



February 4, 2020

HAND DELIVERY

Peter Walden, Principal Planner
Martin County Growth Management Department
2401 S.E. Monterey Road
Stuart, FL 34996

RE: Showcase PUD Zoning Agreement and Major Master Plan – 2nd Resubmittal in Response to 2nd Staff Report Dated November 13, 2019 (MC Project #C140-007; Our Ref. #18-695)

Dear Pete:

In response to the above-referenced staff report and our workshop on December 12, 2019, please find enclosed the original resubmittal packet containing the revised documents and plans referenced below, a CD with PDF copies of the resubmitted materials, and an additional 24x36 copy of the revised plans. The enclosed revised materials are as follows:

- Project narrative;
- Public benefit statement;
- PUD Agreement;
- Master site plan and digital copy of same;
- Phasing plan and digital copy of same;
- Traffic impact analysis;
- Master stormwater report;
- Excavation, fill & hauling form; and
- Master drainage and utility plans.

These materials have been revised or provided in accordance with our discussion at the workshop and as outlined in the following itemized responses to the staff comments. Please note that I have only repeated the relevant comments in **bold type** followed by our responses in plain text *italics*. Please refer to the staff report for the entirety of the comments within each section.

Itemized Responses to Staff Report

A. Application information

Agree.

B. Project description and analysis

As per the workshop discussion on December 12, 2019, please note that the number of units has been reduced to 167 units (3.5 units per acre) including 79 single family lots and 88 fee-simple townhome units.

C. Staff recommendation

See responses to the non-comply comments below.

D. Review Board/Committee action

Agree.

E. Location and site information

Agree.

**F. Determination of compliance with Comprehensive Growth Management Plan requirements
Unresolved Issues:**

This application cannot be deemed to be in compliance until the future land use designation is changed to Low density residential.

Acknowledged.

G. Determination of compliance with land use, site design standards, zoning and procedural requirements

Unresolved issues:

Item #1: Data Table

1. The pervious area provided for duplex lots (282,521 6.21 acres) exceeds the total for the 79 lots at 3,100 sq. ft. each (244,900 5.62 acres). Explain how the greater number is achieved.

The site data and pervious area calculations have been revised and updated to be consistent with the revised site plan and reduced density. The single family lot area provides 80% impervious and 20% pervious area overall. A specific amount of space per individual lot consistent with the overall lot area calculations, will be provided in conjunction with final site plan application when a specific building footprint is identified.

2. The typical lot area shows 3,100 sq. ft. of open space. This does not take into account the reduced rear setbacks for pools, decks, Screen enclosures etc. If open space calculations are to include space provided on lots then this reduced area per the setbacks needs to be accounted for. An additional 61,620 sq. ft. should be reduced from lot pervious space to account for these structures.

The open space dated has been updated to include all potential impervious surfaces including patios, driveways, sidewalks, etc. A specific amount of space per individual lot consistent with the overall lot area calculations will be provided in conjunction with final site plan application when a specific building footprint is identified.

3. The provided open space table adds up to only 23.19 acres or 50% not the 23.22 acres or 50.1 % shown. Revise table when revising lot open space calculations. Show percentage of total as shown on impervious table.

The site data and pervious area calculations have been revised and updated to be consistent with the revised site plan.

4. The note that open space is met project (3.15.1A) wide needs to be demonstrated.

See revised site data on master site plan.

5. Pursuant to Goal 4.3, wetlands and landlocked water bodies may be used in calculating open space if 40% of the upland area consists of open space. Provide data that 40 of the upland area consists of open space and the lakes may be counted. (beyond the 10% used) Sec. 3.15.1.B does not apply to PUDs.

The revised site data documents that 40% of the upland area on site consists of open space not including lakes, therefore the lake area has been included in the open space calculations.

6. Gross density is not affected by ROW designation and should be calculated from overall site area. The resulting gross density is 4.50 units per acre.

Based on the reduction in units to 167 and the total site area of 47.12, the gross density is now 3.5 units per acre.

Item #2:PUD agreement:

1. There is a typo under "Timetable for Development Phase 2 completion (2015)

The timetable for development schedule has been corrected and updated.

Additional information:

Item #1 The Townhome tract table does not account for any patio or additional space.

Building 7 does appear to meet the 10' setback from TOB requirement.

The revised master site plan accounts for patio space and meets the minimum setbacks proposed.

H. Determination of compliance with urban design and community redevelopment requirements

Not applicable.

Agree.

I. Determination of compliance with property management requirements

It has been determined that the Applicant will be required to donate 30 feet of right-of-way on SE Cove Road and 25 feet of right of way on SE Salerno Road. These donations must be shown on the Master Plan.

The dedications must be made at the time of Plat approval. The dedications must be included on the Plat and the conveyances will be recorded simultaneously with the Plat.

Agree. The ROW donations on Salerno Road and Cove Road have been shown on the master plan. As discussed at the workshop, the ROW donations and abandonments, including the release of the TIFF easement on Cove Road, will be completed by way of separate applications prior to or in conjunction with final site plan approval. See also Special Condition #15 within the PUD Agreement.

J. Determination of compliance with environmental and landscaping requirements

Environmental

Unresolved Issues:

Item#1: Master Site Plan

The site data table on the master site plan with the original submittal identified and quantified the wetland buffer as preserve and its acreage. This information was omitted from the data table with the latest submittal. Please add the preserve data/wetland buffer information back to the data table on the MSP.

The wetland buffer preserve area has been added back to the site data.

Landscape

Unresolved Issues:

No landscape plans are being reviewed in association with this application for Revised Zoning and Masterplan. Landscape plans will be submitted and reviewed at time of Final Site Plan Review. However, it does not appear that areas provided on the Master Plan will be sufficient for required landscape areas.

Item #1: Landscape Bufferyard Requirements

Remedy/Suggestion/Clarification:

A Type 3 buffer is required by Code adjacent to the commercial land use. The buffer adjacent to the single family area has been labeled. And though it appears that sufficient area has been provided on the master plan between the multi-family and the commercial parcel to the north, it has not been labelled. Please label as a Type 3 buffer.

The Type 3 buffer between the townhomes and commercial parcel has been labelled.

Item #2: Buffers For Res Uses-Maj Roadways

Remedy/Suggestion/Clarification:

Type 5 Buffers are required along Salerno and Cove Roads. Labels have been added to acknowledge that the Type 5 buffer is provided along Salerno and there appears to be adequate room along Cove Road, however this label indicates that the 30 foot strip is ROW to be donated. Please clarify use of this 30 foot strip and label if this is where the Type 5 buffer is to be provided.

The Type 5 buffer along Cove Road has been provided and labelled.

K. Determination of compliance with transportation requirements

Unresolved Issues:

Item # 1: The Traffic Impact Analysis does not comply with Article 5, Division 3, Section 5.64 because:

Revise the "D Factor" shown on Cove Road to match the published data from the 2018 Roadway Level of Service Report

See revised traffic impact report enclosed.

Item # 2: If the total traffic volume is higher than the adopted level of service capacity, a more detailed analysis of level of service using accepted FDOT level of service methodology techniques must be undertaken. These techniques must be approved by the County Administrator and will include those indicated in the Highway Capacity Manual and FDOT's latest Quality/Level of Service Handbook. If the more detailed analysis indicates that the total traffic volume would be less than the adopted level of service capacity for all impacted links and/or aggregated segments, concurrency has been satisfied. If not, concurrency has not been satisfied, and the only way for concurrency to be satisfied is for a traffic congestion mitigation plan (TCMP) to be accepted by the County Administrator. The TCMP, shall propose solutions to mitigate the impacts of the development on the links on which concurrency has not been satisfied. The TCMP shall demonstrate the operating conditions of the deficient links and/or aggregated segments with project traffic operate at the adopted level of service capacity. [Martin County, Fla., LDR Article 5, Division 3, Section 5.64.C.5.a (2009)]

The detailed analysis submitted by the applicant needs refinement; the traffic signal at SE Legacy Cove Circle needs to be included in the analysis. Confer with staff for methodology and appropriate signal timings along the corridor.

See revised traffic impact report enclosed.

Item # 3: The signal warrant analysis volumes must account for the proposed development trips and must match the driveway analysis proposed volumes provided on D-4.

See revised traffic impact report enclosed.

L. Determination of compliance with county surveyor

Not applicable.

Agree.

M. Determination of compliance with engineering, stormwater and flood management requirements

Unresolved issues:

The proposed lake shown within Phase 3 is identified as Lake 5 on the Master Site Plan and Master Paving, Grading, and Drainage Plan; however, the phasing notes on the Phasing Plan refers to the construction of Lake 6. Revise for consistency.

The phasing notes have been corrected for consistency.

The phasing notes on the Master Paving, Grading, and Drainage Plan calls for the construction of lakes 1 & 2 as part of Phase 1; however, the phasing notes on the Phasing Plan calls for the construction of lakes 1-3. Revise for consistency.

The phasing notes have been corrected for consistency.

Include the construction of the proposed sidewalk within the SE Salerno Rd right-of-way to the phasing notes for Phase 1 on the Phasing Plan and Master Paving, Grading, and Drainage Plan; revise accordingly.

The phasing notes have been revised as requested.

The phasing notes on the Phasing Plan calls for the construction of lake 3 as part of both Phase 1 and Phase 2; revise accordingly.

The phasing notes have been revised as requested.

Include the construction of the turn lanes and removal of driveway gate and Knox box on SE Cove Road to the phasing notes for Phase 2 on the Phasing Plan.

The phasing notes have been revised as requested. Please note Phase 1 restricts access to Cove Road to emergency and pedestrian access only.

The phasing notes on the Phasing Plan calls for the removal of temporary swale as part of Phase 2; however, there is no temporary swale on the Master Paving, Grading, and Drainage Plan. Revise for Consistently.

The phasing notes have been revised as requested.

The PUD document mentions a Phase 2/Phase 3 Construction Timing Alternative. Revise the Phasing Plans to provide additional phasing notes corresponding to the Phase 2 / Phase 3 Construction Timing Alternative.

The alternative phasing option has been eliminated.

Revise the Phase 3 phasing notes on the Phasing Plan to address the construction of Phase 3 as if it will be constructed sequentially (consistent with notes on the Master Paving, Grading, and Drainage Plan). The Phase 2 / Phase 3 Construction Timing Alternative will become a separate note, as mentioned in the comment above.

The alternative phasing option has been eliminated.

Revise the 30' right-of-way dedication note on the Master Site Plan to read as follows: 30-feet to be dedicated to Martin County as right-of-way prior to the County release of the TITF Easement.

See revised note on master site plan.

Item #2: PUD Agreement Language

Exhibit E - Timetable for Development:

Revise Section C – Phase 2/Phase 3 Construction Alternative: If Phase 3 is constructed prior to Phase 2, the remaining spine road, sidewalks, and associated infrastructure must be constructed between Phase 1 and SE Cove Road.

The alternative phasing option has been eliminated.

N. Determination of compliance with addressing and electronic file requirements

Addressing:

Unresolved Issues:

Item #1: Please choose another street suffix for SE Lost Pine Blvd. The street suffix Blvd is reserved for major thoroughfares. Section 4.768.C.

Types such as Ave, Ct, Dr, and Ln may be used. Section 4.768.A.

The street name has been changed to SE Lost Pine Drive.

Electronic file requirements:

Findings of Compliance:

Agree.

O. Determination of compliance with utilities requirements

Water and Wastewater Service

Findings of Compliance:

Agree.

Wellfield and Groundwater Protection

Findings of Compliance:

Agree.

- P. Determination of compliance with fire prevention and emergency management requirements**

Finding of Compliance

Agree.

- Q. Determination of compliance with ADA requirements**

Finding of Compliance

Agree.

- R. Determination of compliance with Martin County Health Department and School Board:
Martin County Health Department**

There are no proposed onsite potable wells or septic disposal systems. Therefore, the Department of Health was not required to review this application for consistency with the Martin County Codes

Agree.

Martin County School District General Capacity Analysis

Agree with findings and comments.

- S. Determination of compliance with legal requirements**

Review On-going.

Agree.

- T. Determination of compliance with adequate public facilities requirements**

Pending

Acknowledged.

- U. Post-approval requirements**

Acknowledged.

- V. Local, State, and federal Permits**

All the applicable Local, State and Federal Permits have been issued.

Acknowledged..

- W. Fees**

Acknowledged.

- X. General application information**

Acknowledged.

- Y. Acronyms**

Acknowledged.

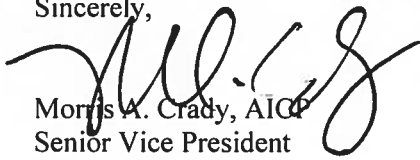
- Z. Attachments**

Acknowledged.

I trust these responses and the revised materials satisfactorily address the comments contained in the staff report and allow the project to proceed to a public hearing before the Local Planning Agency in February.

Please feel free to contact me or my assistant, Shirley Lyders, if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read 'M. Crady', written over the printed name.

Morris A. Crady, AICP
Senior Vice President

Copy: Client
Development Team



PROJECT NARRATIVE

Showcase PUD

Master Site Plan

April 10, 2019

(rev. 9-17-19; 2-4-2020)

The +/- 47.12-acre subject property, which is also the subject of a pending Comprehensive Plan Amendment to change the future land use from Estate Density to Low Density Residential, is located east of Kanner Highway between Cove Road to the South and Salerno Road to the north. The property was used and operated as a tropical fish farm for several decades, which produced ornamental tropical fish for aquariums in 50 or more manmade ponds. The fish farm operation, which effectively ended in the late 1990s, included 2 single family homes and a storage shed on approximately 3 acres near Salerno Road (along the west side of the property). These uses have been maintained by the current owner as rental properties.

In 2010, the majority of the ponds were filled, and the site was reclaimed as “improved pasture” by way of a SFWMD environmental resource permit and a Martin County excavation and fill permit. Based on the findings in these permits and based on review of its current physical condition, the property contains no natural upland or wetland habitat or protected trees.

The project is located immediately adjacent to commercial uses on Kanner Highway, within the core of the County’s Primary Urban Service District. Potable water and wastewater treatment service lines are in place on Salerno Road and Cove Road and adequate capacity is available from Martin County Utilities.

The proposed master site plan has been designed in accordance with the Low Density (5 up) future land use designation and features a mix of residential units including 88 fee-simple, 2-story townhome units and 79 single family homesites. The proposed PUD maximizes the utilization of existing and planned infrastructure on impacted land within the heart of the Primary Urban Service District, and with direct access to major roads and highways. The physical suitability of the land and availability of existing public facilities and services provide an opportunity for attainable housing which does not otherwise exist in Martin County due to the lack of large land holdings or environmental constraints

The site has been designed with interconnected roads, tree-lined streets, private recreation areas, and expanded common areas surrounding perimeter lakes that provide an effective buffer and land use transition from the intense commercial uses along Kanner Highway and the estate homesites to the east and south of Cove Road. The project includes a minimum 50’ wide landscape buffer along Cove Road and Salerno Road not including a 30’ right-of-way (ROW) donation along Cove Road and a 25’ ROW donation along Salerno Road to accommodate future roadway expansion plans.

The minimum required lake littoral zones and lake upland buffers have been consolidated along the site’s perimeter with a “required” 30’ wide Type 3 native landscape buffer along the west side and a “voluntary” 30’ wide, Type 3 buffer along the east side. Typical housing communities most often circle the lakes with homes, which restricts common use, and utilize minimum 10’ wide strips of lake littoral zone and upland transition areas, which restricts wildlife utilization and obstructs lake views resulting in poor maintenance by homeowners and/or the HOA.

The proposed design of the Showcase PUD isolates the lake shoreline plantings along common areas away from homes and results in a 70' wide wildlife corridor along the lake shoreline including the 30' Type 3 native landscape buffer, a minimum 20' wide upland transition zone and a minimum 20' wide lake littoral zone. The PUD design ensures long-term maintenance and viability of native plantings, maximizes wildlife benefits, and ensures access and enjoyment of the lakes to all residents.

The project will be constructed in 2 Phases. Phase 1, which consists of 79 single family homesites, will be accessed from the Salerno Road entrance with emergency and pedestrian access to Cove Road. Phase 2 which consists of 88 townhome units, will expand full access to Cove Road.

Water and sewer services will be provided by Martin County Utilities with a provision to accept Irrigation Quality (IQ) effluent for irrigation if available.



STATEMENT OF BENEFITS

Showcase PUD

Master Site Plan

April 10, 2019

(rev. 9-17-19, 2-4-2020)

Relevant Background

The +/- 47.12-acre subject property, which is also the subject of a pending Comprehensive Plan Amendment to change the future land use from Estate Density to Low Density Residential, is located east of Kanner Highway between Cove Road to the South and Salerno Road to the north. The property was used and operated as a tropical fish farm for several decades, which produced ornamental tropical fish for aquariums in 50 or more manmade ponds.

In 2010, the majority of the ponds were filled, and the site was reclaimed as “improved pasture” by way of a SFWMD environmental resource permit and a Martin County excavation and fill permit. Based on the findings in these permits and based on review of its current physical condition, the property contains no natural upland or wetland habitat or protected trees.

The project is located immediately adjacent to commercial uses on Kanner Highway, within the core of the County’s Primary Urban Service District. Potable water and wastewater treatment service lines are in place on Salerno Road and Cove Road and adequate capacity is available from Martin County Utilities.

The proposed master site plan has been designed in accordance with the Low Density (5 up) future land use designation and features a mix of residential units including 88 fee-simple, 2-story townhome units and 79 single family homesites. The proposed PUD maximizes the utilization of existing and planned infrastructure on impacted land within the heart of the Primary Urban Service District, and with direct access to major roads and highways. The physical suitability of the land and availability of existing public facilities and services provide an opportunity for attainable housing which does not otherwise exist in Martin County due to the lack of large land holdings or environmental constraints

The site has been designed with interconnected roads, tree-lined streets, private recreation areas, and expanded common areas surrounding perimeter lakes that provide an effective buffer and land use transition from the intense commercial uses along Kanner Highway and the estate homesites to the east and south of Cove Road. The project includes a minimum 50’ wide landscape buffer along Cove Road and Salerno Road not including a 30’ right-of-way (ROW) donation along Cove Road and a 25’ ROW donation along Salerno Road to accommodate future roadway expansion plans.

The Martin County Comprehensive Growth Management Plan provides the following policy applicable to PUDs (Planned Unit Developments):

Policy 4.IE.6. A planned unit development is a unified development that is (1) planned, approved and controlled according to provisions of a binding written document negotiated between the developer and the County as a special PUD zoning district and (2) approved at a public hearing. The purpose of PUD districts is to introduce flexibility into the strict zoning and development regulations in a manner that is mutually beneficial to the County and the development. It is also to encourage enlightened and imaginative approaches to community planning. Benefits to the developer may include incentives to

encourage affordable housing (consistent with the Housing Element); transfer of density from wetlands (consistent with the Conservation and Open Space Element, Chapter 9); flexibility in density distribution; flexibility and variety in land use, structure type and project design; and greater intensity than would be achievable under straight zoning. In exchange, the County may acquire such benefits as preservation zones, buffers, density transition zones and recreation facilities in excess of the County's minimum standards. Specific PUD district regulations are negotiated voluntarily by the developer and the County, and neither is guaranteed maximum benefits by right.

Developer Benefits

The PUD zoning district within the Low Density future land use allows the blending of density and a mix of residential unit types that can be phased by way a PUD Master Plan and Phasing Plan.

In this PUD the developer has not asked for any benefits related to land use, structure type or density that would otherwise “*provide greater intensity than would be achievable under straight zoning*”. In fact, the product type was changed from duplex and condominium units to maximum 2-story single family and townhome residences, and the maximum density was reduced from 235 units to 167 units to address compatibility concerns expressed during meetings with surrounding homeowners in Tres Belle.

PUD Benefits

- The proposed PUD maximizes the utilization of existing and planned infrastructure on impacted land within the heart of the Primary Urban Service District while maintaining and/or enhancing compatibility with surrounding development. The physical suitability of the land and availability of existing public facilities and services provide an opportunity for attainable housing which does not otherwise exist in Martin County due to the lack of large land holdings or environmental constraints. The provision of attainable housing in Martin County is a public benefit.
- The PUD design maximizes wildlife utilization by providing perimeter lakes along the east and west boundary that consolidate the minimum required lake littoral zone and upland transition plantings with a “required” Type 3, 30’ wide, native landscape buffer on the west side (next to existing commercial land use), and a “voluntary” Type 3, 30’ wide native landscape buffer on the east side. The design results in a minimum 70’ wide wildlife corridor along the lake shoreline, which includes the 30’ native landscape buffer, a minimum 20’ wide lake upland transition zone and a minimum 20’ wide lake littoral zone.
- The PUD design provides expanded common areas for the benefit of the Homeowner’s Association adjacent to the lakes and throughout the project including a parking tract with 11 spaces that will allow residents convenient access to common open space and walking paths around the lake area that connect to the internal sidewalks along both sides of the private streets.
- The PUD design provides private recreation amenities for the residents.
- The main road between Salerno Road and Cove Road has been designed as a private “through-road” with sidewalks on both sides and landscape easements for street trees that enhance pedestrian circulation and minimize conflicts with utilities and vehicular traffic.
- A sidewalk fee of \$25 per linear foot will be paid by the Developer/Owner for the off-site sidewalk connection along SE Salerno Road between the project limits and South Kanner Highway. The required fee will be paid to Martin County within 60 days of the first final site plan approval.

This Instrument Prepared By:

Lucido & Associates
701 SE Ocean Boulevard
Stuart, FL 34994
(772) 220-2100

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SHOWCASE

RESIDENTIAL PLANNED UNIT DEVELOPMENT ZONING AGREEMENT

THIS AGREEMENT, made and entered into this _____ day of _____, 20____, by and between, COVE/SALERNO PARTNERS, LLC, a Florida limited liability company hereinafter referred to as OWNER, and MARTIN COUNTY, a political subdivision of the State of Florida, hereinafter referred to as COUNTY.

WITNESSETH:

WHEREAS, OWNER is the fee simple title holder of the property situated in Martin County, Florida, and more particularly described in **Exhibit A**, attached hereto and made a part hereof; and

WHEREAS, it is the desire of OWNER to develop (in accordance with development plans, as the same may be revised from time to time) a Residential Planned Unit Development (hereinafter sometimes referred to as PUD) to be known as Showcase consisting of common areas, and a private residential project not to exceed an aggregate sum of 167 residential housing units together with accessory buildings and other related improvements and facilities; and

WHEREAS, Showcase Homeowners Association, Inc., a Florida not-for-profit corporation, will be formed to provide for the maintenance of the roads, streets, rights-of-way, and common areas within Showcase (hereinafter the Association); and

WHEREAS, this type of consolidated development is permitted in Martin County subject to a PUD Agreement; and

WHEREAS, it is the desire of the COUNTY to encourage this form of development, to prevent and discourage urban sprawl, promote compatible, consistent and effective usage of land, to protect, preserve, and manage natural resources, and to implement the COUNTY's growth management plans.

NOW, THEREFORE, the parties do hereby agree as follows:

1. UNIFIED CONTROL

The OWNER hereby warrants that it has, as a result of fee simple ownership, unified ownership of all real property included in this PUD. Documents certifying title, or the right to acquire title, as applicable, are attached hereto and incorporated herein as **Exhibit B**. A Covenant of Unified Control by the OWNER is attached hereto and incorporated herein as **Exhibit C**.

2. DEVELOPMENT

The OWNER agrees that this PUD will be undertaken and carried out in accordance with the following:

- 2.1 The master site plan approved by the COUNTY, a copy of which is attached hereto as **Exhibit D** and by reference made a part hereof Approval of the master site plan shall authorize the OWNER to submit the final site plans in accordance with the terms and conditions of the approved master site plan. Approval of the master site plan by the COUNTY shall not constitute approval to build or construct any improvements and is not the final approval necessary for construction of the development.

- 2.2 The final site plans to be approved by the COUNTY in accordance with such laws, ordinances and regulations as may be in effect at the time of such approval.
- 2.3 The Timetable for Development as shown in **Exhibit E**, attached hereto and by reference made a part hereof.
- 2.4 The Phasing Plan as shown in **Exhibit E-1**, attached hereto and by reference made a part hereof.
- 2.5 The conditions and requirements agreed to by the COUNTY and the OWNER as set forth in **Exhibit F**, attached hereto and by reference made a part hereof.
- 2.6 Permits and authorizations granted in accordance with such laws, ordinances and regulations as may be in effect at the time of such approval.

3. VESTED RIGHTS

The OWNER shall have the right to develop the PUD in accordance with applicable laws, ordinances and regulations, the provisions and requirements of this Agreement, the approved master site plan, final site plans, and the subdivision plat(s).

4. COMMON AREAS, COVENANTS, CONDITIONS AND RESTRICTIONS

- 4.1 The OWNER shall create a Declaration of Covenants, Conditions and Restrictions for Showcase (hereinafter the Covenants and Restrictions), which shall be submitted as part of the application for plat approval. A copy of the Covenants and Restrictions shall be recorded with the plat. As part of said Covenants and Restrictions, the Association shall be established for the maintenance, operation and management of the Common Areas as defined therein. The Common Areas of the PUD shall be designated as such and shown on the approved master site plan, final site plans and subdivision plats. The

Covenants and Restrictions shall be in conformity with such laws, ordinances and regulations as may be in effect at the time of the approval of the subdivision plats.

- 4.2 Except for conveyances to governmental entities, it shall be deemed a breach of this Agreement for any land to be conveyed by the OWNER by an instrument which does not contain the Covenants and Restrictions or incorporate them by reference thereto.
- 4.3 The Association shall not be dissolved, nor shall it dispose of any common areas, by sale or otherwise, except to an organization conceived and organized to own and maintain the common areas, without first receiving approval of the COUNTY. The COUNTY, as a condition precedent to the dissolution or disposal of common areas, may require dedication of common open areas, utilities or road rights-of-way to the public as are deemed necessary.
- 4.4 In the event that the COUNTY determines that the Association (or any successor organization) has failed at any time to maintain the common areas of the PUD in reasonable order and condition in accordance with the approved master and final site plans and applicable laws, ordinances, and regulations, then the COUNTY shall serve written notice by certified mail, return receipt requested, upon such organization and upon each owner of real property within the PUD, which notice shall set forth the manner in which the organization has failed to maintain the common areas in reasonable order and condition, and shall demand that such failure be remedied within thirty (30) days of the sending of such notice or, in the alternative, that such organization appear before the COUNTY at a specified time

[at least ten (10) days but not more than thirty (30) days after the sending of such notice] either to contest the alleged failure to maintain the common areas or to show cause why it cannot remedy such failure within the thirty (30) day period. If such failure has not been remedied within the thirty (30) day period or such longer period as the COUNTY may allow, then the COUNTY, in order to preserve the taxable values of the real property within the Planned Unit Development and to prevent the common areas from becoming a public nuisance, shall hold a public hearing to consider the advisability of the COUNTY entering upon such common areas and maintaining them for a period of one (1) year. Notice of such hearing shall be sent by certified mail, return receipt requested, to the organization involved and to each owner of real property within the PUD and shall be published in a newspaper of general circulation published in Martin County, Florida, Such notice shall be sent and published at least fifteen (15) days in advance of the hearing. At such hearing, the COUNTY may determine that it is advisable for the COUNTY to enter upon such common areas, take non-exclusive possession of them and maintain them, according to COUNTY standards, for one (1) year. Such entry, possession and maintenance when followed in accordance with the above procedures shall not be deemed a trespass. In no event shall any such entry, possession and maintenance be construed to give the public or the, COUNTY any right to use the common areas.

- 4.5 The COUNTY may, upon public hearing with notice given and published in the same manner as above, return possession and maintenance of such common areas to the organization, or successor organization, abandon such possession and

maintenance, or continue such possession and maintenance for an additional one (1) year period. The cost of such maintenance by the COUNTY shall be assessed ratably against the real properties within the PUD, the owners of which have the right to the use and enjoyment of the common areas and shall become a charge or lien on said properties if not paid within thirty (30) days after the receipt of a statement therefor.

5. DESTRUCTION

In the event that all or a portion of the PUD should be destroyed by a storm, fire, or other common disaster, the OWNER, its grantees, successors or assigns and/or the Association, shall have the right to rebuild and/or repair so long as there is strict compliance with the approved master site plan, final site plans, and subdivision plats.

6. CHANGE OR AMENDMENT

There shall at all times be a strict adherence to the provisions of the Agreement and the approved master and final site plans. Any change or amendment to the Agreement and/or the approved master site plan, final site plans, and subdivision plats shall only be made in accordance with Section 10.14, Changes and Amendments to Approved Development Orders of Article 10, Development Review Procedures of the Martin County Land Development Regulations.

7. BREACH OF AGREEMENT

7.1 Development of Showcase shall at all times be in compliance with the PUD Agreement and the approved master site plan, final site plans, and subdivision plats (hereinafter sometimes referred to as development orders). Failure to comply with a development order may result in the suspension of that

development order, the cessation of COUNTY processing of all applications for development on the subject property and any associated phases, or termination of the development order pursuant to Section 10.8, Suspension of Development Orders for Failure to Comply, of Article 10, Development Review Procedures, of the Martin County Land Development Regulations.

7.2 Any person, including the Board of County Commissioners (hereinafter sometimes referred to as Board) or any member of the Board of County Commissioners, may file a complaint with the county administrator alleging that a development order has been violated, that unauthorized development has occurred, or that misrepresentation, fraud, deceit, deliberate error or omission, or a material omission that should have been disclosed regarding information required in a development application has occurred. In the event that such a complaint is filed, it shall be addressed as set forth in Section 10.8, Suspension of Development Orders for Failure to Comply with Article 10, Development Review Procedures of the Martin County Land Development Regulations.

7.3 In addition, pursuant to the provisions of Section 10.5.C., Termination of PUD Development Approval of Article 10, Development Review Procedures of the Martin County Land Development Regulations, at such time as the Board of County Commissioners becomes aware of a possible breach of the PUD Agreement, the Board may schedule a public hearing on reconsideration of the development approval and its possible termination. In the event that the Board determines that a breach of the PUD Agreement has occurred and voids the development order, the Board may initiate an amendment to the Comprehensive

Growth Management Plan to cause the property to revert to its immediately pre-existing future land use designation or the most appropriate designation and rezone the property to a consistent zoning district. Following the termination of the PUD Agreement, all further COUNTY permitting associated with the voided approval shall cease.

- 7.4 The above provisions shall not be interpreted to provide an exclusive remedy, and COUNTY may pursue any appropriate remedy at law or equity in the event OWNER or his successors in interest fail to abide by the provisions of this Agreement.

8. JURISDICTION

This Agreement shall be governed by the laws of the State of Florida, and any and all legal action instituted because of this Agreement shall be instituted in Martin County, Florida.

9. SUCCESSORS AND ASSIGNS

This Agreement shall be binding upon the parties hereto, their successors in interest, heirs, assigns and personal representatives.

10. NOTICE

Any notice, request, demand, consent, approval, or other communication required or permitted by this Agreement shall be given or made in writing and shall be served as elected by the party giving the notice by any of the following methods: (i) hand delivery to the other party; (ii) delivery by commercial overnight courier service; (iii) mailed by registered or certified mail (postage prepaid), return receipt requested; or (iv) mailed by regular U.S. mail. For purposes of notice, the addressees are as follows:

OWNER: Cove/Salerno Partners, LLC
3393 SW 42nd Ave., Suite 1
Palm City, FL 34990

with required copy to:

Lucido& Associates
701 SE Ocean Blvd.
Stuart, FL 34994

COUNTY: County Administrator
Martin County
2401 S.E. Monterey Road
Stuart, Florida 34996

with required copy to:

County Attorney
Martin County
2401 S.E. Monterey Road
Stuart, Florida 34996

Notice given in accordance with the provisions of this Section shall be deemed to be delivered and effective on the date of hand delivery; or on the second day after the date of the deposit with an overnight courier; or on the date upon which the return receipt is signed, or delivery is refused, or the notice is designated by the postal authorities as not delivered if mailed; or on the second business day after the date of mailing by regular U.S. mail. Either party may change its address for the purpose of this Section by written notice to the other party given in accordance with the provisions of this Section.

11. ENTIRE AGREEMENT

This Agreement incorporates and includes all prior and contemporaneous negotiations, correspondence, conversations, agreements, and understanding applicable to the matters contained herein, and the parties agree that there are no commitments, agreements, or understandings concerning the subject matter of this Agreement that are not contained in this

document. Accordingly, it is agreed that no deviation from the terms hereof shall be predicated upon any prior or contemporaneous representations or agreements, whether oral or written.

12. SEVERABILITY

If any term or provision of this Agreement, or the application thereof to any person or circumstance shall, to any extent, be held invalid or unenforceable for the remainder of this Agreement, then the application of such term or provision to persons or circumstances other than those as to which its held invalid or unenforceable shall not be affected, and every other term and provision of this Agreement shall be deemed valid and enforceable to the extent permitted by law.

13. STATUTORY REFERENCES

Any references to laws, ordinances, codes or other regulations shall include any future amendments to such laws, ordinances, codes or regulations.

IN WITNESS WHEREOF, the parties hereto have executed these presents on the dates indicated below. The date of this Agreement shall be the date on which this Agreement was approved by the Board of County Commissioners.

WITNESSES:

Name:_____

Name:_____

STATE OF _____
COUNTY OF _____

OWNER

COVE/SALERNO PARTNERS, LLC, a
Florida limited liability company

By:_____
James R. McNamara, Manager

3393 SW 42nd Ave., Suite 1
Palm City, FL 34990

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State aforesaid and in the County aforesaid to take acknowledgments, personally appeared JAMES R.

MCNAMARA, MANAGER of COVE/SALERNO PARTNERS, LLC, a Florida limited liability company, on behalf of the company, to me known to be the person described herein and who executed the foregoing instrument and acknowledged before me that he executed same.

WITNESS my hand and official seal in the County and State last aforesaid this _____ day of _____, 20____.

(NOTARIAL STAMP)

Notary Public
My commission expires:

ATTEST:

Carolyn Timmann
Clerk of the Circuit Court and Comptroller

(COMMISSION SEAL)

COUNTY
BOARD OF COUNTY COMMISSIONERS
MARTIN COUNTY, FLORIDA

By: _____
Harold E. Jenkins, II, Chairman

**APPROVED AS TO FORM AND
LEGAL SUFFICIENCY:**

Krista A. Storey
Senior Assistant County Attorney

EXHIBIT A

[LEGAL DESCRIPTION]

PARCEL 1:

TRACTS 2, 6 AND 7, BLOCK 43, ST. LUCIE INLET FARMS, ACCORDING TO THE MAP OR PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 98, PALM BEACH COUNTY, FLORIDA (NOW MARTIN) PUBLIC RECORDS, LESS RIGHT-OF-WAY FOR S.E. COVE ROAD.

PARCEL 2:

TRACTS 2 AND 7, BLOCK 44, ST. LUCIE INLET FARMS, ACCORDING TO THE MAP OR PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 98, PALM BEACH COUNTY, FLORIDA (NOW MARTIN) PUBLIC RECORDS, LESS RIGHT-OF-WAY FOR S.E. SALERNO ROAD.

