



Addendum No. 1

IFB-25-00070

Sun City Fire Station No. 47

HCFL.gov/Vendors
(813) 272-5790



**Hillsborough
County Florida**
Procurement Services

IMPORTANT! PLEASE READ CAREFULLY BEFORE SUBMITTING BID

ISSUANCE DATE: **March 21, 2025**

SOLICITATION NUMBER: **IFB-25-00070**

SOLICITATION TITLE: **Sun City Fire Station No. 47**

PRIMARY CONTACT: **Sybil Tucker, Chief Buyer**

CONE OF SILENCE: A Cone of Silence is in effect for this procurement; therefore, no bidder, interested party and/or their principals, officers, employees, attorneys, or agents shall communicate with County employees, the Hearing Master assigned to hear the applicable protest appeal and/or members of the Board of County Commissioners, including their aides and employees regarding this procurement and/or a related protest, except as otherwise provided in the [Hillsborough County Procurement Protest Policy and Procedures Ordinance](#). The Cone of Silence does not prohibit a bidder from communicating with the Director of Procurement, staff in the Procurement Services Department, or the County's attorney assigned to this procurement. Violating the Cone of Silence may disqualify the bidder from consideration for award. Please refer to the **Instructions** for complete details about the Cone of Silence.

NOTICE: This Addendum is an integral part of the invitation for Bid under consideration by you as a Bidder in connection with the subject matter identified below. Hillsborough County deems all Bids to have been proffered in recognition and consideration of the entire Invitation for Bid including all issued Addenda.

THE INFORMATION INCLUDED HEREIN IS HEREBY INCORPORATED INTO THE CONTRACT DOCUMENTS OF THIS PRESENT BID MATTER AND SUPERSEDES ANY CONFLICTING CONTRACT DOCUMENTS OR PORTION THEREOF PREVIOUSLY ISSUED.

If the Bid has already been submitted within the Bonfire electronic bidding system for Hillsborough County Procurement Services, Bidder shall resubmit bid and acknowledge addendum electronically.

REASON(S) FOR ADDENDUM:

- 1. Issue Specifications and Drawing changes identified below.*
- 2. Issue questions and answers identified below.*
- 3. Revised Bid Line-Item No. 3 to read: Additive Alternate No. 2: Furnish and install a prefabricated Tuff Shed storage 10' x 12' with double doors (4'0 W x 6'-8"H) as Basis of Design wind rated to 90mph or better. (concrete pad and electrical stub out shall be included in base bid)*
- 4. The Bid Close Date is changed from March 24, 2025, at 2:00 pm. to April 7, 2025, at 2:00 pm.*

Specification Changes

1. Delete Section 03 3600 POLISHED CONCRETE FLOOR FINISHES.
2. On section 04 2613 MASONRY VENEER:
 - a. Delete letter a from paragraph 3.2, C, 1 – which refers to match existing conditions.
3. On section 06 1000 ROUGH CARPENTRY
 - a. Delete paragraph 1.4, D
 - b. Delete paragraph 2.1, C
4. Delete Section 07 1300 SHEET WATERPROOFING.
5. On section 08 7100 FINISH HARDWARE
 - a. Delete hardware group 04A and move door 110 to hardware group 04B
 - b. Hardware group 07 add:
1 EA THRESHOLD 65A-223 A ZER
 - c. Move door 101B from hardware group 09 to hardware group 05B
6. On section 09 2116 GYPSUM BOARD ASSEMBLIES:
 - a. Modify paragraph 2.3, B, 4, a to read as follows: Vertical Surfaces: 5/8 inch.
 - b. Modify paragraph 2.3, C, 3, a to read as follows: Thickness 5/8 inch.
 - c. Add paragraph 3.4, J as follows: Apply RedGard (or equal) per manufacturer's instructions to the sheathing for the tile surfaces of the shower area.
7. Delete Section 09 2236 METAL LATH.
8. Section 11 4510 RESIDENTIAL APPLIANCES/
 - a. Modify paragraph 3.4, D as follows: Range: GE Monogram 36" All-Gas Professional Range ~~ZGP364NDTSS~~ ZGP364LDRSS.
 - b. Modify paragraph 3.4, D, 2 as follows: "Fuel Source: ~~Natural Gas~~ Liquid Propane. Model - ~~ZGP364NDTSS~~ ZGP364LDRSS.
9. Section 10 9500 Miscellaneous Specialties
 - a. Part 2 Products – strikethrough / disregard item 2.2 CONTROLLED ACCESS PHARMACEUTICAL DISPENSER.
10. Add Section 22 1617 – Liquefied-Petroleum Gas Piping
 - a. This is a new spec section, please update your spec TOCs accordingly.
11. Delete Item 1.4(B)5 in Section 01 29 200.
12. Delete additive Alternate No. 2 in specification Section 01030 ALTERNATES, part 3, 3.1.C and Special Conditions Item 1.3.B in its entirety and replace with the following:

Additive Alternate No. 2: Prefabricated Metal Storage Building:

Base Bid: The purchase and installation of pre-engineered metal storage building as shown in drawing is not included in Base Bid.

Additive: Add to the scope of work for the Contractor to furnish and install a prefabricated Tuff Shed storage 10' x 12' with double doors (4'-0" W x 6'-8" H.) as Basis of Design wind rated to 90mph or better.

Note: Concrete pad and electrical stub out shall be included in base bid.

Drawing Changes:

1. Replace sheet A0.1 LIFE SAFETY PLAN with dated 03.06.2025
2. Replace Civil COVER SHEET with dated 11.26.2024
3. Replace sheet C-10 UTILITY PLAN with dated 11.26.2024
4. Replace sheet C-11 WATER MAIN CONNECTION PROFILE with dated 11.26.2024
5. Replace sheet C-12 SANITARY SEWER CONNECTION PROFILE with dated 11.26.2024
6. Replace sheet C-20 LIFT STATIONPLAN with dated 11.26.2024
7. Replace sheet L1.1 LANDSCAPE PLAN with dated 03.06.2025
8. Replace sheet L1.3 LANDSCAPE PLAN with dated 03.06.2025
9. Replace sheet A5.1 ROOF DETAILS with dated 03.06.2025
10. Replace sheet A5.3 DETAILS with dated 03.06.2025
11. Replace sheet A7.1 SCHEDULES AND DOOR AND WINDOW TYPES with dated 03.06.2025
12. Replace sheet E1.4 ELECTRICAL SYSTEMS SITE PLAN with dated 03.06.2025
13. Replace sheet E5.4 ELECTRICAL DETAILS with dated 03.06.2025

Questions and Answers

Question No. 1: Reference previous RFI responses from 2/19, Question #1. RFP – Page 3, Section 2.1 Special Terms and Conditions Allowance appears to indicate a \$200,000 allowance authorization. Please confirm if this is applicable to this project and whether the Owner will hold this allowance or the contractor.

Response: Yes, it is applicable to this project. Refer to Item 5.19 of General Terms and Conditions of contract.

Question No. 2: Please confirm that although the Owner will be carrying allowances for the following: Construction Allowance, Utility Charges, Allowance Authorization & Fire Alerting System Allowance. Please also confirm whether the contractor is still required to carry all cost for permitting/utilities,

contingency & fire alerting system requirements indicated on the bid documents and as required for the project.

Response: Refer General Terms and Conditions of the contract.

Question No. 3: Please confirm that the plans have been submitted for permit and provide an assumed start date for construction & permit approval.

Response: Permits are ready to be pulled by successful contractor.

Question No. 4: At the site walk – there appeared to be a low hanging overhead fiber optic line that will need to be moved prior to construction to ensure proper clearance to get in/out of the site. Please clarify if this will be handled by the County prior to construction. It is assumed that this line will be relocated underground or raised to an appropriate height to be coordinated with the Contractor.

Response: This item will be coordinated and corrected by service provider during the fire station construction.

Question No. 5a: Reference sheet A4.1 detail A11. A dotted line is shown at the exterior CMU under fiber cement board, but the drawings do not indicate what this line represents. The waterproofing spec #07 1300-1 indicates a mod-bit sheet-applied waterproofing system, but that does not seem like the correct application for this condition. A 5 or 10-year cold fluid-applied system would be more applicable for these conditions. This spec section also indicates to reference spec section 07 2500 for weather barrier under siding, however this spec does not exist. Please advise as to what kind of waterproofing system is to be applied at the exterior CMU walls behind fiber cement panels, stucco, and brick veneer conditions. Additionally, the drawings do not seem to show any waterproofing requirements for the concrete footings or CMU fenestrations. Will any waterproofing systems be required for any other areas other than the exterior CMU walls behind finish materials?

Response: Disregard dotted line in detail A11 / A4.1. Delete mod-bit sheet applied waterproofing spec section 07 1300. No underlayment is required for fiber cement board on CMU per manufacturer's instructions and FBC.

Question No. 5b: We are unable to locate the Sign Schedule referenced in ADA Signage Details K13, K10, and H10 on Sheet A5.3, which notes "See Sign Schedule for Text." Please provide the Sign Schedule or clarify its location. In addition, Detail K10 indicates to "provide male pictogram at men's toilet." However, the plans and Finish Schedule do not specify whether Toilets 125, 112, and 113 are designated for Unisex, Women, or Men use. Please clarify and identify the intended use for each toilet.

Response: Toilets 125, 112 and 113 to be Accessible Unisex Toilets. Detail K10 / A5.3 is nonapplicable. Room identification and number signs are to be provided at each interior door opening and at certain exterior door openings where indicated on drawings. Use room names and number as per Finish Schedule. At accessible toilet rooms provide accessibility pictogram signage.

Question No. 6: The Signs Specification requires a room identification sign at swinging doors or pairs of doors leading to a room. Day Room 105 does not have a door. Please confirm if a sign is required to identify this room.

Response: No sign needed.

Question No. 7: Keyed Note #19 on Sheet P2.1 references a gas line for an outdoor gas grill; however, no outdoor grill is listed in the Equipment Schedule or the Specifications. Please confirm if the outdoor grill is to be provided by Contractor, and if so, kindly provide the grill specifications.

Response: Gas grill to be provided by Owner.

Question No. 8: Specifications Division 11 lists a range with a natural gas fuel source. However, the plumbing drawings indicate that the gas system for this project is propane gas. Please confirm if a conversion kit is required for the specified range, or provide specifications for a propane-fueled range.

Response: Change gas range from natural gas model to liquid propane model. Modify Specification Section 11 4510, paragraph 3.4, D, 2 as follows: "Fuel Source: Natural Gas Liquid Propane. Model - ZGP364NDTSS ZGP364LDRSS.

Question No. 9: Paragraph 3.2-B in Division 10 Fire Extinguisher Specifications states that "Each extinguisher requires a cabinet." However, the Life Safety Plan on Sheet A0.1 differentiates between cabinet-mounted and bracket-mounted fire extinguishers and provides their locations. Please clarify the specifications or confirm if the correct statement should be "Each cabinet requires a fire extinguisher."

Response: Provide as shown on Plans.

Question No. 10: Civil plan shows the FFE of the Fire Station main building is +67.00 NAVD. Architectural/Structural plan only show the Finish Floor Elevation as +100'-0". Please confirm the FFE +100'-0" is the +67.00 NAVD on Architectural/Structural Plans.

Response: Correct, refer to A1.0 General Notes #4

Question No. 11: Bid documents and A1.1 indicate the location of the Add Alternate to provide a prefabricated metal storage shed. No specifications or information has been provided on what to include aside from floor dimensions and door requirements. Please provide a height requirement as well as any specifications/basis of design requirements.

Response: Delete additive Alternate No. 2 in specification Section 01030 ALTERNATES, part 3, 3.1.C and Special Conditions Item 1.3.B in its entirety and replace with the following:

Additive Alternate No. 2: Prefabricated Metal Storage Building:

Base Bid: The purchase and installation of pre-engineered metal storage building as shown in drawing is not included in Base Bid.

Additive: Add to the scope of work for the Contractor to furnish and install a prefabricated Tuff Shed storage 10' x 12' with double doors (4'-0" W x 6'-8" H.) as Basis of Design wind rated to 90mph or better.

Note: Concrete pad and electrical stub out shall be included in base bid.

Question No. 12: Reference sheets A1.1 & A1.2. The detail of the oxygen tank storage shed shows a 1:12 pitch shingle roof, however a shingle roof cannot have a 1:12 pitch. As shown on the roof plan for the main building, the cricket roof with a 1:12 pitch is shown to be TPO membrane roofing. The storage shed would also be assumed to be TPO membrane or a metal roofing system. Please advise.

Response: Oxygen tank storage roof system to match the main building. If asphalt shingles provide a pitch of 2:12, if Bid alternate No. 5 Metal standing seams roof gets approved keep the 1:12 pitch for the storage. Adjust slope as required for the selected roof system.

Question No. 13: Reference A1.3. The drawings call for a 30' weather antenna for Weatherbug system, but the drawings or specs do not seem to indicate the Weatherbug product that is to be installed. Also, keynote 55 on A1.3 calls for a Weatherbug display to be installed but is not shown on the floorplan. Please provide required specifications of additional equipment on the pole & screens, power requirements, etc.

Response: Refer to Specification Appendix Two for Weather bug pole basis of design. Display to be provided by Owner. Refer to electrical drawings for power and display mounting height.

Question No. 14: Reference G1&G6/A6.2 - Please confirm the extent of waterproofing requirements at the showers are per this referenced detail which includes a sheet waterproofing membrane at the base of the shower and 6" up the finished wall. No waterproofing appears to be indicated or required above 6" at wall locations. Please confirm. In addition, the detail provided referenced PT wood blocking for a pan, however, the plumbing schedule does not indicate a plumbing pan requirement. Please confirm if this is required, if yes – provide product.

Response: Use Dense Guard Tile Backer (or equal) as specified in shower surrounds and apply RedGuard (or equal) to the sheathing for the tile surfaces of the shower area. The sheet waterproofing shown in the details is the shower pan, no plumbing selection required for schedule. Provide PVC sheet 40 mil as the shower pan liner.

Question No. 15: Specification 092200 Portland Cement and Plaster indicates a requirement for accessories to be PVC and for direct application to masonry. Specification 092236 Metal Lath does not seem to be applicable to the project as this would typically only be required at a framed assembly. Please confirm Specification 092236 Metal Lath is not applicable to this project. If it is, please clarify what locations and whether PVC products would be acceptable in lieu of metal.

Response: Metal Lath is only required where stucco is applied to a framed, sheathing surface, not applicable here. PVC products are acceptable as accessory components to the cement plaster application as indicated in the 09 2200 specification section.

Question No. 16: Confirm the drawings produced by the County's design professionals comply with the special conditions Paragraph 1.1 which states "The facilities must be of high quality and low maintenance; must meet or exceed the requirements of the Construction Documents Package and must meet the needs of the user and maintenance agencies. The construction of these facilities shall meet the requirements of all governing local, state, and federal regulations, codes, and ordinances, including the Florida Accessibility Code for Building Construction and the Americans with Disabilities Act (ADA). ", since the contractor does not know what the requirements or needs of the user and maintenance agencies are.

Response: Comply with contract documents.

Question No. 17: Provide a specification for the following including approved manufacturer(s), make/model, finish, accessories, options, warranties, installation instructions, etc. as necessary to fully describe the work.

- a. Prefabricated metal storage building per Alternate #2
- b. FRP at Room 126 per the Finish Schedule Sheet A7.1
- c. 2 - Fixed 1-hr rated window frames shown on Sheets A0.1 and A7.1
- d. 4' 8" H x 5' 4" W Access panel to the mechanical chase as shown in Detail A5/A4.2 and D10/A6.1
- e. Vinyl wall base per the Finish Schedule on Sheet A7.1
- f. Exterior key box per A1/A4.3
- g. 44-Gallon trash can on wheels per A5/A6.3
- h. PVC vinyl soft top dome bollard caps per Section 05 50 00 Paragraph 3.3(B)

Response:

- a. See Response to Question No.11.
- b. FRP Basis of design; Crane Composites. Varietex textured, colored wall panel. Install with the fewest seams possible. 0.075" Beaded. Color TBD. Provide all appropriate accessories and manufacturer's recommended attachment(s).
- c. Provide fire rated window assembly as per plans detail similar to J4/A5.2. Fire rated window frames must be UL listed and in accordance to UL Design NO. GSNW-WA-2-001. Provide the rating required as indicated on the drawings
- d. Basis of Design: JL Industries Interior Access Panels – Flush TM series 16 ga. Coordinate Rough Opening to allow access to fan motor.
- e. Vinyl Base Basis of Design – Provide ARMSTRONG Rubber/Vinyl Base 4" Continuous rolled cove base. Provide all appropriate accessories and manufacturer's recommended attachment(s). Do not provide pre-formed corners. Install per manufacturer's recommendations and instructions.
- f. Provide Medeco Box-flush mounted as noted on A1.3 Specific notes #4.
- g. 44-Gallon trash to be provided by Owner.
- h. Disregard PVC vinyl soft top dome bollard caps called on specification. Follow bollard detail shown on plans.

Question No. 18: Provide a list of all subcontractors including certified DM/DWBE firms identified by E & L for fire stations: Armdale #10, Gunn Hwy #13, and Palm River #15 and Diaz Fritz for the Cross Creek Recreation Center.

Response:

Armdale FS No. 10

Premier Fire Sprinklers, Inc.
Harmonics Electric, LLC
Best Made Enterprises, Inc.
Victors Custom Cabinets & Tops LLC
POD-NC LLC
R&D Construction & Roofing
Anticus Engineering

Gunn Hwy FS No. 13

Premier Fire Sprinklers, Inc.
Harmonics Electric, LLC
Best Made Enterprises, Inc.
Victors Custom Cabinets & Tops LLC
POD-NC LLC
Anticus Engineering

Palm River FS No. 15

Premier Fire Sprinklers, Inc.
Best Made Enterprises, Inc.
Victors Custom Cabinets & Tops LLC
POD-NC LLC
Ballfer Service Corp
R&D Construction & Roofing
Anticus Engineering

Cross Creek Recreation Center

Superior Mechanical Solutions
Rick's Electrical
Trimen Landscape
Reeves Building and Plumbing
Star Quality
Torres Total Flooring

Question No. 19: Confirm the bid price is NOT to include over-excavation, soil undercutting, structural fill, inspections, or testing related to removal of unsuitable/deleterious subsurface materials such as muck, peat, buried debris, etc. since none is shown in the geotechnical/soils report or indicated on the plans.

Response: Confirmed. This will not be part of the bid price.

Question No. 20: Confirm excess excavation/surplus earth material shall become the property of the site contractor for disposal at his discretion and will NOT be required to be transported to an Owner (County) approved site as noted per Section 31 20 00, Paragraph 3.2(P).

Response: Any excess soil is the contractors.

Question No. 21: Confirm the site/civil plans and specifications have been prepared and conform with FDOT, Hillsborough County technical specifications, SWFWMD, Florida Environmental Land and Waste Mngt Act, FDEP, Health Dept, NPDES, and all other statutes, laws, regulations, and codes since the contractor is not the licensed design professional. Also, verify the bid price is NOT to include any cost, expense, or contingency for preparing plans, design/engineering work, obtaining approvals, or securing permits related to the site/civil.

Response: Contractor does not have to do site drawings. Contractor will be responsible for pulling permits related to delegated designs (i.e., septic, fuel, wells, etc.). Contractor is also responsible for pulling the FDEP NPDES Permit 48 hours prior to moving dirt.

Question No. 22: Although referred to in other specification sections, confirm the specification book does not include sections for cast-in-place concrete or masonry. Also, confirm the only specification for concrete, masonry and pre-engineered wood trusses is shown in the structural drawings.

Response: Confirmed. Refer to structural drawings.

Question No. 23: Confirm the base bid is to include the added cost for the extensive landscape, lawn and irrigation maintenance for a period of 1-year following substantial completion as outlined per Section 32 67 00. If this is required, will final payment and final acceptance of the project be withheld until after the 1-year maintenance period.

Response: Only one year contractor's warranty following substantial Completion of the project.

Question No. 24: Verify the bid price is to include manufacturer's standard available colors and textures for materials selected by the Architect and not custom, exotic, or special-order items.

Response: Provide Full range of manufacturer's standard available colors, no custom, exotic, or special-order items.

Question No. 25: Provide a sign schedule as referenced in Details K10, K13, and H10 on Sheet A5.3 along with a drawing showing the location(s) for each interior sign.

Response: Refer to response to question 5b.

Question No. 26: Confirm Section 07 13 00 Sheet Waterproofing is not applicable, since it is not shown on the drawings or provide the location(s) and details where it is to be installed.

Response: Not applicable to the project. Delete specification section.07 1300.

Question No. 27: Confirm Section 01 73 20 Selective Demolition is not applicable, since this section refers to Owner occupied portions of the building, asbestos (hazardous materials) report, occupied or operating facilities, existing warranties, etc.

Response: Not applicable

Question No. 28: Provide a drawing identifying each tree that is to be pruned (if any) since Section 32 90 00 Paragraph 3.2 requires "all existing trees within the limits of work shall be pruned" and the landscape plan shows a lot of trees to remain in the fence line or very close to the fence line.

Response: See trees to be pruned on the modified L1.1 Landscape Plan attached with Addendum 01.

Question No. 29: Provide a drawing with details for any aeration systems required (if any) for the existing trees to remain.

Response: No Aeration System is required for the existing trees to remain.

Question No. 30: Provide a specification for field painting the fiber-cement siding since it is not included in Section 09 91 20.

Response: Follow paint specifications for exterior concrete masonry units and vertical stucco surfaces (Section 09 9120 Part 3.6 A).

