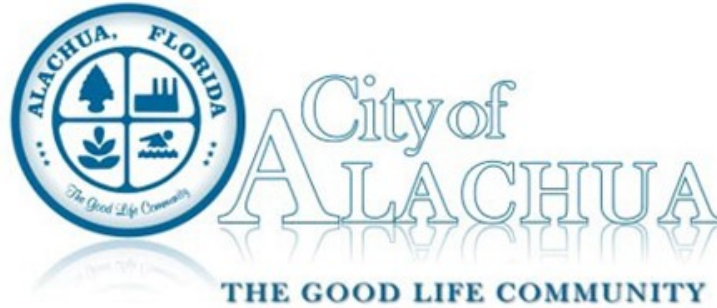




Chair Sandy Burgess
Vice Chair Joe Hancock
Member Virginia Johns
Member Williams "Bill" Menadier
Member Keith Vermillion
School Board Member Tina Certain

City Manager Mike DaRoza
City Attorney Marian Rush

The Planning and Zoning Board will conduct a
Regular Planning and Zoning Board Meeting
At 6:00 PM

to address the item(s) below.

Meeting Date: September 10, 2024

Meeting Location: James A. Lewis City Commission Chambers
15100 NW 142 Terrace
Alachua, FL 32615

Planning and Zoning Board Meeting

Notice given pursuant to Section 286.0105, Florida Statutes. In order to appeal any decision made at this meeting, you will need a verbatim record of the proceedings. It will be your responsibility to ensure such a record is made.

CALL TO ORDER

INVOCATION

PLEDGE TO THE FLAG

APPROVAL OF THE AGENDA

I. OLD BUSINESS

II. NEW BUSINESS

A) APPROVAL OF MEETING MINUTES 07-09-24

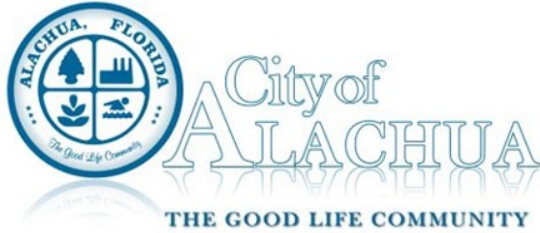
B) SITE PLAN – PATEL FUEL & RETAIL: A REQUEST BY WALKER OWEN, P.E., OF CAUSSEAUX, HEWETT, & WALPOLE, LLC, APPLICANT, ON BEHALF OF SEMOJ 13, LLC, PROPERTY OWNER, FOR CONSIDERATION OF A SITE PLAN TO CONSTRUCT A ±8,836 SQUARE FOOT CONVENIENCE STORE, RETAIL BUILDING, AND GASOLINE FUELING STATION WITH ASSOCIATED SITE IMPROVEMENTS (QUASI-JUDICIAL HEARING).

- C) COMPREHENSIVE PLAN TEXT AMENDMENT - COMMERCIAL AND MIXED-USE FUTURE LAND USE CATEGORIES: A REQUEST BY THE CITY OF ALACHUA TO AMEND THE CITY OF ALACHUA COMPREHENSIVE PLAN, AMENDING THE ADMINISTRATION AND IMPLEMENTATION ELEMENT TO ESTABLISH A NEW DEFINITION FOR MIXED-USE, AMENDING THE FUTURE LAND USE ELEMENT TO ESTABLISH MIXED-USE FUTURE LAND USE CATEGORIES, AND AMENDING THE ECONOMIC ELEMENT TO REMOVE AN EXISTING DEFINITION FOR MIXED-USE (LEGISLATIVE HEARING).
- D) **REMOVED FROM 9/10/24 PZB MEETING AGENDA** – SPECIAL EXCEPTION PERMIT – TARA APRIL STORMWATER FACILITIES: A REQUEST BY CLAY SWEGER, AICP, LEED AP, OF EDA CONSULTANTS, INC., APPLICANT, ON BEHALF OF TARA FOREST, LLC, PROPERTY OWNER, FOR CONSIDERATION OF A SPECIAL EXCEPTION PERMIT TO ALLOW THE PLACEMENT OF A MINOR UTILITY (STORMWATER MANAGEMENT FACILITIES) IN THE AGRICULTURAL (A) ZONING DISTRICT THAT WOULD SUPPORT FUTURE DEVELOPMENT ON ADJACENT LANDS ZONED COMMUNITY COMMERCIAL (CC) (QUASI-JUDICIAL HEARING).

III. BOARD COMMENTS/DISCUSSION

IV. CITIZENS COMMENTS

ADJOURN



Commission Agenda Item

MEETING DATE: September 10, 2024

SUBJECT: Approval of Meeting Minutes 07-09-24

PREPARED BY:

RECOMMENDED ACTION:

Approve the Planning and Zoning Board meeting minutes of July 9, 2024.

Summary

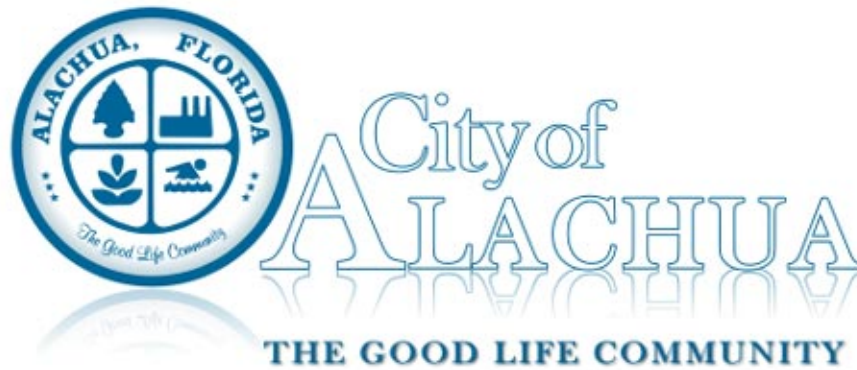
FINANCIAL IMPACT

ADDITIONAL FINANCIAL INFORMATION

COMMISSION GOALS

ATTACHMENTS

1. 24.07.09.M.PZB



Planning and Zoning Board Minutes July 9, 2024

Chair Sandy Burgess

City Manager Mike DaRoza

Vice-Chair Joe Hancock

Member Virginia Johns

Member William "Bill" Menadier

Member Keith Vermillion

School Board Member Tina Certain

Planning and Zoning Board At 6:00 PM

to address the item(s) below.

Meeting Date: July 9, 2024

Meeting Location: James A. Lewis Commission Chambers

Notice given pursuant to Section 286.0105, Florida Statutes. In order to appeal any decision made at this meeting, you will need a verbatim record of the proceedings. It will be your responsibility to ensure such a record is made.
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PLANNING AND ZONING BOARD MEETING MINUTES

CALL TO ORDER

Sandy Burgess – Chair 6:01 p.m.

Absent - Tina Curtain, School Board Member

Absent Joe Hancock, Vice Chair

INVOCATION

Led by Chair Burgess

PLEDGE TO THE FLAG

Led by Chair Burgess

APPROVAL OF THE AGENDA

Member Virginia Johns moved to approve the agenda; seconded by Member Keith Vermillion.

Motion passed by unanimous consent.

I. OLD BUSINESS

II. NEW BUSINESS

- A. Approval of PZB Meeting Minutes- June 11, 2024

Member Johns moved to approve the minutes from the June 11, 2024, meeting; seconded by Member Vermillion.

Motion passed by unanimous consent.

- B. Special Exception Permit – Firestone (PSE23-0002): A request by Morgan Hampton of Common Oak Engineering, LLC, applicant and agent for Alachua 441/235, LLC, property owner, for consideration of a Special Exception Permit to establish an automobile repair and servicing use on a ±1.02 acre subject property located in the Santa Fe Crossing development; Portions of Tax Parcel Numbers 03044-003-000 and 03042-058-000 (Quasi-Judicial Hearing).

Justin Tabor, Principal Planner, presented.
Received and filed.

Member Vermillion moved based upon the competent substantial evidence presented at this hearing, the presentation before this Board, and Staff's recommendation, this Board finds the application to be consistent with the City of Alachua Comprehensive Plan and in compliance with the Land Development Regulations and approves the Special Exception Permit for an automobile repair and servicing use submitted by Morgan Hampton of Common Oak Engineering, LLC on behalf of Alachua 441/235, LLC, subject to the seven (7) conditions provided in Exhibit "A" and located on page 13 of the July 9, 2024 Staff Report to the Planning and Zoning Board; seconded by Member Johns.

Motion passed 4-0 by roll call vote.

- C. Site Plan – Firestone (PSP23-0014): A request by Morgan Hampton of Common Oak Engineering, LLC, applicant and agent for Alachua 441/235, LLC, property owner, for consideration of a Site Plan to ±6,767 square foot automobile repair and servicing facility with associated site improvements; Portions of Tax Parcel Numbers 03044-003-000 and 03042-058-000 (Quasi-Judicial Hearing).

Justin Tabor, Principal Planner, presented.
Received and filed.

Member Johns moved that based upon the competent substantial evidence presented at this hearing, the presentation before this Board, and Staff's recommendation, this Board finds the application to be consistent with the City of Alachua Comprehensive

Plan and in compliance with the Land Development Regulations and approves the Site Plan submitted by Morgan Hampton of Common Oak Engineering, LLC on behalf of Alachua 441/235, LLC, subject to the ten (10) conditions provided in Exhibit “A” and located on page 20 of the July 9, 2024 Staff Report to the Planning & Zoning Board; seconded by Member Vermillion.

Motion passed by 4-0 roll call vote.

III. BOARD COMMENTS/DISCUSSION

IV. CITIZENS COMMENTS

ADJOURN

Member Johns moved to adjourn; seconded by Member Bill Menadier.

Motion passed by unanimous consent.

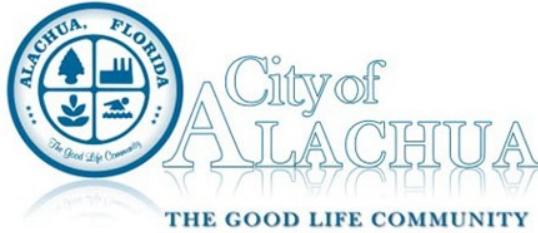
Chair Burgess adjourned the meeting. 6:20 p.m.

ATTEST:

PLANNING AND ZONING BOARD OF THE
CITY OF ALACHUA, FLORIDA

Presiding Officer

Staff Liaison



Commission Agenda Item

MEETING DATE: September 10, 2024

SUBJECT: Site Plan – Patel Fuel & Retail: A request by Walker Owen, P.E., of Causseaux, Hewett, & Walpole, LLC, applicant, on behalf of Semoj 13, LLC, property owner, for consideration of a Site Plan to construct a ±8,836 square foot convenience store, retail building, and gasoline fueling station with associated site improvements (Quasi-Judicial Hearing).

PREPARED BY: Justin Tabor, AICP, Principal Planner

RECOMMENDED ACTION:

Staff recommends that the Planning & Zoning Board approve the Site Plan submitted by Walker Owen, P.E., of Causseaux, Hewett, & Walpole, LLC on behalf of Semoj 13, LLC, subject to the five (5) conditions provided in Exhibit “A” and located on page 16 of the September 10, 2024 Staff Report to the Planning & Zoning Board upon making the following motion:

Based upon the competent substantial evidence presented at this hearing, the presentation before this Board, and Staff’s recommendation, this Board finds the application to be consistent with the City of Alachua Comprehensive Plan and in compliance with the Land Development Regulations and approves the Site Plan submitted by Walker Owen, P.E., of Causseaux, Hewett, & Walpole,, LLC on behalf of Semoj 13, LLC, subject to the five (5) conditions provided in Exhibit “A” and located on page 16 of the September 10, 2024 Staff Report to the Planning & Zoning Board.

Summary

This application is a request by Walker Owen, P.E., of Causseaux, Hewett, & Walpole, LLC, applicant and agent for Semoj 13, LLC, property owner, for consideration of a Site Plan proposing the construction of a ±8,836 square foot convenience store, retail building, and gasoline fueling station with associated site improvements on a ±2.14 acre subject property.

The subject property is located in the southeast corner of the intersection of NW US Highway 441 and NW 59th Terrace.

The proposed development will convey the development’s stormwater runoff to an on-site master stormwater system. Access to the site will be provided by two new ingress/egresses with one (1) connecting to NW US Highway 441 and the second connecting to NW 59th Terrace. A cross access easement will also be provided to provide for future interconnectivity to the land located to the east of the subject property.

FINANCIAL IMPACT

ADDITIONAL FINANCIAL INFORMATION

ATTACHMENTS

1. Staff Report
2. Site Plan - Patel Fuel & Retail
3. Application and Supporting Materials
4. Public Notices for 9/10/2024 PZB Meeting



City of Alachua

Planning & Community Development Department

Staff Report

Planning & Zoning Board Hearing Date: September 10, 2024
Quasi-Judicial Hearing Application #: PSP24-0003

SUBJECT: A request for a Site Plan proposing the construction of a $\pm 8,836$ square foot convenience store, retail building, and gasoline fueling station with associated site improvements

APPLICANT/AGENT: Walker Owen, P.E., Causseaux, Hewett, & Walpole, LLC

PROPERTY OWNER: Semoj 13, LLC

LOCATION: Southeast corner of the intersection of NW US Highway 441 and NW 59th Terrace

PARCEL ID NUMBERS: 05885-010-014

FLUM DESIGNATION: Commercial

ZONING: Commercial Intensive (CI)

OVERLAY: N/A

ACREAGE: ± 2.14

PROJECT PLANNER: Justin Tabor, AICP

RECOMMENDATION: Staff recommends that the Planning & Zoning Board approve the Site Plan submitted by Walker Owen, P.E., of Causseaux, Hewett, & Walpole, LLC on behalf of Semoj 13, LLC, subject to the five (5) conditions provided in Exhibit "A" and located on page 16 of the September 10, 2024 Staff Report to the Planning & Zoning Board.

RECOMMENDED MOTION: *Based upon the competent substantial evidence presented at this hearing, the presentation before this Board, and Staff's recommendation, this Board finds the application to be consistent with the City of Alachua Comprehensive Plan and in compliance with the Land Development Regulations and approves the Site Plan submitted by Walker Owen, P.E., of Causseaux, Hewett, & Walpole, LLC on behalf of Semoj 13, LLC, subject to the five (5) conditions provided in Exhibit "A" and located on page 16 of the September 10, 2024 Staff Report to the Planning & Zoning Board.*

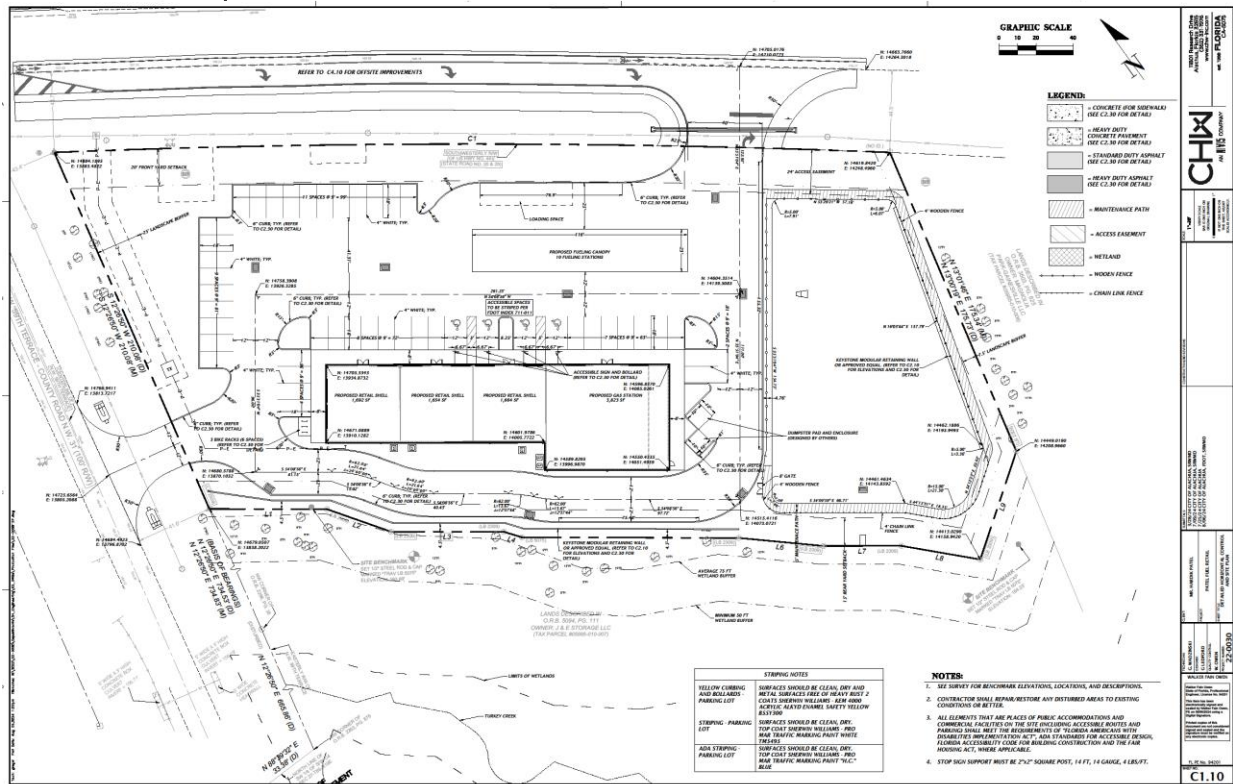
SUMMARY

This application is a request by Walker Owen, P.E., of Causseaux, Hewett, & Walpole, LLC, applicant and agent for Semoj 13, LLC, property owner, for consideration of a Site Plan proposing the construction of a ±8,836 square foot convenience store, retail building, and gasoline fueling station with associated site improvements on a ±2.14 acre subject property.

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Illustration 1. Proposed Site Plan - Patel Fuel & Retail



SURROUNDING USES

The existing uses, Future Land Use Map (FLUM) Designations, and zoning districts of the surrounding area are identified in Table 1. Map 1 provides an overview of the vicinity of the subject property. (NOTE: The information below is intended to provide a general overview of the area surrounding the subject property and to generally orient the reader. It is not intended to be all-inclusive, and may not identify all existing uses, FLUM Designations, and/or zoning districts surrounding the subject property.)

Map 1. Vicinity Map

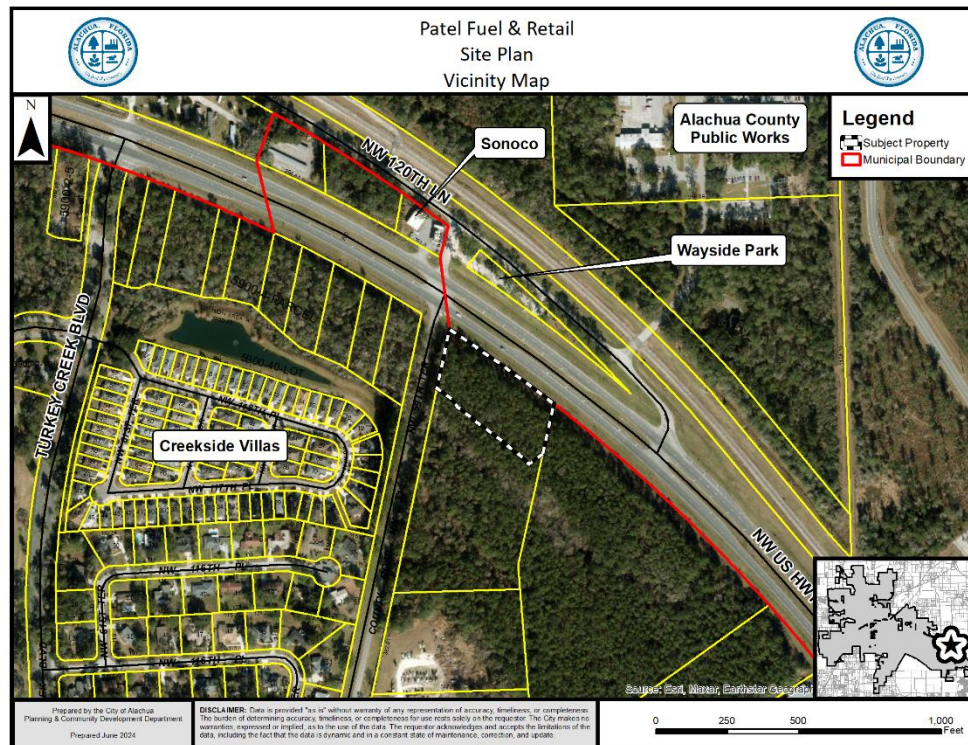


Table 1. Surrounding Land Uses

Direction	Existing Use(s)	FLUM Designation(s)	Zoning District(s)
North	US 441	N/A	N/A
South	Vacant - Turkey Creek	Commercial	CI
East	Vacant Commercial	Commercial	CI
West	NW 59 th Terrace / Turkey Creek PUD	Commercial	Planned Unit Development (PUD)

NEIGHBORHOOD MEETING

The purpose of a Neighborhood Meeting is to educate the owners of nearby land and any other interested members of the public about the project and to receive comments regarding the project. As required by Section 2.2.4 of the LDRs, all property owners within 400 feet of the subject property were notified of the meeting and notice of the meeting was published in a newspaper of general circulation.

A Neighborhood Meeting was held on April 24, 2024 at the offices of CHW located at 11801 Research Drive. The applicant was present and available to answer questions. Materials submitted by the applicant indicate that the meeting was not attended by any members of the public.

CONSISTENCY WITH THE COMPREHENSIVE PLAN

The Goals, Objectives, and Policies (GOPs) identified below are provided to establish a basis of the application's consistency with the Comprehensive Plan. There may be additional GOPs which the application is consistent with that are not identified within this report. An evaluation and findings of consistency with the identified GOPs is also provided below.

Future Land Use Element

Goal 1: Future Land Use Map 2035

The City shall maintain a Future Land Use Map in order to effectively guide development in a sustainable manner and to ensure economic prosperity and stability while maintaining a high quality of life for all of its present and future citizens, businesses, and visitors.

Objective 1.3: Commercial

The City shall establish three commercial land use categories: Community Commercial, Commercial, and Central Business District. These land use categories shall provide a broad range of commercial uses, including retail sales and services, personal services, offices, and tourist-oriented uses, in order to provide for the availability of goods and services, both to the citizens and visitors of Alachua and to the citizens of the North Central Florida region.

Policy 1.3.b: *Commercial*: The Commercial land use category is established to provide for general commercial uses, as well as more intense commercial and highway commercial uses. This is the land use category in which large-scale, regional commercial uses may locate. The following uses are allowed within the Commercial land use category:

1. Retail sales and services;
2. Personal services;
3. Financial institutions;
4. Outdoor recreation and entertainment;
5. Tourist-related uses;
6. Hotels and motels;
7. Commercial shopping centers;
- 8. Auto-oriented uses;**
9. Traditional Neighborhood Planned Developments;
10. Employment Center Planned Developments;
11. Commercial recreation centers;
12. Office/business parks;
13. Limited industrial services; and,
14. Eating establishments.

Analysis of Consistency with Goal 1, Objective 1.2, and Policy 1.2.a: The proposed site plan is consistent with permitting an auto-oriented use. There is no proposed change of future land use designation or zoning designation.

Objective 5.1: Natural features: The City shall coordinate Future Land Use designations with appropriate topography, soils, areas of seasonal flooding, wetlands and habitat during review of proposed amendments

to the Future Land Use Map and the development review process. Natural features may be included as amenities within a development project.

- Policy 5.1.a: Topography: The City shall protect the natural topography of the City, including steep and seepage slopes, by requiring new development to include techniques to minimize negative impacts on the natural terrain. An emphasis will be placed on retaining the natural function of seepage slopes during development. Additionally, retention of existing native vegetation will be encouraged as one method of protecting slopes.
- Policy 5.1.b: Soils: The City shall ensure soil protection and intervention measures are included in the development review process.
- Policy 5.1.c: Flood prone areas: The City shall require as part of the development review process the identification of FEMA flood zone areas. Where necessary, base flood elevations and minimum finished floor elevations shall be established. The City shall also require finished floor elevations on subdivision plats, site plans and building permit plans when necessary to determine compliance with flood prone area regulations. The City shall establish standards for a limitation on filling in flood prone areas.
- Policy 5.1.d: Wetlands: The City shall utilize statewide wetland delineation methodology in accordance with Florida Administrative Code (FAC) and regulations adopted by the FDEP and the Suwannee River Water Management District.
- Policy 5.1.e: Habitat: The City shall require as part of the development review process, an inventory of listed species for all new developments in areas identified as known habitat for listed species if listed species are known to exist in close proximity to the development. The survey shall include detailed information regarding type, quantity, location, and habitat requirements for any listed species identified. A de minimus threshold for properties required to complete the inventory shall be established in the City's Land Development Regulations.

Analysis of Consistency with Objective 5.1 and Policies 5.1.a - e: The applicant has submitted an Environmental Resources Assessment prepared by Environmental Consulting & Technology, Inc., dated May 2022 and a Listed Species Survey prepared by CHW, dated July 8, 2024. These reports indicate there are no significant environmental resources that would limit or impact development.

Objective 5.2: Availability of facilities and services: All new development shall be planned and constructed concurrently with the availability of facilities and services necessary for the development.

Analysis of Consistency with Objective 5.2: The subject property is located within the City's potable water and wastewater service areas, as defined in Policies 1.2.a and 4.2.a of the Community Facilities and Natural Groundwater Aquifer Recharge Element of the

Comprehensive Plan, and will be required to connect to the City of Alachua's potable water and wastewater system.

Objective 9.1: *Connections to Water and Wastewater Systems*

The City will require new development and significant redevelopment projects to connect to the City's potable water and wastewater systems when such connections can be made to such systems.

Policy 9.1: Any new development or redevelopment within a Commercial or Industrial land use category within the corporate limits, where potable water and wastewater service are available, as defined in Policy 1.2.a and Policy 4.2.b of the Community Facilities Element of the City's Comprehensive Plan, shall connect to the City's potable water and wastewater system.

Analysis of Consistency with Goal 9 and Policy 9.1: The subject property is within the potable water and wastewater service area. Any development of the subject property will be required to connect to the potable water and wastewater systems at the time of development.

Transportation Element

Objective 1.1: Level of Service: The City shall establish a safe, convenient and efficient level of service standard for all motorized and non-motorized transportation systems.

Analysis of Consistency with Objective 1.1: An analysis of the impacts to transportation facilities has been provided within this report. The proposed development would not result in a decrease in the level of service for transportation facilities monitored for concurrency.

Community Facilities & Natural Groundwater Aquifer Recharge Element

Policy 1.2.a: The City shall establish a Community Wastewater Service Area, which includes all areas where wastewater service is available. Wastewater service shall be deemed available if:

1. A gravity wastewater system, wastewater pumping station, or force main exists within ½ mile of the property line of any residential subdivision with more than 5 units, or any multi-family residential development, or any commercial development, or any industrial development and the gravity wastewater system, wastewater pumping station, or force main can be accessed through public utility easements or right of ways. The distance shall be measured as required for construction of the infrastructure along public utility easements and right of ways.

Analysis of Consistency with Policy 1.2.a: The subject property is located within the wastewater service area, and any future development on the subject property will be required to connect to the wastewater system.

Policy 2.1.a: The City hereby establishes the following level of service standards for solid waste disposal facilities:

<u>FACILITY TYPE</u>	<u>LEVEL OF SERVICE STANDARD</u>
Solid Waste Landfill	.73 tons per capita per year

Analysis of Consistency with Objective 2.1.a: An analysis of the impacts to solid waste facilities has been provided within this report. The proposed amendment would not result in a decrease in the level of service for solid waste disposal facilities.

Policy 4.1.b: The City shall establish a Community Potable Water Service Area, which includes all areas where potable water service is available. Water service shall be deemed available if:

1. A water main exists within ½ mile of any residential subdivision with more than 5 units, or any multi-family residential development, or any commercial development, or any industrial development and water service can be accessed through public utility easements or right of ways. The distance shall be measured as required for construction of the infrastructure along public utility easements and right of ways.

Analysis of Consistency with Policy 4.1.b: The subject property is located within the potable water service area, and any future development on the subject property will be required to connect to the potable water system.

ENVIRONMENTAL CONDITIONS ANALYSIS

Wetlands

Environmental Resources Assessment prepared by Environmental Consulting & Technology, Inc., dated May 2022 indicates there are no wetlands located within the area of proposed development. If any wetlands are identified within the area of proposed development, these areas will be subject to the applicable protection standards of the City of Alachua Comprehensive Plan and the Land Development Regulations (LDRs.)

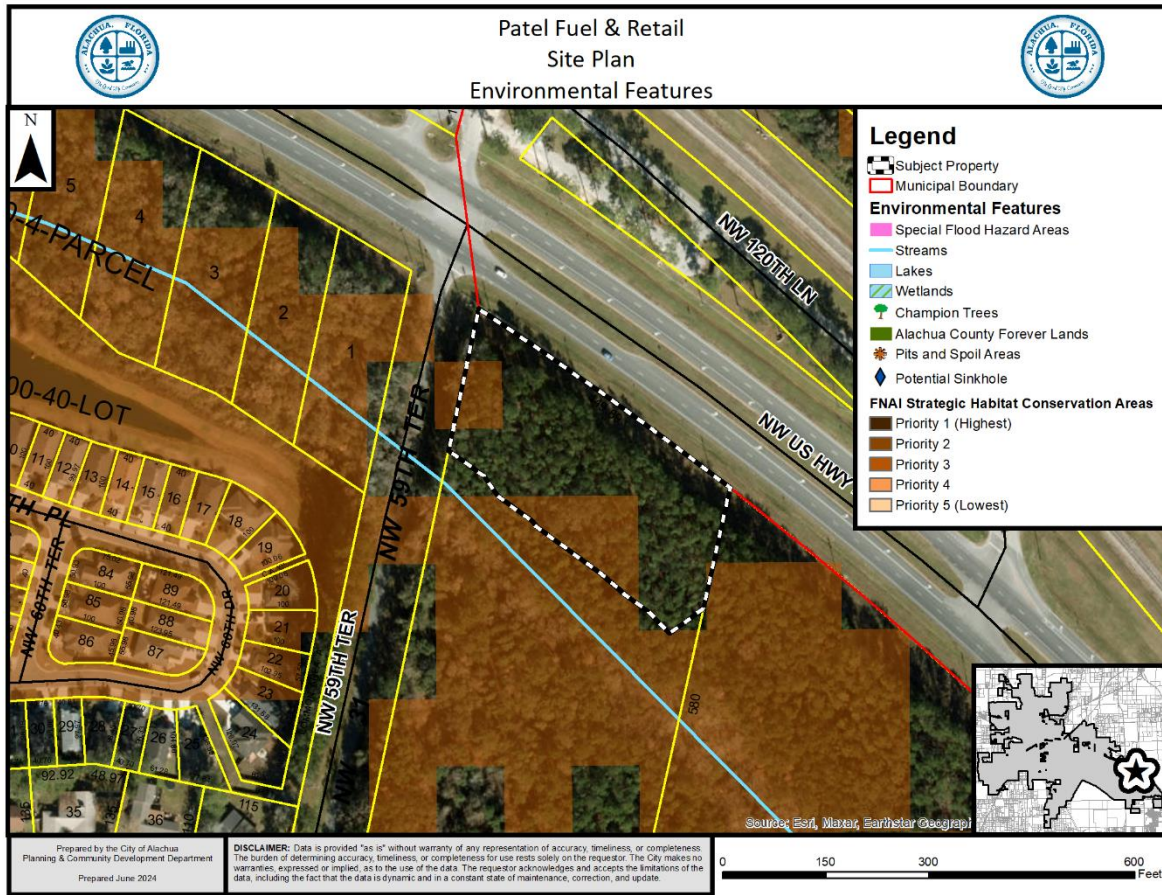
Evaluation: No wetlands have been identified in the area of proposed development, therefore, there are no issues related to wetland protection.

Strategic Ecosystems

Strategic Ecosystems were identified by an ecological inventory project in a report prepared for Alachua County Department of Growth Management in 1987 and updated in 1996. The purpose of the inventory was to identify, inventory, map, describe, and evaluate the most significant natural biological communities in private ownership in Alachua County.

Evaluation: The subject property is not located within or adjacent to a Strategic Ecosystem, therefore, the development will have no impact upon any Strategic Ecosystem(s) identified within the ecological inventory report.

Map 2. Environmental Features



Regulated Plant & Animal Species

Environmental Resources Assessment prepared by Environmental Consulting & Technology, Inc., dated May 2022 indicates that based on desktop data the subject property does not fall within lands classified as critical habitat for listed wildlife species. Further, the report indicates there are no documented occurrences of threatened or endangered species on the property. The report recommends further field review and habitat assessment to confirm the likelihood of the presence of any potential listed species. As such, Staff requested the applicant provide a listed species survey, which was conducted by CHW. The findings of this survey are provided in a report dated July 8, 2024. As part of the research for this report, a field survey was conducted to determine if any listed species may be present on the subject property. The field survey determined no listed species or signs of any listed species were observed on the subject property.

Evaluation: No species identified as endangered, threatened, or of special concern are known to exist on the subject property. If a regulated plant or animal species is identified during development, the applicant must adhere to the applicable standards in the City of Alachua Comprehensive Plan and the Land Development Regulations.

Soil Survey

The hydrologic soil group is an indicator of potential soil limitations. The hydrologic soil group, as defined for each specific soil, refers to a group of soils which have been categorized according to their runoff-producing characteristics. These hydrologic groups are defined by the Soil Survey of Alachua County, Florida, dated August 1985. The chief consideration with respect to runoff potential is the capacity of each soil to permit infiltration (the slope and kind of plant cover are not considered, but are separate factors in predicting runoff.) There are four hydrologic groups: A, B, C, and D. "Group A" soils have a higher infiltration rate when thoroughly wet and therefore have a lower runoff potential. "Group D" soils have very lower infiltration rates and therefore a higher runoff potential.

There are two (2) soil types found within the development area:

Pelham Sand

Hydrologic Soil Group: B/D

This poorly drained, nearly level soil is on broad, low flats in the flatwoods. Slopes are nearly smooth to concave and range from 0 to 2 percent. Typically, the surface layer is black and very dark gray fine sand about 6 inches thick. The subsurface layer, to a depth of about 26 inches, is light brownish gray fine sand. The subsoil to a depth of 80 inches or more is gray fine sandy loam and sandy clay loam. Permeability is moderate or moderately slow in the Pelham soil. Available water capacity is low. In most years the seasonal high water table commonly is at a depth of 6 to 12 inches. In the lower areas, the water table is within a depth of 6 inches.

Pomona Sand

Hydrologic Soil Group: B/D

This nearly level, poorly drained soil is in small and large areas in the flatwoods. Slopes are nearly smooth and range from 0 to 2 percent. The areas are irregular in shape and range from about 10 to 350 acres. Typically, the surface layer is very dark gray sand about 5 inches thick. The subsurface layer is sand to a depth of 16 inches. The upper 4 inches is gray, and the lower 7 inches is light gray. The upper 4 inches of the subsoil is very dark gray sand in which many sand grains are coated with organic material, and the next 4 inches is dark reddish brown sand. The next 8 inches is pale brown sand that has mottles, and the lower 11 inches is very pale brown sand. Below this, a loamy subsoil extends to a depth of 69 inches. The upper 4 inches is light gray fine sandy loam, and the lower 22 inches is gray, mottled sandy clay loam. Between depths of 69 and 84 inches, the underlying material is light gray, mottled fine sandy loam. Included with this soil in mapping are small areas of soils which are similar to Pomona soils but which have a brown, organically stained layer. Many of the sand grains are uncoated. Also included are small areas of soils which are similar to this Pomona soil but which have weakly cemented layers at a depth of 30 to 50 inches. Small areas of Myakka, Newnan, Pelham, Sparr, and Wauchula soils are in some areas. About 60 acres mapped as Pomona soil along the Santa Fe River is occasionally flooded. Total included areas are about 20 percent. In this Pomona soil, the water table is within 10 inches of the surface for 1 to 3 months during most years. During dry seasons, the water table recedes to a depth of more than 40 inches. Surface runoff is slow. The available water capacity is low to medium in the surface and subsurface layers, and it ranges from low to high in the

subsoil. Permeability is rapid to very rapid in the surface and subsurface layers, moderate to rapid in the upper part of the subsoil, and moderately slow to moderate in the lower part.

Evaluation: While the soil types present on the subject property pose potential limitations, such limitations can be overcome or minimized through special planning, design and installation.

Flood Potential

Panel 0143E of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Series, dated November 2, 2018 indicate that the development area is in Flood Zone X (areas determined to be outside of the 500-year floodplain).

Evaluation: Since the subject property is located in Flood Zone X (areas determined to be outside of the 500-year floodplain), there are no issues related to flood potential.

Karst-Sensitive Features

Karst sensitive areas include geologic features, such as fissures, sinkholes, underground streams, and caverns, and are generally the result of irregular limestone formations. The subject property is located within an area where sinkholes may potentially allow hydrologic access to the Floridan Aquifer System, however, best available data indicates that no sinkholes or known indicators of sinkhole activity are located on the subject property.

Evaluation: There are no geologic features located on the subject property which indicate an increased potential for karst sensitivity.

Wellfield Protection Zones

Policy 7.2.1 of the Future Land Use Element of the City's Comprehensive Plan establishes a 500 foot radius area around each city-owned potable water well.

Evaluation: The subject property is not located within a City of Alachua wellhead protection zone as identified on the City of Alachua Wellfield Primary Protection Zones Map of the City's Comprehensive Plan, therefore, there are no issues related to wellfield protection.

Historic Structures/Markers and Historic Features

The subject property does not contain any historic structures as determined by the State of Florida and the Alachua County Historic Resources Inventory. Additionally, the subject property is not located within the City's Historic Overlay District, as established by Section 3.7 of the City's Land Development Regulations.

Evaluation: There are no issues related to historic structures or markers.

FINDINGS OF FACT: COMPLIANCE WITH LAND DEVELOPMENT REGULATIONS

SITE PLAN STANDARDS

Section 2.4.9(E) of the City's Land Development Regulations (LDRs) establishes the standards with which all site plans must be found to be compliant. The application has been reviewed for compliance with the standards of Section 2.4.9(E.) An evaluation and findings of the application's compliance with the standards of Section 2.4.9(E) is provided below.

(E) Site Plan Standards

A Site Plan shall be approved only upon a finding the applicant demonstrates all of the following standards are met:

(1) *Consistency with Comprehensive Plan*

The development and uses in the Site Plan comply with the Goals, Objectives and Policies of the Comprehensive Plan.

Evaluation & Findings: An analysis of the application's consistency with the Comprehensive Plan has been provided in this report.

(2) *Use Allowed in Zone District*

The use is allowed in the zone district in accordance with Article 4: *Use Regulations*.

Evaluation & Findings: The subject property is zoned Commercial Intensive. The proposed uses are permitted within this zoning designation.

(3) *Zone District Use-Specific Standards*

The development and uses in the Site Plan comply with Section 4.3, *Use-Specific Standards*.

Evaluation & Findings: Section 4.3.4(J)(6) establishes use standards for gasoline sales uses. These standards include separation and buffering requirements from schools, day care centers, residential uses and vacant land in residential zoned districts. The application has been reviewed and found to be in compliance with these standards.

(4) *Development and Design Standards*

The development proposed in the Site Plan and its general layout and design comply with all appropriate standards in Article 6: *Development Standards*.

Evaluation & Findings: The application has been reviewed for and is found to be in compliance with all applicable and relevant provisions of Article 6, *Development Standards*, including but not limited to *Section 6.1*, Off Street Parking & Loading Standards, *Section 6.2*, Tree Protection/Landscape/Xeriscape Standards, *Section*

6.3, Fencing Standards, *Section 6.4*, Exterior Lighting Standards, *Section 6.7*, Open Space Standards, *Section 6.8*, Design Standards for Business Uses, and *Section 6.9*, Environmental Protection Standards.

(5) ***Subdivision Standards***

In cases where a subdivision has been approved or is pending, the development proposed in the Site Plan and its general layout and design comply with all appropriate standards in Article 7: *Subdivision Standards*.

Evaluation & Findings: No subdivision of land is proposed, therefore, compliance with this standard is not applicable.

(6) ***Complies with All Other Relevant Laws and Ordinances***

The proposed site plan development and use complies with all other relevant City laws and ordinances, state and federal laws, and regulations.

Evaluation & Findings: The application is consistent with all other relevant City ordinances and regulations.

PUBLIC FACILITIES IMPACT

Traffic Impact

Table 2. Affected Comprehensive Plan Roadway Segments¹

Segment Number ^{2,3}	Segment Description	Lanes	Functional Classification	Area Type	LOS
3 (4124)	US 441 (From MPO Boundary to CR 25A East Intersection)	4/D	Principle Arterial	COMM	D
4 (106)	US 441 (From CR 25A East Intersection to SR 235)	4/D	Principle Arterial	COMM	D

¹ Source: City of Alachua Comprehensive Plan, Transportation Element.
² For developments generating more than 1,000 trips, affected roadway segments are identified as all those wholly or partially located within 1/2 mile of the development's ingress/egress, or to the nearest intersecting major street, whichever is greater [Section 2.4.14(H)(2)(a) of the LDRs].
³ FDOT roadway segment number shown in parenthesis (when applicable.) For the purposes of concurrency management, COA Comprehensive Plan segments that make up a portion of a larger FDOT roadway segment will be evaluated together when determining post development roadway capacity.

Table 3a. Projected Impact on Affected Comprehensive Plan Roadway Segments (AADT)

Traffic System Category	Segment 3 US 441 (From MPO Boundary to CR 25A East Intersection) ¹	Segment 4 US 441 (From CR 25A East Intersection to SR 235) ¹
Average Annual Daily Trips		
Maximum Service Volume ²	43,000	45,7000
Existing Traffic ³	22,194	19,134
Reserved Trips ⁴	0	6,565
Available Capacity ⁴	20,806	20,001
Increase/Decrease in Daily Trips Generated by Development ⁵	1,244	1,244

Residual Capacity After Development's Impacts⁶	19,562	18,757
--	--------	--------

¹ FDOT roadway segment number shown in parenthesis. For the purposes of concurrency management, COA Comprehensive Plan segments that make up a portion of a larger FDOT roadway segment will be evaluated together when determining post development roadway capacity.
² AADT & Peak Hour MSVs calculated using LOSPLAN 2012. County Facilities reflect a 10 percent reduction in the MSV calculated within LOSPLAN 2012 as set forth in the Generalized Tables for AADT / Peak Hour Volumes, FDOT 2018 Q/LOS Handbook.
³ Florida State Highway System Level of Service Report, Florida Department of Transportation, District Two.
⁴ Source: City of Alachua July 2024 Development Monitoring Report.
⁵ Trip Distribution: Segment 3: 100%, Segment 4: 100%
⁶ The application is for a Final Development Order. Facility capacity and concurrency will be reserved.

Table 3b. Projected Impact on Affected Comprehensive Plan Roadway Segments (Peak Hour)

Traffic System Category	Segment 6 US 441 (From I-75 to CR 235-A) ¹	Segment 7 US 441 (From CR 235-A to NW 188 th Street) ¹
PM Peak Hour		
Maximum Service Volume ²	3,870	4,110
Existing Traffic ³	2,127	1,767
Reserved Trips ⁴	0	609
Available Capacity ⁴	1,743	1,734
Increase/Decrease in PM Peak Hour Trips Generated by Development ⁵	204	204
Residual Capacity After Development's Impacts⁶	1,538	1,530

¹ FDOT roadway segment number shown in parenthesis. For the purposes of concurrency management, COA Comprehensive Plan segments that make up a portion of a larger FDOT roadway segment will be evaluated together when determining post development roadway capacity.
² AADT & Peak Hour MSVs calculated using LOSPLAN 2012. County Facilities reflect a 10 percent reduction in the MSV calculated within LOSPLAN 2012 as set forth in the Generalized Tables for AADT / Peak Hour Volumes, FDOT 2018 Q/LOS Handbook.
³ Florida State Highway System Level of Service Report, Florida Department of Transportation, District Two.
⁴ Source: City of Alachua July 2024 Development Monitoring Report.
⁵ Trip Distribution: Segment 3: 100%, Segment 4: 100%
⁶ The application is for a Final Development Order. Facility capacity and concurrency will be reserved.

Evaluation: The impacts generated by the development will not adversely affect the Level of Service (LOS) of the roadway segments identified above. The impacts that will be generated by the development are acceptable.

Potable Water Impacts

Table 4. Potable Water Impacts

System Category	Gallons Per Day
Current Permitted Capacity ¹	2,300,000
Less Actual Potable Water Flows ¹	1,548,250
Reserved Capacity ²	467,620
Available Capacity	284,130
Increase/Decrease in Potable Water Demand from Application ³	1,325
Residual Capacity	282,805
Percentage of Permitted Design Capacity Utilized	87.70%

Sources:
¹ City of Alachua Public Services Department, April 2024
² City of Alachua July 2014 Development Monitoring Report
³ Source: Chapter 64E-6, Florida Administrative Code

Evaluation: The impacts to the potable water system that will be generated by the development will not adversely affect the Level of Service (LOS) for potable water facilities; therefore, the impacts that will be generated by the development are acceptable.

Sanitary Sewer Impacts

Table 5. Sanitary Sewer Impacts

System Category	Gallons Per Day
Treatment Plant Current Permitted Capacity	1,500,000
Less Actual Treatment Plant Flows ¹	764,000
Reserved Capacity ²	435,759
Available Capacity	152,741
Increase/Decrease in Sanitary Sewer Demand from Application ³	1,325
Residual Capacity	151,416
Percentage of Permitted Design Capacity Utilized	89.91%
<i>Sources:</i> ¹ City of Alachua Public Services Department, April 2024 ² City of Alachua July 2024 Development Monitoring Report ³ Source: Chapter 64E-6, Florida Administrative Code	

Evaluation: The impacts to the potable water system that will be generated by the development will not adversely affect the Level of Service (LOS) for sanitary sewer facilities; therefore, the impacts that will be generated by the development are acceptable.

Solid Waste Impacts

Table 6. Solid Waste Impacts

System Category	Pounds Per Day	Tons Per Year
Demand from Existing Development ¹	44,060.00	8,040.95
Reserved Capacity ²	50,388.47	9,195.90
Increase/Decrease in Demand Generated by Application ³	19.35	3.53
New River Solid Waste Facility Capacity ⁴	50 years	
Sources:		
¹ University of Florida, Bureau of Economic & Business Research, Estimates of Population by County and City in Florida, 2019; Policy 2.1.a, CFNGAR Element (Formula: 11,015 persons x 0.73 tons per person per year).		
² City of Alachua July 2024 Development Monitoring Report.		
³ Sincero and Sincero; Environmental Engineering: A Design Approach. Prentice Hall, New Jersey, 1996		
⁴ New River Solid Waste Facility, April 2024.		

Evaluation: The impacts to the solid waste system that will be generated by the development will not adversely affect the Level of Service (LOS) for solid waste facilities. The impacts that will be generated by the development are therefore acceptable.

Recreation Facilities

The proposed development is a nonresidential development. Therefore, there are no impacts to recreation facilities. The development will have no impact to the Level of Service (LOS) of recreation facilities.

Public School Facilities

The proposed development is a nonresidential development. Therefore, there are no impacts to public school facilities. The development will have no impact to the Level of Service (LOS) of public school facilities.

**EXHIBIT “A”
TO
SEMOJ 13, LLC
(PATEL FUEL & RETAIL)
SITE PLAN
STAFF REPORT**

CONDITIONS:

1. The applicant agrees that a 100% gopher tortoise survey of the project area and 25 feet around the project area shall be performed no more than 90 days prior to the commencement of construction. The applicant further agrees to provide the City with a copy of the findings of said survey prior to the commencement of construction. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.
2. The Applicant acknowledges and agrees that no fuel delivery trucks shall utilize NW 59th Terrace to access or leave the subject property.
3. The Applicant acknowledges and agrees it shall provide Public Utilities Easements (the “Easements”) as depicted on the Site Plan. The Easements shall be prepared in coordination with the City’s Compliance & Risk Management Department and shall receive approval of the City’s Compliance & Risk Management Director prior to being recorded in the Public Records of Alachua County and prior to the issuance of a building permit for any building activity associated with this Development Order. The Applicant shall incur all costs associated with preparing and recording the Easements.
4. The Applicant acknowledges and agrees it shall obtain all other applicable local, state, and federal permits before the commencement of site plan work.
5. The Applicant acknowledges and agrees that Conditions 1 – 4 as stated above do not inordinately burden the land and shall be binding upon the property owner, including any subsequent property owners, successors, or assigns, and that the site plan shall comply with Conditions 1 – 5 as stated herein.

EXHIBIT “B”
TO
SEMOJ 13, LLC
(PATEL FUEL & RETAIL)
SITE PLAN
STAFF REPORT

SUPPORTING APPLICATION MATERIALS
SUBMITTED BY CITY STAFF TO THE
PLANNING AND ZONING BOARD



City of Alachua

MIKE DAROZA
CITY MANAGER

PLANNING & COMMUNITY DEVELOPMENT
DIRECTOR KATHY WINBURN

August 19, 2024

Sent by electronic mail to walker.owen@nv5.com

Walker Owen, P.E.
Causseaux, Hewett, & Walpole, LLC
11801 Research Drive
Alachua, FL 32615

RE: Public Hearing for Patel Fuel & Retail Site Plan Application

Dear Mr. Owen:

The City of Alachua has reviewed the revised application and materials for a Site Plan submitted on behalf of Semoj 13, LLC for the Patel Fuel & Retail project. The application proposes the construction of a ±8,836 square foot convenience store and retail building and gasoline fueling station on a ±2.14 acre subject property located southeast of the intersection of NW US Highway 441 and NW 59th Terrace (Tax Parcel Number 05885-010-014). Based upon a review of the revised application, the City has determined that the application can now be scheduled for a hearing before the Planning and Zoning Board (PZB).

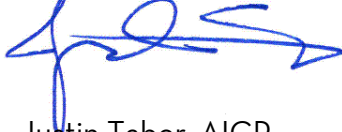
You must provide two (2) *double-sided, three-hole punched, color sets* of the **complete** application package, seven (7) sets of plans, and a digital copy of all materials in PDF format on a CD or by emailing a Cloud / FTP link to download the materials to planning@cityofalachua.com *no less than 10 business days prior to the PZB Meeting at which your application is scheduled to be heard*. The application has been scheduled for the **September 10, 2024** PZB Meeting, therefore, the above referenced materials must be submitted to the City no later than ***Tuesday, August 28, 2024***. Materials may be submitted earlier than this date.

In addition, Section 2.2.9(D) of the Land Development Regulations requires the applicant to place posted notice signs on the subject property at least 14 days prior to the public hearing. Therefore, posted notice signs must be placed on the property no later than ***Tuesday, August 28, 2024***. Staff will contact notify you when the signs are available for pick up at City Hall.

If you plan to utilize a PowerPoint presentation or would like other materials to be available for reference during the public hearing, please submit the presentation or materials no later than 12:00 PM on the last business day prior the PZB meeting (no later than ***Monday, September 9, 2024***). Any presentation or materials may be submitted by emailing them to planning@cityofalachua.com.

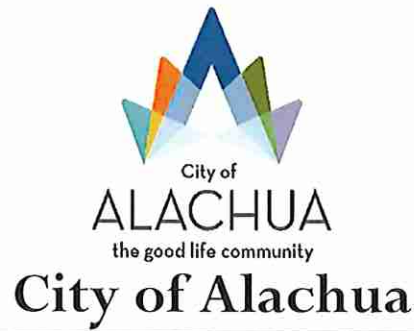
Should you have any questions, please feel free to contact me at (386) 418-6100, x 1602 or via email at jtabor@cityofalachua.com.

Sincerely,



Justin Tabor, AICP
Principal Planner

c: Mike DaRoza, City Manager (*by electronic mail*)
Rodolfo Valladares, PE, Assistant City Manager (*by electronic mail*)
Kathy Winburn, Planning & Community Development Director (*by electronic mail*)
Adam Hall, AICP, Principal Planner (*by electronic mail*)
Carson Crockett, AICP Candidate, Planner (*by electronic mail*)
Hardik Patel, Semoj 13 LLC
Project File



MIKE DAROZA
CITY MANAGER

RODOLFO VALLADARES, P.E.
PUBLIC SERVICES DIRECTOR

INTER-OFFICE COMMUNICATION

DATE: Aug 21, 2024

TO: Kathy Winburn, AICP
Planning & Community Development Director

FROM: Michael Carrillo, P.E.
Public Services Director
Tom Ridgik, P.E.
Engineering Supervisor

TR
8/19/2024
[Signature]

RE: Patel Fuel Retail Site Plan

Public Services has reviewed the subject project (Aug 2024 Documents) and offer the following comments. Review was specific to Public Services utilities.

NO.	COMMENTS
1	Comment on May Submittal Sheet C0.10 To Water & Wastewater General Notes, please add the following: “16. WATER MAINS 4-INCHES AND LARGER SHALL BE AWWA C900 DR-18. 17. ALL FITTINGS FOR WATER MAINS 4-INCHES AND LARGER SHALL BE CEMENT-LINED DUCTILE IRON. 18. PROVIDE TRACER WIRE ON WATER PIPING FROM THE POINT OF CONNECTION AT THE EXISTING WATER MAIN TO EACH WATER METER BOX”. Please Revise and Resubmit this sheet. Comment on July Submittal

NO.	COMMENTS
	Sheet C0.10 Approved
2	Comment on May Submittal Sheet C0.11 To Abbreviations, please add "STM", which is shown on C2.20. Please Revise and Resubmit this sheet. Comment on July Submittal Sheet C0.11 Approved
3	Comment on May Submittal Sheet C3.10 Detail, Lower Right: Please modify detail to conform to COA standards. Manhole Connection: Provide external, not internal, drop connection. Transformer Location: COA electrical staff may prefer alternate location. Please have Bill Stormant coordinate this issue with COA electrical staff. See markup. Please Revise and Resubmit this sheet. Comment on July Submittal Sheet C3.10 Provide 2-inch water service connection to each meter, not 1-inch. Call out 4 X 2 reducer as "CLDI". See markup. Please Revise and Resubmit this sheet. Comment on Aug Submittal

NO.	COMMENTS
	Sheet C3.10 Approved
4	Comment on May Submittal Sheets TBD Please submit all required electrical sheets as well as electrical specifications. Transformer Location: COA electrical staff may prefer alternate location. Please have Bill Stormant coordinate this issue with COA electrical staff. Please Revise and Resubmit applicable sheets. Comment on July Submittal Sheet C3.10 Transformer location as shown is acceptable. However, tap of the proposed primary circuit will be at a different location. See markup. Please include electrical specifications, either on Sheet C3.10 or another sheet. Sample electrical specifications are attached. Please Revise and Resubmit this sheet. Comment on Aug Submittal Sheet C3.10 Approved
5	Comment on May Submittal Sheet TBD Please add the following COA Standard Details to the documents: 115 Water Meter Assembly 118 Water Service Connection 121 Backflow Preventer and Enclosure 127 Valve Box Cover

NO.	COMMENTS
	142 Gate Valve 145 Gate Valve 149 Water Service Connection 151 Abbreviations 215 Manhole 227 Grease Interceptor 230 Ring and Cover 303 Trench Detail 306 Thrust Block Detail 307 Paint System 309 Joint Restraint 318 Access Point 321A Tracer Wire Abbreviations 321B Potable Water Tracer Wire Please Submit these sheets. Comment on July Submittal Sheets C3.20 – C3.23 Approved
6	(New) Comment on July Submittal Please add the following COA Electrical Standard Details to the document: • 506 • 557 • 560 • 584B Please submit applicable sheets. Comment on Aug Submittal Approved
7	(New) Comment on July Submittal Sheet LS-2 A segment of the proposed primary electrical circuit is now in a new location. Please modify

NO.	COMMENTS
	LS-2 so trees do not interfere with this primary electric segment. See markup. Coordinate with revised sheet C3.10. Please Revise and Resubmit this sheet. Comment on Aug Submittal Sheet LS-2 Approved
8	(New) Comment on July Submittal Please submit load schedules of all four facilities so transformer size can be sized by COA. Please submit the load side voltage requirements. Please submit this information and resubmit revised Sheet C3.10. Comment on Aug Submittal Approved
9	(New) Comment on Aug Submittal Sheet C3.23 Please remove the artifact details (Lower Left). Approved as Noted
END OF COMMENTS	

Please advise if you have any questions or require additional information.

cc: Justin Tabor – AICP Principal Planner

Adam Hall – AICP Principal Planner



Volkert, Inc.

3501 South Main Street
Suite 2
Gainesville, FL 32601

Office 352.372.9594
Fax 352.371.3988
gainesville@volkert.com

www.volkert.com

August 14, 2024

Mr. Justin Tabor, AICP
Principal Planner
Office of Planning and Community Development
City of Alachua
15100 NW 142nd Terrace
P.O. Box 6
Alachua, FL 32616

Subject: Independent Review of the Traffic Impact Analysis Report – Patel Fuel and Retail,
Alachua, FL.

Dear Mr. Tabor:

CHW has made all the recommended changes to the Traffic Impact Analysis Report that I requested. The TIA is ready to be submitted with the other project submittals.

This project can now be considered complete with respect to the Independent Review I performed.

Please contact me if you have any questions or need additional information.

Sincerely,

Volkert, Inc.

Brian Kanely, P.E.
Senior Traffic Engineer
Cell: 352-262-3580
Email: briank5030@outlook.com

CC: Manny Richardson
Nancy Pelzer
Mike Warnke

Office Locations:

Birmingham, Foley, Huntsville, Mobile, Alabama • Gainesville, Orlando, Pensacola, Tampa, Florida • Atlanta, Georgia
Collinsville, Illinois • Baton Rouge, Slidell, Louisiana • Biloxi, Mississippi • Jefferson City, Missouri • Raleigh, North Carolina
Chattanooga, Tennessee • Alexandria, Virginia • Washington, D.C.



RE: Request for Review - Patel Fuel & Retail Site Plan

Silver Ware <sware@alachuacounty.us>

Mon 8/12/2024 10:25 AM

To: Justin Tabor <ju_tabor@cityofalachua.org>;

Good morning

ACFR has no comment at this time

Thank you

Chip



Silver Ware

Fire Prevention Officer

Fire Rescue

[911 SE 5th ST • Gainesville • FL • 32601](#)

352-384-3121 (office) • 352-494-3140 (mobile) • 352-384-3157 (fax)



PLEASE NOTE: Florida has a very broad public records law (F.S.119).

All e-mails to and from County Officials and County Staff are kept as public records. Your e-mail communications, including your e-mail address, may be disclosed to the public and media at any time.

From: Justin Tabor <ju_tabor@cityofalachua.org>

Sent: Monday, August 12, 2024 9:23 AM

To: Silver Ware <sware@alachuacounty.us>; John Adler <jadler@alachuacounty.us>; Mark Avery <ma_avery@cityofalachua.org>; Eiman Abbas <ei_abbas@cityofalachua.org>; Thomas Ridgik <th_ridgik@cityofalachua.org>; Rodolfo Valladares <ro_valladares@cityofalachua.org>; Adam Hall <ad_hall@cityofalachua.org>; Kathy Winburn <ka_winburn@cityofalachua.org>; Mike Daroza <wi_daroza@cityofalachua.org>; Anne-Marie DiRocco <an_dirocco@cityofalachua.org>; Grafton Wilson <gr_wilson@cityofalachua.org>; Jeanene Carrillo <ma_carrillo@cityofalachua.org>; Josiah A. Serravalle <jo_serravalle@cityofalachua.org>; Carson J. Crockett <ca_crockett@cityofalachua.org>; Corey King <co_king@cityofalachua.org>; Michael Carrillo <mi_carrillo@cityofalachua.org>; Marcus Winburn <ma_winburn@cityofalachua.org>

Subject: Re: Request for Review - Patel Fuel & Retail Site Plan

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

PAT Members:

The Planning Department has received a revised application from Causseaux, Hewett, & Walpole, LLC on behalf of Semoj 13, LLC for the Patel Fuel & Retail project. The application proposes the

construction of a ±8,836 square foot convenience store and retail building and gasoline fueling station on a ±2.14 acre subject property located southeast of the intersection of NW US Highway 441 and NW 59th Terrace (Tax Parcel Number 05885-010-014).

Please review the application and provide any comments in writing no later than **5 PM on Wednesday, August 21, 2024.**

If a response is not received by this date, it is presumed that the reviewer has no comments and deems the application approvable.

Application materials and plans may be accessed at the links below:

[Plans \(Civil - other trades available at link below\)](#)

[All Application Materials](#)

If you have any questions about this application, please let me know.



JUSTIN TABOR

Principal Planner

📞 386.418.6123

✉ jtabor@cityofalachua.org

🌐 www.cityofalachua.org

Under Florida law, e-mail addresses are public records. If you do not want your e-mail address released in response to a public records request, do not send electronic mail to this entity. Instead, contact this office by phone or in writing.

From: Justin Tabor

Sent: Wednesday, July 10, 2024 2:08 PM

To: Chip Ware; Adler, John; Mark Avery; Eiman Abbas; Thomas Ridgik; Rodolfo Valladares; Adam Hall; Kathy Winburn; Mike DaRoza; Anne-Marie DiRocco; Grafton Wilson; Jeanene Carrillo; Josiah A. Serravalle; Carson J. Crockett; Corey King; Michael Carrillo; Marcus Winburn

Subject: Re: Request for Review - Patel Fuel & Retail Site Plan

PAT Members:

The Planning Department has received a revised application from Causseaux, Hewett, & Walpole, LLC on behalf of Semoj 13, LLC for the Patel Fuel & Retail project. The application proposes the construction of a ±8,836 square foot convenience store and retail building and gasoline fueling station on a ±2.14 acre subject property located southeast of the intersection of NW US Highway 441 and NW 59th Terrace (Tax Parcel Number 05885-010-014).

Please review the application and provide any comments in writing no later than **5 PM on Thursday, July 18, 2024.**

If a response is not received by this date, it is presumed that the reviewer has no comments and deems the application approvable.

Application materials and plans may be accessed at the links below:

[Plans \(Civil - other trades available at link below\)](#)

[All Application Materials](#)

If you have any questions about this application, please let me know.



JUSTIN TABOR

Principal Planner

☎ 386.418.6123

✉ jtabor@cityofalachua.org

🌐 www.cityofalachua.org

Under Florida law, e-mail addresses are public records. If you do not want your e-mail address released in response to a public records request, do not send electronic mail to this entity. Instead, contact this office by phone or in writing.

From: Justin Tabor

Sent: Wednesday, June 5, 2024 4:56 PM

To: Chip Ware; Adler, John; Mark Avery; Eiman Abbas; Thomas Ridgik; Rodolfo Valladares; Adam Hall; Justin Tabor; Kathy Winburn; Mike DaRoza; Anne-Marie DiRocco; Grafton Wilson; Jeanene Carrillo; Josiah A. Serravalle; Carson J. Crockett; Corey King; Michael Carrillo; Marcus Winburn

Subject: Request for Review - Patel Fuel & Retail Site Plan

PAT Members:

The Planning Department has received a new application from Causseaux, Hewett, & Walpole, LLC on behalf of Semoj 13, LLC for the Patel Fuel & Retail project. The application proposes the construction of a ±8,836 square foot convenience store and retail building and gasoline fueling station on a ±2.14 acre subject property located southeast of the intersection of NW US Highway 441 and NW 59th Terrace (Tax Parcel Number 05885-010-014).

Please review the application and provide any comments in writing no later than **5 PM on Thursday, June 20, 2024.**

If a response is not received by this date, it is presumed that the reviewer has no comments and deems the application approvable.

Application materials and plans may be accessed at the links below:

[Plans \(Civil - other trades available at link below\)](#)

[All Application Materials](#)

If you have any questions about this application, please let me know.



JUSTIN TABOR

Principal Planner

☎ 386.418.6123

✉ jtabor@cityofalachua.org

🌐 www.cityofalachua.org

Under Florida law, e-mail addresses are public records. If you do not want your e-mail address released in response to a public records request, do not send electronic mail to this entity. Instead, contact this office by phone or in writing.

August 6, 2024

Justin Tabor
City of Alachua Planning & Community Development
15100 NW 142 Terrace
Alachua, FL 32615

RE: Patel Fuel & Retail

Dear Justin:

Please find attached the following items to address your comments from July 23, 2024:

- Revised Signed and Sealed Development Plans
- Revised Signed and Sealed Traffic Impact Analysis Report

PAT Comments

1. Article 6, Development Standards

a. Section 6.1., Off-Street Parking and Loading Standards

- i. The parking standard utilized on the plans is 1 space / 330 square feet of floor area for all building area. The parking standard for gasoline sales is 1 space / 350 square feet of floor area. Revise accordingly.

Remaining Issues: Parking standards were updated as discussed. The calculations for the sales establishment use, however, is incorrect. Per Section 6.1.6(A) when units or measurements determining number of required off-street parking or loading spaces result in requirement of a fractional space, then such fraction equal or greater than one-half shall require a full off-street parking or loading space. The two proposed retail shells are 1,654 square feet and 1,664 square feet in area. $1,654/305 = 5.42$; $1,664/305 = 5.46$. Revise parking calculations accordingly.

- **The parking calculations on the cover sheet have been revised. Please refer to Sheet C0.00.**

b. Section 6.2, Landscaping Standards

- i. Section 6.2.3(E) requires screening along arterial frontages. This is applicable to the north property line, which is adjacent to the US 441 right of way. Provide arterial screening and calculations in accordance with Section 6.2.3(E).

Remaining Issues: The applicant proposes to provide the total number of trees required by Section 6.2.3(E), however, the applicant proposes all trees to be understory trees. This section of the LDRs is not eligible for any alternative modifications and would require a zoning variance to vary from the requirements of Section 6.2.3(E). Planning Staff understands that the landscape architect has discussed using East Palatka Hollies as the canopy trees. Any species which will achieve 30 feet at maturity is acceptable to fulfill the requirements for canopy trees.

- **The portion of the site that runs along US 441 has several existing utilities and the eastern portion is being reserved for a future cross assess point. Due to these conflicts, we are proposing to place some of the required vegetation a little further away from the boundary. The required understory trees are not affected by the existing utilities, so they have all been placed along the arterial corridor. We have utilized East Palatka Holly trees where we had adequate separation between the**

existing utilities. When there was not enough space, the required canopy trees were placed further into the site but as close to the highway as possible to meet the intent of the code.

c. Section 6.8, Design Standards for Business Uses

- i. Section 6.8.2(A)(2)(b)(i) requires street-facing facades to incorporate wall offsets or a defined alternative. The west elevation faces NW 59th Terrace. Provide wall offsets or approved alternatives for the west elevation.

Remaining Issues: Offset or approved alternative not provided on the west elevation.

- **Architecture has been revised, please refer to Sheets A100 and A200.**

2. Miscellaneous

- a. The site is configured for fuel deliveries to be made using NW 59th Terrace. This roadway is presently not designed to accommodate heavy vehicles such as fuel tankers. In order to accommodate such traffic NW 59th Terrace must be improved from the intersection of US Highway 441 to the south property line of the subject property to accommodate such vehicular traffic.

Remaining Issues: During the PAT meeting held on June 26, 2024 and in subsequent discussions between City Staff and the applicant, it was agreed that the ingress/egress connection to NW 59th Terrace would be redesigned to not accommodate fuel deliveries. Further, it was suggested by Staff to consider reconfiguring the design such that fuel delivery vehicles could circle the building and exit the site via the US 441 ingress/egress. The plans received on July 9, 2024 show an ingress/egress connection to NW 59th Terrace that can accommodate fuel delivery vehicles exiting the site. If the applicant desires to retain this design the previously stated improvements to NW 59th Terrace must be programmed into the development plan. Alternatively, the applicant may propose another method for ingress/egress of fuel deliveries to the site.

- **The ingress/egress connection to NW 59th Terrace has been narrowed to not accommodate fuel deliveries. Please refer to Sheet C1.10.**

New Comments – 7/9/2024 Submittal

3. Article 6, Development Standards

a. Section 6.1.. Off-Street Parking and Loading Standards

- i. Sheet C0.00: Verify the total number of parking spaces provided.

- **The parking calculations on the cover sheet have been revised. Please refer to Sheet C0.00.**

4. Public Services / Fire Rescue / Engineering Review Comments

- a. The applicant must address all comments provided by the Public Services Department in a memorandum dated July 15, 2024.

- **All comments provided by the Public Services Department have been addressed under separate cover.**

- b. Review of the Traffic Impact Analysis is ongoing. Comments from Volkert, Inc., will be provided under separate cover.

- **Comments from Volkert, Inc. have been received and have been addressed. Please refer to the attached response letter and updated TIA.**

We trust you will find this submittal to be complete for review and approval. If you have any questions, or need additional information, please contact me at (352) 331-1976 or via email at walker.owen@nv5.com.

Sincerely,

CHW, an NV5 Company

A handwritten signature in black ink, appearing to read 'Walker Owen'.

Walker Owen, P.E.
Project Manager

August 6, 2024

Kathy Winburn, AICP
City of Alachua Planning & Community Development
15100 NW 142 Terrace
Alachua, FL 32615

RE: Patel Fuel & Retail application

Dear Kathy:

Please find attached the following items to address your comments from July 23, 2024:

- Revised Signed and Sealed Development Plans

PAT Comments

1. Sheet C0.10

a. To Water & Wastewater General Notes, please add the following:

“16. WATER MAINS 4-INCHES AND LARGER SHALL BE AWWA C900 DR-18.

17. ALL FITTINGS FOR WATER MAINS 4-INCHES AND LARGER SHALL BE CEMENT-LINED DUCTILE IRON.

18. PROVIDE TRACER WIRE ON WATER PIPING FROM THE POINT OF CONNECTION AT THE EXISTING WATER MAIN TO EACH WATER METER BOX”.

Please Revise and Resubmit this sheet.

[Comment on July Submittal](#)

Approved.

- **Acknowledged.**

2. Sheet C0.11

a. To Abbreviations, please add “STM”, which is shown on C2.20.

Please Revise and Resubmit this sheet.

[Comment on July Submittal](#)

Approved.

- **Acknowledged.**

3. Sheet C3.10

a. Detail, Lower Right: Please modify detail to conform to COA standards.

Manhole Connection: Provide external, not internal, drop connection.

Transformer Location: COA electrical staff may prefer alternate location. Please have Bill Stormant coordinate this issue with COA electrical staff.

See markup.

Please Revise and Resubmit this sheet.

[Comment on July Submittal](#)

Provide 2-inch water service connection to each meter, not 1-inch.

Call out 4x2 reducer as “CLDI”.

See markup.

- A 2" water service connection to the meters has been called out as requested. The 4"x2" reducer has been called out as "CLDI" as requested. Please refer to Sheet C3.10.

4. Sheets TBD

- a. Please submit all required electrical sheets as well as electrical specifications.

Transformer Location: COA electrical staff may prefer alternate location. Please have Bill Stormant coordinate this issue with COA electrical staff.

Please Revise and Resubmit applicable sheets.

Comment on July Submittal

Transformer location as shown is acceptable. However, tap of the proposed primary circuit will be at a different location. See markup.

Please include electrical specifications, either on Sheet C3.10 or another sheet.

Sample electrical specifications are attached.

Please Revise and Resubmit this sheet.

- The location of the tap of the proposed primary circuit has been updated. Please refer to Sheet C3.10. Please refer to Sheet C0.10 "Electric Service General Notes" #2-#9 for requested electrical specifications.

5. Sheet TBD

- a. Please add the following COA Standard Details to the documents:

115 Water Meter Assembly

118 Water Service Connection

121 Backflow Preventer and Enclosure

127 Valve Box Cover

142 Gate Valve

145 Gate Valve

149 Water Service Connection

151 Abbreviations

215 Manhole

227 Grease Interceptor

230 Ring and Cover

303 Trench Detail

306 Thrust Block Detail

307 Paint System

309 Joint Restraint

318 Access Point

321A Tracer Wire Abbreviations

321B Potable Water Tracer Wire

Please Submit these sheets.

Comment on July Submittal

Approved.

- **Acknowledged.**

6. Sheet TBD

- a. Please add the following COA Standard Details to the documents:

506

557

560

584B

Please submit applicable sheets.

- **The requested details have been added to the plans. Please refer to Sheet C3.24.**

7. LS-2

A segment of the proposed primary electrical circuit is now in a new location. Please modify LS-2 so trees do not interfere with this primary electrical segment.

See markup. Coordinate with revised Sheet C3.10.

- **Please refer to the updated landscape plans.**

8. Sheet TBD

Please submit load schedules of all four facilities so transformer size can be sized by COA.

Please submit the load side voltage requirements.

Please submit this information and resubmit revised Sheet C3.10.

- **The load schedules for the facilities and riser diagram have been provided. Please refer to Sheet E105.**

We trust you will find this submittal to be complete for review and approval. If you have any questions, or need additional information, please contact me at (352) 331-1976 or via email at walker.owen@nv5.com.

Sincerely,
CHW, an NV5 Company



Walker Owen, P.E.
Project Manager

Justin Tabor, AICP
Principal Planner
City of Alachua
15100 NW 142nd Terrace
Alachua, FL 32616

Dear Mr. Tabor:

Please see below our responses to comments per Brian Kanely's comments from July 23, 2024. Please let us know if you have any questions or concerns.

Executive Summary

1. In Figure 1, Study Intersections, intersection #5 has an incorrect street name. The north/south street should be labeled NW 59th Terrace, not NW 25th Terrace.
Response: The street name in Figure 1 has been corrected as requested.

Trip Generation

1. In Appendix C, Trip Generation Documentation, the ITE trip generation sheets for daily trip production were not included for the three land uses in the project. These sheets need to be included in Appendix C. The ITE trip generation sheets for the AM and PM peak hours and pass-by trip generation rates were included in Appendix C.
Response: The daily trip generation was documented in the 7/17/2024 resubmittal. Please see Appendix C, which provides the daily trip generation documentation.

Data Collection

1. In Figure 2, Existing (Peak Season) Conditions and Figure 3, Background Conditions, intersection #5 has an incorrect street name. The north/south street should be labeled NW 59th Terrace, not NW 25th Terrace.
Response: The street name in Figure 2 and Figure 3 has been corrected as requested.

Trip Distribution

1. In Figure 4, Buildout Condition, intersection #5 has an incorrect street name. The north/south street should be labeled NW 59th Terrace, not NW 25th Terrace.
Response: The street name in Figure 4 has been corrected as requested.

Analysis – Intersection Analysis

1. The page number for Table 5 is wrong. The page number should be page 21, not page number 15.
Response: The page number has been corrected as requested.

Additional Volkert Comments/Recommendations

1. It should be stated in the Study that US 441 has been field reviewed to guarantee that all the recommended intersection and roadway modifications can be constructed.

Response: This note has been provided in the conclusion section of the report

2. US 441 is an FDOT highway. It also serves as an alternate route for I-75 traffic when an incident closes a portion of I-75. The City of Alachua needs to closely coordinate with FDOT on any development projects that impact US 441 in the City of Alachua city limits.

Response: Acknowledged

Thank you,



Brian Snyder, PE
Project Manager
11801 Research Drive
Alachua, Florida 32615
(352) 339-2938

**Independent Review of the Traffic Impact Analysis Report
for the Patel Fuel and Retail Project for the City of Alachua, Florida,
Prepared by Volkert, Inc., July 2024**

At the request of the City of Alachua, FL, Planning and Community Development Department, Volkert, Inc., conducted an independent review of the Traffic Impact Analysis Report for the Patel Fuel and Retail Project. This project is located on the southeast corner of the intersection of US 441 (Florida Department of Transportation State Highway) and NW 59th Terrace (City of Alachua Road). This intersection is approximately one-quarter mile east of the intersection of US 441 and Turkey Creek Drive. The Traffic Impact Analysis Report (TIA) was prepared by CHW in July 2024.

The Patel Fuel and Retail Project is located on the southeast corner of US 441 and NW 59th Terrace. The project will consist of a convenience store/gas station with ten fueling positions, a strip retail plaza containing 3,318 KSF and a fast-food restaurant without a drive through window. The project will generate a total of 3,825 gross trips with a total of 303 AM peak hour trips and 305 PM peak hour trips. This type of project attracts a high percentage of its trips from existing traffic that is already passing by the project on the adjacent roads. Therefore, the actual number of new trips generated is significantly less than the gross number of trips generated. This issue is discussed in further detail in the Trip Generation section of this review. The access to the site will be from (1) a full access driveway on NW 59th Terrace approximately 230 feet south of US 441, and (2) a right in/right out driveway on eastbound US 441 approximately 400 feet east of NW 59th Terrace. The anticipated buildout year for the project is 2025.

The independent review of the TIA will include the following:

- Review of the Executive Summary.
- Review of the Trip Generation.
- Review of the Data Collection.
- Review of the Trip Distribution.
- Review of the Analysis.
 - a) Access Management Evaluation.
 - b) Turn Lane Warrant Analysis and Turn Lane Length Evaluation.
 - c) Sight Distance Evaluation.
 - d) Pedestrian and Bicycle Demand.
 - e) Intersection Analysis.
- Review of Conclusions and Recommendations.
- Listing of any additional Volkert Comments/Recommendations.

Review of the Traffic Impact Analysis

Executive Summary

This section of the TIA provides a description of the project, its location (shown on Figure 1) and the access to the project from US 441 and NW 59th Terrace.

Volkert Comments/Recommendations:

1. In Figure 1, Study Intersections, intersection #5 has an incorrect street name. The north/south street should be labeled NW 59th Terrace, not NW 25th Terrace.

Trip Generation

This section of the TIA documents the trip generation for the Patel Fuel and Retail project. The trip generation was calculated based on the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition*. This document is accepted by transportation engineering and planning agencies nationwide as the reliable source for estimating trips generated by various types of land uses. The ITE Land Use Codes used for the TIA were Code 945 (Convenience Store/Gas Station), Code 822 (Strip Retail Plaza) and Code 933 (Fast Food without Drive Thru).

Many land uses attract a significant amount of their trips (traffic) from existing traffic that is passing by the development. Examples of these types of land uses are gas stations, convenience stores and fast-food restaurants both with and without drive through windows. The Patel project contains land uses that attract significant amounts of traffic that is passing by the development. These trips are referred to as pass-by trips. Per the ITE trip generation data, approximately 67% of the trips generated by the Patel project are pass-by trips.

At full buildout and based on the ITE data, the Patel project will generate 3,825 gross daily trips and 1,244 net new trips. The AM peak hour gross trip generation will be 303 AM peak hour trips (158 inbound/145 outbound). The PM peak hour gross trip generation will be 305 PM peak hour trips (153 inbound/152 outbound). The net new AM peak hour trip generation will be 96 AM peak hour trips (52 inbound/44 outbound). The net new PM peak hour trip generation will be 101 PM peak hour trips (51 inbound/50 outbound). The trip generation was correctly calculated and is shown in Table 1.

Volkert Comments/Recommendations:

1. In Appendix C, Trip Generation Documentation, the ITE trip generation sheets for daily trip production were not included for the three land uses in the project. These sheets need to be included in Appendix C. The ITE trip generation sheets for the AM and PM peak hours and pass-by trip generation rates were included in Appendix C.

Data Collection

This section of the TIA documents the data collection for the Patel Fuel and Retail project. The raw traffic data was first adjusted for the FDOT seasonal adjustment factor. The data was then adjusted to determine the 2025 background traffic volumes based on FDOT historical traffic counts. These adjustments to the raw traffic data are typical for TIA studies. It was noted that the initial submitted TIA had the traffic volumes on US 441 reversed. To verify this, additional turning movement counts were obtained. These new counts verified that the original US 441 traffic data was reversed. The traffic data for US 441 was corrected to reflect the correct AM and PM peak hour directional traffic volumes on US 441 in the TIA study area.

Volkert Comments/Recommendations:

1. In Figure 2, Existing (Peak Season) Conditions and Figure 3, Background Conditions, intersection #5 has an incorrect street name. The north/south street should be labeled NW 59th Terrace, not NW 25th Terrace.

Trip Distribution

This section of the TIA documents the trip distribution for the Patel Fuel and Retail Project. The project trip distribution mimics the existing traffic patterns at the US 441/NW 59th Terrace intersection. This is a common practice for traffic studies. The project trips were applied to the trip distributions percentages and then added with the 2025 background traffic to produce the 2025 build condition for the project. The calculations were checked and are correct.

Volkert Comments/Recommendations

1. In Figure 4, Buildout Condition, intersection #5 has an incorrect street name. The north/south street should be labeled NW 59th Terrace, not NW 25th Terrace.

Analysis – Access Management Evaluation

This section of the TIA documents how traffic will ingress/egress the Patel Fuel and Retail project site, referred to as access management. The spacing and location of driveways and median openings that provide access to development next to FDOT highways (state roads) is governed by FDOT Access Spacing Standards. Adhering to these spacing requirements can be challenging for new development next to existing state roads that contain existing median openings, existing street access and existing driveway access to existing developments. Close coordination with FDOT is required to formulate the access management for new developments on state roads.

The site access driveway to the project is located approximately 400 feet east of NW 59th Terrace. This is 260 feet short of meeting the FDOT access standards. To meet the intent of the FDOT spacing standards, the optimal location for the site access driveway was located halfway between NW 59th Terrace and NW 120th Lane.

The existing location where NW 59th Terrace intersects US 441 also does not meet the FDOT spacing standards with respect to distance from Turkey Creek Blvd, the next street intersection on US 441 west of NW 59th Terrace. To meet the intent of the FDOT standards and improve traffic safety at the US 441/NW 59th Terrace intersection, FDOT required that the existing median opening on US 441 at NW 59th Terrace be converted to a directional median opening. A directional median opening allows right in/right out/left in traffic movements from the major street (US 441) but prohibits left out/through traffic movements from the side street/driveway.

Volkert concurs with the access management plan for the project. It will enhance traffic safety on US 441 and meet the intent of the FDOT Access Spacing Standards. Volkert has no comments or recommendations on this section.

Analysis – Turn Lane Warrant Analysis and Turn Lane Length Evaluation

This section of the TIA documents whether right/left turn lanes on US 441 associated with the Patel Fuel and Retail project are warranted, and if turn lanes are warranted, what their length should be. The FDOT Multimodal Access Management Guidebook, 2023, is the governing document and the NCHRP (National Cooperative Highway Research Program) Report 457 is the basis for right turn lane warrants.

Right turn lane warrant analyses were performed at the following intersections for the AM and PM peak hour buildout conditions:

- US 441/NW 59th Terrace, eastbound right turn lane on US 441.
- US 441/Proposed Site Access Driveway, eastbound right turn lane on US.

An eastbound right turn lane is not warranted on US 441 at NW 59th Terrace. An eastbound right turn lane is warranted on US 441 at the proposed site access driveway. There is not sufficient separation between NW 59th Terrace and the start of the proposed eastbound right turn lane at the proposed site access driveway. The adjusted length of the proposed right turn lane is 370 feet, which is the maximum length possible due to the constraints. This right turn lane at the proposed site access driveway on US 441 will significantly enhance traffic safety at this site driveway.

The existing left turn lane lengths on US 441 at NW 120th Lane, NW 59th Terrace and Turkey Creek Driveway were reviewed to determine if the existing left turn lane lengths satisfied the FDOT Design Manual. All the left turn lanes lengths satisfied the FDOT Design Manual, and no modifications are required.

Volkert concurs with the turn lane analyses performed in this section and has no comments or recommendations.

Analysis – Sight Distance Evaluation

This section of the TIA reviews sight visibility requirements for the proposed site access driveway on US 441. Traffic that is exiting the proposed site access driveway and making a right turn to travel east on US 441 (toward Gainesville) must have an unobstructive view of eastbound traffic on US 441. It is essential that no project signs, parking areas, etc. block the view of oncoming eastbound traffic on US 441. The construction plans for this project that are submitted to the City of Alachua for approval must clearly document that there are no obstructions of eastbound traffic on US 441. The FDOT Design Manual shows the criteria for maintaining the proper sight visibility. Volkert concurs with the recommendation in this section and has no comments or recommendations.

Analysis – Pedestrian and Bicycle Demand

This section of the TIA reviews whether or not pedestrian/bicycle activity is present at the three study intersections on US 441. During the field studies for this project, no pedestrian/bicycle activity was observed. Therefore, no pedestrian/bicycle improvements are recommended in conjunction with this project. Given the rural location of this project, this finding is not

unexpected. Volkert concurs with this recommendation and has no comments or recommendations.

Analysis – Intersection Analysis

This section of the TIA reviews the AM and PM peak hour traffic at the study intersections to determine if the project will create any operational deficiencies that may require mitigation. The Highway Capacity Software (HCS) 2023 was utilized to review the study intersections during the existing (peak season), 2025 background and 2025 buildout for the project. Indicators studied were intersection level of service, delay, volume to capacity (v/c) ratio and 95th percentile queue length. It is noted that the intersections if the study area are stop sign controlled (not traffic signal controlled). Since the through street does not stop, the through traffic movements have no level of service indicators.

The intersection analysis revealed that the major street (US 441) movements and intersection totals all operated at satisfactory levels of service. The few levels of service F (unacceptable) that were recorded were at intersection minor movements. The intersection analysis calculations were checked and are correct.

Volkert Comments/Recommendations

1. The page number for Table 5 is wrong. The page number should be page 21, not page number 15.

Conclusions and Recommendations

This section of the TIA lists the conclusions and recommendations to support project traffic. These are as follows.

1. US 441/proposed east site access driveway – provide an eastbound right turn lane on US 441 approximately 370 feet long. Also, the project should not construct any signs or site improvements that would block sight vision of oncoming eastbound US 441 traffic for traffic exiting the east site access driveway per FDOT requirements.
2. US 441/NW 59th Terrace – convert the existing median opening to a directional median opening per FDOT requirements. This will prohibit northbound/southbound through movements and northbound/southbound left turn movements.

Volkert concurs with these recommendations and has no comments/recommendations.

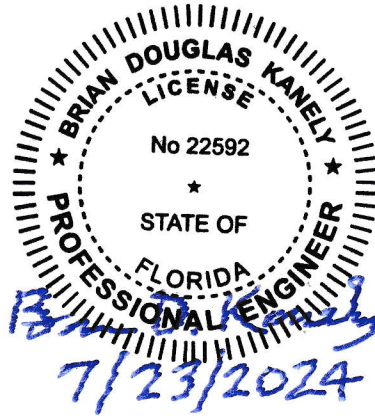
Additional Volkert Comments/Recommendations

1. It should be stated in the Study that US 441 has been field reviewed to guarantee that all the recommended intersection and roadway modifications can be constructed.
2. US 441 is an FDOT highway. It also serves as an alternate route for I-75 traffic when an incident closes a portion of I-75. The City of Alachua needs to closely coordinate with FDOT on any development projects that impact US 441 in the City of Alachua city limits.

Volkert, Inc. appreciates the opportunity to assist the City of Alachua with this independent review of the Patel Fuel and Retail project. Please contact me if you have any questions or need additional information.

Prepared by:

Brian D. Kanely, P.E.
Senior Traffic Engineer
Volkert, Inc.
July 24, 2024
Cell: 352-262-3580
Email: briank5030@outlook.com





City of Alachua

MIKE DAROZA
CITY MANAGER

PLANNING & COMMUNITY DEVELOPMENT
DIRECTOR KATHY WINBURN

July 23, 2024

Sent by electronic mail to walker.owen@nv5.com

Walker Owen, P.E.
Causseaux, Hewett, & Walpole, LLC
11801 Research Drive
Alachua, FL 32615

RE: Second Project Assistance Team (PAT) Review: Patel Fuel & Retail Site Plan Application

Dear Mr. Owen:

On July 9, 2024, the City of Alachua received your revised application for a Site Plan submitted on behalf of Semoj 13, LLC for the Patel Fuel & Retail project. The application proposes the construction of a ±8,836 square foot convenience store and retail building and gasoline fueling station on a ±2.14 acre subject property located southeast of the intersection of NW US Highway 441 and NW 59th Terrace (Tax Parcel Number 05885-010-014). The revised application received on July 9, 2024 was submitted in response to the Project Assistance Team (PAT) review comments issued to you in a letter dated June 24, 2024.

The revised application has been reviewed by the City's PAT. Upon review of the revised application and materials, the following insufficiencies must be addressed. A meeting to review these comments may be scheduled upon request.

Please address all insufficiencies in writing and provide an indication as to how they have been addressed by **5:00 PM on Tuesday, August 6, 2024**. A total of four (4) copies of the application package and a digital copy of all materials in PDF format on a CD or sent by emailing a Cloud / FTP link must be provided by this date.

Please address the following:

Previous Comments - 6/24/24 PAT Review Comments

1. Article 6, Development Standards
 - a. Section 6.1., Off-Street Parking and Loading Standards
 - i. Please identify the parking standard used for 1 space / 330 square feet of floor area. For example, the parking standard for sales establishments is 1 space / 305 square feet of floor area; a restaurant with indoor seating only is 1 space / 100 square feet of floor area.

Remaining Issues: Parking standards were updated as discussed. The calculations for the sales establishment use, however, is incorrect. Per Section 6.1.6(A) when units or measurements determining number of required off-street parking or loading spaces result in requirement of a fractional space, then such fraction equal or greater than one-half shall require a full off-street parking or loading space. The two proposed retail shells are 1,654 square feet and 1,664 square feet in area. $1,654/305 = 5.42$; $1,664/305 = 5.46$. Revise parking calculations accordingly.

b. Section 6.2, Landscaping Standards

- i. Section 6.2.3(E) requires screening along arterial frontages. This is applicable to the north property line, which is adjacent to the US 441 right of way. Provide arterial screening and calculations in accordance with Section 6.2.3(E).

Remaining Issues: The applicant proposes to provide the total number of trees required by Section 6.2.3(E), however, the applicant proposes all trees to be understory trees. This section of the LDRs is not eligible for any alternative modifications and would require a zoning variance to vary from the requirements of Section 6.2.3(E). Planning Staff understands that the landscape architect has discussed using East Palatka Hollies as the canopy tree. Any species which will achieve 30 feet at maturity is acceptable to fulfill the requirements for canopy trees.

c. Section 6.8, Design Standards for Business Uses

- i. Section 6.8.2(A)(2)(b)(i) requires street-facing facades to incorporate wall offsets or a defined alternative. The west elevation faces NW 59th Terrace. Provide wall offsets or approved alternatives for the west elevation.

Remaining Issues: Offset or approved alternative not provided on the west elevation.

2. Miscellaneous

- a. The site is configured for fuel deliveries to be made using NW 59th Terrace. This roadway is presently not designed to accommodate heavy vehicles such as fuel tankers. In order to accommodate such traffic NW 59th Terrace must be improved from the intersection of US Highway 441 to the south property line of the subject property to accommodate such vehicular traffic.

Remaining Issues: During the PAT Meeting held on June 26, 2024 and in subsequent discussions between City Staff and the applicant, it was agreed that the ingress/egress connection to NW 59th Terrace would be redesigned to not accommodate fuel deliveries. Further, it was suggested by Staff to consider reconfiguring the design such that fuel delivery vehicles could circle the building and exit the site via the US 441 ingress/egress. The plans received on July 9, 2024 show an ingress/egress connection to NW 59th Terrace that can accommodate fuel delivery vehicles exiting the site. If the applicant desires to retain this design the previously stated improvements to NW 59th Terrace must be programmed into the development plan. Alternatively, the applicant may propose another method for ingress/egress of fuel deliveries to the site.

New Comments – 7/9/2024 Submittal

3. Article 6, Development Standards

a. Section 6.1., Off-Street Parking and Loading Standards

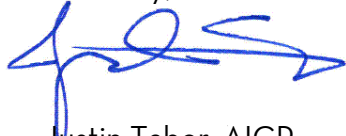
- i. Sheet Co.00: Verify the total number of parking spaces provided.

4. Public Services / Fire Rescue / Engineering Review Comments

- a. The applicant must address all comments provided by the Public Services Department in a memorandum dated July 15, 2024.
- b. Review of the Traffic Impact Analysis is ongoing. Comments from Volkert, Inc., will be provided under separate cover.

If you have any questions regarding the information above, please contact me at 386-418-6100 x 1602 or via e-mail at jtabor@cityofalachua.com. We look forward to receiving your revised application.

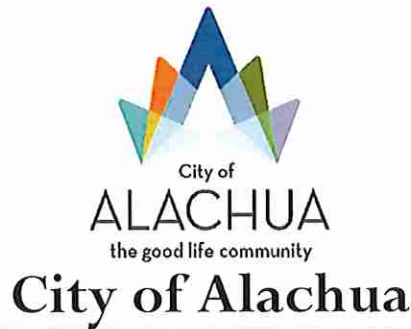
Sincerely,



Justin Tabor, AICP
Principal Planner

Attachments

- c: Mike DaRoza, City Manager *(by electronic mail)*
Rodolfo Valladares, P.E., Assistant City Manager *(by electronic mail)*
Kathy Winburn, Planning & Community Development Director *(by electronic mail)*
Adam Hall, AICP, Principal Planner *(by electronic mail)*
Carson Crockett, AICP Candidate, Planner *(by electronic mail)*
Project File



MIKE DAROZA
CITY MANAGER

RODOLFO VALLADARES, P.E.
PUBLIC SERVICES DIRECTOR

INTER-OFFICE COMMUNICATION

DATE: July 15, 2024

TO: Kathy Winburn, AICP
Planning & Community Development Director

FROM: Michael Carrillo, P.E.
Public Services Director
Tom Ridgik, P.E.
Engineering Supervisor

RE: Patel Fuel Retail Site Plan

TR 7/17/2024
M

Public Services has reviewed the subject project (July 2024 Documents) and offer the following comments. Review was specific to Public Services utilities.

NO.	COMMENTS
1	Comment on May Submittal Sheet C0.10 To Water & Wastewater General Notes, please add the following: “16. WATER MAINS 4-INCHES AND LARGER SHALL BE AWWA C900 DR-18. 17. ALL FITTINGS FOR WATER MAINS 4-INCHES AND LARGER SHALL BE CEMENT-LINED DUCTILE IRON. 18. PROVIDE TRACER WIRE ON WATER PIPING FROM THE POINT OF CONNECTION AT THE EXISTING WATER MAIN TO EACH WATER METER BOX”. Please Revise and Resubmit this sheet. Comment on July Submittal

NO.	COMMENTS
	Sheet C0.10 Approved
2	Comment on May Submittal Sheet C0.11 To Abbreviations, please add "STM", which is shown on C2.20. Please Revise and Resubmit this sheet. Comment on July Submittal Sheet C0.11 Approved
3	Comment on May Submittal Sheet C3.10 Detail, Lower Right: Please modify detail to conform to COA standards. Manhole Connection: Provide external, not internal, drop connection. Transformer Location: COA electrical staff may prefer alternate location. Please have Bill Stormant coordinate this issue with COA electrical staff. See markup. Please Revise and Resubmit this sheet. Comment on July Submittal Sheet C3.10 Provide 2-inch water service connection to each meter, not 1-inch. Call out 4 X 2 reducer as "CLDI". See markup. Please Revise and Resubmit this sheet.
4	Comment on May Submittal Sheets TBD

NO.	COMMENTS
	Please submit all required electrical sheets as well as electrical specifications. Transformer Location: COA electrical staff may prefer alternate location. Please have Bill Stormant coordinate this issue with COA electrical staff. Please Revise and Resubmit applicable sheets. Comment on July Submittal Sheet C3.10 Transformer location as shown is acceptable. However, tap of the proposed primary circuit will be at a different location. See markup. Please include electrical specifications, either on Sheet C3.10 or another sheet. Sample electrical specifications are attached. Please Revise and Resubmit this sheet.
5	Comment on May Submittal Sheet TBD Please add the following COA Standard Details to the documents: 115 Water Meter Assembly 118 Water Service Connection 121 Backflow Preventer and Enclosure 127 Valve Box Cover 142 Gate Valve 145 Gate Valve 149 Water Service Connection 151 Abbreviations 215 Manhole 227 Grease Interceptor 230 Ring and Cover 303 Trench Detail 306 Thrust Block Detail

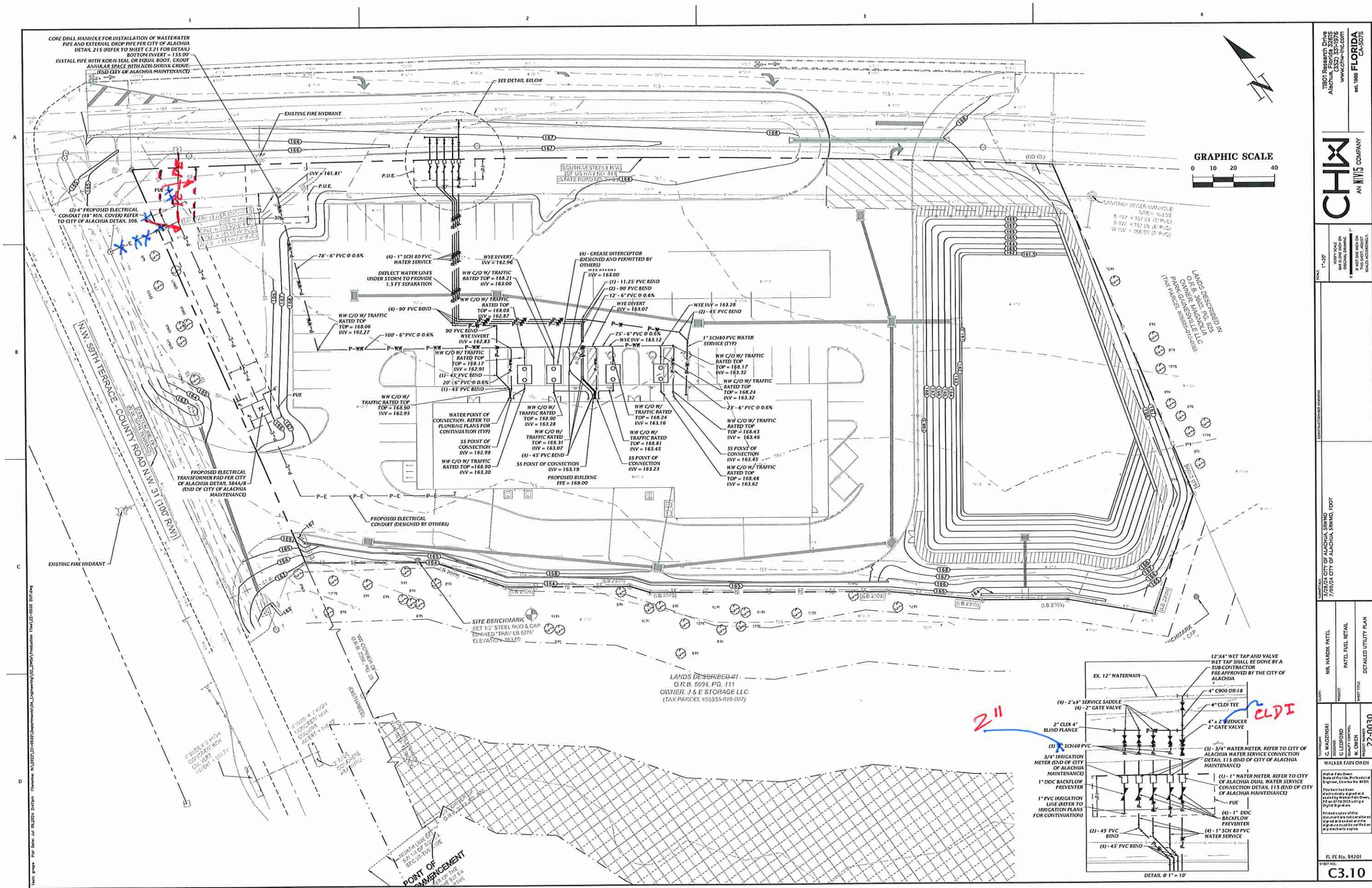
NO.	COMMENTS
	307 Paint System 309 Joint Restraint 318 Access Point 321A Tracer Wire Abbreviations 321B Potable Water Tracer Wire Please Submit these sheets. Comment on July Submittal Sheets C3.20 – C3.23 Approved
6	(New) Comment on July Submittal Please add the following COA Electrical Standard Details to the document: • 506 • 557 • 560 • 584B Please submit applicable sheets.
7	(New) Comment on July Submittal Sheet LS-2 A segment of the proposed primary electrical circuit is now in a new location. Please modify LS-2 so trees do not interfere with this primary electric segment. See markup. Coordinate with revised sheet C3.10. Please Revise and Resubmit this sheet.
8	(New) Comment on July Submittal Please submit load schedules of all four facilities so transformer size can be sized by COA. Please submit the load side voltage requirements. Please submit this information and resubmit revised Sheet C3.10.
9	

NO.	COMMENTS
END OF COMMENTS	

Please advise if you have any questions or require additional information.

cc: Justin Tabor – AICP Principal Planner

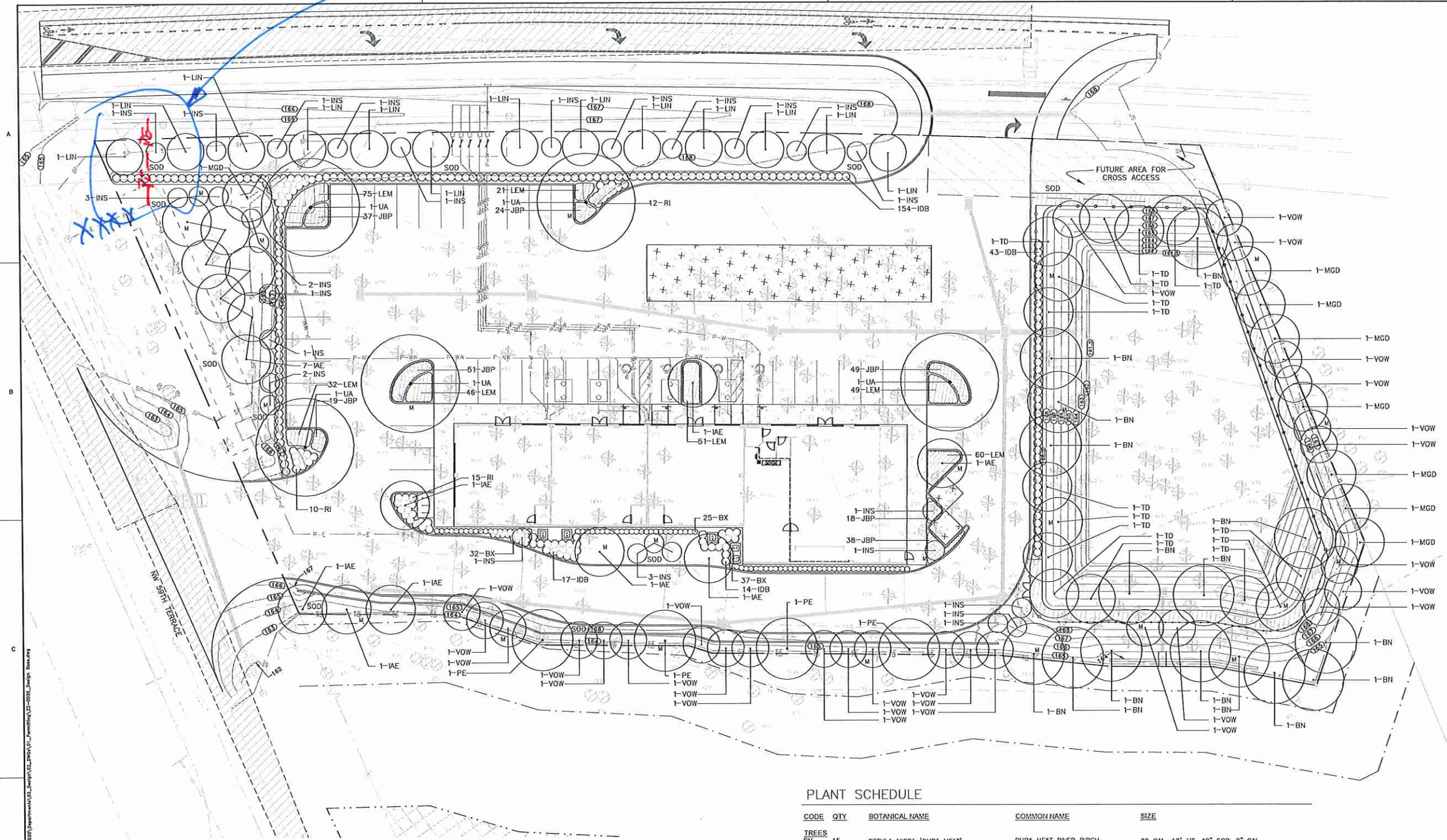
Adam Hall – AICP Principal Planner



1801 Research Drive Alachua, FL 32310 www.chw-inc.com est. 1986 FLORIDA CA-5075	
CHW AN INWIS COMPANY	
SCALE 1"=20'	NOT ONE INCH ON THIS SCALE IS NOT ONE INCH ON THIS SCALE IS NOT ONE INCH ON THIS SCALE
SUBMITTALS 3/26/24 CITY OF ALACHUA SRWMD, FDOT 7/09/24 CITY OF ALACHUA SRWMD, FDOT	
CLIENT MR. HARKIN PATEL	PROJECT PATEL FUEL METAL
DESIGNER C. WADZINSKI	QUANTITY CONTROL W. OWEN
PROJECT NUMBER 22-0030	
SHEET NO. C3.10	

PLEASE EITHER REMOVE OR RELOCATE
TREES TO ALLOW ACCESS TO PRIMARY ELECTRICAL CIRCUIT

580
REVISION E 3.10



EXISTING TREE LEGEND

LAO = LAUREL OAK (QUERCUS LAURIFOLIA)
LO = LIVE OAK (QUERCUS VIRGINIANA)
MAP = RED MAPLE (ACER RUBRUM)
PI = PINE (PINUS SPP.)
WO = WATER OAK (QUERCUS NIGRA)

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE
TREES				
BN	15	BETULA NIGRA 'DURA HEAT'	DURA HEAT RIVER BIRCH	30 GAL, 12' HT, 42" SPR, 2" CAL
IAE	15	ILEX X ATTENUATA 'EAST PALATKA'	EAST PALATKA HOLLY	30 GAL, 8' HT, 3" SPR, 2" CAL
INS	29	ILEX X 'NELLIE R. STEVENS'	NELLIE R. STEVENS HOLLY	15 GAL, 6' HT, 30" SPR, 1.5" CAL
LIN	13	LAGERSTROEMIA INDICA 'NATCHEZ'	NATCHEZ CROPE MYRTLE	30 GAL, 10' HT, 4" SPR, 2" CAL
MGD	8	MAGNOLIA GRANDIFLORA 'DD BLANCHARD'	DD BLANCHARD MAGNOLIA	30 GAL, 12' HT, 42" SPR, 2" CAL
PE	4	PINUS ELLIOTTII	SLASH PINE	30 GAL, 12' HT, 42" SPR, 2" CAL
TD	14	TAXODIUM DISTICHUM	BALD CYPRESS	30 GAL, 12' HT, 42" SPR, 2" CAL
UA	5	ULMUS ALATA	WINGED ELM	30 GAL, 10' HT, 4" SPR, 2" CAL
VOW	27	VIBURNUM OBOVATUM	WALTER'S VIBURNUM	15 GAL, 6' HT, 30" SPR, 1.5" CAL
SHRUBS				
BX	94	BUXUS MICROPHYLLA	BOXWOOD	3 GAL, 18" HT, 9" SPR
IDB	228	ILEX CORNUTA 'DWARF BURFORDI'	DWARF BURFORD HOLLY	3 GAL, 24" HT, 16" SPR
RI	37	RHAPHIOLEPIS INDICA 'ELEANOR TABER'	ELEANOR TABER INDIAN HAWTHORN	3 GAL, 24" HT, X 12" SPR
GROUND COVERS				
JBP	235	JUNIPERUS CHINENSIS 'BLUE PACIFIC'	BLUE PACIFIC JUNIPER	1 GAL., FULL
LEM	334	LIRIOPE MUSCARI 'EMERALD GODDESS'	EMERALD GODDESS LIRIOPE	1 GAL., FULL
SOD/SEED				
SOD		PASPALUM NOTATUM 'ARGENTINE'	BAHIA GRASS	WEED FREE AND SAND GROWN SOD

GRAPHIC SCALE



11801 Research Drive
Alachua, Florida 32615
www.chw-inc.com
est. 1988
FLORIDA
LA0001683

CHW
AN NWS COMPANY

1"=30'
VERIFY SCALE
BASED ON ONE INCH ON
DRAWING EQUALS
9' IF NOT ONE INCH ON
DRAWING, SCALE AS SHOWN.
SHEET NO. 22-0030

03/20/2024 - CITY OF ALACHUA SUBMITTAL
05/28/2024 - CITY OF ALACHUA SUBMITTAL
07/19/2024 - CITY OF ALACHUA SUBMITTAL

CLIENT: MR. MARK PATIL
PROJECT: PATIL FUEL RETAIL
SHEET TITLE: LANDSCAPE PLAN
DESIGNER: JMS
CHECKER: JMS
QUALITY CONTROL: LK
PROJECT NUMBER: 22-0030
REGISTERED LANDSCAPE ARCHITECT
MICHAEL PATIL
LA5667439
STATE OF FLORIDA
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11801 Research Drive
Alachua, FL 32615
www.chw-inc.com

LS-2



Civil Engineering | Land Planning
Surveying | Construction Services

Gainesville | St. Augustine

3530 NW 43rd Street
Gainesville, FL 32606

July 23, 2024

Mr. Justin Tabor
Principal Planner
City of Alachua
Office of Planning & Community Development
P.O. Box 9 Alachua, FL 32616-0009

Re: Patel Fuel & Retail Site Plan

Dear Mr. Tabor:

As you requested, we have reviewed the submittal drawings and other materials provided to us for the above referenced project. This submittal addressed all of our comments and we find the project approvable from an engineering perspective

Sincerely,

A handwritten signature in blue ink, appearing to read 'Tim B.', with a stylized flourish at the end.

Timothy J. Boehlein, PE
Project Manager, JBPro

July 9, 2024

Justin Tabor
City of Alachua Planning & Community Development
15100 NW 142 Terrace
Alachua, FL 32615

RE: Patel Fuel & Retail

Dear Justin:

Please find attached the following items to address your comments from June 24, 2024:

- Revised Signed and Sealed Development Plans
- Revised Signed and Sealed Stormwater Report
- Revised Signed and Sealed Survey
- Revised Concurrency Impact Analysis Report
- Alternate Landscape Memo
- Listed Species Survey

PAT Comments

1. Article 4, Use Regulations

- a. Driveways do not comply with Section 4.3.4(J)(6)(c)(ii) which requires methods of ingress/egress to not exceed 40 feet in width. Please address and provide a measurement of the ingress/egress widths, not inclusive of transitions (flares).
 - **The driveway entrances have been reduced to be 40' wide. Please refer to Sheet C1.10.**

2. Article 6, Development Standards

- a. Section 6.1., Off-Street Parking and Loading Standards
 - i. The parking standard utilized on the plans is 1 space / 330 square feet of floor area for all building area. The parking standard for gasoline sales is 1 space / 350 square feet of floor area. Revise accordingly.
 - **The parking calculations on the cover sheet have been revised. Please refer to Sheet C0.00.**
 - ii. Please identify the parking standard used for 1 space / 330 square feet of floor area. For example, the parking standard for sales establishments is 1 space / 305 square feet of floor area; a restaurant with indoor seating only is 1 space / 100 square feet of floor area.
 - **The parking calculations on the cover sheet have been revised. Please refer to Sheet C0.00.**
 - iii. While parking calculations will be revised note per Section 6.1.4(B)(5) the maximum number of parking spaces is 125 percent of the minimum number required. Presently the parking calculations note 27 spaces are required. This would result in a maximum number of 34 spaces.
 - **Parking calculations on the cover sheet have been revised and the provided number of parking spaces are within 125% of the required number of parking spaces. Please refer to Sheet C0.00.**

- iv. To demonstrate compliance with Section 6.1.7(A)(1), provide a measurement of the drive aisle located east of the building.
- **A dimension has been added to the drive aisle to the east of the building. Please refer to Sheet C1.10.**
- b. Section 6.2. Landscaping Standards
 - i. The landscape plan notes 21 canopy trees and 11 understory trees are required for the parking area perimeter requirement. 21 canopy trees are not provided surrounding parking areas. There are some canopy trees to the west of the parking located on the west end of the site and some understory trees in this area, however, the canopy trees are noted to fulfill mitigation requirements. No canopy or understory trees are located along the parking on the north end of the site. Please address.
 - **An exhibit was provided to help demonstrate how the required landscape has been placed on the site. The mitigation trees have been redistributed to ensure that they are not representing more than 25% of the required trees.**
 - ii. Interior parking area landscape requirements are not met. The landscape plan notes 17 trees are required, however only 3 trees are provided (and not being credited for mitigation).
 - **As discussed with City Staff, the function of the site makes it difficult to provide the interior parking landscape interior to the parking area. This material has instead been placed along the perimeter of the site and we have submitted an alternative landscape plan request for this change.**
 - iii. Section 6.2.2(D)(2)(iii)c. requires tree islands at the end of parking bays. Several trees within islands at the end of parking bays are noted as mitigation trees. Please address.
 - **The mitigation trees have been redistributed to ensure that they are not representing more than 25% of the required trees.**
 - iv. A retaining wall is proposed within the south perimeter buffer. Per Section 6.2.2(D)(3)(f)(i) a perimeter buffer shall not contain any development, impervious surfaces, or site features that do not function to meet the perimeter buffer requirements.
 - **Per email correspondence from Justin Tabor, a buffer on the south side of the property will not be required due to the presence of Turkey Creek, the adjacent wetlands, and the buffers adjacent to the wetlands, which neighbor the project property to the south, and provide a >150' natural buffer between the subject property and developable area on the property to the south.**
 - v. Section 6.2.3(B) requires screening of waste receptacles. Screening detail is not provided.
 - **Architectural screening of the waste receptacles has been provided please refer to the architectural plan and elevations for the dumpster enclosure, Sheet A100**
 - vi. Section 6.2.3(E) requires screening along arterial frontages. This is applicable to the north property line, which is adjacent to the US 441 right of way. Provide arterial screening and calculations in accordance with Section 6.2.3(E).
 - **Arterial screening and calculations have been added to the landscape plans. Due to existing utilities along US 441, the plantable area along US 441 is very small and not adequate to provide the required landscape. However, after discussing the issue with city utilities and engineering staff, we have been allowed to reduce the utility offsets in this area to 8' if understory trees are utilized. We are currently proposing all understory trees for the buffer.**

- vii. Sheet C0.22: Insufficient detail provided on Tree Protection Detail to meet the requirements of Section 6.2.1(D)(2).
- **The tree protection detail has been updated. Please refer to Sheet C0.22.**
- c. Section 6.3, Fencing Standards
 - i. A 4 foot chain link fence is proposed surrounding the stormwater basin. Per Section 6.3.4(A)(4) chain link fencing is not permitted within 50 feet of an arterial road. Additionally, Section 6.3.5(B) prohibits chain link when visible from a public right of way.
- **A wooden fence will be used where visible from a public right of way, or within 50 feet of an arterial roadway, whichever is greater. Please refer to Sheet C1.10.**
- d. Section 6.4, Exterior Lighting Standards
 - i. The maximum height of light fixtures is 15 feet per Section 6.4.5(A). Light detail on Sheet P3 notes to bury pole to get a 30 foot mounting height. Please address.
- **The note has been revised to a 15 foot mounting height. Please refer to Sheet P3.**
- ii. Section 6.4.6(A) requires lighting for canopies for service stations and other similar uses to not exceed an average of 12 footcandles as measured at ground level at the inside of the outside edge of the canopy. Data is provided for a 10 foot zone around the canopy. Provide data to confirm that the average light level surrounding the inside of the outside edge of the canopy shall not exceed 12 footcandles.
- **Photometric calculations have been revised to demonstrate the average light level surrounding the inside of the outside edge of the canopy does not exceed 12 footcandles.**
- e. Section 6.5, Signage
 - i. Note signage is not reviewed or approved through the site plan process. A separate sign permit shall be required and compliance shall be reviewed at that time.
- **Acknowledged.**
- f. Section 6.8, Design Standards for Business Uses
 - i. Section 6.8.2(A)(2)(b)(i) requires street-facing facades to incorporate wall offsets or a defined alternative. The west elevation faces NW 59th Terrace. Provide wall offsets or approved alternatives for the west elevation.
- **Architecture has been revised, please refer to Sheet A100 and A200.**
- ii. Section 6.8.2(A)(2)(c) requires a minimum of 25 percent of the materials utilized for each side facade and the rear façade shall be the same as the materials utilized for the front or street-facing façade(s). The proposed south elevation is entirely comprised of metal. Revise to provide a minimum of 25% of the materials used in the front/street-facing facades (stucco/EIFS and/or stone veneer).
- **The architectural elevations have been revised to provide use stucco, which provides 25% coverage by materials used in the front/street-facing façade.**
- iii. Section 6.8.2(C)(1) requires interconnectivity between business uses through either the extension of a public or private street or through joint use of driveways and cross access agreements among adjoining properties to allow circulation between sites. Cross access

between developments must be configured to provide safe and convenient interconnectivity. A stub to the property to the east of the development will be required.

- **As discussed in the PAT meeting, an access easement will be provided to the eastern property. Please refer to Sheet C1.10.**

3. Public Services / Fire Rescue / Engineering Review Comments

- a. The applicant must address all comments provided by the Public Services Department in a memorandum dated June 24, 2024.
 - b. The applicant must address the comments provided by Tim Boehlein, PE, of JBPro, in a letter dated June 18, 2024.
- **All comments provided by the Public Services Department have been addressed under separate cover.**
 - **All comments provided by Tim Boehlein, P.E. of JBPro have been addressed under separate cover.**

4. Traffic Impact Analysis

- a. The City has engaged Volkert to review the traffic impact analysis. Review comments are forthcoming and will be provided to the applicant once received.
- **Responses to traffic comments have been provided under a separate cover. Revised traffic analysis will be provided this week.**

5. Land Rights

- a. Note regarding Land Rights: All easements in favor of the City and any deeds transferring property to the City will need to be executed and recorded prior to issuance of a building permit. As such, all legal descriptions and sketches for easements and property to be deeded to the City need to be submitted to the City's Compliance and Risk Management Department in a timely manner, prior to execution and recording of the land rights documents. Please submit all documents to Anne-Marie DiRocco at: an_dirocco@cityofalachua.org and Corey King at: cking@cityofalachua.org, in the Compliance and Risk Management Department.
- **Acknowledged.**

6. Environmental Resources Assessment Report

- a. The report notes that a gopher tortoise survey should be conducted at a later date. Staff will propose a condition requiring a 100% gopher tortoise survey to be completed prior to the commencement of construction and in accordance with the Florida Fish & Wildlife Conservation Commission guidelines.
 - b. The report notes that further field review and habitat assessment is needed to confirm the likelihood of the presence of listed faunal species. Please submit documentation addressing this recommendation.
- **CHW staff conducted a listed species survey on 7/8 which included a 100% gopher tortoise survey. Please see attached report.**
 - **Further field review has been conducted to confirm the presence or absence of listed species. Please refer to the attached Ecological Report.**

7. Concurrency Impact Analysis

- a. The Concurrency Impact Analysis submitted with the application uses data from the March 2024 Development Monitoring Report. The most recent Development Monitoring Report is dated May 2024. Please revise the Concurrency Impact Analysis to use the most recent data.
 - **The Concurrency Impact Analysis report has been updated and is attached.**
- b. The correct ITE Code for Convenience Store/Gas Station is 945.
 - **The ITE Code has been updated. Please refer to the revised concurrency impact analysis.**
- c. Please clarify trip generation for the convenience store/gas station is not based upon square footage but rather the number of fueling stations.
 - **The trip generation table notes “10 fueling positions”. Please refer to the revised Concurrency Impact Analysis**
- d. Please ensure transportation data in the Concurrency Impact Analysis is consistent with the Traffic Impact Analysis.
 - **The transportation data in the Concurrency Impact Analysis is consistent with the Traffic Impact Analysis. Please refer to the revised Concurrency Impact Analysis and TIA.**

8. Miscellaneous

- a. The site is configured for fuel deliveries to be made using NW 59th Terrace. This roadway is presently not designed to accommodate heavy vehicles such as fuel tankers. In order to accommodate such traffic NW 59th Terrace must be improved from the intersection of US Highway 441 to the south property line of the subject property to accommodate such vehicular traffic.
 - **The fuel tankers will be accessing the site via US Highway 441. Please see attached autoturn exhibit, EX-1.**
- b. Please identify the number of fueling stations on the plans.
 - **The number of fueling stations has been added to the plans. Please refer to Sheet C1.10.**
- c. Ensure base layers are correct throughout all trades. Base layer of photometric plan is not the current configuration of the area east of the building.
 - **The photometrics plans have been updated to accurately reflect the site plan. Please refer to Sheets P-1 – P3.**

We trust you will find this submittal to be complete for review and approval. If you have any questions, or need additional information, please contact me at (352) 331-1976 or via email at walker.owen@nv5.com.

Sincerely,
CHW, an NV5 Company



Walker Owen, P.E.
Project Manager

July 9, 2024

Kathy Winburn, AICP
City of Alachua Planning & Community Development
15100 NW 142 Terrace
Alachua, FL 32615

RE: Patel Fuel & Retail application

Dear Kathy:

Please find attached the following items to address your comments from June 24, 2024:

- Revised Signed and Sealed Development Plans

PAT Comments

1. Sheet EX.XX:

- a. Please include electrical drawings for proposed electric that will be maintained by the city. Include transformer specs and details.
Please resubmit this sheet.
- **A conduit and pad design has been added, please refer to C3.10.**

2. Sheet C1.20 & C2.30

- a. Duplicate details for handicap parking and bollard, remove duplicates and include Alachua Details when applicable (Detail 404A-D)
Please resubmit this sheet
- **The duplicate details have been removed and the City of Alachua details have been added to the plans. Please refer to Sheets C1.20.**

3. Sheet C2.30

- a. Add City of Alachua details 115, 121, 130, 127, 149, 209, 210, 215, 227, 307, 330, and relevant electrical details (COA details 500 series).
- **The requested details have been added to the plans. CoA drop manhole detail not added due to use of internal drop manhole detail, see comment response below. Please refer to Sheet C3.20 – C3.21.**
- b. Provide detail for internal drop pipe if external drop pipe is not an option. Internal drop pipe will have to be reviewed by the Public Services Director.
Please resubmit this sheet.
- **Please refer to sheet C2.30 for internal drop detail.**

4. Sheet C3.10

- a. Possible alternate location for the proposed transformer and underground electric. New location avoids proximity to proposed trees. See markup.
Please resubmit this sheet.

- The proposed alternate transformer location is not feasible due to the existing sanitary sewer main on the north property boundary. Please refer to Sheet C3.10 for the proposed transformer location.

5. Sheet C3.10

- a. Call out end of city maintenance on electric and wastewater (water is already called out)
Please resubmit this sheet.
- A call out for the end of city maintenance for electric and wastewater have been added to the plans. Please refer to Sheet C3.10.

6. Sheet C3.10

- a. The 4" tap off the 12" water main should be DI instead of SCH40 PVC, referencing AWWA C900.
Please resubmit this sheet
- The 4" tap callout has been updated to be DI. Please refer to Sheet C3.10.

7. Sheet C0.10

- a. To Water & Wastewater General Notes, please add the following:
"16. WATER MAINS 4-INCHES AND LARGER SHALL BE AWWA C900 DR-18.
17. ALL FITTINGS FOR WATER MAINS 4-INCHES AND LARGER SHALL BE CEMENT-LINED DUCTILE IRON.
18. PROVIDE TRACER WIRE ON WATER PIPING FROM THE POINT OF CONNECTION AT THE EXISTING WATER MAIN TO EACH WATER METER BOX".
Please Revise and Resubmit this sheet.
- The requested notes have been added to the Water & Wastewater General Notes section. Please refer to Sheet C0.10.

8. Sheet C0.11

- a. To Abbreviations, please add "STM", which is shown on C2.20.
Please Revise and Resubmit this sheet.
- The STM abbreviation is for storm pipe and has been added to the Abbreviations section. Please refer to Sheet C0.11.

9. Sheet C3.10

- a. Detail, Lower Right: Please modify detail to conform to COA standards.
Manhole Connection: Provide external, not internal, drop connection.
Transformer Location: COA electrical staff may prefer alternate location. Please have Bill Stormant coordinate this issue with COA electrical staff.
See markup.
Please Revise and Resubmit this sheet.
- The detail has been modified to conform to COA standards. The manhole connection has been called out to be an external drop connection. Please refer to Sheet C3.10. The electrical sheets are not available at this time and will be provided under separate cover.

10. Sheets TBD

- a. Please submit all required electrical sheets as well as electrical specifications.
Transformer Location: COA electrical staff may prefer alternate location. Please have Bill Stormant coordinate this issue with COA electrical staff.
Please Revise and Resubmit applicable sheets.

- The electrical sheets are not available at this time and will be provided under a separate cover. We understand that the city may require the transformer to be shifted north and have emailed Tom Ridgik to coordinate the transformer location.

11. Sheet TBD

a. Please add the following COA Standard Details to the documents:

115 Water Meter Assembly
118 Water Service Connection
121 Backflow Preventer and Enclosure
127 Valve Box Cover
142 Gate Valve
145 Gate Valve
149 Water Service Connection
151 Abbreviations
215 Manhole
227 Grease Interceptor
230 Ring and Cover
303 Trench Detail
306 Thrust Block Detail
307 Paint System
309 Joint Restraint
318 Access Point
321A Tracer Wire Abbreviations
321B Potable Water Tracer Wire
Please Submit these sheets.

- The requested details have been added to the plans. Please refer to Sheets C3.20 – C3.23.

We trust you will find this submittal to be complete for review and approval. If you have any questions, or need additional information, please contact me at (352) 331-1976 or via email at walker.owen@nv5.com.

Sincerely,
CHW, an NV5 Company



Walker Owen, P.E.
Project Manager

July 9, 2024

Brian Kanely
Volkert, Inc.
3501 S Main St #2
Gainesville, FL 32601

RE: Patel Fuel & Retail

Dear Brian:

Please see the below responses to address your comments from June 11, 2024:

Major Issue:

There is a significant issue/error with the US 441 traffic counts in the report, please refer to my attachment where I have circled the AM counts in red and the PM counts in green. The three pages in my attachment are as follows:

1. Figure 2 from the CHW report showing existing AM and PM peak hour traffic counts.
2. A figure from the previous Buckholz traffic study for the Tara Forest project showing AM and PM peak hour traffic counts on US 441.
3. A HCS report from the just completed Tara Forest project by Larry Hagen showing PM peak hour traffic counts on US 441.

It is well documented that traffic along US 441 between Alachua and Gainesville is very directional in the AM and PM peak hours. The Buckholz traffic counts and the HCS sheet in the Larry Hagen report clearly show this. Traffic is very heavy towards Gainesville in the AM and very heavy towards Alachua in the PM.

In the CHW report the AM and PM peak hour traffic counts along US 441 are not consistent with previous traffic counts. The AM and PM peak hour counts on US 441 appear to be reversed. There could be several reasons for this.

1. A simple error was made and the east/west traffic count data on US 441 was reversed as it was being prepared.
 2. The labeling of the traffic count directions in the software used with the traffic counters was somehow reversed.
 3. There was a traffic counter error, and the traffic counts need to be re-obtained. CHW needs to review the traffic count data and advise the City as to what accounted for the traffic count error. The traffic count error affects the trip distributions and the analysis section in the report. CHW will need to revise the report and resubmit it to the City once the traffic count error has been corrected.
- **Based on the review of previous count data, it is expected that the volumes of the through movements on HWY 441 were reversed, however the turning movements in and out of all side streets appear to be correctly counted. CHW will collect counts at the US HWY 441/NW 59th Street intersection to confirm that this assumption is correct. If so, the TIA will be revised, including the trip distribution, with the US HWY 441 through movement volumes reversed. CHW will coordinate with the data collection sub consultant to determine the cause of the error.**

Minor Issues:

1. The Analysis Section of the Report contains four items, not three. The omitted section, Pedestrian and Bicycle Demand, needs to be added to the Table of Contents.
 - **The Pedestrian and Bicycle Demand will be included in the table of contents and the introduction to section 5 in the updated TIA.**
2. In the Report it correctly states that any project signage should not block the view of eastbound traffic on US 441. There is a horizontal curve on US 441 in the vicinity of the project. It will be critical that any project signage not block the view of eastbound traffic on US 441 for traffic exiting the on-site driveway. This requirement needs to be emphasized in the CHW Report and also in the project approval documents and the site construction plans approved by the City.
 - **The revised TIA will emphasize the need for the developer to not cause a sight obstruction with the project sign, as requested.**

We trust you will find this submittal to be complete for review and approval. If you have any questions, or need additional information, please contact me at (352) 331-1976 or via email at walker.owen@nv5.com.

Sincerely,
CHW, an NV5 Company



Walker Owen, P.E.
Project Manager

July 9, 2024

Timothy J. Boehlein, P.E.
JBPro
3530 NW 43rd Street
Gainesville, FL 32606

RE: Patel Fuel & Retail application

Dear Timothy:

Please find attached the following items to address your comments from June 24, 2024:

- Revised Signed and Sealed Development Plans
- Revised Signed and Sealed Stormwater Report

Stormwater Management:

1. Although a 10-2 was filed, a stormwater report is still required for review. Please provide for review.
 - **A stormwater report is attached.**

C0.00 - Cover Sheet:

1. Please verify parking calculations. It appears that there are 41 spaces + 4 ADA spaces.
 - **The parking calculations have been updated on the cover sheet. Please refer to Sheet C0.00.**

C0.21 - Stormwater Pollution Prevention Plan:

1. There is a portion of silt fence along US-441 on the Northeast portion of the site which does not seem necessary.
 - **Silt fence on the high side of the site will prevent offsite run-on.**
2. There is grading past silt fence and off the property on the Southwest portion of the site.
 - **Grading is revised to be within the silt fence in all areas.**

C03.0 - Demolition Plan:

1. At the driveway connection to NW 59th Terrace, there is a 10" hack which is located within the grading limits and very close to the proposed stormwater pipe. This tree will likely need to be removed.
 - **The 10" hack tree has been marked to be removed. Please refer to Sheet C0.30.**
2. At the wastewater connection, there is a 16" pine tree which appears to be on top of the structure. Given the depth at which the sewer connection will be installed, it is likely roots would be damaged.
 - **The 16" pine tree and sewer manhole are existing. The 16" pine tree will be removed. Please refer to Sheet C0.30.**

C2.10 - Detailed Grading and Drainage Plan:

1. Several stormwater pipes have a low amount of cover. Particularly the pipe leaving S-3 will need to be lowered. Please confirm that all pipes have adequate cover.
 - **S-3 structure top elevation has been revised to match the proposed grading, which provides sufficient cover. All other pipes have sufficient cover. Please refer to Sheet C2.10.**

2. Structures S-05, S-06, S-07, and S-08 have tops below the DHW and shall be raised to avoid flooding within the parking lot.
 - **The pond has been redesigned to lower the design high water below 166.50, therefore the structure tops are above the DHW. Please refer to Sheet C2.10.**
3. Recommend adding energy dissipation device to S-14 to avoid erosion.
 - **An energy dissipation device has been added to S-14 to avoid erosion.**
4. Will the canopy for the gas pumps have a stormwater connection? If so, please provide downspout locations.
 - **The canopy design is not currently available. Pipe connections are provided for downspout connections at the canopy columns. Please refer to Sheet C2.10.**
5. Behind the building, the curb will be trapping water. There is a 168.67 EP spot, which would put the top of curb at 169.17, and thus above FFE. Additionally, there are several 168.50 spots on the rear of the building. This would also push water back towards the building in several instances.
 - **The grading behind the building has been updated to prevent the trapping of water. Curb breaks have been introduced to provide positive drainage away from the building. Please refer to Sheet C2.10.**
6. Please provide grades for AC Condenser pads.
 - **Grades have been provided for AC condenser pads. Please refer to Sheet C2.10.**
7. Please note there is a spot elevation missing at the Southern corner of the FDOT Driveway connection.
 - **A spot elevation has been added to the southern corner of the FDOT Driveway connection. Please refer to Sheet C2.10.**

C2.20 Stormwater Management Facility Plan and Details:

1. Per SRWMD standards, 12" of freeboard shall be provided. The current pond is just under 12".
 - **The SMF design has been revised to provide 12" of freeboard. Please refer to sheet C2.20.**
2. Per SRWMD standards, The pond must be designed so that the average pond side slope measured between the control elevation and two feet below the control elevation is no steeper than 3:1. Once two feet below the PPV, you may slope at 2:1.
 - **A retaining wall has been added to the east side of the pond to allow 3:1 side slopes at the remaining pond sides to 2 ft below the permanent pool elevation. The pond is fenced to prevent public access to the retaining wall.**
3. Cross section shows that maintenance path shall be at an elevation of 169.00. If this is the intent, show 169 contour on plans. Grading may need to be revised if this is the intent.
 - **The back of the maintenance path has been updated to be 168.75, consistent with the proposed grading.**
4. Revise Existing grade label.
 - **Existing grade label has been revised. Please refer to Sheet C2.20.**

5. Note to sod 4:1 backslope as well as the basin side slopes.
 - **Notes have been made to sod the backslope and the basin side slopes to the permanent pool elevation. Please refer to Sheets C0.21 and C2.20.**
6. Bottom of pond would not be seeded for a wet pond.
 - **The note to seed the bottom of the pond has been removed from the pond cross section. Please refer to Sheet C2.20.**

C2.30 Construction Details:

1. ADA Details are duplicated.
 - **The ADA detail duplicates have been removed. Please refer to Sheet C2.30.**

C310 Detailed Utility Plan:

1. Grease interceptors are said to be designed by others. Please provide these calculations and details once available to confirm sizing.
 - **Grease interceptor sizing is not currently available. It will be provided under a separate cover when available.**
2. Cleanouts shall be removed from the ADA ramp where possible.
 - **Utility alignments have been updated to remove cleanouts from ADA ramps.**

C4.10 Off Site Improvement Plans:

1. Provide additional grades on the bicycle lane to demonstrate cross slope.
 - **Additional grades have been added to the bicycle lane. Please refer to Sheet C4.10.**
2. Defer to FDOT for work within their right of way, however typically a 5' unpaved shoulder of 6% or less shall be provided. Recommend adding this to avoid the drop-off this close to the driveway.
 - **A shoulder has been added to the driveway, to the property line. Please refer to Sheet C4.10.**

We trust you will find this submittal to be complete for review and approval. If you have any questions, or need additional information, please contact me at (352) 331-1976 or via email at walker.owen@nv5.com.

Sincerely,
CHW, an NV5 Company



Walker Owen, P.E.
Project Manager



City of Alachua

MIKE DAROZA
CITY MANAGER

PLANNING & COMMUNITY DEVELOPMENT
DIRECTOR KATHY WINBURN

June 24, 2024

Sent by electronic mail to walkero@chw-inc.com

Walker Owen, P.E.
Causseaux, Hewett, & Walpole, Inc.
11801 Research Drive
Alachua, FL 32615

RE: Project Assistance Team (PAT) Summary: Patel Fuel & Retail Site Plan Application

Dear Mr. Owen:

On June 3, 2024, the City of Alachua received your revised application for a Site Plan submitted on behalf of Semoj 13, LLC for the Patel Fuel & Retail project. The application proposes the construction of a ±8,836 square foot convenience store and retail building and gasoline fueling station on a ±2.14 acre subject property located southeast of the intersection of NW US Highway 441 and NW 59th Terrace (Tax Parcel Number 05885-010-014).

The application has been reviewed by the City's Project Assistance Team (PAT). Upon review of the application and materials, the following insufficiencies must be addressed. A meeting to review these comments may be scheduled upon request.

Please address all insufficiencies in writing and provide an indication as to how they have been addressed by **5:00 PM on Tuesday, July 9, 2024**. A total of four (4) copies of the application package and a digital copy of all materials in PDF format on a CD or sent by emailing a Cloud / FTP link must be provided by this date.

Please address the following:

1. Article 4, Use Regulations

- a. Driveways do not comply with Section 4.3.4(J)(6)(c)(ii) which requires methods of ingress/egress to not exceed 40 feet in width. Please address and provide a measurement of the ingress/egress widths, not inclusive of transitions (flares).

2. Article 6, Development Standards

- a. Section 6.1., Off-Street Parking and Loading Standards
 - i. The parking standard utilized on the plans is 1 space / 330 square feet of floor area for all building area. The parking standard for gasoline sales is 1 space / 350 square feet of floor area. Revise accordingly.
 - ii. Please identify the parking standard used for 1 space / 330 square feet of floor area. For example, the parking standard for sales establishments is 1 space / 305 square

feet of floor area; a restaurant with indoor seating only is 1 space / 100 square feet of floor area.

- iii. While parking calculations will be revised note per Section 6.1.4(B)(5) the maximum number of parking spaces is 125 percent of the minimum number required. Presently the parking calculations note 27 spaces are required. This would result in a maximum number of 34 spaces.
- iv. To demonstrate compliance with Section 6.1.7(A)(1), provide a measurement of the drive aisle located east of the building.
- b. Section 6.2, Landscaping Standards
 - i. The landscape plan notes 21 canopy trees and 11 understory trees are required for the parking area perimeter requirement. 21 canopy trees are not provided surrounding parking areas. There are some canopy trees to the west of the parking located on the west end of the site and some understory trees in this area, however, the canopy trees are noted to fulfill mitigation requirements. No canopy or understory trees are located along the parking on the north end of the site. Please address.
 - ii. Interior parking area landscape requirements are not met. The landscape plan notes 17 trees are required, however only 3 trees are provided (and not being credited for mitigation).
 - iii. Section 6.2.2(D)(2)(iii)c. requires tree islands at the end of parking bays. Several trees within islands at the end of parking bays are noted as mitigation trees. Please address.
 - iv. A retaining wall is proposed within the south perimeter buffer. Per Section 6.2.2(D)(3)(f)(i) a perimeter buffer shall not contain any development, impervious surfaces, or site features that do not function to meet the perimeter buffer requirements.
 - v. Section 6.2.3(B) requires screening of waste receptacles. Screening detail is not provided.
 - vi. Section 6.2.3(E) requires screening along arterial frontages. This is applicable to the north property line, which is adjacent to the US 441 right of way. Provide arterial screening and calculations in accordance with Section 6.2.3(E).
 - vii. Sheet CO.22: Insufficient detail provided on Tree Protection Detail to meet the requirements of Section 6.2.1(D)(2).
- c. Section 6.3, Fencing Standards
 - i. A 4 foot chain link fence is proposed surrounding the stormwater basin. Per Section 6.3.4(A)(4) chain link fencing is not permitted within 50 feet of an arterial road. Additionally, Section 6.3.5(B) prohibits chain link when visible from a public right of way.
- d. Section 6.4, Exterior Lighting Standards
 - i. The maximum height of light fixtures is 15 feet per Section 6.4.5(A). Light detail on Sheet P3 notes to bury pole to get a 30 foot mounting height. Please address.
 - ii. Section 6.4.6(A) requires lighting for canopies for service stations and other similar uses to not exceed an average of 12 footcandles as measured at ground level at the inside of the outside edge of the canopy. Data is provided for a 10 foot zone around the canopy. Provide data to confirm that the average light level surrounding the inside of the outside edge of the canopy shall not exceed 12 footcandles.

- e. Section 6.5, Signage
 - i. Note signage is not reviewed or approved through the site plan process. A separate sign permit shall be required and compliance shall be reviewed at that time.
 - f. Section 6.8, Design Standards for Business Uses
 - i. Section 6.8.2(A)(2)(b)(i) requires street-facing facades to incorporate wall offsets or a defined alternative. The west elevation faces NW 59th Terrace. Provide wall offsets or approved alternatives for the west elevation.
 - ii. Section 6.8.2(A)(2)(c) requires a minimum of 25 percent of the materials utilized for each side facade and the rear façade shall be the same as the materials utilized for the front or street-facing façade(s). The proposed south elevation is entirely comprised of metal. Revise to provide a minimum of 25% of the materials used in the front/street-facing facades (stucco/EIFS and/or stone veneer).
 - iii. Section 6.8.2(C)(1) requires interconnectivity between business uses through either the extension of a public or private street or through joint use of driveways and cross access agreements among adjoining properties to allow circulation between sites. Cross access between developments must be configured to provide safe and convenient interconnectivity. A stub to the property to the east of the development will be required.
3. Public Services / Fire Rescue / Engineering Review Comments
 - a. The applicant must address all comments provided by the Public Services Department in a memorandum dated June 24, 2024.
 - b. The applicant must address the comments provided by Tim Boehlein, PE, of JBPro, in a letter dated June 18, 2024.
 4. Traffic Impact Analysis
 - a. The City has engaged Volkert to review the traffic impact analysis. Review comments are forthcoming and will be provided to the applicant once received.
 5. Land Rights
 - a. Note regarding Land Rights: All easements in favor of the City and any deeds transferring property to the City will need to be executed and recorded prior to issuance of a building permit. As such, all legal descriptions and sketches for easements and property to be deeded to the City need to be submitted to the City's Compliance and Risk Management Department in a timely manner, prior to execution and recording of the land rights documents. Please submit all documents to Anne-Marie DiRocco at: an_dirocco@cityofalachua.org and Corey King at: cking@cityofalachua.org, in the Compliance and Risk Management Department."
 6. Environmental Resources Assessment Report
 - a. The report notes that a gopher tortoise survey should be conducted at a later date. Staff will propose a condition requiring a 100% gopher tortoise survey to be completed prior to the commencement of construction and in accordance with the Florida Fish & Wildlife Conservation Commission guidelines.

- b. The report notes that further field review and habitat assessment is needed to confirm the likelihood of the presence of listed faunal species. Please submit documentation addressing this recommendation.

7. Concurrency Impact Analysis

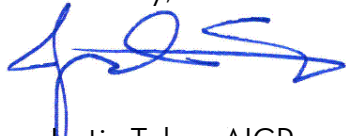
- a. The Concurrency Impact Analysis submitted with the application uses data from the March 2024 Development Monitoring Report. The most recent Development Monitoring Report is dated May 2024. Please revise the Concurrency Impact Analysis to use the most recent data.
- b. The correct ITE Code for Convenience Store/Gas Station is 945.
- c. Please clarify trip generation for the convenience store/gas station is not based upon square footage but rather the number of fueling stations.
- d. Please ensure transportation data in the Concurrency Impact Analysis is consistent with the Traffic Impact Analysis.

8. Miscellaneous

- a. The site is configured for fuel deliveries to be made using NW 59th Terrace. This roadway is presently not designed to accommodate heavy vehicles such as fuel tankers. In order to accommodate such traffic NW 59th Terrace must be improved from the intersection of US Highway 441 to the south property line of the subject property to accommodate such vehicular traffic.
- b. Please identify the number of fueling stations on the plans.
- c. Ensure base layers are correct throughout all trades. Base layer of photometric plan is not the current configuration of the area east of the building.

If you have any questions regarding the information above, please contact me at 386-418-6100 x 1602 or via e-mail at jtabor@cityofalachua.com. We look forward to receiving your revised application.

Sincerely,



Justin Tabor, AICP
Principal Planner

Attachments

- c: Mike DaRoza, City Manager *(by electronic mail)*
Rodolfo Valladares, P.E., Assistant City Manager *(by electronic mail)*
Kathy Winburn, Planning & Community Development Director *(by electronic mail)*
Adam Hall, AICP, Principal Planner *(by electronic mail)*
Carson Crockett, Planner *(by electronic mail)*
Project File



City of Alachua

MIKE DAROZA
CITY MANAGER

RODOLFO VALLADARES, P.E.
ASS'T CITY MANAGER

INTER-OFFICE COMMUNICATION

DATE: June 24th, 2024

TO: Kathy Winburn, AICP
Planning & Community Development Director

FROM: Michael Carrillo, P.E.
Public Services Director
Tom Ridgik, P.E.
Engineering Supervisor

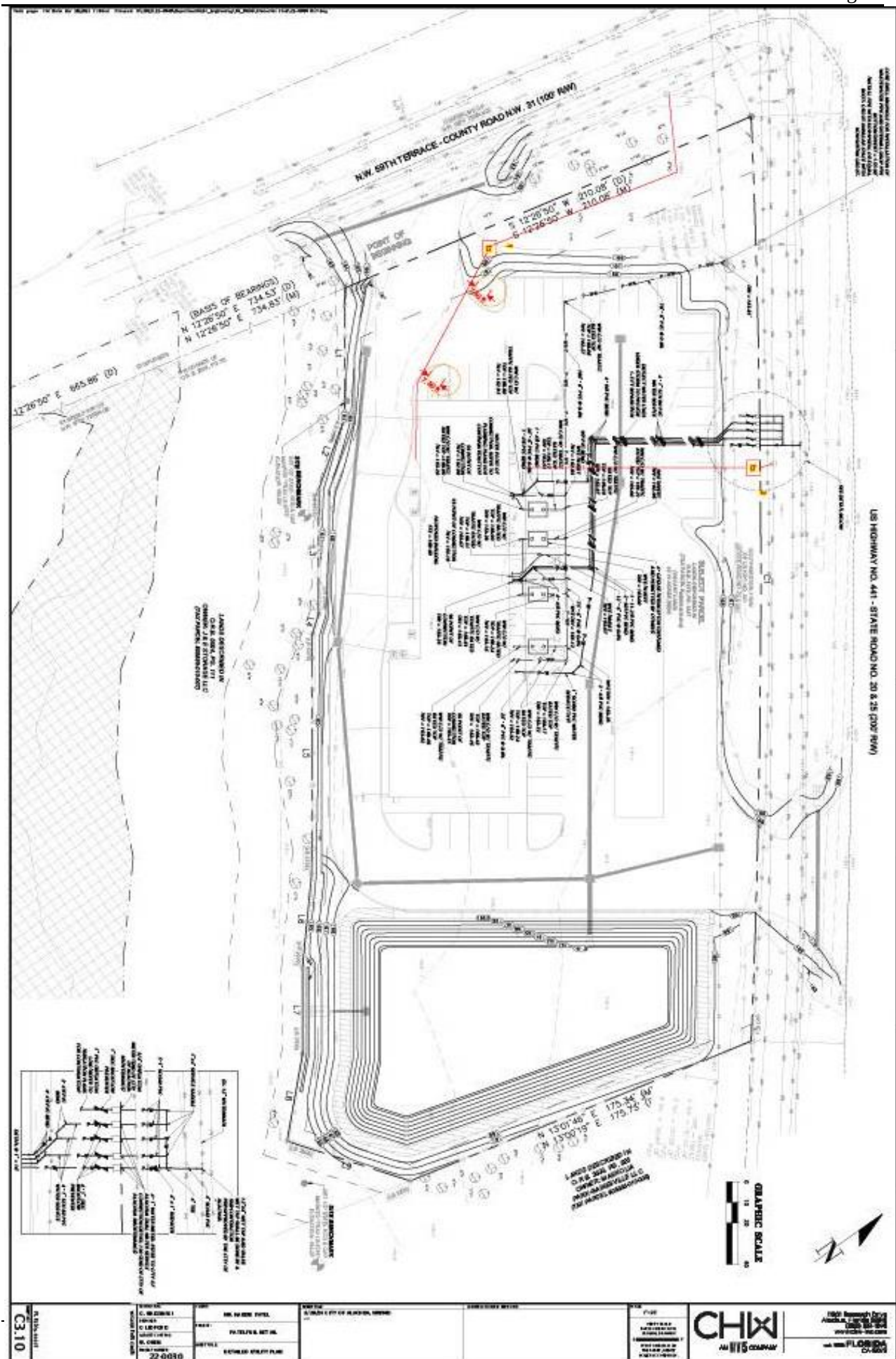
RE: Patel Fuel & Retail Application

Public Services has reviewed the subject project (June Submittal) and offer the following comments. Review was specific to the Public Services Utilities.

NO.	COMMENTS
1	Comment on June 5th Submittal: Meaning of Conditional Approval Please address the following comments. Rather than submitting a complete hard copy set, the design engineer has the option of (1) to instead forward to Public Services by email the revised pdf of this sheet. (Public Services contact is Tom Ridgik, th_ridgik@cityofalachua.org) or (2) to provide a link so Public Services can download the complete PDF set. Public Services would then review this sheet, presumably approve it and so notify the Planning Department.) FYI
2	Comment on June 5th Submittal: Sheet EX.XX Please include electrical drawings for proposed electric that will be maintained by the city. Include transformer specs and details. Please resubmit this sheet

NO.	COMMENTS
3	Comment on June 5th Submittal: Sheet C1.20 & C2.30 Duplicate details for handicap parking and bollard, remove duplicates and include Alachua Details when applicable (Detail 404A-D) Please resubmit this sheet
4	Comment on June 5th Submittal: Sheet C2.30 Add City of Alachua details 115, 121, 130, 127, 149, 209, 210, 215, 227, 307, 330, and relevant electrical details (COA details 500 series) Provide detail for internal drop pipe if external drop pipe is not an option. Internal drop pipe will have to be reviewed by the Public Services Director. Please resubmit this sheet
5	Comment on June 5th Submittal: Sheet C3.10 Possible alternate location for the proposed transformer and underground electric. New location avoids proximity to proposed trees. See markup. Please resubmit this sheet
6	Comment on June 5th Submittal: Sheet C3.10 Call out end of city maintenance on electric and wastewater (water is already called out) Please resubmit this sheet
7	Comment on June 5th Submittal: Sheet C3.10 The 4" tap off the 12" water main should be DI instead of SCH40 PVC, referencing AWWA C900. Please resubmit this sheet
END OF COMMENTS	

Please advise if you have any questions or require additional information.
cc: Justin Tabor – AICP Principal Planner
Adam Hall – AICP Principal Planner



June 18, 2024

Mr. Justin Tabor
Principal Planner
City of Alachua
Office of Planning & Community Development
P.O. Box 9 Alachua, FL 32616-0009

Re: Patel Fuel & Retail Site Plan

Dear Mr. Tabor:

As you requested, we have reviewed the submittal drawings and other materials provided to us for the above referenced project. Our review generated the following comments and recommendations that are outlined below.

Stormwater Management

1. Although a 10-2 was filed, a stormwater report is still required for review. Please provide for review.

C0.00 – Cover Sheet

1. Please verify parking calculations. It appears that there are 41 spaces + 4 ADA spaces.

C0.21 – Stormwater Pollution Prevention Plan

1. There is a portion of silt fence along US-441 on the Northeast portion of the site which does not seem necessary.
2. There is grading past silt fence and off the property on the Southwest portion of the site.

C0.30 – Demolition Plan

1. At the driveway connection to NW 59th Terrace, there is a 10" hack which is located within the grading limits and very close to the proposed stormwater pipe. This tree will likely need to be removed.
2. At the wastewater connection, there is a 16" pine tree which appears to be on top of the structure. Given the depth at which the sewer connection will be installed, it is likely roots would be damaged.

