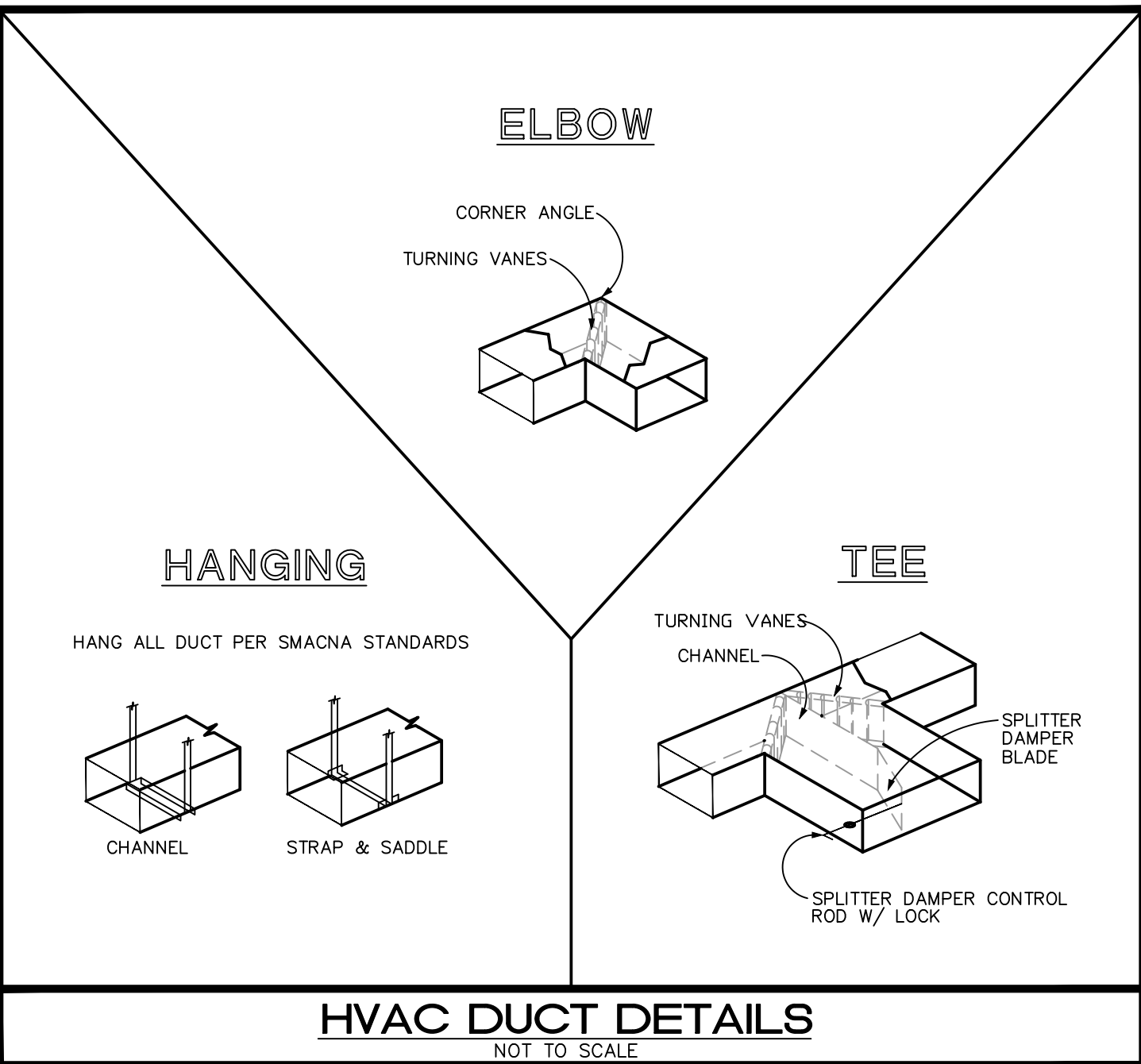
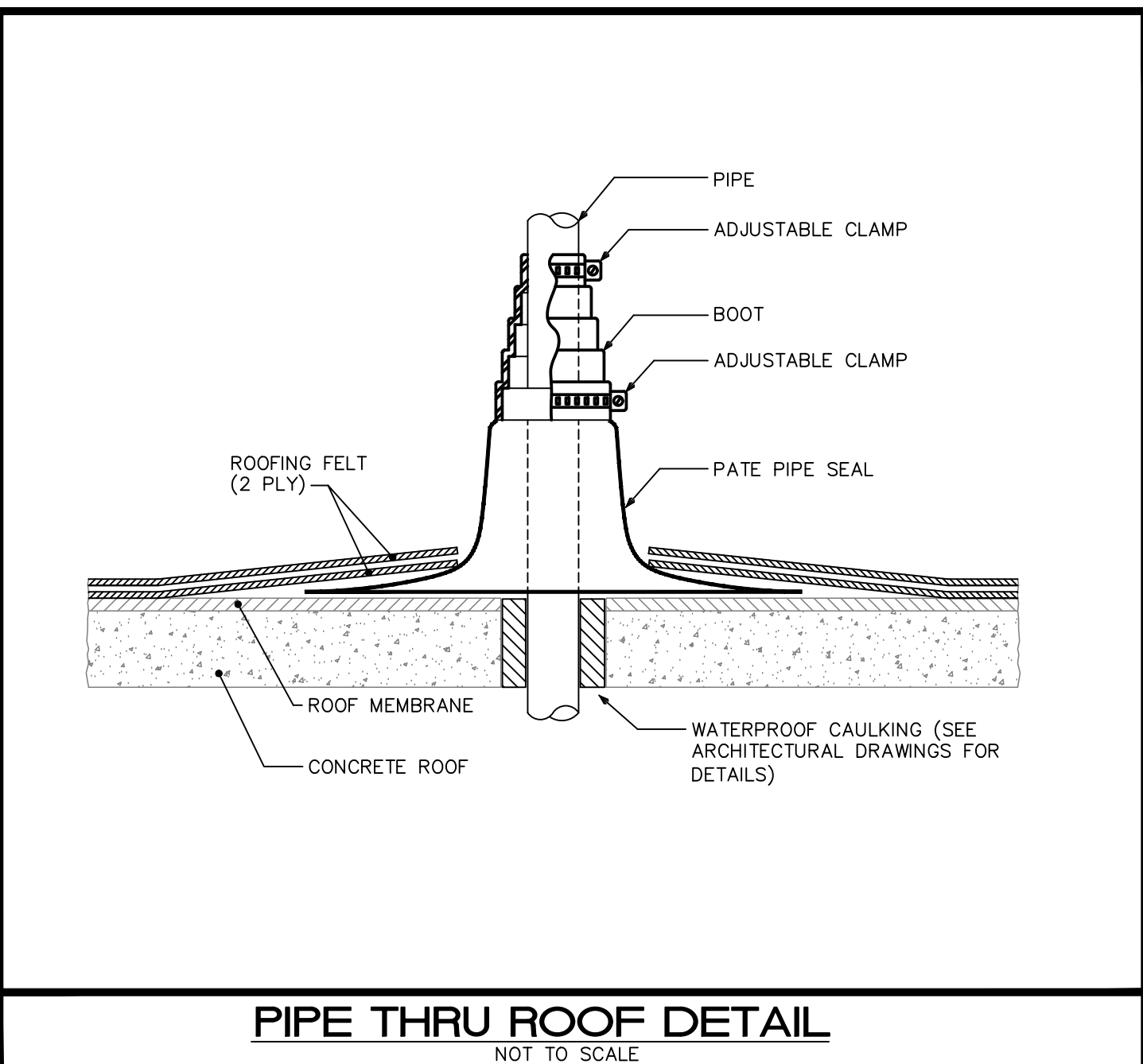
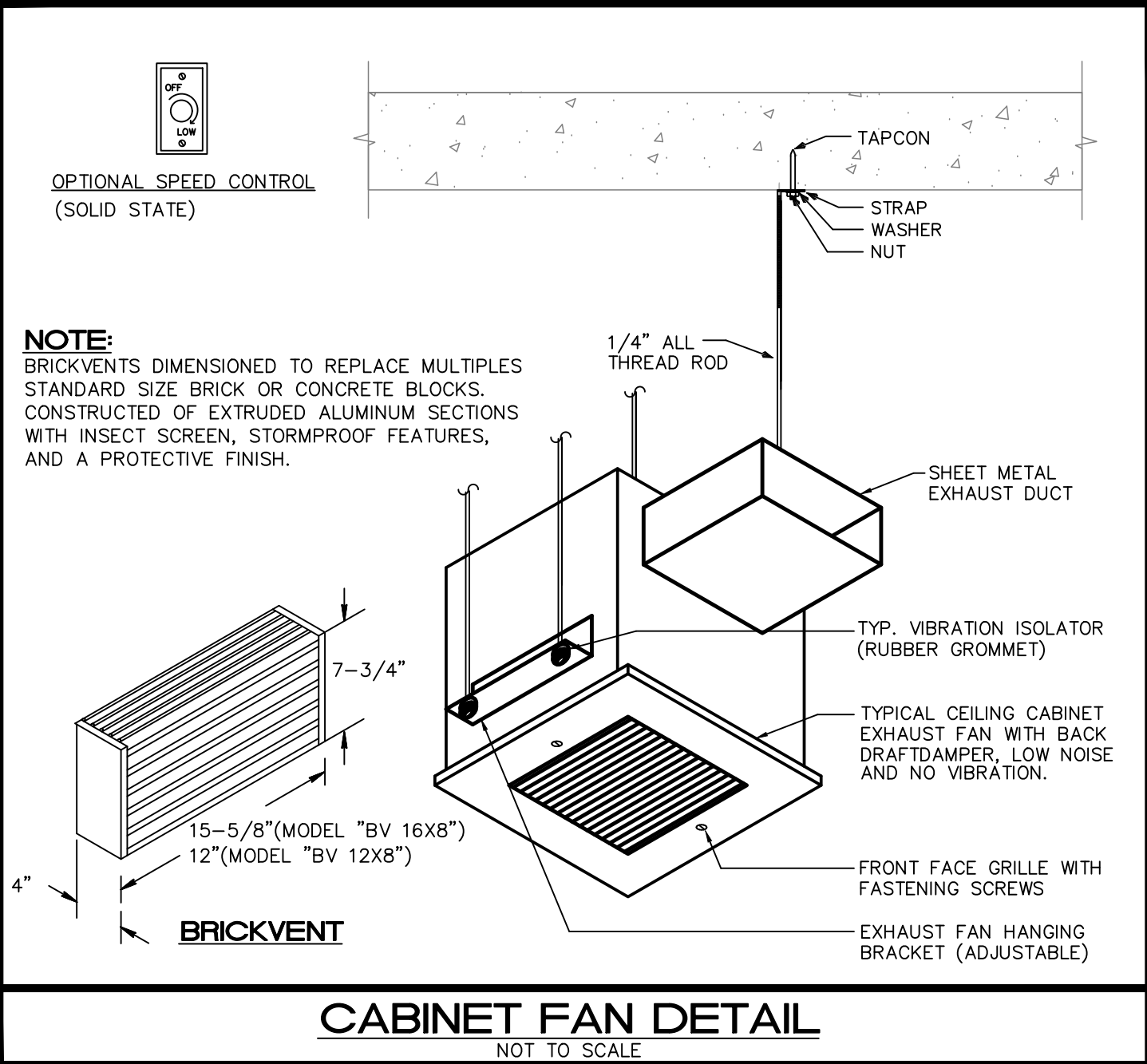




## MECHANICAL NOTES

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SYSTEM IN ACCORDANCE WITH THESE DRAWINGS, THE FLORIDA BUILDING CODE 2017 AND ALL OTHER APPLICABLE STATE, COUNTY AND LOCAL ORDINANCES AND THE LISTED EDITION OF THE FOLLOWING PUBLICATIONS: SMACNA/ANSI-2005; SMACNA-10, 85; ASHRAE-15-2013; 34-2013 62.1-2013; NFPA 70-2014, 72-2013, 90A-2015, 90B-2015, 91-2010, 96-2014, 101-2015; NEBB-2005; NAIMA-2009; NFRC-100-2010, 200-2010, 400-2010; ANSI Z10.1-98, Z10.3-98, Z21.8-2002, Z21.83-98.
2. THE CONTRACTOR SHALL PAY ALL COSTS OF PERMIT, INSPECTIONS AND ALL OTHER COSTS INCIDENTAL TO THE COMPLETION AND TESTING OF THIS WORK.
3. THE CONTRACTOR SHALL VISIT THE SITE AND COORDINATE WORK WITH OTHER TRADES.
4. THE CONTRACTOR SHALL SUPPLY THE ARCHITECT/ENGINEER WITH "AS-BUILT" DRAWINGS.
5. CONTRACTOR SHALL SUBMIT, FOR APPROVAL FIVE (5) COPIES OF A COMPLETE SET OF SHOP DWGS, MANUFACTURER'S SUBMITTALS FOR EACH PIECE OF EQUIPMENT & CONTROLS INCLUDED IN CONTRACT.
6. ALL MATERIAL SHALL BE NEW OF U.S. MANUFACTURER OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED AT INDUSTRY STANDARD QUALITY LEVEL BY CERTIFIED PROFESSIONALS. ALL EQUIPMENT SHALL BE UL OR ETL LISTED. ALL INSTALLATIONS SHALL COMPLY WITH FMC 2017, CH. 3, GENERAL REGULATIONS.

FOR BUILDINGS LOCATED WITHIN 3,000 FT FROM THE OCEAN, CONTRACTOR SHALL UTILIZE NON-FERROUS MATERIALS OR PROVIDE CORROSION COATING FOR ALL OUTDOOR EXPOSED METAL/STEEL EQUIPMENT, SUPPORTS, STANDS, FASTENERS, ETC. BY 3RD PARTY AS APPLIED BY BLYGOLD, LUVATA, ADVANCOAT (ENSEAL CR) OR APPROVED EQUAL WITH STANDARD 5-YEAR WARRANTY.

7. DUCTWORK:  
DUCTWORK CONSTRUCTION, INSTALLATION AND MINIMUM INSULATION R-VALUES SHALL COMPLY WITH FEC 2017, SEC. C403.2.7 AND TABLE C403.2.7.1, S.M.A.C.N.A. MANUAL FOR MEANS AND METHODS AND MANUFACTURER'S INSTRUCTIONS.  
DUCT SIZING IS COMPLIANT WITH FBC SEC. 603.2 BASED ON ASHRAE "EQUAL FRICTION" METHOD, UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS.  
A. ALL AIR CONDITIONING DUCT WORK SHALL BE OF 1" (R-4.2) STANDARD DUTY FOIL REINFORCED FIBERGLASS WITH MANUFACTURER'S LOGO PRINTED ON VAPOR BARRIER ALL FLEXIBLE DUCT TO BE R-4.2 WITH A MAX. TOTAL LENGTH NOT TO EXCEED 15 FT. INSTALL UL LISTED FOR PLENUM, FLEXIBLE DUCTWORK ELBOW SUPPORTS AT EACH DIFFUSER, GRILLE, AND REGISTER EQUAL TO "FLEXRIGHT" BY TITUS OR "FLEXFLOW ELBOW" AS MANUFACTURED BY "THERMAFLEX".

AA. ALL AIR CONDITIONING DUCT WORK SHALL BE OF 1" (R-4.2) SPECIAL DUTY FSK FOIL REINFORCED FIBERGLASS WITH MANUFACTURER'S LOGO PRINTED ON VAPOR BARRIER, WITH A HIGH-TENSILE, RESISTANT MAT COATING, EQUAL TO "SUPERDUCT" BY MANVUE OR "TOUGH-DUCT" BY CERTAINTED, AND AN ANTI-MICROBIAL PROPERTIES. ALL FLEXIBLE DUCT TO BE R-4.2 WITH A MAX. TOTAL LENGTH NOT TO EXCEED 15 FT. INSTALL UL LISTED FOR PLENUM, FLEXIBLE DUCTWORK ELBOW SUPPORTS AT EACH DIFFUSER, GRILLE, AND REGISTER EQUAL TO "FLEXFLOW ELBOW" AS MANUFACTURED BY "THERMAFLEX".

AAA. ALL AIR CONDITIONING DUCT WORK ENCLOSED IN A CHASE SHALL BE SHEETMETAL GALVANIZED WITH EXTERNAL BLANKET INSULATION R-6 MIN. PROVIDE INNER LINER FOR THE FIRST 10 FEET OF THE MAIN TRUNKS CONNECTING TO THE UNIT AND INCLUDING THE FIRST ELBOW OR AS INDICATED ON THE PLANS.

B. ALL AIR CONDITIONING DUCT WORK SHALL BE OF 1-1/2" (R-6) HEAVY DUTY FOIL REINFORCED FIBERGLASS WITH MANUFACTURER'S LOGO PRINTED ON VAPOR BARRIER ALL FLEXIBLE DUCT TO BE R-6 WITH A MAX. TOTAL LENGTH NOT TO EXCEED 15 FT. INSTALL UL LISTED FOR PLENUM, FLEXIBLE DUCTWORK ELBOW SUPPORTS AT EACH DIFFUSER, GRILLE, AND REGISTER EQUAL TO "FLEXFLOW ELBOW" AS MANUFACTURED BY "THERMAFLEX".

### SPECIAL NOTE

SMACNA DUCT PRESSURE CLASSES BASED ON OPERATING PRESSURE ARE: 1/2", 1", 2", 3", 4", 6", AND 10". EACH DUCT SYSTEM SHALL BE CONSTRUCTED FOR THE SPECIFIC DUCT PRESSURE CLASS SHOWN ON PLANS. WHERE NO PRESSURE CLASS IS SPECIFIED FOR CONSTANT VOLUME SYSTEMS, 1" W.G. PRESSURE CLASS IS THE BASIS OF COMPLIANCE WITH THE SMACNA STANDARDS REGARDLESS OF VELOCITY. WHERE NO PRESSURE CLASS IS SPECIFIED FOR VARIABLE VOLUME SYSTEMS, 2" W.G. PRESSURE CLASS IS THE BASIS OF COMPLIANCE WITH THE SMACNA STANDARDS FOR DUCTWORK UPSTREAM OF VAV BOXES. ALL DUCTWORK SHALL BE SEALED TO SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" FOR ITS PRESSURE CLASS SEALING METHODS.

8. ALL EXHAUST DUCTS AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED SHEET METAL WITH SEALED SEAMS AND JOINTS. ALL OUTSIDE AIR DUCT SHALL BE INSULATED WITH EXTERNAL BLANKET INSULATION R-6 MIN. ALL METAL EXHAUST, MAKE-UP OR OTHERWISE DUCTS INSTALLED IN LOCATIONS WHERE DEWPOINT CONDITIONS CAN OCCUR INSIDE THE DUCT SHALL BE EXTERNALLY INSULATED WITH R-6 MIN. AIR INTAKE AND EXHAUST OPENINGS SHALL BE SCREENED WITH A CORROSION RESISTANT MATERIAL PER FMC 2017, TABLE 401.5, AND 501.3.2. LOUVERS THAT PROTECT EXHAUST OPENINGS IN STRUCTURES LOCATED IN HURRICANE-PRONE REGIONS, AS DEFINED IN THE FLORIDA BUILDING CODE (BUILDING) SHALL COMPLY WITH AMCA STANDARD 550. OUTDOOR OPENINGS LOCATED IN EXTERIOR WALLS SHALL MEET THE PROVISIONS FOR EXTERIOR WALL OPENING PROTECTIVES IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (BUILDING).
9. O/A INTAKES SHALL NOT BE TAKEN FROM A LOCATION CLOSER THAN 10 FT FROM ANY CHIMNEY, VENT OUTLET OR SANITARY SEWER VENT OUTLET PER FMC 2017, SEC. 401.4. OUTSIDE AIR INTAKE VENTS LOCATED ON ROOFS WILL BE PROPERLY MARKED WITH A UNIVERSAL MARKING "INTAKE", PERMANENTLY ATTACHED.

10. DUCT SIZES SHOWN ON PLANS ARE INSIDE DIMENSIONS.
11. ALL AIR DEVICES (DIFFUSERS, REGISTERS AND GRILLES) SHALL BE ALL ALUMINUM CONSTRUCTION WITH EXPOSED SURFACE OFF WHITE BAKED ENAMEL FINISH OR AS SPECIFIED BY ARCHITECT. DEVICES SHALL BE AS SPECIFIED OR EQUAL TO TITUS, PRICE OR METALAIR. PROVIDE OPPOSED BLADE DAMPERS AT ALL DIFFUSERS AND REGISTERS AS INDICATED ON PLANS. PROVIDE BALANCING DAMPERS FOR ALL SUPPLY AND RETURN DIFFUSERS AND REGISTERS AND TO ENSURE COMPLIANCE WITH FMC 2017 PAR.601.5 FOR BALANCED RETURN/TRANSFER AIR FLOW.

12. BUILDING/TEMPERATURE CONTROLS: CONTRACTOR SHALL PROVIDE A FULLY INTEGRATED BUILDING CONTROL SYSTEM. WHERE APPLICABLE, PROVIDE BAS/EMS INTERFACE FOR ALL HVAC EQUIPMENT, AS REQUIRED BY THE EXISTING CONTROLS OR DESIGN DOCUMENTS. IN ADDITION AND AS APPLICABLE:

A. FOR NEW, STANDALONE UNITS: THERMOSTAT SHALL BE COMBINATION COOLING/HEATING, WITH SYSTEM "COOL-AUTO- HEAT-OFF" AND FAN "ON-AUTO" SELECTOR SWITCHES. PROVIDE PROGRAMMABLE TYPE AS RECOMMENDED BY MANUFACTURER, HONEYWELL OR EQUAL. PROVIDE SOFTWARE LOCK AND/OR TAMPER PROOF COVERS AS COORDINATED WITH OWNER/END CLIENT.

B. POWER PROVISIONS: SHALL BE FURNISHED AND INSTALLED BY ELEC. CONTRACTOR UNLESS OTHERWISE NOTED. CONTROL WIRING BY MECH/CONTROL CONTRACTOR.  
a. 24V TRANSFORMER SHALL BE PROVIDED BY MANUFACTURER FOR ALL UNITS/EQUIPMENT THAT REQUIRE CONTROL POWER FOR UNITARY CONTROLLERS, IF NOT OTHERWISE NOTED.  
b. 120V POWER AS REQUIRED BY SYSTEM CONTROLLERS SHALL BE PROVIDED/COORDINATED BY ELEC. CONTRACTOR WITH MECH. AND CONTROLS CONTRACTORS.

13. THERMOSTAT LOCATION SHALL BE APPROVED BY OWNER AND ENGINEER BEFORE INSTALLATION. INSTALL THERMOSTAT PER A.D.A REQUIREMENTS WHERE APPLICABLE; MAX. 48" HIGH FOR FORWARD REACH, MAX. 48" HIGH FOR SIDE REACH. MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR ALL REQUIREMENTS FOR JUNCTION BOXES, CONDUITS, CONTROL WIRING, POWER, ETC. AND DEFINE RESPONSIBILITIES AND SCOPE OF WORK FOR EACH TRADE PRIOR TO PURCHASING/INSTALLATION.

### SPECIAL NOTE

WHENEVER THERE ARE MORE THAN ONE SENSOR OR THERMOSTAT, SIDE BY SIDE, THEY SHALL BE GANGED TOGETHER WITHIN THE SAME COVER PLATE WHEREVER POSSIBLE. CONTRACTOR SHALL COORDINATE THIS ISSUE WITH ARCHITECT/OWNER PRIOR TO INSTALLATION AND SHALL BRING ANY DISCREPANCY TO THE ENGINEER'S ATTENTION.

14. REFRIGERANT LINES SHALL BE COPPER, TYPE "L" HARD DRAWN WITH WROUGHT COPPER BRAZING-JOINT TYPE FITTINGS, USE BRAZING MATERIALS FOR HIGH PRESSURE PIPING PER AWS A5.8: BOPU SERIES COPPER-PHOSPHORUS ALLOY OR BAq1 SILVER ALLOY. REFRIGERANT LINES SHALL BE SIZED PER MANUFACTURER'S RECOMMENDATIONS. SOFT COPPER TYPE "M" SHALL BE ALLOWED FOR RISER PIPING INSIDE CHASE TO LIMIT NUMBER OF JOINTS. COORDINATE WITH ENGINEER FOR PRIOR APPROVAL. ALL EXPOSED INSULATION SHALL BE PROTECTED WITH A PROTECTIVE, PUNCTURE AND TEAR RESISTANT JACKETING SYSTEM EQUAL TO "VENTURE CLAD" AND COMPLY WITH FMC 2014, SEC.1101.3 PROTECTION.

15. "ARMAFLEX" OR EQUAL INSULATION SHALL BE USED FOR SUCTION REFRIGERANT LINES WITH THICKNESS PER FLORIDA ENERGY CODE TABLE C403.2.8. FILTER/DRYER AND SIGHT GLASS SHALL BE PROVIDED AT LIQUID LINES.

16. ALL BRANCH TAKE-OFFS TO BE PROVIDED W/ MANUAL VOLUME DAMPERS. PROVIDE RADIUS ELBOWS WHERE FEASIBLE. SQUARE ELBOWS AND TEE'S SHALL BE FURNISHED W/SINGLE FOIL TURNING VANES. PROVIDE MANUAL VOLUME DAMPERS WITH EXTRACTOR AT ALL FLEX TAKE-OFFS. PROVIDE REMOTE, CABLE OPERATED VOLUME DAMPERS IN INACCESSIBLE AND HARD CEILING AREAS, "YOUNG REGULATOR" OR EQUAL.

17. PROVIDE NEW FILTERS FOR ALL AIR CONDITIONING EQUIPMENT BEFORE START-UP, REPLACE PRIOR TO FINAL ACCEPTANCE BY OWNER.

18. PROVIDE SMOKE DETECTORS WITH SERVICE ACCESS DOORS IN ALL AIR DISTRIBUTION SYSTEMS WITH A DESIGN CAPACITY GREATER THAN 2,000 CFM COMPLIANT WITH FMC 2017, SEC. 606.2. FOR SMOKE DETECTORS NOT VISIBLE, IN CONCEALED SPACES, PROVIDE REMOTE ANNUNCIATION/TEST STATION AS REQUIRED BY AUTHORITY HAVING JURISDICTION, COORDINATE PRIOR TO INSTALLATION. DETECTORS SHALL BE BY ONE MANUFACTURER, COORDINATE VOLTAGE ETC. WITH ELECTRICAL CONTRACTOR AND FIRE ALARM SYSTEM BEFORE ORDERING. UPON DETECTION, SMOKE DETECTORS SHUT DOWN ASSOCIATED AIR MOVING EQUIPMENT AND ALL AIR MOVING EQUIPMENT SERVING THAT COMMON PLENUM.

### SPECIAL NOTE

ALL INSTALLED ELECTRICAL DEVICES, ACTUATORS, APPURTENANCES, AUXILIARY EQUIPMENT, ETC. REQUIRING ENVIRONMENTAL PROTECTION SHALL BE PROVIDED WITH ADEQUATE NEMA ENCLOSURES FOR THE CONDITIONS WHERE INSTALLED, WEATHER INDOORS OR OUTDOORS, EVEN IF NOT SPECIFICALLY INDICATED ON PLANS.

19. PROVIDE TYPE "B" DYNAMIC FIRE DAMPERS WITH SERVICE ACCESS DOORS IN ALL DUCTS AND OPENINGS PENETRATING FIRE RATED WALLS, MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS, TENANT SEPARATION, PARTITIONS, FLOOR OR ROOF SLABS AND AT OUTSIDE AIR INTAKES AS REQUIRED. PROVIDE RADIATION DAMPERS IN RATED CEILINGS FOR ALL CEILING OPENINGS, CEILING FANS, DIFFUSERS OR GRILLES RATED FOR USE IN THE CEILING ASSEMBLY. PROVIDE LOW-LEAKAGE CLASS DAMPERS FOR ALL SITUATIONS WHERE THE AIRFLOW CFM HAS TO BE CONTROLLED. VERIFY AND REPLACE AS REQUIRED FOR EXISTING SYSTEMS.

20. A LISTED SMOKE-DAMPER DESIGNED TO RESIST THE PASSAGE OF SMOKE SHALL BE PROVIDED AT EACH PENETRATION OF A SMOKE BARRIER IN COMPLIANCE WITH FMC 2017, SEC. 607.5.4 AND CONTROLLED AS REQUIRED BY SEC. 607.5.4.1. PROVIDE SERVICE ACCESS AS REQUIRED.

21. HVAC CONTRACTOR SHALL PROVIDE A T & B REPORT PER FEC 2017, SEC. C 408.2.2. FOR SYSTEMS OVER 15 TONS, THE T & B SHALL BE PERFORMED BY A CERTIFIED, INDEPENDENT COMPANY FOR ALL MECHANICAL EQUIPMENT, AIR DEVICES, DAMPERS, AND ANY AIR MOVING SYSTEMS. THE TEST AND BALANCE REPORT SHALL BE IN ACCORDANCE WITH THE AABC OR NEBB STANDARDS AND PROCEDURES AND SHALL INCLUDE AIR QUANTITIES FOR ALL SUPPLY GRILLES, RETURN GRILLES AND EXHAUST GRILLES AND THE LEAVING AND ENTERING AIR TEMPERATURE (°F) FROM SUPPLY GRILLES, EVAPORATORS, ENERGY RECOVERY UNITS AND ANY TYPE OF HEAT EXCHANGERS.

### EXCEPTIONS:

1. BUILDINGS WITH COOLING OR HEATING SYSTEM CAPACITIES OF 15 TONS OR LESS PER SYSTEM MAY BE TESTED AND BALANCED BY A MECHANICAL CONTRACTOR LICENSED TO DESIGN AND INSTALL SUCH SYSTEM(S).

2. BUILDINGS WITH COOLING OR HEATING SYSTEM CAPACITIES OF 65,000 BTU/H OR LESS PER SYSTEM ARE EXEMPT FROM THE REQUIREMENTS OF THIS SECTION.

BUILDING ENVELOPE SHALL BE POSITIVELY PRESSURIZED TO PREVENT INFILTRATION PER FEC 2017, SEC. C 408.2.2.1.

22. RUN INSULATED FIRE RATED CONDENSATE DRAINS AS REQUIRED. AUXILIARY DRAIN PANS SHALL BE INSTALLED UNDER ALL COILS ON WHICH CONDENSATION CAN OCCUR AND UNDER ALL UNITS IN CONCEALED SPACES OR ANY AREA WHERE BLDG. DAMAGE CAN OCCUR AS A RESULT OF AN OVERFLOW, TO COMPLY WITH FMC 2017, PAR. 307.2.2. AN ALTERNATE WATER-DETECTION LEVEL DEVICE TO SHUT DOWN THE EQUIPMENT IS ACCEPTABLE.

23. ALL DUCT INSULATION 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 OR UL 723.

25. MECHANICAL EQUIPMENT ON ROOF OR ELEVATED STRUCTURES SHALL COMPLY WITH FMC 2017 PAR. 306.5 IF INSTALLED HIGHER THAN 16 FEET A.T.F. MECHANICAL EQUIPMENT INSTALLED IN ATTICS SHALL MEET THE REQUIREMENTS OF FMC 2017 PAR. 306.3 IF THE EQUIPMENT CAN NOT BE SERVICED/REMOVED THROUGH REQUIRED OPENING. MECHANICAL EQUIPMENT SHALL BE PROTECTED WITH MECHANICAL BARRIERS IF EXPOSED TO MECH. DAMAGE. ALL EQUIPMENT SHALL BE INSTALLED ON CONCRETE PADS AT GRADE LEVEL, SIZED PER STRUCTURAL PLANS.

### SPECIAL NOTE

ALL WIND LOAD AND OTHER COMPLIANCE CALCULATIONS AND/OR INSTALLATION DETAILS FOR OUTDOOR MOUNTED MECHANICAL EQUIPMENT AS REQUIRED BY FBC 2017, SEC. 1509, 1522 AND CHAPTER 16, SHALL BE PROVIDED BY A STRUCTURAL ENGINEER AND SHOWN ON THESE PLANS FOR REFERENCE ONLY. SUCH CALCULATIONS SHALL BE PROVIDED BY THE EQUIPMENT MANUFACTURER OR BY THE GENERAL OR MECHANICAL CONTRACTOR ON BEHALF OF CLIENT.

CONTRACTOR TO PROVIDE WIND LOAD CALCULATIONS SIGNED AND SEALED BY A FLORIDA REGISTERED STRUCTURAL ENGINEER IN ORIGINAL FOR COMPLIANCE WITH SEC. 301.15 OF FMC 2014, INCLUDING ANY DOCUMENTATION REQUIRED BY LOCAL JURISDICTION FOR PERMIT PURPOSES.

26. PROVIDE A MIN. OF 36" CLEARANCE IN FRONT OF ALL 120-208/240 VOLT PANELS AND MIN. 42" CLEARANCE IN FRONT OF ANY 277-480 VOLT PANEL. PROVIDE ADEQUATE SIDE CLEARANCE PER NEC 110.26.

27. MECHANICAL PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, PLUMBING, ELECTRICAL, FIRE SPRINKLER, AND STRUCTURAL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS. DUCT AND PIPING OFFSETS, BENDS AND TRANSITIONS SHALL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. CHANGES IN DUCTWORK SIZE AND ROUTE WILL BE REQUIRED TO AVOID STRUCTURAL, PLUMBING, FIRE SPRINKLER AND ARCHITECTURAL BUILDING FEATURES. DUCTWORK CHANGES MAY BE MADE BY CONTRACTOR USING EQUIVALENT SIZED DUCT. CONTACT ENGINEER IF DUCT AREA WILL NOT FIT.

28. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO BIDDING, ORDERING, FABRICATION OR INSTALLATION OF MATERIALS OR EQUIPMENT, IN ORDER TO PROVIDE A FULLY INTEGRATED MECHANICAL AND CONTROLS SYSTEMS WITH THE EXISTING ONES. ANY DISCREPANCY BETWEEN EXISTING CONDITIONS AND PLANS, OR ADDITIONAL CLARIFICATION REQ'D SHALL BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO FINAL BIDDING AND WORK.

29. MATERIALS ALLOWED IN RETURN AIR PLENUMS OR ABOVE CEILINGS USED AS RETURN AIR PLENUM SHALL COMPLY WITH FMC 2017, SEC. 602.2.1. IF SPACE WITH RETURN AIR PLENUM HAS ANY DECK TO DECK PARTITIONS, AIR TRANSFER DUCTS MUST BE INSTALLED. WHEN CPVC PIPING IS USED FOR FIRE SPRINKLER SYSTEMS, THE R/A GRILLES LAYOUT SHALL BE (FIELD) COORDINATED WITH SUCH PIPING SO THAT NO PORTION OF THE GRILLES WILL BE DIRECTLY BELOW THE CPVC PIPING. STUD CAVITIES AND JOIST SPACE PLENUMS SHALL COMPLY WITH FMC 2017, SEC. 602.3.

30. CONDENSATE DRAIN PIPING TO BE AS SPECIFIED PER PLUMBING PLANS. IF NOT SPECIFIED THEY SHALL BE TYPE "L" COPPER OR PVC WHERE ALLOWED BY CODE WITH INSULATION THICKNESS PER FEC 2017 TABLE C403.2.8. PROVIDE APPROVED WATER LEVEL DETECTOR OR FLOAT SWITCH TO AUTOMATICALLY SHUT DOWN THE AIR COND. UNIT, AS A SECONDARY DRAIN SYSTEM TO COMPLY WITH FMC 2017, SEC. 307 SUPPLY CONDENSATE PUMP WHERE NECESSARY AS IMPOSED BY FIELD CONDITIONS OR INSTALLATION CHANGES AND PIPE TO CONDENSATE DRAIN PER PLUMBING PLANS.

32. MANUFACTURER'S WARRANTY: CONTRACTOR SHALL PROVIDE WARRANTY FOR A PERIOD OF (1) ONE YEAR AFTER BUILDING C.O. FOR ALL MECHANICAL SYSTEMS, DUCTWORK, CONTROLS ACCESSORIES AND ALL OTHER EQUIPMENT, PARTS AND LABOR UNDER THESE DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL PROVIDE WARRANTY FOR COMPRESSORS FOR (5) FIVE YEARS. ANY REPAIRS REQUIRING SYSTEM SHUTDOWN WILL BE DONE DURING NON-OPERATIONAL PERIODS OR AS AGREED WITH OWNER.

31. CLEARANCE FOR MAINTENANCE, SERVICE, REPAIRS, AND REPLACEMENT FOR ALL MECHANICAL EQUIPMENT SHALL BE PROVIDED TO COMPLY WITH FMC 2017, SEC. 306. SERVICE ACCESS PANELS FOR MECH. EQUIPMENT IN CONCEALED SPACES SHALL BE PROVIDED TO COMPLY WITH THE REQUIREMENTS OF SEC. 306.

37. CORROSION COATING: CONTRACTOR SHALL PROVIDE CORROSION COATING TO CONDENSER/EVAPORATOR COILS, EQUIPMENT CASINGS/CABINETS AND ALL EXPOSED COPPER PIPING/ COMPRESSORS/ CONDENSER SECTION, AS WELL AS, ANY EXPOSED METAL WITHIN AIRSTREAM BY 3RD PARTY AS APPLIED BY BLYGOLD, LUVATA, ADVANCOAT OR APPROVED EQUAL WITH STANDARD 5-YEAR WARRANTY.

## MECHANICAL SHEET INDEX

| SHEET# | DESCRIPTION                      |
|--------|----------------------------------|
| M0.1   | MECHANICAL NOTES, LEGEND & INDEX |
| M2.1   | FIRST FLOOR MECHANICAL PLAN      |
| M2.2   | SECOND FLOOR MECHANICAL PLAN     |
| M2.3   | 3RD FLOOR MECHANICAL PLAN        |
| M2.4   | ROOF MECHANICAL PLAN             |
| M6.1   | MECHANICAL SCHEDULES             |
| M7.1   | MECHANICAL DETAILS               |

## MECHANICAL LEGEND

|  |                              |  |                                                   |
|--|------------------------------|--|---------------------------------------------------|
|  | NEW S/A CEILING DIFFUSER     |  | CEILING EXHAUST FAN                               |
|  | NEW R/A CEILING GRILLE       |  | SUPPLY AIR DIFFUSER OR GRILLE DESIGNATION         |
|  | WALL LOUVER / WALL DIFFUSER. |  | RETURN/EXHAUST AIR DIFFUSER OR GRILLE DESIGNATION |
|  | VOLUME CONTROL DAMPER        |  | EQUIPMENT TAG                                     |
|  | REDUCER OR INCREASER         |  | THERMOSTAT                                        |
|  | NEW FLEX DUCT                |  | HUMIDISTAT                                        |
|  | NEW DUCTWORK                 |  | SUPPLY AIR                                        |
|  | BELLMOUTH TAP                |  | RETURN AIR                                        |
|  | SHOE TAP DAMPER              |  | DOOR UNDER CUT                                    |
|  | DUCT SMOKE DETECTOR          |  | AP - ACCESS PANEL                                 |

**NOT ALL SYMBOLS MAY APPLY TO THESE PLANS**

RNA

REX NICHOLS ARCHITECTS  
1800 SOUTH FEDERAL HWY STE 800  
POMPANO BEACH, FL 33062-1600  
WWW.REXNICHOLSARCHITECTS.COM  
INFO@REXNICHOLSARCHITECTS.COM  
T-954 951 8101

REX NICHOLS AIA  
AR007415

PROPOSED TOWNHOUSES ADDRESS 700 BRINY  
AV, POMPANO BEACH, 33062

OWNER : CARLO TREE LP  
GREENPARK GROUP  
5600 N Federal Highway  
Fort Lauderdale - FL - 33308

PROJECT NUMBER 4/2018

## MECHANICAL NOTES

DESIGNED BY:  
Alex Penna & Rex Nichols

DATE:  
JUNE 12TH 2019

ISSUED FOR

☐ REVIEW & COMMENTS  
☐ BIDDING  
☐ NOT FOR CONSTRUCTION  
☐ PERMIT  
☐ CONSTRUCTION

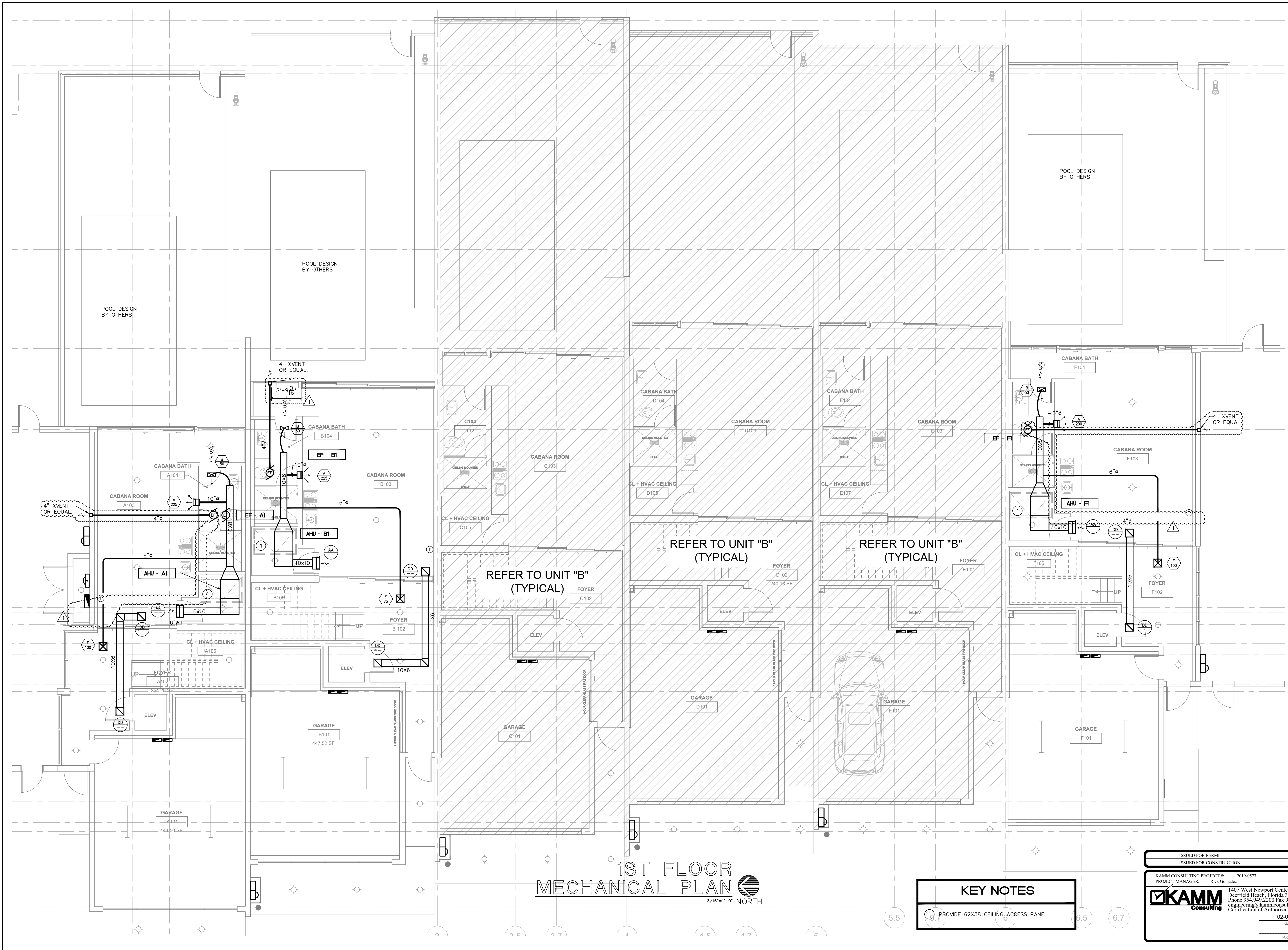
M0.1

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|                            |                                                                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ISSUED FOR PERMIT          |                                                                                                                                                                                   |
| ISSUED FOR CONSTRUCTION    |                                                                                                                                                                                   |
| KAMM CONSULTING PROJECT #: | 2019-0577                                                                                                                                                                         |
| PROJECT MANAGER:           | Rick Gonzalez                                                                                                                                                                     |
|                            | 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |
| 02-05-20                   | date                                                                                                                                                                              |
|                            | signed                                                                                                                                                                            |



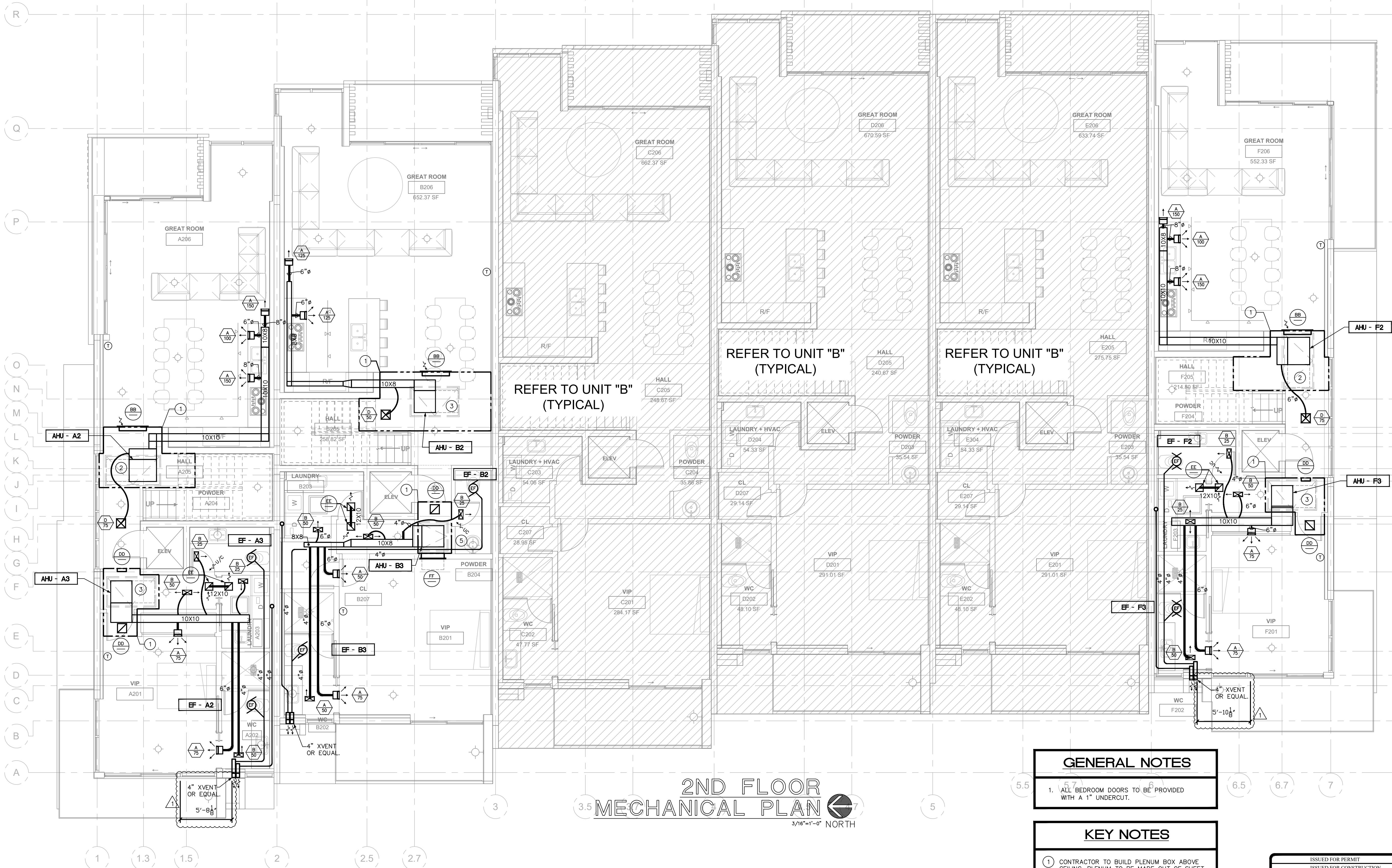
1ST FLOOR  
MECHANICAL PLAN  
3/16"=1'-0" NORTH

## KEY NOTES

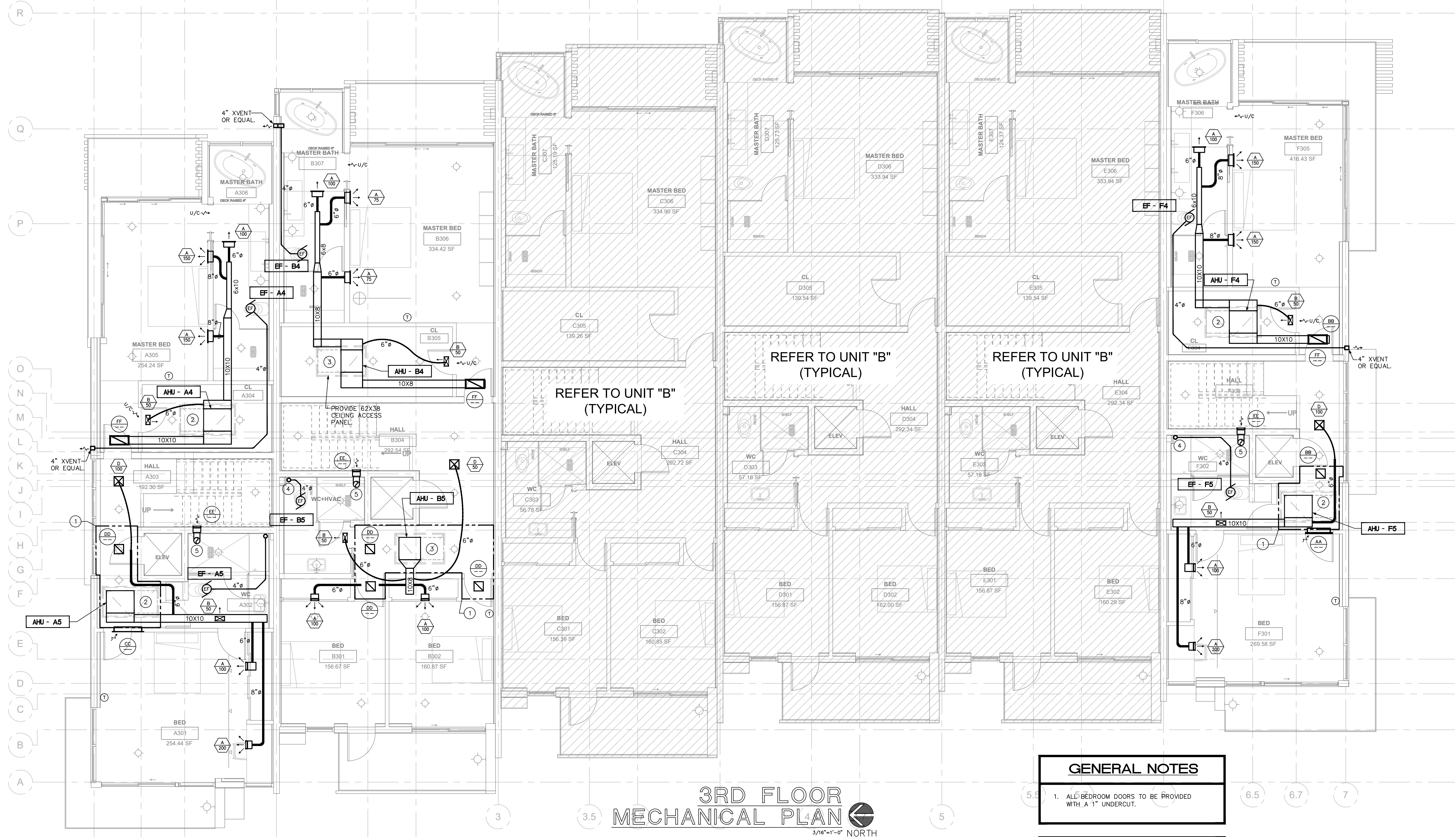
1. PROVIDE 62X38 CEILING ACCESS PANEL.

|                                                                                                                                                                                   |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| ISSUED FOR PERMIT                                                                                                                                                                 |               |
| ISSUED FOR CONSTRUCTION                                                                                                                                                           |               |
| KAMM CONSULTING PROJECT #:                                                                                                                                                        | 2019-0577     |
| PROJECT MANAGER:                                                                                                                                                                  | Rick Gonzalez |
| <b>KAMM Consulting</b>                                                                                                                                                            |               |
| 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |               |
| 02-05-20                                                                                                                                                                          | date          |
| signed                                                                                                                                                                            | signature     |









### 3RD FLOOR MECHANICAL PLAN

3/16"=1'-0" NORTH

#### GENERAL NOTES

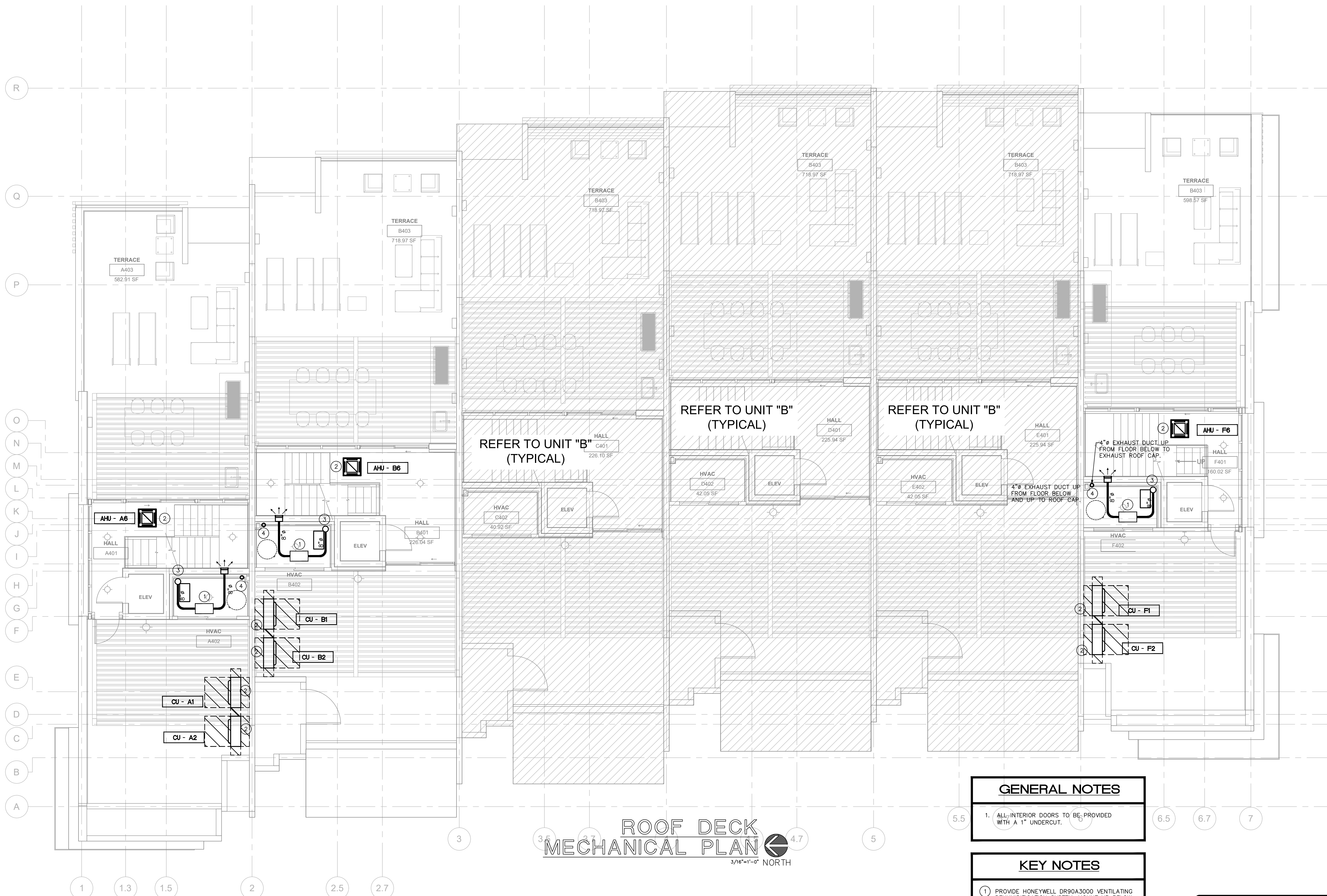
1. ALL BEDROOM DOORS TO BE PROVIDED WITH A 1" UNDERCUT.