Question No. 31: Provide a specification and installation details for the weather barriers under the fiber-cement siding per the related requirements noted in Section 07 46 46 Paragraph 1.2(A), if necessary, since there is no Section 07 25 00 and none are shown on the building details.

Response: Refer to response to question 5a.

Question No. 32: Verify the County has sole sourced Southland Concrete Creations as the only designated polished concrete floor installer per Section 03 36 00.

Response: Delete the requirement for polished concrete flooring. Refer to revised finish schedules. Delete spec section.

Question No. 33: Confirm all polished concrete floors are to receive penetrating color dye as implied per Section 03 36 00 Paragraph 2.1(C), since this will add cost and affect the sequence and schedule of work. If so, confirm that all floors will receive the same color dye.

Response: Delete the requirement for polished concrete flooring. Refer to revised finish schedules. Delete spec section.

Question No. 34: Provide a list of approved manufacturers for the solid plastic laboratory casework since it is not included in Section 12 35 53.23. Also confirm this specialized casework is installed in the Apparatus Bay per Detail D10/A6.1.

Response: The laboratory casework is for the Apparatus Bay. The following manufacturers/vendors are acceptable: TFI/Inline Design, LabAire Systems, PolyGuard Scientific, Laboratory Design & Supply.

Question No. 35: Provide a plumbing specification for the gas piping since it is not included in Division 22.

Response: Refer to attached Specification Section 22 1617 – Liquefied-Petroleum Gas Piping as part of Addendum 01.

Question No. 36: Confirm the folding shower seats per Section 10 80 00 Paragraph 2.10 and the controlled pharmaceutical dispenser per Section 10 95 00 Paragraph 2.2 are not applicable since neither are shown on the drawings.

Response: Folding shower seats are not required as indicated in Section 10 80 00 Paragraph 2.10. Folding seats are shown on sheet A2.1 refer to equipment tag #13. Provide High Back shower seat (Teak) – Model: APFSHAF185155TW-SL (Basis of Design).

Controlled pharmaceutical dispenser applies only to Progress Village South FS No. 48. – delete paragraph 10 9500, 2.2 for the Sun City FR project.

Question No. 37: Confirm metal lath per Section 09 22 36 is not applicable since it is not shown on the drawings.

Response: Not applicable.

Question No. 38: Clarify the gypsum board since the partition types on Sheet A4.0 shows 5/8" whereas Section 09 21 16 Paragraph 2.3 specifies 1/2" for both walls and ceilings.

Response: Provide 5/8" gypsum board as shown on plans for wall and 1/2" for ceilings.

Question No. 39: Verify gypsum board walls and ceilings are not to receive a Level 5 finish although Section 09 21 16 Paragraph 2.4(G) specifies a high build drywall surfacer.

Response: Provide medium orange peel finish (Owner Design Standards) in lieu of the Level 5 specified.

Question No. 40: Confirm the underslab vapor retarder is to be installed per Section 07 16 00 Paragraph 3.3(C) requiring it to be lapped "over footings and sealed to the foundation walls", since this is costly and unusual.

Response: The footings for this job are lower than the finished floor grade preparation elevation; underslab vapor retarder not required over tops of footings. Seal underslab vapor retarder to foundation walls, turn up wall, secure and provide terminating edge with Stego Crete Claw Tape 3" (Basis of Design).

Question No. 41: Confirm there are no grant/funding sources (Federal, State, DOT or other agencies) that would impose additional requirements, regulation and reporting such as Davis Bacon/Payroll Reporting, Buy American, labor surplus area participation, Federal Acquisition Regulations (F.A.R.), etc.

Response: This project is not grant/federally funded.

Question No. 42: Confirm that the allowances totaling \$550,000.00 will not be included in the calculation determining DM/DWBE participation goal of 17%.

Response: Refer to Contract Terms and Conditions, Section 2.12 Utilization of DM/DWBEs.

Question No. 43: Should the bid price include P&P Bond, insurance premiums and overhead and profit mark up for \$550,000 in allowances?

Response: The allowances are for the designated items as stated in the Contract Terms and Conditions. The distribution of cost for P&P Bond, insurance premiums, overhead and profit mark up is at the discretion of each individual bidder.

Question No. 44: Confirm that the bid price is NOT to include the added cost for FSC certification and wood sustainably harvested in the State of Florida for rough carpentry lumber and plywood per Section 06 10 00 Paragraph 1.4(D) & 2.1(B) & (C).

Response: FSC certified wood is not required. Wood harvested in the State of Florida is required per Florida Statutes, Section 255.20(3): "All county officials, boards of county commissioners, school boards, city councils, city commissioners, and all other public officers of state boards or commissions that are charged with the letting of contracts for public work, for the construction of public bridges, buildings, and other structures must always specify lumber, timber, and other forest products produced and manufactured in this state whenever such products are available and their price, fitness, and quality are equal."

Question No. 45: Confirm that the cabinet contractors are not required to be AWI certified or participate in the Quality Control Program as implied per Section 06 41 00 Paragraph 1.4(A).

Response: Cabinet subcontractors are not required to be AWI certified.

Question No. 46: Provide copies of all environmental surveys and/or reports and verify there are no endangered or threatened species including gopher tortoises, birds, etc.

Response: No T&E Survey was done, and no T&E species are expected to be present.

Question No. 47: Although well within the control of the County, confirm the contractor will not be compensated for delays caused by "acts or neglect by the County" outlined by the Force Majeure Paragraph 5.23 in the Invitation to Bid since this seems unusual and unreasonable.

Response: Refer to the Contract Terms and Conditions as written.

Question No. 48: Confirm the County will not allow for a time extension for unfavorable weather as outlined by Paragraph 5.10.3 through 5.10.6 in the Invitation to Bid since it is "not excusable". This paragraph specifies that the bidder should expect and price including overtime and weekend work for the 44 bad weather days out of 260 workdays in any given year.

Response: Refer to the Contract Terms and Conditions as written.

Question No. 49: Provide specific brick size/dimension, texture, finish, color, etc. since Section 04 26 13 appears to be for matching "the existing conditions at the original campus". Also provide clarification as to an 8' x 6' H mock-up panel with an entire window assembly, flashing material, weeps, cavity vents, cavity mortar control and veneer anchoring system since the specification includes a number of items that do not seem applicable to this project or shown on the drawings.

Response: Basis of design to be per specification 04 2613 Part 2 products. Provide a mock-up of brick and mortar at a location on building. Approved mock-up to be part of construction to remain as finished work.

Refer to Addendum 01 Specifications clarifications.

Question No. 50: Verify the bid price is to include "shop-applied coat of epoxy over primer" at all exterior steel doors and frames and spray applied "back-coated bituminous fibrous layer" at all exterior steel frames per Section 08 11 10 Paragraphs 2.3(G) and 2.4(J) & (K). since this is costly and unusual.

Response: Confirmed required this is the County's design standard, provide as specified. If shop applied is not available, it must be done in the field.

Question No. 51: Confirm it is acceptable for the GC to contract the termite control with the concrete subcontractor although Section 31 31 16, Paragraph 1.5(B) restricts this. Also, confirm that applying soil treatment under the footings is not required although it is implied per Paragraph 1.7(A).

Response: The GC can provide termiticide through the concrete subcontractor (qualified applicators/vendors are required). Soil treatment under lowest footings is required.

Question No. 52: Confirm that winds/vision screening for the 6' H temporary chain link fence is not required.

Response: It is not required. The contractor at its own discretion may provide winds/vision screening for the security of its construction site.

Question No. 53: Confirm the County will accept a standard 8' x 40' container without a private toilet room as a temporary construction office with A/C/Heat, lighting, power, and space for meetings, instead of a wheel mounted trailer that will require separate permitting, hurricane rated tie-downs, steps and platforms.

Response: Comply with contract documents.

Question No. 54: Confirm threshold building inspections are NOT to be included in the base bid as specified per Section 01 34 00.

Response: Threshold building inspection is not required.

Question No. 55: Confirm the only acceptable method of dewatering is by well points as noted per Sheet C-1 and using a horizontal sock drain system that will remain in place at completion will not be allowed.

Response: Horizontal sock drain system is acceptable as an alternative to well pointing.

Question No. 56: Confirm the clear water repellent sealer per Section 07 18 15 is to be applied to the brick veneer and cast stone. Also confirm the extensive testing and documentation will be required on the limited amount of brick.

Response: Apply to brick veneer. Cast stone will be painted; not required there. Extensive testing is not required. Applicator report(s) and manufacturer's warranty will suffice.

Question No. 57: Should the cast stone be integrally colored or standard gray since the finish is not specified per Section 04 72 00. Also confirm that costly galvanized rebar is required per Paragraph 2.1(G).

Response: Cast stone to be standard gray and painted in field. Provide galvanized rebar as specified.

Question No. 58: Confirm items 3, 5, 6, & 7 per Paragraph 1.2(A) in Section 05 50 00 is not applicable, since these are not shown on the drawings.

Response: Confirm items 3, 5, 6, & 7 per Paragraph 1.2(A) in Section 05 50 00 is not applicable, since these are not shown on the drawings.

Question No. 59: Verify the bar chart schedule per Section 01 31 00 is preferred by the County for this type of project instead of a CPM schedule and reports as noted in Section 01 32 00.

Response: CPM schedule will be required.

Question No. 60: Verify the foreign product limitations per Section 01 60 00 Paragraph 1.4(C) is not applicable, since the products and manufacturers are specified by the design professional. If this is a requirement, provide product and manufacturers that comply with domestic/American made standards.

Response: Delete Paragraph 1.4C in its entirety.

Question No. 61: Confirm substitutions will be allowed, although Section 01 60 00 Paragraph 2.1(B)1 states no substitutions will be permitted where only one product or manufacturer is named. For those sections where only one is named, provide other approved products or manufacturers.

Response: The substitution shall be equal to meet the specification requirements and be approved by professional. A single named product shall be considered a Basis of Design product, not a closed specification.

Question No. 62: Confirm that products with recycled content and overall project requirements as noted per Section 01 60 00 Paragraph 1.4(B)1 is not applicable.

Response: Delete the last sentence in Paragraph 1.4(B)1.

Question No. 63: Confirm it is NOT required for the "Contractor to provide technical support for 1-year after final completion in addition to the 1-year general contractors warranty" per Section 01 70 00 Paragraph 1.02(A)4(f) and (C)3(i), since this is costly and unusual.

Response: Delete last sentence in Paragraphs 1.02(A)4 (f) and 1.02(C)3 (i). Technical support for 1-year after final completion is not required.

Question No. 64: Please confirm that the reference to a GMP and/or Guaranteed Maximum Construction Price is incorrect, and this is a plans & specifications bid proposal.

Response: Reference to a GMP and/or Guaranteed Maximum Construction Price is incorrect. This a hard bid project.

Question No. 65: The ice makers have a calculated limit of distance the line sets can be. This formula is (Vertical rise x 1.7) + (Vertical Fall x 6.6) + Horizontal Line run = Calculated length. Currently the rise and

fall based upon the locations would calculate to: $(6' \times 1.7) + (9' \times 6.6) = 69.5\text{lf}$. This only leaves a horizontal run of 30.5lf. Per location shown on M2.1 this is more than the manufactures maximum line set run distance. Fire Station 47, Sun City – Horizontal Run is +/- 72lf. Please clarify how to proceed.

Response: In lieu of the specified ice maker model with remote condenser, provide the following:

- a. Air cooled ice maker, Ice-o-Matic model CIM0530A with filter system and compatible bin B40PSB.
- b. Revise VAV-1-5 to be a size 8 box rated for 540 cfm. Relocate VAV box inlet tap upstream of the electric duct heater EDH-1.
- c. Locate VAV-1-5 thermostat in EMS Storage.
- d. Revise supply air device in EMS Storage to be type C, 330 cfm.
- e. Revise return air flow for the type L device in EMS Storage to be 325 cfm.

Question No. 66: Specification section 013400 indicates the CM is to competitively bid the threshold inspections and references the School District inspector. Please confirm that this specification section is correct and was intended to be included and the CM is responsible for threshold inspections.

Response: This is a hard bid project, and the Threshold inspection is not required.

Question No. 67: Per Specification 04 2613, part 2 products, manufacturers to be Meridian Brick LLC; Red Semi-Smooth Flashed Modular: www.meridianbrick.com/#sle. However, Meridian Brick LLC was acquired by General Shale in 2021, please confirm the product is now General Shale Brick RED RANGE SEMI SMOOTH.

Response: Use that as basis of design. Building finishes to be confirmed with Owner color board selection.

Question No. 68: Reference sheets A1.3 & A4.0. Wall partition types P16, P18 & P19 indicates tectum panels at the mechanical/electrical room walls per note 58 on A1.3. Specifications are not provided for tectum panels. Please provide.

Response: Provide Tectum Direct Attached by Armstrong World Industries (basis of design) 1" High NRC (.60) mounting method D-20. Install as per drawings and manufacturer instructions

Question No. 69: Reference sheets A1.3 & A6.1. Floor plan on A1.3 indicates pantry shelves system (tag #43) located at Kit/Din 106. Elevations and specifications are not included for the panty shelves system. Please provide.

Response: Refer to detail A1/A6.3

Question No. 70: Reference project specifications. The plastic laminate casework specification (section 06 4100) indicates "as selected by architect from manufacturer's full range" for the colors and patterns of the solid-surfacing material. Please provide color/finish for the acceptable solid-surfacing material manufacturers indicated in project specifications.

Response: Bidder to provide cost for Quartz countertops and plastic laminate cabinets based on manufacturer's standard range of colors.

Question No. 71: Reference sheet A7.1. The finish schedule on A7.1 indicates fiberglass reinforced plastic (FRP) at walls. Specifications for FRP wall panels are not included. Please provide.

Response: FRP Basis of design; Crane Composites. Varietex textured, colored wall panel. Install with the fewest seams possible. 0.075" Beaded. Color TBD. Provide all appropriate accessories and manufacturer's recommended attachment(s).

Question No. 72: Is this a LEED Project? If yes, what certification is being required?

Response: This is not a LEED project.

Question No. 73: If the project is not a LEED Accredited project, will all the requirements within the specifications as they relate to LEED be required? Some say (If applicable) and others are written as if they are required?

Response: This is not a LEED project.

Question No. 74: Sheet E1.3: Is the Pre-Fab Shed shown on Sheet E1.3 to be supplied and installed by GC? If yes, please provide more details, Manufacturer, etc. for pricing.

Response: See Response to Question No.11.

Question No. 75: Sheet L1.3: Invasive Species Report/Monitoring: Per note on sheet who is responsible for the Invasive Species Reporting / Monitoring for the project? If the GC, can this be limited to only the 1-year warranty period in lieu of the extended timeline as stated within the note?

Response: The General Contractor is responsible to provide the Post Removal Maintenance Program and the Invasive Species Reporting until the end of the 1 – Year Warranty period, the remainder of the Post Removal Maintenance Program and the Invasive Species Reporting shall be done by the Owner, see revised Sheet L-3.

Question No. 76: Note #20 / A1.3: Weatherbug 30'-0" Pole & Antennas. Who is responsible for supply and installation? If GC, please provide more details on the pole for pricing.

Response: Refer to response to question 13.

Question No. 77: Sheet FP1.0 / System Design Note #2: Is the \$500k Errors & Omissions Insurance required for the Professional Engineer as stated within the note in addition to the Insurances outlined in the specifications?

Response: Yes.

Question No. 78: Sheet P2.1 / Note #19: Please provide more details on the outdoor Gas Grille Location. Is the GC required to supply and install the gas grille? If yes, please provide more detail on the required gas grille for supplying.

Response: Gas grill to be provided by Owner.

Question No. 79: Sheet S2.2 / Detail #6: Please provide more detail on edge of slab detail and what is shown / required for the edge as pointed to in the detail? i.e. steel plate, slab corner guard, etc.?

Response: No additional plate or corner guard is required for equipment slabs.

Question No. 80: Sheet 2.2 / Detail #6: Please provide more detail on what the bump on top of the slab shown within the detail is for / required?

Response: Please disregard the bump shown in detail #6/Sheet 2.2.

Question No. 81: Electrical Plans: Are the ceiling fans as shown on within the plans to be supplied by the GC? i.e. Apparatus Bay Circular Fan, Bedroom Fans and Day Room Fans.

If G.C. Responsibility to supply and install, can additional details / information be provided for including in the pricing?

Response: Fans to be furnished/installed by Contractor. Refer to sheet M4.2 for the apparatus bay's High Volume Low Speed Fan Schedule. Refer to sheet E2.2 for Bunk Room fan specs (Keyed Note 2) and Day Room fan specs (Keyed Note 3).

Question No. 82: Provide a copy of all permits, if available, including FDEP, SWFWMD, EPA, NPDES, FDOT, etc.

Response: Refer to Special Conditions, Item 15.3. Contractor will need to obtain the NPDES NOI.

Question No. 83: Confirm there was no flooding or standing water on-site related to the recent Hurricanes Helene and Milton.

Response: It is expected that there was standing water in the wetland and other portions of the site during these storm events.

Question No. 84: Confirm it is acceptable by the County and EOR to substitute all RCP storm drainage pipe with ADS Performance Line "HP" as implied per General Grading Note #10 on Sheet C-6. Are there other approved HPDE pipe manufacturers other than ADS?

Response: HP Storm by ADS is an acceptable alternative to RCP for onsite work.

Question No. 85: Confirm the contractor is NOT responsible for the post removal maintenance program related to the invasive trees/plants per the notes on Sheet L-1.3 requiring inspections and reporting every 6 months for a period of 5 years.

Response: The General Contractor is responsible to provide the Post Removal Maintenance Program and the Invasive Species Reporting until the end of the 1 – Year Warranty period, the remainder of the Post Removal Maintenance Program and the Invasive Species Reporting shall be done by the Owner, see revised Sheet L-3.

Question No. 86: Confirm the County will pay for properly stored material (on-site and off-site) since Section 01 29 00 Paragraph 1.4(B)5 states the Owner will not pay for stored materials and Paragraph 5.12.2.1 of the Invitation to Bid implies payment may not be approved since it is “at the sole discretion of the County”.

Response: Item 1.4(B)5 in Section 01 29 200 is deleted. Refer to the Contract Terms and Conditions Section 5.12.2.1 as written.

Question No. 87: Confirm that Paragraph 3.2(C) and (D) of Section 01 50 00 is not applicable to this project since there is no equipment specified for the contractor’s selection and the temperature range stated as “maintain a minimum temperature of 50 deg F in permanently enclosed portions of building for normal construction activities, and 65 deg F for finishing activities and areas where finished work has been installed” is impractical.

Response: Not applicable

Question No. 88: Confirm this is not a LEED project and the documentation including shop drawings, submittals, certifications, etc. as mentioned sporadically throughout the different sections of the specification will not be required. If required, specifically identify the products/manufacturers that must comply with LEED.

Response: This is not a LEED Project.

Question No. 89: Confirm the duration for construction (330 calendar days to substantial completion) will be significantly reduced per the specifications on Sheet C-1, IV(6) and V(8) which requires the contractor to provide all items to Aurora (EOR) a minimum of 45 days prior to final acceptance and placement into operation and the contractor is to allow the EOR a minimum of 4 weeks upon receipt to complete the review of the as-built information and complete the necessary drawings for submittal to the appropriate agencies. Equally as important, the contractor cannot achieve substantial completion per the definition in the contract without the various agencies approval which typically can take between 30 and 90 days after receipt of the EOR’s documents provided no additional information is required.

Response: Contract Time: The project must reach Substantial Completion within 330 days, as per section 2.8.2.1.1.

Allowance Work: If additional work is required under Allowance Work, section 5.19.1.2, it will extend the Contract Time. The extension is granted only with pre-approval through an Allowance Authorization Release.

Unfavorable Weather Days: The anticipated number of unfavorable weather days, as described in section 5.10.6 (f), will be accounted for within the original 330-day contract time. These weather delays do not extend the contract time but are included in the total time allotted for the project.

Question No. 90: Confirm the duration for construction (330 calendar days to substantial completion) will be significantly reduced by 60 calendar days for allowance work per the Invitation to Bid Paragraph 5.19.1.2 that states “the contract time also includes a number of calendar days reserved for performance of allowance work” which would require the contractor to complete the building and extensive site development, including AHJ’s approvals and Certificate of Occupancy within 270 calendar days (192 work days). In addition, the contractor’s ability to complete the project will be further reduced by at least 44 calendar days for unfavorable weather days per the Invitation to Bid Paragraph 5.10.3 through 5.10.6 which states “the consequences and impact of such unfavorable weather conditions are neither excusable or compensable”. Will the County increase the construction duration to reflect the significant site development, time necessary for the EOR to prepare documentation, AHJ’s approval process, expected unfavorable weather, and the issuance of the Certificate of Occupancy, since it will be impossible to achieve substantial completion within the current contract’s limited time frame?

Response: Contract Time: The project must reach Substantial Completion within 330 days, as per section 2.8.2.1.1.

Allowance Work: If additional work is required under Allowance Work, section 5.19.1.2, it will extend the Contract Time. The extension is granted only with pre-approval through an Allowance Authorization Release.

Unfavorable Weather Days: The anticipated number of unfavorable weather days, as described in section 5.10.6 (f), will be accounted for within the original 330-day contract time. These weather delays do not extend the contract time but are included in the total time allotted for the project.

Question No. 91: Provide clarification for the following partitions.

- a. P4 and P5 at Toilet Rooms 112 & 113 – Do these walls extend to the bottom cord of the truss or to the plywood roof substrate?
- b. P5 at Corridor 116 and Bunk 117 – Do these walls extend to the bottom cord of the trusses or to the plywood roof substrate?
- c. P18 at Rooms 129 and 130 – What is the height of the CMU walls and should these walls or framed walls extend to the bottom cord of the trusses or to the plywood roof substrate?
- d. P5 at Room 122 - Do these walls extend to the bottom cord of the truss or to the plywood roof substrate?