LESS THE FOLLOWING:

BEING KNOWN AS A PORTION OF TRACT 2, BLOCK 44, "ST. LUCIE INLET FARMS SUBDIVISION" AS RECORDED IN PLAT BOOK 1, PAGE 98, PUBLIC RECORDS OF PALM BEACH, (NOW MARTIN) COUNTY, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID TRACT 2, ALSO BEING THE CENTERLINE OF A 30 FOOT WIDE PLATTED ROAD RIGHT-OF-WAY; THENCE RUN SOUTH 23°16'57" EAST ALONG THE WEST LINE OF SAID TRACT 2 A DISTANCE OF 40 FEET TO THE POINT AND PLACE OF BEGINNING; THENCE RUN NORTH 66°09'54" EAST ALONG THE NEW RIGHT-OF-WAY OF WAY LINE OF SALERNO ROAD AND A LINE BEING SOUTH AND PARALLEL TO THE ORIGINAL CENTER LINE AND NORTH LINE OF SAID TRACT 2 A DISTANCE OF 237.81 FEET TO A POINT; THENCE RUN SOUTH 23°16'57" EAST A DISTANCE OF 120.01 FEET TO A POINT; THENCE RUN SOUTH 66°09'54" WEST A DISTANCE OF 237.81 FEET TO A POINT ON THE WEST LINE OF SAID TRACT 2; THENCE RUN NORTH 23°16'57" WEST ALONG SAID WEST LINE A DISTANCE OF 120.01 FEET TO THE POINT AND PLACE OF BEGINNING.
CONTAINING: 28,537 S/F, 0.66 ACRES +/-

INCLUDED AREA = 2,052,500 SQUARE FEET, 47.12 ACRES +/-.

EXHIBIT B
OWNERSHIP CERTIFICATE

I, Robert A. Burson, a member of the Florida Bar, hereby certify that the record title to the property described in Exhibit A to that Residential Planned Unit Development Zoning Agreement dated the _____ day of _____, 20____, by and between Cove/Salerno Partners, LLC, a Florida limited liability company and Martin County, is in the ownership of Cove/Salerno Partners, LLC, a Florida limited liability company.

Dated this ____ day of _____, 20____.

By: _____
Robert A. Burson, Esq.
Robert A. Burson, P.A.
900 East Ocean Boulevard
Stuart, Florida 34994
Florida Bar No.:

EXHIBIT C

UNIFIED CONTROL

The undersigned, being the OWNER of the property described in Exhibit A, to the Residential Planned Unit Development Zoning Agreement (PUD(r) Agreement), dated the _____ day of _____, 20____, between COVE/SALERNO PARTNERS, LLC, a Florida limited liability company and MARTIN COUNTY, does hereby covenant and agree that: (i) the property described in Exhibit A shall be held under single ownership, and shall not be transferred, conveyed, sold or divided in any unit other than in its entirety; provided, however that individual subdivision lots or fully constructed condominium units, if any, may be conveyed to individual purchasers in accordance with and subject to the terms and conditions of the PUD(r) Agreement.

In addition, the following conveyances shall be permitted:

1. If the PUD(r) is designed and planned to be developed in phases or portions of phases, and each phase or portion of a phase complies with the requirements contained within the PUD(r) Agreement, then each phase or portion of phase may be conveyed separately upon final site plan and plat approval of that phase or portion of a phase.
2. Common elements, common open areas and developed recreation areas, if any, may be conveyed to a property owners' association or other legal entity so long as such conveyance shall be subject to the express restriction that the subject property will never be used for any purpose other than as common elements, common open areas or developed recreation areas as applicable.
3. Other portions of the subject property may be conveyed and used or maintained by governmental, environmental, charitable or other organizations or agencies for such purposes as the Board of County Commissioners of Martin County, Florida may deem appropriate.

Nothing herein contained shall limit, in any manner, the undersigned, or their successors or assigns, to mortgage or encumber the property or any part thereof.

The undersigned further agrees that the conditions, restrictions and limitations contained herein shall be deemed a covenant running with the land and shall remain in full force and effect and be binding on the undersigned, its successors and assigns, until such time as the same may be released in writing by the Board of County Commissioners of Martin County, Florida.

The undersigned further agrees that this instrument may be recorded in the public records of Martin County, Florida.

IN WITNESS WHEREOF, the parties hereto have executed these presents on the dates indicated below.

WITNESSES:

Name: _____

Name: _____

OWNER

COVE/SALERNO PARTNERS, LLC, a
Florida limited liability company

By: _____
James R. McNamara, Manager

3393 SW 42nd Ave., Suite 1
Palm City, FL 34990

STATE OF _____
COUNTY OF _____

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State aforesaid and in the County aforesaid to take acknowledgments, personally appeared JAMES R. MCNAMARA, MANAGER of COVE/SALERNO PARTNERS, LLC, a Florida limited liability company, on behalf of the company, to me known to be the person described herein and who executed the foregoing instrument and acknowledged before me that he executed same.

WITNESS my hand and official seal in the County and State last aforesaid this _____
day of _____, 20____.

(NOTARIAL STAMP)

Notary Public
My commission expires:

EXHIBIT D

MASTER SITE PLAN

Master site plan as approved by Martin County Board of County Commissioners to be attached as Exhibit D.

EXHIBIT E

TIMETABLE FOR DEVELOPMENT

- A. This development shall be constructed in accordance with this timetable of development. This development shall be constructed in phases in accordance with the Phasing Plan, attached as Exhibit E-1.
- B. 1. The core infrastructure improvements, consisting of the required stormwater management system, the appropriate NPDES components, stabilized roadways, and adequate fire protection must be completed before issuance of building permits. All required improvements, including but not limited to roads, sidewalks, stormwater and drainage facilities, utilities, landscaping, recreational amenities and those identified on the final site plan for the applicable phase, must be substantially completed, as determined by the County Engineer, prior to the issuance of any certificate of occupancy and prior to the timetable set forth below.
2. Utilities in any phase shall be completed and turned over to Martin County prior to the issuance of a certificate of occupancy for a structure in a subsequent phase which relies upon the water and wastewater utilities of the prior phase.
3. Each phase of the development shall be sequentially completed and shall be self-supportive prior to commencing construction of the next phase.
- C. The phases to be constructed and the time period within which final site plan approval of each phase must be obtained and completed are as follows:

	Final Site Plan and/or Plat Approval (on or before)	Completion (on or before)	Elements of Phase to be constructed
Phase 1	December 31, 2022	December 31, 2024	79 single family units (lots 1-79); Salerno Road entrance including ROW donation and turn lanes, payment of sidewalk fee from project limits to Kanner Highway, landscape buffers, Cove Road ROW donation and emergency access; lakes 1-4, common area parking, walking paths and sidewalks, required landscaping and supporting

infrastructure improvements as shown or identified on Exhibit E-1.

	Final Site Plan and/or Plat Approval (on or before)	Completion (on or before)	Elements of Phase to be constructed
Phase 2	December 31, 2025	December 31, 2027	88 fee simple townhome units; Cove Road entrance including turn lanes and landscape buffers; Lake 5, common area walking paths, parking and sidewalks, pool and cabana; wetland buffer preserve area restoration, required landscaping and supporting infrastructure improvements as shown or identified on Exhibit E-1.

EXHIBIT E-1
PHASING PLAN

Phasing plan as approved by Martin County Board of County Commissioners to be attached as Exhibit E-1.

EXHIBIT F

SPECIAL CONDITIONS

1. ADDITIONAL REQUIREMENTS

The Showcase PUD shall comply with all requirements of the Martin County Comprehensive Growth Management Plan. Unless specifically provided for within this PUD Agreement or set forth on the master site plan, the Showcase PUD shall comply with all requirements of the General Ordinances and Land Development Regulations of the Martin County Code.

2. DRAINAGE/STORMWATER MANAGEMENT

- A. It shall be the OWNER'S sole responsibility to obtain the necessary drainage/stormwater management permits from the South Florida Water Management District (SFWMD). In no event shall COUNTY bear the responsibility for aiding the OWNER in obtaining permits from the SFWMD or funding the improvements necessary to develop the Showcase PUD.
- B. In order to ensure that the PUD's drainage/stormwater management system functions as designed and permitted in perpetuity, OWNER shall maintain the PUD's drainage/stormwater management system according to the Stormwater Management System Maintenance Plan to be submitted with final site plan application. The Maintenance Plan will provide that the OWNER shall be responsible for performing the specific inspections and maintenance operations on the stormwater management system on-site and off-site as approved by the Board of County Commissioners at final site plan approval in order to ensure it functions as intended and as approved by COUNTY. Neither COUNTY nor the SFWMD shall have any responsibility in maintaining the system.

3. FIRE PROTECTION

All Structures that are in excess of 5,000 square feet or two stories or greater in height shall be provided with a sprinkler system installed in accordance with NFPA 13D, Standard for the installation of Sprinkler System in One and Two Family Dwellings and Manufactured Homes. Compliance with all other provisions of the National Fire Protection Association is required. Specifically, stabilized roads and hydrant installations shall be completed before issuance of building permits pursuant to NFPA 241. All structures constructed under this development order shall comply with this condition.

4. HAULING OF FILL

The OWNER agrees not to haul any fill on or off of the site of the Showcase PUD. The OWNER shall also comply with all COUNTY excavation and fill regulations. Lake littoral

zones and upland buffers shall be maintained in accordance with a Preserve Area Management Plan approved by COUNTY.

5. IRRIGATION

- A. Effluent Irrigation. The OWNER agrees to accept wastewater effluent for irrigation, when available in sufficient quality and quantity in accordance with the South Florida Water Management District and Department of Environmental Protection rules, at such rates and charges as may then be charged by the utility. It shall be the OWNER's sole responsibility to obtain the necessary permits and extend the reclaimed water main to the site for connection of the irrigation system. Owner shall design the irrigation system within this project to accommodate spray irrigation with wastewater effluent and provide adequate area for storage of such effluent.
- B. Irrigation water for the entire PUD will be supplied by individual wells permitted by South Florida Water Management District and Martin County in conjunction with final site plan approval of each phase. If the OWNER desires to use ground water, then a ground water model for the entire PUD must be developed along with the required applications and permits.

6. PRESERVE AREAS

Preserve Areas shall be maintained in accordance with an approved Preserve Area Management Plan recorded in the public records of Martin County, Florida in conjunction with final site plan approval of each phase.

7. SCHOOL IMPACT

The OWNER shall obtain a letter of "No Objection" from the Martin County School Board in conjunction with final site plan approval of each phase.

8. SOIL EROSION AND SEDIMENTATION

Site clearing and vegetation removal shall be phased in accordance with the approved final site plan. Construction practices such as seeding, wetting, and mulching which minimize airborne dust and particulate emission generated by construction activity shall be undertaken within thirty (30) days of completion of clearing work. The slopes of constructed lakes from the top of the bank to the control water elevation (landward edge of littoral zone) shall be immediately stabilized and/or sodded to the satisfaction of the Public Works Department upon completion of the lake construction.

9. TEMPORARY CONSTRUCTION OFFICE

The OWNER may establish and maintain on the property a temporary construction office in a location approved by the Growth Management Department Director during the period that the property is being developed and until three (3) months following the issuance of the last certificate of occupancy for a unit. A bond for the removal of the construction office shall be supplied to the COUNTY.

10. TEMPORARY SALES OFFICE

The OWNER may establish and maintain on the property a temporary sales office in a location approved by the Growth Management Department Director during the period that the property is being developed and until three (3) months following the issuance of the last certificate of occupancy for a unit. A bond for the removal of the sales office shall be supplied to the COUNTY.

11. TIME SHARING OR INTERVAL OWNERSHIP PROHIBITED

The units to be constructed within the Showcase PUD shall not be sold nor shall title be conveyed or transferred on the basis of time sharing or interval ownership.

12. PUD BENEFITS

- A. The PUD design maximizes wildlife utilization by providing perimeter lakes along the east and west boundary that consolidate the minimum required lake littoral zone and upland transition plantings with a “required” Type 3, 30’ wide, native landscape buffer on the west side (next to existing commercial land use), and a “voluntary” Type 3, 30’ wide native landscape buffer on the east side. The design results in a minimum 70’ wide wildlife corridor along the lake shoreline, which includes the 30’ native landscape buffer, a minimum 20’ wide lake upland transition zone and a minimum 20’ wide lake littoral zone.
- B. The PUD design provides expanded common areas adjacent to the lakes and a parking tract with 11 spaces that allow residents convenient access to common areas and walking paths around the lake area that connect to the internal sidewalks along the private streets.
- C. The PUD design provides private recreation amenities for the residents and expanded buffers adjacent to the Salerno and Cove Road frontage.
- D. The main boulevard between Salerno Road and Cove Road has been designed with sidewalks on both sides and expanded landscape easements for street trees that enhance pedestrian circulation and minimize conflicts with vehicular traffic and utilities.
- E. A sidewalk fee of \$25 per linear foot will be paid by the Developer/Owner for the off-site sidewalk connection along SE Salerno Road between the project limits and South Kanner Highway. The required fee will be paid to Martin County within 60 days of the first final site plan approval.

13. USES AND DEVELOPMENT STANDARDS

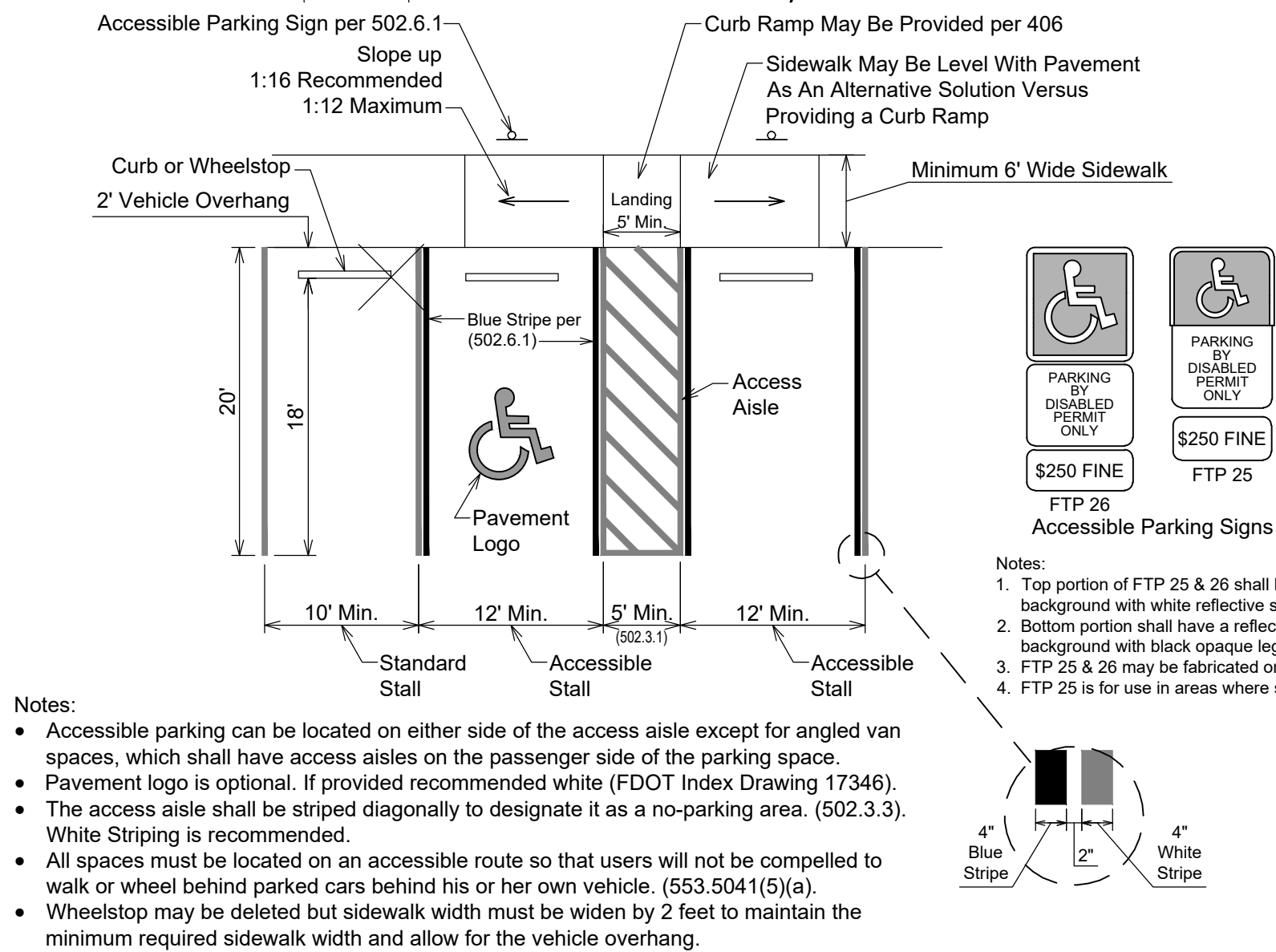
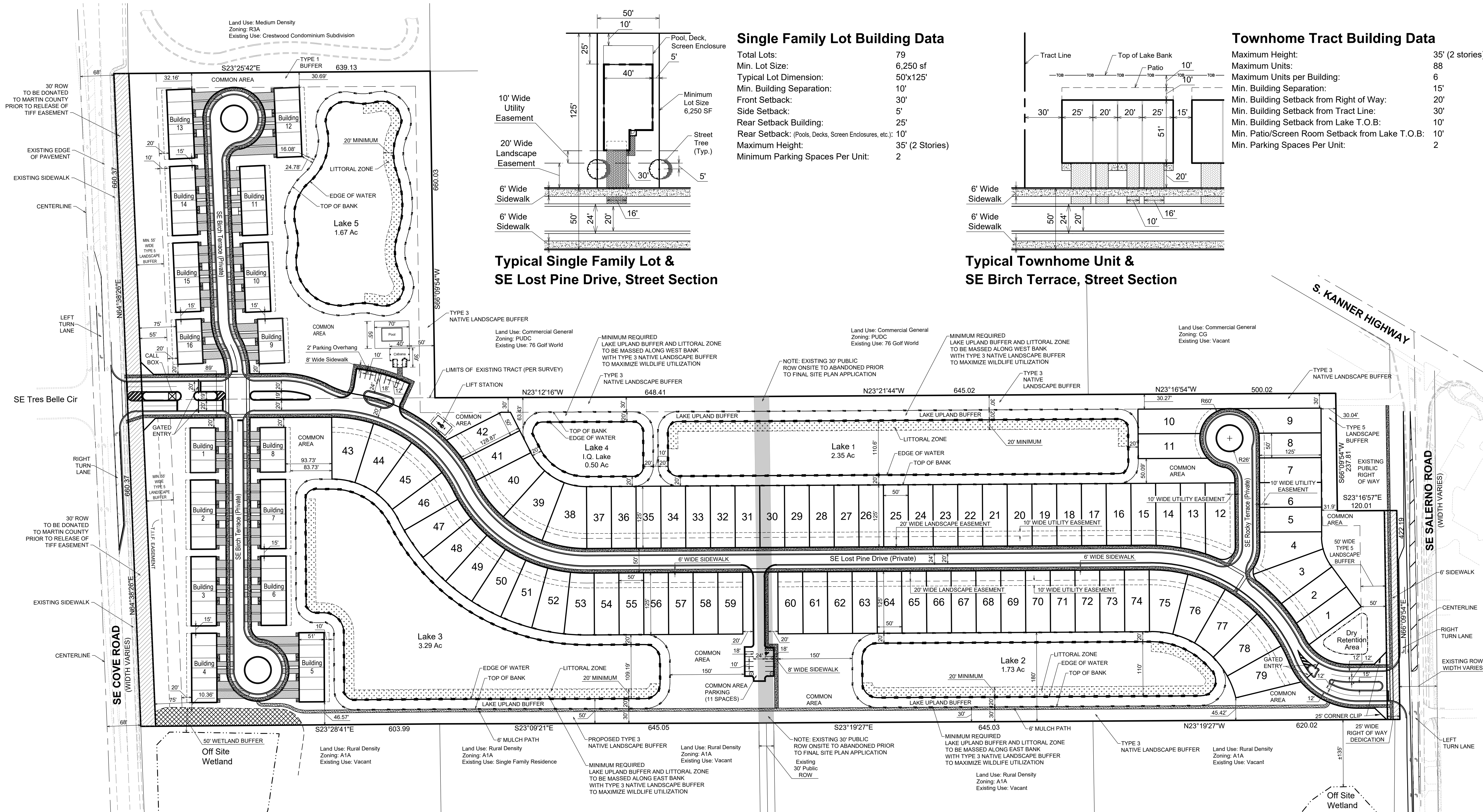
Except as provided for within this PUD Agreement or as set forth on the master site plan, the requirements of Article 3, Land Development Regulations, Martin County Code, and specifically the RS-5 zoning district shall apply to the development of the Showcase PUD, which has a Low Density Land Use Designation.

14. WATER/WASTEWATER

Potable water and wastewater service for this project will be provided by way of a service agreement with the Martin County Regional Utilities. OWNER shall provide an executed copy of the agreement for each phase for such service within 60 days of final site plan approval of that phase.

15. 30' ROW ABANDONMENT

The OWNER shall submit an application to abandon the existing 30' right-of-way (ROW) shown on the Master Site Plan (Exhibit "D") which shall include the donation of ROW on Salerno Road and Cove Road as shown on Exhibit "D", prior to or in conjunction with final site plan application for Phase 1.



Standard & Accessible Parking Space Detail
Not to Scale

Site Data Overall

Total Site Area:
Cove Road Right of Way (ROW) Donation:
Salerno Road ROW Donation:
30' Public ROW Abandonment:
Site Area (Adjusted for Public ROW):

Total Dwelling Units:
Single Family Homes:
Townhomes:

Gross Density (167 units / 47.12 ac):

Future Land Use:
Zoning:

Impervious Area:

Single Family Lots (80%)
Townhomes, Driveways and Patios
Private Right of Way
Common Area (Parking, Access, Cabana & Pool)
Lake

Pervious Area:

Single Family Lots (20%)
Private Road Right of Way
Dry Retention Area
Common Area
Lake Bank
Wetland Buffer

47.12 ac.
- 0.91 ac.
- 0.24 ac.
+ 0.45 ac.
46.42 ac.

167
79
88 (12 buildings)

3.5 units per acre

Low Density Residential
PUD

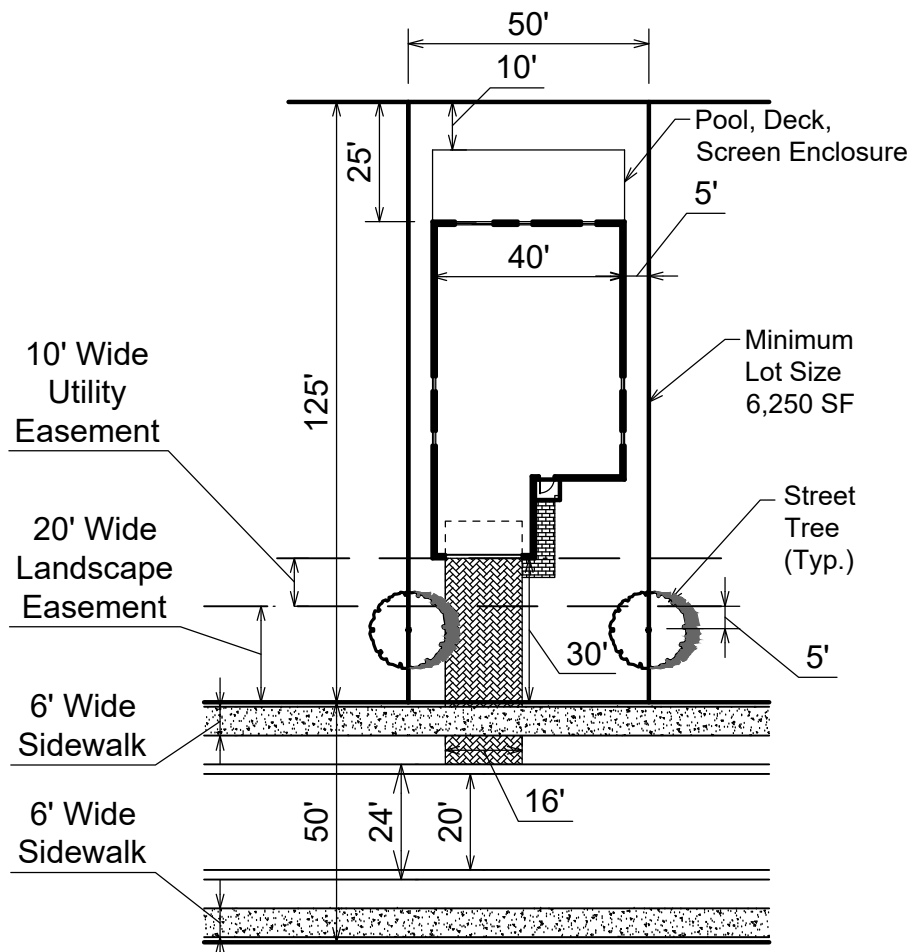
1,211,839 sf. **27.82 ac.** **59.9%**
425,269 sf. 9.76 ac. 21.0%
158,004 sf. 3.63 ac. 7.8%
191,199 sf. 4.39 ac. 9.5%
21,780 sf. 0.50 ac. 1.1%
415,587 sf. 9.54 ac. 20.6%

810,216 sf. **18.60 ac.** **40.1%**
106,317 sf. 2.44 ac. 5.2%
61,875 sf. 1.42 ac. 3.1%
4,994 sf. 0.11 ac. 0.3%
473,598 sf. 10.88 ac. 23.3%
153,456 sf. 3.52 ac. 7.6%
9,976 sf. 0.23 ac. 0.5%

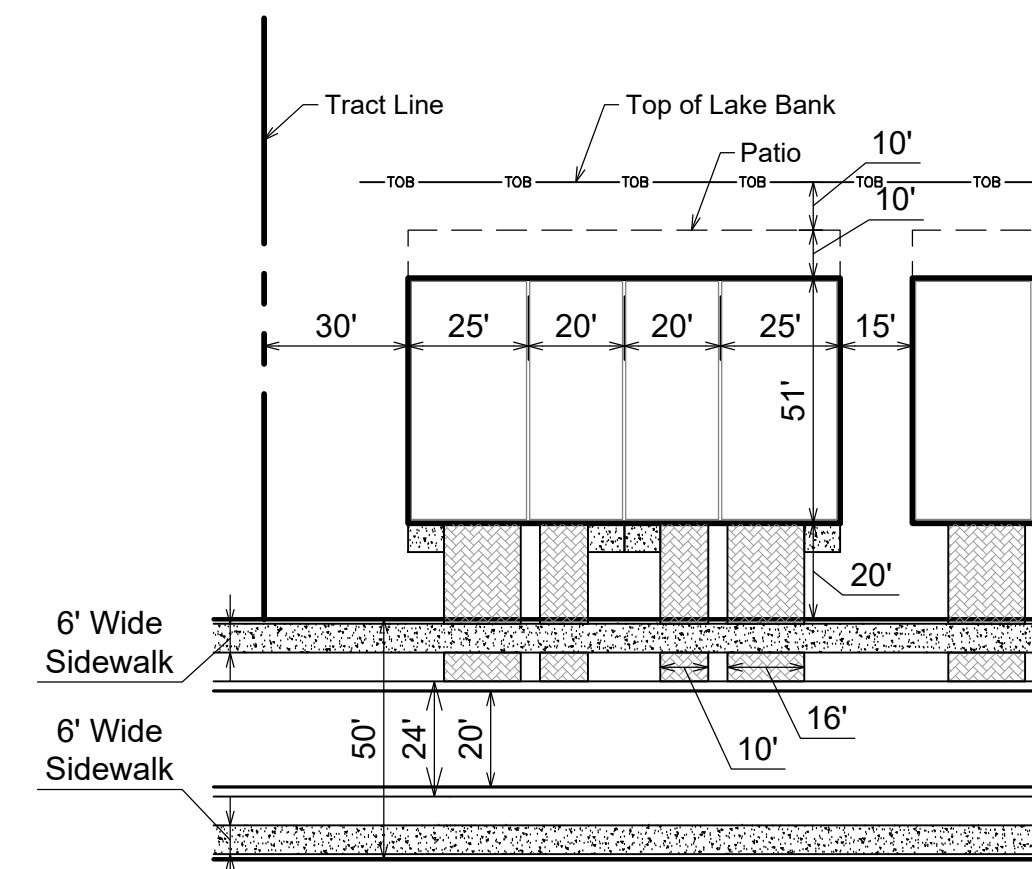
Single Family Lot Building Data

Total Lots: 79
Min. Lot Size: 6,250 sf
Typical Lot Dimension: 50'x125'
Min. Building Separation: 10'
Front Setback: 30'
Side Setback: 5'
Rear Setback Building: 25'
Rear Setback: (Pools, Decks, Screen Enclosures, etc.): 10'
Maximum Height: 35' (2 Stories)
Minimum Parking Spaces Per Unit: 2

Typical Single Family Lot & SE Lost Pine Drive, Street Section



Typical Townhome Unit & SE Birch Terrace, Street Section



Townhome Tract Building Data

Maximum Height: 35' (2 stories)
Maximum Units: 88
Maximum Units per Building: 6
Min. Building Separation: 15'
Min. Building Setback from Right of Way: 20'
Min. Building Setback from Tract Line: 30'
Min. Building Setback from Lake T.O.B.: 10'
Min. Patio/Screen Room Setback from Lake T.O.B.: 10'
Min. Parking Spaces Per Unit: 2

Open Space Data

Total Site Area: 46.42 acres
Required Open Space: 23.21 acres (50%)

Total Upland Area: 46.42 acres
Required Upland Open Space: 18.57 acres (40.0%)
Provided Upland Open Space: 18.60 acres (40.1%)*

Single Family Lots:
Private Road ROW:
Dry Retention Area:
Common Area:
Lake Banks:
Wetland Buffer:

Provided Lake Open Space: 9.54 acres*

Total Open Space Provided: 28.14 acres (60.6%)*

*As per Goal 4.3, MCCGMP, wetlands and landlocked water bodies may be used in calculating open space as long as a minimum of 40 percent of the upland property consists of open space.

General Notes:

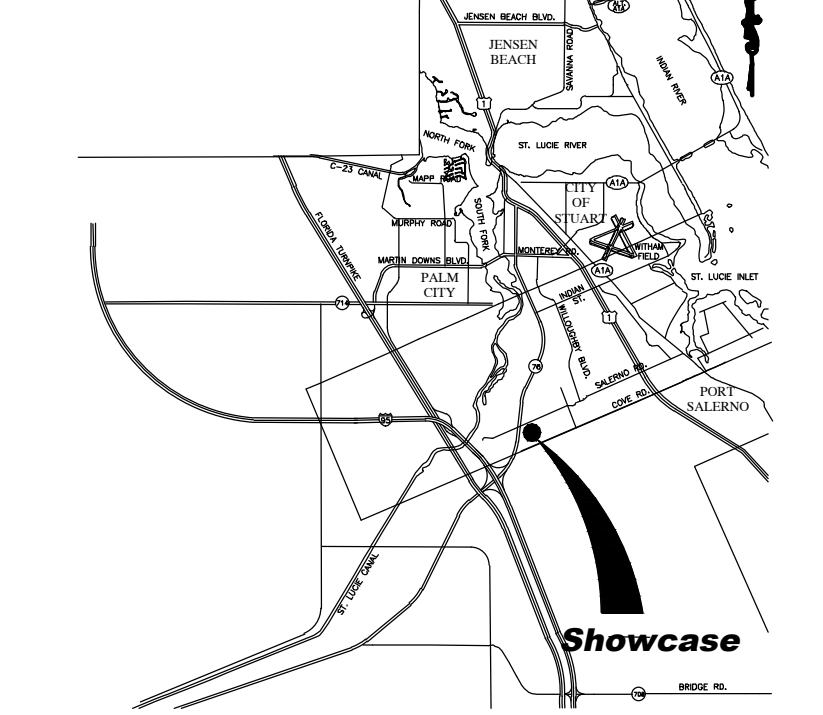
- Final landscape plans for the lake littoral zones, lake upland buffers, recreation area and other required landscape areas shall be submitted in conjunction with Final Site Plan application.
- During construction activities, existing native vegetation shall be retained to act as buffers between adjacent land uses, and to minimize nuisance dust and noise. Barricades shall be used on site to preserve the vegetation to be retained.
- The project shall be constructed in 2 phases, (see phasing plan).
- Preserve areas may not be altered except in compliance with the preserve area management plan approved by Martin County.
- Proposed project signs shall be located in conjunction with final site plan application.
- All exotic plant species shall be removed and all required landscaping for an affected phase shall be installed prior to the issuance of a Certificate of Occupancy.
- Proposed lakes within 200' of wetlands must demonstrate no potential wetland impacts or be provided with an impermeable barrier approved by the South Florida Water Management District and the Martin County Engineer.
- Wetland buffer preserve areas and upland preserves shall be protected from encroachment, construction and other activities by providing a minimum 10' setback from all proposed structures. Excavation and fill activities must maintain a minimum five (5) feet setback from preserve areas. The maximum slope of fill adjacent to the setback shall not exceed one (1) foot vertical to four (4) feet horizontal.