#### KEY NOTES

1. CONTRACTOR TO BUILD PLENUM BOX ABOVE CEILING. PLENUM TO BE MADE OUT OF SHEET METAL SEALED AIR TIGHT.
2. PROVIDE 70X38 CEILING ACCESS PANEL.
3. PROVIDE 62X38 CEILING ACCESS PANEL.
4. 4" EXHAUST DUCT UP TO EXHAUST ROOF CAP.
5. 8" RETURN AIR DUCT DOWN FROM DEHUMIDIFIER ON FLOOR ABOVE.

|                            |                                                                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ISSUED FOR PERMIT          |                                                                                                                                                                                   |
| ISSUED FOR CONSTRUCTION    |                                                                                                                                                                                   |
| KAMM CONSULTING PROJECT #: | 2019-0577                                                                                                                                                                         |
| PROJECT MANAGER:           | Rick Gonzalez                                                                                                                                                                     |
|                            | 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |
| 02-05-20                   |                                                                                                                                                                                   |
| date                       |                                                                                                                                                                                   |
| signed                     |                                                                                                                                                                                   |





ROOF DECK  
MECHANICAL PLAN  
3/16"=1'-0" NORTH

- GENERAL NOTES**
  - ALL INTERIOR DOORS TO BE PROVIDED WITH A 1" UNDERCUT.
- KEY NOTES**
  - PROVIDE HONEYWELL DR90A3000 VENTILATING DEHUMIDIFICATION SYSTEM. MOUNT UP BELOW CEILING. PROVIDE 120V, 5.3A. MAINTAIN PROPER SERVICE CLEARANCE.
  - PROVIDE SERVICE CLEARANCE PER MANUFACTURER'S REQUIREMENTS AND NEC.
  - 8" RETURN DUCT FOR DEHUMIDIFIER DOWN TO 3RD FLOOR.
  - 4" EXHAUST DUCT FROM FLOOR BELOW UP TO EXHAUST ROOF CAP.

|                            |                                                                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ISSUED FOR PERMIT          |                                                                                                                                                                                   |
| ISSUED FOR CONSTRUCTION    |                                                                                                                                                                                   |
| KAMM CONSULTING PROJECT #: | 2019-0577                                                                                                                                                                         |
| PROJECT MANAGER:           | Rick Gonzalez                                                                                                                                                                     |
|                            | 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization R8189 |
| 02-05-20                   |                                                                                                                                                                                   |
| date                       |                                                                                                                                                                                   |
| signed                     |                                                                                                                                                                                   |



| SUPPLY / RETURN AIR DIFFUSER SCHEDULE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                |                       |           |          |         |           |        |           |         |           |       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------|-----------|----------|---------|-----------|--------|-----------|---------|-----------|-------|
| TAG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | MANUF. & MODEL | FACE SIZE             | NECK SIZE | MATERIAL | FRAME   | FINISH    | DAMPER | THROW     | NC      | CFM RANGE | NOTES |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | TITUS 272FS    | DUCT SIZE<br>+ 1-3/4" | 10X6      | ALUM.    | SURFACE | OFF WHITE | OBD    | SEE PLANS | MAX. 25 | SEE SCH.  | 1-8   |
| B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | TITUS 250-AA   | DUCT SIZE<br>+ 1-3/4" | 6X4       | ALUM.    | SURFACE | OFF WHITE | OBD    | SEE PLANS | MAX. 25 | SEE SCH.  | 1-8   |
| C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | TITUS 272FS    | DUCT SIZE<br>+ 1-3/4" | 6X6       | ALUM.    | SURFACE | OFF WHITE | OBD    | SEE PLANS | MAX. 25 | SEE SCH.  | 1-8   |
| D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | TITUS TDC-AA   | DUCT SIZE<br>+ 1-3/4" | 6X6       | ALUM.    | SURFACE | OFF WHITE | OBD    | SEE PLANS | MAX. 25 | SEE SCH.  | 1-8   |
| E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | TITUS 272FS    | DUCT SIZE<br>+ 1-3/4" | 12X6      | ALUM.    | SURFACE | OFF WHITE | OBD    | SEE PLANS | MAX. 25 | SEE SCH.  | 1-8   |
| F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | TITUS 250-AA   | DUCT SIZE<br>+ 1-3/4" | 8X6       | ALUM.    | SURFACE | OFF WHITE | OBD    | SEE PLANS | MAX. 25 | SEE SCH.  | 1-8   |
| AA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TITUS 4FL      | DUCT SIZE<br>+ 1-3/4" | 18X10     | ALUM.    | SURFACE | OFF WHITE | -      | SEE PLANS | MAX. 25 | SEE SCH.  | 1-8   |
| BB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TITUS 4FFL     | DUCT SIZE<br>+ 1-3/4" | 36X6      | ALUM.    | SURFACE | OFF WHITE | -      | SEE PLANS | MAX. 25 | SEE SCH.  | 1-8   |
| CC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TITUS 4FFL     | DUCT SIZE<br>+ 1-3/4" | 24X6      | ALUM.    | SURFACE | OFF WHITE | -      | SEE PLANS | MAX. 25 | SEE SCH.  | 1-8   |
| DD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TITUS 4FFL     | DUCT SIZE<br>+ 1-3/4" | 12X12     | ALUM.    | SURFACE | OFF WHITE | -      | SEE PLANS | MAX. 25 | SEE SCH.  | 1-8   |
| EE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TITUS 4FL      | DUCT SIZE<br>+ 1-3/4" | 12X12     | ALUM.    | SURFACE | OFF WHITE | -      | SEE PLANS | MAX. 25 | SEE SCH.  | 1-8   |
| FF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TITUS 4FFL     | DUCT SIZE<br>+ 1-3/4" | 24X10     | ALUM.    | SURFACE | OFF WHITE | -      | SEE PLANS | MAX. 25 | SEE SCH.  | 1-8   |
| (*) EQUIVALENT MANUFACTURER: TITUS, METALAIRE, CARNES, T & B, NAILOR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                |                       |           |          |         |           |        |           |         |           |       |
| <b>GENERAL NOTES:</b><br>1. PROVIDE SPIN-IN COLLAR WITH VOLUME DAMPER AT TRUNK TO FLEX DUCT CONNECTION (SEE DETAIL).<br>2. PROVIDE TYPICAL 4-WAY DIFFUSION, 2-WAY OR 3-WAY ONLY WHERE INDICATED ON PLANS.<br>3. REFER TO ARCHITECT PLANS FOR CEILING TYPE.<br>4. FINAL COLOR SELECTION SUBJECT TO ARCHITECT APPROVAL.<br>5. FLEX DUCT SIZE TO BE SAME AS DIFFUSER NECK SIZE.<br>6. PROVIDE INSULATION ON THE BACK OF DIFFUSER IF IN UNCONDITIONED SPACE.<br>7. PROVIDE VOLUME CONTROL DAMPERS FOR ALL RETURN GRILLES OR REGISTERS FOR BALANCED AIRFLOW.<br>8. ADJUST LENGTHS TO LINE UP WITH INTERIOR DESIGNER'S PLANS. |                |                       |           |          |         |           |        |           |         |           |       |
| CONTRACTOR SHALL VERIFY WITH ARCHITECT AND TENANT/OWNER, PRIOR TO ANY PURCHASING OR INSTALLATION, IF A BUILDING STANDARD HAS TO BE FOLLOWED REGARDING A SPECIFIC MODEL OR MANUFACTURER AND SHALL BRING ANY DISCREPANCY TO THE ATTENTION OF ENGINEER.                                                                                                                                                                                                                                                                                                                                                                    |                |                       |           |          |         |           |        |           |         |           |       |
| <b>FLEX SCHEDULE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                |                       |           |          |         |           |        |           |         |           |       |
| 6ø" 50-125 CFM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |                       |           |          |         |           |        |           |         |           |       |
| 8ø" 130-200 CFM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                |                       |           |          |         |           |        |           |         |           |       |
| 10ø" 205-330 CFM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |                       |           |          |         |           |        |           |         |           |       |
| 12ø" 335-450 CFM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |                       |           |          |         |           |        |           |         |           |       |
| 14ø" 455-700 CFM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |                       |           |          |         |           |        |           |         |           |       |

| AIR CONDITIONING SPLIT SYSTEM EQUIPMENT SCHEDULE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                         |                 |           |              |             |                |            |             |           |            |            |            |              |                |                |           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|-----------|--------------|-------------|----------------|------------|-------------|-----------|------------|------------|------------|--------------|----------------|----------------|-----------|
| CONDENSING UNIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                         |                 |           |              |             |                |            |             |           |            |            |            |              |                |                |           |
| CU TAG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MANUFACTURER & MODEL    | NOMINAL TONNAGE | COP/HSPF  | (S)EER/PLV   | REFRIG./LBS | LIQ./SUCT.     | NO. FANS   | FAN FLA(EA) | NO. COMP. | COP/HSPF   | VOLTAGE/PH | MCA/MOCP   | WEIGHT (LBS) | L x W x H (IN) | NOTES          |           |
| CU-A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | MITSUBISHI/PUY-P36NKM2  | 3               | 3.7/11.2  | 18.3         | R410A/10    | 3/8 / 5/8      | 2          | 0.074 KW    | 1         | 2.8 KW     | 208-230/1  | 29/45      | 267          | 14X42X53       | SEE BELOW      |           |
| CU-A2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | MITSUBISHI/PUY-P36NKM2  | 3               | 3.7/11.2  | 18.3         | R410A/10    | 3/8 / 5/8      | 2          | 0.074 KW    | 1         | 4.0/12.0   | 208-230/1  | 29/45      | 267          | 14X42X53       | SEE BELOW      |           |
| CU-B1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | MITSUBISHI/PUY-P36NKM2  | 3               | 3.7/11.2  | 18.3         | R410A/10    | 3/8 / 5/8      | 2          | 0.074 KW    | 1         | 4.0/12.0   | 208-230/1  | 29/45      | 267          | 14X42X53       | SEE BELOW      |           |
| CU-B2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | MITSUBISHI/PUY-P36NKM2  | 3               | 3.7/11.2  | 18.3         | R410A/10    | 3/8 / 5/8      | 2          | 0.074 KW    | 1         | 4.0/12.0   | 208-230/1  | 29/45      | 267          | 14X42X53       | SEE BELOW      |           |
| CU-C1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | MITSUBISHI/PUY-P36NKM2  | 3               | 3.7/11.2  | 18.3         | R410A/10    | 3/8 / 5/8      | 2          | 0.074 KW    | 1         | 4.0/12.0   | 208-230/1  | 29/45      | 267          | 14X42X53       | SEE BELOW      |           |
| CU-C2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | MITSUBISHI/PUY-P36NKM2  | 3               | 3.7/11.2  | 18.3         | R410A/10    | 3/8 / 5/8      | 2          | 0.074 KW    | 1         | 4.0/12.0   | 208-230/1  | 29/45      | 267          | 14X42X53       | SEE BELOW      |           |
| *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | *                       | *               | *         | *            | *           | *              | *          | *           | *         | *          | *          | *          | *            | *              | SEE BELOW      |           |
| AIR HANDLING UNIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                         |                 |           |              |             |                |            |             |           |            |            |            |              |                |                |           |
| AHU TAG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | MANUFACTURER & MODEL    | CONDENSER       | TOTAL MBH | SENSIBLE MBH | TOTAL CFM   | E.S.P. ("W.G.) | ENT. DB/WB | LEAV. DB/WB | ROWS/FPI  | FAN HP/FLA | HEAT (MBH) | VOLTAGE/PH | MCA/MOCP     | WEIGHT (LBS)   | L x W x H (IN) | NOTES     |
| AHU-A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PEFY-P12NMAU | CU-A1           | 12.0      | 9.0          | 375         | 0.4            | 80/67      | 55/54       | *         | .09 KW     | 13.5       | 208-230/1  | 1.05/15      | 49             | 29X28X10       | SEE BELOW |
| AHU-A2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PEFY-P19NMAU | CU-A1           | 15.0      | 11.25        | 494         | 0.4            | 80/67      | 55/54       | *         | .09 KW     | 17.0       | 208-230/1  | 1.45/15      | 51             | 36X29X10       | SEE BELOW |
| AHU-A3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PEFY-P08NMAU | CU-A1           | 8.17      | 5.78         | 300         | 0.4            | 80/67      | 55/54       | *         | .06 KW     | 9.0        | 208-230/1  | 1.05/15      | 49             | 29X28X10       | SEE BELOW |
| AHU-A4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PEFY-P15NMAU | CU-A2           | 15.0      | 11.25        | 494         | 0.4            | 80/67      | 55/54       | *         | .09 KW     | 17.0       | 208-230/1  | 1.45/15      | 51             | 36X29X10       | SEE BELOW |
| AHU-A5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PEFY-P15NMAU | CU-A2           | 15.0      | 11.25        | 494         | 0.4            | 80/67      | 55/54       | *         | .09 KW     | 17.0       | 208-230/1  | 1.45/15      | 51             | 36X29X10       | SEE BELOW |
| AHU-A6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PLFY-P05NFMU | CU-A2           | 4.3       | 4.3          | 280         | *              | 80/67      | 55/54       | *         | -          | 5.6        | 208-230/1  | 0.24/15      | 28.9           | 23X23X8        | SEE BELOW |
| AHU-B1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PEFY-P12NMAU | CU-B1           | 12.0      | 9.0          | 375         | 0.4            | 80/67      | 55/54       | *         | .09 KW     | 13.5       | 208-230/1  | 1.05/15      | 49             | 29X28X10       | SEE BELOW |
| AHU-B2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PEFY-P08NMAU | CU-B1           | 8.17      | 5.78         | 300         | 0.4            | 80/67      | 55/54       | *         | .09 KW     | 9.0        | 208-230/1  | 1.05/15      | 49             | 29X28X10       | SEE BELOW |
| AHU-B3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PEFY-P08NMAU | CU-B1           | 8.17      | 5.78         | 300         | 0.4            | 80/67      | 55/54       | *         | .06 KW     | 9.0        | 208-230/1  | 1.05/15      | 49             | 29X28X10       | SEE BELOW |
| AHU-B4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PEFY-P08NMAU | CU-B2           | 8.17      | 5.78         | 300         | 0.4            | 80/67      | 55/54       | *         | .09 KW     | 9.0        | 208-230/1  | 1.05/15      | 49             | 29X28X10       | SEE BELOW |
| AHU-B5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PEFY-P08NMAU | CU-B2           | 8.17      | 5.78         | 300         | 0.4            | 80/67      | 55/54       | *         | .09 KW     | 9.0        | 208-230/1  | 1.05/15      | 49             | 29X28X10       | SEE BELOW |
| AHU-B6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PLFY-P05NFMU | CU-B2           | 4.3       | 4.3          | 280         | *              | 80/67      | 55/54       | *         | -          | 5.6        | 208-230/1  | 0.24/15      | 28.9           | 23X23X8        | SEE BELOW |
| AHU-F1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PEFY-P12NMAU | CU-F1           | 12.0      | 9.0          | 375         | 0.4            | 80/67      | 55/54       | *         | .09 KW     | 9.0        | 208-230/1  | 1.05/15      | 49             | 29X28X10       | SEE BELOW |
| AHU-F2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PEFY-P15NMAU | CU-F1           | 15.0      | 11.25        | 494         | 0.4            | 80/67      | 55/54       | *         | .09 KW     | 17.5       | 208-230/1  | 1.45/15      | 51             | 36X29X10       | SEE BELOW |
| AHU-F3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PEFY-P08NMAU | CU-F1           | 8.17      | 5.78         | 300         | 0.4            | 80/67      | 55/54       | *         | .06 KW     | 9.0        | 208-230/1  | 1.05/15      | 49             | 29X28X10       | SEE BELOW |
| AHU-F4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PEFY-P15NMAU | CU-F2           | 15.0      | 11.25        | 494         | 0.4            | 80/67      | 55/54       | *         | .09 KW     | 17.5       | 208-230/1  | 1.45/15      | 51             | 36X29X10       | SEE BELOW |
| AHU-F5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PEFY-P15NMAU | CU-F2           | 15.0      | 11.25        | 494         | 0.4            | 80/67      | 55/54       | *         | .09 KW     | 17.5       | 208-230/1  | 1.45/15      | 51             | 36X29X10       | SEE BELOW |
| AHU-F6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MITSUBISHI/PLFY-P05NFMU | CU-F2           | 4.3       | 4.3          | 280         | *              | 80/67      | 55/54       | *         | -          | 5.6        | 208-230/1  | 0.24/15      | 28.9           | 23X23X8        | SEE BELOW |
| <b>NOTES:</b><br>1. UNITS RATED PER ARI 210, 240 AND 270, APPROVED EQUAL: AAO, CARRIER, LENNOX, TRANE, YORK<br>2. PROVIDE WITH THERMAL EXPANSION VALVES, LIQUID LINE FILTER DRYER AND MULTI-USE SERVICE VALVES<br>3. PROVIDE COMPRESSOR WITH CRANKCASE HEATER AND MIN. 5-YEAR WARRANTY<br>4. PROVIDE HIGH AND LOW PRESSURE CONTROL AND OVER TEMPERATURE PROTECTION.<br>5. PROVIDE WEATHERPROOF ELECTRIC CONTROLS AND SINGLE SIDE SERVICE ACCESS<br>6. PROVIDE SINGLE POINT POWER ENTRY AND HEAVY DUTY NICKEL-CHROMIUM ELEMENT HEATER<br>7. PROVIDE 1" THROWAWAY, MIN. .30% EFF. FILTER AND VIBRATION ISOLATION FOR AHU<br>8. PROVIDE SPLIT FACE COIL WITH BOTTOM OF COIL ACTIVE FOR MULTIPLE CIRCUIT SYSTEM<br>9. PROVIDE COASTAL CORROSION PROTECTION FOR CONDENSING UNIT, FULLY DIPPED COIL (BY MANUFACTURER)<br>10. PROVIDE HOT GAS RE-HEAT (OR/AND BY-PASS IF REQUIRED).<br>MAX. REFRIGERANT RUN 75 FEET OR AS REQUIRED BY MANUFACTURER.<br>11. PROVIDE FACTORY MOUNTED FUSIBLE DISCONNECT/STARTER FOR A.H.U., COORDINATE PRIOR TO PURCHASING<br>12. PROVIDE DISCONNECT FOR C.U. (INSTALLED BY ELECTRICAL) COORDINATE PRIOR TO PURCHASING<br>13. PROVIDE EMERGENCY POWER, COORDINATE WITH ELECTRICAL<br>14. PROVIDE FACTORY PROGRAMMABLE THERMOSTAT TO MATCH CAPACITY STAGES.<br>15. PROVIDE REFRIGERANT LINES SIZE AS RECOMMENDED BY MANUFACTURER, NOT TO EXCEED 150 FT. EQUIV. LENGTH FOR LONGER RUNS COORDINATE WITH MANUFACTURER PRIOR TO PURCHASE OR ANY WORK.<br>16. PROVIDE A LIQUID LINE SOLENOID VALVE INSTALLED AT THE AHU IF THE INSTALLED LINEAL LENGTH OF THE REFRIGERANT LIQUID LINES EXCEEDS 75 FT (FIELD VERIFY).<br>17. PROVIDE A SUCTION LINE ACCUMULATOR IF THE INSTALLED LINEAL LENGTH OF THE REFRIGERANT SUCTION LINES EXCEEDS 100 FT (FIELD VERIFY).<br>18. PROVIDE CORROSION PROTECTION COATING FOR CONDENSER COIL WITH MIN. 5-YEAR WARRANTY COATING BY SURSIL, LUVATA, THERMOGUARD OR BYGOLD.<br>19. PROVIDE 3" AUXILIARY DRAIN PAN WITH AUTOMATIC SHUT OFF FLOAT SWITCH OR SENSOR SWITCH IN UNIT'S DRAIN PAN SECONDARY CONNECTION, EQUAL TO "WATER GARD"<br>20. PROVIDE ELECTRIC HEATER WITH MIN. 2 STAGES IF OVER 10 KW CAPACITY.<br>21. PROVIDE MOTORIZED OUTSIDE AIR DAMPER INTERLOCK WITH COMPRESSOR<br>22. AS APPLICABLE, MANUFACTURE AND INSTALLATION SHALL COMPLY W/FMCC 301.12 FOR WIND RESISTANCE<br><br><b>COORDINATION NOTE:</b><br>MECHANICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS AND ACCESSORIES WITH ELECTRICAL CONTRACTOR PRIOR TO PURCHASING AND INSTALLATION AND SHALL BRING ANY DISCREPANCIES TO THE ATTENTION OF ENGINEER |                         |                 |           |              |             |                |            |             |           |            |            |            |              |                |                |           |

| FAN SCHEDULE                                                                                                                                                                  |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------|--------|---------|----------|-----------|-------|------------|-----|--------|----------|--------------|---------------------|-----------------|----------------|
| SELECTION DATA                                                                                                                                                                |              |           |        |         | FAN DATA |           |       | MOTOR DATA |     |        |          | GENERAL DATA |                     |                 |                |
| TAG                                                                                                                                                                           | SERVICE AREA | MANUF.(*) | MODEL  | CONFIG. | CFM      | ESP ("WG) | SONES | HP         | RPM | DRIVE  | VOLTAGE  | WEIGHT (LBS) | DIMENSIONS L"xW"xH" | CONTROL         | ACCESSORIES    |
| EF-1,3,4,5<br>UNITS A,B,F                                                                                                                                                     | RESTROOMS    | GREENHECK | SP-A90 | CEILING | 75       | 0.25      | 0.4   | 16 WATTS   | 900 | DIRECT | 115/1/60 | 12           | 11X13X9             | LIGHT INTERLOCK | SEE NOTES #1-8 |
| EF-2<br>UNITS A,B,F                                                                                                                                                           | RESTROOMS    | GREENHECK | SP-A70 | CEILING | 50       | 0.25      | 0.3   | 13 WATTS   | 850 | DIRECT | 115/1/60 | 12           | 11X13X9             | LIGHT INTERLOCK | SEE NOTES #1-8 |
| (*) APPROVED EQUAL MANUFACTURER: COOK, TWIN-CITY, ACME, PENN                                                                                                                  |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| ACCESSORIES NOTES:                                                                                                                                                            |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| 1. PROVIDE INTEGRAL GRILLE.                                                                                                                                                   |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| 2. PROVIDE BACK DRAFT DAMPER.                                                                                                                                                 |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| 3. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH AND INTEGRAL THERMAL OVERLOAD PROTECTION.                                                                                        |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| COORDINATE WITH ELECTRICAL CONTRACTOR PRIOR TO ANY PURCHASING.                                                                                                                |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| 4. PROVIDE 277/120 VOLT STEP DOWN TRANSFORMER AS REQUIRED.                                                                                                                    |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| 5. LOCATE BACK DRAFT DAMPER AT DISCHARGE.                                                                                                                                     |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| 6. SUPPORT FROM STRUCTURE COMPLETE WITH VIBRATION ISOLATORS.                                                                                                                  |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| 7. PROVIDE BIRD SCREEN.                                                                                                                                                       |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| 8. PROVIDE GRILLE COLOR PER ARCH. SPECS.                                                                                                                                      |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| GENERAL FAN NOTES:                                                                                                                                                            |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| a. MOTOR STARTERS, DISCONNECTS (IF NOT FACTORY PROVIDED) AND ALL EQUIPMENT NORMAL POWER WIRING BY ELEC. CONTRACTOR                                                            |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| b. ALL CONTINUOUS-DUTY MOTORS SHALL BE PROVIDED WITH OVERLOAD PROTECTION ACCORDING TO NATIONAL ELECTRICAL CODE PAR. 430-32.                                                   |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| c. FIELD ADJUST OPENINGS WITH STRUCTURE.                                                                                                                                      |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| d. ALL OUTDOOR EQUIPMENT SHALL COMPLY WITH LOCAL ZONING NOISE ORDINANCE OR NOT EXCEED A NOISE LEVEL OF 65dB AS MEASURED RADIALLY 30 FT. FROM THE EQUIPMENT IN ALL DIRECTIONS. |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| e. COORDINATE WITH ELECTRICAL CONTRACTOR BEFORE BIDDING OR ORDERING ANY EQUIPMENT.                                                                                            |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| f. SEE PROJECT PLANS AND SPECIFICATIONS FOR OTHER FIELD SUPPLIED ITEMS AND ADDITIONAL INFORMATION.                                                                            |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |
| g. ALL FANS ON ROOF SHALL BE PAINTED AS PER ARCHITECTURAL SPECS.                                                                                                              |              |           |        |         |          |           |       |            |     |        |          |              |                     |                 |                |

|                                                                                       |                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ISSUED FOR PERMIT                                                                     | -                                                                                                                                                                                 |
| ISSUED FOR CONSTRUCTION                                                               | -                                                                                                                                                                                 |
| KAMM CONSULTING PROJECT #:                                                            | 2019-0577                                                                                                                                                                         |
| PROJECT MANAGER:                                                                      | Rick Gonzalez                                                                                                                                                                     |
|  | 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |
|                                                                                       | 02-05-20                                                                                                                                                                          |
|                                                                                       | date                                                                                                                                                                              |
|                                                                                       | signed                                                                                                                                                                            |

RNA

REX NICHOLS ARCHITECTS  
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WWW.REXNICHOLSARCHITECTS.COM  
T-954 951 8101

REX NICHOLS AIA  
AR007415  
.....

PROPOSED TOWNHOUSES ADDRESS 700 BRINY  
AV, POMPANO BEACH, 33062  
.....

OWNER : CARLO TREE LP  
GREENPARK GROUP  
5600 N Federal Highway  
Fort Lauderdale - FL - 33308

PROJECT NUMBER 4/2018  
.....

MECHANICAL SCHEDULES

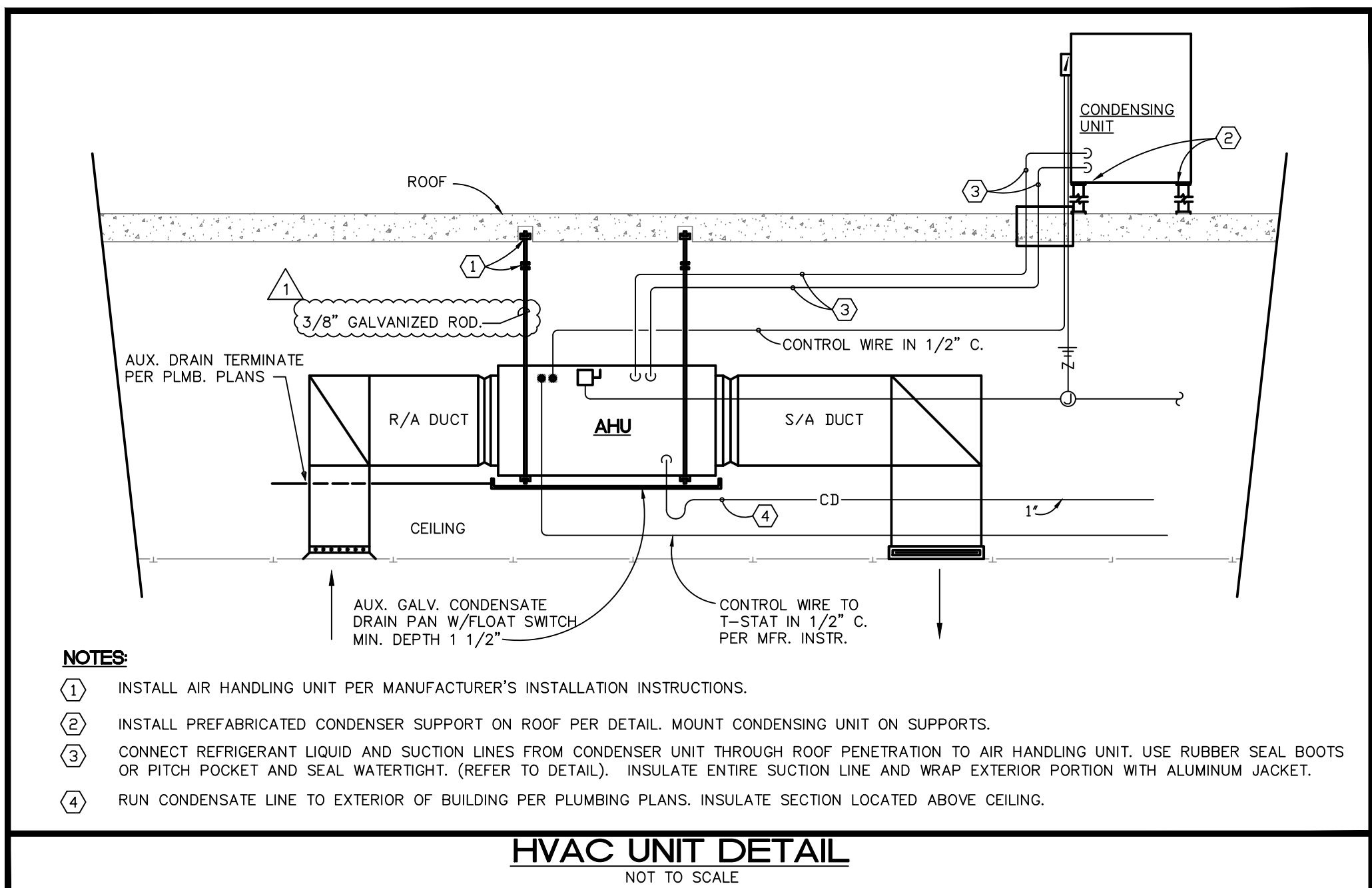
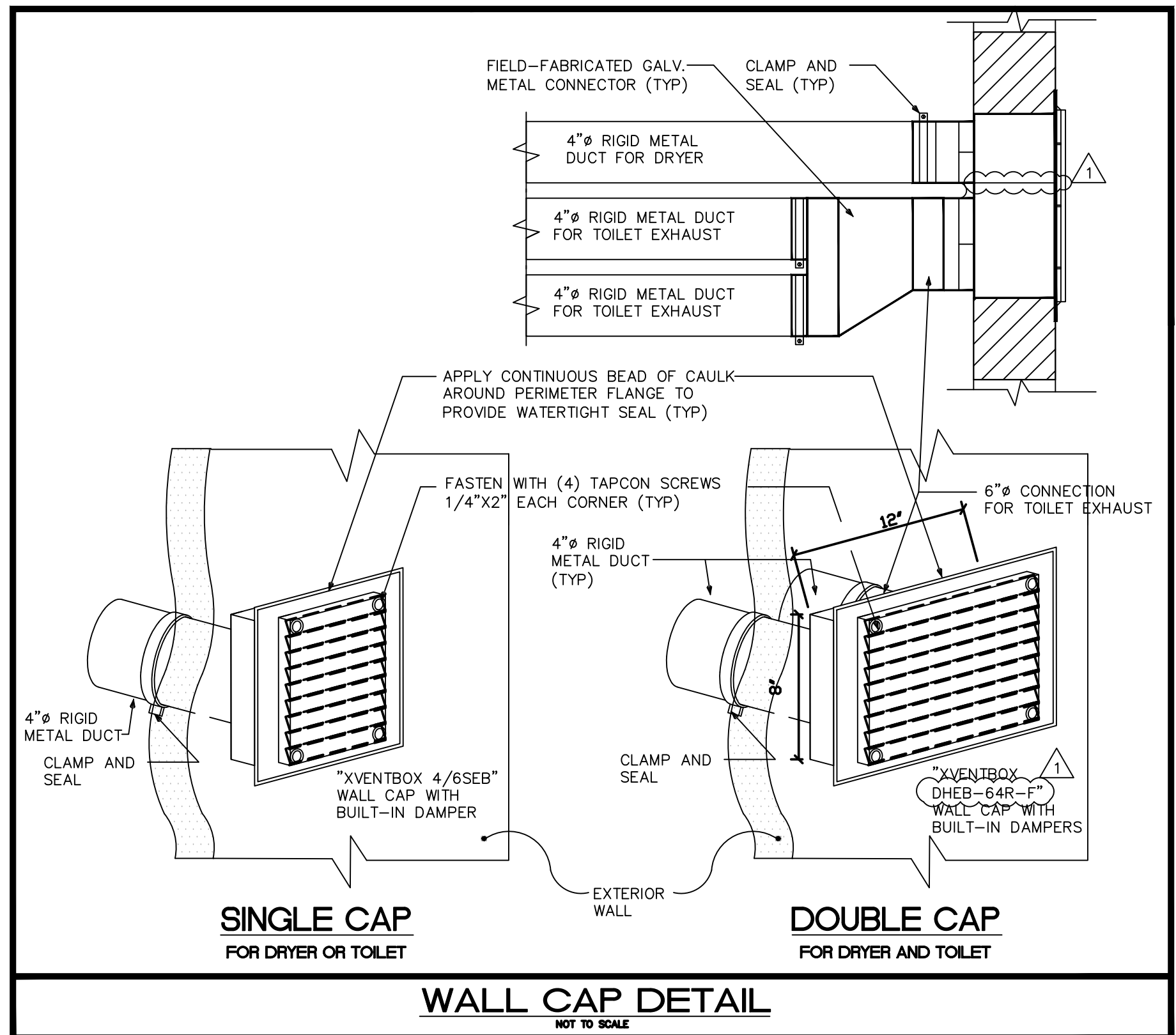
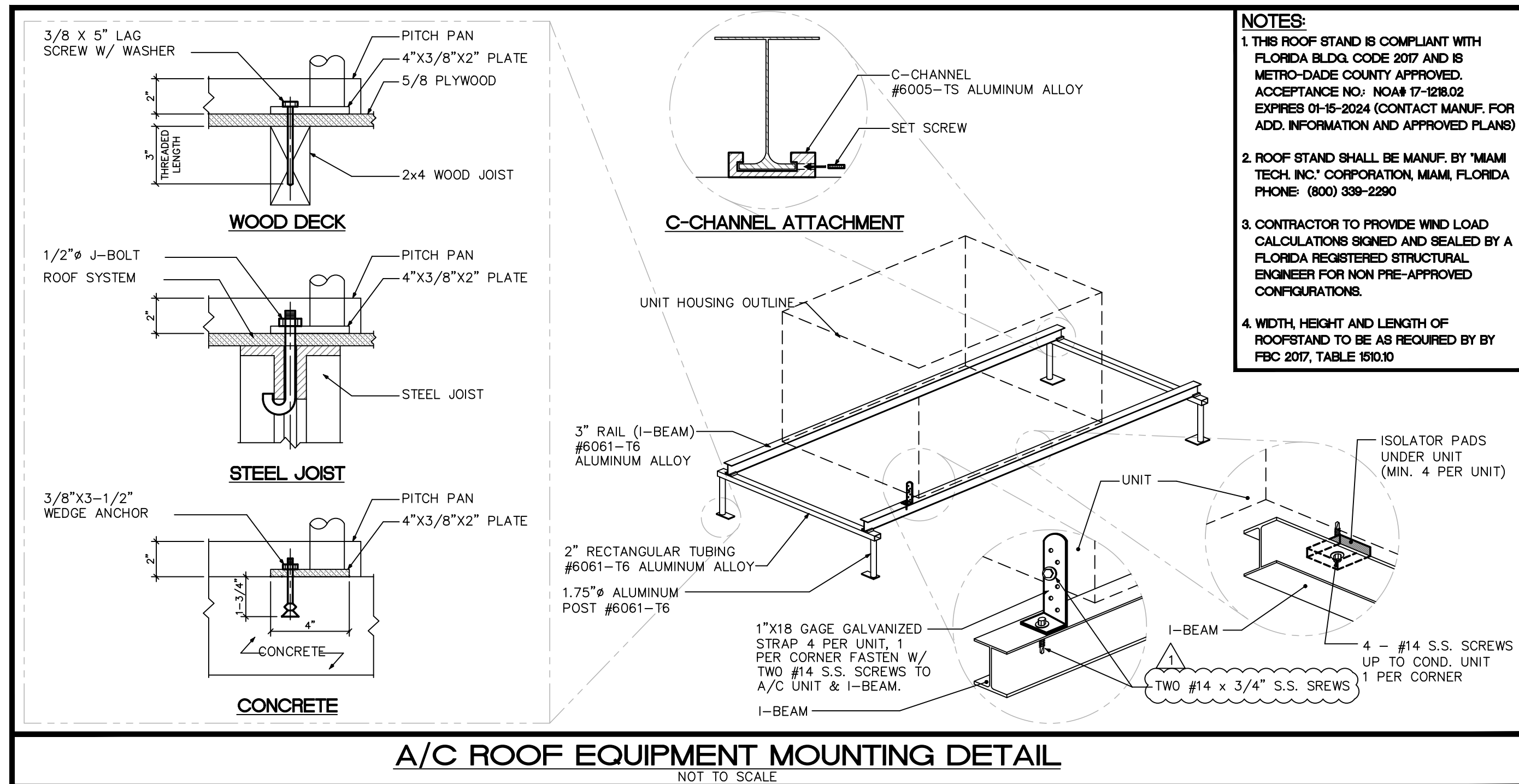
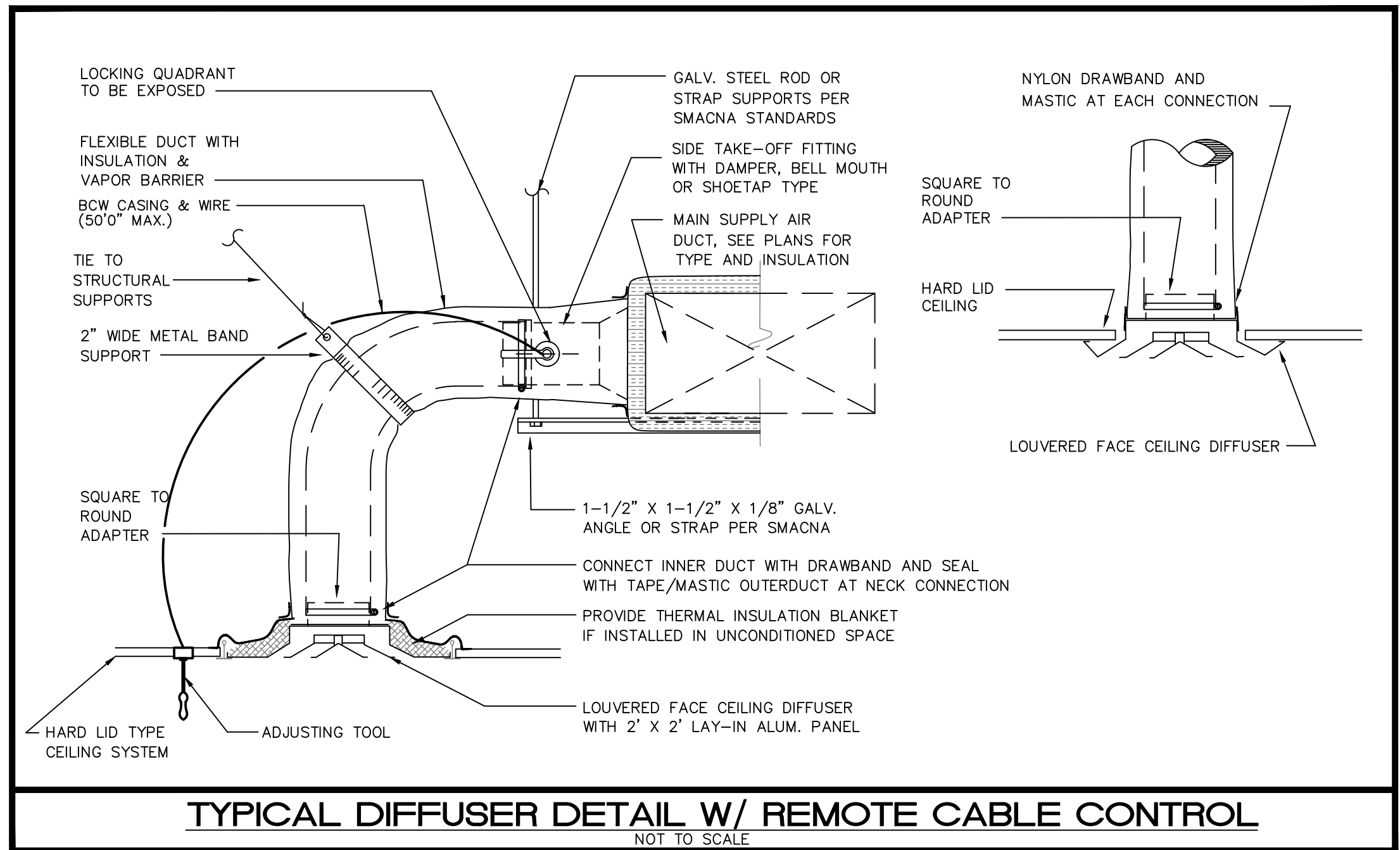
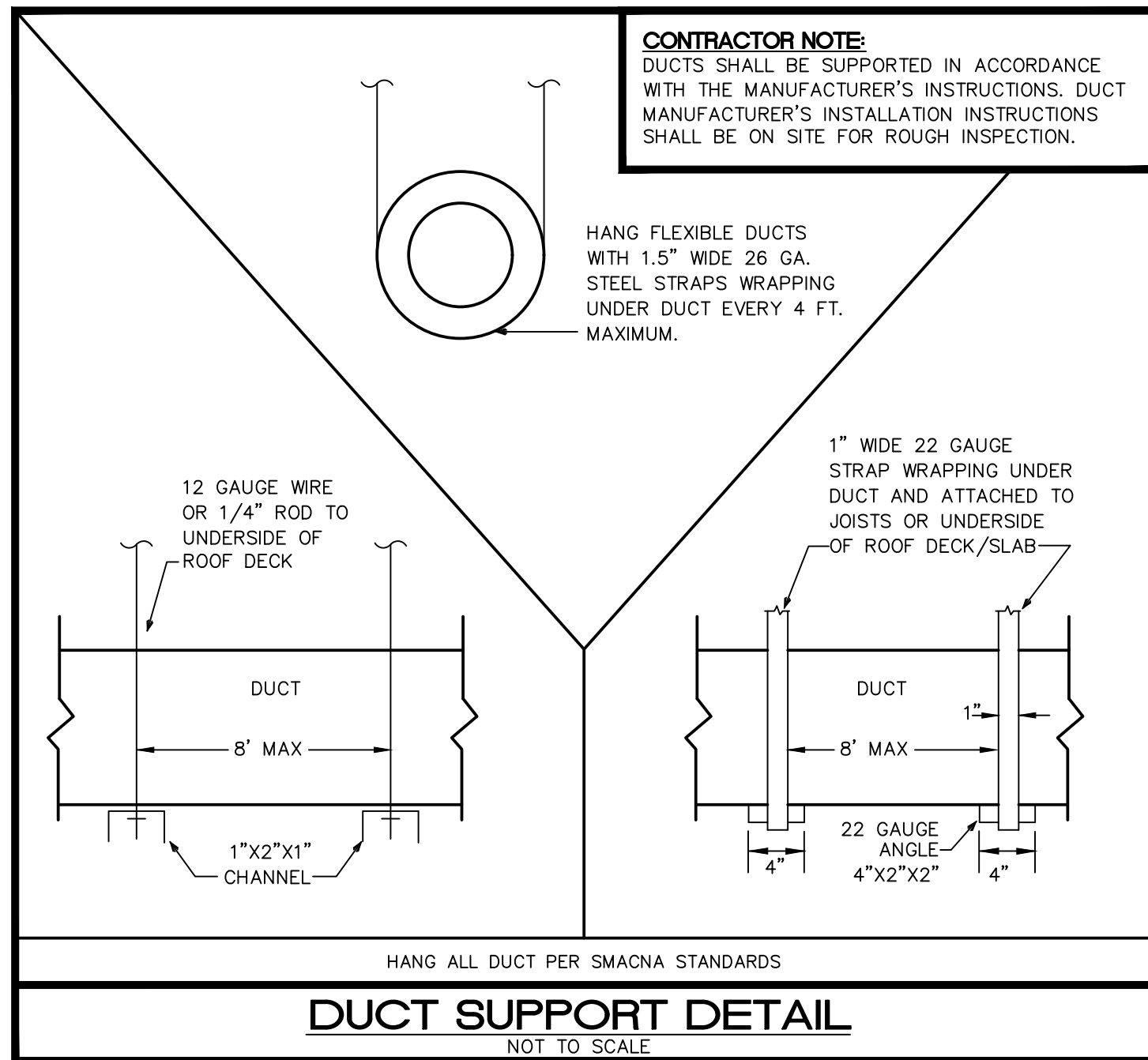
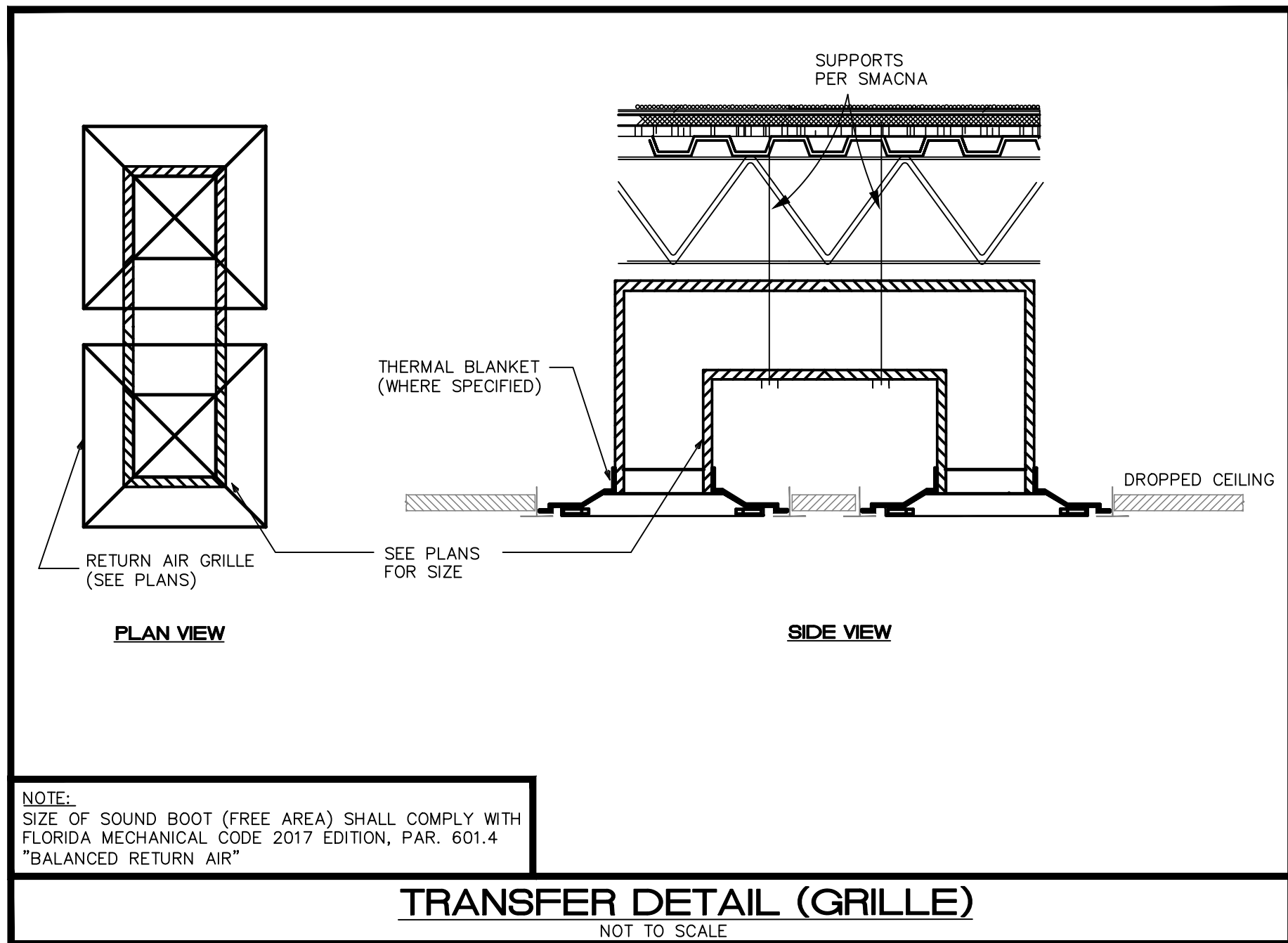
DESIGNED BY:  
Alex Penna & Rex Nichols  
.....  
DATE:  
JUNE 12TH 2019  
.....

