PLANNING AND ZONING BOARD STAFF REPORT

102 SE 5th Avenue

Meeting	File No.	Application Type
March 17, 2025	2024-170	Level 3 Site Plan

Property Owner	Authorized Agent
4TRO Propco LLC	Jeffrey A. Costello, JC Planning Solutions

Reques

Consideration of a Level 3 Site Plan Application with Architectural Elevations and Landscape Plan for a four-story, approximately 35,000 square foot, eight-unit multi-family residential development.

Site Data & Information

Location: 102 SE 5th Avenue

PCN: 12-43-46-16-01-102-0110

Property Size: 0.35 acres, 15,207 sq ft

Land Use: Commercial Core (CC)

Zoning: Central Business District (CBD) – Central Core

Adjacent Zoning:

o All Directions: Central Business District (CBD) - Central

Core

Existing Use: Automotive Repair - Nonconforming

Proposed Land Use: Multi-family Residential

Floor Area Ratio:

Existing: 0.12 Proposed: 2.0

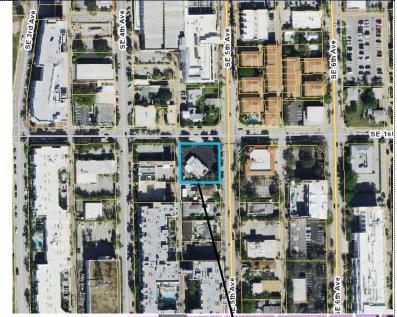
Maximum Allowed: 3.0

Density:

Existing: N/A

Proposed: 22.8 du/acre

Maximum Allowed: 30 du/acre





Background Information

The subject property consists of an approximately 1,800 square foot automotive repair facility that was constructed in 1957; it is considered a nonconforming use. The property is zoned Central Business District (CBD), Central Core Sub-district, with an underlying Land Use Map (LUM) designation of Commercial Core (CC). Automotive repair is a prohibited use in the Central Core Sub-district, as auto-focused uses are inherently inconsistent with the intent of the CBD to foster compact and pedestrian oriented growth that supports the historic moderate scale of downtown. As such, redevelopment of this site is an opportunity to further move the district towards its stated goals and intent for thoughtful urban redevelopment that supports and facilitates walkable neighborhoods.

The Downtown Development Authority (DDA) has considered the application on February 10, 2025, and recommended approval, finding that the development is successful in achieving the applicable findings under the purview of the DDA that the project has economic development benefit and maintains consistency with the goals of the downtown master plan.

Project Description

The proposed development is a foureiaht-unit multi-family story, residential development, with gross building area of 35.007 square feet. The eight units range in size between 2,794 square feet and 3,336 square feet. Each unit has ground floor access from the street, designed as a stoop frontage, which provides pedestrian connection from each unit directly to the public sidewalk. Likewise, there is a common area lobby with entrance off of SE 5th Avenue, which is classified as a Primary Street. No vehicular use area is proposed along any frontage, preserving the entire streetscape between curb and building for the benefit of the pedestrian. Required



parking is provided in a ground floor garage that is fully enclosed and wrapped by the residential units with vehicle access solely occurring from the alley. Private decks with splash pools (one for each unit) are provided on the second level above the garage. There are also activated rooftop living areas for each unit above the third story.

The architectural style proposed is Anglo-Caribbean, a permitted style pursuant to the Delray Beach CBD Design Guidelines. Overall, the project is presented in a way that significantly improves the streetscape with individual unit frontages, expanded sidewalk where feasible, and the introduction of street trees along both frontages, which creates a continuous shade canopy that benefits the pedestrian experience while simultaneously beautifying the corridor and creating buffered protection from the vehicular travel lanes.

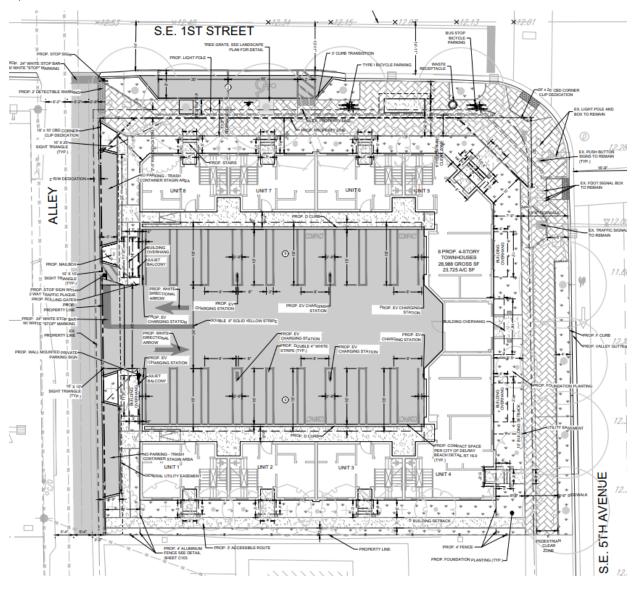
Waivers are not requested as part of this application. The residential units are proposed as market rate, and no workforce housing component is included. Regardless, the proposed density is well below the allowable threshold without utilizing any incentive density.

No loading zone is provided, but a loading area is required pursuant to LDR Section 4.6.10. A determination of adequacy for the lack of a loading zone is required as part of the site plan evaluation. The project is designed to accommodate loading demand for the project in the public alley, which may create conflict on the surrounding street network. A thorough analysis of the issue is provided in the following section.

Review and Analysis: Site Plan

The proposed site plan meets the applicable requirements of the Land Development Regulations. The project is well within allowable intensity thresholds including Floor Area Ratio (2.0 FAR proposed) and Density (22.8 dwelling units per acre proposed). The project meets the height requirement and all setback regulations (except where discussed below regarding the tower encroachment). The building is thoughtfully configured to create a pedestrian scaled urban product that reinforces walkability in the downtown core and helps facilitate redevelopment along the Primary Street in a way that is consistent with the intent of the CBD. Each individual unit has direct frontage access to the public sidewalk (or via an extended walkway along the south property line that thereby connects to the sidewalk) which activates the public realm and reinforces a sense of "eyes on the street" which is a desired outcome in urban settings. The sole point of vehicle access is shifted to the alleyway, and existing curb cuts along 5th Ave and 1st Street are removed. This preserves the integrity of the Primary Streets as high-quality pedestrian focused environments.

Required parking is provided in the ground level garage, which is successfully screened from the Primary Streets by the residential units and common lobby. Additional on-street parking is proposed along SE 1st Street, which further counts towards the parking requirements of the development.



(Full-sized site plan available as an attachment)

The minimum streetscape dimensions are provided in a way that maintains the maximum feasible pedestrian clear zone, while still allocating sufficient area for foundation landscaping and curb zone landscaping, which helps soften the starkness of the urban environment, and provides buffered protection between the pedestrian and vehicle travel lanes. The applicant and staff have worked closely to ensure that the amount of sidewalk area devoted to pedestrians is substantial enough that the landscaping does not have an unintended consequence of creating a constricted bottleneck or pinch point along a heavily trafficked sidewalk.

The clear zone has been routed to ensure that existing above ground traffic infrastructure does not obstruct the pedestrian path, and likewise, a new covered bus shelter has been located to ensure that the pedestrian clear zone is not reduced below minimums. The provision of the bus shelter, expansion of the sidewalk, and introduction of a shaded tree canopy are substantial amenity improvements within the public realm that will benefit the general public.

TYPE I BICYCLE PARKING
RECEPTACLE

The size of the subject property does not require the provision of civic open space; however, the site has been thoughtfully configured to ensure the proposed development positively relates to and enhances the public realm.

LDR Section 2.4.10(A)(3), Findings. All site plan applications require compliance with the applicable regulations and review criteria and shall be consistent with the Comprehensive Plan and other local ordinances.

(b) Level 2, Level 3, and Level 4 Site Plan applications require compliance with the findings in Chapter 3, Performance Standards.

The Site Plan was reviewed according to the performance standards for site plan actions listed in **LDR Section 3.2.3** and these standards have been factored into the technical review of the application. The intent of the standards are to ensure that certain essential criteria and a level of quality are adhered to with regard to new development. The project complies with the performance standards, except with regard to diversity of unit type (discussed below). Whether or not to allow small luxury developments to exempt themselves from this requirement is a policy decision for the regulating bodies.

LDR Section 3.1.1, Required Findings. Prior to the approval of development applications, certain findings must be made in a form which is part of the official record. This may be achieved through information on the application, the staff report, or minutes. Findings shall be made by the body which has the authority to approve or deny the development application.

These findings relate to the following four areas:

(A) Land Use Map The resulting use of land or structures must be allowed in the zoning district within which the land is situated and said zoning must be consistent with the applicable land use designation as shown on the Land Use Map.

As noted previously, the requested approval of a multi-family residential development is consistent with the density and intensity of the land use, and permitted uses as established within the Central Business District. The configuration and typology of the development further achieves the goals and objectives of the district. Additionally, the redevelopment of the site will eliminate the existing nonconforming use.

(B) Concurrency as defined by Objective NDC 3.1 of the Neighborhoods, Districts, and Corridors Element of the adopted Comprehensive Plan must be met and a determination made that the public facility needs, including public schools, of the requested land use and/or development application will not exceed the ability of the City and The School District of Palm Beach County to fund and provide, or to require the provision of, needed capital improvements in order to maintain the Levels of Service Standards established in Table CIE, Level of Service Standards, of the Capital Improvements Element of the adopted Comprehensive Plan of the City of Delray Beach.

Water and Sewer. The development will connect to existing water and sewer networks as approved by the City Utilities Department.

<u>Drainage</u>. Drainage will be accommodated on site. All stormwater runoffs will be collected and contained within the subject property through a drainage system approved by the City Engineer.

<u>Transportation</u>. The provided Palm Beach County TPS approval letter indicates the proposed expansion will generate a net reduction of 3 peak hour trips from the existing auto repair use. Therefore, the project meets transportation concurrency.

<u>Solid Waste</u>. The Solid Waste Authority has indicated that its facilities have sufficient capacity to accommodate all development proposals until 2054.

Schools. The PBC SCAD letter confirms that the development will have no negative impact on the existing school system.

(C) Consistency A finding of overall consistency may be made even though the action will be in conflict with some individual performance standards contained within Article 3.2, provided that the approving body specifically finds that the beneficial aspects of the proposed project (hence compliance with some standards) outweighs the negative impacts of identified points of conflict.

The following Comprehensive Plan objectives and policies are relevant to the request:

Neighborhoods, Districts, and Corridors Element

Objective NDC 1.3 Apply the mixed-use land use designations of Commercial Core, General Commercial, Transitional, Congress Mixed-Use, and Historic Mixed-Use to accommodate a wide range of commercial and residential housing opportunities appropriate in scale, intensity, and density for the diverse neighborhoods, districts, and corridors in the city.

<u>Policy NDC 1.1.2</u> Provide a complementary mix of land uses, including residential, office, commercial, industrial, recreational, and community facilities, with design characteristics that provide: Similar uses, intensity, height, and development patterns facing each other, especially in residential neighborhoods. Uses that meet the daily needs of residents. Public open spaces that are safe and attractive.

<u>Policy NDC 1.3.1</u> Apply mixed-use land use designations to foster development patterns that support pedestrian and bicycle activity, stimulate public transit ridership, and create a park-like environment.

<u>Policy NDC 1.3.2</u> Apply the mixed-use land use designation that best maintains the scale, density, intensity, and enhances the character of the surrounding neighborhood, district, or corridor.

The proposed development maintains consistency and compatibility in terms of scale and intensity with surrounding developments and is presented in a configuration that improves upon the built environment and reinforces key goals of the CBD to facilitate walkable and well-connected development that is respectful to the historic scale and development pattern of downtown.

(D) Compliance with the LDRs Whenever an item is identified elsewhere in the LDR, it shall specifically be addressed by the body taking final action on a land development application/request. Such items are found in Section 2.4.5 and in special regulation portions of individual zoning district regulations.

LDR Section 4.4.13, Central Business (CBD) District

Standard/Regulation	Review			
Height	Maximum: 54 feet	laximum: 54 feet		
4.4.13(D) – Central				
Business District	Proposed: 52 feet			
Setbacks	Minimum Required	Provided:		
4.4.13(D) - Central	Front – 10 feet	Front – 10 feet		
Business District	Rear – 10 feet	Rear – 10 feet		

PLANNING AND ZONING BOARD | MARCH 17, 2025 102 SE 5TH AVENUE | LEVEL 3 SITE PLAN

	Interior – 5 feet	Interior – 10 feet
Streetscape 4.4.13(F) – Central	Minimum Required Curb – 4 feet	Provided: Curb – 4 feet to 9 feet
4.4.13(F) – Central Business District	Pedestrian Clear – 6 feet	Pedestrian Clear – 6 feet
	Total – 15 feet	Total – 20 feet. 8 inches to 21 feet, 9 inches

Other Development Regulations

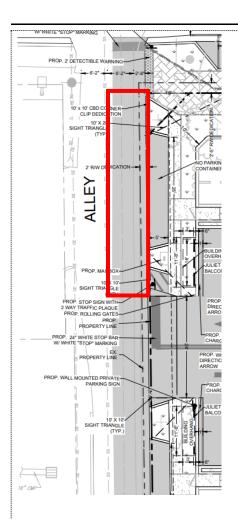
Standard/Regulation	Standard/Regulation Review	
4.4,13(I), CBD Parking Required: 1.75 spaces per unit = 14; and		
Standards 0.5 guest spaces per unit = 4		
	Provided: 20	
4.6.9, Bicycle Parking	Required:	
4.0.3, Dicycle Farking	Type I spaces – 1 spaces per 10 units = 1 space	
	Type II spaces – 1 space per 10 units = 1 space	
	Provided:	
	Type I spaces – 4	
	Type II spaces - 8	
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LDR Section 4.6.10, Off-Street Loading

Multi-family residential development has a robust need for intensive loading and unloading which, although it may not occur frequently, has the tendency to require use of substantially large vehicles. Specifically, it can be reasonably anticipated that certain periods, such as initial move-in and move-out, delivery of furniture, and delivery or removal of large appliances, will necessitate the use of large delivery trucks. A dedicated loading area ensures that the loading demand for a development is not dispersed onto the public street and alley network, which could unfairly burden surrounding property owners and the general public. As such, LDR Section 4.6.10 requires that at least two 12'x30' loading berths are provided for residential development exceeding 20,000 square feet; the proposal is for approximately 35,000 square feet of development.

This development proposal does not include any dedicated loading zone. The loading requirement likely anticipates that a 35,000 square foot development would have a significantly higher unit count than eight (with a higher unit count generating more significant loading demand); the large individual unit sizes on small infill luxury residential developments that have become common in Delray were not contemplated when the regulation was adopted. However, the proposed number of units, while not significant, will at some point require use of a loading zone, and because one is not provided conflict with the surrounding area is anticipated.

While the applicant has stated in their explanation of loading demand that daily freight and parcel delivery from smaller vehicles will be handled in an area provided off of the alley, which is provided within this development for the primary purpose of staging for trash pick-up, the provided area is not large enough to qualify as a loading zone, and further, is not large enough to reasonably accommodate large delivery and moving trucks. As such, it can be expected that during periods of move-in/move-out and delivery of large furniture and appliances, vehicles will at least partially obstruct the alley for significant periods of time. This may negatively impact the open flow of the street and alley network and negatively affect surrounding properties. It is important to note that the two properties directly west of the subject property have the only access to their parking area off of the alley (images next page). Large delivery vehicles servicing the property at 102 SE 5th Ave could conflict with or outright prevent vehicle access to the adjacent properties. The Board shall consider whether this is something that should be corrected or whether this is an unavoidable consequence of dense and compact downtown development on small parcels and, as such, the request is acceptable.



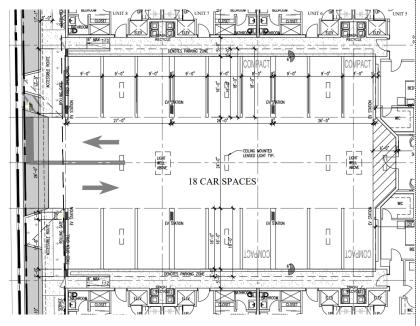


(Adjacent properties as viewed south from the alley)

Garage Circulation

The 8-unit development has a parking requirement of 18 spaces. The development provides 18 spaces in the ground floor garage as well as two via new on-street spaces for a total of 20 spaces, which is a surplus of two. The parking garage is configured with 9 spaces on each side of the drive-aisle. It is an extremely tight configuration with the interior entrances to the units only separated from the parking stalls by a 3-foot-wide walkway.

While the 3 feet provides the absolute minimum functionally required to be able to navigate trash bins from the unit storage to the exterior staging area, and while it provides the minimum necessary to allow for an unencumbered pedestrian to walk from a parked vehicle to a unit entrance, the tight configuration provides no functional room for residents to be able to successfully maneuver larger objects (i.e. furniture, appliances, packages) from their vehicles to their units, especially in scenarios where all 18 parking stalls are occupied.



Given there is a surplus of two spaces, staff strongly encourages that two spaces (one on each side) are removed and replaced with a landing area that will allow for residents to more feasibly navigate from their parked vehicles to their unit entrance when encumbered with larger objects. As configured, the access to the units is unnecessarily compromised. The trade-off of exchanging two surplus spaces for better functionality and maneuverability within the garage is a net positive in the opinion of staff. The Board should consider whether the

proposed garage configuration is acceptable with the identified spatial constraints, or if the applicant should revise the request pursuant to the staff recommendation.

LDR Section 3.2.3, Standards for Site Plan Action

The development proposes eight units that are similar, in that they are all around 3,000 square feet, with the majority being 3-bedroom, one 4-bedroom, and one 2-bedroom with loft. LDR Section 3.2.3 states that development shall provide a variety of housing types that accommodates the City's growing and socio-economically diverse population to meet the Goals, Objectives, and Policies of the Housing Element. This goal is also reinforced in the comprehensive plan. The Board should consider whether the provision of a homogenous unit type (large footprint, luxury typology) is acceptable given that the development is only proposing eight total units, or if the project should better incorporate a variety of housing types to achieve the goals of the performance standards and the comprehensive plan.

Review & Analysis: Landscape Plan

LDR Section 2.4.10(A)(3)(c), Findings

Landscape Plans, including modifications to existing landscaping, shall be consistent with Section 4.6.16, Landscape Regulations.

A technical review of this site plan has been performed, and a determination has been made that the project complies with all applicable landscape regulations. Landscaping is interspersed throughout the site in a way that is appropriate for the urban setting, where some foundation landscaping is incorporated to soften the mass, while a wide sidewalk is simultaneously paired with street trees to establish a walkable corridor. An effort has been made to preserve some of the existing mature trees on site, and those trees that are removed are mitigated through new trees elsewhere on site. The full landscape plan is available for review as an attachment.

Review & Analysis: Architectural Elevations

LDR Section 2.4.10(A)(3)(d), Findings

Architectural Elevations, including modifications to existing building facades, require an overall determination of consistency with the objectives and standards of Section 4.6.18, Architectural Elevations and Aesthetics, and any adopted architectural design guidelines and standards, as applicable.

LDR Section 4.6.18, Architectural Elevations and Aesthetics

(E), Criteria for board action

The following criteria shall be considered, by the Site Plan Review and Appearance Board or Historic Preservation Board, in the review of plans for building permits. If the following criteria are not met, the application shall be disapproved.

- 1. The plan or the proposed structure is in conformity with good taste, good design, and in general contributes to the image of the City as a place of beauty, spaciousness, harmony, taste, fitness, broad vistas, and high quality.
- 2. The proposed structure, or project, is in its exterior design and appearance of quality such as not to cause the nature of the local environment or evolving environment to materially depreciate in appearance and value.
- 3. The proposed structure, or project, is in harmony with the proposed developments in the general area, with the Comprehensive Plan, and with the supplemental criteria which may be set forth for the Board from time to time.

Staff finds that the design criteria are met. A further analysis of compliance with the CBD design guidelines is discussed below.

Delray Beach Central Business Architectural Design Guidelines

Anglo-Caribbean architecture is often considered an eclectic style, common to the British-settled isles of the Caribbean and influenced by Portuguese, Dutch, French, and Spanish colonization. Anglo-Caribbean architecture is characterized by wooden upper floors and roofs historically added over time to the masonry ground floors of initial settlements. The style today often references this through a change in material between floors or as a predominantly masonry construction with sculptural transitions between horizontal and vertical areas, incorporating wood building features.





EAST FACADE SOUTH EAST CORNER

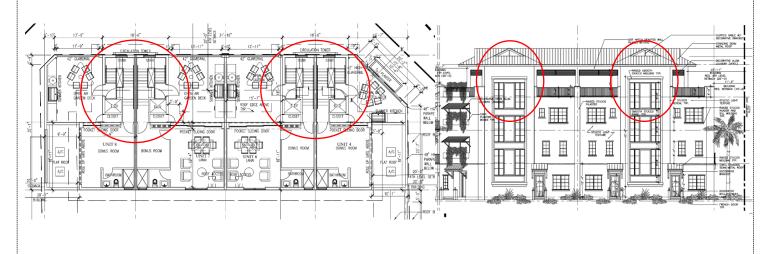
The aesthetic standards of this Section have been met by the proposed architectural design. The architectural style of Anglo-Caribean is a permitted design in the CBD, is regionally appropriate, and is a customary style for coastal Florida architecture. The composition is a well-executed version of the style, introducing movement and interest across the facades through articulation, changes in height, and subtle and stylistically appropriate ornamentation, including bracketed balconies, wood accents, stucco molding, and decorative louvers.

The composition maintains compliance with established façade proportion ratios that allow the building to maintain consistency with the historic downtown scale, and the design successfully incorporates a tripartite composition where a clear base, middle, and top of the composition is defined, which is an important aspect of traditional architectural style and something the CBD guidelines strongly require.

The composition is well connected to the street through thoughtful integration of stoop frontages and significant transparent openings are interspersed across the facades facing the streets which again reinforces a sense of integration and harmony with the public realm.

LDR Section 4.4.13(D)(2) Vertical Tower Encroachment

The LDR requires that an additional setback be applied for portions of the building extending above the third story, however, if encroachments are utilized in the composition as a defined tower element that is well-integrated into the design and consistent with the CBD design guidelines, then an encroachment into the setback above third story may be granted by the approving board. This is not a formal waiver request but rather is encompassed within the site plan approval. As such, the Board shall consider whether the setback encroachment proposed on the south and north facades are successfully composed as a tower feature that is an overall benefit to the design, such that the encroachment is acceptable. The area of encroachment is for the stair and elevator tower providing vertical access to the fourth floor.



Board Action Options

- A. Move **approval** of a Level 3 Site Plan Application request for **102 SE 5th Avenue**, including Architectural Elevations and a Landscape Plan, to construct a four-story, 8-unit residential development, finding that the request is consistent with the Land Development Regulations and the Comprehensive Plan.
- B. Move **approval**, **as amended of a** Level 3 Site Plan Application request for **102 SE 5**th **Avenue**, including Architectural Elevations and a Landscape Plan, to construct a four-story, 8-unit residential development, finding that the request is consistent with the Land Development Regulations and the Comprehensive Plan, **subject to conditions**.
- C. Move **denial** of a Level 3 Site Plan Application request for **102 SE 5th Avenue**, including Architectural Elevations and a Landscape Plan and, to construct a four-story, 8-unit residential development, finding that the request is inconsistent with the Land Development Regulations and the Comprehensive Plan.
- D. Continue with direction.

