



**AGENDA
TECHNICAL REVIEW COMMITTEE
REGULAR MEETING
JULY 11, 2019
9:00 AM
CITY HALL COMMISSION CHAMBERS
204 ASH STREET
FERNANDINA BEACH, FL 32034**

- 1. CALL TO ORDER**
- 2. ROLL CALL**
- 3. APPROVAL OF MINUTES**
 - 3.1 **June 13, 2019 Regular Meeting**
- 4. DISCUSSION ITEMS**
 - 4.1 SPR 2017-13 - School Street & Hometown Drive Sidewalk
 - 4.2 Pre-Application Discussion: Nassau County Habitat for Humanity, with representative Teresa Prince will discuss a proposal to replat three lots of record into six fee simple townhouse lots. The property is located at the corner of Elm and Vernon Street. It carries an R-2 zoning and Medium Density Residential Future Land Use designation.
 - 4.3 Pre-Application Discussion: Wayne Chism, with Chism Development Company to discuss the proposed Grassi Bistro on North 2nd Street. This property is located in the Downtown Historic District. It carries a C-3 zoning and Central Business District Future Land Use designation.
 - 4.4 Pre-Application Discussion: Al Tilly with Concept Companies will discuss a proposal for a single tenant retail store on the western side of PIN #00-00-31-1800-0197-0010, located at the corner of South 14th and Lime Street. This parcel is part of a PUD .
- 5. NEW BUSINESS**
- 6. OLD BUSINESS**
- 7. DEVELOPMENT INQUIRIES FROM APPLICANTS NOT ON THE AGENDA - DISCUSSION ONLY, NO ACTION TO BE TAKEN.**
- 8. COMMITTEE BUSINESS**
 - 8.1 SPR 2018-12 Holiday Inn Express - Sign off
 - 8.2 Distribution SPR 2019-02 Canopy Park Subdivision
- 9. ADJOURNMENT**

NEXT REGULAR TRC MEETING IS SCHEDULED FOR JULY 25, 2019.

Persons with disabilities requiring accommodations in order to participate in this program or activity should contact 310-3115, TTY 711, or through the Florida Relay Services at 1-800-955-8771 (TTY number for all City offices) at least 24 hours in advance to request such accommodations.



**MINUTES
TECHNICAL REVIEW COMMITTEE
REGULAR MEETING
JUNE 13, 2019**

1. CALL TO ORDER – 9:05 AM

2. ROLL CALL

MEMBERS PRESENT:

Jacob Platt, Planning
John Mandrick, Utilities
Sal Cumella, Planning

Rex Lester, Streets
Ed Filipkowski, Building

3. APPROVAL OF MINUTES

3.1 May 23, 2019 Regular Meeting

ACTION TAKEN: A motion was made by Member Mandrick, seconded by Member Cumella, to approve the minutes as presented.

Motion passed by unanimous voice vote.

4. DISCUSSION ITEMS

4.1 Pre-Application Discussion: Rice Architect will present plans for a 176 SF addition to the rear of 110 Centre Street along with plans for a 2-3 story structure on the vacant lot of record to the east.

Randy Rice & Steve Gilchrist of Rice Architect were present to discuss the details of the proposed project. Drainage, impact fees, accessibility issues, the intended use of the additions, building height, and egress were among the topics discussed.

5. DEVELOPMENT INQUIRIES FROM APPLICANTS NOT ON THE AGENDA- DISCUSSION ONLY, NO ACTION TO BE TAKEN.

Present to discuss a proposed plant based holistic retail shop at 529 S 9th Street. This space was previously used as a barber shop and is approximately 360 sf.

The applicants were advised to consult with a design professional and pull all appropriate permits.

Marlin & Barrel was present to discuss 232 S 8th Street as a possible new location. This property consists of 3 lots.

6. COMMITTEE BUSINESS

7. ADJOURNMENT – 10:39 AM

DRAWING INDEX

C-101	SITE GEOMETRY PLAN
C-102	POST-DEVELOPMENT SITE PLAN
A-101	UNIT A & B FLOOR PLANS
A-102	UNIT C FLOOR PLANS
A-201	UNIT A/B ELEVATIONS
A-202	UNIT B/A ELEVATIONS
A-203	UNIT C/C ELEVATIONS



6 ON ELM

FOR HABITAT FOR HUMANITY

FERNANDINA BEACH

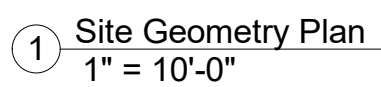
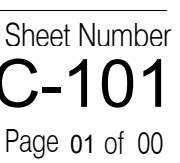
NASSAU COUNTY, FLORIDA

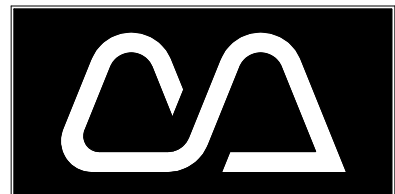


Issued To/For	Date
REVIEW	07/02/19

These drawings and specifications are instruments of service and, and shall remain, the property of the Architect whether the project for which they are made is executed or not. They are not to be used on other projects or extensions to this project except by agreement in writing with the Architect.

Project:	181630
Released:	





Cotner Associates, Inc.
Architects
9 South Third Street
Fernandina Beach, Florida 32034
PH (904)277-4593 FAX (904)277-6734

Revisions

No.	Date

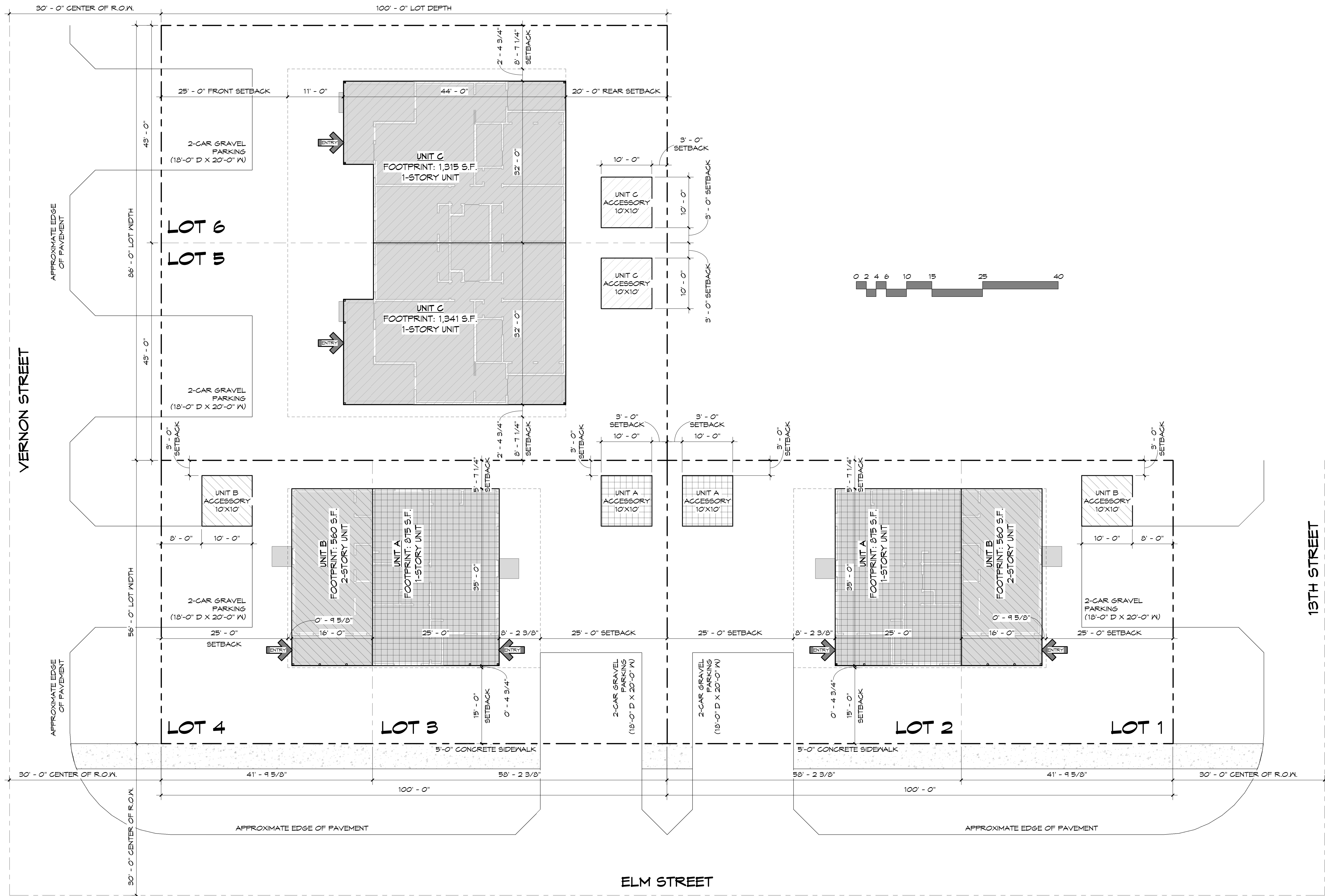
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NOTE: DRAWING SCALE IS 1/2 OF SCALE LISTED IF PRINTED ON 11X17 MEDIA



1 Post Development Site Plan
1" = 10'-0"

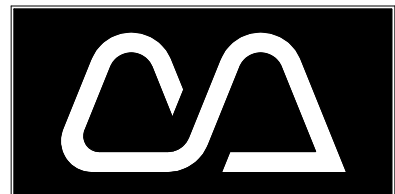
HABITAT - 6 ON ELM
CORNERS OF ELM & VERNON, 13TH
FERNANDINA BEACH
NASSAU COUNTY, FLORIDA

Project: 181630

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POST DEVELOPMENT

Sheet Number
C-102
Page 01 of 00



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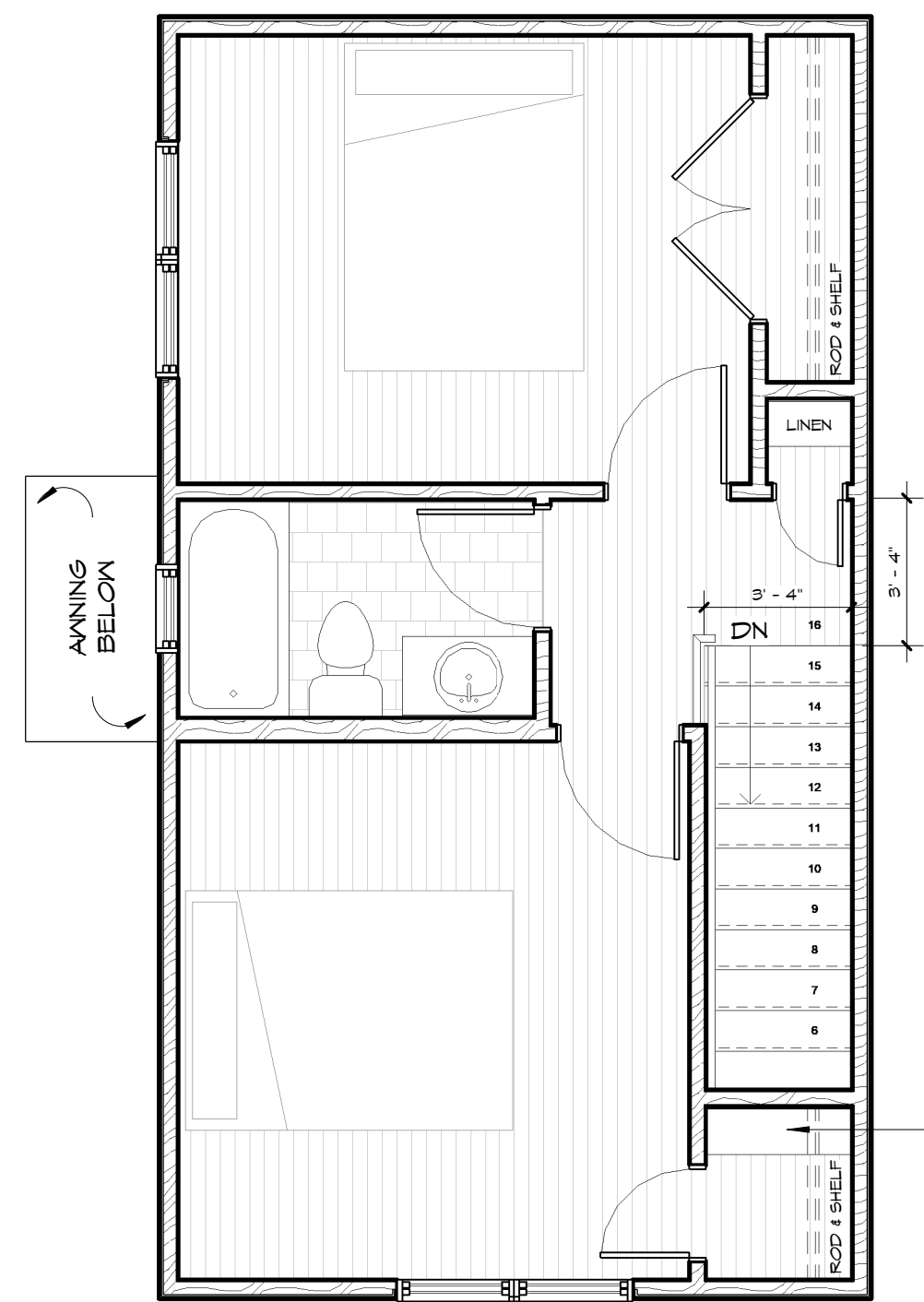
Revisions
No. Date

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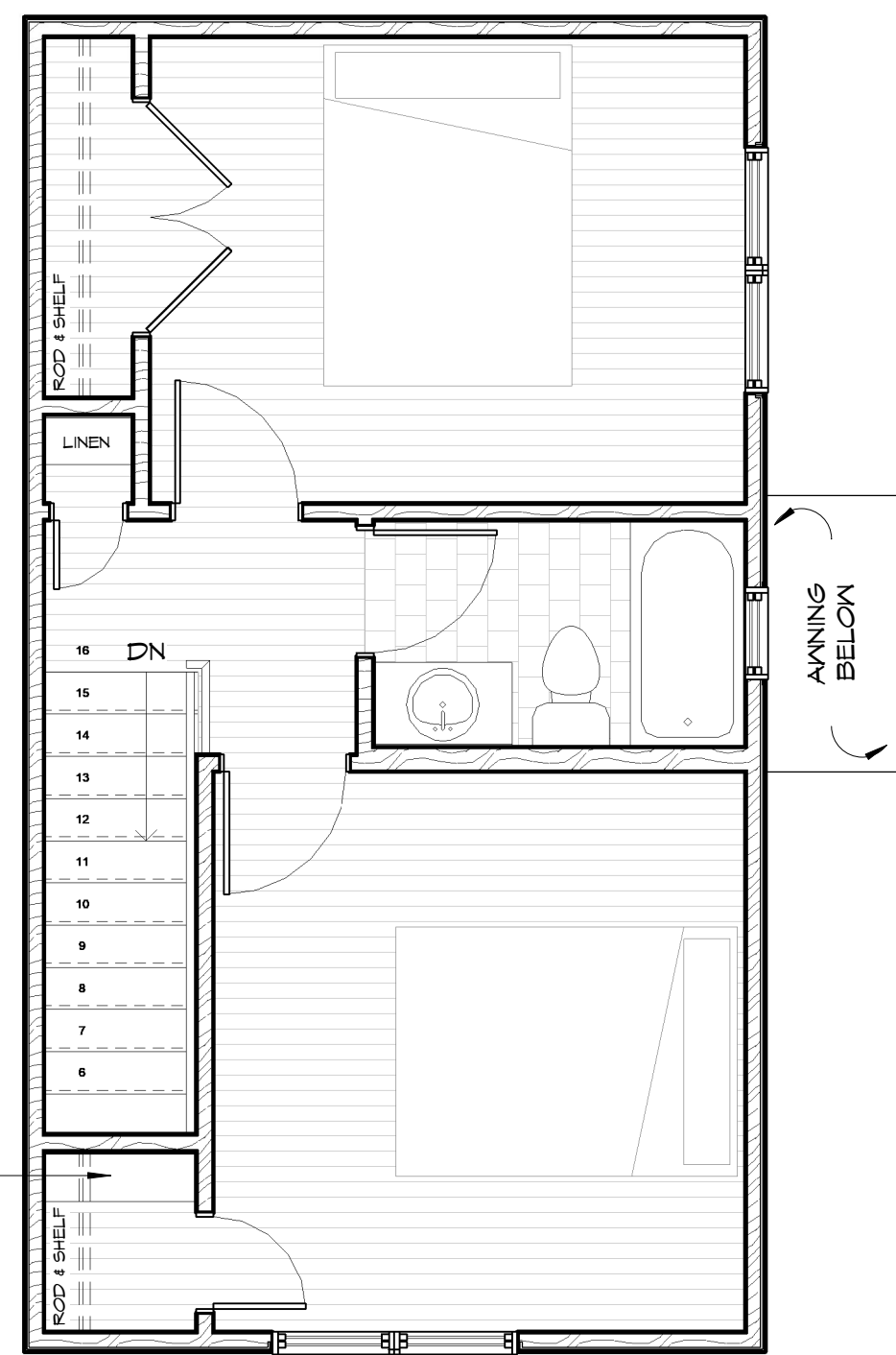
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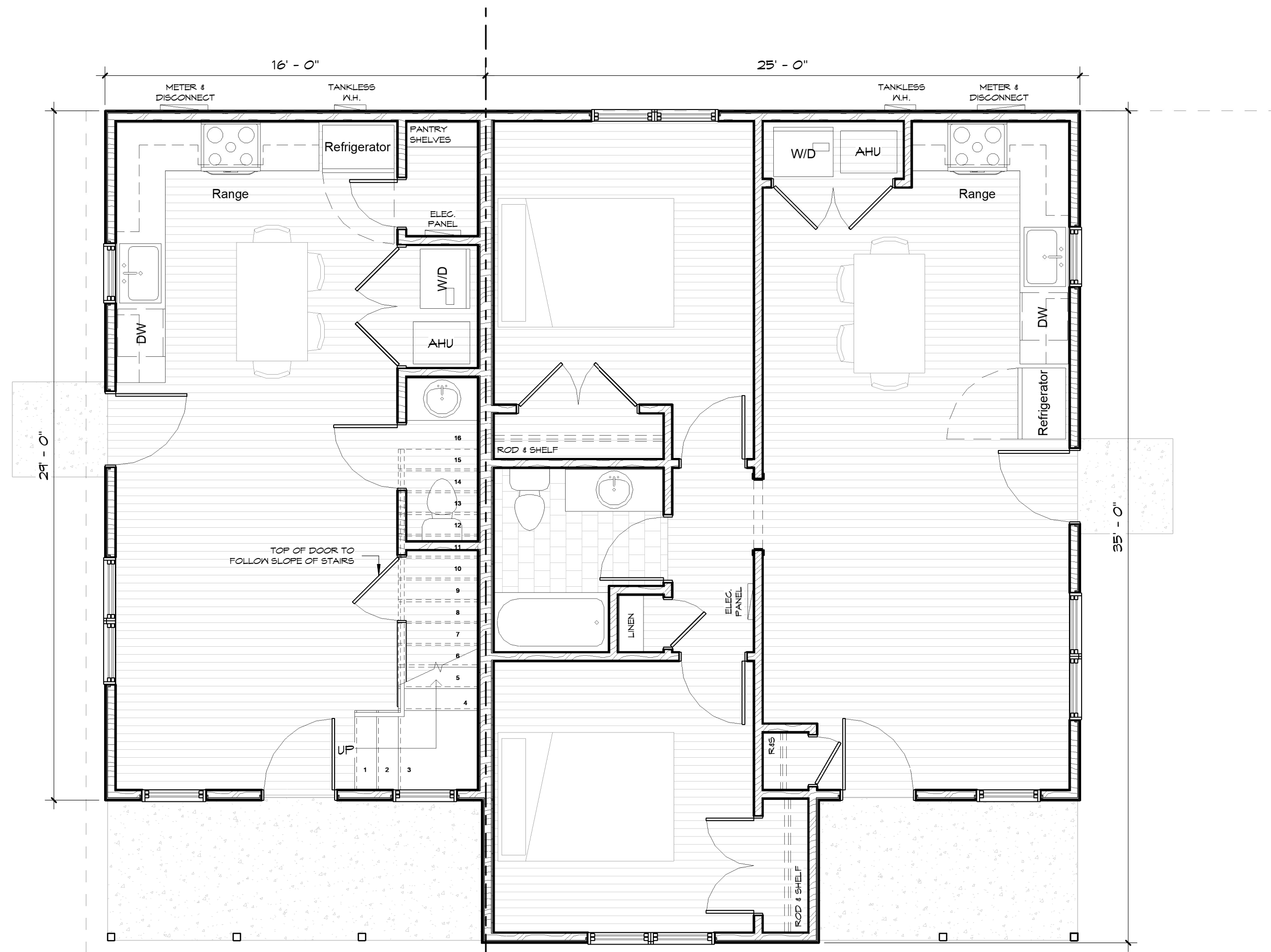
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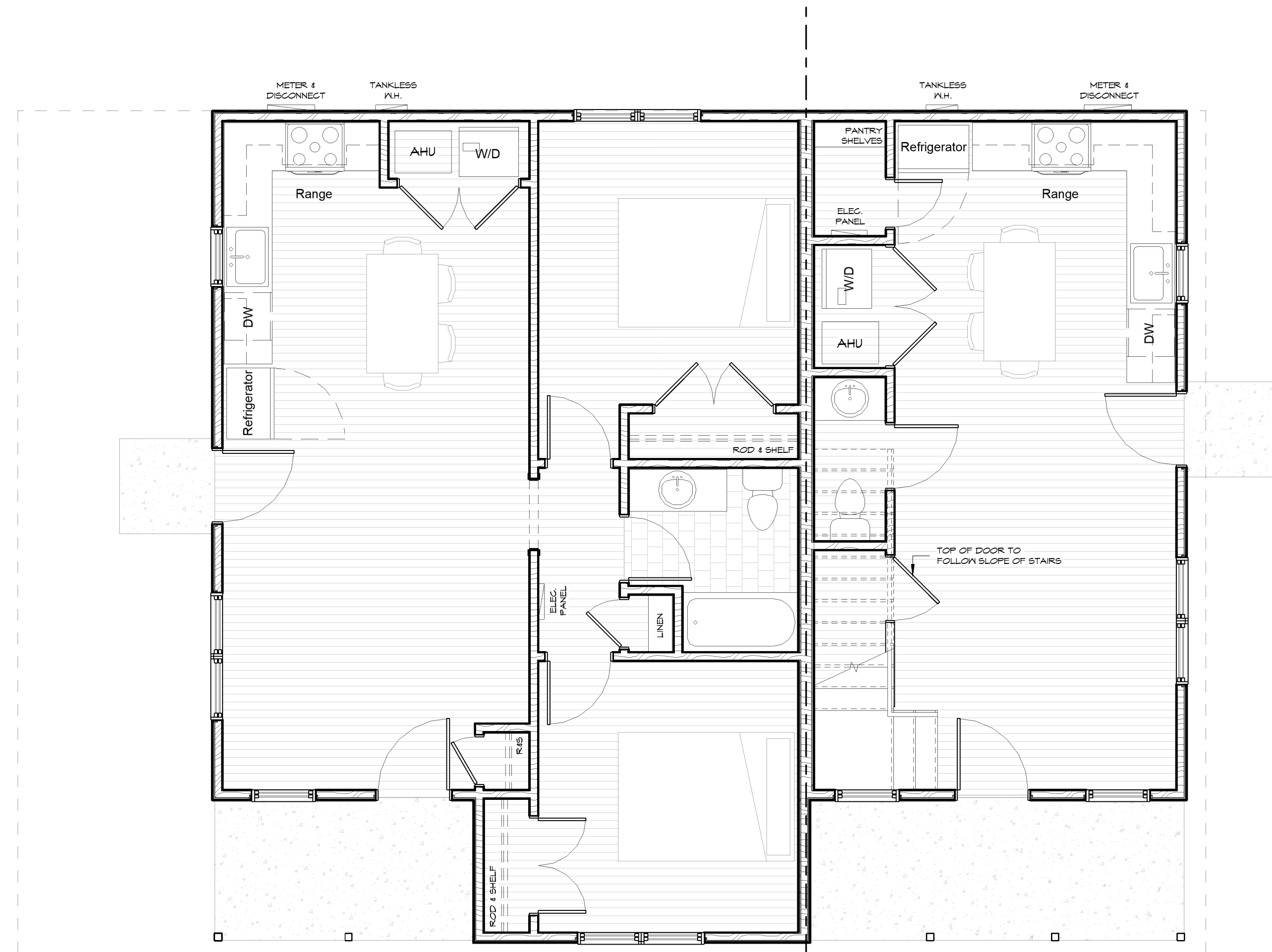
② Level II - Unit B/A
1/4" = 1'-0"



④ Level II - Unit A/B
1/4" = 1'-0"



① Level I - Unit B/A
1/4" = 1'-0"



③ Level I - Unit A/B
1/4" = 1'-0"

HABITAT - 6 ON ELM
CORNERS OF ELM & VERNON, 13TH
FERNANDINA BEACH
NASSAU COUNTY, FLORIDA

Project: 181630
Released:

A & B-UNIT PLANS
Sheet Number
A-101
Page 01 of 00



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CORNERS OF ELM & VERNON, 13TH
FERNANDINA BEACH
NASSAU COUNTY, FLORIDA**

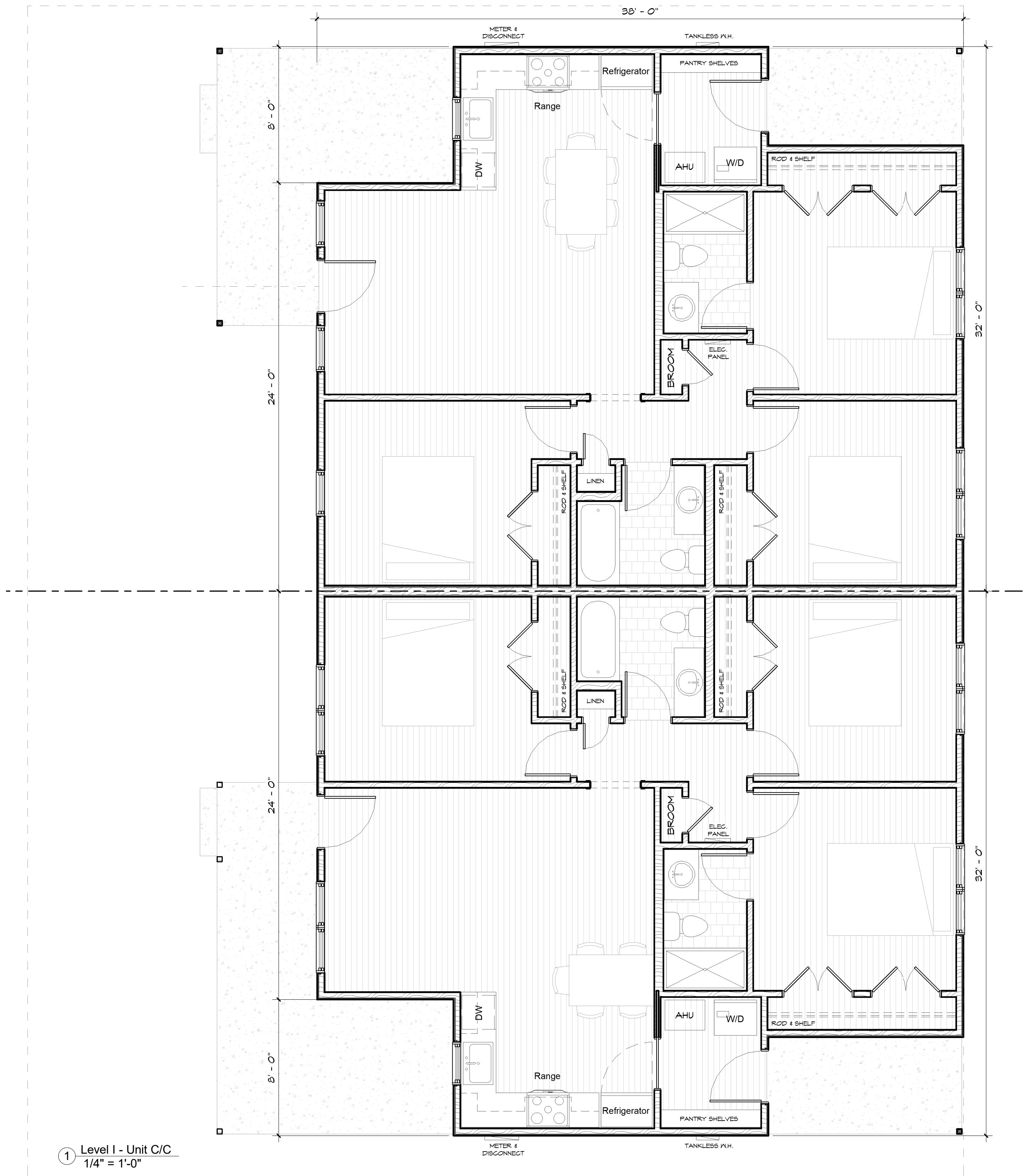
Project: 181630

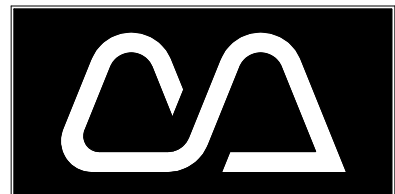
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C-UNIT PLANS



