# HILLSBOROUGH COUNTY
# THONOTOSASSA FS NO. 21
# REPLACEMENT
# CIP NO. C91210000

## 90% CONTRACT DOCUMENTS

## COMMISSIONERS

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**HARRY COHEN**

DISTRICT 2, CHAIR
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, DISTRICT 4, VICE CHAIR
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AR91271 QUALIFIER LICENSE

WILDERARCHITECTURE, INC.


PROJECT TEAM

CIVIL ENGINEERING
**CAMPO ENGINEERING, INC.**

LANDSCAPE ARCHITECTURE
**ANDERSON LESNIAK LIMITED, INC.**

STRUCTURAL ENGINEERING
**PENNONI ASSOCIATE, INC**

FIRE PROTECTION / PLUMBING
MECHANICAL / ELECTRICAL
ENGINEERING
**ENGINEERING MATRIX, INC.**

HILLSBOROUGH COUNTY BOARD
OF COUNTY COMMISSIONERS
COUNTY CENTER
601 E KENNEDY BLVD
TAMPA, FL 33601

HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2116-05

90% CD

11.14.2024

| | |
|---|---|
| @ | AT |
| AB | ANCHOR BOLT |
| AC | AIR CONDITION, ER, ING |
| ADA | AMERICANS WITH DISABILITIES ACT |
| ADJ | ADJACENT |
| AFF | ABOVE FINISHED FLOOR |
| ALUM | ALUMINUM |
| APC | ACOUSTIC PANEL CEILING |
| APPROX | APPROXIMATELY |
| ARCH | ARCHITECT |
| BLDG(S) | BUILDING(S) |
| BLK | BLOCK |
| BLKG | BLOCKING |
| BOS | BOTTTOM OF STEEL |
| BOTT | BOTTOM |
| BRG | BEARING |
| BUR | BUILT-UP ROOFING |
| CI | CONTRACTOR INSTALLED |
| CJ | CONTROL JOINT |
| CL | CENTER LINE |
| CLF | CHAIN LINK FENCE |
| CLG | CEILING |
| CLR | CLEAR |
| CEM | CEMENT |
| CP | CONTRACTOR PROVIDED |
| CR | CLASSROOM |
| CT | CERAMIC TILE |
| CM | CONSTRUCTION MANAGER |
| CMU | CONCRETE MASONRY UNIT |
| COL | COLUMN |
| CONC | CONCRETE |
| CONF | CONFERENCE |
| CONST | CONSTRUCTION |
| CONT | CONTINUOUS |
| CONTR | CONTRACTOR |
| CPT | CARPET |
| D | DEEP, DEPTH |
| DEMO | DEMOLITION |
| DF | DRINKING FOUNTAIN |
| DIAM | DIAMETER |
| DIM | DIMENSION |
| DOCS | DOCUMENTS |
| DN | DOWN |
| DS | DOWNSPOUT |
| DTL | DETAIL |
| DWG | DRAWING |
| EA | EACH |
| EHPA | ENHANCED HURRICANE PROTECTION AREA |
| EJ | EXPANSION JOINT |
| ELEC | ELECTRICAL |
| ELEV | ELEVATION |
| EQ | EQUAL |
| EQUIP | EQUIPMENT |
| ETC | ETCETERA |
| ETR | EXISTING TO REMAIN |
| EWC | ELECTRIC WATER COOLER |
| EWH | ELECTRIC WATER HEATER |
| EXIST | EXISTING |
| EXP | EXPOSED |
| EXT | EXTERIOR |
| FBC | FLORIDA BUILDING CODE |
| FD | FLOOR DRAIN |
| FE | FIRE EXTINGUISHER |
| FFPC | FLORIDA FIRE PREVENTION CODE |
| FIN | FINISH |
| FIXT | FIXTURE |
| FL | FLOOR |
| FLUOR | FLUORESCENT |
| FT | FEET |
| FTG | FOOTING |
| FURN | FURNITURE |
| GA | GAUGE |
| GALV | GALVANIZED |
| GC | GENERAL CONTRACTOR |
| GL | GLASS, GLAZING |
| GWB | GYPSUM WALLBOARD |
| HB | HOSE BIBB |
| HC | HANDICAPPED |
| HT | HEIGHT, HIGH |
| HDW | HARDWARE |
| HM | HOLLOW METAL |
| HMF | HOLLOW METAL FRAME |
| HORIZ | HORIZONTAL |
| ID | INSIDE DIAMETER |
| INCAND | INCANDESCENT |
| INSUL | INSULATION |
| INT | INTERIOR |
| JAN | JANITOR |
| JT | JOINT |
| MAINT | MAINTENANCE |
| MAS | MASONRY |
| MAX | MAXIMUM |
| MECH | MECHANICAL |
| MFR | MANUFACTURER |
| MH | MANHOLE |
| MIN | MINIMUM |
| MISC | MISCELLANEOUS |
| MO | MASONRY OPENING |
| MTD | MOUNTED |
| MVCJ | MASONRY VERTICAL CONTROL JOINT |
| NA | NOT APPLICABLE |
| NIC | NOT IN CONTRACT |
| NO,# | NUMBER |
| NTS | NOT TO SCALE |
| OC | ON CENTER |
| OD | OUTSIDE DIAMETER |
| OH | OVERHEAD |
| OI | OWNER INSTALLED |
| OP | OWNER PROVIDED |
| OPNG | OPENING |
| OPP | OPPOSITE |
| OPH | OPPOSITE HAND |
| PERIM | PERIMETER |
| PLAS | PLASTER |
| PL | PROPERTY LINE |
| PNT | PAINT (PAINTED FINISH) |
| PROJ | PROJECT |
| PT | PRESSURE TREATED |
| PTN | PARTITION |
| PVC | POLYVINYL CHLORIDE |
| PLWD | PLYWOOD |
| PP | PUSH PLATE |
| QT | QUARRY TILE |
| R/W | RIGHT OF WAY |
| RCP | REFLECTED CEILING PLAN |
| RD | ROOF DRAIN |
| REBAR | REINFORCING BAR |
| REINF | REINFORCE/MENT/ING |
| REQ | REQUIRED |
| RM | ROOM |
| RO | ROUGH OPENING |
| RWB | RESILIENT WALL BASE |
| RWL | RAIN WATER LEADER |
| SC | SMOKE COMPARTMENT |
| SHT | SHEET |
| SF | SQUARE FOOT |
| SIM | SIMILAR |
| SOG | SLAB ON GRADE |
| SPECS | SPECIFICATIONS |
| SQ | SQUARE |
| SS | STAINLESS STEEL |
| STC | SOUND TRANSMISSION CLASS (RATING) |
| STD | STANDARD |
| STL | STEEL |
| STOR | STORAGE |
| STRL | STRUCTURAL |
| SUSP | SUSPEND / ED / SION |
| T&B | TOP AND BOTTOM |
| T&G | TONGUE AND GROOVE |
| TEL | TELEPHONE |
| TEMP | TEMPORARY |
| TERR | TERRAZZO |
| TOM | TOP OF MASONRY |
| TOS | TOP OF STEEL |
| TOT | TOTAL |
| T/S | TOP OF SLAB |
| TYP | TYPICAL (UNO) |
| UNO | UNLESS NOTED OTHERWISE |
| V | VINYL |
| VCT | VINYL COMPOSITION TILE |
| VERT | VERTICAL |
| VEST | VESTIBULE |
| VIF | VERIFY IN FIELD |
| VP | VENEER PLASTER |
| VSF | VINYL SHEET FLOORING |
| VT | VINYL TILE |
| VTR | VENT TO ROOF |
| W | WIDE, WIDTH |
| W/ | WITH |
| WP | WEATHERPROOF |
| WWF | WELDED WIRE FABRIC |
| WVP | WOOD VENEER PANELING |

ARCHITECTURAL ABBREVIATIONS AND ACRONYMS | D12

## DRAWING TAGS

FURNITURE & EQUIP







PARTITION TYPE




SPECIFIC NOTE




WINDOW TYPE

W03

HOLLOW METAL FRAME TYPE

F11

DOOR TAG

101a

LOUVER TAG

L01

SPOT ELEV



SIGNAGE TAGS

SIGNAGE LOCATION




ARCHITECTURAL DRAWING SYMBOLS | D7

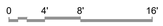
## DRAWING IDENTIFICATION

| DWG NAME<br>SCALE | DWG NO |
|---|---|

NORTH ARROW



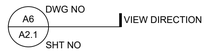

GRAPHIC SCALE




DETAIL INDICATION




SECTION CUT INDICATION




ELEVATION INDICATION




ELEVATION INDICATION | D12

**COVER**
A0.0 GENERAL INFORMATION SHEET
A0.1 LIFE SAFETY PLAN

**SURVEY**
1 OF 1 BOUNDARY & TOPOGRAPHIC SURVEY

**CIVIL**
C-2.1 GENERAL NOTES
C-3.1 EXISTING CONDITIONS, DEMO & EROSION CONTROL PLAN
C-3.2 STORMWATER POLLUTION PREVENTION PLAN
C-4.1 SITE PLAN
C-5.1 PAVING, GRADING & DRAINAGE PLAN
C-5.2 PAVING, GRADING & DRAINAGE DETAILS
C-5.3 CROSS SECTIONS
C-6.1 UTILITY PLAN
C-6.2 UTILITY DETAILS

**LANDSCAPE**
L1.1 LANDSCAPE PLAN
L2.1 IRRIGATION PLAN

**ARCHITECTURAL**
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A1.2 SITE PLAN DETAILS
A1.3 FLOOR PLAN
A1.4 DIMENSIONED FLOOR PLAN
A1.5 REFLECTED CEILING PLAN
A1.6 ROOF PLAN
A2.1 ENLARGED FLOOR PLANS AND DETAILS
A3.1 EXTERIOR ELEVATIONS
A3.2 BUILDING SECTIONS
A4.0 PARTITION TYPES
A4.1 PARTITION DETAILS AND WALL SECTIONS
A4.2 WALL SECTIONS
A4.3 WALL SECTIONS
A5.1 ROOF DETAILS
A5.2 DETAILS
A5.3 DETAILS
A6.1 INTERIOR ELEVATIONS
A6.2 INTERIOR ELEVATIONS & SECTIONS
A6.3 CASEWORK DETAILS
A7.1 SCHEDULES AND DOOR AND WINDOWS TYPES

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S0.2 STRUCTURAL SPECIFICATIONS, SCHEDULES & WIND TABLES
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S1.2 ROOF FRAMING PLAN
S2.1 FOUNDATION DETAILS
S2.2 MASONRY & FOUNDATION DETAILS
S2.3 FRAMING DETAILS
S3.1 WALL SECTIONS

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FP1.2 FIRE SPRINKLER PLAN - ATTIC
FP5.1 FIRE SPRINKLER DETAILS
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P2.2 PLUMBING FLOOR PLAN
P2.3 PLUMBING FLOOR PLAN
P4.1 PLUMBING RISER DIAGRAM
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P5.3 PLUMBING DETAILS
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**MECHANICAL**
M0.0 MECHANICAL SYMBOLS LEGEND
M2.1 MECHANICAL FLOOR PLAN
M3.1 MECHANICAL DETAILS
M3.2 MECHANICAL DETAILS
M3.3 MECHANICAL DETAILS
M3.4 MECHANICAL DETAILS
M4.1 MECHANICAL SCHEDULES
M4.2 MECHANICAL SCHEDULES
M5.1 MECHANICAL CONTROLS
M5.2 MECHANICAL CONTROLS
M5.3 MECHANICAL CONTROLS
M6.1 MECHANICAL FLOW DIAGRAM

**ELECTRICAL**
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E0.1 LUMINAIRE SCHEDULE
E1.1 LIGHTING SITE PLAN
E1.2 PHOTOMETRIC SITE PLAN
E1.3 POWER SITE PLAN
E1.4 ELECTRICAL SYSTEMS SITE PLAN
E2.1 LIGHTING FLOOR PLAN
E3.1 POWER FLOOR PLAN
E4.1 ELECTRICAL SYSTEMS FLOOR PLAN
E4.2 ALERTING SYSTEMS FLOOR PLAN
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E5.3 ELECTRICAL DETAILS
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E5.6 ELECTRICAL DETAILS
E5.7 ELECTRICAL DETAILS
E5.8 ELECTRICAL DETAILS
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E5.10 ELECTRICAL DETAILS
E6.1 ELECTRICAL RISER DIAGRAM
E7.1 ELECTRICAL PANEL SCHEDULES

DRAWING INDEX | F1

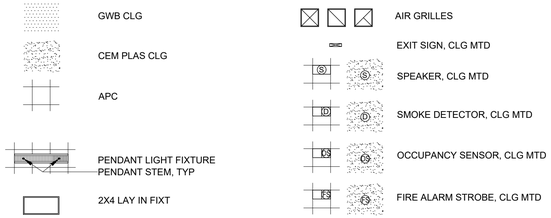
## FLORIDA PRODUCT APPROVAL APPROVED PRODUCT LIST

FLORIDA BUILDING CODE VERSION- 2023

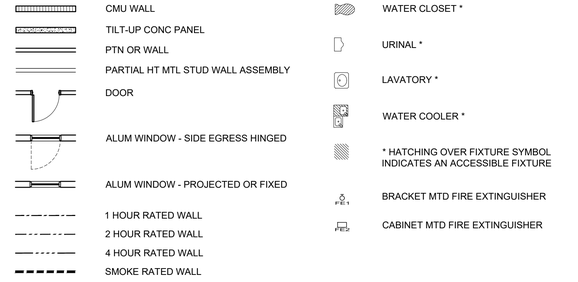
| PRODUCT CATEGORY | SUB CATEGORY | MANUFACTURER | APPROVAL NUMBER | APPROVAL OR VALIDATION DATE |
|---|---|---|---|---|
| EXTERIOR DOORS | SWINGING EXTERIOR DOOR (SINGLE/DOUBLE) | SCHLAGE LOCK COMPANY, LLC/ALLEGION | FL 16740.3 | 12/12/2023 |
| | SECTIONAL EXTERIOR DOOR | OVERHEAD DOOR | FL 11734.18 | 12/12/2023 |
| | STOREFRONT DOOR ASSEMBLY | YKK AP AMERICA | FL 16554.2 | 07/25/2023 |
| WINDOWS | CASEMENT | WINCO WINDOWS | FL 21420 | - |
| ROOFING | ASPHALT SHINGLES | GAF | FL 10124.1 | 12/12/2023 |
| | METAL ROOFING (ADD ALTERNATE) | PETERSEN ALUMINUM CORP. | FL 24423 | 09/17/2023 |
| | SINGLE PLY ROOF SYSTEM | GAF | FL 5293 | 04/16/2024 |
| PANEL WALLS | STOREFRONT | YKK AP AMERICA | FL 14218.1 | 07/25/2023 |
| | WALL LOUVER | RUSKIN | FL 21829.7 | 04/22/2024 |
| | WALL LOUVER (FOR SOFFIT) | RUSKIN | FL 6876.2 | 02/14/2024 |
| | SOFFITS | PLY GEM SIDING GROUP | FL 32502.1 | 10/18/2023 |

FLORIDA PRODUCT APPROVAL APPROVED PRODUCTS LIST | D1

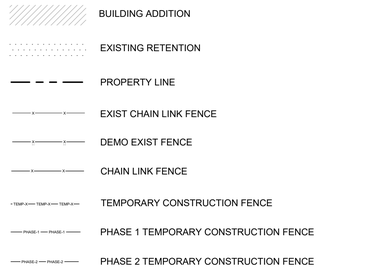
## REFLECTED CEILING PLAN

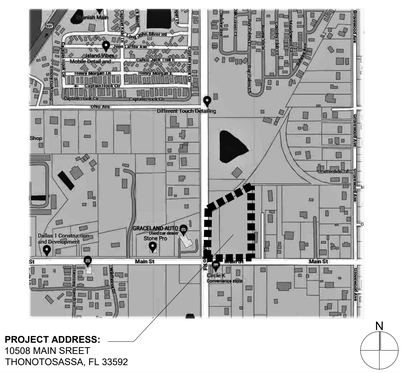



## FLOOR PLAN




## SITE PLAN




**PROJECT ADDRESS:**
10508 MAIN SREET
THONOTOSASSA, FL 33592

LEGENDS | A4

VICINITY MAP
NTS | A1


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John Thompson, AIA
AR91271
11/14/2024


HILLSBOROUGH COUNTY BOARD
OF COUNTY COMMISSIONERS
COUNTY CENTER
601 E KENNEDY BLVD
TAMPA, FL 33601

# HILLSBOROUGH COUNTY THONOTOSASSA FIRE STATION NO. 21 REPLACEMENT

PROJECT #: **2116-05**

| Distribution | Date |
|---|---|
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

GENERAL INFORMATION

A0.0




## PROJECT SUMMARY

NEW THONOTOSASSA FIRE STATION 21 IS A 7,327 SF STATION FOR HILLSBOROUGH COUNTY.

- HOUSING = RESIDENTIAL (R-2)
- APPARATUS BAY = STORAGE (S-2)
- BUSINESS (B)

1,950 SF HOUSING
3,238 SF APPARATUS BAY AND ACCESORIES
2,139 SF BUSINESS AND ACCESORIES
7,327 SF TOTAL

## LIFE SAFETY AND CODE DATA

CODE REFERENCES
FLORIDA BUILDING CODE 8TH EDITION (FBC 2023) - BUILDING, MECHANICAL, PLUMBING, FUEL GAS, ELECTRICAL, ENERGY CONSERVATION

NFPA 70, NATIONAL ELECTRICAL CODE 2020
FLORIDA FIRE PREVENTION CODE - 7TH EDITION

BUILDING DATA

- CONSTRUCTION TYPE: **TYPE V-B (SPRINKLERED)**
- OCCUPANCY TYPE: **MIXED (R-2, B & S-2)**
  RESIDENTIAL (R-2) - HOUSING / BUNK ROOM
  BUSINESS (B) - OFFICE
  STORAGE (S-2) - APPARATUS BAY / STORAGE
- OCCUPANCY SEPARATION: **1-HR**
- HEIGHT: **24'- 0"** (35'-0" MAX)
- STORIES: **1** (2 MAX)
- IMPACT RESISTANCE: **YES (MISSILE "E")**

OCCUPANT LOAD (TABLE 1004.5)
R-2 (RESIDENTIAL) AREA: 1,950 / 200 GSF = 9.75 OCC

S-2 (PARKING GARAGE) AREA: 2,579 / 200 GSF = 12.89 OCC

ACCESSORY STORAGE AREA: 1,005 / 300 GSF = 3.35 OCC

B (BUSINESS) AREA: 1,356 / 150 GSF = 9.04 OCC

ASSEMBLY UNCONCENTRATED (VESTIBULE) = 91 / 15 NSF = 6.06 OCC

TOTAL NUMBER OF OCCUPANTS = 41.09 (42 OCC)
(21 MENS / 21 WOMENS)

PLUMBING FIXTURES (TABLE P403.1)
RESIDENTIAL (9.75 OCCUPANTS)
WC: 1 PER 10 = 0.975 REQ'D
LAVS: 1 PER 10 = 0.975 REQ'D
BATHTUB/SHOWER: 1 PER 8 = 1.2 REQ'D
DRINKING FOUNTAIN: 1 PER 100 = 0.09 REQ'D
SERVICE SINK: 1 REQ'D
STORAGE (16.24 OCCUPANTS)
WC: 1 PER 100 = 0.16 REQ'D
LAVS: 1 PER 100 = 0.16 REQ'D
BATHTUB/SHOWER: EYEWASH - REQ'D
DRINKING FOUNTAIN: 1 PER 1,000 = 0.01 REQ'D
SERVICE SINK: 1 REQ'D
BUSINESS (15.01 OCCUPANTS)
WC: 1 PER 25 = 0.604 REQ'D
LAVS: 1 PER 40 = 0.375 REQ'D
BATHTUB/SHOWER: EYEWASH - N/A
DRINKING FOUNTAIN: 1 PER 100 = 0.15 REQ'D
SERVICE SINK: 1 REQ'D
TOTALS
WC: 1.7 REQ'D - 3 PROVIDED
LAV: 1.5 REQ'D - 4 PROVIDED
BATHTUB/SHOWER: 1.2 REQ'D - 3 PROVIDED
EYEWASH: 1 REQ'D - 1 PROVIDED
DRINKING FOUNTAIN: 0.25 REQ'D - 1 Hi-Lo PROVIDED
SERVICE SINK: 3 PROVIDED

MEANS OF EGRESS REQUIREMENTS

- MAX. TRAVEL DISTANCE TO EXIT:
  250'-0" (R-2), 400'-0" (S-2), 300'-0" (B)
  (SPRINKLERED - TABLE 1017.2)
- DEAD END CORRIDOR: 50'-0" (R-2)
  (1020.5 EXCEPTION 2)
- COMMON PATH OF TRAVEL (1006.2.1):
  125'-0" (R-2) & 100'-0" (S-2 & B)
- MIN. NUMBER OF EXITS: **2** (3 PROVIDED - OK)
- EGRESS WIDTH
  LEVEL - 0.2"/OCCUPANT: **32" MIN** (108" - OK)
  STAIR - 0.3"/OCCUPANT: **N/A**
  MIN CORRIDOR WIDTH (1020.2): **36" MIN** (60" - OK)

**PATH 1**
14'-4" COMMON PATH OF TRAVEL R2 (<125' OK)
41'-9" DISTANCE TO EXIT (<250' OK)

**PATH 2**
59'-11" COMMON PATH OF TRAVEL B (<100' OK)
108'-2" DISTANCE TO EXIT (<300' OK)

**PATH 3**
40'-7" COMMON PATH OF TRAVEL S2 (<100' OK)
87'-6" DISTANCE TO EXIT (<400' OK)

## SPECIFIC NOTES

1. RATED FRAME (1 HR) & GLAZING (W-60)
2. EMERGENCY LIGHT FIXTURE, TYP
3. HAND WASH SINK (FOOT OPERATED)
4. SERVICE SINK / MOP SINK

## LIFE SAFETY LEGEND

- PRIMARY EXIT
- EXIT ACCESS
- SECONDARY EGRESS
- END OF COMMON PATH OF TRAVEL
- 1 HOUR RATED PARTITION
- SMOKE RATED PARTITION
- TRAVEL DISTANCES
- EXIT SIGN
- F.E.1 BRACKET MTD FIRE EXTINGUISHER
- F.E.C. CABINET MTD FIRE EXTINGUISHER
- EMERGENCY SHOWER AND EYEWASH

0 2'-8" 5'-4" 10'-8"

LIFE SAFETY PLAN 3/16" = 1'-0" A3

NOTES A1


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HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2116-05

| Distribution | Date |
|---|---|
| DD SET | 06.06.2024 |
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LIFE SAFETY PLAN

A0.1

## SAFETY

1. DURING THE CONSTRUCTION AND MAINTENANCE OF THIS PROJECT, ALL SAFETY REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS PERSONNEL.
2. THE CONTRACTOR'S MAINTENANCE OF TRAFFIC PLAN MUST BE SUBMITTED AND APPROVED BY THE GOVERNMENTAL AGENCIES HAVING JURISDICTION PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES.
3. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF TRANSPORTATION.
4. CONTRACTOR SHALL PROVIDE AND MAINTAIN ITS OWN SAFETY EQUIPMENT IN ACCORDANCE WITH ITS HEALTH & SAFETY PROGRAM AND ALL OTHER APPLICABLE LEGAL AND HEALTH AND SAFETY REQUIREMENTS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR PROVIDING ITS EMPLOYEES AND SUBCONTRACTORS WITH ADEQUATE INFORMATION AND TRAINING TO ENSURE THAT ALL EMPLOYEES AND SUBCONTRACTORS AND SUBCONTRACTORS' EMPLOYEES COMPLY WITH ALL APPLICABLE REQUIREMENTS. CONTRACTOR SHALL REMAIN IN COMPLIANCE WITH ALL OCCUPATION SAFETY AND HEALTH REGULATIONS AS WELL AS THE ENVIRONMENTAL PROTECTION LAWS. THE FOLLOWING IS NOT TO BE PERCEIVED AS THE ENTIRE SAFETY PROGRAM BUT JUST BASIC REQUIREMENTS.
5. ALL EXCAVATIONS BY THE CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF THE DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. PARTICULAR ATTENTION MUST BE PAID TO THE CONSTRUCTION STANDARDS FOR EXCAVATIONS, 29 CFR PART 1926, SUBPART P.
6. THE MINIMUM STANDARDS AS SET FORTH IN THE CURRENT EDITION OF "THE STATE OF FLORIDA, MANUAL ON TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS" SHALL BE FOLLOWED IN THE DESIGN APPLICATION, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PUBLIC AND WORKMEN FROM HAZARDS WITHIN THE PROJECT LIMITS.
7. ALL TRAFFIC CONTROL MARKINGS AND DEVICES SHALL CONFORM TO THE PROVISIONS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES PREPARED BY THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION.
8. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS. THE ABOVE INFORMATION HAS BEEN PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATIONS.
9. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE UTILITY COMPANIES PRIOR TO CONSTRUCTION TO OBTAIN FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES. CALL SUNSHINE ONE CALL AT 811 TO ARRANGE FOR FIELD LOCATIONS.
10. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED BY THE CONTRACTOR CALLED FOR IN THIS CONTRACT.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND WILL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.

## EXISTING TREE PROTECTION NOTES:

1. REQUIRED BARRICADES AND FLAGGING SHALL BE ERECTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER AND REGULATORY AGENCIES PRIOR TO COMMENCEMENT OF LAND ALTERATION ACTIVITIES. BARRICADES SHALL REMAIN IN PLACE UNTIL ALTERATION AND CONSTRUCTION ACTIVITIES ARE COMPLETED.
2. DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES, WITHIN THE DRIPLINE OF A TREE REMAINING ON SITE, UNLESS OTHERWISE APPROVED, IT SHALL BE UNLAWFUL TO REMOVE VEGETATION, EXCEPT BY HAND, BY GRUBBING OR TO PLACE SOIL DEPOSITS, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND WITHIN THE DRIPLINE OF A TREE TO REMAIN ON THE SITE.
3. ADEQUATE PROTECTION MEASURES (I.E. HAY BALES, BAFFLES, SODDING AND SANDBAGGING) SHALL BE PROVIDED, AS NECESSARY, TO MINIMIZE EROSION AND DOWNSTREAM SEDIMENTATION CAUSED BY SURFACE WATER RUNOFF ON EXPOSED LAND SURFACES.
4. ALL TRIMMING UNDERTAKEN ON A TREE PROTECTED BY THE PROVISIONS OF THE LAND DEVELOPMENT CODE SHALL BE PRUNED IN ACCORDANCE WITH THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) A-300 PRUNING STANDARDS. THIS INFORMATION MUST BE CLEARLY IDENTIFIED ON THE CONSTRUCTION PLANS.

## CLEARING/DEMOLITION

1. PRIOR TO ANY SITE CLEARING, ALL TREES SHOWN TO REMAIN AS INDICATED IN THE CONSTRUCTION PLANS SHALL BE PROTECTED IN ACCORDANCE WITH LOCAL TREE ORDINANCES AND DETAILS CONTAINED IN THESE PLANS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THESE TREES IN GOOD CONDITION. NO TREE SHOWN TO REMAIN SHALL BE REMOVED WITHOUT WRITTEN APPROVAL FROM THE REGULATORY AGENCY OR THE OWNER.
2. THE CONTRACTOR SHALL CLEAR AND GRUB ONLY THOSE PORTIONS OF THE SITE NECESSARY FOR CONSTRUCTION. DISTURBED AREAS WILL BE SEEDED, MULCHED, SODDED OR PLANTED WITH OTHER APPROVED LANDSCAPE MATERIAL IMMEDIATELY FOLLOWING CONSTRUCTION.
3. REMAINING EARTHWORK THAT RESULTS FROM CLEARING AND GRUBBING OR SITE EXCAVATION IS TO BE UTILIZED ON-SITE IF REQUIRED, PROVIDED THAT THE MATERIAL IS DEEMED SUITABLE FOR CONSTRUCTION BY THE OWNER'S SOILS TESTING COMPANY. EXCESS MATERIAL IS TO BE EITHER STOCKPILED ON THE SITE AS DIRECTED BY THE OWNER OR OWNER'S ENGINEER, OR REMOVED FROM THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING EXCESS EARTHWORK FROM THE SITE.
4. ALL CONSTRUCTION DEBRIS AND OTHER WASTE MATERIALS SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH APPLICABLE REGULATORY AGENCY REQUIREMENTS.
5. CONTRACTOR WILL BE RESPONSIBLE FOR MAKING A VISUAL INSPECTION OF THE SITE AND WILL BE RESPONSIBLE FOR THE DEMOLITION AND REMOVAL, PURSUANT TO ALL FEDERAL, STATE, COUNTY, CITY OR OTHER GOVERNMENT AGENCY REQUIREMENTS, OF ALL UNDERGROUND AND ABOVE GROUND STRUCTURES THAT WILL NOT BE INCORPORATED WITHIN THE NEW FACILITIES.

## SITE PLAN AND COORDINATE GEOMETRY

1. BOUNDARY SURVEY PREPARED BY LICENSED SURVEYOR.
2. ALL POINTS AND MONUMENTS SHALL BE SURVEYED UPON MOBILIZATION TO VERIFY THEIR ACCURACY. ANY DISCREPANCIES DISCOVERED MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING.
3. MONUMENTS AND OTHER SURVEY CONTROL POINTS SHALL BE PROTECTED FROM DAMAGE AND DISTURBANCE. IF ANY CONTROL POINTS ARE DAMAGED OR DISTURBED, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER AND REPLACE THE CONTROL POINTS TO THEIR ORIGINAL CONDITION AT HIS OWN EXPENSE.
4. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THIS WORK PRIOR TO CONSTRUCTION.
5. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH THE OWNER'S ENGINEER WITH COMPLETE "AS-BUILT" INFORMATION CERTIFIED BY A REGISTERED LAND SURVEYOR. THIS "AS-BUILT" INFORMATION SHALL INCLUDE INVERT ELEVATIONS, LOCATION OF FITTINGS, LOCATION OF STRUCTURES FOR ALL UTILITIES INSTALLED, AS WELL AS TOP OF BANK, TOE OF SLOPE AND GRADE BREAK LOCATIONS AND ELEVATIONS FOR POND AND DITCH CONSTRUCTION. CONTRACTOR TO PROVIDE ASBUILT TOPOGRAPHIC SHOTS OF ALL HARD SURFACE GRADES INCLUDING CONCRETE SIDEWALKS, CONCRETE PADS, ASPHALT, ETC. AT THE SAME LOCATIONS AS PROPOSED DESIGN GRADES. NO ENGINEER'S CERTIFICATIONS FOR CERTIFICATE OF OCCUPANCY PURPOSES WILL BE MADE UNTIL THIS INFORMATION IS RECEIVED AND APPROVED BY THE OWNER'S ENGINEER.

## DRAINAGE

1. ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE CLASS III (ASTM C-76) UNLESS OTHERWISE NOTED ON PLANS. ALL DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS AND LOCAL AGENCY STANDARDS UNLESS OTHERWISE SHOWN ON PLANS.
2. PIPE LENGTHS SHOWN ARE APPROXIMATE.
3. ALL DRAINAGE STRUCTURE GRATES AND COVERS SHALL BE TRAFFIC RATED FOR H-20 LOADINGS.
4. ALL STORM DRAINAGE PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER PRIOR TO THE PLACEMENT OF BACKFILL. CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION.
5. THE CONTRACTOR SHALL MAINTAIN AND PROTECT FROM MUD, DIRT, DEBRIS, ETC. THE STORM DRAINAGE SYSTEM UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE CONTRACTOR MAY BE REQUIRED TO RECLEAN PIPES AND INLETS FOR THESE PURPOSES.

## GENERAL NOTES

1. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE PERMIT AND INSPECTION REQUIREMENTS SPECIFIED BY THE VARIOUS GOVERNMENTAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL CONSTRUCTION RELATED PERMITS, INCLUDING BUT NOT LIMITED TO: RIGHT OF WAY USE PERMITS, PIPING PERMITS, MOT PERMITS, ETC, PRIOR TO CONSTRUCTION, AND SCHEDULE ANY NECESSARY INSPECTIONS ACCORDING TO AGENCY INSTRUCTIONS.
2. ALL SPECIFICATIONS AND DOCUMENTS REFERRED TO IN THESE PLANS SHALL BE OF THE LATEST REVISION.
3. ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.
4. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL PRECAST AND MANUFACTURED ITEMS TO THE ENGINEER OF RECORD FOR APPROVAL. FAILURE TO OBTAIN APPROVAL BEFORE INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT CONTRACTOR'S EXPENSE.
5. WORK PERFORMED UNDER THIS CONTRACT SHALL INTERFACE SMOOTHLY WITH OTHER WORK BEING PERFORMED ON SITE BY OTHER CONTRACTORS AND UTILITY COMPANIES. IT WILL BE NECESSARY FOR THE CONTRACTOR TO COORDINATE AND SCHEDULE HIS ACTIVITIES, WHERE NECESSARY, WITH OTHER CONTRACTORS AND UTILITY COMPANIES & THEIR SUBCONTRACTORS.
6. THE WATER, SANITARY SEWER, AND STORM DRAINAGE FACILITIES ARE SUBJECT TO THE REVIEW AND APPROVAL OF THE REGULATORY AGENCY AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN THE REQUIRED PERMITS TO PERFORM WORK IN THE PUBLIC RIGHT-OF-WAY.
7. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES BEFORE ORDERING MATERIALS AND CASTING STRUCTURES.
8. IT WILL BE NECESSARY TO EXAMINE, COORDINATE AND ADJUST ACCORDINGLY THE PROPOSED LOCATIONS OF THE VARIOUS COMPONENTS OF THE SITE UTILITIES. THE LAYOUTS INDICATED IN THE PLANS ARE NOT EXACT AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUBMIT COORDINATION DRAWINGS SHOWING PIPE SIZES, STRUCTURES, AND ELEVATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SCHEDULING AND COORDINATION OF ALL THE UNDERGROUND WORK ASSOCIATED WITH THIS PROJECT.
9. CONTRACTOR SHALL CONFIRM LOCATIONS AND DEPTHS OF EXISTING WATER AND SEWER LINES PRIOR TO BEGINNING CONSTRUCTION.
10. THE EXISTING UNDERGROUND UTILITY LINES SHOWN HEREON WERE TAKEN FROM DOCUMENTS FURNISHED BY OTHERS AND NOT FIELD VERIFIED, THEREFORE, THE ENGINEER CANNOT GUARANTEE THE ACCURACY OF SAME NOR ALL THAT ARE SHOWN. THE CONTRACTOR SHALL EXPOSE ALL UNDERGROUND UTILITY LINES IN COORDINATION WITH THE OWNERS TO HIS SATISFACTION AND MAKE ADJUSTMENTS TO SAME IN THE EVENT THERE ARE CONFLICTS WITH NEW CONSTRUCTION.
11. BEFORE BEGINNING SITE WORK, THE CONTRACTOR IS REQUIRED TO CONFIRM IN THE FIELD EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES AND OTHER FEATURES. THE CONTRACTOR MAY CONSULT THE UTILITY OWNER'S RECORD DRAWINGS, BUT THE UTILITY OWNER AND THE ENGINEER DO NOT GUARANTEE, BY IMPLICATION OR OTHERWISE, THE ACCURACY OF THE THESE DRAWINGS. THE SITE CONTRACTOR SHALL BE FINANCIALLY RESPONSIBLE FOR ANY MODIFICATION REQUIRED, OTHER THAN SHOWN ON PLANS.
12. EXISTING WATER & SEWER MAIN LOCATIONS SHOWN ARE APPROXIMATE BASED ON HILLSBOROUGH COUNTY.
13. ALL MECHANICAL EQUIPMENT SHALL BE SCREENED FROM VIEW.
14. ADJUSTMENTS OF INLETS, JUNCTION BOXES, MANHOLE TOPS, WATER VALVES, WATER METERS, ETC. SHALL BE INCLUDED IN THE CONTRACTOR'S BID AND NO CLAIM SHALL BE MADE AGAINST THE OWNER OR ENGINEER FOR THESE ADJUSTMENTS, IF REQUIRED.
15. OVERALL CLEANUP SHALL BE ACCOMPLISHED BY THE CONTRACTOR IN ACCORDANCE WITH REGULATORY AGENCY STANDARDS OR AS DIRECTED BY THE ENGINEER. ANY AND ALL EXPENSES INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS.
16. THE CONTRACTOR SHALL ENDEAVOR TO PROTECT PRIVATE PROPERTY. ANY DAMAGE CAUSED BY THE CONTRACTOR IN THE PERFORMANCE OF HIS WORK SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE. PAYMENT SHALL NOT BE MADE FOR THIS WORK.
17. ANY DAMAGE TO STATE, COUNTY, OR LOCAL ROADS CAUSED BY THE CONTRACTOR'S HAULING OR EXCAVATION EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER. PAYMENT SHALL NOT BE MADE FOR THIS WORK.
18. ANY U.S.C. & G.S. MONUMENT WITHIN LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF IN DANGER OF DAMAGE, THE CONTRACTOR SHOULD NOTIFY THE ENGINEER OF RECORD.

## PAVING AND GRADING

1. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) IS TO BE EXCAVATED IN ACCORDANCE WITH THESE PLANS OR AS DIRECTED BY THE OWNER, THE OWNER'S ENGINEER, OR OWNER'S SOIL TESTING COMPANY. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER. EXCAVATED AREAS TO BE BACK FILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.
2. ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOIL TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE PLANS OR THE REFERENCED SOILS REPORT.
3. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADE UNLESS OTHERWISE NOTED ON DRAWINGS.
4. CONTRACTOR SHALL TRIM, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.
5. CURBING WILL BE PLACED AT THE EDGE OF ALL PAVEMENT, AS SHOWN ON THE PLANS.
6. REFER TO THE LATEST EDITION OF F.D.O.T. "ROADWAY AND TRAFFIC DESIGN STANDARDS" FOR DETAILS AND SPECIFICATIONS OF ALL F.D.O.T. TYPE CURBING AND GUTTERS CALLED FOR IN THESE PLANS.
7. CONTRACTOR TO PROVIDE A 1/2" TO 1" BITUMINOUS EXPANSION JOINT MATERIAL WITH SEALER AT ABUTMENT OF CONCRETE AND OTHER MATERIALS (BUILDINGS, OTHER POURED CONCRETE, ETC.)
8. ALL PAVEMENT MARKINGS IN RIGHT-OF-WAY AND STOP BARS SHALL BE MADE WITH PERMANENT THERMOPLASTIC AND SHALL CONFORM TO F.D.O.T STANDARD INDEX NO. 17346, SHEETS 1-7. PARKING STALL STRIPING AND ON-SITE PRIVATE PAVEMENT MARKINGS TO BE TRAFFIC GRADE PAINT.
9. THE CONTRACTOR WILL STABILIZE BY SEED AND MULCH, SOD OR OTHER APPROVED MATERIALS ANY DISTURBED AREAS WITHIN ONE WEEK FOLLOWING CONSTRUCTION OF THE UTILITY SYSTEMS AND PAVEMENT AREAS. CONTRACTOR SHALL MAINTAIN SUCH AREAS UNTIL FINAL ACCEPTANCE BY OWNER.
10. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING APPLICABLE TESTING WITH THE SOILS ENGINEER. TESTS WILL BE REQUIRED PURSUANT WITH THE TESTING SCHEDULE LOCATED ON THIS SHEET. UPON COMPLETION OF THE WORK, SOILS ENGINEER WILL SUBMIT CERTIFICATIONS TO THE OWNER'S ENGINEER STATING THAT ALL REQUIREMENTS HAVE BEEN MET.
11. A QUALIFIED TESTING LABORATORY SHALL PERFORM ALL TESTING NECESSARY TO ASSURE COMPLIANCE OF THE IN PLACE MATERIALS AS REQUIRED BY THESE PLANS AND THE VARIOUS AGENCIES. SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THE REQUIREMENTS, THE CONTRACTOR WILL BEAR ALL COST OF SAID RETESTING.
12. ALL UNDERGROUND UTILITIES MUST BE IN PLACE AND TESTED OR INSPECTED PRIOR TO BASE AND PAVEMENT CONSTRUCTION.
13. CONTRACTOR IS TO PROVIDE EROSION CONTROL AND SEDIMENTATION BARRIER (SILTATION CURTAIN) TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND VARIOUS AGENCIES. IN ADDITION, THE CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON GROUND IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC. THE CONTRACTOR IS TO REMOVE SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES.
14. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS.

## WATER DISTRIBUTION

1. SEE PIPE SEPARATION REQUIREMENTS, THIS SHEET.
2. ALL WATER MAINS SHALL HAVE A MINIMUM OF 36 INCHES OF COVER.
3. ALL WATER SYSTEM WORK SHALL CONFORM WITH LOCAL REGULATORY AGENCY STANDARDS AND SPECIFICATIONS.
4. CONFLICTS BETWEEN WATER AND STORM OR SANITARY SEWER TO BE RESOLVED BY ADJUSTING THE WATER LINES AS NECESSARY AND PER PIPE SEPARATION REQUIREMENTS NOTED THIS SHEET.
5. ALL ON SITE PVC WATER MAINS 4 INCHES THROUGH 12 INCHES SHALL BE IN ACCORDANCE WITH AWWA C-900 AND SHALL BE CLASS 150 SDR 18. ALL ON-SITE PVC WATER MAINS 2" TO 3" SHALL BE CLASS 1120 AND MEET REQUIREMENTS OF SDR 21 IN ACCORDANCE WITH ASTM D-2241. WATER MAINS SMALLER THAN 1 1/2" SHALL BE CLASS 1120 OR 1220 SCHEDULE 80 AND MEET REQUIREMENTS OF ASTM D-1785.
6. ALL DUCTILE IRON PIPE SHALL CONFORM TO THE REQUIREMENTS OF ANSI STANDARD A21.51, MINIMUM CLASS 50. JOINTS FOR DUCTILE IRON PIPE SHALL BE MECHANICAL OR PUSH-ON JOINTS. PIPE SHALL HAVE AN EXTERIOR BITUMINOUS COATING IN ACCORDANCE WITH ANSI A21.51. PIPE INTERIOR SHALL HAVE A CEMENT MORTAR LINING WITH AN ASPHALTIC SEAL COAT CONFORMING TO AWWA/ANSI C104/A21.4. THE WEIGHT AND CLASS DESIGNATION SHALL BE PAINTED IN WHITE ON THE EXTERIOR SURFACE OF ALL PIPE AND FITTINGS. MANUFACTURER'S CODE OR SERIAL NUMBER SHALL BE PROVIDED ON THE BELL OF EACH PIPE JOINT.
7. ALL DUCTILE FITTINGS SHALL BE MECHANICAL JOINT WITH A MINIMUM PRESSURE RATING OF 250 PSI AND SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA STANDARD A21.10/C110. ALL FITTING SHALL BE COATED AND LINED AS SPECIFIED ABOVE FOR DUCTILE IRON PIPE.
8. RESTRAINED JOINTS SHALL BE PROVIDED AT ALL FITTINGS AND HYDRANTS AS SHOWN ON DETAILS.
9. ALL COMPONENTS OF THE WATER SYSTEM, INCLUDING FITTINGS, HYDRANTS, CONNECTIONS, AND VALVES SHALL REMAIN UNCOVERED UNTIL PROPERLY PRESSURE TESTED AND ACCEPTED BY THE OWNER'S ENGINEER. PRESSURE TESTS TO BE IN ACCORDANCE WITH LOCAL REGULATORY AGENCY SPECIFICATIONS. CONTRACTOR TO NOTIFY OWNER'S ENGINEER AND LOCAL INSPECTORS 48 HOURS IN ADVANCE OF PERFORMING TESTS.
10. CONTRACTOR TO PERFORM CHLORINATION AND BACTERIOLOGICAL SAMPLING AND OBTAIN CLEARANCE OF DOMESTIC WATER SYSTEM. COPIES OFF ALL BACTERIOLOGICAL TESTS TO BE SUBMITTED TO OWNER'S ENGINEER.

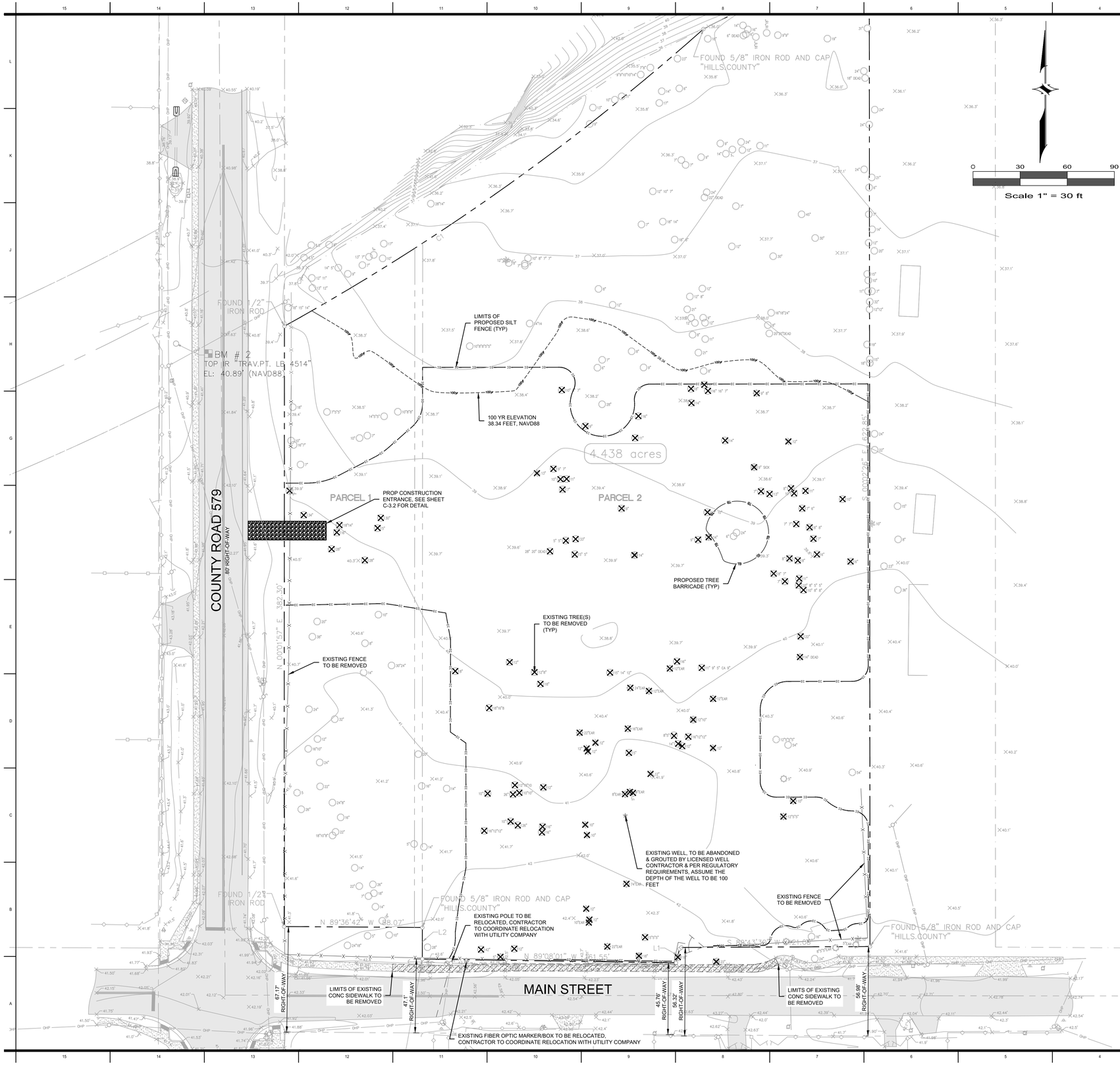
## SANITARY SEWER

1. SEE PIPE SEPARATION REQUIREMENTS, THIS SHEET.
2. ALL SANITARY SEWER MAINS AND LATERALS SHALL HAVE A MINIMUM OF 36 INCHES OF COVER.
3. ALL ON SITE PVC GRAVITY SANITARY SEWER PIPE SHALL BE MADE OF MATERIAL HAVING A CELL CLASSIFICATION OF 12454 B, 12454 C OR 13354 B AS DEFINED IN ASTM D-1784. PVC PIPE AND FITTINGS USED IN THE GRAVITY SYSTEM SHALL BEET THE REQUIREMENTS OF ASTM D3034 SDR 35 TO A DEPTH OF 15' AND SDR 26 AT A DEPTH BEYOND 15'.
4. ALL ON SITE DUCTILE IRON PIPE SHALL BE CLASS 52 AND SHALL RECEIVE INTERIOR AND EXTERIOR BITUMINOUS COATING IN ACCORDANCE WITH ANSI A 21.6, A 21.8, OR A 21.51.
5. ALL SANITARY SEWER WORK SHALL CONFORM WITH APPLICABLE AGENCY STANDARDS AND SPECIFICATIONS, LATEST EDITION THERE OF.
6. PRIOR TO COMMENCING WORK WHICH REQUIRES CONNECTING NEW SANITARY SEWER LINES TO EXISTING LINES OR APPURTENANCES, THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES NEAR THE POINT OF CONNECTION AND NOTIFY OWNER'S ENGINEER OF ANY CONFLICTS OR DISCREPANCIES WITH DESIGN INFORMATION SHOWN IN THESE PLANS.
7. ALL GRAVITY SEWER PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER PRIOR TO PLACEMENT OF BASE AND PAVING AND AGAIN PRIOR TO OBTAINING CERTIFICATE OF OCCUPANCY. CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS.
8. THE CONTRACTOR SHALL PERFORM A CLOSED CIRCUIT TELEVISION INSPECTION ON ALL GRAVITY SEWERS IN ACCORDANCE WITH THE REGULATORY AGENCY HAVING JURISDICTION PRIOR TO FINAL ACCEPTANCE.
9. ALL WASTE-WATER LATERALS TO HAVE A MINIMUM OF 36" COVER AT THE RIGHT-OF-WAY LINE.

## PIPE SEPARATION REQUIREMENTS:

FOR THE PURPOSE OF THIS SECTION, THE PHRASE "WATER MAINS" SHALL MEAN MAINS, INCLUDING TREATMENT PLANT PROCESS PIPING, CONVEYING EITHER RAW, PARTIALLY TREATED, OR FINISHED DRINKING WATER; FIRE HYDRANT LEADS; AND SERVICE LINES THAT ARE UNDER THE CONTROL OF A PUBLIC WATER SYSTEM AND THAT HAVE AN INSIDE DIAMETER OF THREE INCHES OR GREATER.

1. HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORM WATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS
   - A. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
   - B. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.
   - C. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
   - D. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C.
2. VERTICAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORM WATER FORCE MAINS, AND RECLAIMED WATER PIPELINES.
   - A. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
   - B. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
   - C. AT THE UTILITY CROSSINGS DESCRIBED IN PARAGRAPHS (A) AND (B) ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM WATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
3. SEPARATION BETWEEN WATER MAINS AND SANITARY OR STORM SEWER MANHOLES
   - A. NO WATER MAIN SHALL PASS THROUGH, OR COME INTO CONTACT WITH, ANY PART OF A SANITARY SEWER MANHOLE.
   - B. EFFECTIVE AUGUST 28, 2003, WATER MAINS SHALL NOT BE CONSTRUCTED OR ALTERED TO PASS THROUGH, OR COME INTO CONTACT WITH, ANY PART OF A STORM SEWER MANHOLE OR INLET STRUCTURE.
4. SEPARATION BETWEEN FIRE HYDRANT DRAINS AND SANITARY OR STOR




## LEGEND

- PROPERTY LINE
- TB — TREE BARRICADE
- EC — EC — EROSION CONTROL
- EXIST. CONC. S/W TO REMAIN
- EXIST. ASPHALT PAVEMENT TO REMAIN
- OHP — OHP — = OVERHEAD POWER LINE
- = CHAIN LINK FENCE
- = WIRE FENCE
- = POWER POLE/TELEPHONE POLE
- = METER POLE
- = GUY ANCHOR
- = WELL
- = ELECTRIC BOX
- = ELECTRIC MANHOLE
- = TELEPHONE PEDESTAL
- = CAMPHOR TREE (SIZE AS NOTED)
- = CEDAR TREE (SIZE AS NOTED)
- = CHERRY LAUREL TREE (SIZE AS NOTED)
- = MAGNOLIA TREE (SIZE AS NOTED)
- = OAK TREE (SIZE AS NOTED)
- = PALM TREE (SIZE AS NOTED)
- = TREE (UNKNOWN VARIETY)
- = SPOT ELEVATION

## SURVEYOR'S NOTES:

1. USE OF THIS SURVEY FOR PURPOSES OTHER THAN INTENDED, WITHOUT WRITTEN VERIFICATION, WILL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING HEREIN SHALL BE CONSTRUED TO GIVE ANY RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO. THIS SURVEY MEETS THE "STANDARDS OF PRACTICE" SET FORTH BY THE FLORIDA BOARD OF LAND SURVEYORS IN CHAPTER 5J-17 FLORIDA ADMINISTRATIVE CODE.
2. THIS SURVEY WAS PREPARED WITHOUT AN ABSTRACT OF TITLE; THEREFORE THE UNDERSIGNED MAKES NO GUARANTEES OR REPRESENTATIONS REGARDING INFORMATION SHOWN HEREON PERTAINING TO EASEMENTS, RIGHTS-OF-WAY, SETBACK LINES, AGREEMENTS, RESERVATIONS, OR OTHER SIMILAR MATTERS.
3. NO INSTRUMENTS OF RECORD REFLECTING EASEMENTS, RIGHT-OF-WAYS AND/OR OWNERSHIP WERE FURNISHED TO THE UNDERSIGNED EXCEPT AS SHOWN.
4. NO UNDERGROUND INSTALLATIONS, IMPROVEMENTS OR ENCROACHMENTS, HAVE BEEN LOCATED EXCEPT THOSE SHOWN HEREON.
5. BEARINGS SHOWN HEREON ARE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, FL-WEST PROJECTION, WITH EAST BOUNDARY OF THE EAST 290' OF THE WEST 413' OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 10, TOWNSHIP 28 SOUTH, RANGE 20 EAST, HILLSBOROUGH COUNTY, FLORIDA HAVING A GRID BEARING OF S.00°02'26"E.
6. ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), HILLSBOROUGH COUNTY BENCHMARK "VB-224", LOCATED AT THE THONOTOSASSA BRANCH PUBLIC LIBRARY, PUBLISHED ELEVATION = 45.16' (NAVD88).
7. BEARINGS AND DISTANCES SHOWN HEREON ARE FIELD MEASURED, UNLESS OTHERWISE INDICATED.
8. THE TEXT FOR TIES TO IMPROVEMENTS INDICATES THE DIRECTION THEY LIE IN RELATION TO THE BOUNDARY.
9. SUBJECT PROPERTY APPEARS TO LIE IN FLOOD ZONE "X" ACCORDING TO F.I.R.M. COMMUNITY PANEL 12057C0245H, DATED 08/28/2008.
10. SUBJECT PROPERTY MAY CONTAIN LANDS THAT ARE SUBJECT TO JURISDICTION OR RESTRICTION BY ONE OR MORE OF THE FOLLOWING AGENCIES: ARMY CORP. OF ENGINEERS, SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (S.W.F.W.M.D.) OR FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (F.D.E.P.).
11. THE RIGHT-OF-WAY FOR COUNTY ROAD 579 WAS BASED ON RIGHT OF WAY TRANSFER BOOK 3, PAGE 5 (FDOT SECTION 10550-2151). THE RIGHT-OF-WAY FOR MAIN STREET WAS BASED ON INFORMATION PROVIDED BY THE HILLSBOROUGH COUNTY SURVEYING AND MAPPING DEPARTMENT.

## EROSION CONTROL NOTES

1. THE INSTALLATION OF TEMPORARY EROSION CONTROL BARRIERS SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE PERMANENT EROSION CONTROL FEATURES TO THE EXTENT NECESSARY TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL OF EROSION AND WATER POLLUTION THROUGHOUT THE LIFE OF THE CONSTRUCTION PHASE.
2. THE TYPE OF EROSION CONTROL BARRIERS USED SHALL BE GOVERNED BY THE NATURE OF THE CONSTRUCTION OPERATION AND SOIL TYPE THAT WILL BE EXPOSED. SILTY AND CLAYEY MATERIAL USUALLY REQUIRE SOLID SEDIMENT BARRIERS TO PREVENT TURBID WATER DISCHARGE. WHILE SANDY MATERIAL MAY NEED ONLY SILT SCREENS OR HAY BALES TO PREVENT EROSION. FLOATING TURBIDITY CURTAINS SHALL BE USED IN OPEN WATER SITUATIONS. DIVERSION DITCHES OR SWALES MAY BE REQUIRED TO PREVENT TURBID STORMWATER RUNOFF FROM BEING DISCHARGED TO WETLANDS OR OTHER WATER BODIES. IT MAY BE NECESSARY TO EMPLOY A COMBINATION OF BARRIERS, DITCHES AND OTHER EROSION/TURBIDITY CONTROL MEASURES IF CONDITIONS WARRANT.
3. CONSTRUCTION OPERATIONS IN OR ADJACENT TO WETLANDS SHALL BE RESTRICTED TO THOSE AREAS IDENTIFIED IN THE PLANS AND IN THE SPECIFICATIONS.
4. EXCAVATED MATERIAL SHALL NOT BE DEPOSITED IN THE WETLANDS OR IN A POSITION CLOSE ENOUGH THERETO TO BE WASHED AWAY BY HIGH WATER OR RUNOFF.
5. WHERE PUMPS ARE TO BE USED TO REMOVE TURBID WATERS FROM CONSTRUCTION AREAS, THE WATER SHALL BE TREATED PRIOR TO DISCHARGE TO THE WETLANDS. TREATMENT METHODS INCLUDE AND ARE NOT LIMITED TO, TURBID WATER BEING PUMPED INTO GRASSED SWALES OR APPROPRIATE VEGETATED AREAS, SEDIMENT BASINS, OR CONFINED BY AN APPROPRIATE ENCLOSURE SUCH AS TURBIDITY BARRIERS, AND KEPT CONFINED UNTIL ITS TURBIDITY LEVEL MEETS STATE WATER QUALITY STANDARDS.
6. THE CONTRACTOR SHALL SCHEDULE HIS OPERATIONS SUCH THAT THE AREA OF UNPROTECTED ERODIBLE EARTH EXPOSED AT ANY ONE TIME IS NOT LARGER THAN THE MINIMUM AREA NECESSARY FOR EFFICIENT CONSTRUCTION OPERATIONS, AND THE DURATION OF EXPOSED, UNCOMPLETED CONSTRUCTION TO THE ELEMENTS SHALL BE AS SHORT AS PRACTICABLE. CLEARING AND GRUBBING SHALL BE SCHEDULED AND PERFORMED SO THAT GRADING OPERATIONS CAN FOLLOW IMMEDIATELY THEREAFTER, AND GRADING OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PERMANENT EROSION CONTROL FEATURES CAN FOLLOW IMMEDIATELY THEREAFTER IF CONDITIONS ON THE PROJECT PERMIT.
7. THE CONTRACTOR AND/OR OWNER'S REPRESENTATIVE SHALL PROVIDE ROUTINE MAINTENANCE OF PERMANENT AND TEMPORARY EROSION CONTROL FEATURES UNTIL THE PROJECT IS COMPLETE AND ALL BARED SOILS ARE STABILIZED.
8. SILT FENCE SHALL BE LOCATED AT THE PERIMETER OF CONSTRUCTION LIMITS, AS DEFINED BY FIELD CONDITIONS.
9. CONTRACTOR IS TO PROVIDE EROSION CONTROL AND SEDIMENTATION BARRIER (HAY BALES OR SILTATION CURTAIN) TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON GROUND IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTOR IS TO REMOVE SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES.
10. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS.
11. ALL EXIST SIDEWALK CRACKED OR DAMAGED SHALL BE REPLACED.
12. REFER TO THE STATE OF FLORIDA E&SC DESIGNER AND REVIEWER MANUAL, DATED JULY 2013 FOR ADDITIONAL EROSION AND SEDIMENT CONTROL INFORMATION.
13. ALL EFFORTS MUST BE UNDERTAKEN TO PREVENT ANY EROSION OR TURBID WATER FROM BEING DISCHARGED OFFSITE INTO WETLANDS AND/OR WATERS OF THE COUNTY. TURBID DISCHARGES THAT EXCEED 29 NTU'S (NEPHELOMETRIC TURBIDITY UNITS) ABOVE BACKGROUND LEVELS ARE A VIOLATION PURSUANT TO CHAPTER 1-5, THE EPC WATER QUALITY RULE. THE EROSION OR DISCHARGE OF SEDIMENTS INTO WETLANDS IS A VIOLATION OF CHAPTER 1-11, THE EPC WETLAND RULE. SILT SCREENS OR OTHER METHODS OF EROSION/TURBIDITY CONTROL MAY BE REQUIRED. IT IS THE RESPONSIBILITY OF THE OWNER/DEVELOPER TO INSURE THE INSTALLATION OF ADEQUATE EROSION CONTROL BARRIERS PRIOR TO THE COMMENCEMENT OF ANY SITE WORK. THESE EROSION CONTROL DEVICES MUST BE MAINTAINED IN GOOD CONDITION THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL ALL LOOSE SOILS HAVE STABILIZED. IT IS STRONGLY RECOMMENDED THAT ALL EROSION CONTROL DEVICES BE REGULARLY INSPECTED DURING CONSTRUCTION AND MODIFIED IF CONDITIONS WARRANT.

## DEMOLITION NOTES

1. PRIOR TO THE INITIATION OF SITE CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, COMMUNICATION, CABLE TV, SANITARY AND STORM SEWER BOTH ON AND ADJACENT TO THE SITE.
2. CONTRACTOR TO REMOVE ALL IMPROVEMENTS WITHIN THE LIMITS OF CONSTRUCTION EXCEPT AS NOTED.
3. CONTRACTOR TO COORDINATE WITH LOCAL UTILITY OWNERS TO DISCONNECT/RELOCATE THEIR FACILITIES WITHIN THE LIMITS OF CONSTRUCTION PRIOR TO ANY DEMOLITION.
4. FUGITIVE DUST EMISSIONS DURING DEMOLITION SHALL BE MAINTAINED TO AN ACCEPTABLE LEVEL BY CONTRACTOR, IN ACCORDANCE WITH THE CONSTRUCTION NOTES AND TESTING SCHEDULE, SHEET C-2
5. REMOVE OR CAP ALL UTILITIES TO EXIST STRUCTURES WHICH ARE TO BE REMOVED. CONTRACTOR TO COORDINATE WITH UTILITY OWNERS PRIOR TO MAKING ANY UTILITY ADJUSTMENTS.
6. CONTRACTOR TO DEMOLISH, REMOVE AND DISPOSE OF ALL ASPHALT, CONCRETE, SIDEWALKS, CURBING, BUILDINGS AND BUILDING FOUNDATIONS WITHIN THE LIMITS OF CONSTRUCTION UNLESS OTHERWISE NOTED ON PLANS. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL REGULATIONS.
7. CONTRACTOR TO PROTECT PROPERTY CORNERS DURING DEMOLITION AND CONSTRUCTION
8. DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES, IT SHALL BE UNLAWFUL TO REMOVE VEGETATION BY GRUBBING OR TO PLACE SOIL DEPOSITS, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND WITHIN THE DRIPLINE OF A TREE TO REMAIN ON THE SITE.


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HILLSBOROUGH COUNTY BOARD OF COUNTY COMMISSIONERS
COUNTY CENTER
601 E KENNEDY BLVD
TAMPA, FL 33601

# HILLSBOROUGH COUNTY THONOTOSASSA FIRE STATION NO. 21 REPLACEMENT

PROJECT #: 2116-05

| DISTRIBUTION | DATE |
|---|---|
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

EXISTING CONDITIONS, DEMO & EROSION CONTROL PLAN

C-3.1

# STORMWATER POLLUTION PREVENTION PLAN

**NOTICE OF INTENT**

A "NOTICE OF INTENT TO USE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM A LARGE AND SMALL CONSTRUCTION ACTIVITIES" (NOI) IS REQUIRED FOR THIS SITE SINCE THE SIZE OF THE PROJECT IS GREATER THAN ONE ACRE IN SIZE. CONTRACTOR SHALL OBTAIN THE NOI FROM THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION 48 HOURS BEFORE THE CONSTRUCTION START.

**SITE DESCRIPTION**

PROJECT NAME AND LOCATION

THONOTOSASSA FIRE STATION
10508 MAIN STREET
THONOTOSASSA, FL.
*SEE COVER SHEET FOR LOCATION MAP

OWNER NAME AND ADDRESS

HILLSBOROUGH COUNTY BOARD OF COUNTY COMMISSIONERS
601 EAST KENNEDY BOULEVARD
TAMPA, FL. 33602
CONTACT: 813-307-1031

PROJECT DESCRIPTION

THE PROPOSED PROJECT IS A HILLSBOROUGH COUNTY DEVELOPMENT ON A 4.44± ACRE SITE FOR A NEW 13,692 SF FIRE STATION.

PROJECT AREA: 3.03± ACRES
CONTRIBUTING DRAINAGE AREA: 1.64± ACRES

CONTROL STRUCTURE CS-1 LONGITUDE: 82° 18' 07.69"N LATITUDE: 28° 03' 32.37"W

ULTIMATE RECEIVING WATERS: CLOSED BASIN

ACTIVITIES THAT REQUIRE EROSION CONTROL

SITE CLEARING AND GRUBBING; PROVIDING A STABILIZED CONSTRUCTION ENTRANCE, PERIMETER, AND OTHER EROSION AND SEDIMENT CONTROLS; SITE GRADING; INSTALLATION OF STORM WATER, SANITARY SEWER, AND WATER STRUCTURES; CURB, ROADWAYS, AND PARKING FACILITIES.

*SEE PLANS FOR THE LOCATION OF TEMPORARY SEDIMENT BARRIERS AND OTHER EROSION CONTROL METHODS.

SOIL PARAMETERS

SOIL TYPES:

| Soil Unit Number | Soil Name | Approximate Depth to Seasonal High Water Table (feet) |
|---|---|---|
| 5 | Basinger, Holopaw, and Samsula soils, depressional | 0 |
| 7 | Candler fine sand, 0 to 5 percent slopes | >6 |
| 53 | Tavares-Millhopper complex, 0 to 5 percent slopes | 3.5 – 6 |

**SEQUENCE OF MAJOR ACTIVITIES**

THE ORDER OF CONSTRUCTION IS AS FOLLOWS:

1. PROVIDE STABILIZED CONSTRUCTION ENTRANCE
2. INSTALL SILT FENCES AND OTHER EROSION CONTROL METHODS
3. CLEAR AND GRUB FOR SEDIMENT BASIN AND EARTH DIKE
4. CONSTRUCT EARTH DIKE AND SEDIMENT BASIN
5. FINISH CLEARING AND GRUBBING
6. REMOVE AND STORE TOPSOIL
7. PROVIDE INITIAL GRADING AS REQUIRED
8. STABILIZE ALL DISTURBED AREAS AS SOON AS POSSIBLE
9. INSTALL UTILITIES, STORM SEWER, CURB AND GUTTER
10. INSTALL BASE TO ROAD AND PARKING AREA
11. FINISH GRADING ENTIRE SITE
12. INSTALL LANDSCAPING/SOD
12. CONSTRUCT FINAL PAVING
13. REMOVE ACCUMULATED SEDIMENT
14. ONCE ALL SITE AREAS STABILIZED, REMOVE EROSION PROTECTION DEVICES

TIMING OF CONTROL MEASURES

THE INSTALLATION OF SILT FENCE (AND OTHER EROSION CONTROL MEASURES), A STABILIZED ENTRANCE AND SEDIMENT BASIN SHALL OCCUR PRIOR TO CLEARING AND GRUBBING ACTIVITY. AFTER CONSTRUCTION IS COMPLETE, THE ACCUMULATED SEDIMENT SHALL BE REMOVED AND THE AREAS SHALL BE REGRADED AND PERMANENTLY STABILIZED AS SHOWN ON THE PLANS.

**EROSION AND SEDIMENT CONTROLS**

BEST MANAGEMENT PRACTICES SHALL BE USED FOR THIS PROJECT TO CONTROL EROSION AND TURBIDITY CAUSED BY STORM WATER RUN-OFF. THE LOCATION AND DETAILS OF EROSION CONTROL METHODS ARE SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR PLACING AND MAINTAINING THESE CONTROL METHODS AS SHOWN ON THE PLANS OR AS REQUIRED. HE/SHE SHALL ALSO PROVIDE THE REQUIRED EROSION PROTECTION AS REQUIRED BY LOCAL, STATE AND FEDERAL LAW.

STORM WATER MANAGEMENT

THE PERMANENT STORMWATER SYSTEM WILL INCLUDE CURBED AND PAVED PARKING AREAS WITH STORM INLETS. AN UNDERGROUND STORMWATER SYSTEM WILL CONVEY STORMWATER TO PROPOSED POND. SEDIMENTS ACCUMULATED IN THE STORMWATER SYSTEM AND PONDS DURING CONSTRUCTION WILL BE REMOVED PRIOR TO THE COMPLETION OF THE PROJECT. ALL PERVIOUS AREAS OF THE SITE DISTURBED DURING CONSTRUCTION WILL BE REVEGETATED WITH A PERMANENT VEGETATIVE COVER.

STABILIZATION PRACTICES:

TEMPORARY STABILIZATION - TOPSOIL STOCK PILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED, SHALL BE STABILIZED WITH TEMPORARY SEED AND MULCH WITHIN 7 DAYS OF THE LAST CONSTRUCTION ACTIVITY IN THAT AREA. THE TEMPORARY SEED REQUIRED CAN BE FOUND IN TABLE 1.65 A OF THE FLORIDA DEVELOPMENT MANUAL. PRIOR TO SEEDING, WHERE SOILS ARE ACIDIC 2 TONS OF PULVERIZED AGRICULTURAL LIMESTONE SHOULD BE ADDED PER ACRE AND 450 POUNDS OF 10-20-20 FERTILIZER SHALL BE APPLIED TO EACH ACRE. AFTER SEEDING, EACH AREA SHALL BE IMMEDIATELY MULCHED WITH STRAW OR EQUIVALENT EQUAL. AREAS OF THE SITE WHICH ARE TO BE PAVED SHALL BE TEMPORARILY STABILIZED BY APPLYING GEOTEXTILE AND STONE SUB-BASE UNTIL BITUMINOUS PAVEMENT CAN BE APPLIED.

WIND EROSION STABILIZATION - MANAGE FUGITIVE DUST FROM BARE AREAS AND AREAS OF ACTIVE CONSTRUCTION BY APPLYING WATER SPRAY TO SATURATE SURFACE SOILS. APPLY WATER SPRAY ON A DAILY BASIS OR AS NEEDED TO MAINTAIN MINIMAL DUST TRANSPORT. MONITOR FUGITIVE DUST ON A CONTINUOUS BASIS AND USE ADDITIONAL MEASURES AS REQUIRED TO CONTROL OFF-SITE TRANSPORT OF UNACCEPTABLE LEVELS OF DUST. STABILIZE AREAS TO BE PAVED BY SPREADING BASE MATERIAL.

PERMANENT STABILIZATION - DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY. THE APPROPRIATE PERMANENT SEED MIX CAN BE FOUND IN TABLES 1.66A, 1.66B AND 1.66C OF THE FLORIDA DEVELOPMENT MANUAL. PRIOR TO SEEDING, 2 TONS/ACRE OF FINELY GROUND AGRICULTURAL LIMESTONE AND THE PROPER FERTILIZER BASED ON THE TYPE OF SEEDING SHALL BE APPLIED TO EACH ACRE TO PROVIDE PLANT NUTRIENTS. AFTER SEEDING, EACH AREA SHALL BE MULCHED IMMEDIATELY.

STRUCTURAL PRACTICES:

EARTH DIKE - IF REQUIRED, AN EARTH DIKE SHALL BE CONSTRUCTED ALONG THE SITE PERIMETER. A PORTION OF THE DIKE SHALL DIVERT RUN-ON AROUND THE CONSTRUCTION SITE. THE REMAINING PORTION OF THE DIKE SHALL COLLECT RUNOFF FROM THE DISTURBED AREA AND DIRECT THE RUNOFF TO THE SEDIMENT BASIN.

SEDIMENT BASIN - A SEDIMENT BASIN SHALL BE CONSTRUCTED IN THE COMMON DRAINAGE AREA FOR THE SITE. ALL SEDIMENT COLLECTED IN THE BASIN MUST BE REMOVED FROM THE BASIN UPON COMPLETION OF CONSTRUCTION. SEDIMENT FROM THE BASIN MAY BE USED AS FILL ON THE SITE IF IT IS SUITABLE SOIL.

WASTE DISPOSAL

WASTE MATERIALS - ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN A METAL DUMPSTER WITH A SECURE LID IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN THE DUMPSTER. THE SUPERINTENDENT SHALL COORDINATE WITH THE LOCAL UTILITIES TO HAVE THE DUMPSTER EMPTIED AT LEAST TWICE A WEEK AND THE WASTE TAKEN TO AN APPROPRIATE LANDFILL. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE. THE SUPERINTENDENT SHALL ORGANIZE TRAINING FOR THE EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH WASTE MATERIALS. THE SUPERINTENDENT SHALL BE RESPONSIBLE FOR POSTING AND ENFORCING WASTE MATERIAL PROCEDURES.

HAZARDOUS WASTE - HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS OR AS DIRECTED BY THE MANUFACTURER. THE SUPERINTENDENT SHALL ORGANIZE THE PROPER TRAINING FOR EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH HAZARDOUS WASTE MATERIALS. THESE PROCEDURES SHALL BE POSTED ON THE SITE. THE PERSON WHO MANAGES THE SITE SHALL BE RESPONSIBLE FOR ENFORCING THE PROCEDURES.

SANITARY WASTE - SANITARY WASTE SHALL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. THE SUPERINTENDENT SHALL COORDINATE WITH THE LOCAL UTILITY FOR COLLECTION OF THE SANITARY WASTE AT LEAST THREE TIMES A WEEK TO PREVENT SPILLAGE ONTO THE SITE.

OFF-SITE TRACKING

A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED TO REDUCE SEDIMENT TRACKING OFFSITE. THE MAJOR ROAD CONNECTED TO THE PROJECT SHALL BE CLEANED ONCE A DAY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK RESULTING FROM CONSTRUCTION TRAFFIC. ALL TRUCKS HAULING MATERIALS OFFSITE SHALL BE COVERED WITH A TARPAULIN.

**ITEMS REQUIRING POLLUTION PREVENTION**

THE FOLLOWING ITEMS ARE EXPECTED TO BE PRESENT ON THE PROJECT SITE:

-ASPHALT
-CONCRETE
-FERTILIZERS
-METAL PIECES
-PETROLEUM BASED PRODUCTS
-TAR
-CLEANING SUPPLIES
-DETERGENTS
-MASONARY BLOCK/BRICKS
-PAINT
-WOOD
-CHLORINE

THE FOLLOWING ARE NON-STORM WATER SOURCES THAT WILL BE ENCOUNTERED AT THE SITE AND SHOULD BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE:

-UNCONTAMINATED GROUNDWATER EXPOSED DURING EXCAVATION
-WATER FROM WATER LINE FLUSHING
-PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED).

**SPILL PREVENTION AND CONTROL**

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

GOOD HOUSEKEEPING

SUPERINTENDENT SHALL INSPECT PROJECT AREA DAILY FOR PROPER STORAGE, USE, AND DISPOSAL OF CONSTRUCTION MATERIALS.

STORE ONLY ENOUGH MATERIAL ON SITE FOR PROJECT COMPLETION.

ALL SUBSTANCES SHOULD BE USED BEFORE DISPOSAL OF CONTAINER.

ALL CONSTRUCTION MATERIALS STORED SHALL BE ORGANIZED AND IN THE PROPER CONTAINER AND IF POSSIBLE, STORED UNDER A ROOF OR PROTECTIVE COVER.

PRODUCTS SHALL NOT BE MIXED UNLESS DIRECTED BY THE MANUFACTURER.

ALL PRODUCTS SHALL BE USED AND DISPOSED OF ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

HAZARDOUS PRODUCTS

MATERIALS SHOULD BE KEPT IN ORIGINAL CONTAINER WITH LABELS UNLESS THE ORIGINAL CONTAINERS CANNOT BE RESEALED. IF ORIGINAL CONTAINERS CANNOT BE USED, LABELS AND PRODUCT INFORMATION SHALL BE SAVED.

PROPER DISPOSAL PRACTICES SHALL ALWAYS BE FOLLOWED IN ACCORDANCE WITH MANUFACTURER AND LOCAL/STATE REGULATIONS.

PRODUCT SPECIFIC PRACTICES

PETROLEUM PRODUCTS MUST BE STORED IN PROPER CONTAINERS AND CLEARLY LABELED. VEHICLES CONTAINING PETROLEUM PRODUCTS SHALL BE PERIODICALLY INSPECTED FOR LEAKS. PRECAUTIONS SHALL BE TAKEN TO AVOID LEAKAGE OF PETROLEUM PRODUCTS ON SITE.

THE MINIMUM AMOUNT OF FERTILIZER SHALL BE USED AND MIXED INTO THE SOIL IN ORDER TO LIMIT EXPOSURE TO STORM WATER. FERTILIZERS SHALL BE STORED IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

PAINT CONTAINERS SHALL BE SEALED AND STORED WHEN NOT IN USE. EXCESS PAINT MUST BE DISPOSED OF IN AN APPROVED MANNER.

CONCRETE TRUCKS SHALL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.

**SPILL CONTROL PRACTICES**

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

-SPILL CLEANUP INFORMATION SHALL BE POSTED ON SITE TO INFORM EMPLOYEES ABOUT CLEANUP PROCEDURES AND RESOURCES.

-THE FOLLOWING CLEAN-UP EQUIPMENT MUST BE KEPT ON-SITE NEAR THE MATERIAL STORAGE AREA: GLOVES, MOPS, RAGS, BROOMS, DUST PANS, SAND, SAWDUST, LIQUID ABSORBER, GOGGLES, AND TRASH CONTAINERS.

-ALL SPILLS SHALL BE CLEANED UP AS SOON AS POSSIBLE.

-WHEN CLEANING A SPILL, THE AREA SHOULD BE WELL VENTILATED AND THE EMPLOYEE SHALL WEAR PROPER PROTECTIVE COVERING TO PREVENT INJURY.

-TOXIC SPILLS MUST BE REPORTED TO THE PROPER AUTHORITY REGARDLESS OF THE SIZE OF THE SPILL.

-AFTER A SPILL, THE PREVENTION PLAN SHALL BE REVIEWED AND CHANGED TO PREVENT FURTHER SIMILAR SPILLS FROM OCCURRING. THE CAUSE OF THE SPILL, MEASURES TO PREVENT IT, AND HOW TO CLEAN THE SPILL UP SHALL BE RECORDED.

-THE SUPERINTENDENT SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR AND IS RESPONSIBLE FOR THE DAY TO DAY SITE OPERATIONS. THE SUPERINTENDENT ALSO OVERSEES THE SPILL PREVENTION PLAN AND SHALL BE RESPONSIBLE FOR EDUCATING THE EMPLOYEES ABOUT SPILL PREVENTION AND CLEANUP PROCEDURES.

**MAINTENANCE AND INSPECTION PRACTICES**

THE FOLLOWING ARE MAINTENANCE AND INSPECTION PRACTICES THAT SHALL BE COMPLETED BY THE CONTRACTOR:

-ALL SEDIMENT AND EROSION CONTROL METHODS SHALL BE CHECKED DAILY AND AFTER EACH 0.5 INCH OR GREATER RAINFALL BY THE SUPERINTENDENT OR SOMEONE UNDER HIS/HER DIRECT SUPERVISION.

-ALL SEDIMENT AND EROSION CONTROL METHODS SHALL BE KEPT IN GOOD CONDITION. REPAIRS MUST BE MADE WITHIN 24 HOURS OF REPORT.

-THE SILT FENCE SHALL BE INSPECTED PERIODICALLY FOR HEIGHT OF SEDIMENT AND CONDITION OF FENCE.

-THE SILT FENCE SHALL BE CLEARED OF SEDIMENT WHEN SEDIMENT MEASURES ONE-THIRD THE HEIGHT OF THE FENCE.

-THE SEDIMENT BASINS/DITCHES SHALL BE CHECKED MONTHLY FOR DEPTH OF SEDIMENT. THEY SHALL BE CLEANED WHEN SEDIMENT REACHES 10% OF TOTAL CAPACITY AND AFTER CONSTRUCTION IS COMPLETE.

-DIVERSION DIKES SHALL BE INSPECTED MONTHLY. ANY BREACHES SHALL BE PROMPTLY REPAIRED.

-ALL SEEDING SHALL BE CHECKED FOR PROPER GROWTH AND UNIFORMITY. UNSTABALIZED AREAS SHALL BE RE-SODDED.

-A MAINTENANCE REPORT SHALL BE COMPLETED DAILY AFTER EACH INSPECTION OF THE SEDIMENT AND EROSION CONTROL METHODS. THE REPORTS SHALL BE FILED IN AN ORGANIZED MANNER AND RETAINED ON-SITE DURING CONSTRUCTION. AFTER CONSTRUCTION IS COMPLETED, THE REPORTS SHALL BE SAVED FOR AT LEAST THREE YEARS. THE REPORTS SHALL BE AVAILABLE FOR ANY AGENCY THAT HAS JURISDICTION OVER EROSION CONTROL.

-THE SUPERINTENDENT SHALL ORGANIZE THE TRAINING FOR INSPECTION PROCEDURES AND PROPER EROSION CONTROL METHODS FOR EMPLOYEES THAT COMPLETE INSPECTIONS AND REPORTS.

**NOTICE OF TERMINATION**

A NOTICE OF TERMINATION WILL BE SUBMITTED TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AFTER THE CONSTRUCTION HAS BEEN COMPLETED AND THE SITE HAS UNDERGONE FINAL STABILIZATION.

**POLLUTION PREVENTION PLAN CERTIFICATION**

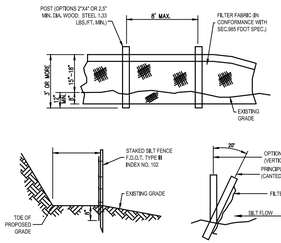
I CERTIFY, UNDER PENALTY OF LAW, THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION, IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

NAME (OPERATOR AND/OR RESPONSIBLE AUTHORITY) DATE

**CONTRACTOR'S CERTIFICATION**

I CERTIFY, UNDER PENALTY OF LAW, THAT I UNDERSTAND, SHALL COMPLY WITH, THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FORM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN PREPARED THEREUNDER.

| SIGNATURE | TITLE | COMPANY / ADDRESS AND PHONE NUMBER | DATE |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |




## SILT FENCE DETAIL

NTS

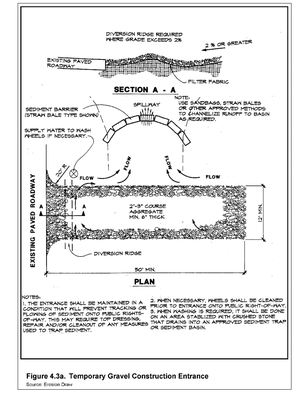
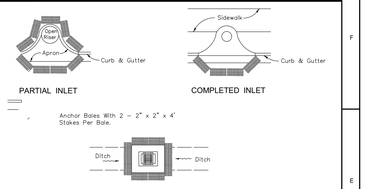



Figure 4.3a. Temporary Gravel Construction Entrance
Source: Erosion Dave

## CONSTRUCTION ENTRANCE

NTS

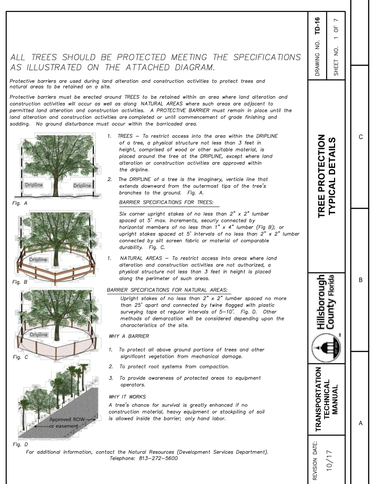



SITE FENCE INSPECTION NOTE:

1. **CONTRACTOR IS AUTHORIZED TO STAKE SEDIMENT AND EROSION CONTROL DEVICE LOCATIONS. AFTER STAKING COUNTY ERS STAFF MUST BE CONTACTED TO INSPECT STAKED LOCATIONS.**
2. **AFTER INSTALLATION OFF SEDIMENT AND EROSION CONTROL DEVICES A 2ND INSPECTION IS REQUIRED.**

## INLET PROTECTION DETAIL

NTS





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FACSIMILE 813.242.6683

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WILDERARCHITECTURE, INC.


LAUREN DECKER CAMPO
LICENSE
No. 57421
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Lauren D. Campo P.E. # 57421 11/12/2024

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY LAUREN D. CAMPO, PE ON THE DATE ADJACENT TO THE SEAL USING A DIGITAL SIGNATURE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.


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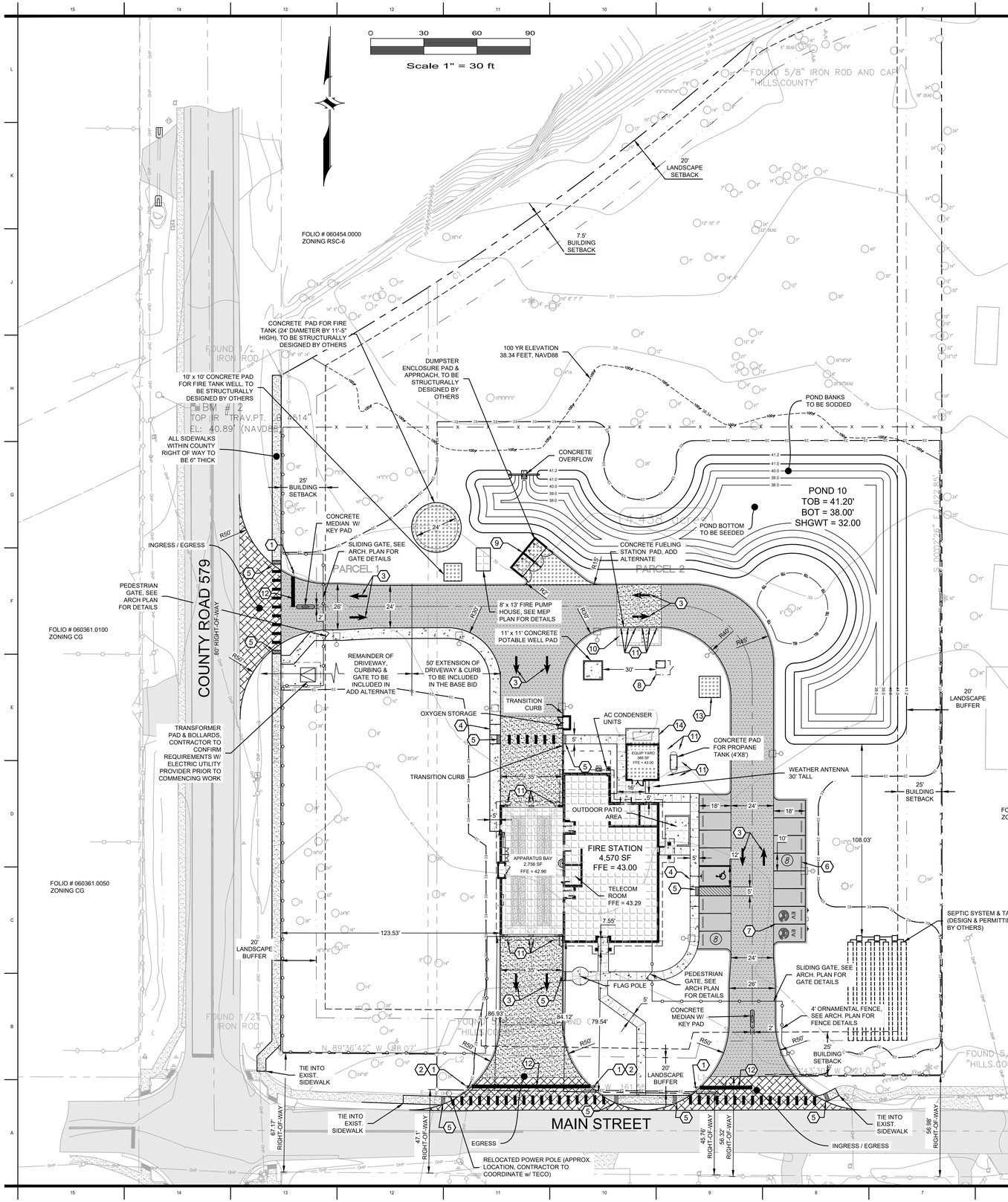

HILLSBOROUGH COUNTY BOARD OF COUNTY COMMISSIONERS
COUNTY CENTER
601 E KENNEDY BLVD
TAMPA, FL 33601

HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

| PROJECT #: 2116-05 | |
|---|---|
| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

STORMWATER POLLUTION PREVENTION PLAN

C-3.2




## SITE DATA TABLE

| | |
|---|---|
| TOTAL PROPERTY AREA: | 193,317 SF (4.44 AC) |
| PROJECT AREA: | 132,124 SF (3.03 AC) |
| PARCEL ID #: | U-10-28-20-ZZZ-000002-01770.0<br>U-10-28-20-ZZZ-000002-01760.0 |
| FOLIO #: | 060460.0000 & 060459.0000 |
| ADDRESS: | 10504 MAIN STREET, THONOTOSASSA 33592 |
| ZONING : | RSC-6 |
| FUTURE LAND USE: | RESIDENTIAL - 6 |
| PROPOSED LAND USE: | FIRE STATION |
| BUILDING AREA: | 7,326 SF (FIRE STATION 4,570 SF APPARATUS BAY 2,756 SF) |
| BUILDING HEIGHT: | 23' - 5.5" |
| BUILDING TYPE | 5B |
| NUMBER OF FLOORS: | 1 |
| REQ SETBACKS:<br>FRONT:<br>SIDE :<br>REAR : | <br>25'<br>25'<br>7.5' |
| REQ LANDSCAPE BUFFERS:<br>FRONT :<br>SIDE :<br>REAR : | <br>20'<br>20'<br>20' |
| REQ PARKING (COUNTY): | 2 SPACES PER EMPLOYEE<br>7 EMPLOYEES x 2 = 14 SPACES |
| PROP PARKING: | REGULAR = 13 SPACES<br>HANDICAP = 1 SPACES<br>TOTAL PROPOSED = 14 SPACES<br>+ 2 EV SPACES |

SITE AREAS:

| | |
|---|---|
| PROPOSED BUILDINGS: | 7,326 SF ~ 3.79% ~ 0.17 AC |
| PROPOSED ASPHALT: | 17,738 SF ~ 9.18% ~ 0.41 AC |
| PROPOSED VEHICULAR USE CONCRETE: | 6,996 SF ~ 3.62% ~ 0.16 AC |
| PROPOSED CONCRETE: | 5,350 SF ~ 2.77% ~ 0.12 AC |
| PROPOSED POND: | 17,289 SF ~ 8.94% ~ 0.40 AC |
| PROPOSED OPEN SPACE: | 138,617 SF ~ 71.70% ~ 3.18 AC |
| TOTAL SITE AREA: | 193,317 SF ~ 100.00% ~ 4.44 AC |

PROPOSED IMPERVIOUS AREA: 37,411 SF / 193,317 SF = 19.35%

PROPOSED FAR: 0.04

FLOOD ZONE:
ACCORDING TO CURRENT FLOOD INSURANCE MAPS ISSUED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THE PROPERTY SHOWN APPEARS TO LIE WITHIN ZONE "X" PANEL NO. 12057C0245H DATED AUGUST 28, 2008.

COUNTY MODEL:
HILLSBOROUGH RIVER / TAMPA BYPASS CANAL 100 YEAR ELEVATION 38.34 FEET, NAVD88

NOTE: ACCORDING TO SWFWMD THE POTABLE WATER WELL MUST BE AT LEAST 100' FROM THE SEPTIC SYSTEM AND THE FIRE AND IRRIGATION WELLS MUST BE AT LEAST 50' FROM THE SEPTIC SYSTEM. ALL OF THE WELLS SHOULD BE SEPARATED AT LEAST 20' FROM EACH OTHER. THE THREE DIFFERENT WELLS ARE ALLOWED ON THIS SITE. THE WELLS SHOULD BE 4" OR 5" IN SIZE TO $TAY UNDER THE LIMIT FOR A CONSUMPTIVE WATER PERMIT.

## LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- LANDSCAPE BUFFER
- EXIST. CONC. S/W TO REMAIN
- EXIST. ASPHALT PAVEMENT TO REMAIN
- PROP BUILDING
- (8) PARKING SPACE COUNT
- PROP LIGHT DUTY ASPHALT PAVEMENT
- PROP HEAVY DUTY ASPHALT PAVEMENT
- PROP HEAVY DUTY CONC PAVEMENT
- PROP CONC PAVEMENT DRIVEWAYS
- PROP CONC S/W
- PROP CONC TO BE STRUCTURALLY DESIGNED BY OTHERS
- 4' ORNAMENTAL FENCE
- 6' OPAQUE FENCE

## PROJECT NOTES

1. THE PROPOSED ACTIVITIES SHALL COMPLY WITH HILLSBOROUGH COUNTY DEVELOPMENT REGULATIONS (LATEST EDITION).
2. SIDEWALKS TO BE PROVIDED AND BUILT IN ACCORDANCE WITH THE HILLSBOROUGH COUNTY LAND DEVELOPMENT REGULATIONS (LATEST EDITION). ALL PROPOSED SIDEWALKS SHALL MEET ADA REQUIREMENTS (LATEST EDITION).
3. BUFFERING AND SCREENING SHALL BE PROVIDED IN ACCORDANCE WITH HILLSBOROUGH COUNTY LAND DEVELOPMENT CODE.
4. SITE ACCESS HAS BEEN DESIGNED FOR EMERGENCY AND PARATRANSIT VEHICLES.
5. SOLID WASTE COLLECTION SHALL BE BY DUMPSTER PICK-UP AS SHOWN.
6. ALL BUILDING CONSTRUCTION SHALL CONFORM TO THE FLORIDA BUILDING CODE (LATEST EDITION).
7. ALL EASEMENTS SHALL BE DEDICATED TO THE APPROPRIATE ENTITY.
8. WATER AND WASTEWATER ARE PROVIDED BY WELL AND SEPTIC.
9. PLANS SHALL BE IN ACCORDANCE WITH NFPA 1 AND NFPA 101, LATEST EDITIONS.
10. ALL CONSTRUCTION, MATERIALS, AND WORKMANSHIP ARE TO BE IN ACCORDANCE WITH COUNTY STANDARDS, LATEST EDITIONS.
11. GRASS AND MULCH, OR SOLID SOD, ALL AREAS IN EXISTING RIGHT-OF-WAY DISTURBED BY CONSTRUCTION.
12. CONTRACTOR IS TO COORDINATE ALL WORK WITHIN, BUT NOT LIMITED TO PUBLIC RIGHT-OF-WAY WITH UTILITY COMPANIES IN ORDER TO PREVENT DAMAGE TO UTILITY LINES AND THE MAKING OF ADJUSTMENTS TO SAME, IF REQUIRED.
13. CONTRACTOR SHALL CONTACT THE ENGINEER AND/OR THE OWNER PRIOR TO ANY CONSTRUCTION THAT MAY DAMAGE TREES.
14. UPON COMPLETION OF CONSTRUCTION, BUILDING NUMBERS ARE TO BE AFFIXED TO BUILDING (STRUCTURE) FRONT FACING THE ROADWAY AND ARE ALSO TO BE POSTED AT THE ENTRANCE DRIVE.

## MAINTENANCE OF TRAFFIC NOTES

1. CONTRACTOR SHALL CONTACT UTILITY COMPANIES AND COORDINATE ALL NECESSARY RELOCATION OF POWER POLES, OVERHEAD WIRES, AND UNDERGROUND UTILITIES TO FACILITATE CONSTRUCTION.
2. A MAINTENANCE OF TRAFFIC (MOT) PLAN FOR ALL WORK INCLUDING WITHIN THE COUNTY RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH FDOT INDEX #102-000, #102-005, #102-010, #102-075 AND OTHER APPLICABLE PORTIONS OF FDOT #102.
3. APPLICANT MUST NOTIFY HILLSBOROUGH COUNTY IN ADVANCE OF STARTING PROPOSED WORK WITHIN THE HILLSBOROUGH COUNTY RIGHT-OF-WAY.
4. CONTRACTOR SHALL SUBMIT A CERTIFIED MOT PLAN.

## CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED) NOTES

PER SECTION 6.03.11.c OF THE LDC, THE FOLLOWING REQUIREMENTS APPLY:

A MINIMUM OF ONE CPTED STRATEGY FROM EACH OF THE PRINCIPLES OF NATURAL SURVEILLANCE, NATURAL ACCESS CONTROL AND TERRITORIAL REINFORCEMENT SHALL BE INCORPORATED INTO THE SITE DESIGN PHASE FOR ALL APPLICABLE DEVELOPMENT.

1.NATURAL SURVEILLANCE (REDUCE OPPORTUNITIES) CRIMINAL OPPORTUNITIES CAN BE REDUCED BY CREATING AN ATMOSPHERE THAT DOES NOT ENCOURAGE OR INVITE UNLAWFUL ACTIVITY. STRATEGIES INCLUDE;

A. WELL LIT PUBLIC OUTDOOR AREAS AND PEDESTRIAN WALKWAYS;
B. WELL LIT PARKING AREAS;
C. DIRECTION TO GENERAL PUBLIC ACCESS FROM ALL PARKING AREAS;
D. SIGNS DIRECTING GENERAL PUBLIC TO ENTRANCES FOR GENERAL PUBLIC;
E. EASILY IDENTIFIABLE STORE ENTRANCES;
F. RESTRICT THE ACCESS TO ROOFS OR UPPER LEVELS;
G. ELEVATORS AND STAIRS IN PARKING GARAGES LOCATED ON THE PERIMETER TO PERMIT NATURAL SURVEILLANCE FROM EXTERIOR PUBLIC AREAS VIA GLASS-BACK ELEVATORS AND GLASS AT STAIRS AND ELEVATOR LOBBIES; AND
H. PARKING AREAS DESIGNED IN A WAY TO ACCOMMODATE THE IMMEDIATE OR FUTURE INSTALLATION OF EMERGENCY COMMUNICATIONS.

2. NATURAL ACCESS CONTROL (INCREASE VISIBILITY)
VISIBILITY IN AND AROUND THE BUSINESS AND RESIDENTIAL AREAS WILL HELP TO REDUCE CRIME. STRATEGIES INCLUDE:

A. STORE WINDOWS FACING ALL PARKING AREAS;
B. INTERIOR SHELVES AND DISPLAYS NOT EXCEEDING FIVE FEET IN HEIGHT;
C. WELL LIT INTERIOR/EXTERIOR SPACES;
D. BUILDING-MOUNTED LIGHTING INSTALLED ON ALL EXTERIOR WALLS, ESPECIALLY AT DELIVERY/SERVICE AND ENTRANCES FOR GENERAL PUBLIC;
E. CLEAR VISIBILITY MAINTAINED FROM THE STORE TO THE STREET, PARKING AREAS, PEDESTRIAN WALKWAYS, AND PASSING VEHICLES;
F. ALL ENTRANCES AND EXITS UNDER VISUAL OR ELECTRONIC SURVEILLANCE; AND
G. LANDSCAPING, BUILDINGS, WALLS AND FENCES WHICH DO NOT CREATE HIDING PLACES OR HINDER VISIBILITY.

3. TERRITORIAL REINFORCEMENT
PHYSICAL FEATURES CAN BE USED TO DISTINGUISH PRIVATE AREAS FROM PUBLIC SPACES. RESIDENTIAL AREAS SHOULD BE DESIGNED TO MARK TERRITORY, SENDING A MESSAGE THAT THE PROPERTY BELONGS TO SOMEONE. STRATEGIES TO DIFFERENTIATE PRIVATE AREAS FROM PUBLIC SPACES INCLUDE:

A. LANDSCAPING, SPECIAL PAVEMENT, AND LOW FENCES;
B. SECURITY SYSTEM SIGNAGE DISPLAYED AT ACCESS POINTS;
C. PUBLIC SPACES IDENTIFIED BY WELCOME, DIRECTIONAL, MARQUEE, OR SIMILAR SIGNS; AND
D. WROUGHT IRON, ALUMINUM PICKET OR SIMILAR NON-OPAQUE DECORATIVE GATES USED TO IDENTIFY ENTRANCES OR DIRECT PEDESTRIAN TRAFFIC.

4. MAINTENANCE AND MANAGEMENT
MAINTENANCE AND MANAGEMENT SHALL BE CONSIDERED AT THE SITE DESIGN PHASE, AS THE SELECTION OF MATERIALS AND FINISHES IMPACT THE TYPES OF MAINTENANCE METHODS THAT CAN BE SUSTAINED OVER TIME. PROPER MAINTENANCE PREVENTS REDUCED VISIBILITY DUE TO, FOR EXAMPLE, PLANT OVERGROWTH, AND OBSTRUCTED OR INOPERATIVE LIGHTING. STRATEGIES INCLUDE:

A. LOW-MAINTENANCE LANDSCAPING AND LIGHTING TREATMENTS;
B. LOCATION OF LIGHT FIXTURES AT SUITABLE HEIGHTS FOR EASY MAINTENANCE AND REPLACEMENT; AND
C. POSTING CURRENT INFORMATION INDICATING WHO TO CALL WHEN MAINTENANCE IS REQUIRED, SUCH AS LIGHT BULB BURNOUT, PLANT OVERGROWTH, ETC.

## KEY NOTES

1. 30"x30" R1-1 STOP SIGN.
2. 30"x30" R5-1 DO NOT ENTER SIGN.
3. WHITE PAVEMENT ARROW
4. MODIFIED CURB RAMP CR-F PER FDOT INDEX 522-002
5. RED DETECTABLE WARNING SURFACE PER FDOT INDEX 522-002
6. CONCRETE WHEEL STOPS
7. 6" WHITE PAINT PARKING STRIPES
8. 8'x8' FENCE ENCLOSURE w/ 5'x4'x4" REINFORCED CONC SLAB, SEE IRR PLANS FOR DETAILS
9. PROPOSED DUMPSTER ENCLOSURE (SEE ARCHITECTURAL PLANS FOR DETAILS)
10. PROPOSED DIESEL FUEL TANK & DISPENSER w/ CONCRETE PAD (SEE ARCHITECTURAL PLANS FOR DETAILS)(ADD ALTERNATE)
11. PROPOSED STEEL BOLLARDS (TYP)
12. 24" WHITE STOP BAR. CONTRACTOR TO USE SHERWIN WILLIAMS SETFAST WATERBORNE TRAFFIC PAINT OR APPROVED SUBSTITUTE.
13. 12'x12' SLAB FOR STORAGE SHED TO BE STRUCTURALLY DESIGNED BY OTHERS (ADD ALTERNATE)
14. GENERATOR PAD (ADD ALTERNATE)


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Lauren D. Campo P.E. # 57421 11/12/2024
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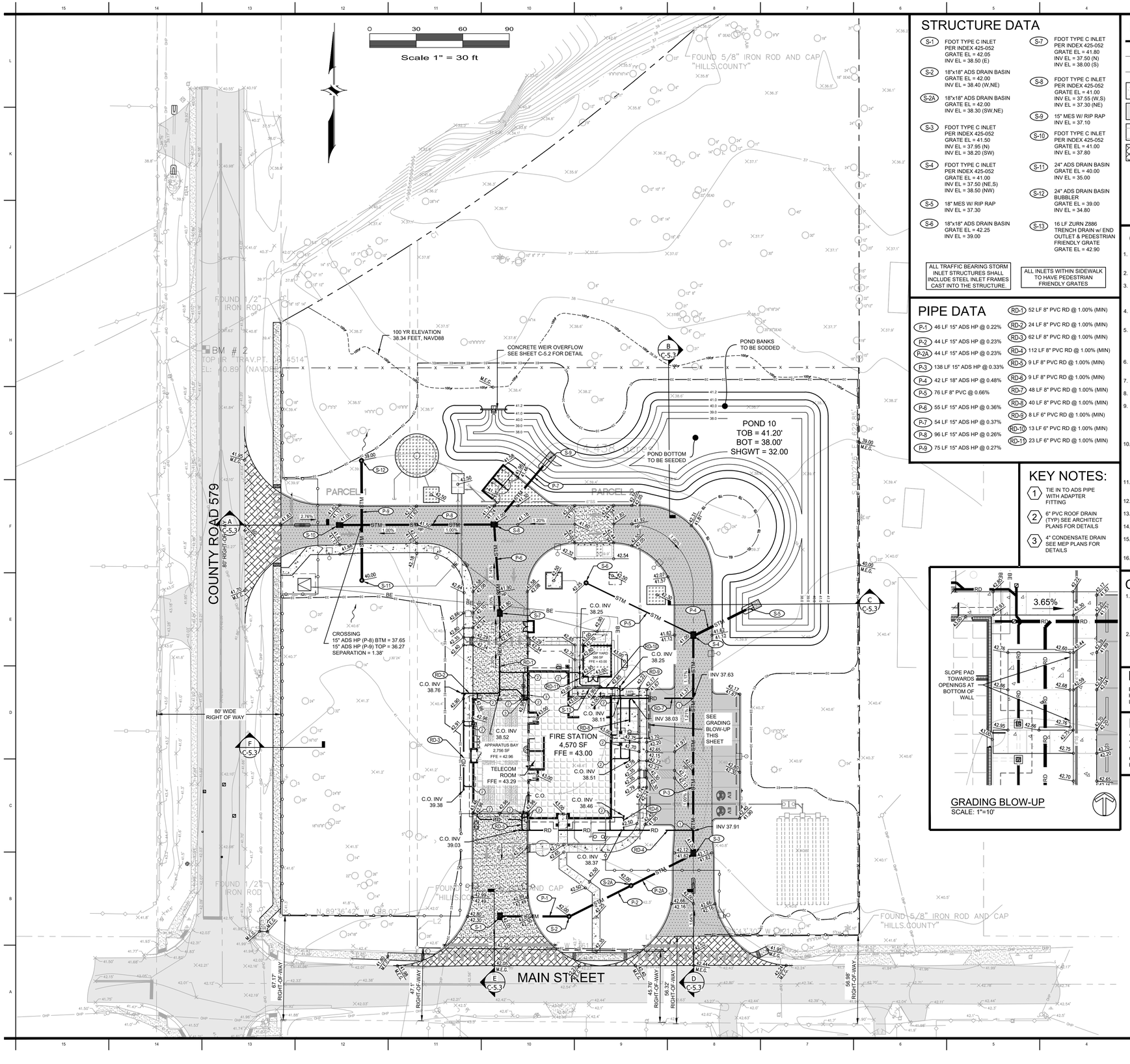
# HILLSBOROUGH COUNTY THONOTOSASSA FIRE STATION NO. 21 REPLACEMENT

PROJECT #: 2116-05

| DISTRIBUTION | DATE |
|---|---|
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

SITE PLAN

C-4.1




## STRUCTURE DATA

- S-1 FDOT TYPE C INLET PER INDEX 425-052 GRATE EL = 42.05 INV EL = 38.50 (E)
- S-2 18"x18" ADS DRAIN BASIN GRATE EL = 42.00 INV EL = 38.40 (W,NE)
- S-2A 18"x18" ADS DRAIN BASIN GRATE EL = 42.00 INV EL = 38.30 (SW,NE)
- S-3 FDOT TYPE C INLET PER INDEX 425-052 GRATE EL = 41.50 INV EL = 37.95 (N) INV EL = 38.20 (SW)
- S-4 FDOT TYPE C INLET PER INDEX 425-052 GRATE EL = 41.00 INV EL = 37.50 (NE,S) INV EL = 38.50 (NW)
- S-5 18" MES W/ RIP RAP INV EL = 37.30
- S-6 18"x18" ADS DRAIN BASIN GRATE EL = 42.25 INV EL = 39.00
- S-7 FDOT TYPE C INLET PER INDEX 425-052 GRATE EL = 41.80 INV EL = 37.50 (N) INV EL = 38.00 (S)
- S-8 FDOT TYPE C INLET PER INDEX 425-052 GRATE EL = 41.00 INV EL = 37.55 (W,S) INV EL = 37.30 (NE)
- S-9 15" MES W/ RIP RAP INV EL = 37.10
- S-10 FDOT TYPE C INLET PER INDEX 425-052 GRATE EL = 41.00 INV EL = 37.80
- S-11 24" ADS DRAIN BASIN GRATE EL = 40.00 INV EL = 35.00
- S-12 24" ADS DRAIN BASIN BUBBLER GRATE EL = 39.00 INV EL = 34.80
- S-13 16 LF ZURN Z886 TRENCH DRAIN w/ END OUTLET & PEDESTRIAN FRIENDLY GRATE GRATE EL = 42.90

ALL TRAFFIC BEARING STORM INLET STRUCTURES SHALL INCLUDE STEEL INLET FRAMES CAST INTO THE STRUCTURE.

ALL INLETS WITHIN SIDEWALK TO HAVE PEDESTRIAN FRIENDLY GRATES

## PIPE DATA

- P-1 46 LF 15" ADS HP @ 0.22%
- P-2 44 LF 15" ADS HP @ 0.23%
- P-2A 44 LF 15" ADS HP @ 0.23%
- P-3 138 LF 15" ADS HP @ 0.33%
- P-4 42 LF 18" ADS HP @ 0.48%
- P-5 76 LF 8" PVC @ 0.66%
- P-6 55 LF 15" ADS HP @ 0.36%
- P-7 54 LF 15" ADS HP @ 0.37%
- P-8 96 LF 15" ADS HP @ 0.26%
- P-9 75 LF 15" ADS HP @ 0.27%
- RD-1 52 LF 8" PVC RD @ 1.00% (MIN)
- RD-2 24 LF 8" PVC RD @ 1.00% (MIN)
- RD-3 62 LF 8" PVC RD @ 1.00% (MIN)
- RD-4 112 LF 8" PVC RD @ 1.00% (MIN)
- RD-5 9 LF 8" PVC RD @ 1.00% (MIN)
- RD-6 9 LF 8" PVC RD @ 1.00% (MIN)
- RD-7 48 LF 8" PVC RD @ 1.00% (MIN)
- RD-8 40 LF 8" PVC RD @ 1.00% (MIN)
- RD-9 8 LF 6" PVC RD @ 1.00% (MIN)
- RD-10 13 LF 6" PVC RD @ 1.00% (MIN)
- RD-11 23 LF 6" PVC RD @ 1.00% (MIN)

## KEY NOTES:

1. TIE IN TO ADS PIPE WITH ADAPTER FITTING
2. 6" PVC ROOF DRAIN (TYP) SEE ARCHITECT PLANS FOR DETAILS
3. 4" CONDENSATE DRAIN SEE MEP PLANS FOR DETAILS

## LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- LANDSCAPE BUFFER
- EXIST. CONC. S/W TO REMAIN
- EXIST. ASPHALT PAVEMENT TO REMAIN
- PROP BUILDING
- PROP CONC PAVEMENT DRIVEWAYS
- CROSS SECTION NAME (A / C-5.3)
- CROSS SECTION SHEET LOCATION
- PROP ASPHALT PAVEMENT
- PROP CONC PAVEMENT
- PROP CONC S/W
- PROP CONC TO BE STRUCTURALLY DESIGNED BY OTHERS
- 4' ORNAMENTAL FENCE
- 6' OPAQUE FENCE
- STORM STRUCTURE OR PIPE NUMBER (P-1)
- FLOW ARROW
- PAVEMENT SLOPE (1.00%)
- PROPOSED SPOT GRADE (0.00 / 0.00)

## GENERAL GRADING NOTES

1. ALL CONSTRUCTION, MATERIALS, AND WORKMANSHIP ARE TO BE IN ACCORDANCE WITH COUNTY STANDARDS, AND FDOT SPECIFICATIONS, LATEST EDITIONS.
2. SOD ALL AREAS IN EXISTING RIGHT-OF-WAY DISTURBED BY CONSTRUCTION.
3. CONTRACTOR IS TO COORDINATE ALL WORK WITHIN, BUT NOT LIMITED TO PUBLIC RIGHT-OF-WAY WITH UTILITY COMPANIES IN ORDER TO PREVENT DAMAGE TO UTILITY LINES AND THE MAKING OF ADJUSTMENTS TO SAME, IF REQUIRED.
4. CONTRACTOR SHALL CONTACT THE ENGINEER AND/OR THE OWNER PRIOR TO ANY CONSTRUCTION THAT MAY DAMAGE TREES.
5. ADJUSTING MANHOLE TOPS TO MATCH GRADE AND SLOPE OF THE FINISH PAVING SHALL BE INCLUDED IN THE RESPECTIVE CONTRACT UNIT PRICE FOR MANHOLES, PAYMENT OF WHICH WILL CONSTITUTE FULL COMPENSATION FOR THE CONSTRUCTION AND COMPLETION OF THE MANHOLE, AND NO ADDITIONAL PAYMENT WILL BE ALLOWED OR MADE FOR ADJUSTING MANHOLE TOPS.
6. ROOF DRAINAGE TO BE DIRECTED FROM BUILDINGS TO STORM SYSTEM VIA DOWNSPOUTS OR SHEET FLOW.
7. ALL FINISH FLOOR ELEVATIONS (FFE) ARE MINIMUMS.
8. SLOPE PERIMETER GRADE TO MATCH EXISTING GRADE AT 4:1 MAXIMUM.
9. ANY AREAS SUBJECT TO EROSION MUST BE ADEQUATELY STABILIZED WITH VEGETATIVE MATERIAL THAT WILL, WITHIN A REASONABLE TIME FRAME, DETER SOIL DISTURBANCE. SODDING, PLUGGING, SPRIGGING OR SEEDING IS ACCEPTABLE FOR STABILIZATION; HOWEVER, SODDING MAY BE REQUIRED IN AREAS OF EROSION-PRONE SOILS OR WHERE SLOPES ARE GREATER THAT 5:1 VEGETATION OTHER THAN GRASS IS ACCEPTABLE UNLESS OTHERWISE SPECIFIED.
10. ALL GRADING OF SIDEWALKS AND PEDESTRIAN WALKWAYS SHALL MEET MINIMUM 'ADA' STANDARDS. SIDEWALK CROSS SLOPES AND DRIVEWAY CROSSINGS FOR SIDEWALKS TO BE 2.0% MAX. SLOPE. ALL SIDEWALK RUNNING SLOPES SHALL NOT EXCEED 5% WITHOUT USE OF PROPER RAMPS PER FDOT OR FLORIDA BUILDING CODE. CONTRACTOR SHALL FIELD VERIFY SIDEWALK FORM BOARDS PRIOR TO CONSTRUCTING WALKWAYS.
11. CONTRACTOR SHALL WRAP ALL INLET GRATES WITH FILTER FABRIC UPON INSTALLATION. FABRIC TO BE REMOVED UPON COMPLETION OF BUILDING CONSTRUCTION.
12. GRADING SLOPES W/IN PRIVATE PROPERTY SHALL BE CONSTRUCTED AT 4:1 MAXIMUM SLOPE.
13. CONTRACTOR SHALL OBTAIN ALL CONTRACTOR RELATED PERMITS.
14. ALL CONCRETE AREAS SHALL HAVE SAW-CUT 10'X10' O.C.
15. ALL INLETS WITHIN WALKING PATHS AND DRIVEWAYS TO HAVE PEDESTRIAN FRIENDLY GRATES; COORDINATE ALL GRATE STYLES/PRODUCT WITH ARCH & OWNER.
16. DITCH BOTTOM INLETS IN GRASS AREAS TO HAVE 6" SLOT.

## CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING THE EXTENTS OF PAVEMENT RESTORATION BASED ON HIS MEANS AND METHODS OF INSTALLING WATER, SEWER AND STORMWATER INFRASTRUCTURE ADJACENT TO OR UNDER EXISTING PAVEMENT AREAS. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING LOCAL MUNICIPALITY AND STATE STANDARDS WHEN RESTORING PAVEMENT AND NOT SOLELY RELY ON CIVIL PLANS.
2. CONTRACTOR MUST VERIFY ALL EXISTING WATER, SEWER AND STORM WATER INFRASTRUCTURE WITHIN THE RIGHT OF WAY PRIOR TO ORDERING STRUCTURES. THE CONTRACTOR SHALL PROVIDE THE ENGINEER VERTICAL AND HORIZONTAL LOCATIONS OF INFRASTRUCTURE IN ORDER TO VERIFY ANY POTENTIAL CONFLICTS PRIOR TO ORDERING STRUCTURES.

## DATUM

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), HILLSBOROUGH COUNTY BENCHMARK "VB-224", LOCATED AT THE THONOTOSASSA BRANCH PUBLIC LIBRARY, PUBLISHED ELEVATION = 45.16' (NAVD88).

## FLOOD ZONE

ACCORDING TO CURRENT FLOOD INSURANCE MAPS ISSUED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THE PROPERTY SHOWN APPEARS TO LIE WITHIN ZONE "X" PANEL NO. 12057C0245H DATED AUGUST 28, 2008.

COUNTY MODEL:
HILLSBOROUGH RIVER / TAMPA BYPASS CANAL 100 YEAR ELEVATION 38.34 FEET, NAVD88




GRADING BLOW-UP
SCALE: 1"=10'


WILDERARCHITECTURE, INC.
1315 SEVENTH AVENUE
SUITE 106
TAMPA, FLORIDA 33605.3607
TELEPHONE 813.242.6677
FACSIMILE 813.242.6683
wilderarchitecture.com
AR91271 QUALIFIER LICENSE

LAUREN DECKER CAMPO
LICENSE
No. 57421
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Lauren D. Campo P.E. # 57421 11/12/2024
THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY LAUREN D. CAMPO, PE ON THE DATE ADJACENT TO THE SEAL USING A DIGITAL SIGNATURE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

CEI ENGINEERS CONSTRUCTION INSPECTION PLANNERS
CAMPO ENGINEERING, INC.
FBPR REGISTRY NO.: 26726
1725 EAST 5TH AVENUE
TAMPA, FL. 33605
PHONE: (813) 215-7372
FAX: (813) 902-8782


HILLSBOROUGH COUNTY BOARD OF COUNTY COMMISSIONERS
COUNTY CENTER
601 E KENNEDY BLVD
TAMPA, FL 33601

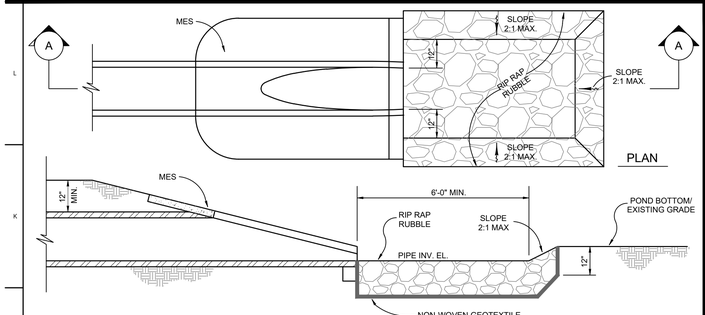
HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2116-05

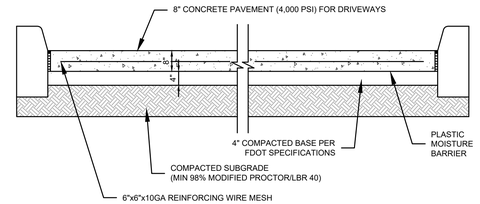
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|---|---|
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| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

PAVING, GRADING & DRAINAGE PLAN

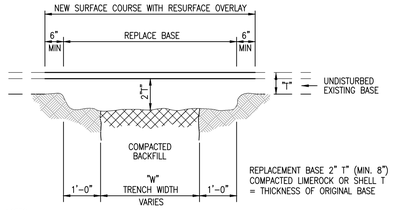
C-5.1




## POND/OUTFALL SUMP DETAIL
NTS



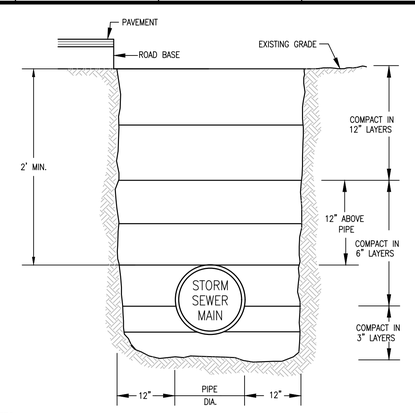

## CONCRETE PAVEMENT DRIVEWAY DETAIL
NTS




NOTES:

1. CONTRACTOR TO RESURFACE TO ALL VALVES WITHIN EXISTING ROADWAY AND NOT COVER.
2. ALL GRASSED AREAS DISTURBED WITHIN THE RIGHT-OF-WAY SHALL BE SODDED TO ORIGINAL OR BETTER CONDITION.
3. ALL GEOTECHNICAL TESTING OF WORK WITHIN THE RIGHT-OF-WAY SHALL BE PER CITY SPECIFICATIONS.

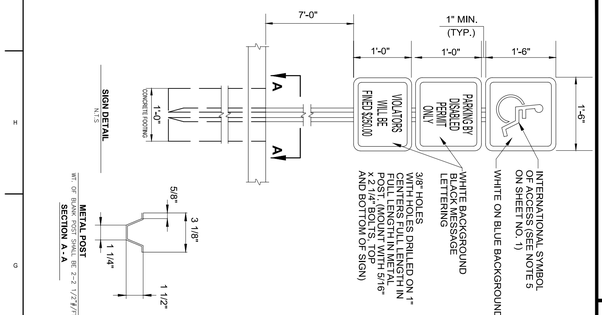
## PAVEMENT REPLACEMENT DETAIL
NTS




NOTES:

1. TRENCHES LOCATED UNDER PAVEMENT SHALL BE COMPACTED TO 100% OF MAXIMUM DENSITY BY A.A.S.H.T.O. T-99, METHOD C.
2. TRENCHES NOT LOCATED UNDER PAVEMENT SHALL BE COMPACTED TO A FIRMNESS EQUAL EQUAL TO THAT OF THE SOIL ADJACENT TO THE TRENCH.
3. REPLACEMENT OF PAVED SURFACES SHALL BE MADE IN ACCORDANCE TO APPLICABLE LOCAL REGULATIONS.

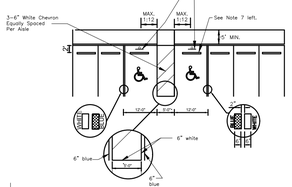
## TRENCH BACKFILL DETAIL
NTS

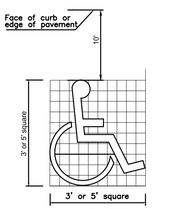



| REVISION DATE : | TRANSPORTATION TECHNICAL MANUAL | DISABLED PARKING / SIGNING TYPICAL DETAILS | DRAWING NO. TD-1 |
|---|---|---|---|
| | | | SHEET NO. 2 OF 2 |

**NOTES:**

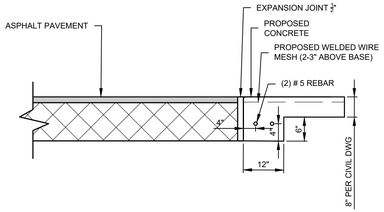
1. METAL POST TO BE GALVANIZED, ALL BOLTS, NUTS, WASHERS AND SCREWS MUST BE RUSTPROOF.
2. CONCRETE FOR FOOTING SHALL BE PORTLAND CEMENT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 P.S.I.
3. SIGNS WILL BE FABRICATED BY USING REFLECTING COATING IN THE SYMBOL, MESSAGE AND BORDER APPLIED TO A SHEET ALUMINUM BACKING (.080) IN THICKNESS.
4. MESSAGE LETTERING SHALL BE UPPER CASE (BLACK)(SERIES C) 1.5" HIGH IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, EXCEPT AS NOTED ON SHEET 2 OF 2.
5. THE SYMBOL IS COMPOSED OF TWO ELEMENTS, A WHITE WHEELCHAIR FIGURE (WHICH SHOULD ALWAYS FACE RIGHT) ON A SQUARE BACKGROUND, INTERNATIONAL BLUE IN COLOR (FED. STD. 595a, COLOR #15180).
6. SIGN POST SHALL BE MIN. 2'-0" CLEAR FROM BACK OF CURB.
7. THE USE OF PROPERLY LOCATED BOLLARDS IN ACCESSIBLE PARKING SPACES ARE ACCEPTABLE SUBSTITUTES FOR REGULAR BUMPER GUARD.
8. MINIMUM NUMBER OF ACCESSIBLE PARKING SPACES SHALL BE PER FLORIDA ACCESSIBILITY BUILDING CODE SECTION 4.6.3.




## MANDATORY
White on Blue Background

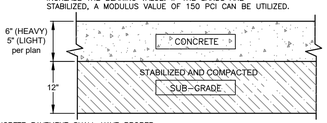
| REVISION DATE : 12/08 | TRANSPORTATION TECHNICAL MANUAL | DISABLED PARKING / MARKING TYPICAL DETAILS | DRAWING NO. TD-1 |
|---|---|---|---|
| | | | SHEET NO. 1 OF 2 |




## ASPHALT ABUTTING CONCRETE DETAIL
NTS

CONCRETE — NORMAL WEIGHT CONCRETE HAVING A 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI AND A MIN. 28-DAY FLEXURAL STRENGTH OF AT LEAST 600 PSI.

SUB-GRADE — THE SUBGRADE SOILS SHOULD BE COMPACTED TO A MINIMUM DENSITY OF 98% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY. TO AID IN THE DESIGN OF THE ANTICIPATED CONCRETE PAVEMENT SECTIONS, A MODULUS OF SUBGRADE REACTION OF 100 PCI (LBR 20 SANDS) SHOULD BE UTILIZED FOR THE LOW BEARING SANDS UNLESS STABILIZATION IS ADDED TO INCREASE THE BEARING VALUE. IF THE SANDS ARE STABILIZED, A MODULUS VALUE OF 150 PCI CAN BE UTILIZED.

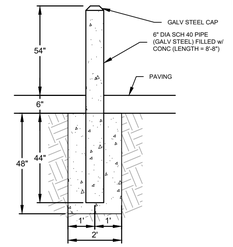



ALL CONCRETE PAVEMENT SHALL HAVE PROPER REINFORCEMENT, JOINTING AND SAWCUTTING PER AMERICAN CONCRETE INSTITUTE (ACI) STANDARDS. 10' MAX. SPACING ON JOINTS IN LIGHT DUTY AREAS; 14' MAX. SPACING ON JOINTS IN HEAVY DUTY AREAS

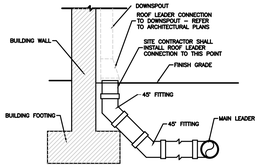
HEAVY DUTY CONCRETE DESIGN TO BE REVIEWED AND APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER

SITE PREPARATION TO BE COMPLETED PER ARCHNA ENGINEERING, INC., REPORT DATED SEPTEMBER 09, 2022.

## CONCRETE PAVEMENT SECTION DETAIL
NTS



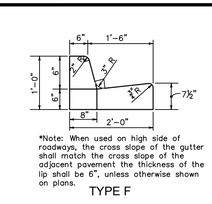

## STEEL BOLLARD DETAIL
NTS




NOTES:

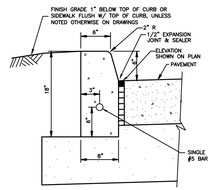
1. REFER TO SITE PLANS FOR PIPE SIZES AND SPECIFICATIONS.
2. SITEWORK CONTRACTOR IS RESPONSIBLE FOR ALL LABOR AND MATERIAL UP TO THE DOWNSPOUT CONNECTION.
3. ACTUAL DOWNSPOUT CONNECTION SHALL BE SUPPLIED AND INSTALLED BY BUILDING CONTRACTOR.

## ROOF LEADER CONNECTION DETAIL
NTS

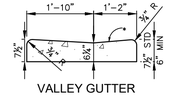


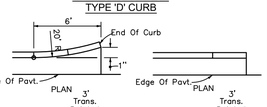

*Note: When used on high side of roadways, the cross slope of the gutter shall match the cross slope of the adjacent pavement the thickness of the lip shall be 6", unless otherwise shown on plans.

TYPE F




REINFORCED FDOT TYPE 'D' CURB



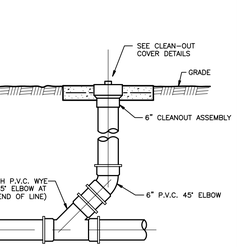




CURB AND GUTTER ENDINGS

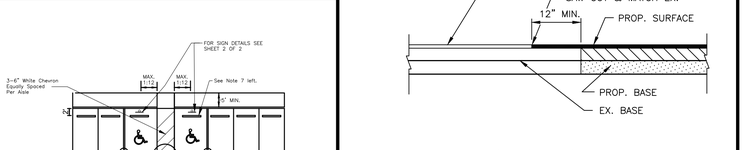
**NOTE:**
1/2" EXPANSION JOINT EVERY 500', BETWEEN CURB SECTIONS, AT MAIN, END OF FOUR AND STRUCTURES. FALSE JOINTS EVERY 10', LONGITUDINALLY.

NOTE: ALL CONCRETE SHALL BE 4,000 PSI CONCRETE.