Public and Courtesy Notices

No Public Notice was required by the LDR for this application.

TAC Review Timeline

IAC IVENIEW III			
Review		TAC	Total time with Applicant: 122 days
No.	Submittal Date	Total time under review: 121 days 6/20/24 7/30/24 Applicant requested a reextension on 9/27/2024 due complexity of the project, when the project is described and therefore, the oblimation of the project is described and therefore, the oblimation to be granted within 18	Total time under review: 121 days
1	6/20/24		Applicant requested a resubmittal
2	10/16/24	11/15/24	extension on 9/27/2024 due to the complexity of the project, which was
3	12/18/24	1/13/25	accepted, and therefore, the obligation for
4	1/24/25	2/18/25	initial application date was waived by the
		•	Applicant.



March 3, 2025

102 SE 5th Avenue Level 3 Site Plan Revised Narrative Letter

This revised Narrative Letter associated with the Level 3 Site Plan application is respectfully submitted on behalf of Mugdock Development, LLC for the property located at 102 SE 5th Avenue (PCN: 12-43-46-16-01-102-0110).

BACKGROUND:

The subject property is located at the southwest corner of SE 5th Avenue and SE 1st Street. The 0.35-acre (15,207 sf.) property contains a one-story 1,871 sf. automotive repair facility constructed in 1957.

The property has a Future Land Use Map designation of Commercial Core (CC), is zoned Central Business District (CBD), and is within the CBD Central Core Sub-district.

DEVELOPMENT PROPOSAL:

The development proposal consists of the following:

- Demolition of the existing 1,871 sf. automotive repair facility;
- Construction of a 4-story, 8-unit townhouse type development with a 2- bedroom unit, a 4-bedroom unit and six 3-bedroom units. The townhouse units have the following range in sizes: 2-Bedroom 3,987 sf..; 3-Bedroom 3,442 3,456 sf.; 4-Bedroom 4,049 sf. On the 2nd level, a central amenity area will be provided with a privacy area for each unit consisting of privacy walls, planter areas, decking and a splash pool. On the 4th level, each unit includes an open area garden deck and sitting room.
- An 18-space ground level parking area will be provided with access to the ground level parking area provided from
 the alley. The driveway will be gated with a call box and lockbox at the alley entrance. A waiver to reduce the
 stacking distance along the alley, which is discussed in more detail below, has been approved by the City Engineer.
- Removal of the existing driveways onto SE 5th Avenue and SE 1st Street and construction of City streetscape requirements consisting of City standard paver brick sidewalks, decorative street lighting, and tree grates with 2 parallel parking spaces with landscape nodes and a City standard bus shelter along SE 1st Street.
- Installation of associated site lighting, refuse container staging areas adjacent to the alley, and fencing to the rear
 of the building.
- The development proposal includes the following right-of-way dedications: a 2' alley right-of-way dedication; a 2.5' dedication along SE 1st Street; a 10'x10' corner clip dedication at the intersection of the alley and SE 1st Street; and, and a 20' x 20' corner clip dedication at the intersection of SE 5th Avenue (Southbound Federal Highway) and SE 1st Street.

Level 3 Site Plan Application. Pursuant to LDR Section 2.4.10(A)(1), General. A site plan application is required for all exterior site or building improvements or modifications, and/or new construction associated with a multi-family residential, commercial, or mixed-use development. Single family homes and duplexes, and associated site improvements, are reviewed for compliance with the Land Development Regulations





(LDR) through the building permit approval process.

(c) **Level 3**. Level 3 Site Plan applications include new construction, additions to an existing building, or the conversion of an existing single-family residence or duplex, consisting of more than a total of five dwelling units for multi-family residential development or 15,000 gross square feet of mixed-use or nonresidential development.

Pursuant to LDR Section 2.4.10 (A)(3) Findings. All site plan applications require compliance with the applicable regulations and review criteria and shall be consistent with the Comprehensive Plan and other local ordinances.

- (b) Level 2, Level 3, and Level 4 Site Plan applications require compliance with the findings in Chapter 3, Performance Standards.
- (c) Landscape Plans, including modifications to existing landscaping, shall be consistent with Section 4.6.16, Landscape Regulations.
- (d) Architectural Elevations, including modifications to existing building facades, require an overall determination of consistency with the objectives and standards of Section 4.6.18, Architectural Elevations and Aesthetics, and any adopted architectural design guidelines and standards, as applicable.
- (f) Site Plan applications that include a waiver(s) are subject to the findings of 2.4.11(B).

REQUIRED FINDINGS – SEC. 3.1.1:

Pursuant to **LDR Section 3.1.1, Required Findings**, prior to the approval of development applications, certain findings must be made in a form which is a part of the official record. This may be achieved through information on the application, written materials submitted by the applicant, the staff report, or minutes. Findings shall be made by the body which has the authority to approve or deny the development application. As indicated below, positive findings can be made with respect to LDR Sections 3.1.1 (A) – (D).

(A) Land Use Map. The resulting use of land or structures must be allowed in the zoning district within which the land is situated and said zoning must be consistent with the applicable land use designation as shown on the Land Use Map.

The property has a Land Use Map designation of Commercial Core (CC), is zoned Central Business District (CBD), and is within the CBD Central Core Sub-district. Table NDC 1 lists CBD zoning as an implementing zoning district for CC land use. The proposed multi-family residential use is permitted in the CBD zoning district. Per Neighborhoods, Districts, and Corridors Element Table NDC – 1 of the Comprehensive Plan, the CC land use designation allows a maximum floor area ratio (FAR) of 3.0, and a standard residential density of 30 dwelling units per acre. The proposed 8-unit townhouse development has a density of 22.8 du/ac and an FAR of 1.93. Thus, positive findings can be made with respect to Land Use Map consistency.

(B) Concurrency. Concurrency as defined by Objective NDC 3.1 of the Neighborhoods, Districts, and Corridors Element of the adopted Comprehensive Plan must be met and a determination made that the public facility needs, including public schools, of the requested land use and/or development application will not exceed the ability of the City and The School District of Palm Beach County to fund and provide, or to require the provision of, needed capital improvements in order to maintain the Levels of Service Standards established in Table CIE-2, Level of Service Standards, of the Capital Improvements Element of the adopted Comprehensive Plan of the City of Delray Beach.





Per Objective 3.1 of the NDC Element, allow new development provided that the necessary public facilities and services are available. Allow new development within the Planning Area provided the necessary public facilities and services that are provided by, or through, the City are available concurrently.

Schools. The Palm Beach County School District School Capacity Availability Determination (SCAD) Application has been submitted for review for compliance with the adopted Level of Service for School Concurrency. On September 25, 2024, a SCAD letter was provided by the School District of Palm Beach County indicating there will be no negative impact on the School District of Palm Beach County public school system. Therefore, the School District has no comment on this application.

Water and Sewer. Municipal water and service is available via connections to the existing water main located within SE 5th Avenue and the sewer main located within the abutting alley along the west side of the property. Sewage calculations have been provided for City review. Pursuant to the City's Comprehensive Plan, adequate water and sewer treatment capacity exists to meet the adopted LOS at the City's build-out population, based on the current Land Use Map designation.

Solid Waste. Multi-family units with 5 or more units are calculated to generate 0.52 tons of solid waste per unit per year. The development proposal is to accommodate a maximum of 8 units, which represents 4.16 tons of solid waste per year. The landfill serving the property is projected to have sufficient capacity to meet the needs of city residents through the depletion year in 2054.

Drainage. Drainage will be accommodated on-site via an exfiltration trench system. No problems are anticipated obtaining a South Florida Water Management District permit. A signed and sealed drainage report has been submitted for review. The proposed system will meet storm water requirements in accordance with the South Florida Water Management District regulations per LDR Section 2.4.3(D)(8) as well as requirements in LDR Section 6.1.9 for the surface water management system.

Traffic: The proposed development is within the City's Transportation Concurrency Exception Area (TCEA) and the Coastal Residential Exception Area. Therefore, the proposed development is exempt from the Traffic Performance Standards of Palm Beach County. However, a Traffic Impact Statement was prepared and transmitted to Palm Beach County Traffic Division for review indicating that the 8-unit multi-family development will generate 54 new daily trips, 3 new AM peak hour trips and 4 peak PM hour trips. This is a reduction of 19 trips generated by the existing automotive repair facility. A Traffic Performance Standards (TPS) approval letter from Palm Beach County Traffic Division was provided on July 15, 2024.

Parks and Open Space: While there are sufficient recreation facilities in the City to meet this LOS, the proposal includes private on-site amenities. A park impact fee in the amount of \$500.00 per dwelling unit (\$4,000) will be collected prior to the issuance of a building permit to offset any impacts that a residential project may have on the City's recreational facilities.

(C) Consistency. A finding of overall consistency may be made even though the action will be in conflict with some individual performance standards contained within <u>Article 3.2</u>, provided that the approving body specifically finds that the beneficial aspects of the proposed project (hence compliance with some standards) outweighs the negative impacts of identified points of conflict.

Comprehensive Plan

A finding of overall consistency can be made that the development proposal is consistent with applicable Goals, Objectives, or Policies of the Comprehensive Plan referenced below, particularly those of the Neighborhood, Districts.





and Corridors Element, Housing Element, Economic Prosperity Element as well as the Downtown Delray Beach Master Plan, and Community Redevelopment Plan. The proposal includes the redevelopment of a nonconforming automotive repair facility to accommodate an 8-unit multi-family development within the downtown core and one block from Atlantic Avenue, providing additional year round residents to support the downtown businesses.

Neighborhoods, Districts, and Corridors Element

<u>Policy NDC 1.1.14</u> Continue to require that property be developed or redeveloped or accommodated, in a manner so that the use, intensity and density are appropriate in terms of soil, topographic, and other applicable physical considerations; encourage affordable goods and services; are complementary to and compatible with adjacent land uses; and fulfill remaining land use needs.

Objective 1.3, Mixed-Use Land Use Designations: Apply the mixed-use land use designations of Commercial Core, General Commercial, Transitional, Congress Mixed-Use, and Historic Mixed-Use to accommodate a wide range of commercial and residential housing opportunities appropriate in scale, intensity, and density for the diverse neighborhoods, districts, and corridors in the city.

<u>Policy NDC 1.3.3:</u> Apply the density and intensity in mixed-use land use designations to encourage adaptive re-use, development, and redevelopment that advances strategic, policy-driven goals, such as diverse residential housing opportunities, sustainable building practices, historic preservation, public parking, civic open space, or economic development strategies.

<u>Policy NDC 1.3.5:</u> Use the Commercial Core land use designation to stimulate the vitality and economic growth of the city while simultaneously enhancing and preserving the cultural and historic downtown area.

Policy NDC 1.3.6: Allow a maximum floor area ratio of 3.0 and a maximum density of 12 dwelling units per acre east of the Intracoastal Waterway, and a standard density of 12-30 dwelling units per acre with a revitalization/incentive density of 30-100 dwelling units per acre for the Commercial Core land use designation; specific standards in the Land Development Regulations adjust density and intensity based on compatibility, scale, character, adopted Redevelopment or Neighborhood Master Plans, or workforce housing incentives.

<u>Policy NDC 1.3.7:</u> Implement the Commercial Core land use designation using form-based code to provide for adaptive-reuse, development, and redevelopment that preserves the downtown's historic moderate scale, while promoting a balanced mix of uses that will help the area continue to evolve into a traditional, self-sufficient downtown...

Objective NDC 2.7: Planning of Neighborhoods, Districts, and Corridors Continue to respond to unique needs and conditions of the varied neighborhoods, districts, and corridors of Delray Beach using Neighborhood and Redevelopment Plans that determine specialized planning strategies and improvement projects to implement the vision of plans.

Economic Prosperity

<u>Policy ECP 3.3.4</u> Continue to support efforts of commercial districts, streets and neighborhoods to improve their physical attributes by encouraging infill, adaptive reuse, redevelopment and other strategies.

<u>Policy ECP 3.3.6</u> Promote development or redevelopment of vacant, underutilized or surplus properties, particularly those with the potential to serve as a catalyst for economic development.





Housing Element

Objective HOU 3.1 Provide opportunities for residential development to accommodate the housing needs of existing and future residents.

<u>Policy HOU 3.1.4</u> Encourage development of vacant or underdeveloped land for housing and mixed-uses and promote rehabilitation of underutilized housing into desirable places to live.

Sec. 3.2.3 – Standards for Site Plan Actions:

(A) Building design, landscaping, and lighting (glare) shall be such that they do not create unwarranted distractions or blockage of visibility as it pertains to traffic circulation.

The proposal meets this standard. The proposed building is of the Anglo-Caribbean Architectural Style, which is one of seven architectural styles identified in the Delray Beach Central Business District Architectural Design Guidelines. The building along with the associated landscaping and site lighting are designed in compliance with the LDRs and will not create any distractions of block visibility as it pertains to traffic circulation.

(B) All development shall provide pedestrian, bicycle, and vehicular interconnections to adjacent properties, where possible, and include accessible routes from the entry points of publicly accessible buildings to the sidewalk network in accordance with the Americans with Disabilities Act (ADA).

The intent of this standard has been met. Interconnections are provided via the urban grid. Pedestrian access and interconnections to the adjacent streets and alley will be provided. The development complies with the CBD Streetscape Standards and includes installation of 2 on-street parking spaces along with the required 4' curb zone and 6' pedestrian clear zone on SE 1st Street with a 4' curb zone 9'6" clear zone along SE 5th Avenue.

(C) Open space enhancements and recreational amenities shall be provided to meet Objective OPR 1.4 and other requirements of the Goals, Objectives and Policies, as applicable, of both the Open Space, Parks, and Recreation Element and Conservation Element.

This standard is not applicable. The above-referenced Objective pertains primarily to private residential development and the property is less than 20,000 sf.; therefore, there is no civic open space required, per LDR Section 4.4.13 (G).

(D) Any proposed street widening or modifications to traffic circulation shall be evaluated by the City, and if found to have a detrimental impact upon or result in the degradation of an existing neighborhood, the request shall be modified or denied.

This standard is not applicable. There is no street widening or traffic circulation modifications associated with the project.

(E) Development of residentially zoned vacant land shall be planned in a manner consistent with adjacent development regardless of zoning designations.

This standard is not applicable. The project does not propose development of residentially zoned vacant land. The property is zoned CBD, and the improvements include an 8-unit townhouse type condominium development, in accordance with the CBD regulations.





(F) Property shall be developed or redeveloped in a manner so that the use, intensity, and density are appropriate in terms of soil, topographic, and other applicable physical considerations; encourage affordable goods and services: are complementary to and compatible with adjacent land uses; and fulfill remaining land use needs.

This standard has been met. The proposed use, intensity and density are appropriate and are compatible with and complementary to the adjacent uses. The proposed development will provide 8 additional units in the downtown area that will support surrounding businesses and will significantly enhance the SE 5th Avenue and SE 1st Street corridors.

(G) Development shall provide a variety of housing types that accommodates the City's growing and socioeconomically diverse population to meet the Goals, Objectives, and Policies the Housing Element.

This development complies with the intent of this standard. The proposal consists of one 2-bedroom, one 4-bedroom unit, and six 3-bedroom units with varying unit types in conjunction with the other improvements.

(H) Consideration shall be given to the effect a development will have on the safety, livability, and stability of surrounding neighborhoods and residential areas. Factors such as but not limited to, noise, odors, dust, and traffic volumes and circulation patterns shall be reviewed and if found to result in a degradation of the surrounding areas, the project shall be modified accordingly or denied.

This standard has been met. The proposed redevelopment will have a positive impact on stability, livability and safety within the downtown core. There will be no issues in terms of noise, odors, dust or traffic volumes and traffic circulation. It is noted that access to the ground level parking area is from the alley. The introduction of the residential units in place of the auto repair facility will further enhance and stabilize the area. The residential use will not generate any factors that will result in degradation of the surrounding area and will not have any impact on any residential neighborhoods.

(I) Development shall not be approved if traffic associated with such development would create a new high accident location or exacerbate an existing situation causing it to become a high accident location, without such development taking actions to remedy the accident situation.

This standard has been met. The traffic statement submitted in conjunction with this application does not show any indication that the project will create any significant additional traffic that will exacerbate an existing situation to become a high accident location. The existing driveways on SE 1st Street and SE 5th Avenue (Southbound Federal Highway) are being eliminated in conjunction with the redevelopment of the property. The proposed 8-unit development will result in a reduction in average daily and peak period trips. A Traffic Performance Standards (TPS) approval letter from Palm Beach County Traffic Division was provided on July 15, 2024.

(J) Tot lots and recreational areas, serving children, teens, and adults shall be a feature of all new housing developments as part of the design to accommodate households having a range of ages. This requirement may be waived or modified for residential developments located in the downtown area, and for infill projects having fewer than 25 units.

This standard is not applicable as the project only provides 8 residential units.

(K) Development shall not exceed the maximum limits established in the Table NDC-1, Land Use Designations: Density, Intensity, and Implementing Zoning Districts, of the Neighborhoods, Districts, and Corridors Element or specific standards established in the zoning districts that limit density (dwelling units per acre) or intensity (floor area ratio) and must adhere to whichever limit is lower. Development in areas included in density or incentive programs (i.e., workforce housing programs specified in Article 4.7-Family/Workforce Housing) may exceed the





Standard density limit, up to the specified Revitalization/Incentive density established for the program: development in all other areas shall not exceed the Standard density.

The intent of this standard has been met. The proposed 8-unit townhouse development is less than the 30 units per acre permitted (22.8 du/ac) and is less than the maximum 3.0 Floor Area Ratio (FAR) permitted in the CBD (1.93 FAR). Thus, the proposal will not exceed the maximum limits in Table NDC-1, or the specific standards related to the intensity and density.

(L) Development shall meet the intent of CSR <u>5</u>, Energy Efficiently and Diverse Energy Mix and, where applicable, the requirements of LDR <u>Section 7.11.1</u>, Green Building Regulations.

The standard will be met. The proposal will comply with the applicable provisions of CSR 5, Energy Efficiently and Diverse Energy Mix, LDR Section 7.11.1, Green Building Regulations, and Florida Building Code, Energy Conservation Code 7th Edition.

(D) Compliance with LDRs. Whenever an item is identified elsewhere in these Land Development Regulations (LDRs), it shall specifically be addressed by the body taking final action on a land development application/request. Such items are found in <u>Section 2.4.5</u> and in special regulation portions of individual zoning district regulations.

The development proposal is in compliance with the Land Development Regulations, including the CBD Development and Architectural Standards as they relate to building setbacks, parking, site lighting, building design, and streetscape standards. The proposed rooftop terraces will comply with LDR Section 4.4.13(C)(4)(h). Also, the proposal includes the following right-of-way dedications: a 2' alley right-of-way dedication; a 2.5' dedication along SE 1st Street; a 10'x10' corner clip dedication at the intersection of the alley and SE 1st Street; and, and a 20' x 20' corner clip dedication at the intersection of SE 5th Avenue (Southbound Federal Highway) and SE 1st Street. Separately, a waiver to LDR Section 4.6.9(D)(4) to reduce the stacking distance along the alley between the parking area entry gate and the alley has been requested. Pursuant to LDR Section 4.6.9(D)(5), a reduction to the minimum required stacking distance may be requested when supported by a traffic study and justification statement addressing access into the site and efforts to diminish the impact of queuing on the public right-of-way. The City Engineer shall provide a written determination regarding the request to reduce the stacking distance. A traffic study and justification statement was provided to the City Engineer for review and approval. The City Engineer has approved the stacking distance reduction based on the analysis provided.

LANDSCAPE PLAN:

Pursuant to LDR Section 2.4.10(A)(3)(c) Landscape Plans, including modifications to existing landscaping, shall be consistent with Section 4.6.16, Landscape Regulations

The proposed landscape plan complies with the objectives and design standards of LDR Section 4.6.16. The landscape plan provides a variety of landscape material in compliance with regulations including the City's Streetscape Standards.

ARCHITECTURAL ELEVATIONS:

Per LDR Section 4.4.13(F)**Architectural standards**. To ensure high quality architecture in the downtown area, the architectural standards apply to all buildings in the Central Business District Sub-districts and in the OSSHAD with CBD Overlay. In addition to the standards in <u>Section 4.6.18</u>, the following standards apply in all CBD Sub-districts

Per LDR Section 4.4.13(F)(3) **Appropriate architectural styles**. The adopted "Delray Beach Central Business District Architectural Design Guidelines", as amended, identifies architectural styles as appropriate for downtown Delray





Beach, based on historical precedent, climate, and building scale. Defining characteristics and character examples are provided for each of the styles as guidance.

Pursuant to LDR Section 4.6.18(E), **Criteria for Board Action**, the below criteria shall be considered, by the Site Plan Review and Appearance Board, in the review of plans for building permits. If the following criteria are not met, the application shall be disapproved.

- (1) The plan or the proposed structure is in conformity with good taste, good design, and in general, contributes to the image of the City as a place of beauty, spaciousness, harmony, taste, fitness, broad vistas, and high quality.
- (2) The proposed structure, or project, is in its exterior design and appearance of quality such as not to cause the nature of the local environment or evolving environment to materially depreciate in appearance and value.
- (3) The proposed structure, or project, is in harmony with the proposed developments in the general area, with the Comprehensive Plan, and with the supplemental criteria which may be set forth for the Board from time to time.

The proposed building is designed in the Anglo-Caribbean architectural style, which is an architectural style that is identified as an appropriate architectural style for downtown Delray Beach per the "Delray Beach Central Business District Architectural Design Guidelines". The proposed building also provides the desired articulations and tri-partite composition referenced in LDR Section 4.4.13(F)(2). The elevations comply with LDR Section 4.4.13(F), the CBD Architectural Guidelines as well as LDR Section 4.6.18(E)(1)-(3) (Criteria for Board Action). The proposed elevations are in conformity with good taste and good design. The design is in harmony with the developments in the area and will enhance the character, value, and attractiveness of the surrounding area.

CONSLUSION/FINDINGS:

Based on the above, positive findings can be made that the project as represented by the Level 3 Site Plan application is consistent with Chapter 3 (Performance Standards, LDR Section 3.1.1 (Required Findings), (A) Future Land Use Map, (B) Concurrency, (C) Consistency, and (D) Compliance with LDRs, as well as the Always Delray Comprehensive Plan, Downtown Delray Beach Master Plan, and Community Redevelopment Plan. Positive findings can also be made with LDR Sections 4.6.16 and 4.6.18. Therefore, approval of the Level 3 Site Plan application is respectfully requested.







3000 N. Military Trail Suite 209 Boca Raton, Florida 33431 P (561) 391-0081 F (561) 391-0085 mail@rwb-arch.com AA26000640

October 9, 2024

City of Delray Beach 100 NW 1st Avenue Delray Beach, FL 33444

RE: 102 SE 5TH AVENUE DESIGN NARRATIVE

The architectural style presented is consistent with **Anglo-Caribbean** design and detailing.