Legend

- Right of Way to be Donated
- Right of Way to be Abandoned
- Littoral Zone



Key / Location:
NOT TO SCALE



Project Team:

Client/Property Owner
Cove/Salerno Partners, LLC
3333 SW 42nd Ave. Suite 1
Palm City, FL 34980

Land Planner / Landscape Architect
Lucido & Associates
701 E Ocean Blvd.
Stuart, FL 34994

Engineer
Melissa Corbett
The Micor Group
10975 SE Federal Highway
Hobe Sound, FL 33455

Surveyor
Stephen Brown
619 E 5th Street
Stuart, FL 34994

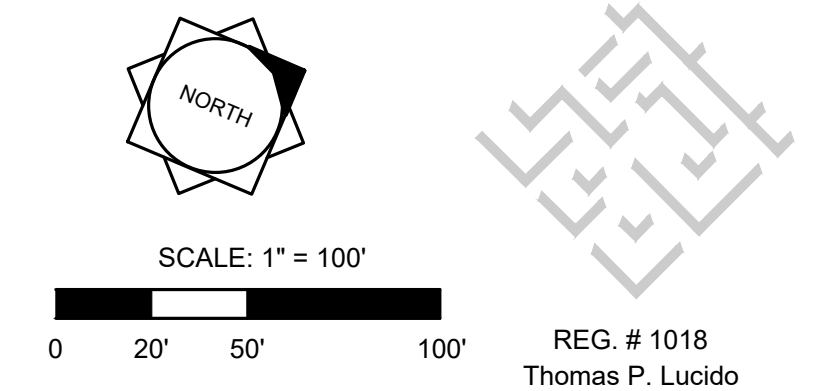
Traffic Engineer
Susan O'Rourke
O'Rourke Engineering & Planning
669 SE Federal Highway, Suite 402
Stuart, FL 34994

Showcase PUD

Master Site Plan

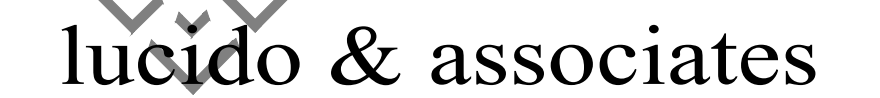
Martin County, Florida

Date	By	Description
02.25.19	SAW	Initial Submittal
09.19.19	SLS	1st Resubmittal
02.04.20	SLS	2nd Resubmittal



Designer	S.L.S.	Sheet
Manager	M.C.	
Project Number	18-695	
Municipal Number	---	
Computer File	18-695 Showcase PUD - Master Site Plan.dwg	

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Key / Location:
NOT TO SCALE



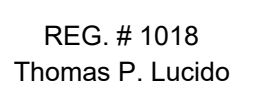
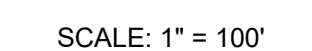
Traffic Engineer
Susan O'Rourke
O'Rourke Engineering & Planning
669 SE Federal Highway, Suite 402
Stuart, FL 34994

Showcase PUD

Phasing Plan

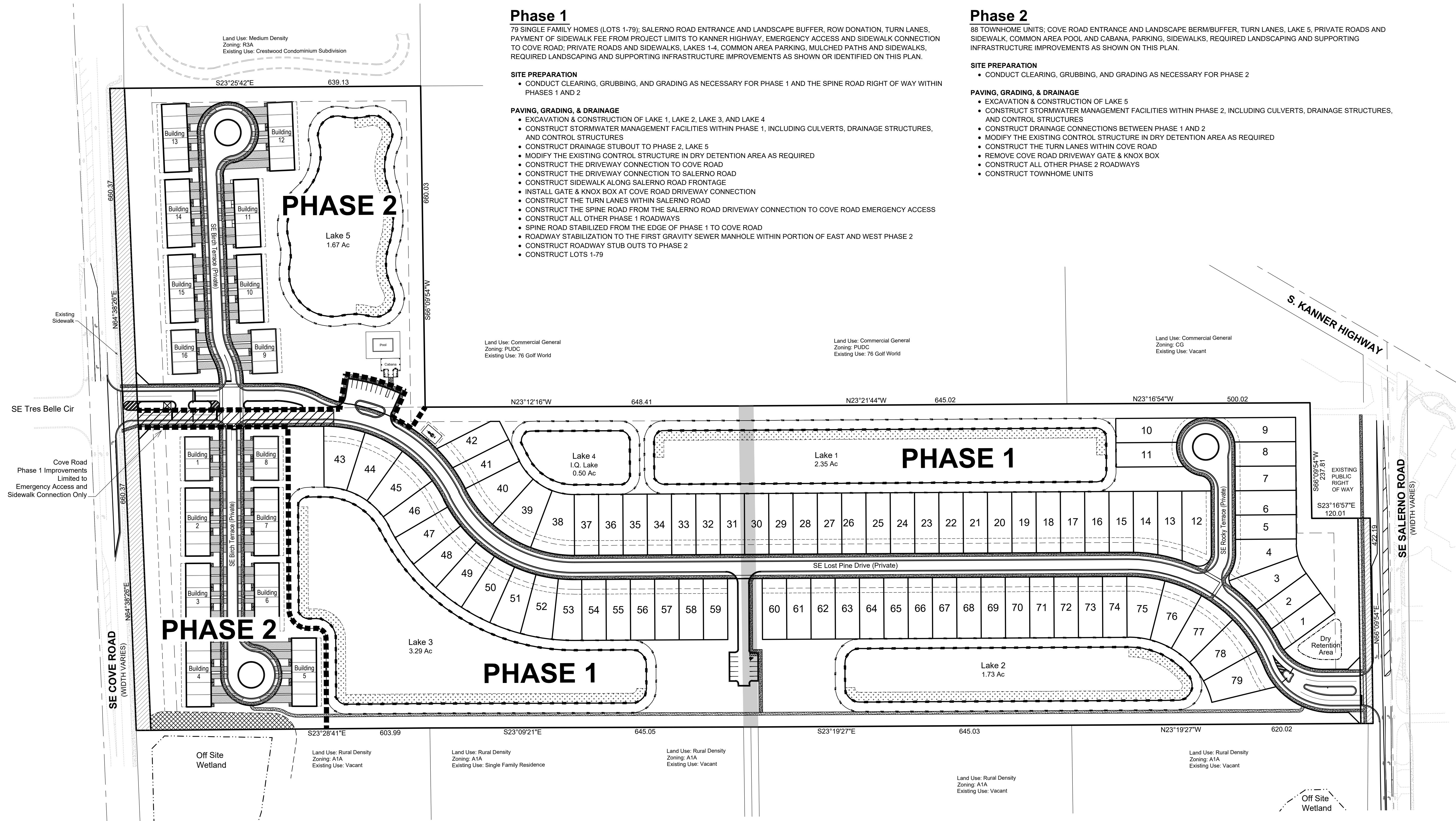
Martin County, Florida

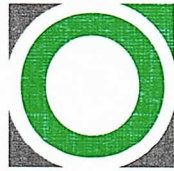
Date	By	Description
02.25.19	SAW	Initial Submittal
09.19.19	SLS	1st Resubmittal
02.04.20	SLS	2nd Resubmittal



Designer	S.L.S.	Sheet
Manager	M.C.	10
Project Number	18-895	
Municipal Number	---	
Computer File	18-895 Showcase PUD - Master Site Plan.dwg	

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O'ROURKE
ENGINEERING & PLANNING

TRAFFIC ANALYSIS

FOR

SHOWCASE PUD

Prepared for:


**Mr. Jim McNamara
Cove/Salerno Partners, LLC
12825 SE Suzanne Drive
Hobe Sound, FL 33455**

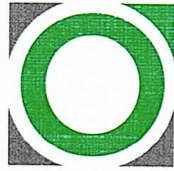
Prepared by:

**O'Rourke Engineering & Planning
969 SE Federal Highway, Suite 402
Stuart, FL 34994
(772)781-7918**

**February 4, 2019
Revised May 21, 2019
Revised August 5, 2019
Revised February 4, 2020**

MR19012.0

Prepared by: O'Rourke Engineering & Planning Certificate of Authorization: #26869 969 SE Federal Highway, Suite 402 Stuart, Florida 34994 772-781-7918	Professional Engineer  Susan E. O'Rourke, P.E. Date signed and sealed: 2/4/20 License #: 42684
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O'ROURKE
ENGINEERING & PLANNING

February 4, 2019

Mr. Jim McNamara
Cove/Salerno Partners, LLC
12825 SE Suzanne Drive
Hobe Sound, FL 33455

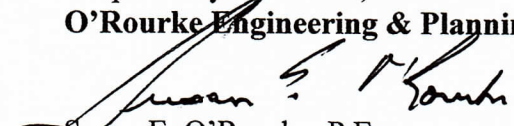
Re: Showcase PUD

Dear Mr. McNamara:

O'Rourke Engineering & Planning has completed the analysis of the proposed 47.12 acres of development to be located south of Salerno Road just east of Kanner Highway in Martin County, Florida. The steps in the analysis and the ensuing results are presented herein.

It has been a pleasure working with you. If you have any questions or comments, please give me a call.

Respectfully submitted,
O'Rourke Engineering & Planning



Susan E. O'Rourke, P.E.
Registered Civil Engineer - Traffic

C6 - Showcase Concurrency Report – 1.13.20

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INTRODUCTION

O'Rourke Engineering & Planning was retained to prepare a traffic analysis for the proposed 47.12 acres of Residential development to be located south of Salerno Road, north of Cove Road, and east of Kanner Highway in Martin County, Florida. The project will have access to Salerno Road and Cove Road via 2 full-access driveways.

Appendix A includes the site plan for the project.

The purpose of this report is to determine the project's impact on the surrounding roadway system. This report follows the procedures outlined in the County Ordinance Article 5.

In order to make the determination that the project complies with County Concurrency Guidelines, the following analytical steps were taken:

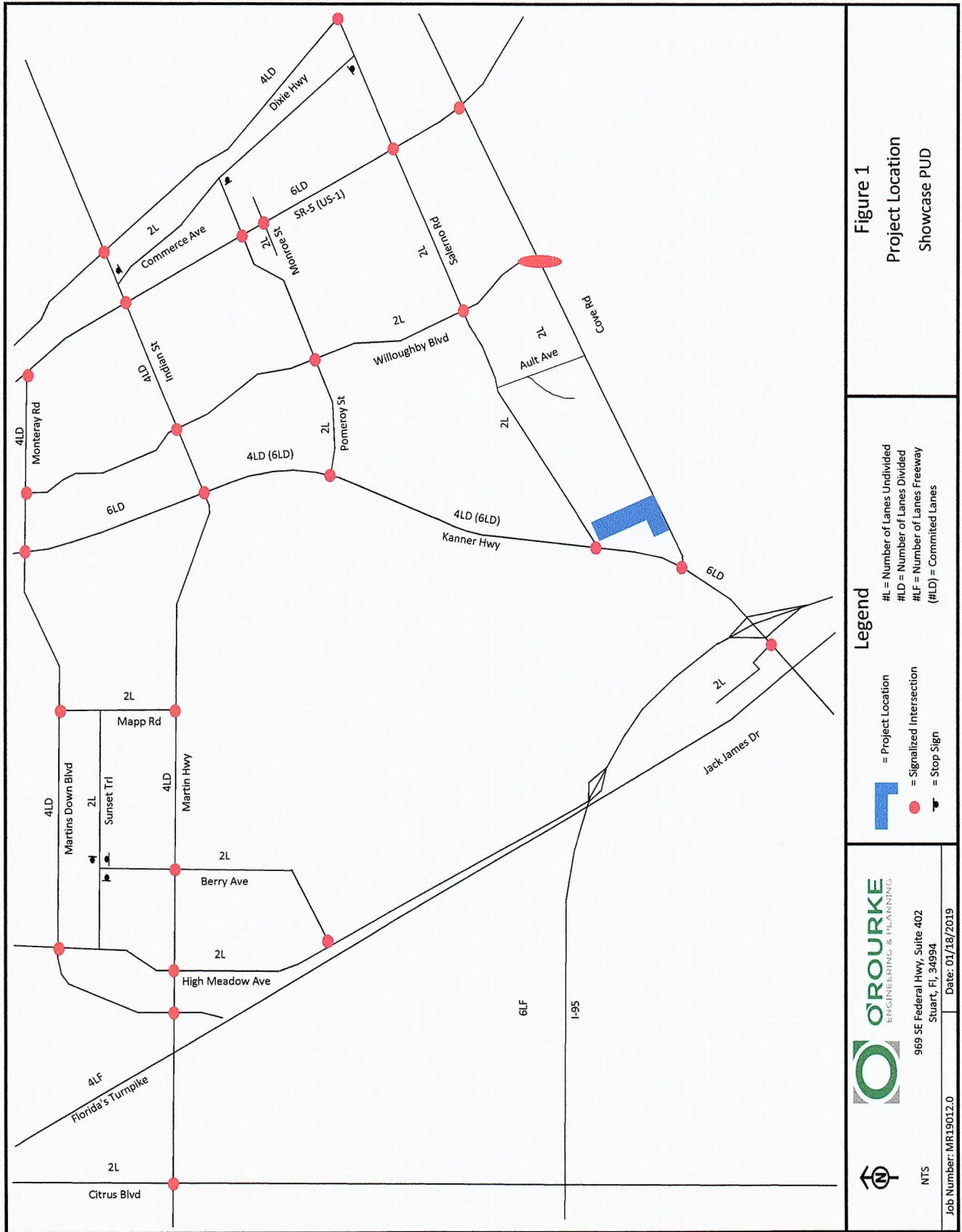
- ◆summary of the project,
- ◆summary of existing lane geometrics,
- ◆summary of maximum allowable service volumes,
- ◆assessment of project traffic,
- ◆determination of study area,
- ◆summary of cumulative traffic volumes,
- ◆comparison of volumes to allowable levels of service

Each of these steps is outlined herein.

PROJECT DESCRIPTION

The proposed 47.12 acres will be a Residential development consisting of 79 Single-Family dwelling units and 88 Multi-Family dwelling units. The project buildout year is 2027. The project will build in phases. Phase 1 will consist of 79 units and Phase 2 will consist of 88 units. Since no final site plans are submitted at this time, only build out is shown in this study. The project location as well as the roadway characteristics and traffic control are shown in **Figure 1**.

Appendix A also includes the local transit, bicycle, and pedestrian features for the surrounding area.



ROADWAY CONDITIONS

The study area is defined as the roadways upon which the project has an impact of 2% of the level of service capacity of the roadway or any impact to an interim level of service or de minimis roadway. Once the project traffic was assigned, the study area was refined based on the impact percentages.

The study area roadways were defined in terms of existing lane geometrics and existing traffic volumes.

Existing Lane Geometrics

The study area was reviewed to determine the existing number and type of lanes and the traffic control along the roadway. Each roadway is described below.

- SE Salerno Road is a two-lane collector roadway with east/west alignment.
- SE Willoughby Boulevard is a two-lane arterial with a north/south alignment.
- SR-76 (Kanner Highway) is a major arterial with a generally north/south alignment. It is a six-lane divided road from I-95 to US-1.
- US-1 is a six-lane divided arterial with a north/south alignment.
- I-95 is a six-lane divided freeway with a north/south alignment.
- Cove Road is a two-lane major arterial with a primarily east/west alignment. It is included in the 2018/19 Martin MPO Transportation Improvement Program as Priority #3 to be widened to a four-lane divided road with PD&E scheduled for 2021/22 and 2022/23.

PROJECT TRAFFIC

To estimate traffic generated by the Showcase PUD project, the ITE Trip Generation, 10th Edition Single-Family Detached Housing (ITE Code 210) and Multi-Family (Low Rise) (ITE Code 240) trip rates were applied for the 79 single-family dwelling units and 88 multi-family dwelling units to obtain the daily and the peak hour generation. The trip generation for the proposed project is shown in **Table 1**. The project will generate 1,461 Daily trips, 103 AM peak hour trips with 25 entering and 78 exiting, and 134 PM peak hour trips with 84 entering and 50 exiting the project. The highest movement is the PM inbound movement with 84 inbound trips. The project will have access to both Salerno Road and Cove Road.

Table 1 - Trip Generation

Table 1a: Daily

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Net New Trips		
					In	Out	In	Out	Total
Single Family Detached	210	79	DU	$\text{Ln}(T) = 0.92\text{Ln}(X) + 2.71$	50%	50%	419	418	837
Multifamily Housing (Low-Rise)	220	88	DU	$T = 7.56(X) - 40.86$	50%	50%	312	312	624
TOTALS							731	730	1,461

Source: ITE 10th Edition Trip Generation Rates

Table 1b: AM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Net New Trips		
					In	Out	In	Out	Total
Single Family Detached	210	79	DU	$T = 0.71(X) + 4.80$	25%	75%	15	46	61
Multifamily Housing (Low-Rise)	220	88	DU	$\text{Ln}(T) = 0.95\text{Ln}(X) - 0.51$	23%	77%	10	32	42
TOTALS							25	78	103

Source: ITE 10th Edition Trip Generation Rates

Table 1c: PM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Net New Trips		
					In	Out	In	Out	Total
Single Family Detached	210	79	DU	$\text{Ln}(T) = 0.96\text{Ln}(X) + 0.20$	63%	37%	51	30	81
Multifamily Housing (Low-Rise)	220	88	DU	$\text{Ln}(T) = 0.89\text{Ln}(X) - 0.02$	63%	37%	33	20	53
TOTALS							84	50	134

Source: ITE 10th Edition Trip Generation Rates

PROJECT DISTRIBUTION / ASSIGNMENT/ IMPACT

The project traffic was distributed by general geographic direction and then assigned to the roadway network.

Assignment -- This general distribution led to an assignment of trips based on the anticipated ultimate destinations and the roadway paths used to reach those destinations. The project assignment is shown in **Figure 2**.

Project Impact -- **Table 2** summarizes the project impact as it relates to the percent of the service volume capacity or maximum allowable service volume for the project at Project Buildout. As shown, the only road with an impact of 2% or greater of capacity is Cove Road.

FUTURE TRAFFIC/ CONCURRENCY REVIEW

Martin County maintains traffic spreadsheets that summarize the existing traffic volumes on the major roadway network. The 2018 volumes were taken from the Martin County 2018 Roadway Level of Service Inventory Report and increased by the growth rate also provided in the report. The project traffic was then added to estimate the 2027 future Total Traffic Volumes for buildout.

Appendix B includes the Martin County 2018 Roadway Level of Service Inventory Report.

Table 3 shows the link analysis. As shown, Cove Road operates above the theoretical capacity from SR-76 (Kanner Highway) to Willoughby Boulevard. A detailed analysis was performed using Artplan, the detailed analysis shows this segment will operate at an acceptable LOS at project buildout.

Appendix C includes the Artplan Analysis.

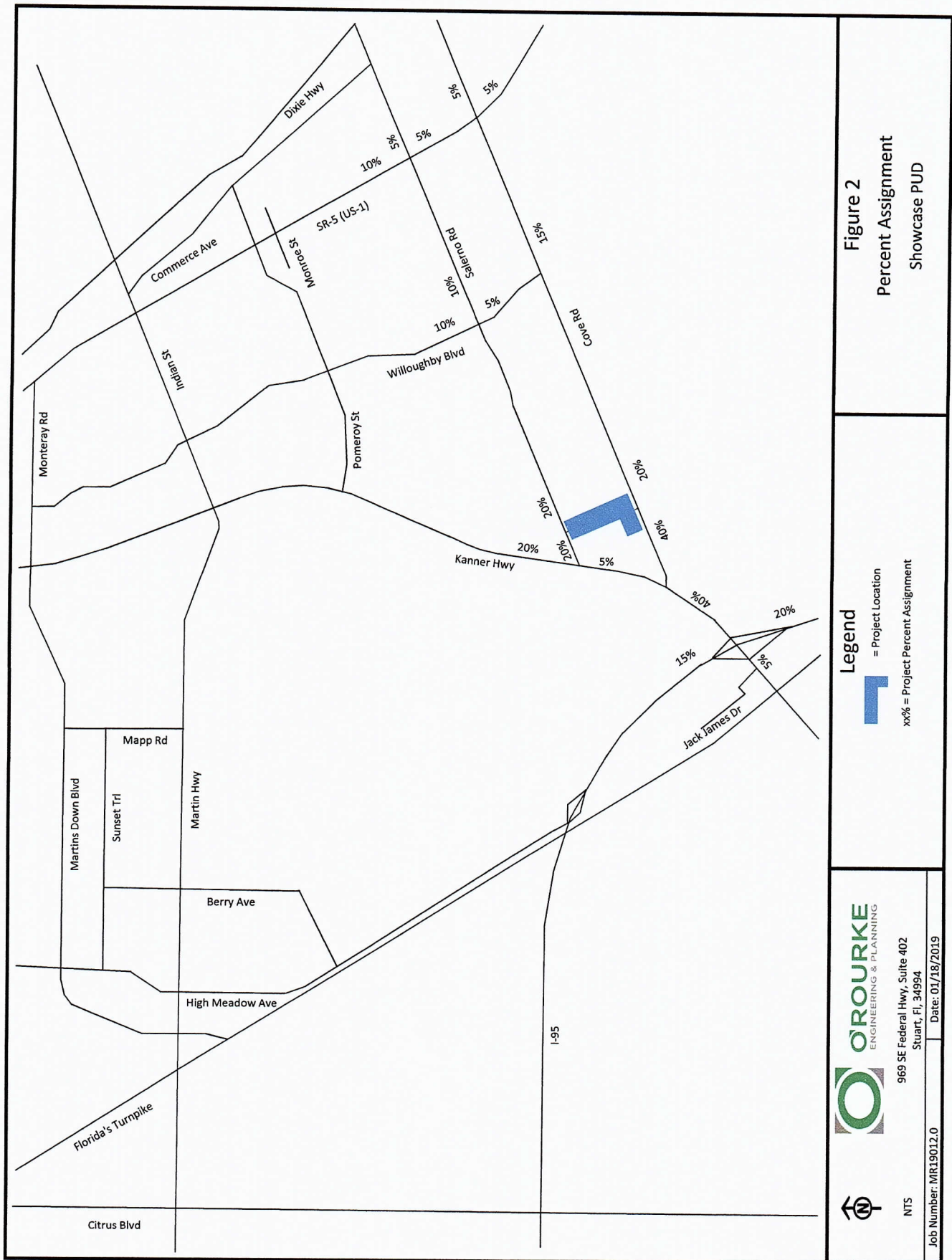


Table 2a: Percent Impact - AM Peak Hour

Segment	From	To	Direction		Lanes	Is Project Traffic 2% or More of Capacity?	LOS D Directional Peak Hour (E+C)	Directional Peak Project Volume	Project Percent Assignment	Directional Percent Project of Capacity
Salerno Rd	SR - 76	Project Entrance	WB	OUT	2L	no	880	16	20%	1.82%
	Project Entrance	Willoughby	EB	OUT	2L	no	880	16	20%	1.82%
	Willoughby	SR-5	EB	OUT	2L	no	790	8	10%	1.01%
SR-76 (Kanner Hwy)	SR-5	Commerce Ave	EB	OUT	2L	no	750	4	5%	0.53%
	Jack James	Cove Rd	SB	OUT	6LD	no	3,020	31	40%	1.03%
	Cove Rd	Salerno Rd	SB	OUT	6LD	no	3,020	4	5%	0.13%
SR-5 (US-1)	Salerno Rd	Indian St	NB	OUT	6LD	no	3,020	16	20%	0.53%
	Cove Rd	Salerno Rd	SB	OUT	6LD	no	3,020	4	5%	0.13%
	Salerno Rd	Monroe St	NB	OUT	6LD	no	3,020	8	10%	0.26%
Willoughby Blvd	Cove Rd	Salerno Rd	SB	OUT	2L	no	880	4	5%	0.45%
	Salerno Rd	Pomeroy St	NB	OUT	2L	no	880	8	10%	0.91%
	Cove Rd	SR-76	WB	OUT	2L	yes	880	31	40%	3.52%
Cove Rd	Project Entrance	Willoughby Blvd	EB	OUT	2L	no	880	16	20%	1.82%
	Willoughby Blvd	SR-5	EB	OUT	2L	no	880	12	15%	1.36%
	SR-5	CR-A1A	EB	OUT	2L	no	750	4	5%	0.53%

Source: Martin County 2018 Roadway Level of Service Inventory Report

Out: 78

Table 2b: Percent Impact - PM Peak Hour

Segment	From	To	Direction		Lanes	Is Project Traffic 2% or More of Capacity?	LOS D Directional Peak Hour (E+C)	Directional Peak Project Volume	Project Percent Assignment	Directional Percent Project of Capacity
Salerno Rd	SR - 76	Project Entrance	EB	IN	2L	no	880	17	20%	1.93%
	Project Entrance	Willoughby	WB	IN	2L	no	880	17	20%	1.93%
	Willoughby	SR-5	WB	IN	2L	no	790	8	10%	1.01%
	SR-5	Commerce Ave	WB	IN	2L	no	750	4	5%	0.53%
SR-76 (Kanner Hwy)	Jack James	Cove Rd	NB	IN	6LD	no	3,020	34	40%	1.13%
	Cove Rd	Salerno Rd	NB	IN	6LD	no	3,020	4	5%	0.13%
	Salerno Rd	Indian St	SB	IN	6LD	no	3,020	17	20%	0.56%
SR-5 (US-1)	Cove Rd	Salerno Rd	NB	IN	6LD	no	3,020	4	5%	0.13%
	Salerno Rd	Monroe St	SB	IN	6LD	no	3,020	8	10%	0.26%
Willoughby Blvd	Cove Rd	Salerno Rd	NB	IN	2L	no	880	4	5%	0.45%
	Salerno Rd	Pomeroy St	SB	IN	2L	no	880	8	10%	0.91%
Cove Rd	SR-76	Project Entrance	EB	IN	2L	yes	880	34	40%	3.86%
	Project Entrance	Willoughby Blvd	WB	IN	2L	no	880	17	20%	1.93%
	Willoughby Blvd	SR-5	WB	IN	2L	no	880	13	15%	1.48%
	SR-5	CR-A1A	WB	IN	2L	no	750	4	5%	0.53%

Source: Martin County 2018 Roadway Level of Service Inventory Report

In: 84

Table 3a: Link Analysis - AM Peak Hour

Segment	From	To	Direction	Lanes	Is Project Traffic 2% or More of Capacity?	2018 AADT	K Factor	D Factor	2018 Volume Peak Hour Peak Direction	Growth Rate	2027 Volume Peak Hour Peak Direction	LOS D Directional Peak Hour (E-C)	Directional Peak Project Volume	Project Percent Assignment	Directional Percent Project of Capacity	Total Traffic (Peak Direction)	Does Project Meet Concurrency?
Salerno Rd	Project Entrance	Willoughby	EB	2L	no	7950	0.09	0.52	389	1.035	530	880	16	20%	1.82%	546	Yes
Cove Rd	SB-76	Project Entrance	WB	2L	yes	13912	0.1	0.51	681	1.033	912	880	31	40%	3.52%	943	Yes (1)

Source: Martin County 2018 Roadway Level of Service Inventory Report

(1) Demonstrated with Detailed Analysis

Out: 78
Years Grown: 9

Table 3b: Link Analysis - PM Peak Hour

Segment	From	To	Direction	Lanes	Is Project Traffic 2% or More of Capacity?	2018 AADT	K Factor	D Factor	2018 Volume Peak Hour Peak Direction	Growth Rate	2027 Volume Peak Hour Peak Direction	LOS D Directional Peak Hour (E-C)	Directional Peak Project Volume	Project Percent Assignment	Directional Percent Project of Capacity	Total Traffic (Peak Direction)	Does Project Meet Concurrency?
Salerno Rd	Project Entrance	Willoughby	WB	2L	no	7950	0.09	0.52	389	1.035	530	880	17	20%	1.93%	547	Yes
Cove Rd	SB-76	Project Entrance	EB	2L	yes	13912	0.1	0.51	681	1.033	912	880	34	40%	3.86%	946	Yes (1)

Source: Martin County 2018 Roadway Level of Service Inventory Report

(1) Demonstrated with Detailed Analysis

In: 84
Years Grown: 9

DRIVEWAY ANALYSIS

The project will have one full access Driveway on Salerno Road (Driveway 1) and one full access Driveway on Cove Road (Driveway 2). The project driveway volumes are shown in **Figure 3**. The County has required a left turn lane and a right turn lane into the project at both Driveway 1 and 2.

Driveway 1/Salerno Road

Driveway 1 and Salerno Road was analyzed using unsignalized HCS. The results show that the intersection will operate at a LOS B in the AM and PM peak hours at project buildout.

Driveway 2/Cove Road

The intersection of Cove Road and Driveway 2 was analyzed for the AM and PM peak hours using HCS for unsignalized intersections. The results show that the northbound approach operates at a LOS D and the southbound approach operates at a LOS C in the AM peak hour at project buildout. The northbound and southbound approaches both operate at a LOS C in the PM peak hour at project buildout.

The intersection was also analyzed for when Cove Road is widened to a four-lane divided roadway. The results show that the northbound and southbound approaches will operate at a LOS C in the AM and PM peak hour when Cove Road is widened to a four-lane divided roadway.

A signal warrant analysis was undertaken at the request of Martin County to address the possibility of a signal at the intersection. The results of the Signal Warrant are discussed on the following page.

Appendix D includes the driveway analyses.

SIGNAL WARRANT

A signal warrant analysis was conducted for the existing conditions and the buildout condition for the intersection of Cove Road and Tres Belle Circle/Driveway 2.

Existing Condition

The existing condition warrants included the 8-hour warrant, 4-hour warrant, peak hour warrant, and crash experience warrant. A 24-hour approach was made, and a turning movement count was conducted at the intersection from 7:00 am to 6:00 pm to collect the northbound approach volumes and peak hour turning movements. Crash data for the past 12 months were obtained from Martin County. The results show that no warrants are satisfied for the existing conditions.

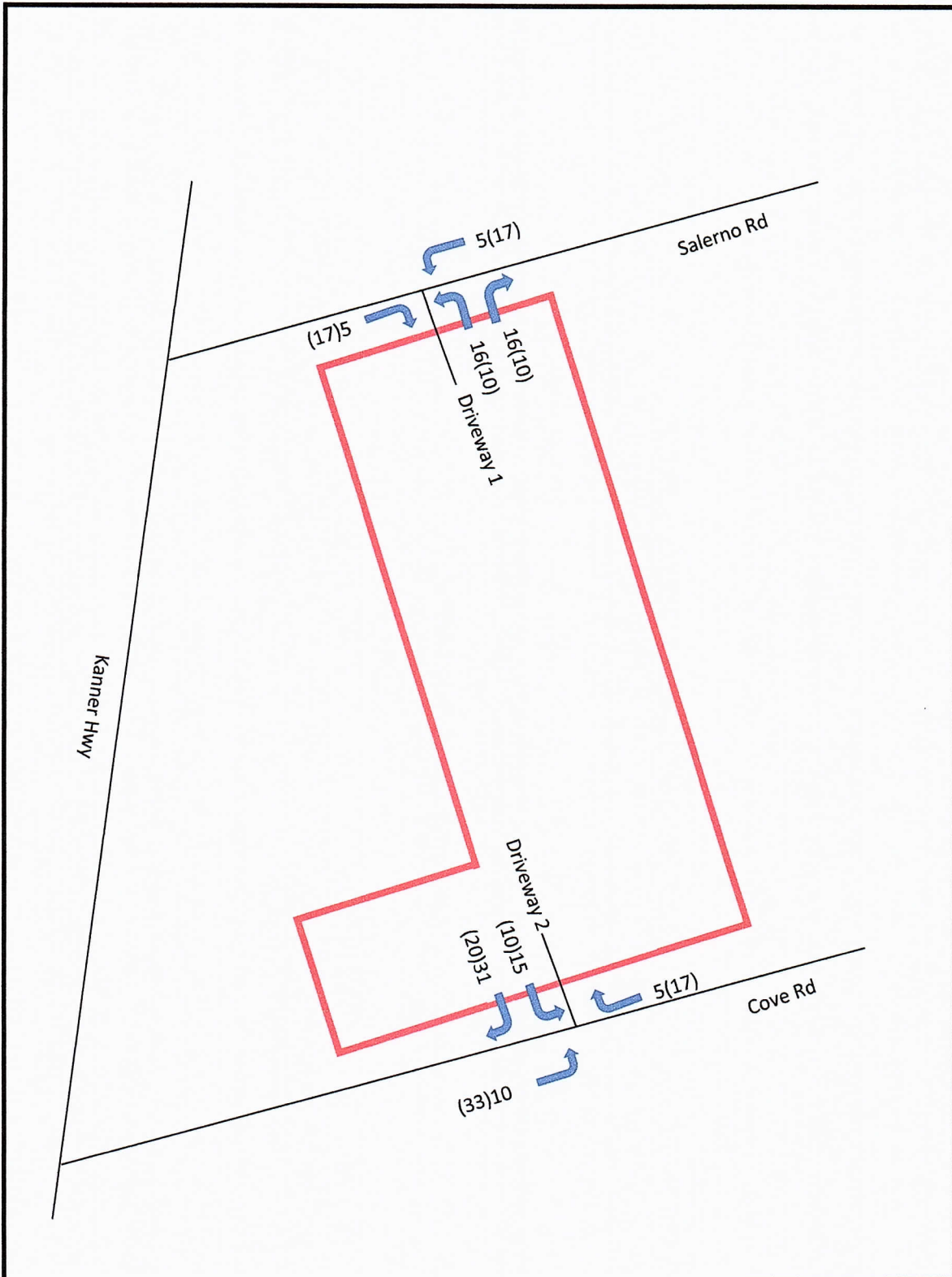
Project Buildout




Volumes were grown to 2027 on Cove Road, with growth plus traffic. Tres Belle volumes were held constant and project traffic was added to the southbound approach. Only the peak hour traffic warrant was conducted for the 2027 scenario. The results show that the peak hour warrant is not met at project buildout.

Appendix E includes the Signal Warrant analysis.

CONCLUSION

The Showcase PUD development will have a traffic impact of 1,461 daily trips, 103 AM peak hour trips, and 134 PM peak hour trips. Based on the data and calculations presented herein, the project does not require additional analysis and is deemed to be consistent with transportation concurrency requirements. The intersection of Cove Road and Tres Belle/Driveway 2 will operate at acceptable levels of service as an unsignalized intersection. Furthermore, the intersection does not meet signal warrants and is unlikely to in the future.



  <p>NTS 969 SE Federal Hwy, Suite 402 Stuart, FL, 34994</p> <p>Job #: MR19012.0 Date: 01/29/2019</p>	<p>Legend</p> <p> = Project Location</p> <p>XX(X) = AM(PM)</p>	<p>Figure 3</p> <p>Project Driveway Volumes</p> <p>Showcase PUD</p>
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APPENDIX A

SITE PLAN/TRANSIT/NON-MOTORIZED FEATURES



Project Team:
 Lucido & Associates, LLC
 1772250726 Tel: 772.250.7263
 1772250727 Tel: 772.250.7264
 1772250728 Tel: 772.250.7265
 1772250729 Tel: 772.250.7266
 1772250730 Tel: 772.250.7267
 1772250731 Tel: 772.250.7268
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 1772250762 Tel: 772.250.7299
 1772250763 Tel: 772.250.7300

Showcase PUD Master Site Plan Martin County, Florida

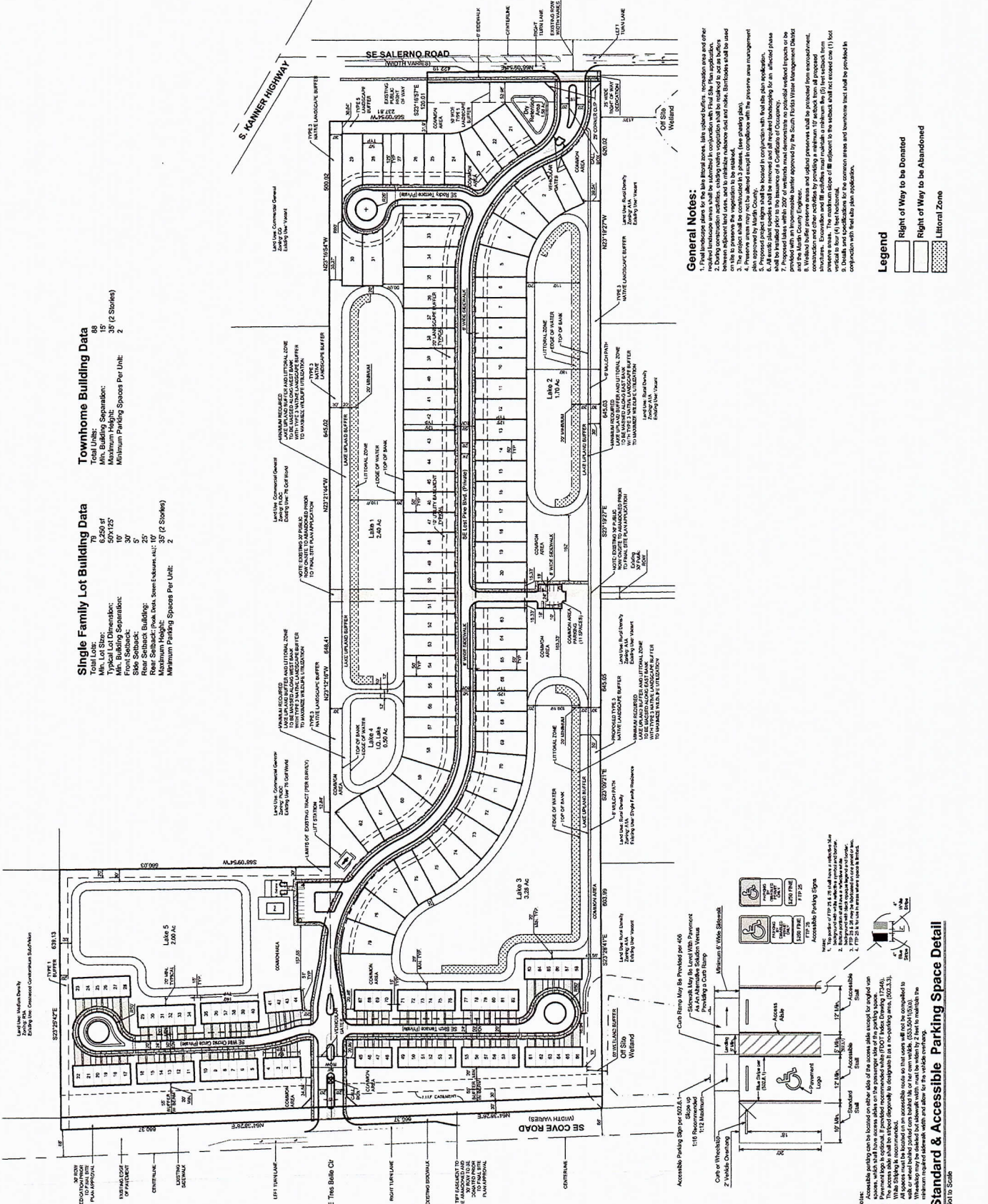
Date	By	Description
02.25.19	SAW	Initial Submittal
03.15.19	SAW	Revised
12.10.19	SAS	Revised



Scale: 1" = 100'
 0 20 40 60 80 100
 Feet

Legend:
 Right of Way to be Donated
 Right of Way to be Abandoned
 Littoral Zone

General Notes:
 1. Final landscape plan for the lake littoral zone, lake subject buffer, recreation area and other required landscape areas shall be submitted in conjunction with Final Site Plan application.
 2. Final landscape plan shall be submitted in conjunction with Final Site Plan application.
 3. Final landscape plan shall be submitted in conjunction with Final Site Plan application.
 4. Final landscape plan shall be submitted in conjunction with Final Site Plan application.
 5. Final landscape plan shall be submitted in conjunction with Final Site Plan application.
 6. Final landscape plan shall be submitted in conjunction with Final Site Plan application.
 7. Final landscape plan shall be submitted in conjunction with Final Site Plan application.
 8. Final landscape plan shall be submitted in conjunction with Final Site Plan application.
 9. Final landscape plan shall be submitted in conjunction with Final Site Plan application.
 10. Final landscape plan shall be submitted in conjunction with Final Site Plan application.