ISSUED FOR  
☐ REVIEW & COMMENTS  
☐ BIDDING  
☐ NOT FOR CONSTRUCTION  
☐ PERMIT  
☐ CONSTRUCTION  
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| ROOFTOP EQUIP. CLEARANCE TABLE            |                                            |
|-------------------------------------------|--------------------------------------------|
| FLORIDA BUILDING CODE 2017, TABLE 1510.10 |                                            |
| WIDTH OF MECHANICAL UNIT (INCHES)         | MIN. CLEARANCE ABOVE ROOF SURFACE (INCHES) |
| < 24                                      | 14                                         |
| 24 < 36                                   | 18                                         |
| 36 < 48                                   | 24                                         |
| 48 < 60                                   | 30                                         |
| ≥ 60                                      | 48                                         |

|                            |                                                                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ISSUED FOR PERMIT          | -                                                                                                                                                                                 |
| ISSUED FOR CONSTRUCTION    | -                                                                                                                                                                                 |
| KAMM CONSULTING PROJECT #: | 2019-0577                                                                                                                                                                         |
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| <b>KAMM Consulting</b>     | 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |
| 02-05-20                   | date                                                                                                                                                                              |
| signed                     |                                                                                                                                                                                   |



ELECTRICAL SYMBOLS

|        |                                                                                                                                                                                                                                                                                   |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ▽      | TELEPHONE OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.                                                                                                                                      |
| ▼      | DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.                                                                                                                                           |
| ↗      | TELEPHONE/DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNTED ABOVE COUNTER, SEE ARCHITECTURAL DRAWING FOR SPECIFIC REQUIREMENTS.                                                                                                                       |
| ▼      | TELEPHONE/DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.                                                                                                                                 |
| ⌈      | TELEPHONE/DATA OUTLET, RECESSED FLOOR MOUNTED, WITH 3/4" CONDUIT RUN TO THE NEAREST STUD WALL AND STUBBED OUT FROM WALL 6" ABOVE CEILING, PROVIDE BRASS COVER PLATE AND CARPET FLANGE.                                                                                            |
| ⌈      | TELEVISION OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.                                                                                                                                  |
| ⊕      | DUPLEX RECEPTACLE (AMPERAGE RATING TO MATCH BRANCH CIRCUIT RATING) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.                                                                                                                                         |
| ⊕S     | CONTROLLED DUPLEX RECEPTACLE (AMPERAGE RATING TO MATCH BRANCH CIRCUIT RATING) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE. RECEPTACLE FACE SHALL HAVE MARKING SYMBOL (⌋) TO INDICATE AS CONTROLLED RECEPTACLE.                                          |
| S      | RECEPTACLE FACE SHALL HAVE MARKING SYMBOL (⌋) TO INDICATE AS CONTROLLED RECEPTACLE                                                                                                                                                                                                |
| ⊕      | QUADRUPLX RECEPTACLE (AMPERAGE RATING TO MATCH BRANCH CIRCUIT RATING) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE.                                                                                                                                      |
| ⊕GFI   | DUPLEX RECEPTACLE (AMPERAGE RATING TO MATCH BRANCH CIRCUIT RATING) WITH GROUND FAULT CIRCUIT INTERRUPTER, MOUNT AT 18" A.F.F. TO CENTER LINE OF OUTLET. UNLESS NOTED OTHERWISE.                                                                                                   |
| ⊕WP    | WEATHER RESISTANT RECEPTACLE PER NEC-406.9(B) WITH IN-USE, DUTY RATED COVER.                                                                                                                                                                                                      |
| ⊕      | DUPLEX RECEPTACLE (AMPERAGE RATING TO MATCH BRANCH CIRCUIT RATING) MOUNTED ABOVE COUNTER SEE ARCHITECTUAL DRAWINGS FOR SPECIFIC REQUIREMENTS.                                                                                                                                     |
| ⊕      | DUPLEX RECEPTACLE (AMPERAGE RATING TO MATCH BRANCH CIRCUIT RATING) WITH DEDICATED GROUND, MOUNT AT 18" A.F.F. TO CENTERLINE OF OUTLET UNLESS OTHERWISE NOTED.                                                                                                                     |
| ⊕      | DUPLEX RECEPTACLE (AMPERAGE RATING TO MATCH BRANCH CIRCUIT RATING) WITH ISOLATED GROUND, MOUNT AT 18" A.F.F. TO CENTERLINE OF OUTLET UNLESS OTHERWISE NOTED.                                                                                                                      |
| ⊕      | QUADRUPLX RECEPTACLE (AMPERAGE RATING TO MATCH BRANCH CIRCUIT RATING) WITH ISOLATED GROUND, MOUNT AT 18" A.F.F. TO CENTERLINE OF OUTLET UNLESS OTHERWISE NOTED.                                                                                                                   |
| ⊕      | DUPLEX RECEPTACLE (AMPERAGE RATING TO MATCH BRANCH CIRCUIT RATING), RECESSED FLOOR MOUNTED. PROVIDE BRASS COVER PLATE AND CARPET FLANGE.                                                                                                                                          |
| ⊕      | QUADRUPLX RECEPTACLE (AMPERAGE RATING TO MATCH BRANCH CIRCUIT RATING), RECESSED FLOOR MOUNTED. PROVIDE BRASS COVER PLATE AND CARPET FLANGE.                                                                                                                                       |
| ⊕      | DUPLEX RECEPTACLE (AMPERAGE RATING TO MATCH BRANCH CIRCUIT RATING), CEILING MOUNTED.                                                                                                                                                                                              |
| ⊕      | SPECIAL-PURPOSE RECEPTACLE                                                                                                                                                                                                                                                        |
| ⊕      | JUNCTION BOX                                                                                                                                                                                                                                                                      |
| ⊕      | SINGLE GANG JUNCTION BOX FOR POWER CONNECTION TO MODULAR FURNITURE SYSTEM. INSTALL IN EXACT MANNER AS DIRECTED BY FURNITURE SUPPLIER.                                                                                                                                             |
| ⊕      | DOUBLE GANG JUNCTION BOX FOR TELEPHONE/DATA CONNECTION TO MODULAR FURNITURE SYSTEM. INSTALL IN EXACT MANNER AND LOCATION AS DIRECTED BY FURNITURE SUPPLIER. EXTEND (2) 3/4" EMPTY CONDUITS FROM JUNCTION BOX TO ABOVE CEILING AND TERMINATE WITH INSULATING BUSHING 6" FROM WALL. |
| ⊕P     | FLOOR POKE THRU FOR POWER (CONNECTION TO MODULAR FURNITURE SYSTEM) INSTALL IN EXACT MANNER AS DIRECTED BY FURNITURE SUPPLIER.                                                                                                                                                     |
| ⊕T/D   | FLOOR POKE THRU FOR TELEPHONE/DATA CONNECTION TO MODULAR FURNITURE SYSTEM. INSTALL IN EXACT MANNER AND LOCATION AS DIRECTED BY FURNITURE SUPPLIER. EXTEND (2) 3/4" EMPTY CONDUITS FROM JUNCTION BOX TO ABOVE CEILING AND TERMINATE WITH INSULATING BUSHING 6" FROM WALL.          |
| ⊕      | TELEPHONE/DATA/POWER POLE FOR TELEPHONE/DATA/POWER CONNECTION TO MODULAR FURNITURE 8 WIRE SYSTEM (SEE DETAIL THIS SHEET). INSTALL IN EXACT MANNER AND LOCATION AS DIRECTED BY FURNITURE SUPPLIER, WIREMOLD CATALOG # 250TP-4D W/IVORY FINISH.                                     |
| ⊕      | SPECIAL PURPOSE RECEPTACLE MOUNTED BELOW RAISE FLOOR.                                                                                                                                                                                                                             |
| ⊕      | EXHAUST FAN. SEE MECHANICAL DRAWINGS FOR SPECIFICATIONS.                                                                                                                                                                                                                          |
| \$     | SINGLE POLE, 20 AMP. SWITCH. MOUNT 42" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED.                                                                                                                                                                                     |
| \$3    | 3-WAY, 20 AMP. SWITCH. MOUNT 42" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED.                                                                                                                                                                                           |
| \$D    | SINGLE POLE, 20 AMP. SWITCH WITH DIMMER. MOUNT 42" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED.                                                                                                                                                                         |
| \$M    | MOTOR RATED SWITCH                                                                                                                                                                                                                                                                |
| \$     | TWO POLE, 30 AMP SWITCH. MOUNT ADJACENT EQUIPMENT TO BE CONTROLLED.                                                                                                                                                                                                               |
| \$     | FACTORY MOUNTED DISCONNECT/STARTER (SEE MECHANICAL SCHEDULE)                                                                                                                                                                                                                      |
| ⊕A     | FUSIBLE DISCONNECT SWITCH A = POLES, B= FRAME SIZE, C= FUSE RATING                                                                                                                                                                                                                |
| ⊕A     | FUSIBLE DISCONNECT SWITCH TYPE COMBINATION MOTOR STARTER A = POLES, B= NEMA SIZE, C= FUSE RATING                                                                                                                                                                                  |
| ⊕      | GROUNDING ELECTRODE & CONDUCTOR SYSTEM                                                                                                                                                                                                                                            |
| ⊕      | TRANSFORMER                                                                                                                                                                                                                                                                       |
| ⊕      | METER                                                                                                                                                                                                                                                                             |
| ⊕      | ELECTRICAL PANELBOARD                                                                                                                                                                                                                                                             |
| ⊕      | LIGHTING CONTROL PANEL                                                                                                                                                                                                                                                            |
| ⊕      | TELEPHONE WOOD BACKBOARD                                                                                                                                                                                                                                                          |
| WP     | WEATHERPROOF                                                                                                                                                                                                                                                                      |
| T/C    | TIME CLOCK                                                                                                                                                                                                                                                                        |
| RE     | RELOCATED                                                                                                                                                                                                                                                                         |
| E      | EXISTING TO REMAIN                                                                                                                                                                                                                                                                |
| A.F.F. | ABOVE FINISH FLOOR                                                                                                                                                                                                                                                                |
| VP     | VAPOR PROOF                                                                                                                                                                                                                                                                       |

GENERAL NOTE:  
IT IS ACCEPTABLE TO PROVIDE A BLANK COVER PLATE ON ANY UNUSED JUNCTION BOX IN THE FIELD.

ELECTRICAL SPECIFICATIONS

PART 1 — GENERAL

- A. THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED. CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND APPLICABLE SPECIFICATIONS. IF A PROBLEM IS ENCOUNTERED IN COMPLYING WITH THIS REQUIREMENT, CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER AS SOON AS POSSIBLE AFTER DISCOVERY OF THE PROBLEM AND BRANCH CIRCUIT WIRING AND SERVICES (#6 AND LARGER) SHALL BE COLOR CODED AT ALL PULL POINTS (EXCEPT LB'S OR LBD'S) USING COLORED MARKERS OR PLASTIC TAPE MANUFACTURED FOR THE PURPOSE.
- B. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BID AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATIONS INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF.
- C. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE (AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION) AND ALL CODES AND ORDINANCES OF THE AUTHORITY HAVING JURISDICTION. THE SPECIFICATION, CODES AND STANDARDS LISTED BELOW ARE UTILIZED IN THIS PROJECT.
- D. DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION OF ALL EQUIPMENT. CONFIRM WITH OWNER'S REPRESENTATIVE.
- E. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
- F. CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FROM A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.
- G. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THERE BY.
- H. ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- I. CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT.
- J. THE TERM "PROVIDE" USED IN THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS INDICATES THE CONTRACTOR SHALL FURNISH AND INSTALL.

PART 2 — PRODUCTS

- A. MINIMUM WIRE SIZE SHALL BE #12 A.W.G. UNLESS OTHERWISE NOTED.
- B. ALL CONDUCTORS SHALL BE COPPER WITH "THHN-THWN" INSULATION UNLESS OTHERWISE NOTED.
- C. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
- D. ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE. CIRCUIT BREAKERS USED AS SWITCHES IN FLUORESCENT OR HID LIGHTING CIRCUITS SHALL BE LISTED AND MARKED "SWD".
- E. ALL CIRCUIT BREAKERS FEEDING MECHANICAL EQUIPMENT SHALL BE HACR TYPE CIRCUIT BREAKERS.
- F. PANELBOARDS AND LOAD CENTERS:
1. CURRENT CARRYING BUSES SHALL BE COPPER. GROUND BUS BARS SHALL BE COPPER.
2. ALL CIRCUIT BREAKERS INSTALLED IN PANELBOARDS SHALL BE BOLT ON.
3. ALL CIRCUIT BREAKERS INSTALLED IN LOAD CENTERS SHALL BE PLUG IN.
4. ALL CIRCUIT BREAKERS FEEDING MECHANICAL EQUIPMENT SHALL BE HACR TYPE CIRCUIT BREAKERS.
5. A.I.C. RATINGS SHALL BE AS INDICATED ON PANELBOARD SCHEDULES.
6. PANELBOARD ENCLOSURES SHALL BE FURNISHED WITHOUT PRE-PUNCHED CONCENTRIC KNOCKOUTS.
7. ALL PANELBOARDS SHALL BE FURNISHED WITH PLASTIC LAMINATE NAMEPLATES WITH 1/4" ENGRAVED LETTERING FOR PANEL IDENTIFICATION.
8. ALL PANELBOARDS SHALL BE PROVIDED WITH TYPE-WRITTEN DIRECTORY OF BRANCH CIRCUIT DESIGNATIONS.
- F. DISCONNECT SWITCHES SHALL BE H.P. RATED, HEAVY DUTY, QUICK-MAKE, QUICK-BREAK ENCLOSURES AS REQUIRED BY EXPOSURE.
- G. MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC AS INDICATED, WITH OVERLOAD RELAYS IN EACH HOT LEG.
- H. RIGID NONMETALLIC CONDUIT SHALL BE SCHEDULE 40 PVC.
- I. WIRING DEVICES (GENERAL PURPOSE RECEPTACLES AND WALL SWITCHES) SHALL BE WHITE COLOR UNLESS OTHERWISE NOTED. FACEPLATES SHALL BE SMOOTH, WHITE NYLON.
- J. PROVIDE ARC-FAULT CIRCUIT INTERRUPTER PROTECTION AS REQUIRED BY NEC ARTICLE 210.12.
- K. PROVIDE TAMPER RESISTANT RECEPTACLES AS REQUIRED BY NEC ARTICLE 406.12.
- L. 15 AND 20 AMPERE, 125 VOLT AND 250 VOLT RECEPTACLES INSTALLED IN A WET LOCATION SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF WHETHER OR NOT THE ATTACHMENT PLUG CAP IS INSERTED. ALL 15 AND 20 AMPERE, 125 AND 250 VOLT NON-LOCKING RECEPTACLES SHALL BE LISTED WEATHER-RESISTANT TYPE.

PART 3 — EXECUTION

- A. COLOR CODING OF CONDUCTORS SHALL BE AS FOLLOWS:
1. 120/240 VOLTS, 1 PHASE, 3-WIRE SYSTEM: UNGROUNDED CONDUCTORS: 1 BLACK AND 1 RED GROUNDED (NEUTRAL) CONDUCTOR: WHITE. GROUNDING CONDUCTORS SHALL BE GREEN.
2. BRANCH CIRCUIT WIRING AND SERVICES (#6 AND LARGER) SHALL BE COLOR CODED AT ALL PULL POINTS (EXCEPT LB'S OR LBD'S) USING COLORED MARKERS OR PLASTIC TAPE MANUFACTURED FOR THE PURPOSE.
- B. WIRING METHODS
1. ALL CONDUCTORS SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT) UNLESS OTHERWISE NOTED OR SPECIFICALLY PROHIBITED BY THE AUTHORITY HAVING JURISDICTION. ALL FITTINGS AND COUPLINGS FOR EMT CONDUIT SHALL BE ALL STEEL RAIN TIGHT COMPRESSION TYPE OR ALL STEEL CONCRETE TIGHT SET SCREW TYPE.
2. SCHEDULE 40 PVC CONDUIT, WITH FITTINGS AND COUPLINGS APPROPRIATE FOR THE USE, SHALL BE INSTALLED UNDERGROUND OR BELOW SLABS ON GRADE.
3. ELECTRICAL NONMETALLIC TUBING (EMT), WITH FITTINGS AND COUPLINGS APPROPRIATE FOR THE USE IS ACCEPTABLE FOR USE WITH INTERIOR BRANCH CIRCUIT WIRING FOR CIRCUITS 20 AMPS OR LESS AND CONCEALED IN WALLS OR ABOVE SUSPENDED CEILING AND AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
4. TYPE MC (METAL CLAD) CABLE WITH ALUMINUM ARMOR AND INTERNAL GROUND IS ACCEPTABLE FOR USE AS GENERAL BRANCH CIRCUIT WIRING FOR CIRCUITS 20 AMPERES OR LESS AND CONCEALED IN WALLS OR ABOVE SUSPENDED CEILING AND AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
5. TYPE NM (NONMETALLIC SHEATH) CABLE WITH INTERNAL GROUND IS ACCEPTABLE FOR USE AS GENERAL BRANCH CIRCUIT WIRING FOR CIRCUITS 20 AMPERES OR LESS AND CONCEALED IN WALLS OR ABOVE CEILING AND AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- C. ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE LATEST EDITION OF THE N.E.C. AND LOCAL CODES.
- D. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/ARCHITECT.
- E. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- F. THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE COMPANIES, AND SHALL BE FULLY COORDINATED WITH THEM PRIOR TO COMMENCEMENT OF WORK.
- G. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES, AND WIRING DEVICES, FOR ALL OUTLETS AS INDICATED.
- H. MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SUCH AS APPEAR ON THE UL LIST OF APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF NEC, NEMA, AND IECE.
- I. SUBSTITUTIONS:
1. IF ANY PROPOSED EQUIPMENT IS OF LARGER SIZE OR THERE ARE ANY CONTINGENT DIFFERENCES WHICH REQUIRE ADDITIONAL CONTROLS, EQUIPMENT OR APPARATUS ALL ASSOCIATED CHANGES TO THE BUILDING SYSTEMS NECESSARY TO ACCOMMODATE THESE CHANGES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
2. "TO-SCALE" FLOOR PLAN DRAWINGS OR RISER/WIRING DIAGRAMS INDICATING THE PROPOSED CHANGES SHALL BE SUBMITTED ALONG WITH THE OTHER REQUIRED SHOP DRAWINGS.
- J. CONTRACTOR SHALL SUBMIT AT LEAST FIVE (5) SETS OF SHOP DRAWINGS OR CUT SHEETS OF LIGHTING FIXTURES, SWITCHES, AND OTHER ELECTRICAL ITEMS FOR APPROVAL BY ENGINEER/ARCHITECT.
- K. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED OF HIS WORK.
- L. ALL LAY-IN LIGHTING FIXTURES SHALL BE SECURED TO THE SUSPENDED CEILING GRID AT EACH CORNER OR AS REQUIRED BY THE NATIONAL ELECTRIC CODE AND THE FLORIDA BUILDING CODE, SECTION 808. SEE ARCHITECTURAL DRAWINGS FOR DETAIL OF CEILING AND LUMINAIRE SUPPORT.
- M. CONTRACTOR SHALL COORDINATE WITH MECHANICAL DRAWINGS AND PROVIDE ALL NECESSARY CONTROL WIRING.
- N. ALL ELECTRICAL POWER WIRING FOR THE HVAC SYSTEM INCLUDING WIRING THRU LINE VOLTAGE CONTROL DEVICES SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- O. VOLTAGE DROP
1. CONDUCTORS FOR ALL FEEDERS SHALL BE INCREASED FROM SIZES INDICATED ON DRAWINGS TO PREVENT VOLTAGE DROP EXCEEDING 2%.
2. CONDUCTORS FOR ALL BRANCH CIRCUITS SHALL BE INCREASED FROM SIZES INDICATED ON DRAWINGS TO PREVENT VOLTAGE DROP EXCEEDING 3% FROM THE FURTHEST DEVICE.
3. DETERMINING CONDUCTOR SIZES SHALL BE BASED ON 80% LOAD OF THE BREAKER SIZE.
4. FOR DETERMINATION OF WIRE SIZE FOR BID PURPOSES:
- \* INCREASE WIRE BY 1 WIRE SIZE FOR RUNS 60 FT. TO 100 FT.
- \* INCREASE WIRE BY 2 WIRE SIZES FOR RUNS 100 FT. TO 150 FT.
- \* INCREASE WIRE BY 3 WIRE SIZES FOR RUNS FROM 150 FT. TO 230 FT.
- P. PROVIDE CABLE LUGS SIZED FOR THE LINE AND/OR LOAD SIDE FEEDERS AS SCHEDULED FOR ALL SWITCHBOARDS, PANELBOARDS AND DISCONNECTS. WHERE CABLE LUGS ARE NOT AVAILABLE FOR THE SPECIFIC WIRE SIZE AND NUMBER OF SETS SCHEDULED, PROVIDE A TAP BOX ADJACENT TO THE EQUIPMENT WITH "POLARIS" TAPS TO TRANSITION TO CONDUCTORS TO MATCH THE CABLE LUGS AVAILABLE AND THE AMPERE RATING OF THE OVER-CURRENT DEVICE PROTECTING THE FEEDER.
- Q. THE CONTRACTOR SHALL CONFIRM WITH THE ELECTRICAL UTILITY COMPANY ANY AND ALL REQUIREMENTS SUCH AS: METERING EQUIPMENT REQUIREMENTS AND METERING EQUIPMENT LOCATION, TRANSFORMER SIZE AND LOCATION OR SERVICE POINT, CONDUIT ENTRY AND LUG SIZE RESTRICTIONS.
- R. THE CONTRACTOR SHALL SCHEDULE ALL REQUIRED DOWN TIME FOR THE OWNERS CONFIRMATION.
- S. ANY CONFLICTS AND DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK.

700 Briney Avenue Condo

| LIGHTING FIXTURE SCHEDULE                                                                                                                                                       |               |                                |                                             |       |      |               |       |           |             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------------------|---------------------------------------------|-------|------|---------------|-------|-----------|-------------|
| TYPE                                                                                                                                                                            | MANUFACTURER  | CATALOG NUMBER                 | DESCRIPTION                                 | LAMPS |      |               | VOLTS | MOUNTING  | REMARKS     |
|                                                                                                                                                                                 |               |                                |                                             | Qty   | Type | Total Wattage |       |           |             |
| A                                                                                                                                                                               | KIRLIN        | TNT-03175-37                   | FWC APPROVED RECESSED WALL STEP LIGHT       | INCL  | LED  | 4             | UNV   | RECESSED  |             |
| B                                                                                                                                                                               | LITON         | WD1Q360-BZ-TAM-LVR             | FWC APPROVED 6" SQUARE WALL MOUNT           | INCL  | LED  | 22            | 120   | WALL      |             |
| C                                                                                                                                                                               | LIGHTOLIER    | S6S830K10                      | 6" SQUARE SLIMSURFACE DOWNLIGHT             | INCL  | LED  | 14.2          | 120   | SURFACE   |             |
| D                                                                                                                                                                               | LIGHTOLIER    | S4S830K7                       | 4" SQUARE SLIMSURFACE SHOWER DOWNLIGHT      | INCL  | LED  | 9.5           | 120   | SURFACE   | VAPOR PROOF |
| E                                                                                                                                                                               | BORDON        | 574-25-LED/20-120-SAL-1EM      | 25" LED BATH VANITY LUMINAIRE               | INCL  | LED  | 20            | 120   | WALL      |             |
| F                                                                                                                                                                               | LITON / SORAA | LT538W - SM16FA-07-60D-930-03  | SINGLE CIRCUIT TRACK & GU10 BASE TRACK HEAD | INCL  | LED  | 7.5           | 120   | SURFACE   |             |
| G                                                                                                                                                                               | OSTWIN        | OW-LFMDR-14D2130-NK            | 14" ROUND DINING ROOM CEILING LED LUMINAIRE | INCL  | LED  | 21            | 120   | WALL      |             |
| H                                                                                                                                                                               | DAYBRITE      | 2FXP45L8352DSUNV-DIM-FSK22     | 2X2 LED FLAT PANEL WITH SURFACE MOUNT KIT   | INCL  | LED  | 42            | UNV   | SURFACE   |             |
| J                                                                                                                                                                               | BEGHELLI      | BS100LED-4-HT-MO-WT35-120-277V | 4' LED VAPORPROOF                           | INCL  | LED  | 60            | UNV   | SURFACE   |             |
| X                                                                                                                                                                               | BEGHELLI      | PX-R-SA-AT                     | UNIVERSAL LED EXIT WITH BATTERY & AUTOTEST  | INCL  | LED  | 2             | UNV   | UNIVERSAL |             |
| LIGHTING SCHEDULE NOTES:                                                                                                                                                        |               |                                |                                             |       |      |               |       |           |             |
| 1. FOR QUOTES CONTACT SESCO LIGHTING FT. LAUDERDALE 954-474-9888 or fltquotes@sescolighting.com. FOR QUESTIONS CONTACT JERRY SCHMITZ 561-906-9146 or jschmitz@sescolighting.com |               |                                |                                             |       |      |               |       |           |             |
| 2. NO SUBSTITUTIONS ALLOWED.                                                                                                                                                    |               |                                |                                             |       |      |               |       |           |             |

ELECTRICAL SHEET INDEX

| SHEET# | DESCRIPTION                      |
|--------|----------------------------------|
| E0.1   | ELECTRICAL NOTES, LEGEND & INDEX |
| E1.1   | ELECTRICAL SITE PLAN             |
| E3.1   | ELECTRICAL PLAN 1ST FLOOR        |
| E3.2   | ELECTRICAL PLAN 2ND FLOOR        |
| E3.3   | ELECTRICAL PLAN 3RD FLOOR        |
| E3.4   | ELECTRICAL PLAN ROOF DECK        |
| E5.1   | ELECTRICAL RISER DIAGRAM         |
| E6.1   | ELECTRICAL PANEL SCHEDULES       |

RNA

REX NICHOLS ARCHITECTS  
1800 SOUTH FEDERAL HWY. STE 970  
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REX NICHOLS AIA  
AR007415

PROPOSED TOWNHOUSES ADDRESS 700 BRINY  
AV. POMPANO BEACH, 33062

OWNER : CARLO TREE LP  
GREENPARK GROUP  
5600 N Federal Highway  
Fort Lauderdale - FL - 33308

BLDG. DEPT. COMMENTS 1/17/20  
PROJECT NUMBER 4/2018

ELECTRICAL NOTES

DESIGNED BY:  
Alex Penna & Rex Nichols  
DATE:  
JUNE 12TH 2019

ISSUED FOR

- REVIEW & COMMENTS  
BIDDING  
NOT FOR CONSTRUCTION  
PERMIT  
CONSTRUCTION

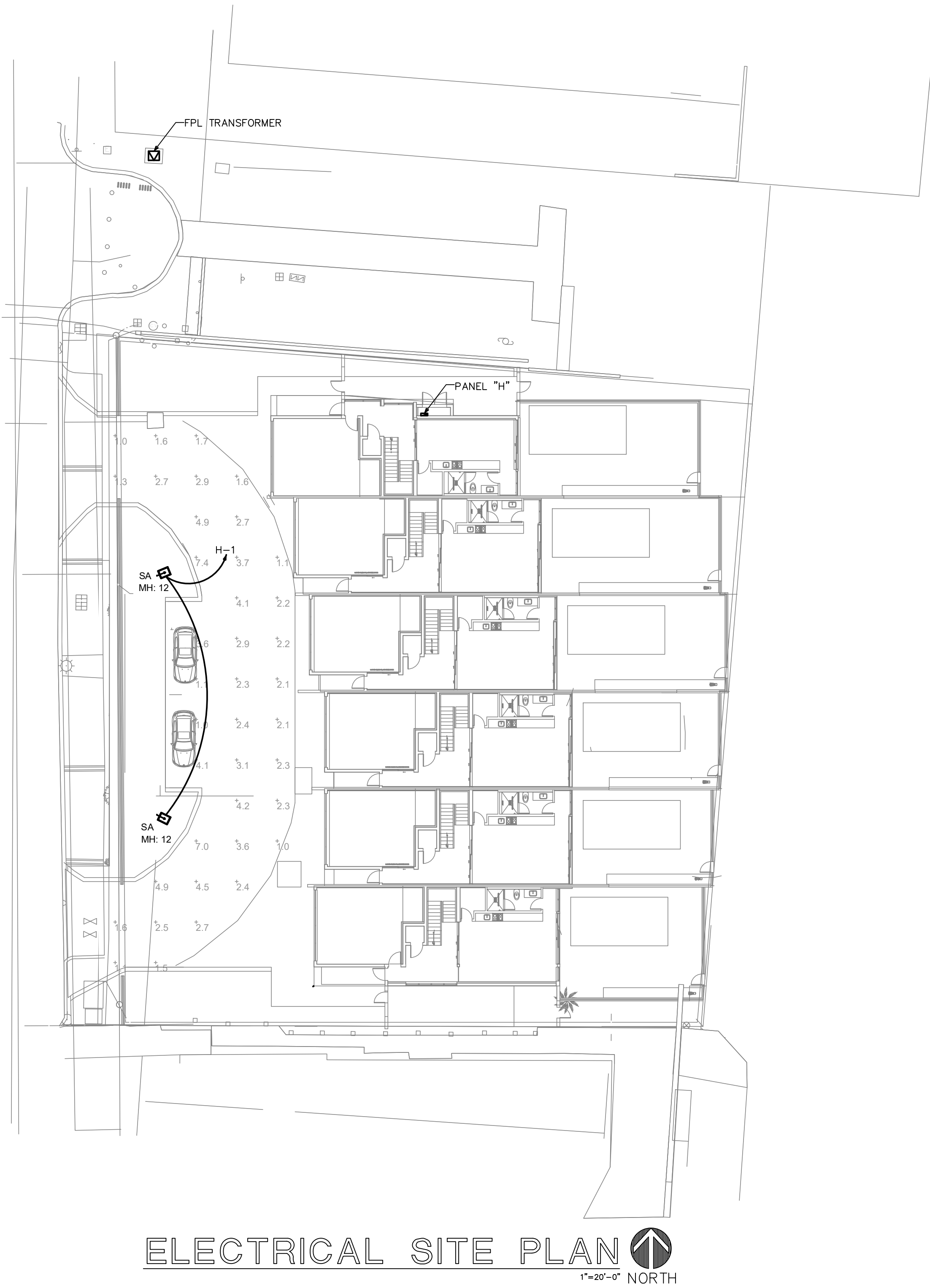
E0.1

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|                                                                                       |                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ISSUED FOR PERMIT                                                                     |                                                                                                                                                                                   |
| ISSUED FOR CONSTRUCTION                                                               |                                                                                                                                                                                   |
| KAMM CONSULTING PROJECT #:                                                            | 2019-0577                                                                                                                                                                         |
| PROJECT MANAGER:                                                                      | Rick Gonzalez                                                                                                                                                                     |
|  | 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |
| 02-05-20                                                                              |                                                                                                                                                                                   |
| date                                                                                  |                                                                                                                                                                                   |
| signed                                                                                |                                                                                                                                                                                   |





| Luminaire Schedule                      |             |       |                                                      |             |       |         |         |       |             |
|-----------------------------------------|-------------|-------|------------------------------------------------------|-------------|-------|---------|---------|-------|-------------|
| Project: 700 BRINEY AVE SITE 10-23-2019 |             |       |                                                      |             |       |         |         |       |             |
| Symbol                                  | Qty         | Label | Description                                          | Lumens/Lamp | LLD   | LDD     | BF      | LLF   | Total Watts |
|                                         | 2           | SA    | GARDCO ECF-S-32L-1_2A-NW-G2-3-HIS POLE MOUNT 12' AFG | N.A.        | 0.900 | 0.900   | 1.000   | 0.810 | 243.2       |
| Calculation Summary                     |             |       |                                                      |             |       |         |         |       |             |
| Project: 700 BRINEY AVE SITE 10-23-2019 |             |       |                                                      |             |       |         |         |       |             |
| Label                                   | CalcType    | Units | Avg                                                  | Max         | Min   | Avg/Min | Max/Min |       |             |
| SITE & PARKING_Planar                   | Illuminance | Fc    | 2.75                                                 | 7.4         | 1.0   | 2.75    | 7.40    |       |             |

ISSUED FOR PERMIT  
ISSUED FOR CONSTRUCTION

KAMM CONSULTING PROJECT #: 2019-0577  
PROJECT MANAGER: Rick Gonzalez

KAMM Consulting

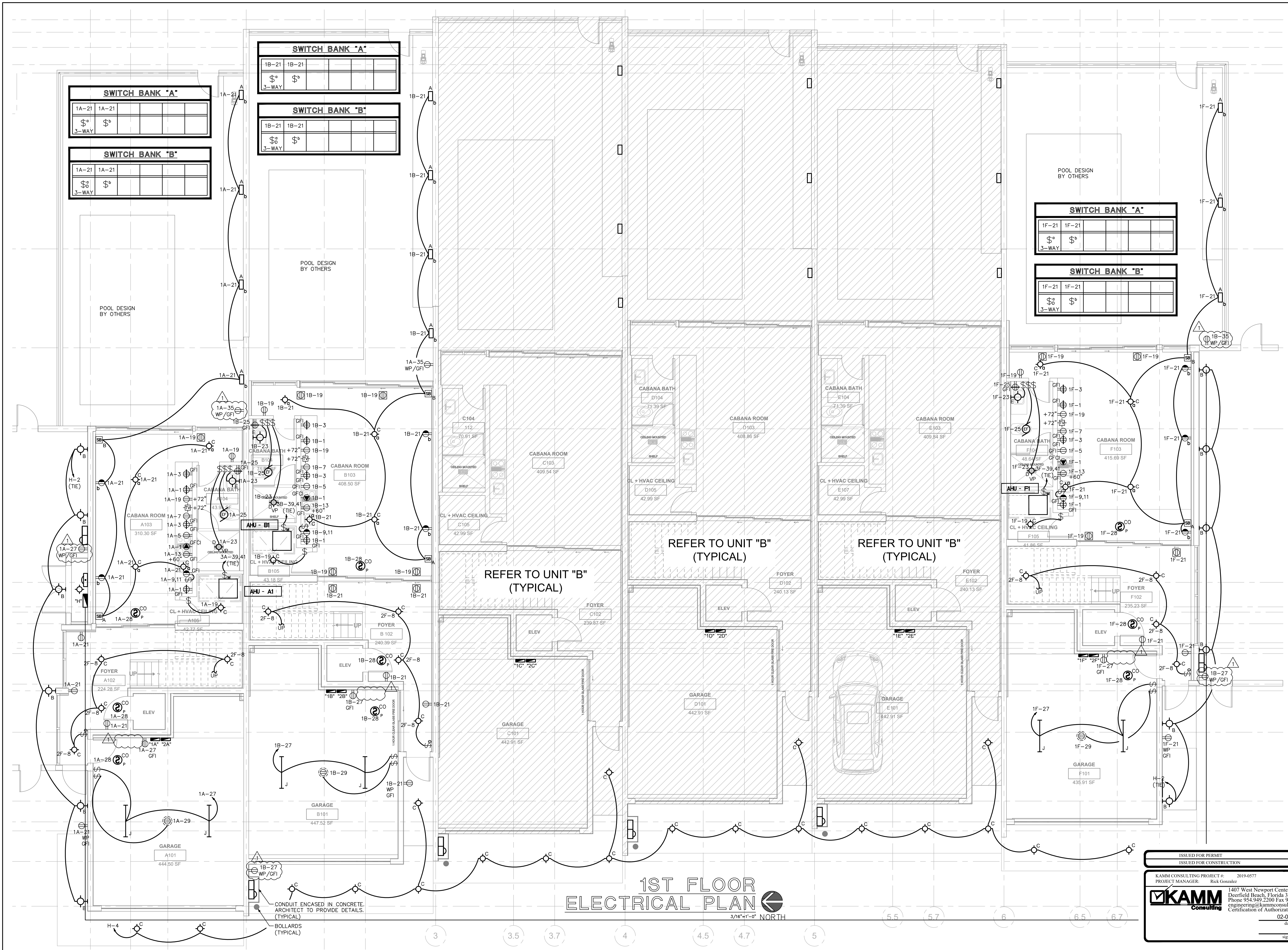
1407 West Newport Center Drive  
Deerfield Beach, Florida 33442  
Phone 954.949.2200 Fax 954.949.2201  
engineering@kammconsulting.com  
Certification of Authorization #R189

02-05-20  
date  
signed



## 1ST FLOOR ELECTRICAL PLAN

3/16"=1'-0" NORTH



|                                                                                                                                                                                   |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| ISSUED FOR PERMIT                                                                                                                                                                 |               |
| ISSUED FOR CONSTRUCTION                                                                                                                                                           |               |
| KAMM CONSULTING PROJECT #:                                                                                                                                                        | 2019-0577     |
| PROJECT MANAGER:                                                                                                                                                                  | Rick Gonzalez |
|                                                                                                                                                                                   |               |
| 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |               |
| 02-05-20                                                                                                                                                                          | date          |
| signed                                                                                                                                                                            |               |



| SWITCH BANK "A" |       |       |       |       |      |
|-----------------|-------|-------|-------|-------|------|
| 1A-28           | 1A-28 | 1A-28 | 1A-28 | 1A-28 | 2F-8 |
| \$°             | \$°   | \$°   | \$°   | \$°   | \$°  |

| SWITCH BANK "B" |       |  |  |  |  |
|-----------------|-------|--|--|--|--|
| 1A-34           | 1A-34 |  |  |  |  |
| \$°             | \$°   |  |  |  |  |

| SWITCH BANK "C" |       |  |  |  |  |
|-----------------|-------|--|--|--|--|
| 1A-34           | 1A-34 |  |  |  |  |
| \$°             | \$°   |  |  |  |  |

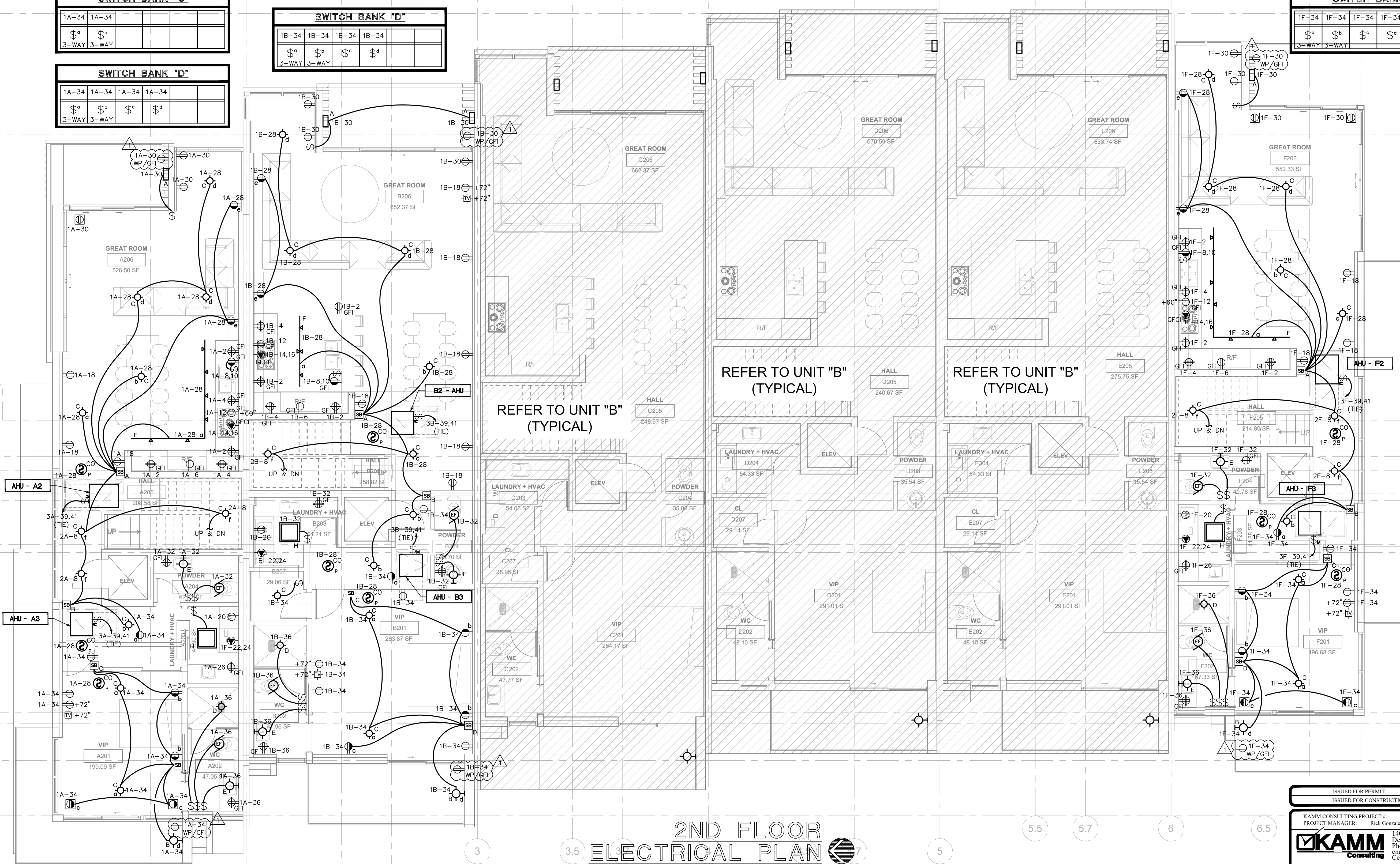
| SWITCH BANK "D" |       |       |       |  |  |
|-----------------|-------|-------|-------|--|--|
| 1A-34           | 1A-34 | 1A-34 | 1A-34 |  |  |
| \$°             | \$°   | \$°   | \$°   |  |  |

| SWITCH BANK "A" |       |       |       |       |      |
|-----------------|-------|-------|-------|-------|------|
| 1B-28           | 1B-28 | 1B-28 | 1B-28 | 1B-28 | 2F-8 |
| \$°             | \$°   | \$°   | \$°   | \$°   | \$°  |

| SWITCH BANK "B" |       |  |  |  |  |
|-----------------|-------|--|--|--|--|
| 1B-34           | 1B-34 |  |  |  |  |
| \$°             | \$°   |  |  |  |  |

| SWITCH BANK "C" |       |  |  |  |  |
|-----------------|-------|--|--|--|--|
| 1B-34           | 1B-34 |  |  |  |  |
| \$°             | \$°   |  |  |  |  |

| SWITCH BANK "D" |       |       |       |  |  |
|-----------------|-------|-------|-------|--|--|
| 1B-34           | 1B-34 | 1B-34 | 1B-34 |  |  |
| \$°             | \$°   | \$°   | \$°   |  |  |



2ND FLOOR  
ELECTRICAL PLAN  
3/16"=1'-0" NORTH

|                                                                                                                                                                                   |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| ISSUED FOR PERMIT                                                                                                                                                                 |               |
| ISSUED FOR CONSTRUCTION                                                                                                                                                           |               |
| KAMM CONSULTING PROJECT #:                                                                                                                                                        | 2019-0577     |
| PROJECT MANAGER:                                                                                                                                                                  | Rick Gonzalez |
| 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |               |
| 02-05-20                                                                                                                                                                          |               |
| date                                                                                                                                                                              |               |
| signed                                                                                                                                                                            |               |