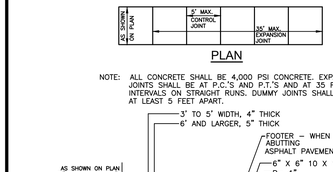
## CURB & CURB AND GUTTER DETAILS (FDOT INDEX 520-001)
NTS




## CLEAN-OUT DETAIL
NTS

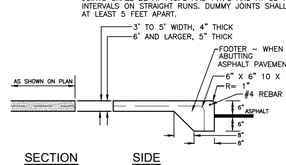



## TIE-IN OF PROPOSED ASPHALT PAVEMENT TO EXISTING ASPHALT
NTS




PLAN

NOTE: ALL CONCRETE SHALL BE 4,000 PSI CONCRETE. EXPANSION JOINTS SHALL BE AT P.C.'S AND P.T.'S AND AT 35 FOOT INTERVALS ON STRAIGHT RUNS. DUMMY JOINTS SHALL BE AT LEAST 5 FEET APART.




SECTION — MINIMUM 1/4"- 1'-0" SLOPE (FOR POSITIVE DRAINAGE)

SIDE — MAXIMUM 12:1 SLOPE (FOR HANDICAP ACCESS)

## ON-SITE RAISED SIDEWALK DETAIL
NTS

NOTE: SEE AHJ'S SIDEWALK REQUIREMENTS FOR SIDEWALKS WITHIN RIGHT-OF-WAY

2.0" FDOT TYPE SP ASPHALTIC CONCRETE. THE ASPHALTIC CONCRETE SHOULD MEET STANDARD FDOT MATERIAL REQUIREMENTS AND PLACEMENT PROCEDURES AS OUTLINED IN THE MOST RECENT EDITION OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, OR GOVERNING COUNTY/CITY SPECIFICATIONS.

8" BASE MATERIALS SHOULD MEET FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATION, SECTION 200 REQUIREMENTS (OR GOVERNING COUNTY/CITY SPECIFICATIONS), INCLUDING COMPACTION TO 98 PERCENT OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D-1557) AND A MINIMUM LIMEROCK BEARING RATIO (LBR) OF 100. CRUSHED CONCRETE SHOULD HAVE AN LBR VALUE OF 150 AND BE GRADED IN ACCORDANCE WITH FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS SECTION 204, OR GOVERNING COUNTY/CITY SPECIFICATIONS. A NO. 57 WASHED STONE (OR OTHER GRAVEL WITH LOW FINES) MAY BE USED AS A BASE BENEATH ANY RIGID CONCRETE PAVEMENT SECTIONS; HOWEVER, CLEAN SAND (SP) MAY ALSO BE USED AS A BASE FOR RIGID PAVEMENT. IT IS IMPORTANT THAT THE UPPER 12 INCHES OF MATERIAL DIRECTLY BELOW RIGID PAVEMENT IS FREE-DRAINING (LOW FINES) MATERIAL.

12" STABILIZED SUBGRADE SANDY EXISTING SOILS AND SANDY STRUCTURAL FILL SOILS SHOULD BE ACCEPTABLE FOR CONSTRUCTION AND SUPPORT OF A FLEXIBLE PAVEMENT SECTION AFTER PROPER COMPACTION, SUBSURFACE PREPARATION AND PROOFROLLING.ALTERNATIVELY, A RIGID CONCRETE SECTION MAY BE USED. FILL SOILS, IF NEEDED, SHOULD CONSIST OF REASONABLY CLEAN FINE SANDS (NORGANIC, NON-PLASTIC SANDS CONTAINING LESS THAN 12 PERCENT MATERIAL PASSING THE NO. 200 MESH SIEVE). FOR FLEXIBLE PAVEMENTS, WE RECOMMEND THAT ANY FILL, IF NEEDED, BELOW THE STABILIZED SUBGRADE BE COMPACTED TO AT LEAST 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557). THE UPPER FOOT OF PAVEMENT SUBGRADE SHOULD BE COMPACTED TO 98% ASTM D1557. TRAFFIC SHOULD NOT BE ALLOWED ON THE SUBGRADE BEFORE THE BASE IS PLACED TO AVOID RUTTING.

NOTES:

1. CONTRACTOR MUST INSTALL PAVEMENT AS SMOOTH AS POSSIBLE & KEEP IT FREE OF ANY MARKS, SCRAPES, GOUGES, TIRE MARKS, ETC., THAT MIGHT BE CAUSED BY CONSTRUCTION TRAFFIC & EQUIPMENT.
2. CONTRACTOR SHALL LIMIT PLACING THE ASPHALT PAVEMENT COURSE UNTIL ALL OTHER CONSTRUCTION IS COMPLETE & NO OTHER CONSTRUCTION TRAFFIC IS ANTICIPATED.

SITE PREPARATION TO BE COMPLETED PER ARCHNA ENGINEERING, INC., REPORT DATED SEPTEMBER 09, 2022.

| HEAVY DUTY PAVEMENT SECTION | LAYER COEFF. | SN |
|---|---|---|
| 2" TYPE SP STRUCTURAL COURSE (TRAFFIC C) | 0.44 | 0.88 |
| 8" CRUSHED CONCRETE BASE (LBR 150) | 0.18 | 1.44 |
| 12" STABILIZED SUBGRADE (MIN LBR OF 40 & COMPACTED TO AT LEAST 98% OF THE MODIFIED PROCTOR MAX DRY DENSITY) (AASHTO T-180) | 0.08 | 0.96 |
| TOTAL SN PROVIDED | | 3.28 |

## HEAVY DUTY ASPHALT PAVEMENT SECTION
NTS

1.5" FDOT TYPE SP ASPHALTIC CONCRETE THE ASPHALTIC CONCRETE SHOULD MEET STANDARD FDOT MATERIAL REQUIREMENTS AND PLACEMENT PROCEDURES AS OUTLINED IN THE MOST RECENT EDITION OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, OR GOVERNING COUNTY/CITY SPECIFICATIONS.

6" BASE MATERIALS SHOULD MEET FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATION, SECTION 200 REQUIREMENTS (OR GOVERNING COUNTY/CITY SPECIFICATIONS), INCLUDING COMPACTION TO 98 PERCENT OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D-1557) AND A MINIMUM LIMEROCK BEARING RATIO (LBR) OF 100. CRUSHED CONCRETE SHOULD HAVE AN LBR VALUE OF 150 AND BE GRADED IN ACCORDANCE WITH FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS SECTION 204, OR GOVERNING COUNTY/CITY SPECIFICATIONS. A NO. 57 WASHED STONE (OR OTHER GRAVEL WITH LOW FINES) MAY BE USED AS A BASE BENEATH ANY RIGID CONCRETE PAVEMENT SECTIONS; HOWEVER, CLEAN SAND (SP) MAY ALSO BE USED AS A BASE FOR RIGID PAVEMENT. IT IS IMPORTANT THAT THE UPPER 12 INCHES OF MATERIAL DIRECTLY BELOW RIGID PAVEMENT IS FREE-DRAINING (LOW FINES) MATERIAL.

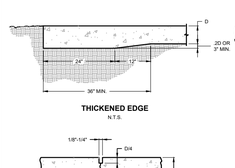
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2. CONTRACTOR SHALL LIMIT PLACING THE ASPHALT PAVEMENT COURSE UNTIL ALL OTHER CONSTRUCTION IS COMPLETE & NO OTHER CONSTRUCTION TRAFFIC IS ANTICIPATED.

SITE PREPARATION TO BE COMPLETED PER ARCHNA ENGINEERING, INC., REPORT DATED SEPTEMBER 09, 2022.

## LIGHT DUTY ASPHALT PAVEMENT SECTION
NTS

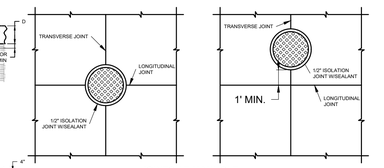



RECOMMENDED MAX. JOINT SPACINGS

| PAVEMENT THICKNESS (INCHES) | RECOMMENDED MAXIMUM JOINT SPACING (FEET) |
|---|---|
| 3.5 (FOR WHITETOPPING ONLY) | 6 |
| 4.0 | 10 |
| 4.5 | 10 |
| 5.0 | 12 |
| 5.5 | 12 |
| 6.0 | 15 |
| OVER 6.0 | 15 |

N.T.S.

NOTE: CONTRACTOR TO SUBMIT A CONCRETE JOINT LAYOUT TO ENGINEER PRIOR TO CONSTRUCTION




## CONCRETE JOINT DETAILS
NTS

**GENERAL NOTES:**

1. USE ACI OR FC&PA CERTIFIED FLATWORK FINISHER
2. USE ACI 330R-01 GUIDE FOR DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS
3. USE ACI 330.1-94 STANDARD SPECIFICATION FOR PLAIN CONCRETE PARKING LOTS
4. ALL CONCRETE USED IN PARKING LOT SHALL HAVE A COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
5. PREPARE THE SUBGRADE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEEER'S RECOMMENDATIONS FOR RIGID PAVEMENTS. SUBGRADE SOIL DENSITY TESTING MUST BE COMPLETED AND VERIFIED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONCRETE PLACEMENT.
6. IMPORTED SUB-BASE USE FOR BACK FILL SHOULD BE FREE OF HEAVY CLAY, SILTS, STONES, PLANT ROOT OR OTHER FOREIGN MATERIAL GREATER THAN 16" IN DIAMETER IN ORDER TO ACHIEVE ADEQUATE COMPACTION AROUND ANY FIXED OBJECT IN GROUND. ALTERNATE WILL BE TO USE FLOWABLE FILL.
7. LAYOUT CONTROL JOINT BY STARTING WITH ANY DRAINAGE INLET WITHIN THE PAVEMENT SECTION AND WORK TOWARD EDGE OF PAVEMENT
8. KEEP ALL JOINTS CONTINUOUS
9. CONTROL JOINTS SHALL BE FORMED OR SAWED WITHIN 12 HOURS FROM TIME OF PLACEMENT; A. SIDEWALK-SPACING SHALL BE SAME AS WIDTH OF PAVEMENT AND LESS THAN 5 FEET IN LENGTH
   B. PAVEMENT-MAXIMUM SPACING SHALL BE 2.5 TIMES THICKNESS IN UNIT OF FEET AND LESS THAN 15 FEET IN LENGTH.(E.G. 7"=I INCH SPACING AT 10'x10')
10. CURE CONCRETE IMMEDIATELY AFTER FINISHING OPERATION IS COMPLETED BY USING ONE OF THE FOLLOWING METHODS: WATER, PIGMENTED WATER-BASED CURING COMPOUND OR VISQUEEN AND BURLAP

**CURBS:**

1. ALL CURBING SHALL BE CONSTRUCTED OF CONCRETE THAT WILL OBTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI (MIN) AT 28 DAYS
2. ALL CONCRETE CURBS SHALL BE SPACED WITH A FULL-DEPTH, 2' WIDTH ISOLATION JOINT MATERIAL PRIOR TO PLACEMENT OF ADJACENT CONCRETE PAVEMENT
3. THERE SHALL BE CONTROL JOINTS, EITHER TOOL OR SAW-CUT, MATCH PAVEMENT JOINTS, UNLESS OTHERWISE SPECIFIED; JOINTS SHALL BE FORMED WITHIN 12 HOURS OF PLACEMENT
4. ALL CURB ENDS THAT DO NOT TIE INTO OTHER FACILITIES SHALL TRANSITION DOWN TO PAVEMENT GRADE IN 24 INCHES
5. CONSTRUCTION JOINT SHALL BE TIED WITH A No.4 TIE BAR EXTENDED 6 INCHES INTO EACH CURB SECTION AND SHALL BE SPACED WITH A FULL-DEPTH 2' WIDTH ISOLATION JOINT MATERIAL


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Lauren D. Campo P.E. # 57421 11/12/2024

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HILLSBOROUGH COUNTY BOARD OF COUNTY COMMISSIONERS
COUNTY CENTER
601 E KENNEDY BLVD
TAMPA, FL 33601

# HILLSBOROUGH COUNTY THONOTOSASSA FIRE STATION NO. 21 REPLACEMENT

| PROJECT #: 2116-05 | |
|---|---|
| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

PAVING, GRADING & DRAINAGE DETAILS

C-5.2

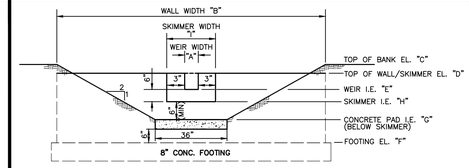
OPERATION

THE PROJECTS STORMWATER SYSTEM IS A GRAVITY OPERATED SYSTEM AND REQUIRES NO OPERATOR ACTION.

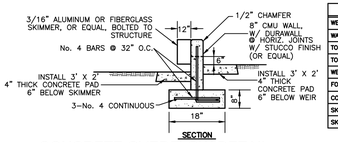
MAINTENANCE

1. DITCHES AND SWALES: ALL DITCHES AND SWALES SHALL BE PERIODICALLY MOWED AND CLEANED. DURING THE MOWING OPERATION, DITCHES AND SWALES SHALL BE INSPECTED FOR BARE SPOTS, DAMAGE AND EROSION. ANY BARE SPOTS GREATER THAN ONE (1) SQUARE FOOT IN AREA SHALL BE SEEDED OR SODDED TO REPLACE THE GRASS COVER. IN CASE OF EROSION OR DAMAGE WHERE UNDERLYING SOIL IS MISSING, THE MISSING SOIL SHALL BE REPLACED AND THE AREA BROUGHT BACK TO GRADE THEN SEEDED OR SODDED AS REQUIRED.
2. INLET GRATES: INLET GRATES WILL BE CHECKED MONTHLY FOR DAMAGE OR BLOCKAGE. ANY DAMAGED GRATES WILL BE REPLACED OR REPAIRED. ANY DEBRIS BLOCKING FULL FLOW THROUGH THE GRATE WILL BE REMOVED.
3. PIPES AND INLETS: PIPES AND INLETS WILL BE INSPECTEED YEARLY FOR DAMAGE OR BLOCKAGE. ANY DAMAGED PIPES OR INLETS WILL BE REPAIRED OR REPLACED. ANY TRASH, DEBRIS, OR SAND DEPOSITS WILL BE REMOVED.
4. PONDS: ALL PONDS SHALL BE PERIODICALLY MOWED AND CLEANED, DURING THE MOWING OPERATION, PONDS SHALL BE INSPECTED FOR BARE SPOTS, DAMAGE, AND EROSION. ANY BARE SPOTS GREATER THAN ONE (1) SQUARE FOOT IN AREA SHALL BE SEEDED OR SODDED TO REPLACE THE GRASS COVER. IN CASE OF EROSION OR DAMAGE WHERE UNDERLYING SOIL IS MISSING, THE MISSING SOIL SHALL BE REPLACED AND THE AREA BROUGHT BACK TO GRADE THEN SEEDED OR SODDED AS REQUIRED.

## STORMWATER OPERATION & MAINTENANCE INSTRUCTIONS




ELEVATION

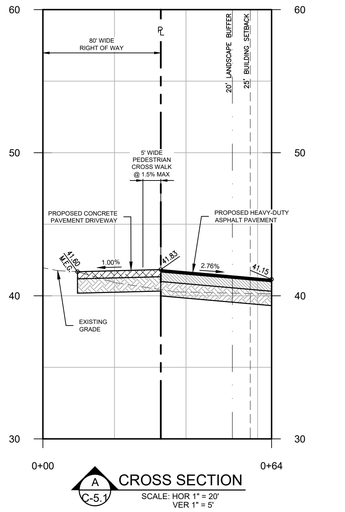



SECTION

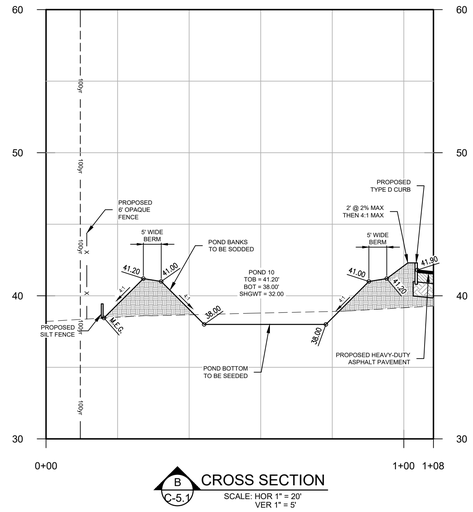
| CONTROL STRUCTURE DATA | |
|---|---|
| DESCRIPTION | CS |
| WEIR WIDTH "A" | 24" |
| WALL WIDTH "B" | 17.0' |
| TOP OF BANK EL. "C" | 41.2' |
| TOP OF WALL EL. "D" | 41.0' |
| WEIR I.E. "E" | 39.2' |
| FOOTING EL. "F" | 37.37' |
| CONCRETE PAD I.E. "G" | 38.2' |
| SKIMMER I.E. "H" | 38.7' |
| SKIMMER WIDTH "I" | 30" |

## CONCRETE OVERFLOW DETAIL

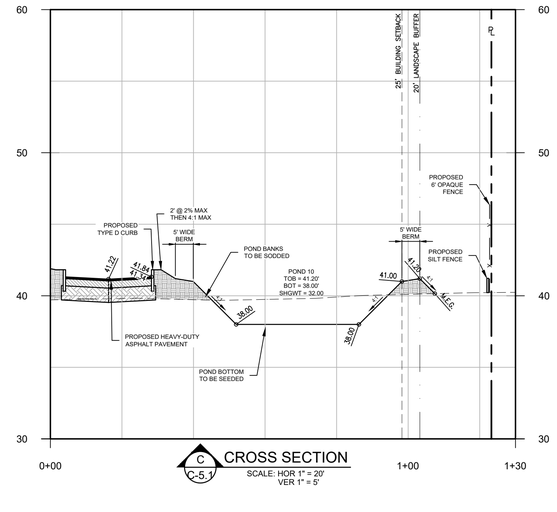
NTS



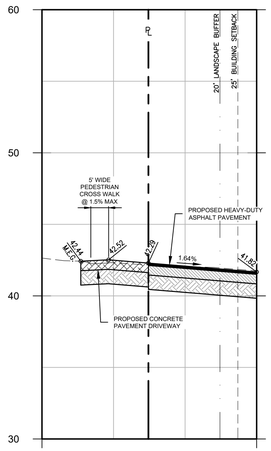

A C-5.1 CROSS SECTION
SCALE: HOR 1" = 20'
VER 1" = 5'



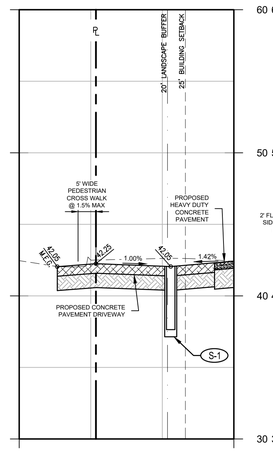

B C-5.1 CROSS SECTION
SCALE: HOR 1" = 20'
VER 1" = 5'



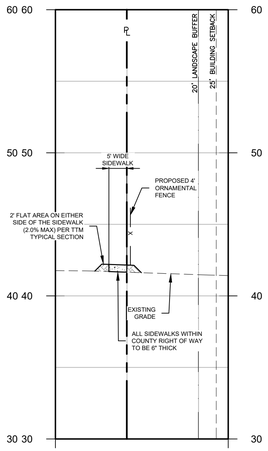

C C-5.1 CROSS SECTION
SCALE: HOR 1" = 20'
VER 1" = 5'




D C-5.1 CROSS SECTION
SCALE: HOR 1" = 20'
VER 1" = 5'




E C-5.1 CROSS SECTION
SCALE: HOR 1" = 20'
VER 1" = 5'




F C-5.1 CROSS SECTION
SCALE: HOR 1" = 20'
VER 1" = 5'


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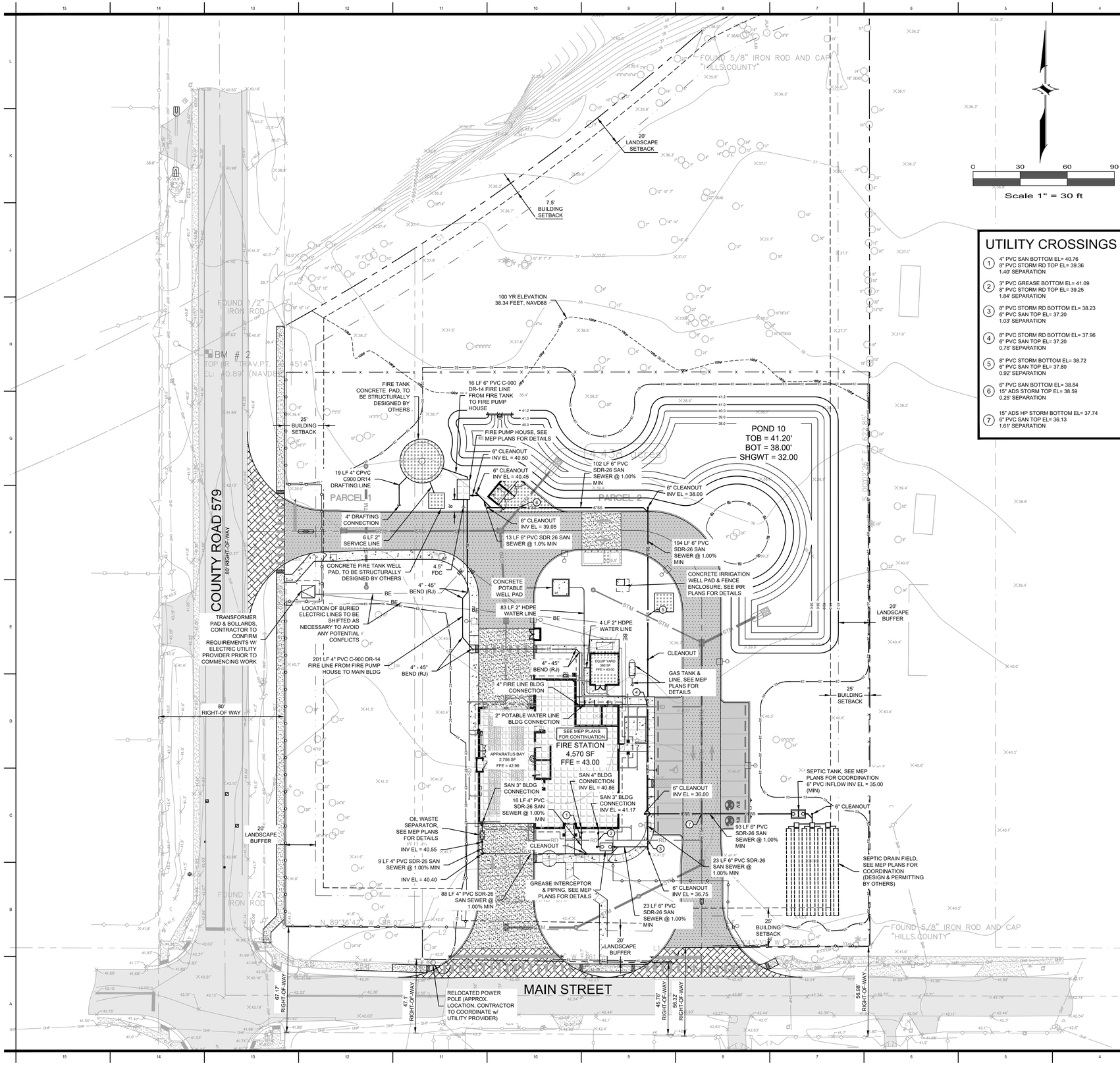
HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2116-05

| DISTRIBUTION | DATE |
|---|---|
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

CROSS SECTIONS

C-5.3




## UTILITY CROSSINGS

1. 4" PVC SAN BOTTOM EL= 40.76
   8" PVC STORM RD TOP EL= 39.36
   1.40' SEPARATION
2. 3" PVC GREASE BOTTOM EL= 41.09
   8" PVC STORM RD TOP EL= 39.25
   1.84' SEPARATION
3. 8" PVC STORM RD BOTTOM EL= 38.23
   6" PVC SAN TOP EL= 37.20
   1.03' SEPARATION
4. 8" PVC STORM RD BOTTOM EL= 37.96
   6" PVC SAN TOP EL= 37.20
   0.76' SEPARATION
5. 8" PVC STORM BOTTOM EL= 38.72
   6" PVC SAN TOP EL= 37.80
   0.92' SEPARATION
6. 6" PVC SAN BOTTOM EL= 38.84
   15" ADS STORM TOP EL= 38.59
   0.25' SEPARATION
7. 15" ADS HP STORM BOTTOM EL= 37.74
   6" PVC SAN TOP EL= 36.13
   1.61' SEPARATION

## LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- LANDSCAPE BUFFER
- STM PROPOSED STORM PIPE
- FL FIRE MAIN
- WM WATER MAIN
- WL EXISTING WATERMAIN
- FM EXISTING FORCEMAIN
- SS SANITARY SEWER MAIN
- 4' ORNAMENTAL FENCE
- 6' OPAQUE FENCE
- PROP ASPHALT PAVEMENT
- PROP CONC PAVEMENT (SOUTH OF BUILDING)
- PROP CONC S/W
- EXIST. CONC. S/W TO REMAIN
- EXIST. ASPHALT PAVEMENT TO REMAIN
- PROP BUILDING
- PROP CONC PAVEMENT DRIVEWAYS
- PROP CONC TO BE STRUCTURALLY DESIGNED BY OTHERS

## HILLSBOROUGH COUNTY NOTES

1. ALL ELEVATIONS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. ALL NON-METALLIC PIPE WILL BE INSTALLED WITH 2 PAIR, 10 GAUGE, COPPER TRACER WIRE.
3. THE LOCATION OF ALL NEWLY INSTALLED FIRE HYDRANTS SHALL BE IDENTIFIED WITH A BLUE REFLECTIVE PAVEMENT MARKER INSTALLED ON THE ROADWAY, PERPENDICULAR TO THE FIRE HYDRANT. THE REFLECTIVE MARKER WILL BE LOCATED IN THE CENTER OF THE LANE CLOSEST TO THE HYDRANT.
4. THE ENGINEER OF RECORD AND/OR CONTRACTOR WILL BE RESPONSIBLE FOR THE FLOW TESTING AND COLOR CODING OF ALL NEWLY INSTALLED FIRE HYDRANTS IN THE EXISTING OR PROPOSED HILLSBOROUGH COUNTY RIGHT OF WAY AND UTILITY EASEMENTS THAT ARE TO BE DEDICATED TO HILLSBOROUGH COUNTY PRIOR TO THE FINAL INSPECTION OF THE PROJECT.
5. THE ENGINEER OF RECORD AND/OR CONTRACTOR SHALL REFER TO NFPA STANDARD 291 FOR FLOW TESTING AND COLOR CODING METHODS AND PROCEDURES.

## GENERAL NOTES

1. THE CONTRACTOR SHALL NOT OPERATE ANY VALVES OR PRESSURE TEST AGAINST ANY COUNTY INSTALLED VALVES OR FITTINGS.
2. GRASS AND MULCH, OR SOLID SOD, ALL AREAS IN EXISTING RIGHT-OF-WAY DISTURBED BY CONSTRUCTION.
3. CONTRACTOR IS TO COORDINATE ALL WORK WITHIN, BUT NOT LIMITED TO PUBLIC RIGHT-OF-WAY WITH UTILITY COMPANIES IN ORDER TO PREVENT DAMAGE TO UTILITY LINES AND THE MAKING OF ADJUSTMENTS TO SAME, IF REQUIRED.
4. CONTRACTOR SHALL CONTACT THE ENGINEER AND/OR THE OWNER PRIOR TO ANY CONSTRUCTION THAT MAY DAMAGE TREES.
5. FIRE HYDRANT, GATE VALVE AND BLOW-OFF VALVE ASSEMBLIES SHALL CONSIST OF ALL PIPE VALVES, TEE S, FITTINGS, AND ANY AND ALL OTHER APPURTENANCES COMPRISING A COMPLETE, WORKING UNIT.
6. CONTRACTOR SHALL PROVIDE ANY DEWATERING FOR UTILITY INSTALLATION IF REQUIRED.
7. ADJUSTING MANHOLE TOPS TO MATCH GRADE AND SLOPE OF THE FINISH PAVING SHALL BE INCLUDED IN THE RESPECTIVE CONTRACT UNIT PRICE FOR MANHOLES, PAYMENT OF WHICH WILL CONSTITUTE FULL COMPENSATION FOR THE CONSTRUCTION AND COMPLETION OF THE MANHOLE, AND NO ADDITIONAL PAYMENT WILL BE ALLOWED OR MADE FOR ADJUSTING MANHOLE TOPS.
8. BENDS SHALL BE INSTALLED IN WATER MAIN TO AVOID UNFORESEEN CONFLICTS IN EXISTING OR PROPOSED STRUCTURES.
9. THE JOINT DEFLECTION METHOD SHALL BE USED WHERE PRACTICAL IN LIEU OF INSTALLING BENDS.
10. CONTRACTOR SHALL VERIFY LOCATIONS AND DEPTHS OF EXISTING WATER AND SEWER LINES PRIOR TO BEGINNING CONSTRUCTION.
11. THE EXISTING UNDERGROUND UTILITY LINES SHOWN HEREON WERE TAKEN FROM DOCUMENTS FURNISHED BY OTHERS AND NOT FIELD VERIFIED, THEREFORE, THE ENGINEER CANNOT GUARANTEE THE ACCURACY OF SAME NOR ALL THAT ARE SHOWN. THE CONTRACTOR SHALL EXPOSE ALL UNDERGROUND UTILITY LINES IN COORDINATION WITH THE OWNERS TO HIS SATISFACTION AND MAKE ADJUSTMENTS TO SAME IN THE EVENT THERE ARE CONFLICTS WITH NEW CONSTRUCTION.
12. WHEN POTABLE WATER LINES PASS UNDERNEATH SEWER LINES, WATER LINES TO BE SLEEVED WITH SCHEDULE 80 PVC AND SEALED WITH WATERPROOF SEALANT WITHIN 5' OF SEWER CROSSINGS.

## CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING THE EXTENTS OF PAVEMENT RESTORATION BASED ON HIS MEANS AND METHODS OF INSTALLING WATER, SEWER AND STORMWATER INFRASTRUCTURE ADJACENT TO OR UNDER EXISTING PAVEMENT AREAS. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING LOCAL MUNICIPALITY AND STATE STANDARDS WHEN RESTORING PAVEMENT AND NOT SOLELY RELY ON CIVIL PLANS.
2. CONTRACTOR MUST VERIFY ALL EXISTING WATER, SEWER AND STORM WATER INFRASTRUCTURE WITHIN THE RIGHT OF WAY PRIOR TO ORDERING STRUCTURES. THE CONTRACTOR SHALL PROVIDE THE ENGINEER VERTICAL AND HORIZONTAL LOCATIONS OF INFRASTRUCTURE IN ORDER TO VERIFY ANY POTENTIAL CONFLICTS PRIOR TO ORDERING STRUCTURES.

## EXISTING UTILITY LOCATION NOTES

1. BEFORE BEGINNING SITE WORK, THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES AND OTHER FEATURES. THE CONTRACTOR MAY CONSULT THE UTILITY OWNER'S RECORD DRAWINGS, BUT THE UTILITY OWNER AND THE ENGINEER DO NOT GUARANTEE , BY IMPLICATION OR OTHERWISE, THE ACCURACY OF THE THESE DRAWINGS. THE SITE CONTRACTOR SHALL BE FINANCIALLY RESPONSIBLE FOR ANY MODIFICATION REQUIRED, OTHER THAN SHOWN ON PLANS.
2. EXISTING WATER MAIN AND OTHER UTILITY LOCATIONS SHOWN ARE APPROXIMATE PER THE SUBSURFACE UTILITY ENGINEERING (SUE) SURVEY.

## FLOOD ZONE

ACCORDING TO CURRENT FLOOD INSURANCE MAPS ISSUED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THE PROPERTY SHOWN APPEARS TO LIE WITHIN ZONE "X" PANEL NO. 12057C0245H DATED AUGUST 28, 2008.

COUNTY MODEL:
HILLSBOROUGH RIVER / TAMPA BYPASS CANAL 100 YEAR ELEVATION 38.34 FEET, NAVD88

## FIRE PROTECTION SYSTEM NOTES*

1. 7,326 SF BUILDING, 1 STORY, CONSTRUCTION TYPE 5B, SPRINKLED.
2. FIRE FLOW REQUIRED: 600 GPM FOR 2 HRS (2,250GPM X 0.25 FOR SPRINKLER BUILDING W/QR HEADS). THERE WILL NOT BE ANY HYDRANTS ONSITE; ONLY A DRAFTING CONNECTION FROM THE FIRE WATER STORAGE TANK.
3. THE TYPE OF FIRE SPRINKLER HEAD RESPONSE LINK THAT WILL BE INSTALLED ON THE FIRE SPRINKLER SYSTEM WILL BE QUICK RESPONSE.
4. THE FIRE WATER STORAGE TANK SIZE IS BASED ON NFPA 1142 FIRE WATER SUPPLY CALCULATION. THE MINIMUM WATER SUPPLY REQUIRED IS 29,670 GALLONS. A 36,833 GALLON FIRE WATER STORAGE TANK WILL BE PROPOSED. THE PROPOSED FIRE PUMP WILL BE A VERTICAL INLINE ELECTRIC FIRE PUMP RATED AT 500 GPM @ 80 PSI.
5. A 4" DRAFTING CONNECTION WILL BE PROVIDED TO DRAFT WATER FROM THE FIRE WATER STORAGE TANK. NO FIRE HYDRANTS ARE ANTICIPATED ON THIS SITE.
6. TANK WILL REFILL WITHIN A MAXIMUM OF 8 HOURS PER NFPA 22 (2018 EDITION) SECTION 42.1.4. BASED ON WELL PUMP SUPPLY FLOWRATE OF 62 GPM.
7. DRAFTING CONNECTION TYPE IS A 4.5" MALE NST CONNECTION WITH CAP & CHAIN.
8. FDC CONNECTION TYPE IS A 5" QUICK CONNECT (STORTZ) WITH A 30° TURNDOWN.

* DESIGN AND CALCULATIONS PROVIDED BY FIRE PROTECTION ENGINEER.


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CIVIL ENGINEERS CONSTRUCTION MANAGERS PLANNERS CEI

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# HILLSBOROUGH COUNTY THONOTOSASSA FIRE STATION NO. 21 REPLACEMENT

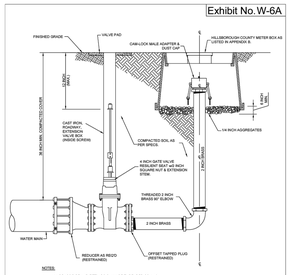
PROJECT #: 2116-05

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UTILITY PLAN

C-6.1

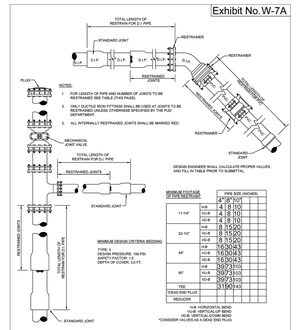
Exhibit No.W-6A




NOTES:
1. ALL BRASS PIPE AND FITTINGS SHALL BE THREADED SCH. 40.
2. CAM-LOCK MALE ADAPTER & DUST CAP SHALL BE STAINLESS STEEL/THREADED.
3. ACTUAL LENGTH OF THE BLOWOFF PIPING TO BE DETERMINED IN THE FIELD.
4. DEFLECT OR INSTALL FITTINGS AS REQUIRED TO MAINTAIN COVER AND TO SET BLOW-OFF ASSEMBLY PLUMB.
5. EXTENSION OF VALVE BOX SHALL BE SET SO AS TO RESERVE 1/2 OF THE ADJUSTMENT LENGTH FOR FUTURE USE.
6. A FULL SIZE IN-LINE VALVE MAY BE USED AT PROJECT PHASE LINES. THE VALVE MAY REQUIRE RELOCATION, IF THE VALVE FALLS WITHIN CONCRETE IN THE NEXT PHASE.

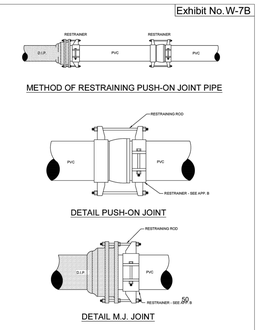
| BLOWOFF ASSEMBLY | 10/2021 |
|---|---|
| HILLSBOROUGH COUNTY, FLORIDA | SCALE: N.T.S. |

Exhibit No.W-7A



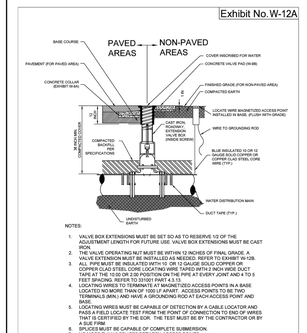

| RESTRAINED JOINT-STANDARD | 10/2021 |
|---|---|
| HILLSBOROUGH COUNTY, FLORIDA | SCALE: N.T.S. |

Exhibit No.W-7B




| RESTRAINED JOINT FOR PVC C-900 PIPE (4 IN TO 12 IN) | 10/2021 |
|---|---|
| HILLSBOROUGH COUNTY, FLORIDA | SCALE: N.T.S. |

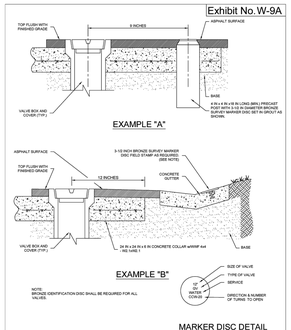
Exhibit No.W-12A




NOTES:
1. VALVE BOX EXTENSIONS MUST BE SET SO AS TO RESERVE 1/2 OF THE ADJUSTMENT LENGTH FOR FUTURE USE. VALVE BOX EXTENSIONS MUST BE CAST IRON.
2. ALL VALVE OPERATING NUT MUST BE WITHIN 12 INCHES OF FINAL GRADE. A VALVE EXTENSION MUST BE INSTALLED AS NEEDED. REFER TO EXHIBIT W-12B.
3. ALL PIPE MUST BE INSULATED WITH 10 OR 12 GAUGE SOLID COPPER OR COPPER CLAD STEEL CORE LOCATING WIRE TAPED WITH 2 INCH WIDE DUCT TAPE AT THE 10:00 OR 2:00 POSITION ON THE PIPE AT EVERY JOINT AND 4 TO 5 LINEAR FEET SPACING ALONG THE RUN OF PIPE.
4. LOCATING WIRES TO TERMINATE AT GROUND LEVEL MAGNETIZED ACCESS POINTS IN A BASE LOCATED NO MORE THAN OF 1000 LF APART. ACCESS POINTS TO BE TWO TERMINALS (MIN.) AND HAVE A GROUNDING ROD AT EACH ACCESS POINT AND A SUE RING.
5. LOCATING WIRES MUST BE CAPABLE OF DETECTION BY A CABLE LOCATOR AND PASS A FIELD LOCATE TEST FROM THE POINT OF CONNECTION TO END OF WIRES THAT IS CERTIFIED BY THE EOR. THE TEST MUST BE BY THE CONTRACTOR OR BY A SUE FIRM.
6. SPLICES SHALL BE CAPABLE OF COMPLETE SUBMERSION.
7. NO MORE THAN 6 SPLICES BETWEEN ACCESS POINTS.

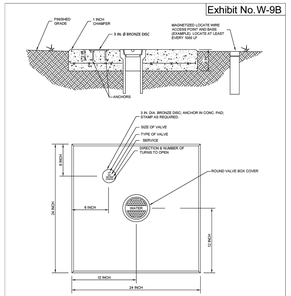
| VALVE AND TRACER WIRE PAVED OR NON-PAVED AREAS | 10/2021 |
|---|---|
| HILLSBOROUGH COUNTY, FLORIDA | SCALE: N.T.S. |

Exhibit No.W-9A




| VALVE BOX & MARKER INSTALLATION FOR PAVED AREAS | 10/2021 |
|---|---|
| HILLSBOROUGH COUNTY, FLORIDA | SCALE: N.T.S. |

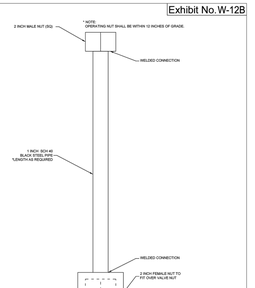
Exhibit No.W-9B




NOTES
1. CONCRETE TO BE TYPE I GENERAL PORTLAND CEMENT WITH 3/4" TOP SIZE AGGREGATE AND SHALL DEVELOP A 28-DAY COMPRESSIVE STRENGTH OF 3000 psi
2. REINFORCING STEEL SHALL BE 6x6 - W 1.4xW 1.4 W.W.F.
3. CONCRETE VALVE PAD SHALL BE POURED IN PLACE AND SHALL BE SET 1/2" ABOVE FINISHED GRADE

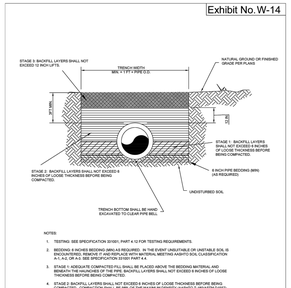
| CONCRETE VALVE PAD (FOR UNPAVED AREAS) | 10/2021 |
|---|---|
| HILLSBOROUGH COUNTY, FLORIDA | SCALE: N.T.S. |

Exhibit No.W-12B




| VALVE EXTENSION FOR GATE VALVES | 10/2021 |
|---|---|
| HILLSBOROUGH COUNTY, FLORIDA | SCALE: N.T.S. |

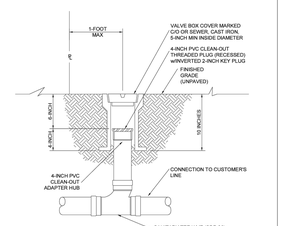
Exhibit No.W-14




NOTES:
1. TESTING: SEE SPECIFICATION 331001, PART 4.10 FOR TESTING REQUIREMENTS.
2. BEDDING: 6 INCHES BEDDING (MIN) AS REQUIRED. IN THE EVENT UNSUITABLE OR UNSTABLE SOIL IS ENCOUNTERED, REMOVE IT AND REPLACE WITH MATERIAL MEETING AASHTO SOIL CLASSIFICATION A-1, A-2, OR A-3. SEE SPECIFICATION 331001 PART 4.4.
3. STAGE 1: ADEQUATE COMPACTED FILL SHALL BE PLACED ABOVE THE BEDDING MATERIAL AND BENEATH THE HAUNCHES OF THE PIPE. BACKFILL LAYERS SHALL NOT EXCEED 6 INCHES OF LOOSE THICKNESS BEFORE BEING COMPACTED.
4. STAGE 2: BACKFILL LAYERS SHALL NOT EXCEED 6 INCH OF LOOSE THICKNESS BEFORE BEING COMPACTED. COMPACTION SHALL BE 98% OF THE MAXIMUM DENSITY (AASHTO T-180/ASTM D1557) TO A POINT 1 FT ABOVE THE PIPE (OR AS STATED IN THE SPECIFICATION).
5. STAGE 3: BACKFILL LAYERS SHALL NOT EXCEED 12 INCH LIFTS. COMPACTION SHALL BE 98% OF THE MAXIMUM DENSITY (AASHTO T-180/ASTM D1557) OR AS STATED IN THE SPECIFICATION.

| TRENCH DETAIL BACKFILL & COMPACTION | 10/2021 |
|---|---|
| HILLSBOROUGH COUNTY, FLORIDA | SCALE: N.T.S. |

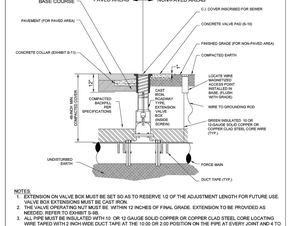
Exhibit No.S-2B




NOTE
1. ALL LATERALS PIPING AND FITTINGS SHALL BE GASKETED SDR 26 PVC
2. CLEANOUT SHALL NOT BE INSTALLED IN CONCRETE

| CLEAN-OUT DETAIL WITH VALVE BOX COVER | 10/2021 |
|---|---|
| HILLSBOROUGH COUNTY, FLORIDA | SCALE: N.T.S. |

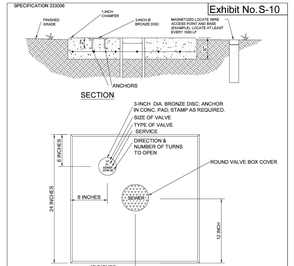
Exhibit No.S-9A




NOTES:
1. EXTENSION ON VALVE BOX MUST BE SET SO AS TO RESERVE 1/2 OF THE ADJUSTMENT LENGTH FOR FUTURE USE. VALVE BOX EXTENSIONS MUST BE CAST IRON.
2. ALL VALVE OPERATING NUT MUST BE WITHIN 12 INCHES OF FINAL GRADE. EXTENSION TO BE PROVIDED AS NEEDED. REFER TO EXHIBIT S-9B.
3. ALL PIPE MUST BE INSULATED WITH 10 OR 12 GAUGE SOLID COPPER OR COPPER CLAD STEEL CORE LOCATING WIRE TAPED WITH 2 INCH WIDE DUCT TAPE AT THE 10:00 OR 2:00 POSITION ON THE PIPE AT EVERY JOINT AND 4 TO 5 LINEAR FEET SPACING ALONG THE RUN OF PIPE. (FOR DIRECTIONAL DRILL WITH COTTED MUDD TO COPPER CLAD STEEL CORE WIRE WITH A MINIMUM BREAKING STRENGTH OF 1000 PSI. REFER TO 333002, PART 4.3.14
4. LOCATING WIRES TO TERMINATE AT GROUND LEVEL MAGNETIZED ACCESS POINTS IN A BASE LOCATED NO MORE THAN OF 1000 LF APART. ACCESS POINTS TO BE TWO TERMINALS (MIN.) AND HAVE A GROUNDING ROD AT EACH ACCESS POINT.
5. LOCATING WIRES SHALL BE CAPABLE OF DETECTION BY A CABLE LOCATOR AND PASS A FIELD LOCATE TEST THAT IS CERTIFIED BY THE ENGINEER OF RECORD OR THEIR REPRESENTATIVE. THE TEST MUST BE BY THE CONTRACTOR OR BY A SUE FIRM
6. SPLICES SHALL BE CAPABLE OF COMPLETE SUBMERSION.
7. NO MORE THAN 6 SPLICES BETWEEN ACCESS POINTS.

| VALVE AND TRACER WIRE PAVED OR NON-PAVED AREAS | 10/2021 |
|---|---|
| HILLSBOROUGH COUNTY, FLORIDA | SCALE: N.T.S. |

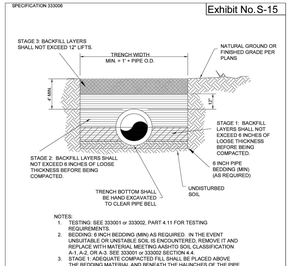
Exhibit No.S-10




NOTES:
1. CONCRETE TO BE TYPE I GENERAL PORTLAND CEMENT WITH 3/4" TOP SIZE AGGREGATE AND SHALL DEVELOP A 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI
2. REINFORCING STEEL SHALL BE 6x6 - W 1.4xW 1.4 W.W.F.
3. CONCRETE VALVE PAD SHALL BE POURED IN PLACE AND SHALL BE SET 1/2" ABOVE FINISHED GRADE

| CONCRETE VALVE PAD (FOR UNPAVED AREAS) | 10/2021 |
|---|---|
| HILLSBOROUGH COUNTY, FLORIDA | SCALE: N.T.S. |

Exhibit No.S-15




NOTES:
1. TESTING: SEE 333001 or 333002, PART 4.11 FOR TESTING REQUIREMENTS.
2. BEDDING: 6 INCHES BEDDING (MIN) AS REQUIRED. IN THE EVENT UNSUITABLE OR UNSTABLE SOIL IS ENCOUNTERED, REMOVE IT AND REPLACE WITH MATERIAL MEETING AASHTO SOIL CLASSIFICATION A-1, A-2, OR A-3. SEE 333001 or 333002 SECTION 4.4.
3. STAGE 1: ADEQUATE COMPACTED FILL SHALL BE PLACED ABOVE THE BEDDING MATERIAL AND BENEATH THE HAUNCHES OF THE PIPE. BACKFILL LAYERS SHALL NOT EXCEED 6 INCHES OF LOOSE THICKNESS BEFORE BEING COMPACTED.
4. STAGE 2: BACKFILL LAYERS SHALL NOT EXCEED 6 INCH OF LOOSE THICKNESS BEFORE BEING COMPACTED. COMPACTION SHALL BE 98% OF THE MAXIMUM DENSITY (AASHTO T-180/ASTM D1557) TO A POINT 1 FT ABOVE THE PIPE (OR AS STATED IN THE SPECIFICATION).
5. STAGE 3: BACKFILL LAYERS SHALL NOT EXCEED 12 INCH LIFTS. COMPACTION SHALL BE 98% OF THE MAXIMUM DENSITY (AASHTO T-180/ASTM D1557) OR AS STATED IN THE SPECIFICATION.

| TRENCH DETAIL BACKFILL & COMPACTION | 10/2021 |
|---|---|
| HILLSBOROUGH COUNTY, FLORIDA | SCALE: N.T.S. |


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AR91271 QUALIFIER LICENSE

WILDERARCHITECTURE, INC

LAUREN DECKER CAMPO LICENSE No. 57421 STATE OF FLORIDA PROFESSIONAL ENGINEER

Lauren D. Campo P.E. # 57421 11/12/2024


THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY LAUREN D. CAMPO, PE ON THE DATE ADJACENT TO THE SEAL USING A DIGITAL SIGNATURE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.


CAMPO ENGINEERING, INC.
FBPR REGISTRY NO.: 26726
1725 EAST 5TH AVENUE
TAMPA, FL. 33605
PHONE: (813) 215-7372
FAX: (813) 902-8782

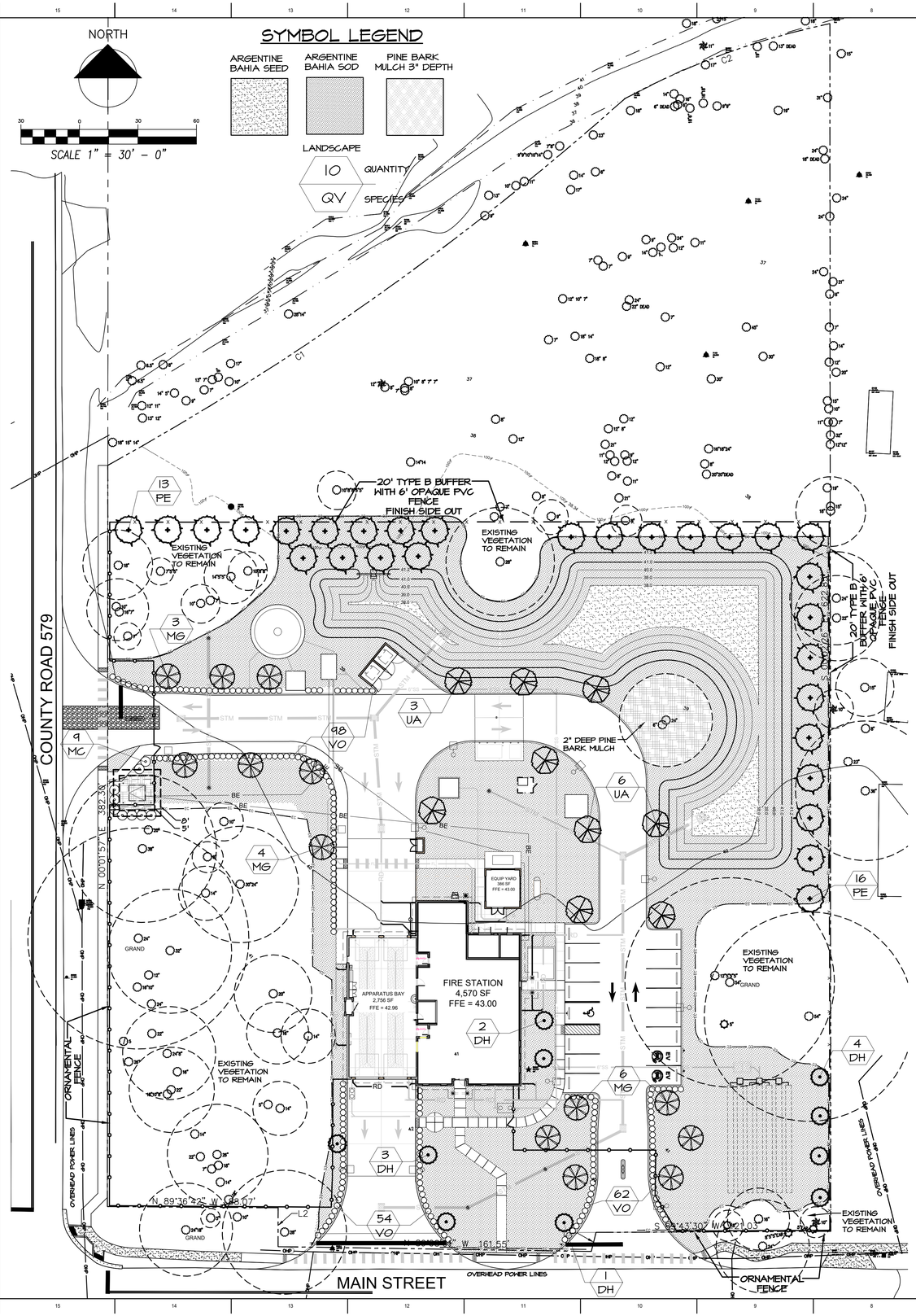

HILLSBOROUGH COUNTY BOARD OF COUNTY COMMISSIONERS
COUNTY CENTER
601 E KENNEDY BLVD
TAMPA, FL 33601

HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

| PROJECT #: 2116-05 | |
|---|---|
| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

UTILITY DETAILS

C-6.2




## PLANT MATERIALS LIST

| SYMBOL | QUANTITY | BOTANICAL NAME | COMMON NAME | SPECIFICATIONS | NATIVE | SPACING |
|---|---|---|---|---|---|---|
| MG | 13 | MAGNOLIA GRANDIFLORA | *SOUTHERN MAGNOLIA* | 14' HT X 6' SPD, 3" DBH | YES | AS SHOWN |
| PE | 29 | PINUS ELLIOTTII | *SLASH PINE* | 12' HT X 5' SPD, 2" DBH | YES | AS SHOWN |
| UA | 9 | ULMUS ALATA | *WINGED ELM* | 14' HT X 6' SPD, 3" DBH | YES | AS SHOWN |
| DH | 10 | ILEX CASSINE | *DAHOON HOLLY* | 10' HT X 4' SPD, 1" DBH | YES | AS SHOWN |
| MC | 9 | MYRICA CERIFERA | *WAX MYRTLE* | 60" HT X 48" SPD | YES | 60" OC |
| VO | 214 | VIBURNUM OBOVATUM | *WALTER'S VIBURNUM* | 24" HT X 24" SPD | YES | 36" OC |

## TREE REQUIREMENTS

INTERIOR REQUIREMENTS
ONE TREE PER TERMINAL ISLAND
4 ISLANDS/ 1 = 4 TREES

PERIMETER PARKING REQUIREMENTS
880' / 40 = 22 TREES

EAST 20' TYPE B BUFFER
622 LF / 20 = 31 TREES + 6' OPAQUE FENCE
31 - 14 EXISTING TREES = 17 TREES

NORTH 20' TYPE B BUFFER
372 LF / 20 = 19 TREES + 6' OPAQUE FENCE
19 - 8 EXISTING TREES = 11 TREES

TOTAL REQUIREMENTS
4 + 22 + 17 + 11 = 54 TREES @ 1" DBH = 54"

## CODE & REPLACEMENT TREES

| | |
|---|---|
| MAGNOLIA | 13 X 3" = 39" |
| SLASH PINE | 29 X 2" = 58" |
| HOLLY | 10 X 1" = 10" |
| WINGED ELM | 9 X 3" = 27" |
| TOTAL = | 61 TREES @ 134" |

134" - 54" CODE TREES = 80"
REPLACEMENT INCHES

## TREE REPLACEMENT FUND

REPLACEMENTS
2 @ 26" + 1 @ 24" + 1 @ 30" + 1 @ 35" = 146" X .5 = 73"
1 @ 43" GRAND + 1 @ 43" = 86"
73" + 86" = 159"

159" - 80 REPLACEMENTS" = 79" REPLACEMENTS X $65.00 =$5,135 TO THE COUNTY TREE BANK

## LANDSCAPE INSTALLATION NOTES

1) ALL PLANT MATERIALS SHALL BE FLORIDA #1 OR BETTER AS GIVEN IN, GRADES AND STANDARDS FOR NURSERY PLANTS, LATEST EDITION, PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES.

2) LOCATION OF PLANTS ON THE PLAN ARE DIAGRAMMATIC- SEE THE LANDSCAPE ARCHITECT FOR QUESTIONS ON EXACT LOCATIONS. THE PLANT MATERIALS LIST IS PROVIDED FOR THE CONVENIENCE OF THE LANDSCAPE CONTRACTOR. SHOULD THERE BE ANY DISCREPANCY BETWEEN THE PLANT LIST AND THE PLAN, THE PLAN SHALL PREVAIL.

3) IT IS THE LANDSCAPE CONTRACTORS RESPONSIBILITY TO INSURE THAT ALL PLANT BED AREAS HAVE PROPER DRAINAGE FOR OPTIMUM GROWTH OF LANDSCAPE MATERIAL BEFORE INSTALLATION BEGINS.

4) THE CONTRACTOR SHALL INSURE THAT ALL PLANTING ISLANDS AND OTHER AREAS SHALL BE CLEAN OF TRASH, CONSTRUCTION DEBRIS, OR OTHER WASTE MATERIALS TO A DEPTH OF 24" PRIOR TO LANDSCAPE INSTALLATION.

5) ALL PLANT BEDS AND TREE RINGS SHALL BE TREATED WITH A PRE-EMERGENT HERBICIDE AND THEN TOP-DRESSED WITH 3" DEEP PINE BARK NUGGETS. ALL NEW TREES SHALL HAVE A TREE RING WITH A MINIMUM OF 24" RADIUS, ALL NEW TREES AND PALMS SHALL BE STAKED.

6) NEW SOD SHALL BE ARGENTINE BAHIA SOD APPROXIMATELY 34,700 SF AND BAHIA SEED APPROXIMATELY 3,900 SF, IN THE LOCATIONS SHOWN ON THE PLAN. CONTRACTOR SHALL DETERMINE EXACT QUANTITIES IN THE FIELD. SOD AREAS SHALL BE MAINTAINED BY THE CONTRACTOR FROM THE TIME OF INSTALLATION TO THE TIME OF FINAL ACCEPTANCE.

7) TREES SHRUBS, AND GROUND COVER SHALL BE INSTALLED USING THE FOLLOWING PROCEDURE: PLANT PITS SHALL BE EXCAVATED TO TWICE THE DIAMETER OF THE PLANT ROOT BALL. AERATE EXISTING SOIL BEFORE BACKFILLING PIT. ADD AGRIFORM FERTILIZER TABLETS TO EACH PLANT PIT, AS PER THE SPECIFICATIONS.

8) TREE INSTALLATION: ALL REQUIRED TREES SHALL BE INSTALLED 1" - 2" ABOVE FINISH GRADE. TREES INSTALLED OR BURIED TOO DEEP SHALL BE RESET TO THIS STANDARD. REMOVE THE TOP 1/3 OF THE WIRE BASKETS ON ALL B & B STOCK.

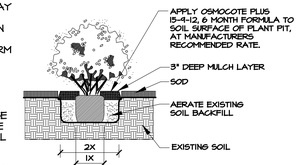
9) ALL TRIMMING UNDERTAKEN ON A TREE PROTECTED BY THE PROVISIONS OF THE LAND DEVELOPMENT CODE SHALL BE IN ACCORDANCE WITH THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) A-300 PRUNING STANDARDS.

## SCREENING ABOVE GROUND UTILITIES

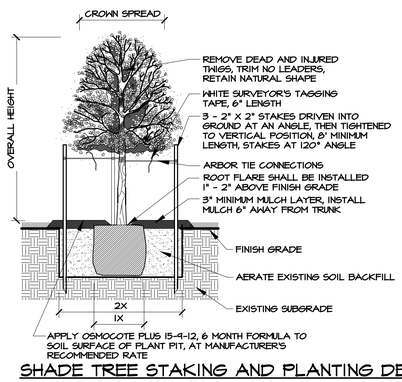
1) THE CONSTRUCTION OF ALL ABOVE GROUND UTILITY APPURTENANCES VISIBLE FROM THE PUBLIC RIGHT-OF-WAY SUCH AS PEDESTALS, UTILITY METERS, TRANSFORMERS, BACK-FLOW PREVENTION DEVICES, ETC. FOR NEW DEVELOPMENT OR REDEVELOPMENT ACTIVITIES SHALL CONFORM TO SCREENING REQUIREMENTS AS OUTLINED IN SECTION 6.06.06.C.10 OF THE LANDSCAPE DEVELOPMENT CODE. PLANT LOCATION MUST BE CONSIDERATE OF REQUIRED SPATIAL SEPARATIONS FROM A FIRE FLOW PROTECTION APPLIANCE IN ACCORDANCE TO THE UNIFORM FIRE CODE, AND PER WATER, WASTEWATER AND RECLAIMED WATER TECHNICAL SPECIFICATIONS SPEC 331001, PART 2.6.4.2., MUST BE LOCATED A MINIMUM OF 5' FROM UTILITY SLABS AND 3' FROM UNDERGROUND VALVES. TREES MUST BE LOCATED A MINIMUM OF 8' FROM UTILITY SLABS. DO NOT INSTALL ANY SCREENING THAT WILL HINDER ACCESS IN THE FUTURE TO THE METER ASSEMBLY FROM THE INTERIOR OF THE SITE.

2) FOR ABOVE GROUND UTILITY APPURTENANCES ILLUSTRATED ON THE PLANS, THE TYPE OF SCREENING MUST BE CLEARLY NOTED TO MATCH THE OVERALL HEIGHT FOR THE TYPE OF ABOVE GROUND UTILITY SPECIFIED ON THE PLANS. UTILIZATION OF EVERGREEN PLANT MATERIAL MUST BE DESCRIBED BY SPECIES, SPACING AND OVERALL HEIGHT FOR THE TYPE OF UTILITY TO BE SCREENED. UTILIZATION OF OPAQUE FENCING OR OTHER SCREENING MATERIAL IS PERMITTED. THE METER ASSEMBLY MUST BE ACCESSIBLE BY BOOM TRUCK OFF A COUNTY RIGHT-OF-WAY OR AN INTERIOR PAVED ACCESS ROAD AT LEAST 12' IN WIDTH PER SPEC 331001, PART 2.6.4. DO NOT INSTALL ANY SCREENING THAT WILL HINDER ACCESS IN THE FUTURE TO THE METER ASSEMBLY FROM THE INTERIOR OF THE SITE.

3) TRANSFORMER IS 56" HIGH, PROPOSED SCREENING SHRUBS ARE 60" HIGH.

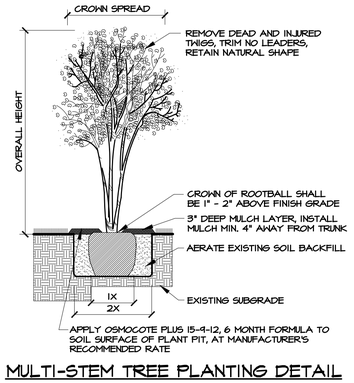



SHRUB PLANTING DETAIL




SHADE TREE STAKING AND PLANTING DETAIL

CONTRACTOR SHALL REMOVE STAKING AND GUYING MATERIALS AFTER ONE GROWING SEASON.




MULTI-STEM TREE PLANTING DETAIL

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AR91271 QUALIFIER LICENSE

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WEEKI WACHEE, FLORIDA 34614
(813) 831-9595
alyson@andersonlesniak.net
www.andersonlesniak.net

HILLSBOROUGH COUNTY
BOARD OF COUNTY
COMMISSIONERS COUNTY
CENTER

601 E KENNEDY BLVD
TAMPA FL 33601

HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

| PROJECT #: 2116-05 | |
|---|---|
| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

LANDSCAPE PLAN

L1.1

NORTH

30 0 30 60

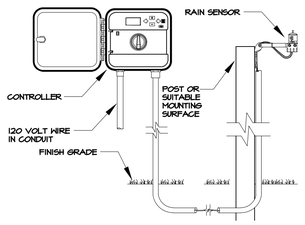
SCALE 1" = 30' - 0"

## SYMBOL LEGEND

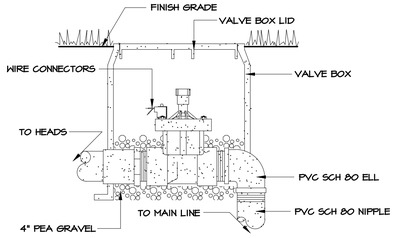
IRRIGATION

#1 — ZONE NUMBER

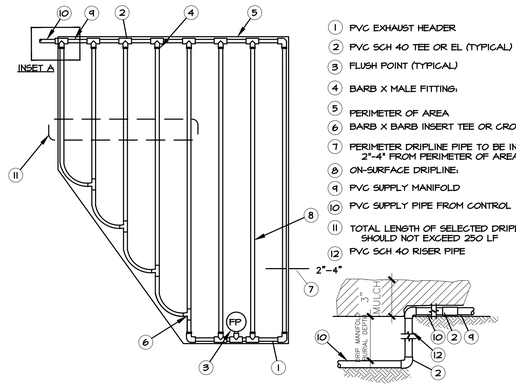
28 — ZONE GPM




## CONTROLLER WITH RAIN SENSOR




## ELECTRIC VALVE DETAIL




1. PVC EXHAUST HEADER
2. PVC SCH 40 TEE OR EL (TYPICAL)
3. FLUSH POINT (TYPICAL)
4. BARB X MALE FITTING:
5. PERIMETER OF AREA
6. BARB X BARB INSERT TEE OR CROSS:
7. PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
8. ON-SURFACE DRIPLINE:
9. PVC SUPPLY MANIFOLD
10. PVC SUPPLY PIPE FROM CONTROL
11. TOTAL LENGTH OF SELECTED DRIPLINE SHOULD NOT EXCEED 250 LF
12. PVC SCH 40 RISER PIPE

## ON-SURFACE DRIPLINE INSTALLATION

## IRRIGATION MATERIAL LIST

| SYMBOL | QUANTITY | MODEL NUMBER |
|---|---|---|
| A ● | 51 | 1806-18-VAN, 6" POP-UP SPRAY |
| B ● | 28 | 1806-15-MPR, 6" POP-UP SPRAY |
| C ● | 8 | 1806-12-MPR, 6" POP-UP SPRAY |
| D ● | 3 | 1806-15SST-4X30, SIDE STRIP, 6" POP-UP SPRAY |
| E ● | 3 | 1806-15EST-4X15, END STRIP, 6" POP-UP SPRAY |
| F ● | 61 X 2 = 122 | 1402-050, PRESSURE COMPENSATING BUBBLER, TWO PER TREE |
| G ● | 4 | 1806-08-MPR, 6" POP-UP SPRAY |
| ▨ | ± 1,400 LF | XFD-09-12-250, LANDSCAPE DRIPLINE |
| ⊕ | 7 | 150-PEB-PRS-D, 1-1/2" ELECTRICAL VALVE |
| ⊕ | 1 | XCZ-PRB-150-COM, 1-1/2" CONTROL ZONE KIT |
| ▬ ▬ ▬ | ± 435 LF | 2" PVC, SCHEDULE 40 MAIN LINE |
| ⊠ | 1 | ESP-LX, 9 STATION CONTROLLER |
| | 1 | RAIN CHECK, AUTOMATIC RAIN SHUTOFF |

## IRRIGATION INSTALLATION NOTES

1) ALL QUANTITIES SHOWN ON THE DRAWINGS ARE NOT GUARANTEED AS TO ACCURACY AND ARE SHOWN FOR THE PURPOSES OF INDICATING VOLUME OF WORK. IT SHALL BE THE RESPONSIBILITY OF THE BIDDER TO SATISFY HIMSELF AS TO THE ACCURACY OF THE QUANTITIES.

2) PIPING OR VALVES MAY SOMETIMES BE INDICATED AS BEING LOCATED IN UNLIKELY AREAS; I.E., IN BUILDINGS, UNDER PAVEMENT, OR OUTSIDE OF THE PROPERTY LINES. THIS IS DONE FOR GRAPHIC CLARITY ONLY. WHENEVER POSSIBLE, PIPING IS TO BE INSTALLED IN SOIL AREAS.

3) INSTALL IRRIGATION SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES.

4) PIPE SIZES ARE LABELED AT LOCATIONS WHERE AN INCREASE IN SIZE OCCURS. CONTINUE PIPE SIZE UNTIL SIZE INCREASE IS INDICATED. PIPES SHALL BE INSTALLED ALONG WALKS, CURBS OR WALLS, THEY SHALL NOT BE INSTALLED IN THE MIDDLE OF PLANTERS. CONTRACTOR SHALL REVIEW LANDSCAPE PLANS TO DETERMINE TREE AND PALM LOCATIONS. MAIN LINE AND LATERALS SHALL BE SCH 40 PVC.

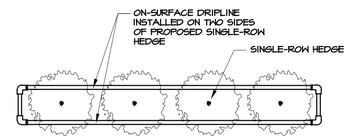
5) ALL POP-UP SPRAY AND ROTOR HEADS SHALL BE INSTALLED ON 18" LONG FLEX PIPE CONNECTIONS. RISERS SHALL BE 28" IN HEIGHT OR 4" ABOVE ADJACENT SHRUBS. ALL IRRIGATION EQUIPMENT SHALL BE BY HUNTER, UNLESS OTHERWISE STATED ON THE PLAN.

6) WATER SOURCE IS A NEW 4" WELL WITH 3 HP PUMP. IRRIGATION SYSTEM REQUIRES 45 GPM AT 50 PSI. WIRING USED FOR CONNECTING THE VALVES TO THE CONTROLLER SHALL BE TYPE UF, 16 AWG WIRE, WITH PVC INSULATION. ZONE WIRES SHALL BE COLOR CODED, AND COMMON WIRE SHALL BE WHITE. VALVE BOXES SHALL BE CARSON MODEL 1220-12, 12" X 21"X 14" RECTANGLE, WITH GREEN LID. PLACE 3" DEEP LAYER OF GRAVEL INSIDE EACH VALVE BOX.

7) NEW CONTROLLER SHALL BE POST MOUNTED IN THE WELL ENCLOSURE AND APPROVED BY THE PROJECT MANAGER. AFTER 30 DAY PLANT MATERIAL ESTABLISHMENT PERIOD, CONTROLLER SHALL BE SET AS PER LOCAL WATER RESTRICTIONS. AFTER IRRIGATION SYSTEM INSTALLATION IS COMPLETE, CONTRACTOR SHALL PROVIDE THE OWNER WITH AN AS-BUILT DRAWING SHOWING LOCATION OF IRRIGATION HEADS, VALVES AND PIPE.

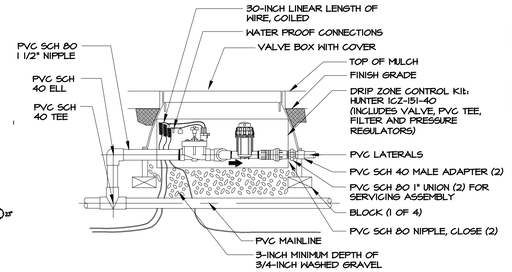
8) PIPING ON THE PLAN IS DIAGRAMMATICALLY ROUTED FOR CLARITY. DESIGN MODIFICATIONS SHALL BE MADE TO MEET FIELD CONDITIONS. THE PIPING SCHEMATIC IS DESIGNED TO MINIMIZE TRENCHING. WHENEVER POSSIBLE RUN MULTIPLE LINES AND WIRE IN THE SAME TRENCH.

9) WHERE EXISTING OR PROPOSED PAVED SURFACES CROSS IRRIGATION LINES, ALL PIPING UNDER SAID SURFACES SHALL BE IN SLEEVES. SLEEVES SHALL BE SCH 40 PVC, MINIMUM 2" DIAMETER OR AS SPECIFIED ON PLAN. WHERE EXISTING PAVEMENTS MUST BE CUT TO INSTALL IRRIGATION PIPE, SAW CUT SIX INCHES WIDER THAN THE NEEDED TRENCH. REPAIR CUTS WITH AN EQUIVALENT MATERIAL TO MATCH EXISTING.




## SINGLE-ROW HEDGE DRIPLINE DETAIL

NOTE: TOTAL LENGTH OF DRIPLINE SHALL NOT EXCEED 250 LF



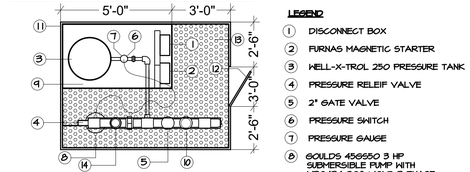

## DRIP CONTROL ZONE KIT

## DRIP INSTALLATION NOTES

1) DRIPLINE SHALL BE LAID DIRECTLY UNDER THE 3" MULCH BED. MULCHING OF PLANT BEDS SHALL OCCUR AFTER DRIPLINE INSTALLATION.

2) DRIPLINE SHALL COVER THE FULL EXTENT OF ALL PLANTING BEDS WHERE IT IS INDICATED ON THE DRAWINGS, AT A SPACING OF 18" ON CENTER. ON THE DRIPLINE ZONES, THE ELECTRIC VALVE, DISC FILTER, AND PRESSURE REGULATOR SHALL BE PLACED UNDERGROUND IN A PLASTIC VALVE BOX WITH COVER. ADJUST PRESSURE REGULATOR TO ACCOMMODATE EACH ZONE.

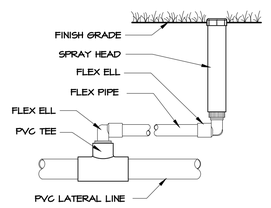
3) INDIVIDUAL SECTIONS OF DRIPLINE SHALL BE CONNECTED USING PVC PIPE, SIZED AS PER GPM REQUIREMENTS. DRIPLINE SHALL BE STAPLED OR OTHERWISE FASTENED TO THE FINISH GRADE EVERY 4' ON CENTER.



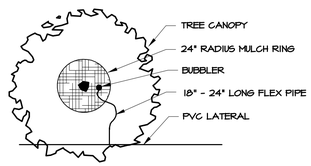

LEGEND

1. DISCONNECT BOX
2. FURNAS MAGNETIC STARTER
3. WELL-X-TROL 250 PRESSURE TANK
4. PRESSURE RELEIF VALVE
5. 2" GATE VALVE
6. PRESSURE SWITCH
7. PRESSURE GAUGE
8. GOULDS 456550 3 HP SUBMERSIBLE PUMP WITH M30434 208 VOLT, 3 PHASE MOTOR. OR TO MATCH POWER AVAILABLE ON SITE
9. 5' X 4' X 4" REINFORCED CONCRETE SLAB
10. PRESSURE VACUUM BREAKER
11. 4' HT CHAIN LINK FENCE, 8'x8' ENCLOSURE WITH GATE
12. 3' WIDE GATE
13. 9" DEEP LAYER OF GRAVEL
14. CYCLE STOP VALVE MODEL CSV3 - 2" INSTALL AS RECOMMENDED BY MANUFACTURER

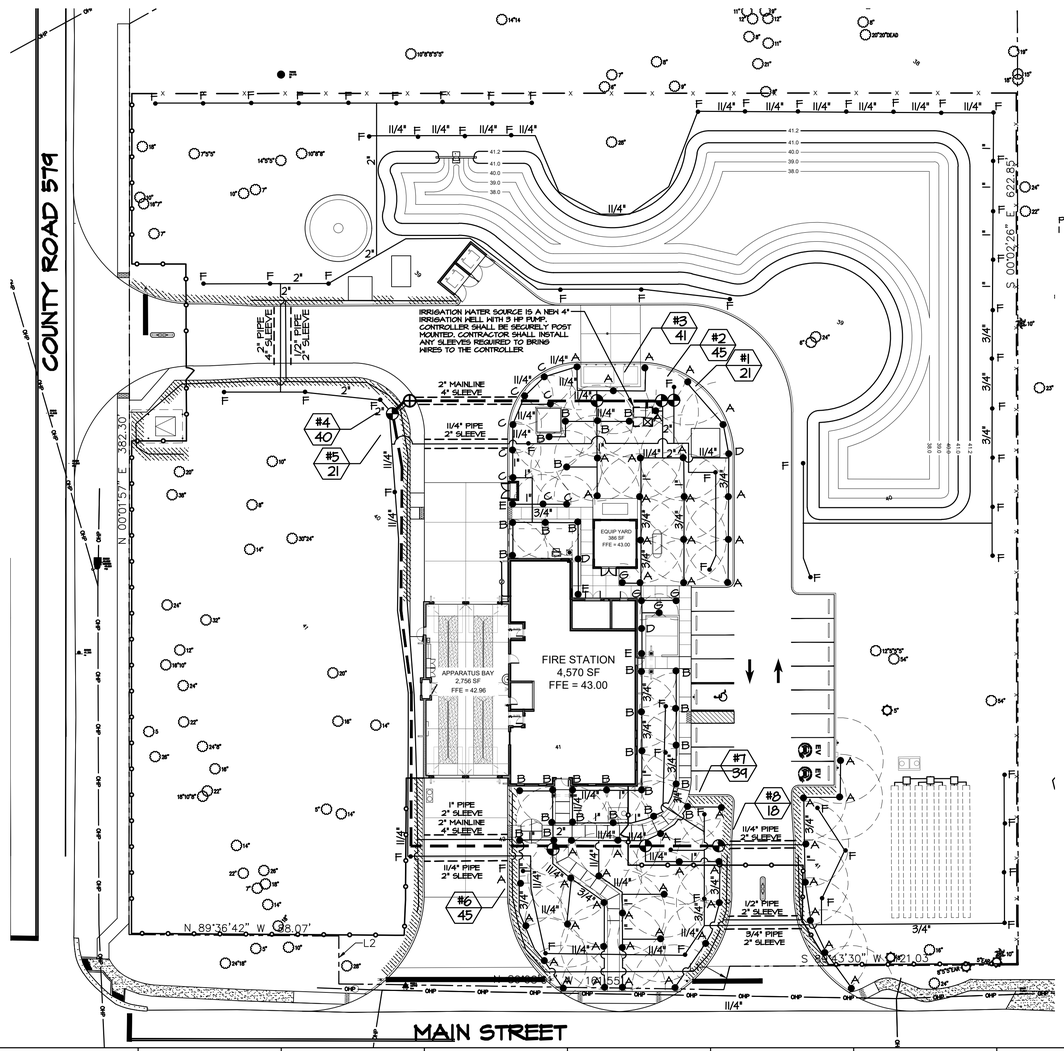
## 4" WELL WITH 3 HP PUMP




## 6" POP-UP SPRAY DETAIL




## BUBBLER DETAIL





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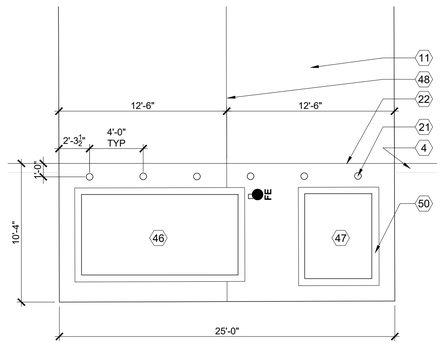

HILLSBOROUGH COUNTY BOARD OF COUNTY COMMISSIONERS COUNTY CENTER
601 E KENNEDY BLVD
TAMPA FL 33601

HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

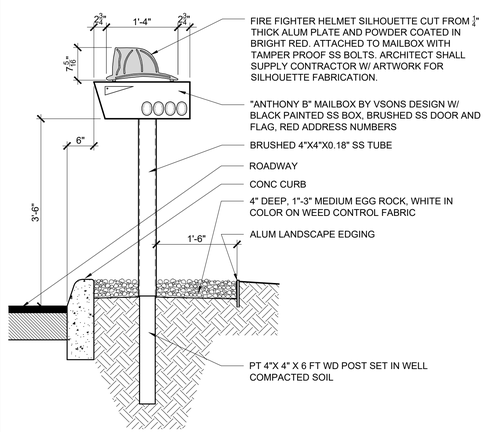
| PROJECT #: 2116-05 | |
|---|---|
| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

IRRIGATION PLAN

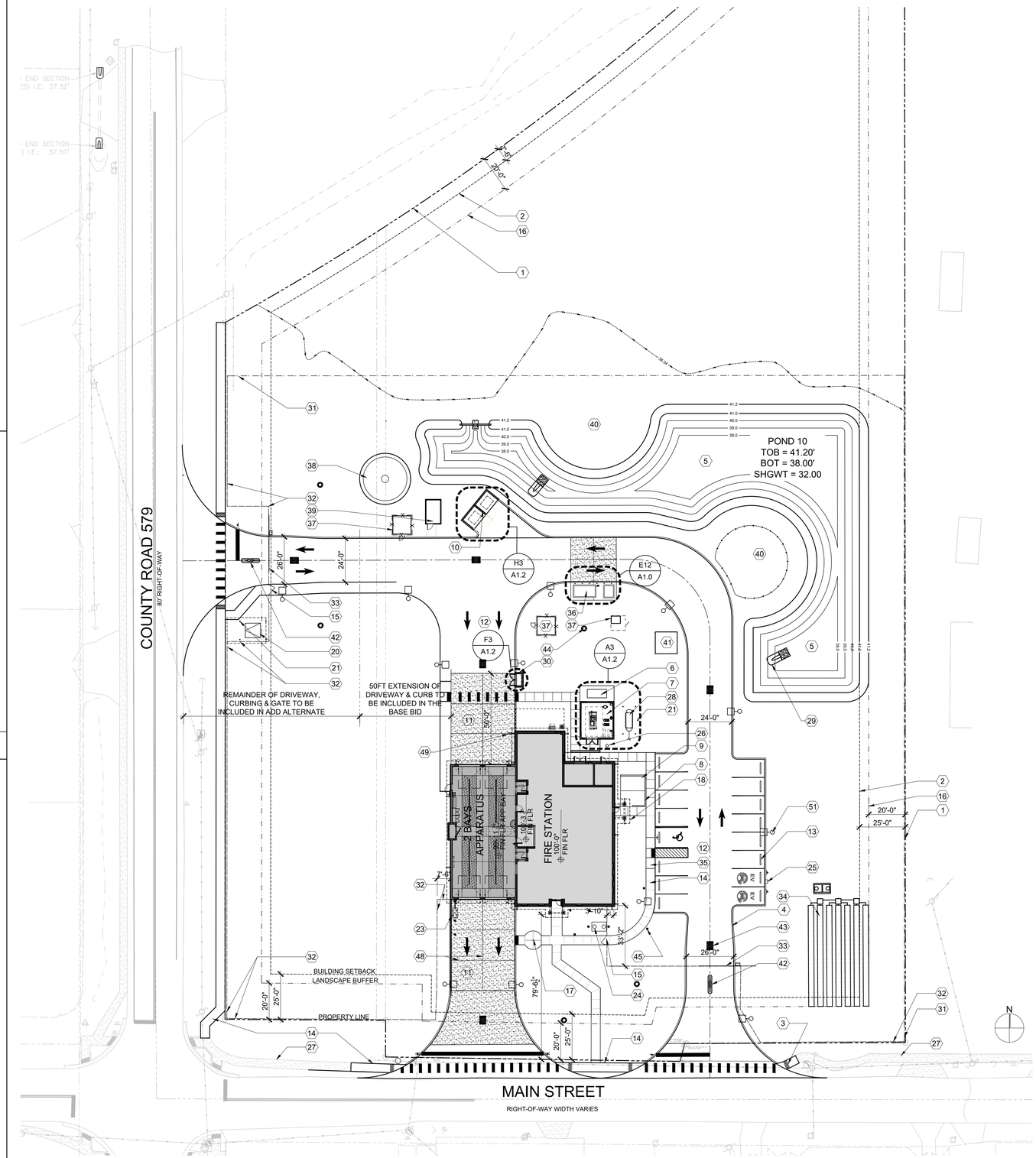
L2.1




FUELING STATION ENLARGED PLAN
3/16" = 1'-0" | E12




MAILBOX DETAIL
3/4" = 1'-0" | A12




SITE PLAN
1" = 30'-0" | A3

## GENERAL NOTES

1. SITE IS LOCATED IN WIND BORNE DEBRIS ZONE. PROVIDE IMPACT RATED OPENINGS (MISSILE "E").
2. RISK CATEGORY: IV (ESSENTIAL FACILITY).
3. REFER TO CIVIL DRAWINGS FOR PAVEMENT SCOPE / TYPES.
4. CIVIL FFE OF 43.0' = ARCH FFE OF 100'-0"
5. CONNECT DOWNSPOUTS TO UG DRAINAGE, TYP
6. COORDINATE MAIL BOX LOCATION
7. FUELING TANKS TIED TO VEEDER ROOF SYSTEM FOR MONITORING
8. COORDINATE APP BAY FLOOR TRENCH INVERTS WITH SLOPED SLAB.
9. OPAQUE FENCE BASIS OF DESIGN: SUPERIOR FENCE AND RAIL. VINYL FENCE STYLE: WHITE HAMILTON (SUPERIORFENCEANDRAIL.COM)

## SPECIFIC NOTES

1. PROPERTY LINE, TYP
2. BUILDING SETBACK, TYP.
3. DETECTABLE WARNING SURFACE, TYP
4. CONC CURB, TYP
5. RETENTION POND
6. DIESEL GENERATOR ON CONC SLAB (ADD ALTERNATE)
7. EQUIPMENT YARD
8. 48" H WALL
9. CONC PATIO W/ GAS CONNECTION FOR OUTDOOR GRILL. SLOPE SLAB TO DRAIN TOWARDS WALL OPENINGS - REFER TO ELEVATIONS.
10. DUMPSTER ENCLOSURE
11. CONC PAVEMENT
12. ASPHALT PAVEMENT
13. WHEEL STOP, TYP
14. CONC SIDEWALK, TYP.
15. PEDESTRIAN GATE TO MATCH FENCE - PROVIDE ACCESS CONTROL - CARD READER KEYPAD COMBO.
16. 20 FT LANDSCAPE BUFFER
17. FLAG POLE W/ LUMINAIRE
18. ROOF OVERHANG, TYP.
19. CATCH BASIN, TYP
20. UTILITY TRANSFORMER
21. BOLLARDS, TYP.
22. CONC EXPANSION JOINTS, TYP.
23. SAND AND OIL INTERCEPTOR
24. GREASE TRAP
25. ELECTRIC CAR CHARGING STATION
26. 30 FT POLE FOR WEATHERBUG / RACES ANTENNAS.
27. EXIST SIDEWALK
28. ABOVE GROUND 250 GAL PROPANE TANK AND CONCRETE PAD
29. MES-CONC, TYP
30. OXYGEN TANK STORAGE SHED
31. 6 FT OPAQUE FENCE, TYP
32. 4 FT ORNAMENTAL FENCE, TYP
33. ROLLER GATE TO MATCH FENCE
34. SEPTIC FIELD
35. RAMP - CONC (ADA), TYP
36. FUELING STATION
37. WELL W/ 4FT H CHAIN LINK FENCE AND 36FT WIDE GATE.
38. ABOVE GROUND WATER TANK - 24 FT DIAM.
39. PRE-MANUFACTURED FIRE PUMP HOUSE (8' X 13' INTERIOR DIMENSION) DESIGNED AND CONSTRUCTED BY MANUF. BASIS OF DESIGN KYSOR PANEL SYSTEMS ENVIRONMENTAL ENCLOSURES. PROVIDE 1-HR RATED ENCLOSURE.
40. EXISTING TREE TO BE PRESERVED
41. 10' X 12' PRE FAB MTL STORAGE SHED ON 12' X 12' CONC SLAB (ADD ALTERNATE)
42. CONCRETE ISLAND WITH GATE ACCESS CONTROL. PROVIDE CARD READER / KEYPAD COMBO AND INTERCOM.
43. CATCH BASIN - REFER TO CIVIL DWGS, TYP.
44. INLET STRUCTURE, TYP. - REFER TO CIVIL DWGS.
45. CLEAN OUT, TYP - REFER TO CIVIL AND PLUMBING DWGS.
46. FUEL TANK - DIESEL
47. UNLEADED FUEL TANK
48. CONCRETE SLAB CONTROL JOINT, TYP.
49. VALVE BOX - COORD LOCATIN IN SLAB WITH CONTROL JOINTS.
50. RAISED CONC. HOUSEKEEPING PAD, TYP
51. LIGHT POLE, TYP.

NOTES
A1

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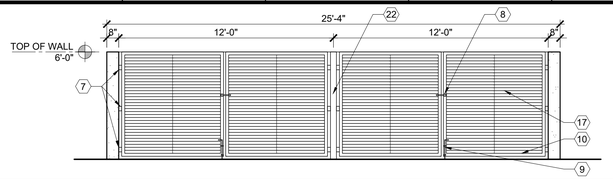
# HILLSBOROUGH COUNTY THONOTOSASSA FIRE STATION NO. 21 REPLACEMENT

PROJECT #: **2116-05**

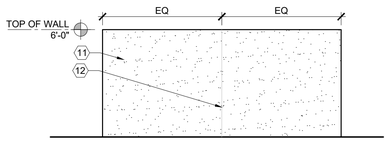
| Distribution | Date |
|---|---|
| SCHEMATIC DESIGN | 03.15.2024 |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

SITE PLAN

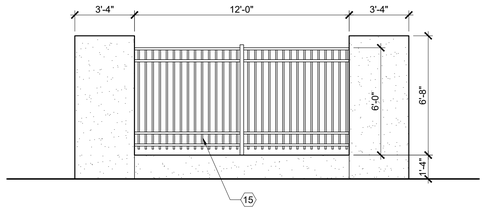
A1.0



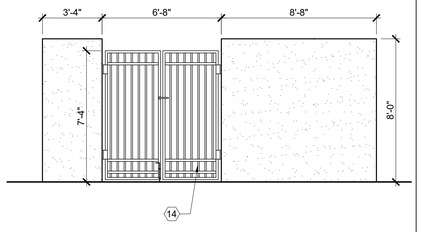

DUMPSTER ENCLOSURE FRONT ELEVATION
1/4" = 1'-0" K11



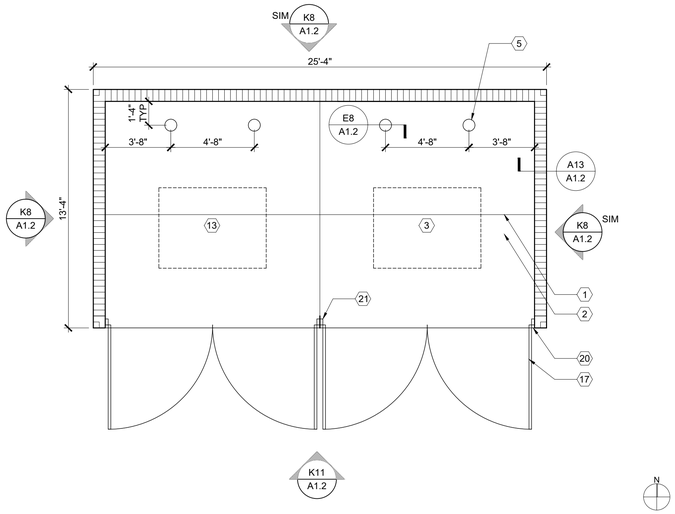

DUMPSTER ENCLOSURE TYPICAL ELEVATION
1/4" = 1'-0" K8




HVAC ENCLOSURE ELEVATION
1/4" = 1'-0" H11



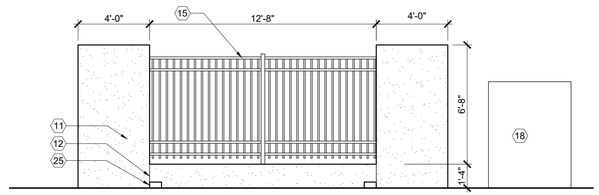

HVAC ENCLOSURE ELEVATION
1/4" = 1'-0" H8



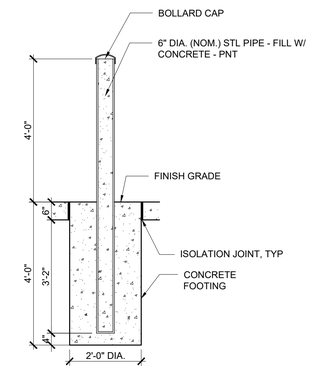

DUMPSTER ENCLOSURE PLAN
1/4" = 1'-0" H3

## GENERAL NOTES

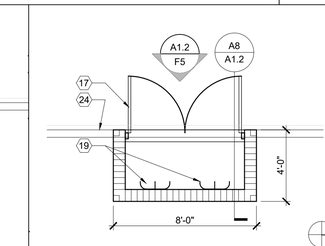
1. COORDINATE ELEVATED HOUSEKEEPING PAD DIMENSIONS WITH THE EQUIPMENT SELECTED AND APPROVED. ALERT ARCHITECT IF SELECTIONS / APPROVALS CREATE CONFLICTS, INCLUDE CLEARANCES REQ BY PRODUCTS.
2. PROVIDE EXPANSION JOINTS AT PERIMETER OF HOUSEKEEPING PADS, TYP
3. TYPICAL ORNAMENTAL METAL FENCE: 4 RAIL STYLE WITH 3/4" SQUARE EXTRUDED 0.050" ALUMINUM TUBE PICKETS AND 2-1/2" REINFORCED POSTS. ALL ALUMINUM JOINTS TO BE WELDED. ALL FASTENERS TO BE STAINLESS STEEL. ALL COMPONENTS TO HAVE BLACK POWDER COAT FINISH. GATE HARDWARE TO INCLUDE 3" PIN HINGES, "STRONG ARM" LOCKABLE LATCH, AND CANE BOLT. BASIS OF DESIGN - AMERISTAR ECHELON PLUS "MAJESTIC".
4. METAL GATES TO MATCH ORNAMENTAL FENCING WITH LOCKING LATCH, HEAVY DUTY HINGES, AND CANE BOLT.
5. LOUVER GATES: ECLIPSE DESIGN AS MANUFACTURED BY AMETCO MANUFACTURING CORP. OR EQUAL. RESISTANCE WELDED EXTRUDED ALUMINUM ECLIPSE DESIGN HAS FORMED EXTRUDED INCLINED MAIN BARS ON 2 1/16" CENTERS. CROSS BARS WITH POWDER COAT FINISH ARE ON CENTERS UP TO 18". ALUMINUM TO BE 6063 EXTRUSIONS.




HVAC ENCLOSURE ELEVATION
1/4" = 1'-0" F11




BOLLARD DETAIL
1/2" = 1'-0" E8



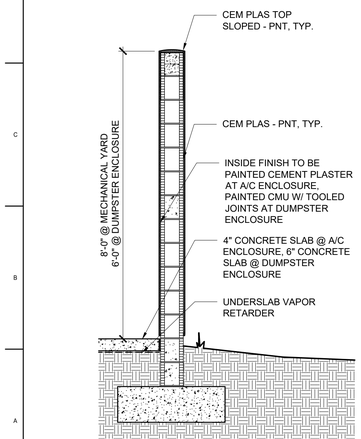

OXYGEN TANK SHED FRONT ELEVATION
1/4" = 1'-0" F5



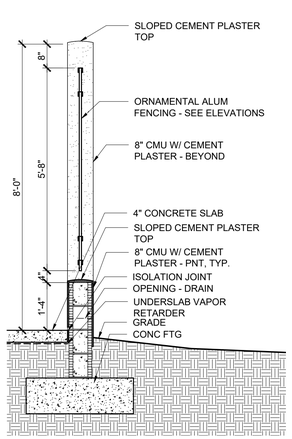

OXYGEN TANK SHED
1/4" = 1'-0" F3

## SPECIFIC NOTES

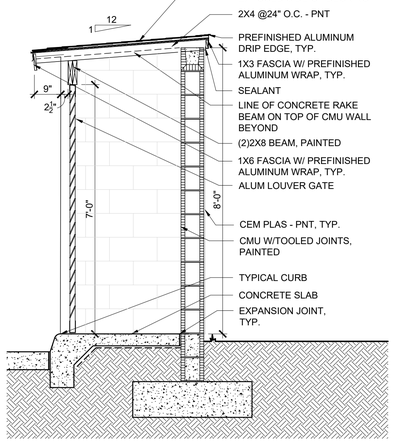
1. CJ, TYP
2. CONCRETE SLAB
3. RECYCLING DUMPSTER / CONTAINER, N.I.C.
4. RAISED CONC HOUSEKEEPING PAD, TYP
5. BOLLARD, TYP
6. EXPANSION JOINT, TYP
7. HEAVY DUTY HINGES
8. SLIDE BOLT
9. CANE BOLT
10. 2" SQUARE TUBING FRAME, TYP
11. PAINTED CEMENT PLASTER ON 8" CMU, TYP
12. PLASTER CONTROL JOINT, TYP
13. DUMPSTER, N.I.C.
14. ALUM GATE
15. ORNAMENTAL ALUM FENCE, TYP
16. ASPHALT SHINGLES ROOF
17. LOUVER GATE
18. BACK-UP DIESEL GENERATOR ON CONC PAD (ADD ALTERNATE)
19. HEAVY DUTY OXYGEN CYLINDER BRACKETS (4 CYLINDER TOTAL) - PROVIDED BY OWNER INSTALL BY GC.
20. POSITION HINGES TO ALLOW GATE TO OPEN 120 DEG W/O CONFLICT W/ MASONRY WALLS, TYP.
21. 4"X4" POST
22. COORD RAISED CONC HOUSEKEEPING PAD WITH MECH & STRUCTURAL DWGS, TYP
23. 250 GAL PROPANE TANK - ABOVE GROUND. GC TO PROVIDE 10 FT CLEAR FROM ANY SOURCE OF IGNITION.
24. CONC CURB, TYP
25. 4" X 8" OPENING ON WALL - DRAIN, TYP
26. SLOPE FLOOR SLAB TOWARDS DRAIN OPENINGS ON WALLS ($\frac{1}{2}$" SLOPE FROM CENTER)



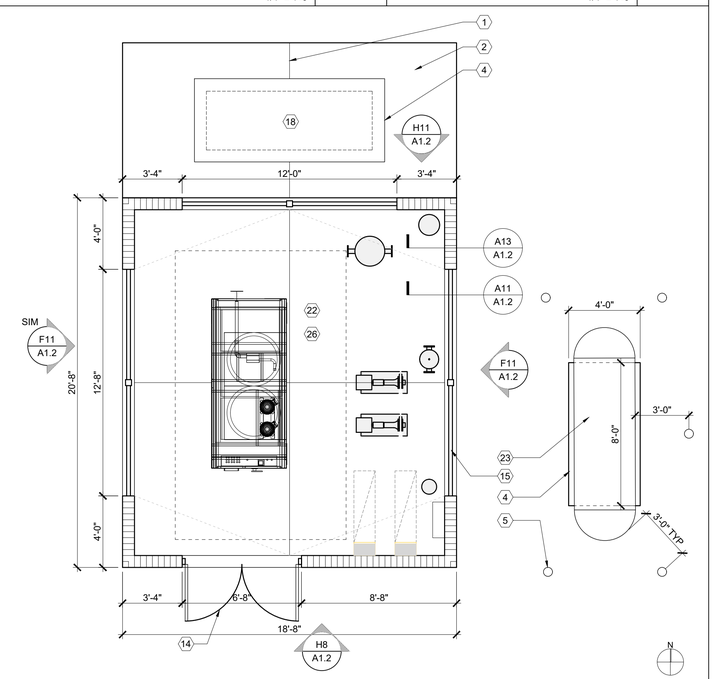

WALL SECTION
1/2" = 1'-0" A13




MECH YARD WALL SECTION
1/2" = 1'-0" A11




EXT STORAGE WALL SECTION
1/2" = 1'-0" A8




MECHANICAL YARD ENLARGED PLAN
1/4" = 1'-0" A3

NOTES A1

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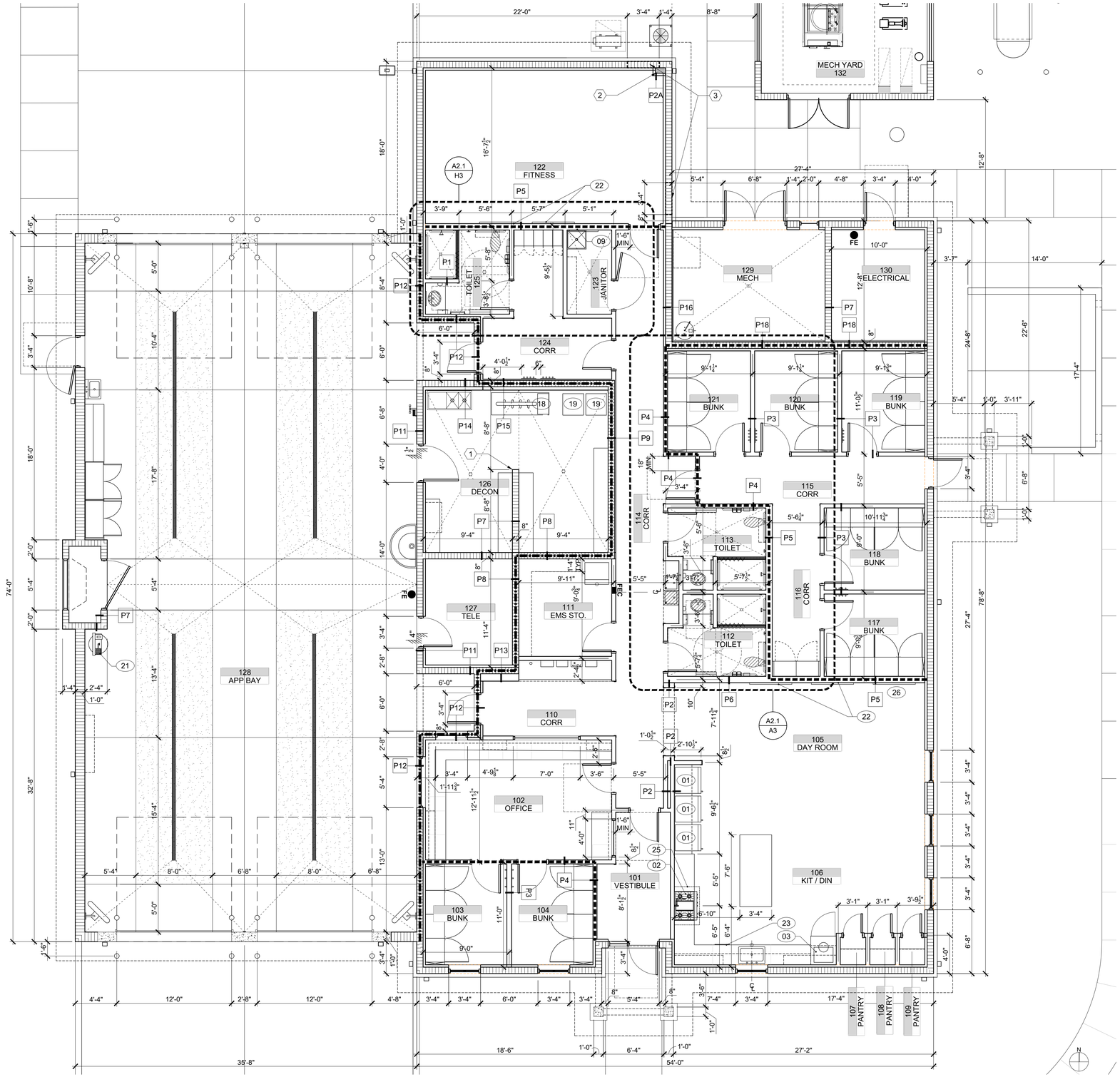
HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

| PROJECT #: 2116-05 | |
|---|---|
| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PREMIT SET | 11.14.2024 |

SITE PLAN
DETAILS

A1.2


E3
A3.1
MECH YARD
132
122
FITNESS
P2A
P5
7
30
122
L04
11
129
FE
130
129
MECH
130
ELECTRICAL
54
21
58
P16
3
2
P18
P7
P18
60
SLOPE
36
10
SLOPE
121
BUNK
120
BUNK
119
BUNK
P3
P3
121
120
119
115
P4
P4
114
115
CORR
22
P5
P3
113
TOILET
118
BUNK
118
116
CORR
117
A6.1
J3
117
BUNK
112
TOILET
C3
A3.1
A3
A3.2
42
P2
P6
7
30
29
P5
46
105
DAY ROOM
9
8
31
40
P2
101B
102
OFFICE
A6.1
F5
J1
F1
8
32
W02
22
103
104
W01
W01
W01




## GENERAL NOTES

1. ALL INTERIOR PARTITIONS ARE TYPE P1 UNO, TYP
2. PROVIDE CORNER GUARDS AT EXPOSED GWB CORNERS, TYP
3. WHERE ELEC, SERIES CALL FOR TV LOCATIONS COORD BLOCKING CONCEALED IN WALLS FOR OWNER PROVIDED MOUNTING BRACKETS.
4. EXTEND RATED WALL CONTINUOUSLY, VERTICALLY TO ROOF DECK. PROVIDE COMPOUND WALLS WHERE INDICATED IN PARTITION TYPE SCHEDULE
5. PROVIDE WD BLOCKING FOR ITEMS TO BE MOUNTED AT GWB LOCATIONS. COORD W/ PARTITION TYPE, MAINTAINING RATINGS, STC VALUES, INSULATION, ETC. IN THE WALL ASSEMBLY, TYP.
6. DOORS OPENING TO BE 4" FROM ADJACENT WALL UNO, TYP.
7. BUNK ROOM DOORS OPENING TO BE 6" FROM ADJACENT WALL, TYP.
8. REFER TO A2.1 FOR EQUIPMENT AND ACCESSORIES SCHEDULE.

## SPECIFIC NOTES

1. PARTIAL HEIGHT CMU WALL - 7'-4" TALL
2. WALL CHASE 6" X 12" CLEAR
3. FUTURE DOOR OPENING - PROVIDE BOND BEAM REFER TO STRUCTURAL DWGS.

0 2'-8" 5'-4" 10'-8"

DIMENSIONED FLOOR PLAN
3/16" = 1'-0"

A3

NOTES A1


1315 E. SEVENTH AVENUE
SUITE 106
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# HILLSBOROUGH COUNTY THONOTOSASSA FIRE STATION NO. 21 REPLACEMENT

PROJECT #: 2116-05

| DISTRIBUTION | DATE |
|---|---|
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
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DIMENSIONED FLOOR PLAN

A1.4

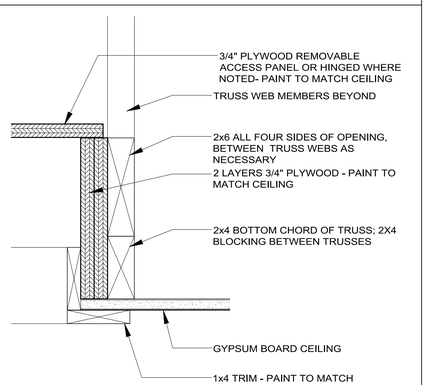



## GENERAL NOTES

1. ALL CLGS (APC) ARE 9'-0" AFF (UNO).
2. ALIGN LIGHTS, OUTLETS, ETC. ON APPARENT CENTERLINES, TYP.
3. SPRINKLER HEADS INSTALLED IN APC AND GWB ARE TO BE RECESSED - CENTERED IN TILE.
4. CENTER SOFFIT LOUVERS IN THE OVERALL DEPTH OF THE SOFFIT.
5. COORDINATE ALL WORK ABOVE CEILING TO ENSURE LOCATIONS SHOWN FOR ELEC, MECH, FP, AND OTHER SYSTEMS ARE INSTALLED AS SHOWN IN ARCHITECTURAL RCP. WHERE LOCATIONS CREATE A COORDINATION ISSUE ALERT ARCHITECT PRIOR TO BIDDING FOR CLARIFICATION. COORDINATE ACCESS TO ABOVE CLG EQUIPMENT.
6. INSTALL MOISTURE RESISTANT GYPSUM WALL BOARD AT ALL UNCONDITIONED WALLS, PARTITIONS AND CEILINGS.
7. REFER TO ELECTRICAL DWG FOR CAMERA LOCATIONS.
8. REFER TO ELECTRICAL DWG FOR SHORE LINE CONNECTION - COORD LOCATION W/ OWNER PRIOR TO INSTALL.

## SPECIFIC NOTES

1. KITCHEN HOOD W/ UTILITY CABINET
2. GUTTER, TYP.
3. MTL SOFFIT PANEL, TYP.
4. LED LIGHT FIXTURE, TYP.
5. CEILING FAN
6. MINI SPLIT UNIT AIR HANDLER
7. OVERHEAD DOOR, TYP.
8. WALL MOUNTED LIGHT FIXTURE, TYP.
9. APC - 2 KITCHEN
10. SOFFIT - ELEV @ 7'-6"
11. AIR CURTAIN, TYP.
12. DEHUMIDIFIER - SUSPENDED FROM CEILING & STRUCTURE ABOVE
13. SOFFIT LOUVER, TYP
14. ATTIC ACCESS DOOR - COOR LOCATION W/ WD TRUSSES
15. ALUM DOWNSPOUT (BACK TO WALL), TYP.
16. OSCILLATING FAN - WALL MTD, TYP.
17. BULKHEAD, TYP. - 7'-6" AFF
18. CEILING CONTROL JOINT @ BAY
19. GREEN LED SIGNAL LIGHT, TYP. (REFER TO ELECTRICAL DWGS.)
20. CEM PLASTERED BEAM, TYP
21. ACCESS PANEL HINGED ON ONE SIDE (20"X30") - COORD LOCATION FOR MAX ACCESS (PROVIDE ATTIC CLEAR HEADROOM OF NOT LESS THAN 30" ABOVE THE ACCESS OPENING).
22. CEM PLASTERED BEAM, TYP
23. EMERGENCY LIGHT FIXTURE, TYP
24. FOUR WAY CEILING CASSETTE UNIT
25. WALL CHASE 6" X 12" CLEAR
26. GRAVITY VENT ON ROOF - SHOWN FOR REFERENCE ONLY
27. BULKHEAD, TYP - 8'-10" AFF




TYPICAL ATTIC ACCESS DOOR DETAIL — SCALE: 3" = 1'-0" — A13

0 2'-8" 5'-4" 10'-8"

REFLECTED CEILING PLAN — 3/16" = 1'-0" — A3

NOTES — A1

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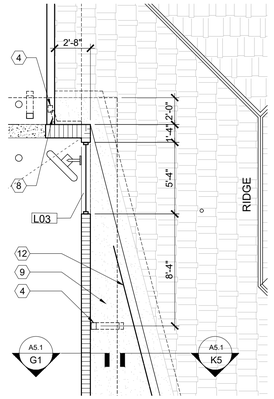
# HILLSBOROUGH COUNTY THONOTOSASSA FIRE STATION NO. 21 REPLACEMENT

PROJECT #: 2116-05

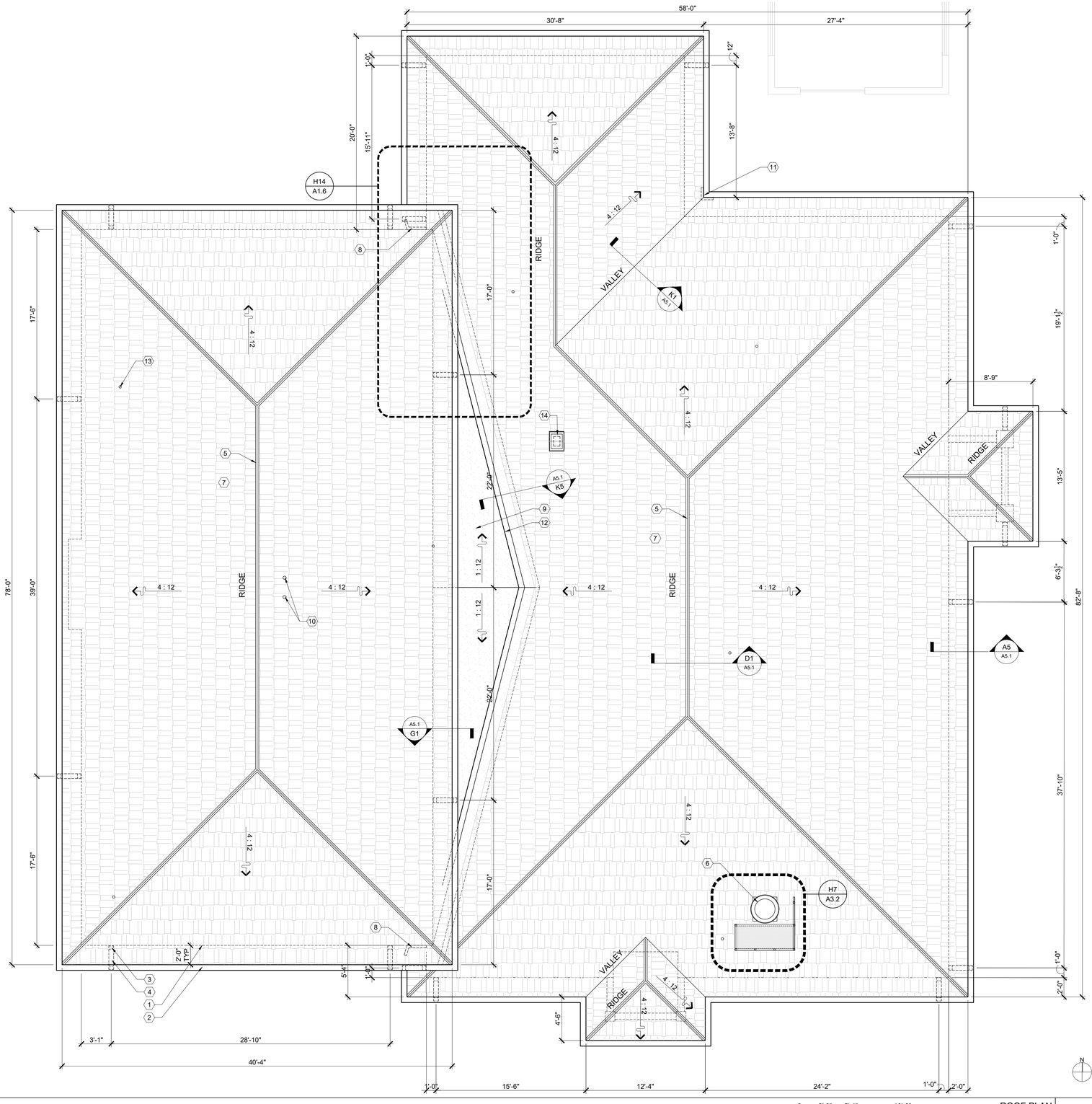
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REFLECTED CEILING PLAN

A1.5




ROOF PLAN DETAIL 3/16" = 1'-0" | H14




ROOF PLAN 3/16" = 1'-0" | A3

## ROOF DRAINAGE SIZING

PER FBC PLUMBING 1105 & 1106:
THE PROJECT LARGEST HORIZONTAL CONTRIBUTING ROOF AREA SERVED BY ONE PRIMARY ROOF DRAIN IS 1,427 SF.

FLOW RATE BASED ON 1,427 SF AND 4.5 IN PER HOUR (100 YEAR PER FIG 1106.1, PLUMBING) X 0.0104 = 67 GPM.

REQUIRED (VERTICAL LEADER SIZING PER FBC TABLE P1106.3):
MINIMUM DOWNSPOUT SIZING REQUIRED = 2 X4 BASED ON MAX CAPACITY OF 92 GPM.
PROVIDE = 3 1/2 X 4 MIN.

REQUIRED (HORIZONTAL GUTTER SIZING PER FBC TABLE P1106.6):
MINIMUM GUTTER SIZING REQUIRED = 2 $\frac{1}{4}$" X 3" SLOPED 1/2 BASED ON MAX CAPACITY OF 87 GPM.
PROVIDE = 4 1/2 X 6 (PER DETAIL ON SHEET A5.1)

## GENERAL NOTES

1. ROOF SLOPE TO BE 4:12, UNO.
2. ROOF OVERHANG - 2'-0", UNO, TYP.
3. ASPHALT SHINGLES ROOF TYP. UNO.
4. DAS ROOF PENETRATIONS TO BE COORD W/ OWNER

## SPECIFIC NOTES

1. FACE OF WALL BELOW, TYP.
2. ALUM GUTTER, TYP
3. ALUM DOWNSPOUT, TYP
4. DS CONNECTION TO GUTTER, TYP
5. RIDGE CAP, TYP
6. KITCHEN EXHAUST FAN (ALIGN W/ WINDOW BELOW)
7. ASPHALT SHINGLES ROOF, TYP.
8. KICK-OUT DIVERTER
9. THERMOPLASTIC MEMBRANE ROOF @ CRICKET - SLOPE 1" : 12", TYP
10. 3FT STUB-UP CAPPED W/ WEATHERHEAD.
11. VALLEY ROOF RAIN DIVERTER
12. WATER DIVERTER
13. VTR, TYP - REFER TO PLUMBING DWGS.
14. GRAVITY VENT

NOTES | A1


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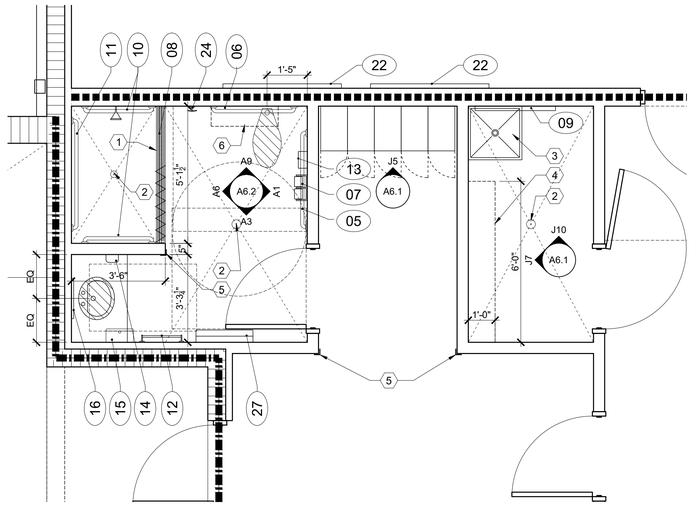
ROOF PLAN

A1.6

**EQUIPMENT / ACCESSORY SCHEDULE** (01)

| NUMBER | DESCRIPTION | CONTRACT STATUS | | | | REMARKS |
|---|---|---|---|---|---|---|
| | | CP | OP | CI | OI | |
| 01 | REFRIGERATOR | • | | • | | - |
| 02 | GAS RANGE | • | | • | | - |
| 03 | BUILT-IN MICROWAVE | • | | • | | - |
| 04 | 3 PRONG HOOK | • | | • | | NOT USED |
| 05 | 42 IN GRAB BAR | • | | • | | - |
| 06 | 36 IN GRAB BAR | • | | • | | - |
| 07 | TOILET PAPER HOLDER | • | | • | | - |
| 08 | SHOWER ROD & CURTAIN | • | | • | | - |
| 09 | MOP AND BROOM HOLDER | • | | • | | - |
| 10 | 30 IN GRAB BAR | • | | • | | - |
| 11 | 48 IN GRAB BAR | • | | • | | - |
| 12 | 18 IN TOWEL BAR | • | | • | | - |
| 13 | SANITARY NAPKIN DISPOSAL | • | | • | | - |
| 14 | SOAP DISPENSER | • | | • | | - |
| 15 | PAPER TOWEL DISPENSER | • | | • | | - |
| 16 | MIRROR | • | | • | | - |
| 17 | FOUR PRONG HOOK | • | | • | | - |
| 18 | GEAR DRYER | • | | • | | - |
| 19 | WASHER | • | | • | | - |
| 21 | AIR COMPRESOR (CPCI) | • | | • | | - |
| 22 | TV 60 INCH & MOUNTING BRACKET | | • | • | | - |
| 23 | DISHWASHER | • | | • | | - |
| 24 | ROBE HOOK | • | | • | | - |
| 25 | KITCHEN HOOD W/ UTILITY CABINET | • | | • | | - |
| 26 | TV 40 INCH & MOUNTING BRACKET | | • | • | | - |
| 27 | FOLDING SEAT | • | | • | | - |

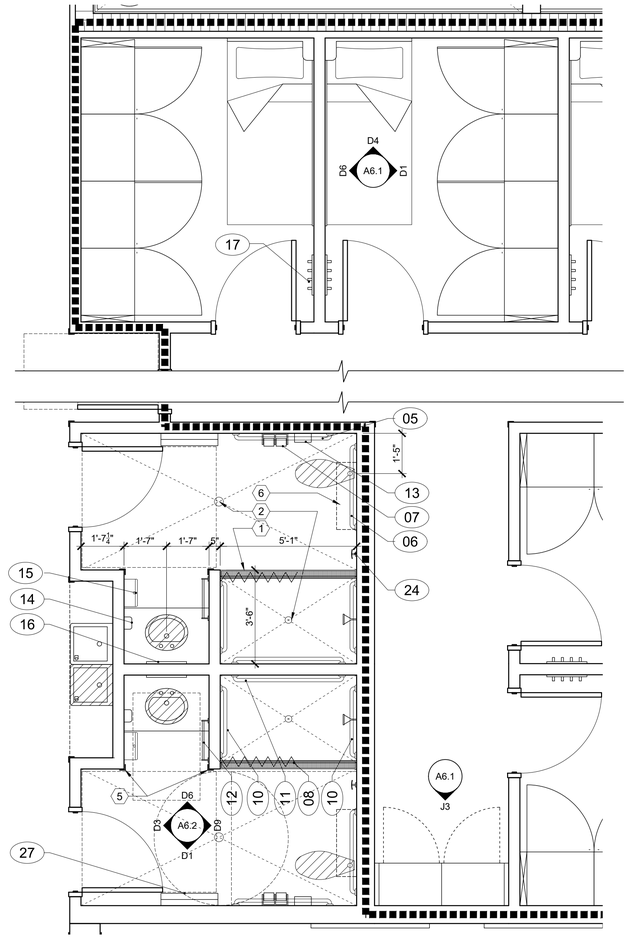
EQUIPMENT / ACCESORIES SCHEDULE
NTS
H8




TOILET 125 AND JANITOR ENLARGED PLAN
3/8" = 1'-0"
H3

## GENERAL NOTES

1. PROVIDE UNDER LAVATORY GUARDS AT RESTROOMS, TYP.




TOILETS AND BUNKROOMS ENLARGED PLAN
3/8" ='1'-0"
A3

## SPECIFIC NOTES

1. TRENCH DRAIN @ SHOWER EDGE, TYP.
2. FLOOR DRAIN
3. MOP SINK
4. 12" DEEP CLOSET MAID CLOSE MESH SHELVING.
5. CORNER GUARD
6. CABINET ABOVE

NOTES
A1


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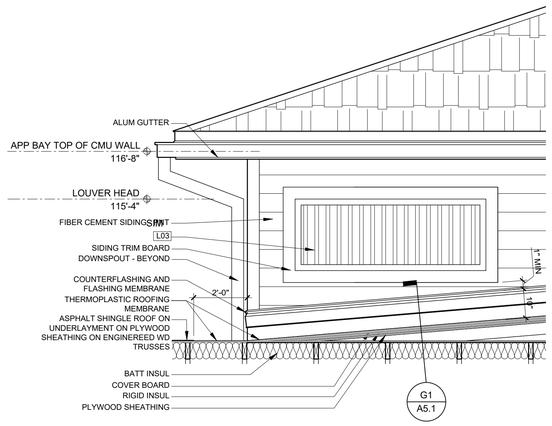
HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2116-05

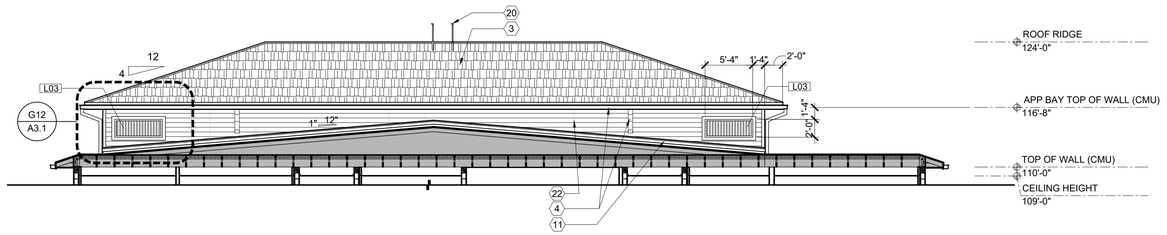
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ENLARGED FLOOR
PLANS AND DETAILS

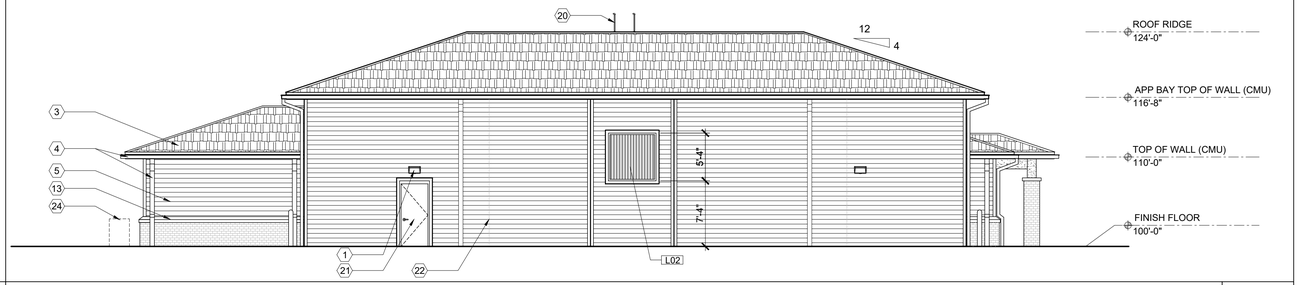
A2.1



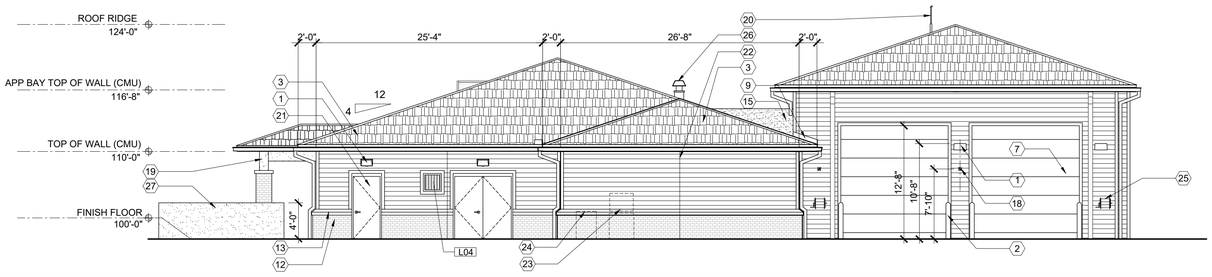

ENLARGED SECTION 1/2" = 1'-0" | G12



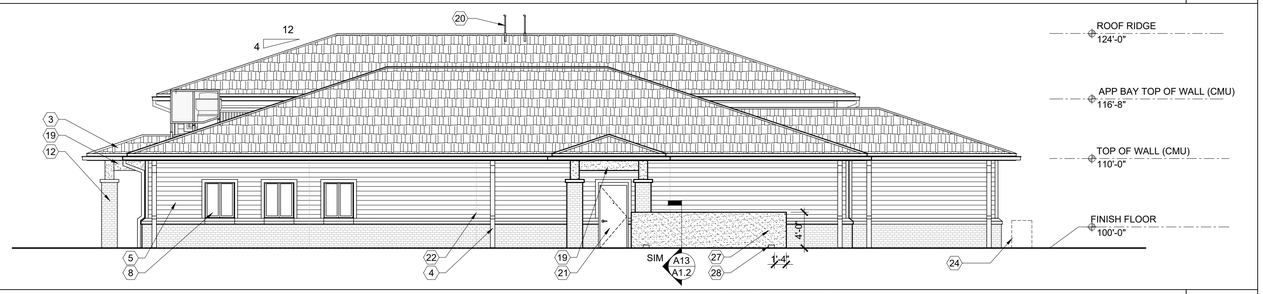

0 4' 8' 16' APP BAY SOUTH ELEVATION 1/8" = 1'-0" | K3



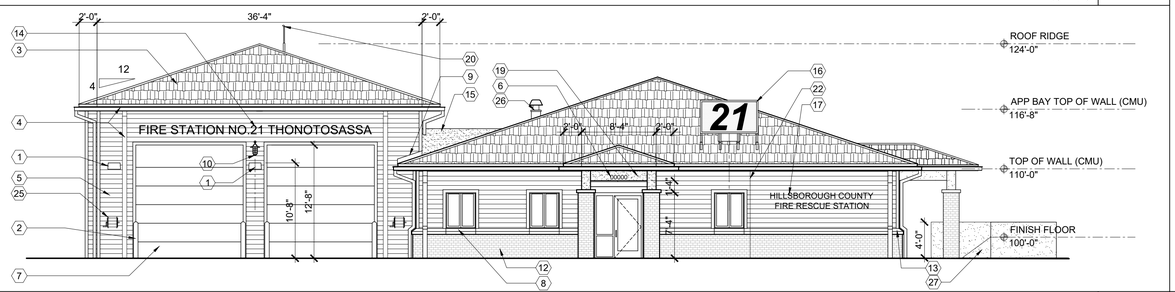

0 4' 8' 16' APP BAY SIDE ELEVATION 1/8" = 1'-0" | G3




0 4' 8' 16' REAR ELEVATION 1/8" = 1'-0" | E3




0 4' 8' 16' LIVING QUARTERS SIDE ELEVATION 1/8" = 1'-0" | C3




0 4' 8' 16' FRONT ELEVATION 1/8" = 1'-0" | A3

## GENERAL NOTES

1. EXT OPENINGS (WINDOWS, DOORS, LOUVERS, ETC.) SHALL BE IMPACT RESISTANT - MISSILE "E", TYP.

## SPECIFIC NOTES

1. WALL PACK LIGHT FIXTURE, TYP
2. BOLLARD, TYP.
3. ASPHALT SHINGLES ROOF, TYP.
4. PRE-FINISHED ALUM GUTTER & DOWNSPOUT, TYP.
5. FIBER-CEMENT SIDING,TYP.
6. 6" H - CAST ALUM PLATE ADDRESS NUMBERS. FONT TO BE HELVETICA MEDIUM.
7. SECTIONAL OVERHEAD DOOR, IMPACT RESISTANT, TYP.
8. ALUM TWIN CASEMENT WINDOW, TYP.
9. KICK-OUT DIVERTER
10. DECORATIVE RED LENS LIGHT FIXTURE, TYP.
11. CRICKET SS FLASHING
12. BRICK VENNER - WAINSCOTTING, TYP.
13. CAST STONE SILL, TYP.
14. CAST ALUM PLATE LETTERS - 12" H, FONT TO BE HELVETICA MEDIUM
15. CRICKET
16. HALO LIT ALUM NUMBER MOUNTED TO A PERFORATED, PAINTED ALUM PANEL ATTACHED TO ROOFTOP PLATFORM GUARDRAIL
17. CAST ALUM PLATE LETTERS - 8" H. FONT TO BE HELVETICA MEDIUM - ALIGN WITH TOP OF WINDOW.
18. GREEN LED SIGNAL, TYP.
19. CEM PLASTER
20. 3FT STUB-UP CAPPED W/ WEATHERHEAD - PNT TO MATCH ROOF
21. HMF AND DOOR - MISSILE "E", TYP
22. MASONRY CONTROL JOINT, TYP
23. CONDENSING UNITS STACKED (NOT SHOWN FOR CLARITY)
24. ICE MAKER CONDENSING UNIT (NOT SHOWN FOR CLARITY)
25. WALL MOUNTED HOSE REEL, TYP
26. GRAVITY VENT
27. OUTDOOR PATION WALL - CEM PLASTER & PNT
28. 4" X 8" OPENING ON WALL - DRAIN, TYP.