"Anglo-Caribbean architecture is often considered an eclectic style, common to the British-settled isles of the Caribbean and influenced by Portuguese, Dutch, French, and Spanish colonizations. Anglo-Caribbean architecture is characterized by wooden upper floors and roofs historically added over time to the masonry ground floors of initial settlements. The style today often references this through a change in material between floors or as a predominantly masonry construction with sculptural transitions between horizontal and vertical areas, incorporating wood building features."

Roof: The building is presented with 6:12 metal standing seam roof, in addition, the standing seam metal roof material is included on the cantilevered balconies and roofed entry stoops. The roofing details include deep overhangs with exposed wood rafter tails. A clipped gable roof detail including wood accents within are used to add additional architectural interest to the roof.

Balconies: This building is presented with decorative cantilevered balconies on the east and west elevations. These balconies are consistent with the design style including exposed wood column and beams the assembly supported with decoratively shaped wood brackets. A combination of double height and single height wood balconies are provided.

Windows and Doors: The building is presented with casement window opening recessed from the heavy masonry stucco wall construction, creating shadows to express the solidity of the stucco masonry construction. The windows include raised header and sill molding consistent with this this architectural style. The doors and windows will have divided lights throughout. Single and double window sizes have been selected to be consistent with vertical proportions, all to be casement opening. French style doors have been used on all exterior facing locations.

Unique tower features: The building includes vertically proportioned windows and sculptural molding features to accent the building's interior vertical stair elements which are appropriately expressed on the exterior. This feature will reinforce the use of cantilevered wood detail and divided light widows which will offer a unique and dramatic aesthetic features on the north and south elevations.

Additional architectural detailing: Included in the design is the use of open louvers presented with angled brackets and vertically presented to accent key window and building opening further enhancing dramatic shadows and providing additional color to the aesthetic.

Cantilevered planters have been used to add visual interest at the prominent north east street corner. In addition to a planter used in conjunction with a wood trellis detail featured at the center of east elevation. Addition wood brackets have been used to accent and frame the roofing over the central street facing wall portal allowing for a continuous and aesthetically consistent east street elevation.

This office is proud to present this building with its consistent and appropriate use of details and styling all perfectly consistent with the Anglo-Caribbean guidelines.

Sincerely, Juan C. Linares

Juan C. Linares, AIA, LEED AP RWB / Linares Architecture, Inc. 1600 South Dixie Hwy Suite 400 Boca Raton, Florida 33432 P (561) 391-0081 F (561) 391-0085 Jlinares@rwb-arch.com

2. AREA = 15,207 SQUARE FEET OR 0.349 ACRES (MEASURED)

- 3. LOCATION OF ALL UNDERGROUND UTILITIES ARE APPROXIMATE, SOURCE INFORMATION FROM PLANS AND MARKINGS HAS BEEN COMBINED WITH OBSERVED EVIDENCE OF UTILITIES TO DEVELOP A VIEW OF THOSE UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION MAY BE NECESSARY.
- 4. THIS SURVEY WAS PERFORMED IN THE FIELD ON DECEMBER 6, 2023 UTILIZING THE REFERENCE DOCUMENTS AS LISTED HEREON AND DEPICTS BUILDINGS, STRUCTURES AND OTHER IMPROVEMENTS. REVISIONS LISTED ON THIS SURVEY APPLY ONLY TO THE SPECIFIC CHANGES REFERENCED, AND DO NOT CONSTITUTE AN UPDATE OF OTHER DATA ON THIS SURVEY. THE "SURVEY DATE" SHOWN HEREON IS THE APPLICABLE DATE AS RELATED TO PROVISIONS OF STATUTES OF LIMITATION UNLESS NOTED OTHERWISE.
- 5. ELEVATIONS ARE BASED ON NAVD88 DATUM DETERMINED BY GPS OBSERVATION AND TIED INTO THE NGS BENCHMARK NO. AD2695 WITH A PUBLISHED ELEVATION OF 15.62 FEET.
- 6. THE PROPERTY IS LOCATED IN OTHER AREAS ZONE X (AREAS DETERMINE TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) PER MAP ENTITLED "FIRM, FLOOD INSURANCE RATE MAP, PALM BEACH COUNTY, FLORIDA AND INCORPORATED AREAS, PANEL 979 OF 1200", MAP NUMBER 12099C0979F, WITH A MAP EFFECTIVE DATE OF OCTOBER 5, 2017.EFFECTIVE DATE OF OCTOBER 5,
- 7. ZONING: NO ZONING REPORT OR ZONING LETTER WAS PROVIDED TO THE SURVEYOR.
- 8. NO SURVEY OF SUBTERRANEAN STRUCTURES OR INTERIOR SPACES SUCH AS FOOTINGS, FOUNDATIONS, VAULTS OR BASEMENTS WAS PERFORMED AS PART OF THIS LAND SURVEY, AND THIS PLAN SHOULD NOT BE CONSTRUED AS CERTIFICATION TO THE EXISTENCE OR LOCATION OF THE SAME
- 9. TREES 4 INCHES DIAMETER AT BREAST HEIGHT (DBH) AND LARGER HAVE BEEN LOCATED WITHIN THE PROJECT BOUNDARY.
- 10. THERE ARE NO GAP/GORES OR OVERLAPS BETWEEN THE RIGHT-OF-WAY LINES SHOWN HEREON AND THE SUBJECT PROPERTY.
- 11. PARKING: 13 STANDARD 0 ADA
- 13 TOTAL SPACES
- 12. THERE ARE NO VISIBLE ENCROACHMENTS EXCEPT AS SHOWN ON THE SURVEY. ENCROACHMENT IS A LEGAL CONDITION, NOT A MATTER OF SURVEY AND, AS A RESULT, THERE MAY BE OTHER POSSIBLE ENCROACHMENTS AFFECTING THE PROPERTY THAT ARE NOT SHOWN.
- 13. THE PROPERTY HAS DIRECT ACCESS ALONG SOUTHEAST 5TH AVENUE AND SOUTHEAST 1ST STREET.
- 14. THIS SURVEY WAS PREPARED IN ACCORDANCE WITH THE "STANDARDS OF PRACTICE", AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN RULES 5J-17.050 THROUGH 5J-17.053, OF THE FLORIDA ADMINISTRATIVE CODE.
- 15. THE BEARINGS SHOWN HEREON ARE RELATIVE TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 1990 ADJUSTMENT, HOLDING THE NORTH LINE OF THE SUBJECT PROPERTY AS BEING NORTH 89°16'25" EAST.
- 16. ALL DISTANCES ARE MEASURED GROUND DISTANCES UNLESS NOTED OTHERWISE.
- 17. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY ANYONE OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
- 18. THIS SURVEY WAS PREPARED FOR THE PARTIES LISTED BELOW AND IS NOT ASSIGNABLE: MUGROCK DEVELOPMENT LLC
- 19. THIS MAP IN INTENDED TO BE DEPICTED AT A SCALE OF 1"=20' ON 24"X36" SHEETS. UNITS SHOWN ARE U.S. SURVEY FEET.
- 20. SOME TOPOGRAPHIC FEATURES MAY BE EXAGGERATED IN SCALE FOR CLARITY. THE CENTER OF THE SYMBOL OF SUCH FEATURES IS THE CORRECT LOCATIONS.
- 21. © COPYRIGHT 2023 BY BOHLER ENGINEERING FL, LLC.
 REPRODUCTIONS OF THIS SURVEY ARE NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND STAMP, OR A DIGITALLY VERIFIED ELECTRONIC SIGNATURE AND SEAL, OF A FLORIDA LICENSED

SURVEYOR AND MAPPER EMPLOYED BY BOHLER ENGINEERING FL, LLC.

FITLE NOTES

COUNTY, FLORIDA.

THIS SURVEY IS PREPARED WITH REFERENCE TO A COMMITMENT FOR TITLE INSURANCE PREPARED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY, COMMITMENT NO. NACS231017, WITH A COMMITMENT DATE OF OCTOBER 27, 2023. OUR OFFICE HAS REVIEWED THE TITLE COMMITMENT AND THERE ARE NO SURVEY RELATED EXCEPTIONS IN SCHEDULE B-II, EXCEPTIONS.

TITLE DESCRIPTION

LOTS 11 AND 12, BLOCK 102, TOWN OF LINTON (NOW KNOWN AS DELRAY BEACH), ACCORDING TO THE MAP OR PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 3, PUBLIC RECORDS OF PALM BEACH

EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE STATE OF FLORIDA BY DEED RECORDED APRIL 25, 1960, IN O.R. BOOK 499, PAGE 500, PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THE EAST 10 FEET OF LOTS 11 AND 12, BLOCK 102, TOWN OF LINTON (NOW KNOWN AS DELRAY BEACH), ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 3, PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA,

ALSO: A PARCEL OF LAND IN LOT 11, BLOCK 102, TOWN OF LINTON (NOW KNOWN AS DELRAY BEACH), ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 3, PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

FROM A POINT ON THE NORTH LINE OF SAID LOT 11, LOCATED 10 FEET WEST OF THE NORTHEAST COMER OF SAID LOT 11, RUN WESTERLY ALONG SAID NORTH LINE FOR 14.78 FEET; THENCE RUN SOUTHEASTERLY ALONG A CURVE CONCAVE TO THE SOUTHWEST AND HAVING A RADIUS OF 15 FEET FOR 23.34 FEET, THROUGH A CENTRAL ANGLE OF 89 DEGREES 09' 00" TO A POINT ON A LINE PARALLEL TO AND 10 FEET WESTERLY OF THE EAST LINE OF SAID LOT 11; THENCE RUN NORTH 01 DEGREE 08' 35" WEST ALONG SAID PARALLEL LINE FOR 14.78 FEET TO THE POINT OF BEGINNING.

UTILITIES:

THE FOLLOWING COMPANIES WERE NOTIFIED BY SUNSHINE 811 UTILITY SYSTEM (1-800-432-4770) AND REQUESTED TO MARK OUT UNDERGROUND FACILITIES AFFECTING AND SERVICING THIS SITE. THE UNDERGROUND UTILITY INFORMATION SHOWN HEREON IS BASED UPON THE UTILITY COMPANIES RESPONSE TO THIS REQUEST. SERIAL NUMBER(S): 335304764

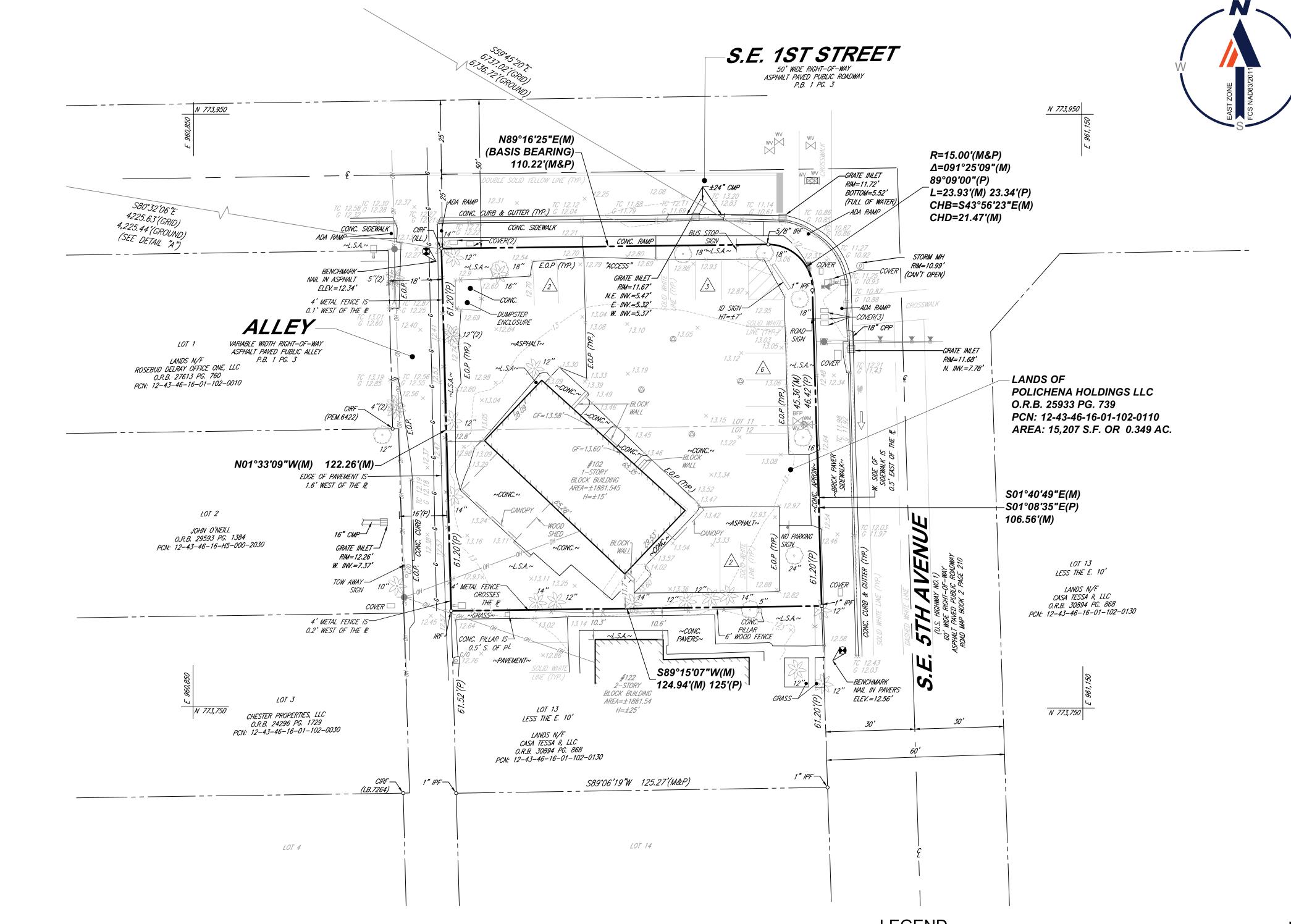
UTILITY COMPANY	LOCATE STATUS	PHONE NUMBER
COMCAST-PBG WINDSTREAM COMMUNICATION WINDSTREAM ENTERPRISE/WHOLESALE CITY OF DELRAY BEACH WATER/SEWER NETWORK FLORIDA POWER & LIGHT - PALM BEACH FLA PUBLIC UTILITIES CO HOTWIRE COMMUNICATIONS CROWN CASTLE NG PALM BEACH COUNTY TRAFFIC OPERATIONS AT & T/ DISTRIBUTION	CATV TELEPHONE FIBER SEWER, WATER ELECTRIC GAS CATV, FIBER, TELEPHONE FIBER TRAFFIC LIGHTS	(954) 789-9762 (800) 289-1901 (800) 941-3430 (561) 243-7000 X7335 (800) 778-9140 (561) 261-9034 (561) 288-9188 X6 (855) 933-4237 X1 (561) 233-3923
AT & I/ DISTRIBUTION	TELEPHONE	(800) 247-2020



Know what's **below.**Call before you dig.

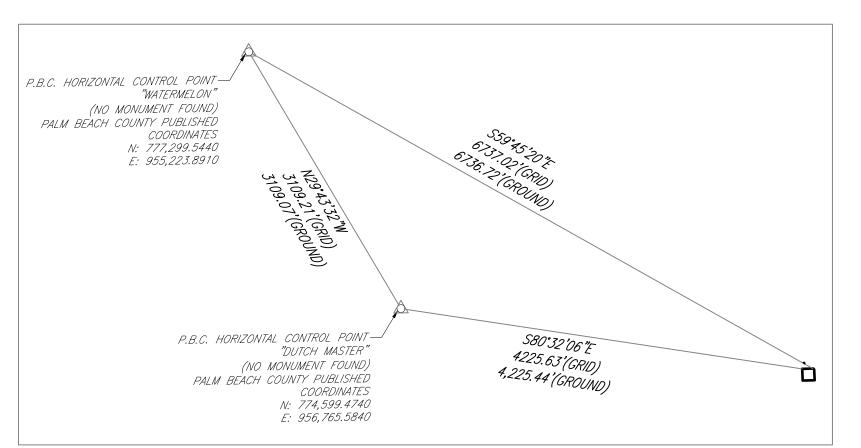
Dial 811

Or Call 800-432-4770



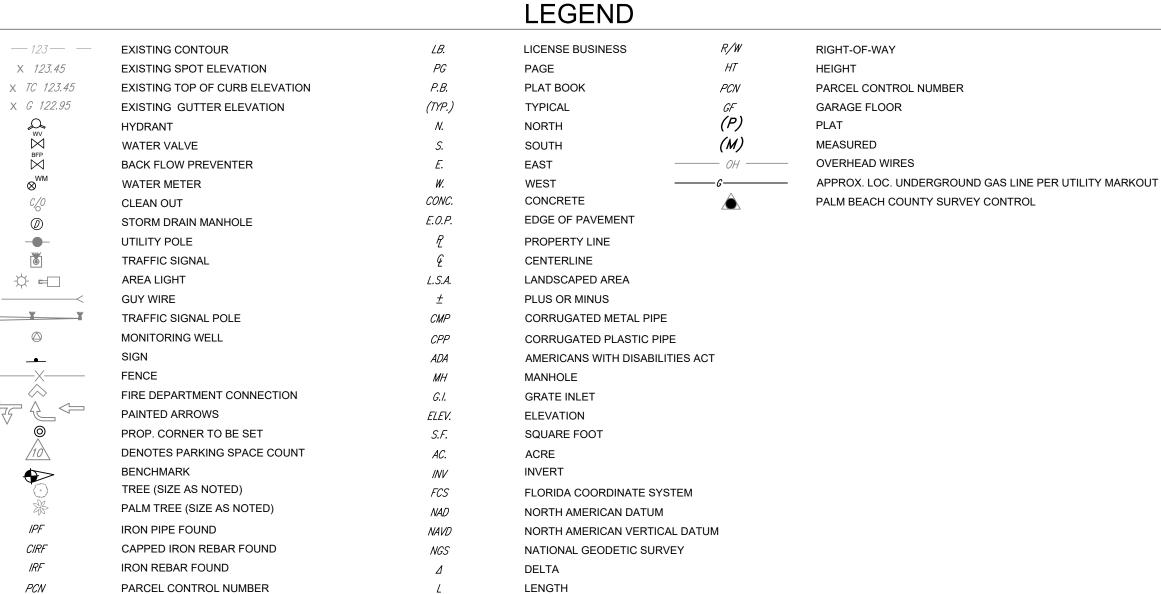
OFFICIAL RECORD BOOK

PROPERTY IDENTIFICATION



DETAIL "A"

NOT SCALE



CHORD LENGTH BEARING

CHORD LENGTH DISTANCE

TO: FIDELITY NATIONAL TITLE INSURANCE COMPANY; MUGDOCK DEVELOPMENT LLC, A FLORIDA LIMITED LIABILITY COMPANY; POLICHENA HOLDINGS LLC, A FLORIDA LIMITED LIABILITY COMPANY.

= Beach

Tennis

Center

Atlantic Ave

4th St GRIFFIN GATE

SWINTON OAKS

LOCATION MAP

SCALE: 1"=2000'

COORDINATES, BEARINGS AND DISTANCES

7. ALL DISTANCES ARE GROUND, UNLESS OTHERWISE NOTES

9. GROUND DISTANCE X SCALE FACTOR = GRID DISTANCE

1. COORDINATES SHOWN ARE GRID

2. DATUM = NAD 83 1990 ADJUSTMENT

5. COORDINATE SYSTEM 1983 STATE PLANE

6. TRANSVERSE MERCATOR PROJECTION

4. LINEAR UNIT = US SURVEY FEET

8. SCALE FACTOR = 1.000044782

3. ZONE = FLORIDA EAST

SW 5th St

SQUARE

AVENUE EAST

VIA M

REID

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 7(A), 7(B)(1), 7(C), 8, 9, 11(A), 13, & 14 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON DECEMBER 6, 2023.



ALTA/NSPS LAND TITLE SURVEY

MUGDOCK DEVELOPMENT, LLC

PROPERTY BY THE NAMED PURCHASER. NO RESPONSIBILITY OR LIABILITY IS ASSUMED BY SURVEYOR FOR THE USE

OF SURVEY FOR ANY OTHER PURPOSE INCLUDING, BUT NOT LIMITED TO, USE OF SURVEY AFFIDAVIT, RESALE OF

PROPERTY, OR TO ANY OTHER PERSON NOT LISTED IN CERTIFICATION, EITHER DIRECTLY OR INDIRECTLY.