R  
Q  
P  
O  
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E  
D  
C  
B  
A

| SWITCH BANK "A" |       |  |  |  |
|-----------------|-------|--|--|--|
| 2A-9            | 2A-9  |  |  |  |
| \$°             | \$°   |  |  |  |
| 3-WAY           | 3-WAY |  |  |  |

| SWITCH BANK "B" |      |      |  |  |
|-----------------|------|------|--|--|
| 2A-5            | 2A-5 | 2A-5 |  |  |
| \$°             | \$°  | \$°  |  |  |
|                 |      |      |  |  |

| SWITCH BANK "C" |       |       |       |       |
|-----------------|-------|-------|-------|-------|
| 2A-13           | 2A-13 | 2A-13 | 2A-13 | 2A-13 |
| \$°             | \$°   | \$°   | \$°   | \$°   |
|                 |       |       |       |       |

| SWITCH BANK "D" |       |      |  |  |
|-----------------|-------|------|--|--|
| 2A-9            | 2A-9  | 2A-9 |  |  |
| \$°             | \$°   | \$°  |  |  |
| 3-WAY           | 3-WAY |      |  |  |

| SWITCH BANK "A" |       |  |  |  |
|-----------------|-------|--|--|--|
| 2B-9            | 2B-9  |  |  |  |
| \$°             | \$°   |  |  |  |
| 3-WAY           | 3-WAY |  |  |  |

| SWITCH BANK "B" |      |      |  |  |
|-----------------|------|------|--|--|
| 2B-5            | 2B-5 | 2B-5 |  |  |
| \$°             | \$°  | \$°  |  |  |
|                 |      |      |  |  |

| SWITCH BANK "C" |       |  |  |  |
|-----------------|-------|--|--|--|
| 2B-13           | 2B-13 |  |  |  |
| \$°             | \$°   |  |  |  |
|                 |       |  |  |  |

| SWITCH BANK "D" |       |      |  |  |
|-----------------|-------|------|--|--|
| 2B-9            | 2B-9  | 2B-9 |  |  |
| \$°             | \$°   | \$°  |  |  |
| 3-WAY           | 3-WAY |      |  |  |

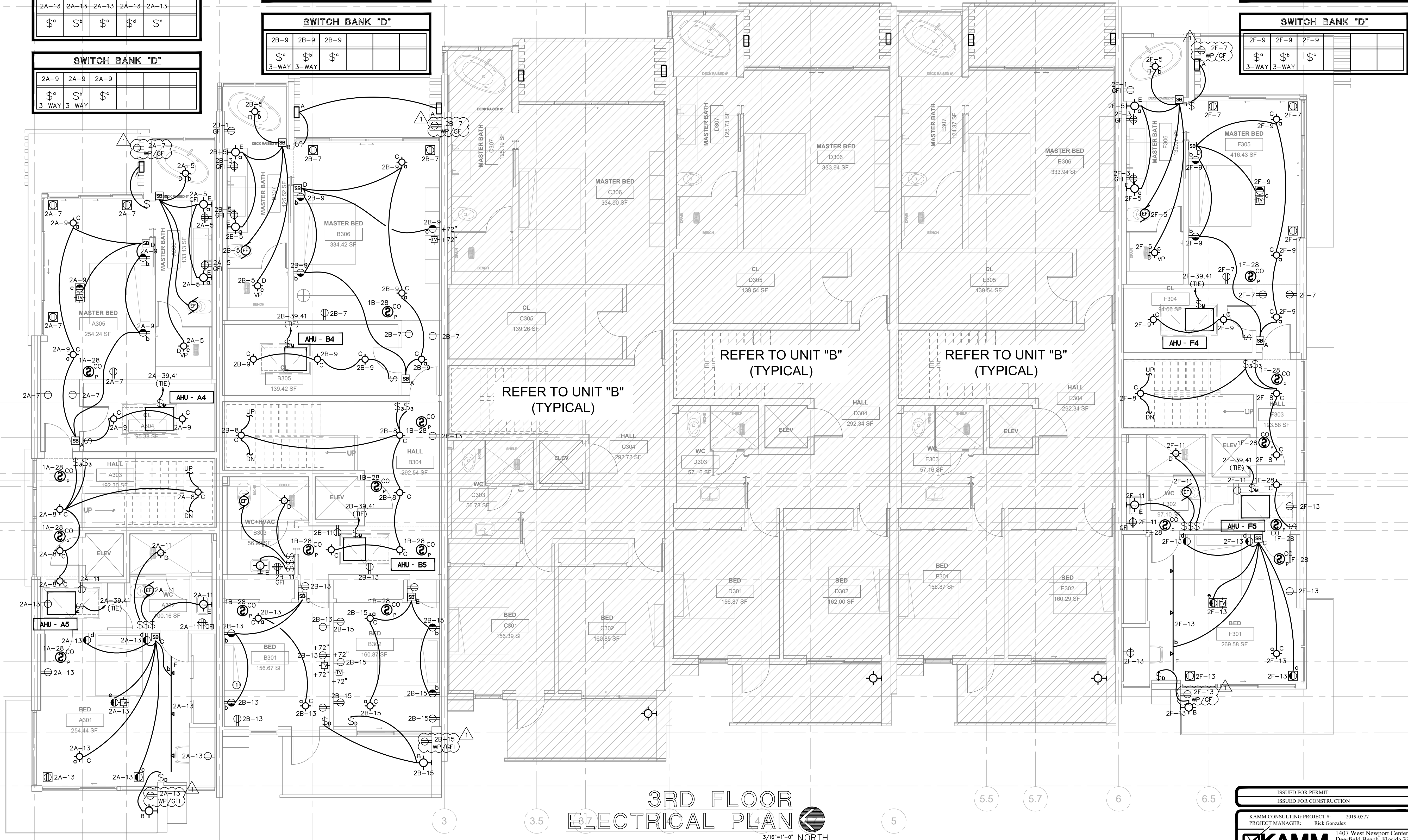
| SWITCH BANK "E" |       |  |  |  |
|-----------------|-------|--|--|--|
| 2B-15           | 2B-15 |  |  |  |
| \$°             | \$°   |  |  |  |
|                 |       |  |  |  |

| SWITCH BANK "A" |       |  |  |  |
|-----------------|-------|--|--|--|
| 2F-9            | 2F-9  |  |  |  |
| \$°             | \$°   |  |  |  |
| 3-WAY           | 3-WAY |  |  |  |

| SWITCH BANK "B" |      |      |  |  |
|-----------------|------|------|--|--|
| 2F-5            | 2F-5 | 2F-5 |  |  |
| \$°             | \$°  | \$°  |  |  |
|                 |      |      |  |  |

| SWITCH BANK "C" |       |       |       |       |
|-----------------|-------|-------|-------|-------|
| 2F-13           | 2F-13 | 2F-13 | 2F-13 | 2F-13 |
| \$°             | \$°   | \$°   | \$°   | \$°   |
|                 |       |       |       |       |

| SWITCH BANK "D" |       |      |  |  |
|-----------------|-------|------|--|--|
| 2F-9            | 2F-9  | 2F-9 |  |  |
| \$°             | \$°   | \$°  |  |  |
| 3-WAY           | 3-WAY |      |  |  |



3RD FLOOR  
ELECTRICAL PLAN  
3/16"=1'-0" NORTH

|                                                                                                                                                                                   |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| ISSUED FOR PERMIT                                                                                                                                                                 |               |
| ISSUED FOR CONSTRUCTION                                                                                                                                                           |               |
| KAMM CONSULTING PROJECT #:                                                                                                                                                        | 2019-0577     |
| PROJECT MANAGER:                                                                                                                                                                  | Rick Gonzalez |
| <b>KAMM Consulting</b>                                                                                                                                                            |               |
| 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |               |
| 02-05-20                                                                                                                                                                          | date          |
|                                                                                                                                                                                   | signed        |

RNA

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OWNER : CARLO TREE LP  
GREENPARK GROUP  
5600 N Federal Highway  
Fort Lauderdale - FL - 33308

BLDG. DEPT. COMMENTS 1/17/20  
PROJECT NUMBER 4/2018

3RD FLOOR  
ELECTRICAL PLAN

DESIGNED BY:  
Alex Penna & Rex Nichols

DATE:  
JUNE 12TH 2019

ISSUED FOR  
REVIEW & COMMENTS  
BIDDING  
NOT FOR CONSTRUCTION  
PERMIT  
CONSTRUCTION

E3.3

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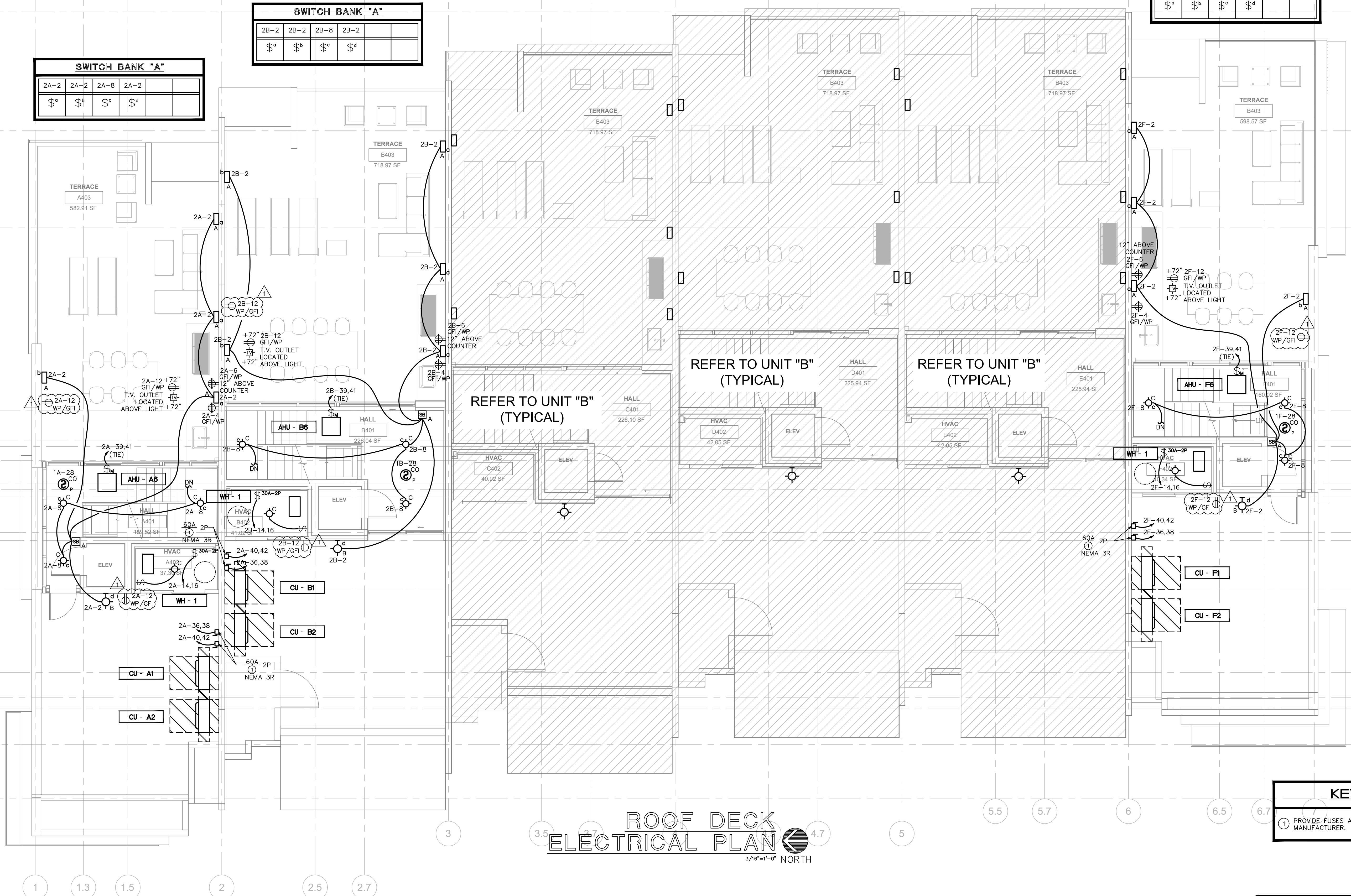
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| SWITCH BANK "A" |                 |                 |                 |  |
|-----------------|-----------------|-----------------|-----------------|--|
| 2A-2            | 2A-2            | 2A-8            | 2A-2            |  |
| \$ <sup>a</sup> | \$ <sup>b</sup> | \$ <sup>c</sup> | \$ <sup>d</sup> |  |

| SWITCH BANK "A" |                 |                 |                 |  |
|-----------------|-----------------|-----------------|-----------------|--|
| 2B-2            | 2B-2            | 2B-8            | 2B-2            |  |
| \$ <sup>a</sup> | \$ <sup>b</sup> | \$ <sup>c</sup> | \$ <sup>d</sup> |  |

| SWITCH BANK "A" |                 |                 |                 |  |
|-----------------|-----------------|-----------------|-----------------|--|
| 2F-2            | 2F-2            | 2F-8            | 2F-2            |  |
| \$ <sup>a</sup> | \$ <sup>b</sup> | \$ <sup>c</sup> | \$ <sup>d</sup> |  |



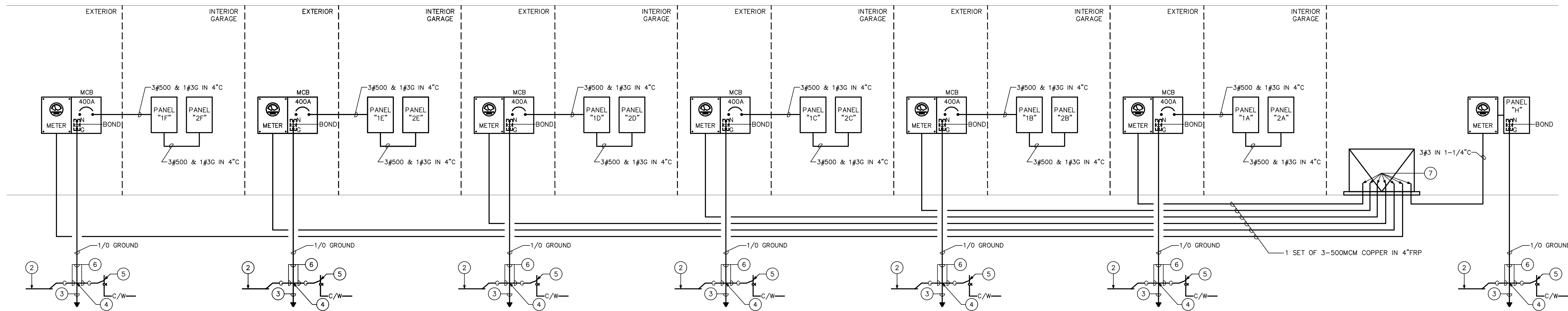
ROOF DECK  
ELECTRICAL PLAN  
3/16"=1'-0" NORTH

KEY NOTES

1 PROVIDE FUSES AS RECOMMENDED BY EQUIPMENT MANUFACTURER.

|                            |                                                                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ISSUED FOR PERMIT          |                                                                                                                                                                                   |
| ISSUED FOR CONSTRUCTION    |                                                                                                                                                                                   |
| KAMM CONSULTING PROJECT #: | 2019-0577                                                                                                                                                                         |
| PROJECT MANAGER:           | Rick Gonzalez                                                                                                                                                                     |
| <b>KAMM Consulting</b>     | 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |
|                            | 02-05-20                                                                                                                                                                          |
|                            | date                                                                                                                                                                              |
|                            | signed                                                                                                                                                                            |





## ELECTRICAL RISER DIAGRAM

NOT TO SCALE

## GENERAL NOTE

ALL EXTERIOR PANELS TO BE NEMA 4X STAINLESS STEEL.

## KEY NOTES

- NOT USED.
- ELECTRICALLY CONTINUOUS STEEL REINFORCING BAR (CR) IN BOTTOM OF BUILDING FOUNDATION. IN DIRECT CONTACT WITH EARTH.
- 10 FT. LONG x 3/4" DIAMETER COPPER CLAD DRIVEN GROUND ELECTRODE.
- HEAVY DUTY BRONZE GROUND CLAMP APPROVED FOR APPLICATION.
- MAKE CONNECTION TO METALLIC COLD WATER ENTRANCE PIPE AFTER FIRST VALVE WITH HEAVY DUTY BRONZE GROUND CLAMP.
- 1#1/0 GROUNDING ELECTRODE CONDUCTOR IN 1" SCHEDULE 40 PVC CONDUIT.
- TERMINATE CONDUITS IN EXACT MANNER AND LOCATION AS REQUIRED BY UTILITY COMPANY. LEAVE 10 FT SLACK CONDUCTOR PER CONDUCTOR FOR EXTENSION AND CONNECTION FOR UTILITY COMPANY.

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ISSUED FOR CONSTRUCTION

|                            |                                                                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| KAMM CONSULTING PROJECT #: | 2019-0577                                                                                                                                                                         |
| PROJECT MANAGER:           | Rick Gonzalez                                                                                                                                                                     |
|                            | 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |
| 02-05-20                   | date                                                                                                                                                                              |
|                            | signed                                                                                                                                                                            |

BLDG. DEPT.  
COMMENTS 1/17/20  
PROJECT NUMBER 4/2018

## RISER DIAGRAM

DESIGNED BY:  
Alex Penna & Rex Nichols  
DATE:  
JUNE 12TH 2019

## ISSUED FOR

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E5.1

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| 400 AMP MAIN LUGS ONLY WITH FEED THRU LUGS                 |      |      |        |       |      |       |             |       |             | VOLTAGE: 120/240V, 1ø, 3 WIRE |      |      |                                |                               |                             |  |  |  |  |
|------------------------------------------------------------|------|------|--------|-------|------|-------|-------------|-------|-------------|-------------------------------|------|------|--------------------------------|-------------------------------|-----------------------------|--|--|--|--|
| SPEC: SQUARE D TYPE "OO-LOADCENTER" OR APPROVED EQUIVALENT |      |      |        |       |      |       |             |       |             |                               |      |      |                                |                               |                             |  |  |  |  |
| MOUNTING: RECESSED                                         |      |      |        |       |      |       |             |       |             |                               |      |      |                                |                               |                             |  |  |  |  |
| DESCRIPTION                                                |      | WIRE | GND.   | COND. | TRIP | CRK.  | A PHASE KVA |       | B PHASE KVA |                               | CRK. | TRIP | AIC SYMM: WIRE SIZED           |                               | DESCRIPTION                 |  |  |  |  |
| 1ST FLOOR-APPLIANCE CIRCUIT                                | 2#12 | 1#12 | 3/4"   | 20    | 1    | 1.5   | 1.5         | 1.5   | 1.5         | 2                             | 20   | 3/4" | 1#12                           | 2#12                          | 2ND FLOOR-APPLIANCE CIRCUIT |  |  |  |  |
| 1ST FLOOR-APPLIANCE CIRCUIT                                | 2#12 | 1#12 | 3/4"   | 20    | 3    |       |             | 1.5   | 1.5         | 4                             | 20   | 3/4" | 1#12                           | 2ND FLOOR-APPLIANCE CIRCUIT   |                             |  |  |  |  |
| 1ST FLOOR-REFRIGERATOR                                     | 2#12 | 1#12 | 3/4"   | 20    | 0    | 1.0   | 1.5         | 1.5   | 1.5         | 6                             | 3/4" | 1#12 | 2ND FLOOR-REFRIGERATOR         |                               |                             |  |  |  |  |
| 1ST FLOOR-ICE MAKER                                        | 2#12 | 1#12 | 3/4"   | 20    | 7    |       |             | 1.0   | 1.5         | 8                             | 20   | 3/4" | 1#12                           | 2ND FLOOR-ICE MAKER           |                             |  |  |  |  |
| 1ST FLOOR-DISPOSAL/DISHWASHER                              | 2#12 | 1#12 | 3/4"   | 20    | 9    | 1.5   | 1.5         | 1.5   | 1.5         | 10                            | 2    | 3/4" | 1#12                           | 2ND FLOOR-DISPOSAL/DISHWASHER |                             |  |  |  |  |
| 1ST FLOOR-MICROWAVE                                        | 2#12 | 1#12 | 3/4"   | 20    | 11   |       |             | 1.5   | 1.5         | 12                            | 20   | 3/4" | 1#12                           | 2ND FLOOR-MICROWAVE           |                             |  |  |  |  |
| 1ST FLOOR-RANGE                                            | 2#8  | 1#10 | 3/4"   | 50    | 15   | 1.5   | 6.0         | 1.5   | 6.0         | 14                            | 50   | 3/4" | 1#10                           | 2ND FLOOR-RANGE               |                             |  |  |  |  |
| 1ST FLOOR-POWER & LIGHTING                                 | 2#12 | 1#12 | 3/4"   | 20    | 17   | 4.0   | * 8         | 1.5   | 1.5         | 18                            | 20   | 3/4" | 1#12                           | 2ND FLOOR-POWER & LIGHTING    |                             |  |  |  |  |
| 1ST FLOOR-POWER & LIGHTING                                 | 2#12 | 1#12 | 3/4"   | 20    | 19   |       |             | * 1.5 | 2.0         | 20                            | 3/4" | 1#12 | 2ND FLOOR-POWER & LIGHTING     |                               |                             |  |  |  |  |
| 1ST FLOOR-POWER & LIGHTING                                 | 2#12 | 1#12 | 3/4"   | 20    | 21   |       |             | * 2.5 | 2.5         | 22                            | 20   | 3/4" | 1#12                           | 2ND FLOOR-POWER & LIGHTING    |                             |  |  |  |  |
| 1ST FLOOR-BATHROOM LIGHTING                                | 2#12 | 1#12 | 3/4"   | 20    | 23   |       |             | * 2.5 | 2.5         | 24                            | 20   | 3/4" | 1#12                           | 2ND FLOOR-BATHROOM LIGHTING   |                             |  |  |  |  |
| 1ST FLOOR-BATHROOM RECEPT.                                 | 2#12 | 1#12 | 3/4"   | 20    | 25   | * 1.5 |             |       |             | 26                            | 3/4" | 1#12 | 2ND FLOOR-BATHROOM RECEPT.     |                               |                             |  |  |  |  |
| 1ST FLOOR-GARAGE LTG. RECEPT.                              | 2#12 | 1#12 | 3/4"   | 20    | 27   |       |             | * 1.5 | 2.0         | 28                            | 3/4" | 1#12 | 2ND FLOOR-GARAGE LTG. RECEPT.  |                               |                             |  |  |  |  |
| 1ST FLOOR-GARAGE FLOOR GREENER                             | 2#12 | 1#12 | 3/4"   | 20    | 29   | 1.5   |             |       |             | 30                            | 3/4" | 1#12 | 2ND FLOOR-GARAGE FLOOR GREENER |                               |                             |  |  |  |  |
| SPARE                                                      | 2#12 | 1#12 | 3/4"   | 20    | 31   |       |             |       |             | 32                            | 3/4" | 1#12 | 2ND FLOOR-SPARE                |                               |                             |  |  |  |  |
| SPARE                                                      | 2#12 | 1#12 | 3/4"   | 20    | 33   |       |             |       |             | 34                            | 3/4" | 1#12 | 2ND FLOOR-SPARE                |                               |                             |  |  |  |  |
| POOL RECEPT                                                | 2#12 | 1#12 | 3/4"   | 20    | 35   |       |             | 0.2   | * 1         | 36                            | 3/4" | 1#12 | 2ND FLOOR-POOL RECEPT          |                               |                             |  |  |  |  |
| POOL RECEPT                                                | 2#12 | 1#12 | 3/4"   | 20    | 37   | 1.0   | 1.5         | 1.5   | 1.5         | 38                            | 20   | 3/4" | 1#12                           | 2ND FLOOR-POOL RECEPT         |                             |  |  |  |  |
| POOL PUMP (GF1)                                            | 2#8  | 1#8  | 1-1/4" | 30    | 39   |       |             | 2.2   | 1.0         | 40                            | 20   | 3/4" | 1#12                           | 2ND FLOOR-POOL PUMP           |                             |  |  |  |  |
|                                                            | 2    | 41   | 2.2    | -     | -    | -     | -           | -     | -           | 42                            | 20   | 3/4" | 1#12                           | 2ND FLOOR-SPARE               |                             |  |  |  |  |

| MAIN: 400 AMP MAIN LUGS ONLY                               |      |      |       |      |      |             |             |      |      | VOLTAGE: 120/240V, 1Ø, 3 WIRE |      |                               |       |
|------------------------------------------------------------|------|------|-------|------|------|-------------|-------------|------|------|-------------------------------|------|-------------------------------|-------|
| SPEC: SQUARE D TYPE "GO-LOADCENTER" OR APPROVED EQUIVALENT |      |      |       |      |      |             |             |      |      |                               |      |                               |       |
| MOUNTING: RECESSED                                         |      |      |       |      |      |             |             |      |      | AIRC SYMM: SERIES RATED       |      |                               |       |
| DESCRIPTION                                                | WIRE | GND. | COND. | TRIP | CKT. | A PHASE KVA | B PHASE KVA | CKT. | AIRC | COND.                         | WIRE | DESCRIPTION                   |       |
| 3RD FLOOR-MASTER BATH JACUZZI (GP)                         | 2#12 | 1#12 | 3/4"  | 20   | 1    | *           | *           | 2    | 20   | 3/4"                          | 2#12 | ROOF DECK-LIGHTING            |       |
| 3RD FLOOR-MASTER BATH RECEPT.                              | 2#12 | 1#12 | 3/4"  | 20   | 5    | *           | *           | 4    | 20   | 3/4"                          | 2#12 | ROOF DECK-APPLIANCE RECEPT.   |       |
| 3RD FLOOR-MASTER BATH LIG. (GP)                            | 2#12 | 1#12 | 3/4"  | 20   | 3    | *           | *           | 6    | 20   | 3/4"                          | 2#12 | ROOF DECK-REFRIGERATOR        |       |
| 3RD FLOOR-MASTER BED LIG./RECEPT.                          | 2#12 | 1#12 | 3/4"  | 20   | 7    | *           | *           | 8    | 20   | 3/4"                          | 2#12 | STAIR LIGHTING-ALL FLOORS     |       |
| 3RD FLOOR-MASTER BED LIG./RECEPT.                          | 2#12 | 1#12 | 3/4"  | 20   | 9    | *           | *           | 10   | 20   | -                             | -    | SPARE                         |       |
| 3RD FLOOR-BEDROOM BATH LIG./RECEPT.                        | 2#12 | 1#12 | 3/4"  | 20   | 11   | *           | *           | 12   | 20   | 3/4"                          | 2#12 | ROOF DECK-T.V.                |       |
| 3RD FLOOR-BEDROOM LIG./RECEPT.                             | 2#12 | 1#12 | 3/4"  | 20   | 13   | *           | 12.5        | 14   | 20   | 3/4"                          | 2#12 | ROOF DECK-WATER HEATER (WH-1) |       |
| SPARE                                                      | -    | -    | -     | 20   | 15   | -           | -           | 16   | 20   | -                             | -    | SPARE                         |       |
| SPARE                                                      | -    | -    | -     | 20   | 17   | -           | -           | 18   | 20   | -                             | -    | SPARE                         |       |
| SPARE                                                      | -    | -    | -     | 20   | 19   | -           | -           | 20   | 20   | -                             | -    | SPARE                         |       |
| SPARE                                                      | -    | -    | -     | 20   | 21   | -           | -           | 22   | 20   | -                             | -    | SPARE                         |       |
| SPARE                                                      | -    | -    | -     | 20   | 23   | -           | -           | 24   | 20   | -                             | -    | SPARE                         |       |
| SPARE                                                      | -    | -    | -     | 20   | 25   | -           | -           | 26   | -    | -                             | -    | SPARE                         |       |
| SPARE                                                      | -    | -    | -     | 20   | 27   | -           | -           | 28   | -    | -                             | -    | SPARE                         |       |
| SPARE                                                      | -    | -    | -     | 20   | 29   | -           | 0.8         | 30   | 20   | 3/4"                          | 2#12 | ELEVATOR LIGHTS               |       |
| SPARE                                                      | -    | -    | -     | 20   | 31   | -           | 2.5         | 32   | 30   | 3/4"                          | 2#10 | ELEVATOR                      |       |
| SPARE                                                      | -    | -    | -     | 20   | 33   | -           | 2.5         | 34   | 2    | -                             | -    | SPARE                         |       |
| SPARE                                                      | -    | -    | -     | 20   | 35   | -           | 3.5         | 36   | 45   | 2                             | 3/4" | 2#12                          | CU-A1 |
| SPARE                                                      | -    | -    | -     | 20   | 37   | -           | 3.5         | 38   | 45   | 2                             | 3/4" | 2#12                          | CU-A2 |
| ANU-A1-A6                                                  | 2#12 | 1#12 | 3/4"  | 15   | 2    | 1.2         | 1.5         | 40   | 2    | 3/4"                          | 1#12 | 2#12                          | CU-A2 |
|                                                            |      |      |       | 2    | 41   | 1.2         | 1.5         | 40   | 2    | 3/4"                          | 1#12 | 2#12                          | CU-A2 |

| 400 AMP MAIN LUGS ONLY WITH FEED THRU LUGS                 |      |      |      |       |      |      |             |    |             | VOLTAGE: 120/240V, 1ø, 3 WIRE |      |      |                               |           |                             |       |      |             |  |
|------------------------------------------------------------|------|------|------|-------|------|------|-------------|----|-------------|-------------------------------|------|------|-------------------------------|-----------|-----------------------------|-------|------|-------------|--|
| SPEC: SQUARE D TYPE "QO"-LOADCENTER OR APPROVED EQUIVALENT |      |      |      |       |      |      |             |    |             |                               |      |      |                               |           |                             |       |      |             |  |
| MOUNTING: RECESSED                                         |      |      |      |       |      |      |             |    |             |                               |      |      |                               |           |                             |       |      |             |  |
| DESCRIPTION                                                |      | WIRE | GND. | COND. | TRIP | CKT. | A PHASE KVA |    | B PHASE KVA |                               | CKT. | TRIP |                               | AIC SYMM. |                             | COND. | WIRE | DESCRIPTION |  |
| 1ST FLOOR-APPLIANCE CIRCUIT                                | 2#12 | 1#12 | 3/4" | 20    | 1    | 1.5  | 1.5         | -  | -           | 2                             | 20   | 3/4" | 1#12                          | 2#12      | 2ND FLOOR-APPLIANCE CIRCUIT |       |      |             |  |
| 1ST FLOOR-LAUNDRY CIRCUIT                                  | 2#12 | 1#12 | 3/4" | 20    | 3    | 1.5  | 1.5         | 4  | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-APPLIANCE CIRCUIT   |           |                             |       |      |             |  |
| 1ST FLOOR-REFRIGERATOR                                     | 2#12 | 1#12 | 3/4" | 20    | 7    | 1.0  | 1.5         | 8  | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-REFRIGERATOR        |           |                             |       |      |             |  |
| 1ST FLOOR-ICE MAKER                                        | 2#12 | 1#12 | 3/4" | 20    | 7    | 1.0  | 1.5         | 8  | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-REFRIGERATOR        |           |                             |       |      |             |  |
| 1ST FLOOR-DISPOSAL/DISHWASHER                              | 2#12 | 1#12 | 3/4" | 20    | 9    | 1.5  | 1.5         | 10 | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-DISPOSAL/DISHWASHER |           |                             |       |      |             |  |
| 1ST FLOOR-MICROWAVE                                        | 2#12 | 1#12 | 3/4" | 20    | 11   | 1.5  | 1.5         | 12 | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-MICROWAVE           |           |                             |       |      |             |  |
| 1ST FLOOR-RANGE                                            | 2#8  | 1#10 | 3/4" | 50    | 15   | 4.0  | 6.0         | 16 | 50          | 3/4"                          | 1#10 | 2#8  | 2ND FLOOR-RANGE               |           |                             |       |      |             |  |
| 1ST FLOOR-DINING ROOM                                      | 2#12 | 1#12 | 3/4" | 20    | 17   | 4.0  | 6.0         | 18 | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-DINING ROOM         |           |                             |       |      |             |  |
| 1ST FLOOR-POWER & LIGHTING                                 | 2#12 | 1#12 | 3/4" | 20    | 19   | *    | 2.5         | 20 | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-WASHING MACHINE     |           |                             |       |      |             |  |
| 1ST FLOOR-POWER & LIGHTING                                 | 2#12 | 1#12 | 3/4" | 20    | 21   | *    | 2.5         | 24 | 20          | 3/4"                          | 1#10 | 2#12 | 2ND FLOOR-CLAY'S DRYER        |           |                             |       |      |             |  |
| 1ST FLOOR-BATHROOM LIGHTING                                | 2#12 | 1#12 | 3/4" | 20    | 23   | *    | 2.5         | 24 | 20          | 3/4"                          | 1#10 | 2#12 | 2ND FLOOR-CLAY'S DRYER        |           |                             |       |      |             |  |
| 1ST FLOOR-BATHROOM RECEPT.                                 | 2#12 | 1#12 | 3/4" | 20    | 25   | *    | 1.5         | 26 | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-LAUNDRY CIRCUIT     |           |                             |       |      |             |  |
| 1ST FLOOR-GARAGE LTC RECEPT.                               | 2#12 | 1#12 | 3/4" | 20    | 27   | *    | 2.5         | 30 | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-GREAT/ DINING LTC   |           |                             |       |      |             |  |
| 1ST FLOOR-GARAGE LTC RECEPT.                               | 2#12 | 1#12 | 3/4" | 20    | 29   | 1.5  | 1.5         | 30 | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-GREAT/ DINING LTC   |           |                             |       |      |             |  |
| 1ST FLOOR-PAINT ROOM RECEPT.                               | 2#12 | 1#12 | 3/4" | 20    | 31   | *    | 2.5         | 32 | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-PAINT ROOM RECEPT.  |           |                             |       |      |             |  |
| 1ST FLOOR-PAINT ROOM RECEPT.                               | 2#12 | 1#12 | 3/4" | 20    | 33   | *    | 2.5         | 34 | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-PAINT ROOM RECEPT.  |           |                             |       |      |             |  |
| 1ST FLOOR-PAINT ROOM RECEPT.                               | 2#12 | 1#12 | 3/4" | 20    | 35   | 0.2  | 1.5         | 36 | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-VIP BEDROOM         |           |                             |       |      |             |  |
| 1ST FLOOR-PAINT ROOM RECEPT.                               | 2#12 | 1#12 | 3/4" | 20    | 37   | 1.0  | 1.5         | 38 | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-VIP BEDROOM         |           |                             |       |      |             |  |
| 1ST FLOOR-PAINT ROOM RECEPT.                               | 2#12 | 1#12 | 3/4" | 20    | 39   | 2.2  | 1.5         | 40 | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-VIP BEDROOM         |           |                             |       |      |             |  |
| 1ST FLOOR-PAINT ROOM RECEPT.                               | 2#12 | 1#12 | 3/4" | 20    | 41   | 2.2  | 1.5         | 42 | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-VIP BEDROOM         |           |                             |       |      |             |  |
| 1ST FLOOR-PAINT ROOM RECEPT.                               | 2#12 | 1#12 | 3/4" | 20    | 43   | 2.2  | 1.5         | 44 | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-VIP BEDROOM         |           |                             |       |      |             |  |
| 1ST FLOOR-PAINT ROOM RECEPT.                               | 2#12 | 1#12 | 3/4" | 20    | 45   | 2.2  | 1.5         | 46 | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-VIP BEDROOM         |           |                             |       |      |             |  |
| 1ST FLOOR-PAINT ROOM RECEPT.                               | 2#12 | 1#12 | 3/4" | 20    | 47   | 2.2  | 1.5         | 48 | 20          | 3/4"                          | 1#12 | 2#12 | 2ND FLOOR-VIP BEDROOM         |           |                             |       |      |             |  |
| 1ST                                                        |      |      |      |       |      |      |             |    |             |                               |      |      |                               |           |                             |       |      |             |  |

| MAIN: 400 AMP MAIN LUGS ONLY                               |      |      |       |      |      |                |                |      |      | VOLTAGE: 120/240V, 1ø, 3 WIRE |      |      |                               |  |  |  |  |  |  |
|------------------------------------------------------------|------|------|-------|------|------|----------------|----------------|------|------|-------------------------------|------|------|-------------------------------|--|--|--|--|--|--|
| SPEC: SQUARE D TYPE "QO-LOADCENTER" OR APPROVED EQUIVALENT |      |      |       |      |      |                |                |      |      |                               |      |      |                               |  |  |  |  |  |  |
| MOUNTING: RECESSED                                         |      |      |       |      |      |                |                |      |      | AIC SYMM. SERIES RATED        |      |      |                               |  |  |  |  |  |  |
| DESCRIPTION                                                | WIRE | GND. | COND. | TRIP | CRK. | A PHASE<br>KVA | B PHASE<br>KVA | CRK. | TRIP | COND.                         | GND. | WIRE | DESCRIPTION                   |  |  |  |  |  |  |
| 3RD FLOOR-MASTER BATH JACUZZI (GF)                         | 2#12 | 1#12 | 3/4"  | 20   | 1    | * *            |                | 2    | 20   | 3/4"                          | 1#12 | 2#12 | ROOF DECK-LIGHTING            |  |  |  |  |  |  |
| 3RD FLOOR-MASTER BATH RECEPT.                              | 2#12 | 1#12 | 3/4"  | 20   | 3    | * *            |                | 2    | 20   | 3/4"                          | 1#12 | 2#12 | ROOF DECK-APPLIANCE RECEPT.   |  |  |  |  |  |  |
| 3RD FLOOR-MASTER BATH LITG.                                | 2#12 | 1#12 | 3/4"  | 20   | 3    | * *            | 1.5            |      |      | 3/4"                          | 1#12 | 2#12 | ROOF DECK-REFRIGERATOR        |  |  |  |  |  |  |
| 3RD FLOOR-MASTER BED LITG./RECEPT.                         | 2#12 | 1#12 | 3/4"  | 20   | 7    | * *            |                | 8    | 20   | 3/4"                          | 1#12 | 2#12 | STAIR LIGHTING-ALL FLOORS     |  |  |  |  |  |  |
| 3RD FLOOR-MASTER BED LITG./RECEPT.                         | 2#12 | 1#12 | 3/4"  | 20   | 9    | * *            |                | 10   | 20   | -                             | -    | -    | SPARE                         |  |  |  |  |  |  |
| 3RD FLOOR-BEDROOM BATH LITG./RECEPT.                       | 2#12 | 1#12 | 3/4"  | 20   | 11   | * *            | 2.5            | 12   | 20   | 3/4"                          | 1#12 | 2#12 | ROOF DECK-T.V.                |  |  |  |  |  |  |
| 3RD FLOOR-BEDROOM LITG./RECEPT.                            | 2#12 | 1#12 | 3/4"  | 20   | 13   | * *            | 2.0            | 16   | 20   | 3/4"                          | 1#12 | 2#12 | ROOF DECK-WATER HEATER (WH-1) |  |  |  |  |  |  |
| 3RD FLOOR-2ND BEDROOM                                      | 2#12 | 1#12 | 3/4"  | 20   | 15   |                |                | 2    | 20   | -                             | -    | -    |                               |  |  |  |  |  |  |
| SPARE                                                      | -    | -    | 20    | 17   | -    | -              | -              | 18   | 20   | -                             | -    | -    | SPARE                         |  |  |  |  |  |  |
| SPARE                                                      | -    | -    | 20    | 19   | -    | -              | -              | 20   | 20   | -                             | -    | -    | SPARE                         |  |  |  |  |  |  |
| SPARE                                                      | -    | -    | 20    | 21   | -    | -              | -              | 22   | 20   | -                             | -    | -    | SPARE                         |  |  |  |  |  |  |
| SPARE                                                      | -    | -    | 20    | 23   | -    | -              | -              | 24   | 20   | -                             | -    | -    | SPARE                         |  |  |  |  |  |  |
| SPARE                                                      | -    | -    | 20    | 25   | -    | -              | -              | 26   | -    | -                             | -    | -    | SPACE                         |  |  |  |  |  |  |
| SPARE                                                      | -    | -    | 20    | 27   | -    | -              | -              | 28   | -    | -                             | -    | -    | SPACE                         |  |  |  |  |  |  |
| SPARE                                                      | -    | -    | 20    | 29   | -    | 0.8            | -              | 30   | 20   | 3/4"                          | 1#12 | 2#12 | ELEVATOR LIGHTS               |  |  |  |  |  |  |
| 3RD FLOOR-2ND BEDROOM LITG./RECEPT.                        | 2#12 | 1#12 | 3/4"  | 20   | 31   | * *            | 2.5            | 32   | 20   | 3/4"                          | 1#10 | 2#10 | ELEVATOR                      |  |  |  |  |  |  |
| SPARE                                                      | -    | -    | 33    | -    | 2.5  | 34             | -              | 36   | 2    | -                             | -    | -    |                               |  |  |  |  |  |  |
| SPARE                                                      | -    | -    | 35    | -    | -    | 3.5            | 36             | 45   | 2    | 3/4"                          | 1#12 | 2#12 | CJ-B1                         |  |  |  |  |  |  |
| SPARE                                                      | -    | -    | 37    | -    | -    | 3.5            | 38             | 45   | 2    | -                             | -    | -    |                               |  |  |  |  |  |  |
| AHU-B1-B6                                                  | 2#12 | 1#12 | 3/4"  | 15   | 32   | 40             | 1.2            | 35   | 40   | 3/4"                          | 1#12 | 2#12 | CJ-B2                         |  |  |  |  |  |  |
|                                                            |      |      |       | 2    | 41   | 1.2            | 35             | 40   | 2    | -                             | -    | -    |                               |  |  |  |  |  |  |

| 400 AMP MAIN LUGS ONLY WITH FEED THRU LUGS           |      |      |       |      |     |             |             |     |      | VOLTAGE: 120/240V, 1ø, 3 WIRE |      |      |                               |
|------------------------------------------------------|------|------|-------|------|-----|-------------|-------------|-----|------|-------------------------------|------|------|-------------------------------|
| SQUARE D TYPE "OO-LOADCENTER" OR APPROVED EQUIVALENT |      |      |       |      |     |             |             |     |      |                               |      |      |                               |
| MOUNTING: RECESSED                                   |      |      |       |      |     |             |             |     |      | AIC SYMM: WIRE SIZED          |      |      |                               |
| DESCRIPTION                                          | WRE  | GND. | COND. | TRIP | OKT | A PHASE KVA | B PHASE KVA | CT  | TRIP | COND.                         | GND. | WIRE | DESCRIPTION                   |
| TST FLOOR-APPLIANCE CIRCUIT                          | #212 | #12  | 3/4"  | 20   | 1   | 1.5         | 1.5         | 2   | 20   | 3/4"                          | #12  | #212 | 2ND FLOOR-APPLIANCE CIRCUIT   |
| TST FLOOR-APPLIANCE CIRCUIT                          | #212 | #12  | 3/4"  | 20   | 3   |             | 1.5         | 1.5 | 6    | 3/4"                          | #12  | #212 | 2ND FLOOR-APPLIANCE CIRCUIT   |
| TST FLOOR-REFRIGERATOR                               | #212 | #12  | 3/4"  | 20   | 1   | 1.0         | 1.5         |     | 6    | 3/4"                          | #12  | #212 | 2ND FLOOR-REFRIGERATOR        |
| TST FLOOR-ICE MAKER                                  | #212 | #12  | 3/4"  | 20   | 7   |             | 1.0         | 1.5 | 8    | 20                            | 3/4" | #212 | 2ND FLOOR-DISPOSAL/DISHWASHER |
| TST FLOOR-DISPOSAL/DISHWASHER                        | #312 | #12  | 3/4"  | 20   | 9   | 1.5         | 1.5         |     | 10   | 2                             |      |      |                               |
| TST FLOOR-MICROWAVE                                  | #212 | #12  | 3/4"  | 20   | 11  |             | 1.5         | 1.5 | 12   | 20                            | 3/4" | #212 | 2ND FLOOR-MICROWAVE           |
| TST FLOOR-RANGE                                      | #212 | #12  | 3/4"  | 50   | 15  | 1.5         | 6.0         |     | 14   | 2                             | 3/4" | #12  | 2ND FLOOR-RANGE               |
|                                                      | #10  |      |       |      | 2   | 4.0         | *           |     | 18   | 20                            | 3/4" | #12  | 2ND FLOOR-DINING ROOM         |
| TST FLOOR-POWER & LIGHTING                           | #212 | #12  | 3/4"  | 20   | 19  |             | *           | 1.5 | 20   | 3/4"                          | #212 | #212 | 2ND FLOOR-WASHING MACHINE     |
| TST FLOOR-POWER & LIGHTING                           | #212 | #12  | 3/4"  | 20   | 21  |             | *           | 2.5 | 24   | 2                             | 3/4" | #12  | 2ND FLOOR-CLOTHES DRYER       |
| TST FLOOR-BATHROOM LIGHTING                          | #212 | #12  | 3/4"  | 20   | 23  |             | *           | 2.5 | 24   | 2                             |      |      |                               |
| TST FLOOR-BATHROOM RECEPT.                           | #212 | #12  | 3/4"  | 20   | 25  | *           | 1.5         |     | 26   | 3/4"                          | #212 | #212 | 2ND FLOOR-LAUNDRY CIRCUIT     |
| TST FLOOR-GARAGE LITG/RECEPT.                        | #212 | #12  | 3/4"  | 20   | 27  |             | *           | *   | 28   | 3/4"                          | #12  | #212 | 2ND FLOOR-GREAT/ DINING LITG  |
| TST FLOOR-GARAGE DOOR OPENER                         | #212 | #12  | 3/4"  | 20   | 31  | 1.5         |             |     | 30   | 2                             | 3/4" | #212 | 2ND FLOOR-GREAT ROOM RECEPT.  |
| SPARE                                                | #212 | #12  | 3/4"  | 20   | 33  |             |             | *   | 32   | 3/4"                          | #12  | #212 | 2ND FLOOR-POWER ROOM          |
| SPARE                                                | #212 | #12  | 3/4"  | 20   | 34  |             |             |     | 34   | 20                            | 3/4" | #12  | 2ND FLOOR-VIP BED ROOM        |
| POOL RECEPT.                                         | #212 | #12  | 3/4"  | 20   | 35  |             | 0.2         | *   | 36   | 20                            | 3/4" | #212 | 2ND FLOOR-VIP BATHROOM        |
| POOL RECEPT.                                         | #212 | #12  | 3/4"  | 20   | 38  |             | 1.0         | *   | 38   | 20                            |      |      | SPARE                         |
| POOL PUMP (GF1)                                      | #312 | #12  | 3/4"  | 30   | 39  |             | 2.2         | *   | 40   | 20                            |      |      | SPARE                         |
|                                                      | #312 | #12  | 3/4"  | 30   | 41  | 2.2         | *           |     | 42   | 20                            |      |      | SPARE                         |

| MAIN:                                |      | 400 AMP MAIN LUGS ONLY                               |      |       |      |      |             |             |     |      |      | VOLTAGE: 120/240V, 1Ø, 3 WIRE |      |      |                               |  |  |  |  |  |  |
|--------------------------------------|------|------------------------------------------------------|------|-------|------|------|-------------|-------------|-----|------|------|-------------------------------|------|------|-------------------------------|--|--|--|--|--|--|
| SPEC:                                |      | SQUARE D TYPE "QO-LOADCENTER" OR APPROVED EQUIVALENT |      |       |      |      |             |             |     |      |      |                               |      |      |                               |  |  |  |  |  |  |
| MOUNTING:                            |      | RECESSED                                             |      |       |      |      |             |             |     |      |      | AIC SYMM: WIRE SIZED          |      |      |                               |  |  |  |  |  |  |
| DESCRIPTION                          |      | WIRE                                                 | GND. | COND. | TRIP | CRK. | A PHASE KVA | B PHASE KVA | KVA | CRK. | TRIP | COND.                         | GND. | WIRE | DESCRIPTION                   |  |  |  |  |  |  |
| 3RD FLOOR-MASTER BATH JACUZZI (GP)   | 2#12 | 1#12                                                 | 3/4" | 20    | 1    | *    | *           | *           | 2   | 20   | 3/4" | 1#12                          | 2#12 |      | ROOF DECK-LIGHTING            |  |  |  |  |  |  |
| 3RD FLOOR-MASTER BATH RECEPT.        | 2#12 | 1#12                                                 | 3/4" | 20    | 3    | *    | *           | *           | 4   | 20   | 3/4" | 1#12                          | 2#12 |      | ROOF DECK-APPLIANCE RECEPT.   |  |  |  |  |  |  |
| 3RD FLOOR-MASTER BATH LITG.          | 2#12 | 1#12                                                 | 3/4" | 20    | 7    | *    | *           | 1.5         | 3   | 20   | 3/4" | 1#12                          | 2#12 |      | ROOF DECK-REFRIGERATOR        |  |  |  |  |  |  |
| 3RD FLOOR-MASTER BED LITG./RECEPT.   | 2#12 | 1#12                                                 | 3/4" | 20    | 7    | *    | *           | *           | 8   | 20   | 3/4" | 1#12                          | 2#12 |      | STAIR LIGHTING-ALL FLOORS     |  |  |  |  |  |  |
| 3RD FLOOR-MASTER BED LITG./RECEPT.   | 2#12 | 1#12                                                 | 3/4" | 20    | 9    | *    | *           | *           | 10  | 20   | -    | -                             | -    | -    | SPARE                         |  |  |  |  |  |  |
| 3RD FLOOR-BEDROOM BATH LITG./RECEPT. | 2#12 | 1#12                                                 | 3/4" | 20    | 11   | *    | *           | *           | 12  | 20   | 3/4" | 1#12                          | 2#12 |      | ROOF DECK-T.V.                |  |  |  |  |  |  |
| 3RD FLOOR-BEDROOM LITG./RECEPT.      | 2#12 | 1#12                                                 | 3/4" | 20    | 15   | *    | 1.5         | *           | 14  | 20   | 3/4" | 1#12                          | 2#12 |      | ROOF DECK-WATER HEATER (WH-1) |  |  |  |  |  |  |
| SPARE                                | -    | -                                                    | -    | 20    | 15   | -    | -           | -           | 2.0 | 16   | 2    | -                             | -    | -    | -                             |  |  |  |  |  |  |
| SPARE                                | -    | -                                                    | -    | 20    | 17   | -    | -           | -           | -   | 18   | 20   | -                             | -    | -    | -                             |  |  |  |  |  |  |
| SPARE                                | -    | -                                                    | -    | 20    | 19   | -    | -           | -           | -   | 20   | 20   | -                             | -    | -    | -                             |  |  |  |  |  |  |
| SPARE                                | -    | -                                                    | -    | 20    | 21   | -    | -           | -           | -   | 22   | 20   | -                             | -    | -    | -                             |  |  |  |  |  |  |
| SPACE                                | -    | -                                                    | -    | 23    | -    | -    | -           | -           | -   | 24   | 20   | -                             | -    | -    | -                             |  |  |  |  |  |  |
| SPACE                                | -    | -                                                    | -    | 25    | -    | -    | -           | -           | -   | 26   | -    | -                             | -    | -    | -                             |  |  |  |  |  |  |
| SPACE                                | -    | -                                                    | -    | 27    | -    | -    | -           | -           | -   | 28   | -    | -                             | -    | -    | -                             |  |  |  |  |  |  |
| SPACE                                | -    | -                                                    | -    | 29    | -    | 0.8  | -           | -           | -   | 30   | 3/4" | 1#12                          | 2#12 |      | ELEVATOR LIGHTS               |  |  |  |  |  |  |
| SPACE                                | -    | -                                                    | -    | 31    | -    | -    | -           | 2.5         | 32  | 30   | 3/4" | 1#12                          | 2#12 |      | ELEVATOR                      |  |  |  |  |  |  |
| SPACE                                | -    | -                                                    | -    | 33    | -    | 2.5  | -           | -           | 34  | 2    | -    | -                             | -    | -    | -                             |  |  |  |  |  |  |
| SPACE                                | -    | -                                                    | -    | 35    | -    | -    | -           | 3.5         | 36  | 45   | 2    | 3/4"                          | 1#12 | 2#12 | CU-F1                         |  |  |  |  |  |  |
| SPACE                                | -    | -                                                    | -    | 37    | -    | 3.5  | -           | -           | 38  | 45   | 2    | -                             | -    | -    | -                             |  |  |  |  |  |  |
| ANU-F1-F6                            | 2#12 | 1#12                                                 | 3/4" | 15    | 2    | 4.1  | 1.2         | 3.5         | 40  | 45   | 2    | 3/4"                          | 1#12 | 2#12 | CU-F2                         |  |  |  |  |  |  |
|                                      |      |                                                      |      | 2     | 4.1  | 1.2  | 3.5         | 40          | 45  | 2    |      |                               |      |      |                               |  |  |  |  |  |  |