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HABITAT - 6 ON ELM
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FERNANDINA BEACH
NASSAU COUNTY, FLORIDA

Project: 181630

Released:

UNIT A/B ELEVATIONS

Sheet Number
A-201
Page 01 of 00



④ Unit A/B West Elevation
1/4" = 1'-0"



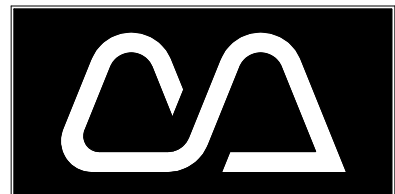
③ Unit A/B East Elevation
1/4" = 1'-0"



② Unit A/B North Elevation
1/4" = 1'-0"



① Unit A/B South Elevation
1/4" = 1'-0"



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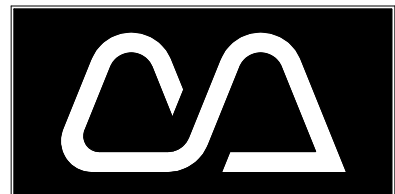
HABITAT - 6 ON ELM
CORNERS OF ELM & VERNON, 13TH
FERNANDINA BEACH
NASSAU COUNTY, FLORIDA

Project: 181630

Released:

UNIT B/A ELEVATIONS

Sheet Number
A-202
Page 01 of 00



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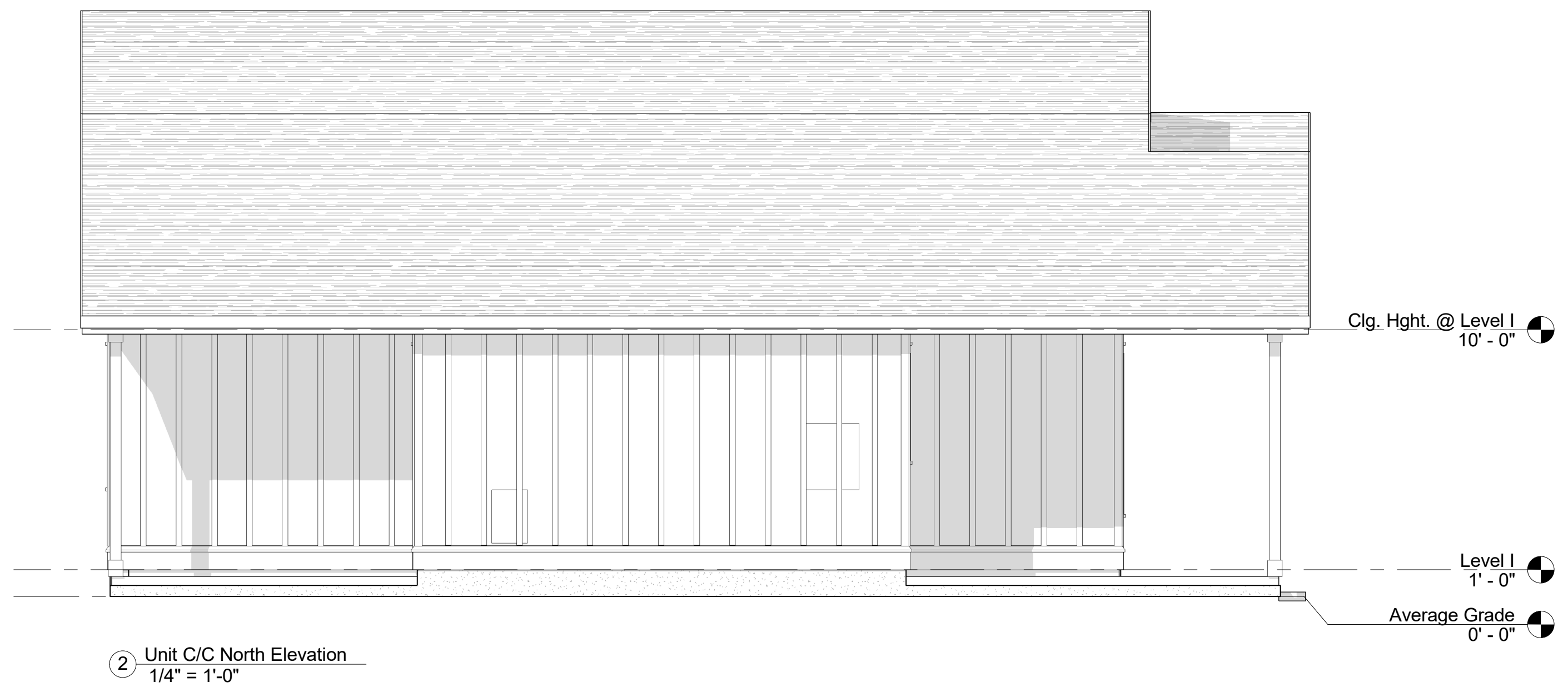
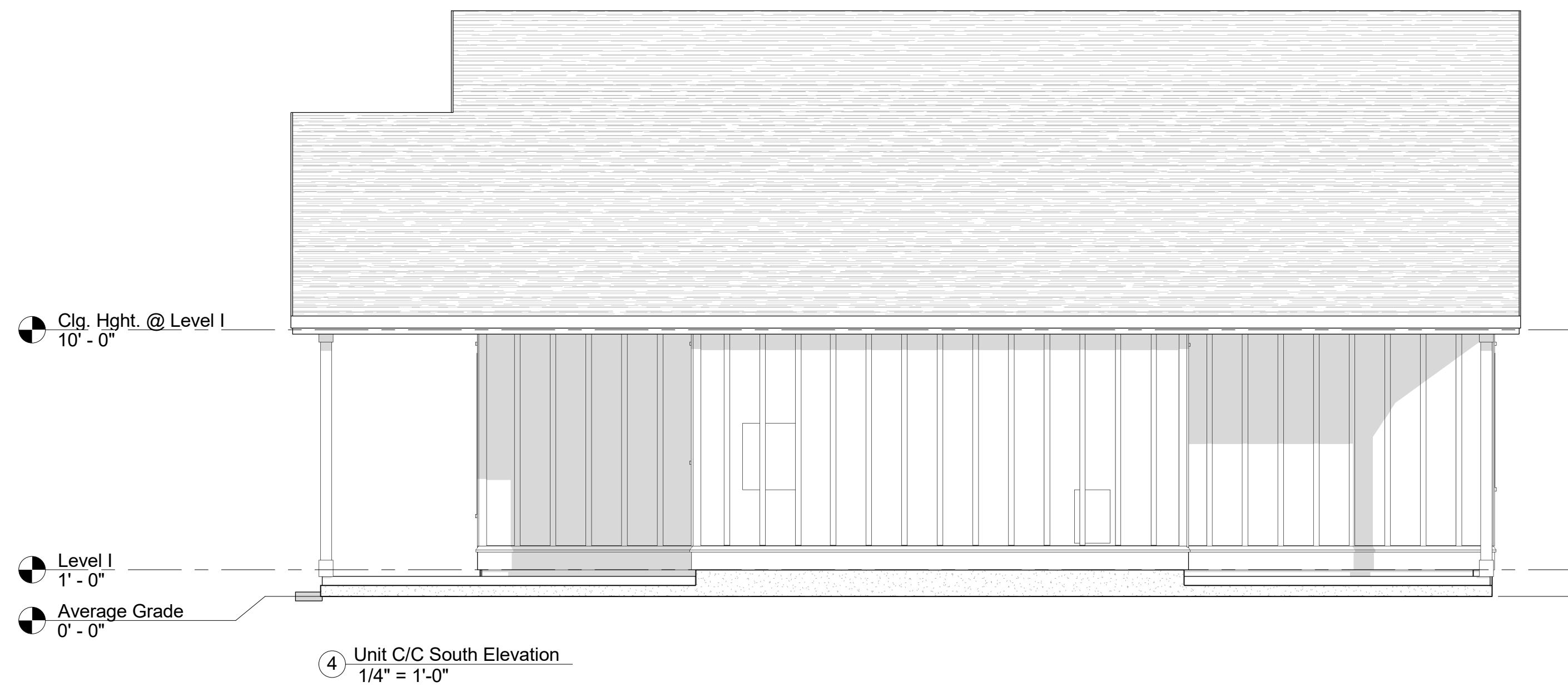
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HABITAT - 6 ON ELM
CORNERS OF ELM & VERNON, 13TH
FERNANDINA BEACH
NASSAU COUNTY, FLORIDA

Project: 181630
Released:

BUILDING SECTIONS
Sheet Number
A-301
Page 01 of 00





A. Michael Hickox, CFA
 Cert. Res. RD1941

NASSAU COUNTY
 PROPERTY APPRAISER


**PROPERTY INFORMATION****Parcel Number 00-00-31-1800-0231-09B0**

Owner Name COTNER JOHN M
 Mailing Address 1627 ATLANTIC AVE
 FERNANDINA BEACH, FL 32034
 Location Address VERNON ST
 FERNANDINA BEACH 32034
 Tax District FERNANDINA BEACH
 Milage 20.3245
 Homestead No
 Property Usage VACANT 000000
 Deed Acres 0
 Short Legal BLK 231 TRACT B OF LOT 9 PT OR 967/1609 CITY OF FDNA BEACH

2018 PROPERTY VALUES (Certified Final Roll)

Land Value \$36,120
 (+) Improved Value \$0
(=) Market Value \$36,120
 (-) Agricultural Classification \$0
 (-) SOH or Non-Hx* Capped Savings \$8,075
(=) Assessed Value \$28,045
 (-) Homestead \$0
 (-) Additional Exemptions \$0
 (=) School Taxable Value \$36,120
 (-) Non-School HX & Other Exempt Value \$0
(=) County Taxable Value \$28,045

Note - *10% Cap does not apply to School Taxable Value



Map This Parcel



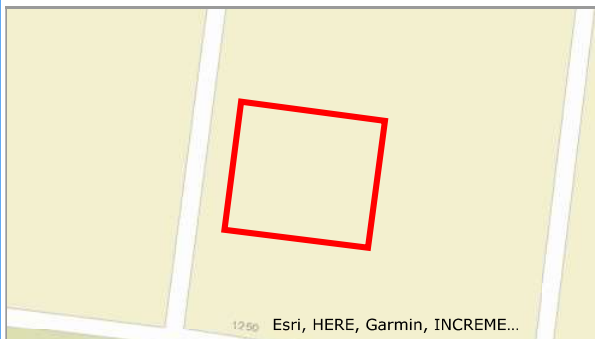
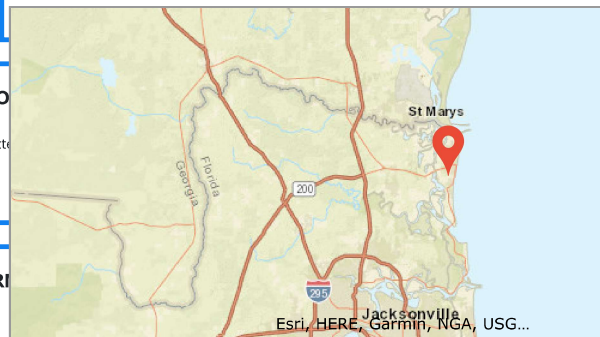
GIS Report



Property Record Card



Print Friendly Page

PARCEL MAP**2019 AERIAL MAP****PROPERTY PHOTO**If this picture is incorrect, please email info@nassaufpa.com**LOCATION MAP****BUILDING INFO**

Type	Total Area	Heated Area	Bedrooms	Baths	Primary Ext

SALES INFO

Sale Date	Book Page	Price	Instr	Qual
2001-01-23	967 / 1609	\$23,800	WD	U
1998-12-31	861 / 213	\$34,000	PR	U

MONGOOSE INVESTMENTS LLC COTNER JOHN M
 EVANS EUGENIA P/R FOR WILLIE B MONGOOSE INVESTMENTS LLC
 EVANS SR ESTAT



A. Michael Hickox, CFA
Cert. Res. RD1941

NASSAU COUNTY
PROPERTY APPRAISER



PROPERTY INFORMATION

Parcel Number 00-00-31-1800-0231-08A0

Owner Name COTNER JOHN M
Mailing Address 1627 ATLANTIC AVE
FERNANDINA BEACH, FL 32034
Location Address 425 13TH ST S
FERNANDINA BEACH 32034
Tax District FERNANDINA BEACH
Milage 20.3245
Homestead No
Property Usage VACANT 000000
Deed Acres 0
Short Legal BLK 231 TRACTS A & D OF LOT 8 PT OR 967/1609 CITY OF FDNA
BEACH

2018 PROPERTY VALUES (Certified Final Roll)

Land Value \$47,040
(+) Improved Value \$0
(=) Market Value \$47,040
(-) Agricultural Classification \$0
(-) SOH or Non-Hx* Capped Savings \$10,518
(=) Assessed Value \$36,522
(-) Homestead \$0
(-) Additional Exemptions \$0
(=) School Taxable Value \$47,040
(-) Non-School HX & Other Exempt Value \$0
(=) County Taxable Value \$36,522

Note - *10% Cap does not apply to School Taxable Value



Map This Parcel



GIS Report

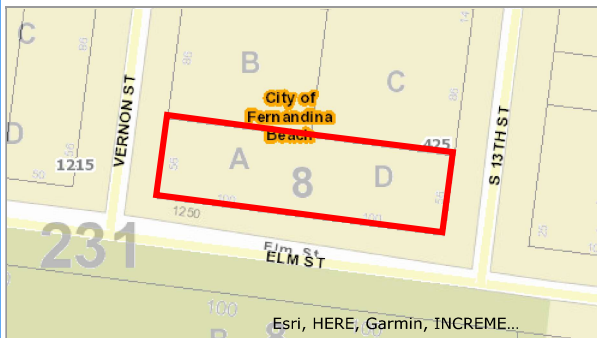


Property Record Card



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PARCEL MAP



2019 AERIAL MAP

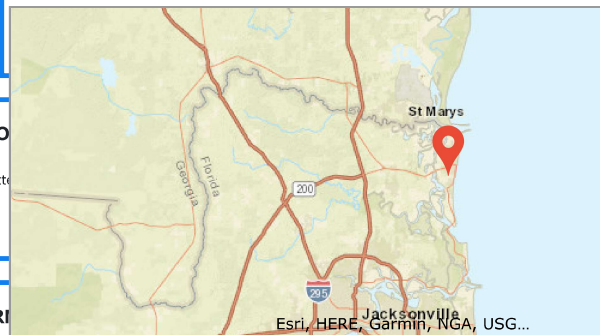


PROPERTY PHOTO



If this picture is incorrect, please email info@nassauflpa.com

LOCATION MAP



BUILDING INFO

Type	Total Area	Heated Area	Bedrooms	Baths	Primary Ext
------	------------	-------------	----------	-------	-------------

SALES INFO

Sale Date	Book Page	Price	Instr	Qual	Imp	Grantor	Grantee
2001-01-21	967 / 1609	\$23,800	WD	U	N	MONGOOSE INVESTMENTS LLC	COTNER JOHN M

1998-12-31	861 / 213	\$34,000	PR	U	N	EVANS EUGENIA P/R FOR WILLIE B EVANS SR	MONGOOSE INVESTMENTS LLC
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PROPOSED PROJECT (6 on Elm)

- 3 undeveloped lots – 2 at 56 feet by 100 feet; one at 86 feet by 100 feet
- Build three duplex structures – six residences
 - Two structures, each consisting of:
 - One two story residence (approx. 1100 sq. ft.)
 - One single story residence (approx. 800 sq. ft.)
 - One structure
 - Two single story residences (approx. 1300 sq. ft.) each
- Anticipated cost to occupying family (total mortgage amount)
 - Two story 1100 sq. ft. residence: \$115,000
 - One story 800 sq. ft. residence: \$105,000
 - Single story 1300 sq. ft. residence \$135,000
- Land to be purchased by Nassau Habitat with grant from Delores Weaver Foundation
- Architectural work to be completed by John Cotner Associates
- Construction to be done by Habitat volunteers and local subcontractors where appropriate
- Habitat will provide a 20 or 25 year 0% mortgage for the purchase, down payment will be sweat equity.

ABOUT NASSAU HABITAT FOR HUMANITY:

- Local affiliate of Habitat International started in 1994/501 C 3 status /Built first home in 1995
- We build 1 or 2 houses each calendar year; have built 43 houses since 1995
- We accept no government funds or funds from United Way
- Donations come from local business, churches, foundations and individuals
- Housing stock
 - o 29 houses currently paying mortgage to Habitat
 - o 3 houses currently rented by individuals completing their sweat equity
 - o 6 houses occupied by owners who have completed payments
 - o 5 houses have been sold after completed payments

HABITAT MODEL FOR LOW INCOME HOUSING:

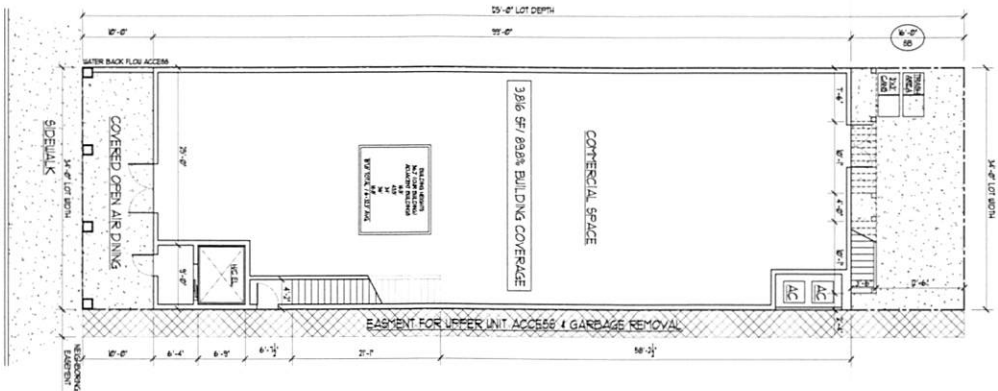
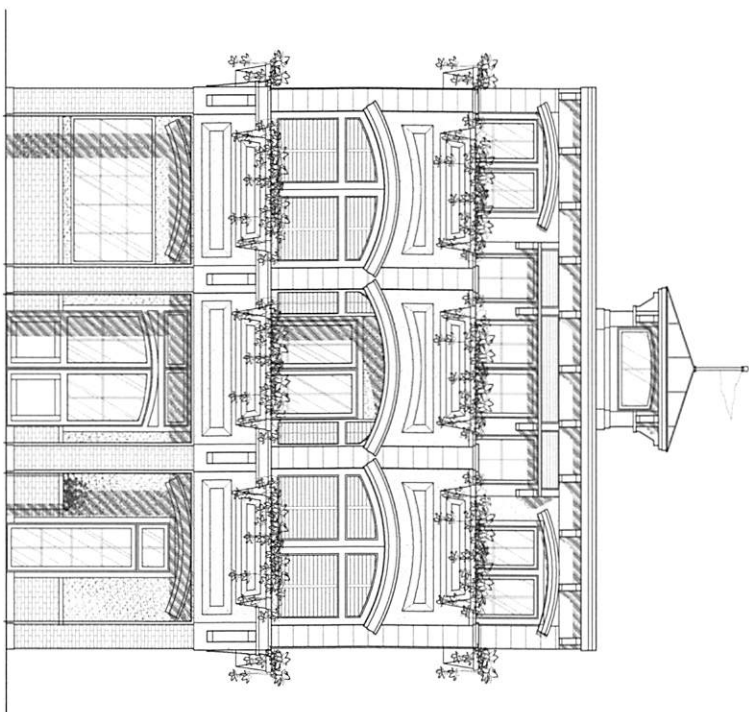
- Build houses for low income families <60% of local median income
- Sell houses to qualified individuals; provide a 20 year, 0% mortgage
- Mortgage precludes ability to sell at market price or to obtain secondary financing
- Price houses at cost, no profit; use volunteer labor

NOTES:

- Build new single family homes
- Obtain land as donation when possible; buy below market rate if possible
- Targeted cohort cannot afford safe housing at market rate
- Qualifying family must
 - o Show consistent employment history
 - o Demonstrate ability to make monthly home payments
 - o Currently lives in an inadequate or unsafe environment
 - o Be willing to provide 300 hours of sweat equity as down payment
 - o Limit housing expenses to 30% of income, total debt payments to 60%

BISTRO 2020

14 NORTH SECOND STREET



Design Development
June 24, 2019

DATE	PAGE	TITLE
6-24-19	1-1	LIST OF DRAWINGS
6-24-19	A-1	NOT A REAR ELEVATION
6-24-19	A-2	NOT A REAR ELEVATION
6-24-19	A-3	LEFT SIDE ELEVATION
6-24-19	A-4	RIGHT SIDE ELEVATION
6-24-19	A-5	THIRD FLOOR PLAN

GEORGE WRAY THOMAS Professional Engineer 999 SHIPLE ROAD SOMERS POINT, NJ TELEPHONE: (609) 927-0550		ANDREW C. BECHTOLD Registered Architect 999 SHIPLE ROAD SOMERS POINT, NJ TELEPHONE: (609) 927-0550		DAVID W. SHORTEN N.E.T. Co. 999 SHIPLE ROAD SOMERS POINT, NJ TELEPHONE: (609) 927-0550	
GRASSI AMERICAN BISTRO 2020 14 NORTH 2ND STREET LOT: 5 FERNANDINA BEACH, FL.		I HEREBY CERTIFY THAT THE ABOVE IS A TRUE AND CORRECT REPRESENTATION OF THE PROJECT AS DESIGNED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER OR ARCHITECT IN THE STATE OF NEW JERSEY.			

to City - Vector Fernandina Beach - Lime St & S. 14th St DG

Printed from Asana

GENERAL SITE INFORMATION:



☐ AI Tilly: GENERAL SITE INFORMATION: Determine Property Acreage

±1.21 acres

☐ AI Tilly: GENERAL SITE INFORMATION: Primary Street and Nearest Cross Street

primary street is S 14th Street (CR 105A)

secondary street is Lime Street

we have indirect access from both by virtue of the PD construction

CONFIRM

☐ AI Tilly: GENERAL SITE INFORMATION: Parcel Identification Number

part of 00-00-31-1800-0197-0010

Nassau County

☐ AI Tilly: GENERAL SITE INFORMATION: Determine if competitor is proposed or existing in the project area

no other retail that is currently in the permitting process (from initial contact to permits recently (within 3 months) issued) in the City of Fernandina Beach or known by the City in unincorporated Nassau County

(any in Nassau County?)

CONFIRM

☐ AI Tilly: GENERAL SITE INFORMATION: Determine if sale of beer and wine is allowed

not found in code

sales of beer and wine for offsite consumption only is allowed with a letter from the City and a license from the state

CONFIRM

☐ AI Tilly: GENERAL SITE INFORMATION: Governing Municipality & County Determination, need to annex?

City of Fernandina Beach
(which is in Nassau County)

☐ AI Tilly: GENERAL SITE INFORMATION: Site Plan Review Process (How long and hearings required) and length of time for permits to be issued.

11.03.01 determination of completeness

11.03.02 TRC review - public meeting (noticed but not mailed). We get a preliminary compliance report from the City at least 7 days prior to TRC

any waivers required?

not in historic district overlay or airport overlay

City Commission approval not required for site plan, just TRC

driveway connection permit to private road interior to the PD

protected tree removal permit required **(or covered with the approval of the PD?)**

heritage tree removal goes to City Commission (min size 36" dbh and designated by the City). There are none on the site (?)

from Chapter 1: heritage tree means any native tree designated as irreplaceable by the City, due to its size, age, historic, aesthetic, or cultural significance

site permit first, then building permit submittal

guesstimated time from first submittal to site and building permits received is 4.5 months (reasonable?)

CONFIRM

☐ AI Tilly: GENERAL SITE INFORMATION: Prepare preliminary entitlement schedule

- submit for TRC approval - meets 2nd and 4th Thursday and needs to be in 14 days prior to meeting
- city TRC review
- figuring initial and 2 resubmittals
- figuring 4 weeks for building permit approval (starts AFTER TRC approval)

realistic?

CONFIRM

ACCESS MANAGEMENT REVIEW:

☐ AI Tilly: ACCESS MANAGEMENT REVIEW: Confirm Full Access with FDOT Traffic Ops or Road Dept.

full access on private road from both drives and full access on Lime acceptable to the City

full access to S 14th Street (CR 105A) acceptable to the City **and County**

CONFIRM

☐ AI Tilly: ACCESS MANAGEMENT REVIEW: Determine what offsite improvements are required if any.

existing apron connections to private road need to be widened from 24' to 36' to handle truck ingress/egress

(variance requirements - 10.02.02

variance procedures - 10.02.04)

☐ AI Tilly: ACCESS MANAGEMENT REVIEW: Determine if a Cross access is Required by reviewers (if yes: public/private?)

7.01.04C.4. cross access required

to both drives?

CONFIRM

☐ AI Tilly: ACCESS MANAGEMENT REVIEW: Determine Owner of ROW for all access points.

private street is owned by the PD association(?)