C2.10 – Detailed Grading and Drainage Plan

1. Several stormwater pipes have a low amount of cover. Particularly the pipe leaving S-3 will need to be lowered. Please confirm that all pipes have adequate cover.
2. Structures S-05, S-06, S-07, and S-08 have tops below the DHW and shall be raised to avoid flooding within the parking lot.
3. Recommend adding energy dissipation device to S-14 to avoid erosion.
4. Will the canopy for the gas pumps have a stormwater connection? If so, please provide downspout locations.
5. Behind the building, the curb will be trapping water. There is a 168.67 EP spot, which would put the top of curb at 169.17, and thus above FFE. Additionally, there are several

168.50 spots on the rear of the building. This would also push water back towards the building in several instances.

6. Please provide grades for AC Condenser pads.
7. Please note there is a spot elevation missing at the Southern corner of the FDOT Driveway connection

C2.20 – Stormwater Management Facility Plan and Details

1. Per SRWMD standards, 12" of freeboard shall be provided. The current pond is just under 12".
2. Per SRWMD standards, The pond must be designed so that the average pond side slope measured between the control elevation and two feet below the control elevation is no steeper than 3:1. Once two feet below the PPV, you may slope at 2:1.
3. Cross section shows that maintenance path shall be at an elevation of 169.00. If this is the intent, show 169 contour on plans. Grading may need to be revised if this is the intent.
4. Revise Existing grade label.
5. Note to sod 4:1 backslope as well as the basin side slopes.
6. Bottom of pond would not be seeded for a wet pond.

C2.30 – Construction Details

1. ADA Details are duplicated.

C3.10 – Detailed Utility Plan.

1. Grease interceptors are said to be designed by others. Please provide these calculations and details once available to confirm sizing.
2. Cleanouts shall be removed from the ADA ramp where possible.

C4.10 – Off Site Improvements Plan

1. Provide additional grades on the bicycle lane to demonstrate cross slope.
2. Defer to FDOT for work within their right of way, however typically a 5' unpaved shoulder of 6% or less shall be provided. Recommend adding this to avoid the drop-off this close to the driveway.

Sincerely,



Timothy J. Boehlein, PE
Project Manager, JBPro



City of Alachua

MIKE DAROZA
CITY MANAGER

PLANNING & COMMUNITY DEVELOPMENT
DIRECTOR KATHY WINBURN, AICP

June 5, 2024

Sent by electronic mail to walkero@chw-inc.com

Walker Owen, P.E.
Causseaux, Hewett, & Walpole, Inc.
11801 Research Drive
Alachua, FL 32615

RE: Second Completeness Review: Patel Fuel & Retail Site Plan Application

Dear Mr. Owen:

On June 3, 2024, the City of Alachua received your revised application for a Site Plan submitted on behalf of Semoj 13, LLC for the Patel Fuel & Retail project. The application proposes the construction of a $\pm 8,836$ square foot convenience store and retail building and gasoline fueling station on a ± 2.14 acre subject property located southeast of the intersection of NW US Highway 441 and NW 59th Terrace (Tax Parcel Number 05885-010-014). The revised application received on June 3, 2024 was submitted to address the completeness review comments issued to you in a letter dated April 2, 2024.

According to Section 2.2.6 of the Land Development Regulations (LDRs), upon receipt of an application, a completeness review shall be conducted to determine that the application contains all the necessary information and materials, is in proper form and of sufficient detail, and is accompanied by the appropriate fee. The Planning Department has reviewed the aforementioned application for completeness and finds that the application is **complete**. The application will now be sent to the City's Project Assistance Team (PAT) for review. Review comments will be provided to you in approximately two (2) weeks.

If you have any questions, please contact me at 386-418-6100 x 1602 or via e-mail at jtabor@cityofalachua.com.

Sincerely,

Justin Tabor, AICP
Principal Planner

c: Mike DaRoza, City Manager *(by electronic mail)*
Rodolfo Valladares, P.E., Assistant City Manager *(by electronic mail)*
Kathy Winburn, Planning & Community Development Director *(by electronic mail)*
Adam Hall, AICP, Principal Planner *(by electronic mail)*
Carson Crockett, AICP Candidate, Planner *(by electronic mail)*
Project File

May 29, 2024

Justin Tabor, AICP
City of Alachua
15100 NW 142nd Terrace
Alachua, FL 32616

RE: Patel Fuel & Retail Site Plan Application

Dear Justin:

Please find attached the following items to address your comments from April 2, 2024:

- Signed and Sealed Fire Flow Memo
 - Concurrency Impact Analysis Report
 - Comprehensive Plan Consistency Analysis Report
 - Mailing Labels for all Property Owners within 400 Feet
 - Neighborhood Workshop Package
 - Traffic Impact Analysis
 - Revised Signed and Sealed Development Plans
 - Revised Signed and Sealed Landscape Plans
1. Site Plan Application Attachment #1 – Site Plan:
- a. Attachment #1.d.: Vicinity Map (Location Map) does not identify the location of all adjacent properties.
 - **Parcel lines have been added to the Vicinity Map, please refer to revised Sheet C0.00.**
 - b. Attachment #1.n.: Location of electric system infrastructure is not shown on the plans.
 - **Electric system infrastructure has been added to the plans. Please refer to Sheet C3.10.**
 - c. Attachment #1.q.: Location of all proposed PUEs are not shown on the plans.
 - **PUEs have been added to the plans. Please refer to Sheet C3.10.**
 - d. Attachment #1.y.: Landscape Plan.
 - i. Subsection i.: Plans do not identify the species of each existing tree by common and scientific names.
 - **Existing tree legend has been added which provides common and scientific names for all abbreviations used in the plan view. Please refer to LS-2.**
 - ii. Subsection x.: Plans do not identify the species of each tree proposed for removal by common and scientific names.
 - **Trees requiring mitigation have been identified and the common and scientific names have been provided in the 'Tree Mitigation/Demolition List' Table on LS-1. For the common and scientific name of all trees not requiring mitigation, please refer to the existing tree legend.**
 - iii. Subsection x.: Plans do not identify new trees proposed to fulfill mitigation requirements.
 - **Tree mitigation calculations have been provided which identify the new trees proposed to fulfill mitigation requirements.**

- e. Attachment #1.z.: Plans do not show the location of waste receptacles and the screening of the receptacles.
 - **A dumpster enclosure has been added east of the proposed building. Please refer to C1.10 for the location of the dumpster enclosure.**
- 2. Site Plan Application Attachment #3 – Fire Department Supply and Water Access: Fire flow calculations and demonstration of available flow were not submitted with the application.
 - **A fire flow memo is attached.**
- 3. Site Plan Application Attachment #4 – Concurrency Impact Analysis: A Concurrency Impact Analysis was not submitted with the application.
 - **A concurrency impact analysis report is attached.**
- 4. Site Plan Application Attachment #5 – Comprehensive Plan Consistency Analysis: An analysis of the application's consistency with the City's Comprehensive Plan was not submitted with the application.
 - **A comprehensive plan consistency analysis report is attached.**
- 5. Site Plan Application Attachment #6 – Mailing Labels: Mailing labels for property owners within 400 feet of the subject property are not applicable to this project. Verify parcels within 400 feet and submit new mailing labels.
 - **A new neighborhood workshop was performed and a revised neighborhood workshop package is attached with the correct mailing labels.**
- 6. Site Plan Application Attachment #7 – Mailed Notice: List of property owners within 400 feet of the subject property are not applicable to this project. Verify correct mailed notice of the neighborhood meeting was sent and submit the correct notice list. If the list provided with the application is in fact those who received notice, an additional neighborhood meeting shall be required with notice sent to property owners within 400 feet of the subject property.
 - **A new neighborhood workshop was performed and a revised neighborhood workshop package is attached with updated address labels.**
- 7. Site Plan Application Attachment #11 – Traffic Impact Analysis: A Traffic Impact Analysis shall be required for this project and was not submitted with the application.
 - **A traffic impact analysis was conducted and is attached.**
- 8. Site Plan Application Attachment #12 – Environmental Assessment/Study: At a minimum, an environmental assessment of the subject property is required as wetlands/flowing water bodies exist proximate to the subject property. City Staff reserves the right to require a formal environmental study upon receipt and review of the environmental assessment.
 - **As previously coordinated via phone call with Justin Tabor, Walker Owen and Gerry Dedenbach; the Environmental Resources Assessment that was performed for the purchase of this property has been provided. Additionally, the prior environmental report performed on this property from 2005 has also been provided.**
- 9. Site Plan Application Attachment #13 – Environmental Resource Permit (ERP): Submit documentation that confirms an application for an ERP has been submitted to Suwannee River Water Management Permit.

- An ERP submittal is not required for this project. A 10-2 application will be submitted to Suwannee River Water Management District and is attached.

10. Site Plan Application Attachment #15 – Access Management Permit: Submit documentation that confirms an application for an Access Management Permit has been submitted to the Florida Department of Transportation.

- The TIA methodology was developed in coordination with FDOT, and the project submittal to FDOT is in progress. Documentation of submittal to FDOT will be provided upon completion.

We trust you will find this submittal to be complete for review and approval. If you have any questions, or need additional information, please contact me at (352) 331-1976 or via email at walker.owen@nv5.com

Sincerely,
CHW, an NV5 Company



Walker Owen, P.E.
Project Manager



City of Alachua

MIKE DAROZA
CITY MANAGER

PLANNING & COMMUNITY DEVELOPMENT
DIRECTOR KATHY WINBURN

April 2, 2024

Sent by electronic mail to walkero@chw-inc.com

Walker Owen, P.E.
Causseaux, Hewett, & Walpole, Inc.
11801 Research Drive
Alachua, FL 32615

RE: Completeness Review: Patel Fuel & Retail Site Plan Application

Dear Mr. Owen:

On March 28, 2024, the City of Alachua received your application for a Site Plan submitted on behalf of Semoj 13, LLC for the Patel Fuel & Retail project. The application proposes the construction of a ±8,836 square foot convenience store and retail building and gasoline fueling station on a ±2.14 acre subject property located southeast of the intersection of NW US Highway 441 and NW 59th Terrace (Tax Parcel Number 05885-010-014).

According to Section 2.2.6 of the Land Development Regulations (LDRs), upon receipt of an application, a completeness review shall be conducted to determine that the application contains all the necessary information and materials, is in proper form and of sufficient detail, and is accompanied by the appropriate fee. The Planning Department has reviewed the aforementioned application for completeness and finds that **the application is incomplete** and the following information is needed to begin the review of the application. Please address the following deficiencies no later than **5:00 PM on Tuesday, April 9, 2024**.

In accordance with Section 2.2.6(B) of the LDRs, the applicant must correct the deficiencies and resubmit the application for completeness determination. *Plans and application materials may be made available for return in order to revise and resubmit as needed.*

The time frame and cycle for review shall be based upon the date the application is determined to be complete. If the applicant fails to respond to the identified deficiencies within forty-five (45) calendar days, the application shall be considered withdrawn.

Please note that if an additional completeness review is required, a resubmittal fee equal to 10% of the application fee will be assessed for each additional completeness review and must be paid prior to further review of the application.

The comments below are based solely on a preliminary review of your application for completeness. An in-depth review of the content of the application will be performed, and the findings of the in-depth review will be discussed at a Project Assistance Team (PAT) Meeting, which will be sent under separate cover and subsequent to a determination of completeness.

In order to provide a complete application, please address the following:

1. **Site Plan Application Attachment #1 – Site Plan:**
 - a. *Attachment #1.d.:* Vicinity Map (Location Map) does not identify the location of all adjacent properties.
 - b. *Attachment #1.n.:* Location of electric system infrastructure is not shown on the plans.
 - c. *Attachment #1.q.:* Location of all proposed PUEs are not shown on the plans.
 - d. *Attachment #1.y.:* Landscape Plan.
 - i. *Subsection i.:* Plans do not identify the species of each existing tree by common and scientific names.
 - ii. *Subsection x.:* Plans do not identify the species of each tree proposed for removal by common and scientific names.
 - iii. *Subsection x.:* Plans do not identify new trees proposed to fulfill mitigation requirements.
 - e. *Attachment #1.z.:* Plans do not show the location of waste receptacles and the screening of the receptacles.
2. **Site Plan Application Attachment #3 – Fire Department Supply and Water Access:** Fire flow calculations and demonstration of available flow were not submitted with the application.
3. **Site Plan Application Attachment #4 – Concurrency Impact Analysis:** A Concurrency Impact Analysis was not submitted with the application.
4. **Site Plan Application Attachment #5 – Comprehensive Plan Consistency Analysis:** An analysis of the application’s consistency with the City’s Comprehensive Plan was not submitted with the application.
5. **Site Plan Application Attachment #6 – Mailing Labels:** Mailing labels for property owners within 400 feet of the subject property are not applicable to this project. Verify parcels within 400 feet and submit new mailing labels.
6. **Site Plan Application Attachment #7 – Mailed Notice:** List of property owners within 400 feet of the subject property are not applicable to this project. Verify correct mailed notice of the neighborhood meeting was sent and submit the correct notice list. If the list provided with the application is in fact those who received notice, an additional neighborhood meeting shall be required with notice sent to property owners within 400 feet of the subject property.
7. **Site Plan Application Attachment #11 – Traffic Impact Analysis:** A Traffic Impact Analysis shall be required for this project and was not submitted with the application.
8. **Site Plan Application Attachment #12 – Environmental Assessment/Study:** At a minimum, an environmental assessment of the subject property is required as wetlands/flowing water bodies exist proximate to the subject property. City Staff reserves the right to

require a formal environmental study upon receipt and review of the environmental assessment.

9. **Site Plan Application Attachment #13 – Environmental Resource Permit (ERP):** Submit documentation that confirms an application for an ERP has been submitted to Suwannee River Water Management Permit.
10. **Site Plan Application Attachment #15 – Access Management Permit:** Submit documentation that confirms an application for an Access Management Permit has been submitted to the Florida Department of Transportation.

If you have any questions regarding the information above, please contact me at 386-418-6100 x 1602 or via e-mail at jtabor@cityofalachua.com.

Sincerely,



Justin Tabor, AICP
Principal Planner

- c: Mike DaRoza, City Manager *(by electronic mail)*
Kathy Winburn, Planning & Community Development Director *(by electronic mail)*
Adam Hall, AICP, Principal Planner *(by electronic mail)*
Carson Crockett, AICP Candidate, Planner *(by electronic mail)*
Hardik Patel, Semoj 13 LLC
Project File

Patel Fuel Retail – Cover Letter

JOB NO. 22-0030



March 28, 2024

City of Alachua
Planning and Community Development
15100 NW 142 Terrace
Alachua, FL 32615

RE: Patel Fuel Retail

Dear Staff:

Please find attached the following items for review:

- Four (4) copies of the following:
 - Check #102 in the amount of \$2,700.00
 - Authorized Agent Affidavit
 - Site Plan Application
 - Warranty Deed
 - Property Appraiser Information
 - Proof of Tax Payment
 - Division of Corporations Information
 - Neighborhood Workshop Package
 - Legal Description
 - Meter Sizing Calculations
 - Signed and Sealed 24x36 Plan Set
- Two (2) copies of the following:
 - Stormwater Report
- One (1) copy of the following:
 - Mailing labels for all property owners within 400 feet

The Patel Fuel Retail project proposes the construction of a fuel station with associated retail space, access roadways, parking, and stormwater management facilities. The proposed site is located on the southeast corner of US HWY 441 and NW 59th Terrace in Alachua, FL. The project site is ±2.14 acres located in Section 27, Township 08 South, Range 19 East of Alachua County, FL on tax parcel ID #05885-010-014.

We trust you will find this submittal to be complete for review and approval. If you have any questions, or need additional information, please contact me at (352) 331-1976 or via email at walkero@chw-inc.com.

Sincerely,
CHW

A handwritten signature in black ink, appearing to read 'Walker Owen'.

Walker Owen, PE
Project Manager

N:\2022\22-0030\Departments\04_Engineering\01_Regulatory Permitting\Municipalities\City\Submittals and Comments\2402XX
Submittal\LTR 240328 Patel Fuel Retail - Cover Letter.docx

SITE PLANS

FOR:

PATEL FUEL RETAIL

ALACHUA COUNTY, FLORIDA

SECTION 27, TOWNSHIP 8 SOUTH, RANGE 19 EAST

SUBMITTED TO:

SUWANNEE RIVER WATER MANAGEMENT DISTRICT
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
FLORIDA DEPARTMENT OF TRANSPORTATION
CITY OF ALACHUA

SURVEYOR OF RECORD

CLINTON N. RICKNER, P.L.S.
CHW
11801 RESEARCH DRIVE
ALACHUA, FL 32615
(352) 331-1976

LANDSCAPE ARCHITECT

JOHN MICHAEL SIMPSON, L.A.
CHW
11801 RESEARCH DRIVE
ALACHUA, FL 32615
(352) 331-1976

OWNER/DEVELOPER

SEMOJ 13 LLC
3612 SW 106TH ST.
GAINESVILLE, FL 32608

PHOTOMETRIC

BILL STORMANT, PE
5304 NW 173 ST.
ALACHUA, FL. 32615
STORMANTWT@COX.NET

ENGINEER OF RECORD

WALKER OWEN, P.E.
CHW
11801 RESEARCH DRIVE
ALACHUA, FL 32615
(352) 331-1976

GENERAL NOTES

- DEVELOPMENT DATA:
OVERALL SITE AREA= 93,331 S.F. 100.0% 2.14 ACRES
BUILDING FOOTPRINT AREA= 8,836 S.F. 9.5%
CONC./PAVE AREA= 44,380 S.F. 47.6%
TOTAL IMPERVIOUS AREA= 53,216 S.F. 57.0%
OPEN AREA= 40,115 S.F. 43.0%
DESCRIPTION: THE PROPOSED DEVELOPMENT IS THE CONSTRUCTION OF A FUELING STATION WITH A CONVENIENCE STORE WITH THREE SHELL RETAIL SPACES, AND ASSOCIATED PAVEMENT FOR DRIVEWAYS AND PARKING, SIDEWALK, UTILITIES, AND A STORMWATER MANAGEMENT FACILITY.
- MINIMUM BUILDING / YARD SETBACKS PER COMMERCIAL INTENSIVE ZONING ARE AS FOLLOWS:
PRIMARY BUILDING (CI)
FRONT: 20'
SIDE: NONE
REAR: 15'
MINIMUM LOT AREA NONE
MINIMUM LOT WIDTH NONE
MAX BUILDING HEIGHT 65'
MAX LOT COVERAGE NONE
PROPOSED FAR 0.09
- PARKING CALCULATIONS:
GAS SALES: 1 SPACE PER 350 SQ. FT. FLOOR AREA
RESTAURANT: 1 SPACE PER 100 SQ. FT. FLOOR AREA
SALES ESTABLISHMENT: 1 SPACE PER 305 SQ. FT. FLOOR AREA
GAS SALES: 3,823 SQ. FT. / 350 SQ. FT. = 11 SPACES
RESTAURANT: 1,692 SQ. FT. / 100 SQ. FT. = 17 SPACES
SALES ESTABLISHMENT: 1,664 SQ. FT. / 305 SQ. FT. = 5 SPACES
SALES ESTABLISHMENT: 1,664 SQ. FT. / 305 SQ. FT. = 5 SPACES
TOTAL REQUIRED: MINIMUM 38 SPACES
PROVIDED: 48 SPACES TOTAL
ACCESSIBLE SPACES:
REQUIRED = 2
PROVIDED = 4
BICYCLE: 1 SPACE/10 CAR SPACES = 48 / 10 = 4.8 SPACES REQUIRED;
6 SPACES PROVIDED
- DATE OF BOUNDARY SURVEY:
A BOUNDARY SURVEY WAS COMPLETED BY CHW DATED JANUARY 18, 2024 AND REVISED JULY 1, 2024.
- UTILITIES:
-POTABLE WATER AND FIRE SERVICE WILL BE PROVIDED BY CITY OF ALACHUA.
-SANITARY SEWER SERVICE WILL BE PROVIDED BY CITY OF ALACHUA.
-ELECTRIC SERVICE WILL BE PROVIDED BY CITY OF ALACHUA.
-GAS SERVICE WILL BE PROVIDED BY GRU.
- DRAINAGE:
AN ON-SITE STORMWATER COLLECTION SYSTEM WILL BE CONSTRUCTED AND CONNECT TO A PROPOSED STORMWATER MANAGEMENT FACILITY. THE FACILITY MEETS CITY OF ALACHUA AND SRWMD DESIGN CRITERIA. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR OPERATION AND MAINTENANCE OF ALL COMPONENTS OF THE STORMWATER SYSTEM.
- NATURAL FEATURES:
TOPOGRAPHY SLOPES FROM NORTH TO SOUTH WITH MODERATE SLOPES. THERE ARE NO ON-SITE WETLANDS.
- ZONING/LAND USE INFORMATION AND COMPLIANCE:
ZONING DISTRICT = COMMERCIAL, INTENSIVE COMMERCIAL (CI)
PER ARTICLE 6 OF THE LDRS, THE PROPOSED SITE IS CONSISTENT WITH ALL APPLICABLE DEVELOPMENT STANDARDS. COMPLIANCE WITH THE REQUIRED PARKING CAN BE FOUND IN NOTE 3 ON THIS SHEET. THE SITE IS CURRENTLY WOODED WITH UNDERBRUSH AND THE PROPOSED LANDSCAPING FULFILLS GENERAL, MITIGATION, AND BUFFER REQUIREMENTS. A STORMWATER MANAGEMENT SYSTEM WILL BE BUILT WITH THE PROPOSED PROJECT.
- CONCURRENCY IMPACT ANALYSIS:
SUBMITTED UNDER SEPARATE COVER
- LEGAL DESCRIPTION:
REFER TO SURVEY

SHEET INDEX

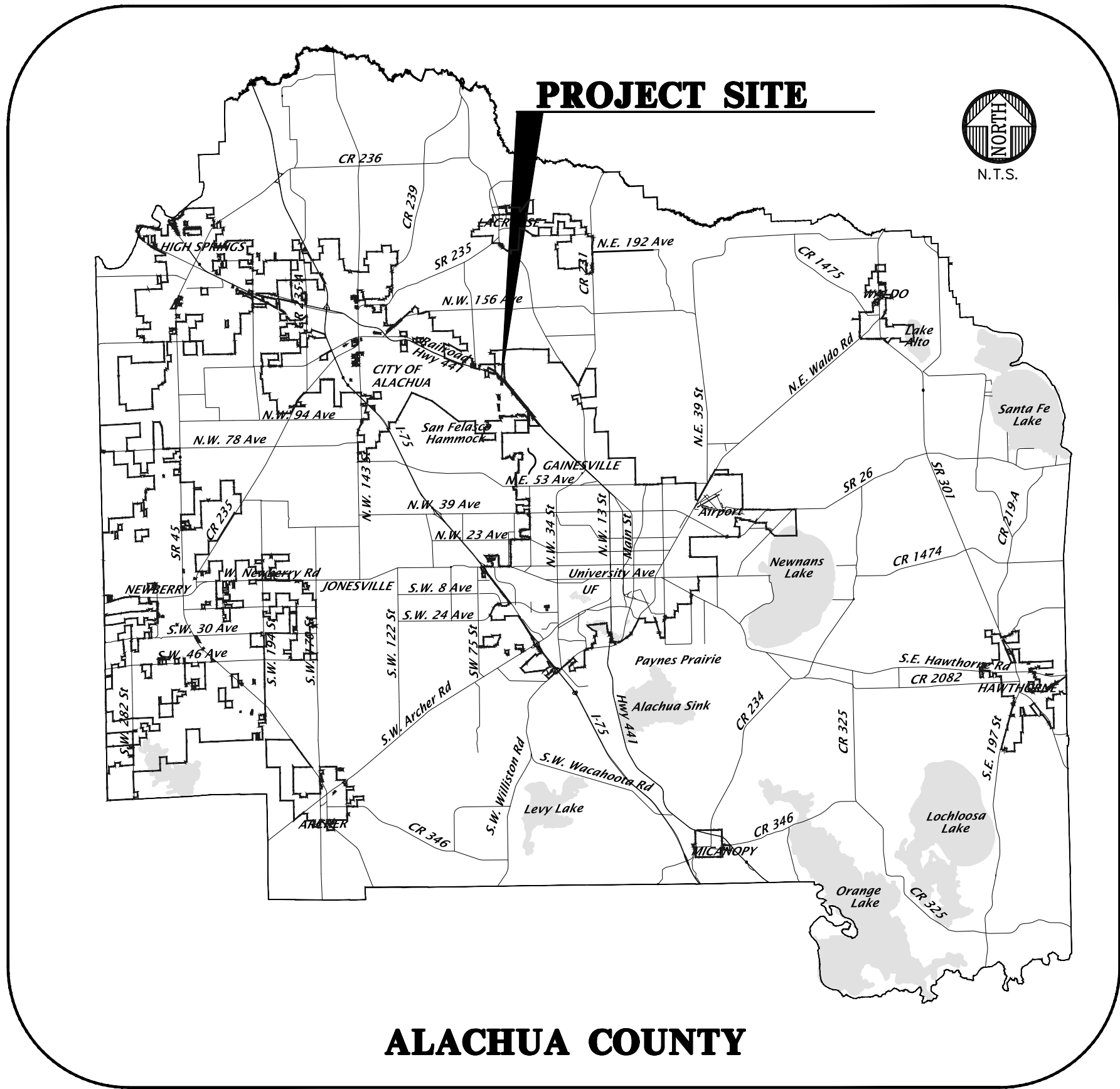
SHEET NUMBER	DESCRIPTION
C0.00	COVER SHEET AND INDEX
C0.10	GENERAL NOTES
C0.11	LEGEND
1 OF 1	SURVEY
C0.20	STORMWATER POLLUTION PREVENTION NOTES
C0.21	STORMWATER POLLUTION PREVENTION PLAN
C0.22	STORMWATER POLLUTION PREVENTION DETAILS
C0.30	DEMOLITION AND TREE PROTECTION PLAN
C1.10	DETAILED HORIZONTAL CONTROL AND SITE PLAN
C1.20	ACCESSIBILITY SITE PLAN AND DETAILS
C2.10	DETAILED GRADING AND DRAINAGE PLAN
C2.20	STORMWATER MANAGEMENT FACILITY PLAN AND DETAILS
C2.30	CONSTRUCTION DETAILS
C3.10	DETAILED UTILITY PLAN
C3.20-24	UTILITY DETAILS
C4.10	OFFSITE IMPROVEMENTS
A100	OVERALL FLOOR PLAN
A200	ARCHITECTURAL ELEVATIONS
4 OF 4	CANOPY PLANS
LS-1 - LS-2	LANDSCAPE PLAN(S)
IR-1 - IR-2	IRRIGATION PLAN(S)
P-1 - P-3	PHOTOMETRIC PLANS

BEFORE YOU DIG !
CALL SUNSHINE STATE ONE CALL OF FLORIDA
AT LEAST TWO FULL BUSINESS DAYS BEFORE
DIGGING OR DISTURBING EARTH

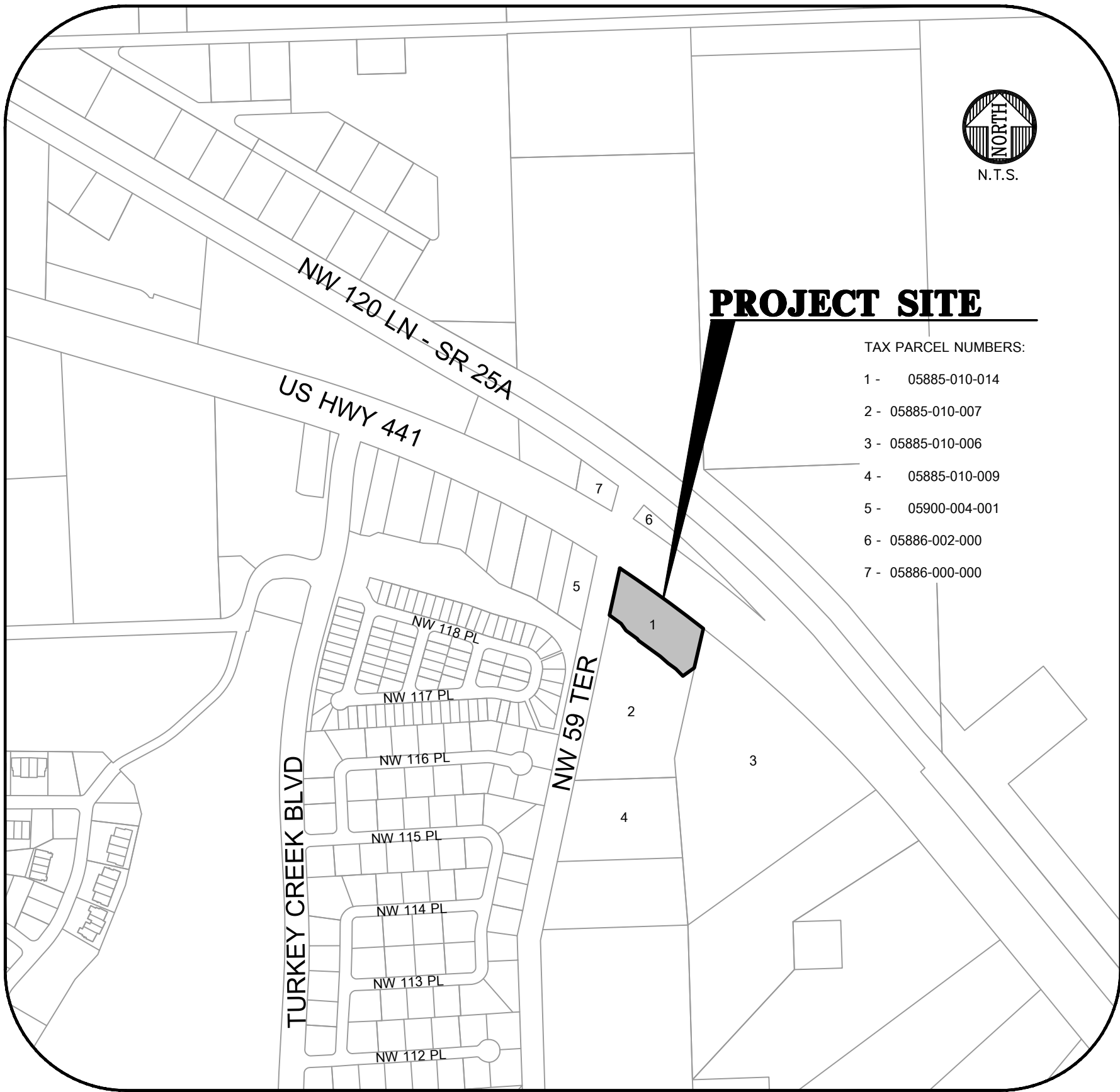
1-800-432-4770

811

Know what's below.
Call before you dig.



ALACHUA COUNTY
LOCATION MAP



VICINITY MAP

11801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com

CHW
AN NVIS COMPANY

SCALE
N/A
VERTICAL SCALE
BASED ON SCALE
OF ORIGINAL DRAWING
0" = 100' (AS SHOWN)
THIS SHEET ADJUST
SCALES ACCORDINGLY.

CONSTRUCTION REVISIONS

DATE
3/28/24 CITY OF ALACHUA, SRWMD
7/09/24 CITY OF ALACHUA
8/09/24 CITY OF ALACHUA, FOOT, SRWMD

CLIENT
MR. HARDIK PATEL
PROJECT
PATEL FUEL RETAIL
SHEET TITLE
COVER SHEET AND INDEX

DESIGNER
G. WARDZINSKI
CHECKER
C. LEDFORD
PROJECT MANAGER
W. OWEN
SHEET NUMBER
22-0030

WALKER FAIN OWEN
Walker Fain Owen
State of Florida, Professional
Engineer, License No. 94201
This item has been
electronically signed and
sealed by Walker Fain Owen,
PE on 08/06/2024 using a
Digital Signature.
Printed copies of this
document are not considered
signed and sealed and the
signature must be verified on
any electronic copies.

FL PE No. 94201
SHEET NO.
C0.00

SHOWN HEREON WERE TAKEN FROM A TOPOGRAPHIC SURVEY PREPARED BY CHW, AND DATED

3. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAS BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ACCURACY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE NECESSARY ARRANGEMENTS FOR ANY RELOCATION OF THESE UTILITIES WITH THE OWNER OF THE UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING ANY UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLANS OR LOCATED BY THE UTILITY COMPANY. THE RESPECTIVE UTILITY COMPANIES SHALL RELOCATE ALL UTILITIES THAT INTERFERE WITH THE PROPOSED CONSTRUCTION. THE CONTRACTOR SHALL COOPERATE WITH THE UTILITY COMPANIES DURING THE RELOCATION OPERATIONS. ANY DELAY OR INCONVENIENCE CAUSED TO THE CONTRACTOR BY THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED.
3. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE APPROPRIATE UTILITY COMPANIES IN ORDER TO ALLOW MARKING OF THE LOCATIONS OF EXISTING UNDERGROUND FACILITIES IN ADVANCE OF CONSTRUCTION BY CALLING THE FLORIDA SUNSHINE STATE ONE-CALL CENTER, INC. AT 1-800-432-4770 OR 811. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY "SUNSHINE" 48 HOURS PRIOR TO ANY CLEARING OF CONSTRUCTION TO IDENTIFY ALL UTILITY LOCATIONS. NO CONSTRUCTION ACTIVITY MAY OCCUR UNTIL THE UTILITIES HAVE BEEN PROPERLY MARKED.
4. THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL LOCATION AND VERTICAL LOCATION OF ALL EXISTING UTILITIES WITHIN THE LIMITS OF THE PROJECT ENVELOPE SHOWN PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL CALL ALL UTILITY COMPANIES TO HAVE THE LOCATIONS OF ALL UTILITIES FIELD MARKED PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONTINUING CONSTRUCTION.
5. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED BY THE CONTRACTOR.
6. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITIONS BEFORE COMMENCING CONSTRUCTION WORK, UNLESS SPECIFICALLY EXEMPTED BY THE PLANS. ADDITIONAL COSTS ARE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION WILL BE ALLOWED.
7. ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK INCLUDING LANDSCAPING.
8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PERMIT AND INSPECTION REQUIREMENTS OF THE VARIOUS GOVERNMENTAL AGENCIES. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION AND SCHEDULE INSPECTIONS ACCORDING TO AGENCY AND/OR MUNICIPALITY INSTRUCTIONS.
9. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND SHALL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. TRENCHES SHALL BE KEPT DRY WHILE PILES ARE BEING PLACED. DEWATERING SHALL BE USED AS REQUIRED, AND PERMITTED THROUGH LOCAL GOVERNMENTAL AGENCIES AND WATER MANAGEMENT DISTRICT PER CURRENT REGULATIONS AT THE SOLE COST OF THE CONTRACTOR.
11. CONTRACTOR TO REVIEW GEOTECHNICAL REPORT AND BORINGS PRIOR TO BIDDING THE PROJECT AND FOLLOW OUTLINED CONSTRUCTION TECHNIQUES.
12. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING APPLICABLE TESTING WITH THE SERVICES OF AN APPROVED TESTING LABORATORY AND/OR SOILS ENGINEER, APPLICABLE REGULATORY AGENCIES, AND AS MAY BE FOUND IN THE ENGINEERING CONSTRUCTION DRAWINGS OR SPECIFICATIONS. CONTRACTOR TO VERIFY ALL TESTING WITH THE OWNER PRIOR TO COMMENCING CONSTRUCTION. UPON COMPLETION OF THE WORK, THE TESTING LABORATORY AND/OR SOILS ENGINEER MUST SUBMIT TO THE OWNER'S ENGINEER CERTIFICATIONS STATING THAT ALL REQUIREMENTS HAVE BEEN MET.
13. INSTALL SILT FENCE PRIOR TO SITE DEMOLITION OR NEW SITE CONSTRUCTION. INSTALL SILT FENCE FOR FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL AND PROVIDE TOE-IN. THE CONTRACTOR SHALL MAINTAIN THE SILT FENCE IN WORKING ORDER THROUGHOUT THE CONSTRUCTION PHASE. THE PROJECT SILT FENCE SHALL BE INSPECTED DAILY AND ANY CORRECTIVE MEASURES SHALL BE COMPLETED WITHIN 24 HOURS.
14. ALL TREE BARRICADES AND SILT FENCING SHALL BE INSTALLED AND INSPECTED BY CITY OF ALACHUA PRIOR TO COMMENCEMENT OF ANY DEMOLITION OR CONSTRUCTION ACTIVITIES.
15. THE CONTRACTOR IS TO PREPARE THE SITE PRIOR TO BEGINNING ACTUAL CONSTRUCTION IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
16. ALL DELETERIOUS MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) IS TO BE EXCAVATED IN ACCORDANCE WITH THESE PLANS OR AS DIRECTED BY THE OWNER'S ENGINEER OR OWNER'S SOIL TESTING COMPANY. DELETERIOUS MATERIAL IS TO BE STOCKPILED AND REMOVED FROM THE SITE. EXCAVATED AREAS ARE TO BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE AREAS.
17. CONTRACTOR SHALL CLEAR AND GRUB ONLY THOSE PORTIONS OF THE SITE NECESSARY FOR CONSTRUCTION. DISTURBED AREAS SHALL BE SODDED, SEED, MULCHED, OR PLANTED WITH OTHER APPROVED LANDSCAPE MATERIAL, AS DIRECTED BY THESE PLANS, IMMEDIATELY FOLLOWING CONSTRUCTION PER LOCAL INSPECTOR.
18. WORK BEING PERFORMED UNDER THIS CONTRACT SHALL INTERFACE SMOOTHLY WITH OTHER WORK BEING PERFORMED ON THE SITE BY OTHER CONTRACTORS AND/OR UTILITY COMPANIES. IT WILL BE NECESSARY FOR THE CONTRACTOR TO COORDINATE AND SCHEDULE HIS ACTIVITIES, WHERE NECESSARY, WITH OTHER CONTRACTORS AND UTILITY COMPANIES.
19. ALL PAVEMENT DIMENSIONS SHOWN ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
20. THE GOVERNING STANDARDS AND SPECIFICATIONS, UNLESS STATED OTHERWISE SHALL BE PER FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD PLANS (FY 2023-24 ROAD CONSTRUCTION), AND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED 2023-2024, AS AMENDED BY CONTRACT DOCUMENTS. ALL MATERIALS AND METHODS SHALL MEET FDOT SPECIFICATIONS AND SHALL BE PRODUCED OR OBTAINED FROM AN FDOT APPROVED SOURCE.
21. ALL NEW TRAFFIC CONTROL DEVICES (SIGNS AND PAVEMENT MARKINGS) SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND FDOT STANDARDS.
22. ALL STRIPING WITHIN THE FDOT RIGHT OF WAY SHALL BE PLACED FIRST AS TEMPORARY STRIPING FOLLOWED BY APPLICATION OF THERMOPLASTIC STRIPING 30 DAYS LATER.
23. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING PROPER BENCHMARKS ON-SITE. EXISTING BENCH MARKS SCHEDULED FOR REMOVAL SHALL BE RELOCATED AT CONTRACTORS EXPENSE AND RE-ESTABLISHED BY A LICENSED SURVEYOR.
24. ALL HANDICAP RAMPS SHALL COMPLY WITH THE FLORIDA ACCESSIBILITY CODE AND AMERICANS WITH DISABILITIES ACT.
25. A PRE-CONSTRUCTION CONFERENCE SHALL BE REQUIRED. THE CONTRACTOR, ENGINEER OF RECORD, AND THE OWNER SHALL MEET WITH THE CITY OF ALACHUA PUBLIC WORKS DEPARTMENT PRIOR TO INITIATION OF SITE CONSTRUCTION.
26. ANY CHANGE ORDER REQUESTS, SITE REVISIONS, AND PAY REQUESTS MUST BE SUBMITTED TO AND APPROVED BY THE ENGINEER OF RECORD.
27. CONTRACTOR IS RESPONSIBLE FOR ALL DEWATERING AS NEEDED THROUGHOUT ALL CONSTRUCTION ACTIVITIES COVERED BY THESE PLANS. DEWATERING SHALL BE DONE IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS, 2018 EDITION, SECTION 120.
28. THE CONTRACTOR IS RESPONSIBLE FOR THE PERFORMANCE AND COST OF ALL CLEARING AND GRUBBING AND ALL WORK OF REMOVAL, DISPOSAL, AND REPAIR OR REPLACEMENT OF EXISTING IMPROVEMENTS WHERE SHOWN IN THE PLANS, OR ORDERED BY THE ENGINEER TO BE REMOVED, OR WHERE REQUIRED BECAUSE OF THE CONSTRUCTION OPERATIONS, IN ORDER TO CONSTRUCT THE PROPOSED IMPROVEMENTS (THIS INCLUDES BUT IS NOT LIMITED TO PROPOSED PIPING, STRUCTURES, UTILITIES, PAVING, CURBING, ETC.).
29. AN AS-BUILT SURVEY MAY BE REQUIRED BY REGULATORY AGENCIES. CONTRACTOR TO COORDINATE WITH PROJECT OWNER FOR COMPLETION OF AS-BUILT SURVEYS PRIOR TO PROJECT / PERMIT CLOSE-OUT.

IS RESPONSIBLE FOR CREATING A MAINTENANCE OF TRAFFIC (MOT) PLAN FOR CONSTRUCTION ACTIVITY OF-WAY, INCLUDING BUT NOT LIMITED TO SIDEWALK WORK AND ACTIVITIES THAT REQUIRE A LANE (OR

- AS CONNECTION TO SEWER MANHOLES AND WATER MAINS. THE MOT PLAN MUST BE CREATED BY A REGISTERED PROFESSIONAL ENGINEER WHO IS CERTIFIED TO DO SO BY THE FDOT MOT CERTIFICATION TRAINING. THE MOT PLAN MUST ALSO BE IN ACCORDANCE WITH FDOT STANDARDS PLANS AND FDOT STANDARD SPECIFICATIONS REQUIREMENTS AND MUST BE REVIEWED AND APPROVED BY THE FDOT AND THE CITY OF ALACHUA.
2. THE CONTRACTOR SHALL SUBMIT THE MOT TO THE APPROPRIATE REGULATORY AUTHORITY PRIOR TO WORK REQUIRING THE MOT FOR APPROVAL. NO WORK IN THE ROW SHALL OCCUR UNTIL THE MOT IS APPROVED.

POSSIBLE TO DISPOSE OF ALL DEMOLITION MATERIALS IN A SAFE AND LAWFUL MANNER. ANY ITEM AS DETERMINED BY THE OWNER. ONCE DEMOLISHED, MATERIALS SHALL BE

- AND IMMEDIATELY.
2. REMOVE ALL IMPROVEMENTS DEFINED ON THE DEMOLITION PLAN. SALVAGE ITEMS TO OWNER AS DEFINED BY THE OWNER'S REPRESENTATIVE AND CONSTRUCTION DOCUMENT SPECIFICATIONS.
3. EXISTING PAVEMENT AND SIDEWALK EDGES THAT BORDER NEW CONSTRUCTION OR DEMOLITION ARE TO BE SAW-CUT TO PROVIDE A SMOOTH TRANSITION.
4. ALL EXISTING TREES ARE TO REMAIN UNLESS OTHERWISE NOTED.
5. ROOTS LARGER THAN 1 INCH IN DIAMETER ON TREES TO BE PRESERVED THAT ARE ENCOUNTERED DURING CONSTRUCTION MUST BE CUT CLEANLY AND COVERED OVER WITH SOIL BY THE END OF THE WORKING DAY.
6. ALL ASPHALT AND LIMEROCK WILL BE COMPLETELY REMOVED FROM AREAS THAT WILL BE LANDSCAPED. IN PARTICULAR, AREAS WHERE ASPHALT WILL BE REMOVED MUST HAVE THE TOP HARD SURFACE, LIMEROCK, AND COMPACTED SOIL REMOVED. REPLACEMENT SOIL SHALL BE CLEAN DEEP FILL OF PH 5.5 - 6.5. THE DEPTH OF UNCOMPACTED SOIL PRIOR TO PLANTING MUST BE AT LEAST 3 FEET TO ACCOMMODATE FUTURE TREE ROOT GROWTH. NO LIMEROCK, LARGE STONES, OR OTHER CONSTRUCTION DEBRIS CAN REMAIN IN AREAS TO BE LANDSCAPED.

CONTRACTOR IS RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL PRACTICES DURING CONSTRUCTION TO MINIMIZE ON-SITE EROSION/SEDIMENTATION AND TO PROTECT AGAINST DAMAGE TO OFF SITE PROPERTY. THE FOLLOWING PRACTICES SHALL BE EMPLOYED:

- A. EROSION AND SEDIMENTATION CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. AREAS OF OFF-SITE DISCHARGE DURING CONSTRUCTION SHALL BE PROTECTED WITH A SEDIMENT BARRIER PER FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL TO PREVENT OFF-SITE DISCHARGE OF SEDIMENTS. A SILT BARRIER SHALL SPECIFICALLY BE REQUIRED, CONSTRUCTED, AND MAINTAINED AS INDICATED ON THIS SHEET. TEMPORARY SEED AND MULCH SHALL BE USED TO CONTROL ON-SITE EROSION WHEN IT IS NOT PRACTICAL TO ESTABLISH PERMANENT VEGETATION. SOD SHALL BE PLACED AS EARLY AS POSSIBLE ON ALL SLOPES STEEPER THAN 5 (FT) HORIZONTAL TO 1 (FT) VERTICAL. SOD SHALL BE PINNED AS REQUIRED. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE MAINTAINED IN WORKING ORDER THROUGHOUT THE CONSTRUCTION PHASE. THE CONTRACTOR SHALL INSPECT AND REPAIR AS NECESSARY THE EROSION/SEDIMENTATION PROTECTION AT THE END OF EACH WORKING DAY.
- B. NOTE: EROSION/SEDIMENTATION CONTROL SHALL BE PLACED PRIOR TO SITE EXCAVATION AND SHALL REMAIN IN PLACE UNTIL SITE VEGETATION AND LANDSCAPING IS COMPLETE.
- C. B. ALL INLET STRUCTURES AND PIPE SHALL BE PROTECTED FROM SILTATION BY CONSTRUCTING INLET PROTECTION AS DEFINED BY THESE PLANS OR IN THE FDOT STANDARDS. IF SILTATION OCCURS, THE CONTRACTOR IS RESPONSIBLE TO REMOVE SILTATION AS PART OF THE BASE CONTRACT AT NO ADDITIONAL COST TO THE OWNER.
- D. C. EXCAVATED STORMWATER FACILITIES SHALL BE CONSTRUCTED AS PART OF THE INITIAL CONSTRUCTION. THE FACILITIES SHALL BE ROUGH GRADED TO THE DESIGN ELEVATIONS. AFTER THE CONTRIBUTING DRAINAGE AREA IS STABILIZED, THE FACILITIES BOTTOM SHALL BE OVER-EXCAVATED BY TWO FEET, SCARIFIED, BACKFILLED WITH ARCHER FILL (HAVING NO MORE THAN 10% PASSING NO. 200 SIEVE), AND GRADED TO FINAL DESIGN GRADES. EXCESS AND UNSUITABLE SOILS SHALL BE REMOVED FROM THE BASIN (REMOVE ALL ACCUMULATED SILTS, CLAYS, ORGANIC, AND DEBRIS). FINALLY, SCARIFY AND RAKE BOTTOM AND VEGETATE.
- E. D. PERMANENT VEGETATIVE STABILIZATION SHALL BE APPLIED ON FINE GRADED SITES AS SOON AS PRACTICAL. TEMPORARY SEEDING SHOULD BE EMPLOYED TO PREVENT EXPOSURE OF BARREN SOILS UNTIL PERMANENT VEGETATION CAN BE APPLIED.
- F. E. ALL SLOPES 1:3 OR STEEPER REQUIRE LAPPED OR PEGGED SOD.
- G. F. EROSION, SEDIMENT AND TURBIDITY CONTROL ARE THE RESPONSIBILITY OF THE CONTRACTOR. THESE DELINEATED MEASURES ARE THE MINIMUM REQUIRED. WITH ADDITIONAL CONTROLS TO BE UTILIZED AS NEEDED, DEPENDENT UPON ACTUAL SITE CONDITIONS AND CONSTRUCTION OPERATION.
- H. G. ALL SYNTHETIC BALES, SILT FENCE, AND OTHER EROSION CONTROL MEASURES SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT.
2. THE CONTRACTOR SHALL MAINTAIN IN HIS POSSESSION A COPY OF THE WATER MANAGEMENT DISTRICT CONSTRUCTION PERMIT. HE SHALL BE RESPONSIBLE FOR ADHERENCE TO ALL CONDITIONS CONTAINED IN THE PERMIT.
3. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADE UNLESS OTHERWISE NOTED ON DRAWINGS.
4. CONTRACTOR SHALL SUBMIT FOR REVIEW TO THE OWNER AND OWNER'S ENGINEER SHOP DRAWINGS ON ALL PRECAST AND MANUFACTURED ITEMS TO BE USED ON THIS SITE. FAILURE TO OBTAIN APPROVAL BEFORE INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT CONTRACTOR'S EXPENSE. ENGINEER'S APPROVAL OF A SHOP DRAWING DOES NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR THE PERFORMANCE OF THE ITEM.
5. THE COST OF ALL TESTING OF COMPACTION AND OTHER REQUIRED TESTS SHALL BE PAID BY THE CONTRACTOR AND MADE AVAILABLE TO THE ENGINEER OF RECORD DURING SITE INSPECTIONS.
6. GENERAL CONTRACTOR TO CONTACT ENGINEER OF RECORD AND THE OWNER REPRESENTATIVE 48 HOURS IN ADVANCE PRIOR TO BACKFILLING TRENCHES FOR FIELD INSPECTION AND PRIOR TO LAYING ASPHALT FOR FIELD INSPECTION.
7. CONTRACTOR IS TO SUBMIT FDOT APPROVED ASPHALT DESIGN MIXES TO THE OWNER'S REPRESENTATIVE AND ENGINEER OF RECORD BEFORE ANY WORK IS TO COMMENCE ON PROJECT. THE MIXTURE AT THE PLANT OR ON THE ROAD SHALL NOT EXCEED 335 DEGREES. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AND PROVIDE TEMPERATURE READINGS PRIOR TO LAYING ASPHALT.
8. AS DETERMINED NECESSARY AND DIRECTED BY CITY OF ALACHUA PUBLIC WORKS DEPARTMENT OR ENGINEER OF RECORD, THE CONTRACTOR SHALL UNDERCUT ALL UNSUITABLE MATERIAL 18 INCHES BELOW THE BOTTOM OF ANY PROPOSED LINEROCK BASE, AND SHALL BACKFILL WITH FILL MATERIAL MEETING FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. SEE FDOT INDEX 120-001 AND 120-002.
9. PROVIDE LEVEL PLATFORM IN FRONT OF ALL EGRESS DOORS. THE FLOOR SURFACE ON BOTH SIDES OF A DOOR SHALL BE AT THE SAME ELEVATION. THE FLOOR SURFACE OR LANDING ON EACH SIDE OF THE DOOR SHALL EXTEND FROM THE DOOR IN THE CLOSED POSITION A DISTANCE EQUAL TO THE DOOR WIDTH AND SHALL COMPLY WITH SECTION 4.13.6 MANEUVERING CLEARANCES AT DOORS OF THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION.
10. RAMPS SHALL HAVE LEVEL LANDINGS AT THE BOTTOM AND TOP OF EACH RAMP RUN. CURB RAMPS ARE NOT REQUIRED TO HAVE LANDINGS. LANDINGS SHALL HAVE THE FOLLOWING FEATURES:

 - A. THE LANDING SHALL BE AT LEAST AS WIDE AS THE RAMP RUN LEADING TO IT.
 - B. ALL LANDINGS ON RAMPS SHALL BE NOT LESS THAN 60" CLEAR, AND THE BOTTOM OF EACH RAMP SHALL HAVE NOT LESS THAN 72" OF STRAIGHT AND LEVEL CLEARANCE.
 - C. IF RAMPS CHANGE DIRECTION AT LANDINGS, THE MINIMUM LANDING SIZE SHALL BE 60"x60". IF A RAMP RUN HAS A RISE GREATER THAN 6" OR A HORIZONTAL PROJECTION GREATER THAN 72" THEN IT SHALL HAVE HANDRAILS ON BOTH SIDES. HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. HANDRAILS SHALL BE SHOWN ON THE SITE PLAN.
11. THE CONTRACTOR SHALL STOCKPILE TOPSOIL AND CONSTRUCTION MATERIALS IN AREAS DESIGNATED BY THE OWNER.
12. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING RECORD DRAWINGS AS NOTED IN NOTE #29 UNDER SITE GENERAL NOTES.
13. ALL CONCRETE USED SHALL BE 2,500 PSI MINIMUM.
14. ALL WELLS, CLEANOUTS, MANHOLE TOPS, PULL BOX COVERS AND OTHER UTILITY APPURTENANCES IN THE AREA OF REDEVELOPMENT SHALL BE PROTECTED AND TOPS ADJUSTED TO MATCH PROPOSED GRADES.
15. CONTRACTOR SHALL SAW CUT, TACK, AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS ANY EXISTING PAVEMENT.
16. SOD SHALL BE PLACED AROUND ALL STRUCTURES AS DIRECTED BY THE FDOT INDEX 524-001 AND FDOT INDEX 425- AND 430- SERIES AS APPROPRIATE. ALL OTHER DISTURBED AREAS SHALL BE SEEDED AND MULCHED.
17. ALL STORM SEWER CURB AND DITCH BOTTOM INLETS SHALL CONFORM TO THE APPLICABLE FDOT INDEX. ALL DRAINAGE STRUCTURES WITH GRATES THAT ARE LOCATED IN GRASSED AREAS SHALL HAVE THE GRATE CHAINED TO THE STRUCTURE USING AN EYE BOLT AND CHAIN.
18. ALL CONCRETE STRUCTURES SHALL HAVE ALL EXPOSED EDGES CHAMFERED 3/4" AND CLASS I SURFACE FINISH.
19. ALL HDPE FITTINGS AND CONNECTORS SHALL BE WATER TIGHT. SEE SPECIFICATIONS FOR MORE INFORMATION.
20. COMPACTION OF ALL MATERIALS SHALL BE LIMITED TO STATIC MOUD ONLY, UNLESS DIRECTED OTHERWISE BY THE ENGINEER OF RECORD.
21. ALL RCP PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC IN ACCORDANCE WITH FDOT STANDARD SPECIFICATION SECTION 430.

CONSTRUCTION METHODS FOR WATER AND WASTEWATER SYSTEMS SHALL BE IN ACCORDANCE WITH THE LOCAL ORDINANCES, AND SPECIFICATIONS FOR CONSTRUCTION, LATEST REVISION THEREOF AND SUPPLEMENTAL SPECIFICATIONS.

1. APPROVAL AND CONSTRUCTION OF ALL UTILITY EXTENSIONS AND CONNECTIONS MUST BE COORDINATED WITH THE REGULATORY AGENCY FOR PUBLIC UTILITIES.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES TO DISCONNECT OR REMOVE THEIR FACILITIES PRIOR TO REMOVING OR DEMOLISHING ANY EXISTING STRUCTURES FROM THE SITE.
3. THE CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY UTILITY FIELD LOCATION AND RELOCATION AS REQUIRED.
4. THE COST OF ALL TESTING OF COMPACTION AND OTHER REQUIRED TESTS SHALL BE PAID BY THE CONTRACTOR AND MADE AVAILABLE TO THE ENGINEER OF RECORD DURING SITE INSPECTIONS.
5. THE CONTRACTOR SHALL PERFORM AN INFILTRATION/EXFILTRATION TEST ON GRAVITY SEWERS IN ACCORDANCE WITH THE REGULATORY JURISDICTION. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. COORDINATION AND NOTIFICATION OF PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.
6. ALL FORCE MAINS SHALL BE SUBJECT TO A HYDROSTATIC PRESSURE TEST IN ACCORDANCE WITH THE REGULATORY AGENCY HAVING JURISDICTION. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. COORDINATION AND NOTIFICATION OF PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.
7. CONTRACTOR SHALL SUBMIT FOR REVIEW TO THE OWNER AND OWNER'S ENGINEER SHOP DRAWINGS ON ALL PRECAST AND MANUFACTURED ITEMS TO BE USED ON THIS SITE. FAILURE TO OBTAIN APPROVAL BEFORE INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT CONTRACTOR'S EXPENSE. ENGINEER'S APPROVAL OF A SHOP DRAWING DOES NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR THE PERFORMANCE OF THE ITEM.
8. A HORIZONTAL SEPARATION OF TEN FEET PREFERRED, BUT NO LESS THAN SIX FEET, SHALL BE MAINTAINED BETWEEN POTABLE WATER MAINS AND GRAVITY OR PRESSURE WASTEWATER MAINS, WASTEWATER FORCE MAINS, AND RECLAIMED WATER MAINS NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. A HORIZONTAL SEPARATION OF TEN FEET PREFERRED, BUT NO LESS THAN THREE FEET, SHALL BE MAINTAINED BETWEEN POTABLE WATER MAINS AND VACUUM WASTEWATER MAINS. A HORIZONTAL SEPARATION OF THREE FEET SHALL BE MAINTAINED BETWEEN POTABLE WATER MAINS AND STORM SEWERS, STORMWATER FORCE MAINS, AND RECLAIMED WATER MAINS REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
9. WHEN POTABLE WATER MAINS CROSS OTHER PIPES, THE TWO PIPES SHALL HAVE JOINTS A MINIMUM OF SIX FEET FROM THE CROSSING. WHEN POTABLE WATER MAINS CROSS UNDERNEATH OTHER PIPES, THE MINIMUM VERTICAL SEPARATION IS TWELVE INCHES. WHEN POTABLE WATER MAINS CROSS ABOVE PRESSURE WASTEWATER MAINS, WASTEWATER FORCE MAINS, AND RECLAIMED WATER MAINS, THE MINIMUM VERTICAL SEPARATION IS TWELVE INCHES. WHEN POTABLE WATER MAINS CROSS ABOVE GRAVITY AND VACUUM WASTEWATER MAINS, STORM SEWERS, AND STORMWATER FORCE MAINS, THE PREFERRED VERTICAL SEPARATION IS TWELVE INCHES AND THE MINIMUM VERTICAL SEPARATION IS SIX INCHES.
10. ALL WATER MAINS SHALL HAVE A MINIMUM OF 36 INCHES OF COVER.
11. RESTRAINED JOINTS SHALL BE PROVIDED AT ALL FITTINGS AND HYDRANTS IN ACCORDANCE WITH AWWA STANDARDS.
12. ALL PUBLIC PVC WATER SERVICE LINES SHALL BE SCH 40 PVC. ALL PRIVATE PVC WATER SERVICE LINES SHALL BE SCH 80 PVC.
13. THE SITE WORK CONTRACTOR SHALL ENGAGE THE SERVICES OF A LICENSED UNDERGROUND UTILITY AND EXCAVATION CONTRACTOR TO INSTALL THE NEW WATER SERVICE LINE.
14. ALL SANITARY SEWER SERVICE LATERALS SHALL BE 4" PVC SDR 35 OR 6" PVC SDR 35 WITH A CLEAN-OUT LOCATED PER THE PLANS. MINIMUM SLOPE FOR 4" LATERALS SHALL BE 1.0% AND A MINIMUM CLEANOUT SPACING OF 75 FEET ON-CENTER AND MINIMUM SLOPE FOR 6" LATERALS SHALL BE 0.6% AND A MINIMUM CLEANOUT SPACING OF 100 FEET ON-CENTER.
15. PUBLIC UTILITY EASEMENTS WILL BE PROVIDED AS REQUIRED FOR ALL UTILITIES SHOWN HEREON BY METES AND BOUND DESCRIPTION AND IN ACCORDANCE WITH THE REGULATORY AGENCY DEPARTMENT FOR PUBLIC UTILITIES.
16. WATER MAINS 4-INCHES AND LARGER SHALL BE AWWA C900 DR-18.
17. ALL FITTINGS FOR WATER MAINS 4-INCHES AND LARGER SHALL BE CEMENT-LINED DUCTILE IRON.
18. PROVIDE TRACER WIRE ON WATER PIPING FROM THE POINT OF CONNECTION AT THE EXISTING WATER MAIN TO EACH WATER METER BOX.

NOTES: 1. ALL DIMENSIONS SHOWN ON THE CIVIL PLANS ARE FOR LOCATION AND COORDINATION PURPOSES FOR THE ELECTRICAL DESIGN AND DETAILS.

2. SCOPE OF COA ELECTRICAL WORK: AT NO COST TO THE CITY, THE COA WILL PERFORM CERTAIN WORK ELEMENTS TO ASSIST THE CONTRACTOR IN PROVIDING COMPLETE AND OPERATING ELECTRICAL SYSTEMS AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.
3. THE WORK REQUIRED TO MODIFY EXISTING PRIMARY SERVICE AND TO PROVIDE THE TRANSFORMER SHALL BE A JOINT EFFORT BETWEEN THE CONTRACTOR AND COA.
4. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL ELECTRICAL WORK REQUIRED TO PROVIDE SECONDARY (LOAD-SIDE) SERVICE FROM THE TRANSFORMER.
5. COA WILL ORDER THE FOLLOWING PRODUCTS, WHICH SHALL BE PAID FOR BY THE CONTRACTOR: ALL PRIMARY CABLES, ALL TRANSFORMERS AND ALL MAKE-UP MATERIALS. ONCE ON SITE, THESE PRODUCTS WILL BE INSTALLED BY THE CITY OF ALACHUA. ALL PRIMARY MAKEUP, CONNECTION, AND TESTING WILL BE COMPLETED BY THE CITY OF ALACHUA. ALL WORK DONE BY COA WILL BE BACKCHARGED TO THE CONTRACTOR.
6. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL OTHER MATERIALS, INCLUDING, BUT NOT LIMITED TO ALL CONDUIT, ENCLOSURES, POLES, LUMINAIRES, TRANSFORMER PADS AND SWITCHGEAR BASES.
7. THE CONTRACTOR SHALL SCHEDULE AN ELECTRICAL COORDINATION MEETING AT START OF PROJECT. REQUIRED ATTENDEES INCLUDE THE CONTRACTOR, THE ELECTRICAL SUB-CONTRACTOR, THE ENGINEER OF RECORD, THE COA PROJECT MANAGER AND COA ELECTRICAL STAFF.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ELECTRICAL AS-BUILT INFORMATION, WHICH SHALL BE RECORDED AS CONSTRUCTION PROGRESSES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ELECTRICAL AS-BUILT DRAWINGS TO THE OWNER AND ENGINEER OF RECORD. BOTH PAPER AND AUTOCAD DRAWINGS SHALL BE PROVIDED.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND SUBMITTING AS-BUILT DRAWINGS OF THE PRIMARY POWER CIRCUIT TO THE NEW TRANSFORMER.

A DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY SHA

- A. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2023-24).
B. FDOT STANDARD PLANS (FY 2023-24 ROAD CONSTRUCTION)
C. FDOT DESIGN MANUAL (2024)
D. FDOT FLEXIBLE PAVEMENT DESIGN MANUAL FOR NEW CONSTRUCTION AND PAVEMENT REHABILITATION

SHOULD A CONFLICT ARISE BETWEEN THE DETAILS SHOWN IN THE PLANS AND THE DEPARTMENT OF TRANSPORTATION STANDARDS THE ENGINEER/ PERMITTEE SHALL IMMEDIATELY CONFER WITH THE DEPARTMENT'S ENGINEER IN ORDER TO RESOLVE THE DISCREPANCY. IN NO CASE WILL ANYTHING LESS THAT THE DEPARTMENT'S MINIMUM STANDARD BE ALLOWED.

3. REMOVAL OF EXISTING STRIPING SHALL BE ACCOMPLISHED USING THE "HYDRO-BLAST" METHOD.
4. ALL CURB AND GUTTER AND SIDEWALK WILL BE REMOVED AND REPLACED JOINT TO JOINT.
5. ALL DISTURBED AREA WITH THE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY WILL RESTORED TO ORIGINAL OR BETTER CONDITION BY GRADING AND SODDING THE AREA DISTURBED (BERMUDA IN RURAL, CENTIPEDE IN UTILITY STRIPS).

ABBREVIATIONS

SYMBOLS		N	
'	FEET (WHEN USED WITH LENGTHS)	N	NORTH
°	DEGREES	N-E	NORTHING - EASTING
'	MINUTES (WHEN USED WITH ANGLES)	N/A	NOT APPLICABLE
"	SECONDS	NAVD	NORTH AMERICAN VERTICAL DATUM OF 1988
%	PERCENT	NGVD	NATIONAL GEODETIC VERTICAL DATUM OF 1929
@	AT	NO	NUMBER
		NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
		NTS	NOT TO SCALE
		O	ON CENTER
A	ASSHTO ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	OC	OVERHEAD WIRE
AC	AMERICAN WITH DISABILITIES ACT	OHW	OFFICIAL RECORDS BOOK
ADA	AMERICAN NATIONAL STANDARDS INSTITUTE	ORH	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
ANSI	ARCHITECT		
ARCH	AIR RELEASE VALVE		
ARV	AMERICAN SOCIETY FOR TESTING AND MATERIALS		
ASTM	AMERICAN WATER WORKS ASSOCIATION		
AWWA			
		P	PAVEMENT
		PC	POINT OF CURVATURE
BC	BACK OF CURB	PCC	POINT OF COMPOUND CURVE
BFP	BACKFLOW PREVENTER	PE	POLYETHYLENE
BLDG	BUILDING	PERF	PERFORATED
BM	BENCHMARK	PROP	PROPOSED
BMP	BEST MANAGEMENT PRACTICE	PT	POINT OF TANGENCY
BOS	BACK OF CURB	PVC	POLYVINYL CHLORIDE
BVCS	BEGIN VERTICAL CURVE STATION	PUE	PUBLIC UTILITY EASEMENT
BVCE	BEGIN VERTICAL CURVE ELEVATION	PVI	POINT OF VERTICAL INTERSECTION
BW	BOTTOM OF WALL		
BSL	BUILDING SETBACK LINE		
		R	RADIUS
		RCP	REINFORCED CONCRETE PIPE
CATV	CABLE TELEVISION	RPM	RAISED REFLECTIVE PAVEMENT MARKER
CI	CURB INLET	R/Z	REDUCED PRESSURE ZONE
CP	CAST IRON PIPE	RT	RIGHT
CLDIP	CEMENT LINE DUCTILE IRON PIPE	RWM	RECLAIMED WATER MAIN
CMP	CORRUGATED METAL PIPE	R/W	RIGHT-OF-WAY
CO	CLEANOUT		
COA	CITY OF ALACHUA		
CONC	CONCRETE	S	SOUTH
COORD	COORDINATE	SAN	SANITARY
CR	COUNTY ROAD	SHWE	SEASONAL HIGH WATER ELEVATION
C/O	CLEANOUT	SL	SILT FENCE
		SP	SLOPE
DBH	DIAMETER AT BREAST HEIGHT	SR	STATE ROAD
DE	DRAINAGE EASEMENT	SS	SANITARY SEWER
DEG	DEGREE	ST	STORM
DIA	DIAMETER	STA	STATION
DIP	DUCTILE IRON PIPE	STD	STANDARD
DWG	DRAWING	STM	STORM PIPE
		T	TREE BARRICADE
e	RATE OF ELEVATION	TCE	TEMPORARY CONSTRUCTION EASEMENT
E	EAST	TEMP	TEMPORARY
EA	EACH	TOR	TOP OF BANK
EL	ELEVATION	TV	TELEVISION
ELEV	ELEVATION	TW	TOP OF WALL
EOP	EDGE OF PAVEMENT	TYP	TYPICAL
EOR	ENGINEER OF RECORD		
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE		
ESMT	EASEMENT	U	UNITED STATES FOUNDRY
EVCS	END VERTICAL CURVE STATION	USCS	UNITED STATES GEOLOGICAL SURVEY
EVCE	END VERTICAL CURVE ELEVATION	UTIL	UTILITY
EX	EXISTING		
		V	VERTICAL
FAC	FLORIDA ADMINISTRATIVE CODE	VC	VERTICAL CURVE
FBR	FLORIDA BEARING RATIO	VCP	VITRIFIED CLAY PIPE
FC	FRICTION COURSE		
FDEP	FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION		
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION	W	WEST
FFE	FINISHED FLOOR ELEVATION	W	WATER
FH	FIRE HYDRANT	W/	WITH
FWHA	FLORIDA HIGHWAY ADMINISTRATION	WM	WATER MAIN
FIG	FIGURE	WW	WASTEWATER
FM	FORCE MAIN	WWF	WELDED WIRE FABRIC
FOC	FACE OF CURB		
FS	FLORIDA STATUTES		
FT	FEET		
		G	GALVANIZED
		GM	GAS MAIN
		GV	GATE VALVE
		H	HIGH DENSITY POLYETHYLENE
		HP	HIGH POINT
		I	IDENTIFICATION
ID	IDENTIFICATION	INV	INVERT
INV	INVERT	INV EL	INVERT ELEVATION
IP	IRON PIPE		
		K	VERTICAL CURVE RATE OF CHANGE
		L	LENGTH
LA	LANDSCAPE ARCHITECT		
LBR	LIMEROCK BEARING RATIO		
LDR	LAND DEVELOPMENT REGULATION		
LF	LINEAR FEET		
LP	LOW POINT		
LT	LEFT		
		M	MAXIMUM
MAX	MAXIMUM	ME	MATCH EXISTING
ME	MATCH EXISTING	MH	MANHOLE
MH	MANHOLE	MIN	MINIMUM
MIN	MINIMUM	MISC	MISCELLANEOUS
MISC	MISCELLANEOUS	MJ	MECHANICAL JOINT
MJ	MECHANICAL JOINT	MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES		

SIGNAGE

SIGNS ARE PER FDOT SPECIFICATIONS OR PER MUTCD. SIGN POSTS AND INSTALLATION SHALL BE PER FDOT INDEX NO. 700-010. SIGN PLACEMENT SHALL BE PER FDOT INDEX NO. 700-101.

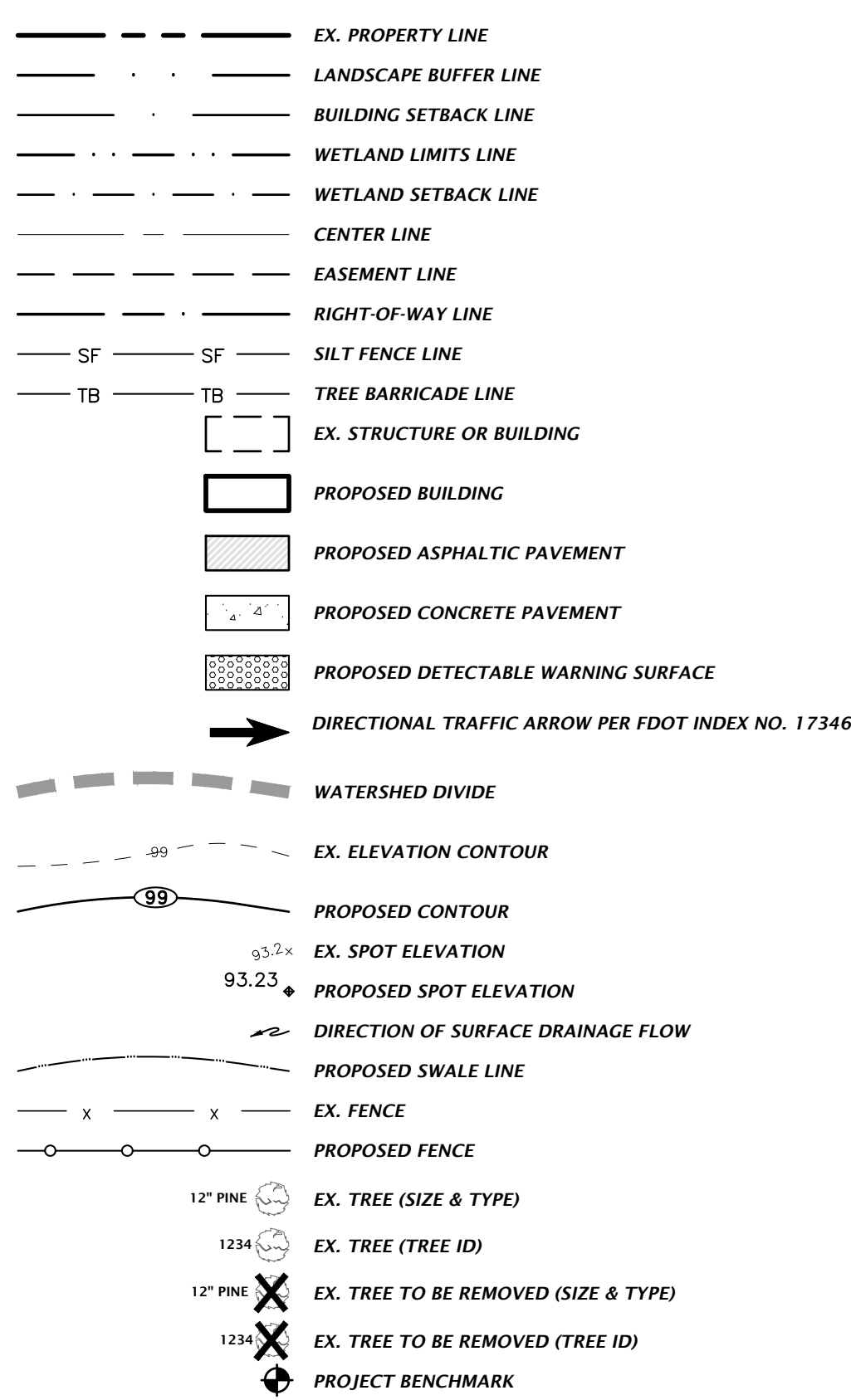


FTP-20-06 (12" X 18") PER FDOT INDEX NO. 700-102



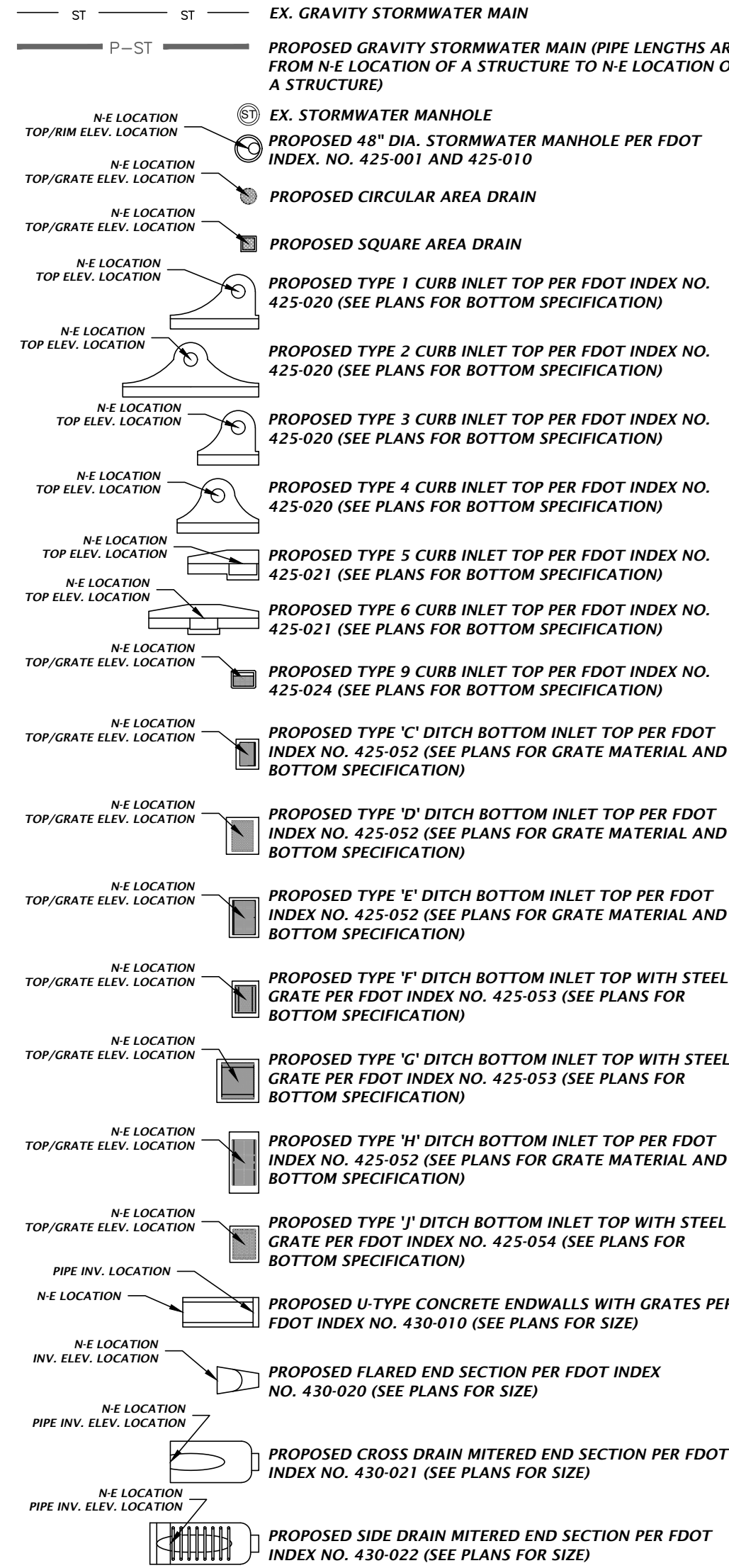
R1-1 "STOP" - SEE PLANS FOR SIZE

SITE INFORMATION

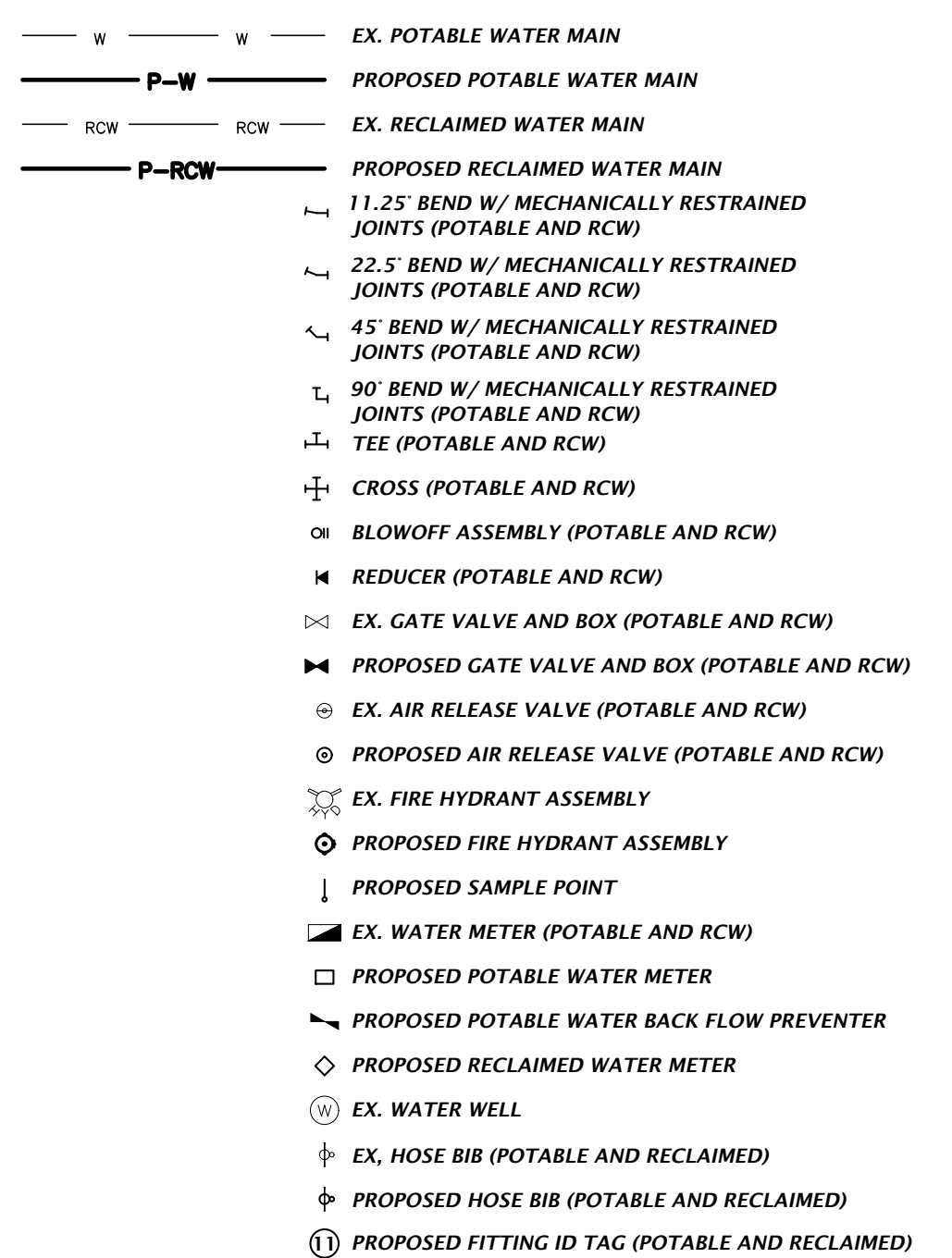


STORMWATER

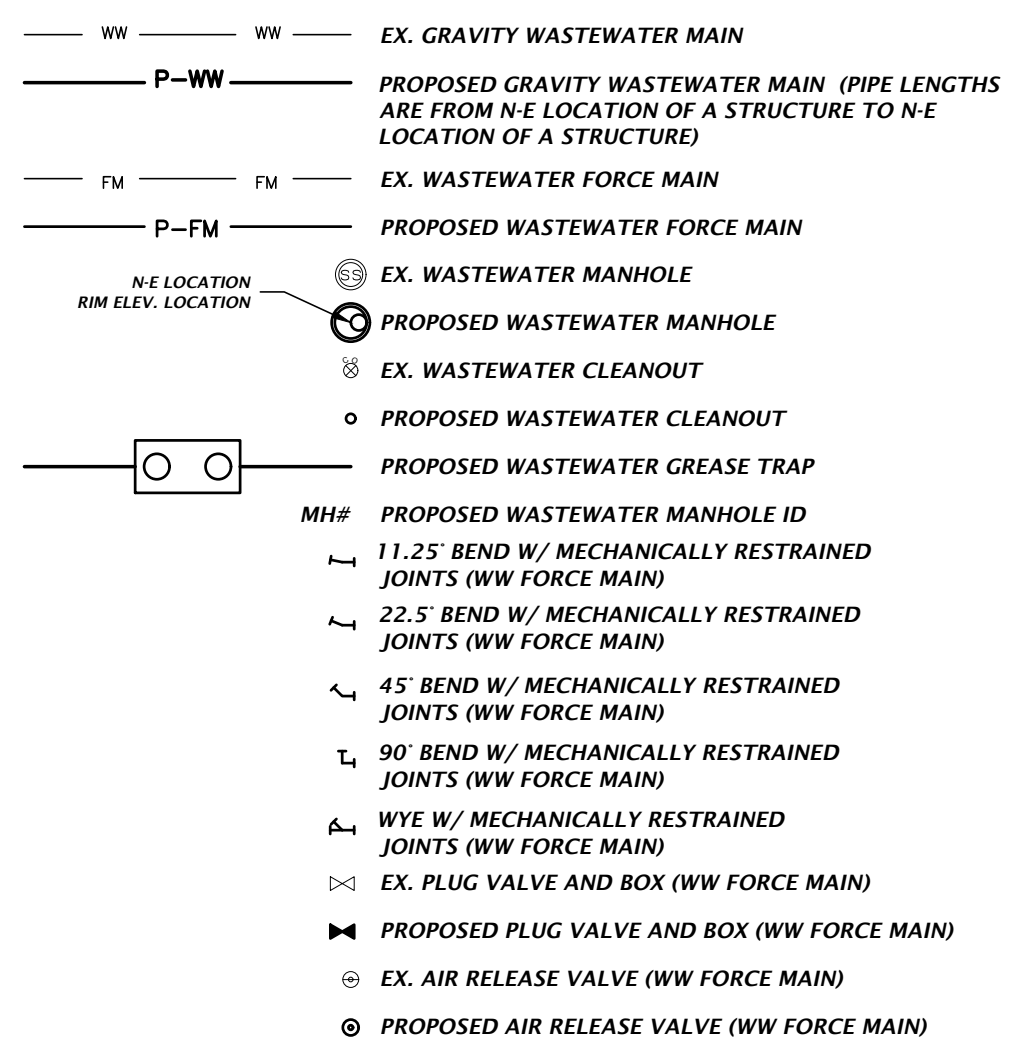
THE PROPOSED STORMWATER STRUCTURES DEPICTED BELOW ARE DRAWN PER FDOT SPECIFICATIONS AND TO SCALE WHEN SHOWN ON THE PLAN SHEETS.



POTABLE AND RECLAIMED WATER

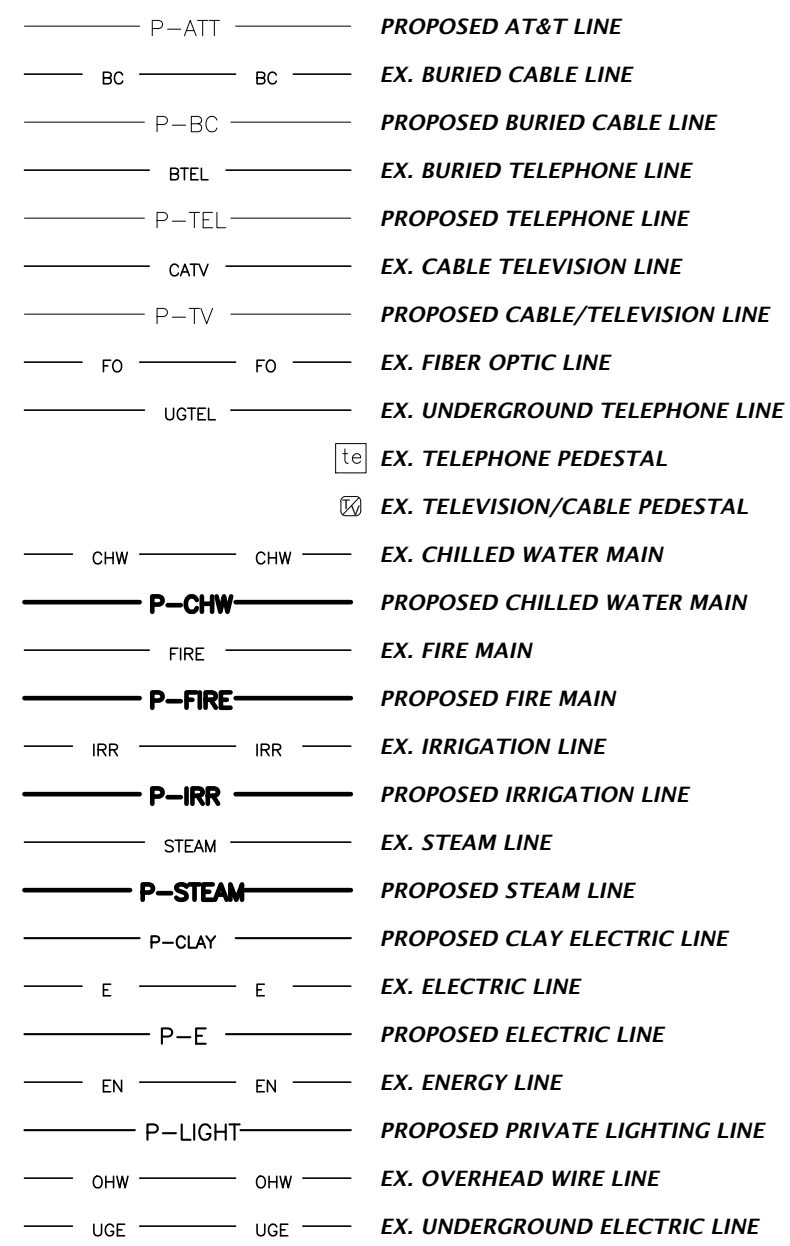


WASTEWATER



MISCELLANEOUS UTILITIES

THE PROPOSED UTILITIES BELOW ARE DESIGN BY OTHERS AND ARE DEPICTED FOR COORDINATION PURPOSES ONLY. REFER TO PLANS BY OTHERS FOR EXACT LOCATIONS, DIMENSION, AND DETAILS.



NOTES:
1. THIS LEGEND IS ALL INCLUSIVE AND MAY INCLUDE ITEMS NOT A PART OF THIS PLAN SET.
2. SYMBOLS SHOWN ON THIS SHEET ARE FOR ILLUSTRATIVE PURPOSES ONLY. UNLESS NOTED OTHERWISE, SYMBOLS IN THESE PLANS MAY NOT BE REPRESENTATIVE OF SIZE.

11801 Research Drive
Alachua, Florida 32615
(352) 351-1976
www.chw-inc.com

CHW
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SCALE
N/A
VERTICAL SCALE
BASED ON SCALE
ORIGINAL DRAWING
0
HORIZONTAL SCALE
BASED ON SCALE
THIS SHEET ADJUST
SCALES ACCORDINGLY.

CONSTRUCTION REVISIONS

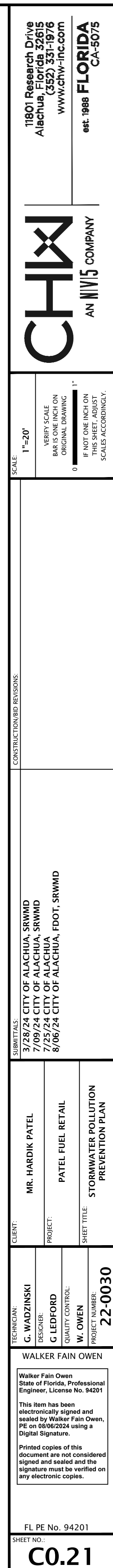
DATE: 3/28/24
BY: 3/28/24
CITY OF ALACHUA, SRWMD
7/09/24
CITY OF ALACHUA, SRWMD
8/09/24
CITY OF ALACHUA, SRWMD

CLIENT: MR. HARDIK PATEL
PROJECT: PATEL FUEL RETAIL
SHEET NUMBER: 22-0030
LEGEND

DESIGNED BY: G. WADZINSKI
CHECKED BY: G. LEDFORD
DATE: 3/28/24
BY: 3/28/24
CITY OF ALACHUA, SRWMD
7/09/24
CITY OF ALACHUA, SRWMD
8/09/24
CITY OF ALACHUA, SRWMD

WALKER FAIR OWEN
Walker Fair Owen
State of Florida, Professional
Engineer, License No. 94201
This item has been
electronically signed and
sealed by Walker Fair Owen,
PE on 03/28/2024 using a
Digital Signature.
Printed copies of this
document are not considered
signed and sealed and the
signature must be verified on
any electronic copies.

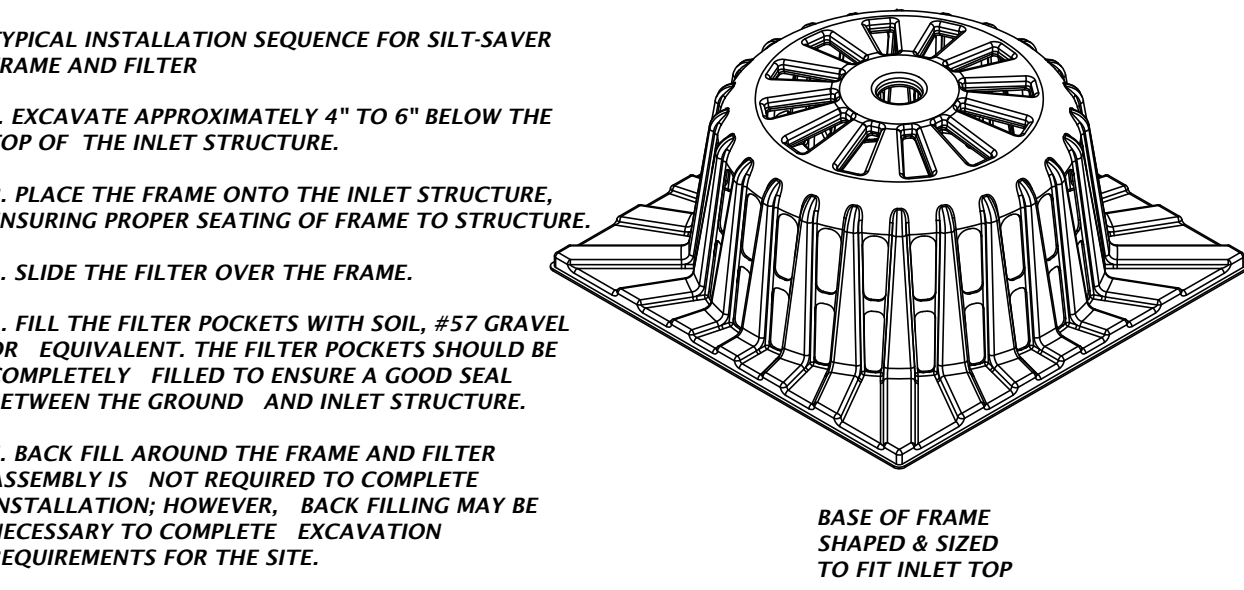
FL PE No. 94201
SHEET NO.
C0.11



Test: gregw Flor Date: Aug 06,2024 12:58pm Filename: N:\2022\22-0030\Department\04_Engineering\02_DWG\Production\Files\22-0030_Const_Details.dwg

TYPICAL INSTALLATION SEQUENCE FOR SILT-SAVER FRAME AND FILTER

1. EXCAVATE APPROXIMATELY 4" TO 6" BELOW THE TOP OF THE INLET STRUCTURE.
2. PLACE THE FRAME ONTO THE INLET STRUCTURE, ENSURING PROPER SEATING OF FRAME TO STRUCTURE.
3. SLIDE THE FILTER OVER THE FRAME.
4. FILL THE FILTER POCKETS WITH SOIL, #57 GRAVEL OR EQUIVALENT. THE FILTER POCKETS SHOULD BE COMPLETELY FILLED TO ENSURE A GOOD SEAL BETWEEN THE GROUND AND INLET STRUCTURE.
5. BACK FILL AROUND THE FRAME AND FILTER ASSEMBLY IS NOT REQUIRED TO COMPLETE INSTALLATION; HOWEVER, BACK FILLING MAY BE NECESSARY TO COMPLETE EXCAVATION REQUIREMENTS FOR THE SITE.



SILT-SAVER® DETAIL

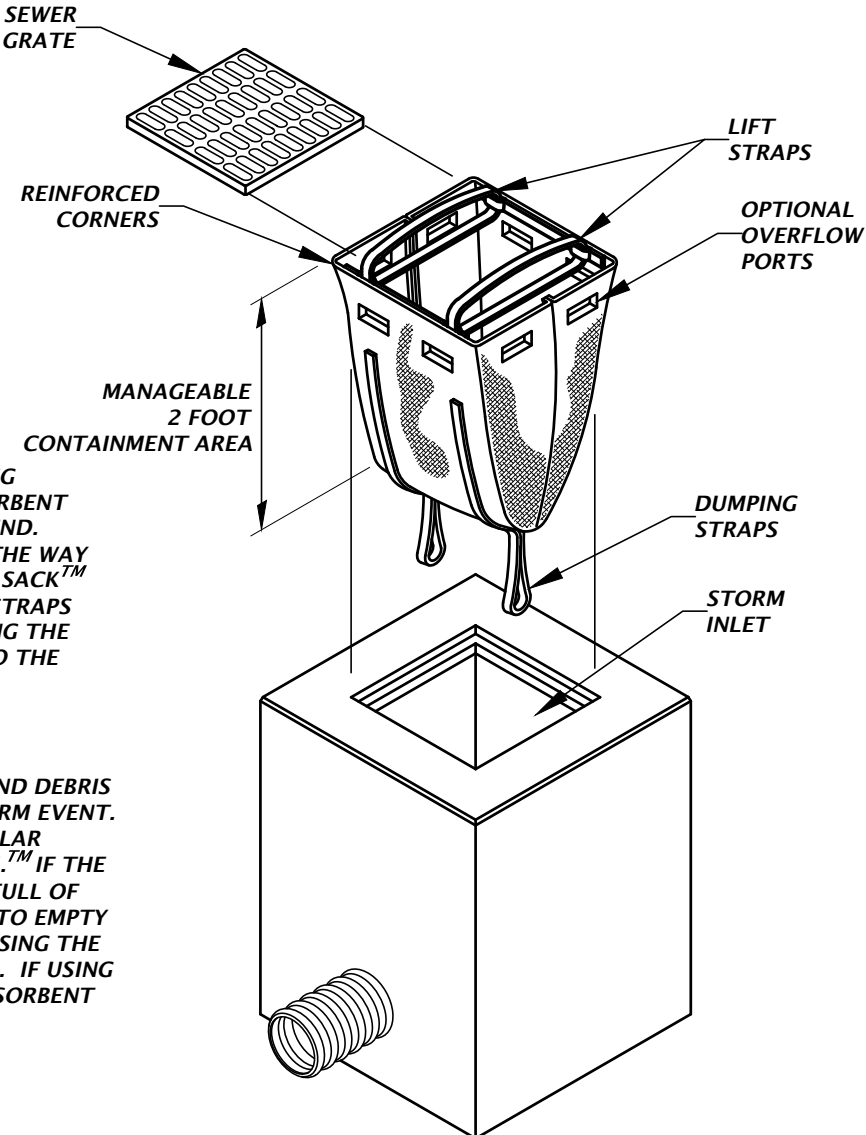
NTS

INSTALLATION:

REMOVE THE GRATE FROM INLET. IF USING OPTIONAL OIL ABSORBENTS, PLACE ABSORBENT PILLOW IN UNIT. STAND THE GRATE ON END. MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO THE DANDY SACK™ SO THAT THE GRATE IS BELOW THE TOP STRAPS AND ABOVE THE LOWER STRAPS. HOLDING THE LIFTING DEVICES, INSERT THE GRATE INTO THE INLET.

MAINTENANCE:

REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF UNIT AFTER EACH STORM EVENT. AFTER EACH STORM EVENT AND AT REGULAR INTERVALS, LOOK INTO THE DANDY SACK™. IF THE CONTAINMENT AREA IS MORE THAN 1/3 FULL OF SEDIMENT, THE UNIT MUST BE EMPTIED. TO EMPTY UNIT, LIFT THE UNIT OUT OF THE INLET USING THE LIFTING STRAPS AND REMOVE THE GRATE. IF USING OPTIONAL OIL ABSORBENTS, REPLACE ABSORBENT WHEN NEAR SATURATION.



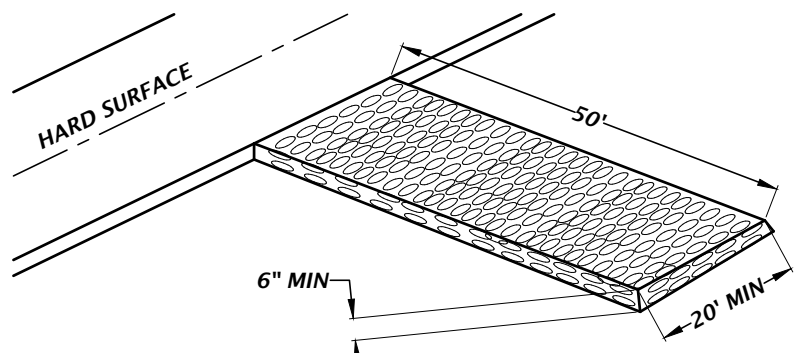
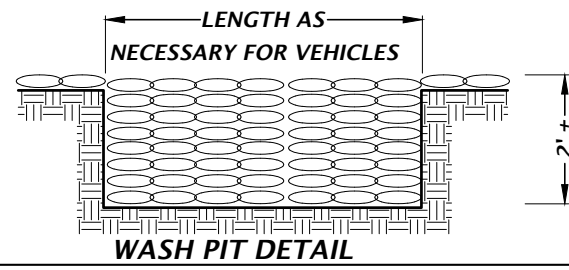
DANDY SACK™ DETAIL

NTS

INLET PROTECTION OPTIONS DETAIL

NTS

- NOTE:
1. CONSTRUCTION EXIT INSTALLATION SHALL REMOVE MUD/SOILS FROM TIRES TO PREVENT TRACKING ONTO PUBLIC ROADS.
 2. TOP DRESSING WITH 2" STONE MAY BE REQ'D AS DETERMINED BY THE USE AND FUNCTION OF THE SYSTEM.
 3. THE WASH PIT SHOULD BE INSTALLED IF THE STANDARD CONSTRUCTION EXIT DOES NOT SUFFICIENTLY REMOVE SOILS AND WASHING IS REQ'D.



STONE SIZE:
ASTM D448 SIZE #1 (1-1/2" TO 3-1/2" DIA)

STANDARD CONSTRUCTION EXIT

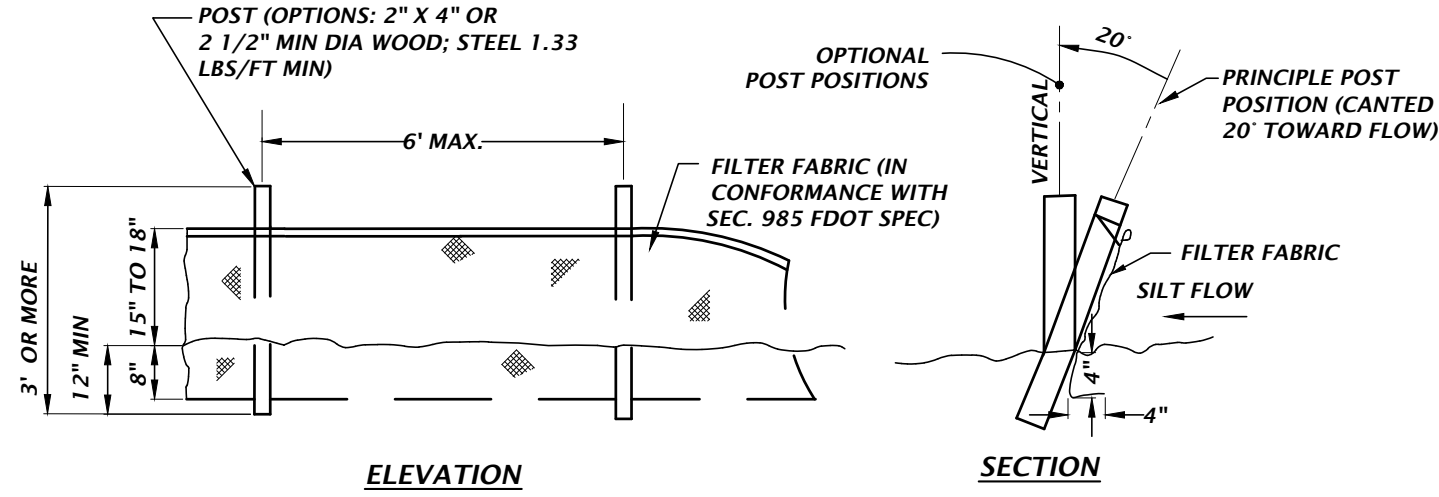
CONSTRUCTION EXIT WITH WASH PIT

TEMPORARY CONSTRUCTION EXIT DETAIL

NTS

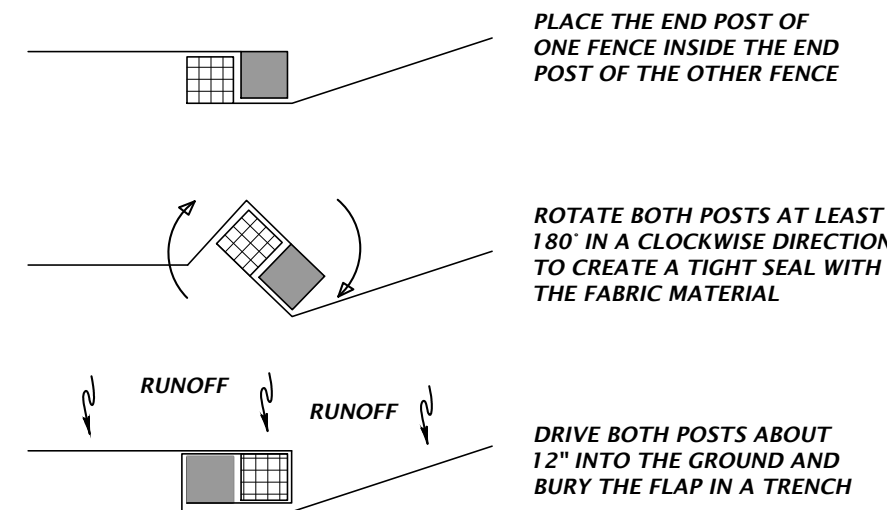
BASIN EROSION & SEDIMENTATION CONTROL

1. SILT FENCING AND/OR STAKED HAYBALES SHALL BE CONSTRUCTED WHERE SHOWN ON THE DRAWINGS PRIOR TO STARTING CONSTRUCTION.
2. ALL STORMDRAIN INLETS SHALL BE PROTECTED DURING CONSTRUCTION IN ACCORDANCE WITH FDOT STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL.
3. THE DRAINAGE BASINS SHALL BE ROUGH GRADED PRIOR TO CONSTRUCTING THE LIMEROCK BASE. THE RETENTION BASINS SHALL BE FINE GRADED AND GRASSED PRIOR TO PAVING AND SITE CLEANUP.
4. THE STORMDRAIN SYSTEM SHALL BE FLUSHED OUT TO REMOVE ALL ACCUMULATED DEBRIS AND SEDIMENT UPON COMPLETION OF CONSTRUCTION.
5. THE DRAINAGE BASIN BOTTOM SHALL BE SCRAPED CLEAN OF ALL ACCUMULATED SEDIMENT UPON COMPLETION OF CONSTRUCTION AFTER THE STORMDRAIN SYSTEM IS COMPLETELY FLUSHED OUT. THIS ACTIVITY SHALL ONLY OCCUR IN A DRY STATE.
6. ALL DISTURBED AREAS IN THE CONSTRUCTION AREA SHALL BE COMPLETELY STABILIZED BY COMPLETION OF CONSTRUCTION. GRASS SEEDING RATES AND MIXTURES SHALL BE PER SECTION 570 OF THE STANDARD SPECIFICATIONS. EVIDENCE OF GROWTH MUST BE PRESENT PRIOR TO FINAL RELEASE.
7. REFER TO THE SWPPP PLAN FOR COMPLETE EROSION CONTROL MEASURES.
8. WHERE POND TOP OF BANK IS IN CUT TO EXISTING GRADE, CONTRACTOR SHALL SOD 5-FT BEYOND TOP OF BANK FOR EROSION PROTECTION.



TYPE III SILT FENCE DETAIL

NTS



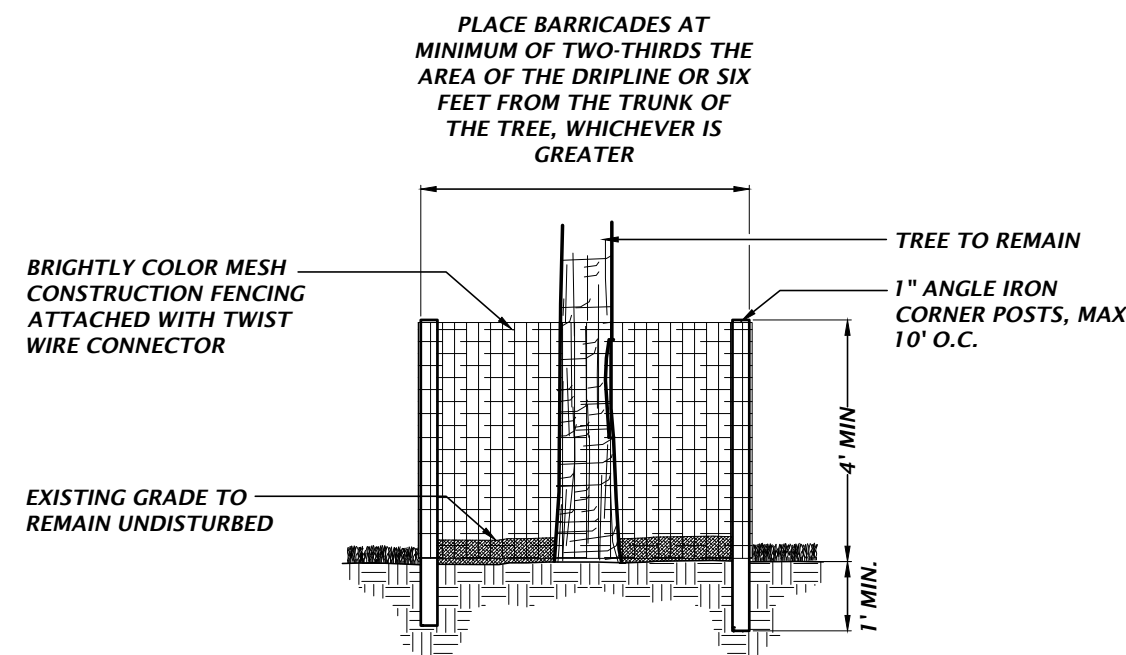
FOR ATTACHING TWO SILT FENCES WHEN TRENCHING IS USED

TYPE III SILT FENCE WRAPPING DETAIL

NTS

TREE PROTECTION NOTES

- 1) PROTECTIVE BARRIERS SHALL BE CONSTRUCTED, AS NECESSARY, TO PREVENT THE DESTRUCTION OR DAMAGING OF REGULATED TREES THAT ARE LOCATED WITHIN 50 FEET OF ANY CONSTRUCTION ACTIVITY OR STORAGE OF EQUIPMENT AND MATERIALS.
- 2) PROTECTIVE BARRIERS SHALL BE PLAINLY VISIBLE AND SHALL CREATE A CONTINUOUS BOUNDARY AROUND TREES OR VEGETATION CLUSTERS IN ORDER TO PREVENT ENCROACHMENT BY MACHINERY, VEHICLES OR STORED MATERIALS.
- 3) NO TRENCHING ALLOWED WITHIN THE PROTECTIVE BARRIER ZONE. HAND DIG TO INSTALL UTILITY IF APPROVED BY CITY MANAGER OR DESIGNEE. WHERE ROOTS GREATER THAN ONE INCH IN DIAMETER ARE DAMAGED OR EXPOSED, THEY SHALL BE CUT CLEANLY AND RECOVERED WITH SOIL WITHIN ONE HOUR OF DAMAGE OR EXPOSURE.
- 4) PROTECTIVE BARRIERS SHALL REMAIN IN PLACE AND INTACT UNTIL SUCH TIME AS LANDSCAPE OPERATIONS BEGIN.
- 5) LANDSCAPE PREPARATION IN THE PROTECTED AREA SHALL BE LIMITED TO SHALLOW DISCING OF THE AREA. DISCING SHALL BE LIMITED TO A DEPTH OF 4 INCHES.
- 6) NO BUILDING MATERIALS, MACHINERY OR HARMFUL CHEMICALS SHALL BE PLACED WITHIN PROTECTIVE BARRIERS.
- 7) THE AMERICAN NATIONAL STANDARDS INSTITUTE A-300 PART V: MANAGEMENT OF TREES AND SHRUBS DURING SITE PLANNING, SITE DEVELOPMENT, AND SITE CONSTRUCTION OR OTHER NATIONALLY RECOGNIZED ARBORICULTURAL STANDARDS SHALL BE USED AS GUIDELINES FOR TREE PROTECTION, PLANTING, PRUNING AND CARE DURING DEVELOPMENT AND CONSTRUCTION.



TREE PROTECTION DETAIL

NTS

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Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com
est. 1988 FLORIDA
CA-5075

CHW
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SCALE
N/A
VERTICAL SCALE
BASED ON SCALE OF
ORIGINAL DRAWING
0' = 1" (NOT AN ADJUST)
THIS SHEET ADJUST
SCALES ACCORDINGLY.

CONSTRUCTION REVISIONS

DATE
3/25/24 CITY OF ALACHUA, SHWID
7/09/24 CITY OF ALACHUA, SHWID
2/22/24 CITY OF ALACHUA, SHWID
6/09/24 CITY OF ALACHUA, FOOT, SHWID

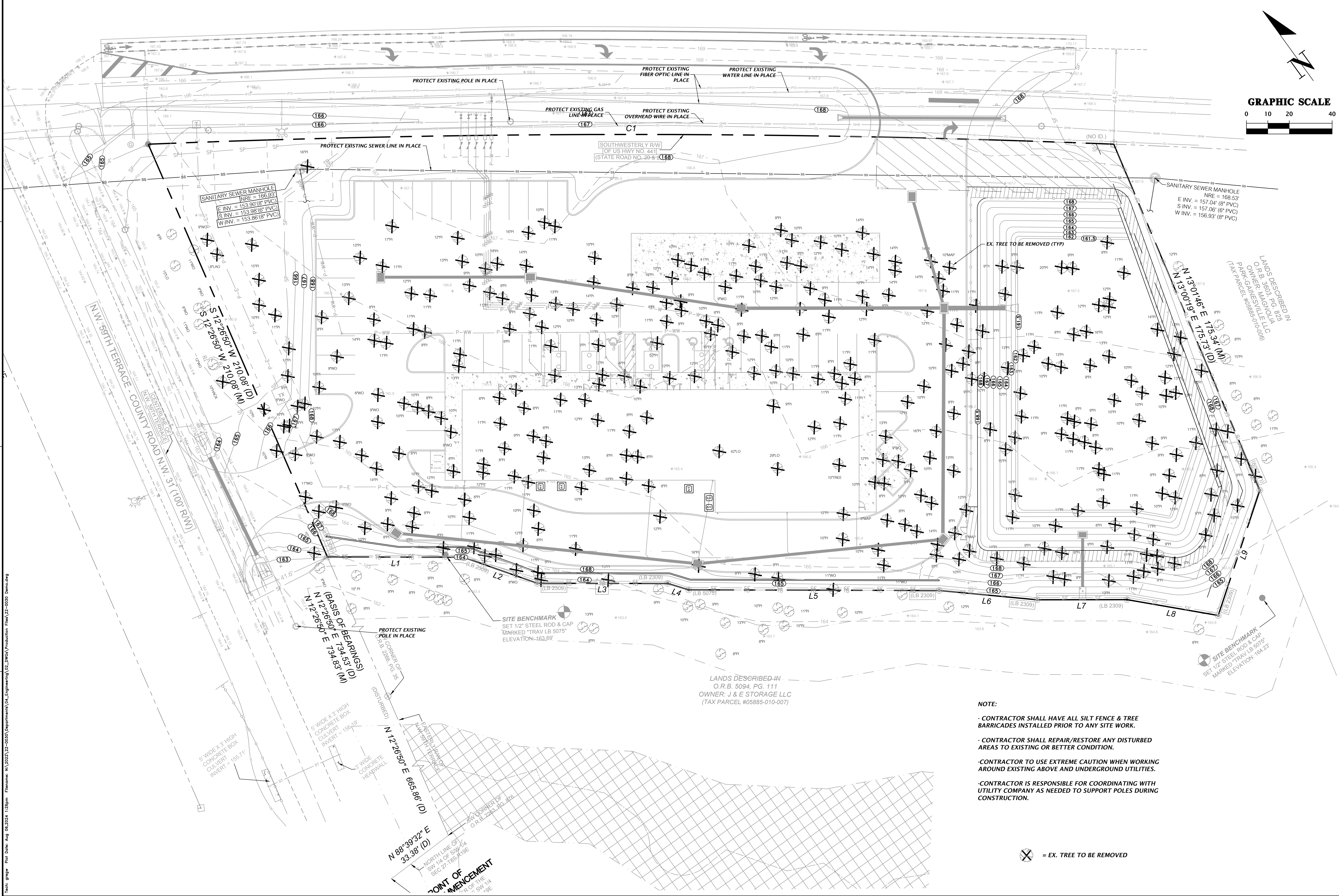
CHECKED
MR. HARDIK PATEL
DESIGNED
G. LEDFORD
QUALITY CONTROL
W. OWEN
PROJECT NUMBER
22-0030

FOR CONSTRUCTION
G. WADZINSKI
PERSONAL
G. LEDFORD
QUALITY CONTROL
W. OWEN
PROJECT NUMBER
22-0030

WALKER FAIR OWEN
Walker Fair Owen
State of Florida, Professional
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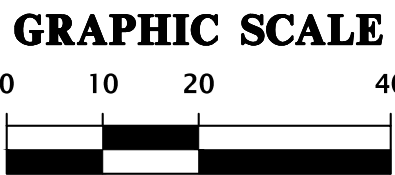
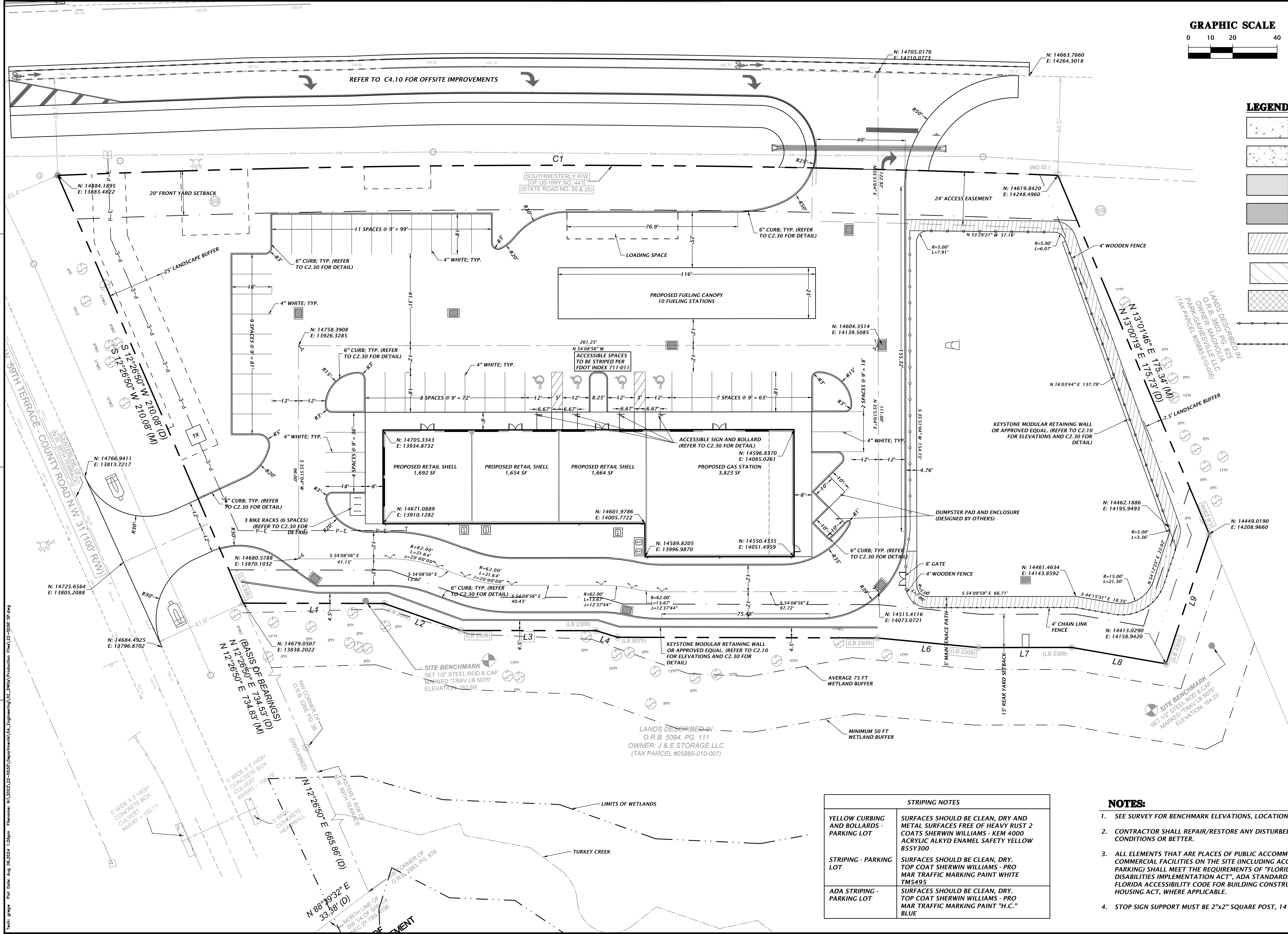
FL PE No. 94201

SHEET NO.
C0.22



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1801 Research Drive Alachua, Florida 32615 (352) 331-1976 www.chw-inc.com		est. 1986 FLORIDA CA-5075	
CHW AN INVIS COMPANY		SCALE: 1"=20'	
CHECKED BY: [Signature] DATE: 8/6/24 ORIGINAL DRAWING		0 10 20 40 GRAPHIC SCALE	
CONTRACTOR'S DESIGN		SHEET NUMBER: 22-0030	
SUBMITTAL: 3/28/24 CITY OF ALACHUA, SRWMD 7/09/24 CITY OF ALACHUA, SRWMD 2/22/24 CITY OF ALACHUA, SRWMD 6/09/24 CITY OF ALACHUA, SRWMD		PROJECT: PATEL FUEL RETAIL	
CLIENT: MR. HARDIK PATEL		SHEET TITLE: DEMOLITION AND TREE PROTECTION PLAN	
DESIGNED BY: G. WADZINSKI CHECKED BY: C. LEDFORD PROJECT MANAGER: W. OWEN		WALKER FAIN OWEN Walker Fain Owen State of Florida, Professional Engineer, License No. 94201 This item has been electronically signed and sealed by Walker Fain Owen, PE on 08/06/2024 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.	
FL PE No. 94201		SHEET NO. C0.30	



LEGEND:

- = CONCRETE (FOR SIDEWALK) (SEE C2.30 FOR DETAIL)
- = HEAVY DUTY CONCRETE PAVEMENT (SEE C2.30 FOR DETAIL)
- = STANDARD DUTY ASPHALT (SEE C2.30 FOR DETAIL)
- = HEAVY DUTY ASPHALT (SEE C2.30 FOR DETAIL)
- = MAINTENANCE PATH
- = ACCESS EASEMENT
- = WETLAND
- = WOODEN FENCE
- = CHAIN LINK FENCE

STRIPING NOTES	
YELLOW CURBING AND BOLLARDS - PARKING LOT	SURFACES SHOULD BE CLEAN, DRY AND METAL SURFACES FREE OF HEAVY RUST 2 COATS SHERWIN WILLIAMS - KEM 4000 ACRYLIC ALKYD ENAMEL SAFETY YELLOW B55Y300
STRIPING - PARKING LOT	SURFACES SHOULD BE CLEAN, DRY. TOP COAT SHERWIN WILLIAMS - PRO MAR TRAFFIC MARKING PAINT WHITE TMS495
ADA STRIPING - PARKING LOT	SURFACES SHOULD BE CLEAN, DRY. TOP COAT SHERWIN WILLIAMS - PRO MAR TRAFFIC MARKING PAINT "H.C." BLUE

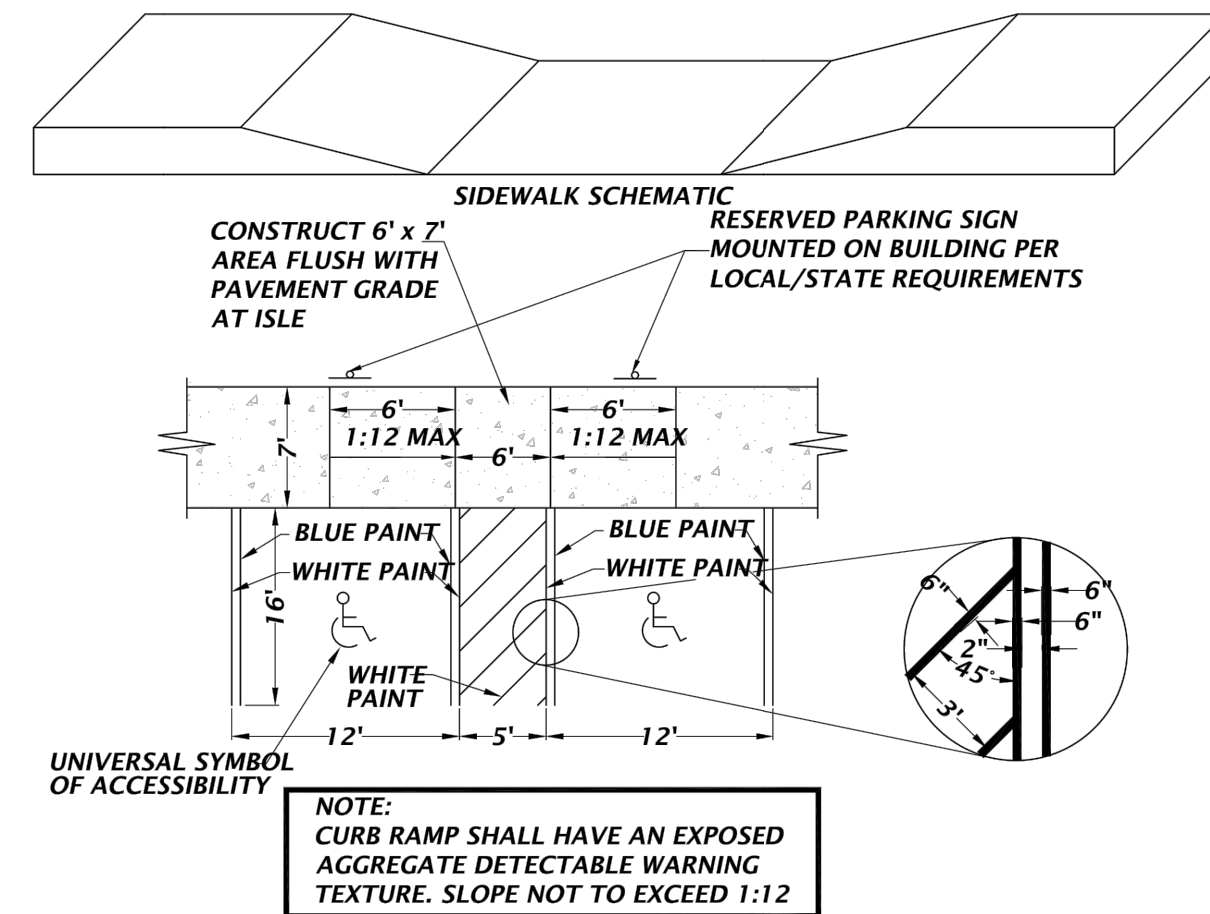
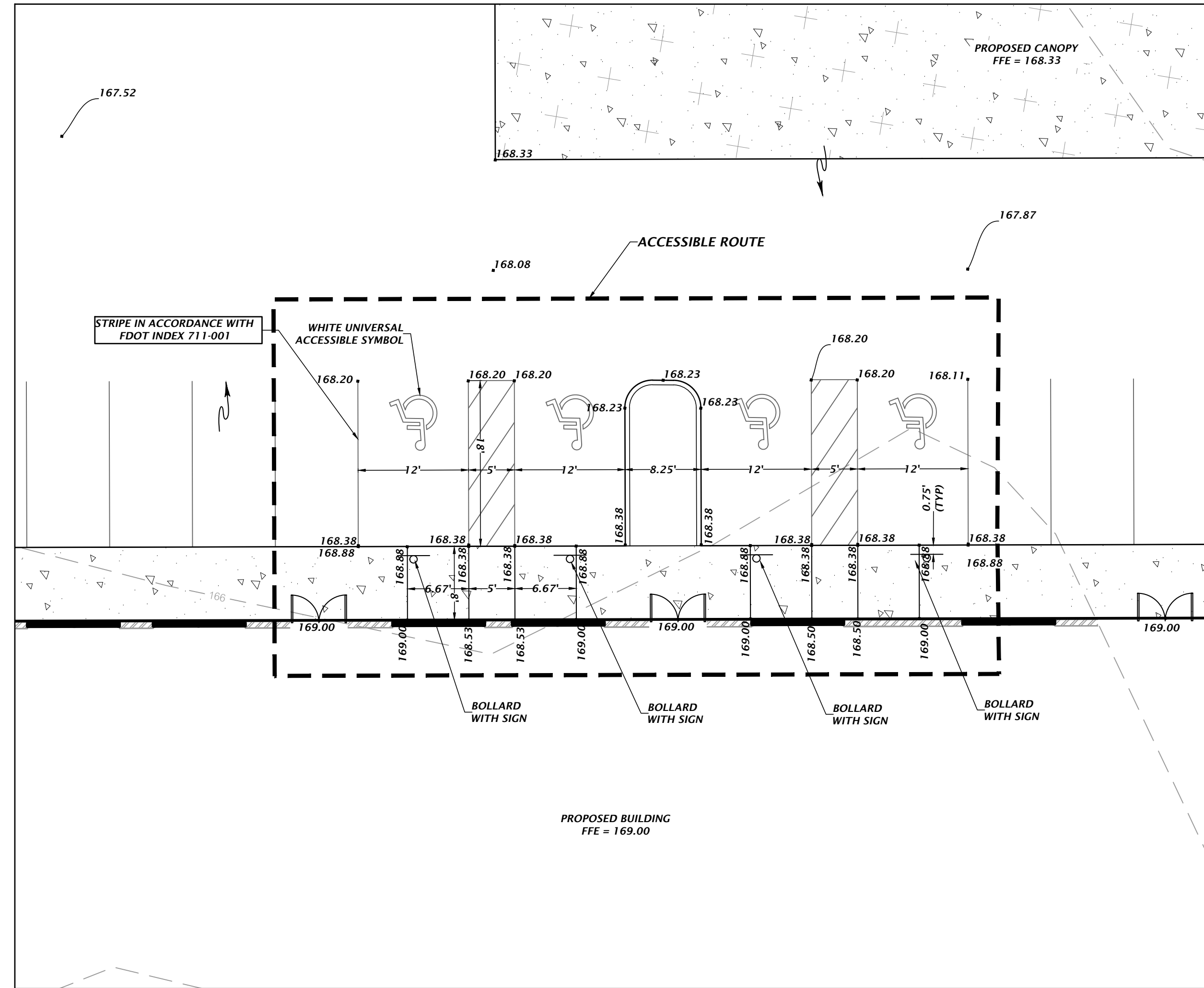
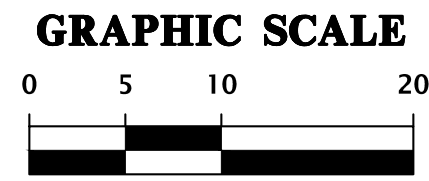
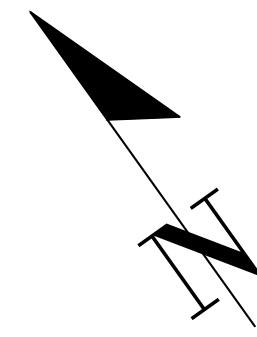
NOTES:

- SEE SURVEY FOR BENCHMARK ELEVATIONS, LOCATIONS, AND DESCRIPTIONS.
- CONTRACTOR SHALL REPAIR/RESTORE ANY DISTURBED AREAS TO EXISTING CONDITIONS OR BETTER.
- ALL ELEMENTS THAT ARE PLACES OF PUBLIC ACCOMMODATIONS AND COMMERCIAL FACILITIES ON THE SITE (INCLUDING ACCESSIBLE ROUTES AND PARKING) SHALL MEET THE REQUIREMENTS OF "FLORIDA AMERICANS WITH DISABILITIES IMPLEMENTATION ACT", ADA STANDARDS FOR ACCESSIBLE DESIGN, FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION AND THE FAIR HOUSING ACT, WHERE APPLICABLE.
- STOP SIGN SUPPORT MUST BE 2"x2" SQUARE POST, 14 FT, 14 GAUGE, 4 LBS/FT.

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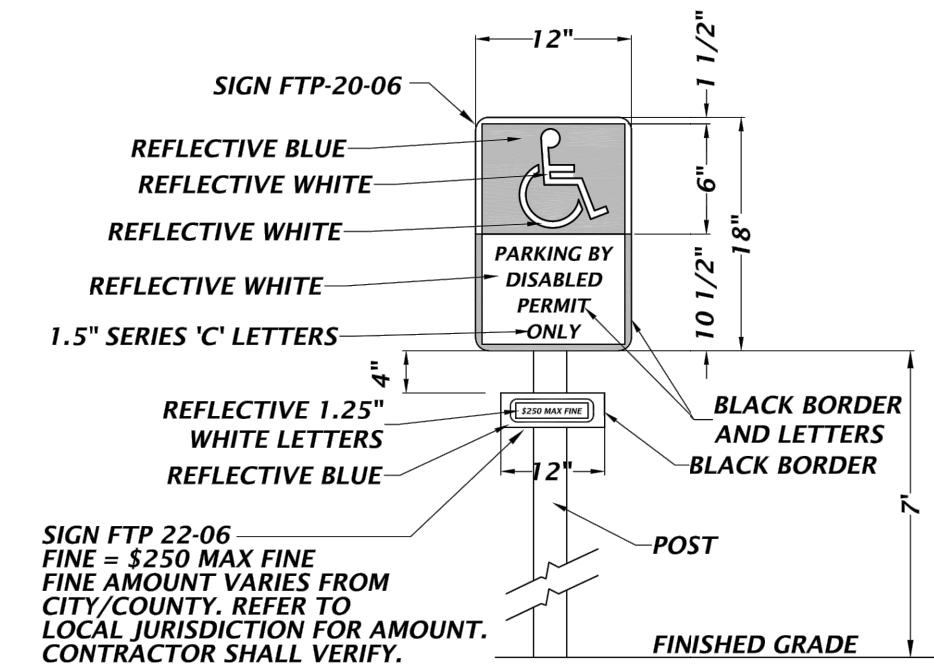
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VERTICAL SCALE: 1"=10'
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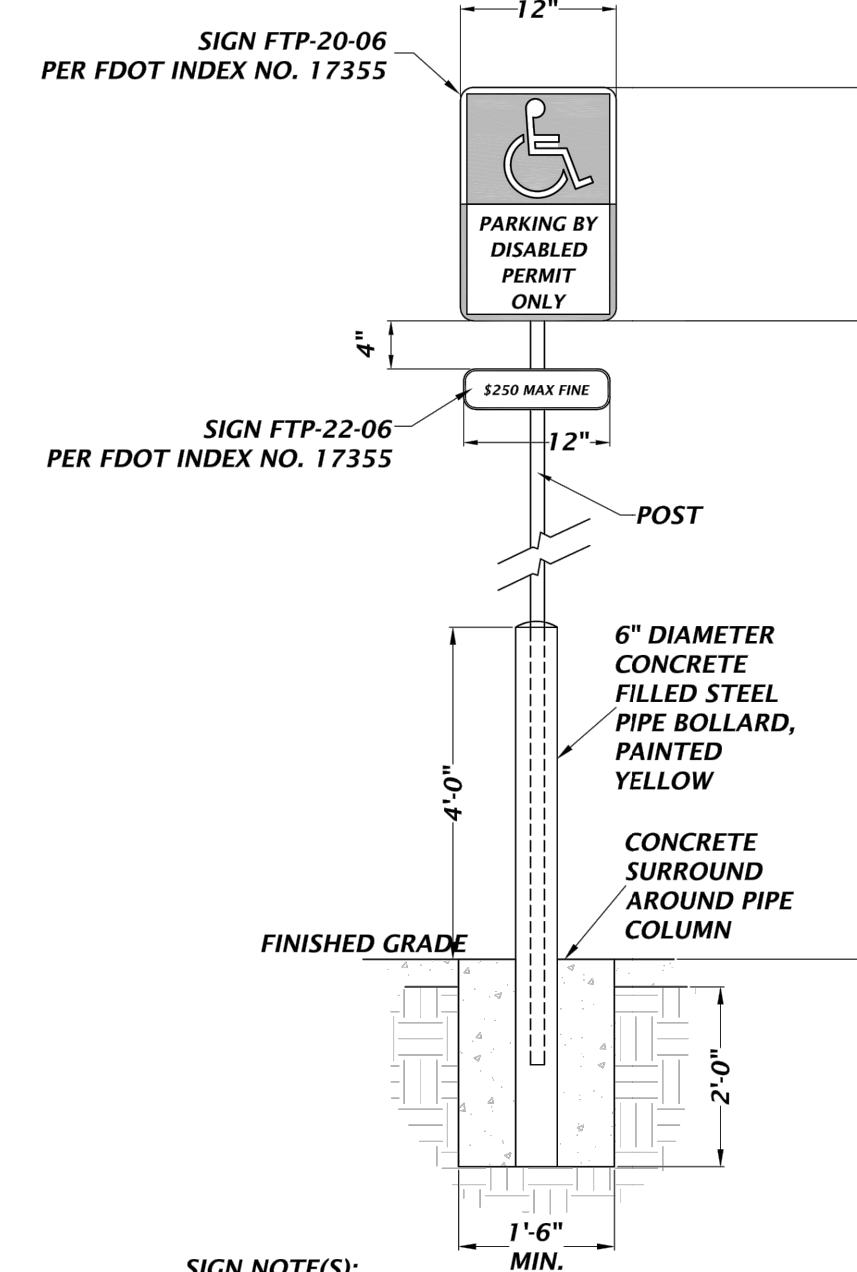
HANDICAP PARKING & RAMP
NTS



- SIGN NOTE(S):
1. SIGN CONSTRUCTION, DESIGN AND PLACEMENT SHALL COMPLY WITH STATE AND LOCAL STATUTES.

404B

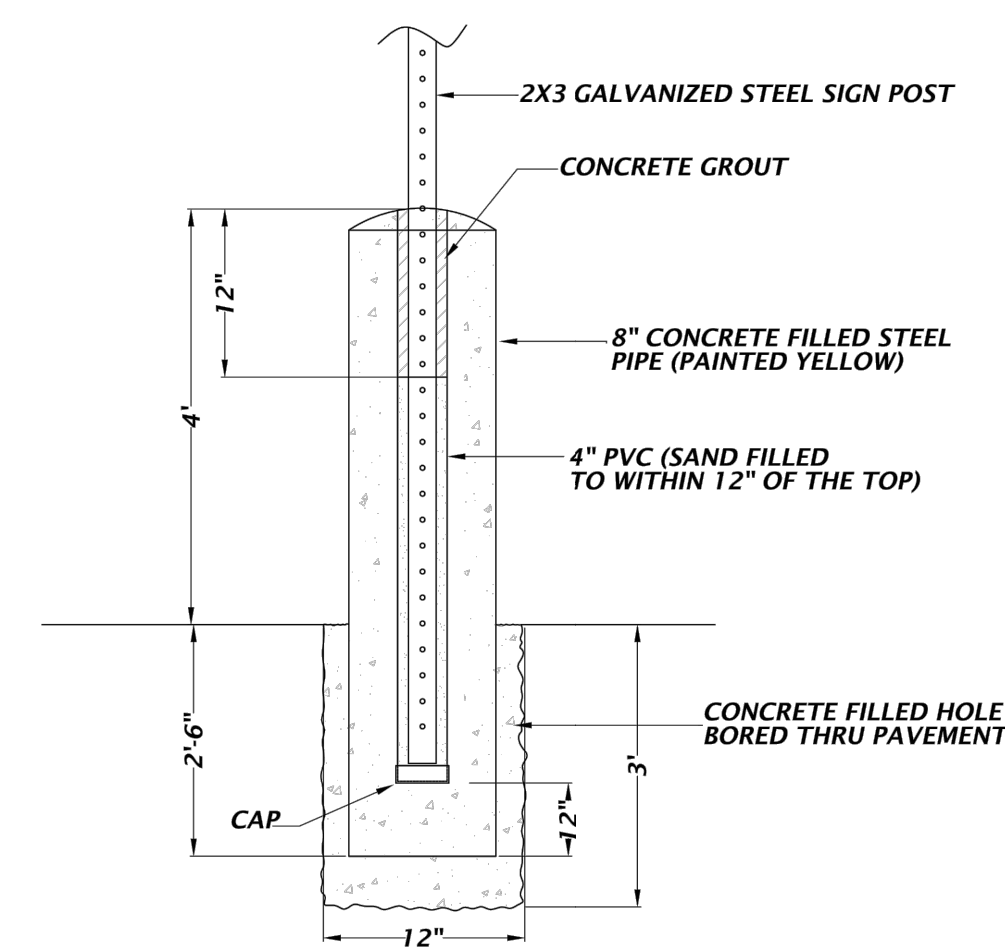
ACCESSIBLE PARKING SIGN
NTS



- SIGN NOTE(S):
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404C

ACCESSIBLE PARKING SIGN WITH BOLLARD
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404D

SIGN POST BOLLARD
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VERIFY SCALE
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ORIGINAL DRAWING
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THIS SHEET ADJUST
SCALES ACCORDINGLY

CONSTRUCTION REVISIONS

DATE: 3/28/24
BY: 3/28/24 CITY OF ALACHUA, SRWID
7/09/24 CITY OF ALACHUA, SRWID
8/09/24 CITY OF ALACHUA, SRWID

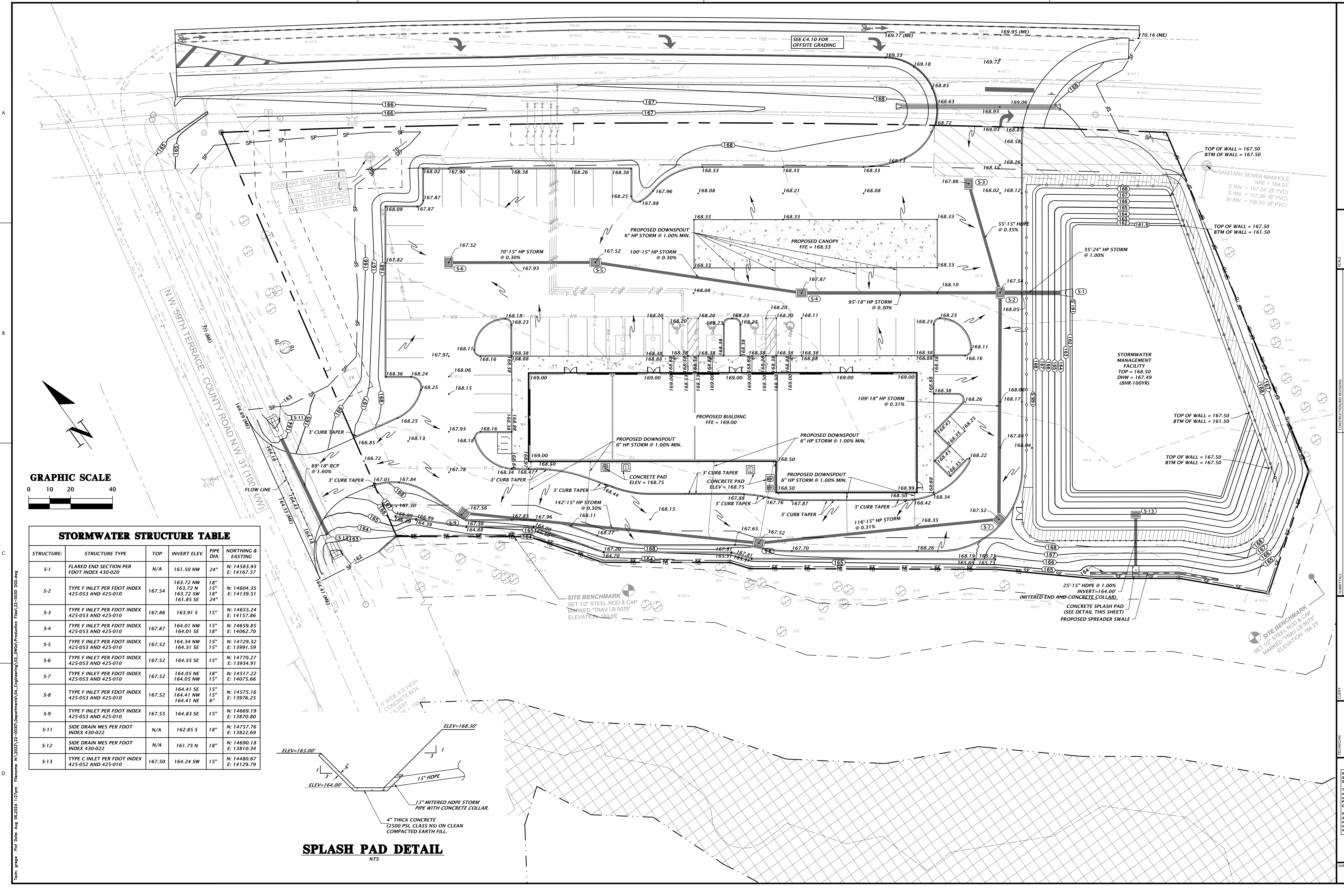
CLIENT: MR. HARDIK PATEL
PROJECT: PATEL FUEL RETAIL
SHEET TITLE: ACCESSIBILITY SITE PLAN AND DETAILS

DESIGNER: G. WARDZINSKI
CHECKER: C. LEDFORD
QUALITY CONTROL: W. OWEN
PROJECT NUMBER: 22-0030

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SHEET NO. **C1.20**



STORMWATER STRUCTURE TABLE				
STRUCTURE	STRUCTURE TYPE	TOP	INVERT ELEV	PIPE DIA. & NORTHING & EASTING
S-1	FLARED END SECTION PER FDOT INDEX 430-020	N/A	161.50 NW	24" N: 14583.93 E: 14167.57
S-2	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	167.54	163.72 NW 163.72 SW 161.85 SE	18" N: 14604.35 E: 14139.51
S-3	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	167.86	163.91 S	15" N: 14655.24 E: 14157.86
S-4	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	167.87	164.01 NW 164.01 SE	15" N: 14659.85 E: 14062.70
S-5	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	167.52	164.34 NW 164.31 SE	15" N: 14729.32 E: 13991.59
S-6	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	167.52	164.55 SE	15" N: 14770.27 E: 13934.91
S-7	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	167.52	164.05 NE 164.05 NW	18" N: 14517.22 E: 14075.66
S-8	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	167.52	164.41 SE 164.41 NW 164.41 NE	15" N: 14575.16 E: 13976.25 15" N: 14575.16 E: 13870.80
S-9	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	167.55	164.83 SE	15" N: 14669.19 E: 13822.69
S-11	SIDE DRAIN MES PER FDOT INDEX 430-022	N/A	162.85 S	18" N: 14757.76 E: 13822.69
S-12	SIDE DRAIN MES PER FDOT INDEX 430-022	N/A	161.75 N	18" N: 14690.18 E: 13810.34
S-13	TYPE C INLET PER FDOT INDEX 425-052 AND 425-010	167.50	164.24 SW	15" N: 14480.67 E: 14129.79

SPLASH PAD DETAIL

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0 10 20 40
GRAPHIC SCALE

3/28/24 CITY OF ALACHUA, SRWMD
7/09/24 CITY OF ALACHUA, SRWMD
8/09/24 CITY OF ALACHUA, SRWMD

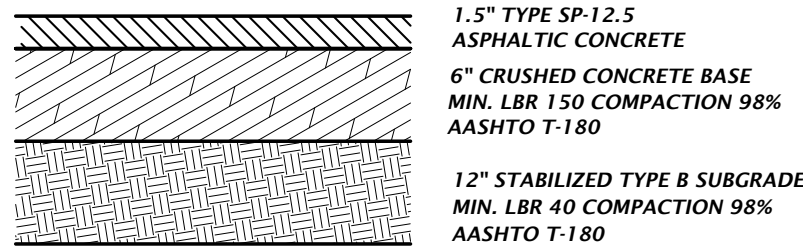
MR. HARDIK PATEL
PATEL FUEL RETAIL
DETAILED GRADING AND DRAINAGE
PLAN

CLIENT: MR. HARDIK PATEL
PROJECT: PATEL FUEL RETAIL
SHEET TITLE: DETAILED GRADING AND DRAINAGE
PLAN

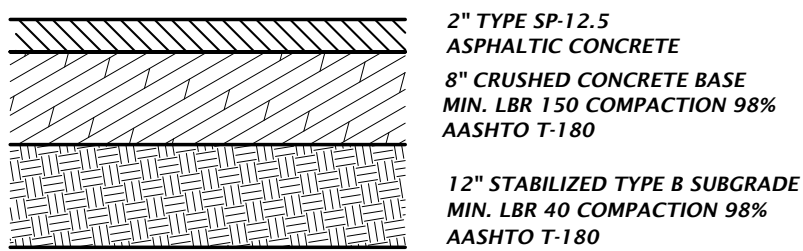
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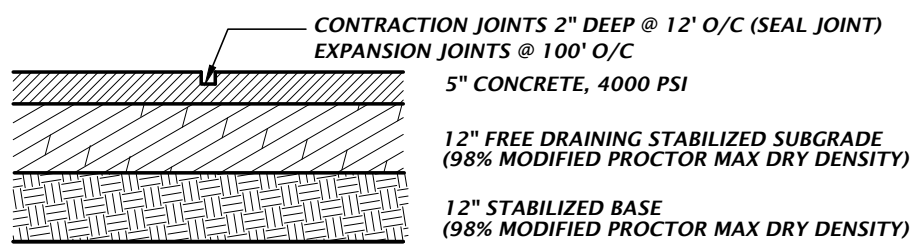
**STANDARD DUTY
ASPHALT DETAIL**



**HEAVY DUTY
ASPHALT DETAIL**

ASPHALT PAVEMENT DETAILS

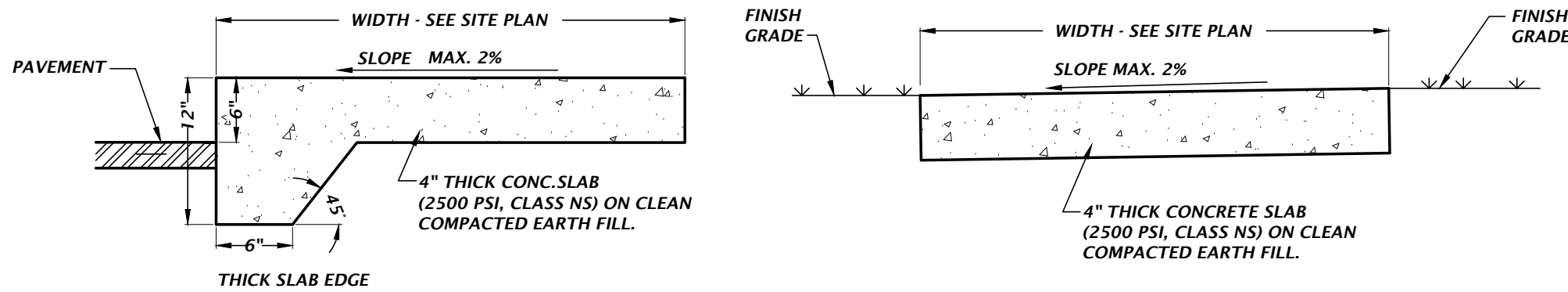
NTS



NOTE: CONCRETE PAVEMENT & JOINTS SHALL BE CONSTRUCTED TO FC & PA STANDARDS.