|                                                 |  |      |      |       |      |       |                |                |       |                               |      |      |                      |                        |
|-------------------------------------------------|--|------|------|-------|------|-------|----------------|----------------|-------|-------------------------------|------|------|----------------------|------------------------|
| MAIN: 100 AMP / 3 POLE MAIN CIRCUIT BREAKER     |  |      |      |       |      |       |                |                |       | VOLTAGE: 120/240V, 1Ø, 3 WIRE |      |      |                      |                        |
| SPEC: SQUARE D TYPE "NO" OR APPROVED EQUIVALENT |  |      |      |       |      |       |                |                |       |                               |      |      |                      |                        |
| MOUNTING: SURFACE                               |  |      |      |       |      |       |                |                |       | AIC SYMM: 10,000              |      |      |                      |                        |
| DESCRIPTION                                     |  | WIRE | GND. | COND. | TRIP | CRKT. | A PHASE<br>KVA | B PHASE<br>KVA | CRKT. | TRIP                          | GND. | WIRE | DESCRIPTION          |                        |
| SITE LIGHTING                                   |  | 2#10 | 1#10 | 3/4"  | 20   | 1     | 0.3            | 0.3            | 2     | 20                            | 3/4" | 1#10 | EXTERIOR WALL LIGHTS |                        |
| FIRE ALARM                                      |  | 2#12 | 1#12 | 3/4"  | 20   | 3     |                | 0.2            | 0.3   | 4                             | 20   | 3/4" | 2#10                 | GARAGE OVERHANG LIGHTS |
| IRIGATION CONTROL                               |  | 2#12 | 1#12 | 3/4"  | 20   | 5     |                |                |       | 6                             | 20   | 1#10 | SPARE                |                        |
| SPARE                                           |  | --   | --   | --    | 20   | 5     | 0.8            | --             | --    | 8                             | 20   | --   | SPARE                |                        |
| SPARE                                           |  | --   | --   | --    | 20   | 9     | --             | --             | --    | 10                            | 20   | --   | SPARE                |                        |
| SPARE                                           |  | --   | --   | --    | 20   | 11    | --             | --             | --    | 12                            | 20   | --   | SPARE                |                        |
| SPARE                                           |  | --   | --   | --    | 20   | 13    | --             | --             | --    | 14                            | 20   | --   | SPARE                |                        |
| SPARE                                           |  | --   | --   | --    | 20   | 15    | --             | --             | --    | 16                            | 20   | --   | SPARE                |                        |
| SPARE                                           |  | --   | --   | --    | 20   | 17    | --             | --             | --    | 18                            | 20   | --   | SPARE                |                        |
| SPARE                                           |  | --   | --   | --    | 20   | 19    | --             | --             | --    | 20                            | 20   | --   | SPARE                |                        |
| SPARE                                           |  | --   | --   | --    | 20   | 21    | --             | --             | --    | 22                            | 20   | --   | SPARE                |                        |
| SPARE                                           |  | --   | --   | --    | 20   | 23    | --             | --             | --    | 24                            | 20   | --   | SPARE                |                        |
| SPARE                                           |  | --   | --   | --    | 20   | 25    | --             | --             | --    | 26                            | 20   | --   | SPARE                |                        |
| SPARE                                           |  | --   | --   | --    | 20   | 27    | --             | --             | --    | 28                            | 20   | --   | SPARE                |                        |
| SPARE                                           |  | --   | --   | --    | 20   | 29    | --             | --             | --    | 30                            | 20   | --   | SPARE                |                        |
|                                                 |  |      |      |       |      | 1.4   | 0.5            | KVA PER PHASE  |       |                               |      |      |                      |                        |
|                                                 |  |      |      |       |      | 12    | 4              | AMPS PER PHASE |       |                               |      |      |                      |                        |
|                                                 |  |      |      |       |      | 1.9   |                | TOTAL KVA      |       |                               |      |      |                      |                        |

|                                  |   |              |
|----------------------------------|---|--------------|
| Source                           | = | AC, 1 $\phi$ |
| Voltage                          | = | 240.0        |
| Cond. Material                   | = | PVC          |
| Power Factor                     | = | 0.90         |
| Cond. Temp.                      | = | 75°C         |
| Conductor Metal                  | = | Copper       |
| Cond. Per Phase                  | = | 1            |
| Wire Size                        | = | 500MCM       |
| Load                             | = | 218.0 A      |
| Length (1-way)                   | = | 264.0 F      |
| <b>Result:</b>                   |   |              |
| Voltage Drop = 1.98%, 4.76V L-L. |   |              |

| DESCRIPTION                             | LOAD (KVA)  |
|-----------------------------------------|-------------|
| HOUSE GENERAL LTG & RECEPT @ 3VA/SQ.FT. | 10.7        |
| SMALL APPLIANCE CIRCUITS (4)            | 6.0         |
| MICROWAVE (2)                           | 3.0         |
| REFRIGERATOR (3)                        | 4.5         |
| DISHWASHER (2)                          | 3.0         |
| GARBAGE DISPOSAL (2)                    | 3.0         |
| RANGE 1                                 | 8.0         |
| RANGE 2                                 | 12.0        |
| WASHER                                  | 1.5         |
| DRYER                                   | 5.0         |
| LAUNDRY CIRCUIT                         | 1.5         |
| WATER HEATER                            | 4.5         |
| GARAGE DOOR OPENER                      | 1.2         |
| POOL PUMP                               | 4.4         |
| POOL LIGHTS                             | 1.0         |
| RECIRCULATING PUMP                      | 0.5         |
| ELEVATOR                                | 5.0         |
| <b>SUB-TOTAL LOAD (NON-DIVERSIFIED)</b> | <b>74.8</b> |

$$\left(\frac{1000\text{VA}}{1\text{KVA}}\right)\left(\frac{50.4\text{KVA}}{240\text{V}}\right) = 218.0\text{ AMPERES}$$

SERVICE PROVIDED: 120/240V, 1 $\phi$ , 3 WIRE, 400 AMPS.

|                                                                                                                                                                                                                                                                                                                        |   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| ISSUED FOR PERMIT                                                                                                                                                                                                                                                                                                      | - |
| ISSUED FOR CONSTRUCTION                                                                                                                                                                                                                                                                                                | - |
| <p>KAMM CONSULTING PROJECT #: 2019-0577</p> <p>PROJECT MANAGER: Rick Gonzalez</p>                                                                                                                                                                                                                                      |   |
| <p> 1407 West Newport Center Drive<br/>         Deerfield Beach, Florida 33442<br/>         Phone 954.949.2200 Fax 954.949.2201<br/>         engineering@kammconsulting.com<br/>         Certification of Authorization #8189</p> |   |
| <p>_____ date _____</p> <p>_____ signed _____</p>                                                                                                                                                                                                                                                                      |   |

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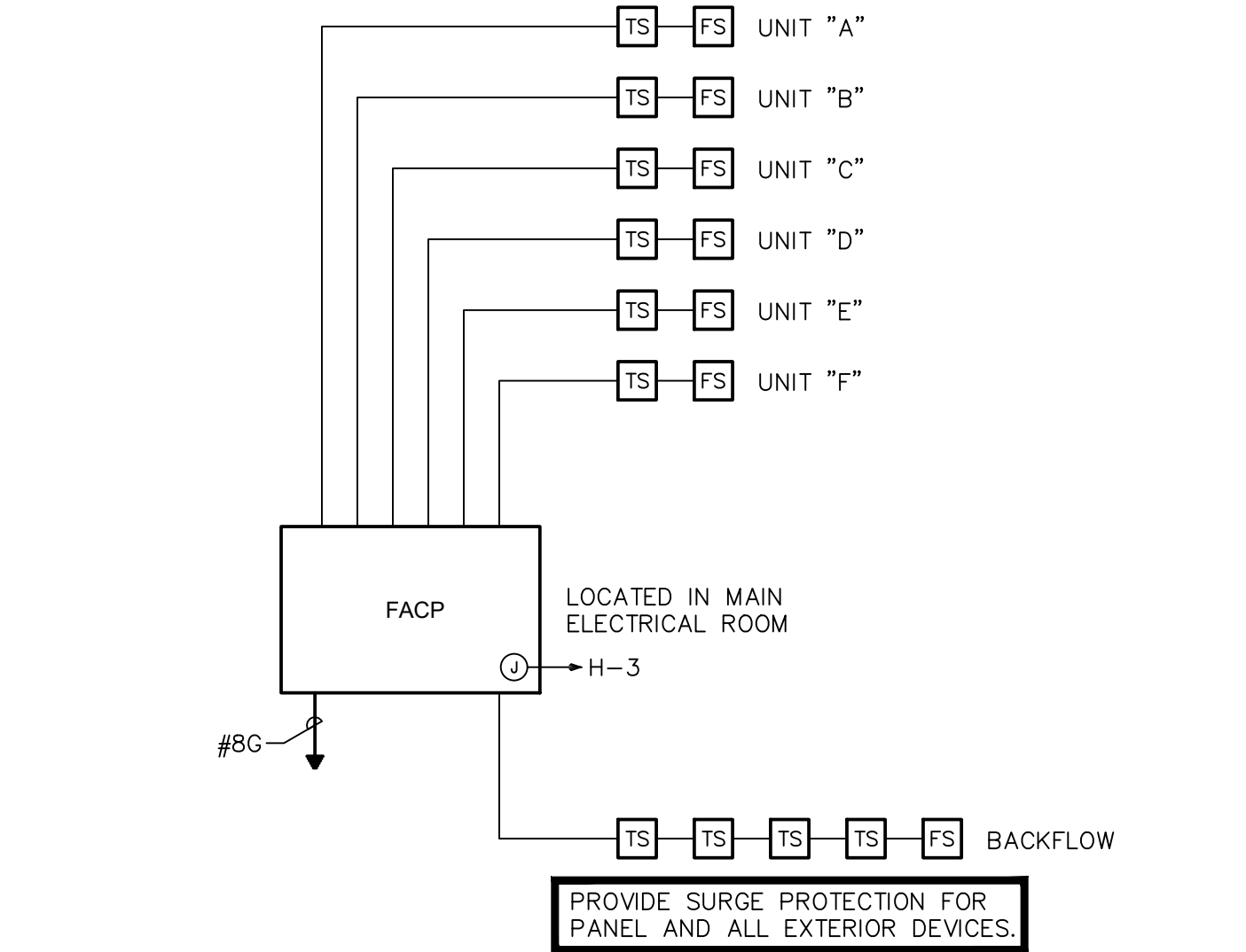
PERMIT APPLICATION



| FIRE ALARM SHEET INDEX |                                  |
|------------------------|----------------------------------|
| SHEET#                 | DESCRIPTION                      |
| FA0.1                  | FIRE ALARM NOTES, LEGEND & INDEX |
| FA2.1                  | FIRE ALARM PLAN                  |
|                        |                                  |

| FIRE ALARM SYMBOLS |                                                        |
|--------------------|--------------------------------------------------------|
|                    | FIRE ALARM MANUAL PULL STATION. SILENT KNIGHT PS-DA    |
|                    | PHOTOELECTRIC SMOKE DETECTOR. SYSTEM SENSOR 200 SERIES |
|                    | FIRE ALARM CONTROL PANEL. SILENT KNIGHT MODEL 5208     |
|                    | FIRE ALARM HORN / STROBE COMBINATION. WEATHER PROOF    |
|                    | TAMPER SWITCH.                                         |
|                    | FLOW SWITCH.                                           |

| FIRE ALARM NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p>1. THE MAIN FIRE ALARM CONTROL PANEL SHALL BE A MICROPROCESSOR BASE SYSTEM WITH ADDRESSABLE, INTELLIGENT DETECTORS, ADDRESSABLE CONTROL RELAY AND MONITOR MODULES, VISIBLE AND AUDIBLE SYSTEM ANNUNCIATORS AND OTHER SYSTEM CONTROLLED DEVICES AS REQUIRED.</p> <p>2. PROVIDE REMOTE POWER SUPPLY AS INDICATED FOR EACH FLOOR FOR FUTURE TENANT BUILDOUT. THE FIRE ALARM SHALL BE CAPABLE OF FUTURE EXPANSION AS REQUIRED IN THE TENANT TENANT SPACES.</p> <p>3. ALL WIRING AND CONDUIT TO CONFORM TO N.F.P.A. 72 AND N.E.C. ARTICLE 760. WIRING SHALL BE SOLID COPPER OR STRANDED COPPER WITH A MAX. OF 7 STRANDS FOR 16 GA AND 18 GA, STRANDED COPPER WITH A MAX. OF 19 STRANDS FOR SIZES 14 AND LARGER AS REQUIRED BY N.E.C. 760 AND N.F.P.A. 70.</p> <p>4. ALL FIRE STOP PENETRATIONS SHALL BE MADE WITH APPROVED (NEC) METALLIC CONDUIT AND SHALL BE SEALED WITH A U.L. APPROVED FIRE STOP MATERIAL (SEE FIRE STOP DETAIL)</p> <p>5. ROUTING OF THE FIRE ALARM SYSTEM CONDUIT IS DIAGRAMMATIC ONLY, VERIFY EXACT LOCATIONS PRIOR TO STARTING WORK.</p> <p>6. ALL FIRE ALARM NOTIFICATION APPLIANCES SHALL ACTIVATE UPON INITIATION OF THE GENERAL ALARM.</p> <p>7. ALL FIRE ALARM AUDIBLE SIGNALS SHALL HAVE A THREE PLUS TEMPORAL PATTERN.</p> <p>8. ALL FIRE ALARM AUDIBLE SIGNALS SHALL HAVE A SOUND LEVEL OF AT LEAST 15 dba ABOVE THE AVERAGE AMBIENT SOUND LEVEL.</p> <p>9. MANUAL STATIONS SHALL BE INSTALLED AT 48" INCHES A.F.F.</p> <p>10. WALL MOUNTED FIRE ALARM SYSTEM AUDIBLE/VISUAL SIGNALS (COMBINATION DEVICES) SHALL BE MOUNTED SUCH THAT THE ENTIRE STROBE LENS IS 80" A.F.F. OR 6" BELOW CEILING, WHICHEVER IS LOWER.</p> <p>11. WALL MOUNTED FIRE ALARM SYSTEM VISUAL SIGNALS (STROBES) SHALL BE MOUNTED SUCH THAT THE ENTIRE STROBE LENS IS 80" A.F.F. OR 6" BELOW CEILING, WHICHEVER IS LOWER.</p> <p>12. SMOKE DETECTORS TO BE INSTALLED AS REQUIRED BY N.F.P.A. 72.</p> <p>13. THE FIRE ALARM PANEL SHALL HAVE AN EARTH GROUND CONNECTION AS REQUIRED BY THE SYSTEM MANUFACTURER, AND N.E.C. ARTICLE 760. MINIMUM WIRE SIZE IS #8 AWG FOR GROUND CONNECTION. (NOTE: PANEL NEUTRAL OR CONDUIT GROUND IS NOT ACCEPTABLE).</p> <p>14. A GENERAL ALARM SHALL BE ANNUNCIATED UPON ACTIVATION OF ANY PULL STATION, FLOW SWITCH OR DETECTION DEVICE.</p> <p>15. A TROUBLE SIGNAL SHALL BE ANNUNCIATED UPON FAILURE OR REMOVAL OF ANY DETECTION OR MANUAL DEVICE.</p> <p>16. A SUPERVISORY SIGNAL SHALL BE ANNUNCIATED UPON ACTIVATION OF ANY FIRE SPRINKLER SYSTEM TAMPER SWITCH.</p> <p>17. HVAC DUCT SMOKE DETECTORS SHALL BE CONNECTED TO THE FIRE ALARM CONTROL PANEL AND SHALL INITIATE A SUPERVISORY SIGNAL ONLY.</p> <p>18. FIRE ALARM SYSTEM SHALL BE U.L. CERTIFIED.</p> <p>19. ALL FIRE ALARM INITIATING DEVICES SHALL BE ADDRESSABLE AND ALL FIRE ALARM CIRCUITS SHALL BE CLASS "B", STYLE "C".</p> <p>20. SECURITY LOCK SYSTEM (BY OTHERS) SHALL BE TIED INTO FIRE ALARM SYSTEM. EMERGENCY EXITS SHALL UNLOCK UPON RECEIPT OF ANY FIRE SIGNAL OR LOSS OF PRIMARY POWER.</p> <p>21. PROVIDE CERTIFICATE OF COMPLETION AT THE FINAL INSPECTION OF THE FIRE ALARM SYSTEM.</p> <p>22. FIRE ALARM CONTRACTOR SHALL PROVIDE A DETAILED SET OF SIGNED AND SEALED (BY CONTRACTORS ENGINEER) SHOP DRAWINGS (INCLUDING DEVICE CUT SHEETS), A COMPLETE POINT TO POINT WIRING DIAGRAM, FLOOR PLAN DRAWINGS INDICATING ALL DEVICE LOCATIONS AND NUMBERS, COMPLETE BATTERY CALCULATIONS AND COMPLETE NOTIFICATION APPLIANCE CIRCUIT CALCULATIONS (FOR THE SYSTEM TO BE INSTALLED) TO THE BUILDING DEPARTMENT (AUTHORITY HAVING JURISDICTION) AT THE TIME OF APPLICATION FOR BUILDING PERMIT.</p> <p>23. PROVIDE THE OWNER WITH A COMPLETE FIRE ALARM SYSTEM AND INSTALLATION MANUAL COVERING ALL SYSTEM EQUIPMENT INSTALLED FOR THIS PROJECT. KEEP AT THE MAIN FIRE ALARM CONTROL PANEL.</p> |  |



## FIRE ALARM RISER DIAGRAM

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COMMENTS 1/17/20  
PROJECT NUMBER 4/2018

### FIRE ALARM NOTES

DESIGNED BY:  
Alex Penna & Rex Nichols  
DATE:  
JUNE 12TH 2019

ISSUED FOR  
REVIEW & COMMENTS  
BIDDING  
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FIRE ALARM PLAN

NEW SHEET

|                                                     |                                                                                                                                                                                   |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ISSUED FOR PERMIT                                   |                                                                                                                                                                                   |
| ISSUED FOR CONSTRUCTION                             |                                                                                                                                                                                   |
| KAMM CONSULTING PROJECT #: 2019-0577                |                                                                                                                                                                                   |
| PROJECT MANAGER: Rick Gonzalez                      |                                                                                                                                                                                   |
| <input checked="" type="checkbox"/> KAMM Consulting | 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |
| 02-05-20                                            | date                                                                                                                                                                              |
| signed                                              | signature                                                                                                                                                                         |

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| TYPICAL PLUMBING FIXTURE CONNECTION SCHEDULE                                                                                                                                                                                                                                |              |      |          |    |    |                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------|----------|----|----|---------------------------------------------------------|
| TYPE                                                                                                                                                                                                                                                                        | SOIL / WASTE | VENT | TRAP     | CW | HW | REMARKS                                                 |
| 2" HUB DRAIN                                                                                                                                                                                                                                                                | 2"           | 2"   | 2"       | —  | —  | PROVIDE ½" CW TRAP PRIMER AND PROSET TRAP GUARD.        |
| OUTLET BOX                                                                                                                                                                                                                                                                  | —            | —    | —        | ½" | —  | PROVIDE w/ INTEGRAL WATER HAMMER ARRESTOR.              |
| KITCHEN SINK                                                                                                                                                                                                                                                                | 2"           | 2"   | 1½"      | ½" | ½" | 1.0 GPM AT 60 PSI MAXIMUM.                              |
| LAVATORY (PRIVATE)                                                                                                                                                                                                                                                          | 2"           | 2"   | 1¼"      | ½" | ½" | 0.5 GPM AT 60 PSI MAXIMUM. (0.25 GALLON METERING CYCLE) |
| REFRIGERATOR                                                                                                                                                                                                                                                                | —            | —    | —        | ½" | —  | PROVIDE WITH VACUUM BREAKER.                            |
| WATER CLOSET (FLUSH TANK)                                                                                                                                                                                                                                                   | 3" OR 4"     | 2"   | INTEGRAL | ½" | —  | 1.28 GALLONS PER FLUSHING CYCLE MAXIMUM.                |
| NOTE: PLUMBING FIXTURE CONNECTION SCHEDULE IS SHOWN FOR CONVENIENCE ONLY. PLUMBING CONTRACTOR TO CONFIRM FINAL PLUMBING FIXTURE CONNECTION SIZES WITH PLUMBING FIXTURE MANUFACTURER'S REQUIREMENTS. ALL FIXTURES SHALL COMPLY WITH LOCAL WATER-USE EFFICIENCY REQUIREMENTS. |              |      |          |    |    |                                                         |

| SHOCK ARRESTOR SCHEDULE                                                                                                   |                   |               |            |
|---------------------------------------------------------------------------------------------------------------------------|-------------------|---------------|------------|
| P.D.I. DESIGNATION                                                                                                        | MANUF. & MODEL    | FIXTURE UNITS | CONNECTION |
| A                                                                                                                         | SIoux CHIEF 652-A | 1-11          | 1/2"       |
| B                                                                                                                         | SIoux CHIEF 653-B | 12-32         | 3/4"       |
| C                                                                                                                         | SIoux CHIEF 654-C | 33-60         | 1"         |
| SIoux CHIEF SHOCK ARRESTORS APPROVED FOR INSTALLATION WITH NO ACCESS DOOR REQUIRED. CONFORMS TO ANSI/ASSE 1010 STANDARDS. |                   |               |            |

| SLOPE OF HORIZ. DRAINAGE PIPE                 |                               |
|-----------------------------------------------|-------------------------------|
| SIZE (inches)                                 | MINIMUM SLOPE (inch per foot) |
| 2-1/2 or less                                 | 1/4                           |
| 3 to 6                                        | 1/8                           |
| 8 or larger                                   | 1/16                          |
| TABLE 704.1 OF THE FLORIDA PLUMBING CODE 2017 |                               |

| CONDENSATE DRAIN PIPE SIZING             |                                          |
|------------------------------------------|------------------------------------------|
| EQUIPMENT CAPABILITY                     | MINIMUM CONDENSATE PIPE DIAMETER (inch ) |
| UP TO 20 TONS OF REFRIGERATION           | 1"                                       |
| OVER 21 TONS TO 40 TONS OF REFRIGERATION | 1-1/4"                                   |
| OVER 41 TONS TO 60 TONS OF REFRIGERATION | 1-1/2"                                   |
|                                          |                                          |

| PLUMBING FIXTURE SCHEDULE                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| L1                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | BY OWNER /ARCHITECT                                                                                                                                           |
| L2                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | BY OWNER /ARCHITECT                                                                                                                                           |
| WC1                                                                                                                                                                                                                                                                                                                                                                                                                                                                | BY OWNER /ARCHITECT                                                                                                                                           |
| SK1                                                                                                                                                                                                                                                                                                                                                                                                                                                                | BY OWNER /ARCHITECT                                                                                                                                           |
| SK2                                                                                                                                                                                                                                                                                                                                                                                                                                                                | BY OWNER /ARCHITECT                                                                                                                                           |
| SK3                                                                                                                                                                                                                                                                                                                                                                                                                                                                | BY OWNER /ARCHITECT                                                                                                                                           |
| SH                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | BY OWNER /ARCHITECT                                                                                                                                           |
| SH2                                                                                                                                                                                                                                                                                                                                                                                                                                                                | BY OWNER /ARCHITECT                                                                                                                                           |
| TUB                                                                                                                                                                                                                                                                                                                                                                                                                                                                | BY OWNER /ARCHITECT                                                                                                                                           |
| EW1                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ELECTRIC WATER HEATER, LOCHINVAR MODEL #HPA082KD, 80 GALLON, 208V/240V/1ø/4.5KW.                                                                              |
| OB1                                                                                                                                                                                                                                                                                                                                                                                                                                                                | WATER OUTLET BOX, GUY GRAY MODEL #BIM875QTSAB WITH LEAD-FREE QUARTER-TURN VALVE & INTEGRAL WATER-HAMMER ARRESTOR.                                             |
| OB2                                                                                                                                                                                                                                                                                                                                                                                                                                                                | WASHING MACHINE OUTLET BOX, GUY GRAY MODEL #B200 WITH LEAD-FREE QUARTER-TURN VALVES, INTEGRAL WATER-HAMMER ARRESTORS, AND 2" DRAIN CONNECTION.                |
| HB                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | HOSE BIB, MIFAB #MHY-9041, ROUGH BRASS, LOOSE KEY OPERATOR, INTEGRAL VACUUM BREAKER, 1/2" SUPPLY CONNECTION. INSTALL ø 18"-24" A.F.F. UNLESS NOTED OTHERWISE. |
| GENERAL NOTES:<br>(1) - FIXTURES SHALL BE AS SHOWN OR EQUAL.<br>(2) - ALL FIXTURES SHALL COMPLY WITH TABLE 604.4 OF FBC 2017.<br>(3) - ALL FIXTURE TRIM PACKAGES INCLUDING BUT NOT LIMITED TO TRAP, ANGLE STOP, FLUSH VALVE, SUPPLY TUBES, AND CLEANOUT COVER PLATES SHALL BE OF THE SAME FINISH AS THE ABOVE SPECIFIED FAUCET AND PER ARCHITECTURAL FINISH SCHEDULE.<br>(4) - ALL FIXTURES SHALL BE ROUGHED IN PER MANUFACTURER CUT SHEET TO MAINTAIN UNIFORMITY. |                                                                                                                                                               |

| PLUMBING SHEET INDEX |                                                 |
|----------------------|-------------------------------------------------|
| SHEET#               | DESCRIPTION                                     |
| P0.1                 | PLUMBING INDEX, NOTES, AND DETAILS              |
| P0.2                 | DETAILS                                         |
| P1.1                 | PLUMBING SITE PLAN                              |
| P2.1A                | PLUMBING DRAINAGE PLAN (UNDERGROUND)            |
| P2.1B                | PLUMBING DRAINAGE PLAN LEVEL 1                  |
| P2.2                 | PLUMBING DRAINAGE PLAN LEVEL 2                  |
| P2.3                 | PLUMBING DRAINAGE PLAN LEVEL 3                  |
| P2.4                 | PLUMBING DRAINAGE PLAN ROOF DECK                |
| P3.1                 | PLUMBING SERVICE PLAN LEVEL 1                   |
| P3.2                 | PLUMBING SERVICE PLAN LEVEL 2                   |
| P3.3                 | PLUMBING SERVICE PLAN LEVEL 3                   |
| P3.4                 | PLUMBING SERVICE PLAN ROOF DECK                 |
| P5.1                 | TH A - SANITARY AND DOMESTIC WATER ISOMETRICS   |
| P5.2                 | TH B-E - SANITARY AND DOMESTIC WATER ISOMETRICS |
| P5.3                 | TH F - SANITARY AND DOMESTIC WATER ISOMETRICS   |
| P5.4                 | TH A-C - GAS ISOMETRICS                         |
| P5.5                 | TH D-E - GAS ISOMETRICS                         |
| P5.6                 | TH A - STORM ISOMETRICS                         |
| P5.7                 | TH B-E - STORM ISOMETRICS                       |
| P5.8                 | TH F - STORM ISOMETRICS                         |

## PIPE SYSTEM LEGEND

|  |                   |                                              |
|--|-------------------|----------------------------------------------|
|  | <b>SAN</b>        | <b>SANITARY</b>                              |
|  | <b>V</b>          | <b>VENT</b>                                  |
|  | <b>SD</b>         | <b>STORM DRAIN</b>                           |
|  | <b>CW-SP</b>      | <b>DOMESTIC COLD WATER - STREET PRESSURE</b> |
|  | <b>HW-110°F</b>   | <b>DOMESTIC HOT WATER 110°F</b>              |
|  | <b>HWR-110°F</b>  | <b>DOMESTIC HOT WATER RETURN 110°F</b>       |
|  | <b>Gas</b>        | <b>GAS</b>                                   |
|  | <b>Elev. Sump</b> | <b>ELEVATOR SUMP PIT DISCHARGE</b>           |

| PLUMBING NOTES |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.             | THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SCOPE OF WORK. ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH THE FLORIDA BUILDING CODE 6th EDITION (2017) - PLUMBING, APPLICABLE LOCAL CODES, RULES, AND ORDINANCES.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2.             | THE PLUMBING CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME THOROUGHLY FAMILIAR WITH ALL EXISTING CONDITIONS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 3.             | ALL MATERIALS SHALL BE NEW AND OF GOOD QUALITY.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 4.             | ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY-OPERATIONAL. ALL EXCAVATION AND BACKFILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 5.             | REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 6.             | PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTS. PLUMBING CONTRACTOR SHALL OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT. PLUMBING CONTRACTOR MUST BE PRESENT FOR ALL INSPECTIONS OF HIS WORK BY REGULATORY AUTHORITIES.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 7.             | CONTRACTOR SHALL SUBMIT TO ARCHITECT/ENGINEER, FOR REVIEW & APPROVAL, FIVE (5) SETS OF MANUFACTURER'S CUT SHEETS FOR EACH FIXTURE, PIPING/FITTING MATERIAL AND EQUIPMENT ITEM WITH ASSOCIATED CONTROLS, THAT ARE INCLUDED IN THE CONTRACT.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 8.             | DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE FOR THE EXACT LOCATION OF FIXTURES, PIPING, EQUIPMENT, ETC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 9.             | ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION. REPORT ANY DISCREPANCY TO ARCHITECT/ENGINEER PRIOR TO BEGINNING CONSTRUCTION.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 10.            | VERIFY LOCATION, SIZE, DIRECTION OF FLOW AND INVERT ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION. ADVISE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 11.            | WATER DISTRIBUTION PIPING ABOVE AND BELOW GROUND SHALL BE TYPE "L" COPPER. ALTERNATE PIPING & FITTING MATERIALS MAY BE USED IN ACCORDANCE WITH FLORIDA BUILDING CODE 6th EDITION (2017) - PLUMBING, TABLES 605.3, 605.4 & 605.5, WHEN APPROVED BY ENGINEER OF RECORD AND LOCAL AUTHORITY HAVING JURISDICTION. PROVIDE ALTERNATE FOR CPVC PIPING & FITTINGS EQUAL TO LUBRIZOL CORZAN OR FLOW-GUARD GOLD. PROVIDE ALTERNATE FOR PEX TYPE "A" PIPING & FITTINGS EQUAL TO UPONOR. ALTERNATES ARE PERTINENT FOR WATER SERVICES KNOWN OR DETERMINED TO HAVE ACIDIC CHARACTERISTICS OR OTHER PARTICULAR CIRCUMSTANCES AS DEEMED APPROPRIATE BY DIRECTIVE FROM THE OWNER. CONTRACTOR SHALL PERFORM A WATER TEST TO DETERMINE WATER CHEMISTRY PRIOR TO ANY WORK OR PERMIT SUBMITTAL. TEST RESULTS TO THE ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL. DISINFECTION OF POTABLE WATER SYSTEM SHALL COMPLY WITH FLORIDA BUILDING CODE 6th EDITION (2017) - PLUMBING, SECTION 610. ALL WATER PIPING & FITTINGS SHALL BE OF DOMESTIC MANUFACTURE; SPECIFICALLY IN THE UNITED STATES OF AMERICA. |
| 12.            | SOIL, WASTE, VENT, AND RAINWATER (DWW) PIPING & FITTINGS SHALL BE CAST IRON OR PVC, WHERE CODE ALLOWS. PVC MAY NOT BE USED THRU RATED ASSEMBLIES OR IN PLENUMS. PVC PIPING SHALL BE SOLID-CORE ONLY. FOAM-CORE PIPING SHALL NOT BE ACCEPTED. CAST IRON PIPING & FITTINGS SHALL BEAR THE CIPSF 501 MARK. ALL DWW PIPING & FITTINGS SHALL BE OF DOMESTIC MANUFACTURE; SPECIFICALLY IN THE UNITED STATES OF AMERICA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 13.            | NATURAL & PROPANE FUEL GAS PIPING SHALL BE THE FOLLOWING: UNDERGROUND - PE PIPE COMPLYING WITH ASTM D2583 OR ASTM D2581, SDR 11 TRANSITION FITTINGS. ABOVEGROUND - SCHEDULE 40 BLACK STEEL COMPLYING WITH ASTM A53 AND THREADED, WELDED, OR FLANGED FITTINGS. CORRUGATED STAINLESS STEEL TUBING COMPLYING WITH ANSI/AS LC1 SHALL BE ALLOWED ONLY WITHIN INTERIOR ACCESSIBLE SPACES.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 14.            | COMPRESSED AIR PIPING SHALL BE ASTM B241 EXTRUDED ALUMINUM ALLOY COMPLIANT WITH ASME B31.1 OR GALVANIZED BLACK STEEL IN ACCORDANCE WITH DIN EN 10255. ALUMINUM PIPING AND MECHANICAL GROOVED-JOINT FITTINGS SHALL BE AIRNET, TRANSAIR, OR APPROVED EQUAL. STEEL PIPING AND MECHANICAL GROOVED-JOINT FITTINGS SHALL BE VIEGA MEGAPRESS OR APPROVED EQUAL.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 15.            | ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE ANGLE STOPS AND APPROPRIATELY MARKED ACCESS PANELS (WHERE REQUIRED). COORDINATE LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 16.            | PROVIDE APPROVED WATER HAMMER ARRESTORS FOR ALL (GROUP) PLUMBING FIXTURES, SIZED & LOCATED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS & PDI-WH201.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 17.            | PROVIDE DIELECTRIC COUPLINGS OR FLANGES BETWEEN ALL DISSIMILAR METALS IN PIPING AND EQUIPMENT CONNECTIONS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 18.            | ISOLATE COPPER PIPING FROM METALLIC HANGERS OR SUPPORTS WITH ISOLATOR PADS OR NON-CONDUCTIVE MATERIAL.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 19.            | ALL FIRE RATED FLOOR AND WALL PENETRATIONS SHALL BE PROPERLY PROTECTED FROM FIRE, SMOKE AND WATER PENETRATION BY FILLING ANNULAR SPACE BETWEEN PIPING AND SLEEVES WITH INTUMESCENT CAULK, TO ACHIEVE THE SAME RATING AS WALLS OR FLOORS, AS PART OF THE PLUMBING CONTRACTOR'S WORK.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 20.            | PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF ACCEPTANCE BY OWNER. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 21.            | PROVIDE ACCESS PANELS FOR ALL CONCEALED VALVES. ACCESS PANELS IN RATED WALLS SHALL MAINTAIN THE SAME RATING AND SHALL MATCH THE FINISH OF THE WALL IN WHICH IT IS INSTALLED.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 22.            | PROVIDE COMBINATION CLEANOUT PLUG AND COVER PLATE OR ACCESS PANEL FOR ALL WALL CLEANOUTS. FINISH TO MATCH NEARBY FIXTURE TRIM.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 23.            | NO COMBUSTIBLE MATERIAL SHALL BE INSTALLED IN MECHANICAL ROOMS NOR IN CEILING SPACES WHERE USED AS RETURN AIR PLENUMS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 24.            | NO WATER, SANITARY OR DRAINAGE PIPING SHALL BE INSTALLED IN ELECTRICAL OR ELEVATOR EQUIPMENT ROOMS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 25.            | ALL CONTROL VALVES SHALL BE TAGGED AND MARKED. A REPRODUCIBLE DIAGRAM LOCATING ALL VALVES SHALL BE FURNISHED FOR OWNER/OPERATOR.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 26.            | CONDENSATE DRAIN PIPING SHALL BE TYPE "L" COPPER WITH ARMAFLEX INSULATION AND A VAPOR-BARRIER JACKET PER FLORIDA BUILDING CODE 6th EDITION (2017) - ENERGY CONSERVATION, TABLE C403.2.8. PVC WITHOUT INSULATION IS ACCEPTABLE FOR RISERS AND BELOW GRADE PIPING. WHEN USED IN A RETURN AIR PLENUM, CPVC PIPING WITH INSULATION IS ACCEPTABLE IN LOCATIONS WHERE ALLOWED BY LOCAL CODES. CONDENSATE PIPING SHALL NOT DRAIN ONTO THE ROOFING SYSTEM NOR ANY OF ITS COMPONENTS. CONDENSATE PIPING ARRANGEMENT IS EXEMPT FROM MINIMUM EQUIPMENT CLEARANCE REQUIREMENTS PER FLORIDA BUILDING CODE 6th EDITION (2017), SECTION 1522.3.5. ALL HORIZONTAL RAINWATER PIPING RUN ABOVE FINISHED FLOOR THAT RECEIVES CONDENSATE DISCHARGE SHALL BE INSULATED WITH ARMAFLEX AND A VAPOR-BARRIER JACKET.                                                                                                                                                                                                                                                                                      |
| 27.            | HOT WATER PIPING INSULATION SHALL BE PROVIDED IN ACCORDANCE WITH FLORIDA BUILDING CODE 6th EDITION (2017) - PLUMBING, SECTION 607.5 & FLORIDA BUILDING CODE 6th EDITION (2017) - ENERGY CONSERVATION, TABLE C403.2.10. CONTRACTOR SHALL USE ARMAFLEX OR EQUAL WHERE APPLICABLE. WHERE DOMESTIC WATER TEMPERATURES CAN CAUSE SWEATING, ALL COLD WATER PIPING SHALL BE INSULATED WITH ARMAFLEX INSULATION AND A VAPOR-BARRIER JACKET, PER FLORIDA BUILDING CODE 6th EDITION (2017) - ENERGY CONSERVATION, TABLE C403.2.10.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 28.            | AIR ADMITTANCE VALVES MAY BE USED AS AN ALTERNATE TO VENT PIPING THRU ROOF WHERE ACCEPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION. INSTALLATION METHODS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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PROPOSED TOWNHOUSES ADDRESS 700 BRINY  
AV, POMPANO BEACH, 33062

OWNER : CARLO TREE LP  
GREENPARK GROUP  
5600 N Federal Highway  
Fort Lauderdale - FL - 33308

PROJECT NUMBER 4/2018

PLUMBING INDEX,  
NOTES, AND DETAILS

DESIGNED BY:  
Alex Penna & Rex Nichols

DATE:  
JUNE 12TH 2019

ISSUED FOR  
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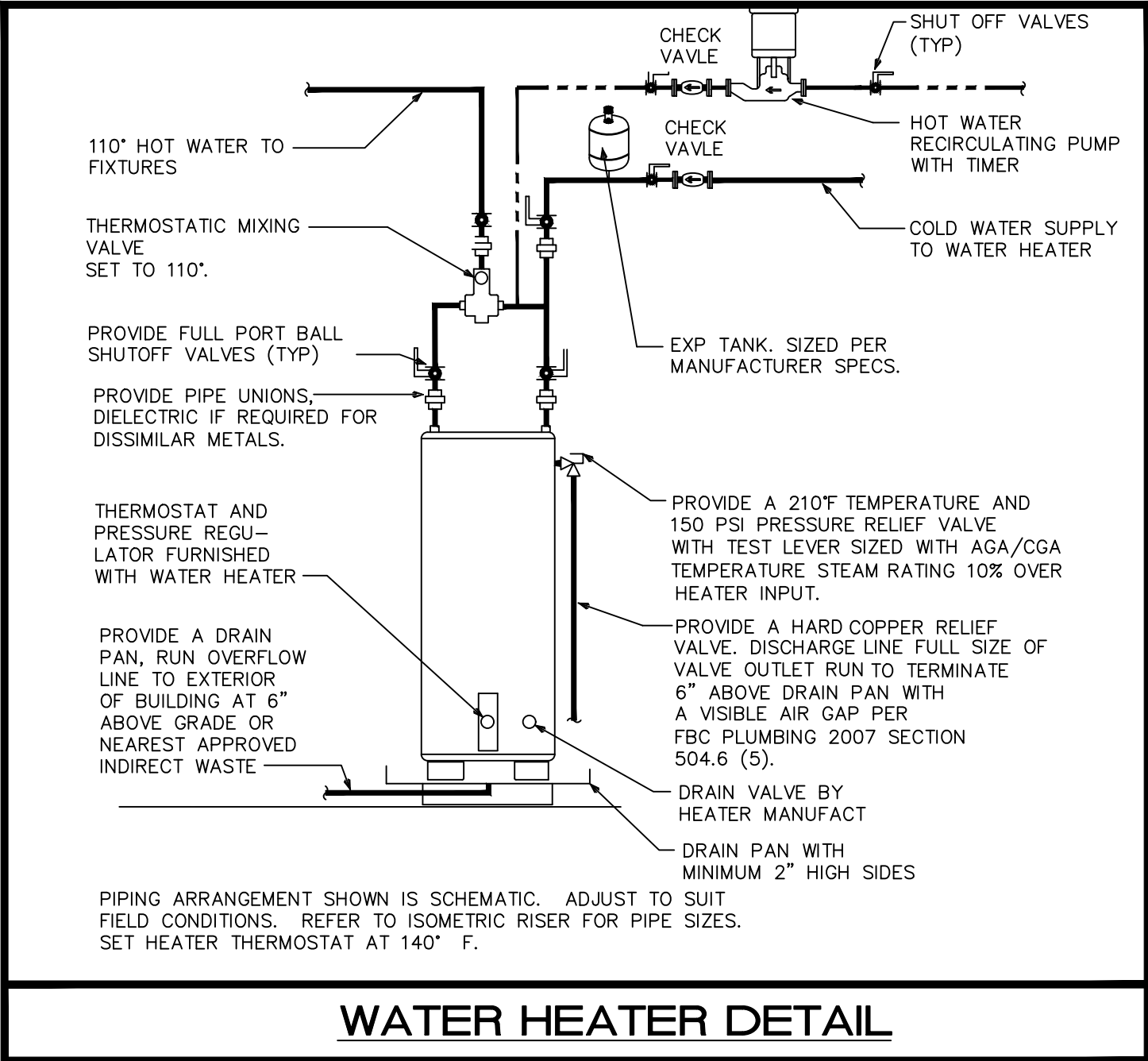
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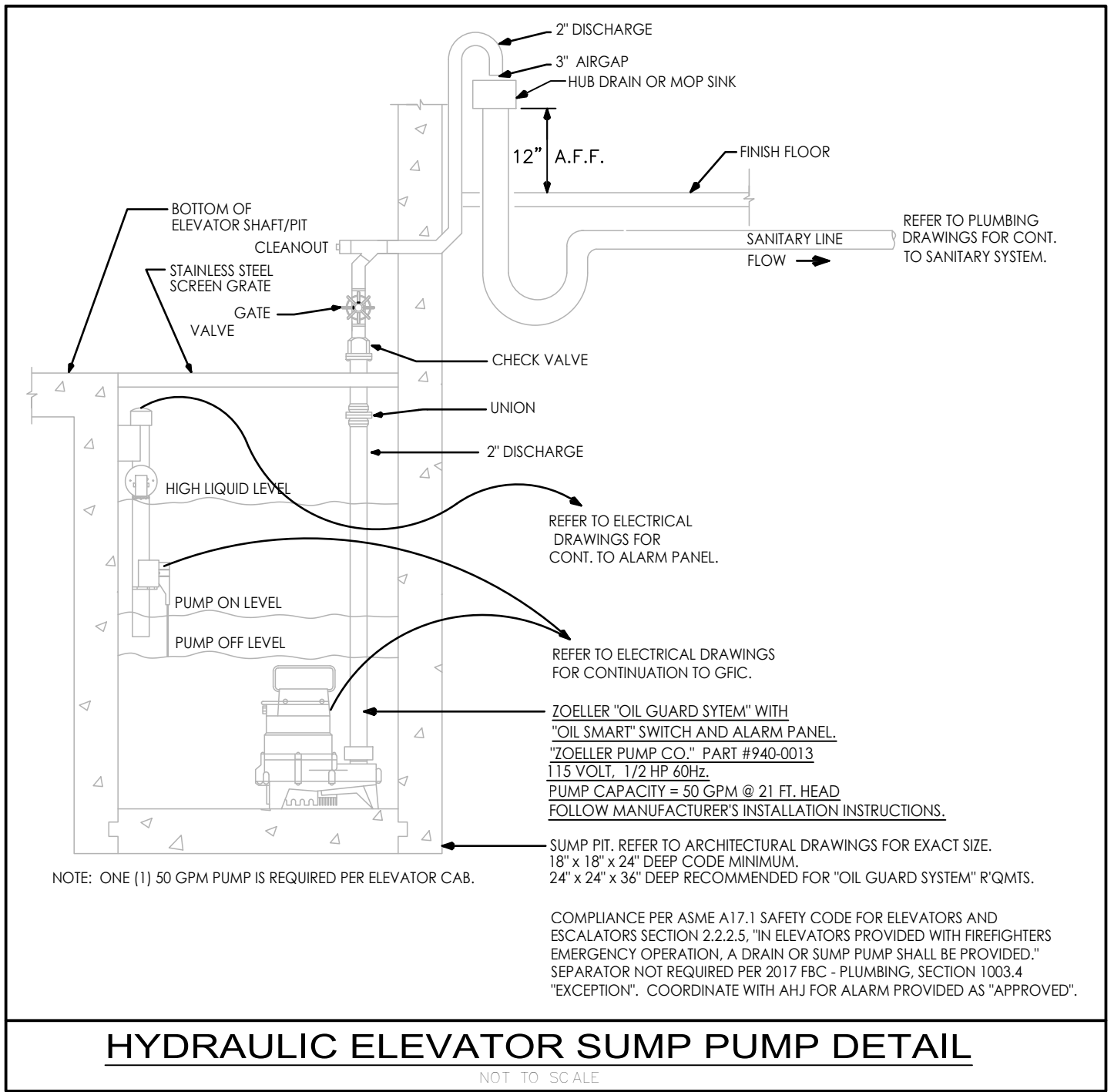
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| PROJECT MANAGER:           | Rick Gonzalez                                                                                                                                                                     |
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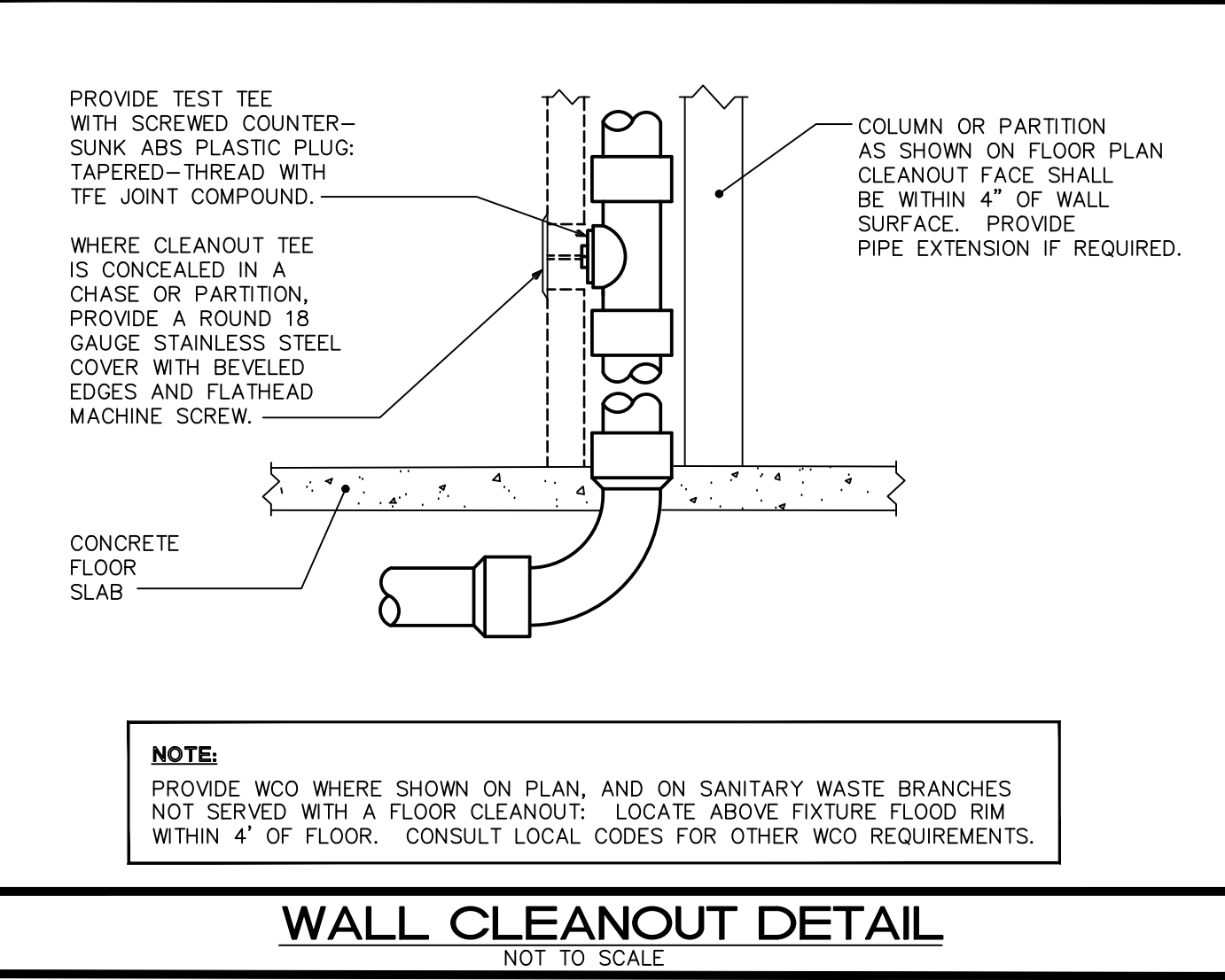