NOTES | A1


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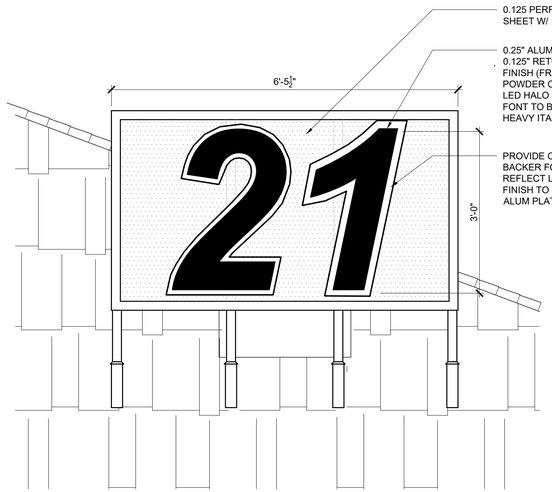

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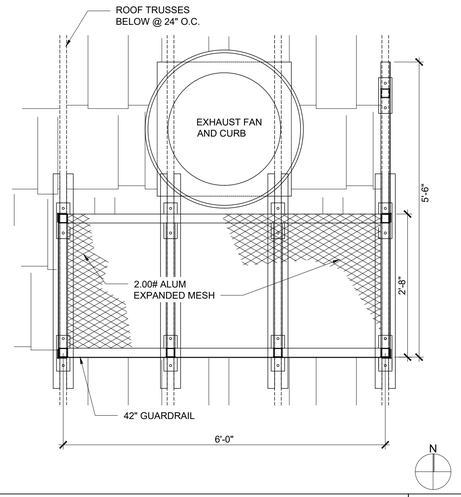
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EXTERIOR ELEVATIONS

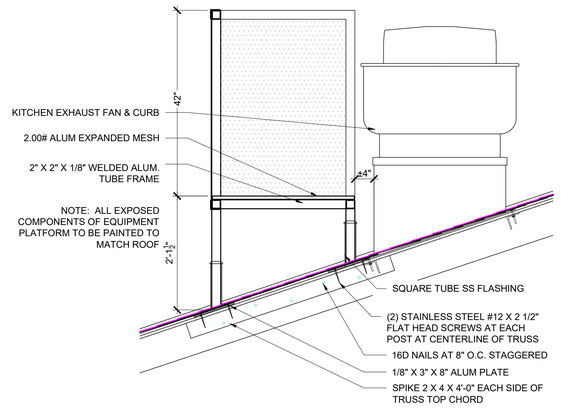
A3.1




EXHAUST FAN ENCLOSURE FRONT ELEVATION
3/4" =1'-0" | H11

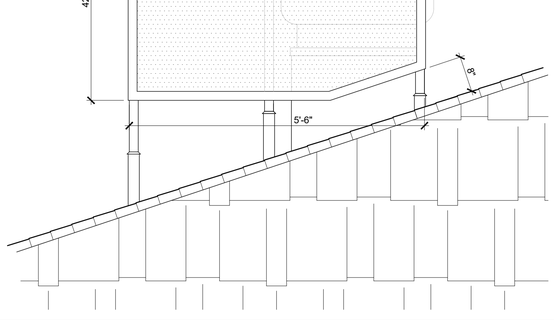



EXHAUST FAN ENLARGED PLAN
3/4" =1'-0" | H7

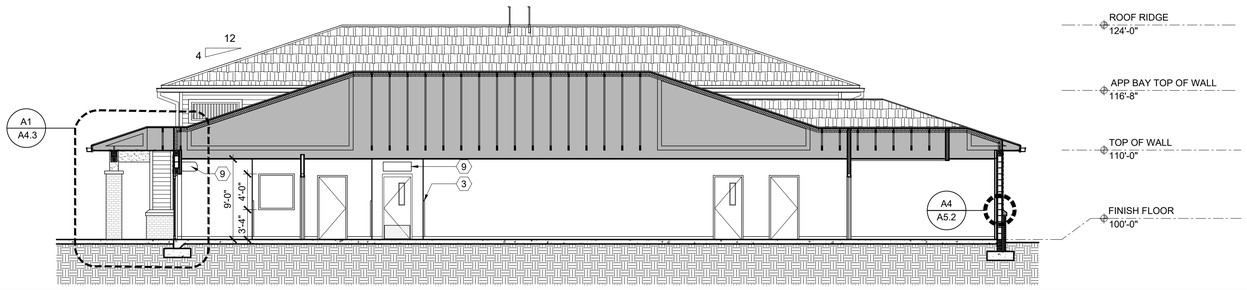



NOTE: ENCLOSURE PROVIDES ALL PROTECTION REQUIREMENT FOR EXHAUST FAN SERVICE

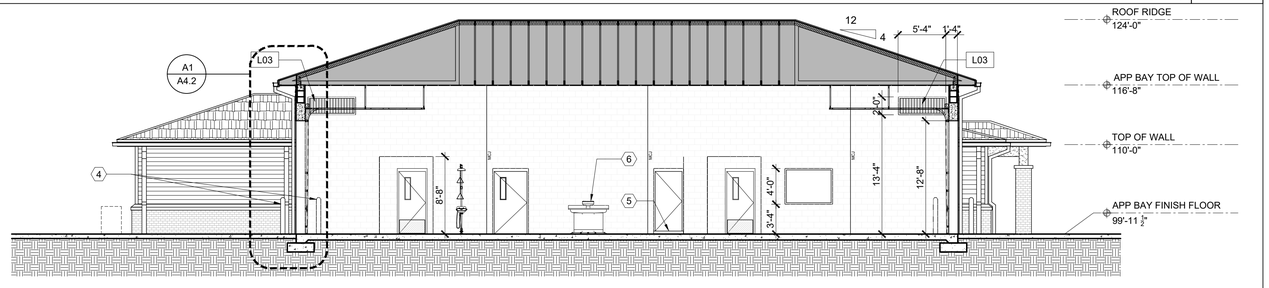
EXHAUST FAN ENCLOSURE SECTION
3/4" =1'-0" | H3



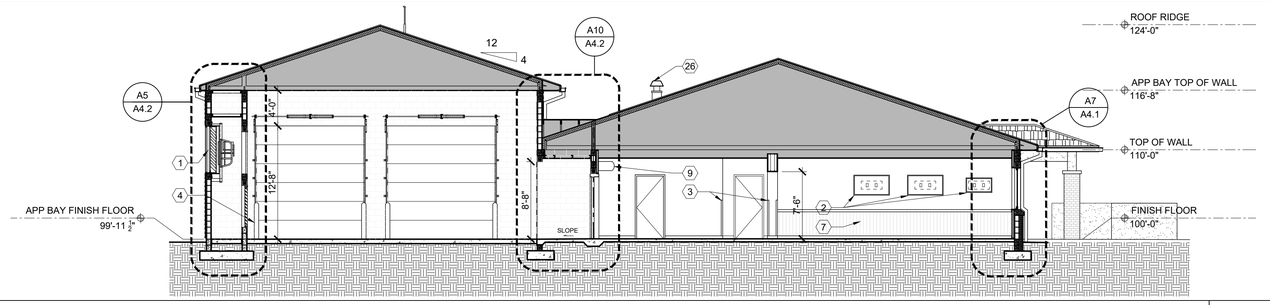

EXHAUST FAN ENCLOSURE SIDE ELEVATION
3/4" =1'-0" | E12




0 4' 8' 16'
BUILDING SECTION
1/8" = 1'-0" | E3




0 4' 8' 16'
BUILDING SECTION
1/8" = 1'-0" | C3




0 4' 8' 16'
BUILDING SECTION
1/8" = 1'-0" | A3

## GENERAL NOTES

1. EXT OPENINGS (WINDOWS, DOORS, LOUVERS, ETC.) SHALL BE IMPACT RESISTANT - MISSILE "E", TYP.
2. CLG HT IS 9'-0" UNO, TYP.
3. RIGID INSUL @ EXT WALLS TO BE INSTALLED CONTINUOUS. OUTLETS, JUNCTION BOXES, ETC. TO BE INSTALLED IN MTL STUDS SPACE ADJACENT TO CMU WALL/ INSUL.
4. PROVIDE CONTINUOUS THERMAL/ VAPOR/ AIR ENVELOPE.

## SPECIFIC NOTES

1. ACCESS PANEL
2. TV WALL MOUNTED - COORD POWER AND DATA OUTLETS LOCATIONS TO BE CONCEALED BEHIND TV AND COORD W/ SELECTED SUPPORT BRACKET.
3. CORNER GUARD, TYP
4. BOLLARD, TYP
5. TELECOM ROOM FLOOR IS 4" ABOVE APP BAY FINISH FLOOR. PNT STEP SAFETY YELLOW.
6. HAND WASH SINK (FOOT OPERATED)
7. WAINSCOT AND CHAIR RAIL
8. GRAVITY VENT (BEYOND).
9. AIR CURTAIN

NOTES | A1


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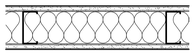
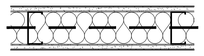
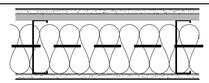
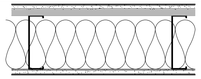
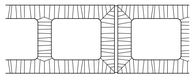
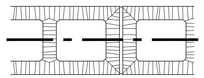
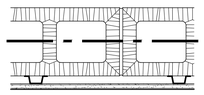
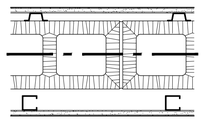
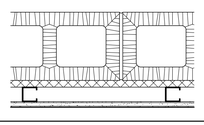
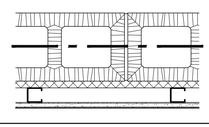
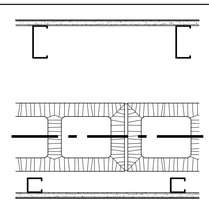

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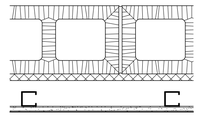
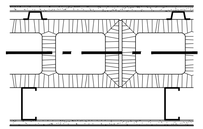
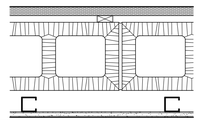
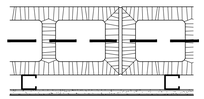
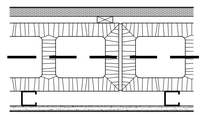
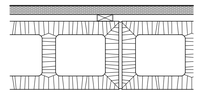
HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

| PROJECT #: 2116-05 | |
|---|---|
| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

BUILDING SECTIONS AND DETAILS

A3.2

| PARTITION TYPE | PLAN SECTION | DESCRIPTION | FIRE RATED PARTITIONS | |
|---|---|---|---|---|
| | | | RATING | DETAIL |
| P1 |  | 3-5/8" METAL STUDS @ 16" OC WITH 5/8" GYPSUM BOARD ON EACH SIDE<br>STC: 40 \| USG-860808 | | |
| P2 |  | 3-5/8" METAL STUDS @ 16" OC WITH 5/8" GYPSUM BOARD ON ONE SIDE | | |
| P2A | | 1-5/8" METAL STUDS @ 16" OC WITH 5/8" GYPSUM BOARD ON ONE SIDE | | |
| P3 |  | 3-5/8" METAL STUDS @ 16" OC WITH 5/8" GYPSUM BOARD ON EACH SIDE AND 3-1/2" BLANKET INSULATION<br>EXTEND TO DECK ON BUNK ROOMS.<br>STC: 49 \| SA-870717 | | |
| P4 |  | 3-5/8" METAL STUDS @ 16" OC WITH 5/8" GYPSUM BOARD ON EACH SIDE AND 3-1/2" BLANKET INSULATION<br>EXTEND TO DECK ON BUNK ROOMS.<br>STC: 49 \| SA-870717 | SMOKE | F1 / A4.1 |
| P5 |  | 6" METAL STUDS @ 16" OC WITH 5/8" GYPSUM BOARD ON EACH SIDE AND 5" BLANKET INSULATION. RC-1 CHANNEL OR EQUIVALENT ON ONE SIDE SPACE 16" OC.<br>STC: 56 \| RAL-TL-84-141 | SMOKE | |
| P6 |  | 6" METAL STUDS @ 16" OC WITH 5/8" GYPSUM BOARD ON EACH SIDE AND 5" BLANKET INSULATION. RC-1 CHANNEL OR EQUIVALENT ON ONE SIDE SPACE 16" OC.<br>STC: 56 \| RAL-TL-84-141 | | |
| P7 |  | 8" CMU | | |
| P8 |  | 8" CMU | 1 HOUR (UL 905) | A1 / A4.1<br>E4 / A4.1 |
| P9 |  | 8" CMU WITH 5/8" GYPSUM BOARD ON 7/8" METAL FURRING (16" OC) ON ONE SIDE | 1 HOUR (UL 905) | A1 / A4.1<br>E4 / A4.1 |
| P10 |  | 8" CMU WITH 5/8" GYPSUM BOARD ON 7/8" METAL FURRING (16" OC) ON ONE SIDE AND 5/8" GYPSUM BOARD ON 1-5/8" METAL STUDS AND 3/4" GAP ON ONE SIDE. | 1 HOUR (UL 905) | A1 / A4.1<br>E4 / A4.1 |
| P11 |  | 8" CMU WITH 5/8" GYPSUM BOARD ON 1-5/8" METAL STUDS (16" OC) AND 3/4" RIGID INSULATION ON ONE SIDE. | | |
| P12 |  | 8" CMU WITH 5/8" GYPSUM BOARD ON 1-5/8" METAL STUDS (16" OC) AND 3/4" RIGID INSULATION ON ONE SIDE. | 1 HOUR (UL 905) | A1 / A4.1<br>E4 / A4.1 |
| P13 |  | 8" CMU WITH 5/8" GYPSUM BOARD ON 1-5/8" METAL STUDS (16" OC) AND 3/4" GAP ON ONE SIDE. ON THE OTHER SIDE 5/8" GYPSUM BOARD ON 3-5/8" METAL STUDS AND GAP OF APPOX. 5" (ALIGN TO ADJACENT PARTITION) | 1 HOUR (UL 905) | A1 / A4.1<br>E4 / A4.1 |

| WALL TYPE | PLAN SECTION | DESCRIPTION | FIRE RATED PARTITIONS | |
|---|---|---|---|---|
| | | | RATING | DETAIL |
| P14 |  | 8" CMU WITH 5/8" GYPSUM BOARD ON 1-5/8" METAL STUDS (16" OC), 1-1/4" APPROX. GAP AND 3/4" RIGID INSULATION ON ONE SIDE. | | |
| P15 |  | 8" CMU WITH 5/8" GYPSUM BOARD ON 7/8" METAL FURRING (16" OC) ON ONE SIDE AND 5/8" GYPSUM BOARD ON 3-5/8" METAL STUDS ON OTHER SIDE. | 1 HOUR (UL 905) | A1 / A4.1<br>E4 / A4.1 |
| P16 |  | 8" CMU WITH 5/8" GYPSUM BOARD ON 1-5/8" METAL STUDS (16" OC), 3/4" GAP ON ONE SIDE AND TECTUM PANELS ON 1X FURRING STRIPS (24" OC) ON THE OTHER SIDE (MECHANICAL ROOM). | | |
| P17 |  | 8" CMU WITH 5/8" GYPSUM BOARD ON 1-5/8" METAL STUDS (16" OC) ON ONE SIDE. | SMOKE | |
| P18 |  | 8" CMU WITH 5/8" GYPSUM BOARD ON 1-5/8" METAL STUDS (16" OC) ON ONE SIDE AND TECTUM PANELS ON 1X FURRING STRIPS (24" OC) ON THE OTHER SIDE (MECHANICAL ROOM)<br>PROVIDE STC: 55 - MINIMUM | SMOKE | |
| P19 |  | 8" CMU AND TECTUM PANELS ON 1X FURRING STRIPS (24" OC) ON ONE SIDE (MECHANICAL ROOM) | | |

## PARTITION SCHEDULE NOTES

A. INT WALLS WITHOUT WALL TAGS ARE TYPE P1, TYP.
B. THE FOLLOWING INTERIOR WALL FINISH SUBSTRATES ARE TO BE PROVIDED IN LIEU OF GYPSUM BOARD (IN LIKE THICKNESS)
   - MOISTURE RESISTANT GYPSUM BOARD ON FIXTURE SIDE OF ALL PLUMBING WALLS
   - SILICONE IMPREGNATED TILE BACKER BOARD ON SIDE OF WALLS SCHEDULED TO RECEIVE CERAMIC TILE
   - ABUSE RESISTANT GYPSUM BOARD WHERE INDICATED ON FLOOR PLAN

C. REFERENCES HEREIN TO FIRE RATINGS APPLY ONLY TO WALLS GRAPHICALLY DESIGNATED IN PLAN TO BE FIRE RATED IN ACCORDANCE WITH THE "WALL LEGEND."
D. WALL TYPE INDICATED SHALL CONTINUE OVER DOOR OPENINGS AND OVER/BELOW GLAZED OPENINGS OR WINDOWS AS REQ'D. COORDINATE WITH FRAME DETAILS.
E. WALL TYPES LISTED HEREIN WITH AN STC RATING ARE CONSIDERED TO BE "ACOUSTIC WALLS."
F. STC RATINGS INDICATED HEREIN ARE DERIVED FROM THE LABORATORY TEST INDICATED IN THE "DESIGN REFERENCE" COLUMN. TEST SOURCES ARE AS FOLLOWS:

| | |
|---|---|
| USG, SA, BBN: | UNITED STATES GYPSUM |
| NGC: | NATIONAL GYPSUM COMPANY |
| KAL: | KODARS ACOUSTICAL LABS |
| TL: | ETL-SEMKO |

G. CONSTRUCT ACOUSTIC WALLS TO COMPLY WITH THE FOLLOWING REQUIREMENTS:
   1. FILL ALL WALL PENETRATIONS W/ BATT INSULATION AND SEAL W/ ACOUSTICAL SEALANT.
   2. STAGGER ELECTRICAL AND COMMUNICATIONS BOXES A MINIMUM OF 16" HORIZONTALLY.
   3. APPLY ACOUSTIC SEALANT AT PERIMETER OF STUD WALLS, TYP.
   4. GYPSUM BOARD FASTENERS MUST NOT CONTACT MASONRY ON CMU WALLS HAVING GYP BD ON FURRING STRIPS.

H. METAL STUD & GYPSUM BOARD WALLS WITH EQUIVALENT OR BETTER FIRE & STC RATINGS MAY BE SUBSTITUTED FOR CMU WALLS ABOVE THE CEILING LEVEL. THE INTEGRITY OF SOUND & FIRE RATINGS MUST BE MAINTAINED.
I. EXTEND RATED PARTITIONS TO THE UNDERSIDE OF THE ROOF SHEATHING AT HOUSING PORTION OF STATION.

## GENERAL NOTES - DIMENSIONING

1. DIMENSIONS LOCATING NEW EXTERIOR MASONRY WALLS ARE TO EXTERIOR FACE OF MASONRY SUBSTRATE.
2. DIMENSIONS LOCATING NEW INTERIOR MASONRY WALLS ARE TO FACE OF MASONRY.
3. DIMENSIONS LOCATING NEW INTERIOR STUD WALLS ARE TO CENTERLINE OF WALLS.
4. IF THE LOCATION OF ANY BUILDING ELEMENT IS NOT OBVIOUS OR CANNOT BE DETERMINED BY DIMENSION, MATHEMATICS, OR AS NOTED ABOVE, CONTACT THE ARCHITECT PRIOR TO LOCATING THE ELEMENT.

PARTITION SCHEDULE 1 1/2" =1'-0" A3

NOTES A1

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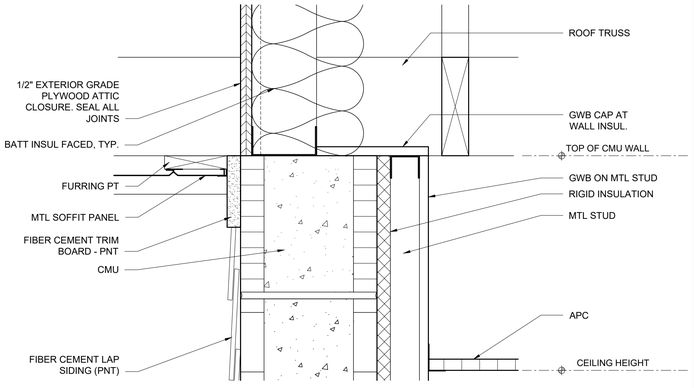
HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2116-05

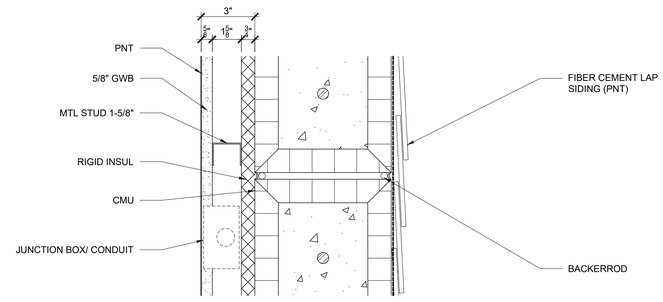
| DISTRIBUTION | DATE |
|---|---|
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

PARTITION TYPES

A4.0

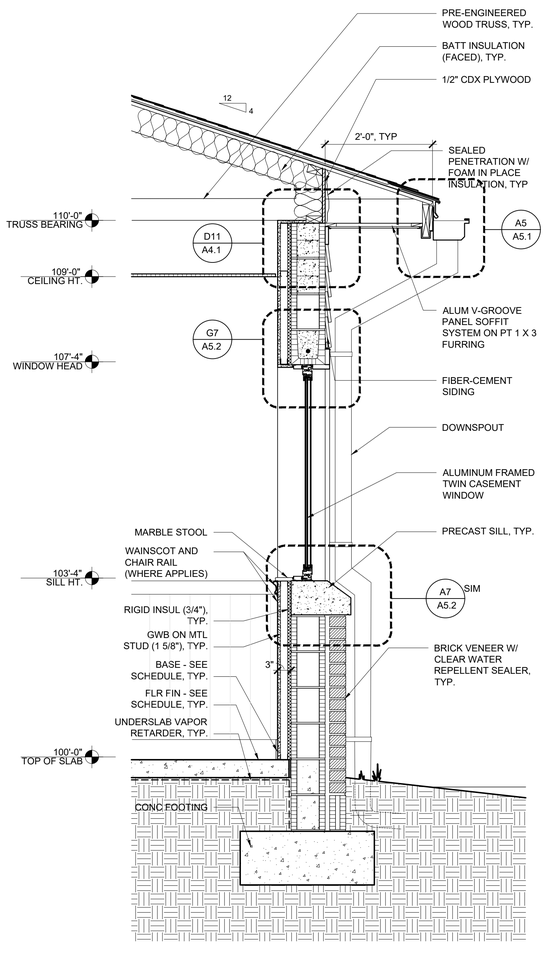



EXT WALL - TYP
3" = 1'-0" | D11




NOTE: CONDITION SHOWS VERTICAL MAS CONTROL JOINT

EXT WALL - TYP
3" = 1'-0" | A11



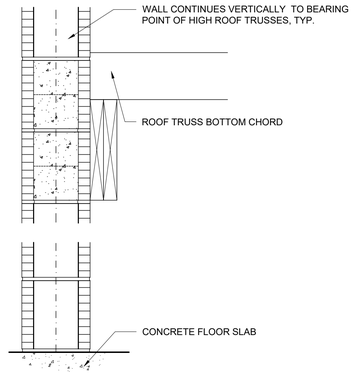

NOTE: PROVIDE TERMICIDE AT NEW CONSTRUCTION, TYP.

WALL SECTION
3/4" = 1'-0" | A7

## FIRE RATED WALL NOTES

1. HORIZONTAL JOINTS BETWEEN VERTICALLY ORIENTED GYPSUM BOARD SHEETS SHALL BE BACKED WITH HORIZONTAL STUDS SPANNING BETWEEN VERTICAL STUDS. MATCH VERTICAL WALL STUDS IN GAGE, SIZE, AND FASTENING.
2. NONMETALLIC ELECTRICAL OUTLET BOXES SHALL NOT BE INSTALLED ON OPPOSITE SIDES OF RATED WALLS UNLESS CLASSIFIED FOR FIRE RESISTANCE AS DEFINED BY UL SECTION "OUTLET BOXES AND FITTINGS CLASSIFIED FOR FIRE RESISTANCE."
3. METALLIC ELECTRICAL OUTLET BOXES SHALL NOT EXCEED 16 SQUARE INCHES WITHIN THE WALL FACE, NOR EXCEED 100 SQUARE INCHES AGGREGATE SURFACE AREA PER 100 SQUARE FEET OF WALL SURFACE. MAINTAIN MAXIMUM OF 1/8" CLEARANCE BETWEEN BOX AND GYPSUM BOARD. METALLIC BOXES ON OPPOSITE SIDES OF A WALL SHALL BE SEPARATED BY A MINIMUM OF 24" HORIZONTALLY, UNLESS WALL OPENING PROTECTIVE MATERIALS ARE INSTALLED PER REQUIREMENTS OF THEIR CLASSIFICATION, AS DEFINED BY UL SECTION "WALL OPENING PROTECTIVE MATERIALS." ELECTRICAL BOXES EXCEEDING 16 SQUARE INCHES IN FIRE RATED STUD WALLS SHALL BE FRAMED BY STUDS AND INSTALLED WITH A PUTTY PAD APPROVED FOR NECESSARY SIZE, INSTALLED PER MANUFACTURER INSTRUCTIONS.
4. ALL PENETRATIONS SHALL BE SEALED PER APPROPRIATE UL TESTED METHODS, AS DEFINED BY UL SECTION "THROUGH-PENETRATION FIRESTOP SYSTEMS." PENETRATIONS THROUGH CMU RATED WALLS SHALL BE COMPLETELY SURROUNDED BY NON-SHRINK GROUT, WITH NON-COMBUSTIBLE CMU CELL CLOSURE.
5. ALL NAILS SHALL MEET REQUIREMENTS OF ASTM F547 OR ASTM C514.
6. ALL SCREWS SHALL MEET REQUIREMENTS OF ASTM C1002 OR ASTM C954.
7. ALL EXPOSED FINISHES SHALL MEET A FLAME SPREAD INDEX OF LESS THAN 200 AND SMOKE DEVELOPMENT INDEX OF LESS THAN 450, BASED ON TEST METHOD ANSI/UL 723.
8. GAGES, SIZES, FASTENERS, AND OTHER QUANTITATIVE NOTES ARE MINIMUMS FOR FIRE RATING REQUIREMENT. IF CONFLICTING WITH OTHER SPECS AND/OR DRAWINGS, THE MORE STRINGENT NOTE/SPEC TAKES PRECEDENCE.
9. FIRE RATED WALLS MUST BE CONSTRUCTED TO ENSURE CONTINUITY OF REQUIRED FIRE RATING. MORE STRINGENT FIRE RATINGS REQUIRE CONTINUITY OVER LESS STRINGENT FIRE RATINGS. FOR EXAMPLE, ENVELOPE OF A FIRE RATED WALL MUST BE COMPLETE PRIOR TO ATTACHMENT OF INTERSECTING NON-RATED WALLS.

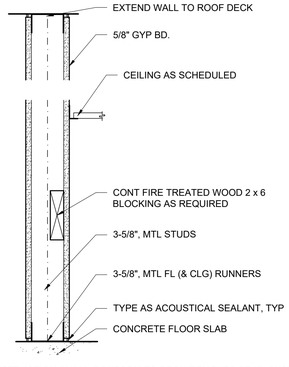
FIRE RATED PARTITION DETAIL
1 1/2" =1'-0" | J1




**CONSTRUCTION SHALL CONFORM TO REQUIREMENTS OF UL SYSTEM #U905, 1 HOUR FIRE RATED**

NOTES:
1. WALL FINISH SUBSTRATES ARE NOT SHOWN FOR SAKE OF CLARITY AND MAY OR MAY NOT APPLY TO THIS DETAIL - REFER TO "PARTITION TYPE SCHEDULE" FOR FINISH SUBSTRATE MATERIALS, IF ANY, THAT MAY BE REQUIRED.

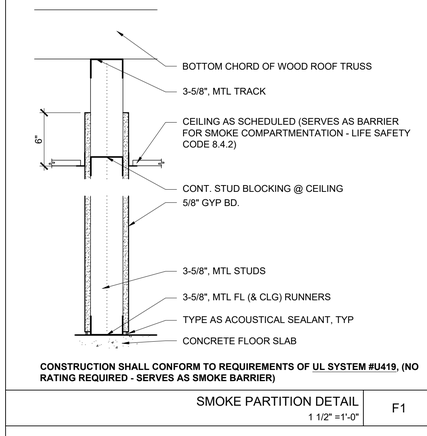
FIRE RATED PARTITION DETAIL
1 1/2" =1'-0" | E4




**CONSTRUCTION SHALL CONFORM TO REQUIREMENTS OF UL SYSTEM #U419, 1 HOUR FIRE RATED**

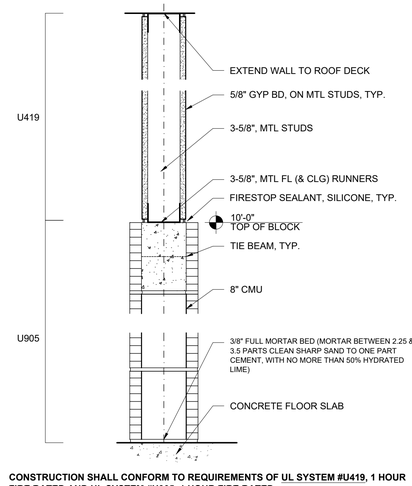
NOTES:
1. HORIZONTAL GYP BD JOINTS OPPOSITE SIDES OF WALL ABOVE CEILING MUST BE STAGGERED BY MIN 1'-0".
2. WHERE WALL INTERSECTS WITH JOIST, BEAM, TRUSS, OR OTHER STRUCTURE AT TOP OF WALL, PROVIDE ADDITIONAL FRAMING AS REQ'D TO ENSURE GYP BD EXTENDS UNSUPPORTED NO GREATER THAN 6". INFILL AROUND STRUCTURE WITH FIRE SAFING.

FIRE RATED PARTITION DETAIL
1 1/2" =1'-0" | A4




**CONSTRUCTION SHALL CONFORM TO REQUIREMENTS OF UL SYSTEM #U419, (NO RATING REQUIRED - SERVES AS SMOKE BARRIER)**

SMOKE PARTITION DETAIL
1 1/2" =1'-0" | F1




**CONSTRUCTION SHALL CONFORM TO REQUIREMENTS OF UL SYSTEM #U419, 1 HOUR FIRE RATED AND UL SYSTEM #U905, 1 HOUR FIRE RATED.**

NOTES:
1. HORIZONTAL GYP BD JOINTS OPPOSITE SIDES OF WALL ABOVE CEILING MUST BE STAGGERED BY MIN 1'-0".
2. WHERE WALL INTERSECTS WITH JOIST, BEAM, TRUSS, OR OTHER STRUCTURE AT TOP OF WALL, PROVIDE ADDITIONAL FRAMING AS REQ'D TO ENSURE GYP BD EXTENDS UNSUPPORTED NO GREATER THAN 6". INFILL AROUND STRUCTURE WITH FIRE SAFING, TYP.
3. WALL FINISH SUBSTRATES ARE NOT SHOWN FOR SAKE OF CLARITY AND MAY OR MAY NOT APPLY TO THIS DETAIL - REFER TO "INTERIOR WALL TYPE SCHEDULE" FOR FINISH SUBSTRATE MATERIALS, IF ANY, THAT MAY BE REQUIRED.

FIRE RATED PARTITION DETAIL
1 1/2" =1'-0" | A1

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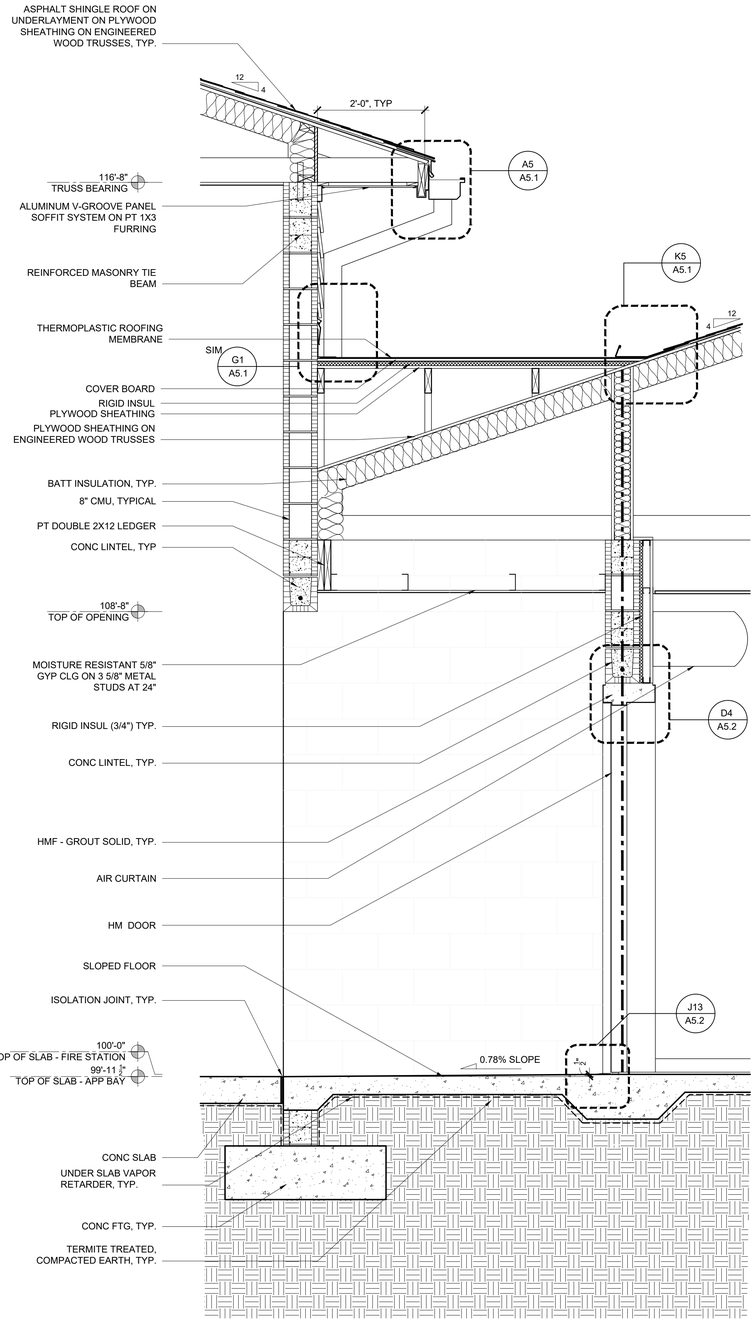
# HILLSBOROUGH COUNTY THONOTOSASSA FIRE STATION NO. 21 REPLACEMENT

PROJECT #: 2116-05

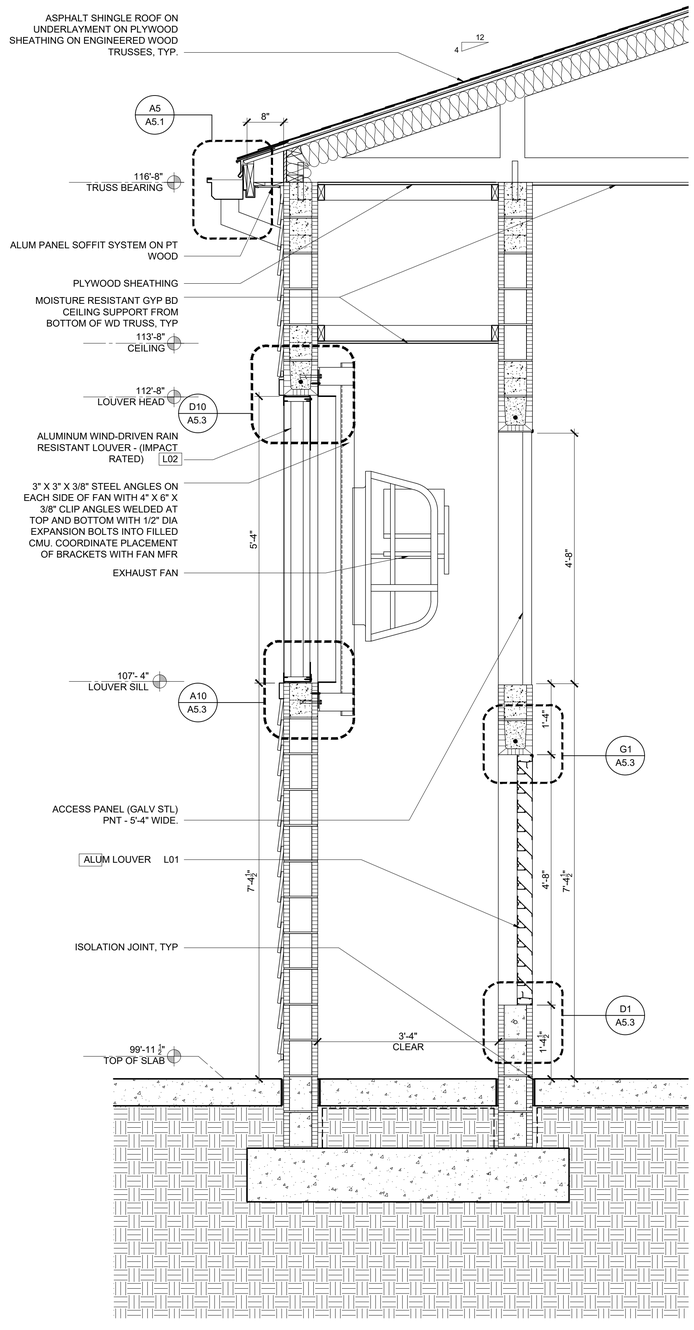
| DISTRIBUTION | DATE |
|---|---|
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

PARTITION DETAILS AND WALL SECTIONS

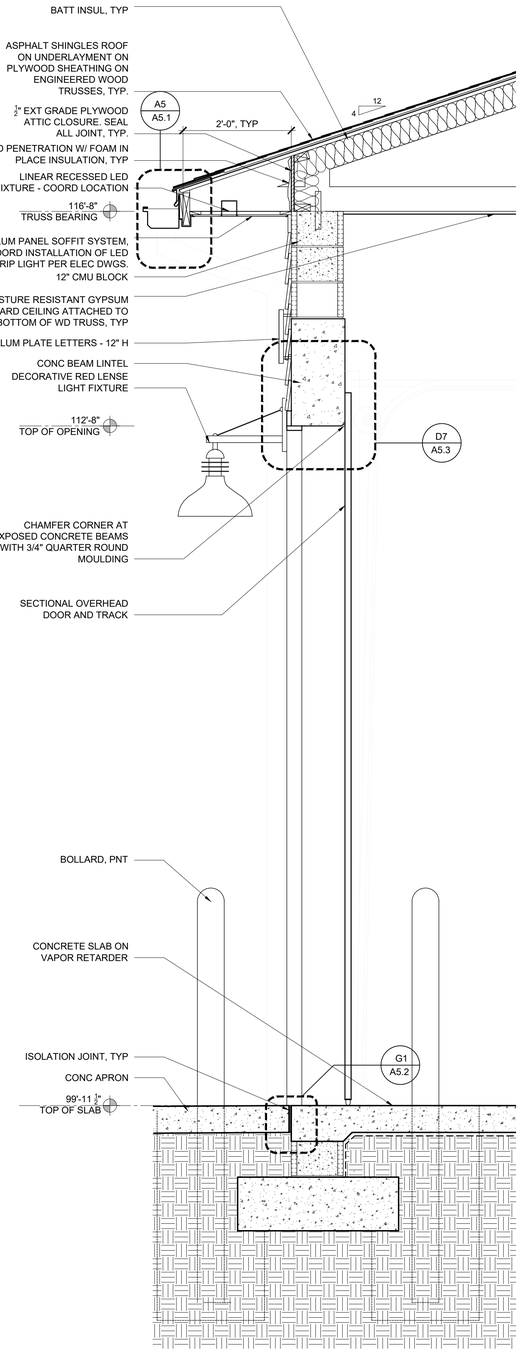
A4.1




WALL SECTION 3/4" = 1'-0" A10




WALL SECTION 3/4" = 1'-0" A5




WALL SECTION 3/4" = 1'-0" A1

1315 E. SEVENTH AVENUE
SUITE 106
TAMPA, FLORIDA 33605.3607

TELEPHONE 813.242.6677
FACSIMILE 813.242.6683

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WILDERARCHITECTURE, INC.

HILLSBOROUGH COUNTY BOARD OF COUNTY COMMISSIONERS
COUNTY CENTER
601 E KENNEDY BLVD
TAMPA, FL 33601

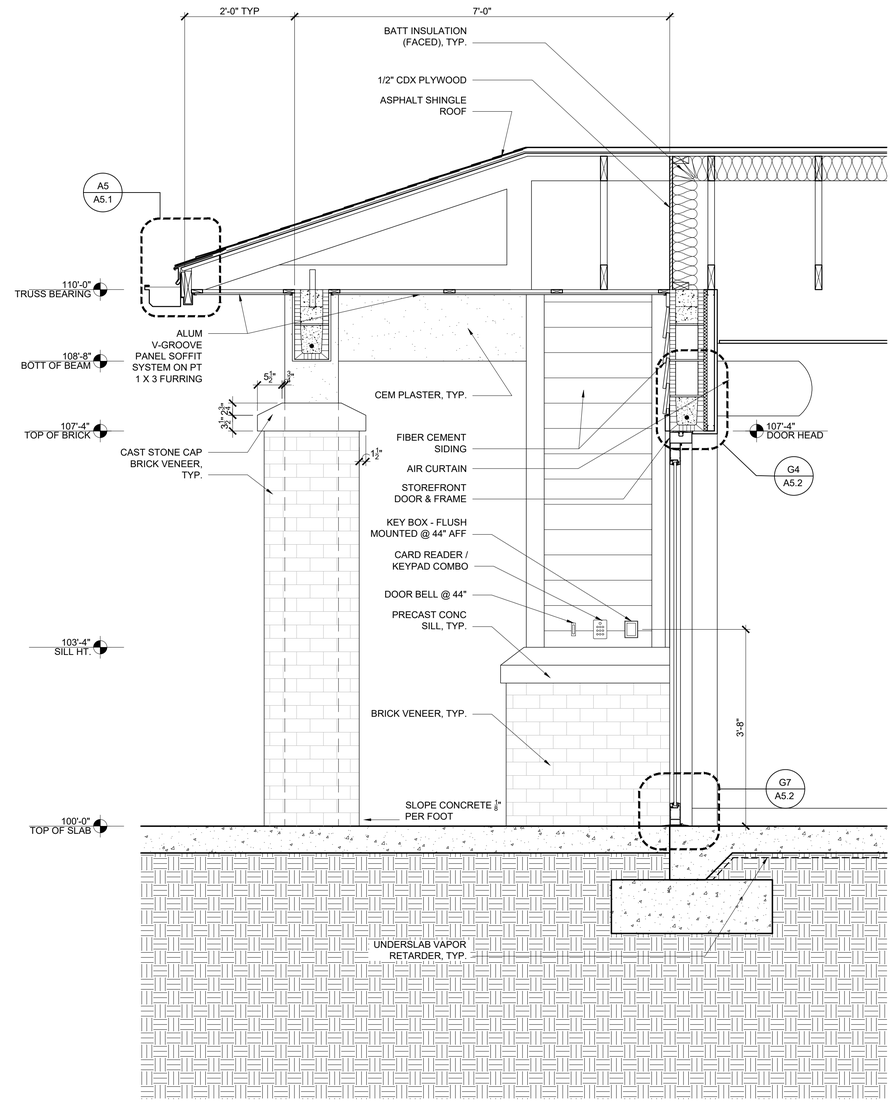
HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2116-05

| DISTRIBUTION | DATE |
|---|---|
| SCHEMATIC DESIGN | 03.15.2024 |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

WALL SECTIONS

A4.2




ENTRY TOWER - WALL SECTION
3/4" = 1'-0"

A1

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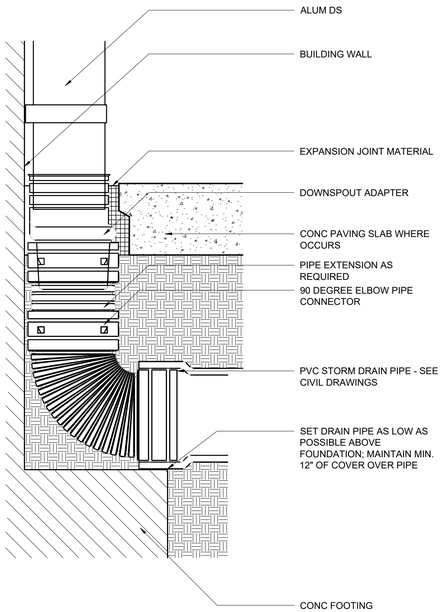
HILLSBOROUGH COUNTY
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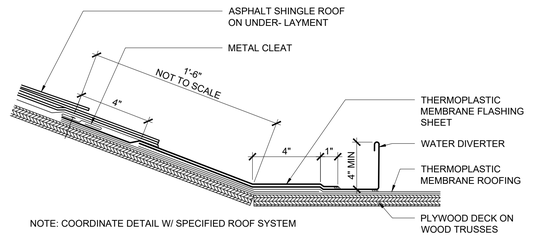
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WALL SECTIONS

A4.3

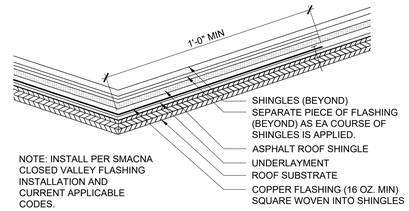



DOWNSPOUT CONNECTION 3" = 1'-0" | G8

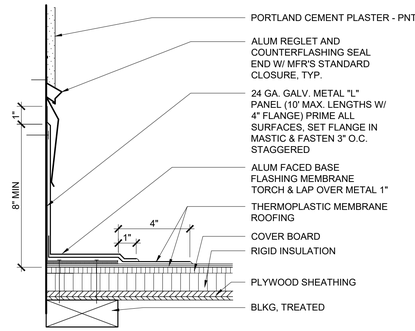



NOTE: COORDINATE DETAIL W/ SPECIFIED ROOF SYSTEM

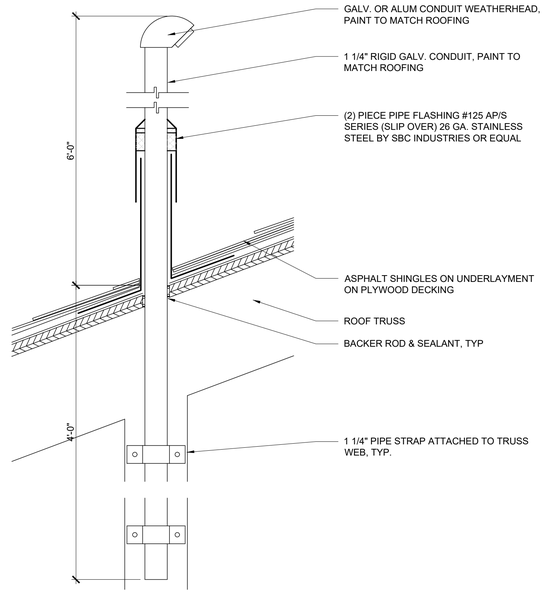
ASPHALT SHINGLE ROOFING TO SINGLE PLY TRANSITION DETAIL 3" = 1'-0" | K5




TYPICAL VALLEY FLASHING DETAIL 3" = 1'-0" | K1

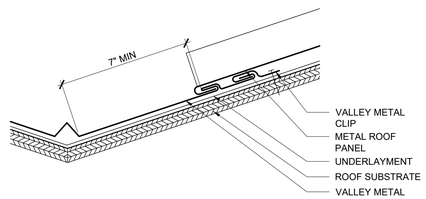



CRICKET ROOF TO WALL FLASHING DETAIL 3" = 1'-0" | G1

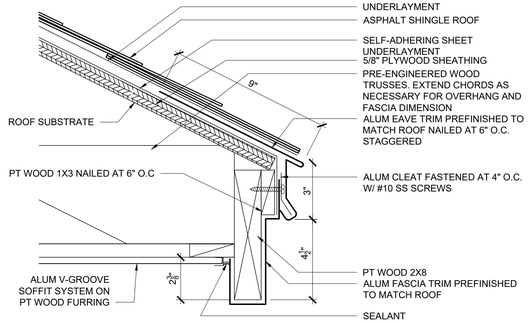



NOTES:
1. CONNECT MAST TO GROUND OF LIGHTNING PROTECTION SYSTEM.
2. COORDINATE EXACT LOCATION OF MAST WITH OWNER.

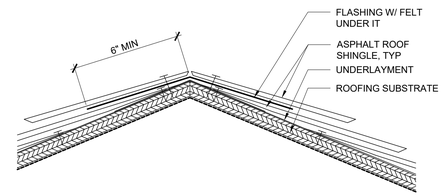
WEATHERHEAD / POWER POLE DETAIL 3" = 1'-0" | A12



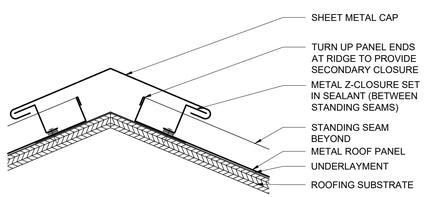

STANDING SEAM ROOF TYPICAL VALLEY FLASHING DETAIL 3" = 1'-0" | D8



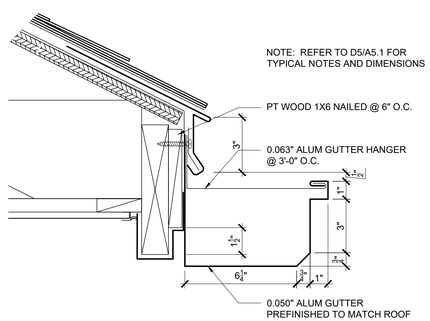

ROOF EDGE DETAIL 3" = 1'-0" | D5



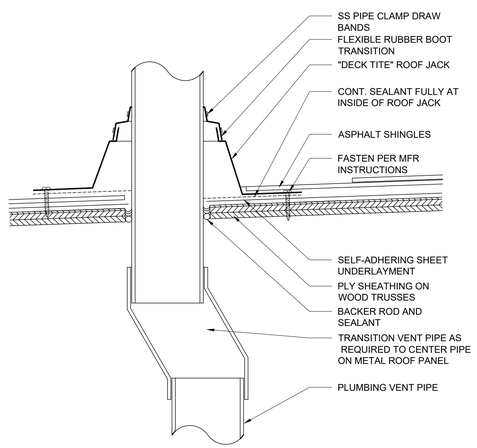

TYPICAL RIDGE FLASHING DETAIL 3" = 1'-0" | D1




STANDING SEAM TYPICAL RIDGE FLASHING DETAIL 3" = 1'-0" | A8




ROOF GUTTER DETAIL 3" = 1'-0" | A5




TYPICAL VENT PIPE PENETRATION DETAIL 3" = 1'-0" | A1

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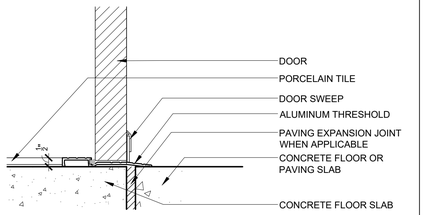
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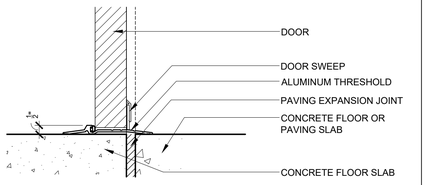
| DISTRIBUTION | DATE |
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ROOF DETAILS

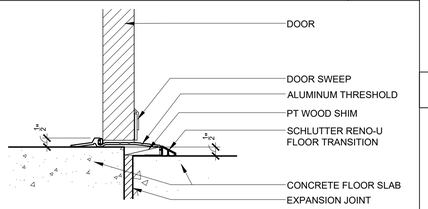
A5.1



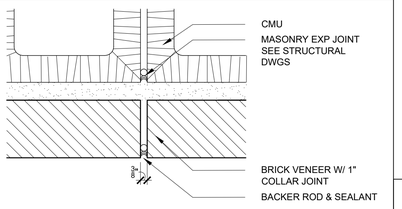

DOOR THRESHOLD 3" = 1'-0" J13



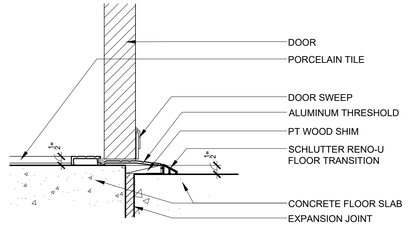

DOOR THRESHOLD 3" = 1'-0" G13



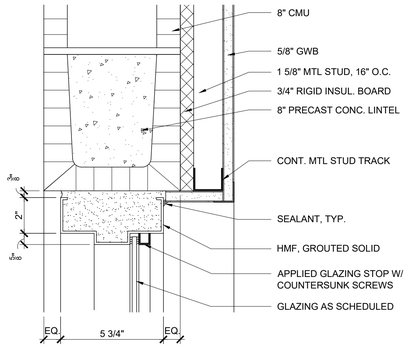

DOOR THRESHOLD 3" = 1'-0" F13



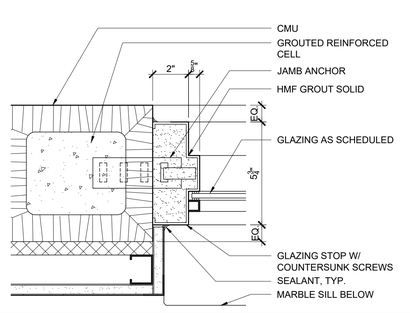

TYPICAL BRICK CJ @ MASONRY CJ 3" = 1'-0" D13



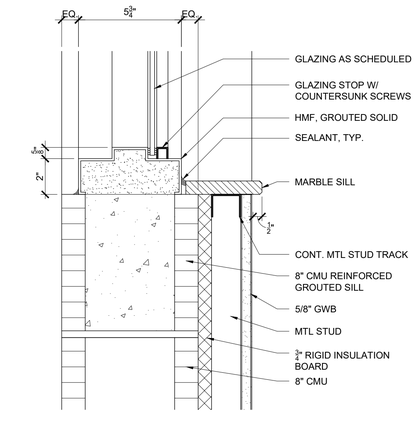

DOOR THRESHOLD 3" = 1'-0" J10



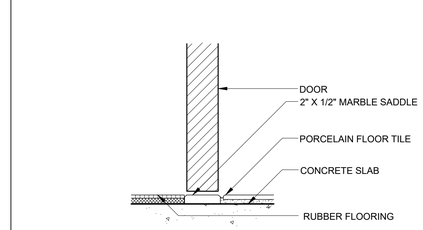

BAY WINDOW HEAD 3" = 1'-0" G10



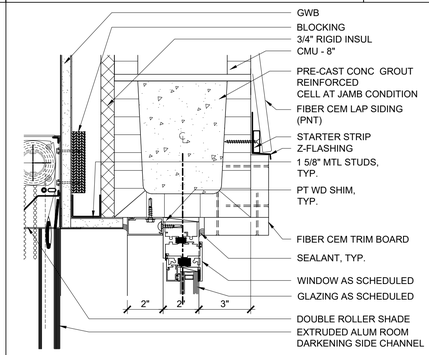

BAY WINDOW JAMB 3" = 1'-0" D10



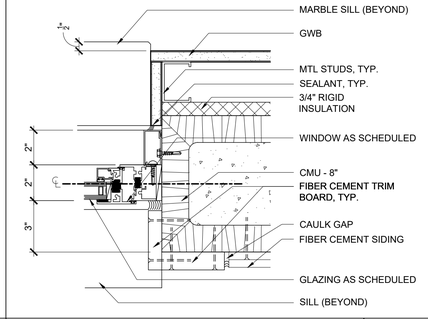

BAY WINDOW SILL 3" = 1'-0" A10



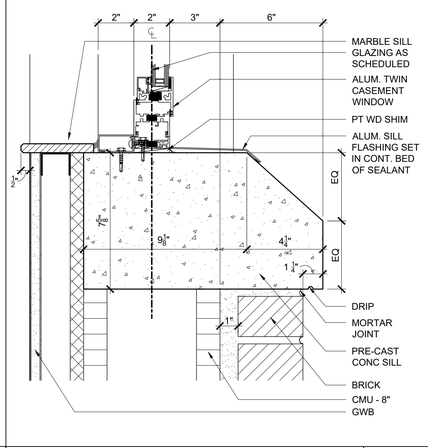

DOOR THRESHOLD 3" = 1'-0" J7



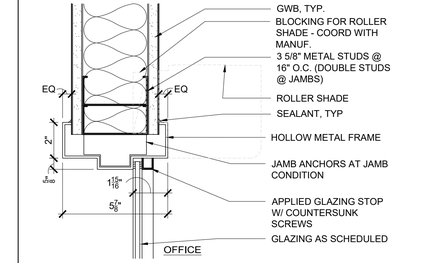

WINDOW HEAD W/ GWB & FIBERCEMENT SIDING 3" = 1'-0" G7



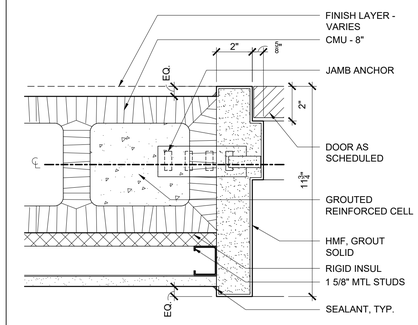

CASEMENT WINDOW JAMB 3" = 1'-0" D7



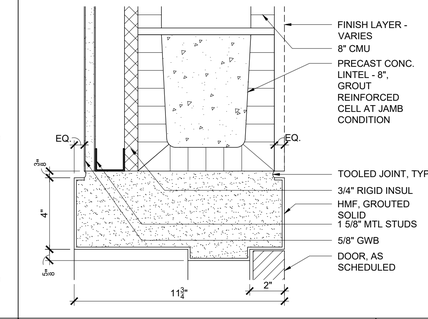

CASEMENT WINDOW SILL 3" = 1'-0" A7



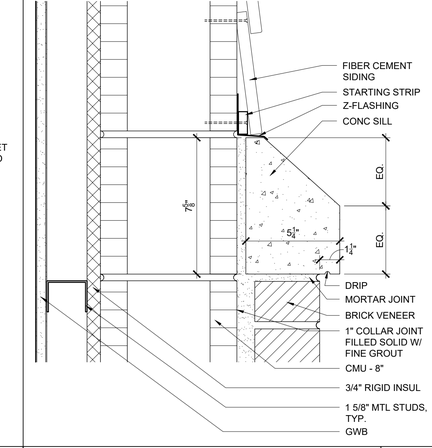

INTERIOR WINDOW HEAD/JAMB/SILL 3" = 1'-0" J4



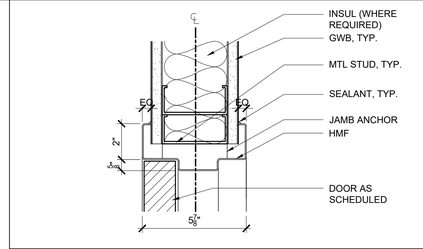

HM FRAME - JAMB W/ GWB 3" = 1'-0" G4



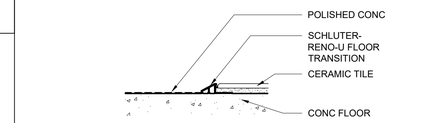

HM FRAME - HEAD W/ GWB 3" = 1'-0" D4




BRICK VENEER CAP DETAIL 3" = 1'-0" A4

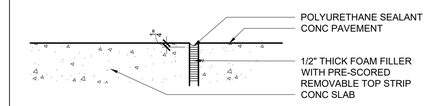



HM FRAME - GWB HEAD/JAMB 3" = 1'-0" K1

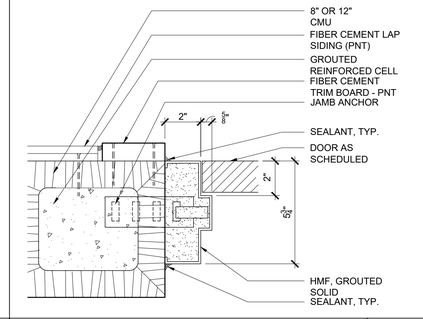



NOTE: CONFIRM & NOTE TRANSITION TO COMPLY W/ FBC-ACCESSIBILITY 303

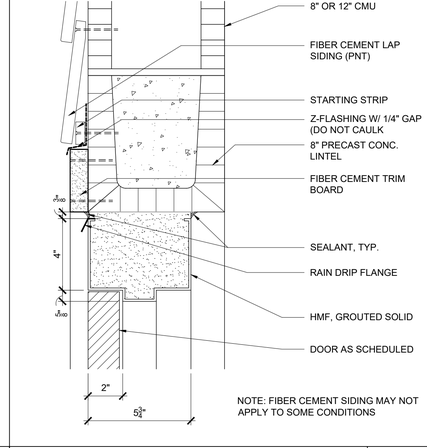
FLOOR TRANSITION 3" = 1'-0" H1




SLAB CONNECTION 3" = 1'-0" G1




HM FRAME - JAMB DETAIL 3" = 1'-0" D1




NOTE: FIBER CEMENT SIDING MAY NOT APPLY TO SOME CONDITIONS

HM FRAME - HEAD DETAIL 3" = 1'-0" A1

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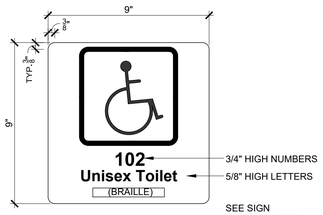
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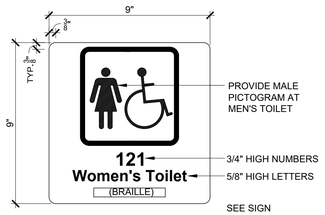
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| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
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DETAILS

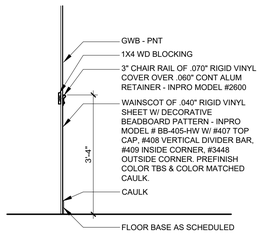
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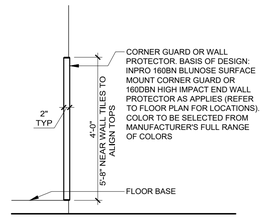

ADA SIGNAGE 3" = 1'-0" K13



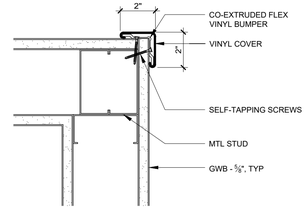

ADA SIGNAGE 3" = 1'-0" K10



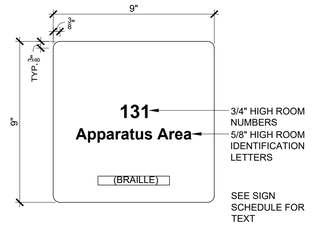

WAINSCOT & CHAIR RAIL DETAIL 1/2" = 1'-0" K7



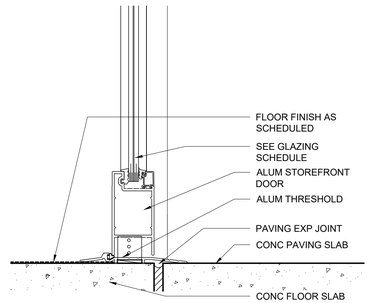

CORNER GUARD ELEVATION 1/2" = 1'-0" K4



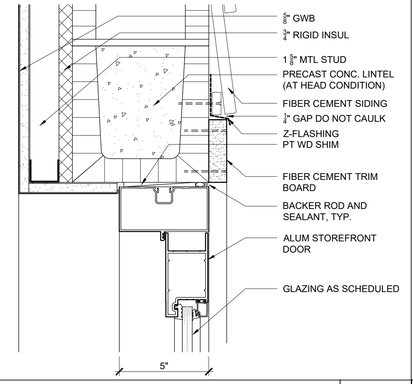

CORNER GUARD DETAIL 3" = 1'-0" K1



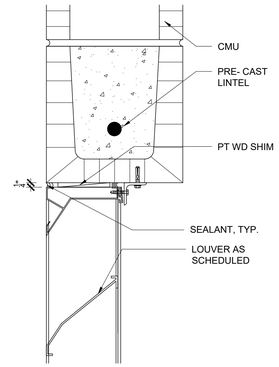

ADA SIGNAGE 3" = 1'-0" H10



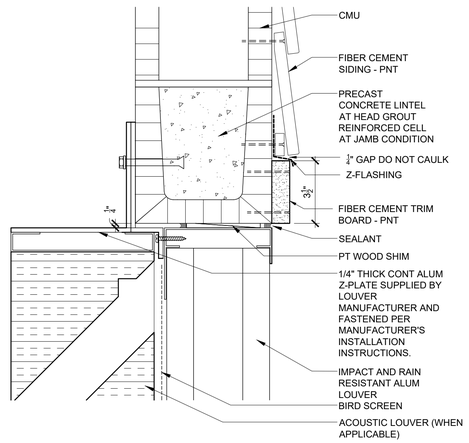

STR FRNT DOOR THRESHOLD DETAIL 3" = 1'-0" G7



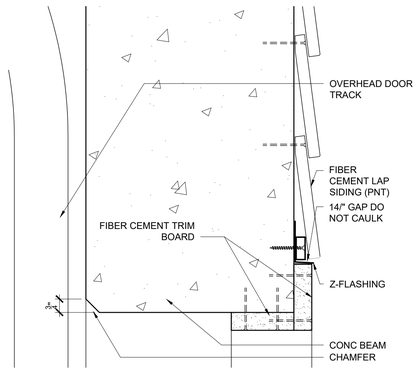

STR FRNT EXT HEAD 3" = 1'-0" G4



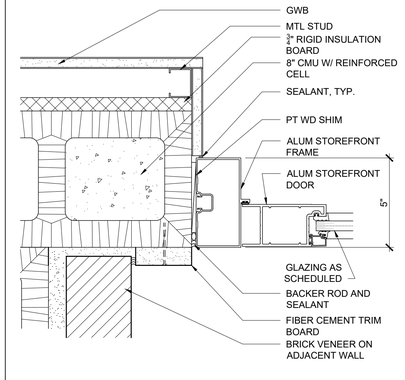

LOUVER HEAD DETAIL 3" = 1'-0" G1



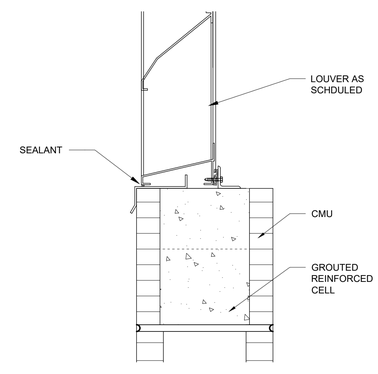

LOUVER HEAD DETAIL 3" = 1'-0" D10



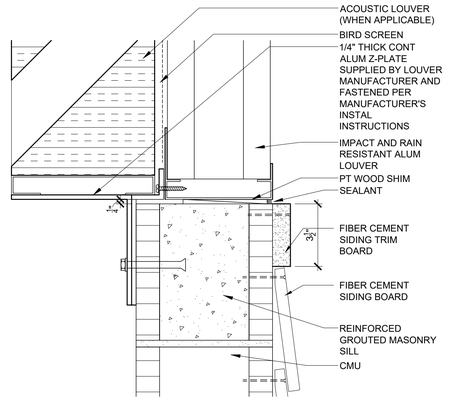

SECTIONAL OVERHEAD DOOR HEAD 3" = 1'-0" D7



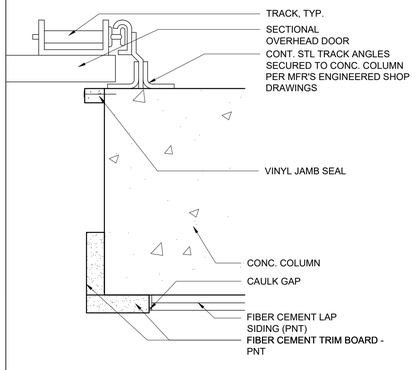

STR FRNT EXT JAMB 3" = 1'-0" D4



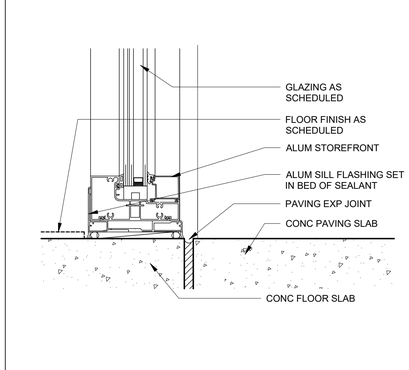

LOUVER SILL DETAIL 3" = 1'-0" D1



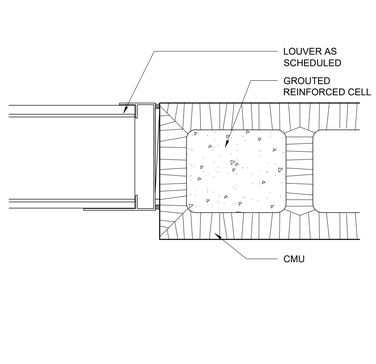

LOUVER SILL DETAIL 3" = 1'-0" A10




SECTIONAL OVERHEAD DOOR JAMB 3" = 1'-0" A7




STR FRNT EXT SILL 3" = 1'-0" A4




LOUVER JAMB DETAIL 3" = 1'-0" A1

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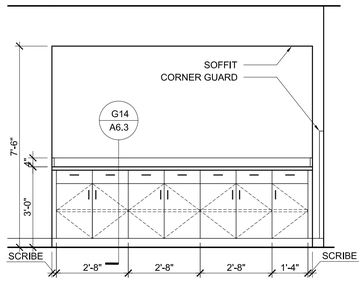
HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2116-05

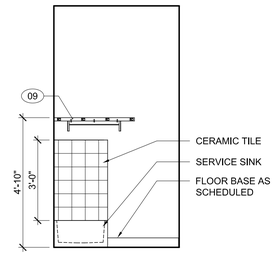
| DISTRIBUTION | DATE |
|---|---|
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

DETAILS

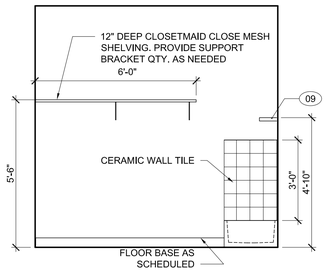
A5.3



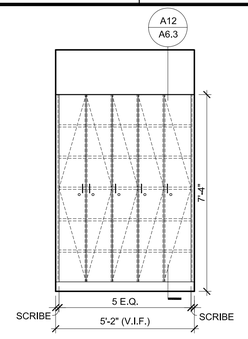

PANEL WALL CASEWORK 3/8" = 1'-0" | J13




JANITOR 3/8" = 1'-0" | J10

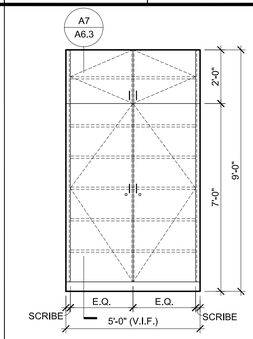



JANITOR 3/8" = 1'-0" | J7



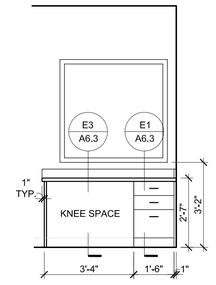

CORRIDOR 124 3/8" = 1'-0" | J5

NOTE: 5 INDIVIDUAL STORAGE UNITS WITH LOCKS

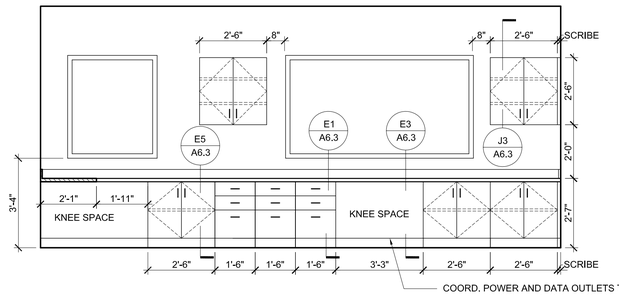



CORRIDOR 116 3/8" = 1'-0" | J3

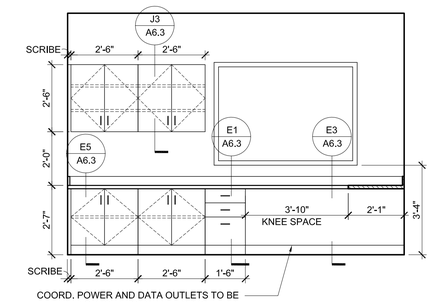
NOTE: 2 INDIVIDUAL STORAGE UNITS WITH LOCKS



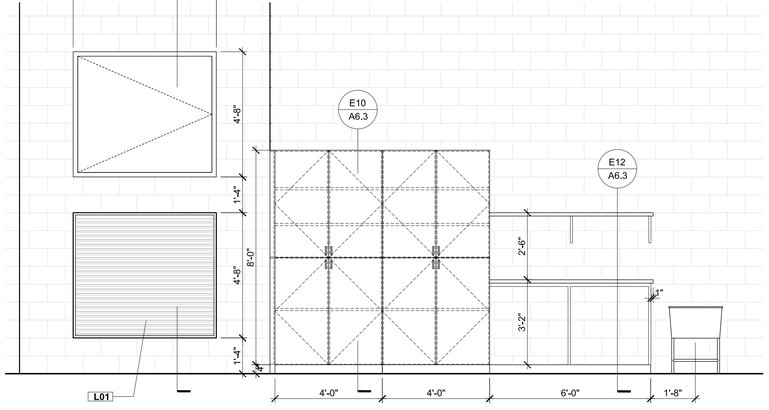

OFFICE 3/8" = 1'-0" | J1



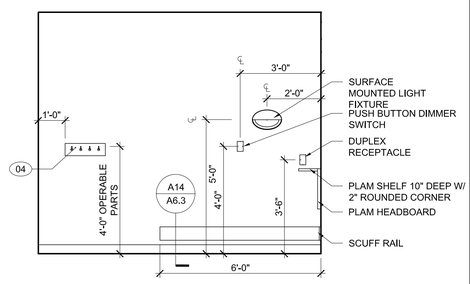

OFFICE 3/8" = 1'-0" | F5



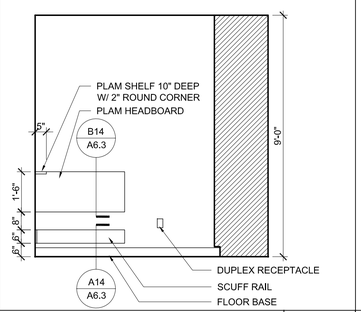

OFFICE 3/8" = 1'-0" | F1



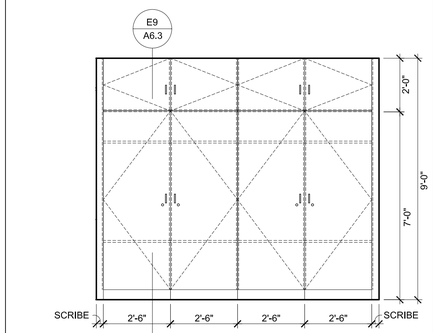

APPARATUS BAY WORK AREA 3/8" = 1'-0" | D10




BUNK ELEVATION, TYP. 3/8" = 1'-0" | D6

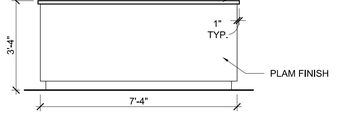



BUNK ELEVATION, TYP. 3/8" = 1'-0" | D4



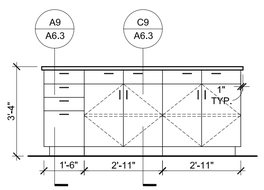

NOTE: 4 INDIVIDUAL STORAGE UNITS WITH LOCKS

BUNK ELEVATION, TYP. 3/8" = 1'-0" | D1

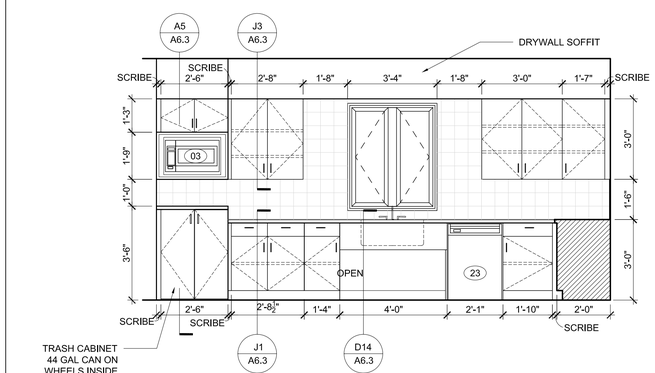



KITCHEN - ISLAND 3/8" = 1'-0" | A13

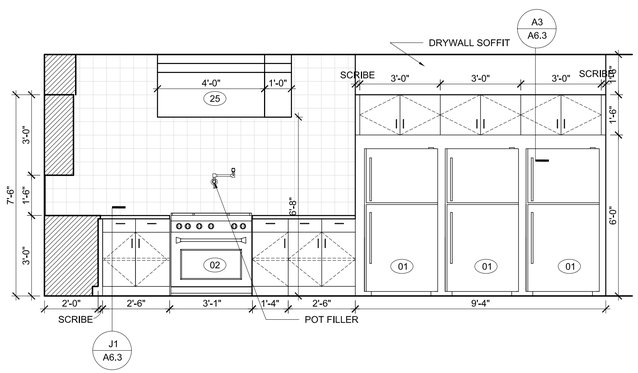
NOTE:
COORDINATE POWER RECEPTACLES ON BOTH SIDES OF KITCHEN ISLAND WITH DRAWERS.




KITCHEN - ISLAND 3/8" = 1'-0" | A11




KITCHEN 3/8" = 1'-0" | A6




KITCHEN 3/8" = 1'-0" | A1

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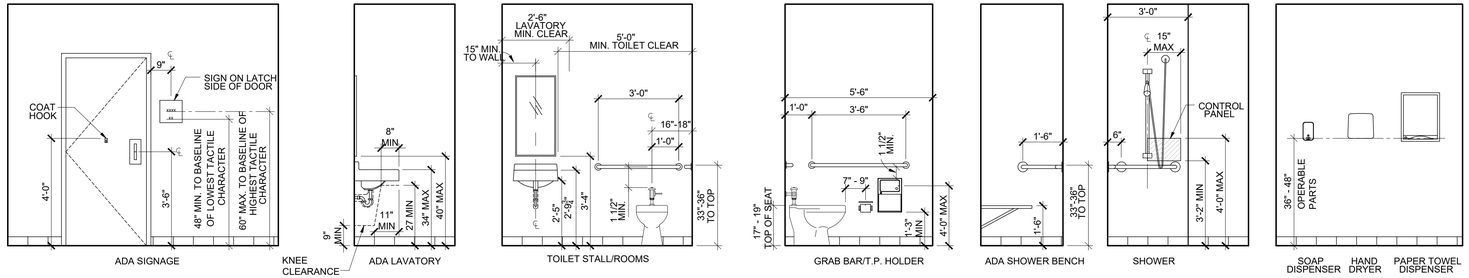
HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

| PROJECT #: 2116-05 | |
|---|---|
| DISTRIBUTION | DATE |
| SCHEMATIC DESIGN | 03.15.2024 |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

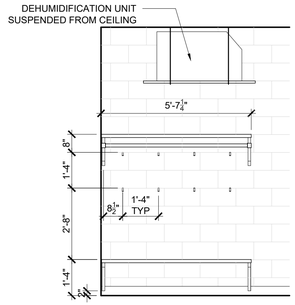
INTERIOR ELEVATIONS

A6.1

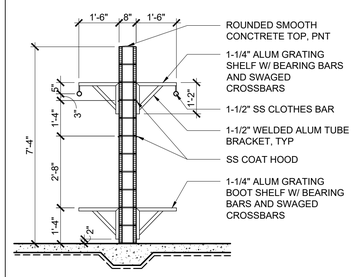
NOTE: FOR EQUIPMENT SCHEDULE SEE A2.1



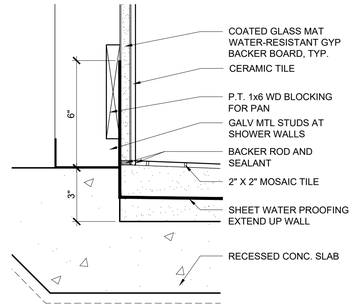

ADA MOUNT HEIGHT ELEVATIONS 3/8" = 1'-0" | J1



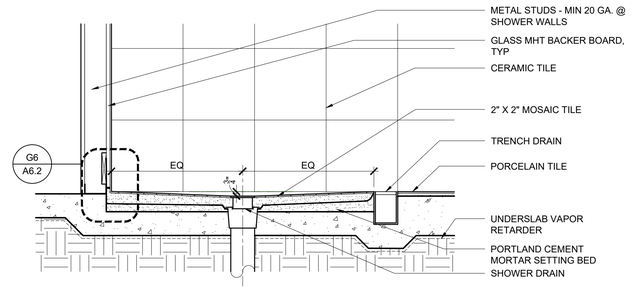

BUNKER GEAR 3/8" = 1'-0" | G11



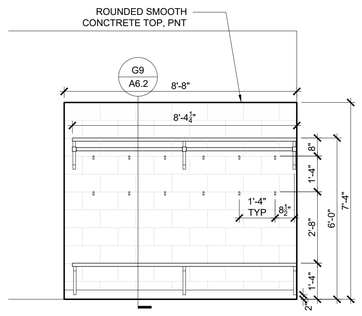

BUNKER GEAR SECTION 3/8" = 1'-0" | G9



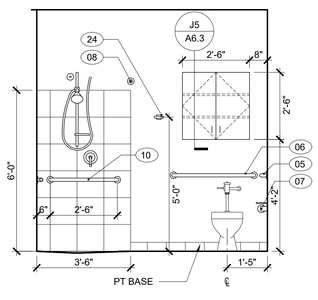

TYPICAL SHOWER DETAIL 3" = 1'-0" | G6



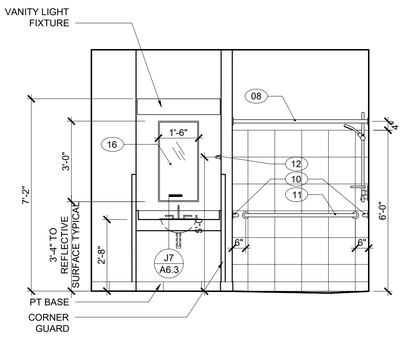

TYPICAL SHOWER SECTION 1" = 1'-0" | G1



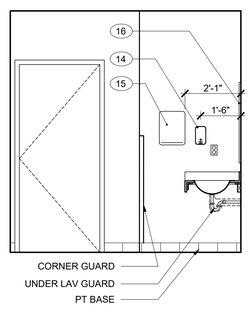

BUNKER GEAR 3/8" = 1'-0" | D11



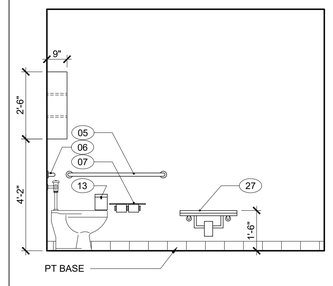

TOILET RM 112 (113 SIM) 3/8" = 1'-0" | D9



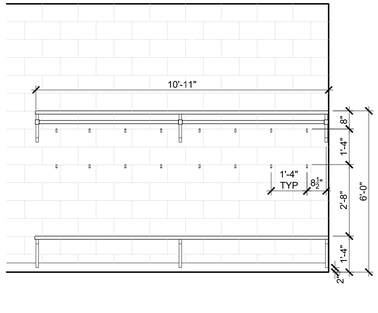

TOILET RM 112 (113 SIM) 3/8" = 1'-0" | D6



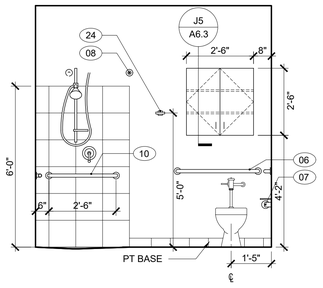

TOILET RM 112 (113 SIM) 3/8" = 1'-0" | D3



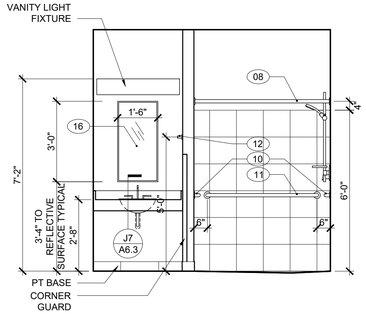

TOILET RM 112 (113 SIM) 3/8" = 1'-0" | D1



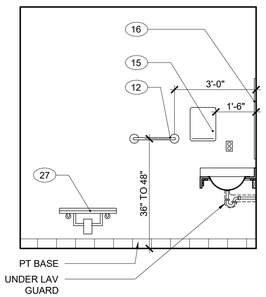

BUNKER GEAR 3/8" = 1'-0" | A11



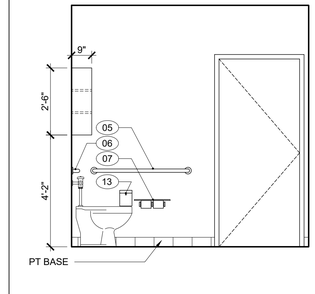

TOILET RM 125 3/8" = 1'-0" | A9




TOILET RM 125 3/8" = 1'-0" | A6




TOILET RM 125 3/8" = 1'-0" | A3




TOILET RM 125 3/8" = 1'-0" | A1

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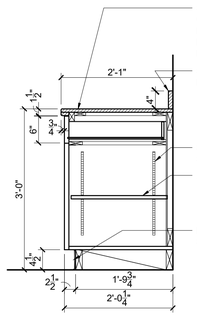
HILLSBOROUGH COUNTY BOARD
OF COUNTY COMMISSIONERS
COUNTY CENTER
601 E KENNEDY BLVD
TAMPA, FL 33601

HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

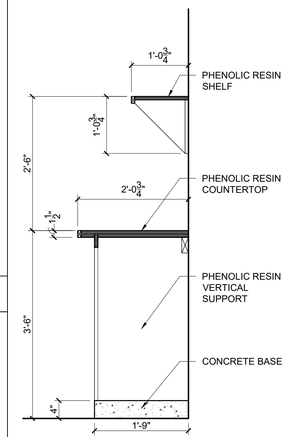
| PROJECT #: 2116-05 | |
|---|---|
| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

INTERIOR ELEVATIONS & SECTIONS

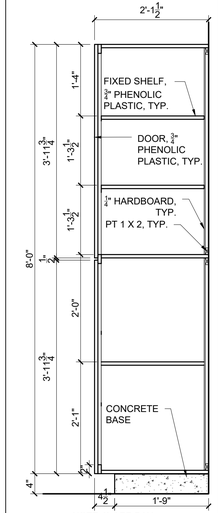
A6.2



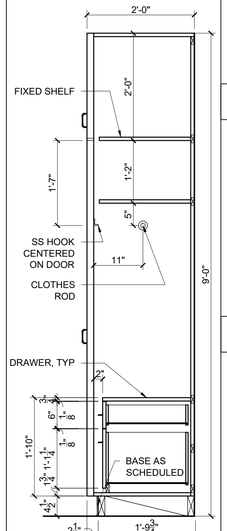

BASE CABINET W/ DRAWER 3/4" = 1'-0" G14




CASEWORK SECTION 3/4" = 1'-0" E12



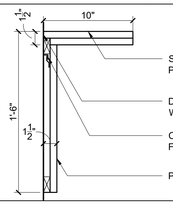

STORAGE CABINET 3/4" = 1'-0" E10



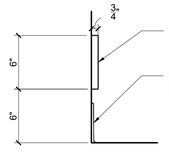

LOCKERS AT BUNK 3/4" = 1'-0" E9



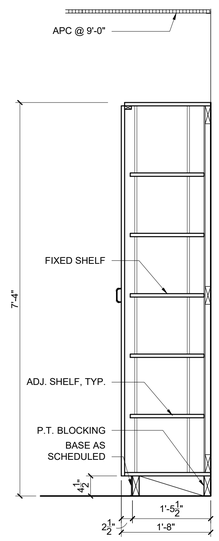

KITCHEN SINK W/ KNEE SPACE 3/4" = 1'-0" D14



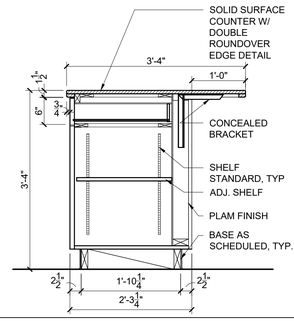

HEADBOARD & SHELF 1 1/2" = 1'-0" B14



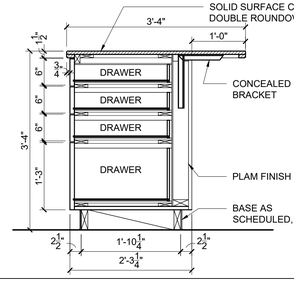

SCUFF RAIL & BUNK ROOM 1 1/2" = 1'-0" A14



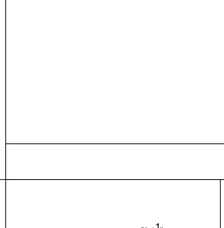

TOILET VEST CABINET 3/4" = 1'-0" A12



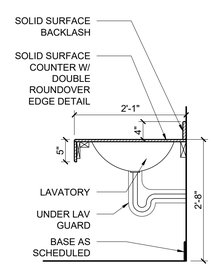

KITCHEN ISLAND 3/4" = 1'-0" C9



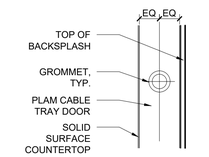

BASE CABINET - 4 DRAWER 3/4" = 1'-0" A9




KICK BASE CABINET 1 1/2" = 1'-0" K9

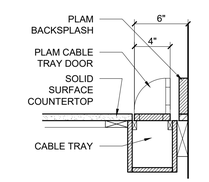



VANITY COUNTER 3/4" = 1'-0" J7

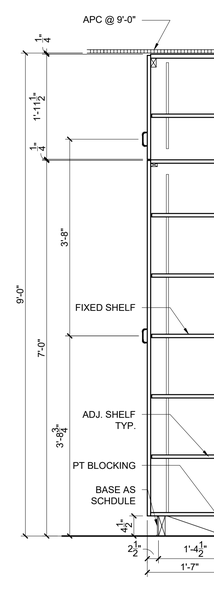


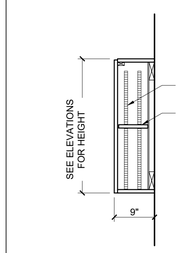

NOTE: COORD GROMMET LOCATION WITH OWNER

CASEWORK SECTION 1 1/2" = 1'-0" G7

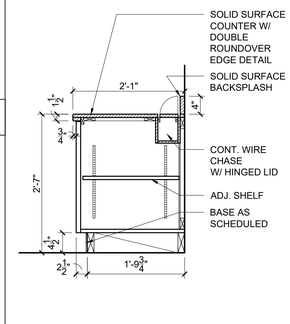



CASEWORK SECTION 1 1/2" = 1'-0" E7

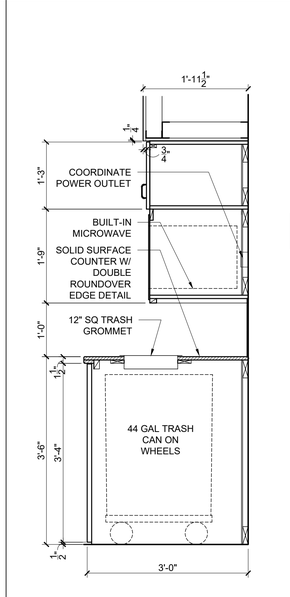


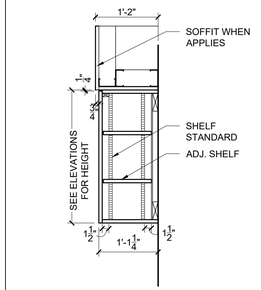




WALL CABINET 3/4" = 1'-0" J5

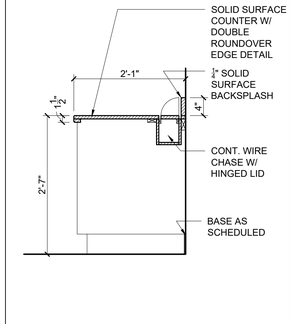



BASE CABINET W/ WIRE CHASE 3/4" = 1'-0" E5

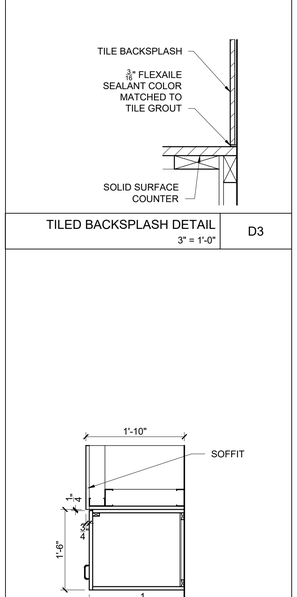


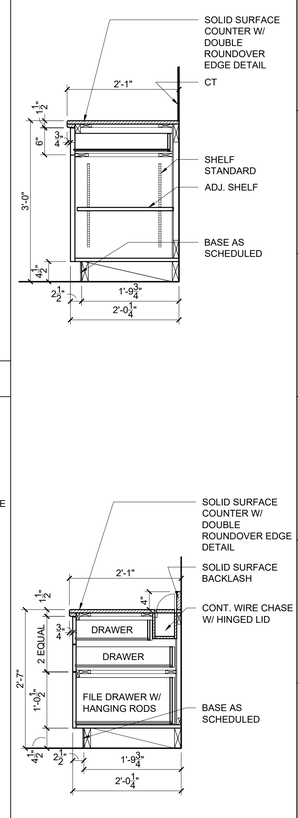

WALL CABINET 3/4" = 1'-0" J3




BASE CABINET W/ KNEE SPACE 3/4" = 1'-0" E3



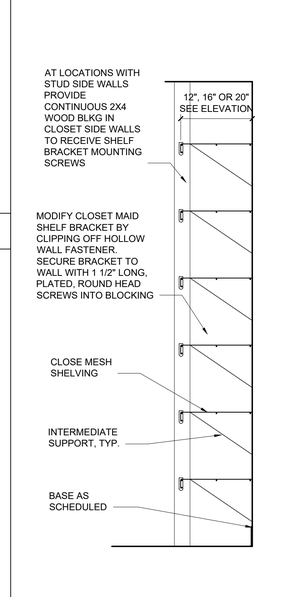

CASEWORK SECTION 3/4" = 1'-0" A3







BASE CABINET W/ DRAWERS 3/4" = 1'-0" E1




TYP. SHELVING INSTALLATION 3/4" = 1'-0" A1

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WILDERARCHITECTURE, INC.

HILLSBOROUGH COUNTY BOARD OF COUNTY COMMISSIONERS
601 E KENNEDY BLVD
TAMPA, FL 33601

HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

| PROJECT #: 2116-05 | |
|---|---|
| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

CASEWORK DETAILS

A6.3

**FINISH SCHEDULE**

| ROOM NUMBER | ROOM NAME | FLOOR | BASE | FINISH | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | WALLS | | | | CEILING | | |
| | | | | SOUTH | EAST | WEST | NORTH | HEIGHT | FINISH | |
| 101 | VESTIBULE | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | APC-1 | |
| 102 | OFFICE | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | APC-1 | |
| 103 | BUNK ROOM | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | APC-1 | 5 |
| 104 | BUNK ROOM | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | APC-1 | 5 |
| 105 | DAYROOM | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | APC-2 | 1, 17 |
| 106 | KITCHEN / DINING | PC | VWB | PNT | CT / PNT | PNT | CT / PNT | 9'-0" | APC-2 | 1, 2, 11, 17 |
| 107 | PANTRY | PC | PWB | PNT | PNT | PNT | PNT | 9'-0" | PNT | |
| 108 | PANTRY | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | PNT | |
| 109 | PANTRY | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | PNT | |
| 110 | CORRIDOR | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | APC-1 | |
| 111 | EMS STORAGE | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | APC-1 | |
| 112 | TOILET | PT | PT | CT / EP | CT / EP | CT / EP | CT / EP | 9'-0" | PNT | 2, 5 |
| 113 | TOILET | PT | PT | CT / EP | CT / EP | CT / EP | CT / EP | 9'-0" | PNT | 2, 5 |
| 114 | CORRIDOR | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | APC-1 | |
| 115 | CORRIDOR | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | APC-1 | 5 |
| 116 | CORRIDOR | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | APC-1 | 5 |
| 117 | BUNK ROOM | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | APC-1 | 5 |
| 118 | BUNK ROOM | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | APC-1 | 5 |
| 119 | BUNK ROOM | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | APC-1 | 5 |
| 120 | BUNK ROOM | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | APC-1 | 5 |
| 121 | BUNK ROOM | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | APC-1 | 5 |
| 122 | FITNESS | RF | VWB | EP | EP | EP | EP | 9'-0" | APC-1 | 6 |
| 123 | JANITOR | PC | VWB | EP | EP | CT / EP | CT /EP | 9'-0" | PNT | 12 |
| 124 | CORRIDOR | PC | VWB | PNT | PNT | PNT | PNT | 9'-0" | APC-1 | |
| 125 | TOILET | PT | PT | CT / EP | CT / EP | CT / EP | CT / EP | 9'-0" | PNT | 2, 5 |
| 126 | DECON | SC | VWB | FRP / EP | FRP / EP | FRP / EP | FRP / EP | 10'-0" | PNT | |
| 127 | TELE | SC | VWB | PNT | PNT | PNT | PNT | 9'-0" | APC-1 | 4 |
| 128 | APP BAY | SC / EF | NR | EP | EP | EP | EP | 16'-7 1/2" | PNT | 7, 9, 10, 13, 16 |
| 129 | MECHANICAL | SC | VWB | PNT | PNT | PNT | PNT | 9'-11 1/2" | PNT | 15, 16 |
| 130 | ELECTRICAL | SC | VWB | EP | EP | EP | EP | 9'-0" | PNT | 15 |
| 131 | EXTERIOR STORAGE | CONC | NR | PNT | PNT | PNT | PNT | -- | EXP | |
| 132 | MECH YARD | CONC | NR | PNT | PNT | PNT | PNT | -- | -- | |

## FINISH SCHEDULE ABBREVIATIONS

| | | | |
|---|---|---|---|
| APC-1 | ACOUSTICAL PANEL CEILING - 1 | PDC | POLYURETHANE DECK COATING |
| APC-2 | ACOUSTICAL PANEL CEILING - 2 | PNT | PAINTED |
| CONC | CONCRETE | PT | PORCELAIN TILE |
| CT | CERAMIC TILE | RB | RESILIENT WALL BASE |
| EF | EPOXY FLOORING | RF | RUBBER FLOORING |
| EP | EPOXY PAINT | SC | SEALED CONCRETE |
| EXP | EXPOSED ROOF STRUCTURE | VCT | VINYL COMPOSITION TILE |
| FRP | FIBERGLASS REINFORCED PLASTIC | VWB | VINYL WALL BASE |
| NR | NONE REQUIRED | WD | WOOD |
| PC | POLISHED CONCRETE | | |

## NOTES

1. PROVIDE CRACK SUPPRESSION MEMBRANE AT TILE FLOOR LOCATIONS.
2. PROVIDE FLOOR TRANSITIONS AS NEEDED.
3. PROVIDE EPOXY GROUT AT ALL WET LOCATIONS

## REMARKS

1. PROVIDE APC-2 AT DESIGNATED PANELS. SEE REFLECTED CEILING PLAN.
2. PROVIDE TILE AT DESIGNATED LOCATIONS. SEE INTERIOR ELEVATIONS.
3. SEE EXTERIOR ELEVATIONS AND SITE DETAILS FOR CEILING HEIGHT.(EXPOSED STRUCTURE)
4. PLYWOOD BACKBOARD - PNT ALL SIDES / EDGES WITH FIRE RETARDANT PNT (ALL WALLS).
5. PROVIDE SOUND ATTENUATION BLANKETS IN WALL BETWEEN ADJACENT ROOMS DESIGNATED.
6. ABUSE RESISTANT GWB
7. PAINT CEILING LIGHT BLUE (COLOR TBD)
8. REFER TO RCP
9. FIRST 9'-0" OF WALL TO BE ONE COLOR (TBD) AND ABOVE THAT A SECOND COLOR (TBD).
10. COORDINATE WITH OWNER TO WRITE / PNT ON ONE DESIGNATED WALL "DUTY HONOR & COURAGE".
11. REFER TO RCP FOR SOFFITS
12. PROVIDE TILE AT MOP SINK - REFER TO INTERIOR ELEVATIONS
13. PRIME AND PAINT INTERIOR OF CHASE
14. NOT USED
15. PAINTED TECTUM WALL PANELS (OR EQUAL) WHERE POSSIBLE IN MECHANICAL AND ELECTRICAL ROOM. PANELS ARE IN ADDITION TO OTHER INSULATION AND SHALL BE MOUNTED FLOOR TO CEILING. (COORD W/ BLOCK REQUIREMENTS.)
16. CEILING MOUNT TO BOTTOM OF TRUSSES
17. PROVIDE WAINSCOT AND CHAIR RAIL

FINISH SCHEDULE | F8

**DOOR SCHEDULE**

| OPENING NUMBER | ROOM NAME | DOOR | | | | FRAME | | | | | IMPACT RATED | FIRE RATING | HDW SET | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TYPE | MATL | INT | EXT | TYPE | MATL | DETAILS | | | | | | |
| | | | | | | | | HEAD | JAMB | SILL | | | | |
| 101A | VESTIBULE | D08 | ALUM | | ● | SF01 | ALUM | G4 / A5.3 | D4 / A5.3 | G7 / A5.3 | ● | -- | 01 | 4, 5, 7 |
| 101B | VESTIBULE | D05 | WD | ● | | F01 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | -- | 09 | -- |
| 102 | OFFICE | D01 | WD | ● | | F01 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | -- | 06 | -- |
| 103 | BUNK | D11 | WD | ● | | F10 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | SMOKE | 08 | -- |
| 104 | BUNK | D11 | WD | ● | | F10 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | SMOKE | 08 | -- |
| 107 | PANTRY | D04 | WD | ● | | F03 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | -- | 11 | -- |
| 108 | PANTRY | D04 | WD | ● | | F03 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | -- | 11 | -- |
| 109 | PANTRY | D04 | WD | ● | | F03 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | -- | 11 | -- |
| 110 | CORR | D06 | MTL | | ● | F05 | MTL | D4 / A5.2 | G4 / A5.2 | J13 / A5.2 | | 45 MIN | 04A | 7 |
| 112 | TOILET | D01 | WD | ● | | F01 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | -- | 08 | -- |
| 113 | TOILET | D01 | WD | ● | | F01 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | -- | 08 | -- |
| 114 | CORR | D10 | WD | ● | | F10 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | SMOKE | 09 | -- |
| 115 | CORR | D12 | MTL | | ● | F04 | MTL | D4 / A5.2 | G4 / A5.2 | -- | ● | -- | 03A | 4, 6, 7 |
| 117 | BUNK | D01 | WD | ● | | F01 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | -- | 08 | -- |
| 118 | BUNK | D01 | WD | ● | | F01 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | -- | 08 | -- |
| 119 | BUNK | D01 | WD | ● | | F01 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | -- | 08 | -- |
| 120 | BUNK | D01 | WD | ● | | F01 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | -- | 08 | -- |
| 121 | BUNK | D01 | WD | ● | | F01 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | -- | 08 | -- |
| 122 | FITNESS | D01 | WD | ● | | F01 | MTL | K1 / A5.2 | K1 / A5.2 | J7 / A5.2 | | -- | 09 | -- |
| 123 | JANITOR | D01 | WD | ● | | F01 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | -- | 05A | -- |
| 124A | CORR | D05 | WD | ● | | F01 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | -- | 10 | -- |
| 124B | CORR | D07 | MTL | | ● | F05 | MTL | D4 / A5.2 | G4 / A5.2 | J13 / A5.2 | | 45 MIN | 04B | 7 |
| 125 | TOILET | D01 | WD | ● | | F01 | MTL | K1 / A5.2 | K1 / A5.2 | -- | | -- | 08 | -- |
| 126 | DECON | D03 | MTL | | ● | F06 | MTL | D4 / A5.2 | G4 / A5.2 | F13 / A5.2 | | -- | 07 | 7 |
| 127 | TELE | D13 | MTL | | ● | F08 | MTL | D4 / A5.2 | G4 / A5.2 | -- | | -- | 05B | 3, 7 |
| 128A | APP BAY | D09 | STL | | ● | -- | -- | D7 / A5.3 | A7 / A5.3 | -- | ● | -- | 12 | 2, 7 |
| 128B | APP BAY | D09 | STL | | ● | -- | -- | D7 / A5.3 | A7 / A5.3 | -- | ● | -- | 12 | 2, 7 |
| 128C | APP BAY | D09 | STL | | ● | -- | -- | D7 / A5.3 | A7 / A5.3 | -- | ● | -- | 12 | 2, 7 |
| 128D | APP BAY | D09 | STL | | ● | -- | -- | D7 / A5.3 | A7 / A5.3 | -- | ● | -- | 12 | 2, 7 |
| 128E | APP BAY | D12 | MTL | | ● | F04 | MTL | A1 / A5.2 | D1 / A5.2 | G13 / A5.2 | ● | -- | 03B | 4, 7 |
| 129 | MECH | D12 | MTL | | ● | F07 | MTL | D4 / A5.2 | G4 / A5.2 | G13 / A5.2 | ● | -- | 02 | 1, 7 |
| 130 | ELECTRICAL | D12 | MTL | | ● | F04 | MTL | D4 / A5.2 | G4 / A5.2 | G13 / A5.2 | ● | -- | 03B | 7 |

## REMARKS

1. PAIR OF DOORS.
2. OVERHEAD DOOR.
3. CARD READER ACCESS.
4. CARD READER / KEY PAD COMBO
5. ELECTRIC STRIKE
6. WIDE ANGLE DOOR PREVIEW.
7. INSULATED DOOR

## GENERAL REMARKS

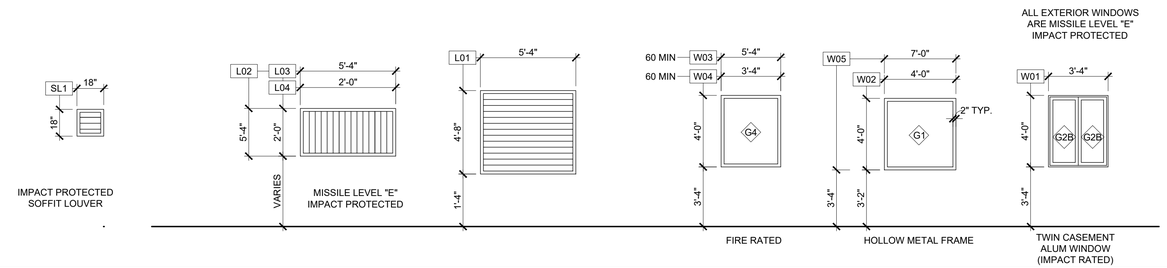
1. ALL EXTERIOR DOORS AND WINDOWS TO BE MISSILE LEVEL "E" IMPACT PROTECTED
2. REFER TO MECH DRAWINGS FOR UNDERCUT DOORS (1" TYP).
3. PROVIDE PANIC HARDWARE AT ELECTRICAL ROOM

DOOR SCHEDULE | F1

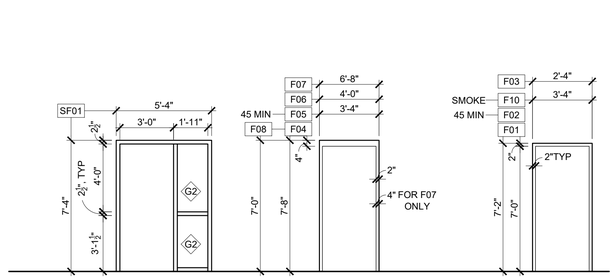
## GLAZING SCHEDULE

| TAG | TYPE | REMARKS |
|---|---|---|
| G1 | TEMPERED CLEAR | 1/4" THICK, TYP. TEMPERED |
| G2 | LAMINATED UV - TINTED | 1-5/16" THICK, TYP. LARGE MISSILE IMPACT GLAZING |
| G2A | LAMINATED UV - TINTED | 1" THICK, TYP. LARGE MISSILE IMPACT GLAZING |
| G2B | LAMINATED UV - TINTED | 1-7/16" THICK, TYP. LARGE MISSILE IMPACT GLAZING |
| G3 | CLEAR FIRELIGHT | OH 45 OR W-60 PLUS LAMINATED GLASS |
| G4 | CLEAR FIRELIGHT | W-60 PLUS LAMINATED GLASS |

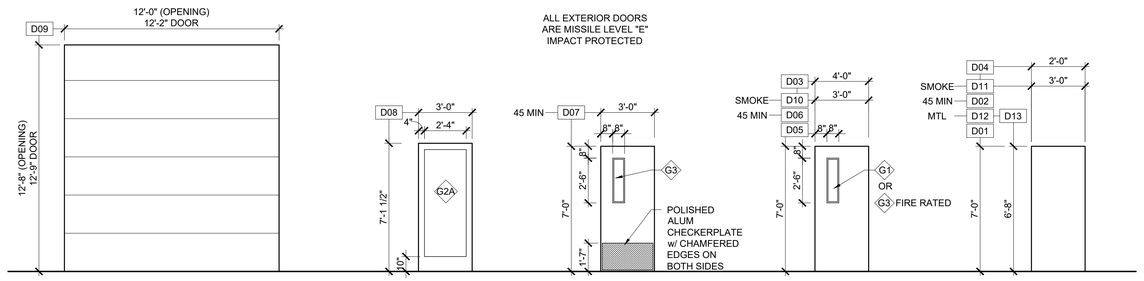
GLAZING SCHEDULE | C9




WINDOW & LOUVER TYPES | C1




DOOR FRAME TYPES | A9




DOOR TYPES | A1


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| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

SCHEDULES AND DOOR AND WINDOWS TYPES

A7.1

## STRUCTURAL SPECIFICATIONS

### MISCELLANEOUS

1. THE STRUCTURAL SYSTEM IS UNSTABLE UNTIL ALL CONNECTIONS HAVE BEEN MADE AND ALL CONCRETE HAS REACHED ITS MINIMUM DESIGN STRENGTH, AS SHOWN IN THE STRUCTURAL DOCUMENTS.

2. CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION TO ENSURE THE SAFETY OF THE BUILDING UNTIL STRUCTURAL SYSTEM IS COMPLETED. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, SHORING, GUYS OR TIE_DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.

3. CONTRACTOR TO SUPPORT, BRACE AND SECURE EXISTING STRUCTURE AS REQUIRED. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFETY OF THE BUILDING DURING CONSTRUCTION.

4. APPLICABLE BUILDING CODE: 8TH EDITION 2023 FLORIDA BUILDING CODE

5. GRAVITY DESIGN LOADS:

| | SUPERIMPOSED | TOTAL |
|---|---|---|
| AREA | LIVE LOAD | DEAD LOAD |
| ROOF | 20 PSF | 25 PSF |
| SLAB-ON-GRADE | 100 PSF | N/A |
| APPARATUS ROOM | 400 PSF | N/A |

6. WIND DESIGN CRITERIA:
ULTIMATE BASIC WIND SPEED: VULT = 154 MPH (3 SECOND GUST)
EQUIVALENT NOMINAL BASIC WIND SPEED VASD = 120 MPH (3 SECOND GUST)
TORNADO SPEED, VT= 55 MPH (DOES NOT CONTROL DESIGN PER ASCE 7-22 32.5.2)
RISK CATEGORY = IV
TORNADO EFFECTIVE PLAN AREA, Ae=15000 SF
EXPOSURE CATEGORY = C
ENCLOSED BUILDING INTERNAL PRESSURE COEFFICIENT, GCPI= +/-0.18
ENCLOSED BUILDING TORNADO INTERNAL PRESSURE COEFFICIENT, GCPIT= + 55/-0.18
WIND BORNE DEBRIS REGION

7. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REFERENCED BUILDING CODE.

8. COORDINATE ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS. DO NOT SCALE DRAWINGS.

9. CONTACT ENGINEER WITH ANY QUESTIONS OR DISCREPANCIES FOUND ON DRAWINGS.

10. BUILDING EXPANSION JOINTS (EJ), WHERE SHOWN, WILL EXPAND AND CONTRACT OVER THE LIFE OF THE BUILDING. JOINT SEALANTS AND COVERS MUST ACCOMMODATE THIS MOVEMENT.

11. CONTRACTOR TO VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS, AND CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.

12. SUBMIT SHOP DRAWINGS AS REQUIRED HEREIN. ALLOW FOR TWO WEEKS REVIEW TIME AFTER RECEIPT OF SUBMITTALS BY THIS FIRM. ALL SUBMITTALS SHALL BE CHECKED AND SIGNED BY THE GENERAL CONTRACTOR AND SIGNED/SEALED BY THE DELEGATED ENGINEER, WHERE SPECIFIED HEREIN.

13. CONTRACTOR SHALL NOT BE RELIEVED FROM RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS OR MIX DESIGNS BY THE ENGINEER'S REVIEW THEREOF.

14. ANY CHANGES TO THE STRUCTURE SHALL HAVE BEEN REVIEWED AND APPROVED IN WRITING BY THE ENGINEER PRIOR TO COMMENCING WORK ON ITEMS AFFECTED.

15. CONTRACTOR SHALL NOTIFY THIS OFFICE WHEN THE STRUCTURAL SYSTEM IS SUBSTANTIALLY COMPLETED, AND BEFORE SHEATHING, CEILINGS, OR ROOFING IS INSTALLED.

### DELEGATED ENGINEER

1. WHERE NOTED HEREIN, A LICENSED PROFESSIONAL (DELEGATED) ENGINEER SHALL BE RETAINED TO DESIGN THE PRODUCT OR ASSEMBLY.

2. THE DELEGATED ENGINEER SHALL BE EXPERIENCED IN THE DESIGN OF THE REFERENCED PRODUCT OR ASSEMBLY.

3. THE DELEGATED ENGINEER MUST BE PROVIDED WITH A COPY OF THESE DRAWINGS AND SPECIFICATIONS.

4. IT IS THE DELEGATED ENGINEER'S RESPONSIBILITY TO REVIEW THE ENGINEER OF RECORD'S WRITTEN ENGINEERING REQUIREMENTS AND AUTHORIZATION FOR THE DELEGATED ENGINEERING DOCUMENT TO DETERMINE THE APPROPRIATE SCOPE OF ENGINEERING.

5. THE DELEGATED ENGINEERING DOCUMENT SHALL COMPLY WITH THE WRITTEN ENGINEERING REQUIREMENTS RECEIVED FROM THE ENGINEER OF RECORD. THEY SHALL INCLUDE THE PROJECT IDENTIFICATION AND THE CRITERIA USED AS A BASIS FOR ITS PREPARATION. IF A DELEGATED ENGINEER DETERMINES THERE ARE DETAILS, FEATURES OR UNANTICIPATED PROJECT LIMITS WHICH CONFLICT WITH THE WRITTEN ENGINEERING REQUIREMENTS PROVIDED BY THE ENGINEER OF RECORD, THE DELEGATED ENGINEER SHALL TIMELY CONTACT THE ENGINEER OF RECORD FOR RESOLUTION OF CONFLICTS.

6. THE DELEGATED ENGINEER SHALL FORWARD THE DELEGATED ENGINEERING DOCUMENT TO THE ENGINEER OF RECORD FOR REVIEW. ALL FINAL DELEGATED ENGINEERING DOCUMENTS REQUIRE THE IMPRESSED SEAL AND SIGNATURE OF THE DELEGATED ENGINEER AND INCLUDE:
A) DRAWINGS INTRODUCING ENGINEERING INPUT SUCH AS DEFINING THE CONFIGURATION OR STRUCTURAL CAPACITY OF STRUCTURAL COMPONENTS AND/OR THEIR ASSEMBLY INTO STRUCTURAL SYSTEMS.

### SITE WORK

1. A SUBSURFACE INVESTIGATION HAS BEEN COMPLETED AT THE PROJECT SITE BY AREHNA ENGINEERING INC.. SOIL BORING LOGS AND SITE PREPARATION PROCEDURES BY TRERRA, INC. ARE INCLUDED IN THE PROJECT SOILS REPORT B-18-114.20, DATED MAY 1ST., 2023, WHICH IS AN INTEGRAL PART OF THESE CONTRACT DOCUMENTS.

2. SITE WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE PROJECT SOILS REPORT.

3. CONTRACTOR SHALL REVIEW THE SOILS REPORT AND VERIFY THAT TEST BORINGS HAVE BEEN DONE UNDER ALL BUILDING(S) PRIOR TO BEGINNING EARTHWORK.

4. INFORMATION FROM GEAOTECHNICAL REPORT:
A) DESIGN SOIL BEARING PRESSURE = 2500 PSF.
B) ESTIMATED MAXIMUM SETTLEMENT= 1 INCH.
C) ESTIMATED DIFFERENTIAL SETTLEMENT= 1/2 INCH

5. A QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO PERFORM THE FOLLOWING MINIMUM TESTS. REFER TO SOILS REPORT FOR ANY ADDITIONAL TESTING.
A) ONE DENSITY TEST FOR EACH 2,000 SQUARE FEET OF COMPACTED SUBGRADE AND COMPACTED FILL.
B) ONE DENSITY TEST AT EACH COLUMN FOOTING.
C) ONE DENSITY TEST PER 50 FEET OF WALL FOOTING.

6. ONE COPY OF ALL TEST REPORTS SHALL BE SENT DIRECTLY TO OWNER, ARCHITECT, STRUCTURAL ENGINEER, AND GENERAL CONTRACTOR.

7. FOUNDATION WALLS THAT RETAIN EARTH SHALL BE BRACED AGAINST BACKFILLING PRESSURES UNTIL FLOOR SLABS AT TOP AND BOTTOM ARE IN PLACE.

8. THE SIDES OF FOOTINGS MAY BE EARTH_FORMED IF THE EXCAVATION CAN BE KEPT VERTICAL, CLEAN, AND STABLE, OTHERWISE, PLYWOOD FORMS MUST BE USED.

9. EXERCISE CARE WHEN COMPACTING NEAR ADJACENT STRUCTURES. FOLLOW THE RECOMMENDATIONS IN THE SOILS REPORT AND DOCUMENT EXISTING CONDITIONS WITH PHOTOGRAPHS PRIOR TO STARTING WORK.

10. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITY LINES, TANKS, ETC. WITHIN THE CONSTRUCTION AREA AND RELOCATE THEM AS DIRECTED BY THE CIVIL ENGINEER.

### CAST IN PLACE CONCRETE

1. ALL CAST-IN-PLACE CONCRETE WORK INCLUDES REINFORCING STEEL AND RELATED WORK SHOWN INCLUDING FORMWORK, SETTING ANCHOR BOLTS, PLATES, FRAMES, DOWELS FOR MASONRY OR OTHER ITEMS EMBEDDED IN CONCRETE.

2. APPLICABLE STANDARDS

| ACI NUMBER | TITLE |
|---|---|
| 117 | STANDARD SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION |
| 226 | GROUND GRANULATED BLAST-FURNACE SLAG |
| 301 | STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS |
| 302 | GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION |
| 304 | GUIDE FOR MEASURING MIXING, TRANSPORTING AND PLACING CONCRETE |
| 304.2R | PLACING CONCRETE BY PUMPING METHODS. |
| 305R | HOT WEATHER CONCRETING |
| 306R | COLD WEATHER CONCRETING |
| 308 | STANDARD PRACTICE FOR CURING CONCRETE |
| 309R | GUIDE FOR CONSOLIDATION OF CONCRETE |
| 315 | MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES |
| 318 | BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE |
| 347 | RECOMMENDED PRACTICE FOR CONCRETE FORMWORK |

| CRSI NUMBER | TITLE |
|---|---|
| 63 | RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS |

3. CONCRETE MATERIALS
A) PORTLAND CEMENT - ASTM C 150, TYPE I
B) AGGREGATES - NORMAL WEIGHT CONCRETE, COARSE AND FINE, ASTM C33. STRUCTURAL LIGHT WEIGHT ASTM C330.
C) AIR-ENTRAINING - ASTM C260
D) WATER REDUCING - ASTM C494, TYPE A
E) WATER - FRESH, CLEAN AND POTABLE
F) NO ACCELERATORS, RETARDERS OR ADMIXTURES CONTAINING CHLORIDES WILL BE PERMITTED
G) FLY-ASH - ASTM C618, CLASS F, 20% MAXIMUM OF CEMENTITIOUS MATERIAL BY WEIGHT. DO NOT USE FOR EXPOSED SLABS OR ARCHITECTURAL CONCRETE.
H) SUPER PLASTICIZER - ASTM C494, TYPE F OR G, WHERE AUTHORIZED BY THE ENGINEER.
I) GROUND GRANULATED BLAST-FURNACE SLAG CEMENT - ASTM C989, 50% MAXIMUM BY WEIGHT.
J) MAXIMUM AGGREGATE SIZE - FOOTINGS = #57, OTHERS #67

4. REINFORCING MATERIALS
A) DEFORMED BARS - ASTM A615, GRADE 60
B) SMOOTH DOWELS - ASTM A615, PLAIN BARS, MINIMUM YIELD STRENGTH OF 60,000 PSI.
C) CORROSION RESISTANT UNCOATED STEEL (MMFX-2) - ASTM A615, GRADE 75 AND ASTM A1035 LOW-CARBON (8% MINIMUM) CHROMIUM BY MMFX OR EQUAL.
D) WELDED WIRE FABRIC - ASTM A185, PLAIN WIRE FABRIC IN FLAT SHEETS ONLY.
E) ACCESSORIES TO CONFORM TO ACI 315.
F) WHERE CONCRETE SURFACES ARE EXPOSED, MAKE THOSE PORTIONS OF ALL ACCESSORIES IN CONTACT WITH THE CONCRETE SURFACE OR WITHIN 1/2 INCH THEREOF, OF PLASTIC OR STAINLESS STEEL.

5. PROVIDE THE FOLLOWING MINIMUM CONCRETE STRENGTHS AT 28 DAYS:
A) FOOTINGS, SLAB-ON-GRADE----------3000 PSI
B) MASONRY WALL BEAMS, TIE COLUMNS----------3000 PSI
C) FORMED COLUMNS, WALLS, BEAMS & SLABS--------4000 PSI

6. CONCRETE MUST BE BATCHED, MIXED AND TRANSPORTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR READY-MIXED CONCRETE ASTM C94.

7. REQUIRED SLUMP = 4 PLUS OR MINUS ONE INCH.

8. CONCRETE MUST BE PLACED WITHIN 90 MINUTES OF BATCH TIME. WHEN AIR TEMPERATURE IS BETWEEN 85 AND 90 DEGREES F, REDUCE MIXING AND DELIVERY TIME TO 75 MINUTES. WHEN AIR TEMPERATURE IS HIGHER THAN 90 DEGREES F, REDUCE MIXING AND DELIVERY TIME TO 60 MINUTES.

9. DO NOT ADD WATER AT THE JOB SITE WITHOUT APPROVAL OF THE PROJECT SUPERINTENDENT. DO NOT EXCEED THE SLUMP LIMITATION. USE ONLY COLD WATER FROM THE TRUCK TANK. ANY ADDED WATER MUST BE INDICATED ON THE DELIVERY TICKET PLUS THE NAME OF THE PERSON AUTHORIZING. TEST CYLINDERS SHALL BE TAKEN AFTER THE ADDITION OF WATER.

10. LAP SPLICE REINFORCING PER CONCRETE LAP SCHEDULE MINIMUM UNLESS OTHERWISE SHOWN OR NOTED.

11. PROVIDE CORNER BARS AT ALL WALL FOOTING, WALL AND BEAM CORNERS. SIZE AND NUMBER TO MATCH HORIZONTAL BARS.

12. PROVIDE FOUNDATION DOWELS TO MATCH SIZE AND NUMBER OF VERTICAL BARS. EMBED DOWELS TO:
A) 3" ABOVE BOTTOM OF FOOTINGS

13. REINFORCEMENT SHALL BE FASTENED AND SECURED TOGETHER TO PREVENT DISPLACEMENT BY CONSTRUCTION LOADS OR THE PLACING OF CONCRETE.

14. REINFORCING BAR COVER
A) FOOTINGS 2" (TOP), 3" (SIDES AND BOTTOM)
B) COLUMNS AND BEAMS 1-1/2"
C) SLABS 3/4" (INTERIOR), 1-1/2" (EXTERIOR)

15. WHERE BAR LENGTHS ARE GIVEN ON THE DRAWINGS, LENGTH OF HOOK, IF REQUIRED, IS NOT INCLUDED.

16. SELECT PROPORTIONS IN ACCORDANCE WITH ACI 301 TO PROVIDE CONCRETE CAPABLE OF BEING PLACED WITHOUT EXCESSIVE SEGREGATION AND WITH ACCEPTABLE FINISHING PROPERTIES, DURABILITY, SURFACE HARDENERS, APPEARANCE, AND STRENGTH REQUIREMENTS REQUIRED BY THESE SPECIFICATIONS.

17. CHAIR WELDED WIRE FABRIC REINFORCING AT 3'-0" ON CENTER MAXIMUM IN EACH DIRECTION.

18. MAXIMUM WATER TO CEMENT RATIO WHEN NO BACK-UP DATA IS AVAILABLE:
A) 4000 PSI, 28-DAY COMPRESSIVE STRENGTH; W/C RATIO, 0.44 MAXIMUM (NON-AIR-ENTRAINED), 0.36 MAXIMUM (AIR-ENTRAINED).
B) 3000 PSI, 28-DAY COMPRESSIVE STRENGTH; W/C RATIO, 0.58 MAXIMUM (NON-AIR-ENTRAINED), 0.47 MAXIMUM (AIR-ENTRAINED).

19. DATA TO BE SUBMITTED:
A) INTENDED USAGE AND LOCATION FOR EACH TYPE
B) MIX DESIGN FOR EACH TYPE
C) CEMENT CONTENT IN POUNDS-PER-CUBIC YARD
D) COARSE AND FINE AGGREGATE IN POUNDS/CUBIC YARD
E) WATER CEMENT RATIO BY WEIGHT
F) CEMENT TYPE AND MANUFACTURER
G) SLUMP RANGE
H) AIR CONTENT
I) ADMIXTURE TYPE AND MANUFACTURER
J) PERCENT ADMIXTURE BY WEIGHT
K) STRENGTH TEST DATA REQUIRED TO ESTABLISH MIX DESIGN.
L) COMPLETE DETAIL AND PLACING SHOP DRAWINGS FOR ALL REINFORCING STEEL INCLUDING ACCESSORIES THAT HAVE BEEN REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR. INCLUDE ALL REQUIRED DIMENSIONS AND ELEVATIONS (IE. TOP OF CONCRETE)

20. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE CONSTRUCTION OF FORMWORK, SHORING AND RE-SHORING IN ACCORDANCE WITH ACI 347.
A) FORM AND SHORING DESIGN BY A P.E. REGISTERED IN THE STATE OF FLORIDA.