102 SOUTHEAST 5TH AVE CITY OF DELRAY BEACH, FLORIDA

PALM BEACH COUNTY

FILE NO.
FLB230140

BOLLER

1900 CORPORATE BLVD. NW,
SUITE 101E
BOCA RATON, FLORIDA 33431
561.571.0280
www.bohlerengineering.com
CERT. OF AUTHORIZATION: LB#80

12/19/2023

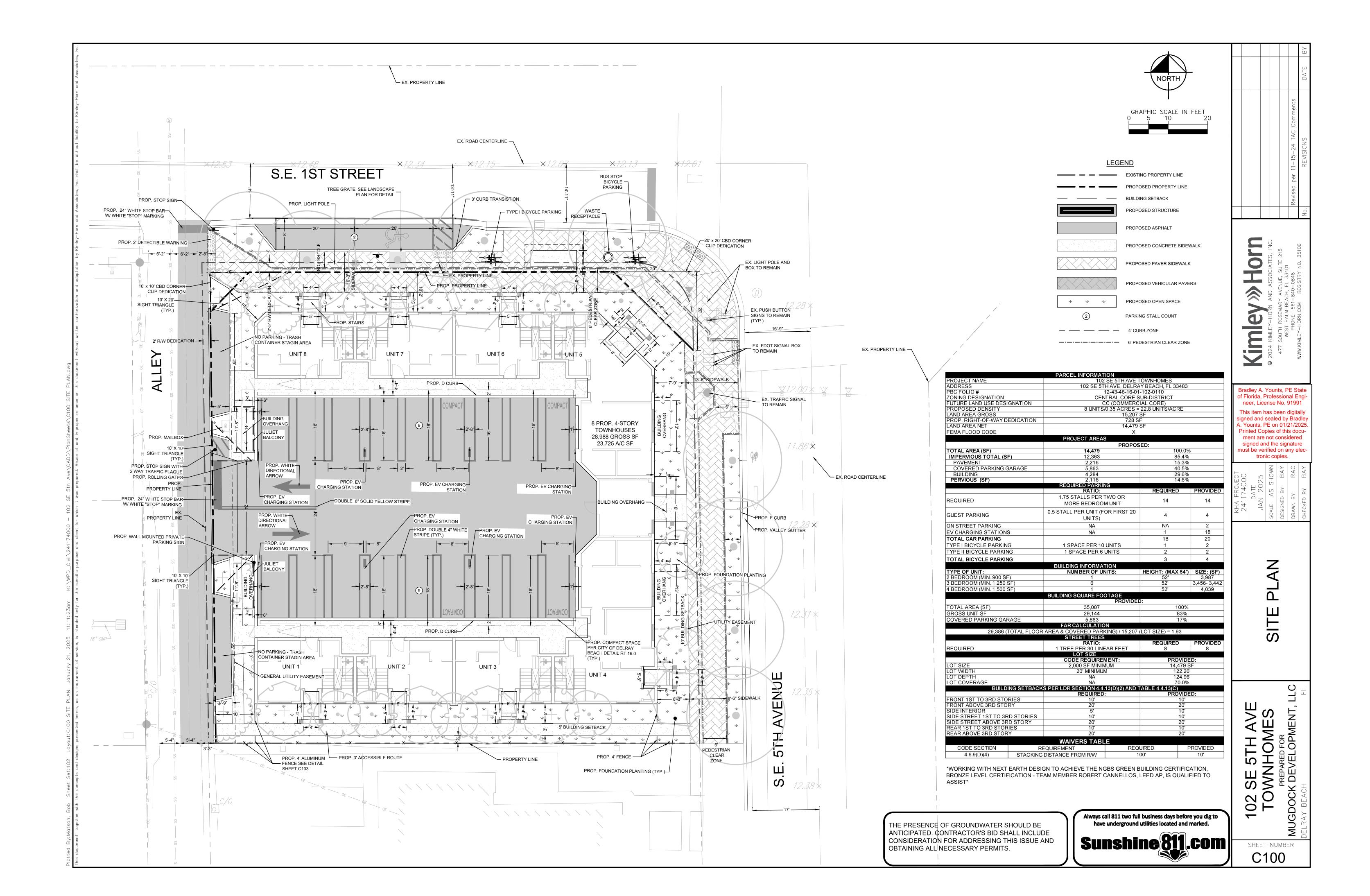
BOCA RATON, FL
MIAMI, FL
TAMPA, FL
ATLANTA, GA
RALEIGH, NC
CERT. OF AUTHORIZATION: LB#80

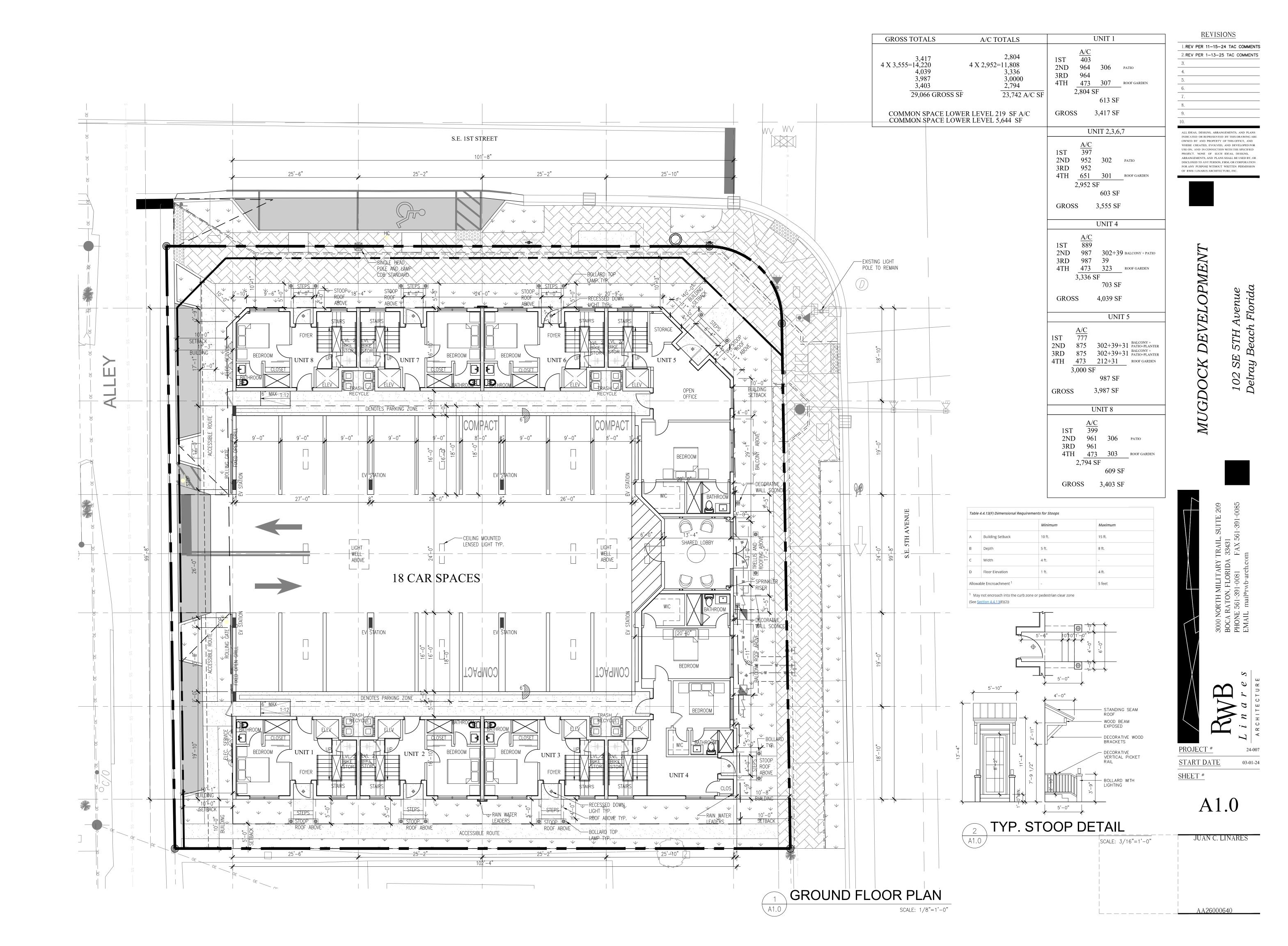
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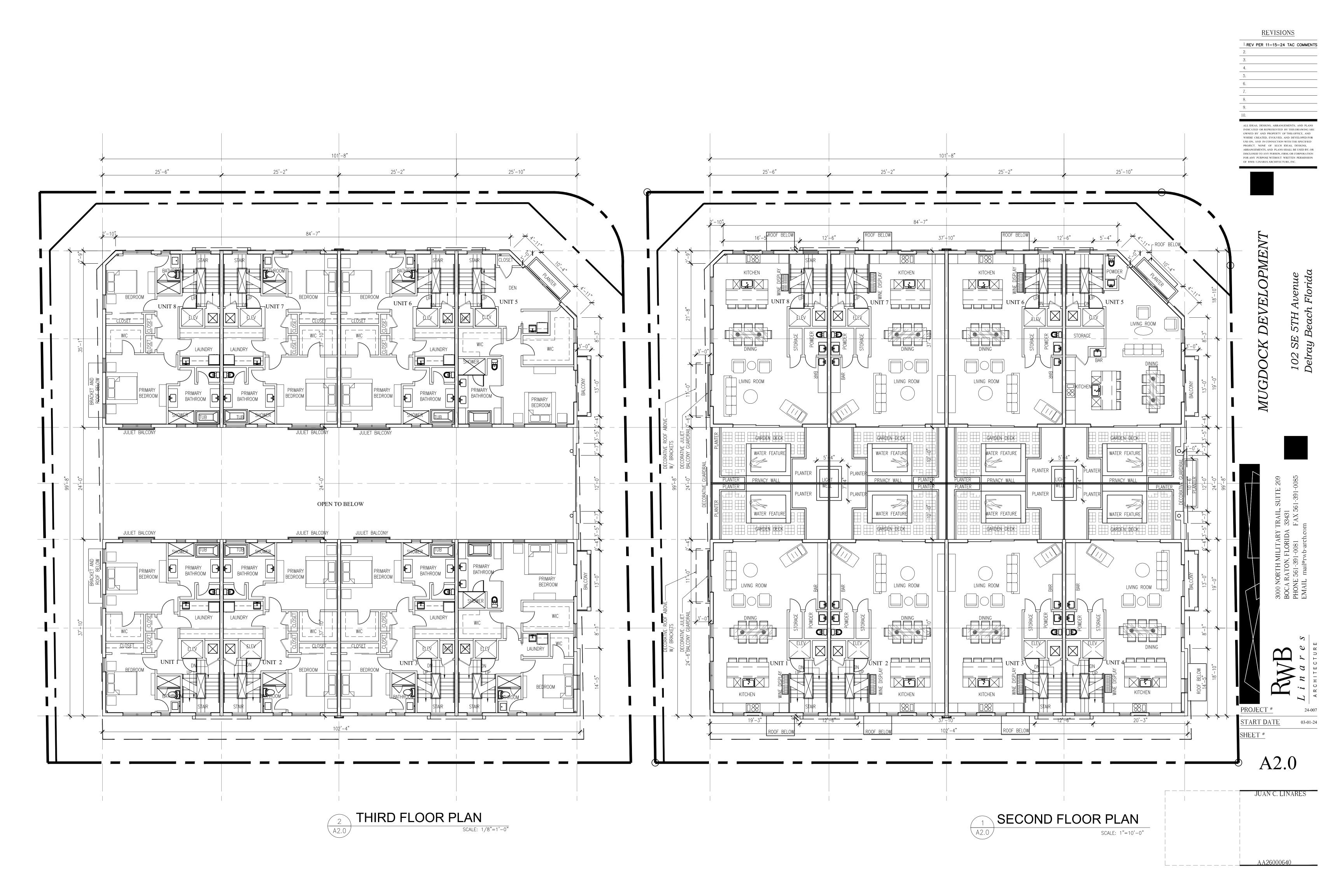
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PROGRAM MANAGEMENT
PLANNING & LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN

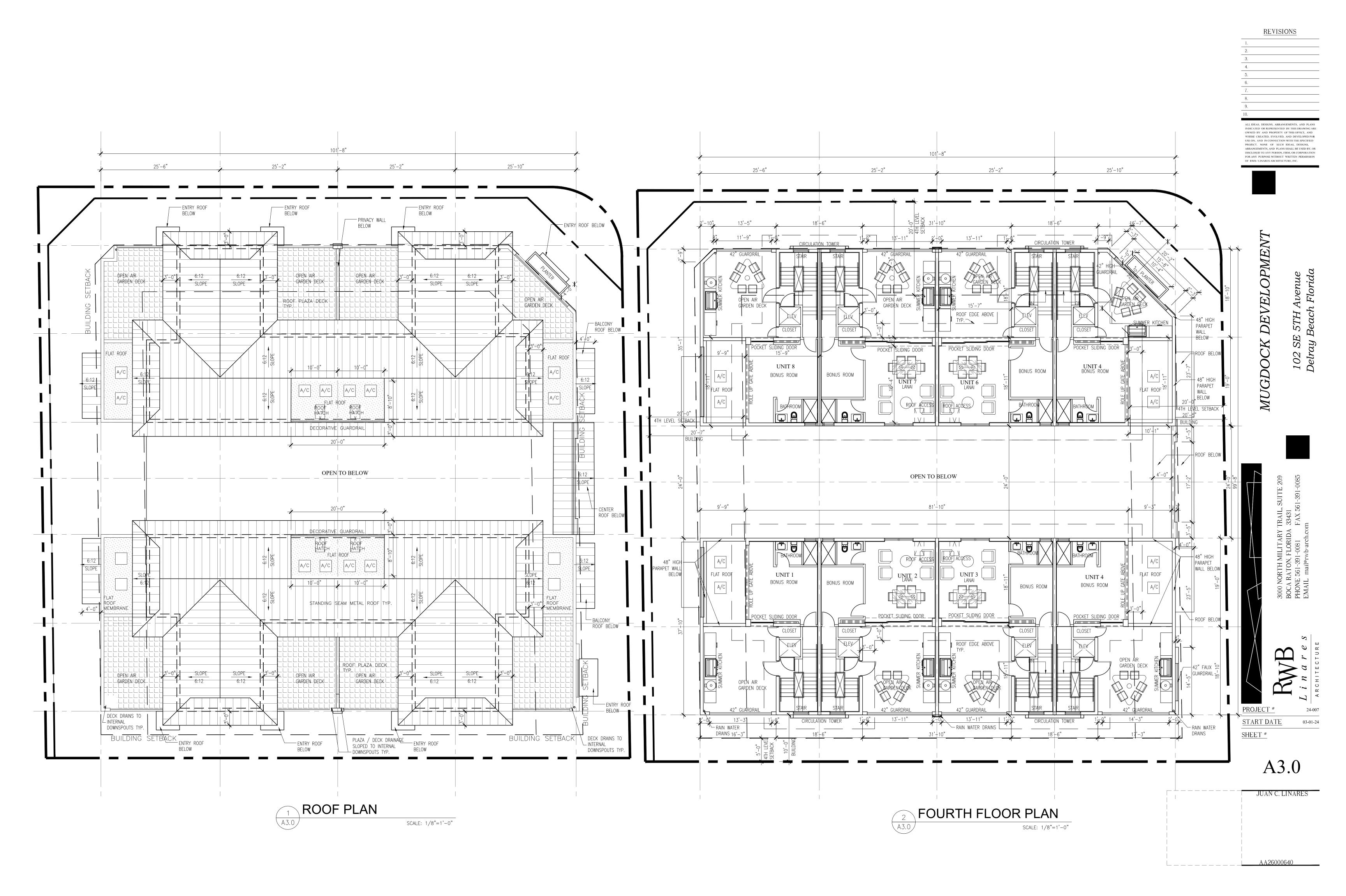
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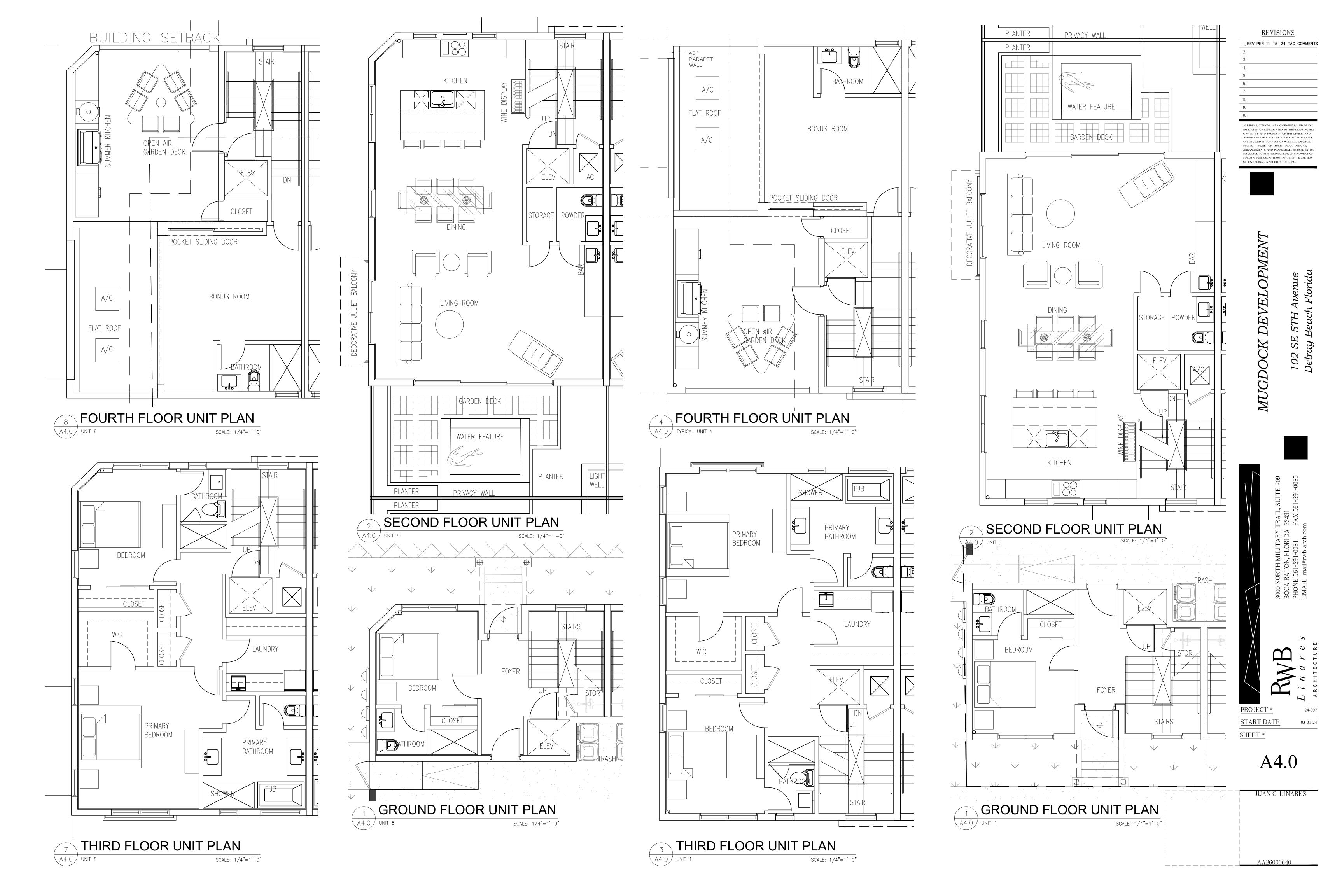
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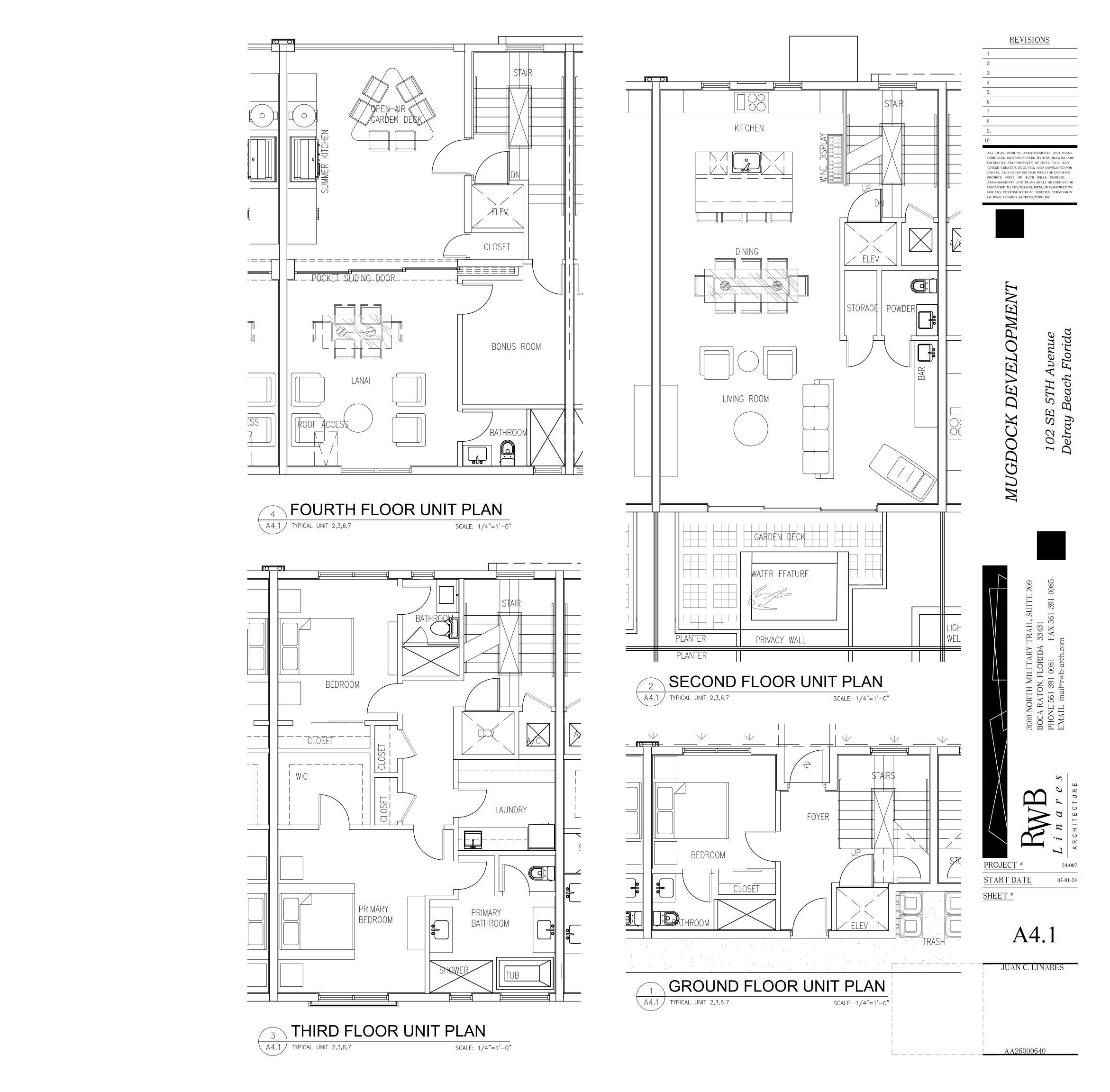