Response:

- a. Extend up to deck
- b. Extend up to deck
- c. Provide P18 up to 10ft and P4 above up to deck.
- d. Extend up to deck

Question No. 92: Confirm the County will accept the following contractor's fee for combined overhead and profit, since the Invitation to Bid Paragraph 5.9.3 is insufficient to cover the increased cost the industry has experienced over the past 10 years.

- a. Work done by the contractor's own organization shall not exceed 22.5%.
- b. Contractor mark-up for work done by subcontractors shall not exceed 12.5%.
- c. Each subcontractor may add up to 22.5% for work done by the subcontractor.

Response: Refer to Contract Terms and Conditions Section as written.

Question No. 93: Confirm the County will NOT reimburse the contractor for attorney's fees, claims preparation expenses, and cost of litigation per the Invitation to Bid Paragraph 5.7.6.4 even if it is determined the contractor is the prevailing party, since this is unreasonable.

Response: Refer to Contract Terms and Conditions Section as written.

Question No. 94: Confirm the County is entitled to only the documents specific to this project in support of a claim filed by the contractor and not financial statements, income tax returns, or other documents related to the contractor's other business concerns "during the years this contract was being performed and for each of the 5 years prior to the commencement of this contract" per the Invitation to Bid Paragraph 5.7.6.8.

Response: Refer to Contract Terms and Conditions Section as written.

Question No. 95: Fitness Room RFI - It appears there is a countertop/cubbies at the fitness room but no elevations or details are provided indicating the intent shown on floor plan A1.3. Please clarify what is to be included here.

Response: That's a dumbbell storage rack – To be provided by Owner.

Questions No. 96: For the Sheet Membrane Waterproofing on this project, please confirm if there is waterproofing on the Below-Grade Building Foundation Walls.

Response: Sheet Membrane waterproofing is not required for this project. There are no below grade foundation walls that require sheet membrane waterproofing. This requirement applies to projects with retaining walls at the site ponds.

Questions No. 97: Sheet C-6: The Zurn Trench Drain through the drive at the R.O.W. line, the pavement elevation on the south side of the drive at the drain is 65.4. They do not give us a invert elevation of the trench drain so I had to work backwards from the northeast invert at structure 1. The invert is 59.5 and the pipe is 52' Long @ .97% slope which would make the invert at the trench drain 60.0. This would make the trench drain 5' deep? This is not typical for these types of drains. Can you please provide clarification?

Response: The trench drain can have an 8" bottom outlet with an 8"x12" increaser. In addition, we can raise the 12" storm pipe invert elevation at ST-1 to elevation 61.0'. We need to have enough cover for the pipe.

Questions No. 98: It is understood that it is past the RFI deadline, however, with the time extension and no addendum yet published an additional question has come up in regard to specification section 013400 - Inspections. Section 1.3/2/a. indicates that a threshold building inspection shall be competitively bid. It appears that this building does not fall under the requirement of a threshold building inspection. Please confirm that this is not required on this project.

Response: Not required, this is not a threshold building.

SECTION 22 16 17

LIQUEFIED-PETROLEUM GAS PIPING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Pipes, tubes, and fittings.
 - 2. Piping specialties.
 - 3. Piping and tubing joining materials.
 - 4. Valves.
 - 5. Pressure regulators.
 - 6. Mechanical sleeve seals.
 - 7. Grout.
 - 8. Concrete bases.

1.3 DEFINITIONS

- A. Finished Spaces: Spaces other than mechanical and electrical equipment rooms, furred spaces, pipe and duct shafts, unheated spaces immediately below roof, spaces above ceilings, unexcavated spaces, crawlspaces, and tunnels.
- B. Exposed, Interior Installations: Exposed to view indoors. Examples include finished occupied spaces and mechanical equipment rooms.
- C. Exposed, Exterior Installations: Exposed to view outdoors or subject to outdoor ambient temperatures and weather conditions. Examples include rooftop locations.
- D. LPG: Liquefied-petroleum gas.

1.4 PERFORMANCE REQUIREMENTS

- A. Minimum Operating-Pressure Ratings:
 - 1. For Piping Containing Only Vapor:
 - a. Piping and Valves: 125 psig unless otherwise indicated.

2. For Piping Containing Liquid:
 - a. Piping between Shutoff Valves: 350 psig unless otherwise indicated.
 - b. Piping Other Than Above: 250 psig unless otherwise indicated.
 - c. Valves and Fittings: 250 psig unless otherwise indicated.
3. Minimum Operating Pressure of Service Meter: 5 psig.
- B. LPG System Pressures within Buildings: Two pressure ranges. Primary pressure is more than 0.5 psig but not more than 2 psig and is reduced to secondary pressure of 0.5 psig or less.

1.5 SUBMITTALS

- A. Product Data: For each type of the following:
 1. Piping specialties.
 2. Corrugated stainless-steel tubing with associated components.
 3. Valves. Include pressure rating, capacity, settings, and electrical connection data of selected models.
 4. Pressure regulators. Indicate pressure ratings and capacities.
 5. Dielectric fittings.
 6. Mechanical sleeve seals.
 7. Escutcheons.
- B. Shop Drawings: For facility LPG piping layout. Include plans, piping layout and elevations, sections, and details for fabrication of pipe anchors, hangers, supports for multiple pipes, alignment guides, expansion joints and loops, and attachments of the same to building structure. Detail location of anchors, alignment guides, and expansion joints and loops.
 1. Shop Drawing Scale: 1/4 inch per foot.
 2. Detail mounting, supports, valve arrangements, and pressure regulator assembly.
- C. Coordination Drawings: Plans and details, drawn to scale, on which natural-gas piping is shown and coordinated with other installations, using input from installers of the items involved.
- D. Site Survey: Plans, drawn to scale, on which natural-gas piping is shown and coordinated with other services and utilities.
- E. Qualification Data: For qualified professional engineer.
- F. Welding certificates.
- G. Field quality-control reports.

- H. Operation and Maintenance Data: For LPG equipment and accessories to include in emergency, operation, and maintenance manuals.

1.6 QUALITY ASSURANCE

- A. Steel Support Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
- B. Pipe Welding Qualifications: Qualify procedures and operators according to ASME Boiler and Pressure Vessel Code.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Handling Flammable Liquids: Remove and dispose of liquids from existing LPG piping according to requirements of authorities having jurisdiction.
- B. Deliver pipes and tubes with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe end damage and to prevent entrance of dirt, debris, and moisture.
- C. Store and handle pipes and tubes having factory-applied protective coatings to avoid damaging coating and protect from direct sunlight.
- D. Protect stored PE pipes and valves from direct sunlight.

1.8 PROJECT CONDITIONS

- A. Perform site survey, research public utility records, and verify existing utility locations. Contact utility-locating service for area where Project is located.

1.9 COORDINATION

- A. Coordinate LP Gas service requirements with LP Gas service provider.
- B. Coordinate sizes and locations of concrete bases with actual equipment provided.
- C. Coordinate requirements for access panels and doors for valves installed concealed behind finished surfaces. Comply with requirements in Division 08 Section "Access Doors and Frames."

PART 2 PRODUCTS

2.1 PIPES, TUBES, AND FITTINGS

- A. Steel Pipe: ASTM A 53/A 53M, black steel, Schedules 40, Type E or S, Grade B.
 - 1. Malleable-Iron Threaded Fittings: ASME B16.3, Class 150, standard pattern.
 - 2. Wrought-Steel Welding Fittings: ASTM A 234/A 234M for butt welding and socket welding.

3. Unions: ASME B16.39, Class 150, malleable iron with brass-to-iron seat, ground joint, and threaded ends.
 4. Forged-Steel Flanges and Flanged Fittings: ASME B16.5, minimum Class 150, including bolts, nuts, and gaskets of the following material group, end connections, and facings:
 - a. Material Group: 1.1.
 - b. End Connections: Threaded or butt welding to match pipe.
 - c. Lapped Face: Not permitted underground.
 - d. Gasket Materials: ASME B16.20, metallic, flat, asbestos free, aluminum o-rings, and spiral-wound metal gaskets.
 - e. Bolts and Nuts: ASME B18.2.1, carbon steel aboveground, and stainless steel underground.
 5. Protective Coating for Underground Piping: Factory-applied, three-layer coating of epoxy, adhesive, and PE.
 - a. Joint Cover Kits: Epoxy paint, adhesive, and heat-shrink PE sleeves.
 6. Mechanical Couplings:
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Dresser Piping Specialties; Division of Dresser, Inc.
 - 2) Smith-Blair, Inc.
 - b. Steel flanges and tube with epoxy finish.
 - c. Buna-nitrile seals.
 - d. Steel bolts, washers, and nuts.
 - e. Coupling shall be capable of joining PE pipe to PE pipe, steel pipe to PE pipe, or steel pipe to steel pipe.
 - f. Steel body couplings installed underground on plastic pipe shall be factory equipped with anode.
- B. PE Pipe: ASTM D 2513, SDR 11.
1. PE Fittings: ASTM D 2683, socket-fusion type or ASTM D 3261, butt-fusion type with dimensions matching PE pipe.
 2. PE Transition Fittings: Factory-fabricated fittings with PE pipe complying with ASTM D 2513, SDR 11; and steel pipe complying with ASTM A 53/A 53M, black steel, Schedule 40, Type E or S, Grade B.

3. Anodeless Service-Line Risers: Factory fabricated and leak tested.
 - a. Underground Portion: PE pipe complying with ASTM D 2513, SDR 11 inlet.
 - b. Casing: Steel pipe complying with ASTM A 53/A 53M, Schedule 40, black steel, Type E or S, Grade B with corrosion-protective coating covering. Vent casing aboveground.
 - c. Aboveground Portion: PE transition fitting.
 - d. Outlet shall be threaded or flanged or suitable for welded connection.
 - e. Tracer wire connection.
 - f. Ultraviolet shield.
 - g. Stake supports with factory finish to match steel pipe casing or carrier pipe.
4. Transition Service-Line Risers: Factory fabricated and leak tested.
 - a. Underground Portion: PE pipe complying with ASTM D 2513, SDR 11 inlet connected to steel pipe complying with ASTM A 53/A 53M, Schedule 40, Type E or S, Grade B, with corrosion-protective coating for aboveground outlet.
 - b. Outlet shall be threaded or flanged or suitable for welded connection.
 - c. Bridging sleeve over mechanical coupling.
 - d. Factory-connected anode.
 - e. Tracer wire connection.
 - f. Ultraviolet shield.
 - g. Stake supports with factory finish to match steel pipe casing or carrier pipe.
5. Plastic Mechanical Couplings, NPS 1-1/2 and Smaller: Capable of joining PE pipe to PE pipe.
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Lyall, R. W. & Company, Inc.
 - 2) Mueller Co.; Gas Products Div.
 - 3) Perfection Corporation; a subsidiary of American Meter Company.
 - b. PE body with molded-in, stainless-steel support ring.
 - c. Buna-nitrile seals.
 - d. Acetal collets.
 - e. Electro-zinc-plated steel stiffener.

6. Plastic Mechanical Couplings, NPS 2 and Larger: Capable of joining PE pipe to PE pipe, steel pipe to PE pipe, or steel pipe to steel pipe.
 - a. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Lyall, R. W. & Company, Inc.
 - 2) Mueller Co.; Gas Products Div.
 - 3) Perfection Corporation; a subsidiary of American Meter Company.
 - b. Fiber-reinforced plastic body.
 - c. PE body tube.
 - d. 6Buna-nitrile seals.
 - e. Acetal collets.
 - f. Stainless-steel bolts, nuts, and washers.
7. Steel Mechanical Couplings: Capable of joining plain-end PE pipe to PE pipe, steel pipe to PE pipe, or steel pipe to steel pipe.
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Dresser Piping Specialties; Division of Dresser, Inc.
 - 2) Smith-Blair, Inc.
 - b. Steel flanges and tube with epoxy finish.
 - c. Buna-nitrile seals.
 - d. Steel bolts, washers, and nuts.
 - e. Factory-installed anode for steel-body couplings installed underground.

2.2 PIPING SPECIALTIES

A. Flexible Piping Joints:

1. Approved for LPG service.
2. Stainless-steel bellows with woven, flexible, bronze, wire-reinforcing protective jacket.
3. Minimum working pressure of 250 psig and 250 deg F operating temperature.
4. Flanged- or threaded-end connections to match equipment connected and shall be capable of minimum 3/4-inch misalignment.
5. Maximum 36-inch length for liquid LPG lines.

B. Appliance Flexible Connectors:

1. Indoor, Fixed-Appliance Flexible Connectors: Comply with ANSI Z21.24.
2. Indoor, Movable-Appliance Flexible Connectors: Comply with ANSI Z21.69.
3. Outdoor, Appliance Flexible Connectors: Comply with ANSI Z21.75.
4. Corrugated stainless-steel tubing with polymer coating.
5. Operating-Pressure Rating: 0.5 psig.
6. End Fittings: Zinc-coated steel.
7. Threaded Ends: Comply with ASME B1.20.1.
8. Maximum Length: 72 inches.

C. Quick-Disconnect Devices: Comply with ANSI Z21.41.

1. Copper-alloy convenience outlet and matching plug connector.
2. Nitrile seals.
3. Hand operated with automatic shutoff when disconnected.
4. For indoor or outdoor applications.
5. Adjustable, retractable restraining cable.

D. Y-Pattern Strainers:

1. Body: ASTM A 126, Class B, cast iron with bolted cover and bottom drain connection.
2. End Connections: Threaded ends for NPS 2 and smaller, flanged ends for NPS 2-1/2 and larger.
3. Strainer Screen: 40-mesh startup strainer and perforated stainless-steel basket with 50 percent free area.
4. CWP Rating: 125 psig.

E. Weatherproof Vent Cap: Cast- or malleable-iron increaser fitting with corrosion-resistant wire screen, with free area at least equal to cross-sectional area of connecting pipe and threaded-end connection.

2.3 JOINING MATERIALS

A. Joint Compound and Tape: Suitable for LPG.

B. Welding Filler Metals: Comply with AWS D10.12/D10.12M for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.

- C. Brazing Filler Metals: Alloy with melting point greater than 1000 deg F complying with AWS A5.8/A5.8M. Brazing alloys containing more than 0.05 percent phosphorus are prohibited.

2.4 MANUAL GAS SHUTOFF VALVES

- A. See "Underground Manual Gas Shutoff Valve Schedule" and "Aboveground Manual Gas Shutoff Valve Schedule" Articles for where each valve type is applied in various services.
- B. Metallic Valves, NPS 2 and Smaller for Liquid Service: Comply with ASME B16.33 and UL 842.
 - 1. CWP Rating: 250 psig.
 - 2. Threaded Ends: Comply with ASME B1.20.1.
 - 3. Socket ends for brazed joints.
 - 4. Tamperproof Feature: Locking feature for valves indicated in "Underground Manual Gas Shutoff Valve Schedule" and "Aboveground Manual Gas Shutoff Valve Schedule" Articles.
 - 5. Listing by CSA or agency acceptable to authorities having jurisdiction for valves 1 inch and smaller.
 - 6. Valves 1-1/4 inch and larger shall be suitable for LPG service, with "WOG" indicated on valve body.
- C. General Requirements for Metallic Valves, NPS 2 and Smaller for Vapor Service: Comply with ASME B16.33.
 - 1. CWP Rating: 125 psig.
 - 2. Threaded Ends: Comply with ASME B1.20.1.
 - 3. Dryseal Threads on Flare Ends: Comply with ASME B1.20.3.
 - 4. Tamperproof Feature: Locking feature for valves indicated in "Underground Manual Gas Shutoff Valve Schedule" and "Aboveground Manual Gas Shutoff Valve Schedule" Articles.
 - 5. Listing: Listed and labeled by an NRTL acceptable to authorities having jurisdiction for valves 1 inch and smaller.
 - 6. Service Mark: Valves 1-1/4 inch to NPS 2 shall have initials "WOG" permanently marked on valve body.
- D. One-Piece, Bronze Ball Valve with Bronze Trim: MSS SP-110.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. BrassCraft Manufacturing Company; a Masco company.
 - b. Conbraco Industries, Inc.; Apollo Div.

- c. Lyall, R. W. & Company, Inc.
 - d. McDonald, A. Y. Mfg. Co.
 - e. Perfection Corporation; a subsidiary of American Meter Company.
 - 2. Body: Bronze, complying with ASTM B 584.
 - 3. Ball: Chrome-plated brass.
 - 4. Stem: Bronze; blowout proof.
 - 5. Seats: Reinforced TFE; blowout proof.
 - 6. Packing: Separate packnut with adjustable-stem packing threaded ends.
 - 7. Ends: Threaded, flared, or socket as indicated in "Underground Manual Gas Shutoff Valve Schedule" and "Aboveground Manual Gas Shutoff Valve Schedule" Articles.
 - 8. CWP Rating: 600 psig.
 - 9. Listing: Valves NPS 1 and smaller shall be listed and labeled by an NRTL acceptable to authorities having jurisdiction.
 - 10. Service: Suitable for LPG service with "WOG" indicated on valve body.
- E. Two-Piece, Full-Port, Bronze Ball Valves with Bronze Trim: MSS SP-110.
- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. BrassCraft Manufacturing Company; a Masco company.
 - b. Conbraco Industries, Inc.; Apollo Div.
 - c. Lyall, R. W. & Company, Inc.
 - d. McDonald, A. Y. Mfg. Co.
 - e. Perfection Corporation; a subsidiary of American Meter Company.
 - 2. Body: Bronze, complying with ASTM B 584.
 - 3. Ball: Chrome-plated bronze.
 - 4. Stem: Bronze; blowout proof.
 - 5. Seats: Reinforced TFE; blowout proof.
 - 6. Packing: Threaded-body packnut design with adjustable-stem packing.
 - 7. Ends: Threaded, flared, or socket as indicated in "Underground Manual Gas Shutoff Valve Schedule" and "Aboveground Manual Gas Shutoff Valve Schedule" Articles.
 - 8. CWP Rating: 600 psig.

9. Listing: Valves NPS 1 and smaller shall be listed and labeled by an NRTL acceptable to authorities having jurisdiction.
 10. Service: Suitable for LPG service with "WOG" indicated on valve body.
- F. Bronze Plug Valves: MSS SP-78.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Lee Brass Company.
 - b. McDonald, A. Y. Mfg. Co.
 2. Body: Bronze, complying with ASTM B 584.
 3. Plug: Bronze.
 4. Ends: Threaded, socket, or flanged as indicated in "Underground Manual Gas Shutoff Valve Schedule" and "Aboveground Manual Gas Shutoff Valve Schedule" Articles.
 5. Operator: Square head or lug type with tamperproof feature where indicated.
 6. Pressure Class: 125 psig.
 7. Listing: Valves NPS 1 and smaller shall be listed and labeled by an NRTL acceptable to authorities having jurisdiction.
 8. Service: Suitable for LPG service with "WOG" indicated on valve body.
- G. PE Ball Valves: Comply with ASME B16.40.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Kerotest Manufacturing Corp.
 - b. Lyall, R. W. & Company, Inc.
 - c. Perfection Corporation; a subsidiary of American Meter Company.
 2. Body: PE.
 3. Ball: PE.
 4. Stem: Acetal.
 5. Seats and Seals: Nitrile.
 6. Ends: Plain or fusible to match piping.
 7. CWP Rating: 80 psig.
 8. Operating Temperature: Minus 20 to plus 140 deg F.

9. Operator: Nut or flat head for key operation.
10. Include plastic valve extension.
11. Include tamperproof locking feature for valves where indicated on Drawings.

H. Valve Boxes:

1. Cast-iron, two-section box.
2. Top section with cover with "GAS" lettering.
3. Bottom section with base to fit over valve and barrel a minimum of 5 inches in diameter.
4. Adjustable cast-iron extensions of length required for depth of bury.
5. Include tee-handle, steel operating wrench with socket end fitting valve nut or flat head and with stem of length required to operate valve.

2.5 SOLENOID GAS VALVES

A. Automatic Gas Valves: Comply with ANSI Z21.21.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following
 - a. ASCO.
 - b. Honeywell International Inc.
 - c. Maxon
2. Body: Brass or aluminum.
3. Seats and Disc: Nitrile rubber.
4. Springs and Valve Trim: Stainless steel.
5. Normally closed.
6. Visual position indicator.
7. Electrical operator for actuation by automatic shutoff device..
8. Provide normally closed, manual reset solenoid valves with open-shut indicator, auxiliary switches and terminal block, suitable for gas service and exterior weatherproof applications. Coordinate location of valves with other trades. Coordinate requirements for power circuiting and control circuiting to fire alarm system and/or kitchen hood (whichever applies). Valves shall be Maxon Series SMM or approved equal. Coordinate power source and required voltage with Electrical Contractor and Fire Alarm System Contractor prior to ordering valves.

2.6 PRESSURE REGULATORS

A. General Requirements:

1. Single stage and suitable for LPG.
2. Steel jacket and corrosion-resistant components.
3. Elevation compensator.
4. End Connections: Threaded for regulators NPS 2 and smaller, flanged for regulators NPS 2-1/2 and larger
5. Provide gas pressure regulators as required and shown on the plans to maintain the required food service equipment pressure and flow, despite inlet pressure fluctuation.
6. Regulator size shall provide maximum flow required at the highest outlet pressure needed (take into consideration incoming line losses).
7. Regulator spring shall be chosen so desired outlet pressure is centered within its range. Regulator inlet pressure cannot be exceeded at outlet. Provide a spare spring in the next higher pressure range to avoid start-up inconvenience if system pressure drops exceed those anticipated.
8. Orifice size shall be the smallest compatible with required capacity.
9. Mounting position may affect regulator performance. See manufacturer's specific regulator data for any limitations.
10. Install gas pressure regulators per the manufacturer's installation recommendations and guidelines.
11. Gas pressure regulators shall be as manufactured by Maxon or approved equal..