21. SUBMIT FORM WORK AND SHORING DRAWINGS TO LOCAL BUILDING DEPARTMENT WHEN REQUIRED BY FLORIDA THRESHOLD LAW.

22. CONSTRUCTION JOINTS NOT SHOWN ON THE DRAWINGS MUST BE MADE AND LOCATED TO LEAST IMPAIR THE STRENGTH OF THE STRUCTURE.
A) NO HORIZONTAL CONSTRUCTION JOINTS WILL BE PERMITTED IN BEAMS, GIRDERS AND SLABS.
B) LOCATION OF ANY CONSTRUCTION JOINT NOT SHOWN IS SUBJECT TO REVIEW AND ACCEPTANCE BY ENGINEER.

23. INTERNAL VIBRATION, PROPERLY APPLIED IS THE REQUIRED METHOD OF CONSOLIDATING PLASTIC CONCRETE.

24. PROVIDE 3/4" CHAMFER ON ALL EXPOSED CORNERS OF COLUMNS, BEAMS AND WALLS UNLESS OTHERWISE NOTED ON ARCHITECTURAL DRAWINGS.

25. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL OPENINGS, SLEEVES, AND SLAB RECESSES AS REQUIRED BY OTHER TRADES BEFORE CONCRETE IS PLACED. NO SLEEVE, OPENINGS, OR INSERT MAY BE PLACED IN BEAMS, JOISTS, OR COLUMN UNLESS APPROVED BY THE ENGINEER.

26. CONTRACTOR SHALL VERIFY EMBEDDED ITEMS INCLUDING, BUT NOT LIMITED TO, ANCHOR BOLTS, BOLT CLUSTERS, WELD PLATES, ETC., BEFORE PLACING CONCRETE. NOTIFY ENGINEER OF ANY CONFLICTS WITH REBAR.

27. SEE ARCHITECTURAL DRAWINGS FOR REQUIRED CONCRETE FINISHES.

28. SLOPE WALKWAYS TO DRAIN AWAY FROM THE BUILDING.

29. BUILDING FLOOR AND SITE SLABS-ON-GRADE SHALL BE 4" MINIMUM THICKNESS, UNLESS NOTED OTHERWISE.
A) REINFORCED WITH 6X6 - W1.4 X W1.4 W.W.F.
B) PLACED ON 15 MIL POLYETHYLENE VAPOR RETARDER. LAP 6" AND TAPE ALL JOINTS.
C) SAW-CUT CONTROL JOINTS @ LESS THAN OR EQUAL TO 15'-0" EACH WAY.
D) PROVIDE HOUSEKEEPING PADS AS REQUIRED.
E) SEE DRAWINGS FOR ANY ADDITIONAL CONDITIONS.

30. TESTING
A) A QUALIFIED TESTING LAB SHALL BE RETAINED TO PERFORM QUALITY CONTROL WORK AND ON-SITE TESTING.
B) SLUMP TEST - ASTM 143
C) MOLD AND CURE TEST CYLINDERS (ASTM C-31) AND TEST CYLINDERS FOR STRENGTH (ASTM C39). TAKE ONE TEST - FOUR CYLINDERS FOR EACH DAYS POUR OF 50 CUBIC YARDS, OR FRACTION THEREOF. TEST ONE CYLINDER AT 7 DAYS, TWO AT 28 DAYS AND ONE HOLD. TEST CYLINDER SAMPLES SHALL BE TAKEN AT THE POINT OF DISCHARGE WHEN USING A PUMP.
D) ONE COPY OF ALL TEST REPORTS SHALL BE SENT DIRECTLY TO THE OWNER, ENGINEER, ARCHITECT AND GENERAL CONTRACTOR.

31. CONTRACTOR SHALL PROVIDE FLATNESS AND LEVELNESS IN CONCRETE SLABS PER ACI 302.1R, FIG. 8.7 MINIMUM REQUIRED "F" NUMBERS FOR TYPE OF SLAB USE. REFER TO ACI 117 FOR FLOOR TOLERANCES.

32. REPAIR ANY CRACKS OR DEFECTIVE AREAS THAT WILL RESTORE THE AFFECTED SURFACE OR AREAS TO THEIR FULL DESIGN STRENGTH AND APPEARANCE. CONTACT THE STRUCTURAL ENGINEER FOR ADVICE AND EVALUATION.

33. ACCEPTANCE OF THE STRUCTURE WILL BE MADE IN CONFORMANCE WITH ACI 301.

34. ALL CAST-IN-PLACE CONCRETE MUST BE MAINTAINED WITH MINIMAL MOISTURE LOSS AT A RELATIVELY CONSTANT TEMPERATURE FOR A MINIMUM OF 7 DAYS FOLLOWING THE PLACING OF THE CONCRETE BY THE USE OF A WATER SPRAY, WATER SATURATED FABRIC, MOISTURE RETAINING MEMBRANE OR LIQUID CURING COMPOUND.

35. CURE SLABS-ON-GRADE FOR THE FIRST 72 HOURS BY THE USE OF:
A) FOG SPRAYING
B) PONDING
C) SPRINKLING
D) CONTINUOUSLY WET ABSORPTIVE MATS OR FABRIC
E) CONTINUE CURING BY USE OF MOISTURE RETAINING COVER UNTIL CONCRETE HAS OBTAINED ITS SPECIFIED 28 DAY COMPRESSIVE STRENGTH.
F) OR LIQUID CURING COMPOUND AFTER FINISHING PROCESS IS COMPLETED.
G) CONCRETE WET CURE TIME TO BE 7 DAYS MINIMUM AT 50 DEGREES MINIMUM TEMPERATURE.

36. SUBMIT MATERIALS AND METHOD OF CURING FOR REVIEW.

37. DO NOT USE MOISTURE RETAINING CURING COMPOUNDS FOR CURING SURFACES TO RECEIVE CARPET, FLEXIBLE FLOORING, CERAMIC TILED FLOORS OR OTHER SPECIFIED FLOOR SYSTEMS, UNLESS IT HAS BEEN DEMONSTRATED THAT SUCH COMPOUNDS WILL NOT PREVENT BOND.

38. DO NOT PERMIT CONCRETE NOT FULLY CURED TO BE EXPOSED TO EXCESSIVE TEMPERATURE CHANGES OR HIGH WINDS.

39. POUR ALL GROUND SLABS ON 15 MIL MINIMUM VAPOR RETARDER IN COMPLIANCE WITH ASTM E1745, LAPPED 6" MINIMUM AND FULLY TAPED.

40. EQUIPMENT MADE OF ALUMINUM OR ALUMINUM ALLOYS, SHALL NOT BE USED FOR PUMP LINES, TREMIES, OR CHUTES OTHER THAN SHORT CHUTES SUCH AS THOSE USED TO CONVEY CONCRETE FROM A TRUCK MIXER.

41. THE CODE PROHIBITS THE USE OF ALUMINUM (CONDUIT, PIPES, ETC.) IN STRUCTURAL CONCRETE UNLESS IT IS EFFECTIVELY COATED OR COVERED.

### PRECAST CONCRETE U-LINTELS AND SILLS

1. UNITS SHALL BE FABRICATED BY A FIRM ENGAGED IN THE MANUFACTURING OF PRECAST AND PRE-STRESSED CONCRETE U-LINTELS AND SILLS FOR A MINIMUM OF 5 YEARS. FABRICATOR SHALL HAVE A QUALITY ASSURANCE PROGRAM THAT COMPLIES WITH THE PROCEDURES OF MANUAL 116 BY THE PRECAST/PRE-STRESSED CONCRETE INSTITUTE PCI).

2. PLANT RECORDS OF PRODUCTION AND QUALITY CONTROL SHALL BE KEPT IN ACCORDANCE WITH PCI RECOMMENDATIONS AND MADE AVAILABLE UPON REQUEST FOR THE ARCHITECT/ENGINEER.

3. CODES AND STANDARDS:
A) AMERICAN SOCIETY FOR TESTING AND MATERIALS(ASTM)
1) C33 - SPECIFICATION FOR CONCRETE AGGREGATES
2) C150 - SPECIFICATION FOR PORTLAND CEMENT
B) PRECAST/PRE-STRESSED CONCRETE INSTITUTE (PCI) STANDARDS: MANUAL FOR QUALITY CONTROL FOR PRECAST AND PRE-STRESSED CONCRETE MNL-116.
C) AMERICAN CONCRETE INSTITUTE: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318)
D) AMERICAN CONCRETE INSTITUTE: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530)

5. REINFORCING
A) DEFORMED REINFORCEMENT: ASTM A615 GRADE 40 OR 60.
B) PRE-STRESSING STRAND: ASTM A416 270 KSI LL.

6. U-LINTEL UNITS 14 FEET IN OVERALL LENGTH AND SHORTER SHALL BE MADE OF CONCRETE WITH A MINIMUM STRENGTH OF 3500 PSI AT 28 DAYS.

7. U-LINTEL UNITS EXCEEDING 14 FEET IN OVERALL LENGTH SHALL BE MADE OF CONCRETE WITH A MINIMUM STRENGTH OF 6000 PSI AT 28 DAYS AND SHALL BE PRE-STRESSED CONCRETE.

8. SILL UNITS SHALL BE MADE OF CONCRETE WITH A MINIMUM STRENGTH OF 3000 PSI AT 28 DAYS.

9 UNITS SHALL BE SAND BLOCK FINISH EXCEPT PRE-STRESSED, 6" WIDE, AND 12" WIDE U-LINTELS SHALL BE SMOOTH FORM FINISHED.

10. PRECAST CONCRETE U-LINTELS SHALL BE DESIGNED BY A LICENSED DELEGATED ENGINEER.

11. SUBMITTALS
A) PROVIDE MANUFACTURER'S CATALOG ENGINEERING DATA.

B) MANUFACTURER SHALL RATE U-LINTEL UNITS FOR GRAVITY, UPLIFT, AND LATERAL LOADS IN UNITS OF POUNDS PER LINEAR FOOT.

### FIBROUS REINFORCING (ALTERNATE TO W.W.F. IN SLAB-ON-GRADE)

1. REINFORCING FIBERS TO BE VIRGIN 100% MICRO SYNTHETIC POLYPROPYLENE FIBERS, SPECIFICALLY MANUFACTURED FOR USE IN CONCRETE, CONTAINING NO REPROCESSED OLEFIN MATERIALS, WITH THE FOLLOWING MINIMUM PHYSICAL CHARACTERISTICS:
A) SPECIFIED GRAVITY: 0.91
B) YOUNG'S MODULUS 0.5 (3.5KN/MM2)
C) TENSILE STRENGTH: 45-60 KSI
D) LENGTH: 3/4" MAXIMUM, MULTI GRADATION DESIGN

2. REINFORCING FIBERS TO BE SUPPLIED BY THE FOLLOWING APPROVED MANUFACTURERS:
A) "FIBERSTRAND 100", EUCLID CHEMICAL COMPANY
B) "FIBERMESH 150 OR 300, PROPEX CONCRETE SOLUTIONS
C) "FORTA ECONO-NET", FORTA CORPORATION
D) "NYCON SUPER FIBERS", NYCON, INC.

3. FIBERS TO BE ADDED IN MANUFACTURER'S APPROVED AMOUNT WITH A MINIMUM OF 1.5 LBS PER CUBIC YARD FOR POLY AND NYLON.

4. CONCRETE TO BE MIXED IN ACCORDANCE WITH FIBER MANUFACTURER'S RECOMMENDATIONS FOR UNIFORM AND COMPLETE DISPERSION OF FIBER BUNDLES INTO SINGLE MONOFILAMENTS WITHIN CONCRETE.

5. REINFORCING FIBERS ONLY TO BE USED IN CONCRETE SLAB-ON-GRADES, AND NOT IN PRECAST PLANK OR METAL DECK TOPPING SLABS.

6. FOR A "NON-HAIRY" FINISH, USE A MONOFILAMENT FIBER, MORE DEMANDING APPLICATIONS, USE A COLLATED FIBRILLATED FIBER, WHICH WILL WEAR AWAY OVER TIME.

### MASONRY

1. HOLLOW LOAD BEARING UNITS SHALL CONFORM TO ASTM C90, NORMAL WEIGHT, TYPE II. MINIMUM NET COMPRESSIVE UNIT STRENGTH = 2000 PSI. (NET AREA COMPRESSIVE MASONRY STRENGTH F'M = 1500 PSI).

2. MORTAR SHALL BE TYPE S AND CONFORM TO ASTM C270 (PROPORTION OR PROPERTY SPECIFICATION) WITH A MINIMUM AVERAGE COMPRESSIVE STRENGTH AT 28 DAYS OF 1800 PSI (TYPE S).

3. COARSE GROUT SHALL CONFORM TO ASTM C476:
A) 2500 PSI AT 28 DAYS.
B) 1/4" MAXIMUM AGGREGATE.
C) 8" - 11" SLUMP.

4. CODES AND STANDARDS:
A) SPECIFICATIONS FOR MASONRY STRUCTURES - ACI 530.1/ASCE 6/ TMS 602 IS INCLUDED BY REFERENCE IN ITS ENTIRETY.
B) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES - ACI 530/ ASCE 5/TMS 402.

5. A REINFORCED TIE BEAM SHALL BE PROVIDED IN ALL WALLS SHOWN ON THE STRUCTURAL DRAWINGS AT EACH FLOOR, THE ROOF, AND AT TOP OF ANY PARAPET WALL. USE GALVANIZED MESH-TYPE CELL CAPS. PROVIDE CORNER BARS AT ALL BEAM CORNERS TO MATCH HORIZONTAL BARS.

6. UNLESS NOTED OTHERWISE, TIE BEAMS SHALL BE AS FOLLOWS:
A) ROOF LEVEL: DOUBLE COURSE OF KNOCK-OUT BLOCKS WITH (1) #5 IN EACH 8" COURSE OR (2) #5 IN EACH 12" COURSE.

7. VERTICAL BARS SHALL BE HELD IN POSITION AT THE TOP AND BOTTOM OF BAR AND AT 8'_0" O.C. MAXIMUM WITH A MINIMUM CLEARANCE OF 1/2" FROM MASONRY. THE CLEAR DISTANCE BETWEEN BARS SHALL NOT EXCEED ONE BAR DIAMETER, OR MORE THAN 1". CENTER BARS IN WALLS U.N.O.

8. VERTICAL REINFORCING SHALL BE AS SHOWN ON THE DRAWINGS. FILL CELLS WITH COARSE GROUT AS SPECIFIED. PROVIDE ACI 90 DEGREE STANDARD HOOKS INTO FOOTING AND ROOF TIE BEAM. LAP SPLICE VERTICAL REINFORCEMENT ABOVE FOOTING AND ABOVE EACH FLOOR LEVEL UNLESS NOTED OTHERWISE. MAINTAIN VERTICAL REINFORCING SHOWN ON PLANS ABOVE AND BELOW MASONRY OPENINGS. CONTINUE FOUNDATION DOWELS BELOW ALL MASONRY OPENINGS.

9. REINFORCED FILL CELLS ARE TO BE CLEAN AND FREE OF ANY FOREIGN MATERIAL OR DEBRIS. REMOVE ANY INSULATING MATERIAL FROM CELLS, INCLUDING POLYSTYRENE INSULATING INSERTS, PRIOR TO GROUT POUR.

10. REINFORCING BARS SHALL BE STRAIGHT EXCEPT FOR BENDS AROUND CORNERS AND WHERE BENDS OR HOOKS ARE DETAILED ON THE PLANS.

11. REINFORCING BARS SHALL BE LAPPED PER MASONRY LAP SCHEDULE MINIMUM (UNLESS OTHERWISE NOTED) WHERE SPLICED AND SHALL BE WIRED TOGETHER.

12. WHEN A FOUNDATION DOWEL DOES NOT LINE UP WITH A VERTICAL CORE, IT SHALL NOT BE SLOPED MORE THAN ONE HORIZONTAL IN SIX VERTICALS. DOWELS SHALL BE GROUTED INTO A CORE IN VERTICAL ALIGNMENT, EVEN THOUGH IT IS IN AN ADJACENT CELL TO THE VERTICAL WALL REINFORCEMENT.

13. PROVIDE HORIZONTAL WALL REINFORCING (9 GA.) HOT DIPPED GALVANIZED LADDER TYPE DUR-O-WALL (OR EQUIVALENT) AT 16" O.C. JOINT REINFORCING SHALL CONFORM TO ASTM A-951.

14. PROVIDE HORIZONTAL JOINT REINFORCEMENT AT DOORS AND WINDOWS FOR FIRST AND SECOND BLOCK COURSE ABOVE AND BELOW APERTURES. RUN REINFORCING CONTINUOUS OR EXTEND TWO FEET FROM APERTURE EDGE.

15. WIRE REINFORCEMENT SHALL BE LAPPED AT LEAST 6" AT SPLICES AND SHALL CONTAIN AT LEAST ONE CROSS WIRE OF EACH PIECE OF REINFORCEMENT IN THE LAPPED DISTANCE.

16. CLEANOUTS SHALL BE PROVIDED IN THE BOTTOM COURSE OF MASONRY IN EACH GROUT POUR WHEN THE POUR HEIGHT EXCEEDS 5'. CLEANOUTS TO BE SAW-CUT 4" X 4".

17. GROUT POUR HEIGHT SHALL NOT EXCEED 24'. PLACE GROUT IN 5' MAX. LIFTS HEIGHTS.

18. CONSOLIDATE GROUT POURS AT THE TIME OF PLACEMENT BY MECHANICAL MEANS AND RECONSOLIDATE AFTER INITIAL WATER LOSS AND SETTLEMENT.

19. ALL MASONRY FOUNDATION STEMWALLS AND RETAINING WALLS SHALL BE FULLY GROUTED.

20. STORE BLOCKS ON PALLETS AND COVER WITH PLASTIC SHEETING.

21. PLACE MASONRY IN RUNNING BOND WITH 3/8" MORTAR JOINTS. PROVIDE COMPLETE COVERAGE FACE SHELL MORTAR BEDDING, HORIZONTAL AND VERTICAL. FULLY MORTAR WEBS IN ALL COURSES OF PIERS, COLUMNS, AND PILASTERS AND ADJACENT TO GROUTED CELLS.

22. SEE DRAWINGS FOR MASONRY CONTROL JOINT LOCATIONS. SPACE AT 26'-0" O.C. AT EXTERIOR WALLS, 32'-0" O.C. AT INTERIOR WALLS UNLESS NOTED OTHERWISE.

23. SUBMITTALS:
A) SUBMIT PROPOSED GROUT MIX DESIGN PRIOR TO CONSTRUCTION.
B) SUBMIT PROPOSED MORTAR MIX DESIGN PRIOR TO CONSTRUCTION.
C) SUBMIT DETAILED SHOP DRAWINGS OF REINFORCING BARS SHOWING NUMBER, SIZE, AND LOCATION. INCLUDE BAR LISTS AND BEND DIAGRAMS. INCLUDE ALL REQUIRED DIMENSIONS AND ELEVATIONS.
D) SUBMIT COMPRESSIVE STRENGTH TESTS OF PROPOSED MASONRY UNITS PRIOR TO CONSTRUCTION. MASONRY UNITS ARE TO BE TESTED IN ACCORDANCE WITH ASTM C140.

SHEET INDEX


| Sheet Number | Sheet Name |
|---|---|
| | |
| S0.1 | STRUCTURAL SPECIFICATIONS |
| S0.2 | STRUCTURAL SPECIFICATIONS, SCHEDULES & WIND TABLES |
| S1.1 | FOUND

**STRUCTURAL SPECIFICATIONS CONT.**

**PRE-ENGINEERED WOOD TRUSSES**

1. THIS SECTION DEFINES PRE-ENGINEERED, PREFABRICATED, METAL PLATE CONNECTED WOOD ROOF TRUSSES AS "WOOD TRUSSES".

2. WOOD TRUSSES SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION", PUBLISHED BY THE AMERICAN FOREST AND PAPER ASSOCIATION, "NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION", PUBLISHED BY THE TRUSS PLATE INSTITUTE, TPI 1.

3. THE WOOD TRUSS MANUFACTURER MUST PARTICIPATE IN A CODE APPROVED THIRD PARTY QUALITY ASSURANCE PROGRAM SUCH AS THE TRUSS PLATE INSTITUTE'S "QUALITY CONTROL INSPECTION PROGRAM" OR EQUIVALENT.

4. WOOD TRUSSES SHALL BE DESIGNED FOR THE LOAD CRITERIA PROVIDED ON THE STRUCTURAL DRAWINGS. MINIMUM BOTTOM CHORD DEAD LOAD = 10 PSF.

5. DURATION OF LOAD FACTORS:
ROOF 0.6DL+WL 1.33
ROOF DL+LL 1.25
FLOOR DL+LL 1.00

6. THE WOOD TRUSS SYSTEM SHALL BE DESIGNED BY THE DELEGATED SYSTEM ENGINEER WHO SHALL PREPARE DESIGN CALCULATIONS AND SUPERVISE THE PREPARATION OF SHOP DRAWINGS INCLUDING, BUT NOT LIMITED TO:
A) TRUSS PLACEMENT PLAN SHOWING ALL TRUSSES, GIRDERS, AND OVER-BUILD TRUSS FRAMING.
B) TRUSS TO TRUSS METAL CONNECTORS WITH MODEL NUMBER AND MANUFACTURER.
C) DIMENSIONED LOCATION OF ALL TRUSSES.
D) TRUSS BRACING.
E) DESIGNATION OF EACH TRUSS REFERENCED TO THE TRUSS DESIGN CALCULATIONS.

7. INDIVIDUAL TRUSSES SHALL BE DESIGNED BY THE DELEGATED SYSTEM ENGINEER INCLUDING:
A) DIMENSIONED TRUSS ELEVATION OF EACH INDIVIDUAL TRUSS WITH CHORDS AND WEBS, REFERENCED TO THE TRUSS SYSTEM DRAWINGS.
B) TRUSS SPACING.
C) DESIGN LOADS CRITERIA AND LOAD COMBINATIONS.
D) LOAD DURATION FACTORS, CONDITION OF USE FACTORS AND ANY LIVE LOAD REDUCTIONS TAKEN.
E) APPLICABLE CODES USED.
F) WOOD SPECIES, GRADE, AND MOISTURE CONTENT.
G) METAL CONNECTOR PLATES TYPE, SIZE, GAUGE, ETC.
H) SUPPORT REACTIONS AND MINIMUM BEARING LENGTH.
I) DEFLECTIONS.
J) PERMANENT CONTINUOUS TRUSS TO TRUSS BRACING.
K) INDIVIDUAL MEMBER STIFFENERS.
L) TRUSS SPLICE DETAILS, INCLUDING PIGGY BACK TRUSSES.
M) IDENTIFICATION OF ANY COMPUTER PROGRAM USED.

8. DEFLECTION LIMITATIONS: (UNLESS NOTED OTHERWISE)
A) ROOF LIVE LOAD = L/360
B) ROOF TOTAL LOAD = L/240
C) FLOOR LIVE LOAD = L/480
D) FLOOR TOTAL LOAD = L/360

9. FIRE RETARDANT WOOD IS NOT ALLOWABLE.

10. SUPPORTS: WOOD TRUSSES SHALL BE DESIGNED WITH AT LEAST ONE HORIZONTAL ROLLER CONNECTION PER SPAN SO THAT NO HORIZONTAL REACTIONS ARE INDUCED ON SUPPORTS UNDER DEAD OR LIVE LOADS.

11. REFER TO THE ARCHITECTURAL DRAWINGS. IF A CEILING OR ADEQUATE FURRING STRIPS ARE NOT PROVIDED, TRUSS BOTTOM CHORDS MUST BE DESIGNED AS LATERALLY UNBRACED.

12. TRUSS ERECTOR IS RESPONSIBLE FOR ALL TEMPORARY BRACING OF TRUSS SYSTEM DURING CONSTRUCTION.

13. HANDLING, INSTALLATION, AND BRACING OF WOOD TRUSSES SHALL BE IN ACCORDANCE WITH TPI/WTCA BCSI.

14. ALL TRUSS TO TRUSS AND TRUSS TO SUPPORT CONNECTIONS SHALL BE DESIGNED BY THE DELEGATED ENGINEER.

15. CONNECTION HARDWARE SHALL BE SUPPLIED BY SIMPSON STRONG-TIE CO., INC, OR BY APPROVED EQUIVALENT MANUFACTURER. CONNECTION HARDWARE IS TO BE FULLY FASTENED PER MANUFACTURER'S REQUIREMENTS.

16. MINIMUM COATING REQUIREMENTS FOR METAL CONNECTORS, TRUSS PLATES, AND FASTENERS:
A) INTERIOR -ZINC GALVANIZED (G90)
B) EXTERIOR -GALVANIZED (G185) OR HOT DIP GALVANIZED (HDG)
C) EXTERIOR COASTAL AREAS -STAINLESS STEEL (TYPE 316L)

17. PILING OF PLYWOOD ON WOOD TRUSSES IS NOT ALLOWED.

18. INSTALLATION OF BROKEN, DAMAGED, WARPED, OR IMPROPERLY REPAIRED WOOD TRUSSES IS NOT ALLOWED.

19. IMPROPER OR UNAUTHORIZED FIELD ALTERATIONS OF WOOD TRUSSES IS NOT ALLOWED.

20. CONNECTIONS AND BRACING MUST BE INSTALLED BEFORE LOADING SHEATHING ON THE TRUSSES.

21. GABLE END WALL TRUSSES MUST TRANSFER LATERAL LOADS TO THE SHEAR WALLS AND/OR THE ROOF DIAPHRAGM.

22. WOOD TRUSSES THAT DO NOT MEET INTERIOR LOAD BEARING WALLS MUST BE SHIMMED. DO NOT PULL WOOD TRUSSES DOWN TO INTERIOR BEARINGS.

23. WOOD TRUSS DELEGATED ENGINEER MUST BE PROVIDED WITH A COPY OF THESE DRAWINGS AND SPECIFICATIONS.

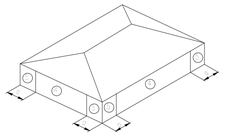
24. SUBMITTALS SHALL HAVE A COVER SHEET CONTAINING THE NAME, ADDRESS, AND LICENSE NUMBER OF DELEGATED ENGINEER, PROJECT IDENTIFICATION INFORMATION, AND AN INDEX OF ATTACHED DRAWINGS. ALL SUBMITTED CALCULATIONS AND SHOP DRAWINGS SHALL BEAR THE SEAL OF THE DELEGATED ENGINEER.

## GROSS ULTIMATE WIND LOADS MAIN ROOF
### ROOFING MATERIALS

| COMPONENTS AND CLADDING | ROOF ZONE | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| PRESSURE (psf) | 59.9 | 59.9 | 59.9 |
| SUCTION (psf) | -135.0 | -175.0 | -189.0 |

## GROSS ULTIMATE WIND LOADS MAIN ROOF
### JOISTS OR TRUSSES

| COMPONENTS AND CLADDING | ROOF ZONE | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| PRESSURE (psf) | 32.6 | 32.6 | 32.6 |
| SUCTION (psf) | -66.7 | -101.0 | -107.0 |



DOORS, WINDOWS AND WALLS

## GROSS ULTIMATE WIND LOADS OVERHANGS AND CANOPIES
### JOISTS OR TRUSSES

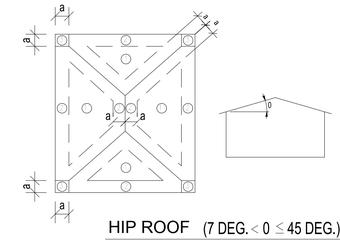
| COMPONENTS AND CLADDING | ROOF ZONE | | |
|---|---|---|---|
| | | 2 | 3 |
| PRESSURE (psf) | | 89.8 | 105.2 |
| SUCTION (psf) | | -157.0 | -163.0 |

## ULTIMATE WIND PRESSURES ( PSF)
### EXTERIOR DOORS, WINDOWS, WALLS

| EFFECTIVE AREA (ft ) | ZONE 4 | | ZONE 5 | |
|---|---|---|---|---|
| | PRESSURE | SUCTION | PRESSURE | SUCTION |
| 1 TO 20 | 80.3 | -80.7 | 80.3 | -107.0 |
| 21 TO 50 | 76.4 | -83.2 | 76.4 | -99.7 |
| 51 TO 100 | 71.8 | -78.6 | 71.8 | -90.5 |
| 101 TO 150 | 68.2 | -75.0 | 68.2 | -83.3 |
| 151 TO 250 | 66.1 | -72.9 | 66.1 | -79.1 |
| 251 TO 500 | 63.4 | -70.2 | 63.4 | -73.8 |
| 501 + ABOVE | 59.9 | -66.7 | 59.9 | -66.7 |

## COMPONENT AND CLADDING LOADING DIAGRAMS

1. a= 6'-0"
2. THIS BUILDING IS DESIGNED AS AN ENCLOSED STRUCTURE. ALL EXTERIOR COMPONENTS (DOORS, WINDOWS, ETC.) MUST BE DESIGNED TO WITHSTAND THE WIND LOADINGS SPECIFIED FOR THE DESIGN OF COMPONENTS AND CLADDING IN THE TABLES. IN ADDITION, ALL AREAS OF EXTERIOR GLAZING MUST BE CERTIFIED FOR MISSILE IMPACT OR PROTECTED BY WIND-BORNE DEBRIS BY A SCREEN BARRIER.
3. TO CONVERT THE (ASCE 7-22) ULTIMATE WIND PRESSURES IN THE TABLES ABOVE TO (ASD) WIND PRESSURES, MULTIPLY EACH VALUE BY 0.6.




HIP ROOF (7 DEG. < θ ≤ 45 DEG.)

## MASONRY REINF. LAP SCHEDULE

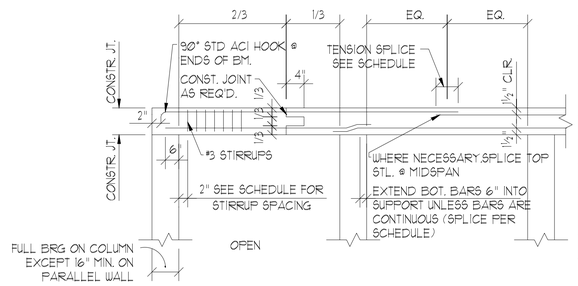
| BAR SIZE | LAP LENGTH |
|---|---|
| #3 BAR | 20" |
| #4 BAR | 26" |
| #5 BAR | 32" |
| #6 BAR | 43" |
| #7 BAR | 60" |

NOTE:
1. TABLE BASED ON BAR STRESSES LESS THAN 80%

## CONCRETE BEAM TENSION LAP SPLICE SCHEDULE

| BAR SIZE | LOCATION | CONCRETE STRENGTH | | |
|---|---|---|---|---|
| | | 3,000 PSI | 4,000 PSI | 5,000 PSI |
| # 4 | TOP BARS | 37" | 32" | 29" |
| | OTHER BARS | 29" | 25" | 22" |
| # 5 | TOP BARS | 47" | 40" | 36" |
| | OTHER BARS | 36" | 31" | 28" |
| # 6 | TOP BARS | 56" | 48" | 43" |
| | OTHER BARS | 43" | 37" | 33" |
| # 7 | TOP BARS | 81" | 70" | 63" |
| | OTHER BARS | 63" | 54" | 49" |
| # 8 | TOP BARS | 93" | 80" | 72" |
| | OTHER BARS | 72" | 62" | 55" |
| # 9 | TOP BARS | 105" | 91" | 81" |
| | OTHER BARS | 81" | 70" | 63" |
| # 10 | TOP BARS | 118" | 102" | 91" |
| | OTHER BARS | 91" | 79" | 70" |

NOTES:
1. BASED ON NORMAL WEIGHT CONCRETE & GRADE 60 REINFORCING BARS.
2. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
3. FOR LIGHTWEIGHT AGGREGATE, MULTIPLY ABOVE VALUES BY 1.3.




1 BEAM REINFORCING

## VERTICAL REINFORCEMENT BAR LAP SCHEDULE

| BAR SIZE | COMPRESSION LAP | CLASS "B" TENSION LAP | | |
|---|---|---|---|---|
| | | 3,000 PSI | 4,000 PSI | 5,000 PSI |
| # 5 | 25" | 36" | 31" | 28" |
| # 6 | 30" | 43" | 37" | 33" |
| # 7 | 35" | 63" | 54" | 49" |
| # 8 | 40" | 72" | 62" | 55" |
| # 9 | 44" | 81" | 70" | 63" |
| # 10 | 50" | 91" | 79" | 70" |

NOTES:
1. BASED ON NORMAL WEIGHT CONCRETE & GRADE 60 REINFORCING BARS.


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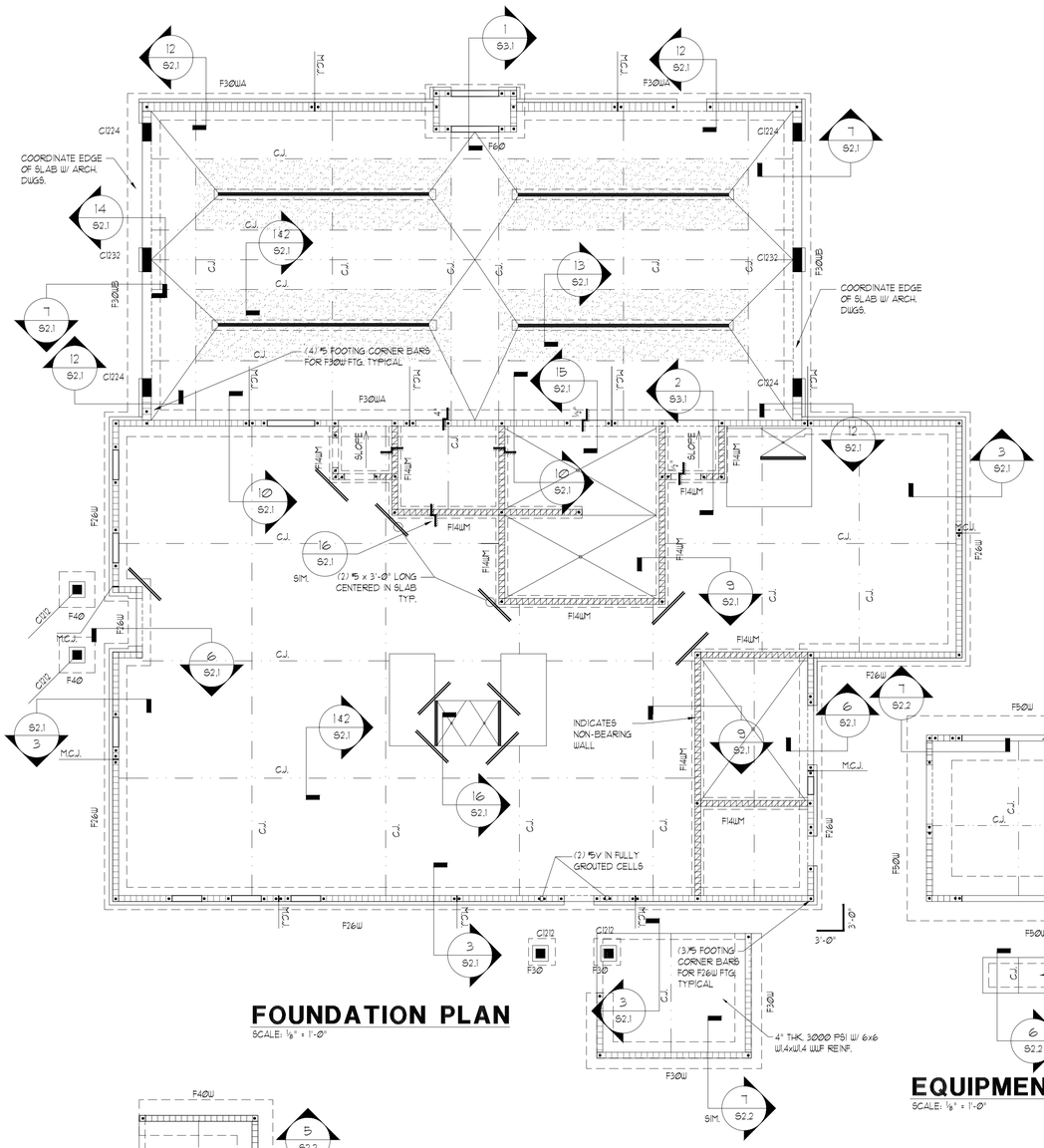
DATE: 11/14/2024

WAI PROJECT #2116-00

| NUM | REVISION | DATE |
|---|---|---|
| | | |

STRUCTURAL SPECIFICATIONS, SCHEDULES & WIND TABLES

S0.2




## FOUNDATION PLAN

SCALE: 1/8" = 1'-0"

## EQUIPMENT PLAN

SCALE: 1/8" = 1'-0"

## DUMPSTER PLAN

SCALE: 1/8" = 1'-0"


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### FOUNDATION PLAN NOTES

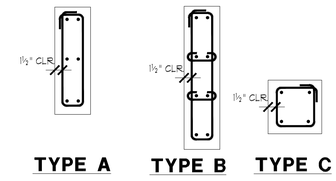
1. SLAB-ON-GRADE TO BE 4" THICK f'c = 3000 PSI NORMAL WEIGHT CONCRETE W/ 6x6-W1.4xW1.4 WWF. ON 15 MIL VAPOR RETARDER & TREATED SUBGRADE. SEE PLAN FOR APPARATUS ROOM SLAB.
2. TOP OF SLAB = (+) 100'-0"
   TOP OF (APP. BAY)= (+) 99'-11½"
   TOP OF FOOTING= (-) 98'-8" U.N.O. ADJUST TOP OF FTG TO PROVIDE 12" MIN SOIL COVER OF FTG. COORDINATE W/ ARCH & CIVIL DWGS ( SEE 4/S2.1)
3. CENTER ALL FOOTINGS BELOW WALL OR COLUMN
4. MASONRY WALLS:
   a) 8" LOAD BEARING: #6 @ 24" O.C. UNO
   b) 8" NON-LOAD BEARING: #5 @ 8'-0" O.C.
   c) 12" LOAD-BEARING: #6 @ 24" O.C.
5. ALL FOOTING REINF. TO BE BOTTOM BARS U.N.O. TIE VERTICAL DOWELS TO BOTTOM BARS.
6. REFER TO SHEETS S0.1 & S0.2 FOR SPECIFICATIONS.
7. REFER TO ARCHITECT FOR EXTENT OF SLAB DEPRESSIONS.
8. REFER TO ARCHITECT FOR ANY DIMS. NOT SHOWN. COORDINATE LOCATION OF WINDOWS AND DOOR W/ ARCHITECT DRAWINGS.
9. ALL FOOTINGS TO BE F16W EXCEPT WHERE NOTED OTHERWISE.
10. PROVIDE BRICK TIES @ 16" O.C. MAX. EACH WAY TO MASONRY, TYP. DO NOT USE CORRUGATED TIES.
11. M.C.J.= MASONRY CONTROL JOINT. SEE 3/S2.2
12. PROVIDE (2) #4 x 3'-0" MID-DEPTH CENTERED ON SLAB CORNER.
13. SEE 6/S2.2 FOR FABRICATED STORAGE SHED FOUNDATION SLAB. SEE ARCH. FOR SIZE & LOCATION.

### FOOTING SCHEDULE

| MARK | SIZE | DEPTH | REINF. EA. WAY | REMARKS | DWL/A.B. EMBEDMENT |
|---|---|---|---|---|---|
| F14WM | 1'-4" | 10" | (2) #5 CONT. #6@24" TRANSV. | WALL FTG. | 1' |
| F2ØW | 2'-Ø" | 1'-Ø" | (3) #5 CONT. #6@24" TRANSV. | WALL FTG. | 9" |
| F26W | 2'-6" | 1'-Ø" | (3) #5 CONT. #5@24" TRANSV. | WALL FTG. | 9" |
| F3ØWA | 3'-Ø" | 1'-Ø" | (3) #5 CONT. #5@24" TRANSV. | WALL FTG. | 9" |
| F3ØWB | 3'-Ø" | 1'-Ø" | (4) #5 CONT. T4B #5@12" TRANSV. | WALL FTG. | 9" |
| F3ØW | 3'-Ø" | 1'-Ø" | (4) #5 CONT. #5@12" TRANSV. | WALL FTG. | 9" |
| F4ØW | 4'-Ø" | 1'-2" | (4) #5 CONT. #5@12" TRANSV. | WALL FTG. | 11" |
| F5ØW | 5'-Ø" | 1'-2" | (5) #5 CONT. #5@12" TRANSV. | WALL FTG. | 11" |
| F6ØW | 6'-Ø" | 1'-2" | (7) #5 CONT. #5@12" TRANSV. | WALL FTG. | 11" |
| F4Ø | 4'-Ø"x4'-Ø" | 1'-Ø" | (4) #5 | | 9" |

### CONCRETE COLUMN SCHEDULE

| MARK | SIZE | REINFORCING VERT. | REINFORCING TIES | REMARKS |
|---|---|---|---|---|
| C1224 | 12"x24" | (6) #6 | #3 @ 12" O.C. | TYPE A |
| C1232 | 12"x32" | (8) #7 | #3 @ 12" O.C. | TYPE B |
| C1212 | 12"x12" | (4) #5 | #3 @ 12" O.C. | TYPE C |
| | | | | |




**TYPE A** **TYPE B** **TYPE C**

C816 8"x16"

C816L SEE *


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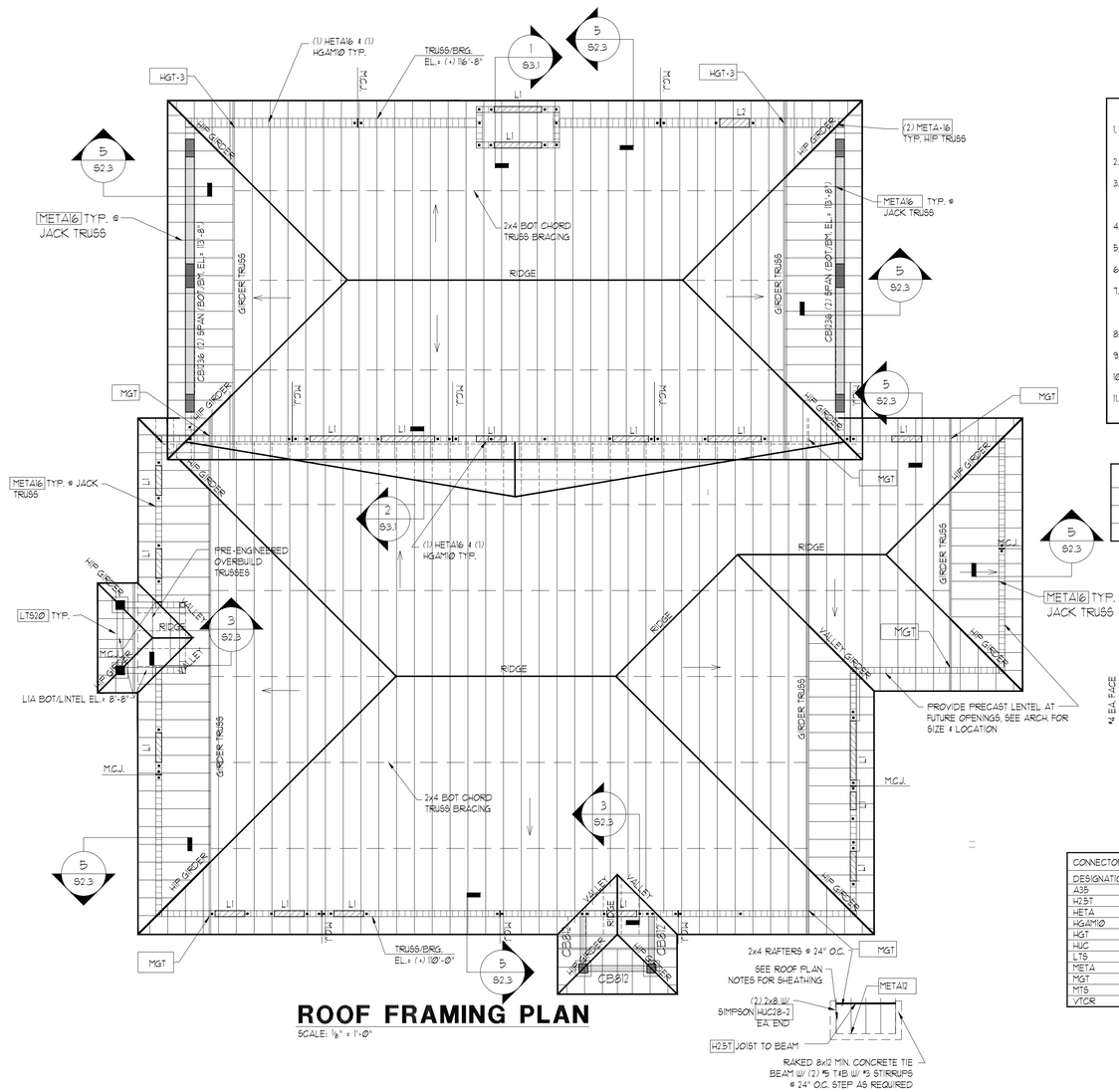
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FOUNDATION PLAN

S1.1




## ROOF FRAMING PLAN

SCALE: 1/8" = 1'-0"




## STORAGE ROOF FRAMING PLAN

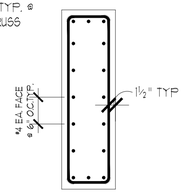
SCALE: 1/8" = 1'-0"

ROOF FRAMING PLAN NOTES

1. FOR WOOD TRUSS DESIGN REQUIREMENTS SEE SHEET S0.2. SEE ARCH DWGS FOR TRUSS PROFILES AND OVERHANG DETAILS. ROOF SLOPE = PER PLAN
2. THE CONTRACTOR SHALL PROVIDE WEDGE-TYPE WOOD MEMBERS OVER TOP TRUSSES TO PROVIDE FULL BEARING FOR PLYWOOD DECKING CHORD OF (TYP.)
3. ALL TRUSS TO TRUSS CONNECTIONS TO BE DESIGNED BY MANUF. ENGINEER DELEGATED
4. [ ] INDICATES MODEL NO. OF METAL CONNECTOR BY SIMPSON STRONG-TIE.
5. TRUSS ANCHORS SUBJECT TO CHANGE PENDING REVIEW OF TRUSS SHOP DRAWINGS.
6. NET WIND UPLIFT = SEE SHEET S0.2
7. ROOF DECK SHEATHING TO BE 5/8" EXT. GRADE PLYWOOD W/ 10d COMMON 4" O.C. AT PANEL EDGES 6" O.C. AT INTERMEDIATE SUPPORTS TYPICAL. PROVIDE (2) 10d NAILS @ 2x4 BLOCKING = INSTALL W/ SOLID H-CLIPS.
8. CONTRACTOR / ERECTOR IS RESPONSIBLE FOR ALL TEMPORARY BRACING.
9. TRUSS BEARING EL.= SEE PLAN
10. INSTALL [TB] OVER ALL TRUSS BRG. WALLS. SEE DETAIL 2/S2.4
11. SLOPE ALL TOP CHORDS PER ARCHITECTURAL DRAWINGS.

**CONCRETE BEAM SCHEDULE**

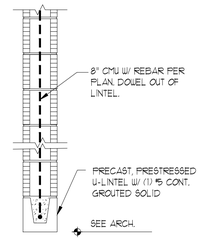
| MARK | SIZE | REINFORCING CONT. | REINFORCING STIRRUPS | REMARKS |
|---|---|---|---|---|
| CB1236 | 12"x36" | (3) #6 T&B | #3 @ 14" O.C. | TYPE "A" |




TYPE "A"

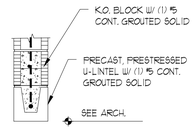
**CONNECTOR SCHEDULE**

| DESIGNATION | FPAN |
|---|---|
| A35 | FL10446 |
| H2.5T | FL10446 |
| META | FL11413 |
| HGAM10 | FL11413 |
| HGT | FL10456 |
| HUC | FL10531 |
| LTS | FL10456 |
| META | FL11413 |
| MGT | FL10456 |
| MTS | FL10456 |
| VTCR | FL10447 |



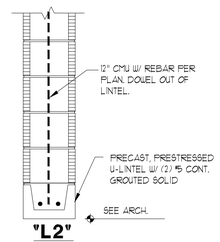

"L1"

NOTE: PROVIDE 8" BEARING EA. END OF LINTEL NOTCH ENDS TO ALLOW VERT. REINF. TO BE CONTINUOUS




"L1A"

NOTE: PROVIDE 8" BEARING EA. END OF LINTEL NOTCH ENDS TO ALLOW VERT. REINF. TO BE CONTINUOUS




"L2"

NOTE: PROVIDE 8" BEARING EA. END OF LINTEL NOTCH ENDS TO ALLOW VERT. REINF. TO BE CONTINUOUS

## LINTEL DETAILS

SCALE: 3/4" = 1'-0" 1

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Pennoni Project No. WILDC22001

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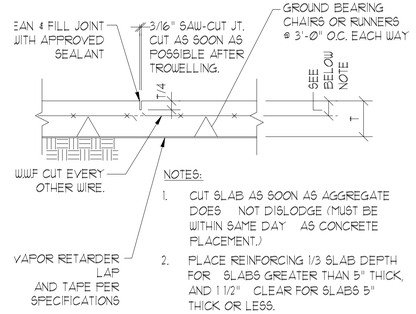
DATE: 11/14/2024

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ROOF FRAMING PLAN

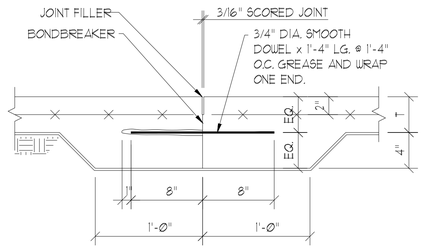
S1.2



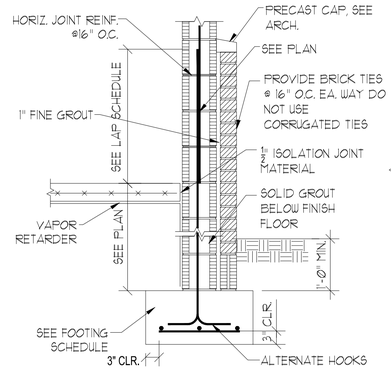

NOTES:

1. CUT SLAB AS SOON AS AGGREGATE DOES NOT DISLODGE (MUST BE WITHIN SAME DAY AS CONCRETE PLACEMENT.)
2. PLACE REINFORCING 1/3 SLAB DEPTH FOR SLABS GREATER THAN 5" THICK, AND 1 1/2" CLEAR FOR SLABS 5" THICK OR LESS.
3. HAND TOOL JOINT TO FACE OF WALL WHERE SAWCUT DOES NOT REACH.

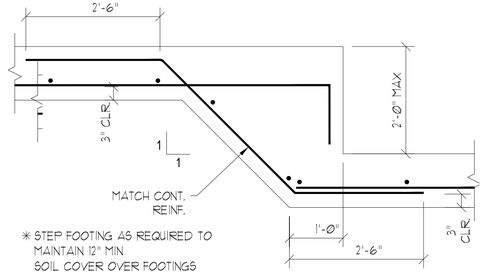
## 1 CONTRACTION JOINT
3/4" = 1'-0"




## 2 CONSTRUCTION JOINT IN APPARATUS BAY
3/4" = 1'-0"

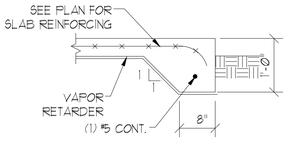



## 3 WALL FOOTING
3/4" = 1'-0"

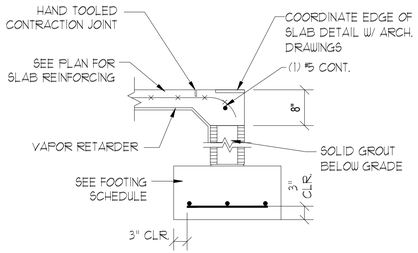



* STEP FOOTING AS REQUIRED TO MAINTAIN 12" MIN SOIL COVER OVER FOOTINGS

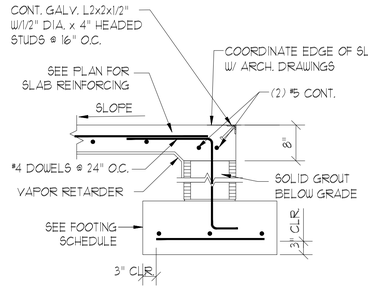
## 4 STEPPED FOOTING
3/4" = 1'-0"



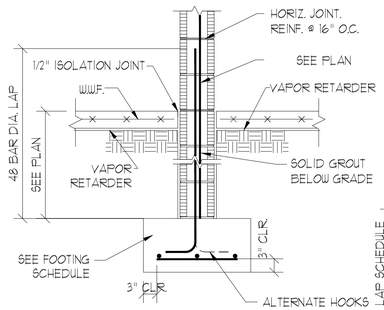

## 5 THICKENED SLAB EDGE
3/4" = 1'-0"



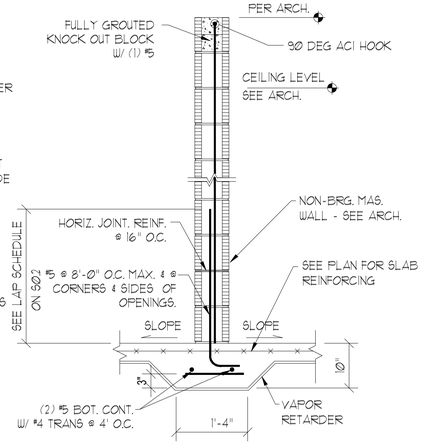

## 6 SLAB EDGE @ MASONRY OPENING
3/4" = 1'-0"



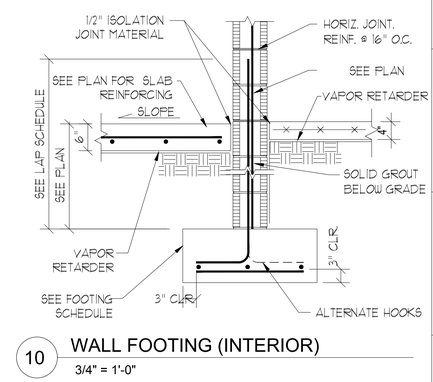

## 7 SLAB EDGE @ APPARATUS BAY
3/4" = 1'-0"



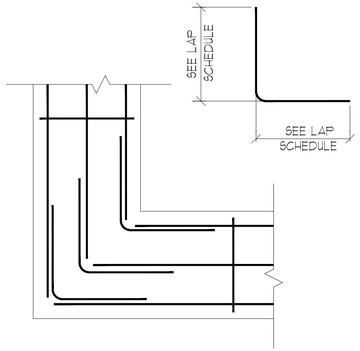

## 8 INTERIOR WALL FOOTING
3/4" = 1'-0"



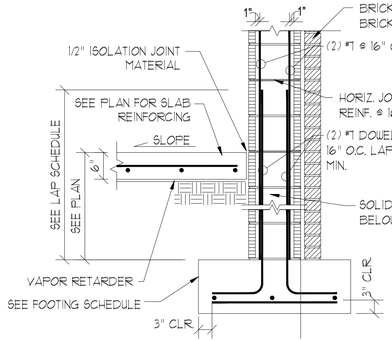

## 9 INTERIOR NON-BRG. MASONRY
3/4" = 1'-0"



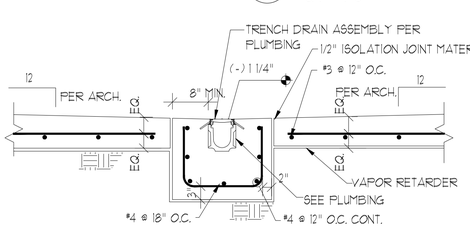

## 10 WALL FOOTING (INTERIOR)
3/4" = 1'-0"



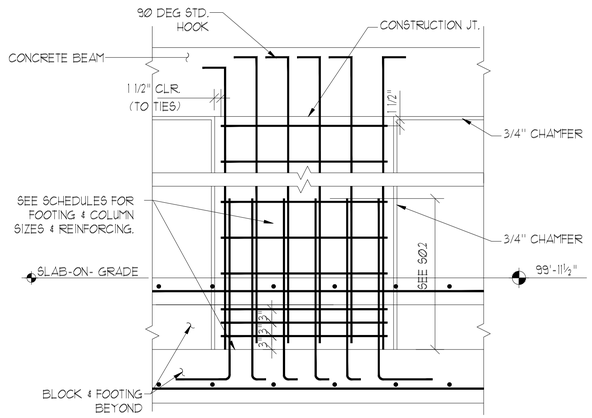

## 11 CORNER BAR DETAIL AT FOUNDATION
3/4" = 1'-0"



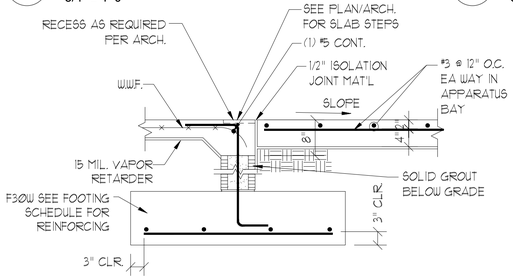

## 12 WALL FOOTING @12" CMU
3/4" = 1'-0"



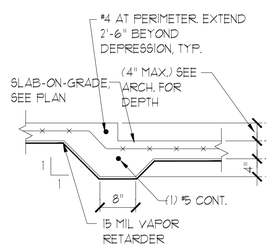

## 13 TRENCH DRAIN
3/4" = 1'-0"



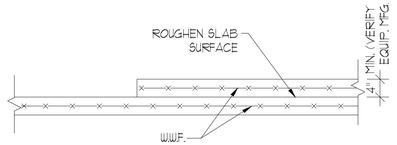

## 14 APPARATUS BAY CONCRETE COLUMN DETAIL
3/4" = 1'-0"




## 15 SLAB EDGE DETAIL
3/4" = 1'-0"




## 16 SLAB STEP
3/4" = 1'-0"




## 17 17S2.1 HOUSEKEEPING SLAB
3/4" = 1'-0"


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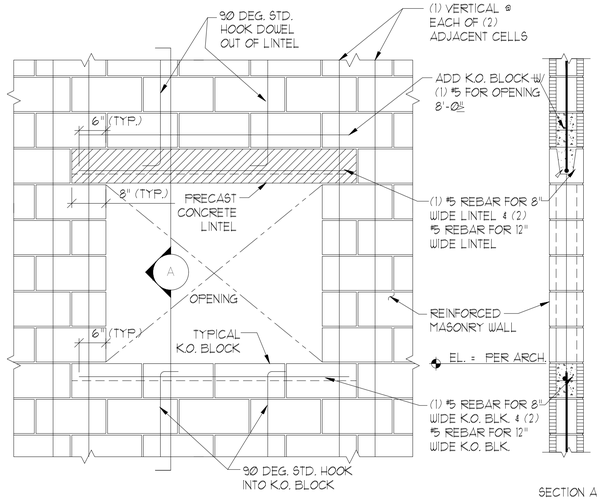
DATE: 11/14/2024

WAI PROJECT #2116-00

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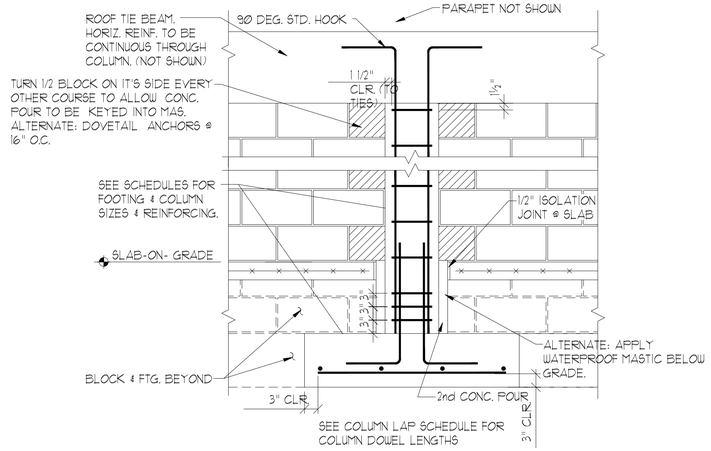
FOUNDATION DETAILS

S2.1




## 1 TYP. MASONRY OPENING DETAIL

3/4" = 1'-0"




## 2 CONCRETE COLUMN DETAIL

3/4" = 1'-0"

LOW LIFT GROUTING PROCEDURE:

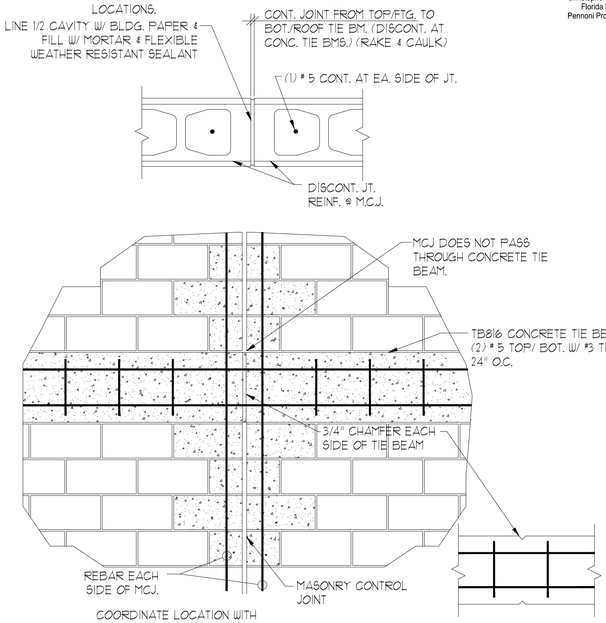
1. CONSTRUCT WALL TO HEIGHT OF 4'-0" TO 5'-4" MAX. ALLOW MORTAR TO SET SUFFICIENTLY TO WITHSTAND GROUT PRESSURE.
2. VERTICAL WALL REINF. BARS TO EXTEND BEYOND HEIGHT OF WALL FOR PROPER LAP.
3. INSPECT UNITS FOR ALIGNMENT, CLEAN OUT CELLS TO BE FILLED.
4. FILL CELLS TO 5 FOOT MAX. GROUT POUR.
5. DELAY 3 TO 5 MINUTES PRIOR TO CONSOLIDATING TO ALLOW WATER TO BE ABSORBED BY MASONRY.

HIGH LIFT GROUTING PROCEDURE:

1. CONSTRUCT WALL TO FULL HEIGHT (24 FEET MAX.) WITH PROPER REINFORCING AND ALLOW MASONRY TO CURE AT LEAST 3 DAYS.
2. CLEAN CELLS, WHICH ARE TO BE GROUTED THROUGH CLEAN-OUT PORTS.
3. PLACE GROUT IN 4 FOOT, 5 FOOT MAX. LIFTS AND CONSOLIDATE AFTER EXCESS MOISTURE HAS BEEN ABSORBED BY MASONRY.
4. PLACE THE NEXT LIFT AS SOON AS POSSIBLE BUT NO LONGER THAN ONE HOUR LATER.

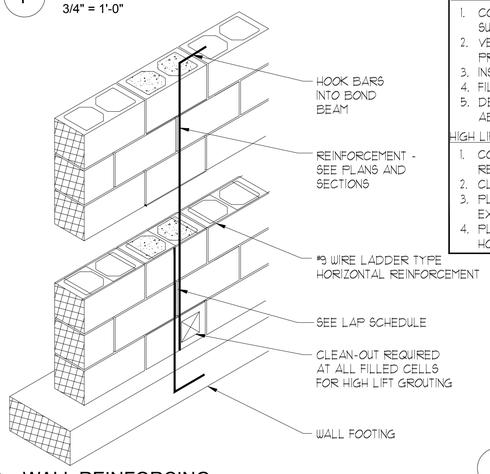
NOTES

1. EXTEND JOINT VERTICALLY FROM TOP OF FOOTING TO ROOF.
2. DISCONTINUE AT INTERMEDIATE TIE BEAMS AND ROOF TIE BEAMS.
3. SCORE ALL TIE BEAMS ON BOTH SIDES OF WALL TO MATCH JOINT.
4. SPACE JOINTS AT 26'-0" O.C. MAXIMUM.
5. COORDINATE LOCATIONS OF JOINTS WITH ARCH. JOINT LOCATIONS.



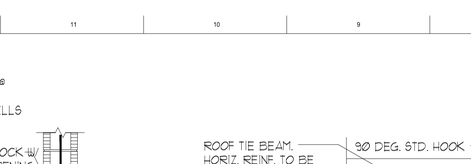

## 3 MASONRY CONTROL JOINT ELEVATION

3/4" = 1'-0"



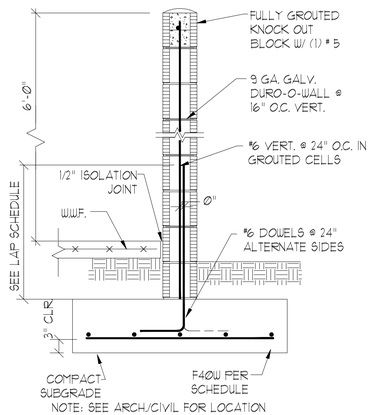

## 4 WALL REINFORCING

3/4" = 1'-0"



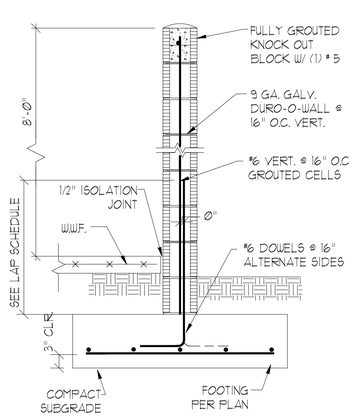

## 6 EQUIPMENT FOUNDATION

3/4" = 1'-0"



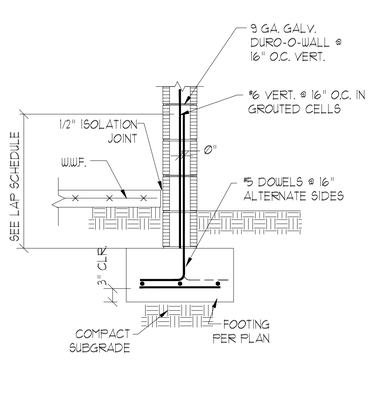

## 5 DUMPSTER ENCLOSURE

3/4" = 1'-0"



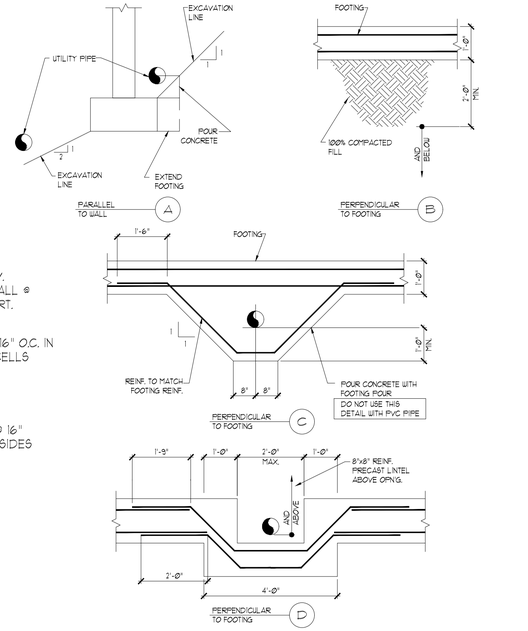

## 7 EQUIPMENT YARD WALL

3/4" = 1'-0"




## 8 STORAGE BUILDING FND.

3/4" = 1'-0"




## 9 FOOTING FOR PIPES PASSING UNDER OR ADJACENT TO WALLS

N.T.S.


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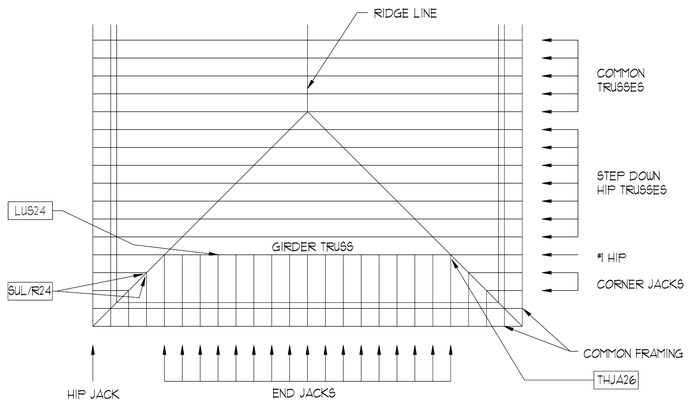
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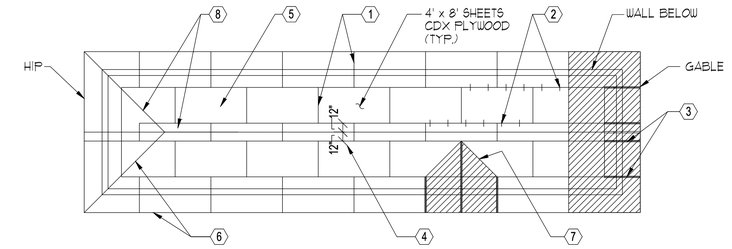
MASONRY & FOUNDATION DETAILS

S2.2




## 1 TYPICAL HIP ROOF TRUSS FRAMING

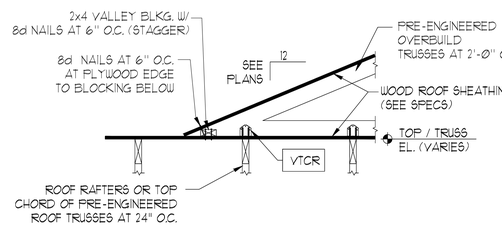
3/4" = 1'-0"




1. STAGGER END JOINTS AT FRAMING MEMBER
2. PROVIDE A HURRICANE CLIP AT EACH JOINT, BETWEEN EACH FRAMING MEMBER
3. 2x4 BLOCKING AT EACH JOINT, IN END ZONE MINIMUM PLYWOOD WIDTH 12"- SEE ARCHITECT FOR RIDGE VENTS
4. 5/8" OR GREATER PLYWOOD- 10d COMMONS AT 4" O.C. EDGES AND 6" O.C. INTERMEDIATE
5. NAILING 6" O.C. AT HIPS AND SUBFASCIA W/ 8d COMMON.
6. NAILING 3" O.C. AT VALLEYS W/ 8d COMMON.
7. PROVIDE BEVELED WOOD SHIMS FOR PLYWOOD BEARING.
8. USE RING SHANK NAILS.

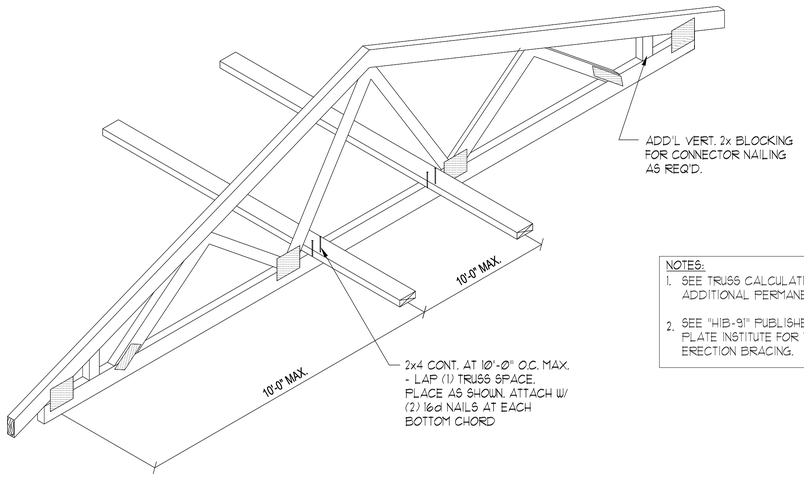
## 2 ROOF DIAGRAM NAILING SCHEDULE

3/4" = 1'-0"




## 3 OVER BUILT AT VALLEY CONNECTION

3/4" = 1'-0"

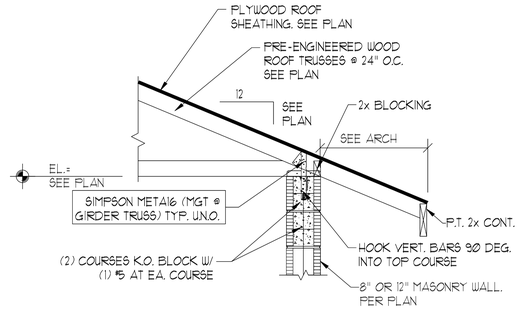



NOTES:

1. SEE TRUSS CALCULATION SHEETS FOR ADDITIONAL PERMANENT BRACING.
2. SEE "HIB-91" PUBLISHED BY THE TRUSS PLATE INSTITUTE FOR TEMPORARY ERECTION BRACING.

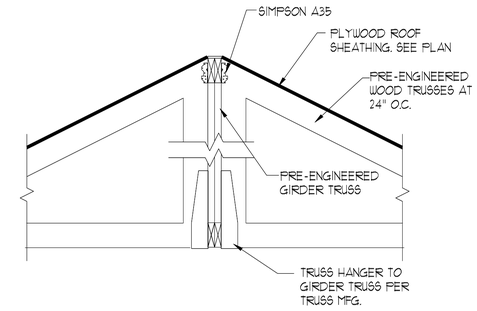
## 4 MINIMUM BOTTOM CHORD TRUSS BRACING

3/4" = 1'-0"



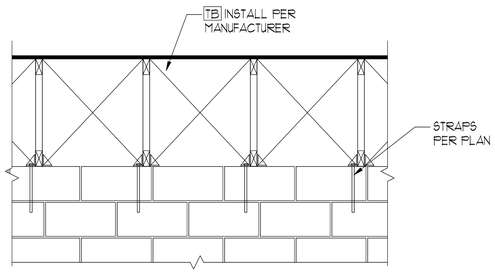

## 5 TRUSS BEARING

3/4"=1'-0"




## 6 TRUSS GIRDER SECTION

3/4" = 1'-0"




## 7 TYPICAL TENSON BRIDGING BETWEEN TRUSSES

3/4" = 1'-0"

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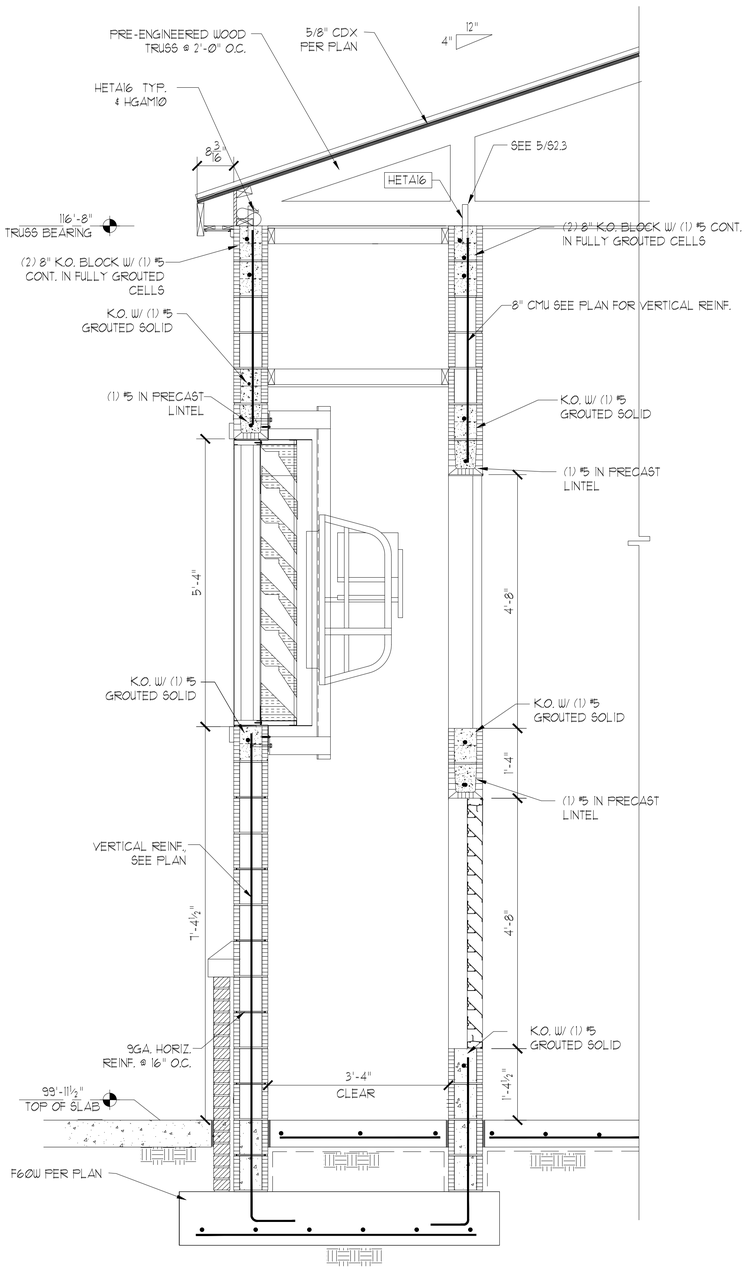
DATE: 11/14/2024

WAI PROJECT #2116-00

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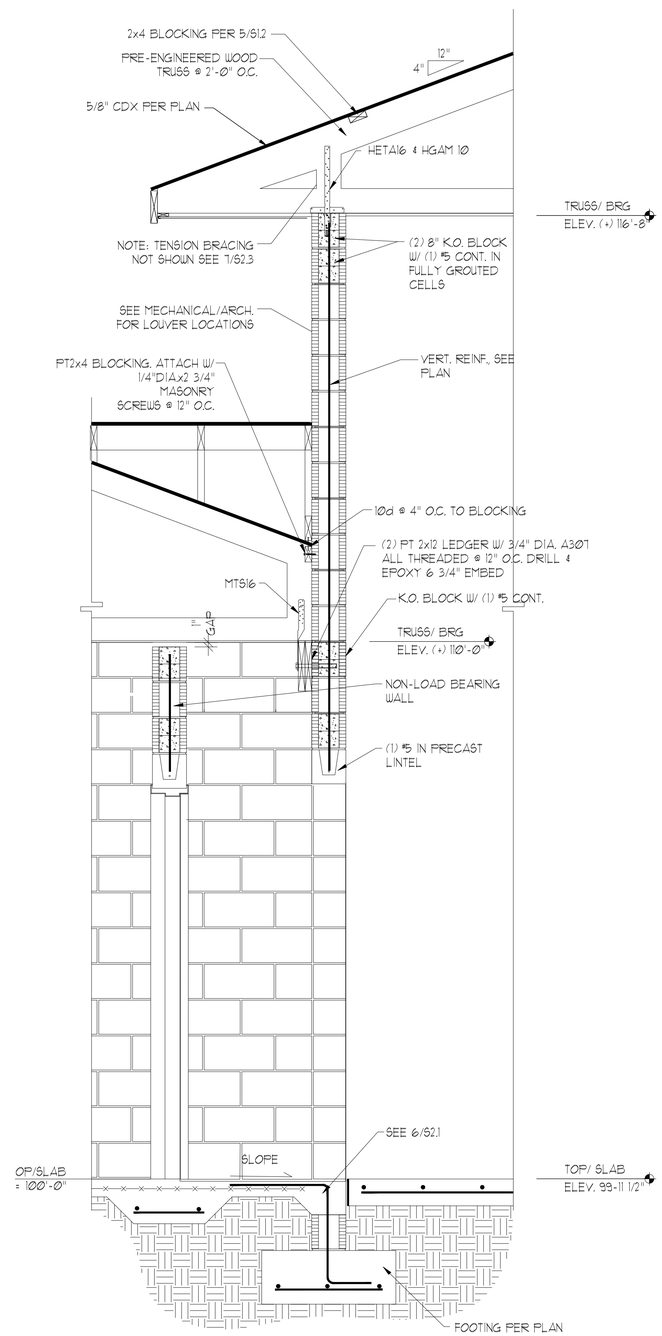
FRAMING DETAILS

S2.3




1 WALL SECTION

3/4" = 1'-0"




2 WALL SECTION

3/4" = 1'-0"

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5755 Rio Vista Drive
Clearwater, FL 33760-3137
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Florida Coa 7819
Christopher Lee, P.E., S.E.
Florida P.E. 73264
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This item has been digitally signed and sealed by Christopher Lee, on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies

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HILLSBOROUGH COUNTY BOARD OF COUNTY COMMISSIONERS COUNTY CENTER

601 E KENNEDY BLVD
TAMPA FL 33601

HILLSBOROUGH COUNTY
THONOSASSA FIRE STATION NO. 21
REPLACEMENT

PHASE: PERMIT SET

DATE: 11/14/2024

WAI PROJECT #2116-00

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WALL SECTIONS

S3.1

## MATERIAL SPECIFICATIONS AND REQUIREMENTS

MATERIALS MAY BE FOREIGN OR DOMESTIC PRODUCTS MEETING THE REQUIREMENTS OF NFPA 13.

THE FOLLOWING PIPE AND MATERIAL REQUIREMENTS APPLY FOR WET-PIPE SYSTEMS ON THIS PROJECT:

I. FIRE SPRINKLER PIPING REQUIREMENTS:

A. ALL INTERIOR GROOVED/WELDED PIPING 1½" AND LARGER SHALL BE A MINIMUM OF SCHEDULE 10 BLACK STEEL.
B. ALL INTERIOR THREADED PIPING SHALL BE A MINIMUM OF SCHEDULE 40 BLACK STEEL.
C. ALL EXTERIOR PIPING (INCLUDING NIPPLES OR SPOOL PIECES EXTENDING THROUGH EXTERIOR WALLS) SHALL BE GALVANIZED SCHEDULE 40.

II. FITTING REQUIREMENTS:

A. ALL INTERIOR GROOVED FITTINGS SHALL COME WITH THE FACTORY APPLIED PAINTED COATING AND SHALL BE UL/FM APPROVED FOR FIRE PROTECTION SERVICE.
B. ALL INTERIOR THREADED FITTINGS SHALL BE CAST IRON, DUCTILE IRON, OR MALLEABLE IRON.
C. ALL EXTERIOR FITTINGS SHALL BE GALVANIZED.

III. DEVICES:

A. AT A MINIMUM DEVICES USED FOR FIRE PROTECTION SERVICE ON THIS PROJECT SHALL BE UL LISTED. THIS INCLUDES FIRE SPRINKLER HEADS, VALVES, FLOW SWITCHES, ELECTRIC BELLS, TAMPER SWITCHES, CHECK VALVES, ETC.
B. SPRINKLER HEADS SHOWN ON THIS SHEET OR IN THIS PLAN SET SHALL BE THE BASIS OF THE DESIGN. EQUAL HEADS BY OTHER MANUFACTURERS WILL BE EVALUATED AND APPROVED IF FUNCTIONALLY EQUIVALENT.

## FIRE SPRINKLER SYSTEM TESTING REQUIREMENTS

1. PER NFPA 13 (2019), THE FIRE PROTECTION SYSTEM SHALL BE HYDROSTATICALLY TESTED AS FOLLOWS:

28.2.1 HYDROSTATIC TESTS.

APPLICABLE ON THIS PROJECT

28.2.1.1 UNLESS PERMITTED BY 28.2.1.3 THROUGH 28.2.1.5, ALL PIPING AND ATTACHED APPURTENANCES SUBJECTED TO SYSTEM WORKING PRESSURE SHALL BE HYDROSTATICALLY TESTED AT 200 PSI (13.8 BAR) AND SHALL MAINTAIN THAT PRESSURE WITHOUT LOSS FOR 2 HOURS.

28.2.1.2 LOSS SHALL BE DETERMINED BY A DROP IN GAUGE PRESSURE OR VISUAL LEAKAGE.

28.2.1.3 PORTIONS OF SYSTEMS NORMALLY SUBJECTED TO SYSTEM WORKING PRESSURES IN EXCESS OF 150 PSI (10.4 BAR) SHALL BE TESTED AS DESCRIBED IN 28.2.1.1, AT A PRESSURE OF 50 PSI (3.5 BAR) IN EXCESS OF SYSTEM WORKING PRESSURE.

28.2.1.4 WHERE COLD WEATHER WILL NOT PERMIT TESTING WITH WATER, AN INTERIM AIR TEST SHALL BE PERMITTED TO BE CONDUCTED AS DESCRIBED IN 28.2.2. THIS PROVISION SHALL NOT REMOVE OR REPLACE THE REQUIREMENT FOR CONDUCTING THE HYDROSTATIC TEST AS DESCRIBED IN 28.2.1.1.

28.2.1.5 THE TEST PRESSURE SHALL BE READ FROM A GAUGE LOCATED AT THE LOW ELEVATION POINT OF THE SYSTEM OR PORTION BEING TESTED. THE PRESSURES IN PIPING AT HIGHER ELEVATIONS SHALL BE PERMITTED TO BE LESS THAN 200 PSI (13.8 BAR) WHEN ACCOUNTING FOR ELEVATION LOSSES. SYSTEMS OR PORTIONS OF SYSTEMS THAT CAN BE ISOLATED SHALL BE PERMITTED TO BE TESTED SEPARATELY.

28.2.1.6 ADDITIVES, CORROSIVE CHEMICALS SUCH AS SODIUM SILICATE, OR DERIVATIVES OF SODIUM SILICATE, BRINE, OR SIMILAR ACTING CHEMICALS SHALL NOT BE USED WHILE HYDROSTATICALLY TESTING SYSTEMS OR FOR STOPPING LEAKS.

28.2.1.7 PIPING BETWEEN THE EXTERIOR FIRE DEPARTMENT CONNECTION AND THE CHECK VALVE IN THE FIRE DEPARTMENT INLET PIPE SHALL BE HYDROSTATICALLY TESTED IN THE SAME MANNER AS THE BALANCE OF THE SYSTEM. AFTER REPAIR OR REPLACEMENT WORK AFFECTING THE FIRE DEPARTMENT CONNECTION, THE PIPING BETWEEN THE EXTERIOR AND THE CHECK VALVE IN THE FIRE DEPARTMENT INLET PIPE SHALL BE ISOLATED AND HYDROSTATICALLY TESTED AT 150 PSI (10.3 BAR).

28.2.1.8 WHEN SYSTEMS ARE BEING HYDROSTATICALLY TESTED, TESTS SHALL BE PERMITTED TO BE CONDUCTED WITH PENDENT OR HORIZONTAL SIDEWALL SPRINKLERS OR PLUGS INSTALLED IN FITTINGS. ANY PLUGS SHALL BE REPLACED WITH PENDENT OR HORIZONTAL SIDEWALL SPRINKLERS AFTER THE TEST IS COMPLETED.

29.7.1 MODIFICATIONS TO EXISTING PIPING SYSTEMS SHALL REQUIRE TESTING AT SYSTEM WORKING PRESSURE.

29.7.1.1 WHERE MODIFICATION IS MADE TO AN EXISTING SYSTEM AFFECTING MORE THAN 20 SPRINKLERS, THE NEW PORTION SHALL BE ISOLATED AND TESTED AT NOT LESS THAN 200 PSI (13.8 BAR) FOR 2 HOURS.

29.7.1.2 MODIFICATIONS THAT CANNOT BE ISOLATED, SUCH AS RELOCATED DROPS, SHALL REQUIRE TESTING AT SYSTEM WORKING PRESSURE.

29.7.1.2 MODIFICATIONS THAT CANNOT BE ISOLATED, SUCH AS RELOCATED DROPS, SHALL REQUIRE TESTING AT SYSTEM WORKING PRESSURE.

## FIRE SPRINKLER SPECIFICATIONS AND GENERAL NOTES

1. GENERAL PROJECT SCOPE:

THIS PROJECT CONCERNS THE INSTALLATION OF A NEW WET-PIPE FIRE SPRINKLER SYSTEM TO PROTECT A NEW FIRE STATION FOR HILLSBOROUGH COUNTY. A FIRE PUMP AND WATER STORAGE TANK WILL BE INSTALLED FOR THIS FACILITY AND SHALL SERVE AS THE WATER SUPPLY FOR THE FIRE SPRINKLER SYSTEM IN THE BUILDING. THE FIRE PUMP SHALL BE A VERTICAL INLINE ELECTRIC FIRE PUMP RATED AT 500 GPM @ 80 PSI. ONE RISER SHALL BE INSTALLED IN THE FIRE STATION. THE AREA PROTECTED BY THE RISER IS APPROXIMATELY 7,200 SQ.FT.

2. DESIGN PARAMETERS:

A. SEE THE 61G15 PARAMETERS ON THIS SHEET FOR DESIGN CRITERIA.

B. HANGER SPACING AND LOCATIONS SHALL BE IN ACCORDANCE WITH NFPA 13.

C. ALL UNDERGROUND WORK (MATERIAL, INSTALLATION, FLUSHING AND TESTING) IS TO BE IN ACCORDANCE WITH NFPA 24.

D. FIRE SPRINKLER HYDRAULIC CALCULATIONS SHALL MAINTAIN A MINIMUM 15% PRESSURE SAFETY FACTOR. THE SYSTEM PRESSURE SAFETY FACTOR SHALL BE AT LEAST 15% (FIFTEEN PERCENT) OF THE REQUIRED RESIDUAL PRESSURE AT THE TEST LOCATION.

E. AN AUTOMATIC AIR RELEASE VALVE SHALL BE INSTALLED ON THE FIRE SPRINKLER SYSTEM, IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 13. THE AUTOMATIC AIR RELEASE DISCHARGE SHALL BE PIPED TO DISCHARGE AT GRADE OUTSIDE THE BUILDING.

3. MATERIALS:

A. ALL FIRE PROTECTION EQUIPMENT AND MATERIALS SHALL BE U.L. LISTED OR FM APPROVED (WHEN APPLICABLE).
B. SEE THE 'MATERIAL SPECIFICATIONS AND REQUIREMENTS' SECTION ON THIS SHEET FOR MATERIAL SPECIFICATIONS.

4. THE FIRE SPRINKLER CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AS-BUILTS.

5. ALL PENETRATIONS THRU RATED WALLS/FLOORS SHALL BE FIRE STOPPED/WATERPROOFED TO MATCH THE RATING OF THE WALL/FLOOR.

6. AUXILIARY DRAIN VALVES ARE TO BE PROVIDED WHERE PORTIONS OF THE SYSTEM ARE INSTALLED "TRAPPED", IN ACCORDANCE WITH NFPA 13.

7. HEADS SHALL NOT BE PAINTED AND SHALL BE TEMPORARILY PROTECTED FROM OVERSPRAY WITH PAPER BAGS OR ALUMINUM FOIL. CARE SHALL BE TAKEN AT ALL TIMES NOT TO DAMAGE THE SPRINKLER HEAD'S FRANGIBLE BULB.

8. THE FIRE DEPARTMENT CONNECTION SHALL BE LOCATED WHERE SHOWN ON THESE PLANS.

9. THE FIRE SPRINKLER CONTRACTOR SHALL PREPARE A SHOP DRAWING SUBMITTAL AND EQUIPMENT CUTSHEET PACKAGE SUBMITTAL, AND SUBMIT TO THE ENGINEER AND AUTHORITY HAVING JURISDICTION, FOR APPROVAL. APPROVAL OF SHOP DRAWINGS AND EQUIPMENT SHALL BE OBTAINED PRIOR TO STARTING WORK. THE ENGINEER OF RECORD SHALL FURNISH THE FIRE SPRINKLER CONTRACTOR WITH AUTOCAD DRAWINGS, PREPARED WITH HYDRACAD SPRINKLER DESIGN SOFTWARE, FOR USE IN PREPARING SHOP DRAWINGS AND AS-BUILTS.

10. THE SYSTEM SHOWN ON THESE PLANS REQUIRES A CONNECTION TO THE UNDERGROUND FIRE PROTECTION MAIN. THE CONTRACTOR WHO INSTALLS THE UNDERGROUND PIPING FROM THE POINT OF SERVICE IS RESPONSIBLE FOR COMPLETING THE INSTALLATION TO THE ABOVE GROUND FIRE SPRINKLER SYSTEM CONNECTION FLANGE OR GROOVED CONNECTION, WHICH BY DEFINITION PER 633.334(3) IS NO MORE THAN 1 FOOT ABOVE THE FINISHED FLOOR (OR FINISHED GRADE FOR OUTSIDE RISERS). ALL FIRE PROTECTION UNDERGROUND DOWNSTREAM OF THE POINT OF SERVICE IDENTIFIED ON THE PLANS SHALL BE INSTALLED BY A LICENSED CLASS I, CLASS II, OR CLASS V FIRE PROTECTION CONTRACTOR AS REQUIRED BY THE STATE FIRE MARSHAL. THE UNDERGROUND CONTRACTOR IS RESPONSIBLE FOR APPLYING FOR A SEPARATE UNDERGROUND FIRE MAIN INSTALLATION PERMIT WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND COMPLETING THE CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING DOCUMENT. ABOVE GROUND CONTRACTORS MAY NOT COMPLETE THE CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR THE UNDERGROUND PIPING OR PORTION THEREOF WHICH HAVE BEEN INSTALLED BY OTHERS. THE UNDERGROUND CONTRACTOR MUST USE EXTREME CARE IN INSTALLING THE RISER STUB-UP EXACTLY WHERE SHOWN AND DIMENSIONED ON THIS PLAN.

11. QUICK RESPONSE SPRINKLER HEADS SHALL BE INSTALLED THROUGHOUT (UNLESS OTHERWISE NOTED).

12. THIS IS A CENTER-OF-TILE INSTALLATION. IN STORAGE AND MECHANICAL ROOMS IT WILL NOT BE NECESSARY TO CENTER HEADS IN THE CEILING GRID.

13. FIRE SPRINKLER PROTECTION SHALL BE PROVIDED UNDER OBSTRUCTIONS OVER 48" IN WIDTH (SUCH AS DUCTWORK), IN ACCORDANCE WITH NFPA 13. SEE THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL PLANS FOR FEATURES OR EQUIPMENT THAT MAY REQUIRE FIRE SPRINKLER PROTECTION UNDER OBSTRUCTIONS. IN ORDER TO MEET THIS SPECIFICATION, INCLUDE AN ADDITIONAL TEN (10) FIRE SPRINKLER HEAD ALLOWANCE IN BUDGET PRICING FOR PROVIDING COVERAGE UNDER OBSTRUCTIONS OR FOR OTHER UNFORESEEN CONDITIONS. BUDGET PRICING SHALL INCLUDE ASSOCIATED LABOR, PIPE, FITTINGS, HANGERS, ETC. RELATED TO THE ADDITIONAL HEAD ALLOWANCE.

## F.A.C. CHAPTER 61G15-32 REQUIREMENTS - FIRE SPRINKLER

THE FOLLOWING IS AN OUTLINE OF THE MINIMUM DESIGN PARAMETERS ASSOCIATED WITH THE DESIGN OF THE WATER-BASED FIRE PROTECTION SYSTEM ON THIS PROJECT. THE OUTLINE OF THESE PARAMETERS FOLLOWS THE MINIMUM REQUIREMENTS AS PROVIDED IN THE FLORIDA ADMINISTRATIVE CODE, CHAPTER 61G15-32.

61G15-32.003 COMMON REQUIREMENTS TO ALL FIRE PROTECTION SYSTEM ENGINEERING DOCUMENTS

32.003(1) THIS FIRE PROTECTION ENGINEERING DOCUMENT PROVIDES THE ENGINEERING REQUIREMENTS TO BE USED IN THE PREPARATION OF THE FIRE PROTECTION SYSTEM LAYOUT DOCUMENTS FOR THE FOLLOWING SYSTEMS:

a. WET-PIPE FIRE SPRINKLER SYSTEM INSTALLATION.

32.003(2) THE ACCEPTANCE TESTING OF THE FIRE PROTECTION SYSTEM AND COMPONENTS SHALL BE PERFORMED BY THE INSTALLING CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN NFPA 13, 2019 EDITION, CHAPTERS 6 AND 28. THE APPROPRIATE CONTRACTOR'S MATERIAL AND TEST CERTIFICATE(S) SHALL BE COMPLETED AND SIGNED:

NFPA 13, 2019 EDITION, SECTION 28.1(3) & FIGURE 28.1, "CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR ABOVEGROUND PIPING"
NFPA 13, 2019 EDITION, SECTION 6.10.1(3) & FIGURE 6.10.1, "CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING"

SEE THE REQUIREMENTS LABELED "FIRE SPRINKLER SYSTEM TESTING REQUIREMENTS" ON THIS SHEET FOR ADDITIONAL DETAILS CONCERTING HYDROSTATIC PRESSURE TESTS.

32.003(3) SEE 32.004(2)(C) AND 32.004(2)(D) FOR OCCUPANCY DESIGN CRITERIA.
32.003(4) SEE 32.004(2)(B) FOR APPLICABLE STANDARDS.

32.003(5) THE FIRE PROTECTION SYSTEM FOR THIS PROJECT MAY CONTRIBUTE 3 POUNDS PER SQUARE FOOT TO THE DEAD LOAD OF THIS BUILDING'S STRUCTURAL SUPPORT SYSTEM. IT IS THE CONTENTION OF THE ENGINEER OF RECORD FOR THE FIRE PROTECTION SYSTEM THAT THE BUILDING WILL ADEQUATELY SUPPORT THE FIRE PROTECTION SYSTEM. THIS HAS BEEN CONFIRMED WITH THE STRUCTURAL ENGINEER.

61G15-32.004 DESIGN OF WATER-BASED FIRE PROTECTION SYSTEMS.

32.004(4)(A) THE POINT-OF-SERVICE FOR THIS BUILDING'S FIRE PROTECTION WATER SUPPLY, AS DEFINED BY 633.021(18) F.S., IS AT THE CONNECTION TO THE FIRE WATER STORAGE TANK. SEE THE SITE UTILITY PLANS FOR WATER SUPPLY CONFIGURATION.

32.004(4)(B) THE APPLICABLE STANDARDS TO BE APPLIED IN THE DESIGN OF THIS PROJECT ARE:

FLORIDA BUILDING CODE (2023)
FLORIDA FIRE PREVENTION CODE (2023)
NFPA 13 STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS (2019 EDITION)
NFPA 20 STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION (2019 EDITION)
NFPA 22 STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION (2018 EDITION)
NFPA 24 STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES (2019 EDITION)

32.004(4)(C) CLASSIFICATION OF HAZARD OCCUPANCY FOR EACH ROOM OR AREA:

LIGHT HAZARD OCCUPANCIES: OFFICES, CORRIDORS, BATHROOMS, KITCHEN, DAYROOM, BUNKS, VESTIBULES, CONFERENCE, FITNESS, ATTIC
ORDINARY HAZARD OCCUPANCIES (GROUP 1): MECHANICAL & ELECTRICAL ROOMS, SMALL STORAGE CLOSETS, TELECOM, JANITOR, DECON
ORDINARY HAZARD OCCUPANCIES (GROUP 2): APPARATUS BAY

32.004(4)(D) DESIGN APPROACH FOR EACH SEPARATE HAZARD OCCUPANCY, OR SYSTEM, AS PER NFPA 13, 2019 ED:

LIGHT HAZARD OCCUPANCIES:

WET PIPE SYSTEM, 0.10 GPM/FT2, 155'F, 225 FT2 MAX SPACING - FOR STANDARD COVERAGE HEADS ONLY. EXTENDED COVERAGE HEADS SHALL BE PERMITTED WHEN VERIFIED WITH THE HYDRAULIC CALCULATIONS, AND WHEN THE HEAD UL LISTING IS APPLICABLE TO THE TYPE OF CONSTRUCTION. THE BASE DESIGN AREA FOR THIS HAZARD IS 1,500 SQ.FT., HOWEVER, A REDUCTION IN THE DESIGN AREA, IN ACCORDANCE WITH NFPA 13, SECTION 19.3.3.2.3, SHALL BE PERMITTED.

ORDINARY HAZARD OCCUPANCIES (GROUP 1):

WET PIPE SYSTEM, 0.15 GPM/FT2, 155'F, 130 FT2 MAX SPACING - FOR STANDARD COVERAGE HEADS ONLY. INTERMEDIATE TEMPERATURE HEADS SHALL BE USED IN UNCONDITIONED SPACE OR WHEN SPRINKLERS ARE INSTALLED WITHIN 12' OF A METAL ROOF DECK. THE BASE DESIGN AREA FOR THIS HAZARD IS 1,500 SQ.FT., HOWEVER, A REDUCTION IN THE DESIGN AREA, IN ACCORDANCE WITH NFPA 13, SECTION 19.3.3.2.3, SHALL BE PERMITTED.

ORDINARY HAZARD OCCUPANCIES (GROUP 2):

WET PIPE SYSTEM, 0.20 GPM/FT2, 155'F, 130 FT2 MAX SPACING - FOR STANDARD COVERAGE HEADS ONLY. INTERMEDIATE TEMPERATURE HEADS SHALL BE USED IN UNCONDITIONED SPACE OR WHEN SPRINKLERS ARE INSTALLED WITHIN 12' OF A METAL ROOF DECK. SHELF STORAGE SHALL NOT EXCEED TEN (10) FEET IN HEIGHT (TO TOP OF COMMODITY BEING STORED ON THE SHELF). THE BASE DESIGN AREA FOR THIS HAZARD IS 1,500 SQ.FT., HOWEVER, A REDUCTION IN THE DESIGN AREA, IN ACCORDANCE WITH NFPA 13, SECTION 19.3.3.2.3, SHALL BE PERMITTED.

32.004(4)(E)(F) SEE THE FIRE PROTECTION SITE PLAN SHOWN ON SHEET FP1.0 FOR WATER SUPPLY SPECIFICS.

32.004(4)(G) VALVES AND ALARMS SPECIFIC TO THE FIRE PROTECTION SYSTEM USED ON THIS PROJECT SHALL BE U.L. LISTED & FM APPROVED FOR FIRE PROTECTION SERVICE. ALL VALVES CONTROLLING CONNECTIONS TO WATER SUPPLIES AND TO SUPPLY PIPES TO SPRINKLERS, INCLUDING BACKFLOW PREVENTION ASSEMBLIES, SHALL BE LISTED INDICATING VALVES AND PROVIDED WITH TAMPER AND/OR FLOW SWITCHES WITH CONNECTIONS TO LOCAL AUDIBLE ALARMS AND OFF SITE MONITORING.

32.004(4)(H) IN ACCORDANCE WITH DISCUSSIONS WITH THE LOCAL WATER PURVEYOR AND FIRE MARSHAL, AND FAMILIARITY WITH CONDITIONS IN THE AREA, MICROBIAL INDUCED CORROSION (MIC) IS NOT KNOWN TO BE PRESENT IN THE WATER SUPPLY.

32.004(4)(I) BACKFLOW PREVENTION REQUIREMENTS (AS APPLICABLE), INCLUDING ANTICIPATED PRESSURE LOSS, ARE INDICATED ON THE FIRE PROTECTION SITE PLAN.

32.004(4)(J) ALL YARD AND INTERIOR FIRE PROTECTION COMPONENTS SHALL BE U.L. LISTED & FM APPROVED FOR FIRE PROTECTION SERVICE AND/OR STATED PURPOSE.

32.004(4)(K) THE LOCAL MUNICIPAL WATER SUPPLY CAPABILITY HAS BEEN REVIEWED BY THE ENGINEER. IT HAS BEEN DETERMINED A 500 GPM RATED AT 80 PSI FIRE PUMP WILL BE REQUIRED ON THIS PROJECT.

32.004(4)(L) THE LOCAL MUNICIPAL WATER SUPPLY CAPABILITY HAS BEEN REVIEWED BY THE ENGINEER. IT HAS BEEN DETERMINED A MINIMUM 29,670 GALLON FIRE WATER STORAGE TANK WILL BE REQUIRED ON THIS PROJECT.

32.004(4)(M) THE PROJECT IS NOT A STORAGE OCCUPANCY. STOCK ROOMS AND STORAGE CLOSETS WILL CONTAIN STORAGE ON SHELVING THAT IS 10'-0 OR LESS IN HEIGHT (CLASS III AND CLASS IV COMMODITIES).

### MINIMUM DESIGN AREA - PER NFPA 13

| CALC ID | MAXIMUM CEILING HEIGHT | INITIAL DESIGN AREA | REDUCTION IN DESIGN AREA -3x/2 + 55 X = CEILING HEIGHT (PER FIGURE 19.3.3.2.3.1) | DESIGN AREA REDUCTION (SQ.FT.) | INCREASE FOR SLOPES OVER 2:12 (PER SECTION 19.3.3.2.4) | INCREASE FOR DRY PIPE SYSTEMS (PER SECTION 19.3.3.2.5) | DESIGN AREA INCREASE (SQ.FT.) | MINIMUM ALLOWABLE COMBINED DESIGN AREA (PER SECTION 19.3.3.2.8) |
|---|---|---|---|---|---|---|---|---|
| 2520-A | 17'-8" | 1,500 SQ.FT. | - 28.5% | - 428 SQ.FT. | + 0% | + 0% | + 0 SQ.FT. | 1,073 SQ.FT. |
| | | | | | | | | |

### HYDRAULIC DESIGN DATA

| CALC ID | DESCRIPTION OF AREA PROTECTED | COMPANY PRINT NUMBER | DENSITY (GPM/SQ.FT.) | DESIGN AREA (SQ. FT.) | HOSE ALLOW. (GPM) INSIDE/OUTSIDE | NUMBER OF HEADS CALCULATED | OCCUPANCY CLASSIFICATION | COMMODITY CLASSIFICATION | MAX. STORAGE HEIGHT | WATER DEMAND AT NODE 'PUMP' INCLUDING HOSE DEMAND ( GPM @ PSI ) | WATER DEMAND AT BASE OF RISER ( GPM @ PSI ) | SAFETY FACTOR ( PSI ) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2520-A | APPARATUS BAY | FP1.1 | 0.20 | 1,130 | 0 / 0 | 12 | ORDINARY HAZARD (GROUP 2) | N/A | N/A | 292.6 GPM @ 55.0 PSI | 292.6 GPM @ 50.7 PSI | 31.9 PSI |
| | | | | | | | | | | | | |

### SPRINKLER HEADS AND LEGEND - BASIS OF DESIGN

| MAKE | MODEL | TYPE | RESPONSE | "K" | NPT | TEMP | FINISH - HD/ESC | SPRK ID# | SYMBOL | TOTAL | COMMENTS | SPARE HEAD COUNT BY TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RELIABLE | F1FR56 | RECESSED PENDENT | QUICK | 5.6 | ½" | 155'F | CHROME / CHROME | | ⦿ | 53 | RECESSED PENDENT INSTALLED CENTER-OF-TILE | 2 |
| RELIABLE | F1FR56 | UPRIGHT | QUICK | 5.6 | ½" | 200'F | WHITE POLY | | ○ | 2 | | 2 |
| RELIABLE | F1FR80 | RECESSED PENDENT | QUICK | 8.0 | ¾" | 200'F | CHROME / CHROME | | ● | 27 | | 2 |
| RELIABLE | F1FR56 | UPRIGHT | QUICK | 5.6 | ½" | 200'F | BRASS | | ⊘ | 114 | UPRIGHT INSTALLED IN ATTIC | 4 |
| RELIABLE | F1FR80 QREC | EC HORIZONTAL SIDEWALL | QUICK | 8.0 | ¾" | 155'F | BRASS | | ◀ | 4 | | 2 |
| RELIABLE | F1FR56 | RECESSED PENDENT | QUICK | 5.6 | ½" | 155'F | CHROME / CHROME | | ⊗ | 2 | RECESSED PENDENT PROVIDED WITH HEAD GUARD | 0 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | TOTAL SPARE HEADS |
| | | | | | | | | | | | | 12 |
| | | | | | | | | TOTAL HEADS | | 202 | TOTAL DOES NOT INCLUDE SPARE HEAD COUNT | LOCATE SPARE HEAD CABINET |
| | | | | | | | | | | | | NEXT TO THE RISER |

THE SPRINKLER HEAD COUNT SHOWN ON THIS PLAN SHALL BE CONSIDERED APPROXIMATE UNTIL VERIFIED BY THE CONTRACTOR. ANY DISCREPANCY SHALL BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION.

### FIRE SPRINKLER DRAWING LEGEND

| SHEET # | DESCRIPTION |
|---|---|
| FP0.0 | FIRE SPRINKLER GENERAL NOTES & SPECIFICATIONS |
| FP1.0 | FIRE PROTECTION SITE PLAN |
| FP1.1 | FIRE SPRINKLER PLAN |
| FP1.2 | FIRE SPRINKLER PLAN - ATTIC |
| FP5.1 | FIRE SPRINKLER DETAILS |
| FP6.1 | FIRE PUMP & FIRE WATER STORAGE TANK PLAN |
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RICHARD W. LYONS, #82374

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FIRE PROTECTION ENGINEERING • LIFE SAFETY
Florida Cert. of Authorization #: 28939
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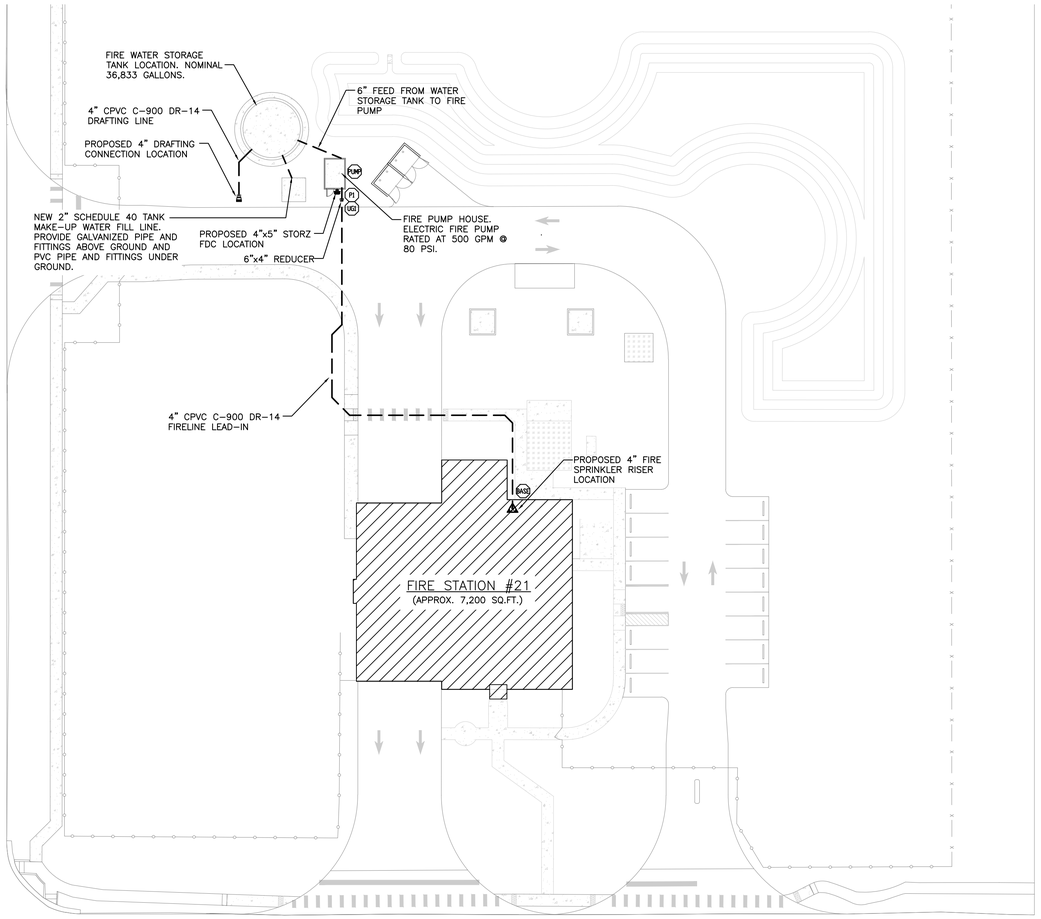
HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2116-05

| DISTRIBUTION | DATE |
|---|---|
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

FIRE SPRINKLER GENERAL NOTES & SPECIFICATIONS

FP0.0

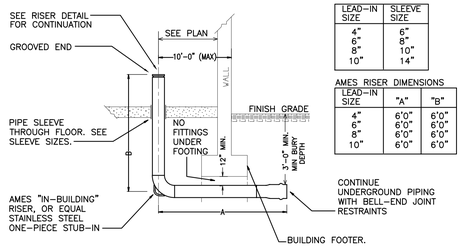



## FIRE PROTECTION SITE PLAN
(FOR HYDRAULIC REFERENCE ONLY)

0 15 30
SCALE: 1" = 30'-0"

N

**A FIRE PROTECTION SITE PLAN HAS BEEN SHOWN ON THESE PLANS IN ORDER TO SHOW THE UNDERGROUND HYDRAULIC NODES USED IN THE CALCULATIONS AND THE GENERAL LAYOUT OF THE FIRE PROTECTION SYSTEM RELATED COMPONENTS. THE SITE PLAN SHOWN ON THESE PLANS IS TO BE USED FOR HYDRAULIC REFERENCE ONLY. SEE THE SITE UTILITY DRAWINGS FOR CONSTRUCTION REQUIREMENTS.**

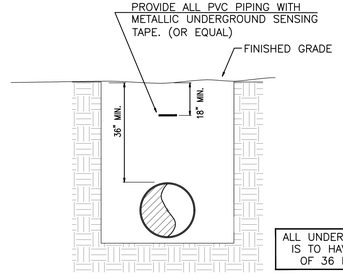



| LEAD-IN SIZE | SLEEVE SIZE |
|---|---|
| 4" | 6" |
| 6" | 8" |
| 8" | 10" |
| 10" | 14" |

AMES RISER DIMENSIONS

| LEAD-IN SIZE | "A" | "B" |
|---|---|---|
| 4" | 6'0" | 6'0" |
| 6" | 6'0" | 6'0" |
| 8" | 6'0" | 6'0" |
| 10" | 6'0" | 6'0" |

A FP1.0 UNDERGROUND ENTRANCE
SCALE: N.T.S.




ALL UNDERGROUND PIPING IS TO HAVE A MINIMUM OF 36 INCH COVER.

B FP1.0 PIPE TRENCH DETAIL
SCALE: N.T.S.

**811**
3 WORKING DAYS
BEFORE YOU DIG CALL SUNSHINE STATE ONE CALL OF FLORIDA '811'
FOR THE LOCATION OF UNDERGROUND FACILITIES

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THEIR REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

## PRIVATE FIRE WATER SERVICE MAINS

1. PRIVATE FIRE MAIN INSTALLATION SHALL COMPLY WITH THE 8TH EDITION FLORIDA FIRE PREVENTION CODE (2023), NFPA 24 (2019), NFPA 13 (2019), AND THE LOCAL AUTHORITY HAVING JURISDICTION.
2. PVC PIPE SHALL MEET THE REQUIREMENTS OF: 4" TO 12" AWWA C-900, DR-14, PIPING.
3. DUCTILE IRON PIPE SHALL BE CEMENT LINED, CLASS 51, OR PRESSURE RATED AT 350. MECHANICAL JOINT OR PUSH-ON JOINT SHALL MEET ALL THE REQUIREMENTS OF THE FOLLOWING ANSI/AWWA C111/A 21.11 (FOR RUBBER GASKET JOINTS): ANSI/AWWA C150/A 21.50 (FOR THICKNESS DESIGN) AND ANSI/AWWA C151/A 21.51 (FOR DUCTILE IRON PIPE MOLDS).
4. FITTINGS FOR DUCTILE IRON AND ALL PVC PIPE WILL BE CEMENT LINED DUCTILE IRON, MECHANICAL JOINT (MJ), 350 PRESSURE RATED, AND SHALL COMPLY WITH ANSI/AWWA C110/A 21.10 OR C153/A 21.53 AND C111/A 21.11 OR U.S. PIPES "PERMAFUSE" EPOXY. ALL MJ FITTINGS ARE TO BE RESTRAINED WITH A UL LISTED MEGA LUG JOINT RESTRAINT SYSTEM. NO PVC FITTINGS ARE PERMITTED. ALL BELL-END JOINTS SHALL BE RESTRAINED WITH A UL LISTED JOINT RESTRAINT SYSTEM.
5. INSTALLATION OF WATER MAINS SHALL BE IN ACCORDANCE WITH ANSI/AWWA C900 (MANUAL M23) FOR PVC PRESSURE PIPE AND C600 FOR DUCTILE IRON PIPE.
6. ALL GATE VALVES ARE TO BE EPOXY LINED AND WITH RESILIENT WEDGE OR SEAT SIZES THRU 10".
7. BACKFILL & COMPACTION: AS PER STANDARD DETAIL FOR WATER SYSTEMS.
8. PRESSURE TESTING SHALL BE IN ACCORDANCE WITH NFPA 13 & NFPA 24 (2019 EDITION). MINIMUM TEST PRESSURE: 200 PSI; DURATION: 2 HOURS
9. ALL UNDERGROUND PIPING/MAINS TO HAVE A MINIMUM COVER OF 36 INCHES.
10. UNDERGROUND MAINS SHALL BE FLUSHED PRIOR TO CONNECTING TO THE ABOVEGROUND FIRE SPRINKLER PIPING NETWORK. THE FLUSHING RATE SHALL BE AS DICTATED BY NFPA 24, OR THE MAXIMUM SPRINKLER SYSTEM DEMAND FLOW, WHICHEVER IS GREATER. THE NFPA 24 FLUSHING RATES, BASED ON LINE SIZE, ARE:

    4" – 390 GPM  6" – 880 GPM  8" – 1560 GPM  10" – 2440 GPM

11. AFTER INSTALLATION OF THE UNDERGROUND FIRE MAIN(S) ALL RODS, NUTS, BOLTS, WASHERS, CLAMPS, AND OTHER RESTRAINING DEVICES SHALL BE CLEANED AND THOROUGHLY COATED WITH A BITUMINOUS COATING OR OTHER ACCEPTABLE CORROSION-RETARDING MATERIAL.

## PRIVATE FIRE WATER SERVICE MAIN SPECIFICATIONS AND GENERAL NOTES

1. THE CONTRACTOR SHALL NOTIFY SUNSHINE STATE ONE CALL (1-800-282-8881) PRIOR TO CONSTRUCTION OPERATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO PROTECT EXISTING UTILITIES FROM DAMAGE.
2. PRIOR TO THE START OF CONSTRUCTION ACTIVITIES, AREAS WITHIN AND ADJOINING THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED BY ERECTION OF TREE PROTECTION BARRICADES AND/OR SILT BARRIERS. SILT BARRIERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH LOCAL AND STATE REQUIREMENTS.
3. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE, AT ALL TIMES ONE COPY OF THE CONTRACT DOCUMENTS INCLUDING PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS, AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS.
4. CONTRACTOR IS RESPONSIBLE FOR CHECKING ACTUAL SITE CONDITIONS BEFORE STARTING CONSTRUCTION.
5. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE COMMENCING WORK.
6. CONTRACTOR SHALL OBTAIN ALL REQUIRED COUNTY AND STATE PERMITS BEFORE COMMENCING WORK.
7. THE CONTRACTOR SHALL CONTACT ALL CONCERNED UTILITIES A MINIMUM OF 72-HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS.
8. NO FIELD CHANGES OR DEVIATION FROM DESIGN TO BE MADE WITHOUT PRIOR WRITTEN APPROVAL BY THE ENGINEER.
9. ALL DISTURBED OR DAMAGED AREAS TO BE RESTORED TO THE SAME OR BETTER CONDITION THAN THAT PRIOR TO THE START OF CONSTRUCTION.
10. ALL PORTIONS OF TRENCH WITHIN 7.5' OF EXISTING EDGE OF PAVEMENT SHALL BE COMPACTED TO 98% T-180, 95% OTHERWISE.
11. ALL WORK TO BE COMPLETED WITHIN COUNTY RIGHT-OF-WAY SHALL REQUIRE RIGHT-OF-WAY PERMIT.
12. ALL VALVES SHALL BE INSTALLED OUTSIDE OF THE PAVEMENT.
13. CONTRACTOR SHALL REMOVE AND DISPOSE OF (OFFSITE) ALL ORGANIC AND INORGANIC MATERIAL LOCATED WITHIN THE LIMITS OF CLEARING.
14. LOCATIONS AND ALIGNMENT OF EXISTING UTILITIES AS SHOWN ON THE PLANS ARE INCLUDED FOR INFORMATION ONLY. CONTRACTOR SHALL FIELD VERIFY ACTUAL LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO EXCAVATION. THE CONTRACTOR SHALL MARK LOCATIONS OF UTILITIES BY PAINTING AND/OR FLAGGING THE UTILITY ALIGNMENT. INCIDENTAL. FITTINGS REQUIRED TO RESOLVE CONFLICTS BETWEEN EXISTING AND PROPOSED UTILITIES SHALL BE DETERMINED IN THE FIELD, UNLESS OTHERWISE SHOWN ON THE PLANS. ALL MATERIALS, EQUIPMENT, LABOR AND INCIDENTALS REQUIRED TO RESOLVE THE CONFLICTS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE OF THE PROPOSED UTILITY.
15. CONTRACTOR SHALL NOTIFY UTILITY USER 48 HOURS IN ADVANCE IF WATER, GAS, SEWER, TELEPHONE, ELECTRIC, ETC. IS TO BE TEMPORARILY INTERRUPTED IN ORDER TO CONSTRUCT IMPROVEMENTS.
16. ANY CONSTRUCTION WITHIN THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY, SHALL CONFORM TO FLORIDA DOT CONSTRUCTION STANDARDS.
17. WHEN LAYING PIPE, ALL LETTERING SHALL BE IN AN UPRIGHT VERTICAL POSITION SO IT CAN BE READ FROM THE TOP.
18. ALL SPIGOT ENDS OF PVC PIPE SHALL BE HOMED INTO BELL ENDS WITHIN 1/2" OF THE MANUFACTURER'S INSERTION MARK. IF PIPE IS CUT, THE INSERTION MARK WILL BE REPLACED FROM NEW END OF PIPE AS IT WAS ON THE ORIGINAL PIPE.
19. ALL STAINLESS STEEL WILL BE 316 AUSTENTITIC, NON-MAGNETIC UNLESS OTHERWISE NOTED.
20. DETECTIBLE (METALLIC) LOCATION TAPE WITH A MINIMUM WIDTH OF TWO AND ONE HALF (2 1/2) INCHES IS TO BE LAID DIRECTLY ABOVE THE PIPE AND EIGHTEEN (18) INCHES BELOW THE GROUND SURFACE. TAPE IS TO BE OF COLOR AND MARKING TO CORRESPOND TO THE PIPING LAID. TAPE ENDS ARE TO BE SPLICED TOGETHER SO AS TO PRODUCE A CONTINUOUS LENGTH OF LOCATION TAPE.

## FIRE WATER LINE EXCAVATION, BEDDING, AND BACKFILL

BACKFILL SHALL BE NATIVE SOILS FREE OF DEBRIS, TRASH, ROCKS OVER 2 INCHES IN DIAMETER AND OTHER OBJECTIONABLE MATERIAL.

BORROW MATERIAL: IF EXCAVATED MATERIALS OF A SUITABLE NATURE ARE NOT OF SUFFICIENT QUANTITY TO COMPLETE THE WORK, PROVIDE BORROW MATERIAL IN SUFFICIENT QUANTITY TO COMPLETE THE WORK.

EXCAVATION – FIRE WATER LINE TRENCHES:

1. FIRE WATER LINES MUST BE A MINIMUM OF THREE FEET IN DEPTH FROM THE TOP OF PROPOSED GRADE TO THE TOP OF PIPE, UNLESS OTHERWISE SHOWN ON THE PLANS.
2. TRENCH WIDTH FOR WATER LINES SHALL BE A MINIMUM OF THE OUTSIDE PIPE DIAMETER PLUS 18 INCHES.
3. TRENCHES SHALL BE EXCAVATED TO A DEPTH OF AT LEAST 6 INCHES BELOW THE BARREL OF PIPE, AND THEN THE PIPE BEDDING SHALL BE PLACED AS INDICATED IN THE PIPE BEDDING AND BACKFILL SECTION.

PIPE BEDDING AND BACKFILL – FIRE WATER LINE TRENCHES:

1. PIPE BEDDING SHALL CONSIST OF 6 INCHES OF CLEAN SAND PLACED BEFORE THE PIPE IS LAID.
2. AFTER LAYING PIPE AND INSURING THAT THE PIPE IS PROPERLY PLACED AND SUPPORTED BY THE SAND BEDDING, CLEAN SAND BACKFILL SHALL BE PLACED TO 6 INCHES ABOVE THE TOP OF PIPE. THE SAND BACKFILL SHALL BE THOROUGHLY RODDED AND TAMPED FOR COMPACTION.
3. FOR FIRE WATER LINES BENEATH PAVEMENT AND TO ONE FOOT HORIZONTALLY FROM THE OUTER EDGE OF PAVEMENT, THE REMAINDER OF THE TRENCH BACKFILL SHALL BE CLEAN SAND PLACED UP TO THE TOP OF SUBGRADE, THOROUGHLY RODDED AND TAMPED.
4. FOR FIRE WATER LINES NOT BENEATH PAVEMENT OR WITHIN ONE FOOT HORIZONTALLY FROM THE OUTER EDGE OF PAVEMENT, THE REMAINDER OF THE TRENCH BACKFILL SHALL BE EARTH FILL PACED IN UNIFORM LAYERS NOT TO EXCEED 8" LOOSE DEPTH, EACH LIFT TO BE COMPACTED TO A MINIMUM OF 95 PERCENT OF STANDARD DENSITY (ASTM D698) AT THE PROPER MOISTURE CONTENT. ALL EARTH BACKFILL TO BE PLACED THE NEXT DAY OR LATER AFTER THE PIPE IS LAID.


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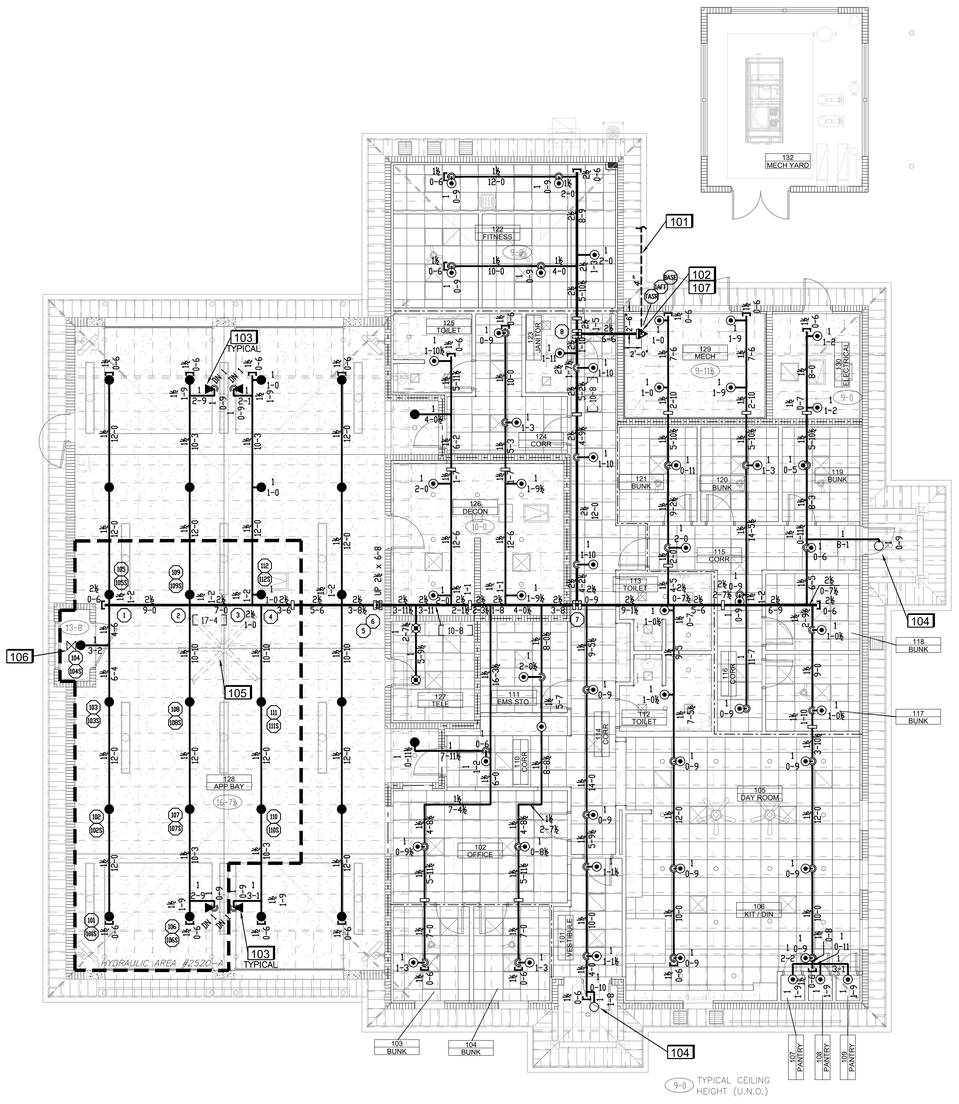
HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2116-05

| DISTRIBUTION | DATE |
|---|---|
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FIRE PROTECTION SITE PLAN

FP1.0




## FIRE SPRINKLER PLAN

SCALE: 1/8" = 1'-0"

SCALE: 1/8" = 1'-0"

--- KEY NOTE DENOTED BY THIS SYMBOL. SEE PLAN.

### KEY NOTE LEGEND (THIS SHEET):

101. 4" FIRE SPRINKLER UNDERGROUND LEAD-IN LOCATION. SEE THE FIRE PROTECTION SITE PLAN FOR UNDERGROUND CONFIGURATION.

