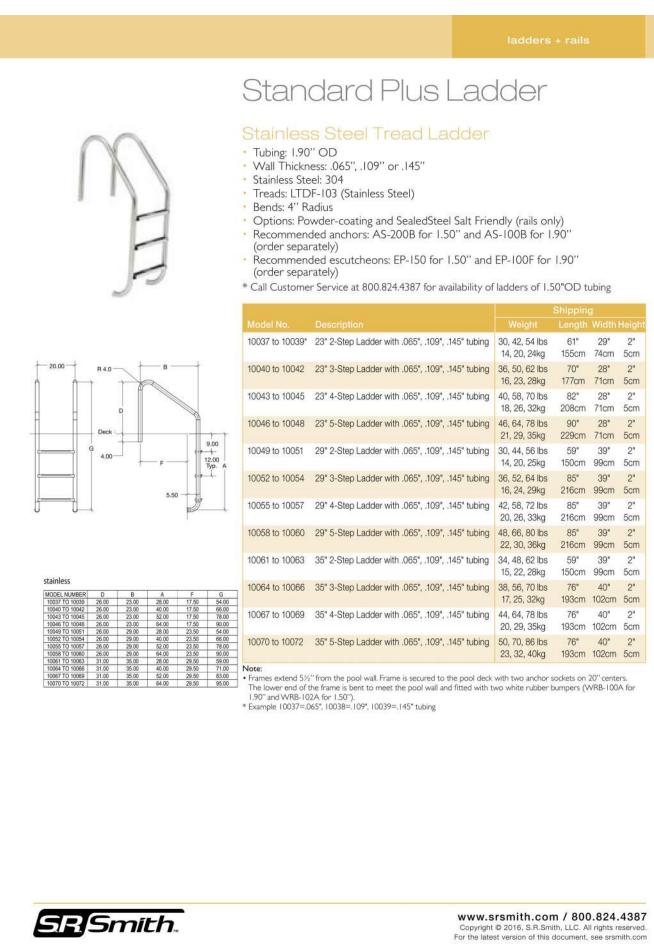
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TAG 15 - LIGHT - 601107 - 300W INTELLIBRITE WHITE LED LIGHT

| Junction Box - PJB4175 | INTER |
|---------------------------------------|--|
| Junction Box 4 Light Conno | ation Pool & Sna Junction Pov |
| Junction Box - 4 Light Conne | cuon Poor & Spa Junction Box |
| Item PJB4175 | |
| | PRODUCT DESCRIPTION |
| | These polymeric junction boxes are code compliant and provide safe, reliable connections for low-voltage light designed for pools, pool-spa combinations, and landscape applications. Junction boxes are for outdoor use only. |
| | FEATURES |
| Manananananan | Accommodates flexible cords and non-metallic conduits from ½" to 1" |
| | Watertight, multifixture enclosure Easy access ground bar |
| | PA114 Wall/Post Mounting Bracket (sold separately) |
| | Complies with NEC Code 680.24 requirements for junction boxes |
| | ► 1-year warranty |
| G . | APPLICATIONS |
| | ► Landscape Lighting |
| | Underwater Lighting |
| TECHNICAL DATA | |
| General Model Number | PJB4175 |
| | |
| Description UPC Code | 4 Light Connection Pool & Spa Junction Box 078275094048 |
| Brand | Internatic |
| Country of Origin (Intermatic) | INDIA |
| Warranty Period | 1-Year limited |
| | |
| Control Specifications | |
| Number of Light Connections | 4 |
| Mechanical Specifications | |
| Mounting Options | Bracket; Post; Rod; Wall |
| Dimensions | |
| Product Dimensions (H x W x D) in | 8.75 x 5 x 4.625 in |
| Non Metallic Conduit Size | 1/2"-1" |
| Material Specifications | |
| Body Material | Plastic |
| Electrical Specifications | |
| Number of Receptacle Knockouts | 5 |
| Packaging | |
| Unit Carton Dimensions (H x W x L) in | 5.25 x 5 x 9 in |
| Standards and Certifications | |
| | |