Townhome Building Data
 Total Units: 88
 Min. Building Separation: 35' (2 Stories)
 Minimum Parking Spaces Per Unit: 2

Single Family Lot Building Data
 Total Lots: 78
 Min. Building Separation: 35' (2 Stories)
 Minimum Parking Spaces Per Unit: 2

Standard & Accessible Parking Space Detail
 Not to Scale

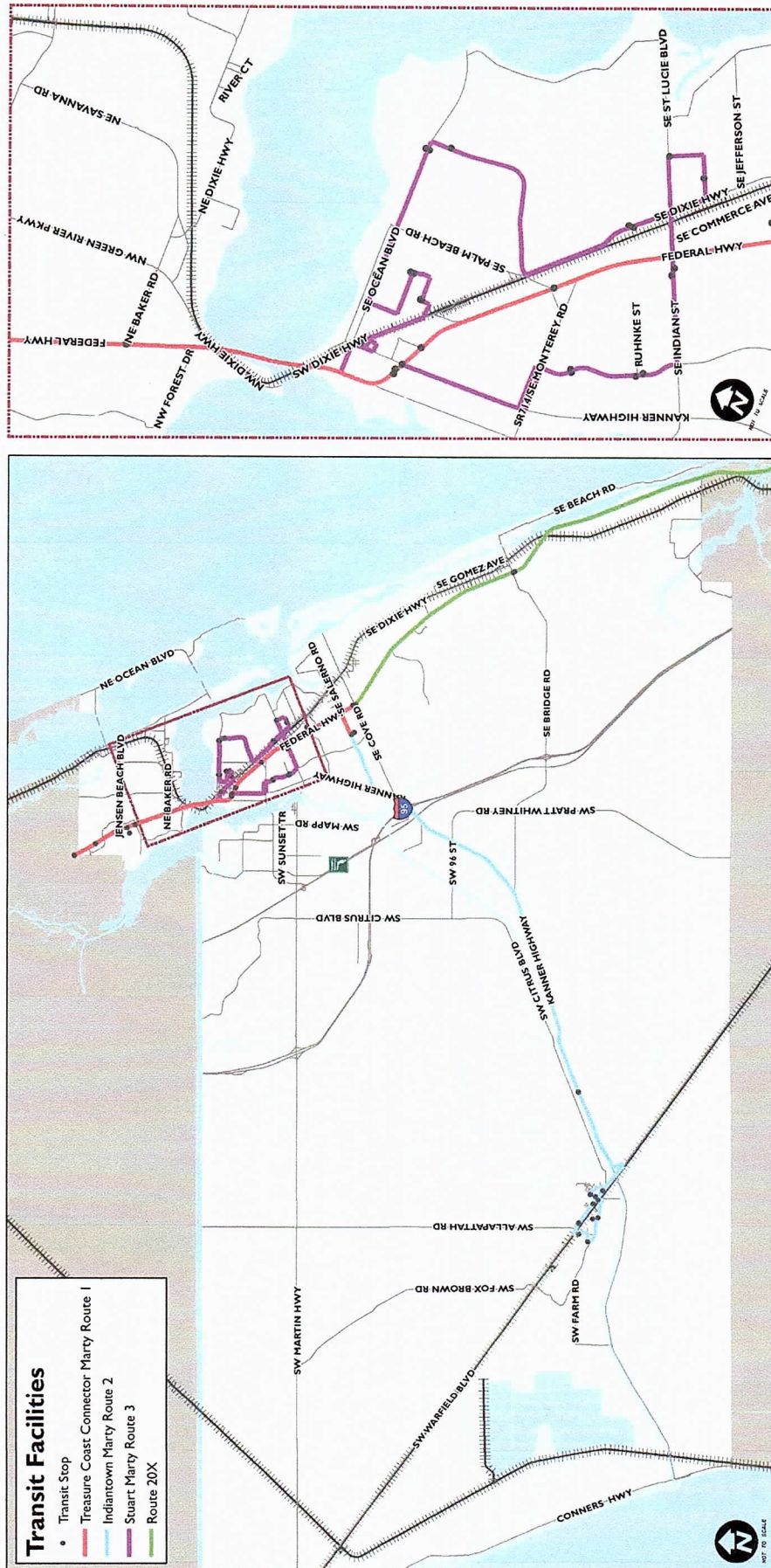


Figure 2-3. Transit Facilities

Figure 2-3 illustrates the locations of the transit routes and stops in Martin County. Four bus routes serve Martin County: Route 1/US 1 Corridor, Route 2/Indiantown, Route 3/Stuart, and Route 20X. Route 1/US 1 Corridor provides service from Port Salerno north to St. Lucie County while Route 20X provides commuter service south to Palm Beach County. Route 2/Indiantown serves as a connector between Indiantown and the urbanized east coast of Martin County while Route 3/Stuart provides a circulator service within the Stuart urbanized area.



MARTIN MPO
BICYCLE, PEDESTRIAN & TRAILS
MASTER PLAN

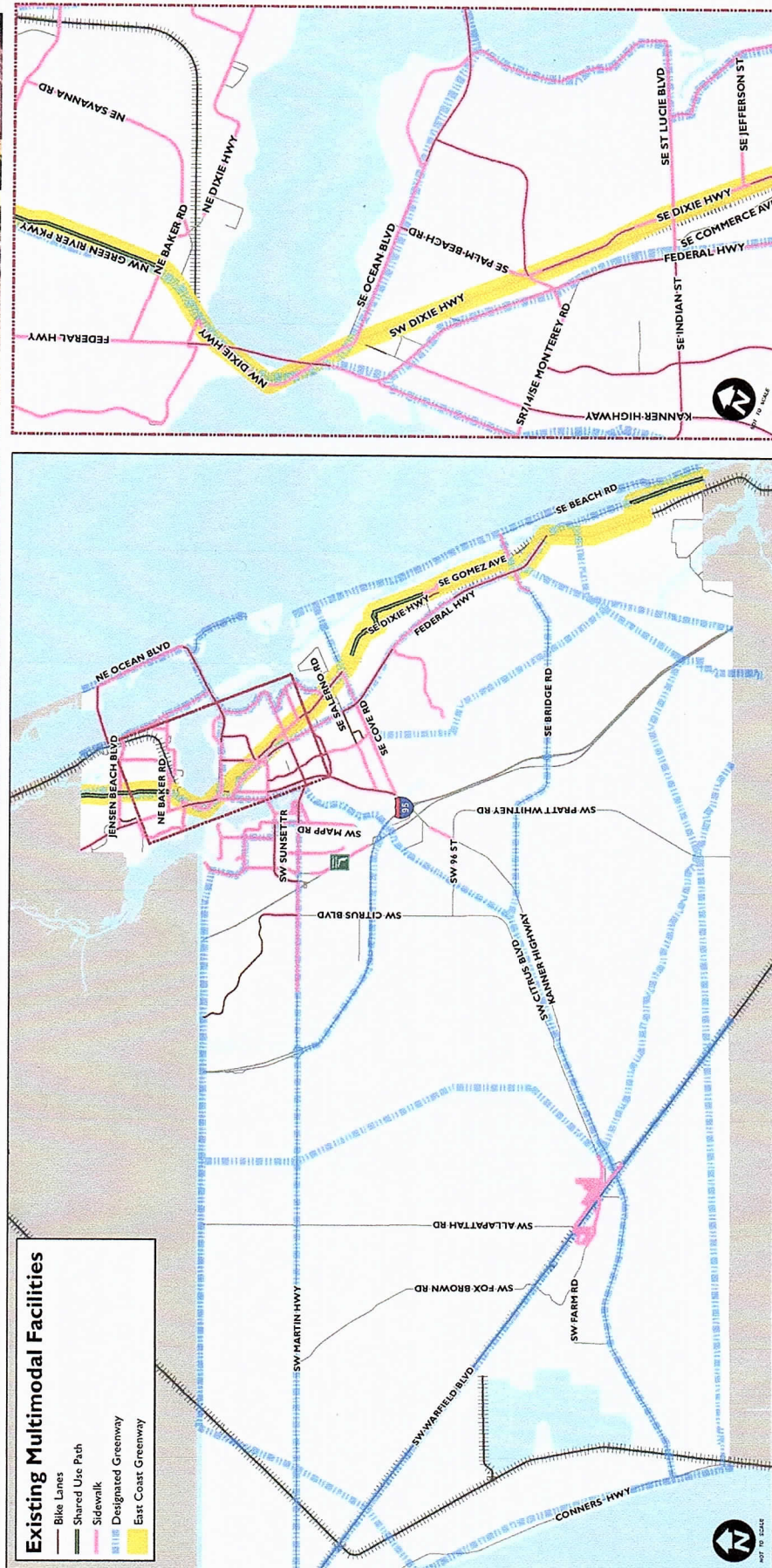


Figure 2-2. Existing Multimodal Facilities

Figure 2-2 provides an overview of existing and designated bicycle and pedestrian facilities. This includes roadways with existing bike lanes, shared use paths, and sidewalks along major roadways. As illustrated, nearly all the existing bike lanes and shared use paths are located within the eastern portion of the County and serve to connect the urbanized areas. Included in Figure 2-2 is the proposed East Coast Greenways (ECG), which are trails of regional and statewide significance and connect to Palm Beach and St. Lucie Counties. The light-green network represents the Designated Greenways -- these greenways do not necessarily represent existing bike facilities, rather they identify corridors along which to provide a facility.

APPENDIX B

**MARTIN COUNTY 2018 ROADWAY
LEVEL OF SERVICE INVENTORY REPORT**

Martin County 2018 Roadway Level of Service Inventory Report

Road Name	From	To	Generalized Service Capacity	2018 Average Annual Daily Traffic	Peak Hour Factor K ₃₀	Directional Distribution D ₁₀₀	2018 Peak Hour Directional Volume	2018 Generalized LOS	Avg. Annual Growth Rate
Baker Rd	SR-5	CR-723	750	5,134	0.09	0.51	230	C	2.2%
Berry Ave	Golden Bear Wy	CR-714	750	3,496	0.09	0.50	157	C	0.9%
Berry Ave	CR-714	Sunset Tr	750	1,917	0.09	0.53	91	C	1.0%
Britt Rd	Pine Lake Dr	SR-5	750	4,538	0.08	0.58	208	C	0.5%
Citrus Blvd.	CR-714 (Martin Hwy)	Port St. Lucie Blvd.	1200	5,145	0.12	0.81	479	C	6.3%
Commerce Ave	Salerno Rd	Monroe St	750	6,810	0.10	0.60	413	D	2.5%
Commerce Ave	Monroe St	Indian St	750	6,726	0.11	0.60	432	D	1.2%
Country Club Dr	Palm Beach County	Island Way	750	2,978	0.08	0.53	120	C	4.2%
Country Club Dr	Island Way	Little Club Dr	750	3,665	0.08	0.59	164	C	4.4%
County Line Rd	Little Club Dr	SR-5	750	2,517	0.08	0.53	105	C	0.5%
Cove Rd	SR-76	Willoughby Blvd	880	13,912	0.10	0.51	681	C	3.3%
Cove Rd	Willoughby Blvd	SR-5	880	14,894	0.09	0.54	732	C	2.1%
Cove Rd	SR-5	CR-A1A	750	12,683	0.08	0.52	547	D	4.2%
Cove Rd	CR-A1A	End	675	5,547	0.09	0.57	285	C	0.5%
CR-609 (Allapattah Rd)	SR-710	CR-714	740	1,793	0.09	0.53	85	A/B	5.3%
CR-609 (Allapattah Rd)	CR-714	St Lucie County	740	1,812	0.09	0.65	106	A/B	6.0%
CR-707 (Beach Rd)	Palm Beach County	CR-708	675	1,928	0.09	0.63	111	C	5.3%
CR-707 (Dixie Hwy)	CR-723/CR-707	CR-707 (Indian River Dr)	750	5,401	0.09	0.51	237	C	0.5%
CR-707 (Indian River Dr)	CR-707 (Dixie Hwy)	CR-707A (Jensen Beach Blvd.)	675	10,488	0.10	0.54	578	D	2.2%
CR-707 (Indian River Dr)	CR-707A	SR-732	675	5,663	0.08	0.53	241	C	0.5%
CR-707 (Indian River Dr)	SR-732	St. Lucie County	675	6,216	0.09	0.61	334	C	3.1%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/5B); CR-713 (PM/5B); Murphy Rd (PM/5B); SR-5 (AM/5B); SR-714 (Palm City Bridge) (PM/5B) and SR-714 (PM/5B).

Martin County 2018 Roadway Level of Service Inventory Report

Road Name	From	To	Generalized Service Capacity	2018 Average Annual Daily Traffic	Peak Hour Factor K ₃₀	Directional Distribution D ₁₀₀	2018 Peak Hour Directional Volume	2018 Generalized LOS	Avg. Annual Growth Rate
MacArthur Blvd	Sailfish Point	SR-A1A	675	5,386	0.10	0.58	306	C	0.5%
Mapp Rd	South End	CR-714	750	5,277	0.08	0.67	297	C	0.5%
Mapp Rd	CR-714	SR-714	750	11,742	0.09	0.53	529	D	0.5%
Mapp Rd	SR-714	Matheson Ave	750	5,650	0.09	0.53	275	C	1.9%
Mapp Rd	Matheson Ave	North End	750	7,637	0.08	0.54	322	C	0.5%
Market Pl	SR-5	Commerce Ave	790	4,431	0.08	0.54	187	C	1.9%
Matheson Ave	SR-714	Mapp Rd	750	5,077	0.09	0.61	279	C	0.5%
Monroe St	SR-5	Commerce Ave	750	1,775	0.11	0.64	130	C	1.7%
Murphy Rd	Mapp Rd	High Meadow Ave	750	5,986	0.10	0.51	302	C	0.5%
Murphy Rd	High Meadow Ave	St Lucie County	750	9,699	0.13	0.72	887	F	4.5%
Ocean Blvd	Flagler Ave	Palm Beach Rd	790	9,760	0.10	0.60	556	D	1.7%
Ocean Blvd	Palm Beach Rd	SR-714	1465	12,209	0.10	0.52	635	C	0.5%
Osprey St	SR-5	CR-A1A	750	5,057	0.07	0.54	197	C	1.0%
Osprey St	CR-A1A	Gomez Ave	750	1,864	0.09	0.61	100	C	0.5%
Palm Beach Rd	SR-714	Ocean Blvd	710	8,272	0.09	0.55	428	D	0.5%
Palm City Rd	SR-714	SR-5	750	7,323	0.08	0.59	363	C	1.1%
Palmer St	CR-707	Indian River Dr	750	3,007	0.11	0.61	205	C	1.8%
Pineapple Wy	CR-707A(Jensen Beach Blvd.)	SR-732	750	11,663	0.10	0.53	593	D	2.5%
Pomeroy St	SR-76	Willoughby Blvd	790	8,804	0.08	0.62	442	D	2.4%
Pomeroy St	Willoughby Blvd	SR-5	790	8,898	0.08	0.57	380	C	3.9%
Salerno Rd	SR-76	Willoughby Blvd	880	7,950	0.09	0.52	389	C	3.5%

Martin County 2018 Roadway Level of Service Inventory Report

Road Name	From	To	Generalized Service Capacity	2018 Average Annual Daily Traffic	Peak Hour Factor K ₃₀	Directional Distribution D ₁₀₀	2018 Peak Hour Directional Volume	2018 Generalized LOS	Avg. Annual Growth Rate
Salerno Rd	Willoughby Blvd	SR-5	790	9,765	0.12	0.62	727	D	1.8%
Salerno Rd	SR-5	Commerce Ave	750	9,439	0.08	0.55	431	D	0.5%
Salerno Rd	Commerce Ave	CR-A1A	750	7,502	0.09	0.51	337	C	0.5%
Seabranh Blvd	Doubletree Dr	SR-5	2000	6,403	0.09	0.55	310	C	0.5%
Sewalls Pt Rd	SR-A1A	Palmer St	675	9,542	0.09	0.52	461	D	1.0%
Skyline Dr	CR-707A	CR-707	675	2,064	0.08	0.55	87	C	3.0%
SR-5 (US-1)	Palm Beach County	CR-A1A	3110	21,690	0.09	0.56	1,032	A/B	3.8%
SR-5 (US-1)	CR-A1A	CR-708	2000	17,113	0.09	0.68	1,094	C	3.1%
SR-5 (US-1)	CR-708	Osprey St	2000	24,451	0.10	0.65	1,589	C	2.0%
SR-5 (US-1)	Osprey St	Seabranh Blvd	2000	24,010	0.08	0.61	1,128	C	1.2%
SR-5 (US-1)	Seabranh Blvd	Cove Rd	3020	30,639	0.08	0.51	1,313	C	0.5%
SR-5 (US-1)	Cove Rd	Salerno Rd	3020	34,682	0.08	0.54	1,461	C	0.5%
SR-5 (US-1)	Salerno Rd	Monroe St	3020	42,146	0.08	0.52	1,775	C	0.9%
SR-5 (US-1)	Monroe St	Indian St	3020	45,627	0.08	0.52	1,922	C	1.3%
SR-5 (US-1)	Indian St	SR-714	3020	45,758	0.09	0.51	2,194	C	0.9%
SR-5 (US-1)	SR-714	SR-5A	3020	38,109	0.09	0.54	1,934	C	0.7%
SR-5 (US-1)	SR-5A(Cut-off Rd)	SR-76	3020	36,130	0.09	0.51	1,640	C	0.5%
SR-5 (US-1)	SR-76	Palm City Rd	2520	49,890	0.08	0.57	2,247	D	1.4%
SR-5 (US-1)	Palm City Rd	Joan Jefferson Wy	2520	55,868	0.08	0.64	2,860	F	0.8%
SR-5 (US-1)	Joan Jefferson Wy	Wright Blvd	3020	59,857	0.08	0.60	2,892	C	1.4%
SR-5 (US-1)	Wright Blvd	Baker Rd	3020	54,975	0.08	0.50	2,172	C	1.1%

Martin County 2018 Roadway Level of Service Inventory Report

Road Name	From	To	Generalized Service Capacity	2018 Average Annual Daily Traffic	Peak Hour Factor K ₃₀	Directional Distribution D ₁₀₀	2018 Peak Hour Directional Volume	2018 Generalized LOS	Avg. Annual Growth Rate
SR-732 (Causeway Blvd)	CR-707	SR-A1A	1190	13,403	0.10	0.51	684	C	0.8%
SR-732 (Jensen Beach Blvd)	SR-5	Green River Pkwy	2000	25,891	0.10	0.52	1,319	C	0.5%
SR-732 (Jensen Beach Blvd)	Green River Pkwy	CR-723	2000	24,869	0.09	0.56	1,253	C	0.5%
SR-76 (Kanner Hwy)	SR-15	SR-710	740	2,117	0.09	0.57	105	A/B	8.0%
SR-76 (Kanner Hwy)	SR-710	CR-708	740	3,488	0.08	0.59	171	A/B	8.0%
SR-76 (Kanner Hwy)	CR-708	CR-711/CR-76A	1200	3,027	0.11	0.54	180	A/B	1.9%
SR-76 (Kanner Hwy)	CR-711/CR76A	Locks Rd	2000	12,928	0.12	0.52	813	C	1.2%
SR-76 (Kanner Hwy)	Locks Rd	Jack James	2000	20,494	0.09	0.60	1,082	C	2.0%
SR-76 (Kanner Hwy)	Jack James	Cove Rd	3020	45,918	0.10	0.52	2,409	C	2.4%
SR-76 (Kanner Hwy)	Cove Rd	Salerno Rd	3020	31,734	0.09	0.52	1,436	C	0.9%
SR-76 (Kanner Hwy)	Salerno Rd	Indian St	3020	29,492	0.10	0.52	1,468	C	2.6%
SR-76 (Kanner Hwy)	Indian St	SR-714	3020	21,161	0.07	0.52	759	C	0.5%
SR-76 (Kanner Hwy)	SR-714	SR-5	3020	25,033	0.08	0.50	1,001	C	0.5%
SR-A1A (Ocean Blvd)	SR-714	St Lucie Blvd	1630	19,372	0.11	0.57	1,193	D	1.4%
SR-A1A (Ocean Blvd)	St Lucie Blvd	Sewalls Point Rd	2000	21,532	0.09	0.51	1,010	C	0.5%
SR-A1A (Ocean Blvd)	Sewalls Point Rd	MacArthur Blvd	925	12,803	0.09	0.54	650	C	0.5%
SR-A1A (Ocean Blvd)	MacArthur Blvd	SR-732	1190	8,278	0.09	0.53	395	A/B	2.5%
SR-A1A (Ocean Blvd)	SR-732	St Lucie County	1190	14,957	0.12	0.54	953	D	3.6%
St Lucie Blvd	CR-A1A	Indian St	675	3,083	0.10	0.55	163	C	0.5%
St Lucie Blvd	Indian St	SR-A1A	675	7,420	0.11	0.54	421	D	0.8%
Westmoreland Blvd	St Lucie County	SR-5	790	12,542	0.08	0.60	632	D	2.6%

Segments with shaded LOS require additional analysis.

The peaks are: CR-A1A (PM/5B); CR-713 (PM/5B); Murphy Rd (PM/5B); SR-5 (AM/5B); SR-714 [Palm City Bridge] (PM/5B) and SR-714 (PM/5B).

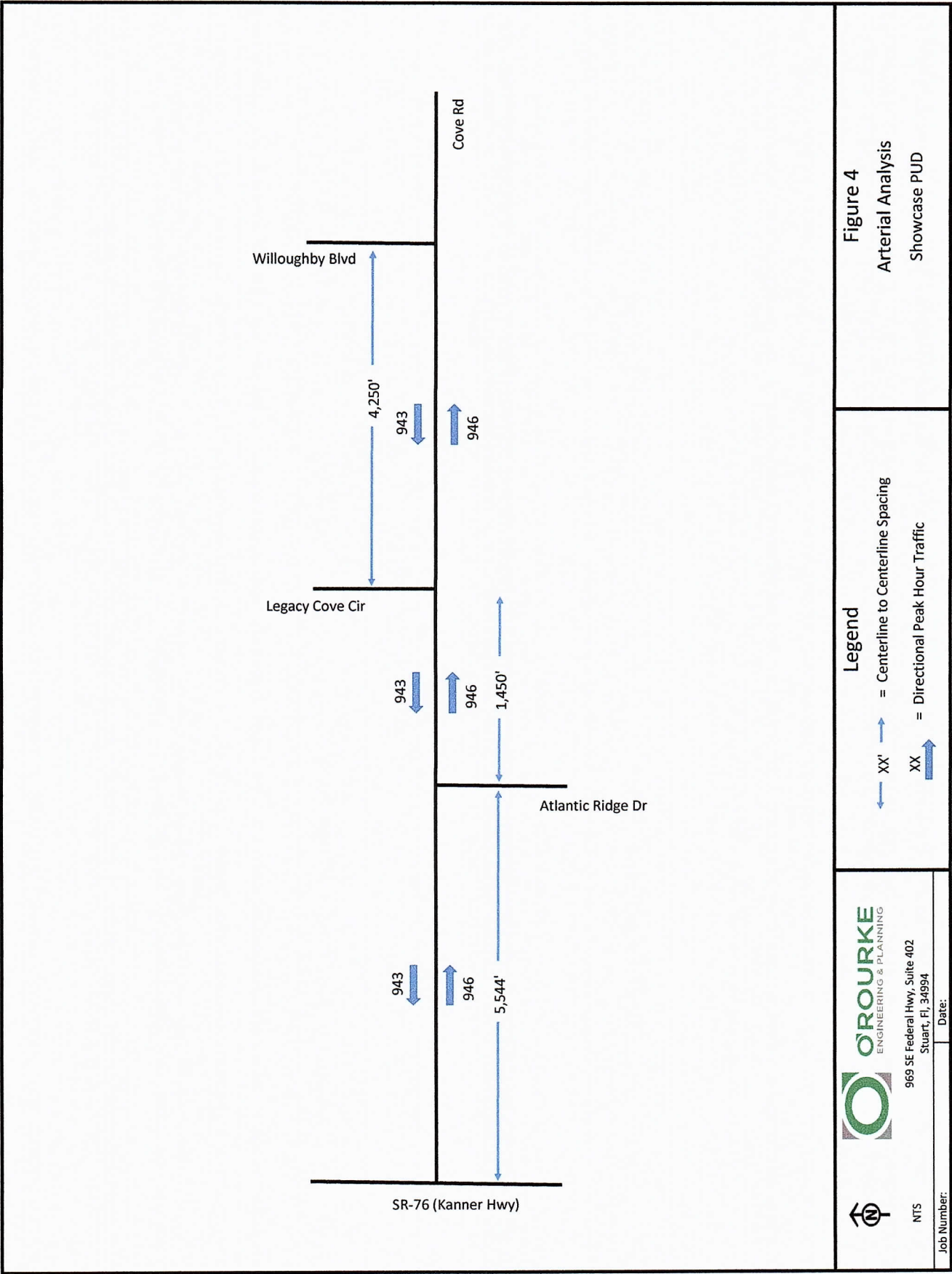
Martin County 2018 Roadway Level of Service Inventory Report

Road Name	From	To	Generalized Service Capacity	2018 Average Annual Daily Traffic	Peak Hour Factor K ₃₀	Directional Distribution D ₁₀₀	2018 Peak Hour Directional Volume	2018 Generalized LOS	Avg. Annual Growth Rate
Willoughby Blvd	Cove Rd	Salerno Rd	880	3,938	0.10	0.56	216	C	4.6%
Willoughby Blvd	Salerno Rd	Pomeroy St	880	9,827	0.09	0.51	461	C	6.6%
Willoughby Blvd	Pomeroy St	Indian St	2000	11,500	0.10	0.60	662	C	7.9%
Willoughby Blvd	Indian St	SR-714	2000	11,284	0.10	0.53	610	C	4.2%
Wright Blvd	SR-5	Dixie Highway	750	9,689	0.09	0.59	503	D	2.4%

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APPENDIX C

ARTPLAN ANALYSIS



ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	James Kemp	Arterial Name	Cove Road	Study Period	Dir Hr Demand Vol
Date Prepared	1/24/2020 9:49:46 AM	From	Willoughby	Modal Analysis	Auto Only
Agency	O'Rourke Engineering & Planning	To	SR 76	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Westbound	Version Date	12/12/2012
Arterial Class	1				
File Name	C:\Users\SOR2\Documents\Projects\Martin County\Showcase PUD\Comments\Cove Rd - Willoughby to SR 76 WB - 2027 AM - 1.13.20.xap				
User Notes	Showcase PUD Concurrency 2027 AM				

Arterial Data

K	0.09	PHF	0.95	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Legacy Cove	125	0.44	3	1	23	0	Yes	ProtPerm	1	235	0.15	Yes
Atlantic Ridge	125	0.44	3	1	15	0	Yes	ProtPerm	1	235	0.15	No
SR 76	150	0.45	3	2	0	11	No	None	N/A	N/A	N/A	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Legacy Cove)	4250	17633	943	1	40	45	Non-Restrictive	No	N/A
2 (to Atlantic Ridge)	1450	17633	943	1	40	45	Non-Restrictive	No	N/A
3 (to SR 76)	5544	17633	943	1	45	50	Non-Restrictive	No	N/A

Automobile LOS

Segment #		Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio		Speed (mph)	Segment LOS	
1 (to Legacy Cove)		764	1714	0.840	34.70	C	0.85		27.78	C	
2 (to Atlantic Ridge)		844	1720	0.883	37.52	D	0.44		16.35	E	
3 (to SR 76)		993	3547	0.622	31.70	C	0.00		33.85	B	
Arterial Length	2.1636	Weighted g/C	0.44	FFS Delay	119.67	Threshold Delay	0.00	Auto Speed	27.66	Auto LOS	C

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	400	820	***	***
2	**	820	1640	***	***
3	**	1260	2480	***	***
4	**	1690	3320	***	***
*	**	470	900	***	***
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.

** Cannot be achieved based on input data provided.

*** Not applicable for that level of service letter grade. See generalized tables notes for more details.

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	James Kemp	Arterial Name	Cove Road	Study Period	Dir Hr Demand Vol
Date Prepared	1/24/2020 9:49:46 AM	From	SR76	Modal Analysis	Auto Only
Agency	O'Rourke Engineering & Planning	To	Willoughby	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	1				
File Name	C:\Users\SOR2\Documents\Projects\Martin County\Showcase PUD\Comments\Cove Rd - SR 76 to Willoughby EB - 2027 PM - 1.13.20.xap				
User Notes	Showcase PUD Concurrency 2027 PM				

Arterial Data

K	0.09	PHF	0.95	Control Type	Fully Actuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Atlantic Ridge	125	0.5	3	1	0	15	No	None	N/A	N/A	N/A	Yes
Legacy Cove	125	0.49	3	1	2	16	Yes	ProtPerm	1	235	0.15	Yes
Willoughby	125	0.44	3	1	15	0	Yes	ProtPerm	1	235	0.15	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Atlantic Ridge)	5544	17633	946	1	40	45	Non-Restrictive	No	N/A
2 (to Legacy Cove)	1450	17633	946	1	40	45	Non-Restrictive	No	N/A
3 (to Willoughby)	4250	17633	946	1	45	50	Restrictive	No	N/A

Automobile LOS

Segment #		Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS		
1 (to Atlantic Ridge)		846	1637	1.034	52.23	D	0.00	26.44	C		
2 (to Legacy Cove)		817	1616	1.031	51.95	D	0.06	13.24	F		
3 (to Willoughby)		846	1786	0.921	34.92	C	0.51	29.78	C		
Arterial Length	2.1636	Weighted g/C	0.47	FFS Delay	157.03	Threshold Delay	0.00	Auto Speed	24.27	Auto LOS	C

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.