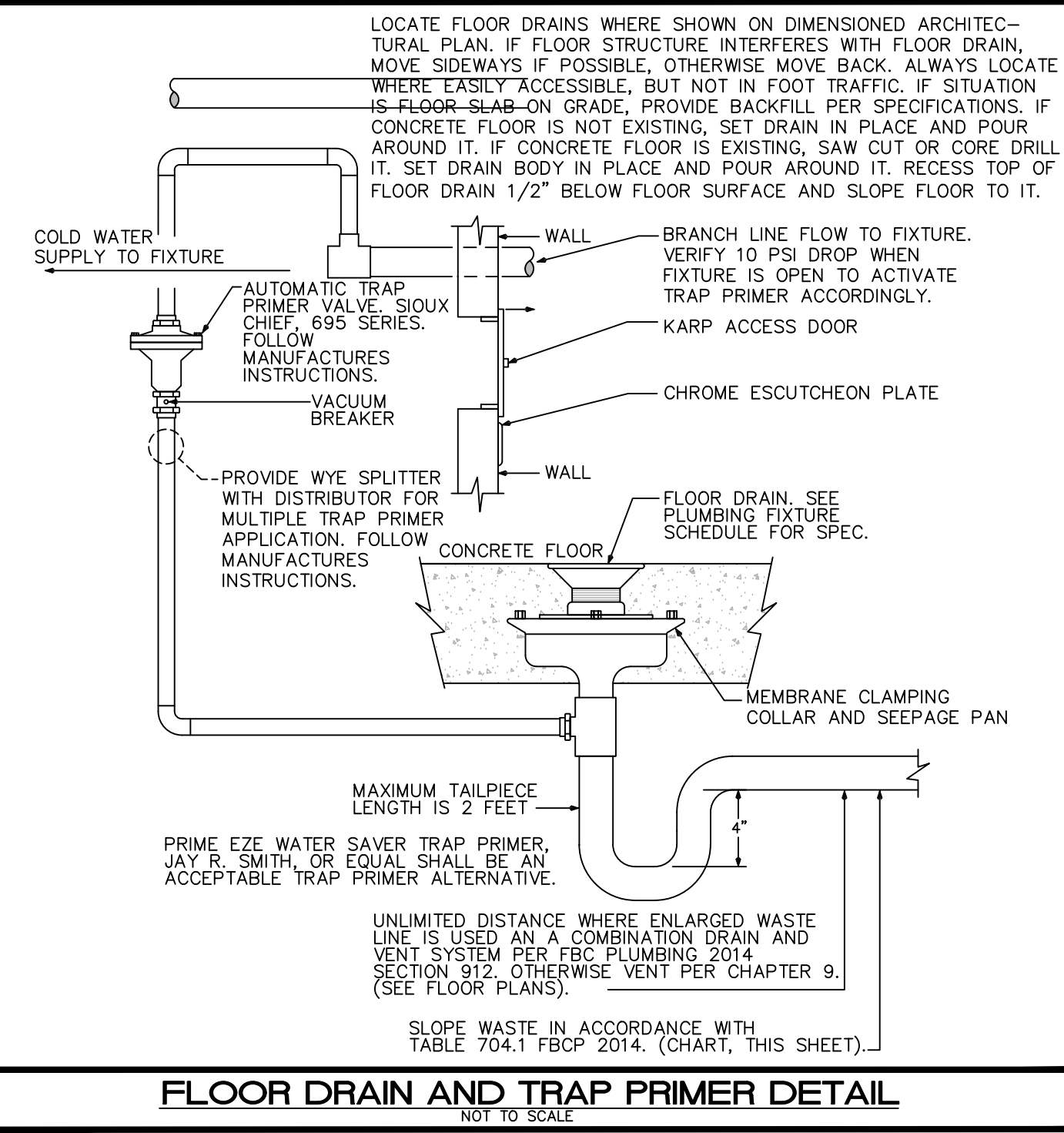
WATER HEATER DETAIL



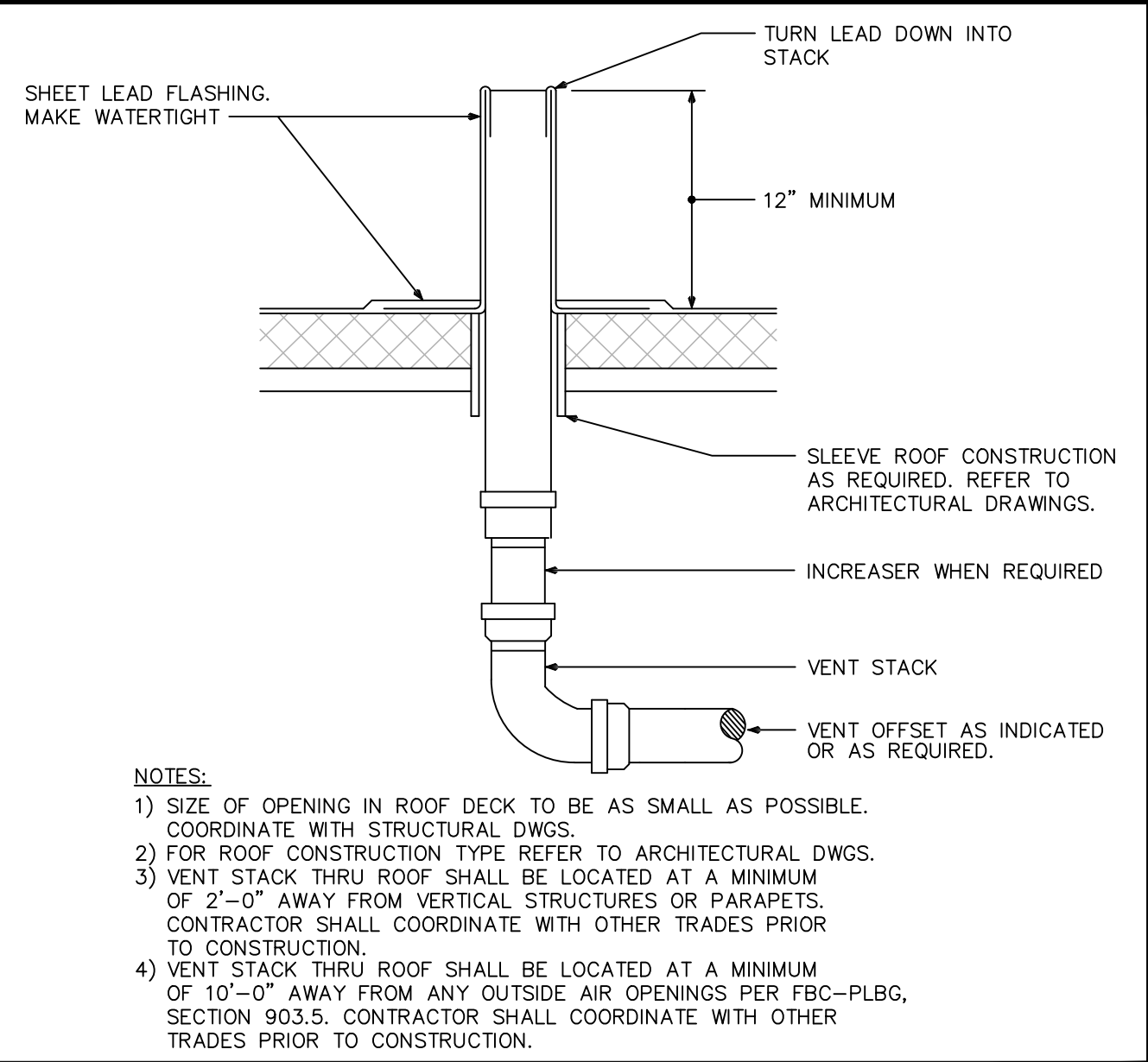
HYDRAULIC ELEVATOR SUMP PUMP DETAIL



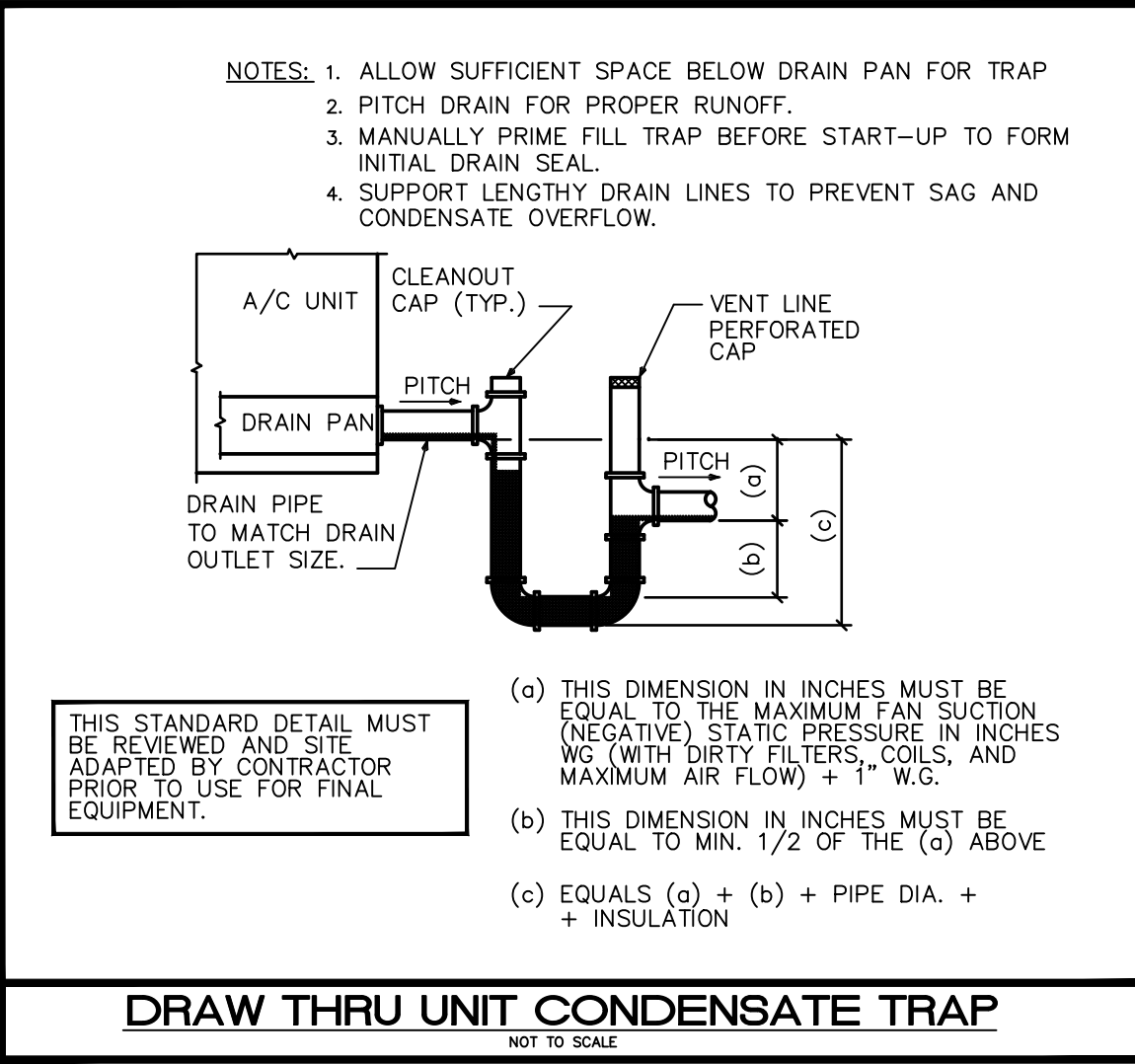
WALL CLEANOUT DETAIL



FLOOR DRAIN AND TRAP PRIMER DETAIL

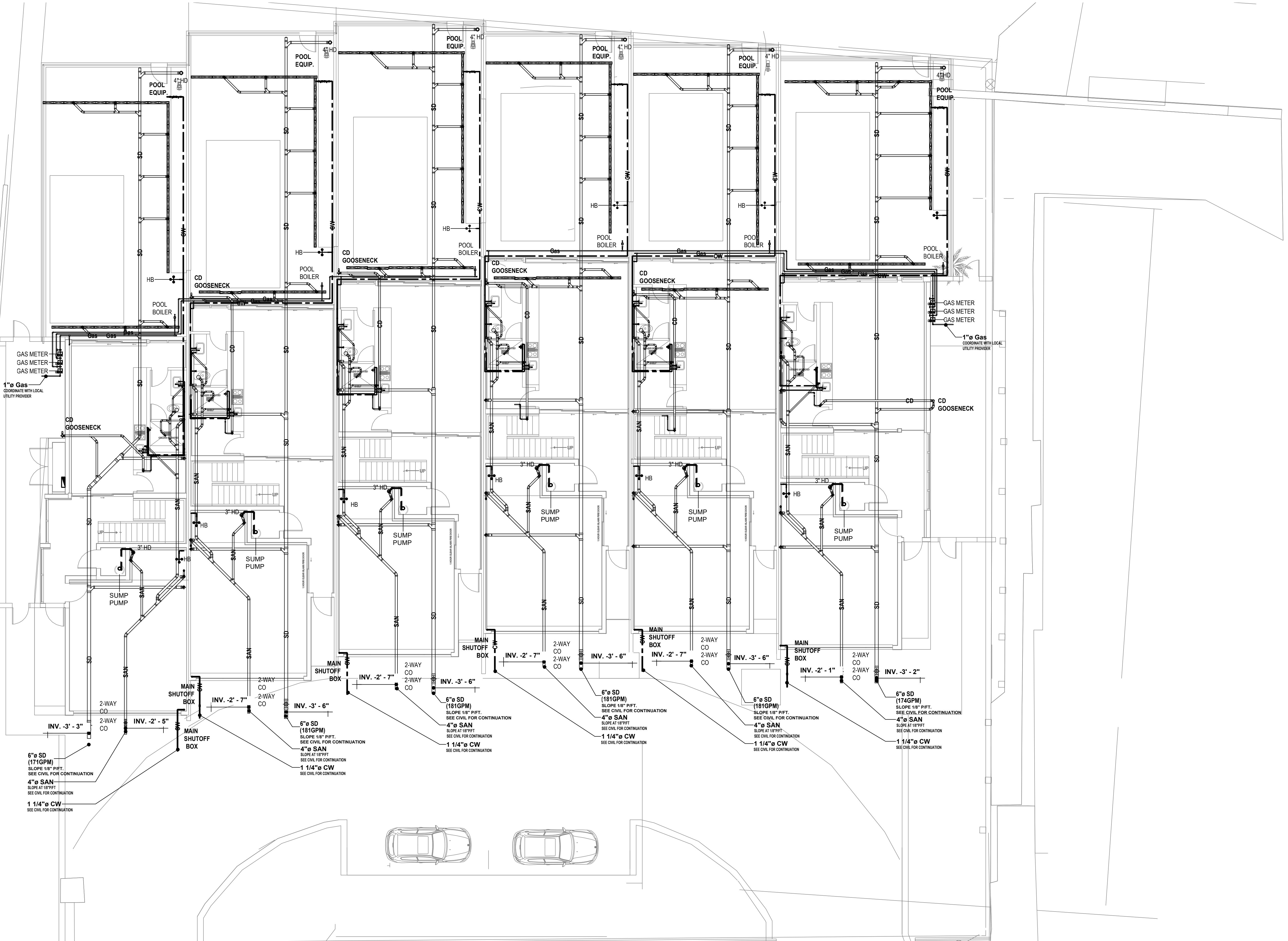


VENT THROUGH ROOF



DRAW THRU UNIT CONDENSATE TRAP

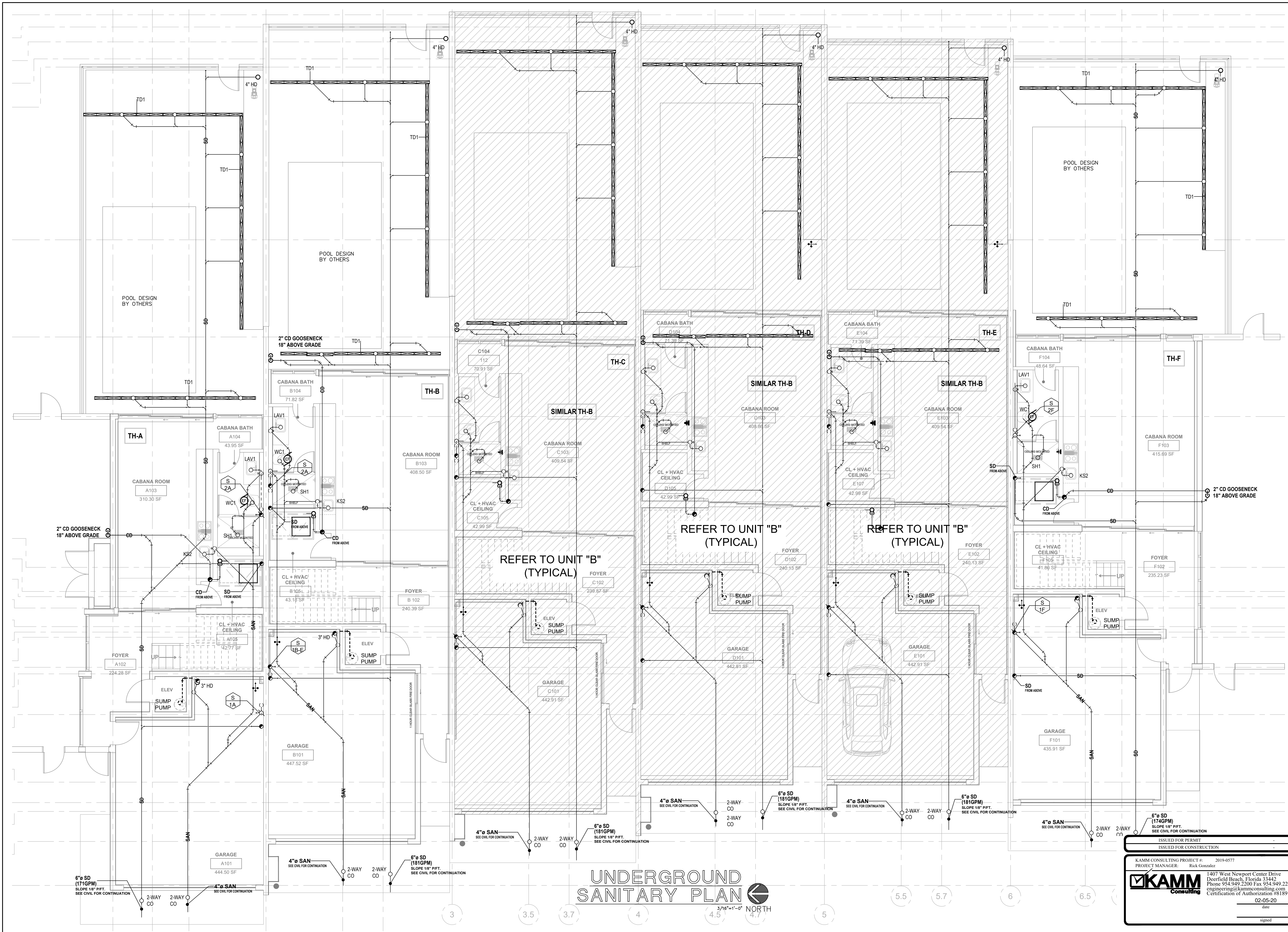




SITE PLUMBING PLAN  
1"=20'-0" NORTH

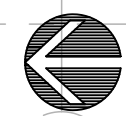
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| PROJECT MANAGER: Rick Gonzalez                      |  |                                                                                                                                                                                   |  |
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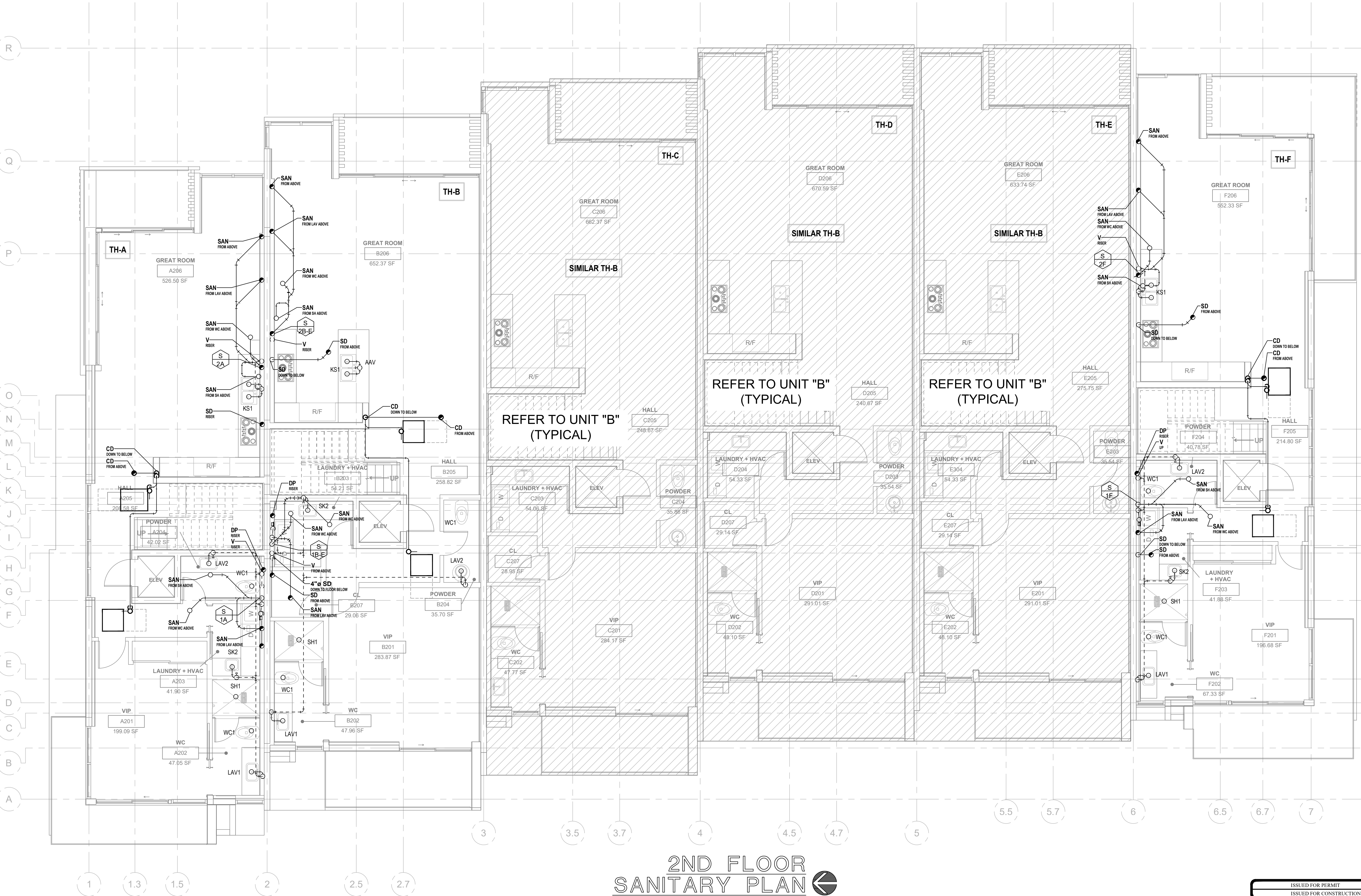
## 1ST FLOOR SANITARY PLAN



3/16"=1'-0" NORTH

|                                                                                                                                                                                   |               |
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| DATE                                                                                                                                                                              | 02-05-20      |
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2ND FLOOR  
SANITARY PLAN  
3/16"=1'-0" NORTH

|                                                                                                                                                                                   |  |                            |  |
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| ISSUED FOR PERMIT                                                                                                                                                                 |  | -                          |  |
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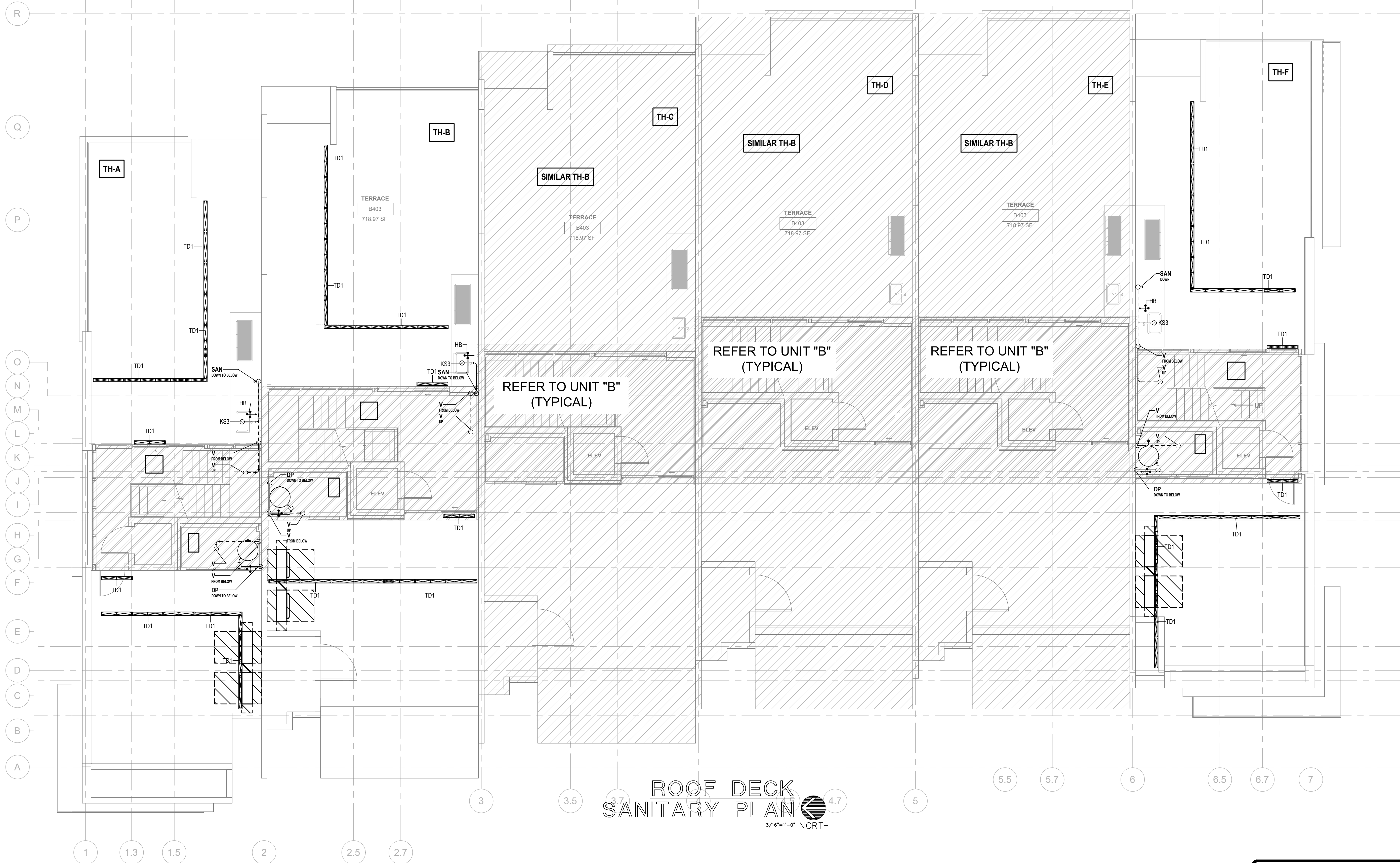
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3RD FLOOR  
SANITARY PLAN  
3/16"=1'-0" NORTH

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ROOF DECK  
SANITARY PLAN  
3/16"=1'-0" NORTH

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OWNER : CARLO TREE LP  
GREENPARK GROUP  
5600 N Federal Highway  
Fort Lauderdale - FL - 33308

PROJECT NUMBER 4/2018

SANITARY PLAN  
ROOF DECK

DESIGNED BY:  
Alex Penna & Rex Nichols  
DATE:  
JUNE 12TH 2019

ISSUED FOR  
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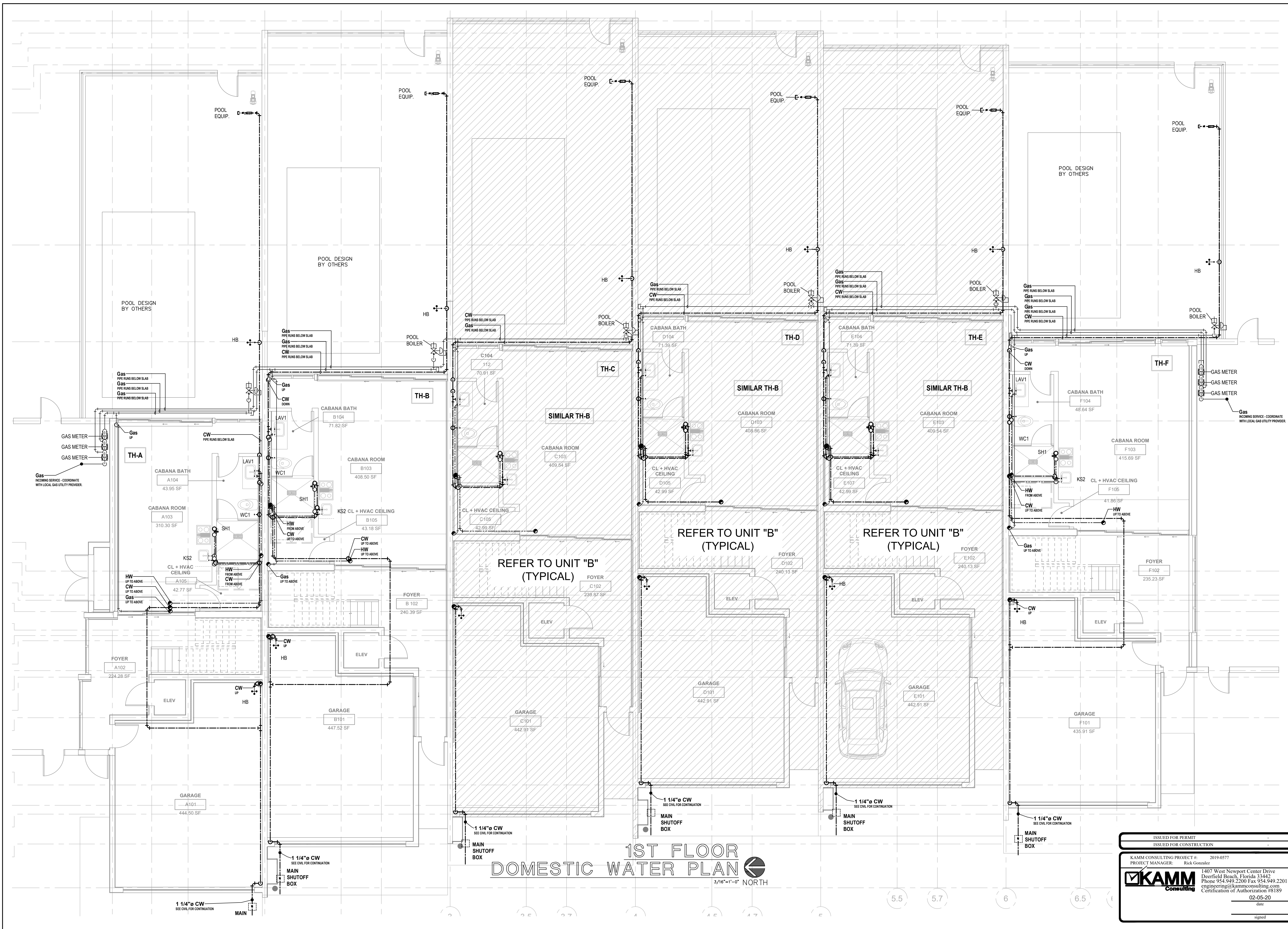
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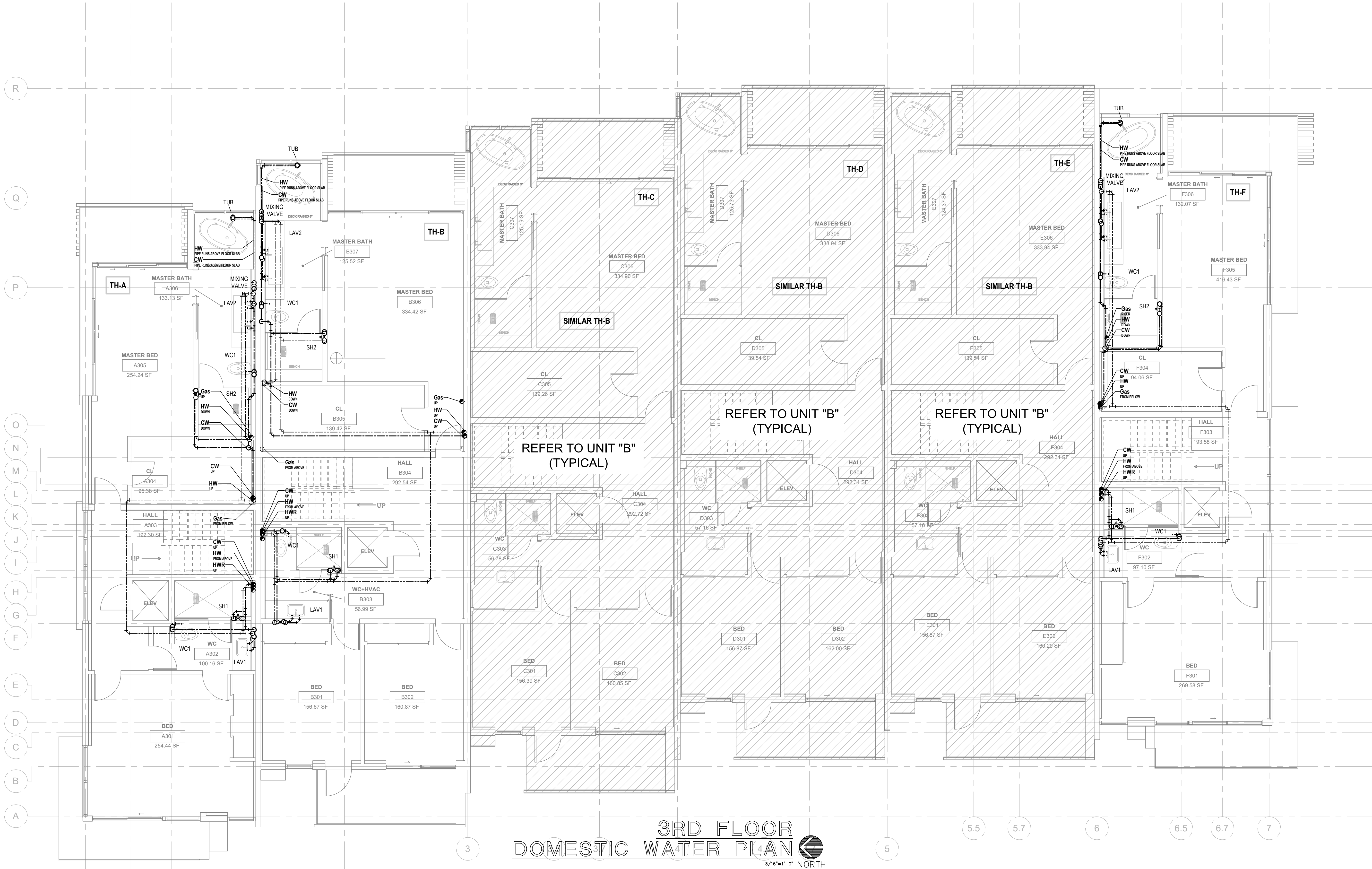




2ND FLOOR  
DOMESTIC WATER PLAN  
3/16"=1'-0" NORTH

|                            |                                                                                                                                                                                   |
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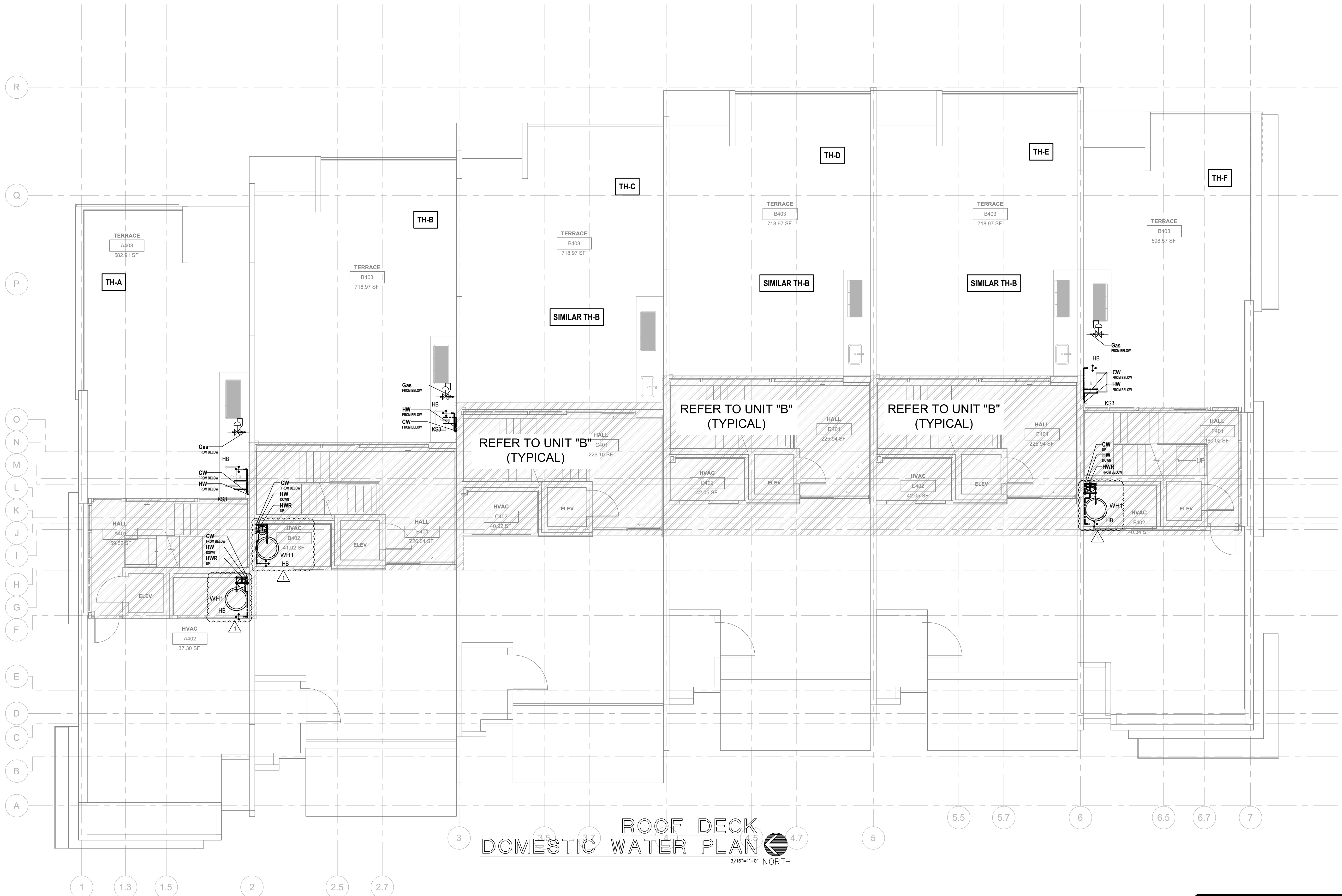




3RD FLOOR  
DOMESTIC WATER PLAN  
3/16"=1'-0" NORTH

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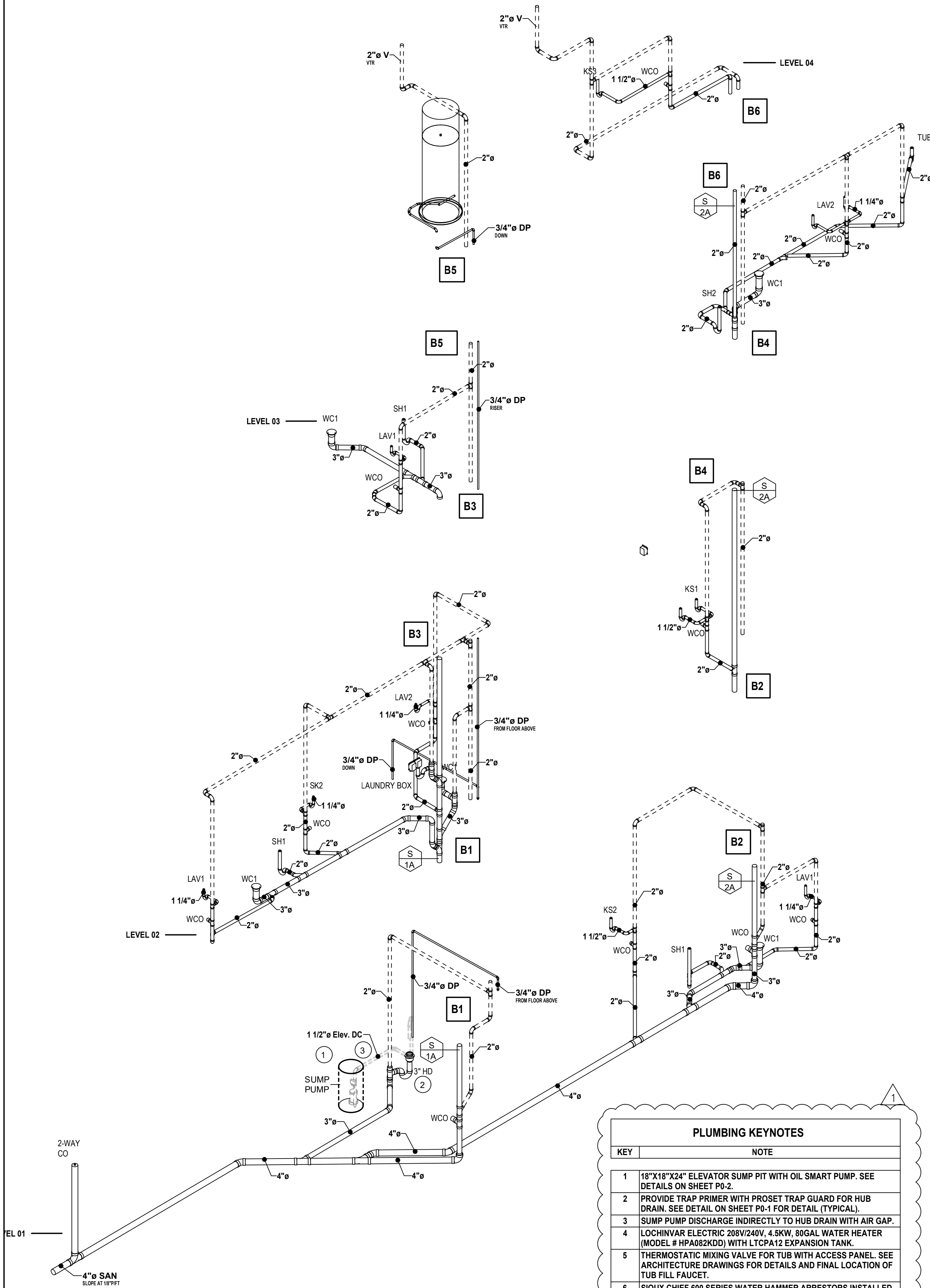




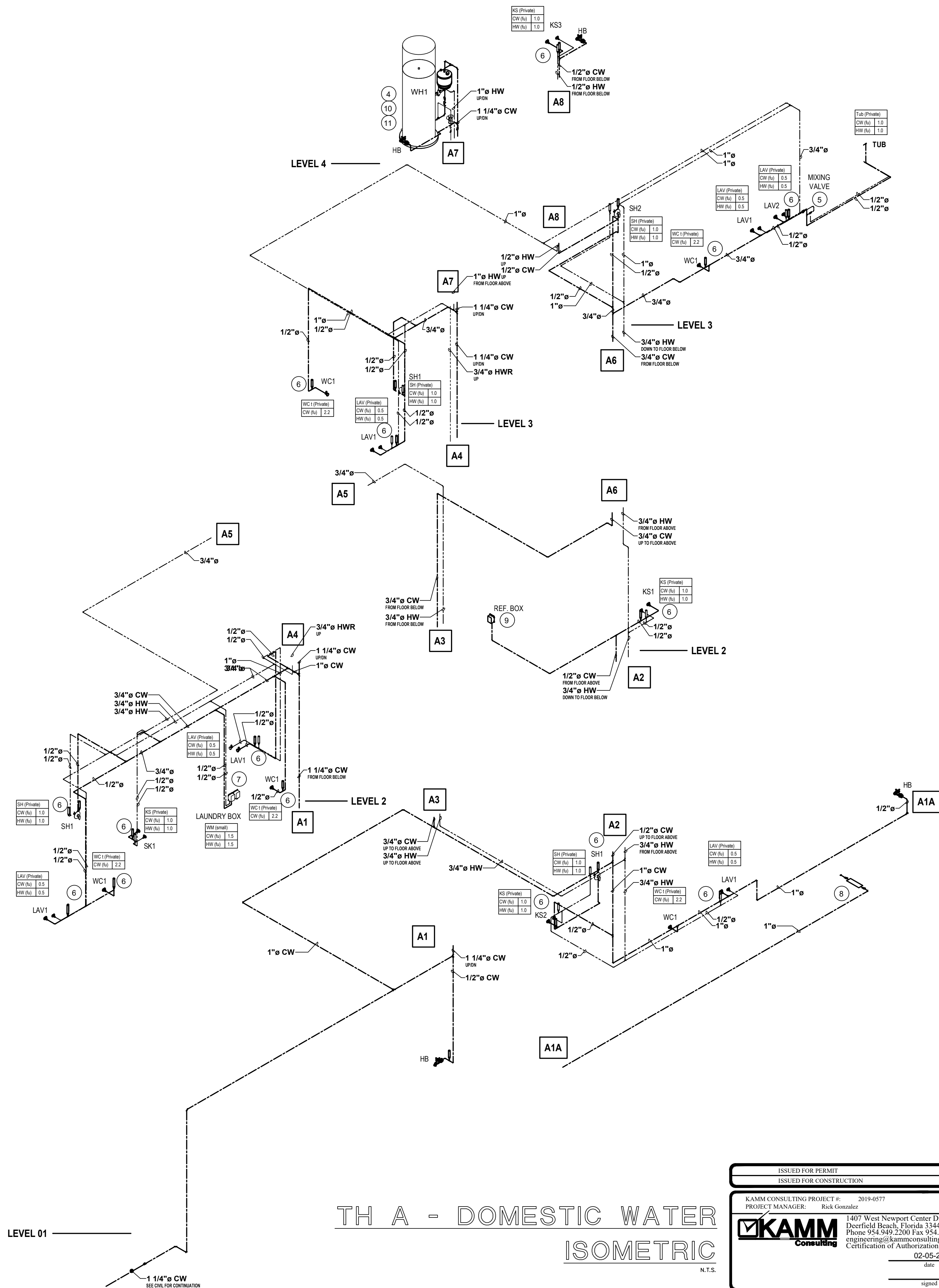
ROOF DECK  
DOMESTIC WATER PLAN  
3/16"=1'-0" NORTH

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TH A - SANITARY ISOMETRIC  
N.T.S.



TH A - DOMESTIC WATER ISOMETRIC  
N.T.S.