CONCRETE PAVEMENT DETAIL

NTS



NOTES:

1. SAWCUT CONTROL JOINTS SHALL BE CONSTRUCTED 5 FEET ON CENTER
2. EXPANSION JOINTS WITH PREFORMED JOINT FILLER SHALL BE CONSTRUCTED BETWEEN ALL FIXED OBJECTS AND WALK AND AT CONSTRUCTION JOINTS.

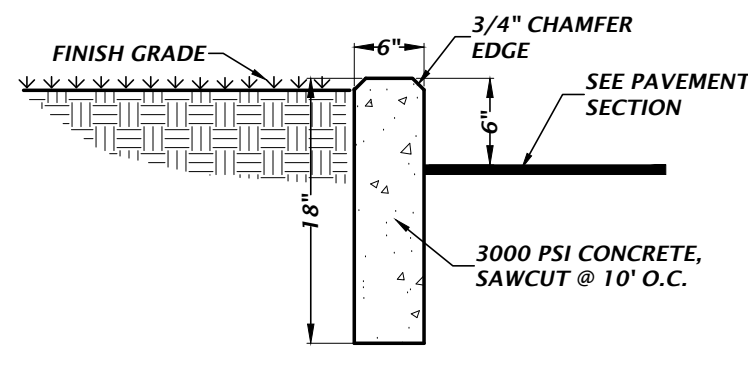
ADJACENT TO PAVEMENT

NTS

NOT ADJACENT TO PAVEMENT

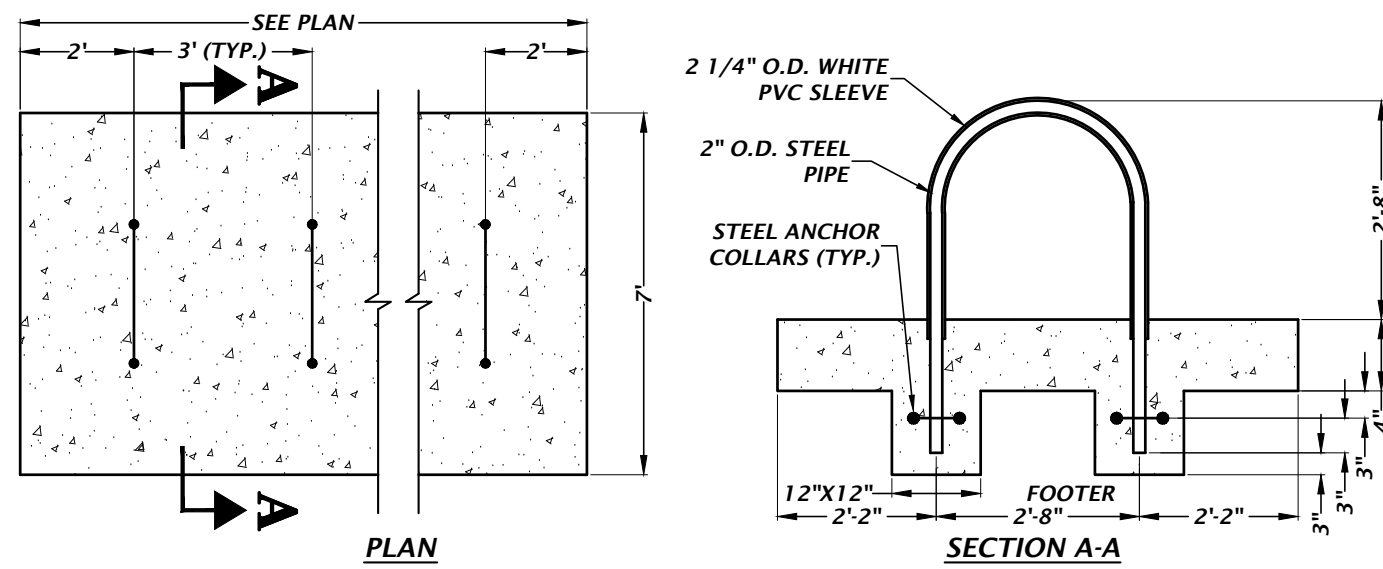
NTS

CONCRETE SIDEWALK DETAILS



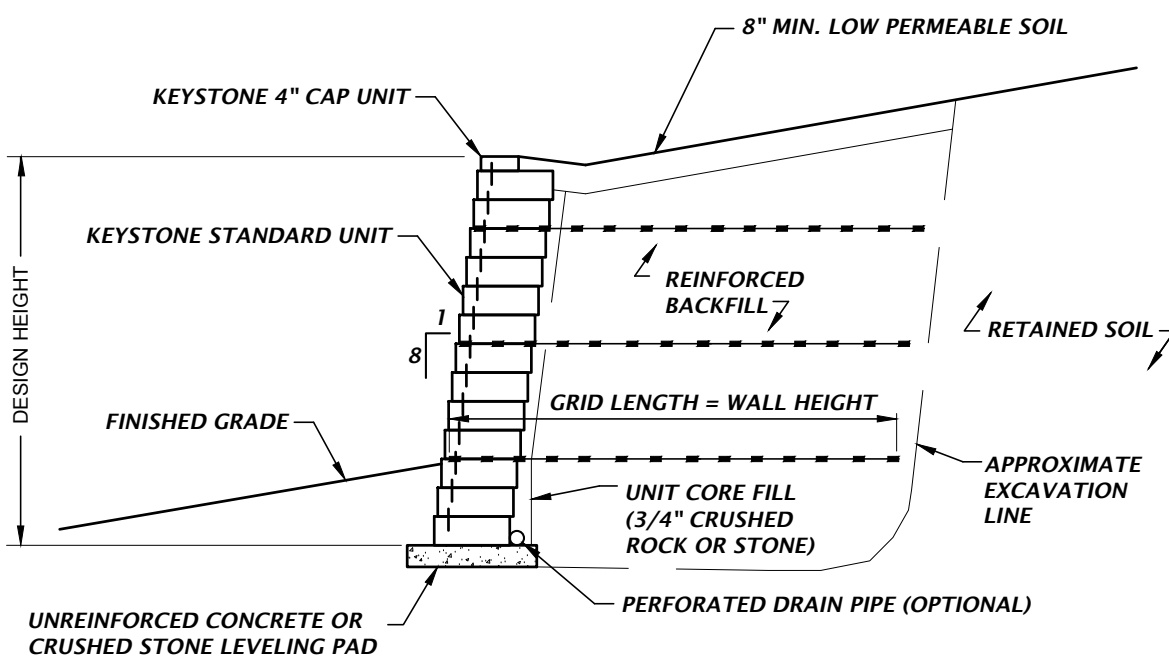
TYPICAL 6" CURB DETAIL

NTS



U-SHAPE BIKE RACK

NTS



**TYPICAL KEYSTONE RETAINING
WALL REINFORCED SECTION**

STANDARD UNIT - 1" MINIMUM SETBACK

NTS

Test: greg For Date: Aug 06,2024 12:27pm Filename: N:\2022\22-0030\Department\04_Engineering\02_DWG\Production\Files\22-0030_Const_Details.dwg

11801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com

est. 1988 FLORIDA
CA-5075

CHW
AN INVIS COMPANY

SCALE
N/A
VERTICAL SCALE
BASED ON SCALE
ORIGINAL DRAWING
0 1' 1"
DO NOT USE INCHES
THIS SHEET ADJUST
SCALES ACCORDINGLY.

CONSTRUCTION REVISIONS

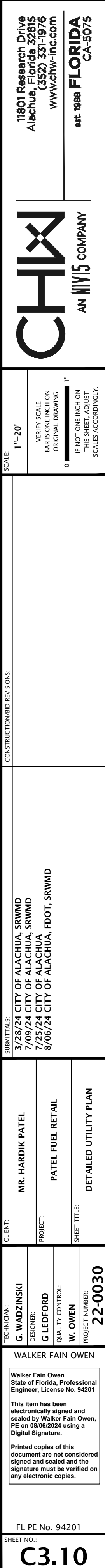
DATE: 3/25/24 CITY OF ALACHUA, SRWID
7/09/24 CITY OF ALACHUA, SRWID
7/22/24 CITY OF ALACHUA, SRWID
8/06/24 CITY OF ALACHUA, FOOT, SRWID

CLIENT: MR. HARDIK PATEL
PROJECT: PATEL FUEL RETAIL
SHEET TITLE: CONSTRUCTION DETAILS

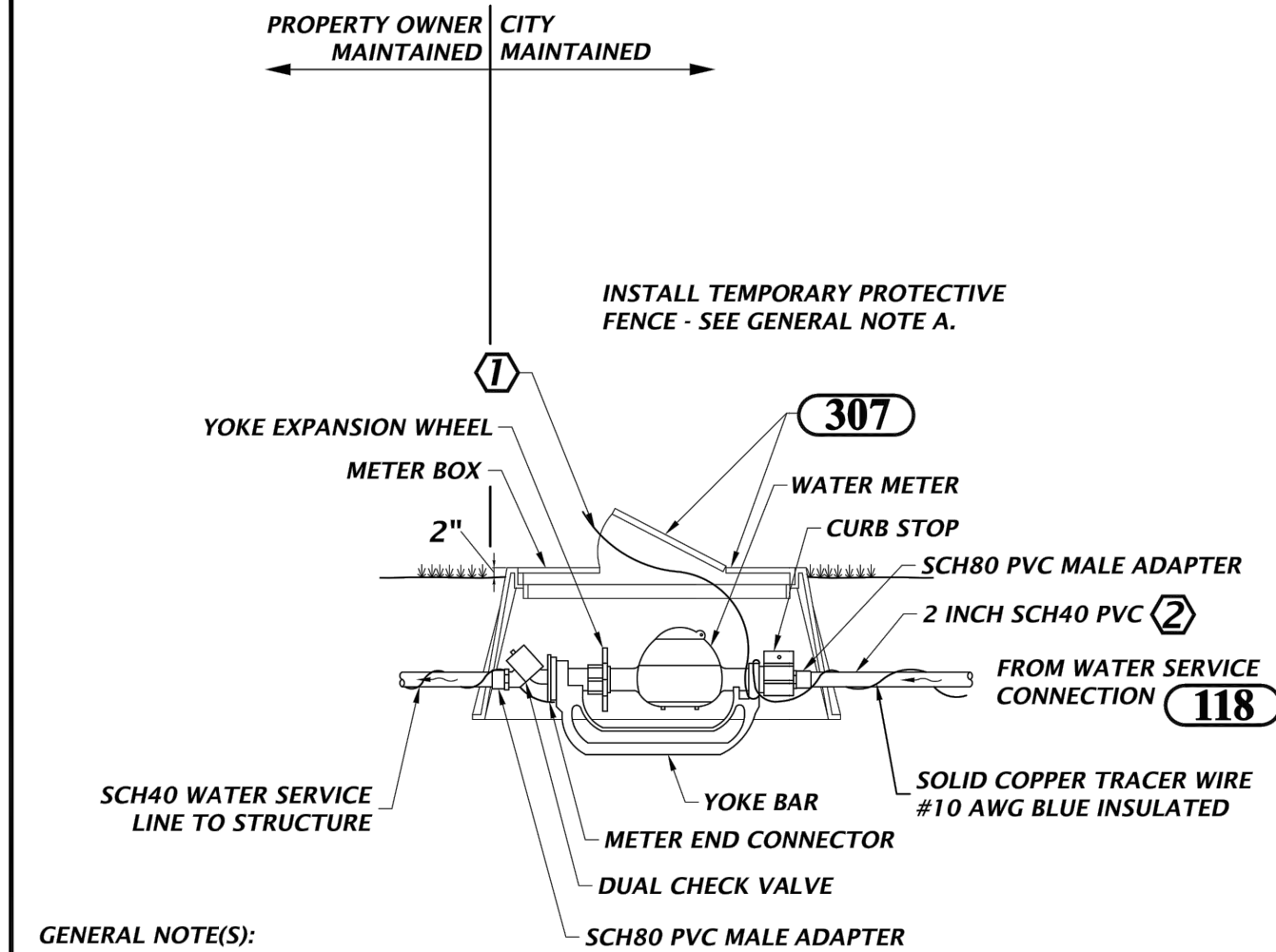
DESIGNER: G. WADZINSKI
CHECKER: G. LEDFORD
PROJECT NUMBER: 22-0030

WALKER FAIR OWEN
Walker Fair Owen
State of Florida, Professional
Engineer, License No. 94201
This item has been
electronically signed and
sealed by Walker Fair Owen,
PE on 08/06/2024 using a
Digital Signature.
Printed copies of this
document are not considered
signed and sealed and the
signature must be verified on
any electronic copies.

FL PE No. 94201
SHEET NO.
C2.30



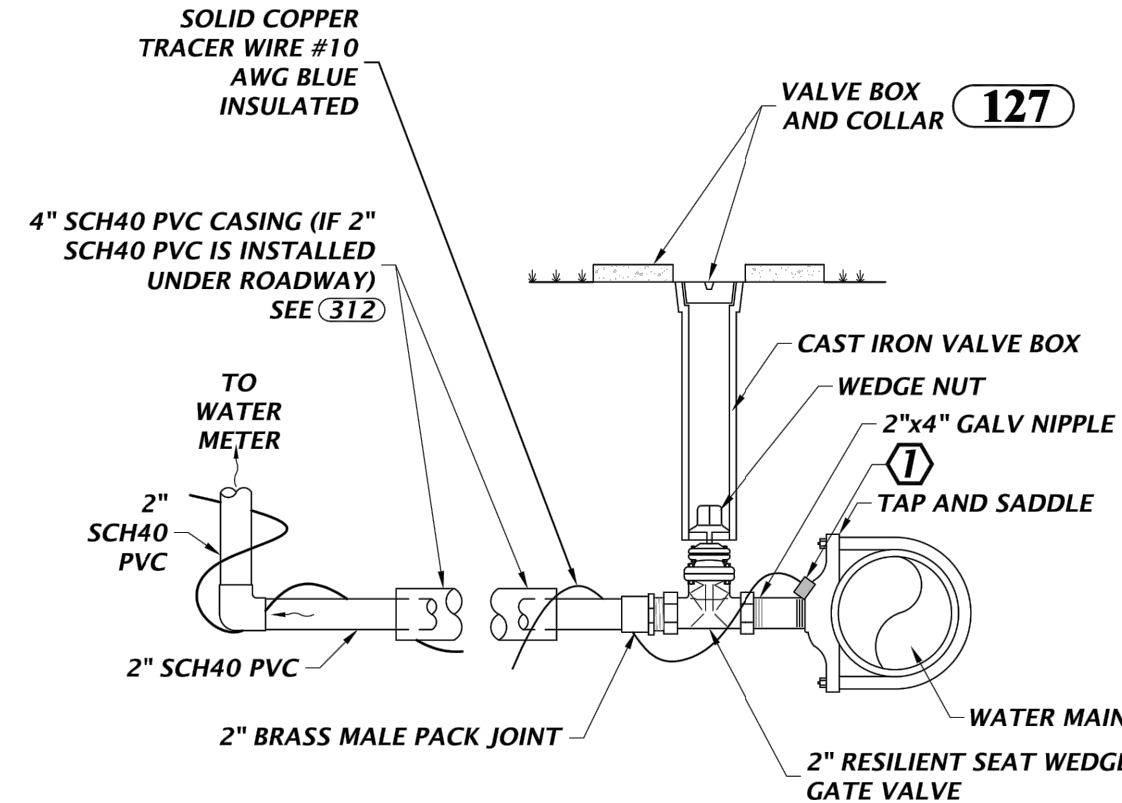
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GENERAL NOTE(S):
A. DURING CONSTRUCTION, PROVIDE TEMPORARY PROTECTIVE FENCE AROUND METER AS PER (324).
B. CONNECT TRACER WIRES WITH PRO-LINE TRACER-LOCK CONNECTORS. PART # TL-LUG-SS.

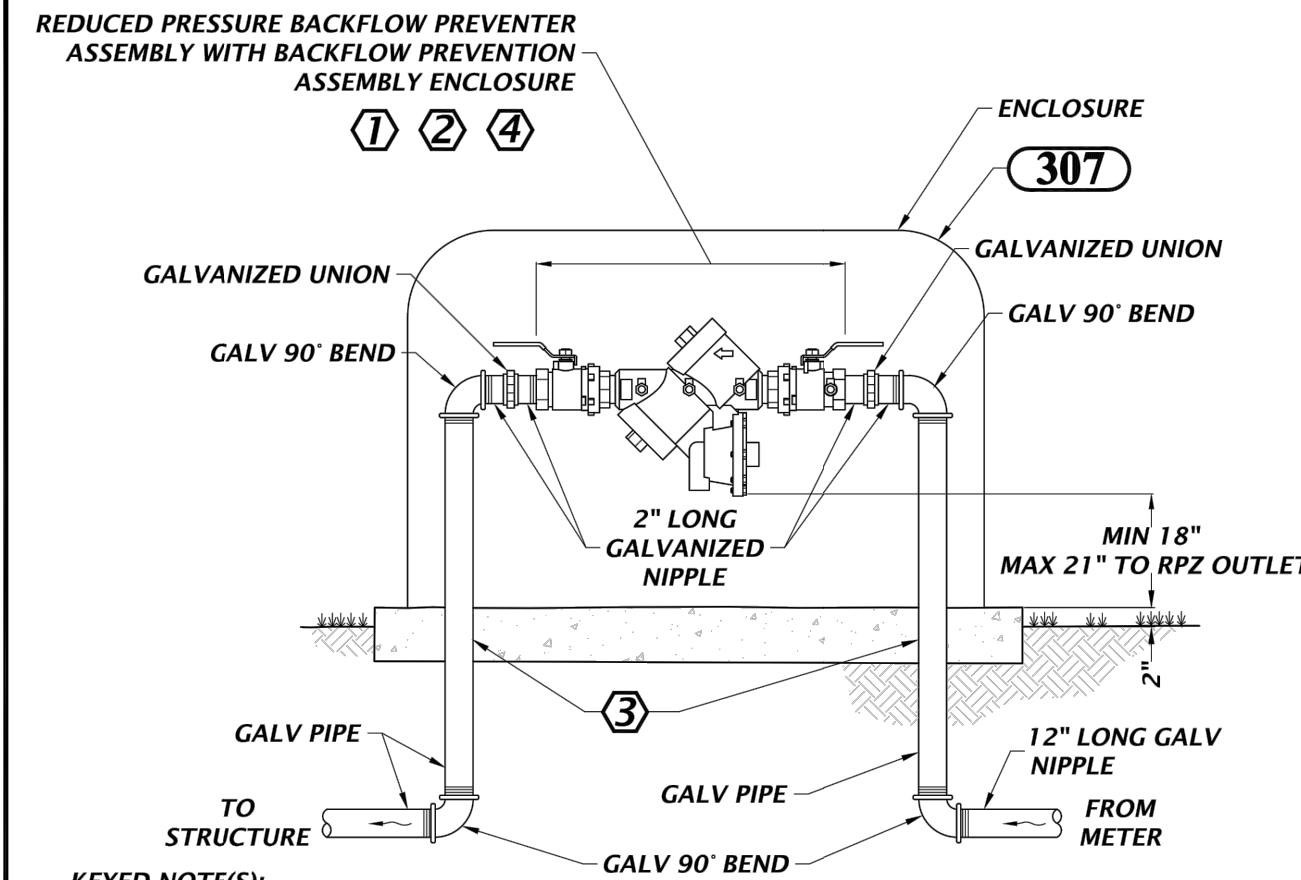
- KEYED NOTE(S):
- 1 PROVIDE ENOUGH TRACER WIRE SO IT CAN EXTEND AT LEAST 8-INCHES ABOVE METER BOX.
 - 2 PROVIDE 2x1 (or 3/4) INCH REDUCING BUSHING SCH 80 PVC SPIGOT X SOCKET TO CONNECT TO CURB STOP.

115 3/4" AND 1" WATER METER ASSEMBLY
NTS



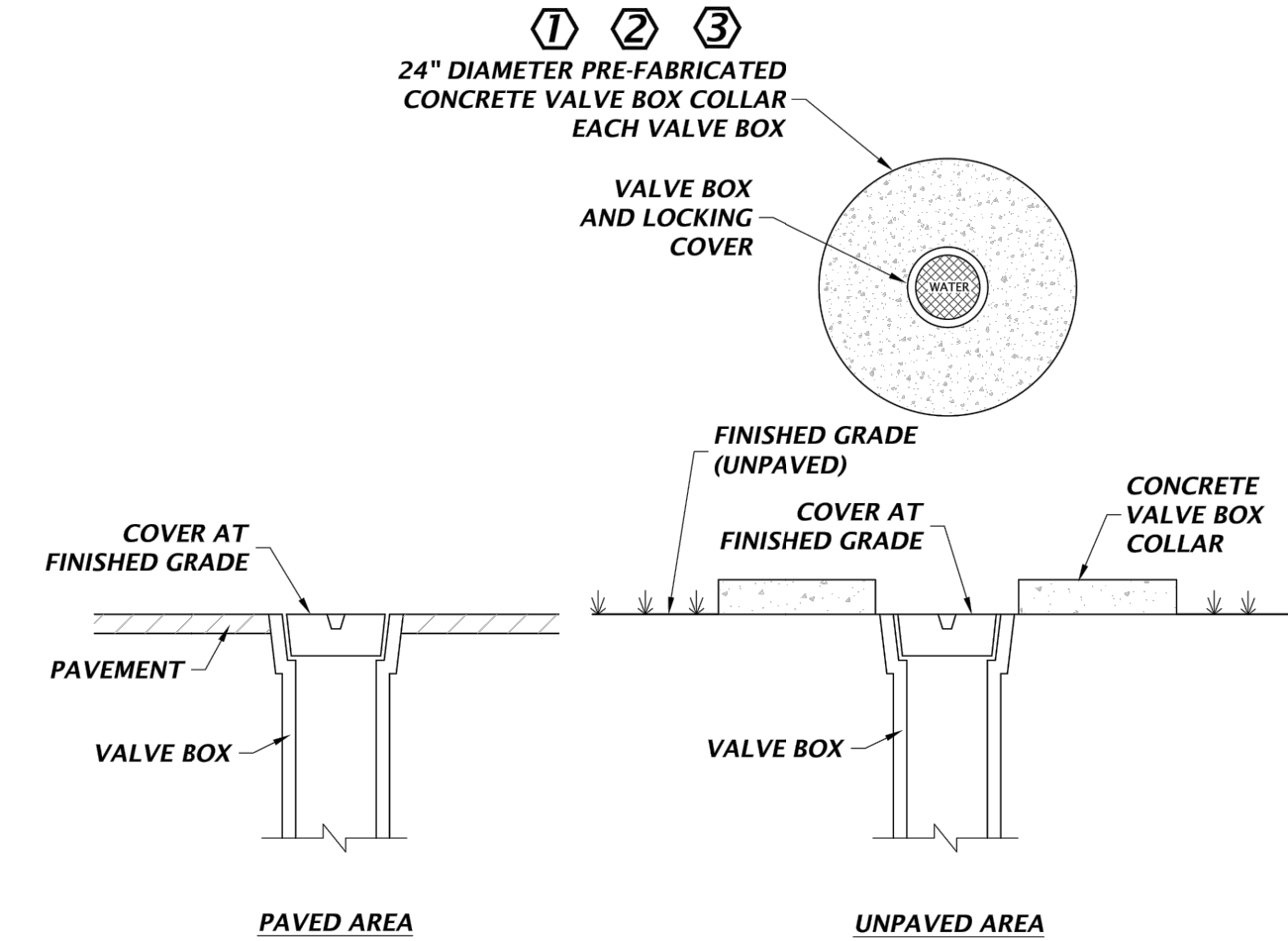
- KEYED NOTE(S):
- 1 CONNECT TRACER WIRES FROM MAIN TO SERVICE WITH PRO-LINE TRACER-LOCK CONNECTORS. PART # TL-LUG-SS.

118 2" WATER SERVICE CONNECTION
NTS



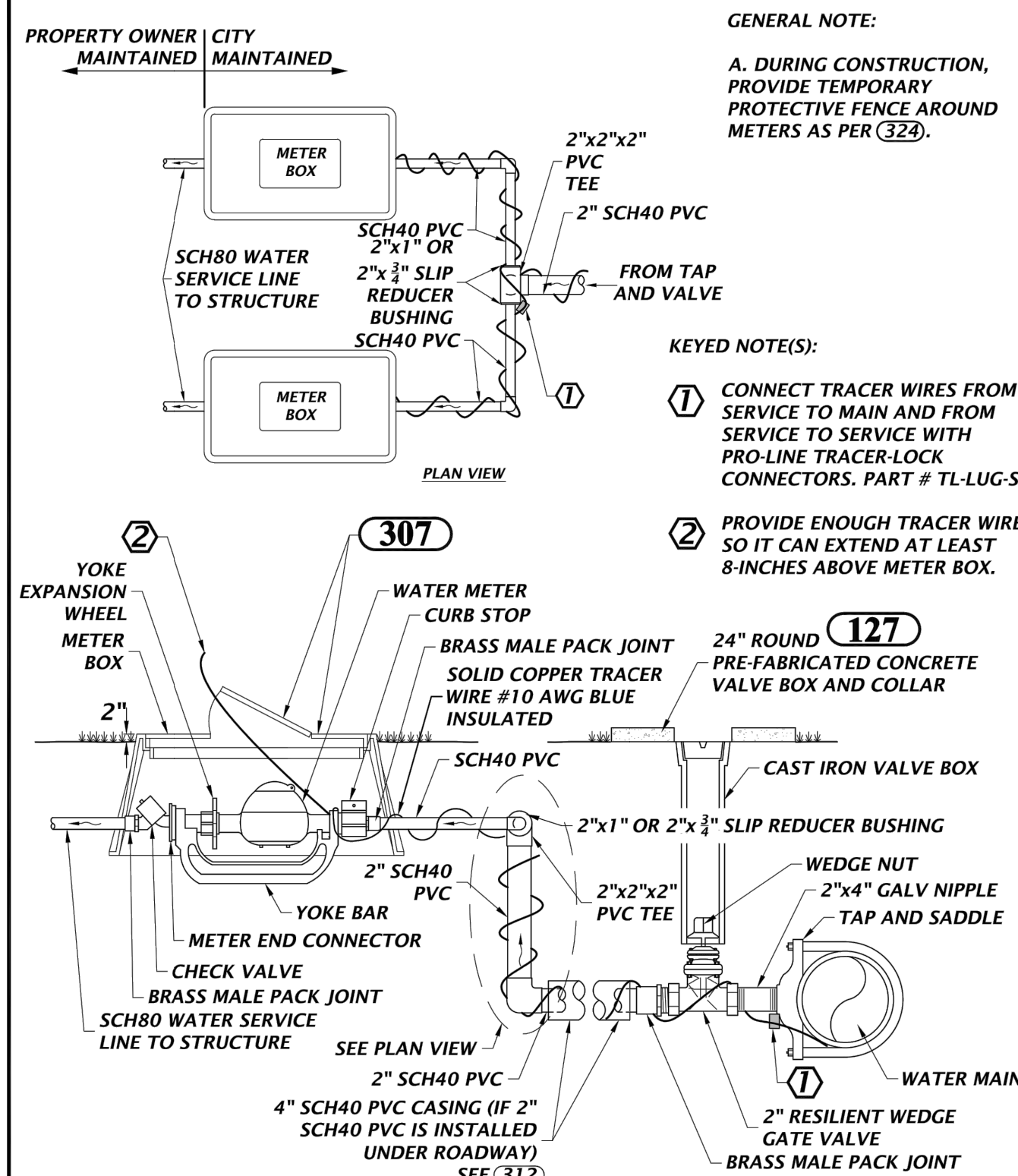
- KEYED NOTE(S):
- 1 PROVIDE BACKFLOW PREVENTION ASSEMBLY ENCLOSURE. COORDINATE WITH VENDOR TO SELECT ENCLOSURE SIZE SUITABLE FOR INSTALLED BACKFLOW PREVENTER ASSEMBLY.
 - 2 ENCLOSURE VENDOR AND FEATURES:
 - MARINE GRADE ALUMINUM
 - 1.5 INCH INSULATION, 9.0 R VALUE
 - MEANS TO ACCESS ASSEMBLY
 - LOCKABLE
 - MOUNTING HARDWARE
 - COLOR: TAN, UNLESS OTHERWISE NOTED.
 - VENDORS: SAFE T COVER, NASHVILLE, TN; OR EQUAL
 - 3 POUR CONCRETE PAD WITH DIMENSIONS AS PER VENDOR'S RECOMMENDATIONS. MINIMUM THICKNESS OF 4 INCHES.
 - PROVIDE SLEEVES AROUND PIPING
 - 4 BACKFLOW PREVENTER FURNISHED, INSTALLED AND MAINTAINED BY PROPERTY OWNER, NOT COA.

121 3/4" TO 2" BACKFLOW PREVENTER AND ENCLOSURE
NTS



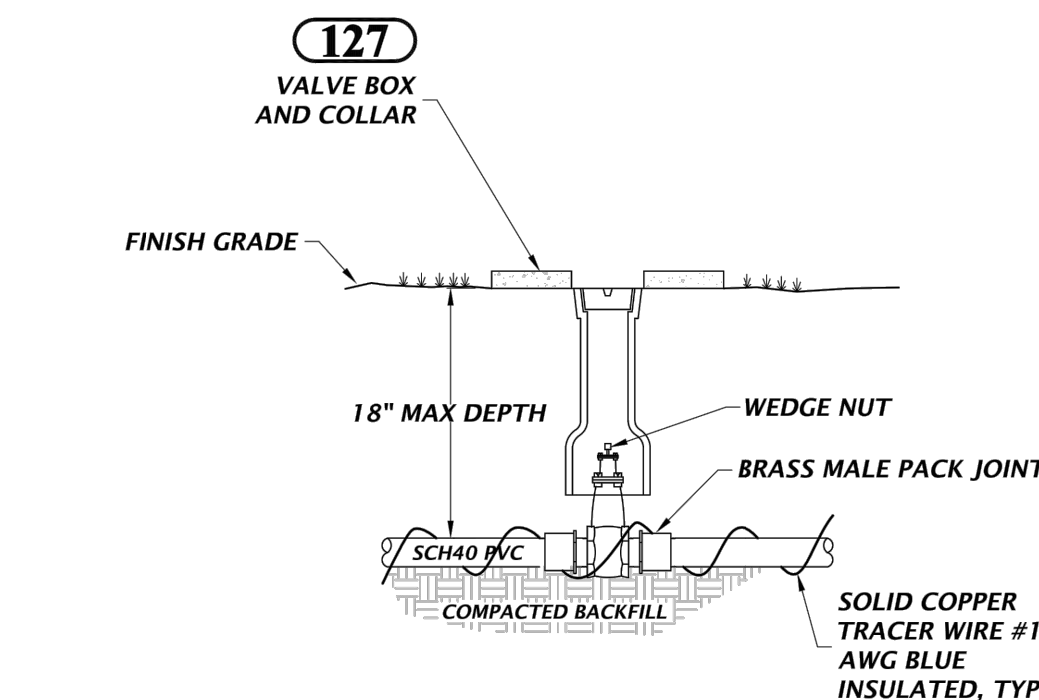
- KEYED NOTE(S):
- 1 VALVE BOX COLLAR FEATURES:
 - 24" DIAMETER, 11" INNER OPENING
 - 4" THICK
 - TWO RINGS OF #3 REBAR
 - 4000 PSI TEST CONCRETE
 - 2 SUPPLIER AND PRODUCT:
 - MASONRY SUPPLY, INC., SELMA, NC OR EQUAL
 - ITEM: 24" CONCRETE VALVE BOX COLLAR OR EQUAL
 - PART: MSVB-24 OR EQUAL
 - 3 PAINT VALVE BOX COVER AND COLLAR AS PER (307)

127 VALVE BOX COVER
NTS



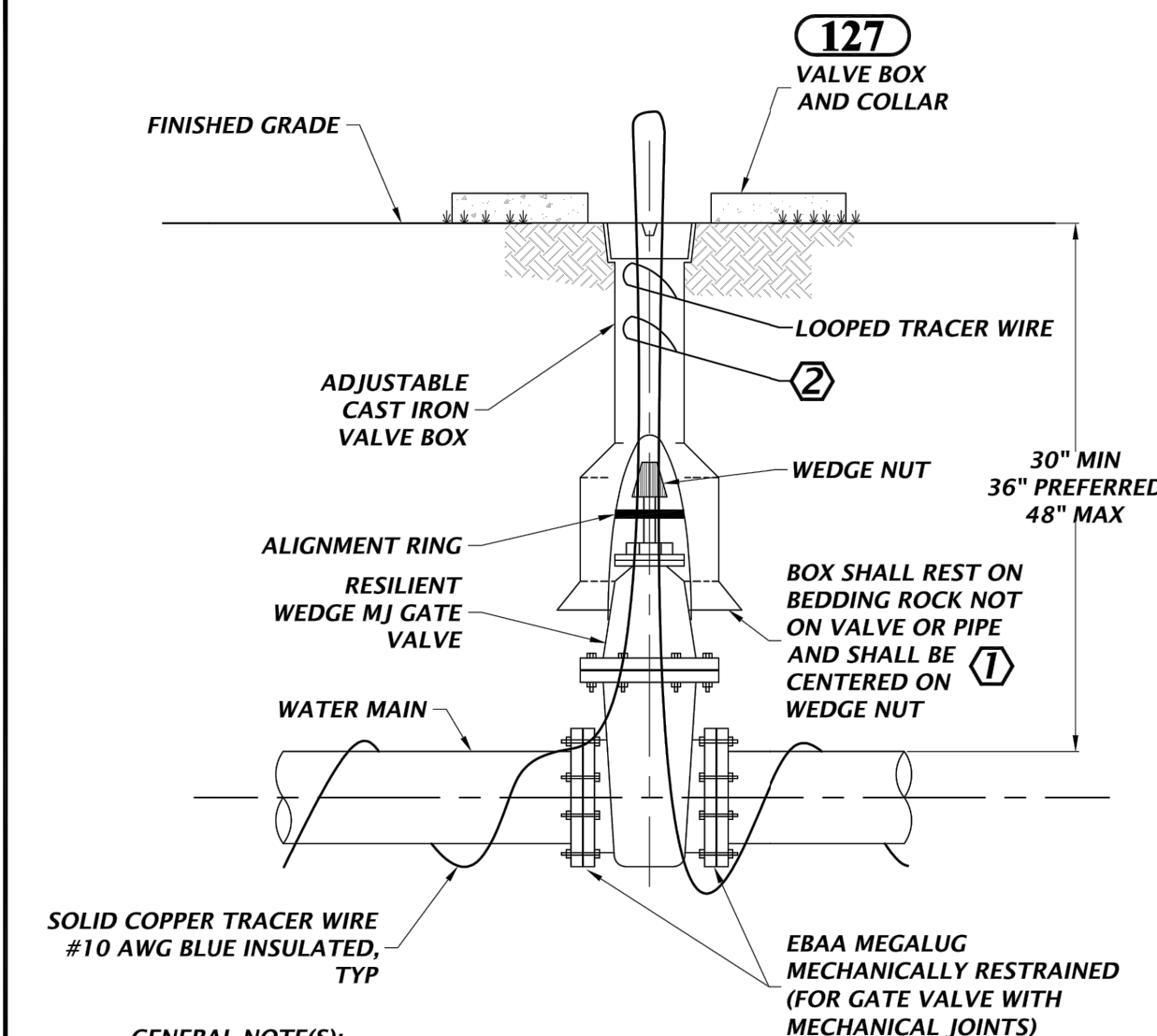
- KEYED NOTE(S):
- 1 CONNECT TRACER WIRES FROM SERVICE TO MAIN AND FROM SERVICE TO SERVICE WITH PRO-LINE TRACER-LOCK CONNECTORS. PART # TL-LUG-SS.
 - 2 PROVIDE ENOUGH TRACER WIRE SO IT CAN EXTEND AT LEAST 8-INCHES ABOVE METER BOX.

130 DUAL WATER SERVICE CONNECTION
NTS



- GENERAL NOTE(S):
1. WATER VALVE BOX TOPS ARE TO BE CAST WITH THE WORD "WATER" ON TOP AND PAINTED BLUE.

142 2" RESILIENT SEAT WEDGE GATE VALVE FOR WATER AND RECLAIMED WATER SERVICE CONNECTIONS
NTS



- GENERAL NOTE(S):
1. PVC EXTENSIONS SHALL NOT BE USED ON VALVE BOX INSTALLATION.
 2. VALVE BOX LID TO BE LETTERED WITH THE WORD "WATER" OR "RECLAIMED".
- KEYED NOTE(S):
- 1 WHEN VALVE BOX IS TO BE INSTALLED IN ROADWAY OR OTHER TRAFFIC AREAS SET VALVE BOX ON FIVE (5) SOLID COMMON BRICKS.
 - 2 VALVE BOX MAY SERVE AS ACCESS POINT FOR TRACER WIRES. PROVIDE ENOUGH LOOPED TRACER WIRE SO IT CAN EXTEND 8-INCHES ABOVE GRADE.

145 GATE VALVE FOR WATER AND RECLAIMED WATER MAINS 4" OR LARGER
NTS

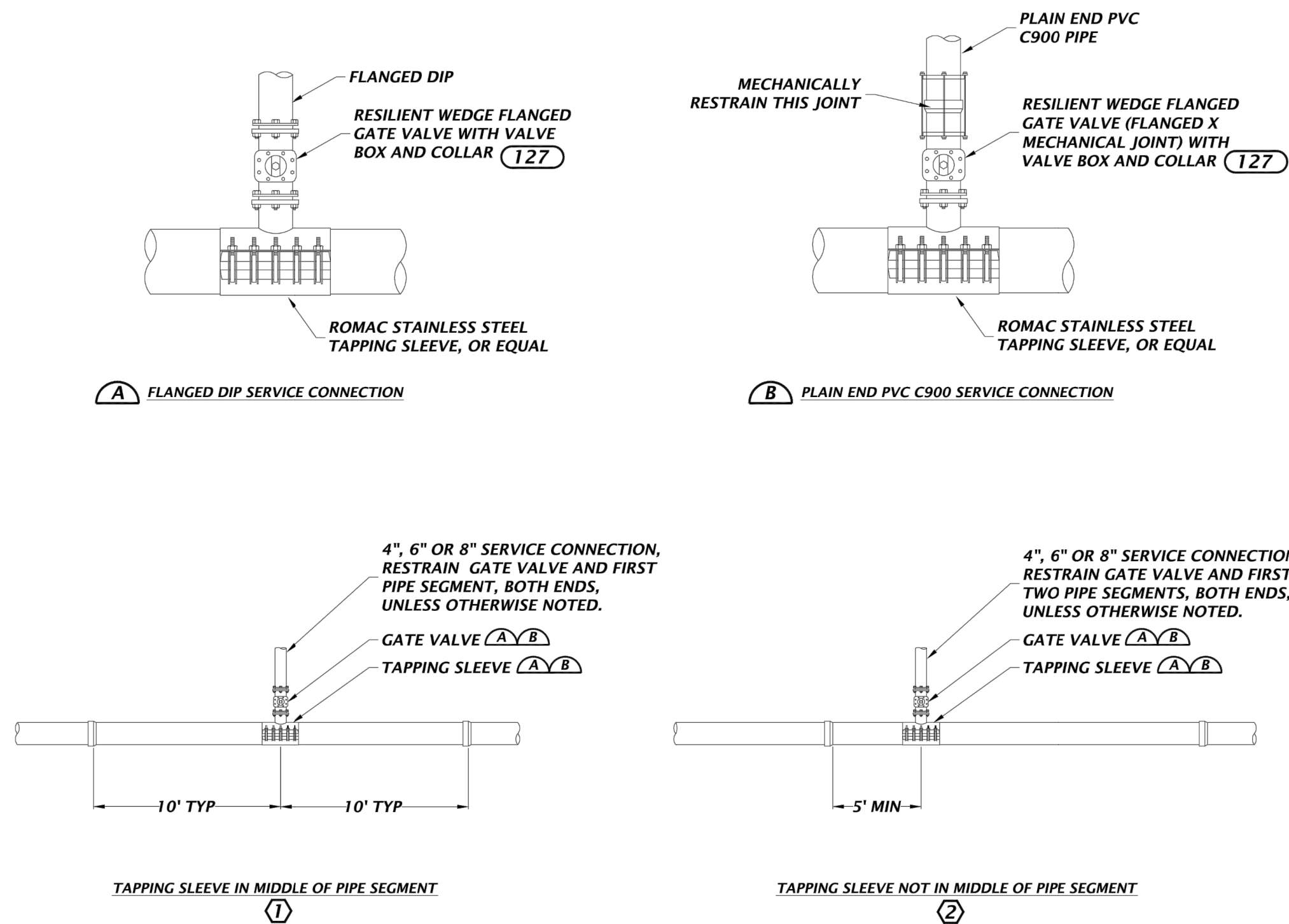


ABBREVIATIONS	
APP	APPROXIMATE
ARV	AIR RELEASE VALVE
AWG	AMERICAN WIRE GAUGE
DI	DUCTILE IRON
DIP	DUCTILE IRON PIPE
E	ELECTRIC CONDUCTOR
FLG	FLANGED
FT	FOOT
FM	FORCE MAIN
GA	GAUGE
GALV	GALVANIZED
GRN	GREEN
GSP	GALVANIZED STEEL PIPE
GV	GATE VALVE
ID	INSIDE DIAMETER
LF	LINEAR FEET
MAX	MAXIMUM
MIN	MINIMUM
MJ	MECHANICAL JOINT
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
OS&Y	OUTSIDE SCREW AND YOKE
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
R/W	RIGHT OF WAY
RPZ	REDUCED PRESSURE ZONE
SCH	SCHEDULE
SF	SQUARE FEET
SIM	SIMILAR
SS	STAINLESS STEEL
TYP	TYPICAL
URD	UNDERGROUND RESIDENTIAL DISTRIBUTION
YEL	YELLOW
WM	WATER MAIN
WW	WASTEWATER

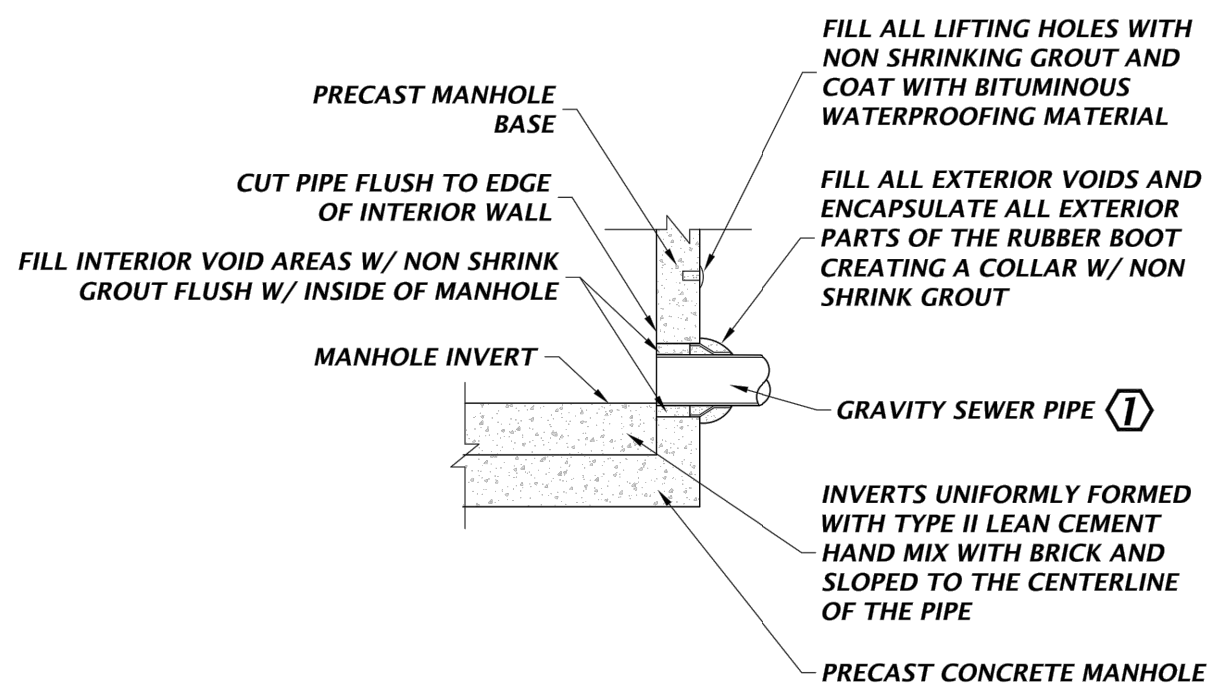
151 DETAIL ABBREVIATIONS
NTS



- GENERAL NOTE(S)
1. MINIMUM RESTRAINED LENGTHS ARE BASED ON (309) AND ARE SUFFICIENT FOR BOTH DIP AND PVC PIPE.
 2. THIS DETAIL APPLIES TO BOTH NEW SERVICE CONNECTIONS INSTALLED ON NEW PIPE AND NEW SERVICE CONNECTIONS INSTALLED ON EXISTING PIPE.
- KEYED NOTE(S):
- ① PREFERRED LOCATION TO REDUCE THRUST FORCES IN THE PIPE BRANCH.
 - ② IF 5' MIN DISTANCE BETWEEN JOINT AND TAPPING SLEEVE IS NOT POSSIBLE, CONTACT COA. THRUST FORCE ANALYSIS REQUIRED.

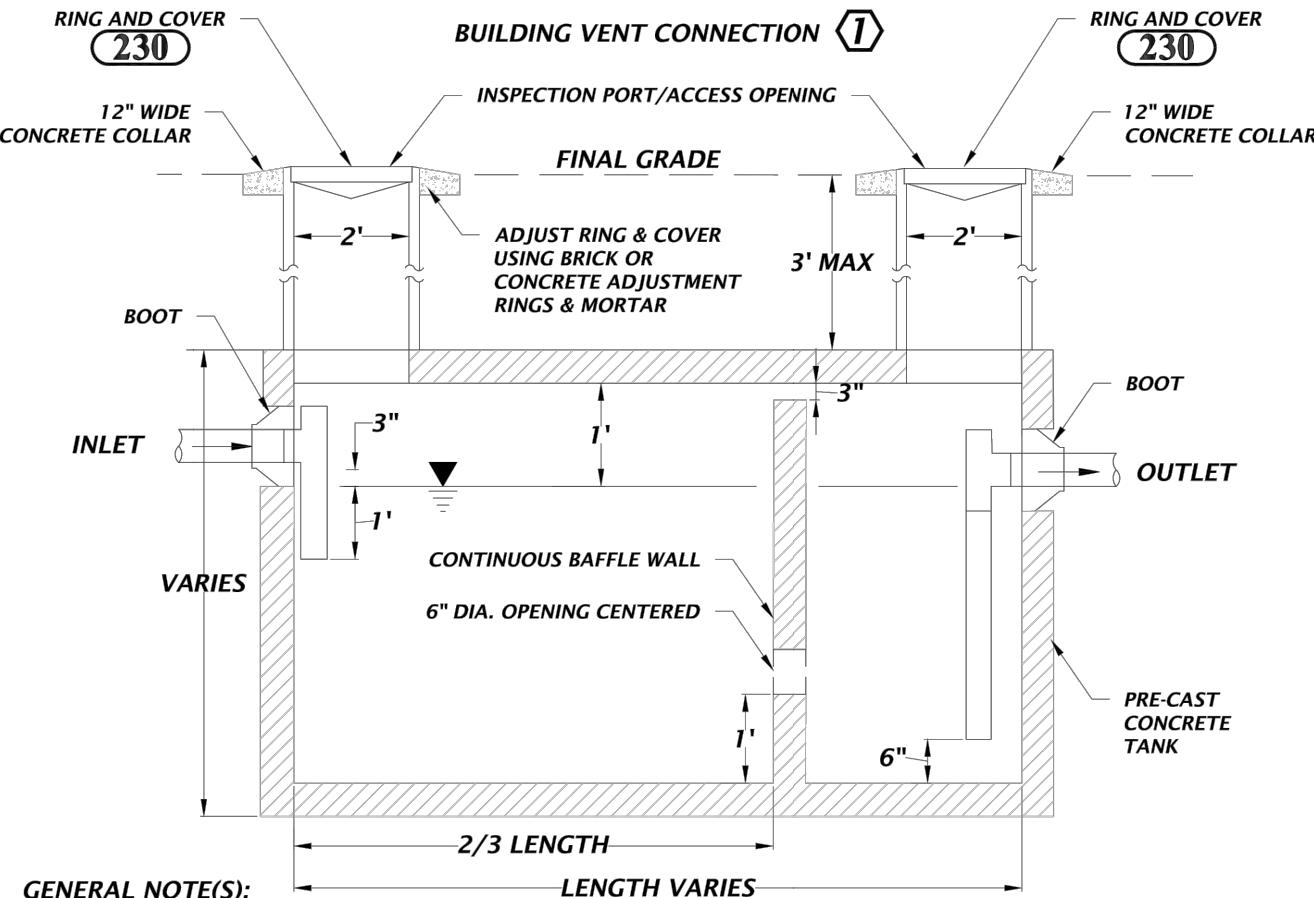


WATER SERVICE CONNECTION FOR NEW AND EXISTING
MAINS - 4\", 6\" AND 8\"
NTS



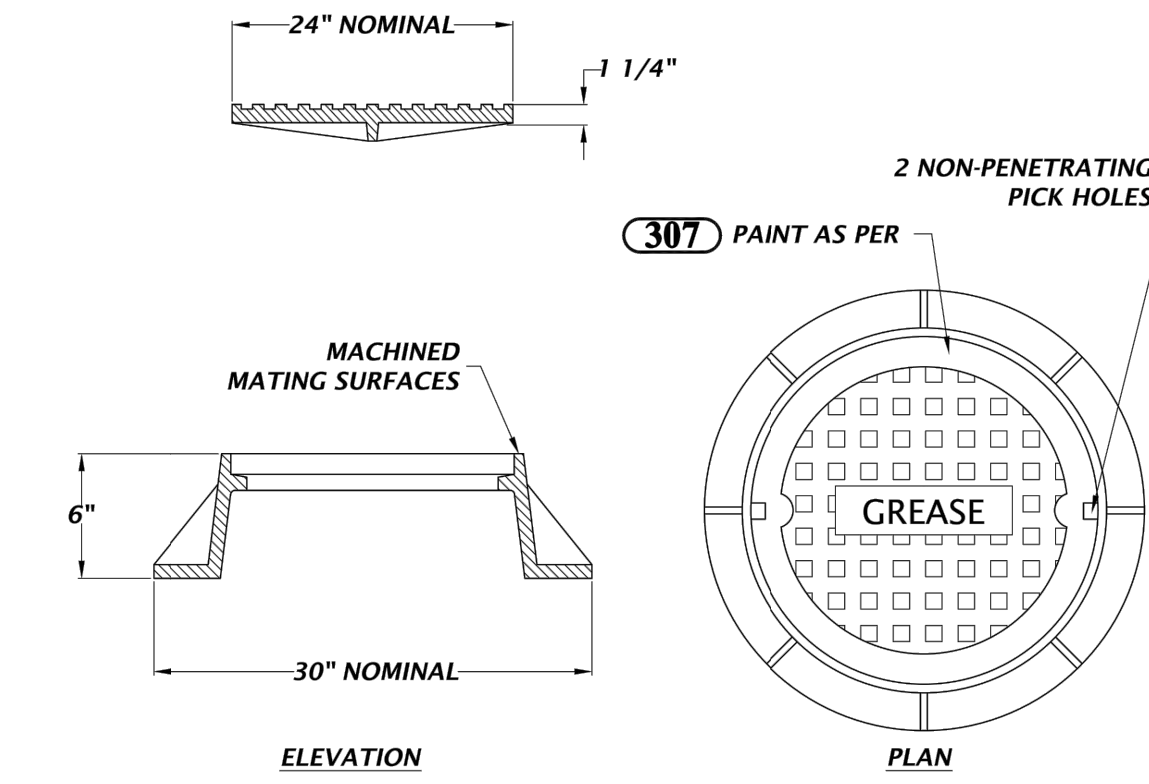
- GENERAL NOTE:
- RUBBER BOOT, DOUBLE BANDED, 316 S/S CLAMPS, MEETING THE ASTM C923 STANDARD. Kor-N-Seal® 1 EX SERIES CONNECTOR WITH DOUBLE STAINLESS STEEL BANDS OR EQUAL
- KEYED NOTE(S):
- ① ESPECIALLY FOR RETRO FIT WORK, INSTALLING A GRAVITY SEWER PIPE UP TO 2 FEET ABOVE INVERT IS PERMISSIBLE.

MANHOLE PIPE CONNECTION
NTS



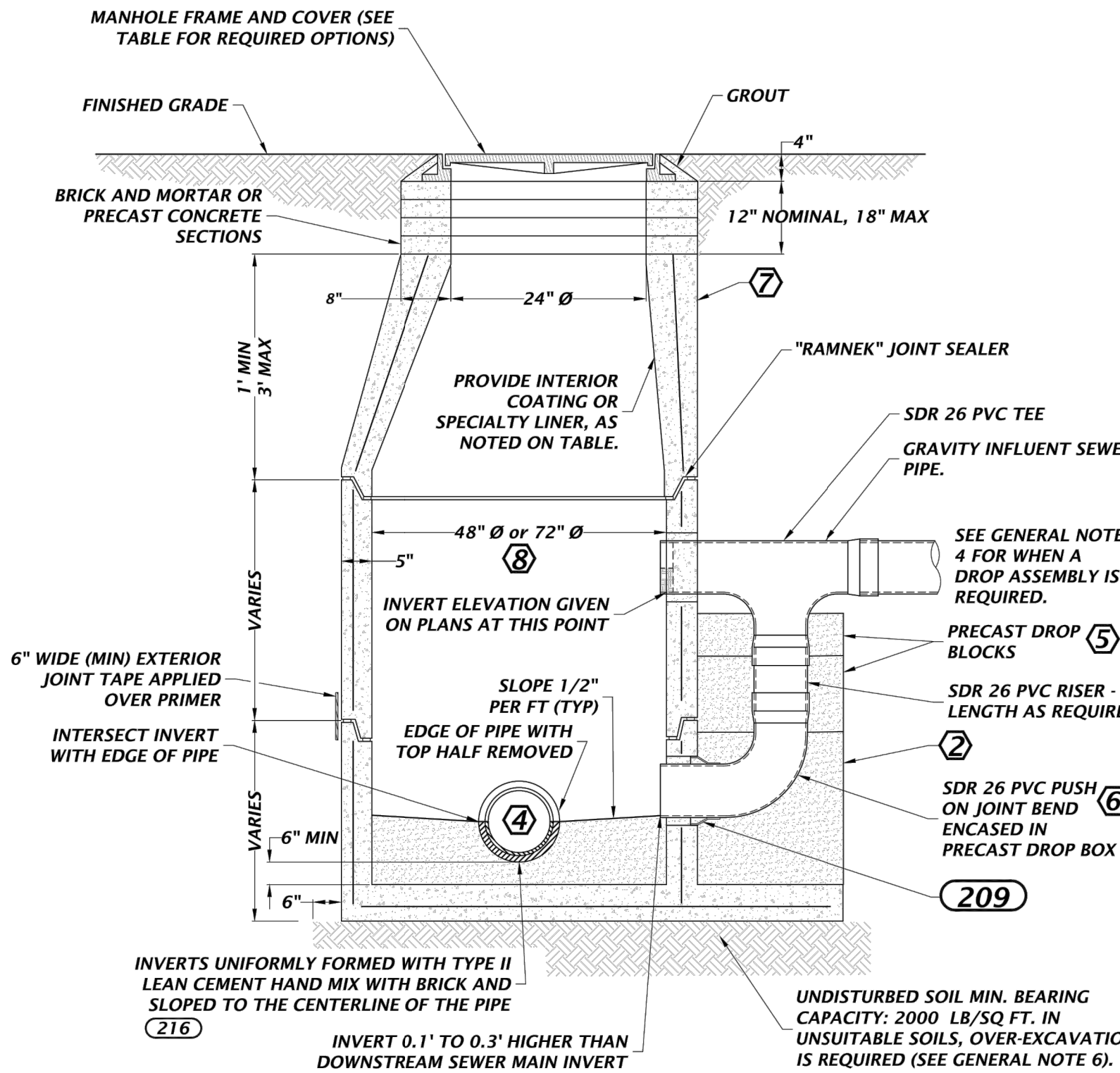
- GENERAL NOTE(S):
1. DESIGNER/OWNER SHALL SUBMIT TANK VOLUME CALCULATIONS. REQUIRED TANK VOLUME SHALL BE CONFIRMED BY CITY OF ALACHUA, 1000 GALLON MINIMUM TANK VOLUME. STRUCTURAL DESIGN SHALL BE THE RESPONSIBILITY OF THE TANK MANUFACTURER.
 2. ONLY KITCHEN WASTE SHALL BE DISCHARGED INTO THE GREASE INTERCEPTOR. ALL DOMESTIC WASTE (i.e. RESTROOMS) SHALL BE CONNECTED DOWNSTREAM OF THE GREASE INTERCEPTOR.
 3. MANHOLES THAT ARE NOT INSTALLED UNDER PAVEMENT SHALL HAVE A RIM ELEVATION AT LEAST 6\" ABOVE FINISHED GRADE AND A 10:1 SLOPE TO FINISHED GRADE.
 4. GREASE INTERCEPTOR ASSEMBLY TO BE H-20 TRAFFIC LOAD RATED - INCLUDING TANK, TANK LID, CHIMNEYS, AND MANHOLE RING & COVER.
 5. NO CAPPED TEES.
- KEYED NOTE(S):
- ① IF REQUIRED, PROVIDE CONNECTION FOR BUILDING VENT. COORDINATE WITH BUILDING DESIGNER.

GREASE INTERCEPTOR
NTS



- GENERAL NOTE:
1. MATERIAL: ASTM-A48 CLASS 30B GRAY IRON.
 2. RING WT: 150 LBS. APP.
 3. COVER WT: 130 LBS. APP.

RING AND COVER
NTS



STANDARD MANHOLE AND DROP, AS REQUIRED
NTS



- PAINT SYSTEM NO. 5
- SURFACE PREPARATION - PRESSURE WASH SURFACE TO BE PAINTED
- OPTIMAL APPLICATION CONDITIONS
- AMBIENT TEMPERATURE BETWEEN 55 AND 75 DEGREES F.
- HUMIDITY BELOW 60 PERCENT
- IF OUTSIDE THESE LIMITS, REQUEST PERMISSION TO APPLY PAINT FROM COA INSPECTOR OR SERVICES DURING CONSTRUCTION ENGINEER
- APPLY (SPRAY) FIRST COAT
- APPLY (SPRAY) SECOND COAT EITHER WITHIN TWO HOURS OR MORE THAN 48 HOURS AFTER APPLYING FIRST COAT.
- PRODUCT
- KRYLON SPRAY PAINT
- FUSION ALL-IN-ONE
- PAINT PLUS PRIMER
- COLORS
- POTABLE WATER - GLOSS PATRIOTIC BLUE
- WASTEWATER - GLOSSY SPRING GRASS
- RECLAIMED - GLOSSY ICY GRAPE

PAINT SYSTEM NO. 5
NTS

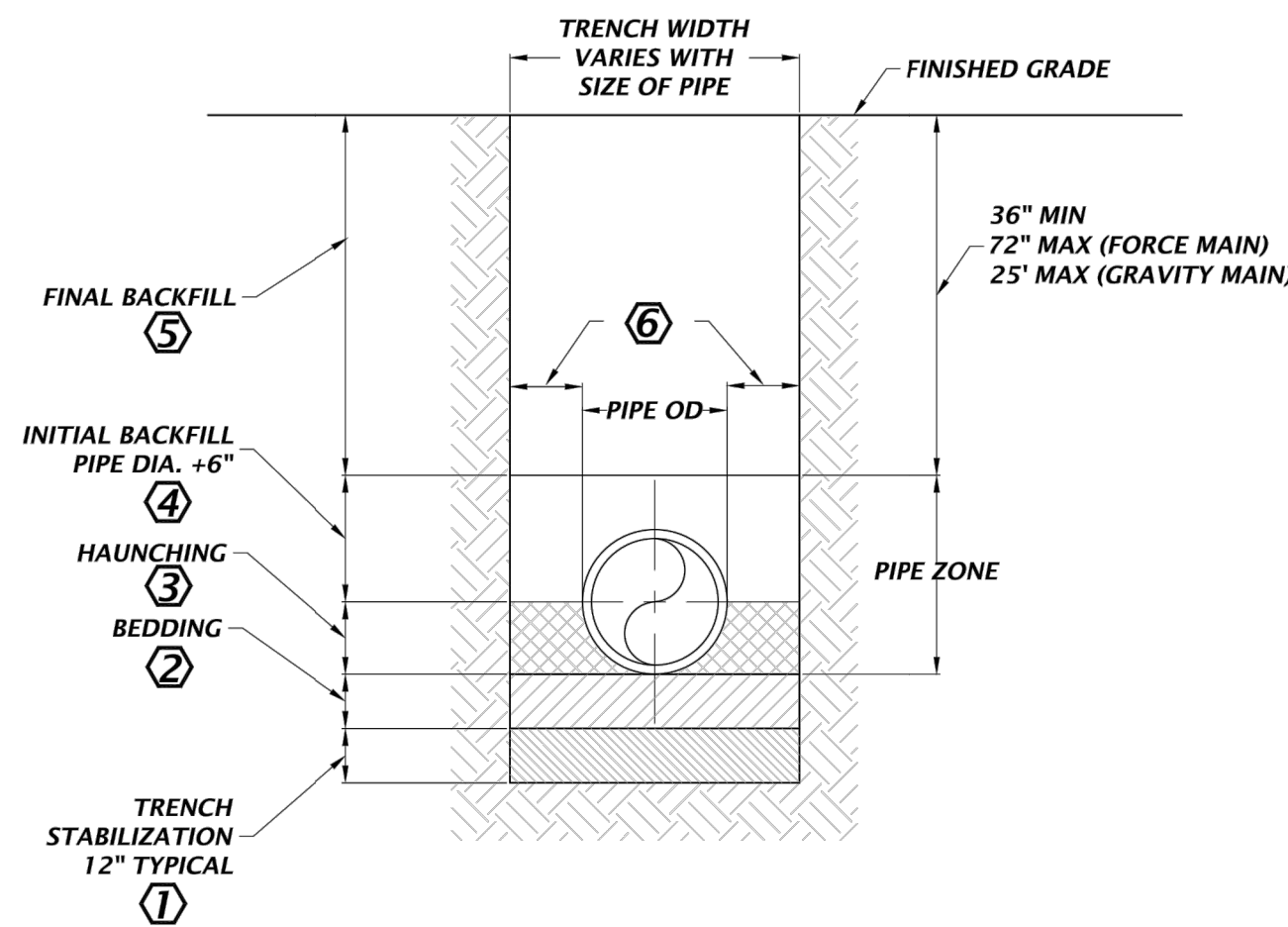


GENERAL NOTE(S):

1. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
2. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
3. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. FIELD DETERMINE REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION. THE BOTTOM OF THE TRENCH SHALL NOT BE EXCAVATED BELOW THE SPECIFIED GRADE. IF UNDERCUTTING OCCURS, THE BOTTOM OF THE TRENCH SHALL BE BROUGHT UP TO THE ORIGINAL GRADE WITH APPROVED MATERIAL AND THOROUGHLY COMPACTED TO A MINIMUM OF 95% MODIFIED PROCTOR.
4. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES.

KEYED NOTE(S):

- ① TRENCH STABILIZATION SHALL BE PROVIDED TO A DEPTH OF 12-INCHES. THE MATERIAL SHALL BE NO. 57 STONE.
- ② BEDDING SHALL BE A MINIMUM OF 6-INCHES AND COMPOSED OF IMPORTED GRANULAR FILL. COMPACT TO 95% STANDARD PROCTOR, AASHTO T-99.
- ③ HAUNCHING PORTION OF THE PIPE ZONE SHALL BE PLACED TO THE SPRINGLINE OF THE PIPE AND COMPOSED OF IMPORTED GRANULAR FILL. COMPACT TO 95% STANDARD PROCTOR AASHTO T-99.
- ④ INITIAL BACKFILL: COMMON FILL COMPACTED TO 95% (98% UNDER PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180. FROM THE SPRINGLINE OF THE PIPE TO TWO (2) FEET ABOVE THE PIPE, THE SOIL SHALL BE CAREFULLY BACKFILLED IN 6-INCH LIFTS AND THE SOIL CONSOLIDATED WITH THE HAND OPERATED TAMPING MACHINE (OR AS REQUIRED BY CITY, COUNTY, OR STATE INSPECTORS).
- ⑤ FINAL BACKFILL: COMMON FILL COMPACTED TO 95% (98% UNDER PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180. AFTER PLACEMENT AND COMPACTION OF THE INITIAL BACKFILL, THE BALANCE OF THE BACKFILL MATERIAL MAY BE MACHINE PLACED OR AS REQUIRED BY THE INSPECTOR AND SHALL NOT CONTAIN ANY ROCKS OR DEBRIS.
- ⑥ 12" MINIMUM



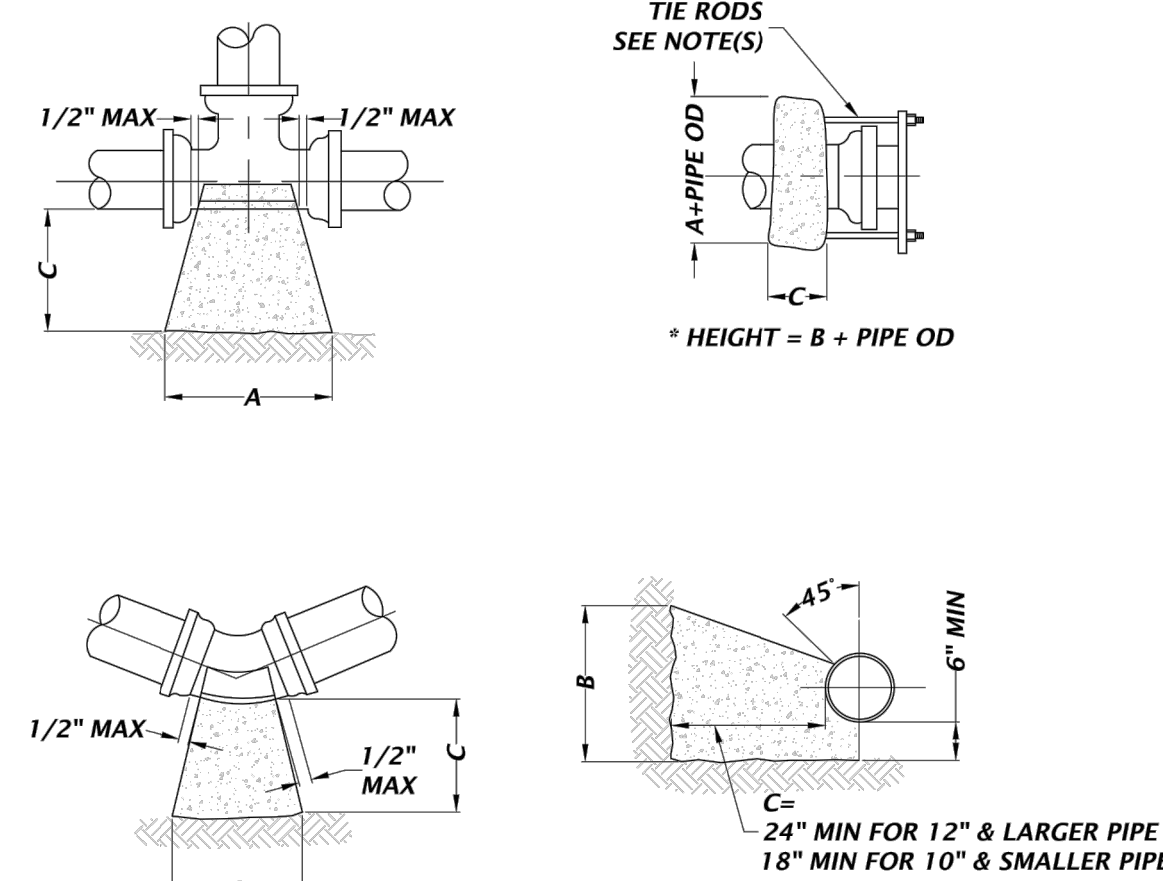
303

BEDDING AND TRENCHING DETAIL
NTS

GENERAL NOTE(S):

1. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED SOIL.
2. THESE TABLES SHOW MINIMUM SIZES FOR THRUST BLOCKS IN GOOD SOIL (A-1 THRU A-3, CLEAN SANDS AND GRAVELS) WITH MINIMUM BEARING CAPACITY OF 2000 psi.
3. POOR SOILS A-4 THRU A-8, SILTY SOILS, CLAYS, MUCK AND PEAT WILL REQUIRE LARGER THRUST BLOCKING.
4. BOTH CONCRETE THRUST BLOCKS AND TIE RODS MUST BE USED WHEN, IN THE JUDGEMENT OF THE ENGINEER, THE NATURE AND CRITICALITY OF AN INSTALLATION IS SUCH AS TO REQUIRE POSITIVE ASSURANCE OF STABILITY.
5. THE USE OF THRUST BLOCKS SHALL BE LIMITED TO SITUATIONS SUCH AS POINT REPAIR WHERE EXPOSING SEVERAL JOINTS OF PIPE IS NOT FEASIBLE DUE TO EXISTING GROUND CONDITIONS.
6. CONCRETE COLLARS WITH TIE RODS MAY BE USED ON DEAD END LINES AT THE CONTRACTOR'S DISCRETION. NUMBER OF TIE RODS REQUIRED IS AS FOLLOWS:

3" - 8" DIAMETER MAIN - 2 TIE RODS REQUIRED PER JOINT (5/8" ROD)
10" - 12" DIAMETER MAIN - 4 TIE RODS REQUIRED PER JOINT (5/8" ROD)
14" - 16" DIAMETER MAIN - 6 TIE RODS REQUIRED PER JOINT (5/8" ROD)
7. TIE RODS AND NUTS SHALL CONFORM TO AWWA/ANSI C111/A21.11
8. TIE RODS AND NUTS SHALL PROVIDE MIN YIELD AND TENSILE STRENGTH OF 45,000 PSI AND 60,000 PSI, RESPECTIVELY.
9. MAXIMUM TEST PRESSURE TO BE 150 PSI.
10. SAFETY FACTOR = 1.5



THRUST BLOCK FOR BENDS												
SIZE	90° BEND			SF BEARING SURFACE	45° BEND			SF BEARING SURFACE	22-1/2° BEND			SF BEARING SURFACE
	A	B	C		A	B	C		A	B	C	
4"	16"	16"	18"	1.78	14"	16"	18"	1.56	14"	16"	18"	1.56
6"	22"	32"	18"	4.89	16"	18"	18"	2.00	14"	16"	18"	1.56
8"	32"	36"	18"	8.00	24"	28"	18"	4.67	16"	18"	18"	1.56
10"	36"	46"	18"	11.50	26"	36"	18"	6.50	20"	24"	18"	1.75
12"	44"	56"	24"	17.11	32"	40"	24"	8.89	24"	30"	24"	2.22
14"	52"	62"	24"	22.39	36"	48"	24"	12.00	26"	36"	24"	3.33
16"	58"	72"	24"	29.00	40"	54"	24"	15.00	32"	38"	24"	8.44
									22"	26"	24"	3.97

THRUST BLOCK FOR TEES AND PLUGS

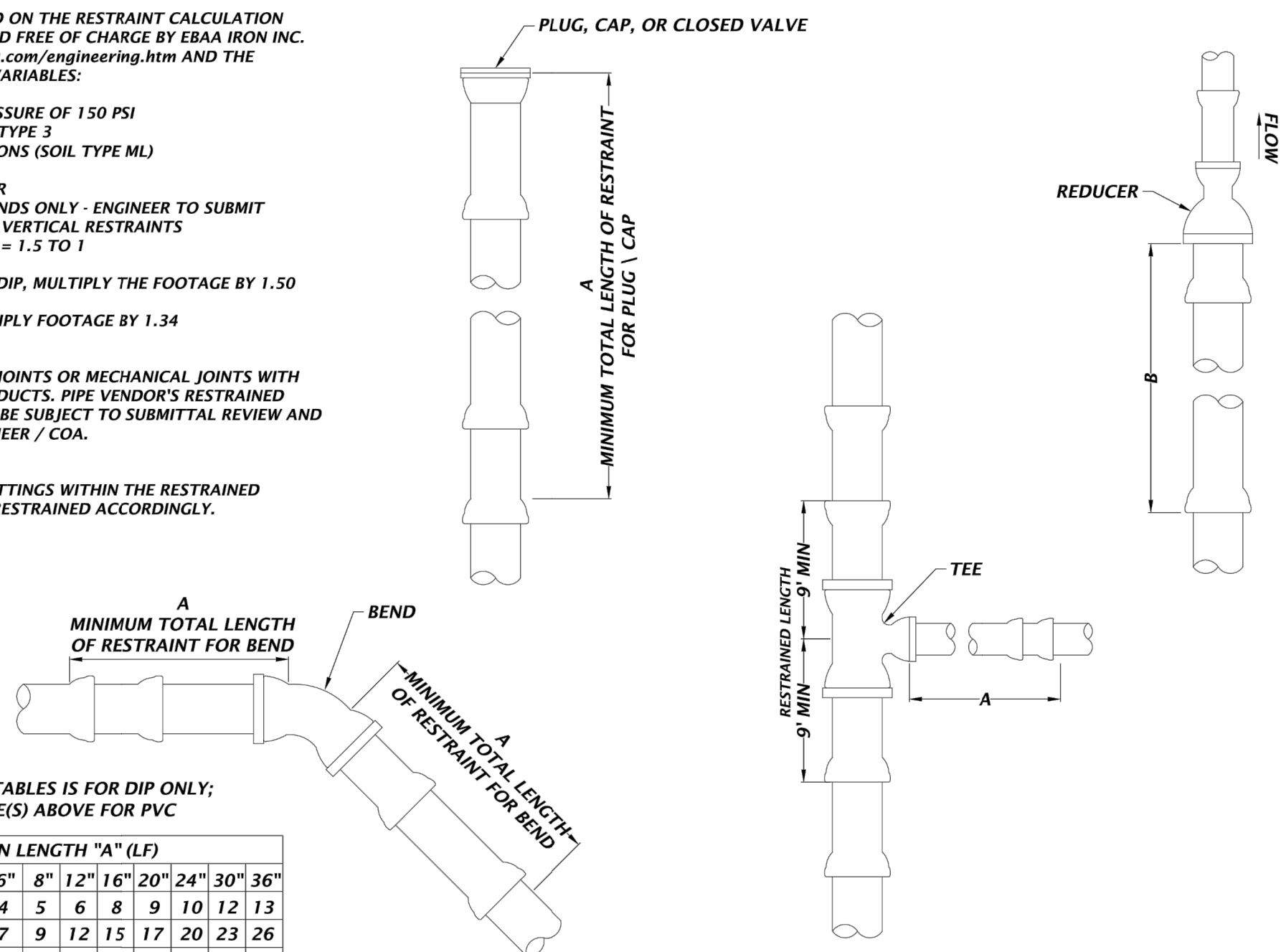
SIZE	90° BEND			SF BEARING SURFACE
	A	B	C	
4"	16"	16"	18"	1.78
6"	20"	24"	18"	3.33
8"	26"	32"	18"	5.78
10"	32"	40"	18"	8.89
12"	36"	48"	24"	12.00
14"	40"	56"	24"	15.56
16"	48"	60"	24"	20.00

306

THRUST BLOCK AND TIE ROD DETAILS
NTS

GENERAL NOTE(S):

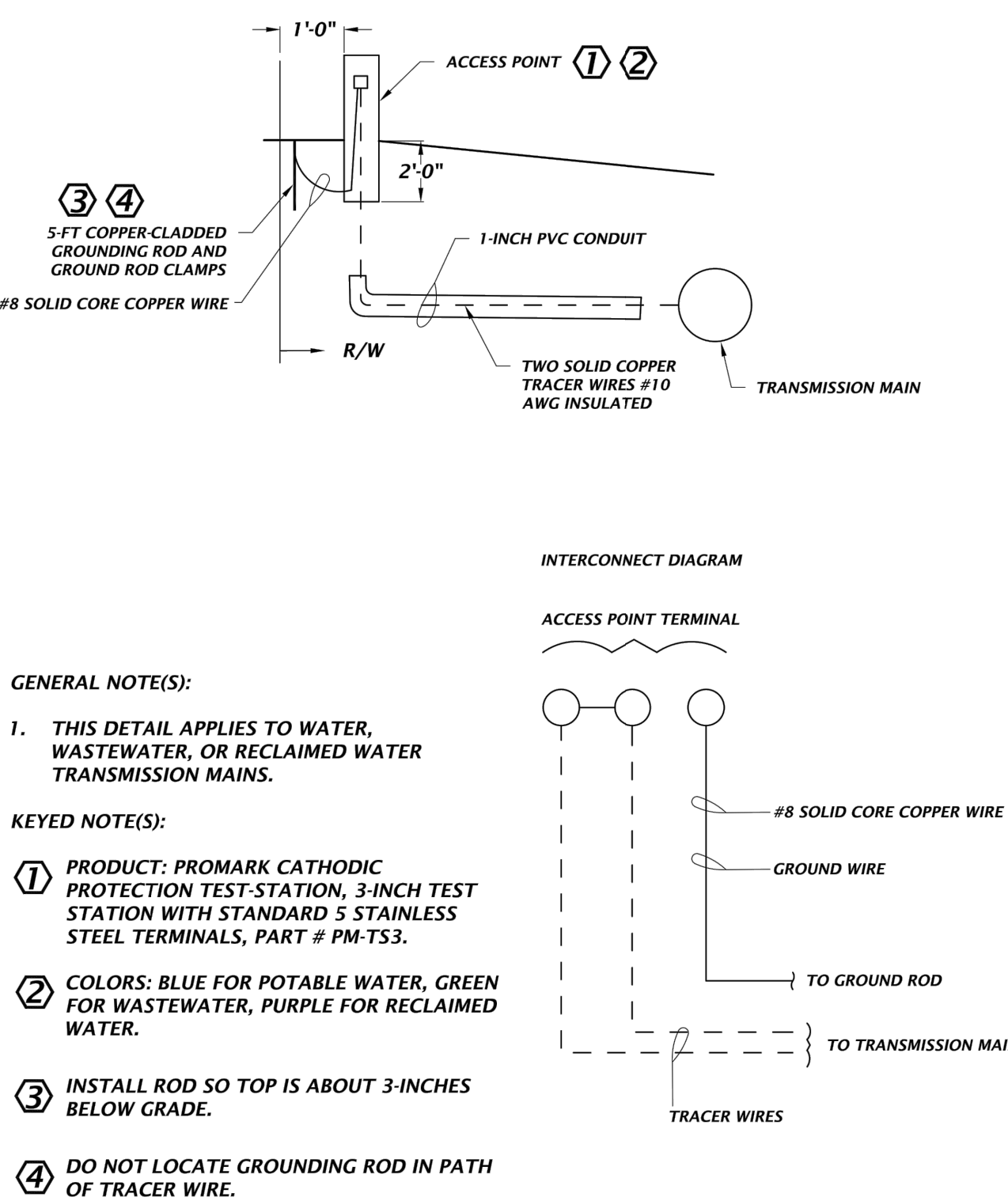
1. THIS TABLE IS BASED ON THE RESTRAINT CALCULATION SOFTWARE PROVIDED FREE OF CHARGE BY EBAA IRON INC. AT <http://www.ebaa.com/engineering.htm> AND THE FOLLOWING INPUT VARIABLES:
A. MAXIMUM TEST PRESSURE OF 150 PSI
B. LAYING CONDITION TYPE 3
C. POOR SOIL CONDITIONS (SOIL TYPE ML)
D. USING DIP
E. 2 FEET OF COVER
F. HORIZONTAL BENDS ONLY - ENGINEER TO SUBMIT CALCULATIONS FOR VERTICAL RESTRAINTS
G. SAFETY FACTOR = 1.5 TO 1
2. FOR POLYWRAPPED DIP, MULTIPLY THE FOOTAGE BY 1.50
3. FOR PVC PIPE, MULTIPLY FOOTAGE BY 1.34
4. RESTRAIN PUSH-ON JOINTS OR MECHANICAL JOINTS WITH EBBA MEGALUG PRODUCTS. PIPE VENDOR'S RESTRAINED JOINT SYSTEM WILL BE SUBJECT TO SUBMITTAL REVIEW AND APPROVAL BY ENGINEER / COA.
5. ANY ADDITIONAL FITTINGS WITHIN THE RESTRAINED SECTION SHALL BE RESTRAINED ACCORDINGLY.

NOTE: THIS TABLE IS FOR DIP ONLY;
SEE NOTE(S) ABOVE FOR PVC

RESTRAIN LENGTH "A" (LF)									
FITTING	4"	6"	8"	12"	16"	20"	24"	30"	36"
1 1/4" BEND	3	4	5	6	8	9	10	12	13
2 1/2" BEND	5	7	9	12	15	17	20	23	26
45° OFFSET	10	14	18	24	30	35	40	47	53
90° BEND	24	33	42	58	72	85	97	112	126
DEAD END	42	58	75	104	131	157	181	213	243

A=MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED.

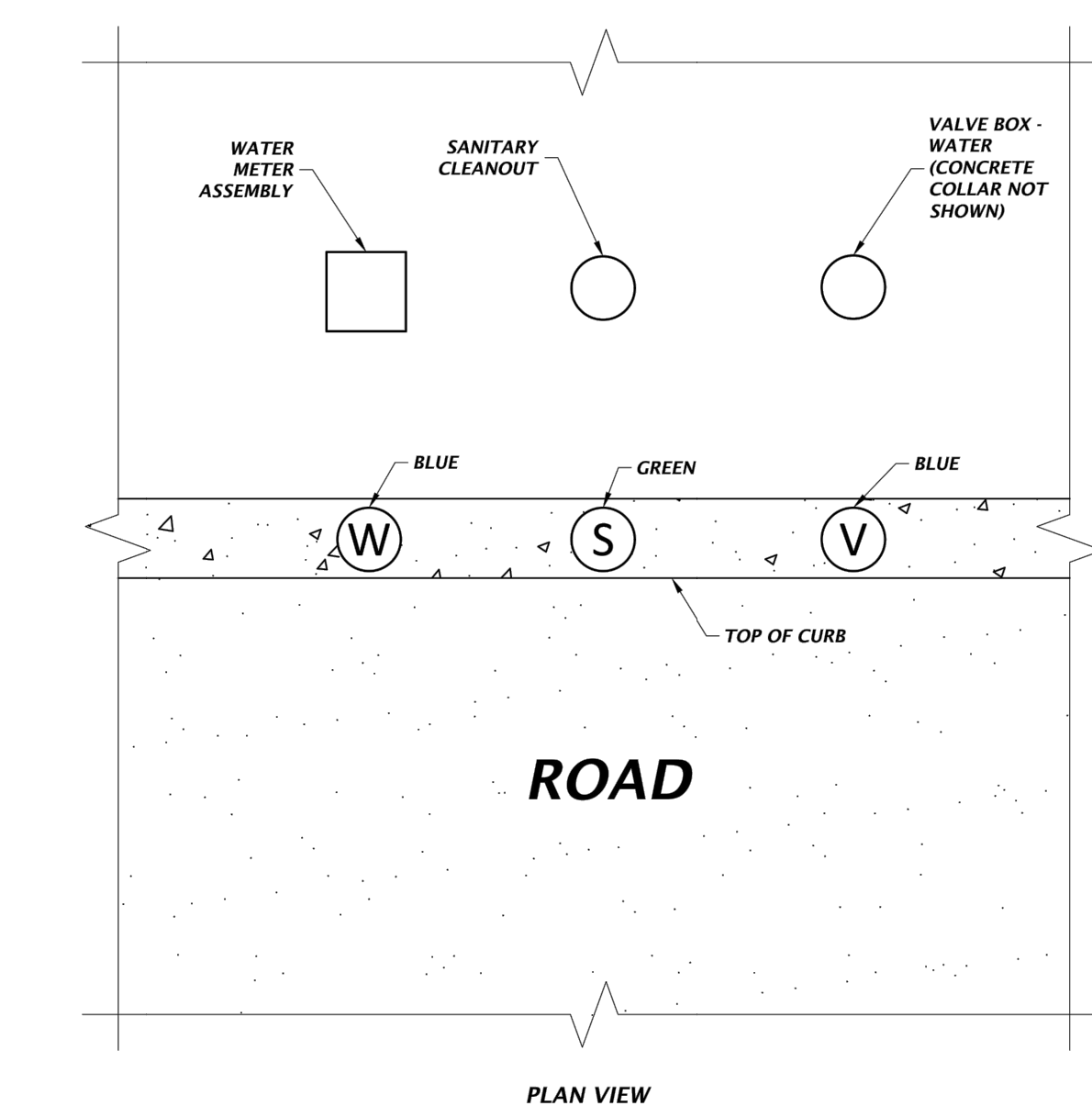
309

JOINT RESTRAINT
NTS

GENERAL NOTE(S):

1. THIS DETAIL APPLIES TO WATER, WASTEWATER, OR RECLAIMED WATER TRANSMISSION MAINS.
- KEYED NOTE(S):
① PRODUCT: PROMARK CATHODIC PROTECTION TEST-STATION, 3-INCH TEST STATION WITH STANDARD 5 STAINLESS STEEL TERMINALS, PART # PM-TS3.
② COLORS: BLUE FOR POTABLE WATER, GREEN FOR WASTEWATER, PURPLE FOR RECLAIMED WATER.
③ INSTALL ROD SO TOP IS ABOUT 3-INCHES BELOW GRADE.
④ DO NOT LOCATE GROUNDING ROD IN PATH OF TRACER WIRE.

318

ACCESS POINT FOR TRANSMISSION MAIN
NTS

GENERAL NOTES:

1. COORDINATE WITH COA STAFF.
2. INSCRIBE "W", "S", OR "V", AS APPLICABLE.
3. SPRAY, PAINT (307) OVER AND AROUND INSCRIPTION. COLOR AS SHOWN.

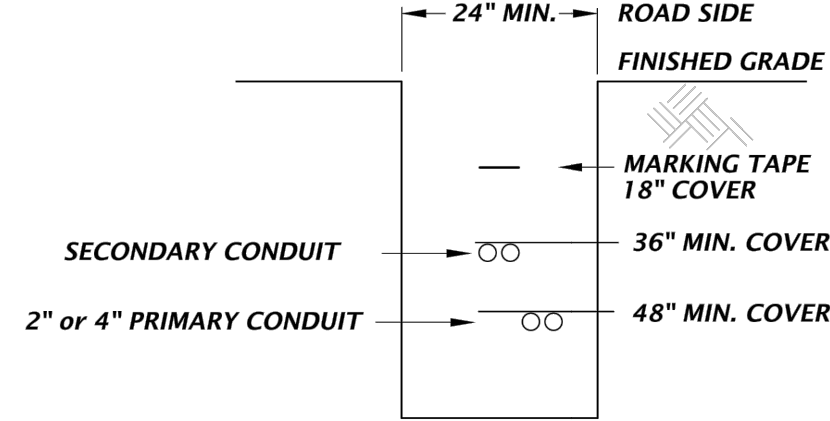
330

CURB MARKINGS FOR WATER METERS,
SANITARY CLEANOUTS, AND WATER VALVES
NTS

A
B
C
D

Test: gregw For Date: Aug 06, 2024 12:58pm Filename: N:\2022\22-0030\Department\04_Engineering\02_DWG\Production\Files\22-0030_Const_Details.dwg

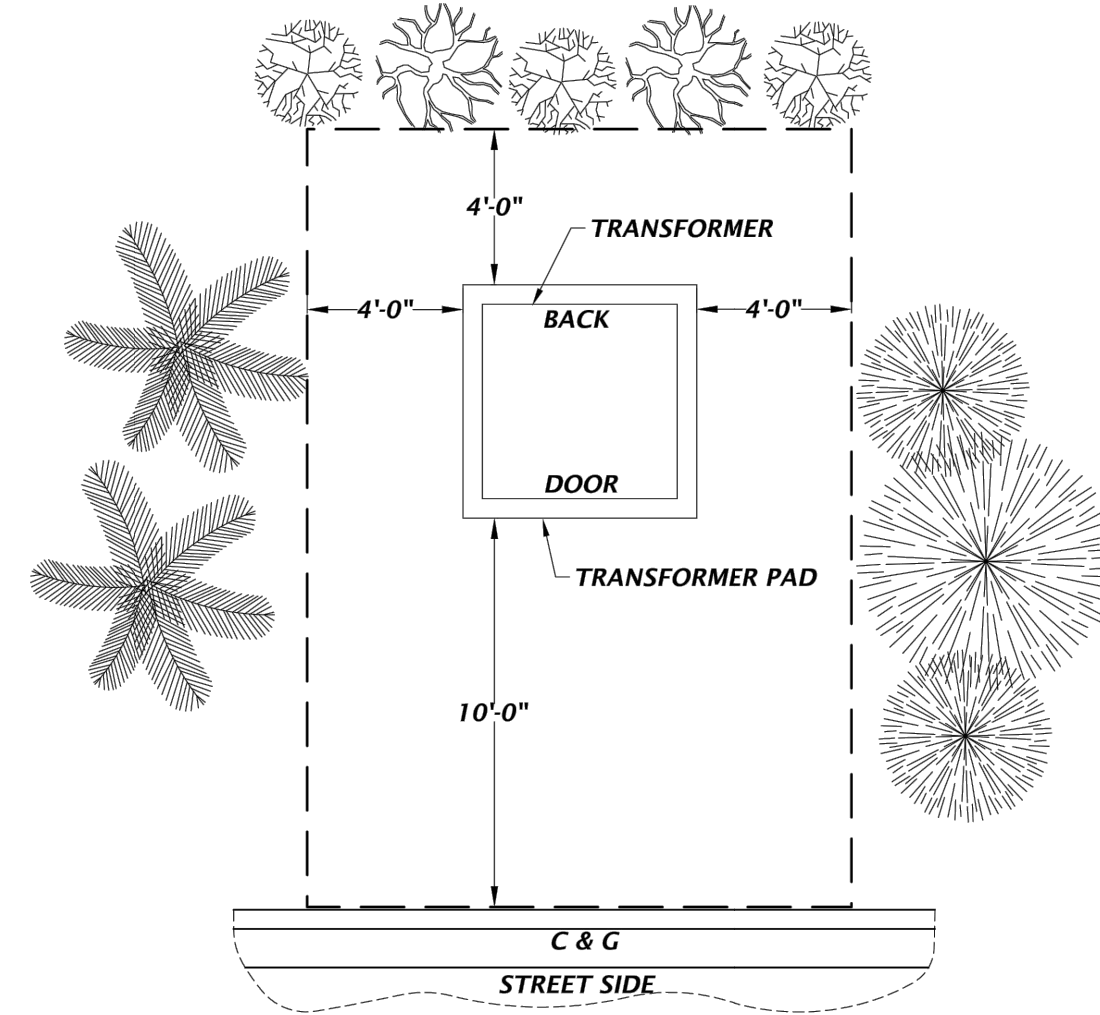
WARNING TAPE SHALL BE RED WITH CONTINUOUS BLACK MARKINGS "CAUTION - CITY OF ALACHUA - ELECTRIC LINE BURIED BELOW SHALL BE ALLENSYSTEM "MARKLINE" OR EQUAL REEF INDUSTRIES OR THOR ENTERPRISES.



- NOTES: 1. CONTRACTOR SHALL CHECK FOR CONFLICTS AND MAKE ADJUSTMENTS AS NECESSARY. REFER TO THE OTHER UTILITY ALLOCATIONS AND LOCATIONS.
2. CONTRACTOR SHALL COORDINATE WITH COA DURING CONSTRUCTION.

506

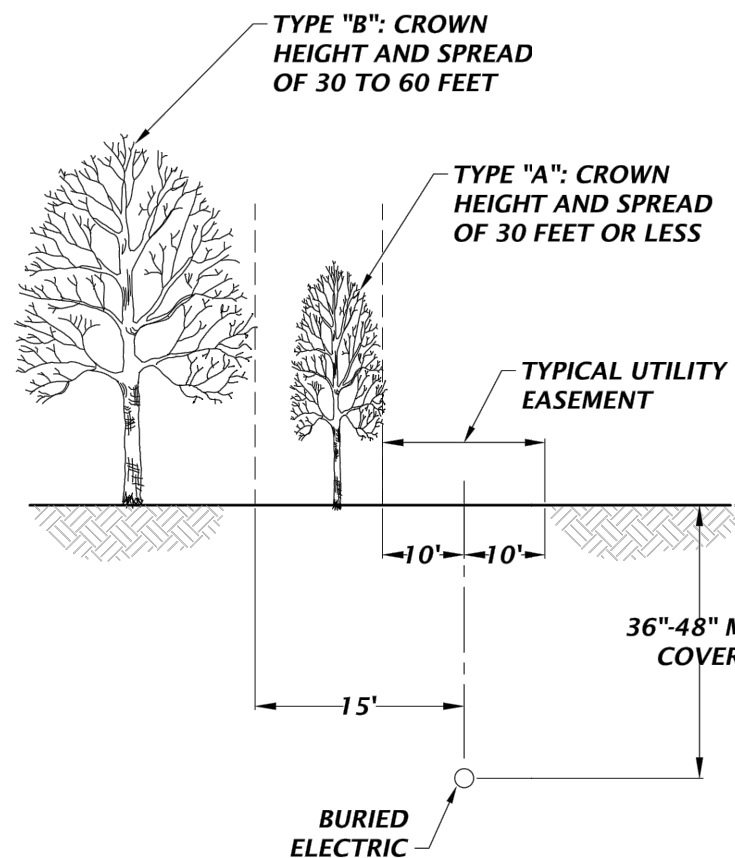
TYPICAL CONDUIT TRENCH
NTS



- NOTES: 1. TO ALLOW ROOM FOR CONSTRUCTION AND MAINTENANCE, PROVIDE A MINIMUM OF TEN (10) FEET OF CLEARANCE AND LEVEL, STABILIZED EARTH IN FRONT OF DOORS AND FOUR (4) FEET OF CLEARANCE AND LEVEL, STABILIZED EARTH ON ALL OTHER SIDES OF PAD MOUNTED EQUIPMENT EQUIPMENT. DO NOT PLACE TREES, SHRUBS OR OTHER OBSTRUCTIONS IN THIS AREA.
2. ABBREVIATION: C & G = CURB AND GUTTER

557

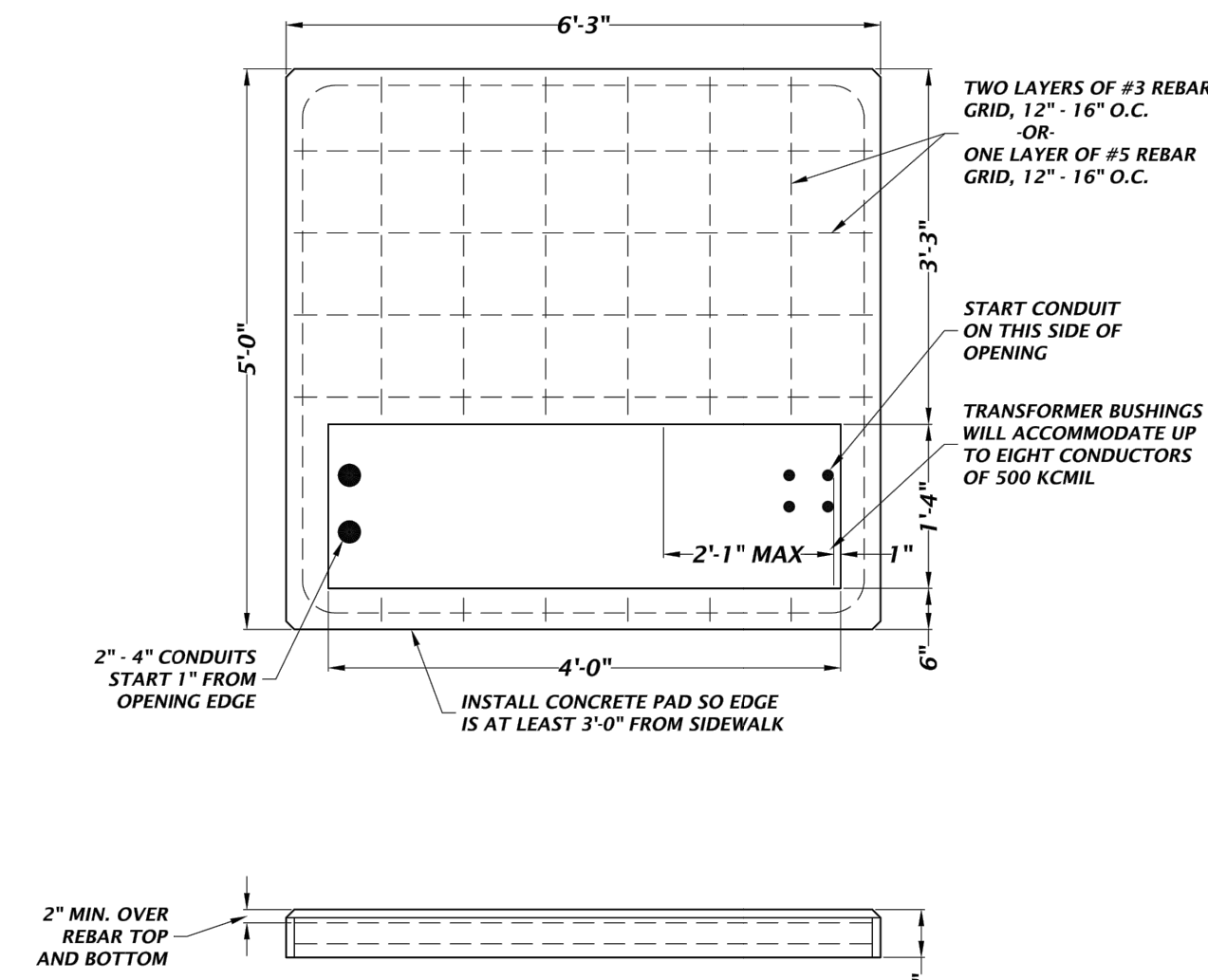
TYPICAL PAD-MOUNTED EQUIPMENT
CLEARANCE
NTS



- NOTES: 1. TO ALLOW ROOM FOR CONSTRUCTION AND MAINTENANCE, THE OWNER SHALL GRANT THE CITY OF ALACHUA A UTILITY EASEMENT FOR THE PURPOSE OF RENDERING SAFE AND RELIABLE SERVICE. DO NOT PLACE TREES, SHRUBS OR OTHER OBSTRUCTIONS IN THIS AREA.

560

TYPICAL UNDERGROUND DISTRIBUTION
(UD) UTILITY CLEARANCE
NTS



- NOTES: 1. LOCATE TRANSFORMER FRONT 8' TO 15' FROM PAVING FOR LINE TRUCK ACCESS.
2. LOCATE TRANSFORMER A MINIMUM OF 4' FROM THE BUILDING DRIP LINE AND 10' FROM ANY WINDOW OR DOOR.
3. MAINTAIN 10' SEPARATION FROM FIRE HYDRANT, TRASH DUMPSTER OR TRASH COMPACTOR.
4. TERMINATE CONDUITS FLUSH WITH TOP OF PAD.
5. CONCRETE SHALL BE 3500 PSI POURED IN PLACE OR COA-APPROVED PRECAST
6. PROVIDE 10 FEET OF LEVEL, STABILIZED EARTH AT FRONT AND BACK OF UNIT, AND 4- FEET AT EACH SIDE.

584B

CONCRETE MOUNTING PAD AND CONDUIT
PLACEMENT FOR THREE-PHASE
TRANSFORMERS, 75-500 KVA
NTS



11801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com

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SCALE
N/A
VERTICAL SCALE
BASED ON SCALE
ORIGINAL DRAWING
0 1' 1"
DO NOT USE FOR CONSTRUCTION
THIS SHEET ADJUST
SCALES ACCORDINGLY.

CONSTRUCTION REVISIONS

DATE
3/25/24 CITY OF ALACHUA SRWID
7/09/24 CITY OF ALACHUA SRWID
8/09/24 CITY OF ALACHUA, FOOT, SRWID

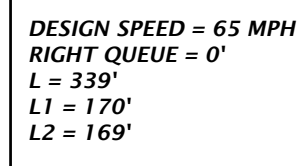
MR. HARDIK PATEL
PATEL FUEL RETAIL
UTILITY DETAILS

PROJECT
SHEET TITLE

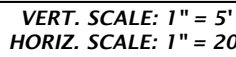
DESIGNED BY
G. WADZINSKI
CHECKED BY
C. LEDFORD
PROJECT NUMBER
W. OWEN
22-0030

WALKER FAIR OWEN
Walker Fair Owen
State of Florida, Professional
Engineer, License No. 94201
This item has been
electronically signed and
sealed by Walker Fair Owen,
PE on 08/06/2024 using a
Digital Signature.
Printed copies of this
document are not considered
signed and sealed and the
signature must be verified on
any electronic copies.

FL PE No. 94201
SHEET NO.
C3.24

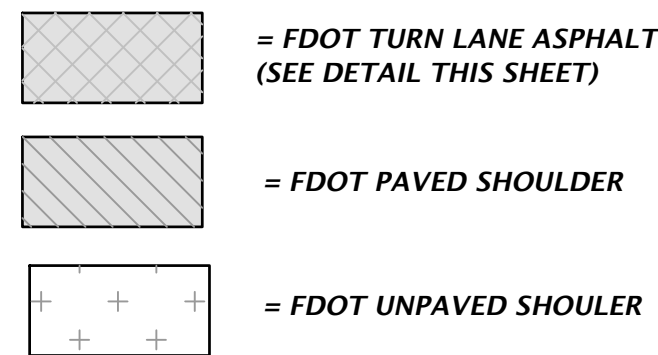


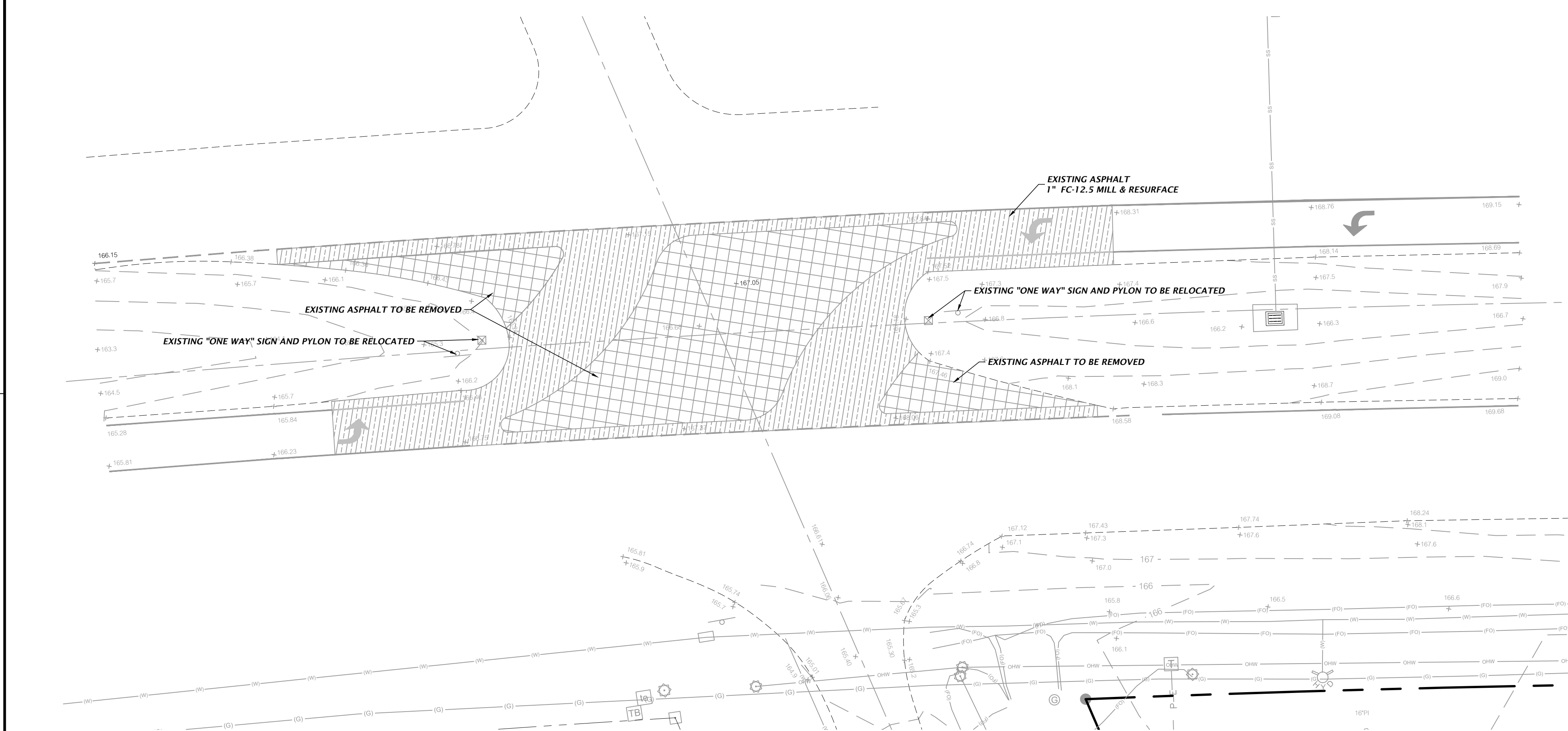
DESIGN SPEED = 65 MPH NTS



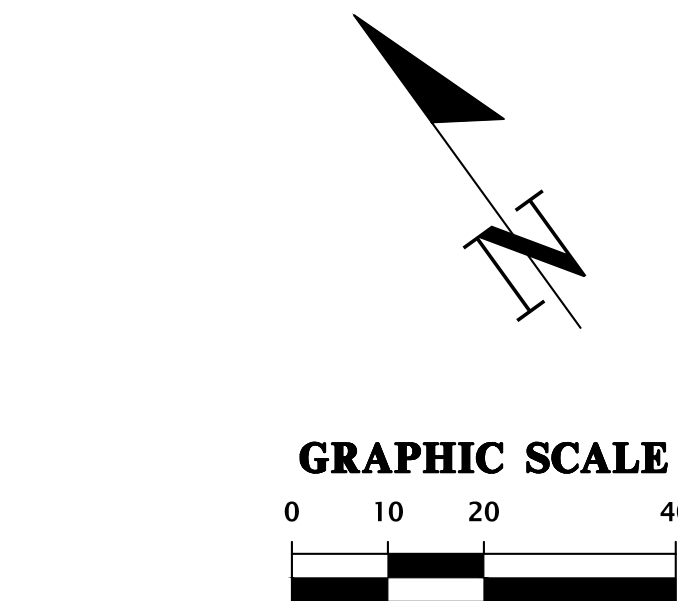
1. ALL WORK PERFORMED WITHIN THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY SHALL CONFORM TO THE FOLLOWING:

- SHOULD A CONFLICT ARISE BETWEEN THE DETAILS SHOWN IN THE PLANS AND THE DEPARTMENT OF TRANSPORTATION STANDARDS THE ENGINEER/ PERMITTEE SHALL IMMEDIATELY CONFER WITH THE DEPARTMENT'S ENGINEER IN ORDER TO RESOLVE THE DISCREPANCY. IN NO CASE WILL ANYTHING LESS THAN THE DEPARTMENT'S MINIMUM STANDARD BE ALLOWED.



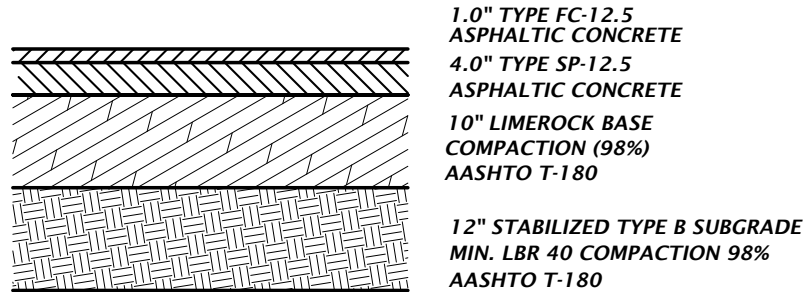


EXISTING CONDITIONS/DEMOLITION PLAN

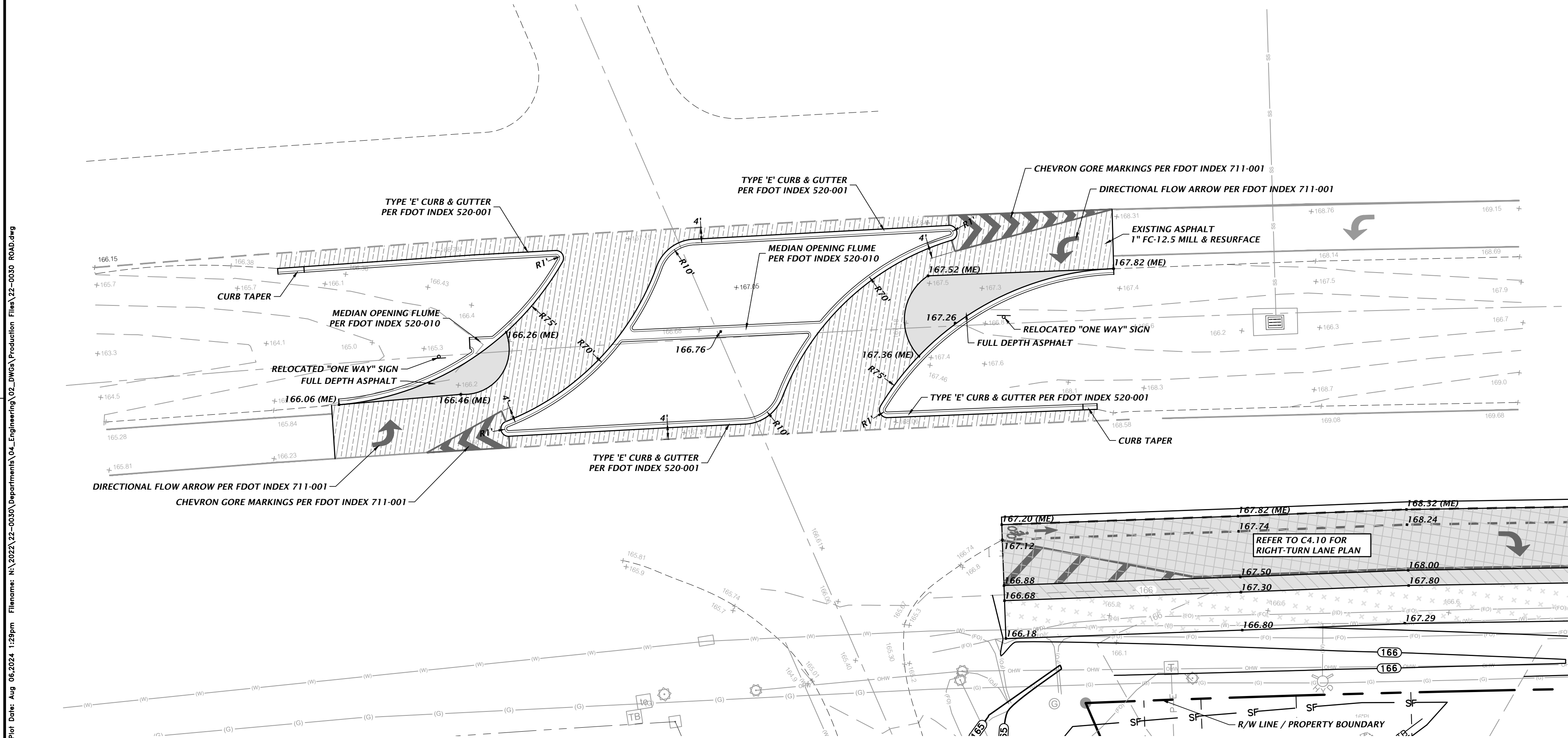


LEGEND

- [Solid gray box] = FULL DEPTH FDOT ASPHALT (SEE DETAIL THIS SHEET)
- [Cross-hatched box] = EXISTING PAVEMENT TO BE REMOVED
- [Vertical line hatched box] = EXISTING PAVEMENT TO BE MILLED & RESURFACED (1")



FDOT ASPHALT PAVEMENT DETAIL
NTS



PROPOSED DIRECTIONALIZED MEDIAN

FDOT GENERAL NOTES

- ALL WORK PERFORMED WITHIN THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY SHALL CONFORM TO THE FOLLOWING:
 - A. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (JANUARY 2024).
 - B. FDOT DESIGN STANDARDS INDEX (FY 2023-2024)
 - C. FDOT PLANS PREP MANUAL (2024)
 - D. FDOT FLEXIBLE PAVEMENT DESIGN MANUAL FOR NEW CONSTRUCTION AND PAVEMENT REHABILITATION
- SHOULD A CONFLICT ARISE BETWEEN THE DETAILS SHOWN IN THE PLANS AND THE DEPARTMENT OF TRANSPORTATION STANDARDS THE ENGINEER/ PERMITTEE SHALL IMMEDIATELY CONFER WITH THE DEPARTMENT'S ENGINEER IN ORDER TO RESOLVE THE DISCREPANCY. IN NO CASE WILL ANYTHING LESS THAN THE DEPARTMENT'S MINIMUM STANDARD BE ALLOWED.
- ALL TRAFFIC STRIPING AND MARKINGS ARE TO BE LEAD-FREE, NON-SOLVENT BASED THERMOPLASTIC.
- REMOVAL OF EXISTING STRIPING SHALL BE ACCOMPLISHED USING THE 'HYDRO-BLAST' METHOD.
- ALL CURB AND GUTTER AND SIDEWALK WILL BE REMOVED AND REPLACED JOINT TO JOINT.
- ALL DISTURBED AREA WITH THE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY WILL RESTORED TO ORIGINAL OR BETTER CONDITION BY GRADING AND SODDING THE AREA DISTURBED (BERMUDA IN RURAL, CENTIPEDE IN UTILITY STRIPS).
- SIGN POST SIZES SHALL BE PER INDEX 11860 AND SIGNING PER 17346.
- NO SPRINKLERS AND LANDSCAPING BUSHES SHALL BE CLOSER THAN 1' FROM RIGHT OF WAY UNLESS A SEPARATE LANDSCAPE PERMIT IS APPLIED FOR.
- TREES SHOWN IN THESE PLANS TO BE PRESERVED ARE NOT TO BE REMOVED FROM THE FDOT RIGHT OF WAY UNLESS APPROVED BY FDOT.
- ALL DENSITY TESTING REQUIREMENTS SHALL BE PER FDOT SPECIFICATIONS.

Test: gmpg For Date: Aug 06,2024 1:28pm Filename: N:\2023\22-0030\Department\04_Engineering\02_DWG\Production\Files\22-0030 ROAD.dwg

11801 Research Drive Alachua, Florida 32615 (352) 331-1976 www.chw-inc.com		est. 1988 FLORIDA CA-5075	
CHW AN INVIS COMPANY			
SCALE VERTICAL SCALE BASED ON SCALE ORIGINAL DRAWING 0 1"=20' HORIZONTAL SCALE BASED ON SCALE THIS SHEET ADJUST SCALES ACCORDINGLY.		CONSTRUCTION REVISIONS	
DESIGNED BY MR. HARDIK PATEL		PROJECT 3/23/24 CITY OF ALACHUA SRWID 7/09/24 CITY OF ALACHUA SRWID 8/09/24 CITY OF ALACHUA, FDOT, SRWID	
CHECKED BY G. WADZINSKI		PROJECT PATEL FUEL RETAIL	
DESIGNED BY G. LEDFORD		PROJECT OFFSITE IMPROVEMENTS	
CHECKED BY W. OWEN		PROJECT 22-0030	
WALKER FAIN OWEN Walker Fain Owen State of Florida, Professional Engineer, License No. 94201 This item has been electronically signed and sealed by Walker Fain Owen, PE on 08/06/2024 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signatures must be verified on any electronic copies.			
FL PE No. 94201 SHEET NO. C4.11			

NO.:
LS-1

Test: John Michaela For Date: Aug 06, 2024 12:20pm Filename: \\A\2024\22-0030\Department\03_Design\02_DWG\A01_Armitting\22-0030_Irrigation_Base.dwg



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ALWAYS CALL 811
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It's fast, it's free, it's the law.
Call 811 two business days
before digging

1.0 GENERAL

- 1.1 SUMMARY: Includes but not limited to:
- A. Furnishing and installing sprinkler system as described in Contract Documents complete with accessories necessary for proper functioning.
- 1.2 SYSTEM DESCRIPTION:
- A. Design Requirements:
1. Layout of Irrigation Heads:
- a. Location of heads shown on Drawings is approximate. Actual placement may vary slightly as is required to achieve full, even coverage without spraying onto buildings, sidewalks, fences, etc.
- b. During layout, consult with Landscape Architect to verify proper placement and make recommendations, where revisions are advisable.
- 1.3 QUALITY ASSURANCE:
- A. Regulatory Requirements:
1. Work and materials shall be in accordance with latest rules and regulations, and other applicable state or local laws. Nothing in Contract Documents is to be construed to permit work not conforming to these codes.
- B. Pre-Installation Conference:
1. Meet with Owner and Landscape Architect to discuss and clarify all aspects of job requirements prior to commencing work of this Section.
- C. System Adjustments:
1. Minor adjustments in system will be permitted to avoid existing fixed obstructions.
2. Mainline, laterals, and valves are shown for clarity purposes only. All irrigation equipment to be with landscape area. Mainline, laterals and valves to be installed as far away from existing and new specimen trees as possible.
- D. 1. Documentation and submittal of actual water supply performance prior to commencing installation. Irrigation contractor shall verify water meter produces a minimum of 25 gpm @ 45 psi.
- 1.4 SUBMITTALS:
- A. Record Drawings:
1. Prepare an accurate as-built drawing as installation proceeds to be submitted prior to final inspection. Drawing shall include:
- a. Detail and dimension changes made during construction.
- b. Significant details and dimensions not shown in original Bidding Documents.
2. Maintain, at job site, one copy of Contract Documents (as defined in General Conditions) and relevant shop drawings.
3. Clearly mark each document "PROJECT RECORD COPY" and maintain in good condition for use of the Landscape Architect and Owner.
4. As-built drawing shall be provided in PDF format.
5. Submit product literature for all sprinklers, valves, pipe, wire, wire connectors and controller.
6. Final payment for system will not be authorized until accurate and complete submittals are delivered to the Landscape Architect.
- B. Instruction Manual:
1. Provide instruction manual which lists complete instructions for system operation and maintenance.
- 1.5 PRODUCT STORAGE:
- A. During construction and storage, protect materials from damage and prolonged exposure to sunlight.
- 1.6 WARRANTY:
- A. Standard one (1) year warranty stipulated in General Conditions shall include:
1. Completed system including parts and labor.
2. Filling and repairing depressions and replacing plantings due to settlement of irrigation trenches for one (1) year following final acceptance.
3. System adjustment to supply proper coverage to areas to receive water.
- 1.7 MAINTENANCE:
- A. Extra Materials:
1. In addition to installed system, furnish Owner with the following items at close-out:
- a. Two sprinkler head bodies of each size and type.
- b. Two nozzles for each size and type.
- c. Two adjusting keys for each sprinkler head cover type.

2.0 PRODUCTS

- 2.1 PIPE, PIPE FITTINGS, AND CONNECTIONS:
- A. Pipe shall be continuously and permanently marked with Manufacturer's name, size, schedule, type, and working pressure.
- B. Pipe:
1. Pressure Lines: as indicated on plans.
2. Lateral Lines: as indicated on plans.
- C. Fittings:
1. Schedule 40 PVC.
- D. Sleeving:
1. Schedule 40 PVC.
- 2.2 SPRINKLER HEADS:
- A. Conform to requirements shown on Drawings as to type, radius of throw, pressure, and discharge.
- 2.3 AUTOMATIC SPRINKLER SYSTEM:
- A. Control valves shall be of size and type indicated on Drawings.
- B. Control wire shall be Hunter IDWIRE1.
- C. All wire splices shall be made with 3M-DBR6 wire connectors.
- 2.4 VALVES:
- A. Electric Valves:
1. Make and model shown on Drawings.
- B. Gate valves:
1. Bronze construction, angle type, 150 pound class, threaded connections, with cross-type operating handle designed to receive operating key.
- C. Automatic Controller:
1. Make and model shown on Drawings.
- D. Backflow Preventor:
1. Make and model shown on Drawings.
- 2.5 VALVE ACCESSORIES:
- A. Valve Boxes:
1. Ametek or Brooks rectangular heavy duty valve box with locking lid or Landscape Architect approved equal.
2. Do not install more than one (1) valve in a single box.
3. Valve boxes shall be large enough for easy removal or maintenance of valves.

3.0 EXECUTION

- 3.1 PREPARATION:
- A. Protection:
1. Work of others damaged by this Section during course of its work shall be replaced or repaired by original installer at this Section's expense.
- 3.2 INSTALLATION:
- A. Trenching and Backfilling:
1. Over-excavate trenches by two (2") inches and bring back to indicated depth by filling with fine, rock-free soil or sand.
2. Cover pipe both top and sides with two (2") inches of material specified in paragraph above. In no case shall there be less than two (2") inches of rock-free soil or sand surrounding pipe.

- B. Installation of Plastic Pipe:
1. Install plastic pipe in a manner to provide for expansion and contraction as recommended by Manufacturer.
2. Unless otherwise indicated on Drawings, install main lines with a minimum cover of eighteen (18") inches based on finish grade. Install lateral lines with a minimum cover of twelve (12") inches based on finish grade.
3. Install pipe and wires under driveways or parking areas in specified sleeves a minimum of eighteen (18") inches below finish grade or as shown on Drawings.
4. Locate no sprinkler head closer than twelve (12") inches from building foundation. Heads immediately adjacent to mowing strips, walks or curbs shall be one (1") inch below top of mowing strip, walk or curb and have a minimum of one (1") inch clearance between head and mowing strip, walk or curb.
5. Drawings show arrangement of piping. Should local conditions necessitate rearrangement, obtain approval of Landscape Architect prior to proceeding with work.
6. Cut plastic pipe square. Remove burrs at cut ends prior to installation so unobstructed flow will result.
7. Make solvent weld joints in the following manner:
- a. Clean mating pipe and fitting with clean, dry cloth and apply one (1) coat of P-70 primer to each.
- b. Apply uniform coat of 711 solvent to outside of pipe.
- c. Apply solvent to fitting in similar manner.
- d. Reapply a light coat of solvent to pipe and quickly insert into fitting.
- e. Give pipe or fitting a quarter turn to insure even distribution of solvent and make sure pipe is inserted to full depth of fitting socket.
- f. Hold in position for fifteen (15) seconds minimum or long enough to secure joint.
- g. Wipe off solvent appearing on outer shoulder of fitting.
- h. Do not use an excessive amount of solvent thereby causing an obstruction to form on the inside of pipe.
- i. Allow joints to set at least 24 hours before applying pressure to PVC pipe.
8. Tape threaded connection with teflon tape.
9. Install concrete thrust blocks wherever change of direction occurs a PVC main pressure lines unless otherwise detailed on Drawings.
- C. Control Valves and Controller:
1. Install controller, control wires, and valves in accordance with Manufacturer's recommendations and according to applicable electrical code.
2. Install valves in plastic boxes with reinforced heavy duty plastic covers. Locate valve box tops at finish grade.
3. Install remote control valves in valve boxes positioned over valve so all parts of valve can be reached for service. Set cover of valve box even with finish grade.
4. Install all valve boxes over nine (9") inches of gravel for drainage.
- D. Sprinkler Heads:
1. Prior to the installation of sprinkler heads, open control valves and use full head of water to flush out system.
2. Set sprinkler heads perpendicular to finish grade.
3. Set lawn sprinkler heads adjacent to existing walks, curbs, and other paved areas to grade.

3.3 ADJUSTMENT AND CLEANING:

- A. Adjust heads to proper grade when turf is sufficiently established to allow walking on it without appreciable harm. Such lowering or raising of heads shall be part of the original contract with no additional charge to the Owner.
- B. Adjust sprinkler heads for proper distribution and trim to ensure spray does not fall on building.
- C. Adjust watering time of valves to provide proper amounts of water to all plants.

3.4 Testing:

- A. The irrigation contractor shall test the mainline at 100 psi for the period of two hours. The mainline shall maintain a minimum of 95 psi throughout the test. Notify the owner representative 48 hours prior to the test.

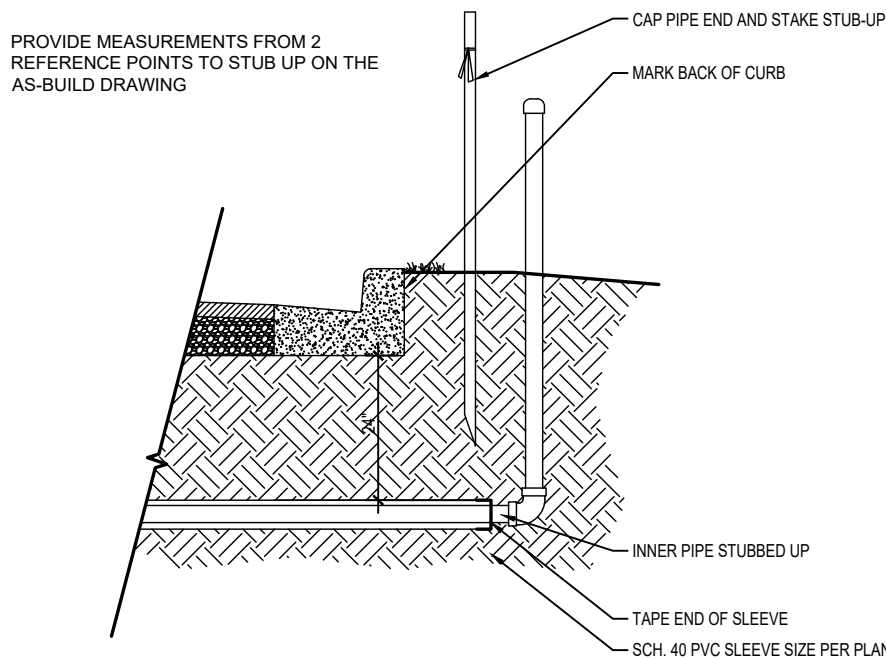
3.5 DEMONSTRATION:

- A. After system is installed and approved, instruct Owners Representative in complete operation and maintenance.

END OF SECTION

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Water Meter 1"
	Zurn 975XL 1-1/2" Reduced Pressure Backflow
	Hunter PC-7-PL
	Hunter Solar Sync Weather Sensor
	Pipe Sleeve: PVC Schedule 40



1 SLEEVING ROUGH-IN DETAIL

SCALE: N.T.S.

1801 Research Drive
Alachua, Florida 32615
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www.dhw-inc.com

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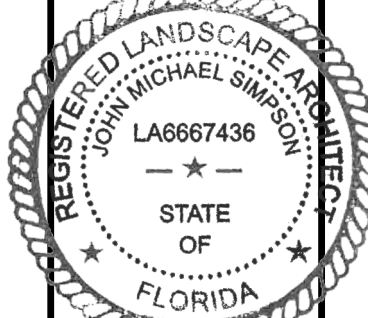
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VERIFY SCALE
BASED ON THE
ORIGINAL DRAWING
0
DO NOT USE INFORMATION
FROM THIS SHEET, ADJUST
SCALES ACCORDINGLY.

CONSTRUCTION/BBU REVISIONS

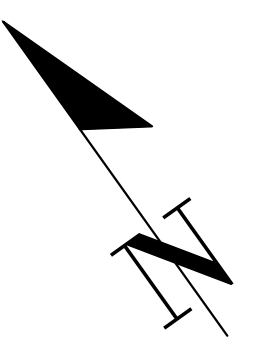
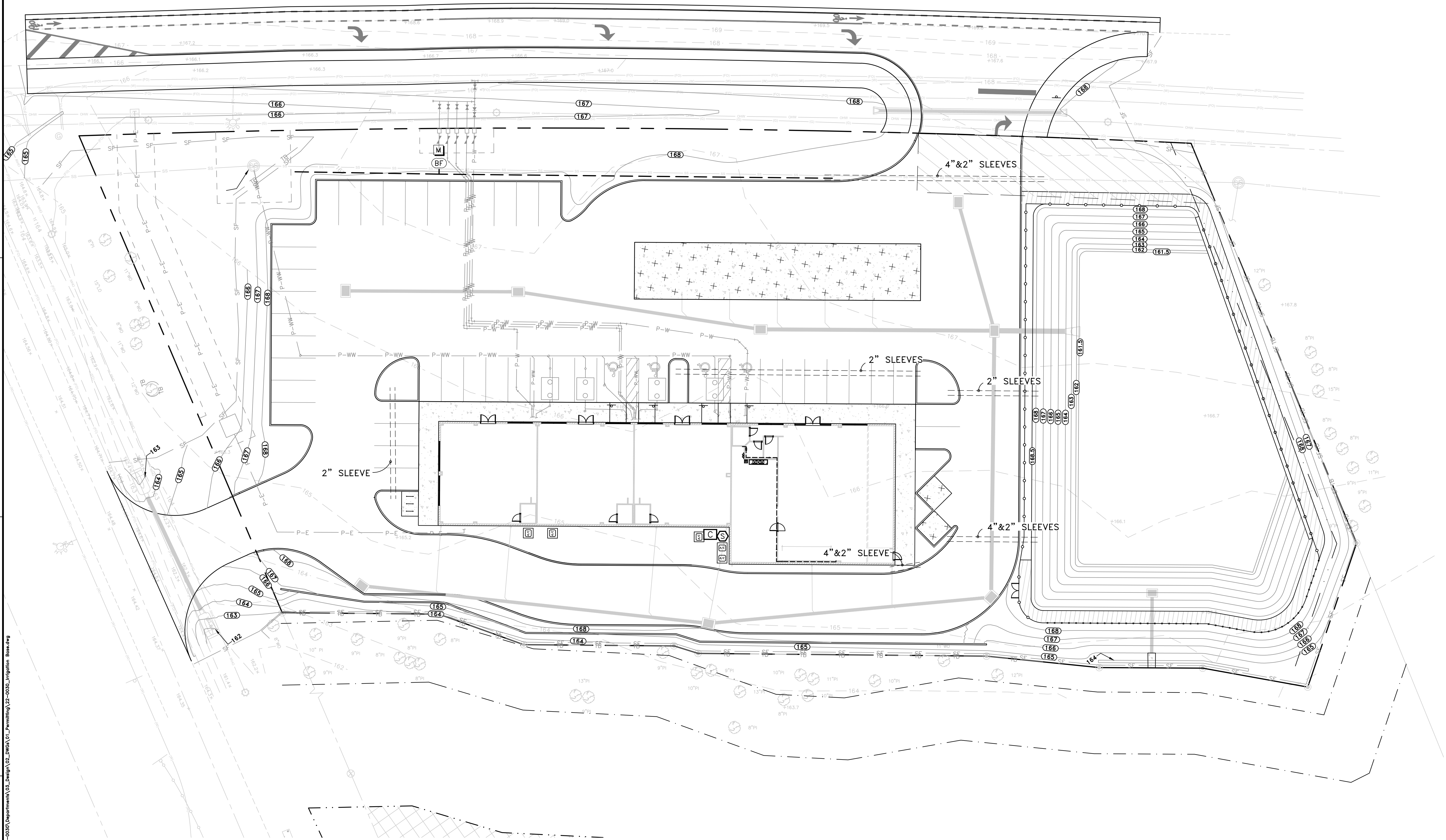
SUBMITTALS
03/20/2024 - CITY OF ALACHUA SUBMITTAL
05/28/2024 - CITY OF ALACHUA SUBMITTAL
07/09/2024 - CITY OF ALACHUA SUBMITTAL
08/06/2024 - CITY OF ALACHUA SUBMITTAL

CLIENT: MR. HARDIK PATEL
PROJECT: PATEL FUEL RETAIL
SHEET TITLE: IRRIGATION NOTES AND DETAILS

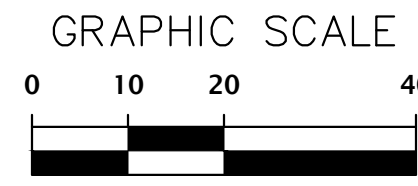
DESIGNER: JMS
CHECKER: JMS
PROJECT NUMBER: 22-0030



SHEET NO.:
IR-1



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Call 811 two business days
before digging



CHW AN INVIS COMPANY		11801 Research Drive Alachua, Florida 32615 (352) 331-1976 www.chw-inc.com	
SCALE: 1"=20'		VERIFY SCALE BASED ON SCALE ON ORIGINAL DRAWING 0" MEANS NO ADJUST THIS SHEET, ADJUST SCALES ACCORDINGLY.	
SUBMITTALS		03/20/2024 - CITY OF ALACHUA SUBMITTAL 05/28/2024 - CITY OF ALACHUA SUBMITTAL 07/09/2024 - CITY OF ALACHUA SUBMITTAL 08/06/2024 - CITY OF ALACHUA SUBMITTAL	
CLIENT:	MR. HARDIK PATEL	PROJECT:	PATEL FUEL RETAIL
DESIGNER:	JMS	QUALITY CONTROL:	LR
PROJECT NUMBER:	22-0030	SHEET TITLE:	IRRIGATION PLAN
REGISTERED LANDSCAPE ARCHITECT JOHN MICHAEL SIMMONS LA6667436 STATE OF FLORIDA		SHEET NO.: IR-2	

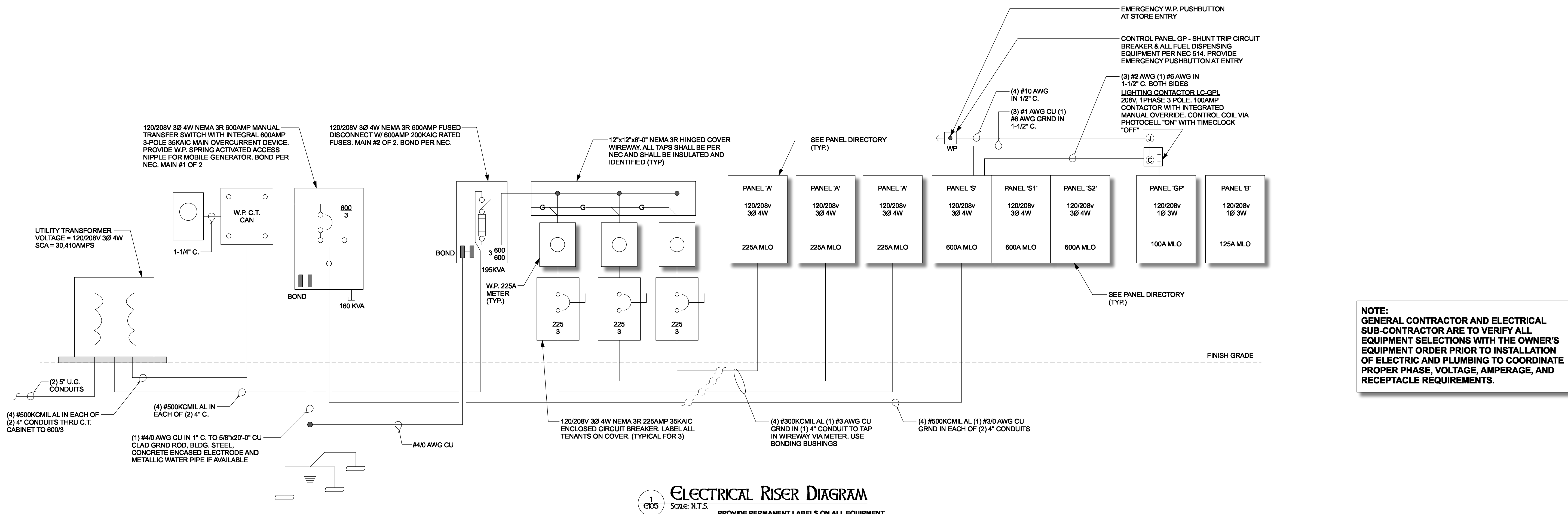
Test: John-michaels Plot Date: Aug 06, 2024 12:20pm Filename: N:\2022\22-0030\Department\03_Design\02_DWG\A01_Arriving\22-0030_Irrigation Base.dwg

PANEL A		RATING 225 AMP MLO										LUG LOCATION TOP										A.I.C. ZKKAIC																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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PANEL S										RATING 800 AMP MLO				LUG LOCATION TOP				A.I.C. ZKKAIC	
SERVICE 120 / 208V / 3Ø / 4W										MOUNTING SURFACE				TYPE SQ-D NOOOD OR EQUAL					
OKT NO	EQUIPMENT SERVED	KVA	OKT BKR	BRANCH CIRCUIT				Ø	OKT NO.	EQUIPMENT SERVED	KVA	OKT BKR	BRANCH CIRCUIT				COND		
			POLE	TR	Ø	NEUT	GND	COND				POLE	TR	Ø	NEUT	GND	COND		
1	BLDG-SIGN	1.00	1	20	10	10	10	12"	A	2	EQUIP	1.00	1	20	12	12	12	12"	
3	EQUIP	1.00	1	20	12	12	12	12"	B	4	LTG SALES	0.80	1	20	12	12	12	12"	
5	EQUIP	1.00	1	30	10	10	10	3/4"	C	6	EQUIP	0.90	1	20	12	12	12	12"	
7	EQUIP - PEANUT	1.00	1	20	12	12	12	12"	A	8	SPARE	1	20						
9	EQUIP - CHILLI CHEESE	0.80	1	20	12	12	12	12"	B	10	LTG	1.00	1	20	10	10	10	12"	
11	EQUIP	0.80	1	20	12	12	12	12"	C	12	EQUIP - HOTDODG	1.20	1	20	10	10	10	12"	
13	EQUIP	0.80	1	20	10	10	10	3/4"	A	14	EQUIP - MINI HFD	1.00	1	20	10	10	10	12"	
15	EQUIP - ATM	0.80	1	20	12	12	12	12"	B	16	EQUIP - MICROWAVE	1.00	1	20	10	10	10	12"	
17	EQUIP - ICE CREAM	0.80	1	20	12	12	12	12"	C	18	EQUIP - SPARE ISLAND	1.00	1	20	10	10	10	12"	
19	EQUIP	1.20	1	20	12	12	12	12"	A	20	EQUIP - HOTDODG	0.80	1	20	10	10	10	12"	
21	EQUIP	0.90	1	20	12	12	12	12"	B	22	EQUIP	0.90	1	20	10	10	10	12"	
23	EQUIP - ICE COFFEE	0.90	1	20	12	12	12	12"	C	24	EQUIP	0.90	1	20	10	10	10	12"	
25	EQUIP - CAPPUCCINO	0.90	1	20	12	12	12	12"	A	26	EQUIP	0.90	1	20	10	10	10	12"	
27	EQUIP - COFFEE	0.90	2	20	12	12	12	12"	B	28	EQUIP	1.00	1	20	12	12	12	12"	
29	-	0.90	-	-	-	-	-	-	C	30	EQUIP - FLOOR RECEPT	0.90	1	20	10	10	10	12"	
31	EQUIP	1.20	1	20	12	12	12	12"	A	32	EQUIP	0.90	1	20	10	10	10	12"	
33	ICE MACHINE #1	1.00	2	20	10	10	10	3/4"	B	34	EQUIP - COFFEE	0.90	2	20	12	12	12	12"	
35	-	1.00	-	-	-	-	-	-	C	36	-	0.90	2	12	12	12	12	12"	
37	EQUIP	1.00	1	20	12	12	12	12"	A	38	PANEL B	10.00	2	125	1	1	6	1-1/2"	
39	PANEL GP	6.50	2	100	2	2	6	1-1/2"	B	40	-	10.00	-	-	1				
41	-	-	-	-	-	-	-	-	C	42	RECEPT	8.00	1	20	10	10	10	3/4"	
EQUIPMENT SERVED			CONN. LOAD		LF		DESIGN LOAD (KVA)		REMARKS										
LTG / SIGNS			8.40		1.25		11.25		11.25										
EQUIP			121.82		DF		65 78.18		- PROVIDE TYPE WRITTEN PANEL DIRECTORY. - PROVIDE GRID BUS & NEUTRAL BUS. - PROVIDE FEED-THRU LUGS.										
HVAC			36.00		1.00		36.00												
PANEL GP / PANEL B			33.00		1.00		33.00												
TOTAL			159.48 KVA						42 CIRCUITS									443 AMPS	

RATING 600 AMP MLO										LUG LOCATION TOP										A.I.C.		ZKKAIC	
PANEL S2		SERVICE 120 / 208V, 3Ø, 4W								MOUNTING SURFACE								TYPE		SQ.-D. NOOD OR EQUAL			
OKT NO	EQUIPMENT SERVED	KVA	OKT BKR POLE	TR	BRANCH CIRCUIT Ø NEUT GND COND			Ø	OKT NO.	EQUIPMENT SERVED	KVA	OKT BKR POLE	TR	BRANCH CIRCUIT Ø NEUT GND COND									
1	SPACE								A	2	COOLER EVAP.	1.20	3	30	10	--	10	1*					
3	SPACE								B	4	--	1.20	--	--	10								
5	SPACE								C	6	--	1.20	--	--	10								
7	SPACE								A	8	COOLER COND.	3.60	3	40	8	--	8	1*					
9	SPACE								B	10	--	3.60	--	--	8								
11	SPACE								C	12	--	3.60	--	--	8								
13	SPACE								A	14	SPACE												
15	SPACE								B	16	SPACE												
17	SPACE								C	18	SPACE												
19	SPACE								A	20	SPACE												
21	SPACE								B	22	SPACE												
23	SPACE								C	24	SPACE												
25	RTU-3	6.00	3	60	6	--	6	1*	A	26	BEER CAVE EVAP.	1.20	3	30	10	--	10	1*					
27	--	6.00	--	--	6				B	28	--	1.20	--	--	10								
29	--	6.00	--	--	6				C	30	--	1.20	--	--	10								
31	RTU-4	6.00	3	60	6	--	6	1*	A	32	BEER CAVE COND.	3.60	3	40	8	--	8	1*					
33	--	6.00	--	--	6				B	34	--	3.60	--	--	8								
35	--	6.00	--	--	6				C	36	--	3.60	--	--	8								
37	BLDG SIGN	1.00	1	20	10	10	10	1/2"	A	38	SPARE			1	20								
39	BLDG SIGN	1.00	1	20	10	10	10	1/2"	B	40	SPARE												
41	BLDG SIGN	1.00	1	20	10	10	10	1/2"	C	42	SPARE												
EQUIPMENT SERVED								CONN. LOAD				LF	DF	DESIGN LOAD (KVA)				REMARKS					
																		- PROVIDE TYPE WRITTEN PANEL DIRECTORY. - PROVIDE GRND BUS & NEUTRAL BUS.					
SEE PANEL S FOR TOTAL TABULATION												TOTAL		SPARE				42 CIRCUITS					

PANEL S1		RATING 800 AMP MLO						LUG LOCATION TOP						A.I.C. 22KAIC					
		SERVICE 120 / 208V / 3Ø, 4W						MOUNTING SURFACE						TYPE SQ-D NOOD OR EQUAL					
OKT NO	EQUIPMENT SERVED	KVA	OKT POLE	BRK TR	Ø	NEUT	GND	COND	OKT NO	EQUIPMENT SERVED	KVA	OKT POLE	BRK TR	Ø	NEUT	GND	COND		
1	PUMP	1.00	1	20	12	12	12	12"	A	2	HAND DRYER	1.00	1	20	10	10	10	1/2"	
3	HAND DRYER	1.00	1	20	10	10	10	10"	B	4	FROZEN BEV	1.00	2	20	10	10	10	3/4"	
5	EQUIP	1.00	1	20	12	12	12	12"	C	6	--	1.00	--	--	10				
7	RECEPTS	1.00	1	20	12	12	12	12"	A	8	COFFEE	.900	2	20	10	10	10	1/2"	
9	RECEPTS	1.00	1	20	12	12	12	12"	B	10	--	.900	--	--	10	10	10		
11	SITE POLE LIGHTING *	1.00	2	20	4	4	4	1-1/4"	C	12									
13	--*	1.00	--	--	--	4			A	14	SPARE		1	20					
15	EVH	2.25	2	30	10	--	10	3/4"	B	16	SPARE		1	20					
17	--	2.25	--	--	--	10			C	18	SPARE		1	20					
19	PYLON SIGNAGE *	1.00	1	20	8	8	8	1"	A	20	SPARE		1	20					
21	EX LIGHTING	1.00	1	20	10	10	10	10"	B	22	DOOR HEATERS	1.00	1	20	10	10	10	1"	
23	SHOW WINDOW	1.20	1	20	12	12	12	12"	C	24	LIGHTS	1.00	1	20	10	10	10	1"	
25	SHOW WINDOW	1.00	1	20	12	12	12	12"	A	26	DOOR HTR	1.00	1	20	10	10	10	3/4"	
27	EQUIP	0.50	1	20	12	12	12	12"	B	28	--	1.00	--	--	12				
29	EQUIP IRRIGATION	1.00	1	20	12	12	12	12"	C	30	SPARE		1	20					
31	RECEPTS	1.00	1	20	12	12	12	12"	A	32	FREEZER COND.	3.60	3	40	8	--	8	1"	
33	AIR/ VACC	.200	2	30	10	10	10	3/4"	B	34	--	3.60	--	--	8				
35	--	.200	--	--	--	10			C	36	--	3.60	--	--	8				
37	SHUNT TRIP	.200	1	20	12	12	12	12"	A	38	EXHAUST FAN BATHROOM	1.00	1	20	12	12	12	1/2"	
39	--								B	40	ROOF RECEPTS	.400	1	20	10			1/2"	
41	EQUIP	.500	1	20	12	12	12	12"	C	42	SPARE		1	20					
EQUIPMENT SERVED				CONN. LOAD		LF	DF	DESIGN LOAD (KVA)		REMARKS									
										- PROVIDE TYPE WRITTEN PANEL DIRECTORY.									
										- PROVIDE GRND BUS & NEUTRAL BUS.									
										- PROVIDE FEED-THRU LUGS TO SERVE PANEL "S2".									
SEE PANEL S FOR TOTAL TABULATION								TOTAL SPARE		42 CIRCUITS									



REVISIONS		
REV.	DATE	DESCRIPTION

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USE MAY RESULT IN LEGAL ACTION.

DONAHUE ARCHITECTURE, INC
1202 SW 17th Street, Ste.201-165

1202 SW 17th Street, Ste.201-165

Ocala, FL 34471

T 352.867.5148
E john@donahue-arch.com

FI: #AD00174ES

FL: # AR0017430

Riser Diagram & Panel Schedules

**A New Building for
US 441 C-Store & Retail**
NW US Hwy 441
Gainesville, FL 32653

DATE: 01/09/24		
JOB: D_23050		
DRAWN BY: JG, BG		28
CHECKED BY: JAD		
E105		OF
DESIGN DEVELOPMENT		28

A PORTION OF SECTION 27, TOWNSHIP 8 SOUTH, RANGE 19 EAST, CITY OF ALACHUA, ALACHUA COUNTY, FLORIDA; BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS

CONTAINING 2.139 ACRES (93,164 SQUARE FEET), MORE OR LESS

SURVEYOR'S NOTES:

1. BEARINGS SHOWN HEREON ARE REFERRED TO A VALUE OF N 12°21'26"50" E FOR THE EASTERLY RIGHT OF WAY LINE OF N.W. 59TH TERRACE (100 FOOT RIGHT OF WAY) SAID BEARING IS IDENTICAL WITH THE RECORDED DEED.
2. VERTICAL DATUM BASED ON FLORIDA DEPARTMENT OF TRANSPORTATION BENCHMARK "BM715H1", PUBLISHED ELEVATION OF 174.66 FEET (NAVD 88) AND ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988.
3. NO UNDERGROUND INSTALLATION OF UTILITIES OR IMPROVEMENTS HAVE BEEN LOCATED EXCEPT AS SHOWN.
4. THE SURVEYOR HAS NO KNOWLEDGE OF UNDERGROUND FOUNDATIONS WHICH MAY ENCROACH.
5. FENCING, SYMBOLS AND MONUMENTATION SHOWN HEREON MAY BE EXAGGERATED FOR PICTORIAL PURPOSES ONLY AND MAY NOT BE SHOWN TO SCALE.
6. IN THE OPINION OF THIS SURVEYOR, THE PERIMETER LINES AS SHOWN HEREON REPRESENT THE LOCATION OF THE BOUNDARY LINES OF THE SUBJECT PARCEL IN RELATION TO THE DESCRIPTION OF RECORD AND THOSE EXISTING LAND CORNERS FOUND TO BE ACCEPTABLE BY THIS SURVEYOR.
7. THIS SURVEY WAS PRODUCED WITHOUT THE BENEFITS OF FURNISHED TITLE WORK. NO INSTRUMENTS OF RECORD REFLECTING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WERE FURNISHED TO THE SURVEYOR EXCEPT AS SHOWN, AND NO SEARCH OF THE PUBLIC RECORDS HAS BEEN DONE BY THE SURVEYOR.
8. INFORMATION FROM FEDERAL EMERGENCY MANAGEMENT AGENCY, (F.E.M.A.) FLOOD INSURANCE RATE MAP(S), SHOWN ON THIS MAP WAS CURRENT AS OF THE REFERENCED DATE. MAP REVISIONS AND AMENDMENTS ARE PERIODICALLY MADE BY LETTER AND MAY NOT BE REFLECTED ON THE MOST CURRENT MAP.
9. TREES 6" IN DIAMETER OR GREATER (MEASURED AT CHEST HEIGHT) ARE SHOWN HEREON.
10. ADDITIONAL POINTS MAY BE FOUND BY TURNING ON THE SV-NODE* LAYERS IN THE SUPPLIED DIGITAL FILE.
11. TOPOGRAPHIC INFORMATION SHOWN HEREON BASED ON GROUND SURVEY. CONTOURS SHOWN HEREON REFLECT 1-FOOT INTERVALS.



REVISION 07-01-2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION AT THE INTERSECTION OF US HWY 441 & N.W. 59TH TERRACE

NFO

ED ADDITIONAL

REVISION 07

6

11801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com

est. 1988 **FLORIDA**
CA-5075



SCALE: 1" = 30'

VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING

IF NOT ONE INCH ON
THIS SHEET, ADJUST

HARDIK PATEL
SEMOJ 13 LLC.