** Cannot be achieved based on input data provided.

*** Not applicable for that level of service letter grade. See generalized tables notes for more details.

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

APPENDIX D
DRIVEWAY ANALYSIS

HCS7 Two-Way Stop-Control Report

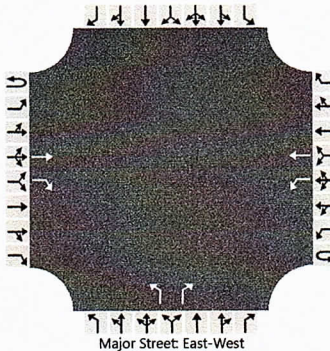
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/16/2019
Analysis Year	2027
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	With Project

Site Information

Intersection	Salerno Rd & Driveway 1
Jurisdiction	Martin County
East/West Street	Salerno Rd
North/South Street	Driveway 1
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	1	1	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume (veh/h)			389	5		5	343			16		16				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						5				17		17				
Capacity, c (veh/h)						1139				360		640				
v/c Ratio						0.00				0.05		0.03				
95% Queue Length, Q ₉₅ (veh)						0.0				0.1		0.1				
Control Delay (s/veh)						8.2				15.5		10.8				
Level of Service (LOS)						A				C		B				
Approach Delay (s/veh)					0.1				13.1							
Approach LOS									B							

HCS7 Two-Way Stop-Control Report

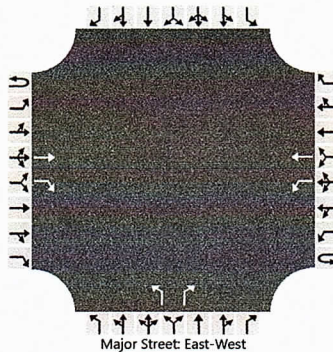
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/16/2019
Analysis Year	2027
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	With Project

Site Information

Intersection	Salerno Rd & Driveway 1
Jurisdiction	Martin County
East/West Street	Salerno Rd
North/South Street	Driveway 1
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	1	1	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume (veh/h)			343	17		17	389			10		10				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						18				11		11				
Capacity, c (veh/h)						1174				344		681				
v/c Ratio						0.02				0.03		0.02				
95% Queue Length, Q ₉₅ (veh)						0.0				0.1		0.0				
Control Delay (s/veh)						8.1				15.8		10.4				
Level of Service (LOS)						A				C		B				
Approach Delay (s/veh)					0.3				13.1							
Approach LOS									B							

TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Tres Belle Circle/Driveway 2
 FILENAME: C6 - Tres Belle & Cove - Yearly with Project
 COUNT DATE: 4/9/2019
 REPORT DATE: 4/16/2019
 DAY: Tuesday
 ANALYSIS YEAR: 2027
 E/W STREET: Cove Road
 CITY: Martin County
 CONTROL: Martin County

15 Min Period	Northbound				Southbound				Eastbound				Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	WBL	WBT	WBR	
7:00-7:15	9	0	4	0	0	0	0	109	2	0	172	0	296	1344	0	0	1344
7:15-7:30	1	0	1	0	0	0	0	134	0	0	166	0	302	1363	0	0	1363
7:30-7:45	7	0	6	0	0	0	0	162	7	0	167	0	349	1391	0	0	1391
7:45-8:00	6	0	1	0	0	0	0	193	2	0	195	0	397	1356	0	0	1356
8:00-8:15	6	0	2	0	0	0	0	156	2	1	148	0	315	1271	0	0	1271
8:15-8:30	6	0	2	0	0	0	0	196	3	1	122	0	330	1271	0	0	1271
8:30-8:45	6	0	3	0	0	0	0	128	3	0	154	0	294	1271	0	0	1271
8:45-9:00	5	0	2	0	0	0	0	131	3	2	129	0	332	1271	0	0	1271

AM PEAK HOUR IS FROM: 7:30 AM TO 8:30 AM
 Volumes 25 0 11 15 0 0 0 0 707 14 2 632 0 1391
 Season Factor 25 0 11 0 0 0 0 0 707 14 2 632 0 1391
 Growth 25 0 11 0 0 0 0 0 917 14 2 819 0 1788
 In/Out - - - OUT IN - - - IN -
 Percentage 0% 0% 0% 20% 0% 40% 0% 0% 0% 0% 0% 20% 0% 0%
 PROJECT 0 0 0 15 0 31 10 0 0 0 0 0 5 0

D-3

15 Min Period	Northbound				Southbound				Eastbound				Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	WBL	WBT	WBR	
4:00-4:15	2	0	5	0	0	0	0	132	4	6	195	0	344	1354	0	0	1354
4:15-4:30	3	0	2	0	0	0	0	148	4	2	215	0	374	1355	0	0	1355
4:30-4:45	1	0	1	0	0	0	0	154	3	1	171	0	331	1324	0	0	1324
4:45-5:00	2	0	4	0	0	0	0	146	3	1	149	0	305	1330	0	0	1330
5:00-5:15	4	0	1	0	0	0	0	168	4	3	165	0	345	1342	0	0	1342
5:15-5:30	2	0	2	0	0	0	0	148	3	1	187	0	343	1342	0	0	1342
5:30-5:45	2	0	0	0	0	0	0	171	5	1	158	0	337	1342	0	0	1342
5:45-6:00	3	0	0	0	0	0	0	152	4	3	155	0	317	1342	0	0	1342

PM PEAK HOUR IS FROM: 4:15 PM TO 5:15 PM
 Volumes 10 0 8 0 0 0 0 0 616 14 7 700 0 1355
 Season Factor 10 0 8 0 0 0 0 0 616 14 7 700 0 1355
 Growth 10 0 8 0 0 0 0 0 799 14 7 908 0 1745
 In/Out 0% 0% 0% 20% 0% 40% 0% 0% 0% 0% 0% 20% 0% 0%
 PROJECT 0 0 0 10 0 20 0 33 799 14 7 908 17 1825

HCS7 Two-Way Stop-Control Report

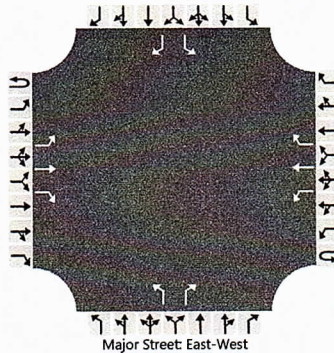
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/16/2019
Analysis Year	2027
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	With Project

Site Information

Intersection	Cove Rd & Tres Belle
Jurisdiction	Martin County
East/West Street	Cove Rd
North/South Street	Driveway 2
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	1	0	1	1	1		1	0	1		1	0	1
Configuration		L	T	R		L	T	R		L		R		L		R
Volume (veh/h)		10	917	14		2	819	5		25		11		15		31
Percent Heavy Vehicles (%)		3				3				3		3		3		3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No				No				No			
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1		6.2		7.1		6.2
Critical Headway (sec)		4.13				4.13				7.13		6.23		7.13		6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.53		3.33		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11				2				26		12		16		33
Capacity, c (veh/h)		772				700				157		308		163		353
v/c Ratio		0.01				0.00				0.17		0.04		0.10		0.09
95% Queue Length, Q ₉₅ (veh)		0.0				0.0				0.6		0.1		0.3		0.3
Control Delay (s/veh)		9.7				10.2				32.6		17.2		29.4		16.2
Level of Service (LOS)		A				B				D		C		D		C
Approach Delay (s/veh)	0.1				0.0				27.9				20.5			
Approach LOS									D				C			

HCS7 Two-Way Stop-Control Report

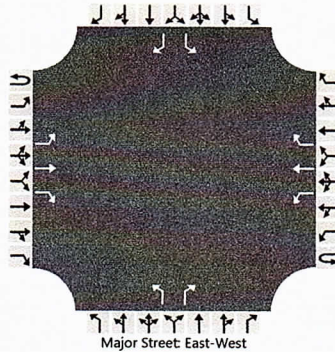
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/16/2019
Analysis Year	2027
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	With Project

Site Information

Intersection	Cove Rd & Tres Belle
Jurisdiction	Martin County
East/West Street	Cove Rd
North/South Street	Driveway 2
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	1	0	1	1	1		1	0	1		1	0	1
Configuration		L	T	R		L	T	R		L		R		L		R
Volume (veh/h)		33	799	14		7	908	17		10		8		10		20
Percent Heavy Vehicles (%)		3				3				3		3		3		3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No				No				No			
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1		6.2		7.1		6.2
Critical Headway (sec)		4.13				4.13				7.13		6.23		7.13		6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.53		3.33		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		35				7				11		8		11		21
Capacity, c (veh/h)		704				780				144		363		158		312
v/c Ratio		0.05				0.01				0.07		0.02		0.07		0.07
95% Queue Length, Q ₉₅ (veh)		0.2				0.0				0.2		0.1		0.2		0.2
Control Delay (s/veh)		10.4				9.7				32.0		15.1		29.5		17.4
Level of Service (LOS)		B				A				D		C		D		C
Approach Delay (s/veh)	0.4				0.1				24.5				21.4			
Approach LOS									C				C			

HCS7 Two-Way Stop-Control Report

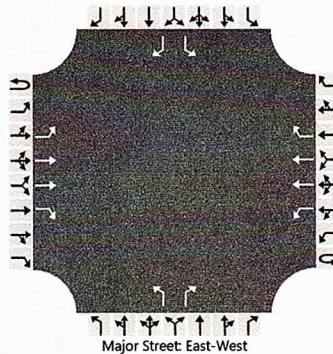
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/16/2019
Analysis Year	2027
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	With Cove Improvements

Site Information

Intersection	Cove Rd & Tres Belle
Jurisdiction	Martin County
East/West Street	Cove Rd
North/South Street	Driveway 2
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	1	0	1	2	1		1	0	1		1	0	1
Configuration		L	T	R		L	T	R		L		R		L		R
Volume (veh/h)	0	10	917	14	0	2	819	5		25		11		15		31
Percent Heavy Vehicles (%)	3	3			3	3				3		3		3		3
Proportion Time Blocked		0.000				0.000				0.000		0.000		0.000		0.000
Percent Grade (%)									0				0			
Right Turn Channelized	No				No				No				No			
Median Type Storage					Left Only				1							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5		6.9
Critical Headway (sec)		4.16				4.16				7.56		6.96		7.56		6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.53		3.33		3.53		3.33

Delay, Queue Length, and Level of Service

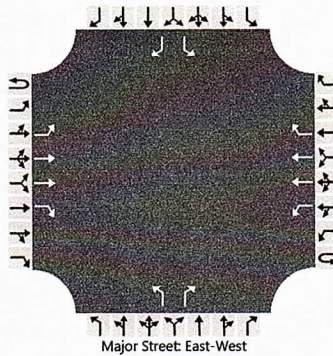
Flow Rate, v (veh/h)		11				2				26		12		16		33
Capacity, c (veh/h)		766				694				193		527		217		570
v/c Ratio		0.01				0.00				0.14		0.02		0.07		0.06
95% Queue Length, Q ₉₅ (veh)		0.0				0.0				0.5		0.1		0.2		0.2
Control Delay (s/veh)		9.8				10.2				26.6		12.0		22.9		11.7
Level of Service (LOS)		A				B				D		B		C		B
Approach Delay (s/veh)	0.1				0.0				22.1				15.3			
Approach LOS									C				C			

HCS7 Two-Way Stop-Control Report

General Information

Analyst	James Kemp	Intersection	Cove Rd & Tres Belle
Agency/Co.	O'Rourke Engineering	Jurisdiction	Martin County
Date Performed	4/16/2019	East/West Street	Cove Rd
Analysis Year	2027	North/South Street	Driveway 2
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	With Cove Improvements		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	1	0	1	2	1		1	0	1		1	0	1
Configuration		L	T	R		L	T	R		L		R		L		R
Volume (veh/h)	0	33	799	14	0	7	908	17		10		8		10		20
Percent Heavy Vehicles (%)	3	3			3	3				3		3		3		3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No				No				No			
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5		6.9
Critical Headway (sec)		4.16				4.16				7.56		6.96		7.56		6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.53		3.33		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		35				7				11		8		11		21
Capacity, c (veh/h)		698				774				197		579		191		531
v/c Ratio		0.05				0.01				0.05		0.01		0.05		0.04
95% Queue Length, Q ₉₅ (veh)		0.2				0.0				0.2		0.0		0.2		0.1
Control Delay (s/veh)		10.4				9.7				24.3		11.3		24.9		12.1
Level of Service (LOS)		B				A				C		B		C		B
Approach Delay (s/veh)	0.4				0.1				18.5				16.3			
Approach LOS									C				C			

APPENDIX E

SIGNAL WARRANT ANALYSIS

2019 Existing Traffic

State of Florida Department of Transportation TRAFFIC SIGNAL WARRANT SUMMARY

City: Stuart
County: 89 – Martin
District: Four

Engineer: James Kemp
Date: April 16, 2019

Major Street: Cove Rd
Minor Street: Tres Belle Cr

Lanes: 1 Major Approach Speed: 45
Lanes: 1 Minor Approach Speed:

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph (70 km/h)? ☒ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☒ No
- "70%" volume level may be used if Question 1 or 2 above is answered "Yes" ☒ 70% ☒ 100%

WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied for eight hours.

Warrant 1 is also satisfied if both Condition A and Condition B are "80%" satisfied (should only be applied after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems).

Condition A - Minimum Vehicular Volume

Condition A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

100% Satisfied: ☐ Yes ☒ No
80% Satisfied: ☐ Yes ☒ No
70% Satisfied: ☐ Yes ☒ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100% ^a	80% ^b	70% ^c	100% ^a	80% ^b	70% ^c
1	1	500	400	350	150	120	105
2 or more	1	600	480	420	150	120	105
2 or more	2 or more	600	480	420	200	160	140
1	2 or more	500	400	350	200	160	140

^a Basic Minimum hourly volume

^b Used for combination of Conditions A and B after adequate trial of other remedial measures

^c May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Street	Eight Highest Hours							
	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM
Major	1,309	1,239	981	900	917	1,200	1,334	1,328
Minor	35	32	28	33	16	20	20	14

Existing Volumes

State of Florida Department of Transportation
TRAFFIC SIGNAL WARRANT SUMMARY

Form 750-020-01
 TRAFFIC ENGINEERING
 10/15

Condition B - Interruption of Continuous Traffic

Condition B is intended for application where Condition A is not satisfied and the traffic volume on a major street is so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

Applicable: ☒ Yes ☐ No
 100% Satisfied: ☐ Yes ☒ No
 80% Satisfied: ☐ Yes ☒ No
 70% Satisfied: ☐ Yes ☒ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100% ^a	80% ^b	70% ^c	100% ^a	80% ^b	70% ^c
1	1	750	600	525	75	60	53
2 or more	1	900	720	630	75	60	53
2 or more	2 or more	900	720	630	100	80	70
1	2 or more	750	600	525	100	80	70

^a Basic Minimum hourly volume

^b Used for combination of Conditions A and B after adequate trial of other remedial measures

^c May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Eight Highest Hours								
Street	7:00 AM	8:00 AM	9:00 AM	10:00 AM	2:00 PM	3:00 PM	4:00 PM	5:00 PM
Major	1,309	1,239	981	900	917	1,200	1,334	1,328
Minor	35	32	28	33	16	20	20	14

Existing Volumes

TRAFFIC SIGNAL WARRANT SUMMARY

City: Stuart
 County: 89 – Martin
 District: Four

Engineer: James Kemp
 Date: April 16, 2019

Major Street: Cove Rd
 Minor Street: Tres Belle Cir

Lanes: 1 Major Approach Speed: 45
 Lanes: 1 Minor Approach Speed:

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph (70 km/h)? ☒ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☒ No
- "70%" volume level may be used if Question 1 or 2 above is answered "Yes" ☒ Yes ☐ No

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

If all four points lie above the appropriate line, then the warrant is satisfied.

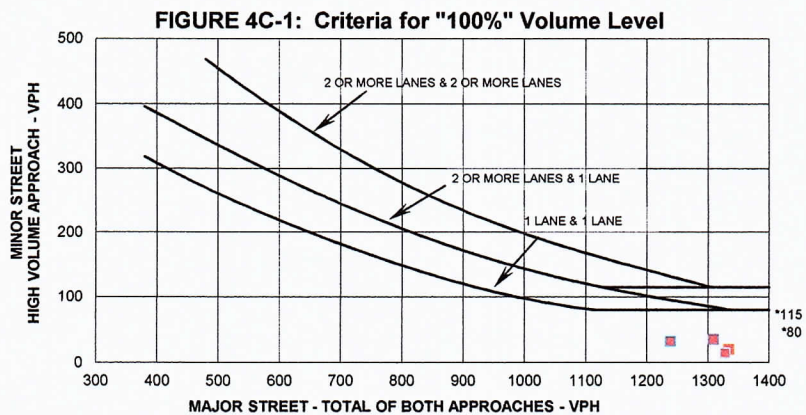
Applicable: ☒ Yes ☐ No

Satisfied: ☐ Yes ☒ No

Plot four volume combinations on the applicable figure below.

100% Volume Level

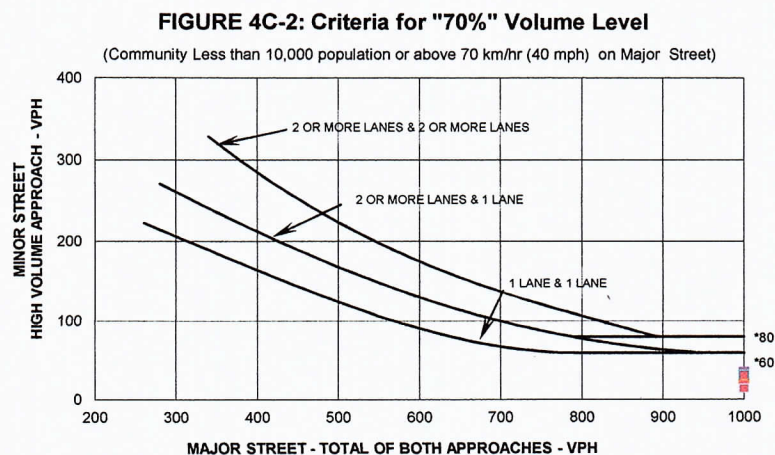
Four Highest Hours	Volumes	
	Major Street	Minor Street
7:00 AM	1309	35
8:00 AM	1239	32
4:00 PM	1334	20
5:00 PM	1328	14



* Note: 115 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 80 vph applies as the lower threshold volume threshold for a minor street approach with one lane.

70% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
7:00 AM	1309	35
8:00 AM	1239	32
4:00 PM	1334	20
5:00 PM	1328	14



* Note: 80 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 60 vph applies as the lower threshold volume threshold for a minor street approach with one lane.

State of Florida Department of Transportation
TRAFFIC SIGNAL WARRANT SUMMARY

Form 750-020-01
 TRAFFIC ENGINEERING
 10/15

City: Stuart
 County: 89 - Martin
 District: Four

Engineer: James Kemp
 Date: April 16, 2019

Major Street: Cove Rd
 Minor Street: Tres Belle Cir

Lanes: 1 Major Approach Speed: 45
 Lanes: 1 Minor Approach Speed:

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph (70 km/h)? ☒ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☒ No
- "70%" volume level may be used if Question 1 or 2 above is answered "Yes" ☒ 70% ☒ 100%

WARRANT 3 - PEAK HOUR

If all three criteria are fulfilled or the plotted point lies above the appropriate line, then the warrant is satisfied.

Applicable: ☒ Yes ☐ No

Satisfied: ☐ Yes ☒ No

Unusual condition justifying use of warrant:

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
7:30 AM	1355	36

Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.
7:30 AM	1355	36

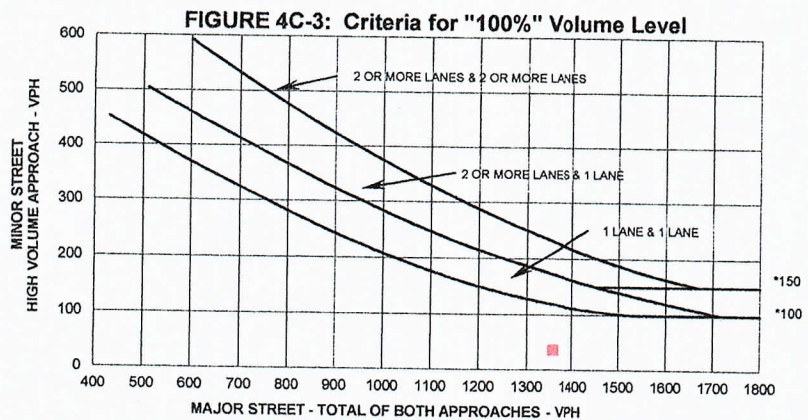
Criteria

1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*	0.4	
Fulfilled?:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

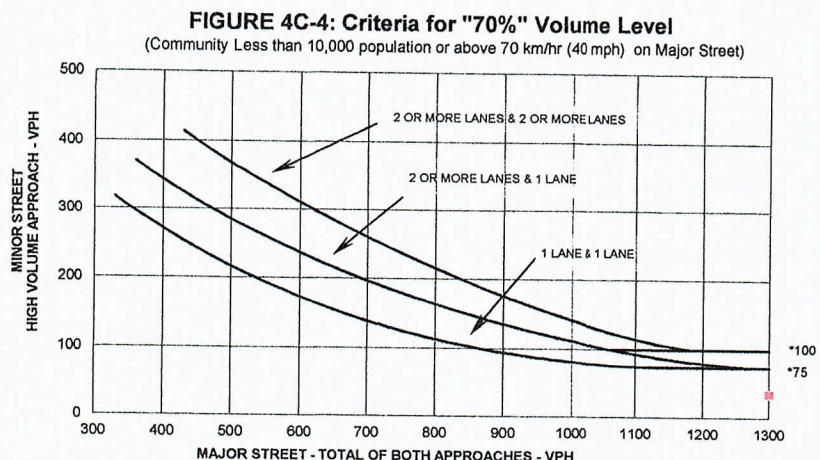
2. Volume on Minor Approach One-Direction *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*	36	
Fulfilled?:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

3. Total Intersection Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*	1,391	
Fulfilled?:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Plot volume combination on the applicable figure below.



* Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.



* Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume threshold for a minor street approach with one lane.

2019 Existing Traffic

State of Florida Department of Transportation

Form 750-020-01
TRAFFIC ENGINEERING
10/15

TRAFFIC SIGNAL WARRANT SUMMARY

City: Stuart
County: 89 – Martin
District: Four

Engineer: James Kemp
Date: April 16, 2019

Major Street: Cove Rd
Minor Street: Tres Belle Cir

Lanes: 1 Major Approach Speed: 45
Lanes: 1 Minor Approach Speed:

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

WARRANT 7 - CRASH EXPERIENCE

Record hours where criteria are fulfilled, the corresponding volume, and other information in the boxes provided. The warrant is satisfied if all three of the criteria are fulfilled.

Applicable: ☒ Yes ☐ No

Satisfied: ☐ Yes ☒ No

Criteria		Hour								Volume		Met?		Fulfilled?	
										Major	Minor	Yes	No	Yes	No
1. warrants to the right is met.	Warrant 1, Condition A (80% satisfied)	7	8	9	10	2	3	4	5	1334	35		No		No
	Warrant 1, Condition B (80% satisfied)	7	8	9	10	2	3	4	5				No		
	Warrant 4, Pedestrian Volume at 80% of volume requirements: # ped/hr for four (4) hours or # ped/hr for one (1) hour.									N / A					
2.	Adequate trial of other remedial measure has failed to reduce crash frequency.	Measure tried:			N/A										No
3.	Five or more reported crashes, of types susceptible to correction by signal, have occurred within a 12-month period.	Observed Crash Types:			Rear End			Number of crashes per 12 months:			3			No	

TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Tres Belle Circle										EW STREET: Cove Road										CONTROL: TWSC																			
FILENAME: C6 - Tres Belle & Cove - 7:11 AM - with Thru										CITY: Martin County																													
COUNT DATE: 4/9/2019										DAY: Tuesday																													
REPORT DATE: 4/16/2019										ANALYSIS YEAR: 2019																													
Northbound										Southbound										Eastbound										Westbound									
NBL		NBT		NBR		SBL		SBT		SBR		EBL		EBT		EBR		WBL		WBT		WBR		TOTAL		ONE HOUR SUM													
9	0	0	4	0	0	0	0	0	0	0	0	0	109	2	0	172	0	296	1344																				
1	0	1	0	0	0	0	0	134	0	0	166	0	302	1363																									
7	0	6	0	0	0	0	162	7	0	167	0	349	1391																										
6	0	1	0	0	0	0	193	2	0	195	0	397	1336																										
6	0	2	0	0	0	0	156	2	1	148	0	315	1271																										
6	0	2	0	0	0	0	196	3	1	122	0	330																											
6	0	3	0	0	0	0	128	3	0	154	0	294																											
5	0	2	0	0	0	0	191	3	2	129	0	332																											
AM PEAK HOUR IS FROM: 7:30 AM TO 8:30AM																																							
Volumes		25		0		11		0		0		0		707		14		2		632		0		1391															
Season Factor		25		0		11		0		0		0		707		14		2		632		0		1391															
Growth		25		0		11		0		0		0		707		14		2		632		0		1391															
In/Out		-		-		-		-		-		-		-		-		-		-		-		-															
Percentage		0%		0%		0%		0%		0%		0%		0%		0%		0%		0%		0%		0%															
PROJECT		0		0		0		0		0		0		0		0		0		0		0		0															
Seasonal Factor: 1 Trips In: 1 Trips Out: 1 Growth Rate: 1 Years Grown: 1																																							

15 Min Period														
Northbound				Southbound				Eastbound				Westbound		
NBL	NBT	NBR		SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7	0	1	0	0	0	0	0	130	4	2	134	0	278	1009
4	0	2	0	0	0	0	0	108	5	3	122	0	244	980
2	0	4	0	0	0	0	0	97	3	3	124	0	233	973
6	0	2	0	0	0	0	0	116	3	5	112	0	254	954
4	0	4	0	0	0	0	0	124	6	3	108	0	249	933
5	0	1	0	0	0	0	0	101	4	4	122	0	237	
7	0	1	0	0	0	0	0	101	7	2	96	0	214	
6	0	5	0	0	0	0	0	106	6	1	109	0	233	
9:00AM TO 10:00AM														
Volumes	19	0	9	0	0	0	0	461	15	13	492	0	1009	
Season Factor	19	0	9	0	0	0	0	461	15	13	492	0	1009	1
Growth	19	0	9	0	0	0	0	461	15	13	492	0	1009	1
In/Out	-	-	-	-	-	-	-	-	-	-	-	-	-	Trips In: 1
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Trips Out: 0
Project	0	0	0	0	0	0	0	0	0	0	0	0	0	Years Grown: 0

15 Min Period														
Northbound				Southbound				Eastbound				Westbound		
NBL	NBT	NBR		SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7	0	1	0	0	0	0	0	130	4	2	134	0	278	1009
4	0	2	0	0	0	0	0	108	5	3	122	0	244	980
2	0	4	0	0	0	0	0	97	3	3	124	0	233	973
6	0	2	0	0	0	0	0	116	3	5	112	0	254	954
4	0	4	0	0	0	0	0	124	6	3	108	0	249	933
5	0	1	0	0	0	0	0	101	4	4	122	0	237	
7	0	1	0	0	0	0	0	101	7	2	96	0	214	
6	0	5	0	0	0	0	0	106	6	1	109	0	233	
9:00AM TO 10:00AM														
Volumes	19	0	9	0	0	0	0	461	15	13	492	0	1009	
Season Factor	19	0	9	0	0	0	0	461	15	13	492	0	1009	1
Growth	19	0	9	0	0	0	0	461	15	13	492	0	1009	1
In/Out	-	-	-	-	-	-	-	-	-	-	-	-	-	Trips In: 1
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Trips Out: 0
Project	0	0	0	0	0	0	0	0	0	0	0	0	0	Years Grown: 0

15 Min Period														
Northbound				Southbound				Eastbound				Westbound		
NBL	NBT	NBR		SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7	0	1	0	0	0	0	0	130	4	2	134	0	278	1009
4	0	2	0	0	0	0	0	108	5	3	122	0	244	980
2	0	4	0	0	0	0	0	97	3	3	124	0	233	973
6	0	2	0	0	0	0	0	116	3	5	112	0	254	954
4	0	4	0	0	0	0	0	124	6	3	108	0	249	933
5	0	1	0	0	0	0	0	101	4	4	122	0	237	
7	0	1	0	0	0	0	0	101	7	2	96	0	214	
6	0	5	0	0	0	0	0	106	6	1	109	0	233	
9:00AM TO 10:00AM														
Volumes	19	0	9	0	0	0	0	461	15	13	492	0	1009	
Season Factor	19	0	9	0	0	0	0	461	15	13	492	0	1009	1
Growth	19	0	9	0	0	0	0	461	15	13	492	0	1009	1
In/Out	-	-	-	-	-	-	-	-	-	-	-	-	-	Trips In: 1
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Trips Out: 0
Project	0	0	0	0	0	0	0	0	0	0	0	0	0	Years Grown: 0

15 Min Period														
Northbound				Southbound				Eastbound				Westbound		
NBL	NBT	NBR		SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7	0	1	0	0	0	0	0	130	4	2	134	0	278	1009
4	0	2	0	0	0	0	0	108	5	3	122	0	244	980
2	0	4	0	0	0	0	0	97	3	3	124	0	233	973
6	0	2	0	0	0	0	0	116	3	5	112	0	254	954
4	0	4	0	0	0	0	0	124	6	3	108	0	249	933
5	0	1	0	0	0	0	0	101	4	4	122	0	237	
7	0	1	0	0	0	0	0	101	7	2	96	0	214	
6	0	5	0	0	0	0	0	106	6	1	109	0	233	
9:00AM TO 10:00AM														
Volumes	19	0	9	0	0	0	0	461	15	13	492	0	1009	
Season Factor	19	0	9	0	0	0	0	461	15	13	492	0	1009	1
Growth	19	0	9	0	0	0	0	461	15	13	492	0	1009	1
In/Out	-	-	-	-	-	-	-	-	-	-	-	-	-	Trips In: 1
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Trips Out: 0
Project	0	0	0	0	0	0	0	0	0	0	0	0	0	Years Grown: 0

15 Min Period														
Northbound				Southbound				Eastbound				Westbound		
NBL	NBT	NBR		SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7	0	1	0	0	0	0	0	130	4	2	134	0	278	1009
4	0	2	0	0	0	0	0	108	5	3	122	0	244	980
2	0	4	0	0	0	0	0	97	3	3	124	0	233	973
6	0	2	0	0	0	0	0	116	3	5	112	0	254	954
4	0	4	0	0	0	0	0	124	6	3	108	0	249	933
5	0	1	0	0	0	0	0	101	4	4	122	0	237	
7	0	1	0	0	0	0	0	101	7	2	96	0	214	
6	0	5	0	0	0	0	0	106	6	1	109	0	233	
9:00AM TO 10:00AM														
Volumes	19	0	9	0	0	0	0	461	15	13	492	0	1009	
Season Factor	19	0	9	0	0	0	0	461	15	13	492	0	1009	1
Growth	19	0	9	0	0	0	0	461	15	13	492	0	1009	1
In/Out	-	-	-	-	-	-	-	-	-	-	-	-	-	Trips In: 1
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Trips Out: 0
Project	0	0	0	0	0	0	0	0	0	0	0	0	0	Years Grown: 0

15 Min Period														
Northbound				Southbound				Eastbound				Westbound		
NBL	NBT	NBR		SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7	0	1	0	0	0	0	0	130	4	2	134	0	278	1009
4	0	2	0	0	0	0	0	108	5	3	122	0	244	980
2	0	4	0	0	0	0	0	97	3	3	124	0	233	973
6	0	2	0	0	0	0	0	116	3	5	112	0	254	954
4	0	4	0	0	0	0	0	124	6	3	108	0	249	933
5	0	1	0	0	0	0	0	101	4	4	122	0	237	
7	0	1	0	0	0	0	0	101	7	2	96	0	214	
6	0	5	0	0	0	0	0	106	6	1	109	0	233	
9:00AM TO 10:00AM														
Volumes	19	0	9	0	0	0	0	461	15	13	492	0	1009	
Season Factor	19	0	9	0	0	0	0	461	15	13	492	0	1009	1
Growth	19	0	9	0	0	0	0	461	15	13	492	0	1009	1
In/Out	-	-	-	-	-	-	-	-	-	-	-	-	-	Trips In: 1
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Trips Out: 0
Project	0	0	0	0	0	0	0	0	0	0	0	0	0	Years Grown: 0

15 Min Period														
Northbound				Southbound				Eastbound				Westbound		
NBL	NBT	NBR		SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7	0	1	0	0	0	0	0	130	4	2	134	0	278	1009
4	0	2	0	0	0	0	0	108	5	3	122	0	244	980
2	0	4	0	0	0	0	0	97	3	3	124	0	233	973
6	0	2	0	0	0	0	0	116	3	5	112	0	254	954
4	0	4	0	0	0	0	0	124	6	3	108	0	249	933
5	0	1	0	0	0	0	0	101	4	4	122	0	237	
7	0	1	0	0	0	0	0	101	7	2	96	0	214	
6	0	5	0	0	0	0	0	106	6	1	109	0	233	
9:00AM TO 10:00AM														
Volumes	19	0	9	0	0	0	0	461	15	13	492	0	1009	
Season Factor	19	0	9	0	0	0	0	461	15	13	492	0	1009	1
Growth	19	0	9	0	0	0	0	461	15	13	492	0	1009	1
In/Out	-	-	-	-	-	-	-	-	-	-	-	-	-	Trips In: 1
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Trips Out: 0
Project	0	0	0	0	0	0	0	0	0	0	0	0	0	Years Grown: 0

15 Min Period														
Northbound				Southbound				Eastbound				Westbound		
NBL	NBT	NBR		SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7	0	1	0	0	0	0	0	130	4	2	134	0	278	1009
4	0	2	0	0	0	0	0	108	5	3	122	0	244	980
2	0	4	0	0	0	0	0	97	3	3	124	0	233	973
6	0	2	0	0	0	0	0	116	3	5	112	0	254	954
4	0	4	0	0	0	0	0	124	6	3	108	0	249	933
5	0	1	0	0	0	0	0	101	4	4	122	0	237	
7	0	1	0	0	0	0	0	101	7	2	96	0	214	
6	0	5	0	0	0	0	0	106	6	1	109	0	233	
9:00AM TO 10:00AM														
Volumes	19	0	9	0	0	0	0	461	15	13	492	0	1009	
Season Factor	19	0	9	0	0	0	0	461	15	13	492	0	1009	1
Growth	19	0	9	0	0	0								

TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Tres Belle Circle
 FILENAME: C6 - Tres Belle & Cove - 11 AM-2 PM - with Thru
 COUNT DATE: 4/9/2019
 REPORT DATE: 4/16/2019
 DAY: Tuesday
 ANALYSIS YEAR: 2019
 CITY: Martin County
 EW STREET: Cove Road
 CONTROL: TWSC

15 Min Period	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM	
11:00-11:15	4	0	3	0	0	0	0	117	4	5	92	0	225	910	
11:15-11:30	5	0	2	0	0	0	0	106	5	4	98	0	220	908	
11:30-11:45	6	0	5	0	0	0	0	95	5	2	114	0	227	932	
11:45-12:00	4	0	2	0	0	0	0	108	3	4	117	0	238	923	
12:00-12:15	5	0	6	0	0	0	0	97	3	2	110	0	223	915	
12:15-12:30	5	0	3	0	0	0	0	103	2	3	128	0	244		
12:30-12:45	3	0	4	0	0	0	0	107	1	0	103	0	218		
12:45-1:00	4	0	1	0	0	0	0	104	5	2	114	0	230		

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AM PEAK HOUR IS FROM: 11:30 AM TO 12:30 PM
 Volumes 20 0 16 0 0 0 0 0 403 13 11 469 0 932
 Season Factor 20 0 16 0 0 0 0 0 403 13 11 469 0 932
 Growth In/Out - - - - - - - - - - - - - -
 Percentage 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PROJECT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Seasonal Factor: 1
 Trips In: 403
 Trips Out: 13
 Growth Rate: 0%
 Years Grown: 1

Total	20	0	16	0	0	0	0	403	13	11	469	0	932			
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15 Min Period lanes	Northbound			Southbound			Eastbound			Westbound			ONE HOUR SUM	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
1:00-1:15	4	0	3	0	0	0	0	99	4	2	94	0	206	889
1:15-1:30	2	0	2	0	0	0	0	99	3	3	131	0	240	683
1:30-1:45	8	0	2	0	0	0	0	111	5	2	108	0	236	443
1:45-2:00	4	0	1	0	0	0	0	89	4	1	108	0	207	207
													0	0
													0	0
													0	0

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PM PEAK HOUR IS FROM: 1:00 PM TO 2:00 PM
 Volumes 18 0 8 0 0 0 0 0 398 16 8 441 0 889
 Season Factor 18 0 8 0 0 0 0 0 398 16 8 441 0 889
 Growth In/Out - - - - - - - - - - - - - -
 Percentage 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PROJECT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Seasonal Factor: 1
 Trips In: 398
 Trips Out: 16
 Growth Rate: 0%
 Years Grown: 0

Total	18	0	8	0	0	0	0	398	16	8	441	0	889			
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TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Tres Belle Circle
 FILENAME: C6 - Tres Belle & Cove - 2 PM-6 PM - with Thru
 COUNT DATE: 4/9/2019
 REPORT DATE: 4/16/2019
 DAY: Tuesday
 ANALYSIS YEAR: 2019
 CITY: Martin County
 E/W STREET: Cove Road
 CONTROL: TWSC

15 Min Period	NBL			NBT			NBR			SBL			SBT			SBR			EBL			EBT			EBR			WBL			WBT			WBR			TOTAL			ONE HOUR SUM																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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AM PEAK HOUR IS FROM: 3:00PM TO 4:00PM
 Volumes 16 0 4 0 0 0 0 0 670 17 14 499 0 1220
 Season Factor 16 0 4 0 0 0 0 0 670 17 14 499 0 1220
 Growth 16 0 4 0 0 0 0 0 670 17 14 499 0 1220
 In/Out - - - - - - - - - - - - - - -
 Percentage 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PROJECT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Total	16	0	4	0	0	0	0	670	17	14	499	0	1220				
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15 Min Period lanes	Northbound			Southbound			Eastbound			Westbound			ONE HOUR SUM		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR		TOTAL	
	2	0	5	0	0	0	0	132	4	6	195	0		344	1354
	3	0	2	0	0	0	0	148	4	2	215	0		374	1355
	1	0	1	0	0	0	0	154	3	1	171	0		331	1324
	2	0	4	0	0	0	0	146	3	1	149	0		305	1330
	4	0	1	0	0	0	0	168	4	3	165	0		345	1342
	2	0	2	0	0	0	0	148	3	1	187	0		343	
	2	0	0	0	0	0	0	171	5	1	158	0		337	
	3	0	0	0	0	0	0	152	4	3	155	0		317	
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PM PEAK HOUR IS FROM: 4:15PM TO 5:15PM
 Volumes 10 0 8 0 0 0 0 0 616 14 7 700 0 1355
 Season Factor 10 0 8 0 0 0 0 0 616 14 7 700 0 1355
 Growth 10 0 8 0 0 0 0 0 616 14 7 700 0 1355
 In/Out - - - - - - - - - - - - - - -
 Percentage 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PROJECT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Total	10	0	8	0	0	0	0	616	14	7	700	0	1355				
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HCS7 Two-Way Stop-Control Report

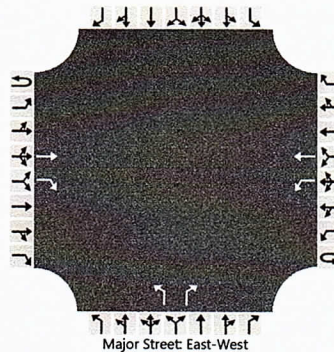
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/16/2019
Analysis Year	2019
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Existing

Site Information

Intersection	Cove Rd & Tres Belle
Jurisdiction	Martin County
East/West Street	Cove Rd
North/South Street	Tres Belle Cir
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	1	1	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume (veh/h)			616	14		7	700			10		8				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)					4.1				7.1		6.2					
Critical Headway (sec)					4.13				6.43		6.23					
Base Follow-Up Headway (sec)					2.2				3.5		3.3					
Follow-Up Headway (sec)					2.23				3.53		3.33					

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)					7				11		8					
Capacity, c (veh/h)					921				153		468					
v/c Ratio					0.01				0.07		0.02					
95% Queue Length, Q ₉₅ (veh)					0.0				0.2		0.1					
Control Delay (s/veh)					8.9				30.3		12.8					
Level of Service (LOS)					A				D		B					
Approach Delay (s/veh)					0.1				22.5							
Approach LOS									C							

HSMV_Rep_Agency_Re_Reporting_Agency	Form_Type	Crash_Date	Crash_Time	City	County	Crash_Street	Intersecting_Street	Offset_Distan	Offset_Direction	Crash_Type	Vehicles	Weather_C	Light_Conc	Manner_of_Collision
89038669 19-01949	Martin Co SO	2/1/2019	12:33 PM	Stuart	Martin	SE COVE RD	SE TRES BELLE CIR	91	West	Rear End	4	Rain	Daylight	Front to Rear
89038843 19-02592	Martin Co SO	2/11/2019	2:30 PM	Stuart	Martin	COVE RD SE	TRES BELLE CIR SE	100	East	Rear End	2	Cloudy	Daylight	Sideswipe, Same Direction
89039130 19-04704	Martin Co SO	3/16/2019	10:37 AM	Stuart	Martin	COVE RD SE	TRES BELLE CIR SE	20	West	Rear End	2	Rain	Daylight	Front to Rear

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Form 750-020-01
TRAFFIC ENGINEERING
10/15

City: Stuart
County: 89 – Martin
District: Four

Engineer: James Kemp
Date: April 16, 2019

Major Street: Cove Rd
Minor Street: Tres Belle Cir/Driveway 2

Lanes: 1 Major Approach Speed: 45
Lanes: 1 Minor Approach Speed:

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph (70 km/h)? ☒ Yes ☐ No
 2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☒ No
- "70%" volume level may be used if Question 1 or 2 above is answered "Yes" ☒ 70% ☒ 100%

WARRANT 3 - PEAK HOUR

If all three criteria are fulfilled or the plotted point lies above the appropriate line, then the warrant is satisfied.