B. Service Pressure Regulators: Comply with ANSI Z21.80.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following
 - a. Actaris.
 - b. American Meter Company.
 - c. Fisher Control Valves and Regulators; Division of Emerson Process Management.
 - d. Invensys.
 - e. Maxitrol Company.
 - f. Richards Industries; Jordan Valve Div.
2. Body and Diaphragm Case: Cast iron or die-cast aluminum.
3. Springs: Zinc-plated steel; interchangeable.

4. Diaphragm Plate: Zinc-plated steel.
 5. Seat Disc: Nitrile rubber resistant to gas impurities, abrasion, and deformation at the valve port.
 6. Orifice: Aluminum; interchangeable.
 7. Seal Plug: Ultraviolet-stabilized, mineral-filled nylon.
 8. Single-port, self-contained regulator with orifice no larger than required at maximum pressure inlet and no pressure sensing piping external to the regulator.
 9. Pressure regulator shall maintain discharge pressure setting downstream and not exceed 150 percent of design discharge pressure at shutoff.
 10. Overpressure Protection Device: Factory mounted on pressure regulator.
 11. Atmospheric Vent: Factory- or field-installed, stainless-steel screen in opening if not connected to vent piping.
 12. Maximum Inlet Pressure: 100 psig.
- C. Line Pressure Regulators: Comply with ANSI Z21.80.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following
 - a. Actaris.
 - b. American Meter Company.
 - c. Eclipse Combustion, Inc.
 - d. Fisher Control Valves and Regulators; Division of Emerson Process Management.
 - e. Invensys.
 - f. Maxitrol Company.
 - g. Richards Industries; Jordan Valve Div.
 2. Body and Diaphragm Case: Cast iron or die-cast aluminum.
 3. Springs: Zinc-plated steel; interchangeable.
 4. Diaphragm Plate: Zinc-plated steel.
 5. Seat Disc: Nitrile rubber resistant to gas impurities, abrasion, and deformation at the valve port.
 6. Orifice: Aluminum; interchangeable.
 7. Seal Plug: Ultraviolet-stabilized, mineral-filled nylon.

8. Single-port, self-contained regulator with orifice no larger than required at maximum pressure inlet and no pressure sensing piping external to the regulator.
 9. Pressure regulator shall maintain discharge pressure setting downstream and not exceed 150 percent of design discharge pressure at shutoff.
 10. Overpressure Protection Device: Factory mounted on pressure regulator.
 11. Atmospheric Vent: Factory- or field-installed, stainless-steel screen in opening if not connected to vent piping.
 12. Maximum Inlet Pressure: 2 psig.
 13. Vent Limiting Device (indoor applications only):
 - a. Comply with ANSI Z21.80
 - b. Vent limiters shall only be installed on regulators for which they are certified.
 - c. Vent limiters shall be manufactured of materials having melting point of not less than 800°F.
 - d. Maximum allowable flow rate: 1.0 cfm at 1.53 specific gravity.
- E. Appliance Pressure Regulators: Comply with ANSI Z21.18.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following
 - a. Canadian Meter Company Inc.
 - b. Eaton Corporation; Controls Div.
 - c. Harper Wyman Co.
 - d. Maxitrol Company.
 - e. SCP, Inc.
 - f. <Insert manufacturer's name>.
 2. Body and Diaphragm Case: Die-cast aluminum.
 3. Springs: Zinc-plated steel; interchangeable.
 4. Diaphragm Plate: Zinc-plated steel.
 5. Seat Disc: Nitrile rubber.
 6. Seal Plug: Ultraviolet-stabilized, mineral-filled nylon.
 7. Factory-Applied Finish: Minimum three-layer polyester and polyurethane paint finish.
 8. Regulator may include vent limiting device, instead of vent connection, if approved by authorities having jurisdiction.

9. Maximum Inlet Pressure: 2 psig.

2.7 DIELECTRIC FITTINGS

A. Dielectric Unions:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following
 - a. Capitol Manufacturing Company.
 - b. Central Plastics Company.
 - c. Hart Industries International, Inc.
 - d. McDonald, A. Y. Mfg. Co.
 - e. Watts Regulator Co.; Division of Watts Water Technologies, Inc.
 - f. Wilkins; Zurn Plumbing Products Group.
2. Minimum Operating-Pressure Rating: 150 psig.
3. Combination fitting of copper alloy and ferrous materials.
4. Insulating materials suitable for LPG.
5. Combination fitting of copper alloy and ferrous materials with threaded, brazed-joint, plain, or welded end connections that match piping system materials.

B. Dielectric Flanges:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following
 - a. Capitol Manufacturing Company.
 - b. Central Plastics Company.
 - c. Watts Regulator Co.; Division of Watts Water Technologies, Inc.
 - d. Wilkins; Zurn Plumbing Products Group.
2. Minimum Operating-Pressure Rating: 150 psig.
3. Combination fitting of copper alloy and ferrous materials.
4. Insulating materials suitable for LPG.
5. Combination fitting of copper alloy and ferrous materials with threaded, brazed-joint, plain, or welded end connections that match piping system materials.

C. Dielectric-Flange Kits:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following
 - a. Advance Products & Systems, Inc.
 - b. Calpico Inc.
 - c. Central Plastics Company.
 - d. Pipeline Seal and Insulator, Inc.
2. Minimum Operating-Pressure Rating: 150 psig.
3. Companion-flange assembly for field assembly.
4. Include flanges, full-face- or ring-type neoprene or phenolic gasket, phenolic or PE bolt sleeves, phenolic washers, and steel backing washers.
5. Insulating materials suitable for LPG.
6. Combination fitting of copper alloy and ferrous materials with threaded, brazed-joint, plain, or welded end connections that match piping system materials.

2.8 SLEEVES

- A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.
- B. Cast-Iron Pipe Sleeves: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.

2.9 MECHANICAL SLEEVE SEALS

- A. Description: Modular sealing element unit, designed for field assembly, to fill annular space between pipe and sleeve.
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following
 - a. Advance Products & Systems, Inc.
 - b. Calpico Inc.
 - c. Metraflex Company (The).
 - d. Pipeline Seal and Insulator, Inc.
 2. Sealing Elements: EPDM interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe and sleeve.
 3. Pressure Plates: Stainless steel.

4. Connecting Bolts and Nuts: Stainless steel of length required to secure pressure plates to sealing elements. Include one nut and bolt for each sealing element.

2.10 ESCUTCHEONS

- A. General Requirements for Escutcheons: Manufactured wall and ceiling escutcheons and floor plates, with ID to fit around pipe or tube, and OD that completely covers opening.
- B. One-Piece, Deep-Pattern Escutcheons: Deep-drawn brass with polished chrome-plated finish.
- C. One-Piece, Cast-Brass Escutcheons: With set screw.
 1. Finish: Polished chrome-plated.
- D. One-Piece, Stamped-Steel Escutcheons: With set screw or spring clips and chrome-plated finish.
- E. One-Piece, Floor-Plate Escutcheons: Cast-iron floor plate.
- F. Split-Casting, Floor-Plate Escutcheons: Cast brass with concealed hinge and set screw.

2.11 GROUT

- A. Description: ASTM C 1107, Grade B, nonshrink and nonmetallic, dry hydraulic-cement grout.
 1. Characteristics: Post-hardening, volume adjusting, nonstaining, noncorrosive, nongaseous, and recommended for interior and exterior applications.
 2. Design Mix: 5000-psi, 28-day compressive strength.
 3. Packaging: Premixed and factory packaged.

2.12 LABELING AND IDENTIFYING

- A. Detectable Warning Tape: Acid- and alkali-resistant PE film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored yellow.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine roughing-in for LPG piping system to verify actual locations of piping connections before equipment installation.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 EARTHWORK

- A. Comply with requirements in Division 31 Section "Earth Moving" for excavating, trenching, and backfilling.

3.3 PREPARATION

- A. Close equipment shutoff valves before turning off LPG to premises or piping section.
- B. Inspect LPG piping according to NFPA 58 to determine that LPG utilization devices are turned off in piping section affected.
- C. Comply with NFPA 58 requirements for prevention of accidental ignition.

3.4 OUTDOOR PIPING INSTALLATION

- A. Comply with NFPA 58 requirements for installation and purging of LPG piping.
- B. Install underground, LPG piping buried at least 36 inches below finished grade. Comply with requirements in Division 31 Section "Earth Moving" for excavating, trenching, and backfilling.
 - 1. If LPG piping is installed less than 36 inches below finished grade, install it in containment conduit.
- C. Install underground, PE, LPG piping according to ASTM D 2774.
- D. Steel Piping with Protective Coating:
 - 1. Apply joint cover kits to pipe after joining to cover, seal, and protect joints.
 - 2. Repair damage to PE coating on pipe as recommended in writing by protective coating manufacturer.
 - 3. Replace pipe having damaged PE coating with new pipe.
- E. Install fittings for changes in direction and branch connections.
- F. Joints for connection to inlets and outlets on vaporizers, air mixers, regulators, and valves may be flanged or threaded to match the equipment.
- G. Aboveground, Exterior-Wall Pipe Penetrations: Seal penetrations using sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.
 - 1. Install steel pipe for sleeves smaller than 6 inches in diameter.
- H. Underground, Exterior-Wall Pipe Penetrations: Install cast-iron "wall pipes" for sleeves. Seal pipe penetrations using mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.
- I. Mechanical Sleeve Seal Installation: Select type and number of sealing elements required for pipe material and size. Position pipe in center of sleeve. Assemble mechanical sleeve seals and install in annular space between pipe and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

- J. Install pressure gage upstream and downstream from each service regulator.

3.5 INDOOR PIPING INSTALLATION

- A. Comply with NFPA 58 for installation and purging of LPG piping.
- B. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, and other design considerations. Install piping as indicated unless deviations to layout are approved on Coordination Drawings.
- C. Arrange for pipe spaces, chases, slots, sleeves, and openings in building structure during progress of construction, to allow for mechanical installations.
- D. Install piping in concealed locations unless otherwise indicated and except in equipment rooms and service areas.
- E. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.
- F. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.
- G. Locate valves for easy access.
- H. Install LPG piping at uniform grade of 2 percent down toward drip and sediment traps.
- I. Install piping free of sags and bends.
- J. Install fittings for changes in direction and branch connections.
- K. Install escutcheons for penetrations of interior walls, ceilings, and floors.
 - 1. New Piping:
 - a. Piping with Fitting or Sleeve Protruding from Wall: One-piece, deep-pattern type.
 - b. Piping at Wall and Floor Penetrations in Finished Spaces: One-piece, cast-brass type with polished chrome-plated finish.
 - c. Piping at Ceiling Penetrations in Finished Spaces: One-piece, cast-brass type with polished chrome-plated finish.
 - d. Piping in Unfinished Service Spaces: One-piece, cast-brass type with rough-brass finish.
 - e. Piping in Equipment Rooms: One-piece, cast-brass type.
 - f. Piping at Floor Penetrations in Equipment Rooms: One-piece, floor-plate type.
 - L. Fire-Barrier Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at pipe penetrations. Seal pipe penetrations with firestop materials. Comply with requirements in Division 07 Section "Penetration Firestopping" for materials.

- M. Verify final equipment locations for roughing-in.
- N. Comply with requirements in Sections specifying gas-fired appliances and equipment for roughing-in requirements.
- O. Drips and Sediment Traps: Install drips at points where condensate may collect, including service-meter outlets. Locate where readily accessible to permit cleaning and emptying. Do not install where condensate is subject to freezing.
 - 1. Construct drips and sediment traps using tee fitting with bottom outlet plugged or capped. Use nipple a minimum length of 3 pipe diameters, but not less than 3 inches (75 mm) long and same size as connected pipe. Install with space below bottom of drip to remove plug or cap.
- P. Extend relief vent connections for service regulators, line regulators, and overpressure protection devices to outdoors and terminate with weatherproof vent cap.
- Q. Where line pressure regulators are provided with vent limiters, the vent limiting device shall be installed directly to the regulator without intermediate pipe or fittings. Regulator must be mounted in horizontal, upright position.
- R. Conceal pipe installations in walls, pipe spaces, utility spaces, above ceilings, below grade or floors, and in floor channels unless indicated to be exposed to view.
- S. Concealed Location Installations: Except as specified below, install concealed LPG piping and piping installed under the building in containment conduit constructed of steel pipe with welded joints as described in Part 2. Install a vent pipe from containment conduit to outdoors and terminate with weatherproof vent cap.
 - 1. Above Accessible Ceilings: LPG piping, fittings, valves, and regulators may be installed in accessible spaces without containment conduit.
 - 2. In Floors: Install LPG piping with welded or brazed joints and protective coating in cast-in-place concrete floors. Cover piping to be cast in concrete slabs with minimum of 1-1/2 inches of concrete. Piping may not be in physical contact with other metallic structures such as reinforcing rods or electrically neutral conductors. Do not embed piping in concrete slabs containing quick-set additives or cinder aggregate.
 - 3. In Floor Channels: Install LPG piping in floor channels. Channels must have cover and be open to space above cover for ventilation.
 - 4. In Walls or Partitions: Protect tubing installed inside partitions or hollow walls from physical damage using steel striker barriers at rigid supports.
 - a. Exception: Tubing passing through partitions or walls does not require striker barriers.
 - 5. Prohibited Locations:
 - a. Do not install LPG piping in or through circulating air ducts, clothes or trash chutes, chimneys or gas vents (flues), ventilating ducts, or dumbwaiter or elevator shafts.
 - b. Do not install LPG piping in solid walls or partitions.

- T. Use eccentric reducer fittings to make reductions in pipe sizes. Install fittings with level side down.
- U. Connect branch piping from top or side of horizontal piping.
- V. Install unions in pipes NPS 2 and smaller, adjacent to each valve, at final connection to each piece of equipment. Unions are not required at flanged connections.
- W. Do not use LPG piping as grounding electrode.
- X. Install strainer on inlet of each line-pressure regulator and automatic or electrically operated valve.
- Y. Install pressure gage upstream and downstream from each line regulator.

3.6 VALVE INSTALLATION

- A. Install manual gas shutoff valve for each gas appliance ahead of corrugated stainless-steel tubing, aluminum, or copper connector.
- B. Install underground valves with valve boxes.
- C. Install regulators and overpressure protection devices with maintenance access space adequate for servicing and testing.
- D. Install anode for metallic valves in underground PE piping.
- E. Install exterior, automatic gas shutoff valves in lockable enclosure to prevent unintended shut-off or vandalism.

3.7 PIPING JOINT CONSTRUCTION

- A. Ream ends of pipes and tubes and remove burrs.
- B. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
- C. Threaded Joints:
 - 1. Thread pipe with tapered pipe threads complying with ASME B1.20.1.
 - 2. Cut threads full and clean using sharp dies.
 - 3. Ream threaded pipe ends to remove burrs and restore full ID of pipe.
 - 4. Apply appropriate tape or thread compound to external pipe threads unless dryseal threading is specified.
 - 5. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.

D. Welded Joints:

1. Construct joints according to AWS D10.12/D10.12M, using qualified processes and welding operators.
2. Bevel plain ends of steel pipe.
3. Patch factory-applied protective coating as recommended by manufacturer at field welds and where damage to coating occurs during construction.

E. Brazed Joints: Construct joints according to AWS's "Brazing Handbook," Ch. 22, "Pipe and Tube."

F. Flared Joints: Cut tubing with roll cutting tool. Flare tube end with tool to result in flare dimensions complying with SAE J513. Tighten finger tight, then use wrench. Do not overtighten.

G. PE Piping Heat-Fusion Joints: Clean and dry joining surfaces by wiping with clean cloth or paper towels. Join according to ASTM D 2657.

1. Plain-End Pipe and Fittings: Use butt fusion.
2. Plain-End Pipe and Socket Fittings: Use socket fusion.

3.8 HANGER AND SUPPORT INSTALLATION

A. Install seismic restraints on piping. Comply with requirements for seismic-restraint devices specified in Division 23 Section "Vibration and Seismic Controls for HVAC Piping and Equipment."

B. Comply with requirements for pipe hangers and supports specified in Division 23 Section "Hangers and Supports for HVAC Piping and Equipment."

C. Install hangers for horizontal steel piping with the following maximum spacing and minimum rod sizes:

1. NPS 1 and Smaller: Maximum span, 96 inches; minimum rod size, 3/8 inch.
2. NPS 1-1/4: Maximum span, 108 inches; minimum rod size, 3/8 inch.
3. NPS 1-1/2 and NPS 2: Maximum span, 108 inches; minimum rod size, 3/8 inch.

3.9 CONNECTIONS

A. Connect to utility's gas main according to utility's procedures and requirements.

B. Install LPG piping electrically continuous, and bonded to gas appliance equipment grounding conductor of the circuit powering the appliance according to NFPA 70.

C. Install piping adjacent to appliances to allow service and maintenance of appliances.

D. Connect piping to appliances using manual gas shutoff valves and unions. Install valve within 72 inches of each gas-fired appliances and equipment. Install union between valve and appliances or equipment.

- E. Sediment Traps: Install tee fitting with capped nipple in bottom to form drip, as close as practical to inlet of each appliance.

3.10 LABELING AND IDENTIFYING

- A. Comply with requirements in Division 23 Section "Identification for HVAC Piping and Equipment" for piping and valve identification.
- B. Install detectable warning tape directly above gas piping, 12 inches below finished grade, except 6 inches (below subgrade under pavements and slabs).

3.11 PAINTING

- A. Comply with requirements in Division 09 painting Sections for painting interior and exterior LPG piping.
- B. Paint exposed, exterior metal piping, valves, service regulators, service meters and meter bars, earthquake valves, and piping specialties, except components with factory-applied paint or protective coating.
 - 1. Alkyd System: MPI EXT 5.1D.
 - a. Prime Coat: Alkyd anticorrosive metal primer.
 - b. Intermediate Coat: Exterior alkyd enamel matching topcoat.
 - c. Topcoat: Exterior alkyd enamel semigloss.
 - d. Color: Gray.
- C. Paint exposed, interior metal piping, valves, service regulators, service meters and meter bars, earthquake valves, and piping specialties, except components with factory-applied paint or protective coating.
 - 1. Latex Over Alkyd Primer System: MPI INT 5.1Q.
 - a. Prime Coat: Alkyd anticorrosive metal primer.
 - b. Intermediate Coat: Interior latex matching topcoat.
 - c. Topcoat: Interior latex semigloss.
 - d. Color: Gray.
 - 2. Alkyd System: MPI INT 5.1E.
 - a. Prime Coat: Alkyd anticorrosive metal primer.
 - b. Intermediate Coat: Interior alkyd matching topcoat.
 - c. Topcoat: Interior alkyd semigloss.
 - d. Color: Gray.

- D. Damage and Touchup: Repair marred and damaged factory-applied finishes with materials and by procedures to match original factory finish.

3.12 CONCRETE BASES

- A. Concrete Bases: Anchor equipment to concrete bases.
 - 1. Construct concrete bases of dimensions indicated, but not less than 4 inches larger in both directions than supported unit.
 - 2. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch centers around the full perimeter of the base.
 - 3. Install epoxy-coated anchor bolts for supported equipment that extend through concrete base, and anchor into structural concrete floor.
 - 4. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 - 5. Install anchor bolts to elevations required for proper attachment to supported equipment.
 - 6. Use 3000-psig, 28-day, compressive-strength concrete and reinforcement as specified in Division 03 Section "Cast-in-Place Concrete."

3.13 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
- B. Tests and Inspections:
 - 1. Test, inspect, and purge LPG according to NFPA 58 and requirements of authorities having jurisdiction.
- C. LPG piping will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.

3.14 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain LPG equipment.

3.15 OUTDOOR PIPING SCHEDULE

- A. Underground LPG liquid piping shall be the following:
 - 1. Schedule 40 steel pipe with wrought-steel fittings and welded joints, or mechanical couplings. Coat pipe and fittings with protective coating for steel piping.

- B. Aboveground LPG liquid piping shall be the following:
 - 1. NPS 2 and Smaller: Schedule 40 steel pipe, malleable-iron threaded fittings and threaded and seal welded joints. Coat pipe and fittings with protective coating for steel piping.
- C. Underground LPG vapor piping shall be the following:
 - 1. PE pipe and fittings joined by heat-fusion, or mechanical couplings; service-line risers with tracer wire terminated in an accessible location.
- D. Aboveground LPG vapor piping shall be the following:
 - 1. Schedule 40, steel pipe with malleable-iron fittings and threaded joints.
 - 2. Schedule 40, steel pipe with wrought-steel fittings and welded joints, or mechanical couplings.
- E. Branch Piping in Cast-in-Place Concrete to Single Appliance: Annealed-temper copper, with wrought-copper fittings and brazed joints. Install piping embedded in concrete with no joints in concrete.
- F. Containment Conduit: Schedule 40, steel pipe with wrought-steel fittings and welded joints. Coat pipe and fittings with protective coating for steel piping.