SURVEY DATE:	01-18-2024
REVISION DATE:	07-01-2024
PROJECT NUMBER:	00 0000 00

CLINTON N. RICKNER

This map prepared by:

Certificate of Authorization No. L.B. 5075
 NOT VALID WITHOUT THE ORIGINAL
 SIGNATURE AND SEAL OR ELECTRONIC
 DIGITAL SIGNATURE OF A FLORIDA



THE GOOD LIFE COMMUNITY

FOR OFFICE USE ONLY

Case #: _____
Application Fee: \$ _____
Filing Date: _____
Completeness Date: _____
Review Type: P&Z or PZB & CCOM

Site Plan Application

Reference City of Alachua Land Development Regulations (LDRs), Section 2.4.9

A. PROJECT

1. Project Name: Patel Fuel Retail
2. Pre-Application Conference Date: November 28, 2023
3. Neighborhood Meeting Date: February 15, 2024
4. Address of Subject Property: Southeast corner of NW 59th Terrace and US Highway 441
5. Parcel ID Number(s): 05885-010-014
6. Existing Use of Property: Vacant
7. Future Land Use Map Designation: COMM
8. Zoning Designation: CI
9. Acreage: ±2.16
10. Total Existing Building Square Footage, if applicable: N/A
11. Total Existing Impervious Area (not including existing building area), if applicable: N/A
12. Total Building Square Footage Proposed: ±9,200 sf
13. Total New Impervious Area Proposed (not including building area): ±46,130 sf

B. APPLICANT

1. Applicant's Status ☐ Owner (title holder) ☒ Agent
2. Name of Applicant(s) or Contact Person(s): Walker Owen, P.E. Title: Project Manager
Company (if applicable): CHW
Mailing address: 11801 Research Drive
City: Alachua State: FL ZIP: 32615
Telephone: (352) 331 - 1976 FAX: _____ e-mail: walkero@chw-inc.com
3. If the applicant is agent for the property owner*:
Name of Owner (title holder): Hardik Patel
Mailing Address: 3612 SW 106th St.
City: Gainesville State: FL ZIP: 32608

** Must provide an executed Authorized Agent Affidavit or other acceptable documentation (as deemed acceptable by the City in its sole discretion) authorizing the agent to act on behalf of the property owner.*

C. ADDITIONAL INFORMATION

1. Is there any additional contact for sale of, or options to purchase, the subject property? ☐ Yes ☒ No
If yes, list names of all parties involved: _____
2. Has the applicant discussed possible utility/infrastructure fees with the Public Services Department?
If no, contact the Public Services Department at 386-418-6140. ☒ Yes ☐ No

D. ATTACHMENTS

1. Site Plan. Sheet size shall be 24" X 36" with a 3" left margin and ½" top, bottom, and right margin.

Site Plan shall include:

- a. Name and location of project.
- b. Name and contact information (address, telephone, and email address) of property owner, developer (if applicable), and all professional consultants (i.e., landscape architect, photometric, electrical engineer, architect, etc.) for the project.
- c. Zoning of the subject property.
- d. Vicinity map - indicating general location of the site and major adjacent streets and all adjacent properties.
- e. Boundary and topographic survey. Survey shall be signed and sealed by the surveyor, and shall be no older than two (2) years.
- f. Complete legal description of the subject property.
- g. Statement of proposed uses.
- h. Location of the subject property in relation to adjacent properties.
- i. Date, north arrow, and graphic scale (not to exceed one (1) inch equal to 50 feet.)
- j. Area and dimensions of the subject property.
- k. Structures and major features – fully dimensioned – including setbacks from property lines and right-of-ways, distances between structures (if structures are within 25 feet of one another), floor area of each building, floor area ratio, and property lines.
- l. Location of all property lines, existing and proposed adjacent right-of-ways, sidewalks, curbs, and gutters.
- m. Distance between ingress and egress connections for the project and the ingress / egress connections for all contiguous properties and for properties on the opposite side of the road, measured from the interior radius of all ingress/egress connections.
- n. Location of all existing and proposed utilities (electric, potable water, sanitary sewer, gas, etc.) on the subject property, and on adjacent properties if located within 50 feet of the subject property, and within adjacent rights-of-way.
- o. Location of all existing and proposed fire hydrants.
- p. Location of all existing easements on the property and on adjacent properties if located within 50 feet of the subject property, and recording information for such easements.
- q. Location of all proposed easements (legal descriptions and sketches of all proposed easements shall be provided by the applicant following a review of proposed utility locations by Public Services).
- r. Location and dimensions of all existing and proposed vehicular parking spaces, dimensions of all drive aisles, and the angle of parking spaces.
- s. Location of all bicycle parking areas and specifications of bicycle racks.
- t. Location, dimensions, and vertical clearance of all off-street loading spaces, if required by Section 6.1 of the LDRs.
- u. Location and dimensions of all vehicle stacking spaces, if required by Section 6.1 of the LDRs.
- v. Vehicular parking calculations, indicating the minimum and maximum number of required spaces and the number of parking spaces provided (regular and accessible spaces) in accordance with Section 6.1 of the LDRs.
- w. Bicycle parking calculations, if required by Section 6.1 of the LDRs.
- x. Striping and signage for all traffic control devices.
- y. Landscape Plan, indicating the location, size, and design of required and proposed landscaped areas. Landscape Plans shall identify the following with sufficient detail and calculations to demonstrate compliance with Section 6.2.2 of the LDRs:
 - i. Location, identification of the species, and size of all existing trees.
 - ii. Required perimeter buffer areas.
 - iii. Parking lot perimeter landscaping.
 - iv. Parking lot interior landscaping.
 - v. Building façade landscaping.
 - vi. Calculation of landscaped areas (see Policy 2.4.a of the Comprehensive Plan Future Land Use Element).
 - vii. Calculation of open space provided (see Section 6.7 of the LDRs).
 - viii. Calculation of tree credits, if applicable. Calculations shall be as set forth in Sections 6.2.1(D)(4) and 6.2.2(D)(6) of the LDRs and shall be shown on the plan in tabular format (if tree credits are utilized, the Landscape Plan must identify in the landscape calculations where credit is applied).
 - ix. Tree protection detail in accordance with Section 6.2.1(D)(2) of the LDRs.
 - x. If tree removal is proposed, a tree survey, showing:
 - (a) Each tree proposed for removal;
 - (b) Each tree proposed for retention;
 - (c) The size and species (both common and scientific names) of all trees proposed for removal/retention;
 - (d) Location, size, and species of all new trees proposed to meet mitigation requirements. Mitigation trees must be shown on the plans and a list of all mitigation trees and calculation of required mitigation must be provided on the plan in tabular format.

- z. Location of waste receptacles and detail of waste receptacle screening, demonstrating compliance with Section 6.2.3(B) and, if within the Gateway Overlay District, with Section 3.7.2(C)(5)(c)(ii).
 - aa. Photometric Plan, demonstrating compliance with the applicable provisions of Section 6.4 of the LDRs.
 - bb. Location and size of any lakes, ponds, canals, or other waters and waterways, and required setbacks dimensioned on the plans from such waterways.
 - cc. For development consisting of a nonresidential use, except for single tenant retail sales and services uses greater than or equal to 20,000 square feet in area and except for use types within the industrial services, manufacturing and production, warehouse freight and movement, waste-related services, and wholesale sales use categories **not** located within 500 feet of the right-of-way of US Highway 441: Architectural plans demonstrating compliance with the design standards for business uses as provided in Section 6.8.2 of the LDRs. Architectural plans shall include:
 - i. Calculation of glazing of:
 - (a) the front façade;
 - (b) any facade facing a street;
 - (c) any façade facing a publicly-accessible parking area which is a part of the development and consisting of 15 percent or more of the minimum off-street parking required by Section 6.1.4(B) of the LDRs; and,
 - (d) any façade facing vacant land classified as CSV, A, RSF-1, RSF-3, RSF-4, RSF-6, RMH-5, RMH-P, RMF-8 or RMF-15, or lands containing existing residential uses.
 - ii. Calculation of the area of all façades subject to glazing.
 - iii. Detail on the architectural plans depicting façade massing or a massing alternative as defined in Section 6.8.2(A)(2)(b).
 - iv. Identification of each material utilized in each façade and the percentage of the total area of the façade for each material used.
 - dd. For development consisting of a nonresidential use where a single retail services tenant is greater than or equal to 20,000 square feet in area: Architectural plans demonstrating compliance with the design standards for single tenant retail sales and service uses greater than or equal to 20,000 square feet in area as provided in Section 6.8.3 of the LDRs. Architectural plans shall include:
 - i. Color plans depicting the color of all materials used in the façade.
 - ii. Identification of each material utilized in each façade and the percentage of the total area of the façade for each material used.
 - iii. Calculation of glazing of:
 - (a) the front façade;
 - (b) any facade facing a street;
 - (c) any façade facing a publicly-accessible parking area which is a part of the development and consisting of 15 percent or more of the minimum off-street parking required by Section 6.1.4(B) of the LDRs; and,
 - (d) any façade facing vacant land classified as CSV, A, RSF-1, RSF-3, RSF-4, RSF-6, RMH-5, RMH-P, RMF-8 or RMF-15, or lands containing existing residential uses.
 - iv. Calculation of the area of all façades subject to glazing.
 - v. If a glazing alternative as defined in Section 6.8.3(A)(2)(a)(iv) is used, calculation of area of alternative materials used or identification of other architectural features meeting the requirements of Section 6.8.3 of the LDRs.
 - vi. Detail on the architectural plans depicting façade massing or a massing alternative as defined in Section 6.8.2(A)(2)(b) of the LDRs.
 - ee. For development consisting multi-family residential uses and/or a mobile home park:
 - i. Gross acreage.
 - ii. Number of dwelling units proposed.
 - iii. Density.
 - iv. Location and percentage of total open space and recreation areas.
 - v. Floor area of each dwelling unit.
 - vi. Number of proposed parking spaces.
 - vii. Street layout, if applicable.
 - viii. Layout of mobile home stands (for mobile home parks only).
 - ix. City of Alachua Public School Student Generation Form.
2. Stormwater management plan - including the following:
 - a. Plans showing existing contours at one (1) foot intervals based on U.S. Coastal and Geodetic Datum.
 - b. Proposed finished floor elevation of all buildings.
 - c. Existing and proposed stormwater management facilities with size and grades.
 - d. Proposed orderly disposal of surface water runoff.
 - e. Drainage calculations.
 3. Fire Department Access and Water Supply Plan. All fire protection plans are subject to review and approval by the Alachua County Fire Marshal and City of Alachua Public Services Department. Fire Department Access and Water Supply Plan shall include:
 - a. Plans prepared by a professional engineer licensed in the State of Florida.

- b. Fire flow calculations for each newly constructed building. Calculations shall be performed in accordance with Chapter 18, Section 18.4 of the Florida Fire Prevention Code.
 - c. Documentation from the water purveyor stating the available flow to the subject property.
4. Concurrency Impact Analysis showing the impact on public facilities, including potable water, sanitary sewer, transportation, solid waste, recreation, stormwater, and public schools (if applicable) in accordance with Section 2.4.14 of the LDRs.
 5. Analysis of Consistency with the City of Alachua Comprehensive Plan (analysis must identify specific Goals, Objectives, and Policies and describe in detail how the application complies with the noted Goal, Objective, or Policy).

For commercial/corporate park/industrial projects: In addition to submitting specific written information regarding the development's compliance with the relevant Goals, Objectives, and Policies of the City of Alachua Comprehensive Plan, a response to the design and performance standards as provided in Policy 1.3.d (for commercial projects), Policy 1.4.f (for corporate park projects), or Policy 1.5.d (for industrial projects) of the Future Land Use Element:

The following criteria shall apply when evaluating commercial/corporate park/industrial development proposals:

1. Integration of vehicular and non-vehicular access into the site and access management features of site in terms of driveway cuts and cross access between adjacent sites, including use of frontage roads and/or shared access;
 2. Buffering from adjacent existing/potential uses;
 3. Open space provisions and balance of proportion between gross floor area and site size;
 4. Adequacy of pervious surface area in terms of drainage requirements;
 5. Placement of signage;
 6. Adequacy of site lighting and intrusiveness of lighting upon the surrounding area;
 7. Safety of on-site circulation patterns (patron, employee and delivery vehicles), including parking layout and drive aisles, and points of conflict;
 8. Landscaping, as it relates to the requirements of the Comprehensive Plan and Land Development Regulations;
 9. Unique features and resources which may constrain site development, such as soils, existing vegetation and historic significance; and
 10. Performance based zoning requirements, which may serve as a substitute for or accompany land development regulations in attaining acceptable site design.
 11. Commercial/Corporate Park/Industrial uses shall be limited to an intensity of less than or equal to 0.50 floor area ratio for parcels 10 acres or greater, 0.50 floor area ratio for parcels less than 10 acres but 5 acres or greater, a 0.75 floor area ratio for parcels less than 5 acres but greater than 1 acre, and 1.0 floor area ratio to parcels 1 acre or less.
 12. Complementary residential uses (corporate park only).
6. For Site Plans for Buildings Less than 80,000 Square Feet in Area: One (1) set of mailing labels for all property owners within 400 feet of the subject property boundaries – even if property within 400 feet falls outside of City limits (obtain from the Alachua County Property Appraiser's web site) – and all persons/organizations registered to receive notice of development applications (current list may be obtained from the Planning & Community Development Department).
 - For Site Plans for Buildings Greater than or Equal to 80,000 Square Feet in Area: Two (2) sets of mailing labels for all property owners within 400 feet of the subject property boundaries – even if property within 400 feet falls outside of City limits (obtain from the Alachua County Property Appraiser's web site) – and all persons/organizations registered to receive notice of development applications (current list may be obtained from the Planning & Community Development Department).
7. Neighborhood Meeting Materials, including:
 - i. Copy of the required published notice (advertisement) – must be published a newspaper of general circulation, as defined in Article 10 of the City's LDRs;
 - ii. Copy of written notice (letter) sent to all property owners within 400 feet and to all persons/organizations registered with the City to receive notice, and a copy of the mailing labels or a list of those who received written notice; and,
 - iii. Written summary of meeting – must include (1) those in attendance; (2) a summary of the issues related to the development proposal discussed; (3) comments by those in attendance about the development proposal; and, (4) any other information deemed appropriate.
 8. Legal description: (1) on 8.5" x 11" paper; and (2) electronic file in Word format.
 9. Proof of ownership (i.e., copy of deed.)

10. Proof of payment of taxes.
11. Traffic Impact Analysis or Statement, as deemed applicable to the project by the City of Alachua in its sole discretion.
12. Environmental Assessment or Study, as deemed applicable to the project by the City of Alachua in its sole discretion.
13. Environmental Resource Permit (or Letter of Exemption) from the Suwannee River Water Management District (SRWMD) or Self-Certification for a Stormwater Management System in Uplands Serving Less than 10 Acres of Total Project Area and Less than 2 Acres of Impervious Surfaces from the Florida Department of Environmental Protection (FDEP) pursuant to Section 403.814(12), Florida Statutes (or documentation which shows a permit application/exemption/self-certification has been submitted to SRWMD or FDEP).
14. If access is from a County Road, access management permit from Alachua County Public Works (or documentation which shows a permit application has been submitted).
15. If access is from a State Road, access management permit from Florida Department of Transportation (or documentation which shows a permit application has been submitted).
16. **Fee.** Please see fee schedule for fee determination. No application shall be accepted for processing until the required application fee is paid in full by the applicant. Any costs associated with outside professional consulting services deemed necessary by the City in its sole discretion will be billed to the applicant at the rate of the consultant. The invoice for such services shall be paid in full prior to any public hearing(s) on the application.

All applicable attachments are required for a complete application. A completeness review of the application will be conducted within five (5) business days of receipt. If the application is determined to be incomplete, the application will be returned to the applicant.

Under penalty of perjury, I/we certify and acknowledge that the information contained herein is true and correct to the best of my/our knowledge.



Signature of Applicant

Walker Owen, P.E., Project Manager

Typed or printed name and title of applicant

Signature of Co-applicant

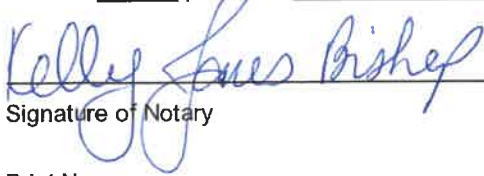
Typed or printed name and title of co-applicant

STATE OF FLORIDA
COUNTY OF ALACHUA

The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization, this

day of March 28, 2024, by Walker Owen who executed the same

and has _____ produced _____ as identification or ☒ is personally known to me.

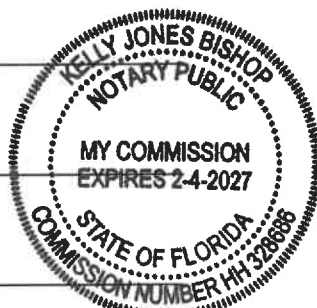


Signature of Notary

Print Name: _____

Notary Public, State of Florida

My Commission Expires: _____



City of Alachua ♦ Planning and Community Development Department
PO Box 9 ♦ Alachua, FL 32616 ♦ (386) 418-6121

4/1/2021

Page 5 of 5

Page 123 of 538



City of
ALACHUA

THE GOOD LIFE COMMUNITY

Authorized Agent Affidavit

A. PROPERTY INFORMATION

Address of Subject Property: Southeast corner of NW 59th Terrace and US Highway 441

Parcel ID Number(s): 05885-010-014

Acreage: ±2.16

B. PERSON PROVIDING AGENT AUTHORIZATION

Name: Hardik Patel

Title: _____

Company (if applicable): Semoj 13 LLC

Mailing Address: 3612 SW 106th St.

City: Gainesville

State: FL

ZIP: 32608

Telephone: Contact Agent

FAX: _____

e-mail: Contact Agent

C. AUTHORIZED AGENT

Name: Walker Owen, P.E.

Title: Project Manager

Company (if applicable): CHW

Mailing address: 11801 Research Drive

City: Alachua

State: FL

ZIP: 32615

Telephone: (352) 331 - 1976

FAX: _____

e-mail: walkero@chw-inc.com

D. REQUESTED ACTION:

To submit and obtain approvals needed for the Patel Fuel Retail project.

I hereby certify that I am the property owner of record, or I have received authorization from the property owner of record to file an application for a development permit related to the property identified above. I authorize the agent listed above to act on my behalf for purposes of this application.

Hardik Patel
Signature of Applicant

Signature of Co-applicant

Hardik Patel; AMBR

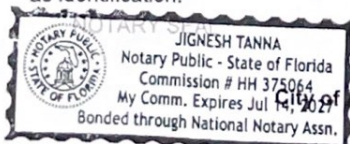
Typed or printed name and title of applicant

Typed or printed name of co-applicant

State of Florida County of Alachua

The foregoing application is acknowledged before me this 23rd day of February, 2024 by Hardik Patel

_____, who is/are personally known to me, or who has/have produced FL-DL
as identification.



Jignesh Tanna
Signature of Notary Public, State of Florida

City of Alachua ♦ Planning and Community Development Department
PO Box 9 ♦ Alachua, FL 32616 ♦ (386) 418-6121
Revised 9/30/2014



[Department of State](#) / [Division of Corporations](#) / [Search Records](#) / [Search by Entity Name](#) /

Detail by Entity Name

Florida Limited Liability Company
SEMOJ 13 LLC

Filing Information

Document Number L22000254307
FEI/EIN Number 88-2741436
Date Filed 06/03/2022
State FL
Status ACTIVE

Principal Address

3612 SW 106TH ST
GAINESVILLE, FL 32608

Changed: 01/28/2023

Mailing Address

3612 SW 106TH ST
GAINESVILLE, FL 32608

Changed: 01/28/2023

Registered Agent Name & Address

PATEL, HARDIK
3612 SW 106TH ST
GAINESVILLE, FL 32608

Address Changed: 01/28/2023

Authorized Person(s) Detail

Name & Address

Title AMBR

PATEL, HARDIK
3612 SW 106TH ST
GAINESVILLE, FL 32608

Title AMBR

PATEL, PANKAJ
6212 SW 86TH WAY
GAINESVILLE, FL 32608

Annual Reports

Report Year	Filed Date
2023	01/28/2023
2024	01/07/2024

Document Images

01/07/2024 -- ANNUAL REPORT	View image in PDF format
01/28/2023 -- ANNUAL REPORT	View image in PDF format
06/03/2022 -- Florida Limited Liability	View image in PDF format

MEMORANDUM

Patel Fuel Retail

22-0030



To: City of Alachua
From: Walker F. Owen
Date: 4/29/2024
RE: Patel Fuel Retail, Alachua, FL. - Required Fire Flow

The following is a calculation for the required fire flow for the proposed project based on the most recent edition of NFPA 1: Fire Code.

Building data is based on the information available from the project architect at the time of this memo. Any changes to the building data will void the provided fire flow calculation and requires a revised analysis to verify the building complies with the applicable fire protection criteria.

NFPA Calculations:

Building: Convenience Store / Retail
Construction Type: V(000)
Max. Fire Flow Area: <9,000 SF

Conclusions

Minimum Required Fire Flow to be provided: **2,500 gpm**

Available Fire Flow @ 20psi per Fire Hydrant Flow Test: **2,923 gpm**

Walker Fain Owen
State of Florida, Professional
Engineer, License No. 94201

This item has been
electronically signed and
sealed by Walker Fain Owen,
PE on 08/06/2024 using a
Digital Signature.

Printed copies of this
document are not considered
signed and sealed and the
signature must be verified on
any electronic copies.

Hydrant Flow Test Report

Test Date 3/27/2024

Test Time 10:00 AM

Location

Hardik Patel Semoj 13 LLC
Parcel# 05885-010-014
Along NW 59th Terracet
South of US HWY 441
Alachua FL 32615

Tested by

Gator Fire Equipment Co., Inc.
Conducted by: J. Mallard/ C. Carroll
Witnessed by: Emory City of Alachua

Notes

Read Hydrant Along US HWY 441
Flow Hydrant Along NW 59th Terrace

Read Hydrant

61 psi **static pressure**
42 psi **residual pressure**
0 ft **hydrant elevation**

Flow Hydrant(s)

Outlet	Elev	Size	C	Pitot Pressure	Flow
#1	0	2.5	.9	32	950 gpm
#2	0	2.5	.9	34	979 gpm
				Total	1929 gpm

Flow Graph

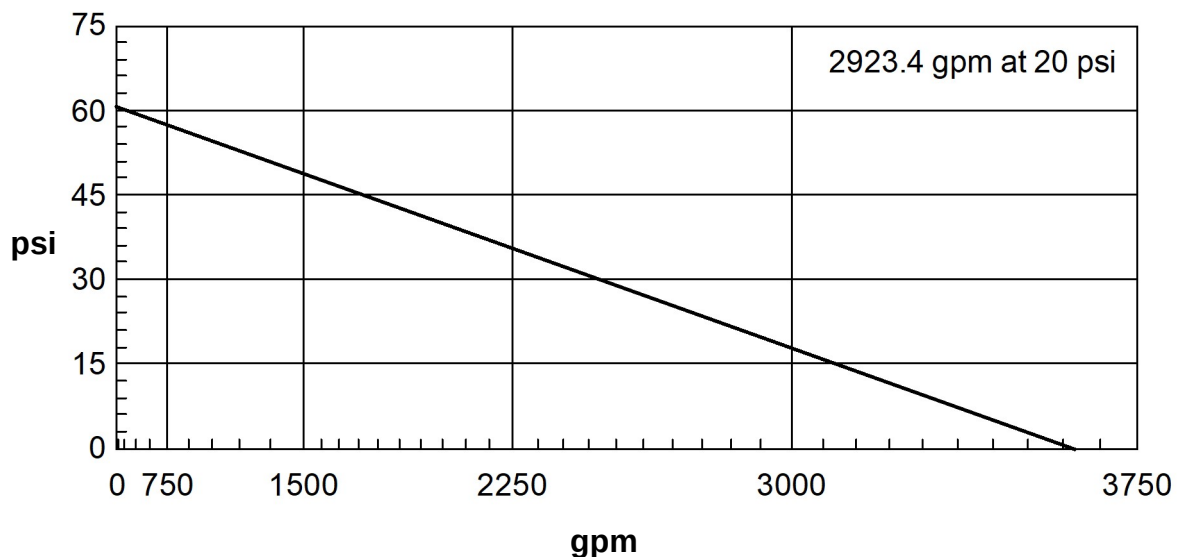


Table 18.4.5.1.2 Minimum Required Fire Flow and Flow Duration for Buildings

Fire Flow Area ft ² (× 0.0929 for m ²)					Fire Flow gpm [†] (× 3.785 for l./min)	Flow Duration (hours)
I(443), I(332), II(222)*	II(111), III(211)*	IV(2HH), V(111)*	II(000), III(200)*	V(000)*		
0-22,700	0-12,700	0-8200	0-5900	0-3600	1500	2
22,701-30,200	12,701-17,000	8201-10,900	5901-7900	3601-4800	1750	
30,201-38,700	17,001-21,800	10,901-12,900	7901-9800	4801-6200	2000	
38,701-48,300	21,801-24,200	12,901-17,400	9801-12,600	6201-7700	2250	
48,301-59,000	24,201-33,200	17,401-21,300	12,601-15,400	7701-9400	2500	
59,001-70,900	33,201-39,700	21,301-25,500	15,401-18,400	9401-11,300	2750	3
70,901-83,700	39,701-47,100	25,501-30,100	18,401-21,800	11,301-13,400	3000	
83,701-97,700	47,101-54,900	30,101-35,200	21,801-25,900	13,401-15,600	3250	
97,701-112,700	54,901-63,400	35,201-40,600	25,901-29,300	15,601-18,000	3500	
112,701-128,700	63,401-72,400	40,601-46,400	29,301-33,500	18,001-20,600	3750	
128,701-145,900	72,401-82,100	46,401-52,500	33,501-37,900	20,601-23,300	4000	4
145,901-164,200	82,101-92,400	52,501-59,100	37,901-42,700	23,301-26,300	4250	
164,201-183,400	92,401-103,100	59,101-66,000	42,701-47,700	26,301-29,300	4500	
183,401-203,700	103,101-114,600	66,001-73,300	47,701-53,000	29,301-32,600	4750	
203,701-225,200	114,601-126,700	73,301-81,100	53,001-58,600	32,601-36,000	5000	
225,201-247,700	126,701-139,400	81,101-89,200	58,601-65,400	36,001-39,600	5250	
247,701-271,200	139,401-152,600	89,201-97,700	65,401-70,600	39,601-43,400	5500	
271,201-295,900	152,601-166,500	97,701-106,500	70,601-77,000	43,401-47,400	5750	
Greater than 295,900	Greater than 166,500	106,501-115,800	77,001-83,700	47,401-51,500	6000	
		115,801-125,500	83,701-90,600	51,501-55,700	6250	
		125,501-135,500	90,601-97,900	55,701-60,200	6500	
		135,501-145,800	97,901-106,800	60,201-64,800	6750	
		145,801-156,700	106,801-113,200	64,801-69,600	7000	
		156,701-167,900	113,201-121,300	69,601-74,600	7250	
		167,901-179,400	121,301-129,600	74,601-79,800	7500	
		179,401-191,400	129,601-138,300	79,801-85,100	7750	
		Greater than 191,400	Greater than 138,300	Greater than 85,100	8000	

*Types of construction are based on NFPA 220.

†Measured at 20 psi (139.9 kPa).

To: Kathy Winburn, AICP, City of Alachua Planning & Community Dev. Director
From: Braxton Linton III, Project Planner
Date: April 5th, 2024
RE: Patel Fuel Retail – Comprehensive Plan Consistency Analysis

This Comprehensive Plan Consistency Analysis is submitted for Patel Fuel Retail Alachua. The Patel Fuel Retail project proposes the construction of an ±8,833 sq. ft. fuel station inclusive of shell retail space, access roadways, parking, and stormwater management facilities. The proposed site is located on the southeast corner of US HWY 441 and NW 59th Terrace in Alachua, FL. The project site is ±2.14 acres located in on tax parcel ID #05885-010-014. The site's Future Land Use (FLU) category is Commercial, and the Zoning District classification is Commercial, Intensive (CI).

The following identifies specific City of Alachua Comprehensive Plan Goals, Objectives, and Policies and explains how this application is consistent with each. Comprehensive Plan text is provided in normal font, while consistency statements are provided in **bold**.

Future Land Use Element

Objective 1.3: Commercial

The City of Alachua shall establish three commercial districts: Community Commercial, Commercial, and Central Business District. These districts shall provide a broad range of retail sales and services, as well as office uses, to provide for the availability of goods and services, both to the citizens of Alachua and to the citizens of the North Central Florida region.

Policy 1.3.b: Commercial: The Commercial land use category is established to provide for general commercial uses, as well as more intense commercial and highway commercial uses. This is the land use category in which large-scale, regional commercial uses may locate. The following uses are allowed within the Commercial land use category:

1. Retail sales and services;
2. Personal services;
3. Financial Institutions;
4. Outdoor recreation and entertainment;
5. Tourist-related uses;
6. Hotels, motels;
7. Commercial shopping centers;
8. Auto-oriented uses;
9. Traditional Mixed-use Neighborhood Planned Developments;
10. Employment Center Planned Developments;
11. Commercial recreation centers;
12. Office/business parks;
13. Limited industrial services;
14. Eating establishments

The proposed use, a fueling station and associated retail, is consistent with the Commercial FLU category. This application is for the development of an ±8,833 sq. ft. fuel station inclusive of shell retail space, access roadways, parking, and stormwater management facilities. Development will be consistent with standards set forth by the Commercial FLU category and CI Zoning District.

Policy 1.3.d: Design and performance standards: The following criteria shall apply when evaluating commercial development proposals:

1. Integration of vehicular and non-vehicular access into the site and access management features of site in terms of driveway cuts and cross access between adjacent sites, including use of frontage roads and/or shared access;

For vehicular site access, the application proposes a full ingress/egress point on Northwest 59th Terrace on the site's western boundary and on US HWY 441 on the site's northern boundary.

2. Buffering from adjacent existing/potential uses;

- Vacant Land (South): 7.5-foot-wide Type 'A' Buffer
- Vacant Land (West): 25-foot-wide Type 'D' Buffer
- Stormwater Perimeter (East): 7.5-foot-wide Type 'A' Buffer

Per City of Alachua LDR Sec. 6.2.2(D)(2)(b), parking areas must be buffered around their exterior at a minimum of 5 feet in width and an average of 7 feet in width.

As depicted in the application, the submitted site plan adheres to all required buffers.

3. Open space provisions and balance of proportion between gross floor area and site size;

City of Alachua LDR §6.7.3(A), Table 6.7-1. states that a minimum of 10% of the gross site area shall be designated as open space. The project proposes to designate more than 10% of the project site as open space, through the use of stormwater management facilities, thus exceeding the 10% minimum requirement.

4. Adequacy of pervious surface area in terms of drainage requirements.

The proposed development drains to a proposed master Stormwater Management Facility (SMF) on the eastern portion of the project site.

5. Placement of signage.

All proposed signage will adhere to the policies stated in Section 6.5 of Article 6 of the City of Alachua LDR.

6. Adequacy of site lighting and potential impacts of lighting upon the surrounding area. Lighting should be designed to minimize impacts and preserve the ambiance and quality of the nighttime sky by reducing light trespass and light pollution on adjacent properties by utilizing lighting at an appropriate intensity, direction and times to ensure light is not overused or impacting areas where it is not intended.

All proposed lighting will adhere to the policies stated in Section 6.4 of Article 6 of the City of Alachua LDR.

7. Safety of on-site circulation patterns (patron, employee, and delivery vehicles), including parking layout and drive aisles, and points of conflict.

The proposed on-site parking area is designed for safe onsite circulation with minimal vehicle and pedestrian conflicts. The majority of parking is located at the front and sides of the buildings. According to Section 6.1.5(C)(1) in the City of Alachua's LDR, there is a 1-space loading zone requirement due to the building's size. The loading zone is located at the rear of the building, avoiding conflict with pedestrians.

8. Landscaping, as it relates to the requirements of the Comprehensive Plan and Land Development Regulations.

Future Land Use Element (FLUE) Policy 2.4.a states that the minimum landscaped area shall be 10% of the development site, not inclusive of any designated open space areas. The submitted Landscape Plans demonstrate that more than 10% of the total site area will be landscaped.

9. Unique features and resources which may constrain site development, such as soils, existing vegetation, and historic significance; and

There are no environmental features or significant resources onsite that warrant protection.

10. Performance based zoning requirements, which may serve as a substitute for or accompany land development regulations in attaining acceptable site design.

There are no performance-based zoning requirements being proposed for this site.

11. Commercial uses shall be limited to an intensity of less than or equal to .50 floor area ratio for parcels 10 acres or greater, .50 floor area ratio for parcels less than 10 acres but 5 acres or greater, a .75 floor area ratio for parcels less than 5 acres but greater than 1 acre, and 1.0 floor area ratio to parcels 1 acre or less.

The project site is ±2.14 acres. The proposed building is a ±8,833 sq. ft. structure. This yields an approximate Floor Area Ratio (FAR) of 0.09. The proposed development onsite will not exceed the permitted 0.75 FAR.

Transportation Element

Objective 1.1: Level of Service

The City shall establish a safe, convenient, and efficient level of service standard for all motorized and non-motorized transportation systems.

The proposed use, a Convenience Store/Gas Station & Strip Retail Plaza (Institute of Transportation Engineers (ITE) Land Use Code 945 & 822) will not result in a degradation of transportation Level of Service (LOS) standards, as is demonstrated in the complementary Concurrency Impact Analysis memorandum submitted as part of this application.

Conservation and Open Space Element

Objective 1.5: Soils. The City shall protect soil resources through erosion and sedimentation control, by requiring proper design criteria on specific soils.

The site is composed of two different soil types.

1. Pamona Sand, 0 to 2 percent slopes (hydro group: A/D)
2. Pelham Sand (hydro group: B/D)

According to the NRCS soil database, the soil types are conducive to the proposed development, which is also demonstrated on adjacent sites with similar uses and soil types.

Community Facilities Element

Policy 1.1.d: The City hereby establishes the following Level of Service standards for sanitary sewer facilities:

- b. Quantity: System-wide wastewater collection and treatment will be sufficient to provide a minimum of 250 gallons per day per equivalent residential unit (ERU) on an average annual basis.

Per the current City of Alachua Development Monitoring Report, there is residual capacity for existing Sanitary Sewer facilities. As is demonstrated in the Concurrency Impact Analysis submitted as part of this application, facility demands by the proposed nonresidential use will not exceed this residual capacity.

Objective 2.1: Continue to ensure satisfactory and economical solid waste service for all City residents, with an emphasis on reuse and recycling.

Policy 2.1.a: The City hereby establishes the following level of service standards for solid waste disposal facilities:

<u>FACILITY TYPE</u>	<u>LEVEL OF SERVICE STANDARD</u>
Solid Waste Landfill	.73 tons per capita per year

Per the current City of Alachua Development Monitoring Report, there is a 50-year build-out capacity for the solid waste disposal facility. As is demonstrated in the Concurrency Impact Analysis submitted as part of this application, facility demands by the proposed nonresidential use will not exceed this build-out capacity.

Objective 4.1: Achieve and maintain acceptable levels of service for potable water quantity and quality.

Policy 4.1.c: The City establishes the following level of service standards for potable water:

2. Quantity: System-wide potable water distribution and treatment will be sufficient to provide a minimum of 275 gallons per day per equivalent residential unit (ERU) on an average annual basis.

Per the current City of Alachua Development Monitoring Report, there is residual capacity for existing Potable Water facilities. As is demonstrated in the Concurrency Impact Analysis submitted as part of this application, facility demands by the proposed nonresidential use will not exceed this residual capacity.

CONCURRENCY IMPACT ANALYSIS

Patel Fuel Retail

22-0030



To: Kathy Winburn, AICP, City of Alachua Planning & Community Dev. Director
From: Braxton Linton III, Project Planner
Date: April 5th, 2024 RESUBMITTAL July 5th, 2024
RE: Patel Fuel Retail – Concurrency Impact Analysis

This Concurrency Analysis is submitted for Patel Fuel Retail Alachua. The Patel Fuel Retail project proposes the construction of an ±8,836 sq. ft. fuel station inclusive of shell retail space, access roadways, parking, and stormwater management facilities. The proposed site is located on the southeast corner of US HWY 441 and NW 59th Terrace in Alachua, FL. The project site is ±2.14 acres located in on tax parcel ID #05885-010-014. The site's Future Land Use (FLU) category is Commercial, and the Zoning District classification is Commercial, Intensive (CI).

The following analysis estimates potential impacts on City of Alachua public facilities that may result from the proposed development. Please note, building square footage, rather than building footprint area, is used for all calculations.

Roadways / Transportation

Table 1: Projected Trip Generation

Trip Generation									
Land Use	ITE LU Code	Variable KSF with 10 fueling positions	Daily	AM Peak			PM Peak		
			Total	Total	In	Out	Total	In	Out
Convenience Store/Gas Station	945	3.823	2,693	216	108	108	208	104	104
Pass-by Trips (AM = 76%, PM = 75%, Daily = 75.5%)			2033	164	82	82	156	78	78
Strip Retail Plaza	822	3.318	370	14	8	6	36	18	18
Pass-by Trips (40%)			148	6	3	3	14	7	7
Fast-food without Drive-thru	933	1.692	762	73	42	31	61	31	30
Pass-by Trips (AM = 50%, PM = 55%, Daily = 52.5%)			400	37	21	16	34	17	17
Gross New Trips			3,825	303	158	145	305	153	152
Total Pass-by			2,581	207	106	101	204	102	102
Net New Trips (utilizing pass-by reduction)			1,244	96	52	44	101	51	50

* The ITE Trip Generation Manual, 11th Edition provides a pass-by rate of 76% during the AM and 75% during the PM peak but does not provide a pass-by rate for the daily condition, therefore, a pass-by rate average of 75.5% is applied to the daily.

* The ITE Trip Generation Manual, 11th Edition does not provide pass-by rates for the Strip Retail Plaza, therefore the Shopping Plaza pass-by rates are used. The ITE does not provide daily or AM peak hour pass-by rates for Shopping Plaza, therefore, the PM Peak pass-by rate of 40% is applied to all scenarios.

* The ITE Trip Generation Manual, 11th Edition does not provide pass-by rates for Fast-food without drive-thru, therefore the pass-by rates for fast-food with drive-thru are used. The ITE does not provide daily pass-by rates for fast-food with drive-thru, therefore, the daily is based on the average of the AM pass-by rate = 50% and PM pass-by rate = 55%.

* Pass-by rates are reduced such that the eastbound inbound matches the eastbound outbound and same for westbound.

Conclusion: Approval of this application may generate **3,825 new daily vehicle trips & 1,244 net new trips utilizing pass-by reductions**. This is not anticipated to negatively impact the adopted LOS for adjacent and nearby roadways, as demonstrated in Table 2.

Per City LDR §2.4.14(H)(2)(b), affected roadways for developments generating more than 1,000 external average daily trips (ADT) affected roadway segments are those on which the development's impacts are five percent or greater of the maximum service volume of the roadway and are all those wholly or partially located within one-half mile of the development's ingress/egress, or to the nearest intersecting major street, whichever is greater. Based on this code, the affected roadway segments are Segment 3, from MPO Boundary to CR 25A East Intersection US HWY 441 & Segment 4, US HWY 441, from CR 25A East Intersection to SR 235.

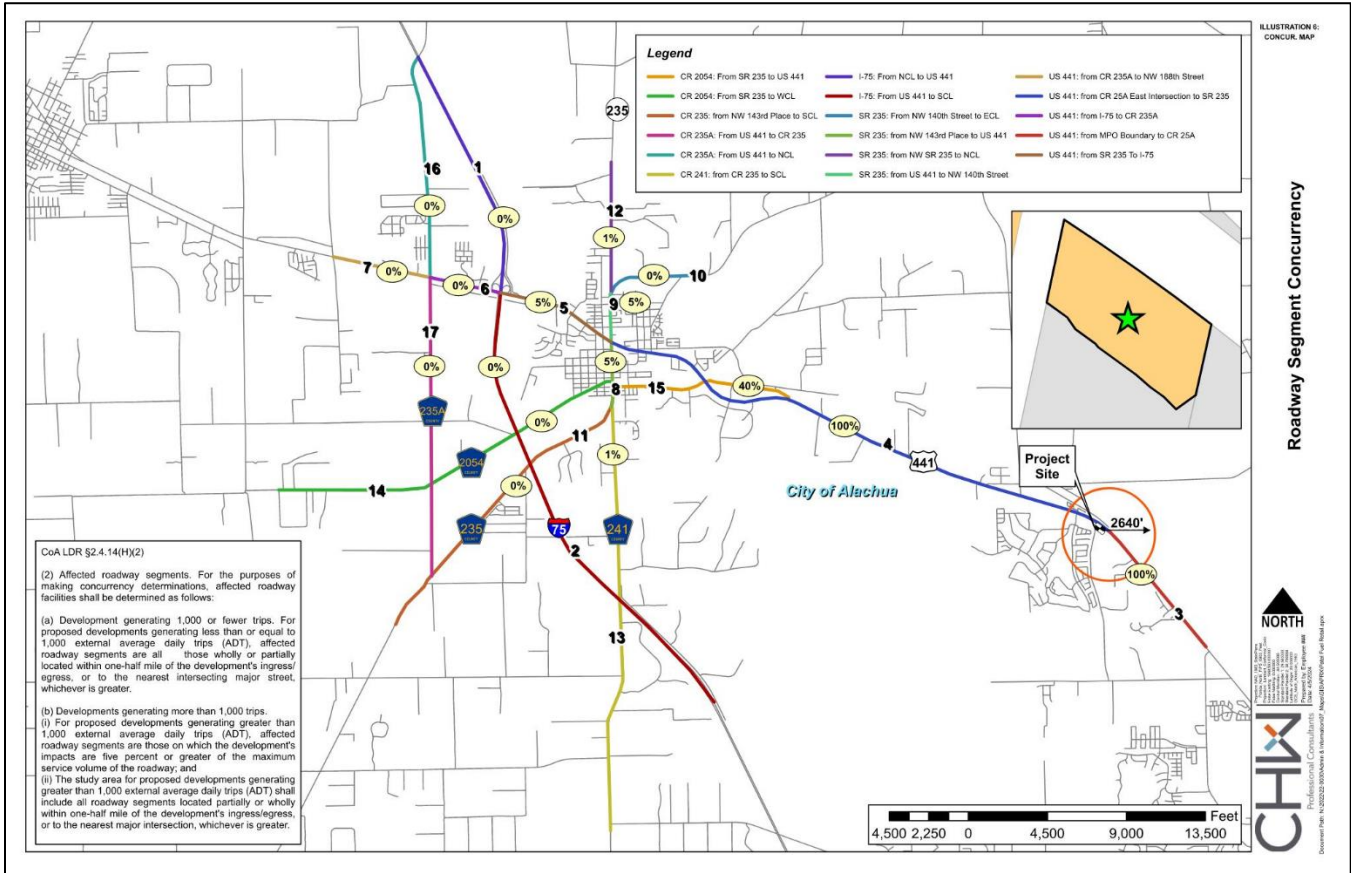


Figure 1: Traffic Segment Map

Table 2: Projected Impacts on Roadway Segments

	AADT	PM	AADT	PM
Traffic System Category	Segment 3		Segment 4	
	US Hwy 441 From MPO Boundary to CR 25A East Intersection		US Hwy 441 From CR 25A East Intersection to SR 235	
Maximum Service Volume ¹	43,000	3,870	45,700	4,110
Existing Traffic ¹	22,194	2,127	19,134	1,767
Reserved Trips ¹	0	0	6,565	609
Available Capacity	20,806	1,743	20,001	1,734
Projected Trip Generation ²	3,825	305	3,825	305
Available Capacity w/ Application approval	16,981	1,438	16,176	1,429

1. Source: City of Alachua June 2024 Development Monitoring Report

2. NOTE: Projected trip distribution percentage is as follows:

- a. Segment 3: 100%
- b. Segment 4: 100%

Conclusion: Affected roadway segments include US Hwy 441 (From MPO Boundary to CR 25A East Intersection), & US Hwy 441 (From CR 25A East Intersection to SR 235). There is available capacity with this application's approval. Therefore, this development *will not* cause the roadway segments to fall below the LOS standards.

Potable Water/Sanitary Sewer

Table 3: Projected Potable Water Impact

System Category	Gallons Per Day (GPD)
Current Permitted Capacity ¹	2,300,000
Less actual Potable Water Flows ¹	1,548,250
Reserved Capacity ¹	401,945
Residual Capacity ¹	349,805
Percentage of Permitted Design Capacity Utilized ¹	84.79%
Projected Potable Water Demand from Proposed Project ²	1,325.4
Residual Capacity after Proposed Project	348,479.6

1. Source: City of Alachua June 2024 Development Monitoring Report

2. Formulas used: $(8,836 \text{ sq. ft.} / 100) * 15 \text{ gpd}$

a. Source: 62-6.008 Florida Administrative Code (FAC)

Conclusion: There is residual capacity with this application's approval. Therefore, the proposed development *will not* cause the City's potable water facilities to fall below LOS standards.

Table 4: Projected Sanitary Sewer Impact

System Category	Gallons Per Day (GPD)
Treatment Plant Current Permitted Capacity ¹	1,500,000
Less actual Treatment Plant Flows ¹	764,000
Reserved Capacity ¹	376,009
Residual Capacity ¹	359,991
Percentage of Permitted Design Capacity Utilized ¹	76%
Projected Potable Water Demand from Proposed Project ²	1,325.4
Residual Capacity after Proposed Project	358,665.6

1. Source: City of Alachua June 2024 Development Monitoring Report

2. Formulas used: $(8,836 \text{ sq. ft.} / 100) * 15 \text{ gpd}$

a. Source: 62-6.008 Florida Administrative Code (FAC)

Conclusion: There is residual capacity with this application's approval. Therefore, the proposed development will not cause sanitary sewer facilities to fall below LOS standards.

Solid Waste

Table 5: Projected Solid Waste Impact

System Category	LBs Per Day	Tons Per Year
Existing Demand ¹	44,060.00	8,040.95
Reserved Capacity ¹	47,884.21	8,738.87
New River Solid Waste Facility Capacity ¹	50 years	
Solid Waste Generated by Proposed Project²	19.35	3.53

1. Source: City of Alachua June 2024 Development Monitoring Report.

2. Source: Sincero and Sincero; *Environmental Engineering: A Design Approach*. Prentice Hall, New Jersey, 1996. Formula used: $((12 \text{ lbs.} / 1,000 \text{ ft}^2/\text{day} \times 8,836 \text{ sq. ft.}) \times 365) / 2,000$

a. Lbs/Day to Tons/Year: $(\text{lbs/day} * 0.1825)$

Conclusion: There is available capacity with this application's approval. Therefore, the proposed development *will not* cause the City's solid waste facilities to fall below LOS standards.

Mailed Memorandum

NEIGHBORHOOD MEETING NOTIFICATION

PN 22-0030



To: Neighbors of the U.S. 441 / NW 59th Terrace Intersection
From: Braxton Linton
Date: April 9th, 2024
RE: Neighborhood Meeting Public Notice

A Neighborhood Meeting will be held to discuss a Site Plan application for a fuel station on ±2.14 Acres in the City of Alachua (Alachua County Tax Parcel # 05885-010-014). Proposed uses include the construction of a fueling station, convenience store, and one retail shell building with associated parking, loading area, driveway, stormwater management facility, and utility infrastructure.

The site is located on the southern side of U.S. 441, adjacent to NW 59th Terrace. The onsite Future Land Use (FLU) category is Commercial, and the Zoning district classification is Commercial, Intensive (CI).

Date: April 24, 2024
Time: 6:00 p.m.
Location: CHW Office: 11801 Research Drive, Alachua, FL, 32615
Contact: Walker Owen, PE
11801 Research Drive
Alachua, FL 32615
(386) 518-5126
Walkero@CHW-inc.com

This is not a public hearing. The purpose of the Neighborhood Meeting is to inform the public about the nature of the proposal and seek their comments.

If you are unable to attend the meeting, please contact CHW using the information above. Meeting materials can be provided after the meeting is held. Comments may also be submitted in writing to the address or email above or by phone at the phone number above.

Mailing Labels

THE EMORY GROUP LLC
13900 TECH CITY CIR STE 100
ALACHUA, FL 32615

SOWELL KUTONYA L
378 TURKEY CREEK
ALACHUA, FL 32615

THE EMORY GROUP LLC
13900 TECH CITY CIR STE 100
ALACHUA, FL 32615

TURKEY CREEK MASTER OWNERS
ASSOCIATION INC
4400 NW 36TH AVE
GAINESVILLE, FL 32606

DAVE MILAN N & NIMISHA M
812 TURKEY CREEK
ALACHUA, FL 32615

CSX TRANSPORTATION INC
500 WATER ST
TAX DEPARTMENT J-910
JACKSONVILLE, FL 32202

LAND O'SUN MANAGEMENT CORP
3715 NW 97TH BLVD # A
GAINESVILLE, FL 32606

ALACHUA COUNTY
5620 NW 120TH LN
GAINESVILLE, FL 32653

LAND O'SUN MANAGEMENT CORP
3715 NW 97TH BLVD # A
GAINESVILLE, FL 32606

THE EMORY GROUP LLC
13900 TECH CITY CIR STE 100
ALACHUA, FL 32615

J & E STORAGE LLC
527 TURKEY CREEK
ALACHUA, FL 32615

SEMOJ 13 LLC
3612 SW 106TH ST
GAINESVILLE, FL 32608

SHALLIS, PATRICK & THERESA
840 TURKEY CREEK
ALACHUA, FL 32615

BARRIENTOS & BELN W/H
350 TURKEY CREEK
ALACHUA, FL 32615

BRALLEY SANDAR
11781 NW 60TH DR
ALACHUA, FL 32615

ASSAD & GREGOIRE
396 TURKEY CREEK
GAINESVILLE, FL 32615

GREEN & ROONEY
241 TURKEY CREEK
ALACHUA, FL 32615

MAGNOLIA PARK-GAINESVILLE LLC
2627 NW 43RD ST STE 300
GAINESVILLE, FL 32606

Mike DaRoza, City Manager
PO Box 9
Alachua, FL 32615

Michele L. Lieberman
County Manager
12 SE 1st Street
Gainesville, FL 32601

Antoinette Endelicato
5562 NW 93rd Avenue
Gainesville, FL 32653

Linda Dixon, AICP
PO Box 115050
Gainesville, FL 32611

Tamara Robbins
PO Box 2317
Alachua, FL 32616

Lynda Coon
7216 NW 126 Avenue
Alachua, FL 32615

Joseph & Phyllis Strickland
14103 NW 156th Place
Alachua, FL 32615

Jean Calderwood
14095 NW 174th Ave
Alachua, FL 32615

Lynn Horton
19005 NW 138th Avenue
Alachua, FL 32615

Newspaper Advertisement

PUBLIC NOTICE

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Contact: Walker Owen, PE

Phone Number: (352) 331-1976

Email: WalkerO@CHW-inc.com

Student loan forgiveness on tap

Biden offers new plans after justices nixed first

Zachary Schermele and Alia Wong
USA TODAY

President Joe Biden’s administration gave a much-anticipated preview Monday of his final plan to bring student debt forgiveness to millions of Americans. More than 4 million student loan borrowers – many of whom have been paying their bills down for at least 20 years – could see their debt fully canceled under the proposal, according to the White House. In addition, over 10 million borrowers could get relief of \$5,000 or more. Biden also hopes to eliminate interest past the original loan amounts of 23 million borrowers. Though experts say the regulations aren’t expected to fully take effect until July of next year at the earliest, the Department of Education is considering taking actions to expedite parts of the plan, possibly bringing relief to some borrowers as soon as this fall. The announcement represents the most aggressive actions Biden has committed to yet in hopes of making up for the Supreme Court’s rebuke of his first student loan relief gambit, which would have canceled up to \$20,000 in student loan debt for millions of low- and middle-income borrowers. Though the final regulation still hasn’t been released, and likely won’t be set in stone for months, the White House’s eagerness to promote it underscores just how central student loan forgiveness has become to Biden’s reelection effort.

Biden and his surrogates – including Education Secretary Miguel Cardona, Vice President Kamala Harris and second gentleman Douglas Emhoff – were fanning out across the U.S. on Monday to tout the proposal.

After months of talks, student loan panel greenlights plan

Administration officials say they’re confident the plan will pass legal muster. But that doesn’t mean potential court challenges won’t derail the federal government’s timeline for waiving debt. The bungled rollout of a new college financial aid form, meanwhile, has prompted Republicans in recent weeks to criticize the Education Department for prioritizing student loan forgiveness.

On a call with reporters Sunday, Cardona said the administration remains “unapologetic” about its aggressive debt cancellation strategies. “It means breathing room,” he said. “It means freedom from feeling like your student loan bills compete with basic needs like grocery or health care.”

Biden’s first try at delivering broad student loan forgiveness relied on his emergency authorities during the pandemic. Legal challenges halted the plan before it got off the ground, though, and last summer the Supreme Court struck it down. The president immediately pledged to come up with a Plan B. Instead of using his emergency powers, he



The White House’s eagerness to promote the latest plan underscores just how central student loan forgiveness has become to President Joe Biden’s reelection effort. JIM WATSON/AFP VIA GETTY IMAGES

promised to seek changes to federal higher education law, triggering a process involving a lot more government red tape. After months of sometimes contentious meetings, a panel of student loan experts ultimately greenlighted parts of Biden’s new plan in February.

Who could get student loan forgiveness under Biden’s new plan?

Biden’s old plan hit legal snags because it would have relieved the student loan debt for broad swaths of borrowers. His new plan makes similar promises, just in different ways. Borrowers experiencing specific forms of “hardship,” such as big expenses for child care and medical bills, could end up getting their debt completely canceled by filling out an application. The Education Department also hopes to use government data to calculate which borrowers are likely to default on their loans. They could have their debt canceled, too. Individual borrowers who make \$120,000 or less could see the entire amount of extra interest on their loans forgiven if they enroll in Biden’s income-driven repayment plan. And people who have been in repayment for at least 20 years may also have their balances wiped.

Biden eyes debt relief as election, lawsuits loom

Because student loans are a top issue for voters, Biden is keen on finalizing the new rules as soon as possible. Still, Monday’s announcement won’t be the end of the story.

Legal challenges are likely and imminent – Biden’s conservative opponents have been poised to sue the administration over student loan forgiveness efforts at every turn. In late March, for instance, the attorneys general in nearly a dozen red states filed suit in federal court over Biden’s signature student loan repayment initiative. The income-driven plan, known as Saving on a Valuable Education or SAVE, was launched last fall and has already led to the cancellation of balances for tens of thousands of participants. Once news began percolating Friday that Biden would be hinting at more student debt relief this week, critics were quick to pounce. “The Biden administration is once again looking to have a huge, unilateral – and hence unconstitutional – student debt cancellation,” Neal McCluskey of the libertarian think tank the Cato Institute said on X, citing a Wall Street Journal article that first reported the news.

What student loan debt has Biden already canceled?

The administration has already used several other creative levers to relieve roughly \$146 billion in student loans. That includes nearly \$46 billion for some 900,000 borrowers through one-time fixes to their income-driven repayment plans, about \$62.5 billion for roughly 872,000 borrowers through Public Service Loan Forgiveness fixes, more than \$22.5 billion for 1.2 million borrowers who attended predatory or defunct schools, and close to \$12 billion for several hundred thousand borrowers with disabilities that make it difficult for them to pay off their loans. Roughly 4 million borrowers have already had their student loans forgiven thanks to policies or changes implemented under Biden.

Trump says he opposes national ban on abortion

David Jackson
USA TODAY

WASHINGTON – Former President Donald Trump said Monday he does not support a national ban on abortion and that each state should decide any restrictions on the procedure, an attempt to ease the political pressure on an issue that has hurt Republicans in recent elections. “At the end of the day, this is all about the will of the people,” Trump said in a video statement posted on his Truth Social platform, adding, “Now it’s up to the states to do the right thing.”

President Joe Biden and his supporters – who have made abortion a top issue in the 2024 race for the White House – said Trump has been a massive threat to abortion rights by appointing Supreme Court justices who overturned the Roe v. Wade ruling. Democrats have used abortion rights to fuel voter turnout since the end of Roe v. Wade, and they’ve notched wins with referendums and ballot measures on abortion across the country. They hope to do the same this fall.

After Trump’s announcement, Democrats pointed out that Trump has given at least tacit support to Republican-backed restrictions in the states, including a six-week abortion ban in his home state of Florida. “Donald Trump is endorsing every single abortion ban in the states, including abortion bans with no exceptions,” Biden campaign spokesman Ammar Mousa posted on X. “And he’s bragging about his role in creating this hellscap.”

Florida is holding an abortion rights referendum in the fall. Biden aides said that measure will drive voters to the polls and make Democrats competitive in a must-win state for Trump. But Trump didn’t face criticism from Democrats alone. Some groups that oppose abortion took aim at Trump’s opting out of the federal debate. Marjorie Dannenfelser, president of Susan B. Anthony Pro-Life America, said, “We are deeply disappointed in President Trump’s position.” She said that letting the states decide “cedes the national debate to the Democrats.” During his political career, Trump has always had an equivocal relationship with the abortion issue. In the 1990s, Trump publicly said he supported abortion rights. But the former president avidly sought

the support of religious conservatives and activists who oppose abortion rights during his 2016 presidential campaign. In this presidential campaign, Trump has proclaimed that “I killed Roe v. Wade,” but he has also warned Republicans to be “careful” about how they deal with the issue because it has hurt them in elections – including his own reelection bid in 2020 and congressional races in 2022. In recent weeks, Trump aides suggested that he might back a 15- or 16-week national abortion ban – echoing some new state laws – but Trump did not raise the issue in his video Monday. In that message, Trump stressed his support for exceptions in cases of rape, incest and severe medical emergencies.



Former President Donald Trump has proclaimed “I killed Roe v. Wade” during his campaign, but he has also warned Republicans to be “careful” about how they deal with the issue because it has hurt them in elections. CHARLY TRIBALLEAU/AFP VIA GETTY IMAGES

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Contact: Walker Owen, PE
Phone Number: (352) 331-1976
Email: WalkerO@CHW-inc.com

CHW
Professional Consultants

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PALLISER®

3413 SW 47th Avenue
352-372-1125

GF-33861627

Workshop Presentation

Patel Fuel Retail

Site Plan Application



City of Alachua
Neighborhood Meeting
April 24, 2024

22-0030: Patel Fuel Retail

1

The **purpose** of the neighborhood meeting:

The City of Alachua requires Site Plan applicants to host a neighborhood meeting *prior* to application submittal.

The purpose is to **inform neighbors** of the proposed action's nature and to get feedback early in the process.

This meeting provides the applicant with an opportunity to **identify concerns** prior to the application's submission.

22-0030: Patel Fuel Retail

2



PUBLIC NOTIFICATION

NEIGHBORHOOD MEETING NOTIFICATION

To: Neighbors of the U.S. 441 / NW 59th Terrace Intersection

From: Brighton Linkin

Date: April 19th, 2024

RE: Neighborhood Meeting Public Notice

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Time: 6:00 p.m.
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 (386) 518-5126
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Contact: Walker Owen, PE
Phone Number: (352) 331-1976
Email: Walkero@CHW-inc.com

CHW
Professional Consultants

22-0030: Patel Fuel Retail
CHW

3

REQUEST:

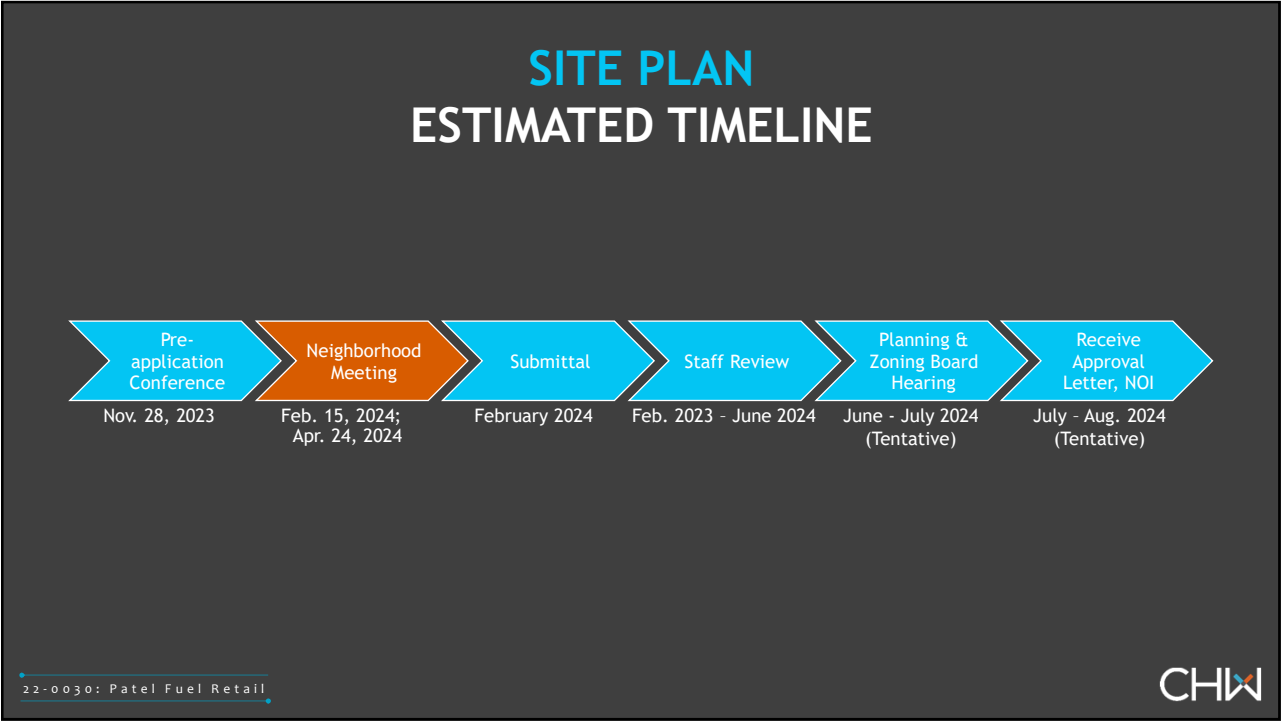
Site Plan Application

INTENT:

- ±9,200 sq. ft. fueling station, convenience store with a retail shell building, parking, and associated infrastructure.

22-0030: Patel Fuel Retail

4

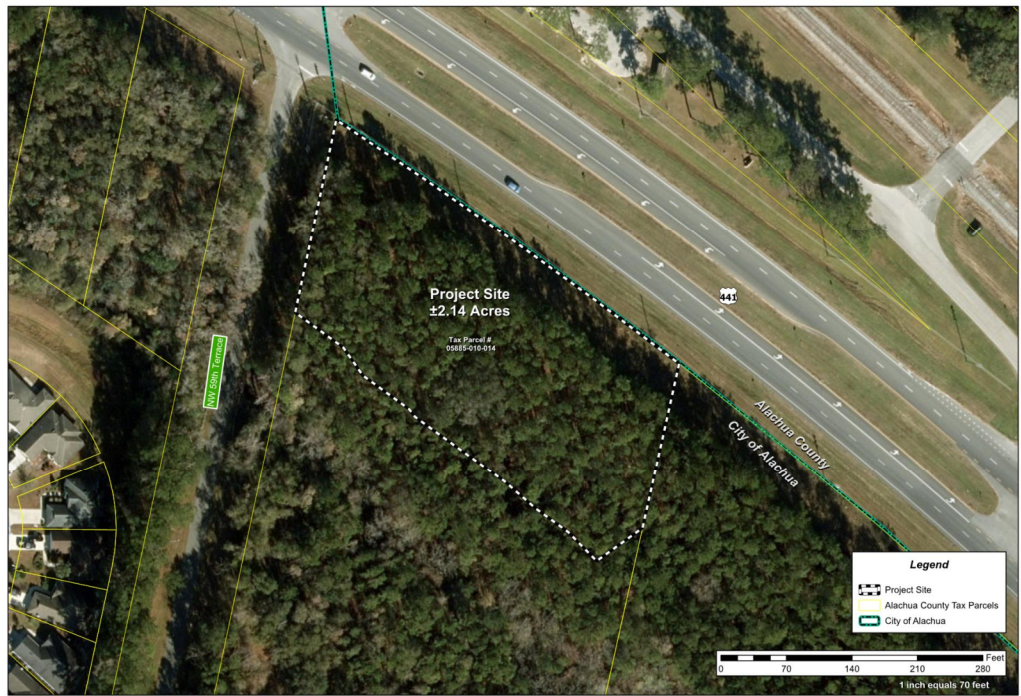


5



6

Aerial Map



7

Future Land Use (FLU) Map

FLU: Commercial

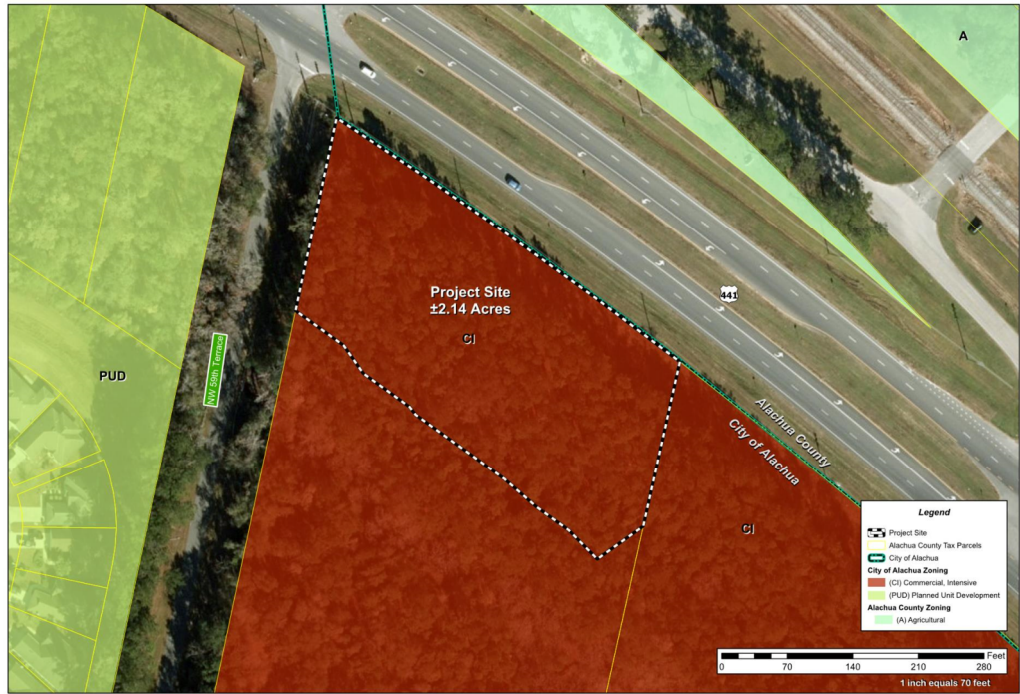


8

Zoning Map (Zon)

Zon: Commercial, Intensive (CI)

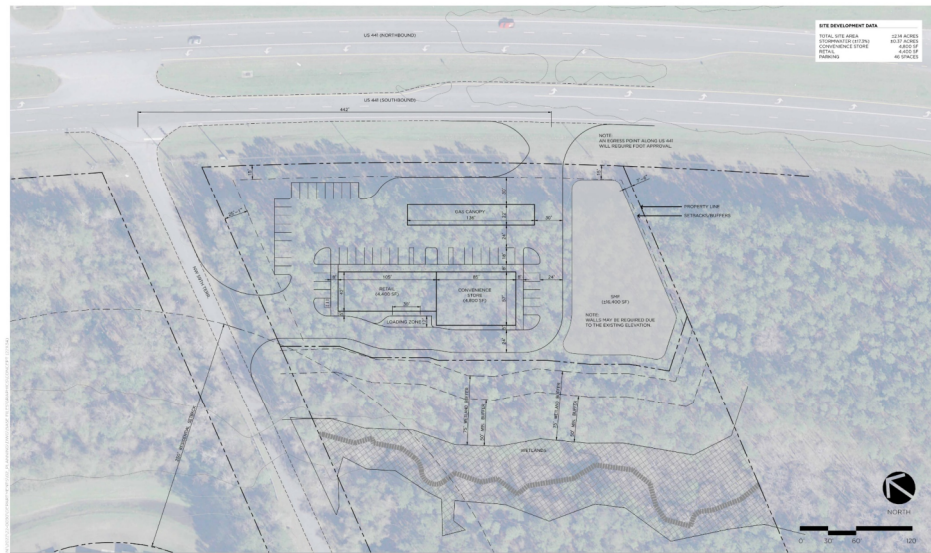
CHW



9

Site Plan

CHW



PATEL GAS STATION & RETAIL | CONCEPT PLAN - C | 2-2-2023

10

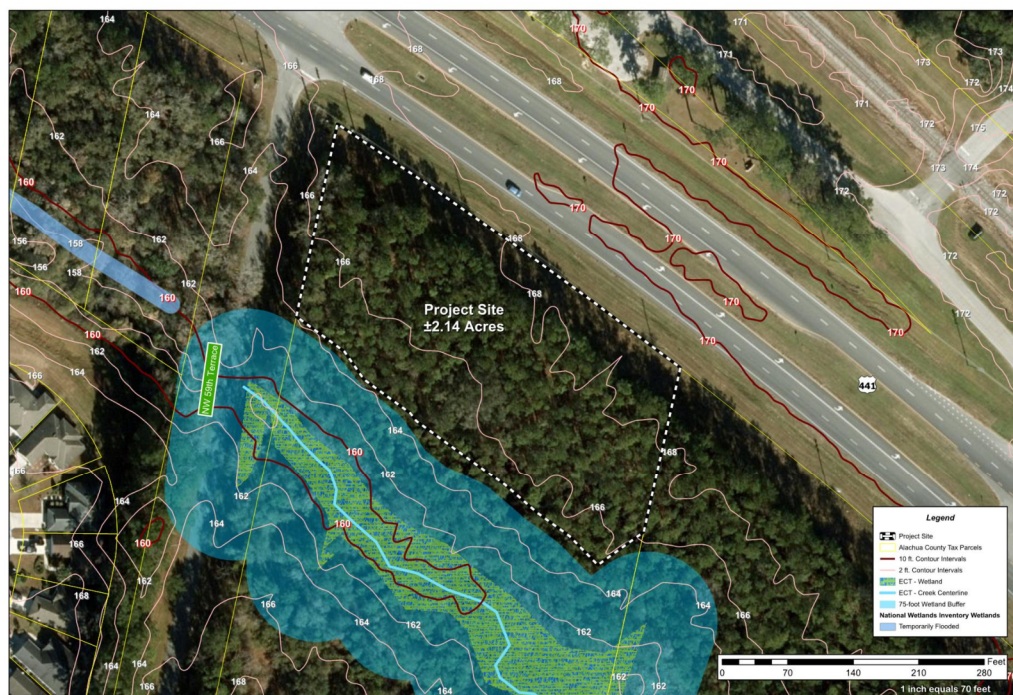
Contact Information

Address: 11801 Research Drive
Alachua, FL, 32615
Phone: (386) 518-5137
Email: Gabrielal@CHW-inc.com



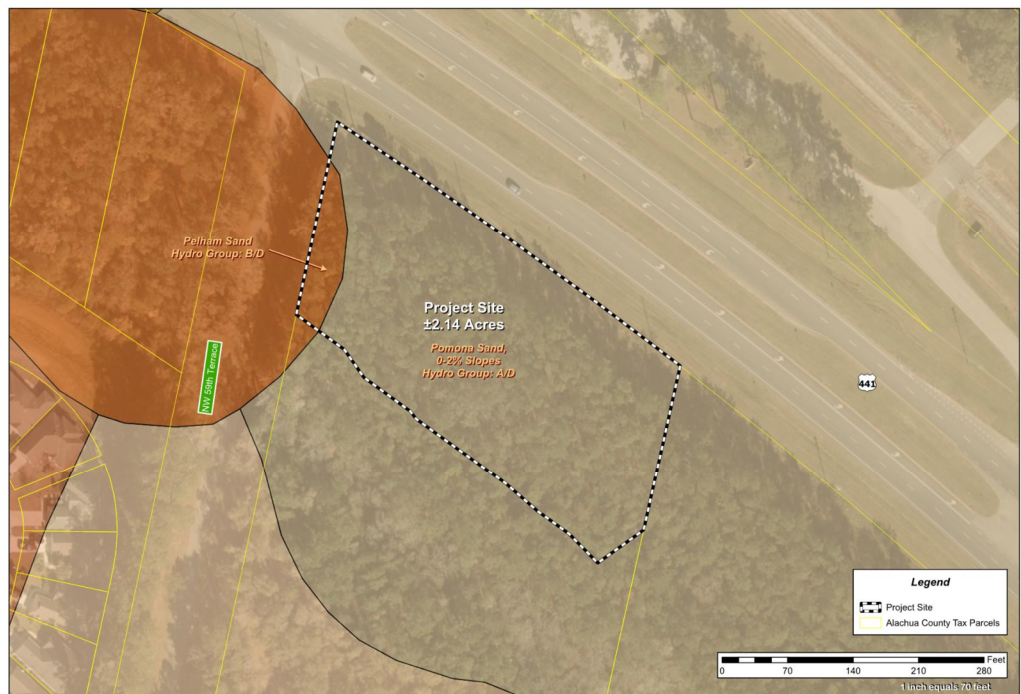
11

Environmental Map



12

Soils Map



CHW

13

Sign-in Sheet

SIGN-IN SHEET

Patel Fuel Retail

22-0030



Event: Neighborhood Meeting
Date/Time: April 24, 2024 @ 6:00 PM
Place: CHW Office – 11801 Research Drive, Alachua, FL, 32615
Re: Site Plan Application

	<u>Print Name</u>	<u>Street Address</u>	<u>Signature</u>
1	No Attendees		
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			

Workshop Minutes

NEIGHBORHOOD MEETING MINUTES

Patel Fuel Retail

22-0030



Event: Neighborhood Meeting
Date/Time: April 24, 2024 @ 6:00 PM
Place: CHW Office – 11801 Research Drive, Alachua, FL, 32615
Re: Site Plan Application

CHW (Agent) Attendees: Walker Owen, PE; Gabriela Ledford, E.I.;
Public Attendees: 0

CHW, on behalf of the City of Alachua, hosted the required Neighborhood Meeting and presented the following: the meeting's purpose; the application's request and intent; maps illustrating the site's regulatory and physical characteristics; and a site plan. No members of the public attended the meeting. After a fifteen-minute grace period, **the meeting was adjourned at approximately 6:15 PM.**

This instrument prepared by:
Raymond M. Ivey, Esquire
SCRUGGS, CARMICHAEL & WERSHOW, P.A.
4923 Northwest 43 Street
Gainesville, Florida 32606
(Statutory Form §689.02 F.S.)
RMI 22-0144 TIDEWAT

1,099.00
27.00

RECORDED IN OFFICIAL RECORDS
INSTRUMENT # 3480999 3 PG(S)
March 28, 2023 3:58:10 PM
Book 5079 Page 1687
J.K. JESS IRBY, ESQ. Clerk Of Court
ALACHUA COUNTY, Florida
Doc Stamp-Deed: \$1,099.00



THIS WARRANTY DEED, made and entered into
on this 23rd day of March, 2023, by and between

TIDEWATER PROPERTIES, LLC, a Florida Limited Liability Company

whose address is **527 TURKEY CREEK, ALACHUA, FLORIDA 32615**
hereinafter called Grantor*, and

SEMOJ 13 LLC, a Florida Limited Liability Company

whose address is **3612 SOUTHWEST 106 STREET, GAINESVILLE, FLORIDA 32608**
hereinafter called Grantee(s)*

*(Wherever used herein the terms "Grantor" and "Grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

WITNESSETH, that said Grantor, for and in consideration of the sum of Ten and No/100 Dollars (\$10.00) and other valuable consideration to said Grantor in hand paid by said Grantee(s), the receipt whereof is hereby acknowledged, has granted, bargained and sold to the said Grantee(s), the following described land, situated, lying and being in Alachua County, Florida, to-wit:

SEE EXHIBIT 'A', ATTACHED HERETO AND MADE A PART HEREOF.

Parcel Identification Number: 05885-010-007 (Part of)

SUBJECT TO easements and restrictions of record, if any;
SUBJECT TO Taxes for 2023 and all subsequent years;

TOGETHER with all tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

AND said Grantor does hereby fully warrant the title to said land, and will defend the same against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF, the Grantor has executed this deed under seal on the day and year first above written.

TIDEWATER PROPERTIES, LLC

Gayle Bussard
 Witness Name: GAYLE BUSSARD

By: Britton A Jones
 BRITTON A JONES, Manager

Pam Tyler
 Witness Name: Pam Tyler

State of Florida
 County of Alachua

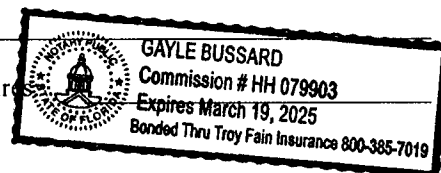
The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization, this 23 day of March, 2023 by BRITTON A JONES, President on behalf of TIDEWATER PROPERTIES, LLC. He ☒ is personally known to me or ☐ has produced a driver's license as identification.

[Notary Seal]

Gayle Bussard
 Notary Public

Printed Name: _____

My Commission Expires _____





February 21, 2023

Duration Builders
eda Project No. 2022-0032.S03

LEGAL DESCRIPTION

PARCEL B

A PORTION OF SECTION 27, TOWNSHIP 8 SOUTH, RANGE 19 EAST, CITY OF ALACHUA, ALACHUA COUNTY, FLORIDA; BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 27, TOWNSHIP 8 SOUTH, RANGE 19 EAST, ALACHUA COUNTY, FLORIDA AND RUN THENCE NORTH 88°39'32" EAST, ALONG THE NORTH LINE OF SAID SOUTHWEST 1/4 OF SOUTHWEST 1/4, A DISTANCE OF 33.38 FEET TO THE SOUTHWEST CORNER OF THAT CERTAIN PARCEL OF LAND DESCRIBED IN OFFICIAL RECORDS BOOK 2263, PAGE 876 OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA, SAID SOUTHWEST CORNER LYING 100 FEET SOUTHEASTERLY OF THE EASTERLY BOUNDARY OF "DRY CREEK" AS PER PLAT THEREOF, RECORDED IN PLAT BOOK "J", PAGE 23 OF SAID PUBLIC RECORDS AND LYING ON THE EASTERLY RIGHT OF WAY LINE OF NORTHWEST 59th TERRACE (100' RIGHT OF WAY); THENCE NORTH 12°26'50" EAST, ALONG SAID EASTERLY RIGHT OF WAY LINE, PARALLEL WITH AND 100 FEET SOUTHEASTERLY OF THE EASTERLY BOUNDARY OF SAID "DRY CREEK", A DISTANCE OF 665.86 FEET TO THE NORTHWEST CORNER OF THAT CERTAIN PARCEL OF LAND DESCRIBED IN OFFICIAL RECORDS BOOK 2266, PAGE 35 OF SAID PUBLIC RECORDS; THENCE CONTINUE NORTH 12°26'50" EAST, PARALLEL WITH AND 100 FEET SOUTHEASTERLY OF SAID EASTERLY BOUNDARY OF "DRY CREEK" AND ALONG SAID EASTERLY RIGHT OF WAY LINE, 734.53 FEET TO THE POINT OF BEGINNING; THENCE RUN SOUTH 53°58'44" EAST, 63.19 FEET; THENCE SOUTH 34°44'17" EAST, 36.41 FEET; SOUTH 53°58'44" EAST, 61.04 FEET; THENCE SOUTH 36°42'52" EAST, 10.11 FEET; THENCE SOUTH 53°58'44" EAST, 116.88 FEET; THENCE SOUTH 48°41'59" EAST, 45.92 FEET; THENCE SOUTH 54°08'37" EAST, 41.97 FEET; THENCE SOUTH 44°18'51" EAST, 43.25 FEET; THENCE NORTH 54°11'47" EAST, 61.15 FEET; THENCE NORTH 13°00'19" EAST, 175.73 FEET TO A POINT ON THE SOUTHWESTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY NO. 441 (STATE ROAD NO. 20 & 25, 200' RIGHT OF WAY), SAID POINT LYING ON THE ARC OF A CURVE, CONCAVE SOUTHWESTERLY HAVING A RADIUS OF 5579.58 FEET; THENCE NORTHWESTERLY, ALONG SAID SOUTHWESTERLY RIGHT OF WAY LINE, THROUGH A CENTRAL ANGLE OF 04°37'15", AN ARC DISTANCE OF 449.98 FEET TO A POINT ON SAID EASTERLY RIGHT OF WAY LINE OF N.W. 59th TERRACE, SAID ARC BEING SUBTENDED BY A CHORD HAVING A BEARING AND DISTANCE OF NORTH 54°05'51" WEST, 449.85 FEET; THENCE SOUTH 12°26'50" WEST, ALONG SAID EASTERLY RIGHT OF WAY LINE, 210.08 FEET TO THE POINT OF BEGINNING.

CONTAINING 2.139 ACRES (93,164 SQUARE FEET), MORE OR LESS.

[Sign Up for Property Watch](#)

Parcel Summary

Parcel ID 05885-010-014
Prop ID 507103
Location Address UNASSIGNED LOCATION RE
Neighborhood/Area 233200.50
Subdivision
Legal Description COM NW COR OF SW1/4 OF SW1/4 OF SEC N 88 DEG 39 MIN 32 SEC E 33.38 FT N 12 DEG 26 MIN 50 SEC E 665.86 FT N 12 DEG 26 MIN 50 SEC E 734.53 FT POB S 53 DEG 58 MIN 44 SEC E 63.19 FT S 34 DEG 44 MIN 77 SEC E 36.41 FT S 53 DEG 58 MIN 44 SEC E 61.04 FT S 36 DEG
(Note: *The Description above is not to be used on legal documents.)
Property Use Code VACANT (00000)
Sec/Twp/Rng 27-08-19
Tax Area ALACHUA (1700)
Acres 2.14
Homesteaded False

[Click Here to Open Cyclomedia Viewer in a New Tab](#)

[View Map](#)

Millage Rate Value

Millage Rate: 21.8298

Owner Information

SEMOJ 13 LLC
 3612 SW 106TH ST
 GAINESVILLE, FL 32608

Valuation

	2023 Certified Values
Improvement Value	\$0
Land Value	\$93,090
Land Agricultural Value	\$0
Agricultural (Market) Value	\$0
Just (Market) Value	\$93,090
Assessed Value	\$93,090
Exempt Value	\$0
Taxable Value	\$93,090
Maximum Save Our Homes Portability	\$0

"Just (Market) Value" description - This is the value established by the Property Appraiser for ad valorem purposes. This value does not represent anticipated selling price.

TRIM Notice

[2023 TRIM Notice \(PDF\)](#)

Land Information

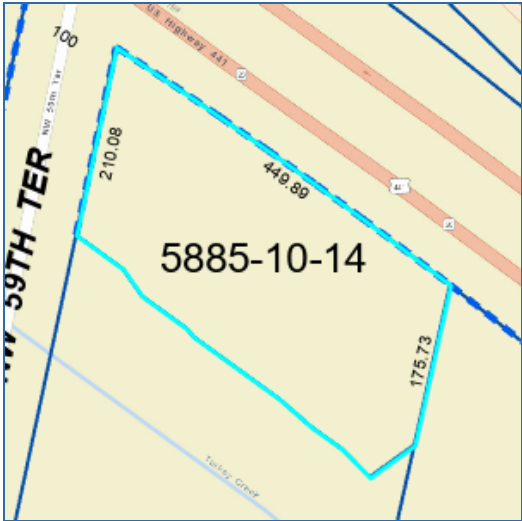
Land Use	Land Use Desc	Acres	Square Feet	Eff. Frontage	Depth	Zoning
1000	VACANT COMMERCIAL	2.14	93218.4	0	0	CI

Sales

Sale Date	Sale Price	Instrument	Book	Page	Qualification	Vacant/Improved	Grantor	Grantee	Link to Official Records
3/23/2023	\$157,000	WD	5079	1687	Qualified (Q)	Vacant	TIDEWATER PROPERTIES LLC	SEMOJ 13 LLC	Link (Clerk)
10/4/2005	\$267,100	DD	3236	1108	Unqualified (U)	Vacant	* RESERVE INVESTORS TRUST G	TIDEWATER PROPERTIES LLC	Link (Clerk)
9/25/2000	\$100	WD	2320	1672	Unqualified (U)	Vacant	* COLE L SAXON JR TRUSTEE OF R	* RESERVE INVESTORS TRUST G	Link (Clerk)
4/1/1985	\$109,500	WD	1589	1866	Unqualified (U)	Vacant		* COLE L SAXON JR TRUSTEE OF R	Link (Clerk)

Official Public Records information is provided by the Alachua County Clerk's Office. Clicking on these links will direct you to their web site displaying the document details for this specific transaction.

Map



No data available for the following modules: Building Information, Sub Area, Extra Features, Permits, Sketches, Photos.

This web application and the data herein is prepared for the inventory of real property found within Alachua County and is compiled from recorded deeds, plats, and other public records and data. Users of this web application and the data herein are hereby notified that the aforementioned public primary information sources should be consulted for verification of the information. Alachua County Property Appraiser's Office assumes no legal responsibility for the information contained herein.

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Developed by
 Schneider
GEOSPATIAL

ACCOUNT NUMBER	PROPERTY ADDRESS	MILLAGE CODE
05885 010 014	UNASSIGNED LOCATION RE	1700

SEMOJ 13 LLC
3612 SW 106TH ST
GAINESVILLE, FL 32608

EXEMPTIONS:



SCAN TO PAY ONLINE

AD VALOREM TAXES					
TAXING AUTHORITY	MILLAGE RATE	ASSESSED VALUE	EXEMPTION(S)	TAXABLE VALUE	TAXES LEVIED
COUNTY GENERAL	7.6414	93,090	0	93,090	711.34
LIBRARY GENERAL	1.0339	93,090	0	93,090	96.25
SCHOOL CAP PROJECT	1.5000	93,090	0	93,090	139.64
SCHOOL DISCRNRY & CN	0.7480	93,090	0	93,090	69.63
SCHOOL GENERAL	3.1840	93,090	0	93,090	296.40
SCHOOL VOTED	1.0000	93,090	0	93,090	93.09
CHILDREN'S TRUST	0.4612	93,090	0	93,090	42.93
SUWANNEE RIVER WATER MGT DIST	0.3113	93,090	0	93,090	28.98
CITY OF ALACHUA	5.9500	93,090	0	93,090	553.89
TOTAL MILLAGE					21.8298
AD VALOREM TAXES					\$2,032.15

LEGAL DESCRIPTION
COM NW COR OF SW1/4 OF SW1/4 OF SEC N 88 DEG 39 MIN 32 SEC E 33.38 FT N 12 DEG 2 See Additional Legal on Tax Roll

NON-AD VALOREM ASSESSMENTS			
LEVYING AUTHORITY	UNIT	RATE	AMOUNT
550 COUNTY FIRE SERVICES	1.000	Varies	90.69
NON-AD VALOREM ASSESSMENTS			\$90.69

PAY ONLY ONE AMOUNT. ↓

COMBINED TAXES AND ASSESSMENTS

\$2,122.84

IF PAID BY PLEASE PAY	Nov 30, 2023 \$0.00				
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JOHN POWER, CFC

ALACHUA COUNTY TAX COLLECTOR

2023 PAID REAL ESTATE

NOTICE OF AD VALOREM TAXES AND NON-AD VALOREM ASSESSMENTS

507103

PLEASE PAY IN U.S. FUNDS TO JOHN POWER, TAX COLLECTOR • P.O. Box 44310 • Jacksonville, FL 32231-4310

ACCOUNT NUMBER	PROPERTY ADDRESS
05885 010 014	UNASSIGNED LOCATION RE

SEMOJ 13 LLC
3612 SW 106TH ST
GAINESVILLE, FL 32608

PAY ONLY ONE AMOUNT

IF PAID BY	PLEASE PAY
☐ Nov 30, 2023	\$0.00
☐	
☐	
☐	
☐	

WANT TO RECEIVE YOUR BILL ELECTRONICALLY NEXT YEAR? VISIT
www.AlachuaCollector.com AND SIGN UP FOR E-BILLS!



FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

**SELF-CERTIFICATION FOR
A STORMWATER MANAGEMENT SYSTEM IN UPLANDS SERVING
LESS THAN 10 ACRES OF TOTAL PROJECT AREA AND
LESS THAN 2 ACRES OF IMPERVIOUS SURFACES**

Owner(s)/Permittee(s):	SEMOJ 13 LLC
File No:	0451921001EG
File Name:	PATEL FUEL RETAIL
Site Address:	NW 59th Terrace Gainesville FL - 32653
County:	Alachua
Latitude:	29° 45' 47.2948"
Longitude:	-82° 24' 25.8348"
Total Project Area:	2.14
Total Impervious Surface Area:	1.18
Approximate Date of Commencement of Construction:	01/15/2025
Registered Florida Professional:	Walker Owen
License No.:	94201
Company:	CHW, an NV5 Company

Date: August 09, 2024

Walker Owen certified through the Department's Enterprise Self-Service Application portal that the project described above was designed by the above-named Florida registered professional to meet the following requirements:

- (a)The total project area involves less than 10 acres and less than 2 acres of impervious surface;
- (b)Activities will not impact wetlands or other surface waters;
- (c)Activities are not conducted in, on, or over wetlands or other surface waters;
- (d)Drainage facilities will not include pipes having diameters greater than 24 inches, or the hydraulic equivalent, and will not use pumps in any manner;
- (e)The project is not part of a larger common plan, development, or sale; and
- (f)The project does not:
 - 1.Cause adverse water quantity or flooding impacts to receiving water and adjacent lands;

- 2.Cause adverse impacts to existing surface water storage and conveyance capabilities;
- 3.Cause a violation of state water quality standards; or
- 4.Cause an adverse impact to the maintenance of surface or ground water levels or surface water flows established pursuant to s. 373.042 or a work of the district established pursuant to s. 373.086, F.S.

This certification was submitted before initiation of construction of the above project. The system is designed, and will be operated and maintained in accordance with applicable rules adopted pursuant to part IV of chapter 373, F.S. There is a rebuttable presumption that the discharge from such system will comply with state water quality standards. Therefore, construction, alteration, and maintenance of the stormwater management system serving this project is authorized in accordance with s.403.814(12), F.S.

In accordance with s. 373.416(2), F.S., if ownership of the property or the stormwater management system is sold or transferred to another party, continued operation of the system is authorized only if notice is provided to the Department within 30 days of the sale or transfer. This notice can be submitted to:

FDEP Northeast District
8800 Baymeadows Way West
Jacksonville, FL32256

This certification was submitted along with the following electronic documents:

File Description
Grading and Drainage

If you have submitted this certification as a Florida Registered Professional, you may wish to sign and seal this certification, and return a copy to the Department, in accordance with your professional practice act requirements under Florida Statutes.

I, Walker Owen, License No. 94201, do hereby certify that the above information is true and accurate, based upon my knowledge, information and belief. In the space below, affix signature, date, seal, company name, address and certificate of authorization (if applicable).

This sealed certification may be submitted to the Department, either electronically (as an attachment in Adobe PDF or other secure, digital format) at DEP_NED@dep.state.fl.us, or as a hardcopy, at the postal address below:

FDEP Northeast District
8800 Baymeadows Way West
Jacksonville, FL32256

Walker Fain Owen
State of Florida, Professional
Engineer, License No. 94201

This item has been
electronically signed and
sealed by Walker Fain Owen,
PE on 08/13/2024 using a
Digital Signature.

Printed copies of this
document are not considered
signed and sealed and the
signature must be verified on
any electronic copies.

ig/Educator
Environmental Permitting
Wetland Studies
Population Studies
Expert Witness Testimony
Mitigation



DAVID W. HALL, PH.D.

Environmental Consultant
Forensic Botanist

10 July 2005

19 years ago

Louis Mantini
Suwannee River Water Management District
9225 CR 49
Live Oak, FL 32060

Dear Louis:

I would like to request a review of a jurisdictional wetland for a proposed development on approximately 7.63 acres in the City of Alachua in Alachua County, Florida. This project is located in Section 27, Township 8 South, Range 19 East, on the south side of US 441. The property is bounded on the east and south sides by pine plantation, on the west side by 59th Terrace, and on the north side by US 441. The property can be entered from any point, but is best from US 441 or 59th Terrace.

Enclosed are wetland data sheets for the wetland. Also enclosed is a survey showing property boundaries, topography, and the tentative wetland limits.

Please give me a call to schedule a review of the tentative wetland flagging.

Sincerely,

David W. Hall

Enclosures (wetland data sheets, survey)

cc: ✓ Britton Jones, Duration Builders, Inc. (w/o encl.)
File

Training/Education
Environmental Permitting
Wetland Studies
Plant Population Studies
Expert Witness Testimony
Plant Identification



Quality Assurance
Forensic Botany
Environmental Siting
Land Management
Environmental Inventories

20 July 2005

Duration Builders, Inc.
c/o Britton Jones
527 Turkey Creek Blvd.
Alachua, FL 32615

RE: Southeast Corner US 441 & 59th Terrace

On 18 July 2005, Louis Mantini of the Suwannee River Water Management District (SRWMD) and I reviewed the tentative wetland jurisdictional line on the property on the southeast corner of US 441 & 59th Terrace, Alachua County. We moved one flag, number 19, 11 feet directly west (downhill). Otherwise all the flags were judged to be correct. Please ask the surveyor to make the correction on the survey. He does not need to go to the site to resurvey the location in the field.

Sincerely,

David W. Hall

cc: Louis Mantini, SRWMD
File

Training/Education
Environmental Permitting
Wetland Studies
Plant Population Studies
Exhibit Witness Testimony
Plant Identification



DAVID W. HALL, PH.D.

Environmental Consultant
Forensic Botanist

Quality Assurance
Forensic Botany
Environmental Site
Land Management
Environmental Inventory

ENVIRONMENTAL ASSESSMENT STUDY

DURATION BUILDERS, INC.

ALACHUA COUNTY, FLORIDA

13 June 2005

Dr. David W. Hall performed habitat, listed wildlife, listed plant surveys, and jurisdictional wetland evaluation for a proposed development on approximately 7.63 acres, parcel 05885-010-007, in Alachua County, Florida. This project is located in Section 27, Township 8 South, Range 19 East, on the south side of US 441. The property is bounded on the east and south sides by pine plantation, on the west side by 59th Terrace, and on the north side by US 441. The property is not fenced and can be entered from any point, but is best from US 441 or 59th Terrace.

A thorough field survey was conducted on 10 June 2005. The weather during this time was overcast, rainy, and breezy with temperatures in the 80s.

SITE OVERVIEW

The site is a young pine plantation with a swamp extending west to east across the property. The topography slopes slightly down to the wetland. The subcanopy and ground cover is quite dense.

A few common species of wildlife were identified on this site by observation, sign, or calls: (Birds) Northern Mockingbird, Northern Cardinal, Rufous-sided Towhee, and (Mammal) Nine-banded Armadillo.

HABITAT SURVEY

Pine Plantation 441 -- The site is comprised of a young Slash Pine Pine Plantation with a wetland crossing the entire site. A band of Hedge Bamboo extends along US 441. The entire plantation has been bedded. No weed treatments are evident. The subcanopy is dense: Loblolly Pine, Sweetgum, Chinese Tallow Tree, Water Oak, Chinaberry, Mimosa, Boxelder, Cherry Laurel, Winged Sumac, Groundsel Bush, Wild Cherry, French-mulberry, Persimmon, Upland Laurel Oak, and Elderberry. The ground cover is very dense and

tangled. Many vines are pervasive. Moisture is held in the soils by the dense vegetation and spots with some wetland species are found between and on the beds. Ground cover is: Canada Goldenrod, Wild Grape, Pepper Vine, Japanese Honeysuckle, Sand Blackberry, Highbush Blackberry, Poison-ivy, May Pop, Florida Betony, Nuttall's Thistle, Dog Fennel, Ragweed, Virginia Creeper, Ebony Spleenwort, Bushy Broom Grass, Broom Grass, Clustered Beakrush, Common Carpet Grass, Yellow Jessamine, Fire Weed, Roadside Vervain, Wood Sage, Mild Water-pepper, and Wild-bamboo.

Exotics -- This site contains a number of species and some extensive populations of nuisance exotic plants: Japanese Climbing Fern, Chinese Tallow Tree, Mimosa Tree, Chinaberry, Tropical Soda-apple, and Hedge Bamboo. These plants are widely disseminated throughout the site and form dense populations at various locations.

WETLAND SURVEY

A swamp runs east to west across the site and continues off site across 59th Terrace as a small intermittent branch of Turkey Creek. This swamp is intermittently dry. Wetland data sheets are included with this report. The wetland species and other characteristics are addressed in the wetland data sheets.

PROTECTED WILDLIFE AND PLANT SURVEY

A survey of listed species was conducted. Species of interest consisted of those designated by the U.S. Fish and Wildlife Service as endangered, threatened, or under review for listing, those designated by the Florida Fish and Wildlife Conservation Commission as endangered, threatened, or species of special concern, and species designated by the Florida Department of Agriculture and Consumer Services as endangered, threatened or commercially exploited. FWC

Prior to the field survey, a literature search was conducted to identify listed species that potentially could occupy the habitats at this site. The primary sources of information were: ① the Florida Natural Areas Inventory data base, ② Rare and Endangered Biota of Florida, ③ Florida Committee on Rare and Endangered Plants and Animals - Vol. I (Mammals, 1992), Vol. II (Fishes, 1992), Vol. III (Amphibians & Reptiles, 1992), Vol. IV (Vertebrates, 1994), Vol. V (Birds, 1996), Vol. VI (Plants, 1979), ④ Nancy C. Coile's (2000) Notes on Florida's Endangered and Threatened Plants, ⑤ Florida Fish and Wildlife Conservation Commission website (<http://floridaconservation.org/pubs/endanger.html>); and the personal experience of the biologists. ⑥

PROTECTED SPECIES SURVEY METHODS

A comprehensive survey was conducted. The entire property was walked on foot in meandering transects to look for any species evident during this season. The possibility always exists that a particular expected species was not apparent during the time of the field observations. A plant could have been dormant, late resuming growth for the year, bloomed out of season, or not have germinated when expected due to unusual microclimatic conditions. Wildlife could simply not have been present when the survey was performed.

Adjacent habitats were visually and physically surveyed for wildlife.

PROTECTED SPECIES SURVEY RESULTS

Plants

No listed species of plants were seen during this survey. A table of listed species of plants known to be in Alachua County is included.

Wildlife

AMPHIBIANS

Flatwoods Salamander -- The Flatwoods Salamander occurs in pine flatwoods-wire grass communities with naturally occurring ponds. No such flatwoods habitat is present.

Gopher Frog -- Gopher Frogs occur in native, xeric, upland habitats. No such habitat occurs on this property. No Gopher Frogs were seen.

BIRDS

Florida Scrub Jay -- No scrub (type I) or sandhill (type II) habitat occurs on this site. No Scrub Jays were seen.

Limpkin - Although suitable habitat occurs on this property, no Limpkins were seen on this site.

Kirtland's Warbler -- This bird prefers low structured habitats, scrub or young communities. No suitable occurs on this site. No Kirtland's Warblers were seen.

Little Blue Heron -- Found in virtually all wet habitats, no Little Blue Herons were seen.

Snowy Egret -- Found in virtually all wet habitats, no Snowy Egrets were seen.

Tricolored Heron -- Found in virtually all wet habitats, no Tricolored Herons were seen.

White Ibis -- Found in virtually all wet habitats, no White Ibis' were seen.

Peregrine Falcon -- No open terrain is found on this site. Normally migrating into Florida and found during the winter. No Peregrine Falcons were seen.

Southeastern American Kestrel -- No Kestrels were seen at this site and no habitat occurs on the site.

Florida Sandhill Crane -- No marshes or open fields frequented by these birds occurs on this site. No Cranes were seen.

Bald Eagle -- The Florida Fish and Wildlife Conservation Commission website was checked for known nest locations. No known Eagle nests occur on this site and none were seen. No Eagles were seen.

Wood Stork -- Although limited suitable habitat occurs on this property, no Wood Storks were seen.

Red-cockaded Woodpecker -- No mature Slash or Longleaf Pines of sufficient age or size suitable for nesting (cavities) or sufficient open foraging habitat suitable for Red-cockaded Woodpeckers exists on this site. No Red-cockaded Woodpeckers were seen.

Burrowing Owl -- Usually found in old fields, pastures, dry prairies, and sandhills, no suitable habitat occurs on this site. No Burrowing Owls were seen.

F FISHES

Atlantic Sturgeon -- Known from streams and rivers, no habitat with sufficient water occurs on this site.

Suwannee Bass -- Occurring in streams and rivers and spring runs, no habitat with sufficient water occurs on this site.

M MAMMALS

Sherman's Short-tailed Shrew -- Normally found in ditches and in moist habitats with dense grass vegetation in flatwoods. No suitable habitat occurs on this property. No Shrews were seen.

Florida Mouse -- The Florida Mouse's primary habitats are all very dry: sandhill, scrub, and scrubby flatwoods. No suitable habitat is found at this site. No Mice were seen.

Sherman's Fox Squirrel -- No suitable large oaks, a preferred habitat for Sherman's Fox Squirrel, are found on this property. No Fox Squirrels were found.

Florida Black Bear -- This Pine Plantation habitat is a type that is seldom used by the Florida Black Bear. The small swamp would also seldom be utilized. Homesites are nearby and a major four-lane highway is on the north side. Bears do roam through inhabited areas on occasion. No Bears or sign were seen.

REPTILES

American Alligator -- Alligators can be found in virtually all habitats with standing water. No Alligators were seen.

Eastern Indigo Snake -- Indigo Snakes are known to utilize the types of habitat on this property. No Indigo Snakes or shed skin were seen during this survey.

Gopher Tortoise -- No Gopher Tortoise habitat or burrows were found. No Tortoise's were seen.

Alligator Snapping Turtle -- This Turtle is found in swamps near deep running water. No deep running water occurs. No Alligator Snapping Turtles were seen.

Florida Pine Snake -- Florida Pine Snakes are not typically found in this type of habitat, preferring drier sites. No Florida Pine Snakes were seen.

Suwannee Cooter -- Suwannee Cooter occurs in rivers. No rivers occur on this site. No Cooters were seen.

Short-tailed Snake -- Turkey Oak-Longleaf Pine associations are the preferred habitat. No such habitat occurs on this site. No Short-tailed Snakes were seen.

CONCLUSIONS

In my opinion, no environmental issues other than wetland permitting would prevent appropriate development of this property.

Sincerely,

David W. Hall

David W. Hall

Enclosures (inventory of Alachua County listed plants, inventory of Alachua County listed wildlife, wetland data sheets)

cc: File

WETLAND DATA SHEET

PHOTO NO: _____

DATE OF INSPECTION: 10 June 2005INSPECTED BY: David M. HallPROJECT NAME: DURATION BUILDERS - SOUTHEAST CORNER US 441 AND 59TH TERRACE

AREA OF WETLAND IMPACT: _____

FORESTED WETLAND AREA TO BE CLEARED: _____

LOCATION: Aerial Photo Sheet No. _____ Section 27 Township 8 South Range 19 EastCounty AlachuaWETLAND NO.: 1 - 38 FlagsWETLAND COMMUNITY TYPE: swamp & roadside ditch

VEGETATION:

Dominant Plant Species		Strata	Species Origin ^a	Agency Wetland Dependency Class	
Scientific Name	Common Name			FDEP ^b	USACE ^c
<u>Liquidambar styraciflua</u>	Sweetgum	C	I	FACW	FAC+
<u>Boehmeria cylindrica</u>	Bog hemp	G	I	OBL	FACW+
<u>Myrica cerifera</u>	Wax-myrtle	S	I	FAC	FAC+
<u>Apios americana</u>	Groundnut	V	I	V	FACW
<u>Ludwigia peruviana</u>	Primrose-willow	S	I	OBL	OBL
<u>Salix caroliniana</u>	Coastal Plain Willow	C	I	OBL	OBL
<u>Thelypteris hispidula</u>	Hairy Maiden Fern	G	I	FACW	FACU-
<u>Sapium sebiferum</u>	Chinese Tallow Tree	S	E	FAC	FAC
<u>Lonicera japonica</u>	Japanese Honeysuckle	V	E	V	FAC-
<u>Cephalanthus occidentalis</u>	Button Bush	S	I	OBL	OBL
<u>Ludwigia repens</u>	Red Ludwigia	G	I	OBL	OBL
<u>Osmunda cinnamomea</u>	Cinnamon Fern	G	I	FACW	FACW+
<u>Osmunda regalis</u>	Royal Fern	G	I	OBL	OBL
<u>Hydrocotyle bonariensis</u>	Coastal Plain Pennywort	G	I	FACW	FACW
<u>Quercus nigra</u>	Water Oak	C	I	FACW	FAC
<u>Solidago stricta</u>	Smooth Goldenrod	G	I	FACW	OBL
<u>Juncus effusus</u>	Soft Rush	G	I	OBL	FACW+
<u>Saururus cernuus</u>	Lizard's-tail	G	I	OBL	OBL
<u>Peltandra virginica</u>	Green Arrow Arum	G	I	OBL	OBL
<u>Juncus megacephalus</u>	Bighead Rush	G	I	OBL	OBL
<u>Toxicodendron radicans</u>	Poison-ivy	V	I	V	FAC
<u>Acer rubrum</u>	Red Maple	C	I	FACW	FAC
<u>Celtis laevigata</u>	Hackberry	S	I	FACW	FACW

SOIL TYPE:

Name _____ Color light to dark tans, brownHydric Soil: YesHydric Soil Indicator mucky fine sand, stripping, inclusions

SURFACE AND GROUNDWATER DEPTHS:

Surface or Subsurface H₂O depth^d + 2 inches OMW depth^d + 36 inches
(Note: "+" if water is above ground surface and "-" if water is below ground surface)

JURISDICTION:

USACE: NoFDEP: YesWhat is the estimated normal water depth? surface to + a few inches

ENDANGERED SPECIES (Plant and Animal): _____

Observed--NoneHabitat Suitability--Poor

NOTE: OTHER PERTINENT COMMENTS (e.g., APPEARS DRAINED BY AGRICULTURE, INVASION BY EXOTIC SPECIES, ETC.).

This wetland is a swamp feeding a small intermittent branch of Turkey Creek. The creek ultimately ends in a sink in San Felasco Hammock State Preserve. The adjacent Pine Plantation has been pushed into the edge of the swamp. Exotics are extensive: Japanese Honeysuckle, Japanese Climbing Fern, Chinese Yellow Tree, and Chinaberry.

a = I = Indigenous, E = Exotic

b = FDEP

AQU = Aquatic Plant

OBL = Obligate Species

FACW = Facultative Wet Species

FAC = Facultative Species

UPL = Upland Species

V = Vine, not used for determination

d = All water depths provided are relative measurements to the existing ground levels and not elevations.

c = USACE

NI = No Indicator Status

OBL = Obligate

FACW = Facultative Wet

FAC = Facultative

FACU = Facultative Upland

UPL = Upland

+ = Occurs more often in wetlands than the general indicator status.

- = Occurs less often in wetlands than the general indicator status.

? = No decision.

-- = Dash without an associated indicator status no current status.

David W. Hall Consultant Inc.

3666 N.W. 13th Place; Gainesville FL 32605 (352) 375-1370 FAX: (352) 377-2729

ALACHUA COUNTY LISTED ANIMALS

Scientific Name Common Name State Federal Habitat

AMPHIBIANS

<i>Ambystoma cingulatum</i>	flatwoods salamander		T	Pine Flatwoods-Wire Grass communities with cypress heads and natural ponds
<i>Rana capito</i>	gopher frog	SSC		Dry Flatwoods, Upland Pine Forests, Dry Hammocks, Sandhills, Scrub; breeding in grassy ponds & cypress heads lacking fish populations

BIRDS

<i>Aphelocoma coerulescens</i>	Florida scrub jay	T	T	Scrubby Flatwoods, Scrub
<i>Aramus guarauna</i>	limpkin	SSC		Marshes, Ponds, Lakes, Streams, Rivers, Swamps
<i>Dendroica kirtlandii</i>	Kirtland's warbler	E	E	Upland Pine Forests, Dry Hammocks, Scrub
<i>Egretta caerulea</i>	little blue heron	SSC		Virtually all wet habitats
<i>Egretta thula</i>	snowy egret	SSC		Virtually all wet habitats
<i>Egretta tricolor</i>	tricolored heron, Louisiana heron	SSC		Virtually all wet habitats
<i>Eudocimus albus</i>	white ibis	SSC		Virtually all wet habitats
<i>Falco peregrinus tundrius</i>	peregrine falcon	E		Disturbed & Cultivated lands, Marshes, Prairies, Ponds, Lakes, Streams, Rivers, Swamps
<i>Falco sparverius paulus</i>	southeastern American kestrel	T		Disturbed & Cultivated lands, Flatwoods, Upland Pine Forests, Prairies, Sandhills
<i>Grus canadensis pratensis</i>	Florida sandhill crane	T		Disturbed & Cultivated areas, Marshes, Prairies
<i>Haliaeetus leucocephalus</i>	bald eagle	T	T	Floodplain Forests, Marshes, Ponds, Lakes, Streams, Rivers, Swamps
<i>Mycteria americana</i>	wood stork	E	E	Disturbed & Cultivated lands, Floodplain Forest, Marshes, Wet Prairies, Streams, Rivers, Swamps
<i>Pelecanus occidentalis</i>	brown pelican	SSC		Salt & brackish waters
<i>Picoides borealis</i>	red-cockaded woodpecker	T	E	Flatwoods, Sandhills
<i>Speotyto cunicularia</i>	burrowing owl	SSC		Old fields, Pastures, Dry Prairies, Sandhills
CRUSTACEANS				
<i>Palaemonetes cummingi</i>	Squid Chimmney cave shrimp, Florida cave shrimp		T	Caves & Sinkholes

FISHES

<i>Acipenser oxyrinchus</i>	Atlantic sturgeon	SSC	T	Salt & brackish waters, Alluvial & Blackwater Streams/Rivers
<i>Micropterus notius</i>	Suwannee bass	SSC		Streams, Rivers, Spring Runs

E= Endangered

T = Threatened

SSC = Species of Special Concern

S/A = Similarity of Appearance

ALACHUA COUNTY LISTED ANIMALS

Scientific Name Common Name State Federal Habitat

MAMMALS

<i>Blarina carolinensis</i> (=brevicauda) shermani	Sherman's short-tailed shrew	SSC		Wet Flatwoods, Hammocks, and Prairies
<i>Podomys floridanus</i>	Florida mouse	SSC		Scrub, Scrubby Flatwoods, Sandhills
<i>Sciurus niger shermani</i>	Sherman's fox squirrel	SSC		Dry Flatwoods, Forests, Hammocks, Sandhills, Dome Swamps
<i>Ursus americanus floridanus</i>	Florida black bear	T		Virtually all forested habitats

REPTILES

<i>Alligator mississippiensis</i>	American alligator	SSC	T(S/A)	Virtually all habitats with standing water
<i>Drymarchon corais couperi</i>	eastern indigo snake	T	T	Virtually all dry & mesic habitats
<i>Gopherus polyphemus</i>	gopher tortoise	SSC		Beach Dunes, Pastures, Dry Flatwoods, Dry Hammocks, Dry Prairies, Sandhills, Scrub
<i>Macrolemys temminckii</i>	alligator snapping turtle	SSC		Marshes, Ponds, Lakes, Streams, Rivers, Spring Runs
<i>Pituophis melanoleucus mugitus</i>	Florida pine snake	SSC		Pastures, Scrubby Flatwoods, Dry Hammocks, Sandhills
<i>Pseudemys concinna suwanniensis</i>	Suwannee cooter	SSC		Streams, Rivers, Spring Runs
<i>Stilosoma extenuatum</i>	short-tailed snake	T		Dry Hammocks, Sandhills, Scrub

E= Endangered

T = Threatened

SSC = Species of Special Concern

S/A = Similarity of Appearance

ALACHUA COUNTY LISTED PLANTS

Scientific Name	Common Name	Family	State	Federal	Habitat
<i>Sarracenia minor</i>	Hooded Pitcher-plant; Rain-hat Trumpet	Sarracenaceae	T		Wet Flatwoods, Seepage Bogs
<i>Spiranthes brevifolia</i>	Small Ladies'-tresses; Florida Ladies'-tresses; slender Ladies'-tresses; Short-lip Ladies'-tresses	Orchidaceae	E		Flatwoods
<i>Spiranthes ovata</i>	Lesser Ladies'-tresses	Orchidaceae	E		Hydric Hammocks, Swamps
<i>Spiranthes tuberosa</i>	Little Pearl-twist; Little Ladies'-tresses	Orchidaceae	T		Scrubby Flatwoods
<i>Stenomorphochos lanceolatus</i> (Sacc.) (Hubl.)	Leafless Baked Orchid	Orchidaceae	T		Pastures, Wet Flatwoods, Sandhills
<i>Thelypteris reptans</i>	Creeping Star-hair Fern; Walking Wood Fern; Creeping Fern	Thelypteridaceae	E		Calcareous/Rocky & Mesic Hammocks
<i>Tipularia discolor</i>	Crane-fly Orchid; Elf-in Spur	Orchidaceae	T		Floodplain & Slope Forests
<i>Triphora trianthophora</i>	Three-birds Orchid; Nodding Etter-cap; Nodding Pogonia	Orchidaceae	T		Upland Hammocks
<i>Zamia</i>	Coontie; Wild Sago; Florida Arrowroot	Gymnospermae--Cycadopsida: Zamiaceae	C		Shell Mounds, Dry Flatwoods, Dry Hammocks, Sandhills, Scrub
<i>Zephyranthes atamasco</i>	Rain-lily; Atamasco Lily; Easter-lily	Amaryllidaceae	T		Pastures, Bottomland Forests, Mesic & Calcareous Hammocks
<i>Zephyranthes treatiae</i>	Treat's Zephyr-lily; Florida Easter-lily	Amaryllidaceae	T		Wet Flatwoods

C = Commercially Exploited
E = Endangered
T = Threatened

ALACHUA COUNTY LISTED PLANTS

Scientific Name	Common Name	Family	State	Federal	Habitat
<i>Adiantum tenerum</i>	Brittle Maidenhair Fern	Adiantaceae	E		Limestone Rockland
<i>Andropogon arctatus</i>	Pinewood Bluestem	Poaceae (Gramineae)	T		Flatwoods, Scrub, Seepage
<i>Asplenium monanthos</i>	San Felasco Spleenwort; Monosoral Spleenwort; Single Sorus Spleenwort	Polypodiaceae/ Aspleniaceae	E		Upland Pine Forest, Limestone Rockland
<i>Asplenium pumilum</i>	Dwarf Spleenwort; Sriagele Spleenwort; Hairy Spleenwort; Chervil Spleenwort	Polypodiaceae/ Aspleniaceae	E		Limestone Rockland
<i>Asplenium verecundum</i>	Delicate Spleenwort	Polypodiaceae/ Aspleniaceae	E		Upland Pine Forest, Limestone Rockland
<i>Athyrium filix-femina</i>	Southern Lady Fern; Lowland Lady Fern	Asplidiaceae/ Dryopteridaceae	T		Slope Forest, Hydric Hammock, Seepage Slope
<i>Blechnum occidentale</i>	Sinkhole Fern	Polypodiaceae/ Blechnaceae	E		Limestone Rockland
<i>Brickellia cordifolia</i>	Flyer's Nemesis; Flyer's Brickell-bush; Flyer's Nemesis	Asteraceae (Compositae)	E		Upland Pine Forest
<i>Bumelia anomala</i>	Clark's Buckthorn; Silver Buckthorn	Sapotaceae	E		Upland Hammock
<i>Bumelia lycioides</i>	Buckthorn; Ironwood; Shittim-wood	Sapotaceae	E		Floodplain Forest, Mesic Hammock
<i>Callirhoe papaver</i>	Poppy Mallow	Malvaceae	E		Old Field, Mesic Hammock
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	Orchidaceae	E		Wet Flatwoods
<i>Carex chapmanii</i>	Chapman's Sedge	Cyperaceae	E		Mesic Hammock
<i>Chellanthus microphylla</i>	Southern Lip Fern	Polypodiaceae	E		Mesic Hammock, Limestone Rockland
<i>Cleistes divaricata</i>	Spreading Pogonia; Rosebud Orchid; Lady's Ettiencap; Rose Orchid	Orchidaceae	T		Wet Flatwoods, Seepage Bogs, Swamps
<i>Coelorachis tuberculosa</i>	Florida Joint-tall Grass	Poaceae (Gramineae)	T		Marshes, Ponds/Lakes
<i>Ctenium floridanum</i>	Florida Toothache Grass	Poaceae (Gramineae)	E		Wet Flatwoods
<i>Epidendrum conopseum</i>	Green-fly Orchid	Orchidaceae	C		Mesic Hammocks, Swamps
<i>Forestiera godfreyi</i>	Godfrey's Privet	Oleaceae	E		Calcareous & Mesic Hammocks
<i>Hexaletris spicata</i>	Crested Coralroot; Brunetta	Orchidaceae	E		Mesic Hammocks
<i>Lilium catesbaei</i>	Catesby Lily; Pine Lily; Southern Red Lily	Liliaceae	T		Wet Flatwoods, Seepage Bogs
<i>Listera australis</i>	Southern Twayblade; Double-leaf Orchid;	Orchidaceae	T		Hydric Hammocks, Swamps
<i>Litsea aestivalis</i>	Pondspice; Pond Bush	Lauraceae	E		Bayheads, Ponds/Lakes, Swamps

C = Commercially Exploited
E = Endangered
T = Threatened

ALACHUA COUNTY LISTED PLANTS

Scientific Name	Common Name	Family	State	Federal	Habitat
<i>Lobelia cardinalis</i>	Cardinal Flower	Campanulaceae	T		Stream & River Banks
<i>Lycopodium cernuum</i>	Nodding Clubmoss; Staghorn Clubmoss	Lycopodiaceae	C		Wet Flatwoods, Marshes, Swamps
<i>Malaxis unifolia</i>	Green Adder's-mouth	Orchidaceae	E		Slope Forests, Mesic Hammocks, Sinkholes, Seepage Bogs
<i>Matelea floridana</i>	Florida Spiny-pod	Asclepiadaceae	E		Slope Forests, Mesic Hammock
<i>Matelea gonocarpus</i>	Angle-pod	Asclepiadaceae	T		Slope & Floodplain Forests
<i>Matelea pubiflora</i>	Sandhill Spiny-pod	Asclepiadaceae	E		Sandhills, Scrub
<i>Osmunda cinnamomea</i>	Cinnamon Fern	Osmundaceae	C		Marshes, Swamps
<i>Osmunda regalis</i>	Royal Fern	Osmundaceae	C		Marshes, Swamps
<i>Pectuma dispersa</i>	Widespread Polypody	Polypodiaceae	E		Upland & Hydric Hammocks, Limestone Rocklands
<i>Pinguicula caerulea</i>	Blue Butterwort	Lentibulariaceae	T		Wet Flatwoods
<i>Pinguicula lutea</i>	Yellow Butterwort	Lentibulariaceae	T		Wet Flatwoods, Seepage Bogs
<i>Platanthera blephariglottis</i>	White-fringed Orchid; Plume-of-Navarre; Large White-fringed Orchid	Orchidaceae	T		Wet Flatwoods, Marshes, Seepage Bogs
<i>Platanthera ciliaris</i>	Yellow-fringed Orchid; Orange Plume	Orchidaceae	T		Wet Flatwoods, Slope & Floodplain Forests, Seepage Bogs, Swamps
<i>Platanthera cristata</i>	Crested-fringed Orchid; Orange Crest Orchid; Golden Fringed Orchid	Orchidaceae	T		Seepage Slopes & Bogs, Wet Flatwoods, Swamps
<i>Platanthera nivea</i>	Snowy Orchid; Bog-torch; Frog-spear; White Rein Orchid	Orchidaceae	T		Wet Flatwoods & Prairies, Seepage Bogs
<i>Pogonia ophioglossoides</i>	Rose Pogonia; Ettercap; Crested Ettercap; Rose-crested Orchid	Orchidaceae	T		Wet Flatwoods, Prairies, Seepage Bogs, Swamps
<i>Polygonum melsnerianum</i>	Mexican Tear-thumb	Polygonaceae	E		Floodplain Forest, Ponds/Lakes
<i>Pteroglossaspis ecristata</i>	Non-crested Eulophia	Orchidaceae	T		Sandhills, Scrub
<i>Pycnanthemum floridanum</i>	Florida Mountain-mint; Horsemint	Lamiaceae (Labiatae)	T		Wet Flatwoods, Sandhills
<i>Rhapidophyllum hystrix</i>	Needle Palm; Vegetable Porcupine	Arecaceae (Palmae)	C		Bottomland & Seepage Slope Forest
<i>Rhododendron canescens</i>	Pink Azalea; Southern Pinxter-bloom; Piedmont Azalea; Wild Azalea	Ericaceae	C		Slope & Floodplain Forest, Seepage Bogs
<i>Rhus michauxii</i>	Micheaux's Sumac; False Poison Sumac	Anacardiaceae	E	E	Calcareous & Mesic Hammocks
<i>Salix floridana</i>	Florida Willow	Salicaceae	E		Bottomland Forest, Hydric Hammocks, Swamps

C = Commercially Exploited
E = Endangered
T = Threatened



**PATEL/TIDEWATER – TURKEY CREEK PARCEL
ALACHUA COUNTY, FLORIDA**

ENVIRONMENTAL RESOURCES ASSESSMENT

Prepared for:

Mr. Hardik Patel

Tidewater Properties, LLC

Prepared by:

***ECT* Environmental
Consulting &
Technology, Inc.**

***7027 SW 24th Avenue
Gainesville, FL 32607***

ECT No. 220248-0200

May 2022

DOCUMENT REVIEW

The dual signatory process is an integral part of Environmental Consulting & Technology, Inc.'s (ECT's) Document Review Policy No. 9.03. All ECT documents undergo technical/peer review prior to dispatching these documents to any outside entity.

This document has been authored and reviewed by the following employees:

Jude Dawson

Jason Lancaster, PWS, CEP, CE, TN-QHP

Author

Peer Review

Signature

Signature

Date

Date

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- Alachua County Floridan Aquifer High Recharge Areas
- USFWS IPaC Resource List
- FNAI Biodiversity Matrices
- Central Black Bear Management Unit

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Table 1. Land Use/Land Cover

Table 2. Soils

Table 3. Listed Species with Potential to Occur in Project Area

ACRONYMS

AGTA	Authorized Gopher Tortoise Agent
AJD	Approved Jurisdictional Determination
BGEPA	Bald and Golden Eagle Protection Act
ERP	Environmental Resource Permit
ESA	Endangered Species Act
FAC	Florida Administrative Code
FEMA	Federal Emergency Management Agency
FDEP	Florida Department of Environmental Protection
FLUCFCS	Florida Land Use, Cover and Forms Classification System
FMSF	Florida Master Site File
FNAI	Florida Natural Areas Inventory
FWC	Florida Fish and Wildlife Conservation Commission
GPS	Global Positioning System
IPaC	Information for Planning and Consultation
MBTA	Migratory Bird Treaty Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NWPR	Navigable Waters Protection Rule
OSW	Other Surface Waters
SHPO	State Historic Preservation Office
UFA	Upper Floridan Aquifer
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTUS	Waters of the United States

1.0 INTRODUCTION

Mr. Patel is planning to acquire and develop a subdivided parcel approximately 7.63-acres in size in north Alachua County, Florida within the municipal boundary of the City of Alachua. Parcel number 05885-010-007 is owned by Tidewater Properties, LLC. The property is currently zoned Commercial, Intensive (CI) and is vacant. Environmental Consulting & Technology, Inc. (ECT) conducted a wetland delineation to help inform where the parcel would be subdivided. An Environmental Resources Assessment and the resulting report (Report) is to support the planning and inform permitting requirements for the development of the project. Alachua County (County) provides a checklist to facilitate and guide the environmental review process. ECT has used the checklist to provide guidance for the inventory of natural resource information. This Report provides site specific identification, analysis, and mapping of resources within and adjacent to the proposed project development area. Because the parcel is intended to be subdivided, this Report will be focused primarily on the northern portion of the parcel where the initial project site will be located (Project Area).

The County checklist is provided as Appendix A for reference.

This Report summarizes the findings of desktop assessments and field surveys conducted. Field surveys were conducted in March 2022. Based on the County guidance, the following parameters were reviewed for the Project Area and will be discussed further in Section 3:

- Wetland and waterbodies;
- Floodplains;
- Special Area Study Protection Areas; and
- Listed Species and Listed Species Habitats.

1.1 PROJECT SITE/DESCRIPTON

The proposed project is to be located in northern Alachua County on approximately 7.63 acres of vacant property. The Project Area is the portion of property north of the

delineated creek that bifurcates the property. The undeveloped parcel is situated in the southeastern quadrant of the intersection of NW 59th Terrace and Highway 441 in Alachua County, within the city limits of the City of Alachua.

To the west of the property is a residential development, the Turkey Creek Golf Course community. To the east is vacant commercial property and to the south the vacant property is zoned agricultural. To the northeast is US 441. See Figure B-1 Project Location Map in Appendix B.

Land use and land cover on the subject property is upland hardwood forests. The Project Area is undeveloped and has no history of having been developed previously.

1.2 STUDY AREA

Please refer to Appendix B for the map series for the Project. For the purposes of this Report, the study area is defined as the Project Area and the immediately adjacent area. The Project Area would include the portion of the property north of the creek approximately 3.4 acres. The total parcel acreage is 7.63 acres.

1.3 PURPOSE OF THE STUDY

As stated in the Introduction, the purpose of the study is to assess and provide an inventory of natural resource information. This includes site specific identification, analysis, and mapping of resources within and adjacent to the proposed project development area in order to support the subdivision of the parcel and inform the planning and permitting process for the Project.

2.0 ASSESSMENT METHODOLOGY

2.1 ECOLOGICAL ASSESSMENT

ECT conducted an ecological assessment through desktop and field evaluation to determine the approximate limits of jurisdictional wetlands and waterbodies (including other surface waters), habitats suitable to support federal and state protected species, protected species general observations, and land use types (based on the Florida Land Use, Cover and Land Form Classification System [FLUCFCS]). The field component included a formal wetland delineation and informal pedestrian survey for any listed species observed. The remaining parameters were assessed using desktop analysis.

2.1.1 DESKTOP EVALUATION

ECT performed a desktop evaluation of the Project that focused on identifying certain signatures and contours suggestive of potential wetlands, waterbodies, and habitats within the Study Area. The evaluation also aided in establishing the presence or absence of criteria used to determine jurisdictional Waters of the United States (WOTUS) and/or state of Florida. A desktop review and inventory of potential federal and state rare, threatened, and endangered species (listed species) that may utilize the site and surroundings was also conducted. Sources used to complete the evaluation included but were not limited to the following:

- United States Geological Survey (USGS): 7.5-minute Topographic Quadrangle Maps;
- Color infrared and natural color digital aerial images (multiple years);
- United States Fish and Wildlife Service (USFWS): National Wetland Inventory (NWI) Maps;
- Federal Emergency Management Agency (FEMA): Flood Insurance Rate Maps;
- United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS): Soil Survey of Alachua County, Florida;
- USDA: National Hydrography Dataset (NHD);
- NRCS State Soil Data Access (SDA): Hydric Soil List for Florida;
- USFWS Information for Planning and Consultation (IPaC) database;
- Florida Fish and Wildlife Conservation Commission (FWC) Florida's Imperiled Species Management Plan;
- Audubon Florida Eagle Watch Public Nest Application;
- FWC Water Bird Locator;
- USFWS Wood Stork Florida Nesting Colonies Maps; and

- Florida Natural Areas Inventory (FNAI).

2.1.2 FIELD EVALUATION

A site review by two ecologists and a technician took place in March 2022 to delineate the extent of the creek, field verify the desktop assessment and gather additional data.

2.1.2.1 Wetland and Waterbodies Delineation

ECT conducted formal delineations of WOTUS or wetlands and other surface waters (OSW) of Florida as part of the due diligence exercise. Experienced Florida wetland scientists examined the desktop data sources to determine where wetlands and OSWs were most likely indicated within the Study Area. This information was digitized into a Geographic Information System (GIS) to produce maps and electronic files for the Geographic Positioning System (GPS) used during the field evaluations. ECT field verified the desktop wetland and OSW limits during the field investigation. Each suspected wetland and OSW area was visited to determine if the general limits noted during the desktop analysis were accurate based on vegetation, soil, and hydrological indicators. Where necessary, areas of adjustment were collected using a Trimble GPS of sub-meter accuracy.

Wetlands and OSWs were determined in accordance with the routine onsite determination methods described in the U.S. Corps of Engineers Wetlands Delineation Manual (USACE, Environmental Laboratory 1987), hereafter referred to as the “1987 Manual,” and are also consistent with the methods, guidelines, and indicators present in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region ([Regional Supplement] USACE 2010). Wetlands and OSWs of Florida were in general conducted in accordance with the Florida Wetland Delineation Manual (62-340 Florida Administrative Code). Differences in the methodologies can result in variances in delineation limits (e.g., two wetland lines) and in some areas being identified as wetlands according to one methodology and uplands according to the other. Where differences arose, both lines were delineated or the area of greatest potential jurisdiction was adopted.

Verified wetlands and OSWs were classified in accordance with the Florida Department of Transportation's FLUCFCS as adapted by the Water Management Districts and the FWC. All wetlands and OSWs were considered to be jurisdictional to the state of Florida. Each wetland and OSW was evaluated in accordance with the 2020 Navigable Waters Protection Rule to determine jurisdiction as a WOTUS.

Qualitative data was collected for each potential jurisdictional feature to complete Uniform Mitigation Assessment Methodology (UMAM) determination as this is the method utilized by mitigation banks servicing the Study Area.

The extent of wetlands associated with Turkey Creek and the creek centerline is depicted in Figures B-5 (NWI), B-7 and B-8 (as delineated) in Appendix B. There were no other wetlands identified on the subject parcel north of the creek.

2.1.2.2 General Listed Species Assessment

Species of Interest for Project

ECT developed an inventory of potential listed species of interest for the Project based upon the following:

- A query of the USFWS IPaC System;
- Review of the FNAI Biodiversity Matrix for Alachua County, Florida;
- Review of USFWS and FWC GIS database files;
- ECT's extensive previous history and knowledge of wildlife habitats in Florida; and
- Field observations.

The USFWS IPaC resource list and FNAI Biodiversity Matrices are presented as Appendix C. Listed species with potential to occur in the Project Area are provided in Table 3.

Fauna species were eliminated from further consideration if suitable habitat was not identified within the Study Area based on the desktop evaluation and after verification

during the field assessment. Likewise, federally listed flora species were eliminated from further evaluation if required habitat was not recognized within the Study Area during the desktop evaluation and after verification during the field assessment.

All state listed flora species were eliminated from further evaluation due to state regulations designed to prevent the commercial exploitation of state listed threatened and endangered plant species. It is unlawful to willfully harvest, collect, pick, remove, injure, or destroy any plant listed as endangered growing on the private land of another, or any public land or water, without obtaining the written permission of the owner of the land or water, or their legal representative. If the Project was to move forward, it is assumed there would be no commercial exploitation.

General Habitat Assessment

During the general habitat assessment, ECT ecologists conducted meandering pedestrian transects throughout the Study Area to determine the presence and relative abundance of species afforded protection by the USFWS under the Endangered Species Act of 1973 (fauna in 50 CFR 17 and flora in 50 CFR 23), the FWC under Rule 68A-27.003, 68A-27.0031 and 68A-27.005 F.A.C. and the Preservation of Native Flora of Florida Act, Section 581 F.S. and Chapter 5B-40 F.A.C. The Assessment was performed in general accordance with methods found in the Florida Wildlife Conservation Guide as developed by the USFWS, FWC, and FNAI. During each survey event, observations of all listed species, as well as physical features that may indicate the presence of these species (e.g., tracks, scat, nests, burrows, cavity trees, etc.) were recorded and mapped using GPS. The field assessment did not include species specific surveys for any species. The field assessment did not include a 15 percent survey for the gopher tortoise (*Gopherus polyphemus*) at this time, however one should be conducted in accordance with the April 2008 FWC Gopher Tortoise Permitting Guidelines (revised July 2020) at a later date and the presence of gopher tortoise is assumed.

3.0 RESULTS

3.1 ECOLOGICAL ASSESSMENT

3.1.1 DESKTOP RESULTS

3.1.1.1 Wetlands

USGS Quadrangle

The USGS Quadrangle Map (see Appendix B, Figure B-2) indicates the presence of no wetlands or surface water within the Project Area.

USFWS NWI/NHD/Alachua County

The USFWS NWI / USGS NHD/Alachua County Flow Lines Map (see Appendix B, Figure B-5) shows no wetlands and one surface water feature in the Project Area currently under review. Alachua County data was used to identify the known creek location on the property.

There are no USGS NHD flow lines represented. Alachua County data was used to map the flow line for Turkey Creek.

FLUCFCS

Desktop data identified the subject property as being comprised predominantly of uplands. There are two FLUCFCS types identified within the Project Area (Table 1). Of these FLUCFCS types, approximately 6.94 acres are Pine Flatwoods and 0.69 acre is Stream and Lake Swamp or Bottomland (FLUCFCS 615). ECT ecologists confirmed the land use types within the Study Area during the field assessment and prepared the site-specific FLUCFCS map, Figure B-6 (see Appendix B). Representative site photos documenting the land cover may be found in Appendix D.

Table 1. Land Use/Land Cover

FLUCFCS	Description	Acres
411	Pine Flatwoods	6.94
615	Stream and Lake Swamp (Bottomland)	0.69
	Total	7.63

3.1.1.2 Soils

Based on the USDA NRCS Web Soil Survey, three soil types are present in the Project area, none of which are hydric. Fine sandy soils with no hydric soil ratings dominate the landscape within the Project area.

Table 2 provides the areal extent and acreage by soil type. The USDA NRCS Soil Survey for the Project Area is illustrated in Figure B-4, Appendix B. Appendix C includes the custom Soil Resource Report for the parcel. Brief descriptions of the dominant soil types follow.

Table 2. Soils

Symbol	Description	Hydric	Acres
13	Pelham Sand	No	0.14
14	Pomona Sand, 0 to 2 Percent Slopes	No	4.35
23	Mulat Sand	No	3.13
	Total		7.63

Pelham Sand- The Pelham series consists of very deep, poorly drained, moderately permeable soils that formed in unconsolidated Coastal Plain sediments. These soils are on nearly level broad flats, toe slopes, depressions and drainageways. Slopes range from 0 to 5 percent. Pelham sand tends to be poorly drained with slow runoff and moderate permeability. Depth to water table ranges from +1.0 to 1.5 feet.

Pomona Sand- This nearly level poorly drained sandy soil has a water table that is less than 10 inches from the surface for 2 to 6 months during most years. Surface runoff is slow. The available water capacity is very low. Permeability is very rapid. The natural fertility is low. Organic matter content of the surface layer is moderately low to moderate.

Mulat Sand - The Mulat series consists of poorly drained soils that formed in loamy and acid marine sediments. These soils occur on low-lying and flatwood areas of the lower coastal plain. Slopes are 0 to 2 percent.

3.1.1.3 Floodplains

The Project area is within the jurisdictional boundaries of the Suwannee River Water Management District (SRWMD). The Project is found on FEMA Flood Panel 12001C0143E effective 11/2/2018. For Flood Zone X, Areas of Minimal Flood Hazard, are areas outside the 0.2% annual chance flood hazard (Not a Special Flood Hazard Area). Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply. Please refer to Appendix B, Figure B-3.



3.1.1.4 Critical Habitats/Listed Species

Based on the desktop review, the Project Area does not fall within lands classified as critical habitat for listed wildlife species.

There are no documented occurrences of threatened or endangered species on the property. Based on the desktop database review, 12 faunal species with protected status have the potential to utilize the Project Area. Of these species, six are also protected by federal regulations. Table 3 provides a summary of the protected species that have potential to utilize the Project Area. The project does not fall within lands classified as critical habitat for wildlife species.

Further field review and habitat assessment is needed to confirm likelihood of the presence of these listed species.

Table 3. Listed Species with Potential to Occur in Project Area

Scientific Name	Common Name	Federal Listing		State Listing	Likelihood of Occurrence
		Federal Status	State Status		
Amphibians					
<i>Ambystoma cingulatum</i>	Frosted flatwoods salamander	T	T		Low
<i>Lithobates capito</i>	Gopher frog	N	N		(**)
<i>Notophthalmus perstriatus</i>	Striped Newt	C	N		Low
Birds					
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	N	T		Low
<i>Egretta caerulea</i>	Little blue heron	N	T		Moderate
<i>Grus canadensis pratensis</i>	Florida sandhill crane	N	T		Moderate
<i>Haliaeetus leucocephalus</i>	American Eagle	N	N		Low
<i>Laterallus jamaicensis spp. Ja-maicensis</i>	Eastern black rail	T	T		Low
<i>Mycteria americana</i>	Wood Stork	T	T		Low
<i>Pandion haliaetus</i>	Osprey	N	N		(**)
<i>Picoides borealis</i>	Red-cockaded woodpecker	E	E		Low
Insects					
<i>Danaus plexippus</i>	Monarch butterfly	C	N		Low
Mammals					
<i>Peromyscus floridanus</i>	Florida Mouse	N	N		(**)
<i>Sciurus niger shermani</i>	Southern fox squirrel (fka Sherman's fox squirrel)	N	N		(**)
<i>Ursus americanus floridanus</i>	Florida Black Bear	N	N		(***)

Scientific Name	Common Name	Federal Listing	State Listing	Likelihood of Occurrence
Reptiles				
<i>Alligator mississippiensis</i>	American alligator	SAT		Moderate
<i>Drymarchon couperi</i>	Eastern indigo snake	T	T	Low
<i>Gopherus polyphemus</i>	Gopher tortoise	C	T	Moderate
<i>Lampropeltis extenuata</i>	Short-tailed snake	N	T	Low
<i>Pituophis melanoleucus mugitus</i>	Florida Pine Snake	N	T	Low
Plants				
<i>Agrimonia incisa</i>	Incised Groove-bur	N	T	
<i>Brickellia cordolia</i>	Flyr's Brickell-bush	N	E	
<i>Ctenium floridanum</i>	Florida Toothache Grass	N	E	
<i>Hartwrightia floridana</i>	Hartwrightia	N	T	
<i>Litsea aestivalis</i>	Pondspice	N	E	
<i>Matelea floridana</i>	Florida Spiny-pod	N	E	
<i>Pteroglossaspis ecristata</i>	Giant Orchid	N	T	
<i>Pycnanthemum floridanum</i>	Florida Mountain-mint	N	T	
<i>Sideroxylon alachuense</i>	Silver buckthorn	N	E	

*

**

SAT

T

Not listed but still protected under the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act.

No longer listed in Florida as of January 11, 2017, but is part of the Imperiled Species Management Plan.

Not listed but a species managed by FWC.

Threatened due to similarity of appearance to American Crocodile
Threatened

Scientific Name	Common Name	Federal Listing	State Listing	Likelihood of Occurrence
E	Endangered	Federal Status	State Status	
SSC	Species of Special Concern			
N	Not currently Listed			
C	Candidate			

The closest documented eagle nest located over two miles southwest of the parcel boundary. Although the bald eagle (*Haliaeetus leucocephalus*) is not currently classified by the USFWS or FWC as threatened or endangered, it is protected under the Federal Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act, as well as Florida's Bald Eagle Management Plan.

Several documented wading bird rookeries were noted within one mile northeast of the Project Area. Because of the creek located on the site, it is thought possible that wading birds may use the area for occasional opportunistic foraging.

For the same reason, it is thought likely that alligators may be found on the subject parcel.

During field reconnaissance in March 2022, informal pedestrian surveys did not identify the presence of gopher tortoise burrows in the Project Area. No live gopher tortoises were observed but tortoises may be found in any suitable upland habitat. No other listed species were identified during the review. There is some potential for eastern indigo snakes (*Drymarchon couperi*) on the property, however, it is believed that the likelihood for occurrence would be low.

Further field review would be needed to confirm suitable habitat and likelihood of any other listed species to be found on the property.

3.1.1.5 Recreation/Conservation/Preservation Lands

The Project Area is not located within any lands under jurisdiction of any federal, state, or tribal lands. To the south protected lands include the Turkey Creek Hammock Preserve, managed by Alachua County. Other conservation lands are located southwest of the property, including the San Felasco Hammock Preserve State Park, a 7,353 acre preserve managed by the Florida Department of Environmental Protection (FDEP).

3.1.2 FIELD RESULTS

Wetlands/Waterbodies

During the field survey 6.57 acres of wetlands and waterbodies were delineated on the parcel. These features are depicted on Figures B-7 and B-8, Appendix B. The FDEP retained waters tool indicated that these wetlands/waters would be state-assumed with regards to the State 404 Program. However, the feature identified on the site is a tributary to Turkey Creek, which because of its hydrological connection offsite may be considered Waters of the United States (WOTUS). If the plan design will impact this feature, further investigation and consultation would be needed to confirm whether there is a federal nexus and a Clean Water Act 404 authorization would be required. However, it is assumed for this report that there will be no impacts. Appendix E contains photographs of the Project Area and of each wetland/upland datapoint as well as the soil samples

Uplands

ECT ecologists confirmed the land use types within the Study Area during the field assessment and prepared the site-specific FLUCFCS map, Figure B-6 (see Appendix B). Representative site photos documenting the land cover may be found in Appendix E.

3.1.3 FEDERAL AND STATE PROTECTED SPECIES

General Habitat Descriptions (FLUCFCS Based)

Upland Land Uses

Pine Flatwoods (FLUCFCS 411) - FLUCFCS 411 is the most extensive terrestrial ecosystem in Florida. This upland forested community evolved under frequent lightning and human-caused fire, seasonal drought and seasonally flooded soil conditions. Pine flatwoods are characterized by low flat topography and relatively poorly drained, acidic, sandy soils. The Project Area largely consists predominantly of this land use type, except where the property is bifurcated by the creek system. This habitat is suitable for listed species to occur such as Florida black bear (*Ursus americanus floridanus*), gopher tortoise, and burrow commensal species such as the gopher frog (*Lithobates capito*) and eastern indigo snake.

Wetland Land Uses

Stream and Lake Swamp - Bottomland (FLUCFCS 615)

Swamps, or forest wetlands, are widely distributed throughout the state. They fringe rivers, follow drainages and occupy small shallow ponds. This wetland type borders the creek system that divides the subject parcel.

Species of Interest

Under the Endangered Species Act of 1973 (ESA), species may be listed as either endangered or threatened. "Endangered" means a species is in danger of extinction throughout all or a significant portion of its range. "Threatened" means a species is likely to become endangered within the foreseeable future. All species of plants and animals, except pest insects, are eligible for listing as threatened or endangered. For the purposes of the ESA, Congress defined species to include subspecies, varieties, and, for vertebrates, distinct population segments.

According to the FNAI database and IPaC Unofficial Species List, a total of 9 listed floral and 12 faunal species with protected status are known to occur or have the potential to occur on this site in Alachua County. During the desktop analysis, ECT determined that federal and state protected species have the potential to occur within the Study Area based on potential habitat onsite, and proximity to habitat and consultation areas (see Appendix C and Table 3). This number was further reduced to six potential species or groups following the field assessment due to current habitat conditions within the Project Area. These species are discussed in detail below.

Wading Birds (Little blue heron, Florida sandhill crane)

The presence of wetlands/waterbodies on the parcel could provide opportunities for wading birds to forage. Wading bird populations in the immediate region should not be significantly affected by the proposed development because there is ample foraging area of better quality occurring on adjoining lands. Therefore, the proposed construction activities and use of the project site should not impact the ability of wading birds to forage.

Florida sandhill cranes (*Grus canadensis pratensis*) prefer foraging in wet prairies, the shallow edges of freshwater marshes and ponds, pastureland, and other grassy ruderal habitats. Their nest is a mound of herbaceous plant materials in shallow water or the ground of marshy areas. There are two subspecies of sandhill cranes that occur in Florida: the greater sandhill crane (*Antigone canadensis tabida*) and the state designated threatened Florida sandhill crane. No sandhill cranes were seen during the field surveys and no potential foraging and nesting habitat was identified on the project site.

American Alligator

The alligator is listed as threatened by USFWS and FWC due to similarity of appearance to the American crocodile (*Crocodylus acutus*). Alligators are not uncommon in this part of the state, and this reptile is assumed present in most surface waters.

Gopher Tortoise

Gopher tortoises are currently a candidate species for listing by USFWS and are classified as threatened by the FWC. They are typically found within upland habitats with well-drained, sandy soils. Gopher tortoise burrows are used by other listed and non-listed wildlife species and both the tortoise and their burrows are protected by FWC. A 100% gopher tortoise burrow pedestrian survey within tortoise suitable habitat would be conducted prior to development. Any tortoise burrows that could not be avoided by 25 feet would require a permit to be excavated per the FWC Gopher Tortoise Guidelines, and tortoises that may be affected by the project would be relocated from harm's way to an on- or offsite recipient area in accordance with the state regulations.

Eastern Indigo Snake

The eastern indigo snake (*Drymarchon couperi*) is listed as a threatened species by the USFWS and is protected under federal law. The Project Area is within the known range and Consultation Area for the species. Although historically the species has been

documented within the vicinity of the Project Area, there has been a recent decline in the documented occurrences within southeastern Alachua County.

Eastern indigo snakes are burrow commensal species with gopher tortoises and can be potentially found in nearly any wooded upland habitat throughout Florida. No individuals or signs of their presence were observed during the site visits; however, suitable habitat is present within the Project Area and the presence of gopher tortoise burrows could provide refugia.

"Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. It is ECT's opinion that the eastern indigo snake would not likely be affected by project development on this site. However, prior to construction, any potentially occupied gopher tortoise burrows located within areas of potential construction on the project site should be excavated through an FWC gopher tortoise relocation permit. If an eastern indigo snake is discovered during gopher tortoise relocation activities (i.e., burrow excavation), the USFWS should be contacted immediately. No attempt should be made to touch or handle the snake due to its protected status.

Because of the recent timber harvest and generally denuded and disturbed vegetative nature of most of the Project Area, the habitat quality is considered to be low. Although, the open groundcover conditions and sparse canopy cover provides foraging opportunities for raptors, none were observed during the duration of the field surveys.

Bald Eagle (*Haliaeetus leucocephalus*)

While not listed, this species is afforded protection by federal and state management guidelines. The eagle is making a comeback in population numbers in the United States, and, in Florida, eagle nests are becoming more common. One nest was identified approxi-

mately two miles southwest of the parcel boundary. The presence of this nest is not anticipated to be a deterrent to development of the Project.

Florida Black Bear (*Ursus americanus floridanus*)

The Florida black bear was removed from Florida's Endangered and Threatened Species List on August 23, 2012, after approval by the Commission at the June 2012 Commission meeting. However, a new Florida Black Bear Management Plan was approved in 2012 and later updated in December 2019, which is the version currently in effect. Alachua County falls within FWC's Central Bear Management Unit (Appendix C) and while there have been no reported black bear sightings on the subject property, there is still some potential of occurrence.

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USGS, 2022. National Geospatial Program, The National Map – Data Delivery.
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**APPENDIX A
ALACHUA COUNTY ENVIRONMENTAL CHECKLIST**



ENVIRONMENTAL RESOURCES ASSESSMENT CHECKLIST

Pursuant to Alachua County Comprehensive Plan 2002, as amended, Conservation Open Space Element Policy 3.4.1, applications for land use change, zoning change, and development approval shall be required to submit an inventory of natural resource information. The inventory shall include site specific identification, analysis and mapping of each resource present on or adjacent to the site. The identification and analysis shall indicate information sources consulted.

Natural Resources Checklist:

Check "Yes" for each resource or resource characteristic identified and discuss and provide supporting material.

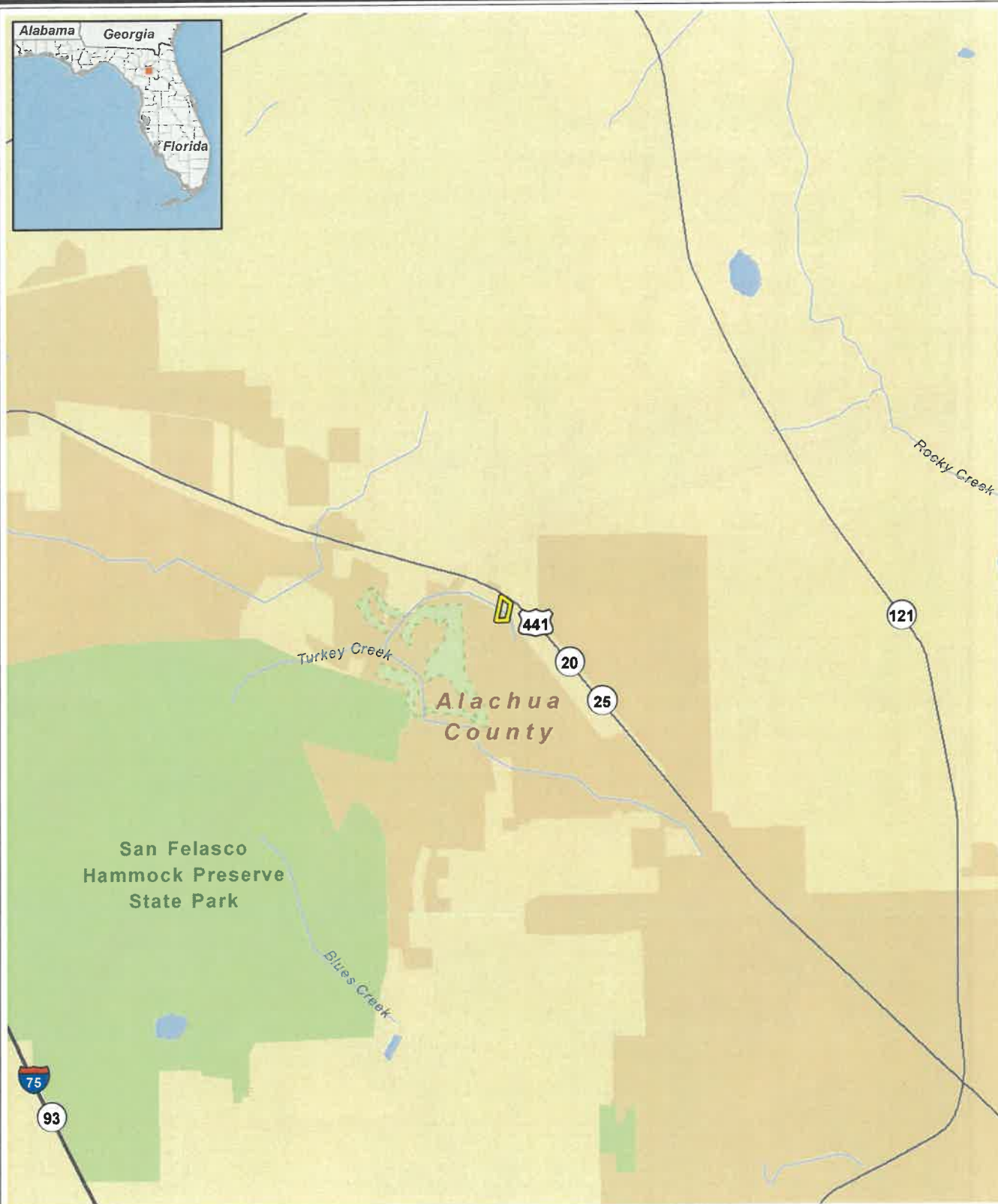
Check "N/A" for each resource or resource characteristic not present or otherwise relevant to the application.