Unusual condition justifying use of warrant:

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
7:30 AM	1767	46

Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.
7:30 AM	1767	46

Criteria

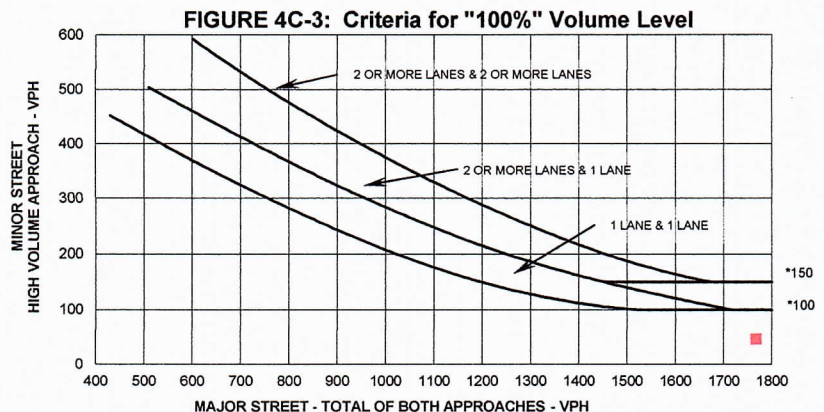
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*	0.3	
Fulfilled?:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

2. Volume on Minor Approach One-Direction *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*	46	
Fulfilled?:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

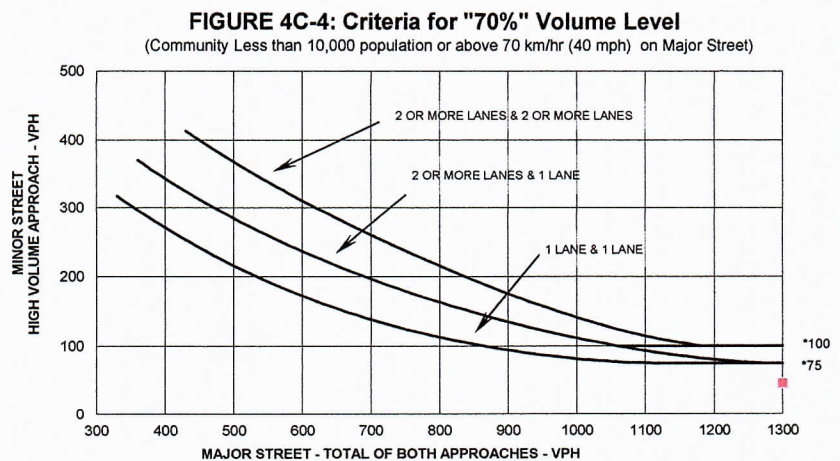
3. Total Intersection Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*		1,812
Fulfilled?:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Applicable: ☒ Yes ☐ No
Satisfied: ☐ Yes ☒ No

Plot volume combination on the applicable figure below.



* Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.



* Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume threshold for a minor street approach with one lane.

TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Tres Belle Circle/Driveaway 2
 FILENAME: C6 - Tres Belle & Cove - Yearly with Project
 COUNT DATE: 4/9/2019
 REPORT DATE: 4/16/2019
 DAY: Tuesday
 ANALYSIS YEAR: 2027
 CITY: Martin County
 CONTROL: Martin County

15 Min Period	Northbound			Southbound			Eastbound			Westbound			ONE HOUR SUM	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR		TOTAL
7:00-7:15	9	0	4	0	0	0	0	109	2	0	172	0	296	1344
7:15-7:30	1	0	1	0	0	0	0	134	0	0	166	0	302	1363
7:30-7:45	7	0	6	0	0	0	0	162	7	0	167	0	349	1391
7:45-8:00	6	0	1	0	0	0	0	193	2	0	195	0	397	1336
8:00-8:15	6	0	2	0	0	0	0	156	2	1	148	0	315	1271
8:15-8:30	6	0	2	0	0	0	0	196	3	1	122	0	330	
8:30-8:45	6	0	3	0	0	0	0	128	3	0	154	0	294	
8:45-9:00	5	0	2	0	0	0	0	191	3	2	129	0	332	

AM PEAK HOUR IS FROM: 7:30 AM TO 8:30 AM

Volumes	25	0	11	0	0	0	0	707	14	2	632	0	1391
Season Factor	25	0	11	0	0	0	0	707	14	2	632	0	1391
Growth	25	0	11	0	0	0	0	917	14	2	819	0	1788
In/Out	-	-	-	OUT	-	OUT	IN	-	-	-	IN	-	-
Percentage	0%	0%	0%	20%	0%	40%	40%	0%	0%	0%	0%	20%	0%
PROJECT	0	0	0	15	0	31	10	0	0	0	0	5	0

Seasonal Factor: 1
Trips In: 25
Trips Out: 78
Growth Rate: 1.033
Years Grown: 8

AM

← 876 →
← 826 →

10 →
917 →
14 →

↑ 5
← 819
↓ 2

31 ←
0 ↓
15 →

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11 ↓

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943 →

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E-12

15 Min Period lanes	Northbound				Southbound				Eastbound				Westbound				ONE HOUR SUM	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL					
4:00-4:15	2	0	5	0	0	0	0	132	4	6	195	0	344	1354				
4:15-4:30	3	0	2	0	0	0	0	148	4	2	215	0	374	1355				
4:30-4:45	1	0	1	0	0	0	0	154	3	1	171	0	331	1324				
4:45-5:00	2	0	4	0	0	0	0	146	3	1	149	0	305	1330				
5:00-5:15	4	0	1	0	0	0	0	168	4	3	165	0	345	1342				
5:15-5:30	2	0	2	0	0	0	0	148	3	1	187	0	343					
5:30-5:45	2	0	0	0	0	0	0	171	5	1	158	0	337					
5:45-6:00	3	0	0	0	0	0	0	152	4	3	155	0	317					

← 938

→ 846

33

799

14

← 931

→ 817

17

908

7

PM

↑ 30

↓ 50

20

0

10

↓

↑

↓ 21

↑ 18

10

0

8

↑

↓

Seasonal Factor: 1

Growth Rate: 1.033

Trips In: 84

Trips Out: 50

Years Grown: 8

HCS7 Two-Way Stop-Control Report

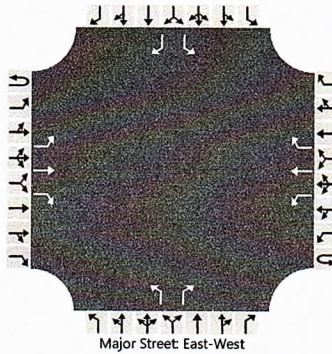
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/16/2019
Analysis Year	2027
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	With Project

Site Information

Intersection	Cove Rd & Tres Belle
Jurisdiction	Martin County
East/West Street	Cove Rd
North/South Street	Driveway 2
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	1	0	1	1	1		1	0	1		1	0	1
Configuration		L	T	R		L	T	R		L		R		L		R
Volume (veh/h)		10	917	14		2	819	5		25		11		15		31
Percent Heavy Vehicles (%)		3				3				3		3		3		3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No				No				No			
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1		6.2		7.1		6.2
Critical Headway (sec)		4.13				4.13				7.13		6.23		7.13		6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.53		3.33		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11				2				26		12		16		33
Capacity, c (veh/h)		772				700				157		308		163		353
v/c Ratio		0.01				0.00				0.17		0.04		0.10		0.09
95% Queue Length, Q ₉₅ (veh)		0.0				0.0				0.6		0.1		0.3		0.3
Control Delay (s/veh)		9.7				10.2				32.6		17.2		29.4		16.2
Level of Service (LOS)		A				B				D		C		D		C
Approach Delay (s/veh)	0.1				0.0				27.9				20.5			
Approach LOS									D				C			

TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Legacy Cove Cir E/W STREET: Cove Rd
 FILENAME: 1/22/2020 DAY: Wednesday CITY: Martin County
 COUNT DATE: 1/22/2020 ANALYSIS YEAR: 2020
 REPORT DATE: CONTROL: Signalized

15 Min Period	Northbound				Southbound				Eastbound				Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	WBL	WBT	WBR	
7:00-7:15							0	93	4	5	131	0	233				1227
7:15-7:30							0	111	26	19	132	2	290				1328
7:30-7:45							1	120	36	23	145	1	326				1268
7:45-8:00							1	97	71	54	155	0	378				1202
8:00-8:15							2	89	77	66	100	0	334				1040
8:15-8:30							2	132	14	7	75	0	230				
8:30-8:45							4	132	5	3	115	1	260				
8:45-9:00							3	136	3	3	70	1	216				

AM PEAK HOUR IS FROM: 7:15AM TO 8:15AM
 Volumes 0 0 0 0 0 0 0 4 417 210 162 532 3 1328
 Season Factor 0 0 0 0 0 0 0 4 417 210 162 532 3 1328
 Growth In/Out - - - - - - - - - - - - - -
 Percentage 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PROJECT 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Seasonal Factor: 1
 Trips In: 417
 Trips Out: 210
 Growth Rate: 0%
 Years Grown: 1

E-14

15 Min Period	Northbound				Southbound				Eastbound				Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	WBL	WBT	WBR	
1:30-1:45							12	108	4	4	58	3	189				732
1:45-2:00							1	113	1	1	50	1	167				834
2:00-2:15							3	95	4	5	53	1	161				923
2:15-2:30							1	117	9	27	58	3	215				966
2:30-2:45							2	142	27	25	91	4	291				997
2:45-3:00							3	115	36	9	90	3	256				
3:00-3:15							3	109	7	27	58	0	204				
3:15-3:30							3	90	21	25	107	0	246				

PM PEAK HOUR IS FROM: 5:00PM TO 6:00PM
 Volumes 0 0 0 0 0 0 0 11 456 91 86 346 7 997
 Season Factor 0 0 0 0 0 0 0 11 456 91 86 346 7 997
 Growth In/Out - - - - - - - - - - - - - -
 Percentage 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PROJECT 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Seasonal Factor: 1
 Trips In: 456
 Trips Out: 91
 Growth Rate: 0%
 Years Grown: 0

Total 0 0 0 0 0 0 0 11 456 91 86 346 7 997

Vision Volume Report

Number of Vehicles in 15-Minute Period

	Ttl Volume	Avg Volume	EBLT	EBRT	EBT	93 15-Min Percent	Right Sum	Through Sum	Hourly Percent of RT
01/22/2020 07:00	97	32.3	0	4	111	23%	210	417	50%
01/22/2020 07:15	137	45.7	0	26	120	30%			
01/22/2020 07:30	157	52.3	1	36	97	73%			
01/22/2020 07:45	169	56.3	1	71	89	87%			
01/22/2020 08:00	168	56.0	2	77	132				
01/22/2020 08:15	148	49.3	2	14	132				
01/22/2020 08:30	141	47.0	4	5	136				
01/22/2020 08:45	142	47.3	3	3	164				
01/22/2020 09:00	170	56.7	3	3	168				
01/22/2020 09:15	173	57.7	3	2	91				
01/22/2020 09:30	95	31.7	4	0	85				
01/22/2020 09:45	88	29.3	1	2	106				
01/22/2020 10:00	107	35.7	1	0	101				
01/22/2020 10:15	101	33.7	0	0	108				
01/22/2020 10:30	113	37.7	0	5	91				
01/22/2020 10:45	95	31.7	3	1	105				
01/22/2020 11:00	108	36.0	1	2	91				
01/22/2020 11:15	96	32.0	2	3	97				
01/22/2020 11:30	103	34.3	5	1	103				
01/22/2020 11:45	108	36.0	2	3	101				
01/22/2020 12:00	104	34.7	1	2	82				
01/22/2020 12:15	85	28.3	1	2	98				
01/22/2020 12:30	101	33.7	2	1	103				
01/22/2020 12:45	109	36.3	3	3	92				
01/22/2020 13:00	96	32.0	4	0	91				
01/22/2020 13:15	94	31.3	3	0	108				
01/22/2020 13:30	124	41.3	12	4	113				
01/22/2020 13:45	115	38.3	1	1	95				
01/22/2020 14:00	102	34.0	3	4	117 15-Min Percent				
01/22/2020 14:15	127	42.3	1	9	142	19%			
01/22/2020 14:30	171	57.0	2	27	115	31%			
01/22/2020 14:45	154	51.3	3	36	109	6%			
01/22/2020 15:00	119	39.7	3	7	90	23%			
01/22/2020 15:15	114	38.0	3	21					
							Right Sum	Through Sum	Hourly Percent of RT
							91	456	20%

Vision Volume Report

Number of Vehicles in 15-Minute Period

	Ttl Volume	Avg Volume	WBLT	WBRT	WBT		131	15-Min Percent		Left Sum	Through Sum	Hourly Percent of LT
01/22/2020 07:00	136	45.3		5	0		131	14%		162	532	30%
01/22/2020 07:15	153	51.0		19	2		132	14%				
01/22/2020 07:30	169	56.3		23	1		145	16%				
01/22/2020 07:45	209	69.7		54	0		155	35%				
01/22/2020 08:00	166	55.3		66	0		100	66%				
01/22/2020 08:15	82	27.3		7	0		75					
01/22/2020 08:30	119	39.7		3	1		115					
01/22/2020 08:45	74	24.7		3	1		70					
01/22/2020 09:00	132	44.0		3	1		128					
01/22/2020 09:15	89	29.7		3	3		83					
01/22/2020 09:30	28	9.3		1	2		25					
01/22/2020 09:45	28	9.3		2	1		25					
01/22/2020 10:00	76	25.3		4	1		71					
01/22/2020 10:15	68	22.7		3	1		64					
01/22/2020 10:30	65	21.7		3	4		58					
01/22/2020 10:45	66	22.0		3	2		61					
01/22/2020 11:00	65	21.7		3	4		58					
01/22/2020 11:15	80	26.7		0	2		78					
01/22/2020 11:30	69	23.0		4	2		63					
01/22/2020 11:45	81	27.0		4	2		75					
01/22/2020 12:00	92	30.7		3	1		88					
01/22/2020 12:15	84	28.0		0	4		80					
01/22/2020 12:30	93	31.0		3	5		85					
01/22/2020 12:45	81	27.0		2	1		78					
01/22/2020 13:00	65	21.7		2	4		59					
01/22/2020 13:15	89	29.7		1	2		86					
01/22/2020 13:30	55	18.3		4	3		48					
01/22/2020 13:45	65	21.7		4	3		58					
01/22/2020 14:00	52	17.3		1	1		50					
01/22/2020 14:15	59	19.7		5	1		53	15-Min Percent				
01/22/2020 14:30	88	29.3		27	3		58	47%				
01/22/2020 14:45	120	40.0		25	4		91	27%				
01/22/2020 15:00	102	34.0		9	3		90	10%				
01/22/2020 15:15	85	28.3		27	0		58	47%				
01/22/2020 15:30	132	44.0		25	0		107					
										Left Sum	Through Sum	Hourly Percent of LT
										88	297	30%

MARTIN COUNTY TRAFFIC

Intersection: 313 WILLOUGHBY BLVD @ COVE ROAD

PHASE	EBLT 1	WB 2	3	4	5	EB 6	7	SB 8
Min green	5	20	0	0	0	20	0	7
Vehicle Ext	3	5	0	0	0	5	0	3
Max 1	15	45	0	0	0	45	0	45
Yellow	3.7	4.4	3	3	3	4.4	3	4.8
Red Clear	3.3	2	0	0	0	2	0	2

Walk	0	7	0	0	0	0	0	0
Ped Clear	0	16	0	0	0	0	0	0

Start Up		Green				Green		
Locking Detector		X				X		
Veh. Recalls		Min				Min		

Assigned ph.	1							
Cross Switch Ph	6							

September 24, 2019

MARTIN COUNTY TRAFFIC

Intersection: 321 COVE RD @ LEGACY COVE CHARTER SCHOOL

	WBLT	EB		SB	EBLT	WB		NB
PHASE	1	2	3	4	5	6	7	8
Min green	7	10	0	7	7	10	0	7
Vehicle Ext	3	5	0	3	3	5	0	3
Max 1	25	45	0	35	25	45	0	35
Yellow	4.4	4.8	3	3.4	4.4	4.8	3	3.4
Red Clear	2	2	0	3	2	2	0	3

Walk	0	7	0	7	0	7	0	0
Ped Clear	0	22	0	20	0	28	0	0

Start Up		Green				Green		
Locking Detector		X				X		
Veh. Recalls		Min				Min		

Assigned ph.	1				5			
Cross Switch Ph	6				2			

January 13, 2020

MARTIN COUNTY TRAFFIC

Intersection: 127 SR-76 (KANNER HIGHWAY) @ COVE ROAD

PHASE	SBLT 1	NB 2	3	WB 4	5	SB 6	7	8
Initial green	5	10	0	7	0	10	0	0
Passage	3	3	0	3	0	3	0	0
Max 1	20	60	0	45	0	60	0	0
Max 2	30	50	30	50	30	50	30	50
Yellow	4.8	5.1	3	4.8	3	5.1	3	3
All Red	2.3	2	0	2.7	0	2.3	0	0

Walk	0	0	0	5	0	0	0	0
Ped Clear	0	0	0	32	0	0	0	0

Initial	1-Inactive	4-Green	0-None	1-Inactive	0-None	4-Green	0-None	0-None
NA Response	0-None	1-NonAct1	0-None	2-NonAct2	0-None	1-NonAct1	0-None	2-NonAct2
Veh. Recalls	0-None	2-Min	0-None	0-None	0-None	2-Min	0-None	0-None

Non-Lock	1	0	0	1	0	0	0	0
Dual Entry	0	0	0	0	0	0	0	0

Assigned ph.	1	2	3	4	5	6	7	8
Oper. Mode	0-Veh	0-Veh	0-Veh	0-Veh	0-Veh	0-Veh	0-Veh	0-Veh
Switch	6	0	0	0	0	0	0	0

August 29, 2018

MARTIN COUNTY TRAFFIC

LOCATION: 127 SR-76 (KANNER HIGHWAY) @ COVE ROAD

Day Plan

Day 2 = Weekdays Day 1 = Weekends

<u>DAY</u>	<u>START</u>	<u>GROUP 1 C/S/O</u>	<u>COBALT Plan</u>					
1	9:00	2/2/1	1					
1	19:00	0/0/4	99					
2	6:00	4/1/1	3					
2	9:30	2/1/1	5					
2	15:00	3/1/1	7					
2	19:00	3/2/1	9					
2	20:30	0/0/4	99					
<u>Plan</u>		1	3	5	7	9		
DIAL		2	4	2	3	3		
SPLIT		2	1	1	1	2		
OFFSET		66	72	86	105	68		
CYCLE LENGTH		120	150	140	160	120		
Cobalt Sequence								
<u>PHASE</u>		<u>SPLITS (SECONDS)</u>						
1	SBLT	18	17	16	19	15		
2	NB	62	82	79	85	65		
3								
4	WB	40	51	45	56	40		
5								
6	SB	80	99	95	104	80		
7								
8								

Printed

08/29/18

MARTIN COUNTY TRAFFIC

Intersection: 323 ATLANTIC RIDGE @ COVE ROAD

PHASE	1	WB 2	3	NB 4	WBLT 5	EB 6	7	8
Initial green	0	10	0	7	6	10	0	0
Passage	0	5	0	3	3	5	0	0
Max 1	0	45	0	35	20	45	0	0
Max 2	0	45	0	35	20	45	0	0
Yellow	3	4.8	3	3.4	4	4.8	3	3
All Red	0	2	0	2.9	2	2	0	0

Walk	0	0	0	7	0	0	0	0
Ped Clear	0	0	0	23	0	0	0	0

Initial	0-None	4-Green	0-None	1-Inactive	1-Inactive	4-Green	0-None	0-None
NA Response	0-None	1-NonAct1	0-None	0-None	0-None	1-NonAct1	0-None	0-None
Veh. Recalls	0-None	2-Min	0-None	0-None	0-None	2-Min	0-None	0-None

Non-Lock	1	0	1	1	1	0	1	1
Dual Entry	0	0	0	0	0	0	0	0

Assigned ph.	1	2	3	4	5	6	7	8
Oper. Mode	0-Veh	0-Veh	0-Veh	0-Veh	0-Veh	0-Veh	0-Veh	0-Veh
Switch	0	0	0	0	2	0	0	0

**** P8 (sb ped) operates as P4 in cabinet and programming

** to enable MMU: FFF, #4, #7, scroll down to #16 and program a "1" under "pres" for malfunction unit

September 9, 2016

Cove-Salerno Development

Master Stormwater Management Report

For Review By:
Martin County

Prepared For:
Cove-Salerno Partners

Prepared By:
The MilCor Group, Inc.

February 2019
Revised April 2019
Revised September 2019
Revised January 2020

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Design Certification

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I, Kenneth Rau, do certify to Martin County that the application for the Cove-Salerno Development has been designed in full compliance with Divisions 9 and 10 of Article 4 of the Martin County Land Development Regulations (LDR). I acknowledge that Martin County's LDR may and do include requirements that are more stringent or restrictive than the requirements of other regulatory agencies including, but not limited to, the South Florida Water Management District (SFWMD), the U.S. Army Corps of Engineers (USACOE), the U.S. Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP). Any plans, calculations, reports, or other documents submitted to Martin County or any regulatory agency in support of the application have been prepared in full recognition of and compliance with Martin County LDR.



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1. Existing Conditions:

1.1 Location

The site is located just west of Kanner Hwy. and spans from Salerno Rd. to Cove Rd., within Martin County. The project is bordered on the west by 76 Golf World, and both vacant land and private residences on the east side. It is approximately 47.12 acres in size lying in The Hanson Grant, Township 39 South, Range 41 East. Access to the project is located on Cove Rd. approximately 0.4 miles east of Kanner Hwy. The project is bisected by a small 0.45 acre strip of right of way that will be included in the project, bringing the total project area to 47.57 acres.

1.2 Site Conditions

The project was originally a fish farm containing 72 on-site ponds for production. In 2008 the site was approved to fill in the ponds and return to an undeveloped agricultural site. This was approved via South Florida Water Management District (SFWMD) Environmental Permit No. 43-02237-P. The majority of site construction was completed, only a few minor ponds were left on-site. The system was completed and certified to SFWMD and Martin County. It is currently maintained to a level that is intended to preserve its agricultural use.

1.3 Soils & Wetlands

Soils:

Based on the Martin County Soil Survey, the dominant soil type for the site is 95.4% Arents (Map unit Symbol 36), which are somewhat poorly drained with the water table at depths between 18 to 36 inches throughout the year. The hydrologic group is A. The other soil type for the site is 4.6% Waveland and Immokalee fine sands (Map unit Symbol 4). Waveland and Immokalee fine sands are poorly drained with the water table at depths between 6 to 18 inches throughout the year, and the hydrologic group is also A/D. Please refer to the Soils Map in Attachment 4.1 for more information. Waveland and Immokalee fine sands

Wetlands:

Per the existing Environmental Resource Permit, there are no on-site wetlands, however, there are offsite wetlands adjacent to the north-east and south-east of the property.

1.4 Topography & Drainage Pattern

The topographic information shows that the site typically slopes from the south property line to the north property line. The site elevations range from approximately 9.5 feet NAVD to 12.5 NAVD, north to south. When the fish ponds were filled in, the site was returned to the historic drainage pattern of the site. Runoff from the site sheet flows to the dry detention area located along the north property line. Once the dry detention area fills and water quality requirements are

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met, the runoff is discharged through a control structure and is conveyed to the swale located in the Salerno Road right-of-way.

1.5 FEMA Flood Zone

The site lies wholly within FEMA Flood Zone X, which is outside the 0.2% annual chance flood. The site is shown within FEMA FIRM Maps (Attachment 4.3) consisting of Map Numbers 12085C0282G and 12085C0301G.

1.6 Allowable Discharge

The allowable discharge rate for the project set in the previous environmental resource permit (See Attachment 4.5) as 5.58 cfs, which was determined via a TR-55 pre-development analysis of the property. The proposed project will limit discharge to less than 5.58 cfs.

Please note that the project was also reviewed as part of the Martin Crossing's project (SFWMD ERP #43-01050-P), which set a much higher allowable discharge rate for the property (0.46 cfs/ac, See Basin ZMBWET2).

2. Proposed Development:

2.1 Project Description:

The master plan for the proposed project consists of planning for 79 duplex residences (158 residences), nine multi-unit townhome buildings, a club-house and amenity buildings, roads, drainage improvements, wet detention ponds, and water distribution and sanitary facilities.

	Full Site Landuse			
	Existing (Per ERP #43-02237-P)		Proposed	
Buildings	0.21 Ac	0.4%	6.52 Ac	13.7%
Roads/Impervious	0.08 Ac	0.2%	11.77 Ac	24.7%
Lake/Water Surface	0.0 Ac	0.0%	9.54 Ac	20.1%
Green/Buffers/Pervious	47.1 Ac	99.4%	18.60 Ac	39.1%
ROW Dedication	0.0 Ac	0.0%	1.15 Ac	2.4%
Total	47.39 Ac	0.00%	47.57 Ac	100%

The project will be developed in two phases. The first phase will consist of approximately 32.8 acres of development and will include the driveway connection to Salerno Road, left and right hand turn lanes from Salerno Road, internal roads, a stabilized road connection to Cove Road, lakes, duplexes, and the water and sanitary backbone infrastructure for the project. Phase 2 will consist of approximately 13.6 acres of development, consisting of the driveway connection to

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Cove Road, a left hand turn lane from Cove Road, internal roads, townhommess, lakes, the future IQ lake, and water and sanitary services.

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Proposed Landuse Breakdown

	Phase 1		Phase 2		Full Site	
Single Family Lots						
Buildings	3.63	11.0%	0.00	0.0%	3.63	7.6%
Driveways/Impervious	6.10	18.4%	0.00	0.0%	6.10	12.8%
Pervious	2.47	7.5%	0.00	0.0%	2.47	5.2%
Townhome Area		0.0%		0.0%	0.00	0.0%
Buildings	0.00	0.0%	2.78	19.2%	2.78	5.8%
Driveways	0.00	0.0%	0.73	5.0%	0.73	1.5%
Other Buildings (Cabana)	0.00	0.0%	0.11	0.8%	0.11	0.2%
Green/Buffers/Other						
Pervious	9.47	28.6%	6.65	46.0%	16.12	33.9%
Roads/Other Impervious	3.28	9.9%	1.66	11.5%	4.94	10.4%
Lake/Water Surface	7.87	23.8%	1.67	11.6%	9.54	20.1%
Sub-Total	32.82	99.1%	13.61	94.0%	46.42	97.6%
ROW Dedication – Cove Rd	0.04	0.1%	0.87	6.0%	0.91	1.9%
ROW Dedication – Salerno Rd	0.24	0.7%	0.00	0.0%	0.24	0.5%
Grand Total	33.10	100.0%	14.47	100.0%	47.57	100.0%

*Note: All ROW Dedication will occur in the first Phase of Development, the above ROW Dedication breakdown represents where the dedicated area is located.

2.2 Control Elevation

A control elevation of 10.00 ft NGVD was established in SFWMD permit number 43-02237-P. The conversion to NAVD is NGVD = NAVD + 1.48 ft. The control elevation is 8.52 ft NAVD. For simplicity, the control elevation shall be rounded to 8.5 ft NAVD.

2.3 Water Quality

Water quality treatment is provided in the onsite wet detention lakes. Water quality treatment is provided for the more stringent of requirements of the SFWMD and Martin County regulations:

1" x Drainage Area

or

2.5" x Imperviousness x Drainage Area (SFWMD)

or

3" x % Imperviousness x Drainage Area (Martin County)

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Since the project will be developed in the phases, the lake system will provide the required water quality volume for the project as it is developed. The required water quality volume for the project is as follows:

Water Quality Requirements

	Phase 1	Phases 1 + 2
Required WQ Volume	7.83 Ac-ft	10.35 Ac-ft
Met at Lake Elevation	9.60 ft NAVD	9.60 ft NAVD

*Note: ROW Dedication Areas were not considered for water quality volumes.

During Phase 1 of the project, the outfall weir elevation will be set at elevation 9.60 ft NAVD. During Phase 2 of the project, the outfall weir will remain at elevation 9.60 ft NAVD. Therefore, the project will provide the required water quality treatment volume during each phase of the project.

Water quality calculations can be found in Attachment 4.4 Stormwater and Stage-Storage Calculations.

2.4 Stormwater Management System

The project's stormwater management will consist of inlets, culverts, swales, wet detention lakes, and an outfall control structure. The wet detention areas will be interconnected and controlled at the same elevation, acting as a single basin. Runoff will be conveyed to the wet detention areas for water quality treatment and attenuation prior to discharge. The project will outfall through an existing control structure, located in the north of the property at Lake 1, to the SE Salerno Road right of way.

The Phase 1 the stormwater management system will consist of necessary roadside drainage, culverts, a dry detention area, Lake 1, Lake 2, Lake 3, and Lake 4 (future IQ Lake). Lake 4 (Future IQ Lake) will be constructed; however, it is not considered part of the stormwater management system. The stormwater management system will include a stubout connection to Phase 2.

Phase 2 of the project will consist of the necessary roadside drainage components, culverts, and Lake 5. The system will be interconnected with the Phase 1 stormwater management system.

2.5 Offsite Improvements

The project will include offsite improvements to Cove Road and Salerno Road, which will consist of pavement widening for turn lanes, sidewalks, and stormwater management improvements. The stormwater improvements will consist of inlets and culverts to convey the stormwater from the proposed turn lanes and re-grading the roadside swales. The project is dedicating a variably sized ROW along the Cove Road frontage and 25 ft of ROW along the Salerno Road frontage, which will allow these improvements. The proposed additional imperviousness of each of the improvements is as follows:

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	ROW Dedicated	Additional Impervious
Cove Rd Improvements	0.91 Ac	0.19 Ac
Salerno Rd Improvements	0.24 Ac	0.41 Ac
Grand Total	1.15 Ac	0.61 Ac

3. Modeling:

3.1 Modeling Inputs

The following is a listing of Design Storm Events and Rainfall Amounts from the SFWMD Permit Information Manual that will be to model the system. Flood elevations and attenuation modeling will be performed with the final design.

Storm Event:	Criteria:	Rainfall Amount (inches):
10-yr, 24-hour	Minimum Road Elevation	7.0 inches
25-yr, 72-hour	Perimeter Elevation	11.5 inches
100-yr, 72-hour	Finished Floor Elevation	14.5 inches

3.2 Minimum Design Elevations

The post-development routing results are as follows:

Storm Event	Criteria	Previously Permitted	Modeled Elevation	Proposed Elevation
10-yr, 24-hour	Min. Pavement Elevation	11.61 NAVD	n/a	11.0 NAVD
25-yr, 72-hour	Perimeter Elevation	12.12 NAVD	n/a	12.0 NAVD
100-yr, 72-hour zero discharge	Finished Floor Elevation	12.62 NAVD	n/a	12.50 NAVD

*Note: Previously Permitted elevations per existing SFWMD ERP #43-02237-P. Elevations converted to NAVD. NGVD to NAVD conversion factor is NAVD = NGVD + 1.48 ft. Modeled elevations will be included in the final stormwater management report. Proposed elevations are conceptual.

3.3 Allowable Discharge

The post-development routing results are as follows:

Storm Event	Criteria	Allowable	Previously Permitted	Modeled Flow
25-yr, 72-hour	Max. Discharge	5.58 cfs	5.54 cfs	n/a

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*Note: Allowable and previously permitted discharge rates per SFWMD ERP #43-02237-P (Attachment 4.5). Modeled discharge will be provided with the final design stormwater management report.

3.5 Recovery

Per Martin County regulations, 50% of the treatment volume must be recovered within 24 hours to five days and 90% in 12 days from cessation of the storm event. Proof of system recovery will be provided with the final stormwater management report.