3.16 INDOOR PIPING SCHEDULE FOR SYSTEM PRESSURES LESS THAN 2 PSIG

- A. Aboveground, branch piping NPS 1 and smaller shall be one of the following:
 - 1. Schedule 40, steel pipe with malleable-iron fittings and threaded joints.
- B. Aboveground, distribution piping shall be one of] the following:
 - 1. Schedule 40, steel pipe with malleable-iron fittings and threaded joints.
 - 2. Schedule 40, steel pipe with wrought-steel fittings and welded joints.
- C. Underground, below building, piping shall be[one of] the following:
 - 1. Schedule 40, steel pipe with malleable-iron fittings and threaded joints.
 - 2. Schedule 40, steel pipe with wrought-steel fittings and welded joints.
- D. Containment Conduit: Schedule 40, steel pipe with wrought-steel fittings and welded joints. Coat pipe and fittings with protective coating for steel piping.
- E. Containment Conduit Vent Piping: Schedule 40, steel pipe with malleable-iron fittings and threaded or wrought-steel fittings with welded joints. Coat underground pipe and fittings with protective coating for steel piping.

3.17 UNDERGROUND MANUAL GAS SHUTOFF VALVE SCHEDULE

- A. Connections to Existing Gas Piping: Use valve and fitting assemblies made for tapping utility's gas mains and listed by an NRTL.

- B. Underground Vapor Piping:
 - 1. PE valves.
 - 2. NPS 2 and Smaller: Bronze, lubricated plug valves.

3.18 ABOVEGROUND MANUAL GAS SHUTOFF VALVE SCHEDULE

- A. Aboveground Liquid Piping:
 - 1. Two-piece, full-port, bronze ball valves with bronze trim.
- B. Distribution piping valves for pipe NPS 2 and smaller shall be[one of] the following:
 - 1. One-piece, bronze ball valve with bronze trim.
 - 2. Two-piece, full-port, bronze ball valves with bronze trim.
 - 3. Bronze plug valve.
- C. Valves in branch piping for single appliance shall be one of the following:
 - 1. One-piece, bronze ball valve with bronze trim.
 - 2. Two-piece, full-port, bronze ball valves with bronze trim.
 - 3. Bronze plug valve.

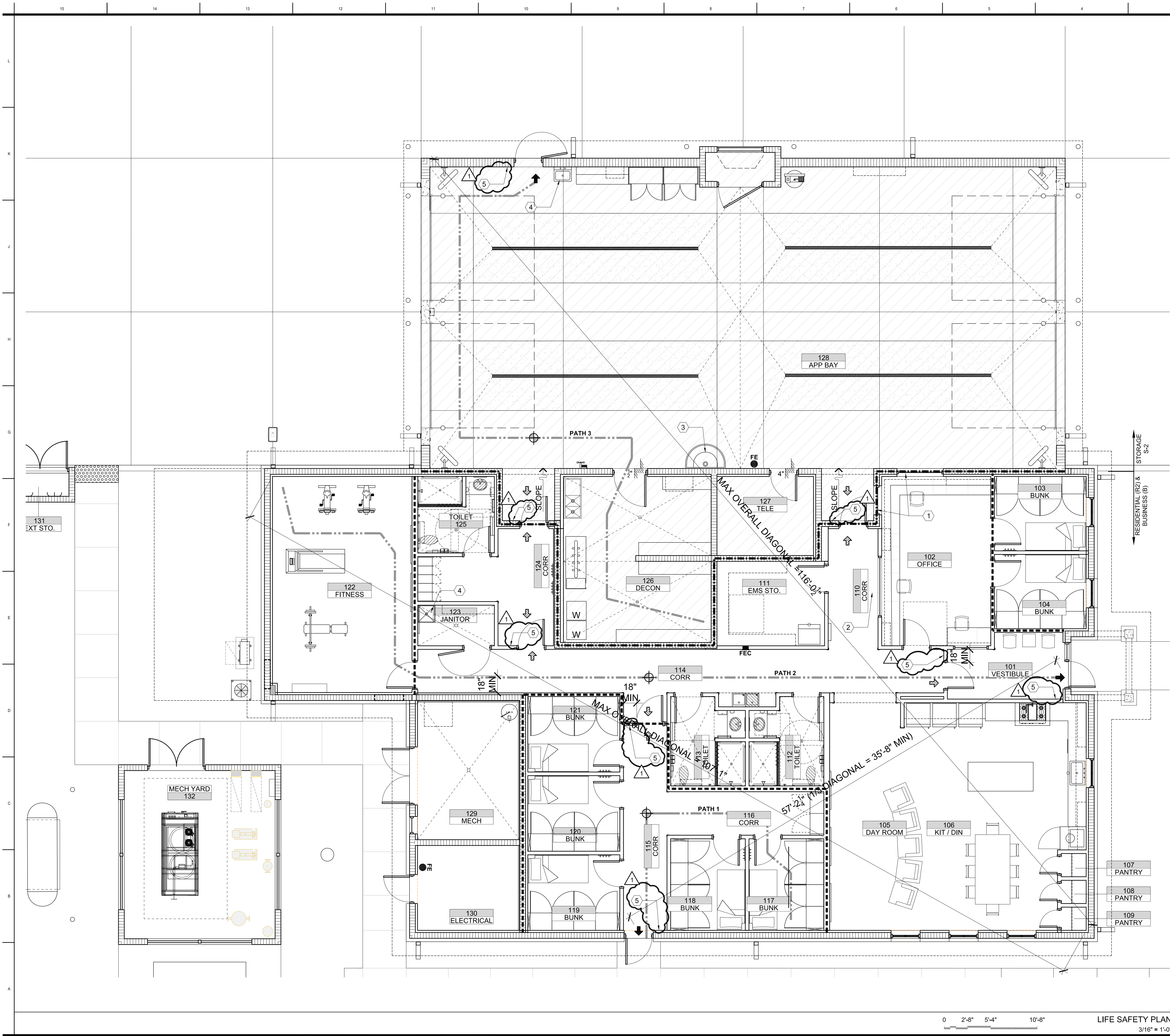
3.19 INSTALLATION—GENERAL

- A. Installation shall be in accordance with NFPA 58 and Florida Building Code—Fuel Gas.
- B. Exposed or readily accessible piping shall be graded at not less than 1/4" in 15 feet to secure drainage.
- C. Install accessible 6" long drip pockets at the bottoms of all vertical risers and such other points as required. Pockets shall be made of a full size pipe tee with one leg capped.
 - 1. One-piece, bronze ball valve with bronze trim.
 - 2. Two-piece, full-port, bronze ball valves with bronze trim.
 - 3. Bronze plug valve.
- D. Install branch shut-off cocks ahead of all appliances, burners, etc., see plans for size of lines and cocks.
- E. Provide shut-off valves where noted on plans, and as required for complete regulation or control of all systems and at each piece of equipment.
- F. Underground piping shall be coated with coal tar enamel and wrapped with pressure sensitive tape equal to tapecoat CT.
- G. Gas pipe shall be tested for tightness. Refer to Section 15400, Pressure Testing of Piping Systems.

- H. All pipe shall be supported from the building structure in a neat and workmanlike manner and wherever possible, parallel runs of horizontal piping shall be grouped together on trapeze type hangers. Vertical risers shall be supported at each floor line with steel pipe clamps. The use of wire or perforated metal to support pipes will not be permitted. Hanging pipes from other pipes will not be permitted. Spacing of pipe supports shall not exceed 8 feet for pipes up to 1-1/4" and 10 feet on all other piping.
- I. Provide a master manual emergency shut-off valve at the instructors station unless noted otherwise on the drawings.
- J. Provide one (1) emergency automatic shut-off valve at each classroom served with gas unless otherwise noted on the drawings. Provide electrical power and control circuiting for intended operation, coordinate circuiting and voltage requirements the Electrical Contractor. Valves shall be designed for exterior service.
- K. All gas piping below floor shall be welded steel and shall be sleeved and vented as required by the Florida Building Code—Fuel Gas unless otherwise noted on the drawings.
- L. Assemble all fixtures and equipment shipped loose which this Contractor is required to make final connections to, whether furnished by this Contractor or by others (i.e., science cabinet gas fixtures, etc.).
- M. Provide regulators on each gas service branch pipe termination at appliance or equipment as necessary for proper operation of appliance or equipment. Coordinate requirements with shop drawings and gas service. Refer to equipment manufacturer's recommendations. Provide independent gas piping from each pressure regulator relief vent to exterior of building.
- N. Provide one (1) emergency automatic shut-off valve at exterior wall of kitchen served with gas unless otherwise noted on the drawings. Provide electrical power and control circuiting for intended operation, coordinate circuiting and voltage requirements the Electrical Contractor. Valves shall be designed for exterior service.

*** END OF SECTION 22 16 17 ***

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PROJECT SUMMARY
NEW SUN CITY NORTH FIRE STATION 47 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 ACCESSORIES
2,139 SF BUSINESS AND ACCESSORIES
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"
41'-9"
COMMON PATH OF TRAVEL R2 (<125' OK)
DISTANCE TO EXIT (<250' OK)

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

PATH 3
40'-7"
87'-6"
COMMON PATH OF TRAVEL S2 (<100' OK)
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
5. EXIT TACTILE SIGNAGE

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
	BACKET MTD FIRE EXTINGUISHER
	CABINET MTD FIRE EXTINGUISHER
	EMERGENCY SHOWER AND EYEWASH

LIFE SAFETY PLAN

PROJECT #: 2216-02
Distribution _____ Date _____
DD SET _____ 06.06.2024
90% CD _____ 08.30.2024
PERMIT SET _____ 11.14.2024
ADDENDUM 01 _____ 03.06.2025

LIFE SAFETY PLAN

A0.1

NOTES

A1

1315 E. Seventh Avenue
Suite 106
Tampa, Florida 33605.3607
Telephone 813.242.6677
Facsimile 813.242.6683
wilderarchitecture.com

AR91271 QUALIFIER LICENSE

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

HILLSBOROUGH COUNTY
SUN CITY NORTH FIRE STATION NO. 47

PROJECT #: 2216-02
Distribution _____ Date _____
DD SET _____ 06.06.2024
90% CD _____ 08.30.2024
PERMIT SET _____ 11.14.2024
ADDENDUM 01 _____ 03.06.2025

LIFE SAFETY PLAN

A0.1

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SITE CONSTRUCTION PLANS

for

SUN CITY NORTH FIRE STATION 47

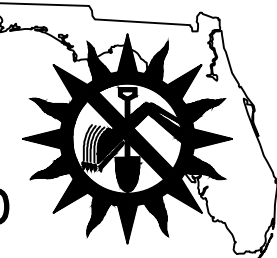
(PID U-30-31-20-ZZZ-000003-19730.0)

HILLSBOROUGH COUNTY, FLORIDA

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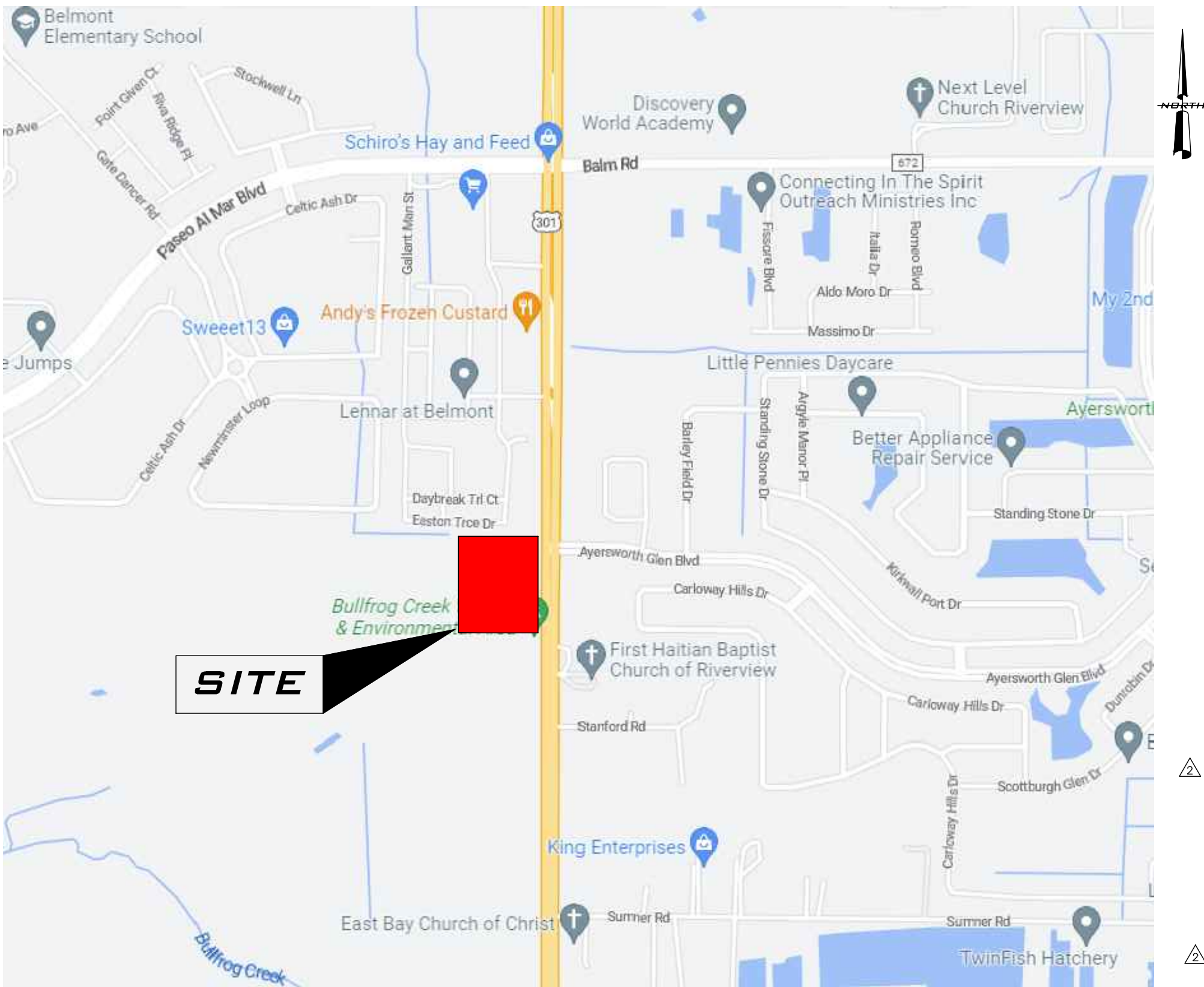
SUNSHINE STATE ONE CALL OF FLORIDA, INC.



INDEX OF DRAWINGS

DRAWING TITLE	SHEET NO.	LATEST DATE
COVER SHEET		
GENERAL NOTES & TESTING SCHEDULE	C-1	04-26-2024
EXISTING CONDITIONS PLAN	C-2	10-16-2024
OVERALL SITE PLAN	C-3	10-16-2024
MASTER DRAINAGE PLAN	C-4	07-24-2024
HORIZONTAL CONTROL PLAN	C-5	10-16-2024
PAVING, GRADING & DRAINAGE PLAN	C-6	10-16-2024
FLOODPLAIN MITIGATION PLAN	C-6A	10-16-2024
FLOODPLAIN MITIGATION PLAN	C-6B	10-16-2024
CROSS SECTIONS PLAN	C-7	10-16-2024
DRAINAGE DETAILS	C-8	10-16-2024
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UTILITY PLAN	C-10	11-26-2024
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FDOT INDEXES	C-18	04-26-2024
FDOT INDEXES	C-19	04-26-2024
LIFT STATION PLAN	C-20	11-26-2024
STORMWATER POLLUTION PREVENTION PLAN	C-21	10-17-2023
AS-BUILT REQUIREMENTS	C-22	05-10-2023
LANDSCAPE PLAN	L-1	09-30-2024
IRRIGATION PLAN	L-2	09-30-2024
INVASIVE SPECIES REMOVAL PLAN	L-3	09-30-2024

VICINITY MAP



SECTION 30 TOWNSHIP 31S RANGE 20E

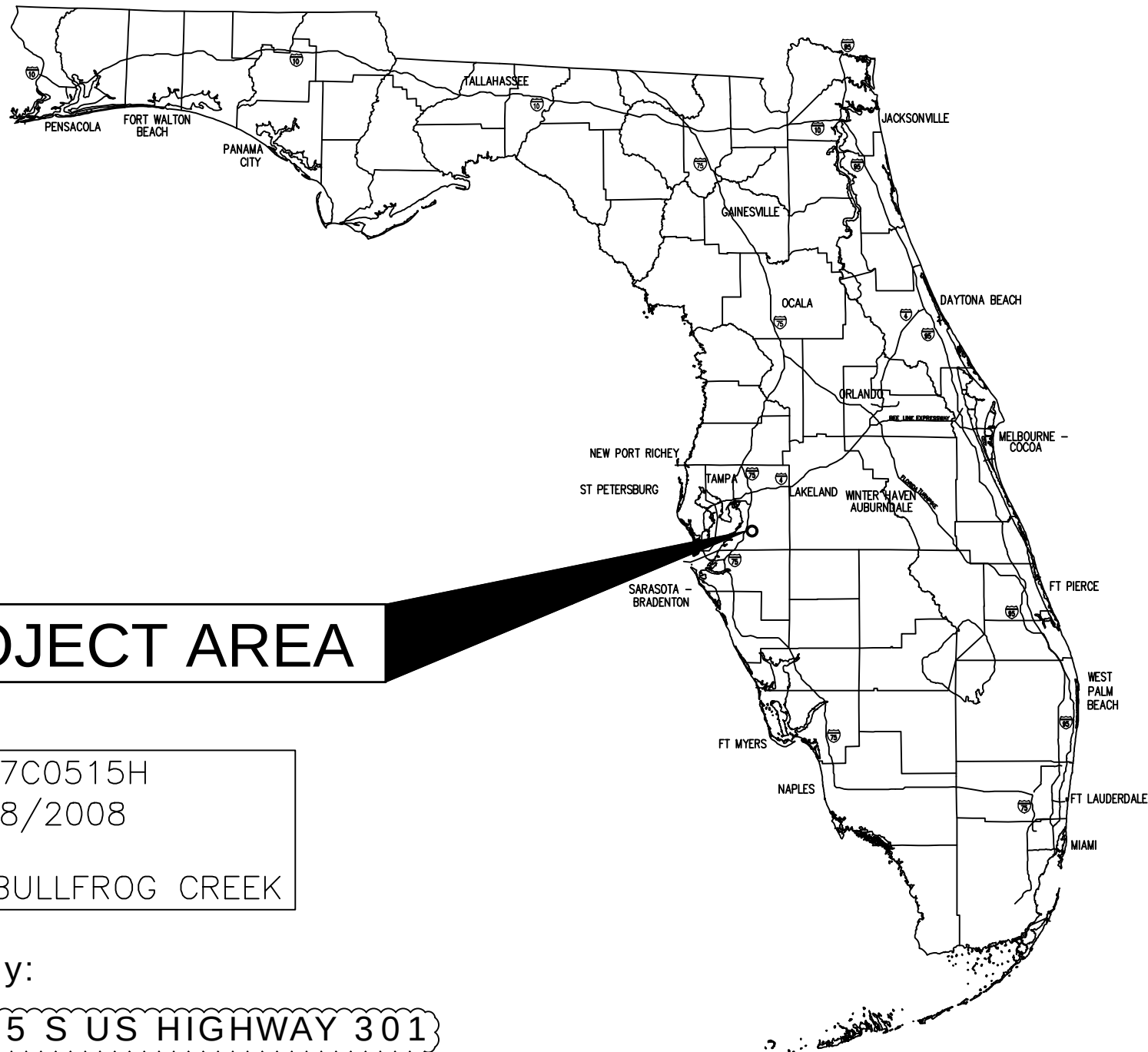
LEGAL DESCRIPTION (PROVIDED BY SURVEYOR)

THE NORTH 275 FEET OF THE FOLLOWING DESCRIBED TRACT:

THE NE 1/4 OF THE NE 1/4 OF THE NE 1/4 SECTION 30, TOWNSHIP 31 SOUTH, RANGE 20 EAST, HILLSBOROUGH COUNTY, FLORIDA; LESS ROAD RIGHT-OF-WAY FOR U.S. HIGHWAY 301.

CONTAINING 169560.89 SQUARE FEET OR 3.89 ACRES, MORE OR LESS.

LOCATION MAP



PROJECT AREA

FIRM PANEL No. 12057C0515H
EFFECTIVE DATE: 08/28/2008
FLOOD ZONE: X
STORMWATER BASIN: BULLFROG CREEK

Hillsborough County:

Site Address: 14495 S US HIGHWAY 301

Folio: 077953-0000

Property Acreage: 9.5-ac.
Project Acreage: 6.0-ac.