Yes	☒	N/A	☐	Surface Waters (ponds, lakes, streams, springs, etc.)
Yes	☒	N/A	☐	Wetlands
Yes	☒	N/A	☐	Surface Water or Wetland Buffers
Yes	☒	N/A	☐	Floodplains (100-year)
Yes	☐	N/A	☒	Special Area Study Resource Protection Areas (Cross Creek, Idylwild/Serenola, etc)
Yes	☐	N/A	☒	Strategic Ecosystems (within or adjacent to mapped areas)
Yes	☐	N/A	☐	Significant Habitat (biologically diverse natural areas)
Yes	☒	N/A	☐	Listed Species/Listed Species Habitats (FNAI S1, S2, & S3; State or Federally E, T, SSC)
Yes	☐	N/A	☒	Recreation/Conservation/Preservation Lands
Yes	☐	N/A	☒	Significant Geological Features (caves, springs, sinkholes, etc.)
Yes	☐	N/A	☒	High Aquifer Recharge Areas
Yes	☐	N/A	☒	Wellfield Protection Areas
Yes	☐	N/A	☒	Wells
Yes	☒	N/A	☐	Soils
Yes	☐	N/A	☒	Mineral Resource Areas
Yes	☐	N/A	☒	Topography/Steep Slopes
Yes	☐	N/A	☒	Historical and Paleontological Resources
Yes	☐	N/A	☒	Hazardous Materials Storage Facilities
Yes	☐	N/A	☒	Contamination (soil, surface water, ground water)

SIGNED: _____ PROJECT # _____ DATE: _____

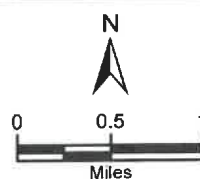
For assistance please visit the Alachua County Environmental Protection Department (ACEPD) website at <http://www.alachuacounty.us/government/depts/epd/natural/devchecklist.aspx> or contact ACEPD at (352) 264-6800.
(version 5/20/05)

APPENDIX B FIGURES



Legend

 Project Boundary

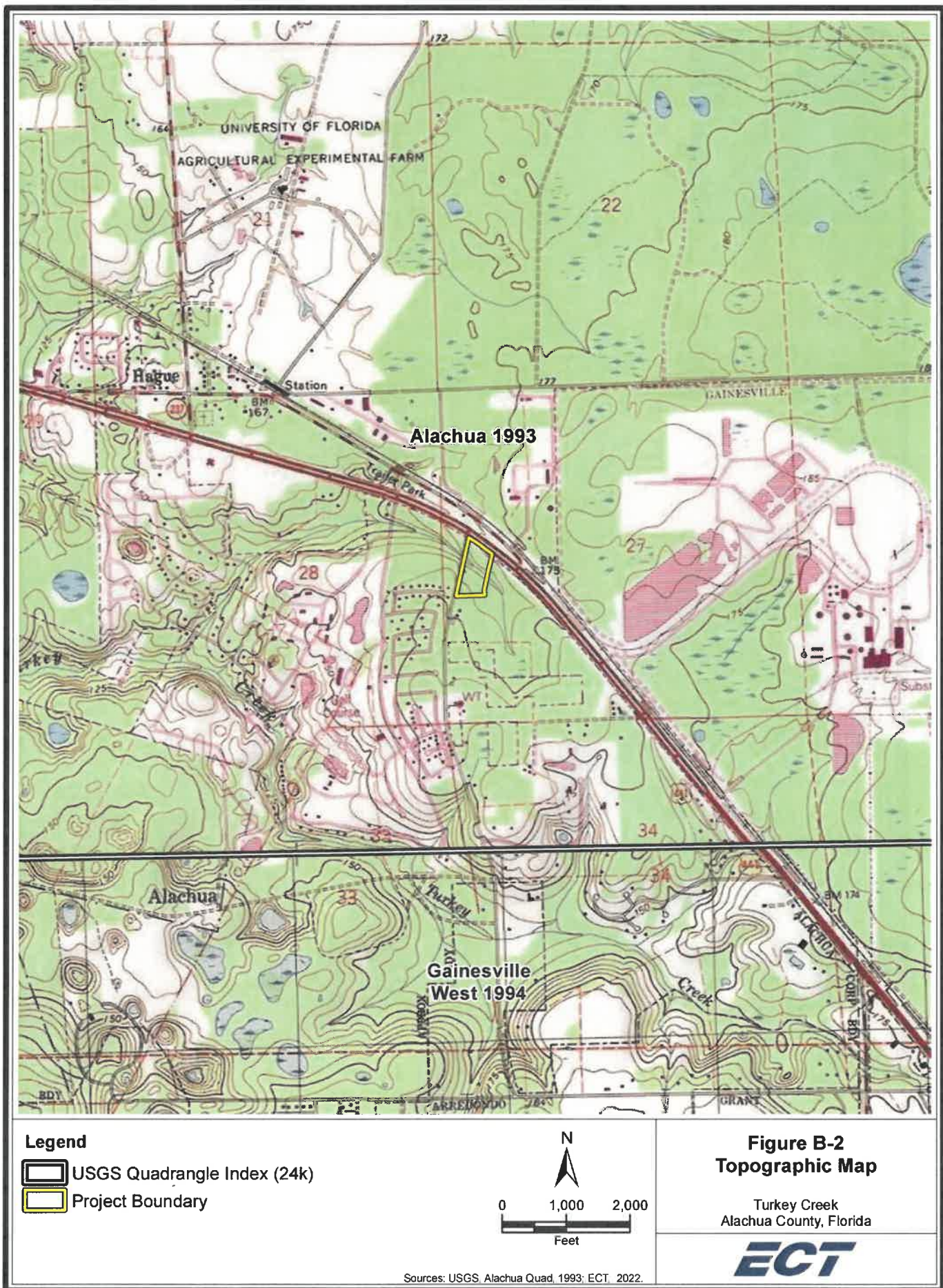


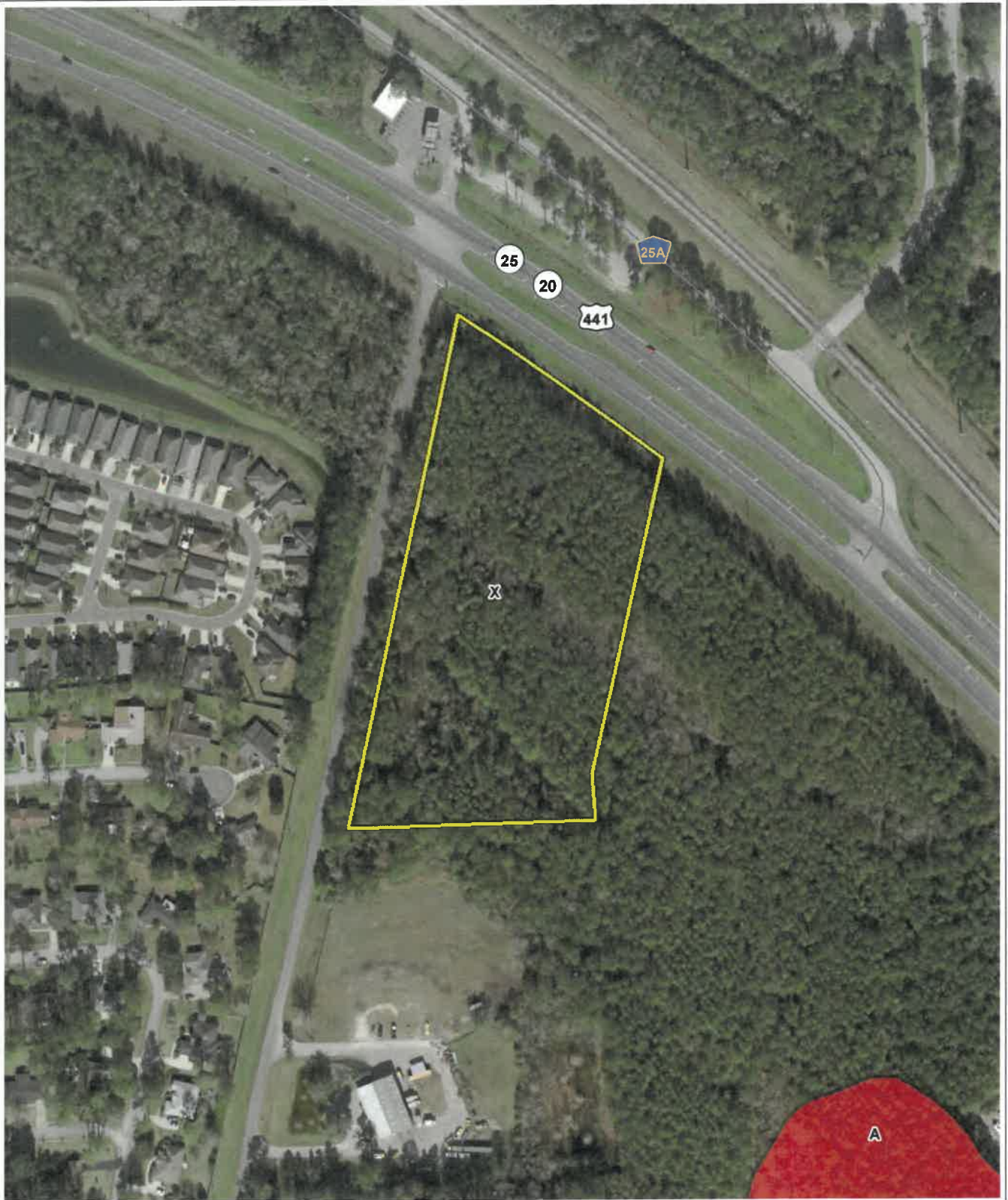
**Figure B-1
Site Location**

Turkey Creek
Alachua County, Florida

ECT

Sources: ESRI, 2021; ECT, 2022.





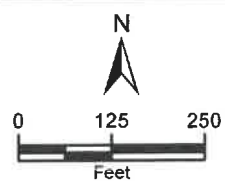
Legend

 Project Boundary

Flood Zone

 A

 X, Area of Minimal Flood Hazard

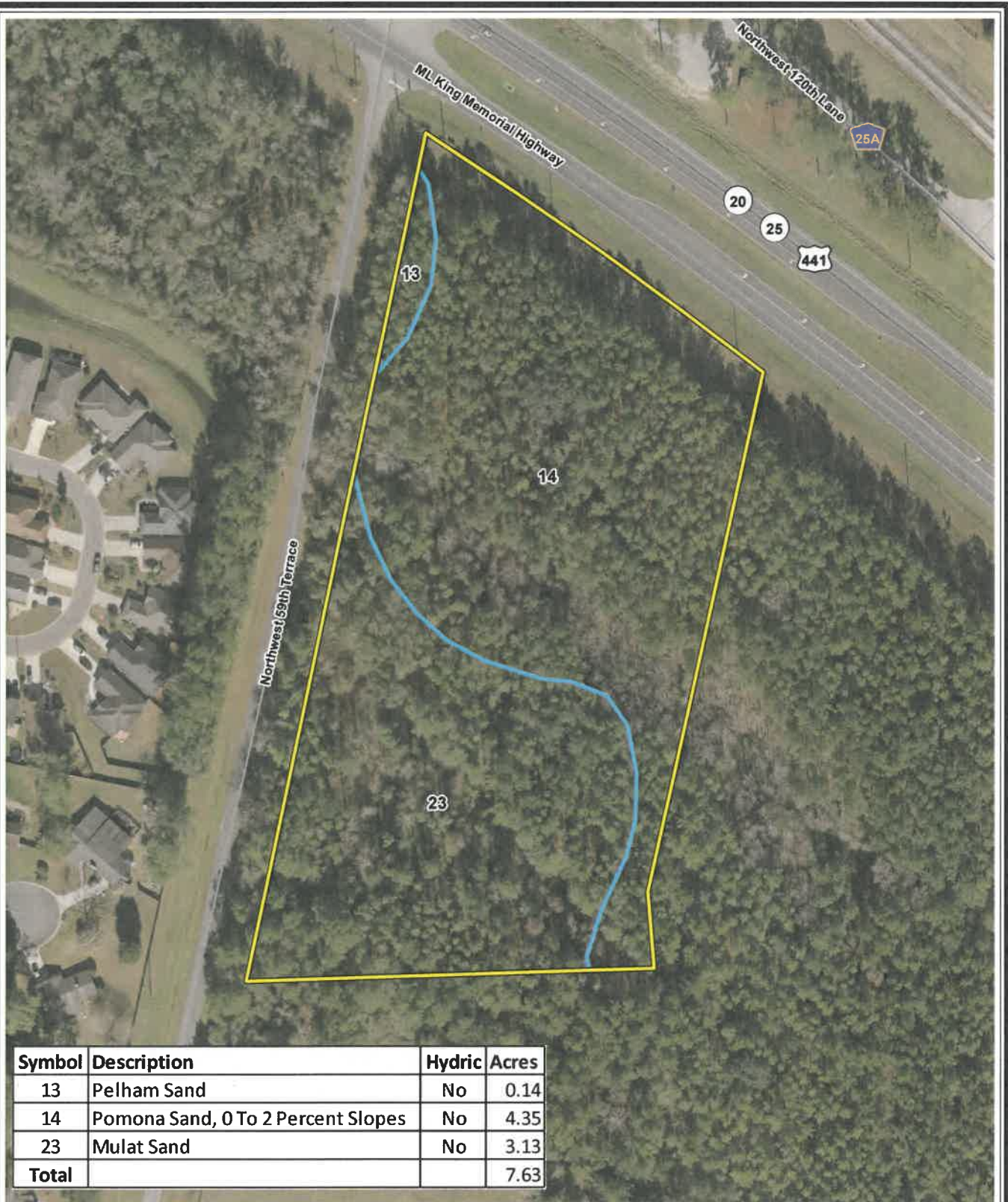


**Figure B-3
FEMA Flood Zones**

Turkey Creek
Alachua County, Florida

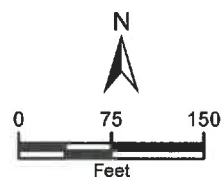
ECT

Sources: FEMA, 2021; FDOT Imagery, 2020; ECT, 2022.



Legend

- Project Boundary
- Soils

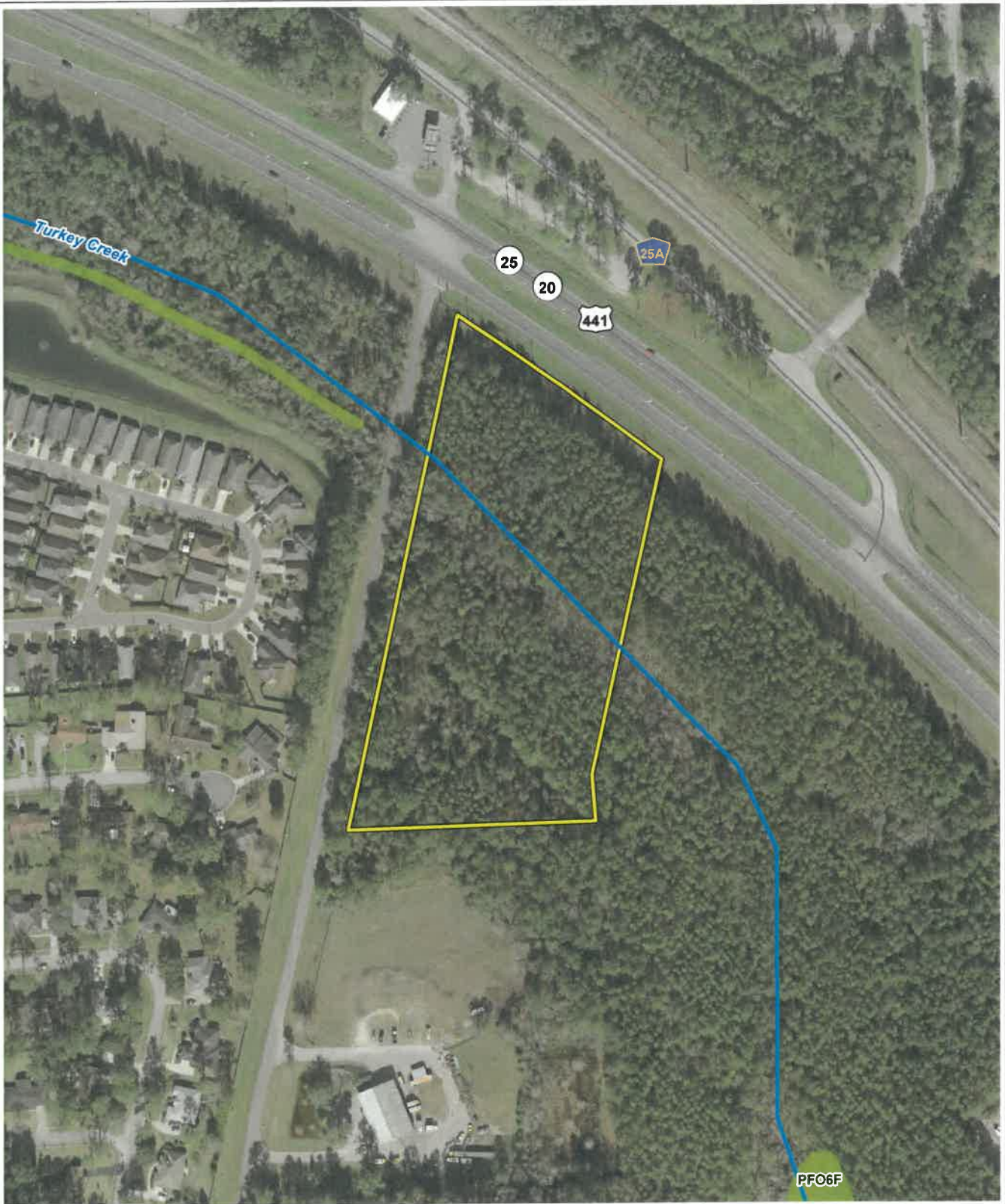


**Figure B-4
Soils**

Turkey Creek
Alachua County, Florida

ECT

Sources: USDA, 2021; FDOT Imagery, 2020; ECT, 2022.



Legend

- Project Boundary
- Creeks
- Freshwater Forested/Shrub Wetland

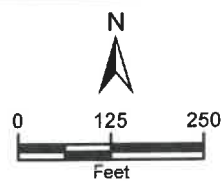
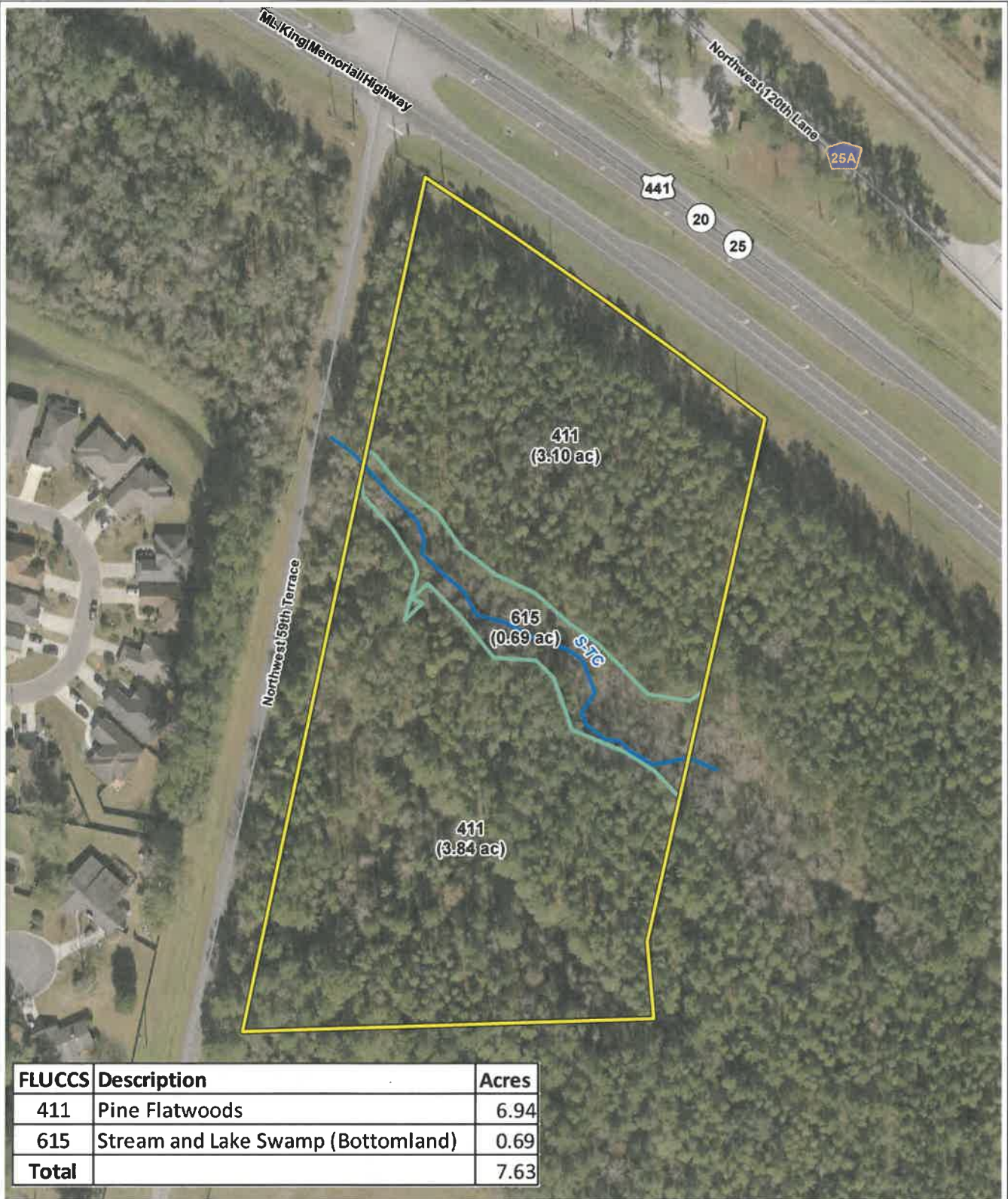


Figure B-5
National Wetlands Inventory
and Alachua County Creeks

Turkey Creek
 Alachua County, Florida

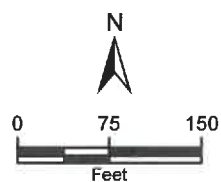
ECT

Sources: Alachua County, 2020; USFWS, 2021; FDOT Imagery, 2020; ECT, 2022.



Legend

- Project Boundary
- Creek Centerline
- Land Use/Land Cover

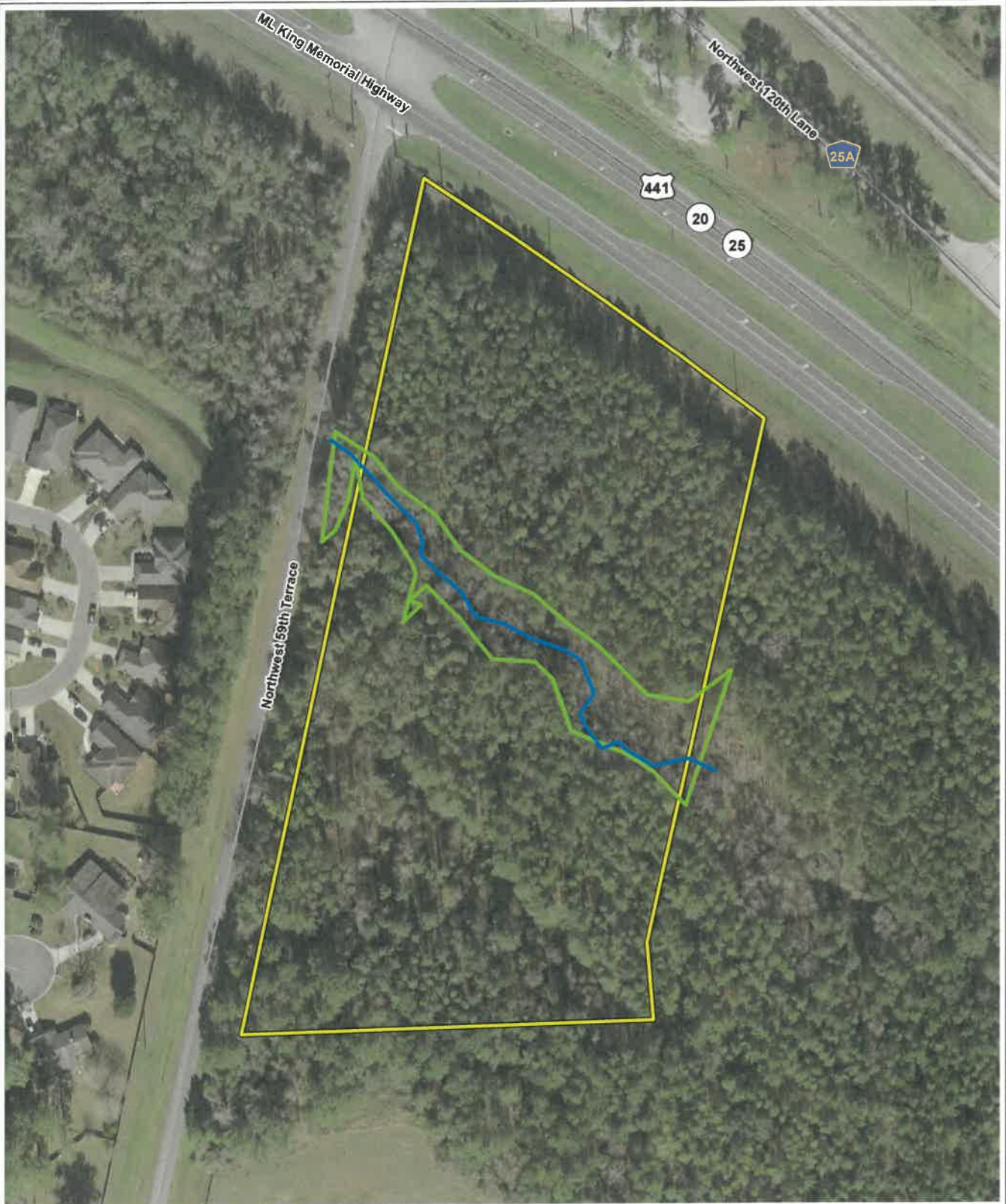


Sources: FDOT Imagery, 2020; ECT, 2022.

Figure B-6
Land Use/Land Cover

Turkey Creek
Alachua County, Florida

ECT



Legend

- Project Boundary
- Wetland
- Creek Centerline

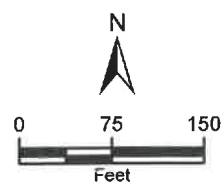
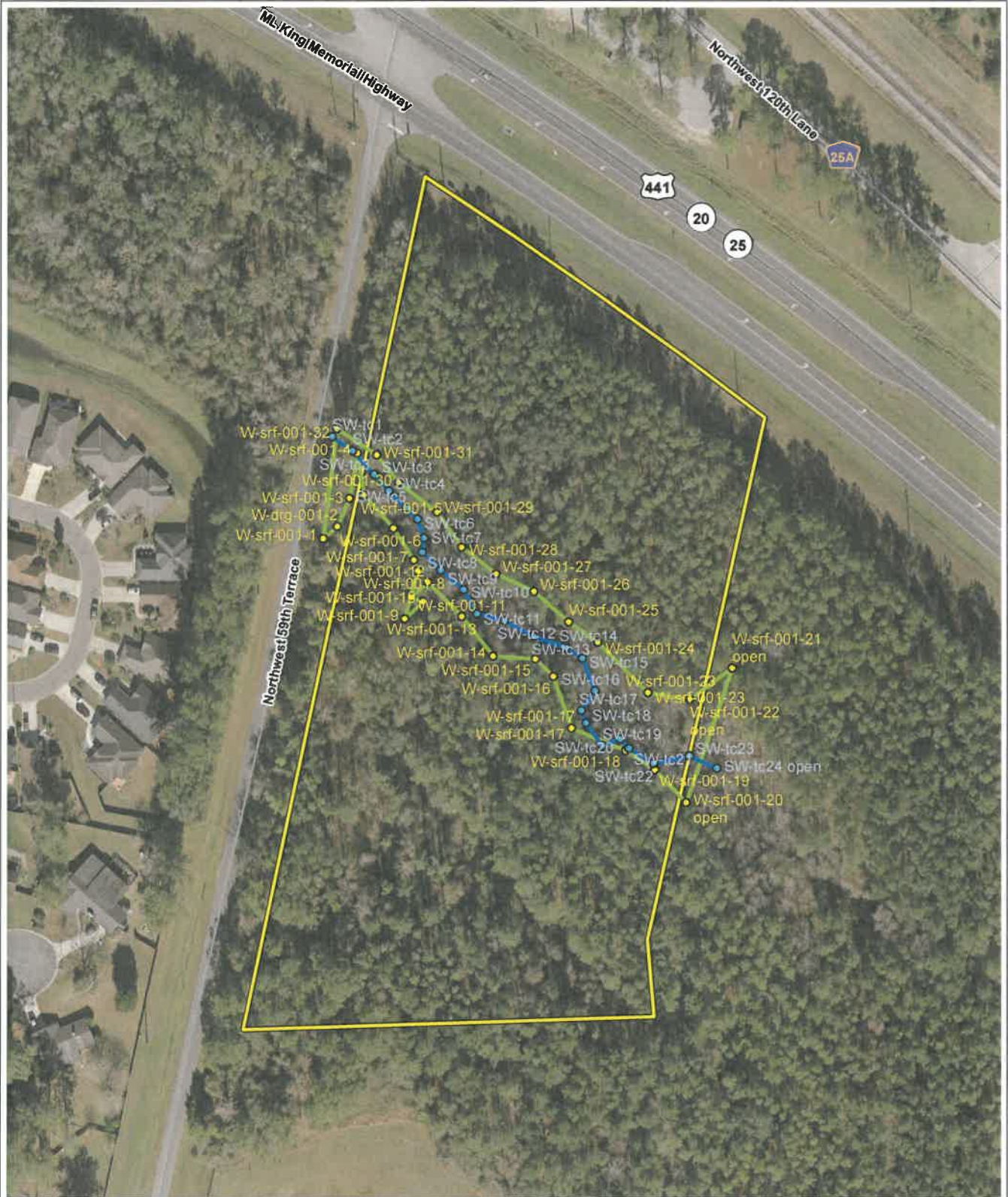


Figure B-7
Wetlands and Streams

Turkey Creek
Alachua County, Florida

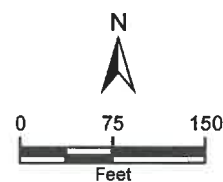
ECT

Sources: FDOT Imagery, 2020; ECT, 2022.



Legend

- Project Boundary
- Wetland
- Creek Centerline
- Wetland_pt
- SW_pt



**Figure B-8
Wetlands and Streams**

Turkey Creek
Alachua County, Florida

ECT

Sources: FDOT Imagery, 2020; ECT, 2022.

**APPENDIX C
RARE, THREATENED, AND ENDANGERED SPECIES
SUPPLEMENTAL INFORMATION**

NRCS SOILS REPORT



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Alachua County, Florida



April 4, 2022

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Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

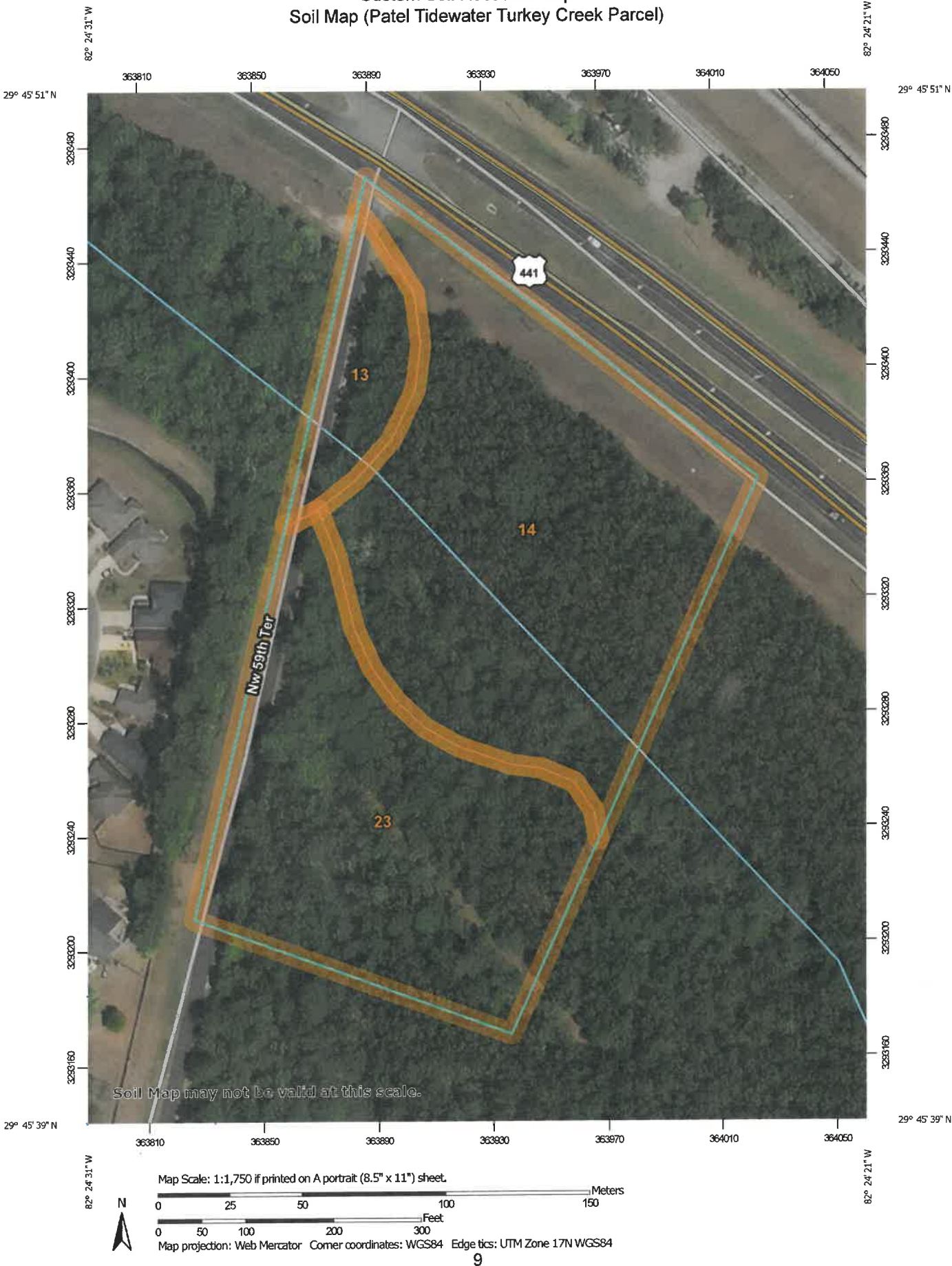
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (Patel Tidewater Turkey Creek Parcel)



MAP LEGEND

MAP INFORMATION

Area of Interest (AOI)	
	Area of Interest (AOI)
Soils	
	Soil Map Unit Polygons
	Soil Map Unit Lines
	Soil Map Unit Points
Special Point Features	
	Blowout
	Borrow Pit
	Clay Spot
	Closed Depression
	Gravel Pit
	Gravelly Spot
	Landfill
	Lava Flow
	Marsh or swamp
	Mine or Quarry
	Miscellaneous Water
	Perennial Water
	Rock Outcrop
	Saline Spot
	Sandy Spot
	Severely Eroded Spot
	Sinkhole
	Slide or Slip
	Sodic Spot

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Alachua County, Florida
Survey Area Data: Version 22, Aug 31, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 26, 2014—Dec 9, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (Patel Tidewater Turkey Creek Parcel)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
13	Pelham sand	0.6	7.7%
14	Pomona sand, 0 to 2 percent slopes	4.4	53.2%
23	Mulat sand	3.2	39.1%
Totals for Area of Interest		8.3	100.0%

Map Unit Descriptions (Patel Tidewater Turkey Creek Parcel)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

Custom Soil Resource Report

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Alachua County, Florida

13—Pelham sand

Map Unit Setting

National map unit symbol: brp5
Elevation: 10 to 450 feet
Mean annual precipitation: 50 to 58 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 248 to 278 days
Farmland classification: Not prime farmland

Map Unit Composition

Pelham and similar soils: 70 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pelham

Setting

Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 7 inches: sand
E - 7 to 29 inches: sand
Btg - 29 to 69 inches: sandy clay loam
Cg - 69 to 80 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 2.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL)
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL)
Hydric soil rating: No

Minor Components

Surrency

Percent of map unit: 6 percent

Landform: Depressions on marine terraces

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G154XB245FL)

Hydric soil rating: Yes

Mulat, non-hydric

Percent of map unit: 6 percent

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL)

Hydric soil rating: No

Wauchula, non-hydric

Percent of map unit: 6 percent

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL)

Hydric soil rating: No

Riviera

Percent of map unit: 6 percent

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL)

Hydric soil rating: Yes

Pomona

Percent of map unit: 6 percent

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)

Hydric soil rating: No

14—Pomona sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2w4gc

Elevation: 20 to 180 feet

Mean annual precipitation: 50 to 58 inches

Mean annual air temperature: 66 to 73 degrees F

Frost-free period: 248 to 278 days

Farmland classification: Not prime farmland

Map Unit Composition

Pomona and similar soils: 70 percent

Minor components: 30 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pomona

Setting

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 5 inches: sand

E - 5 to 16 inches: sand

Bh - 16 to 24 inches: sand

E' - 24 to 43 inches: sand

B'tg - 43 to 69 inches: sandy clay loam

Cg - 69 to 84 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 2.00 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 4.0

Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: A/D

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Forage suitability group: Sandy soils on flats of mesic or hydric lowlands
(G155XB141FL)
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands
(G155XB141FL)
Hydric soil rating: No

Minor Components

Sparr

Percent of map unit: 6 percent
Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Talf, rise
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands
(G155XB141FL)
Hydric soil rating: No

Newnan

Percent of map unit: 6 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands
(G155XB141FL)
Hydric soil rating: No

Myakka, non-hydric

Percent of map unit: 6 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands
(G155XB141FL)
Hydric soil rating: No

Wauchula, non-hydric

Percent of map unit: 6 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands
(G155XB141FL)
Hydric soil rating: No

Pelham

Percent of map unit: 6 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands
(G155XB141FL)
Hydric soil rating: No

23—Mulat sand

Map Unit Setting

National map unit symbol: brps
Elevation: 10 to 450 feet
Mean annual precipitation: 50 to 58 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 248 to 278 days
Farmland classification: Not prime farmland

Map Unit Composition

Mulat, non-hydric, and similar soils: 70 percent
Mulat, hydric, and similar soils: 20 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mulat, Non-hydric

Setting

Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 8 inches: sand
E - 8 to 30 inches: sand
Btg - 30 to 47 inches: fine sandy loam
BCg - 47 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D

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Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL)

Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL)

Hydric soil rating: No

Description of Mulat, Hydric

Setting

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 8 inches: sand

E - 8 to 30 inches: sand

Btg - 30 to 47 inches: fine sandy loam

BCg - 47 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 4.0

Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D

Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL)

Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL)

Hydric soil rating: Yes

Minor Components

Plummer, non-hydric

Percent of map unit: 3 percent

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)

Hydric soil rating: No

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Pelham

Percent of map unit: 3 percent

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL)

Hydric soil rating: No

Wauchula, non-hydric

Percent of map unit: 2 percent

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL)

Hydric soil rating: No

Pomona

Percent of map unit: 2 percent

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)

Hydric soil rating: No

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ALACHULA COUNTY FLORIDAN AQUIFER HIGH RECHARGE AREAS

Alachua County Floridan Aquifer High Recharge Area

Legend

Generalized Vulnerability
Rating

Low Vulnerability

Vulnerable

High Vulnerability

Stream-to-Sink Basins

Municipalities

Major Roads

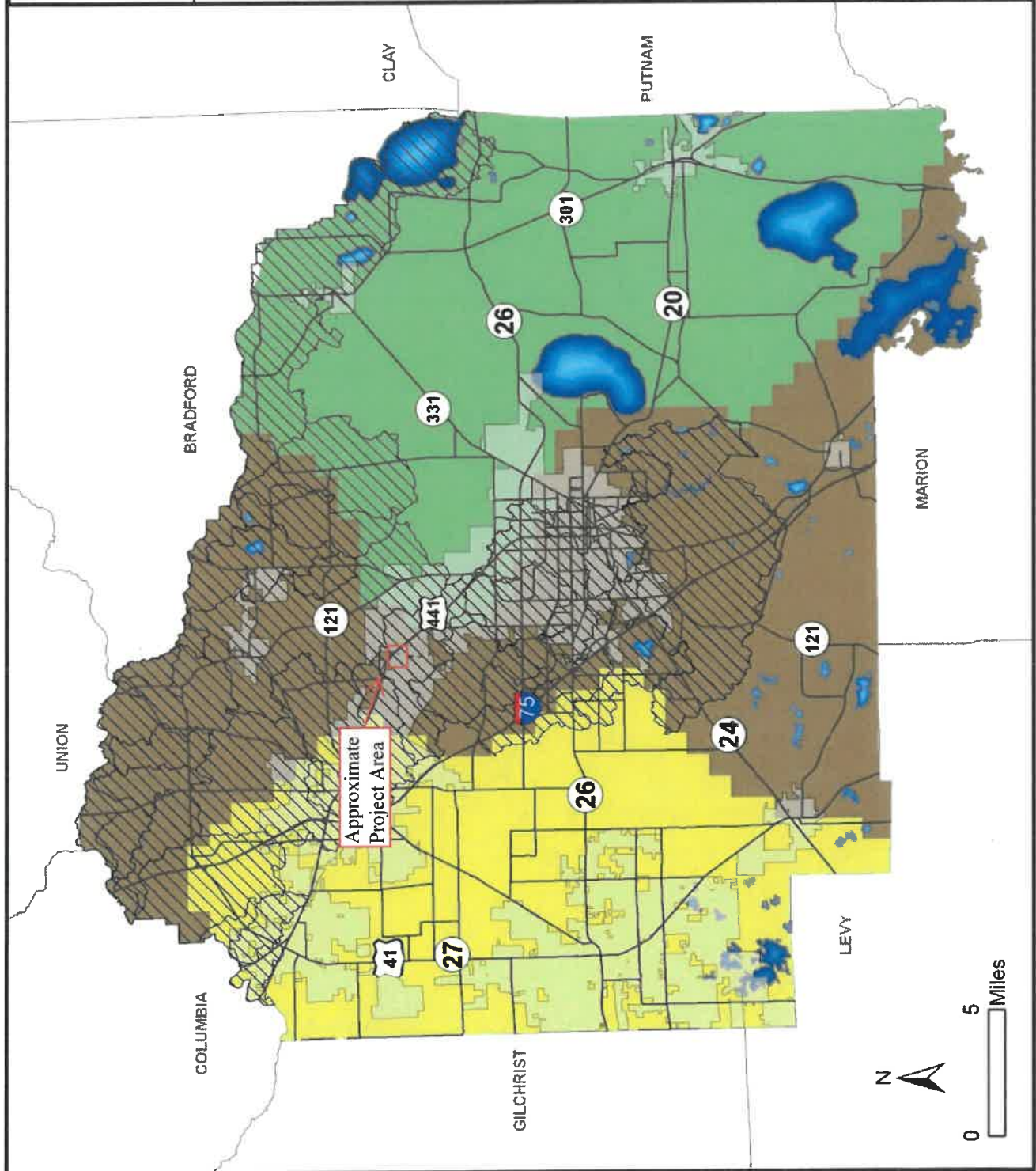
Lakes

High Aquifer Recharge Areas: Areas where stream-to-sink surface water basins occur and areas where the Floridan aquifer system is vulnerable or highly vulnerable

Sources:
Basins Layer used to produce the Stream-to-Sink Basins Layer (FDEP, 1998)
Generalization of Alachua County (Florida)
Aquifer Vulnerability Assessment Results
(Advanced Geospatial Inc., 2008)

Prepared At:
Alachua County
Environmental Protection Department
201 SE 2nd Avenue, Suite 201
Gainesville, FL 32601

DISCLAIMER: This map and the spatial data it contains are made available as a public service, to be used for reference purposes only. The Alachua County Environmental Protection Department provides this information AS IS without warranty of any kind, implied or expressed, regarding accuracy, completeness, or fitness of use. The quality of the data is dependent on the various sources from which each data layer is obtained. 3-27-2009



Appendix C - Approximate Patel/Tidewater Turkey Creek Project Area/High Aquifer Recharge Area

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Alachua County, Florida



Local office

Florida Ecological Services Field Office

☎ (772) 5623909

📠 (772) 7780683

MAILING ADDRESS

1339 20th Street
Vero Beach, FL 32960

PHYSICAL ADDRESS

339 20th Street
Vero Beach, FL 92960

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act requires Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#) also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME

STATUS

Eastern Black Rail *Laterallus jamaicensis ssp. jamaicensis*

Threatened

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/10477>

Wood Stork *Mycteria americana*

Threatened

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/8477>

Reptiles

NAME

STATUS

Eastern Indigo Snake *Drymarchon corais couperi*

Threatened

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/646>

Gopher Tortoise *Gopherus polyphemus*

Candidate

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/6994>

Amphibians

NAME

STATUS

Frosted Flatwoods Salamander *Ambystoma cingulatum*

Threatened

Wherever found

There is final critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/4981>

Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus*

Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.p>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur on the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A
BREEDING SEASON IS INDICATED
FOR A BIRD ON YOUR LIST, THE
BIRD MAY BREED IN YOUR
PROJECT AREA SOMETIME WITHIN

THE TIMEFRAME SPECIFIED,
WHICH IS A VERY LIBERAL
ESTIMATE OF THE DATES INSIDE
WHICH THE BIRD BREEDS
ACROSS ITS ENTIRE RANGE.
"BREEDS ELSEWHERE" INDICATES
THAT THE BIRD DOES NOT LIKELY
BREED IN YOUR PROJECT AREA.)

American Kestrel *Falco sparverius paulus*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9587>

Breeds Apr 1 to Aug 31

Bald Eagle *Haliaeetus leucocephalus*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Breeds Sep 1 to Jul 31

Great Blue Heron *Ardea herodias occidentalis*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds Jan 1 to Dec 31

Henslow's Sparrow *Ammodramus henslowii*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3941>

Breeds elsewhere

Lesser Yellowlegs *Tringa flavipes*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9679>

Breeds elsewhere

Magnificent Frigatebird *Fregata magnificens*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds Oct 1 to Apr 30

Prairie Warbler *Dendroica discolor*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 1 to Jul 31

Red-headed Woodpecker *Melanerpes erythrocephalus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 10 to Sep 10

Short-billed Dowitcher *Limnodromus griseus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9480>

Swallow-tailed Kite *Elanoides forficatus*

Breeds Mar 10 to Jun 30

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8938>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

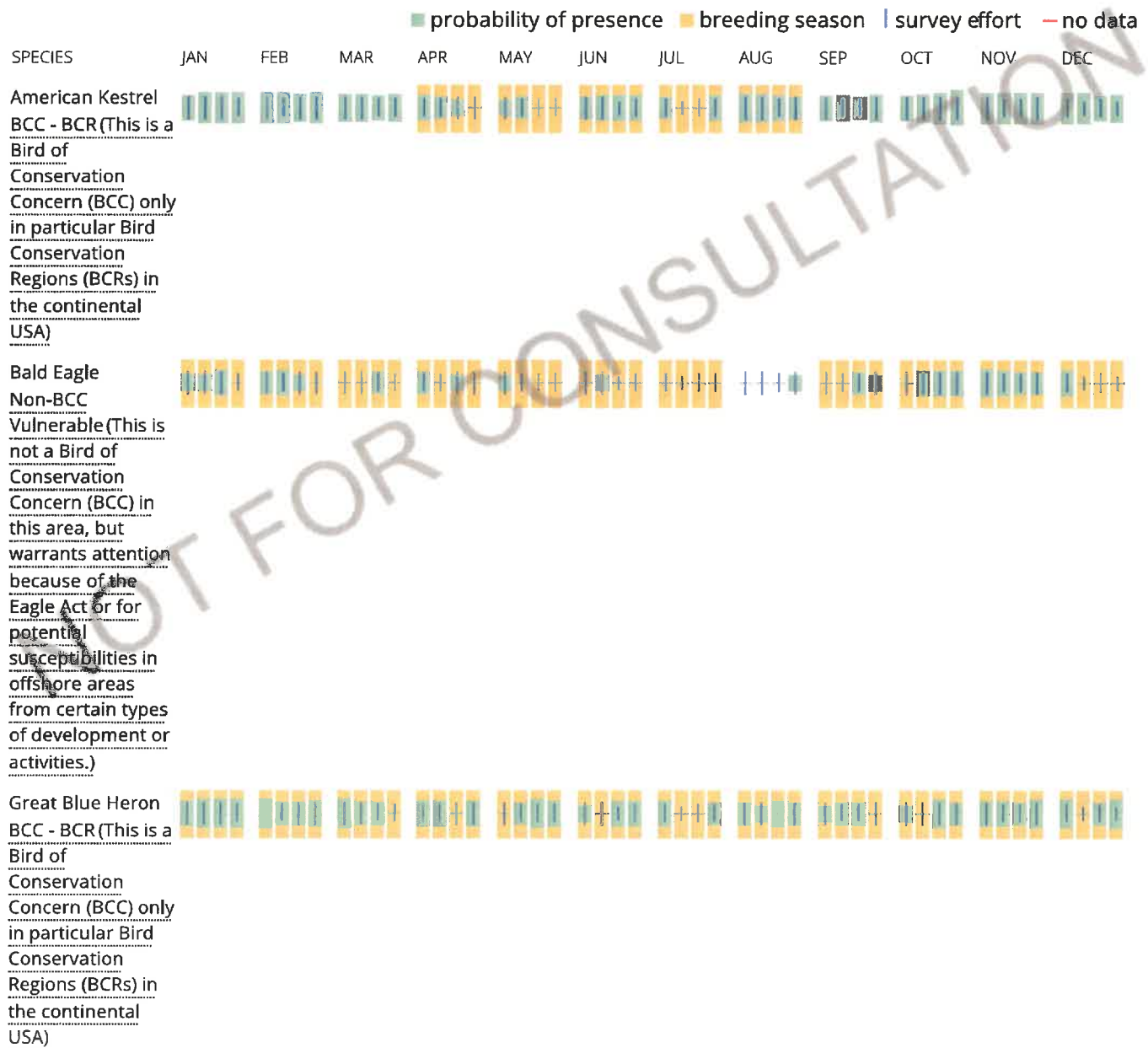
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

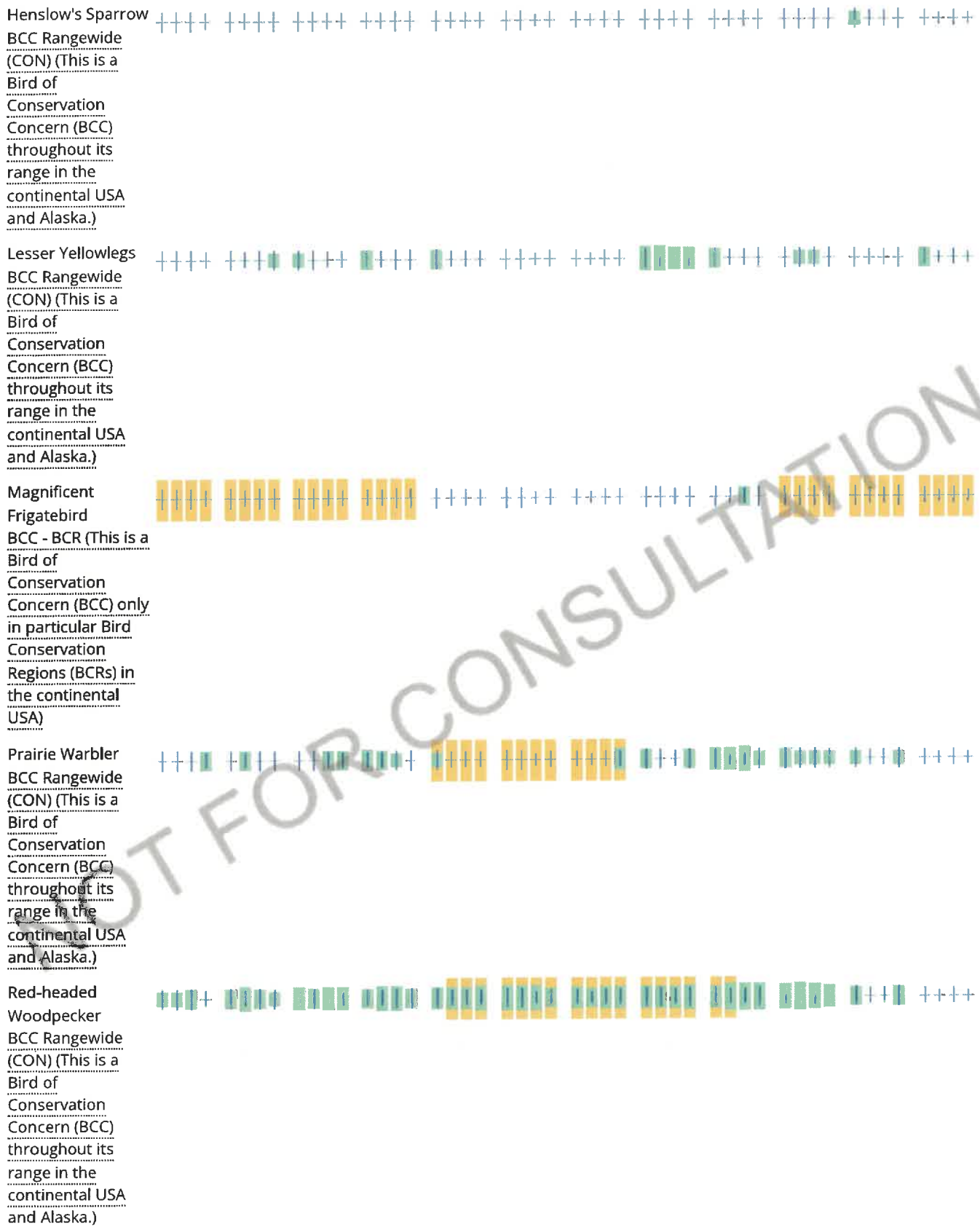
No Data (—)

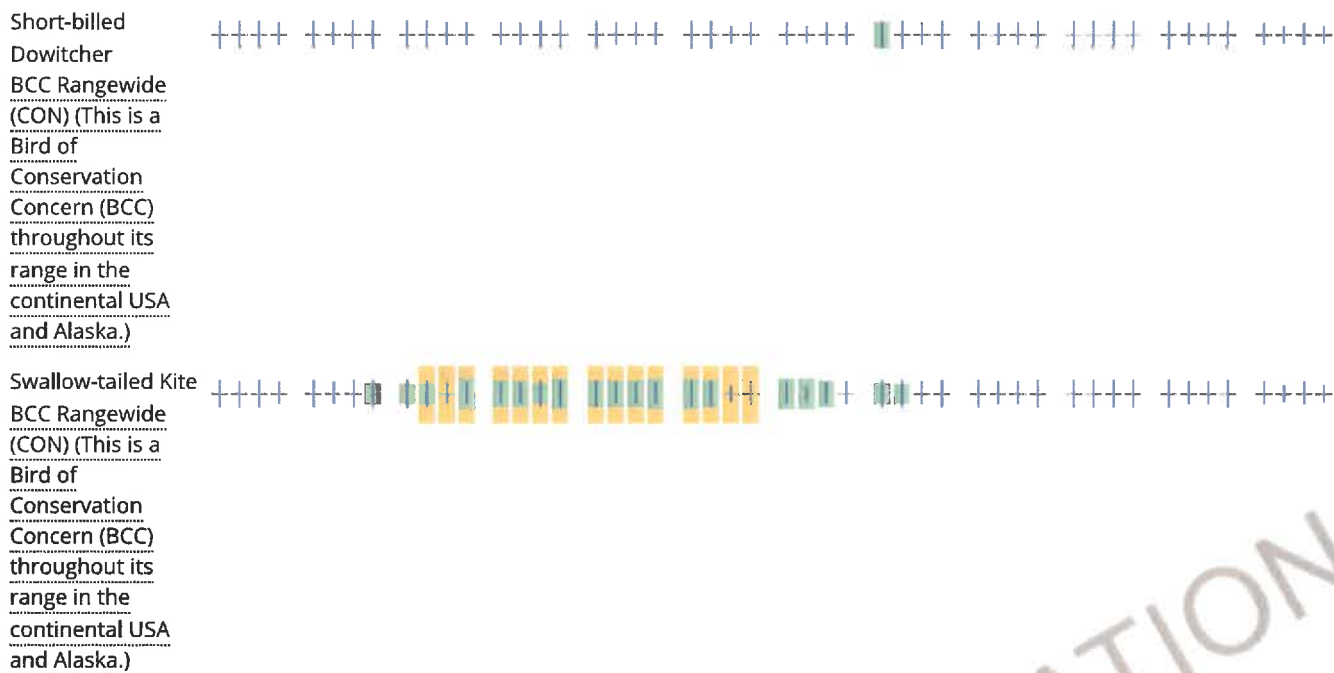
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.







Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the [Probability of Presence Summary](#). [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring

in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

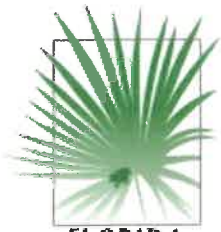
Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

FNAI BIODIVERSITY MATRICES

FNAI BIODIVERSITY MATRICES



1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
850-681-9364 fax
www.fnai.org

FLORIDA
Natural Areas
INVENTORY

Florida Natural Areas Inventory

Biodiversity Matrix Query Results

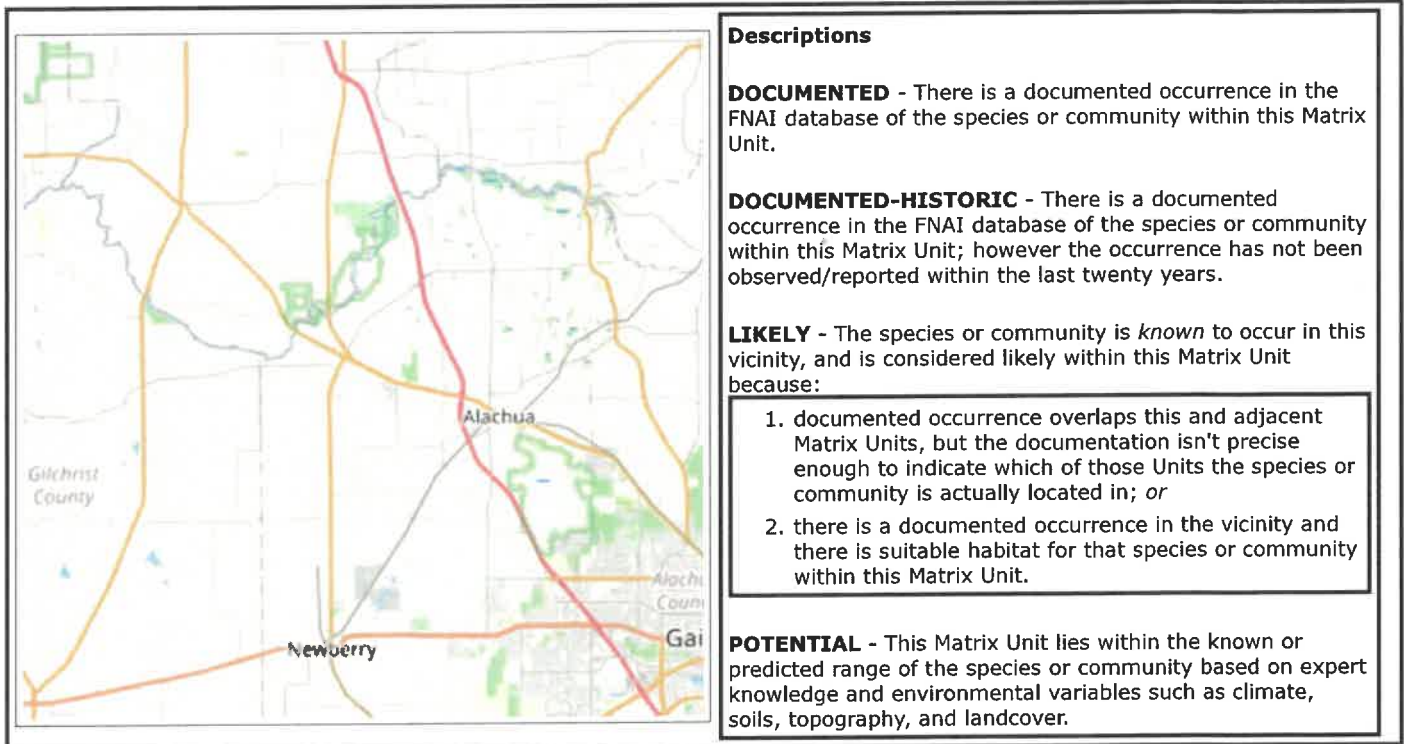
UNOFFICIAL REPORT

Created 4/6/2022

(Contact the FNAI Data Services Coordinator at 850.224.8207 or
kbrinegar@fnai.fsu.edu for information on an official Standard Data Report)

NOTE: The Biodiversity Matrix includes only rare species and natural communities tracked by FNAI.

Report for 2 Matrix Units: 26171 , 26172



Matrix Unit ID: 26171

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

4 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Drymarchon couperi Eastern Indigo Snake	G3	S3	LT	FT
<i>Mesic flatwoods</i>	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	LT	FT
<i>Upland hardwood forest</i>	G5	S3	N	N

Matrix Unit ID: 26172

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

3 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Drymarchon couperi Eastern Indigo Snake	G3	S3	LT	FT
Mycteria americana Wood Stork	G4	S2	LT	FT
Upland hardwood forest	G5	S3	N	N

Matrix Unit IDs: 26171 , 26172

37 **Potential** Elements Common to Any of the 2 Matrix Units

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Agrimonia incisa Incised Groove-bur	G3	S2	N	T
Aphodius troglodytes Gopher Tortoise Aphodius Beetle	G2G3	S2	N	N
Asplenium heteroresiliens Wagner's Spleenwort	GNA	S1	N	N
Asplenium plenum Ruffled Spleenwort	G1Q	S1	N	N
Asplenium x curtissii Curtiss' Spleenwort	GNA	S1	N	N
Ataenius brevicollis An Ataenius Beetle	G3G5	S1S2	N	N
Athene cunicularia floridana Florida Burrowing Owl	G4T3	S3	N	SSC
Bolbocerosoma hamatum Bicolored Burrowing Scarab Beetle	G3G4	S3	N	N
Brickellia cordifolia Flyn's Brickell-bush	G2G3	S2	N	E
Ceratocanthus aeneus Shining Ball Scarab Beetle	G2G3	S2	N	N
Coprion gopheri Gopher Tortoise Copris Beetle	G2	S2	N	N
Ctenium floridanum Florida Toothache Grass	G2	S2	N	E
Dasymutilla archboldi Lake Wales Ridge Velvet Ant	G2G3	S2S3	N	N
Egretta caerulea Little Blue Heron	G5	S4	N	SSC
Gopherus polyphemus Gopher Tortoise	G3	S3	C	ST
Grus canadensis pratensis Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Hartwrightia floridana Hartwrightia	G2	S2	N	T
Heterodon simus Southern Hognose Snake	G2	S2	N	N
Lampropeltis extenuata Short-tailed Snake	G3	S3	N	ST
Lithobates capito Gopher Frog	G3	S3	N	SSC
Litsea aestivalis Pondspice	G3?	S2	N	E
Matelea floridana Florida Spiny-pod	G2	S2	N	E
Myotis austroriparius Southeastern Bat	G3G4	S3	N	N

<i>Neofiber alleni</i> Round-tailed Muskrat	G3	S3	N	N
<i>Notophthalmus perstriatus</i> Striped Newt	G2G3	S2	C	N
<i>Onthophagus polyphemi polyphemi</i> Punctate Gopher Tortoise Onthophagus Beetle	G2G3T2T3	S2	N	N
<i>Peltotrupes profundus</i> Florida Deepdigger Scarab Beetle	G3	S3	N	N
<i>Peucaea aestivalis</i> Bachman's Sparrow	G3	S3	N	N
<i>Phyllophaga elongata</i> Elongate June Beetle	G3	S3	N	N
<i>Picoides borealis</i> Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Pituophis melanoleucus mugitus</i> Florida Pine Snake	G4T3	S3	N	SSC
<i>Podomys floridanus</i> Florida Mouse	G3	S3	N	SSC
<i>Pteroglossaspis ecristata</i> Giant Orchid	G2G3	S2	N	T
<i>Pycnanthemum floridanum</i> Florida Mountain-mint	G3	S3	N	T
<i>Sciurus niger shermani</i> Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Sideroxylon alachuense</i> Silver Buckthorn	G1	S1	N	E
<i>Ursus americanus floridanus</i> Florida Black Bear	G5T2	S2	N	N

Disclaimer

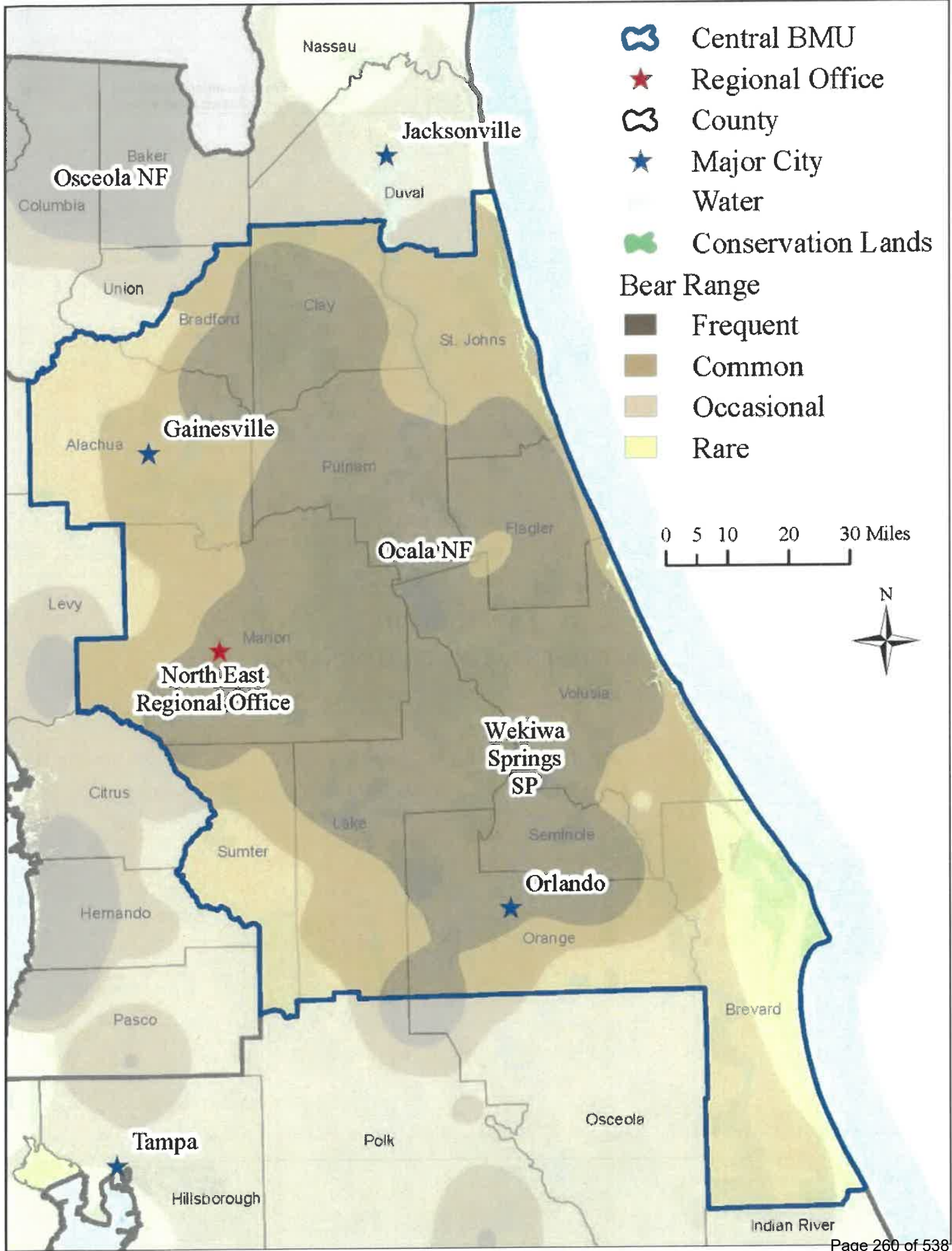
The data maintained by the Florida Natural Areas Inventory represent the single most comprehensive source of information available on the locations of rare species and other significant ecological resources statewide. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. FNAI shall not be held liable for the accuracy and completeness of these data, or opinions or conclusions drawn from these data. FNAI is not inviting reliance on these data. Inventory data are designed for the purposes of conservation planning and scientific research and are not intended for use as the primary criteria for regulatory decisions.

Unofficial Report

These results are considered unofficial. FNAI offers a [Standard Data Request](#) option for those needing certifiable data.

1	1	10	10	10	10
2	2	20	20	20	20
3	3	30	30	30	30
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6	6	60	60	60	60
7	7	70	70	70	70
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96	96	960	960	960	960
97	97	970	970	970	970
98	98	980	980	980	980
99	99	990	990	990	990
100	100	1000	1000	1000	1000

CENTRAL BLACK BEAR MANAGEMENT UNIT



APPENDIX D REPRESENTATIVE PHOTOGRAPHS

Site Name: Patel Tidewater LLC Turkey Creek Property		Site Location: Alachua County, Florida	
Photograph No.: 1			
Date: 3/21/2022			
Direction Photograph Taken E			
Description: View over looking creek.			

Site Name: Patel Tidewater LLC Turkey Creek Property		Site Location: Alachua County, Florida	
Photograph No.: 2			
Date: 3/21/2022			
Direction Photograph Taken N			
Description: View depicting characteristic vegetation.			

Site Name: Patel Tidewater LLC Turkey Creek Property		Site Location: Alachua County, Florida	
Photograph No.: 3			
Date: 3/21/2022			
Direction Photograph Taken S			
Description: Sandy-bottom creek.			

Site Name: Patel Tidewater LLC Turkey Creek Property		Site Location: Alachua County, Florida	
Photograph No.: 4			
Date: 3/21/2022			
Direction Photograph Taken W			
Description: View overlooking creek tributary, showing characteristic vegetation.			

Site Name: Patel Tidewater LLC Turkey Creek Property		Site Location: Alachua County, Florida	
Photograph No.: 5			
Date: 3/21/2022			
Direction Photograph Taken E			
Description: View looking east from road, creek is culverted under road bridge.			

Site Name: Patel Tidewater LLC Turkey Creek Property		Site Location: Alachua County, Florida	
Photograph No.: 6			
Date:			
Direction Photograph Taken E			
Description: View showing vegetation in bottomland around creek.			

Site Name: Patel Tidewater LLC Turkey Creek Property		Site Location: Alachua County, Florida	
Photograph No.: 7			
Date: 3/21/2022			
Direction Photograph Taken N			
Description: View of characteristic upland habitat found on site.			

Site Name: Patel Tidewater LLC Turkey Creek Property		Site Location: Alachua County, Florida	
Photograph No.: 8			
Date: 3/21/2022			
Direction Photograph Taken NW			
Description: View looking north and west along US 441.			

Site Name: Patel Tidewater LLC Turkey Creek Property		Site Location: Alachua County, Florida	
Photograph No.: 9			
Date: 3/21/2022			
Direction Photograph Taken SE			
Description: From US 411, looking south across property. View of vegetation and tree canopy on subject parcel.			

Site Name: Patel Tidewater LLC Turkey Creek Property		Site Location: Alachua County, Florida	
Photograph No.: 10			
Date: 3/21/2022			
Direction Photograph Taken SE			
Description: A number of large trees were identified on site.			

Site Name: Patel Tidewater LLC Turkey Creek Property		Site Location: Alachua County, Florida	
Photograph No.: 11			
Date: 3/21/2022			
Direction Photograph Taken			
Description: Soil profile taken at upland.			

Site Name: Patel Tidewater LLC Turkey Creek Property		Site Location: Alachua County, Florida	
Photograph No.: 12			
Date: 3/21/2022			
Direction Photograph Taken			
Description: Soil profile taken at wetland.			

Ecological Report

Listed Species Survey



Date: 07/08/2024
PN# 23-0030.04
PM: Andy Woodruff
11801 Research Dr
Alachua, FL 32615
(352)331-1976

Prepared For: City of Alachua Planning and Community Development

Submitted For Review To: Timothy J. Boehlein, PE

Address: PO Box 9
Alachua, FL 32616



1.0 Introduction

This report documents the results of a listed species survey conducted on July 8, 2024 by CHW LLC, an NV5 company(CHW) for Patel Fuel and Retail (Project). The Project totals approximately 2.14± acres and is located in Section 27, Township 8 South, and Range 19 East, Alachua County, Florida (Exhibit 1). The Project is composed of pine plantation and is surrounded by US 441 to the north, undeveloped forested lands to the east, south, and NW 59th Terrace to the west (Exhibit 2).

2.0 Methods

A literature review involved an examination of available information on listed species in the Project's geographical region. The literature sources reviewed included the FWCC's Florida's Endangered and Threatened Species (2021); Florida Atlas of Breeding Sites for Herons and Their Allies (Runde et al. 1991); Audubon Eagle Watch database of bald eagle (*Haliaeetus leucocephalus*) nest locations; and database information from the United States Fish and Wildlife Service (USFWS) and the Florida Fish and Wildlife Conservation Commission (FWCC).

A field survey was conducted on July 8, 2024, during daylight hours by qualified ecologists walking parallel belt transects across the Project site. Transects were oriented east west and spaced to ensure that sufficient visual coverage of ground and flora were obtained. Depictions of transects are depicted on Exhibit 3. At regular intervals the ecologists stopped, remained quiet, and listened for wildlife vocalizations. The survey was conducted with the aid of 8x power binoculars. Weather conditions in the pedestrian transects during the survey had temperatures in the low-90s, clear skies, and no precipitation.

3.0 Results

The Project is not within any USFWS consultation areas for Threatened and Endangered species. No listed species have been documented by FWCC or USFWS occurring on the Project site (Exhibit 4).

According to the Audubon Eagle Watch and FWCC databases, the closest bald eagle nest (AL-056) is located approximately 1.9 miles southwest of the Project (Exhibit 4). This distance is beyond the FWCC and the USFWS recommended 660-foot buffer protection zone for active and alternate bald eagle nests (National Bald Eagle Management Guidelines, USFWS 2007). The bald eagle was delisted under the federal Endangered Species Act in 2007, but it is still protected under the Bald and Golden Eagle Protection Act.

The Florida Atlas of Breeding Sites for Herons and Their Allies (Runde et al. 1991) and the FWCC database were referenced for the locations of breeding colonies for both listed and non-listed wading birds including, but not limited to, snowy egret (*Egretta thula*), roseate spoonbill (*Ajaia ajaja*), little blue heron (*Egretta caerulea*), and tri-colored heron (*Egretta tricolor*). The FWCC information is current through 1999. According to these sources a rookery exists approximately 0.7 miles southeast of the Project, which is beyond the FWCC recommended 250-foot buffer (Exhibit 4).

No listed species or their sign were observed on the Project during the July 8, 2024 field survey.

4.0 Summary

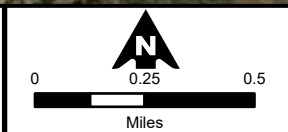
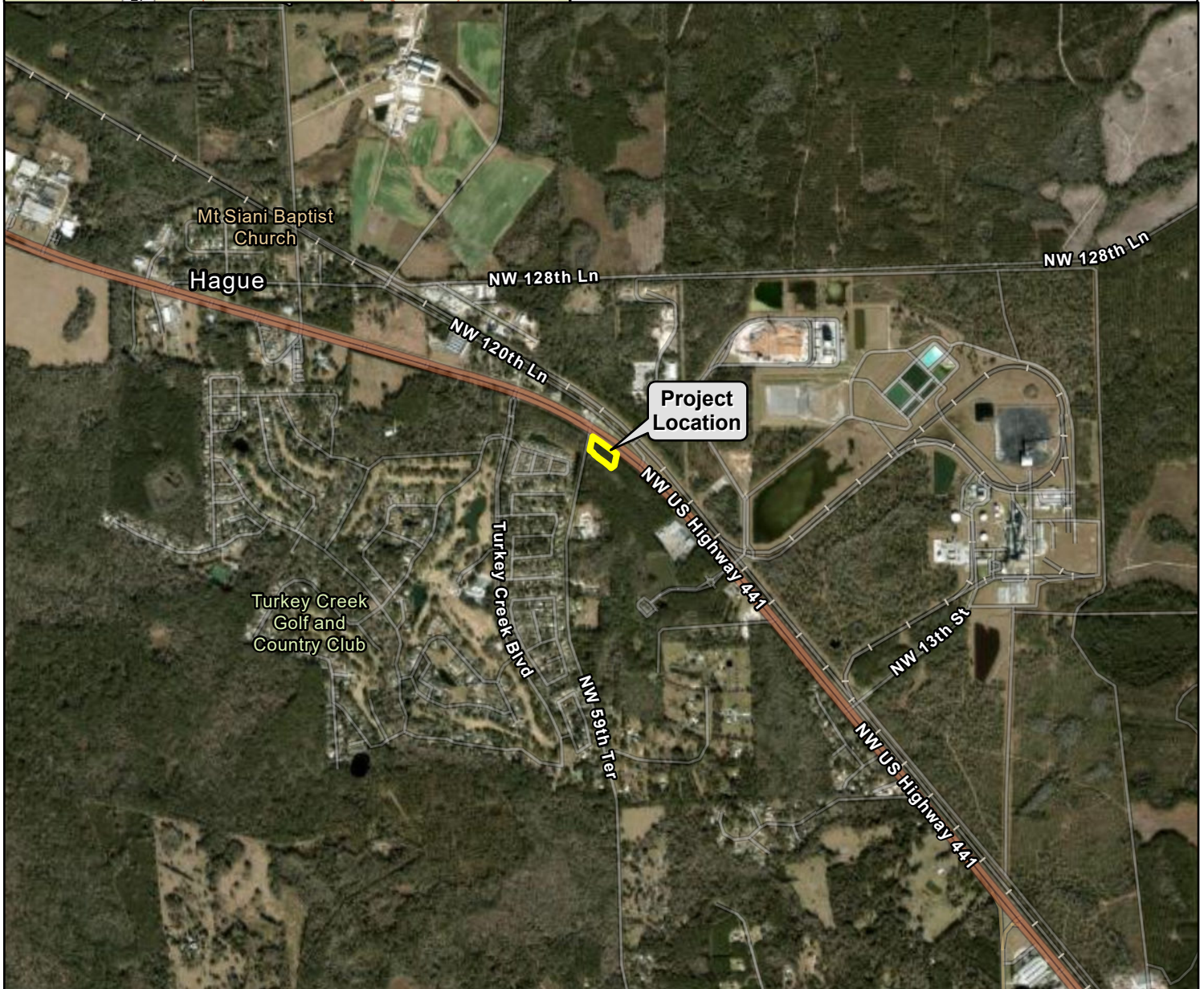
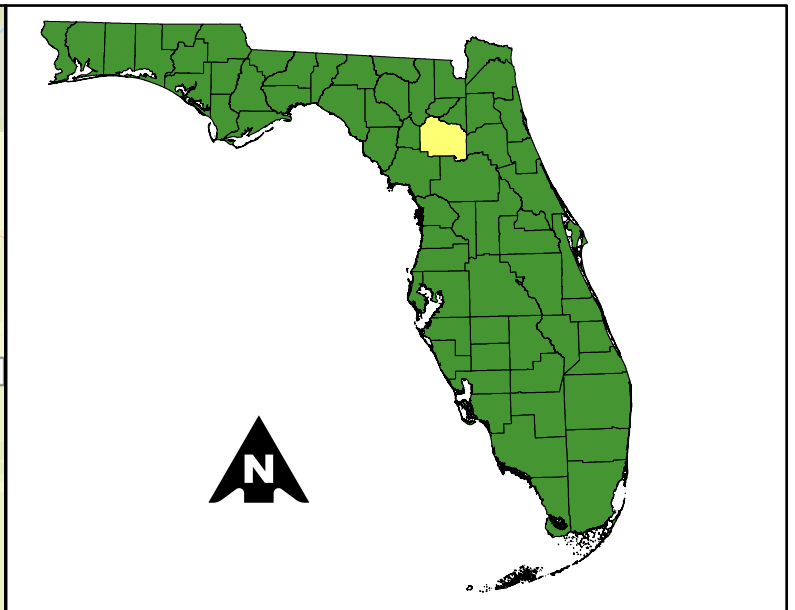
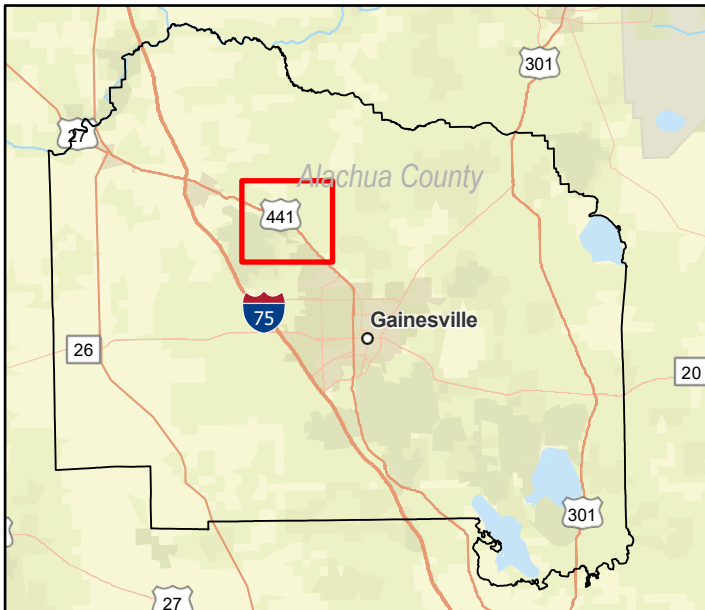
CHW ecologists conducted a literature review and field survey to determine if the Project is being utilized by threatened or endangered species. The Project is not within any USFWS consultation areas. There are no agency documented occurrences of threatened or endangered species on or in the vicinity of the Project site. No listed species or their sign were observed on the Project site.

5.0 References

Florida Fish and Wildlife Conservation Commission. 2022. Florida's Endangered and Threatened Species. Official Lists, Bureau of Non-Game Wildlife, Division of Wildlife.

Runde, D.E., J.A. Gore, J.A. Hovis, M.S. Robson, and P.D. Southall. 1991. Florida Atlas of Breeding Sites for Herons and Their Allies, Update 1986 - 1989. Nongame Wildlife Program Technical Report No. 10. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida. E6-5

U.S. Fish and Wildlife Service. 2007. National Bald Eagle Management Guidelines.



Project Location Map **Patel Fuel and Retail**

DRAWN BY:	D.B.
DRAWING DATE:	7/06/24
REVIEWED BY:	A.W.
EXHIBIT NUMBER:	1



Legend



Project Location

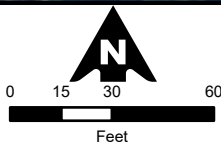
NOTES:

Aerial photographs provided by the Florida Department of Transportation and were flown in 2022.

Property boundary per CHW-Inc. drawing number 22-0030 BOUNDARY TOPO-ADD TOPO.dwg accessed on July 6, 2024 and aerial interpreted.

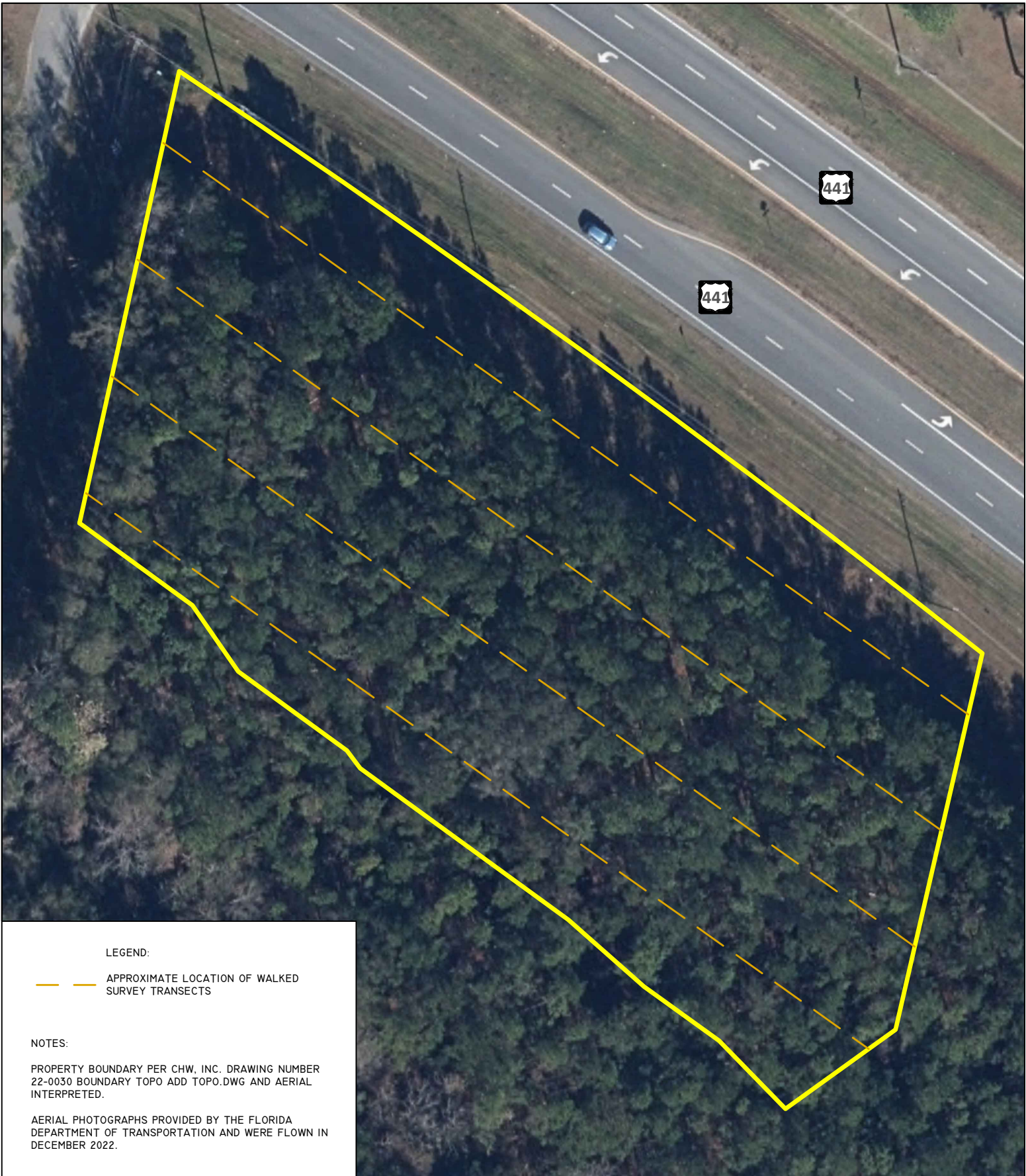


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Aerial With Boundary Patel Fuel and Retail

DRAWN BY:	D.B.
DRAWING DATE:	7/06/24
REVIEWED BY:	A.W.
EXHIBIT NUMBER:	2



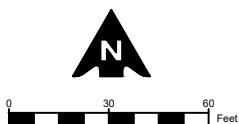
LEGEND:

— — — — — APPROXIMATE LOCATION OF WALKED
SURVEY TRANSECTS

NOTES:

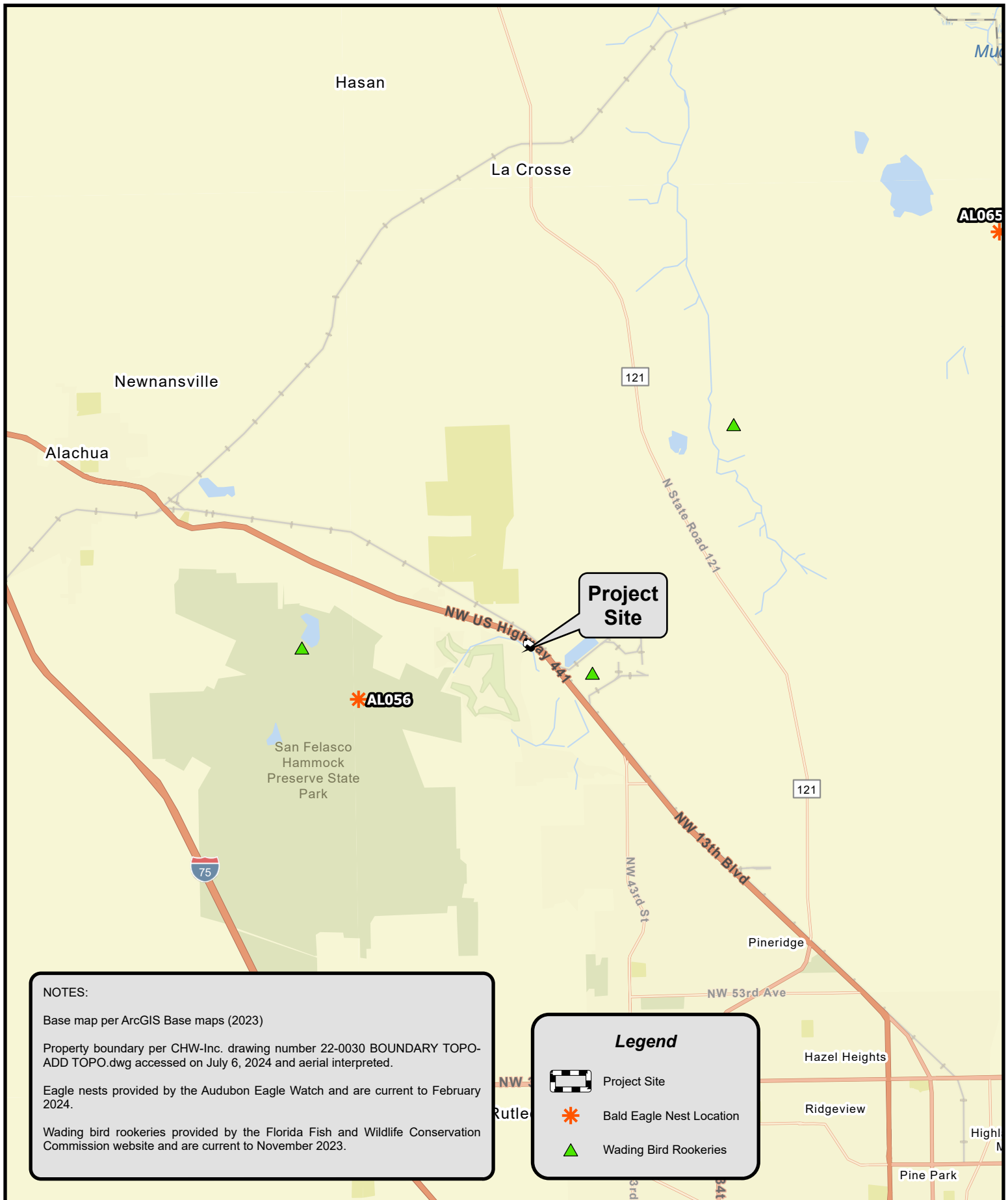
PROPERTY BOUNDARY PER CHW, INC. DRAWING NUMBER
22-0030 BOUNDARY TOPO ADD TOPO.DWG AND AERIAL
INTERPRETED.

AERIAL PHOTOGRAPHS PROVIDED BY THE FLORIDA
DEPARTMENT OF TRANSPORTATION AND WERE FLOWN IN
DECEMBER 2022.



Aerial with Survey Transects Patel Fuel and Retail

DRAWN BY:	D.B.
DRAWING DATE:	7/8/24
REVISED:	
EXHIBIT NUMBER:	3



NOTES:

Base map per ArcGIS Base maps (2023)

Property boundary per CHW-Inc. drawing number 22-0030 BOUNDARY TOPO-ADD TOPO.dwg accessed on July 6, 2024 and aerial interpreted.

Eagle nests provided by the Audubon Eagle Watch and are current to February 2024.

Wading bird rookeries provided by the Florida Fish and Wildlife Conservation Commission website and are current to November 2023.

Legend



Project Site



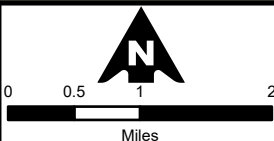
Bald Eagle Nest Location



Wading Bird Rookeries



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Documented Occurrences of Listed Species Patel Fuel and Retail

DRAWN BY:	D.B.
DRAWING DATE:	7/06/24
REVIEWED BY:	A.W.
EXHIBIT NUMBER:	4

Traffic Impact Analysis Report

Listed Species Survey



Date: 07/08/2024
PN# 23-0030.04
PM: Andy Woodruff
11801 Research Dr
Alachua, FL 32615
(352)331-1976

Brian Richard Snyder
State of Florida
Professional Engineer, License
No. 74607

This item has been digitally
signed and sealed by Brian
Richard Snyder, PE, on the
date indicated here.

Printed copies of this document
are not considered signed and
sealed and the signature must
be verified on any electronic
copies.

Prepared For: City of Alachua Planning and Community Development

Submitted For Review To: Timothy J. Boehlein, PE

Address: PO Box 9
Alachua, FL 32616



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- Appendix B: Methodology Letter
- Appendix C: Trip Generation Documentation
- Appendix D: Turning Movement Counts
- Appendix E: Peak Season Factor and Historical Growth Rates
- Appendix F: Buildout Tables
- Appendix G: Trip Distribution
- Appendix H: Straight Line Diagram
- Appendix I: HCS Reports

1. EXECUTIVE SUMMARY

CHW has prepared the following Traffic Impact Analysis (TIA) for the proposed Patel Fuel and Retail which will consist of a convenience store with 10 fueling positions and three retail shells on the southeast corner of the US HWY 441/NW 59th Terrace intersection in the city of Alachua, Florida. The project is anticipated to be built out in approximately 1 year (2025 buildout year). The concept plan for the proposed development is provided in **Appendix A**.

The purpose of this study is to identify the transportation impacts of the proposed project on the transportation network and to recommend mitigation strategies to address any deficiencies that are identified. The study is being prepared for Hardik Patel and is in conformance with the methodology letter dated April 4th, 2024, see **Appendix B**.

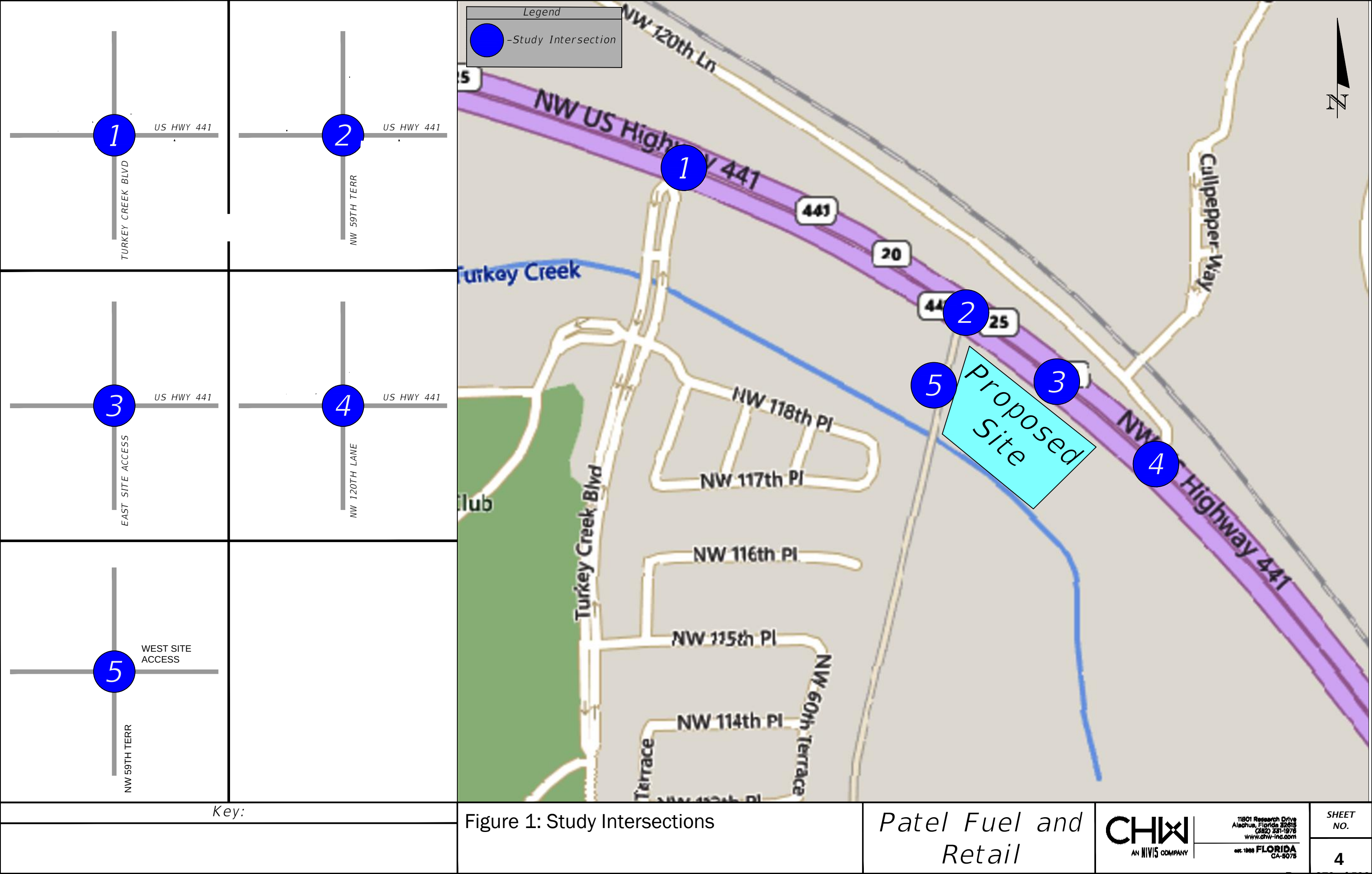
As agreed upon in the methodology, the following land uses and building sizes are used to establish the trip generation volumes used for the analysis.

- Convenience Store/Gas Station – 3.823 KSF with 10 fueling positions
- Strip Retail Plaza – 3.318 KSF
- Fast-food without Drive-thru – 1.692 KSF

The following access are proposed for this development:

- Full access on NW 59th Terrace, located approximately 230 FT south of US HWY 441
- Right-in/right out on US HWY 441 located approximately 400 FT east of NW 59th Terrace

Figure 1 provides the Study Intersections agreed upon in the methodology.



2. TRIP GENERATION

The Institute of Transportation Engineer's (ITE) Trip Generation Manual, 11th Edition was used to develop the trip generation for the site. Pass-by trips were only applied to project trips to/from the west and east on US HWY 441. The applied pass-by trip volumes used in the analysis are lower than the pass-by trips shown in **Table 1**. This is because the pass-by trips volumes were changed such that the eastbound inbound trips matched the eastbound outbound trips and the same for the westbound trips, for the purpose of balancing the trips. The trip generation is provided in **Table 1** and supporting documentation are provided in **Appendix C**.

Table 1 | Trip Generation

Trip Generation									
Land Use	ITE LU Code	Variable KSF with 10 fueling positions	Daily	AM Peak			PM Peak		
			Total	Total	In	Out	Total	In	Out
Convenience Store/Gas Station	945	3.823	2,693	216	108	108	208	104	104
Pass-by Trips (AM = 76%, PM = 75%, Daily = 75.5%)			2033	164	82	82	156	78	78
Strip Retail Plaza	822	3.318	370	14	8	6	36	18	18
Pass-by Trips (40%)			148	6	3	3	14	7	7
Fast-food without Drive-thru	933	1.692	762	73	42	31	61	31	30
Pass-by Trips (AM = 50%, PM = 55%, Daily = 52.5%)			400	37	21	16	34	17	17
Gross New Trips			3,825	303	158	145	305	153	152
Total Pass-by			2,581	207	106	101	204	102	102
Net New Trips (utilizing pass-by reduction)			1,244	96	52	44	101	51	50

* The ITE Trip Generation Manual, 11th Edition provides a pass-by rate of 76% during the AM and 75% during the PM peak but does not provide a pass-by rate for the daily condition, therefore, a pass-by rate average of 75.5% is applied to the daily.

* The ITE Trip Generation Manual, 11th Edition does not provide pass-by rates for the Strip Retail Plaza, therefore the Shopping Plaza pass-by rates are used. The ITE does not provide daily or AM peak hour pass-by rates for Shopping Plaza, therefore, the PM Peak pass-by rate of 40% is applied to all scenarios.

* The ITE Trip Generation Manual, 11th Edition does not provide pass-by rates for Fast-food without drive-thru, therefore the pass-by rates for fast-food with drive-thru is used. The ITE does not provide daily pass-by rates for fast-food with drive-thru, therefore, the daily is based on the average of the AM pass-by rate = 50% and PM pass-by rate = 55%.

*Pass-by rates are reduced such that the eastbound inbound matches the eastbound outbound and same for westbound.

The pass-by rates were adjusted such that the inbound and outbound pass-by trips balanced out based on the direction of travel. The adjusted trip generation used for the analysis is provided in **Table 2**.

Table 2 | Trip Generation used for Analysis

Trip Generation used for Analysis									
Land Use	ITE LU Code	Variable KSF with 10 fueling positions	Daily	AM Peak			PM Peak		
			Total	Total	In	Out	Total	In	Out
Convenience Store/Gas Station	945	3.823	2,693	216	108	108	208	104	104
Strip Retail Plaza	822	3.318	370	14	8	6	36	18	18
Fast-food without Drive-thru	933	1.692	762	73	42	31	61	31	30
Total Pass-by with Directional Volumes Matching			2581	200	100	100	204	102	102
Gross New Trips			3,825	303	158	145	305	153	152
Net New Trips (utilizing pass-by reduction)			1,244	103	58	45	101	51	50

3. DATA COLLECTION

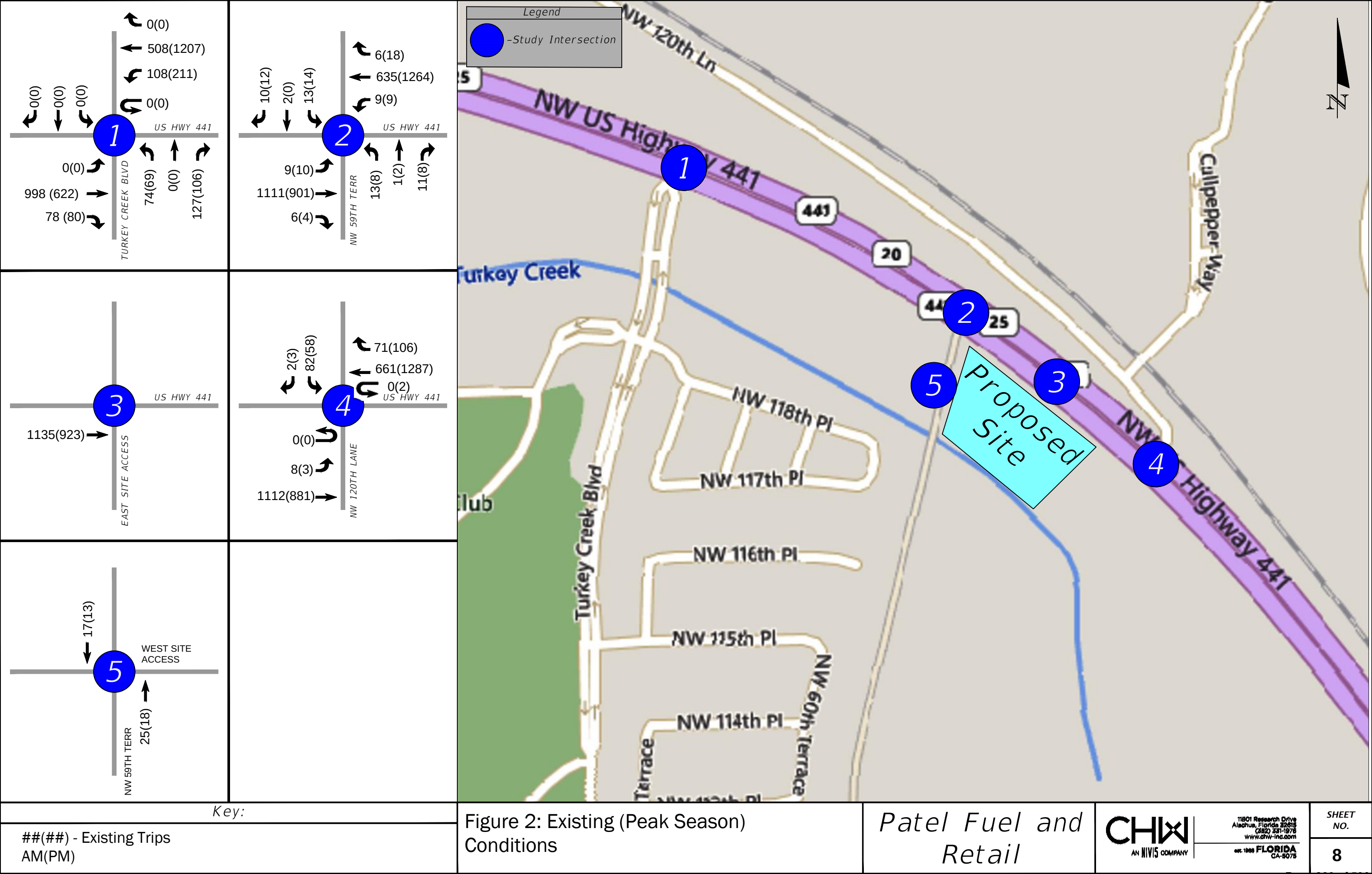
Turning movement counts were collected at the following intersections from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on April 30th, 2024. The counts include passenger vehicles, trucks, and pedestrians.

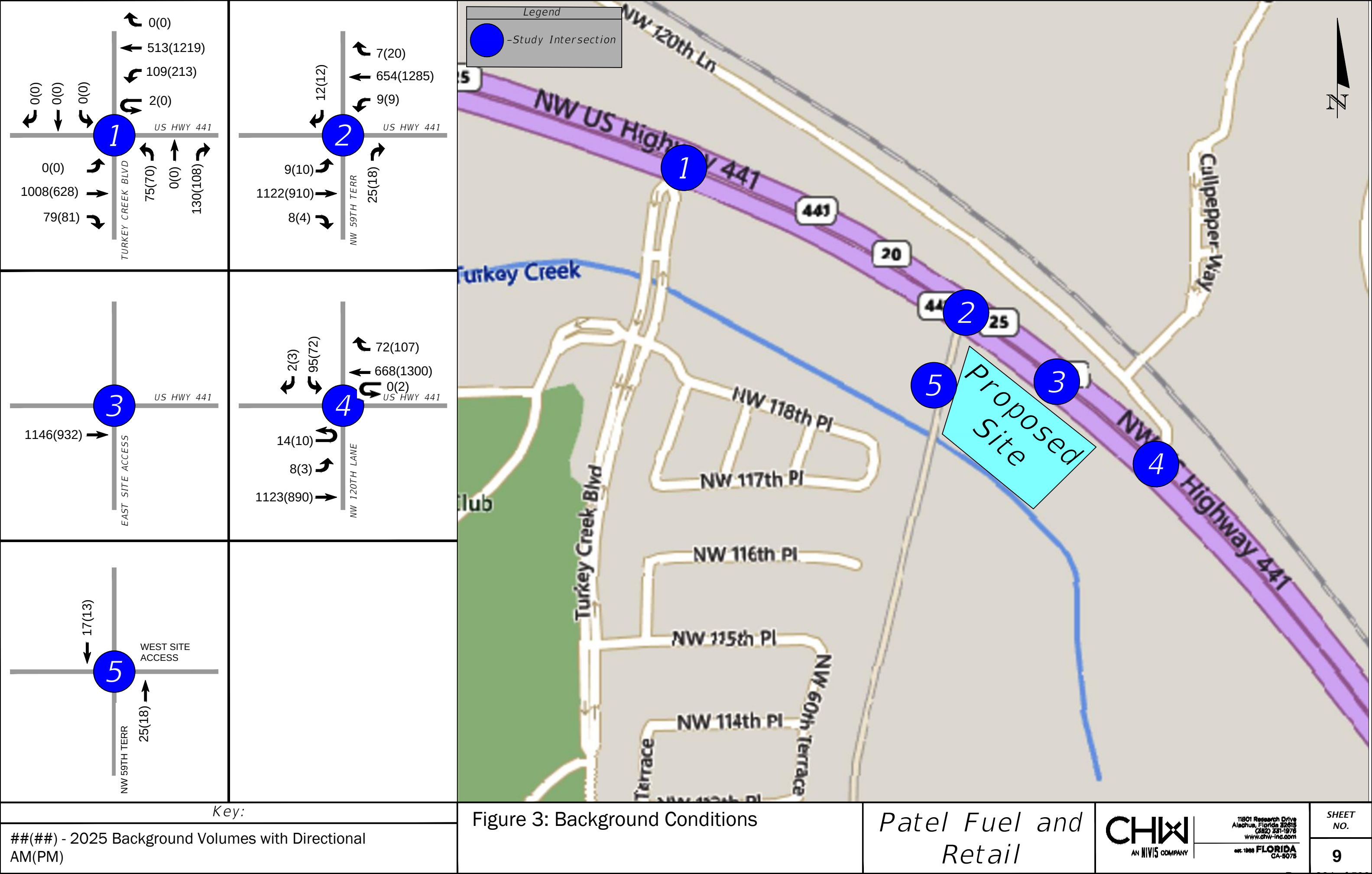
- US HWY 441 at Turkey Creek Boulevard
- US HWY 441 at NW 59th Terrace
- US HWY 441 at NW 120th Lane

The raw count data is provided in **Appendix D**. The count data was adjusted based on the seasonal adjustment factor to derive the peak season turning movements. **Figure 2** illustrates the existing (peak season) turning movements at the study intersections.

Growth rates were determined based on historical ADT from FDOT Traffic Online to derive the 2025 background volumes. **Appendix E** provides the data used to determine the peak season factor and growth rates used to forecast the background volumes. The background information and volumes are provided in the buildout tables provided in **Appendix F**. **Figure 3** illustrates the background conditions at the study intersections.

UPDATED 7/17/2024: The reviewer for the City of Alachua commented that the counts collected on April 30th, 2024, were not consistent with other counts along US HWY 441 which indicate higher volumes traveling eastbound in the morning and westbound in the evening. To confirm that the counts were erroneous, turning movement counts were collected at the US HWY 441/NW 59th Terrace intersection during the AM peak hour on July 9th, 2024, and the PM peak hour on July 8th, 2024. These counts are provided in **Appendix D**. These counts demonstrated 66% eastbound volumes during the AM and 63% westbound volumes during the PM, confirming that the US HWY 441 through movements were reversed in the original counts. All of the turning movements in and out of the side streets along US HWY 441, from the April 30th, 2024 counts, were reviewed and appear to be accurate. Therefore, the through movements were adjusted (eastbound volumes changed to westbound volumes and vice versa) and the turning movement counts were kept as-is. These markups are shown in the count data provided in the appendices.



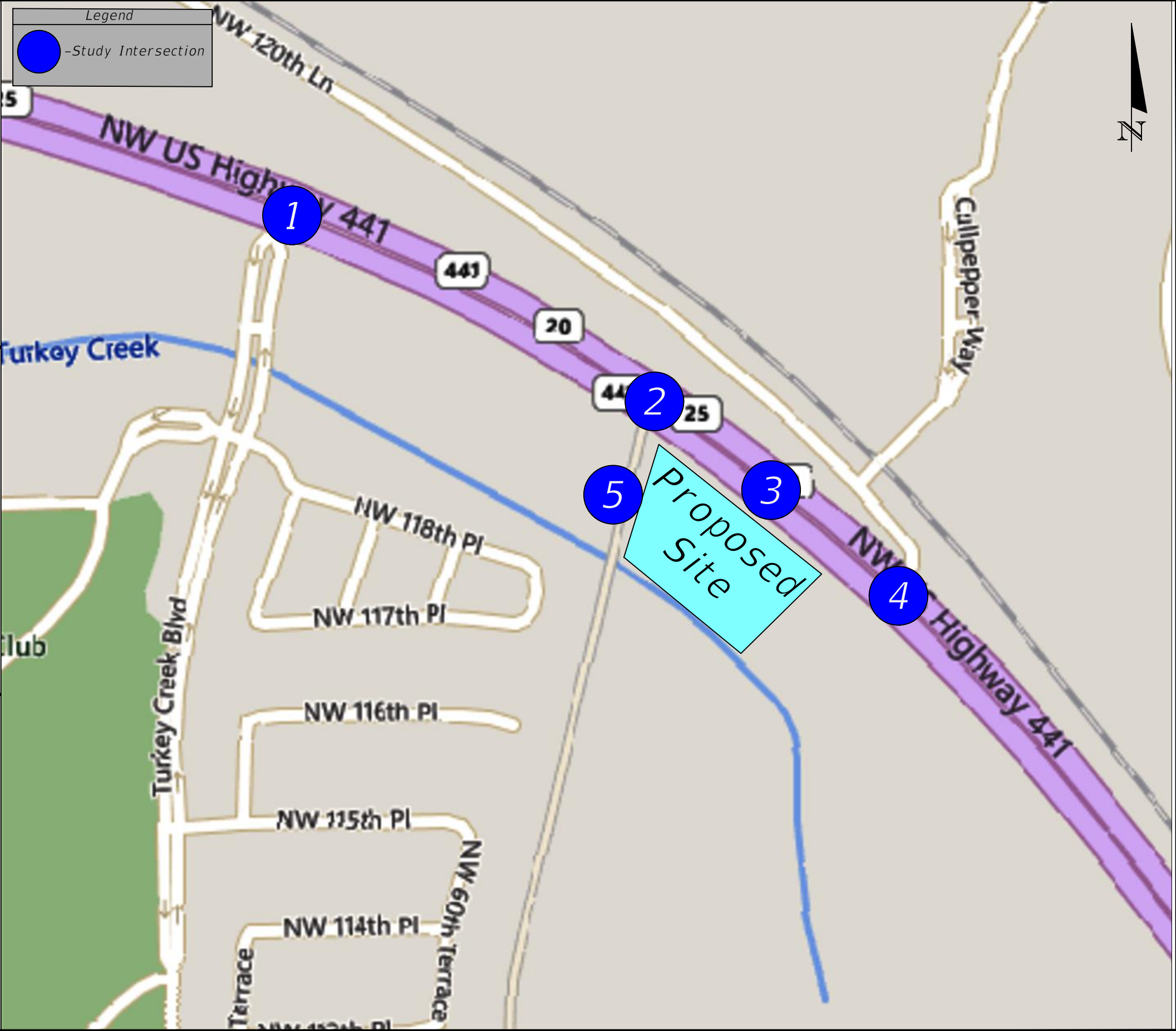
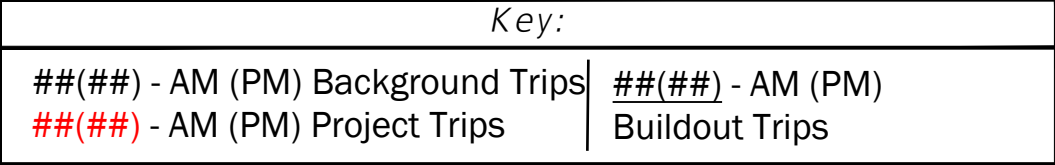
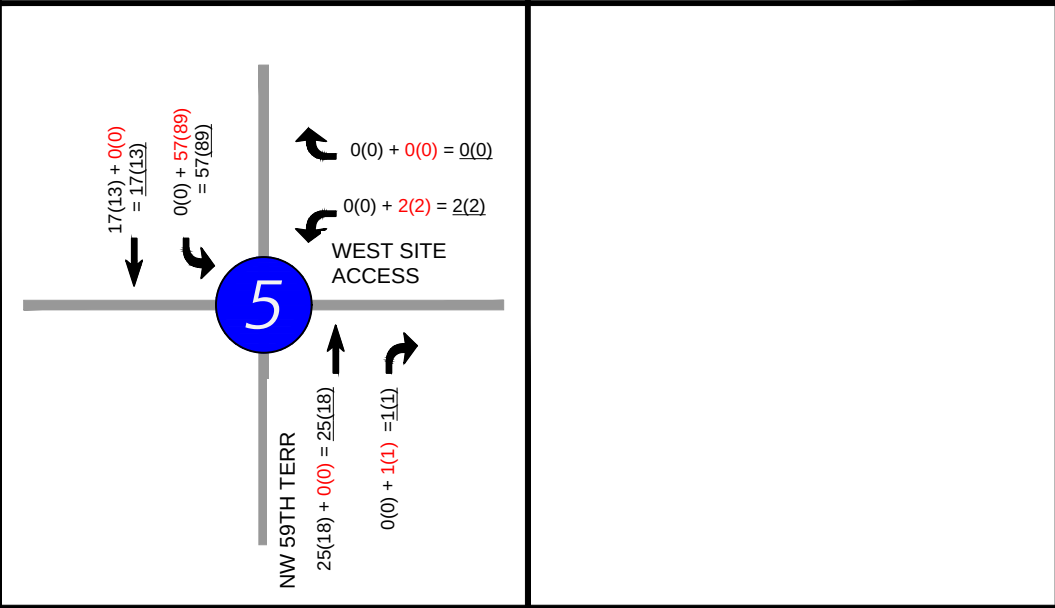
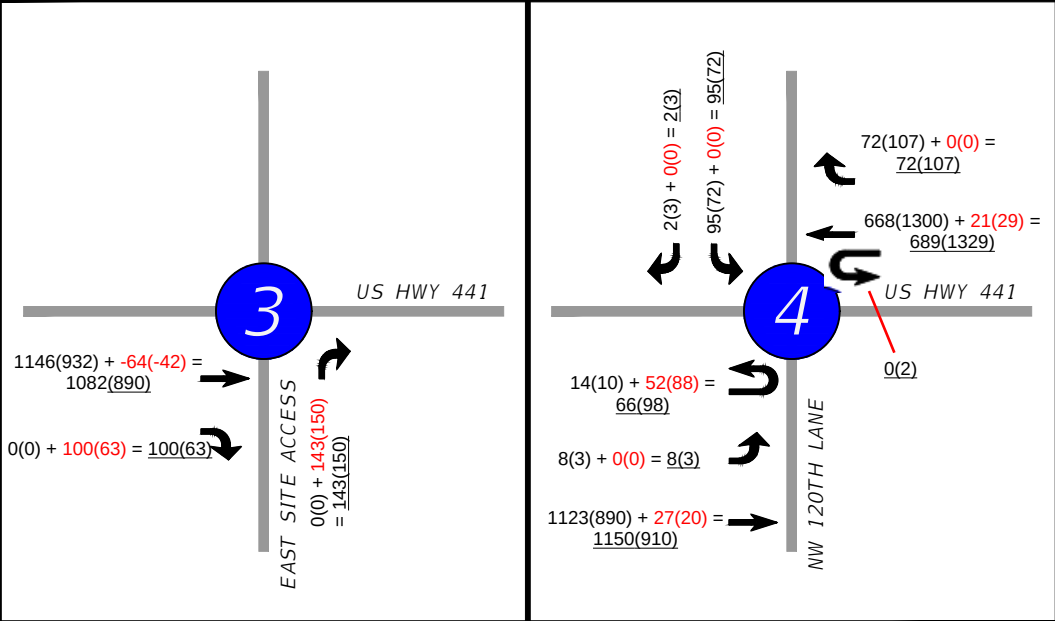
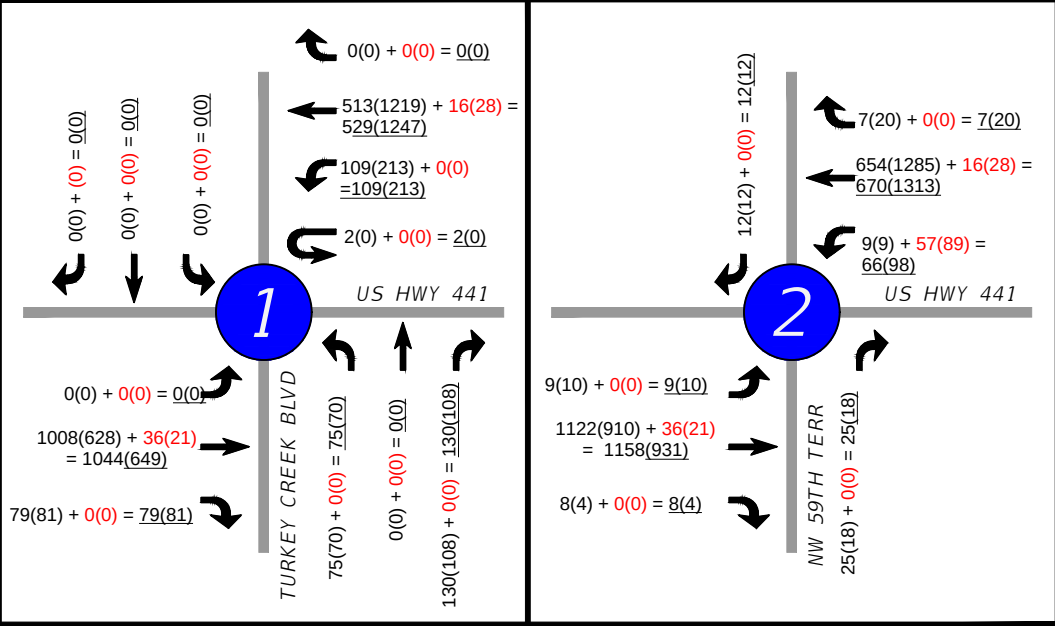


4. TRIP DISTRIBUTION

The project trip distribution is expected to mimic the prevailing traffic patterns at the US HWY 441/NW 59th Terrace intersection. Therefore, the turning movement count at the US HWY 441/NW 59th Terrace intersection, was used to derive the project trip distribution. Project trips were applied to the trip distribution percentages and combined with the background trips to derive the 2025 buildout condition.

The project trip distribution and trip assignment are provided in **Appendix G**.

The combined background trips and project trips form the buildout conditions illustrated in **Figure 4**.



Key:	
##(##) - AM (PM) Background Trips	##(##) - AM (PM) Buildout Trips
##(##) - AM (PM) Project Trips	

Figure 4: Buildout Conditions

Patel Fuel and Retail

CHW

AN NVIS COMPANY

11801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com

est. 1988 **FLORIDA**
CA-5075

SHEET NO.

11

5. ANALYSIS

The following analysis is divided into five parts: 1) access management evaluation, 2) turn lane warrant analyses and length evaluations, 3) sight distance evaluation, 4) pedestrian and bicycle demand, and 5) intersection analysis.

5.1. Access Management Evaluation

Based on the straight-line diagram provided in **Appendix H**, US HWY 441 is a divided roadway with a posted speed of 60 MPH, and has a roadway access class 3 designation, at the project's frontage. **Table 3** provides the FDOT spacing standards per the FDOT Multimodal Access Management Guidebook, 2023. **Figure 5** illustrates the spacing of the proposed access point and NW 59th Terrace along US HWY 441.

Table 3 | FDOT Access Spacing Standards

Roadway Access Class	FDOT Context Classification	Movement Type	Multimodal Mix	Network Density	Median Type	Connection/Driveway Spacing (feet)		Median Opening Spacing (feet)		Minimum Signal Spacing (feet)***
						≤45mph Posted	>45mph Posted	Directional	Full	
Limited Access (LA) Right of Way Facilities						Refer to Right of Way (ROW) Maps				
2	C1 Natural, C2 Rural	Regional	Low	Low	Restrictive w/Service Roads	660	1320	1,320	2,640	2,640
3	C1 Natural, C2 Rural, C2T Rural Town, C3R Suburban Residential, C3C Suburban Commercial	Regional	Low	Low	Restrictive	440	660	1,320	2,640	2,640
4	C3R Suburban Residential, C3C Suburban Commercial	Regional	Moderate	Low	Non-Restrictive**	440	660			2,640
5	C3R Suburban Residential, C3C Suburban Commercial, C4 Urban General	Regional	High	High	Restrictive	245	440	660/330*	2,640/1,320* 660*	2,640/1,320*
6	C4 Urban General, C5 Urban Center, C6 Urban Core	Cross-town	High	High	Both Median Types**	245	440	Match Network Block Size	660	1,320
7	C2T Rural Town, C4 Urban General, C5 Urban Center, C6 Urban Core	Local	High	High	Both Median Types**	125		Match Network Block Size	Match Network Block Size	1,320

*Full Median Opening Spacing 1,320 and 660 feet when roadway speed limit is 40-45 mph and 35 mph or below respectively.

**Directional Median Opening Spacing 330 feet when roadway speed limit is 35 mph or below.

***It is recommended that additional safety/operational analysis is completed for non-restrictive medians

***Traffic signals, proposed at intervals closer than the access management standard for the designated access class, will only be approved where the need for such signal(s) is clearly demonstrated for the safety and operation of the roadway through the signal warrant process. (F.A.C. Rule Chapter: 14-97.003) Applicants requesting or requiring the addition, removal, or modification of a traffic signal for Category E, F, and G connections, must submit an Intersection Control Evaluation Form, Form 750-010-30 (F.A.C. Rule Chapter: 14-96.003). This language is in the draft version of rule 14-96.

Source: Adapted from *FDOT 201 - Design Controls* and *FDOT Context Classification*

Figure 5 | Proposed Access Spacing



As shown in **Figure 5** the site access is located approximately 400 FT east of NW 59th Terrace. This is 260 FT short of meeting the connection spacing standard. Though it is short of meeting the spacing standards, the connection is provided at an optimal location, spaced between NW 59th Terrace and NW 120th Lane and should be acceptable as proposed.

NW 59th Terrace is located approximately 1,230 FT east of the Turkey Creek Boulevard and 960 FT west of NW 120th Lane. This is short of meeting the full access spacing standard. Staff from FDOT requested that this intersection be converted to a directional median opening as part of this development. This improvement brings this connection closer to meeting the FDOT spacing standards. Providing a directional median opening, where the northbound and southbound left and through movements are prohibited, is planned with the development of the site.

5.2. Turn Lane Warrant Analysis and Turn Lane Length Evaluation

Turn lane warrant analyses were performed along the main roadway of all study area intersections in accordance with FDOT Multimodal Access Management Guidebook, 2023. Right turn lane warrants are based on NCHRP Report 457, as recommended by the FDOT Multimodal Access Management Guidebook. Right-turn lane warrant analyses were performed at the following intersections under the AM and PM peak buildout scenarios:

- US HWY 441/NW 59th Terrace intersection
- US HWY 441/Proposed Site Access intersection

The results of the analyses are provided in **Figures 6** through **9** below.

Figure 6 | AM Eastbound Right at US HWY 441/NW 59th Terrace - Right-turn Lane Warrant

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

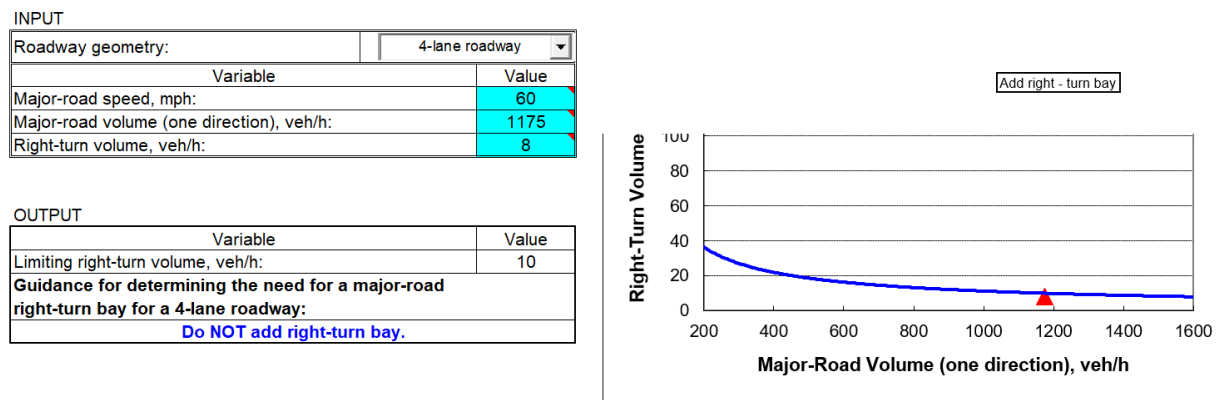


Figure 7 | PM Eastbound Right at US HWY 441/NW 59th Terrace - Right-turn Lane Warrant

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	4-lane roadway
Variable	Value
Major-road speed, mph:	60
Major-road volume (one direction), veh/h:	945
Right-turn volume, veh/h:	4

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	12
Guidance for determining the need for a major-road right-turn bay for a 4-lane roadway:	
Do NOT add right-turn bay.	

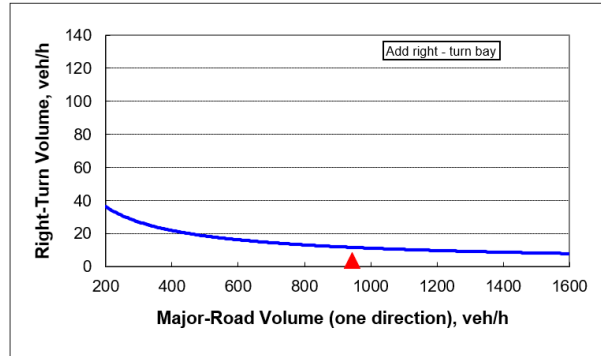


Figure 8 | AM Eastbound Right at US HWY 441/Site Access - Right-turn Lane Warrant

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	4-lane roadway
Variable	Value
Major-road speed, mph:	60
Major-road volume (one direction), veh/h:	1182
Right-turn volume, veh/h:	100

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	10
Guidance for determining the need for a major-road right-turn bay for a 4-lane roadway:	
Add right-turn bay.	

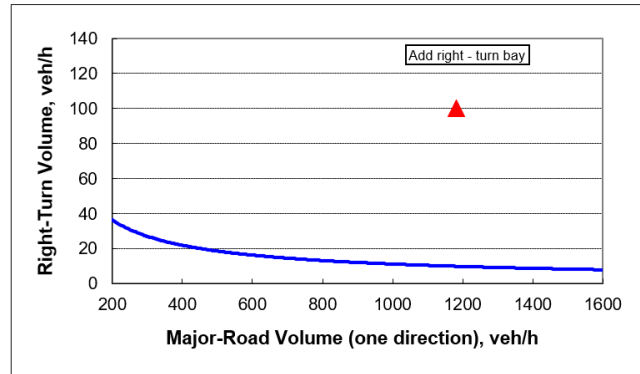
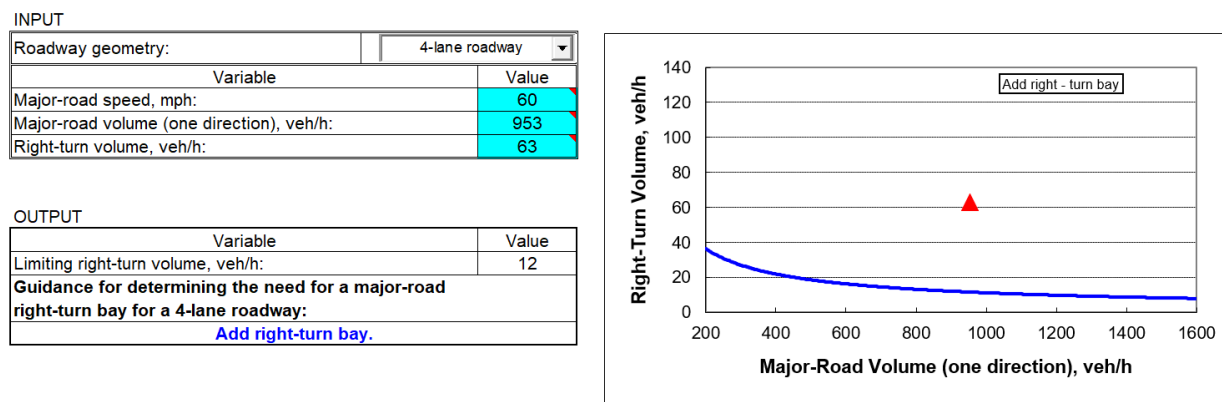


Figure 9 | PM Eastbound Right at US HWY 441/Site Access - Right-turn Lane Warrant

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.



The right turn lane warrant analyses indicates that an eastbound right-turn lane is not warranted for the US HWY 441/NW 59th Terrace but is warranted at the US HWY 441/proposed site access intersection. Therefore, it is recommended that an eastbound right turn lane is provided at the US HWY 441/Proposed Site Access intersection. The FDOT standard length for a right turn lane at this location is 460 FT, based on the FDOT Design Manual, using a design speed of 65 MPH which is 5 MPH over the posted speed. There is not sufficient separation from NW 59th Terrace and the proposed site access to achieve this turn lane length. Therefore, it is recommended to provide an eastbound right turn lane approximately 370 FT in length, which is the maximum length possible due to the constraints.

The existing US HWY 441 left-turn lane lengths, at the three study intersections were evaluated based on the FDOT Design Manual standards. **Table 3** provides the recommended turn lane length based on the FDOT Design Manual standard lengths along with the existing measured turn lane lengths. As indicated in **Table 3**, all existing left-turn lane lengths are sufficient.

Table 4: Existing Turn Lane Lengths					
Turn Lane Locations	Deceleration Length (FT)	Max Queue Length (FT)	Standard Length (FT)	Actual Length (FT)	Sufficient (Yes/No)
US HWY 441/Turkey Creek Blvd					
Eastbound Left	460	0	460	580	Yes
Westbound Left	460	50	510	580	Yes
US HWY 441/NW 59 th Terr					
Eastbound Left	460	25	485	590	Yes
Westbound Left	460	25	485	600	Yes
US HWY 441/NW 120 th Lane					
Eastbound Left	460	75	535	580	Yes
Westbound Left	460	0	460	600	Yes

5.3 Sight Distance Evaluation

Vehicles exiting the site, making a northbound right onto US HWY 441 must have an unobstructed view of the eastbound drivers on US HWY 441 to determine a gap that is sufficient for the vehicles to make a right turn. Therefore, it is imperative that no sight obstructions, such as signs for the development, are placed within the Limit of Clear Sight, per the FDOT Design Manual. This is the line formed between the driver's sight (14 FT behind the stop bar) and an approaching eastbound vehicle in the outside lane 765 FT from the sight access. **Figure 6** provides an excerpt from the FDOT Design Manual, illustrating the sight distance standard.

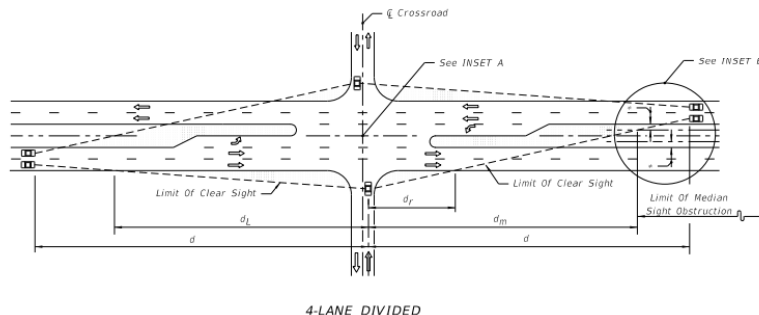
Figure 10 | FDOT Intersection Sight Distance

INTERSECTION SIGHT DISTANCE: 4-LANE DIVIDED

Median 22' or Less				
Design Speed (mph)	d (ft.)	d_L (ft.)	d_r (ft.)	d_m (ft.)
≤ 25	130	235	75	270
30	395	280	90	325
35	460	325	100	380
40	525	375	115	430
45	590	420	130	485
50	655	465	145	540
55	720	510	160	590
60	785	555	175	645
65	850	605	185	700
70	920	655	200	755

Passenger Vehicle

25'-64' Median				
Design Speed (mph)	d (ft.)	d_L (ft.)	d_r (ft.)	d_m (ft.)
≤ 25	295	210	275	200
30	355	255	330	240
35	415	295	390	280
40	470	335	445	320
45	530	375	500	360
50	590	420	550	400
55	650	460	610	440
60	705	500	665	480
65	765	545	720	520
70	825	585	775	560



5.4 Pedestrian and Bicycle Demand

There are no pedestrian or bicycle facilities along US HWY 441 at the location of this development. The turning movement counts indicate that there were 0 pedestrians crossing the three US HWY 441 intersections during the AM and PM peak two hours. Therefore, no pedestrian or bicycle improvements are proposed with this development.

5.5 Intersection Analysis

The study intersections were analyzed during the AM and PM peak hours during the following conditions:

- Existing (Peak Season)
- 2025 Background
- 2025 Buildout

The objectives of the analysis were to identify level of service or operational deficiencies and if necessary, model potential improvement to mitigate deficiencies. Resulting indicators for intersection operational performance include level of service (LOS), delay, volume to capacity (v/c) ratio, and the 95th percentile queue length.

The Highway Capacity Software (HCS) 2023 was used to analyze all study intersections. A summary of the operational performance of the intersections is provided in **Table 5 and Table 6**. The HCS reports are provided in **Appendix I**.

All operational deficiencies are highlighted in **Tables 5 and 6**. A yellow highlight indicates that a deficiency occurs before project trips are added and therefore, not the responsibility of the project's developer. A red highlight indicates that the deficiency occurs with the addition of project trips, therefore, transportation improvements should be considered to mitigate the deficiency. Deficiencies are defined as v/c greater than 1.0, 95th percentile queue lengths exceeding storage lengths, and LOS of F for the main street through movements and intersection totals. As indicated in **Tables 5 and 6** there are no deficiencies caused by project trips, therefore, no additional operational improvements are recommended.

Table 5: AM Intersection Analysis Summary

Intersection	Movement	Avail. Storage (ft)	Existing (Peak Season)				Background (2025)				Build-out (2025)			
			LOS	Delay(s)	v/c	95% Queue (FT)	LOS	Delay(s)	v/c	95% Queue (FT)	LOS	Delay(s)	v/c	95% Queue (FT)
US HWY 441 @ Turkey Creek Blvd	EBL	580	A	8.6	0.00	0	A	8.6	0.00	0	A	8.7	0.00	0
	WBL	580	B	13.0	0.20	25	B	13.5	0.22	25	B	13.9	0.22	25
	NBL	590	D	30.2	0.36	50	D	31.1	0.37	50	D	33.2	0.39	50
	NBT/R	N/A	C	15.0	0.27	50	C	15.2	0.28	50	C	15.6	0.29	50
	SBL/T/R	N/A												
	Int. Total													
US HWY 441 @ NW 59th Terr	EBL	590	A	9.1	0.01	0	A	9.2	0.01	0	A	9.3	0.01	0
	WBL	600	B	11.8	0.02	25	B	11.9	0.02	25	B	13.1	0.13	25
	NBL/T/R	N/A	C	24.4	0.12	25								
	NBR	N/A					B	14.9	0.07	25	C	15.3	0.07	25
	SBL/T/R	N/A	C	16.4	0.08	25								
	SBR	N/A					B	11.3	0.02	25	B	11.3	0.02	25
US HWY 441 @ Site Access	Int. Total			0.7				0.4				0.7		
	NBR	N/A									C	16.1	0.31	50
US HWY 441 @ NW 120th Lane	Int. Total											1.7		
	EBL	580	A	9.5	0.01	0	B	11.5	0.04	25	B	13.4	0.15	25
	WBU	600	C	19.7	0.00	0	C	20.0	0.00	0	C	20.6	0.00	0
	SBL/R	N/A	C	17.4	0.23	25	C	18.8	0.28	50	C	22.9	0.34	50
NW 59th Terr @ Site Access	Int. Total			0.8				1.0				1.5		
	WBL/R	N/A									A	9.7	0.00	0
	SBL	N/A									A	7.6	0.04	25
	Int. Total											4.5		

Yellow highlight = deficiency occurring without project traffic

Red highlight = deficiency occurs due to added project trips

Blue highlight = HCS does not report results because there are zero southbound trips

Table 6: PM Intersection Analysis Summary

Intersection	Movement	Avail. Storage (ft)	Existing (Peak Season)				Background (2025)				Build-out (2025)			
			LOS	Delay(s)	v/c	95% Queue (FT)	LOS	Delay(s)	v/c	95% Queue (FT)	LOS	Delay(s)	v/c	95% Queue (FT)
US HWY 441 @ Turkey Creek Blvd	EBL	580	B	12.2	0.00	0	B	12.3	0.00	0	B	12.5	0.00	0
	WBL	580	B	10.8	0.26	50	B	10.9	0.27	25	B	11.0	0.27	50
	NBL	590	E	45.5	0.46	75	E	47.4	0.47	50	E	49.6	0.49	75
	NBT/R	N/A	B	11.6	0.17	25	B	11.6	0.17	25	B	11.8	0.18	25
	SBL/T/R	N/A												
	Int. Total													
US HWY 441 @ NW 59th Terr	EBL	590	B	12.8	0.02	25	B	13.0	0.02	25	B	13.2	0.02	25
	WBL	600	B	10.2	0.01	0	B	10.2	0.01	0	B	11.2	0.15	25
	NBL/T/R	N/A	C	19.2	0.07	25								
	NBR	N/A					B	12.5	0.04	25	B	12.7	0.04	25
	SBL/T/R	N/A	D	27.8	0.15	25								
	SBR	N/A					C	15.5	0.04	25	C	15.7	0.04	25
US HWY 441 @ Site Access	Int. Total			0.6				0.3				0.7		
	NBR	N/A									B	14.6	0.30	50
US HWY 441 @ NW 120th Lane	Int. Total											2.0		
	EBL	580	B	13.2	0.01	0	C	22.6	0.06	25	E	46.9	0.56	75
	WBU	600	B	14.5	0.01	0	B	14.7	0.01	0	B	15.0	0.01	0
	SBL/R	N/A	D	32.1	0.32	50	E	36.4	0.40	50	F	53.8	0.52	75
NW 59th Terr @ Site Access	Int. Total			0.9				1.3				3.5		
	WBL/R	N/A									B	10.1	0.00	0
	SBL	N/A									A	7.6	0.07	25
	Int. Total											5.7		

Yellow highlight = deficiency occurring without project traffic

Red highlight = deficiency occurs due to added project trips

Blue highlight = HCS does not report results because there are zero southbound trips

6 CONCLUSIONS AND RECOMMENDATIONS

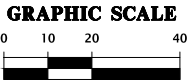
Based on the findings of this TIA, the following improvements are recommended to support the project traffic:

- **US HWY 441/Proposed East Site Access** – Provide an eastbound right-turn lane on US HWY 441 at the proposed site access, approximately 370 FT in length, which is the maximum length available between NW 59th Terrace and the proposed site access. Additionally, the development should not add any obstructions to the sight distance for drivers exiting the site onto US HWY 441.
- **US HWY 441/NW 59th Terrace** – As requested by FDOT to meet FDOT access spacing standards, the HWY 441/NW 59th Terrace should be converted to a directional median opening. The following movements should be prohibited with the directional median opening:
 - Northbound and southbound through movements
 - Northbound and southbound left turn movements
- Ensure that no obstructions, such as the business sign, are placed within the limit of Sight as specified in Section 5.3.

The recommended transportation improvements on US HWY 441, provided above, have been field reviewed to confirm that the modifications can be constructed.

Appendix A

Concept Plan



LEGEND:

- = CONCRETE (FOR SIDEWALK) (SEE C2.30 FOR DETAIL)
- = HEAVY DUTY CONCRETE PAVEMENT (SEE C2.30 FOR DETAIL)
- = STANDARD DUTY ASPHALT (SEE C2.30 FOR DETAIL)
- = HEAVY DUTY ASPHALT (SEE C2.30 FOR DETAIL)
- = MAINTENANCE PATH
- = WETLAND

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SCALE: 1"=20'
VERIFY SCALE
ON ORIGINAL DRAWING
IF NOT ONE INCH ON
SCALE, ACCORDINGLY

REVISIONS: 3/2/24 CITY OF ALACHUA, SRWMD

CLIENT: MR. HARDIK PATEL
PROJECT: PATEL FUEL RETAIL
SHEET TITLE: DETAILED HORIZONTAL CONTROL AND SITE PLAN

TECHNICIAN: C. WADZINSKI
CHECKED: C. WADZINSKI
DESIGNED: W. OWEN
PROJECT NUMBER: 22-0030

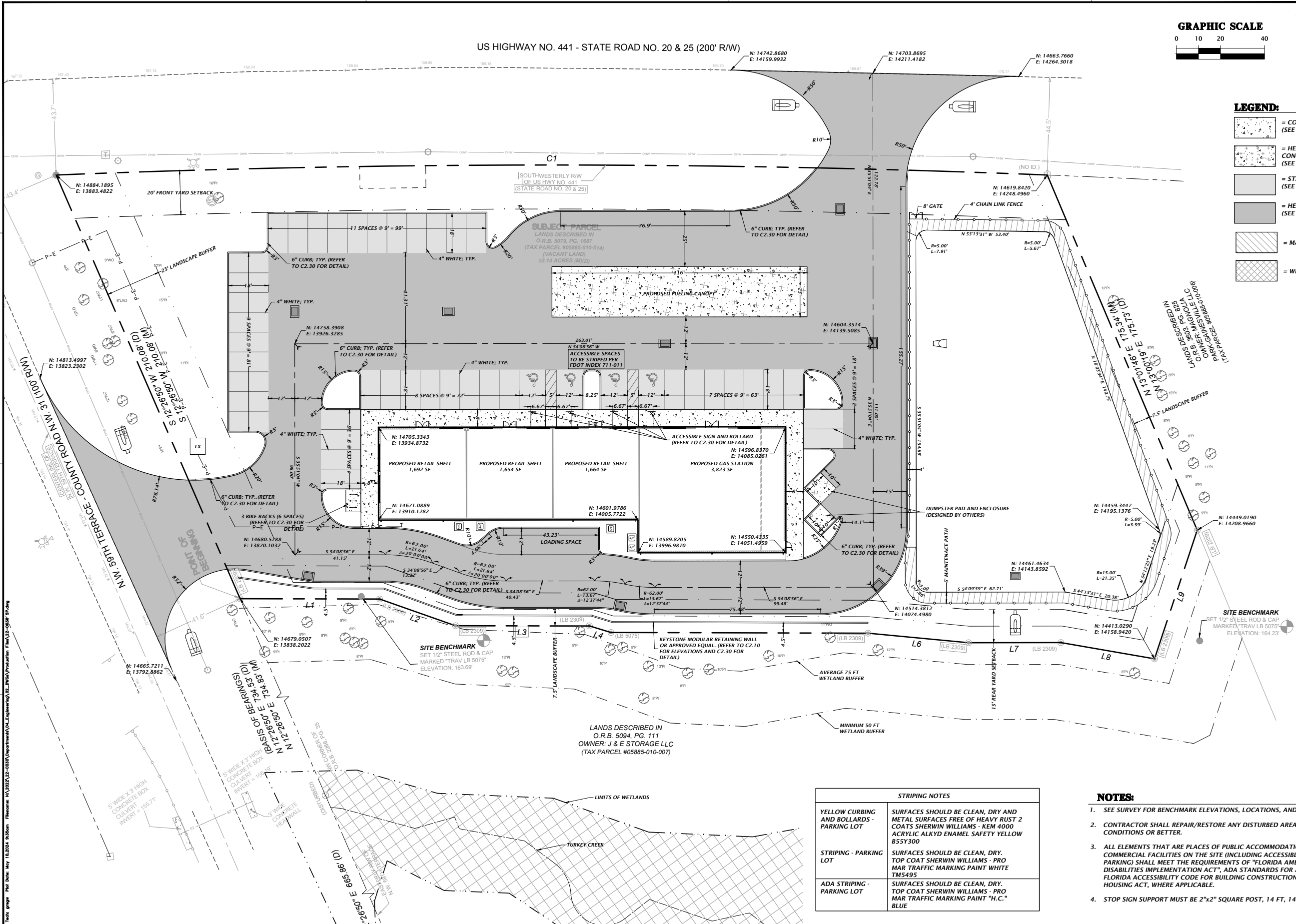
FL PE No. 94201
SHEET NO.: **C1.10**

NOTES:

- SEE SURVEY FOR BENCHMARK ELEVATIONS, LOCATIONS, AND DESCRIPTIONS.
- CONTRACTOR SHALL REPAIR/RESTORE ANY DISTURBED AREAS TO EXISTING CONDITIONS OR BETTER.
- ALL ELEMENTS THAT ARE PLACES OF PUBLIC ACCOMMODATIONS AND COMMERCIAL FACILITIES ON THE SITE (INCLUDING ACCESSIBLE ROUTES AND PARKING) SHALL MEET THE REQUIREMENTS OF "FLORIDA AMERICANS WITH DISABILITIES IMPLEMENTATION ACT", ADA STANDARDS FOR ACCESSIBLE DESIGN, FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION AND THE FAIR HOUSING ACT, WHERE APPLICABLE.
- STOP SIGN SUPPORT MUST BE 2"x2" SQUARE POST, 14 FT, 14 GAUGE, 4 LBS/FT.