Lime is a City Street

S 14th is Nassau County

CONFIRM

☐ AI Tilly: ACCESS MANAGEMENT REVIEW: Determine if a traffic study is required.

traffic study done for Vintage at Amelia Island by S&ME August 11, 2017 for the PD included 27,300 sf of shopping center on our parent parcel in the analysis

No additional study required

CONFIRM

(pdf pages 10 and 23)

☐ AI Tilly: ACCESS MANAGEMENT REVIEW: Determine if truck traffic is prohibited.

truck traffic is allowed on Lime by the City between the private drive connection and 14th

truck traffic is allowed by Nassau County between the private drive connection and S 14th (CR 105A)

CONFIRM

☐ AI Tilly: ACCESS MANAGEMENT REVIEW: Review FDOT 5 Year Plan

No FDOT R/W

Nassau County resurface 1.415 miles of S 14th Street by end of this year (CONFIRM if we are in the stretch affected)

nothing in the Fernandina Beach capital improvements program

CONFIRM

☐ AI Tilly: ACCESS MANAGEMENT REVIEW: Determine if Fire Needs to Review. If so, Acceptable?

fire needs to review

access acceptable as shown

CONFIRM

BOUNDARY AND TITLE REVIEW:

☐ AI Tilly: BOUNDARY AND TITLE REVIEW: Is a lot split or lot combo required? List process and time to complete.

division to break the parent parcel into two separate parcels can be done by **(lot split?)**

DISCUSS

☐ AI Tilly: BOUNDARY AND TITLE REVIEW: Is the property a legal parcel of record?

parent parcel is a legal parcel of record

CONFIRM

SITE EVALUATION:

☐ AI Tilly: SITE EVALUATION: Determine if the site is in the Fema Flood Plain

NOT in flood prone area per Google Earth FEMA FIRM plugin

City doesn't have anything different

CONFIRM

☐ AI Tilly: SITE EVALUATION: Determine if the site is flood prone

no flooding issues in this area known by the City

or the County

CONFIRM

☐ AI Tilly: SITE EVALUATION: Is project site in/near a karst area?

no sinkhole activity known in the area by the City

or the County

CONFIRM

☐ AI Tilly: SITE EVALUATION: Determine if the site is wooded or has protected trees

protected trees 5" dbh and up
heritage trees 36" dbh and up

site has protected trees

☐ AI Tilly: SITE EVALUATION: Determine if there is a tree ordinance and mitigation requirements

City has tree ordinance

4.05.14B.3.c. - 75% of tree DBH removed is EXEMPT

Replacement of 25% of DBH in impervious areas and area 5' around impervious REQUIRED

separate permit or included in site and/or building permit approval(?)

preservation credits (in 4.05.14(E)(1)) may be obtainable

CONFIRM/DISCUSS

☐ AI Tilly: SITE EVALUATION: Locate hydrants within 500ft (3 maximum)

per Nassau County GIS

SE corner of 14th at Lime

east side of 13th 150' north of Lime

south side of Lime ±1080' west of 14th

SE corner 14th at Nectarine

additonal hydrants in PD area

☐ AI Tilly: SITE EVALUATION: Locate the Nearest Water & identify provider

from plan sheet UT-1 for Vintage Amelia Island there is an 8" WM along the west and south sides of the private street bordering our site. No stub shown to our site on that plan though

by City of Fernandina Beach

(reclaimed available?)

CONFIRM

☐ AI Tilly: SITE EVALUATION: Locate Nearest Sewer (gravity or force) & identify provider

from plan sheet UT-1 for Vintage Amelia Island there is a gravity 8" PVC sanitary stub to a manhole near the NW corner of our site where the access drive comes in

by City of Fernandina Beach

CONFIRM

☐ AI Tilly: SITE EVALUATION: If a septic system is required is an individual system acceptable?

N/A

☐ AI Tilly: SITE EVALUATION: If a well is required is a Limited Use Well Acceptable?

N/A

☐ AI Tilly: SITE EVALUATION: Any impacts from high voltage line (fill, access restrictions, etc?)

none known. Overhead in R/W on north side and on east side of parent parcel starting ±170' south of Lime

☐ AI Tilly: SITE EVALUATION: Any prior water management district permits?

SJRWMD 143031 - (1-5)

☐ Vanessa Araujo: SITE EVALUATION: Any archaeological factors? (get determination from State)

none per response from State Master File

☐ AI Tilly: SITE EVALUATION: Preliminary stormwater design completed? (list significant findings)
143031 - (1-5)

-3 plans attached
4 and 5 are transfers

LAND USE AND ZONING:

☐ AI Tilly: LAND USE AND ZONING: Determine validity of applicable code info in this section

City LDC is on the City website

CONFIRM

☐ AI Tilly: LAND USE AND ZONING: Determine Land Use and if it allows for intended use of Commercial Retail

high density residential/residential 2 from Ordinance 16-35

commercial retail allowed(?)

CONFIRM

(City GIS is inoperative and maps available online from City are prior to this area being annexed. As of today (7/02/19), City map links are inoperative also)

☐ AI Tilly: LAND USE AND ZONING: Determine Zoning and if it allows for intended use of Commercial Retail

GC/C-2 and R-3, affected by PD?

commercial retail allowed

mapped limits doesn't seem to correspond to the actual created parcel we're buying. Do we need to do anything to make it fit?

CONFIRM/DISCUSS

(City GIS is inoperative and maps available online from City are prior to this area being annexed. As of today (7/02/19), City map links are inoperative also)

☐ AI Tilly: LAND USE AND ZONING: Determine Land Use / Zoning of adjacent properties.

land use: high density residential/residential 2 from Ordinance 16-35 south to parent boundary, west to C/L 13th extended south per Nassau County GIS

(City GIS is inoperative and maps available online from City are prior to this area being annexed. As of today (7/02/19), City map links are inoperative also)

zoning: GC/C-2 and R-3, affected by PD? Encroaches on our project site. **how do we handle the discrepancy?**

CONFIRM/DISCUSS

☐ AI Tilly: LAND USE AND ZONING: Determine Parking Requirements (quantity & dimension)

4.05.07 (landscape)
(C) 1. 10' width

islands 100 or 250 sf

7.01.04

Number calc: 1 space per 300 sf - Table 7.01.04 (A) FB land development code chapter 7
35.46 (36 for 10,640) (30.33 for a 9100)

Space size: 9 ft x 18 ft land dev code ch 7 7.01.04 **C.6.a,**

Aisle width: 12 ft for one-way internal aisle and 22 ft for a two-way internal aisle (7.01.04) **C.6.c.**

Max number of spaces in row between islands: 10 spaces. Planting areas can be located w/in driveway medians minimum of 12 ft wide. One shade tree per 400 sq ft of required planting area. 4.05.07(D)(2)(a)(b)

4.05.07 C. Parking perimeter 10' C.4 hedge required on side lines D. 6 - curb required for islands, D.1. calls for 10% gross vehicle use area for interior landscaping

Min landscape island width/area: minimum of 10 ft wide 4.05.07 (C)(1)

Loading space size: 30 ft x 12 ft x 14 ft **LxWxH** (7.01.06)(B)(2)

7.01.06A. 1. and 2.- 1 space for 9100, 2 spaces for 10,640

7.01.03 sidewalks required

7.01.03 bikes 1/25 car spaces

CONFIRM

☐ AI Tilly: LAND USE AND ZONING: Determine Setbacks

Table 4.02.03(E) for C-2

max height 45'

front, side, rear, and corner lot are all zero

CONFIRM

☐ AI Tilly: LAND USE AND ZONING: Determine if buffer OR walls (fences) are required.

10' from R/W for parking

CONFIRM

☐ AI Tilly: LAND USE AND ZONING: Determine if there is an overlay district

PD overlay(?)

no others

CONFIRM

☐ AI Tilly: LAND USE AND ZONING: Is the site in a PD?

by mapping yes but by ordinance no? We use only C-2 requirements per code

CONFIRM/DISCUSS

☐ AI Tilly: LAND USE AND ZONING: Determine any code Maximum Allowable Building Size

4.03.01 I.6. calls for max FAR 0.21 in PUD overlay - is this us?

Table 4.02.01(J)

C-2 max FAR is 1.50

no other conditions

CONFIRM

☐ AI Tilly: LAND USE AND ZONING: Determine Required Openspace (ISR)

Table 4.02.01(J)

C-2 max ISR is 60% (**need variance?** - we are at 75% and shared stormwater for rest of development has capacity to handle it)

no other conditions

CONFIRM

☐ AI Tilly: LAND USE AND ZONING: Determine if Landscape and Irrigation Plans are required. If so, is a Landscape Architect required to design?

4.05.02 and 4.05.04C.2.

landscape and irrigation plan required and need to be signed/sealed

CONFIRM

☐ AI Tilly: LAND USE AND ZONING: Determine if Photometric Plan is Required.

photometric plan not required in code

CONFIRM

BUILDING REQUIREMENTS: :

☐ AI Tilly: BUILDING REQUIREMENTS: Are there specific architectural requirements? <-- outdoor sales allowed?

nothing for less than 20,000 sf of commercial

outdoor sales (Redbox, propane cage, soda machine, daily seasonal wheel out-wheel in carts) allowed

CONFIRM

☐ AI Tilly: BUILDING REQUIREMENTS: Are fire tanks required (if no hydrant)?

N/A, hydrants available

☐ AI Tilly: BUILDING REQUIREMENTS: Are fire sprinklers required? If so is there adequate flow?

not required

City uses FFPC and NFPA codes only

building is less than 12000 sf with no hazardous materials storage

CONFIRM

☐ Vanessa Araujo: BUILDING REQUIREMENTS: Identify Utility Providers..(811 design tickets?)

Water & sewer - City of Fernandina Beach

Electric/Gas - Florida Public Utilities

per 811 one call design ticket

CONFIRM

☐ AI Tilly: BUILDING REQUIREMENTS: Sign requirements (freestanding/monument and building) <-- Pylon allowed?

signs per 5.03.00 allowed in buffers

5.03.09 no pole signs, need monument sign

Table 5.03.09(C) and (D) one sign per street frontage, 1 sf per front foot - max 50 sf, 1 each front and side street, 5' setback from P/L, max height 8 feet. (2 signs total)

Wall sign is 30% of signable wall area (doesn't count windows and doors) - 1 sign per project

CONFIRM

ENVIRONMENTAL CONCERNS:

☐ AI Tilly: ENVIRONMENTAL CONCERNS: Is the site part of an impaired water body? If so, list name and for what parameters.

WBID 2140

Impaired area designation is Jackson Creek which is a 3M estuary

no results for maximum daily load or basin management action plan

☐ AI Tilly: ENVIRONMENTAL CONCERNS: Determine if a species report is needed. If so, obtain when?

species report not required by the City for this site

CONFIRM

☐ AI Tilly: ENVIRONMENTAL CONCERNS: Determine if a Wetland Delineation is needed. If so, obtain when?

wetland determination not required for this site by the City - previously handled by PD development

CONFIRM

☐ AI Tilly: ENVIRONMENTAL CONCERNS: Determine if site has apparent environmental concerns (unsuitables, contamination, etc.) If so obtain Environmental Report.

no site environmental factors known to the city

CONFIRM

DEVELOPMENT FEES:

☐ Vanessa Araujo: DEVELOPMENT FEES: Impact Fees (transportation, fire, police, etc)

per each sq ft of floor area:

Police - \$0.264 (\$2,808.96)

Fire - \$0.360 (\$3,830.40)

Public facilities - \$0.443 (4,713.52)

Total: \$11,352.88

Per city's fee schedule

CONFIRM

☐ Vanessa Araujo: DEVELOPMENT FEES: Water / Sewer Tap & Impact Fees

per city's building impact fee schedule:

water/ per equivalent residential unit (ERU) = \$959

sewer/ per equivalent residential unit (ERU) = \$2,321

utilities department tap fee:

☐ Vanessa Araujo: DEVELOPMENT FEES: Building Permit Fees

General building:

1st \$1,000 of job cost - \$80

Each additional \$1,000 - \$7

Plan review - 50% of permit fee

Total for building permit fee = building fee permit + plan review fee + zoning review (\$100)

From city's fee schedule, current as of 5/20/2019.

**city said that "job cost" is whatever the contractor lists as the total job cost on the application. Did not specify whether that is cost for the building or the entire site.

CONFIRM

☐ Vanessa Araujo: DEVELOPMENT FEES: Concurrency Fees

transportation - need determination form the Northeast Florida Regional Council

<https://www.nefrc.org/>

Not required by City per NEFRC

not required by City?

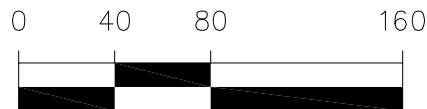
CONFIRM

PRELIMINARY SITE PLAN		CITY, STATE STREET: FERNANDINA BEACH, FL TBD LIME STREET		 CONCEPT COMPANIES 3917 NW 97TH BOULEVARD / GAINESVILLE, FL 32606 Licence# CGC1515491 / WWW.CONCEPTCOMPANIES.NET	
BUILDING: 1-STORY, PEMB	PROPOSED USE:	DEVELOPER:			DATE:
BLDG/SALES SF:10,640/8,513	SINGLE TENANT COMMERCIAL RETAIL STORE	NAME:	BRIAN CRAWFORD		7-02-19
ACREAGE: ±1.21		PHONE #:	(352)333-3233 x200		
PARKING SPACES: 36		DESIGNER:	AL TILLY		



Google Earth

GRAPHIC SCALE



PART OF TAX PARCEL NO.
00-00-31-1800-0197-0010

LOT SPLIT(?) REQUIRED

POTABLE WATER REQUIRED
SANITARY SEWER REQUIRED

Engineering Plans

For

Canopy Park

for

Ed Boner

Citrona Drive
Fernandina Beach, Florida

Gillette & Associates, Inc.

Civil & Environmental Engineering
Mechanical & Structural Engineering
Permitting & Construction Management

20 South 4th Street Amelia Island, Florida 32034
Phone: (904) 261-8819



Issue Date:
June 26, 2019

Citrona Drive

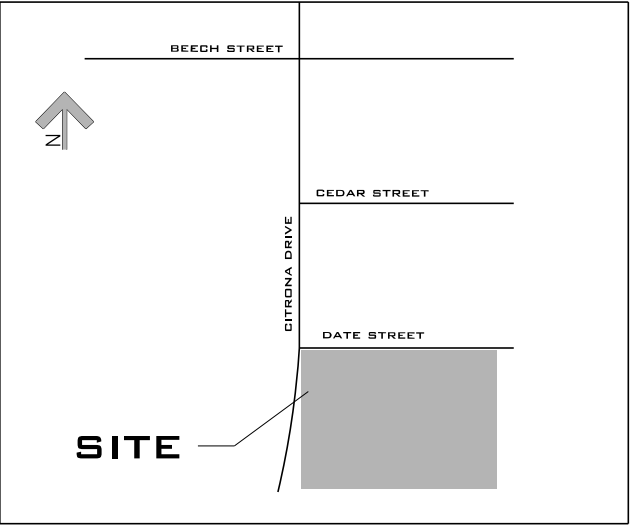
FOR

Ed Boner

BY

RELEASED FOR CONSTRUCTION

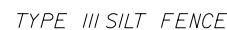
SITE LOCATION MAP



\$\$\$time\$\$\$date\$\$\$drawn\$\$\$

G&A Project
No.:19-10.09

GENERAL NOTES										INDEX						
SITE / GEOMETRY					WATER NOTES					SHEET	DESCRIPTION					
1.ALL WORK SHALL BE PERFORMED IN A SAFE MANNER.ALL SAFETY RULES AND GUIDELINES OF O.S.H.A.SHALL BE FOLLOWED.THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ANY INJURIES OF HIS EMPLOYEES,AND ANY DAMAGE TO PRIVATE PROPERTY OR PERSONS DURING THE COURSE OF THIS PROJECT.ALL COSTS ASSOCIATED WITH COMPLYING WITH O.S.H.A.REGULATIONS AND THE FLORIDA TRENCH SAFETY ACT MUST BE INCLUDED IN THE CONTRACTOR'S PRICE FOR PERFORMING THE WORK. 2.THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE JOB SITE PRIOR TO PREPARING THE BID FOR THE PURPOSE OF FAMILIARIZING HIMSELF WITH THE NATURE AND THE EXTENT OF THE WORK AND LOCAL CONDITIONS.EITHER SURFACE OR SUBSURFACE,WHICH MAY AFFECT THE WORK TO BE PERFORMED,AND THE EQUIPMENT,LABOR AND MATERIALS REQUIRED. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF COMPLETE PERFORMANCE UNDER THIS CONTRACT.THE CONTRACTOR IS URGED TO TAKE COLOR PHOTOGRAPHS ALONG THE ROUTE OF THIS PROJECT TO RECORD EXISTING CONDITIONS PRIOR TO CONSTRUCTION,AND TO AID IN RESOLVING POSSIBLE FUTURE COMPLAINTS THAT MAY OCCUR DUE TO CONSTRUCTION OF THE PROJECT.ALL COSTS ASSOCIATED WITH PRELIMINARY INVESTIGATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. 3.ALL IMPROVEMENTS SHOWN ARE TO BE WARRANTED BY THE CONTRACTOR TO THE DEVELOPER. 4.ELEVATIONS ARE BASED ON NAVD DATUM OF 1988. 5.TOPOGRAPHIC AND BOUNDARY INFORMATION WAS PROVIDED BY:MANZIE & DRAKE LAND SURVEYING (904-491-5700). 6.THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY BUILDING,RIGHT-OF-WAY PERMITS NOT PROVIDED AND INSURANCE REQUIRED FOR THE PROJECT. 7.THE CONTRACTOR SHALL COORDINATE THE WORK WITHIN CITY,COUNTY OR STATE RIGHT-OF-WAY WITH THE PROPER AGENCIES FOR MAINTENANCE OF TRAFFIC AND METHOD OF CONSTRUCTION & REPAIR. 8.THE CONTRACTOR SHALL ADVISE THE OWNER'S AUTHORIZED REPRESENTATIVE OF PLANNED WORK SCHEDULE.THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION WITH ALL OTHER CONTRACTORS,IN THE EVENT OF ANY CONFLICT WHATSOEVER,THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD,AND THE OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION. 9."AS-BUILT" DRAWINGS - AS-BUILTS ARE REQUIRED TO BE SIGNED AND SEALED BY A FLORIDA REGISTERED LAND SURVEYOR.THEREFORE,IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTRACT WITH A LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA FOR THE PREPARATION,FIELD LOCATIONS,CERTIFICATION,AND SUBMITTAL OF AS-BUILT DRAWINGS. 10."AS-BUILT" RECORD DATA AND INFORMATION SHALL BE MAINTAINED BY THE CONTRACTOR.RECORD DRAWINGS SHALL BE SUPPLIED TO THE ENGINEER. 11.THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL SURVEY AND PROPERTY MONUMENTS,IF A MONUMENT IS DISTURBED,THE CONTRACTOR SHALL CONTRACT WITH THE SURVEYOR OF RECORD FOR REINSTALLATION OF THE MONUMENT. 12.ALL DEBRIS RESULTING FROM ALL ACTIVITIES SHALL BE DISPOSED OF OFF-SITE BY CONTRACTOR ON A DAILY BASIS. 13.ALL EXCESS SUITABLE AND UNSUITABLE MATERIALS SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR UNLESS DIRECTED OTHERWISE BY THE ENGINEER. 14.ALL EXISTING TREES LISTED TO REMAIN SHALL BE PRESERVED AND PROTECTED. 15.THE LOCATION OF ALL EXISTING UTILITIES,STRUCTURES,AND IMPROVEMENTS ON THE DRAWINGS ARE BASED ON LIMITED INFORMATION AND MAY NOT HAVE BEEN FIELD VERIFIED.THE LOCATIONS ARE APPROXIMATE.THE CONTRACTOR SHALL NOTIFY RESPECTIVE UTILITY OWNERS AND FIELD VERIFY LOCATIONS OF EXISTING UTILITIES AND OTHER IMPROVEMENTS PRIOR TO COMMENCING ANY CONSTRUCTION,IF THE LOCATIONS SHOWN ARE CONTRARY TO ACTUAL FIELD LOCATIONS,THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER OF THE DISCREPANCY.THE DISCREPANCY SHOULD BE RESOLVED PRIOR TO COMMENCING CONSTRUCTION.THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING IN AREAS NEAR EXISTING UTILITY IMPROVEMENTS AND SHALL BE RESPONSIBLE FOR REPAIRS OR PAYMENTS FOR ALL DAMAGE MADE TO EXISTING UTILITIES OR OTHER IMPROVEMENTS,PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.THE CONTRACTOR SHALL VERIFY ALL GRADES, INVERTS,AND TYPE OF MATERIAL OF EXISTING UTILITIES TO WHICH THEY SHALL CONNECT. 16.THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER ON ALL MATERIALS,FOR REVIEW AND APPROVAL,PRIOR TO PURCHASE OR CONSTRUCTION OF ANY UTILITY OR STRUCTURE. 17A.UNSUITABLE MATERIALS UNDER WATER,SEWER,OR STORM PIPE AND/OR STRUCTURES SHALL BE REMOVED AND REPLACED WITH SELECTED BACKFILL COMPACTED TO 98% OF ITS MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D1557). 17B. ALL FINISH FLOORS SHOWN ON THE PLANS ARE MINIMUM ELEVATIONS					18.ALL WATER & SEWER CONSTRUCTION SHALL BE ACCOMPLISHED BY AN UNDERGROUND UTILITY CONTRACTOR LICENSED UNDER THE PROVISIONS OF CHAPTER 489 FLORIDA STATUTES. 19.WHEN DEWATERING CAPACITY REQUIRES A PERMIT (CUP),IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE PERMIT THROUGH THE ST.JOHNS RIVER WATER MANAGEMENT DISTRICT. 20.WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SANITARY HAZARD,THE DISTANCE SHALL BE MEASURED EDGE TO EDGE.WHERE PARALLEL WATER AND SEWER MAINS HAVE LESS THAN 10 FOOT HORIZONTAL SEPARATION,20 FOOT LENGTHS OF C900 (DR18)WATER QUALITY PIPE SHALL BE USED WITH THE JOINTS STAGGERED AT 10 FOOT INTERVALS.THE PIPES SHALL BE PLACED IN SEPARATE TRENCHES WITH THE WATER MAIN AT LEAST 18 INCHES ABOVE THE SEWER. 21.WATER MAINS CROSSING SANITARY HAZARDS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER MAIN.WHERE WATER AND SEWER MAINS CROSS WITH BETWEEN 18 INCHES AND 6 INCHES OF VERTICAL CLEARANCE,A 20 FOOT SECTION OF C900 (DR18)WATER QUALITY PIPE SHALL BE CENTERED ON THE POINT OF THE CROSSING.THE CONTRACTOR SHALL FIELD VERIFY THE VERTICAL SEPARATION.THE MINIMUM SEPARATION BETWEEN WATER AND SEWER PIPES IS TO BE 6 INCHES OUTSIDE DIAMETER TO OUTSIDE DIAMETER. 22.NO WATER MAIN PIPE SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SEWER MANHOLE. 23.BLANK 24.TRACER WIRE SHALL BE PROVIDED ON ALL WATER MAINS AND FORCE MAINS.TRACER WIRE SHALL BE #10 UF SOLID COPPER WIRE,COATED,AND SUITABLE FOR BURIAL.COATING SHALL BE BLUE FOR WATER AND GREEN FOR SEWER MAIN CONNECTIONS.WIRE SHALL BE ATTACHED DIRECTLY TO TOP OF PIPE AND BROUGHT INTO EACH VALVE BOX AND COILED TO ALLOW FOR EASY ACCESS AND EXTENSION ABOVE FINISHED GRADE FOR ATTACHMENT OF LOCATING EQUIPMENT. 25.ALL PIPE LENGTHS ARE APPROXIMATE DIMENSIONS,ALL DRAINAGE STRUCTURES SHALL BE CONSTRUCTED TO CONFORM WITH TYPICAL SECTIONS AND DETAILS AS SHOWN ON THE MISCELLANEOUS DETAILS SHEET AND IN ACCORDANCE WITH THE SPECIFICATIONS. 26.ALL UNDERGROUND UTILITIES MUST BE INSTALLED PRIOR TO PREPARATION OF SUBGRADE FOR PAVEMENT. 27.GRADES SHOWN ON PLANS ARE EDGE OF PAVEMENT FINISHED GRADES UNLESS OTHERWISE NOTED. 28.SHOULD THE SURFACE OR SUBSURFACE CONDITIONS VARY FROM WHAT IS SHOWN ON THE PLANS,THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER. 29.ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE SEEDED AND MULCHED UNLESS OTHERWISE SPECIFICALLY STATED. 30.THE CONTRACTOR IS RESPONSIBLE FOR THE CONTROL OF SEDIMENT-LADEN RUNOFF RESULTING FROM STORM EVENTS DURING THE CONSTRUCTION PHASE.EROSION CONTROL FACILITIES SHOULD BE INSTALLED EARLY DURING THE CONSTRUCTION PERIOD SO AS TO PREVENT THE TRANSPORT OF SEDIMENT INTO SURFACE WATERS,REVEGETATION AND STABILIZATION OF DISTURBED AREAS SHOULD BE ACCOMPLISHED IMMEDIATELY TO REDUCE THE POTENTIAL FOR FURTHER SOIL EROSION. 31.ANY DISCREPANCIES ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND COUNTY/CITY BEFORE COMMENCING WORK. 32.MINIMUM COVER OVER PIPES SHALL BE 36"UNLESS OTHERWISE INDICATED. 33.ALL UNDERGROUND UTILITY COMPANIES SHALL BE CONTACTED AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION. 34.IN ADDITION TO THE SPECIFICATIONS AND DETAILS PROVIDED FOR THIS CONTRACT,THE NASSAU COUNTY STANDARD DETAILS AND SPECIFICATIONS (LATEST REVISION) SHALL ALSO BE USED FOR ANY ITEMS NOT COVERED.IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A SET OF STANDARD DETAILS AND SPECIFICATIONS FROM NASSAU COUNTY. 35.BACKFILL MATERIAL SHALL BE COMPACTED TO 100% (2X) PER CITY OF FB REQUIREMENTS UNDER EXISTING AND PROPOSED ROADWAYS. 36.NO FIELD CHANGES OR DEVIATIONS FROM DESIGN TO BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER. 37.STATIONING REFERS TO THE CENTERLINE OF THE ROADWAY EXCEPT AS NOTED ON PLANS.WHERE PAVEMENT SPLITS, THE STATIONING FOLLOWS THE INSIDE EDGE OF PAVEMENT UNTIL ROADWAY TRANSITIONS BACK TO THE TYPICAL ROADWAY SECTION 38.ALL CONSTRUCTION,MATERIAL,AND WORKMANSHIP ARE TO BE IN ACCORDANCE WITH CITY OF FB AND COUNTY STANDARDS.					1.WATER MAINS SHALL HAVE A MINIMUM OF 36" COVER UNDER PAVEMENT OR 30" COVER FROM FINISHED GRADE UNLESS OTHERWISE SHOWN.ALL WATER MAINS SHALL BE FLUSHED IN ACCORDANCE WITH,AND UNDER THE DIRECTION OF THE UTILITY COMPANY. 2.THRUST RESTRAINTS ARE REQUIRED IN ACCORDANCE WITH UTHE UTILITY COMPANY STANDARDS WHERE WATER MAINS ARE TERMINATED AND AT ALL BENDS AND TEES. 3.TIE RODS SHALL BE INSTALLED ON ALL VALVES LOCATED AT FITTINGS,ALL 10" AND LARGER VALVES AND LARGER SHALL REQUIRE (4)TIE RODS.MEGA LUG JOINT RESTRAINTS MAY BE USED IN LIEU OF THRUST BLOCKS OR TIE RODS. 4.UNLESS OTHERWISE NOTED,WATER MAINS ARE TO BE PVC DR18,DR-25,C-900 (BLUE),CLASS 150. 5.ALL WATER MAINS SHALL BE BACTERIOLOGICAL AND PRESSURE TESTED IN ACCORDANCE WITH ANWA C-600.NO CONNECTION TO EXISTING POTABLE WATER SYSTEM SHALL BE ALLOWED UNTIL ALL PROPOSED WATER MAINS HAVE BEEN PRESSURE TESTED,DISINFECTED,AND CLEARED FOR SERVICE,THE UTILITY COMPANY'S AUTHORIZED REPRESENTATIVE MUST BE NOTIFIED 48 HOURS PRIOR TO PERFORMING THE PRESSURE TEST AND MUST BE PRESENT. 6.THE CONTRACTOR SHALL AVOID SERVICE INTERRUPTIONS AND MAINTAIN ANY EXISTING WATER SERVICE TO MEET THE SYSTEM DEMANDS AT ALL TIMES.THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION OF AFFECTED CUSTOMERS OF THE UTILITY A MINIMUM OF 48 HOURS IN ADVANCE OF ANY INTERRUPTION OF SERVICE.BOIL WATER NOTICES SHALL BE DELIVERED IN ACCORDANCE WITH THE UTILITY COMPANY BOIL WATER NOTICE REQUIREMENTS. 7.ALL MAIN FLUSHING POINTS SHALL BE SAME SIZE AS MAIN UP TO 8 INCH WATER MAINS.FLUSHING POINTS FOR MAINS LARGER THAN 8 INCH SHALL BE REDUCED TO 8 INCH. 8.ALL WATER MAINS SHALL BE DISINFECTED USING LIQUID CHLORINE OR HYPOCHLORITES IN ACCORDANCE TO ANWA C651-B6. WATER IN MAIN SHALL MAINTAIN A CHLORINE RESIDUAL OF 50 MG/L FOR A MINIMUM OF 24 HOURS.WATER MAIN SHALL NOT BE PLACED IN SERVICE UNTIL CLEARANCE HAS BEEN PROVIDED BY THE APPROPRIATE REGULATING AGENCY AND CITY OF FERNANDINA BEACH UTILITIES DEPARTMENT. 9.IF SOLVENT CONTAMINATION IS FOUND IN THE PIPE TRENCH,WORK SHALL BE STOPPED AND THE PROPER AUTHORITIES NOTIFIED,BASED ON APPROVAL OF THE PERMITTING AGENCY,DUCTILE IRON PIPE,FITTINGS,AND SOLVENT RESISTANT GASKET MATERIAL SUCH AS FLUOROCARBON SHALL BE USED IN THE CONTAMINATED AREA.THE DUCTILE IRON PIPE SHALL EXTEND AT LEAST 100 FEET BEYOND ANY SOLVENT NOTED,ANY CONTAMINATED SOIL THAT IS EXCAVATED SHALL BE PLACED ON AN IMPERMEABLE MAT AND COVERED WITH A WATER PROOF COVERING.THE PROPER AUTHORITIES WILL BE NOTIFIED AND THE CONTAMINATED SOIL HELD FOR PROPER DISPOSAL. 10.2" FLUSHING HYDRANTS SHALL BE INSTALLED AT ALL DEAD END LINES AND MAIN LINE STUB-OUTS. 11.A SEPARATE WATER SERVICE SHALL BE REQUIRED FOR EACH UNIT SERVED AND SHALL BE INSTALLED 3 FEET EITHER SIDE OF PROPERTY LINE.ALL WATER SERVICES SHALL BE MARKED WITH A "W" ETCHED ON THE CURB.ALL VALVES SHALL BE MARKED WITH A "V" ETCHED ON THE CURB. 12.ALL BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED IN ACCORDANCE WITH THE UTILITY COMPANY'S STANDARDS. 13.ALL BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED AT THE CONSUMER'S METER OR AT THE PROPERTY LINE WHEN A METER IS NOT USED. 14.BACKFLOW PREVENTION ASSEMBLIES SHALL BE TESTED BY A CERTIFIED BACKFLOW TECHNICIAN,TEST RESULTS SHALL BE SUBMITTED TO AND APPROVED BY THE UTILITY COMPANY PRIOR TO ACCEPTANCE OF INSTALLATION. 15.MAXIMUM DEPTH ON WATER SERVICES TO METER TO BE 36".					1 2 3 4 5 6 7 8 9 10 11 12	COVER SHEET INDEX SHEET PREDEVELOPMENT PLAN GEOMETRY PLAN POST-DEVELOPMENT DRAINAGE PLAN UTILITY PLAN DATE STREET PLAN & PROFILE TREE PRESERVATION PLAN LANDSCAPE PLAN MISCELLANEOUS DETAILS WATER DETAILS SEWER DETAILS
										FIRE NOTES						
										1.WHERE UNDERGROUND WATER MAINS AND HYDRANTS ARE TO BE PROVIDED, THEY SHALL BE INSTALLED,COMPLETED,AND IN SERVICE PRIOR TO COMMENCING CONSTRUCTION WORK ON ANY STRUCTURE.(NFPA 1,16.4.3.1,2009 EDITION) 2.CLEARANCES OF SEVEN AND ONE HALF FEET (7 FT-6 IN.) IN FRONT OF AND TO THE SIDES OF THE FIRE HYDRANT,WITH A FOUR FOOT CLEARANCE TO THE REAR OF THE HYDRANT.(NFPA 1,18.3.4.1,2009) 3.NEW FIRE HYDRANT(S) SHALL BE INSTALLED SO THAT POSITIONED NOT MORE THAN 7 FEET 6 INCHES AWAY FROM CURB OR BERM OF THE ROADWAY.						
LEGEND					SEWER NOTES											
---------- EXISTING VALVE ----- WM ----- EXISTING WATER LINE ----- SAN ----- EXISTING SANITARY SEWER  EXISTING FIRE HYDRANT ----- SAN -----					 15.3 PROPOSED SPOT ELEVATION											
					 S-5 DRAINAGE STRUCTURE											
					 P-1 PIPE											
----- SAN -----					 15.0 PROPOSED CONTOUR											
----- WM -----					 PROPOSED EDGE OF PAVEMENT											
					----- PROPOSED PROPERTY LINE											
----- EXISTING EDGE OF PAVEMENT					----- PROPOSED R.O.W. LINE											
----- EXISTING PROPERTY LINE					 16 EXISTING CONTOUR											
					</											