PID: U-30-31-20-ZZZ-000003-19730.0

Water: TBD
Wastewater: TBD

SWFWMD:

App: TBD

ERP: TBD

Dept. of Health - Water:
TBD

EPC - Sewer
TBD

FDOT:
Access: 2023-A-796-00031
Drainage: 23-D-796-00027
Water: TBD
Sewer: TBD

FDOT HIGHWAY SEGMENT # 10 010 000
SR 43 / US 301, MILEPOST 9.125, POSTED SPEED: 60 MPH, HILLSBOROUGH COUNTY
ACCESS CLASS: 3

LANE CLOSURE RESTRICTIONS:
1 LANE CLOSURE N/E RESTRICTIONS: NO RESTRICTIONS
S/W RESTRICTIONS: NO RESTRICTIONS
SIGNAL RESTRICTIONS: NO RESTRICTIONS

△ (ADDRESSED EPC & FDOT COMMENTS)	11-26-2024
△ (ADDRESSED COUNTY & FDOT COMMENTS)	10-16-2024
△ (ADDRESSED FDOT COMMENTS)	07-24-2024
△ (BUILDING SF AND UTILITY REVISION)	06-06-2024
△ (ADDRESSED EPC COMMENTS)	05-09-2024
△ (ADDRESSED FDOT & EPC COMMENTS)	04-26-2024
△ (ADDRESSED FDOT & EPC COMMENTS)	01-24-2024
△ (ADDRESSED FDOT COMMENTS)	11-07-2023
△ (ADDRESSED COUNTY, FDOT, & SWFWMD COMMENTS)	10-17-2023
△ (FDOT SUBMITTAL)	05-31-2023
	05-10-2023

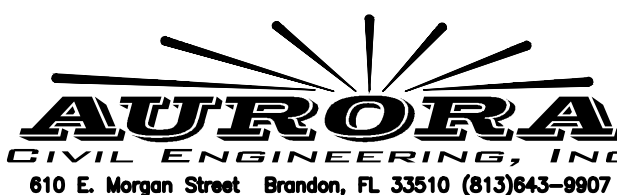
PREPARED BY



PREPARED FOR

HILLSBOROUGH COUNTY
PO BOX 1110
TAMPA, FLORIDA 33601-1110

Sun City North
Fire Station 47

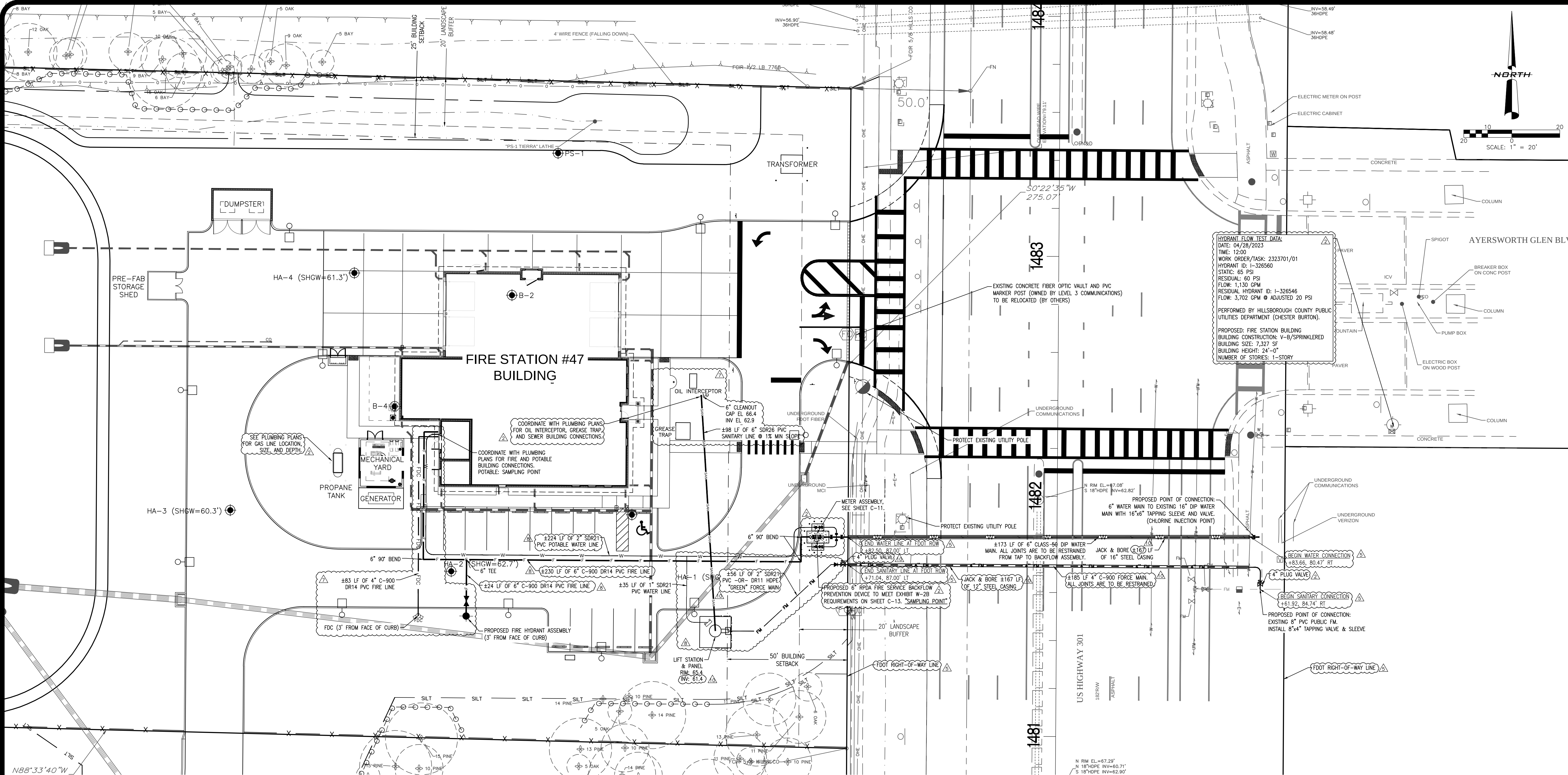


PROJECT 22-157

This item has been digitally signed and sealed by
Michael H. Knight, PE 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.

MICHAEL H. KNIGHT, P.E.
FLORIDA P.E. No. 45278
AURORA CIVIL ENGINEERING, INC.
CERTIFICATE OF AUTHORIZATION No. 00008909

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FIRE LINE NOTES

1. All Fire Lines to meet requirements of current Codes: 2017 FFPC, 6th Edition; NFPA 24 (2016 edition); NFPA 13 (2016 edition).
2. All joints to be restrained.
3. All Fire lines to be C900 DR14.
4. All underground fire lines shall be completed thru the foundation to no more than 1 ft. above finish floor and comply with F.S.S. 633.334(3). (Fire line shall go into the building).

GENERAL NOTES:

1. EXISTING UTILITY INFORMATION PROVIDED BY SURVEY.
2. ALL DISTURBED AREAS WITHIN ANY RIGHT-OF-WAY SHALL BE RESTORED TO EXISTING CONDITIONS PRIOR TO CONSTRUCTION. DISTURBED AREAS TO BE SODDED.
3. ANY MATERIALS REMOVED FROM THE SITE DURING CONSTRUCTION SHALL BE PROPERLY DISPOSED OF OFF-SITE OR AS DIRECTED BY THE OWNER.
4. RESTORE ANY DISTURBED AREAS ON-SITE TO EXISTING CONDITIONS. THIS INCLUDES WALKS, LANDSCAPING & IRRIGATION, UTILITIES, ETC.
5. CONFIRM, LOCATE AND PROTECT ALL EXISTING ABOVE AND BELOW GRADE UTILITIES IN THE PROJECT AREA. ADVISE ENGINEER & OWNER OF ANY CONFLICTS OR DISCREPANCIES.
6. CONTRACTOR SHALL INSTALL & MAINTAIN ALL SILT FENCE FOR THE INSTALLATION OF WATER AND SEWER LINES.
7. ALL PROPOSED LINES TO HAVE A MINIMUM OF 36" COVER.
8. THE BACKFLOW PREVENTION DEVICE IS TO COMPLY WITH THE HILLSBOROUGH COUNTY TECHNICAL SERVICE MANUAL.
9. MAXIMUM PRESSURE DROP OF 5 PSI FOR THE BACKFLOW PREVENTER.
10. ROOT PRUNE ALL EXISTING TREES ALONG WATERLINE ROUTE(S), OUTSIDE OF DRIPLINE.
11. THE LOCATIONS OF THE LAUNCHING AND RECEIVING PITS FOR BOTH WATER AND FORCE MAIN ARE SHOWN ON SHEETS C-11 AND C-12. LOCATION AND SIZE OF PITS SHOWN IS APPROXIMATE. WILL BE CONFIRMED BY CONTRACTOR ONCE SELECTED.

GAS MAINS:

SHOULD A GAS MAIN BE DETERMINED TO EXIST (FIELD LOCATED) THEN THE MINIMUM SEPARATION BETWEEN THE GAS MAIN AND PROPOSED WATER MAIN SHALL BE 18". CONTRACTOR SHALL NOTIFY ENGINEER ACCORDINGLY.

FIRE DEPARTMENT NOTES:

- TO SITE CONTRACTOR
- THIS SITE REVIEW IS FOR PROPOSED LOCATIONS OF WATER SUPPLIES, BASIC PIPING LAYOUTS, AND HYDRANT LOCATIONS, AND IS NOT INTENDED TO BE CONSIDERED FOR DESIGN PURPOSES. ADDITIONAL PLAN REVIEWS ARE REQUIRED OF UNDERGROUND FIRE PROTECTION WATER SUPPLIES, SYSTEMS, PIPING, APPLIANCES & APPURTENANCES AT THE TIME OF SUBMITTAL OF PROPOSED CONSTRUCTION DOCUMENTS BY A STATE LICENSED PROFESSIONAL ENGINEER & STATE LICENSED CONTRACTOR CERTIFIED TO PERFORM THE WORK AND INSTALLATION.
- TO SITE CONTRACTOR & G.C.
- THE UNDERGROUND PRIVATE FIRE SERVICE MAINS WILL REQUIRE MANDATORY PLAN REVIEW, PERMITS, AND INSPECTIONS BY THE FIRE MARSHAL'S OFFICE & SHALL COMPLY WITH NFPA-24, 2019 EDITION.
- MINIMUM CONSTRUCTION REQUIREMENTS
- FIRE DEPT ACCESS ROADS SHALL BE INSTALLED TO AN ALL-WEATHER DRIVING SURFACE ABLE TO WITHSTAND THE LIVE LOADS OF FIRE DEPT APPARATUS (42 TONS) PRIOR TO COMBUSTIBLES COMING ON TO THE JOBSITE AND THEY SHALL BE MAINTAINED DURING CONSTRUCTION. THE SITE SHALL COMPLY NFPA-1, CHAPTER 16.1.4. & 18.3.
 - WATER SUPPLY FOR FIRE PROTECTION AND FIRE HYDRANTS SHALL BE INSTALLED, COMPLETED, AND IN SERVICE PRIOR TO COMBUSTIBLES COMING ON TO THE JOBSITE AND THEY SHALL BE MAINTAINED DURING CONSTRUCTION. THE SITE SHALL COMPLY NFPA-1, CHAPTER 16.4.3.1.

HYDRANT FLOW TEST DATA
DATE: 04/28/2023
TIME: 12:00
WORK ORDER/TASK: 2323701/01
HYDRANT ID: I-326560
STATIC: 65 PSI
RESIDUAL: 60 PSI
FLOW: 1,130 GPM
RESIDUAL HYDRANT ID: I-326546
FLOW: 3,702 GPM @ ADJUSTED 20 PSI
PERFORMED BY HILLSBOROUGH COUNTY PUBLIC UTILITIES DEPARTMENT (CHESTER BURTON)

PROPOSED: FIRE STATION BUILDING
BUILDING CONSTRUCTION: V-B/SPRINKLERED
BUILDING SIZE: 7,327 SF
BUILDING HEIGHT: 24'-0"
NUMBER OF STORIES: 1-STORY

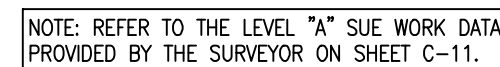
REVISIONS	NO.	DATE	DESCRIPTION	BY	APP'D
1	10	11-26-2024	ADDRESSED EPC & EPC COMMENTS		
2	09	09-26-2024	ADDRESSED EPC & EPC COMMENTS		
3	08	08-26-2024	POTABLE WATER & FIRE LINES REVISION		
4	07	07-26-2024	ADDRESSED EPC & EPC COMMENTS		
5	06	06-26-2024	ADDRESSED EPC & EPC COMMENTS		
6	05	05-26-2024	ADDRESSED EPC & EPC COMMENTS		
7	04	04-26-2024	ADDRESSED EPC & EPC COMMENTS		
8	03	03-26-2024	ADDRESSED EPC & EPC COMMENTS		
9	02	02-26-2024	ADDRESSED EPC & EPC COMMENTS		
10	01	01-26-2024	ADDRESSED EPC & EPC COMMENTS		

DESIGNED BY: MICHAEL H. KNIGHT
CHECKED BY: MICHAEL H. KNIGHT
DATE: 11-26-2024
PROJECT: SUN CITY NORTH FIRE STATION #47
SHEET: 22-157

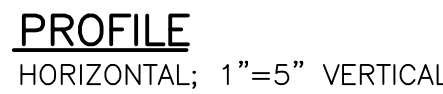
SUN CITY NORTH
FIRE STATION #47
HILLSBOROUGH COUNTY
TAMPA, FLORIDA 33601-1110

AUTORA
CIVIL ENGINEERING, INC.
610 E. Morgan Street
Brandon, FL 33510 (813)643-9807

MICHAEL H. KNIGHT, P.E.
FLORIDA PROFESSIONAL ENGINEER NO. 00089593
CERTIFICATE OF AUTHORIZATION NO. 00089593



PROFILE
SCALE: 1"=10" HORIZONTAL; 1"=5" VERTICAL
SANITARY SEWER CONNECTION DETAIL



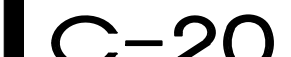
C-12

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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 6.06.06.010 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) BACK FLOW IS 32" HIGH, PROPOSED SCREENING SHRUBS ARE 36" HIGH.

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

5) LIFT STATION IS UNDERGROUND. NO SCREENING NEEDED.

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 TREE REMAINS, 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 WITH 3" DEEP PINE BARK MUGGETS. 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 79,000 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 THREE TIMES 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.

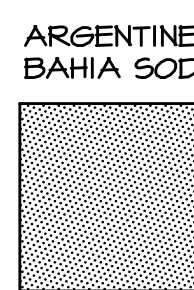
8) TREE INSTALLATION, ALL REQUIRED TREES SHALL BE INSTALLED 1" - 2" ABOVE FINISH GRADE. TREES INSTALLED OR BURIED TOO DEEP SHALL BE RESET TO THIS STANDARD. REMOVE THE TOP 1/3 OF THE WIRE BASKETS ON ALL B & B STOCK.

PLANT MATERIALS LIST

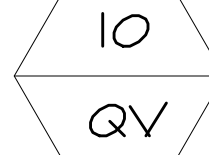
SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SPECIFICATIONS	NATIVE	SPACING
*QV	14	QUERCUS VIRGINIANA	LIVE OAK	12' HT X 5' SPD, 2" DBH	YES	AS SHOWN
PE	41	PINUS ELLIOTTII	SLASH PINE	10' HT X 4' SPD, 1" DBH	YES	AS SHOWN
MG	26	MAGNOLIA GRANDIFLORA	SOUTHERN MAGNOLIA	10' HT X 4' SPD, 1" DBH	YES	AS SHOWN
DH	2	ILEX CASSINE	DAHOO HOLLY	10' HT X 4' SPD, 1" DBH	YES	AS SHOWN
AE	12	ULMUS AMERICANA	AMERICAN ELM	8' HT X 4' SPD, 1" DBH	YES	AS SHOWN
UA	11	ULMUS ALATA	WINGED ELM	8' HT X 4' SPD, 1" DBH	YES	AS SHOWN
LA	3	LAGERSTROEMIA INDICA	CRABE MYRTLE	8' HT X 4' SPD, MULTI-STEM	YES	AS SHOWN
MC	11	MYRTICA CERIFERA	WAX MYRTLE	60" HT X 48" SPD	YES	60" OC
WV	15	VIBURNUM OBOVATUM	WALTER'S VIBURNUM	36" HT X 36" SPD	YES	48" OC
VO	63	VIBURNUM OBOVATUM	WALTER'S VIBURNUM	24" HT X 24" SPD	YES	36" OC

*REPLACEMENT TREES

SYMBOL LEGEND



LANDSCAPE



QUANTITY

SPECIES

OFF-SITE TREE TO BE PRUNED



ON-SITE TREE TO BE PRUNED



TREE PRUNING NOTES

ON-SITE TREE PRUNING:

BEFORE CONSTRUCTION STARTS, ALL PROTECTED TREES SHALL BE PRUNED AS FOLLOWS: PRUNE TREES TO 12' CLEAR TRUNK HEIGHT, REMOVE ANY DEAD OR DISEASED TRUNKS OR BRANCHES, AND REMOVE WEAK OR CROSSED BRANCHES. ALL CUTS SHALL BE MADE SUFFICIENTLY CLOSE TO THE TRUNK OR PARENT LIMB, WITHOUT CUTTING INTO THE BRANCH COLLAR OR LEAVING A PROTRUDING STUB, SO THAT CLOSURE CAN READILY START. ALL TRIMMING SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) A-300 PRUNING STANDARDS. FIELD ADJUST PROPOSED FENCE LAYOUT TO AVOID ALL ON-SITE PROTECTED TREES.

OFF-SITE TREE PRUNING:

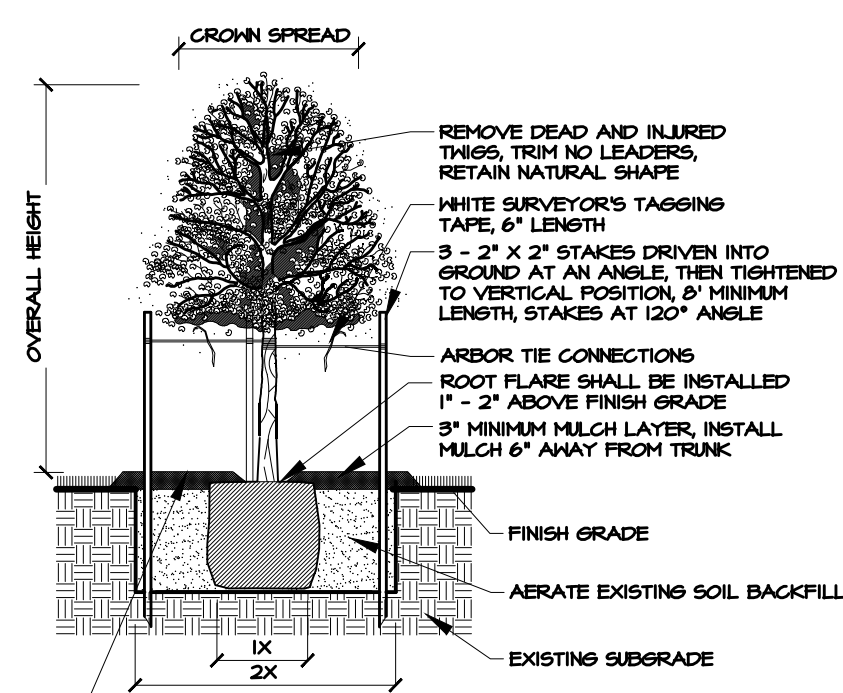
REMOVE ALL TREE BRANCHES WITHIN THE LIMITS OF THE PROPERTY.

REPLACEMENT TREES

REPLACEMENT TREES - 50% OF DBH

1 @ 32" + 1 @ 24" = 56" x .5 = 28 TREES

PROPOSED LIVE OAK 14 X 2" DBH = 28" DBH



SHADE TREE STAKING AND PLANTING DETAIL

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

CODE TREE REQUIREMENTS

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

PERIMETER PARKING REQUIREMENTS
880' / 40 = 22 TREES
22 PROPOSED TREES

NORTH 20' TYPE B BUFFER
615 LF / 20 = 31 TREES + 6' OPAQUE FENCE
31 PROPOSED TREES

SOUTH 20' TYPE B BUFFER
545 LF / 20 = 30 TREES - 6 EXISTING TREES = 24
+ 6' OPAQUE FENCE
24 PROPOSED TREES

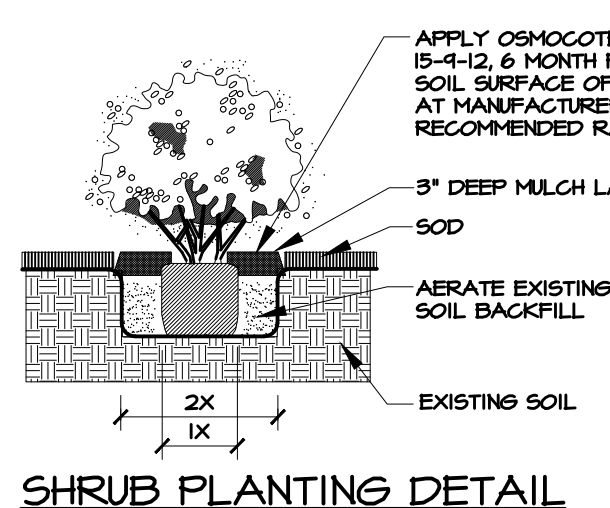
WEST 20' TYPE B BUFFER
275 LF / 20 = 14 TREES + 6' OPAQUE FENCE

TOTAL REQUIREMENTS
4 + 22 + 31 + 24 + 14 = 95 TREES

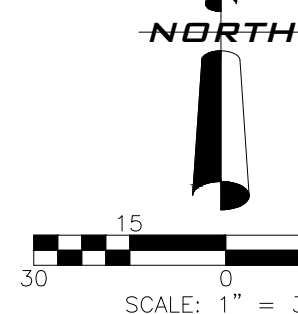
CODE TREES

SLASH PINE 41
AMERICAN ELM 12
MAGNOLIA 26
DAHOO HOLLY 2
CRABE MYRTLE 3
WINGED ELM 11

TOTAL TREE = 95



SHRUB PLANTING DETAIL



1315 E. SEVENTH AVENUE
SUITE 106
TAMPA, FLORIDA 33605.3607

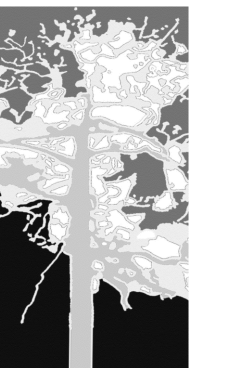
TELEPHONE 813.242.6677
FACSIMILE 813.242.6683

wilderarchitecture.com

AR91271 QUALIFIER LICENSE

WILDERARCHITECTURE, INC.