STRIPING NOTES

YELLOW CURBING AND BOLLARDS - PARKING LOT	SURFACES SHOULD BE CLEAN, DRY AND METAL SURFACES FREE OF HEAVY RUST 2 COATS SHERWIN WILLIAMS - KEM 4000 ACRYLIC ALKYD ENAMEL SAFETY YELLOW B55Y300
STRIPING - PARKING LOT	SURFACES SHOULD BE CLEAN, DRY. TOP COAT SHERWIN WILLIAMS - PRO MAR TRAFFIC MARKING PAINT WHITE TM5495
ADA STRIPING - PARKING LOT	SURFACES SHOULD BE CLEAN, DRY. TOP COAT SHERWIN WILLIAMS - PRO MAR TRAFFIC MARKING PAINT "H.C." BLUE



Trade Granger Plot Date: May 13/2024 10:26am Filename: AL_2022\22-0030\Department\04_Engineering\02_Plan\Production\Plan_22-0030.dwg

Appendix B

Methodology Letter

April 4, 2024

Carlos Nieto, PE
Jacksonville Studies Engineer
Florida Department of Transportation
2198 Edison Avenue, MS2815
Jacksonville, FL 32204

Justin Tabor, AICP
Principal Planner
City of Alachua
15100 NW 142nd Terrace
Alachua, FL 32616

RE: Traffic Impact Analysis Methodology – Patel Fuel & Retail, in Alachua, FL

Dear Carlos, Justin,

CHW is preparing a Traffic Impact Analysis (TIA) for a proposed gas station with convenience store and three retail shells on the southeast corner of the US HWY 441/NW 59th Terrace intersection in Alachua, Florida. The convenience store will be approximately 3.823 KSF and will include 10 fueling positions. The site will also include an additional three retail shells totaling 5.010 KSF retail site. Preliminary plans for the site are provided in **Attachment A**.

A full access on NW 59th Terrace and a right-in/right-out access on US HWY 441 are being proposed for the site.

Per discussion with FDOT, it is anticipated that the US HWY 441/NW 59th Terrace will be required to be modified to a directional median opening where the minor street through and left movements are prohibited. This improvement will require that the northbound side street vehicles intending to travel through or turn left at this intersection to instead turn right, followed by a U-turn at the down stream intersection.

The following intersections will be impacted by this project and will therefore be included as study intersections:

- US HWY 441/NW 59th Terrace
- US HWY 441/Proposed right-in/right-out access
- US HWY 441/NW 120th Lane
- NW 59th Terrace/Proposed site access

Land Use and Trip Generation

The trip generation for the site is based on the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 11th Edition. The estimated trip generation is provided below.

Trip Generation									
Land Use	ITE LU Code	Variable KSF	Daily	AM Peak			PM Peak		
			Total	Total	In	Out	Total	In	Out
Convenience Store/Gas Station	945	3.823	983	103	57	46	87	44	43
Pass-by Trips			742	78	43	35	65	33	32
Strip Retail Plaza	822	5.010	441	18	11	7	48	24	24
Pass-by Trips (40%)			176	7	4	3	19	10	9
Gross New Trips			1,424	121	68	53	135	68	67
Net New Trips (utilizing pass-by reduction)			506	36	21	15	51	25	26

* The IT Trip Generation Manual, 11th Edition provides a pass-by rate of 76% during the AM and 75% during the PM peak but does not provide a pass-by rate for the daily condition, therefore, a pass-by rate average of 75.5% is applied to the daily.

* The IT Trip Generation Manual, 11th Edition does not provide pass-by rates for the Strip Retail Plaza, therefore the Shopping Plaza PM Peak pass-by rate of 40% is utilized.

Data Collection

Turning movement counts will be collected during the AM and PM peak two hours at the following intersections:

- US HWY 441/NW 59th Terrace
- US HWY 441/NW 120th Lane

Counts will be collected on a Tuesday, Wednesday, or Thursday while Alachua County Public Schools are in session. The counts will include passenger vehicle, pedestrian, and truck traffic.

Background Forecast

A peak season factor and historical growth rate will be derived from FDOT Traffic Online data, at count station 260229, and applied to the count data to derive the background turning movement volumes. A minimum 1% growth rate will be applied if the historical growth rate is less than 1%. The background trips will be forecasted to the estimated build-out year of 2025.

Trip Distribution

The project trip distribution is expected to mimic the prevailing traffic patterns at the US HWY 441/NW 59th Terrace intersection. Therefore, the turning movement count at the US HWY 441/NW 59th Terrace intersection, will be used to derive the project trip distribution. For example, if the count data indicates 40% of the trips are eastbound during the AM peak, 40% of the AM peak entering trips will be eastbound, entering the site. The project trip distribution will consider the eastbound approach, westbound approach and northbound approach but will not consider the southbound approach since this approach is used by vehicles from an existing gas station. Project trips will be applied to the trip distribution percentages and combined with the background trips to derive the 2025 buildout condition.

Analysis

The TIA will include an evaluation of the proposed access location in accordance with the FDOT Access Management Guidebook, latest edition.

Eastbound right-turn lane warrant analyses will be performed at the US HWY 441/NW 59th Terrace intersection and the proposed right-in/right-out access intersection, in accordance with the FDOT Access Management Guidebook, latest edition. The existing westbound left turn lane at the US HWY 441/NW 59th Terrace intersection and the existing eastbound left turn lane at the US HWY 441/NW 120th Lane intersection will be evaluated to ensure that the turn lanes can accommodate the added trips from this site.

An intersection analysis will be performed at the proposed site access intersection during the AM and PM peak hours of adjacent street traffic under the following conditions:

- Existing condition
- Background condition
- 2025 Build-out condition
- 2025 Build-out with improvements condition (if applicable)

The intersection operation analysis will provide the delay, LOS, V/C, and 95th percentile queue length of each intersection movement as well as the intersection, as a whole. The stop-controlled intersection will be analyzed using HCS 2023. The analysis reports will be provided in the appendices.

Any needed roadway modifications based on this analysis will be identified and modeled to demonstrate that the improvement mitigates the deficiency.

Report

A draft report, including the following, at a minimum, will be submitted for review and comment.

- Executive Summary
- Study Area Map
- Trip Generation
- Data Collection
- Background Forecast
- Trip Distribution
- Analysis
 - Access Management Evaluation
 - Left and Right Turn-lane Warrant Analyses and Evaluations
 - AM and PM Intersection Analysis
- Conclusion and Recommendations
- Appendices with Supporting Documentation

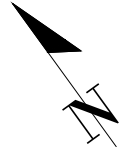
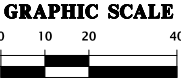
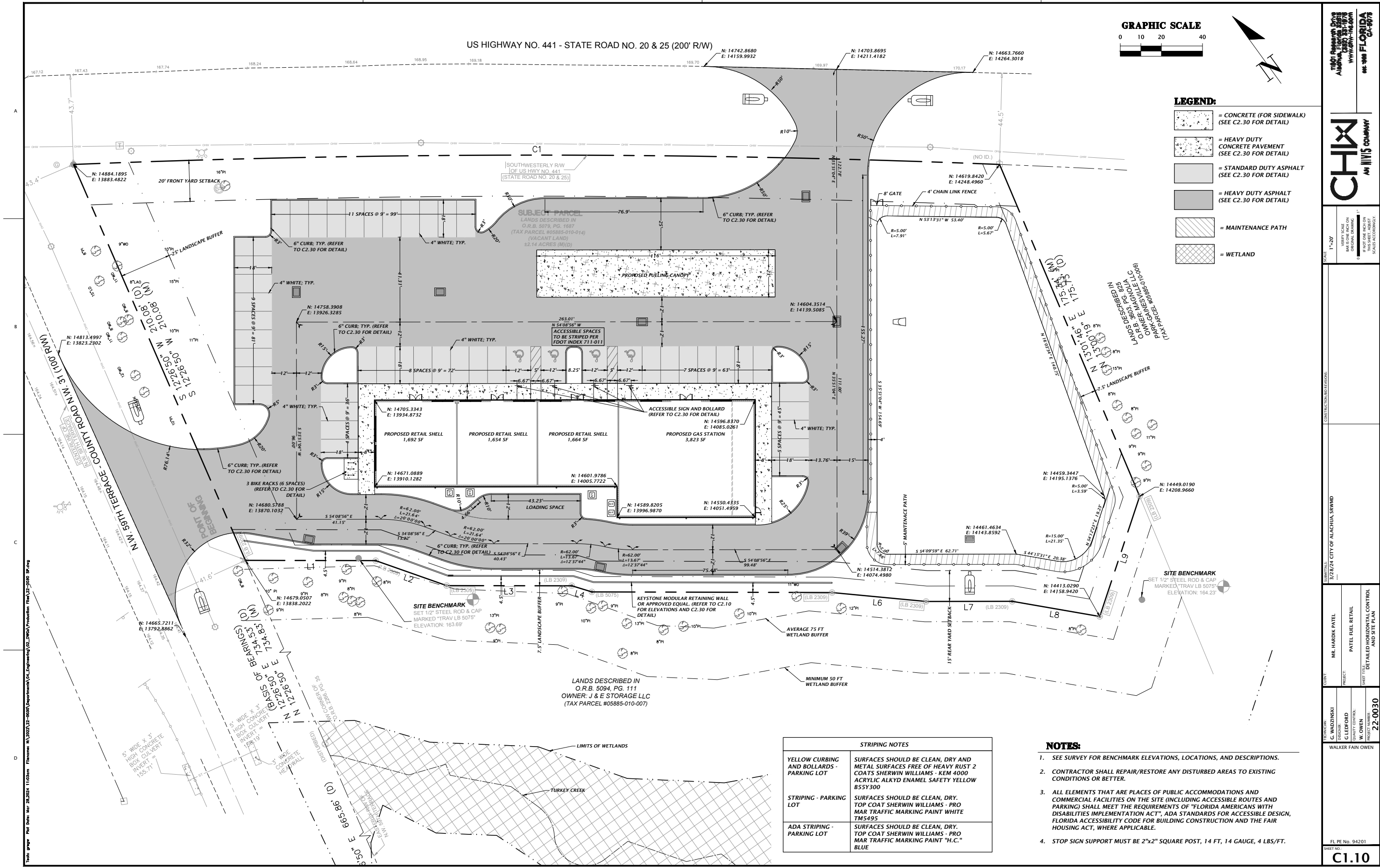
Following any revisions, based on staff comments, we will prepare a final signed and sealed report.

Please provide concurrence if you agree with this methodology. Thank you for your review and consideration.

Sincerely,
CHW



Brian Snyder, P.E.
Project Manager



LEGEND:

- = CONCRETE (FOR SIDEWALK) (SEE C2.30 FOR DETAIL)
- = HEAVY DUTY CONCRETE PAVEMENT (SEE C2.30 FOR DETAIL)
- = STANDARD DUTY ASPHALT (SEE C2.30 FOR DETAIL)
- = HEAVY DUTY ASPHALT (SEE C2.30 FOR DETAIL)
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- = WETLAND

STRIPING NOTES	
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- ALL ELEMENTS THAT ARE PLACES OF PUBLIC ACCOMMODATIONS AND COMMERCIAL FACILITIES ON THE SITE (INCLUDING ACCESSIBLE ROUTES AND PARKING) SHALL MEET THE REQUIREMENTS OF "FLORIDA AMERICANS WITH DISABILITIES IMPLEMENTATION ACT", ADA STANDARDS FOR ACCESSIBLE DESIGN, FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION AND THE FAIR HOUSING ACT, WHERE APPLICABLE.
- STOP SIGN SUPPORT MUST BE 2"x2" SQUARE POST, 14 FT, 14 GAUGE, 4 LBS/FT.

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ON ORIGINAL DRAWING
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SCALE, ACCORDINGLY

DATE: 2/2/24
CITY OF ALACHUA, SRWMD

CLIENT: MR. HARDIK PATEL
PROJECT: PATEL FUEL RETAIL
SHEET TITLE: DETAILED HORIZONTAL CONTROL AND SITE PLAN

TECHNICIAN: C. WADZINSKI
CHECKED: C. WADZINSKI
DESIGNED: W. OWEN
PROJECT NUMBER: 22-0030

FL PE No. 94201
SHEET NO.: **C1.10**

Brian Snyder

From: Justin Tabor <ju_tabor@cityofalachua.org>
Sent: Monday, April 8, 2024 10:39 AM
To: Brian Snyder; Nieto, Carlos A; Nicholle Brockish
Cc: Walker Owen; Kathy Winburn; Adam Hall; Carson J. Crockett
Subject: Re: Patel Fuel Methodology

Brian,

Please see our comments below.

- The modification of the intersection of US 441/NW 59th Terrace to a directional median opening will require NB US 441 to make a U-turn at the US 441/Turkey Creek Blvd intersection to access the site. As such, please include US 441/Turkey Creek Blvd as an intersection to be included within the study.
- To be conservative, we would like at least 1 of the shell units to be categorized as Code 930 - Fast Casual Restaurant - or Code 933 - Fast Food Restaurant without Drive-Through Window.
- Turning counts should be taken for AM & PM periods at the intersection of US 441/Turkey Creek Blvd.

Please feel free to contact me if you have any questions or would like to discuss.



Under Florida law, e-mail addresses are public records. If you do not want your e-mail address released in response to a public records request, do not send electronic mail to this entity. Instead, contact this office by phone or in writing.

From: Brian Snyder <brians@chw-inc.com>
Sent: Monday, April 8, 2024 9:29 AM
To: Nieto, Carlos A; Nicholle Brockish; Justin Tabor
Cc: Walker Owen
Subject: RE: Patel Fuel Methodology

Carlos,

Is it okay to include these updates in the TIA and include your email as an approval subject to complying with these comments. If not, no problem, we can update methodology and get that back to you this week.

Thank you,

Brian Snyder, PE | Project Manager | [CHW, an NV5 company](#)
11801 Research Drive, Alachua, FL 32615 | O: (386) 518-5154 | C: (352) 339-2938



Beyond Engineering | **Florida Region**

[Electronic Communications Disclaimer](#)

From: Nieto, Carlos A <CarlosA.Nieto@dot.state.fl.us>
Sent: Monday, April 8, 2024 9:22 AM
To: Nicholle Brockish <nicholleb@chw-inc.com>; ju_tabor@cityofalachua.org
Cc: Brian Snyder <brians@chw-inc.com>; Walker Owen <walkero@chw-inc.com>
Subject: RE: Patel Fuel Methodology

Good morning,

See comments below:

- Please advise on how the trip generation for the gas-station/C-store was developed. I am calculating over 2000 vpd.
- Also, please include a section on the AM spacing standards.
- Please include a section describing ped/bike demand and any improvements based on demand and context classification. (this is somewhat new; if you have questions, please reach out to discuss).
- Discussion on sight distance for the WB left-turn, NB right turn at NW 59th Terrace and the RIRO driveway.

I've copied Walker, due to this next comment as the traffic study may not be the place for it, but I wanted to mention in on the front end.

The driveway geometry should be proposed based on the truck turning template.

Sincerely,

Carlos Nieto, P.E.
Traffic Services Engineer
Florida Department of Transportation District 2
Phone (904) 360-5455

From: Nicholle Brockish <nicholleb@chw-inc.com>
Sent: Thursday, April 4, 2024 2:25 PM
To: ju_tabor@cityofalachua.org; Nieto, Carlos A <CarlosA.Nieto@dot.state.fl.us>
Cc: Brian Snyder <brians@chw-inc.com>
Subject: Patel Fuel Methodology

EXTERNAL SENDER: Use caution with links and attachments.

Good afternoon,

Please find attached the Patel Fuel Methodology for your review. Please let us know if you have any questions or concerns.

Thank you,

Nicholle Brockish | Project Coordinator | [CHW, an NV5 company](#)
11801 Research Drive, Alachua, FL 32615 | P: (386) 347-5249 | C: (910) 322-7697



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[Electronic Communications Disclaimer](#)

Brian Snyder

From: Nieto, Carlos A <CarlosA.Nieto@dot.state.fl.us>
Sent: Monday, April 8, 2024 9:36 AM
To: Brian Snyder
Subject: RE: Patel Fuel Methodology

Brian,

I would like to see the trip generation prior to reviewing the TIA. Please send me something to review before then – via email would be acceptable.

The remainder of my comments can be addressed in the TIA/appendix.

Thanks,

Carlos Nieto, P.E.
Traffic Services Engineer
Florida Department of Transportation District 2
Phone (904) 360-5455

From: Brian Snyder <brians@chw-inc.com>
Sent: Monday, April 8, 2024 9:29 AM
To: Nieto, Carlos A <CarlosA.Nieto@dot.state.fl.us>; Nicholle Brockish <nicholleb@chw-inc.com>; ju_tabor@cityofalachua.org
Cc: Walker Owen <walkero@chw-inc.com>
Subject: RE: Patel Fuel Methodology

Carlos,

Is it okay to include these updates in the TIA and include your email as an approval subject to complying with these comments. If not, no problem, we can update methodology and get that back to you this week.

Thank you,

Brian Snyder, PE | Project Manager | [CHW, an NV5 company](#)
11801 Research Drive, Alachua, FL 32615 | O: (386) 518-5154 | C: (352) 339-2938



Beyond Engineering | [Florida Region](#)
[Electronic Communications Disclaimer](#)

From: Nieto, Carlos A <CarlosA.Nieto@dot.state.fl.us>
Sent: Monday, April 8, 2024 9:22 AM
To: Nicholle Brockish <nicholleb@chw-inc.com>; ju_tabor@cityofalachua.org
Cc: Brian Snyder <brians@chw-inc.com>; Walker Owen <walkero@chw-inc.com>
Subject: RE: Patel Fuel Methodology

Good morning,

See comments below:

- Please advise on how the trip generation for the gas-station/C-store was developed. I am calculating over 2000 vpd.
- Also, please include a section on the AM spacing standards.
- Please include a section describing ped/bike demand and any improvements based on demand and context classification. (this is somewhat new; if you have questions, please reach out to discuss).
- Discussion on sight distance for the WB left-turn, NB right turn at NW 59th Terrace and the RIRO driveway.

I've copied Walker, due to this next comment as the traffic study may not be the place for it, but I wanted to mention in on the front end.

The driveway geometry should be proposed based on the truck turning template.

Sincerely,

Carlos Nieto, P.E.
Traffic Services Engineer
Florida Department of Transportation District 2
Phone (904) 360-5455

From: Nicholle Brockish <nicholleb@chw-inc.com>
Sent: Thursday, April 4, 2024 2:25 PM
To: ju_tabor@cityofalachua.org; Nieto, Carlos A <CarlosA.Nieto@dot.state.fl.us>
Cc: Brian Snyder <brians@chw-inc.com>
Subject: Patel Fuel Methodology

EXTERNAL SENDER: Use caution with links and attachments.

Good afternoon,

Please find attached the Patel Fuel Methodology for your review. Please let us know if you have any questions or concerns.

Thank you,

Nicholle Brockish | Project Coordinator | [CHW, an NV5 company](#)
11801 Research Drive, Alachua, FL 32615 | P: (386) 347-5249 | C: (910) 322-7697



Beyond Engineering | **Florida Region**
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Appendix C

Trip Generation Documentation

Strip Retail Plaza (<40k)

(822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

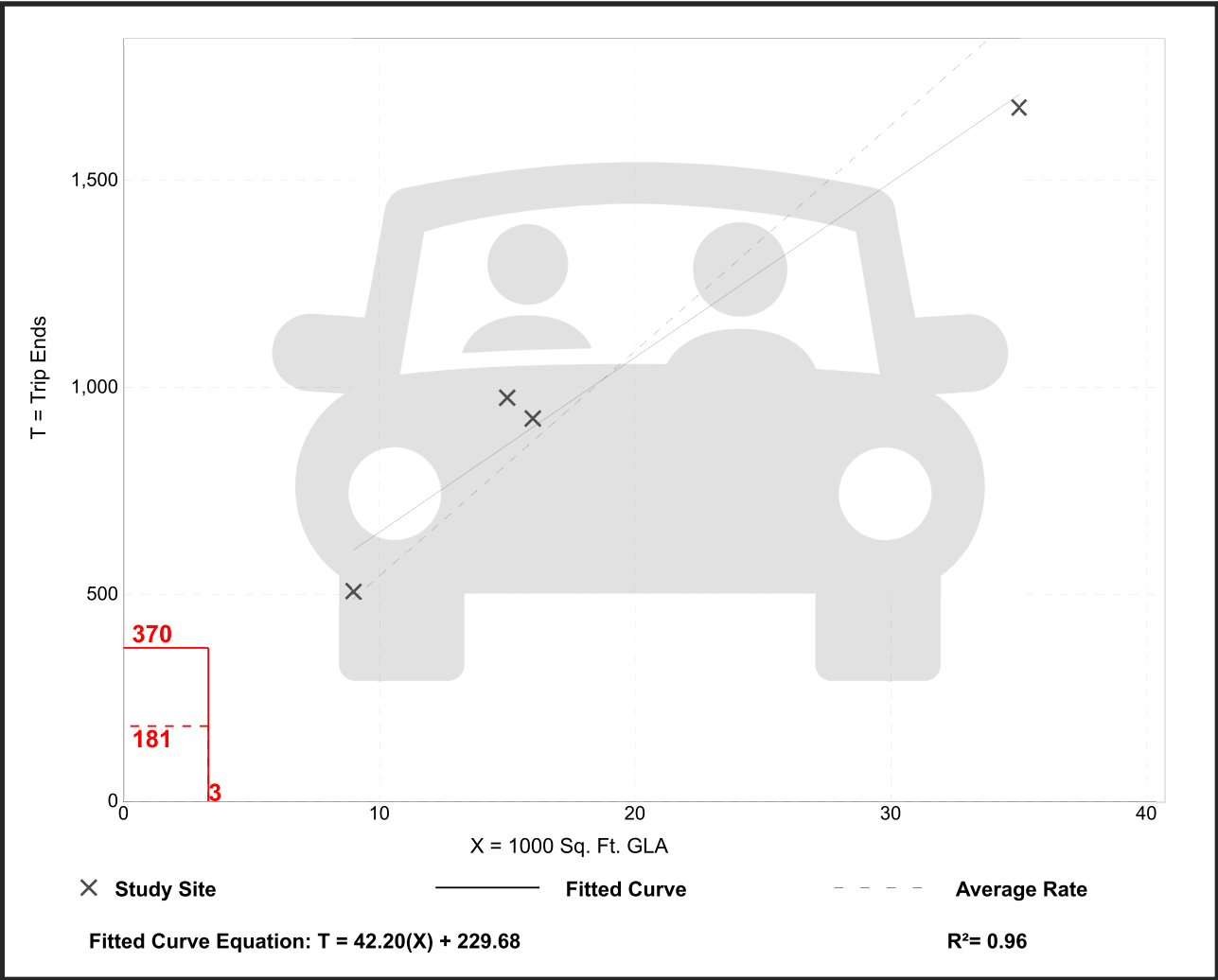
Setting/Location: General Urban/Suburban
Number of Studies: 4
Avg. 1000 Sq. Ft. GLA: 19
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
54.45	47.86 - 65.07	7.81

Data Plot and Equation

Caution – Small Sample Size



Strip Retail Plaza (<40k)

(822)

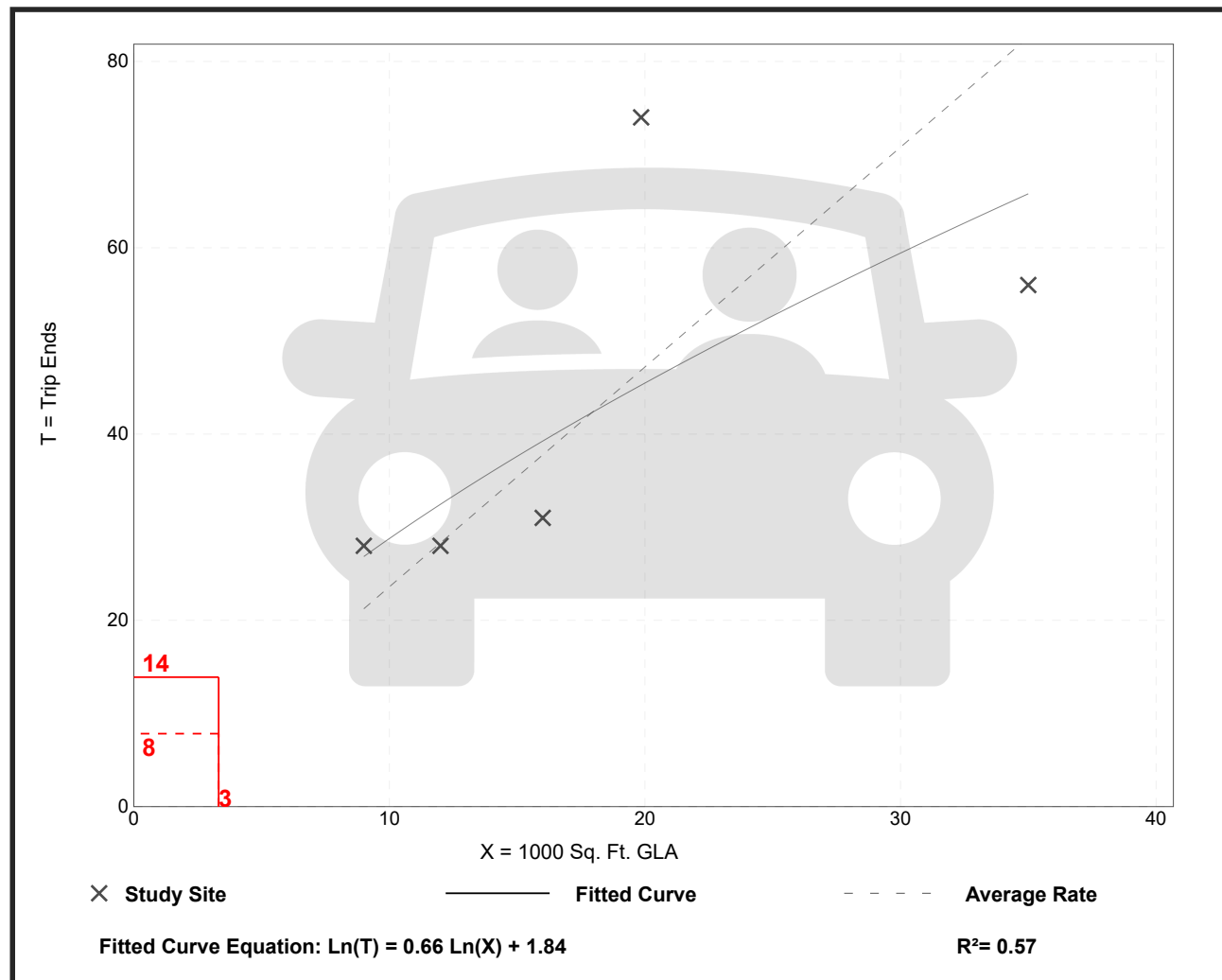
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 5
 Avg. 1000 Sq. Ft. GLA: 18
 Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
2.36	1.60 - 3.73	0.94

Data Plot and Equation

Caution – Small Sample Size



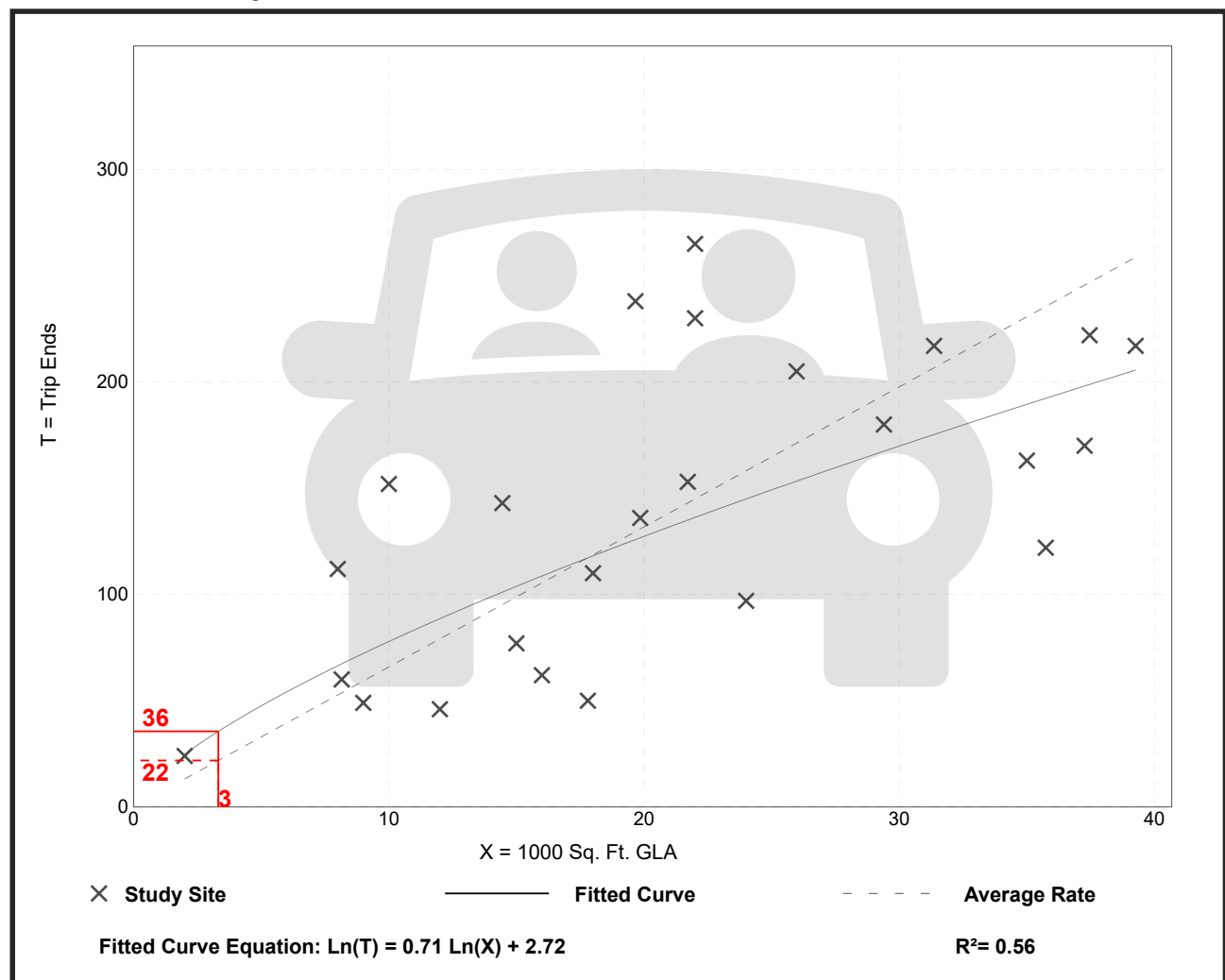
Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 25
 Avg. 1000 Sq. Ft. GLA: 21
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.59	2.81 - 15.20	2.94

Data Plot and Equation



Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual*, 11th Edition

Land Use Code	821								
Land Use	Shopping Plaza (40 - 150k)								
Setting	General Urban/Suburban								
Time Period	Weekday PM Peak Period								
# Data Sites	15								
Average Pass-By Rate	40%								
	Pass-By Characteristics for Individual Sites								
GLA (000)	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Non-Pass-By Trips			Adj Street Peak Hour Volume	Source
					Primary (%)	Diverted (%)	Total (%)		
45	Florida	1992	844	56	24	20	44	—	30
50	Florida	1992	555	41	41	18	59	—	30
52	Florida	1995	665	42	33	25	58	—	30
53	Florida	1993	162	59	—	—	41	—	30
57.23	Kentucky	1993	247	31	53	16	69	2659	34
60	Florida	1995	1583	40	38	22	60	—	30
69.4	Kentucky	1993	109	25	42	33	75	1559	34
77	Florida	1992	365	46	—	—	54	—	30
78	Florida	1991	702	55	23	22	45	—	30
82	Florida	1992	336	34	—	—	66	—	30
92.857	Kentucky	1993	133	22	50	28	78	3555	34
100.888	Kentucky	1993	281	28	50	22	72	2111	34
121.54	Kentucky	1993	210	53	30	17	47	2636	34
144	New Jersey	1990	176	32	44	24	68	—	24
146.8	Kentucky	1993	—	36	39	25	64	—	34

Fast-Food Restaurant without Drive-Through Window (933)

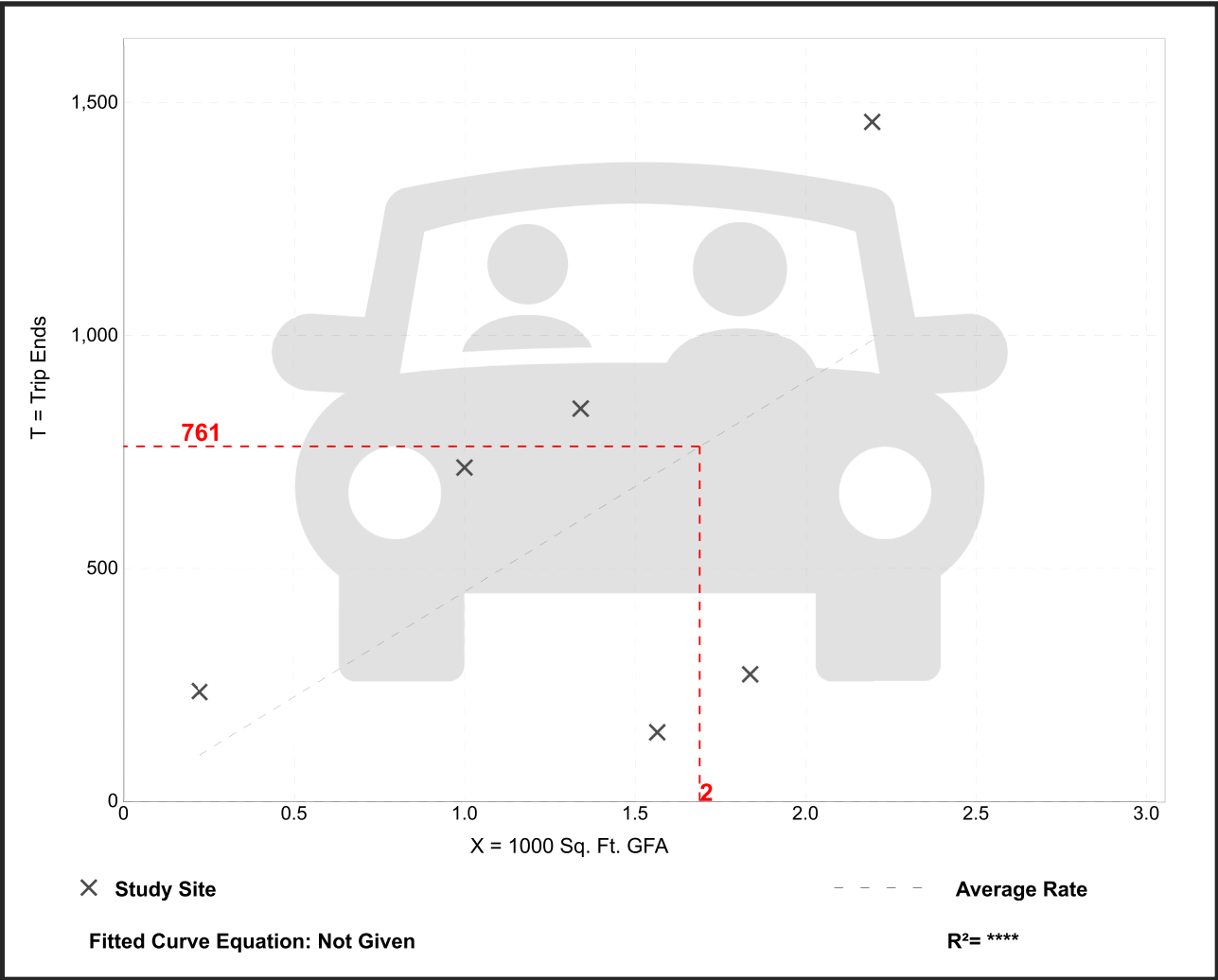
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. 1000 Sq. Ft. GFA: 1
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
450.49	95.91 - 1053.57	310.99

Data Plot and Equation



Fast-Food Restaurant without Drive-Through Window (933)

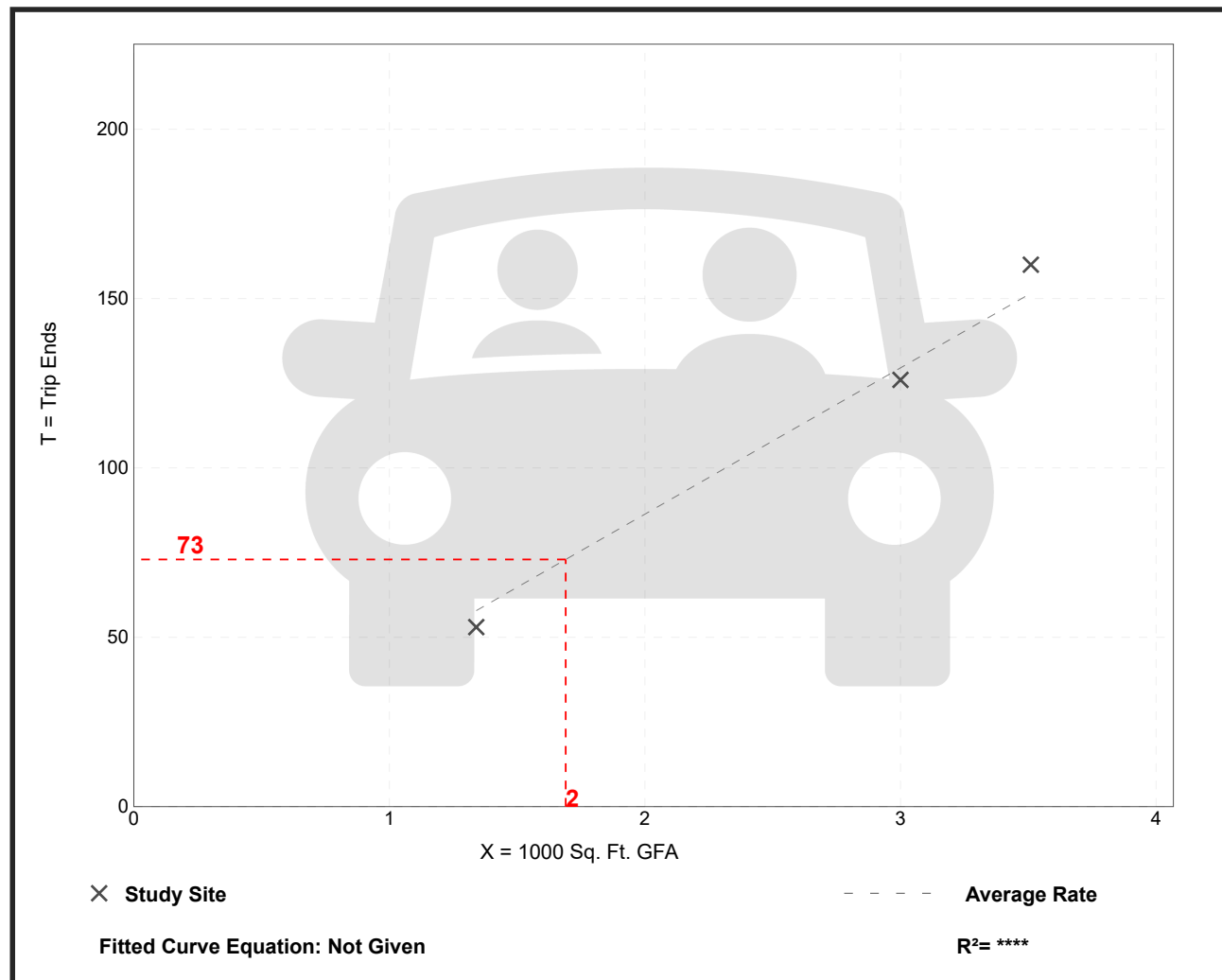
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 3
 Avg. 1000 Sq. Ft. GFA: 3
 Directional Distribution: 58% entering, 42% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
43.18	39.55 - 45.58	2.84

Data Plot and Equation

Caution – Small Sample Size



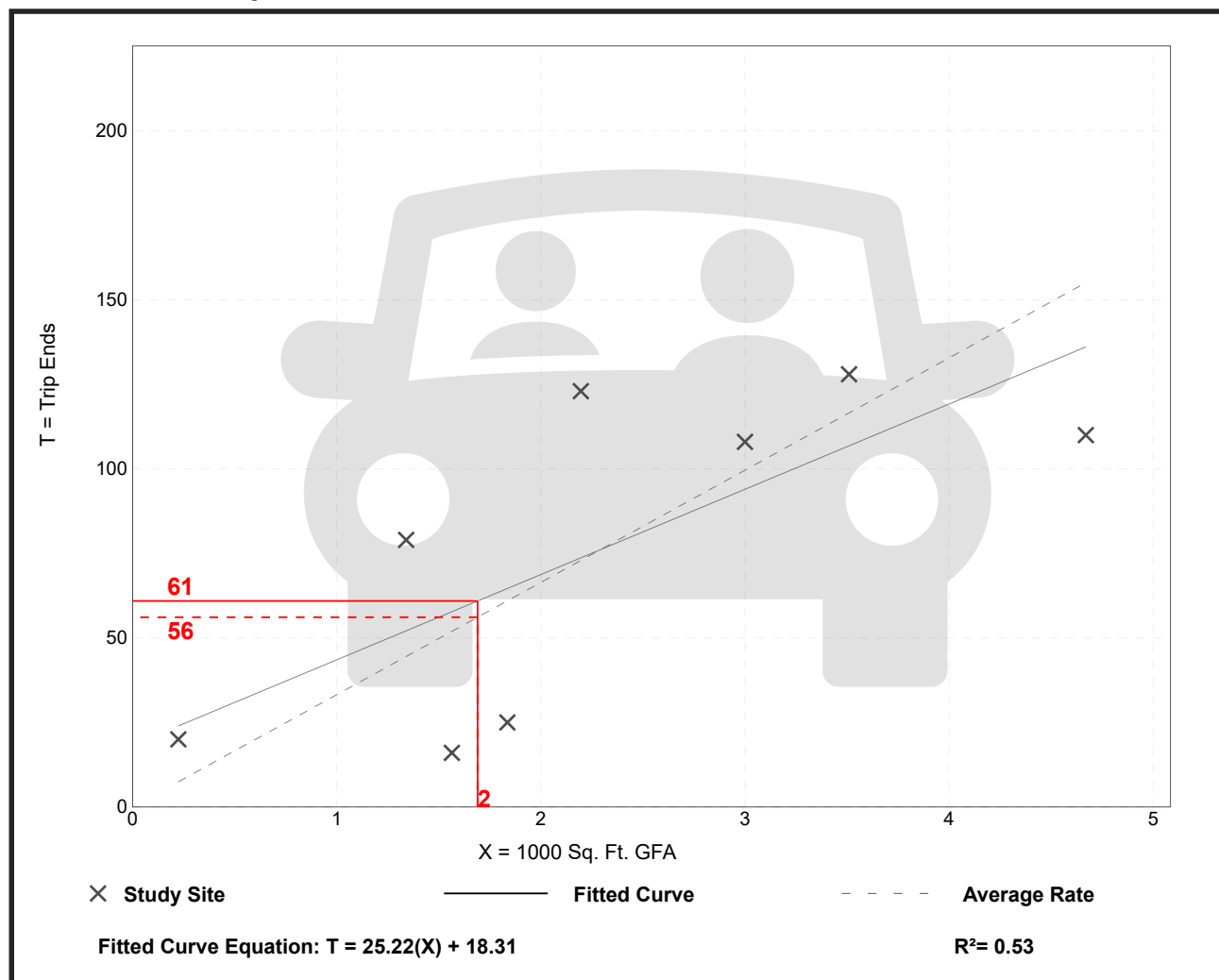
Fast-Food Restaurant without Drive-Through Window (933)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 8
 Avg. 1000 Sq. Ft. GFA: 2
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
33.21	10.23 - 89.29	17.22

Data Plot and Equation



Vehicle Pass-By Rates by Land Use									
Source: ITE <i>Trip Generation Manual</i> , 11th Edition									
Land Use Code	934								
Land Use	Fast-Food Restaurant with Drive-Through Window								
Setting	General Urban/Suburban								
Time Period	Weekday AM Peak Period								
# Data Sites	5								
Average Pass-By Rate	50%								
	Pass-By Characteristics for Individual Sites								
	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Non-Pass-By Trips			Adj Street Peak Hour Volume	Source
GFA (000)					Primary (%)	Diverted (%)	Total (%)		
1.4	Kentucky	1993	—	62	22	16	38	1407	2
3	Kentucky	1993	—	43	14	43	57	2903	2
3.3	--	1996	—	68	—	—	32	—	21
3.6	Kentucky	1993	—	32	47	21	68	437	2
4.2	Indiana	1993	—	46	23	31	54	1049	2

Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual*, 11th Edition

Land Use Code	934								
Land Use	Fast-Food Restaurant with Drive-Through Window								
Setting	General Urban/Suburban								
Time Period	Weekday PM Peak Period								
# Data Sites	11								
Average Pass-By Rate	55%								
	Pass-By Characteristics for Individual Sites								
GFA (000)	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Non-Pass-By Trips			Adj Street Peak Hour Volume	Source
					Primary (%)	Diverted (%)	Total (%)		
1.3	Kentucky	1993	—	68	22	10	32	2055	2
1.9	Kentucky	1993	33	67	24	9	33	2447	2
2.8	Florida	1995	47	66	—	—	34	—	30
2.9	Florida	1996	271	41	41	18	59	—	30
3	Kentucky	1993	—	31	31	38	69	4250	2
3.1	Florida	1995	28	71	—	—	29	—	30
3.1	Florida	1996	29	38	—	—	62	—	30
3.2	Florida	1996	202	40	39	21	60	—	30
3.3	—	1996	—	62	—	—	38	—	21
4.2	Indiana	1993	—	56	25	19	44	1632	2
4.3	Florida	1994	304	62	—	—	38	—	30

Convenience Store/Gas Station - VFP (9-15) (945)

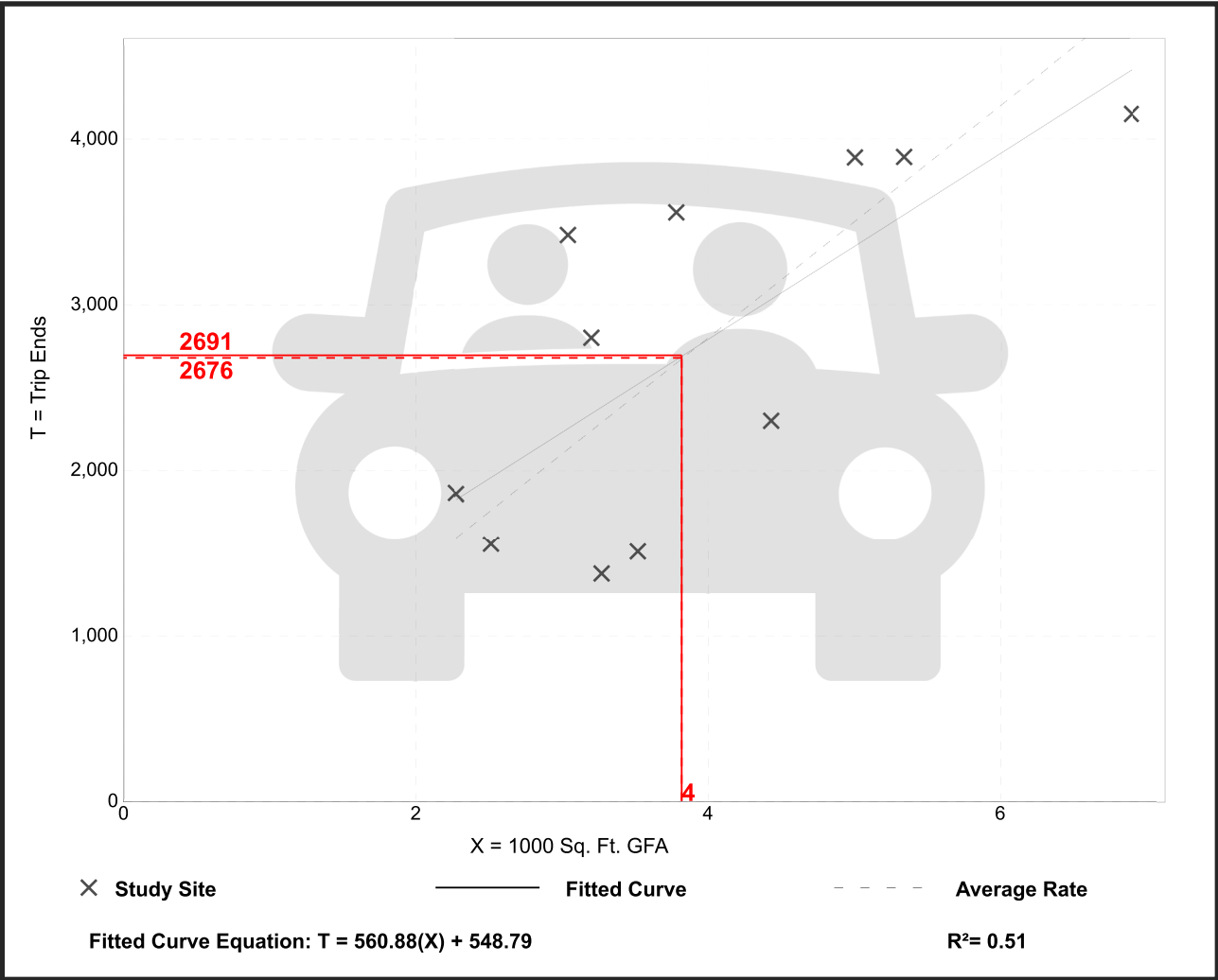
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 11
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
700.43	419.93 - 1125.00	206.44

Data Plot and Equation



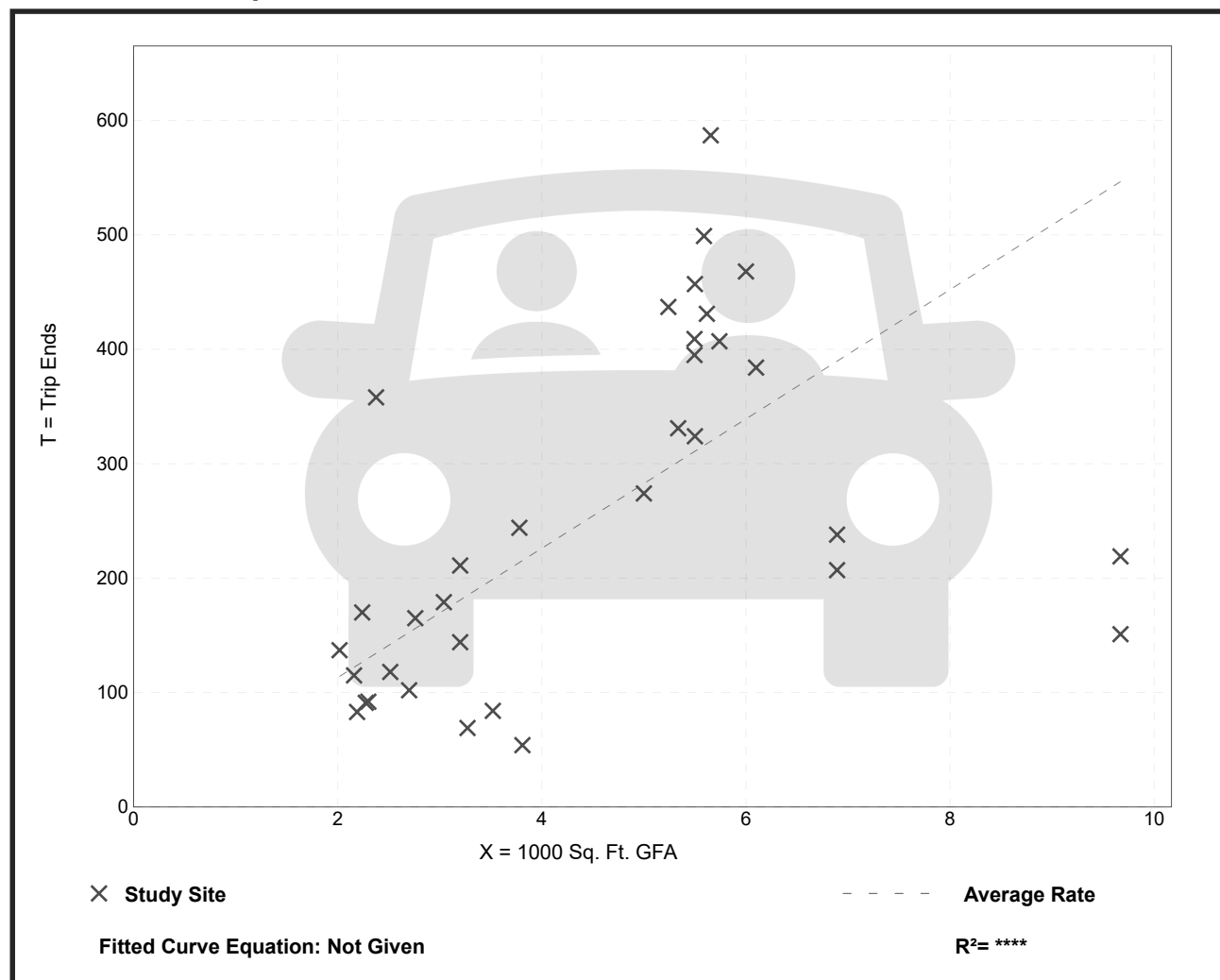
Convenience Store/Gas Station - VFP (9-15) (945)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 34
 Avg. 1000 Sq. Ft. GFA: 4
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
56.52	14.17 - 150.67	27.56

Data Plot and Equation



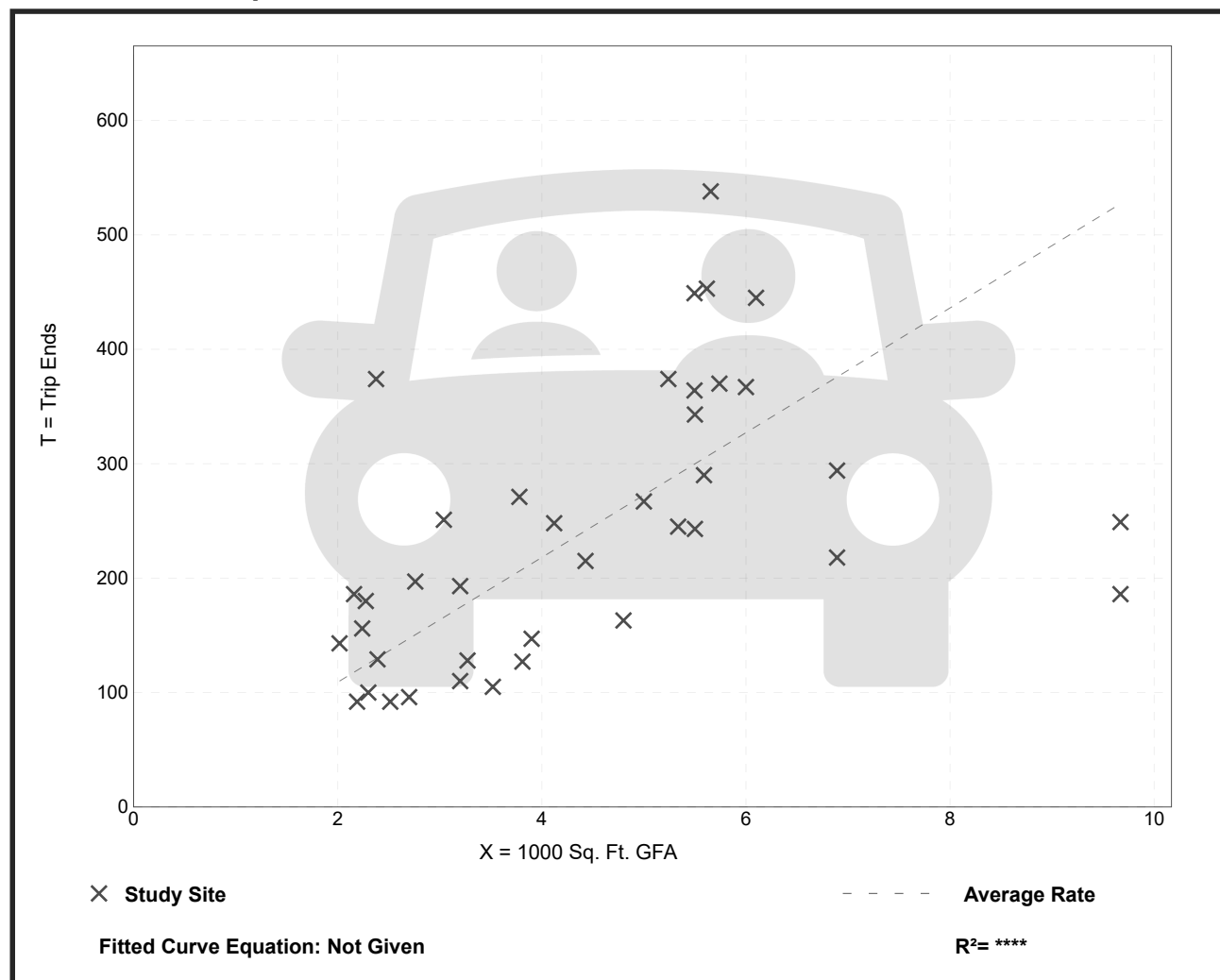
Convenience Store/Gas Station - VFP (9-15) (945)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 39
 Avg. 1000 Sq. Ft. GFA: 4
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
54.52	19.23 - 157.41	23.69

Data Plot and Equation



Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	945									
Land Use	Convenience Store/Gas Station									
Setting	General Urban/Suburban									
Time Period	Weekday AM Peak Period									
# Data Sites	16 Sites with between 2 and 8 VFP					28 Sites with between 9 and 20 VFP				
Average Pass-By Rate	60% for Sites with between 2 and 8 VFP					76% for Sites with between 9 and 20 VFP				
	Pass-By Characteristics for Individual Sites									
	VFP	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Non-Pass-By Trips			Adj Street Peak	Source
GFA (000)						Primary (%)	Diverted (%)	Total (%)	Hour Volume	
2	8	Maryland	1992	46	87	13	0	13	2235	25
2.1	6	Maryland	1992	26	58	23	19	42	2080	25
2.1	6	Maryland	1992	26	58	23	19	42	2080	25
2.2	8	Maryland	1992	31	47	34	19	53	1785	25
2.2	< 8	Indiana	1993	79	56	6	38	44	635	2
2.2	8	Maryland	1992	35	78	9	13	22	7080	25
2.3	6	Maryland	1992	37	32	41	27	68	2080	25
2.3	< 8	Kentucky	1993	58	64	5	31	36	1255	2
2.3	6	Maryland	1992	37	32	41	27	68	2080	25
2.4	< 8	Kentucky	1993	—	48	17	35	52	1210	2
2.6	< 8	Kentucky	1993	—	72	15	13	28	940	2
2.8	< 8	Kentucky	1993	—	54	11	35	46	1240	2
3	< 8	Indiana	1993	62	74	10	16	26	790	2
3.6	< 8	Kentucky	1993	49	67	4	29	33	1985	2
3.7	< 8	Kentucky	1993	49	66	16	18	34	990	2
4.694	12	Maryland	2000	—	72	—	—	28	2440	30
4.694	12	Maryland	2000	—	78	—	—	22	1561	30
4.694	12	Maryland	2000	—	79	—	—	21	2764	30
4.848	12	Virginia	2000	—	55	—	—	45	1398	30
5.06	12	Pennsylvania	2000	—	84	—	—	16	3219	30
5.242	12	Virginia	2000	—	74	—	—	26	1160	30
5.242	12	Virginia	2000	—	71	—	—	29	548	30
5.488	12	Delaware	2000	—	80	—	—	20	—	30

5.5	12	Pennsylvania	2000	—	85	—	—	15	2975	30
4.2	< 8	Kentucky	1993	47	62	19	19	38	1705	2
4.694	16	Maryland	2000	—	90	—	—	10	2278	30
4.694	16	Delaware	2000	—	74	—	—	26	2185	30
4.694	16	Delaware	2000	—	58	—	—	42	962	30
4.694	16	Delaware	2000	—	84	—	—	16	2956	30
4.694	16	New Jersey	2000	—	79	—	—	21	1859	30
4.694	20	Delaware	2000	—	84	—	—	16	3864	30
4.848	16	Virginia	2000	—	68	—	—	32	2106	30
4.848	16	Virginia	2000	—	85	—	—	15	2676	30
4.848	16	Virginia	2000	—	75	—	—	25	3244	30
4.848	16	Virginia	2000	—	71	—	—	29	1663	30
4.993	16	Pennsylvania	2000	—	75	—	—	25	1991	30
5.094	16	New Jersey	2000	—	86	—	—	14	1260	30
5.5	16	Pennsylvania	2000	—	82	—	—	18	1570	30
5.543	16	Pennsylvania	2000	—	84	—	—	16	1933	30
5.565	16	Pennsylvania	2000	—	77	—	—	23	2262	30
5.565	16	Pennsylvania	2000	—	68	—	—	32	2854	30
5.565	16	New Jersey	2000	—	58	—	—	42	1253	30
5.565	16	New Jersey	2000	—	79	—	—	21	1928	30
5.565	16	New Jersey	2000	---	84	---	---	16	1953	30

Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	945									
Land Use	Convenience Store/Gas Station									
Setting	General Urban/Suburban									
Time Period	Weekday PM Peak Period									
# Data Sites	12 Sites with between 2 and 8 VFP					28 Sites with between 9 and 20 VFP				
Average Pass-By Rate	56% for Sites with between 2 and 8 VFP					75% for Sites with between 9 and 20 VFP				
	Pass-By Characteristics for Individual Sites									
	VFP	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Non-Pass-By Trips			Adj Street Peak Hour Volume	
GFA (000)						Primary (%)	Diverted (%)	Total (%)		
2.1	8	Maryland	1992	31	52	13	35	48	1785	25
2.1	6	Maryland	1992	30	53	20	27	47	1060	25
2.2	< 8	Indiana	1993	115	48	16	36	52	820	2
2.3	< 8	Kentucky	1993	67	57	16	27	43	1954	2
2.3	6	Maryland	1992	55	40	11	49	60	2760	25
2.4	< 8	Kentucky	1993	—	58	13	29	42	2655	2
2.6	< 8	Kentucky	1993	68	67	15	18	33	950	2
2.8	< 8	Kentucky	1993	—	62	11	27	38	2875	2
3	< 8	Indiana	1993	80	65	15	20	35	1165	2
3.6	< 8	Kentucky	1993	60	56	17	27	44	2505	2
3.7	< 8	Kentucky	1993	70	61	16	23	39	2175	2
4.2	< 8	Kentucky	1993	61	58	26	16	42	2300	2
4.694	12	Maryland	2000	—	78	—	—	22	3549	30
4.694	12	Maryland	2000	—	67	—	—	33	2272	30
4.694	12	Maryland	2000	—	66	—	—	34	3514	30
4.848	12	Virginia	2000	—	71	—	—	29	2350	30
5.06	12	Pennsylvania	2000	—	91	—	—	9	4181	30
5.242	12	Virginia	2000	—	70	—	—	30	2445	30
5.242	12	Virginia	2000	—	56	—	—	44	950	30
5.488	12	Delaware	2000	—	73	—	—	27	—	30
5.5	12	Pennsylvania	2000	—	84	—	—	16	4025	30
4.694	16	Maryland	2000	—	89	—	—	11	2755	30
4.694	16	Delaware	2000	—	73	—	—	27	1858	30

4.694	16	Delaware	2000	—	59	—	—	41	1344	30
4.694	16	Delaware	2000	—	72	—	—	28	3434	30
4.694	16	New Jersey	2000	—	81	—	—	19	1734	30
4.694	20	Delaware	2000	—	76	—	—	24	1616	30
4.848	16	Virginia	2000	—	67	—	—	33	2.954	30
4.848	16	Virginia	2000	—	78	—	—	22	3086	30
4.848	16	Virginia	2000	—	83	—	—	17	4143	30
4.848	16	Virginia	2000	—	73	—	—	27	2534	30
4.993	16	Pennsylvania	2000	—	72	—	—	28	2917	30
5.094	16	New Jersey	2000	—	86	—	—	14	1730	30
5.5	16	Pennsylvania	2000	—	90	—	—	10	2616	30
5.543	16	Pennsylvania	2000	—	87	—	—	13	2363	30
5.565	16	Pennsylvania	2000	—	81	—	—	19	2770	30
5.565	16	Pennsylvania	2000	—	76	—	—	24	3362	30
5.565	16	New Jersey	2000	—	61	—	—	39	1713	30
5.565	16	New Jersey	2000	—	86	—	—	14	1721	30
5.565	16	New Jersey	2000	---	81	---	---	19	2227	30

Appendix D

Turning Movement Counts

DE TRAFFIC

detraffic.com

(386) 341-4186

Turkey Creek Blvd at US 441

Alachua County, FL

File Name : Turkey at 441

Site Code : 00000002

Start Date : 4/30/2024

Page No : 1

Groups Printed- Automobiles - Commercial

	Dirt Road Southbound				US 441 Westbound				Turkey Creek Blvd Northbound				US 441 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	16	211	0	227	8	0	17	25	0	86	9	95	347
07:15 AM	0	0	0	0	19	250	0	269	14	0	34	48	0	107	16	123	440
07:30 AM	0	0	0	0	16	270	0	286	15	0	43	58	0	139	19	158	502
07:45 AM	0	0	0	0	26	264	0	290	20	0	25	45	0	135	19	154	489
Total	0	0	0	0	77	995	0	1072	57	0	119	176	0	467	63	530	1778
08:00 AM	0	0	0	0	38	242	0	280	22	0	29	51	0	128	20	148	479
08:15 AM	0	0	0	0	29	232	0	261	18	0	31	49	0	111	21	132	442
08:30 AM	0	0	0	0	22	222	0	244	15	0	31	46	0	128	19	147	437
08:45 AM	0	0	0	0	21	207	0	228	12	0	31	43	0	115	17	132	403
Total	0	0	0	0	110	903	0	1013	67	0	122	189	0	482	77	559	1761
04:00 PM	0	0	0	0	60	126	0	186	14	0	18	32	0	242	11	253	471
04:15 PM	0	0	0	0	61	139	0	200	16	0	22	38	0	223	8	231	469
04:30 PM	0	0	0	0	63	158	0	221	12	0	27	39	0	282	10	292	552
04:45 PM	0	0	0	0	47	154	0	201	13	0	24	37	0	247	16	263	501
Total	0	0	0	0	231	577	0	808	55	0	91	146	0	994	45	1039	1993
05:00 PM	0	0	0	0	55	185	0	240	16	0	35	51	0	300	21	321	612
05:15 PM	0	0	0	0	53	171	0	224	16	0	31	47	0	318	22	340	611
05:30 PM	0	0	0	0	58	143	0	201	19	0	24	43	0	326	21	347	591
05:45 PM	0	0	0	0	47	129	0	176	19	0	17	36	0	275	17	292	504
Total	0	0	0	0	213	628	0	841	70	0	107	177	0	1219	81	1300	2318
Grand Total	0	0	0	0	631	3103	0	3734	249	0	439	688	0	3162	266	3428	7850
Apprch %	0	0	0	0	16.9	83.1	0		36.2	0	63.8		0	92.2	7.8		
Total %	0	0	0	0	8	39.5	0	47.6	3.2	0	5.6	8.8	0	40.3	3.4	43.7	
Automobiles	0	0	0	0	598	2849	0	3447	239	0	423	662	0	2962	253	3215	7324
% Automobiles	0	0	0	0	94.8	91.8	0	92.3	96	0	96.4	96.2	0	93.7	95.1	93.8	93.3
Commercial	0	0	0	0	33	254	0	287	10	0	16	26	0	200	13	213	526
% Commercial	0	0	0	0	5.2	8.2	0	7.7	4	0	3.6	3.8	0	6.3	4.9	6.2	6.7

DE TRAFFIC

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(386) 341-4186

Turkey Creek Blvd at US 441

Alachua County, FL

File Name : Turkey at 441

Site Code : 00000002

Start Date : 4/30/2024

Page No : 2

	Dirt Road Southbound				US 441 Westbound				Turkey Creek Blvd Northbound				US 441 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	16	270	0	286	15	0	43	58	0	139	19	158	502
07:45 AM	0	0	0	0	26	264	0	290	20	0	25	45	0	135	19	154	489
08:00 AM	0	0	0	0	38	242	0	280	22	0	29	51	0	128	20	148	479
08:15 AM	0	0	0	0	29	232	0	261	18	0	31	49	0	111	21	132	442
Total Volume	0	0	0	0	109	1008 513	0	1117	75	0	128	203	0	513 1008	79	592	1912
% App. Total	0	0	0	0	9.8	90.2	0		36.9	0	63.1		0	86.7	13.3		
PHF	.000	.000	.000	.000	.717	.933	.000	.963 .937	.852	.000	.744	.875	.000	.923	.940	.937	.963
Automobiles	0	0	0	0	103	936	0	1039	73	0	121	194	0	451	75	526	1759
% Automobiles	0	0	0	0	94.5	92.9	0	93.0	97.3	0	94.5	95.6	0	87.9	94.9	88.9	92.0
Commercial	0	0	0	0	6	72	0	78	2	0	7	9	0	62	4	66	153
% Commercial	0	0	0	0	5.5	7.1	0	7.0 11.1	2.7	0	5.5	4.4	0	12.1	5.1	11.1 7.0	8.0

66%

DE TRAFFIC

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Turkey Creek Blvd at US 441

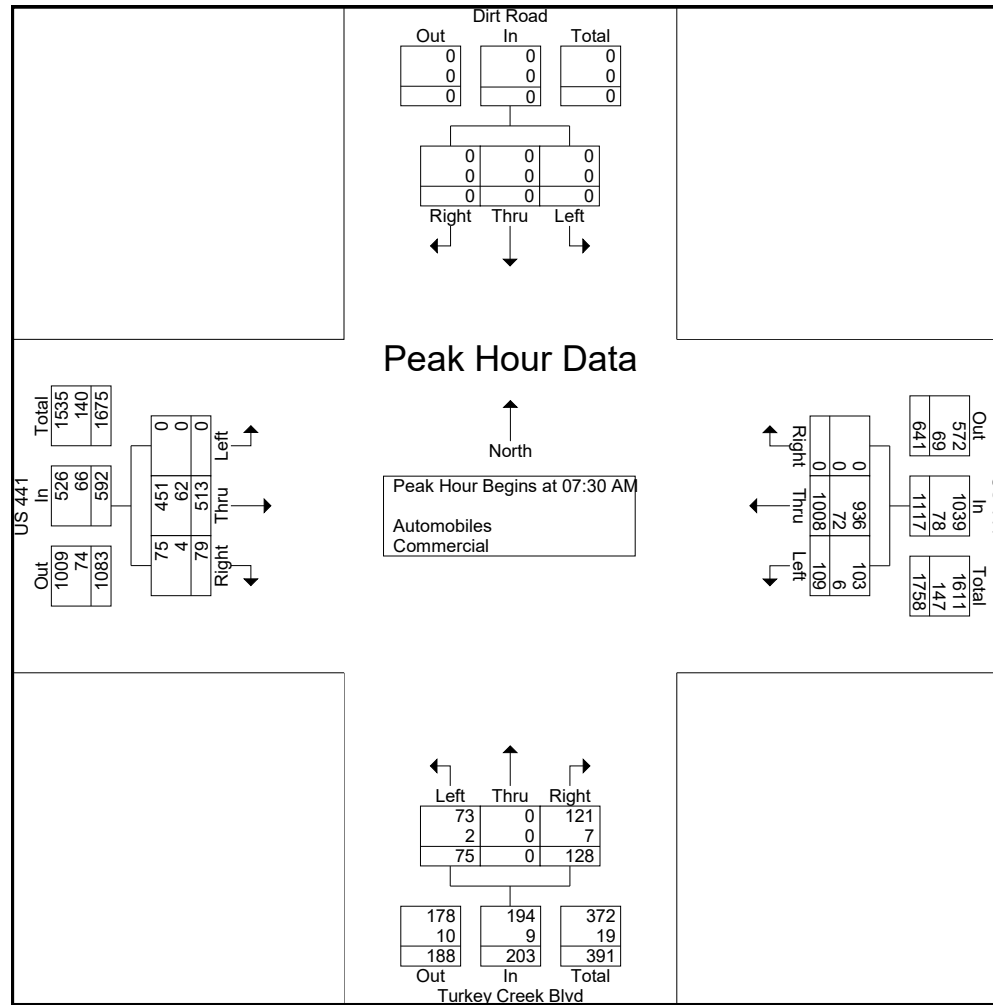
Alachua County, FL

File Name : Turkey at 441

Site Code : 00000002

Start Date : 4/30/2024

Page No : 3



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Turkey Creek Blvd at US 441

Alachua County, FL

File Name : Turkey at 441

Site Code : 00000002

Start Date : 4/30/2024

Page No : 4

	Dirt Road Southbound				US 441 Westbound				Turkey Creek Blvd Northbound				US 441 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	55	185	0	240	16	0	35	51	0	300	21	321	612
05:15 PM	0	0	0	0	53	171	0	224	16	0	31	47	0	318	22	340	611
05:30 PM	0	0	0	0	58	143	0	201	19	0	24	43	0	326	21	347	591
05:45 PM	0	0	0	0	47	129	0	176	19	0	17	36	0	275	17	292	504
Total Volume	0	0	0	0	213	628 1219	0	841	70	0	107	177	0	1219 628	81	1300	2318
% App. Total	0	0	0	0	25.3	74.7	0		39.5	0	60.5		0	93.8	6.2		
PHF	.000	.000	.000	.000	.918	.849	.000	.876	.937	.921	.000	.764	.868	.000	.935	.920	.876
Automobiles	0	0	0	0	197	561	0	758	66	0	103	169	0	1164	76	1240	2167
% Automobiles	0	0	0	0	92.5	89.3	0	90.1	94.3	0	96.3	95.5	0	95.5	93.8	95.4	93.5
Commercial	0	0	0	0	16	67	0	83	4	0	4	8	0	55	5	60	151
% Commercial	0	0	0	0	7.5	10.7	0	9.9	5.7	0	3.7	4.5	0	4.5	6.2	4.6	6.5

66%

DE TRAFFIC

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Turkey Creek Blvd at US 441

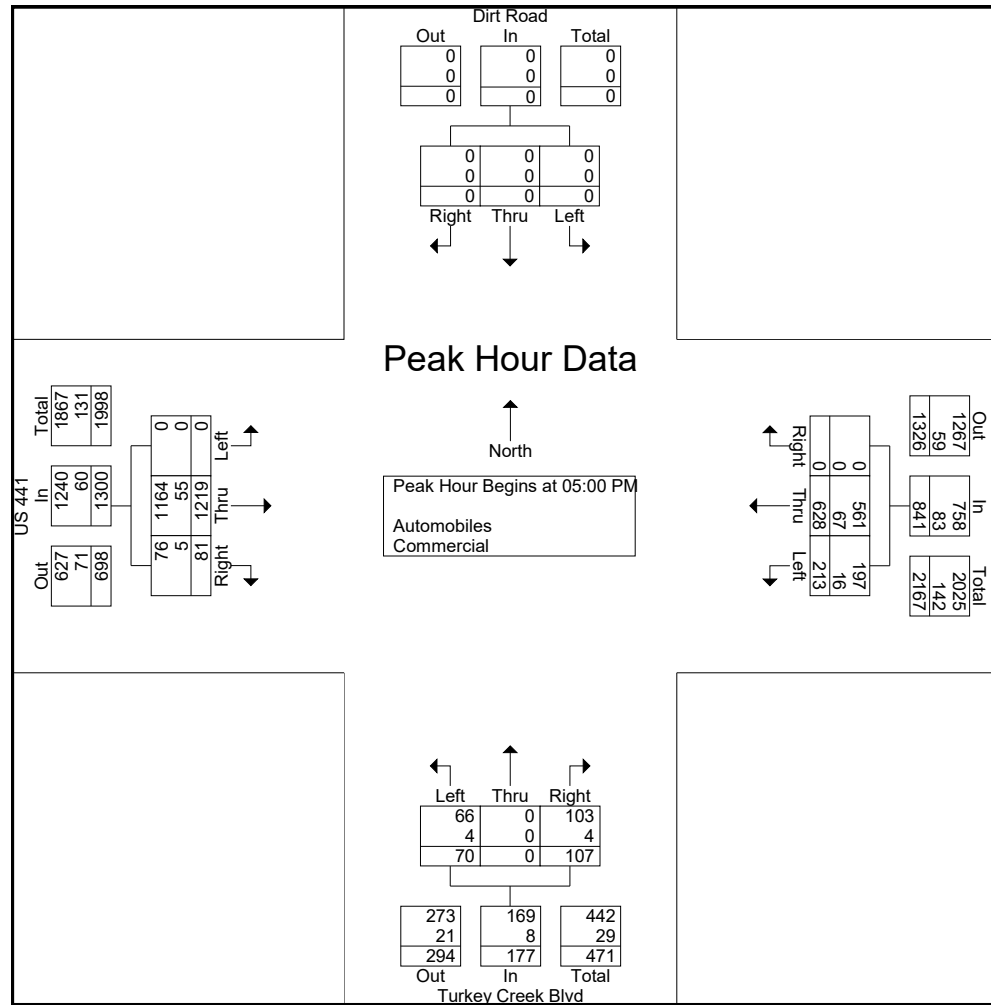
Alachua County, FL

File Name : Turkey at 441

Site Code : 00000002

Start Date : 4/30/2024

Page No : 5



DE TRAFFIC

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Turkey Creek Blvd at US 441

Alachua County, FL

File Name : Turkey at 441

Site Code : 00000002

Start Date : 4/30/2024

Page No : 6

Groups Printed- Peds

Start Time	Dirt Road Southbound					US 441 Westbound					Turkey Creek Blvd Northbound					US 441 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

DE TRAFFIC

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(386) 341-4186

NW 59th Terrace at US 441

Alachua County, FL

File Name : NW 59 at 441

Site Code : 00000002

Start Date : 4/30/2024

Page No : 1

Groups Printed- Automobiles - Commercial

Start Time	NW 59th Terrace Southbound				US 441 Westbound				NW 59th Terrace Northbound				US 441 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	2	0	1	3	0	223	3	226	5	1	3	9	2	112	0	114	352
07:15 AM	3	0	3	6	2	250	1	253	3	0	2	5	1	145	4	150	414
07:30 AM	3	1	1	5	2	290	1	293	3	1	1	5	3	175	3	181	484
07:45 AM	3	0	3	6	2	277	2	281	4	0	3	7	1	159	1	161	455
Total	11	1	8	20	6	1040	7	1053	15	2	9	26	7	591	8	606	1705
08:00 AM	3	1	3	7	2	282	1	285	3	0	3	6	2	160	2	164	462
08:15 AM	4	0	3	7	3	273	2	278	3	0	4	7	3	147	0	150	442
08:30 AM	4	0	3	7	1	237	1	239	2	0	2	4	4	166	1	171	421
08:45 AM	3	0	3	6	4	238	2	244	3	0	1	4	2	142	0	144	398
Total	14	1	12	27	10	1030	6	1046	11	0	10	21	11	615	3	629	1723
04:00 PM	2	0	2	4	3	197	3	203	3	0	2	5	7	260	0	267	479
04:15 PM	3	1	4	8	1	216	6	223	1	0	2	3	4	253	2	259	493
04:30 PM	4	0	4	8	5	239	5	249	2	1	2	5	4	321	0	325	587
04:45 PM	3	0	4	7	0	222	5	227	2	0	3	5	3	275	1	279	518
Total	12	1	14	27	9	874	19	902	8	1	9	18	18	1109	3	1130	2077
05:00 PM	4	0	2	6	2	232	6	240	1	0	2	3	2	336	2	340	589
05:15 PM	3	0	2	5	2	217	2	221	3	1	1	5	1	345	1	347	578
05:30 PM	4	0	3	7	1	209	3	213	1	2	1	4	1	357	3	361	585
05:45 PM	2	0	1	3	0	182	2	184	2	0	0	2	2	311	1	314	503
Total	13	0	8	21	5	840	13	858	7	3	4	14	6	1349	7	1362	2255
Grand Total	50	3	42	95	30	3784	45	3859	41	6	32	79	42	3664	21	3727	7760
Apprch %	52.6	3.2	44.2		0.8	98.1	1.2		51.9	7.6	40.5		1.1	98.3	0.6		
Total %	0.6	0	0.5	1.2	0.4	48.8	0.6	49.7	0.5	0.1	0.4	1	0.5	47.2	0.3	48	
Automobiles	40	3	34	77	16	3485	38	3539	35	6	23	64	40	3425	20	3485	7165
% Automobiles	80	100	81	81.1	53.3	92.1	84.4	91.7	85.4	100	71.9	81	95.2	93.5	95.2	93.5	92.3
Commercial	10	0	8	18	14	299	7	320	6	0	9	15	2	239	1	242	595
% Commercial	20	0	19	18.9	46.7	7.9	15.6	8.3	14.6	0	28.1	19	4.8	6.5	4.8	6.5	7.7

DE TRAFFIC
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(386) 341-4186
NW 59th Terrace at US 441
Alachua County, FL

File Name : NW 59 at 441
Site Code : 00000002
Start Date : 4/30/2024
Page No : 2

	NW 59th Terrace Southbound				US 441 Westbound				NW 59th Terrace Northbound				US 441 Eastbound				Int. Total
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	1	1	5	2	290	1	293	3	1	1	5	3	175	3	181	484
07:45 AM	3	0	3	6	2	277	2	281	4	0	3	7	1	159	1	161	455
08:00 AM	3	1	3	7	2	282	1	285	3	0	3	6	2	160	2	164	462
08:15 AM	4	0	3	7	3	273	2	278	3	0	4	7	3	147	0	150	442
Total Volume	13	2	10	25	9	1122 641	6	1137	13	1	11	25	9	641 1122	6	656	1843
% App. Total	52	8	40		0.8	98.7	0.5		52	4	44		1.4	97.7	0.9		
PHF	.813	.500	.833	.893	.750	.967	.750	.970 906	.813	.250	.688	.893	.750	.916	.500	.906 970	.952
Automobiles	10	2	7	19	5	1044	5	1054	10	1	7	18	9	567	6	582	1673
% Automobiles	76.9	100	70.0	76.0	55.6	93.0	83.3	92.7	76.9	100	63.6	72.0	100	88.5	100	88.7	90.8
Commercial	3	0	3	6	4	78	1	83	3	0	4	7	0	74	0	74	170
% Commercial	23.1	0	30.0	24.0	44.4	7.0	16.7	7.3 11.3	23.1	0	36.4	28.0	0	11.5	0	11.3 7.3	9.2

64%

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NW 59th Terrace at US 441

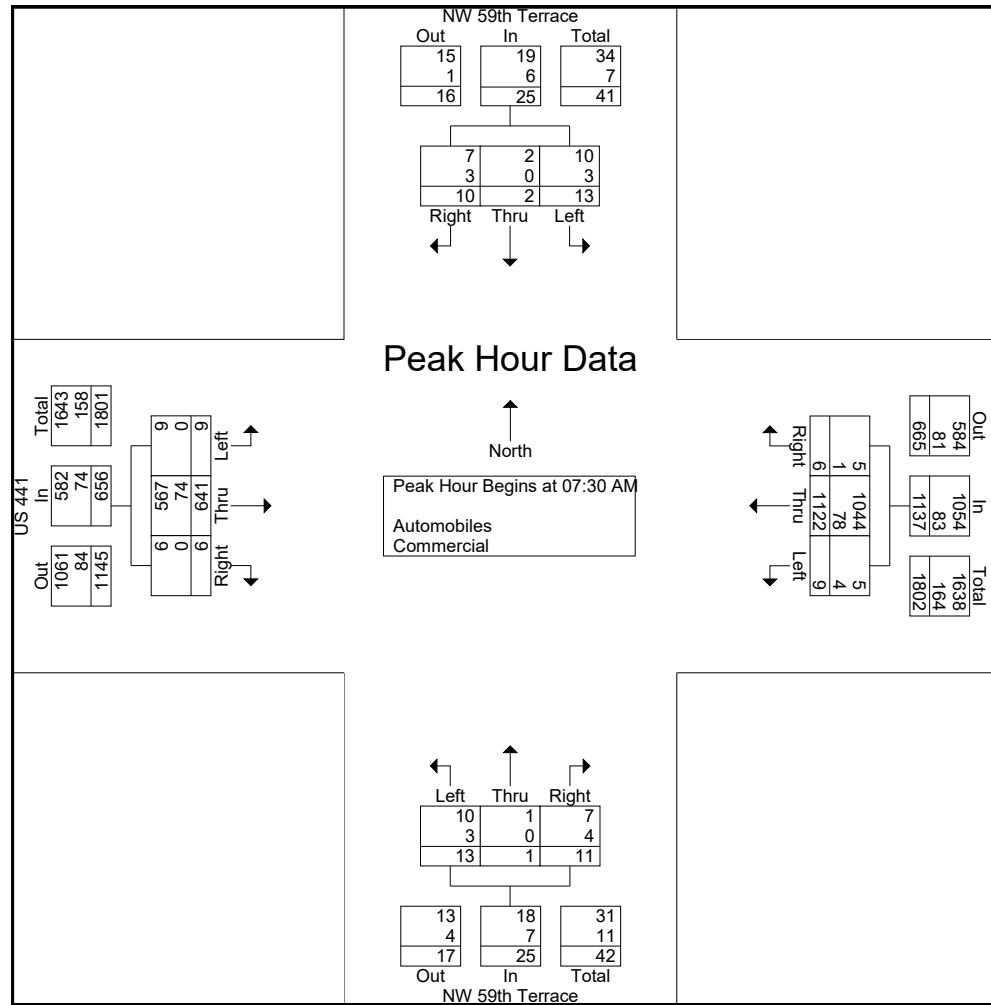
Alachua County, FL

File Name : NW 59 at 441

Site Code : 00000002

Start Date : 4/30/2024

Page No : 3



DE TRAFFIC
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(386) 341-4186
NW 59th Terrace at US 441
Alachua County, FL

File Name : NW 59 at 441
Site Code : 00000002
Start Date : 4/30/2024
Page No : 4

	NW 59th Terrace Southbound				US 441 Westbound				NW 59th Terrace Northbound				US 441 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	4	0	4	8	5	239	5	249	2	1	2	5	4	321	0	325	587
04:45 PM	3	0	4	7	0	222	5	227	2	0	3	5	3	275	1	279	518
05:00 PM	4	0	2	6	2	232	6	240	1	0	2	3	2	336	2	340	589
05:15 PM	3	0	2	5	2	217	2	221	3	1	1	5	1	345	1	347	578
Total Volume	14	0	12	26	9	940 1277	18	937	8	2	8	18	10	1277 910	4	1291	2272
% App. Total	53.8	0	46.2		1	97.1	1.9		44.4	11.1	44.4		0.8	98.9	0.3		
PHF	.875	.000	.750	.813	.450	.952	.750	.941 .930	.667	.500	.667	.900	.625	.925	.500	.930 .941	.964
Automobiles	11	0	10	21	5	821	15	841 841	7	2	6	15	10	1214	4	1228 1228	2105
% Automobiles	78.6	0	83.3	80.8	55.6	90.2	83.3	89.8 89.8	87.5	100	75.0	83.3	100	95.1	100	95.1 95.1	92.6
Commercial	3	0	2	5	4	89	3	96 96	1	0	2	3	0	63	0	63 63	167
% Commercial	21.4	0	16.7	19.2	44.4	9.8	16.7	10.2 4.9	12.5	0	25.0	16.7	0	4.9	0	4.9 10.2	7.4

58%

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NW 59th Terrace at US 441

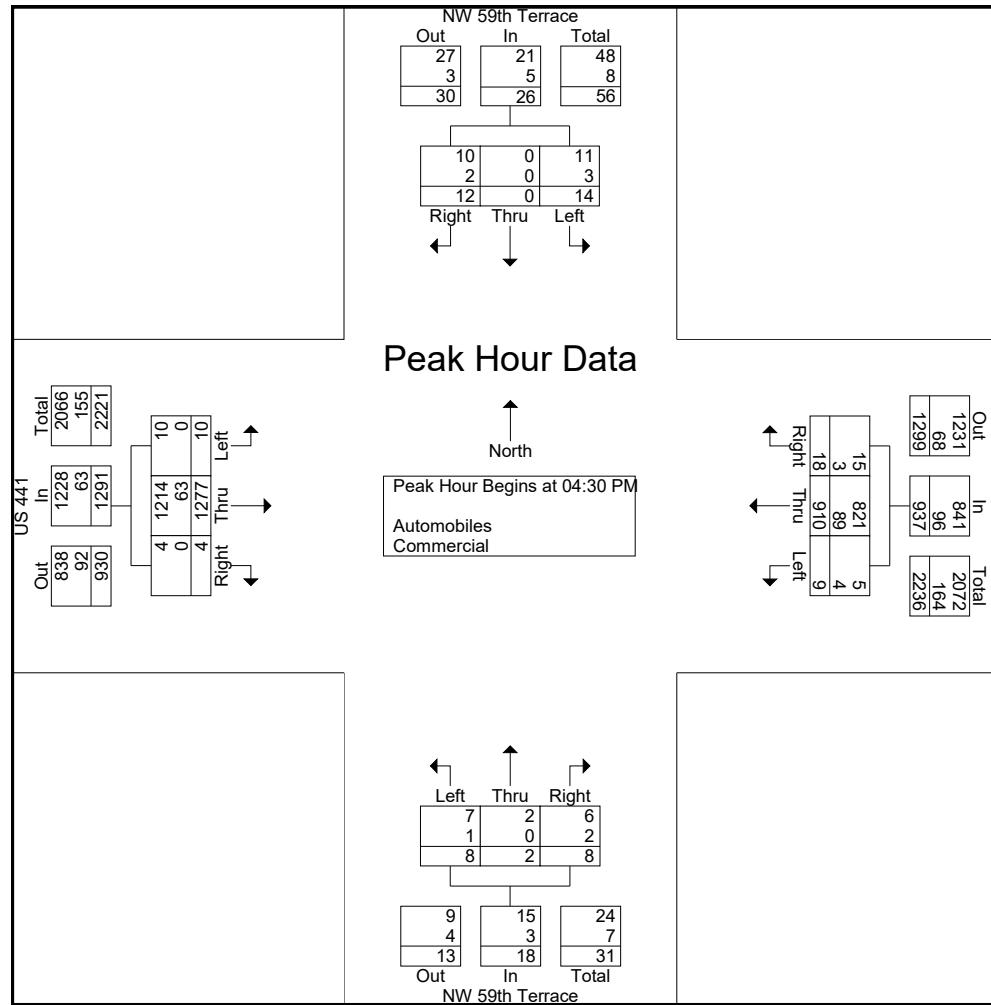
Alachua County, FL

File Name : NW 59 at 441

Site Code : 00000002

Start Date : 4/30/2024

Page No : 5



DE TRAFFIC

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NW 59th Terrace at US 441
Alachua County, FL

File Name : NW 59 at 441
Site Code : 00000002
Start Date : 4/30/2024
Page No : 6

Groups Printed- Peds

	NW 59th Terrace Southbound					US 441 Westbound					NW 59th Terrace Northbound					US 441 Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

DE TRAFFIC
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(386) 341-4186
NW 120th Ln at US 441
Alachua County, FL

File Name : NW 120 at 441
Site Code : 00000001
Start Date : 4/30/2024
Page No : 1

Groups Printed- Automobiles - Commercial

	NW 120th Ln Southbound				US 441 Westbound				N/A Northbound				US 441 Eastbound				
Start Time	Left	Thru	Right	App. Total	Uturn	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	16	0	0	16	0	246	16	262	0	0	0	0	0	109	0	109	387
07:15 AM	17	0	0	17	0	269	10	279	0	0	0	0	0	147	0	147	443
07:30 AM	18	0	1	19	1	281	19	301	0	0	0	0	1	187	0	188	508
07:45 AM	21	0	0	21	0	277	19	296	0	0	0	0	3	173	0	176	493
Total	72	0	1	73	1	1073	64	1138	0	0	0	0	4	616	0	620	1831
08:00 AM	23	0	1	24	0	294	21	315	0	0	0	0	3	161	0	164	503
08:15 AM	21	0	0	21	0	271	13	284	0	0	0	0	1	147	0	148	453
08:30 AM	24	0	1	25	1	252	15	268	0	0	0	0	1	163	0	164	457
08:45 AM	17	0	1	18	0	219	16	235	0	0	0	0	2	140	0	142	395
Total	85	0	3	88	1	1036	65	1102	0	0	0	0	7	611	0	618	1808
04:00 PM	5	0	0	5	0	204	25	229	0	0	0	0	1	244	0	245	479
04:15 PM	16	0	1	17	1	216	20	237	0	0	0	0	0	258	0	258	512
04:30 PM	13	0	0	13	0	235	25	260	0	0	0	0	2	322	0	324	597
04:45 PM	16	0	1	17	1	223	31	255	0	0	0	0	1	288	0	289	561
Total	50	0	2	52	2	878	101	981	0	0	0	0	4	1112	0	1116	2149
05:00 PM	14	0	0	14	0	237	25	262	0	0	0	0	1	329	0	330	606
05:15 PM	16	0	2	18	1	223	30	254	0	0	0	0	0	323	0	323	595
05:30 PM	13	0	0	13	0	207	21	228	0	0	0	0	1	360	0	361	602
05:45 PM	10	0	1	11	0	180	13	193	0	0	0	0	0	309	0	309	513
Total	53	0	3	56	1	847	89	937	0	0	0	0	2	1321	0	1323	2316
Grand Total	260	0	9	269	5	3834	319	4158	0	0	0	0	17	3660	0	3677	8104
Apprch %	96.7	0	3.3		0.1	92.2	7.7		0	0	0	0	0.5	99.5	0		
Total %	3.2	0	0.1	3.3	0.1	47.3	3.9	51.3	0	0	0	0	0.2	45.2	0	45.4	
Automobiles	231	0	8	239	5	3543	296	3844	0	0	0	0	5	3460	0	3465	7548
% Automobiles	88.8	0	88.8	88.8	100	92.4	92.8	92.4	0	0	0	0	29.4	94.5	0	94.2	93.1
Commercial	29	0	1	30	0	291	23	314	0	0	0	0	12	200	0	212	556
% Commercial	11.2	0	11.1	11.2	0	7.6	7.2	7.6	0	0	0	0	70.6	5.5	0	5.8	6.9

DE TRAFFIC
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(386) 341-4186
NW 120th Ln at US 441
Alachua County, FL

File Name : NW 120 at 441
Site Code : 00000001
Start Date : 4/30/2024
Page No : 2

	NW 120th Ln Southbound				US 441 Westbound				N/A Northbound				US 441 Eastbound				Int. Total
Start Time	Left	Thru	Right	App. Total	Uturn	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	18	0	1	19	1	281	19	301	0	0	0	0	1	187	0	188	508
07:45 AM	21	0	0	21	0	277	19	296	0	0	0	0	3	173	0	176	493
08:00 AM	23	0	1	24	0	294	21	315	0	0	0	0	3	161	0	164	503
08:15 AM	21	0	0	21	0	271	13	284	0	0	0	0	1	147	0	148	453
Total Volume	83	0	2	85	1	1123	668	1196	0	0	0	0	8	668	1123	676	1957
% App. Total	97.6	0	2.4		0.1	93.9	6		0	0	0	0	1.2	98.8	0		
PHF	.902	.000	.500	.885	.250	.955	.857	.949	.899	.000	.000	.000	.667	.893	.000	.899	.949
Automobiles	76	0	2	78	1	1047	66	1114	0	0	0	0	2	606	0	608	1800
% Automobiles	91.6	0	100	91.8	100	93.2	91.7	93.1	0	0	0	0	25.0	90.7	0	89.9	92.0
Commercial	7	0	0	7	0	76	6	82	0	0	0	0	6	62	0	68	157
% Commercial	8.4	0	0	8.2	0	6.8	8.3	6.9	0	0	0	0	75.0	9.3	0	10.1	8.0

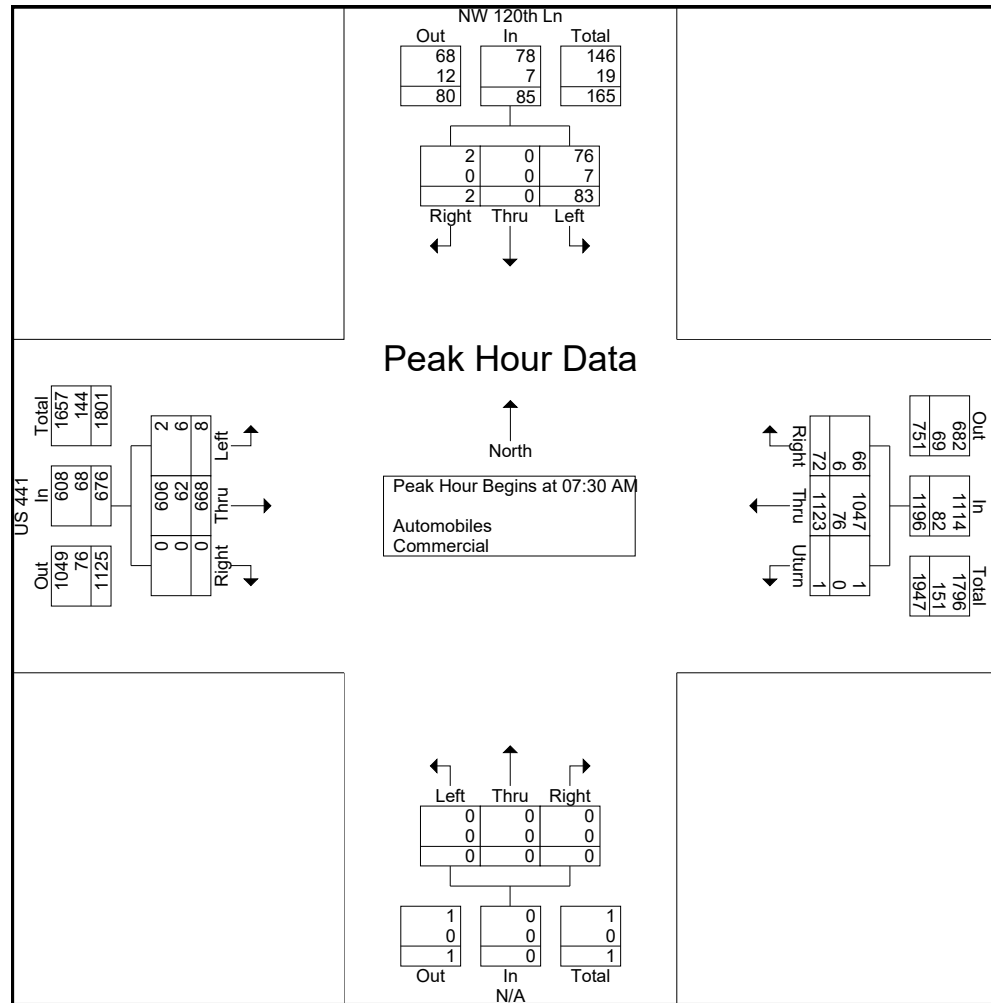
10.1

6.9

63%

DE TRAFFIC
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 (386) 341-4186
 NW 120th Ln at US 441
 Alachua County, FL

File Name : NW 120 at 441
 Site Code : 00000001
 Start Date : 4/30/2024
 Page No : 3



DE TRAFFIC
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NW 120th Ln at US 441
Alachua County, FL

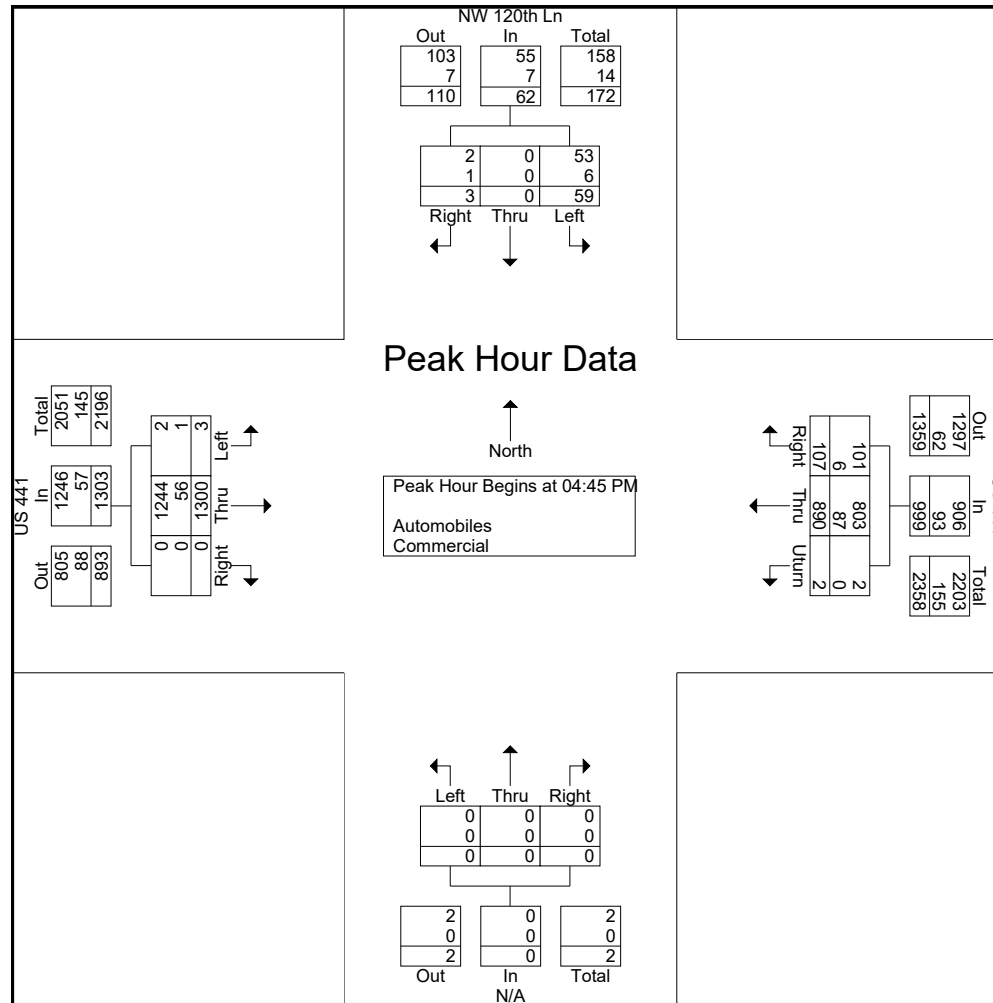
File Name : NW 120 at 441
Site Code : 00000001
Start Date : 4/30/2024
Page No : 4

	NW 120th Ln Southbound				US 441 Westbound				N/A Northbound				US 441 Eastbound				
Start Time	Left	Thru	Right	App. Total	Uturn	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	16	0	1	17	1	223	31	255	0	0	0	0	1	288	0	289	561
05:00 PM	14	0	0	14	0	237	25	262	0	0	0	0	1	329	0	330	606
05:15 PM	16	0	2	18	1	223	30	254	0	0	0	0	0	323	0	323	595
05:30 PM	13	0	0	13	0	207	21	228	0	0	0	0	1	360	0	361	602
Total Volume	59	0	3	62	2	890 1300	107	999	0	0	0	0	3	1300 890	0	1303	2364
% App. Total	95.2	0	4.8		0.2	89.1	10.7		0	0	0		0.2	99.8	0		
PHF	.922	.000	.375	.861	.500	.939	.863	.953	.902	.000	.000	.000	.750	.903	.000	.902	.953
Automobiles	53	0	2	55	2	803	101	906	0	0	0	0	2	1244	0	1246	2207
% Automobiles	89.8	0	66.7	88.7	100	90.2	94.4	90.7	0	0	0	0	66.7	95.7	0	95.6	93.4
Commercial	6	0	1	7	0	87	6	93	0	0	0	0	1	56	0	57	157
% Commercial	10.2	0	33.3	11.3	0	9.8	5.6	9.3	0	0	0	0	33.3	4.3	0	4.4	6.6

59%

DE TRAFFIC
detrainc.com
(386) 341-4186
NW 120th Ln at US 441
Alachua County, Fl

File Name : NW 120 at 441
Site Code : 00000001
Start Date : 4/30/2024
Page No : 5



DE TRAFFIC
 detraffic.com
 (386) 341-4186
 NW 120th Ln at US 441
 Alachua County, Fl

File Name : NW 120 at 441
 Site Code : 00000001
 Start Date : 4/30/2024
 Page No : 6

Groups Printed- Peds

	NW 120th Ln Southbound					US 441 Westbound					N/A Northbound					US 441 Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Uturn	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					



NB Approach



SB Approach



EB Approach



WB Approach



Turkey Creek Blvd
at US 441

Alachua County

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9239 Outlook Rock Trl. Windermere Fl. 34786

Project
Number: CHW24-08

Sheet
Number: 1



NB Approach



SB Approach



EB Approach



WB Approach



NW 59th Terrace
at US 441

Alachua County

detraffic.com

9239 Outlook Rock Trl. Windermere Fl. 34786

Project
Number: CHW24-08

Sheet
Number: 2



SB Approach



EB Approach



WB Approach



NW 120th Ln
at US 441

Alachua County

detraffic.com

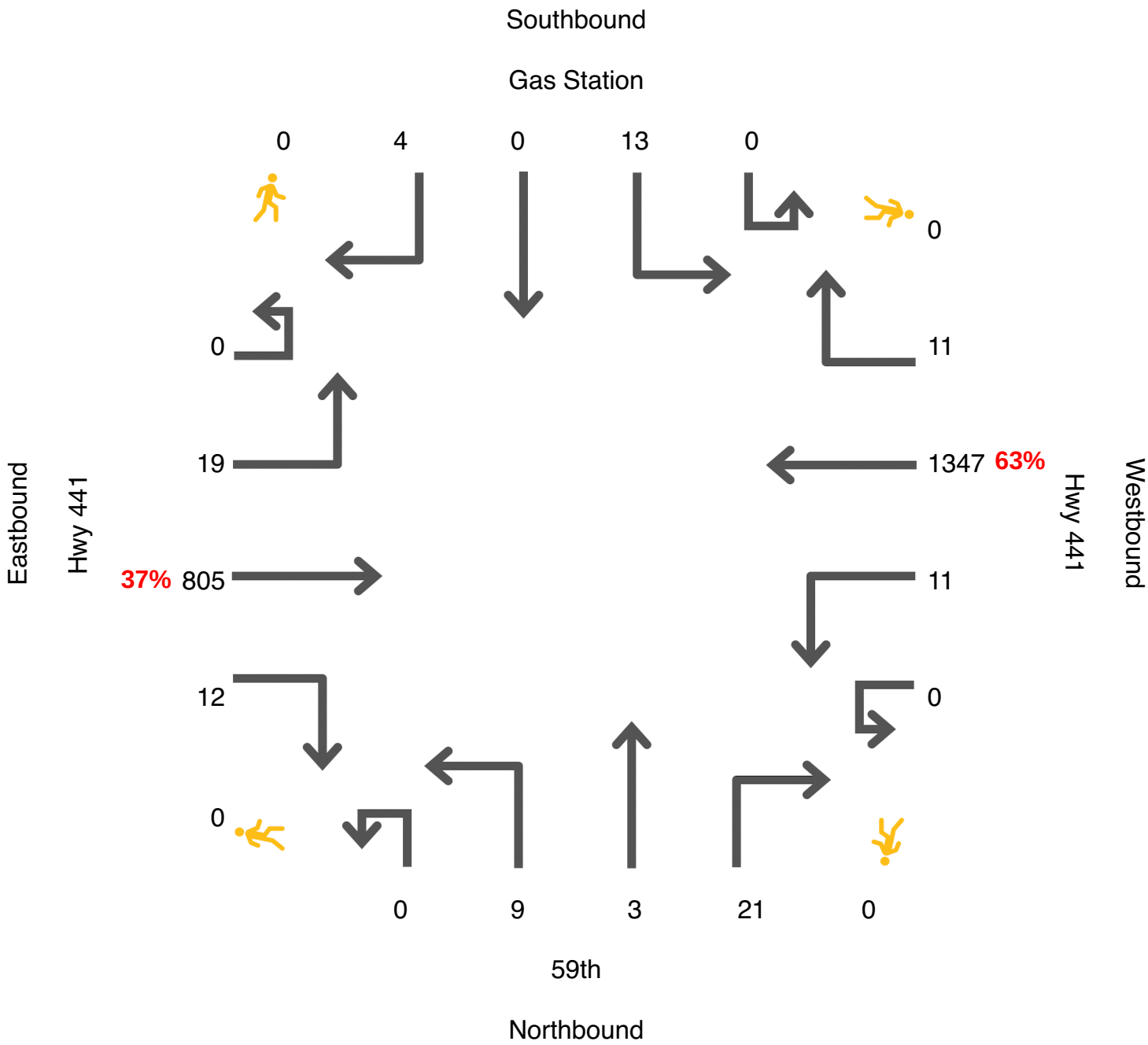
9239 Outlook Rock Trl. Windermere Fl. 34786

Project
Number: CHW24-08

Sheet
Number: 3

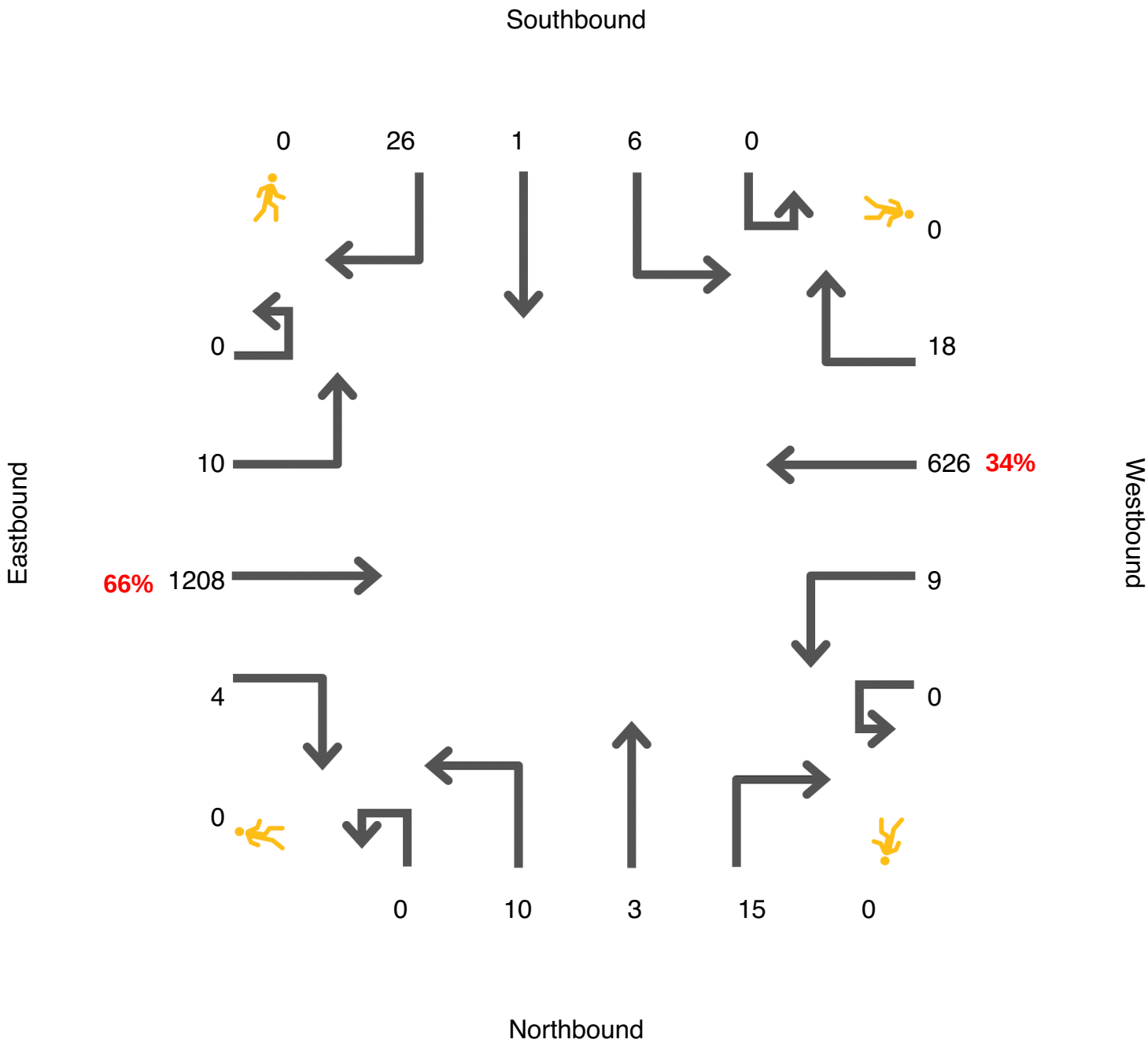
Turning Movement Count

Study Name: Patel
Date: Monday, Jul 8 2024 (4:30 PM TO 5:30 PM)
Location: 59th/441
Observer: Brian Snyder
Weather: Cloudy
Comments: ""



Turning Movement Count

Study Name: 441/59
Date: Tuesday, Jul 9 2024 (7:30 AM TO 8:30 AM)
Location:
Observer:
Weather:
Comments: ""



Appendix E

Peak Season Factor and Historical Growth Rates

2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 2600 ALACHUA COUNTYWIDE

WEEK	DATES	SF	MOCF: 0.96 PSCF
1	01/01/2022 - 01/01/2022	1.05	1.09
2	01/02/2022 - 01/08/2022	1.05	1.09
3	01/09/2022 - 01/15/2022	1.04	1.08
4	01/16/2022 - 01/22/2022	1.03	1.07
5	01/23/2022 - 01/29/2022	1.01	1.05
6	01/30/2022 - 02/05/2022	1.00	1.04
7	02/06/2022 - 02/12/2022	0.98	1.02
* 8	02/13/2022 - 02/19/2022	0.97	1.01
* 9	02/20/2022 - 02/26/2022	0.97	1.01
*10	02/27/2022 - 03/05/2022	0.97	1.01
*11	03/06/2022 - 03/12/2022	0.97	1.01
*12	03/13/2022 - 03/19/2022	0.97	1.01
*13	03/20/2022 - 03/26/2022	0.96	1.00
*14	03/27/2022 - 04/02/2022	0.95	0.99
*15	04/03/2022 - 04/09/2022	0.94	0.98
*16	04/10/2022 - 04/16/2022	0.93	0.97
*17	04/17/2022 - 04/23/2022	0.94	0.98
*18	04/24/2022 - 04/30/2022	0.95	0.99
*19	05/01/2022 - 05/07/2022	0.96	1.00
*20	05/08/2022 - 05/14/2022	0.97	1.01
21	05/15/2022 - 05/21/2022	0.99	1.03
22	05/22/2022 - 05/28/2022	0.99	1.03
23	05/29/2022 - 06/04/2022	1.00	1.04
24	06/05/2022 - 06/11/2022	1.01	1.05
25	06/12/2022 - 06/18/2022	1.01	1.05
26	06/19/2022 - 06/25/2022	1.02	1.06
27	06/26/2022 - 07/02/2022	1.03	1.07
28	07/03/2022 - 07/09/2022	1.04	1.08
29	07/10/2022 - 07/16/2022	1.05	1.09
30	07/17/2022 - 07/23/2022	1.05	1.09
31	07/24/2022 - 07/30/2022	1.04	1.08
32	07/31/2022 - 08/06/2022	1.03	1.07
33	08/07/2022 - 08/13/2022	1.02	1.06
34	08/14/2022 - 08/20/2022	1.02	1.06
35	08/21/2022 - 08/27/2022	1.02	1.06
36	08/28/2022 - 09/03/2022	1.02	1.06
37	09/04/2022 - 09/10/2022	1.02	1.06
38	09/11/2022 - 09/17/2022	1.03	1.07
39	09/18/2022 - 09/24/2022	1.01	1.05
40	09/25/2022 - 10/01/2022	0.99	1.03
41	10/02/2022 - 10/08/2022	0.98	1.02
42	10/09/2022 - 10/15/2022	0.96	1.00
43	10/16/2022 - 10/22/2022	0.97	1.01
44	10/23/2022 - 10/29/2022	0.99	1.03
45	10/30/2022 - 11/05/2022	1.00	1.04
46	11/06/2022 - 11/12/2022	1.02	1.06
47	11/13/2022 - 11/19/2022	1.03	1.07
48	11/20/2022 - 11/26/2022	1.04	1.08
49	11/27/2022 - 12/03/2022	1.04	1.08
50	12/04/2022 - 12/10/2022	1.05	1.09
51	12/11/2022 - 12/17/2022	1.05	1.09
52	12/18/2022 - 12/24/2022	1.05	1.09
53	12/25/2022 - 12/31/2022	1.04	1.08

* PEAK SEASON

23-FEB-2023 09:11:19

830UPD

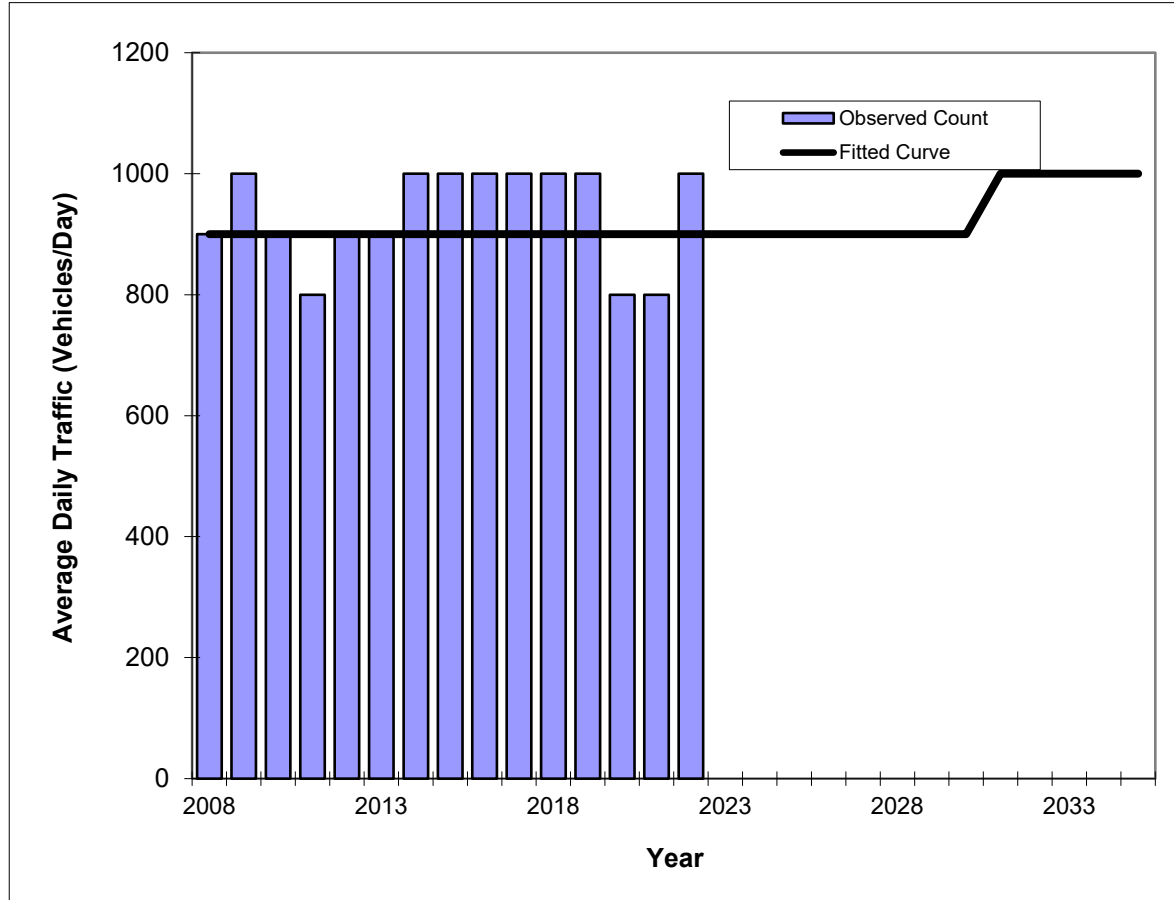
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Traffic Trends - V03.a

NW 120th Lane --

FIN#	429193-1
Location	1

County:	Alachua (26)
Station #:	9024
Highway:	NW 120th Lane



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2008	900	900
2009	1000	900
2010	900	900
2011	800	900
2012	900	900
2013	900	900
2014	1000	900
2015	1000	900
2016	1000	900
2017	1000	900
2018	1000	900
2019	1000	900
2020	800	900
2021	800	900
2022	1000	900
2024 Opening Year Trend		
2024	N/A	900
2025 Mid-Year Trend		
2025	N/A	900
2026 Design Year Trend		
2026	N/A	900
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	1
Trend R-squared:	0.34%
Trend Annual Historic Growth Rate:	0.00%
Trend Growth Rate (2022 to Design Year):	0.00%
Printed:	5-May-24
Straight Line Growth Option	

*Axle-Adjusted

Appendix F

Buildout Tables

US HWY 441 at Turkey Creek Blvd

US HWY 441 at Turkey Creek Blvd - Growth Rate Data			
Peak Season Factor			0.99
Growth Rate			
Approach	Historical Growth Rate	Growth Rate Used	2025 Growth Factor
Turkey Creek Blvd/Dirt Road	Not Available	2.00%	1.020
US HWY 441	0.98%	1.00%	1.010

AM Peak Hour Buildout Traffic Volumes - US HWY 441 at Turkey Creek Blvd													
Scenario	US HWY 441			US HWY 441				Turkey Creek Blvd			Dirt Road		
	Eastbound			Westbound				Northbound			Southbound		
	Left	Thru	Right	U-turn	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed Turning Movement Counts	0	1008	79	0	109	513	0	75	0	128	0	0	0
Peak Season Volume (Existing)	0	998	78	0	108	508	0	74	0	127	0	0	0
2025 Background Volumes	0	1008	79	0	109	513	0	75	0	130	0	0	0
2025 Background Volumes with Directional	0	1008	79	2	109	513	0	75	0	130	0	0	0
Project Trips	0	36	0	0	0	16	0	0	0	0	0	0	0
2025 Buildout Volumes	0	1044	79	2	109	529	0	75	0	130	0	0	0
Peak Hour Factor (Int total = 0.95)	0.96			0.94				0.88			0.00		
Truck %	7%			11%				4%			0%		
Pedestrian Volumes	0			0				0			0		

PM Peak Hour Buildout Traffic Volumes - US HWY 441 at Turkey Creek Blvd													
Scenario	US HWY 441			US HWY 441				Turkey Creek Blvd			Dirt Road		
	Eastbound			Westbound				Northbound			Southbound		
	Left	Thru	Right	U-turn	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed Turning Movement Counts	0	628	81	0	213	1219	0	70	0	107	0	0	0
Peak Season Volume (Existing)	0	622	80	0	211	1207	0	69	0	106	0	0	0
2025 Background Volumes	0	628	81	0	213	1219	0	70	0	108	0	0	0
2025 Background Volumes with Directional	0	628	81	0	213	1219	0	70	0	108	0	0	0
Project Trips	0	21	0	0	0	28	0	0	0	0	0	0	0
2025 Buildout Volumes	0	649	81	0	213	1247	0	70	0	108	0	0	0
Peak Hour Factor (Int total = 0.95)	0.88			0.94				0.87			0.00		
Truck %	10%			5%				5%			0%		
Pedestrian Volumes	0			0				0			0		

(1) Under a directional access the (441/59th Terr) northbound lefts and throughs will turn right followed by a U-turn at the 441/NW 120th Lane intersection. All the (441/59th Terr)southbound throughs are expected to turn right followed by a U-turn at the 441/Turkey Creek Blvd intersection. All of the (441/59th Terr) southbound lefts are expected to travel along NW 120th Lane and make a southbound left at the 441/120th Lane intersection. The volumes are redistributed based on these assumptions.

US HWY 441 at NW 59th Terrace

US HWY 441 at NW 59th Terrace - Growth Rate Data			
Peak Season Factor			0.99
Growth Rate			
Approach	Historical Growth Rate	Growth Rate Used	2025 Growth Factor
NW 59th Terrace	Not Available	2.00%	1.020
US HWY 441	0.98%	1.00%	1.010

AM Peak Hour Buildout Traffic Volumes - US HWY 441 at NW 59th Terrace												
Scenario	US HWY 441			US HWY 441			NW 59th Terrace			NW 59th Terrace		
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed Turning Movement Counts	9	1122	6	9	641	6	13	1	11	13	2	10
Peak Season Volume (Existing)	9	1111	6	9	635	6	13	1	11	13	2	10
2025 Background Volumes	9	1122	6	9	641	6	13	1	11	13	2	10
2025 Background Volumes with Directional ⁽¹⁾	9	1122	8	9	654	7			25			12
Project Trips	0	36	0	57	16	0			0			0
2025 Buildout Volumes	9	1158	8	66	670	7			25			12
Peak Hour Factor (Int total = 0.95)	0.97			0.91			0.89			0.89		
Truck %	7%			11%			28%			24%		
Pedestrian Volumes	0			0			0			0		

PM Peak Hour Buildout Traffic Volumes - US HWY 441 at NW 59th Terrace												
Scenario	US HWY 441			US HWY 441			NW 59th Terrace			NW 59th Terrace		
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed Turning Movement Counts	10	910	4	9	1277	18	8	2	8	14	0	12
Peak Season Volume (Existing)	10	901	4	9	1264	18	8	2	8	14	0	12
2025 Background Volumes	10	910	4	9	1277	18	8	2	8	14	0	12
2025 Background Volumes with Directional ⁽¹⁾	10	910	4	9	1285	20			18			12
Project Trips	0	21	0	89	28	0			0			0
2025 Buildout Volumes	10	931	4	98	1313	20			18			12
Peak Hour Factor (Int total = 0.96)	0.94			0.93			0.90			0.81		
Truck %	10%			5%			17%			19%		
Pedestrian Volumes	0			0			0			0		

(1) Under a directional access the (441/59th Terr) northbound lefts and throughs will turn right followed by a U-turn at the 441/NW 120th Lane intersection. All the (441/59th Terr)southbound throughs are expected to turn right followed by a U-turn at the 441/Turkey Creek Blvd intersection. All of the (441/59th Terr) southbound lefts are expected to travel along NW 120th Lane and make a southbound left at the 441/120th Lane intersection. The volumes are redistributed based on these assumptions.

AM Peak Hour Buildout Traffic Volumes - NW 59th Terrace at Site Access												
Scenario	N/A			Site Access			NW 59th Terrace			NW 59th Terrace		
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed Turning Movement Counts								25			17	
Peak Season Volume (Existing)								25			17	
2025 Background Volumes								25			17	
Project Trips				2		0		0	1	57	0	
2025 Buildout Volumes				2		0		25	1	57	17	
Peak Hour Factor (Int total = 0.89)				0.92			0.89			0.89		
Truck %				3%			28%			28%		
Pedestrian Volumes				0			0			0		

PM Peak Hour Buildout Traffic Volumes - NW 59th Terrace at Site Access												
Scenario	N/A			Site Access			NW 59th Terrace			NW 59th Terrace		
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed Turning Movement Counts								18			13	
Peak Season Volume (Existing)								18			13	
2025 Background Volumes								18			13	
Project Trips				2		0		0	1	89	0	
2025 Buildout Volumes				2		0		18	1	89	13	
Peak Hour Factor (Int total = 0.90)				0.92			0.90			0.90		
Truck %				3%			17%			17%		
Pedestrian Volumes				0			0			0		

AM Peak Hour Buildout Traffic Volumes - US HWY 441 at East Site Access						
Scenario	US HWY 441			Site Access		
	Eastbound			Northbound		
	Left	Thru	Right	Left	Thru	Right
Observed Turning Movement Counts		1146				
Peak Season Volume (Existing)		1135				
2025 Background Volumes		1146				
Project Trips		-64	100			143
2025 Buildout Volumes		1082	100			143
Peak Hour Factor (Int total = 0.97)	0.97			0.92		
Truck %	0.07			3%		
Pedestrian Volumes	0			0		

PM Peak Hour Buildout Traffic Volumes - US HWY 441 at East Site Access						
Scenario	US HWY 441			Site Access		
	Eastbound			Northbound		
	Left	Thru	Right	Left	Thru	Right
Observed Turning Movement Counts		932				
Peak Season Volume (Existing)		923				
2025 Background Volumes		932				
Project Trips		-42	63			150
2025 Buildout Volumes		890	63			150
Peak Hour Factor (Int total = 0.94)	0.94			0.92		
Truck %	10%			3%		
Pedestrian Volumes	0			0		

US HWY 441 at NW 120th Lane

US HWY 441 at NW 120th Lane - Growth Rate Data				
Peak Season Factor				0.99
Growth Rate				
Approach		Historical Growth Rate	Growth Rate Used	2025 Growth Factor
NW 120th Lane		0.00%	0.00%	1.000
US HWY 441		0.98%	1.00%	1.010

AM Peak Hour Buildout Traffic Volumes - US HWY 441 at NW 120th Lane													
Scenario	US HWY 441				US HWY 441			N/A			NW 120th Lane		
	Eastbound				Westbound			Northbound			Southbound		
	U-turn	Left	Thru	Right	U-turn	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed Turning Movement Counts	0	8	1123		0	668	72				83		2
Peak Season Volume (Existing)	0	8	1112		0	661	71				82		2
2025 Background Volumes	0	8	1123		0	668	72				82		2
2025 Background Volumes with Directional	14	8	1123		0	668	72				95		2
Project Trips	52	0	27		0	21	0				0		0
2025 Buildout Volumes	66	8	1150		0	689	72				95		2
Peak Hour Factor (Int total = 0.96)	0.95				0.90						0.89		
Truck %	7%				10%						8%		
Pedestrian Volumes	0				0						0		

PM Peak Hour Buildout Traffic Volumes - US HWY 441 at NW 120th Lane													
Scenario	US HWY 441				US HWY 441			N/A			NW 120th Lane		
	Eastbound				Westbound			Northbound			Southbound		
	U-turn	Left	Thru	Right	U-turn	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed Turning Movement Counts	0	3	890		2	1300	107				59		3
Peak Season Volume (Existing)	0	3	881		2	1287	106				58		3
2025 Background Volumes	0	3	890		2	1300	107				58		3
2025 Background Volumes with Directional	10	3	890		2	1300	107				72		3
Project Trips	88	0	20		0	29	0				0		0
2025 Buildout Volumes	98	3	910		2	1329	107				72		3
Peak Hour Factor (Int total = 0.98)	0.95				0.9						0.86		
Truck %	9%				4%						11%		
Pedestrian Volumes	0				0						0		

(1) Under a directional access the (441/59th Terr) northbound lefts and throughs will turn right followed by a U-turn at the 441/NW 120th Lane intersection. All the (441/59th Terr)southbound throughs are expected to turn right followed by a U-turn at the 441/Turkey Creek Blvd intersection. All of the (441/59th Terr) southbound lefts are expected to travel along NW 120th Lane and make a southbound left at the 441/120th Lane intersection. The volumes are redistributed based on these assumptions.

Appendix G

Trip Distribution

Trip Generation (Based on ITE Rates)									
Land Use	ITE LU Code	Variable KSF with 10 fueling positions	Daily	AM Peak			PM Peak		
			Total	Total	In	Out	Total	In	Out
Convenience Store/Gas Station	945	3.823	2,693	216	108	108	208	104	104
Pass-by Trips (AM = 76%, PM = 75%, Daily = 75.5%)			2033	164	82	82	156	78	78
Strip Retail Plaza	822	3.318	370	14	8	6	36	18	18
Pass-by Trips (40%)			148	6	3	3	14	7	7
Fast-food without Drive-thru	933	1.692	762	73	42	31	61	31	30
Pass-by Trips (AM = 50%, PM = 55%, Daily = 52.5%)			400	37	21	16	34	17	17
Gross New Trips			3,825	303	158	145	305	153	152
Total Pass-by			2,581	207	106	101	204	102	102
Net New Trips (utilizing pass-by reduction)			1,244	96	52	44	101	51	50

* The ITE Trip Generation Manual, 11th Edition provides a pass-by rate of 76% during the AM and 75% during the PM peak but does not provide a pass-by rate for the daily condition, therefore, a pass-by rate average of 75.5% is applied to the daily.

* The ITE Trip Generation Manual, 11th Edition does not provide pass-by rates for the Strip Retail Plaza, therefore the Shopping Plaza pass-by rates are used. The ITE does not provide daily or AM peak hour pass-by rates for Shopping Plaza, therefore, the PM Peak pass-by rate of 40% is applied to all scenarios.

* The ITE Trip Generation Manual, 11th Edition does not provide pass-by rates for Fast-food without drive-thru, therefore the pass-by rates for fast-food with drive-thru is used. The ITE does not provide daily pass-by rates for fast-food with drive-thru, therefore, the daily is based on the average of the AM pass-by rate = 50% and PM pass-by rate = 55%.

*The pass-by rates are reduced such that the eastbound inbound matches the eastbound outbound and same for westbound.