PROPERTY
BOUNDARY

Registered Professional

GENERAL NOTES:

PIN # 00-00-31-1180-0015-0000

FLOOD ZONE- X

PROPERTY AREA- 3.32 ACRES

ZONING- RIA (C.O.F.B.)

FLUM- LOW DENSITY RESIDENTIAL

DEVELOPMENT REQUIREMENTS:

LOT REQUIREMENTS:

MAX. LOT COVERAGE- 40%
MIN. LOT WIDTH- 75 FT
MIN. LOT AREA- 7,500 SF (0.17 AC.)
MAX. IMPERVIOUS SURFACE- 60% LOT AREA
MAX. FLOOR AREA RATIO- 50% LOT AREA

YARD REQUIREMENTS:

FRONT YARD- 25 FT
BACK YARD- 25 FT
SIDE YARDS- 10% LOT WIDTH

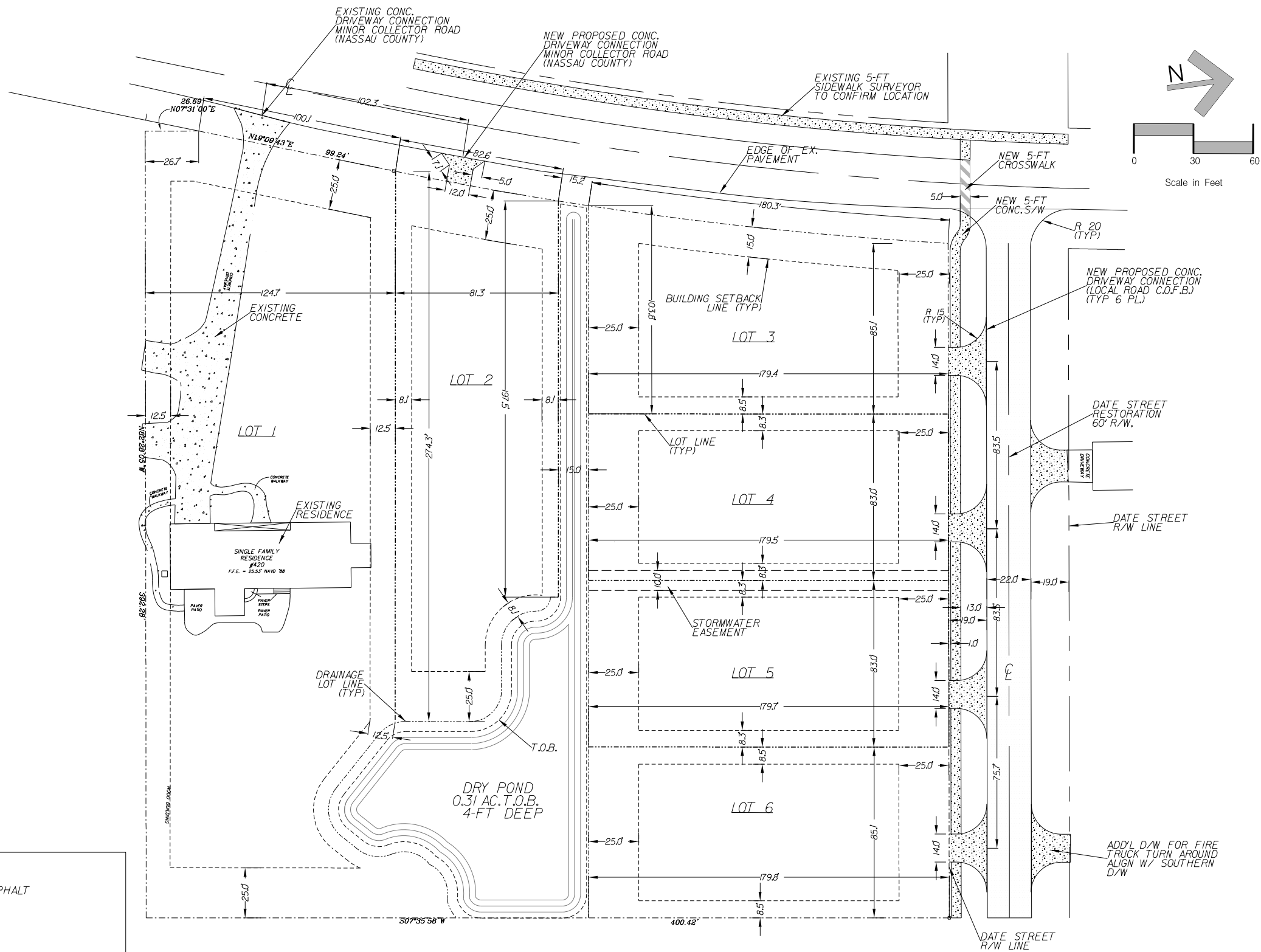
STREET AND DRIVEWAY REQUIREMENTS:

DATE STREET (LOCAL ROAD C.O.F.B.)

MIN. DISTANCE BETWEEN- 50 FT
MIN. DRIVEWAY RADIUS- 15 FT
MIN. DRIVEWAY WIDTH- 12 FT
MAX. DRIVEWAY WIDTH- 20 FT
SIDEWALKS- ONE SIDE OF STREET

CITRONA DRIVE (MINOR COLLECTOR NASSAU CO.)

MIN. DISTANCE BETWEEN- 100 FT
MIN. DRIVEWAY RADIUS- 15 FT
MIN. DRIVEWAY WIDTH- 24 FT
SIDEWALKS- ONE SIDE OF STREET (EXISTING)



ASPHALT

CONCRETE

LEGEND

Scale: 1" = 30'

Project Mgr: AG

Designed by: AG

Drawn by: LA

QA/QC: NG

GILLETTE & ASSOCIATES, INC.
20 SOUTH 4TH STREET
FERNANDINA BEACH, FL 32034
CERTIFICATE OF AUTHORIZATION NO. 9332

ASA R GILLETTE, PE
FL PE NO. 56177

DO NOT SCALE THIS DRAWING - DIMENSIONS AND NOTES TAKE PREFERENCE. DRAWING IS REDUCED IF LESS THAN 22" x 34"

G & A

GILLETTE & ASSOCIATES, INC.

20 SOUTH 4TH STREET
FERNANDINA BEACH, FL 32034

PHONE: (904) 261-8819

ED BONER

CANOPY PARK

GEOMETRY PLAN

Sheet No.

GE-1

4 of 12

Issue Date

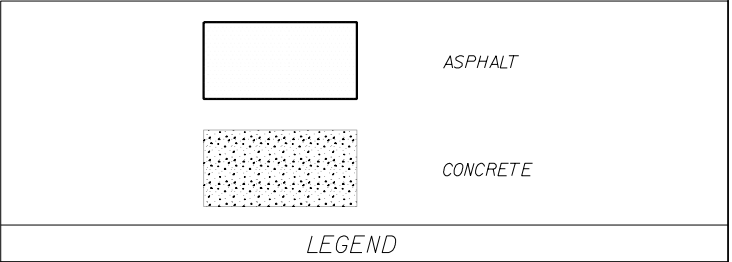
06-26-19

Project No.

19-10-09

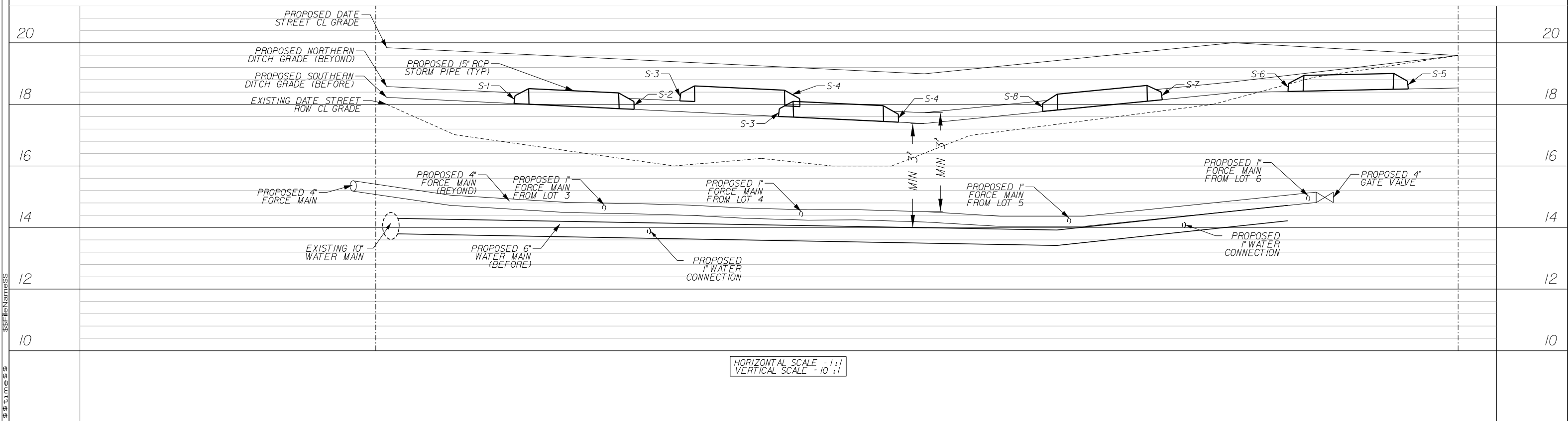
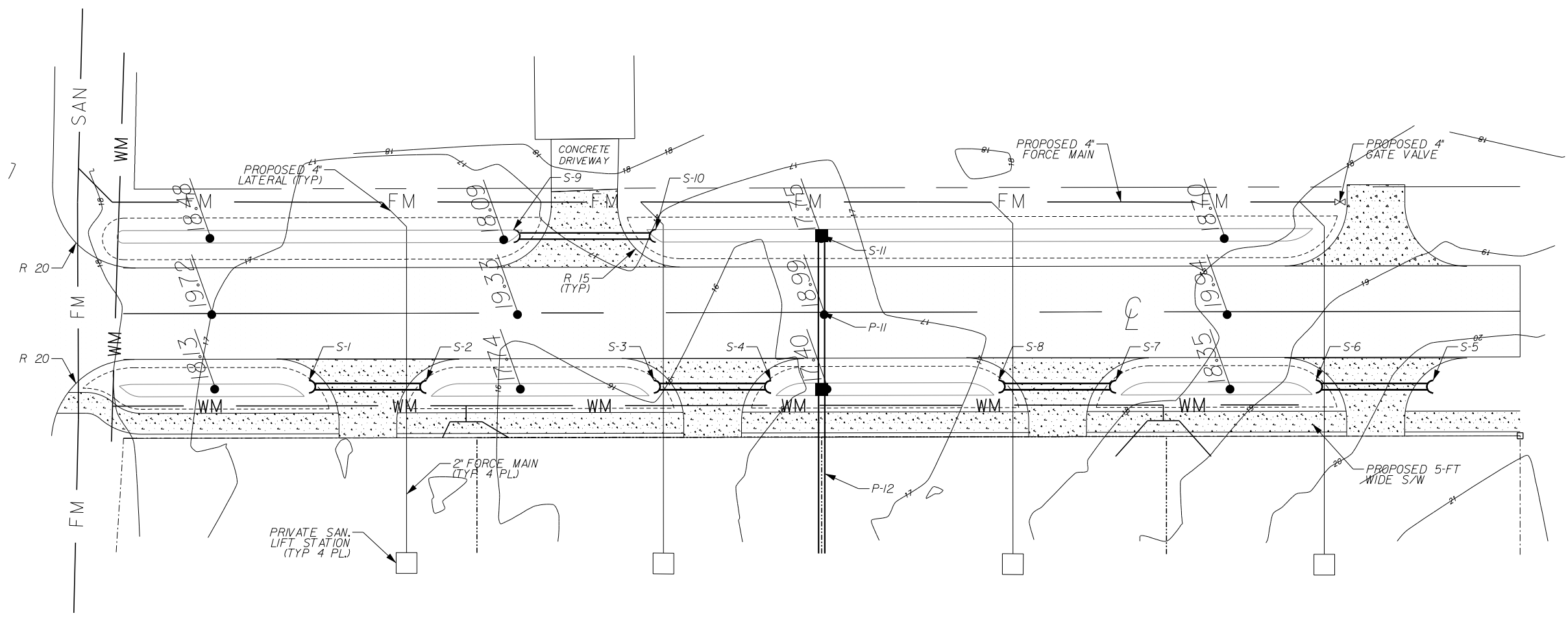
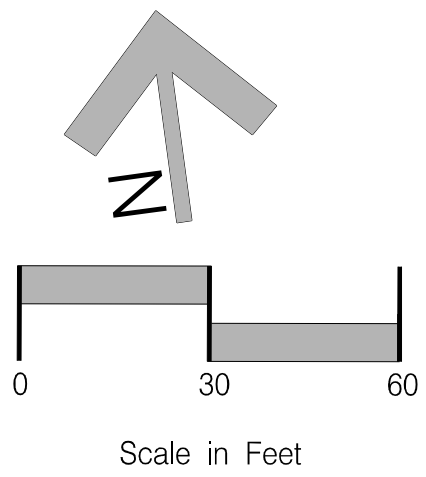
Registered Professional

STORM PIPE TABLE					
NAME	FROM	TO	SIZE	LENGTH	MATERIAL
P-1	S-1	S-2	15"	26'	RCP
P-3	S-3	S-4	15"	26'	RCP
P-5	S-5	S-6	15"	26'	RCP
P-7	S-7	S-8	15"	26'	RCP
P-9	S-9	S-10	15"	33'	RCP
P-11	S-11	S-12	15"	35'	RCP
P-12	S-12	S-13	15"	195'	HDPE

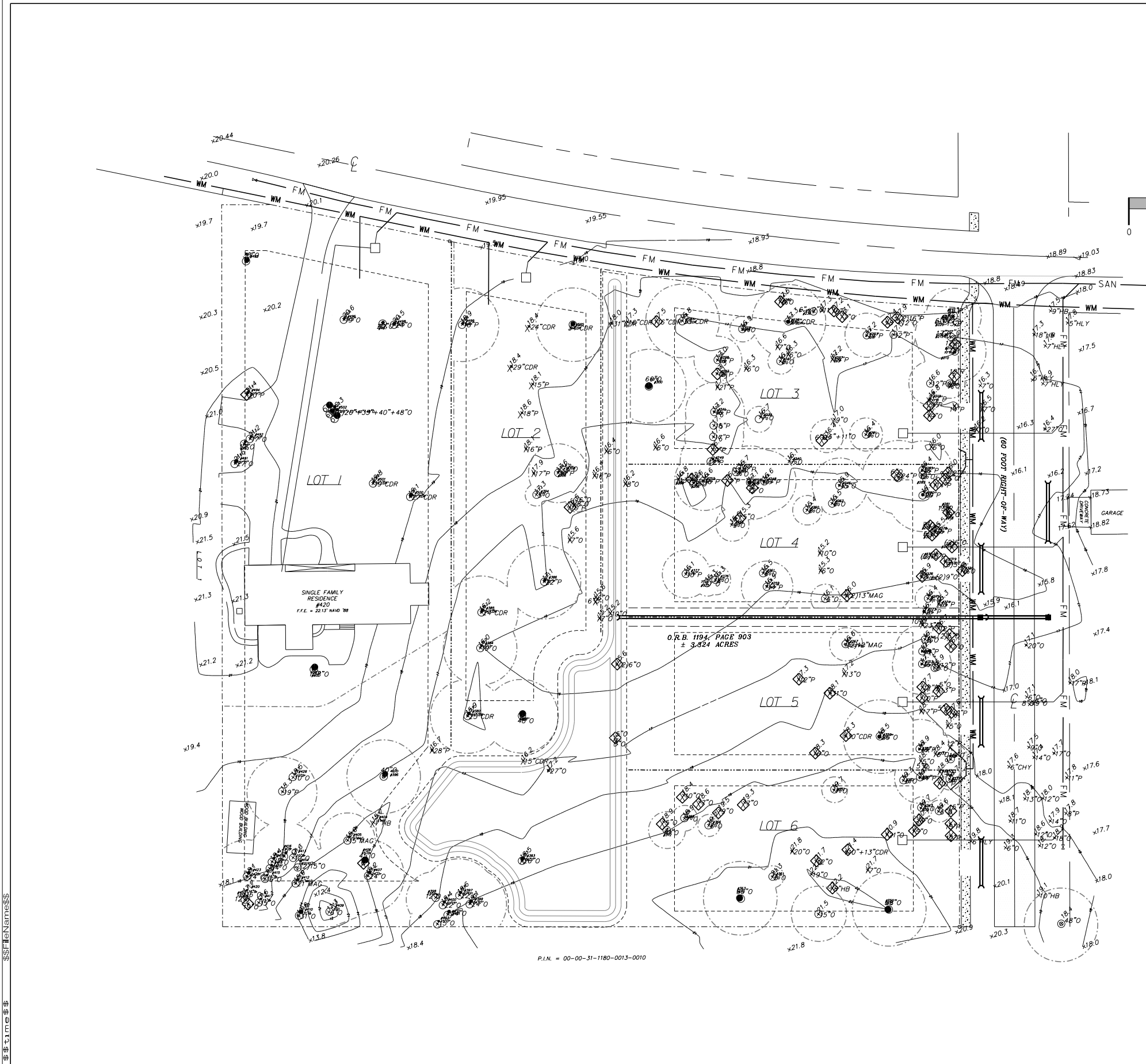


Registered Professional	Sheet No. <i>DR-1</i>
	<u>5</u> of <u>12</u>
	Issue Date <i>06-26-19</i>
	Project No. <i>19-10-09</i>

GILLETTE & ASSOCIATES, INC. 20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034 CERTIFICATE OF AUTHORIZATION NO.9332 ASA R GILLETTE, PE FL PE NO.56177 NOT SCALE THIS DRAWING - DIMENSIONS AND NOTES TAKE PRECEDENCE. DRAWING IS REDUCED IF LESS THAN 22" x 34"	 GILLETTE & ASSOCIATES, INC. 20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034 PHONE: (904) 261-8819	ED BONER	CANOPY PARK	UTILITY PLAN	Registered Professional	Sheet No. UT-1 6 of 12 Issue Date 06-26-19 Project No. 19-10-09



10 9 8 7 6 5 4 3 2 1 0	LA 6-26-19	YRC SUBMITTAL REVISION	Scale: 1" = 30'	GILLETTE & ASSOCIATES, INC. 20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034 CERTIFICATE OF AUTHORIZATION NO.9332	G & A GILLETTE & ASSOCIATES, INC. 20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034 PHONE: (904) 261-8819	ED BONER	CANOPY PARK	DATE STREET PLAN AND PROFILE	Registered Professional	Sheet No. PP-1
			Project Mgr: AG							7 of 12
			Designed by: AG							Issue Date 06-26-19
			Drawn by: LA							Project No. 19-10-09
			QA/QC: NG							



TREE MITIGATION LEGEND

- TREE IN POOR HEALTH
- TREE TO BE RETAINED
- TREE TO BE REMOVED
- TREE PROTECTION BARRIER

TREE PROTECTION DETAIL

BARRIER TO BE PLACED AROUND TREE SHALL BE PLACED WITH SPECIFICATIONS DEFINED IN CHAPTER 4.05.14 OF THE FERNANDINA BEACH LAND DEVELOPMENT CODE.

TREE PROTECTION ZONE IS AT MINIMUM A CIRCULAR ZONE AROUND THE TREE TRUNK OF A RADIUS:

- 6 FEET, IF THE DRIP LINE OF THE TREE IS LESS THAN 6 FEET FROM THE TRUNK OF THE TREE.
- 6-20 FEET ENCOMPASSING THE FULL DRIP LINE OF THE TREE, IF THE DRIP LINE OF THE TREE IS BETWEEN 6 AND 20 FEET FROM THE TRUNK OF THE TREE.
- 20 FEET, IF THE DRIP LINE OF THE TREE IS GREATER THAN 20 FEET FROM THE TRUNK OF THE TREE. 3" MULCH LAYER SHALL APPLIED TO THE REMAINING AREA BETWEEN THE TREE PROTECTION ZONE AND DRIP LINE.

2" x 2" x 4" WOODEN POSTS - 5' O.C. WITH A 2" x 4" TOP RAILING AND 3" WIDE TEMPORARY MESH WIRE, CHAIN-LINK, OR SIMILAR BARRIER ATTACHED TO POSTS.

MIN. 6" UP TO 20" DRIP LINE

MIN. 3" HIGH

PRESERVED UNDERSTORY

NOT TO SCALE

NO PARKING OF HEAVY EQUIPMENT OR VEHICLES; STOCKPILING OF MATERIALS; DEPOSITION OF SOIL, SEDIMENT, OR MULCH; GRADING OR CRUSHING; EXCAVATION OR TRENCHING; CONSTRUCTION MATERIALS, DUMPING, BURIAL OR BURNING OF DEBRIS WITHIN THE ENTIRE CONSTRUCTION SITE; DUMPING PETROCHEMICALS, CHEMICALS, WASTEWATER, OR OTHER CONSTRUCTION WASTE, ALL HAZARDOUS MATERIALS TO BE STORED AT A MAXIMUM DISTANCES FROM ANY TREE PROTECTION ZONE.

NOTE TO CONTRACTOR :

REQUIRED TREE PROTECTION BARRICADES MUST BE INSPECTED BY THE CERTIFYING ARBORIST PRIOR TO ANY CONSTRUCT ACTIVITIES, AND REMAIN INTACT THROUGHOUT CONSTRUCTION. ENCROACHMENT INTO OR FAILURE TO MAINTAIN TREE BARRICADES WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS AND/OR BUILDING/CLEARING PERMIT REVOCATION AS PROVIDED BY COUNTY ORDINANCE.