L. Alyson Utter #LA0001163



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

HILLSBOROUGH COUNTY
SUN CITY NORTH FIRE STATION NO. 47

PROJECT #: 2216-02
DISTRIBUTION DATE
DD SET 06.06.2024
90% CD 08.30.2024
PERMIT SET 11.14.2024
ADDENDUM 01 03.06.2025

LANDSCAPE PLAN

L1.1

PLAN FOR INVASIVE PLANT REMOVAL, DISPOSAL AND MAINTENANCE

SECTION 4.01.06.E OF THE HILLSBOROUGH COUNTY LAND DEVELOPMENT CODE REQUIRES THE SUBMISSION OF AN INVASIVE PLANT SPECIES REMOVAL, DISPOSAL AND MAINTENANCE PLAN. THE PLAN FOR THE ABOVE SITE SHALL BE AS PER THE FOLLOWING PARAGRAPHS.

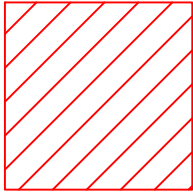
ALL INVASIVE EXOTIC SPECIES SUCH AS BRAZILIAN PEPPER -SCHINUS TEREBINTHIFOLIUS, AIR POTATO - DIOSCOREA BULBIFERA, CHINABERRY - MELIA AZEDARACH, AUSTRALIAN PINE - CASUARINA AND PUNK TREE- MELALEUCA QUINQUENERVIA MUST BE REMOVED FROM THE SITE. REMOVAL SHALL BE PERFORMED BY MECHANICAL AND CHEMICAL MEANS. EXOTIC TREES AND SHRUBS SHALL BE CUT FLUSH WITH FINISH GRADE. CONTRACTOR SHALL TREAT CUT STUMPS WITH GARLON 3A, TROOPER, OR RODEO HERBICIDE TO THE CAMBIUM LAYER AS PER MANUFACTURER'S INSTRUCTIONS, AT THE RECOMMENDED STRENGTH TO PREVENT RE-GROWTH. HERBICIDE SHALL BE APPLIED IMMEDIATELY AFTER TRUNKS ARE CUT TO PREVENT SAP FROM SEALING WOUNDS. REMOVAL SHALL BE ONLY WITHIN THE PROPERTY BOUNDARIES. WORK SHALL BE PERFORMED IN CONFORMANCE WITH RULE 62C-20 OF THE FLORIDA ADMINISTRATIVE CODE REGARDING AQUATIC PLANT MANAGEMENT PERMITS. THE EXPOSED SOILS WILL BE STABILIZED WITH BAHIA SOD OR MULCH TO REPEL RE-GROWTH. ALL WASTE MATERIALS PRODUCED FROM THIS ACTIVITY SHALL BE DISPOSED OF, OFF OF THE SITE, AT AN APPROVED DISPOSAL SITE (350 FALKENBURG ROAD TAMPA, FLORIDA 33619).

A POST REMOVAL MAINTENANCE PROGRAM SHALL BE PERFORMED EVERY SIX MONTHS FOR A PERIOD OF FIVE YEARS TO ENSURE THAT ANY INVASIVE SPECIES DOES NOT RE-APPEAR. ANY NUISANCE SPECIES THAT SPROUTS ON THE PROPERTY SHALL BE MECHANICALLY REMOVED, RE- TREATED WITH HERBICIDE AND DISPOSED OF, OFF OF THE SITE, AT AN APPROVED DISPOSAL SITE.

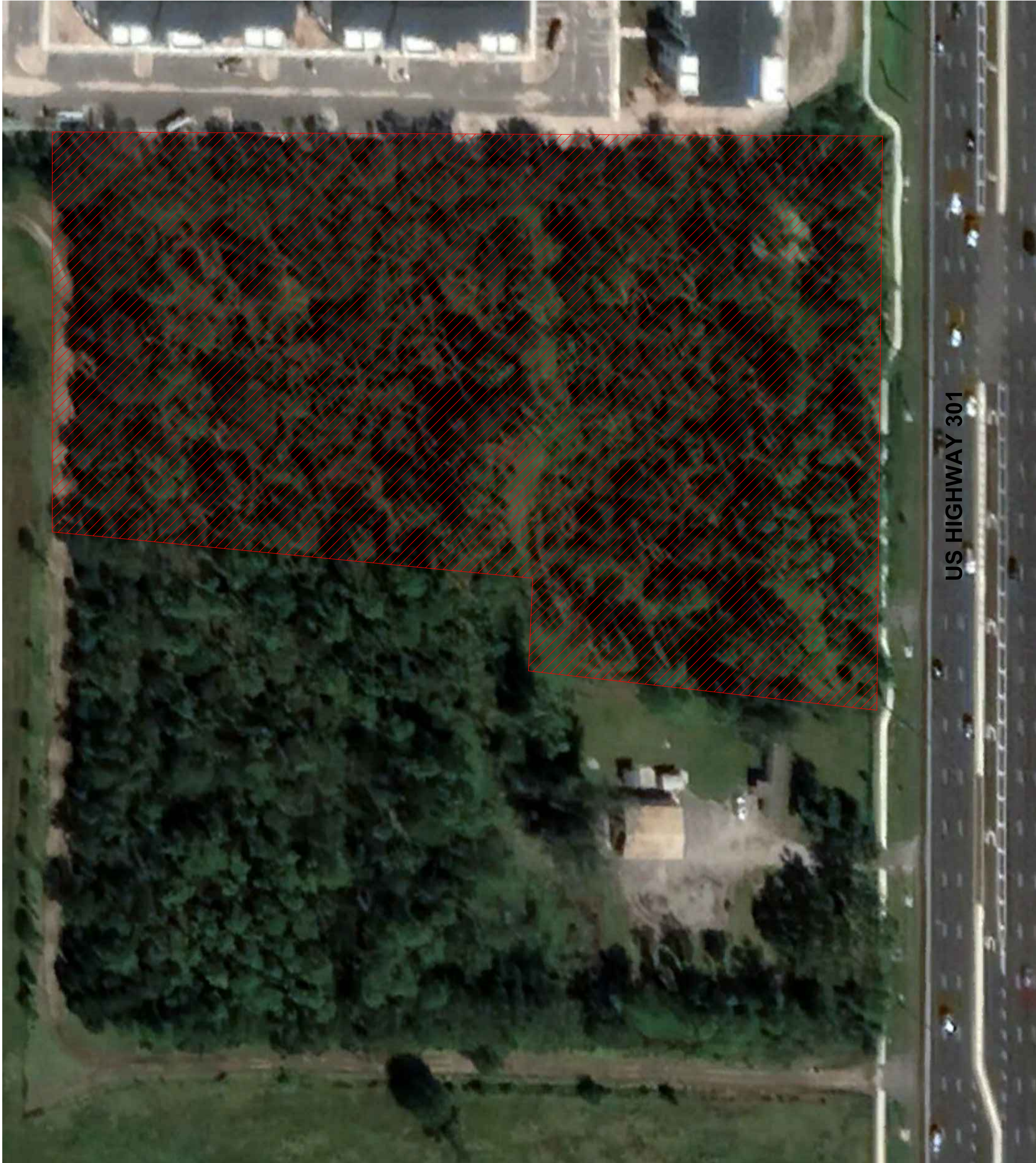
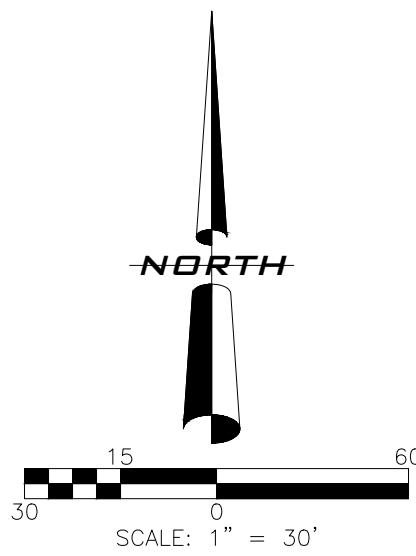
A REPORT SHALL BE SUBMITTED TO HILLSBOROUGH COUNTY EVERY 6 MONTHS FOR THE FIRST TWO YEARS AFTER REMOVAL OPERATIONS AND EVERY 12 MONTHS FOR THE LAST THREE YEARS. THE FOLLOWING INFORMATION WILL BE INCLUDED IN THE REPORT: COLOR PHOTOS SHOWING APPROXIMATE NUMBER OF INDIVIDUAL INVASIVE PLANTS EXISTING ON THE SITE AND DATED PHOTOS SHOWING NON-RE-EMERGENCE OF INVASIVE PLANTS AT EACH MAINTENANCE PERIOD, AND A LIST OF CORRECTIVE MEASURES THAT HAVE BEEN IMPLEMENTED.

THE GENERAL CONTRACTOR SHALL PROVIDE THE POST REMOVAL MAINTENANCE PROGRAM AND THE INVASIVE SPEICES REPORTING UNTIL THE END OF THE ONE YEAR WARRANTY PERIOD, THE REMAINDER OF THE POST REMOVAL MAINTENANCE PROGRAM AND THE INVASIVE SPECIES REPORTING REPORTING SHALL BE DONE BY THE OWNER.

SYMBOL LEGEND



INVASIVE PLANT LOCATIONS



1315 E. SEVENTH AVENUE
TAMPA, FLORIDA 33605.3607
SUITE 106
TELEPHONE 813.242.6677
FACSIMILE 813.242.6683

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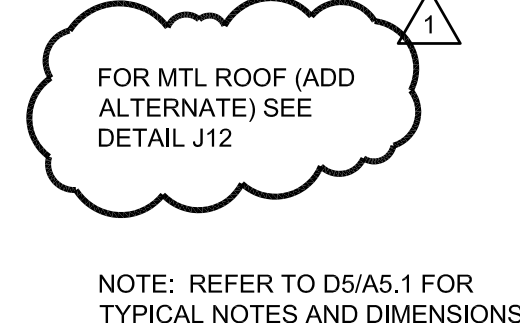
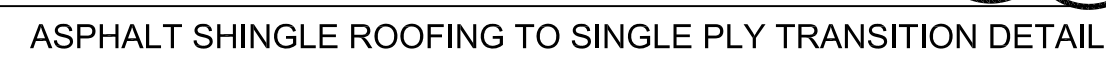
PROJECT #: 2216-02	
DISTRIBUTION	DATE
DD SET	06.06.2024
90% CD	08.30.2024
PERMIT SET	11.14.2024
ADDENDUM 01	03.06.2025

INVASIVE PLANT
REMOVAL PLAN

L-1.3



WEATHERHEAD / POWER POLE DETAIL 3" = 1'-0"	A12
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ROOF GUTTER DETAIL 3" = 1'-0"	A
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A5.1

FINISH SCHEDULE											
ROOM NUMBER	ROOM NAME	2	FLOOR	BASE	FINISH WALLS				CEILING		REMARKS
					SOUTH	EAST	WEST	NORTH	HEIGHT	FINISH	
101	VESTIBULE		LVT	VWB	PNT	PNT	PNT	PNT	9'-0"	APC-1	
102	OFFICE		LVT	VWB	PNT	PNT	PNT	PNT	9'-0"	APC-1	
103	BUNK ROOM		LVT	VWB	PNT	PNT	PNT	PNT	9'-0"	APC-1	5
104	BUNK ROOM		LVT	VWB	PNT	PNT	PNT	PNT	9'-0"	APC-1	5
105	DAYROOM		LVT	VWB	PNT	PNT	PNT	PNT	9'-0"	APC-2	1, 17
106	KITCHEN / DINING		LVT	VWB	PNT	CT / PNT	PNT	CT / PNT	9'-0"	APC-2	1, 2, 11, 17
107	PANTRY		LVT	VWB	PNT	PNT	PNT	PNT	9'-0"	PNT	
108	PANTRY		LVT	VWB	PNT	PNT	PNT	PNT	9'-0"	PNT	
109	PANTRY		LVT	VWB	PNT	PNT	PNT	PNT	9'-0"	PNT	
110	CORRIDOR		LVT	VWB	PNT	PNT	PNT	PNT	9'-0"	APC-1	-
111	EMS STORAGE		LVT	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		LVT	VWB	PNT	PNT	PNT	PNT	9'-0"	APC-1	
115	CORRIDOR		LVT	VWB	PNT	PNT	PNT	PNT	9'-0"	APC-1	5
116	CORRIDOR		LVT	VWB	PNT	PNT	PNT	PNT	9'-0"	APC-1	5
117	BUNK ROOM		LVT	VWB	PNT	PNT	PNT	PNT	9'-0"	APC-1	5
118	BUNK ROOM		LVT	VWB	PNT	PNT	PNT	PNT	9'-0"	APC-1	5
119	BUNK ROOM		LVT	VWB	PNT	PNT	PNT	PNT	9'-0"	APC-1	5
120	BUNK ROOM		LVT	VWB	PNT	PNT	PNT	PNT	9'-0"	APC-1	5
121	BUNK ROOM		LVT	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		VWB	EP	EP	CT / EP	CT / EP	CT / EP	PNT	PNT	12
124	CORRIDOR		LVT	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
128	MECHANICAL		SC	VWB	PNT	PNT	PNT	PNT	9'-11 1/2"	PNT	15, 16
129	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	RFT	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	VNB	VINYL WALL BASE
	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. | 11. REFER TO RCP FOR SOFFITS |
| 2. PROVIDE TILE AT DESIGNATED LOCATIONS. SEE INTERIOR ELEVATIONS. | 12. PROVIDE TILE AT MOP SINK - REFER TO INTERIOR ELEVATIONS |
| 3. SEE EXTERIOR ELEVATIONS AND SITE DETAILS FOR CEILING HEIGHT.(EXPOSED STRUCTURE) | 13. PRIME AND PAINT INTERIOR OF CHASE |
| 4. PLYWOOD BACKBOARD - PNT ALL SIDES / EDGES WITH FIRE RESISTANT PNT (ALL WALLS) | 14. NOT USED |
| 5. PROVIDE SOUND ATTENUATION BLANKETS IN WALL BETWEEN ADJACENT ROOMS DESIGNATED. | 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.) |
| 6. ABUSE RESISTANT GWB | 16. CEILING MOUNT TO BOTTOM OF TRUSSES |
| 7. PAINT CEILING LIGHT BLUE (COLOR TBD) | 17. PROVIDE WAINSCOT AND CHAIR RAIL |
| 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". | |

DOOR SCHEDULE														
OPENING NUMBER	ROOM NAME	DOOR				FRAME				IMPACT RATED	FIRE RATING	HSD SET	REMARKS	
		TYPE	MATL	INT	EXT	TYPE	MATL	DETAILS						
		TYPE	MATL	INT	EXT			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	--		--	05B	4, 5
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	--		--	08	--
104	BUNK	D11	WD	*		F10	MTL	K1 / A5.2	K1 / A5.2	--		--	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	D07	MTL		*	F05	MTL	D4 / A5.2	G4 / A5.2	J13 / A5.2		45 MIN	04B	7
111	EMS STO.	D01	WD	*		F01	MTL	K1 / A5.2	K1 / A5.2	--		--	05A	--
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	--		--	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	D11	WD	*		F10	MTL	K1 / A5.2	K1 / A5.2	J7 / A5.2		SMOKE	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	--
127	APP BAY	D13	MTL		*	F08	MTL	D4 / A5.2	G4 / A5.2	--		--	05B	3, 7
128A	APP BAY	D09	STL		--	--	D7 / A5.3	A7 / A 5.3	--	--	•	--	12	2, 7
128B	APP BAY	D09	STL		--	--	D7 / A5.3	A7 / A 5.3	--	--	•	--	12	2, 7
128C	APP BAY	D09	STL		--	--	D7 / A5.3	A7 / A 5.3	--	--	•	--	12	2, 7
128D	APP BAY	D09	STL		--	--	D7 / A5.3	A7 / A 5.3	--	--	•	--	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 HARDWARE TIE TO BUZZ
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 @ ELECTRICAL ROOM

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	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

DOOR FRAME TYPES

WINDOW & LOUVER TYPES	C1
-----------------------	----

12-2" (OPENING)
12-2" DOOR

12-8" (OPENING)
12-8" DOOR

12-9" DOOR

ALL EXTERIOR DOORS
ARE MISSILE LEVEL "E"
IMPACT PROTECTED

45 MIN D07 3'-0" 8" 8" 2'-5" 7'-0" 1'-7" POLISHED ALUM CHECKERPLATE w/ CHAMFERED EDGES ON BOTH SIDES

SMOKE 45 MIN D03 D10 D06 D05 3'-8" 3'-0" 8" 8" 2'-5" 7'-0" G1 OR G3 FIRE RATED

SMOKE 45 MIN MTL D04 D11 D12 D13 2'-0" 3'-0" 7'-0" 6'-8"

DOOR TYPES	A1
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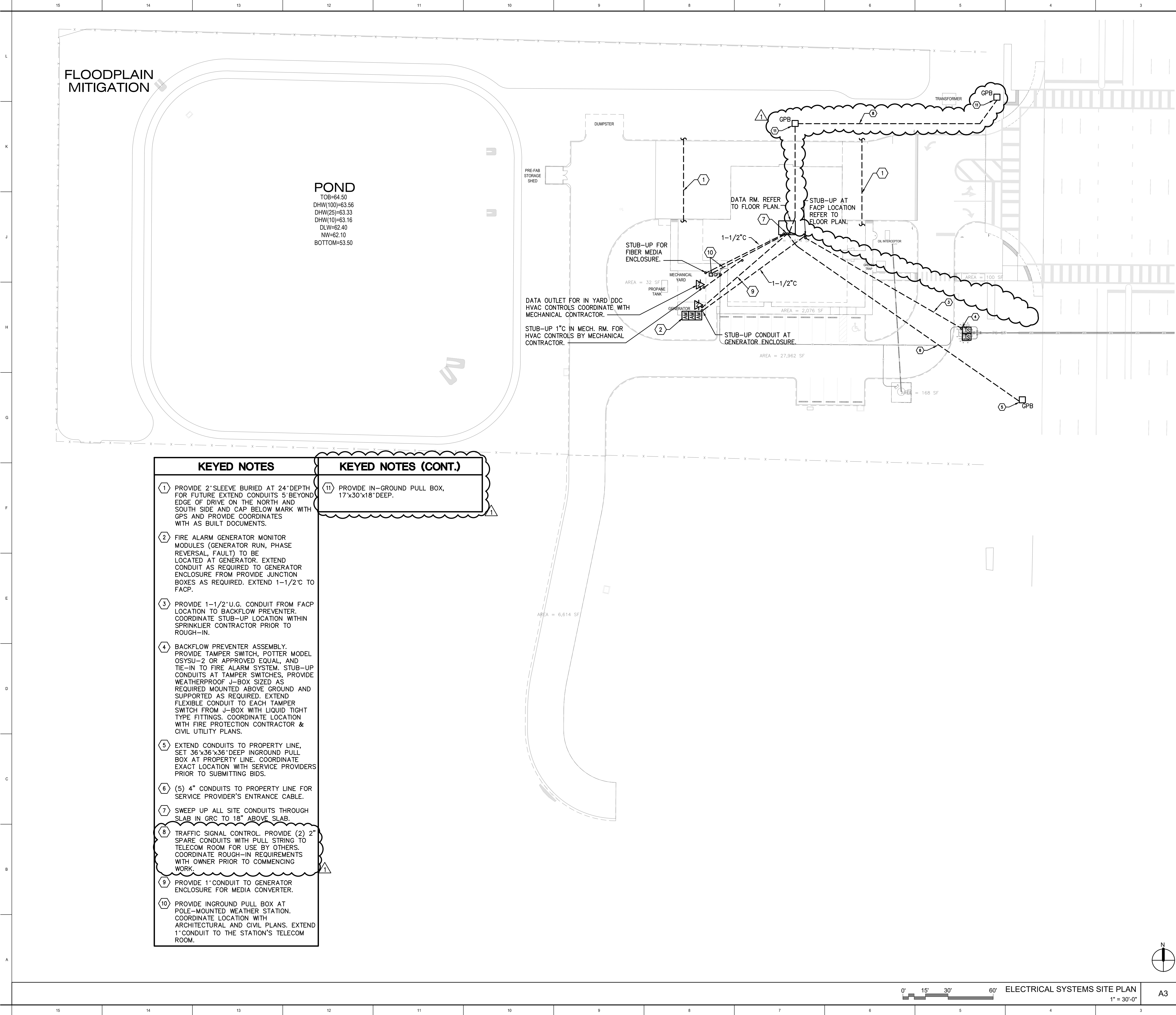
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HILLSBOROUGH COUNTY
SUN CITY NORTH FIRE STATION NO. 47

PROJECT #: 2216-02	
DISTRIBUTION	DATE
SCHEMATIC DESIGN	03.15.2024
DD SET	06.06.2024
90% CD	08.30.2024
PERMIT SET	11.14.2024
ADDENDUM 01	03.06.2025

SCHEDULES AND DOOR AND WINDOWS TYPES

A7.1



- KEYED NOTES
- 1

PROVIDE 2" SLEEVE BURIED AT 24" DEPTH FOR FUTURE EXTEND CONDUITS 5' BEYOND EDGE OF DRIVE ON THE NORTH AND SOUTH SIDE AND CAP BELOW MARK WITH GPS AND PROVIDE COORDINATES WITH AS BUILT DOCUMENTS.
- 2

FIRE ALARM GENERATOR MONITOR MODULES (GENERATOR RUN, PHASE REVERSAL, FAULT) TO BE LOCATED AT GENERATOR. EXTEND CONDUIT AS REQUIRED TO GENERATOR ENCLOSURE FROM PROVIDE JUNCTION BOXES AS REQUIRED. EXTEND 1-1/2" C TO FACP.
- 3

PROVIDE 1-1/2" U.G. CONDUIT FROM FACP LOCATION TO BACKFLOW PREVENTER. COORDINATE STUB-UP LOCATION WITHIN SPRINKLER CONTRACTOR PRIOR TO ROUGH-IN.
- 4

BACKFLOW PREVENTER ASSEMBLY. PROVIDE TAMPER SWITCH, POTTER MODEL OSYSJ-2 OR APPROVED EQUAL, AND TIE-IN TO FIRE ALARM SYSTEM. STUB-UP CONDUITS AT TAMPER SWITCHES, PROVIDE WEATHERPROOF J-BOX SIZED AS REQUIRED MOUNTED ABOVE GROUND AND SUPPORTED AS REQUIRED. EXTEND FLEXIBLE CONDUIT TO EACH TAMPER SWITCH FROM J-BOX WITH LIQUID TIGHT TYPE FITTINGS. COORDINATE LOCATION WITH FIRE PROTECTION CONTRACTOR & CIVIL UTILITY PLANS.
- 5

EXTEND CONDUITS TO PROPERTY LINE. SET 36"x36"x36" DEEP INGROUND PULL BOX AT PROPERTY LINE. 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

TRAFFIC SIGNAL CONTROL. PROVIDE (2) 2" SPARE CONDUITS WITH PULL STRING TO TELECOM ROOM FOR USE BY OTHERS. COORDINATE ROUGH-IN REQUIREMENTS WITH OWNER PRIOR TO COMMENCING WORK.
- 9

PROVIDE 1" CONDUIT TO GENERATOR ENCLOSURE FOR MEDIA CONVERTER.
- 10

PROVIDE INGROUND PULL BOX AT POLE-MOUNTED WEATHER STATION. COORDINATE LOCATION WITH ARCHITECTURAL AND CIVIL PLANS. EXTEND 1" CONDUIT TO THE STATION'S TELECOM ROOM.