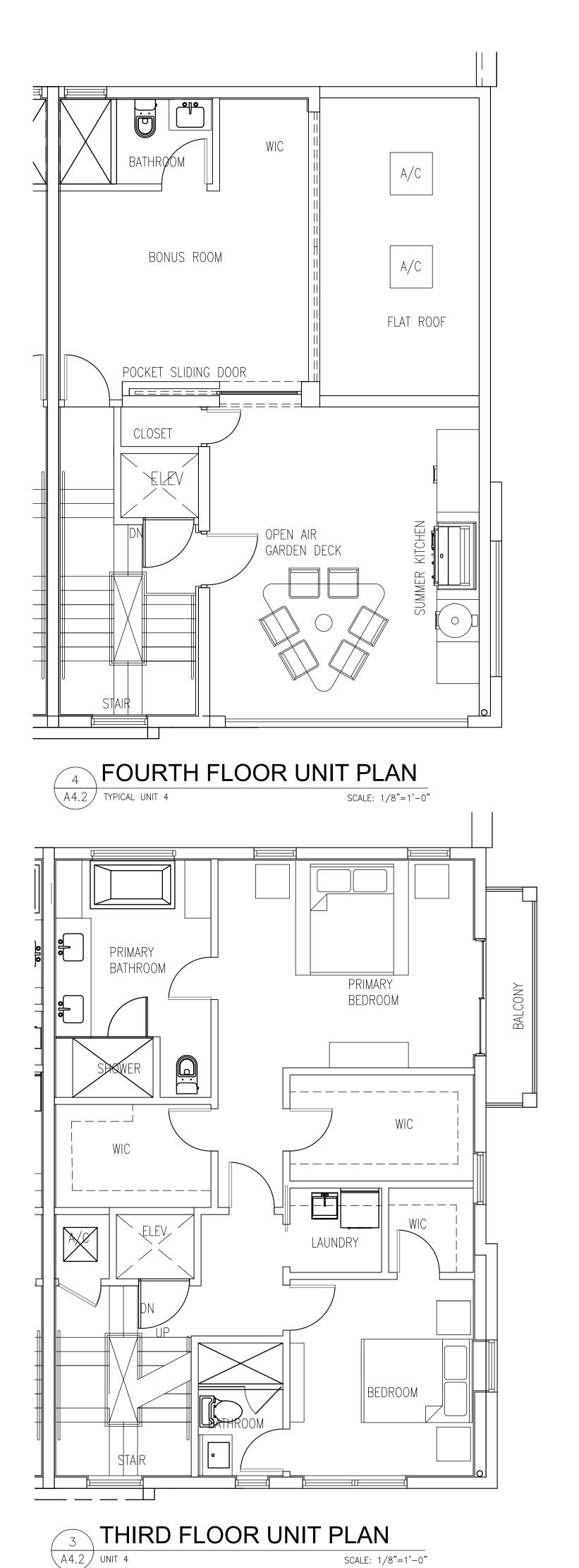


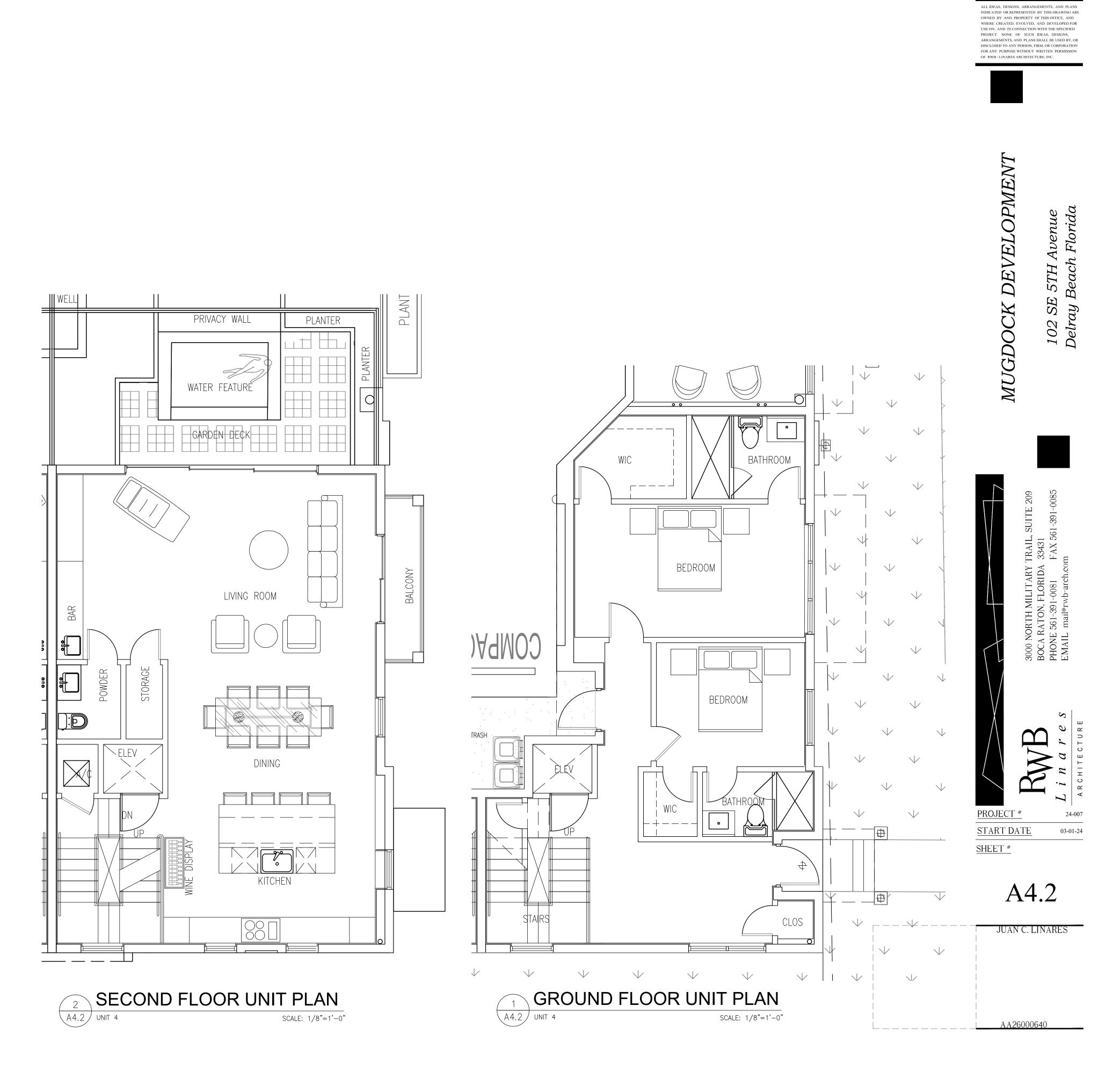




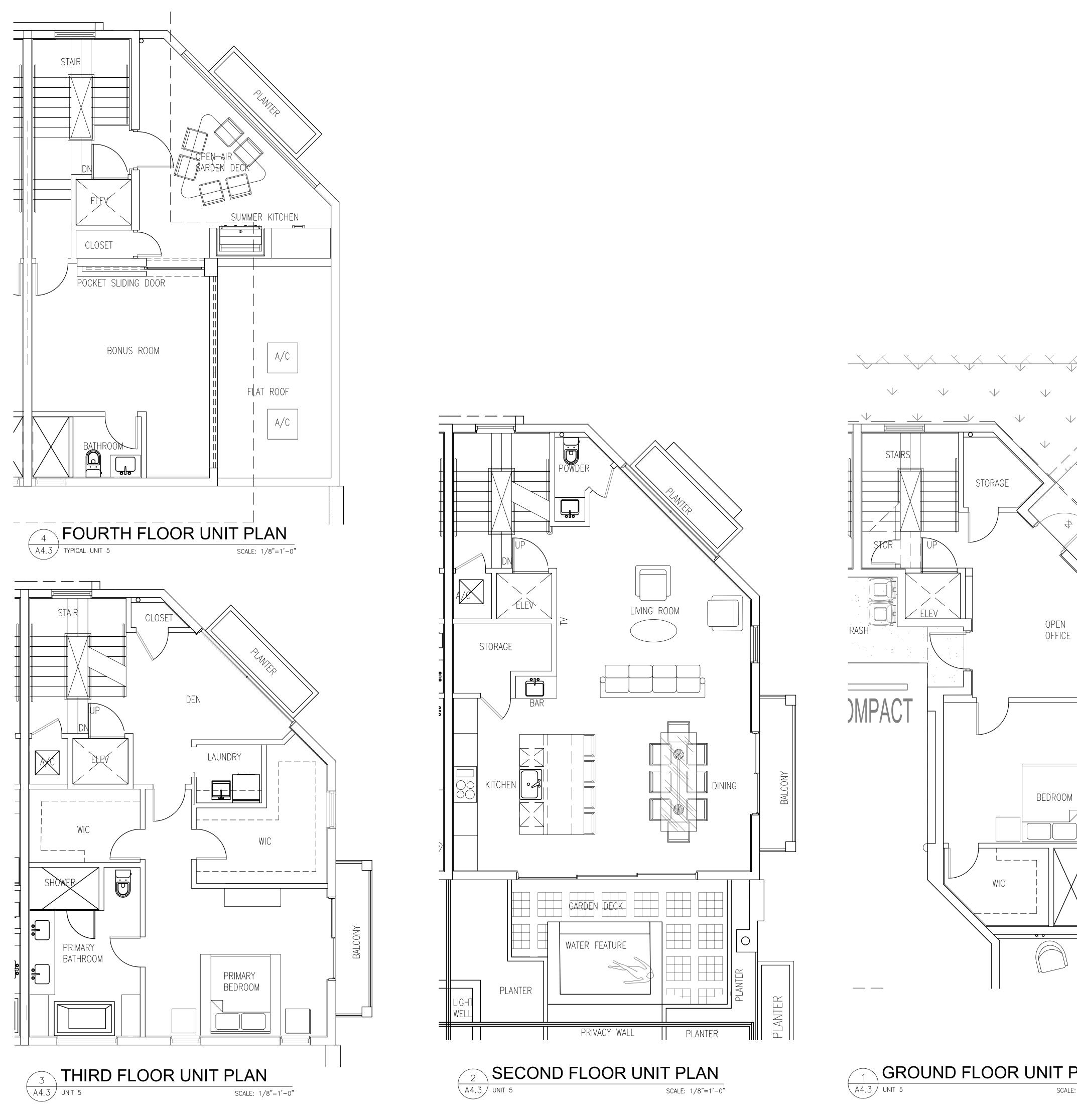








<u>REVISIONS</u>



<u>REVISIONS</u>

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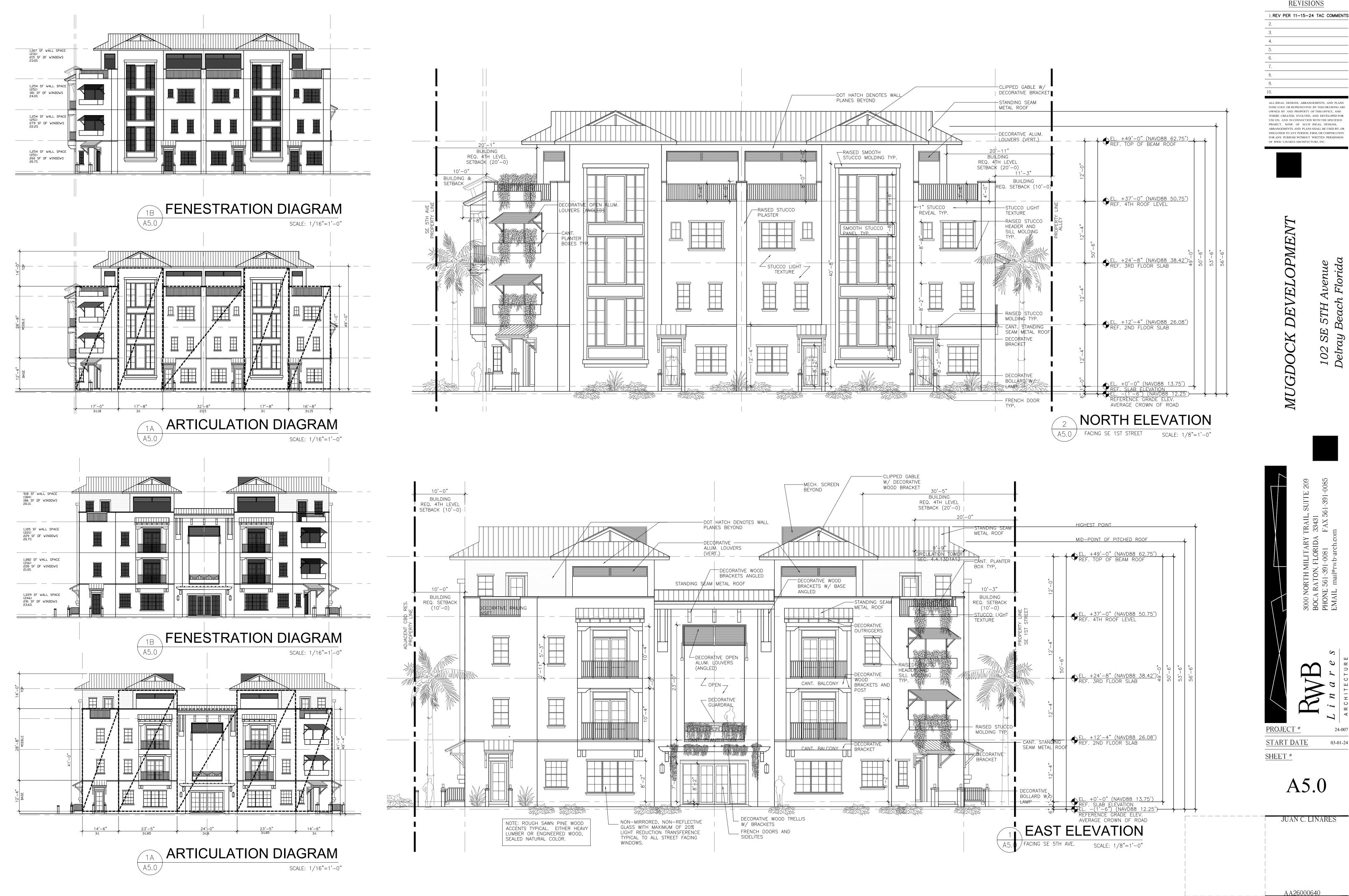
MUGDOCK DEVELOPMENT

START DATE

A4.3

JUAN C. LINARES

GROUND FLOOR UNIT PLAN SCALE: 1/8"=1'-0" AA26000640



REVISIONS

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24-007 03-01-24









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BUILDING MATERIALS

ANODIZED STANDING SEAM METAL ROOF, SILVER COLOR

BM 2143-60 MOONLIGHT WHITE COLOR

BM 2151-60 LINEN SAND COLOR

BM 0C-152 SUPER WHITE COLOR

BM 2162-30 WARM TAN COLOR

GLASS GRAY COLOR

ALUMINUM BRONZE FINISH

BM 2061-30 BERMUDA BLUE COLOR

ALUMINUM WHITE POWDER COAT

ROOF

WALLS

FASCIA

TRIM

WINDOWS

SHUTTERS/AWNINGS

RAILINGS

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MUGDOCK DEVELOPMENT

PROJECT #

START DATE 03-01-24 SHEET #

A5.0C

JUAN C. LINARES AA26000640

<u>REVISIONS</u> 1.REV PER 11-15-24 TAC COMMENTS

AA26000640









BUILDING MATERIALS

ANODIZED STANDING SEAM METAL ROOF, SILVER COLOR

BM 2143-60 MOONLIGHT WHITE COLOR

BM 2151-60 LINEN SAND COLOR

BM 0C-152 SUPER WHITE COLOR

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MUGDOCK DEVELOPMENT

102 SE 5TH Avenue Delray Beach Florida

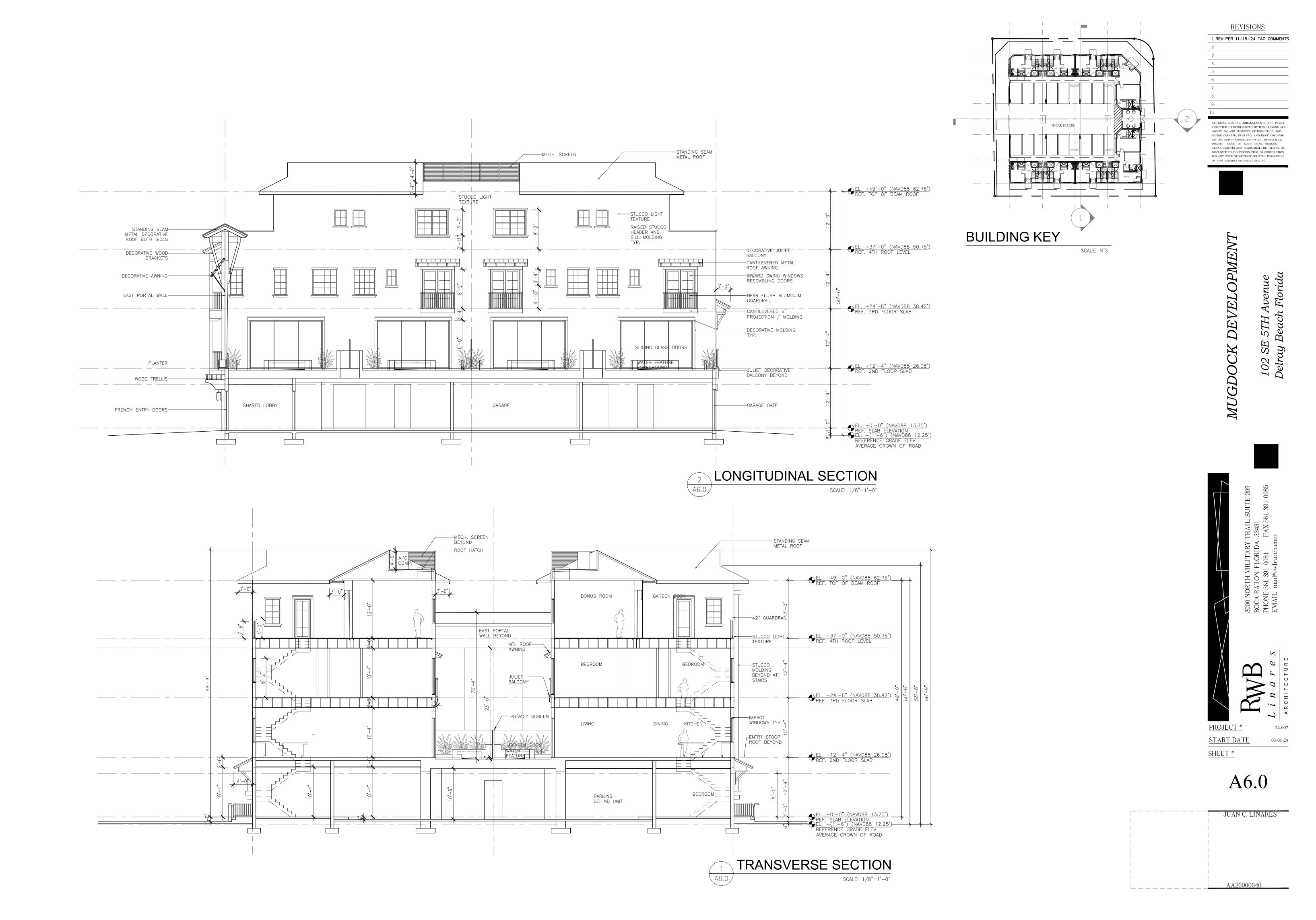
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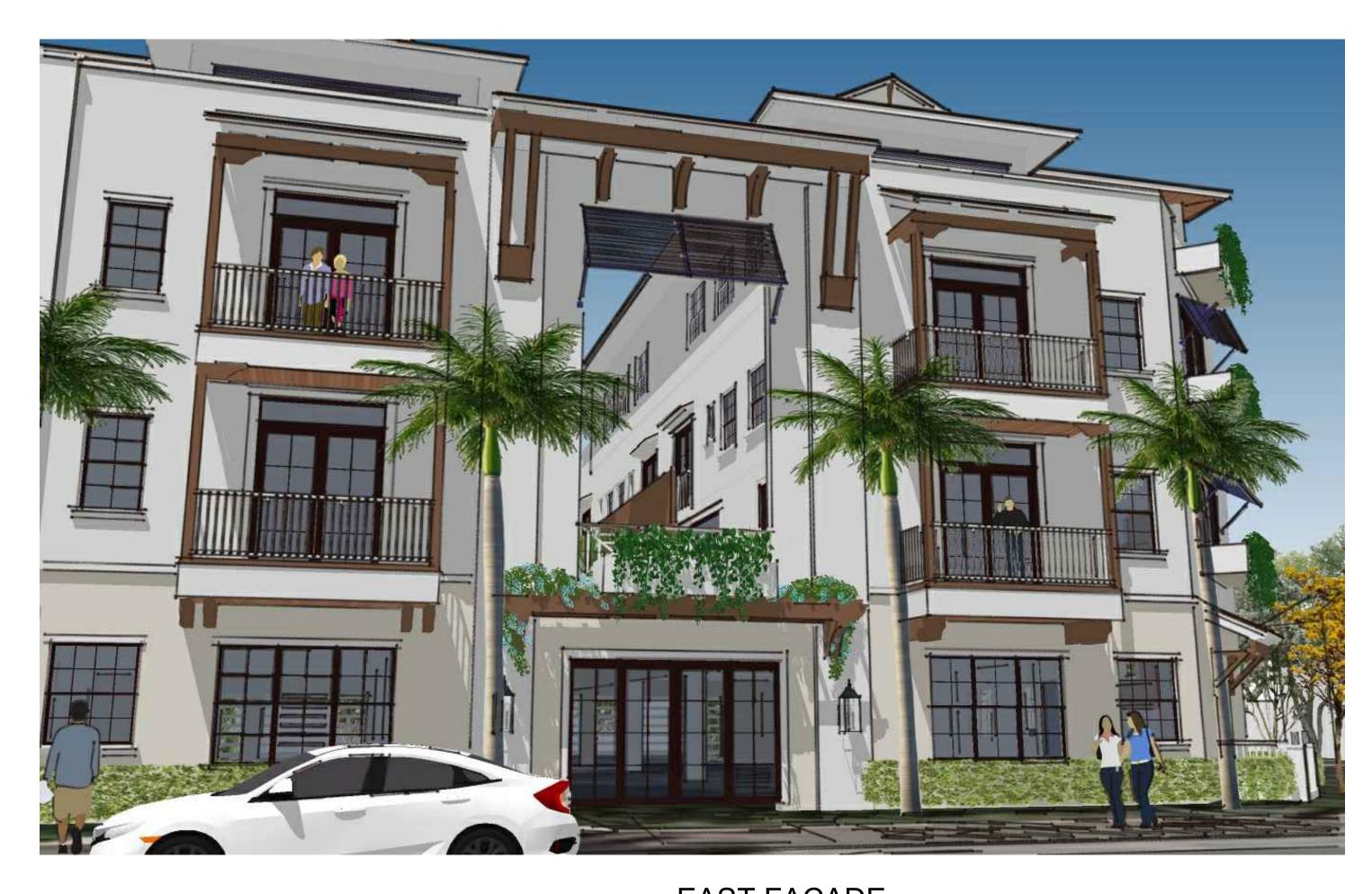
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JUAN C. LINARES

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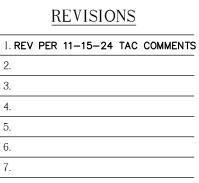
SOUTH EAST CORNER



SOUTH WEST CORNER



NORTH EAST CORNER



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SHEET #

A7.0

JUAN C. LINARES





NORTH WEST BIRD'S EYE SOUTH EAST BIRD'S EYE

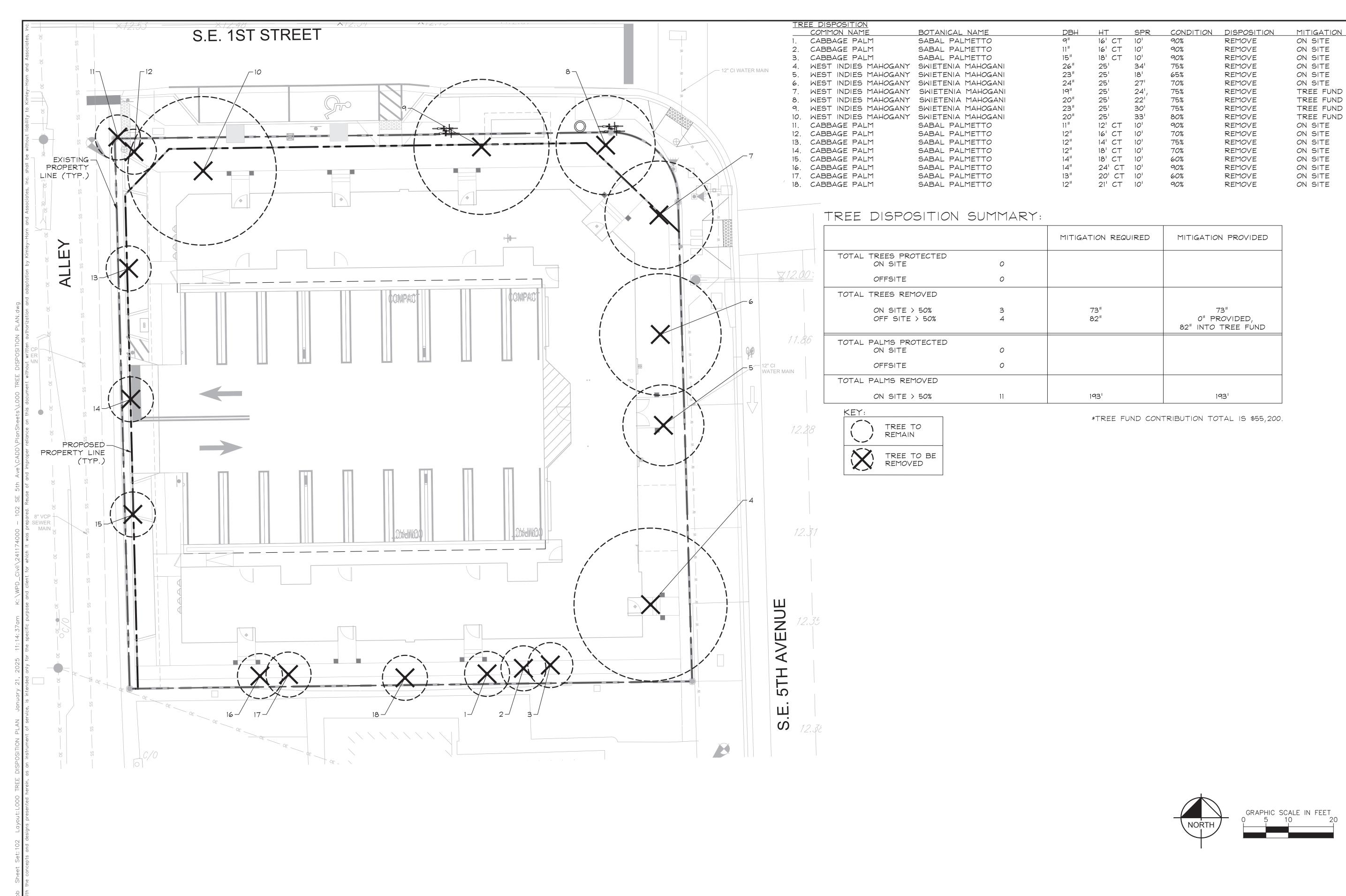
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A7.1



Always call 811 two full business days before you dig to have underground utilities located and marked.