Boner Tree Count and Cumulative Dbh																			
Tree ID	Species	Health	DBH (in)	Retained (Y or N)	DBH Retained (in)	Comment													
200	SP	14	1	28	Y	28	dead												
201	SP	14	1	28	Y	28	out of bounds												
202	SP	14	1	28	Y	28	out of bounds												
203	CH LAU	7	3	7	Y	7	forked at 15'												
204	SP	21	1	63			dead												
205	SP	13	1	19.5	Y	19.5	dead												
206	SP	13	1	19.5	Y	19.5	dead												
207	LAU	8	2	16	Y	16	forked at 10'												
208	SP	13	1	19.5	Y	19.5	dead												
209	SP	13	1	19.5	Y	19.5	dead												
210	SP	13	1	19.5	Y	19.5	dead												
211	SP	13	1	19.5	Y	19.5	dead												
212	SP	13	1	19.5	Y	19.5	dead												
213	SP	13	1	19.5	Y	19.5	dead												
214	SP	13	1	19.5	Y	19.5	dead												
215	SP	13	1	19.5	Y	19.5	dead												
216	SP	13	1	19.5	Y	19.5	dead												
217	SP	13	1	19.5	Y	19.5	dead												
218	LAU	9	3	13.5	Y	13.5	bent top												
219	CH LAU	9	3	13.5	Y	13.5	bent top												
220	CH LAU	9	3	13.5	Y	13.5	bent top												
221	CH LAU	9	3	13.5	Y	13.5	bent top												
222	CH LAU	9	3	13.5	Y	13.5	bent top												
223	SP	12	1	15.5	Y	15.5	grown into small tree												
224	MAG	4	0				top bent												
225	LAU	12	2	16			bent top												
226	SP	12	2	16			grown together												
227	SP	12	2	16			grown together												
228	SP	12	2	16			grown together												
229	SP	12	2	16			grown together												
230	SP	12	2	16			grown together												
231	CH LAU	6	2	6	Y	6	lean												
232	CH LAU	6	2	6	Y	6	lean												
233	CH LAU	6	2	6	Y	6	lean												
234	CH LAU	6	2	6	Y	6	lean												
235	CH LAU	6	2	6	Y	6	lean												
236	CH LAU	6	2	6	Y	6	lean												
237	CH LAU	6	2	6	Y	6	lean												
238	CH LAU	6	2	6	Y	6	lean												
239	CH LAU	6	2	6	Y	6	lean												
240	CH LAU	6	2	6	Y	6	lean												
241	SP	16	1	32	Y	32	crooked from competition												
242	LAU	6	3	6			forked base												
243	LAU	6	3	6			forked base												
244	SP	16	1	32	Y	32	crooked from competition												
245	SP	16	1	32	Y	32	crooked from competition												
246	SP	16	1	32	Y	32	crooked from competition												
247	SP	16	1	32	Y	32	crooked from competition												
248	SP	16	1	32	Y	32	crooked from competition												
249	SP	16	1	32	Y	32	crooked from competition												
250	SP	24	1	72	Y	72	severe competition - crown poor												
251	LAU	4	0				severe competition - crown poor												
252	SP	16	1	32	Y	32	stump sprouts weak at the base												
253	SP	16	1	32	Y	32	stump sprouts weak at the base												
254	SP	16	1	32	Y	32	stump sprouts weak at the base												
255	LAU	7	3	7	Y	7	forked at 10'												
256	LAU	8	3	12	Y	12	forked at 10'												
257	LAU	9	3	13.5	Y	13.5	forked at 10'												
258	LAU	9	3	13.5	Y	13.5	forked at 10'												
259	SP	14	1	28	Y	28	stump sprouts weak at the base												
260	LAU	8	1	12	Y	12	stump sprouts weak at the base												
261	LAU	6	1	6	Y	6	stump sprouts weak at the base												
262	LAU	6	1	6	Y	6	stump sprouts weak at the base												
263	LAU	10	1	20	Y	20	stump sprouts weak at the base												
264	LAU	6	1	6	Y	6	stump sprouts weak at the base												
265	MAG	4	0				forked with decay between												
266	MAG	4	0				forked with decay between												
267	MAG	12	3	18	Y	18	stump sprouts weak at the base												
268	MAG	12	3	18	Y	18	stump sprouts weak at the base												
269	SP	23	1	69			forked at 20'												
270	SP	23	1	69			forked at 20'												
271	LAU	10	1	15			bent from competition												
272	LAU	10	1	15			dead												
273	LAU	10	1	15			dead												
274	SP	16	1	32			dead												
275	SP	7	1	7	Y	7	stump sprouts weak at the base												
276	LAU	4	0				failure at the base												
277	CH LAU	4	0				failure at the base												
278	CH LAU	4	0				failure at the base												
279	CH LAU	4	0				failure at the base												
280	SP	20	1	60	Y	60	lean												
281	SP	33	3	99			spine crown												
282	SP	24	2	72	Y	72	lean												
283	CH LAU	12	1	15	Y	15	lean												
284	CH LAU	4	0				lean												
285	SP	16	3	32			lean												
286	LAU	6	2	6	Y	6	forked at 8'												
287	SP	0	0				dead												
288	SP	0	0				dead												
289	SP	0	0				dead												
290	SP	0	0				dead												
291	SP	0	0				dead												
292	SP	0	0				dead												
293	SP	0	0				dead												
294	SP	0	0				dead												
295	SP	0	0				dead												
296	SP	0	0				dead												
297	SP	0	0				dead												
298	SP	0	0				dead												
299	SP	0	0				dead												
300	SP	0	0				dead												
301	SP	0	0				dead												
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303	SP	0	0				dead												
304	SP	0	0				dead												
305	SP	0	0				dead												
306	SP	0	0				dead												
307	SP	0	0				dead												
308	SP	0	0				dead												
309	SP	0	0				dead												
310	SP	0	0				dead												
311	SP	0	0				dead												
312	SP	0	0				dead												
313	SP	0	0																

INTERNAL PLANTING PLANT/MATERIAL SCHEDULE

	QUANTITY	KEY	SPECIES	SIZE/REMARKS
	5	UP	ULMUS PARVIFOLIA	2.5' MIN CAL. 8' MIN HT.
	12	CC	CERCIS CANADENSIS	2.5' MIN CAL. 8' MIN HT.
			EASTERN REDBUD	

TREES SHRUBS AND GROUNDCOVERS SHALL BE SELECTED BY USING THE FLORIDAFRIENDLY PLANT DATABASE.

PLANTS IDENTIFIED AS PROHIBITED OR NOXIOUS WEEDS SPECIES ON THE MOST RECENT FLORIDAFRIENDLY PLANT DATABASE SHALL BE EXCLUDED FROM THE PLANT LIST. PLANTS IDENTIFIED AS PROHIBITED OR NOXIOUS WEEDS SPECIES SHALL BE EXCLUDED FROM THE PLANT LIST. PLANTS IDENTIFIED AS PROHIBITED OR NOXIOUS WEEDS SPECIES SHALL BE EXCLUDED FROM THE PLANT LIST.

ALL PLANTS USED AS PART OF ANY LANDSCAPE PLAN SHALL BE HEALTHY WELL PROPORTIONED DISEASE FREE PEST FREE AND HARDY. PLANTS SHALL BE INSTALLED IN LANDSCAPED BUFFERS AND PARKING AREAS AND FOR REPLACEMENT SHALL BE NATIVE SPECIES.

A ROOT BARRIER SHALL BE INSTALLED FOR ALL STREET TREES TO AVOID FUTURE ROOT CONFLICTS.

AT LEAST FIFTY (50) PERCENT OF THE REQUIRED TREES INSTALLED IN LANDSCAPED BUFFERS AND PARKING AREAS AND TO MEET THE FLORIDAFRIENDLY PLANT DATABASE REQUIREMENTS. TREES OF THE SAME SPECIES SHALL BE PLANTED IN GROUPS OF THREE (3) OR MORE. TREES SHALL BE PLANTED IN GROUPS OF THREE (3) OR MORE. TREES SHALL BE PLANTED IN GROUPS OF THREE (3) OR MORE.

TREES SHALL BE A MINIMUM OF TWO (2) AND A MAXIMUM OF THREE (3) FEET TALL AT THE TIME OF INSTALLATION. TREES SHALL BE A MINIMUM OF TWO (2) AND A MAXIMUM OF THREE (3) FEET TALL AT THE TIME OF INSTALLATION.

SHRUBS SHALL BE AT LEAST EIGHTEEN (18) INCHES IN HEIGHT AND HAVE A MINIMUM SPREAD OF AT LEAST FIFTEEN (15) INCHES AT THE TIME OF INSTALLATION. SHRUBS SHALL BE INSTALLED AT LEAST FIFTEEN (15) INCHES FROM THE EDGE OF ANY IMPAVED AREA PLANTED TREES SHALL BE A MINIMUM OF TEN (10) FEET TALL AT THE TIME OF INSTALLATION.

WHERE UTILITIES CONFLICT WITH PROPOSED PLANTINGS TREES SHALL BE SELECTED FROM A LIST PROVIDED BY THE CITY WHERE UNDERGROUND UTILITIES CONFLICT WITH PROPOSED PLANTINGS TREE PLANTING SHALL BE A MINIMUM OF TEN (10) FEET FROM THE UNDERGROUND UTILITY AND A ROOT BARRIER OF TWO (2) FEET DEEP SHALL BE INSTALLED.

LANDSCAPING NOTES

ONE (1) SHADE TREE (ST) FOR EVERY 2500 SQUARE FEET OF LOT AREA OR FRACTION THEREOF. AT LEAST TWO (2) TREES SHALL BE LOCATED IN THE FRONT OR REAR YARD.

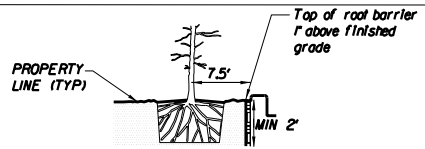
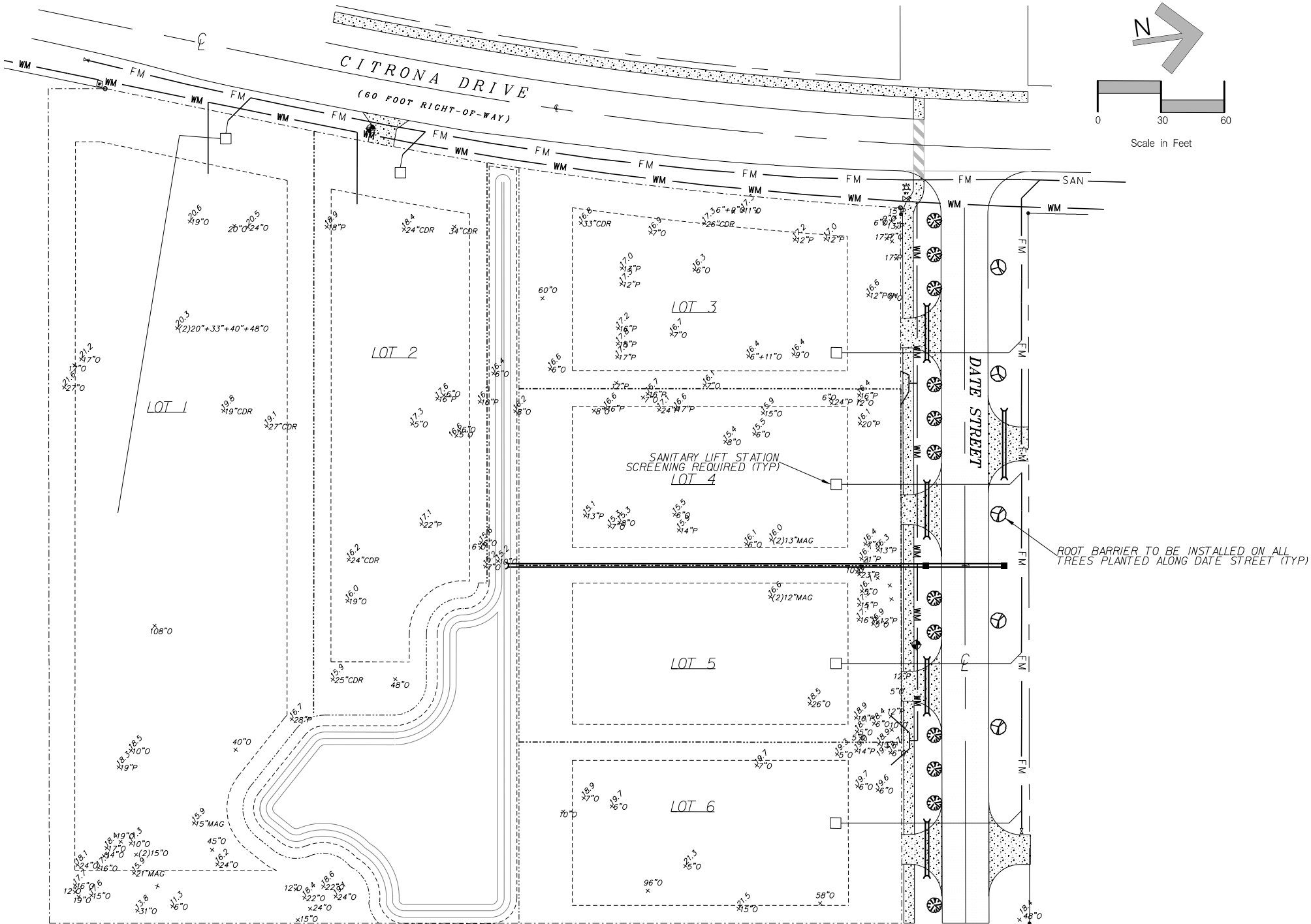
ONE (1) SHADE TREE (ST) FOR EVERY 50 FEET OF SITE/LOT FRONTAGE ALONG THE RIGHT-OF-WAY.

STREET TREES SHALL BE A MINIMUM OF TEN (10) FEET TALL AT THE TIME OF INSTALLATION.

USE OF UNDERGROUND TREES IS NOT PERMITTED IN LIEU OF SHADE TREES AS DETERMINED TO BE PRACTICAL BECAUSE OF OVERHEAD UTILITY LINES OR OTHER INFRASTRUCTURE CONFLICTS. ONE (1) ST FOR EVERY 25 FEET OF SITE/LOT FRONTAGE ALONG THE RIGHT-OF-WAY.

PRESERVED OR RETAINED TREES ON-SITE SHALL COUNT TOWARDS SATISFYING THIS REQUIREMENT IN NEWLY ESTABLISHED RESIDENTIAL SUBDIVISIONS.

LANDSCAPING REQUIREMENTS



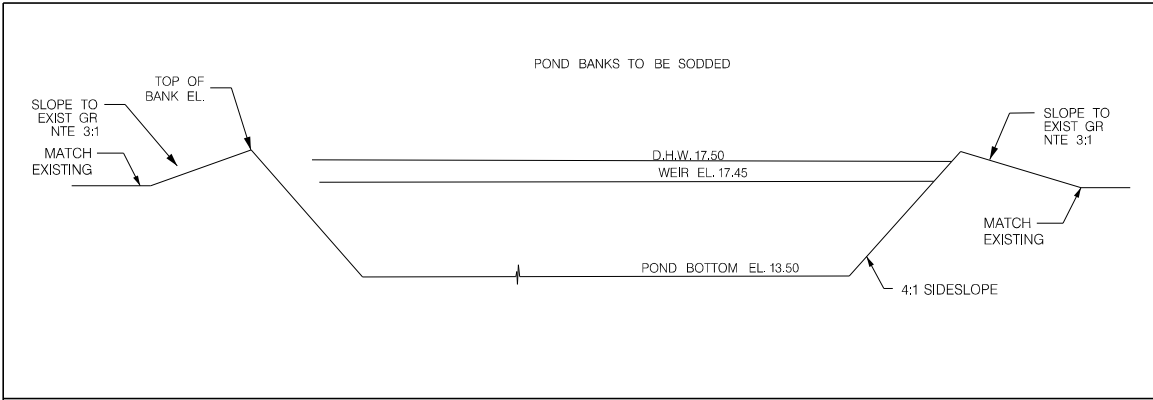
NOTES:
1. Root barriers shall be installed per manufacturer's specifications.
2. Root barriers shall be installed when root balls are located within 8' of pavement on all street trees, and all trees within 10' of underground utilities.

ROOT BARRIER DETAIL

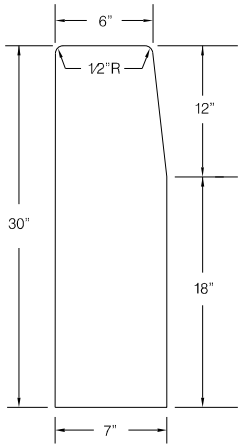
	ASPHALT		CONCRETE
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LEGEND

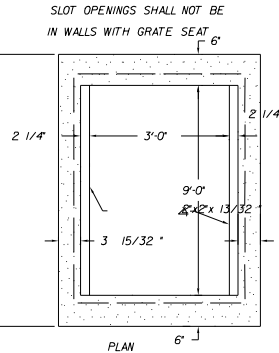
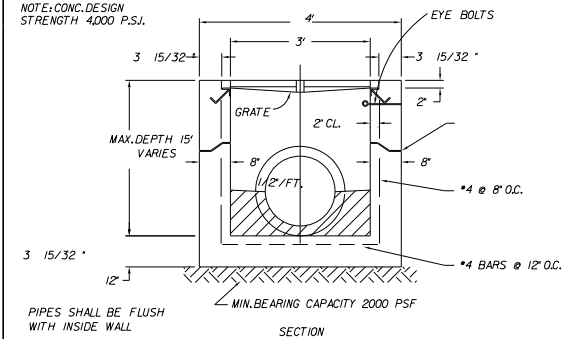
10 9 8 7 6 5 4 3 2 1 0	LA 6-26-19 No. By Date	YRC SUBMITTAL REVISION	Scale: 1" = 30'	Project Mgr: AG Designed by: AG Drawn by: LA QA/QC: NG	GILLETTE & ASSOCIATES, INC. 20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034 CERTIFICATE OF AUTHORIZATION NO. 9332 ASA R GILLETTE, PE FL PE NO. 56177 DO NOT SCALE THIS DRAWING - DIMENSIONS AND NOTES TAKE PREFERENCE. DRAWING IS REDUCED IF LESS THAN 22" x 34"	P.L.N. # 00-00-31-1180-0013-0010 G & A GILLETTE & ASSOCIATES, INC. 20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034 PHONE: (904) 261-8819	ED BONER	CANOPY PARK	LANDSCAPE PLAN	Sheet No. LS-1 9 of 12 Issue Date 06-26-19 Project No. 19-10-09 Registered Professional
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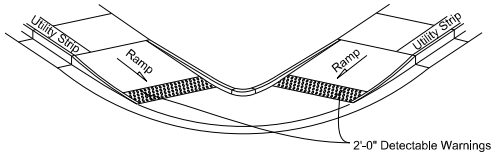
DRY POND CROSS SECTION AND DETAIL



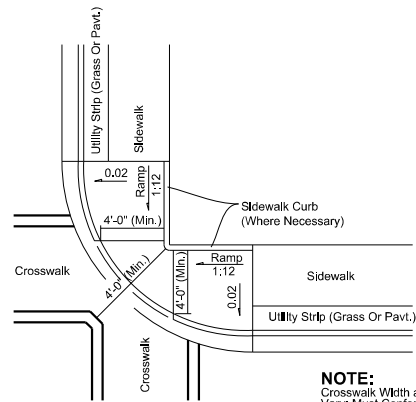
12" HEADER CURB DETAIL



TYPE C INLET DETAIL



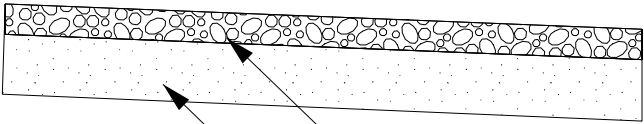
ISOMETRIC VIEW



PLAN VIEW

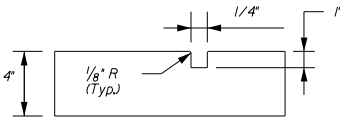
NOTE:
Curbwalk Width and Configuration
Vary. Must Conform to Index
17344 and 17346.15' Radius Curve
Shown for CR-L.

CURB RAMP DETAIL

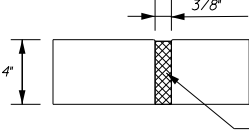


Note: Soil analysis may indicate the need for a thicker base course than those shown herein. The pavement thickness shown herein are not intended to be absolute, but are preliminary criteria & may be modified to accommodate the bearing capacities of various subgrades.

DRIVEWAY CONNECTION DETAIL



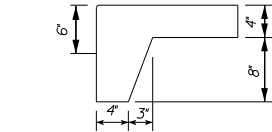
Dummy Joint



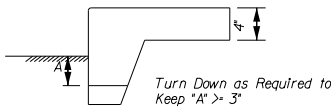
Expansion Joint

Preformed Expansion
Joint Material

SIDEWALK JOINT DETAILS

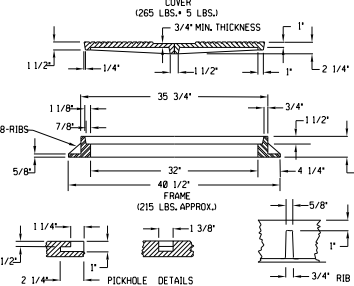
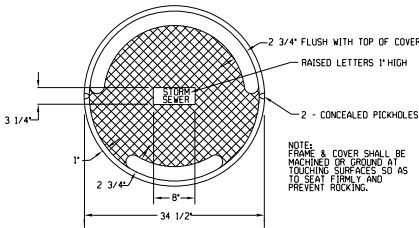


At Asphalt Pavement



At Grade

SIDEWALK TURNDOWN DETAILS



MANHOLE FRAME AND COVER

10					
9					
8					
7					
6					
5					
4					
3					
2					
1					
0	LA	6-26-19	YRC SUBMITTAL		
No.	By	Date	REVISION		

Scale:	NONE	1" = 30'
Project Mgr:	AG	
Designed by:	AG	
Drawn by:	LA	
QA/QC:	NG	

GILLETTE & ASSOCIATES, INC. 20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034 CERTIFICATE OF AUTHORIZATION NO.9332
ASA R GILLETTE, PE FL PE NO.56177
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FERNANDINA BEACH, FL 32034
PHONE: (904) 261-8819

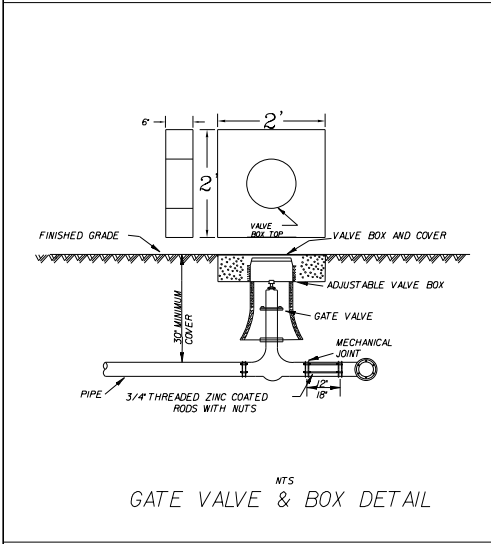
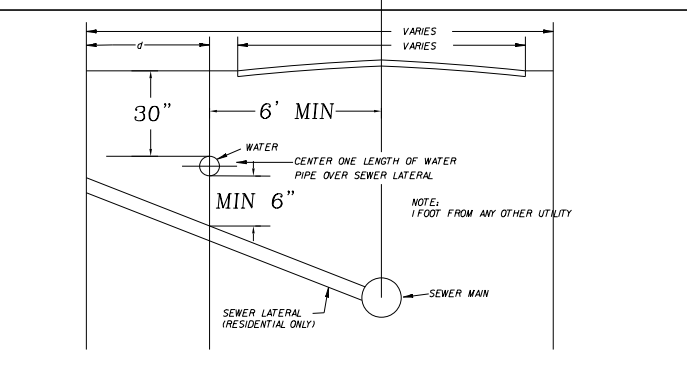
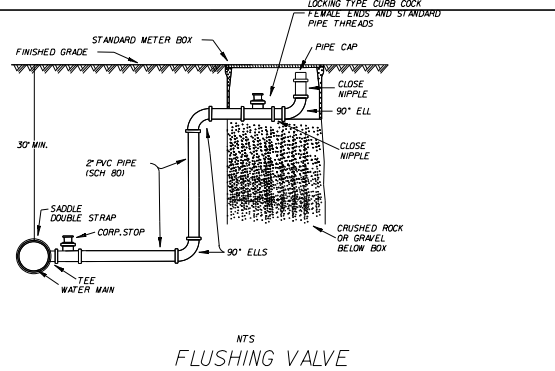
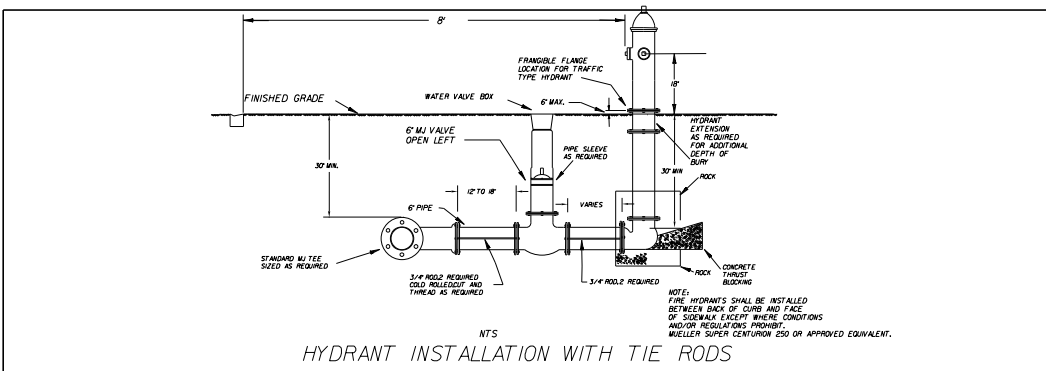
ED BONER

CANOPY PARK

MICELLANEOUS DETAILS

Registered Professional

Sheet No.
DT-1
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Issue Date
06-26-19
Project No.
19-10-09