TAG 16 - JUNCTION BOX - PJB4175 - 4 LIGHT CONNECTION POOL & SPA JUNCTION BOX



TAG 18 - HANDRAIL - 10054-MG - MARINE GRADE DECK MOUNTED COMMERCIAL LADDER

Hand & Stair Rails

- Tubing: 1.90" OD
- Wall Thickness*: .049" or .065" Stainless Steel: 304 or 316L Marine Grade** (add –MG to part number)
- Bends: 6" Radius
- Options: Powder-coating and SealedSteel Salt Friendly
- Recommended Anchors: AS-100P or AS-100B (order separately)
- Recommended Escutcheon: EP-100F (order separately)
- Sold as a single rail
- * Minimum rail thickness is .065 for Commercial ** Minimum requirement for salt pools is 316L Marine Grade

| | Shipping | | | |
|-----------------------------|---|--|---|---|
| Description | Weight | Length | Width | Heigh |
| 54" Center Grab Rail, .049" | 15 lbs — 19 lbs | 59" | 39" | 2" |
| | 7 — 9kg | 150cm | 99cm | 5cm |
| 54" Center Grab Rail, .065" | 15 lbs — 19 lbs | 59" | 39" | 2" |
| | 7 — 9kg | 150cm | 99cm | 5cm |
| 54" Center Grab Rail, .049" | 15 lbs — 19 lbs | 59" | 39" | 2" |
| w/welded mounting plate | 7 — 9kg | 150cm | 99cm | 5cm. |
| | 54" Center Grab Rail, .049" 54" Center Grab Rail, .065" 54" Center Grab Rail, .049" | Description Weight 54" Center Grab Rail, .049" 15 lbs - 19 lbs 7 - 9kg 54" Center Grab Rail, .065" 15 lbs - 19 lbs 7 - 9kg 54" Center Grab Rail, .049" 15 lbs - 19 lbs | Description Weight Length 54" Center Grab Rail, .049" 15 lbs – 19 lbs 59" 54" Center Grab Rail, .065" 15 lbs – 19 lbs 59" 54" Center Grab Rail, .065" 15 lbs – 19 lbs 59" 54" Center Grab Rail, .065" 15 lbs – 19 lbs 59" 54" Center Grab Rail, .049" 15 lbs – 19 lbs 59" | 54" Center Grab Rail, .049" 15 lbs - 19 lbs 59" 39" 7 - 9kg 150cm 99cm 54" Center Grab Rail, .065" 15 lbs - 19 lbs 59" 39" 7 - 9kg 150cm 99cm 54" Center Grab Rail, .049" 15 lbs - 19 lbs 59" 39" 54" Center Grab Rail, .049" 15 lbs - 19 lbs 59" 39" |

SR Smith.

DMS-102

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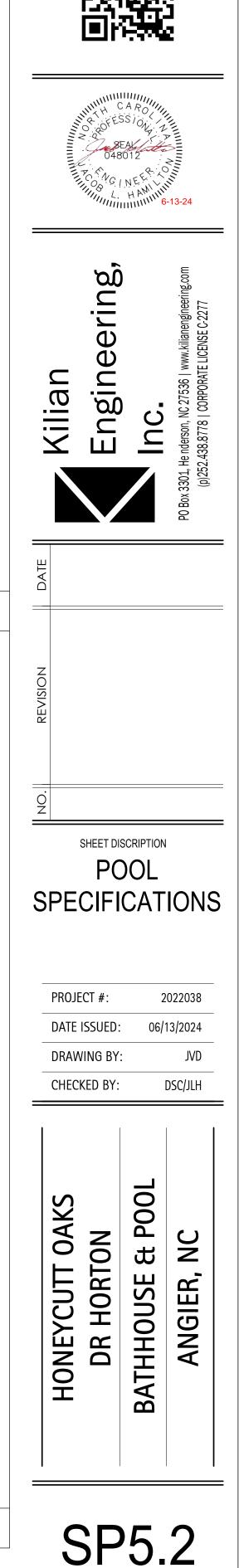
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8.00 54.00

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TAG 17 - HANDRAIL - DMS-102B-MG - MARINE GRADE DECK MOUNTED HANDRAILS





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TAG HC - ADA LIFT - MULTILIFT - ADA COMPLIANT MULTI-LIFT