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BLDG. DEPT. COMMENTS 1/17/20  
PROJECT NUMBER 4/2018

PLUMBING ISOMETRICS

DESIGNED BY:  
Alex Penna & Rex Nichols  
DATE:  
JUNE 12TH 2019

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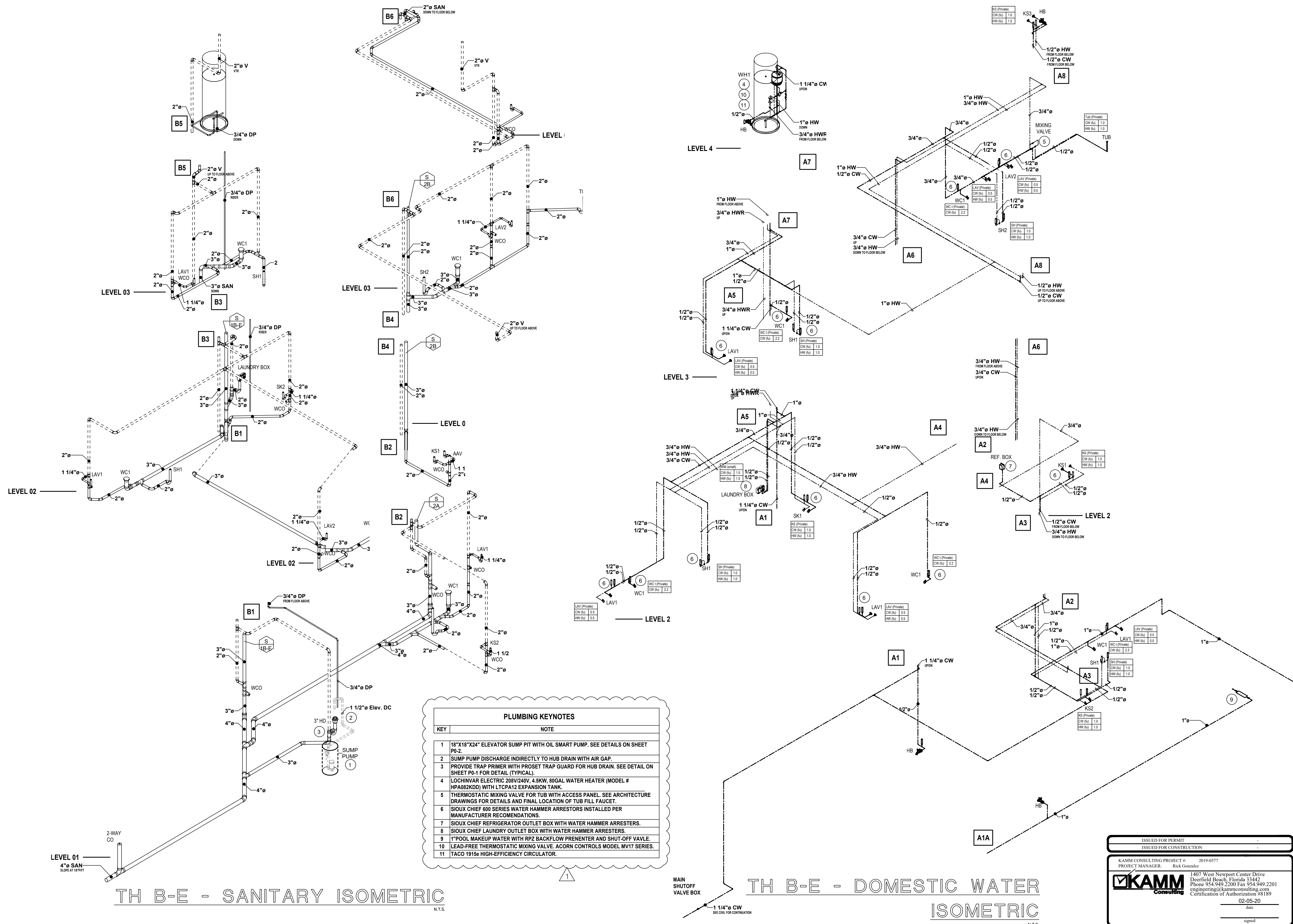
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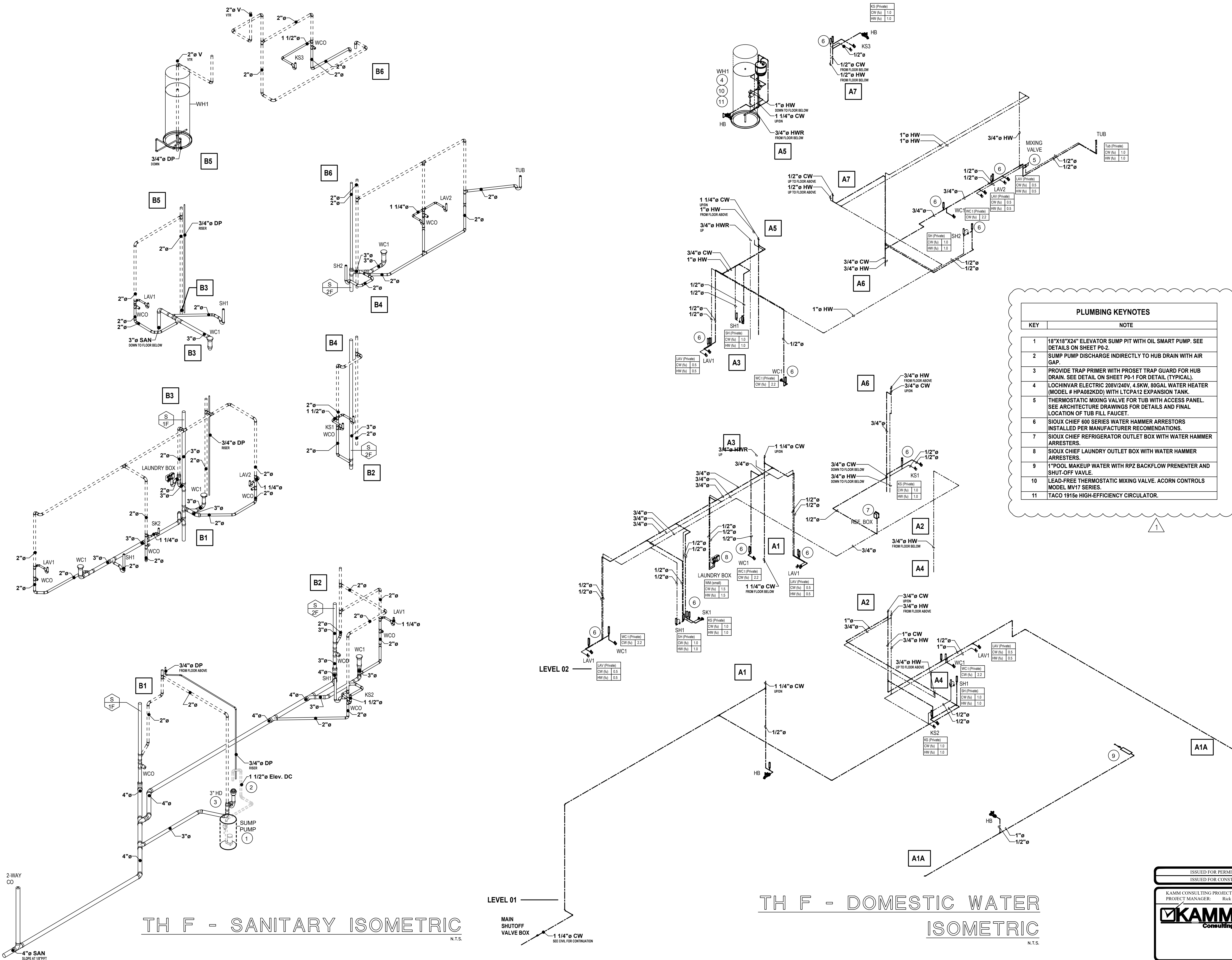
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PROJECT NUMBER 4/2018  
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## AS ISOMETRICS

DESIGNED BY:  
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.....  
DATE:  
JUNE 12TH 2019

**ISSUED FOR**

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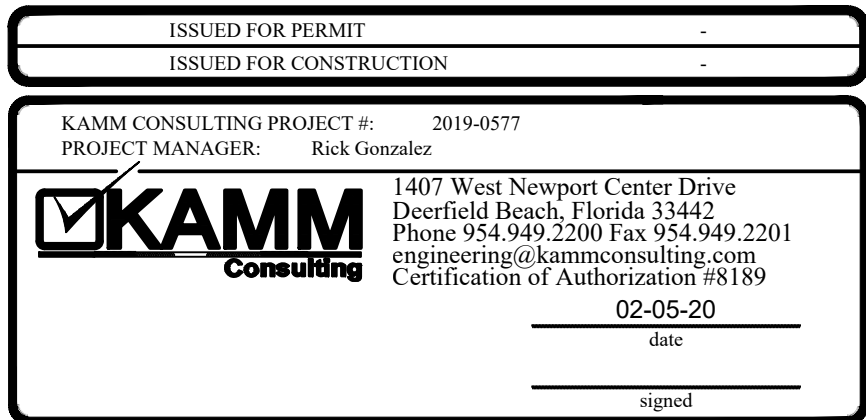
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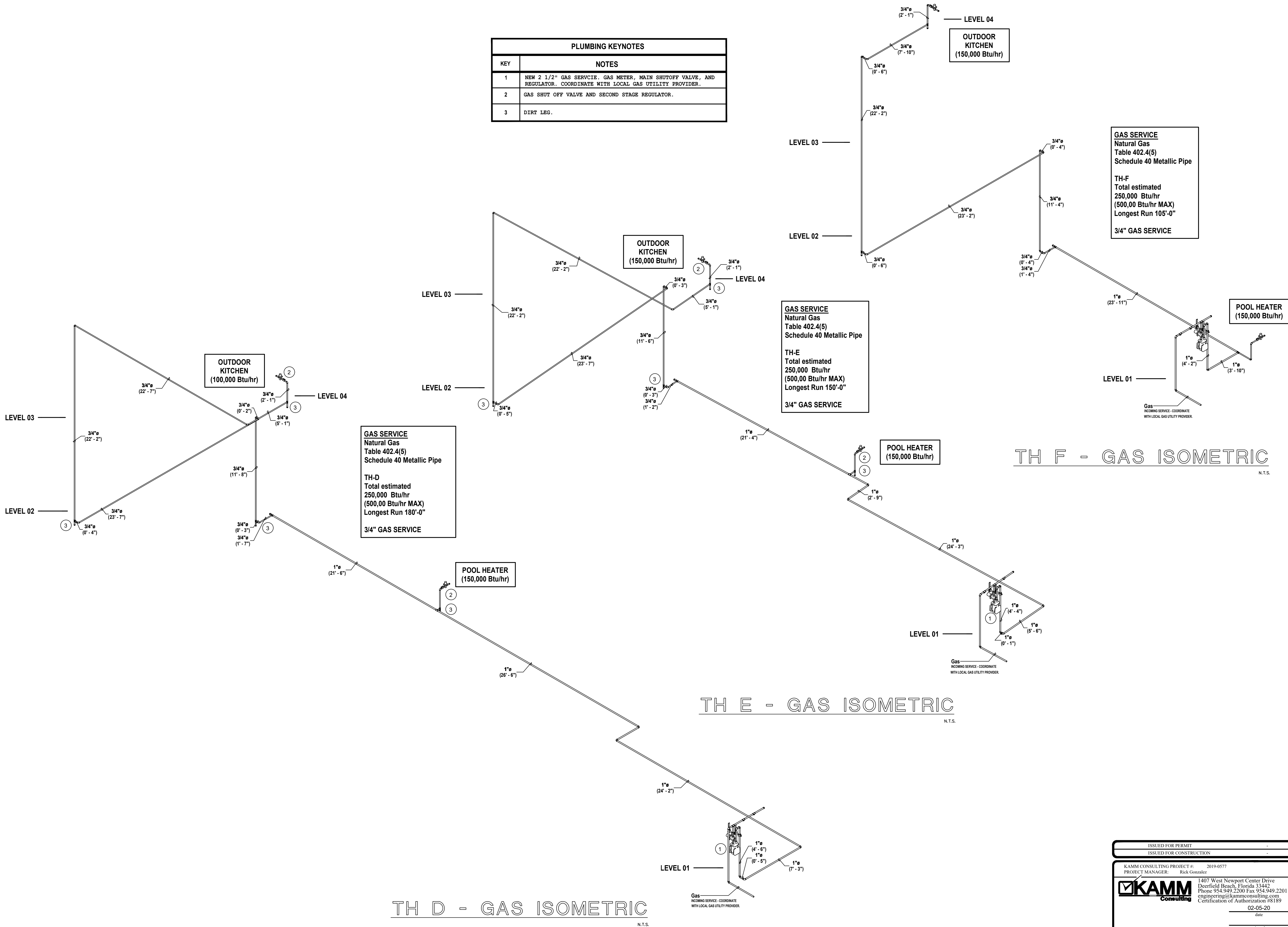
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| PLUMBING KEYNOTES |                                                                                                                   |
|-------------------|-------------------------------------------------------------------------------------------------------------------|
| KEY               | NOTES                                                                                                             |
| 1                 | NEW 2 1/2" GAS SERVICE. GAS METER, MAIN SHUTOFF VALVE, AND REGULATOR. COORDINATE WITH LOCAL GAS UTILITY PROVIDER. |
| 2                 | GAS SHUT OFF VALVE AND SECOND STAGE REGULATOR.                                                                    |
| 3                 | DIRT LEG.                                                                                                         |



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TH D-E-F  
GAS ISOMETRICS

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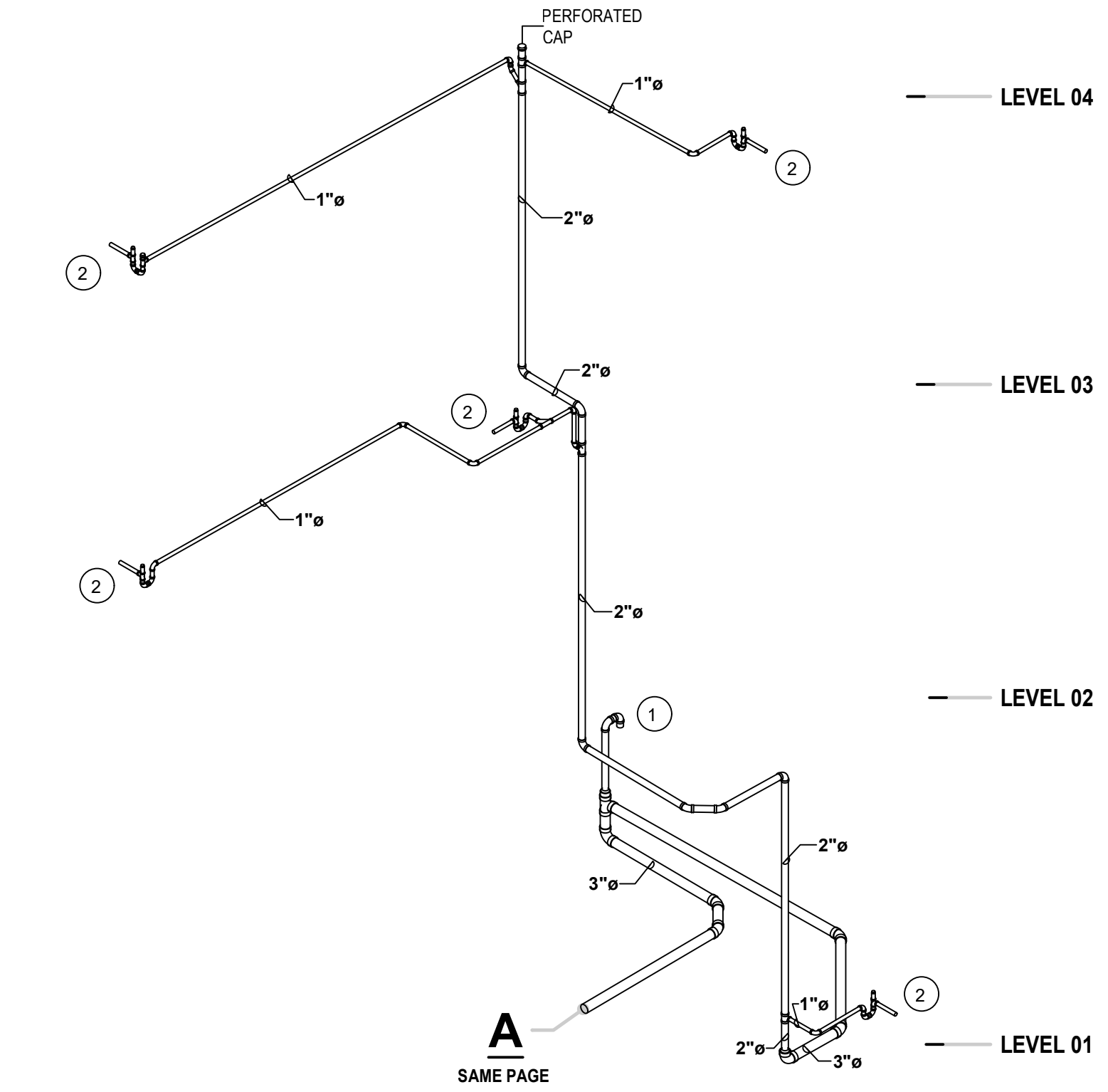
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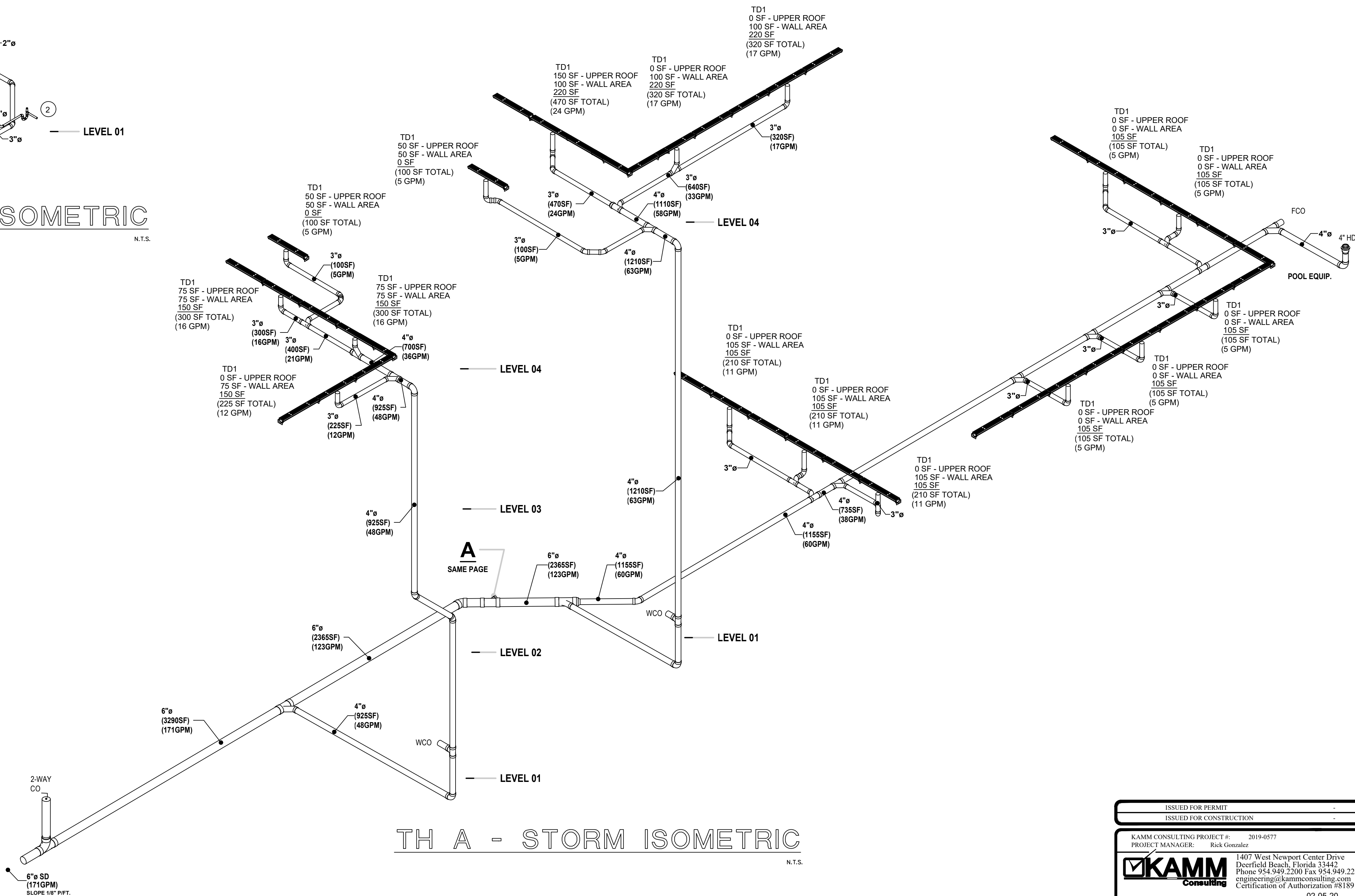
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|                                                     | 02-05-20                                                                                                                                                                          |
|                                                     | date                                                                                                                                                                              |
|                                                     | signed                                                                                                                                                                            |





TH A - CONDENSATE ISOMETRIC  
N.T.S.

| PLUMBING KEYNOTES |                                                                               |
|-------------------|-------------------------------------------------------------------------------|
| KEY               | NOTES                                                                         |
| 1                 | 3" GOOSENECK AT BUILDING EXTERIOR TERMINATE 16" ABOVE GRADE.                  |
| 2                 | MECHANICAL EQUIPMENT. SEE MECHANICAL DRAWINGS FOR SPECIFICATIONS AND DETAILS. |



TH A - STORM ISOMETRIC  
N.T.S.

|                                      |  |                                                                                                                                                                                   |  |
|--------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| ISSUED FOR PERMIT                    |  | -                                                                                                                                                                                 |  |
| ISSUED FOR CONSTRUCTION              |  | -                                                                                                                                                                                 |  |
| KAMM CONSULTING PROJECT #: 2019-0577 |  |                                                                                                                                                                                   |  |
| PROJECT MANAGER: Rick Gonzalez       |  |                                                                                                                                                                                   |  |
|                                      |  | 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |  |
| 02-05-20                             |  | date                                                                                                                                                                              |  |
| _____                                |  | signature                                                                                                                                                                         |  |

RNA

REX NICHOLS ARCHITECTS

1800 SOUTH FEDERAL HWY. STE 970  
POMPANO BEACH, FL 33062-1600  
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T-954 951 8101

REX NICHOLS AIA  
AR007415

.....

PROPOSED TOWNHOUSES ADDRESS 700 BRINY  
AV, POMPANO BEACH, 33062

.....

OWNER : CARLO TREE LP

GREENPARK GROUP  
5600 N Federal Highway  
Fort Lauderdale - FL - 33308

PROJECT NUMBER 4/2018

.....

STORM ISOMETRICS

.....

DESIGNED BY:  
Alex Penna & Rex Nichols

DATE:  
JUNE 12TH 2019

.....

ISSUED FOR

☐ REVIEW & COMMENTS

☐ BIDDING

☐ NOT FOR CONSTRUCTION

☐ PERMIT

☐ CONSTRUCTION

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P5.6

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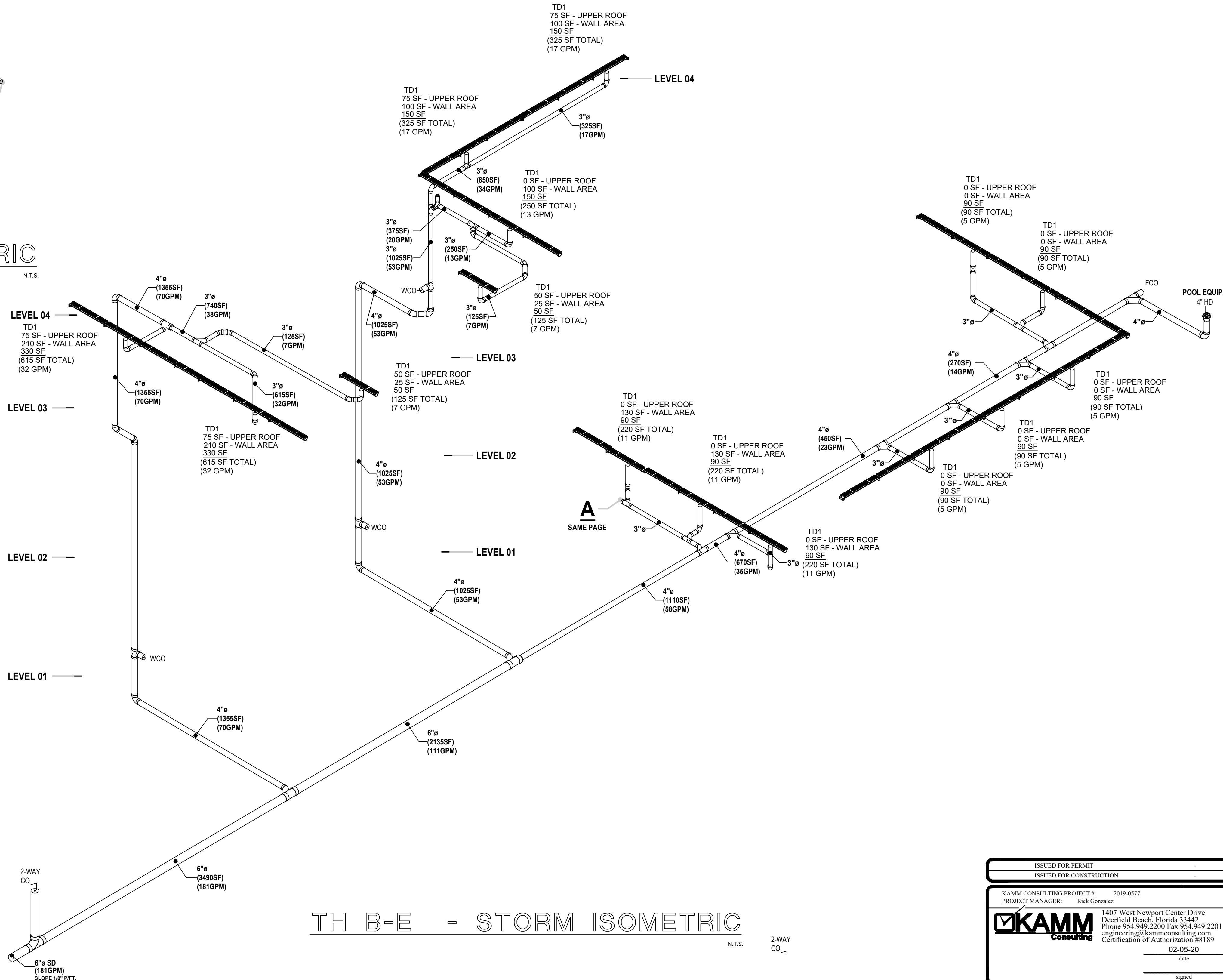
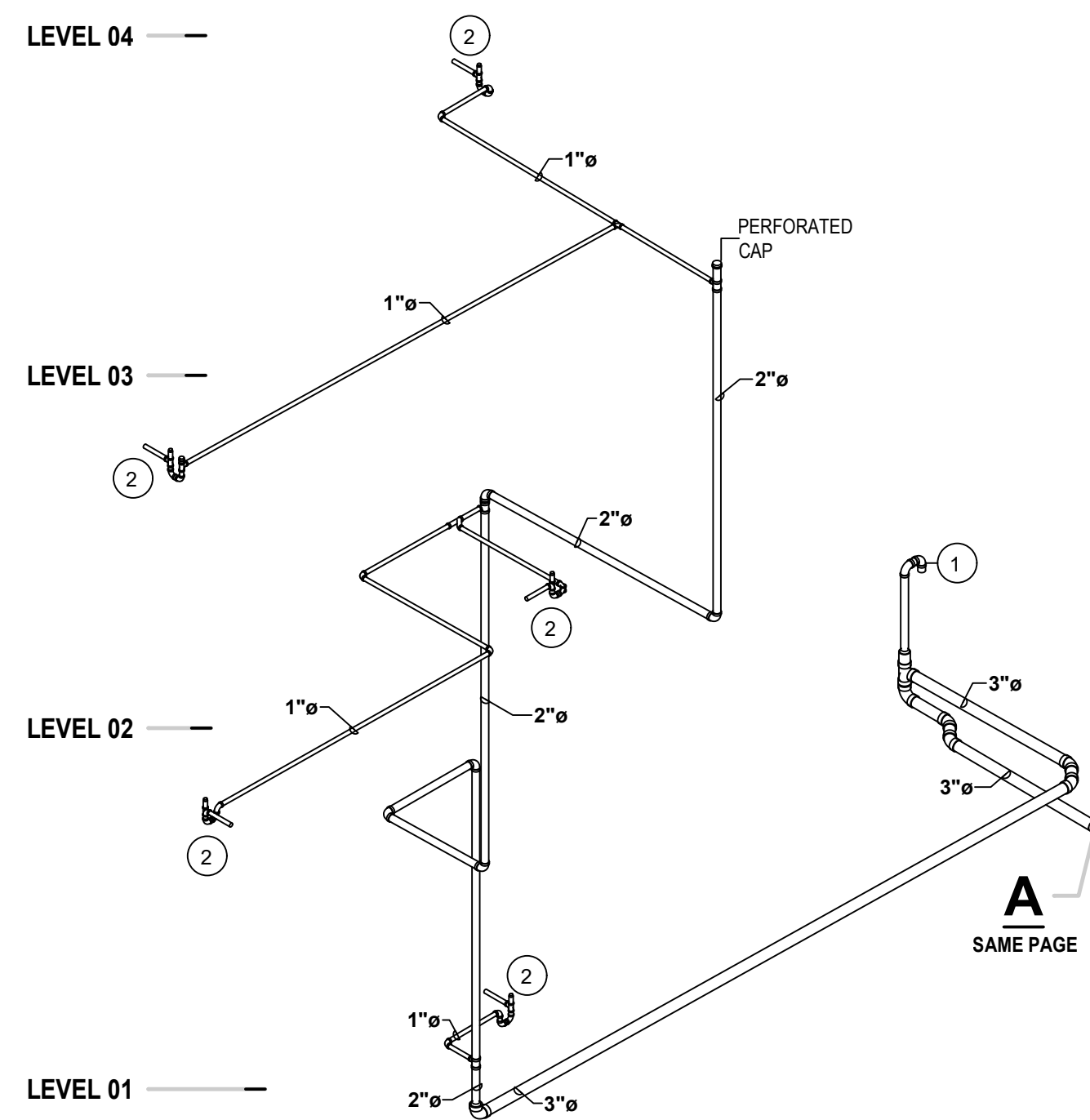
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| PLUMBING KEYNOTES |                                                                               |
|-------------------|-------------------------------------------------------------------------------|
| KEY               | NOTES                                                                         |
| 1                 | 3" GOOSENECK AT BUILDING EXTERIOR TERMINATE 16" ABOVE GRADE.                  |
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## TH B-E - CONDENSATE ISOMETRIC

N.T.S.



## TH B-E - STORM ISOMETRIC

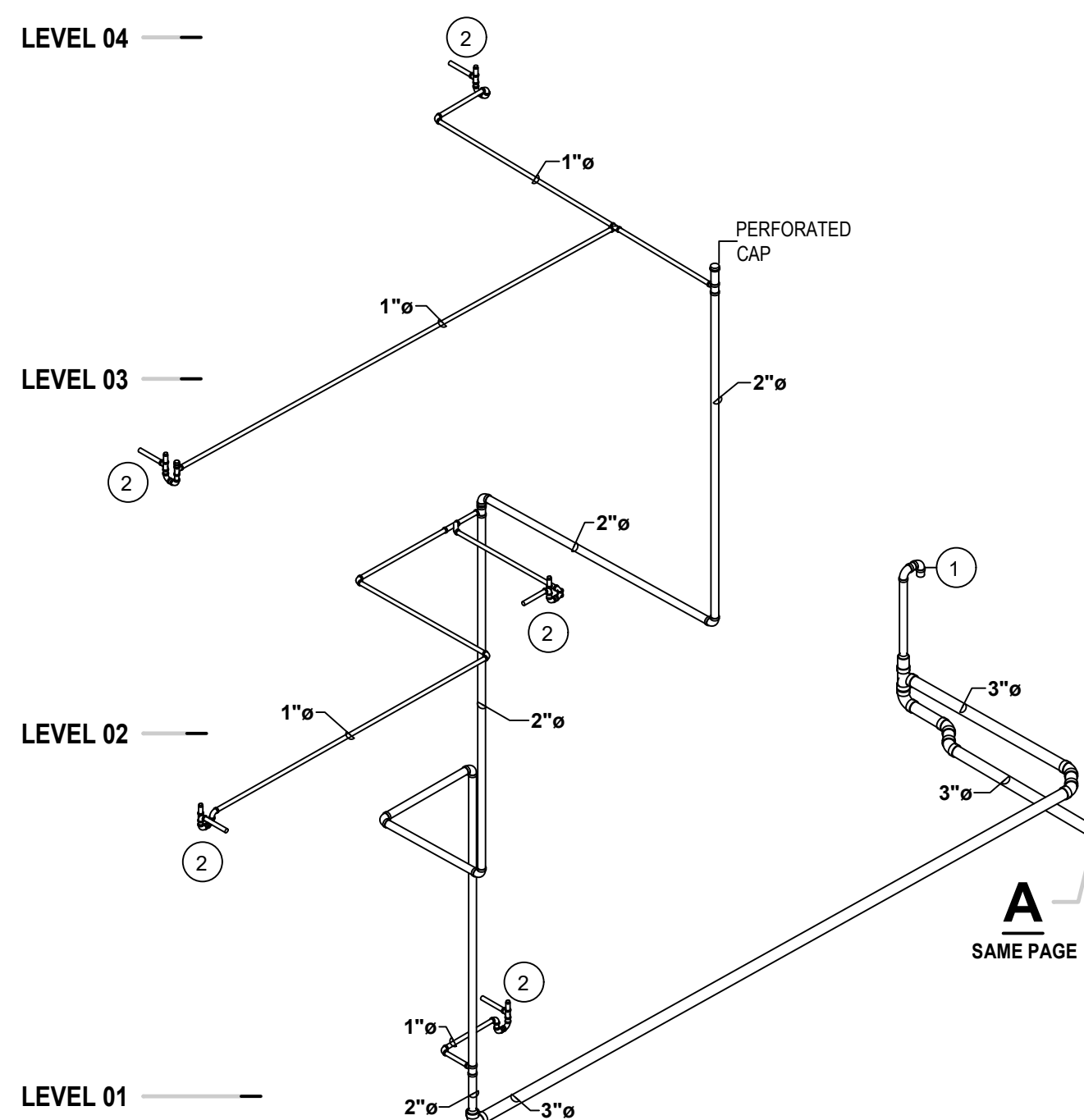
N.T.S.

2-WAY  
CO-1

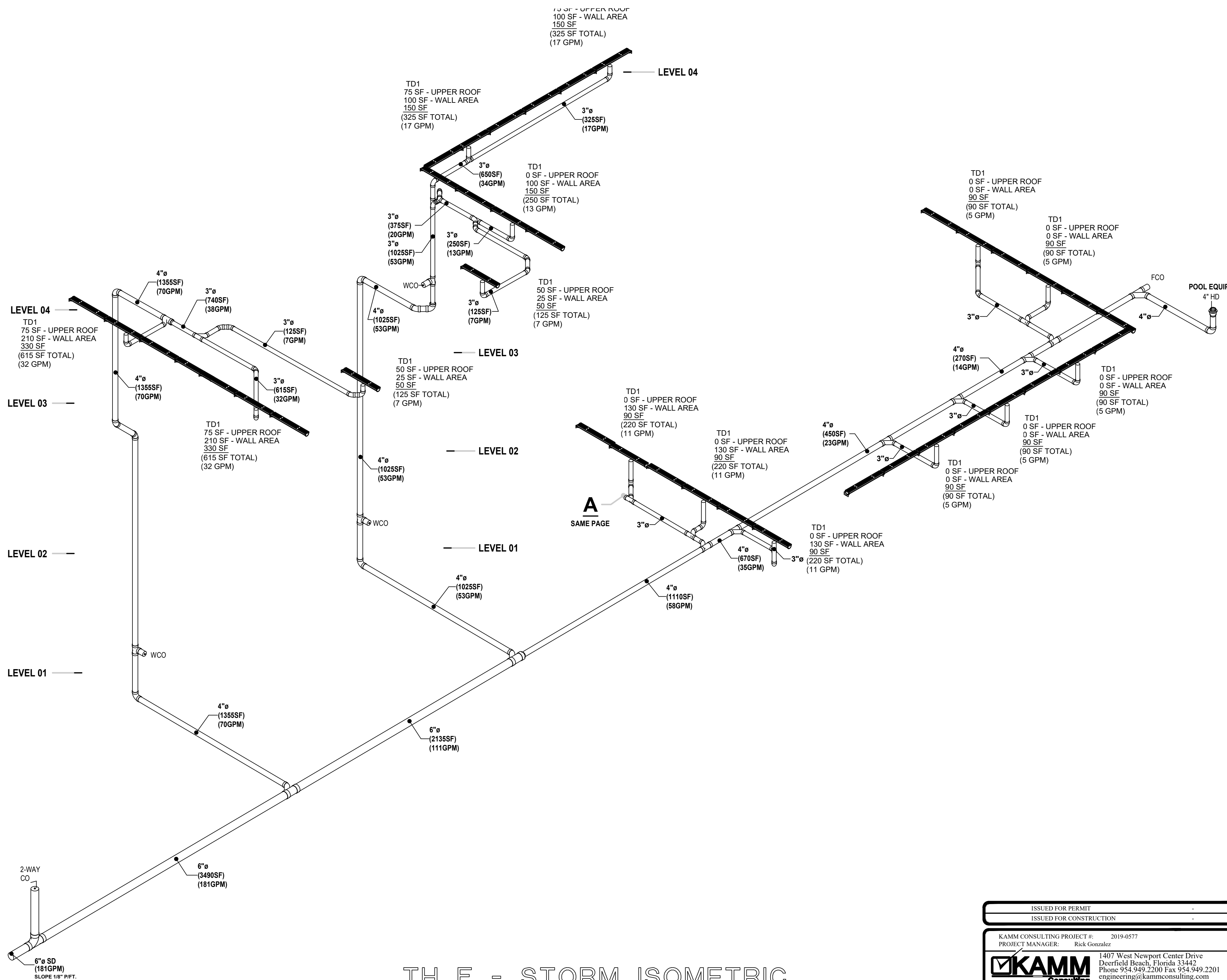
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| ISSUED FOR PERMIT                                   | -                                                                                                                                                                                 |
| ISSUED FOR CONSTRUCTION                             | -                                                                                                                                                                                 |
| KAMM CONSULTING PROJECT #:                          | 2019-0577                                                                                                                                                                         |
| PROJECT MANAGER:                                    | Rick Gonzalez                                                                                                                                                                     |
| <input checked="" type="checkbox"/> KAMM Consulting | 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |
| date                                                | 02-05-20                                                                                                                                                                          |
| signed                                              |                                                                                                                                                                                   |



| PLUMBING KEYNOTES |                                                                               |
|-------------------|-------------------------------------------------------------------------------|
| KEY               | NOTES                                                                         |
| 1                 | 3" GOOSENECK AT BUILDING EXTERIOR TERMINATE 16" ABOVE GRADE.                  |
| 2                 | MECHANICAL EQUIPMENT. SEE MECHANICAL DRAWINGS FOR SPECIFICATIONS AND DETAILS. |



TH F - CONDENSATE ISOMETRIC  
N.T.S.



TH F - STORM ISOMETRIC  
N.T.S.

|                            |  |                                                                                                                                                                                   |  |
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| ISSUED FOR PERMIT          |  | -                                                                                                                                                                                 |  |
| ISSUED FOR CONSTRUCTION    |  | -                                                                                                                                                                                 |  |
| KAMM CONSULTING PROJECT #: |  | 2019-0577                                                                                                                                                                         |  |
| PROJECT MANAGER:           |  | Rick Gonzalez                                                                                                                                                                     |  |
| <b>KAMM</b> Consulting     |  | 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |  |
| date                       |  | 02-05-20                                                                                                                                                                          |  |
| signature                  |  | -                                                                                                                                                                                 |  |



**SPRINKLER NOTES: CODE SECTION 61G15-32.004**

1. THE FOLLOWING NOTES SHALL SERVE AS MEETING THE REQUIREMENTS SET FORTH UNDER THE FLORIDA ADMINISTRATIVE CODE SECTION 61G15-32.004 FOR FIRE PROTECTION ENGINEERING DOCUMENTS.
2. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF SHOP DRAWINGS FOR FIRE SPRINKLER INSTALLATION FOR THE PROJECT AS INDICATED IN THE ENGINEER OF RECORD (EOR) DOCUMENTS. THE SYSTEM SHALL BE DESIGNED IN ACCORDANCE WITH THE 2017 FLORIDA BUILDING CODE, THE FLORIDA FIRE PREVENTION CODE-6th EDITION, NFPA 13 (2013 EDITION), NFPA 14, NFPA 20, NFPA 24 (2013 EDITIONS), THE OWNER'S INSURANCE COMPANY AND GUIDE LINES IF ANY, THE STATE AND/OR LOCAL FIRE MARSHAL, THE LOCAL BUILDING DEPARTMENT, AND OWNER GUIDE LINE AND STANDARDS IF EXISTING.
3. THE FIRE SPRINKLER SYSTEM SHALL BE DESIGNED AS OUTLINED BELOW:
- LIGHT HAZARD:** (DESIGNATED AS LH)  
DESIGN DENSITY: 0.10 GPM/SQFT OVER THE MOST DEMANDING 1500 SQFT.  
FIRE SPRINKLER SPACING: 225 SQFT. MAXIMUM.  
AREAS/ROOMS: LOBBIES, OFFICES, RESTAURANT SEATING AREAS  
HOSE REQUIREMENTS: 100 GPM (TOTAL COMBINED INSIDE/OUTSIDE).
- ORDINARY HAZARD GROUP 1:** (DESIGNATED AS OH1)  
DESIGN DENSITY: 0.15 GPM/SQFT OVER THE MOST DEMANDING 1500 SQFT.  
FIRE SPRINKLER SPACING: 130 SQFT. MAXIMUM.  
AREAS/ROOMS: PARKING, RESTAURANT SERVICE AREAS, MECHANICAL ROOMS, ELEVATOR MACHINE ROOMS, ELECTRIC ROOMS, TELEPHONE ROOMS.  
HOSE REQUIREMENTS: 250 GPM (TOTAL COMBINED INSIDE/OUTSIDE).
- ORDINARY HAZARD GROUP 2:** (DESIGNATED AS OH2)  
DESIGN DENSITY: 0.20 GPM/SQFT OVER THE MOST DEMANDING 1500 SQFT.  
FIRE SPRINKLER SPACING: 130 SQFT. MAXIMUM.  
AREAS/ROOMS: RETAIL SPACES, TRASH ROOM, STORAGE SPACES.  
HOSE REQUIREMENTS: 250 GPM (TOTAL COMBINED INSIDE/OUTSIDE).
- NOTE:** NO STORAGE OVER 12 FT SHALL BE ALLOWED.
4. THE CONTRACTOR SHALL USE A FLOW TEST PERFORMED BY THE LOCAL AUTHORITY TO ASCERTAIN THE WATER SERVICE REQUIRED FOR THE FIRE SPRINKLER INSTALLATION. THE HYDRAULIC CALCULATIONS SHALL ALLOW FOR A 10% PRESSURE REDUCTION AS A FACTOR OF SAFETY AND COMPLY WITH THE AHJ REQUIREMENTS AND/OR USE PRESSURE AND FLOW CRITERIA PROVIDED BY THE AUTHORITY HAVING JURISDICTION.
5. THE CONTRACTOR SHALL SUBMIT THREE (3) SETS OF SHOP DRAWINGS AND, IF APPLICABLE, HYDRAULIC CALCULATIONS BEARING THE SIGNATURE AND SEAL OF A FLORIDA REGISTERED PROFESSIONAL ENGINEER FOR REVIEW BY THE ARCHITECT/OWNER PRIOR TO COMMENCING ANY FIELD WORK. AS WELL, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND, IF APPLICABLE, HYDRAULIC CALCULATIONS TO THE LOCAL BUILDING DEPARTMENT OR AUTHORITY HAVING JURISDICTION AND OBTAIN ALL NECESSARY APPROVALS AND PERMITS FOR THE PROJECT.
6. THE CONTRACTOR SHALL COORDINATE ALL FIRE SPRINKLER WORK WITH ALL OTHER CONSTRUCTION DISCIPLINES INCLUDING BUT NOT LIMITED TO HVAC, PLUMBING, ELECTRICAL, STRUCTURAL AND CIVIL. THE CONTRACTOR SHALL ALSO COORDINATE ANY SPECIAL TESTING REQUIRED BY THE OWNER.
7. THE SHOP DRAWINGS, INCLUDING HYDRAULIC CALCULATIONS, SHALL SHOW THE SIZES, TYPES, AND DIMENSIONAL LOCATIONS FOR ALL FIRE SPRINKLERS, MAINS, BRANCHES, AND EXISTING PIPING FOR THE WATER SUPPLY TO THE CONNECTION OF THE SYSTEM.
8. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND FINAL LOCATION OF THE FIRE SPRINKLER HEADS AND/OR PIPING FOR FINAL FIRE PROTECTION LAYOUT DOCUMENTS PREPARATION AND INSTALLATION.
9. THE ENGINEER OF RECORD (EOR) DOCUMENTS ARE NOT AND SHALL NOT BE CONSIDERED SHOP DRAWINGS NOR INSTALLATION DRAWINGS.
10. ALL INFORMATION CONTAINED IN THESE DRAWINGS IS ACCORDING TO THE ORIGINAL CONSTRUCTION DOCUMENTS PROVIDED BY THE OWNER AND LIMITED FIELD OBSERVATIONS. THE ENGINEER OR THE ARCHITECT MAKES NO REPRESENTATION FOR THE ACCURACY OF SUCH INFORMATION. THE CONTRACTOR SHALL VISIT THE BUILDING AND FIELD VERIFY ALL EXISTING CONDITIONS MATERIALS, EQUIPMENT, DIMENSIONS, ETC. ONCE DEMOLITION TAKES PLACE PRIOR TO SUBMITTING A BID AND COMMERCING ANY WORK.
11. THE CONTRACTOR SHALL REMOVE EXISTING FIRE SPRINKLERS AND/OR FIRE SPRINKLER PIPING NOT REQUIRED FOR THE PERMANENT INSTALLATION AT THE END OF THE INSTALLATION PHASE.
12. ALL WORK BY THE CONTRACTOR SHALL BE DONE IN STRICT COORDINATION AND AS APPROVED BY THE OWNER. ALL INTERRUPTIONS IN THE FUNCTIONING OF THE FIRE SPRINKLER SYSTEM SHALL BE DONE DURING OFF-PEAK (UNOCCUPIED TIMES) OR STRICTLY AS APPROVED BY THE OWNER. NOTIFICATION OF A SHUTDOWN TO THE FIRE SPRINKLER SYSTEM, INCLUDING THE DURATION TIME, SHALL BE MADE TO THE OWNER A MINIMUM OF SEVEN (7) DAYS IN ADVANCE OF SUCH WORK AND COORDINATED ALSO WITH AHJ, WHERE IN THE OPINION OF THE AHJ IF PARTIAL OR TOTAL DEMOLITION OF THE EXISTING FIRE SPRINKLER SYSTEM TAKES PLACE IN SITE AND SUCH DEMOLITION IS OF A HAZARDOUS NATURE, QUALIFIED PERSONNEL SHALL SERVE AS ON-SITE FIRE WATCH.
13. THE CONTRACTOR SHALL BEAR ALL COSTS OF:  
A. PREPARING SHOP DRAWINGS AND DOCUMENTS  
B. SECURING PERMITS AND APPROVALS  
C. LABOR  
D. MATERIALS  
E. CLEAN UP/WASTE REMOVAL  
F. FIRE WATCH IN COORDINATION OF AHJ IF REQUIRED.
14. PIPING INSTALLATION  
WHEN THE INSTALLATION OF A NEW FIRE SPRINKLER SYSTEM TAKES PLACE, THE CONTRACTOR SHALL PROPOSE THE PIPE SCHEDULE MATERIALS, FITTINGS, VALVES, HANGERS, ETC. ACCORDING TO THE GUIDE LINES AND STANDARDS OF THE OWNER IF ANY, WHICH SHALL BE ALSO RESPONSIBILITY OF THE CONTRACTOR VERIFY PREVIOUSLY TO BIDDING, SUBMITTING, PERMITTING, COMMENCING AND INSTALLING ANY NEW WORK; SUCH STANDARDS SHALL BE ALSO AS PER NFPA 13 AND AHJ. THE FOLLOWING MATERIALS ARE SPECIFICATIONS AS PER NFPA 13:  
A. MAKE CHANGES IN SIZE OF PIPE WITH REDUCING FITTINGS; BUSHINGS ARE NOT PERMITTED.  
B. CAP OPENINGS IN PIPING DURING CONSTRUCTION.  
C. ESCUTCHEONS: FIT EXPOSED PIPES PASSING THROUGH FLOORS, WALL OR CEILING WITH ESCUTCHEONS. MANUFACTURE SPECIAL SIZES OF ESCUTCHEONS FROM STEEL AND PRIME COAT SAME. CUT IN ROUND, RECTANGULAR OR SQUARE SPACE TO PROVIDE A CLEAN APPEARANCE ACCEPTABLE TO THE GAP.  
D. PENETRATIONS THROUGH FIRE RATED WALLS SHOULD BE FILLED WITH A UL LISTED FIRE SEALANT IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS AND TO PROVIDE AT LEAST THE MINIMUM FIRE RATING OF THE WALL.  
E. CPVC PIPING & FITTINGS SHALL BE MANUFACTURED OF IDENTICAL RESIN COMPOUNDS AND SHALL BE JOINED WITH SOLVENT PRIMERS/CEMENTS SPECIFICALLY COMPATIBLE WITH THE RESIN COMPOUND THAT IS UTILIZED FOR SAME. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL PLASTIC AND METALLIC SYSTEM COMPONENTS AND WATER ADDITIVES ARE COMPATIBLE WITH THE MANUFACTURER'S R/OMTS. AFTER INSTALLATION, SYSTEM PIPING & FITTINGS SHALL BE FLUSHED WITH POTABLE WATER AS PER THE MANUFACTURER'S R/OMTS, PRIOR TO BEING PUT INTO SERVICE. CPVC PIPING SHALL NOT BE INSTALLED EXPOSED HANGING FROM ANY POSSIBLE OPEN CEILING AREAS.  
F. ABOVEGROUND PIPE MATERIALS:  
1. SCHEDULE 40, FOR PIPE SIZES 1" THROUGH 2".  
2. SCHEDULE 10 FOR PIPE SIZES 2½" AND LARGER.  
3. ALL EXPOSED PIPE AND FITTINGS TO OUTSIDE AIR, SALT, CHEMICALS, MOISTURE, AND/OR OTHER CORROSIVE VAPORS SUFFICIENT TO CAUSE CORROSION OF SUCH MATERIALS SHALL BE BLACK STEEL PIPE SCH. 40, CARBON STEEL GROOVED FITTINGS, HANG UP WITH CORROSION RESISTANT STEEL ROD AND HANGERS AND SHALL BE ALL RED PAINTED PER NFPA 13-2013-8.16.4.2.
- G. UNDERGROUND PIPE MATERIALS:  
1. DUCTILE IRON MEETING AWWA C104 STANDARDS  
2. PLASTIC MEETING AWWA C900 STANDARDS, DR 14.