6" MIN

2" MIN. 1/2" & LARGER PIPE
18" MIN. 10" & SMALLER PIPE

X-X

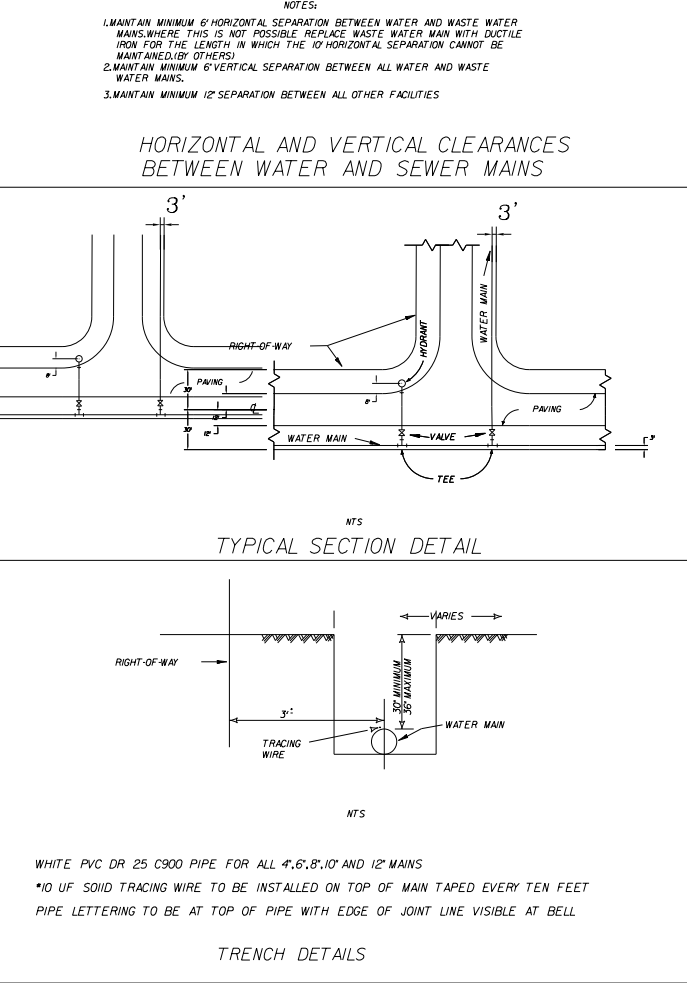
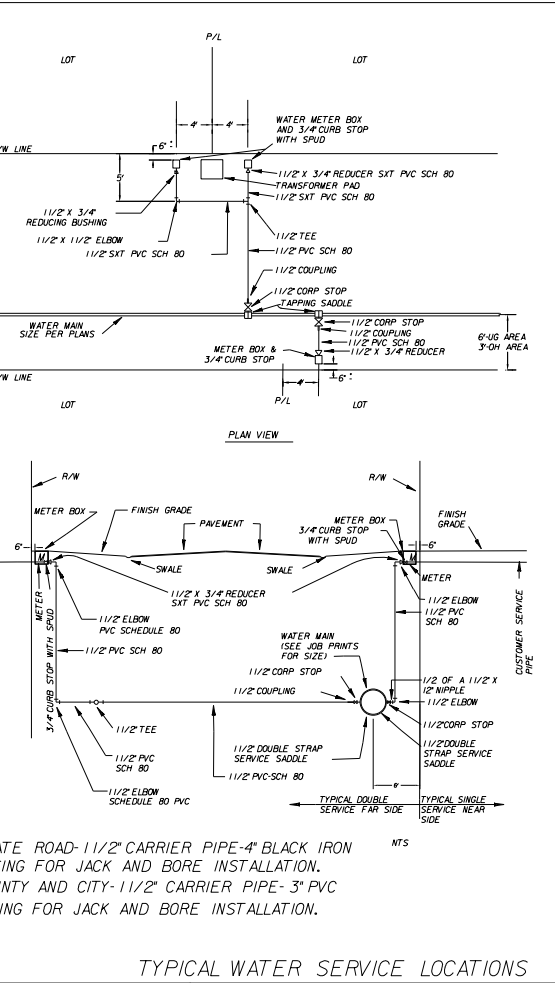
1/4 BENDS			1/2 BENDS			3/4 BENDS			1" BENDS			TEE			1/2 BENDS			3/4 BENDS			1" BENDS				
SIZE	A	B	CONC.	A	B	CONC.	A	B	CONC.	A	B	CONC.	SIZE	A	B	CONC.	A	B	CONC.	A	B	CONC.	A	B	CONC.
6"	15"	10"	3.5	6"	10"	3.0	6"	10"	3.0	6"	10"	3.0	6"	10"	10"	3.5	6"	10"	3.0	6"	10"	3.0	6"	10"	3.0
8"	20"	15"	4.5	8"	15"	4.0	8"	15"	4.0	8"	15"	4.0	8"	15"	15"	5.5	8"	15"	4.0	8"	15"	4.0	8"	15"	4.0
10"	25"	17"	5.5	10"	17"	5.0	10"	17"	5.0	10"	17"	5.0	10"	17"	20"	6.5	10"	17"	5.0	10"	17"	5.0	10"	17"	5.0
12"	30"	20"	6.5	12"	20"	6.0	12"	20"	6.0	12"	20"	6.0	12"	20"	25"	7.5	12"	20"	6.0	12"	20"	6.0	12"	20"	6.0
14"	35"	22"	7.5	14"	22"	7.0	14"	22"	7.0	14"	22"	7.0	14"	22"	30"	8.5	14"	22"	7.0	14"	22"	7.0	14"	22"	7.0
16"	40"	24"	8.5	16"	24"	8.0	16"	24"	8.0	16"	24"	8.0	16"	24"	35"	9.5	16"	24"	8.0	16"	24"	8.0	16"	24"	8.0
18"	45"	26"	9.5	18"	26"	9.0	18"	26"	9.0	18"	26"	9.0	18"	26"	40"	10.5	18"	26"	9.0	18"	26"	9.0	18"	26"	9.0
20"	50"	28"	10.5	20"	28"	10.0	20"	28"	10.0	20"	28"	10.0	20"	28"	45"	11.5	20"	28"	10.0	20"	28"	10.0	20"	28"	10.0

NOTE:

1. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED SOIL.
2. THESE TABLES SHOW MINIMUM SIZE THRUST BLOCKS FOR GOOD SOIL (A-1 THROUGH A-3, CLEAN SAND AND GRAVELS).
3. POOR SOIL (A-4 THROUGH A-8, SILTY SOILS, CLAYS, MUCK AND PEAT) WILL REQUIRE LARGER THRUST BLOCKS.

NTS.

THRUST BLOCKS FOR BENDS & TEE'S



TIE RODS

TWO RODS ON ALL SIX INCH (6") PIPE
THREE RODS ON ALL EIGHT INCH (8") PIPE
FOUR RODS ON ALL TEN AND TWELVE INCH (10" & 12") PIPE

PIPE SIZE	11 1/4"	22 1/2"	45"	90"	TEE	VALVE	CAP	REDUCER
4"	2	4	7	18	20	39	39	N/A
6"	2	5	10	25	20	55	55	28
8"	3	6	13	32	20	72	72	30
10"	4	8	16	38	20	86	86	29
12"	4	9	19	45	20	102	102	50
16"	6	11	23	57	20	131	131	30

BELL RESTRAINT REQUIREMENTS

ITEM	QUANT.	DESCRIPTION
1	1	2.5"-10" VALVE, DOUBLE CHECK OR REDUCED PRESSURE BACKFLOW PREVENTION
2	4	2.5"-10" BEND - 90° F-F
3	2	2.5"-10" D.I.P. (48" LONG) F-PE
3A	1	2.5"-10" D.I.P. (24" LONG) F-PE (OPT.)
4	3	2.5"-10" FLANGE, D.I.P.
5	2	2.5"-10" VALVE, GATE, D.I., F-F, OS+Y (RESILIENT SEAT)
6	1	2" IRON PIPE/CONCRETE FOUNDATION
7	2	THRUST BLOCK
8	2	SUPPORT BLOCKING UNDER VALVES (6" AND LARGER SIZES)

LARGE WATER SERVICE
DOUBLE CHECK AND REDUCED PRESSURE BACKFLOW PREVENTION
SINGLE SERVICE: 2 1/2" - 10"

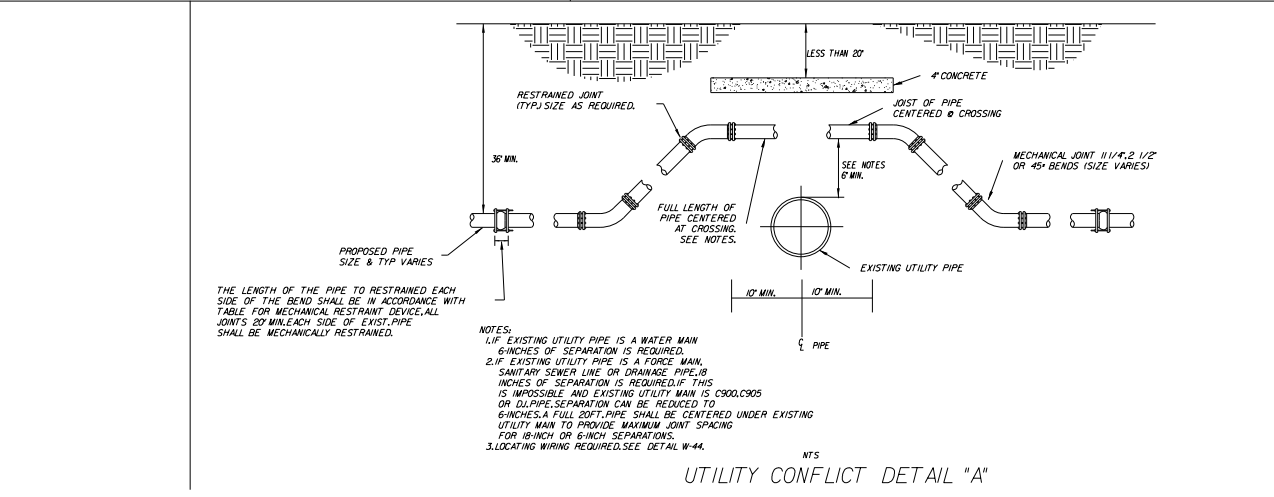
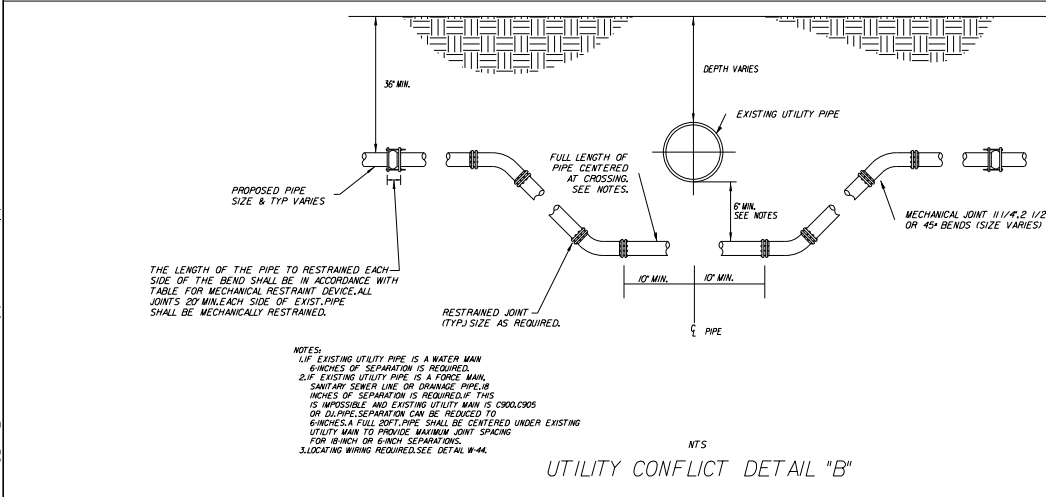
BACKFLOW PREVENTER

CONTRACTORS ARE REQUIRED TO PAINT NEW HYDRANT'S SAFETY YELLOW AND MARK HYDRANT'S. THE TOPS AND NOZZLE CAPS SHALL BE PAINTED WITH THE FOLLOWING CAPACITY INDICATOR COLOR SCHEME:
BLUE (SW4079) 1500GPM AND HIGHER
GREEN (SW4085) 1000-1499 GPM
ORANGE (SW4083) 500-999 GPM
RED (SW4081) LESS THAN 500 GPM

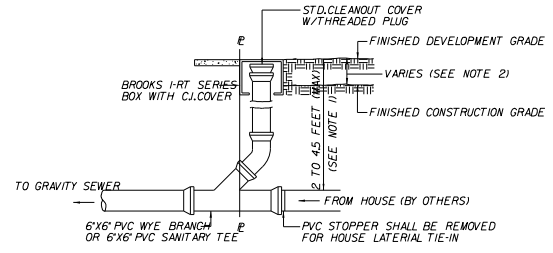
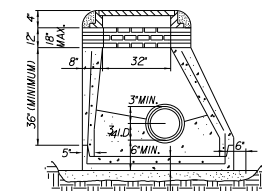
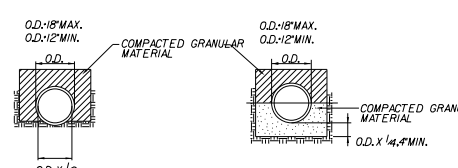
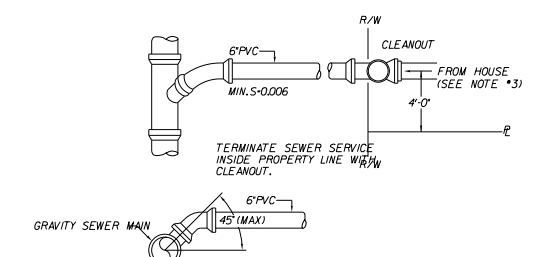
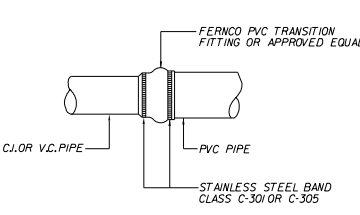
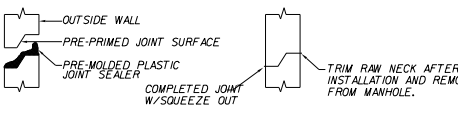
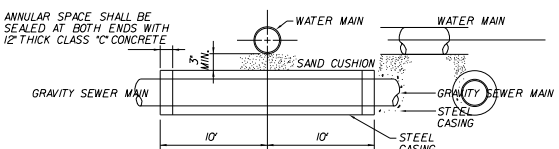
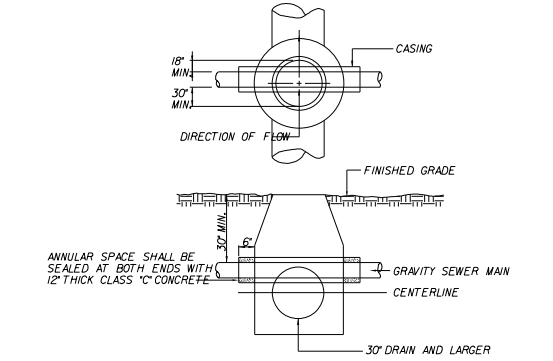
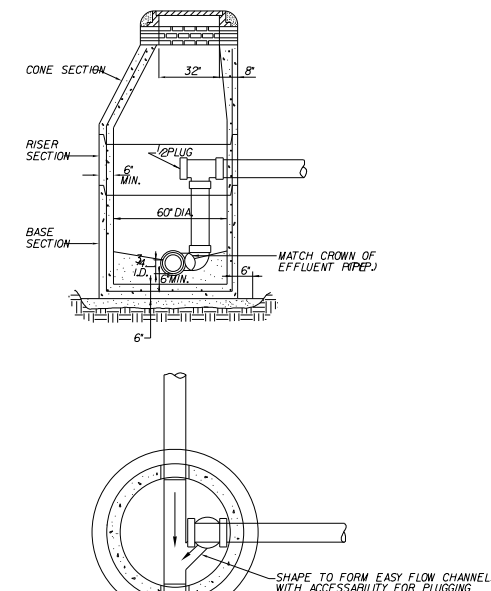
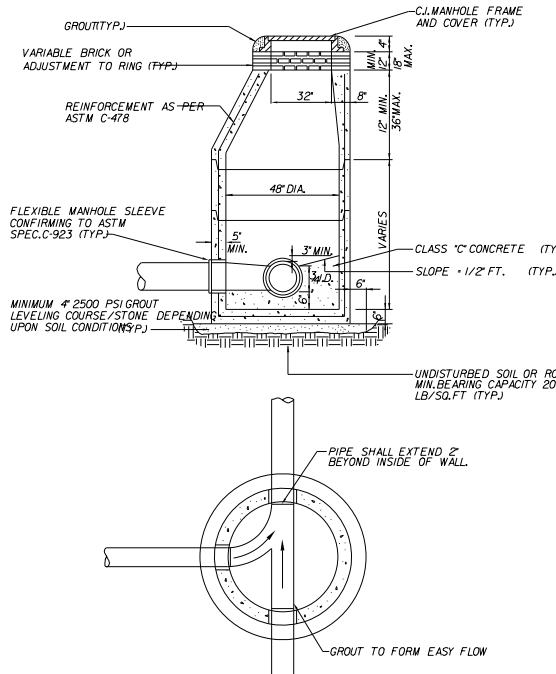
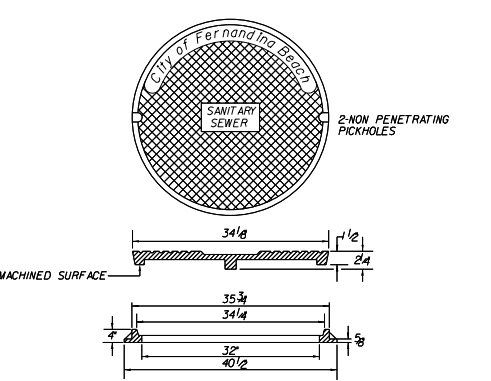
IT IS REQUIRED THAT ALL NEW AND RELOCATED WATER MAINS BE PRESSURE TESTED AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C600.

IT IS REQUIRED THAT ALL NEW AND RELOCATED WATER MAINS BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651 AND RULE 62-555.342, F.A.C.

ALL WATER MAINS WILL BE CONSTRUCTED WITH BLUE C900-DR25 PIPE
ALL WATER SERVICES WILL CONSTRUCTED WITH WHITE PVC SCHEDULE 80 PIPE. BLUE SPRAY PAINT WILL BE APPLIED TO THE TOP SURFACE.
JOINT RESTRAINERS MAY BE USED IN PLACE OF THRUST BLOCKS ON C900, DR25 PIPE, WITH APPROVAL OF THE CITY UTILITIES DEPARTMENT.



10 9 8 7 6 5 4 3 2 1 0	LA By Date	6-26-19 Date	TRC SUBMITTAL REVISION	Scale: 1" = 30'	Project Mgr: AG Designed by: AG Drawn by: LA QA/QC: NG	GILLETTE & ASSOCIATES, INC. 20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034 CERTIFICATE OF AUTHORIZATION NO.9332 ASA R GILLETTE, PE FL PE NO.56177 DO NOT SCALE THIS DRAWING - DIMENSIONS AND NOTES TAKE PREFERENCE. DRAWING IS REDUCED IF LESS THAN 22" X 34"	G & A GILLETTE & ASSOCIATES, INC. 20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034 PHONE: (904) 261-8819	ED BONER	CANOPY PARK	WATER DETAILS	Registered Professional	Sheet No. DT-2 11 of 12 Issue Date 06-26-19 Project No. 19-10-09
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 STD. CLEANOUT COVER W/THREADED PLUG FINISHED DEVELOPMENT GRADE BROOKS I-RT SERIES BOX WITH C.I. COVER VARIES (SEE NOTE 2) FINISHED CONSTRUCTION GRADE 9 TO 45 FEET (SEE NOTE 1) TO GRAVITY SEWER FROM HOUSE (BY OTHERS) 6"x6" PVC WYE BRANCH OR 6"x6" PVC SANITARY TEE PVC STOPPER SHALL BE REMOVED FOR HOUSE LATERAL TIE-IN NOTE: 1. DEPTH OF CLEANOUT SHALL BE SET BY DISTANCE TO HOUSE CONNECTION @ 1/4" PER FOOT, PLUS ONE FOOT. 2. CONTRACTOR TO COORDINATE DEPTH WITH DEVELOPER.	 SHALLOW MANHOLE	 TYPE I SHAPED BOTTOM W/TAMPED TYPE II COMPACTED GRANULAR BEDDING CLASS "B"	1. ALL MANHOLES SHALL BE PRECAST CONCRETE AND CONFORM TO ASTM C-478 STANDARDS. MANHOLE CONES AND RISERS SHALL BE CONSTRUCTED OF 400 PSI TYPE II CEMENT WITH RIVER ROCK OR GRANITE AGGREGATE. 2. ALL PIPES SHALL BE CONNECTED TO THE MANHOLE USING A 10 CK JOINT FLEXIBLE MANHOLE SLEEVE (ASTM C-923) OR APPROVED EQUAL. 3. THE EXTERIOR AND INTERIOR OF THE MANHOLE SHALL BE COATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS WITH FABERTITE AS MANUFACTURED BY BRIGGS BITUMINOUS COMPOSITION COMPANY. 4. AN INSIDE PVC DROP MANHOLE (TYPE "B") SHALL BE REQUIRED FOR MANHOLES WHICH HAVE A DISTANCE OF 18 INCHES OR GREATER BETWEEN INFLUENT PIPE INVERT AND EFFLUENT PIPE INVERT. ALL OTHER DROPS SHALL HAVE A SLIDE CONSTRUCTED TO DIRECT THE FLOW INTO THE INVERT CHANNEL. 5. SEWER SERVICES SHALL BE CAST IRON IF 2 1/2 FEET OF GROUND COVER CAN NOT BE MAINTAINED OVER THE SERVICE LINE. 6. ALL DUCTILE IRON SEWER PIPE, WHERE SPECIFIED, SHALL BE CLASS 51 AND COMPLY WITH ANSI/AWWA C150/A2150 AND ANSI/AWWA C151/A2151. DUCTILE IRON PIPE SHALL BE PROVIDED WITH A FACTORY APPLIED INTERIOR POLYETHYLENE LINING IN ACCORDANCE WITH ANSI/ASTM D1246. 7. THE MAXIMUM NUMBER OF DIPS IS ONE 1/4 INCH DIP PER 135 LF OF PIPE. NO MORE THAN ONE DIP PER 135 LF OF PIPE. A DIP IS DEFINED AS A CHANGE IN ELEVATION OF .05' OR GREATER.																																																
CLEANOUT  NOTE: 1. SEWER SERVICE SHALL BE INSTALLED 4'-0" INSIDE PROPERTY LINES. 2. TEMPORARY 4"x4"x8" POST, PAINTED RED AT TOP, TO BE INSTALLED FOR AIDING IN THE PROTECTION OF SEWER CLEAN OUTS. THE POST SHALL EXTEND 4' ABOVE GRADE. 3. CONNECTION FROM HOUSE TO UNF SYSTEMS SHALL BE A HARD CONNECTION. FLEXIBLE CONNECTIONS SHALL NOT BE USED.	TYPE "C" MANHOLE  C.I. TO PVC COUPLING ADAPTER	BEDDING DETAILS  MANHOLE JOINT	GRAVITY SEWER STANDARD SPECIFICATIONS  NOTE: 1. SEWER MAIN SHALL BE ENCASED AS SHOWN ON THE ABOVE DETAIL WHERE LESS THAN 18 INCHES OF VERTICAL CLEARANCE IS MAINTAINED BETWEEN WATER MAIN AND SEWER MAIN. 2. CLASS 51 STEEL CASING SHALL BE SIZED FOR 2 INCHES PLUS THE OUTSIDE DIAMETER OF THE CARRIER PIPE JOINT. 3. THE ABOVE DETAIL APPLIES TO WATER MAIN 21 INCH DIAMETER AND LARGER																																																
TYPICAL SEWER SERVICE  NOTE: 1. CASING PIPE SHALL BE PLACED ABOVE THE CENTERLINE OF THE CONFLICT DRAIN. 2. MANHOLE SHALL BE CONSTRUCTED IN COMPLIANCE WITH CITY OF JACKSONVILLE STANDARD SPECIFICATIONS AND DETAILS. (WHEN APPLICABLE) 3. INSIDE DIAMETER OF MANHOLE SHALL BE MINIMUM 5 FOOT. 4. EXTERIOR OF CASING PIPE SHALL BE COATED WITH AN ASPHALTIC BITUMINOUS COATING. 5. NO CARRIER PIPE JOINTS SHALL BE INSTALLED INSIDE OF CASING. 6. CLASS 51 CASING PIPE SHALL BE SIZED FOR 2 INCHES PLUS DIAMETER OF CARRIER PIPE JOINT.	 INSIDE PVC DROP CONNECTION TO MANHOLE	 STANDARD PRECAST SANITARY MANHOLE	ENCASEMENT AT WATER LINE  NOTE: ONE COAT OF ASPHALTIC PAINT																																																
DRAIN CONFLICT	TYPE "B" MANHOLE	TYPE "A" MANHOLE	MANHOLE COVER																																																
<table><tr><td>10</td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td></tr><tr><td>1</td><td>LA</td><td>6-26-19</td><td>YRC SUBMITTAL</td></tr><tr><td>No.</td><td>By</td><td>Date</td><td>REVISION</td></tr></table>	10				9				8				7				6				5				4				3				2				1	LA	6-26-19	YRC SUBMITTAL	No.	By	Date	REVISION	Scale: NONE 30' Project Mgr: AG Designed by: AG Drawn by: LA QA/QC: NG	GILLETTE & ASSOCIATES, INC. 20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034 CERTIFICATE OF AUTHORIZATION NO.9332 ASA R GILLETTE, PE FL PE NO.56177 DO NOT SCALE THIS DRAWING - DIMENSIONS AND NOTES TAKE PREFERENCE. DRAWING IS REDUCED IF LESS THAN 22" x 34"	G & A⁺ GILLETTE & ASSOCIATES, INC. 20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034 PHONE: (904) 261-8819	ED BONER	CANOPY PARK	SEWER DETAILS	Sheet No. DT-3 10 of 12 Issue Date 06-26-19 Project No. 19-10-09 Registered Professional
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Civil & Environmental Engineering • Mechanical & Structural Engineering • Construction Management

SITE DRAINAGE EVALUATION

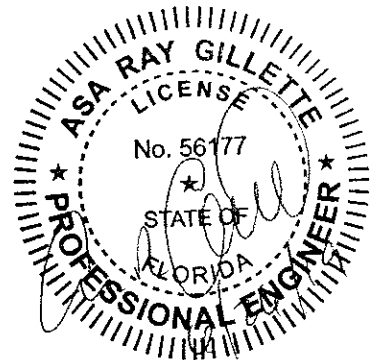
Canopy Park Subdivision

**Citrona Drive and Date Street
FERNANDINA BEACH, FLORIDA**

BY

**Gillette & Associates, Inc.
20 South 4th Street
Fernandina Beach, FL**

Issue Date: June 26, 2019



PROJECT DESCRIPTION

The proposed project consists of the development of six single family home lots and associated infrastructure, on a 3.3 acre parcel, at the corner of Date Street and Citrona Drive, in Fernandina Beach. The project will also include the development of the Date Street to current City of Fernandina Beach Roadway Standards. The site will be served by a combination of a capture swales and a dry retention pond. The drainage infrastructure is designed to provide storm water treatment and retention for a 10 year rain event with zero discharge. The overall drainage area for the site will be the lots, half of the Citrona Drive right of way and the entire street and associated right of way for Date Street.

EXISTING CONDITIONS

The project site is currently a single 3.324 acre parcel with one single family home onsite. The home and associated structures contains 7,617 ft² (0.17acres) impervious areas, and no visible surface water onsite, and no wetlands. In its pre-developed state, the site has a single drainage basin, DA-1, which encompasses the entire 3.3 acres of the subject property. DA-1 also receives runoff from half of Citrona Drive and its associated right of way. The site topography ranges from approximately elevation 12-ft to 22-ft NAVD. Predeveloped flow is mostly from the north to the southeast.

DRAINAGE ANALYSIS

Drainage analysis was conducted over the drainage basin, DA-1, which encompasses the 3.32 acre parcel, half of the Citrona Drive right of way and street (0.28 acres), and all of the improved date street right of way and street, totaling approximately 4.04 acres. For the new residential lots, 30% of the total lot area was assumed to be impervious. A composite curve number of 69.40 was used in the simulation based on the ratio of impervious area to pervious area.

MODRET simulations were conducted to model the dry storm-water retention pond. A geotechnical study was performed on the property in order to provide additional data used in the MODRET simulations. The geotechnical report is attached at the end of this report. Data from NRCS Soil Survey was also used to supplement the geotechnical data in MODRET simulations. The proposed dry pond provides 0.52 acre feet of storage between the bottom of the pond and the weir elevation. The provided treatment volume does not incorporate associated swales on Date Street on the property. Calculations for the dry pond are included in this report.

DRY POND CALCULATIONS

Ed Boner (Dry Pond) Post Developed

Basin Calculations

Basin 1

Composite Cn

Total Drainage Area =	4.038636 ac	
Impervious Area =	0.997096 ac	max permitted imp. + citriona
Pond Area =	0.31 ac	and date street
Impervious Cn =	98.0	
Pond Cn =	60.0	
Pervious Cn =	60.0	
Composite Cn =	69.4	

Time of Concentration, Tc

Minimum Time of Concentration =	10 min.
Length of Overland Flow @ 1ft/sec. =	195 ft.
Length of Pipe Flow @ 2.5 ft/sec. =	0 ft.
Tc =	14 min.