Sunshine 811.com

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED. CONTRACTOR'S BID SHALL INCLUDE

CONSIDERATION FOR ADDRESSING THIS ISSUE AND

OBTAINING ALL NECESSARY PERMITS.

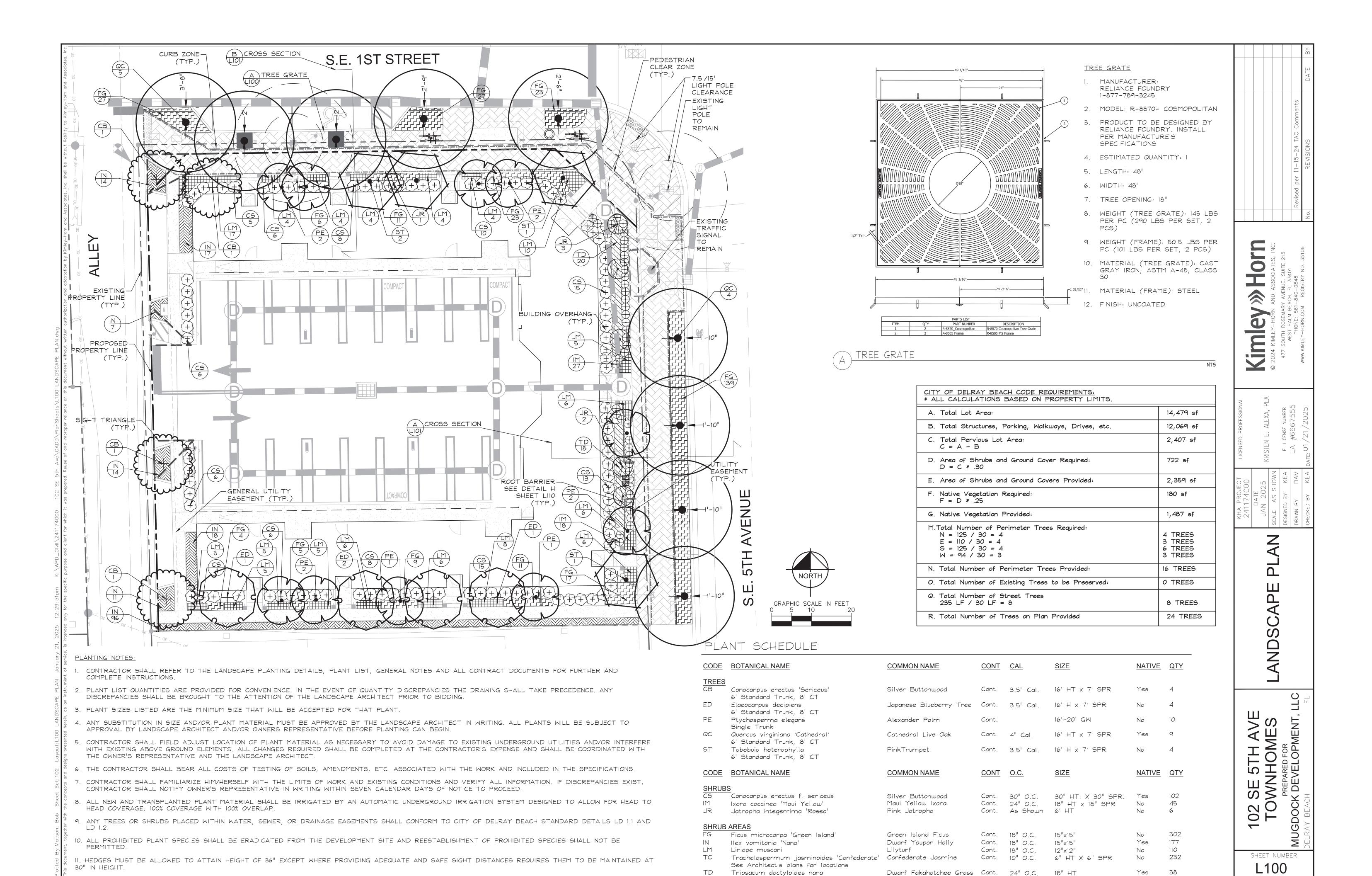
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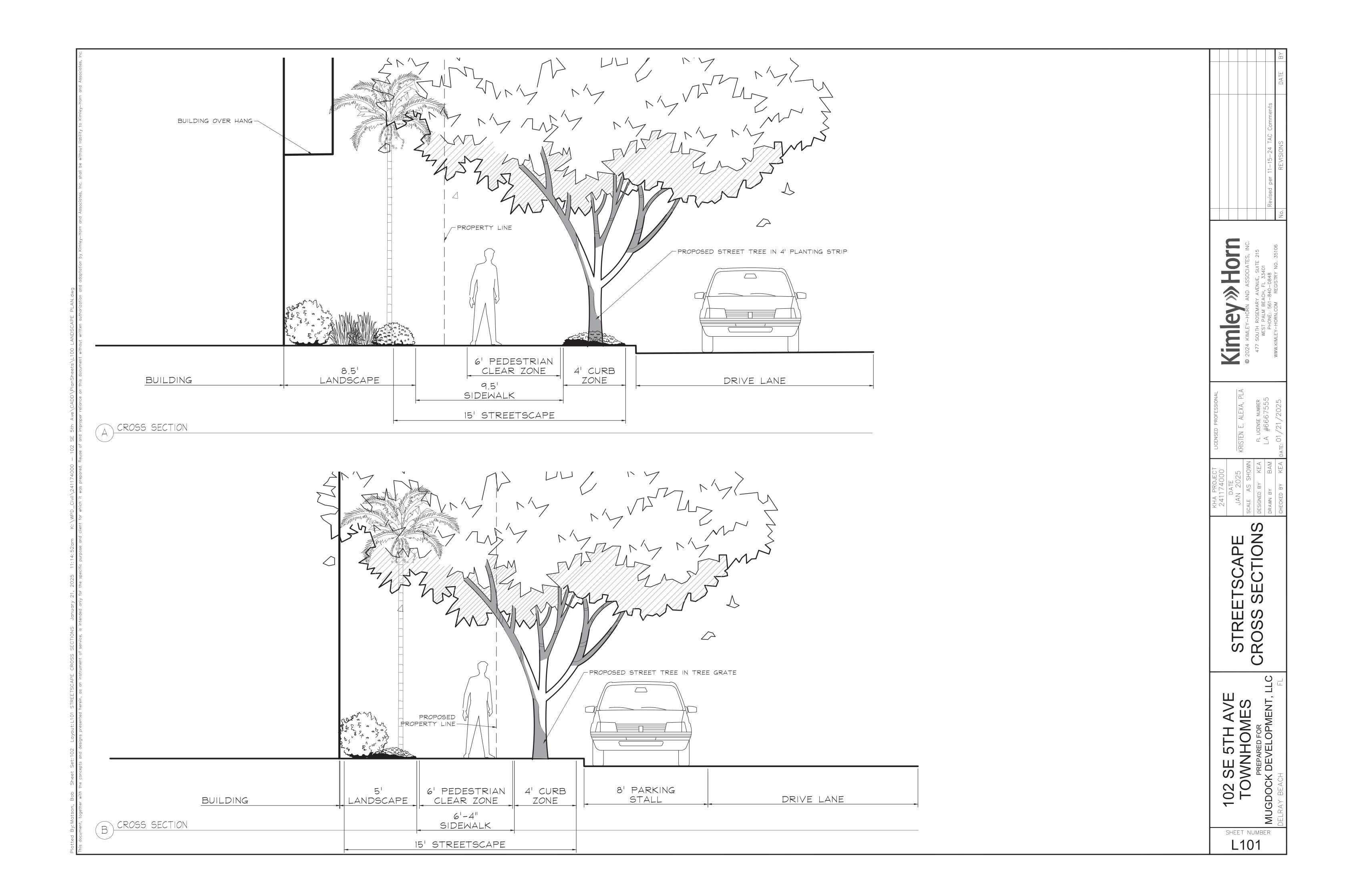
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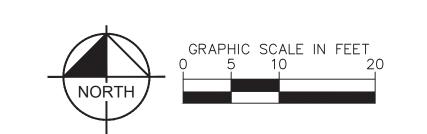
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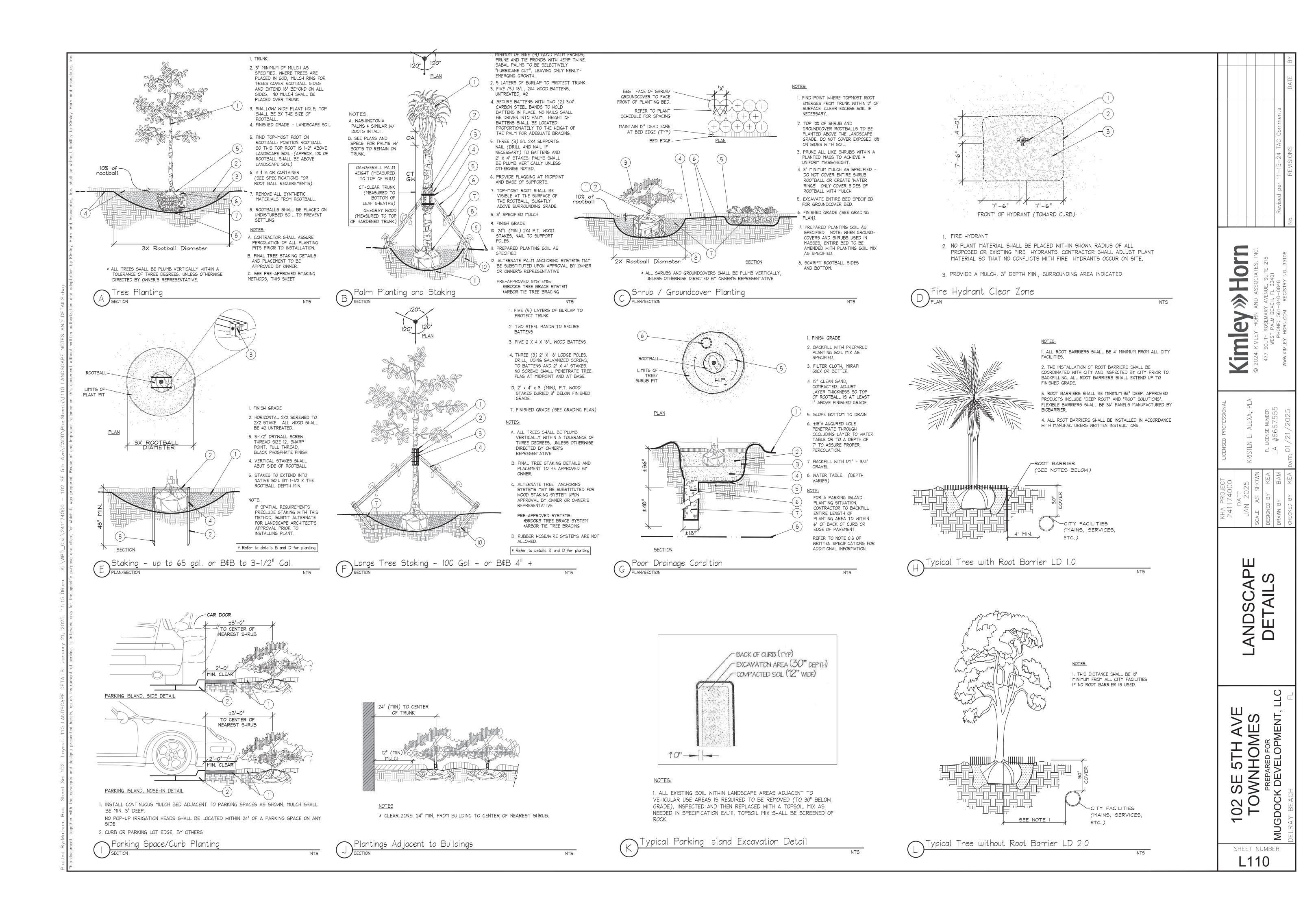




102 SE E TOWNI

SITE PLAN RENDER

SHEET NUMBER L102



GENERAL LANDSCAPE SPECIFICATIONS AND NOTES

A. SCOPE OF WORK

- 1. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS, AS INCLUDED IN THE PLANT LIST, AND AS HEREIN
- 2. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER.

B. PROTECTION OF EXISTING STRUCTURES

ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND PLANTING ALREADY COMPLETED OR ESTABLISHED SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER.

C. PROTECTION OF EXISTING PLANT MATERIALS OUTSIDE LIMIT OF WORK

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE, CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC. THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKING INSIDE THE DRIP-LINE AND SPILLING OIL, GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIP-LINE. NO MATERIALS SHALL BE BURNED WHERE HEAT WILL DAMAGE ANY PLANT. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MISSHAPEN AND/ OR UNSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF ONE HUNDRED DOLLARS (\$100) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR (4) INCHES CALIPER AS FIXED AND AGREED LIQUIDATED DAMAGES. CALIPER SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIPER.

D. MATERIALS

MATERIALS LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL. UPON SUBMITTALS' APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.

TOPSOIL MIX AMENDMENT MIX/ PRODUCT DATA/ TEST RESULTS

PLANTS PHOTOGRAPHS OF ONE (1) OF EACH SPECIES (OR TAGGED IN NURSERY)

CLIENT-REQUESTED TAGGING MAY SUBSTITUTE PHOTOS. INDICATE SIZES (HEIGHT/WIDTH) AND QUALITY PER SPEC.

FERTILIZER PRODUCT DATA INNOCULANT PRODUCT DATA HERBICIDE PRODUCT DATA

STAKING/GUYING FOR ALTERNATE TO DETAILS: SEND PRODUCT DATA, DETAIL

2. PLANT MATERIALS

A. PLANT SPECIES AND SIZE SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS. NOMENCLATURE SHALL CONFORM TO STANDARDIZED PLANT NAMES, 1942 EDITION. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS, LATEST EDITION, PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. ALL PLANTS SHALL BE FLORIDA GRADE NO. 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, SOUND, WELL-BRANCHED, AND FREE OF DISEASE AND INSECTS, INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER. WHERE ANY REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY WITH APPROVAL FROM OWNER OR OWNER'S REPRESENTATIVE. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE OWNER'S REPRESENTATIVE

- B. MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES SHALL BE MEASURED FROM THE GROUND OR ACROSS THE NORMAL SPREAD OF BRANCHES WITH THE PLANTS IN THEIR NORMAL POSITION. THIS MEASUREMENT SHALL NOT INCLUDE THE IMMEDIATE TERMINAL GROWTH. PLANTS LARGER IN SIZE THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE OWNER. IF THE USE OF LARGER PLANTS IS APPROVED, THE BALL OF EARTH OR SPREAD OF ROOTS SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.
- C. INSPECTION: PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER, FOR QUALITY, SIZE, AND VARIETY: SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.

E. SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, TOPSOIL MIX)

- 1. SOIL MIXTURE (PLANTING MEDIUM FOR PLANT PITS) SHALL CONSIST OF 20% CLEAN FLORIDA MUCK AND 80% PARTS CLEAN SAND. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER AND A PH BETWEEN 5.5 AND 7.0 - SUBMIT SAMPLE AND PH TESTING RESULTS FOR APPROVAL.
- 2. MUCK (OR MUCKY PEAT) FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT PITS SHALL BE FERTILE, AND OF A VERY HIGH ORGANIC CONTENT DERIVED FROM FLORIDA SOURCES; REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER; FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH.
- 3. SAND FOR USE IN PREPARING SOIL MIXTURE SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND. CONTRACTOR SHALL SUBMIT RESULTS OF SOIL TESTS FOR TOPSOIL AND SAND PROPOSED FOR USE UNDER THIS CONTRACT FOR APPROVAL BY THE OWNER.
- 4. TREES SHALL BE PLANTED IN THE EXISTING NATIVE SOIL ON SITE, UNLESS DETERMINED TO BE UNSUITABLE - AT WHICH POINT THE CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT TO DISCUSS ALTERNATE RECOMMENDATION PRIOR TO PLANTING.
- 5. CONTRACTOR TO SUBMIT SAMPLES OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.

WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN AN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC... IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER.

*WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL

AUTHORITY. G. FERTILIZER

CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED.

*FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

H. MULCH

MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A MINIMUM DEPTH OF 3 INCHES. CLEAR MULCH FROM EACH PLANT'S CROWN (BASE). TYPE OF MATERIAL: "FLORIMULCH" OR SHREDDED, STERILE EUCALYPTUS

I. DIGGING AND HANDLING

- 1. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING, AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT. TREES TRANSPORTED MORE THAN TEN (10) MILES OR WHICH ARE NOT PLANTED WITHIN THREE (3) DAYS OF DELIVERY TO SITE SHALL BE SPRAYED WITH AN ANTITRANSPIRANT PRODUCT ("WILTPRUF" OR EQUAL) TO MINIMIZE TRANSPIRATIONAL WATER LOSS.
- 2. BALLED AND BURLAPPED PLANTS (B\$B) SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS BALLED AND BURLAPPED OR CONTAINER GROWN SHALL NOT BE HANDLED BY STEMS.
- 3. PLANTS MARKED "BR" IN THE PLANT LIST SHALL BE DUG WITH BARE ROOTS, COMPLYING WITH FLORIDA GRADES AND STANDARDS FOR NURSERY PLANTS, CURRENT EDITION. CARE SHALL BE EXERCISED THAT THE ROOTS DO NOT DRY OUT DURING TRANSPORTATION AND PRIOR TO PLANTING.
- 4. PROTECTION OF PALMS (IF APPLICABLE): ONLY A MINIMUM OF FRONDS SHALL BE REMOVED FROM THE CROWN OF THE PALM TREES TO FACILITATE MOVING AND HANDLING. CLEAR TRUNK (CT) SHALL BE AS SPECIFIED AFTER THE MINIMUM OF FRONDS HAVE BEEN REMOVED. ALL PALMS SHALL BE BRACED PER PALM PLANTING DETAIL.
- 5. EXCAVATION OF TREE PITS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDSCAPE ELEMENTS, FOOTERS AND PREPARED SUB- BASES.

J. CONTAINER GROWN STOCK

- 1. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION, FLORIDA #1 OR
- 2. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.
- 3. PLANT ROOTS BOUND IN CONTAINERS ARE NOT ACCEPTABLE.
- 4. SUBSTITUTION OF NON-CONTAINER GROWN MATERIAL FOR MATERIAL EXPLICITLY SPECIFIED TO BE CONTAINER GROWN WILL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL IS OBTAINED FROM THE OWNER OR OWNER'S REPRESENTATIVE.

K. COLLECTED STOCK

WHEN THE USE OF COLLECTED STOCK IS PERMITTED AS INDICATED BY THE OWNER OR OWNER'S REPRESENTATIVE, THE MINIMUM SIZES OF ROOTBALLS SHALL BE EQUAL TO THAT SPECIFIED FOR THE NEXT LARGER SIZE OF NURSERY GROWN STOCK OF THE SAME VARIETY.

L. NATIVE STOCK

WHEN THEY HAVE BEEN SUCCESSFULLY RE-ESTABLISHED IN A NURSERY ROW AND GROWN UNDER REGULAR NURSERY CULTURAL PRACTICES FOR A MINIMUM OF TWO (2) GROWING SEASONS AND HAVE ATTAINED ADEQUATE ROOT AND TOP GROWTH TO INDICATE FULL RECOVERY FROM TRANSPLANTING INTO THE NURSERY ROW.

M. MATERIALS LIST

QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE LANDSCAPE ARCHITECT OR OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR ERRORS. SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY, THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION PRIOR TO BIDDING OR INSTALLATION. ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE

N. FINE GRADING

- 1. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN ROUGH GRADED BY OTHERS. BERMING AS SHOWN ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED.
- 2. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH. THIS CONTRACTOR SHALL FINE GRADE BY HAND AND/OR WITH ALL EQUIPMENT NECESSARY INCLUDING A GRADING TRACTOR WITH FRONT-END LOADER FOR TRANSPORTING SOIL WITHIN THE SITE.
- 3. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS. AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES.

O. PLANTING PROCEDURES

- 1. CLEANING UP BEFORE COMMENCING WORK: THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER. ALL MORTAR, CEMENT, AND TOXIC MATERIAL SHALL BE REMOVED FROM THE SURFACE OF ALL PLANT BEDS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS BENEATH THE SOIL WHICH WILL IN ANY WAY ADVERSELY AFFECT THE PLANT GROWTH, HE SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.
- 2. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CALL NATIONAL ONE CALL - 811 - TO LOCATE UTILITIES.
- 3. SUBGRADE EXCAVATION: CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL LANDSCAPE PLANTING AREAS TO A MINIMUM DEPTH OF 30". CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISHED GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 30" DEEP EXCAVATION BY THE CONTRACTOR, AND ADEQUATE PERCOLATION CAN NOT BE ACHIEVED, CONTRACTOR SHALL UTILIZE PLANTING DETAIL THAT ADDRESSES POOR DRAINAGE.