**TYPICAL UNITS PER**

**NFPA 13R-2013:**

TYPICAL UNITS SHALL BE DESIGNED AS PER NFPA 13R:2013:6.6 LOCATION OF SPRINKLERS, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS IN RESIDENTIAL OCCUPANCIES UNDER THE FOLLOWING PARAMETERS:

6.6 LOCATION OF SPRINKLERS  
6.6.1 SPRINKLERS SHALL BE INSTALLED IN ALL AREAS EXCEPT WHERE OMISSION IS PERMITTED BY 6.6.2 THROUGH 6.6.7.

6.6.2\* SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS WHERE THE BATHROOM AREA DOES NOT EXCEED 55 ft² (5.1 m²).

6.6.3 EXCEPT WHERE SPECIFIED IN 6.6.4, SPRINKLERS SHALL NOT BE REQUIRED IN CLOTHES CLOSETS, LINEN CLOSETS, AND PANTRIES WITHIN DWELLING UNITS THAT MEET ALL OF THE FOLLOWING CONDITIONS:

(1) THE AREA OF SPACE DOES NOT EXCEED 24 ft² (2.2 m²).

(2) THE LEAST DIMENSION DOES NOT EXCEED 3 ft (0.91 m).

(3) THE WALLS AND CEILINGS ARE SURFACED WITH NONCOMBUSTIBLE OR LIMITED-COMBUSTIBLE MATERIALS AS DEFINED BY NFPA 220, STANDARDS ON TYPES OF BUILDING CONSTRUCTION.

6.6.4\* SPRINKLERS SHALL BE INSTALLED IN ANY CLOSET USED FOR HEATING AND AIR-CONDITIONING EQUIPMENT, WASHERS, DRYERS, OR WATER HEATERS EXCEPT AS PERMITTED BY 6.6.7.

6.6.5\* EXCEPT AS PROVIDED FOR IN 6.6.5.1, SPRINKLERS SHALL NOT BE REQUIRED IN ANY PORCHES, BALCONIES, CORRIDORS, CARPORTS, PORTE COCHERES, AND STAIRS THAT ARE OPEN AND ATTACHED.

6.6.5.1 WHERE A ROOF OR DECK IS PROVIDED ABOVE, SPRINKLERS SHALL NOT BE INSTALLED TO PROTECT ATTACHED EXTERIOR BALCONIES, ATTACHED EXTERIOR DECKS, AND GROUND FLOOR PATIOS SERVING DWELLING UNITS IN BUILDINGS OF CONSTRUCTION TYPE V.

6.6.5.1.1 WHERE SIDEWALL SPRINKLERS ARE INSTALLED BENEATH DECKS OR BALCONIES CONSTRUCTED WITH OPEN WOOD JOISTS, SPRINKLERS SHALL BE PERMITTED TO BE INSTALLED WITH DEFLECTORS NO LESS THAN 1 INCH (25 mm) OR MORE THAN 6 INCH (152 mm) BELOW THE STRUCTURAL MEMBERS, PROVIDED THAT THE DEFLECTOR IS NO MORE THAN 14 INCH (356 mm) BELOW UNDERSIDE SURFACE OF THE DECK.

6.6.6\* SPRINKLERS SHALL NOT BE REQUIRED IN ATTICS, PENTHOUSE EQUIPMENT ROOMS, ELEVATOR MACHINE ROOMS, CONCEALED SPACES DEDICATED EXCLUSIVELY TO AND CONTAINING ONLY DWELLING UNIT VENTILATION EQUIPMENT, CRAWL SPACES, FLOOR/CEILING SPACES, NONCOMBUSTIBLE ELEVATOR SHAFTS WHERE THE ELEVATOR CARS COMPLY WITH ANSI A17.1, SAFETY CODE FOR ELEVATORS AND ESCALATORS, AND OTHER CONCEALED SPACES THAT ARE NOT USED OR INTENDED FOR LIVING PURPOSES OR STORAGE AND DO NOT CONTAIN FUEL-FIRE EQUIPMENT.

6.6.6.1 WHEN FUEL-FIRE EQUIPMENT IS PRESENT, AT LEAST ONE-QUICK RESPONSE INTERMEDIATE TEMPERATURE SPRINKLER SHALL BE INSTALLED ABOVE THE EQUIPMENT.

6.6.7 SPRINKLERS SHALL NOT BE REQUIRED IN CLOSETS (REGARDLESS OF SIZE) ON EXTERIOR BALCONIES AND EXTERIOR BREEZEWAYS/CORRIDORS, REGARDLESS OF SIZE, AS LONG AS THE CLOSET DOES NOT HAVE DOORS OR UNPROTECTED PENETRATIONS DIRECTLY INTO THE DWELLING UNIT.

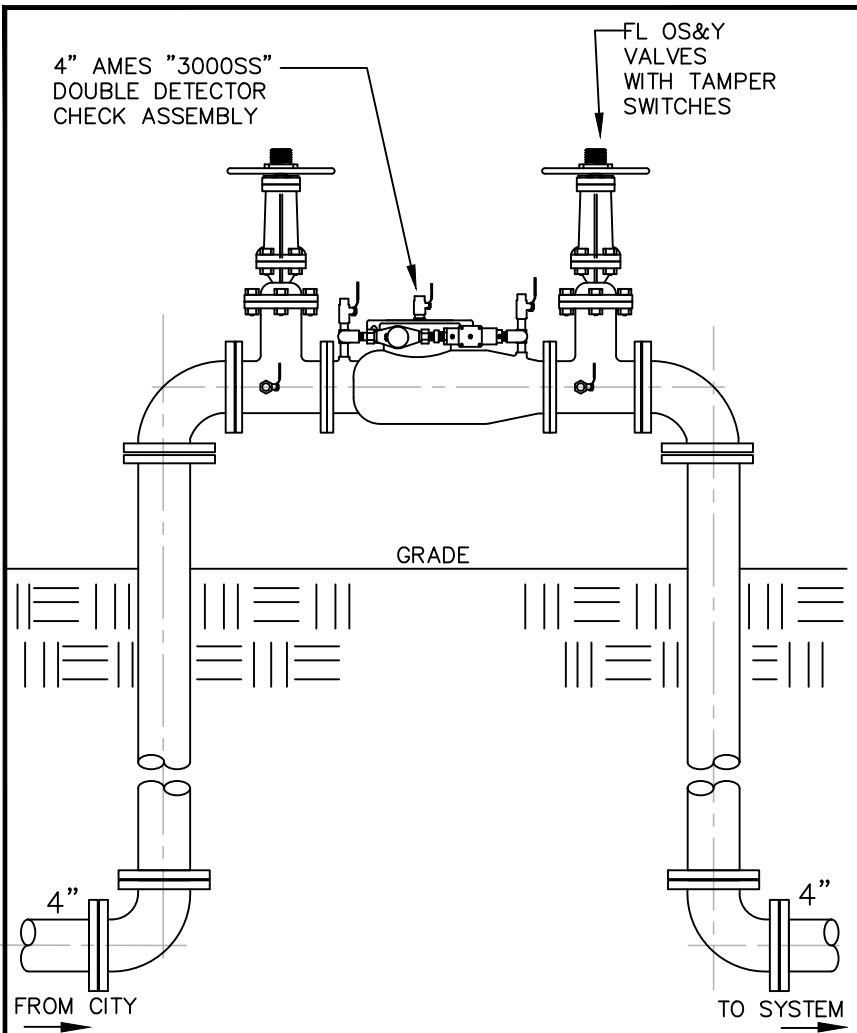
6.6.8 ALL SITUATIONS REGARDING SPRINKLER LOCATION AND POSITION THAT ARE NOT DIRECTLY DISCUSSED IN NFPA 13R SHALL BE IN ACCORDANCE WITH NFPA 13.

**FIRE SPRINKLER SCHEDULE--(REFER TO NOTES BELOW)**

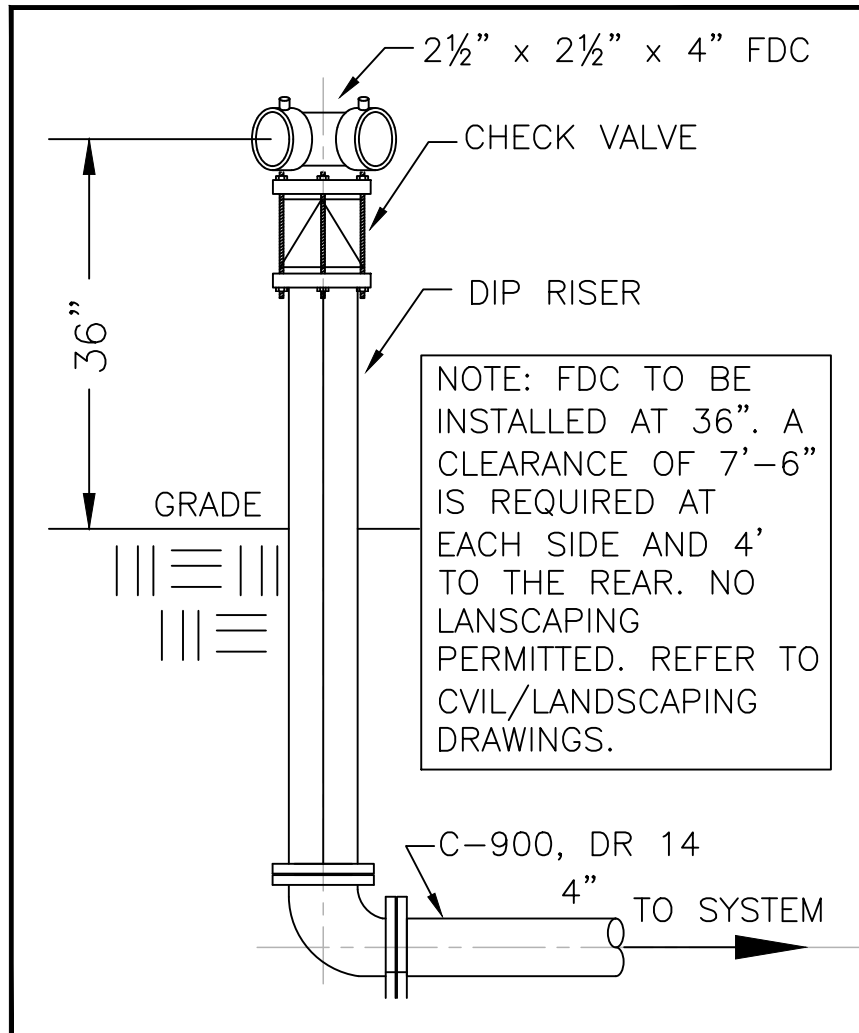
| SYM | QNT | TYPE/DESCRIPTION               | TEMP(°F) RATING | K FACTOR | RESPONSE | NPT  | MFG.   | MODEL   | SIN   | ESCUTCHEON FINISH | CONN.  | NOTES/INTENDED USE        |
|-----|-----|--------------------------------|-----------------|----------|----------|------|--------|---------|-------|-------------------|--------|---------------------------|
| ☉   | -   | CONCEALED PENDENT              | 175             | 5.6      | QR       | 1/2" | VIKING | MIRAGE  | VK462 | BRASS             | Thread | GARAGE & TRASH ROOM AREAS |
| ●   | -   | RESIDENTIAL CONCEALED PENDENT  | 155             | 5.8      | FAST     | 1/2" | VIKING | FREEDOM | VK498 | BRASS             | Thread | DROP CEILING AREAS        |
| ◐   | -   | RESIDENTIAL PENDENT            | 155             | 7.4      | FAST     | 3/4" | VIKING | FREEDOM | VK458 | BRASS             | Thread | OPEN CEILING AREAS        |
| ◑   | -   | RESIDENTIAL CONCEALED SIDEWALL | 165             | 5.8      | FAST     | 1/2" | VIKING | FREEDOM | VK490 | BRASS             | Thread | OPEN CEILING AREAS        |

**NOTES**

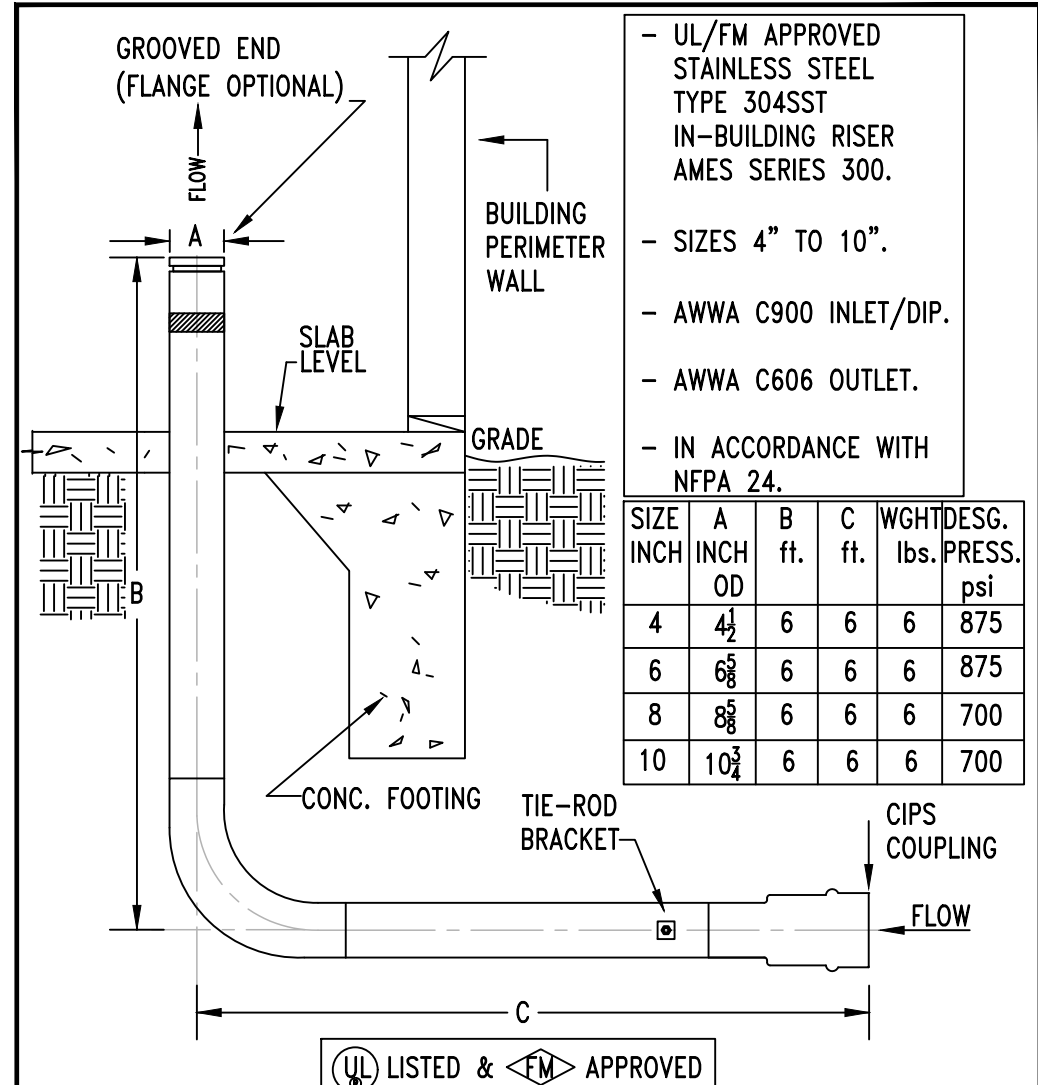
- ALL FIRE SPRINKLERS SHALL HAVE A UL APPROVED CORROSION RESISTANT COATING WHERE EXPOSED TO OUTSIDE AIR, CHEMICALS, MOISTURE, OR OTHER CORROSIVE VAPORS SUFFICIENT TO CAUSE CORROSION OF SUCH DEVICES.
- THE CONTRACTOR SHALL RECEIVE THE ARCHITECTS APPROVAL FOR ALL FIRE SPRINKLER/ESCUTCHEON FINISHES PRIOR TO ORDERING AND INSTALL. DESPITE WHAT IS SPECIFIED IN THIS SCHEDULE.
- FIRE SPRINKLER IN CEILING TILES TO BE INSTALLED IN THE CENTER OF TILE.



**DOUBLE DETECTOR CHECK VALVE**  
NOT TO SCALE



**FREE STANDING FDC**  
NOT TO SCALE



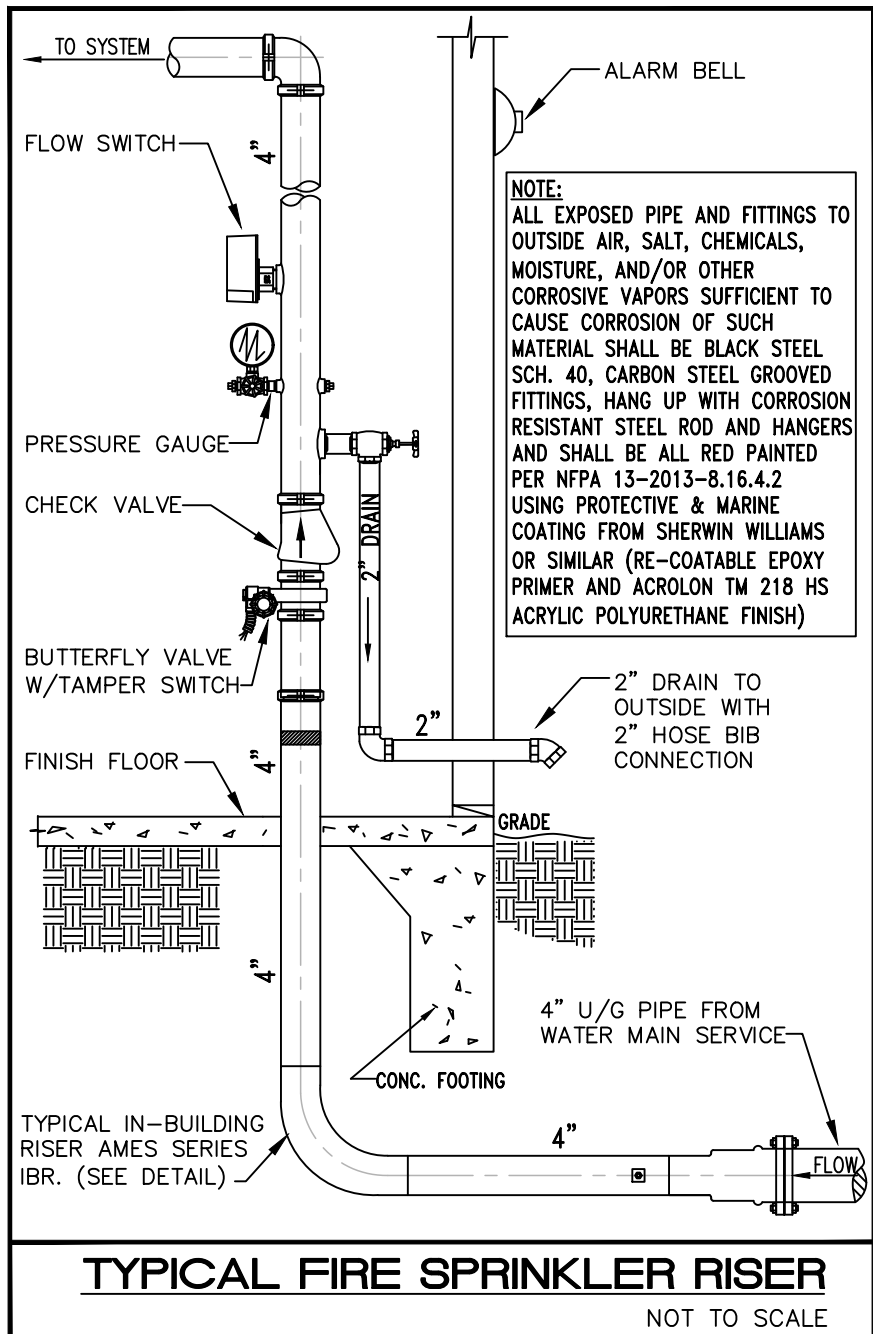
**IN-BUILDING RISER AMES SERIES IBR**  
NOT TO SCALE

**Hydrant Flow Test Data:**  
**Static:** 68 psi  
**Residual:** 50 psi  
**Flow:** 1,051 gpm  
**Date:** 9-23/2019  
**Location:** 700 Briny Avenue  
Pompano Beach, FL 33062  
**By:** Sentinel Fire Protection & Service Co., Inc.

| HANGER SCHEDULE                                                                                                                                  |      |      |        |        |      |        |      |        |      |      |      |
|--------------------------------------------------------------------------------------------------------------------------------------------------|------|------|--------|--------|------|--------|------|--------|------|------|------|
| NFPA 13 TABLE 6.2.2. MAXIMUM DISTANCE BETWEEN HANGERS (FT - IN)                                                                                  |      |      |        |        |      |        |      |        |      |      |      |
| NOMINAL PIPE SIZE                                                                                                                                | 3/4" | 1"   | 1-1/4" | 1-1/2" | 2"   | 2-1/2" | 3"   | 3-1/2" | 4"   | 5"   | 8"   |
| STEEL PIPE EXCEPT THREADED LIGHT-                                                                                                                | N/A  | 12-0 | 12-0   | 15-0   | 15-0 | 15-0   | 15-0 | 15-0   | 15-0 | 15-0 | 15-0 |
| THREADED LIGHT-WALL STEEL PIPE                                                                                                                   | N/A  | 12-0 | 12-0   | 12-0   | 12-0 | 12-0   | 12-0 | N/A    | N/A  | N/A  | N/A  |
| CPVC                                                                                                                                             | 5-6  | 6-0  | 6-6    | 7-0    | 8-0  | 9-0    | 10-0 | N/A    | N/A  | N/A  | N/A  |
| NOTES                                                                                                                                            |      |      |        |        |      |        |      |        |      |      |      |
| 1. THERE SHALL BE NOT LESS THAN ONE HANGER FOR EACH SECTION OF PIPE.                                                                             |      |      |        |        |      |        |      |        |      |      |      |
| 2. SUPPORT SPACING DISTANCE FOR END LINE SPRINKLER DROP ELBOWS AND DROP TEES TO BE IN ACCORDANCE WITH NFPA 13R AND THE PRODUCT APPROVAL LISTING. |      |      |        |        |      |        |      |        |      |      |      |

**FIRE SPRINKLER SHEET INDEX**

| SHEET#  | DESCRIPTION                                            |
|---------|--------------------------------------------------------|
| FSP-0.1 | FIRE SPRINKLER PERFORMANCE SPEC NOTES, LEGEND & INDEX  |
| FSP-1.1 | FIRE SPRINKLER PERFORMANCE SPEC SITE PLAN              |
| FSP-2.1 | FIRE SPRINKLER PERFORMANCE SPEC TYPICAL 1st FLOOR PLAN |
| FSP-2.2 | FIRE SPRINKLER PERFORMANCE SPEC TYPICAL 2nd FLOOR PLAN |
| FSP-2.3 | FIRE SPRINKLER PERFORMANCE SPEC TYPICAL 3rd FLOOR PLAN |
| FSP-2.4 | FIRE SPRINKLER PERFORMANCE SPEC ROOF DECK PLAN         |



**TYPICAL FIRE SPRINKLER RISER**  
NOT TO SCALE

**RNA**

REX NICHOLS ARCHITECTS  
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REX NICHOLS AIA  
AR007415

PROPOSED TOWNHOUSES ADDRESS 700 BRINY  
AV, POMPAO BEACH, 33062

OWNER : CARLO TREE LP  
GREENPARK GROUP  
5600 N Federal Highway  
Fort Lauderdale - FL - 33308

PROJECT NUMBER 4/2018

**FIRE SPRINKLER  
NOTES**

DESIGNED BY:  
Alex Penna & Rex Nichols

DATE:  
JUNE 12TH 2019

**ISSUED FOR**

- ☐ REVIEW & COMMENTS  
☐ RECORD  
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☐ CONSTRUCTION

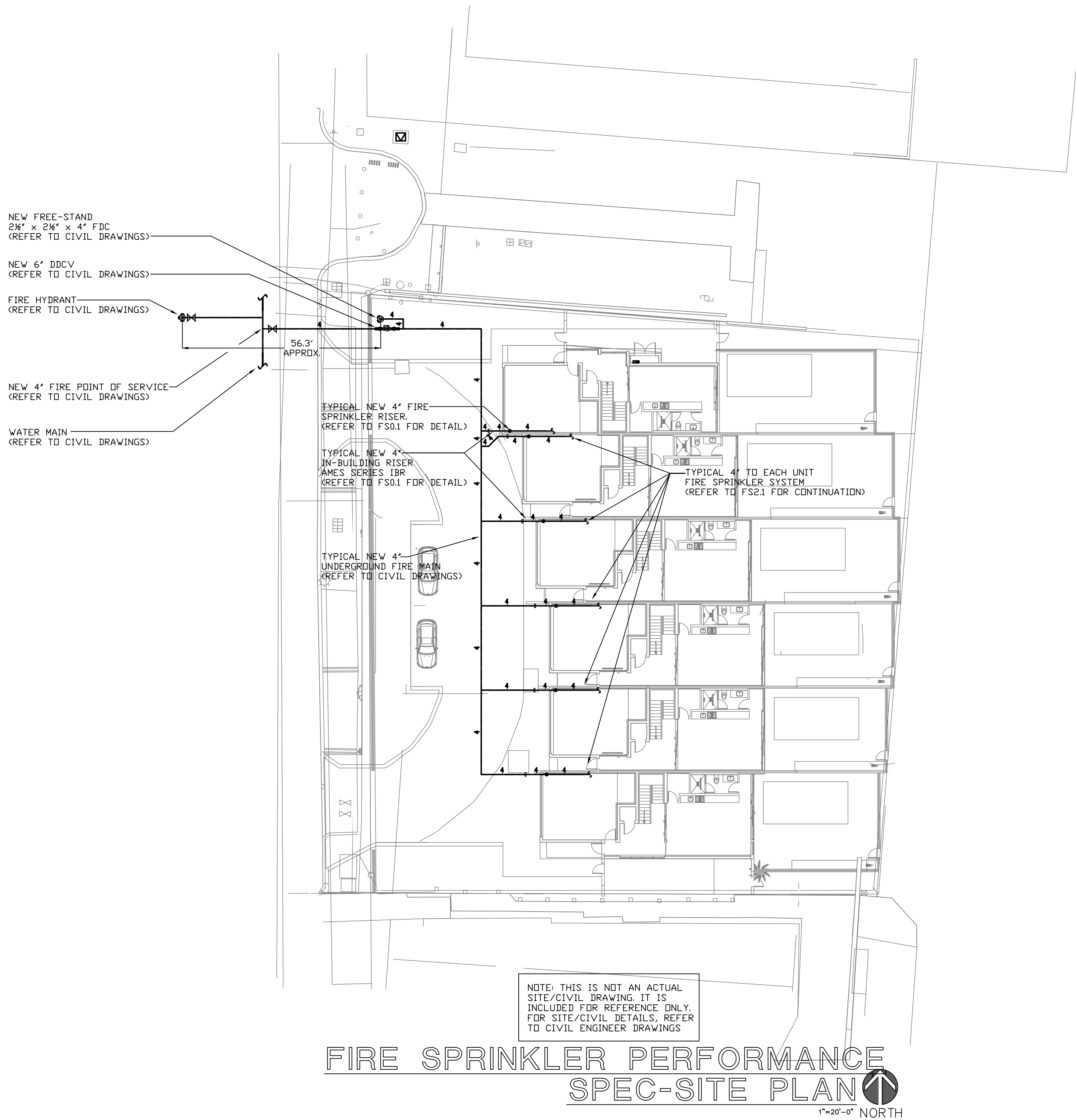
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| KAMM CONSULTING PROJECT #: | 2019-0577                                                                                                                                                                         |
| PROJECT MANAGER:           | Rick Gonzalez                                                                                                                                                                     |
| <b>KAMM Consulting</b>     | 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |
| 02-05-20                   |                                                                                                                                                                                   |
| date                       |                                                                                                                                                                                   |
| signed                     |                                                                                                                                                                                   |





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| ISSUED FOR CONSTRUCTION                             | -                                                                                                                                                                                 |
| KAMM CONSULTING PROJECT #:                          | 2019-0577                                                                                                                                                                         |
| PROJECT MANAGER:                                    | Rick Gonzalez                                                                                                                                                                     |
| <input checked="" type="checkbox"/> KAMM Consulting | 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |
|                                                     | 02-05-20                                                                                                                                                                          |
|                                                     | date                                                                                                                                                                              |
|                                                     | signed                                                                                                                                                                            |



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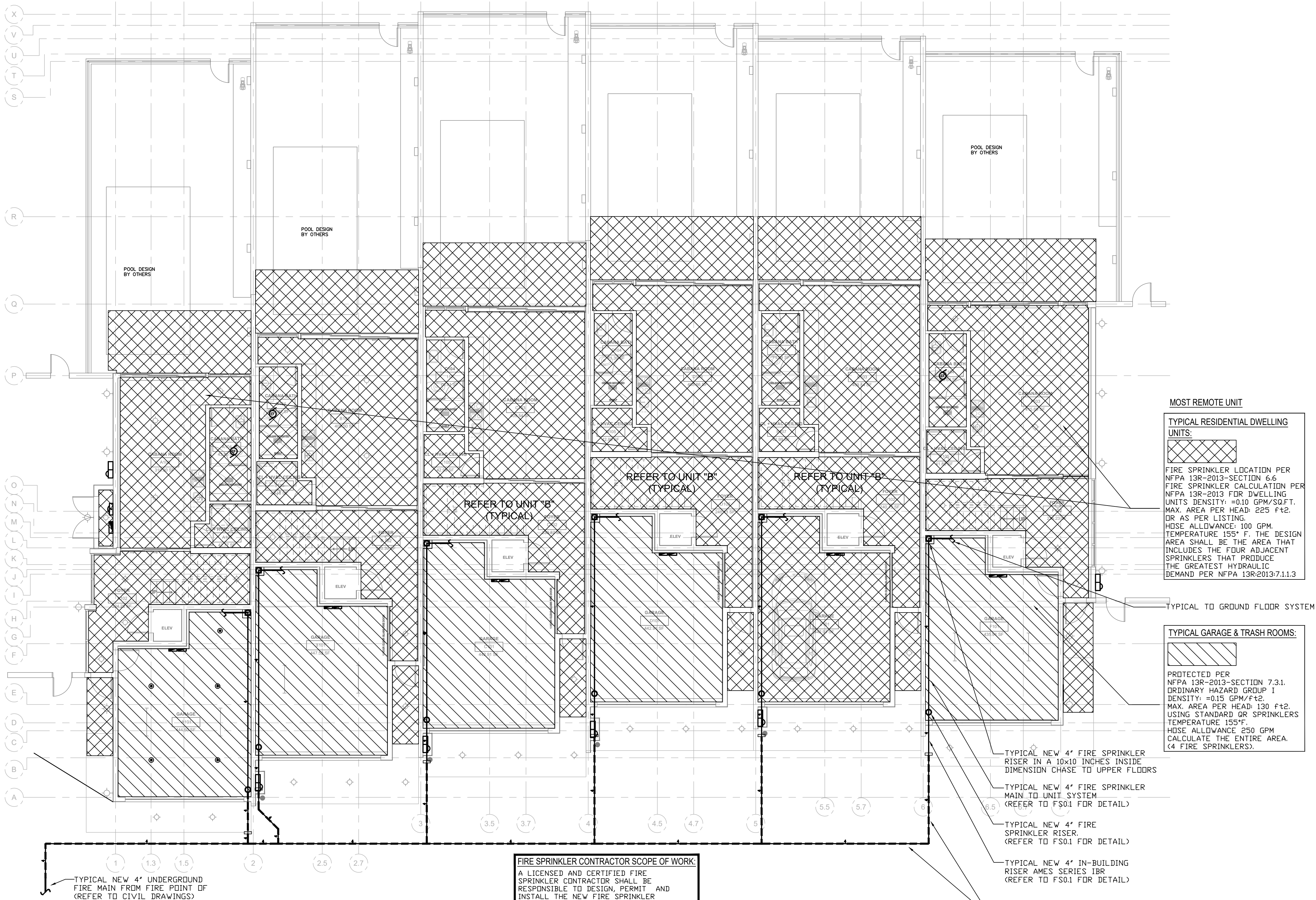
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MOST REMOTE UNIT

TYPICAL RESIDENTIAL DWELLING UNITS:

FIRE SPRINKLER LOCATION PER NFPA 13R-2013-SECTION 6.6  
FIRE SPRINKLER CALCULATION PER NFPA 13R-2013 FOR DWELLING UNITS DENSITY: =0.10 GPM/SG.F.T. MAX. AREA PER HEAD: 225 ft². OR AS PER LISTING.  
HOSE ALLOWANCE: 100 GPM. TEMPERATURE 155° F. THE DESIGN AREA SHALL BE THE AREA THAT INCLUDES THE FOUR ADJACENT SPRINKLERS THAT PRODUCE THE GREATEST HYDRAULIC DEMAND PER NFPA 13R:2013:7.1.1.3

TYPICAL GARAGE & TRASH ROOMS:

PROTECTED PER NFPA 13R-2013-SECTION 7.3.1. ORDINARY HAZARD GROUP 1 DENSITY: =0.15 GPM/ft². MAX. AREA PER HEAD: 130 ft². USING STANDARD OR SPRINKLERS TEMPERATURE 155°F. HOSE ALLOWANCE: 250 GPM. CALCULATE THE ENTIRE AREA. (4 FIRE SPRINKLERS).

TYPICAL NEW 4" FIRE SPRINKLER RISER IN A 10x10 INCHES INSIDE DIMENSION CHASE TO UPPER FLOORS

TYPICAL NEW 4" FIRE SPRINKLER MAIN TO UNIT SYSTEM (REFER TO FS01 FOR DETAIL)

TYPICAL NEW 4" FIRE SPRINKLER RISER. (REFER TO FS01 FOR DETAIL)

TYPICAL NEW 4" IN-BUILDING RISER AMES SERIES 1BR (REFER TO FS01 FOR DETAIL)

TYPICAL NEW 4" FIRE UNDERGROUND MAIN (REFER TO CIVIL DRAWINGS)

FIRE SPRINKLER CONTRACTOR SCOPE OF WORK:

A LICENSED AND CERTIFIED FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE TO DESIGN, PERMIT AND INSTALL THE NEW FIRE SPRINKLER COMPONENTS AS REQUIRED FOR A COMPLETE FUNCTIONAL CODE COMPLIANT FIRE SPRINKLER SYSTEM IN ACCORDANCE TO ALL APPLICABLE NFPA CODES, OWNER & UNDERWRITER INSURANCE STANDARDS, THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) REQUIREMENTS AND THE ENGINEER OF RECORD (EOR) 616-15 DOCUMENTS PER FLORIDA STATUTES.

TYPICAL NEW 4" UNDERGROUND FIRE MAIN FROM FIRE POINT OF (REFER TO CIVIL DRAWINGS)

FIRE SPRINKLER PERFORMANCE SPEC GROUND FLOOR PLAN

1/8"=1'-0"



RNA

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PROPOSED TOWNHOUSES ADDRESS 700 BRINY  
AV. POMPANO BEACH, 33062

OWNER : CARLO TREE LP

GREENPARK GROUP  
5600 N Federal Highway  
Fort Lauderdale - FL - 33308

PROJECT NUMBER 4/2018

FIRE SPRINKLER  
PLAN 1ST FLOOR

DESIGNED BY:  
Alex Penna & Rex Nichols

DATE:  
JUNE 12TH 2019

ISSUED FOR

REVIEW & COMMENTS  
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| ISSUED FOR CONSTRUCTION    |                                                                                                                                                                                   |
| KAMM CONSULTING PROJECT #: | 2019-0577                                                                                                                                                                         |
| PROJECT MANAGER:           | Rick Gonzalez                                                                                                                                                                     |
|                            | 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |
| 02-05-20                   | date                                                                                                                                                                              |
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## FIRE SPRINKLER PERFORMANCE SPEC SECOND FLOOR PLAN

1/8"=1'-0"



|                                                                        |                                                                                                                                                                                   |
|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ISSUED FOR PERMIT                                                      | -                                                                                                                                                                                 |
| ISSUED FOR CONSTRUCTION                                                | -                                                                                                                                                                                 |
| KAMM CONSULTING PROJECT #: 2019-0577<br>PROJECT MANAGER: Rick Gonzalez |                                                                                                                                                                                   |
| <input checked="" type="checkbox"/> KAMM Consulting                    | 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |
| 02-05-20                                                               | date                                                                                                                                                                              |
|                                                                        | signed                                                                                                                                                                            |

# RNA

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AR007415

PROPOSED TOWNHOUSES ADDRESS 700 BRINY  
AV. POMPANO BEACH, 33062

OWNER : CARLO TREE LP  
GREENPARK GROUP  
5600 N Federal Highway  
Fort Lauderdale - FL - 33308

PROJECT NUMBER 4/2018

FIRE SPRINKLER  
PLAN 2ND FLOOR

DESIGNED BY:  
Alex Penna & Rex Nichols

DATE:  
JUNE 12TH 2019

ISSUED FOR

☐ REVIEW & COMMENTS  
☐ BIDDING  
☐ NOT FOR CONSTRUCTION  
☐ PERMIT  
☐ CONSTRUCTION

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FIRE SPRINKLER PERFORMANCE  
SPEC THIRD FLOOR PLAN

1/8"=1'-0"

NORTH

|                            |                                                                                                                                                                                   |
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| ISSUED FOR PERMIT          | -                                                                                                                                                                                 |
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| KAMM CONSULTING PROJECT #: | 2019-0577                                                                                                                                                                         |
| PROJECT MANAGER:           | Rick Gonzalez                                                                                                                                                                     |
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| 02-05-20                   | date                                                                                                                                                                              |
|                            | signed                                                                                                                                                                            |

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GREENPARK GROUP  
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PROJECT NUMBER 4/2018

FIRE SPRINKLER  
PLAN 3RD FLOOR

DESIGNED BY:

Alex Penna & Rex Nichols

DATE:

JUNE 12TH 2019

ISSUED FOR

☐ REVIEW & COMMENTS  
☐ BIDDING  
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7- THE CONTRACTOR SHALL CREATE SHOP DRAWINGS AND PERFORM HYDRAULIC CALCULATIONS AS PER NFPA 13-2010-8.15.19.5.2 ACCORDING TO THE RESPECTIVE HAZARD REQUIREMENTS BY OWNER STANDARDS IF ANY AND BY CODE. SHALL SHOW PIPE SIZES, ALL FITTINGS, AND DIMENSIONAL LOCATIONS FOR ALL FIRE SPRINKLERS, MAINS, BRANCHES, AND PIPING FOR THE WATER SUPPLY TO THE CONNECTION OF THE SYSTEM.

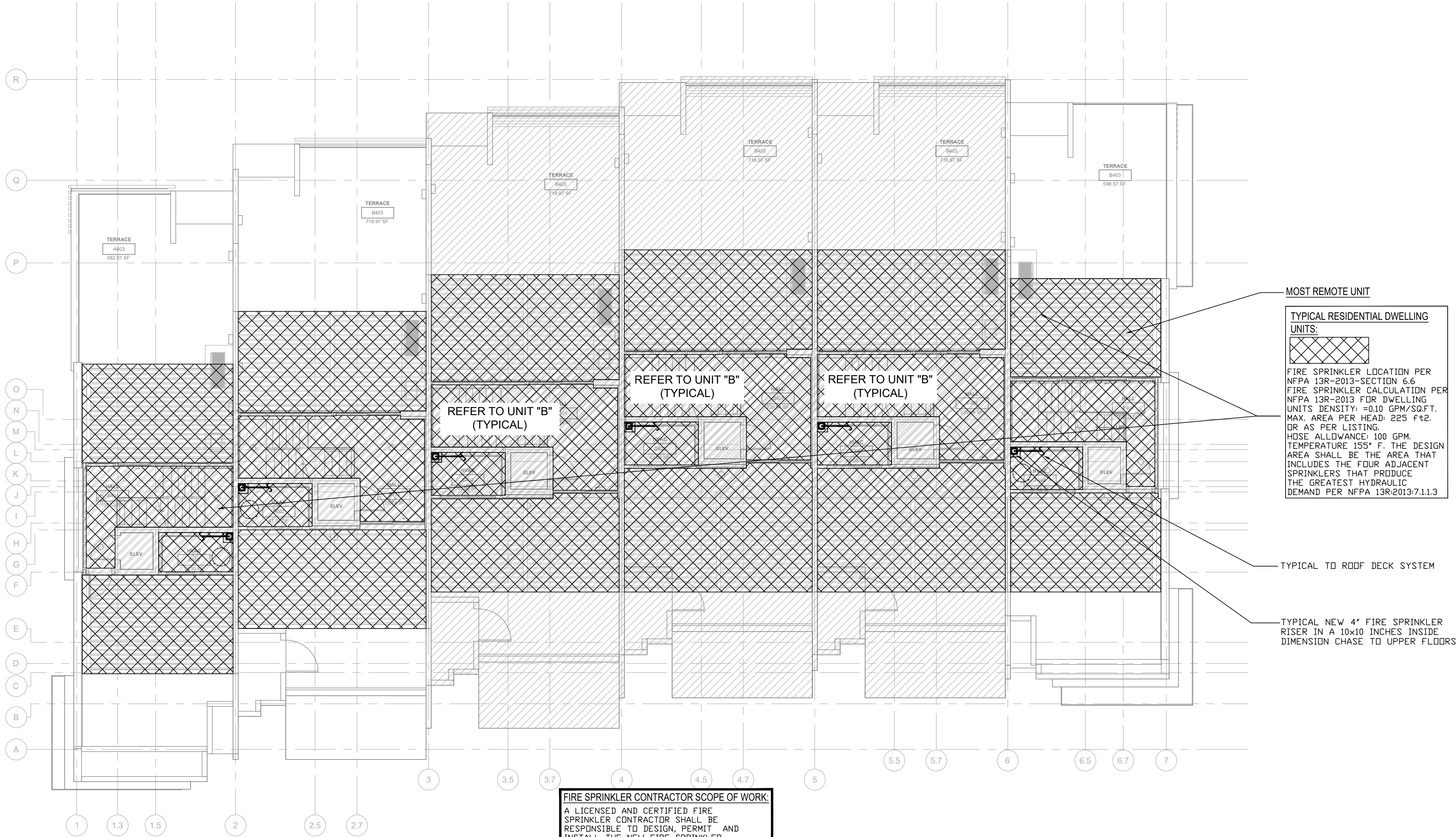
8- ANY PIPE SIZES INDICATED ON THE FIRE SPRINKLER EDR DOCUMENTS ARE PROVIDED FOR REFERENCE ONLY INCLUDING THE SIZE OF THE FIRE POINT OF SERVICE. THE ENGINEER OF RECORD MAKES NO REPRESENTATION AND CANNOT TAKE ANY RESPONSIBILITY FOR THE ACCURACY OF SUCH REPRESENTATION DUE TO THE LACK OF INFORMATION IN THE BEGINNING OF THE PROJECT. THE FIRE SPRINKLER CONTRACTOR CANNOT BASE HIS PRICE IN ANY EDR DRAWING PIPE SIZES DUE TO THE GIVEN REASONS. THE FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM AND PROVIDE A HYDRAULICALLY CALCULATED FIRE SPRINKLER SYSTEM, CONFORMING TO ALL APPLICABLE NFPA CODES, HAZARDS, INCREASING OF REMOTE AREAS AND/OR DENSITIES IF REQUIRED, USING AND PROVIDING THE PROPER PIPE SIZES FOR THE MOST REMOTE AREAS AND SYSTEMS DEMAND, STARTING AT THE DESIGNATED POINT OF SERVICE AND SUCH CONDITION SHALL BE REFLECTED AND UNDERSTOOD BY THE FIRE SPRINKLER CONTRACTOR ASSUMING ALL HIS RESPONSIBILITIES IF FINAL PIPE SIZES DIFFER FROM EDR DRAWINGS, BEFORE SIGNING ANY POSSIBLE CONTRACT WITH THE OWNERS REPRESENTATIVE.

9- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD COORDINATION AND FINAL LOCATION OF THE FIRE SPRINKLER HEADS (AS PER NFPA 13 AND AHJ); WITH THE RESPECTIVE HAZARD REQUIREMENTS BY CODE AND PIPING FOR FINAL FIRE PROTECTION LAYOUT DOCUMENTS PREPARATION AND FINAL INSTALLATION.

10- CONTRACTOR SHALL TAP IN INTO EXISTING SYSTEM WITH MECH. TEES OR SIMILAR CONNECTED FROM THE FIRE SPRINKLER MAIN WHEN IS REQUIRED TO ADD SPRINKLERS TO PROVIDE PROPER PIPE SIZES ACCORDING TO NFPA 13.

11- THE CONTRACTOR SHALL COORDINATE ALL FIRE SPRINKLER WORK WITH ALL OTHER CONSTRUCTION DISCIPLINES INCLUDING BUT NOT LIMITED TO HVAC, PLUMBING, ELECTRICAL, STRUCTURAL, CIVIL, ARCHITECTURAL AND FIRE ALARM. THE CONTRACTOR SHALL ALSO COORDINATE ANY SPECIAL TESTING REQUIRED BY THE OWNER.

12- SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE PROPER FIRE SPRINKLERS BELOW ANY OBSTRUCTION INCLUDED BUT NOT LIMITED TO DUCT, STRUCTURE, RAMP, ESCALATOR, STAIR, CEILING, SOFFIT, PIPE, DOOR, LANDING, RAMP ETC. IN ORDER TO PROVIDE PROPER FLOOR FIRE PROTECTION CODE COMPLIANCE SYSTEM DESPITE WHAT IS SPECIFIED IN THIS DRAWING. SUCH CONDITION SHALL BE REFLECTED IN HIS BID PRICE BEFORE SIGNING ANY CONTRACT WITH THE OWNER'S REPRESENTATIVE.



FIRE SPRINKLER CONTRACTOR SCOPE OF WORK:  
A LICENSED AND CERTIFIED FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE TO DESIGN, PERMIT AND INSTALL THE NEW FIRE SPRINKLER COMPONENTS AS REQUIRED FOR A COMPLETE FUNCTIONAL CODE COMPLIANT FIRE SPRINKLER SYSTEM IN ACCORDANCE TO ALL APPLICABLE NFPA CODES, OWNER & UNDERWRITER INSURANCE STANDARDS, THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) REQUIREMENTS AND THE ENGINEER OF RECORD (EDR) 610-15 DOCUMENTS PER FLORIDA STATUTES.

FIRE SPRINKLER PERFORMANCE  
SPEC ROOF DECK PLAN

1/8"=1'-0"



|                            |                                                                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ISSUED FOR PERMIT          | -                                                                                                                                                                                 |
| ISSUED FOR CONSTRUCTION    | -                                                                                                                                                                                 |
| KAMM CONSULTING PROJECT #: | 2019-0577                                                                                                                                                                         |
| PROJECT MANAGER:           | Rick Gonzalez                                                                                                                                                                     |
|                            | 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #R189 |
| 02-05-20                   | date                                                                                                                                                                              |
|                            | signed                                                                                                                                                                            |

RNA

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PROPOSED TOWNHOUSES ADDRESS 700 BRINY  
AV, POMPANO BEACH, 33062

OWNER : CARLO TREE LP  
GREENPARK GROUP  
5600 N Federal Highway  
Fort Lauderdale - FL - 33308

PROJECT NUMBER 4/2018

FIRE SPRINKLER  
PLAN ROOF DECK

DESIGNED BY:  
Alex Penna & Rex Nichols

DATE:  
JUNE 12TH 2019

ISSUED FOR

☐ REVIEW & COMMENTS  
☐ BIDDING  
☐ NOT FOR CONSTRUCTION  
☐ PERMIT  
☐ CONSTRUCTION

FS2.4

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