102. PROPOSED 4" FIRE SPRINKLER RISER LOCATION.

103. INSTALL HORIZONTAL SIDEWALL SPRINKLER BELOW OVERHEAD DOOR. POSITION DEFLECTOR 6" – 12" BELOW DOOR.

104. PROVIDE SPRINKLER PROTECTION BELOW THE COMBUSTIBLE OVERHANG, PER NFPA 13.

105. HIGH VOLUME, LOW SPEED, FAN LOCATION (TYPICAL WHERE SHOWN). THE FIRE ALARM SYSTEM SHALL SHUT-DOWN THE HVLS FAN UPON FIRE SPRINKLER WATER FLOW ALARM. SEE THE FIRE ALARM PLAN FOR ADDITIONAL DETAILS.

106. PROVIDE AIR VENT AT HIGH POINT OF SYSTEM. PIPE DRAIN LINE TO EXTERIOR OF BUILDING.

107. PROPOSED 1" INSPECTOR'S TEST LOCATED AT RISER.

**THE STRUCTURAL FRAMING USED TO PREPARE THESE FIRE SPRINKLER DESIGN DOCUMENTS WAS PRELIMINARY AT THE TIME PROVIDED TO HATCHER ENGINEERING, INC. IT IS THE INSTALLING FIRE SPRINKLER CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE STRUCTURAL FRAMING SHOP DRAWINGS AND VERIFY THE PIPING SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS IS COORDINATED WITH THE STRUCTURAL FRAMING PLAN PRIOR TO FABRICATION OR INSTALLATION.**

### FIRE SPRINKLER DRAWING LEGEND

| SYMBOL | DESCRIPTION |
|---|---|
| 4" | PIPE SIZE |
| 10-0 | PIPE LENGTH IN FEET-INCHES |
| | INDICATES PITCHED PIPE (ARROW POINTS TOWARD LOWER ELEVATION) |
| (22) | HYDRAULIC REFERENCE POINT |
| [24 Bts] | ELEVATION BELOW TOP OF STEEL (INCHES) |
| [10-6] | ELEVATION ABOVE FINISHED FLOOR (FEET-INCHES) |
| (10-0) | CEILING HEIGHT (FEET-INCHES) |
| | HANGER LOCATION |
| | TRAPEZE HANGER LOCATION |
| | DENOTES PIPE RISE UP OR DOWN |
| | STANDARD GROOVED COUPLING |
| | "FIRELOCK" GROOVED COUPLING |
| | PIPING CAP |
| | PIPING PLUG |
| | FIRE SPRINKLER RISER LOCATION |
| # L01 | LINE TAG (ONLY IF STOCKLISTED) |
| A5 | MAIN TAG (ONLY IF STOCKLISTED) |

**PIPE DIMENSIONS SHOWN ON THIS PLAN ARE CENTER-TO-CENTER, AS DESCRIBED BELOW:**

1). WHEN GROOVED ELLS AND TEES ARE SHOWN CUT-IN ON THE MAINS AND/OR BRANCH LINES, THE GROOVED FITTING TAKE-OUT HAS BEEN REMOVED FROM THE ADJACENT PIPING DIMENSION TAG.

2). ALL ELEVATION CHANGES INDICATED BY A RISER NIPPLE, OR RISE UP/DN, ARE CENTER-TO-CENTER DIMENSIONS UNLESS CUT-LENGTH DIMENSIONS ARE SPECIFICALLY SHOWN. IN OTHER WORDS, NO TAKE-OUTS HAVE BEEN REMOVED FROM THE RISER NIPPLES OR RISERS (UP OR DOWN). THIS INCLUDES BOTH THREADED AND GROOVED PIPING ELEVATION CHANGES.

3). ALL THREADED PIPING DIMENSIONS ARE CENTER-TO-CENTER.

4). IF HANGER LENGTHS ARE SHOWN, THEY ARE CENTER-TO-CENTER.


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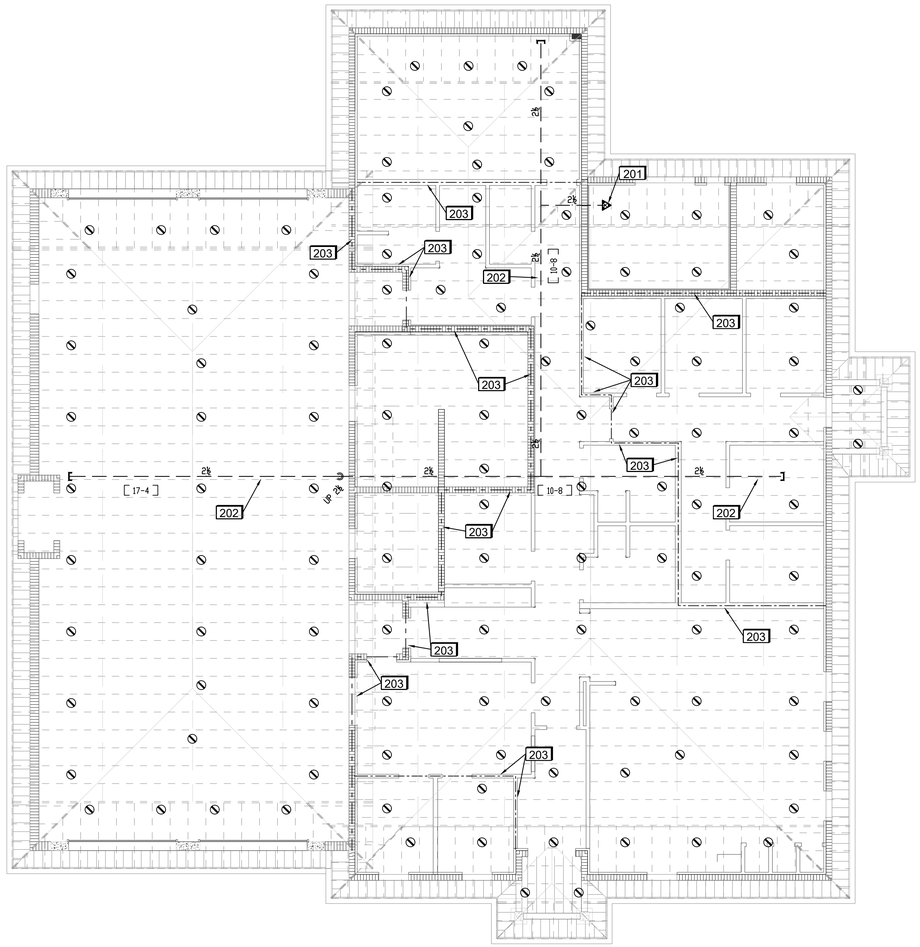
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FIRE SPRINKLER PLAN

FP1.1




FIRE SPRINKLER PLAN – ATTIC

SCALE: 1/8" = 1'–0"

SCALE: 1/8" = 1'–0"

--- KEY NOTE DENOTED BY THIS SYMBOL. SEE PLAN.

## KEY NOTE LEGEND (THIS SHEET):

201. PROPOSED 4" FIRE SPRINKLER RISER LOCATION.

202. CROSSMAIN SHOWN ON ATTIC PLAN FOR CLARITY. SEE FIRE SPRINKLER PLAN ON SHEET FP1.1 FOR PIPE LENGTHS AND BRANCHLINE LOCATIONS. ELEVATIONS SHOWN ARE FROM ABOVE GROUND LEVEL FINISHED FLOOR.

203. WALL EXTENDS TO ROOF DECK.

**THE STRUCTURAL FRAMING USED TO PREPARE THESE FIRE SPRINKLER DESIGN DOCUMENTS WAS PRELIMINARY AT THE TIME PROVIDED TO HATCHER ENGINEERING, INC. IT IS THE INSTALLING FIRE SPRINKLER CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE STRUCTURAL FRAMING SHOP DRAWINGS AND VERIFY THE PIPING SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS IS COORDINATED WITH THE STRUCTURAL FRAMING PLAN PRIOR TO FABRICATION OR INSTALLATION.**

## FIRE SPRINKLER DRAWING LEGEND

| SYMBOL | DESCRIPTION |
|---|---|
| 4" | PIPE SIZE |
| 10-0 | PIPE LENGTH IN FEET–INCHES |
| | INDICATES PITCHED PIPE (ARROW POINTS TOWARD LOWER ELEVATION) |
| (22) | HYDRAULIC REFERENCE POINT |
| [24 Bfs] | ELEVATION BELOW TOP OF STEEL (INCHES) |
| [10-6] | ELEVATION ABOVE FINISHED FLOOR (FEET–INCHES) |
| 10-0 | CEILING HEIGHT (FEET–INCHES) |
| | HANGER LOCATION |
| | TRAPEZE HANGER LOCATION |
| | DENOTES PIPE RISE UP OR DOWN |
| | STANDARD GROOVED COUPLING |
| | 'FIRELOCK' GROOVED COUPLING |
| | PIPING CAP |
| | PIPING PLUG |
| | FIRE SPRINKLER RISER LOCATION |
| # L01 | LINE TAG (ONLY IF STOCKLISTED) |
| A5 | MAIN TAG (ONLY IF STOCKLISTED) |

**PROVIDE FIRE SPRINKLER PROTECTION IN COMBUSTIBLE CONCEALED ATTIC SPACES IN ACCORDANCE WITH NFPA 13.**


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HILLSBOROUGH COUNTY
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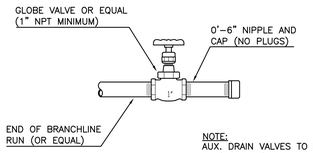
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FIRE SPRINKLER
PLAN - ATTIC

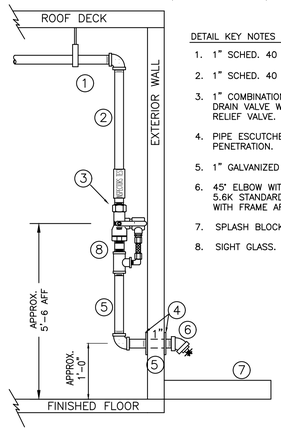
FP1.2

## AUXILIARY DRAIN VALVE
(NOT TO SCALE)




NOTE:
AUX. DRAIN VALVES TO BE PROVIDED ON 'TRAPPED' PIPING SECTIONS CONTAINING MORE THAN 5 GALLONS OF WATER. (PER NFPA 13)

## INSPECTOR'S TEST
## WET SYSTEM ASSEMBLY
(NOT TO SCALE)



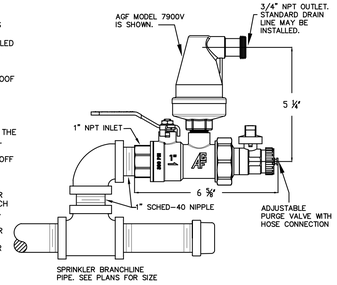

DETAIL KEY NOTES

1. 1" SCHED. 40 FROM SYSTEM.
2. 1" SCHED. 40 PIPE NIPPLE.
3. 1" COMBINATION INSPECTOR'S TEST AND DRAIN VALVE WITH INTEGRAL PRESSURE RELIEF VALVE.
4. PIPE ESCUTCHEONS AND WATERPROOF PENETRATION.
5. 1" GALVANIZED SCHED. 40 PIPE NIPPLE.
6. 45° ELBOW WITH REDUCING BUSHING AND 5.6K STANDARD COVERAGE SPRINKLER HEAD WITH FRAME ARMS BROKEN OFF.
7. SPLASH BLOCK.
8. SIGHT GLASS.

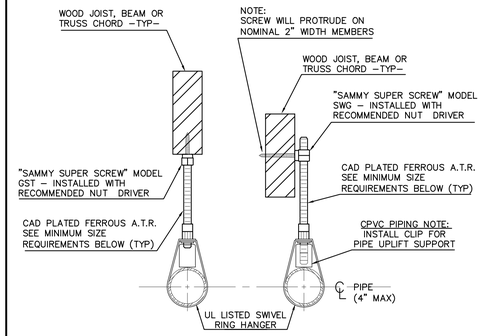
## AUTOMATIC AIR VENT
(NOT TO SCALE)

AUTOMATIC AIR VENTING NOTES
1). ONLY A SINGLE AIR VENT IS REQUIRED PER NFPA 13.
2). THE VENT SHALL BE INSTALLED NEAR A HIGH POINT IN THE SYSTEM. (EX. TOP OF A VERTICAL RISER, ELEVATED BRANCHLINE, AND UNDER ROOF PEAKS.)

RECOMMENDED INSTALLATION:
1). SHOULD BE INSTALLED OFF THE TOP OF HORIZONTAL PIPING.
2). DO NOT INSTALL AIR VENT OFF THE BOTTOM OR SIDE OF HORIZONTAL PIPING.
3). SHOULD BE INSTALLED NEAR THE END OF SYSTEM BRANCH LINES, WHENEVER POSSIBLE.
4). SHOULD BE INSTALLED OVER AREAS WITHOUT CEILINGS, ABOVE LAY-IN CEILINGS, OR ABOVE AN ACCESS PANEL.



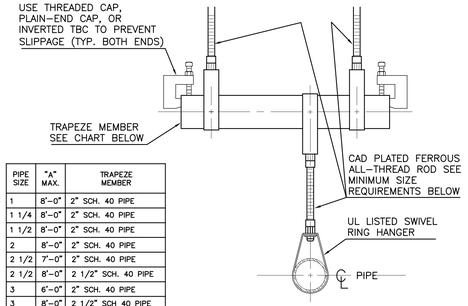

## PIPE SUPPORT - WOOD JOIST
## 'SAMMY SUPER SCREW' W/ RING HANGER
(NOT TO SCALE)




APPROVED PART #'S

| PART # | ROD SIZE | MAX. PIPE SIZE |
|---|---|---|
| SWG 20 | 3/8" ROD | 3" PIPE |
| SWG 25-380 | 3/8" ROD | 4" PIPE |
| | | |
| GST 20 | 3/8" ROD | 2½" PIPE |
| GST 25-380 | 3/8" ROD | 4" PIPE |
| GST 30 | 3/8" ROD | 4" PIPE |

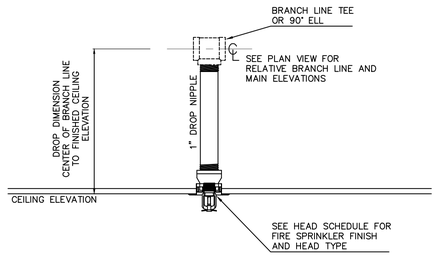
## PIPE SUPPORT - TYPE T01
## PIPE TRAPEZE HANGER
(NOT TO SCALE)



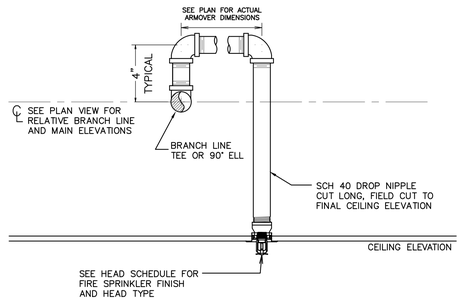

| PIPE SIZE | "A" MAX. | TRAPEZE MEMBER |
|---|---|---|
| 1 | 8'-0" | 2" SCH. 40 PIPE |
| 1 1/4 | 8'-0" | 2" SCH. 40 PIPE |
| 1 1/2 | 8'-0" | 2" SCH. 40 PIPE |
| 2 | 8'-0" | 2" SCH. 40 PIPE |
| 2 1/2 | 7'-0" | 2" SCH. 40 PIPE |
| 2 1/2 | 8'-0" | 2 1/2" SCH. 40 PIPE |
| 3 | 6'-0" | 2" SCH. 40 PIPE |
| 3 | 8'-0" | 2 1/2" SCH 40 PIPE |
| 4 | 5'-0" | 2" SCH. 40 PIPE |
| 4 | 8'-0" | 2 1/2" SCH 40 PIPE |
| 6 | 3'-0" | 2" SCH. 40 PIPE |
| 6 | 5'-0" | 2 1/2" SCH. 40 PIPE |
| 6 | 7'-0" | 2 1/2" SCH. 40 PIPE |
| 6 | 10'-0" | 3" SCH. 40 PIPE |

ALL THREAD ROD SIZES
PIPE SIZES 1" - 4" -- ROD SIZE = 3/8"
PIPE SIZES 5" - 8" -- ROD SIZE = 1/2"

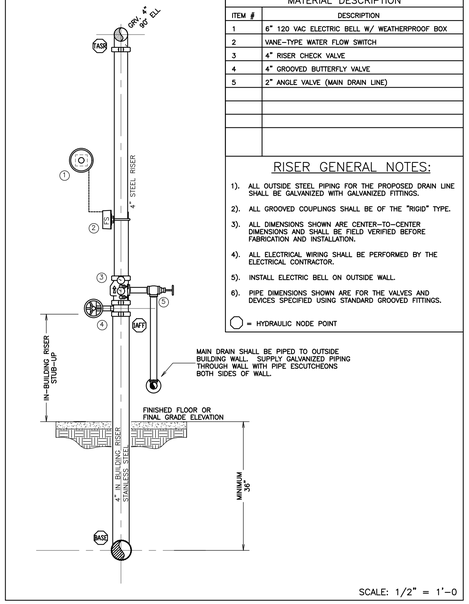
## TYPICAL RECESSED PENDENT
(NOT TO SCALE)




## TYPICAL GOOSENECK ARMOVER
(NOT TO SCALE)




## FIRE SPRINKLER RISER DETAIL




| MATERIAL DESCRIPTION | |
|---|---|
| ITEM # | DESCRIPTION |
| 1 | 6" 120 VAC ELECTRIC BELL W/ WEATHERPROOF BOX |
| 2 | VANE-TYPE WATER FLOW SWITCH |
| 3 | 4" RISER CHECK VALVE |
| 4 | 4" GROOVED BUTTERFLY VALVE |
| 5 | 2" ANGLE VALVE (MAIN DRAIN LINE) |
| | |
| | |
| | |
| | |

### RISER GENERAL NOTES:

1). ALL OUTSIDE STEEL PIPING FOR THE PROPOSED DRAIN LINE SHALL BE GALVANIZED WITH GALVANIZED FITTINGS.
2). ALL GROOVED COUPLINGS SHALL BE OF THE "RIGID" TYPE.
3). ALL DIMENSIONS SHOWN ARE CENTER-TO-CENTER DIMENSIONS AND SHALL BE FIELD VERIFIED BEFORE FABRICATION AND INSTALLATION.
4). ALL ELECTRICAL WIRING SHALL BE PERFORMED BY THE ELECTRICAL CONTRACTOR.
5). INSTALL ELECTRIC BELL ON OUTSIDE WALL.
6). PIPE DIMENSIONS SHOWN ARE FOR THE VALVES AND DEVICES SPECIFIED USING STANDARD GROOVED FITTINGS.

◯ = HYDRAULIC NODE POINT

SCALE: 1/2" = 1'-0


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HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2116-05

| DISTRIBUTION | DATE |
|---|---|
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

FIRE SPRINKLER
DETAILS

FP5.1

| NO. | KEY NOTE DESCRIPTION |
|---|---|
| 1 | 6" SUCTION NOZZLE WITH ANTI-VORTEX PLATE |
| 2 | 2" FILL NOZZLE. 2" FLANGE, 125# |
| 3 | OVERFLOW (ABOVE) AND 4" DRAIN NOZZLE (WITH VALVE) BELOW |
| 4 | TANK VENT |
| 5 | INSPECTION HATCH (POSITIONED PER TANK SUPPLIER) |
| 6 | ROOF HATCH (ACCESS TO FLOAT CONTROL VALVE IN TANK) |
| 7 | 1" NOZZLE (APPROXIMATELY 6" FROM TOP OF TANK), FEMALE NPT |
| 8 | 6" OS&Y VALVE W/ TAMPER SWITCH |
| 9 | EXTERIOR LADDER |
| 10 | EXTERIOR WATER LEVEL GAUGE W/ TWO 3/4" OUTLETS |
| 11 | 6" SWING CHECK VALVE |
| 12 | 1 1/4" SUCTION FOR JOCKEY PUMP |
| 13 | 6"x5" FLANGED ECCENTRIC REDUCER |
| 14 | ELECTRIC FIRE PUMP: 500 GPM @ 80 PSI |
| 15 | 6"x4" FLANGED CONCENTRIC REDUCER |
| 16 | AUTOMATIC AIR RELEASE |
| 17 | 4" G.O.L. TO FEED TEST HEADER |
| 18 | 1/2" P.O.L. FOR FIRE PUMP SENSING LINE |
| 19 | 4" GROOVED BUTTERFLY VALVE W/ TAMPER SWITCH (NORMALLY CLOSED) |
| 20 | 1 1/4" DISCHARGE FOR JOCKEY PUMP |
| 21 | FIRE PUMP CONTROLLER |
| 22 | JOCKEY PUMP CONTROLLER |
| 23 | 6" GROOVED BUTTERFLY VALVE W/ TAMPER SWITCH |
| 24 | FIRE PUMP TEST HEADER W/ TWO 2 1/2" HOSE VALVES |
| 25 | JOCKEY PUMP |
| 26 | 1 1/2" NOZZLE FOR TANK LOW WATER LEVEL SWITCH, FEMALE NPT |
| 27 | SUCTION ELL WITH ANTI-VORTEX PLATE 6" ABOVE BOTTOM OF TANK |
| 28 | PRE-MANUFACTURED FIRE PUMP HOUSE. PROVIDE 1-HOUR RATED ENCLOSURE FOR THE NEW FIRE PUMP HOUSE. PUMP HOUSE DESIGNED AND CONSTRUCTED (BY MANUFACTURER) AS FOLLOWS:<br>– ULTIMATE BASIC WIND SPEED: $V_{ULT}$ = 152-MPH (3 SECOND GUST)<br>– EQUIVALENT NOMINAL BASIC WIND SPEED: $V_{ASD}$ = 118-MPH (3 SECOND GUST)<br>– RISK CATEGORY = IV<br>– EXPOSURE CATEGORY = C |
| 29 | AIR LOUVER (SIZED BY MANUFACTURER). |
| 30 | PUMP ROOM LIGHTING PROVIDED BY MANUFACTURER. |
| 31 | PUMP ROOM EXTERIOR AND EMERGENCY LIGHTING PROVIDED BY BUILDING MANUFACTURER. |
| 32 | SEAL WALL PENETRATION (WEATHERPROOF AND FIRE STOPPED). TYPICAL FOR ALL WALL PENETRATIONS. |
| 33 | FIRE ALARM CIRCUIT 1" UNDERGROUND CONDUIT FROM FIRE ALARM PANEL IN FIRE STATION. |
| 34 | FIRE ALARM CIRCUIT 1" CONDUIT TO DEVICES IN PUMP ROOM AND WATER TANK. |
| 35 | FIRE ALARM CIRCUIT 1" CONDUIT OUT TO DEVICES ASSOCIATED WITH WATER TANK. |
| 36 | ELECTRICAL LOAD CENTER/PANEL. LOCATION TO BE DETERMINED BY PUMP HOUSE SUPPLIER. |
| 37 | PUMP ROOM HEATER (SIZED BY MANUFACTURER). SET HEATER FOR MINIMUM ROOM TEMPERATURE OF 50°F. |
| 38 | PROVIDE FIRE SPRINKLER PROTECTION FOR THE NEW PUMP HOUSE. 286°F, STANDARD SPRAY, K-5.6 SPRINKLER HEAD. PROVIDE A CONTROL VALVE WITH TAMPER SWITCH, PRESSURE GAUGES, CHECK VALVE, FLOW SWITCH, AND INSPECTOR'S TEST & DRAIN (FOR TESTING THE FLOW SWITCH). |
| 39 | 4" FLOOR DRAIN DISCHARGED TO EXTERIOR GRADE (FLOOR DRAIN PROVIDED FOR EQUIPMENT PROTECTION, PER NFPA 20). PROVIDE BIRD SCREEN ON DRAIN DISCHARGE. |
| 40 | 4" OS&Y VALVE W/ TAMPER SWITCH (NORMALLY CLOSED) |
| 41 | 6"x4" GRV. REDUCING COUPLING |
| 42 | 4" SWING CHECK VALVE |
| 43 | 4"x5" STORZ FDC WITH 30° DOWNTURN |
| -·-·-·- | DASHED LINE REPRESENTS 1-HOUR RATED PUMP ROOM/HOUSE ENCLOSURE (PER NFPA 20 REQUIREMENTS FOR BUILDING & PUMP ROOM SEPARATION. |

## FIRE PUMP SYSTEM NOTES & REQUIREMENTS

1). FIRE PUMP SCOPE OF WORK:

THIS PROJECT REQUIRES THE INSTALLATION OF A NEW 500 GPM VERTICAL IN-LINE ELECTRIC FIRE PUMP RATED FOR 80 PSI @ 500 GPM, CLOCKWISE ROTATION. THE FIRE PUMP SYSTEM INSTALLATION SHALL COMPLY WITH NFPA 20 (2019 EDITION).

2). MATERIALS: ALL MATERIAL SHALL BE UL LISTED.

A). ALL FIRE PUMP ROOM MAIN PIPING, 2½" AND LARGER IN SIZE SHALL BE SCH. 10 BLACK STEEL WITH THE END PREPARATIONS INDICATED ON THIS PLAN. FITTINGS SHALL BE GROOVED OR 125# FLANGED.

B). ALL PIPING 2" AND UNDER IN SIZE SHALL BE SCHEDULE 40 BLACK STEEL.

C). SENSING LINES SHALL BE PIPED WITH 1/2" "RIGID" COPPER TUBING (TYPE L, K, OR M) WITH COPPER FITTINGS WHERE NECESSARY. ANY REQUIRED THREADED FITTINGS IN THE SENSING LINES SHALL BE BRASS.

D). ALL TAKE-OUTS ARE FOR STANDARD GROOVED FITTINGS AND THE SPECIFIC DEVICES SHOWN.

3). FIRE PUMP TESTING:

A). ALL PUMP STARTING AND TESTING PROCEDURES SHALL COMPLY WITH NFPA 20.

B). ALL PUMP ROOM PIPING SHALL BE HYDROSTATICALLY TESTED AT NOT LESS THAN 225 PSI. PIPING TEST PRESSURE SHALL BE MAINTAINED FOR A MINIMUM OF 2 HOURS.

C). THE FIRE PUMP SHALL BE FIELD TESTED BY THE FACTORY REPRESENTATIVE. THE FIRE PUMP FIELD ACCEPTANCE TEST SHALL BE INCLUDED IN THE FIRE SPRINKLER CLOSE-OUT DOCUMENTS.

4). GENERAL:

A). ALL PIPING SHALL BE ADEQUATELY SUPPORTED FROM EITHER THE FLOOR OR ROOF STRUCTURE. HANGERS SHALL COMPLY WITH NFPA 13.

B). ALL FIELD WIRING SHALL BE DONE BY THE ELECTRICAL CONTRACTOR. THE FIRE PROTECTION CONTRACTOR SHALL SUPPLY THE GENERAL CONTRACTOR WITH ALL THE MANUFACTURERS SPECIFICATION NECESSARY TO ENSURE THE PROPER WIRING OF THE FIRE PUMP AND JOCKEY PUMP CONTROLLER.

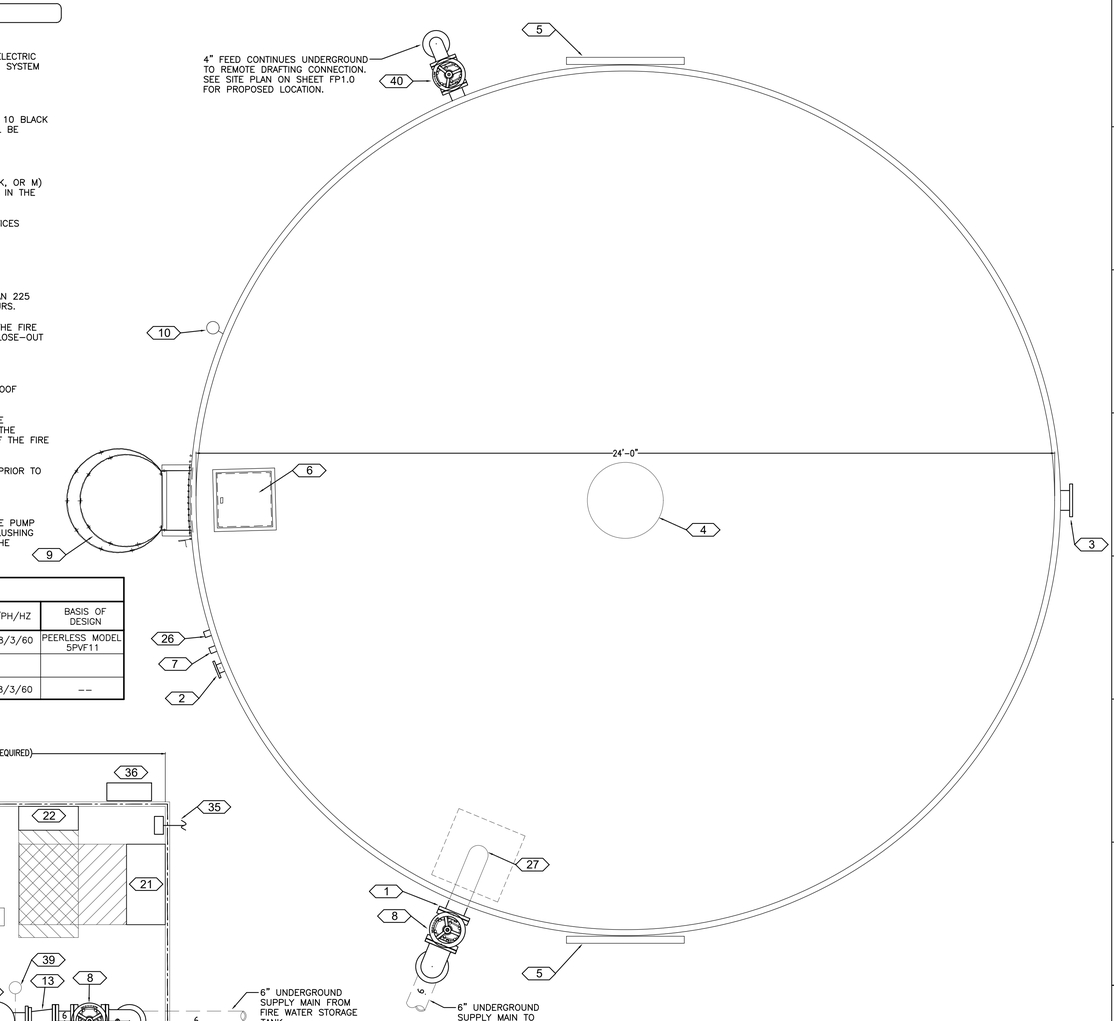
C). DIMENSIONS BASED ON ANY STRUCTURAL ELEMENTS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION.

D). ALL PENETRATIONS THROUGH THE WALLS SHALL BE SEALED & CAULKED.

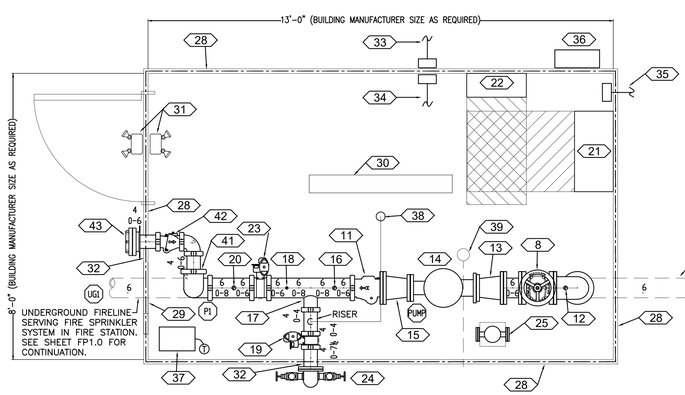
E). ALL UNDERGROUND PIPING SHALL BE FLUSHED PRIOR TO CONNECTING THE FIRE PUMP SUCTION AND DISCHARGE PIPING. DAMAGE TO THE FIRE PUMP DUE TO NOT FLUSHING THE UNDERGROUND FIRE MAINS PRIOR TO CONNECTING THE PUMP SHALL BE THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR.

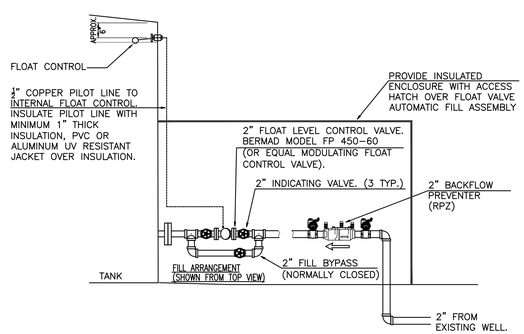
## FIRE PUMP & JOCKEY PUMP SCHEDULE

| DESCRIPTION | PUMP TYPE | CONFIGURATION | RATED FLOW GPM | RATED PRESSURE PSI | HP | V/PH/HZ | BASIS OF DESIGN |
|---|---|---|---|---|---|---|---|
| FIRE PUMP #1 | ELECTRIC | VERTICAL IN-LINE | 500 | 80 | 40 | 208/3/60 | PEERLESS MODEL 5PVF11 |
| | | | | | | | |
| JOCKEY PUMP | ELECTRIC | VERTICAL IN-LINE | 15 | 90 | 3/4 | 208/3/60 | -- |

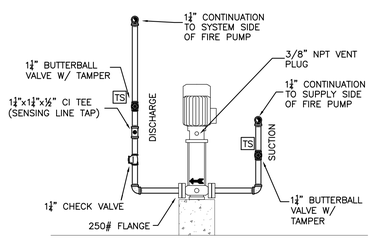



A FP6.1 FIRE PUMP HOUSE AND WATER TANK
SCALE: 1/2" = 1'-0"

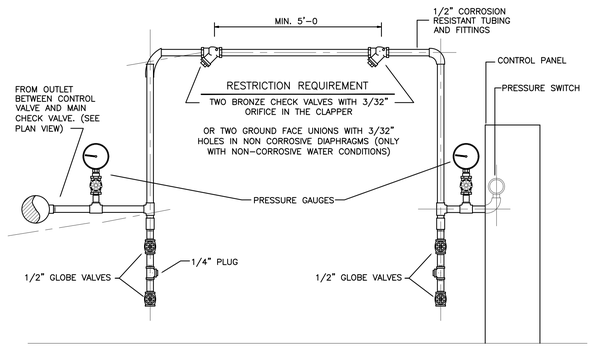



B FP6.1 FILL ARRANGEMENT (TANK)
NOT TO SCALE




C FP6.1 JOCKEY PUMP DETAIL
NOT TO SCALE




D FP6.1 FIRE PUMP SENSING LINE DETAIL
NOT TO SCALE


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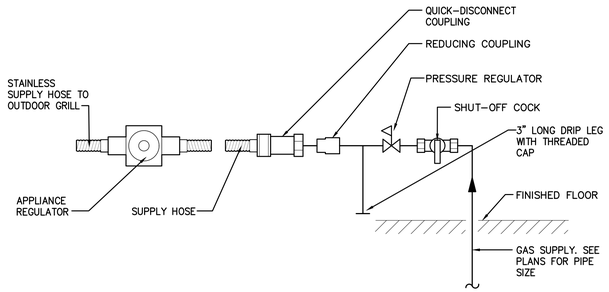
HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
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PROJECT #: 2116-05

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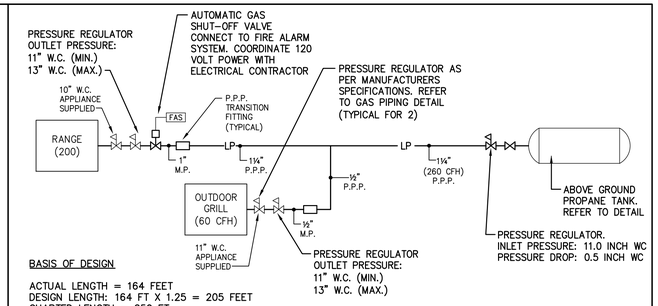
FIRE PUMP & FIRE WATER STORAGE TANK PLAN

FP6.1




## OUTDOOR GRILL GAS PIPING DETAIL

SCALE: NONE




BASIS OF DESIGN

ACTUAL LENGTH = 164 FEET
DESIGN LENGTH: 164 FT X 1.25 = 205 FEET
CHARTED LENGTH = 250 FT.
TOTAL DEMAND = 260 CFH

ABOVE GROUND PIPING: NOTED ON RISER AS "M.P."
SCHEDULE 40 BLACK STEEL PIPE.

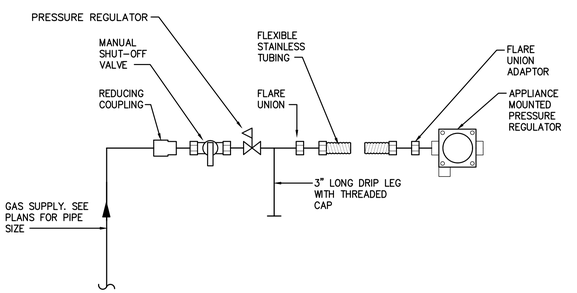
THE ABOVE INFORMATION IS BASED ON THE FLORIDA BLDG. CODE "FUEL GAS 8TH EDITION 2023 TABLE 402.4(28)
SCHEDULE 40 METALLIC PIPE
GAS: UNDILUTED PROPANE
INLET PRESSURE: 11.0 INCH W.C.
PRESSURE DROP: 0.5 INCH W.C.
SPECIFIC GRAVITY: 1.50

UNDER GROUND PIPING: NOTED ON RISER AS "P.P.P."

THE ABOVE INFORMATION IS BASED ON THE FLORIDA BLDG. CODE "FUEL GAS 8TH EDITION 2023 TABLE 402.4(35)
POLYETHYLENE PLASTIC PIPE
GAS: UNDILUTED PROPANE
INLET PRESSURE: 11.0 INCH W.C.
PRESSURE DROP: 0.5 INCH W.C.
SPECIFIC GRAVITY: 1.50

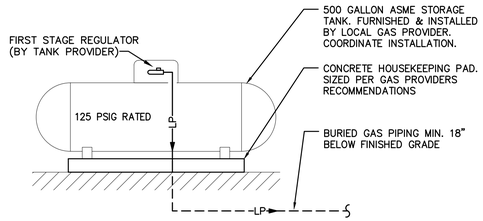
## GAS RISER DIAGRAM

SCALE: NONE




## GAS RANGE PIPING DETAIL

SCALE: NONE

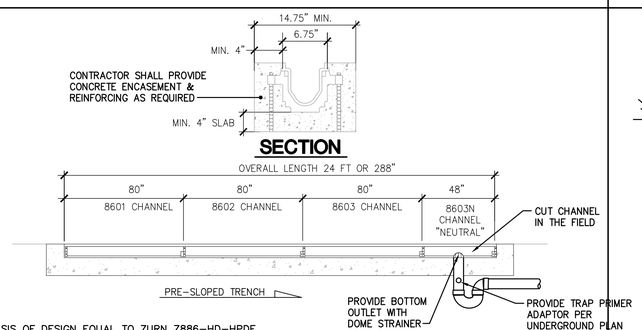



NOTES:

1. INSTALL IN ACCORDANCE WITH NFPA 58.
2. MINIMUM DISTANCE FROM TANK TO BUILDING: 125-500 GALLON CAPACITY REQUIRES 10 FEET & 501-2000 GALLON CAPACITY REQUIRES 25 FEET. MAINTAIN 10 FEET CLEARANCE FROM ANY SOURCE OF IGNITION, I.E. CENTRAL AIR CONDITIONER, COMPRESSOR, GENERATOR, ETC.
3. TANK MUST BE API/ASME CERTIFIED CONSTRUCTION AND BE PROVIDED WITH PROPER MARKING, VALVES, REGULATOR, PRESSURE RELIEF VENT, MAX LIQUID LEVEL GAUGE.
4. TANK MUST BE SELF SUPPORTING WITH LIFTING LUGS. SUPPORTS MUST BE 2 HOUR MIN. FIRE RESISTANCE RATING. PROVIDE WITH TIE DOWN ANCHORS.
5. PROVIDE BOLLARDS ADJACENT TO HOUSEKEEPING PAD & STORAGE TANK FOR PROTECTION AGAINST PHYSICAL DAMAGE DUE TO VEHICULAR TRAFFIC.

## ABOVE GROUND LP GAS TANK DETAIL

SCALE: NONE



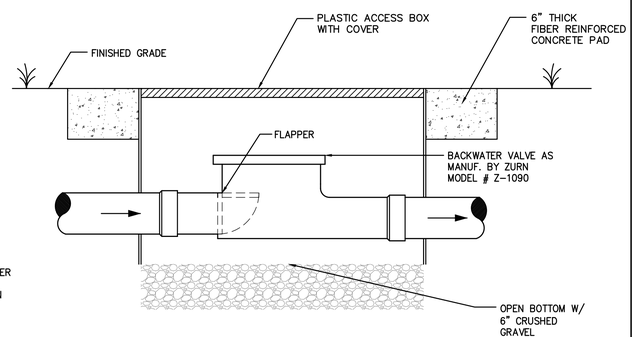

BASIS OF DESIGN EQUAL TO ZURN Z886-HD-HPDE
6" WIDE, HEAVY DUTY, PRE-SLOPED TRENCH DRAINAGE SYSTEM, HIGH DENSITY POLYETHYLENE STRUCTURAL COMPOSITE DRAIN CHANNEL WITH 75% BOTTOM SLOPE. 80 INCH CHANNEL LENGTH, INTEGRAL TOP FRAME, INTERLOCKING ENDS & RADIUSED BOTTOM. COMBINATION TIE-DOWN/LEVEL DEVICES AT 20 INCH INTERVALS. VERIFY OVERALL LENGTH DIMENSIONS WITH ARCHITECTURAL PLANS & FLOORING REQUIREMENTS.

OPTIONS TO INCLUDED:
E1: CLOSED END CAP (2)
HPDE: HEEL-PROOF DUCTILE GRATE (DIN EN1433 CLASS E).
DB: BOTTOM DOME STRAINER.

PROVIDE & INSTALL CONCRETE ENCASEMENT & REINFORCING FOR COMPLETE TRENCH SYSTEM.

## TRENCH DRAIN SYSTEM

SCALE: NONE




## BACKWATER VALVE DETAIL

SCALE: NONE

## PLUMBING SYMBOL LEGEND

| SYMBOL | DESCRIPTION | ABBREV. |
|---|---|---|
| CD | CONDENSATE DRAIN | CD |
| ST | STORM DRAINAGE | ST |
| SD | SECONDARY EMERGENCY ROOF DRAINAGE | SD |
| S | SANITARY DRAINAGE | S |
| AW | ACID WASTE | AW |
| GW | GREASE WASTE | GW |
| V | VENT PIPING | V |
| | COLD WATER PIPING | C.W. |
| | HOT WATER PIPING | H.W. |
| | HOT WATER RETURN | H.W.R. |
| G | GAS PIPING | G |
| A | COMPRESSED AIR PIPING | |
| | DIRECTION OF FLOW | |
| | SWING CHECK VALVE | |
| | SHUTOFF VALVE | |
| | SHUT-OFF VALVE IN RISE | |
| | SOLENOID VALVE | |
| | BALANCING VALVE | |
| | PRESSURE REGULATING VALVE | |
| | ELBOW TURNED DOWN | |
| | ELBOW TURNED UP | |
| | TEE TURNED UP | |
| | TEE TURNED DOWN | |
| | P-TRAP | F.D. |
| | FLOOR DRAIN | F.D. |
| | HUB DRAIN | H.D. |
| | HOSE BIB | H.B. |
| | WALL HYDRANT | H |
| | FLOOR SINK | F.S. |
| | ROOF DRAIN ABOVE | R.D. |
| WCO | WALL CLEANOUT | |
| FCO | FLOOR CLEANOUT | |
| CO | EXTERIOR CLEANOUT | |
| | T&P RELIEF VALVE (AGA RATED) | |
| | CONNECT TO EXISTING UTILITIES | |
| | WATER HAMMER ARRESTOR | |
| | KEYED NOTE | |
| | INSERT INDICATES DETAIL NUMBER<br>INSERT INDICATES SHEET NUMBER | |
| | INSERT INDICATES ENLARGED PLAN NUMBER<br>INSERT INDICATES SHEET NUMBER | |
| XX<br>XXX | INSERT INDICATES RISER DIAGRAM NUMBER<br>INSERT INDICATES SHEET NUMBER | |
| | BY PLUMBING CONTRACTOR<br>REFER TO CIVIL PLANS FOR CONTINUATION | |
| | SHUT-OFF VALVE IN VALVE BOX | |
| | INSERT INDICATES INVERT ELEVATION | I.E. |
| | TRAP PRIMER | TP |
| | ABOVE FINISHED FLOOR | AFF |
| | CONTINUATION | CONT. |
| | DISHWASHER | DW |
| | WASHER | W |
| | FROM BELOW | FB |
| | FROM ABOVE | FA |
| | BELOW FLOOR | BF |
| | BELOW GRADE | BG |
| | WATER FIXTURE UNIT | WFU |
| | DRAINAGE FIXTURE UNIT | DFU |
| | EXISTING CONDITION | (E) |
| | WALL CLEANOUT | WCO |
| | FLOOR CLEANOUT | FCO |
| | EXTERIOR CLEANOUT | CO |
| | VENT THROUGH ROOF | VTR |

## PLUMBING GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY FITTINGS AS REQUIRED BY ALL APPLICABLE CODES AND GOVERNING AUTHORITIES.
2. CONTRACTOR SHALL VERIFY AND CORRECT AS REQUIRED TO MEET ALL CODES AND REGULATIONS ANY POSSIBLE DISCREPANCIES BETWEEN TYPE AND SIZE OF CONNECTION SPECIFIED IN PLUMBING FIXTURE SCHEDULE AND FIXTURES ACTUALLY INSTALLED ON THE SITE.
3. SANITARY PIPING 2" SHALL HAVE A 1/4" PER FT. SLOPE. PIPING 3" & LARGER SHALL HAVE A 1/8" PER FT. SLOPE MINIMUM.
4. COORDINATE SANITARY VENTS WITH HVAC O.A. INTAKES. PROVIDE AT LEAST 10'-0" DISTANCE FROM VENT STACKS AND INTAKE VENTS.
5. VALVES AND FITTINGS SHALL BE OF SAME SIZE OF LINE ON WHICH THEY ARE LOCATED, UNLESS OTHERWISE INDICATED ON DRAWINGS.
6. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES.
7. CONTRACTOR SHALL FIELD VERIFY ALL GIVEN MEASUREMENTS PRIOR TO LAYING AND CONNECTING ALL SANITARY AND WASTE PIPING AND NOTIFY ARCHITECT OF ANY DISCREPANCIES.
8. AIR CHAMBERS SHALL NOT BE CONSIDERED AN EQUAL TO WATER HAMMER ARRESTORS. WATER HAMMER ARRESTORS (WHA) SHALL BE INSTALLED ON ALL GROUP TOILETS AND ON THE BRANCH LINES TO INDIVIDUAL FIXTURES. ALL APPLICATIONS SHALL BE INSTALLED AS PER STANDARD PDI-WH201. REFER TO PLUMBING FIXTURES SCHEDULE FOR SPECIFICATIONS. PROVIDE ACCESS PANELS IN THE CEILING AS REQUIRED FOR ACCESSIBILITY AND MAINTENANCE. PROVIDE & INSTALL TYPE "A" ON ALL INDIVIDUAL FIXTURES THAT ARE NOT LOCATED IN GROUP TOILETS OR NOT NOTED ON RISER DIAGRAMS.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FIRE RATING AND WEATHERPROOFING INTEGRITY OF ALL PIPING AND PENETRATIONS. REFER TO DETAILS.
10. ALL WATER SUPPLY AND SANITARY LINES SHALL BE RUN AS CLOSE TO PLANS AS POSSIBLE WITH NO CHANGES IN SIZING.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY SUPPORTING DEVICES FOR ALL FIXTURES INCLUDED IN CONTRACT OR HEREIN SPECIFIED OR OTHERWISE.
12. ALL DRAINAGE PIPING SHALL BE MARKED WITH THE SEAL OF APPROVAL OF THE NATIONAL SANITATION FOUNDATION.
13. ROUTE ALL PIPING CONCEALED ABOVE CEILINGS, WITHIN WALLS, OR IN CHASES EXCEPT AS SPECIFICALLY NOTED, OR IN MECHANICAL ROOMS.
14. PROVIDE ACCESS PANELS TO ALL VALVES WITHIN CHASES OR ABOVE NON-ACCESSIBLE CEILINGS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
15. SEE ARCHITECTURAL DRAWINGS FOR EXACT ROUGH-IN LOCATION OF PLUMBING FIXTURES.
16. PROVIDE A PRE MANUFACTURED DRAIN INSULATING COVER ON ALL SINKS AND LAVATORIES DESIGNATED AS A HANDICAP FIXTURE. REFER TO PLUMBING DRAWINGS AND THE ARCHITECTS DRAWINGS FOR DESIGNATIONS.
17. CONTRACTOR SHALL VERIFY INVERT ELEVATIONS OF SEWERS TO WHICH NEW SEWER LINES ARE TO BE CONNECTED BEFORE INSTALLATION OF NEW SEWER LINE.
18. CONTRACTOR SHALL INSTALL DIELECTRIC UNIONS AT CONNECTIONS OF DISSIMILAR METALS.
19. CONTRACTOR SHALL ROUGH-IN ALL WASTES AND SUPPLIES TO SPECIAL EQUIPMENT ACCORDING TO MANUFACTURER'S SHOP DRAWINGS AND MAKE FINAL CONNECTIONS. ALL SUPPLIES SHALL BE VALVED. INSTALL VACUUM BREAKERS WHERE REQUIRED BY CODE.
20. PROVIDE REDUCED PRESSURE BACKFLOW PREVENTERS FOR DOMESTIC WATER SUPPLIES AS REQUIRED BY LOCAL WATER PURVEYORS.
21. DO NOT PENETRATE WALL FOOTINGS WITH PIPING, COORDINATE WITH GENERAL CONTRACTOR TO DROP FOOTINGS AS REQUIRED TO CLEAR PLUMBING SERVICES WHERE ABSOLUTELY NECESSARY. ANY PIPING PENETRATING A BEARING WALL OR FOOTING MUST BE SLEEVED AND LOCATION APPROVED BY STRUCTURAL ENGINEER.
22. THE CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO FIXTURES.
23. ASSEMBLE ALL FIXTURES AND EQUIPMENT SHIPPED LOOSE WHICH YOU ARE REQUIRED TO MAKE FINAL CONNECTIONS TO, WHETHER FURNISHED BY YOU OR BY OTHERS, (I.E. WATER FAUCETS, TRIM OR TAILPIECE ETC.)
24. ALL INSTALLATIONS OF FLOOR DRAINS AND HUB DRAINS (LOCATED IN MECHANICAL ROOMS) SHALL COORDINATED WITH THE MECHANICAL EQUIPMENT AND HOUSEKEEPING PADS PRIOR TO ROUGH-IN OF DRAINS.
25. PLUMBER SHALL BE LICENSED BY STATE AND LOCAL AUTHORITIES TO INSTALL GAS PIPING.

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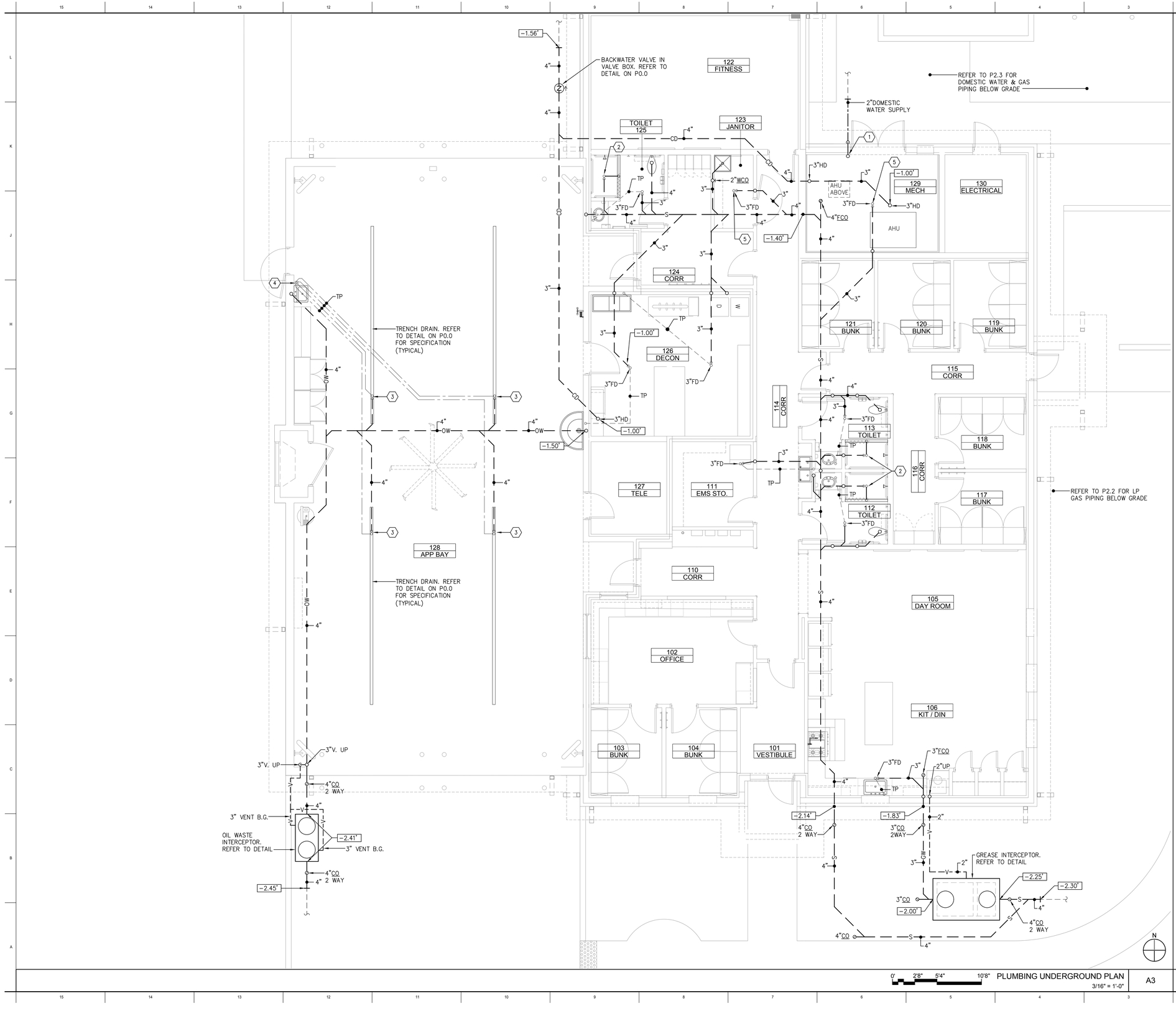
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HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

| PROJECT #: 2216-05 | |
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PLUMBIING LEGEND & NOTES

P0.0




0' 2'8" 5'4" 10'8" PLUMBING UNDERGROUND PLAN 3/16" = 1'-0" | A3 | NOTES | A1

NOTES APPPLY FOR SHEETS P2.0 & P2.1

## GENERAL NOTES

1. REFER TO RISER DIAGRAMS FOR PIPE SIZES NOT SHOWN ON THIS PLAN.
2. REFER TO FIXTURE SCHEDULE FOR ALL WATER BRANCH SIZE CONNECTIONS, UNLESS OTHERWISE NOTED ON THIS PLAN.
3. INVERT ELEVATIONS NOTED ON ARE REFERENCED WITH FINISHED FLOOR ELEVATION OF 0.00'. REFER TO CIVIL PLANS FOR ACTUAL FINISHED FLOOR ELEVATIONS.

## KEYED NOTES

1. 2" DOMESTIC WATER UP TO ABOVE GRADE. REFER TO PLUMBING FLOOR PLAN FOR CONTINUATION.
2. INSTALL RUNNING TRAP FOR SHOWER DRAIN & TRENCH DRAIN. REFER TO DETAIL ON P5.1..
3. PROVIDE TRAP PRIMER ADAPTOR FITTING ON OUTLET OF TRENCH DRAIN. FITTING EQUAL TO PRECISION PLUMBING PRODUCTS #PPA-3P500: 3" X ½" O.D., ½" BRASS FITTING.
4. TRAP PRIMER VALVE & DISTRIBUTION UNIT. PROVIDE ½" TRAP PRIMER CONNECTION FOR EACH TRENCH DRAIN OUTLET.
5. PROVIDE DEEP SEAL TRAP FOR FLOOR DRAIN.


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PLUMBING
UNDERGROUND PLAN

P2.0

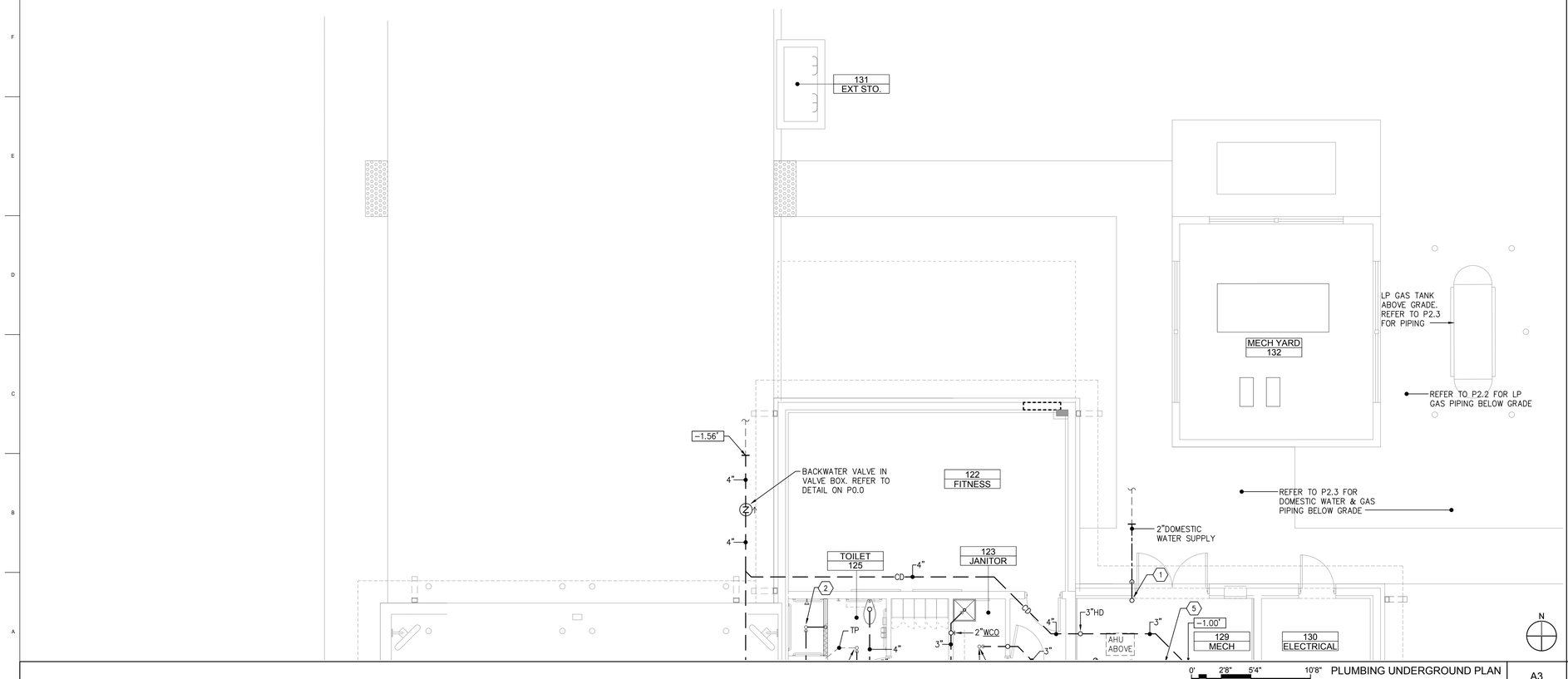
NOTES APPPLY FOR SHEETS P2.0 & P2.1

## GENERAL NOTES

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4. TRAP PRIMER VALVE & DISTRIBUTION UNIT. PROVIDE ½" TRAP PRIMER CONNECTION FOR EACH TRENCH DRAIN OUTLET.
5. PROVIDE DEEP SEAL TRAP FOR FLOOR DRAIN.




0' 2'8" 5'4" 10'8"

PLUMBING UNDERGROUND PLAN
3/16" = 1'-0"

A3

NOTES

A1


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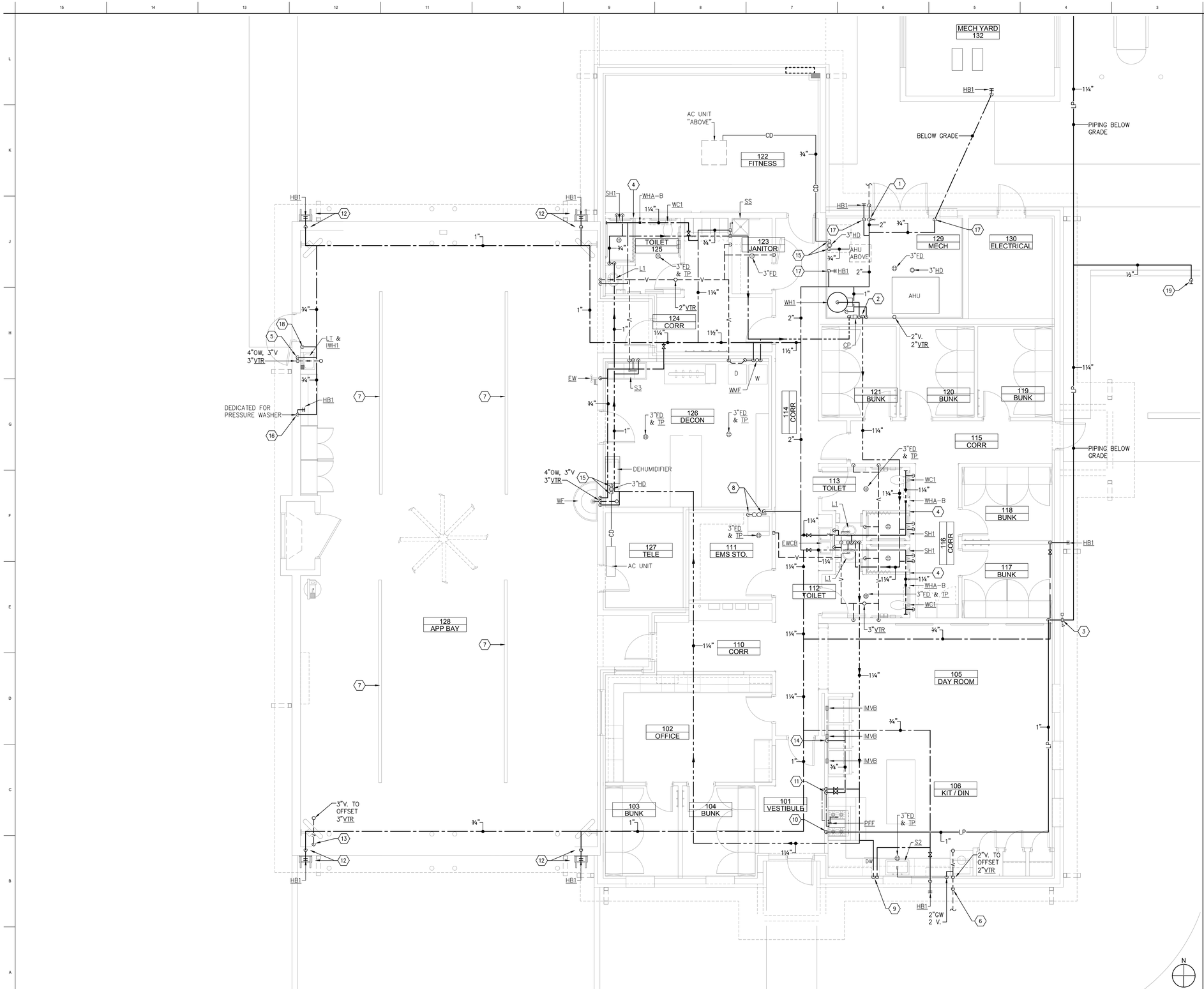
# HILLSBOROUGH COUNTY THONOTOSASSA FIRE STATION NO. 21 REPLACEMENT

PROJECT #: 2216-05

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PLUMBING
UNDERGROUND PLAN

P2.1




NOTES APPPLY FOR SHEETS P2.2 & P2.3

## GENERAL NOTES

1. REFER TO RISER DIAGRAMS FOR PIPE SIZES NOT SHOWN ON THIS PLAN.
2. REFER TO FIXTURE SCHEDULE FOR ALL WATER BRANCH SIZE CONNECTIONS, UNLESS OTHERWISE NOTED ON THIS PLAN.

## BUILDING CALCULATIONS

TOTAL WATER FIXTURE UNITS: 100 @ 68 GPM (BASED ON FLUSH VALVES)

TOTAL DRAINAGE FIXTURE UNITS: 50

## KEYED NOTES

1. 2" DOMESTIC WATER UP FROM BELOW GRADE. OFFSET ABOVE SLAB & PENETRATE EXTERIOR WALL. PIPE SHALL NOT BE INSTALLED BELOW SLAB. INSTALL SHUT–OFF VALVE AT 48" A.F.F.. EXTEND PIPE UP INTO CEILING SPACE.
2. THERMOSTATIC MIXING VALVE SECURED TO WALL AT 48" A.F.F.. VALVE SHALL BE EQUAL TO SYMMONS MODEL 7–500A–W. BRANCH 1" C.W. & H.W. TO INLETS. BRANCH 1¼" TEMPERED H.W. FROM OUTLET.
3. GAS UP FROM BELOW GRADE. INSTALL PRESSURE REGULATOR & AUTOMATIC GAS SHUT–OFF VALVE IN RISE. PENETRATE EXTERIOR WALL ABOVE FINISHED FLOOR. DO NOT INSTALL ANY GAS PIPING BELOW SLAB OF BUILDING. REFER TO GAS RISER FOR ADDITIONAL INFORMATION.
4. LINEAR TRENCH DRAIN FOR SHOWER. REFER TO FIXTURE SCHEDULE FOR SPECIFICATION.
5. ¾" C.W. DOWN. BRANCH ½" TO SINK FAUCET & ½" TO TANK–LESS WATER HEATER. REFER TO DETAIL ON P5.2.
6. 2" VENT FROM GREASE INTERCEPTOR. REFER TO UNDERGROUND PLUMBING PLAN FOR CONTINUATION.
7. TRENCH DRAIN SYSTEM. REFER TO DETAIL ON P0.0 FOR SPECIFICATION.
8. ½" C.W. DOWN TO IMVB & WATER FILTER. REFER TO ICE MACHINE DETAIL ON P5.3.
9. PROVIDE SERVICE STOP & H.W. SUPPLY TO DISHWASHER. REFER TO DISHWASHER DRAIN DETAIL ON P5.2.
10. ½" GAS DOWN TO GAS RANGE. PROVIDE SHUT–OFF VALVE. REFER TO GAS PIPING DETAIL FOR ADDITIONAL INFORMATION. REFER TO MANUFACTURERS SPECIFICATIONS FOR ROUGH–IN INFORMATION.
11. ½" C.W. & H.W. DOWN TO FILL FAUCET.
12. WALL MOUNTED GARDEN HOSE REEL & HOSE BIB. HOSE REEL EQUAL TO LIBERTY GARDEN MODEL #709–8 DUAL MOUNT HOSE REEL. SECURE TO WALL @ 48" ABOVE GRADE. PROVIDE 125 FT OF ⅝" GARDEN HOSE, (4) ½" MOUNTING HOLES, 12 GA. STEEL, POWDER COATED FINISH, ROTATING BRASS SWIVEL, (4) RUBBER BUMPERS, CRANK HANDLE. INSTALL HOSE BIB DIRECTLY BELOW HOSE REEL @ 24" ABOVE GRADE. PROVIDE SHUT–OFF VALVE IN RISE FOR HOSE BIB. MOUNT VALVE IN VALVE BOX WITH LOCKING COVER AT 48" A.F.F..
13. 3"VENT FROM OIL WASTE INTERCEPTOR.
14. ¾" C.W. DOWN IN WALL. BRANCH ½" TO EACH VALVE BOX.
15. ROUTE ¾"CONDENSATE FROM MECHANICAL EQUIPMENT ABOVE FLOOR TO HUB DRAIN.
16. PROVIDE SHUT–OFF VALVE IN RISE FOR HOSE BIB. MOUNT VALVE IN VALVE BOX WITH LOCKING COVER AT 48" A.F.F..
17. DROP EXPOSED PIPE FROM ABOVE CEILING. PROVIDE SHUT–OFF VALVE IN RISE AT 48" A.F.F..
18. ½" DOWN TO TRAP PRIMER DISTRIBUTION UNIT. REFER TO DETAIL. REFER TO UNDERGROUND PLAN FOR CONTINUATION.
19. ½" LP GAS UP TO OUTDOOR GAS GRILL.


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REPLACEMENT

PROJECT #: 2216-05

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PLUMBING
FLOOR PLAN

P2.2

0' 2'8" 5'4" 10'8"
PLUMBING FLOOR PLAN
3/16" = 1'-0"
A3

NOTES A1

NOTES APPPLY FOR SHEETS P2.2 & P2.3

## GENERAL NOTES

1. REFER TO RISER DIAGRAMS FOR PIPE SIZES NOT SHOWN ON THIS PLAN.
2. REFER TO FIXTURE SCHEDULE FOR ALL WATER BRANCH SIZE CONNECTIONS, UNLESS OTHERWISE NOTED ON THIS PLAN.

## BUILDING CALCULATIONS

TOTAL WATER FIXTURE UNITS: 100 @ 68 GPM (BASED ON FLUSH VALVES)

TOTAL DRAINAGE FIXTURE UNITS: 50

## KEYED NOTES

(1) 2" DOMESTIC WATER UP FROM BELOW GRADE. OFFSET ABOVE SLAB & PENETRATE EXTERIOR WALL. PIPE SHALL NOT BE INSTALLED BELOW SLAB. INSTALL SHUT-OFF VALVE AT 48" A.F.F.. EXTEND PIPE UP INTO CEILING SPACE.

(2) THERMOSTATIC MIXING VALVE SECURED TO WALL AT 48" A.F.F.. VALVE SHALL BE EQUAL TO SYMMONS MODEL 7-500A-W. BRANCH 1" C.W. & H.W. TO INLETS. BRANCH 1¼" TEMPERED H.W. FROM OUTLET.

(3) GAS UP FROM BELOW GRADE. INSTALL PRESSURE REGULATOR & AUTOMATIC GAS SHUT-OFF VALVE IN RISE. PENETRATE EXTERIOR WALL ABOVE FINISHED FLOOR. DO NOT INSTALL ANY GAS PIPING BELOW SLAB OF BUILDING. REFER TO GAS RISER FOR ADDITIONAL INFORMATION.

(4) LINEAR TRENCH DRAIN FOR SHOWER. REFER TO FIXTURE SCHEDULE FOR SPECIFICATION.

(5) ¾" C.W. DOWN. BRANCH ½" TO SINK FAUCET & ½" TO TANK-LESS WATER HEATER. REFER TO DETAIL ON P5.2.

(6) 2" VENT FROM GREASE INTERCEPTOR. REFER TO UNDERGROUND PLUMBING PLAN FOR CONTINUATION.

(7) TRENCH DRAIN SYSTEM. REFER TO DETAIL ON P0.0 FOR SPECIFICATION.

(8) ½" C.W. DOWN TO IMVB & WATER FILTER. REFER TO ICE MACHINE DETAIL ON P5.3.

(9) PROVIDE SERVICE STOP & H.W. SUPPLY TO DISHWASHER. REFER TO DISHWASHER DRAIN DETAIL ON P5.2.

(10) ½" GAS DOWN TO GAS RANGE. PROVIDE SHUT-OFF VALVE. REFER TO GAS PIPING DETAIL FOR ADDITIONAL INFORMATION. REFER TO MANUFACTURERS SPECIFICATIONS FOR ROUGH-IN INFORMATION.

(11) ½" C.W. & H.W. DOWN TO FILL FAUCET.

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(14) ¾" C.W. DOWN IN WALL. BRANCH ½" TO EACH VALVE BOX.

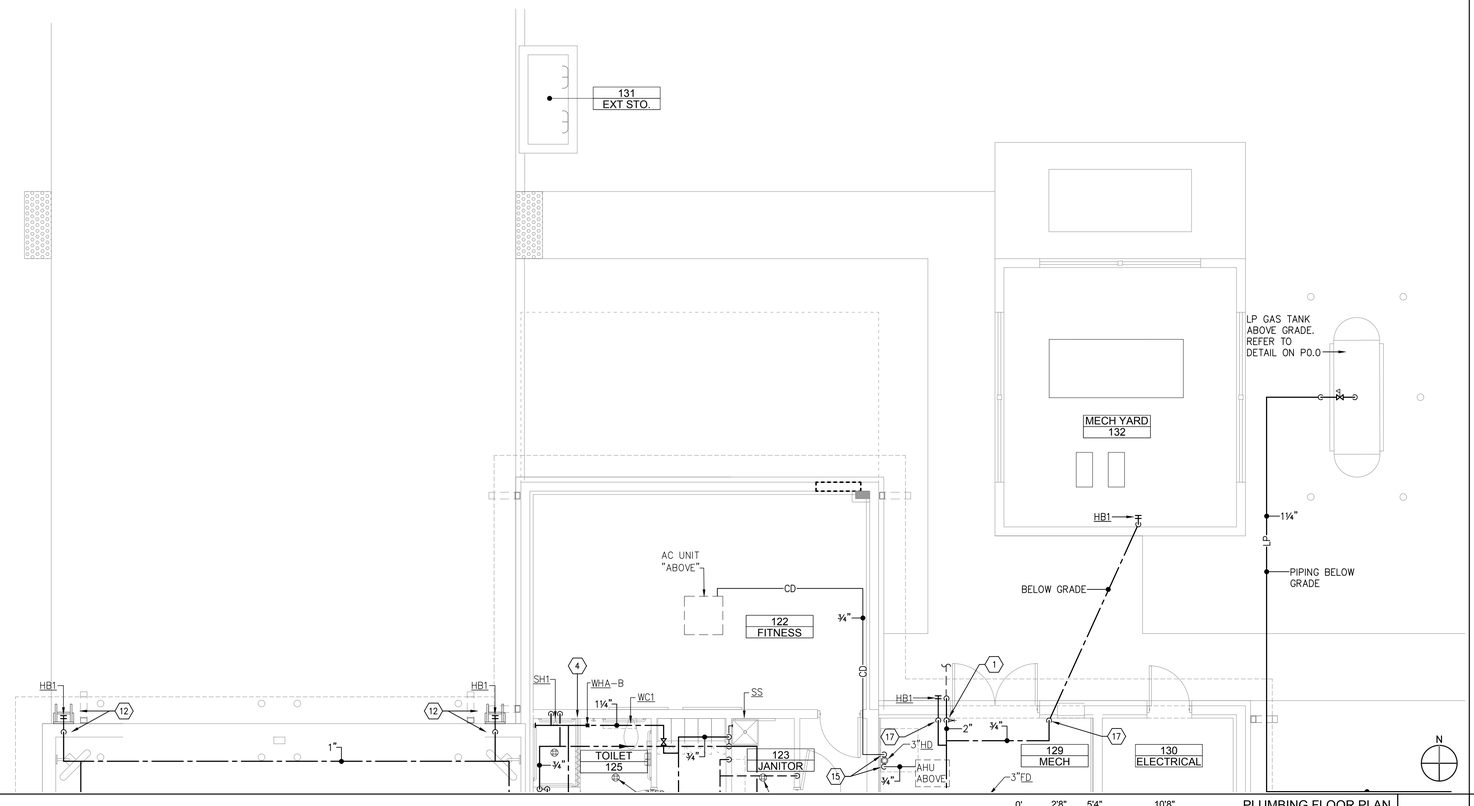
(15) ROUTE ¾"CONDENSATE FROM MECHANICAL EQUIPMENT ABOVE FLOOR TO HUB DRAIN.

(16) PROVIDE SHUT-OFF VALVE IN RISE FOR HOSE BIB. MOUNT VALVE IN VALVE BOX WITH LOCKING COVER AT 48" A.F.F..

(17) DROP EXPOSED PIPE FROM ABOVE CEILING. PROVIDE SHUT-OFF VALVE IN RISE AT 48" A.F.F..

(18) ½" DOWN TO TRAP PRIMER DISTRIBUTION UNIT. REFER TO DETAIL. REFER TO UNDERGROUND PLAN FOR CONTINUATION.

(19) ½" LP GAS UP TO OUTDOOR GAS GRILL.




PLUMBING FLOOR PLAN
3/16" = 1'-0"

A3

NOTES

A1


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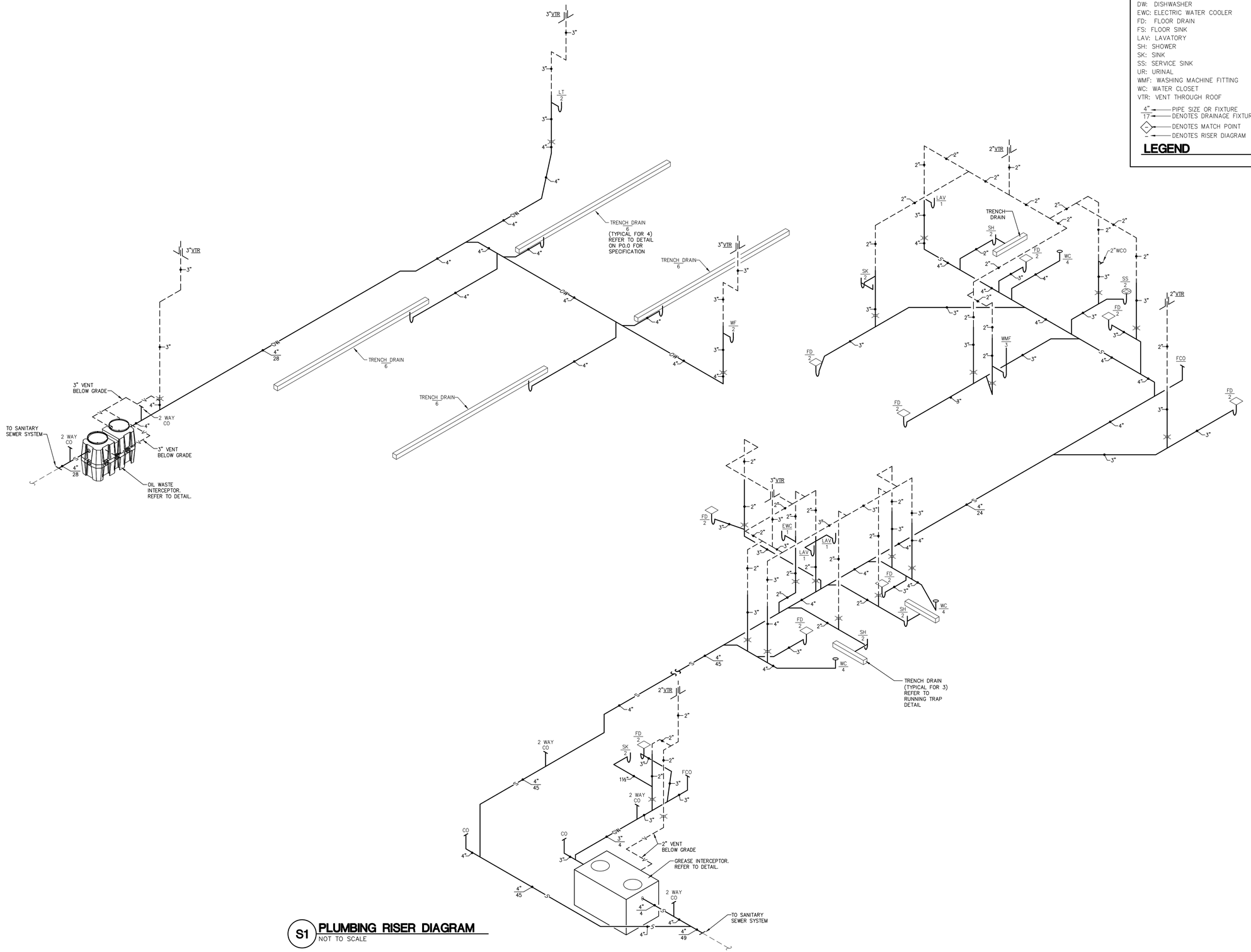
PLUMBING
FLOOR PLAN

P2.3

ABBREVIATIONS:
DW: DISHWASHER
EWC: ELECTRIC WATER COOLER
FD: FLOOR DRAIN
FS: FLOOR SINK
LAV: LAVATORY
SH: SHOWER
SK: SINK
SS: SERVICE SINK
UR: URINAL
WMF: WASHING MACHINE FITTING
WC: WATER CLOSET
VTR: VENT THROUGH ROOF

4" — PIPE SIZE OR FIXTURE
17 — DENOTES DRAINAGE FIXTURE UNIT
◇ — DENOTES MATCH POINT
— DENOTES RISER DIAGRAM

**LEGEND**




**S1 PLUMBING RISER DIAGRAM**
NOT TO SCALE


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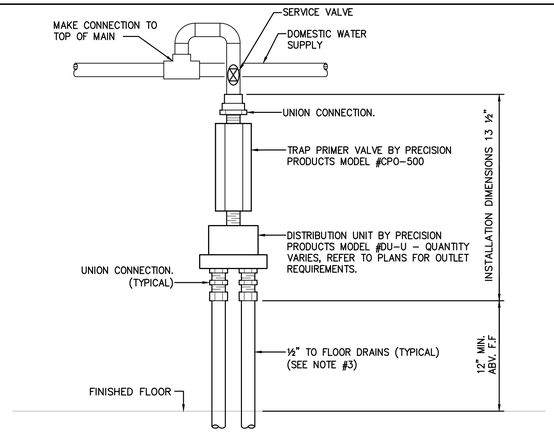
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PLUMBIING RISER DIAGRAM

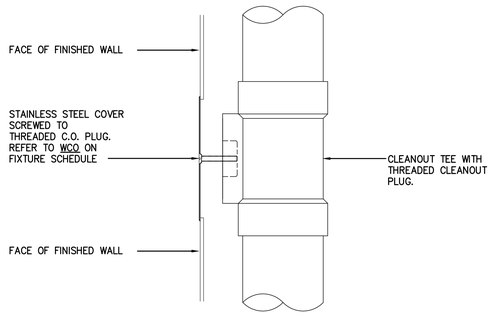
P4.1



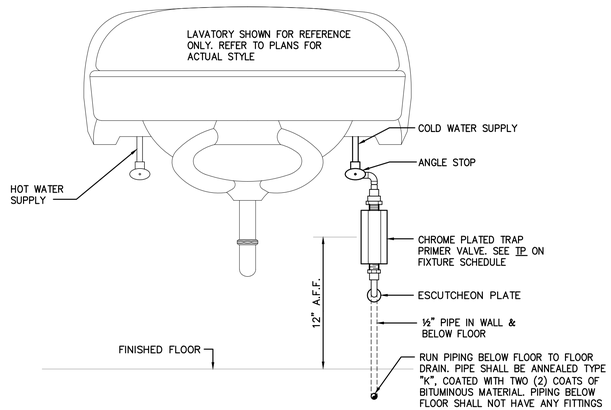

NOTES:

1. TRAP PRIMER & DISTRIBUTION UNIT BY PRECISION PLUMBING PRODUCTS OR APPROVED EQUAL.
2. REFER TO UNDERGROUND PLAN FOR LOCATION AND CONTINUATION OF PIPING.
3. RUN PIPING BELOW FLOOR TO FLOOR DRAIN. PIPE SHALL BE ANNEALED TYPE "K", COATED WITH TWO (2) COATS OF BITUMINOUS MATERIAL. PIPING BELOW FLOOR SHALL NOT HAVE ANY FITTINGS EXCEPT AT FLOOR DRAIN.
4. PROVIDE SHUTOFF VALVE MAINTENANCE.
5. DISTRIBUTION UNIT IS NOT REQUIRED ON SINGLE FLOOR DRAIN APPLICATIONS.

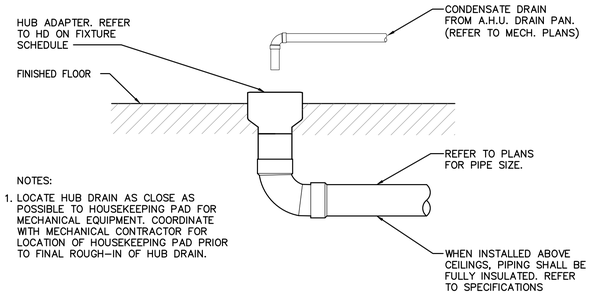
6 / – **TRAP PRIMER DISTRIBUTION UNIT DETAIL**
SCALE: NONE




7 / – **WALL CLEANOUT DETAIL**
SCALE: NONE



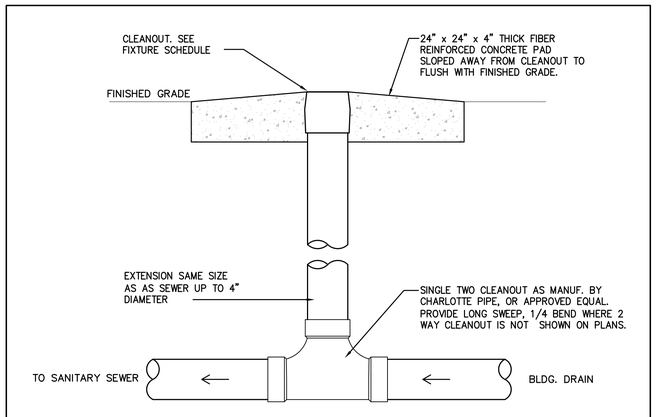

4 / – **TRAP PRIMER AT SINK/LAVATORY DETAIL**
SCALE: NONE



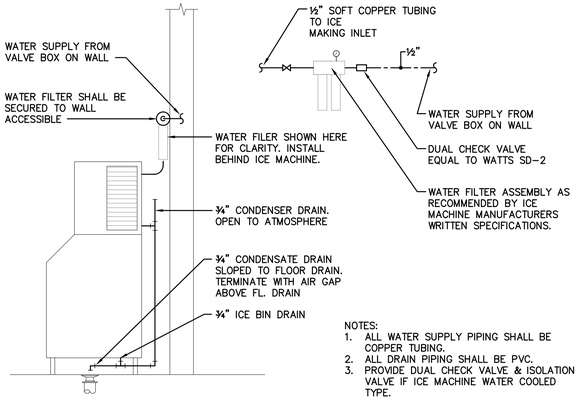

NOTES:

1. LOCATE HUB DRAIN AS CLOSE AS POSSIBLE TO HOUSEKEEPING PAD FOR MECHANICAL EQUIPMENT. COORDINATE WITH MECHANICAL CONTRACTOR FOR LOCATION OF HOUSEKEEPING PAD PRIOR TO FINAL ROUGH-IN OF HUB DRAIN.

5 / – **TYPICAL HUB DRAIN DETAIL**
SCALE: NONE



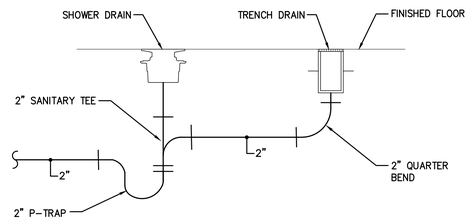

1 / – **EXTERIOR CLEANOUT DETAIL**
SCALE: NONE




NOTES:

1. ALL WATER SUPPLY PIPING SHALL BE COPPER TUBING.
2. ALL DRAIN PIPING SHALL BE PVC.
3. PROVIDE DUAL CHECK VALVE & ISOLATION VALVE IF ICE MACHINE WATER COOLED TYPE.

2 / – **ICE MACHINE DETAIL**
SCALE: NONE




3 / – **RUNNING P-TRAP FOR SHOWER DETAIL**
SCALE: NONE

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EMI Job No. 22-0480 Drawn By:SGD/RJF Checked By: JSW

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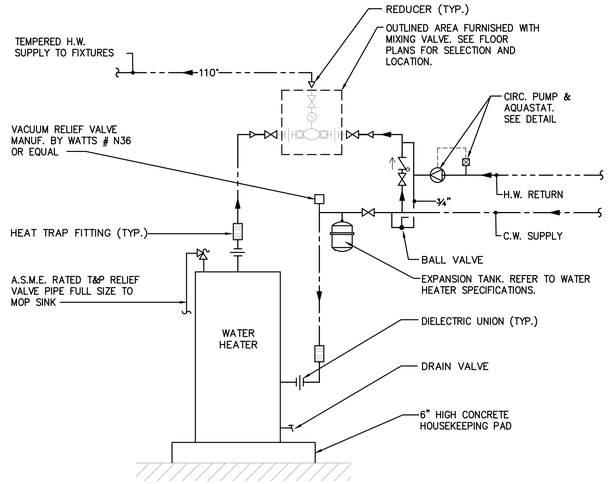
PROJECT ADDRESS:
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THONOTOSASSA, FL 33592

# HILLSBOROUGH COUNTY THONOTOSASSA FIRE STATION NO. 21 REPLACEMENT

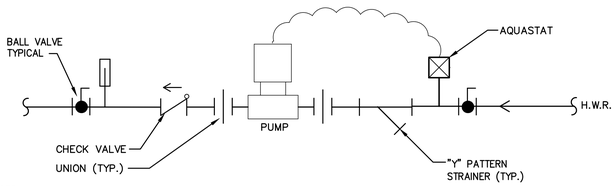
| PROJECT #: 2216-05 | |
|---|---|
| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

PLUMBING DETAILS

P5.1

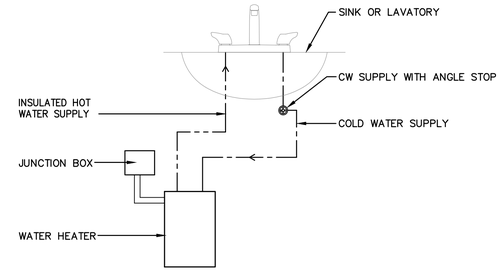



6 — **WATER HEATER DETAIL - JAN. CLOSET**
SCALE: NONE



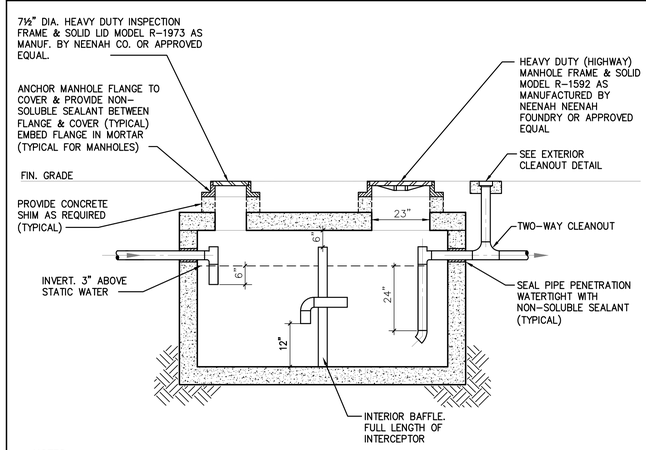

NOTE.
1. BASIS OF DESIGN IS GROUNFOS "UP" SERIES AQUASTAT. USE LOW TEMPERATURE MODEL FOR 110°F HOT WATER SYSYTEMS. USE HIGH TEMPERATURE MODEL FOR 120°F HOT WATER SYSTEMS.
2. PROVIDE COMBINATION AUTOMATIC TIME KIT–AQUASTAT. TIMER SHALL BE A 24 HOUR TIME CLOCK. THE AQUASTAT SHALL HAVE A TEMPERATURE SET POINTS CAPABLE OF THE FOLLOWING: PUMP SHALL STOP WHENEVER THE AQUASTAT TEMPERATURE IS ANYWHERE IN THE RANGE OF (0°F–5°F) DEGREES BELOW THE LOOP HOT WATER SUPPLY TEMPERATURE SET POINT. PUMP SHALL START WHENEVER THE AQUASTAT TEMPERATURE IS ANYWHERE IN THE RANGE OF (10°F–15°F) DEGREES BELOW THE LOOP HOT WATER SUPPLY TEMPERATURE SET POINT.
3. SUPPORT PUMP INDEPENDENT OF PIPING.

7 — **CIRCULATING PUMP DETAIL**
SCALE: NONE




NOTE:
PROVIDE FLOW RESTRICTOR (AERATOR) AS RECOMMENDED BY MANUFACTURERS WRITTEN SPECIFICATIONS.

4 — **TANK-LESS WATER HEATER DETAIL**
SCALE: NONE




NOTES:
CONTRACTOR SHALL FIELD VERIFY INVERT ELEVATION OF DRAIN LINES PRIOR TO ORDERING OR CONSTRUCTING THE GREASE INTERCEPTOR.

BASIS OF DESIGN: PRECAST CONCRETE INTERCEPTOR, 5'–4" WIDE X 9'–4" LENGTH X 5'–8" DEEP, WALLS & FLOOR REINFORCED THROUGHOUT WITH #4 REBAR AT 9" O.C., #6 REBAR AT 8" O.C. WIDTH WAYS & #6 REBAR DIAGONALLY AROUND ACCESS HOLES, 8" THICK TOP SLAB, 6" THICK WALLS & 6" THICK BOTTOM, SECONDARY COMPARTMENT SHALL EQUAL APPROX. 1/3 OF TOTAL CAPACITY.

THE FOLLOWING IS THE BASIS OF DESIGN FOR THE GREASE INTERCEPTOR SIZE PER THE 2023 FBC–PLUMBING, SECTION 1003.3.7.

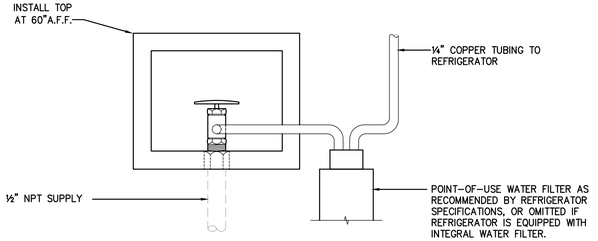
(PEAK FLOWRATE) x (30–MIN RETENTION TIME) = EFFECTIVE CAPACITY OF GREASE INTERCEPTOR IN GALLONS

PEAK FLOWRATE = 21 GPM BASED ON 3" PIPE SLOPED AT 1/8"–PER–FOOT AND 2–MINUTE DRAIN TIME.

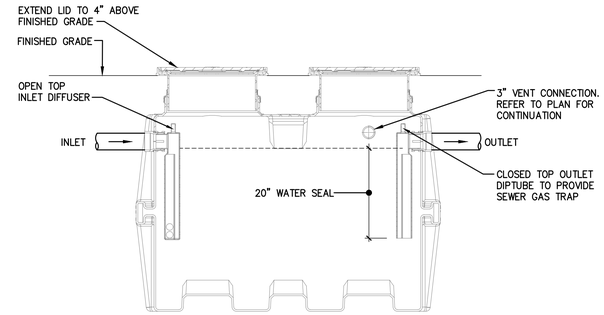
21 GPM X 30 MINS = 630 GALLONS

NOTE: THE MINIMUM VOLUME OF ANY GRAVITY GREASE INTERCEPTOR SHALL BE 750 GALLONS PER FLORIDA ADMINISTRATIVE CODE (FAC) RULE 62–6.013 AS REFERENCED IN FBC–PLUMBING SECTION 1003.3.9.

5 — **750 GALLON GREASE INTERCEPTOR**
SCALE: NONE




1 — **ICE MAKER VALVE BOX COMBO DETAIL**
SCALE: NONE



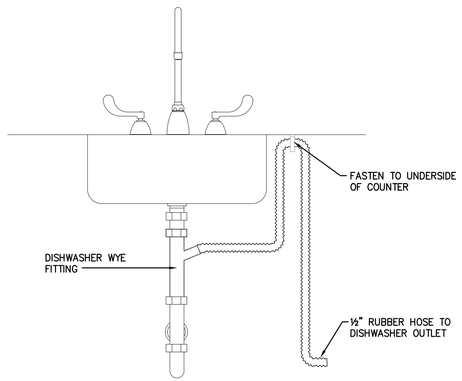

OIL & SAND INTERCEPTOR SHALL BE EQUAL TO STRIEM OIL SEPARATOR MODEL OS–100:
LIFETIME GUARANTEED AND MADE IN USA OF HIGH DENSITY POLYETHYLENE WITH MINIMUM 1" UNIFORM WALL THICKNESS. SEPARATOR SHALL BE FURNISHED FOR BELOW GRADE INSTALLATION WITH FIELD ADJUSTABLE RISER SYSTEM. COVER SHALL PROVIDE WATER/GAS–TIGHT SEAL AND HAVE A MAXIMUM 16,000 LBS LOAD CAPACITY.

SPECIFICATIONS
1. MAX FLOW RATE: 75 GPM
2. LIQUID CAPACITY: 250 GALLONS (33.4 CU. FT.)
3. OIL CAPACITY: 62.5 GALLONS
4. SOLIDS/SEDIMENT CAPACITY: 95 GALLONS
5. UNIT WEIGHT W/STD. COVERS: 225 LBS.
6. HIGHWAY TRAFFIC LOAD RATED, BOLTED, GAS/WATER TIGHT COMPOSITE COVERS. (16,000 LBS)
7. 4" INLET & OUTLET, (TWO) 3" VENTS.

NOTES
1. 1" THICK HIGH DENSITY POLYETHYLENE WALLS.
2. UNIT SUPPLIED WITH BUILT–IN ADAPTER(S) FOR UP TO 6" OF ADJUSTABILITY. ADDITIONAL RISER(S) AVAILABLE FOR DEEPER BURIAL DEPTH.
3. FOR BURIED APPLICATIONS.
4. LIFTING LUG SET INCLUDED FOR EASY INSTALL.

CONTRACTOR SHALL PROVIDE SOIL TESTS TO DETERMINE IF HIGH WATER ANCHOR KIT IS REQUIRED FOR INSTALLATION.

2 — **OIL WASTE INTERCEPTOR DETAIL**
SCALE: NONE




3 — **DISHWASHER DRAIN DETAIL**
SCALE: NONE

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601 E KENNEDY BLVD
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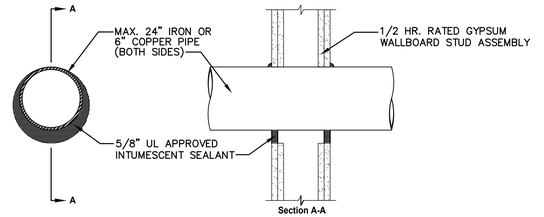
HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

| PROJECT #: 2216-05 | |
|---|---|
| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

PLUMBING DETAILS

P5.2

BASIS OF DESIGN:
SYSTEM: WL-1049
MANUFACTURER: SPECIFIED TECHNOLOGIES INC.
FIRESTOP SEALANT: 5/8" SSS SEALANT
F-RATING: 1/2 HR
PRIMARY PRODUCT USED: SSS SEALANT
SEALING METHOD: CAULK & WALK

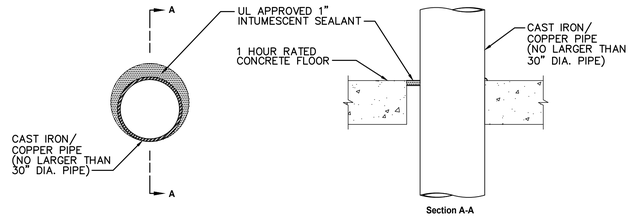



1
—

## TYPICAL GYPSUM BOARD WALL FIRESTOP SYSTEM (METAL)

NO SCALE

BASIS OF DESIGN:
SYSTEM: CAJ-1080
MANUFACTURER: SPECIFIED TECHNOLOGIES INC.
FIRESTOP SEALANT: 1" SSS SEALANT
F-RATING: 3 HR
PRIMARY PRODUCT USED: SSS SEALANT
SEALING METHOD: CAULK & WALK

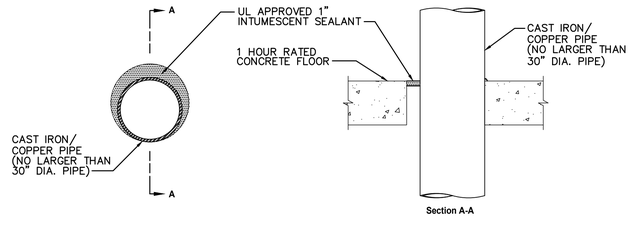



2
—

## TYPICAL CONCRETE FLOOR/WALL FIRESTOP SYSTEM (METAL)

NO SCALE

BASIS OF DESIGN:
SYSTEM: CAJ-1080
MANUFACTURER: SPECIFIED TECHNOLOGIES INC.
FIRESTOP SEALANT: 1" SSS SEALANT
F-RATING: 3 HR
PRIMARY PRODUCT USED: SSS SEALANT
SEALING METHOD: CAULK & WALK




3
—

## TYPICAL CONCRETE FLOOR/WALL FIRESTOP SYSTEM (METAL)

NO SCALE


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THONOTOSASSA, FL 33592

HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2216-05

| DISTRIBUTION | DATE |
|---|---|
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

PLUMBING DETAILS

P5.3

# PLUMBING FIXTURE SCHEDULE

| MARK | DESCRIPTION | MANUFACTURER | MODEL NO. | BRANCH CONNECTIONS (1) WASTE | C.W. | H.W. |
|---|---|---|---|---|---|---|
| WMF | WASHING MACHINE FITTING – FIRE RATED OUTLET BOX, TOP SUPPLIES, ½" COPPER SWEAT, 2" THREADED DRAIN, QUARTER TURN BRASS BALL VALVES FOR H.W. & C.W. SUPPLY. FURNISHED WITH WATER HAMMER ARRESTORS.<br><br>PROVIDE & INSTALL NYLON LINT TRAP POLYPROPYLENE MESH SCREEN & SECURE TO DRAIN OUTLET. | GUY GREY<br>APPROVED EQUAL | FR12CHA | 2" | ¾" | ¾" |
| WHA | WATER HAMMER ARRESTOR – WROUGHT COPPER SHELL, HYDRO–PNEUMATIC AIR CUSHION, TRIPLE O–RING SEALED PISTON, WROUGHT COPPER ADAPTER AND MALE THREADED CONNECTION. SIZED PER STANDARD P.D.I. – WH201.<br>TYPE A = "P.D.I." SIZE A = 1–11 FIX. UNITS, 1/2" CONN.<br>TYPE B = "P.D.I." SIZE B = 12–32 FIX. UNITS, 3/4" CONN.<br>TYPE C = "P.D.I." SIZE C = 33–60 FIX. UNITS, 1" CONN.<br>TYPE D = "P.D.I." SIZE D = 61–113 FIX. UNITS, 1" CONN. | JOSAM<br>SIOUX CHIEF<br>ZURN–WILKINS | 75000–S SERIES<br>"HYDRA–RESTER"<br>1250 SERIES | – | – | – |
| LT | LAUNDRY TUB – 20" X 24" X 14" D. COMPOSITE FIBERGLASS/STONE MATERIAL, LAUNDRY TUB, DRAIN WITH STOPPER, COLOR WHITE, WHITE BAKED ENAMEL ANGLE LEGS, LEVELING DEVICES. PROVIDE WITH DECK TYPE FAUCET: CHROME PLATED WITH SWING SPOUT.<br><br>SUPPLIES – ANGLE STOP FITTING WITH SUPPLY TUBE, 1/2" NPT FLANGED FEMALE INLET, LOOSE KEY, ESCUTCHEONS, 3/8" X 12" FLEX SUPPLY RISER.<br><br>TRAP – CHROME PLATED, CAST BRASS, ONE–PIECE CLEANOUT PLUG, OUTLET TRAPPED FOR I.P. NIPPLE AND CAST BRASS FLANGE, POLISHED CHROME PLATED THREADED BOTH ENDS. | MUSTEE<br>FIAT<br>OR EQUAL<br><br>CHICAGO<br>MCGUIRE<br>BRASSCRAFT<br><br>MCGUIRE<br>ZURN | 18F<br><br>1017<br>H2165LKC<br>OCR1920A C<br><br>8912<br>Z8701 | 1¼" | ½" | ½" |

(1) BRANCH CONNECTION SIZES ARE INTENDED FOR BRANCH SIZES FROM WATER SUPPLY. REFER TO DESCRIPTION IN SCHEDULE FOR ACTUAL ROUGH IN PIPE SIZE CONNECTION TO FIXTURE.

# ELECTRIC WATER HEATER SCHEDULE

| MARK | MANUFACTURER | MODEL | GALLON | V/P/HZ | KW | AMPS | RECOVERY 70°F RISE | DIAMETER | DEPTH | HEIGHT | INLET / OUTLET | LOCATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WH1 | A.O. SMITH | DSE–80–12 | 80 | 208/3/60 | 12 | 33.3 | 70 GPH | 28" | 35" | 54.25" | 1¼" | JANITOR 136 |

NOTES
1. A.O. SMITH IS BASIS OF DESIGN, STATE & RHEEM RUUD EQUAL. MEETS THERMAL EFFICIENCY AND/OR STANDBY REQUIREMENTS OF THE U.S. DEPARTMENT OF ENERGY ASHRAE/ISENA 90.1.
2. PROVIDE ASME RATED T&P RELIEF VALVE. ROUTE DISCHARGE AS INDICATED ON WATER HEATER DETAIL.
3. PROVIDE EXPANSION TANK EQUAL TO AMTROL MODEL ST–5.
4. PROVIDE & INSTALL AUTOMATIC TIMER KIT AQUASTAT. REFER TO CIRCULATION PUMP DETAIL.
5. REFER TO WATER HEATER DETAIL FOR ADDITIONAL INFORMATION.

# TANK-LESS WATER HEATER SCHEDULE

| MARK | MANUFACTURER | MODEL | KW | VOLTAGE | CIRCUIT AMPS | TURN–ON GPM | TEMP. RISE @ 2.0 GPM | INLET / OUTLET | LOCATION |
|---|---|---|---|---|---|---|---|---|---|
| IWH1 | EEMAX | PA014240TC | 11.2 | 208 | 52(2X27)A | 0.7 | 38° | ¾" | LAUNDRY TUB |

NOTES
1. REFER TO WATER HEATER DETAILS FOR ADDITIONAL INFORMATION.
2. DIGITAL MICRO PROCESSING TEMPERATURE CONTROL CAPABLE OF MAINTAINING OUTLET TEMPERATURE, DIGITAL TOUCH PAD LED DISPLAY (100°F–140°F), SET TEMPERATURE TO 105°F, ALLOY COVER, ELEMENT SHALL BE REPLACEABLE CARTRIDGE INSERT, REPLACEABLE FILTER IN INLET CONNECTOR, ELEMENT SHALL BE NICKEL CHROME MATERIAL, MAXIMUM OPERATION PRESSURE OF 150 PSI.

| MARK | DESCRIPTION | MANUFACTURER | MODEL NO. | BRANCH CONNECTIONS (1) WASTE | C.W. | H.W. |
|---|---|---|---|---|---|---|
| SS | SERVICE SINK – FLOOR MOUNTED, ONE–PIECE PRE–CAST TERRAZZO, 24" X 24" X 12" SIZE, 12" HIGH ON THREE SIDES & 6" DROP ON FRONT SIDE, SQUARE MODEL, STAINLESS STEEL RIM GUARD, GRID DRAIN.<br><br>TRIM – SERVICE SINK FAUCET, THREADED SPOUT, POLISHED CHROME, VACUUM BREAKER, PAIL HOOK, WALL BRACE, RENEWABLE VALVES, INTEGRAL STOPS.<br><br>24" LONG X 3" WIDE, STAINLESS STEEL ATTACHED WITH THREE (3) RUBBER TOOL GRIPS.<br><br>30" LONG FLEXIBLE, HEAVY DUTY 5/8" RUBBER HOSE, CLOTH REINFORCED, WITH 3/4" BRASS COUPLING AT ONE END. 5" LONG X 3" WIDE BRACKET, 18 GA. #302 STAINLESS STEEL WITH RUBBER GRIP | FIAT<br>STERN WILLIAMS<br>FLORESTONE<br><br>CHICAGO<br>T&S BRASS<br>ZURN<br><br>FIAT<br>T&S BRASS<br>OR EQUAL<br>FIAT<br>T&S BRASS<br>OR EQUAL | TSB–3000<br><br>897–CP<br>B–0667–POL<br>Z841M1<br><br>889–CC<br>B–0635<br><br>832–AA<br>B–0654 | 3" | ¾" | ¾" |
| EW | EMERGENCY EYEWASH – WALL MOUNTED, HAND HELD DUAL SPRAY HEADS, ANGLED SPRAY HEAD, POP–OFF PROTECTIVE SPRAY HEAD COVERS, CHROME–PLATED VALVE, EXTENDED REINFORCED HANDLE, 12 FOOT THERMOPLASTIC HOSE, 3/8" I.P.S. MALE THREAD WITH REMOVABLE 1/2" I.P.S. FEMALE REDUCING COUPLING, HOSE HOLDER MOUNTED TO WALL.<br><br>INSTALL ON WALL, ABOVE SINK. SEE FL. PLAN FOR LOCATION. | HAWS<br>BRADLEY<br>GUARDIAN | 8905<br>S19–435EFW<br>G5026 | – | ½" | – |
| IMVB | ICE MAKER VALVE BOX – FIRE RATED OUTLET BOX, ½" O.D. SWEAT COMBO CONNECTION, ¼" O.D. COMPRESSION OUTLET, 1/4 TURN BRASS VALVE, BULK MOLDED COMPOUND THERMOSET FIRE–RATED PLASTIC, UL CLASSIFIED "FYREWRAP" INSULATION MATERIAL, 8.07" X 8.13" OVERALL DIMENSION, PROVIDE FLEXIBLE TUBING FROM VALVE TO ICE MAKER.<br><br>INSTALL 60" A.F.F. FOR REFRIGERATOR.<br>INSTALL 20" A.F.F. FOR UNDER–COUNTER ICE MAKER.<br>REFER TO MANUFACTURERS WRITTEN SPECIFICATIONS FOR ROUGH–IN REQUIREMENTS. | OATEY<br>OR EQUAL | | – | ½" | – |
| CP | CIRCULATING PUMP – BRONZE CONSTRUCTION, REPLACEABLE STAINLESS STEEL CARTRIDGE IMPELLER ASSEMBLY, VENT PLUG FOR PURGING, ETHYLENE PROPYLENE GASKETS, IMPEDANCE PROTECTED MOTOR. PROVIDE ON/OFF SWITCH FOR OVERLOAD PROTECTION. PROVIDE & INSTALL WITH AQUASTAT.<br><br>CAPACITY OF 5 GPM AGAINST A TOTAL HEAD OF 16 FT. 3000 RPM, 80 INPUT WATTS, .70 FULL LOAD AMPS. ELECTRICAL REQ.: 115V/1/60 | ARMSTRONG<br>BELL & GOSSETT<br>OR EQUAL | ASTRO 50B<br>NSF–22 | – | – | – |
| FD | FLOOR DRAIN – COATED CAST IRON BODY WITH NEOPRENE GASKET, COMBINATION INVERTIBLE MEMBRANE CLAMP, INTEGRAL 1/2" PRIMER CONNECTION AND ADJUSTABLE NICKEL BRONZE STRAINER (TYPE "B"), SEDIMENT BUCKET. (REFER TO PLANS FOR PIPE SIZES) | ZURN<br>JOSAM<br>J.R.SMITH | ZN–415–B–P–Y<br>30000–A<br>2005 NB | PROVIDE DEEP SEAL TRAPS WHERE TRAP PRIMERS ARE NOT INDICATED. | | |
| HD | HUB DRAIN – COATED CAST IRON HUB ADAPTER WITH CAST IRON SOIL PIPE HUB AND MALE THREADED OUTLET. | ZURN<br>JOSAM<br>J.R. SMITH | Z–1030<br>88550<br>2645 | REFER TO FLOOR DRAINS FOR PIPE SIZE | | |
| CO | CLEANOUT – DURA–COATED CAST IRON FERRULE WITH THREADED BRONZE COUNTER SUNK CLEANOUT PLUG, INSTALL CLEANOUT IN 12" X 12" X 4" CONCRETE FLUSH WITH GRADE. REFER TO PLANS FOR SIZES. | ZURN<br>JOSAM<br>J.R. SMITH | Z–1440–BP<br>58500–22<br>4031–PB | – | – | – |
| FCO | FLOOR CLEANOUT – ADJUSTABLE FLOOR CLEANOUT, COATED CAST IRON BODY, GAS AND WATERTIGHT ABS TAPERED THREAD PLUG, ROUND SCORIATED SECURED HEAVY DUTY TOP, ADJUSTABLE TO FINISHED FLOOR. REFER TO PLANS FOR SIZES. | ZURN<br>JOSAM<br>J.R. SMITH | ZN–1400–VP<br>56000<br>4231–U | – | – | – |
| WCO | WALL CLEANOUT – DURA–COATED CAST IRON FERRULE & CADMIUM PLATED CAST IRON COUNTERSUNK PLUG WITH ROUND, SMOOTH, STAINLESS STEEL ACCESS COVER WITH SECURING SCREWS. REFER TO DRAWINGS FOR SIZES. | ZURN<br>JOSAM<br>WATTS DRAINAGE | Z–1441<br>58710<br>CO–380–RD | – | – | – |
| HB1 | HOSE BIBB – VACUUM BREAKER, BACKFLOW PROTECTED, WALL FAUCET, 3/4" INLET, ROUGH CHROME PLATED BRONZE CASTING, CHROME PLATED VACUUM BREAKER, LOOSE KEY HANDLE, WALL FLANGE. | CHICAGO<br>T&S BRASS<br>ZURN | 387–RCF & E27<br>B–0737–RGH<br>Z80707–VB–RB | – | ¾" | – |
| TP | TRAP PRIMER – "UNDER LAVATORY OR SINK" INSTALLATION, CHROME PLATED, ANGLE STOP W/ 5/8" COMP. FITTING, AUTOMATIC TRAP PRIMER W/ 5/8" COMP. FITTING, 1/2" ID COPPER TUBING, 5 P.S.I. OR GREATER PRESSURE ACTIVATION. | PRECISION PLUMBING PRODUCTS, INC.<br>OR EQUAL | PR–500NP | – | ½" | – |
| SH1 | SHOWER VALVE – PRESSURE BALANCING MIXING VALVE, ADJUSTABLE STOP SCREW, IN–LINE VACUUM BREAKER, PROVIDE REVERSE CORING FOR BACK–TO–BACK INSTALLATION WHERE NECESSARY (SEE PLAN), INSTALL VALVE AT 44" ABOVE FLOOR TO CENTERLINE. VACUUM BREAKER, POLISHED CHROME FINISH.<br><br>HAND–HELD SHOWER – HANDSHOWER HOLDER, ADJUSTABLE ANGLE, 36" SLIDE BAR & HOLDER, CHROME PLATED HAND HELD SHOWER, 1.6 GPM, CHROME PLATED 63" FLEX SHOWER HOSE, SWIVEL CONNECTOR, SELF–DRAINING SOAP DISH ON SLIDE BAR, 1/2" FEMALE NPT INLET, CHROME PLATED WALL UNION.<br><br>SHOWER DRAIN – NEO–LOC PIPE CONNECTION DRAIN, COATED CAST IRON BODY WITH NEOPRENE GASKET, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE TYPE 'B' NICKEL BRONZE STRAINER.<br><br>TRENCH DRAIN – 3" WIDE X 96" LONG CHANNEL, ALUMINUM ALLOY T–6063T5, POSITIVE MECHANICAL CONNECTION, 0% BUILT–IN SLOPE, FLANGE CHANNEL FOR ANCHORING, DECORATIVE CLASS A GRATE.<br><br>OPTIONS TO INCLUDE:<br>2" NO–HUB BOTTOM OUTLET, BRONZE DECORATIVE GRATE.<br><br>CONTRACTOR SHALL CUT TRENCH DRAIN IN FIELD FOR INSTALLATION. PROVIDE CONCRETE ENCASEMENT. | HANSGROHE<br><br>HANSGROHE<br><br>ZURN<br>JOSAM<br>J.R. SMITH<br><br>ZURN<br><br>JOSAM<br>J.R. SMITH | 04212000 &<br>04121181<br><br>H06497000 SHOWER<br>H28631000 BAR<br>H28276003 HOSE<br>H28679000 DISH<br>H27458003 OUTLET<br><br>ZN–415<br>30000–5A<br>2005 A6 NB<br><br>ZA–880–300B–<br>U2–BZ<br>.<br>. | 2" | ¾" | ¾" |
| WF | WASH FOUNTAIN – 54" DIAMETER SEMI–CIRCULAR, 9" DEEP BOWL, ONE–PIECE 14 GAUGE STAINLESS STEEL, PEDESTAL CONSTRUCTED OF DIE–FORMED LEGS, UPPER BRACE SOUIFF BASES & PANELS, ZINC CHROME PLATED 14 GA. STEEL, (3) USER STATIONS, 1.25 GPM.<br>FOOT CONTROL: FOOT RAIL MECHANICALLY ACTUATES A HOLD–OPEN VALVE, SLOW CLOSING UPON FOOT PRESSURE.<br>OPTIONS TO INCLUDE:<br>A: OFF–LINE VENT WITH SUPPLIES FROM BELOW.<br>STD: STANDARD HEIGHT.<br>F: FOOT CONTROL VALVE<br>LSD: LIQUID SOAP DISPENSER<br>TMA: THERMOSTATIC MIXING VALVE.<br><br>PROVIDE IN–LINE SHUT–OFF VALVES FOR SUPPLIES.<br>PROVIDE 2" P–TRAP THROUGH WALL.<br>REFER TO MANUFACTURERS SPECIFICATIONS FOR ROUGH–IN & INSTALLATION REQUIREMENTS.<br><br>PROVIDE & INSTALL WATER HAMMERS ARRESTORS TYPE "A" FOR BOTH COLD & HOT WATER SUPPLY. INSTALL ABOVE CEILING. | BRADLEY<br>ACORN<br>GUARDIAN | WF2704 | 2" | 1" | 1" |

(1) BRANCH CONNECTION SIZES ARE INTENDED FOR BRANCH SIZES FROM WATER SUPPLY. REFER TO DESCRIPTION IN SCHEDULE FOR ACTUAL ROUGH IN PIPE SIZE CONNECTION TO FIXTURE.

| MARK | DESCRIPTION | MANUFACTURER | MODEL NO. | BRANCH CONNECTIONS (1) WASTE | C.W. | H.W. |
|---|---|---|---|---|---|---|
| EWCB | ELECTRIC WATER COOLER – DUAL UNIT, SELF–CONTAINED WALL HUNG, REFRIGERANT COOLER & BOTTLE FILLING STATION, HOODED STREAM PROJECTOR, "LIGHT TOUCH" PUSH BAR, BUILT–IN FLOW REGULATOR, FULLY PROTECTED BUBBLER.<br><br>BOTTLE FILLING STATION – MOUNTED ON HIGH WATER COOLER, SENSOR ACTIVATED, 30 SECOND SHUT–OFF TIMER, GREEN TICKER: COUNTS QUANTITY 16 OZ. BOTTLES FILLED.<br><br>SUPPLIES – STRAIGHT STOP FITTING WITH LOOSE KEY, POLISHED CHROME PLATED SOLID BRASS CONSTRUCTION, METAL TEE HANDLE, ½" NPT INLET & OUTLET, MOUNTING HARDWARE.<br><br>TRAP – 1¼" X 1¼" CHROME PLATED, CAST BRASS, ONE PIECE P–TRAP, CLEANOUT PLUG, NIPPLE AND CAST BRASS FLANGE, POLISHED CHROME THREADED BOTH ENDS.<br><br>CARRIER – TOP & BOTTOM PLATES, DURA–COATED RECTANGULAR STEEL UPRIGHTS WITH WELDED FEET, ADJUSTABLE SUPPORT PLATES, MOUNTING FASTENERS.<br><br>MOUNTING HEIGHT – COOLER SHALL BE INSTALLED WITH THE SPOUT A MAXIMUM OF 34" A.F.F. AND PROVIDE A MIN. OF 27" BETWEEN BOTTOM OF APRON AND FLOOR. | ELKAY<br>HAWS<br>OASIS<br><br>CHICAGO<br>MCGUIRE<br>BRASSCRAFT<br><br>MCGUIRE<br>ZURN<br><br>ZURN<br>JOSAM<br>J.R. SMITH | EZSTL8WSLK<br><br>45–LKCP<br>ST155LKSB<br>SCR39 C<br><br>8088<br>Z8710<br><br>Z–1225–BL<br>17905<br>834 | 1¼" | ½" | – |
| S1 | SINK – COUNTER MOUNTED, SINGLE COMPARTMENT, STAINLESS STEEL, 18 GAUGE TYPE 304 (18–8) NICKEL BEARING, 33" X 22" OVERALL SIZE, 11 5/8"" BOWL DEPTH, SINGLE FAUCET HOLE, STAINLESS STEEL STRAINER BASKET, 1 1/2" O.D., STAINLESS STEEL TAILPIECE, 4" LONG.<br><br>TRIM – SINK FAUCET WITH SINGLE LEVER HANDLE, 15.625" SPOUT HEIGHT, 8.75" SPOUT REACH, 1.75 GPM, (2) FUNCTION SPRAY HEAD, CERAMIC DISC CARTRIDGE, SINGLE HOLE INSTALLATION, 3/8" COMPRESSION NUTS, RETRACTABLE HOSE & WEIGHT, FINISH TO BE DETERMINED.<br><br>SUPPLIES – ANGLE STOP, 1/2" I.P.S., LOOSE KEY, CHROME PLATED NIPPLES, ESCUTCHEON, 12" X 3/8" O.D. FLEX RISER.<br><br>TRAP – CHROME PLATED, CAST BRASS, ONE–PIECE CLEANOUT PLUG, OUTLET TRAPPED FOR I.P. NIPPLE AND CAST BRASS FLANGE, POLISHED CHROME PLATED THREADED BOTH ENDS. | ELKAY<br><br>GERBER<br><br>CHICAGO<br>MCGUIRE<br>ZURN<br><br>MCGUIRE<br>ZURN<br>SANITARY DASH | DLRS332212–1<br><br>G0040164<br><br>1017<br>H2165LKC<br>HLSD090LK<br><br>8912<br>Z–8701<br>R870–9 | 1½" | ½" | ½" |
| S2 | SINK – FLOOR MOUNTED, DOUBLE COMPARTMENT WITH RIGHT DRAIN BOARD, BACK SPLASH, 14 GA. TYPE 304 STAINLESS STEEL, 78"X 27.5" X 14" OVERALL SIZE, CENTERED FAUCET HOLES ON 8" CENTERS, STAINLESS STEEL FLAT STRAINER, 1½" O.D., STAINLESS STEEL TAILPIECE, 4" LONG, S.S. TUBULAR LEGS FULLY ENCLOSED GUSSETS WITH BUFFER PLATE, ADJUSTABLE FEET.<br><br>TRIM – SINK FAUCET, BACK SPLASH MOUNTED, LEVER HANDLES, 6" LONG SWING SPOUT, 2.2 GPM AERATOR, ADJUSTABLE CENTERS, ½" NPT FEMALE THREAD INLETS, LEAD FREE, LESS DRAIN.<br><br>SUPPLIES – SAME AS S1.<br><br>TRAP – SAME AS S1. | ELKAY<br>JUST<br>OR EQUAL<br><br>CHICAGO<br>T&S BRASS<br>ZURN | SS8230R2<br><br>445–ABCP<br>B–0235–LN<br>Z841F1 | 1½" | ½" | ½" |
| WC1 | WATER CLOSET – FLOOR MOUNTED, FLUSH VALVE, 1.6 GAL., ELONGATED VITREOUS CHINA, SIPHON JET ACTION, TOP SPUD, BOLT CAPS, ELONGATED BOWL, 17 1/4" HEIGHT.<br><br>FLUSH VALVE – 1.6 GPF, SENSOR OPERATED, EXPOSED TOP SPUD, ADA COMPLIANT, PLASTIC COVER WITH LENS, FOUR (4) "AA" SIZE BATTERIES, SENSOR RANGE ADJUSTMENT SCREW, 1" I.P.S. SCREWDRIVER BACK–CHECK ANGLE STOP, 1¼" SPUD COUPLING, SWEAT SOLDER ADAPTOR W/ COVER TUBE & CAST SET SCREW WALL FLANGE, 16" HIGH ROUGH–IN.<br><br>SEAT – FINISH WHITE, EXTRA HEAVY DUTY PLASTIC, ELONGATED BOWL, OPEN FRONT LESS COVER, SELF SUSTAINING CHECK HINGE. | AMERICAN STANDARD<br>CRANE<br>KOHLER<br><br>SLOAN<br><br>BEMIS<br>OLSONITE<br>CHURCH | 3043.001<br>3H701E<br>K–4368<br><br>G2 8113–1.6<br><br>1655–SS/C<br>95<br>9500C | 3" | 1¼" | – |
| L1 | LAVATORY – UNDER COUNTER MOUNTED, VITREOUS CHINA, 19¼" X 15¾" BOWL SIZE & 5½" DEPTH (ADA COMPLIANT), REAR OVERFLOW, MOUNTING KIT & TEMPLATE<br><br>TRIM – FAUCET, 4" COVER PLATE, SINGLE CONTROL HANDLE, LESS POP–UP, 4 3/4" SPOUT, 3/8" O.D. COPPER INLET TUBES, 1/2 GPM AERATOR, SOFT–CLOSING VALVES, ADJUSTABLE LIMIT STOP, INTEGRAL FLOW CONTROL, POLISHED CHROME FINISH, INTEGRAL PERFORATED GRID DRAIN, 1 1/4" TAILPIECE.<br><br>SUPPLIES – ANGLE STOPS (1/2" I.P.S.) LOOSE KEY, C.P NIPPLES, ESCUTCHEONS, 12" X 3/8" FLEX RISER.<br><br>TRAP – CHROME PLATED CAST BRASS WITH CLEANOUT, 17 GAUGE SEAMLESS TUBULAR WALL BEAND, CAST BRASS SLIP NUTS, RUBBER WASHER, STEEL WALL FLANGE WITH SET SCREW, 1 1/4" O.D.<br><br>P–TRAP AND ANGLE VALVE ASSEMBLIES SHALL BE INSULATED WITH MOLDED SEAMLESS ANTI MICROBIAL MATERIAL. MINIMUM 3/16" THICKNESS, COLOR WHITE. | AMERICAN STANDARD<br>KOHLER<br>SLOAN<br><br>CHICAGO<br>T&S BRASS<br>ZURN<br><br>CHICAGO<br>MCGUIRE<br>ZURN<br><br>MCGUIRE<br>ZURN<br>SANITARY DASH<br><br>MCGUIRE<br>TRUEBRO<br>OR EQUAL | 9482.000<br>K–2211<br>SS–3001<br><br>2200–4<br>B–2711<br>Z82200–CPU<br><br>1017<br>H2165LKC<br>ZH–8822–LR–LK–HCI<br><br>8872<br>Z8700<br>R867–8<br><br>PW 2000 WC | 1¼" | ½" | ½" |
| PFF | POT/KETTLE FILL FAUCET – WALL MOUNTED, CHROME PLATED BRASS BODY, 8" CENTERS, 18" DOUBLE JOINT SWING NOZZLE W/ HEAT RESISTANT HANDLE, CERAMIC CARTRIDGE W/ CHECK VALVE, 2.2 GPM, LEVER HANDLES, ½" NPT FEMALE INLET. INSTALL VALVE AT 50" A.F.F. UNLESS OTHERWISE NOTED ON ARCHITECTURAL PLANS. | T&S BRASS<br>CHICAGO | B–0597–LF20 | – | ½" | ½" |

(1) BRANCH CONNECTION SIZES ARE INTENDED FOR BRANCH SIZES FROM WATER SUPPLY. REFER TO DESCRIPTION IN SCHEDULE FOR ACTUAL ROUGH IN PIPE SIZE CONNECTION TO FIXTURE.