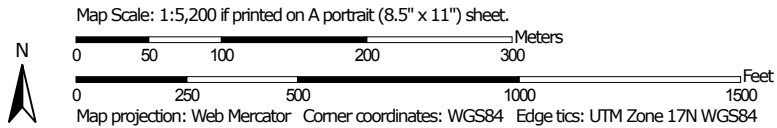
4. Attachments:

- 4.1 Soils Map & Information
- 4.2 Survey
- 4.3 FEMA FIRM map
- 4.4 Stage-Storage Calculations
- 4.5 SFWMD ERP No. 43-02237-P



Attachment 4.1


Soil Map—Martin County, Florida
(Overall Soils Map)




Soil Map—Martin County, Florida
(Overall Soils Map)


MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Martin County, Florida

Survey Area Data: Version 16, Oct 5, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 14, 2015—May 8, 2015

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4	Waveland and Immokalee fine sands	2.2	4.6%
36	Arents, 0 to 2 percent slopes	45.7	95.4%
Totals for Area of Interest		48.0	100.0%

Martin County, Florida

36—Arents, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1jq8k

Mean annual precipitation: 56 to 64 inches

Mean annual air temperature: 72 to 79 degrees F

Frost-free period: 350 to 365 days

Farmland classification: Not prime farmland

Map Unit Composition

Arents and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arents

Setting

Landform: Rises on marine terraces

Landform position (three-dimensional): Rise

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Altered marine deposits

Typical profile

C - 0 to 30 inches: fine sand

2Ab - 30 to 36 inches: mucky fine sand

2Eb - 36 to 60 inches: sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)

Depth to water table: About 18 to 36 inches

Frequency of flooding: None

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydrologic Soil Group: A

Forage suitability group: Forage suitability group not assigned (G156BC999FL)

Hydric soil rating: No

Data Source Information

Soil Survey Area: Martin County, Florida
Survey Area Data: Version 16, Oct 5, 2017

Martin County, Florida

4—Waveland and Immokalee fine sands

Map Unit Setting

National map unit symbol: 1jq7n

Mean annual precipitation: 56 to 64 inches

Mean annual air temperature: 72 to 79 degrees F

Frost-free period: 350 to 365 days

Farmland classification: Farmland of unique importance

Map Unit Composition

Waveland and similar soils: 40 percent

Immokalee and similar soils: 40 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Waveland

Setting

Landform: Flatwoods on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: fine sand

Eg - 4 to 43 inches: fine sand

Bh1 - 43 to 47 inches: fine sand

Bh2 - 47 to 77 inches: loamy fine sand

Cg1 - 77 to 91 inches: fine sand

Cg2 - 91 to 99 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: 30 to 50 inches to ortstein

Natural drainage class: Poorly drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat):

Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Very low (about 1.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G156BC141FL)
Other vegetative classification: South Florida Flatwoods (R156BY003FL)
Hydric soil rating: No

Description of Immokalee

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 35 inches: fine sand
Bh - 35 to 54 inches: fine sand
BC - 54 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat):
Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G156BC141FL)
Other vegetative classification: South Florida Flatwoods (R156BY003FL)
Hydric soil rating: No

Minor Components

Basinger

Percent of map unit: 4 percent
Landform: Drainageways on marine terraces
Landform position (three-dimensional): Dip

Down-slope shape: Linear
Across-slope shape: Concave
Other vegetative classification: Slough (R156BY011FL)
Hydric soil rating: Yes

Lawnwood

Percent of map unit: 4 percent
Landform: Marine terraces on flatwoods
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods
(R156BY003FL)
Hydric soil rating: No

Placid

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Freshwater Marshes and Ponds
(R156BY010FL)
Hydric soil rating: Yes

Jonathan

Percent of map unit: 3 percent
Landform: Rises on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods
(R156BY003FL)
Hydric soil rating: No

Nettles

Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods
(R156BY003FL)
Hydric soil rating: No

Salerno

Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods
(R156BY003FL)

Hydric soil rating: No

Data Source Information

Soil Survey Area: Martin County, Florida
Survey Area Data: Version 16, Oct 5, 2017

Attachment 4.2

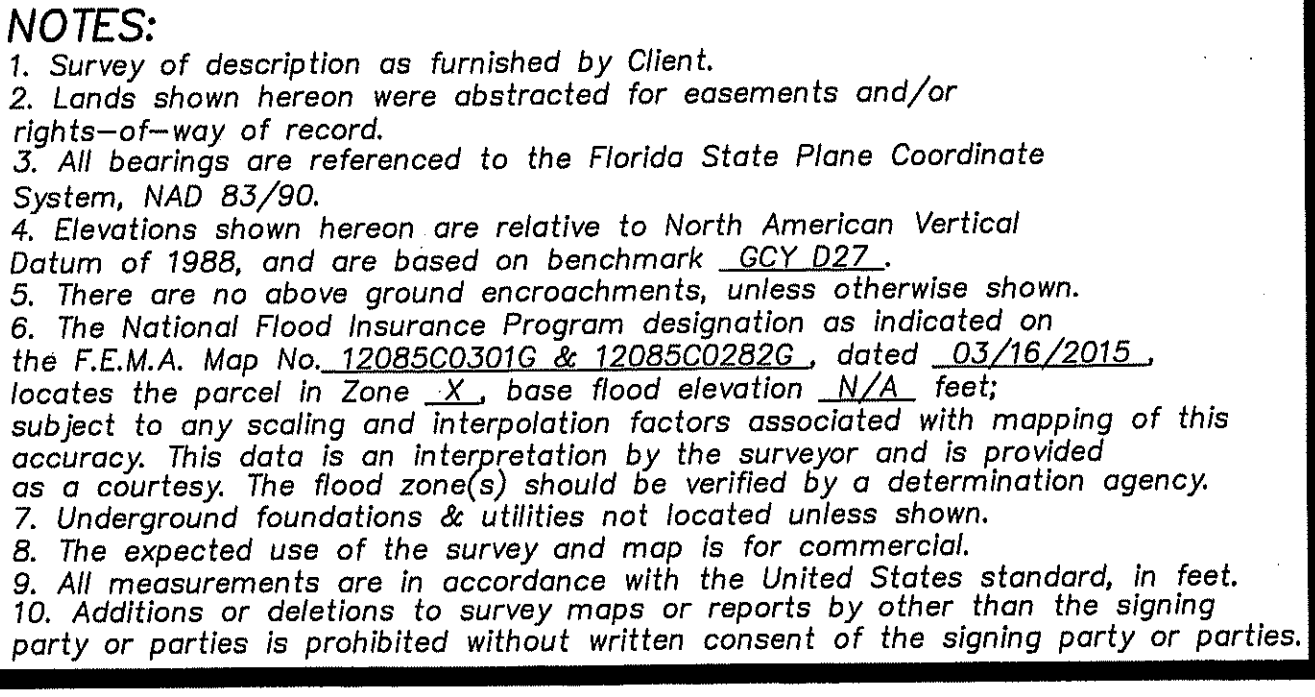
PREPARED FOR: COVE/SALERNO PARTNERS, LLC

STEPHEN J. BROWN, INC LICENSED BUSINESS NUMBER: 6484

SURVEYORS • DESIGNERS • LANDPLANNERS • CONSULTANTS

6319 EAST 5TH STREET, STUART, FLORIDA 34894 EMAIL: sjbinc@bellsouth.net PHONE: (772)-288-7176

DRAWN S.J.B.
CHECKED S.J.B.
DATE 11/07/2005
SCALE 1" = 100'
JOB NO. 4896-01-13
SHEET ONE
OF ONE SHEETS

[illegible]

1. PROPERTY ADDRESS: 371 SE COVE ROAD
2. CERTIFIED TO:
- COVE/SALERNO PARTNERS, LLC

NOT VALID WITHOUT THE SIGNATURE AND THE
ORIGINAL RAISED SEAL OF A FLORIDA LICENSED
SURVEYOR AND MAPPER.

STEPHEN J. BROWN, INC

STEPHEN J. BROWN, PROFESSIONAL SURVEYOR AND MAPPER
REGISTRATION NO. 4049, STATE OF FLORIDA

Attachment 4.3

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

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Coastal Base Flood Elevations shown on this map apply only landward of 0' 0" North American Vertical Datum of 1988. Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 'Flood Protection Measures' of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Florida State Plane East zone (FIPS 0901). The **horizontal datum** was the North American Datum of 1983 (NAD 83), GRS1980 Spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NINGS12
National Geodetic Survey
SSM-C-3, #9202
1315 East-West Highway
Silver Spring, Maryland, 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov/>.

Base Map information shown on this FIRM was derived from multiple sources and was provided in digital format using source material at a scale of 1:20,000 or larger.

Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations** and **floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unreviewed streams may differ from what is shown on previous maps.

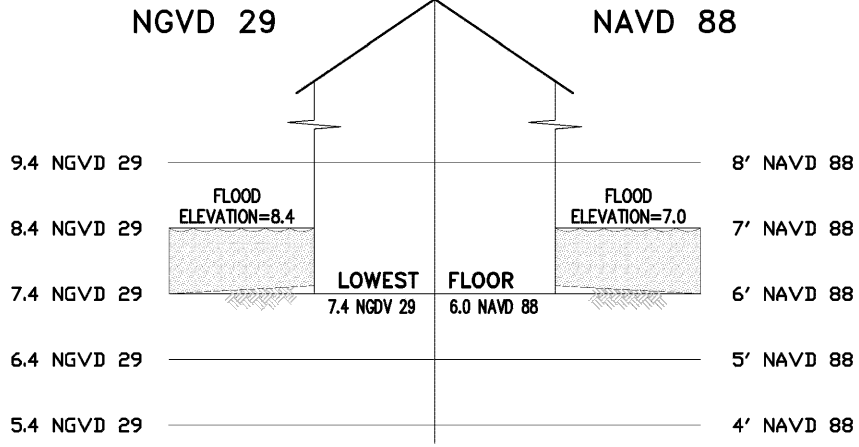
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Ground, structure, and NAVD 88 flood elevations may be compared and/or referenced to NGVD 29 by applying a standard conversion factor. To get the conversion from NAVD 88 to NGVD 29, add 1.4 foot to the NAVD 88 elevation. The 1.4 foot value is an average for the entire county. The Datum Conversion Schematic below illustrates this conversion.

DATUM CONVERSION SCHEMATIC



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the 'base flood', is the flood that has a 1% chance of being equalled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain Boundary
- Floodway Boundary
- Zone D Boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

Limit of Moderate Wave Action

Base Flood Elevation line and value; elevation in feet*
Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- Cross section line
- Transect line
- Culvert
- Bridge
- Footbridge
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 1000-meter Universal Transverse Mercator grid ticks, zone 17
- 5000-foot grid values: Florida State Plane Coordinate System, East zone (FIPS Zone 0901), Transverse Mercator
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- River Mile
- Flow accumulation point or hydraulic connection

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
OCTOBER 4, 2002

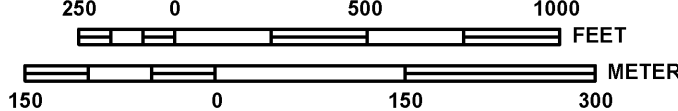
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
March 16, 2015 - to update corporate limits, to reflect updated topographic information, to add and change Base Flood Elevations, to add floodways, to add and change Special Flood Hazard Areas, and to change zone designations.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

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MAP SCALE 1" = 500'



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0282G

FIRM

FLOOD INSURANCE RATE MAP

MARTIN COUNTY, FLORIDA AND INCORPORATED AREAS

PANEL 282 OF 527
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MARTIN COUNTY	120161	0282	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12085C0282G
MAP REVISED
MARCH 16, 2015

Federal Emergency Management Agency

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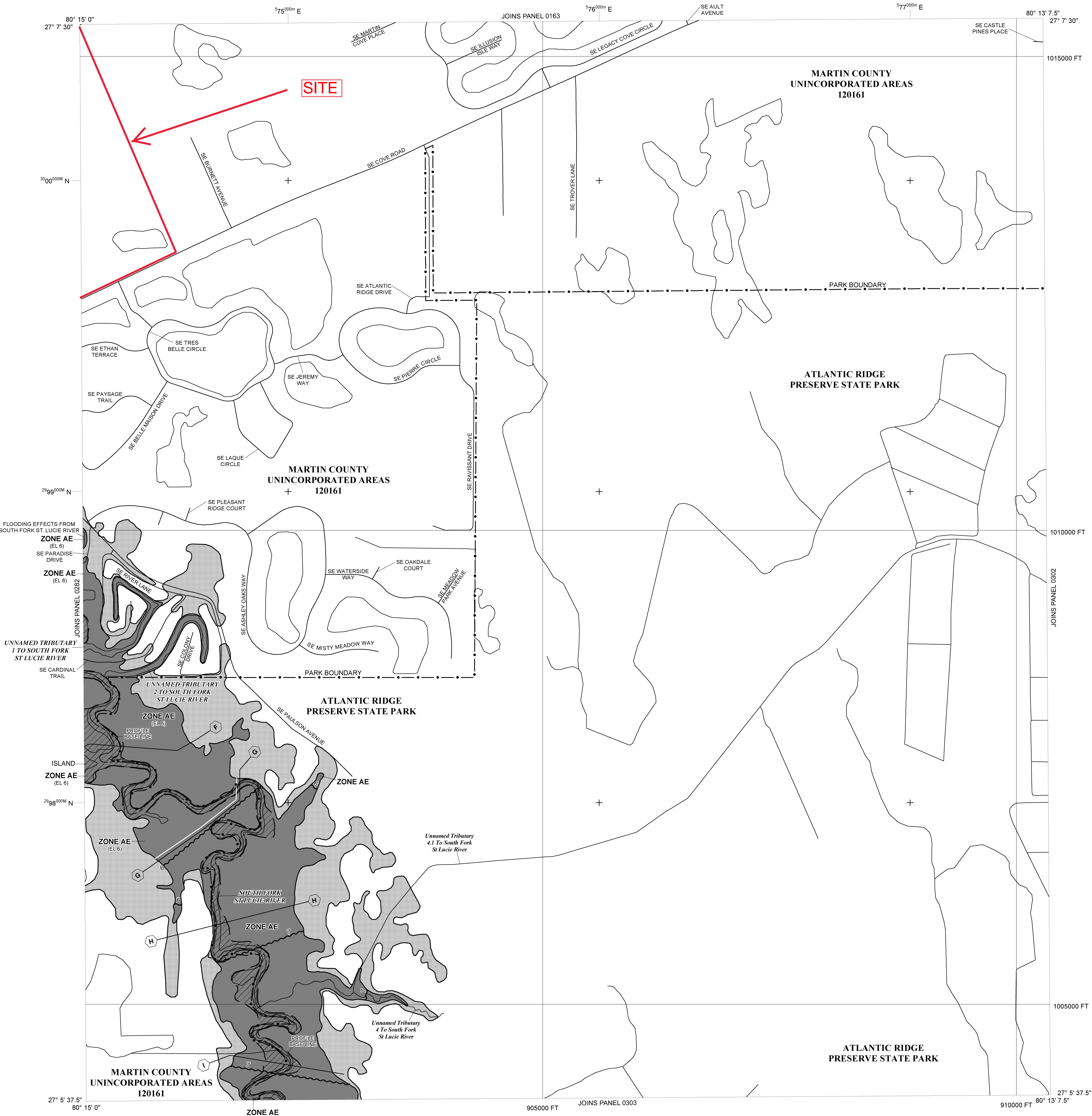
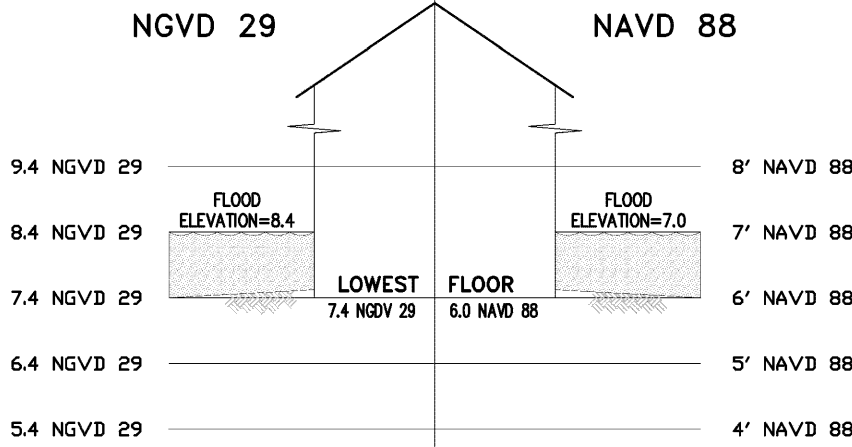
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DATUM CONVERSION SCHEMATIC



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the "base flood," is the flood that has a 1% chance of being equalled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

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OTHERWISE PROTECTED AREAS (OPAs)

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Floodplain Boundary
 Floodway Boundary
 Zone D Boundary
 CBRS and OPA boundary
 Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
 Limit of Moderate Wave Action

Base Flood Elevation line and value; elevation in feet*
 Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

Cross section line

Transect line

Culvert

Bridge

Footbridge

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
45° 02' 08", 93° 02' 12"

1000-meter Universal Transverse Mercator grid ticks, zone 17
4999000 FT
DX5510 X

River Mile
M1.5

Flow accumulation point or hydraulic connection
0330

MAP REPOSITORIES

Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

OCTOBER 4, 2002

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

March 16, 2015 - to update corporate limits, to reflect updated topographic information, to add and change Base Flood Elevations, to add floodways, to add and change Special Flood Hazard Areas, and to change zone designations.

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MAP SCALE 1" = 500'
250 0 500 1000 FEET
150 0 150 300 METERS

NATIONAL FLOOD INSURANCE PROGRAM
FEDERAL EMERGENCY MANAGEMENT AGENCY
DEPARTMENT OF HOMELAND SECURITY

PANEL 0301G

FIRM
FLOOD INSURANCE RATE MAP

MARTIN COUNTY, FLORIDA AND INCORPORATED AREAS

PANEL 301 OF 527
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MARTIN COUNTY	120161	0301	G

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MAP NUMBER
12085C0301G

MAP REVISED
MARCH 16, 2015

Federal Emergency Management Agency

Attachment 4.4

**Cove-Salerno Development
Master Stormwater Management Report
Full Site**

A. Acreage

	<u>Area (Acres)</u>	<u>Percentage</u>
Buildings/structures	6.41	13.80
Driveways/Impervious	6.83	14.71
Lot Open Area	2.47	5.33
Lakes (water surface)	9.04	19.47
Lake Banks/side slopes	3.22	6.94
IQ Lake (water surface)	0.50	1.08
IQ Lake (banks/side slopes)	0.30	0.65
Road ROW (Driveways)	0.31	0.66
Road ROW (Rds/Curbs/SW/Parking)	4.63	9.98
Dry Det Bottom	0.02	0.05
Dry Det Banks	0.09	0.20
Cabana / Pool	0.11	0.24
Upland Preserve / Buffers	0.23	0.49
Green Space	12.26	26.40
Total Site Area	46.42	100.00

B. Minimum Elevations

Roads and Driveways, 2' above control or as modeled	11.00	Feet
Floors, 18" above roads or as calculated	12.50	Feet

C. Design Storm allowable discharge

The control structure has been designed to meet the Discharge Rate established in ERP #43-02237-P	5.58	cfs
---	------	-----

D. Water Level Elevations

Based on Existing SFWMD Permit	8.5	Feet NAVD
--------------------------------	-----	-----------

E. Rainfall Amounts:

Roads (10-year, 1-day)	7.0	inches
Design (25-year, 3-day)	11.5	inches
Floors (100-year, 3-day)	14.5	inches

DESIGN CRITERIA:

A. Quality

Greater of
~ the first inch of runoff from the entire site
~ 2.5 inches times the percent impervious

Impaired Water
1.5 x the greater of above

~ 3 inches times the percent impervious (Martin County)

B. Quantity

The control structure has been designed to meet the	5.58	cfs
---	------	-----

COMPUTATIONS:

A. Quality

SFWMD

First inch of runoff from the developed site 1inch x 1ft / 12inches x Total Site acres	3.87	acre-feet
Impaired Waters (St. Lucie River)-Provide a total of 150% of	5.80	acre-feet

SFWMD

2.5 inches times percent impervious		
1. Site Area = Project Area - (roofs* + lakes + wetlands)	30.36	acres
2. Impervious Area = Site Area - Pervious Area	11.77	acres
3. Percent Impervious = Impervious Area / Site Area	0.39	39%
4. 2.5 inches times percent impervious	0.97	inches
5. Volume required for treatment = inches to be treated x Site Area	2.45	acre-feet
Impaired Waters (St. Lucie River)-Provide a total of 150% of	3.68	acre-feet

**Cove-Salerno Development
Master Stormwater Management Report
Full Site**

Martin County		
3 inches times percent impervious		
1. Site Area = Project Area - Preserve (Wetlands)	46.19	acres
2. Impervious Area = Site Area - Pervious Area	27.59	acres
3. Percent Impervious = Impervious Area / Site Area	0.60	60%
4. 3 inches times percent impervious	1.79	inches
5. Volume required for treatment = inches to be treated x Site Area	6.90	acre-feet
6. Since wet detention, 50% increase	10.35	acre-feet
WATER QUALITY REQUIRED =	10.35	acre-feet
WATER QUALITY MET (on the developed site) AT ELEVATION		
	9.70	FEET
B. Soil Storage, S		
Average Open Area Grade	11.75	feet
Average Wet Season Water Table	8.50	feet
Average Depth to Water Table	3.25	feet
Soil Storage, from Table	4.8	inches
Pervious Area =	18.60	acres
Soil Storage = Storage Available X Pervious Area	7.44	acre-feet
Moisture Soil Storage, S = S = Available Soil Storage / Developed Area	1.92	inches
SCS Curve Number, CN CN = 1000 / (S + 10)	83.9	
D. Stage-Storage - Developed Area		
<i>Refer to separate stage-storage calculation sheets.</i>		
E. 100-Year Finished Floor Elevation Check		
1. Rainfall from the 100-yr, 3-day design storm =	14.5	inches
2. Runoff, Q, in inches: Area utilized = Developed Site		
Q = (P-0.2S)^2 / (P+0.8S)		
Finished Floor (100-year, 3-day)	P =	14.50 inches
	S =	1.92 inches
	Q =	12.42 inches
	V =	48.06 acre-feet
Met at Elevation (developed site)	12.10	feet
Minimum Finished Floor Elevation		

**Cove-Salerno Development
Master Stormwater Management Report
Full Site**

F. 25-Year Zero Discharge Check

1. Rainfall from the 100-yr, 3-day design storm = 11.5 inches
2. Runoff, Q, in inches:
Area utilized = Developed Site

$$Q = (P - 0.2S)^2 / (P + 0.8S)$$

Finished Floor (100-year, 3-day)	P =	11.50	inches
	S =	1.92	inches
	Q =	9.48	inches
	V =	36.66	acre-feet

Met at Elevation (developed site)	11.60	feet
Minimum Finished Floor Elevation		

G. 10-Year Zero Discharge Check

1. Rainfall from the 100-yr, 3-day design storm = 7.0 inches
2. Runoff, Q, in inches:
Area utilized = Developed Site

$$Q = (P - 0.2S)^2 / (P + 0.8S)$$

Finished Floor (100-year, 3-day)	P =	7.00	inches
	S =	1.92	inches
	Q =	5.13	inches
	V =	19.83	acre-feet

Met at Elevation (developed site)	10.50	feet
Minimum Finished Floor Elevation		

Cove-Salerno Development - Master Stormwater Management Report

Post Development Stage Storage - Full Site

	Area (ac)	Water Quality Elev.	n/a	ft
Buildings/structures	6.41	10-year 1-day	n/a	ft
Driveways/Impervious	6.83	25-yr-3-day	n/a	ft
Lot Open Area	2.47	Minimum Finished Floor Elev.	12.50	ft
Lakes (water surface)	9.04			
Lake Banks/side slopes	3.22			
IQ Lake (water surface)	0.50			
IQ Lake (banks/side slopes)	0.30			
Road ROW (Driveways)	0.31			
Road ROW (Rds/Curbs/SW/Parking)	4.63			
Dry Det Bottom	0.02			
Dry Det Banks	0.09			
Cabana / Pool	0.11			
Upland Preserve / Buffers	0.23			
Green Space	12.26			
Total	46.42			

Elements storage type	Buildings/structures Vertical	Driveways/Impervious Linear	Lot Open Area Linear	Lakes (water surface) Vertical	Lake Banks/side slopes Linear	IQ Lake (water surface) Vertical	IQ Lake (banks/side slopes) Linear	Road ROW (Driveways) Linear	Road ROW (Rds/Curbs/S W/Parking) Linear	Dry Det Bottom Vertical	Dry Det Banks Linear	Cabana / Pool Vertical	Upland Preserve / Buffers Linear	Green Space Linear	Total
area	6.41	6.83	2.47	9.04	3.22	0.50	0.30	0.31	4.63	0.02	0.09	0.11	0.23	12.26	46.42
start stage	12.50	11.00	11.00	8.50	8.50	8.50	8.50	11.00	11.00	9.50	9.50	14.50	0.00	10.50	
end stage		14.00	15.00		11.00		11.00	13.00	12.50		11.00		0.00	13.50	
stage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage
8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.50
8.60	0.00	0.00	0.00	0.00	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	8.60
8.70	0.00	0.00	0.00	0.00	0.03	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	8.70
8.80	0.00	0.00	0.00	0.00	0.06	0.15	0.01	0.00	0.00	0.00	0.00	0.00	0.07	0.00	8.80
8.90	0.00	0.00	0.00	0.00	0.10	0.20	0.01	0.00	0.00	0.00	0.00	0.00	0.09	0.00	8.90
9.00	0.00	0.00	0.00	0.00	0.16	0.25	0.02	0.00	0.00	0.00	0.00	0.00	0.11	0.00	9.00
9.10	0.00	0.00	0.00	0.00	0.23	0.30	0.02	0.00	0.00	0.00	0.00	0.00	0.14	0.00	9.10
9.20	0.00	0.00	0.00	0.00	0.32	0.35	0.03	0.00	0.00	0.00	0.00	0.00	0.16	0.00	9.20
9.30	0.00	0.00	0.00	0.00	0.41	0.40	0.04	0.00	0.00	0.00	0.00	0.00	0.18	0.00	9.30
9.40	0.00	0.00	0.00	0.00	0.52	0.45	0.05	0.00	0.00	0.00	0.00	0.00	0.21	0.00	9.40
9.50	0.00	0.00	0.00	0.00	0.64	0.50	0.06	0.00	0.00	0.00	0.00	0.00	0.23	0.00	9.50
9.60	0.00	0.00	0.00	0.00	0.78	0.55	0.07	0.00	0.00	0.00	0.00	0.00	0.25	0.00	9.60
9.70	0.00	0.00	0.00	0.00	0.93	0.60	0.09	0.00	0.00	0.00	0.00	0.00	0.27	0.00	9.70
9.80	0.00	0.00	0.00	0.00	1.09	0.65	0.10	0.00	0.00	0.01	0.00	0.00	0.30	0.00	9.80
9.90	0.00	0.00	0.00	0.00	1.26	0.70	0.12	0.00	0.00	0.01	0.00	0.00	0.32	0.00	9.90
10.00	0.00	0.00	0.00	0.00	1.36	0.75	0.14	0.00	0.00	0.01	0.01	0.00	0.34	0.00	10.00
10.10	0.00	0.00	0.00	0.00	1.46	0.80	0.15	0.00	0.00	0.01	0.01	0.00	0.37	0.00	10.10
10.20	0.00	0.00	0.00	0.00	1.57	0.85	0.17	0.00	0.00	0.02	0.01	0.00	0.39	0.00	10.20
10.30	0.00	0.00	0.00	0.00	16.27	2.09	0.90	0.20	0.00	0.02	0.02	0.00	0.41	0.00	10.30
10.40	0.00	0.00	0.00	0.00	17.17	2.33	0.95	0.22	0.00	0.02	0.02	0.00	0.44	0.00	10.40
10.50	0.00	0.00	0.00	0.00	18.08	2.58	1.00	0.24	0.00	0.02	0.03	0.00	0.46	0.00	10.50
10.60	0.00	0.00	0.00	0.00	18.98	2.84	1.05	0.27	0.00	0.03	0.04	0.00	0.48	0.02	10.60
10.70	0.00	0.00	0.00	0.00	19.89	3.12	1.10	0.29	0.00	0.03	0.04	0.00	0.50	0.08	10.70
10.80	0.00	0.00	0.00	0.00	20.79	3.41	1.15	0.32	0.00	0.03	0.05	0.00	0.53	0.18	10.80
10.90	0.00	0.00	0.00	0.00	21.69	3.71	1.20	0.35	0.00	0.03	0.06	0.00	0.55	0.33	10.90
11.00	0.00	0.00	0.00	0.00	22.60	4.03	1.25	0.38	0.00	0.03	0.07	0.00	0.57	0.51	11.00
11.10	0.00	0.01	0.00	0.00	23.50	4.35	1.31	0.41	0.00	0.02	0.04	0.00	0.60	0.74	11.10
11.20	0.00	0.05	0.01	0.00	24.40	4.67	1.36	0.44	0.00	0.06	0.04	0.00	0.62	1.00	11.20
11.30	0.00	0.10	0.03	0.00	25.31	4.99	1.41	0.47	0.01	0.14	0.04	0.10	0.64	1.31	11.30
11.40	0.00	0.18	0.05	0.00	26.21	5.32	1.46	0.50	0.01	0.25	0.04	0.11	0.66	1.65	11.40
11.50	0.00	0.28	0.08	0.00	27.12	5.64	1.51	0.53	0.02	0.39	0.05	0.11	0.69	2.04	11.50
11.60	0.00	0.41	0.11	0.00	28.02	5.96	1.56	0.56	0.03	0.56	0.05	0.12	0.71	2.47	11.60
11.70	0.00	0.56	0.15	0.00	28.92	6.28	1.61	0.59	0.04	0.76	0.05	0.13	0.73	2.94	11.70
11.80	0.00	0.73	0.20	0.00	29.83	6.60	1.66	0.62	0.05	0.99	0.05	0.14	0.76	3.45	11.80
11.90	0.00	0.92	0.25	0.00	30.73	6.93	1.71	0.65	0.06	1.25	0.06	0.15	0.78	4.00	11.90
12.00	0.00	1.14	0.31	0.00	31.64	7.25	1.76	0.68	0.08	1.54	0.06	0.16	0.80	4.60	12.00
12.10	0.00	1.38	0.37	0.00	32.54	7.57	1.81	0.71	0.09	1.87	0.06	0.17	0.82	5.23	12.10
12.20	0.00	1.64	0.45	0.00	33.44	7.89	1.86	0.74	0.11	2.22	0.06	0.18	0.85	5.90	12.20
12.30	0.00	1.92	0.52	0.00	34.35	8.21	1.91	0.77	0.13	2.61	0.06	0.19	0.87	6.62	12.30
12.40	0.00	2.23	0.61	0.00	35.25	8.54	1.96	0.80	0.15	3.03	0.07	0.20	0.89	7.37	12.40
12.50	0.00	2.56	0.70	0.00	36.15	8.86	2.01	0.83	0.17	3.47	0.07	0.21	0.92	8.17	12.50

Cove-Salerno Development - Master Stormwater Management Report

Post Development Stage Storage - Full Site Less IQ Lake

	Area (ac)	Water Quality Elev.	9.70	ft
Buildings/structures	6.41	10-year 1-day	10.50	ft
Driveways/Impervious	6.83	25-yr-3-day	11.60	ft
Lot Open Area	2.47	Minimum Finished Floor Elev.	12.10	ft
Lakes (water surface)	9.04			
Lake Banks/side slopes	3.22			
IQ Lake (water surface)	0.00			
IQ Lake (banks/side slopes)	0.00			
Road ROW (Driveways)	0.31			
Road ROW (Rds/Curbs/SW/Parking)	4.63			
Dry Det Bottom	0.02			
Dry Det Banks	0.09			
Cabana / Pool	0.11			
Upland Preserve / Buffers	0.23			
Green Space	12.26			
Total	45.62			

Elements storage type	Buildings/structures Vertical	Driveways/Impervious Linear	Lot Open Area Linear	Lakes (water surface) Vertical	Lake Banks/side slopes Linear	IQ Lake (water surface) Vertical	IQ Lake (banks/side slopes) Linear	Road ROW (Driveways) Linear	Road ROW (Rds/Curbs/SW/Parking) Linear	Dry Det Bottom Vertical	Dry Det Banks Linear	Cabana / Pool Vertical	Upland Preserve / Buffers Linear	Green Space Linear	Total
area	6.41	6.83	2.47	9.04	3.22	0.00	0.00	0.31	4.63	0.00	0.00	0.11	0.23	12.26	45.50
start stage	12.50	11.00	11.00	8.50	8.50	8.50	8.50	11.00	11.00	9.50	9.50	14.50	0.00	10.50	
end stage		14.00	15.00	--	11.00	--	11.00	13.00	12.50		11.00		0.00	13.50	
stage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage
8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.50
8.60	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	8.60
8.70	0.00	0.00	0.00	1.81	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	8.70
8.80	0.00	0.00	0.00	2.71	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	8.80
8.90	0.00	0.00	0.00	3.62	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	8.90
9.00	0.00	0.00	0.00	4.52	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	9.00
9.10	0.00	0.00	0.00	5.42	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	9.10
9.20	0.00	0.00	0.00	6.33	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	9.20
9.30	0.00	0.00	0.00	7.23	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	9.30
9.40	0.00	0.00	0.00	8.13	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	9.40
9.50	0.00	0.00	0.00	9.04	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	9.50
9.60	0.00	0.00	0.00	9.94	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	9.60
9.70	0.00	0.00	0.00	10.85	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	9.70
9.80	0.00	0.00	0.00	11.75	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	9.80
9.90	0.00	0.00	0.00	12.65	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	9.90
10.00	0.00	0.00	0.00	13.56	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00	10.00
10.10	0.00	0.00	0.00	14.46	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	10.10
10.20	0.00	0.00	0.00	15.37	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	10.20
10.30	0.00	0.00	0.00	16.27	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	10.30
10.40	0.00	0.00	0.00	17.17	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	10.40
10.50	0.00	0.00	0.00	18.08	2.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	10.50
10.60	0.00	0.00	0.00	18.98	2.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.02	10.60
10.70	0.00	0.00	0.00	19.89	3.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.08	10.70
10.80	0.00	0.00	0.00	20.79	3.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.18	10.80
10.90	0.00	0.00	0.00	21.69	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.33	10.90
11.00	0.00	0.00	0.00	22.60	4.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.51	11.00
11.10	0.00	0.01	0.00	23.50	4.35	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.60	0.74	11.10
11.20	0.00	0.05	0.01	24.40	4.67	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.62	1.00	11.20
11.30	0.00	0.10	0.03	25.31	4.99	0.00	0.00	0.01	0.14	0.00	0.00	0.00	0.64	1.31	11.30
11.40	0.00	0.18	0.05	26.21	5.32	0.00	0.00	0.01	0.25	0.00	0.00	0.00	0.66	1.65	11.40
11.50	0.00	0.28	0.08	27.12	5.64	0.00	0.00	0.02	0.39	0.00	0.00	0.00	0.69	2.04	11.50
11.60	0.00	0.41	0.11	28.02	5.96	0.00	0.00	0.03	0.56	0.00	0.00	0.00	0.71	2.47	11.60
11.70	0.00	0.56	0.15	28.92	6.28	0.00	0.00	0.04	0.76	0.00	0.00	0.00	0.73	2.94	11.70
11.80	0.00	0.73	0.20	29.83	6.60	0.00	0.00	0.05	0.99	0.00	0.00	0.00	0.76	3.45	11.80
11.90	0.00	0.92	0.25	30.73	6.93	0.00	0.00	0.06	1.25	0.00	0.00	0.00	0.78	4.00	11.90
12.00	0.00	1.14	0.31	31.64	7.25	0.00	0.00	0.08	1.54	0.00	0.00	0.00	0.80	4.60	12.00
12.10	0.00	1.38	0.37	32.54	7.57	0.00	0.00	0.09	1.87	0.00	0.00	0.00	0.82	5.23	12.10
12.20	0.00	1.64	0.45	33.44	7.89	0.00	0.00	0.11	2.22	0.00	0.00	0.00	0.85	5.90	12.20
12.30	0.00	1.92	0.52	34.35	8.21	0.00	0.00	0.13	2.61	0.00	0.00	0.00	0.87	6.62	12.30
12.40	0.00	2.23	0.61	35.25	8.54	0.00	0.00	0.15	3.03	0.00	0.00	0.00	0.89	7.37	12.40
12.50	0.00	2.56	0.70	36.15	8.86	0.00	0.00	0.17	3.47	0.00	0.00	0.00	0.92	8.17	12.50