- 4. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS HEREIN SPECIFIED AND REQUIRED. INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE.
- 5. GENERAL: COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. CONFORM TO ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE. UPON ARRIVAL AT THE SITE , PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ON-SITE SHALL NOT REMAIN UNPLANTED FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES, METHODS CUSTOMARY IN GOOD HORTICULTURAL PRACTICES SHALL BE EXERCISED.
- 6. THE WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS. COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.
- 7. ALL PLANTING PITS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH THE USA STANDARD FOR NURSERY STOCK 260.1, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, AND BACKFILLED WITH THE PREPARED PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. TEST ALL TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER PERCOLATION. IF POOR PERCOLATION EXISTS, UTILIZE "POOR DRAINAGE CONDITION" PLANTING DETAIL. TREES SHALL BE SET PLUMB AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLUSHED INTO PLACE WITH A SLOW, FULL HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMAN. PROPER "JETTING IN" SHALL BE ASSURED TO ELIMINATE AIR POCKETS AROUND THE ROOTS. "JET STICK" OR EQUAL IS RECOMMENDED.
- 8. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING TREES.
- 9. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION E OF THESE SPECIFICATIONS.
- 10. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. PLANTING SOIL MIXTURE SHALL BE BACKFILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING).
- 11. AMEND PINE AND OAK PLANT PITS WITH ECTOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. ALL OTHER PLANT PITS SHALL BE AMENDED WITH ENDOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. PROVIDE PRODUCT INFORMATION SUBMITTAL PRIOR TO INOCULATION.
- 12. FILL HOLE WITH SOIL MIXTURE, MAKING CERTAIN ALL SOIL IS SATURATED. TO DO THIS, FILL HOLE WITH WATER AND ALLOW TO SOAK MINIMUM TWENTY (20) MINUTES, STIRRING IF NECESSARY TO GET SOIL THOROUGHLY WET. PACK LIGHTLY WITH FEET. ADD MORE WET SOIL MIXTURE. DO NOT COVER TOP OF BALL WITH SOIL MIXTURE, ONLY WITH MULCH. ALL BURLAP, ROPE, WIRES, BASKETS, ETC.., SHALL BE REMOVED FROM THE SIDES AND TOPS OF BALLS, BUT NO BURLAP SHALL BE PULLED FROM UNDERNEATH.
- 13. PRUNING: TREES SHALL BE PRUNED, AT THE DIRECTION OF THE OWNER OR OWNER'S REPRESENTATIVE, TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL SOFT WOOD OR SUCKER GROWTH AND ALL BROKEN OR BADLY DAMAGED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT. ALL PRUNING TO BE PERFORMED BY LICENSED ARBORIST, IN ACCORDANCE WITH ANSI A-300.
- 14. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 6", REMOVE AND DISPOSE ALL DEBRIS MIX TOP 4" TO ACHEIVE SOIL MIXTURE AS SPECIFIED IN SECTION E. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.
- 15. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO WAIVE THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE LANDSCAPE ARCHITECT IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.
- 16. MULCHING: PROVIDE A THREE INCH (MINIMUM) LAYER OF SPECIFIED MULCH OVER THE ENTIRE AREA OF EACH SHRUB BED, GROUND COVER, VINE BED, AND TREE PIT PLANTED UNDER THIS CONTRACT.
- 17. HERBICIDE WEED CONTROL: ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S PRECAUTIONS AND SPECIFICATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER. (AS ALLOWED BY JURISDICTIONAL AUTHORITY)

P. LAWN SODDING

- 1. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING COMPLETE, IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER.
- 2. LAWN BED PREPARATION: ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE.
- 3. SOIL PREPARATION: PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY.

4. SODDING

- A. THE CONTRACTOR SHALL SOD ALL AREAS THAT ARE NOT PAVED OR PLANTED AS DESIGNATED ON THE DRAWINGS WITHIN THE CONTRACT LIMITS, UNLESS SPECIFICALLY NOTED OTHERWISE.
- B. THE SOD SHALL BE CERTIFIED TO MEET FLORIDA STATE PLANT BOARD SPECIFICATIONS, ABSOLUTELY TRUE TO VARIETAL TYPE, AND FREE FROM WEEDS, FUNGUS, INSECTS AND DISEASE OF ANY KIND.

- C. SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. ADJACENT TO BUILDINGS, A 24 INCH STONE MULCH STRIP SHALL BE PROVIDED - REFER TO DETAILS. IMMEDIATELY FOLLOWING SOD LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY.
- 5. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE.

6. LAWN MAINTENANCE:

- A. WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS (LARGER THAN 12"X12") UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK (INCLUDING REGRADING IF NECESSARY).
- B. CONTRACTOR RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SOD/LAWN UNTIL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.

Q. CLEANUP

UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE BROOM-CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.

R. PLANT MATERIAL MAINTENANCE

ALL PLANTS AND PLANTING INCLUDED UNDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR REPAIRING GUY SUPPORTS) NECESSARY TO INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE. MAINTENANCE AFTER THE CERTIFICATION OF ACCEPTABILITY SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS IN THIS SECTION. CONTRACTORS ARE REQUESTED TO PROVIDE A BID ESTIMATE TO COVER LANDSCAPE AND IRRIGATION MAINTENANCE FOR A PERIOD OF 90 CALENDAR DAYS COMMENCING AFTER ACCEPTANCE.

S. MAINTENANCE (ALTERNATE BID ITEM)

CONTRACTORS ARE REQUESTED TO PROVIDE A BID ESTIMATE FOR MAINTENANCE FOLLOWING THE INITIAL 90-DAY MAINTENANCE PERIOD ON A COST-PER-MONTH

T. FINAL INSPECTION AND ACCEPTANCE OF WORK

FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THIS TIME SHALL BE SUBJECT TO THE SAME ONE (1) YEAR WARRANTY (OR AS SPECIFIED BY THE LANDSCAPE ARCHITECT OR OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED.

U. WARRANTY

1. THE LIFE AND SATISFACTORY CONDITION OF ALL 7 GALLON AND LARGER PLANT MATERIAL INSTALLED BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.

- 2. THE LIFE AND SATISFACTORY CONDITION OF ALL OTHER PLANT MATERIAL (INCLUDING SOD) INSTALLED BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.
- 3. REPLACEMENT: ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION AT THE END OF THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS PERMIT. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISHED PLANTED AND MULCHED AS SPECIFIED UNDER "PLANTING", AT NO ADDITIONAL COST TO THE OWNER.
- 4. IN THE EVENT THE OWNER DOES NOT CONTRACT WITH THE CONTRACTOR FOR LANDSCAPE (AND IRRIGATION) MAINTENANCE, THE CONTRACTOR IS ENCOURAGED TO VISIT THE PROJECT SITE PERIODICALLY DURING THE ONE YEAR WARRANTY PERIOD TO EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED BY THE OWNER, AND SHALL NOTIFY THE OWNER IN WRITING OF MAINTENANCE PROCEDURES OR CONDITIONS WHICH THREATEN VIGOROUS AND HEALTHY PLANT GROWTH. IT IS SUGGESTED SUCH SITE VISITS SHALL BE CONDUCTED A MINIMUM OF ONCE PER MONTH FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF ACCEPTANCE.

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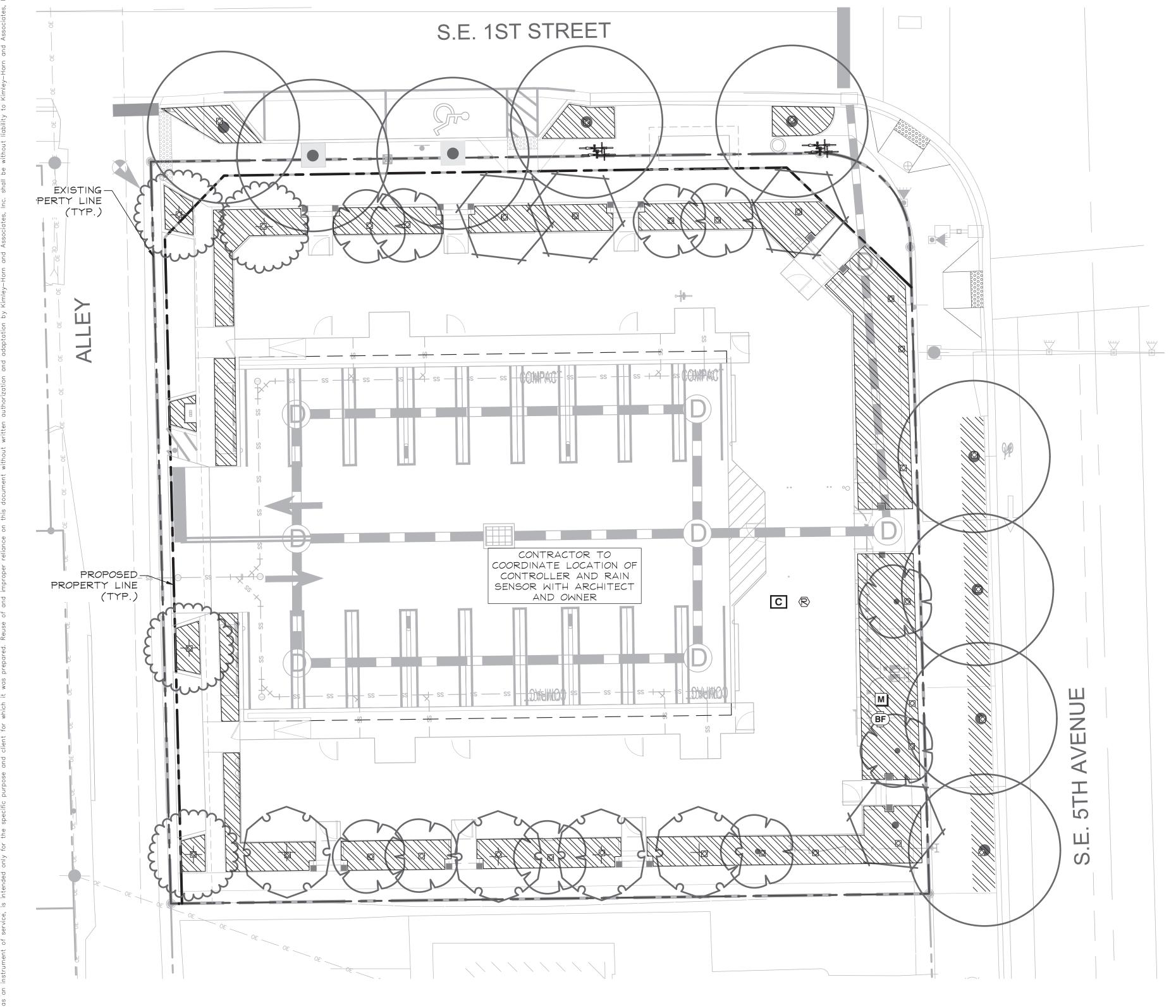
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SHEET NUMBER



IRRIGATION SCHEDULE

SYMBOL	DESCRIPTION		
	Shrub Spray		
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	<u>PSI</u>
△ ○ △ □ 1401 1402 1404 1408	Rain Bird 1802-1400 Flood Flood Bubbler on IPS Flex Hose	34	30
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	
BF	Febco 765 1" Pressure Vacuum Breaker, brass with ball valve SOV. Install 12in. above highest downstream outlet and the highest point in the downstream piping.	1	
C	Rain Bird ESP-2WIRE (120VAC) 50 Station 2-Wire, Indoor/ Outdoor Controller w/ decoder auto-address. For Residential or Light Commercial Use. LNK WiFi Module and Flow Sensor Ready. Use with 2W-1 single station decoders and standard direct burial wire.	1	
€	Hunter MINI-CLIK Rain Sensor, mount as noted	1	
M	Water Meter 1"	1	

IRRIGATION SYSTEM NOTES

- 1. CONTRACTOR SHALL REFER TO THE IRRIGATION DETAILS, IRRIGATION SCHEDULE, SPECIFICATIONS AND ALL CONTRACT DOCUMENTS FOR FURTHER AND COMPLETE
- 2. IRRIGATION QUANTITIES ARE PROVIDED FOR CONVENIENCE. IN THE EVENT OF QUANTITY DISCREPANCIES THE DRAWING SHALL TAKE PRECEDENCE. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BIDDING.
- 3. ANY SUBSTITUTIONS FOR SPECIFIED IRRIGATION EQUIPMENT MUST BE APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE IN WRITING PRIOR TO CONSTRUCTION.
- 4. CONTRACTOR SHALL FIELD ADJUST LOCATION OF IRRIGATION EQUIPMENT AS NECESSARY TO AVOID DAMAGE TO EXISTING UNDERGROUND UTILITIES AND/OR INTERFERE WITH EXISTING ABOVE GROUND ELEMENTS. ALL FIELD ADJUSTMENTS SHALL BE COMPLETED AT THE CONTRACTOR'S EXPENSE AND SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE AND THE LANDSCAPE ARCHITECT.
- 5. CONTRACTOR SHALL FAMILIARIZE HIM/HERSELF WITH THE LIMITS OF WORK AND EXISTING CONDITIONS AND VERIFY ALL INFORMATION. IF DISCREPANCIES EXIST, CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE IN WRITING WITHIN SEVEN CALENDAR DAYS OF NOTICE TO PROCEED.
- 6. IRRIGATION PLAN IS DIAGRAMMATIC. EQUIPMENT SHOWN ON IMPERVIOUS SURFACES IS FOR GRAPHIC CLARITY UNLESS OTHERWISE NOTED. CONTRACTOR SHALL INSTALL ALL EQUIPMENT WITHIN LANDSCAPE AREAS IN PROPERTY LIMITS.
- THE IRRIGATION SYSTEM IS DESIGNED TO OPERATE WITH A SOURCE PROVIDING 35 GPM AT <u>35</u> PSI.

SPRAY HEAD DESIGN PRESSURE: 30 PSI BUBBLER DESIGN PRESSURE: 30 PSI

GRAPHIC SCALE IN FEET
0 5 10 20

PLAN IS DIAGRAMMATIC. CONTRACTOR SHALL INSTALL ALL IRRIGATION EQUIPMENT IN LANDSCAPE OR TURF AREAS WITHIN PROJECT LIMITS.

> THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE AND OBTAINING ALL NECESSARY PERMITS.



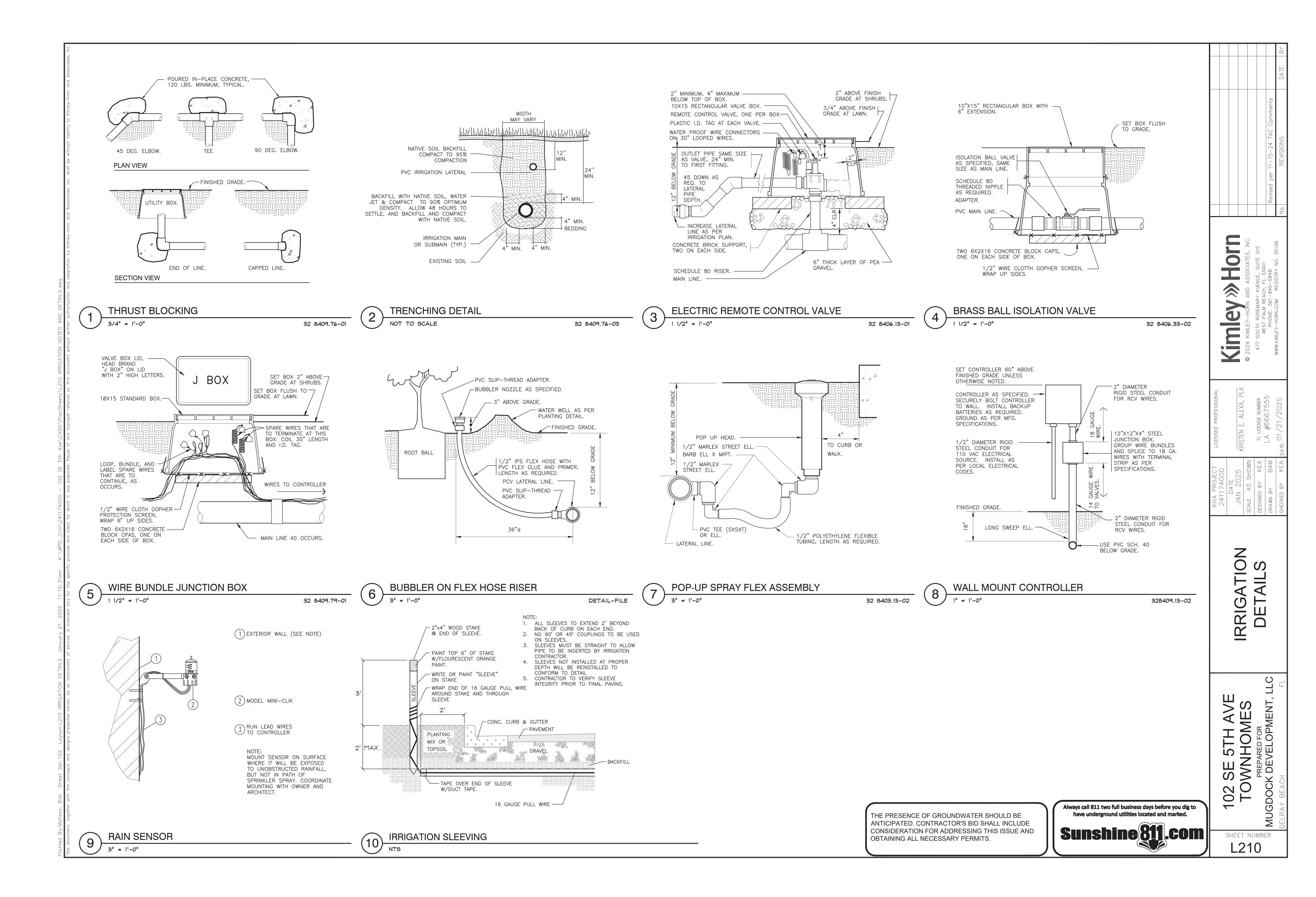
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 \Box IRRIGATION

SE 5TH AVE PREPARED FOR AUGDOCK DEVELOPMENT

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SHEET NUMBER L200



PART I: GENERAL 1.01 SCOPE

- A. The work covered by this specification shall include the furnishing of all labor, materials, tools and equipment necessary to perform and complete the installation of an automatic irrigation system as specified herein and as shown on the drawings and any incidental work not shown or specified which can reasonably be determined to be part of the work and necessary to provide a complete and functional system.
- B. The work covered by this specification also includes all permits, federal, state and local taxes and all other costs, both foreseeable and unforeseeable at the time of construction.
- C. No deviation from these specifications, the accompanying drawings, or agreement is authorized or shall be made without prior written authorization signed by the Owner or his duly appointed representative.
- 1.02 QUALITY ASSURANCE
- A. Installer Qualifications: A firm specializing in irrigation work with not less than five (5) years of experience in installing irrigation systems similar to those required for this project.
- B. Coordination: Coordinate and cooperate with other contractors to enable the work to proceed as rapidly and efficiently as possible.
- C. Inspection of Site: The Contractor shall acquaint himself with all site conditions, including underground utilities before construction is to begin. Contractor shall coordinate placement of underground materials with contractors previously working underground in the vicinity or those scheduled to do underground work in the vicinity. Contractor is responsible for minor adjustments in the layout of the work to accommodate existing facilities.
- D. Protection of Existing Plants and Site Conditions: The Contractor shall take necessary precautions to protect site conditions to remain. Should damages be incurred, this Contractor shall repair the damage to its original condition at his own expense. Any disruption, destruction, or disturbance of any existing plant, tree, shrub, or turf, or any structure shall be completely restored to the satisfaction of the Owner and his representatives, solely at the Contractor's expense.
- E. Protection of Work and Property: The Contractor shall be liable for and shall take the following actions as required with regard to damage to any of the Owner's property.
 - 1. Any existing building, equipment, piping, pipe coverings, electrical systems, sewers, sidewalks, roads, grounds, landscaping or structure of any kind (including without limitation, damage from leaks in the piping system being installed or having been installed by Contractor) damaged by the Contractor, or by his agents, employees, or subcontractors, during the course of his work, whether through negligence or otherwise, shall be replaced or repaired by Contractor at his own expense in a manner satisfactory to Owner, which repair or replacement shall be a condition precedent to Owner's obligation to make final payment under the Contract.
 - 2. Contractor shall also be responsible for damage to any work covered by these specifications before final acceptance of the work. He shall securely cover all openings into the systems and cover all apparatus, equipment and appliances, both before and after being set in place to prevent obstructions on the pipes and the breakage, misuse or disfigurement of the apparatus, equipment or appliance.
 - 3. All trenching or other work under the leaf canopy of any and all trees shall be done by hand or by other methods so that no branches are damaged in any way.
 - Buildings, walks, walls, and other property shall be protected from damage. Open ditches left exposed shall be flagged and barricaded by the Contractor by approved means. The Contractor shall restore disturbed areas to their original condition.
 - 4. The Contractor shall be responsible for requesting the proper utility company to stake the exact location of any underground lines including but not limited to electric, gas, telephone service, water, and cable.
 - The Contractor shall take whatever precautions are necessary to protect these underground lines from damage. In the event damage does occur, all damage shall be completely repaired to its original condition, at no additional cost to the Owner.
 - 5. The Contractor shall request the Owner, in writing, to locate any private utilities (i.e., electrical service to outside lighting) before proceeding with any excavation. If, after such requests and necessary staking, private utilities which were not staked are encountered and damaged by the Contractor, they shall be repaired by the Owner at no cost to the Contractor. If the Contractor damages staked or located utilities, they shall be repaired at the Contractor's
- Codes and Inspections: The entire installation shall comply fully with all local and state laws and ordinances and with all established codes arrange for all necessary inspections and shall pay all fees and expenses in connection with same, as part of the work under this Contract. Upon completion of the work, he shall furnish to the "Owner" all inspection certificates customarily issued in connection with the class of work involved.
- G. The Contractor shall keep on his work, during its progress, a competent superintendent and any necessary assistants, all satisfactory to the Owner, or Owner's representative.
- H. The superintendent shall represent the Contractor in his absence and all directions given to him shall be as binding as if given to the Contractor.
- The Owner's Landscape Architect or designated individual shall have full authority to approve or reject work performed by the Contractor. The Owner's Authorized Representative shall also have full authority to make field changes that are deemed necessary.
- Final Acceptance: Final acceptance of the work may be obtained from the Owner upon the satisfactory completion of all work. Acceptance by the Landscape Architect and/or Owner in no way removes the Contractor of his responsibility to make further repairs, corrections and adjustments to eliminate any deficiencies which may later be discovered.
- K. Guarantee: All work shall be guaranteed for one year from date of final acceptance against all defects in material, equipment and workmanship to the satisfaction of the Owner. Repairs, if required, shall be done promptly at no cost to the Owner.
 - 1. The guarantee shall also cover repair of damage to any part of the premises resulting from leaks or workmanship, to the satisfaction of the Owner. The Contractor shall not be responsible for work damaged by others. Repairs, if required, shall be done promptly. The guarantee shall state the name of the Owner, provide full guarantee terms, effective and termination date, name and license number of Contractor providing guarantee, address, and telephone number. It shall be signed by the chief executive of the Contractor of his liability under the guarantee. Such warranties shall only supplement the guarantee.
 - 2. If, within ten (10) days after mailing of written notice by the Owner to the Contractor requesting repairs or replacement resulting from a breach of warranty, the Contractor shall neglect to make or undertake with due diligence to make the same, the Owner may make such repairs at the Contractor's expense; provided, however, that in the case of emergency where, in the judgment of the Owner, delay would cause serious loss or damage, repairs or replacement may be made without notice being sent to the Contractor, and Contractor shall pay the cost thereof.