AM Trip Distribution

Eastbound	Westbound	Northbound
1137	656	25
63%	36%	1%

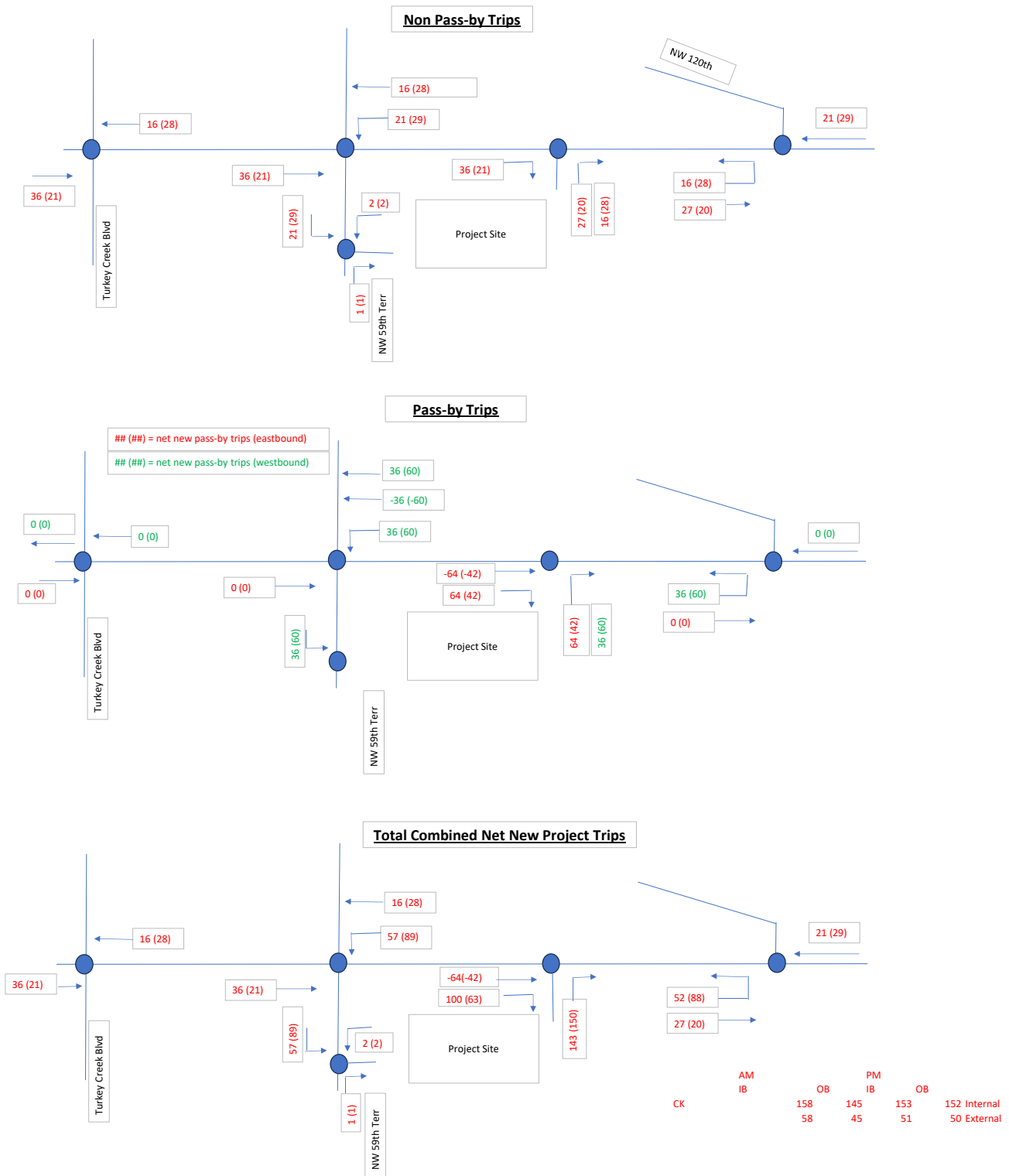
Eastbound		Inbound	Outbound
Gross	191	100	91
Pass-by	128	64	64
Non Pass-by	63	36	27
Westbound			
Gross	109	57	52
Pass-by	72	36	36
Non Pass-by	37	21	16
Northbound			
Non Pass-by	3	1	2
CK Gross	303	158	145
Pass-by	200	100	100
Net New	103	58	45

PM Trip Distribution

Eastbound	Westbound	Northbound
924	1304	18
41%	58%	1%

Eastbound		Inbound	Outbound
Gross	125	63	62
Pass-by	84	42	42
Non Pass-by	41	21	20
Westbound			
Gross	177	89	88
Pass-by	120	60	60
Non Pass-by	57	29	28
Northbound			
Non Pass-by	3	1	2
CK	305	153	152
Pass-by	204	102	102
Net New	101	51	50

Trip Generation used for Analysis									
Land Use	ITE LU Code	Variable KSF with 10 fueling positions	Daily	AM Peak			PM Peak		
			Total	Total	In	Out	Total	In	Out
Convenience Store/Gas Station	945	3.823	2,693	216	108	108	208	104	104
Strip Retail Plaza	822	3.318	370	14	8	6	36	18	18
Fast-food without Drive-thru	933	1.692	762	73	42	31	61	31	30
Total Pass-by with Directional Volumes Matching			2581	200	100	100	204	102	102
Gross New Trips			3,825	303	158	145	305	153	152
Net New Trips (utilizing pass-by reduction)			1,244	103	58	45	101	51	50



Appendix F

Straight Line Diagram

Version: 1.4.27 08/10/2022

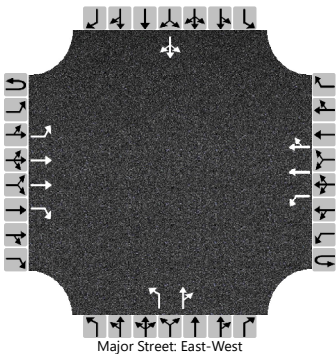
Appendix I

HCS Reports

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at Turkey Creek Blvd
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/16/2024	East/West Street	US HWY 441
Analysis Year	2024	North/South Street	Turkey Creek Blvd
Time Analyzed	AM Peak - Existing	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	1	0	1	2	0		1	1	0		0	1	0
Configuration		L	T	R		L	T	TR		L		TR			LTR	
Volume (veh/h)	0	0	998	78	0	108	508	0		74	0	127		0	0	0
Percent Heavy Vehicles (%)	7	7			11	11				4	4	4		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No															
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.24				4.32				7.58	6.58	6.98		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.27				2.31				3.54	4.04	3.34		3.50	4.00	3.30

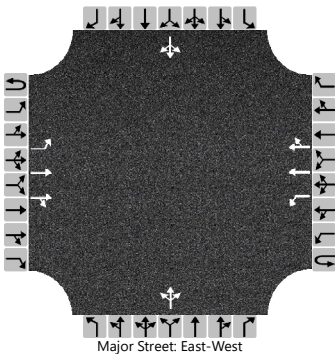
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				114				78		134			0	
Capacity, c (veh/h)		995				563				219		492			0	
v/c Ratio		0.00				0.20				0.36		0.27				
95% Queue Length, Q ₉₅ (veh)		0.0				0.7				1.5		1.1				
95% Queue Length, Q ₉₅ (ft)						19.0				38.7		28.4				
Control Delay (s/veh)		8.6				13.0				30.2		15.0				
Level of Service (LOS)		A				B				D		C				
Approach Delay (s/veh)	0.0				2.3				20.6							
Approach LOS	A				A				C							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at NW 59th Terr
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/16/2024	East/West Street	US HWY 441
Analysis Year	2024	North/South Street	NW 59th Terr
Time Analyzed	AM Peak - Existing	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	T	TR		L	T	TR			LTR				LTR	
Volume (veh/h)	0	9	1111	6	0	9	635	6		13	1	11		13	2	10
Percent Heavy Vehicles (%)	7	7			11	11				28	28	28		24	24	24
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.24				4.32				8.06	7.06	7.46		7.98	6.98	7.38
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.27				2.31				3.78	4.28	3.58		3.74	4.24	3.54

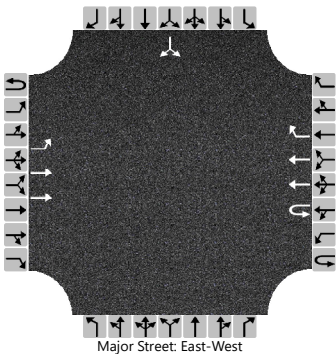
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		9				9					26				26	
Capacity, c (veh/h)		880				541					212				341	
v/c Ratio		0.01				0.02					0.12				0.08	
95% Queue Length, Q ₉₅ (veh)		0.0				0.1					0.4				0.2	
95% Queue Length, Q ₉₅ (ft)		0.0				2.7					12.2				6.0	
Control Delay (s/veh)		9.1				11.8					24.4				16.4	
Level of Service (LOS)		A				B					C				C	
Approach Delay (s/veh)	0.1				0.2				24.4				16.4			
Approach LOS	A				A				C				C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at NW 120th Lane
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/16/2024	East/West Street	US HWY 441
Analysis Year	2025	North/South Street	NW 120th Lane
Time Analyzed	AM Peak - Existing	Peak Hour Factor	0.96
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	1	0	2	1		0	0	0		0	1	0
Configuration		L	T		U		T	R							LR	
Volume (veh/h)	0	8	1112		0		661	71						82		2
Percent Heavy Vehicles (%)	7	7			10									8		8
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1			6.4									7.5		6.9
Critical Headway (sec)		4.24			6.60									6.96		7.06
Base Follow-Up Headway (sec)		2.2			2.5									3.5		3.3
Follow-Up Headway (sec)		2.27			2.60									3.58		3.38

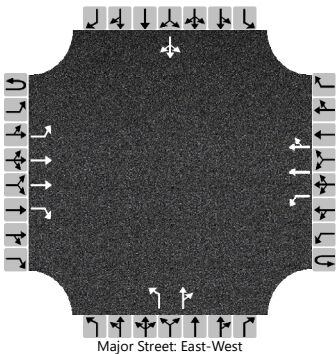
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		8			0										88	
Capacity, c (veh/h)		814			244										376	
v/c Ratio		0.01			0.00										0.23	
95% Queue Length, Q ₉₅ (veh)		0.0			0.0										0.9	
95% Queue Length, Q ₉₅ (ft)		0.0			0.0										23.9	
Control Delay (s/veh)		9.5			19.7										17.4	
Level of Service (LOS)		A			C										C	
Approach Delay (s/veh)	0.1				0.0								17.4			
Approach LOS	A				A								C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at Turkey Creek Blvd
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/16/2024	East/West Street	US HWY 441
Analysis Year	2025	North/South Street	Turkey Creek Blvd
Time Analyzed	AM Peak - Background	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	1	0	1	2	0		1	1	0		0	1	0
Configuration		L	T	R		L	T	TR		L		TR			LTR	
Volume (veh/h)	0	0	1008	79	2	109	513	0		75	0	130		0	0	0
Percent Heavy Vehicles (%)	7	7			11	11				4	4	4		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No															
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1			6.4	4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.24			6.62	4.32				7.58	6.58	6.98		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2			2.5	2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.27			2.61	2.31				3.54	4.04	3.34		3.50	4.00	3.30

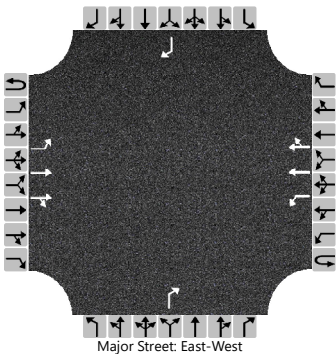
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0			117				79		137			0		
Capacity, c (veh/h)		991			540				215		488			0		
v/c Ratio		0.00			0.22				0.37		0.28					
95% Queue Length, Q ₉₅ (veh)		0.0			0.8				1.6		1.1					
95% Queue Length, Q ₉₅ (ft)					21.8				41.3		28.4					
Control Delay (s/veh)		8.6			13.5				31.1		15.2					
Level of Service (LOS)		A			B				D		C					
Approach Delay (s/veh)	0.0				2.4				21.0							
Approach LOS	A				A				C							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at NW 59th Terr
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/16/2024	East/West Street	US HWY 441
Analysis Year	2025	North/South Street	NW 59th Terr
Time Analyzed	AM Peak - Background	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	0	1		0	0	1
Configuration		L	T	TR		L	T	TR				R				R
Volume (veh/h)	0	9	1122	8	0	9	654	7				25				12
Percent Heavy Vehicles (%)	7	7			11	11						28				24
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No				No			
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1						6.9				6.9
Critical Headway (sec)		4.24				4.32						7.46				7.38
Base Follow-Up Headway (sec)		2.2				2.2						3.3				3.3
Follow-Up Headway (sec)		2.27				2.31						3.58				3.54

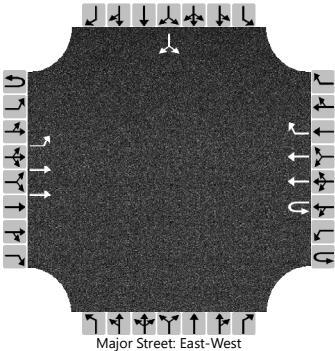
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		9				9						26				13
Capacity, c (veh/h)		863				535						388				588
v/c Ratio		0.01				0.02						0.07				0.02
95% Queue Length, Q ₉₅ (veh)		0.0				0.1						0.2				0.1
95% Queue Length, Q ₉₅ (ft)		0.0				2.7						6.1				3.0
Control Delay (s/veh)		9.2				11.9						14.9				11.3
Level of Service (LOS)		A				B						B				B
Approach Delay (s/veh)	0.1				0.2				14.9				11.3			
Approach LOS	A				A				B				B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at NW 120th Lane
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/16/2024	East/West Street	US HWY 441
Analysis Year	2025	North/South Street	NW 120th Lane
Time Analyzed	AM Peak - Background	Peak Hour Factor	0.96
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	1	0	2	1		0	0	0		0	1	0
Configuration		L	T		U		T	R							LR	
Volume (veh/h)	14	8	1123		0		668	72						95		2
Percent Heavy Vehicles (%)	7	7			10									8		8
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)	6.4	4.1			6.4									7.5		6.9
Critical Headway (sec)	6.54	4.24			6.60									6.96		7.06
Base Follow-Up Headway (sec)	2.5	2.2			2.5									3.5		3.3
Follow-Up Headway (sec)	2.57	2.27			2.60									3.58		3.38

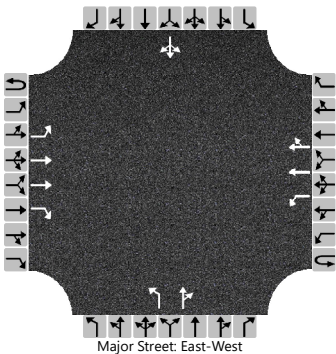
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		23			0										101	
Capacity, c (veh/h)		581			240										361	
v/c Ratio		0.04			0.00										0.28	
95% Queue Length, Q ₉₅ (veh)		0.1			0.0										1.1	
95% Queue Length, Q ₉₅ (ft)		2.6			0.0										29.3	
Control Delay (s/veh)		11.5			20.0										18.8	
Level of Service (LOS)		B			C										C	
Approach Delay (s/veh)	0.2				0.0								18.8			
Approach LOS	A				A								C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at Turkey Creek Blvd
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/16/2024	East/West Street	US HWY 441
Analysis Year	2025	North/South Street	Turkey Creek Blvd
Time Analyzed	AM Peak - Buildout	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	1	0	1	2	0		1	1	0		0	1	0
Configuration		L	T	R		L	T	TR		L		TR			LTR	
Volume (veh/h)	0	0	1044	79	2	109	529	0		75	0	130		0	0	0
Percent Heavy Vehicles (%)	7	7			11	11				4	4	4		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No															
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1			6.4	4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.24			6.62	4.32				7.58	6.58	6.98		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2			2.5	2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.27			2.61	2.31				3.54	4.04	3.34		3.50	4.00	3.30

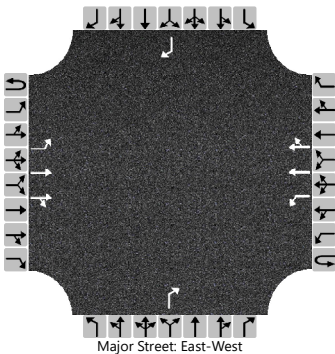
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0			117				79		137			0		
Capacity, c (veh/h)		976			521				205		474			0		
v/c Ratio		0.00			0.22				0.39		0.29					
95% Queue Length, Q ₉₅ (veh)		0.0			0.9				1.7		1.2					
95% Queue Length, Q ₉₅ (ft)					24.5				43.9		31.0					
Control Delay (s/veh)		8.7			13.9				33.2		15.6					
Level of Service (LOS)		A			B				D		C					
Approach Delay (s/veh)	0.0				2.4				22.1							
Approach LOS	A				A				C							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at NW 59th Terr
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/16/2024	East/West Street	US HWY 441
Analysis Year	2025	North/South Street	NW 59th Terr
Time Analyzed	AM Peak - Buildout	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	0	1		0	0	1
Configuration		L	T	TR		L	T	TR				R				R
Volume (veh/h)	0	9	1158	8	0	66	670	7				25				12
Percent Heavy Vehicles (%)	7	7			11	11						28				24
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No				No			
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1						6.9				6.9
Critical Headway (sec)		4.24				4.32						7.46				7.38
Base Follow-Up Headway (sec)		2.2				2.2						3.3				3.3
Follow-Up Headway (sec)		2.27				2.31						3.58				3.54

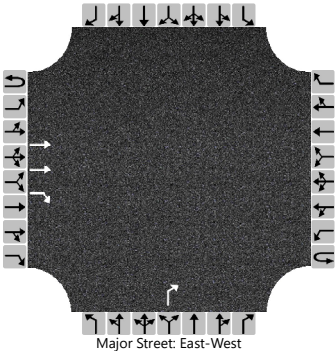
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		9				69						26				13
Capacity, c (veh/h)		851				516						377				581
v/c Ratio		0.01				0.13						0.07				0.02
95% Queue Length, Q ₉₅ (veh)		0.0				0.5						0.2				0.1
95% Queue Length, Q ₉₅ (ft)		0.0				13.6						6.1				3.0
Control Delay (s/veh)		9.3				13.1						15.3				11.3
Level of Service (LOS)		A				B						C				B
Approach Delay (s/veh)	0.1				1.2				15.3				11.3			
Approach LOS	A				A				C				B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at Site Access
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua County
Date Performed	7/16/2024	East/West Street	US HWY 441
Analysis Year	2025	North/South Street	Site Access
Time Analyzed	AM Peak - Buildout	Peak Hour Factor	0.97
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	1	0	0	0	0		0	0	1		0	0	0
Configuration			T	R								R				
Volume (veh/h)			1082	100								143				
Percent Heavy Vehicles (%)												3				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.96				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.33				

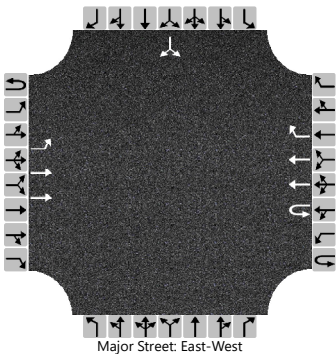
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)												147				
Capacity, c (veh/h)												471				
v/c Ratio												0.31				
95% Queue Length, Q ₉₅ (veh)												1.3				
95% Queue Length, Q ₉₅ (ft)												33.3				
Control Delay (s/veh)												16.1				
Level of Service (LOS)												C				
Approach Delay (s/veh)									16.1							
Approach LOS									C							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at NW 120th Lane
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/16/2024	East/West Street	US HWY 441
Analysis Year	2025	North/South Street	NW 120th Lane
Time Analyzed	AM Peak - Buildout	Peak Hour Factor	0.96
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	1	0	2	1		0	0	0		0	1	0
Configuration		L	T		U		T	R							LR	
Volume (veh/h)	66	8	1150		0		689	72						95		2
Percent Heavy Vehicles (%)	7	7			10									8		8
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)	6.4	4.1			6.4									7.5		6.9
Critical Headway (sec)	6.54	4.24			6.60									6.96		7.06
Base Follow-Up Headway (sec)	2.5	2.2			2.5									3.5		3.3
Follow-Up Headway (sec)	2.57	2.27			2.60									3.58		3.38

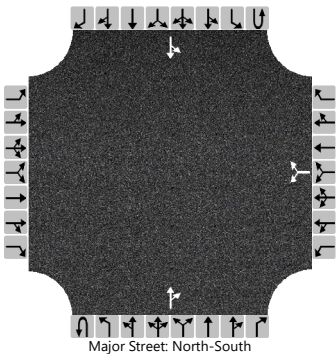
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		77			0										101	
Capacity, c (veh/h)		506			230										301	
v/c Ratio		0.15			0.00										0.34	
95% Queue Length, Q ₉₅ (veh)		0.5			0.0										1.4	
95% Queue Length, Q ₉₅ (ft)		13.2			0.0										37.2	
Control Delay (s/veh)		13.4			20.6										22.9	
Level of Service (LOS)		B			C										C	
Approach Delay (s/veh)	0.8				0.0								22.9			
Approach LOS	A				A								C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	NW 59th Terr at Site Access
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua County
Date Performed	7/16/2024	East/West Street	Site Access
Analysis Year	2025	North/South Street	NW 59th Terr
Time Analyzed	AM Peak - Buildout	Peak Hour Factor	0.89
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						2		0			25	1		57	17	
Percent Heavy Vehicles (%)						3		3						28		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.38		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.45		

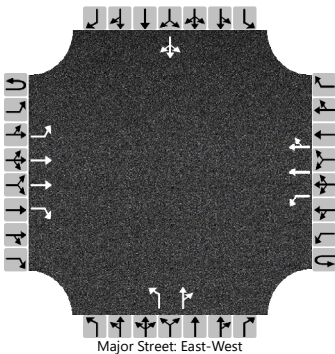
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						2								64		
Capacity, c (veh/h)						775								1431		
v/c Ratio						0.00								0.04		
95% Queue Length, Q ₉₅ (veh)						0.0								0.1		
95% Queue Length, Q ₉₅ (ft)						0.0								3.1		
Control Delay (s/veh)						9.7								7.6	0.3	
Level of Service (LOS)						A								A	A	
Approach Delay (s/veh)					9.7								6.0			
Approach LOS					A								A			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at Turkey Creek Blvd
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/16/2024	East/West Street	US HWY 441
Analysis Year	2025	North/South Street	Turkey Creek Blvd
Time Analyzed	PM Peak - Existing	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	1	0	1	2	0		1	1	0		0	1	0
Configuration		L	T	R		L	T	TR		L		TR			LTR	
Volume (veh/h)	0	0	622	80	0	211	1207	0		69	0	106		0	0	0
Percent Heavy Vehicles (%)	10	10			5	5				5	5	5		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No															
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.30				4.20				7.60	6.60	7.00		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.30				2.25				3.55	4.05	3.35		3.50	4.00	3.30

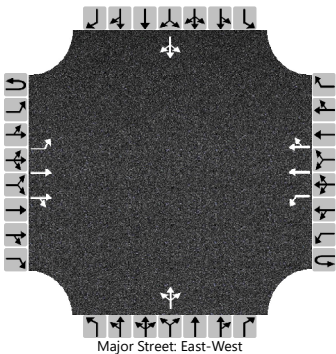
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				222				73		112			0	
Capacity, c (veh/h)		501				844				159		660			0	
v/c Ratio		0.00				0.26				0.46		0.17				
95% Queue Length, Q ₉₅ (veh)		0.0				1.1				2.1		0.6				
95% Queue Length, Q ₉₅ (ft)						28.6				54.6		15.6				
Control Delay (s/veh)		12.2				10.8				45.5		11.6				
Level of Service (LOS)		B				B				E		B				
Approach Delay (s/veh)	0.0				1.6				24.9							
Approach LOS	A				A				C							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at NW 59th Terr
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/16/2024	East/West Street	US HWY 441
Analysis Year	2024	North/South Street	NW 59th Terr
Time Analyzed	PM Peak - Existing	Peak Hour Factor	0.96
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	T	TR		L	T	TR			LTR				LTR	
Volume (veh/h)	0	10	901	4	0	9	1264	18		8	2	8		14	0	12
Percent Heavy Vehicles (%)	10	10			5	5				17	17	17		19	19	19
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.30				4.20				7.84	6.84	7.24		7.88	6.88	7.28
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.30				2.25				3.67	4.17	3.47		3.69	4.19	3.49

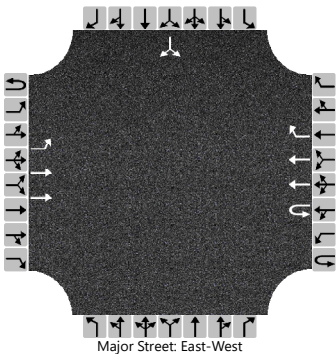
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		10				9					19				27	
Capacity, c (veh/h)		472				705					272				185	
v/c Ratio		0.02				0.01					0.07				0.15	
95% Queue Length, Q ₉₅ (veh)		0.1				0.0					0.2				0.5	
95% Queue Length, Q ₉₅ (ft)		2.7				0.0					5.7				14.4	
Control Delay (s/veh)		12.8				10.2					19.2				27.8	
Level of Service (LOS)		B				B					C				D	
Approach Delay (s/veh)		0.1				0.1				19.2				27.8		
Approach LOS		A				A				C				D		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at NW 120th Lane
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/17/2024	East/West Street	US HWY 441
Analysis Year	2024	North/South Street	NW 120th Lane
Time Analyzed	PM Peak - Existing	Peak Hour Factor	0.98
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	1	0	2	1		0	0	0		0	1	0
Configuration		L	T		U		T	R							LR	
Volume (veh/h)	0	3	881		2		1287	106						58		3
Percent Heavy Vehicles (%)	9	9			4									11		11
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1			6.4									7.5		6.9
Critical Headway (sec)		4.28			6.48									7.02		7.12
Base Follow-Up Headway (sec)		2.2			2.5									3.5		3.3
Follow-Up Headway (sec)		2.29			2.54									3.61		3.41

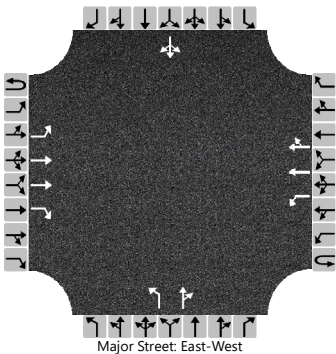
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		3			2										62	
Capacity, c (veh/h)		441			379										194	
v/c Ratio		0.01			0.01										0.32	
95% Queue Length, Q ₉₅ (veh)		0.0			0.0										1.3	
95% Queue Length, Q ₉₅ (ft)		0.0			0.0										35.4	
Control Delay (s/veh)		13.2			14.5										32.1	
Level of Service (LOS)		B			B										D	
Approach Delay (s/veh)	0.0				0.0								32.1			
Approach LOS	A				A								D			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at Turkey Creek Blvd
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/16/2024	East/West Street	US HWY 441
Analysis Year	2025	North/South Street	Turkey Creek Blvd
Time Analyzed	PM Peak - Background	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	1	0	1	2	0		1	1	0		0	1	0
Configuration		L	T	R		L	T	TR		L		TR			LTR	
Volume (veh/h)	0	0	628	81	0	213	1219	0		70	0	108		0	0	0
Percent Heavy Vehicles (%)	10	10			5	5				5	5	5		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No															
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.30				4.20				7.60	6.60	7.00		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.30				2.25				3.55	4.05	3.35		3.50	4.00	3.30

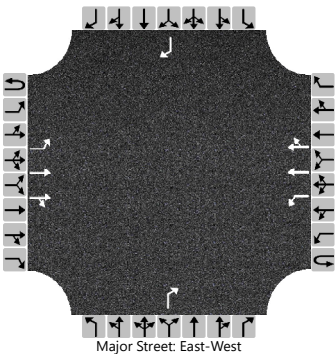
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				224				74		114			0	
Capacity, c (veh/h)		495				838				156		656			0	
v/c Ratio		0.00				0.27				0.47		0.17				
95% Queue Length, Q ₉₅ (veh)		0.0				1.1				2.2		0.6				
95% Queue Length, Q ₉₅ (ft)						28.6				57.2		15.6				
Control Delay (s/veh)		12.3				10.9				47.4		11.6				
Level of Service (LOS)		B				B				E		B				
Approach Delay (s/veh)	0.0				1.6				25.7							
Approach LOS	A				A				D							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at NW 59th Terr
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/16/2024	East/West Street	US HWY 441
Analysis Year	2025	North/South Street	NW 59th Terr
Time Analyzed	PM Peak - Background	Peak Hour Factor	0.96
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	0	1		0	0	1
Configuration		L	T	TR		L	T	TR				R				R
Volume (veh/h)	0	10	910	4	0	9	1285	20				18				12
Percent Heavy Vehicles (%)	10	10			5	5						17				19
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No				No			
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1						6.9				6.9
Critical Headway (sec)		4.30				4.20						7.24				7.28
Base Follow-Up Headway (sec)		2.2				2.2						3.3				3.3
Follow-Up Headway (sec)		2.30				2.25						3.47				3.49

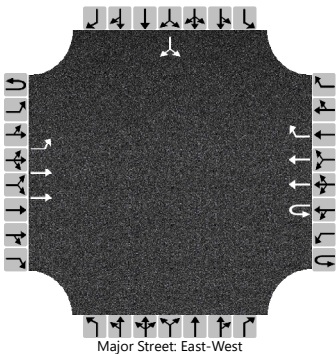
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		10				9						19				13
Capacity, c (veh/h)		462				699						497				356
v/c Ratio		0.02				0.01						0.04				0.04
95% Queue Length, Q ₉₅ (veh)		0.1				0.0						0.1				0.1
95% Queue Length, Q ₉₅ (ft)		2.7				0.0						2.8				2.9
Control Delay (s/veh)		13.0				10.2						12.5				15.5
Level of Service (LOS)		B				B						B				C
Approach Delay (s/veh)	0.1				0.1				12.5				15.5			
Approach LOS	A				A				B				C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at NW 120th Lane
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/17/2024	East/West Street	US HWY 441
Analysis Year	2025	North/South Street	NW 120th Lane
Time Analyzed	PM Peak - Background	Peak Hour Factor	0.98
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	1	0	2	1		0	0	0		0	1	0
Configuration		L	T		U		T	R							LR	
Volume (veh/h)	10	3	890		2		1300	107						72		3
Percent Heavy Vehicles (%)	9	9			4									11		11
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)	6.4	4.1			6.4									7.5		6.9
Critical Headway (sec)	6.58	4.28			6.48									7.02		7.12
Base Follow-Up Headway (sec)	2.5	2.2			2.5									3.5		3.3
Follow-Up Headway (sec)	2.59	2.29			2.54									3.61		3.41

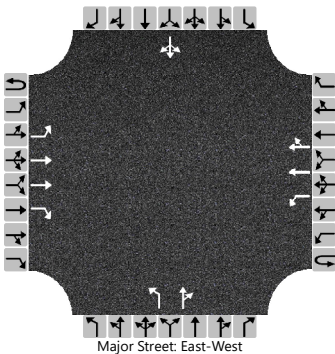
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		13			2										77	
Capacity, c (veh/h)		218			374										189	
v/c Ratio		0.06			0.01										0.40	
95% Queue Length, Q ₉₅ (veh)		0.2			0.0										1.8	
95% Queue Length, Q ₉₅ (ft)		5.4			0.0										49.0	
Control Delay (s/veh)		22.6			14.7										36.4	
Level of Service (LOS)		C			B										E	
Approach Delay (s/veh)	0.3				0.0								36.4			
Approach LOS	A				A								E			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at Turkey Creek Blvd
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/16/2024	East/West Street	US HWY 441
Analysis Year	2025	North/South Street	Turkey Creek Blvd
Time Analyzed	PM Peak - Buildout	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	1	0	1	2	0		1	1	0		0	1	0
Configuration		L	T	R		L	T	TR		L		TR			LTR	
Volume (veh/h)	0	0	649	81	0	213	1247	0		70	0	108		0	0	0
Percent Heavy Vehicles (%)	10	10			5	5				5	5	5		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No															
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.30				4.20				7.60	6.60	7.00		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.30				2.25				3.55	4.05	3.35		3.50	4.00	3.30

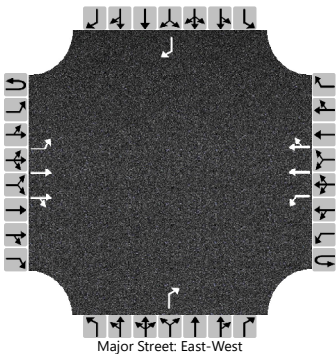
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				224				74		114			0	
Capacity, c (veh/h)		482				822				151		646			0	
v/c Ratio		0.00				0.27				0.49		0.18				
95% Queue Length, Q ₉₅ (veh)		0.0				1.1				2.3		0.6				
95% Queue Length, Q ₉₅ (ft)						28.6				59.8		15.6				
Control Delay (s/veh)		12.5				11.0				49.6		11.8				
Level of Service (LOS)		B				B				E		B				
Approach Delay (s/veh)	0.0				1.6				26.6							
Approach LOS	A				A				D							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at NW 59th Terr
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/16/2024	East/West Street	US HWY 441
Analysis Year	2025	North/South Street	NW 59th Terr
Time Analyzed	PM Peak - Buildout	Peak Hour Factor	0.96
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	0	1		0	0	1
Configuration		L	T	TR		L	T	TR				R				R
Volume (veh/h)	0	10	931	4	0	98	1313	20				18				12
Percent Heavy Vehicles (%)	10	10			5	5						17				19
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No				No			
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1						6.9				6.9
Critical Headway (sec)		4.30				4.20						7.24				7.28
Base Follow-Up Headway (sec)		2.2				2.2						3.3				3.3
Follow-Up Headway (sec)		2.30				2.25						3.47				3.49

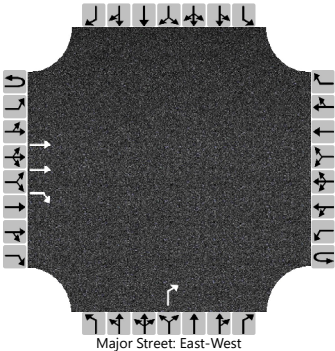
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		10				102						19				13
Capacity, c (veh/h)		450				686						488				348
v/c Ratio		0.02				0.15						0.04				0.04
95% Queue Length, Q ₉₅ (veh)		0.1				0.5						0.1				0.1
95% Queue Length, Q ₉₅ (ft)		2.7				13.0						2.8				2.9
Control Delay (s/veh)		13.2				11.2						12.7				15.7
Level of Service (LOS)		B				B						B				C
Approach Delay (s/veh)	0.1				0.8				12.7				15.7			
Approach LOS	A				A				B				C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at Site Access
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua County
Date Performed	7/16/2024	East/West Street	US HWY 441
Analysis Year	2025	North/South Street	Site Access
Time Analyzed	PM Peak - Buildout	Peak Hour Factor	0.94
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	1	0	0	0	0		0	0	1		0	0	0
Configuration			T	R								R				
Volume (veh/h)			890	63								150				
Percent Heavy Vehicles (%)												3				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.96				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.33				

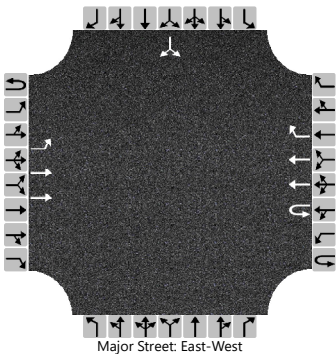
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)												160				
Capacity, c (veh/h)												535				
v/c Ratio												0.30				
95% Queue Length, Q ₉₅ (veh)												1.2				
95% Queue Length, Q ₉₅ (ft)												30.7				
Control Delay (s/veh)												14.6				
Level of Service (LOS)												B				
Approach Delay (s/veh)									14.6							
Approach LOS									B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	US HWY 441 at NW 120th Lane
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua
Date Performed	7/17/2024	East/West Street	US HWY 441
Analysis Year	2025	North/South Street	NW 120th Lane
Time Analyzed	PM Peak - Buildout	Peak Hour Factor	0.98
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	1	0	2	1		0	0	0		0	1	0
Configuration		L	T		U		T	R							LR	
Volume (veh/h)	98	3	910		2		1329	107						72		3
Percent Heavy Vehicles (%)	9	9			4									11		11
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Left + Thru								3							

Critical and Follow-up Headways

Base Critical Headway (sec)	6.4	4.1			6.4									7.5		6.9
Critical Headway (sec)	6.58	4.28			6.48									7.02		7.12
Base Follow-Up Headway (sec)	2.5	2.2			2.5									3.5		3.3
Follow-Up Headway (sec)	2.59	2.29			2.54									3.61		3.41

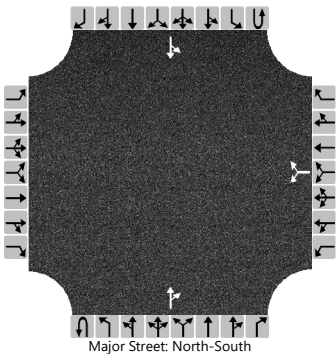
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		103			2										77	
Capacity, c (veh/h)		184			363										146	
v/c Ratio		0.56			0.01										0.52	
95% Queue Length, Q ₉₅ (veh)		3.0			0.0										2.5	
95% Queue Length, Q ₉₅ (ft)		80.4			0.0										68.0	
Control Delay (s/veh)		46.9			15.0										53.8	
Level of Service (LOS)		E			B										F	
Approach Delay (s/veh)	4.7				0.0								53.8			
Approach LOS	A				A								F			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Brian Snyder	Intersection	NW 59th Terr at Site Access
Agency/Co.	CHW, an NV5 Company	Jurisdiction	Alachua County
Date Performed	7/16/2024	East/West Street	Site Access
Analysis Year	2025	North/South Street	NW 59th Terr
Time Analyzed	PM Peak - Buildout	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Patel Fuel and Retail		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						2		0			18	1		89	13	
Percent Heavy Vehicles (%)						3		3						17		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.27		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.35		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						2								99		
Capacity, c (veh/h)						703								1502		
v/c Ratio						0.00								0.07		
95% Queue Length, Q ₉₅ (veh)						0.0								0.2		
95% Queue Length, Q ₉₅ (ft)						0.0								5.7		
Control Delay (s/veh)						10.1								7.6	0.5	
Level of Service (LOS)						B								A	A	
Approach Delay (s/veh)					10.1								6.7			
Approach LOS					B								A			

MEMORANDUM

Patel Fuel & Retail

22-0030



To: Mike DeRoza, City Manager/LDR Administrator
From: John-Michael Simpson, PLA
Date: 7/9/2024
RE: Patel Fuel & Retail – Alternative Landscape Plan

Alternative Landscape Plan Summary

Due to the proposed use, and lot configuration, CHW is submitting a request to use an alternative landscape plan to fulfill site landscape requirements on the project site in accordance with Section 6.2.2(D)(10).

The alternative landscape items are detailed below, and attached to this letter is an exhibit highlighting the proposed alternative landscape locations.

Code References:

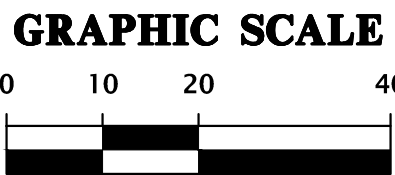
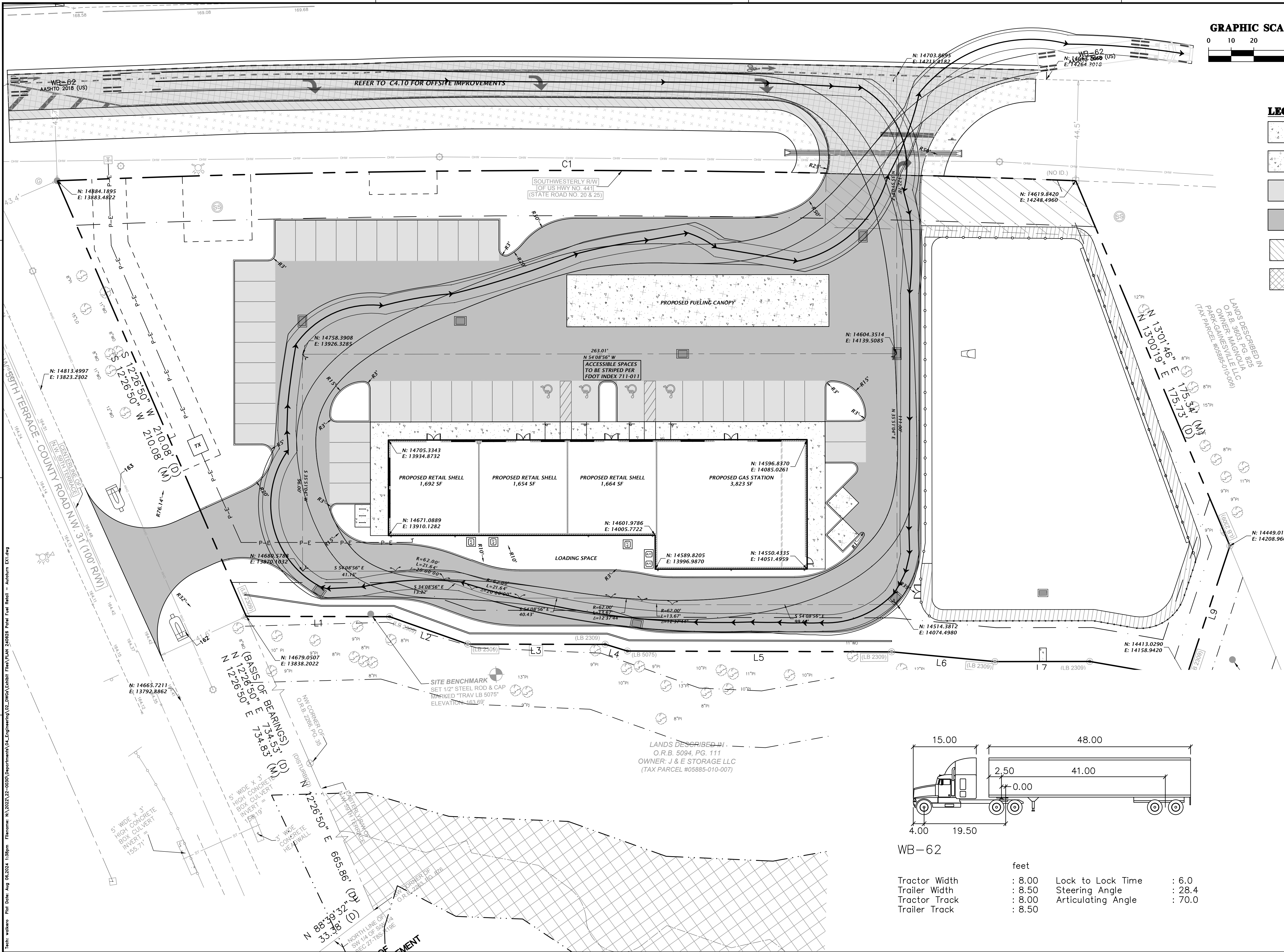
6.2.2 (D)(2)(a)

(ii) Interior planting areas shall be located within or adjacent to parking areas, consisting of one or more of the following:

- a. Landscaped islands located at the end of parking bays; or
- b. Landscaped islands located between parallel rows of cars, used to visually separate parking areas; or
- c. Landscaped driveway medians with a minimum width of six feet if curbed or a minimum width of ten feet if not curbed; or
- d. Landscaped areas adjacent to parking lots, interior to the development area.

Requested Alterations:

This project involves the construction of a gas station and retail space. Due to the function of the gas station, a large area of open pavement is required to allow a wide variety of vehicular movement as well as for the delivery of fuel to the site. Due to the large amount of open pavement, there is an insufficient amount of space interior to the parking and vehicular use areas to provide the required trees. Additionally, due to the limited size of this site, we also do not have the option of providing more space between the building and the parking to allow more interior trees to be provided. With the site constraints in mind, we would like to request to place the majority of the required trees along the perimeter of the parking and site development area to meet the requirements of this section.



LEGEND:

- CONCRETE (FOR SIDEWALK) (SEE C2.30 FOR DETAIL)
- HEAVY DUTY CONCRETE PAVEMENT (SEE C2.30 FOR DETAIL)
- STANDARD DUTY ASPHALT (SEE C2.30 FOR DETAIL)
- HEAVY DUTY ASPHALT (SEE C2.30 FOR DETAIL)
- MAINTENANCE PATH
- WETLAND

Test: walkero Ref Date: Aug 05, 2024 1:58pm Filename: N:\2024\22-0030\Department\04_Engineering\02_DWG\Exhibit Plans\PLAN 240628 Fuel Retail - Autoturn EX1.dwg

11801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com
FLORIDA
CA-5075

CHW
AN INVIS COMPANY

SCALE: 1"=20'
VERIFY SCALE
BASED ON
ORIGINAL DRAWING
0"=100' SEE INSTRUCTIONS
THIS SHEET, ADJUST
SCALES ACCORDINGLY.

CONSTRUCTION DIVISION

DATE: 3/28/24 CITY OF ALACHUA, SRWID

CLIENT: MR. HARDY PATEL

PROJECT: PATEL FUEL RETAIL

SHEET TITLE: AUTOTURN - FUEL DELIVERY

DESIGNED BY: G. WADZINSKI

DRAWN BY: C. LEDFORD

CHECKED BY: W. OWEN

PROJECT NUMBER: 22-0030

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO. EX-1

MEMORANDUM

Patel Fuel Retail

22-0030



To: City of Alachua Utilities Department
From: Walker Owen, P.E.
Date: February 29, 2024
RE: Patel Fuel Retail – Retail Space Meter Sizing Calculations

The following is a calculation for meter sizing for the proposed project based on the AWWA M22 Manual.

Building data is based on the information available from the project architect at the time of this memo. Any changes to the building data will void the provided meter sizing calculation and requires a revised analysis to verify calculations are compliant with AWWA criteria.

PROJECT NAME: Patel Fuel Retail			
PROJECT No.: 22-0030			
FILE PATH: N:\2022\22-0030\Departments\04_Engineering\01_Regulatory Permitting\Utilities\Meter Sizing\MEMO 2402XX Patel Fuel Retail - Meter Sizing Convenience Store.docx			
<u>Convenience Store Space (±3,850 sf)</u>			
ADF and ADF METER SIZING CALCULATIONS			
Fixture Type	Quantity	Fixture Value*	Total Fixture Value
Lavatory sink	2	1.5	10
Toilet (tank)	2	4	8
Wash sink	3	4	12
Kitchen sink	1	2.2	2.2
Service sink	1	4	4
*Fixture Values per Florida Building Code based on 60 psi			Total 36.2
Peak Flow per AWWA M22 Manual Table 4-2.			42.0 gpm
Meter size per AWWA M22 Manual Table 6-1.			1 inch

Use 1" Meter with 1" DDC Backflow Preventer

Walker Fain Owen, FL P.E. No. 94201

Date

Walker Fain Owen
State of Florida, Professional Engineer, License No. 94201

This item has been electronically signed and sealed by Walker Fain Owen, PE on 08/06/2024 using a Digital Signature.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

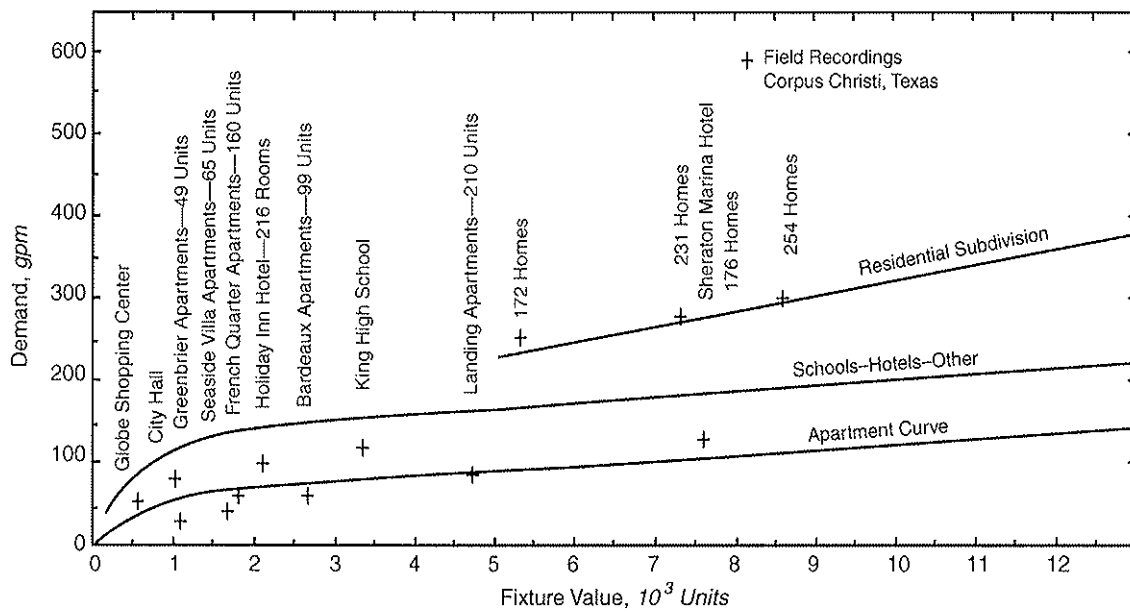


Figure 4-1 Peak flow demand of typical customer categories

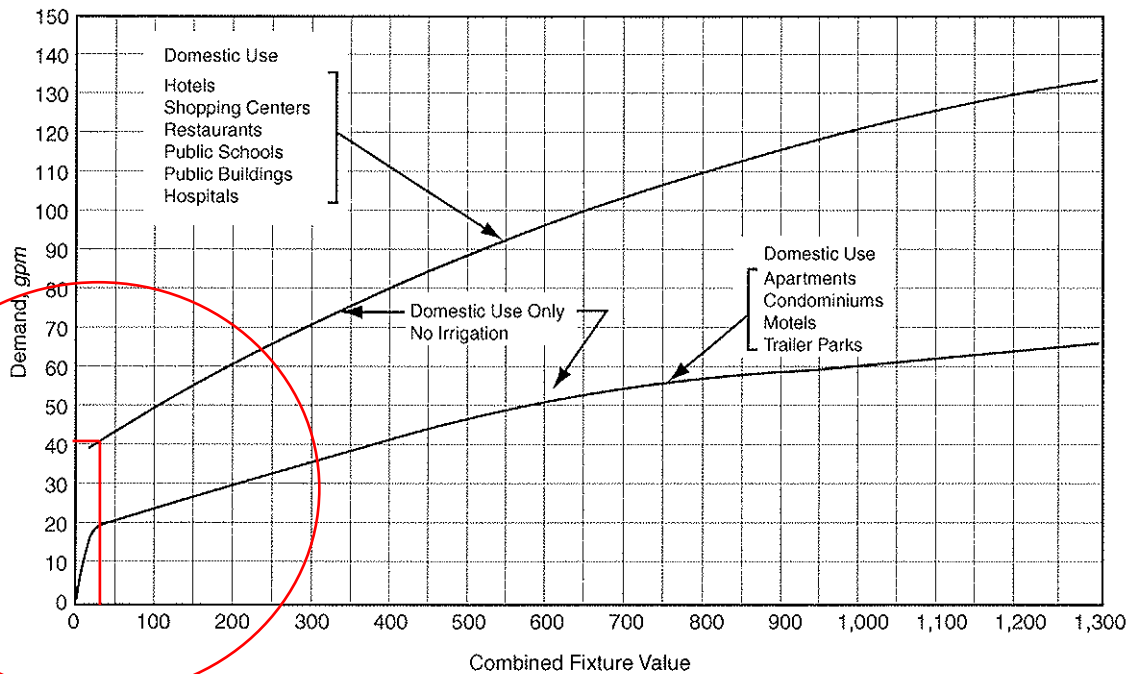


Figure 4-2 Water flow demand per fixture value—low range

Table 4-3 Example of fixture value adjustment for pressure (based on Figure 4-6)

Kitchen Faucet Fixture Value Adjustment			
Residual Pressure at Fixture Outlet, <i>psi</i>	Baseline Flow Rate at <i>60 psi</i>	Actual Flow Rate at Residual Pressure (Fixture Value)	Pressure Adjustment Factor
15	1.8	1.0	0.56
20	1.8	1.1	0.61
25	1.8	1.2	0.67
30	1.8	1.3	0.72
35	1.8	1.4	0.78
40	1.8	1.5	0.83
50	1.8	1.7	0.94
60	1.8	1.8	1.00
70	1.8	1.8	1.00
80	1.8	1.8	1.00

Table 6-1 AWWA meter standards

Meter	Minimum Flow Rate (gpm)	Low Normal Flow Rate (gpm)	Change-over Range (Compound Meters)	High Normal Flow Rate (gpm)	Maximum Flow Rate (gpm)	Head Loss at Maximum Flow (psi)
Positive Displacement						
1/2 in.	0.25	1	N/A	7.5	15	15
5/8 in.	0.25	1		10	20	15
3/4 in.	0.5	2		15	30	15
1 in.	0.75	3		25	50	15
1 1/2 in.	1.5	5	N/A	50	100	15
2 in.	2	8		80	160	15
Multijet						
5/8 in.	0.25	1	N/A	10	20	15
3/4 in.	0.5	2		15	30	15
1 in.	0.75	3		25	50	15
1 1/2 in.	1.5	5		50	100	15
2 in.	2.0	8		80	160	15
Turbine class 1						
3/4 in.	1.5	N/A	N/A	20	30	15
1 in.	2			35	50	15
1 1/2 in.	3			65	100	15
2 in.	4			100	160	15
3 in.	6			220	350	15
4 in.	8			420	630	15
6 in.	15			865	1,300	15
Turbine class 2						
1 1/2 in.	4	N/A	N/A	80	120	7
2 in.	4			100	160	7
3 in.	8			240	350	7
4 in.	15			420	630	7
6 in.	30			920	1,400	7
8 in.	50			1,600	2,400	7
10 in.	75			2,500	3,800	7
12 in.	120			3,300	5,000	7
14 in.	150			5,200	7,500	7
16 in.	200			6,500	10,000	7
18 in.	250			8,500	12,500	7
20 in.	300			10,000	15,000	7
Compound						
2 in.	0.25	2	20	80	160	20
3 in.	0.5	4	23	160	320	20
4 in.	0.75	6	28	250	500	20
6 in.	1.5	10	32	500	1,000	20
8 in.	2	16	50	800	1,600	20
Singlejet						
1 1/2 in.	0.5	1.5	N/A	50	100	15
2 in.	0.5	2.0		80	160	15
3 in.	0.5	2.5		160	320	15
4 in.	0.75	3.0		250	500	15
6 in.	1.5	4.0		500	1000	15

Source: Data are drawn from AWWA Standards C700, C701, C702, C708, C710, and C712, of latest revision as of December 2002.

N/A = not applicable

MEMORANDUM

Patel Fuel Retail

22-0030



To: City of Alachua Utilities Department
From: Walker Owen, P.E.
Date: February 29, 2024
RE: Patel Fuel Retail – Retail Space Meter Sizing Calculations

The following is a calculation for meter sizing for the proposed project based on the AWWA M22 Manual.

Building data is based on the information available from the project architect at the time of this memo. Any changes to the building data will void the provided meter sizing calculation and requires a revised analysis to verify calculations are compliant with AWWA criteria.

PROJECT NAME: Patel Fuel Retail			
PROJECT No.: 22-0030			
FILE PATH: N:\2022\22-0030\Departments\04_Engineering\01_Regulatory Permitting\Utilities\Meter Sizing\MEMO 2402XX Patel Fuel Retail - Meter Sizing Retail Space.docx			
<u>Retail Space (±1,692 sf)</u>			
ADF and ADF METER SIZING CALCULATIONS			
Fixture Type	Quantity	Fixture Value*	Total Fixture Value
Lavatory sink	1	1.5	1.5
Toilet (tank)	1	4	4
Drinking Fountain	1	2	2
Service sink	1	4	4
*Fixture Values per Florida Building Code Based on 60 psi			Total 11.5
The smallest, commercial meter size will be used.			3/4 inch

Use 3/4" Meter with 1" DDC Backflow Preventer

Walker Fain Owen, FL P.E. No.
94201

Date

Walker Fain Owen
State of Florida, Professional
Engineer, License No. 94201

This item has been
electronically signed and
sealed by Walker Fain Owen,
PE on 08/06/2024 using a
Digital Signature.

Printed copies of this
document are not considered
signed and sealed and the
signature must be verified on
any electronic copies.

Stormwater Management System Report

Listed Species Survey



Prepared For: City of Alachua Planning and Community Development

Submitted For Review To: Timothy J. Boehlein, PE

Date: 07/08/2024
PN# 23-0030.04
PM: Andy Woodruff
11801 Research Dr
Alachua, FL 32615
(352)331-1976

Address: PO Box 9
Alachua, FL 32616

www.chw-inc.com



Engineer's Certification Statement

I hereby certify that the design of the stormwater management system for the project known as Patel Fuel Retail has been designed substantially in accordance with the Suwannee River Water Management District (SRWMD) and City of Alachua applicable rules and criteria.

Walker Fain Owen
State of Florida, Professional
Engineer, License No. 94201

This item has been
electronically signed and
sealed by Walker Fain Owen,
PE on 08/06/2024 using a
Digital Signature.

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any electronic copies.

Walker Fain Owen, FL PE No.94201

Date

Contents	Page
Introduction.....	1
Design Criteria.....	1
Site Characteristics.....	2
Drainage Analysis.....	3
Summary and Conclusions.....	6

Figures

- 1 Project Location Map
- 2 USGS Quadrangle Map
- 3 Aerial Map
- 4 NRCS Soils Map
- 5 FEMA Flood Map
- 6 Pre-Development Drainage Map
- 7 Post-Development Drainage Map

Appendices

- A. Drainage Calculations and Computer Model Output
- B. Operation and Maintenance Requirements and Erosion and Sedimentation Control Requirements
- C. Geotechnical Report

Introduction

The Patel Fuel Retail project proposes the construction of a fuel station with associated retail space, access roadways, parking, and stormwater management facilities. The proposed site is located on the southeast corner of US HWY 441 and NW 59th Terrace in Alachua, Florida.

According to the Alachua County Property Appraiser's website, the project site is ±2.14 acres located in Section 27, Township 08 South, Range 19 East of Alachua County, Florida on tax parcel ID #05885-010-014. Figure 1 provides a Location Map and Figure 2 depicts the site on a USGS quadrangle map.

Refer to the accompanying engineering plans for details about the proposed construction.

Design Criteria

The design criteria for the proposed stormwater management facility (SMF) are based upon the criteria set forth by the City of Alachua (CoA) and Suwannee River Water Management District (SRWMD), for a wet detention basin within a closed watershed. The design criteria are as follows:

1. Stormwater Quantity – The post-development peak discharge rates must not exceed the pre-development peak discharge rates for the 100-year frequency (1% annual chance) critical duration rainfall depths with SCS type II distribution analyzed for 1-, 2-, 4-, 8-, and 24-hour durations (SRWMD).
2. Water Quality Treatment Volume (WQTV) and Recovery – The minimum stormwater treatment volume shall be the first 2.0" of rainfall over the stormwater management facility's contributing basin area and half of the WQTV must be drawn down between 24 and 30 hours following a design storm event (CoA and SRWMD).
3. Seasonal High Ground Water Table (SHGWT) – The control elevation shall be set at or above the SHGWT and at or above the design tailwater conditions. (SRWMD).
4. Freeboard – A minimum of one foot of freeboard shall be provided above the maximum stage height (SRWMD).
5. Overflow Structures – Overflow structures shall be designed such that the top of the structure is below the top of the pond and above maximum stage (SRWMD).
6. Pond Geometrics – Side slopes shall be designed with a horizontal to vertical ratio of 4:1 and drawdown devices with a width smaller than three inches will include a device to eliminate clogging. Flow paths should be maximized to ensure treatment (SRWMD).

7. Permanent Pool Volume (PPV) – Permanent Pool Volume will be sized to provide a 21-day residence time based upon average wet season rainfall. Additional PPV is required when wet detention systems discharge to a sink. The maximum depth of the permanent pool will be 12 feet and the minimum depth will be 2 feet (SRWMD).

The City of Alachua (CoA) and Suwanee River Water Management District (SRWMD) require that best management practices (BMPs) be employed to control erosion and sedimentation and an operation and maintenance entity be established.

Site Characteristics

Physical characteristics of the site are described in the following sections. Additional details are provided in the accompanying Engineering plans.

Site Topography

The existing site is undeveloped with a mix of woods, grass, and thick underbrush. The site is gently sloping from the north property line to the south property line. Elevations (NAVD 88) range from EL. $\pm 168.00'$ on the north property line and EL. $\pm 164.00'$ to the south property line. The site drains south to an offsite wetland which ultimately drains to Turkey Creek.

Pre-Development Drainage

Pre-Development drainage on the site consists of one watershed (Pre DA-1). The watershed is ± 1.91 acres of pervious areas that are wooded with dense underbrush. Stormwater runoff occurs via sheet flow and shallow concentrated flow across the property from north to south which flows into an offsite wetland that drains to Turkey Creek.

Please refer to Appendix A of this report for more details regarding the pre-development drainage conditions.

Refer to Figure 6 for information on the pre-development drainage patterns.

Post-Development Drainage

Post-Development drainage consists of one watershed (Post DA-1). Post DA-1 is ± 1.91 acres and contains impervious improvements such as buildings, canopies, parking areas, and drive aisles. Stormwater runoff from Post DA-1 will be routed via sheet flow and shallow concentrated flow to a stormwater pipe conveyance system and then into a stormwater management facility, SMF-1. After treatment in the SMF, the water will discharge into the offsite wetland via a spreader swale and into Turkey Creek, mimicking the pre-development drainage.

Refer to Figure 7 for information on the post-development drainage pattern. Refer to Appendix A and the accompanying engineering plans for additional details about the proposed stormwater management system.

Soils Information

The National Resource Conservation Service (NRCS) Soil Surveys for Alachua County describes the near surface soil profile for the watersheds are primarily *Pomona sand* with a small amount of soil being *Pelham sand*. The soils have a hydrologic soil group rating of ‘A/D’ and ‘B/D’, respectively. Refer to Figure 4 for the NRCS Soils Map for further breakdown.

A site-specific soils investigation was conducted by ECS Florida, LLC in February 2024. Based on the Summary Report of Geotechnical Site Exploration, the following design parameters were recommended for the stormwater management facility calculations. Refer to Appendix C for further details.

SMF-1

- Average geotechnical stormwater boring elevation (NAVD 88): 166.33’
- Base elevation of effective or mobilized aquifer: 8.0 feet bls (158.33’)
- Average seasonal high groundwater table elevation: 1-foot bls (165.33’)
- Specific yield (fillable porosity): 20%

Drainage Analysis

The proposed stormwater management system (SMF-1) has been designed to provide attenuation of discharge rates for SCS type II distributions analyzed for 100-year critical duration rainfall events for 1-, 2-, 4-, 8-, and 24-hour durations with a minimum of one foot of freeboard. In addition, the stormwater management system provides the required water quality treatment volume (WQTV).

Pre-Development calculations were completed to determine the runoff rates for the existing conditions. Calculations for Post DA-1 were completed to demonstrate that the required water quality treatment volume and discharge rate attenuation were met.

Appendix A contains details and calculations as well as a section for routing results, recovery analysis, hydraulic calculations, and general drainage calculations.

Analysis Methodology

The drainage analysis was conducted using the computer program POND5 (Version 3.3.0241) to generate runoff hydrographs and route the runoff hydrographs through the proposed stormwater system. The required storm events were analyzed using SRWMD and CoA rainfall amounts for the pre-development and post-development watersheds.

Unit Hydrograph Parameters

Unit hydrograph parameters required for the drainage analysis include run-off curve number (CN), time of concentration (T_c), and drainage area. Values used in the analysis are summarized as follows:

Pre-Development Watershed #1:

Watershed Area = 1.91 AC.
Woods (Fair, Type 'D' Soils) = 1.91 AC.
CN = 79
 T_c = 39 min.

Post-Development Watershed #1:

Watershed Area = 1.91 AC.
Impervious Area = 1.18 AC.
Stormwater Management Facility = 0.35 AC.
Open Space (Good, Type 'D' Soils) = 0.37 AC.
CN = 95
 T_c = 10min.¹

1. Time of concentration is less than 10 minutes, therefore the minimum allowable value per FDOT of 10 minutes has been used.

Pond Storage

Stage-storage values for the proposed SMF-1 are provided in Appendix A.

Water Quality Treatment Volume (WQTV)

Per SRWMD and the City of Alachua, the required WQTV for a wet retention discharging into a sink is the first 2.0 inches of runoff for the entire site. The required WQTV for the proposed SMF is shown in Table 1 below.

Table 1: Post-Development Water Quality Treatment

Basin ID	Required SRWMD (cf)	Elevation at WQTV (ft)
POST-1	11,262	166.23

Run-off and Facility Routing Results

The routing results for SMF-1 are summarized below in Table 2 below which includes peak stage elevations, freeboard, and discharge rates for the analyzed storm events. In all events, total post-development discharge rates did not exceed the predevelopment conditions and a minimum of one foot of freeboard was maintained for all required design storms. Detailed results can be found in Appendix A.

Table 2: Design Storm Modeling Results

Storm Event	Peak Stage (ft)	Freeboard (ft.)	Discharge Rates		
			Pre-Dev.	Post Dev.	Difference
1 hr - 100 yr	167.20	1.30	3.52	1.92	-1.60
2 hr - 100 yr	167.27	1.23	3.40	2.22	-1.18
4 hr - 100 yr	167.47	1.03	3.49	3.34	-0.15
8 hr - 100 yr	167.49	1.01	3.71	3.51	-0.20
24hr - 100 yr	167.06	1.44	1.66	1.60	-0.06

Summary and Conclusions

The proposed drainage system meets SRWMD and City of Alachua criteria for a wet retention system designed for a closed watershed. The criteria are as follows:

1. Stormwater Quantity: The Post-development peak discharge rates do not exceed the pre-development peak discharge rates for the 100-year frequency (1% annual chance) critical duration rainfall depths with SCS type II distribution analyzed for 1-, 2-, 4-, 8-, and 24-hour durations (SRWMD).
2. Water Quality Treatment Volume (WQTV) and Recovery: The SMF has been designed to retain the first 2.0 inches of runoff from the contributing basin area. Half of the water quality treatment volume recovers in less than the recommended time of 24-30 hours. This is acceptable because the bleed down orifice is the minimum 3" diameter restrictions set by SRWMD to prevent orifice clogging (SRWMD).
3. Freeboard: A minimum of one foot of freeboard is provided for all design storm events (SRWMD).
4. Permanent Pool Volume: The permanent pool volume provides a 21-day residence time based on average wet season rainfall. The PPV depth was maintained above two feet and below 12 feet (SRWMD).

Based on the information provided, the project is eligible for approval by the City of Alachua and SRWMD.

Figure 1

Project Location Map

Project Location Map Patel Fuel Retail

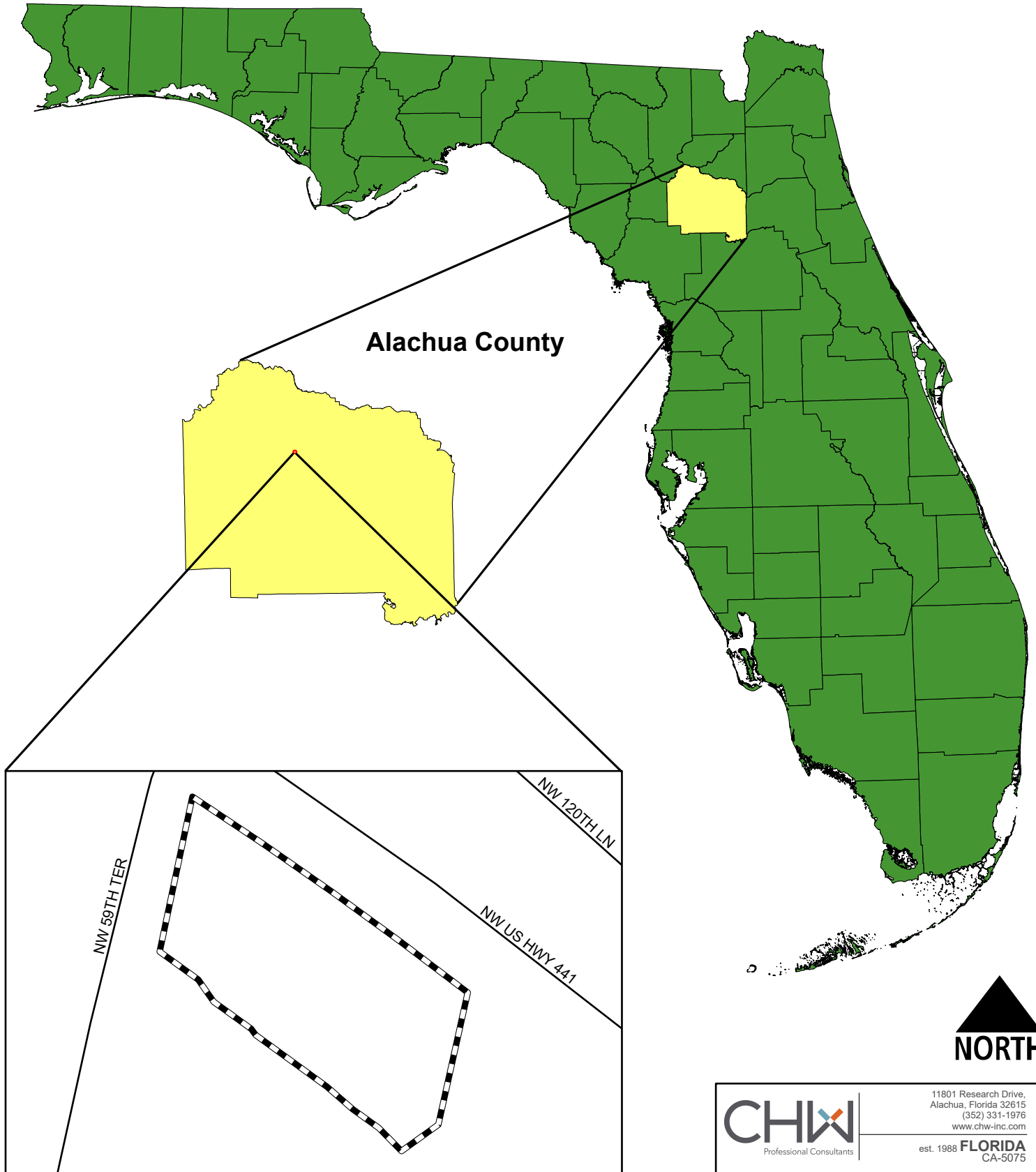


Figure 2

USGS Quadrangle Map



**Subject
Property**



11801 Research Drive,
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com
est. 1988 **FLORIDA**
CA-5075

Patel Fuel Retail Quad Map

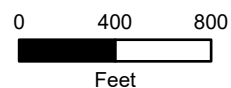
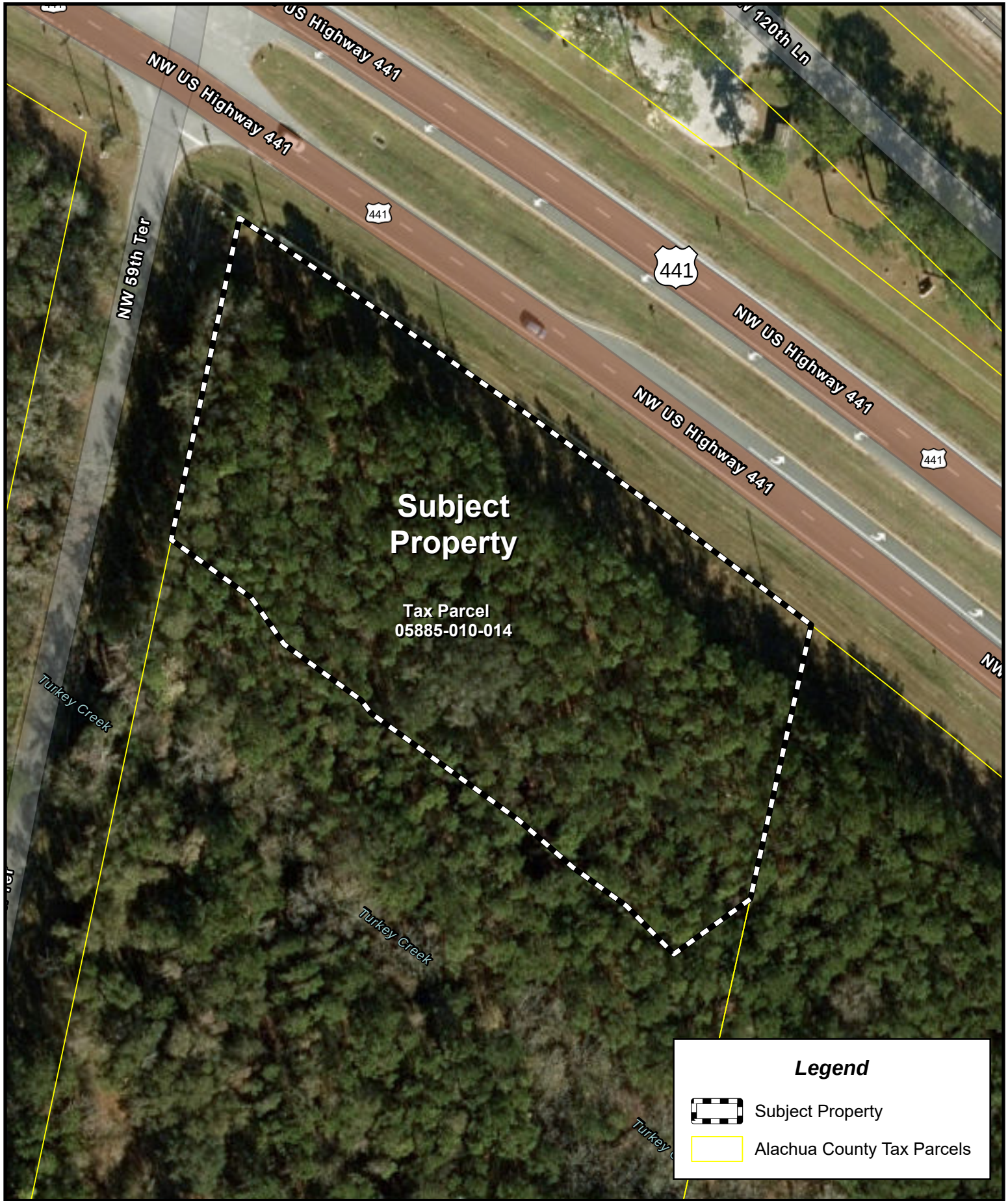


Figure 3

Aerial Map



**Subject
Property**

Tax Parcel
05885-010-014

Legend



Subject Property



Alachua County Tax Parcels



11801 Research Drive,
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com
est. 1988 **FLORIDA**
CA-5075

**Patel Fuel Retail
Aerial Map**

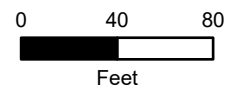
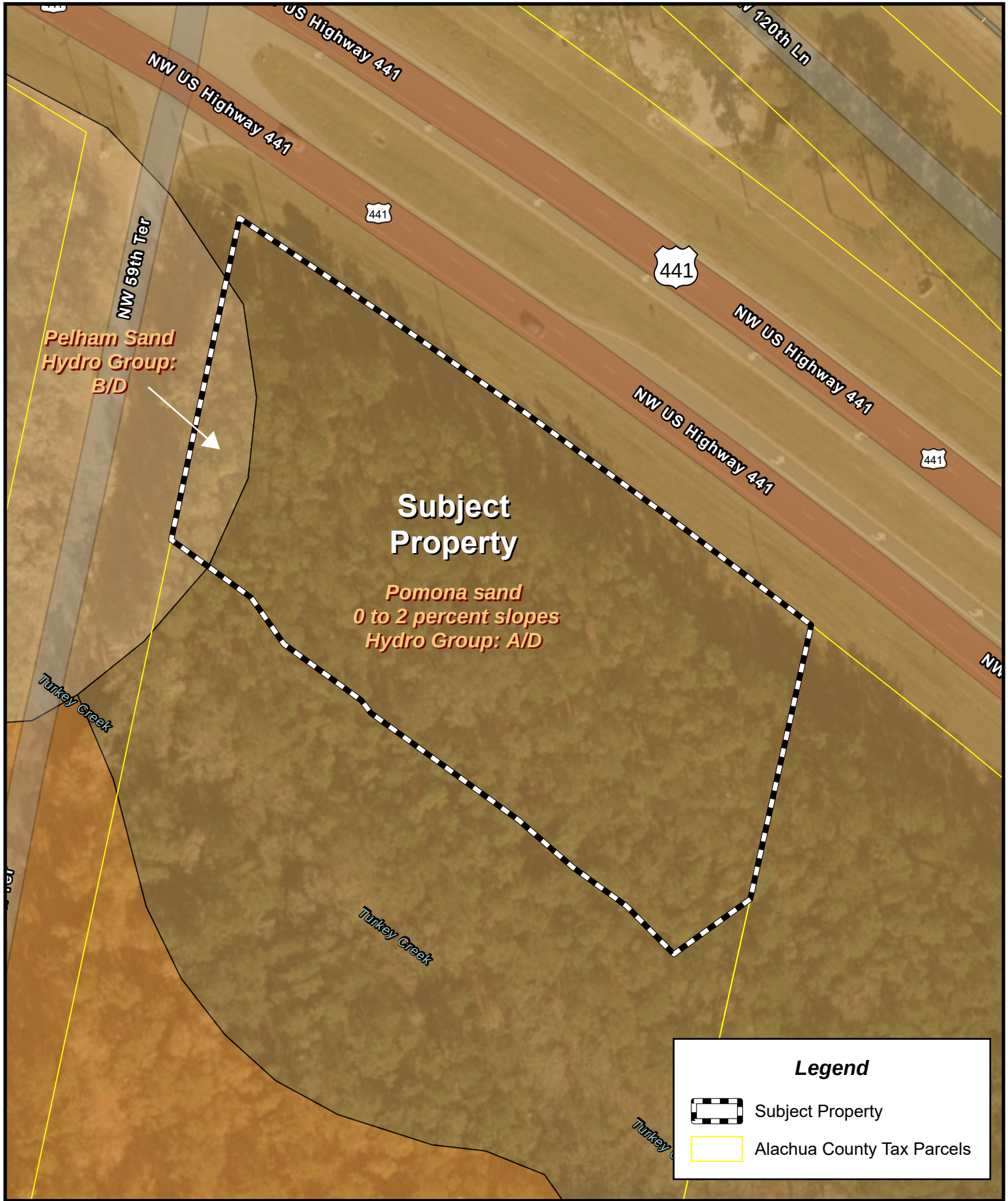


Figure 4

NRCS Soils Map



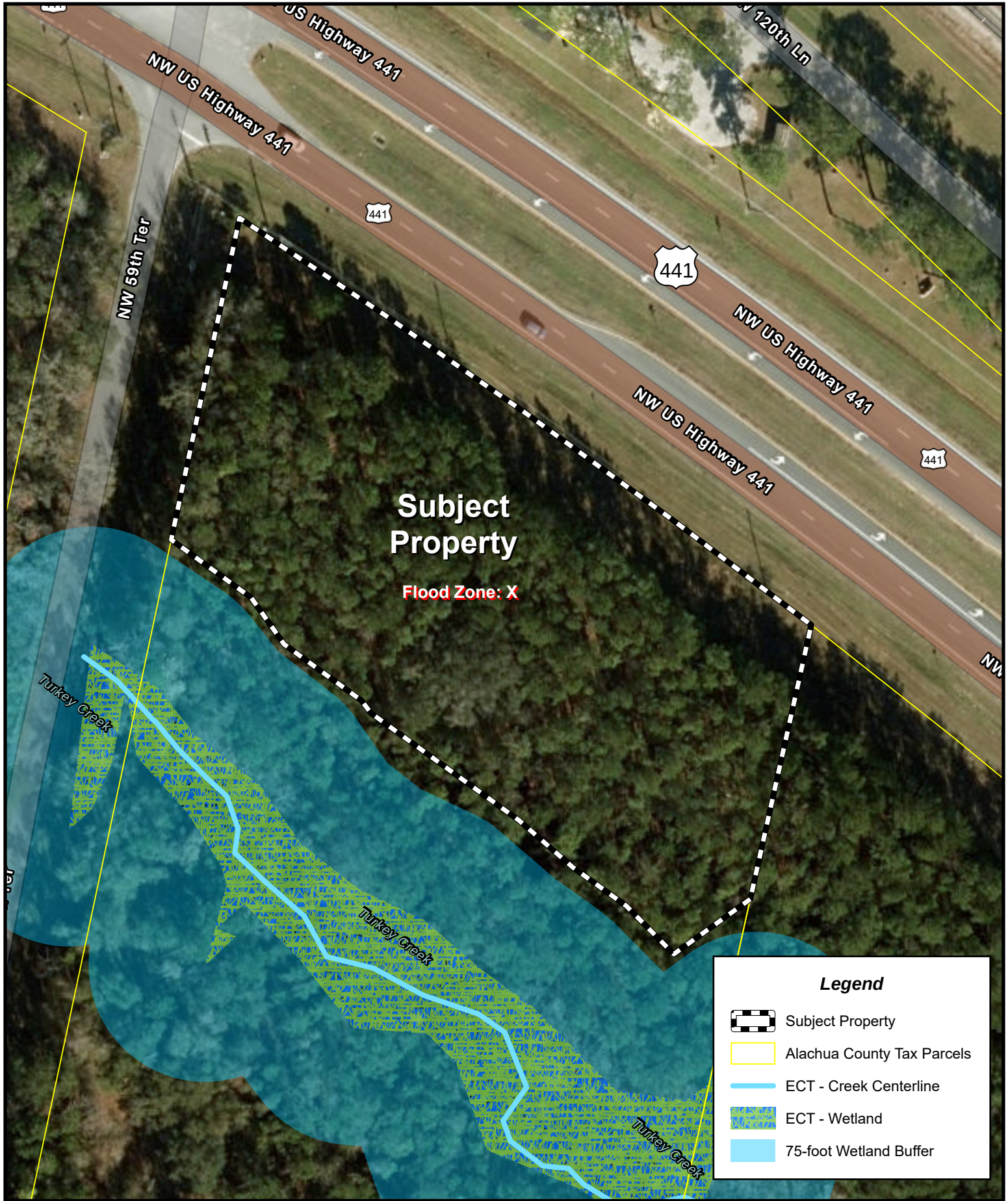
Legend

 Subject Property

 Alachua County Tax Parcels

Figure 5

FEMA Flood Map



Legend

- Subject Property
- Alachua County Tax Parcels
- ECT - Creek Centerline
- ECT - Wetland
- 75-foot Wetland Buffer

Professional Consultants

11801 Research Drive,
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com

est. 1988 **FLORIDA**
CA-5075

**Patel Fuel Retail
FEMA Map**

0 40 80
Feet

NORTH

Figure 6

Pre-Development Drainage Map

LEGEND

PRE-DEVELOPMENT ONSITE WATERSHED:

PRE-DEVELOPMENT DRAINAGE FLOW PATTERNS:

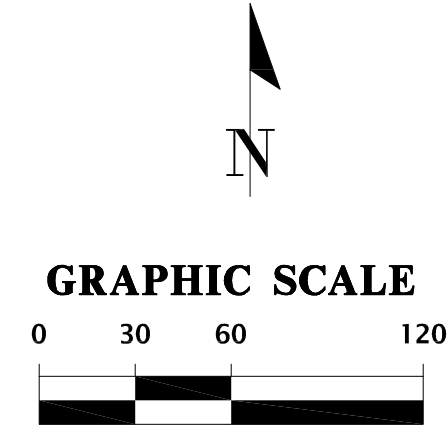
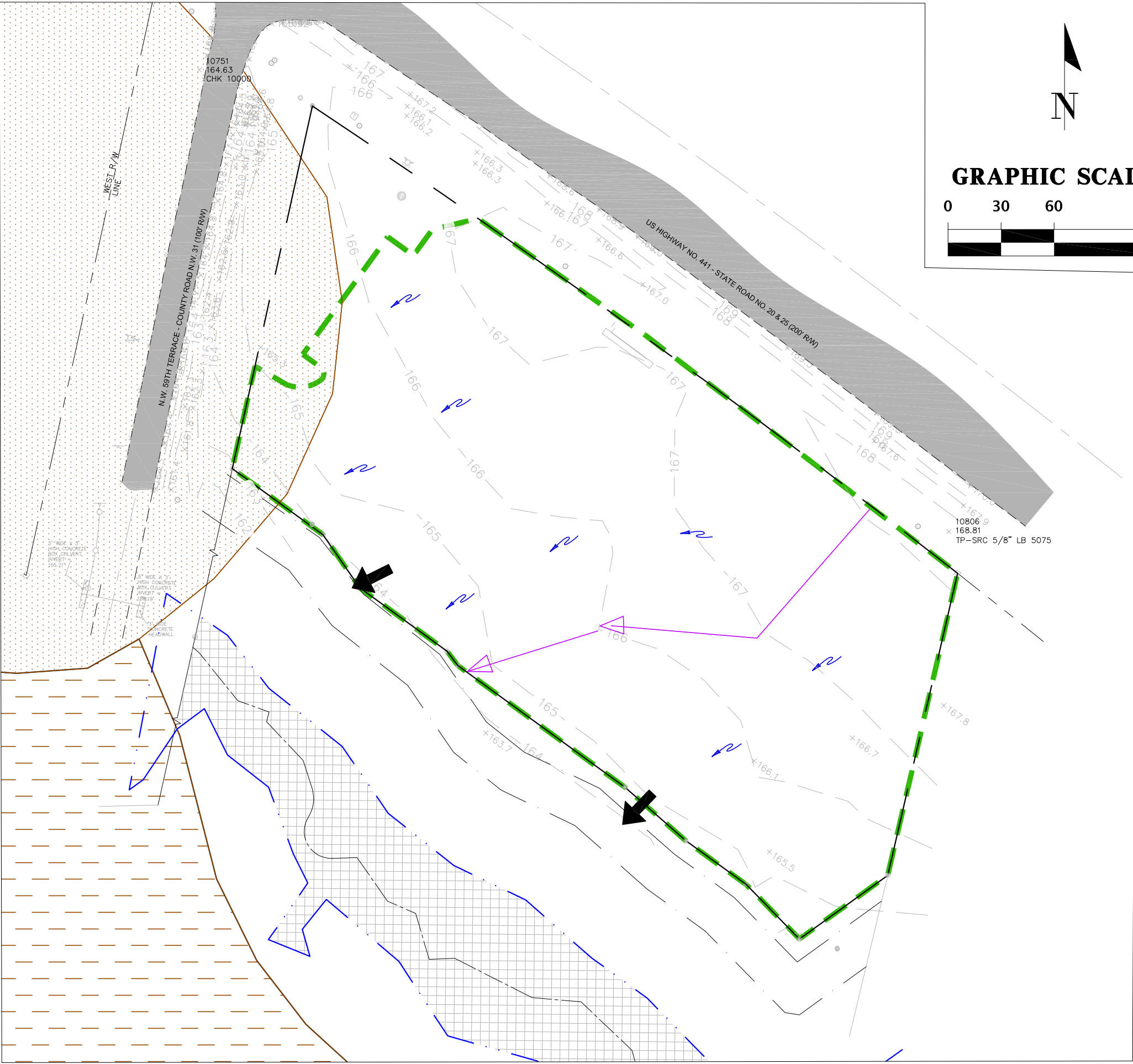
PRE-DEVELOPMENT TIME OF CONCENTRATION

PRE-DEVELOPMENT DISCHARGE POINT:

TYPE 'C/D' SOILS

TYPE 'B/D' SOILS

NOTE: ALL SOILS ARE TYPE 'A/D' UNLESS OTHERWISE NOTED



11801 Research Drive Alachua, Florida 32615 (352) 331-1976 www.cfw-inc.com		FLORIDA CA-5075	
CHINA AN NVIS COMPANY		SCALE 1"=60' VERY SCALE BUT ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH OR THIS SHEET, ADJUST SCALE ACCORDINGLY.	
SUBMITTALS CONSTRUCTION AND EXISTING		CLIENT MR. HARDIK PATEL PROJECT PATEL FUEL RETAIL SHEET TITLE PRE DEVELOPMENT DRAINAGE	
TECHNICIAN KT MCMAHON DESIGNER G. LEDFORD, E.L. QUALITY CONTROL W. OWEN, P.E. PROJECT NUMBER 22-0030		WALKER FAIN OWEN	
FL PE No. 94201 SHEET NO.		FIGURE 6	

Figure 7

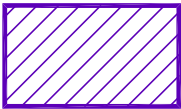
Post-Development Drainage Map

LEGEND

POST-DEVELOPMENT
WATERSHED #1:



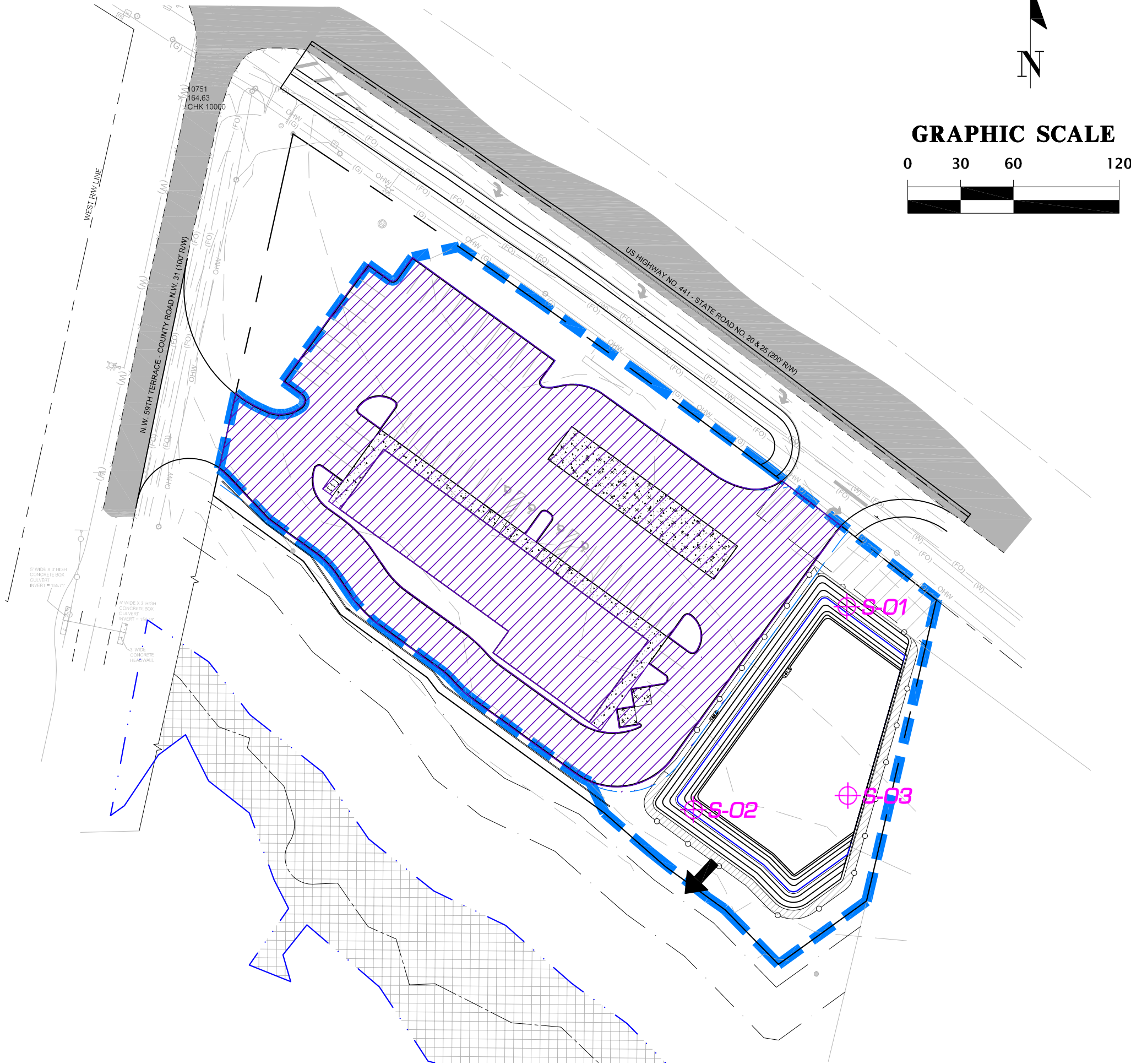
PROPOSED ONSITE
IMPERVIOUS AREA:



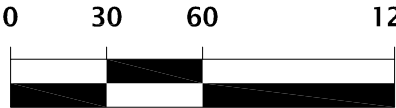
SOIL BORING LOCATION:



POST-DEVELOPMENT
DISCHARGE POINT:



GRAPHIC SCALE



11801 Research Drive Alachua, Florida 32615 (352) 331-1976 www.cfw-inc.com		FLORIDA CA-5075	
CFW AN FFW COMPANY		1"=50' VERIFY SCALE BASED ON FIELD OR ORIGINAL DRAWING IF NOT ONE INCH OR THIS SHEET, ADJUST SCALE ACCORDINGLY.	
SUBMITTALS		CONSTRUCTION AND REVISIONS	
CLIENT:	MR. HARSH PATEL		
PROJECT:	Patel Fuel Retail		
TECHNICAL:	KT MCMAHON		
DESIGNER:	G LEDFORD, E.L.		
QUALITY CONTROL:	W. OWEN, P.E.		
PROJECT NUMBER:	22-0030		
WALKER FAIN OWEN		POST DEVELOPMENT DRAINAGE	
FL PE No. 94201			
SHEET NO.			

Figure 7

Appendix A

Drainage Calculations and Computer Model Output

CURVE NUMBER CALCULATIONS

Pre-Development Watershed #1 (Pre DA-1):

Total Area:	83,383	s.f.	1.91	ac.	CN	CN * Area
Impervious Area (Existing)	0	s.f.	0.00	ac.	98	0.00
Woods-Grass Combo (Good, Type 'D' Soil):	83,383	s.f.	1.91	ac.	79	151.22

Composite CN: **79**

Time of Concentration: **39** minutes
(Time of concentration was calculated using TR-55 methodology)

Post-Development Watershed #1 (Post DA-1):

Total Area:	83,169	s.f.	1.91	ac.	CN	CN * Area
Impervious Area:	51,514	s.f.	1.18	ac.	98	115.89
Stormwater Management Facility:	15,379	s.f.	0.35	ac.	100	35.31
Open Space (Good, Type 'D' Soil):	16,276	s.f.	0.37	ac.	80	29.89

Composite CN: **95**

Time of Concentration: **10** minutes
(Time assumed to be 10 minutes)

Note: The stormwater management area was considered to have an CN value of 100

WQTV CALCULATIONS

SMF-1

SRWMD WQTV Calculations

2.0" x Drainage Area: 11,262 cf

SRWMD WQTV:	11,262 cf
	0.26 ac-ft

Stormwater Parameters			
Average Existing Ground Elevation =	166.33	ft	
Water Table (ASHGW) =	165.33	ft	
Horizontal Permeability =	3.5	ft/day	
Vertical Infiltration =	2	ft/day	Factor of Safety - 2
Porosity =	0.20		Factor of Safety - 2

Open Space (lawns, parks, golf courses, cemeteries, etc.):

	A	B	C	D
Poor	68	79	86	89
Fair	49	69	79	84
Good	39	61	74	80

Impervious areas

Paved parking lots, roofs, driveways, etc. (excluding R/W):

A	B	C	D
98	98	98	98

	SHEET FLOW					SHALLOW CONCENTRATED FLOW					CHANNEL / PIPE FLOW											
WATERSHED	Manning's n (--)	Flow Length L (ft)	2-Year 24-Hour Rain, P2 (in)	Land Slope s (ft/ft)	Tt1 (hr)	Paved or Unpvd. (P or U)	Flow Length L (ft)	Water- course Slope, s (ft/ft)	Avg. Velocity V (ft/s)	Tt2 (hr)	Cross- Section Area, a (ft^2)	Wetted Perim. Pw (ft)	Hydraulic Radius r (ft)	Pipe Slope s (ft/ft)	Manning n (--)	Avg. Velocity V (ft/s)	Flow Length L (ft)	Tt3 (hr)	ID #	Tc (hr)	Tc (min)	
Pre DA-1	0.8	100	4.2	0.014	0.63	U	138	0.017	2.08	0.02	-	-	-	-	-	-	-	-	Pre DA-1	0.65	39	

TIME OF CONCENTRATION VALUES DETERMINED USING TR-55 METHODOLOGY.

SHEET FLOW:

$$T_t = .007 (nL)^{0.8} / (P2)^{0.5} s^{0.4}$$

SHALLOW CONCENTRATED FLOW:
 1. For slopes < 0.005 ft/ft
 Unpaved $V=16.1345 s^{0.5}$
 Paved $V=20.3282 s^{0.5}$

2. For slopes > 0.005 ft/ft
 Velocity per Figure 3-1, TR-55

$$T_t = \frac{L}{3600 V}$$

CHANNEL/PIPE FLOW:

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

$$T_t = \frac{L}{3600 V}$$

Manning's = Heavy underbrush = 0.8

STAGE-STORAGE CALCULATIONS:

Post-Development SMF-1: Stage-Storage Relationship				
ELEV. (FT)	AREA (SF)	AREA (AC)	VOLUME (CF)	VOLUME (AC-FT)
165.33	12,016	0.2758	0	0.000
166.00	12,561	0.2884	8,233	0.189
167.00	13,581	0.3118	21,304	0.489
168.00	14,631	0.3359	35,410	0.813
168.50	15,379	0.3531	42,913	0.985

<-- Control Elevation @ 165.33

<-- Top of Bank

Post-Development SMF-1: Permanent Pool Volume				
ELEV. (FT)	AREA (SF)	AREA (AC)	VOLUME (CF)	VOLUME (AC-FT)
161.50	9,007	0.2068	0	0.000
162.00	9,304	0.2136	4,578	0.105
163.00	9,897	0.2272	14,178	0.325
164.00	10,619	0.2438	24,436	0.561
165.00	11,574	0.2657	35,533	0.816
165.33	12,016	0.2758	39,425	0.905

<-- Bottom of Pond @ 161.5

<-- Control Elevation @ 165.33

SMF-1 WQTV	
WQTV (cf) =	11,262
WQTV EL (ft) =	166.23
1/2 WQTV (cf) =	5,631
1/2 WQTV EL (ft) =	165.79

Post-Development - SMF-1 (Wet retention stormwater management facility):

Volume =	42,913 c.f.	Length =	173 ft.
Area =	15,379 s.f.		
Perimeter =	503.0 ft.	Width =	78 ft.
Depth=	3.2 ft.		

PERMANENT POOL VOLUME AND ORIFICE SIZING CALCULATIONS

Drainage Area to pond = 1.91 ac.
Is there a littoral Zone? No
Impervious Area = 62%
Curve Number = 95

Permanent Pool Calculations

Minimum Permanent Pool Volume (PPV) = $(DA \times C \times R \times RT) / (WS \times C.F.)$

DA = Drainage Area 1.91 ac
C = Runoff Coefficient 0.81
R = Wet season rainfall depth 30 in
RT = Minimum Residence Time 21 days
(Non-littoral zone option)
WS = length of wet season 153 days
C.F. = 12 in/ft

Runoff Coefficient Calculation

	Area (ac.)	C	C*A
Impervious area	1.18	0.95	1.12
Open space	0.37	0.20	0.07
Pond area	0.35	1.00	0.35
Total	1.91	2.15	1.55
Runoff Coefficient $(\sum(C*A)/DA) =$			0.81

Minimum PPV = 0.532 ac-ft

Provided PPV = 0.905 ac-ft

Pond Configuration

	SMF-1
Pond Perimeter at ctrl elev (ft)	445
Pond Depth from ctrl elev to bottom (ft)	3.83
Pond Width at ctrl elev (ft)	89
Pond Length at ctrl elev (ft)	146
Approximate length to width (ratio)	1.6
Pond Volume at ctrl elev (cf)	39,425
Surface Area at ctrl elev (sf)	12,016
Mean Depth =	3.28

Orifice Sizing Calculation

Iteration #1

h1=	165.33 ft	h=	84.250 ft
h2=	3.17 ft		
TV=	11,262 c.f.	Q=	0.07 cfs
t=	24 hrs		
CF=	3,600 s/hr	A=	0.001 s.f.
g=	32.2 ft/s/s		
C=	0.81	D=	0.037 ft

Iteration #2

h1=	165.31 ft	h=	84.231 ft
h2=	3.15 ft		
TV=	11,262 c.f.	Q=	0.07 cfs
t=	24 hrs		
CF=	3,600 s/hr	A=	0.001 s.f.
g=	32.2 ft/s/s		
C=	0.81	D=	0.037 ft

Iteration #3

h1=	165.31 ft	h=	84.231 ft
h2=	3.15 ft		
TV=	11,262 c.f.	Q=	0.07 cfs
t=	24 hrs		
CF=	3,600 s/hr	A=	0.001 s.f.
g=	32.2 ft/s/s		
C=	0.81	D=	0.037 ft

Iteration #4

h1=	165.31 ft	h=	84.231 ft
h2=	3.15 ft		
TV=	11,262 c.f.	Q=	0.07 cfs
t=	24 hrs		
CF=	3,600 s/hr	A=	0.001 s.f.
g=	32.2 ft/s/s		
C=	0.81	D=	0.037 ft

D =	0.45 in.
Use D =	3 in.

Note 3.0" Dia. Orifice was used to reduce occurrence of clogging, per SRWMD.

Project No. 22-0030: Patel Fuel-Pipe Sizing																						
Hydraulic Pipe Calculations																						
												Q		V - Full	Pipe	Minor	Minor	Friction				
Structure No.		Invert Elev.		Length	Slope	Dia.		i	A	Q (cfs) Actual		Allowed	Pipe A	Flow	Hydraulic R	Loss	Loss	Loss	HGL		ToG/	F.B.
From	To	U.S.	D.S.	(ft)	(ft/foot)	(in)	C	(in/hr)	(ac)	Inc	Cumul	(cfs)	(sq-ft)	(fps)	(ft)	Coeff.	(ft)	(ft)	U.S.	D.S.	EoP	(ft)
S-3	S-2	163.91	163.72	54	0.0035	15.0	0.95	6.02	0.161	0.919	0.919	4.13	1.23	3.36	0.31	0.70	0.006	0.009	166.54	166.53	167.54	1.00
S-6	S-5	164.55	164.34	70	0.0030	15.0	0.95	6.02	0.321	1.836	1.836	3.84	1.23	3.13	0.31	0.60	0.021	0.048	167.22	167.15	167.52	0.30
S-5	S-4	164.31	164.01	99	0.0030	15.0	0.95	6.02	0.191	1.095	2.931	3.83	1.23	3.12	0.31	0.60	0.053	0.173	167.15	166.92	167.52	0.37
S-4	S-2	164.01	163.72	95	0.0031	15.0	0.95	6.02	0.161	0.921	3.852	3.87	1.23	3.15	0.31	0.70	0.107	0.286	166.92	166.53	167.54	0.62
S-9	S-8	164.83	164.41	142	0.0030	15.0	0.95	6.02	0.115	0.660	0.660	3.83	1.23	3.12	0.31	0.60	0.003	0.013	166.91	166.90	167.54	0.62
S-8	S-7	164.41	164.05	115	0.0031	15.0	0.95	6.02	0.280	1.601	2.261	3.89	1.23	3.17	0.31	0.60	0.032	0.120	166.90	166.75	167.47	0.57
S-7	S-2	164.05	163.72	108	0.0030	15.0	0.95	6.02	0.083	0.475	2.736	3.84	1.23	3.13	0.31	0.70	0.054	0.164	166.75	166.53	167.54	0.79
S-2	S-1	161.85	161.50	35	0.0100	24.0	0.95	6.02	0.324	1.853	9.359	24.50	3.14	7.80	0.50	0.50	0.069	0.050	166.53	166.41	167.54	1.01

- Notes
1. ToG = Top of Grate/EoP = Edge of Pavement

2. FB= Free Board, CC = Concrete Collar

3. Rainfall intensity is based on the 3 YR-1 hour storm event (6.02 inches).

4. The tailwater condition for the contributing pipe system into the pond was obtained by averaging the 100-year design high water elevation and the normal water surface elevation of the pond (EL. 166.41')

Pipe Type	Manning
PVC	0.011
HDPE	0.012
RCP	0.013

PONDS Version 3.3.0241
Retention Pond Recovery - Refined Method
Copyright 2011
Devo Seereeram, Ph.D., P.E.

Project Data

Project Name: Patel Fuel Retail
Simulation Description: Pre Construction Basin
Project Number: 22-0030
Engineer : CC
Supervising Engineer: GL & WFO
Date: 02-28-2024

Aquifer Data

Base Of Aquifer Elevation, [B] (ft datum): 158.33
Water Table Elevation, [WT] (ft datum): 165.33
Horizontal Saturated Hydraulic Conductivity, [Kh] (ft/day): 0.00
Fillable Porosity, [n] (%): 20.00
Vertical infiltration was not considered.

Geometry Data

Equivalent Pond Length, [L] (ft): 0.0
Equivalent Pond Width, [W] (ft): 0.0
Ground water mound is expected to intersect the pond bottom

Stage vs Area Data

<u>Stage</u> <u>(ft datum)</u>	<u>Area</u> <u>(ft²)</u>
-----------------------------------	--

PONDS Version 3.3.0241
Retention Pond Recovery - Refined Method
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Devo Seereeram, Ph.D., P.E.

Scenario Input Data

Scenario 1 :: FDOT 1 Hour - 1 hr - 100 yr

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.910
Time Of Concentration (minutes) 39.0
DCIA (%) 0.0
Curve Number 79
Design Rainfall Depth (inches) 4.4
Design Rainfall Duration (hours) 1.0
Shape Factor UHG 256
Rainfall Distribution FDOT 1 Hour

Initial ground water level (ft datum) 165.33 (default)

No times after storm specified.

Scenario 2 :: FDOT 2 Hour - 2 hr - 100 yr

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.910
Time Of Concentration (minutes) 39.0
DCIA (%) 0.0
Curve Number 79
Design Rainfall Depth (inches) 5.4
Design Rainfall Duration (hours) 2.0
Shape Factor UHG 256
Rainfall Distribution FDOT 2 Hour

Initial ground water level (ft datum) 165.33 (default)

No times after storm specified.

Scenario 3 :: FDOT 4 Hour - 4 hr - 100 yr

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.910
Time Of Concentration (minutes) 39.0
DCIA (%) 0.0
Curve Number 79
Design Rainfall Depth (inches) 6.7
Design Rainfall Duration (hours) 4.0
Shape Factor UHG 256
Rainfall Distribution FDOT 4 Hour

Initial ground water level (ft datum) 165.33 (default)

No times after storm specified.

PONDS Version 3.3.0241
Retention Pond Recovery - Refined Method
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Scenario Input Data (cont'd.)

Scenario 4 :: FDOT 8 Hour - 8 hr - 100 yr

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.910
Time Of Concentration (minutes) 39.0
DCIA (%) 0.0
Curve Number 79
Design Rainfall Depth (inches) 8.0
Design Rainfall Duration (hours) 8.0
Shape Factor UHG 256
Rainfall Distribution FDOT 8 Hour

Initial ground water level (ft datum) 165.33 (default)

No times after storm specified.

Scenario 5 :: FDOT 24 Hour - 24 hr - 100 yr

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.910
Time Of Concentration (minutes) 39.0
DCIA (%) 0.0
Curve Number 79
Design Rainfall Depth (inches) 11.0
Design Rainfall Duration (hours) 24.0
Shape Factor UHG 256
Rainfall Distribution FDOT 24 Hour

Initial ground water level (ft datum) 165.33 (default)

No times after storm specified.

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Sort-By-Category Report

Scenarios Considered: 1 to 5

Stage - Maximum

Rank	Scenario Number	Maximum Stage (ft datum)	Time (hours)	Description
1	1	Not Available	Not Available	FDOT 1 Hour - 1 hr - 100 yr
2	2	Not Available	Not Available	FDOT 2 Hour - 2 hr - 100 yr
3	3	Not Available	Not Available	FDOT 4 Hour - 4 hr - 100 yr
4	4	Not Available	Not Available	FDOT 8 Hour - 8 hr - 100 yr
5	5	Not Available	Not Available	FDOT 24 Hour - 24 hr - 100 yr

Discharge - Rate - Maximum Positive

Rank	Scenario Number	Maximum Positive Discharge Rate (ft ³ /s)	Time (hours)	Description
1	4	3.71	4.25	FDOT 8 Hour - 8 hr - 100 yr
2	1	3.52	1.04	FDOT 1 Hour - 1 hr - 100 yr
3	3	3.49	2.77	FDOT 4 Hour - 4 hr - 100 yr
4	2	3.40	1.21	FDOT 2 Hour - 2 hr - 100 yr
5	5	1.66	12.22	FDOT 24 Hour - 24 hr - 100 yr

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Project Data

Project Name: Patel Fuel Retail
Simulation Description: Post Construction Basin
Project Number: 22-0030
Engineer : CWC
Supervising Engineer: GL & WFO
Date: 07-08-2024

Aquifer Data

Base Of Aquifer Elevation, [B] (ft datum): 158.33
Water Table Elevation, [WT] (ft datum): 165.33
Horizontal Saturated Hydraulic Conductivity, [Kh] (ft/day): 0.00
Fillable Porosity, [n] (%): 20.00
Vertical infiltration was not considered.

Geometry Data

Equivalent Pond Length, [L] (ft): 173.0
Equivalent Pond Width, [W] (ft): 78.0
Ground water mound is expected to intersect the pond bottom

Stage vs Area Data

Stage (ft datum)	Area (ft ²)
165.33	12016.0
166.00	12561.0
167.00	13581.0
168.00	14631.0
169.00	15379.0

Discharge Structures

Discharge Structure #1 is active as weir

Structure Parameters

Description: Sharp Crested Rectangular Weir

Weir elevation, (ft datum):	166.231
Weir coefficient:	3.13
Weir length, (ft):	.44
Weir exponent:	1.5

Tailwater - disabled, free discharge

Discharge Structure #2 is active as orifice

Structure Parameters

Description: 3.0" Sharp Edge Orifice

Orifice elevation, (ft datum):	165.331
Orifice coefficient:	4.9
Orifice area, (ft ²):	.049087
Orifice exponent:	1.5

Tailwater - disabled, free discharge

Discharge Structure #3 is active as weir

Structure Parameters

Description: weir

Weir elevation, (ft datum):	167.19
Weir coefficient:	3.13
Weir length, (ft):	1.5
Weir exponent:	1.5

Tailwater - disabled, free discharge

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Scenario Input Data

Scenario 1 :: FDOT 1 Hour - 1 hr - 100 yr

Hydrograph Type: Inline SCS
• Modflow Routing: **Routed without infiltration**
 Repetitions: 1

Basin Area (acres) 1.910
 Time Of Concentration (minutes) 10.0
 DCIA (%) 0.0
 Curve Number 95
 Design Rainfall Depth (inches) 4.4
 Design Rainfall Duration (hours) 1.0
 Shape Factor UHG 484
 Rainfall Distribution FDOT 1 Hour

Initial ground water level (ft datum) 165.33 (default)

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
0.250	6.250	12.250	18.250	24.250
0.500	6.500	12.500	18.500	24.500
0.750	6.750	12.750	18.750	24.750
1.000	7.000	13.000	19.000	25.000
1.250	7.250	13.250	19.250	25.250
1.500	7.500	13.500	19.500	25.500
1.750	7.750	13.750	19.750	25.750
2.000	8.000	14.000	20.000	26.000
2.250	8.250	14.250	20.250	26.250
2.500	8.500	14.500	20.500	26.500
2.750	8.750	14.750	20.750	26.750
3.000	9.000	15.000	21.000	27.000
3.250	9.250	15.250	21.250	27.250
3.500	9.500	15.500	21.500	27.500
3.750	9.750	15.750	21.750	27.750
4.000	10.000	16.000	22.000	28.000
4.250	10.250	16.250	22.250	28.250
4.500	10.500	16.500	22.500	28.500
4.750	10.750	16.750	22.750	28.750
5.000	11.000	17.000	23.000	29.000
5.250	11.250	17.250	23.250	29.250
5.500	11.500	17.500	23.500	29.500
5.750	11.750	17.750	23.750	29.750
6.000	12.000	18.000	24.000	30.000

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Scenario Input Data (cont'd.)

Scenario 2 :: FDOT 2 Hour - 2 hr - 100 yr

Hydrograph Type: Inline SCS
• Modflow Routing: **Routed without infiltration**
Repetitions: 1

Basin Area (acres) 1.910
Time Of Concentration (minutes) 10.0
DCIA (%) 0.0
Curve Number 95
Design Rainfall Depth (inches) 5.4
Design Rainfall Duration (hours) 2.0
Shape Factor UHG 484
Rainfall Distribution FDOT 2 Hour

Initial ground water level (ft datum) 165.33 (default)

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
0.250	6.250	12.250	18.250	24.250
0.500	6.500	12.500	18.500	24.500
0.750	6.750	12.750	18.750	24.750
1.000	7.000	13.000	19.000	25.000
1.250	7.250	13.250	19.250	25.250
1.500	7.500	13.500	19.500	25.500
1.750	7.750	13.750	19.750	25.750
2.000	8.000	14.000	20.000	26.000
2.250	8.250	14.250	20.250	26.250
2.500	8.500	14.500	20.500	26.500
2.750	8.750	14.750	20.750	26.750
3.000	9.000	15.000	21.000	27.000
3.250	9.250	15.250	21.250	27.250
3.500	9.500	15.500	21.500	27.500
3.750	9.750	15.750	21.750	27.750
4.000	10.000	16.000	22.000	28.000
4.250	10.250	16.250	22.250	28.250
4.500	10.500	16.500	22.500	28.500
4.750	10.750	16.750	22.750	28.750
5.000	11.000	17.000	23.000	29.000
5.250	11.250	17.250	23.250	29.250
5.500	11.500	17.500	23.500	29.500
5.750	11.750	17.750	23.750	29.750
6.000	12.000	18.000	24.000	30.000

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Scenario Input Data (cont'd.)

Scenario 3 :: FDOT 4 Hour - 4 hr - 100 yr

Hydrograph Type: Inline SCS
• Modflow Routing: **Routed without infiltration**
 Repetitions: 1

Basin Area (acres) 1.910
 Time Of Concentration (minutes) 10.0
 DCIA (%) 0.0
 Curve Number 95
 Design Rainfall Depth (inches) 6.7
 Design Rainfall Duration (hours) 4.0
 Shape Factor UHG 484
 Rainfall Distribution FDOT 4 Hour

Initial ground water level (ft datum) 165.33 (default)

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
0.250	6.250	12.250	18.250	24.250
0.500	6.500	12.500	18.500	24.500
0.750	6.750	12.750	18.750	24.750
1.000	7.000	13.000	19.000	25.000
1.250	7.250	13.250	19.250	25.250
1.500	7.500	13.500	19.500	25.500
1.750	7.750	13.750	19.750	25.750
2.000	8.000	14.000	20.000	26.000
2.250	8.250	14.250	20.250	26.250
2.500	8.500	14.500	20.500	26.500
2.750	8.750	14.750	20.750	26.750
3.000	9.000	15.000	21.000	27.000
3.250	9.250	15.250	21.250	27.250
3.500	9.500	15.500	21.500	27.500
3.750	9.750	15.750	21.750	27.750
4.000	10.000	16.000	22.000	28.000
4.250	10.250	16.250	22.250	28.250
4.500	10.500	16.500	22.500	28.500
4.750	10.750	16.750	22.750	28.750
5.000	11.000	17.000	23.000	29.000
5.250	11.250	17.250	23.250	29.250
5.500	11.500	17.500	23.500	29.500
5.750	11.750	17.750	23.750	29.750
6.000	12.000	18.000	24.000	30.000

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Scenario Input Data (cont'd.)

Scenario 4 :: FDOT 8 Hour - 8 hr - 100 yr

Hydrograph Type: Inline SCS
• Modflow Routing: **Routed without infiltration**
 Repetitions: 1

Basin Area (acres) 1.910
 Time Of Concentration (minutes) 10.0
 DCIA (%) 0.0
 Curve Number 95
 Design Rainfall Depth (inches) 8.0
 Design Rainfall Duration (hours) 8.0
 Shape Factor UHG 484
 Rainfall Distribution FDOT 8 Hour

Initial ground water level (ft datum) 165.33 (default)

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
0.250	6.250	12.250	18.250	24.250
0.500	6.500	12.500	18.500	24.500
0.750	6.750	12.750	18.750	24.750
1.000	7.000	13.000	19.000	25.000
1.250	7.250	13.250	19.250	25.250
1.500	7.500	13.500	19.500	25.500
1.750	7.750	13.750	19.750	25.750
2.000	8.000	14.000	20.000	26.000
2.250	8.250	14.250	20.250	26.250
2.500	8.500	14.500	20.500	26.500
2.750	8.750	14.750	20.750	26.750
3.000	9.000	15.000	21.000	27.000
3.250	9.250	15.250	21.250	27.250
3.500	9.500	15.500	21.500	27.500
3.750	9.750	15.750	21.750	27.750
4.000	10.000	16.000	22.000	28.000
4.250	10.250	16.250	22.250	28.250
4.500	10.500	16.500	22.500	28.500
4.750	10.750	16.750	22.750	28.750
5.000	11.000	17.000	23.000	29.000
5.250	11.250	17.250	23.250	29.250
5.500	11.500	17.500	23.500	29.500
5.750	11.750	17.750	23.750	29.750
6.000	12.000	18.000	24.000	30.000

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Scenario Input Data (cont'd.)

Scenario 5 :: FDOT 24 Hour - 24 hr - 100 yr

Hydrograph Type: Inline SCS
• Modflow Routing: **Routed without infiltration**
 Repetitions: 1

Basin Area (acres) 1.910
 Time Of Concentration (minutes) 10.0
 DCIA (%) 0.0
 Curve Number 95
 Design Rainfall Depth (inches) 11.0
 Design Rainfall Duration (hours) 24.0
 Shape Factor UHG 484
 Rainfall Distribution FDOT 24 Hour

Initial ground water level (ft datum) 165.33 (default)

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
0.250	6.250	12.250	18.250	24.250
0.500	6.500	12.500	18.500	24.500
0.750	6.750	12.750	18.750	24.750
1.000	7.000	13.000	19.000	25.000
1.250	7.250	13.250	19.250	25.250
1.500	7.500	13.500	19.500	25.500
1.750	7.750	13.750	19.750	25.750
2.000	8.000	14.000	20.000	26.000
2.250	8.250	14.250	20.250	26.250
2.500	8.500	14.500	20.500	26.500
2.750	8.750	14.750	20.750	26.750
3.000	9.000	15.000	21.000	27.000
3.250	9.250	15.250	21.250	27.250
3.500	9.500	15.500	21.500	27.500
3.750	9.750	15.750	21.750	27.750
4.000	10.000	16.000	22.000	28.000
4.250	10.250	16.250	22.250	28.250
4.500	10.500	16.500	22.500	28.500
4.750	10.750	16.750	22.750	28.750
5.000	11.000	17.000	23.000	29.000
5.250	11.250	17.250	23.250	29.250
5.500	11.500	17.500	23.500	29.500
5.750	11.750	17.750	23.750	29.750
6.000	12.000	18.000	24.000	30.000

Scenario 6 :: WQTV

Hydrograph Type: Slug Load
• Modflow Routing: **Routed without infiltration**

Treatment Volume (ft³) 11262

Initial ground water level (ft datum) 165.33 (default)

Scenario Input Data (cont'd.)

Scenario 6 (cont'd.) :: Slug Load :: WQTV

<u>Time After Storm Event (days)</u>	<u>Time After Storm Event (days)</u>
0.100	2.000
0.250	2.500
0.500	3.000
1.000	3.500
1.500	4.000

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Sort-By-Category Report

Scenarios Considered: 1 to 6

Stage - Maximum

Rank	Scenario Number	Maximum Stage (ft datum)	Time (hours)	Description
1	4	167.49	4.16	FDOT 8 Hour - 8 hr - 100 yr
2	3	167.47	3.07	FDOT 4 Hour - 4 hr - 100 yr
3	2	167.27	1.56	FDOT 2 Hour - 2 hr - 100 yr
4	1	167.20	0.98	FDOT 1 Hour - 1 hr - 100 yr
5	5	167.06	12.18	FDOT 24 Hour - 24 hr - 100 yr
6	6	166.24	0.00	WQTV

Discharge - Rate - Maximum Positive

Rank	Scenario Number	Maximum Positive Discharge Rate (ft ³ /s)	Time (hours)	Description
1	4	3.51	4.16	FDOT 8 Hour - 8 hr - 100 yr
2	3	3.34	3.07	FDOT 4 Hour - 4 hr - 100 yr
3	2	2.22	1.56	FDOT 2 Hour - 2 hr - 100 yr
4	1	1.92	0.98	FDOT 1 Hour - 1 hr - 100 yr
5	5	1.60	12.18	FDOT 24 Hour - 24 hr - 100 yr
6	6	0.17	0.00	WQTV

Appendix B

Operation and Maintenance Requirements and Erosion and Sedimentation Control Requirements

Operation and Maintenance Requirements

Proposed operation and maintenance and soil erosion and sediment control practices are outlined in the following paragraphs.

Stormwater Management Facilities

The man-made stormwater management facilities shall be maintained free of sediments and debris. Areas shall be inspected on a routine basis and nuisance plants shall be removed a minimum of twice annually. Grassed areas shall be mowed a minimum of 6 times per year. The natural systems shall be least disturbed as possible. Minimal maintenance is required for the natural and undisturbed areas. All basins shall be inspected monthly. Monthly documentation shall be noted based upon the inspection findings.

Erosion Control

All erosion damage at spillways, outfall structures, and along basin side slopes shall be repaired (grading and grassing) as conditions occur. All side slopes and other areas disturbed by construction shall be stabilized by sodding, hydro-mulching or other appropriate vegetative or non-vegetative erosion control measures.

Swale/Ditch

All swales, if any, shall be maintained free of debris and sediment. Sediments shall be removed when the depth has been reduced by 20 percent. Sediments removed from swales/ditches should be evenly spread over grassed areas away from the stormwater management facilities.

Culverts, Pipes and Structures

All pipes, if any, shall be inspected bi-annually. Culverts and pipes shall be maintained free of debris and sediment. Sediments removed from culverts and pipes should be evenly spread over grassed areas away from the stormwater management facilities.

The structures and paved flow lines, if any, shall be maintained clear of debris. Remove any debris and silt collected in inlets and pipes as routine inspections dictates.

Inspection Reporting

Annual inspection reports, prepared by a properly licensed professional engineer, should be submitted to the water management district. The engineer shall inspect the site and report on the status and function of the system. Noted deficiencies and/or maintenance requirements shall be reported to the owner with recommendations for repairs. Repairs shall be executed.

Limerock/Sinkhole

If continuous limerock is encountered during excavation of the swales/basin or if a sinkhole forms in the area of a drainage swale/basin the engineer of record shall be notified by either the contractor or the established operation and maintenance entity. The engineer of record shall inspect the repaired area upon completion of the repair.

Where continuous limerock is encountered during excavation of the swales/basins, the limerock shall

be over excavated by 2 feet and replaced with clayey soils that extend 2 feet beyond the perimeter of the limerock outcropping. The clayey soil shall have at least 20% passing the no. 200 sieve, compacted to 95% of standard proctor, and compacted in a wet condition with moisture 2% - 4% above optimum.

All swales/basins shall be inspected monthly for sinkhole occurrence. Should a sinkhole occur, the area shall be repaired as soon as possible. Repair shall include filling (limerock such as road base material, clay/sand mixture, or concrete if necessary). A 2-foot deep cap that extends 2 feet beyond the perimeter of the sinkhole shall be constructed with clayey soils. The clayey soil shall have at least 20% passing the no. 200 sieve, compacted to 95% of standard proctor, and compacted in a wet condition with moisture 2% - 4% above optimum. The clay soil cap shall be re-graded to prevent concentration of waters (ponding) and re-vegetated.

Operation & Maintenance Entity:

Hardik Patel
Semoj 13, LLC
3612 SW 106th St.
Gainesville, FL 32608

Appendix C

Geotechnical Report



ECS Florida, LLC

Geotechnical Engineering Report

Patel Fuel Retail - Gainesville

US-441 & NW 59th Terrace
Gainesville, Alachua County, Florida

ECS Project Number 35:35158

February 16, 2024





February 16, 2024

Mr. Hardik Patel
SEMOJ 13 LLC
12210 SW Archer Road
Archer, Florida 32618

ECS Project No. 35:35158
Client ID: 35:Y374-02

Reference: Geotechnical Engineering Report
Patel Fuel Retail - Gainesville
US-441 & NW 59th Terrace
Gainesville, Alachua County, Florida

Dear Mr. Patel:

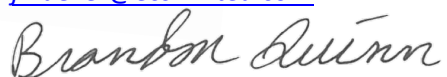
ECS Florida, LLC (ECS) has completed the subsurface exploration, laboratory testing, and geotechnical engineering analyses for the above-referenced project. Our services were performed in general accordance with our Proposal No. 35:21552, dated December 15, 2023. This report presents our understanding of the geotechnical aspects of the project, the results of the field exploration and laboratory testing conducted, and our recommendations to assist with foundation design and earthwork construction.

It has been our pleasure to be of service to CHW Professional Consultants during the design phase of this project. We would appreciate the opportunity to remain involved during the continuation of the design phase, and we would like to provide our services during construction phase operations as well to verify the assumptions of subsurface conditions made for this report. Should you have any questions concerning the information contained in this report, or if we can be of further assistance to you, please contact us.

Respectfully submitted,
ECS Florida, LLC.



Jaq Mueller, E.I.
Geotechnical Staff Project Manager
jmueller@ecslimited.com



Brandon M. Quinn, P.E.
Geotechnical Department Manager
bquinn@ecslimited.com

This item has been digitally signed and sealed by Corey Alan Dunlap on the date adjacent to the seal.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



Corey A. Dunlap, P.E.
Principal Engineer
Registered Florida No. 77678
cdunlap@ecslimited.com

Distribution: Addressee
Mr. Walker Owen (CHW Inc.)

1 pdf
1 pdf

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APPENDICES

Appendix A – Drawings & Reports

- Site Location Diagram
- Boring Location Diagram
- Subsurface Cross-Section(s)

Appendix B – Field Operations

- Reference Notes for Boring Logs
- Subsurface Exploration Procedure: Standard Penetration Testing (SPT) and Auger Borings
- Boring Logs

Appendix C – Laboratory Testing

- Laboratory Test Results Summary
- Plasticity Chart(s)

EXECUTIVE SUMMARY

The following summarizes the main findings of the exploration, particularly those that may have a cost impact on the planned development. Please refer to the complete report for more detailed discussion.

ECS Florida, LLC (ECS) has completed the subsurface exploration for the proposed gas station and retail store located at US-441 & NW 59th Terrace, Gainesville, Alachua County, Florida. The project information summarized below is based exclusively on the information made available to us by Walker Owner with CHW Professional Consultants at the time of this report. Our findings, conclusion and recommendations are summarized below.

PROJECT INFORMATION:

- Site Location: US-441 & NW 59th Terrace, Gainesville, Alachua County, Florida
- Building Scope: One story convenience store and retail store
- Building Type: Wood frame
- Assumed Loads: Max. column loads = 50 kips, Max. wall loads = 2 klf
- Earthwork: Estimated fill of 4 feet
- Assumed FFE: El. +169 feet. based on groundwater conditions

SUBSURFACE CONDITIONS:

- Field Exploration: Six (6) SPT Borings to 20 feet below existing grade for the proposed buildings and canopies, four (4) auger borings to 5 feet below existing grade for the pavement, three (3) auger borings to 15 feet below existing grade for the proposed stormwater management facility.
- Site Conditions: Undeveloped wooded land
- Probable Fill: Not encountered within the depths of borings.
- Natural Soils: FINE SAND (SP), SAND WITH CLAY (SP-SC), SAND WITH SILT (SP-SM), CLAYEY SAND (SC), CLAYEY SAND/SANDY LEAN TO FAT CLAY (SC/CL/CH), SANDY LEAN CLAY (CL), LEAN CLAY WITH SAND (CL)
- Groundwater: Encountered in borings at various depths ranging between 1 and 4 feet beneath existing grade.

GEOTECHNICAL & CONSTRUCTABILITY CONSIDERATION:

- **It is our understanding that the maximum loading of 50 kips is anticipated, and we have assumed a FFE of El. 169 feet. ECS requests final loading conditions, finished floor elevations, and foundation layout be provided to review and update our recommendations as appropriate. Our current bearing and settlement analysis is contingent on these assumptions.**
- **Clay Beneath Water Table:** The laboratory tests indicate potentially expansive clay-rich soils are located beneath the proposed structure. However, these soils are located beneath the groundwater table and will therefore not be subjected to drastic changes in moisture contents throughout the year. Therefore, alternate site preparation techniques or foundation designs to address the presence of expansive soils is not required for this project. Although the risk is low, structures that are underlain by

expansive soils within the zone of influence of the foundations could experience cosmetic cracking damage. However, if clay rich soils are encountered in non-explored areas above the groundwater, then the recommendations in this report may need to be re-evaluated, and ECS should be contacted to provide additional recommendations which may include undercutting these soils.

- **Shallow Groundwater:** Due to the shallow groundwater encountered across the site, raising proposed grades will be required to have a recommended minimum clearance of 2 feet between the estimated seasonal high groundwater table and the bottom of the floor slab. Therefore, we have assumed a FFE of EL. 169 feet based on the ground water conditions.
- **Slab - Shallow Groundwater:** The proposed finished floor elevation was not provided at the time of this report. Due to the shallow groundwater encountered across the site, raising proposed grades will be required to have a recommended minimum clearance of 2 feet between the estimated seasonal high groundwater table and the bottom of the floor slab.
- **Loose soils:** Very loose to loose soils were encountered in the SPT borings at various depths ranging from 0 to 6 feet below existing grades. During construction, we recommend careful proof rolling and if stable bearing conditions are not encountered, compaction or undercuts may be required in some areas.

DESIGN & CONSTRUCTION RECOMMENDATIONS:

- Shallow foundations:
 - Max. Net Allow. Bearing Pressure = 2,000 psf
 - Min. Exterior Embedment: = 18 inches
 - Min. Column/Strip Footing Width = 24 inches/18 inches
- Slab Subgrade Modulus: = 150 pci
- Stormwater Management Facilities:
 - Base Elevation of Aquifer = 8 feet beneath current grade
 - Specific Yield = 20 %
 - Avg. Seasonal High Groundwater Table = 1 feet beneath current grade
 - Avg. Seasonal Low Groundwater Table = 4 feet beneath current grade

1.0 INTRODUCTION

1.1 GENERAL

The purpose of this study was to provide geotechnical information to assist with building foundation, pavement, and stormwater management designs. This report contains the results of our subsurface explorations and laboratory testing programs, site characterization, engineering analyses, and project recommendations. The recommendations developed for this report are based on project information supplied by Walker Owen with CHW Professional Consultants.

1.2 SCOPE OF SERVICES

To obtain the necessary geotechnical information required for design:

- Six (6) Standard Penetration Test (SPT) borings were performed to depths of 20 feet beneath grade in the area of the planned structures and canopies.
- Three (3) auger borings were performed to depths of 15 feet beneath grade in the area planned for stormwater management.
- Four (4) auger borings were performed to depths of 5 feet beneath grade in the area of the planned pavements.

A laboratory-testing program was also implemented to characterize the physical and engineering properties of the subsurface soils.

This report discusses our exploratory and testing procedures, presents our findings and evaluations and includes the following.

- A brief review and description of our field and laboratory test procedures and the results of testing conducted.
- A review of surface topographical features and site conditions.
- A review of area and site geologic conditions.
- A review of subsurface soil stratigraphy with pertinent available physical properties.
- Final copies of our test boring logs.
- Recommended foundation support parameters and type(s).
- General recommendations for pavement design.
- Recommendations for design and construction of stormwater management facilities.
- Recommendations for site preparation and construction of compacted fills, including an evaluation of on-site soils for use as compacted fills and delineation of potentially unsuitable soils and/or soils exhibiting excessive moisture at the time of sampling.

1.3 AUTHORIZATION

Our services were provided in accordance with our Proposal No. 35:21552, dated December 15, 2023, as authorized by Hardik Patel on January 8, 2024, and includes the Terms and Conditions of Service outlined with our Proposal.

2.0 PROJECT INFORMATION

2.1 PROJECT LOCATION

The project site is located at the southeast corner of the US Highway 441 and NW 59th Terrace intersection in Gainesville, Alachua County, Florida. The site is bordered to the north by US Highway 441, to the east by undeveloped wooded land, to the south by Turkey Creek and undeveloped wooded land, and to the west by NW 59th Terrace. The general site location is shown on the Site Location Diagram in Appendix A.

2.2 SITE CONDITIONS

At the time of our exploration, the site was undeveloped, with surface cover consisting of trees and brush. Ponding water was observed along the northern property line of the site along US 441 at the time of our exploration. A site survey was not available to our office at the time of this report preparation. However, based on publicly available information, we understand that the site generally slopes downward to the southwest. Review of readily available published data indicates the existing ground surface grades generally range from El. +164 to +168 feet¹ (unknown datum). These elevations are approximate to within a few feet and should not be used for design.

2.3 PROJECT DESCRIPTION

Project information was provided by Walker Owen with CHW Professional Consultants via several discussions and an email dated December 13, 2023. We were provided with a copy of a site plan for the subject site, prepared by CHW Professional Consultants, last dated February 2, 2023. This plan indicated the boundary limits for the property, the existing roadways adjacent to the site, and the layout of the proposed construction.

We understand the proposed structures include a one-story convenience store approximately 85 feet by 57 feet in plan dimensions, a one-story retail store approximately 105 feet by 42 feet in plan dimensions, and a one-story gas canopy approximately 136 feet by 22 feet in plan dimensions. The following information explains our understanding of the structures and their loads:

Table 2.3.1 Design Values

SUBJECT	DESIGN INFORMATION / EXPECTATIONS		
Structure	Convenience Store	Retail Store	Gas Canopy
Building Footprint	Approx. 4,800 square feet in plan view	Approx. 4,400 square feet in plan view	Approx. 3,000 square feet in plan view
# of Stories	One story		
Framing	We anticipate that the building will be principally load bearing wood framed with interior columns		Steel frame
Column Loads	Estimated at 50 kips maximum		
Wall Loads	Estimated at 2 kips per linear foot (klf) maximum		
Fill/Cuts	Estimated at 4 feet of fill (and only nominal cuts) will be required to achieve final grades in structural areas.		

¹ Alachua County Growth Management Website, <https://mapgenius.alachuacounty.us/>

Parking lots and driveways will generally surround the structure. The stormwater management basin is approximately 0.37 acres in size and is located on the eastern portion of the site. We understand the basin will be designed as a wet detention facility.

If actual building loads and other estimated project information varies from these conditions, then the recommendations in this report may need to be re-evaluated. We should be contacted if any of the above project information is incorrect so that we may reevaluate our recommendations.

3.0 FIELD EXPLORATION

3.1 FIELD EXPLORATION PROGRAM

We performed a field exploration on January 23, 2024. The approximate boring locations are indicated on the attached Boring Location Diagram in Appendix A. Our personnel determined the boring locations using readily available aerial photographs and handheld GPS capable devices. The boring locations on the referenced Boring Location Diagram should be considered accurate only to the degree implied by the method of measurement used.

3.1.1 SPT and Auger Borings

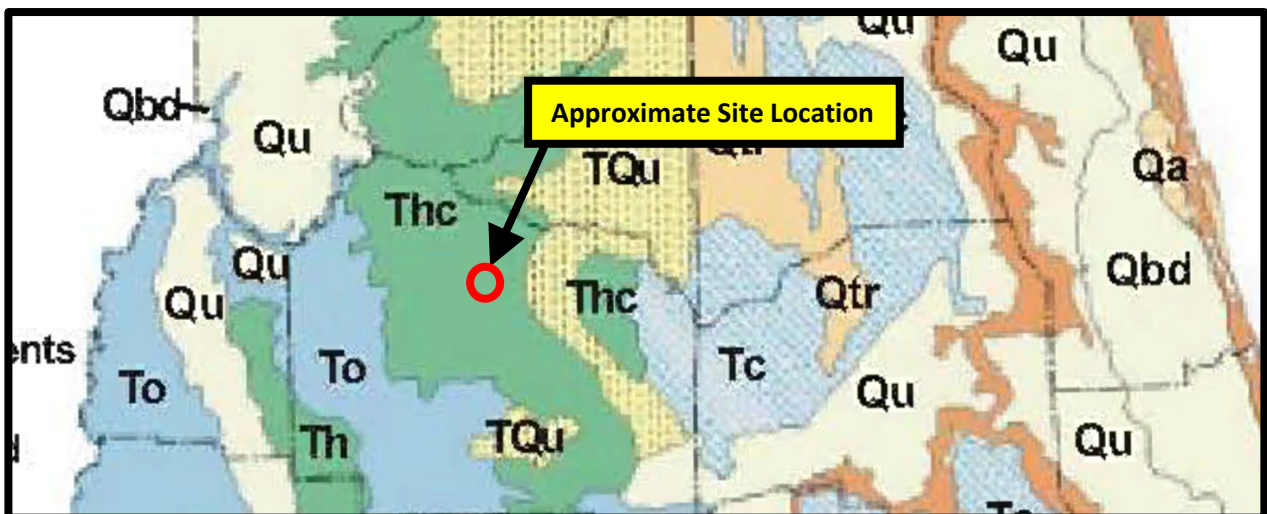
The SPT borings were performed in general accordance with the methodology outlined in ASTM D 1586. Split-spoon soil samples recovered during performance of the borings were visually classified in the field and representative portions of the samples were transported to our laboratory for further evaluation.

The auger borings were performed in general accordance with the methodology outlined in ASTM D 1452. Representative soil samples also were recovered from the auger borings and returned to our laboratory for further evaluation. A summary of the field procedures is included in Appendix B.

3.2 REGIONAL/SITE GEOLOGY

The site is located near the north-central portion of Alachua County. This area of Alachua County maps as the Coosawhatchie Formation geological region². The following description is from the Geological Survey.

Figure 3.2.1 Regional Geology



² Open-File Report 80, Thomas M. Scott, P.G. No. 99, Text to Accompany the Geological Map of Florida, Florida Geological Survey, 2001.

Thc – Coosawhatchie Formation – The Coosawhatchie Formation is sediments of the Miocene Series that is exposed or lies beneath a thin overburden on the eastern flank of the Ocala Platform from southern Columbia County to southern Marion County. Within the outcrop region, the Coosawhatchie Formation varies from a light gray to olive gray, poorly consolidated, variable clayey and phosphatic sand with few fossils, to an olive gray, poorly to moderately consolidated, slightly sandy, silty clay with few to no fossils. Occasionally, the sands will contain a dolomite component and, rarely, the dominant lithology will be dolostone or limestone. Silicified nodules are often present in the Coosawhatchie Formation sediments in the outcrop region. The sediment may contain 20 percent or more phosphate (Scott, 1988). Permeability of the Coosawhatchie Formation is generally low, forming part of the intermediate confining unit/ aquifer system.

The Miocene sediments consist of siliciclastics, carbonates and mixed siliciclastics-carbonate lithologies with numerous lateral and vertical facies changes. The importance of the Miocene sediments in Florida is twofold - first, these sediments contain valuable mineral resources, primarily phosphate and absorptive clays; and second, the Miocene sediments comprise the intermediate confining unit and aquifer system. Whereas the principal geological hazard associated with Paleogene carbonates is karst development, the hazards associated with the Miocene sediments are radon gas and swelling clays.

3.3 SOIL SURVEY MAPPING

Based on the Web Soil Survey for Alachua County, Florida, as prepared by the U.S. Department of Agriculture Natural Resource Conservation Service³, the predominant soil types existing within the site area are described in the following table. The site area is illustrated superimposed on the USDA-NRCS Soil Survey Map included as Figure 3.3.1:

Figure 3.3.1 Soil Survey Map



³ Soil Survey of Alachua County, Florida. Soil Conservation Service, U.S. Department of Agriculture.

Table 3.3.1 Soil Survey Data

Soil ID	Soil Type	Typical Profile	Hydrology	Hydrologic Soil Classification	Estimated Seasonal High Groundwater Level ⁽¹⁾
13	Pelham sand	0 to 29 inches: sand 29 to 69 inches: sandy clay loam 69 to 80 inches: sandy loam	Poorly drained	B/D	> 80
14	Pomona sand, 0 to 2 percent slopes	0 to 43 inches: sand 43 to 84 inches: sandy clay loam	Poorly drained	A/D	> 80

⁽¹⁾ Inches below ground surface at time of survey.

3.4 KARST GEOLOGY

The site is located in an area of North Central Florida known to have karst geology. Karst terrain is characterized by voids, soil domes, soil raveling, interrupted drainage, disappearing streams, and topographical features such as sinkholes and closed depressions. These features are the result of the dissolution of soluble bedrock such as limestone by groundwater and/or the infiltration of surface water.

As water enters fractures, bedding planes, and other bedrock discontinuities within soluble bedrock, it slowly dissolves the rock and enlarges the discontinuities. Over geologic time, this results in the formation of solution channels or underground passages and ravines which may develop into surficial manifestations such as sinkholes and closed depressions. The dissolution of bedrock is generally a very slow process. However, soil may be eroded or raveled into the enlarged bedrock fractures, creating soil domes. Eventually, soil in these features can be lost through groundwater movement, resulting in surface depressions and potential sudden ground subsidence.

The soils derived from and overlying the carbonate bedrock are typically a clayey and silty soil with varying amounts of sand and rock fragments. The bedrock within the general geographic region is characterized by jointed and faulted soluble carbonate lithologies interbedded with non-carbonate lithologies. These carbonate formations are generally moderately to highly solution prone.

The degree of weathering or solutioning is often controlled by lithological variations and structural orientations. Where structural discontinuities intersect or in areas which are highly fractured, solutioning is intensified creating low areas and seams that are typically filled with residual clayey soils. Conversely, more competent, high areas represent slightly- to non-fractured lithologies that are often coarser grained and only slightly solution prone.

The underlying carbonate formations of the project geographic area are susceptible to Karst-related sinkhole development. Contributing characteristics and factors controlling the development include subsurface structural deformation, joint sets, and thick carbonate bedding within the area. Due to the shallow nature of the exploration performed, the borings did not reveal overt signs of soils associated with karst activity or carbonate rocks.

No subsidence incidents are within close proximity to the subject site according to the FDEP map. A walking tour of the site was performed. Close depressions or open collapses that appeared to be related to karst activity were not observed.

This geotechnical analysis of the site was not intended to evaluate the subsurface for potential karst conditions. ECS would be happy to prepare a proposal for these services upon request.

3.5 SUBSURFACE CHARACTERIZATION

The subsurface conditions encountered were generally consistent with published soil survey information and geological mapping. A graphical presentation of the generalized subsurface conditions is presented on the Generalized Subsurface Profiles. Detailed boring records are included in Appendix B. It should be understood that the soil conditions will vary between the boring locations. The following tables summarize the soil conditions encountered.

Table 3.4.1 Subsurface Stratigraphy – Structures and Canopy

Approximate Depth Range (ft)	Stratum	Description	Ranges of SPT ⁽¹⁾ N-values (bpf)
0 to 0.25	N/A	Topsoil – 3 inches Deeper topsoil or organic laden soils are most likely present in wet, poorly drained areas and potentially unexplored areas of the site.	N/A
0.25 to 4	I	Very Loose to Medium Dense FINE SAND, SAND WITH SILT, SAND WITH CLAY (SP, SP-SM, SP-SC), Moist to Wet	3 to 12
0.25 to 12	II	Loose to Medium Dense CLAYEY SAND (SC), Moist to Wet	5 to 29
4 to 20	III	Loose to Dense, Firm to Hard CLAYEY SAND/SANDY LEAN TO FAT CLAY, SANDY LEAN CLAY, LEAN CLAY WITH SAND (SC/CL, SC/CH, CL), Wet	5 to 35

Notes: (1) Standard Penetration Test

Borings B-01, B-04, B-05, and B-06 encountered limestone fragments at various depths ranging between 6 and 17 feet beneath existing grade. Boring B-04 encountered clay nodules at a depth ranging between 2 to 4 feet beneath existing grade. Boring B-04 encountered a lens of sand at a depth ranging between 4 and 6 feet beneath existing grade. Borings B-02 and B-06 encountered roots at a depth ranging between 0 and 2 feet beneath existing grade.

Table 3.4.2 Subsurface Stratigraphy – Pavement

Approximate Depth Range (ft)	Stratum	Description
0 to 3	I	SAND WITH SILT (SP-SM), Moist to Wet
2 to 5	II	CLAYEY SAND (SC), Wet

Borings P-02, P-03 and P-04 encountered roots at various depths ranging between 0 and 2.5 feet beneath existing grade. Boring P-02 contained an organic odor and trace organics at a depth ranging between 1 and 2.5 feet beneath existing grade.

Table 3.4.3 Subsurface Stratigraphy – Stormwater

Approximate Depth Range (ft)	Stratum	Description
0 to 3	I	SAND WITH CLAY and SAND WITH SILT (SP-SC, SP-SM), Wet
3 to 10	II	CLAYEY SAND (SC), Wet
7 to 15	III	SANDY LEAN CLAY and LEAN CLAY WITH SAND (CL), Wet

Borings S-01 and S-03 contained an organic odor at various depths ranging between 0 and 3 feet beneath existing grade. Borings S-02 and S-03 encountered limestone fragments at various depths ranging between 7 and 15 feet beneath existing grade.

3.6 GROUNDWATER LEVEL

Measured Groundwater: Groundwater was encountered at each boring location and recorded at the time of drilling at depths varying from 1 to 4 feet below the existing ground surface. We note that groundwater levels will fluctuate due to seasonal climatic variations, surface water runoff patterns, construction operations, and other interrelated factors. The groundwater depth at each boring location is noted on the Generalized Subsurface Profiles and on the Soil Boring Logs.

Estimated Seasonal High Groundwater: The normal seasonal high groundwater level is affected by a number of factors. The drainage characteristics of the soils, land surface elevation, relief points such as drainage ditches, lakes, rivers, swamp areas, etc., and distance to relief points are some of the more important factors influencing the seasonal high groundwater level.

Based on our interpretation of the site conditions, including the boring logs and Soil Survey information, we estimate the normal seasonal high groundwater level at the site to be approximately ground surface to 3 feet beneath existing ground surface as indicated on the boring logs. It is possible that groundwater levels may exceed the estimated normal seasonal high groundwater level as a result of significant or prolonged rains.

4.0 LABORATORY TESTING

The laboratory testing performed by ECS for this project consisted of selected tests performed on samples obtained during our field exploration operations. The following paragraphs briefly discuss the results of the completed laboratory testing program.

The samples from the test borings were visually classified on the basis of texture and plasticity in accordance with the Unified Soil Classification System (USCS) in general accordance with ASTM D 2488. Additionally, the following laboratory tests were performed to aid in classifying the soils and to further evaluate their engineering properties:

- Seven (7) percent soil fines passing the No. 200 sieve determinations (ASTM D 1140)
- Seven (7) natural moisture content determinations (ASTM D 2216)
- Two (2) Atterberg Limits tests (ASTM D 4318)
- One (1) organic content determination (ASTM D 2974)

The laboratory tests indicate the tested soils consist of sand with silt, sand with clay, clayey sand, and clayey sand/ sandy fat clay.

- The tested sand with silt (SP-SM) contains approximately 9.4 to 11 percent soil fines, natural moisture contents of about 21 percent, and an organic content of approximately 2.0 percent.
- The tested sand with clay (SP-SC) contains approximately 11 percent soil fines, and a natural moisture content of about 26 percent.
- The tested clayey sand (SC) contains approximately 17 to 27 percent soil fines, natural moisture contents of about 16 to 17 percent, Liquid Limit (LL) value of 37 and Plasticity Index (PI) value of 21. The Atterberg Limits results indicate the tested clayey sand has low swell potential⁴.
- The tested clayey sand/ sandy fat clay (SC/CH) contains approximately 44 percent soil fines, a natural moisture content of about 24 percent, Liquid Limit (LL) value of 51 and Plasticity Index (PI) value of 31. The Atterberg Limits results indicate the tested clayey sand has marginal swell potential.

The results of the laboratory testing are shown in the Summary of Laboratory Test Data included in Appendix C.

⁴ Foundations in Expansive Soils, Department of the Army, TM 5-818-7, September 1993.

5.0 DESIGN RECOMMENDATIONS

5.1 GENERAL

Our geotechnical engineering evaluation of the site and subsurface conditions at the property, with respect to the planned construction and our recommendations for site preparation and foundation support, are based on (1) our site observations, (2) the field and laboratory test data obtained, (3) our understanding of the project information and structural conditions as presented in this report, and (4) our experience with similar soil and loading conditions.

If the stated structural or grading conditions are incorrect, or should the location of the structure or pavement areas be changed, please contact us so that we can review our recommendations. Also, the discovery of any site or subsurface conditions during construction that deviate from the data obtained during this geotechnical exploration should also be reported to us for our evaluation.

The recommendations in the subsequent sections of this report present design and construction techniques that are appropriate for the planned construction. We recommend that ECS be provided the opportunity to review the foundation plans and earthwork specifications to verify that our recommendations have been properly interpreted and implemented.

5.2 FOUNDATION DESIGN RECOMMENDATIONS

Based on the results of our exploration, we consider the subsurface conditions at the site adaptable for support of the proposed structure on a properly designed conventional shallow foundation system. Provided the site preparation and earthwork construction recommendations outlined in Section 6.0 of this report are performed, the following parameters may be used for foundation design.

It is our understanding that the maximum loading of 50 kips is anticipated, and we have assumed a FFE of EL. 169 feet. ECS requests final loading conditions, finished floor elevations, and foundation layout be provided to review and update our recommendations as appropriate. Our current bearing and settlement analysis is contingent on these assumptions.

Clay Beneath Water Table: The laboratory tests indicate potentially expansive clay-rich soils are located beneath the proposed structure. However, these soils are located beneath the groundwater table and will therefore not be subjected to drastic changes in moisture contents throughout the year. Therefore, alternate site preparation techniques or foundation designs to address the presence of expansive soils is not required for this project. Although the risk is low, structures that are underlain by expansive soils within the zone of influence of the foundations could experience cosmetic cracking damage. However, if clay rich soils are encountered in non-explored areas above the groundwater, then the recommendations in this report may need to be re-evaluated, and ECS should be contacted to provide additional recommendations which may include undercutting these soils.

Shallow Groundwater: Due to the shallow groundwater encountered across the site, raising proposed grades will be required to have a recommended minimum clearance of 2 feet between the estimated seasonal high groundwater table and the bottom of the floor slab. Therefore, we have assumed a FFE of EL. 169 feet based on the ground water conditions.

Loose Soils: Very loose to loose soils were encountered in SPT borings to depths ranging from 0 to 6 feet below existing grades. The N-values of the loose soils range from 3 to 10 blows per foot. The existing loose soils should be carefully evaluated during construction, we recommend careful proof rolling and if stable bearing conditions are not encountered, compaction or undercuts may be required in some areas in accordance to Section 5.2.3.

5.2.1 Foundations

Provided subgrades and structural fills are prepared as discussed herein, the proposed structure can be supported by conventional shallow foundations: individual column footings and continuous wall footings. The design of the foundation shall utilize the following parameters:

Table 5.2.1.1 Foundation Design

Design Parameter	Column Footing	Wall Footing
Minimum Width	24 inches	18 inches
Minimum Footing Embedment Depth (below slab or finished grade)	12 inches	12 inches
Estimated Maximum Total Settlement	1 inch	1 inch
Estimated Maximum Differential Settlement	Less than 0.5 inches between columns	Less than 0.5 inches over 50 feet
Net Allowable Bearing Pressure ¹	2,000 psf	
Acceptable Bearing Soil Material	Stratum I or Structural Fill	

1. Net allowable bearing pressure is the applied pressure in excess of the surrounding overburden soils above the base of the foundation.

Depending on the final floor elevations of the buildings, we anticipate that most of the soils at the foundation bearing elevation are anticipated to be suitable for support of the proposed structure, after prepared in accordance with Section 6.0 of this report. The bearing level soils, after compaction, should exhibit densities equivalent to 95 percent of the Modified Proctor maximum dry density (ASTM D 1557) to a depth of at least one foot below foundation bearing levels.

5.2.2 Floor Slabs

The floor slabs can be constructed as a slab-on-ground, provided the site is prepared as outlined in Section 6.0. **A minimum clearance of 2 feet is recommended between the estimated seasonal high groundwater table and the bottom of the floor slab.** It is recommended the floor slab bearing soils be covered with an impervious membrane to reduce moisture entry and floor dampness. A 6-mil thick plastic membrane is commonly used for this purpose. Care should be exercised not to tear large sections of the membrane during placement of reinforcing steel and concrete. **In addition, we recommend that a minimum separation of two feet be maintained between the finished floor levels and the top of clayey soils (SC, CL, or CH).** We also recommend that densities of at least 95 percent of the Modified Proctor maximum dry density (ASTM D1557) be obtained within the upper one foot of the materials immediately below the floor slab.

Subgrade Modulus: Provided the placement of Structural Fill per the recommendations discussed herein, the slab may be designed assuming a modulus of subgrade reaction, k_1 of 150 pci (lbs/cu.

inch). The modulus of subgrade reaction value is based on a 1 ft by 1 ft plate load test equivalence.

Slab Isolation: Ground-supported slabs should be isolated from the foundations and foundation-supported elements of the structure so that differential movement between the foundations and slab will not induce excessive shear and bending stresses in the floor slab. Where the structural configuration is not favorable for use of a free-floating slab, the slab should be designed with adequate reinforcement and load transfer devices to reduce the risk of overstressing of the slab.

5.2.3 Undercutting

Selective undercutting of the foundation limits is recommended where any loose soils are encountered. During construction, we recommend careful proof rolling and if stable bearing conditions are not encountered, compaction or undercuts may be required in some areas. Methods of repair of soft subgrade, such as undercutting or moisture conditioning, should be discussed with ECS to determine the appropriate procedure with regard to the existing conditions causing the pumping/yielding. However, we anticipate undercutting to be an appropriate method of repairing soft subgrades. Our typical undercutting recommendations are below.

We recommend the undercutting and backfilling be performed under the observation of the geotechnical engineer. The geotechnical engineer should meet with the earthwork contractor to confirm the locations of the recommended undercutting prior to commencing work. The geotechnical engineer should inspect the bottom of the undercuts prior to the contractor placing the backfill. Field density tests should be performed on the backfill at a minimum of three tests or one test per 50 feet of undercut trench area and every other individual footing for each 1-foot lift of fill material.

Loose Soils

Where loose materials are encountered, we recommend the foundation limits and a minimum of 2 feet past the foundation edges for the building foundations be undercut to a depth such that the loose materials are fully removed and firm and unyielding conditions are encountered. A similar undercut should be performed to a minimum depth of 2 feet beneath the floor slab if loose materials are found within this depth. The foundation undercuts can be backfilled and recompacted with imported structural fill (as described in Section 6.1) or with native soils (as described 5.3.2).

5.3 SITE DESIGN CONSIDERATIONS

5.3.1 Pavement Sections

Loose Soils: Loose soils were encountered in some of the borings. The existing loose soils should be carefully proof rolled at the time of construction and very loose areas as determined by the proof-roll will likely require undercutting. The undercut should extend to 18 inches beneath the bottom of the pavement base course. The undercut can be backfilled with native (as described in 5.3.2) or imported structural fill as described below and in Section 6.1. The backfill should be placed in maximum 12-inch loose lifts and compacted to a minimum 95 percent of the Modified Proctor maximum dry density (ASTM D-1557).

Typical Asphalt Section: Based on the results of our exploration, we consider the subsurface conditions at the site favorable for support of a flexible pavement section when constructed on properly prepared subgrade soils as outlined in Section 6.0 of this report. Typical pavement sections used in North Central Florida are shown on the following table. If requested, we can prepare a project-specific pavement design if specific traffic data is provided.

Table 5.3.1.1: Typical Flexible Pavement Section

Pavement Layer	Auto Parking & Traffic Lanes	Truck Areas
Asphaltic Concrete Wearing Surface	1.5 inches	2.0 inches
Limerock Base	6.0 inches	8.0 inches
Stabilized Subgrade	12.0 inches	12.0 inches

Wearing Surface: The wearing surface should consist of Florida Department of Transportation (FDOT) Type S asphaltic concrete having a minimum Marshall Stability of 1,500 lbs. Specific requirements for Type S asphaltic concrete wearing surface are outlined in the 2000 edition of the *Florida Department of Transportation, Standard Specifications for Road and Bridge Construction*. As an alternative, the wearing surface may consist of a Type SP-9.5 asphaltic concrete as outlined in the current edition of the *Standard Specifications*.

Base and Subgrade: The limerock base course should have a minimum Limerock Bearing Ratio (LBR) of 100 and should be compacted to 98 percent of the Modified Proctor maximum dry density (ASTM D 1557) value. The subgrade material should have a minimum LBR of 40 and be compacted to 98 percent of the modified Proctor maximum dry density (ASTM D 1557) value.

Rigid Concrete Pavements: For Typical concrete pavement sections used in north central Florida are shown on the tables below. If requested, we can prepare a project specific pavement design if specific traffic data is provided. Our recommendations for slab thickness for standard duty and heavy duty concrete pavements are based on a) subgrade soils densified to 98 percent of the modified Proctor maximum dry density (ASTM D 1557) b) modulus of subgrade reaction (k) equal to 200 pounds per cubic inch, c) a 20 year design life.

Table 5.3.1.2: Typical Standard Duty Concrete Pavement Section

Minimum Pavement Thickness	Maximum Control Joint Spacing	Recommended Sawcut Depth
5 Inches	10 Feet x 10 Feet	1-1/4 Inches

Table 5.3.1.3: Typical Heavy Duty Concrete Pavement Section

Minimum Pavement Thickness	Maximum Control Joint Spacing	Recommended Sawcut Depth
6 Inches	12 Feet x 12 Feet	1-1/2 Inches

We recommend using concrete with a minimum 28-day compressive strength of 4,000 psi and a minimum 28-day flexural strength (modulus of rupture) of at least 600 pounds per square inch, based on 3rd point loading of concrete beam test samples. Layout of the sawcut control joints should form square panels, and the depth of sawcut joint should be at least ¼ of the concrete slab thickness. The joints should be sawed within six hours of concrete placement or as soon as the concrete has developed sufficient strength to support workers and equipment. We recommend

allowing ECS Florida, LLC. to review and comment on the final concrete pavement design, including section and joint details (type of joints, joint spacing, etc.), prior to the start of construction.

For further details on concrete pavement construction, please reference the “Guide to Jointing Unreinforced Pavements”, published by the America Concrete Pavement Association, and “Building Quality Concrete Parking Areas”, published by the Portland Cement Association.

Underdrains or Alternate Bases: Satisfactory pavement life is dependent on dry/strong pavement support provided by the base and subgrade courses. **Accordingly, a minimum clearance of 2 feet must be maintained between the normal seasonal high groundwater table and the bottom of the limerock base layer or 1 foot for crushed concrete base material. Depending on final pavement grades, underdrains may be required to maintain dry base and subgrade materials.**

Should the minimum clearance not be feasible for the project, alternate bases can be considered. Crushed concrete base can be used in lieu of the limerock base provided it has a minimum LBR value of 150. A minimum clearance of 1 foot must be maintained between the normal seasonal high groundwater table and the bottom of the crushed concrete base layer.

5.3.2 Stormwater Management Facilities

5.3.2.1 Soil Parameters for Design

Considering the findings of the test borings, laboratory tests, review of readily published information, and our experience with these types of soils, we recommend the following soil parameters be used for stormwater design.

- Base elevation of effective or mobilized aquifer (average depth of confining layer) equal to 8 feet beneath current grade.
- Specific yield (fillable porosity) of 20 percent.
- Average seasonal high groundwater table depth equal to 1 foot beneath current grade.
- Average seasonal low groundwater table depth equal to 4 feet beneath current grade.

The measured permeability/vertical infiltration rates should not be construed to represent the actual pond exfiltration rate. For pond design calculations, we recommend a factor of safety be applied to the above permeability/vertical infiltration rate value(s) to account for remolding and compaction of the natural soils and/or disturbance and surface smearing during construction.

Undercutting: Considering the results of the test borings, it is possible clayey soils with greater than 25% soil fines will be present at the basin bottom. Should this condition be apparent during construction, we recommend these soils be undercut a minimum of 2 feet and backfilled with sands and sands with silt (SP, SP-SM) having a maximum of 10% soil fines and a minimum vertical infiltration rate equal to that used for design. The intent of this undercutting and replacement is (1) to provide a uniform sand layer at the basin bottom that allows for lateral migration of water to the deeper deposits of sand; (2) and reduce the potential for soil fines leaching out of the soils when standing water is present in the basin which can result in a thin layer of confining material on the basin bottom reducing the effectiveness of the basin.

5.3.3 Borrow Suitability

Based on the boring results and classification of the soil samples, soils ranging from sands to clays are expected to be excavated from the site. A description of each soil type that could be excavated from the site with respect to fill suitability is presented below:

- The sands (SP), sands with silt (SP-SM), and sands with clay (SP-SC) are considered acceptable for use as fill soil. These soils were encountered in the borings from 0 to 4 feet beneath the existing ground surface. The soils containing surficial organic material will require removal and are unsuitable as structural fill. The organic soils could be used in landscape berms.
- The clayey sands (SC) having a maximum of 30 percent soil fines may also be used as structural fill; however, we note that these soils will be more difficult to compact due to their tendency to retain soil moisture and they will likely require drying. Depending on the anticipated time for completing the site work portion of the project and the drying time required to reduce the potential for pumping and yielding of these soils during placement and compaction operations, these soils may not be feasible for use as fill material. Soils containing surficial organic material (topsoil) will require removal and are considered unsuitable for use as embankment fill. The organic soils may be used in landscape berms.

Clayey sands with greater than 30 percent soil fines are especially moisture sensitive and typically at least marginally plastic. We do not recommend using clayey soils with greater than 30 percent soil fines as structural fill unless these materials are thoroughly mixed with sandy soils. We can provide soil mixing recommendations to engineer more suitable fill materials at your request.

- We do not recommend reuse of sandy clays to clays (CL or CH) as structural fill material because of their high plasticity and high affinity for moisture.

It should be anticipated that the soils excavated from below the groundwater level will have moisture contents in excess of the Modified Proctor optimum moisture content. Any reuse of these materials will likely require stockpiling or spreading to drain the excess moisture. Generally, the wet soils should be dried to bring the soil moisture content within ± 2 percent of the soil's optimum moisture content (ASTM D1557) to facilitate placement and compaction.

5.4 GENERAL DESIGN CONSIDERATIONS

Gutters: Roof gutters should be considered to divert discharge away from the structure. We recommend, if at all possible, gutter downspouts discharge a minimum of 10 feet from the structure to reduce the amount of water collecting around the foundations.

Landscaping: Existing and planted trees and large “tree-like” shrubbery with potential for developing large root systems should be located a minimum distance of half their final height away from the structure. The purpose of this is to reduce the potential for foundation or slab movements from the growth of root systems as the landscaping matures. Consideration should also be given to using landscaping that has a low water demand, so that excessive irrigation is not conducted around the structures.

6.0 SITE CONSTRUCTION RECOMMENDATIONS

6.1 SUBGRADE PREPARATION

Site preparation as outlined in this section should be performed to provide more uniform foundation bearing conditions, to reduce the potential for post-construction settlements of the planned structure(s) and to maintain the integrity of a flexible pavement section.

6.1.1 Stripping and Grubbing

Prior to construction, the location of existing underground utilities within the construction area should be established. Provisions should then be made to relocate interfering utilities to appropriate locations. Underground pipes that are not properly removed or plugged may serve as conduits for subsurface erosion, which may subsequently lead to excessive settlement of overlying structures.

The "footprint" of the proposed building plus a minimum additional margin of 5 feet, and of the hardscape areas (parking/driveway) plus a minimum additional margin of 3 feet, should be stripped of surface vegetation, stumps, organic topsoil, or other deleterious materials. During grubbing operations, roots with a diameter greater than 0.5-inch, stumps, or small roots in a concentrated state, should be grubbed and completely removed.

Based on the results of our field exploration, it should be anticipated that 3 to 12 inches of topsoil and soils containing significant amounts of organic materials may be encountered across the site. The actual depths of unsuitable soils and materials should be determined by ECS using visual observation and judgment during earthwork operations. Any topsoil removed from the building and parking/drive areas can be stockpiled and used subsequently in non-structural areas.

6.1.2 Proofrolling

After removing unsuitable surface materials, cutting to the proposed grade, and prior to the placement of any structural fill or other construction materials, the exposed subgrade should be examined by ECS. The exposed subgrade should be thoroughly proofrolled with previously approved construction equipment having a minimum axle load of 10 tons (e.g. fully loaded tandem-axle dump truck). The areas subject to proofrolling should be traversed by the equipment in two perpendicular (orthogonal) directions with overlapping passes of the vehicle under the observation of ECS. This procedure is intended to assist in identifying any localized yielding materials. In the event that yielding or "pumping" subgrade is identified by the proofrolling, those areas should be repaired prior to the placement of any subsequent structural fill or other construction materials.

Methods of repair of soft subgrade, such as undercutting or moisture conditioning, should be discussed with ECS to determine the appropriate procedure with regard to the existing conditions causing the pumping/yielding. A test pit(s) may be excavated to explore the shallow subsurface materials in the area of the yielding conditions to help in determined the cause and to assist in the evaluation of the appropriate remedial action to create a firm and unyielding subgrade.

6.1.3 Temporary Groundwater Control

Because of the need for densification of the soils within the upper 12 inches below the stripped surface, temporary groundwater control measures may be required if the groundwater level is within 2 feet below the stripped and grubbed surface at the time of construction. Should groundwater control measures become necessary, dewatering methods should be determined by the contractor. We recommend any temporary groundwater control measures, if necessary; remain in place until compaction of the existing soils is completed. The dewatering method should be maintained until backfilling has reached a height of 2 feet above the groundwater level at the time of construction. The site should be graded to direct surface water runoff from the construction area.

Note that discharge of produced groundwater to surface waters of the state from dewatering operations or other site activities is regulated and requires a permit from the State of Florida Department of Environmental Protection (FDEP). This permit is termed a Generic Permit for the Discharge of Produced Groundwater From Any Non-Contaminated Site Activity. If discharge of produced groundwater is anticipated, we recommend sampling and testing of the groundwater early in the site design phase to reduce project delays during construction. ECS can provide the sampling, testing, and professional consulting related to compliance with the regulations.

6.1.4 Subgrade Compaction

Subgrade Compaction: After completing the clearing and stripping operations and installing the temporary groundwater control measures (if required), the exposed surface should be compacted with a vibratory drum roller having a minimum static, at-drum weight 4 tons to 6 tons. Typically, the material should exhibit moisture contents within ± 2 percentage points of the modified Proctor optimum moisture content (ASTM D 1557) during the compaction operations. Compaction should continue until densities of at least 95 percent of the modified Proctor maximum dry density (ASTM D 1557) have been achieved within the upper 2 feet of the compacted natural soils at the site.

Should the bearing level soils experience pumping and soil strength loss during the compaction operations, compaction work should be immediately terminated, and (1) the disturbed soils should be removed and backfilled with compacted structural fill, or (2) the excess moisture content within the disturbed soils should be allowed to dissipate before recompacting.

Care should be exercised to avoid damaging any nearby structures while the compaction operation is underway. Prior to commencing compaction, occupants of adjacent structures should be notified, and the existing conditions of the structures should be documented with photographs and survey (if deemed necessary). Compaction should cease if deemed detrimental to adjacent structures, and ECS should be contacted immediately. We recommend the vibratory roller remain a minimum of 50 feet from existing structures. Within this zone, use of a track-mounted bulldozer, or a vibratory roller operating in the static mode, is recommended.

6.1.5 Structural Backfill and Fill Soils

Structural backfill or fill required for site development should be placed in loose lifts not exceeding 12 inches in thickness when compacted by the use of the vibratory drum roller described in Section 6.1.4. The lift thickness should be reduced to 8 inches if the roller operates in the static mode or if track-mounted compaction equipment is used. If hand-held compaction equipment is used, the lift thickness should be further reduced to 6 inches.

Structural fill is defined as a non-plastic, inorganic, granular soil having less than 10 percent material passing the No. 200 mesh sieve and containing less than 4 percent organic material. The fine sand and fine sand with silt or fine sand with clay, without roots, as encountered in the borings, are suitable as fill materials and, with proper moisture control, should densify using conventional compaction methods.