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EMI Job No. 22-0480 Drawn By:SGD/RJF Checked By: JSW


HILLSBOROUGH COUNTY
BOARD OF COUNTY
COMMISSIONERS COUNTY
CENTER
601 E KENNEDY BLVD
TAMPA FL 33601

PROJECT ADDRESS:
10508 MAIN ST.
THONOTOSASSA, FL 33592

HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2216-05

| DISTRIBUTION | DATE |
|---|---|
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

PLUMBING FIXTURE SCHEDULE

P6.1

## SECURITY LEGEND

| | |
|---|---|
| KP | ACCESS CONTROL KEY PAD, @ 44" A.F.F. |
| CR | CARD/ PROXIMITY READER @44" A.F.F. BOTTOM. UNLESS NOTED OTHERWISE. |
| DC | RECESSED WIRED DOOR CONTACT TO WIRELESS TRANSMITTER. REFER TO DETAILS AND SPECIFICATION. |
| ES | ACCESS CONTROL ELECTRIC STRIKE LOCK. (COORDINATE WITH DOOR HARDWARE PROVIDER. |
| EL | ELECTRIC LOCK. COORDINATE WITH DOOR HARDWARE PROVIDER. |
| RE | REQUEST TO EXIT DEVICE (SENSOR, INTEGRAL LOCK SWITCH OR PUSH TO EXIT BUTTON). REFER TO FLOOR PLANS. |
| IRS | INTERCOM REMOTE STATION. MOUNT AT 48" AFF TO CENTER. PROVIDE DATA CABLE TO LOCAL DATA ROOM. |
| IMS | INTERCOM MASTER STATION. MOUNT AT 48" AFF TO CENTER. PROVIDE DATA CABLE TO LOCAL DATA ROOM. |
| CAM +XX'–XX" | INTERIOR CAMERA. PROVIDE CAMERA CABLE TO IDF ROOM. CEILING MOUNTED UNLESS HEIGHT SHOWN. REFER TO SPECIFICATIONS. |
| WP CAM +XX'–XX" | WEATHERPROOF CAMERA. PROVIDE CAMERA CABLE TO IDF ROOM. PROVIDE J–BOX AT EXTERIOR WITH 3/4" CONDUIT TO NEAREST ACCESSIBLE CEILING. CEILING MOUNTED UNLESS HEIGHT SHOWN. |

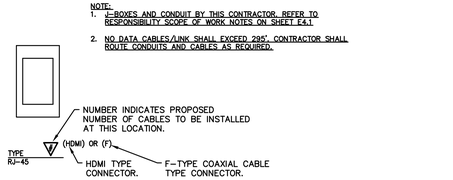
NOTE:

1. J–BOXES AND CONDUIT BY THIS CONTRACTOR. REFER TO RESPONSIBILITY SCOPE OF WORK NOTES ON SHEET E4.1
2. ALL WALL MOUNTED INTERIOR AND EXTERIOR CAMERA HEIGHTS SHOWN FOR REFERENCE ONLY. COORDINATE FINAL MOUNTING HEIGHTS WITH SECURITY INTEGRATOR PRIOR TO INSTALLATION.
3. PROVIDE 20' SERVICE LOOP OF REQUIRED CABLE AT IDF ROOM AND 20' AT DEVICE PLUS THE LENGTH OF THE CONDUIT AT LOCATIONS SHOWN. UNLESS NOTED OTHERWISE.
4. ANY EXTERIOR WALL PENETRATIONS REQUIRED FOR SURVEILLANCE CAMERAS/ ACCESS CONTROL SHALL BE COORDINATED WITH THE CONSTRUCTION MANAGER AND OWNER'S SECURITY INTEGRATOR PRIOR TO ANY DRILLING.
5. WHERE CAMERAS INSTALLED IN HARD/ INACCESSIBLE CEILINGS OR WALLS PROVIDE 3/4" CONDUIT TO NEAREST ACCESSIBLE CEILING. PROVIDE CABLE COILED AT ACCESSIBLE CEILING WITH LENGTH REQUIRED TO REACH CAMERA PLUS SERVICE LOOP.

## DATA/ AV LEGEND

STATION, WAP, PHONE AND ETC. DROPS.

NOTE:
1. J–BOXES AND CONDUIT BY THIS CONTRACTOR. REFER TO RESPONSIBILITY SCOPE OF WORK NOTES ON SHEET E4.1
2. NO DATA CABLES/LINK SHALL EXCEED 295' CONTRACTOR SHALL ROUTE CONDUITS AND CABLES AS REQUIRED.




SPECIALTY DROPS.

- (2) TV — TV MONITOR SYSTEMS BOX. PROVIDE (1) DATA CABLE, (1) F–TYPE CONNECTOR WITH RG–6 CABLE TO LOCAL DATA CLOSET. REFER TO DETAILS FOR ROUGH–IN AND SPECIFICATIONS FOR MORE INFORMATION IN EACH SPACE.
- (2) (2) TV A/V — TV MONITOR SYSTEMS BOX. PROVIDE (2) DATA CABLES, (1) F–TYPE CONNECTOR WITH RG–6 CABLE TO LOCAL DATA CLOSET AND A/V CABLES WHERE SHOWN IN DETAILS. REFER TO DETAILS FOR ROUGH–IN, SYSTEMS INTERFACE CABLING AND SPECIFICATIONS FOR MORE INFORMATION IN EACH SPACE.
- CEILING MOUNTED PROJECTOR. PROVIDE (2) DATA CABLES, (1) F–TYPE CONNECTOR WITH RG–6 CABLE TO LOCAL DATA CLOSET. PROVIDE A/V CABLES WHERE SHOWN IN DETAILS. REFER TO DETAILS FOR ROUGH–IN, SYSTEMS INTERFACE CABLING AND SPECIFICATIONS FOR MORE INFORMATION IN EACH SPACE.

MODULAR VOICE/DATA/VIDEO OUTLET LEGEND (DEVICES MOUNTED AT 16" BOTTOM A.F.F. UNLESS NOTED OTHERWISE)

FOR EACH FACE PLATE SHOWN PROVIDE (1) DOUBLE GANG BOX WITH SINGLE GANG MUD RING AND (2) 1" CONDUITS TO 6" ABOVE ACCESSIBLE CEILING. U.O.N..

## TYPICAL COMMUNICATIONS, LOW VOLTAGE SUFFIX/ ABBREVIATIONS LEGEND:

OSP = OUTSIDE PLANT CABLE.
MM = MULTI MODE FIBER OPTIC CABLE.
SM = SINGLE MODE FIBER OPTIC CABLE.
AFF = ABOVE FINISHED FLOOR.
AFG = ABOVE FINISHED GRADE.
U.O.N. = UNLESS OTHERWISE NOTED.
WAP = WIRELESS ACCESS POINT.
TYP = TYPICAL.
O.F.E. = OWNER FURNISHED EQUIPMENT.
E = EXISTING TO REMAIN..
ER = EXISTING TO BE REPLACED.
D = EXISTING TO BE DEMOLISHED.

## ALERTING SYSTEM SYMBOL LEGEND

| SYMBOL. | DESCRIPTION. | MOUNTING OPTIONS. | MOUNTING HEIGHT. | CONDUIT NEEDS. | J–BOX NEEDS. |
|---|---|---|---|---|---|
| MR2 | G2 MESSAGE REMOTE 2 | RACK MOUNTED. | N/A | PROVIDE CONDUIT SLEEVE FROM CABINET TO ABOVE ACCESSIBLE CEILING. REFER TO SHEET E4.1 | N/A |
| RR2 | G2 ROOM REMOTE 2 | WALL | 52" AFF; ROUGH–IN BOX 4–6" AWAY FROM ANY LIGHT SWITCH | 3/4" EMT STUB TO ACCESSIBLE CEILING | 4–GANG BOX (RACO #943 – 2.5"D) W/ MUD RING |
| CIR | G2 COLOR INDICATOR REMOTE | WALL | 16'–0' AFF | 3/4" EMT CONDUIT TO ACCESSIBLE CEILING | 4–GANG BOX (RACO #943 – 2.5"D) W/ MUD RING |
| PB RED | PUSH BUTTON – BLACK | WALL | SWITCH HEIGHT | 3/4" EMT STUB TO ACCESSIBLE CEILING | SINGLE GANG BOX, VERTICAL |
| PB BLACK | PUSH BUTTON – BLACK | WALL | SWITCH HEIGHT | 3/4" EMT STUB TO ACCESSIBLE CEILING | SINGLE GANG BOX, VERTICAL |
| STR | G2 STROBE LIGHT | INTERIOR WALL | 12" FROM FINISHED CEILING | 3/4" EMT STUB TO ACCESSIBLE CEILING | SINGLE GANG BOX, VERTICAL |
| S LED | G2 LED SPEAKER, FLUSH MOUNT | DROP CEILING | N/A | N/A | FOR INSTALLATION IN HARD CEILING ONLY, REQUIRES BACKBOX (BOGEN #RE84) |
| HS | SPEAKER, WEATHER–PROOF | APPARATUS BAY | 12'–0' AFF OR U.O.N.. | 3/4" EMT CONDUIT TO ACCESSIBLE CEILING | SINGLE GANG BOX, VERTICAL |
| S | SPEAKER, FLUSH MOUNT | DROP CEILING | N/A | N/A | FOR INSTALLATION IN HARD CEILING ONLY, REQUIRES BACKBOX (BOGEN #RE84) |
| S MB | SPEAKER, METAL BOX | INTERIOR WALL OR HARD CEILING | N/A | 3/4" EMT CONDUIT TO ACCESSIBLE CEILING | N/A |
| GSS | G2 MESSAGE SIGN (STANDARD 24") | INTERIOR WALL | 6" FROM TOP OF DOOR FRAME OR 12" FROM FINISHED CEILING WHEN NOT ABOVE DOOR | 3/4" EMT CONDUIT TO ACCESSIBLE CEILING | SINGLE GANG BOX, VERTICAL |
| | ARTICULATING ARM MOUNT – LONG | WALL | 9'–0" AFF | 3/4" EMT CONDUIT TO ACCESSIBLE CEILING | SINGLE GANG BOX, VERTICAL |
| ATX | G2 ATX STATION CONTROLLER | RACK MOUNTED. | N/A | PROVIDE CONDUIT SLEEVE FROM CABINET TO ABOVE ACCESSIBLE CEILING. REFER TO SHEET E4.1 | N/A |
| UPS | G2–UNINTERRUPTIBLE POWER SUPPLY | RACK MOUNTED. | N/A | N/A | N/A |
| AMP | OEM AMPLIFIER | RACK MOUNTED. | | PROVIDE CONDUIT SLEEVE FROM CABINET TO ABOVE ACCESSIBLE CEILING. REFER TO SHEET E4.1 | N/A |
| LED | LED, FLUSH MOUNT | DROP CEILING | N/A | 3/4" EMT CONDUIT TO ACCESSIBLE CEILING | REFER TO EQUIPMENT VENDOR'S SHOP DRAWINGS FOR BACK BOX REQUIREMENTS AT HARD CEILINGS. |
| VC | VOLUME CONTROL | WALL | SWITCH HEIGHT | 3/4" EMT STUB TO ACCESSIBLE CEILING | SINGLE GANG BOX, VERTICAL |
| MIC | DESKTOP MICROPHONE | COUNTER | COUNTER | 3/4" EMT STUB TO ACCESSIBLE CEILING | SINGLE GANG BOX, VERTICAL |
| I/O | G2 I/O REMOTE | RACK MOUNTED. | N/A | PROVIDE CONDUIT SLEEVE FROM CABINET TO ABOVE ACCESSIBLE CEILING. REFER TO SHEET E4.1 | N/A |
| ADP | ADAPTER PLACE DOUBLE | N/A | N/A | N/A | N/A |

## ELECTRICAL SYMBOL LEGEND

| SYMBOL | DESCRIPTION | MOUNTING AND NOTES |
|---|---|---|
| | TYPICAL LIGHTING SYMBOL NOTES:<br>1. UPPER CASE LETTER DENOTES FIXTURE TYPE, SEE FIXTURE SCHEDULE<br>2. LOWER CASE LETTER DENOTES SWITCHED LEG<br>3. SHADED FIXTURE SYMBOL INDICATES EMERGENCY LIGHT.<br>4. 'NL' DENOTES NIGHT LIGHT CIRCUIT<br>5. FIXTURES MARKED WITH ⊗ INDICATE STUMBLE LIGHT. | |
| | CEILING OUTLET FOR INCANDESCENT, "PL" FLUORESCENT OR HIGH INTENSITY DISCHARGE DISCHARGE DOWNLIGHT FIXTURE.<br>SHADED FIXTURE SYMBOL INDICATES EMERGENCY LIGHT.<br>FIXTURES MARKED WITH X INDICATE STUMBLE LIGHT. | SEE FIXTURE SCHEDULE |
| | WALL OUTLET FOR INCANDESCENT,"PL" FLUORESCENT OR HIGH INTENSITY FIXTURE (WALL SCONCE, WALL PACK)<br>SHADED FIXTURE SYMBOL INDICATES EMERGENCY LIGHT. | SEE FIXTURE SCHEDULE |
| | CEILING OUTLET FOR 2'x4' FLUORESCENT FIXTURE.<br>SHADED FIXTURE SYMBOL INDICATES EMERGENCY LIGHT. | SEE FIXTURE SCHEDULE |
| | CEILING OUTLET FOR 2'x2' FLUORESCENT FIXTURE.<br>SHADED FIXTURE SYMBOL INDICATES EMERGENCY LIGHT. | SEE FIXTURE SCHEDULE |
| | CEILING OUTLET FOR 1'x4' FLUORESCENT FIXTURE. (SURFACE, RECESSED, WRAPAROUND, VANDAL–PROOF)<br>SHADED FIXTURE SYMBOL INDICATES EMERGENCY LIGHT. | SEE FIXTURE SCHEDULE |
| | CEILING OUTLET FOR FLUORESCENT FIXTURE. (PENDANT MOUNT, CHANNEL, INDUSTRIAL)<br>SHADED FIXTURE SYMBOL INDICATES EMERGENCY LIGHT. | SEE FIXTURE SCHEDULE |
| | CEILING OUTLET FOR SINGLE FACE EXIT LIGHT FIXTURE. ARROW INDICATES DIRECTION | SEE FIXTURE SCHEDULE |
| | CEILING OUTLET FOR DOUBLE FACE EXIT LIGHT FIXTURE. ARROW INDICATES DIRECTION | SEE FIXTURE SCHEDULE |
| | EMERGENCY BUG EYE FIXTURE. WALL OR CEILING MOUNT | SEE FIXTURE SCHEDULE |
| | TYPICAL SWITCH SUFFIX LEGEND:<br>3 = 3–WAY<br>4 = 4–WAY<br>OS = INTEGRAL OCCUPANCY SENSOR<br>VS = VACANCY SENSOR<br>K = KEYED<br>LOWER CASE (a,b) = SWITCH LEG | |
| $ | SINGLE POLE SWITCH | 44"AFF TO BOTTOM U.O.N. |
| | DIGITAL DIMMING SWITCH | 44"AFF TO BOTTOM U.O.N. |
| | DIGITAL ON/OFF SWITCH | 44"AFF TO BOTTOM U.O.N. |
| OS | CEILING OCCUPANCY SENSOR | SEE SPECIFICATIONS |
| VS | CEILING VACANCY SENSOR | SEE SPECIFICATIONS |
| | TYPICAL RECEPTACLE, OUTLET AND JUNCTION BOX SUFFIX LEGEND:<br>EWC = ELECTRIC WATER COOLER<br>GFI = GROUND FAULT INTERRUPTER<br>UP = UP (CONDUIT)<br>DN = DOWN (CONDUIT)<br>R = RANGE<br>WP = WEATHERPROOF<br>REF = REFRIGERATOR | |
| | DUPLEX RECEPTACLE (20A,120V). FLOOR | FLUSH FLOOR OUTLET |
| | DUPLEX RECEPTACLE (20A, 120V). | M.H. 18" AFF TO CENTER U.O.N. |
| | DUPLEX RECEPTACLE (20A, 120V). ABOVE COUNTER. MOUNT HORIZONTALLY WHEN ABOVE COUNTERTOPS | 42"AFF, ABOVE COUNTER BACKSLASH U.O.N. |
| | DUPLEX RECEPTACLE (20A, 120V). FLUSH WITH CEILING. | FLUSH WITH CEILING |
| | DOUBLE DUPLEX RECEPTACLE (20A, 120V). | M.H. 18" AFF TO CENTER U.O.N. |
| PH | DUPLEX RECEPTACLE (20A, 120V) FOR WALL MOUNTED, TELEPHONE HANDSETS. | 54"AFF, U.O.N. |
| R | RANGE RECEPTACLE, 50A, 250V, ONE PHASE, FOUR WIRE. | 4" AFF. U.O.N. |
| D | DRYER RECEPTACLE, 30A, 250V, ONE PHASE, FOUR WIRE. | 36" AFF. U.O.N. |
| | SPECIAL PURPOSE RECEPTACLE, AMPS, VOLTS AND WIRE AS NOTED. | M.H. 18" AFF TO CENTER U.O.N. |
| J | JUNCTION OR OUTLET BOX, 4" SQUARE BOX U.O.N. | AS NOTED |
| 30/3 | NON–FUSIBLE DISCONNECT SWITCH, 30A, 3 POLE, U.O.N. | SEE SPECIFICATIONS |
| 60/40/3 | FUSIBLE DISCONNECT SWITCH, AMPS/FUSE SIZE/NO. POLES AS NOTED. | SEE SPECIFICATIONS |
| | COMBINATION MAGNETIC MOTOR STARTER | SEE SPECIFICATIONS |
| 3 | MOTOR, NUMERAL INDICATES HORSEPOWER | BY OTHER DIVISION |
| | ELECTRIC DUCT HEATER | BY OTHER DIVISION |
| | PANELBOARD, 120/208V., 3 PH., 4W | 6'–6"AFF MIN. TO TOP |
| TTB | TELEPHONE TERMINAL BOARD, AS NOTED | 6'–6"AFF MIN. TO TOP |
| UP | RACEWAY RISER, UP OR DOWN AS NOTED. | SEE SPECIFICATIONS |
| | RACEWAY CONCEALED UNDER FLOOR, IN SLAB OR BELOW GRADE | SEE SPECIFICATIONS |
| | RACEWAY CONCEALED IN WALL OR CEILING | SEE SPECIFICATIONS |
| L1B–1,3 | HOMERUN TO PANEL, LETTERS INDICATE PANEL, NUMBERS INDICATE CIRCUITS. | SEE SPECIFICATIONS |
| EPO | EMERGENCY POWER OFF SWITCH WITH LEGEND PLATE IDENTIFYING IT AS "EMERGENCY POWER OFF." | M.H. 48" TO TOP, U.O.N. |
| C | MECHANICALLY HELD 6 POLE CONTACTOR WITH 120V COIL CLEARING CONTACTS MOUNTED IN NEMA–1 ENCLOSURE ABOVE SUSPENDED CEILING. | MOUNTED ABOVE CEILING |
| 22 | REFER TO LIKE NUMBERED KEY NOTES. | |
| B | "NUTONE" #LA52WH WITH C90S TRANSFORMER. MOUNT ON SINGLE GANG BOX WITH 3/4" CONDUIT TO ABOVE ACCESSIBLE CEILING. PUSH BUTTONS DESIGNATED TONE 1 & 3 SHALL ACTIVATE DISTINCT MUSICAL TONES. PUSH BUTTON DESIGNATED TONE 2 SHALL ACTIVATE TWO–NOTE CHIME. | 8" BELOW CEILING, U.O.N. |

NOTE:
NOT ALL SYMBOLS SHOWN IN THIS LEGEND MAY NECESSARILY APPEAR IN THESE DOCUMENTS. ADDITIONAL SYMBOLS MAY BE DEFINED ELSEWHERE IN SPECIFIC DRAWINGS.

## GENERAL NOTES ELECTRICAL

1. DO NOT SCALE FROM THESE DRAWINGS.
2. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE EDITION EFFECTIVE AT THE TIME OF PERMIT.
3. ELECTRICAL CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER TRADES TO ASSURE PROPER CLEARANCES FOR EQUIPMENT AND TO KEEP THE JOB PROGRESSING.
4. ALL EMERGENCY SYSTEMS SHALL BE RUN IN SEPARATE RACEWAY/CONDUIT SYSTEM(S).
5. PROVIDE CEILING MOUNTED RED L.E.D. ALARM INDICATOR FOR EACH SMOKE DETECTOR MOUNTED IN PLENUM SPACE(S) OR CONCEALED AREAS.
6. FROM EACH FLUSH MOUNTED PANELBOARD, STUB–OUT INTO CEILING CAVITY ABOVE, A 3/4" C. FOR EACH SET OF 3 – SPARES AND/OR SPACES OR FRACTIONS OF EITHER SET THEREOF.
7. MOTOR CONTROL: REFER TO MECHANICAL DRAWINGS; FOR MOTORS INDICATED TO BE INTERLOCK, AS WELL AS, STARTERS, ETC. PROVIDED BY THE MECHANICAL CONTRACTOR.
8. ALL CEILING MOUNTED ITEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. IF LOCATION FOR AN ITEM IS NOT SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLANS, VERIFY THE EXACT LOCATION OF THE ITEM WITH THE ARCHITECT PRIOR TO INSTALLATION. THESE REQUIREMENTS APPLY TO ALL CEILING TYPES IN ALL AREAS. IF A GREATER QUANTITY IS SHOWN ON THE ELECTRICAL PLANS, PROVIDE THE GREATER QUANTITY.
9. PROVIDE ADEQUATE POWER IN THE FIRE ALARM SYSTEM TO OPERATE ALL LIFE SAFETY SYSTEM AND E.M.C.S. CONTROL DEVICES.
10. REFER TO DIVISION 15 DRAWINGS FOR LOCATIONS OF FIRE PROTECTION WATER FLOW AND TAMPER SWITCHES. PROVIDE/ COORDINATE WIRING REQUIREMENTS.
11. WHERE NON–FUSED DISCONNECT IS NOT PROVIDED "WITHIN SIGHT" OF MOTOR (OR HEATER UNIT). FEEDER (AND/OR BRANCH CIRCUIT) OVER–CURRENT DEVICE SERVING SUCH MOTOR (OR HEATER) SHALL HAVE APPROVED "LOCKED–OFF" PROVISION.
12. PROVIDE WALL SWITCHES IN EACH OFFICE/AREA TO CONTROL THE LIGHT FIXTURE(S) IN EACH OFFICE/AREA.
13. REFERENCE MECHANICAL DRAWINGS FOR ALL MECHANICAL EQUIPMENT NEEDING ELECTRICAL CONNECTIONS. MAKE ALL CONNECTIONS AND PROVIDE APPROPRIATE WIRE CONDUIT AND OVERCURRENT PROTECTION FOR ALL EQUIPMENT. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR.
14. PROVIDE EXIT SIGNAGE AT ALL EXITS AND AS REQUIRED.
15. RECEPTACLES IN MECHANICAL ROOM, ELECTRICAL ROOMS, STORAGE ROOMS AND JANITOR CLOSETS TO BE MOUNTED 48" A.F.F. AND G.F.I.
16. ALL EXTERIOR WIRING DEVICES TO BE WEATHERPROOF AND GROUND INTERRUPTING TYPE.
17. REFER TO ARCHITECTURAL FLOOR PLANS FOR DIMENSIONAL LOCATIONS OF ALL FLOOR MOUNTED ELECTRICAL DEVICES.
18. CONDUIT RUNS SHOWN ARE DIAGRAMMATIC IN NATURE. CONTRACTOR IS RESPONSIBLE FOR SIZING AND LOCATING PULL BOXES PER NEC AND FOR COORDINATION WITH OTHER DISCIPLINES.
19. ALL H.I.D. AND FLUORESCENT LIGHT FIXTURES SALL BE FURNISHED WITH INTEGRAL FUSING.
20. COORDINATE EXACT LOCATIONS OF ALL ITEMS INSTALLED ON SITE WITH CIVIL ENGINEER.
21. COORDINATE ALL LOCATIONS OF RECEPTACLES AND SYSTEMS OUTLETS WITH IN ALL CASEWORK.
22. USE 10 AWG CU. CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 75 FEET. USE 10 AWG CU. CONDUCTORS FOR 20 AMPERE, 277 VOLT BRANCH CIRCUITS LONGER THAN 200 FEET.
23. ALL SITE LIGHTING POLES AND POLE BASES SHALL BE CAPABLE OF SUPPORTING THE ENTIRE WEIGHT OF THE LIGHTING SYSTEM AT THE PROJECT'S WIND LOAD CRITERIA. SHOP DRAWINGS MUST INCLUDE DRAWINGS OF THE ENTIRE ASSEMBLY FOR EACH OF THE MOUNTING CONFIGURATIONS USED. DRAWINGS MUST BE SIGNED AND SEALED BY A FLORIDA REGISTERED STRUCTURAL ENGINEER.
24. ALL CONDUCTORS SHALL BE STRANDED WIRE TYPE.

## ELECTRICAL SYMBOL LEGEND

| SYMBOL | DESCRIPTION | MOUNTING AND NOTES |
|---|---|---|
| | TYPICAL FIRE ALARM DEVICE SUFFIX LEGEND.<br>F = FLASHING STROBE LIGHT<br>S = SUPPLY<br>R = RETURN | |
| S | FIRE ALARM PHOTOELECTRIC SMOKE DETECTOR | CEILING, U.O.N. |
| S DT | FIRE ALARM PHOTOELECTRIC DETECTOR. INSIDE DUCT. PROVIDE RELAY, TEST SWITCH AND LIGHT AS REQUIRED. (COORDINATE WITH MECHANICAL CONTRACTOR.) | DUCT |
| F | FIRE ALARM MANUAL PULL STATION | 48"AFF TO TOP, U.O.N. |
| R | FIRE ALARM SYSTEM FAN OR AHU SHUTDOWN OR RUN RELAY | |
| S TL | FIRE ALARM DUCT SMOKE DETECTOR TEST SWITCHES & LIGHTS. ONE PER SMOKE DUCT DETECTOR | 48"AFF TO TOP, U.O.N. |
| F | FIRE ALARM HORN/ FLASHING STROBE LIGHT. 75 CANDELA MIN U.O.N. | 80" AFF TO BOTTOM OF BOX, U.O.N. |
| F LF | FIRE ALARM HORN/ FLASHING STROBE LIGHT. 75 CANDELA MIN U.O.N. – LOW FREQUENCY. | 80" AFF TO BOTTOM OF BOX, U.O.N. |
| F LF | FIRE ALARM HORN ONLY. – LOW FREQUENCY. | WALL 90" A.F.F. TO TOP OR 6" BELOW CEILING MTD. |
| F | FIRE ALARM WITH FLASHING STROBE LIGHT. 75 CANDELA MIN U.O.N. | 80" AFF TO BOTTOM OF BOX, U.O.N. |
| FACP | FIRE ALARM CONTROL PANEL. | M.H. 60" MIN. TO TOP |
| FS | FIRE ALARM WATER TAMPER SWITCH. | 48"AFF TO TOP, U.O.N. |
| FS | FIRE ALARM WATER FLOW SWITCH. | 48"AFF TO TOP, U.O.N. |
| S | SOUND SYSTEM SPEAKER FOR RADIO ALARM SYSTEM.. | CEILING,U.O.N. |
| PRS H | POWER RESET SWITCH WITH LEGEND PLATE IDENTIFING IT AS 'POWER RESET SWITCH'. | M.H. 48" TO TOP, U.O.N. |
| C | MECHANICALLY HELD 6 POLE CONTACTOR WITH 120V COIL CLEARING CONTACTS MOUNTED IN NEMA–1 ENCLOSURE ABOVE SUSPENDED CEILING. | MOUNTED ABOVE CEILING |
| ## | REFER TO LIKE NUMBERED KEY NOTES. | |
| TG RE | 2X4X3 'J' BOX AND 1/2" CONDUIT TO ABOVE CL'G FOR TONE BOX WIRING AND DEVICES BY BORRELL ELECTRIC INC. | 72" AFF TO TOP U.O.N. |
| DC | 24V. DOOR BELL CHIME | 80" AFF TO TOP U.O.N. |
| PB | 24V. PUSH BUTTON (WEATHER PROOF) FOR DOOR BELL CHIMES.<br>24V. PUSH BUTTON FOR DOOR BELL STRIKE. | 48" AFF TO TOP U.O.N. |
| R | TEAR AND GO RESET BUTTON. | PER ARCHITECTS DETAIL. |
| CO | CARBON MONOXIDE SENSOR AS MANUFACTURED BY EST. SENSOR SHALL BE TIED INTO THE BUILDING FIRE ALARM SYSTEM FOR MONITORING AND ALARM. COORDINATE SENSOR MOUNTING HEIGHT WITH MANUFACTURER REQUIREMENTS. SENSOR SHALL BE ADDRESSABLE DEVICE OR MONITORED BY ADDRESSABLE FIRE ALARM MODULE. | AS REQUIRED. |
| AR AM | FIRE ALARM ADDRESSABLE RELAY/ MONITOR MODULE | |
| F | FIRE ALARM WITH FLASHING STROBE LIGHT. 75 CANDELA MIN U.O.N. | CEILING, U.O.N. |
| F | FIRE ALARM HORN/ FLASHING STROBE LIGHT. 75 CANDELA MIN U.O.N. | CEILING, U.O.N. |
| $H | MOTOR RATED SWITCH WITHOUT THERMAL OVERLOADS FOR FRACTIONAL HORSEPOWER MOTORS. | SEE SPECIFICATIONS |
| Ssc | SPEED CONTROL | SEE SPECIFICATIONS |
| S SB | FIRE ALARM PHOTOELECTRIC SMOKE DETECTOR WITH LOW FREQUENCY SOUNDER BASE AS PER NFPA 72 REQUIREMENTS. SOUNDER BASE SHALL ACTIVATE ON LOCAL ALARM ONLY AND TRANSMIT SUPERVISORY SIGNAL TO FACP. PROVIDE ALL RELAYS AND PROGRAMING AS REQUIRED FOR FULLY FUNCTIONAL SYSTEM. | CEILING, U.O.N. |

NOTE:
NOT ALL SYMBOLS SHOWN IN THIS LEGEND MAY NECESSARILY APPEAR IN THESE DOCUMENTS. ADDITIONAL SYMBOLS MAY BE DEFINED ELSEWHERE IN SPECIFIC DRAWINGS.

## FUNCTIONAL TESTING NOTE

CONTRACTOR SHALL PROVIDE FUNCTIONAL TESTING OF THE LIGHTING CONTROL SYSTEM TO ENSURE COMPLIANCE WITH FEEC C408.3


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WILDERARCHITECTURE, INC.


STANLEY P. NEWTON LICENSE No. 35501 STATE OF FLORIDA REGISTERED PROFESSIONAL ENGINEER

This item has been electronically signed and sealed by Stanley P. Newton, P.E. using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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EMI Job No. 22-0480 Drawn By: EM Checked By: JSW

HILLSBOROUGH COUNTY
BOARD OF COUNTY
COMMISSIONERS COUNTY
CENTER
601 E KENNEDY BLVD
TAMPA FL 33601

PROJECT ADDRESS:
10508 MAIN ST.
THONOTOSASSA, FL 33592

HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2216-05

| DISTRIBUTION | DATE |
|---|---|
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

ELECTRICAL LEGEND

E0.0

# LUMINAIRE SCHEDULE

| TYPE | MANUFACTURER | CATALOG NUMBER | LIGHT SOURCE TYPE | DELIVERED LUMENS | KELVIN COLOR TEMP | INPUT WATTS | DIMMING | VOLTS | MOUNTING | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| A | LITHONIA<br>METALUX<br>COLUMBIA | 2-GTL-2-20L-A12125-GZ10-LP840<br>22GR<br>LJT22 | LED | 2338 | 4000 | 19 | YES | 120 | RECESSED IN CEILING GRID | 2X2 LENSED LED TROFFER; WHITE METAL HOUSING WITH .125" PRISMATIC LENS. |
| A1 | LITHONIA<br>METALUX<br>COLUMBIA | 2-GTL-2-30L-A12125-GZ10-LP840<br>22GR<br>LJT22 | LED | 3495 | 4000 | 29 | YES | 120 | RECESSED IN CEILING GRID | 2X2 LENSED LED TROFFER; WHITE METAL HOUSING WITH .125" PRISMATIC LENS. |
| B | LITHONIA<br>METALUX<br>COLUMBIA | 2-GTL-4-30L-A12125-GZ10-LP840<br>24GR<br>LJT24 | LED | 3102 | 4000 | 23 | YES | 120 | RECESSED IN GRID / HARD CEILING | 2X4 LENSED LED TROFFER; WHITE METAL HOUSING WITH .125" PRISMATIC LENS. PROVIDE DRYWALL GRID ADAPTER FOR FIXTURES IN HARD CEILINGS. |
| B1 | LITHONIA<br>METALUX<br>COLUMBIA | 2-GTL-4-40L-A12125-GZ10-LP840<br>24GR<br>LJT24 | LED | 4079 | 4000 | 30 | YES | 120 | RECESSED IN GRID / HARD CEILING | 2X4 LENSED LED TROFFER; WHITE METAL HOUSING WITH .125" PRISMATIC LENS. PROVIDE DRYWALL GRID ADAPTER FOR FIXTURES IN HARD CEILINGS. |
| C | JUNO<br>HALO-REC<br>ELITE | IC22R-27CWH<br>E7RICAT-30CAT<br>B6IC | E26 CREE LED BULB 75W EQUIV. | 1100 | 4000 | 12 | YES | 120 | RECESSED IN CEILING GRID | 6" RECESSED DOWN LIGHT FIXTURE. CLEAR SPECULAR REFLECTOR. |
| C1 | JUNO<br>HALO-REC<br>ELITE | IC22R-241PW<br>E7RICAT-171PS<br>B6IC | E26 CREE LED BULB 100W EQUIV. | 1600 | 4000 | 17 | NO | 120 | RECESSED IN CEILING GRID | 6" RECESSED SHOWER DOWN LIGHT FIXTURE. PLASTIC OPAL DROP LENS WITH WHITE TRIM RING. |
| D | LITHONIA<br>METALUX<br>COLUMBIA | CLX-L48-5000LM-SEF-RDL-GZ10-40K-80CRI<br>4SNX<br>MPS4 | LED | 5332 | 4000 | 35 | YES | 120 | WALL / SURFACE MOUNTED OR SUSPENDED WITH CHAIN | LED UTILITY STRIP LIGHT. SURFACE MOUNTED TO HARD CEILING OR SUSPENDED FROM STRUCTURE WITH CHAIN IN OPEN CEILING SPACES. COORDINATE WITH MECHANICAL DUCT EXACT MOUNTING REQUIREMENTS AND LOCATION. |
| EM | LITHONIA<br>SURE-LITES<br>COMPASS | EU2C-M6<br>SEL<br>CU2 | LED | N/A | N/A | N/A | N/A | 120 | WALL OR CEILING VERIFY | BUG-EYE EMERGENCY LIGHT. PROVIDE WITH NICKLE CADMIUM BATTERY BACKUP WITH MIN. 90 MINUTE CAPACITY. |
| F | BROWNLEE<br>TERON LIGHTING<br>ELITE | 5038-37-NT-H25-40K<br>DP36-L30.0<br>3-OVL | LED | 2980 | 4000 | 37 | NO | 120 | WALL MOUNTED ABOVE MIRROR | 3' LED WALL MOUNTED VANITY FIXTURE. METAL HOUSING WITH SATIN FINISH. WHITE ACRYLIC DIFFUSER. COORDINATE MOUNTING HEIGHT WITH MIRROR INSTALLER. |
| G | LITHONIA<br>METALUX<br>COLUMBIA | FEM-L96-18000LM-LPACL-WD-120-GZ10-40K-80CRI<br>8VT2<br>LXEM8 | LED | 18240 | 4000 | 104 | NO | 120 | SURFACE MOUNTED | 1X8 LENSED VAPOR TIGHT TROFFER. CLEAR ACRYLIC DIFFUSER. WIDE DISTRIBUTION. WET LOCATION LISTED. |
| H | KENALL<br>FAIL-SAFE<br>LUMENCIA | M013HL-PP-MW-16L40-DV<br>B95-HE-WHT-LD4<br>LLFE113 | LED | 1574 | 4000 | 20 | YES | 120 | WALL MOUNTED ABOVE BUNK | SURFACE MOUNTED HEAVY DUTY DIE CAST WHITE ALUMINUM FIXTURE WITH U.V. STABILIZED TRANSLUCENT WHITE POLYCARBONATE LENS AND HALF-SHROUD HOOD TRIM. MATTE WHITE FINISH. |
| J | GOTHAM LIGHTING<br>PORFOLIO<br>PRESCOLITE | IVO4CYL-WC-D-10LM-27K-80CRI-MWD-MINI0-MVOLT-ZT-L5-JBX-DN-X-X<br>LER4D<br>LTC-4RDW | LED | 777 | 2700 | 8 | NO | 120 | WALL MOUNTED | 4" WALL MOUNTED CYLINDER SCONCE. DIRECT DISTRIBUTION. COORDINATE FINISH WITH ARCHITECT. |
| M | CANLITE<br>OR APPROVED EQUAL | 02-I-C-F-01-0G-11-MOUNTING OPTION #4 | E26 INCAND. BULB 200W | 3000 | 4000 | 50 | NO | 120 | SURFACE MOUNTED | VAPORTITE FIXTURE. GLASS GLOBE WITH DIE CASE BASE AND WIRE GUARD. WET LOCATION LISTED. |
| N | ANP LIGHTING<br>BARN | ORB16-CL-M010LDD-W-40K-RTCW-E27-43-UNV<br>BLE | LED | 1200 | 4000 | 12 | NO | 120 | WALL MOUNTED | VAPORTITE FIXTURE. ALUMINUM CONSTRUCTION. RED DOME SHADE, WIRE GUARD. RED GLASS GLOBE. WET LOCATION LISTED. |
| O | OGM<br>OR APPROVED EQUAL | RUNNING LIGHT LX2-SB #16144 | LED | N/A | N/A | N/A | N/A | 120 | WALL MOUNTED AT 7' AFF | GREEN LED SOURCE WALL MOUNTED SIGNAL LIGHT. PROVIDE IN-LINE TRANSFORMER AND LOCATE AS REQUIRED. U.L. LISTED FOR WET LOCATION. |
| POLE | UTILITIES STRUCTURES | | | | | | | | 18'-0" A.F.G. | DIRECT BURIAL SQUARE TAPERED CONCRETE POLE. POLE MFG. SHALL PROVIDE S&S SHOP DRAWING BY FLORIDA P.E. CONFIRMING OVERALL LENGTH AND BURIAL DEPTH REQUIRED TO MEET PROJECT WIND LOAD REQUIREMENTS. |
| S | LITHONIA<br>MCGRAW-EDISON<br>BEACON | DSX1-LED-P1-40K-T3M-208-SPA-DDBXD<br>GALN<br>VPS | LED | 6764 | 4000 | 54 | NO | 120 | POLE MOUNTED 18'-0" A.F.G. UNLESS OTHERWISE NOTED | LED SITE FIXTURE. SINGLE POLE MOUNT. PROVIDE MOUNTING BRACKET AND POLE. TYPE 3 DISTRIBUTION. PROVIDE INDIVIDUAL FUSING. |
| W | LITHIONIA<br>SPITZER<br>BEACON | WDGE2-LED-P2-40K-80CRI-VW-MVOLT-SRM-DDBXD<br>WPFP<br>RWL1 | LED | 2067 | 4000 | 15 | NO | 120 | WALL MOUNTED 8'-0" A.F.F. | LED ARCHITECTURAL WALL SCONCE. DIE CAST ALUMINUM HOUSING WITH DARK BRONZE FINISH. WIDE DISTRIBUTION. WET LOCATION LISTED. SHADED FIXTURE INDICATED EMERGENCY FIXTURE. PROVIDE EMERGENCY BATTERY BACK-UP OPTION. |

# LUMINAIRE SCHEDULE

| TYPE | MANUFACTURER | CATALOG NUMBER | LIGHT SOURCE TYPE | DELIVERED LUMENS | KELVIN COLOR TEMP | INPUT WATTS | DIMMING | VOLTS | MOUNTING | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| W1 | LUMINAIRE LED<br>LUMOUTDOOR | BLD-36IN-NODIM-30W-40K-MVOLT-DP-BRZ<br>XTO | LED | 3009 | 4000 | 30 | NO | UNV | WALL / MULLION MOUNTED | 36" LOW PROFILE LINEAR LED EGRESS FIXTURE. ALUMINUM HOUSING WITH DARK BRONZE FINISH. SHADED FIXTURE INDICATED EMERGENCY FIXTURE PROVIDE EMERGENCY BATTERY BACK-UP OPTION. |
| W2 | LITHONIA<br>COOPER<br>EXO | TWH-LED-20C-1000-40K-T3M-MVOLT-DDBXD<br>WPSQLED<br>PGM3 | LED | 6983 | 4000 | 72 | NO | UNV | WALL MOUNTED | LED WALL PACK. ALUMINUM HOUSING WITH GLASS LENS. DARK BRONZE FINISH. CONNECT SHADED FIXTURES TO RELAYED EMERGENCY CIRCUIT |
| X | LITHIONIA<br>SURE-LITES<br>DUALITE | LQC-W-X-R-EL-N<br>CX<br>SESRWE | LED | N/A | N/A | N/A | N/A | 120 | CEILING OR WALL VARIFY | EXIT LIGHT SOLID DIE-CAST ALUMINUM HOUSING WITH RED LED LAMP, STENCIL LETTERS, AND WHITE FINISH. SINGLE OR DOUBLE SIDED. NICKEL-CADMIUM BATTERY BACK-UP OPTION. |

NOTES:
1. PROVIDE FIXTURES WITH UNIVERSAL VOLTAGE DRIVERS U.O.N.
2. PROVIDE ALL COMPONENTS (SUPPORT, HANGERS, ETC.) FOR COMPLETE INSTALLATION.
3. THE ARCHITECT SHALL DETERMINE THE FINAL FINISHES AND COLORS FOR ALL FIXTURES.

SUBSTITUTION REQUESTS AND APPROVAL FOR EQUALS:
1. ONLY FIXTURES THAT ARE LISTED BY MANUFACTURER AND CATALOG NUMBER ARE APPROVED FOR BID. THE SPECIFIED FIXTURES HAVE BEEN SELECTED BASED ON PHOTOMETRIC PERFORMANCE, ELECTRICAL CHARACTERISTICS, VISUAL COMFORT, AESTHETIC APPEARANCE, HOUSING CONSTRUCTION, AND LONGEVITY.
2. CONTRACTORS WISHING TO PROPOSE ALTERNATE FIXTURES NOT LISTED ABOVE SHALL SUBMIT A FORMAL SUBSTITUTION REQUEST, IN WRITING, AT LEAST 15 DAYS PRIOR TO BID.
3. ALL ALTERNATE FIXTURE PACKAGES SUBMITTED FOR SUBSTITUTION REQUEST SHALL INCLUDE THE FOLLOWING:
   - 3.1. A LETTER FROM THE LIGHTING REPRESENTATIVE STATING THAT FIXTURES ARE EQUAL IN EVERY ASPECT TO THE SPECIFIED FIXTURES
   - 3.2. ALL CATALOG CUTSHEETS FOR THE ALTERNATE FIXTURES
   - 3.3. PHOTOMETRIC REPORTS DOCUMENTING: TOTAL DOWNWARD EFFICIENCY, PERCENTAGE OF UPLIGHT (FOR SITE FIXTURES), ETC. (REPORT SHALL BE EQUAL TO A BASIC PHOTOMETRIC TOOLBOX REPORT). POINT BY POINT PHOTOMETRIC CALCULATION FOR THE ENTIRE SITE AND A TYPICAL CALCULATION FOR EACH DIFFERENT TYPE OF SPACE AND/OR DIFFERENT FIXTURES USED IN SIMILAR SPACES.
4. APPROVALS, IF ANY, SHALL ONLY BE ISSUED BY THE ENGINEER OF RECORD IN THE FORM OF AN ADDENDUM TO THE BID DOCUMENTS.

# LIGHTING CONTROL SCHEDULE

| AREA | SENSOR SETTING | LENGTH OF OPERATION | ADDITIONAL NOTES |
|---|---|---|---|
| BATHROOMS | OCCUPANCY | 30 MINUTES | PROVIDE P.I.R. LINE VOLTAGE OCCUPANCY SWITCH. SWITCH SHALL HAVE (2) BUTTONS. (LIGHTS/EXHAUST FAN) SET SWITCH TO ALLOW FOR EXHAUST FAN TO RUN AFTER SPACE BECOMES UNOCCUPIED FOR COMPLIANCE WITH ASHRAE 62.2 |
| CORRIDORS | N/A | N/A | AUTOMATIC LIGHTING CONTROLS SHALL BE ARRANGED FOR COMPLIANCE WITH NFPA 101-7.8.1.2.2. THE LIGHTING CONTROL DEVICE SHALL AUTOMATICALLY ENERGIZE THE CONTROLLED LIGHTS UPON LOSS OF NORMAL POWER, OR BY ACTIVATION OF THE BUILDING FIRE ALARM SYSTEM. LIGHTING CONTROL DEVICES SHALL BE UL 924 LISTED. |
| STORAGE AREAS/JANITORIAL | OCCUPANCY | 10 MINUTES | |
| FRONT OFFICE | VACANCY | 30 MINUTES | |
| KITCHEN/DINING/DAYROOM* | N/A | N/A | |
| APPARATUS BAY* | N/A | N/A | |
| EXTERIOR / SITE LIGHTING | N/A | N/A | ALL EXTERIOR LIGHTING SHALL BE CONTROLLED BY PHOTOCELL TO OPERATE FROM DUSK TO DAWN. PROVIDE CONTACTOR(S) WITH LOCAL BYPASS SWITCH NEXT TO SOURCE PANEL. |

* NOTE: ALL OTHER AREAS TO BE CONTROLLED VIA MANUAL ON/OFF. REFER TO PLANS FOR SWITCH TYPE.


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AR91271 QUALIFIER LICENSE

WILDERARCHITECTURE, INC.

STANLEY P. NEWTON LICENSE No. 35071 STATE OF FLORIDA REGISTERED PROFESSIONAL ENGINEER

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Stanley P. Newton, P.E.
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Cert of Authorization No. 4288
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EMI Job No. 22-0480 Drawn By: JTH Checked By: JSW


HILLSBOROUGH COUNTY
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601 E KENNEDY BLVD
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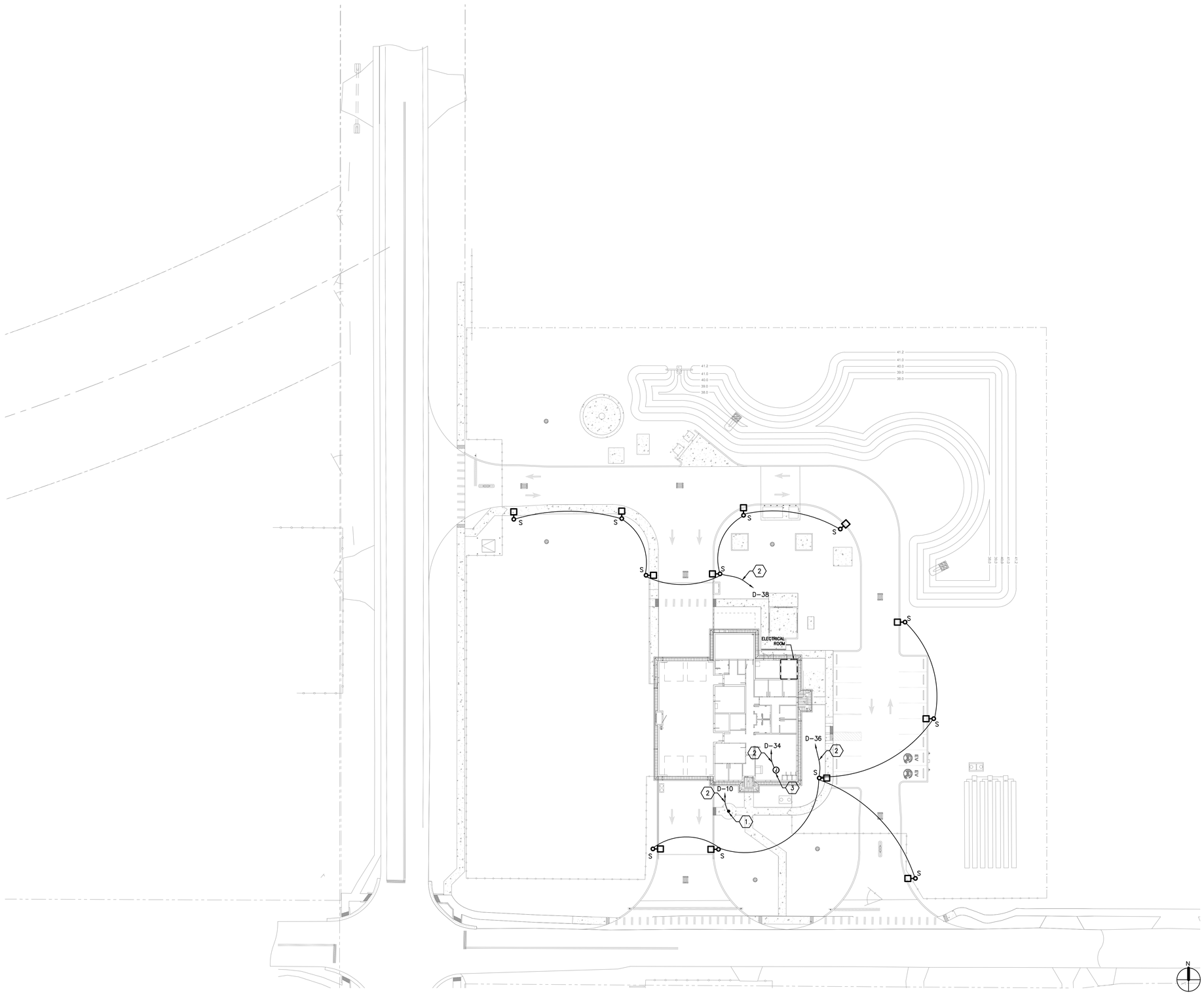
PROJECT ADDRESS:
10508 MAIN ST,
THONOTOSASSA, FL 33592

HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

| PROJECT #: 2216-05 | |
|---|---|
| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| 100% CD | 11.13.2024 |

LUMINAIRE SCHEDULE

E0.1




0' 15' 30' 60'

LIGHTING SITE PLAN
1" = 30'-0"

A3

NOTES

A1

## GENERAL NOTES

1. ALL SITE LIGHTING CIRCUITS SHALL BE RUN IN 1" CONDUIT (MINIMUM).
2. ALL SITE LIGHTING POLES SHALL BE INSTALLED A MINIMUM OF 5' FROM CURB.
3. ALL EXTERIOR LIGHTING SHALL BE CONTROLLED VIA PHOTOCELL ON/OFF. PROVIDE MANUAL BYPASS SWITCH IN ELECTRICAL ROOM. PROVIDE RELAYS AND/OR CONTACTORS AS REQUIRED TO CONTROL ALL EXTERIOR CIRCUITS. PROVIDE NUMBER OF POLES/CONTACTS, WIRING, JUNCTION BOXES, ETC. AS REQUIRED. LOCATE CONTACTORS IN ELECTRICAL ROOM.
4. THE LIGHTING SYSTEM HAS BEEN DESIGNED, AND SHALL BE INSTALLED, TO COMPLY WITH THE HILLSBOROUGH COUNTY LAND DEVELOPMENT CODE (LDC), SECTION 6.10.00-EXTERIOR LIGHTING AND IESNA OUTDOOR LIGHTING STANDARD. PRIOR TO THE ISSUANCE OF A CERTIFICATION OF OCCUPANCY FOR THE PROJECT, THE OUTDOOR LIGHTING PROFESSIONAL ENGINEER OF RECORD SHALL PROVIDE CERTIFICATION TO THE BUILDING SERVICES THAT THE LIGHTING SYSTEM AS INSTALLED COMPLIES WITH THE PROVISIONS OF THE HC LDC 6.10.01.G.

## KEYED NOTES

1. ILLUMINATED FLAG POLE. PROVIDE 2-#10 CU AND 1-#10 CU E.G. IN 3/4" CONDUIT FROM FLAG POLE TO POWER SUPPLY LOCATED ABOVE CEILING. PROVIDE NEMA 1 ENCLOSURE FOR POWER SUPPLY AND ROUTE CIRCUIT THROUGH THE LIGHTING CONTACTOR FOR TIME OF DAY CONTROL OF EXTERIOR FIXTURES. COORDINATE EXACT LOCATION AND FINAL POWER REQUIREMENTS WITH MANUFACTURER PRIOR TO INSTALLATION.
2. ROUTE HOMERUN THROUGH CONTRACTOR PROVIDED CONTACTOR. SITE LIGHTING SHALL OPERATE DUSK TO DAWN VIA PHOTOCELL.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE SURFACE MOUNTED JUNCTION BOX FOR STATION NUMBERS WITH INTEGRAL LIGHTING. COORDINATE FINAL LOCATION, POWER SUPPLY CONNECTIONS, ETC. WITH SIGN MANUFACTURE. NEATLY SURFACE MOUNT 3/4" RMC ALONG EXHAUST PLATFORM STRUCTURE TO THRU ROOF PENETRATION.


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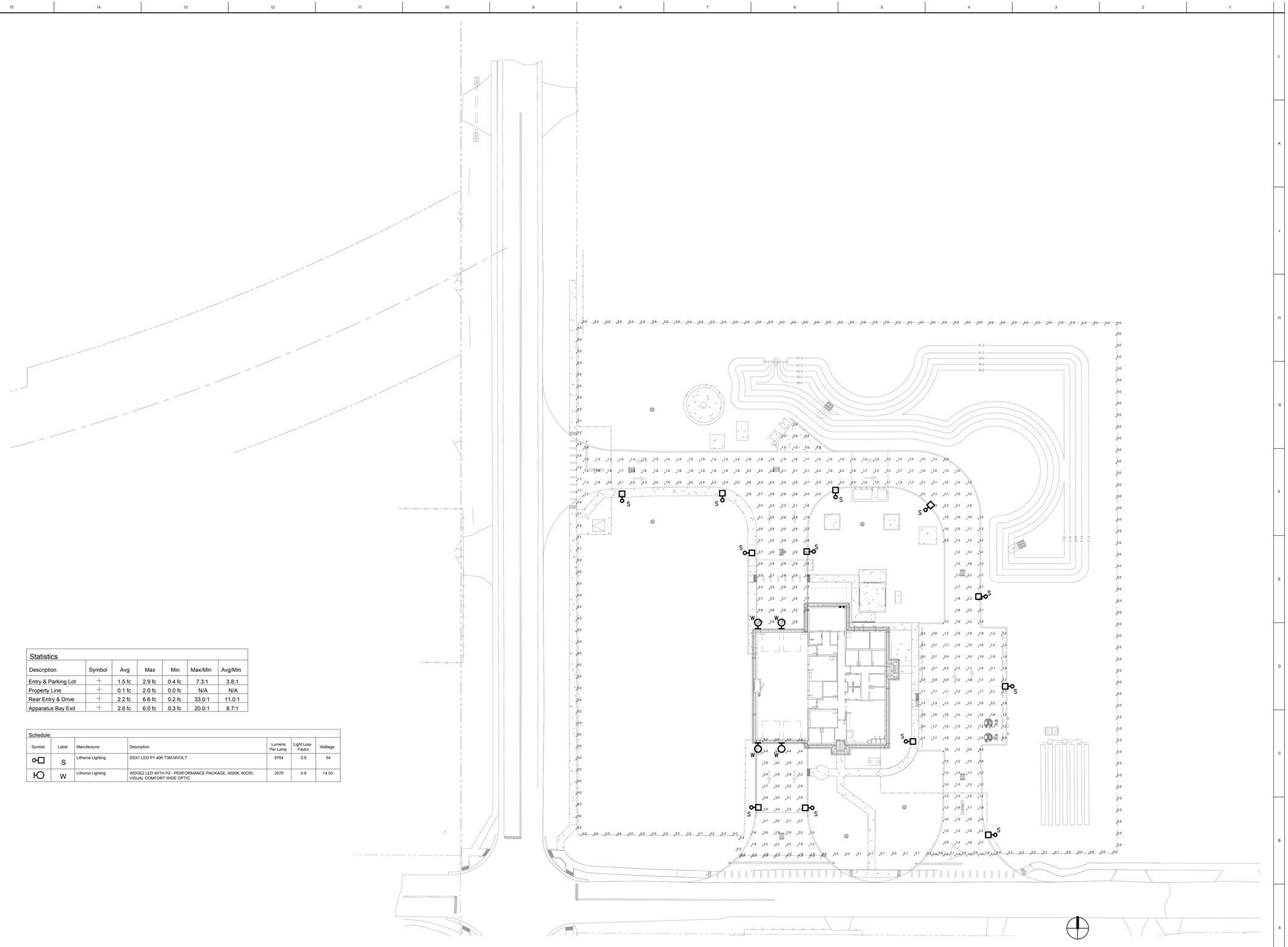
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LIGHTING
SITE PLAN

E1.1




| Statistics | | | | | | |
|---|---|---|---|---|---|---|
| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
| Entry & Parking Lot | + | 1.5 fc | 2.9 fc | 0.4 fc | 7.3:1 | 3.8:1 |
| Property Line | + | 0.1 fc | 2.0 fc | 0.0 fc | N/A | N/A |
| Rear Entry & Drive | + | 2.2 fc | 6.6 fc | 0.2 fc | 33.0:1 | 11.0:1 |
| Apparatus Bay Exit | + | 2.6 fc | 6.0 fc | 0.3 fc | 20.0:1 | 8.7:1 |

| Schedule | | | | | | |
|---|---|---|---|---|---|---|
| Symbol | Label | Manufacturer | Description | Lumens Per Lamp | Light Loss Factor | Wattage |
| | S | Lithonia Lighting | DSX1 LED P1 40K T3M MVOLT | 6764 | 0.9 | 54 |
| | W | Lithonia Lighting | WDGE2 LED WITH P2 - PERFORMANCE PACKAGE, 4000K, 80CRI, VISUAL COMFORT WIDE OPTIC | 2075 | 0.9 | 14.53 |

0' 15' 30' 60'

PHOTOMETRIC SITE PLAN
1" = 30'-0"

A1

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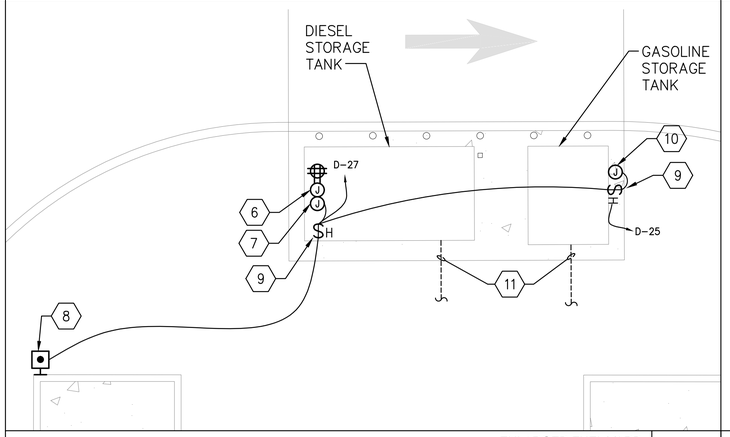
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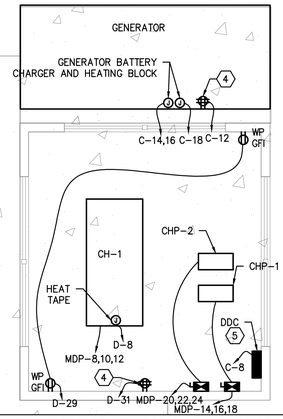
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PHOTOMETRIC
SITE PLAN

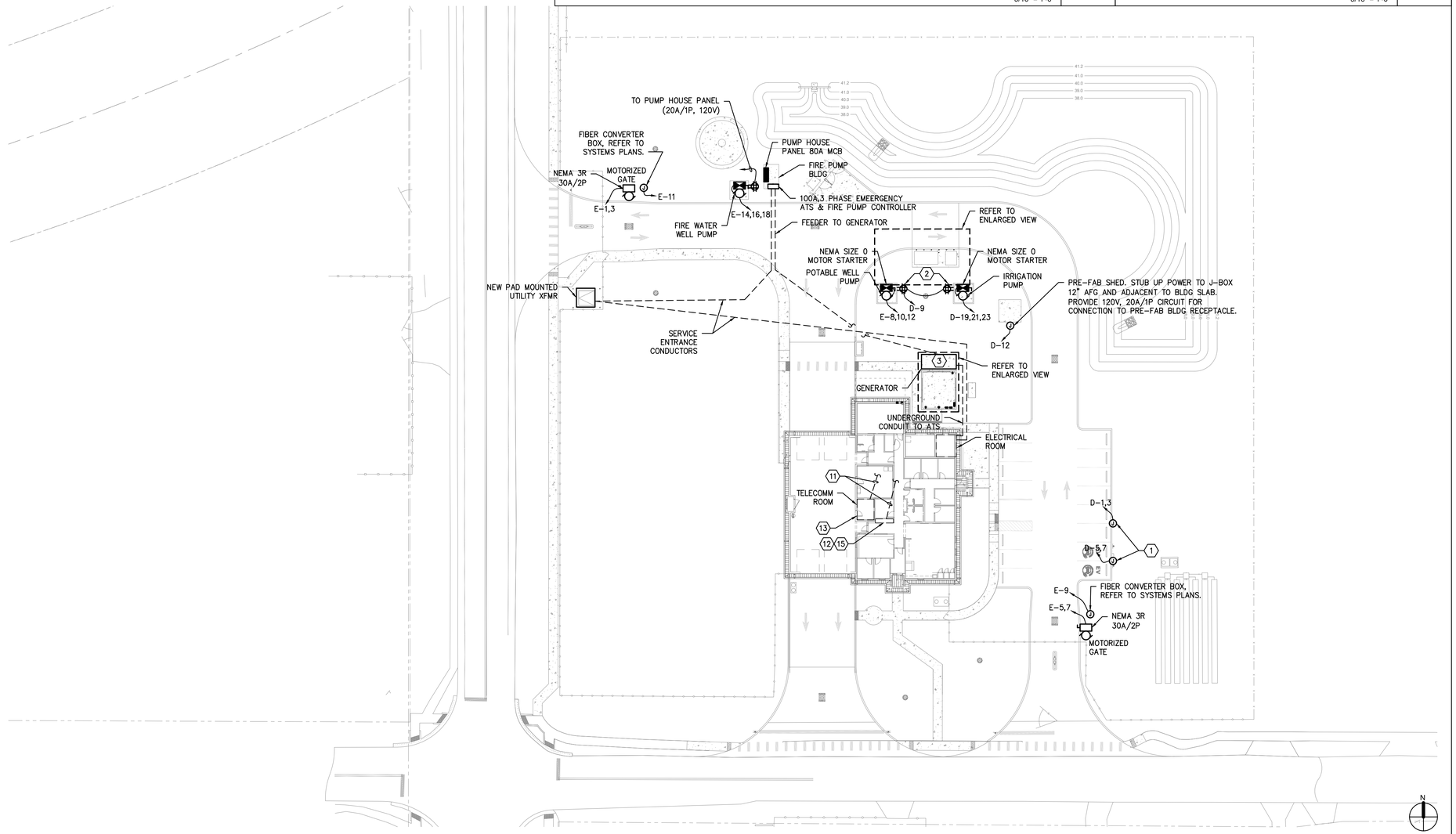
E1.2




ENLARGED FUEL YARD
3/16" = 1'-0"
J6




ENLARGED GENERATOR & CHILLER YARD
3/16" = 1'-0"
J3




0' 15' 30' 60'

POWER SITE PLAN
1" = 30'-0"
A3

## GENERAL NOTES

1. CONDUIT ROUTING SHOWN IS SCHEMATIC ONLY. CONTRACTOR SHALL ESTABLISH ACTUAL ROUTING AND COORDINATE INSTALLATION WITH OTHER TRADES.
2. PRIME AND PAINT ANY EXPOSED CONDUIT AND FITTINGS TO MATCH ADJACENT COLOR.
3. FOR ANY CONDUIT PENETRATIONS, CONTRACTOR TO SEAL AS APPROPRIATE.
4. CONTRACTOR TO REVIEW ROUTING AND MINIMIZE CONFLICTS WITH EXISTING UNDERGROUND UTILITIES WHEN ENCOUNTERED.
5. PROVIDE LONG CONDUIT SWEEPS (PER BICSI) AT ALL RIGHT ANGLES.
6. NEW ELECTRICAL SERVICE REQUIREMENTS:
   - 6.1. UNDERGROUND PRIMARY CONDUITS SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATE EXACT ROUTING AND INSTALLATION REQUIREMENTS WITH UTILITY COMPANY PRIOR TO COMMENCING WORK.
   - 6.2. CONTRACTOR SHALL INSTALL THREE RUNS OF 2"UNDERGROUND PRIMARY CONDUITS FROM UTILITY POLE TO NEW PAD-MOUNT UTILITY TRANSFORMER. PRIMARY CONDUITS FURNISHED BY UTILITY COMPANY. PROVIDE 36" MINIMUM COVER AND 12" SEPARATION FROM OTHER UTILITIES.
   - 6.3. CONTRACTOR SHALL PROVIDE UTILITY TRANSFORMER CONCRETE PAD IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS.

## KEYED NOTES

1. OWNER FURNISHED/OWNER INSTALLED EV CHARGING STATION. BASIS OF DESIGN: JUICEBOX PRO 40 BY ENELX, DUAL PEDESTAL MOUNT WITH SHARED POWER CHARGING. CONTRACTOR SHALL FURNISH/INSTALL CONDUIT, CONDUCTORS, AND OVERCURRENT PROTECTION DEVICE.
2. IN-USE WEATHERPROOF GFI QUAD RECEPTACLE MOUNTED TO EQUIPMENT RACK FOR PUMP CONTROLLER AND CHLORINATION SYSTEM.
3. PROVIDE GENERATOR AND ATS SYSTEM WITH FIBER OPTIC COMMUNICATIONS, INCLUDING BUT NOT LIMITED TO CABLING, CONDUIT, AND FIBER MEDIA CONVERTER/ENCLOSURE WITH QUAD RECEPTACLE. REFER TO ENLARGED VIEW FOR ADDITIONAL INFORMATION.
4. MOUNT RECEPTACLE IN FIBER/MEDIA ENCLOSURE (BY OTHERS). PROVIDE 1-1/2" CONDUIT WITH PULL STRING FROM ENCLOSURE TO TELECOMM ROOM. COORDINATE EXACT REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN. PROVIDE SUPPLEMENTARY DRIVEN GROUND ROD.
5. CONTRACT SHALL COORDINATE EXACT LOCATION AND ROUGH-IN REQUIREMENTS WITH MECHANICAL CONTROLS CONTRACTOR.
6. PROVIDE FUELMASTER FUEL MANAGEMENT UNIT 3508 PLUS MASTER INCLUDING THE FOLLOWING: RF/TAG AND PROKEES (VERIFY QTY. WITH OWNER), ONE (1) HOSE CONTROLLER, PEDESTAL AND MODEM, ONE (1) NETWORK INTERFACE CARD, ONE (1) WESTERN PULSER, AND FIBER MEDIA CONVERTER/ENCLOSURE (BY OTHERS) WITH QUAD RECEPTACLE. PROVIDE 1" SPARE CONDUIT WITH PULL STRING FROM ENCLOSURE TO TELECOMM ROOM. COORDINATE EXACT REQUIREMENTS WITH OWNER PRIOR TO COMMENCING WORK. PROVIDE SUPPLEMENTARY DRIVEN GROUND ROD.
7. DIESEL DISPENSER. ALL CONDUIT, WIRING, SEALOFFS, ETC. SHALL COMPLY WITH HAZARDOUS LOCATION WIRING METHODS PER NEC 501.
8. ROUTE FUEL PUMP CONTROL CIRCUIT THROUGH MULTI POLE EMERGENCY SHUT OFF BUTTON. SHUT OFF SHALL NOT BE LESS THAN 20 FEET, OR MORE THAN 100 FEET, FROM FUEL DISPENSER(S). PROVIDE CONCRETE PEDESTAL FOR MOUNTING. PROVIDE SIGNAGE READING "EMERGENCY SHUT OFF BUTTON"
9. PROVIDE NEMA 3R, 20 AMP SINGLE POLE MOTOR RATED SWITCH FOR FUEL PUMP DISCONNECTING MEANS. PROVIDE PERMANENT LABEL INDICATING PUMP SERVED.
10. GAS DISPENSER. ALL CONDUIT, WIRING, SEALOFFS, ETC. SHALL COMPLY WITH HAZARDOUS LOCATION WIRING METHODS PER NEC 501.
11. REFER TO DETAIL FOR CONDUIT SIZE AND QUANTITY REQUIREMENTS FOR FUEL MANAGEMENT AND LEAK DETECTION SYSTEMS.
12. PROVIDE VEEDER ROOT TLS-4c EQUIPMENT TO MONITOR TANKS (DIESEL FUEL AND UNLEADED FUEL TANKS). INCLUDE THE FOLLOWING: TWO (2) INVENTORY ONLY PROBE WITH WATER DETECTION, ONE (1) SITE-FAX MODULE, ONE (1) 5' DIESEL CABLE, ONE (1) 5' UNLEADED CABLE, TWO (2) 4" RISER CAPS AND RINGS, TWO (2) ABOVE GROUND STORAGE TANK INSTALLATION KITS, TWO (2) INTERSTITIAL SENSORS, TWO (2) OVERFILL ALARMS, TWO (2) OVERFILL ALARM ACKNOWLEDGEMENT SWITCHES AND TWO (2) SUMP SENSORS AT IN-GROUND PIPING TRANSITIONS.
13. DIESEL FUEL MANAGEMENT SYSTEM. REFER TO DETAIL FOR CONDUIT REQUIREMENTS FROM FUEL MASTER FUEL MANAGEMENT UNIT TERMINAL BOX TO INSIDE TELECOM ROOM FOR NETWORK INTERFACE AND CONDUIT FROM FUEL MANAGEMENT SYSTEM TO FUEL DISPENSER'S PULSE TRANSMITTER JUNCTION BOX. COORDIANTE CONDUIT ROUTING AND LOCATIONS WITH CONTRACTOR.
14. GENERATOR REMOTE ANNUNCIATOR PANEL PROVIDE 1-1" CONDUIT TO THE AUTOMATIC TRANSFER SWITCH AND 1-1" CONDUIT TO EMERGENCY GENERATOR. PROVIDE POWER AS REQUIRED TO REMOTE ANNUNCIATOR PANEL.

NOTES
A1

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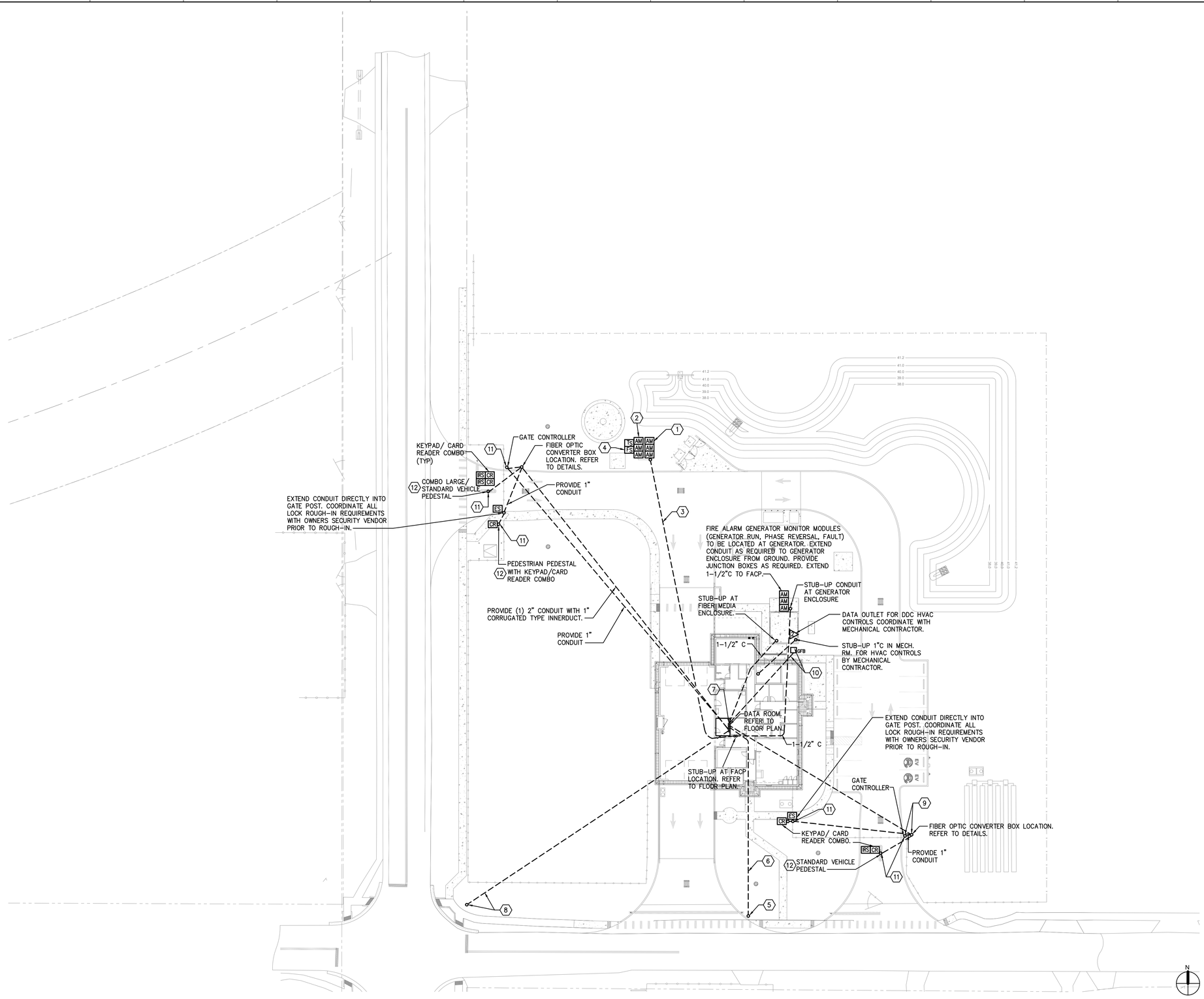
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PROJECT #: 2216-05

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| 90% CD | 08.30.2024 |
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POWER
SITE PLAN

E1.3




0' 15' 30' 60'

ELECTRICAL SYSTEMS SITE PLAN
1" = 30'-0"

A3

NOTES

A1

## GENERAL NOTES

1. CONDUIT ROUTING IS SCHEMATIC ONLY AND BASED UPON REVIEW OF RECORD DRAWINGS AND LIMITED SITE SURVEY EFFORTS. CONTRACTOR SHALL ESTABLISH ACTUAL ROUTING AND COORDINATE INSTALLATION WITH OTHER TRADES.
2. ALL SITE CABLING SHALL BE RUN IN CONDUIT, SIZE AS INDICATED, UNDERGROUND BETWEEN BUILDINGS WITH MINIMUM 24" COVER.PRIME AND PAINT ANY EXPOSED CONDUIT TO MATCH ADJACENT.
3. FOR CONDUIT PENETRATIONS, CONTRACTOR TO SEAL AND/OR FIRE STOP AS APPROPRIATE.
4. PROVIDE LONG CONDUIT SWEEPS (PER BICSI) AT ALL RIGHT ANGLES.
5. INSTALL #4 GROUND KIT IN ALL WIRING CLOSETS.
6. CONTRACTOR TO REVIEW ROUTING AND FIBER CABINET LOCATIONS PRIOR TO BEGINNING CONSTRUCTION. THIS CONTRACTOR TO MINIMIZE CONFLICTS WITH EXISTING UNDERGROUND UTILITIES, SIDEWALKS AND LANDSCAPING WHEN ENCOUNTERED. UTILIZE HAND DIGGING WHERE REQUIRED.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE AND PROVIDE ANY AND ALL PULL BOXES REQUIRED EITHER BY THE N.E.C. OR BOXES THAT MAY BE REQUIRED FOR LONG PULLS. CONDUIT SIZES MAY BE INCREASED BY THE CONTRACTOR IN LIEU OF PROVIDING ADDITIONAL PULL BOXES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INCLUDE THE COST OF ANY INCREASE IN CONDUIT SIZE IN THE BASE BID.
8. ALL COMMUNICATIONS' GROUND PULL BOXES (GPB) TO BE PROVIDED PER SPECIFICATIONS. ALL BOXES SHALL BE SIZED AS REQUIRED. ALL GPB'S TO HAVE APPROPRIATE LOCKING COVER/LOGO (COMMUNICATIONS) AND NO BOTTOM. FILL BOTTOM WITH 6" OF CRUSHED ROCK.
9. PROVIDE PULL STRINGS IN ALL SPARE/EMPTY SITE RACEWAYS FOR FUTURE USE.
10. ALL UNDERGROUND CONDUIT FOR FIBER OPTIC CABLE SHALL HAVE A MINIMUM BEND RADIUS OF 36" ON ANY 90-DEGREE TRANSITION.
11. ALL CONDUIT INTO AND OUT OF GROUND PULL BOXES AND VAULTS SHALL ENTER FROM BELOW. NO THROUGH BOX PENETRATIONS PERMITTED.
12. ALL UNDERGROUND LOW VOLTAGE SYSTEM BOXES SHALL BE POLYMER CONCRETE OR HDPE. FIBERGLASS AND PLASTIC BOXES ARE NOT PERMITTED. ALL TRAFFIC BEARING BOXES SHALL HAVE A TIER RATING OF H-20.

## KEYED NOTES

1. PROVIDE FIRE PUMP MONITOR MODULES IN FIRE PUMP ENCLOSURE AND TIE-IN TO FIRE ALARM SYSTEM AS REQUIRED. (PUMP RUN, PUMP FAULT, PHASE REVERSAL. PROVIDE J-BOXES SIZED AS REQUIRED AND MOUNTED AT PUMP. COORDINATE WITH FIRE PUMP INSTALLER PRIOR TO ROUGH-IN.
2. PROVIDE JOCKEY PUMP MONITOR MODULES IN FIRE PUMP ENCLOSURE AND TIE-IN TO FIRE ALARM SYSTEM AS REQUIRED. (PUMP FAULT, HI/ LOW PRESSURE). PROVIDE J-BOXES SIZED AS REQUIRED AND MOUNTED AT PUMP. COORDINATE WITH FIRE PUMP INSTALLER PRIOR TO ROUGH-IN.
3. PROVIDE 1-1/2"U.G. CONDUIT FROM FACP LOCATION TO FIRE PUMP ENCLOSURE. COORDINATE STUB-UP LOCATION WITHIN ENCLOSURE WITH FIRE PUMP CONTRACTOR PRIOR TO ROUGH-IN.
4. CONTRACTOR SHALL PROVIDE FIRE ALARM TAMPER AND FLOW SWITCH MONITOR MODULES AND TIE-IN TO FIRE ALARM SYSTEM AS REQUIRED. COORDINATE FINAL LOCATION AND QUANTITY WITH SPRINKLER CONTRACTOR.
5. STUB UP CONDUITS AT PROPERTY LINE AND CAP. COORDINATE EXACT LOCATION WITH SERVICE PROVIDERS PRIOR TO SUBMITTING BIDS.
6. (5) 4" CONDUITS TO PROPERTY LINE FOR SERVICE PROVIDER'S ENTRANCE CABLE.
7. SWEEP UP ALL SITE CONDUITS THROUGH SLAB IN GRC TO 18" ABOVE SLAB.
8. PROVIDE TRAFFIC LIGHT CONTROL BOX WITH (2) 2" CONDUITS TO TEAR & GO SYSTEM IN TELECOM ROOM FOR TRAFFIC LIGHT CONTROL. COORDINATE LOCATION WITH ARCHITECT AND CIVIL PLANS.
9. FOR GATE ACCESS CONTROL. STUB-UP CONDUITS AT ACCESS CONTROL FIBER OPTIC ENCLOSURE. COORDINATE ACCESS CONTROL ENCLOSURE LOCATION WITH CIVIL AND OWNERS ACCESS CONTROL CONTRACTOR PRIOR TO COMMENCING WORK. EXTEND TWO (2) 1"CONDUITS TO DATA ROOM.
10. PROVIDE INGROUND PULL BOX AT POLE-MOUNTED WEATHER STATION. COORDINATE LOCATION WITH ARCHITECTURAL AND CIVIL PLANS. EXTEND 1" CONDUIT TO DATA RM.
11. FOR GATE ACCESS CONTROL. STUB-UP CONDUITS AT ACCESS CONTROL PEDESTAL/ GATE CONTROLLER. COORDINATE ACCESS CONTROL PEDESTAL/GATE CONTROLLER LOCATION WITH CIVIL AND OWNERS ACCESS CONTROL CONTRACTOR PRIOR TO COMMENCING WORK. EXTEND 1"CONDUIT TO FIBER OPTIC CONVERTER BOX.
12. REFER TO PEDESTAL ROUGH-IN DETAILS.


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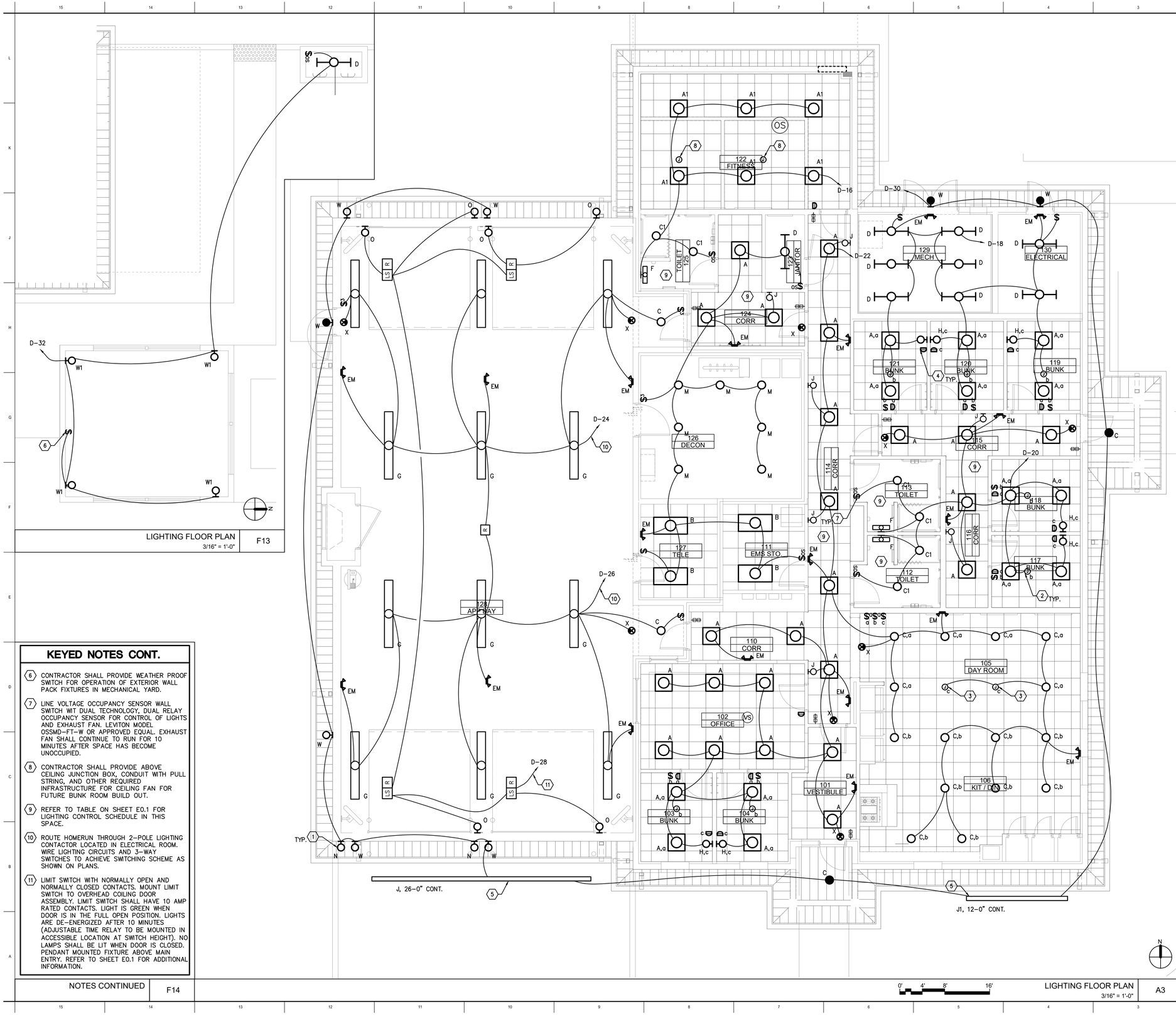
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ELECTRICAL
SYSTEMS SITE PLAN

E1.4




LIGHTING FLOOR PLAN
3/16" = 1'-0"

F13

## KEYED NOTES CONT.

6. CONTRACTOR SHALL PROVIDE WEATHER PROOF SWITCH FOR OPERATION OF EXTERIOR WALL PACK FIXTURES IN MECHANICAL YARD.
7. LINE VOLTAGE OCCUPANCY SENSOR WALL SWITCH WIT DUAL TECHNOLOGY, DUAL RELAY OCCUPANCY SENSOR FOR CONTROL OF LIGHTS AND EXHAUST FAN. LEVITON MODEL OSSMD-FT-W OR APPROVED EQUAL. EXHAUST FAN SHALL CONTINUE TO RUN FOR 10 MINUTES AFTER SPACE HAS BECOME UNOCCUPIED.
8. CONTRACTOR SHALL PROVIDE ABOVE CEILING JUNCTION BOX, CONDUIT WITH PULL STRING, AND OTHER REQUIRED INFRASTRUCTURE FOR CEILING FAN FOR FUTURE BUNK ROOM BUILD OUT.
9. REFER TO TABLE ON SHEET E0.1 FOR LIGHTING CONTROL SCHEDULE IN THIS SPACE.
10. ROUTE HOMERUN THROUGH 2-POLE LIGHTING CONTACTOR LOCATED IN ELECTRICAL ROOM. WIRE LIGHTING CIRCUITS AND 3-WAY SWITCHES TO ACHIEVE SWITCHING SCHEME AS SHOWN ON PLANS.
11. LIMIT SWITCH WITH NORMALLY OPEN AND NORMALLY CLOSED CONTACTS. MOUNT LIMIT SWITCH TO OVERHEAD COILING DOOR ASSEMBLY. LIMIT SWITCH SHALL HAVE 10 AMP RATED CONTACTS. LIGHT IS GREEN WHEN DOOR IS IN THE FULL OPEN POSITION. LIGHTS ARE DE-ENERGIZED AFTER 10 MINUTES (ADJUSTABLE TIME RELAY TO BE MOUNTED IN ACCESSIBLE LOCATION AT SWITCH HEIGHT). NO LAMPS SHALL BE LIT WHEN DOOR IS CLOSED. PENDANT MOUNTED FIXTURE ABOVE MAIN ENTRY. REFER TO SHEET E0.1 FOR ADDITIONAL INFORMATION.

NOTES CONTINUED | F14

## GENERAL NOTES

1. ALL EXIT SIGNS AND EMERGENCY WALL PACKS SHALL BE CONNECTED TO AN UNSWITCHED HOT WIRE FROM RESPECTIVE LIGHTING CIRCUIT. ALL EXTERIOR EMERGENCY EGRESS SCONCES SHALL BE FED BY AN UNSWITCHED HOT LEG IN ADDITION TO THE SWITCH LEG FOR CONTROL OF EMERGENCY BALLAST.
2. PROVIDE WIRING AS NECESSARY TO ACCOMMODATE SWITCHING FUNCTION AS INDICATED ON FLOOR PLAN.
3. ALL EXTERIOR/SITE LIGHTING SHALL BE CONTROLLED VIA PHOTOCELL ON/OFF. PROVIDE MANUAL BYPASS SWITCH. PROVIDE RELAYS AND/OR CONTACTORS AS REQUIRED TO CONTROL ALL EXTERIOR CIRCUITS. PROVIDE NUMBER OF POLES/CONTACTS, WIRING JUNCTION BOXES, ETC. AS REQUIRED. LOCATE IN ELECTRICAL ROOM.

## LIGHTING CONTROL NOTES

1. PROVIDE VACANCY/OCCUPANCY SENSORS FOR LIGHTING CONTROL IN ALL SPACES AS SHOWN ON PLANS. ALL VACANCY SENSORS SHALL BE PROGRAMMED FOR MANUAL ON / AUTO OFF OPERATION. SUBMIT LOCATIONS AND EQUIPMENT CATALOG CUT SHEETS TO OWNER/ENGINEER FOR REVIEW. SEE LIGHTING CONTROL TABLE FOR PROGRAMMING INFORMATION.
2. THE CONTRACTOR SHALL PROVIDE DUAL TECHNOLOGY VACANCY/OCCUPANCY SENSORS AND SWITCH PACKS WITH LOW VOLTAGE SWITCHES, WIRING, CONDUIT, SUPPORTS, ETC. FOR A COMPLETE SYSTEM. ALL SENSORS IN ALL AREAS SHALL INCLUDE MANUAL OVERRIDE (OFF) SWITCHES IN THE SWITCH LOCATIONS SHOWN ON THE PLANS. INCLUDE ANY AND ALL 2 WAY, 3 WAY, AND 4 WAY SWITCHING AS NECESSARY TO MEET THE SWITCHING INTENT SHOWN ON THE DRAWINGS.
3. THE CONTRACTOR SHALL VERIFY TYPE AND QUANTITY OF VACANCY SENSORS AND SWITCH PACKS WITH THE MANUFACTURER'S REPRESENTATIVE FOR CORRECT COVERAGE OF EACH SPACE PRIOR TO BID.
4. CONTRACTOR IS RESPONSIBLE FOR PROPER SENSITIVITY AND TIME DELAY SETTINGS, VERIFICATION OF MANUFACTURER'S RECOMMENDED PLACEMENT, AND FIELD VERIFICATION OF CIRCUITS WITH RESPECT TO POWER PACK PLACEMENT.
5. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF REQUIRED NUMBER OF POWER PACKS. ONE POWER PACK IS REQUIRED FOR EACH CIRCUIT THAT IS TO BE CONTROLLED. MAXIMUM NUMBER OF SENSORS THAT CAN BE WIRED IN PARALLEL TO A SINGLE POWER PACK IS DEPENDENT ON SENSOR MODEL (SEE INDIVIDUAL DATA SHEETS FOR MA CONSUMPTION).
6. THE APPROVED SENSOR MANUFACTURERS ARE LEVITON, COOPER, WATTSTOPPER AND SENSOR SWITCH.
7. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS PRIOR TO INSTALLATION FOR PROPER SENSOR LOCATION.
8. ULTRASONIC AND MULTI-TECH CEILING MOUNT SENSORS SHOULD BE LOCATED A MINIMUM OF SIX (6) FEET FROM HVAC SUPPLY/RETURN VENTS.
9. COORDINATE CEILING HEIGHTS WITH THE ARCHITECTURAL PLANS FOR PROPER COVERAGE AND CONFLICTS WITH SOFFITS, ETC.
10. SEE SHEET E0.1 FOR LIGHTING CONTROL SCHEDULE.

## KEYED NOTES

1. LIGHT FIXTURES SHOWN OFFSET FOR CLARITY. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS.
2. JUNCTION BOX FOR FAN SUPPORTED FROM STRUCTURE. PROVIDE 26" FAN (MANUFACTURED BY MINKA AIRE, MODEL #F510L-WH, THREE BLADES) PROVIDE FAN SUBMITTALS TO ARCHITECT FOR APPROVAL. PROVIDE MULTI-SPEED FAN SWITCH. TYPICAL FOR ALL BUNKS.
3. JUNCTION BOX FOR FAN SUPPORTED FROM STRUCTURE. PROVIDE 52" PADDLE FAN WITH LIGHT KIT (MANUFACTURED BY CRAFTMADE, MODEL #PH52BNK4-BNGW BRUSHED NICKEL, FIVE BLADES) PROVIDE FAN SUBMITTALS TO ARCHITECT FOR APPROVAL. PROVIDE MULTI-SPEED FAN SWITCH.
4. DIGITAL LOW VOLTAGE PUSH-BUTTON DIMMER SWITCH SHALL BE COMPATIBLE WITH LED LAMP. TYPICAL FOR ALL BUNKS.
5. WET LISTED LINEAR FIXTURE RECESSED IN SOFFIT. ASYMMETRIC DISTRIBUTION TO ILLUMINATE WALL MOUNTED DIMENSIONAL LETTERING. FIXTURE OFFSET FOR CLARITY.

0' 4' 8' 16'

LIGHTING FLOOR PLAN
3/16" = 1'-0"

A3

NOTES

A1


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LIGHTING
FLOOR PLAN

E2.1

## KEYED NOTES CONT.

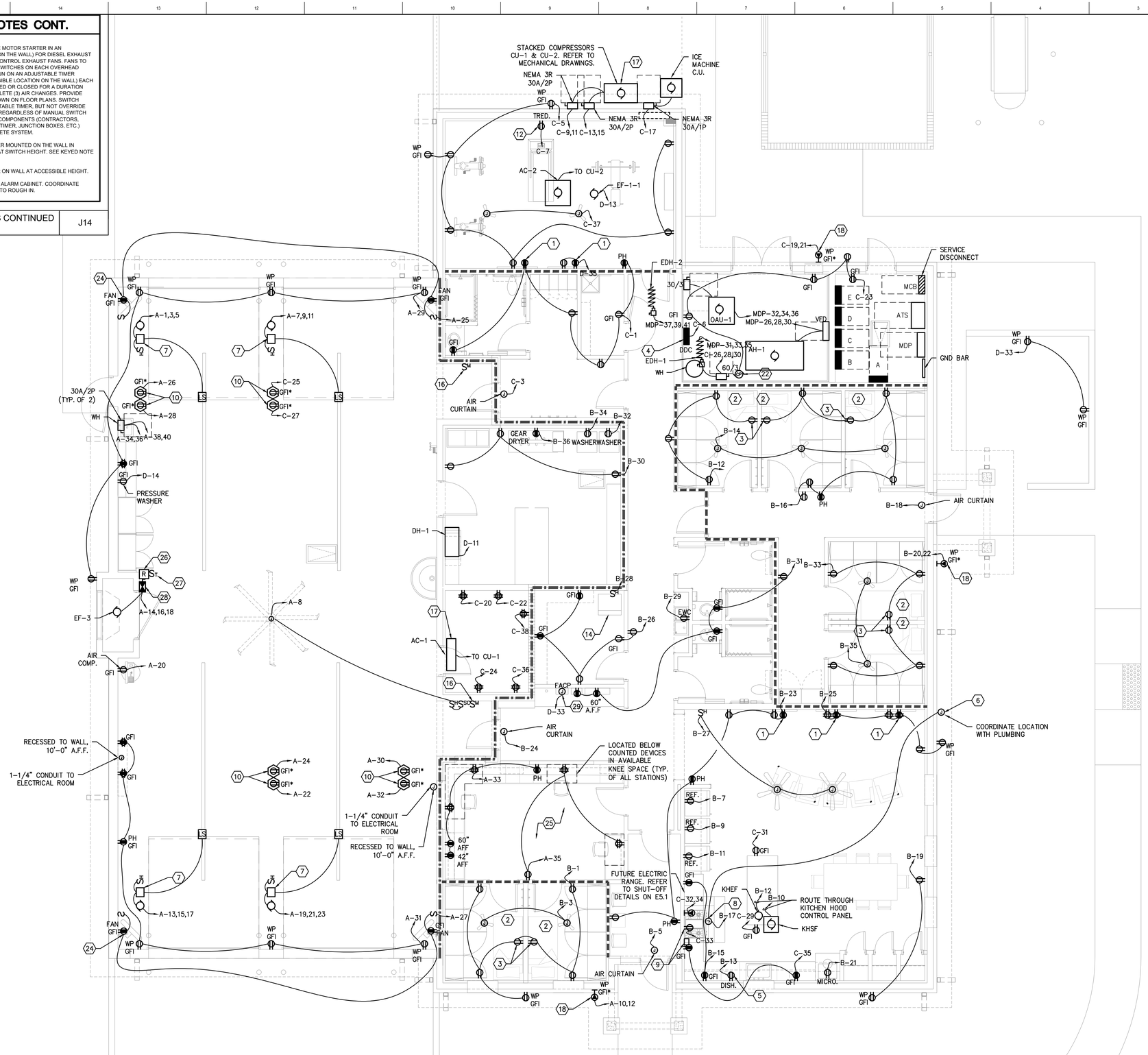
26. RELAY (MOUNTED ABOVE MOTOR STARTER IN AN ACCESSIBLE LOCATION ON THE WALL) FOR DIESEL EXHAUST SYSTEM. RELAY SHALL CONTROL EXHAUST FANS. FANS TO BE ACTIVATED BY LIMIT SWITCHES ON EACH OVERHEAD DOOR. SYSTEM SHALL RUN ON AN ADJUSTABLE TIMER (MOUNTED IN AN ACCESSIBLE LOCATION ON THE WALL) EACH TIME ANY DOOR IS OPENED OR CLOSED FOR A DURATION LONG ENOUGH TO COMPLETE (3) AIR CHANGES. PROVIDE MANUAL SWITCH AS SHOWN ON FLOOR PLANS. SWITCH SHALL OVERRIDE ADJUSTABLE TIMER, BUT NOT OVERRIDE LIMIT EXHAUST SYSTEM REGARDLESS OF MANUAL SWITCH POSITION. PROVIDE ALL COMPONENTS (CONTRACTORS, RELAY, LIMIT SWITCHES, TIMER, JUNCTION BOXES, ETC.) REQUIRED FOR A COMPLETE SYSTEM.

27. PROVIDE 30 MINUTE TIMER MOUNTED ON THE WALL IN ACCESSIBLE LOCATION AT SWITCH HEIGHT. SEE KEYED NOTE #9.

28. MOUNT MOTOR STARTER ON WALL AT ACCESSIBLE HEIGHT.

29. JUNCTION BOX FOR FIRE ALARM CABINET. COORDINATE EXACT LOCATION PRIOR TO ROUGH IN.

NOTES CONTINUED | J14




## GENERAL NOTES

1. ALL EXTERIOR RECEPTACLES SHALL BE WEATHER PROOF GFI RECEPTACLES. PROVIDE LOCKABLE COVERS.
2. USE NO. 10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 100 FEET, OR AS NOTED ON THE PANEL SCHEDULES.
3. ALL WIRING FROM LOAD SIDE OF VARIABLE FREQUENCY DRIVES TO UNIT SHALL BE XLPE (XHHW-2) INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
4. COVER PLATES FOR ALL WIRING DEVICES SHALL BE PERMANENTLY ENGRAVED/ETCHED WITH PANEL NAME AND CIRCUIT NUMBER(S) IN BLACK STENCIL.
5. NONMETALLIC FLEXIBLE SEAL TIGHT CONDUIT SHALL BE USED TO CONNECT AIR HANDLER UNITS FROM MOTOR CONNECTION POINT TO THE FIRST JUNCTION. NOT TO EXCEED 6 FEET.
6. INSTALL DISCONNECT SWITCHES AND SPEED CONTROLLERS FURNISHED BY HVAC CONTRACTOR FOR EXHAUST FANS. COORDINATE WITH HVAC CONTRACTOR FOR REQUIREMENTS.
7. ELECTRICAL DEVICES INDICATED WITH "GFI" SHALL BE OUTLET PROTECTED BY GFCI CIRCUIT BREAKER. REFER TO ELECTRICAL PANEL SCHEDULES.

## KEYED NOTES

1. RECEPTACLE FOR TV. SEE SYSTEMS PLANS FOR ROUGH-IN REQUIREMENTS.
2. ALL RECEPTACLES IN SLEEPING AREA ARE TO BE FED FROM ARC FAULT CIRCUIT BREAKER
3. COMBINATION DUPLEX RECEPTACLE WITH DUPLEX USB PORT, HUBBELL #USB20AC5W OR APPROVED EQUAL. INSTALL RECEPTACLE ABOVE BEDSIDE SHELF/COUNTER. FIELD COORDINATE RECEPTACLE/SHELF HEIGHT WITH OWNER/ARCHITECT.
4. RESERVED.
5. RECEPTACLE FOR DISHWASHER. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.
6. JUNCTION BOX FOR 120V AUTOMATIC SHUTOFF, GAS VALVE. WIRE TO HOOD ANSUL SYSTEM AND TEAR-N-GO SYSTEM.
7. AUTOMATIC OVERHEAD DOOR CONTROLLER. MAKE ALL CONNECTIONS. MOUNT CONTROLS AT ACCESSIBLE HEIGHT WITH WIRING LABELED, AND WIRING PLAN AND DIAGRAM INCLUDED.
8. FLUSH MOUNTED JUNCTION BOX FOR CONNECTION TO RANGE HOOD AND FIRE SUPPRESSION SYSTEM. COORDINATE EXACT MOUNTING HEIGHT AND LOCATION PRIOR TO ROUGH-IN. MAKE ALL CONNECTIONS. WIRE FIRE SUPPRESSION SHUNT TRIP SIGNAL TO RANGE CONTROL CONTACTOR. REFER TO DETAIL. WIRE TO HOOD SUPPLY AND EXHAUST FANS.
9. GAS RANGE RECEPTACLE AT 4" AFF. PROVIDE MANUAL RESET BUTTON FOR RANGE CUT-OFF SWITCH. PROVIDE CONTROL WIRE TO TEAR-N-GO AND ANSUL SYSTEMS FOR RANGE RESET. ROUTE RANGE CIRCUIT THROUGH CONTRACTOR. SEE DETAIL.
10. CEILING MOUNTED JUNCTION BOX FOR POWER CORD DROP. REFER TO DETAIL FOR ADDITIONAL INFORMATION. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.
11. PROVIDE CEILING MOUNTED JUNCTION BOX AND 3/4" CONDUIT WITH PULL STRING BACK TO MAIN ELECTRICAL ROOM FOR FUTURE USE.
12. PROVIDE 2-#12 CU CONDUCTORS AND 1-#12 CU E.G. IN 3/4" CONDUIT. PROVIDE DEDICATED NEUTRAL AND E.G.
13. FUTURE ELECTRIC RANGE RECEPTACLE.
14. ICE MAKER EVAPORATOR. PROVIDE 30 AMP, MOTOR-RATED, TOGGLE-STYLE, LOCKABLE DISCONNECT SWITCH. REFER TO MANUFACTURER'S SPECIFICATIONS. PROVIDE S.O. CORD CONNECTION. PROVIDE CONTROL WIRE TO REMOTE CONDENSER.
15. PROVIDE 20 AMP, 120 VOLT RECEPTACLE FOR AIR COMPRESSOR. COORDINATE EXACT CONNECTION AND POWER REQUIREMENTS PER MANUFACTURER. COORDINATE HEIGHT WITH OWNER PRIOR TO ROUGH-IN.
16. PROVIDE RECESSED SWITCH BANK (6 GANG) FOR AUTOMATIC DOOR OPENERS. DOORS TO BE OPERATED AT THIS CONTROL LOCATION AND AT OTHER SWITCH BANK. PROVIDE ALL COMPONENTS REQUIRED.
17. MINI-SPLIT AC SYSTEM. PROVIDE 30/2 NEMA 3R DISCONNECT SWITCH FOR CONDENSER. PROVIDE POWER AND CONTROL WIRE TO EVAPORATOR PER MANUFACTURER'S REQUIREMENT. PROVIDE MOTOR RATED 20 AMP TOGGLE STYLE DISCONNECT SWITCH FOR EVAPORATOR
18. PROVIDE 40A/2P RECEPTACLE FOR PORTABLE AIR CONDITIONER. VERIFY TYPE WITH OWNER PRIOR TO ROUGH-IN.
19. RECEPTACLE FOR TEAR & GO SYSTEM EQUIPMENT. COORDINATE ROUGH-IN LOCATION WITH TEAR & GO CONTRACTOR. REFER TO SHEET E2.2 FOR TEAR & GO SYSTEM INFORMATION.
20. PROVIDE RECEPTACLE FOR HONEYWELL UV100E ULTRAVIOLET SYSTEM (MODEL UV100W3007 SURFACE TREATMENT SYSTEM). COORDINATE EXACT LOCATION/MOUNTING HEIGHT PRIOR TO ROUGH IN. MAKE ALL FINAL CONNECTIONS.
21. PROVIDE POWER TO ROOF-MOUNTED EXHAUST FAN. INTEGRAL DISCONNECT SWITCH BY EQUIPMENT MANUFACTURER. INSTALL SPEED CONTROLLER FURNISHED BY MECHANICAL.
22. WATER HEATER CIRCULATION PUMP. PROVIDE TOGGLE STYLE DISCONNECT SWITCH LOCATED NEXT TO PUMP.
23. RESERVED.
24. SWITCHED RECEPTACLE AND SWITCH FOR WALL MOUNTED OSCILLATION FAN. PROVIDE A SWITCH AT 48"A.F.F. WIRED TO A SIMPLEX RECEPTACLE MOUNTED ADJACENT TO THE WALL MOUNTED FAN (FAN TO BE MOUNTED AT 7'4" TO THE BOTTOM OF THE LOWEST POINT OF THE FAN.) THIS CONTRACTOR SHALL PROVIDE AND INSTALL A 30" WALL MOUNTED OSCULATING FAN AT HEIGHT SPECIFIED. THE FAN SHALL BE GLOBAL INDUSTRIAL EQUIPMENT FAN MODEL NUMBER 607051, 1/3HP 120V 8100 CFM (HIGH SPEED) OR APPROVED EQUAL.
25. CONTRACTOR SHALL FIELD COORDINATE OUTLET ROUGH-IN LOCATIONS WITH CASEWORK AND ARCHITECTURAL CHASE FOR WIRES TO MAINTAIN ACCESSIBILITY.

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POWER
FLOOR PLAN

E3.1

0' 2'-8" 5'-4" 10'-8"
POWER FLOOR PLAN
3/16" = 1'-0"
A3

NOTES | A1

## KEYED NOTES

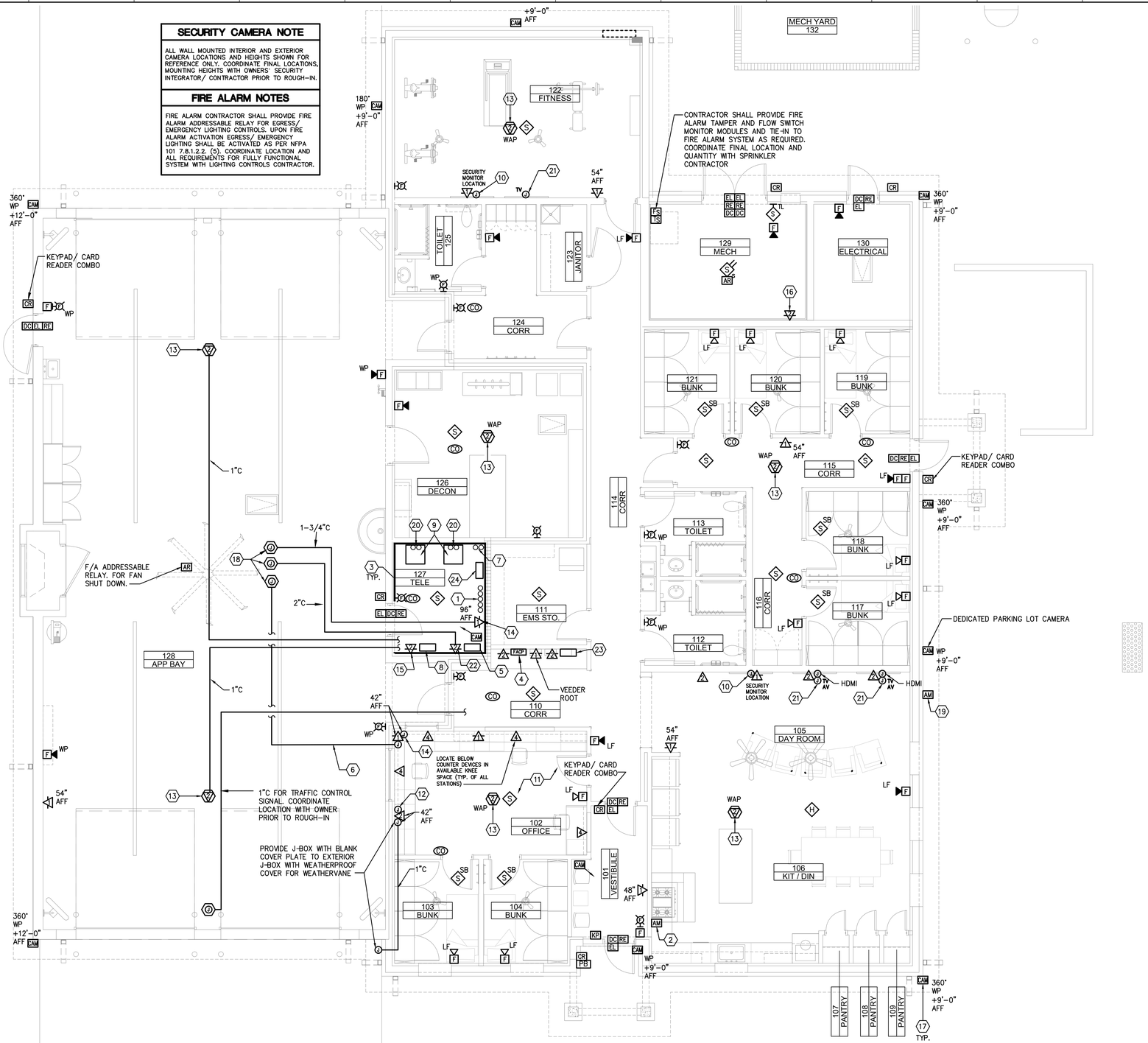
1. SITE CONDUIT ENTRANCE THROUGH FLOOR.
2. ADDRESSABLE MODULE SHALL INTERFACE HOOD SUPPRESSION SYSTEM WITH FIRE ALARM SYSTEM.
3. 3/4" x 8'H x LENGTH OF WALLS SHOWN PLYWOOD NON PRESSURE TREATED BACKBOARD. PROVIDE A/C GRADE PAINTED ALL SIDES AND EDGES WITH FIRE RETARDANT PAINT.
4. SEMI FLUSH FIRE ALARM CONTROL PANEL WITH CELLULAR DIALER. COORDINATE MOUNTING HEIGHTS WITH OWNER PRIOR TO INSTALLATION.
5. SPACE ALLOCATED FOR WEATHERBUG PANEL.
6. PROVIDE J-BOX WITH BLANK COVER PLATE AND 1 1/2" CONDUIT ABOVE CEILING FOR STATION RADIO ANTENNA. PROVIDE PULL STRING.
7. PROVIDE (2) 4" SLEEVES THROUGH CEILING & ELBOW TO ABOVE EMS STORAGE CEILING.
8. PROVIDE ACCESS CONTROL SYSTEM PANEL AT THIS LOCATION.
9. REFER TO ELEVATION FOR WALL MOUNTED COMMUNICATION CABINETS AT THIS LOCATION.
10. LOCATION OF SURVEILLANCE VIDEO MONITOR. PROVIDE SINGLE GANG J-BOX AT 72" AFF WITH GROMMETED FACE PLATE, CABLES, POWER, DATA, AND EQUIPMENT FOR A COMPLETE AND OPERATIONAL SYSTEM. NVR SHALL BE LOCATED IN DATA ROOM RACK. COORDINATE WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
11. CONTRACTOR SHALL FIELD COORDINATE OUTLET ROUGH-IN LOCATIONS WITH CASEWORK AND WIRE MANAGEMENT TROUGH DETAIL TO MAINTAIN ACCESSIBILITY.
12. LOCATION OF SURVEILLANCE VIDEO MONITOR IN THIS ROOM. PROVIDE SINGLE GANG J-BOX AT 60" AFF WITH GROMMETED FACE PLATE, CABLES, POWER, AND EQUIPMENT FOR A COMPLETE AND OPERATIONAL SYSTEM. NVR SHALL BE LOCATED IN DATA ROOM RACK.
13. WIRELESS ACCESS POINT.
14. EMPTY 2x4 J-BOX W/ BLANK COVER FOR GPS ANTENNA. COORDINATE LOCATION WITH COUNTY VENDOR PRIOR TO ROUGH-IN. EXTEND 1-3/4" CONDUIT TO ROOF MOUNTED WEATHERHEAD.
15. MOUNT ADJACENT TO ACCESS CONTROL PANEL. COORDINATE LOCATION WITH ACCESS CONTROL CONTRACTOR PRIOR TO ROUGH-IN.
16. FOR DDC CONTROLS. FINAL LOCATION SHALL BE COORDINATED WITH MECHANICAL CONTRACTOR.
17. PROVIDE 3/4"C TO ABOVE ACCESSIBLE CEILING. REFER TO DETAILS.
18. PROVIDE ROOF PENETRATION AT HIGHEST POINT OF APPARATUS BAY ROOF. COORDINATE ROOF PENETRATION LOCATION WITH COUNTY VENDOR AND ARCHITECT. CONDUIT SHALL PENETRATE ROOF WITH 3' STUB-UP CAPPED WITH WEATHERHEAD. PROVIDE GROUNDING TO ROOF GROUNDING PROTECTION SYSTEM.
19. ADDRESSABLE RELAY SHALL INTERFACE AUTOMATIC SHUTOFF, GAS VALVE WITH FIRE ALARM SYSTEM.
20. PROVIDE (2) 4" SLEEVES FROM EACH CABINET TO 6" ABOVE ACCESSIBLE CEILING.
21. REFER TO DETAILS AND LEGEND FOR ROUGH-IN AND SPECIFICATIONS.
22. PROVIDE DATA OUTLET MOUNTED AT CELLULAR REPEATER AMPLIFIER. COORDINATE LOCATION WITH CELLULAR REPEATER EQUIPMENT VENDOR PRIOR TO ROUGH-IN. EXTEND 2" CONDUIT TO ROOF MOUNTED WEATHERHEAD.
23. WEATHERBUG DISPLAY MOUTED 60" AFF.
24. WEATHERBUG CONTROLLER. REFER TO SITE PLAN FOR CONDUIT REQUIREMENTS.

## SECURITY CAMERA NOTE

ALL WALL MOUNTED INTERIOR AND EXTERIOR CAMERA LOCATIONS AND HEIGHTS SHOWN FOR REFERENCE ONLY. COORDINATE FINAL LOCATIONS, MOUNTING HEIGHTS WITH OWNERS' SECURITY INTEGRATOR/ CONTRACTOR PRIOR TO ROUGH-IN.

## FIRE ALARM NOTES

FIRE ALARM CONTRACTOR SHALL PROVIDE FIRE ALARM ADDRESSABLE RELAY FOR EGRESS/ EMERGENCY LIGHTING CONTROLS. UPON FIRE ALARM ACTIVATION EGRESS/ EMERGENCY LIGHTING SHALL BE ACTIVATED AS PER NFPA 101 7.8.1.2.2. (5). COORDINATE LOCATION AND ALL REQUIREMENTS FOR FULLY FUNCTIONAL SYSTEM WITH LIGHTING CONTROLS CONTRACTOR.




## GENERAL NOTES

1. ALL CONDUIT TO BE CONCEALED/ RECESSED, ALL 'J' BOXES TO BE FLUSH MOUNTED AND DEEP STYLE FOR FLUSH INSTALLATION OF DEVICES. UNLESS NOTED OTHERWISE.
2. ALL LOW VOLTAGE (DATA, PAGING, SECURITY, FIRE ALARM ETC.) CABLES AT EXPOSED CEILING AND ABOVE HARD CEILINGS SHALL BE IN CONDUIT FROM DEVICE LOCATION TO 6" ABOVE ACCESSIBLE CEILING OR TERMINATION LOCATION. CONDUITS SHALL BE SIZED AS REQUIRED. U.O.N..
3. THIS CONTRACTOR SHALL COORDINATE EXACT TELEPHONE REQUIREMENTS W/OWNER. PROVIDE ALL CONDUITS AND BOXES AS REQUIRED FOR OPERATION AS SPECIFIED BY OWNER. COORDINATE ANY REQUIREMENTS WITH OWNER-SELECTED VENDOR.
4. COORDINATE TELEVISION REQUIREMENTS WITH OWNER. PROVIDE ALL RACEWAYS AS REQUIRED FOR TV SYSTEM OPERATION PER OWNER'S SPECIFICATIONS.
5. ENTIRE BUILDING SHALL BE FIRE SPRINKLED. SEE FIRE PROTECTION DRAWINGS FOR FURTHER DETAILS.
6. FLOW AND TAMPER SWITCH SHALL NOTIFY FACP UPON ACTIVATION. PROVIDE ALL COMPONENTS FOR PROPER FIRE ALARM SYSTEM INSTALLATION AND OPERATION. PROVIDE SYSTEM PER NFPA 72. ALL FIRE ALARM SYSTEMS WIRING SHALL BE IN DEDICATED CONDUITS. PAINT JUNCTION BOX COVERS RED.
7. WORK DESCRIBED IN THESE DOCUMENTS AS BEING PERFORMED BY OWNER'S VENDOR SHALL BE COORDINATED BY THIS CONTRACTOR.
8. ROUTE ALL ELECTRICAL SYSTEMS CABLING ABOVE CEILING ON CAT-6 COMPATIBLE 'J' HOOKS AT 60" O.C. MAXIMUM.
9. NO JUNCTION BOX MOUNTED ABOVE CEILING SHALL BE HIGHER THAN 60" ABOVE CEILING.
10. TELEPHONE, DATA, TV CABLING AND TERMINATIONS BY OTHERS. REFER TO LOW VOLTAGE SCOPE OF WORK NOTES THIS SHEET.
11. ACCESS CONTROL DOOR FRAMES SHALL BE MODIFIED AS NECESSARY TO RECEIVE INDICATED DEVICES.
12. ALL ELECTRICALLY HELD (ACCESS CONTROLLED) DOORS SHALL RELEASE UPON FIRE ALARM ACTIVATION AS PER NFPA 101 7.2.1.5.6, 7.2.1.6.2 & FBC 1010.1.9.9. PROVIDE FIRE ALARM INTERFACE RELAY. (RELAYS, CABLING, PROGRAMMING ETC. FOR EACH DOOR).

## LOW VOLTAGE SCOPE OF WORK

1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ACCESS CONTROL, SURVEILLANCE RACEWAYS ONLY. COUNTY INSTALLER WILL BE RESPONSIBLE FOR THE INSTALLATION OF ACCESS CONTROL/ SURVEILLANCE, EQUIPMENT, DEVICES AND CABLING.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF ENTIRE FIRE ALARM SYSTEM AS SPECIFIED ON DRAWINGS AND SPECIFICATIONS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL LOW VOLTAGE SYSTEM RACEWAYS FOR TELEPHONE/DATA, CELLULAR REPEATER, WEATHERBUG AND TV DISTRIBUTION.
4. LOW VOLTAGE SYSTEM RACEWAYS INCLUDE CONDUITS, JUNCTION BOXES, SUPPORTS, ETC. ALL RACEWAYS SHALL BE PROVIDED WITH A PULL STRING.
5. COUNTY INSTALLER SHALL FURNISH AND INSTALL DATA, SECURITY, AND FIRE STATION ALERTING SYSTEM CABINETS. CONTRACTOR SHALL FURNISH & INSTALL FACTORY FINISHED BACKBOARDS IN THE TELECOM ROOM AND PROVIDE SUPPORT TO COUNTY VENDOR DURING CABINET INSTALLATION AS REQUIRED.
6. COUNTY INSTALLER SHALL BE RESPONSIBLE FOR COORDINATING THE TELECOM ROOM LAYOUT, INCLUDING BUT NOT LIMITED TO DATA, SECURITY, AND FIRE STATION ALERTING SYSTEMS. CONTRACTOR SHALL PROVIDE SUPPORT TO COUNTY VENDOR AS REQUIRED
7. COUNTY INSTALLER WILL BE RESPONSIBLE FOR CELLULAR REPEATER SYSTEM AND WEATHERBUG SYSTEM EQUIPMENT WITH CABLING. ALSO CABLING INSTALLATION OF TELEPHONE/DATA CABLING, FIBER OPTIC CABLING, FIBER/COPPER MEDIA CONVERTERS, TELECOMMUNICATION'S GROUNDING, TELECOMMUNICATIONS FIELD INSTALLATION AND CROSS CONNECTS, AND HANDSETS.

0' 4' 8' 16'
ELECTRICAL SYSTEMS FLOOR PLAN
3/16" = 1'-0"

A3 | NOTES | A1


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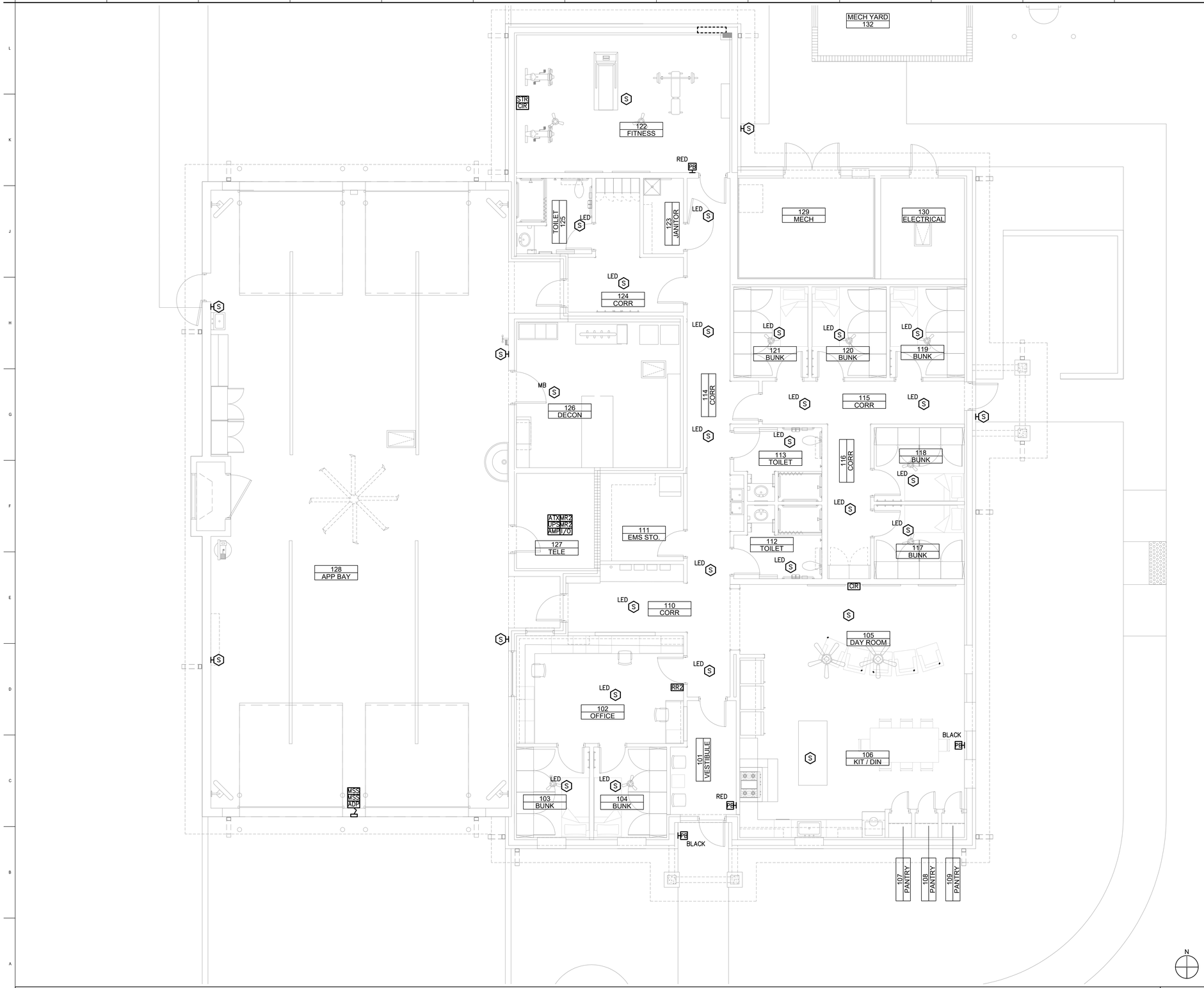
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ELECTRICAL SYSTEMS FLOOR PLAN

E4.1




## GENERAL NOTES

1. THIS PAGE IS REPRESENTATIONAL OF THE WORK THAT IS INCLUDED IN THE ALLOWANCE FOR THE 911(FIRE STATION ALERTING) SYSTEM. THE CONSTRUCTION MANAGER WILL BE REQUIRED TO EMPLOY THE FIRE STATION ALERTING SYSTEM MANUFACTURER'S AUTHORIZED SUB-CONTRACTOR, WHO WILL PROVIDE THIS EQUIPMENT, AND THE INSTALLATION, USING THE FUNDS IN THE ALLOWANCE.
2. FIRE STATION ALERTING SYSTEM CONTRACTOR SHALL FURNISH AND INSTALL ALL WIRING, DEVICES, FIXTURES, EQUIPMENT AND MOUNTING HARDWARE FOR A COMPLETE AND OPERATIONAL SYSTEM, UNLESS OTHERWISE NOTED.
3. TO FACILITATE CONSTRUCTION, ELECTRICAL CONTRACTOR SHALL PROVIDE ALL RACEWAYS FOR THE FIRE STATION ALERTING SYSTEM. COORDINATE ALL REQUIREMENTS WITH FIRE STATION ALERTING SYSTEM INSTALLER.

## FIRE STATION ALERTING SYSTEM MINIMUM CONDUIT REQUIREMENTS

1. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL RACEWAYS FOR FIRE STATION ALERTING SYSTEM. COORDINATE ALL REQUIREMENTS WITH FIRE STATION ALERTING SYSTEM INSTALLER.
2. ALL WALL MOUNTED DEVICE STUB-UP'S SHALL BE 1" CONDUIT MINIMUM TO 6" ABOVE ACCESSIBLE CEILING. WITH PULL STRING.
3. ALL POWER CIRCUITING SHALL BE RAN IN A MINIMUM OF 3/4" CONDUIT, #12 CU CONDUCTORS HOMERUN TO PANEL/CIRCUIT SHOWN. COORDINATE EXACT LOCATION AND MOUNTING HEIGHTS WITH EQUIPMENT INSTALLER.

0' 4' 8' 16'

ALERTING SYSTEMS FLOOR PLAN
3/16" = 1'-0"

A3

NOTES A1


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Cert of Authorization No. 4288

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EMI Job No. 22-0460 Drawn By: BMX Checked By: JSW

HILLSBOROUGH COUNTY
BOARD OF COUNTY
COMMISSIONERS COUNTY
CENTER

601 E KENNEDY BLVD
TAMPA FL 33601

PROJECT ADDRESS:
10508 MAIN ST.
THONOTOSASSA, FL 33592

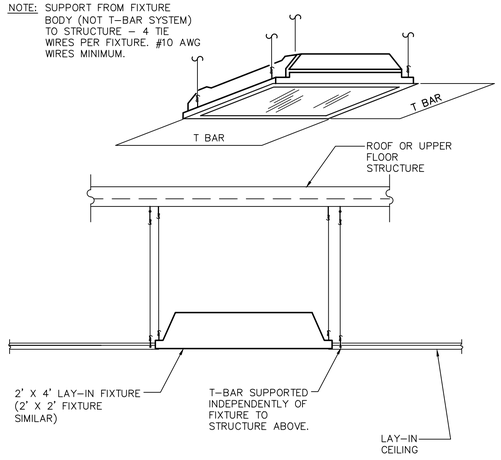
# HILLSBOROUGH COUNTY THONOTOSASSA FIRE STATION NO. 21 REPLACEMENT

PROJECT #: 2216-05

| DISTRIBUTION | DATE |
|---|---|
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

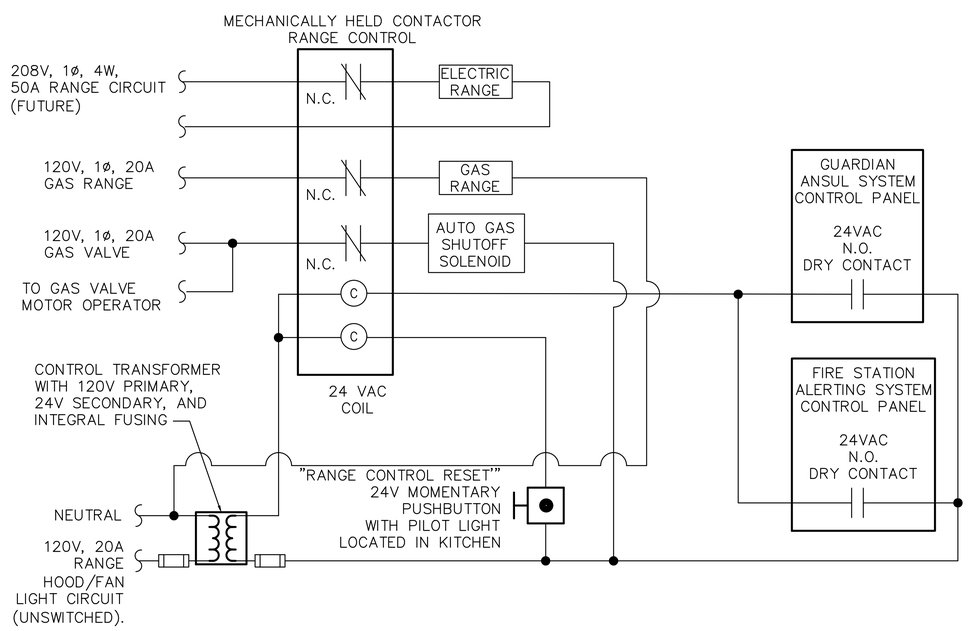
ALERTING SYSTEMS FLOOR PLAN

E4.2




## 2' X 2' RECESSED LAY-IN FIXTURE DETAIL

NO SCALE filename: ED18B

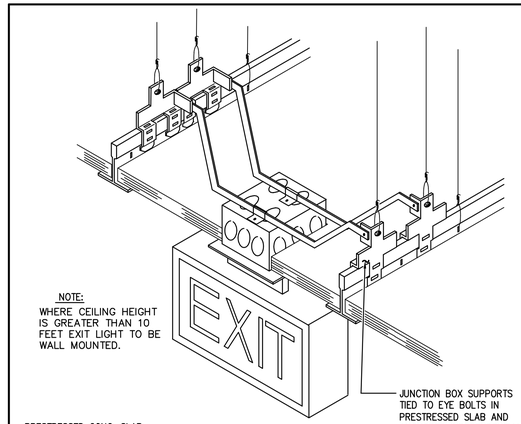


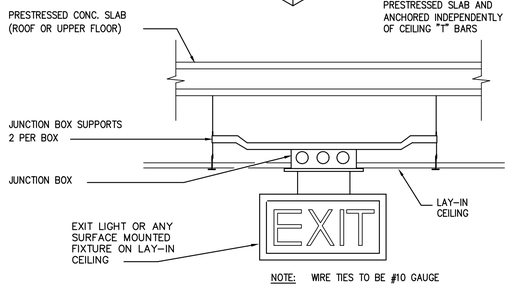

NOTES:

1. PROVIDE CONTROLS TO AUTOMATICALLY SHUT-OFF POWER AND GAS SERVICE TO THE RANGE UPON ACTIVATION OF EITHER THE KITCHEN HOOD ANSUL SYSTEM OR THE TEAR-N-GO SYSTEM. POWER AND GAS SERVICE SHALL BE AUTOMATICALLY RESTORED UPON DEPRESSING THE MOMENTARY PUSHBUUTON LOCATED IN THE KITCHEN. RESETTING THE HOOD ANSUL SYSTEM AFTER A SYSTEM DISCHARGE SHALL BE PERFORMED BY A CERTIFIED, SYSTEM INSTALLER (AS REQUIRED).
2. PROVIDE PHENOLIC SIGNAGE AT PUSHBUTTON READING "RANGE CONTROL RESET. PUSH TO RESTORE ELECTRIC AND GAS SERVICE TO RANGE."
3. PROVIDE ALL OF THE COMPONENTS SHOWN AND ANY ADDITIONAL COMPONENTS REQUIRED FOR A COMPLETE FUNCTIONAL SYSTEM. COORDINATE CONTROL VOLTAGE FOR RELAYS, VALVES, ETC.
4. ALL CONTROL DEVICES SHALL BE MOUNTED IN NEMA-1 ENCLOSURES IN TELECOM ROOM UNLESS OTHERWISE NOTED. ALL CONDUCTORS SHALL BE #12 CU. RUN IN DEDICATED CONDUIT. PROVIDE AN EQUIPMENT GROUND FOR EACH CIRCUIT AND GROUND ALL ENCLOSURES.