Pond Information

El. (ft.)		Volume ac-ft	Area ac.
16.50	TOB	0.50	0.3139
16.45	weir	0.49	0.2982
15.50		0.22	0.2531
14.50		0.00	0.1941
13.50	Bottom	0.00	0.1588

Treatment Volume Required, TVR

(on-line retention)

$$\text{TVR} = 1" * (1/12") * \text{Total Drainage Area} = 0.34 \text{ Ac.-ft.}$$

or

$$\text{TVR} = 1.25" * (1/12") * \text{Total Impervious Drainage Area} + 0.5" * (1/12") * \text{Total Drainage Area} = 0.272 \text{ Ac.-ft.}$$

$$\text{TVR} = 0.34 \text{ Ac.-ft.}$$

Treatment Volume Provided, TVP

$$\text{TVP} = 0.49 \text{ Ac.-ft.} \quad \text{OK}$$

GEOTECHNICAL REPORT



OF JAX, INC.

**REPORT OF PRELIMINARY GEOTECHNICAL
EXPLORATION & ENGINEERING EVALUATION
PROPOSED BONER SUBDIVISION - LOTS, ROADWAYS & PONDS
SE QUADRANT OF CITRONA DRIVE & DATE STREET
FERNANDINA BEACH, FLORIDA**

AGES JOB NO. J18307, REPORT NO. 001

FOR

**GILLETTE & ASSOCIATES
20 South 4th Street
Amelia Island, FL 32034**

Attn: Mr. Asa Gillette, P.E.

SEPTEMBER 19, 2018

AGES of JAX, Inc.

**P O Box 24008, Jacksonville FL 32241-4008
9556 Historic Kings Road South, Suite 201 ● Jacksonville, Florida 32257-2010
(904) 886-0766 ● (904) 880-5190 (FAX)**



OF JAX, INC.

September 19, 2018

GILLETTE & ASSOCIATES

20 South 4th Street
Amelia Island, FL 32034
Attn: Mr. Asa Gillette, P.E.

Re: Report of Preliminary Geotechnical Exploration & Engineering Evaluation
Proposed Boner Subdivision - Lots, Roadways & Ponds
SE Quadrant of Citrona Drive & Date Street
Fernandina Beach, Florida
AGES Job No. J18307, Report No. 001

Ladies & Gentlemen:

AGES OF JAX (AGES), Inc. has completed a preliminary geotechnical exploration of the subsurface conditions beneath the construction area for the referenced project. Our services were performed as requested and authorized by Gillette & Associates representative Mr. Asa Gillette PE on August 25, 2018. This report includes: (1) a brief description of the planned construction, (2) a summary of the field exploration performed and results that were obtained, (3) our recommendations for foundation design and construction of the proposed residential structures, (4) guideline pavement design and construction recommendations, (5) evaluation of the suitability of barrow soil located at the site, and (6) surface aquifer characterization parameters for use in stormwater pond design and permitting.

The site preparation recommendations and foundation design recommendations presented herein are specific to the tested lots. Soil conditions on untested lots could be markedly different and the recommendation presented herein may or may not be applicable. If a higher confidence level is desired concerning the soil conditions on the untested lots and/or reclaimed lots, then we recommend that **AGES** be retained to perform supplemental penetration test borings prior to initiation of building construction.

We appreciate the opportunity to be of service as the geotechnical consultant during this phase of your project. Should you have any questions concerning this report or if we may be of any further service to you, please feel free to contact us.

Very truly yours,

Digitally signed by Bill C.
McMahan Jr., PE
Date: 2018.09.19 12:55:23 -04'00'
Adobe Acrobat version:
2018.011.20058

AGES of JAX, INC.

Bill C. McMahan, Jr.

Bill C. McMahan, Jr., P.E.
Principal Engineer/Vice-President
Registered, Florida No. 42677

BCM/bcm/J18307 boner subdivision - Lots Roadways and Ponds.wpd
Attachments
Distribution: Addressee (1) Via Email

AGES of JAX, Inc.

P O Box 24008, Jacksonville FL 32241-4008
9556 Historic Kings Road South, Suite 201 • Jacksonville, Florida 32257-2010
(904) 886-0766 • (904) 880-5190 (FAX)

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<u>DATA ATTACHMENTS</u>	
Site Location Map	
Field Exploration Plan	
Generalized Subsurface Profile	
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Test Boring Records	
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Double Ring Infiltration Test Results Sheet	
Rising and Falling Head Hydraulic Conductivity Test Results	
Field Exploration Procedures	

REPORT ATTACHMENTS

1.0 PROJECT BACKGROUND INFORMATION

General project information has been provided by Gillette & Associates representative Mr. Asa Gillette P.E. during recent email and telephone calls. We have also received a Boundary Survey/ Site Plan (dated 1/17/05, prepared by Manzie & Drake) which illustrates the site boundaries, the lot layout, the planned stormwater management facility location, and the requested boring/test locations. Neither existing site topographical data nor proposed site grading information has been provided. No other information has been provided at this time.

Based upon the information provided, we understand that a seven lot residential subdivision will be developed in the southeast quadrant of the intersection of Date Street and Citrona Drive in Fernandina Beach, Florida. Date Street will be extend and asphalt paved to provide access to Lots 4-7. Stormwater runoff will be stored and treated in a dry detention pond/swale which will be located on the south end of Lot 7.

We have assumed that the residential structures will be one or two stories and will be either block or wood framed. Detailed structural loading information has not been provided at this time. However, we have assumed maximum individual column loads of 75 kips, maximum wall loads on the order of 1 klf and total floor slab loads of 150 pounds per square foot or less. The proposed building finish floor and existing site topography data have not been provided. However, we have assumed that two feet or less of elevating fill will be added in the building and parking areas.

2.0 PRELIMINARY GEOTECHNICAL EXPLORATION

2.1 Purpose of Exploration

The objective of this preliminary geotechnical exploration was to obtain site and subsurface data for use in: (1) the evaluation of the site with respect to the proposed construction, (2) the development of foundation design and construction recommendations for the proposed building structure, (3) development of guideline pavement design and construction recommendations, (4) evaluation of surface soils for use as transfer fill, and (5) the design and permitting of the stormwater management system. The preliminary geotechnical exploration therefore consisted of field exploratory borings and a geotechnical engineering analysis of the collected test data.

2.2 Subsurface Testing

The field testing was conducted during the period of September 5 - 8, 2018. The lot area testing included four(4) 15- foot deep penetration test borings (B1 -B4). The road extension areas testing includes two(2) 6-foot deep auger borings. Stormwater management facility related testing included one(1) 15-foot deep auger boring (LA1), one double ring infiltration test (DRI1) to measure the insitu vertical unsaturated hydraulic conductivity (Kvunsat), and one fully screened cased borehole hydraulic conductivity test (TMW1) to measure the insitu saturated horizontal hydraulic conductivity (Khsat) of the saturated surface aquifer. The double ring and cased borehole tests were conducted in accordance with the St. Johns River Water Management District testing protocol.

The field testing locations were established by our personnel using hand held GPS locator devices. The borings were located to avoid the existing building structures and other constraints. The boring locations are shown on the attached Field Exploration Plan should be considered approximate. The ground surface elevations at the boring locations were not determined.

The attached Test Boring Records and Auger Boring Records present the descriptions of the subsurface soils encountered, the groundwater levels encountered, and the penetration resistance values recorded when drilling and sampling the test borings. The subsurface conditions are graphically illustrated

on the attached Generalized Subsurface Profile sheet. The stratification lines and depth designations on the boring records and profile represent the approximate boundary between the various soils encountered, as determined in the field by our drillers, and the transition from one strata to the next should be considered approximate. A brief discussion of the drilling, sampling, and field testing techniques used during the geotechnical exploration is provided in the attached Field Exploration Procedures section.

3.0 GEOTECHNICAL FINDINGS

3.1 Site Conditions

The subject site was visited on several occasions by **AGES** personnel to identify site conditions which could impact our site preparation and foundation design recommendations. The site is heavily wooded and relatively level in topography. No standing water was observed on the site at the time of our visits.

3.2 Subsurface Conditions

The subsurface conditions outlined below highlight the major subsurface stratifications encountered during our geotechnical exploration of the site. When reviewing the boring records, the attached Generalized Subsurface Profile and the subsurface conditions outlined below, it should be understood that the subsurface conditions will vary across the proposed construction area and between the boring locations.

3.2.1 Soil Conditions - The penetration test borings typically encountered very loose to loose slightly silty to silty fine sand (SP-SM to SM) in the upper 6 feet of profile. Penetration resistance values within this stratum ranged from 2 to 10 blows/foot. The surface stratum was underlain by loose to firm fine sand (SP, A-3) which extended to a depth of 15 feet. The penetration resistance value within this stratum ranged from 5 to 15 blows/foot.

Auger boring A1 encountered 12-inches of limerock. Both borings encountered fine sand (SP, A-3) which extended to the maximum boring termination depth of 6 feet.

3.2.2 Groundwater Conditions - The groundwater level depths encountered at the time of drilling ranged from approximately 5 to 12 feet below the ground surface. These water levels are estimated to be at seasonal average levels. Seasonal High Groundwater Levels will be approximately 2 feet above the current groundwater levels. The groundwater level should be expected to fluctuate due to seasonal climatic variations, changes in surface water runoff patterns across the site, construction activity and the subsequent development as planned, and other interrelated factors. Since groundwater variations are anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based on the assumption that variations will occur.

3.3 Stormwater Management Facility Test Results

The borings/tests performed in the proposed stormwater treatment pond area encountered permeable fine sands (SP) extending to a depth of 15 feet below the existing ground surface. The groundwater level was encountered 12 feet below the ground surface. The seasonal high groundwater level is estimated to be 10 foot below the ground surface. The aquifer thickness is estimated to be 15 feet. The fillable porosity of the sand deposit is estimated to be 0.22. The saturated horizontal hydraulic conductivity of the surface sand stratum was calculated to be 3.9 ft/day by averaging the rising and falling head slug test data. The average unsaturated vertical hydraulic conductivity (Kvunsat, infiltration rate) was measured to be 4.7 inches/hour at DRI1.

4.0 GEOTECHNICAL ENGINEERING EVALUATION

4.1 Basis of Evaluation & Recommendations

Our geotechnical engineering evaluation of the site and subsurface conditions with respect to the planned construction, and our recommendations for foundation design and site preparation/earthwork construction, are based upon: (1) our site observations; (2) the field test data obtained during this geotechnical exploration of the site; and (3) our understanding of the project information and structural loading conditions as presented in this report. If the structural information or the Site Plan are altered, please contact us so we may review our recommendations. If any site or subsurface conditions are encountered during construction which appear to deviate from data obtained during this geotechnical exploration (as documented herein), please contact us so that we may visit the site, observe the differing conditions, and evaluate the new information relative to our geotechnical evaluation and recommendations.

4.2 Foundation System Evaluation

Based upon our geotechnical findings and our understanding of the proposed construction, we consider the site and subsurface conditions adaptable for support of the proposed structures upon a properly designed and constructed shallow foundation following proper site preparation procedures. The shallow foundation system may be designed using an allowable bearing pressure of 2,500 psf. Provided that the design and construction recommendations outlined subsequently are implemented, we estimate that total structural settlement due to fill and structural loads should be on the order of one inch or less. In addition, post construction differential settlements should be within tolerable magnitudes. The settlements should occur concurrently with construction due to the generally sandy nature of the soils encountered. Site preparation necessary for proper foundation performance includes:

- * Clearing and stripping the existing vegetation and surficial topsoil from within the construction areas.
- * Compaction of the exposed natural soils to densities equivalent to 95 percent of the Modified Proctor maximum dry density (ASTM D 1557).
- * Placement and compaction of any required structural fill to densities equivalent to 95 percent of the Modified Proctor maximum dry density (ASTM D 1557) within the building areas.

4.3 Evaluation of Barrow Soil Suitability

The evaluation of barrow soil suitability depends upon: (1) the planned soil usage, (2) proposed construction methods, (3) the time of year during which site work construction will occur, (4) economic considerations, and (5) other factors. From a building pad perspective, we typically recommend that all fill and backfill soils consist of clean sands (fine sand to slightly silty fine sand) containing less than 12% fines (SP and SP-SM). Higher fines content sandy soils including: silty sands and clayey sands (SM and SC) can also be used in building pad development. However, these soils are more moisture sensitive and re-compaction in Florida during the wet summer months and/or use of the fill on wet sites will significantly increase re-compaction effort and could result in construction delays. Very silty sands, very clayey sands, and/or silts/clays (CH and CL), are not considered to be usable for building pad construction in Florida.

Based upon a review of the boring LA1, it is our opinion that the fine sands encountered throughout the upper 15 foot of profile will be usable as structural fill/backfill.

5.0 PRELIMINARY FOUNDATION DESIGN & SITE PREPARATION RECOMMENDATIONS

5.1 Foundation Design Recommendations

5.1.1 Foundation Type - We consider a conventional shallow foundation system applicable for this project if the site preparation recommendations presented in section 5.2 of this report are performed.

5.1.2 Bearing Pressure & Depth - The maximum allowable soil bearing pressure for use in shallow foundation design should not exceed 2,500 psf. The foundations should be designed based upon the maximum load which could be imposed by all loading conditions. The exterior footings should bear at a depth of at least 12 inches below the exterior final grades and the interior footings should bear at least 12 inches below the interior floor slab. These minimum bearing depths should provide the necessary confinement for the soils at the foundation bearing levels.

5.1.3 Foundation Size - The minimum widths recommended for isolated spread-type footings and continuous wall footings are 24 and 18 inches, respectively. Even though the maximum allowable soil bearing pressure may not be achieved, these minimum width recommendations should still control the size of the foundations.

5.1.4 Bearing Material - The foundations may bear in either the compacted suitable natural granular soils or compacted structural backfill or fill. 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 the foundation bearing levels.

5.2 Site Preparation Recommendations

5.2.1 Temporary Groundwater Control - During our geotechnical exploration, the groundwater level was encountered at depths of 5 to 12 feet below the existing site grades. Dependent upon the groundwater levels encountered at the time of construction, temporary de-watering may be required in some areas of the site. The groundwater should be controlled at all times at a depth of at least two feet below the construction level. Groundwater drawdowns on the order of one to two feet, if required, can probably be best achieved using temporary perimeter drainage ditches, four to five feet deep, which are graded: (1) to a positive gravity outfall away from the site; or (2) to sumps where the collected groundwater and surface water runoff can be removed by pumping.

5.2.2 Site Clearing & Stripping - Initial site preparation should consist of clearing existing trees, vegetation, root systems and surficial topsoil from within the planned construction area. The clearing/stripping work should be performed within and to a distance of at least five feet beyond the perimeter of the planned building areas and three feet beyond the perimeter of the proposed pavement areas. It should be anticipated that surficial topsoil will be encountered in thicknesses of up to 6 inches. The perimeter areas may then need to be graded to help direct surface water runoff away from the construction areas.

5.2.3 Site & Fill Compaction - After completing the initial site preparation, the exposed sandy soils should be compacted to densities of at least 95 percent of the Modified Proctor maximum dry density to a depth of 24 inches using a vibratory drum roller which has a minimum at-drum weight on the order of five tons and a minimum drum diameter on the order of three feet, with the exception that a lightweight vibratory drum or sled compactor having a maximum static weight on the order of 1000 pounds should be used within 50 feet of existing structures. The roller or dozer will be required to improve the density of the upper approximate two feet of loose fine sands at this site. The structural fill required to raise the site to the planned finished grades may then be placed in loose lifts not exceeding 12 inches in thickness, and should be compacted to densities as recommended above. Loose lifts should not exceed eight inches in areas of the site in which lightweight vibratory equipment is used. Structural fill is defined as a non-plastic, inorganic, granular soil containing less than 12 percent material passing the No. 200 mesh sieve (i.e. a relatively clean sand).

5.2.4 Disturbed Soil Conditions - Should the near-surface soils and/or structural fill material experience "pumping" and subsequent soil strength loss during site work construction, work upon these areas should be immediately terminated and: (1) the disturbed soils removed and backfilled with "dry" structural fill soils, (i.e. percent water content on the order of five to 10 percent) which are then compacted; or (2) the excess moisture content within the disturbed soils allowed to dissipate before recompacting. Furthermore, the groundwater table should be checked and controlled as necessary to help insure proper draw-down of any high groundwater conditions that may be causing the "pumping" conditions during compaction or construction activity upon these soils.

5.2.5 Foundation Areas - After placement and compaction of all structural fill, the foundations may be excavated to their planned bearing levels using a "smoothed" bucket backhoe. All fine sandy soils present at the bearing level should be compacted to densities equal to 95% of the Modified Proctor maximum dry density. Compaction of the fine sandy bearing level soils in the small footing areas may be best achieved using lightweight, walk-behind sleds, rollers, or tampers having a minimum total weight of 100 lbs. Loose lifts of backfilled fine sandy soil in the footing excavations, if needed, should be placed in thicknesses of up to 6 inches, prior to densification with the lightweight compaction equipment.

6.0 PRELIMINARY GUIDELINE PAVEMENT DESIGN AND CONSTRUCTION RECOMMENDATIONS

6.1 General

The subsurface conditions at this site appear favorable for use of flexible and/or rigid pavements in the parking lot and drive-through areas. Guideline pavement design and construction recommendations applicable to this project are presented below. The pavement thickness recommendations and construction recommendations presented in this report are based upon our past experience on similar paving projects. Detailed flexible pavement design calculations have not been performed to verify adequacy of the recommended pavement sections since detailed traffic loading information is unavailable at this time. We request that **AGES** be retained to review the final pavement design, paving and drainage plans, and specifications to evaluate whether our guideline recommendations have been properly interpreted and implemented into the project design.

6.2 Guideline Pavement Design Recommendations

The recommended flexible pavement structure thicknesses for the subject project are provided in the following table.

<u>PAVEMENT COURSE</u>	<u>Automobiles & Light Truck Traffic</u>	<u>Moderate to Heavy Traffic</u>
Asphalt Wearing Surface(In.)*	1.5	2.0
Limerock Base Course (In.)**	6.0	8.0
Prepared Subgrade(In.)***	12.0	12.0

- * Superpave 9.5 Asphaltic Concrete or Type SIII, as defined by the Florida DOT Standard Specifications for Road and Bridge Construction Manual.
- ** Florida Limerock, exhibiting an LBR Value of 100, and meeting the specifications outlined in the Florida DOT manual (Section 200).
- *** Stabilized and compacted subgrade should exhibit a Maximum LBR value of at least 30. Subgrade stabilization should be performed in accordance with Section 160 of the standard FDOT specifications.

6.3 Guideline Pavement Construction Recommendations

6.3.1 Pavement Subgrade Preparation - Site preparation in the pavement areas should be performed in accordance with the guideline procedures outlined above, and should include: (1) clearing/stripping surface vegetation, (2) compaction of the exposed soils using a large vibratory drum roller, and (3) placement/compaction of backfill and any required structural fill (if any) to densities equivalent to 95 percent of the Modified Proctor maximum dry density. In addition, the upper one foot of subgrade in the

pavement areas should be compacted to 98 percent of the Modified Proctor maximum dry density. Shell and or clay additives may be required to obtain the required design LBRs required. Also, the pavement structure should be designed to provide at least 30-inches of fine sands separating the limerock subgrade and any underlying clayey/silty soils. This will help to prevent "pumping" and reduce the chance of premature pavement failures which are caused by "perched" groundwater levels.

6.3.2 Limerock Base Course Preparation - The limerock base course should be placed and compacted to densities equivalent to 98 percent of the Modified Proctor maximum dry density (ASTM D 1557). The surface of the limerock base course material should be "primed" with any of the following cutback asphalt grades: RC-70, RC-250, MC-70, or MC-250. Approximately 0.15 gallons per square yard should be applied to the base course surface. Care should be exercised to prevent over-priming of the base course surface. Prior to asphalt placement, the prime coat should be fully set and cured. The specifications governing the placement of prime coats on pavement base course surfaces and sanding is outlined in Section 300 of the Florida DOT Standard Specifications for Road and Bridge Construction (1986).

The primed base course should be sanded if: (1) more than one day (24 hours) will elapse prior to laying the asphalt wearing surface and excess prime is not absorbed, or (2) construction equipment will operate over the unprotected primed base course. If sanding is required, approximately 10 pounds of sand per square yard of surface (i.e., about 1/4 inch of sand) should be spread over the primed base course. The sand surface coating should contain less than 10 percent fines (i.e., material passing the No. 200 sieve) and be composed of non-elastic, inorganic, granular soil.

6.3.3 Asphalt Preparation - The placement and compaction of an asphaltic concrete wearing surface should be performed in general accordance with specifications outlined in the Florida DOT Road and Bridge Construction manual. Prior to asphalt placement, the base course should be broomed to remove any excess sand and then tacked with a bituminous binder.

6.4 Permanent Groundwater Control Measures

Groundwater control is of utmost importance in maintaining the integrity of flexible pavement structures. In areas where groundwater is anticipated to exist within 24 inches of the bottom of the pavement base course, a properly designed and constructed under drain system will be necessary to maintain this 24-inch separation between the pavement base course and the groundwater level. After finalizing the civil grading plan, we would be pleased to review this plan and evaluate the need for an under drain system. If required, we can design an under drain system for this site.

7.0 QUALITY CONTROL TESTING GUIDELINES

Prior to initiating compaction operations, we recommend that representative samples of the structural fill material and exposed in-place fine sandy soils be collected and tested to determine their compaction and classification characteristics. The maximum dry density, optimum moisture content gradation and plasticity characteristics should be determined. These tests are needed for compaction quality control of the structural fill and existing soils and to determine if the fill material is acceptable.

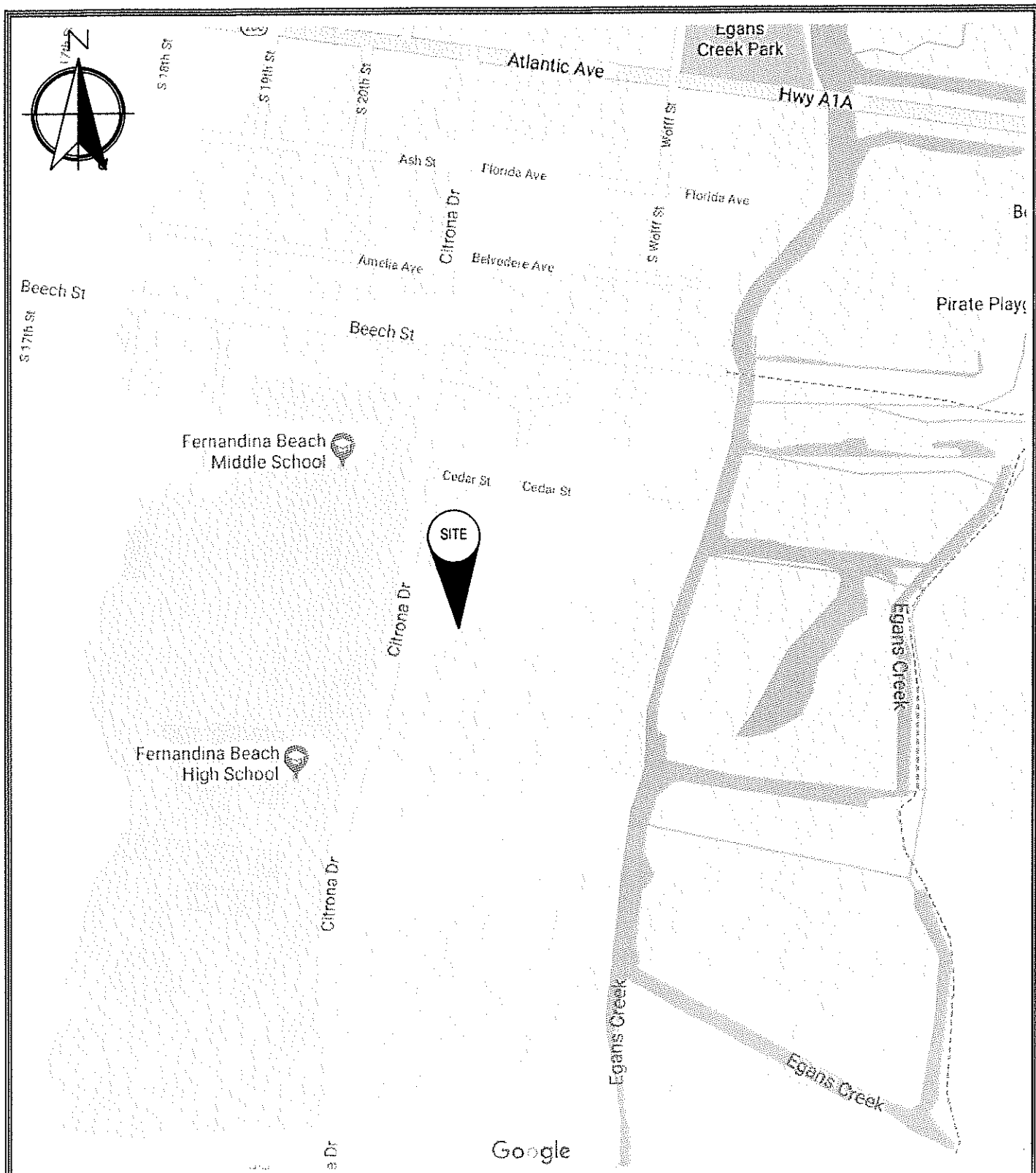
A representative number of field in-place density tests should be performed in the compacted existing soils and in each one foot lift of structural fill/backfill to confirm that the required degree of compaction has been obtained. At each test level, we recommend one density test be performed for every 5,000 square feet of building area (minimum of three locations). In-place density tests should also be performed at representative locations in the bearing level soils of the footings. We recommend that at least one density test be performed at a minimum of 25 percent of the isolated column footing bearing areas, and for every 100 linear feet of continuous footing bearing surface. In addition, in-place density tests should be performed at one location for every 10,000 square feet of pavement area (minimum of three locations).

8.0 CONSTRUCTION PLANS & SPECIFICATIONS REVIEW

We recommend that **AGES** be provided the opportunity to review the plans and the specifications prepared from the recommendations presented in this report. If necessary, we will suggest any modifications that may be required to verify that our recommendations have been properly interpreted and implemented. Our report has been written in a guideline recommendation format and is not appropriate for use as (or inclusion into) the specifications without being reworded in a specification type format. It is recommended that this report not be made part of the contract documents. However, it should be made available to prospective contractors for information purposes only.