Soils with more than 10 to 12 percent passing the No. 200 sieve will be more difficult to compact, due to their nature to retain soil moisture, and such materials may require drying. Typically, the material should exhibit moisture contents within ± 2 percent of the modified Proctor optimum moisture content (ASTM D 1557) during the compaction operations. Compaction should continue until densities of at least 95 percent of the modified Proctor maximum dry density (ASTM D 1557) have been achieved within each lift of the compacted structural fill.

Fill materials should not be placed on excessively wet soils. Excessively wet soils should be scarified, aerated, and moisture conditioned. Proper drainage should be maintained during the earthwork phases of construction to reduce ponding of water which has a tendency to degrade subgrade soils. The contractor should control dusting or implement dust control measures, as required.

We recommend that the grading contractor have equipment on site during earthwork for both drying and wetting fill soils. Moisture control may be difficult during extended periods of rain. The control of moisture content of soils containing more than 10 percent fines may be difficult when these soils become wet. Further, such soils are easily degraded by construction traffic when the moisture content is elevated.

6.1.6 Foundation Areas

After proper placement and compaction of the required structural fill, the foundation areas may be excavated to the planned bearing levels. The foundation bearing level soils, after compaction, should exhibit densities of at least 95 percent of the Modified Proctor maximum dry density (ASTM D 1557) to a depth of one foot below the bearing level. For confined areas, such as the footing excavations, any compactive effort should be provided by a lightweight vibratory sled or roller having a total weight of 500 to 2,000 pounds.

Should the foundations bear on the clayey sand (SC) soils (i.e. soils with greater than 20 percent fines), these soils should be visually inspected and probed in lieu of density testing. The bearing surface of the clayey soils should be determined to be in a firm and unyielding condition in the upper 12 inches. Foundation excavations in clayey soils should be performed in a manner that reduces disturbance of the soil. Clayey sands that are disturbed should be re-compacted to a minimum 98 percent of the Standard Proctor maximum dry density (ASTM D698).

6.1.7 Pavement Areas

After completing the clearing/stripping operations in the pavement areas, any underlying clayey sands and sandy clays that are within 2 feet of the bottom of the pavement base should be over-excavated from within the pavement areas. Structural backfill and fill required to achieve the finish pavement grades then can be placed and compacted as described in Sections 6.1.4 and 6.1.5 above. As an exception, densities of at least 98 percent of the modified Proctor maximum dry density (ASTM D1557) should be obtained within the upper one foot of the materials immediately below the proposed base course.

For a concrete pavement subgrade, we recommend using clean fine sand (SP), compacted to at least 98 percent of the Modified Proctor maximum dry density (ASTM D1557) without additional stabilization, with the following stipulations:

- Subgrade soils must be compacted to at least 98 percent of the Modified Proctor maximum dry density (ASTM D1557) to a depth of at least 2 feet prior to placement of concrete.
- The surface of the subgrade soils must be smooth, and any disturbances or wheel rutting corrected prior to placement of concrete.
- The subgrade soils must be moistened prior to placement of concrete.
- Concrete pavement thickness should be uniform throughout, with exception to thickened edges (curb or footing).

6.2 UTILITY INSTALLATIONS

Utility Subgrades: It is our opinion that the fine sands and fine sand with silt (SP, SP-SM) soils will be suitable bedding soils for pipes and utility structures. The silty fine sand (SM) soils may also be suitable if they can be compacted to the required minimum density (typically 95 percent of the soil's Modified Proctor (AASHTO T-180) maximum dry density). If the SM soils cannot be compacted to the required density, and if clayey or clay soils (SC or CH) are encountered, then we recommend these soils be overexcavated a minimum of 12 inches below the pipe invert elevation (24 inches below the manhole base elevation) and replaced with compacted structural fill as described in Section 6.1.5 above.

Alternatively, a medium-duty woven geotextile, such as Mirafi 600X or equivalent, may be used as a separation barrier between the compacted backfill and the underlying silty/clayey soils. If a woven geotextile is used, then no overexcavation is necessary for the pipe, and the depth of overexcavation for the utility manholes may be reduced to 12 inches. The geotextile should be placed in the excavation bottom and along the sides above the silty/clayey soils creating a barrier between these soils and the sand backfill to reduce contamination of the backfill.

Utility Backfilling: Backfill placed around the pipe, and to a height of 2 feet above the top of pipe, should be placed in 6-inch lifts. Each lift should be compacted with hand-held equipment to at least 95 percent of the soil's Modified Proctor (ASTM D 1557) maximum dry density. Backfill placed above the 2-foot zone above the top of pipe elevation may be placed in 12-inch lifts and compacted with heavier equipment. Typically, the backfill soil should exhibit moisture contents within ± 2 percent of the soil's optimum moisture content as determined from the Proctor test. Care should be taken to avoid damaging the pipe during compaction operations.

Backfill placed around utility structures should be placed in 6-inch thick lifts, and compacted with hand-held equipment to the minimum in-place soil density stated above. Heavy equipment should not be used within 5 feet of the structures to reduce the risk of overstressing of the structure walls.

Utility Excavation Dewatering: Based on the groundwater depths encountered in our borings, groundwater will likely be encountered by utility excavations which extend much below existing grades. It is expected that removal of groundwater may be required, especially for deeper utility excavations. The contractor should submit a dewatering plan prior to installing the site utilities.

6.3 GENERAL CONSTRUCTION CONSIDERATIONS

Moisture Conditioning: We anticipate that typical moisture conditioning for soils in this area will be needed. The sandy surface soils may require wetting during dry periods or periods of high heat. Drying of soils containing more than 10 percent fines or excavated from below the water table may be required to be within ± 2 percentage points of the modified Proctor optimum moisture content (ASTM D 1557).

Subgrade Protection: Measures should also be taken to limit site disturbance, especially from rubber-tired heavy construction equipment, and to control and remove surface water from development areas, including structural and pavement areas. It would be advisable to designate a haul road and construction staging area to limit the areas of disturbance and to reduce construction traffic from excessively degrading sensitive subgrade soils and existing pavement areas. Haul roads and construction staging areas could be covered with an additional thickness of aggregate to protect those subgrades. The aggregate can later be removed and used in pavement areas.

Surface Drainage: Surface drainage conditions should be properly maintained. Surface water should be directed away from the construction area, and the work area should be sloped away from the construction area at a gradient of 1 percent or greater to reduce the potential of ponding water and the subsequent saturation of the surface soils. At the end of each work day, the subgrade soils should be sealed by rolling the surface with a smooth drum roller to limit infiltration of surface water.

Excavation Safety: All excavations and slopes should be made and maintained in accordance with OSHA excavation safety standards. The contractor is solely responsible for designing and constructing stable, temporary excavations and slopes and should shore, slope, or bench the sides of the excavations and slopes as required to maintain stability of both the excavation sides and bottom. The contractor's responsible person, as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations. ECS is providing this information solely as a service to our client. ECS is not assuming responsibility for construction site safety or the contractor's activities; such responsibility is not being implied and should not be inferred.

Erosion Control: The surface soils may be erodible. Therefore, the Contractor should provide and maintain good site drainage during earthwork operations to maintain the integrity of the surface soils. All erosion and sedimentation controls should be in accordance with sound engineering practices and local requirements.

7.0 QUALITY CONTROL TESTING

ECS should be retained to perform the construction material testing and observations required for this project, to document that our recommendations have been satisfied. We are the most qualified party to address problems that may arise during construction, since we are familiar with the intent of our engineering design.

A representative number of field in-place density tests should be made in the upper 2 feet of compacted natural soils, in each lift of compacted backfill and fill, and in the upper 12 inches below the bearing levels in the footing excavations. Density tests are recommended to verify that proper compaction operations have been performed. We recommend density testing be performed at frequencies presented in the table below.

Table 7.0.1 Frequency of Compaction Testing

Location	Frequency of Tests
Expanded Building Limits	1 test per 2,500 sq. ft.
Continuous Wall Footing	1 test per 50 linear ft. of footing
Isolated Column Footings	1 test at 50% of footings
Pavement Areas	1 test per 10,000 sq. ft.

8.0 CLOSING

Our geotechnical exploration has been performed, our findings obtained, and our recommendations prepared, in accordance with generally accepted geotechnical engineering principles and practices. ECS is not responsible for any independent conclusions, interpretation, opinions, or recommendations made by others based on the data contained in this report.

Our scope of services was intended to evaluate the soil conditions within the zone of soil influenced by the foundation system. Our scope of services does not address geologic conditions, such as sinkholes or soil conditions existing below the depth of the soil borings.

This report does not reflect any variations that may occur adjacent to or between soil borings. The discovery of any site or subsurface condition during construction that deviates from the data obtained during this geotechnical exploration should be reported to us for our evaluation.

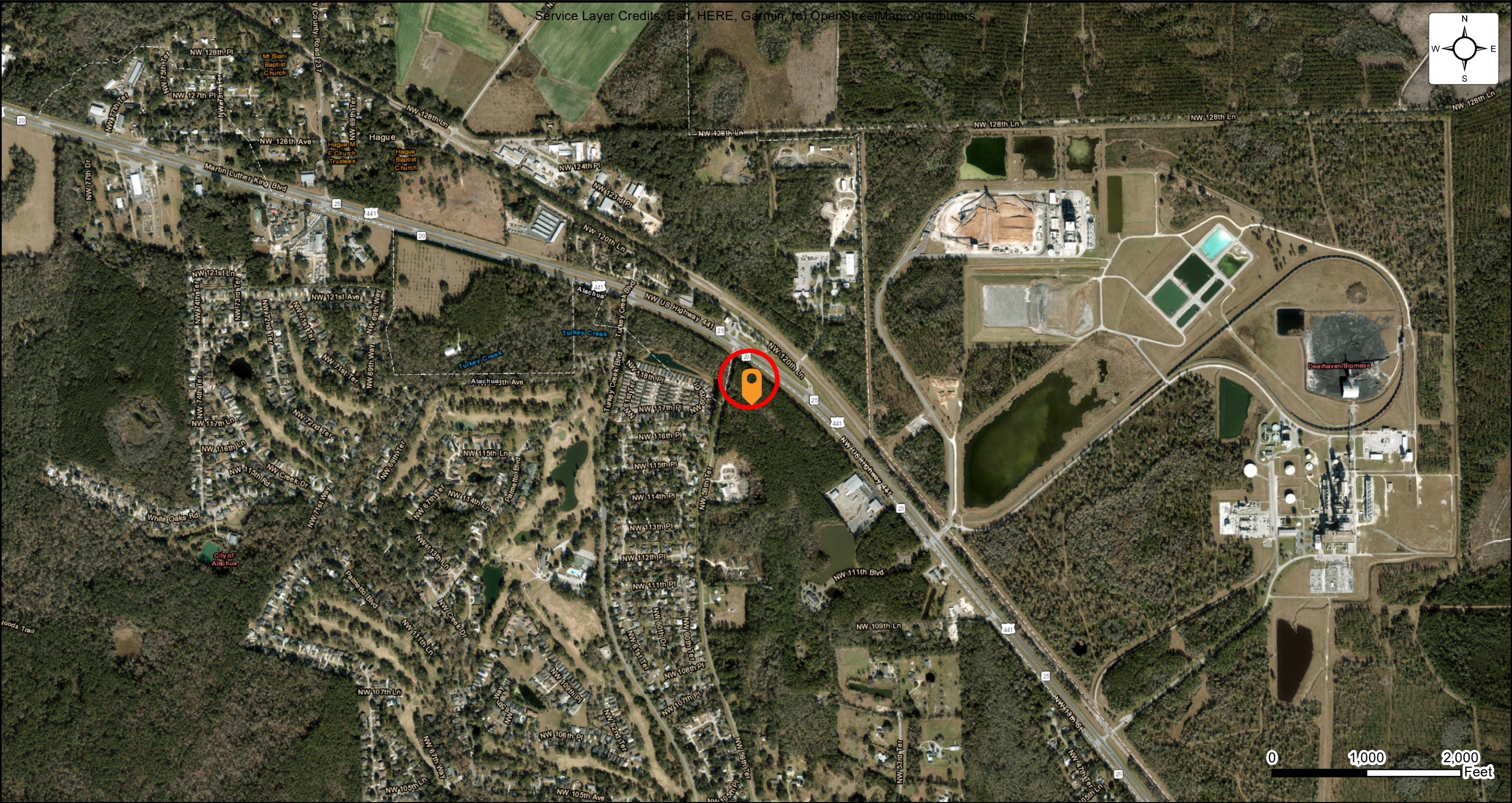
If any of the project description information discussed in this report is inaccurate, either due to our interpretation of the documents provided or site or design changes that may occur later, ECS should be contacted immediately so we can review the report in light of the changes and provide additional or alternate recommendations as may be required to reflect the proposed construction.

We recommend that ECS be allowed to review the project's plans and specifications pertaining to our work so that we may ascertain consistency of those plans/specifications with the intent of the geotechnical report.

Field observations, monitoring, and quality assurance testing during earthwork and foundation installation are an extension of and integral to the geotechnical design recommendation. We recommend that the owner retain these quality assurance services and that ECS be allowed to continue our involvement throughout these critical phases of construction to provide general consultation as issues arise. ECS is not responsible for the conclusions, opinions, or recommendations of others based on the data in this report.

APPENDIX A – Figures

Site Location Diagram
Boring Location Diagram
Subsurface Cross-Section(s)

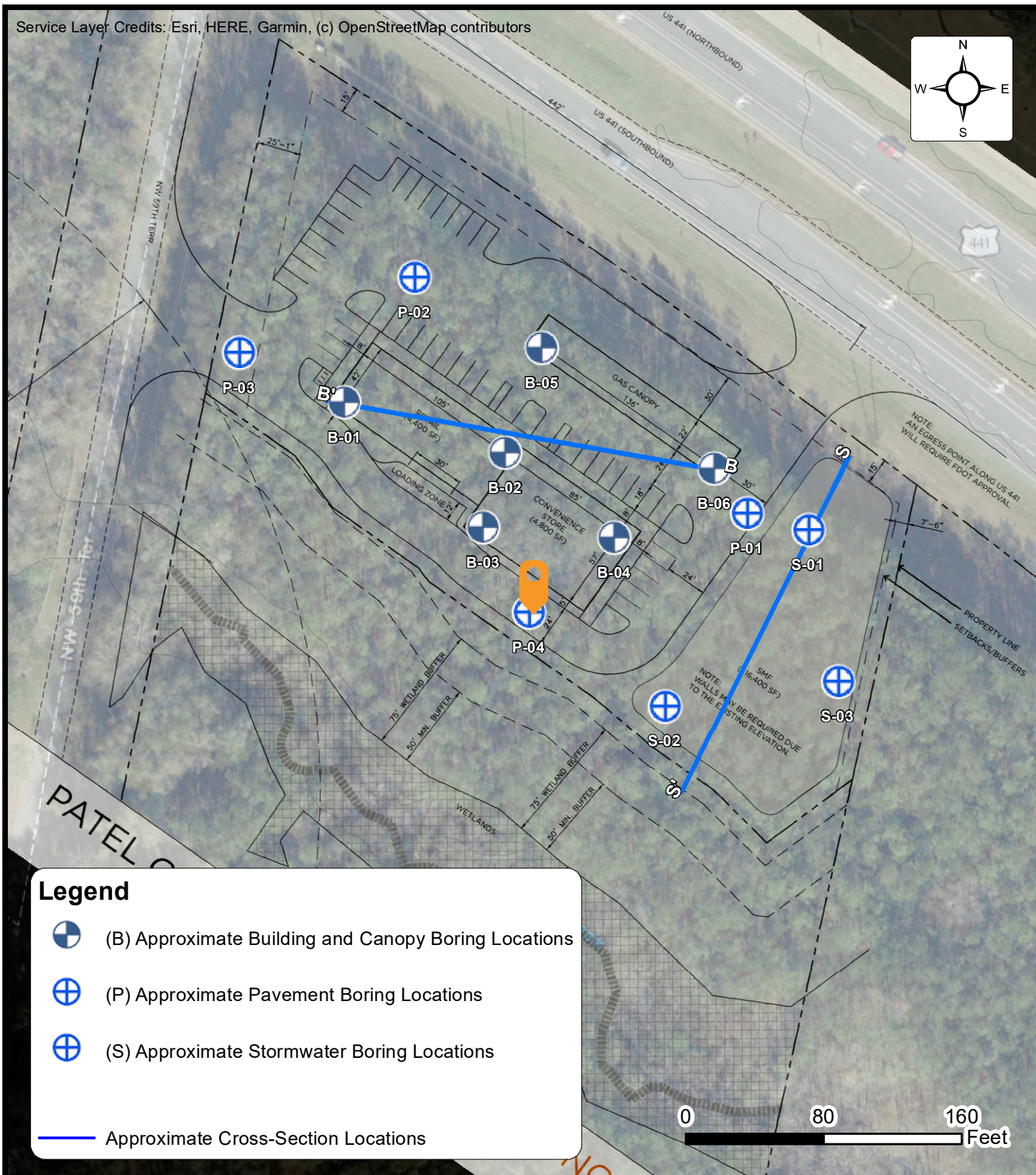
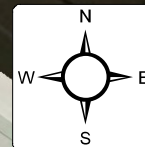


SITE LOCATION DIAGRAM
PATEL FUEL RETAIL - GAINESVILLE

US-441 & NW 59TH TERRACE, GAINESVILLE, FLORIDA
CHW PROFESSIONAL CONSULTANTS



ENGINEER
BMQ
SCALE
AS NOTED
PROJECT NO.
35:35158
FIGURE
1
DATE
1/16/2024



Legend

-  (B) Approximate Building and Canopy Boring Locations
-  (P) Approximate Pavement Boring Locations
-  (S) Approximate Stormwater Boring Locations

 Approximate Cross-Section Locations



BORING LOCATION DIAGRAM PATEL FUEL RETAIL - GAINESVILLE

US-441 & NW 59TH TERRACE, GAINESVILLE,
CHW PROFESSIONAL CONSULTANTS

ENGINEER
BMQ

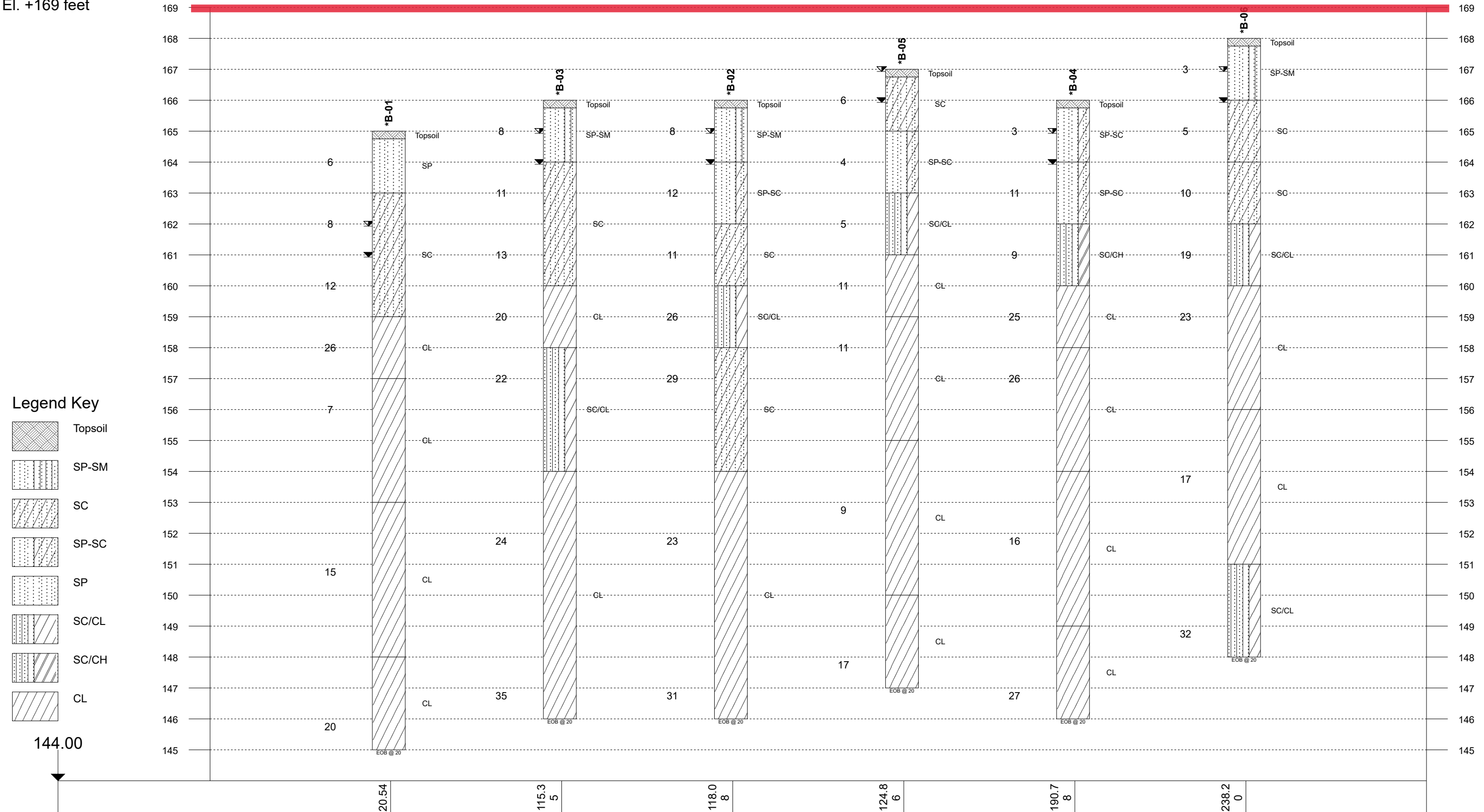
SCALE
AS NOTED

PROJECT NO.
35:35158

FIGURE
2

DATE
2/15/2024

Assumed Finished Floor Elevation:
El. +169 feet



Legend Key

- Topsoil
- SP-SM
- SC
- SP-SC
- SP
- SC/CL
- SC/CH
- CL

Notes:

- 1- EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.
- 2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.
- 3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
- 4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

Plastic Limit	Water Content	Liquid Limit
X	●	△
[FINES CONTENT %]		
▀	BOTTOM OF CASING	▽
⊗	LOSS OF CIRCULATION	▽

WL (First Encountered)	Fill
WL (Completion)	Possible Fill
WL (Seasonal High Water)	Probable Fill
WL (Stabilized)	Rock

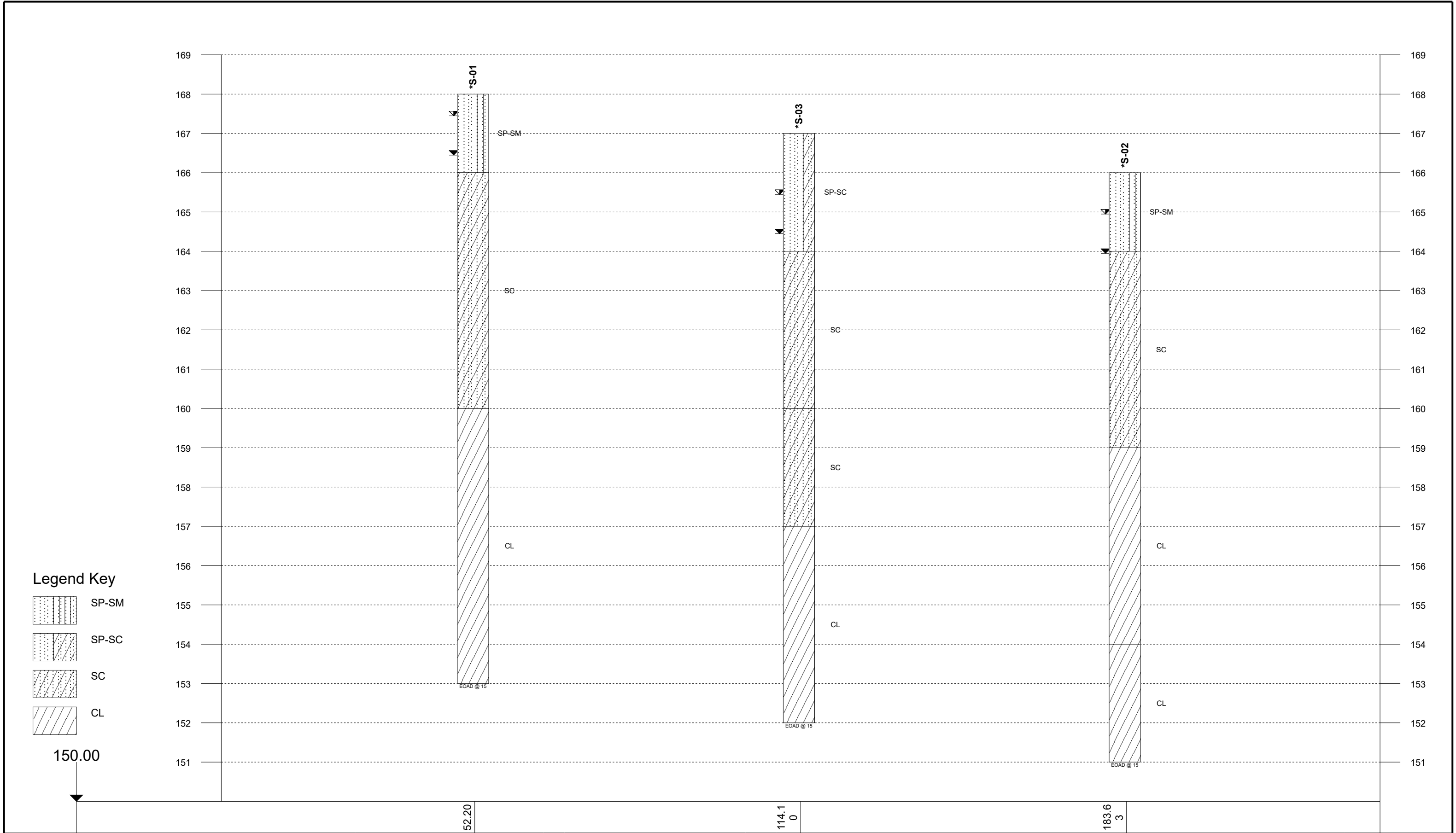
GENERALIZED SUBSURFACE PROFILE B-B'

Patel Fuel Retail - Gainesville

CHW Professional Consultants

US-441 & NW 59th Terrace, Gainesville, Florida, 32653

Project No: 35:35158 Date: 02/15/2024



Notes:

1- EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.
2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.
3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

Plastic Limit	Water Content	Liquid Limit	▽	WL (First Encountered)	■	Fill
X	●	△	▼	WL (Completion)	■	Possible Fill
[FINES CONTENT %]			▼	WL (Seasonal High Water)	■	Probable Fill
▬	BOTTOM OF CASING		▽	WL (Stabilized)	■	Rock
⊗	LOSS OF CIRCULATION					

GENERALIZED SUBSURFACE PROFILE S-S'	
Patel Fuel Retail - Gainesville	
CHW Professional Consultants	
US-441 & NW 59th Terrace, Gainesville, Florida, 32653	
Project No:	35:35158
Date:	02/12/2024

APPENDIX B – Field Operations

Reference Notes for Boring Logs

Subsurface Exploration Procedure: Standard Penetration Testing (SPT)
and Auger Boring

Boring Logs

REFERENCE NOTES FOR BORING LOGS

MATERIAL ^{1,2}	
	ASPHALT
	CONCRETE
	GRAVEL
	TOPSOIL
	VOID
	BRICK
	AGGREGATE BASE COURSE
	GW WELL-GRADED GRAVEL gravel-sand mixtures, little or no fines
	GP POORLY-GRADED GRAVEL gravel-sand mixtures, little or no fines
	GM SILTY GRAVEL gravel-sand-silt mixtures
	GC CLAYEY GRAVEL gravel-sand-clay mixtures
	SW WELL-GRADED SAND gravelly sand, little or no fines
	SP POORLY-GRADED SAND gravelly sand, little or no fines
	SM SILTY SAND sand-silt mixtures
	SC CLAYEY SAND sand-clay mixtures
	ML SILT non-plastic to medium plasticity
	MH ELASTIC SILT high plasticity
	CL LEAN CLAY low to medium plasticity
	CH FAT CLAY high plasticity
	OL ORGANIC SILT or CLAY non-plastic to low plasticity
	OH ORGANIC SILT or CLAY high plasticity
	PT PEAT highly organic soils

DRILLING SAMPLING SYMBOLS & ABBREVIATIONS			
SS	Split Spoon Sampler	PM	Pressuremeter Test
ST	Shelby Tube Sampler	RD	Rock Bit Drilling
WS	Wash Sample	RC	Rock Core, NX, BX, AX
BS	Bulk Sample of Cuttings	REC	Rock Sample Recovery %
PA	Power Auger (no sample)	RQD	Rock Quality Designation %
HSA	Hollow Stem Auger		

PARTICLE SIZE IDENTIFICATION		
DESIGNATION	PARTICLE SIZES	
Boulders	12 inches (300 mm) or larger	
Cobbles	3 inches to 12 inches (75 mm to 300 mm)	
Gravel: Coarse	¾ inch to 3 inches (19 mm to 75 mm)	
Fine	4.75 mm to 19 mm (No. 4 sieve to ¾ inch)	
Sand: Coarse	2.00 mm to 4.75 mm (No. 10 to No. 4 sieve)	
Medium	0.425 mm to 2.00 mm (No. 40 to No. 10 sieve)	
Fine	0.074 mm to 0.425 mm (No. 200 to No. 40 sieve)	
Silt & Clay ("Fines")	<0.074 mm (smaller than a No. 200 sieve)	

COHESIVE SILTS & CLAYS		
UNCONFINED COMPRESSION STRENGTH, QP ⁴	SPT ⁵ (BPF)	CONSISTENCY ⁷ (COHESIVE)
<0.25	<2	Very Soft
0.25 - <0.50	2 - 4	Soft
0.50 - <1.00	5 - 8	Firm
1.00 - <2.00	9 - 15	Stiff
2.00 - <4.00	16 - 30	Very Stiff
4.00 - 8.00	31 - 50	Hard
>8.00	>50	Very Hard

RELATIVE AMOUNT ⁷	COARSE GRAINED (%) ⁸	FINE GRAINED (%) ⁸
Trace	≤5	≤5
With	10 - 20	10 - 25
Adjective (ex: "Silty")	25 - 45	30 - 45

GRAVELS, SANDS & NON-COHESIVE SILTS	
SPT ⁵	DENSITY
<5	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
>50	Very Dense

WATER LEVELS ⁶	
	WL (First Encountered)
	WL (Completion)
	WL (Seasonal High Water)
	WL (Stabilized)

FILL AND ROCK			
FILL	POSSIBLE FILL	PROBABLE FILL	ROCK

¹Classifications and symbols per ASTM D 2488-17 (Visual-Manual Procedure) unless noted otherwise.

²To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.

³Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-FILL)].

⁴Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).

⁵Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb. hammer falling 30 inches on a 2 inch OD split spoon sampler required to drive the sampler 12 inches (ASTM D 1586). "N-value" is another term for "blow count" and is expressed in blows per foot (bpf). SPT correlations per 7.4.2 Method B and need to be corrected if using an auto hammer.

⁶The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally employed.

⁷Minor deviation from ASTM D 2488-17 Note 14.

⁸Percentages are estimated to the nearest 5% per ASTM D 2488-17.



FIELD EXPLORATION PROCEDURES

Standard Penetration Test (SPT) Borings

The Standard Penetration Test (SPT) borings were made in general accordance with the latest revision of ASTM D 1586, "Penetration Test and Split-Barrel Sampling of Soils". The borings were advanced by rotary (or "wash-n-chop") drilling techniques. At 2 ½ to 5 foot intervals, a split-barrel sampler inserted to the borehole bottom and driven 18 inches into the soil using a 140 pound hammer falling on the average 30 inches per hammer blow. The number of hammer blows for the final 12 inches of penetration is termed the "penetration resistance, blow count, or N-value". This value is an index to several in-place geotechnical properties of the material tested, such as relative density and Young's Modulus.

After driving the sampler 18 inches (or less if in hard rock-like material), the sampler was retrieved from the borehole and representative samples of the material within the split-barrel were containerized and sealed. After completing the drilling operations, the samples for each boring were transported to our laboratory where they were examined by our engineer in order to verify the driller's field classification. The retrieved samples will be kept in our facility for a period of sixty (60) calendar days unless directed otherwise.

Flight Auger Boring

The auger borings were performed mechanically by the use of a continuous-flight auger attached to the drill rig and in general accordance with the latest revision of ASTM D 1452, "Soil Investigation and Sampling by Auger Borings". Representative samples of the soils brought to the ground surface by the augering process were containerized and sealed, and transported to our laboratory where they were examined by our engineer to verify the driller's field classification.

CLIENT: CHW Professional Consultants				PROJECT NO.: 35:35158		BORING NO.: B-01		SHEET: 1 of 1		
PROJECT NAME: Patel Fuel Retail - Gainesville				DRILLER/CONTRACTOR: ECS						
SITE LOCATION: US-441 & NW 59th Terrace, Gainesville, Florida, 32653								LOSS OF CIRCULATION 		
LATITUDE: 29.763238		LONGITUDE: -82.407590		STATION:		SURFACE ELEVATION: 165		BOTTOM OF CASING 		

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)	STANDARD PENETRATION BLOWS/FT		ROCK QUALITY DESIGNATION & RECOVERY		LIQUID LIMIT / PLASTIC LIMIT		CALIBRATED PENETROMETER TSF		WATER CONTENT % [FINES CONTENT] %		
									20	40	60	80	100	RQD	REC	1	2	3	4
	S-1	SS	24	24	Topsoil - 3 inches (SP) FINE SAND, brown, moist, loose			2-2-4-3 (6)	⊗6										
	S-2	SS	24	24	(SC) CLAYEY FINE SAND, gray, red, and orange, moist to wet, loose to medium dense			4-4-4-7 (8)	⊗8										
5	S-3	SS	24	24			160	4-4-8-12 (12)	⊗12										
	S-4	SS	24	24	(CL) SANDY LEAN CLAY, gray, wet, very stiff, contains limestone fragments			10-12-14-16 (26)	⊗26										
10	S-5	SS	24	24	(CL) LEAN CLAY WITH SAND, gray, wet, firm, trace limestone fragments			4-4-3-3 (7)	⊗7										
					(CL) LEAN CLAY WITH SAND, gray and tan, wet, stiff, trace limestone fragments														
15	S-6	SS	18	18				4-7-8 (15)	⊗15										
					(CL) SANDY LEAN CLAY, gray and tan, wet, very stiff														
20	S-7	SS	18	18				5-8-12 (20)	⊗20										
					END OF BORING AT 20 FT														
25																			
30																			

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL			
WL (First Encountered) WL (Completion) 4.00 WL (Seasonal High Water) 3.00 WL (Stabilized)	BORING STARTED: Jan 24 2024 BORING COMPLETED: Jan 24 2024 EQUIPMENT: Truck	CAVE IN DEPTH: Not Observed HAMMER TYPE: Auto DRILLING METHOD: Mud rotary	

GEOTECHNICAL BOREHOLE LOG

CLIENT: CHW Professional Consultants				PROJECT NO.: 35:35158		BORING NO.: B-02		SHEET: 1 of 1		
PROJECT NAME: Patel Fuel Retail - Gainesville				DRILLER/CONTRACTOR: ECS						
SITE LOCATION: US-441 & NW 59th Terrace, Gainesville, Florida, 32653								LOSS OF CIRCULATION 		
LATITUDE: 29.763153		LONGITUDE: -82.407298		STATION:		SURFACE ELEVATION: 166		BOTTOM OF CASING 		

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)	STANDARD PENETRATION BLOWS/FT		ROCK QUALITY DESIGNATION & RECOVERY		WATER CONTENT % [FINES CONTENT] %		
									20	40	60	80	100	RQD	REC
	S-1	SS	24	24	Topsoil - 3 inches			2-2-6-9 (8)							
	S-2	SS	24	24	(SP-SM) FINE SAND WITH SILT, dark brown, moist, loose, contains roots			6-6-6-6 (12)							
5	S-4	SS	24	24	(SP-SC) FINE SAND WITH CLAY, brown, gray, red and orange, wet, medium dense			5-5-6-7 (11)							
	S-5	SS	24	24	(SC) CLAYEY FINE SAND, gray, red, and orange, wet, medium dense		161	9-12-14-22 (26)							
10	S-6	SS	24	24	(SC/CL) CLAYEY FINE SAND/ SANDY LEAN CLAY, gray and orange, wet, medium dense			11-13-16-20 (29)							
					(SC) CLAYEY FINE SAND, gray, wet, medium dense		156								
15	S-7	SS	18	18	(CL) SANDY LEAN CLAY, gray and tan, wet, very stiff to hard			6-9-14 (23)							
							151								
20	S-8	SS	18	18				11-13-18 (31)							
					END OF BORING AT 20 FT		146								
25							141								
30							136								

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL			
WL (First Encountered) WL (Completion) 2.00 WL (Seasonal High Water) 1.00 WL (Stabilized)	BORING STARTED: Jan 31 2024 BORING COMPLETED: Jan 31 2024 EQUIPMENT: Track	CAVE IN DEPTH: Not Observed HAMMER TYPE: Auto DRILLING METHOD: Mud rotary	

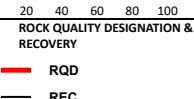
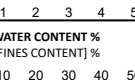
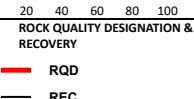
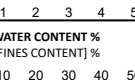
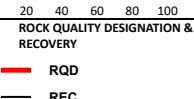
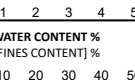
GEOTECHNICAL BOREHOLE LOG

CLIENT: CHW Professional Consultants				PROJECT NO.: 35:35158		BORING NO.: B-03		SHEET: 1 of 1		
PROJECT NAME: Patel Fuel Retail - Gainesville				DRILLER/CONTRACTOR: ECS						
SITE LOCATION: US-441 & NW 59th Terrace, Gainesville, Florida, 32653								LOSS OF CIRCULATION 		
LATITUDE: 29.763034		LONGITUDE: -82.407341		STATION:		SURFACE ELEVATION: 166		BOTTOM OF CASING 		

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)	STANDARD PENETRATION BLOWS/FT		ROCK QUALITY DESIGNATION & RECOVERY		WATER CONTENT % [FINES CONTENT] %		
									20	40	60	80	100	RQD	REC
5	S-1	SS	24	24	Topsoil - 3 inches			2-3-5-7 (8)	⊗						
	S-2	SS	24	24	(SP-SM) FINE SAND WITH SILT, dark brown, moist, loose			5-5-6-5 (11)	⊗						
	S-3	SS	24	24	(SC) CLAYEY FINE SAND, gray, orange, and red, wet, medium dense		161	6-6-7-8 (13)	⊗						
	S-4	SS	24	24	(CL) SANDY LEAN CLAY, gray, brown, and orange, wet, very stiff			7-9-11-13 (20)	⊗						
	S-5	SS	24	24	(SC/CL) CLAYEY FINE SAND/ SANDY LEAN CLAY, gray and brown, wet, medium dense		156	9-9-13-18 (22)	⊗						
10															
					(CL) SANDY LEAN CLAY, gray and tan, wet, very stiff to hard										
15	S-6	SS	18	18			151	7-11-13 (24)	⊗						
20	S-7	SS	18	18			146	12-15-20 (35)	⊗						
					END OF BORING AT 20 FT										
25							141								
30							136								

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL			
 WL (First Encountered)  WL (Completion) 2.00  WL (Seasonal High Water) 1.00  WL (Stabilized)	BORING STARTED: Jan 31 2024 BORING COMPLETED: Jan 31 2024 EQUIPMENT: Track	CAVE IN DEPTH: Not Observed HAMMER TYPE: Auto LOGGED BY: JNM2	DRILLING METHOD: Mud rotary

GEOTECHNICAL BOREHOLE LOG

CLIENT: CHW Professional Consultants				PROJECT NO.: 35:35158		BORING NO.: B-04		SHEET: 1 of 1																																																																																																																																																												
PROJECT NAME: Patel Fuel Retail - Gainesville				DRILLER/CONTRACTOR: ECS																																																																																																																																																																
SITE LOCATION: US-441 & NW 59th Terrace, Gainesville, Florida, 32653								LOSS OF CIRCULATION 																																																																																																																																																												
LATITUDE: 29.763014		LONGITUDE: -82.407102		STATION:		SURFACE ELEVATION: 166		BOTTOM OF CASING 																																																																																																																																																												
<table><thead><tr><th rowspan="2">DEPTH (FT)</th><th rowspan="2">SAMPLE NUMBER</th><th rowspan="2">SAMPLE TYPE</th><th rowspan="2">SAMPLE DIST. (IN)</th><th rowspan="2">RECOVERY (IN)</th><th rowspan="2">DESCRIPTION OF MATERIAL</th><th rowspan="2">WATER LEVELS</th><th rowspan="2">ELEVATION (FT)</th><th rowspan="2">BLOWS/6" (N - Value)</th><th colspan="2">ROCK QUALITY DESIGNATION & RECOVERY</th><th colspan="2">WATER CONTENT % [FINES CONTENT] %</th></tr><tr><th>STANDARD PENETRATION BLOWS/FT</th><th>LIQUID LIMIT / CALIBRATED PENETROMETER TSF</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th></tr></thead><tbody><tr><td rowspan="5">5</td><td>S-1</td><td>SS</td><td>24</td><td>24</td><td>Topsoil - 3 inches</td><td rowspan="5"></td><td rowspan="5">161</td><td>1-1-2-4 (3)</td><td>⊗3</td><td rowspan="5"></td><td rowspan="5"></td></tr><tr><td>S-2</td><td>SS</td><td>24</td><td>24</td><td>(SP-SC) FINE SAND WITH CLAY, brown, moist, very loose</td><td>4-5-6-5 (11)</td><td>⊗11</td></tr><tr><td>S-3</td><td>SS</td><td>24</td><td>24</td><td>(SP-SC) FINE SAND WITH CLAY, gray, wet, medium dense, contains clay nodules</td><td>5-3-6-8 (9)</td><td>⊗9</td></tr><tr><td>S-4</td><td>SS</td><td>24</td><td>24</td><td>(SC/CH) CLAYEY FINE SAND/ SANDY FAT CLAY, bluish gray, gray, and brown, wet, loose, lense of sand</td><td>8-12-13-11 (25)</td><td>⊗25</td></tr><tr><td>S-5</td><td>SS</td><td>24</td><td>24</td><td>(CL) SANDY LEAN CLAY, gray, orange, and blue, wet, very stiff</td><td>10-12-14-12 (26)</td><td>⊗26</td></tr><tr><td rowspan="2">10</td><td></td><td></td><td></td><td></td><td>(CL) SANDY LEAN CLAY, bluish gray, red, and orange, wet, very stiff, trace limestone fragments</td><td></td><td>156</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td>(CL) LEAN CLAY WITH SAND, gray and tan, wet, very stiff</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td rowspan="2">15</td><td>S-6</td><td>SS</td><td>18</td><td>18</td><td></td><td></td><td>151</td><td>5-6-10 (16)</td><td>⊗16</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td>(CL) SANDY LEAN CLAY, gray and tan, wet, very stiff</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td rowspan="2">20</td><td>S-7</td><td>SS</td><td>18</td><td>18</td><td></td><td></td><td>146</td><td>8-11-16 (27)</td><td>⊗27</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td>END OF BORING AT 20 FT</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>25</td><td></td><td></td><td></td><td></td><td></td><td></td><td>141</td><td></td><td></td><td></td><td></td></tr><tr><td>30</td><td></td><td></td><td></td><td></td><td></td><td></td><td>136</td><td></td><td></td><td></td><td></td></tr></tbody></table>												DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)	ROCK QUALITY DESIGNATION & RECOVERY		WATER CONTENT % [FINES CONTENT] %		STANDARD PENETRATION BLOWS/FT	LIQUID LIMIT / CALIBRATED PENETROMETER TSF	1	2	3	4	5	5	S-1	SS	24	24	Topsoil - 3 inches		161	1-1-2-4 (3)	⊗3			S-2	SS	24	24	(SP-SC) FINE SAND WITH CLAY, brown, moist, very loose	4-5-6-5 (11)	⊗11	S-3	SS	24	24	(SP-SC) FINE SAND WITH CLAY, gray, wet, medium dense, contains clay nodules	5-3-6-8 (9)	⊗9	S-4	SS	24	24	(SC/CH) CLAYEY FINE SAND/ SANDY FAT CLAY, bluish gray, gray, and brown, wet, loose, lense of sand	8-12-13-11 (25)	⊗25	S-5	SS	24	24	(CL) SANDY LEAN CLAY, gray, orange, and blue, wet, very stiff	10-12-14-12 (26)	⊗26	10					(CL) SANDY LEAN CLAY, bluish gray, red, and orange, wet, very stiff, trace limestone fragments		156									(CL) LEAN CLAY WITH SAND, gray and tan, wet, very stiff							15	S-6	SS	18	18			151	5-6-10 (16)	⊗16							(CL) SANDY LEAN CLAY, gray and tan, wet, very stiff							20	S-7	SS	18	18			146	8-11-16 (27)	⊗27							END OF BORING AT 20 FT							25							141					30							136				
DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)	ROCK QUALITY DESIGNATION & RECOVERY		WATER CONTENT % [FINES CONTENT] %																																																																																																																																																									
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5	S-1	SS	24	24	Topsoil - 3 inches		161	1-1-2-4 (3)	⊗3																																																																																																																																																											
	S-2	SS	24	24	(SP-SC) FINE SAND WITH CLAY, brown, moist, very loose			4-5-6-5 (11)	⊗11																																																																																																																																																											
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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL																																																																																																																																																																				
⚡ WL (First Encountered)				BORING STARTED: Jan 31 2024				CAVE IN DEPTH: Not Observed																																																																																																																																																												
⚡ WL (Completion) 2.00				BORING COMPLETED: Jan 31 2024				HAMMER TYPE: Auto																																																																																																																																																												
⚡ WL (Seasonal High Water) 1.00				EQUIPMENT: Track		LOGGED BY: JNM2		DRILLING METHOD: Mud rotary																																																																																																																																																												
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GEOTECHNICAL BOREHOLE LOG																																																																																																																																																																				

CLIENT: CHW Professional Consultants				PROJECT NO.: 35:35158		BORING NO.: B-05		SHEET: 1 of 1		
PROJECT NAME: Patel Fuel Retail - Gainesville				DRILLER/CONTRACTOR: ECS						
SITE LOCATION: US-441 & NW 59th Terrace, Gainesville, Florida, 32653								LOSS OF CIRCULATION 		
LATITUDE: 29.763319		LONGITUDE: -82.407228		STATION:		SURFACE ELEVATION: 167		BOTTOM OF CASING 		

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)	STANDARD PENETRATION BLOWS/FT		ROCK QUALITY DESIGNATION & RECOVERY		WATER CONTENT % [FINES CONTENT] %	
									20 40 60 80 100		RQD REC		10 20 30 40 50	
	S-1	SS	24	24	Topsoil - 3 inches			2-3-3-3 (6)	⊗6					
	S-2	SS	24	24	(SC) CLAYEY FINE SAND, brown and red, wet, loose			3-2-2-3 (4)	⊗4					
5	S-3	SS	24	24	(SP-SC) FINE SAND WITH CLAY, gray, wet, very loose			2-2-3-6 (5)	⊗6					
	S-4	SS	24	24	(SC/CL) CLAYEY FINE SAND/ SANDY LEAN CLAY, gray and tan, wet, loose		162	7-7-4-4 (11)	⊗11					
10	S-5	SS	24	24	(CL) SANDY LEAN CLAY, bluish gray and brown, wet, stiff, trace limestone fragments			4-5-6-6 (11)	⊗11					
					(CL) LEAN CLAY WITH SAND, bluish gray, wet, stiff, contains limestone fragments		157							
15	S-6	SS	18	18	(CL) SANDY LEAN CLAY, bluish gray, wet, stiff			4-4-5 (9)	⊗9					
					(CL) SANDY LEAN CLAY, gray, orange, and red, wet, very stiff		152							
20	S-7	SS	18	18				5-9-8 (17)	⊗17					
					END OF BORING AT 20 FT		147							
25							142							
30							137							

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL			
☒ WL (First Encountered) BORING STARTED: Jan 29 2024		CAVE IN DEPTH: Not Observed	
▼ WL (Completion) 1.00 BORING COMPLETED: Jan 29 2024		HAMMER TYPE: Auto	
☒ WL (Seasonal High Water) 0.00 EQUIPMENT: Track		LOGGED BY: JNM2	
☒ WL (Stabilized) DRILLING METHOD: Mud rotary			

GEOTECHNICAL BOREHOLE LOG

CLIENT: CHW Professional Consultants				PROJECT NO.: 35:35158		BORING NO.: B-06		SHEET: 1 of 1		
PROJECT NAME: Patel Fuel Retail - Gainesville				DRILLER/CONTRACTOR: ECS						
SITE LOCATION: US-441 & NW 59th Terrace, Gainesville, Florida, 32653								LOSS OF CIRCULATION 		
LATITUDE: 29.763121		LONGITUDE: -82.406917		STATION:		SURFACE ELEVATION: 168		BOTTOM OF CASING 		

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)	ROCK QUALITY DESIGNATION & RECOVERY		WATER CONTENT % [FINES CONTENT] %	
									RQD	REC	1	2
5	S-1	SS	24	24	Topsoil - 3 inches			1-2-1-3 (3)	⊗			
	S-2	SS	24	24	(SP-SM) FINE SAND WITH SILT, dark brown, moist, very loose, contains roots			3-2-3-4 (5)	⊗			
	S-3	SS	24	24	(SC) CLAYEY FINE SAND, brown and red, wet, loose		163	4-5-5-3 (10)	⊗			
	S-4	SS	24	24	(SC) CLAYEY FINE SAND, gray, brown, and red, wet, loose			6-8-11-13 (19)	⊗			
	S-5	SS	24	24	(SC/CL) CLAYEY FINE SAND/ SANDY LEAN CLAY, gray and red, wet, medium dense			10-11-12-12 (23)	⊗			
10					(CL) SANDY LEAN CLAY, bluish gray, wet, very stiff, contains limestone fragments		158					
					(CL) LEAN CLAY WITH SAND, gray and tan, wet, very stiff							
15	S-6	SS	18	18			153	4-6-11 (17)	⊗			
					(SC/CL) CLAYEY FINE SAND/ SANDY LEAN CLAY, gray and tan, wet, dense							
20	S-7	SS	18	18			148	9-14-18 (32)	⊗			
END OF BORING AT 20 FT												
25							143					
30							138					

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL									
▽ WL (First Encountered)				BORING STARTED: Jan 31 2024		CAVE IN DEPTH: Not Observed			
▼ WL (Completion) 2.00				BORING COMPLETED: Jan 31 2024		HAMMER TYPE: Auto			
▽ WL (Seasonal High Water) 1.00				EQUIPMENT: Truck		LOGGED BY: JNM2		DRILLING METHOD: Mud rotary	
▽ WL (Stabilized)									

GEOTECHNICAL BOREHOLE LOG

CLIENT: CHW Professional Consultants		PROJECT NO.: 35:35158		SHEET: 1 of 1			
PROJECT NAME: Patel Fuel Retail - Gainesville		AUGER NO.: P-01		SURFACE ELEVATION: 168.0			
SITE LOCATION: US-441 & NW 59th Terrace, Gainesville, Florida, 32653				STATION:			
NORTHING: 1976480.3		EASTING: 209767.1					

DEPTH (FT)	WATER LEVELS	ELEVATION (FT)	Description	SAMPLE NUMBER	FINES CONTENT (%)	MOISTURE CONTENT (%)
	▼		(SP-SM) FINE SAND WITH SILT, dark brown, moist	S-1		
	▼		(SC) CLAYEY FINE SAND, brownish gray, wet	S-2		
5		163	END OF DRILLING AT 5.0 FT			
10		158				
15		153				

REMARKS:

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDRY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▼ WL (First Encountered)	▼ WL (Seasonal High)	2.00	DRILLER: ECS	DATE COMPLETED: Jan 29 2024	UNITS: English	AUGER METHOD: Continuous Flight
▼ WL (Completion)	3.00					

FLIGHT AUGER LOG

CLIENT: CHW Professional Consultants		PROJECT NO.: 35:35158		SHEET: 1 of 1			
PROJECT NAME: Patel Fuel Retail - Gainesville		AUGER NO.: P-02		SURFACE ELEVATION: 167.0			
SITE LOCATION: US-441 & NW 59th Terrace, Gainesville, Florida, 32653				STATION:			
NORTHING: 1976622.6		EASTING: 209578.4					

DEPTH (FT)	WATER LEVELS	ELEVATION (FT)	Description	SAMPLE NUMBER	FINES CONTENT (%)	MOISTURE CONTENT (%)
5	▼	162	(SP-SM) FINE SAND WITH SILT, dark brown, moist, contains roots	S-1	9	20.7
			(SP-SM) FINE SAND WITH SILT, dark brown, wet, contains roots, organic odor, and trace organics	S-2		
	▼		(SC) CLAYEY FINE SAND, brown, wet	S-3		
			END OF DRILLING AT 5.0 FT			
10		157				
15		152				

REMARKS:

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDRY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▼ WL (First Encountered)	▼ WL (Seasonal High)	2.00	DRILLER: ECS	DATE COMPLETED: Jan 24 2024	UNITS: English	AUGER METHOD: Continuous Flight
▼ WL (Completion)	3.00					

FLIGHT AUGER LOG

CLIENT: CHW Professional Consultants		PROJECT NO.: 35:35158		SHEET: 1 of 1			
PROJECT NAME: Patel Fuel Retail - Gainesville		AUGER NO.: P-03		SURFACE ELEVATION: 164.0			
SITE LOCATION: US-441 & NW 59th Terrace, Gainesville, Florida, 32653				STATION:			
NORTHING: 1976582.3		EASTING: 209475.5					

DEPTH (FT)	WATER LEVELS	ELEVATION (FT)	Description	SAMPLE NUMBER	FINES CONTENT (%)	MOISTURE CONTENT (%)
			(SP-SM) FINE SAND WITH SILT, dark brown, moist, contains roots	S-1		
	▼		(SC) CLAYEY FINE SAND, orange, gray, and brown, wet	S-2		
5	▼	159	END OF DRILLING AT 5.0 FT			
10		154				
15		149				

REMARKS:

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDRY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▼ WL (First Encountered)	▼ WL (Seasonal High)	3.00	DRILLER: ECS	DATE COMPLETED: Jan 24 2024	UNITS: English	AUGER METHOD: Continuous Flight
▼ WL (Completion)	4.00					

FLIGHT AUGER LOG

CLIENT: CHW Professional Consultants		PROJECT NO.: 35:35158		SHEET: 1 of 1			
PROJECT NAME: Patel Fuel Retail - Gainesville		AUGER NO.: P-04		SURFACE ELEVATION: 165.0			
SITE LOCATION: US-441 & NW 59th Terrace, Gainesville, Florida, 32653				STATION:			
NORTHING: 1976426.8		EASTING: 209638.8					

DEPTH (FT)	WATER LEVELS	ELEVATION (FT)	Description	SAMPLE NUMBER	FINES CONTENT (%)	MOISTURE CONTENT (%)
	▼		(SP-SM) FINE SAND WITH SILT, dark brown, moist, contains roots	S-1		
	▼		(SC) CLAYEY FINE SAND, brown and red, wet	S-2		
5		160	END OF DRILLING AT 5.0 FT			
10		155				
15		150				

REMARKS:

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDRY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▼ WL (First Encountered)	▼ WL (Seasonal High)	1.50	DRILLER: ECS	DATE COMPLETED: Jan 29 2024	UNITS: English	AUGER METHOD: Continuous Flight
▼ WL (Completion)	2.50					

FLIGHT AUGER LOG

CLIENT: CHW Professional Consultants		PROJECT NO.: 35:35158		SHEET: 1 of 1			
PROJECT NAME: Patel Fuel Retail - Gainesville		AUGER NO.: S-01		SURFACE ELEVATION: 168.0			
SITE LOCATION: US-441 & NW 59th Terrace, Gainesville, Florida, 32653				STATION:			
NORTHING: 1976469.6		EASTING: 209802.2					

DEPTH (FT)	WATER LEVELS	ELEVATION (FT)	Description	SAMPLE NUMBER	FINES CONTENT (%)	MOISTURE CONTENT (%)
5	▼	163	(SP-SM) FINE SAND WITH SILT, dark brown, wet, contains organic odor	S-1	11	20.9
	▼					
			(SC) CLAYEY FINE SAND, brownish gray, wet	S-2		
				S-3		
10		158	(CL) SANDY LEAN CLAY, bluish gray and gray, wet	S-4		
15	153	END OF DRILLING AT 15.0 FT				

REMARKS:

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDRY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▼ WL (First Encountered)	▼ WL (Seasonal High)	0.50	DRILLER: ECS	DATE COMPLETED: Jan 29 2024	UNITS: English	AUGER METHOD: Continuous Flight
▼ WL (Completion)	1.50					

FLIGHT AUGER LOG

CLIENT: CHW Professional Consultants		PROJECT NO.: 35:35158		SHEET: 1 of 1			
PROJECT NAME: Patel Fuel Retail - Gainesville		AUGER NO.: S-02		SURFACE ELEVATION: 166.0			
SITE LOCATION: US-441 & NW 59th Terrace, Gainesville, Florida, 32653				STATION:			
NORTHING: 1976370.1		EASTING: 209715.9					

DEPTH (FT)	WATER LEVELS	ELEVATION (FT)	Description	SAMPLE NUMBER	FINES CONTENT (%)	MOISTURE CONTENT (%)
	▼		(SP-SM) FINE SAND WITH SILT, dark brown, wet	S-1	10	20.7
	▼		(SC) CLAYEY FINE SAND, gray and brown, wet	S-2		
5		161				
			(CL) SANDY LEAN CLAY, gray and brown, wet, contains limestone fragments			
10		156		S-3		
				S-4		
			(CL) LEAN CLAY WITH SAND, bluish gray, wet	S-5		
15		151	END OF DRILLING AT 15.0 FT			

REMARKS:

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDRY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▼ WL (First Encountered)	▼ WL (Seasonal High)	1.00	DRILLER: ECS	DATE COMPLETED: Jan 29 2024	UNITS: English	AUGER METHOD: Continuous Flight
▼ WL (Completion)	2.00					

FLIGHT AUGER LOG

CLIENT: CHW Professional Consultants		PROJECT NO.: 35:35158		SHEET: 1 of 1			
PROJECT NAME: Patel Fuel Retail - Gainesville		AUGER NO.: S-03		SURFACE ELEVATION: 167.0			
SITE LOCATION: US-441 & NW 59th Terrace, Gainesville, Florida, 32653				STATION:			
NORTHING: 1976381.3		EASTING: 209816.8					

DEPTH (FT)	WATER LEVELS	ELEVATION (FT)	Description	SAMPLE NUMBER	FINES CONTENT (%)	MOISTURE CONTENT (%)
	▼		(SP-SC) FINE SAND WITH CLAY, brownish gray, wet, contains organic odor	S-1	11	26.0
5	▼	162	(SC) CLAYEY FINE SAND, brownish gray, wet	S-2		
			(SC) CLAYEY FINE SAND, gray, wet	S-3		
10		157	(CL) LEAN CLAY WITH SAND, bluish gray, wet, contains limestone fragments	S-4		
15		152	END OF DRILLING AT 15.0 FT			

REMARKS:

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDRY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	▼ WL (Seasonal High)	1.50	DRILLER:	DATE COMPLETED:	UNITS:	AUGER METHOD:
▼ WL (Completion)	2.50		ECS	Jan 29 2024	English	Continuous Flight

FLIGHT AUGER LOG

APPENDIX C – Laboratory Testing

Laboratory Test Results Summary
Plasticity Chart(s)

Laboratory Testing Summary

Sample Location	Sample Number	Depth (feet)	^MC (%)	Soil Type	Atterberg Limits			**Percent Passing No. 200 Sieve	Moisture - Density		@ LBR (%)	#Organic Content (%)
					LL	PL	PI		<Maximum Density (pcf)	<Optimum Moisture (%)		
B-01	S-2	2-4	17.0	SC	37	16	21	27.2				
B-04	S-3	4-6	23.8	SC/CH	51	20	31	43.5				
B-06	S-2	2-4	15.8	SC				17.1				
P-02	S-2	1-2.5	20.7	SP-SM				9.4				2.0
S-01	S-1	0-3	20.9	SP-SM				11.1				
S-02	S-1	0-3	20.7	SP-SM				10.0				
S-03	S-1	0-3	26.0	SP-SC				11.3				

Notes: See test reports for test method, ^ASTM D2216-19, *ASTM D2488, **ASTM D1140-17, @FM 5-515, #ASTM D2974-20e1 < See test report for D4718 corrected values

Definitions: MC: Moisture Content, Soil Type: USCS (Unified Soil Classification System), LL: Liquid Limit, PL: Plastic Limit, PI: Plasticity Index, CBR: California Bearing Ratio, OC: Organic Content

Project: Patel Fuel Retail - Gainesville
Client: CHW Professional Consultants

Project No.: 35:35158
Date Reported: 2/12/2024



Office / Lab

Address

Office Number / Fax

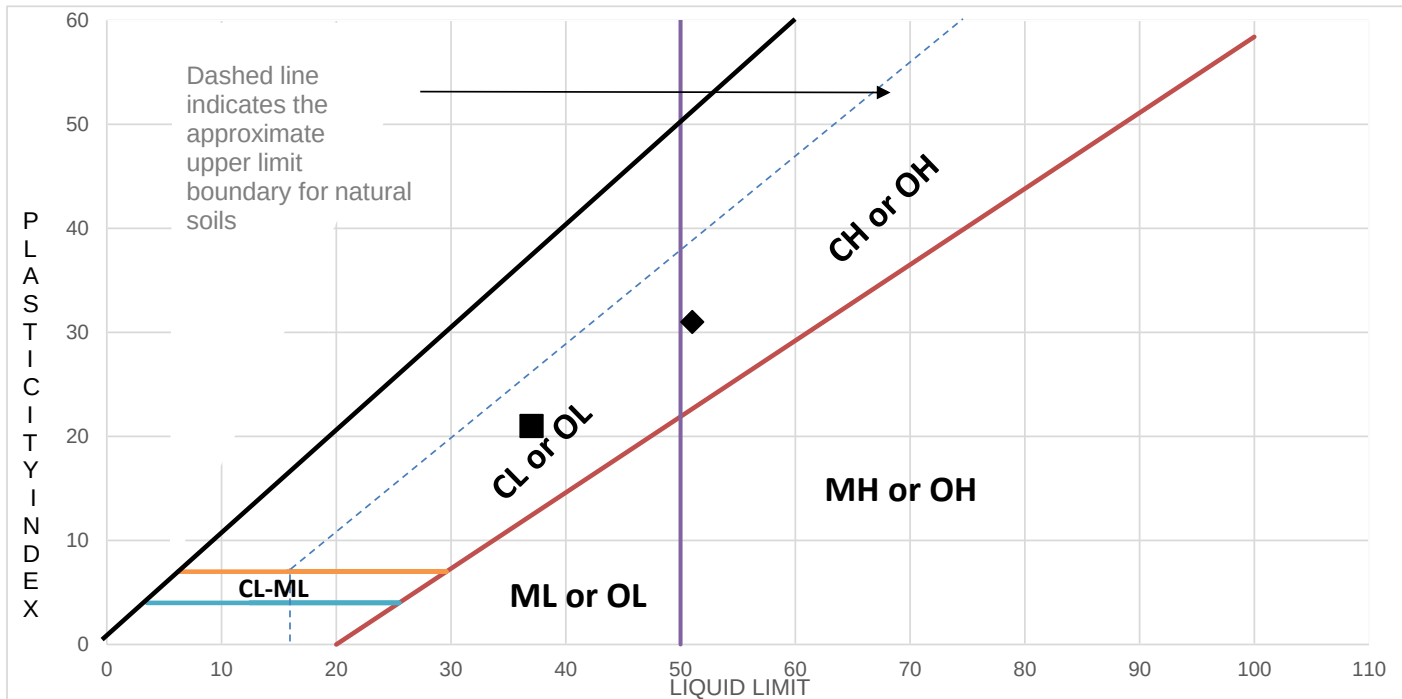
ECS Florida LLC -
Gainesville

6342 NW 18th Drive, Unit 10
Gainesville, Florida 32653

352-221-9221

Tested by	Checked by	Approved by	Date Received
SSykes	JMueller	SSykes	2/12/2024

LIQUID AND PLASTIC LIMITS TEST REPORT



TEST RESULTS (ASTM D4318-10 (MULTIPOINT TEST))

	Sample Location	Sample Number	Sample Depth (ft)	LL	PL	PI	Hyd. Cond. (cm/sec)	%<#200	Material Description	Meets Spec (Y/N)	Sample Remarks
■	B-01	S-2	2-4	37	16	21		27.2	SC	No	
◆	B-04	S-3	4-6	51	20	31		43.5	SC/CH	No	
										Yes	
										Yes	
										Yes	
										Yes	
										Yes	
										Yes	

Specifications

N/A

Samples meeting specifications

11 11 11 11 11 11

Project: Patel Fuel Retail - Gainesville
Client: CHW Professional Consultants

Project No.: 35:35158
Date Reported: 2/12/2024



Office / Lab

ECS Florida LLC - Gainesville

Address

6342 NW 18th Drive, Unit 10
Gainesville, Florida 32653

Office Number / Fax

352-221-9221

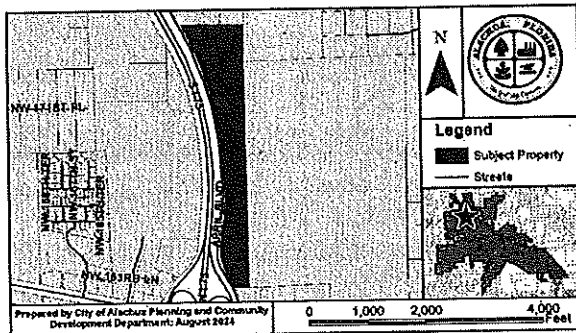
Tested by	Checked by	Approved by	Date Received
SSykes	JMueller	SSykes	2/12/2024



City of ALACHUA

NOTICE OF PUBLIC HEARING BEFORE THE PLANNING AND ZONING BOARD OF THE CITY OF ALACHUA, FLORIDA

Notice is hereby given that the Planning and Zoning Board of the City of Alachua will hold a public hearing on September 10, 2024 at 6:00 p.m. The hearing will be held in the James A. Lewis Commission Chambers in City Hall, located at 15100 NW 142nd Terrace, Alachua, Florida, to consider the following: A request by Clay Sweager, AICP, LBED AP, of EDA Consultants, Inc., applicant, on behalf of Tara Forest, LLC, property owner, for consideration of a Special Exception Permit to allow the placement of a minor utility (stormwater management facilities) in the Agricultural (A) zoning district that would support future development on adjacent lands zoned Community Commercial (CC). The subject property is generally located north of US 441 east of I-75 and April Boulevard, and west of Mill Creek ; Consisting of a portion of Tax Parcel Number 03020-000-000; Future Land Use Map (FLUM) Designation: Agriculture; Zoning: Agricultural (A).



At the public hearing, all interested parties may appear and be heard with respect to the application. Copies of the application are available for public inspection at the Planning and Community Development Department, 15100 NW 142nd Terrace, Alachua, Florida, on any regular business day between the hours of 7:30 a.m. to 6:00 p.m. Written comments on the application may be sent to the following address: City of Alachua, Planning and Community Development, P.O. Box 9, Alachua, FL 32616. Notice is given pursuant to Section 286.0105, Florida Statutes, that, in order to appeal any decision made at the public hearing, you will need a record of the proceedings, and that, for such purpose, you may need to ensure that a verbatim record of the proceedings is made, which includes the testimony and evidence upon which the appeal is to be based. In accordance with the Americans with Disabilities Act, any persons with a disability requiring reasonable accommodation in order to participate in this meeting should call the City Clerk at (386) 418-6100 x 1501 at least 48 hours prior to the public hearing.

(Published: Alachua County Today - August 29, 2024)

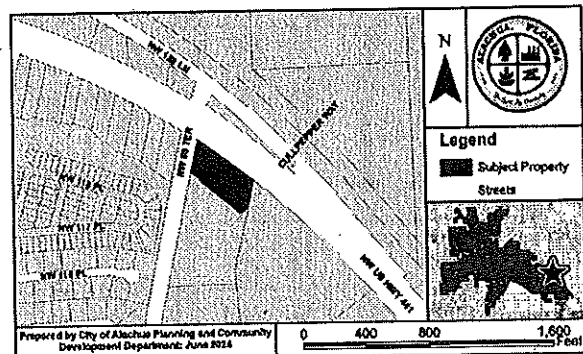
must be at least 18 years old.



City of ALACHUA

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At the public hearing, all interested parties may appear and be heard with respect to the application. Copies of the application are available for public inspection at the Planning and Community Development Department, 15100 NW 142nd Terrace, Alachua, Florida, on any regular business day between the hours of 7:30 a.m. to 6:00 p.m. Written comments on the application may be sent to the following address: City of Alachua, Planning and Community Development, P.O. Box 9, Alachua, FL 32616. Notice is given pursuant to Section 286.0105, Florida Statutes, that, in order to appeal any decision made at the public hearing, you will need a record of the proceedings, and that, for such purpose, you may need to ensure that a verbatim record of the proceedings is made, which includes the testimony and evidence upon which the appeal is to be based. In accordance with the Americans with Disabilities Act, any persons with a disability requiring reasonable accommodation in order to participate in this meeting should call the City Clerk at (386) 418-6100 x 1501 at least 48 hours prior to the public hearing.

(Published: Alachua County Today - August 29, 2024)

- Friday
- Friday

This initial provide a valu to the comm offering hands experiences f in the Ca Sonography Participants w benefit from ea of potential vascular issue contribute to training of futu



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The Alachua for four (4) Appointment applicants n school, or h Alachua in ; also be willi basis and ha

The duties City Comm on issues an youth. Add meetings wi improvemen events to be recognize th of youth.

To apply, y from either the City of Application September your applic P.O. Box 9, cityofalach

(Publish

Alac
is your l

AFFIDAVIT FOR POSTED LAND USE SIGN



I April Dotson, POSTED THE LAND USE
(name)
SIGN ON 8/20/24 FOR THE Patel Fuel & Retail Site Plan
(date) (state type of action and project name)
LAND USE ACTION.

AS PER ARTICLE 2.2.9 D OF THE LAND DEVELOPMENT REGULATIONS.

THIS WILL BE INCLUDED IN THE STAFF REPORT.


(signature)

3 (three)
(number of signs)

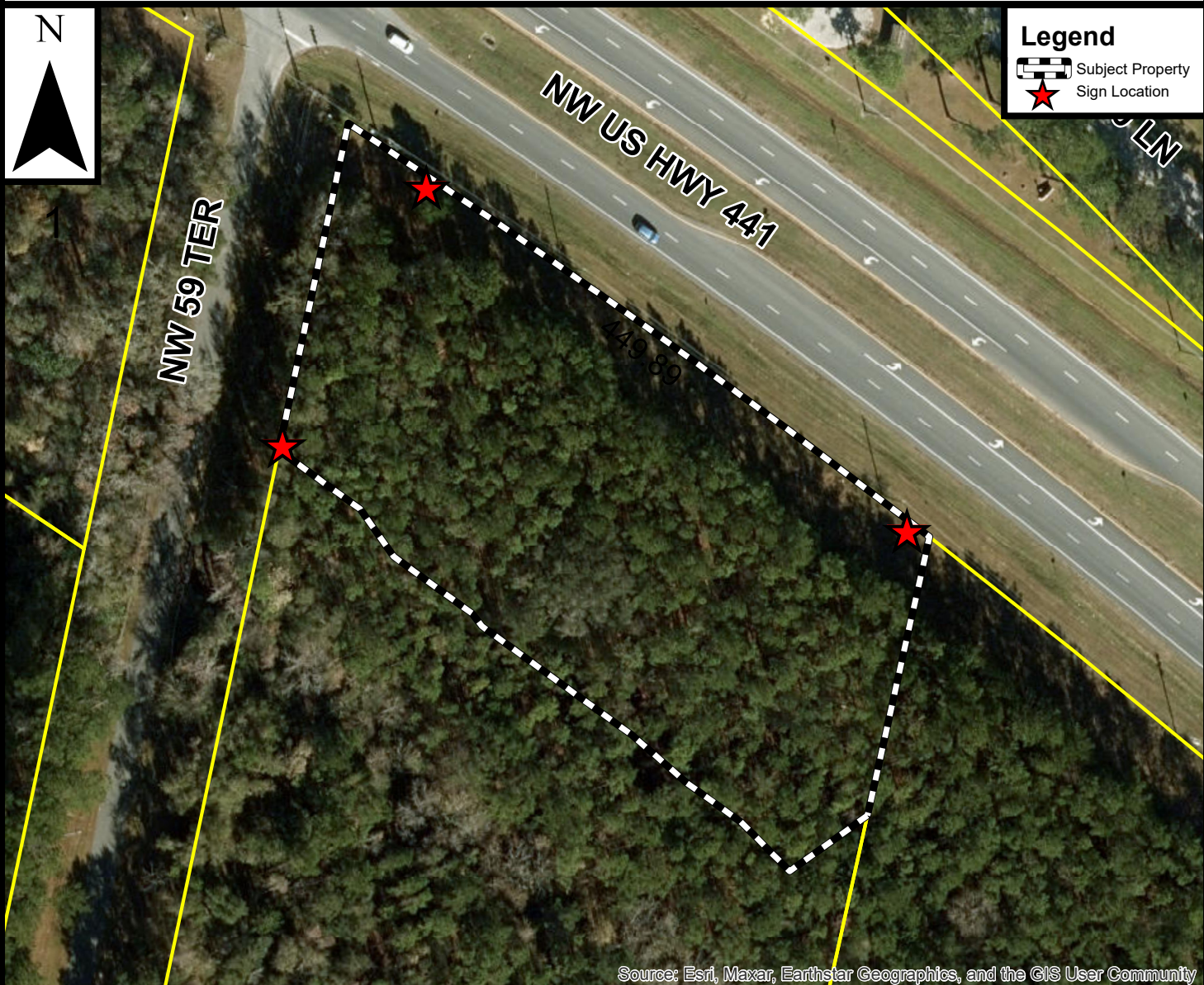
Pursuant to Section 2.2.9(D) of the City's Land Development Regulations, posted notice signs must be placed on the land that is the subject of the application, along each street which is adjacent to or runs through the land in a manner that makes them clearly visible. Signs shall be posted at intervals of not more than 400 feet when the land subject to the application has less than 1,500 feet of road frontage. When the land subject to the application has 1,500 feet or more of road frontage, signs shall be posted at intervals of not more than 1,320 feet.

Signs shall be inspected by the City subsequent to their posting. The applicant shall be responsible for ensuring that the posted notice is maintained on the land subject to the application until the completion of the final public hearing on the application.

Signs must be removed by the applicant and returned to the City within ten days after the final decision on the application.



Patel Fuel & Retail Site Plan



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

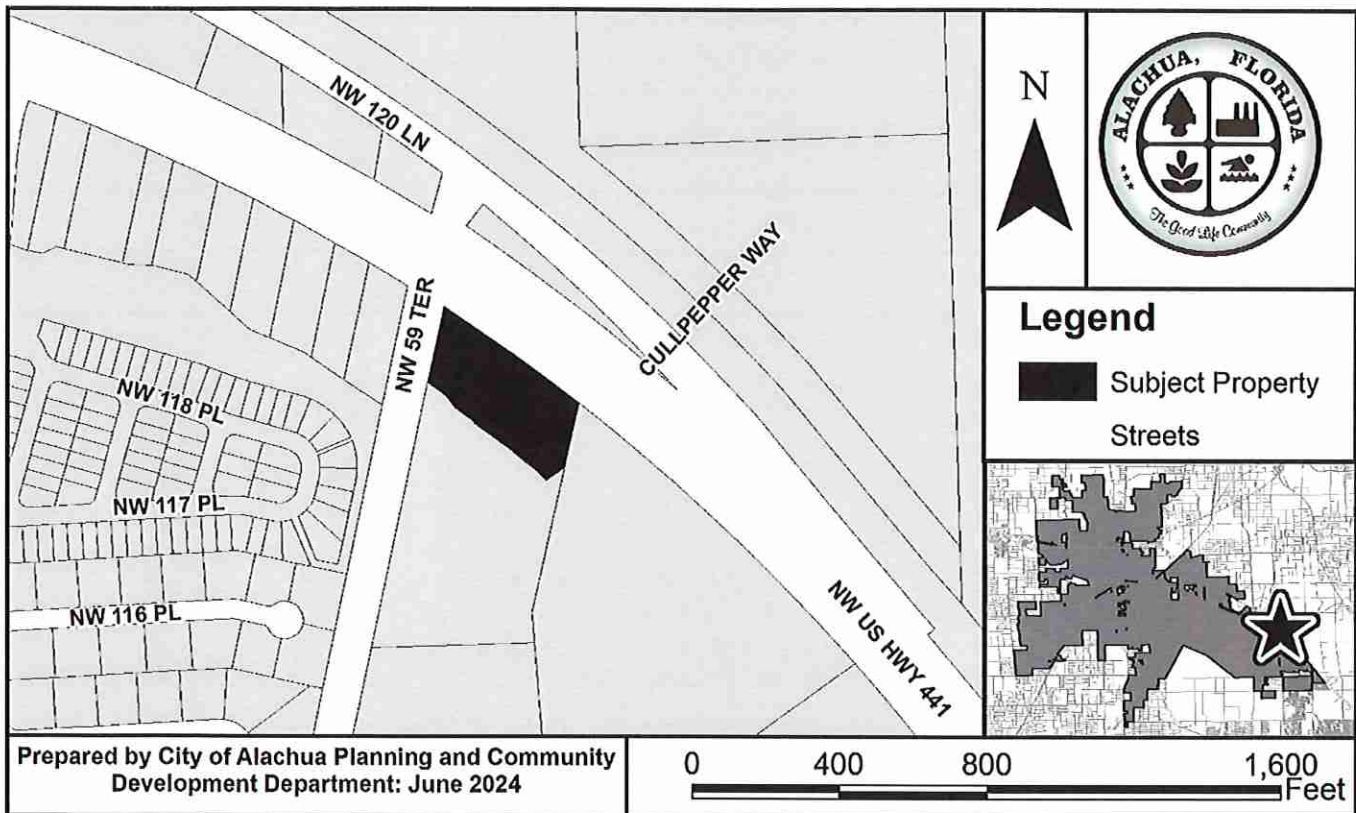
Prepared by the City of Alachua
Planning & Community Development Department
Prepared June 2024

DISCLAIMER: Data is provided "as is" without warranty of any representation of accuracy, timeliness, or completeness. The burden of determining accuracy, timeliness, or completeness for use rests solely on the requestor. The City makes no warranties, expressed or implied, as to the use of the data. The requestor acknowledges and accepts the limitations of the data, including the fact that the data is dynamic and in a constant state of maintenance, correction, and update.

0 25 50 100 Feet

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THE EMORY GROUP LLC
13900 TECH CITY CIR STE 100
ALACHUA, FL 32615

SOWELL KUTONYA L
378 TURKEY CREEK
ALACHUA, FL 32615

THE EMORY GROUP LLC
13900 TECH CITY CIR STE 100
ALACHUA, FL 32615

MAILED

AUG 26 2024

TURKEY CREEK MASTER OWNERS
ASSOCIATION INC
4400 NW 36TH AVE
GAINESVILLE, FL 32606

DAVE MILAN N & NIMISHA M
812 TURKEY CREEK
ALACHUA, FL 32615

CSX TRANSPORTATION INC
500 WATER ST
TAX DEPARTMENT J-910
JACKSONVILLE, FL 32202

LAND O'SUN MANAGEMENT CORP
3715 NW 97TH BLVD # A
GAINESVILLE, FL 32606

ALACHUA COUNTY
5620 NW 120TH LN
GAINESVILLE, FL 32653

LAND O'SUN MANAGEMENT CORP
3715 NW 97TH BLVD # A
GAINESVILLE, FL 32606

THE EMORY GROUP LLC
13900 TECH CITY CIR STE 100
ALACHUA, FL 32615

J & E STORAGE LLC
527 TURKEY CREEK
ALACHUA, FL 32615

SEMOJ 13 LLC
3612 SW 106TH ST
GAINESVILLE, FL 32608

SHALLIS, PATRICK & THERESA
840 TURKEY CREEK
ALACHUA, FL 32615

BARRIENTOS & BELN W/H
350 TURKEY CREEK
ALACHUA, FL 32615

BRALLEY SANDAR
11781 NW 60TH DR
ALACHUA, FL 32615

ASSAD & GREGOIRE
396 TURKEY CREEK
GAINESVILLE, FL 32615

GREEN & ROONEY
241 TURKEY CREEK
ALACHUA, FL 32615

MAGNOLIA PARK-GAINESVILLE LLC
2627 NW 43RD ST STE 300
GAINESVILLE, FL 32606

Michele L. Lieberman
County Manager
12 SE 1st Street
Gainesville, FL 32601

MAILED

Antoinette Endelicato
5562 NW 93rd Avenue
Gainesville, FL 32653

AUG 26 2024

Linda Dixon, AICP
Assistant Director Planning
PO Box 115050
Gainesville, FL 32611

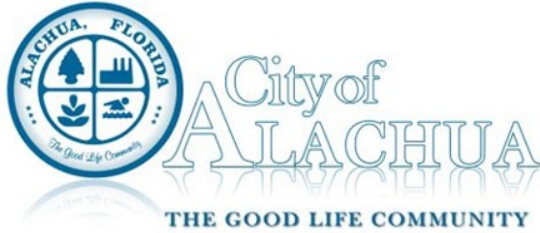
Tamara Robbins
PO Box 2317
Alachua, FL 32616

Lynda Coon
7216 NW 126 Avenue
Alachua, FL 32615

Joseph & Phyllis Strickland
14103 NW 156th Place
Alachua, FL 32615

Jean Calderwood
14095 NW 174th Ave
Alachua, FL 32615

Lynn Horton
19005 NW 138th Avenue
Alachua, FL 32615



Commission Agenda Item

MEETING DATE: September 10, 2024

SUBJECT: Comprehensive Plan Text Amendment - Commercial and Mixed-Use Future Land Use Categories: A request by the City of Alachua to amend the City of Alachua Comprehensive Plan, amending the Administration and Implementation Element to establish a new definition for mixed-use, amending the Future Land Use Element to establish mixed-use future land use categories, and amending the Economic Element to remove an existing definition for mixed-use (Legislative Hearing).

PREPARED BY: Kathy Winburn, Justin Tabor, Adam Hall, Carson Crockett

RECOMMENDED ACTION:

Staff recommends that the Planning & Zoning Board find the proposed Comprehensive Plan Text Amendment to amend the Administration and Implementation, Future Land Use, and Economic Elements to be consistent with the City of Alachua Comprehensive Plan and transmit such finding to the City Commission with a recommendation to approve.

Recommended Motion:

I move that, based upon the presentation to this Board and Staff's recommendation, this Board finds the proposed Comprehensive Plan Text Amendment to amend the Administration and Implementation, Future Land Use, and Economic Elements to be consistent with the City of Alachua Comprehensive Plan and transmits such finding to the City Commission with a recommendation to approve.

Summary

A Staff-initiated amendment to the City of Alachua Comprehensive Plan, amending the Administration and Implementation Element to establish a new definition for mixed-use, amending the Future Land Use Element to establish mixed-use future land use categories, and amending the Economic Element to remove an existing definition for mixed-use.

Each amendment in full is identified in the attached September 10, 2024 Staff Report to the Planning & Zoning Board. Summarized, the proposed amendments are as follows:

1. **Administration and Implementation Element**
 - a. **Amend Definitions** to establish a definition for mixed-use.
2. **Future Land Use Element**
 - a. **Amend Objective 1.3** to update the Commercial future land use categories to

include “Commercial & Mixed-Use” future land use categories.

- b. **Amend Policy 1.3.a** to permit commercial land uses and limited residential land uses in the Community Commercial future land use category.
- c. **Amend Policy 1.3.b** to permit commercial land uses and limited residential land uses in the Commercial future land use category.
- d. **Amend Policy 1.3.c** for consistency.
- e. **Amend Policy 1.3.d** for consistency.
- f. **Establish new Policy 1.3.e** to establish density and intensity standards for residential development, non-residential development, and mixed-use development in the Commercial & Mixed-Use future land use categories.
- g. **Update numbering of subsequent policies** to reflect the addition of the new Policy 1.3.e.
- h. **Amend Objective 1.4** for consistency.
- i. **Amend Policy 1.5.b** for consistency.
- j. **Amend Policy 1.5.d** to establish density and intensity standards for Residential and Non-Residential uses.

3. Economic Element

- a. **Amend Definitions** for consistency to remove an existing definition for mixed-use.

The proposed Comprehensive Plan amendment will be implemented by future amendments to the City’s Land Development Regulations.

FINANCIAL IMPACT

ADDITIONAL FINANCIAL INFORMATION

ATTACHMENTS

- 1. Staff Report & Supporting Materials
- 2. Public Notice Materials



City of Alachua

Planning & Community Development Department Staff Report

Planning & Zoning Board Hearing Date: Legislative Hearing

September 10, 2024

SUBJECT:

A Staff-initiated amendment to the City of Alachua Comprehensive Plan, amending the Administration and Implementation Element to establish a new definition for mixed-use, amending the Future Land Use Element to establish mixed-use future land use categories, and amending the Economic Element to remove an existing definition for mixed-use.

APPLICANT/AGENT:

City of Alachua

PROJECT PLANNER:

Kathy Winburn;
Justin Tabor, AICP;
Adam Hall, AICP;
Carson J. Crockett, AICP Candidate

RECOMMENDATION:

Staff recommends that the Planning & Zoning Board find the proposed Comprehensive Plan Text Amendment to amend the Administration and Implementation, Future Land Use, and Economic Elements to be consistent with the City of Alachua Comprehensive Plan and transmit such finding to the City Commission with a recommendation to approve.

RECOMMENDED MOTION:

I move that based upon the presentation to this Board and Staff's recommendation, this Board finds the proposed Comprehensive Plan Text Amendment to amend the Administration and Implementation, Future Land Use, and Economic Elements to be consistent with the City of Alachua Comprehensive Plan and transmits such finding to the City Commission with a recommendation to approve.

SUMMARY

The City of Alachua Fiscal Year 2024 Strategic Plan was adopted by the City Commission on September 25, 2023, establishing Strategic Initiative 4.2 with highest priority to “develop strategies to ensure cohesive and compatible residential development to accommodate the growth of infill development and redevelopment within the City.” Strategic Initiative 4.2 directs the Planning & Community Development Department to “research peer community comprehensive plans and land development regulations for new and/or innovative planning standards and techniques” and to “develop proposed amendments to the City Comprehensive Plan and Land Development Regulations.”

This proposed Comprehensive Plan amendment furthers the City's strategic plan to help accomplish the desired outcome of Strategic Initiative 4.2: to "ensure infill development and redevelopment occurs alongside greenfield and existing residential development in a cohesive manner." The proposed amendment modifies the existing Commercial future land use categories into Commercial and Mixed-Use future land use categories, increasing the type and density of residential development permitted in the categories to increase the potential for mixed-use and infill development.

Additional interest in the establishment of mixed-use future land use categories as a potential method of encouraging community growth in the Central City Area (Figure 1) and Community Redevelopment Area (Figure 2) was expressed by stakeholders during a January 25, 2024 Downtown Strategies workshop.

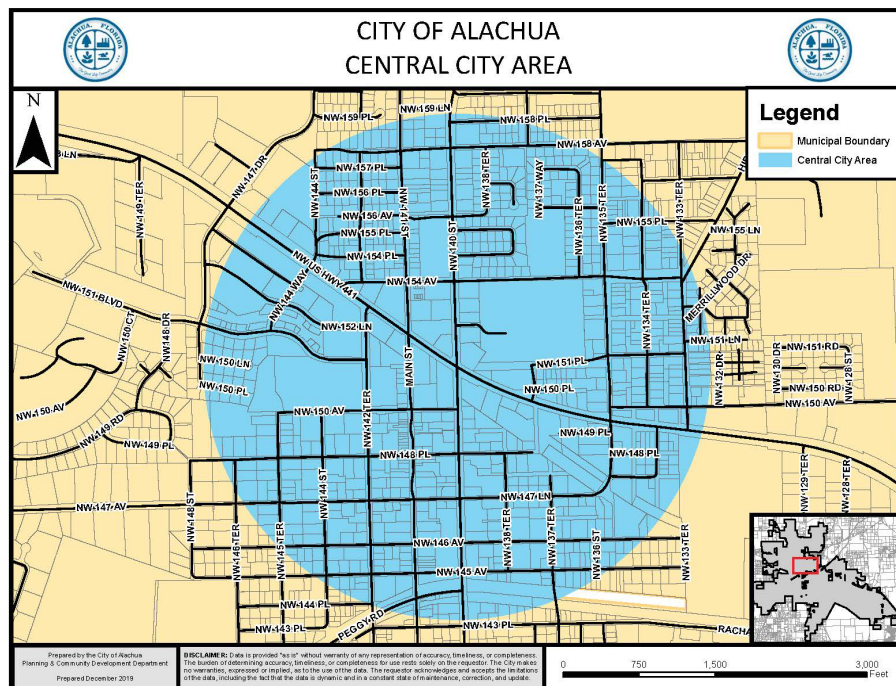


Figure 1. City of Alachua Central City Area

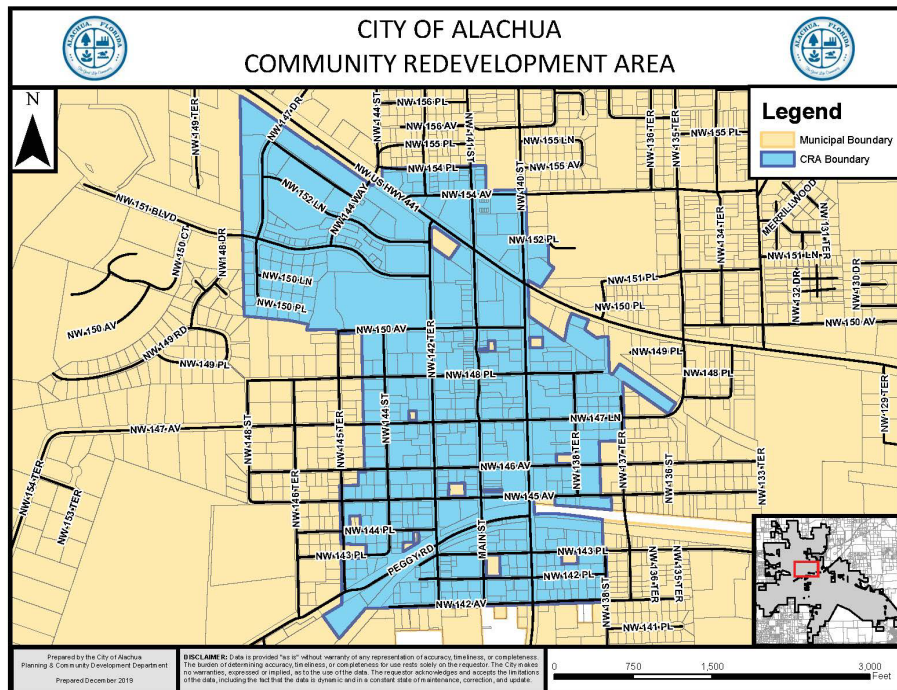


Figure 2. City of Alachua Community Redevelopment Area

Staff researched and considered different strategies from various peer community comprehensive plans across Florida, including the City of Lake City, City of Live Oak, and City of Williston. Mixed-use future land use categories were a common element of these peer community comprehensive plans as a strategy to increase the potential for infill development and economic activity in their various downtown areas, though each peer community had their own unique approach. This proposed amendment takes cues from the various peer community comprehensive plans that were researched; however, Staff tailored the proposed amendment specifically to the needs of the City of Alachua.

Mixed-Use Development

A mixed-use development is a development that combines multiple types of land uses (such as residential, commercial, industrial, institutional, etc.) into one building or distinct area¹. Mixed-use development differs from traditional development based around zoning where residential, commercial, industrial, institutional, and other uses are segregated into distinct development areas and buildings.

¹ Davidson, M., & Dolnick, F. (2004). *A Planner's Dictionary*. Chicago: American Planning Association.

Establishing mixed-use future land use categories as this amendment proposes does not change the type or style of development currently permitted in the City. The proposed amendment adds a new option for development in the City, potentially promoting and encouraging added flexibility in infill development opportunities, in diversifying housing stock, and in local businesses opportunities. Existing residential protection standards will not be impacted by this proposed amendment. Additionally, this amendment only proposes the addition of mixed-use developments in non-residential districts.

Figures 3 and 4 provide a visualization of what typical mixed-use developments may look like.



Figure 3. James Brook Building ²

A collection of small office, retail, and dining spaces occupy the first floor of this structure while the upper two floors are occupied by 14 dwelling units, all designed to maintain a village like atmosphere. This structure is an example of a more compact, infill type of mixed-use development not currently permitted in the commercial future land use designations.



Figure 4. Tioga Town Center³

Tioga Town Center acts as an example of mixed-use development near the City of Alachua. Housing a mix of office, retail, dining, and residential spaces throughout the development, Tioga Town Center represents a larger scale mixed-use development more akin to what might currently be permitted under the Corporate Park future land use designation.

² Kelliher, J. (2021, April 09). *Axiom Architects - Rethinking mixed use for small communities on the South Shore*. Retrieved 2024, from New England Real Estate Journal: <https://nerej.com/axiom-architects-rethinking-mixed-use-for-small-communities-by-kelliher>

³ Tioga Town Center. (2016, August 23). *Tioga Town Center*. Retrieved 2024, from Facebook: <https://www.facebook.com/people/Tioga-Town-Center/100069677083175/>

Summary of Proposed Amendment

Each amendment in full is identified in the next section of this report. Summarized, the proposed amendments are as follows (text that is underlined is to be added and text that is shown as ~~strike through~~ is to be removed):

1. Administration and Implementation Element

- a. **Amend Definitions** to establish a definition for mixed-use of “a building or a distinct area containing a mix of uses which functionally integrate and interconnect with one another. The City may further define the term “mixed-use” in the Land Development Regulations through the creation of subsections.”

2. Future Land Use Element

- a. **Amend Objective 1.3** to update the Commercial future land use categories to include “Commercial & Mixed-Use” future land use categories.
- b. **Amend Policy 1.3.a** to permit commercial land uses and limited residential land uses in the Community Commercial future land use category.
- c. **Amend Policy 1.3.b** to permit commercial land uses and limited residential land uses in the Commercial future land use category.
- d. **Amend Policy 1.3.c** for consistency.
- e. **Amend Policy 1.3.d** for consistency.
- f. **Establish new Policy 1.3.e** to establish density and intensity standards for residential development, non-residential development, and mixed-use development in the Commercial & Mixed-Use future land use categories
- g. **Update numbering of subsequent policies** to reflect the addition of the new Policy 1.3.e
- h. **Amend Objective 1.4** for consistency as follows: “The City shall establish ~~one Corporate Park~~ as a mixed-use land use category.”
- i. **Amend Policy 1.5.b** for consistency, to permit for “live/work uses” in the Industrial land use category.
- j. **Amend Policy 1.5.d** to establish density and intensity standards for Residential and Non-Residential uses.

3. Economic Element

- a. **Amend Definitions** for consistency to remove an existing definition for mixed-use.

Future Land Development Regulations Amendments

The proposed Comprehensive Plan amendment will be implemented by future amendments to the City’s Land Development Regulations.

PROPOSED COMPRHENISVE PLAN TEXT AMENDMENT

Text that is underlined is to be added and text that is shown as ~~striketrough~~ is to be removed.

ADMINISTRATION AND IMPLEMENTATION ELEMENT

Mixed-use: a building or a distinct area containing a mix of uses which functionally integrate and interconnect with one another. The City may further define the term “mixed-use” in the Land Development Regulations through the creation of subsections.

FUTURE LAND USE ELEMENT

Objective 1.3: *Commercial & Mixed-Use*

The City shall establish three commercial and mixed-use land use categories: Community Commercial, Commercial, and Central Business District. These land use categories shall provide a broad range of commercial uses, including retail sales and services, personal services, offices, and tourist-oriented uses, and the potential for mixed-use developments in order to provide for the availability of goods and services, both to the citizens and visitors of Alachua and to the citizens of the North Central Florida region while diversifying the housing stock.

Policy 1.3.a: *Community Commercial:* The Community Commercial land use category is a mixed-use land use category established to provide neighborhood and community scale goods and services to adjacent neighborhood and residential areas while allowing for the development of a diverse and affordable housing stock. The Community Commercial land use category also serves as a transitional land use category between residential and commercial land use categories. The following uses are allowed within the Community Commercial land use category:

1. Neighborhood commercial establishments;
2. Residential/offices and live-work units;
3. Business and professional offices;
4. Personal services;
5. Financial institutions;
6. Retail sales and services that serve the community;
7. Eating establishments;
8. Indoor recreation/entertainment;
9. Single-family and multi-family residential above first floor commercial uses;
10. Bed and breakfast, Visitor accommodations;
11. Supporting community services such as schools, houses of worship, parks, and community centers; ~~and,~~
12. Traditional Neighborhood Planned Developments;;
13. Single family attached units;
14. Apartments and townhomes; and,
15. Duplexes and quadplexes.

Development in the Community Commercial land use category may occur as mixed-use or non-mixed-use.

Policy 1.3.b: *Commercial:* The Commercial land use category is established to provide for general commercial uses, as well as more intense commercial and highway commercial uses. This is the land use category in which large-scale, regional commercial uses may locate. The following uses are allowed within the Commercial land use category:

1. Retail sales and services;
2. Personal services;
3. Financial institutions;
4. ~~Outdoor~~ Recreation and entertainment;
5. Tourist-related uses;
6. ~~Hotels and motels;~~ Visitor accommodations;
7. Commercial shopping centers;
8. Auto-oriented uses;
9. Traditional Neighborhood Planned Developments;
10. Employment Center Planned Developments;
11. Commercial recreation centers;
12. Office/business parks;
13. Limited industrial services; ~~and,~~
14. Eating establishments;
15. Single family attached units;
16. Apartments and townhomes;
17. Duplexes and quadplexes;
18. Single-family and multi-family residential above first floor commercial uses;
19. Convention centers; and,
20. Supporting community services such as schools, houses of worship, parks, and community centers.

Development in the Commercial land use category may occur as mixed-use or non-mixed-use.

Policy 1.3.c: *Central Business District:* The Central Business District land use category is established to provide an area that forms the City's center for financial, commercial, governmental, professional, and cultural activities. This category is to encourage the development of a Central Business District as a focal point for the community that provides the services for people to live, work and shop. The following uses are allowed in the Central Business District land use category:

1. Single family attached and detached dwelling units;
2. Residential/offices and live-work units;
3. Business and professional offices;
4. Personal services;

5. Financial institutions;
6. Eating establishments;
7. Retail sales and services that serve the community;
8. Single-family and multi-family residential above first floor commercial uses;
9. Supporting community services such as schools, houses of worship, parks, and community centers;
10. Traditional Neighborhood Planned Developments;
11. Convention centers; ~~and,~~
12. ~~Hotels, motels, and bed and breakfast inns.~~ Visitor accommodations;
13. Apartments and townhomes;
14. Duplexes and quadplexes; and,
15. Indoor recreation and entertainment.

Development in the Central Business District land use category may occur as mixed-use or non-mixed-use.

Policy 1.3.d: *Design and performance standards:* The following criteria shall apply when evaluating ~~commercial~~ development proposals in the commercial & mixed-use land use categories:

1. Integration of vehicular and non-vehicular access into the site and access management features of site in terms of driveway cuts and cross access between adjacent sites, including use of frontage roads and/or shared access;
2. Buffering from adjacent existing/potential uses;
3. Open space provisions and balance of proportion between gross floor area and site size;
4. Adequacy of pervious surface area in terms of drainage requirements;
5. Placement of signage;
6. Adequacy of site lighting and potential impacts of lighting upon the surrounding area. Lighting should be designed to minimize impacts to preserve the ambiance and quality of the nighttime sky by reducing light trespass and light pollution on adjacent properties by utilizing lighting at appropriate intensities, directions and times to ensure light is not overused or impacting areas where it is not intended;
7. Safety of on-site circulation patterns (patron, employee, and delivery vehicles), including parking layout, drive aisles, and points of conflict;
8. Landscaping, as it relates to the requirements and goals of the Comprehensive Plan and Land Development Regulations;
9. Unique features and resources which may constrain site development such as soils, existing vegetation and historic significance; ~~and,~~
10. Performance based zoning requirements, which may serve as a substitute for or accompany land development regulations in attaining acceptable site design; ~~and,~~

- ~~11. Commercial uses are limited to an intensity of less than or equal to 0.50 floor area ratio for parcels 5 acres or greater, 0.75 floor area ratio for parcels less than 5 acres but greater than 1 acre, and 1.0 floor area ratio for parcels 1 acre or less.~~

Policy 1.3.e: Density and intensity standards.

1. *Non-mixed-uses.* The following density and intensity standards shall apply to non-mixed-use development proposals in the commercial & mixed-use land use categories:
 - a. *Density.* Residential uses are limited to a density of 10 dwelling units per acre in the Community Commercial land use category and 15 dwelling units per acre in the Commercial and Central Business District land use categories.
 - b. *Intensity.* Non-residential uses are limited to an intensity of less than or equal to 0.5 floor area ratio for parcels 5 acres or greater, 0.75 floor area ratio for parcels less than 5 acres but greater than 1 acre, and 1.0 floor area ratio for parcels 1 acre or less.
2. *Mixed-uses.* The following density and intensity standards shall apply to mixed-use development proposals in the commercial & mixed-use land use categories:
 - a. *Density.* Residential uses are limited to a density of 15 dwelling units per acre in the Community Commercial and Commercial land use categories and 20 dwelling units per acre in the Central Business District land use category.
 - b. *Intensity.* Non-residential uses are limited to an intensity of 0.6 floor area ratio for parcels 5 acres or greater, 0.85 floor area ratio for parcels less than 5 acres but greater than 1 acre, and 1.25 floor area ratio for parcels less than 1 acre.

Note: Residential uses are currently permitted in the Office Residential (OR), Neighborhood Commercial (CN), Community Commercial (CC), Central Business District (CBD), and Commercial Intensive (CI) zone districts in the City's Land Development Regulations and in the Commercial future land use categories in the Comprehensive Plan; however, no density standards are currently established in the Comprehensive Plan for Commercial Categories or within Table 5.1-3 of the Land Development Regulations. This proposed amendment sets the stage for establishing density standards, which will be further implemented by future Land Development Regulations amendments.

Policy 1.3.~~ef~~^{ef}: The creation/promotion of strip pattern commercial development shall be discouraged. Infill within established commercial areas is preferred over extension of a strip commercial pattern. Extension of a commercial land use designation may be considered in circumstances where the extension is compatible with the existing land uses surrounding the land or the land use categories of surrounding lands. Extensions of a commercial land use category shall not encroach into a residential area. The following criteria shall be applied to limit the impacts of commercial development upon surrounding areas:

1. Impacts upon traffic circulation should be anticipated and mitigated through the reservation of right-of-way for road widening and marginal access streets when appropriate.
2. Access points for commercial development shall minimize points of conflict by utilizing frontage roads, providing cross access between parcels, or installing shared use ingress and egress access driveways connections to roadways.
3. Setbacks and landscaped or other appropriate buffers shall be established to mitigate the visual impacts of commercial development upon surrounding land uses.
4. A sidewalk or bicycle path shall be required where appropriate, to provide convenient access to the development from surrounding areas and to reduce traffic volumes on the roadways.

Policy 1.3.~~fg~~^{fg}: The City shall pursue the establishment of activity centers and similar criteria to guide the placement and design of commercial and business areas.

1. The City shall establish and maintain a Gateway Activity Center at the interchange of US 441 and Interstate 75. The boundaries of the Gateway Activity Center shall be based on the Generalized US 441/I-75 Activity Center Map provided in the Future Land Use Map Series. The intent of this activity center is to welcome existing and future residents and visitors to the City, and to promote Alachua as an attractive, vibrant, and economically prosperous community.
2. The City shall establish and maintain the US 441 corridor as a Corporate Corridor Activity Center. The intent of establishing this activity center is to implement economic development objectives and to promote a coordinated development plan to maximize existing and future land use patterns and preserve the function of the US 441 corridor.

Policy 1.3.gh: The Parker mixed-use development which includes parcels 03044-010-001, 002, 003, 03044-011-001, 002, 003 03044-012-001, 002, 003, 004, and 005 to a combined maximum of 250,000 square feet of building area. Combined uses in this development must be pedestrian oriented and bicycle accessible. The commercial portions of the development must be linked to internal roads and pedestrian paths of the new residential development and existing external roads and pedestrian paths abutting the development.

Policy 1.3.hi: The following sub-policies shall be applicable to Tax Parcel 03020-000-000 or any subset of the parcel.

1. In order to enhance stormwater treatment conditions and to provide stormwater water quality improvements, the owner/developer of Tax Parcel 03020-000-000 will provide on-site stormwater water quality treatment for the Florida Department of Transportation (FDOT) stormwater runoff as set forth below:
 - a. Concurrent with or prior to any commercial development on Parcel 03020-000-000 (or subset of the parcel), the owner/developer shall provide on-site stormwater water quality treatment volume of 0.5 inches of runoff of the I-75 drainage adjacent to the parcel that is associated with FDOT culverts 2/3 & 4/5 as indicated on the FDOT Drainage Map titled "FDOT Map I-75 Alachua County - US 441 To Columbia County Line 26260-3427." The treatment shall occur on the portion of Parcel 03020-000-000 with a Recreation land use designation.
 - b. The owner/developer shall coordinate the stormwater water quality improvements with the FDOT and the City of Alachua. Improvements will be in the form of a stormwater basin(s) providing volume treatment to infiltrate through the natural ground. The stormwater basin(s) shall be privately owned and maintained.
 - c. Construction of the stormwater water quality improvements may include partnership on the project with, but not limited to, FDOT, Suwannee River Water Management District, or another governmental agency.
 - d. Consistent with the Recreation future land use category on the property, the stormwater water quality treatment area shall be designed to encourage passive recreation use in the form of pervious pathways or nature trails. This passive recreation area shall be privately owned and maintained.
2. The portion of Tax Parcel 03020-000-000 (or subset of the parcel) designated as Commercial on the Future Land Use Map by Ordinance 21-02 shall be zoned Community Commercial (CC) or a less intensive zoning district.

Objective 1.4: *Corporate Park*

The City shall establish ~~one~~Corporate Park as a mixed-use land use category: ~~Corporate Park~~. This land use category shall provide a range of research and development, technology and biotechnology industries, office, supporting retail, and limited residential uses located near major transportation corridors. The Corporate Park category is intended to:

1. provide appropriate locations for mixed use office-oriented development to promote and foster the growth of established industries within the City, including but not limited to research and development and technology and biotechnology, with provisions for a variety of residential uses; and,
2. provide a variety of employment opportunities to the citizens of Alachua and the North Central Florida Region.

Objective 1.5: *Industrial*

The City shall establish one industrial land use category: Industrial. This land use category shall provide a broad range of clean industry, warehousing, research, and technology industries, to provide a variety of job opportunities to the citizens of Alachua and the North Central Florida Region.

Policy 1.5.b: The Industrial land use category may include industrial service uses, office/business parks, biotechnology and other technologies, business incubators, self-storage facilities, a limited amount of retail sales and services, live/work uses, ~~traditional neighborhood design planned developments~~, employment center planned developments, outdoor storage yard or lots, and construction industry uses either as allowed uses or with special exceptions.

Policy 1.5.d: The City shall develop performance standards for uses in the Industrial land use category in order to address the following:

1. Integration of vehicular and non-vehicular access into the site and access management features of site in terms of driveway cuts and cross access between adjacent sites, including use of frontage roads and/or shared access;
2. Buffering from adjacent existing/potential uses;
3. Open space provisions and balance of proportion between gross floor area and site size;
4. Adequacy of pervious surface area in terms of drainage requirements;
5. Placement of signage;

6. Adequacy of site lighting and potential impacts of lighting upon the surrounding area. Lighting should be designed to minimize impacts to preserve the ambiance and quality of the nighttime sky by reducing light trespass and light pollution on adjacent properties by utilizing lighting at an appropriate intensities, directions and times to ensure light is not overused or impacting areas where it is not intended;
7. Safety of on-site circulation patterns (patron, employee and delivery vehicles, trucks), including parking, layout, drive aisles, and points of conflict;
8. Landscaping, as it relates to the requirements and goals of the Comprehensive Plan and Land Development Regulations;
9. Unique features and resources which may constrain site development, such as soils, existing vegetation and historic significance; and
10. Performance based zoning requirements that may serve as a substitute for or accompany land development regulations in attaining acceptable site design; and,
11. Industrial-Non-residential uses shall be limited to an intensity of less than or equal to 0.50 floor area ratio for parcels 5 acres or greater, 0.75 floor area ratio for parcels less than 5 acres but greater than 1 acre, and 1.0 floor area ratio for parcels 1 acre or less. Residential uses are limited to a density of 8 dwelling units per acre.

ECONOMIC ELEMENT

~~Mixed-use: Live/Work, Retail/Office, Residential/Retail and Residential/Office development. Its purpose is to increase the types of spaces available for living and working to encourage a mix of compatible uses in certain areas, and to encourage the upgrading of certain areas with buildings designed to provide a high quality pedestrian oriented street environment. Mixed Use may include permitted activities mixed within the same building or within separate buildings on the same site or on nearby sites.~~

~~Live/Work refers to one or more individuals living in the same building where they earn their livelihood, usually in professional or light industrial activities.~~

~~Retail/Office, Residential/Retail, and Residential/Office provide other variations to Mixed Use with Retail typically on the ground floor and Residential on upper floors. Design standards ensure that development is compatible and contributes to the character of the street and neighborhood.~~

NEEDS ANALYSIS

Chapter 163.3177(6)(a)4., Florida Statutes, requires the Future Land Use Element of a Comprehensive Plan to provide a balance of uses that foster vibrant, viable communities and economic development opportunities and address outdated development patterns, such as antiquated subdivisions. The amount of land designated for future land uses should allow the operation of real estate markets to provide adequate choices for permanent and seasonal residents and business and may not be limited solely by the projected population. The element shall accommodate at least the minimum amount of land required to accommodate the medium projections as published by the Office of Economic and Demographic Research for at least a 10-year planning period unless otherwise limited under s. 380.05, including related rules of the Administration Commission.

The University of Florida Bureau of Economic and Business Research (BEBR) annually releases population estimates and projections for cities and counties in the state of Florida. As of April 1, 2024, the City of Alachua was preliminarily estimated to have a population of 11,296. City Staff analyzed the official published projections through 2050 and analyzed the medium population projections, resulting in a medium population projection of 14,080 by the year 2050⁴.

The proposed text amendment is not altering the amount of lands designated for any use type. Lands currently designated as a Commercial future land use category will be designated as a Commercial and Mixed-Use future land use category, retaining their commercial land use designations and providing enough lands to accommodate the minimum amount of land for a 10-year planning period as required by Chapter 163, Florida Statutes.

Additionally, the Commercial and Mixed-Use future land use categories support and encourage mixed-use development. The mix of uses can serve to meet the demands of residents and businesses within to address future growth within the City, promoting an increase in housing stock and housing diversity. The variety of uses permitted by the Commercial and Mixed-Use future land use categories also allow real estate markets to provide adequate choices for permanent and seasonal residents and business which fosters vibrant, viable communities and economic development opportunities.

⁴ Bureau of Economic and Business Research. (2024). *Florida Estimates of Population 2023*. Gainesville: University of Florida.

URBAN SPRAWL ANALYSIS

Section 163.3177, Florida Statutes, requires that any amendment to the Future Land Use Element discourage the proliferation of urban sprawl. Section 163.3177(6)(a)9.a., Florida Statutes, identifies 13 primary urban sprawl indicators and states that, “[t]he evaluation of the presence of these indicators shall consist of an analysis of the plan or plan amendment within the context of features and characteristics unique to each locality...”

An evaluation of each primary indicator is provided below.

- (I) Promotes, allows, or designates for development substantial areas of the jurisdiction to develop as low-intensity, low-density, or single-use development or uses.

Evaluation & Findings: The Commercial and Mixed-Use future land use categories promote, allow, and encourage mixed-use development, allowing a variety of multi-use development areas of varying densities and intensities.

- (II) Promotes, allows, or designates significant amounts of urban development to occur in rural areas at substantial distances from existing urban areas while not using undeveloped lands that are available and suitable for development.

Evaluation & Findings: The Commercial and Mixed-Use future land use categories are urban in nature and designate lands currently designated as a Commercial future land use category as a Commercial and Mixed-Use future land use category. Mixed-use development can encourage compact and infill type development and help better utilize undeveloped lands that are available and suitable for development in the existing urban areas of the City. Additionally, the intensities of the Commercial and Mixed-Use future land use categories are weighted to encourage development on smaller lots in the existing urban areas of the City.

- (III) Promotes, allows, or designates urban development in radial, strip, isolated, or ribbon patterns generally emanating from existing urban developments.

Evaluation & Findings: The Commercial and Mixed-Use future land use categories designate lands currently designated as a Commercial future land use category as a Commercial and Mixed-Use future land use category. Mixed-use development can encourage compact and infill type development and may discourage and help resolve radial, strip, isolated, and/or ribbon patterns of existing urban development.

- (IV) Fails to adequately protect and conserve natural resources, such as wetlands, floodplains, native vegetation, environmentally sensitive areas, natural groundwater aquifer recharge areas, lakes, rivers, shorelines, beaches, bays, estuarine systems, and other significant natural systems.

Evaluation & Findings: The Commercial and Mixed-Use future land use categories are urban in nature and designate lands currently designated as a Commercial future land use category as a Commercial and Mixed-Use future land use category. Mixed-use development can encourage compact and infill type development, potentially reducing the impacts of utilizing undeveloped rural lands and natural resource areas for new development. The proposed text amendment will not reduce previously approved design requirements that address the protection of natural resources.

- (V) Fails to adequately protect adjacent agricultural areas and activities, including silviculture, active agricultural and silvicultural activities, passive agricultural activities, and dormant, unique, and prime farmlands and soils.

Evaluation & Findings: The Commercial and Mixed-Use future land use categories are urban in nature and designate lands currently designated as a Commercial future land use category as a Commercial and Mixed-Use future land use category. Mixed-use development can encourage compact and infill type development, potentially reducing the impacts of utilizing undeveloped rural lands and agricultural use areas for new development. The proposed text amendment will not reduce the amount of land currently designated with an Agriculture future land use category nor will the proposed text amendment reduce any previously approved design requirements that address the protection of agricultural lands.

- (VI) Fails to maximize use of existing public facilities and services.

Evaluation & Findings: The Commercial and Mixed-Use future land use categories are urban in nature and designate lands currently designated as a Commercial future land use category as a Commercial and Mixed-Use future land use category. Mixed-use development can encourage compact and infill type development, allowing for the efficient delivery, use, and maintenance of existing public utilities, facilities, and services to areas designated as a Commercial and Mixed-Use future land use category.

- (VII) Fails to maximize use of future public facilities and services.

Evaluation & Findings: The Commercial and Mixed-Use future land use categories are urban in nature and designate lands currently designated as a Commercial future land use category as a Commercial and Mixed-Use future land use category. Mixed-use development can encourage compact and infill type development, allowing for the efficient extension, use, and maintenance of any future public utilities, facilities, and services to areas designated as a Commercial and Mixed-Use future land use category.

- (VIII) Allows for land use patterns or timing which disproportionately increase the cost in time, money, and energy of providing and maintaining facilities and services, including roads, potable water, sanitary sewer, stormwater management, law enforcement, education, health care, fire and emergency response, and general government.

Evaluation & Findings: The Commercial and Mixed-use future land use categories encourage compact and infill type development, promoting the efficient utilization of time, money, and energy of providing and maintaining public facilities and services. Encouraging infill development may provide an opportunity to lower the relative cost of delivering and maintaining public facilities and services to areas designated as a Commercial and Mixed-Use future land use category.

- (IX) Fails to provide a clear separation between rural and urban uses.

Evaluation & Findings: The Commercial and Mixed-Use future land use categories are urban in nature and designate lands currently designated as a Commercial future land use category as a Commercial and Mixed-Use future land use category. The three Commercial and Mixed-Use future land use categories allow for a gradient of varying densities and intensities that contextualize the relationship between urban and rural uses. The Commercial and Mixed-Use future land use categories only permit for urban uses and will be located in, or adjacent to, existing urban areas of the City. The proposed text amendment will not reduce previously approved design requirements that address buffering from adjacent existing/potential uses.

- (X) Discourages or inhibits infill development or the redevelopment of existing neighborhoods and communities.

Evaluation & Findings: The Commercial and Mixed-Use future land use categories encourage mixed-use development. Mixed-use development can encourage compact and infill type development and help better utilize undeveloped lands that are available and suitable for development in the existing urban areas of the City. Additionally, the intensities of the Commercial and Mixed-Use future land use categories are weighted to encourage development on smaller lots in the existing urban areas of the City.

- (XI) Fails to encourage a functional mix of uses.

Evaluation & Findings: The Commercial and Mixed-Use future land use categories promote and encourages mixed-use development, providing a variety of uses, including offices, retail sales and services, neighborhood commercial, eating establishments, recreation, visitor accommodations, single-family residential dwellings, multifamily residential dwellings, and other similar uses. The future land use categories are intended to promote walkability and interconnectivity of adjacent land uses and provides for both locally facing uses in lower intensity areas and regionally facing uses in higher intensity areas and along major arterials and collector roadways.

- (XII) Results in poor accessibility among linked or related land uses.

Evaluation & Findings: The Commercial and Mixed-Use future land use categories encourage mixed-use development. A variety of uses are permitted for in each of the three Commercial and Mixed-Use future land use categories, including offices, neighborhood commercial, retail sales and services, eating establishments, recreation, visitor accommodations, single-family dwellings (attached and detached), multifamily dwellings (apartments, townhomes, and quadplexes), upper story dwelling units, and other similar uses.

- (XIII) Results in the loss of significant amounts of functional open space.

Evaluation & Findings: The Commercial and Mixed-Use future land use categories incorporate design standards that must be evaluated when considering development proposals within the three categories. Considerations include an open space provision. The proposed text amendment will not reduce previously approved design requirements that address the provision of open space.

COMPRHENSIVE PLAN CONSISTENCY ANALYSIS

The Goals, Objectives, and Policies (GOPs) identified below are provided to establish a basis of the text amendment's consistency with the Comprehensive Plan. There may be additional GOPs which the application is consistent with that are not identified within this report. An evaluation and findings of consistency with the identified GOPs is also provided below.

Vision Element

II. VISION STATEMENT

The City has a strong image as the “Good Life Community.” The image is woven throughout the work of the City with a commitment to premium service delivery and a high quality of life. The City will be a business friendly community, encouraging economic development and the establishment and expansion of major job centers in the industries of logistics, manufacturing, high-tech and bio-tech. The City will continue to invest in providing high quality recreational and cultural arts facilities and programs that create a sense of community. Alachua will be a place where housing choices are available to meet the needs of all citizens. Alachua will be a leader in fostering quality well-planned growth and redevelopment. Alachua will be a community where citizens can safely choose one of several multi-modal transportation options, including cycling, walking, and innovative options such as ride shares. Alachua will strive to be continually known for its collaboration between citizens, business communities, schools and government and will continue working together for the common good.

Evaluation & Findings: The proposed text amendment to the Commercial and Mixed-Use future land use categories will support the City's vision statement by promoting an increase in housing stock and diversity of the housing stock. Additionally, encouraging compact and infill development may make different transportation modes, such as cycling and walking, more viable and appealing.

III. GOALS TO IMPLEMENT THE VISION

Goal 1: Economic Development

The City of Alachua has a unique business climate. The City is home to corporations, technology incubators, local businesses and start-up companies. The City will maintain its focus on a welcoming business environment and encourage business development in the downtown area and along the US 441 corridor. The City supports a sustainable, thriving Main Street with a variety of businesses and a downtown area that attracts shoppers and patrons through cutting edge marketing strategies. The City will continue to support the redevelopment and revitalization of the historic center of the community. Alachua desires to continue to be a home to innovative businesses and an employment center where jobs are available to citizens of all educational and skill levels and ages. The City will continue to encourage the growth of and development of established industries, such as the life sciences, technologies and emerging industries and encourage the diversification and expansion of commercial businesses which provide integral services to the City's residents.

The City will encourage a sustainable use of natural resources to ensure that economic growth and development will responsibly continue within the community. The City will build strong relationships with local, regional and state-wide economic development organizations in order to work together to retain existing businesses and attract future businesses. The City will pursue business incentives that encourage additional private investment from new or existing businesses that will enhance employment opportunities and the quality of life of residents.

Evaluation & Findings: The text amendment to the Commercial and Mixed-Use future land use categories will support this goal by continuing to encourage business development within the downtown area, helping to support the redevelopment and revitalization of the historic center of the City. Additionally, mixed-use development has the potential to encourage the development of small and local businesses.

Goal 3: Transportation Mobility

The City of Alachua transportation system includes a heavily traveled US 441 corridor and a walkable downtown Main Street. The City will provide efficient traffic circulation that is safe and convenient, while maintaining or improving the level of service on roadways. The City will encourage multi-modal enhancement and trail systems, and provide for an aesthetically pleasing gateway between the I-75 interchange and downtown. The City will further a safe and connected pedestrian network that helps ensure a high quality of life for residents and visitors of all ages and abilities. New roadway construction and significant reconstruction projects will incorporate the principles embodied by the Complete Streets approach whenever possible. The City will explore opportunities for public transportation for Alachua residents, including innovative options such as ride shares and other emerging and technology-based options. The City will continue to pursue the interconnectivity of development in order to limit access points onto roadways thereby reducing negative impacts upon the transportation network. The City will strengthen connections between major hubs within the community, such as those between the historic core and Progress Park and Legacy Park.

Evaluation & Findings: The text amendment to the Commercial and Mixed-Use future land use categories will support this goal by encouraging compact and infill development in urban areas of the City, promoting a walkable atmosphere and an extended sidewalk system.

Goal 4: Residential Opportunities

The City of Alachua recognizes that residential development is tied to growth and employment opportunities and supports a diversity of housing types in order to enhance the City's physical and social fabric. The City will encourage the provision of housing types to serve a wide range of people, from those moving to Alachua to work and/or raise families to those seeking senior housing and assisted living options. The City supports the provision of safe, affordable housing for all income levels. The City will encourage the construction of housing types including single-family conventional dwelling units, duplexes and quadplexes, apartments and town homes, traditional mixed use neighborhood planned development, live/work units, conservation subdivisions, and other innovative housing options that respond to societal changes and needs and are appropriate for the character of the City.

The City supports enhancements that strengthen and improve existing neighborhoods, thereby maintaining a livable community for all demographics.

Evaluation & Findings: The text amendment to the Commercial and Mixed-Use future land use categories will support this goal as the amendment focuses on increasing housing choice and opportunity by encouraging the placement of housing units of varying types in commercial developments that would otherwise not contain residential components.

Future Land Use Element

Goal 1: *Future Land Use Map 2035*

The City shall maintain a Future Land Use Map in order to effectively guide development in a sustainable manner and to ensure economic prosperity and stability while maintaining a high quality of life for all of its present and future citizens, businesses, and visitors.

Objective 2.7: *Discouragement of Urban Sprawl*

The City shall discourage the proliferation of urban sprawl as set forth in Chapter 163, Florida Statutes.

Evaluation & Findings: The text amendment has been evaluated against the standards in Chapter 163, Florida Statutes and will focus on promoting compact and infill development, encouraging a sustainable development pattern.

Housing Element

Policy 1.1.a The City shall encourage development of a variety of housing types including conventional single family homes, accessory dwelling units, multi-family units, group homes, assisted living facilities, foster care facilities, mobile homes, and manufactured homes, and shall ensure that appropriate land use designations and zoning districts exist to accommodate each type.

Evaluation & Findings: The text amendment to the Commercial and Mixed-Use future land use categories will support the development of a variety of housing types as the amendment focuses on increasing housing choice and opportunity by encouraging the placement of housing units of varying types in commercial developments that would otherwise not contain residential components.

Conservation and Open Space Element

Policy 1.4.f The City shall promote mixed use and compact development to promote pedestrian, golf cart and bicycle traffic and reduce automobile dependency.

Evaluation & Findings: The text amendment to the Commercial and Mixed-Use future land use categories allows for mixed-use developments, containing a variety of uses, that encourage compact and infill development to reduce automobile dependency.

FISCAL YEAR 2024 STRATEGIC PLAN

Goal 4 of the City's 2024 Strategic Plan focuses on residential opportunities, with Initiative 4.2 relating to housing types and infill development:

Initiative 4.2

Develop strategies to ensure cohesive and compatible residential development to accommodate the growth of infill development and redevelopment within the City.

The text amendment directly impacts the initiative by promoting increased density and an increase in compatible uses with residential development, primarily in the Central City Area. A main focus of the text amendment is to encourage infill development in the Central City Area and other commercial areas of the City. Initiative 4.2 directly calls out a need for increasing the efficient utilization of land, and increasing the opportunity for infill development may have a positive impact on efficient land utilization.

Mixed-use developments have the potential to make more compact, infill developments more economically viable and attractive to developers by allowing an increase in density and intensity of development. Additionally, the text amendment allows for the creation of transitional future land use categories from residential to commercial with higher densities and intensities featuring a mix of land uses. The text amendment increases flexibility for developers and residents in housing product delivery and consumption and increases the potential location options for local business owners.

CONCLUSIONS

The three Commercial and Mixed-Use future land use categories allow for a mix of uses, including offices, neighborhood commercial, retail sales and services, eating establishments, recreation, visitor accommodations, single-family dwellings, multifamily dwellings (apartments, townhomes, and quadplexes), upper story dwelling units, and other similar uses. These future land use categories allow for development to incorporate commercial and residential elements into unified developments, encouraging compact and infill development and promoting an increase in housing stock diversity. The proposed text amendment supports the intent of the City's Vision, Comprehensive Plan, and Strategic Initiative 4.2, which will provide greater design flexibility and development options within the urbanized portions of the City of Alachua.

EXHIBIT "A"
TO
COMMERCIAL AND MIXED-USE FUTURE LAND USE CATEGORIES
STAFF INITIATED COMPREHENSIVE PLAN AMENDMENT
STAFF REPORT

SUPPORTING APPLICATION MATERIALS
SUBMITTED BY CITY STAFF TO THE
PLANNING AND ZONING BOARD

ORDINANCE 24-12

AN ORDINANCE OF THE CITY OF ALACHUA, FLORIDA, RELATING TO THE AMENDMENT OF THE CITY'S COMPREHENSIVE PLAN; AMENDING THE CITY'S COMPREHENSIVE PLAN ADMINISTRATION AND IMPLEMENTATION ELEMENT TO ESTABLISH A NEW DEFINITION FOR MIXED-USE; AMENDING THE CITY'S COMPREHENSIVE PLAN FUTURE LAND USE ELEMENT TO ESTABLISH MIXED-USE FUTURE LAND USE CATEGORIES; AMENDING THE CITY'S COMPREHENSIVE PLAN ECONOMIC ELEMENT TO REMOVE AN EXISTING DEFINITION FOR MIXED-USE; PROVIDING A REPEALING CLAUSE; PROVIDING SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

RECITALS

WHEREAS, the Community Planning Act (Section 163.3161 et. seq), Florida Statutes, requires each local government to maintain a comprehensive plan; and,

WHEREAS, the City Commission of the City of Alachua adopted its Comprehensive Plan on January 22, 1992, by Ordinance No. 0-91-23 and last updated its Comprehensive Plan on March 28, 2022; and,

WHEREAS, a duly advertised public hearing was conducted on the proposed amendment on September 10, 2024, by the Planning and Zoning Board, sitting as the Local Planning Agency (LPA) and the LPA reviewed and considered comments received during the public hearing concerning the application and made its recommendation to the City Commission; and,

WHEREAS, the City Commission considered the recommendation of the LPA at a duly advertised public hearing on _____, 2024, provided for and received public participation, and approved the amendment for transmittal to the Florida Department of Economic Opportunity (DEO) and reviewing agencies; and

WHEREAS, the DEO has reviewed the proposed amendment and issued its comment letter on _____, 2024; and,

WHEREAS, the City Commission considered the comments received from the DEO and reviewing agencies; and

WHEREAS, the City Commission held a duly advertised public hearing on adoption of the proposed amendment and provided for and received public participation, and approved the amendment on _____, 2024 with no changes since the transmittal hearing; and

WHEREAS, for reasons set forth in this ordinance that is hereby adopted and incorporated as findings of fact, that the Alachua City Commission finds and declares that the enactment of this Amendment is in the furtherance of the public health, safety, morals, order, comfort, convenience, appearance, prosperity, or general welfare;

NOW THEREFORE BE IT ORDAINED BY THE CITY COMMISSION OF THE CITY OF ALACHUA, FLORIDA:

Section 1. Interpretation of Recitals

The above recitals are true and correct and incorporated in this ordinance.

Section 2. Findings of Fact and Conclusions of Law

The authority for the enactment of this ordinance is Chapter 163, Part I, Florida Statutes; Sections 166.021 and 166.041; and the City's Comprehensive Plan.

Section 3. Comprehensive Plan Amendment to Establish a Definition for "Mixed-Use"

The City of Alachua Comprehensive Plan Administration and Implementation Element is hereby amended as follows to establish the following definition for mixed-use, to be added in its alphabetical position within the Definitions section of the Administration and Implementation Element (text that is underlined is to be added and text that is shown as ~~strikethrough~~ is to be removed):

Mixed-use: a building or a distinct area containing a mix of uses which functionally integrate and interconnect with one another. The City may further define the term "mixed-use" in the Land Development Regulations through the creation of subsections.

Section 4. Comprehensive Plan Amendment to Establish Mixed-Use Future Land Use Categories

The City of Alachua Comprehensive Plan Future Land Use Element is hereby amended as follows to amend the current commercial future land use categories to be commercial & mixed-use future land use categories (text that is underlined is to be added and text that is shown as ~~strikethrough~~ is to be removed):

Objective 1.3: Commercial & Mixed-Use

The City shall establish three commercial and mixed-use land use categories: Community Commercial, Commercial, and Central Business District. These land use categories shall provide a broad range of commercial uses, including retail sales and services, personal services, offices, and tourist-oriented uses, and the potential for mixed-use developments in order to provide for the availability of goods and services, both to the citizens and visitors of Alachua and to the citizens of the North Central Florida region while diversifying the housing stock.

Policy 1.3.a: Community Commercial: The Community Commercial land use category is a mixed-use land use category established to provide neighborhood and community scale goods and services to adjacent neighborhood and residential areas while allowing for the development of a diverse and affordable housing stock. The Community Commercial land use category also serves as a transitional land use category between residential and commercial land use categories. The following uses are allowed within the Community Commercial land use category:

1. Neighborhood commercial establishments;
2. Residential/offices and live-work units;
3. Business and professional offices;
4. Personal services;
5. Financial institutions;
6. Retail sales and services that serve the community;
7. Eating establishments;
8. Indoor recreation/entertainment;
9. Single-family and multi-family residential above first floor commercial uses;
10. ~~Bed and breakfast;~~ Visitor accommodations;
11. Supporting community services such as schools, houses of worship, parks, and community centers; ~~and~~;
12. Traditional Neighborhood Planned Developments;:
13. Single family attached units;
14. Apartments and townhomes; and
15. Duplexes and quadplexes.

Development in the Community Commercial land use category may occur as mixed-use or non-mixed-use.

Policy 1.3.b: *Commercial:* The Commercial land use category is established to provide for general commercial uses, as well as more intense commercial and highway commercial uses. This is the land use category in which large-scale, regional commercial uses may locate. The following uses are allowed within the Commercial land use category:

1. Retail sales and services;
2. Personal services;
3. Financial institutions;
4. ~~Outdoor~~ Recreation and entertainment;
5. Tourist-related uses;
6. ~~Hotels and motels;~~ Visitor accommodations;
7. Commercial shopping centers;
8. Auto-oriented uses;
9. Traditional Neighborhood Planned Developments;
10. Employment Center Planned Developments;
11. Commercial recreation centers;
12. Office/business parks;
13. Limited industrial services; ~~and,~~
14. Eating establishments-
15. Single family attached units;
16. Apartments and townhomes;
17. Duplexes and quadplexes;
18. Single-family and multi-family residential above first floor commercial uses;
19. Convention centers; and,
20. Supporting community services such as schools, houses of worship, parks, and community centers.

Development in the Commercial land use category may occur as mixed-use or non-mixed-use.

Policy 1.3.c: *Central Business District:* The Central Business District land use category is established to provide an area that forms the City's center for financial, commercial, governmental, professional, and cultural activities. This category is to encourage the development of a Central Business District as a focal point for the community that provides the services for people to live, work and shop. The following uses are allowed in the Central Business District land use category:

1. Single family attached and detached dwelling units;
2. Residential/offices and live-work units;
3. Business and professional offices;
4. Personal services;
5. Financial institutions;
6. Eating establishments;
7. Retail sales and services that serve the community;
8. Single-family and multi-family residential above first floor commercial uses;
9. Supporting community services such as schools, houses of worship, parks, and community centers;
10. Traditional Neighborhood Planned Developments;
11. Convention centers; ~~and,~~
12. ~~Hotels, motels, and bed and breakfast inns.~~ Visitor accommodations;
13. Apartments and townhomes;
14. Duplexes and quadplexes; and,
15. Indoor recreation and entertainment.

Development in the Central Business District land use category may occur as mixed-use or non-mixed-use.

Policy 1.3.d: *Design and performance standards:* The following criteria shall apply when evaluating ~~commercial~~ development proposals in the commercial & mixed-use land use categories:

1. Integration of vehicular and non-vehicular access into the site and access management features of site in terms of driveway cuts and cross access between adjacent sites, including use of frontage roads and/or shared access;
2. Buffering from adjacent existing/potential uses;
3. Open space provisions and balance of proportion between gross floor area and site size;
4. Adequacy of pervious surface area in terms of drainage requirements;
5. Placement of signage;
6. Adequacy of site lighting and potential impacts of lighting upon the surrounding area. Lighting should be designed to minimize impacts to preserve the ambiance and quality of the nighttime sky by reducing light trespass and light pollution on adjacent properties by utilizing lighting at appropriate intensities, directions and times to ensure light is not overused or impacting areas where it is not intended;
7. Safety of on-site circulation patterns (patron, employee, and delivery vehicles), including parking layout, drive aisles, and points of conflict;
8. Landscaping, as it relates to the requirements and goals of the Comprehensive Plan and Land Development Regulations;
9. Unique features and resources which may constrain site development such as soils, existing vegetation and historic significance; and,
10. Performance based zoning requirements, which may serve as a substitute for or accompany land development regulations in attaining acceptable site design; and,
- ~~11. Commercial uses are limited to an intensity of less than or equal to 0.50 floor area ratio for parcels 5 acres or greater, 0.75 floor area ratio for parcels less than 5 acres but greater than 1 acre, and 1.0 floor area ratio for parcels 1 acre or less.~~

Policy 1.3.e: *Density and intensity standards.*

1. Non-mixed-uses. The following density and intensity standards shall apply to non-mixed-use development proposals in the commercial & mixed-use land use categories:
 - a. Density. Residential uses are limited to a density of 10 dwelling units per acre in the Community Commercial land use category and 15 dwelling units per acre in the Commercial and Central Business District land use categories.
 - b. Intensity. Non-residential uses are limited to an intensity of less than or equal to 0.5 floor area ratio for parcels 5 acres or greater, 0.75 floor area ratio for parcels less than 5 acres but greater than 1 acre, and 1.0 floor area ratio for parcels 1 acre or less.
2. Mixed-uses. The following density and intensity standards shall apply to mixed-use development proposals in the commercial & mixed-use land use categories:
 - a. Density. Residential uses are limited to a density of 15 dwelling units per acre in the Community Commercial and Commercial land use categories and 20 dwelling units per acre in the Central Business District land use category.
 - b. Intensity. Non-residential uses are limited to an intensity of 0.6 floor area ratio for parcels 5 acres or greater, 0.85 floor area ratio for parcels less than 5 acres but greater than 1 acre, and 1.25 floor area ratio for parcels less than 1 acre.

- Policy 1.3.ef: The creation/promotion of strip pattern commercial development shall be discouraged. Infill within established commercial areas is preferred over extension of a strip commercial pattern. Extension of a commercial land use designation may be considered in circumstances where the extension is compatible with the existing land uses surrounding the land or the land use categories of surrounding lands. Extensions of a commercial land use category shall not encroach into a residential area. The following criteria shall be applied to limit the impacts of commercial development upon surrounding areas:
1. Impacts upon traffic circulation should be anticipated and mitigated through the reservation of right-of-way for road widening and marginal access streets when appropriate.
 2. Access points for commercial development shall minimize points of conflict by utilizing frontage roads, providing cross access between parcels, or installing shared use ingress and egress access driveways connections to roadways.
 3. Setbacks and landscaped or other appropriate buffers shall be established to mitigate the visual impacts of commercial development upon surrounding land uses.
 4. A sidewalk or bicycle path shall be required where appropriate, to provide convenient access to the development from surrounding areas and to reduce traffic volumes on the roadways.
- Policy 1.3.fg: The City shall pursue the establishment of activity centers and similar criteria to guide the placement and design of commercial and business areas.
1. The City shall establish and maintain a Gateway Activity Center at the interchange of US 441 and Interstate 75. The boundaries of the Gateway Activity Center shall be based on the Generalized US 441/I-75 Activity Center Map provided in the Future Land Use Map Series. The intent of this activity center is to welcome existing and future residents and visitors to the City, and to promote Alachua as an attractive, vibrant, and economically prosperous community.
 2. The City shall establish and maintain the US 441 corridor as a Corporate Corridor Activity Center. The intent of establishing this activity center is to implement economic development objectives and to promote a coordinated development plan to maximize existing and future land use patterns and preserve the function of the US 441 corridor.
- Policy 1.3.gh: The Parker mixed-use development which includes parcels 03044-010- 001, 002, 003, 03044-011-001, 002, 003 03044-012-001, 002, 003, 004, and 005 to a combined maximum of 250,000 square feet of building area. Combined uses in this development must be pedestrian oriented and bicycle accessible. The commercial portions of the development must be linked to internal roads and pedestrian paths of the new residential development and existing external roads and pedestrian paths abutting the development.
- Policy 1.3.hi: The following sub-policies shall be applicable to Tax Parcel 03020-000-000 or any subset of the parcel.
1. In order to enhance stormwater treatment conditions and to provide stormwater water quality improvements, the owner/developer of Tax Parcel 03020-000-000 will provide on-site stormwater water quality treatment for the Florida Department of Transportation (FDOT) stormwater runoff as set forth below:
 - a. Concurrent with or prior to any commercial development on Parcel 03020-000-000 (or subset of the parcel), the owner/developer shall provide on-site stormwater water quality treatment volume of 0.5 inches of runoff of the I-75 drainage adjacent to the parcel that is associated with FDOT culverts 2/3 & 4/5 as indicated on the FDOT Drainage Map titled "FDOT Map I-75 Alachua County – US 441 To Columbia County Line 26260-3427." The treatment shall occur on the portion of Parcel 03020-000-000 with a Recreation land use designation.

- b. The owner/developer shall coordinate the stormwater water quality improvements with the FDOT and the City of Alachua. Improvements will be in the form of a stormwater basin(s) providing volume treatment to infiltrate through the natural ground. The stormwater basin(s) shall be privately owned and maintained.
 - c. Construction of the stormwater water quality improvements may include partnership on the project with, but not limited to, FDOT, Suwannee River Water Management District, or another governmental agency.
 - d. Consistent with the Recreation future land use category on the property, the stormwater water quality treatment area shall be designed to encourage passive recreation use in the form of pervious pathways or nature trails. This passive recreation area shall be privately owned and maintained.
2. The portion of Tax Parcel 03020-000-000 (or subset of the parcel) designated as Commercial on the Future Land Use Map by Ordinance 21-02 shall be zoned Community Commercial (CC) or a less intensive zoning district.

Objective 1.4: Corporate Park

The City shall establish ~~one Corporate Park as a mixed-use land use category.~~ ~~Corporate Park.~~ This land use category shall provide a range of research and development, technology and biotechnology industries, office, supporting retail, and limited residential uses located near major transportation corridors. The Corporate Park category is intended to:

1. provide appropriate locations for mixed use office-oriented development to promote and foster the growth of established industries within the City, including but not limited to research and development and technology and biotechnology, with provisions for a variety of residential uses; and,
2. provide a variety of employment opportunities to the citizens of Alachua and the North Central Florida Region.

Objective 1.5: Industrial

The City shall establish one industrial land use category: Industrial. This land use category shall provide a broad range of clean industry, warehousing, research, and technology industries, to provide a variety of job opportunities to the citizens of Alachua and the North Central Florida Region.

Policy 1.5.b: The Industrial land use category may include industrial service uses, office/business parks, biotechnology and other technologies, business incubators, self-storage facilities, a limited amount of retail sales and services, live/work uses, ~~traditional neighborhood design planned developments~~, employment center planned developments, outdoor storage yard or lots, and construction industry uses either as allowed uses or with special exceptions.

Policy 1.5.d: The City shall develop performance standards for uses in the Industrial land use category in order to address the following:

1. Integration of vehicular and non-vehicular access into the site and access management features of site in terms of driveway cuts and cross access between adjacent sites, including use of frontage roads and/or shared access;
2. Buffering from adjacent existing/potential uses;
3. Open space provisions and balance of proportion between gross floor area and site size;
4. Adequacy of pervious surface area in terms of drainage requirements;
5. Placement of signage;
6. Adequacy of site lighting and potential impacts of lighting upon the surrounding area. Lighting should be designed to minimize impacts to preserve the ambiance and quality of the nighttime sky by reducing light trespass and light pollution on adjacent properties by utilizing lighting at an appropriate intensities, directions and times to ensure light is not overused or impacting areas where it is not intended;
7. Safety of on-site circulation patterns (patron, employee and delivery vehicles, trucks), including parking, layout, drive aisles, and points of conflict;

8. Landscaping, as it relates to the requirements and goals of the Comprehensive Plan and Land Development Regulations;
9. Unique features and resources which may constrain site development, such as soils, existing vegetation and historic significance; and
10. Performance based zoning requirements that may serve as a substitute for or accompany land development regulations in attaining acceptable site design; and,
11. ~~Industrial-Non-residential~~ uses shall be limited to an intensity of less than or equal to 0.50 floor area ratio for parcels 5 acres or greater, 0.75 floor area ratio for parcels less than 5 acres but greater than 1 acre, and 1.0 floor area ratio for parcels 1 acre or less. Residential uses are limited to a density of 8 dwelling units per acre.

Section 5. Comprehensive Plan Amendment to Remove a Definition for “Mixed-Use”

The City of Alachua Comprehensive Plan Economic Element is hereby amended as follows to remove the following definition for mixed-use from its alphabetical position within the Definitions section of the Economic Element (text that is underlined is to be added and text that is shown as ~~strikethrough~~ is to be removed):

~~**Mixed-use:** Live/Work, Retail/Office, Residential/Retail and Residential/Office development. Its purpose is to increase the types of spaces available for living and working to encourage a mix of compatible uses in certain areas, and to encourage the upgrading of certain areas with buildings designed to provide a high-quality pedestrian-oriented street environment. Mixed Use may include permitted activities mixed within the same building or within separate buildings on the same site or on nearby sites.~~

~~Live/Work refers to one or more individuals living in the same building where they earn their livelihood, usually in professional or light industrial activities.~~

~~Retail/Office, Residential/Retail, and Residential/Office provide other variations to Mixed Use with Retail typically on the ground floor and Residential on upper floors. Design standards ensure that development is compatible and contributes to the character of the street and neighborhood.~~

Section 6. Codification of and Correction of Scrivener’s Errors

The City Manager or designee, without public hearing, is authorized to correct any typographical errors which do not affect the intent of this ordinance. A corrected copy shall be posted in the public record.

Section 7. Ordinance to be Construed Liberally

This ordinance shall be liberally construed in order to effectively carry out the purposes hereof which are deemed to be in the best interest of the public health, safety, and welfare of the citizens and residents of the City of Alachua, Florida.

Section 8. Repealing Clause

All ordinances or parts of ordinances in conflict herewith are, to the extent of the conflict, hereby repealed.

Section 9. Severability

It is the declared intent of the City Commission of the City of Alachua that, if any section, sentence, clause, phrase, or provision of this ordinance is for any reason held or declared to be unconstitutional, void, or inoperative by any court or agency of competent jurisdiction, such holding of invalidity or unconstitutionality shall not affect the remaining provisions of this ordinance, and the remainder of the ordinance after the exclusions of such part or parts shall be deemed to be valid.

Section 10. Effective Date

This ordinance shall become effective immediately upon passage and adoption. The effective date of these plan amendments shall be 31 days after the state land planning agency notifies the City of Alachua, Florida that the plan amendment package is complete, unless a timely challenge has been filed by an affected person in accordance with Chapter 163.3184, Florida Statutes. If timely challenged, these plan amendments shall not become effective until the state land planning agency or the Administration Commission enters a final order determining the adopted amendment to be in compliance in accordance with Chapter 163.3184, Florida Statutes. No development orders, development permit, or land uses dependent on this plan amendment may be issued or commenced before this plan amendment has become effective.

Passed on First Reading the ____ day of _____, 2024.

PASSED and ADOPTED, in regular session, with a quorum present and voting, by the City Commission, upon second and final reading this ____ day of _____, 2024.

CITY COMMISSION OF THE
CITY OF ALACHUA, FLORIDA

Gib Coerper, Mayor
SEAL

ATTEST:

APPROVED AS TO FORM

Mike DaRoza, City Manager/Clerk

Marian B. Rush, City Attorney

se a book," face coloring and Libraries will for library card ons, meet Junior see the forestry and more. Food 52 Munchies and lian Ice available chase of lunch eshments. Park is located at 410 eno Park Road, ings, and there is vehicle entry fee.

14: Bags & Fundraiser - High Springs New Woman's Club, West U.S. Hwy 1 Springs. Enjoy ous brunch and playing bingo to stiful purses. The 11 a.m. - 2 p.m. will be donated Foster Ministries h Springs and Paths. Limited - Tickets are \$25. hase tickets, call -3276, Ext. 2.

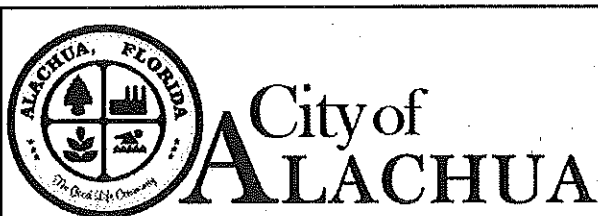
21: 2nd Annual 50's Festival ed in downtown Newberry. Times 4 - 8 p.m. This sponsored by the y Main Street tion. Come til you drop with vn merchants and vendors. Stroll show, take in the , dance the night o classic 50's ive concert from e 57" and enjoy licious treats from restaurants or food Costume Contest. approximately 35 and food trucks. tion open. Apply ps://www.jotform. 094003430139.

Fridays: High Springs Farmers Market from 3 -7 p.m. at the Farmers Market Pavilion, 23517 N.W. 185th Road, High Springs. Local growers, producers and crafters. Veggies, plants, duck and chicken eggs, meats, poultry, canned goods, honey, hot food, soap, art, woodcrafts, and tie dye. For information on how to become a vendor contact Carol at 352-275-6346.

Saturdays: The Newberry Farmers Market, sponsored by the Main Street Organization. This market runs every Saturday from 8 - 12 p.m. and is located in downtown Newberry on the corner of Newberry Road and 254th Street. For further information,

contact the Main Street Organization at newberry mainstreet.com

Tuesdays: Archer Farmers Market from 3 - 7 p.m. on the grounds of the Archer Railway Depot Museum, 16994 S.W. 134th Avenue, Archer. Local farmers offer fresh vegetables, herbs, fruit, honey and plants. Artisan breads and jellies will also be available. Vendors are invited to submit applications and backyard gardeners with excess produce are welcome as well. The Museum will also be open. Vendor applications are available by email request at archerhistorical@gmail.com or by contacting Linda at 352-374-8240



City of ALACHUA

NOTICE

ADVISORY BOARD

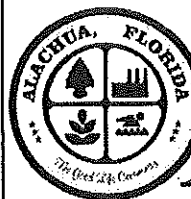
VACANCY

SENIOR RESOURCES

The Alachua City Commission is accepting applications for one (1) member for a three-year term. A minimum of three (3) members must reside in the City of Alachua and two (2) members may be residents of the greater Alachua area. Interested applicants must be willing to attend meetings on at least a quarterly basis and have a keen interest in senior resources.

To apply, you may obtain an application and information from either our website www.cityofalachua.com, or contact the City of Alachua at (386) 418-6100 to obtain a copy. Applications must be received by the City on or before **September 12, 2024**, for consideration. You may send your application Attention: City Clerk's Office, P.O. Box 9, Alachua, FL 32616.

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City of ALACHUA

NOTICE OF PUBLIC HEARING BEFORE THE PLANNING AND ZONING BOARD OF THE CITY OF ALACHUA, FLORIDA

Notice is hereby given that the Planning and Zoning Board of the City of Alachua will hold a public hearing on September 10, 2024 at 6:00 p.m. The hearing will be held in the James A. Lewis Commission Chambers in City Hall, located 15100 NW 142nd Terrace, Alachua, Florida, to consider the following:

A request by the City of Alachua to amend the City of Alachua Comprehensive Plan by amending the Administration and Implementation Element to establish a new definition for mixed-use; amending the Future Land Use Element to establish mixed-use future land use categories; and, amending the Economic Element to remove an existing definition for mixed-use.

At the public hearing, all interested parties may appear and be heard with respect to the application. Copies of the application are available for public inspection at the Planning and Community Development Department, 15100 NW 142nd Terrace, Alachua, Florida, on any regular business day between the hours of 7:30 a.m. to 6:00 p.m. Written comments on the application may be sent to the following address: City of Alachua, Planning and Community Development, P.O. Box 9, Alachua, FL, 32616. Notice is given pursuant to Section 286.0105, Florida Statutes, that, in order to appeal any decision made at the public hearing, you will need a record of the proceedings, and that, for such purpose, you may need to ensure that a verbatim record of the proceedings is made, which includes the testimony and evidence upon which the appeal is to be based. In accordance with the Americans with Disabilities Act, any persons with a disability requiring reasonable accommodation in order to participate in this meeting should call the City Clerk at (386) 418-6100 x 1501 at least 48 hours prior to the public hearing.

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