## RANGE CONTROLS

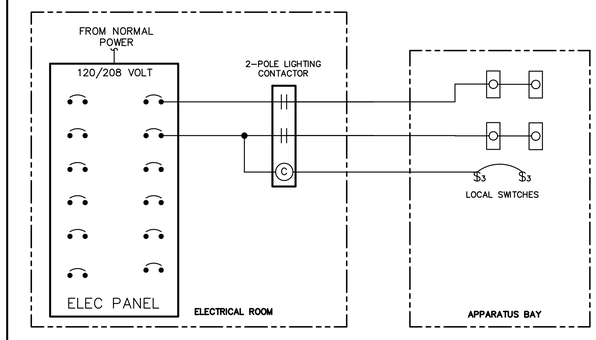
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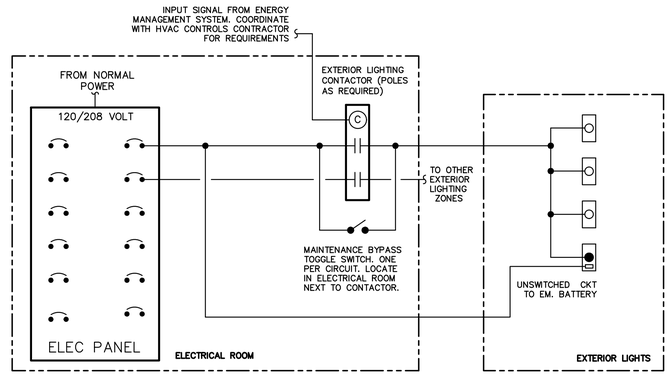

## SURFACE MOUNTED FIXTURE ON LAY-IN CEILING

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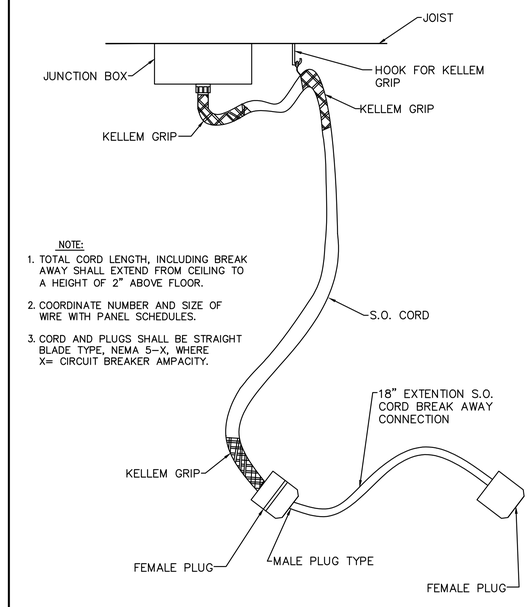

## APPARATUS BAY LIGHTING CONTROL DETAIL

NO SCALE




## EXTERIOR LIGHTING CONTROL DETAIL

NO SCALE




## POWER DROP DETAIL

NO SCALE

1315 E. SEVENTH AVENUE
SUITE 106
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STANLEY P. NEWTON LICENSE No. 35021 STATE OF FLORIDA REGISTERED PROFESSIONAL ENGINEER

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Drawn By: EM
EMI Job No. 22-0460

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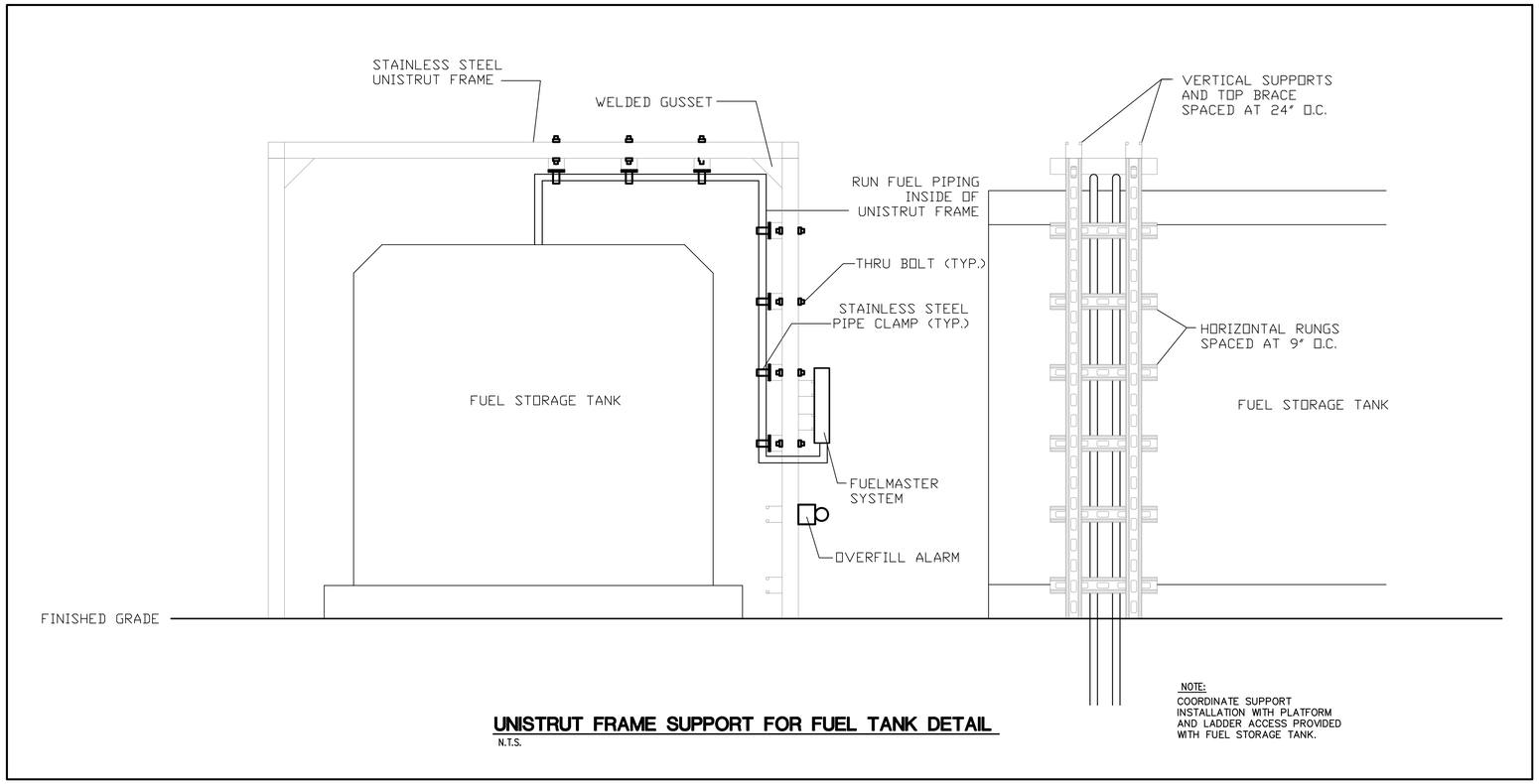
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HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
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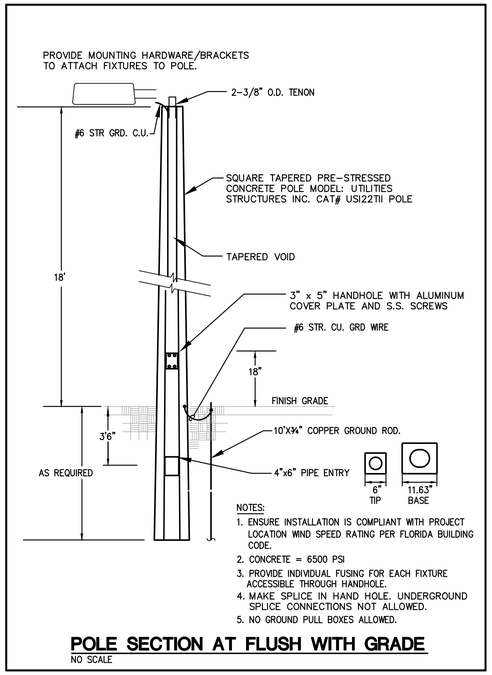
ELECTRICAL DETAILS

E5.1



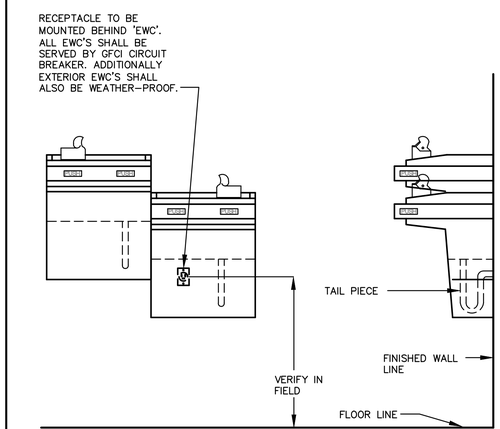

NOTE:
COORDINATE SUPPORT INSTALLATION WITH PLATFORM AND LADDER ACCESS PROVIDED WITH FUEL STORAGE TANK.

## UNISTRUT FRAME SUPPORT FOR FUEL TANK DETAIL
N.T.S.

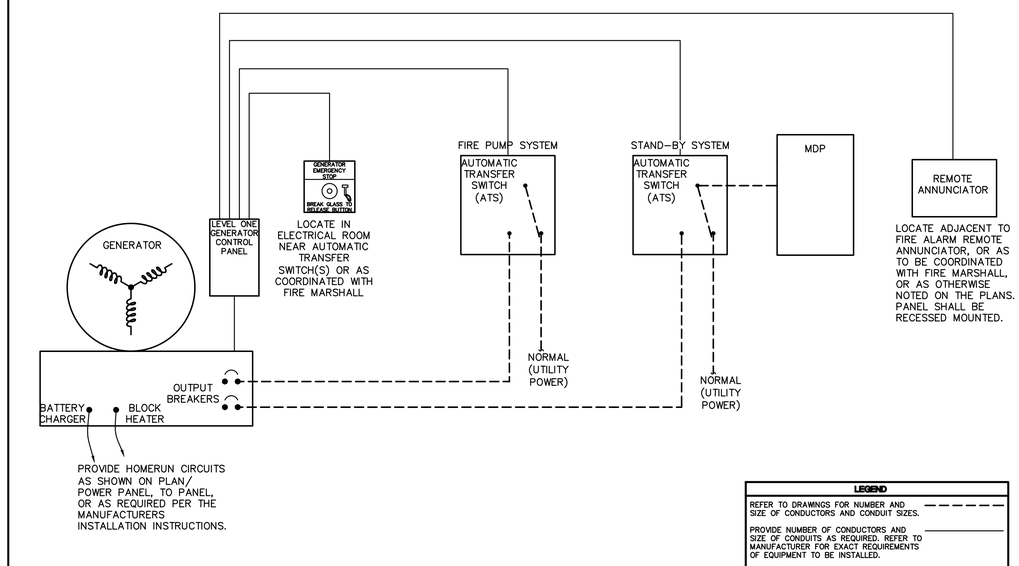



NOTES:
1. ENSURE INSTALLATION IS COMPLIANT WITH PROJECT LOCATION WIND SPEED RATING PER FLORIDA BUILDING CODE.
2. CONCRETE = 6500 PSI
3. PROVIDE INDIVIDUAL FUSING FOR EACH FIXTURE ACCESSIBLE THROUGH HANDHOLE.
4. MAKE SPLICE IN HAND HOLE. UNDERGROUND SPLICE CONNECTIONS NOT ALLOWED.
5. NO GROUND PULL BOXES ALLOWED.

## POLE SECTION AT FLUSH WITH GRADE
NO SCALE

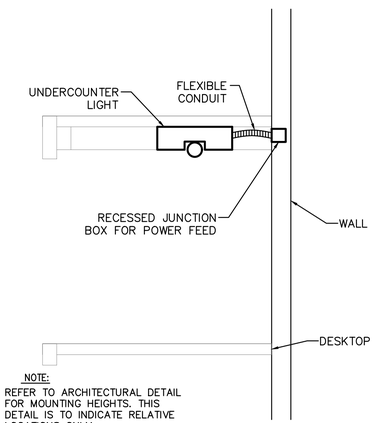



## HI-LOW 'EWC' RECEPTACLE DETAIL
NO SCALE




| LEGEND | |
|---|---|
| REFER TO DRAWINGS FOR NUMBER AND SIZE OF CONDUCTORS AND CONDUIT SIZES. | - - - - - |
| PROVIDE NUMBER OF CONDUCTORS AND SIZE OF CONDUITS AS REQUIRED. REFER TO MANUFACTURER FOR EXACT REQUIREMENTS OF EQUIPMENT TO BE INSTALLED. | ——— |

## EMERGENCY STANDBY GENERATOR
N.T.S.




NOTE:
REFER TO ARCHITECTURAL DETAIL FOR MOUNTING HEIGHTS. THIS DETAIL IS TO INDICATE RELATIVE LOCATIONS ONLY.

## BUNKROOM TASK LIGHT DETAIL
N.T.S.

1315 E. SEVENTH AVENUE
SUITE 106
TAMPA, FLORIDA 33605.3607

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HILLSBOROUGH COUNTY
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ELECTRICAL
DETAILS

E5.2

## GENERAL NOTES

1. ALL GROUNDING ELECTRODE CONDUCTORS/GROUNDING CONDUCTORS INSTALLED UNDERGROUND/IN-SLAB SHALL BE IN PVC CONDUIT.
2. REFERENCE NEC 250.52 (B) AND 250.104(B) FOR BONDING METAL GAS PIPING. GAS PIPING TO BE GROUNDED WITH A GROUNDING CONDUCTOR SIZED PER NEC TABLE 250.122 OR A MINIMUM OF #6 AWG COPPER.
3. REFERENCE NEC 250.104(B) FOR BONDING ALL INTERIOR METAL PIPING AND AIR DUCTS. GROUND ALL SAME INTERIOR PIPING/DUCTS.
4. REFERENCE NEC 250.52(A)(4) FOR A GROUND RING ENCIRCLING THE BUILDING OR STRUCTURE, IF INSTALLED. GROUNDING CONDUCTOR SHALL NOT BE LESS THAN 2.5' BELOW THE EARTH'S SURFACE, CONSISTING OF AT LEAST 20' OF BARE COPPER, NOT SMALLER THAN #2 AWG.
5. REFERENCE NEC 250.106 AND NFPA 780 FOR LIGHTNING PROTECTION SYSTEMS, IF INSTALLED. LIGHTNING PROTECTION SYSTEM GROUND TERMINAL SHALL BE BONDED TO THE BUILDING OR STRUCTURE GROUND BUS.
6. ALL FLOOR-MOUNTED SWITCHBOARDS, PANELBOARDS AND TRANSFORMERS ARE TO BE INSTALLED ON 4" CONCRETE HOUSEKEEPING PADS.
7. ALL TVSS DEVICES SHALL BE PROVIDED AND INSTALLED PER DIVISION 16600 AND PER MANUFACTURERS STANDARDS. FOR CLARITY ONLY BONDING, GROUNDING AND NEUTRAL CONDUCTORS/CONNECTIONS ARE SHOWN.
8. EQUIPMENT LOCATIONS SHOWN FOR REFERENCE ONLY. FIELD COORDINATE EXACT LOCATIONS.
9. ALL COPPER GROUNDING ELECTRODES CONDUCTORS SHALL BE IDENTIFIED EVERY 4' WITH GREEN TAPE IF INSULATED AND EXPOSED.
10. REFERENCE NEC 250.58 COMMON GROUNDING ELECTRODE – WHERE SEPARATE SERVICES SUPPLY A BUILDING, THEY SHALL BE PROVIDED WITH A COMMON GROUNDING ELECTRODE.
11. ALL NATIONAL ELECTRICAL CODE ARTICLE NUMBERS ARE BASED ON THE 2020 N.E.C.
12. EACH CONDUCTOR SHALL BE PERMANENTLY IDENTIFIED AT GROUND BUS AS TO EQUIPMENT SERVED.

# EMERGENCY GENERATOR

## KEYED NOTES

1. TERMINAL BUS FOR GROUNDING ELECTRODE TO GENERATOR SET. GENERATOR SET/SYSTEM GROUNDED CONDUCTOR (NEUTRAL) TO BE BONDED TO GROUNDING ELECTRODE CONDUCTOR/SYSTEM ONLY AT GENERATOR SET.
2. BONDING JUMPER SIZED PER TABLE 250.30(A)(1).
3. EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED PER 250.122 AND TERMINATED AT GROUND BUSS.

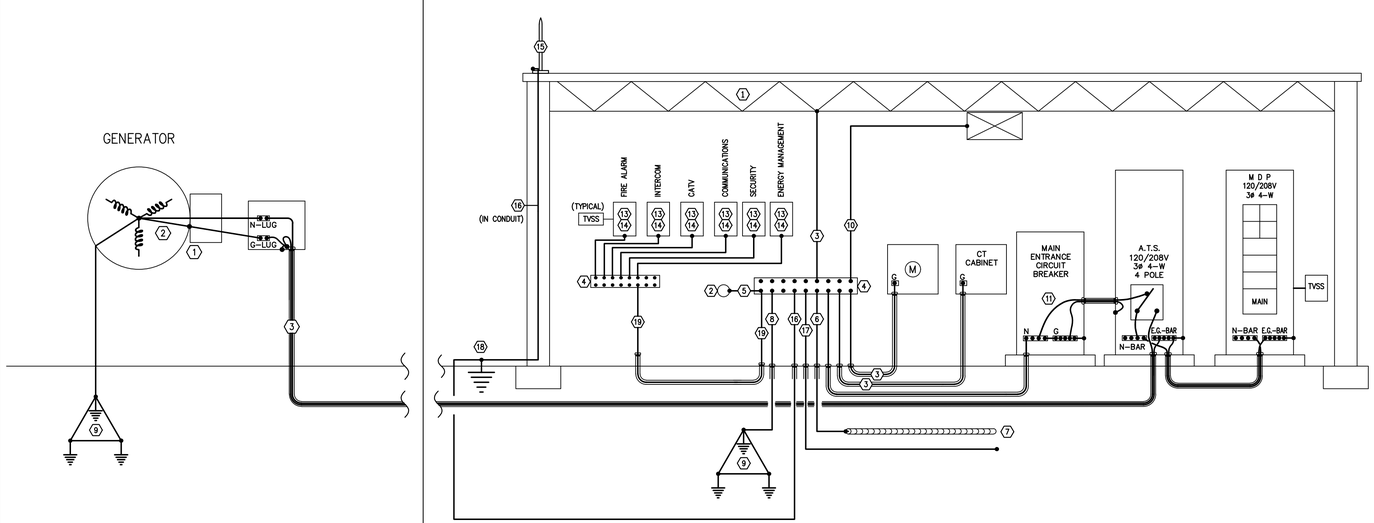
# MAIN ELECTRICAL SERVICE

## KEYED NOTES

1. STRUCTURAL BUILDING STEEL, WHERE APPLICABLE. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. BOND MAIN METAL PLUMBING PIPING WITHIN 5' OF ENTERING BUILDING. IF UNDERGROUND PLUMBING PIPING IS PVC, GROUND METAL PLUMBING WITHIN BUILDING AT CLOSEST ACCESSIBLE POINT.
3. GROUNDING ELECTRODE CONDUCTOR SIZED PER TABLE 250.66.
4. GROUND BUS – 4" WIDE X 18" LONG MINIMUM X 1/4" THICK SOLID COPPER TERMINAL BUS MOUNTED ON INSULATORS OFF WALL.
5. MINIMUM #4 COPPER GROUNDING ELECTRODE CONDUCTOR.
6. MAIN GROUNDING ELECTRODE CONDUCTOR 20' BARE COPPER IN EARTH, BURIED 24" DEEP, SIZED PER TABLE 250.66. INSURE CONDUCTOR IS BURIED OUTSIDE OF BUILDING PAD AND NOT INSTALLED UNDER SLAB OR FOOTER.
7. FOOTER STEEL IN GROUND. GROUND CONNECTIONS TO BE EXOTHERMIC WELDS TO A MIN. 1/2" THICK BY 20' LONG REBAR.
8. GROUNDING ELECTRODE CONDUCTOR SIZED PER TABLE 250.66 BASED ON SECONDARY FEEDER CONDUCTORS.
9. THREE COPPER GROUND RODS, 5/8" BY 20' LONG, SPACED A MINIMUM OF 10' APART. GROUND CONNECTIONS SHALL BE EXOTHERMIC WELDS. PROVIDE 6" PVC SLEEVE WITH THREADED CAP INSTALLED FLUSH WITH FINISHED GRADE FOR ACCESS FOR SERVICE AND/OR INSPECTION.
10. METAL HVAC DUCTWORK SHALL BE BONDED AS PER 250.104 (B) WITHIN THE MECHANICAL ROOM IN WHICH THEY ORIGINATE WITH A MINIMUM #6 AWG COPPER.
11. NEUTRAL (GROUNDED CONDUCTOR) TO BE BONDED ONLY AT SERVICE MAIN. ALL OTHER BUILDING MAIN NEUTRALS ARE NOT TO BE BONDED (FLOATING).

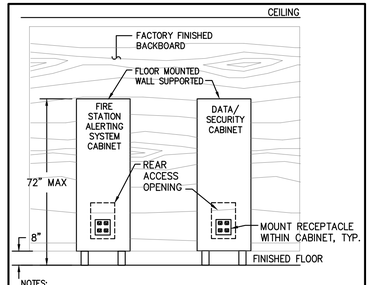
## KEYED NOTES (CONT.)

12. NEUTRAL (GROUNDED CONDUCTOR) SHALL NOT BE BONDED AT SECONDARY PANELBOARDS (FLOAT IF APPLICABLE).
13. ALL ENCLOSURES/CONTROL CABINETS FOR SYSTEMS PER DETAIL SHALL BE GROUNDED WITH A MINUMUM #4 COPPER GROUNDING CONDUCTOR TO MAIN GROUNDING ELECTRODE BUSSBAR.
14. INSTALL A GROUND BAR KIT CAPABLE OF TERMINATING ALL EQUIPMENT GROUNDING CONDUCTORS ENTERING THE ENCLOSURE.
15. LIGHTNING PROTECTION SYSTEM AIR TERMINAL(S). (SEE GENERAL NOTE #5)
16. IF PROVIDED, LIGHTNING PROTECTION SYSTEM GROUND TERMINALS SHALL BE BONDED TO MAIN BUILDING GROUNDING ELECTRICAL SYSTEM/BUSS.
17. GROUND RING. (SEE GENERAL NOTE #4)
18. MADE ELECTRODES INSTALLED AS NECESSARY PER MANUFACTURERS REQUIREMENTS. GROUND CONNECTIONS SHALL BE EXOTHERMIC WELDS. PROVIDE 6" PVC SLEEVE WITH THREADED CAP INSTALLED FLUSH WITH FINISHED GRADE FOR ACCESS FOR SERVICE AND/OR INSPECTION.
19. PROVIDE #1/0 COPPER GROUNDING ELECTRODE CONDUCTOR FROM MAIN GROUND BUS TO TELECOM GROUND BUS.




## GROUNDING DETAIL

NO SCALE

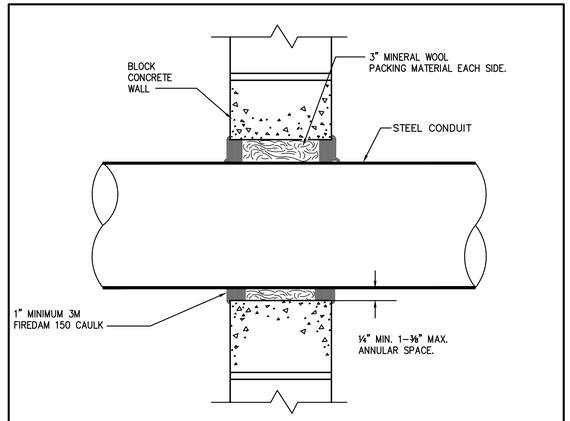



NOTES:

1. PROVIDE CHATSWORTH 13496-772 72Hx27.3Wx30D CABINET WITH LOCKABLE TEMPERED GLASS DOOR. PROVIDE (2) 40975-001 FAN KITS, (2) POWER STRIPS WITH SURGE PROTECTION, 11837-702 WIRE MANAGEMENT BAR, AND (4) SHELVES IN EACH.
2. COORDINATE EQUIPMENT ROUGH-IN WITH OWNER PRIOR TO TERMINATING CABLES.
3. CABINETS SHALL BE FURNISHED AND INSTALLED BY COUNTY VENDOR. CONTRACTOR SHALL COORDINATE ROOM LAYOUT WITH COUNTY VENDOR AND FSA SYSTEM INSTALLER.

## DATA CABINET ELEVATION DETAIL

N.T.S.



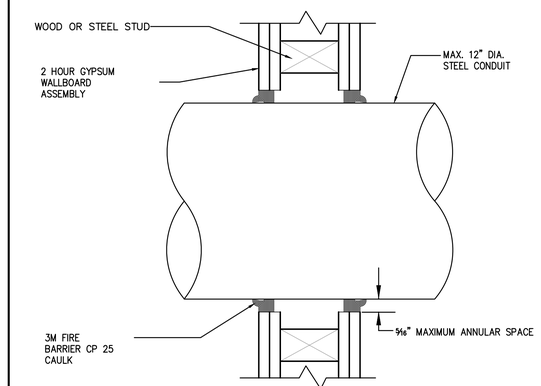

## NOTES:

1. MINIMUM ANNULAR SPACE REQUIREMENT IS 1/4". MAXIMUM ANNULAR SPACE ALLOWABLE IS 1 IN.
2. INSTALL THE FIRESTOP SYMMETRICALLY ON BOTH SIDES OF THE WALL ASSEMBLY.
3. RECESS A NOMINAL 3 IN. THICKNESS OF 4 PCF MINERAL WOOL SAFING 1/2" FOR THE SURFACE OF THE FLOOR.
4. FILL THE ANNULAR SPACE AROUND THE PIPE WITH MINIMUM 1/2" DEPTH OF 3M FIREDAM 150.

U.L. SYSTEM #161

## PENETRATION DETAIL FOR 6" MAX. DIA. CONDUIT

NO SCALE




## NOTES:

1. INSTALL THE FIRESTOP SYMMETRICALLY ON BOTH SIDES OF THE WALL ASSEMBLY.
2. ANNULAR SPACE REQUIREMENTS:

| MAXIMUM CONDUIT DIAMETER | ANNULAR SPACE |
|---|---|
| 1 INCH | 0 – 3/16 IN. |
| 4 INCH | 0 – 1/4 IN. |
| 12 INCH | 3/16 – 5/16 IN. |

3. 3M FIRE BARRIER CP 25N/S CAULK IS TO BE FORCED INTO THE ANNULAR SPACE TO THE MAXIMUM EXTENT POSSIBLE WITH A MINIMUM 1/4" DIAMETER BEAD OF CP 25N/S CAULK APPLIED TO THE PERIMETER OF THE CONDUIT AT ITS EGRESS FROM THE WALL.

U.L. SYSTEM #1479

## PENETRATION FIRESTOP FOR 12" MAX. DIA. METAL CONDUIT THROUGH A GYPSUM WALLBOARD ASSEMBLY

NO SCALE


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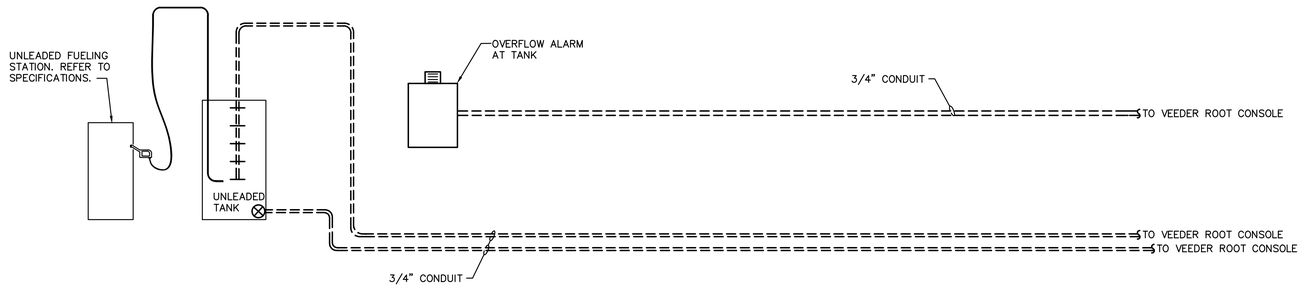
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ELECTRICAL DETAILS

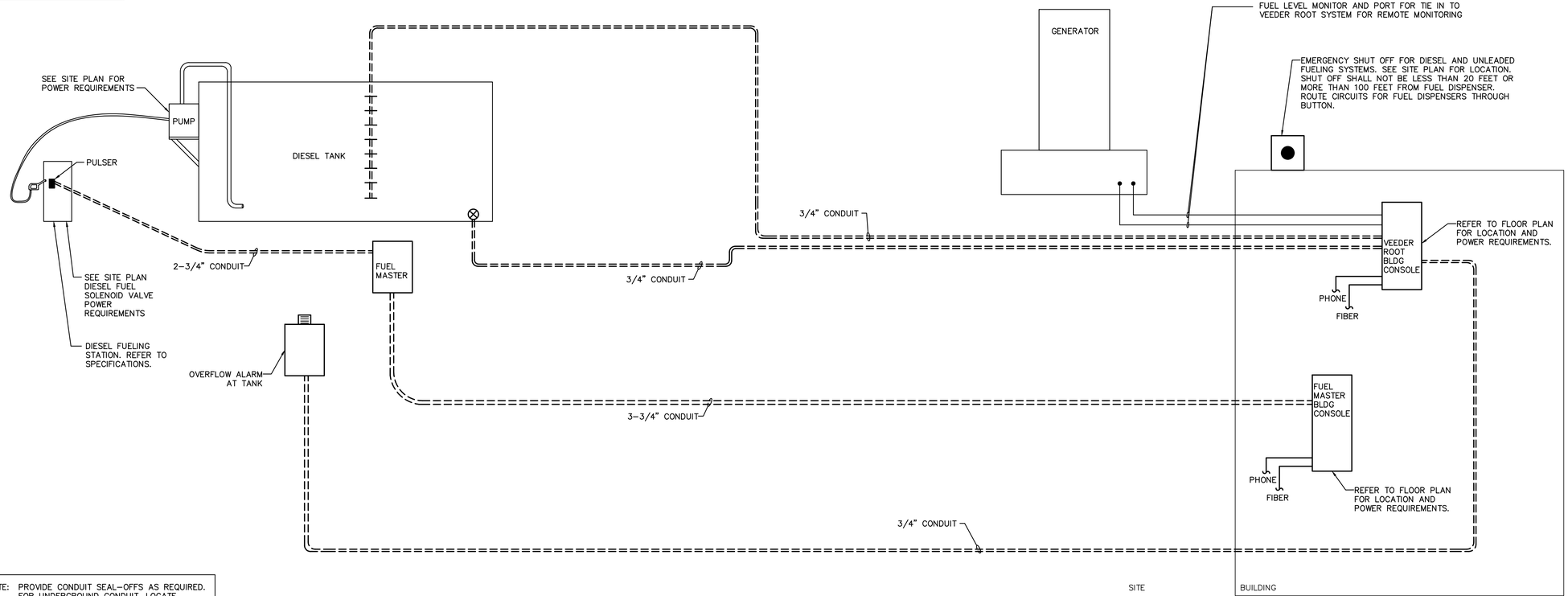
E5.3

## UNLEADED FUEL SYSTEM




NOTE: PROVIDE CONDUIT SEAL-OFFS AS REQUIRED. FOR UNDERGROUND CONDUIT, LOCATE SEAL-OFF ABOVE GRADE.

## DIESEL FUEL SYSTEM




NOTE: PROVIDE CONDUIT SEAL-OFFS AS REQUIRED. FOR UNDERGROUND CONDUIT, LOCATE SEAL-OFF ABOVE GRADE.

**FUEL STORAGE, DISTRIBUTION, AND MONITORING DETAIL**

N.T.S.


1315 E. SEVENTH AVENUE
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TAMPA, FLORIDA 33605.3607

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FACSIMILE 813.242.6683

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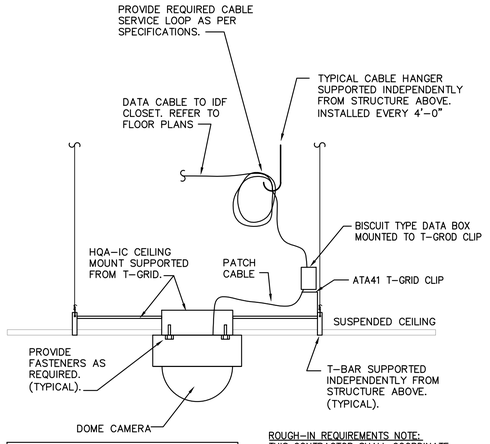
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ELECTRICAL DETAILS

E5.4

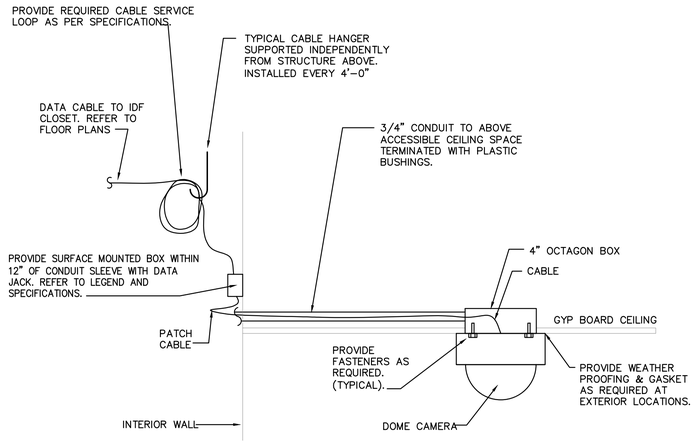



NOTE:
1. ADJUST CAMERA FIELD OF VIEW AS PER OWNER'S REQUIREMENT.
2. PATCH CORDS ARE OWNER PROVIDED CONTRACTOR INSTALLED.

ROUGH-IN REQUIREMENTS NOTE:
THIS CONTRACTOR SHALL COORDINATE LOCATION AND J-BOX REQUIREMENTS WITH CCTV SECURITY INTEGRATOR/ CONTRACTOR PRIOR TO ROUGH-IN. DETAILS SHOWN HEREIN DEPICT TYPICAL INSTALLATION.

## TYPICAL DOME CAMERA SUSPENDED CEILING INSTALLATION DETAIL.

NO SCALE

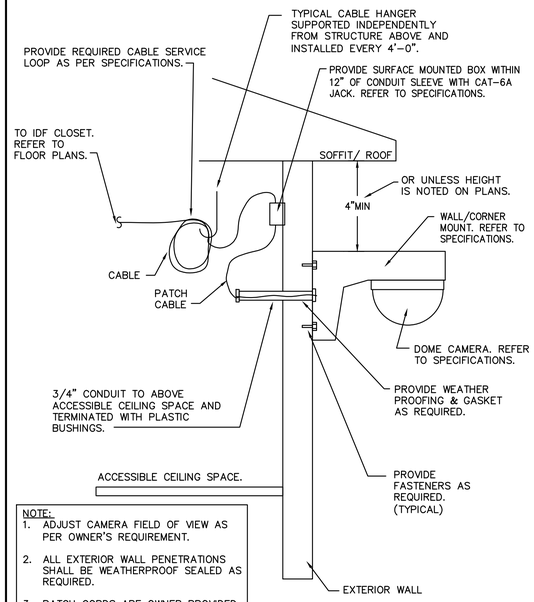



NOTE:
1. ADJUST CAMERA FIELD OF VIEW AS PER OWNER'S REQUIREMENT.
2. ALL EXTERIOR WALL PENETRATIONS SHALL BE WEATHERPROOF SEALED AS REQUIRED.
3. PATCH CORDS ARE OWNER PROVIDED CONTRACTOR INSTALLED.

ROUGH-IN REQUIREMENTS NOTE:
THIS CONTRACTOR SHALL COORDINATE LOCATION AND J-BOX REQUIREMENTS WITH CCTV SECURITY INTEGRATOR/ CONTRACTOR PRIOR TO ROUGH-IN. DETAILS SHOWN HEREIN DEPICT TYPICAL INSTALLATION.

## TYPICAL DOME CAMERA GYP BOARD CEILING INSTALLATION DETAIL.

NO SCALE




NOTE:
1. ADJUST CAMERA FIELD OF VIEW AS PER OWNER'S REQUIREMENT.
2. ALL EXTERIOR WALL PENETRATIONS SHALL BE WEATHERPROOF SEALED AS REQUIRED.
3. PATCH CORDS ARE OWNER PROVIDED, CONTRACTOR INSTALLED.

ROUGH-IN REQUIREMENTS NOTE:
THIS CONTRACTOR SHALL COORDINATE LOCATION AND J-BOX REQUIREMENTS WITH CCTV SECURITY INTEGRATOR/ CONTRACTOR PRIOR TO ROUGH-IN. DETAILS SHOWN HEREIN DEPICT TYPICAL INSTALLATION.

## TYPICAL EXTERIOR WALL MOUNTED CAMERA. EXTERIOR CONCRETE OR BLOCK WALL INSTALLATION DETAIL.

NO SCALE

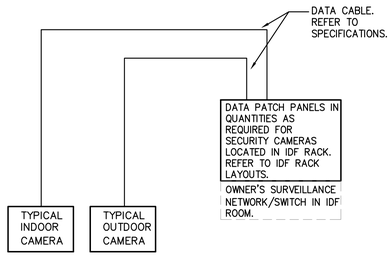






## TYPICAL CABLE HANGER DETAIL

NO SCALE

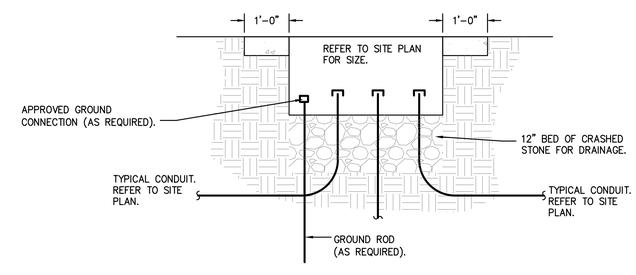



### GENERAL NOTE:

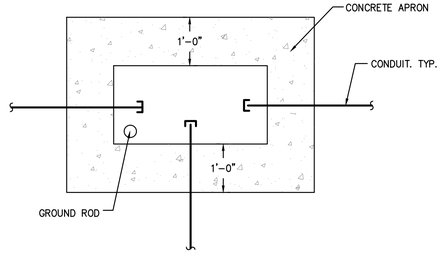
1. PROVIDE TERMINAL CABINET WITH SURGE SUPPRESSOR FOR ALL SECURITY CAMERA CABLES SERVING EXTERIOR DEVICES BY DITEK DTK-WM4NETS COORDINATE WITH SECURITY CAMERA MANUFACTURER FOR EACH DEVICE.

## SURVEILLANCE INTERCONNECT DIAGRAM

N.T.S.




PLAN VEW




TOP VIEW

## TYPICAL COMMUNICATION GROUND PULL BOX. (REFER TO SITE PLAN).

NOT TO SCALE

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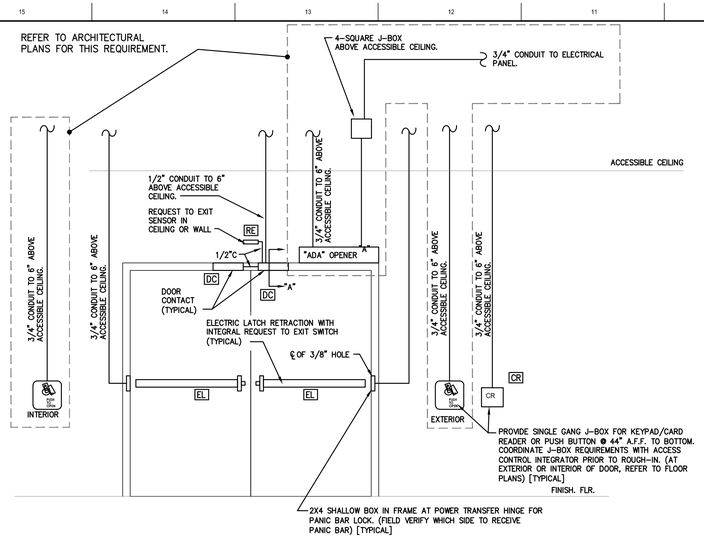
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HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

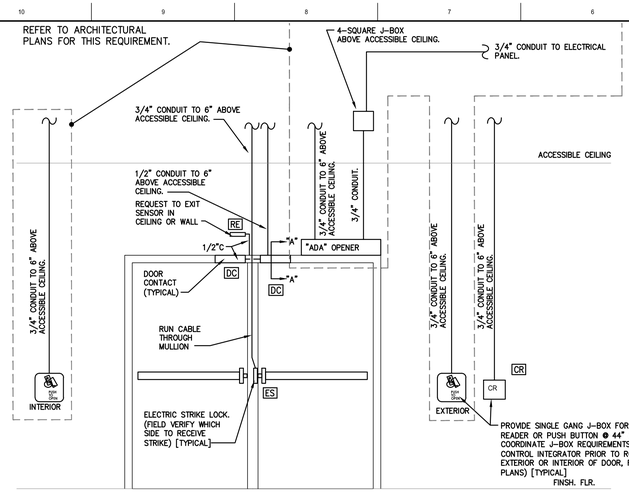
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| 90% CD | 08.30.2024 |
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ELECTRICAL DETAILS

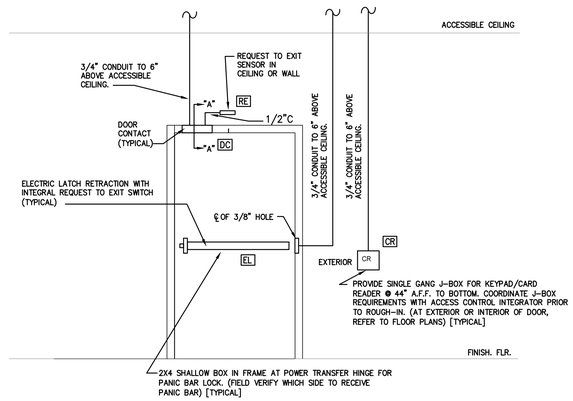
E5.5




## DOUBLE DOOR - ELECTRIC LATCH RETRACTION




## DOUBLE DOOR - ELECTRIC STRIKE LOCK




## SINGLE DOOR - ELECTRIC LATCH RETRACTION




## SINGLE DOOR - ELECTRIC MAGNETIC LOCK

N.T.S.




## DOUBLE DOOR - ELECTRIC MAGNETIC LOCK



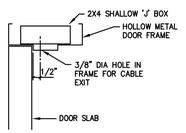

## SINGLE DOOR - ELECTRIC STRIKE LOCK

## SECURITY NOTES:

1. THIS CONTRACTOR SHALL COORDINATE WITH DOOR HARDWARE CONTRACTOR TO DETERMINE PROPER DOOR LOCK ROUGH-IN REQUIREMENT AT EACH DOOR. DETAILS SHOWN HEREIN DEPICT TYPICAL INSTALLATION.
2. PROVIDE A 20' COILED AND EXPOSED SERVICE LOOP OF CABLE AT THE DESTINATION POINTS FOR EACH REQUIRED DEVICE.
3. PROVIDE ONE HOME RUN PER DEVICE INDICATED ON PLANS BACK TO PANEL LOCATION IN COMM. ROOMS. SEE DIAGRAMS THIS SHEET FOR CABLE TYPES PER DEVICE.
4. LABEL EACH HOME RUN WITH DESTINATION ROOM NUMBER AND DEVICE TYPE. DURABLE LABEL TO BE APPLIED AT PANEL END OF CABLE.
5. ALL SECURITY SYSTEMS' CABLING SHALL BE STRANDED CONDUCTOR.
6. ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT PLACEMENT OF DOOR CONTACT AND DRILL A 3/8" HOLE IN THE DOOR FRAME. PULL THE SECURITY CABLE THROUGH CONDUIT EMBEDDED IN DOOR/WALL AND FISH THROUGH DOOR FRAME. LEAVE ENOUGH WIRE PROJECTING FROM THE FRAME FOR TERMINATION BY OTHERS.
7. ALL SECURITY CABLING INSTALLED IN UNDERGROUND CONDUIT SHALL BE LISTED FOR OUTDOOR WET LOCATION USE.
8. ALL SECURITY DEVICES INSTALLED OUTDOORS SHALL BE LISTED FOR WET LOCATION OUTDOOR USE.

## TYPICAL ACCESS CONTROL DOOR CONDUIT ROUGH-IN DETAILS

NOT TO SCALE

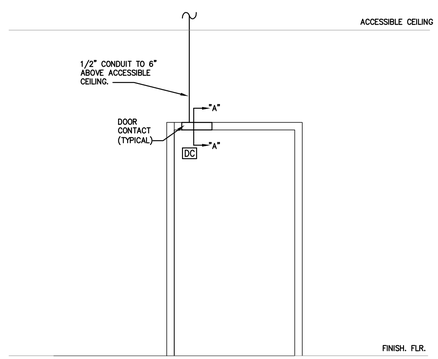



(JAMB SIMILAR)

## FRAME HEAD DETAIL

N.T.S.

A




## SINGLE DOOR (DOOR CONTACT ONLY)

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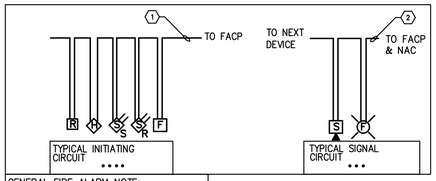
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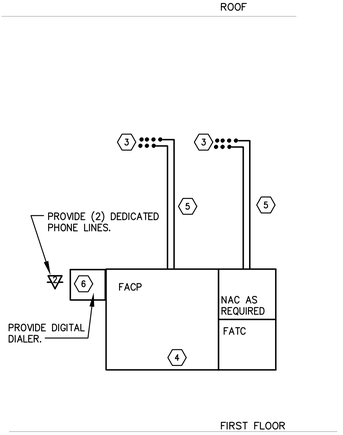
E5.6




GENERAL FIRE ALARM NOTE:
PROVIDE ADDRESSABLE MONITOR MODULES, CONTROL RELAYS, AND EXPANSION CARDS AS REQUIRED FOR FULLY FUNCTIONAL FIRE ALARM SYSTEM. REFER TO SPECIFICATIONS.

## FIRE ALARM TYPICAL DEVICE INTERCONNECT DIAGRAM

NOT TO SCALE




## GENERAL NOTE:

1. PROVIDE FATC WITH SURGE SUPPRESSOR FOR ALL FIRE ALARM CIRCUITS SERVING EXTERIOR DEVICES.
2. REFER TO FLOOR PLANS FOR ALL DEVICE LOCATIONS AND QUANTITIES. REFER TO SPECIFICATIONS FOR ALL EQUIPMENT AND CABLING REQUIREMENTS.
3. FIRE ALARM SYSTEM SHALL BE POINT REPORTING TYPE SYSTEM TO REPORT DEVICE TYPE, LOCATION, ROOM NAME AND NUMBER TO THE MONITORING STATION.

## KEYED NOTES:

1. PROVIDE CONDUIT, CABLING AND ALL OTHER REQUIRED COMPONENTS AND ACCESSORIES FOR A COMPLETE INSTALLATION.
2. PROVIDE CONDUIT, CABLING AND ALL OTHER REQUIRED COMPONENTS AND ACCESSORIES FOR A COMPLETE INSTALLATION. HORNS AND STROBES SHALL BE ON SEPARATE SIGNAL CIRCUITS.
3. PROVIDE FIELD DEVICES AND CABLING. REFER TO FLOOR PLANS AND SPECIFICATIONS.
4. PROVIDE FIRE ALARM CONTROL PANEL WITH INITIATING CIRCUIT BOARD (SIZED AS REQUIRED).
5. CABLING AS REQUIRED PER MANUFACTURER'S SPECIFICATIONS. (SLC, SPEAKER, NOTIFICATION OR ANNUNCIATOR CABLING AS REQUIRED FOR FULLY FUNCTIONAL SYSTEM).
6. PROVIDE DIGITAL CELLULAR DIALER. BY NAPCO SECURITY MODEL STARLINK FIRE SLE–LTEVI–CFB–PS (VERISON) OR SLE–LTEAI–CFB–PS (AT&T) VERIFY CELLULAR CARRIER WITH OWNER PRIOR TO ORDER. ALSO PROVIDE CELLULAR ANTENNA SLE–ANTEXT## (## DEPICTS CABLE LENGTH 75, 50, 30) AS REQUIRED TO MAINTAIN PROPER CELLULAR SIGNAL STRENGTH. EXTEND CABLE TO ROOF, PROVIDE WEATHERHEAD AND ROOF PENETRATION AS REQUIRED.

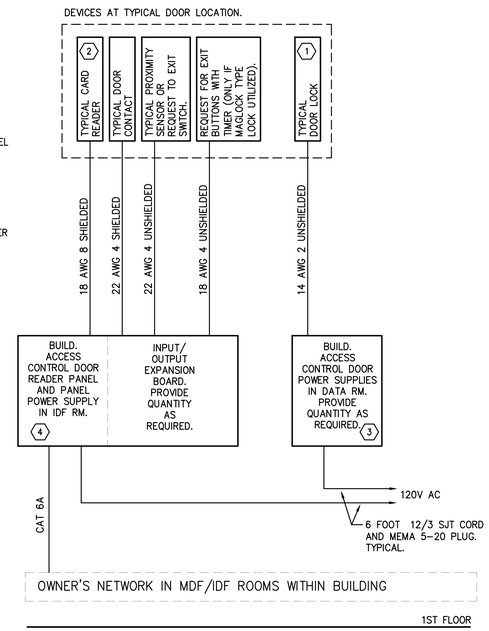
## FIRE ALARM SYSTEM RISER DIAGRAM

NOTES:

1. ALL EXPOSED CEILING ACCESS CONTROL CABLING SHALL BE IN EMT CONDUIT. HORIZONTAL RUNS ABOVE ACCESSIBLE CEILING ARE NOT REQUIRED TO BE IN CONDUIT.
1. PROVIDE TERMINAL CABINET WITH SURGE SUPPRESSORS FOR ALL ACCESS CONTROL CABLING SERVING EXTERIOR DEVICES.
2. ALL EXTERIOR AND UNDERGROUND CABLING SHALL BE WET LOCATION RATED.
3. REFER TO PLANS FOR ALL DEVICE AND CONTROL EQUIPMENT LOCATIONS.
4. REFER TO SPECIFICATIONS FOR ALL EQUIPMENT REQUIREMENTS.
4. LABEL EACH HOME RUN WITH DESTINATION ROOM NUMBER AND DEVICE TYPE. DURABLE LABEL TO BE APPLIED AT PANEL END OF CABLE.
5. ALL ACCESS CONTROL SYSTEMS' CABLING SHALL BE STRANDED CONDUCTOR.
6. PROVIDE SURGE SUPPRESSOR FOR EACH COMMUNICATOR CONNECTION. REFER TO SPECIFICATIONS.
7. PROVIDE BACKUP BATTERIES FOR EACH CONTROLLER AND DOOR LOCK POWER SUPPLY. REFER TO SPECIFICATIONS.
3. ALL SECURITY DEVICES INSTALLED OUTDOORS SHALL BE LISTED FOR WET LOCATION OUTDOOR USE.

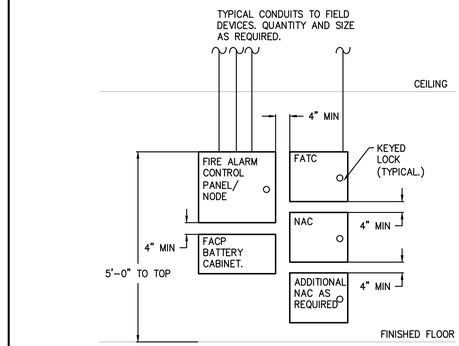
KEYED NOTES THIS DETAIL:

1. REFER TO FLOOR PLAN FOR TYPICAL LOCK LOCATION AND QUANTITIES. PROVIDE EPT–10 POWER TRANSFER AT EACH DOOR LOCK.
2. REFER TO FLOOR PLAN FOR TYPICAL CARD READER LOCATION AND QUANTITIES.
3. PROVIDE FIRE ALARM RELAY AND TIE–IN TO FIRE ALARM SYSTEM FOR REMOTE DOOR RELEASE UPON FIRE ALARM ACTIVATION.
4. PROVIDE QUANTITIES AS REQUIRED FOR EACH BUILDING TO SUPPORT NUMBER OF ACCESS CONTROLLED DOORS SHOWN ON PLANS.



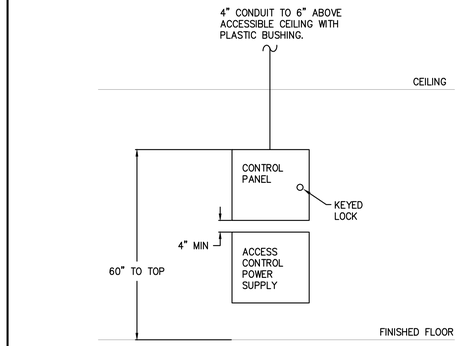

## ACCESS CONTROL SYSTEM RISER DIAGRAM.

NO SCALE



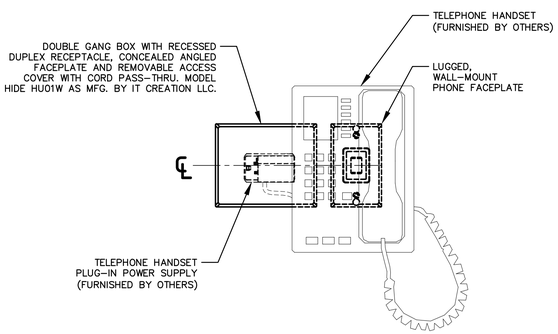

## TYPICAL FIRE ALARM PANEL, FATC & NAC MOUNTING

NOT TO SCALE




## TYPICAL SECURITY CARD ACCESS PANEL MOUNTING

NOT TO SCALE

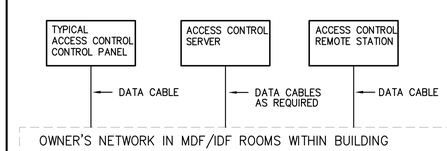



NOTES:

CONTRACTOR SHALL PROVIDE MOCK–UP OF THE TELEPHONE HANDSET INSTALLATION PRIOR TO COMMENCING ANY ROUGH–IN WORK. MOCK–UP IS INTENDED TO VERIFY PROOF–OF–CONCEPT AND TO ALLEVIATE FIELD COORDINATION ISSUES. OWNER/ARCHITECT/ENGINEER SHALL REVIEW AND APPROVE MOCK–UP INSTALLATION PRIOR TO COMMENCING WORK. MOCK–UP SHALL BE PROVIDED FOR REVIEW TO ALLOW SUFFICIENT TIME FOR CONCEPT ADJUSTMENTS, INCLUDING ROUGH–IN LOCATIONS AND PRODUCT CHANGEOUTS, SO AS TO NOT IMPACT THE OVERALL PROJECT SCHEDULE.

## TELEPHONE HANDSET DETAIL

NO SCALE




## ACCESS CONTROL PANEL INTERCONNECT DIAGRAM

NOT TO SCALE

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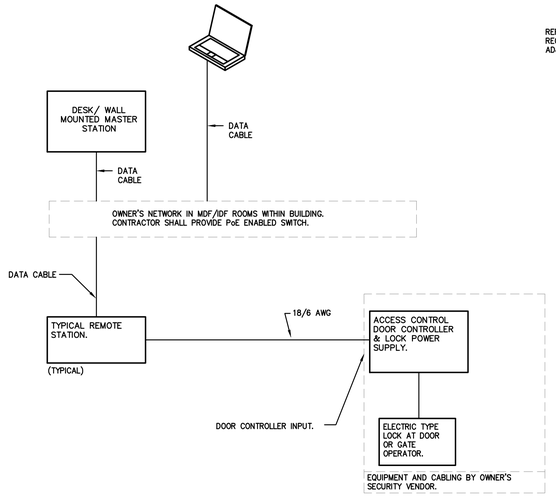
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# HILLSBOROUGH COUNTY THONOTOSASSA FIRE STATION NO. 21 REPLACEMENT

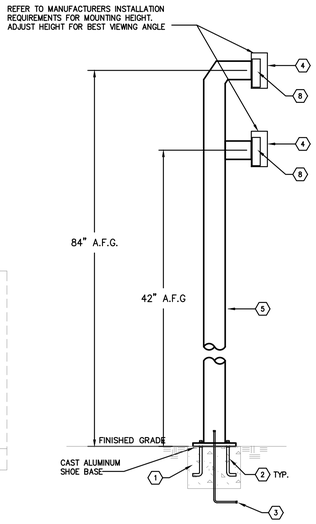
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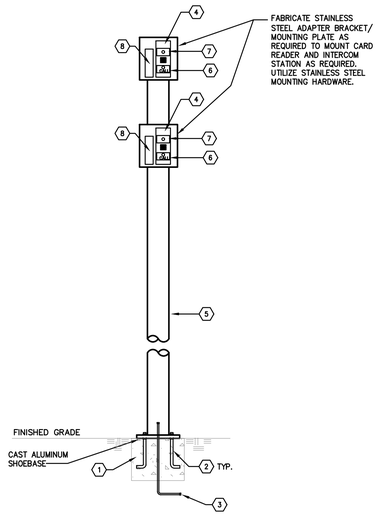
E5.7




**SYSTEM LAYOUT DIAGRAM**



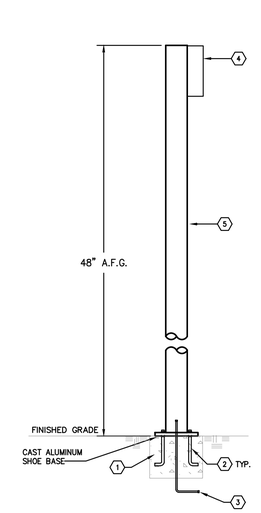

**VEHICLE GATE PEDESTAL SIDE VIEW**



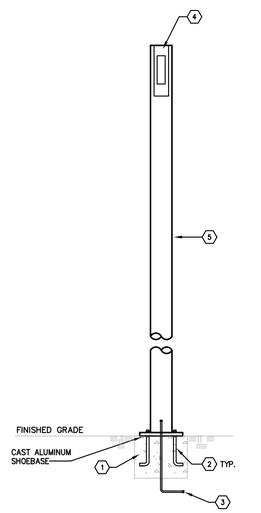

**VEHICLE GATE PEDESTAL FRONT VIEW**

KEYED NOTES THIS DETAIL:

1. CONCRETE OR PAVEMENT. COORDINATE WITH ARCHITECTURAL PLANS.
2. PROVIDE ANCHORS AS REQUIRED IN CONCRETE OR PAVEMENT.
3. PVC CONDUIT. REFER TO SYSTEMS' PLANS FOR SIZE AND ROUTING.
4. INTERCOM STATION.
5. PROVIDE COMBINATION 84" & 42" TALL HEAVY DUTY GOOSENECK TYPE DUAL HEIGHT PEDESTAL PART #84-DSP-4-12-12 OR EQUAL AT DUAL LARGE/ STANDARD VEHICLE LOCATION. PROVIDE 42" STANDARD HEIGHT SINGLE HEAVY DUTY GOOSENECK PEDESTAL PART #42-3-12 OR EQUAL. RUN ALL CABLING CONCEALED WITHIN PEDESTALS.
6. PUSH TO TALK CALL BUTTON.
7. COLOR CAMERA.
8. DRILL HOLE FOR CABLING AND MOUNT MOUNT CARD READER ON SIDE OF ENCLOSURE.




**PEDESTRIAN GATE PEDESTAL SIDE VIEW**




**PEDESTRIAN GATE PEDESTAL FRONT VIEW**

KEYED NOTES THIS DETAIL:

1. CONCRETE OR PAVEMENT. COORDINATE WITH ARCHITECTURAL PLANS.
2. PROVIDE ANCHORS AS REQUIRED IN CONCRETE OR PAVEMENT.
3. PVC CONDUIT. REFER TO SYSTEMS' PLANS FOR SIZE AND ROUTING.
4. KEYPAD / CARD READER COMBO.
5. PROVIDE 48" TALL HEAVY DUTY BOLLARD TYPE PEDESTAL PART #HD-BLACK-TOWER OR EQUAL. RUN ALL CABLING CONCEALED WITHIN PEDESTAL.

NOTES:

1. CONTRACTOR SHALL PROVIDE PEDESTAL AND ROUGH-IN ONLY. SECURITY EQUIPMENT AND CABLING BY OWNER'S SECURITY VENDOR AND SHOWN FOR REFERENCE ONLY.
2. ALL EXTERIOR MOUNTING HARDWARE SHALL BE STAINLESS STEEL.
3. ALL EXPOSED CABLING SHALL BE IN FLEX RACEWAY WITH WEATHER TIGHT TYPE FITTINGS.
4. COORDINATE ALL CONNECTIONS WITH ACCESS CONTROL INTEGRATOR/CONTRACTOR.

**GATE PEDESTAL AND ENTRANCE VIDEO INTERCOM STATION MOUNTING DETAILS AND SYSTEM LAYOUT DIAGRAM (PROVIDE PEDESTAL AND ROUGHIN-ONLY. ALL SECURITY EQUIPMET AND CABLING BY OWNERS SECURITY VENDOR).**

NO SCALE


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|---|---|
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| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

ELECTRICAL DETAILS

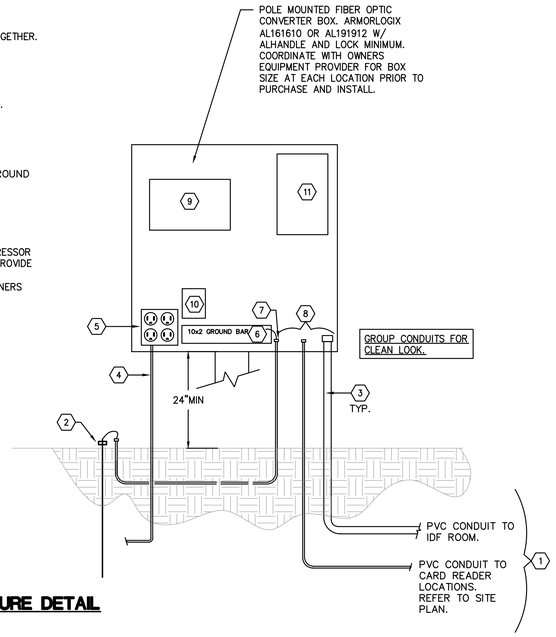
E5.8

KEYED NOTES THIS DETAIL:

1. REFER TO SYSTEMS SITE PLAN FOR CONDUIT SIZES, QUANTITIES AND ROUTING.
2. INSTALL (2) 5/8"x10'-0" COPPER CLAD GROUND RODS, COUPLED TOGETHER. PROVIDE #6 GROUNDING CONDUCTOR.
3. ALL EXPOSED CONDUIT SHALL BE RIGID.
4. PROVIDE POWER CONDUIT FOR ELECTRICAL COMPONENTS. REFER TO ELECTRICAL DRAWINGS FOR CONDUIT, CONDUCTOR SIZE AND ROUTING.
5. PROVIDE (1) QUAD SURFACE MOUNTED RECEPTACLE.
6. 2x10 PROVIDE COPPER GROUND BAR KIT.
7. PROVIDE 3/4" CONDUIT STUB AND #6 STR. CU. GRD. WIRE TO GROUND BAR AND FIXTURE.
8. INSTALL BUSHING ON ALL CONDUITS.
9. SPACE ALLOTTED FOR MEDIA CONVERTER SWITCH
10. PROVIDE SURGE SUPPRESSOR FOR EACH DATA CABLE. SURGE SUPPRESSOR SHALL BE AS MANUFACTURED BY DITEK #DTK-MRJPOE OR EQUAL. PROVIDE 3' PATCH CORD MINIMUM AND GROUNDING CONDUCTOR, REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS. COORDINATE WITH OWNERS EQUIPMENT PRIOR TO PURCHASING AND INSTALLATION.
11. SPACE ALLOTTED FOR FIBER TERMINATION PANEL.

NOTES:

1. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL.
2. CONTRACTOR SHALL COORDINATE RECEPTACLE, GROUNDING, AND CONDUIT INSTALLATION WITH COUNTY VENDOR PRIOR TO COMMENCING WORK.




## SITE FIBER OPTIC CONVERTER ENCLOSURE DETAIL

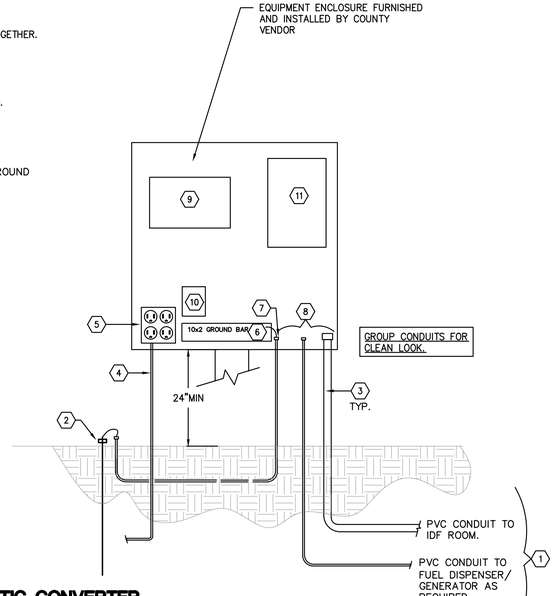
NO SCALE

KEYED NOTES THIS DETAIL:

1. REFER TO SYSTEMS SITE PLAN FOR CONDUIT SIZES, QUANTITIES AND ROUTING.
2. INSTALL (2) 5/8"x10'-0" COPPER CLAD GROUND RODS, COUPLED TOGETHER. PROVIDE #6 GROUNDING CONDUCTOR.
3. ALL EXPOSED CONDUIT SHALL BE RIGID.
4. PROVIDE POWER CONDUIT FOR ELECTRICAL COMPONENTS. REFER TO ELECTRICAL DRAWINGS FOR CONDUIT, CONDUCTOR SIZE AND ROUTING.
5. PROVIDE (1) QUAD SURFACE MOUNTED RECEPTACLE.
6. 2x10 PROVIDE COPPER GROUND BAR KIT.
7. PROVIDE 3/4" CONDUIT STUB AND #6 STR. CU. GRD. WIRE TO GROUND BAR AND FIXTURE.
8. INSTALL BUSHING ON ALL CONDUITS.
9. SPACE ALLOTTED FOR MEDIA CONVERTER SWITCH
10. SPACE ALLOTTED FOR SURGE SUPPRESSOR.
11. SPACE ALLOTTED FOR FIBER TERMINATION PANEL.

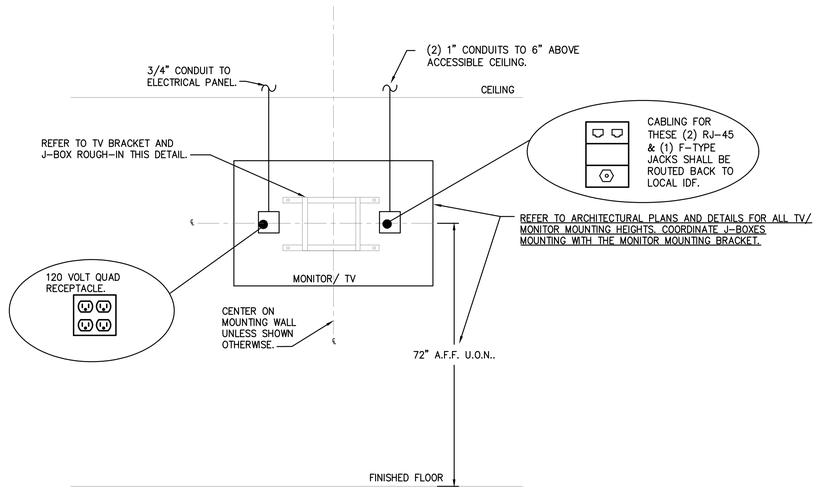
NOTES:

1. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL.
2. CONTRACTOR SHALL COORDINATE RECEPTACLE, GROUNDING, AND CONDUIT INSTALLATION WITH COUNTY VENDOR PRIOR TO COMMENCING WORK.




## FUEL MASTER & GENERATOR FIBER OPTIC CONVERTER ENCLOSURE DETAIL

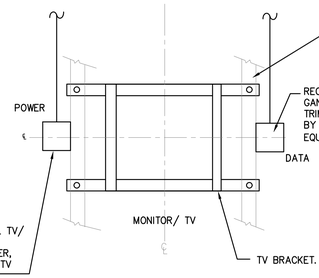
NO SCALE




## TV ELEVATION

NOTES THIS DETAIL:

1. COORDINATE WITH ARCHITECTURAL DRAWINGS. MONITOR SIZE AND LOCATION. A/V BOX SHALL BE MOUNTED AT CENTER OF MONITOR.
2. COORDINATE DISPLAY MOUNT LOCATION WITH A/V J-BOX.




## TV BRACKET AND J-BOX BOX ROUGH-IN DETAIL

## TYPICAL TV/ MONITOR ROUGH-IN DETAIL

NOT TO SCALE

| FLOOR PLAN SYMBOL |
|---|
| TV. |


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EMI Job No. 22-0460 Drawn By: EM Checked By: JSW

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COMMISSIONERS COUNTY
CENTER
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TAMPA FL 33601

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THONOTOSASSA, FL 33592

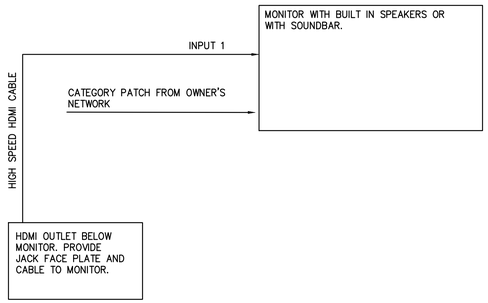
HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2216-05

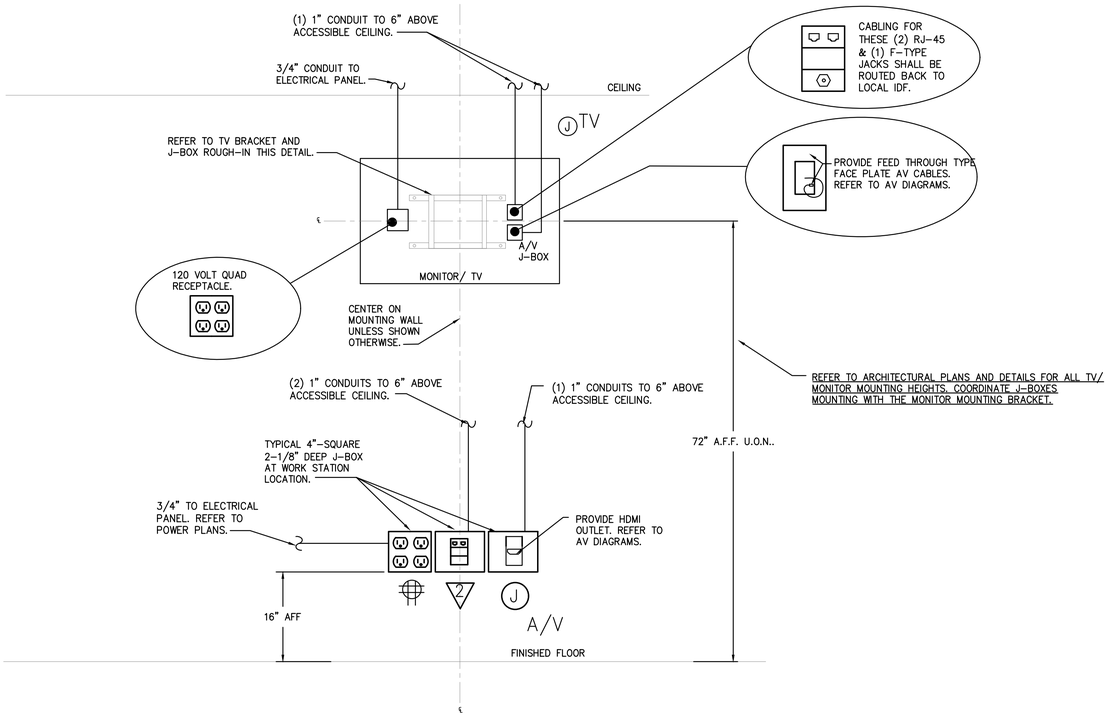
| DISTRIBUTION | DATE |
|---|---|
| DD SET | 06.06.2024 |
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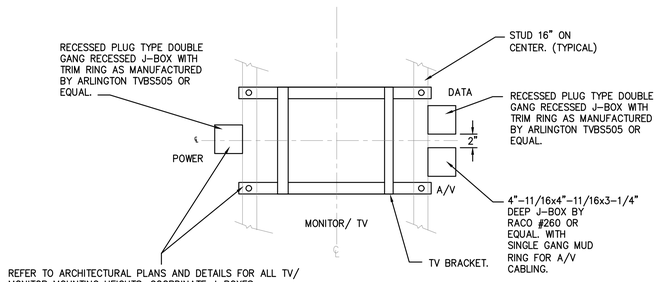
ELECTRICAL DETAILS

E5.9




**A/V INTERCONNECT DIAGRAM.**




**TV BRACKET AND J-BOX BOX ROUGH-IN DETAIL**

NOTES THIS DETAIL:

1. COORDINATE WITH ARCHITECTURAL DRAWINGS. MONITOR SIZE AND LOCATION. A/V BOX SHALL BE MOUNTED AT CENTER OF MONITOR.
2. COORDINATE DISPLAY MOUNT LOCATION WITH A/V J-BOX.
3. ALL J-BOXES ARE 4"-SQUARE 2-1/8" DEEP UNLESS OTHERWISE NOTED.
4. PROVIDE RECESSED PASS THROUGH TYPE FACE PLATE AT A/V J-BOXES FOR A/V CABLES MANAGEMENT BY EATON 35M1W-SP-L OR EQUAL.
3. THIS IS A CONCEPTUAL BASED DRAWING AND IS NOT INTENDED FOR WIRING DIAGRAM USE. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT SHOWN, POWER ADAPTERS, CABLES, BRACKETS, WALL PLATES AND MOUNTING HARDWARE FOR COMPLETE FUNCTIONAL SYSTEM. U.O.N..

**TV ROUGH-IN AND A/V CABLES ROUGH-IN. (DAY ROOM 105)**

NOT TO SCALE

FLOOR PLAN SYMBOL

J TV
J AV

1315 E. SEVENTH AVENUE
SUITE 106
TAMPA, FLORIDA 33605.3607

TELEPHONE 813.242.6677
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EMI Job No. 22-0460 Drawn By: EM Checked By: JSW

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CENTER
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PROJECT ADDRESS:
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HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2216-05

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ELECTRICAL DETAILS

E5.10

## WIRE SIZE REQUIRED FOR BRANCH CIRCUITS AT LESS THAN 3% VOLTAGE DROP

| | DESIGN LOAD | 1 FT TO 50 FT | 51 FT TO 75 FT | 76 FT TO 100 FT | 101 FT TO 125 FT | 126 FT TO 150 FT | 151 FT TO 200 FT |
|---|---|---|---|---|---|---|---|
| 120V | 15A | #12 | #10 | #10 | #8 | #8 | #6 |
| | 20A | #12 | #10 | #8 | #8 | #6 | #6 |
| | 30A | #10 | #8 | #6 | #6 | #6 | #4 |
| | 40A | #8 | #6 | #6 | #4 | #4 | #3 |
| | 50A | #8 | #6 | #4 | #4 | #3 | #2 |
| 208V 1 PHASE | 20A | #12 | #12 | #12 | #10 | #10 | #8 |
| | 30A | #10 | #10 | #10 | #8 | #8 | #6 |
| | 40A | #8 | #8 | #8 | #8 | #6 | #6 |
| | 50A | #8 | #8 | #8 | #6 | #6 | #4 |
| | 60A | #6 | #6 | #6 | #6 | #4 | #4 |
| | 70A | #4 | #4 | #4 | #4 | #4 | #3 |
| | 80A | #4 | #4 | #4 | #4 | #4 | #3 |
| | 90A | #3 | #3 | #3 | #3 | #3 | #2 |
| | 100A | #3 | #3 | #3 | #3 | #3 | #2 |
| 208V 3 PHASE | 20A | #12 | #12 | #12 | #10 | #10 | #8 |
| | 30A | #10 | #10 | #10 | #8 | #8 | #6 |
| | 40A | #8 | #8 | #8 | #8 | #6 | #6 |
| | 50A | #8 | #8 | #8 | #6 | #6 | #4 |
| | 60A | #6 | #6 | #6 | #6 | #6 | #4 |
| | 70A | #4 | #4 | #4 | #4 | #4 | #4 |
| | 80A | #4 | #4 | #4 | #4 | #4 | #3 |
| | 90A | #3 | #3 | #3 | #3 | #3 | #3 |
| | 100A | #3 | #3 | #3 | #3 | #3 | #2 |

CALCULATED USING COPPER WIRE AT 75 °C

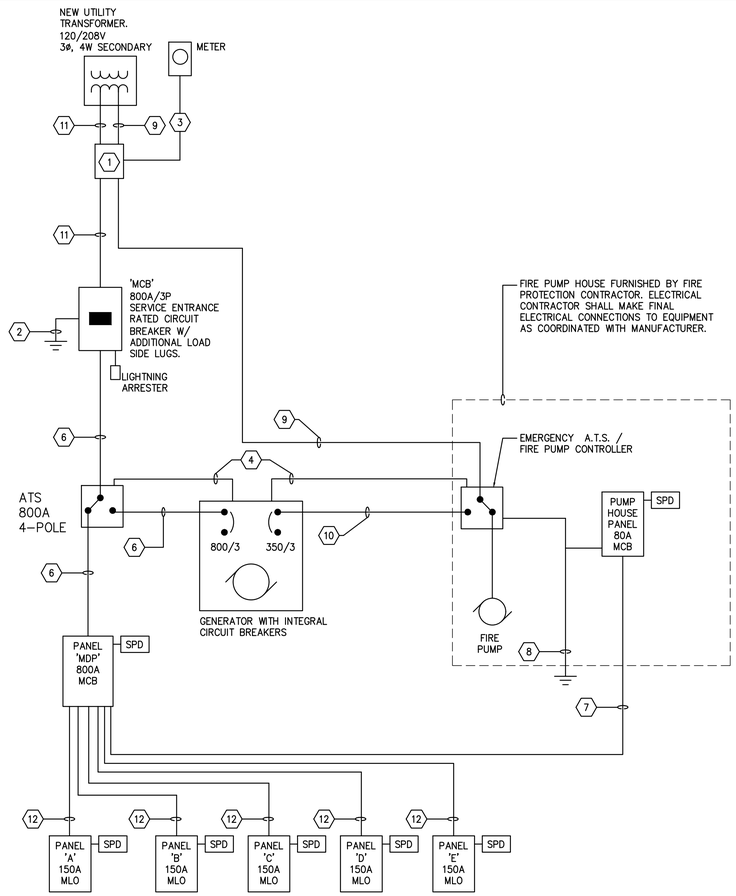
1. CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE VOLTAGE DROP LIMITATIONS OF FBC–ENERGY CONSERVATION, SECTION C405.7.3, NEC 210.19 (A) AND NEC 215.2 (A).
2. REFER TO ELECTRICAL PANEL SCHEDULES FOR DESIGN LOAD OF INDIVIDUAL BRANCH CIRCUITS.
3. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR FEEDER VOLTAGE DROP INFORMATION.

## GENERAL NOTES

1. REFER TO PANEL SCHEDULES FOR WIRE SIZES FEEDING SPD DEVICES.

## KEYED NOTES

1. PROVIDE CT ENCLOSURE PER UTILITY COMPANY REQUIREMENTS. REFER TO GROUNDING DETAIL FOR ADDITIONAL GROUNDING REQUIREMENTS.
2. GROUNDING. PROVIDE #3/0 COPPER GROUNDING ELECTRODE CONDUCTOR TO BUILDING STEEL, METALLIC COLD WATER PIPE AND 3–20'–0"X3/4" COPPERCLAD GROUND RODS SPACED ONE ROD LENGTH APART. GROUNDING SHALL BE IN ACCORDANCE WITH N.E.C. PROVIDE ALL COMPONENTS FOR COMPLETE GROUNDING SYSTEM. REFER TO GROUNDING DETAIL FOR ADDITIONAL GROUNDING REQUIREMENTS.
3. 1 1/4" CONDUIT FOR METER WIRING. REFER TO GROUNDING DETAIL FOR ADDITIONAL GROUNDING REQUIREMENTS.
4. 1" CONDUIT WITH CONTROL WIRES (NUMBER CONDUCTOR PER MANUFACTURER).
5. RESERVED.
6. 800 AMP FEEDER. PROVIDE 3 RUNS OF 3–1/2" CONDUIT WITH 4–300 KCMIL CU AND 1–1/0 CU E.G. IN EACH.
7. PROVIDE 4–#4 CU AND 1–#8 CU E.G. IN 1–1/2" CONDUIT.
8. GROUNDING. PROVIDE #4 COPPER GROUNDING ELECTRODE CONDUCTOR TO BUILDING STEEL, METALLIC COLD WATER PIPE AND 3–20'–0"X3/4" COPPERCLAD GROUND RODS SPACED ONE ROD LENGTH APART. GROUNDING SHALL BE IN ACCORDANCE WITH N.E.C. PROVIDE ALL COMPONENTS FOR COMPLETE GROUNDING SYSTEM. REFER TO GROUNDING DETAIL FOR ADDITIONAL GROUNDING REQUIREMENTS.
9. PROVIDE 4–#1 CU IN 2" CONDUIT.
10. PROVIDE 4–#1 CU & 1–#3 CU E.G. IN 2" CONDUIT.
11. 800 AMP SERVICE. PROVIDE 3 RUNS OF 3–1/2" CONDUIT WITH 4–300 KCMIL CU IN EACH.
12. 150 AMP FEEDER. PROVIDE 4–1/0 CU & 1–#6 CU E.G. IN 2" CONDUIT.




| PANEL NAME | VOLTAGE DROP % | AVAILABLE FAULT KAIC |
|---|---|---|
| MDP | 2.30% | 20.42 |
| A | 0.05% | 18.72 |
| B | 0.05% | 18.72 |
| C | 0.06% | 18.72 |
| D | 0.06% | 18.72 |
| E | 0.04% | 18.72 |

## AUTOMATIC TRANSFER SWITCH SCHEDULE

| | | |
|---|---|---|
| MARK | – | ATS |
| MANUFACTURER | – | ASCO POWER |
| MODEL NUMBER | – | 7000 SERIES |
| CAPACITY | AMPS | 800 |
| ELECTRICAL CHARACTERISTICS | V/ø/HZ | 208/3/60 |
| NEUTRAL CHARACTERISTICS | – | SWITCHED |
| MIN. FAULT CURRENT RATING | KAIC | 22KA |
| ENCLOSURE TYPE | – | NEMA 1 |
| TRANSITION TYPE | – | OPEN |
| BYPASS ISOLATION | – | NO |
| SERVICE TYPE | – | STANDBY |

NOTES:

1. AUTOMATIC TRANSFER SWITCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH UL 1008, 7TH EDITION.
2. COORDINATE ATS CONNECTION CONFIGURATION WITH FIELD CONDITIONS PRIOR TO ORDERING.
3. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

## GENERATOR SCHEDULE

| | | |
|---|---|---|
| MARK | – | – |
| MANUFACTURER | – | CATERPILLAR |
| MODEL NUMBER | – | D250GC |
| CAPACITY | KW | 250 |
| PEAK STARTING KVA @ 15% V. DIP | KVA | 389.1 |
| ENGINE MODEL | – | C9 EPA CERTIFIED |
| FUEL | – | DIESEL |
| ELECTRICAL CHARACTERISTICS | V/ø/HZ | 208/3/60 |
| ENGINE SPEED | RPM | 1800 |
| FUEL CONSUMPTION @100% | GPH | 19.1 |
| SERVICE TYPE | – | STANDBY |
| CLASS | – | 72 |
| TYPE | – | 10 |
| LEVEL | – | 1 |
| SUB–BASE TANK (72–HR RUNTIME @ 100% LOAD) | GALLONS (MINIMUM) | 1375 |

NOTES:

1. PROVIDE WEATHERPROOF SOUND ATTENUATED ALUMINUM ENCLOSURE WITH MIN. 150 MPH WIND RATING.
2. PROVIDE BLOCK HEATER AND BATTERY CHARGER.
3. PROVIDE 800 AMP AND 350 AMP SHUNT TRIP CIRCUIT BREAKERS.
4. PROVIDE STATE–CERTIFIED SUB–BASE FUEL TANK AND VIBRATION ISOLATORS.
5. PROVIDE REMOTE ANNUNCIATOR AND EPO SIWTCH.
6. PROVIDE UNIT MOUNTED CONTROLLER.
7. PROVIDE MATCHING AUTOMATIC TRANSFER SWITCH.


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STANLEY P. NEWTON LICENSE No. 35571 STATE OF FLORIDA PROFESSIONAL ENGINEER

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HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
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ELECTRICAL
RISER DIAGRAM

E6.1

| REMARKS | | | POLES AND | LOAD SERVING VOLT AMPS A | | B | | C | | WIRE | CKT. | CKT. | WIRE | LOAD SERVING VOLT AMPS A | | B | | C | | POLES AND | | REMARKS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 PHASE INFO | | CKT. | AMPS | LIGHTS | POWER | LIGHTS | POWER | LIGHTS | POWER | SIZE | NO. | NO. | SIZE | LIGHTS | POWER | LIGHTS | POWER | LIGHTS | POWER | AMPS | CKT. | | 3 PHASE INFO | |
| X | SDHD | PANEL A | 1 | 150/3 | | 12952 | | | | | 1 | 2 | 6 | | | | | | | 60/3 | 2 | SPD | X | SDHD |
| | H.P | – | 3 | – | | | 12952 | | | | 3 | 4 | 6 | | | | | | | – | 4 | – | | H.P |
| | HT./KW | – | 5 | – | | | | | 12952 | | 5 | 6 | 6 | | | | | | | – | 6 | – | | HT./KW |
| X | SDHD | PANEL B | 7 | 150/3 | | 11677 | | | | | 7 | 8 | 3 | | 9192 | | | | | 110 | 8 | CH–1 | x | SDHD |
| | H.P | – | 9 | – | | | 11677 | | | | 9 | 10 | 3 | | | | 9192 | | | – | 10 | – | | H.P |
| | HT./KW | – | 11 | – | | | | | 11677 | | 11 | 12 | 3 | | | | | | 9192 | – | 12 | – | | HT./KW |
| X | SDHD | PANEL C | 13 | 150/3 | | 14818 | | | | | 13 | 14 | 12 | | 936 | | | | | 20/3 | 14 | CHP–1 | x | SDHD |
| | H.P | – | 15 | – | | | 14818 | | | | 15 | 16 | 12 | | | | 936 | | | – | 16 | – | | H.P |
| | HT./KW | – | 17 | – | | | | | 14818 | | 17 | 18 | 12 | | | | | | 936 | – | 18 | – | | HT./KW |
| X | SDHD | PANEL D | 19 | 150/3 | | 15322 | | | | | 19 | 20 | 12 | | 936 | | | | | 20/3 | 20 | CHP–2 | x | SDHD |
| | H.P | – | 21 | – | | | 15322 | | | | 21 | 22 | 12 | | | | 936 | | | – | 22 | – | | H.P |
| | HT./KW | – | 23 | – | | | | | 15322 | | 23 | 24 | 12 | | | | | | 936 | – | 24 | – | | HT./KW |
| | SDHD | SPACE | 25 | | | | | | | | 25 | 26 | 8 | | 2100 | | | | | 35/3 | 26 | AHU–1 | x | SDHD |
| | H.P | SPACE | 27 | | | | | | | | 27 | 28 | 8 | | | | 2100 | | | – | 28 | – | | H.P |
| | HT./KW | SPACE | 29 | | | | | | | | 29 | 30 | 8 | | | | | | 2100 | – | 30 | – | | HT./KW |
| x | SDHD | EDH–1 | 31 | 80/3 | | 7667 | | | | | 4 | 31 | 32 | 12 | 300 | | | | | 15/3 | 32 | OAU–1 | x | SDHD |
| | H.P | – | 33 | – | | | 7667 | | | | 4 | 33 | 34 | 12 | | | 300 | | | – | 34 | – | 0.5 | H.P |
| 23 | HT./KW | – | 35 | – | | | | | 7667 | | 4 | 35 | 36 | 12 | | | | | 300 | – | 36 | – | | HT./KW |
| x | SDHD | EDH–2 | 37 | 30/3 | | 1667 | | | | | 10 | 37 | 38 | 3 | 7452 | | | | | 100/3 | 38 | LIFT STATION | x | SDHD |
| | H.P | – | 39 | – | | | 1667 | | | | 10 | 39 | 40 | 3 | | | 7452 | | | – | 40 | – | 20 | H.P |
| 5 | HT./KW | – | 41 | – | | | | | 1667 | | 10 | 41 | 42 | 3 | | | | | 7452 | – | 42 | – | | HT./KW |
| | | | | 0 | 64102 | 0 | 64102 | 0 | 64102 | | | | | 0 | 20916 | 0 | 20916 | 0 | 20916 | – | | | | |

| CALCULATIONS | CONN. LOAD | | | DESIGN LOAD | |
|---|---|---|---|---|---|
| | KVA | AMPS | FACTOR | KVA | AMPS |
| LIGHTING | 0.0 | 0.0 | 1.25 | 0.0 | 0.0 |
| CONV. OUTLETS | 0.0 | 0.0 | – | 0.0 | 0.0 |
| MOTORS | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| MISC | 255.1 | 708.5 | 1 | 255.1 | 708.5 |
| EWH | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| KITCHEN EQ. | 0.0 | 0.0 | 0.65 | 0.0 | 0.0 |
| SPARE | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| SPACE ONLY | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| TOTAL | 255.1 | 708.5 | | 255.1 | 708.5 |

| PHASE LOADS | |
|---|---|
| A | 85018 |
| B | 85018 |
| C | 85018 |

REMARKS:
* PROVIDE GFCI CIRCUIT BREAKER
** PROVIDE RED PAINTED HANDLE WITH BREAKER LOCK

PANEL : MDP

| | |
|---|---|
| MOUNTING: | SURFACE |
| VOLTS: | 120/208, 3PH, 4W |
| MAIN SIZE: | 800 AMPS |
| MAIN TYPE: | MCB M.D. |
| BRACING: | 25 KAIC 0 |
| EMI JOB | 22-0480 0 |

NOTE: ALL CONDUCTORS ARE #12 AWG UNLESS OTHERWISE NOTED HERE IN OR ON RISER DIAGRAM, OR AS NOTED IN THE SPECIFICATIONS FOR VOLTAGE DROP.

PROVIDE A DEDICATED NEUTRAL FOR EACH CIRCUIT.
THE CIRCUIT BREAKER FEEDING THE SPD DEVICE SHALL BE INSTALLED AS CLOSE TO THE SPD DEVICES AS POSSIBLE TO MINIMIZE THE LEAD LENGTH. RELOCATE CIRCUIT BREAKERS AS REQUIRED

| REMARKS | | | POLES AND | LOAD SERVING VOLT AMPS A | | B | | C | | WIRE | CKT. | CKT. | WIRE | LOAD SERVING VOLT AMPS A | | B | | C | | POLES AND | | REMARKS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 PHASE INFO | | CKT. | AMPS | LIGHTS | POWER | LIGHTS | POWER | LIGHTS | POWER | SIZE | NO. | NO. | SIZE | LIGHTS | POWER | LIGHTS | POWER | LIGHTS | POWER | AMPS | CKT. | | 3 PHASE INFO | |
| | SDHD | RECEPT 7 | 1 | 20/1 | | 1260 | | | | 12 | 1 | 2 | 10 | | | | | | | 30/3 | 2 | SPD 1 | X | SDHD |
| | H.P | AIR CURTAIN | 3 | 20/1 | | | 1275 | | | 12 | 3 | 4 | 10 | | | | | | | – | 4 | – | | H.P |
| | HT./KW | TREDMIL | 7 | 20/1 | | 500 | | | 1260 | 12 | 5 | 6 | 10 | | | | | | | – | 6 | – | | HT./KW |
| | SDHD | AC–1 & CU–1 | 9 | 15/2 | | | 1159 | | | 12 | 7 | 8 | 12 | | | | | | | 20/1 | 8 | DDC | | SDHD |
| | H.P | AC–2 & CU–2 | 13 | 30/2 | | 1500 | | | 1159 | 12 | 9 | 10 | 12 | | | | | | | 20/1 | 10 | DDC | | H.P |
| | HT./KW | ICE MACHINE CU | 17 | 20/1 | | | 1500 | | 500 | 12 | 11 | 12 | 12 | | | | | | | 20/1 | 12 | RECEPT 1 | | HT./KW |
| | SDHD | PORTABLE A/C | 19 | 40/2* | 2500 | | | | | 8 | 19 | 20 | 10 | | 750 | | | | | 20/2 | 14 | GEN. BLOCK HEATER | | SDHD |
| | H.P | – | 21 | – | | | 2500 | | | 8 | 21 | 22 | 10 | | | | 750 | | | – | 16 | – | | H.P |
| | HT./KW | RECEPT 5 | 23 | 20/1 | | | | | 900 | 12 | 23 | 24 | 10 | | | | | | 500 | 20/1 | 18 | GEN. BATTERY CHARGER | | HT./KW |
| | SDHD | RECEPT BAY OH | 25 | 20/1* | | 180 | | | | 12 | 25 | 26 | 8 | | 4000 | | | | | 20/1 | 20 | RACK | | SDHD |
| | H.P | RECEPT BAY OH | 27 | 20/1* | | | 180 | | | 12 | 27 | 28 | 8 | | | | 4000 | | | 20/1 | 22 | RACK | | H.P |
| | HT./KW | RECEPT 1 | 29 | 20/1 | | | | | 180 | 12 | 29 | 30 | 8 | | | | | | 4000 | 20/1 | 24 | RACK | | HT./KW |
| | SDHD | RECEPT 1 | 31 | 20/1 | | 180 | | | | 12 | 31 | 32 | 8 | | 4160 | | | | | 50/2 | 26 | WATER HEATER | x | SDHD |
| | H.P | RECEPT 2 | 33 | 20/1 | | | 360 | | | 12 | 33 | 34 | 8 | | | | 4160 | | | – | 28 | – | | H.P |
| | HT./KW | RECEPT 2 | 35 | 20/1 | | | | | 360 | 12 | 35 | 36 | 10 | | | | | | 540 | 20/1 | 30 | FUTURE RANGE | | HT./KW |
| | SDHD | RECEPT 4 | 37 | 20/1 | | 720 | | | | 12 | 37 | 38 | 10 | | 540 | | | | | 20/1 | 32 | RACK | | SDHD |
| | H.P | RECEPT 4 | 39 | 20/1 | | | 720 | | | 12 | 39 | 40 | | | | | | | | 20/1 | 34 | RACK | | H.P |
| | HT./KW | SPARE | 41 | 20/1 | | | | | | | | 42 | | | | | | | | 20/1 | 36 | RACK | | HT./KW |
| | | | | 0 | 6840 | 0 | 7694 | 0 | 4359 | | | | | 0 | 10170 | 0 | 9630 | 0 | 4760 | | | SPARE | | |
| | | | | | | | | | | | | | | | | | | | | | | SPARE | | |

| CALCULATIONS | CONN. LOAD | | | DESIGN LOAD | |
|---|---|---|---|---|---|
| | KVA | AMPS | FACTOR | KVA | AMPS |
| LIGHTING | 0.0 | 0.0 | 1.25 | 0.0 | 0.0 |
| CONV. OUTLETS | 0.0 | 0.0 | – | 0.0 | 0.0 |
| MOTORS | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| MISC | 44.5 | 123.5 | 1 | 44.5 | 123.5 |
| EWH | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| KITCHEN EQ. | 0.0 | 0.0 | 0.65 | 0.0 | 0.0 |
| SPARE | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| SPACE ONLY | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| TOTAL | 44.5 | 123.5 | | 44.5 | 123.5 |

| PHASE LOADS | |
|---|---|
| A | 17010 |
| B | 17324 |
| C | 10119 |

REMARKS:
* PROVIDE GFCI CIRCUIT BREAKER
** PROVIDE RED PAINTED HANDLE WITH BREAKER LOCK

PANEL : C

| | |
|---|---|
| MOUNTING: | SURFACE |
| VOLTS: | 120/208, 3PH, 4W |
| MAIN SIZE: | 150 AMPS |
| MAIN TYPE: | MLO M.D. |
| BRACING: | 22 KAIC 0 |
| EMI JOB | 22-0480 0 |

NOTE: ALL CONDUCTORS ARE #12 AWG UNLESS OTHERWISE NOTED HERE IN OR ON RISER DIAGRAM, OR AS NOTED IN THE SPECIFICATIONS FOR VOLTAGE DROP.

PROVIDE A DEDICATED NEUTRAL FOR EACH CIRCUIT.
THE CIRCUIT BREAKER FEEDING THE SPD DEVICE SHALL BE INSTALLED AS CLOSE TO THE SPD DEVICES AS POSSIBLE TO MINIMIZE THE LEAD LENGTH. RELOCATE CIRCUIT BREAKERS AS REQUIRED

| REMARKS | | | POLES AND | LOAD SERVING VOLT AMPS A | | B | | C | | WIRE | CKT. | CKT. | WIRE | LOAD SERVING VOLT AMPS A | | B | | C | | POLES AND | | REMARKS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 PHASE INFO | | CKT. | AMPS | LIGHTS | POWER | LIGHTS | POWER | LIGHTS | POWER | SIZE | NO. | NO. | SIZE | LIGHTS | POWER | LIGHTS | POWER | LIGHTS | POWER | AMPS | CKT. | | 3 PHASE INFO | |
| x | SDHD | ROLL UP DOOR | 1 | 20 | | 900 | | | | #12 | 1 | 2 | 10 | | | | | | | 30/3 | 2 | SPD 1 | X | SDHD |
| | H.P | – | 3 | – | | | 900 | | | #12 | 3 | 4 | 10 | | | | | | | – | 4 | – | | H.P |
| 2.7 | HT./KW | – | 5 | – | | | | | 900 | #12 | 5 | 6 | 10 | | | | | | | – | 6 | – | | HT./KW |
| x | SDHD | ROLL UP DOOR | 7 | 20 | | 900 | | | | #12 | 7 | 8 | 12 | | 636 | | | | | 20/1 | 8 | B.A.F. | | SDHD |
| | H.P | – | 9 | – | | | 900 | | | #12 | 9 | 10 | 8 | | | | 2500 | | | 40/2* | 10 | PORTABLE A/C | | H.P |
| 2.7 | HT./KW | – | 11 | – | | | | | 900 | #12 | 11 | 12 | 8 | | | | | | 2500 | – | 12 | – | | HT./KW |
| x | SDHD | ROLL UP DOOR | 13 | 20 | | 900 | | | | #12 | 13 | 14 | 12 | | 1320 | | | | | 20/3 | 14 | EF–3 | x | SDHD |
| | H.P | – | 15 | – | | | 900 | | | #12 | 15 | 16 | 12 | | | | 1320 | | | – | 16 | – | 3 | H.P |
| 2.7 | HT./KW | – | 17 | – | | | | | 900 | #12 | 17 | 18 | 12 | | | | | | 1320 | – | 18 | – | | HT./KW |
| x | SDHD | ROLL UP DOOR | 19 | 20 | | 900 | | | | #12 | 19 | 20 | 12 | | 1500 | | | | | 20/1 | 20 | AIR COMPRESSOR | | SDHD |
| | H.P | – | 21 | – | | | 900 | | | #12 | 21 | 22 | 12 | | | | 180 | | | 20/1* | 22 | RECEPT BAY OH | | H.P |
| 2.7 | HT./KW | – | 23 | – | | | | | 900 | #12 | 23 | 24 | 12 | | | | | | 180 | 20/1* | 24 | RECEPT BAY OH | | HT./KW |
| | SDHD | CIRCULAR FAN | 25 | 20/1 | | 720 | | | | #12 | 25 | 26 | 12 | | 180 | | | | | 20/1* | 26 | RECEPT BAY OH | | SDHD |
| | H.P | CIRCULAR FAN | 27 | 20/1 | | | 720 | | | #12 | 27 | 28 | 12 | | | | 180 | | | 20/1* | 28 | RECEPT BAY OH | | H.P |
| | HT./KW | RECEPT 5 | 29 | 20/1 | | | | | 900 | #12 | 29 | 30 | 12 | | | | | | 180 | 20/1* | 30 | RECEPT BAY OH | | HT./KW |
| | SDHD | RECEPT 5 | 31 | 20/1 | | 540 | | | | #12 | 31 | 32 | 12 | | 180 | | | | | 20/1* | 32 | RECEPT BAY OH | | SDHD |
| | H.P | RECEPT 5 | 33 | 20/1 | | | 900 | | | #12 | 33 | 34 | 10 | | | | 2800 | | | 30/2 | 34 | INSTA WATER HEATER | | H.P |
| | HT./KW | RECEPT 5 | 35 | 20/1 | | | | | 900 | #12 | 35 | 36 | 10 | | | | | | 2800 | 30/2 | 36 | | | HT./KW |
| | SDHD | SPARE | 37 | 20/1 | | | | | | | 37 | 38 | 10 | | 2800 | | | | | 30/2 | 38 | INSTA WATER HEATER | | SDHD |
| | H.P | SPARE | 39 | 20/1 | | | | | | | 39 | 40 | 10 | | | | 2800 | | | – | 40 | – | | H.P |
| | HT./KW | SPARE | 41 | 20/1 | | | | | | | 41 | 42 | | | | | | | | 20/1 | 42 | SPARE | | HT./KW |
| | | | | 0 | 4860 | 0 | 5220 | 0 | 5400 | | | | | 0 | 6616 | 0 | 9780 | 0 | 6980 | | | | | |

| CALCULATIONS | CONN. LOAD | | | DESIGN LOAD | |
|---|---|---|---|---|---|
| | KVA | AMPS | FACTOR | KVA | AMPS |
| LIGHTING | 0.0 | 0.0 | 1.25 | 0.0 | 0.0 |
| CONV. OUTLETS | 0.0 | 0.0 | – | 0.0 | 0.0 |
| MOTORS | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| MISC | 38.9 | 107.9 | 1 | 38.9 | 107.9 |
| EWH | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| KITCHEN EQ. | 0.0 | 0.0 | 0.65 | 0.0 | 0.0 |
| SPARE | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| SPACE ONLY | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| TOTAL | 38.9 | 107.9 | | 38.9 | 107.9 |

| PHASE LOADS | |
|---|---|
| A | 11476 |
| B | 15000 |
| C | 12380 |

REMARKS:
* PROVIDE GFCI CIRCUIT BREAKER
** PROVIDE RED PAINTED HANDLE WITH BREAKER LOCK

PANEL : A

| | |
|---|---|
| MOUNTING: | SURFACE |
| VOLTS: | 120/208, 3PH, 4W |
| MAIN SIZE: | 150 AMPS |
| MAIN TYPE: | MLO M.D. |
| BRACING: | 22 KAIC 0 |
| EMI JOB | 22-0480 0 |

NOTE: ALL CONDUCTORS ARE #12 AWG UNLESS OTHERWISE NOTED HERE IN OR ON RISER DIAGRAM, OR AS NOTED IN THE SPECIFICATIONS FOR VOLTAGE DROP.

PROVIDE A DEDICATED NEUTRAL FOR EACH CIRCUIT.
THE CIRCUIT BREAKER FEEDING THE SPD DEVICE SHALL BE INSTALLED AS CLOSE TO THE SPD DEVICES AS POSSIBLE TO MINIMIZE THE LEAD LENGTH. RELOCATE CIRCUIT BREAKERS AS REQUIRED

| REMARKS | | | POLES AND | LOAD SERVING VOLT AMPS A | | B | | C | | WIRE | CKT. | CKT. | WIRE | LOAD SERVING VOLT AMPS A | | B | | C | | POLES AND | | REMARKS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 PHASE INFO | | CKT. | AMPS | LIGHTS | POWER | LIGHTS | POWER | LIGHTS | POWER | SIZE | NO. | NO. | SIZE | LIGHTS | POWER | LIGHTS | POWER | LIGHTS | POWER | AMPS | CKT. | | 3 PHASE INFO | |
| | SDHD | RECEPT 7 | 1 | 20/1 | | 1260 | | | | 12 | 1 | 2 | 10 | | | | | | | 30/3 | 2 | SPD 1 | X | SDHD |
| | H.P | BEDROOM FANS | 3 | 20/1 | | | 1000 | | | 12 | 3 | 4 | 10 | | | | | | | – | 4 | – | | H.P |
| | HT./KW | AIR CURTAIN | 5 | 20/1 | | | | | 1275 | 12 | 5 | 6 | 10 | | | | | | | – | 6 | – | | HT./KW |
| | SDHD | RERRIG | 7 | 20/1 | | 840 | | | | 12 | 7 | 8 | 12 | | 864 | | | | | 20/1 | 8 | KHEF–1 | | SDHD |
| | H.P | RERRIG | 9 | 20/1 | | | 840 | | | 12 | 9 | 10 | 12 | | | | 1153 | | | 20/1 | 10 | KHSF–1 | | H.P |
| | HT./KW | RERRIG | 11 | 20/1 | | | | | 840 | 12 | 11 | 12 | 12 | | | | | | 720 | 20/1 | 12 | RECEPT 4 | | HT./KW |
| | SDHD | DISH WASHER | 13 | 20/1 | | 1032 | | | | 12 | 13 | 14 | 12 | | 1000 | | | | | 20/1 | 14 | BEDROOM FANS | | SDHD |
| | H.P | GASS RANGE | 15 | 20/1 | | | 500 | | | 12 | 15 | 16 | 12 | | | | 1440 | | | 20/1 | 16 | RECEPT 8 | | H.P |
| | HT./KW | RANGE HOOD | 17 | 20/1 | | | | | 444 | 12 | 17 | 18 | 12 | | | | | | 1275 | 20/1 | 18 | AIR CURTAIN | | HT./KW |
| | SDHD | RECEPT 2 | 19 | 20/1 | | 360 | | | | 12 | 19 | 20 | 8 | | 2500 | | | | | 40/2* | 20 | PORTABLE A/C | | SDHD |
| | H.P | MICROWAVE | 21 | 20/1 | | | 1560 | | | 12 | 21 | 22 | 8 | | | | 2500 | | | – | 22 | – | | H.P |
| | HT./KW | RECEPT 6 | 23 | 20/1 | | | | | 1080 | 12 | 23 | 24 | 12 | | | | | | 1275 | 20/1 | 24 | AIR CURTAIN | | HT./KW |
| | SDHD | RECEPT 6 | 25 | 20/1 | | 1080 | | | | 12 | 25 | 26 | 12 | | 900 | | | | | 20/1 | 26 | RECEPT 5 | | SDHD |
| | H.P | FAN | 27 | 20/1 | | | 500 | | | 12 | 27 | 28 | 10 | | | | 2000 | | | 30/3 | 28 | ICE MACHINE | | H.P |
| | HT./KW | EWC | 29 | 20/1* | | | | | 552 | 12 | 29 | 30 | 12 | | | | | | 720 | 20/1 | 30 | RECEPT 4 | | HT./KW |
| | SDHD | RECEPT 3 | 31 | 20/1 | | 540 | | | | 12 | 31 | 32 | 12 | | 1200 | | | | | 20/1* | 32 | WASHER | | SDHD |
| | H.P | RECEPT 6 | 33 | 20/1 | | | 1080 | | | 12 | 33 | 34 | 12 | | | | 1200 | | | 20/1* | 34 | WASHER | | H.P |
| | HT./KW | BEDROOM FANS | 35 | 20/1 | | | | | 1000 | 12 | 35 | 36 | 12 | | | | | | 500 | 20/1 | 36 | GEAR DRYER | | HT./KW |
| | SDHD | SPARE | 37 | 20/1 | | | | | | | 37 | 38 | | | | | | | | 20/1 | 38 | SPARE | | SDHD |
| | H.P | SPARE | 39 | 20/1 | | | | | | | 39 | 40 | | | | | | | | 20/1 | 40 | SPARE | | H.P |
| | HT./KW | SPARE | 41 | 20/1 | | | | | | | 41 | 42 | | | | | | | | 20/1 | 42 | SPARE | | HT./KW |
| | | | | 0 | 5112 | 0 | 5480 | 0 | 5191 | | | | | 0 | 6464 | 0 | 8293 | 0 | 4490 | | | | | |

| CALCULATIONS | CONN. LOAD | | | DESIGN LOAD | |
|---|---|---|---|---|---|
| | KVA | AMPS | FACTOR | KVA | AMPS |
| LIGHTING | 0.0 | 0.0 | 1.25 | 0.0 | 0.0 |
| CONV. OUTLETS | 0.0 | 0.0 | – | 0.0 | 0.0 |
| MOTORS | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| MISC | 35.0 | 97.3 | 1 | 35.0 | 97.3 |
| EWH | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| KITCHEN EQ. | 0.0 | 0.0 | 0.65 | 0.0 | 0.0 |
| SPARE | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| SPACE ONLY | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| TOTAL | 35.0 | 97.3 | | 35.0 | 97.3 |

| PHASE LOADS | |
|---|---|
| A | 11576 |
| B | 13773 |
| C | 9681 |

REMARKS:
* PROVIDE GFCI CIRCUIT BREAKER
** PROVIDE RED PAINTED HANDLE WITH BREAKER LOCK

PANEL : B

| | |
|---|---|
| MOUNTING: | SURFACE |
| VOLTS: | 120/208, 3PH, 4W |
| MAIN SIZE: | 150 AMPS |
| MAIN TYPE: | MLO M.D. |
| BRACING: | 22 KAIC 0 |
| EMI JOB | 22-0480 0 |

NOTE: ALL CONDUCTORS ARE #12 AWG UNLESS OTHERWISE NOTED HERE IN OR ON RISER DIAGRAM, OR AS NOTED IN THE SPECIFICATIONS FOR VOLTAGE DROP.

PROVIDE A DEDICATED NEUTRAL FOR EACH CIRCUIT.
THE CIRCUIT BREAKER FEEDING THE SPD DEVICE SHALL BE INSTALLED AS CLOSE TO THE SPD DEVICES AS POSSIBLE TO MINIMIZE THE LEAD LENGTH. RELOCATE CIRCUIT BREAKERS AS REQUIRED

| REMARKS | | | POLES AND | LOAD SERVING VOLT AMPS A | | B | | C | | WIRE | CKT. | CKT. | WIRE | LOAD SERVING VOLT AMPS A | | B | | C | | POLES AND | | REMARKS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 PHASE INFO | | CKT. | AMPS | LIGHTS | POWER | LIGHTS | POWER | LIGHTS | POWER | SIZE | NO. | NO. | SIZE | LIGHTS | POWER | LIGHTS | POWER | LIGHTS | POWER | AMPS | CKT. | | 3 PHASE INFO | |
| | SDHD | EV CHARGER | 1 | 50/2 | | 6225 | | | | 8 | 1 | 2 | 10 | | | | | | | 30/3 | 2 | SPD 1 | X | SDHD |
| | H.P | – | 3 | – | | | 6225 | | | 8 | 3 | 4 | 10 | | | | | | | – | 4 | – | | H.P |
| | HT./KW | EV CHARGER | 5 | 50/2 | | | | | 6225 | 8 | 5 | 6 | 10 | | | | | | | – | 6 | – | | HT./KW |
| | SDHD | – | 7 | – | | 6225 | | | | 8 | 7 | 8 | 12 | | 1500 | | | | | 20/1 | 8 | HEAT TAPE | | SDHD |
| | H.P | IRRIGATION CTRL | 9 | 20/1 | | | 500 | | | 12 | 9 | 10 | 12 | | | | 500 | | | 20/1 | 10 | FLAG POLE | | H.P |
| | HT./KW | DH–1 | 11 | 15/1 | | | | | 1200 | 12 | 11 | 12 | 12 | | | | | | 1000 | 20/1 | 12 | PRE–FAB SHED | | HT./KW |
| | SDHD | EF–1–1 | 13 | 15/1 | 256 | | | | | 12 | 13 | 14 | 12 | | 1500 | | | | | 20/1 | 14 | PRESSURE WASHER | | SDHD |
| | H.P | SPARE | 15 | 20/1 | | | | | | | 15 | 16 | 12 | | | | 779 | | | 20/1 | 16 | LIGHTING | | H.P |
| | HT./KW | EF–2–1 | 17 | 15/1 | | | | | 301 | 12 | 17 | 18 | 10 | | | | | | 454 | 375 | 20/1 | 18 | LIGHTING | | HT./KW |
| x | SDHD | IRRIGATION PUMP | 19 | 20/3 | | 1320 | | | | 12 | 19 | 20 | 10 | 453 | 250 | | | | | 20/1 | 20 | LIGHTING | | SDHD |
| 3 | H.P | – | 21 | – | | | 1320 | | – | 12 | 21 | 22 | 10 | | | | 624 | 375 | | 20/1 | 22 | LIGHTING | | H.P |
| | HT./KW | – | 23 | – | | | | | 1320 | 12 | 23 | 24 | 10 | | | | | | 636 | 20/1 | 24 | LIGHTING | | HT./KW |
| | SDHD | FUEL DISPENSER | 25 | 20/3 | | 500 | | | | 10 | 25 | 26 | 10 | 636 | | | | | | 20/1 | 26 | LIGHTING | | SDHD |
| | H.P | FUEL MANAGEMENT | 27 | 20/1 | | | 500 | | | 10 | 27 | 28 | 10 | | 200 | | | | | 20/1 | 28 | LIGHTING | | H.P |
| | HT./KW | RECEPT 2 | 29 | 20/1 | | | | | 360 | 12 | 29 | 30 | 10 | | | | 517 | | | 20/1 | 30 | EXTERIOR LIGHTING | | HT./KW |
| | SDHD | RECEPT 4 | 31 | 20/1 | 720 | | | | | 12 | 31 | 32 | 10 | 325 | | | | | | 20/1 | 32 | EXTERIOR LIGHTING | | SDHD |
| | H.P | FACP | 33 | 20/1** | | | 180 | | | 12 | 33 | 34 | 10 | | | | 500 | | | 20/1 | 34 | BUILDING SIGN | | H.P |
| | HT./KW | RECEPT 2 | 35 | 20/1 | | | | | 360 | 12 | 35 | 36 | 10 | | | | | | 324 | 20/1 | 36 | SITE LIGHTING | | HT./KW |
| | SDHD | SPARE | 37 | 20/1 | | | | | | | 37 | 38 | 10 | 324 | | | | | | 20/1 | 38 | SITE LIGHTING | | SDHD |
| | H.P | SPARE | 39 | 20/1 | | | | | | | 39 | 40 | | | | | | | | 20/1 | 40 | SPARE | | H.P |
| | HT./KW | SPARE | 41 | 20/1 | | | | | | | 41 | 42 | | | | | | | | 20/1 | 42 | SPARE | | HT./KW |
| | | | | 0 | 15246 | 0 | 8725 | 0 | 9766 | | | | | 1738 | 3250 | 1603 | 1375 | 1931 | 375 | | | | | |

| CALCULATIONS | CONN. LOAD | | | DESIGN LOAD | |
|---|---|---|---|---|---|
| | KVA | AMPS | FACTOR | KVA | AMPS |
| LIGHTING | 5.3 | 14.6 | 1.25 | 6.6 | 18.3 |
| CONV. OUTLETS | 0.0 | 0.0 | – | 0.0 | 0.0 |
| MOTORS | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| MISC | 39.7 | 110.4 | 1 | 39.7 | 110.4 |
| EWH | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| KITCHEN EQ. | 0.0 | 0.0 | 0.65 | 0.0 | 0.0 |
| SPARE | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| SPACE ONLY | 0.0 | 0.0 | 1 | 0.0 | 0.0 |
| TOTAL | 45.0 | 125.0 | | 46.3 | 128.7 |

| PHASE LOADS | |
|---|---|
| A | 20234 |
| B | 11703 |
| C | 13072 |

REMARKS:
* PROVIDE GFCI CIRCUIT BREAKER
** PROVIDE RED PAINTED HANDLE WITH BREAKER LOCK

PANEL : D

| | |
|---|---|
| MOUNTING: | SURFACE |
| VOLTS: | 120/208, 3PH, 4W |
| MAIN SIZE: | 150 AMPS |
| MAIN TYPE: | MLO M.D. |
| BRACING: | 22 KAIC 0 |
| EMI JOB | 22-0480 0 |

NOTE: ALL CONDUCTORS ARE #12 AWG UNLESS OTHERWISE NOTED HERE IN OR ON RISER DIAGRAM, OR AS NOTED IN THE SPECIFICATIONS FOR VOLTAGE DROP.

PROVIDE A DEDICATED NEUTRAL FOR EACH CIRCUIT.
THE CIRCUIT BREAKER FEEDING THE SPD DEVICE SHALL BE INSTALLED AS CLOSE TO THE SPD DEVICES AS POSSIBLE TO MINIMIZE THE LEAD LENGTH. RELOCATE CIRCUIT BREAKERS AS REQUIRED

| REMARKS | | | POLES AND | LOAD SERVING VOLT AMPS A | | B | | C | | WIRE | CKT. | CKT. | WIRE | LOAD SERVING VOLT AMPS A | | B | | C | | POLES AND | | REMARKS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 PHASE INFO | | CKT. | AMPS | LIGHTS | POWER | LIGHTS | POWER | LIGHTS | POWER | SIZE | NO. | NO. | SIZE | LIGHTS | POWER | LIGHTS | POWER | LIGHTS | POWER | AMPS | CKT. | | 3 PHASE INFO | |
| | SDHD | MOTORIZED GATE | 1 | 30/2 | | 2431 | | | | 12 | 1 | 2 | 10 | | | | | | | 30/3 | 2 | SPD 1 | X | SDHD |
| | H.P | – | 3 | | | | 2431 | | | 12 | 3 | 4 | 10 | | | | | | | – | 4 | – | | H.P |
| | HT./KW | MOTORIZED GATE | 5 | 30/2 | | | | | 2431 | 12 | 5 | 6 | 10 | | | | | | | – | 6 | – | | HT./KW |
| | SDHD | – | 7 | – | | 2431 | | | | 12 | 7 | 8 | | | 3036 | | | | | 50/3 | 8 | WELL PUMP | x | SDHD |
| | H.P | FIBER CONV. BOX | 9 | 20/1 | | | 500 | | | 12 | 9 | 10 | 8 | | | | 3036 | | | – | 10 | – | 7.5 | H.P |
| | HT./KW | FIBER CONV. BOX | 11 | 20/1 | | | | | 500 | 12 | 11 | 12 | 8 | | | | | | 3036 | – | 12 | – | | HT./KW |
| | SDHD | SPARE | 13 | 20/1 | | | | | | | 13 | 14 | 8 | | 3036 | | | | | 50/3 | 14 | FIRE WELL PUMP | x | SDHD |
| | H.P | SPARE | 15 | 20/1 | | | | | | | 15 | 16 | 8 | | | 779 | 3036 | | | – | 16 | – | 7.5 | H.P |
| | HT./KW | SPARE | 17 | 20/1 | | | | | | | 17 | 18 | 8 | | | | | 454 | 375 | – | 18 | – | | HT./KW |
| | SDHD | SPARE | 19 | 20/1 | | | | | | | 19 | 20 | | | | | | | | 20/1 | 20 | SPARE | | SDHD |
| | H.P | SPARE | 21 | 20/1 | | | | | | | 21 | 22 | | | | | | | | 20/1 | 22 | SPARE | | H.P |
| | HT./KW | SPARE | 23 | 20/1 | | | | | | | 23 | 24 | | | | | | | | 20/1 | 24 | SPARE | | HT./KW |
| | SDHD | SPARE | 25 | 20/1 | | | | | | | 25 | 26 | | | | | | | | 20/1 | 26 | SPARE | | SDHD |
| | H.P | SPARE | 27 | 20/1 | | | | | | | 27 | 28 | | | | | | | | 20/1 | 28 | SPARE | | H.P |
| | HT./KW | SPARE | 29 | 20/1 | | | | | | | 29 | 30 | | | | | | | | 20/1 | 30 | SPARE | | HT./KW |
| | SDHD | SPARE | 31 | 20/1 | | | | | | | 31 | 32 | | | | | | | | 20/1 | 32 | SPARE | | SDHD |
| | H.P | SPARE | 33 | 20/1 | | | | | | | 33 | 34 | | | | | | | | 20/1 | 34 | SPARE | | H.P |
| | HT./KW | SPARE | 35 | 20/1 | | | | | | | 35 | 36 | | | | | | | | 20/1 | 36 | SPARE | | HT./KW |
| | SDHD | SPARE | 37 | 20/1 | | | | | | | 37 | 38 | | | | | | | | 20/1 | 38 | SPARE | | SDHD |
| | H.P | SPARE | 39 | 20/1 | | | | | | | 39 | 40 | | | | | | | | 20/1 | 40 | SPARE | | H.P |
| | HT./KW | SPARE | 41 | 20/1 | | | | | | | 41 | 42 | | | | | | | | 20/1 | 42 | SPARE | | HT./KW |
| | | | | 0 | 4862 | 0 | 2931 | 0 | 2931 | | | | | 0 | 6072 | 779 | 6072 | 454 | 6411 | | | | | |

| CALCULATIONS | CONN. LOAD | | | DESIGN LOAD | |
|---|---|---|---|---|---|
| |

## MECHANICAL SYMBOLS

| SYMBOL | DESCRIPTION |
|---|---|
| | SUCTION DIFFUSER |
| | MANUAL AIR VENT |
| A | AUTOMATIC AIR VENT |
| | VIBRATION ISOLATOR |
| F | FLOAT TRAP |
| F/T | FLOAT AND THERMOSTATIC TRAP |
| T | THERMOSTATIC TRAP |
| D | THERMO-DYNAMIC DISC TRAP |
| | DRYER |
| | FILTER |
| | EXPANSION VALVE (THERMOSTATIC) |
| | SIGHT GLASS |
| | BALL SHUT-OFF VALVE |
| | LIQUID CHARGING VALVE |
| | HOT GAS BYPASS VALVE |
| | HOT GAS TEE |
| | LIQUID SHUT-OFF VALVE |
| | THERMOMETER WITH NEEDLE VALVE |
| | PRESSURE OR VACUUM GAGE WITH NEEDLE VALVE |
| C | COMPOUND PRESSURE OR VACUUM GAGE WITH NEEDLE VALVE |
| | LUGGED BUTTERFLY VALVE |
| | ANGLE GATE VALVE W/ HOSE BIB |
| | PRESSURE REDUCING VALVE |
| | 3-WAY CONTROL VALVE |
| FM | FLOW MONITOR |
| | 2-WAY CONTROL VALVE |
| | GATE VALVE IN RISE |
| | FLANGED CONNECTION |
| | LUGGED BUTTERFLY VALVE IN RISE |
| | NEEDLE VALVE |
| | CIRCULATING PUMP |
| | SHOCK ARRESTOR |
| | SHUT-OFF VALVE |
| | GLOBE VALVE |
| | PIPE UNION |
| | COMBINATION CALIBRATED BALANCING VALVE WITH MEMORY STOP AND SHUT-OFF VALVE |
| | TRIPLE DUTY VALVE (CALIBRATED BALANCING, SHUT-OFF AND CHECK) |
| P/T | PRESSURE /TEMPERATURE PLUG |
| | SWING CHECK VALVE |
| | GAS PLUG VALVE |
| | Y-TYPE STRAINER WITH BLOW DOWN AND VALVE |
| | SHUT-OFF VALVE IN VALVE BOX |
| | ASME TEMPERATURE AND PRESSURE RELIEF VALVE |
| | SPRING CHECK VALVE |
| | COMBINATION MAGNETIC MOTOR STARTER |
| | FUSIBLE DISCONNECT SWITCH |
| FS | FLOW SWITCH |

## MECHANICAL SYMBOL LEGEND

| SYMBOL | DESCRIPTION |
|---|---|
| TV | 90 DEGREE SQUARE ELBOW WITH TURNING VANES (DOUBLE LINE/SINGLE LINE) |
| TV | RADIUSED ELBOW WITH TURNING VANES (DOUBLE LINE/SINGLE LINE) |
| TV | DUCT TEE WITH TURNING VANES AND SPLITTER DAMPER (DOUBLE LINE/SINGLE LINE) |
| | NESTED RECTANGULAR BRANCH TAKE-OFF (DOUBLE LINE/SINGLE LINE) |
| | NESTED RADIUS BRANCH TAKE-OFF (DOUBLE LINE/SINGLE LINE) |
| | NESTED RADIUS TEE (DOUBLE LINE/SINGLE LINE) |
| | BRANCH TAKE OFF WITH SHOE FITTING (DOUBLE LINE/SINGLE LINE) |
| | SPIN-IN FITTING WITH VOLUME DAMPER (DOUBLE LINE/SINGLE LINE) |
| | CAP ON END OF DUCT (DOUBLE LINE/SINGLE LINE) |
| | DUCT TRANSITION (DOUBLE LINE/SINGLE LINE) |
| | RECTANGULAR TO ROUND TRANSITION (DOUBLE LINE/SINGLE LINE) |
| | RIGID TO FLEXIBLE DUCT (DOUBLE LINE/SINGLE LINE) |
| VD VD | VOLUME DAMPER (DOUBLE LINE/SINGLE LINE) |
| FD/AD | FIRE DAMPER WITH ACCESS DOOR |
| SD/AD | SMOKE DAMPER WITH ACCESS DOOR |
| FSD/AD | COMBINATION FIRE-SMOKE DAMPER WITH ACCESS DOOR |
| M | MOTORIZED DAMPER |
| BDD | BACKDRAFT DAMPER |
| AD | ACCESS DOOR IN DUCT |
| AD | ACCESS DOOR IN SIDE OF DUCT (DOUBLE LINE) |
| AD | ACCESS DOOR IN BOTTOM OF DUCT |
| | PIPE DOWN |
| | PIPE UP |
| | BRANCH CONNECTION OFF TOP |
| | BRANCH CONNECTION OFF BOTTOM |
| | 45 DEGREE OFFSET |
| | PIPE ANCHOR |
| | PIPE EXPANSION GUIDES |
| | BRANCH CONNECTION OFF SIDE |
| | CAP ON END OF PIPE |
| | DIRECTION OF FLOW |
| | PIPE TRANSITION |

## FIRE DAMPER EXCEPTION NOTE

1. A FIRE DAMPER SHALL NOT BE REQUIRED IN A DUCT PENETRATING A FIRE PARTITION PROVIDED THAT THE DUCT PENETRATING THE WALL COMPLIES WITH ALL OF THE FOLLOWING REQUIREMENTS:

1.1. THE DUCT SHALL NOT EXCEED 100 SQUARE INCHES.

1.2. THE DUCT SHALL BE CONSTRUCTED OF STEEL A MINIMUM OF 0.0217 INCH IN THICKNESS.

1.3. THE DUCT SHALL NOT HAVE OPENINGS THAT COMMUNICATE THE CORRIDOR WITH ADJACENT SPACES OR ROOMS.

1.4. THE DUCT SHALL BE INSTALLED ABOVE A CEILING.

1.5. THE DUCT SHALL NOT TERMINATE AT A WALL REGISTER IN THE FIRE-RESISTANCE-RATED WALL.

1.6. A MINIMUM 12-INCH-LONG BY 0.060-INCH-THICK STEEL SLEEVE SHALL BE CENTERED IN EACH DUCT OPENING. THE SLEEVE SHALL BE SECURED TO BOTH SIDES OF THE WALL AND ALL FOUR SIDES OF THE SLEEVE WITH MINIMUM 1 1/2-INCH BY 1 1/2-INCH BY .060-INCH STEEL RETAINING ANGLES. THE RETAINING ANGLES SHALL BE SECURED TO THE SLEEVE AND THE WALL WITH NO. 10 SCREWS. THE ANNULAR SPACE BETWEEN THE STEEL SLEEVE AND THE WALL OPENING SHALL BE FILLED WITH ROCK (MINERAL) WOOL BATTING ON ALL SIDES.