DATA ATTACHMENTS

Site Location Map
Field Exploration Plan
Generalized Subsurface Profile
Key to Soil Classification
Test Boring Records
Auger Boring Records
Double Ring Infiltration Test Results Sheet
Rising & Falling Head Hydraulic Conductivity Test Results
Field Exploration Procedures



REFERENCE:

Google.com



AGES of JAX Inc.
9556 Historic Kings Rd.
Jacksonville, Florida 32257

SITE LOCATION MAP

Boner Subdivision
Fernandina Beach, Florida

DRAWN: DEP

DATE: 09/11/18

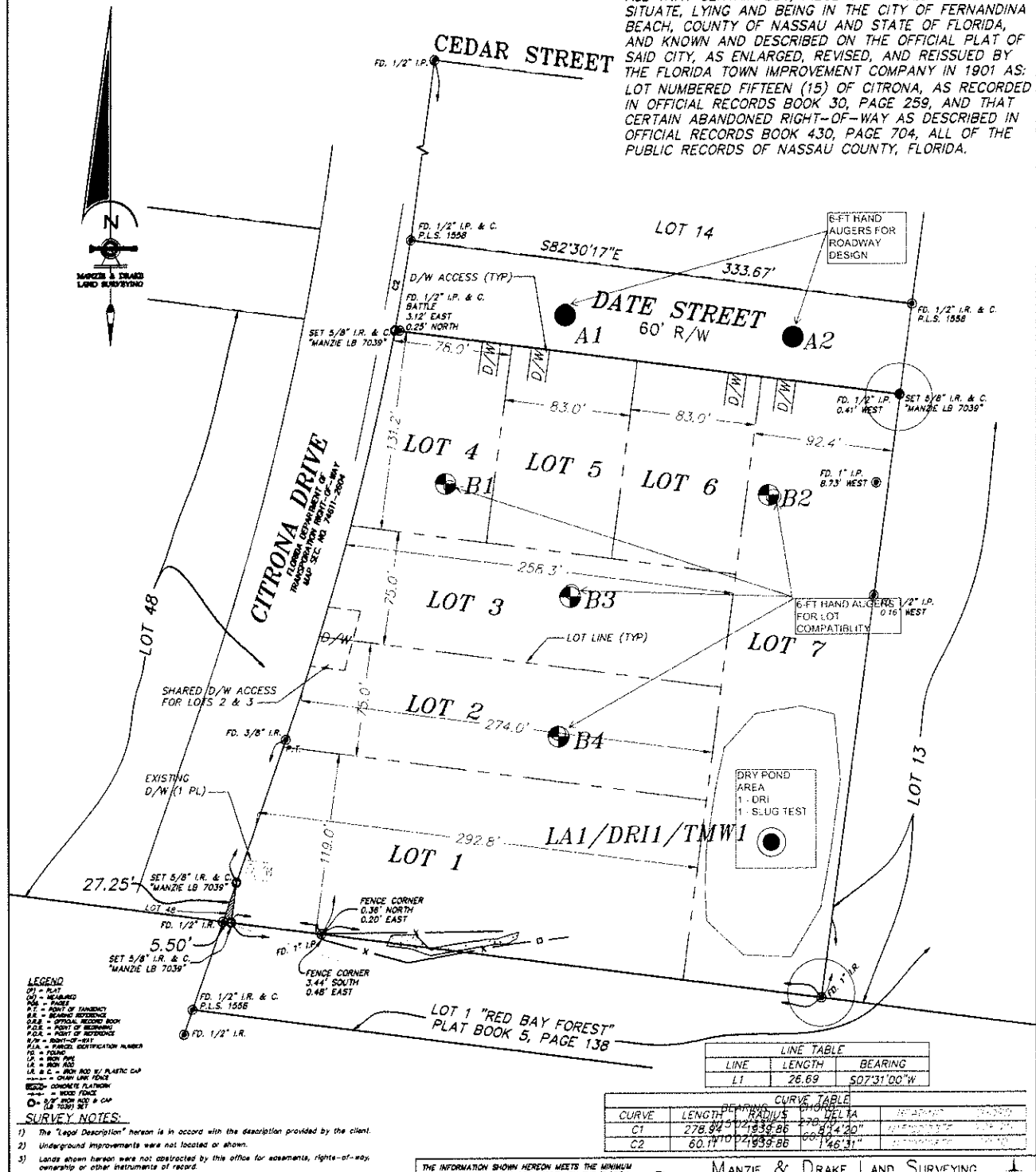
SCALE:

CHECKED: BCM

JOB NO: J18307

NTS

LEGAL DESCRIPTION.
ALL THAT CERTAIN LOT, PIECE OR PARCEL OF LAND
SITUATE, LYING AND BEING IN THE CITY OF FERNANDINA
BEACH, COUNTY OF NASSAU AND STATE OF FLORIDA,
AND KNOWN AND DESCRIBED ON THE OFFICIAL PLAT OF
SAID CITY, AS ENLARGED, REVISED, AND REISSUED BY
THE FLORIDA TOWN IMPROVEMENT COMPANY IN 1901 AS:
LOT NUMBERED FIFTEEN (15) OF CITRONA, AS RECORDED
IN OFFICIAL RECORDS BOOK 30, PAGE 259, AND THAT
CERTAIN ABANDONED RIGHT-OF-WAY AS DESCRIBED IN
OFFICIAL RECORDS BOOK 430, PAGE 704, ALL OF THE
PUBLIC RECORDS OF NASSAU COUNTY, FLORIDA.



 Penetration Test Boring Location (approximate)
 Auger Boring Location (approximate)

REFERENCE:
Site Plan, dated 01/17/05, prepared by Manzie and Drake
Land Surveying.

The boring locations were established by AGES personnel using handheld GPS Locator Units. Boring locations as shown on this plan are approximate.

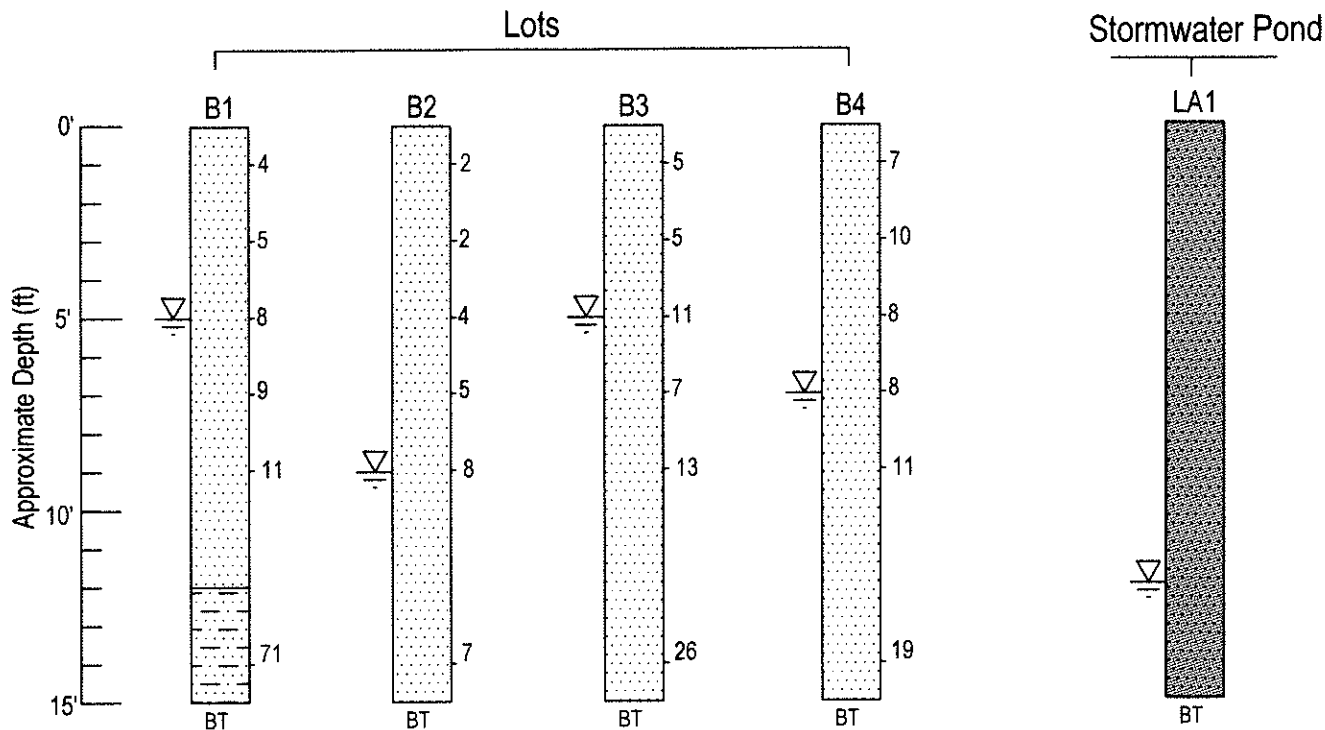


AGES of JAX Inc.
9556 Historic Kings Rd.
Jacksonville, Florida 32257

Boner Subdivision
Fernandina Beach, Florida

SCALE:

$$1'' = 100'$$



LAKE AUGER FILL/BACKFILL CLASSIFICATION



CLASS I FILL- Use as Trench Backfill, Elevating Fill in Roadway & Building Pads Areas



CLASS II FILL- Use as Elevating Fill in Building Pad Areas & Green Areas



UNSUITABLE- Not Suitable For Use as fill or backfill

LEGEND & SYMBOLS (USCS/AASHTO Classification)



Fine SAND (SP/A-3)



Slightly Silty Fine SAND (SP-SM/A-3)



Silty Fine SAND (SM/A-2-4)



Very Silty Fine SAND (SM/A-4)



Clayey Fine SAND (SC/A-2-6)



Silty Clayey Fine SAND (SC-SM/A-2-5)



Very Clayey Fine SAND (SC/A-6)



Silty CLAY (CL/A-7-6)



CLAY (CL/A-7-6)



Sandy SILT (MH/ML/A-4)



Variably Cemented



Fine SAND (HARDPAN)



Fine SAND with Many Organics (A-8)



Standard Penetration Test 9 Resistance (blows/ft)



BT Boring Terminated



ABT Auger Boring Terminated



GWLNE Groundwater Level Not Encountered



Topsoil



Groundwater Level at Time of Drilling



Limerock



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9556 Historic Kings Rd.
Jacksonville, Florida 32257

GENERALIZED SUBSURFACE PROFILE

Boner Subdivision
Fernandina Beach, Florida

DRAWN: DEP

DATE: 09/11/18

SCALE:

CHECKED: BCM

JOB NO: J18307

1"=5'

KEY TO SOIL CLASSIFICATION

CORRELATION OF N-VALUE WITH RELATIVE DENSITY & CONSISTENCY

SANDS AND GRAVEL	
NO. OF BLOWS, N'	RELATIVE DENSITY
0 - 4	VERY LOOSE
5 - 10	LOOSE
11 - 20	FIRM
21 - 30	VERY FIRM
31 - 60	DENSE
OVER 50	VERY DENSE

SILTS AND CLAYS	
NO. OF BLOWS, N'	CONSISTENCY
0 - 2	VERY SOFT
3 - 4	SOFT
5 - 8	FIRM
9 - 15	STIFF
16 - 30	VERY STIFF
31 - 50	HARD
OVER 50	VERY HARD

PARTICLE SIZE IDENTIFICATION (UNIFIED SOIL CLASSIFICATION SYSTEM)

CATEGORY	DIMENSIONS
Boulders	Diameter exceeds 12 inches
Cobbles	3 to 12 inches
Gravel	Coarse - 0.75 to 3 inches in diameter
Sand	Coarse - 2.0 mm to 4.76 mm diameter Medium - 0.42 mm to 2.0 mm diameter
Silt and Clay	Less than 0.074 mm (Invisible to the naked eye)

MODIFIERS

These modifiers provide our estimate of the amount of minor constituents (sand silt or clay size particles) in the soil sample.

PERCENTAGE OF MINOR CONSTITUENT	MODIFIERS
5% to 12%	Slightly Silty, Slightly Clayey, Slightly Sandy
12% to 30%	Silty, Clayey, Sandy
30% to 50%	Very Silty, Very Clayey, Very Sandy

These modifiers provide our estimate of the amount of other components in the soil sample.

APPROXIMATE CONTENT OF OTHER COMPONENTS (SHELL, GRAVEL, ETC.)	MODIFIERS	APPROXIMATE CONTENT OF ORGANIC COMPONENTS
0% to 5%	TRACE	1% to 2%
5% to 12%	FEW	2% to 4%
12% to 30%	SOME	4% to 8%
30% to 50%	MANY	>8%



TEST BORING RECORD

Project Boner Subdivision
 Boring Location (See Field Exploration Plan)
 Ground Elevation NA Datum NA
 Groundwater Depth 5.0' Time: Drilling Date: 09/05/18
 Lat/Long N30.66357° / W81.44395°

JOB NO J18307
 BORING NO B1
 Sheet 1 of 1
 Boring Begun 09/05/18
 Boring Completed 09/05/18
 Driller N.W, W.L, Barry, Pat
 Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST				BLOW COUNT
				BLOWS PER 6-IN. INTERVAL				
	0	VERY LOOSE Dark Brown Fine SAND w/ Some Roots (SP)	1	1	2	2	2	4
		VERY LOOSE Brown Fine SAND (SP)						
		LOOSE Tan Fine SAND (SP)	2	2	2	3	4	5
	5	LOOSE to FIRM Brown Fine SAND (SP)	3	4	4	4	4	8
			4	3	4	5	6	9
			5	3	4	7	2	11
	10	VERY DENSE Brown Fine SAND (SP) (HARDPAN)						
			6	20	29	42	71	
	15	BORING TERMINATED						
	20							
	25							
	30							

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.



TEST BORING RECORD

Project Boner Subdivision
 Boring Location (See Field Exploration Plan)
 Ground Elevation NA Datum NA
 Groundwater Depth 9.0' Time: Drilling Date: 09/05/18
 Lat/Long N30.66355° / W81.44321°

JOB NO J18307
 BORING NO B2
 Sheet 1 of 1
 Boring Begun 09/05/18
 Boring Completed 09/05/18
 Driller N.W. W.L.
 Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST				
				BLOWS PER 6-IN. INTERVAL				BLOW COUNT
	0							
		VERY LOOSE Brown Orange Fine SAND (SP)	1	1	1	1	1	2
			2	2	1	1	3	2
		VERY LOOSE Orange Tan Fine SAND (SP)						
	5		3	2	2	2	3	4
			4	2	2	3	3	5
		LOOSE Light Grey to Tan Fine SAND (SP)						
	10		5	3	3	5	4	8
		LOOSE Brown Fine SAND (SP)						
	15		6	2	3	4		7
		BORING TERMINATED						
	20							
	25							
	30							

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.



TEST BORING RECORD

Project Boner Subdivision
 Boring Location (See Field Exploration Plan)
 Ground Elevation NA Datum NA
 Groundwater Depth 5.0' Time: Drilling Date: 09/05/18
 Lat/Long N30.66336° / W81.44365°

JOB NO J18307
 BORING NO B3
 Sheet 1 of 1
 Boring Begun 09/05/18
 Boring Completed 09/05/18
 Driller N.W. W.L. Barry, Pat
 Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST					
				BLOWS PER 6-IN. INTERVAL				BLOW COUNT	
	0								
		LOOSE Dark Grey Fine SAND (SP)	1	1	2	3	2		5
		LOOSE Grey Fine SAND (SP)	2	2	2	3	4		5
	5	FIRM Grey Fine SAND (SP)	3	3	4	7	7		11
		LOOSE to FIRM Brown Fine SAND (SP)	4	4	4	3	4		7
			5	6	6	7	6		13
	10								
		VERY FIRM Brown Fine SAND (SP)							
	15		6	5	10	16			26
		BORING TERMINATED							
	20								
	25								
	30								

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.



OF JAX, INC.

TEST BORING RECORD

JOB NO J18307

BORING NO B4

Sheet 1 of 1

Project Boner Subdivision

Boring Location (See Field Exploration Plan)

Boring Begun 09/05/18

Ground Elevation NA Datum NA

Boring Completed 09/05/18

Groundwater Depth 7.0'

Time: Drilling Date: 09/05/18

Driller N.W. W.L. Barry, Pat

Lat/Long N30.66316° / W81.44365°

Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST				
				BLOWS PER 6-IN. INTERVAL				BLOW COUNT
	0	LOOSE Dark Brown Fine SAND w/ Some Roots (SP)	1	2	2	5	7	7
		LOOSE Dark Grey Fine SAND (SP)						
			2	5	5	5	5	10
	5		3	5	3	5	7	8
			4	4	4	4	7	8
		LOOSE to FIRM Brown Fine SAND (SP)	5	5	5	6	5	11
	10							
	15		6	7	7	12		19
		BORING TERMINATED						
	20							
	25							
	30							

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

J18307 Boner Subdivision b4



AUGER BORING RECORDS
 Boner Subdivision
 Fernandina Beach, Florida
 AGES Job No. J18307, Report No. 001

Date Performed: 09/05/18

Performed By: N. Wheeler, W. Lewallen, Barry, Pat

Auger ID Location	Depth (Feet) ^a	SOIL DESCRIPTION (USCS/ AASHTO CLASSIFICATION)
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Roadway Augers

A1	0.0 - 1.0	Limerock
N 30.66389°	1.0 - 6.0	Grey Brown Fine SAND (SP / A-3)
W 81.44378°	A.B.T.^b	GWL^c = 5.0'

A2	0.0 - 2.0	Dark Brown Fine SAND (SP / A-3)
N 30.66385°	2.0 - 6.0	Brown Fine SAND (SP / A-3)
W 81.44315°	A.B.T.^b	GWL^c = Not Encountered

Stormwater Management Pond

LA1	0.0 - 1.0	Dark Grey Fine SAND w/ Some Roots (SP / A-3)
N 30.66301°	1.0 - 3.0	Light Grey Fine SAND (SP / A-3)
W 81.44333°	3.0 - 7.0	Brown Fine SAND (SP / A-3)
	7.0 - 15.0	Light Brown Fine SAND (SP / A-3)
	A.B.T.^b	GWL^c = 12.0'
		Estimated Seasonal High GWL= 10.0' Below Ground Surface

*- Auger Boring Terminated Due to GWL.

a - Depth measured below ground surface existing at boring location at time of drilling

b - Auger Boring Terminated (A.B.T.)

c - Groundwater Level (GWL) depth below existing ground surface, recorded at time of drilling, unless otherwise noted

J18307 Boner Subdivision aug1



DOUBLE RING INFILTRATION TEST RESULTS

PROJECT:	Boner Subdivision	REPORT DATE:	09/05/18
LOCATION:	Fernandina Beach, Florida	TEST DATE:	09/05/18
JOB NUMBER:	J18307	FIELD PERSONNEL:	W. Lewallen
TEST NUMBER:	DR11	METHOD:	ASTM D3385
LAT/LONG	N30.56301°, W81.44324°	WATER HEAD:	6"
		TEST DEPTH	Surface

REPORT DATE: 09/05/18

TEST DATE: 09/05/18

FIELD PERSONNEL: W. Lewallen

METHOD: ASTM D3385

WATER HEAD: 6"

TEST DEPTH

SUMMARY OF TEST DATA & RESULTS

INNER RING SIZE (INCHES):

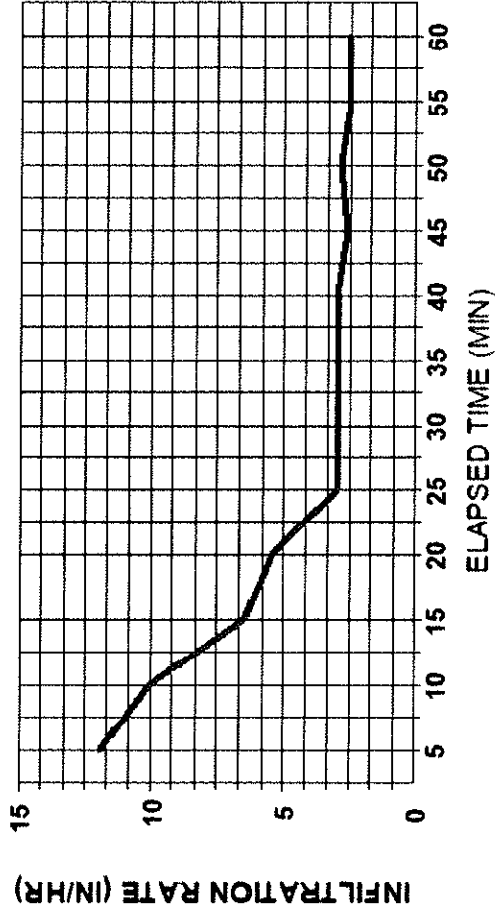
OUTER RING SIZE (INCHES): 24

AVERAGE INFILTRATION RATE (IN/HR):

4.7

STEADY STATE INFILTRATION RATE (IN/HR): 2.5

INFILTRATION RATE VS TIME



Estimated Seasonal High GWL= 11.0' Below Ground Surface

[illegible]

SOIL PROFILE

Depth(Ft)0.0 - 1.0

1.0 - 3.0

3.0 - 7.0

7,0 - 15,0

A.B.T.

Soil Description (USCS/AASHTO Classification)

Dark Grey Fine SAND w/ Some Roots (SP / A-3)

Light Grey Fine SAND (SP / A-3)

Brown Fine SAND (SP / A-3)

Light Brown Fine SAND (SP / A-3)

GWL= 12.0' Below Ground Surface



OF-JAX, INC.

INSITU FALLING HEAD HYDRAULIC CONDUCTIVITY TEST

Boner Subdivision
Fernandina Beach, Florida
AGES Job No. J18307

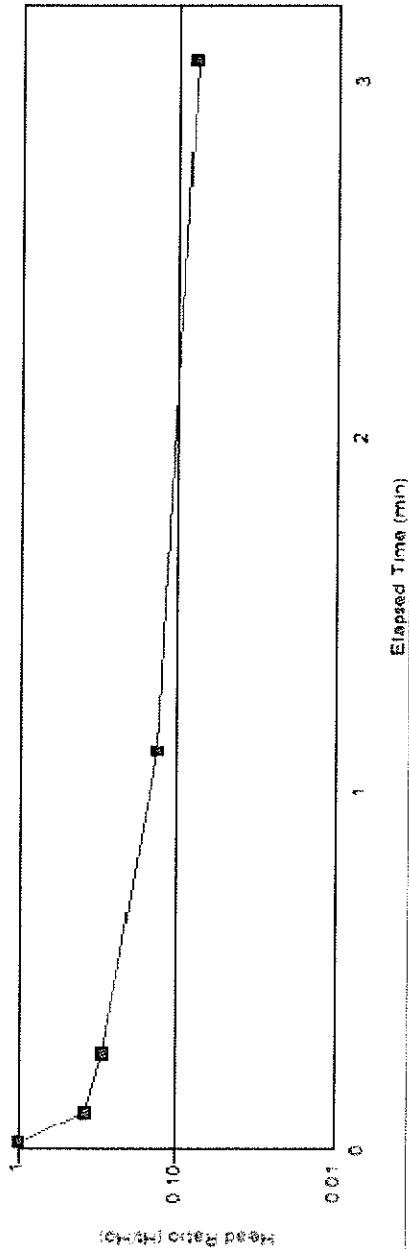
Governing Equation (NAVFAC)
 $K=r^2/2L \ln(L/R) [\ln(H1/H2)/(t2-t1)]$

Date Performed 09/08/18
Performed by D Anderson

Well Data	
Test ID	TMW1
Well Radius - R (ft)	0.08
Well Stickup (ft)	0.5
Well Depth below TOC (ft)	15.33
Saturated Screen Length - L(ft)	4.51
Depth to Static GW below TOC	10.82
Initial Water Depth below TOC Slug In	10.00

Field Data		Water Level	Head (Ht)	Head Ratio
min	sec	TOC (ft)		Ht/Ho
0	1	10.00	0.824976	1.0
0	6	10.51	0.31	0.4
0	16	10.58	0.24	0.3
1	7	10.71	0.11	0.1
3	3	10.76	0.06	0.1
Results: Insitu Horizontal Hydraulic Conductivity (k)				
0.0015	ft/min	2.09	ft/day	7.4E-04
				cm/sec

Head Ratio (Ht/Ho) Vs Elapsed Time (min)





INSITU RISING HEAD HYDRAULIC CONDUCTIVITY TEST

Boner Subdivision
Fernandina Beach, Florida
AGES Job No. J18307

Governing Equation (NAVFAC)

$$K = \frac{r^2}{2L} \ln\left(\frac{L}{R}\right) \left[\ln\left(\frac{H_1}{H_2}\right) / (t_2 - t_1) \right]$$

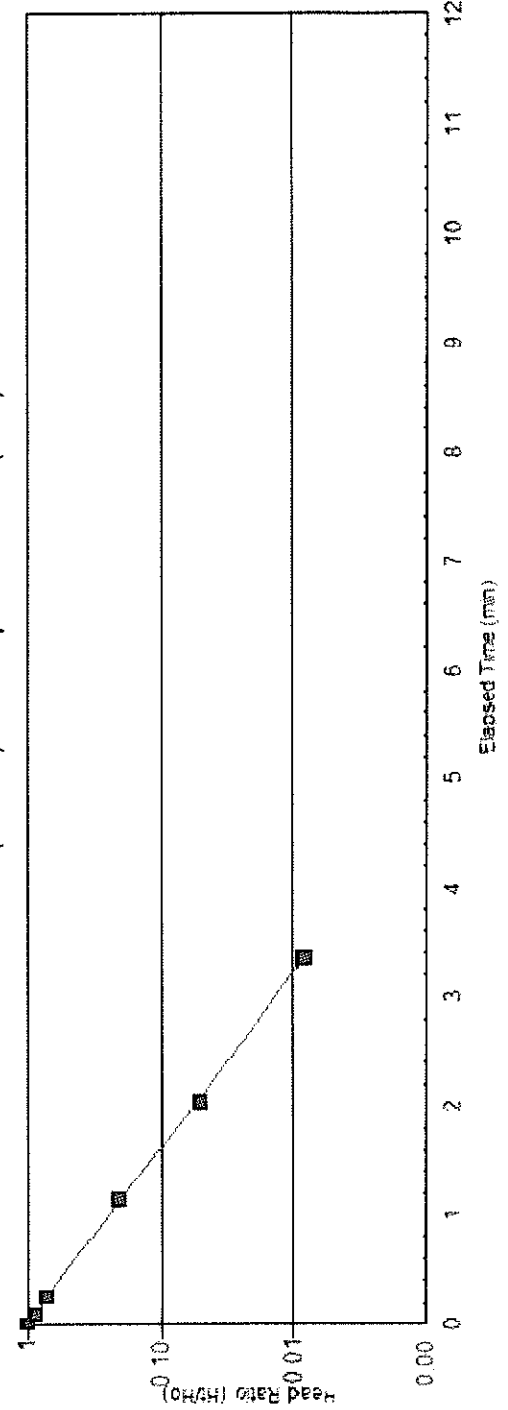
Date Performed 09/08/18

Performed by D Anderson

Well Data	
Well ID	TMW1
Well Radius - R (ft)	0.08
Saturated Screen Length - L (ft)	4.54148
Well Stickup (ft)	0.5
Well Depth below TOC	15.33
Depth to Static GW below TOC	10.78852
Initial Drawdown Depth below TOC	11.57

Field Data			Depth Below TOC (ft)	Head (Ht)	Head Ratio Ht/Ho
Elapsed Time (t)	min	sec			
0	0	0	11.566	0.7771	1.00
0	6	0.1	11.465	0.67662	0.87
0	16	0.3	11.348	0.560	0.72
1	9	1.2	10.947	0.15879	0.20
2	3	2.1	10.828	0.03967	0.05
3	22	3.4	10.795	0.0065	0.01
Results: Insitu Horizontal Hydraulic Conductivity (k)					
0.00398	ft/min	5.73	ft/day	2.0E-03	cm/sec

Head Ratio (Ht/Ho) Vs Elapsed Time (min)



FIELD EXPLORATION PROCEDURES

Penetration Borings

The penetration borings were made in general accordance with ASTM D 1586-67, "Penetration Test and Split-Barrel Sampling of Soils". The borings were advanced to the water table by augering and, after encountering the groundwater table, further advanced by rotary drilling techniques using a circulating bentonite fluid for borehole flushing and stability. At two-foot intervals within the upper 10 feet and at five-foot intervals thereafter, the drilling tools were removed from the borehole and a split-barrel sampler inserted to the borehole bottom and driven 18 inches into the material using a 140-pound SPT 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 or rock-like material) at each test interval, the sampler was retrieved from the borehole and a representative sample of the material within the split-barrel was placed in a glass jar and sealed. After completing the drilling operations, the samples for the borings were transported to our laboratory where they were examined by our engineer in order to verify the driller's field classifications. The samples will be kept in our laboratory for a period of two months after submittal of formal written report, unless otherwise directed by the client.

Auger Borings

The auger borings were performed manually using a post-hole auger. The auger borings were drilled in general accordance with ASTM D 1452-80 ("Soil Investigation and Sampling by Auger Borings"). Representative samples of the soils brought to the ground surface by the augering process were placed in glass jars, sealed, and transported to our laboratory where they were examined by a geotechnical engineer to verify the driller's field classification.