- L. The Contractor shall provide full, 100% irrigation coverage in all areas designed with proposed plantings, in accordance with the site's governing permitting requirements and as designed.
- M. On-site Observation: At any time during the installation of the irrigation system by the Contractor, the Owner or Landscape Architect may visit the site to observe work underway. Upon request, the Contractor shall be required to uncover specified work as directed by the Owner or material, workmanship or method of installation not meet the standards specified herein, the Contractor shall replace the work at his own expense.
- N. Workmanship: All work shall be installed by qualified, skilled personnel, proficient in the trades required, in a neat, orderly, and responsible manner with recognized standards of workmanship. The Contractor shall have had considerable experience and demonstrated ability in the installation of sprinkler irrigation systems of this type.
- 1.04 SUBMITTALS
- All materials shall be those specified and/or approved by the Landscape Architect.
- A. Product Data: After the award of the Contract and prior to beginning work, the Contractor shall submit for approval by the Owner and Landscape Architect, two copies of the complete list of materials, manufacturer's technical data, and installation instructions which he proposes to install.
- B. Commence no work before approval of material list and descriptive material by the Landscape Architect
- C. Record Drawings: The Contractor shall record on reproducibles, all changes that may be made during actual installation of the system. Provide controller sequencing and control valve
- 1. Immediately upon installation of any piping, valves, wiring, sprinklers, etc., in locations other than shown on the original drawings or of sizes other than indicated, the Contractor shall clearly indicate such changes on a set of blueline prints. Records shall be made on a daily basis. All records shall be neat and subject to the approval of the Owner.
- 2. The Contractor shall also indicate on the record prints the location of all wire splices, original or due to repair, that are installed underground in a location other than the controller pedestal, remote control valve box, power source or connection to a valve-in-head sprinkler.
- 3. These drawings shall also serve as work progress sheets. The Contractor shall make neat and legible notations thereon daily as the work proceeds, showing the work as actually installed. These drawings shall be available at all times for review and shall be kept in a location designated by the Owner's Representative.
- 4. Progress payment request and record drawing information must be approved by Landscape Architect before payment is made.
- 5. If in the opinion of the Owner or his representative, the record drawing information is not being properly or promptly recorded, construction payment may be stopped until the proper information has been recorded and submitted.
- 6. Before the date of the final site observation and approval, the Contractor shall deliver one set (copies) of reproducible record drawing plans and notes to the Landscape Architect. Record drawing information shall be approved by the Landscape Architect prior to submittal to Owner for final payments, including retentions.
- D. Operations and Maintenance Manuals: The Contractor shall prepare and deliver to the Owner, or his designated representative within ten (10) calendar days prior to completion of construction, a hard cover binder with three rings containing the following information:
- 1. Index sheet stating the Contractor's address and business telephone number, list of equipment with name(2) and address(es) of local manufacturer's representative(s).
- 2. Catalog and parts sheets on every material and equipment installed under this Contract.
- 3. Complete operating and maintenance instruction on all major equipment. Include initial controller schedule and recommended schedule after establishment period.
- 4. Demonstrate to and provide the Owner's maintenance personnel with instructions for major equipment and show evidence in writing to the Owner, or his designated representative at the conclusion of the project that this service has been rendered.
- 1.05 EXPLANATION OF DRAWINGS
- A. Due to the scale of the drawings, it is not possible to indicate all offsets, fittings and sleeves which may be required. The Contractor shall carefully investigate the structural and finished conditions affecting all of the work and plan his work accordingly, furnishing such offsets, fittings and sleeves as may be required to meet such conditions.
- B. The drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation systems, planting and architectural features. Deviations shall be brought to the Landscape Architects attention.
- C. All work called for a on the drawings by notes or details shall be furnished and installed whether or not specifically mentioned in the specifications.
- D. The Contractor shall not willfully install the irrigation system as shown on the drawings when it is obvious in the field that obstructions, grade differences or discrepancies in area dimensions exist that might not have been known in engineering. Such obstructions or differences should be brought to the attention of the Landscape Architect. In the event that notification is not performed, the Contractor shall assume full responsibility for any revision necessary.
- E. If, in the opinion of the Landscape Architect, the labor furnished by the Contractor is incompetent, unskilled, or unreliable, his equipment inadequate, improper or unsafe, or if the Contractor shall fail to continuously and diligently execute the construction, the Landscape Architect or Owner shall, in writing, instruct the Contractor to remove all such causes of noncompliance and the Contractor shall promptly comply.
- F. The Contractor shall be responsible for full and complete coverage of all irrigation areas. The Landscape Architect shall be notified of any necessary adjustments at no additional cost to the Owner. Any revisions to the irrigation system must be submitted and answered in written form, along with any change in Contract price. Layout may be modified, if necessary to obtain coverage. Spacing not to exceed 60% of the diameter.

PART II: PRODUCTS

2.01 MATERIALS

Material and equipment shall be supplied by the Contractor. No substitutions shall be allowed without the prior written approval of the Owner/Landscape Architect. The Contractor shall inspect all materials and equipment prior to installation, and defective materials shall be replaced with the proper materials and equipment. Those items used in the installation found to be defective, improperly installed or not as specified, shall be removed and the proper materials and equipment installed in the proper manner, as interpreted by the Owner/Landscape Architect. The Contractor shall remove all damaged and defective pipe and equipment from the site.

2.02 PIPING

- A. General Provisions: All materials throughout the system shall be new and in perfect condition unless otherwise directed by the Landscape Architect.
- B. Polyvinyl Chloride Pipe (PVC): (Where indicated on plan, use non-potable purple piping.)
- 1. Laterals: PVC shall conform to the requirements of ASTM Designation D 2241, Class 1120 or 1220. All lateral piping less than 3" in diameter shall be Class 200 SDR-21.
- 2. Main Line Under Pressure: PVC shall conform to the requirements of ASTM Designation D 2241, Class 1120 or 1220, Schedule 40 with belled end for solvent weld connection.
- 3. Pipe Markings: All PVC pipe shall bear the following markings:
 - o Manufacturer's Name o Nominal Pipe Size
 - o Schedule or Class
 - o Pressure Ratina of PSI
 - o NSF (National Sanitation Foundation) Approval
 - o Date of Extrusion

2.04 PVC JOINTS

Joints in PVC pipe smaller than 3" shall be solvent welded in accordance with the recommendations of the pipe manufacturer; the solvent cleaner and welding compound furnished with the pipe.

- 2.05 THREADED CONNECTIONS
- A. Threaded PVC connections shall be made up using Teflon tape only.

THE PRESENCE OF GROUNDWATER SHOULD BE

OBTAINING ALL NECESSARY PERMITS.

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- B. Connection between mainline pipe fittings and automatic or manual control valves shall be made using Schedule 80 threaded fittings and nipples.
- 2.06 SOLVENT CEMENT
- A. General: Provide solvent cement and primer for PVC solvent weld pipe and fittings recommended by the manufacturer. Pipe joints for solvent weld pipe to be belled end. Pipe joints for gasketted pipe to be intrical ring type. Insert gaskets will not be accepted.
- B. Thrust Blocks: Main line piping 3" or greater in diameter shall have thrust blocks sized and placed in accordance with the pipe manufacturer's recommendations or, in the absence of specified recommendations by the pipe manufacturer. 3000 PSI concrete thrusts shall be properly installed at tees, elbows, 45's, crosses, reducers, plugs, caps and valves.
- 2.07 PIPE AND WIRE SLEEVES
- A. Sleeves to be installed:
 - 1. The Contractor shall install irrigation system pipe and wire sleeves conforming to the following:
 - a. All pipe sleeves shall extend a minimum of 36" beyond the edges of payement.
 - b. All pipe sleeves to be installed beneath future/existing road surfaces shall be PVC pipe Schedule 40 or jack and bore steel pipe as per FDOT specifications, and as shown on
 - c. All irrigation system wires shall be sleeved seperately from main or lateral lines.
 - d. All pipe sleeves shall be installed at the minimum depth specified for main lines, lateral lines, and electric wire.
 - e. Contractor shall coordinate all pipe sleeve locations and depths prior to initiating installation of the irrigation system.

2.08 SPRINKLER HEADS

A. Spray Sprinklers: The sprinkler shall be a fixed spray type designed for in-ground installation. The nozzle shall elevate 6" (or as designated on plan) when in operation. The body of the sprinkler shall be constructed of non-corrosive heavy duty Cycolac. A filter screen shall be in the nozzle piston. All sprinkler parts shall be removable through the tip of the unit by removal of a threaded cap.

Riser mounted spray shall be as indicated on the plans. The sprinkler shall consist of a nozzle and body. The body of the riser-mount sprinkler shall be constructed of non-corrosive materials. A cone strainer shall be a separate part with the nozzle assembly to allow for easy flushing of the sprinkler. Maximum working pressure at the base of the sprinkler shall be 40 (continued...)

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The automatic remote control valves shall be as specified on the plans, or approved equal.

2.10 GATE VALVES

- A. Gate valves for 3/4" through 2-1/2" shall be of brass or bronze construction, solid wedge, IPS threads, non-rising stem with wheel operating handle, for a continuous working pressure of 150
- B. Gate valves for 3" and larger: Iron body, brass or bronze mounted AWWA gate valves, with a clear waterway equal to the full nominal diameter of the valve, rubber gasket for a continuous working pressure of 150p PSI. Valve shall be equipped with a square operating nut.

2.11 VALVE BOXES

- A. For gate valves, use AMETEK #10-181-014 box with #10-181-015 locking lid, or as per the drawings.
- B. For control valves 3/4" through 2", the drip valve assemblies, use AMETEK #10-181-014 box with #10-181-015 locking lid, or sized as necessary to effectively house the equipment
- C. For control wiring splices, use AMETEK #10-181-014 box with #10-181-015 locking lid, or as per the drawings.
- 2.12 IRRIGATION WIRING
- A. Wiring used for connecting the electric control valves to the controllers shall be Type UF, 600 volt, single strand, solid copper with PVC insulation 4/64" thick. Size shall be 14 gauge, red for "hot" or lead wires, and common wire to be 14 gauge, white in color.
- B. Contractor shall perform an ohm test on ground to assure adequate protection against surges and indirect lightning strikes.
- 2.13 MISCELLANEOUS MATERIALS
- A. Drainage Backfill: Cleaned gravel or crushed stone, graded from 1" maximum to 3/4" minimum.
- B. Metalized Underground Tape: The detectable, underground utility marking tape shall consist of a minimum: 5 mil (0.005") overall thickness; five-ply composition; ultra-high molecular weight, 100% virgin polyethylene; acid, alkaline and corrosion resistant; with no less than 150 pounds of tensile break strength per 6" width; color-code impregnated with color stable, lead-free, organic pigments suitable for direct burial. Tapes utilizing reprocessed plastics or resins shall not be acceptable. The detectable, underground utility marking tape shall have a 35 gauge (0.0035") solid aluminum foil, core encapsulated within a 2.55 mil (0.00255") polyethylene backing and a 0.6 mil (0.006") PET cover coating. The laminate on each side shall consist of a 0.75 mil (0.00075") layer of hot LPDE, poly-fusing the "sandwich" without use of adhesives.

2.14 AUTOMATIC CONTROL SYSTEM

An Independent Station Controller: Furnish a solid state controller, as specified on the plans. Each station shall be capable of timing from zero (0) minute to 99 minutes per station in one (1) minute increments.

Each station shall be capable of operating two (2) 7VA electric valve-in-head solenoids.

The stand-alone controller shall have two (2) possible programs.

The stand-alone controller shall provide global percentage increase/decrease (water budget) for all stations simultaneously, from ten (10) to two hundred (200) percent, in ten (10) percent

All stations shall be able to be turned on/off manually buy operating timing mechanism or by manual switch at station output.

The stand-alone controller shall incorporate an integral MOV surge protection into the terminal block for each of its 24 VAC field wire outputs. Controller power input wires will also incorporate surge protection.

The control panel shall provide continuous display time. It shall have alphanumeric displays of descriptive Enalish menus and leaend identifiers with cursor selection of function and precision value adjustment by rotary dial input.

The stand-alone controller shall be UL listed and FCC approved.

The stand-alone controller shall have 117 VAC, 60 Hz input, 26.5 VAC, 60 Hz output for operating 24 VAC solenoids.

The stand-alone controller cabinet shall be a lockable and weather-resistant outdoor cabinet. Mount as noted on plans.

The controller shall be equipped with lightening protection, by the Contractor, on both the primary (120v) and each secondary (24v) circuit. The controller circuits shall be grounded to a copper clad grounding rod located at each controller.

The controller shall be equipped for a water conservation device. as specified.

PART III: EXECUTION

3.01 INSPECTION

The Contractor shall examine the areas and conditions under which landscape irrigation system is installed and notify the Landscape Architect in writing of conditions detrimental to the proper and timely completion of the work. The Contractor shall proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Landscape Architect.

3.02 PREPARATION

The Contractor shall provide sleeves to accommodate piping under walks or paving. The Contractor shall coordinate with other trades and install to accurate levels prior to paving work. Cutting and patching of paving and concrete will not be permitted. The Contractor shall maintain all warning signs, shoring, barricades, flares and red lanterns, as required by any local codes, ordinances or permits.

3.03 TRENCHING AND BACKFILLING

A. Excayation: The Contractor shall stake out the location of each run of pipe, sprinkler heads, sprinkler valves and isolation valves prior to trenching. Excavation shall be open vertical construction sufficiently wide to provide free working space around the work installed and to provide ample space or backfilling and tamping. Trenches for pipe shall be cut to required grade lines, and compacted to provide accurate grade and uniform bearing for the full length of the line. The bottom of the trenches shall be free of rock or other sharp edged objects. Minimum cover shall be as follows:

<u>Pipe and Wire Depth</u>

Pressure Mainline 18" at top of pipe from Finish Grade Lateral Pipina (rotor) 12" at top of pipe from Finish Grade Lateral Piping (pop-up) 12" at top of pipe from Finish Grade Control Wiring Side of main Line

B. Minimum Clearances: All pipelines shall have a minimum clearance of six inches from each other and from lines of other crafts. Parallel lines shall not be installed directly over one another. No lateral line shall be installed in the main-line trench.

3.04 INSTALLATION OF PIPING

- A. PVC Pipe and Joints: The Contractor shall not install solvent wild pipe when air temperature is below 400 F. Installation shall be in accordance with the manufacturer's instructions.
- 1. Only the solvent recommended by the pipe manufacturer shall be used. All PVC pipe and fittings shall be installed as outlined and instructed by the pipe manufacturer, and it shall be the Contractor's full responsibility to make arrangements with the pipe manufacturer for any field assistance that may be necessary. The Contractor shall assume full responsibility for the correct installation.

3.05 BACKFILLING PROCEDURES

Initial backfill on PVC lines shall be pulyerized native soil, free of foreign matter. Within radius of 4" of the pipe shall be clean soil or sand. Plant locations shall take precedence over sprinkler and pipe locations. The Contractor shall coordinate the location of trees and shrubs with the routing of lines and final head locations.

- A. Backfill and Compaction: The Contractor shall leave trenches slightly mounded to allow for settlement after the backfilling is completed. The Contractor shall clean the site of the work continuously of excess waste materials as the backfilling progresses, and leave in a neat condition. No trenches shall be left open for a period of more than 48 hours. Protect open trenches as required.
 - The Contractor shall carefully backfill excavated materials approved for backfilling, consisting of earth, loam, sand, and other approved materials, free of rock and debris over 1" in size. Backfill shall be compacted to original density of surrounding soil without dips, sunken areas, or irregularities.

The Contractor shall conform to DOT requirements for methods and required compaction percentages, for roads and paving.

The Contractor shall hand place the first 6" of backfill (or to top of pipe) and have it walked on so as to secure the position of the pipe and wire.

No wheel rolling will be allowed. The Contractor shall remove rock or debris extracted from backfill materials and dispose of offsite. The Contractor shall fill any voids left in backfill with approved backfill materials.

- B. Existing Lawns: Where trenching is required across existing lawns, uniformly cut strips of sod 6" wider than trench. The Contractor shall remove sod in rolls of suitable size for handling and keep moistened until replanted. The Contractor shall replant sod within 48 hours after removal, roll and water generously. The Contractor shall resod any areas not in healthy condition equal to adjoining lawns 10 days after replanting.
- C. Seeded Area: Trenching will be required across existing seeded areas, primarily roadway edging. The Contractor shall conform to the requirements of seeding, Section 02930 for the reseeding of the disturbed trench area.
- D. Pavements: Jack and bore or directional bore piping under paving materials as per local regulatory codes. No cutting and patching of pavement will be permitted.

3.06 VALVES

- A. Isolation Valves: Shall be sized corresponding to adjacent pipe size. Specified valve boxes shall be installed flush with finish grade in such a manner that surface forces applied to their exposed area will not be transmitted to the piping in which the valve is installed nor any other piping, wiring or other lines in the vicinity of said valves.
- B. Gate Valves: Install where shown, in valve boxes.
- C. Electric Control Valyes: Shall be installed in specified valve boxes. The valve shall have 6" of 3/4" pea gravel installed below the bottom of the valve. If the valve box does not extend to the base of the valve, a valve box extension shall be installed. Electric control valves shall be installed where shown and grouped together where practical. The Contractor shall place no closer than 24" to walk edges, bikeway edges, buildings and walls. The Contractor shall adjust the valve to provide flow rate or rated operating pressure required for each sprinkler circuit.

3.07 CONDUIT AND SLEEVES

A. Conduit and Sleeves for Control Wiring and Main/Lateral Pipe: The Contractor shall provide and install where necessary. Contractor shall coordinate locations of previously installed sleeving with the General Site Contractor.

The Contractor shall coordinate installation of sleeves with work of other disciplines.

3.08 CONTROLS

- A. The Contractor shall connect electric control valves to controllers in a clockwise sequence to correspond with station settings beginning with Stations 1, 2, 3, etc. Automatic controllers shall be provided and installed by the Contractor as noted on the drawings. All zones will be labeled on the controller.
- B. Controllers shall be equipped with lightning protection and grounded to a standard 5/8" copper clad steel ground rod driven a minimum of 8' into the ground and clamped.
- C. The electrical service to the controllers shall be performed by an electrical subcontractor in compliance with NEC requirements.

3.09 CONTROL WIRE

- A. Control wiring between the controller and electric valves shall be buried in main line trenches or in separate trenches. Electrical connection at valve will allow for pigtail so solenoid can be removed from valve with sufficient slack to allow ends to be pulled 12" above ground for examination and
- B. An expansion loop shall be provided at every valve at 100' o.c. Expansion loop shall be formed by wrapping wire at least eight times around a 3/4" pipe and withdrawing pipe.
- C. The wire shall be bundled and taped every ten feet. The wire shall be laid in the trench prior to installing the pipe being careful to install wire beneath and 6" to the side of the main pipe line.
- D. Electrical connections to electric control valves shall be made with Rainbird Pen-Tite or Techdel GT-3-GEL - Tite connectors or equal.

Power Connections: Electrical connections to power and signal wires shall be made using 3M 82-A2 power cable splice kits.

3.10 SPRINKLER HEADS

A. General Provisions:

- 1. Sprinkler heads shall be installed as designated on the shop drawings. Heads shall be installed on flexible PVC. Top to be flush with finish grade or top of curb.
- 2. Spacing of heads shall not exceed the maximum indicated on the shop drawings (unless directed by the Landscape Architect). In no case shall the spacing exceed the maximum recommended by the manufacturer.

B. Head Types:

- 1. Pop-up- Rotary Sprinkler Heads: Shall be installed on flex joint and be set with top of head flush with finish grade. Heads installed at curb shall have 6" to 10" between perimeter of head and concrete. Heads placed at edge of pavement having no curb shall be installed 24" from edge of pavement.
- 2. Spray Pop-up Sprinkler Heads: Shall be installed on flexible PVC and be set with top of head flush with finished grade. Sprinkler heads placed adjacent to curbs will be installed 9" from concrete. Sprinkler heads placed adjacent to pavement having no curb shall be installed 24" from the edge of pavement.

3.11 COMPLETION

A. Flushing: Before sprinkler heads are set, the Contractor shall flush the lines thoroughly to make sure there is no foreign matter in the lines.

The Contractor shall flush the main lines from dead end fittings for a minimum of five minutes under a full head of pressure.

B. Testing: The Contractor shall notify Landscape Architect and Owner forty-eight (48) hours in advance of testing.

Prior to backfilling of main line fittings, Contractor shall fill the main line piping with water, in the presence of the Owner/Landscape Architect, taking care to purge the air from it by operating all the sprinkler control valves one or more times and/or such other means as may be necessary. A small, high pressure pump or other means of maintaining a continuous water supply shall be connected to the main line and set so as to maintain 100 PSI in the main line system for two (2) hours without interruption. When this has been accomplished and while the pressure in the system is still 100 PSI, leakage testing shall be performed in accordance with AWWA Standard C-600. Pressure readings shall be noted and make up water usage shall be recorded. Should the rate of make up water usage indicate significant leakage, the source of such leakage shall be found and corrected and the system then retested until the Owner/Landscape Architect is satisfied that the system is reasonably sound. Lateral line testing shall be conducted during the operating testing of the system by checking visually the ground surface until no leaks in this portion of the system are evident. Leaks shall be repaired or paid for by the Contractor at any time they appear during the warranty period.

C. Adjustment and Coverage of System: Coordinate pressure testing with adjustments and coverage test of system so both may occur at the same time. The Contractor shall balance and adjust the various components of the system so that the overall operation of the system is most efficient. This includes a synchronization of the controllers, adjustments to pressure regulators, pressure relief valves, part circle sprinkler heads, and individual station adjustments on the controllers.

3.12 WARRANTY

- A. The Contractor shall fully warrant the landscape irrigation system for a period of one (1) year after the written final acceptance and will receive a written confirmation from the Landscape Architect that the warranty period is in effect.
- B. During the warranty period, the Contractor will enforce all manufacturer's and supplier's warranties as if made by the Contractor himself. Any malfunctions, deficiencies, breaks, damages, disrepair, or other disorder due to materials, workmanship, or installation by the Contractor and his suppliers shall be immediately and properly corrected to the proper order as directed by the Owner and/or Landscape Architect.
- C. Any damages caused by system malfunction shall be the responsibility of the Contractor who shall make full and immediate restoration for said damages.

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