## DEFERRED SUBMITTAL NOTE

1. CONTRACTOR SHALL SUBMIT KITCHEN HOOD SHOP DRAWINGS FOR ENGINEER REVIEW AND APPROVAL. SHOP DRAWINGS SHALL INCLUDE, AT A MINIMUM, PRODUCT DATA INFO FOR THE KITCHEN HOOD, KITCHEN HOOD FANS, KITCHEN HOOD ANSUL SYSTEM AND CONTROLS. ROOFTOP MOUNTED EQUIPMENT INFORMATION SHALL INCLUDE STRUCTURAL TIE-DOWN REQUIREMENTS, INCLUDING ANCHOR TYPE AND SPACING IN COMPLIANCE WITH FLORIDA BUILDNG CODE AND THE PROJECT'S WIND SPEED CRITERIA. CONTRACTOR SHALL SUBMIT APPROVED SHOP DRAWINGS TO THE BUILDING DEPARTMENT AS A DEFERRED SUBMITTAL FOR FINAL REVIEW AND APPROVAL PRIOR TO INSTALLATION.

## MECHANICAL SYMBOL LEGEND

| SYMBOL | DESCRIPTION |
|---|---|
| AH 1 | EQUIPMENT TAG (I.E. AIR HANDLER NUMBER 1) REFER TO MECHANICAL ABBREVIATIONS FOR REFERENCE |
| A 105 | AIR DEVICE TAG (I.E. DEVICE MARK "A" WITH 105 CFM) REFER TO MECHANICAL AIR DEVICE SCHEDULE FOR INFORMATION |
| 1 / M3.1 | SECTION NUMBER / DRAWING NUMBER |
| 1 / M3.1 | DETAIL NUMBER / DRAWING NUMBER |
| | CONNECTION POINT OF NEW TO EXISTING |
| 5 | KEYED NOTE |
| 1 | REVISION MARKER (I.E. REVISION 1) |
| S | SMOKE DETECTOR IN DUCT W/ 6" X 6" ACCESS DOOR |
| T | THERMOSTAT |
| T | TEMPERATURE SENSOR |
| H | HUMIDISTAT |
| H | HUMIDITY SENSOR |
| $CO_2$ | CO2 SENSOR |
| | EXISTING DEVICES OR EQUIPMENT TO REMAIN |
| | EXISTING DEVICES OR EQUIPMENT TO BE REMOVED |
| | NEW OR MODIFIED DEVICES OR EQUIPMENT |
| | SUPPLY AIR DEVICE |
| | SUPPLY AIR DEVICE W/ 90° SECTORIZED BAFFLES PROVIDED IN SHADED QUADRANTS |
| | RETURN AIR DEVICE |
| | EXHAUST AIR DEVICE |
| | SUPPLY AIR DUCT SECTION DOWN/UP |
| | RETURN AIR DUCT SECTION DOWN/UP |
| | EXHAUST AIR DUCT SECTION DOWN/UP |
| | AIR FLOW |
| L | LOUVERED DOOR; LOUVERED DOOR SHALL BE MINIMUM 12" X 12" UNLESS OTHERWISE NOTED ON THE DRAWINGS. CONTRACTOR SHALL COORDINATE ALL DOOR LOUVERS WITH DOOR INSTALLATION CONTRACTOR PRIOR TO BID. |
| U | UNDERCUT DOOR, DOORS SHALL HAVE A 1 INCH UNDERCUT. CONTRACTOR SHALL COORDINATE ALL DOOR UNDERCUTS WITH DOOR INSTALLATION CONTRACTOR PRIOR TO BID. |
| R | RISE IN DUCT ELEVATION IN DIRECTION OF AIRFLOW |
| D | DROP IN DUCT ELEVATION IN DIRECTION OF AIRFLOW |

## SYMBOL LEGEND - CONTROLS

| SYMBOL | DESCRIPTION |
|---|---|
| | SIGNAL TYPE (AI,AO,DI,DO) FUNCTIONAL DESCRIPTION |
| | "AND" LOGIC GATE |
| | THREE INPUT "AND" LOGIC GATE |
| | "OR" LOGIC GATE |
| | TWO INPUT "OR " LOGIC GATE |
| DO | SIGNAL OUT OF DIGITAL (EMCS) SOFTWARE INTO HARDWARE |
| DI | SIGNAL OUT OF HARDWARE INTO DIGITAL (EMCS) SOFTWARE |
| CI | CONTROL RELAY HOLDING COIL |
| | NORMALLY OPEN CONTROL RELAY CONTACT |
| | NORMALLY CLOSED CONTROL RELAY CONTACT |
| T | THERMOSTAT - CLOSE ON TEMPERATURE RISE |
| | SINGLE POLE SWITCH |
| | 'NOT' INPUT LOGIC |

## MECHANICAL ABBREVIATIONS

### GENERAL

| ABBREVIATION | DESCRIPTION |
|---|---|
| ø | DIAMETER/ELECTRICAL PHASE |
| (E) | EXISTING |
| (N) | NEW |
| A.F.F. | ABOVE FINISHED FLOOR |
| A.F.G. | ABOVE FINISHED GRADE |
| AL. | ALUMINUM |
| C. | COMMON (ALWAYS OPEN) |
| C.D. | CONDENSATE DRAIN |
| CFM | CUBIC FEET PER MINUTE |
| DWG | DRAWING |
| E/A | EXHAUST AIR |
| HS | HUMIDISTAT |
| N.T.S | NOT TO SCALE |
| O/A | OUTSIDE AIR |
| O.B.D. | OPPOSED BLADE DAMPER |
| R/A | RETURN AIR |
| S | WALL SWITCH 48" A.F.F. U.O.N. |
| S/A | SUPPLY AIR |
| S/S | STAINLESS STEEL |
| SQFT. | SQUARE FEET |
| U.O.N. | UNLESS OTHERWISE NOTED |
| VFD | VARIABLE FREQUENCY DRIVE |

### EQUIPMENT TAGS

| | |
|---|---|
| AC | MINI-SPLIT AIR HANDLER |
| AH | SPLIT SYSTEM AIR HANDLER |
| CF | AIR CURTAIN |
| CU | SPLIT SYSTEM CONDENSING UNIT |
| DH | DEHUMIDIFIER |
| EF | EXHAUST FAN |
| F | HIGH VOLUME LOW SPEED FAN |
| IV | INTAKE VENT |
| KH | KITCHEN HOOD |
| KHEF | KITCHEN HOOD EXHAUST FAN |
| KHSF | KITCHEN HOOD SUPPLY FAN |
| OAU | 100% OUTDOOR AIR HANDLING UNIT |

## MECHANICAL ABBREVIATIONS

### CONTROLS

| ABBREVIATION | DESCRIPTION |
|---|---|
| AI | ANALOG INPUT |
| AO | ANALOG OUTPUT |
| APPROX | APPROXIMATE |
| AUTO | AUTOMATIC |
| C. | COMMON (ALWAYS OPEN) |
| CO2 | CARBON DIOXIDE SENSOR/TRANSMITTER |
| CT | CURRENT TRANSDUCER WITH GO/NO GO MONITOR CAPACITY |
| DI | DIGITAL INPUT |
| DO | DIGITAL OUTPUT |
| DP | PRESSURE DIFFERENTIAL SWITCH |
| DTR | DUAL TEMPERATURE RETURN |
| DTS | DUAL TEMPERATURE SUPPLY |
| E.G. | ELECTRICAL GROUND |
| FC | FAIL CLOSED |
| FF | FLOW FEEDBACK/STATUS SIGNAL |
| FO | FAIL OPEN |
| H | HUMIDITY SENSOR/TRANSMITTER |
| HS | HUMIDISTAT |
| LS | LIMIT SWITCH |
| M | MOROTIZED DAMPER ACUTATOR |
| NC | NORMALLY CLOSED |
| NO | NORMALLY OPEN |
| P | PRESSURE SENSOR/TRANSMITTER |
| PF | PROPORTIONAL, LINEARIZED FEEDBACK 4-20 mA SIGNAL |
| PID | PROPORTIONAL INTEGRAL DERIVATIVE |
| SP | SET POINT |
| SS | START/STOP SIGNAL |
| T | TEMPERATURE SENSOR OR TRANSMITTER 48" A.F.F. U.O.N. |
| TD | TIME DELAY (RELAY OR SOFTWARE LATCH) |
| TS | THERMOSTAT |
| VM | PID VALVE MODULATION |
| W/ | WITH |
| W/O | WITHOUT |
| WR | CHW RESET SIGNAL 4-20 mA |

NOTE:
NOT ALL SYMBOLS SHOWN IN THIS LEGEND MAY NOT NECESSARILY APPEAR IN THESE DOCUMENTS. ADDITIONAL SYMBOLS MAY BE DEFINED ELSEWHERE IN SPECIFIC DRAWINGS.


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HILLSBROROUGH COUNTY
BOARD OF COUNTY
COMMISSIONERS COUNTY
CENTER
601 E KENNEDY BLVD
TAMPA FL 33601

PROJECT ADDRESS:
10508 MAIN ST.
THONOTOSASSA, FL 33592

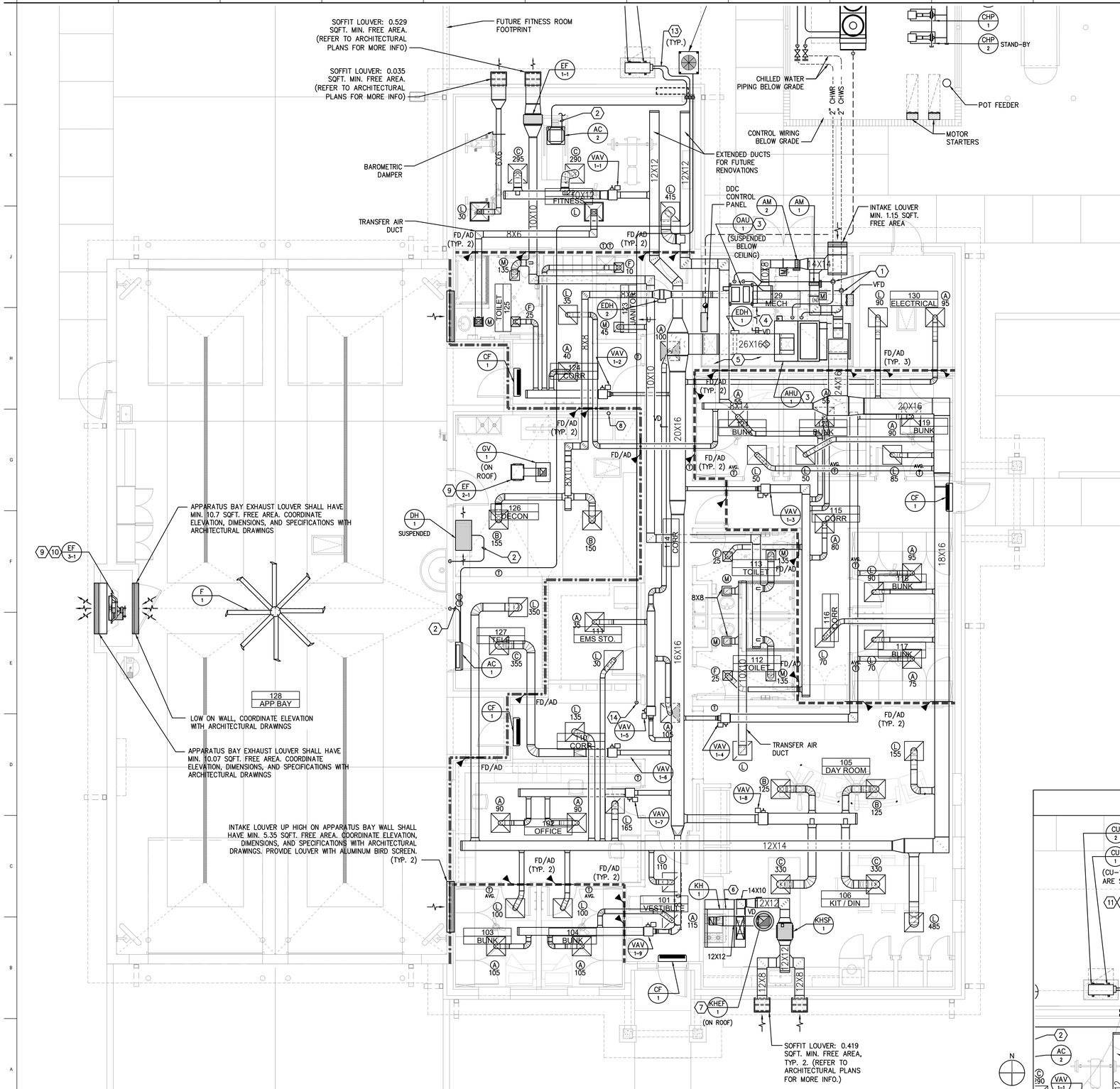
HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2216-05

| DISTRIBUTION | DATE |
|---|---|
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

MECHANICAL
SYMBOLS LEGEND

M0.0




MECHANICAL FLOOR PLAN | A6
3/16" = 1'-0"

## GENERAL NOTES

1. CONTRACTOR SHALL INSTALL MECHANICAL EQUIPMENT IN ACCORDANCE WITH ALL STATE AND LOCAL CODES.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRANSITIONS, FITTINGS, ELBOWS, DUCTWORK, PIPING, SUPPORTS, ETC. NECESSARY FOR A PROPER INSTALLATION AND OPERATION FOR A NEW HVAC SYSTEM.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF INSTALLATION WORK WITH OTHER TRADES TO AVOID CONFLICTS.
4. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF MECHANICAL EQUIPMENT WITH NEW LIGHT LOCATIONS AND NEW CEILING TILE LOCATIONS. REFER TO ARCHITECT'S REFLECTED CEILING PLAN LAYOUT.
5. ALL DUCT DIMENSIONS SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS.
6. DUCT SMOKE DETECTORS SHOWN ON PLANS ARE DIAGRAMMATIC. REFER TO MANUFACTURER'S INSTRUCTIONS FOR EXACT/OPTIMUM LOCATION IN DUCT.

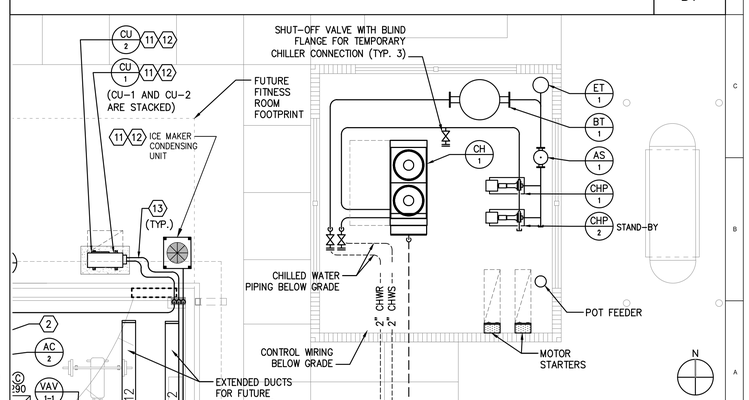
## BRANCH DUCT NOTES

1. ALL BRANCH DUCTWORK SHALL BE EQUIPPED WITH A CONICAL, BELLMOUTH OR 45 DEGREE TAKEOFF WITH VOLUME DAMPER. DAMPER SHALL BE STANDOFF TYPE WITH INDICATING AND LOCKING QUADRANT HANDLE. REFER TO MECHANICAL DETAILS FOR APPROVED BRANCH DUCT TYPES.
2. PROVIDE OPPOSED BLADE DAMPER, ADJUSTABLE FROM FACE OF AIR DEVICE, FOR ALL DEVICES LOCATED IN HARD CEILINGS.
3. BRANCH DUCTS ARE SHOWN DIAGRAMMATICALLY. WHERE SIDE DIMENSION OF DUCT DOES NOT ACCOMMODATE HEIGHT OF TAKE-OFF, CONTRACTOR MAY CONNECT TO BOTTOM OR TOP OF MAIN DUCT.

## KEYED NOTES

1. CHILLED WATER PIPING RISE FROM BELOW GRADE, PIPING SHALL CONTINUE TO EQUIPMENT WITHIN ROOM.
2. REFER TO PLUMBING FLOOR PLANS FOR CONTINUATION OF 3/4"ø CONDENSATE DRAIN PIPING.
3. PROVIDE 3/4"ø CONDENSATE DRAIN AND ROUTE TO HUB DRAIN IN MECHANICAL ROOM.
4. PROVIDE 4"ø SPIN-IN FITTING WITH VOLUME DAMPER. BALANCE TO 50 CFM (MIN.) FOR MECHANICAL ROOM PRESSURIZATION.
5. LOCATE ALL EQUIPMENT AND DAMPERS BELOW CEILING.
6. PROVIDE S.S. CABINET FOR FIRE SUPPRESSION EQUIPMENT. REFER TO KITCHEN HOOD SCHEDULE FOR MORE INFORMATION.
7. TRANSITION FROM HOOD OUTLET DIMENSIONS TO INLET DIMENSIONS OF ROOF MOUNTED EQUIPMENT PRIOR TO PENETRATING ROOF DECK. LOCATE FAN AS SHOWN ARCHITECTURALLY. COORDINATE WITH JOIST LOCATION AS WELL AS ANY ASSOCIATED JOIST BRIDGING.
8. ROUTE 4"ø RIGID DUCT FROM DRYER BOX, IN-O-VATE TECHNOLOGIES MODEL DB-425, OR APPROVED EQUAL, LOCATED IN STUD WALL BEHIND DRYER, TO GOOSENECK ON ROOF. REFER TO GOOSENECK DETAIL. DUCT SHALL BE GALVANIZED STEEL (0.013 MIN. THICKNESS). DRYER BOX ELEVATION SHALL BE COORDINATED WITH DRYER VENT OUTLET. PROVIDE WITH BACKDRAFT DAMPER (NO BIRDSCREEN). BASED ON GE SUPER 6.0 CAPACITY ELECTRIC DRYER, 170 CFM, 10FT. OF DUCT, AND TWO ELBOWS. COORDINATE EXACT SIZE AND ROUTING BASED ON DRYER MANUFACTURER'S SPECIFICATIONS. PROVIDE A MEANS FOR CLEAN OUT AT LOW POINT OF VERTICAL RISE. MAINTAIN 6 INCHES OF CLEARANCE FROM ANY COMBUSTIBLE MATERIALS. SEAL THE ANNULAR SPACE BETWEEN DUCT PENETRATIONS AND WALL/CEILING ASSEMBLIES WITH NONCOMBUSTIBLE MATERIAL.
9. PROVIDE ACCESS DOOR FOR EXHAUST FAN. ACCESS DOOR SHALL BE MARKED WITH A WARNING SIGN TO SHUT OFF FAN PRIOR TO OPENING DOOR.
10. PROVIDE WALL SWITCH TO CONTROL APPARATUS BAY EXHAUST FAN. COORDINATE FINAL LOCATION OF SWITCH WITH OWNER AND ELECTRICIAN. PROVIDE ENGRAVED SIGN NEXT TO SWITCH TO SAY: "APPARATUS AREA EXHAUST FAN"
11. PROVIDE THE NUMBER AND SIZE OF REFRIGERANT LINES PER THE MANUFACTURER'S RECOMMENDATIONS, BASED ON THE ACTUAL ROUTING, PRESSURE DROP, AND LENGTH OF PIPING FOR THE REQUIREMENTS OF THE UNIT.
12. CONDENSING UNIT DISCHARGE SHALL BE UNRESTRICTED TO A MINIMUM OF 100 INCHES. CONDENSING UNIT SHALL BE LOCATED SO THAT ROOF RUN-OFF DURING HARD RAIN DOES NOT FALL DIRECTLY ONTO UNIT.
13. CONDUIT FOR REFRIGERANT PIPING ROUTED ABOVE GRADE WITH LONG RADIUS 90° ELBOWS. EACH REFRIGERANT PIPE LINE SET SHALL BE RUN IN INDIVIDUAL CONDUIT.
14. REFRIGERANT PIPING AND CONTROL WIRING DROPS IN WALL TO FEED ICE MAKER.

NOTES | D1




CHILLER YARD PLAN | A1
3/16" = 1'-0"

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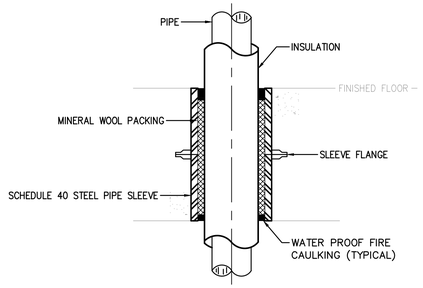
PROJECT ADDRESS:
10508 MAIN ST.
THONOTOSASSA, FL 33592

# HILLSBOROUGH COUNTY THONOTOSASSA FIRE STATION NO. 21 REPLACEMENT

| PROJECT #: 2216-05 | |
|---|---|
| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
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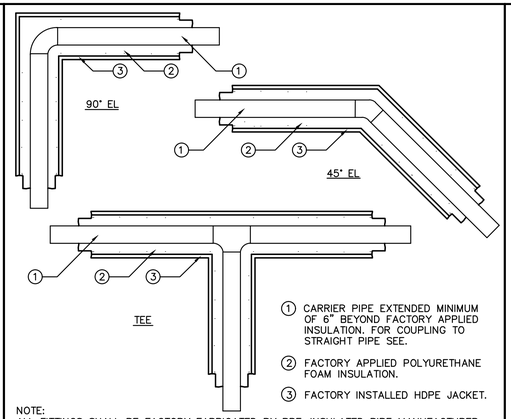
MECHANICAL FLOOR PLAN

M2.1




NOTE:
1. ALTERNATE: SCHEDULE 40 STEEL SLEEVE W/ANCHOR FLANGE & LINK SEAL AS MANUFACTURED BY THUNDERLINE CORP. OR EQUAL
2. CONTRACTOR SHALL SUBMIT U.L. APPROVED PENETRATION DETAIL FOR PENETRATIONS IN RATED WALLS AND FLOORS.

## WATERTIGHT SLEEVE DETAIL
NO SCALE

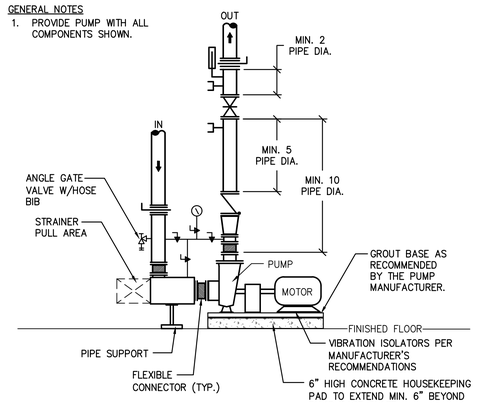



1. CARRIER PIPE EXTENDED MINIMUM OF 6" BEYOND FACTORY APPLIED INSULATION. FOR COUPLING TO STRAIGHT PIPE SEE.
2. FACTORY APPLIED POLYURETHANE FOAM INSULATION.
3. FACTORY INSTALLED HDPE JACKET.

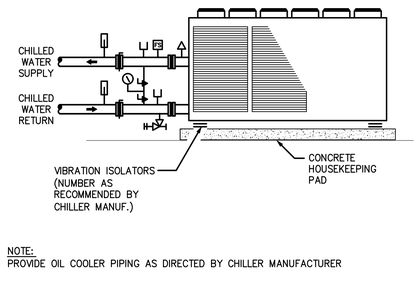
NOTE:
ALL FITTINGS SHALL BE FACTORY FABRICATED BY PRE-INSULATED PIPE MANUFACTURER

## TYPICAL FACTORY PRE-INSULATED PIPE FITTING DETAIL
NO SCALE

GENERAL NOTES
1. PROVIDE PUMP WITH ALL COMPONENTS SHOWN.

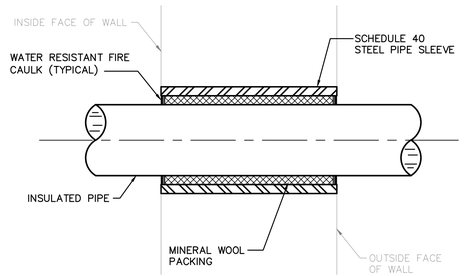



## TYPICAL END SUCTION PUMP PIPING SCHEMATIC DIAGRAM
NO SCALE

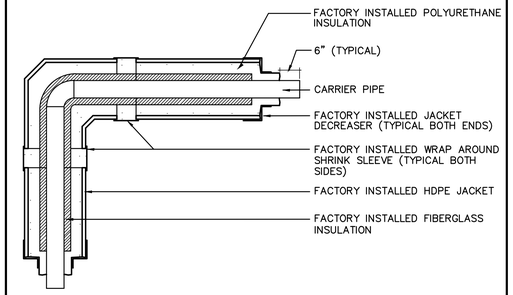



NOTE:
PROVIDE OIL COOLER PIPING AS DIRECTED BY CHILLER MANUFACTURER

## TYPICAL AIR COOLED CHILLER PIPING DIAGRAM
NO SCALE

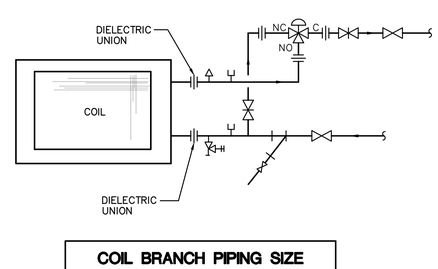



## TYPICAL WALL SLEEVE DETAIL
NO SCALE




NOTE:
90° EXPANSION ELBOW SHALL BE FACTORY FABRICATED BY PRE-INSULATED PIPE MANUFACTURER.

## TYPICAL FACTORY PRE-INSULATED ELBOW DETAIL
NO SCALE



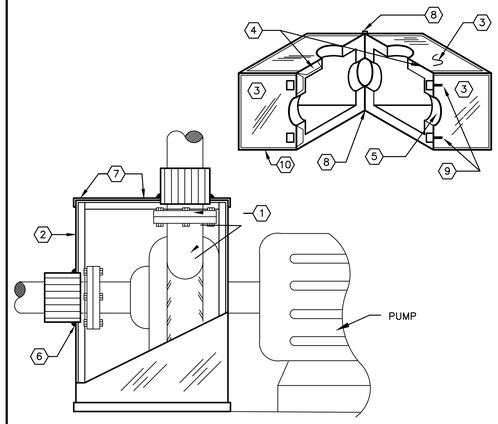

### COIL BRANCH PIPING SIZE

| | FLUID FLOW RATE (GPM) | PIPE DIAMETER (IN.) |
|---|---|---|
| COPPER | 3.6 | ¾ |
| | 7.3 | 1 |
| | 12.7 | 1¼ |
| | 20 | 1½ |
| | 38 | 2 |
| STEEL (SCH. 40) | 74 | 2½ |
| | 130 | 3 |
| NOTE | ① | – |

GENERAL NOTES:
1. INSTALL CALIBRATED BALANCE VALVES PER MANUFACTURER'S INSTRUCTIONS, INCLUDING ALL CLEARANCES AND STRAIGHT LENGTH OF PIPE DISTANCES.
2. INSTALL PIPING TO BREAK DOWN AND PROVIDE ALL NECESSARY CLEARANCES FOR NORMAL MAINTENANCE AND REMOVAL OF COIL WITHOUT CUTTING PIPES.
3. INSTALL MANUAL VENT AT HIGH POINT OF PIPE. REFER TO AIR HANDLER SCHEDULES FOR COIL GPM.
4. PROVIDE PIPE FITTINGS AS NEEDED TO CONNECT TO CONTROL VALVE.

KEYED NOTES:
① CONTROL VALVE SELECTED AND SIZED BY CONTROLS CONTRACTOR PER MANUFACTURER'S RECOMMENDATION.

## TYPICAL 3-WAY COIL PIPING DIAGRAM DETAIL
NO SCALE




GENERAL NOTE:
1. REFER TO MANUFACTURES PUMP INSULATION INSTRUCTIONS PRIOR TO INSULATING PUMPS. DO NOT COVER PUMP BEARING BRACKETS OR GREASE FITTINGS.

KEYED NOTES:

EQUIPMENT COVERS SHALL BE FABRICATED IN SECTIONS OF METAL, LINED WITH FOAMGLASS INSULATION 2" THK. APPLY PITTCOTE 404 REINFORCED WITH WHITE OPEN WEAVE MEMBRANE WITH MAXIMUM MESH OPENING 10 X 10 PER INCH TO LINE INSIDE OF COMPARTMENT OR ANY EXPOSED INSULATION. THE COVER SHOULD ENCLOSE FLANGES OR OTHER CONNECTIONS AS WELL AS THE BODY OF THE EQUIPMENT AND SHOULD BE CONSTRUCTED STRONG ENOUGH TO WITHSTAND VIBRATION AND HANDLING.

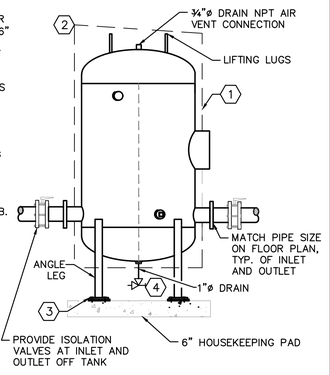
MATERIALS: METAL WITH INSULATION ADHERED TO THE INNER SURFACE, RIVETS OR SHEET METAL SCREWS AND CAULKING.

① PUMP OR EQUIPMENT SURFACES AND FLANGES.
② METAL CASING LINED WITH INSULATION.
③ SECTIONS OF THE FABRICATED COVER.
④ SLIP JOINT OR LAP SEAM SECURED WITH MECHANICAL FASTENERS.
⑤ CUT-OUTS FOR PIPES AND SHAFT. PROVIDE SEVERAL LAYERS OF RUBATEX FOAM INSULATION TO CREATE AIRTIGHT SEAL AT ALL MATING HALVES AND PENETRATIONS. SEAL AIRTIGHT.
⑥ CAULKING WHERE REQUIRED.
⑦ RIVETS OR SHEET METAL SCREWS.
⑧ STAINLESS STEEL PIANO HINGE OR STAINLESS STEEL LATCHES.
⑨ STAINLESS STEEL LATCHES. (TYPICAL OF BOTH ENDS).
⑩ ALUMINUM ANGLE FRAMING ENTIRE BOX AT ALL EDGES AND JOINING EDGES. THESE SHALL ALSO SERVE AS REINFORCEMENT FOR LATCH AND HINGE SUPPORT.

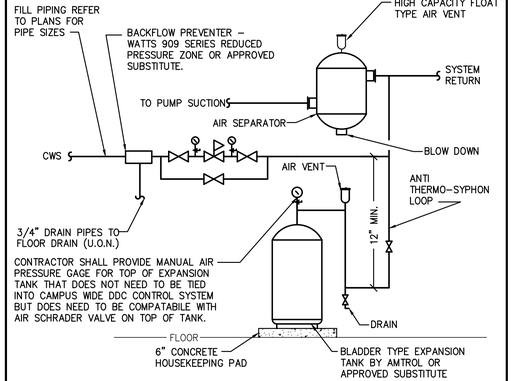
## TYPICAL END SUCTION PUMP - REMOVABLE AND REUSABLE INSULATION COVER
NO SCALE

KEYED NOTES:

① INSULATE BUFFER TANK WITH 2" THICK FOAM GLASS INSULATION, COVER ALL INSULATION WITH .016" ALUMINUM JACKETING, CAULK ALUMINUM JACKET WATER TIGHT.
② PITCH TOP OF FOAMGLASS COVER TO PROVIDE RAIN SHED.
③ REFER TO PIPE SUPPORT DETAIL FOR TANK SUPPORT LEG ANCHORING INFORMATION.
④ EXTEND DRAIN PIPE, AND PROVIDE WITH ANGLED GATE VALVE W/ HOSE BIB.




## CHILLED WATER BUFFER TANK DETAIL
NO SCALE




## EXPANSION TANK AND FILL PIPING DIAGRAM
NO SCALE


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EMI Job No. 22-0460 Drawn By: NSW Checked By: JSW

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BOARD OF COUNTY
COMMISSIONERS COUNTY
CENTER

601 E KENNEDY BLVD
TAMPA FL 33601

PROJECT ADDRESS:
10508 MAIN ST.
THONOTOSASSA, FL 33592

HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

PROJECT #: 2216-05

| DISTRIBUTION | DATE |
|---|---|
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

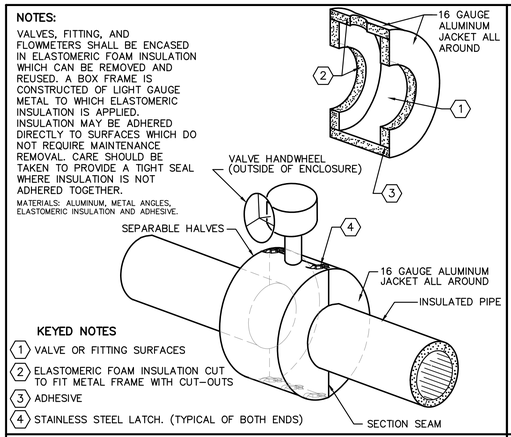
MECHANICAL
DETAILS

M3.1

**NOTES:**

VALVES, FITTING, AND FLOWMETERS SHALL BE ENCASED IN ELASTOMERIC FOAM INSULATION WHICH CAN BE REMOVED AND REUSED. A BOX FRAME IS CONSTRUCTED OF LIGHT GAUGE METAL TO WHICH ELASTOMERIC INSULATION IS APPLIED. INSULATION MAY BE ADHERED DIRECTLY TO SURFACES WHICH DO NOT REQUIRE MAINTENANCE REMOVAL. CARE SHOULD BE TAKEN TO PROVIDE A TIGHT SEAL WHERE INSULATION IS NOT ADHERED TOGETHER.

MATERIALS: ALUMINUM, METAL ANGLES, ELASTOMERIC INSULATION AND ADHESIVE.

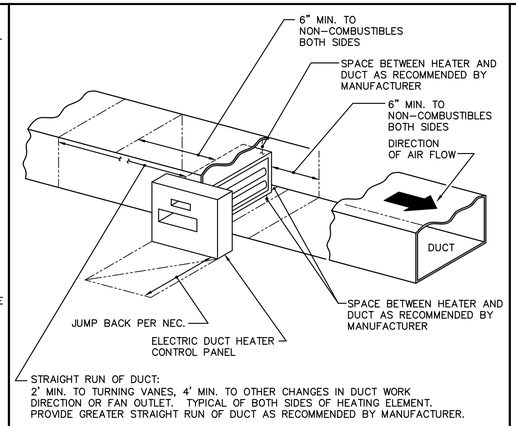



**KEYED NOTES**

1. VALVE OR FITTING SURFACES
2. ELASTOMERIC FOAM INSULATION CUT TO FIT METAL FRAME WITH CUT-OUTS
3. ADHESIVE
4. STAINLESS STEEL LATCH. (TYPICAL OF BOTH ENDS)

## REMOVABLE / REPLACEABLE COVER FOR VALVES AND FITTINGS

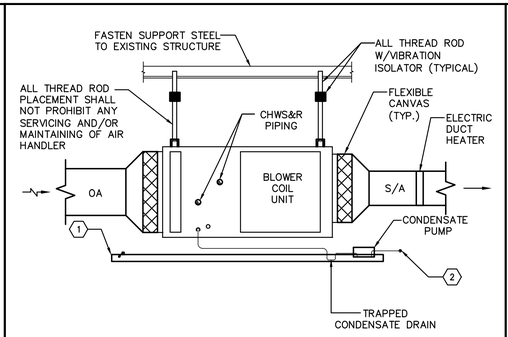
NO SCALE




STRAIGHT RUN OF DUCT:
2' MIN. TO TURNING VANES, 4' MIN. TO OTHER CHANGES IN DUCT WORK DIRECTION OR FAN OUTLET. TYPICAL OF BOTH SIDES OF HEATING ELEMENT. PROVIDE GREATER STRAIGHT RUN OF DUCT AS RECOMMENDED BY MANUFACTURER.

## DUCT HEATER INSTALLATION DETAIL

NO SCALE



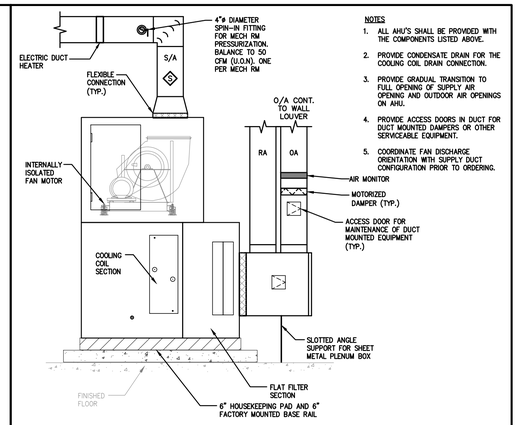

KEYED NOTES

1. AUXILIARY DRAIN PAN, WITH FLOAT SWITCH. PAN TO EXTEND BEYOND BLOWER COIL, VALVE PACKAGE, AND CONDENSATE PUMP.
2. REFER TO FLOOR PLANS FOR CONTINUATION OF CONDENSATE PIPE ROUTING.

## BLOWER COIL UNIT DETAIL

NO SCALE

TYP. OF OAU-1



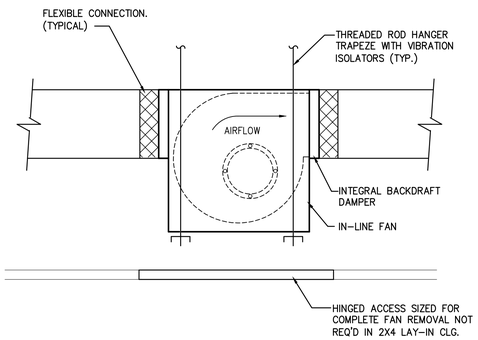

NOTES

1. ALL AHU'S SHALL BE PROVIDED WITH THE COMPONENTS LISTED ABOVE.
2. PROVIDE CONDENSATE DRAIN FOR THE COOLING COIL DRAIN CONNECTION.
3. PROVIDE GRADUAL TRANSITION TO FULL OPENING OF SUPPLY AIR OPENING AND OUTDOOR AIR OPENINGS ON AHU.
4. PROVIDE ACCESS DOORS IN DUCT FOR DUCT MOUNTED DAMPERS OR OTHER SERVICEABLE EQUIPMENT.
5. COORDINATE FAN DISCHARGE ORIENTATION WITH SUPPLY DUCT CONFIGURATION PRIOR TO ORDERING.

## SINGLE PATH AHU COMPONENT DETAIL

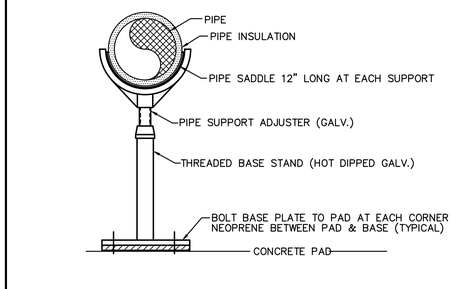
NO SCALE

TYP. OF AHU-1



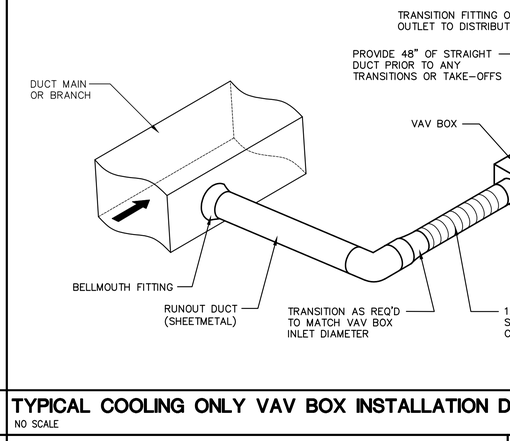

## TYPICAL IN-LINE FAN INSTALLATION DETAIL

NO SCALE




## TYPICAL PIPE STAND DETAIL

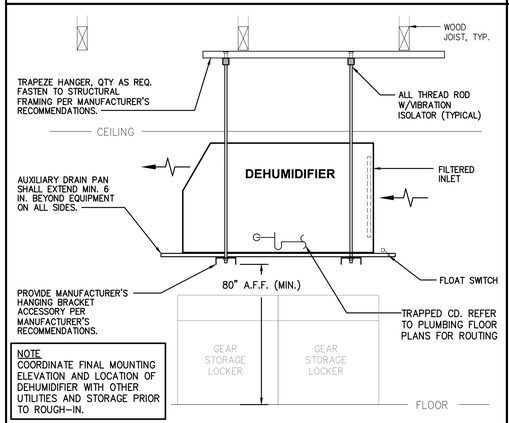
NO SCALE




NOTES:
1) INSULATE DUCTWORK AS DESCRIBED IN SPECIFICATIONS.
2) METAL, FLEXIBLE, CORRUGATED DUCTWORK SHALL BE A MAX. OF 4'-0" LONG.
3) PROVIDE WORKING CLEARANCES FOR CONTROL PANEL PER MANUFACTURER'S RECOMMENDATIONS

## TYPICAL COOLING ONLY VAV BOX INSTALLATION DETAIL

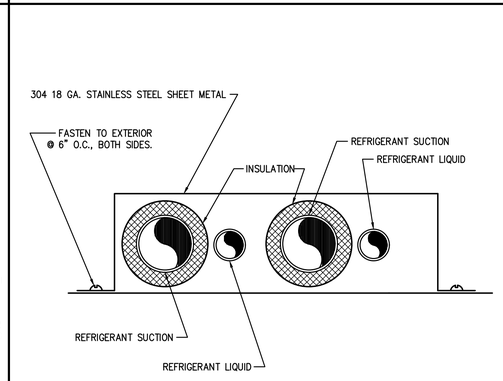
NO SCALE




NOTE
COORDINATE FINAL MOUNTING ELEVATION AND LOCATION OF DEHUMIDIFIER WITH OTHER UTILITIES AND STORAGE PRIOR TO ROUGH-IN.

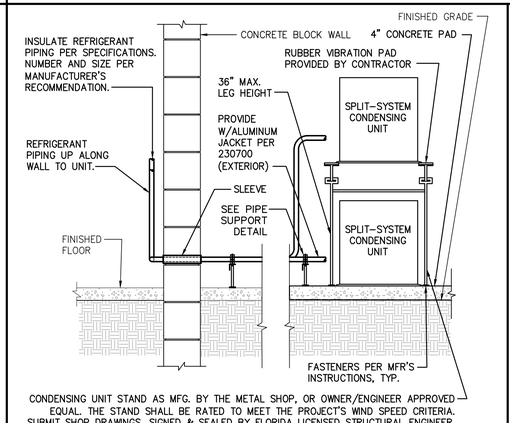
## DEHUMIDIFICATION UNIT DETAIL

NO SCALE




## TYPICAL REFRIGERANT PIPING COVER

NO SCALE

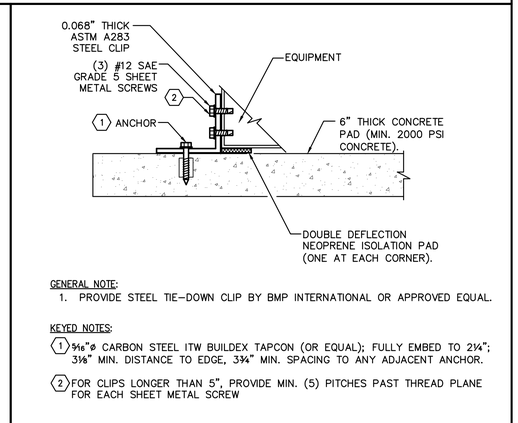



CONDENSING UNIT STAND AS MFG. BY THE METAL SHOP, OR OWNER/ENGINEER APPROVED EQUAL. THE STAND SHALL BE RATED TO MEET THE PROJECT'S WIND SPEED CRITERIA. SUBMIT SHOP DRAWINGS, SIGNED & SEALED BY FLORIDA LICENSED STRUCTURAL ENGINEER.

## STACKED CU DETAIL

NO SCALE

TYP. OF CU-1, & CU-2




GENERAL NOTE:
1. PROVIDE STEEL TIE-DOWN CLIP BY BMP INTERNATIONAL OR APPROVED EQUAL.

KEYED NOTES:

1. 9/16"ø CARBON STEEL ITW BUILDEX TAPCON (OR EQUAL); FULLY EMBED TO 2¼"; 3⅛" MIN. DISTANCE TO EDGE, 3¾" MIN. SPACING TO ANY ADJACENT ANCHOR.
2. FOR CLIPS LONGER THAN 5", PROVIDE MIN. (5) PITCHES PAST THREAD PLANE FOR EACH SHEET METAL SCREW

## CU ANCHOR STRAP

NO SCALE


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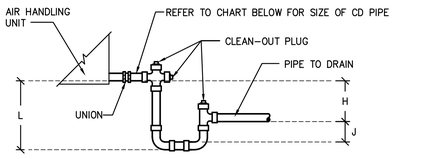
PROJECT ADDRESS:
10508 MAIN ST.
THONOTOSASSA, FL 33592

HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

| PROJECT #: 2216-05 | |
|---|---|
| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

MECHANICAL DETAILS

M3.2




GENERAL NOTE:
1. THIS DETAIL IS FOR DIAGRAMMATIC PURPOSES ONLY. REFER TO MANUFACTURER'S SPECIFICATIONS FOR PROPER TRAPPING AND INSULATION.

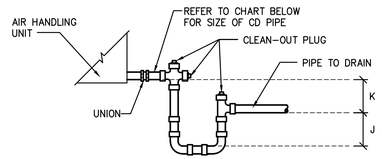
H = (1" FOR EACH 1" OF MAXIMUM NEGATIVE STATIC PRESSURE) + 1"

J = HALF OF H

L = H + J + PIPE DIAMETER + INSULATION

## DRAW-THRU COIL CONFIGURATION

TYP. OF AH-2, OAU-1, & DH-1




GENERAL NOTE:
1. THIS DETAIL IS FOR DIAGRAMMATIC PURPOSES ONLY. REFER TO MANUFACTURER'S SPECIFICATIONS FOR PROPER TRAPPING AND INSULATION.

K = MINIMUM 1/2"

J = 1/2" PLUS MAX TOTAL STATIC PRESSURE DROP

## BLOW-THRU COIL CONFIGURATION

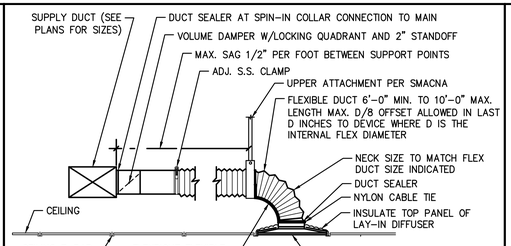
TYP. OF AH-1

| CONDENSATE PIPE SIZE | |
|---|---|
| COOLING COIL MBH (TON) | DIAMETER (INCH) |
| UP TO 240 (20) | ¾ |
| UP TO 480 (40) | 1 |
| UP TO 1080 (90) | 1¼ |
| UP TO 1500 (125) | 1½ |
| UP TO 3000 (250) | 2 |
| NOTES | ① |

KEYED NOTE:
① REFER TO AIR HANDLER SCHEDULE FOR COOLING COIL MBH/TON.

## TYPICAL CONDENSATE DRAIN/ TRAP DETAIL

NO SCALE

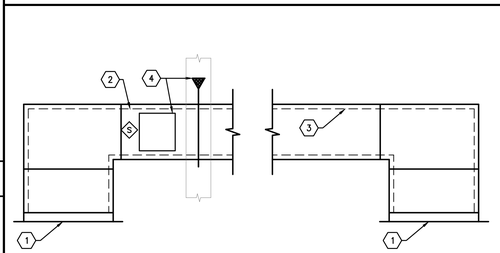



FLEXIBLE DUCT NOTES

1. FLEXIBLE DUCTS SHALL BE ONE-PIECE AND SHALL NOT BE SPLICED TOGETHER.
2. EXTEND FLEXIBLE DUCT INSULATION TO DUCT/DIFFUSER PANEL INSULATION AND SEAL WITH MASTIC.
3. MIN. 1" WIDE 22 GALV. STRAP HANGER WITH HEMMED EDGES PER SMACNA FIGURE 3-10.
4. FLEXIBLE AIR DUCT SHALL BE FULLY EXTENDED AND NOT COMPRESSED WITH ELBOW RADIUS NO LESS THAN R/D = 1.0
5. HANGERS, SADDLES AND OTHER SUPPORTS SHALL MEET THE DUCT MANUFACTURER'S RECOMMENDATIONS AND SHALL BE OF SUFFICIENT WIDTH TO PREVENT RESTRICTION OF THE INTERNAL DUCT DIAMETER. IN NO CASE SHALL THE MATERIAL SUPPORTING FLEXIBLE DUCT AND IN DIRECT CONTACT WITH IT BE LESS THAN 1½ INCHES (38mm) WIDE.

## TYPICAL SUPPLY FLEXIBLE DUCT DETAIL

NO SCALE




① REFER TO MECHANICAL FLOOR PLANS AND SCHEDULES FOR AIR DEVICE INFORMATION.

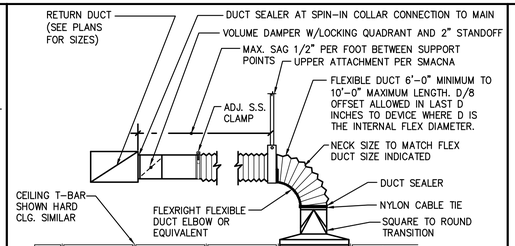
② REFER TO PLANS FOR DUCT SIZES AND CONFIGURATION

③ 1" ACOUSTIC DUCT LINER – 3LBS / CU. FT. DENSITY WITH BLACK PIGMENTED COATING FIRE RESISTANT COATING ON THE AIR SIDE.

④ FIRE DAMPER, SMOKE DAMPER, OR FIRE SMOKE DAMPER W/ ACCESS DOOR AT PENETRATION OF RATED WALLS. DAMPER TYPE PER WALL RATING.

## TYPICAL TRANSFER DUCT DETAIL

NO SCALE

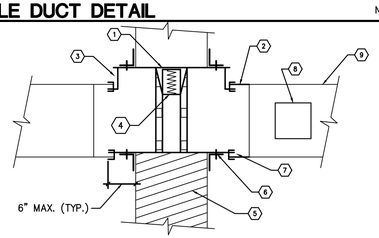



FLEXIBLE DUCT NOTES

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5. HANGERS, SADDLES AND OTHER SUPPORTS SHALL MEET THE DUCT MANUFACTURER'S RECOMMENDATIONS AND SHALL BE OF SUFFICIENT WIDTH TO PREVENT RESTRICTION OF THE INTERNAL DUCT DIAMETER. IN NO CASE SHALL THE MATERIAL SUPPORTING FLEXIBLE DUCT AND IN DIRECT CONTACT WITH IT BE LESS THAN 1½ INCHES (38mm) WIDE.
6. WHERE RECTANGULAR HARD DUCT IS SHOWN, CONTRACTOR SHALL INSTALL DUCT AS SIZED ON THE MECHANICAL FLOOR PLANS IN ACCORDANCE WITH MECHANICAL SPECIFICATIONS.

## TYPICAL RETURN, EXHAUST, RELIEF AIR FLEXIBLE DUCT DETAIL

NO SCALE




① MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCE BETWEEN WALL/FLOOR OPENING TO ALLOW FOR EXPANSION DURING PERIOD'S OF INTENSE HEAT.

② EXPAND DUCT SO THAT FIRE DAMPER DOES NOT REDUCE AIR FLOW

③ APPLY SEALANT TO JOINT ALL AROUND BOTH SIDES OF WALL WITH AN APPROVED CAULKING MATERIAL

④ VERTICAL GUILLOTINE TYPE FIRE DAMPER WITH U.L. RATING AND STAMP.

⑤ FIRE RATED WALL.

⑥ MOUNTING ANGLE, OVERLAP WALL OPENING BY 1" MINIMUM.

⑦ FASTEN DUCT TO SLEEVE WITH BREAKAWAY CONNECTION.

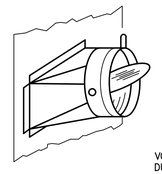
⑧ FIRE DAMPER ACCESS DOOR WITH CAM LATCH.

⑨ DUCTWORK – REFER TO PLANS FOR SIZE AND CONTINUATION

NOTE:
INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, UL555, & UL555S. DAMPER AND RESPECTIVE ACTUATORS SHALL BE U.L. TESTED AND LABELED AS AN ASSEMBLY.

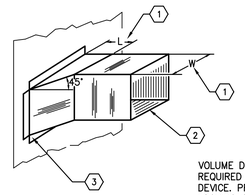
## FIRE DAMPER DETAIL

NO SCALE



BUCKLEY MODEL 3300D
45° BRANCH CONNECTION
NO SCALE (TYPICAL)

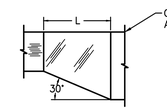
VOLUME DAMPER WITH EXTENDED STEM IS REQUIRED WHEN DUCT IS EXTERNALLY WRAPPED. PROVIDE WITH STAMPED, INDICATING LOCKING QUADRANT HANDLE.



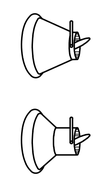

45° BRANCH CONNECTION
NO SCALE (TYPICAL)

KEYED NOTES:
① L = 1/4" W OR 4"MINIMUM
② TO BRANCH DUCT
③ CAULK AIR-JOINT AIR-TIGHT

VOLUME DAMPER WITH EXTENDED STEM IS REQUIRED WHEN DUCT SERVING SIDEWALL AIR DEVICE. PROVIDE WITH STAMPED, INDICATING LOCKING QUADRANT HANDLE.




ECCENTRIC TRANSITION
NO SCALE (TYPICAL)



TYPICAL CONICAL TAP FOR BRANCH DUCTS, REQUIRES ACCURATE HOLE CUT

TYPICAL BELLMOUTH TAP FOR BRANCH DUCTS, REQUIRES ACCURATE HOLE CUT

VOLUME DAMPER WITH EXTENDED STEM IS REQUIRED WHEN DUCT IS EXTERNALLY WRAPPED. PROVIDE WITH STAMPED, INDICATING LOCKING QUADRANT.

ALTERNATE FITTINGS TO BE USED WHEN DUCT HEIGHT DOES NOT PERMIT THE USE OF THE FULL SIZE BELLMOUTH/CONICAL TAP INCLUDE: MINI-BELLMOUTH (M-BMD), OVAL-BELLMOUTH (FOBMD) AND STD 45° RECTANGULAR TO ROUND (3300D)

## TYPICAL BRANCH TAKE-OFF DETAILS

NO SCALE


1315 E. SEVENTH AVENUE
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BOARD OF COUNTY
COMMISSIONERS COUNTY
CENTER
601 E KENNEDY BLVD
TAMPA FL 33601

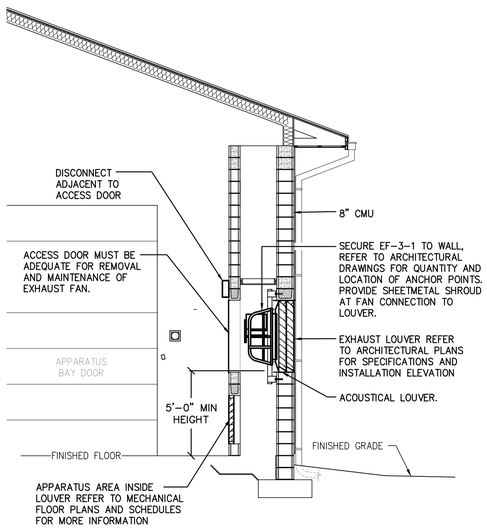
PROJECT ADDRESS:
10508 MAIN ST.
THONOTOSASSA, FL 33592

HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

| PROJECT #: 2216-05 | |
|---|---|
| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

MECHANICAL DETAILS

M3.3




NOTE: PROVIDE ENGRAVED SIGN ON ACCESS DOOR TO READ: "TURN OFF EXHAUST FAN DISCONNECT, BEFORE OPENING ACCESS DOOR."

## APPARATUS BAY EXHAUST FAN DETAIL

SCALE: NONE

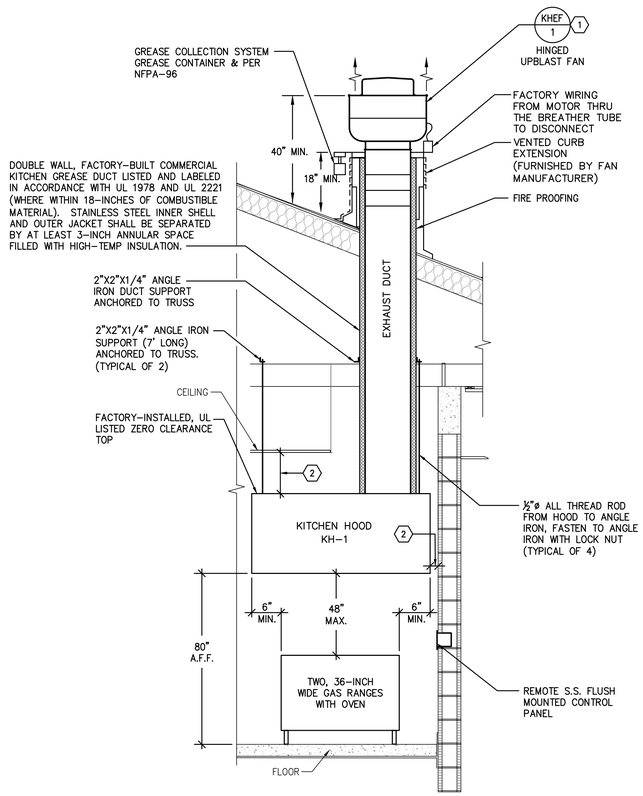
GENERAL NOTES:

1. COORDINATE EXACT LOCATION OF ANSUL PULL STATION WITH ARCHITECTURAL DRAWINGS.
2. ALL WALL AND CEILING SYSTEMS ADJACENT TO HOOD AND EXHAUST FAN DUCT IS COMPOSED OF NON-COMBUSTIBLE MATERIAL.
3. EXHAUST FAN COMPONENTS SHALL BE SCREWED TOGETHER (NOT RIVETED) FOR EASE OF MOTOR MAINTENANCE.
4. EXPOSED SURFACES CONSTRUCTED OF 18 GUAGE STAINLESS STEEL WITH A #4 FINISH. UNEXPOSED SURFACES ARE 18 GUAGE, CORROSION RESISTANT STEEL, UNLESS OTHERWISE NOTED..

KEYED NOTES

(1) PROVIDE GUARD RAILS AND SERVICE PLATFORM IN ACCORDANCE WITH *SECTIONS 304.11 AND 306.5.1* OF THE *FLORIDA BUILDING CODE 8TH EDITION (2023) MECHANICAL*. REFER TO ARCHITECTURAL PLANS FOR MORE INFORMATION.

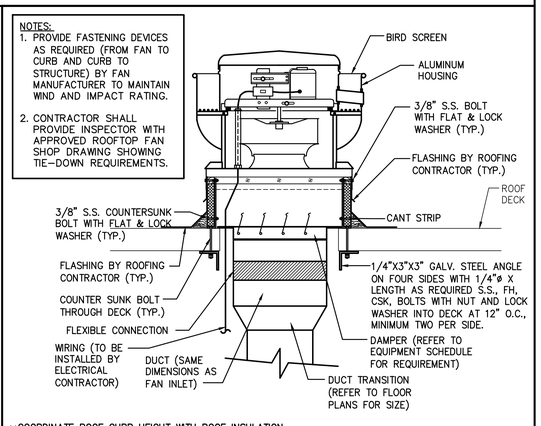
(2) PROVIDE THE FOLLOWING CLEARANCES ON ALL SIDES IN ACCORDANCE WITH SECTION 507.2.6 OF THE *FLORIDA BUILDING CODE 8TH EDITION (2023) MECHANICAL:* 0" TO NON-COMBUSTIBLES, AND 18" TO COMBUSTIBLES.




## KITCHEN HOOD AND EXHAUST FAN DETAIL

SCALE: NONE

NOTES:
1. PROVIDE FASTENING DEVICES AS REQUIRED (FROM FAN TO CURB AND CURB TO STRUCTURE) BY FAN MANUFACTURER TO MAINTAIN WIND AND IMPACT RATING.
2. CONTRACTOR SHALL PROVIDE INSPECTOR WITH APPROVED ROOFTOP FAN SHOP DRAWING SHOWING TIE-DOWN REQUIREMENTS.




**COORDINATE ROOF CURB HEIGHT WITH ROOF INSULATION.

## TYPICAL ROOF MOUNTED UPBLAST FAN DETAIL

NO SCALE

1315 E. SEVENTH AVENUE
SUITE 106
TAMPA, FLORIDA 33605.3607

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HILLSBOROUGH COUNTY
BOARD OF COUNTY COMMISSIONERS COUNTY CENTER
601 E KENNEDY BLVD
TAMPA FL 33601

PROJECT ADDRESS:
10508 MAIN ST.
THONOTOSASSA, FL 33592

HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

| PROJECT #: 2216-05 | |
|---|---|
| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

MECHANICAL DETAILS

M3.4

## VAV AIR HANDLING UNIT SCHEDULE

| MARK | – | AHU-1 |
|---|---|---|
| MANUFACTURER | – | TRANE |
| MODEL NUMBER | – | UCCAF08 |
| SUPPLY AIR QUANTITY | CFM | 3,130 |
| OUTSIDE AIR QUANTITY | CFM | 660 |
| PRE-FILTER TYPE/EFFICIENCY | –/MERV | 2" PLEATED/8 |
| AFTER-FILTER TYPE/EFFICIENCY | –/MERV | 4" CARTRIGE/13 |
| DIMENSIONS (LxWxH) | IN. | 65.9X51.0X71.1 |
| WEIGHT | LBS. | 933.5 |
| **FAN** | | |
| AIRFLOW | CFM | 3,130 |
| FAN TYPE | – | VERTICAL HOUSED FAN |
| MAXIMUM FAN SPEED PER FAN | RPM | 1,641 |
| FAN DISCHARGE ACOUSTICS @ 250 Hz | DB | 84 |
| STATIC PRESS. DROP EXT./TOTAL | IN. H20 | 3.000/4.023 |
| MOTOR SIZE | HP | 5 |
| VFD DESIGN FREQUENCY | HZ | – |
| FULL LOAD AMPS | AMPS | 17.50 |
| ELECTRICAL CHARACTERISTICS | V/ø/HZ | 208/3/60 |
| **COOLING COIL** | | |
| AIRFLOW | CFM | 3,130 |
| TOTAL COOLING CAPACITY | MBH | 145.31 |
| SENSIBLE COOLING CAPACITY | MBH | 93.20 |
| COOLING COIL MAX. FACE VELOCITY | FPM | 410 |
| ENTERING AIR TEMP. (DB./WB.) | °F | 77.64/66.25 |
| LEAVING AIR TEMP. (DB./WB.) | °F | 50.63/50.53 |
| COOLING COIL MAX. AIR PRESS. DROP | IN. H20 | 0.633 |
| COOLING COIL (EWT/LWT) | °F | 42.0/56.0 |
| COOLING COIL WATER FLOWRATE | GPM | 20.68 |
| COOLING COIL MAX. H20 PRESS. DROP | FT. H20 | 4.17 |
| NOTES | – | ①②③④⑤ |

VAV AIR HANDLING UNIT SCHEDULE NOTES

① PROVIDE WITH VFD COMPATIBLE MOTOR, INVERTER DUTY RATED AND LABELED.

② PROVIDE THREE (3) SETS OF REPLACEMENT FILTERS (ONE TO BE USED DURING CONSTRUCTION, THE SECOND SET TO BE USED AT THE START OF THE TEST AND BALANCE PROCESS AND THE FINAL SET TO BE INSTALLED AT FINAL COMPLETION).

③ PROVIDE INTEGRAL MOTORIZED DAMPER FROM THE FACTORY FOR OUTSIDE AIR AND RETURN AIR CONNECTIONS. OUTSIDE AIR MONITOR SHALL BE PROVIDED SEPARATELY AND INSTALLED IN DUCTWORK. REFER TO AIR MONITOR SCHEDULE AND FLOOR PLANS FOR MORE INFORMATION.

④ IF MULTIPLE FANS ARE USED FOR AN AHU, THE MANUFACTURER SHALL PROVIDE A SINGLE UNIT MOUNTED NEMA 4 UL508A LISTED CONTROL PANEL WITH ALL FANS IN AN ARRAY PRE-WIRED TO IT, SUCH THAT ONE PROPERLY SIZED VFD MAY BE FIELD CONNECTED WITH NO ADDITIONAL PROVISIONS REQUIRED FOR PROTECTION OF THE INDIVIDUAL MOTORS. A SINGLE POWER DISTRIBUTION BLOCK SHALL BE PROVIDED FOR CONNECTION OF THE FIELD MOUNTED VFD WITH ONE CONDUCTOR PER PHASE. CLASS J OR CLASS CC FUSING AND AN ELECTRONIC MOTOR OVERLOAD PROTECTOR WITH MANUAL ISOLATION SWITCH SHALL BE PROVIDED FOR EACH MOTOR IN THE ARRAY. EACH MOTOR IN THE ARRAY SHALL BE INDEPENDENTLY GROUNDED WITH A DEDICATED GREEN CONDUCTOR. A MINIMUM OF ONE OPEN GROUND LUG SHALL BE PROVIDED FOR FIELD USE.

⑤ PROVIDE HONEYWELL "UV100E3007", ULTRA VIOLET SURFACE TREATMENT SYSTEM.

## 100% OUTSIDE AIR UNIT SCHEDULE

| MARK | – | OAU-1 |
|---|---|---|
| MANUFACTURER | – | TRANE |
| MODEL NUMBER | – | BCHE012 |
| SUPPLY AIR QUANTITY | CFM | 305 |
| OUTSIDE AIR QUANTITY | CFM | 305 |
| PRE-FILTER TYPE/EFFICIENCY | –/MERV | 2"/8 |
| AFTER-FILTER TYPE/EFFICIENCY | –/MERV | – |
| DIMENSIONS (LxWxH) | IN. | 30.1X24X17 |
| WEIGHT | LBS. | 134.9 |
| **FAN** | | |
| AIRFLOW | CFM | 305 |
| FAN WHEEL DIAMETER/TYPE | IN./– | – |
| MAXIMUM FAN SPEED PER FAN | RPM | 1,553 |
| FAN DISCHARGE ACOUSTICS @ 250 Hz | DB | 80 |
| STATIC PRESS. DROP EXT./TOTAL | IN. H20 | 1.000/1.562 |
| MOTOR SIZE | HP | 1/2 |
| VFD DESIGN FREQUENCY | HZ | – |
| FULL LOAD AMPS | AMPS | 2.40 |
| ELECTRICAL CHARACTERISTICS | V/ø/HZ | 208/3/60 |
| **COOLING COIL** | | |
| AIRFLOW | CFM | 305 |
| TOTAL COOLING CAPACITY | MBH | 29.22 |
| SENSIBLE COOLING CAPACITY | MBH | 12.77 |
| COOLING COIL MAX. FACE VELOCITY | FPM | 343 |
| ENTERING AIR TEMP. (DB./WB.) | °F | 91/80 |
| LEAVING AIR TEMP. (DB./WB.) | °F | 53.58/53.37 |
| COOLING COIL MAX. AIR PRESS. DROP | IN. H20 | 0.502 |
| COOLING COIL (EWT/LWT) | °F | 42.0/56.0 |
| COOLING COIL WATER FLOWRATE | GPM | 4.16 |
| COOLING COIL MAX. H20 PRESS. DROP | FT. H20 | 6.12 |
| NOTES | – | ①② |

VAV AIR HANDLING UNIT SCHEDULE NOTES

① PROVIDE THREE (3) SETS OF REPLACEMENT FILTERS (ONE TO BE USED DURING CONSTRUCTION, THE SECOND SET TO BE USED AT THE START OF THE TEST AND BALANCE PROCESS AND THE FINAL SET TO BE INSTALLED AT FINAL COMPLETION).

② PROVIDE HONEYWELL "UV100E3007", ULTRA VIOLET SURFACE TREATMENT SYSTEM.

## DX MINI-SPLIT SYSTEM A/C SCHEDULE

| **AIR HANDLER DATA** | | | |
|---|---|---|---|
| MARK | – | AC-1 | AC-2 |
| AREA SERVED | – | 127 TELE | 122 FITNESS |
| MANUFACTURER | – | MITSUBISHI | MITSUBISHI |
| MODEL NUMBER | – | PKA-A12 | SLZ-KF-18 |
| RATED TOTAL COOLING CAPACITY | BTUH | 12,000 | 17,700 |
| MAX. SENSIBLE COOLING CAPACITY | BTUH | 9,720 | 12,567 |
| MOTOR SIZE | W | 30 | 56 |
| S.E.E.R. | BTUH/W | 20.8 | 20.7 |
| FILTER TYPE | – | WASHABLE | WASHABLE |
| WEIGHT | LBS. | 29 | 30.6 |
| **CONDENSING UNIT DATA** | | | |
| MARK | – | CU-1 | CU-2 |
| MANUFACTURER | – | MITSUBISHI | MITSUBISHI |
| MODEL NUMBER | – | PUY-A12 | SUZ-KA18 |
| REFRIGERANT | – | R410A | R410A |
| OUTDOOR TEMPERATURE | °F | 95 | 95 |
| ELECTRICAL CHARACTERISTICS | V/ø/HZ | 208/1/60 | 208/1/60 |
| MINIMUM CIRCUIT AMPACITY | AMPS | 11 | 14 |
| MAX. OVERCURRENT PROTECTION | AMPS | 15 | 24 |
| NOTES | – | ① | ① |

KEYED NOTES:

① PROVIDE WITH HARDWIRED REMOTE CONTROLLER MODEL PAR-41MAA.

## AIR MONITOR SCHEDULE

| MARK | – | AM-1 | AM-2 |
|---|---|---|---|
| MANUFACTURER | – | EBTRON | EBTRON |
| MODEL NUMBER | – | HTA104-PA | HTA104-PA |
| NOMINAL AIR FLOW | CFM | 660 | 305 |
| NOMINAL AREA | – | ① | ① |
| SERVICE | – | OUTSIDE AIR | OUTSIDE AIR |
| NOTES | – | ② | ② |

AIR MOINTOR SCHEDULE KEYED NOTES:

① CONTRACTOR SHALL COORDINATE QUANTITY OF PROBES AND REQUIRED NUMBER OF SENSORS WITH DUCT SIZES SHOWN ON MECHANICAL FLOOR PLANS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

② REFER TO MECHANICAL FLOOR PLANS FOR AIR MONITOR LOCATION AND DUCT SIZE.

## AIR DEVICE SCHEDULE

| MARK | FACE SIZE | NECK SIZE | MATERIAL | ACCESSORIES | FINISH | MANUFACTURER AND MODEL | NOTES |
|---|---|---|---|---|---|---|---|
| A | 24X24 | 6"ø | ALUMINUM | – | – | METALAIRE-5700 | ①② |
| B | 24X24 | 8"ø | ALUMINUM | – | – | METALAIRE-5700 | ①② |
| C | 24X24 | 10"ø | ALUMINUM | – | – | METALAIRE-5700 | ①② |
| F | 12X12 | 6"ø | ALUMINUM | – | – | METALAIRE-5000 | ①②⑥ |
| G | 16X6 | 14X4 | ALUMINUM | O.B.D. | – | METALAIRE-V4002 | ② |
| L | 24X24 | 22X22 | ALUMINUM | – | – | METALAIRE-CC5 | ③④⑥ |
| M | 12X12 | 10X10 | ALUMINUM | – | – | METALAIRE-CC5 | ③④⑥ |
| S1 | 10X10 | 8X8 | ALUMINUM | – | – | METALAIRE-H4002 | ② |
| R1 | 10X10 | 8X8 | ALUMINUM | – | – | METALAIRE-H4002R | ② |
| R2 | 12X12 | 10X10 | ALUMINUM | – | – | METALAIRE-H4002R | ② |

AIR DEVICE GENERAL NOTES:

1. ALL UNITS FOR LAY-IN T-BAR GRILLE SHALL BE PROVIDED WITH TYPE 6 BORDER CEILING MODULE (24X24).
2. ALL AIR DEVICES SHALL HAVE PAINTED WHITE FINISH UNLESS COLOR COORDINATED WITH ARCHITECT.
3. ALL 24X24 FACE AIR DEVICES INSTALLED IN HARD CEILINGS SHALL BE PROVIDED WITH T-BAR FRAME FOR PLASTER OR GYPSUM CEILINGS.
4. PROVIDE SQUARE TO ROUND TRANSITIONS AS REQUIRED FOR COORDINATION OF DUCT AND AIR DEVICE NECK.
5. COORDINATE FRAME TYPE WITH LATEST ARCHITECTURAL REFLECTED CEILING PLAN.
6. INSULATE THE TOPS OF ALL SUPPLY AIR DEVICES, REFER TO SPECIFICATIONS.
7. AIR DEVICES LOCATED IN HARD CEILINGS, SOFFITS, OR SIDE WALLS WITH INACCESSIBLE BRANCH DUCTS, SHALL BE EQUIPPED WITH AN OPPOSED BLADE DAMPER ADJUSTABLE FROM FACE OF DEVICE.

KEYED NOTES:

① FLEX DUCT SIZE TO MATCH NECK SIZE. MINIMUM LENGTH OF FLEX SHALL BE 6'-0"; MAXIMUM LENGTH OF FLEX DUCT SHALL BE 10'-0". BALANCE OF DUCT SHOWN ON PLAN SHALL BE EXTERNALLY INSULATED, RIGID STEEL DUCT, SAME SIZE AS NECK SIZE.

② PROVIDE RUNOUT BRANCH DUCT TO AIR DEVICE SAME SIZE AS AIR DEVICE NECK UNLESS OTHERWISE NOTED ON PLANS. PROVIDE MANUFACTURER'S SPECIFIED OPPOSED BLADE DAMPER FOR AIR DEVICES IN HARD CEILING.

③ ALUMINUM ½"x½"x½" GRID.

④ AIR DEVICES USED FOR THE TRANSFER OF AIR DO NOT REQUIRE OPPOSED BLADE DAMPER OR FILTER.

⑤ HORIZONTAL RUNOUT BRANCH DUCTS SERVING A SINGLE AIR DEVICE WITH:
- 95 C.F.M. OR LESS SHALL BE 6"ø RIGID STEEL DUCT AND TRANSITION TO 6"ø FLEX DUCT PRIOR TO AIR DEVICE,
- 100 TO 200 C.F.M. SHALL BE 8"ø RIGID STEEL DUCT AND TRANSITION TO 8"ø FLEX DUCT PRIOR TO AIR DEVICE,
- 205 TO 370 C.F.M. SHALL BE 10"ø RIGID STEEL DUCT AND TRANSITION TO 10"ø FLEX DUCT PRIOR TO AIR DEVICE,
- 375 TO 600 C.F.M. SHALL BE 12"ø RIGID STEEL DUCT AND TRANSITION TO 12"ø FLEX DUCT PRIOR TO AIR DEVICE,
- 605 TO 900 C.F.M. SHALL BE 14"ø RIGID STEEL DUCT AND TRANSITION TO 14"ø FLEX DUCT PRIOR TO AIR DEVICE,
- ALL ELSE SHALL BE 22X10 AND TRANSITION TO 22X22, UNLESS OTHERWISE NOTED,
- MINIMUM LENGTH OF FLEX SHALL BE 6'-0" TO MAXIMUM LENGTH OF 10'-0".

⑥ PROVIDE MANUFACTURER'S SPECIFIED SQUARE TO ROUND DUCT TRANSITION.

⑦ PROVIDE WITH SHEET METAL PLENUM 12" DEEP X FACE DIMENSION FOR TRANSITION OF LOUVER TO DUCT. REFER TO MECHANICAL DETAILS FOR MORE INFORMATION.

## AHU-1 VAV UNIT SCHEDULE

**(PROVIDE WITH DOOR INTERLOCKING FUSED DISCONNECT)**

| MARK | MANUFACTURER AND MODEL | AIRFLOW COOLING MODE MAX. | AIRFLOW COOLING MODE MIN. | AIRFLOW HEAT/ REHEAT MODE MAX. | AIRFLOW HEAT/ REHEAT MODE MIN. | ELECTRIC HEATING COIL (KW) | VOLTAGE (V/ø/HZ) | NUMBER OF HEATING STAGES | MAXIMUM PRESSURE DROP (INCHES H20) | MAXIMUM N.C. LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|
| VAV-1-1 | TRANE- VCCF- 8 | 585 | 180 | 180 | 180 | N/A | COOLING ONLY | N/A | 0.08 | 31 |
| VAV-1-2 | TRANE- VCCF- 4 | 75 | 25 | 25 | 25 | N/A | COOLING ONLY | N/A | 0.01 | 35 |
| VAV-1-3 | TRANE- VCCF- 5 | 240 | 75 | 75 | 75 | N/A | COOLING ONLY | N/A | 0.02 | 31 |
| VAV-1-4 | TRANE- VCCF- 5 | 260 | 80 | 80 | 80 | N/A | COOLING ONLY | N/A | 0.02 | 31 |
| VAV-1-5 | TRANE- VCCF- 5 | 240 | 75 | 75 | 75 | N/A | COOLING ONLY | N/A | 0.02 | 31 |
| VAV-1-6 | TRANE- VCCF- 6 | 355 | 110 | 110 | 110 | N/A | COOLING ONLY | N/A | 0.22 | 31 |
| VAV-1-7 | TRANE- VCCF- 4 | 180 | 55 | 55 | 55 | N/A | COOLING ONLY | N/A | 0.01 | 35 |
| VAV-1-8 | TRANE- VCCF- 10 | 910 | 320 | 320 | 320 | N/A | COOLING ONLY | N/A | 0.01 | 29 |
| VAV-1-9 | TRANE- VCCF- 5 | 325 | 100 | 100 | 100 | N/A | COOLING ONLY | N/A | 0.02 | 31 |
| **AHU-1 VAV UNIT SUBTOTALS** | | 3,170 | 1,020 | 1,020 | 1,020 | 0.0 | | | | |

VAV SCHEDULE NOTES:

1. PROVIDE ALL VAV UNITS WITH ELECTRIC HEAT AND DIGITAL SCR CONTROLS (UNLESS VAV IS SELECTED AS A "COOLING ONLY" UNIT). ALL HEATERS SHALL BE CONTROLLED THROUGH INTEGRAL DRY TYPE CONTACTORS AND STAGE CONTROL.
2. VAV UNITS SCHEDULED AS "COOLING ONLY" SHALL NOT INCLUDE INTEGRAL CONTROL TRANSFORMER. CONTRACTOR SHALL PROVIDE CENTRAL TRANSFORMERS FOR EACH ZONE, LOCATED IN A NEARBY MECHANICAL ROOM AND PROVIDE LOW VOLTAGE CABLING DISTRIBUTED TO EACH "COOLING ONLY" VAV BOX IN THAT ZONE. CONCEAL CABLING ABOVE THE CEILING ROUTED ON J-HOOKS, ETC.
3. PROVIDE ALL VAV UNITS REQUIRING POWER WITH DOOR INTERLOCKING FUSED DISCONNECT SWITCHES.
4. PROVIDE A SHOP DRAWING SUBMITTAL OF ALL ROOM TEMPERATURE SENSOR LOCATIONS AS COORDINATED WITH FURNITURE PLANS, ALL OTHER WALL MOUNTED DEVICES OF OTHER TRADES PRIOR TO INSTALLATION. LOCATE ALL ADJUSTABLE TEMPERATURE TYPE WALL SENSORS IN ACCORDANCE WITH THE FRONT REACH HEIGHT ACCESSIBLE REQUIREMENT (42"AFF). ALL CORRIDOR AND COMMON AREA SENSORS SHALL BE PLATE TYPE NON-ADJUSTABLE VANDAL RESISTANT TYPE.

## VAV BRANCH DUCT SIZES

| BOX SIZE | INLET SIZE ① | IF EXCEEDING 10'② | OUTLET SIZE① |
|---|---|---|---|
| 4 | 4"ø | 6"ø | 10X8 |
| 5 | 5"ø | 8"ø | 10X8 |
| 6 | 6"ø | 8"ø | 10X8 |
| 8 | 8"ø | 10"ø | 11X10 |
| 10 | 10"ø | 12"ø | 14X12 |
| 12 | 12"ø | 16X12 | 17X14 |
| 14 | 14"ø | 20X14 | 19X18 |
| 16 | 16"ø | 22X16 | 23X18 |

KEYED NOTES:

① BRANCH DUCT SIZES FOR VAV UNITS SHALL FOLLOW THE SCHEDULE ABOVE.

② BRANCH DUCT RUNS EXCEEDING 10' TO THE INLET OF THE VAV SHALL BE THE SIZE LISTED. REDUCE DUCT TO INLET SIZE OF VAV ONE AND A HALF (1.5) DUCT DIAMETERS PRIOR TO INLET.

## ELECTRIC DUCT HEATER SCHEDULE

| MARK | – | EDH-1 | EDH-2 |
|---|---|---|---|
| MANUFACTURER | – | WARREN | WARREN |
| MODEL NUMBER | – | CBK | CBK |
| DUCT SIZE | INCHES | SEE PLANS | SEE PLANS |
| AIRFLOW | CFM | 3,130 | 305 |
| HEATER SIZE/STAGES | K.W./STAGES | 24/ 2 | 5/ 1 |
| ELECTRICAL CHARACTERISTICS | V/ø/HZ | 208/3/60 | 208/3/60 |
| CONTROLS | – | INTERLOCK W/AHU | INTERLOCK W/OAU |
| NOTES | – | ① ② ③ | ① ② ③ |

KEYED NOTES:

① ELECTRIC DUCT HEATER SHALL BE SUPPLIED WITH FACTORY FUSED DISCONNECT SWITCH (DOOR INTERLOCK TYPE), FLOW SWITCH, CONTROL BOX WITH INDICATOR LIGHTS, FUSED CONTROL VOLTAGE TRANSFORMER, AND SCR CONTROLS. PROVIDE WITH FACTORY INSULATED CONTROL PANEL.

② REFER TO FLOOR PLANS FOR LOCATIONS. COORDINATE WITH ACTUAL DUCT SIZE FOR DIMENSION OF ELECTRIC DUCT HEATER.

③ REFER TO CONTROLS FOR DUCT HEATER CONTROL SCHEMATICS AND LOGIC DIAGRAMS.

## GRAVITY VENT SCHEDULE

| MARK | – | GV-1 |
|---|---|---|
| QUANTITY | – | 1 |
| MANUFACTURER | – | GREENHECK |
| MODEL NUMBER | – | FGR |
| THROAT DIMENSIONS (LxW) | IN.xIN. | 10X8 |
| SIZE (LxWxH) | IN.xIN.xIN. | 24X18X14 |
| AIRFLOW | CFM | 305 |
| STATIC PRESSURE DROP | IN. H20 | 0.042 |
| SERVICE | – | EXHAUST |

GENERAL NOTES:

1. PROVIDE WITH FACTORY SUPPLIED ROOF CURB TO MATCH SLOPE OF ROOF AND RATING OF VENT.
2. PROVIDE WITH BIRD SCREEN AND BACK DRAFT DAMPER.
3. SHALL BE RATED TO MEET PROJECT WIND LOAD REQUIREMENTS.

## VENTILATION SCHEDULE

| | PEOPLE AND AREA | | | EXHAUST AND PRESSURIZATION | | | DESIGN | |
|---|---|---|---|---|---|---|---|---|
| MARK | NUMBER OF PEOPLE | TOTAL AREA (SQFT) | PEOPLE + AREA OUTDOOR (CFM) ① | EXHAUST AIR (CFM) | PRESSURE AIR (CFM) | EXHAUST + PRESS AIR (CFM) | OUTDOOR AIR INTAKE (CFM) | RELIEF AIR (CFM) |
| AHU-1 | 29 | 3,515 | 660 | 450 | 180 | 630 | 660 | 30 |
| OAU-1 | 0 | 335 | 305 | 0 | 0 | 0 | 305 | 305 |

KEYED NOTES:

① OUTDOOR AIR CALCULATION BASED ON 2023 FLORIDA BUILDING CODE – MECHANICAL, 8TH EDITION TABLE 403.3. VALUE LISTED IN TABLE IS THE CORRECTED O/A VALUE.


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601 E KENNEDY BLVD
TAMPA FL 33601

PROJECT ADDRESS:
10508 MAIN ST.
THONOTOSASSA, FL 33592

HILLSBOROUGH COUNTY
THONOTOSASSA FIRE STATION NO. 21
REPLACEMENT

| PROJECT #: 2216-05 | |
|---|---|
| DISTRIBUTION | DATE |
| DD SET | 06.06.2024 |
| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

MECHANICAL SCHEDULES

M4.1

## AIR COOLED CHILLER SCHEDULE

| | | |
|---|---|---|
| MARK | – | CH–1 |
| MANUFACTURER | – | TRANE |
| MODEL NUMBER | – | TPACWV0150D4–MM |
| CAPACITY | TONS | 15 |
| CHILLED WATER FLOW RATE | GPM | 22.77 |
| CHILLED WATER MINIMUM/MAXUMUM FLOW RATE | GPM/GPM | – |
| CHILLED WATER TERMPERATURE (ENT./LVG.) | °F/°F | 56/42 |
| EVAPORATOR MAXIMUM PRESSURE DROP | FT. H2O | 3.75 |
| AMBIENT AIR TEMPERATURE (DRY BULB) | °F | 95 |
| REFRIGERANT TYPE | – | R454B |
| NO. OF COMPRESSORS | – | 2 |
| NO. OF CONDENSER FANS | – | 2 |
| ELECTRICAL CHARACTERISTICS | V/ø/HZ | 208/3/60 |
| MIN. CIRCUIT AMAPCITY | AMPS | 85.87 |
| IPLV | BTUH/W | – |
| UNIT EFFICIENCY (FULL LOAD CONDITIONS) | E.E.R. | 10.246 |
| DIMENSIONS (LxWxH) | IN. | 76X33X76 |
| OPERATING WEIGHT | LBS. | 2,000 |
| LOCATION | – | CHILLER YARD |
| NOTES | – | ① THRU ⑦ |

NOTES:

① CHILLER SHALL INCLUDE SOUND REDUCTION PACKAGE, INCLUDING ULTRA QUIET FANS, COMPRESSOR BLANKETS, VARIABLE SPEED CONTROL, AND VARIABLE SPEED DRIVE ON LEAD COMPRESSOR. REFER TO SPECIFICATIONS FOR MORE INFORMATION.

② CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ANY CHANGES REQUIRED DUE TO DEVIATION FROM THE ABOVE SCHEDULED DATA SUCH AS ELECTRICAL REQUIREMENTS, OPERATING CLEARANCES, WEIGHT, FLOW RATES, PRESSURE DROPS, ETC.

③ SUBSTITUTE MANUFACTURER SHALL CONFIRM THAT CLEARANCES AND YARD DIMENSIONS SHOWN ON THE FLOOR PLANS ARE APPROPRIATE FOR THE PROPOSED CHILLER. SHOULD MODIFICATION TO THE CHILLER YARD DIMENSIONS BE REQUIRED FOR PROPER OPERATING AND WORKING CLEARANCES, ALL COSTS ASSOCIATED WITH SUCH CHANGES SHALL BE BORNE BY THE MANUFACTURER.

④ PROVIDE WITH SINGLE POINT POWER SUPPLY AND INTEGRAL DISCONNECTING MEANS WITH LOCKABLE, EXTERNAL DOOR HANDLE OPERATOR.

⑤ PROVIDE WITH HEAT TAPE.

⑥ PROVIDE THE FOLLOWING MINIMUM DDC HARDWARE INTERFACES AS A PART OF THE MACHINE CONTROL PANEL:

| | |
|---|---|
| START/STOP | DC BINARY OUTPUT |
| OFF–LINE / RUNNING | DDC BINARY INPUT |
| NORMAL / FAILURE | DDC BINARY INPUT |
| LEAVING CHILLED WATER SETPOINT | DDC ANALOG OUTPUT |

⑦ PROVIDE CORROSION RESISTANT COATING FOR CONDENSER COILS (TUBES AND FINS) AND EXPOSED CABINETRY. CORROSION RESISTANT COATING SHALL:
- A. BE FACTORY OR FIELD APPLIED;
- B. RESULT IN LESS THAN A 1% LOSS OF RATED HEAT TRANSFER CAPACITY;
- C. BE RESISTANT TO MATERIALS WITH A PH RANGE FROM 3 TO 11;
- D. HAVE A SALT SPRAY TEST RATING OF AT LEAST 5,000 HOURS;
- E. BE NON–FLAMMABLE.
- F. ACCEPTABLE COATINGS:
  1. ADSIL
  2. ELECTROFIN
  3. BRONZ–GLOW

## PUMP SCHEDULE

| | | |
|---|---|---|
| MARK | – | CHP–1<br>CHP–2 (STAND–BY) |
| MANUFACTURER | – | BELL & GOSSETT |
| TYPE | – | CLOSE COUPLED END SUCTION |
| MODEL | | E–1531 1.25AD |
| SERIES | – | E–1531 |
| TOTAL PUMP DIMENSIONS (LxWxH) | IN.xIN.xIN. | 18.88X12.75X9.74 |
| WATER FLOW RATE | GPM | 22.8 |
| TOTAL DYNAMIC HEAD | FT. H2O | 54.37 |
| MOTOR SIZE | HP | 2 |
| MOTOR SPEED | RPM | 1,750 |
| MOTOR TYPE | – | – |
| BASE TYPE | – | SOLID STEEL |
| MINIMUM PUMP EFFICIENCY | % | 46.1 |
| MINIMUM MOTOR EFFICIECY | % | REFER TO SPEC. SECT. 23–05–13 |
| SUCTION DIAMETER | IN. | 1.5 |
| DISCHARGE DIAMETER | IN. | 1.25 |
| IMPELLER DIAMETER | IN. | 7 |
| ELECTRICAL CHARACTERISTICS | V/ø/HZ | 208/3/60 |
| WEIGHT | LBS. | 168 |
| LOCATION | – | CHILLER YARD |

PUMP SCHEDULE NOTES:

1. CONTRACTOR SHALL PROVIDE PROVISIONS FOR REMOVAL OF PUMP IMPELLER AND RETURNING IMPELLER TO PUMP MANUFACTURER FOR SHAVING PURPOSES. CONTRACTOR SHALL BE RESPONSIBLE FOR REINSTALLATION OF PUMP IMPELLER AND BRINGING PUMP BACK ON LINE.
2. PROVIDE WITH VFD COMPATIBLE MOTOR, INVERTER DUTY RATED AND LABELED.

## AIR CURTAIN SCHEDULE

| | | |
|---|---|---|
| MARK | – | CF–1 |
| MANUFACTURER | – | BERNER |
| MODEL NUMBER | – | AI08–E–1036A |
| AIRFLOW | CFM | 989 |
| MAX. VELOCITY @ NOZZLE | FPM | 1,758 |
| OUTLET VELOCITY UNIFORMITY | % | 85 |
| MOTOR | – | 1 @ 1/15 HP |
| ELECTRICAL | – | 120/1/60 |
| F.L.A. | AMPS | 1.75 |
| DIMENSIONS (WxDxH) | IN.xIN.xIN. | 38.13X16X8.25 |
| WEIGHT | LBS. | 48 |

## FAN SCHEDULE

| | | | | |
|---|---|---|---|---|
| MARK | – | EF–1–1 | EF–2–1 | EF–3–1 |
| MANUFACTURER | – | GREENHECK | GREENHECK | GREENHECK |
| MODEL NUMBER | – | CSP–A780 | SP–A900 | SBE–3H36 |
| AIRFLOW | CFM | 450 | 305 | 8,560 |
| EXT. STATIC PRESSURE | IN. H2O | 0.84 | 0.59 | 0.75 |
| FAN TYPE | – | FORWARD CURVED | FORWARD CURVED | PROPELLER |
| DRIVE TYPE | – | DIRECT | DIRECT | BELT |
| MAXIMUM GENERATED NOISE | SONES | 2.5 | 3.5 | 35.0 |
| FAN SPEED | RPM | 1,425 | 845 | 925 |
| MOTOR SIZE | – | 269 W | 301 W | 3 HP |
| CONTROLS | – | INTERLOCK W/ TWIST TIMER (ADJ.) | INTERLOCK W/ OAU–1 | WALL SWITCH |
| LOCATION | – | ABOVE CEILING | ABOVE CEILING | IN APPARATUS BAY WALL |
| ELECTRICAL CHARACTERISTICS | V/ø/HZ | 115/1/60 | 115/1/60 | 208/3/60 |
| NOTES | – | ①②③④ | ①②③④ | ⑤⑥ |

KEYED NOTES

① PROVIDE FLEXIBLE CONNECTORS AT ALL DUCT CONNECTIONS TO FAN.

② PROVIDE FAN WITH GRAVITY BACKDRAFT DAMPER. REFER TO STANDARD MECHANICAL DETAILS FOR FURTHER INFORMATION.

③ PROVIDE WITH FACTORY MOUNTED DISCONNECT SWITCH.

④ PROVIDE FAN WITH SPEED CONTROLLER. MOUNT SPEED CONTROLLER IN 2X4 METALLIC BOX ADJACENT TO FAN IN CEILING. TEST AND BALANCE CONTRACTORS SHALL ADJUST FAN PERFORMANCE THROUGH USE OF SPEED CONTROLLER.

⑤ PROVIDE DISCONNECT SWITCH ADJACENT TO ACCESS DOOR. REFER TO MECHANICAL DETAILS FOR FAN INSTALLATION.

⑥ TEST AND BALANCE CONTRACTOR SHALL DETERMINE THE TIME DURATION NECESSARY TO COMPLETE THREE AIR CHANGES AND SET THE FAN TIMER ACCORDINGLY.

## PRECHARGED EXPANSION TANK SCHEDULE

| MARK | MANUFACTURER | MODEL | TOTAL VOLUME | ACCEPTANCE VOLUME | LOCATION | DIAMETER | HEIGHT | APPROX. SHIPPING WEIGHT |
|---|---|---|---|---|---|---|---|---|
| ET–1 | AMTROL | AX–15V–DD | 8.6 GAL | 3.2 GAL | CHILLER YARD | 12 IN. | 22 IN. | 24 LBS |

NOTES:

1. ASME RATED TO 125 PSIG.

## CHILLED WATER BUFFER TANK

| MARK | MANUFACTURER | MODEL NO. | TOTAL VOLUME | LOCATION | DIAMETER | HEIGHT | INSULATION |
|---|---|---|---|---|---|---|---|
| BT–1 | AMTROL | CWBT300–4–150 | 300 GAL. | CHILLER YARD | 36 IN. | 81 IN. | FIELD INSTALLED |

NOTES:

1. ASME RATED TO 150 PSIG.
2. REFER TO MECHANICAL DETAILS FOR INSTALLATION DETAILS.
3. BUFFER TANK SHALL NOT INCLUDE STANDARD FACTORY APPLIED INSULATION, TANK SHALL BE FIELD INSULATED PER MECHANICAL SPECIFICATIONS. REFER TO MECHANICAL DETAILS FOR MORE INFORMATION.

## AIR SEPARATOR SCHEDULE

| MARK | MANUFACTURER | MODEL | APPROXIMATE WET WEIGHT | LOCATION |
|---|---|---|---|---|
| AS–1 | AMTROL | 2–AS(L) | 100 LBS | CHILLER YARD |

NOTES:

1. ASME RATED TO 125 PSIG.

## HIGH VOLUME LOW SPEED FAN SCHEDULE

| | | |
|---|---|---|
| MARK | – | F–1 |
| MANUFACTURER | – | BIG ASS FAN |
| MODEL NUMBER | – | ESSENCE |
| FAN DIAMETER | FT. | 10 |
| FAN TYPE | – | AIRFOIL |
| DRIVE TYPE | – | GEARLESS DIRECT DRIVE |
| MAXIMUM GENERATED NOISE AT 20 FT DISTANCE | DBA | < 35 |
| MAXIMUM FAN SPEED | RPM | 107 |
| MOTOR SIZE | AMPS | 5.3 |
| WEIGHT | LBS | 81 |
| CONTROLS | – | FLUSH MOUTNED WALL SWITCH |
| LOCATION (OUTDOOR) | – | APPARATUS BAY |
| ELECTRICAL CHARACTERISTICS | V/ø/HZ | 120/1/60 |
| NOTES | – | ①②③④⑤ |

KEYED NOTES:

① PROVIDE EXTENSION TUBE AND MOUNTING BRACKET. COORDINATE STRUCTURAL REQUIREMENTS FOR FASTENING OF BRACKET TO BUILDING STRUCTURE WITH STRUCTURAL ENGINEER.

② PROVIDE WALL MOUNTED, VARIABLE SPEED, CONTROL SWITCH AS MFG. BY BIG ASS FANS. FANS SHALL BE SUITABLE FOR OUTDOOR LOCATIONS.

③ PROVIDE FIRE ALARM RELAY FOR FAN SHUTDOWN UPON WATERFLOW SIGNAL FROM FIRE ALARM SYSTEM.

④ MAINTAIN ALL MANUFACTURER REQUIRED CLEARANCES, INCLUDING BUT NOT LIMITED TO: BOTTOM OF FAN SHALL BE AT LEAST 10' AFF; NO OBSTRUCTIONS SHALL BE WITHIN 2' OF FAN IN ALL DIRECTIONS; DO NOT MOUNT FAN WITHIN TWO FAN DIAMETERS OF ANY LARGE AIR MOVING EQUIPMENT; MAINTAIN MINIMUM 3' VERTICAL CLEARANCE FROM FAN TO SPRINKLER DEFLECTOR, CENTER FAN BETWEEN FOUR ADJACENT SPRINKLERS.

⑤ COORDINATE COLOR WITH OWNER/ARCHITECT.

## KITCHEN HOOD SUPPLY AND EXHAUST AIR UNIT SHEDULE

| | | |
|---|---|---|
| **GENERAL** | | |
| MARK | – | KH–1 |
| MANUFACTURER | – | GREENHECK |
| MODEL | – | GHEW–48.00–S |
| DIMENSIONS (LXWXH) | IN.xIN.xIN. | 48X39X24 |
| ELECTRICAL CHARACTERISTICS | V/ø/HZ | 120/1/60 |
| **KITCHEN HOOD EXHAUST REQUIREMENTS** | | |
| MARK | – | KHEF–1 |
| TOTAL EXHAUST AIR QUALITY | CFM | 790 |
| STATIC PRESSURE DROP (EXTERNAL) | IN. H2O | 1.02 |
| FAN TYPE | – | BI |
| FAN SPEED | RPM | 1,468 |
| MODEL | – | CUBE–140HP–3 |
| MOTOR SIZE | HP | 1/3 |
| **KITCHEN HOOD SUPPLY REQUIREMENTS** | | |
| MARK | – | KHSF–1 |
| TOTAL SUPPLY AIR QUALITY | CFM | 665 |
| STATIC PRESSURE DROP (EXTERNAL) | INCHES W.C. | 0.96 |
| FAN TYPE | – | FC |
| FAN SPEED | RPM | 1,086 |
| MODEL | – | CSP–A1750 |
| MOTOR SIZE | W | 1,153 |
| NOTES | | ① THRU ⑧ |

KEYED NOTE:

① PROVIDE WITH FIRE SUPPRESSION SYSTEM, AUTOMATIC MECHANICALLY LINKED GAS SHUT–OFF VALVE, ALUMINUM GREASE FILTERS, INCANDESCENT LIGHTS, AND REMOTE S.S. FLUSH MOUNTED SWITCH BANK FOR CONTROL OF HOOD AND LIGHTS. HOOD CONSTRUCTED OF MINIMUM 18 GAUGE STAINLESS STEEL, BOTH SUPPLY AND EXHAUST. PROVIDE FACTORY PRE–FABRICATED S.S. CABINET TO HOUSE FIRE SUPPRESSION TANK.

② INTERLOCK SUPPLY AND EXHAUST FANS TO RUN WITH HOOD SWITCH. INTERLOCK CONTROLS SO THAT WHEN FIRE SUPPRESSION SYSTEM ALARMS, EXHAUST FAN SHALL CONTINUE TO RUN, BUT SUPPLY FAN SHALL TURN OFF. REFER TO FIRE SUPPRESSION SYSTEM FOR EXACT SEQUENCE OF OPERATION REQUIREMENTS. PROVIDE TESTING AND CERTIFICATION IN ACCORDANCE WITH NFPA 96, AND UL LISTING.

③ PROVIDE EXHAUST FAN, CURB, STRAPPING, & ANCHORING ASSEMBLY PER MANUFACTURER'S REQUIREMENTS, TO MEET THE PROJECT WIND LOAD RATING. ADHERE TO ALL MANUFACTURER'S SPECIFICATIONS FOR ROOF TYPE WHEN MOUNTING ROOF CURB. PROVIDE WITH FACTORY SUPPLIED ROOF CURB TO MATCH SLOPE OF ROOF AND RATING. EXHAUST FAN SHALL BE UL LISTED FOR GREASE AND HIGH TEMPERATURE APPLICATIONS.

④ EXHAUST FAN COMPONENTS SHALL BE BOLTED TOGETHER (NOT RIVETED) FOR EASE OF MOTOR MAINTENANCE. FAN SHALL BE HINGED TO ROOF CURB.

⑤ PROVIDE SUPPLY AND EXHAUST FANS WITH FACTORY MOUNTED DISCONNECT SWITCH.

⑥ PROVIDE FRONT AND END PANEL ENCLOSURES EXTENDING FROM HOOD TO CEILING.

⑦ PROVIDE HOOD TEMPERATURE SENSOR AND INTERLOCK WITH HOOD SUPPLY/EXHAUST FANS. FANS SHALL AUTOMATICALLY START WITHIN 15 MINUTES AFTER THE APPLIANCE SERVED BY THE HOOD HAS BEEN TURNED ON, IN ACCORDANCE WITH 2023 FBC–MECHANICAL, SECTION 507.1.1

⑧ PROVIDE FACTORY–INSTALLED ZERO CLEARANCE TOP, CONSISTING OF 1" HIGH–TEMPERATURE INSULATION INSIDE THE STANDING SEAM HOOD, THAT IS UL LISTED TO PROVIDE ZERO CLEARANCE TO COMBUSTIBLE SURFACES ADJACENT TO THE TOP OF THE HOOD.

## DEHUMIDIFICATION UNIT SCHEDULE

| | | |
|---|---|---|
| MARK | – | DH–1 |
| MANUFACTURER | – | QUEST |
| MODEL | – | 155 DUAL |
| POUNDS PER DAY WATER REMOVAL | LBS. | 161.2 |
| INLET AIR TEMPERATURE | °F | 80.0 |
| INLET RELATIVE HUMIDITY | % | 60 |
| SUPPLY AIR QUANTITY | CFM | 360 |
| EXT. STATIC PRESSURE | IN. W.C. | 0.20 |
| ELECTRICAL | V/ø/HZ | 120/1/60 |
| FLA | AMPS | 8.0 |
| FILTER | – | 2" MERV 11 |
| WEIGHT | LBS. | 140 |
| DIMENSIONS (HxWxL) | IN.xIN.x.IN. | 22x20x38 |
| NOTES: | – | ①②③④ |

KEYED NOTE:

① PROVIDE WITH WALL SENSOR AND CONTROLS. PROVIDE WITH FACTORY SUPPLIED TEMPERATURE SENSOR AND HUMIDITY SENSOR. PROVIDE WITH AUXILIARY DRAIN PAN WHICH EXTENDS 6" BEYOND PERIMETER OF UNIT ALL AROUND, INCLUDE FLOAT SWITCH TO SHUT DOWN UPON PRESENCE OF WATER.

② PROVIDE WITH SINGLE POINT POWER CONNECTION. REFER TO FLOOR PLANS FOR NUMBER OF UNITS.

③ A SPARE SET OF FILTERS SHALL BE DELIVERED TO THE DIRECTOR OF CONSTRUCTION SERVICES UPON COMPLETION OF THE PROJECT.

④ UNIT SHALL BE SUSPENDED FROM STRUCTURE BELOW CEILING. REFER TO "DEHUMIDIFICATION UNIT DETAIL" ON SHEET M3.2.


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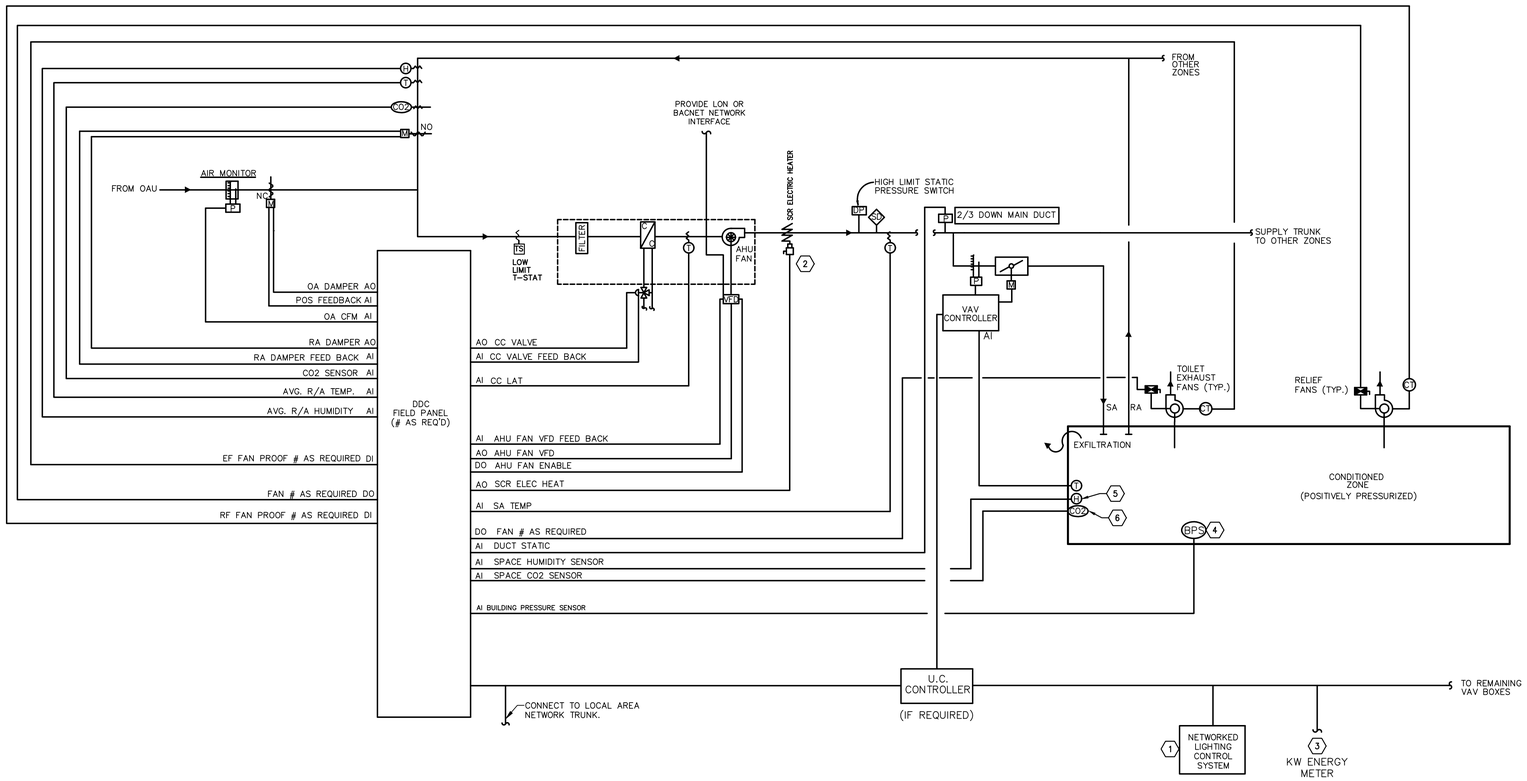
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REPLACEMENT

PROJECT #: 2216-05

| DISTRIBUTION | DATE |
|---|---|
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| 90% CD | 08.30.2024 |
| PERMIT SET | 11.14.2024 |

MECHANICAL SCHEDULES

M4.2



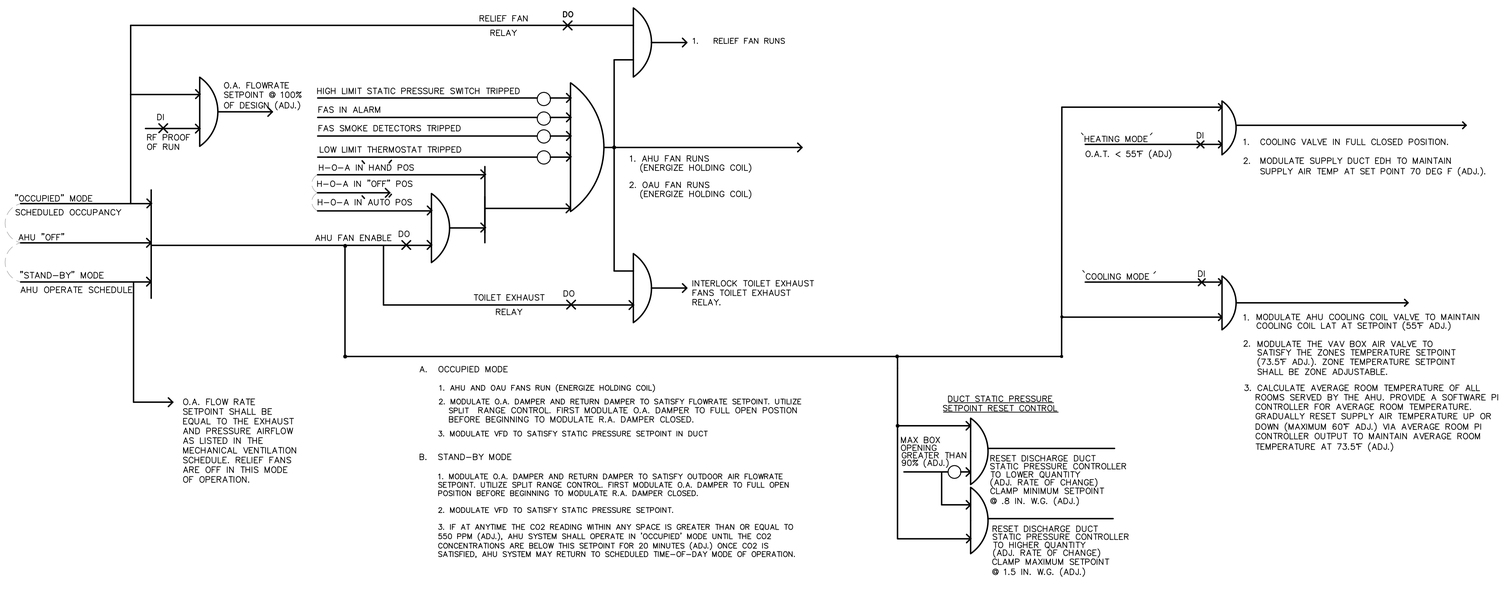

## GENERAL NOTES

1. CONTROLS CONTRACTOR SHALL PROVIDE PROGRAMMING AND CONTROL EQUIPMENT FOR A COMPLETE OPERATIONAL SYSTEM FOR ALL OF THIS PHASE EQUIPMENT. THIS SHALL INCLUDE BUT NOT BE LIMITED TO VFDS, CONTROL VALVES, SENSORS, ACTUATORS, ETC.
2. ALL WATER WETTED TEMPERATURE SENSORS SHALL BE 100 OHM PLATINUM RTD TYPES.
3. ALL SCR ELECTRIC HEAT SHALL USE PWM FOR MODULATION.
4. AHU AND VAV BOX APPLICATION SPECIFIC UNITARY CONTROLLERS SHALL BE DROP SHIPPED TO AHU/VAV MANUFACTURER FOR FACTORY MOUNTING AND TESTING. SEE SPECIFICATIONS.
5. COORDINATE ROOM SENSOR LOCATIONS WITH FURNITURE AND EQUIPMENT PLANS PRIOR TO ROUGH-IN.

## KEYED NOTES

1. PROVIDE BACNET MS/TP INTERFACE TO COMMUNICATE WITH DLM INDOOR LIGHTING CONTROLLER. VAV BOX SEQUENCE OF OPERATIONS SHALL BE CAPABLE OF HAVING SET POINT ADJUSTED DURING PERIODS IN WHICH ALL ROOMS SERVICED BY AN INDIVIDUAL VAV BOX ARE EXPERIENCING UNOCCUPIED CONDITION SIMULTANEOUSLY (AS DETERMINED BY OCCUPANCY SENSORS).
2. PROVIDE SCR COMPATIBLE CONTROL SIGNAL.
3. CONTROLS CONTRACTOR SHALL PROVIDE KW ENERGY METER WITH INPUT INTO EMS. KWH METER SHALL BE PROVIDED AT SERVICE ENTRANCE CONDUCTORS TO BUILDING. COORDINATE WITH ELECTRICAL CONTRACTOR FOR INSTALLATION OF METER. REFER TO SPECIFICATIONS FOR METER REQUIREMENTS.

   THE INTENT IS THAT ALL ELECTRIC UTILITY POWER SERVING THE COMPLEX SHALL BE METERED. PROVIDE BACNET MS/TP TRUNK INTERFACED METERS.
4. PROVIDE BUILDING PRESSURIZATION SENSOR FOR THE BUILDING. REFER TO SPECIFICATIONS FOR SENSOR TYPE. POSITIVE BUILDING PRESSURE SETPOINT SHALL BE SET BASED ON THE TEST & BALANCE CONTRACTORS REPORT.
5. PROVIDE ONE COMBINATION TEMPERATURE-RELATIVE HUMIDITY SENSORS FOR EVERY AHU. SENSOR SHALL BE LOCATED IN THE LARGEST OPEN PLAN AREA MOST REPRESENTATIVE OF THE SPACE TYPE SERVED BY ITS ASSOCIATED AHU.
6. PROVIDE CO2 SENSOR IN LARGE CONFERENCE/MEETING ROOMS.




## SINGLE PATH VARIABLE VOLUME AHU - CONTROL SCHEMATIC AND LOGIC DIAGRAM

SCALE: NONE TYP.

*FIELD PANELS SHALL BE INSTALLED ON AIR HANDLING UNITS AS COORDINATED WITH MECHANICAL ROOM CONFIGURATION FOR CLEARANCES.


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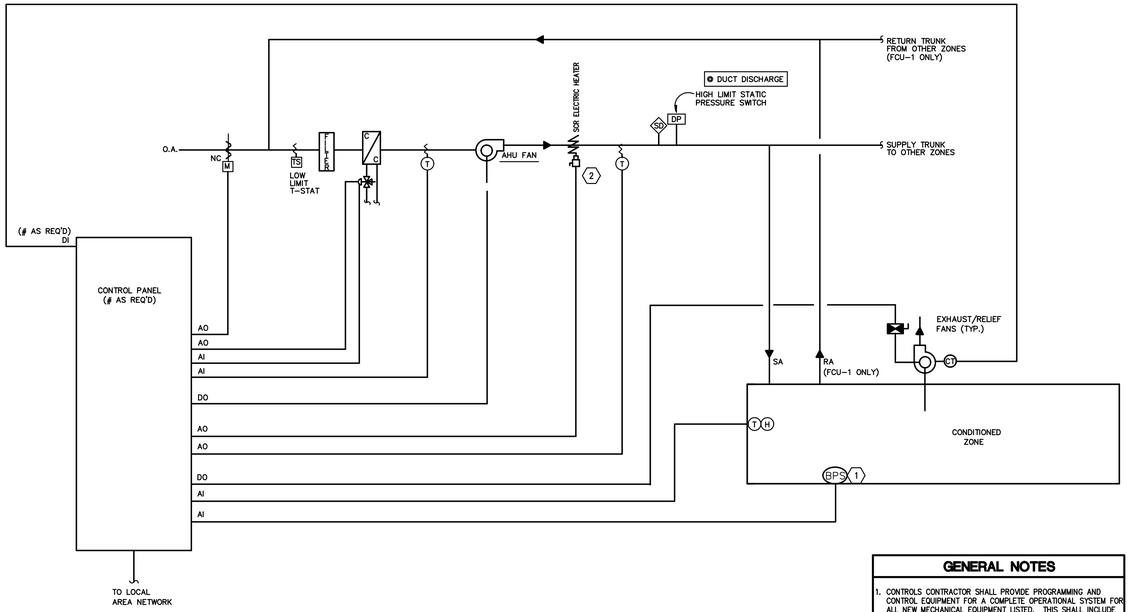
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MECHANICAL
CONTROLS

M5.1

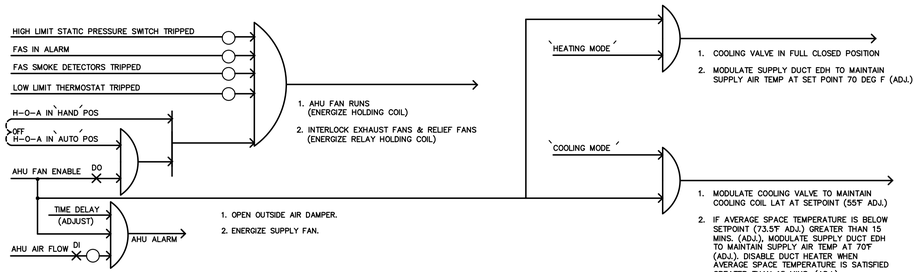



## GENERAL NOTES

1. CONTROLS CONTRACTOR SHALL PROVIDE PROGRAMMING AND CONTROL EQUIPMENT FOR A COMPLETE OPERATIONAL SYSTEM FOR ALL NEW MECHANICAL EQUIPMENT LISTED. THIS SHALL INCLUDE BUT NOT BE LIMITED TO VFDS, CONTROL VALVES, SENSORS, ACTUATORS, ETC.

## KEYED NOTES

1. PROVIDE BUILDING PRESSURIZATION SENSOR FOR THE BUILDING. BUILDING PRESSURE SENSOR SHALL CONSIST OF INDOOR PRESSURE SENSOR SHALL CONSIST OF INDOOR PRESSURE SENSOR WITH LCD DISPLAY. INDOOR SENSOR SHALL BE BAPI-BOX WITH ATTACHED STATIC TUBE AND BOTTOM PORT CONNECTIONS. BUILDING PRESSURE SENSOR SHALL ALSO CONSIST OF OUTDOOR STATIC PRESSURE PICKUP PORT WITH EXTERIOR POLYTUBING INSTALLED IN EMT CONDUIT. PRESSURE PICKUP PORT SHALL BE BAPI MODEL ZPS-ACC10. POSITIVE BUILDING PRESSURE SETPOINT SHALL BE SET BASED ON THE TEST AND BALANCE CONTRACTORS REPORT.
2. PROVIDE SCR COMPATIBLE CONTROL SIGNAL.



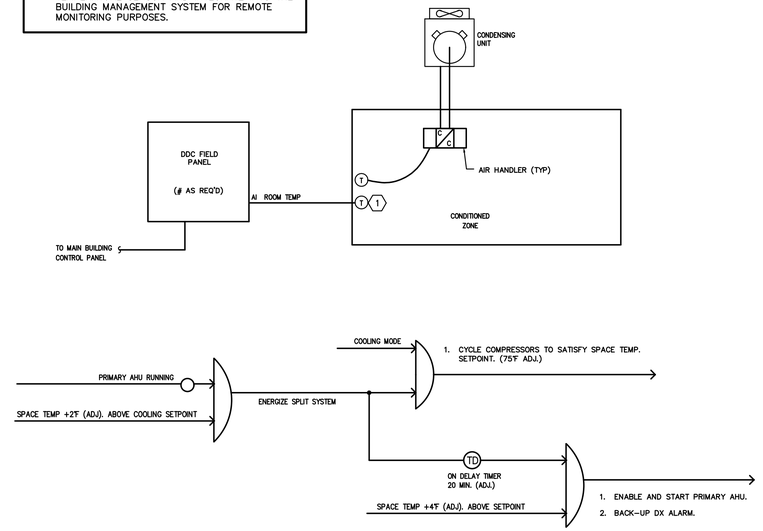

## CONSTANT VOLUME AIR HANDLING UNIT - CONTROL SCHEMATIC AND LOGIC DIAGRAM

SCALE: NONE — TYP. OF OAU-1, FCU-1

UNIT CONTROLLER SHALL BE INSTALLED ON AIR HANDLING UNITS AS COORDINATED

## KEYED NOTES

1. CONTROLS CONTRACTOR SHALL PROVIDE SPACE TEMPERATURE SENSOR AND INTEGRATE INTO THE BUILDING MANAGEMENT SYSTEM FOR REMOTE MONITORING PURPOSES.




## BACK-UP DX SPLIT SYSTEM UNIT - CONTROL SCHEMATIC AND LOGIC DIAGRAM

SCALE: NONE — TYPICAL


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EMI Job No. 22-0480 Drawn By: CJM Checked By: JSW

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# HILLSBOROUGH COUNTY THONOTOSASSA FIRE STATION NO. 21 REPLACEMENT

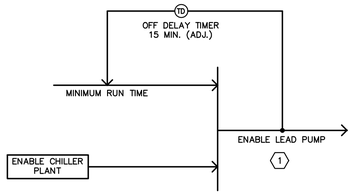
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MECHANICAL CONTROLS

M5.2

A

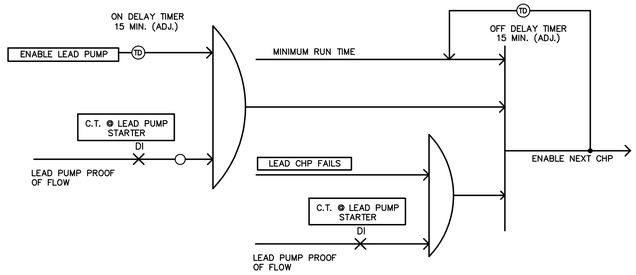



## CHILLED WATER PUMP LEAD ENABLE LOGIC
SCALE: NONE

NOTE:

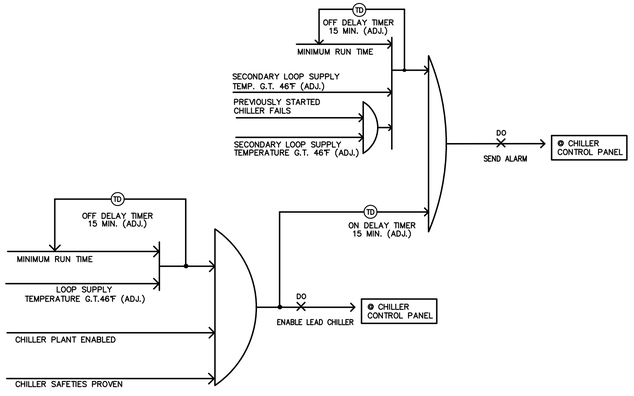
1. THE LEAD CHP SHALL BE AS DETERMINED BY THE OPERATOR THROUGH A SOFTWARE SWITCH ON THE OVERALL GRAPHIC SCREEN.

B



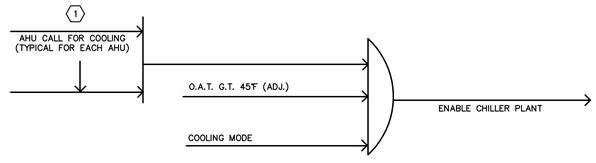

## CHILLED WATER PUMP LAG CHP ENABLE LOGIC
SCALE: NONE

C




## AIR COOLED CHILLER START LOGIC
SCALE: NONE

D




## CHILLER PLANT ENABLE LOGIC
SCALE: NONE

NOTE:

1. AHUS SHALL BE ENABLED BASED UPON TIME OF DAY SCHEDULING WITHIN THE DDC CONTROL SYSTEM (USER ADJUSTABLE). THIS SHALL BE THROUGH THE DDC CONTROL SYSTEM VIA THE SCHEDULED START/STOP PARAMETER.


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MECHANICAL
CONTROLS

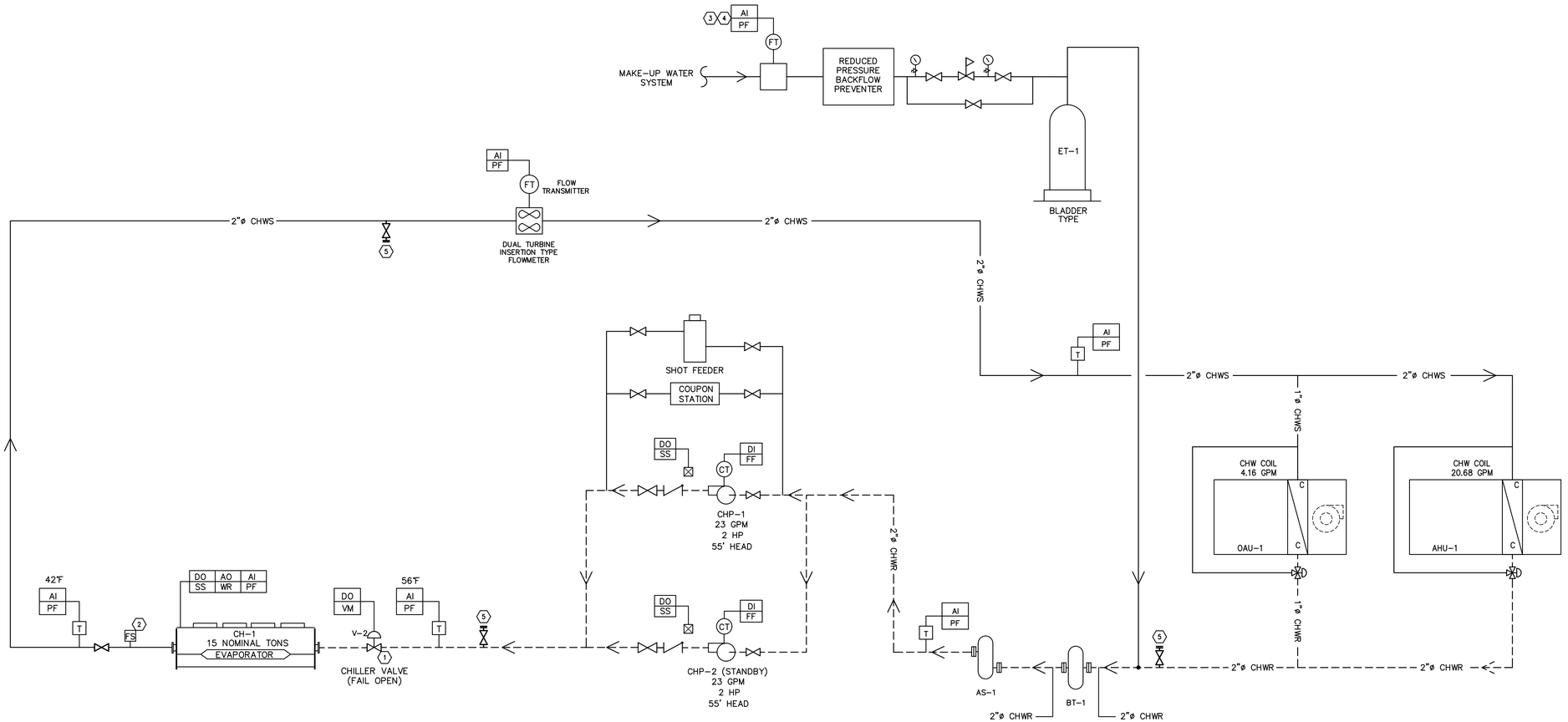
M5.3

## GENERAL NOTES

1. CHILLER ISOLATION CONTROL VALVE ACTUATORS AND BYPASS VALVE ACTUATOR SHALL BE CAPABLE OF SHUT OFF AGAINST CHILLER PUMP DEAD HEAD PRESSURE. CHILLER ISOLATION VALVES SHALL BE SLOW ACTING AND SHALL NOT OPEN OR CLOSE AT A RATE WHICH WILL EXCEED A RATE CHANGE OF 20 PERCENT OF CHILLER DESIGN FLOW RATE PER MINUTE.

## KEYED NOTES

1. CHILLER EVAPORATOR FLOW VALVE SHALL BE A BUTTERFLY STYLE VALVE WITH FAIL TO OPEN SPRING RETURN.
2. PADDLE TYPE FLOW SWITCH IS NOT ACCEPTABLE DUE TO FLUTTERING DURING LOW FLOW CONDITIONS.
3. REFER TO SPECIFICATIONS FOR METER TYPE AND TRENDING REQUIREMENTS.
4. PROVIDE SEAMETRICS MULTI-JET (HALL EFFECT SENSOR) COLD WATER METER IN MAKE UP WATER LINE TO CHILLED WATER SYSTEM, WITH 6-24 VDC, 20 mA MAXIMUM CURRENT OUTPUT AND BRONZE BODY FOR 150 PSI RATING PRESSURE. ACCURACY SHALL BE (+,-) 1.5 PERCENT. INSTALL WITH MINIMUM STRAIGHT RUN OF PIPE FOR 5 PIPE DIAMETERS UP AND DOWN STREAM OF METER. ORIENT FACE OF METER FOR EASE OF READING. CONNECT TO ENERGY MANAGEMENT SYSTEM.
5. SHUT-OFF VALVE WITH BLIND FLANGE FOR TEMPORARY CHILLER CONNECTION.





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MECHANICAL
FLOW DIAGRAM

M6.1