- KEYED NOTES (CONT.)
- 11

PROVIDE IN-GROUND PULL BOX, 17"x30"x18" DEEP.

- 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 CABLEING 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 BICS) AT ALL RIGHT ANGLES. NO MORE THAN 2-90° ANGLE ELBOWS, IF SO NEED TO ADD PULL BOX.
- 5

INSTALL #4 GROUND KIT IN ALL WIRING CLOSESETS.
- 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. (24"x36"x36" DEEP MINIMUM TRAFFIC RATED).
- 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.

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PROJECT ADDRESS:
14503 S 301 HWY
RUSKIN FL 33573

PROJECT #: 2216-02

DISTRIBUTION	DATE
DD SET	06.06.2024
90% CD	08.30.2024
PERMIT SET	11.14.2024
ADDENDUM ONE	03.06.2025

ELECTRICAL SYSTEMS
SITE PLAN

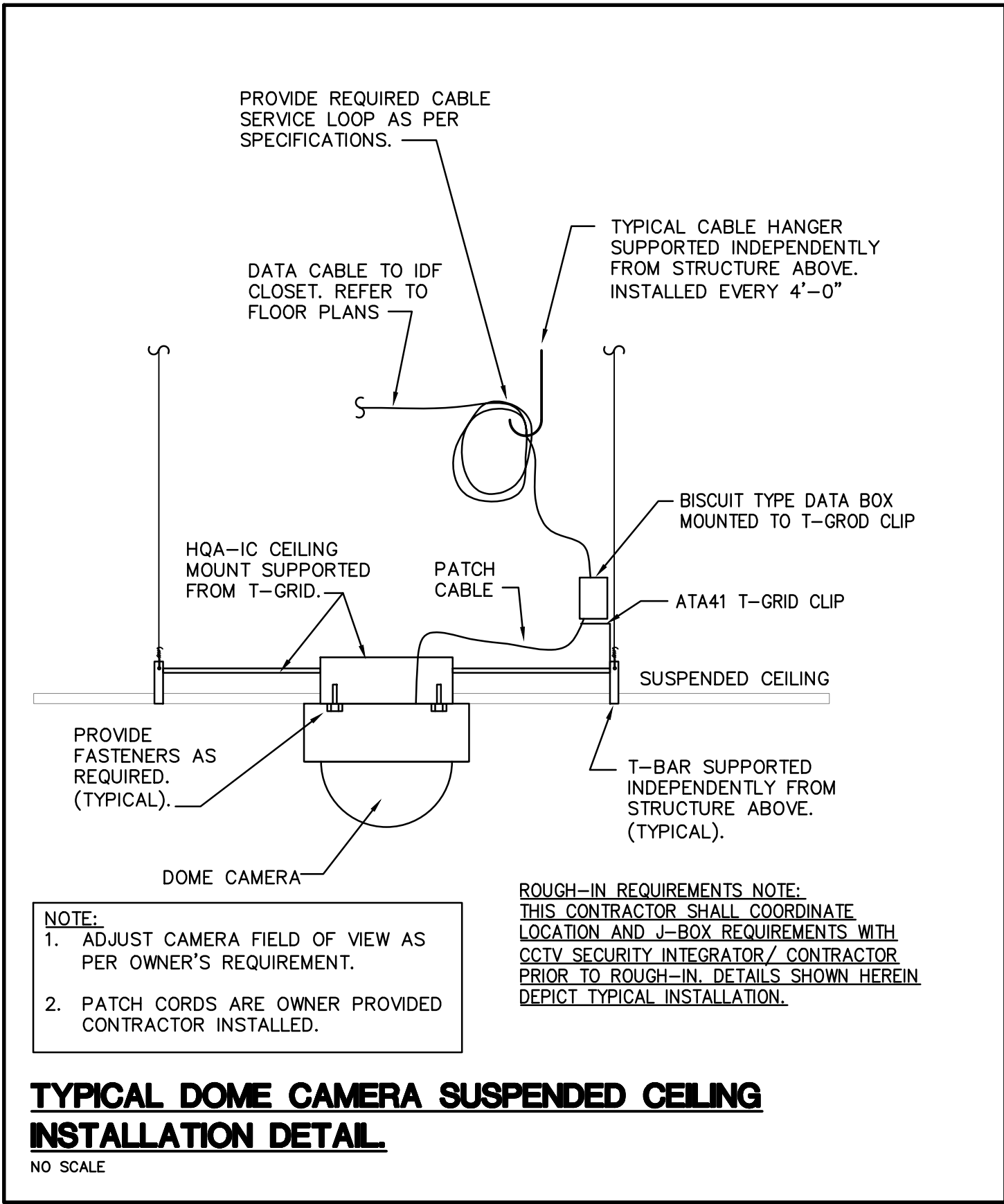
E1.4

HILLSBOROUGH COUNTY
SUN CITY NORTH FIRE STATION NO. 47

NOTES

A3

A1



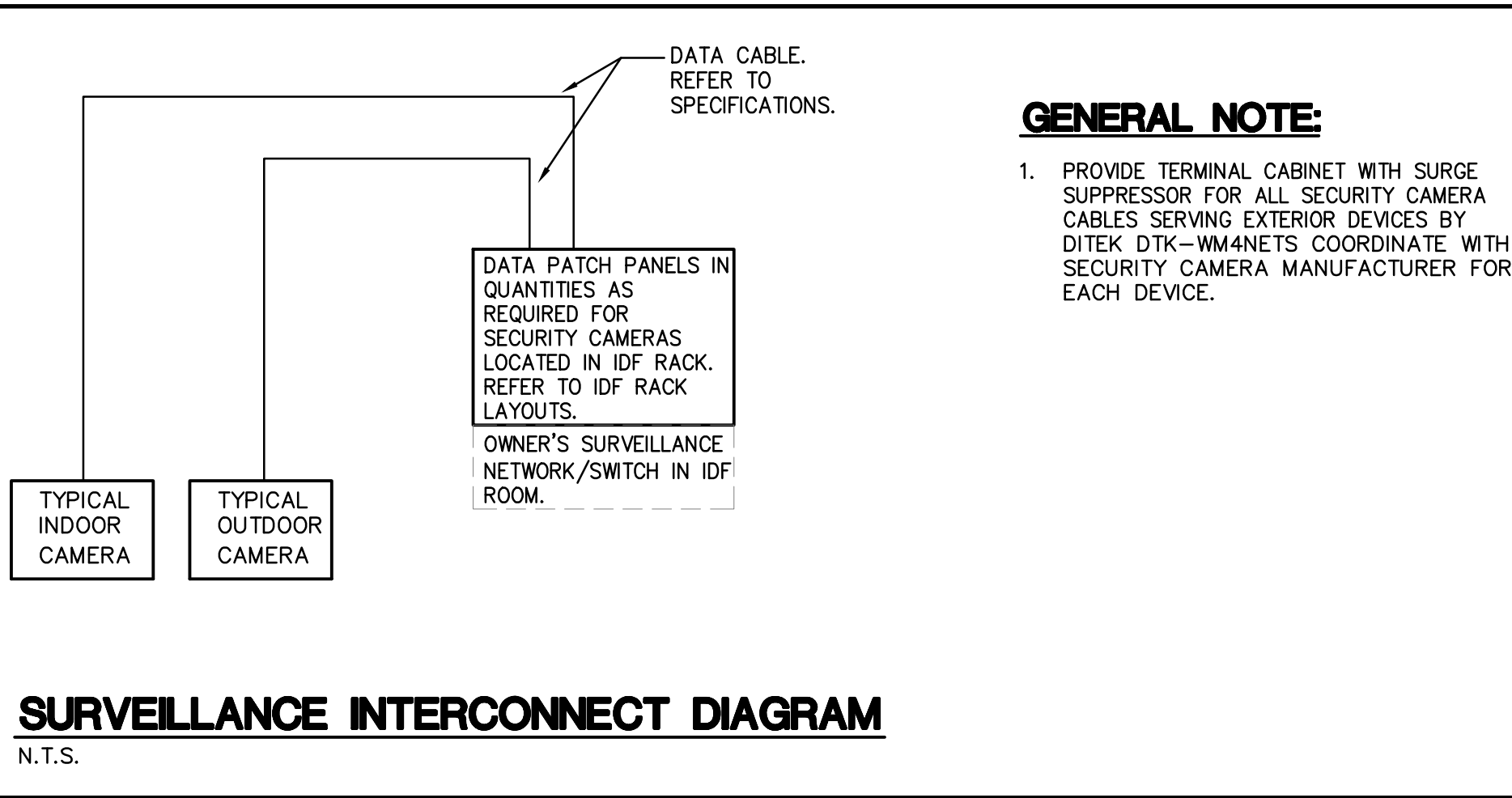
**TYPICAL DOME CAMERA SUSPENDED CEILING
INSTALLATION DETAIL**

NO SCALE



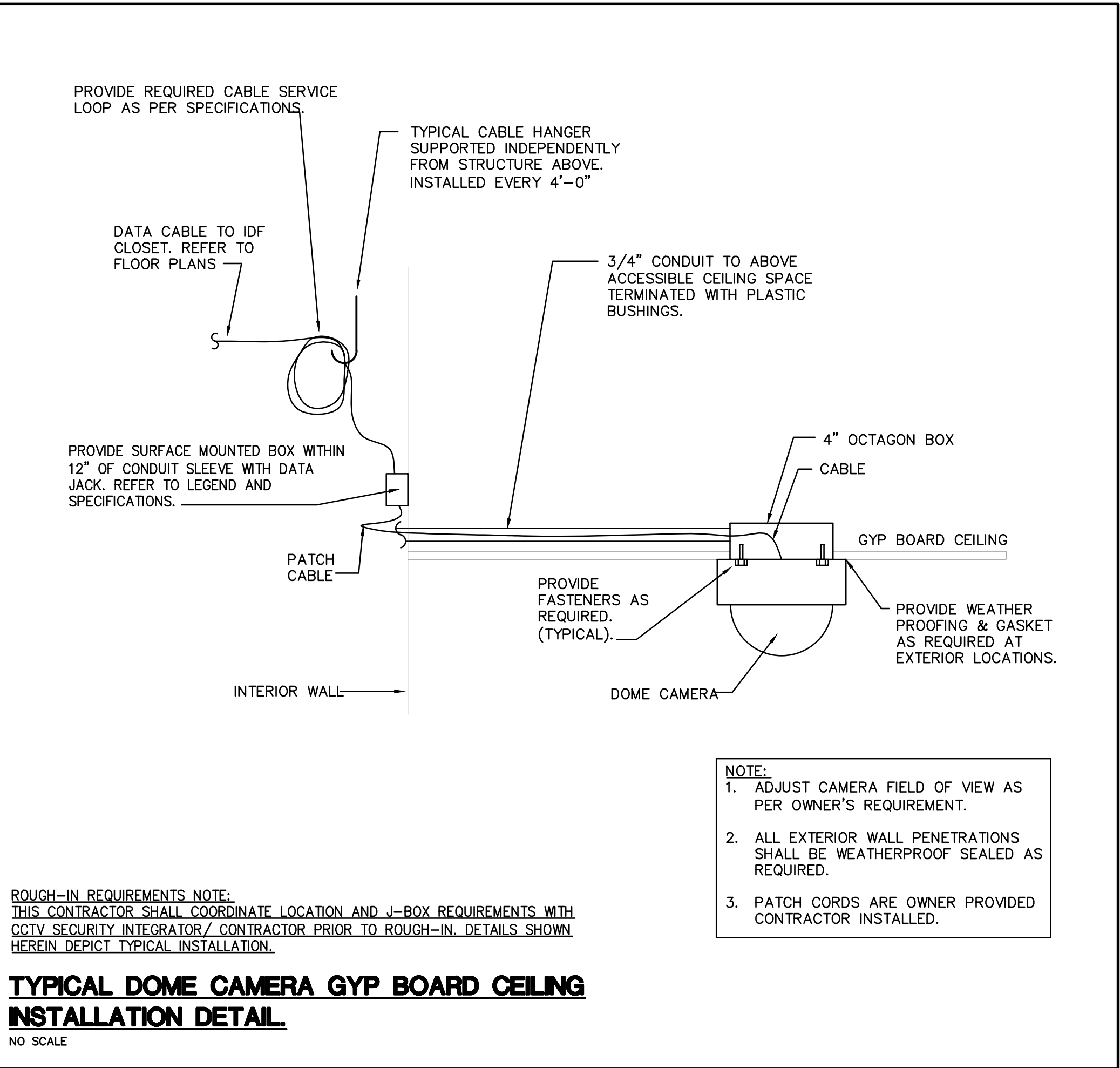
TYPICAL CABLE HANGER DETAIL

NO SCALE



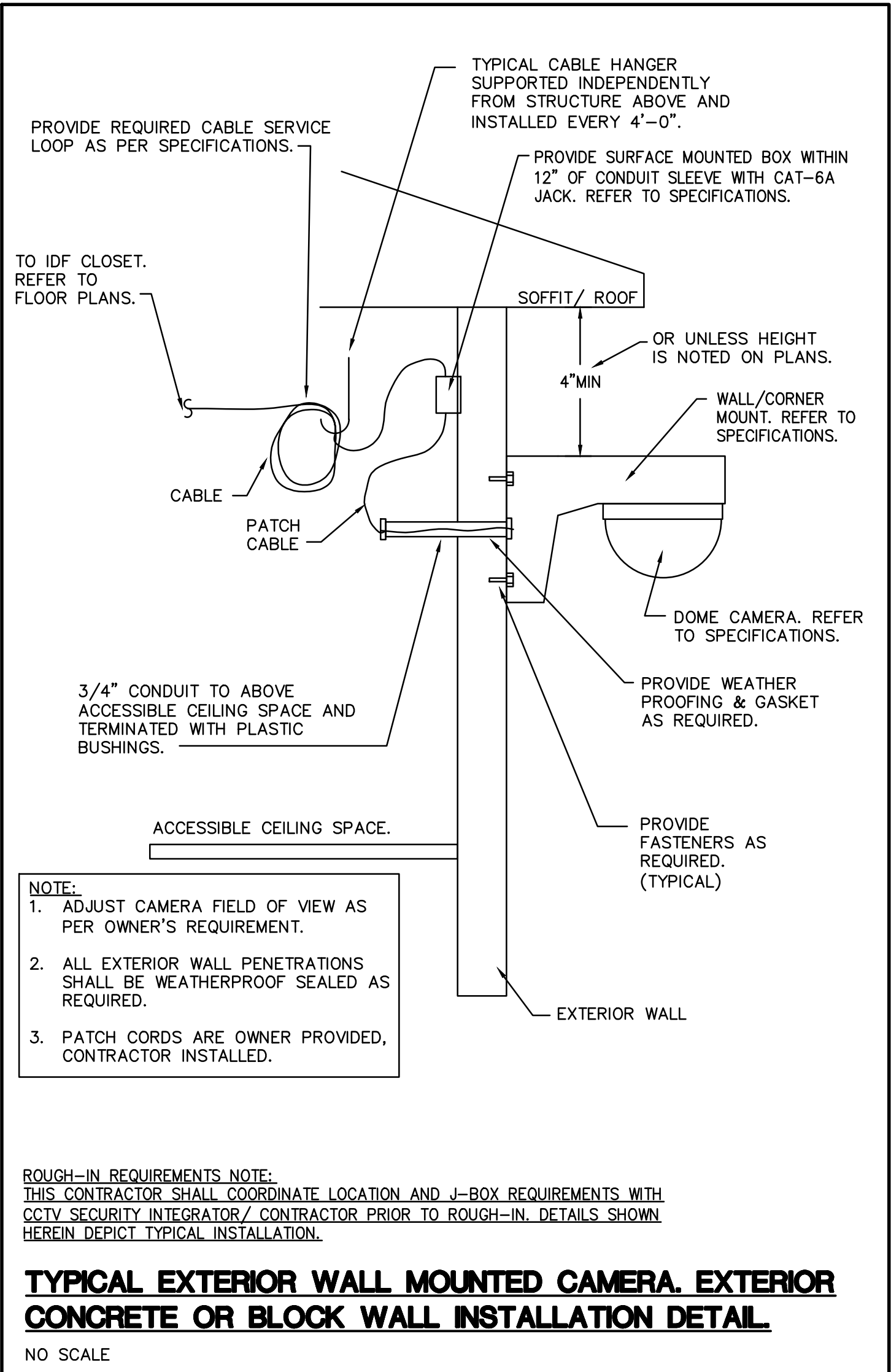
SURVEILLANCE INTERCONNECT DIAGRAM

N.T.S.



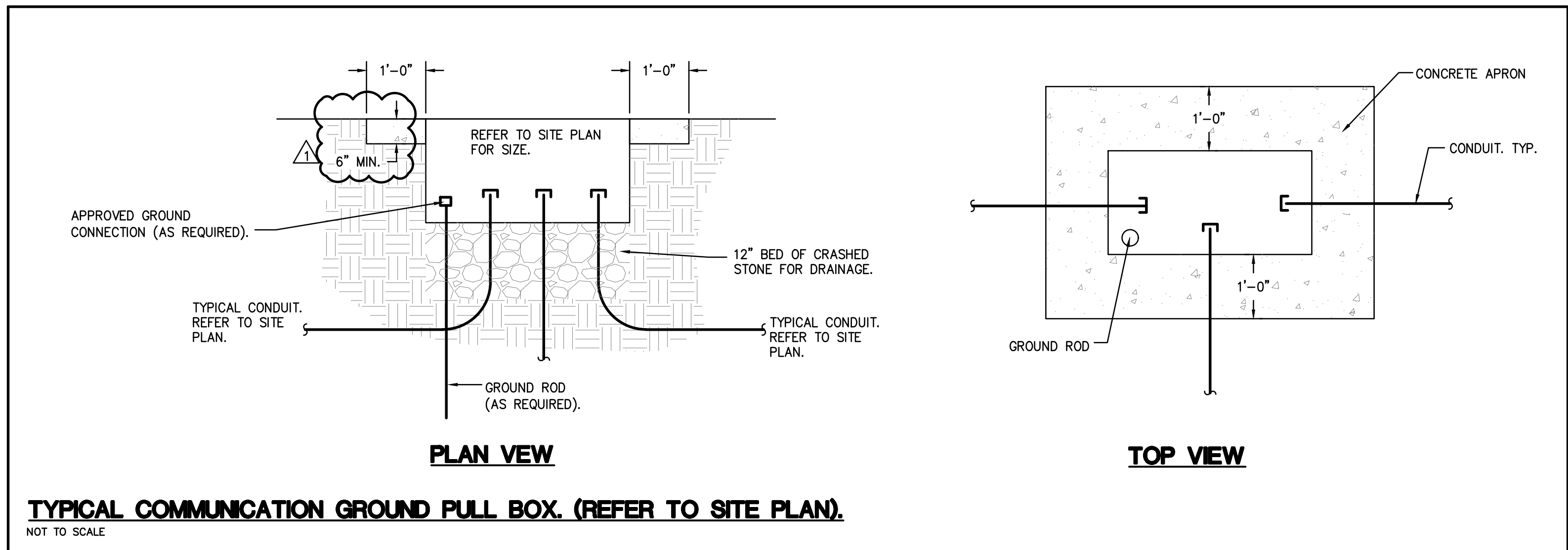
**TYPICAL DOME CAMERA GYP BOARD CEILING
INSTALLATION DETAIL**

NO SCALE



**TYPICAL EXTERIOR WALL MOUNTED CAMERA. EXTERIOR
CONCRETE OR BLOCK WALL INSTALLATION DETAIL**

NO SCALE



TYPICAL COMMUNICATION GROUND PULL BOX. (REFER TO SITE PLAN).

NOT TO SCALE

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Drawn By: JBNW
Checked By: EM
EML Job No. 23-0140

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ELECTRICAL
DETAILS

E5.4