Cove-Salerno Development - Master Stormwater Management Report									
Post Development Stage Storage - IQ Lake Only									

[illegible][illegible]

	Buildings/structures	Driveways/Impervious	Lot Open Area	Lakes (water surface)	Lake Banks/side slopes	IQ Lake (water surface)	IQ Lake (banks/side slopes)	Road ROW (Driveways)	Road ROW (Rds/Curbs/S W/Parking)	Dry Det Bottom	Dry Det Banks	Cabana / Pool	Upland Preserve / Buffers	Green Space	
Elements storage type	Vertical	Linear	Linear	Vertical	Linear	Vertical	Linear	Linear	Linear	Vertical	Linear	Vertical	Linear	Linear	Total
area	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.80
start stage	12.50	11.00	11.00	8.50	8.50	8.50	8.50	11.00	11.00	9.50	9.50	14.50	0.00	10.50	
end stage	--	14.00	15.00	--	11.00	--	11.00	13.00	12.50	--	11.00	--	0.00	13.50	
stage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage
8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8.70	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
8.90	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.21
9.10	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.32
9.30	0.00	0.00	0.00	0.00	0.00	0.40	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.56
9.70	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.69
9.90	0.00	0.00	0.00	0.00	0.00	0.70	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
10.10	0.00	0.00	0.00	0.00	0.00	0.80	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
10.30	0.00	0.00	0.00	0.00	0.00	0.90	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10
10.50	0.00	0.00	0.00	0.00	0.00	1.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25
10.70	0.00	0.00	0.00	0.00	0.00	1.10	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.40
10.90	0.00	0.00	0.00	0.00	0.00	1.20	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.55
11.10	0.00	0.00	0.00	0.00	0.00	1.31	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.71
11.30	0.00	0.00	0.00	0.00	0.00	1.41	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87
11.50	0.00	0.00	0.00	0.00	0.00	1.51	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
11.70	0.00	0.00	0.00	0.00	0.00	1.61	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.20
11.90	0.00	0.00	0.00	0.00	0.00	1.71	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.36
12.10	0.00	0.00	0.00	0.00	0.00	1.81	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.52
12.30	0.00	0.00	0.00	0.00	0.00	1.91	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.68
12.50	0.00	0.00	0.00	0.00	0.00	2.01	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.84
12.70	0.00	0.00	0.00	0.00	0.00	2.11	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
12.90	0.00	0.00	0.00	0.00	0.00	2.21	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.16
13.10	0.00	0.00	0.00	0.00	0.00	2.31	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.32
13.30	0.00	0.00	0.00	0.00	0.00	2.41	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.48
13.50	0.00	0.00	0.00	0.00	0.00	2.51	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.64
13.70	0.00	0.00	0.00	0.00	0.00	2.61	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.80
13.90	0.00	0.00	0.00	0.00	0.00	2.71	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.96
14.10	0.00	0.00	0.00	0.00	0.00	2.81	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.13
14.30	0.00	0.00	0.00	0.00	0.00	2.91	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.29
14.50	0.00	0.00	0.00	0.00	0.00	3.01	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.45
14.70	0.00	0.00	0.00	0.00	0.00	3.11	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.61
14.90	0.00	0.00	0.00	0.00	0.00	3.21	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.77
15.10	0.00	0.00	0.00	0.00	0.00	3.31	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.93
15.30	0.00	0.00	0.00	0.00	0.00	3.41	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.09
15.50	0.00	0.00	0.00	0.00	0.00	3.51	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.25
15.70	0.00	0.00	0.00	0.00	0.00	3.61	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.41
15.90	0.00	0.00	0.00	0.00	0.00	3.71	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.57

**Cove-Salerno Development
Master Stormwater Management Report
Phase 1**

A. Acreage

	<u>Area (Acres)</u>	<u>Percentage</u>
Buildings/structures	3.63	11.05
Driveways/Impervious	6.10	18.59
Lot Open Area	2.47	7.54
Lakes (water surface)	7.37	22.44
Lake Banks/side slopes	2.67	8.14
IQ Lake (water surface)	0.50	1.53
IQ Lake (banks/side slopes)	0.30	0.92
Road ROW (Driveways)	0.15	0.44
Road ROW (Rds/Curbs/SW)	3.13	9.54
Dry Det Bottom	0.02	0.07
Dry Det Banks	0.09	0.28
Cabana / Pool	0.00	0.00
Upland Preserve / Buffers	0.00	0.00
Green Space	6.38	19.45
Total Site Area	32.82	100.00

B. Minimum Elevations

Roads and Driveways, 2' above control or as modeled	11.00	Feet
Floors, 18" above roads or as calculated	12.50	Feet

C. Design Storm allowable discharge

The control structure has been designed to meet the Discharge Rate established in ERP #43-02237-P	5.58	cfs
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D. Water Level Elevations

Based on Existing SFWMD Permit	8.5	Feet NAVD
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E. Rainfall Amounts:

Roads (10-year, 1-day)	7.0	inches
Design (25-year, 3-day)	11.5	inches
Floors (100-year, 3-day)	14.5	inches

DESIGN CRITERIA:

A. Quality

Greater of
~ the first inch of runoff from the entire site
~ 2.5 inches times the percent impervious

Impaired Water
1.5 x the greater of above

~ 3 inches times the percent impervious (Martin County)

B. Quantity

The control structure has been designed to meet the	5.58	cfs
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COMPUTATIONS:

A. Quality

SFWMD

First inch of runoff from the developed site 1inch x 1ft / 12inches x Total Site acres	2.73	acre-feet
Impaired Waters (St. Lucie River)-Provide a total of 150% of	4.10	acre-feet

SFWMD

2.5 inches times percent impervious		
1. Site Area = Project Area - (roofs* + lakes + wetlands)	21.32	acres
2. Impervious Area = Site Area - Pervious Area	9.38	acres
3. Percent Impervious = Impervious Area / Site Area	0.44	44%
4. 2.5 inches times percent impervious	1.10	inches
5. Volume required for treatment = inches to be treated x Site Area	1.95	acre-feet
Impaired Waters (St. Lucie River)-Provide a total of 150% of	2.93	acre-feet

**Cove-Salerno Development
Master Stormwater Management Report
Phase 1**

Martin County		
3 inches times percent impervious		
1. Site Area = Project Area - Preserve (Wetlands)	32.82	acres
2. Impervious Area = Site Area - Pervious Area	20.87	acres
3. Percent Impervious = Impervious Area / Site Area	0.64	64%
4. 3 inches times percent impervious	1.91	inches
5. Volume required for treatment = inches to be treated x Site Area	5.22	acre-feet
6. Since wet detention, 50% increase	7.83	acre-feet
WATER QUALITY REQUIRED =	7.83	acre-feet
WATER QUALITY MET (on the developed site) AT ELEVATION		
	9.70	FEET
B. Soil Storage, S		
Average Open Area Grade	11.75	feet
Average Wet Season Water Table	8.50	feet
Average Depth to Water Table	3.25	feet
Soil Storage, from Table	4.8	inches
Pervious Area =	11.94	acres
Soil Storage = Storage Available X Pervious Area	4.78	acre-feet
Moisture Soil Storage, S =	1.75	inches
S = Available Soil Storage / Developed Area		
SCS Curve Number, CN	85.1	
CN = 1000 / (S + 10)		
D. Stage-Storage - Developed Area		
Refer to separate stage-storage calculation sheets.		

Cove-Salerno Development - Master Stormwater Management Report

Post Development Stage Storage - Phase 1

	Area (ac)	Water Quality Elev.	9.60	ft
Buildings/structures	3.63	10-year 1-day	n/a	ft
Driveways/Impervious	6.10	25-yr-3-day	n/a	ft
Lot Open Area	2.47	Minimum Finished Floor Elev.	12.50	ft
Lakes (water surface)	7.37			
Lake Banks/side slopes	2.67			
IQ Lake (water surface)	0.50			
IQ Lake (banks/side slopes)	0.30			
Road ROW (Driveways)	0.15			
Road ROW (Rds/Curbs/SW)	3.13			
Dry Det Bottom	0.02			
Dry Det Banks	0.09			
Cabana / Pool	0.00			
Upland Preserve / Buffers	0.00			
Green Space	6.38			
Total	32.82			

Elements storage type	Buildings/structures Vertical	Driveways/Impervious Linear	Lot Open Area Linear	Lakes (water surface) Vertical	Lake Banks/side slopes Linear	IQ Lake (water surface) Vertical	IQ Lake (banks/side slopes) Linear	Road ROW (Driveways) Linear	Road ROW (Rds/Curbs/S W) Linear	Dry Det Bottom Vertical	Dry Det Banks Linear	Cabana / Pool Vertical	Upland Preserve / Buffers Linear	Green Space Linear	Total
area	3.63	6.10	2.47	7.37	2.67	0.50	0.30	0.15	3.13	0.02	0.09	0.00	0.00	6.38	32.82
start stage	12.50	11.00	11.00	8.50	8.50	8.50	8.50	11.00	11.00	9.50	9.50	14.50	0.00	10.50	
end stage		14.00	15.00	--	11.00	--	11.00	13.00	12.50		11.00		0.00	13.50	
stage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage
8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.50
8.60	0.00	0.00	0.00	0.74	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.60
8.70	0.00	0.00	0.00	1.47	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.70
8.80	0.00	0.00	0.00	2.21	0.05	0.15	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.80
8.90	0.00	0.00	0.00	2.95	0.09	0.20	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.90
9.00	0.00	0.00	0.00	3.68	0.13	0.25	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.00
9.10	0.00	0.00	0.00	4.42	0.19	0.30	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.10
9.20	0.00	0.00	0.00	5.16	0.26	0.35	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.20
9.30	0.00	0.00	0.00	5.89	0.34	0.40	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.30
9.40	0.00	0.00	0.00	6.63	0.43	0.45	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.40
9.50	0.00	0.00	0.00	7.37	0.53	0.50	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.50
9.60	0.00	0.00	0.00	8.10	0.65	0.55	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.60
9.70	0.00	0.00	0.00	8.84	0.77	0.60	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.70
9.80	0.00	0.00	0.00	9.58	0.90	0.65	0.10	0.00	0.00	0.01	0.00	0.00	0.00	0.00	9.80
9.90	0.00	0.00	0.00	10.31	1.05	0.70	0.12	0.00	0.00	0.01	0.00	0.00	0.00	0.00	9.90
10.00	0.00	0.00	0.00	11.05	1.20	0.75	0.14	0.00	0.00	0.01	0.01	0.00	0.00	0.00	10.00
10.10	0.00	0.00	0.00	11.78	1.37	0.80	0.15	0.00	0.00	0.01	0.01	0.00	0.00	0.00	10.10
10.20	0.00	0.00	0.00	12.52	1.54	0.85	0.17	0.00	0.00	0.02	0.01	0.00	0.00	0.00	10.20
10.30	0.00	0.00	0.00	13.26	1.73	0.90	0.20	0.00	0.00	0.02	0.02	0.00	0.00	0.00	10.30
10.40	0.00	0.00	0.00	13.99	1.93	0.95	0.22	0.00	0.00	0.02	0.02	0.00	0.00	0.00	10.40
10.50	0.00	0.00	0.00	14.73	2.14	1.00	0.24	0.00	0.00	0.02	0.03	0.00	0.00	0.00	10.50
10.60	0.00	0.00	0.00	15.47	2.36	1.05	0.27	0.00	0.00	0.03	0.04	0.00	0.00	0.01	10.60
10.70	0.00	0.00	0.00	16.20	2.58	1.10	0.29	0.00	0.00	0.03	0.04	0.00	0.00	0.04	10.70
10.80	0.00	0.00	0.00	16.94	2.82	1.15	0.32	0.00	0.00	0.03	0.05	0.00	0.00	0.10	10.80
10.90	0.00	0.00	0.00	17.68	3.08	1.20	0.35	0.00	0.00	0.03	0.06	0.00	0.00	0.17	10.90
11.00	0.00	0.00	0.00	18.41	3.34	1.25	0.38	0.00	0.00	0.03	0.07	0.00	0.00	0.27	11.00
11.10	0.00	0.01	0.00	19.15	3.60	1.31	0.41	0.00	0.01	0.04	0.08	0.00	0.00	0.38	11.10
11.20	0.00	0.04	0.01	19.89	3.87	1.36	0.44	0.00	0.04	0.04	0.09	0.00	0.00	0.52	11.20
11.30	0.00	0.09	0.03	20.62	4.14	1.41	0.47	0.00	0.09	0.04	0.10	0.00	0.00	0.68	11.30
11.40	0.00	0.16	0.05	21.36	4.41	1.46	0.50	0.01	0.17	0.04	0.11	0.00	0.00	0.86	11.40
11.50	0.00	0.25	0.08	22.10	4.67	1.51	0.53	0.01	0.26	0.05	0.11	0.00	0.00	1.06	11.50
11.60	0.00	0.37	0.11	22.83	4.94	1.56	0.56	0.01	0.38	0.05	0.12	0.00	0.00	1.29	11.60
11.70	0.00	0.50	0.15	23.57	5.21	1.61	0.59	0.02	0.51	0.05	0.13	0.00	0.00	1.53	11.70
11.80	0.00	0.65	0.20	24.31	5.47	1.66	0.62	0.02	0.67	0.05	0.14	0.00	0.00	1.80	11.80
11.90	0.00	0.82	0.25	25.04	5.74	1.71	0.65	0.03	0.85	0.06	0.15	0.00	0.00	2.08	11.90
12.00	0.00	1.02	0.31	25.78	6.01	1.76	0.68	0.04	1.04	0.06	0.16	0.00	0.00	2.39	12.00
12.10	0.00	1.23	0.37	26.52	6.27	1.81	0.71	0.04	1.26	0.06	0.17	0.00	0.00	2.72	12.10
12.20	0.00	1.46	0.45	27.25	6.54	1.86	0.74	0.05	1.50	0.06	0.18	0.00	0.00	3.07	12.20
12.30	0.00	1.72	0.52	27.99	6.81	1.91	0.77	0.06	1.76	0.06	0.19	0.00	0.00	3.45	12.30
12.40	0.00	1.99	0.61	28.73	7.08	1.96	0.80	0.07	2.05	0.07	0.20	0.00	0.00	3.84	12.40
12.50	0.00	2.29	0.70	29.46	7.34	2.01	0.83	0.08	2.35	0.07	0.21	0.00	0.00	4.25	12.50

Cove-Salerno Development - Master Stormwater Management Report																
Post Development Stage Storage - Phase 1 Less IQ Lake																
			Area (ac)						Water Quality Elev.	9.70	ft					
Buildings/structures			3.63						10-year 1-day	n/a	ft					
Driveways			6.10						25-yr-3-day	n/a	ft					
Lot Open Area			2.47						Minimum Finished Floor Elev.	12.50	ft					
Lakes (water surface)			7.37													
Lake Banks/side slopes			2.67													
IQ Lake (water surface)			0.00													
IQ Lake (banks/side slopes)			0.00													
Road ROW (Driveways)			0.15													
Road ROW (Rds/Curbs/SW)			3.13													
Dry Det Bottom			0.02													
Dry Det Banks			0.09													
Cabana / Pool			0.00													
Upland Preserve / Buffers			0.00													
Green Space			6.38													
		Total	32.01													
Elements	Buildings/structures	Driveways	Lot Open Area	Lakes (water surface)	Lake Banks/side slopes	IQ Lake (water surface)	IQ Lake (banks/side slopes)	Road ROW (Driveways)	Road ROW (Rds/Curbs/SW)	Dry Det Bottom	Dry Det Banks	Cabana / Pool	Upland Preserve / Buffers	Green Space		Total
storage type	Vertical	Linear	Linear	Vertical	Linear	Vertical	Linear	Linear	Linear	Vertical	Linear	Vertical	Linear	Linear		
area	3.63	6.10	2.47	7.37	2.67	0.00	0.00	0.15	3.13	0.02	0.09	0.00	0.00	6.38		32.01
start stage	12.60	11.00	11.00	8.50	8.50	8.50	8.50	11.00	11.00	9.50	9.50	14.50	99.00	10.50		
end stage	--	14.00	15.00	--	11.00	--	11.00	13.00	12.50	--	11.00	--	99.00	13.50		
stage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	stage	storage
8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.50	0.00
8.60	0.00	0.00	0.00	0.74	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.60	0.74
8.70	0.00	0.00	0.00	1.47	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.70	1.49
8.80	0.00	0.00	0.00	2.21	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.80	2.26
8.90	0.00	0.00	0.00	2.95	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.90	3.03
9.00	0.00	0.00	0.00	3.68	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.00	3.82
9.10	0.00	0.00	0.00	4.42	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.10	4.61
9.20	0.00	0.00	0.00	5.16	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.20	5.42
9.30	0.00	0.00	0.00	5.89	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.30	6.23
9.40	0.00	0.00	0.00	6.63	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.40	7.06
9.50	0.00	0.00	0.00	7.37	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.50	7.90
9.60	0.00	0.00	0.00	8.10	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.60	8.75
9.70	0.00	0.00	0.00	8.84	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.70	9.61
9.80	0.00	0.00	0.00	9.58	0.90	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	9.80	10.49
9.90	0.00	0.00	0.00	10.31	1.05	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	9.90	11.37
10.00	0.00	0.00	0.00	11.05	1.20	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	10.00	12.27
10.10	0.00	0.00	0.00	11.78	1.37	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	10.10	13.18
10.20	0.00	0.00	0.00	12.52	1.54	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	10.20	14.10
10.30	0.00	0.00	0.00	13.26	1.73	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	10.30	15.03
10.40	0.00	0.00	0.00	13.99	1.93	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	10.40	15.97
10.50	0.00	0.00	0.00	14.73	2.14	0.00	0.00	0.00	0.00	0.02	0.03	0.00	0.00	0.00	10.50	16.92
10.60	0.00	0.00	0.00	15.47	2.36	0.00	0.00	0.00	0.00	0.03	0.04	0.00	0.00	0.01	10.60	17.90
10.70	0.00	0.00	0.00	16.20	2.58	0.00	0.00	0.00	0.00	0.03	0.04	0.00	0.00	0.04	10.70	18.90
10.80	0.00	0.00	0.00	16.94	2.82	0.00	0.00	0.00	0.00	0.03	0.05	0.00	0.00	0.10	10.80	19.94
10.90	0.00	0.00	0.00	17.68	3.08	0.00	0.00	0.00	0.00	0.03	0.06	0.00	0.00	0.17	10.90	21.02
11.00	0.00	0.00	0.00	18.41	3.34	0.00	0.00	0.00	0.00	0.03	0.07	0.00	0.00	0.27	11.00	22.12
11.10	0.00	0.01	0.00	19.15	3.60	0.00	0.00	0.00	0.00	0.04	0.08	0.00	0.00	0.38	11.10	23.28
11.20	0.00	0.04	0.01	19.89	3.87	0.00	0.00	0.00	0.00	0.04	0.09	0.00	0.00	0.52	11.20	24.50
11.30	0.00	0.09	0.03	20.62	4.14	0.00	0.00	0.00	0.00	0.09	0.10	0.00	0.00	0.68	11.30	25.80
11.40	0.00	0.16	0.05	21.36	4.41	0.00	0.00	0.01	0.01	0.17	0.11	0.00	0.00	0.86	11.40	27.16
11.50	0.00	0.25	0.08	22.10	4.67	0.00	0.00	0.01	0.01	0.26	0.11	0.00	0.00	1.06	11.50	28.59
11.60	0.00	0.37	0.11	22.83	4.94	0.00	0.00	0.01	0.01	0.38	0.12	0.00	0.00	1.29	11.60	30.10
11.70	0.00	0.50	0.15	23.57	5.21	0.00	0.00	0.02	0.02	0.51	0.13	0.00	0.00	1.53	11.70	31.67
11.80	0.00	0.65	0.20	24.31	5.47	0.00	0.00	0.02	0.02	0.67	0.14	0.00	0.00	1.80	11.80	33.31
11.90	0.00	0.82	0.25	25.04	5.74	0.00	0.00	0.03	0.03	0.85	0.15	0.00	0.00	2.08	11.90	35.02
12.00	0.00	1.02	0.31	25.78	6.01	0.00	0.00	0.04	0.04	1.04	0.16	0.00	0.00	2.39	12.00	36.80
12.10	0.00	1.23	0.37	26.52	6.27	0.00	0.00	0.04	0.04	1.26	0.17	0.00	0.00	2.72	12.10	38.65
12.20	0.00	1.46	0.45	27.25	6.54	0.00	0.00	0.05	0.05	1.50	0.18	0.00	0.00	3.07	12.20	40.57
12.30	0.00	1.72	0.52	27.99	6.81	0.00	0.00	0.06	0.06	1.76	0.19	0.00	0.00	3.45	12.30	42.56
12.40	0.00	1.99	0.61	28.73	7.08	0.00	0.00	0.07	0.07	2.05	0.20	0.00	0.00	3.84	12.40	44.62
12.50	0.00	2.29	0.70	29.46	7.34	0.00	0.00	0.08	0.08	2.35	0.21	0.00	0.00	4.25	12.50	46.75
12.60	0.00	2.60	0.79	30.20	7.61	0.00	0.00	0.09	0.09	2.66	0.21	0.00	0.00	4.69	12.60	48.94
12.70	0.36	2.94	0.89	30.94	7.88	0.00	0.00	0.10	0.10	2.98	0.22	0.00	0.00	5.15	12.70	51.53

**Cove-Salerno Development
Master Stormwater Management Report
Phase 2**

A. Acreage

	<u>Area (Acres)</u>	<u>Percentage</u>
Buildings/structures	2.78	20.43
Driveways/Impervious	0.73	5.34
Lot Open Area	0.00	0.00
Lakes (water surface)	1.67	12.30
Lake Banks/side slopes	0.55	4.05
IQ Lake (water surface)	0.00	0.00
IQ Lake (banks/side slopes)	0.00	0.00
Road ROW (Driveways)	0.16	1.19
Road ROW (Rds/Curbs/SW/Parking)	1.50	11.02
Dry Det Bottom	0.00	0.00
Dry Det Banks	0.00	0.00
Cabana / Pool	0.11	0.81
Upland Preserve / Buffers	0.23	1.68
Green Space	5.87	43.18
Total Site Area	13.61	100.00

B. Minimum Elevations

Roads and Driveways, 2' above control or as modeled	11.00	Feet
Floors, 18" above roads or as calculated	12.50	Feet

C. Design Storm allowable discharge

The control structure has been designed to meet the Discharge Rate established in ERP #43-02237-P	5.58	cfs
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D. Water Level Elevations

Based on Existing SFWMD Permit	8.5	Feet NAVD
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E. Rainfall Amounts:

Roads (10-year, 1-day)	7.0	inches
Design (25-year, 3-day)	11.5	inches
Floors (100-year, 3-day)	14.5	inches

DESIGN CRITERIA:

A. Quality

Greater of
~ the first inch of runoff from the entire site
~ 2.5 inches times the percent impervious

Impaired Water
1.5 x the greater of above

~ 3 inches times the percent impervious (Martin County)

B. Quantity

The control structure has been designed to meet the	5.58	cfs
---	------	-----

COMPUTATIONS:

A. Quality

SFWMD

First inch of runoff from the developed site 1inch x 1ft / 12inches x Total Site acres	1.13	acre-feet
Impaired Waters (St. Lucie River)-Provide a total of 150% of	1.70	acre-feet

SFWMD

2.5 inches times percent impervious		
1. Site Area = Project Area - (roofs* + lakes + wetlands)	9.04	acres
2. Impervious Area = Site Area - Pervious Area	2.39	acres
3. Percent Impervious = Impervious Area / Site Area	0.26	26%
4. 2.5 inches times percent impervious	0.66	inches
5. Volume required for treatment = inches to be treated x Site Area	0.50	acre-feet
Impaired Waters (St. Lucie River)-Provide a total of 150% of	0.75	acre-feet

**Cove-Salerno Development
Master Stormwater Management Report
Phase 2**

Martin County		
3 inches times percent impervious		
1. Site Area = Project Area - Preserve (Wetlands)	13.38	acres
2. Impervious Area = Site Area - Pervious Area	6.72	acres
3. Percent Impervious = Impervious Area / Site Area	0.50	50%
4. 3 inches times percent impervious	1.51	inches
5. Volume required for treatment = inches to be treated x Site Area	1.68	acre-feet
6. Since wet detention, 50% increase	2.52	acre-feet
WATER QUALITY REQUIRED =	2.52	acre-feet
WATER QUALITY MET (on the developed site) AT ELEVATION		
	9.70	FEET
B. Soil Storage, S		
Average Open Area Grade	11.75	feet
Average Wet Season Water Table	8.50	feet
Average Depth to Water Table	3.25	feet
Soil Storage, from Table	4.8	inches
Pervious Area =	6.43	acres
Soil Storage = Storage Available X Pervious Area	2.57	acre-feet
Moisture Soil Storage, S =	2.27	inches
S = Available Soil Storage / Developed Area		
SCS Curve Number, CN	81.5	
CN = 1000 / (S + 10)		

D. Stage-Storage - Developed Area

Refer to separate stage-storage calculation sheets.

Cove-Salerno Development - Master Stormwater Management Report

Post Development Stage Storage - Phase 2

	Area (ac)	Water Quality Elev.	9.60	ft
Buildings/structures	2.78	10-year 1-day	n/a	ft
Driveways/Impervious	0.73	25-yr-3-day	n/a	ft
Lot Open Area	0.00	Minimum Finished Floor Elev.	12.50	ft
Lakes (water surface)	1.67			
Lake Banks/side slopes	0.55			
IQ Lake (water surface)	0.00			
IQ Lake (banks/side slopes)	0.00			
Road ROW (Driveways)	0.16			
Road ROW (Rds/Curbs/SW/Parking)	1.50			
Dry Det Bottom	0.00			
Dry Det Banks	0.00			
Cabana / Pool	0.11			
Upland Preserve / Buffers	0.23			
Green Space	5.87			
Total	13.61			

Elements storage type	Buildings/structures Vertical	Driveways/Impervious Linear	Lot Open Area Linear	Lakes (water surface) Vertical	Lake Banks/side slopes Linear	IQ Lake (water surface) Vertical	IQ Lake (banks/side slopes) Linear	Road ROW (Driveways) Linear	Road ROW (Rds/Curbs/S W/Parking) Linear	Dry Det Bottom Vertical	Dry Det Banks Linear	Cabana / Pool Vertical	Upland Preserve / Buffers Linear	Green Space Linear	Total
area	2.78	0.73	0.00	1.67	0.55	0.00	0.00	0.16	1.50	0.00	0.00	0.11	0.23	5.87	13.61
start stage	12.50	11.00	11.00	8.50	8.50	8.50	8.50	11.00	11.00	9.50	9.50	14.50	99.00	10.50	
end stage		14.00	15.00	--	11.00	--	11.00	13.00	12.50		11.00		99.00	13.50	
stage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage	storage
8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.50
8.60	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.60
8.70	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.70
8.80	0.00	0.00	0.00	0.50	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.80
8.90	0.00	0.00	0.00	0.67	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.90
9.00	0.00	0.00	0.00	0.84	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.00
9.10	0.00	0.00	0.00	1.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.10
9.20	0.00	0.00	0.00	1.17	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.20
9.30	0.00	0.00	0.00	1.34	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.30
9.40	0.00	0.00	0.00	1.51	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.40
9.50	0.00	0.00	0.00	1.67	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.50
9.60	0.00	0.00	0.00	1.84	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.60
9.70	0.00	0.00	0.00	2.01	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.70
9.80	0.00	0.00	0.00	2.17	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.80
9.90	0.00	0.00	0.00	2.34	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.90
10.00	0.00	0.00	0.00	2.51	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00
10.10	0.00	0.00	0.00	2.68	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.10
10.20	0.00	0.00	0.00	2.84	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.20
10.30	0.00	0.00	0.00	3.01	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.30
10.40	0.00	0.00	0.00	3.18	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.40
10.50	0.00	0.00	0.00	3.35	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.50
10.60	0.00	0.00	0.00	3.51	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	10.60
10.70	0.00	0.00	0.00	3.68	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	10.70
10.80	0.00	0.00	0.00	3.85	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	10.80
10.90	0.00	0.00	0.00	4.02	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	10.90
11.00	0.00	0.00	0.00	4.18	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	11.00
11.10	0.00	0.00	0.00	4.35	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	11.10
11.20	0.00	0.00	0.00	4.52	0.80	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.48	11.20
11.30	0.00	0.01	0.00	4.68	0.85	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.63	11.30
11.40	0.00	0.02	0.00	4.85	0.91	0.00	0.00	0.01	0.08	0.00	0.00	0.00	0.00	0.79	11.40
11.50	0.00	0.03	0.00	5.02	0.96	0.00	0.00	0.01	0.12	0.00	0.00	0.00	0.00	0.98	11.50
11.60	0.00	0.04	0.00	5.19	1.02	0.00	0.00	0.01	0.18	0.00	0.00	0.00	0.00	1.18	11.60
11.70	0.00	0.06	0.00	5.35	1.08	0.00	0.00	0.02	0.24	0.00	0.00	0.00	0.00	1.41	11.70
11.80	0.00	0.08	0.00	5.52	1.13	0.00	0.00	0.03	0.32	0.00	0.00	0.00	0.00	1.65	11.80
11.90	0.00	0.10	0.00	5.69	1.19	0.00	0.00	0.03	0.40	0.00	0.00	0.00	0.00	1.92	11.90
12.00	0.00	0.12	0.00	5.86	1.24	0.00	0.00	0.04	0.50	0.00	0.00	0.00	0.00	2.20	12.00
12.10	0.00	0.15	0.00	6.02	1.30	0.00	0.00	0.05	0.60	0.00	0.00	0.00	0.00	2.51	12.10
12.20	0.00	0.17	0.00	6.19	1.35	0.00	0.00	0.06	0.72	0.00	0.00	0.00	0.00	2.83	12.20
12.30	0.00	0.20	0.00	6.36	1.41	0.00	0.00	0.07	0.84	0.00	0.00	0.00	0.00	3.17	12.30
12.40	0.00	0.24	0.00	6.52	1.46	0.00	0.00	0.08	0.98	0.00	0.00	0.00	0.00	3.53	12.40
12.50	0.00	0.27	0.00	6.69	1.52	0.00	0.00	0.09	1.12	0.00	0.00	0.00	0.00	3.92	12.50

Attachment 4.5



**SOUTH FLORIDA WATER MANAGEMENT DISTRICT
ENVIRONMENTAL RESOURCE
STANDARD GENERAL PERMIT NO. 43-02237-P
DATE ISSUED: October 7, 2008**

Form #0941
08/95

PERMITTEE: COVE SALERNO PARTNERS LLC
12825 S E SUZANNE DRIVE
HOBE SOUND, FL 33455

PROJECT DESCRIPTION: Construction and operation of a surface water management system to serve a 47.39-acre project known as Cove Salerno Partners LLC.

PROJECT LOCATION: MARTIN COUNTY, HANSON GRANT TWP 39S RGE 41E

PERMIT DURATION: See Special Condition No:1. See attached Rule 40E-4.321, Florida Administrative Code.

This is to notify you of the District's agency action concerning Notice of Intent for Permit Application No. 080401-3, dated April 1, 2008. This action is taken pursuant to Rule 40E-1.603 and Chapter 40E-40, Florida Administrative Code (F.A.C.).

Based on the information provided, District rules have been adhered to and an Environmental Resource General Permit is in effect for this project subject to:

1. Not receiving a filed request for a Chapter 120, Florida Statutes, administrative hearing.
2. the attached 19 General Conditions (See Pages : 2 - 4 of 6),
3. the attached 20 Special Conditions (See Pages : 5 - 6 of 6) and
4. the attached 2 Exhibit(s)

Should you object to these conditions, please refer to the attached "Notice of Rights" which addresses the procedures to be followed if you desire a public hearing or other review of the proposed agency action. Please contact this office if you have any questions concerning this matter. If we do not hear from you in accordance with the "Notice of Rights," we will assume that you concur with the District's action.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a "Notice of Rights" has been mailed to the Permittee (and the persons listed in the attached distribution list) no later than 5:00 p.m. on this 7th day of October, 2008, in accordance with Section 120.60(3), Florida Statutes.

BY: Donald R. Loving
Donald R. Loving
Director, Okee/MSL Regulatory Division
Martin / St Lucie Service Center

Certified mail number 7005 0390-0005 9818 6999

GENERAL CONDITIONS

1. All activities authorized by this permit shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit and Part IV, Chapter 373, F.S.
2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.
3. Activities approved by this permit shall be conducted in a manner which does not cause violations of State water quality standards. The permittee shall implement best management practices for erosion and pollution control to prevent violation of State water quality standards. Temporary erosion control shall be implemented prior to and during construction, and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. All practices shall be in accordance with the guidelines and specifications described in Chapter 6 of the Florida Land Development Manual; A Guide to Sound Land and Water Management (Department of Environmental Regulation, 1988), incorporated by reference in Rule 40E-4.091, F.A.C. unless a project-specific erosion and sediment control plan is approved as part of the permit. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.
4. The permittee shall notify the District of the anticipated construction start date within 30 days of the date that this permit is issued. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the District an Environmental Resource Permit Construction Commencement Notice Form Number 0960 indicating the actual start date and the expected construction completion date.
5. When the duration of construction will exceed one year, the permittee shall submit construction status reports to the District on an annual basis utilizing an annual status report form. Status report forms shall be submitted the following June of each year.
6. Within 30 days after completion of construction of the permitted activity, the permittee shall submit a written statement of completion and certification by a professional engineer or other individual authorized by law, utilizing the supplied Environmental Resource/Surface Water Management Permit Construction Completion/Certification Form Number 0881A, or Environmental Resource/Surface Water Management Permit Construction Completion Certification - For Projects Permitted prior to October 3, 1995 Form No. 0881B, incorporated by reference in Rule 40E-1.659, F.A.C. The statement of completion and certification shall be based on onsite observation of construction or review of as-built drawings for the purpose of determining if the work was completed in compliance with permitted plans and specifications. This submittal shall serve to notify the District that the system is ready for inspection. Additionally, if deviation from the approved drawings are discovered during the certification process, the certification must be accompanied by a copy of the approved permit drawings with deviations noted. Both the original and revised specifications must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawings. All surveyed dimensions and elevations shall be certified by a registered surveyor.
7. The operation phase of this permit shall not become effective: until the permittee has complied with the requirements of condition (6) above, and submitted a request for conversion of Environmental Resource Permit from Construction Phase to Operation Phase, Form No. 0920; the District determines the system to be in compliance with the permitted plans and specifications; and the entity approved by the District in accordance with Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit

GENERAL CONDITIONS

Applications within the South Florida Water Management District, accepts responsibility for operation and maintenance of the system. The permit shall not be transferred to such approved operation and maintenance entity until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the District, the permittee shall initiate transfer of the permit to the approved responsible operating entity if different from the permittee. Until the permit is transferred pursuant to Section 40E-1.6107, F.A.C., the permittee shall be liable for compliance with the terms of the permit.

8. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the initiation of the permitted use of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of the phase or portion of the system to a local government or other responsible entity.
9. For those systems that will be operated or maintained by an entity that will require an easement or deed restriction in order to enable that entity to operate or maintain the system in conformance with this permit, such easement or deed restriction must be recorded in the public records and submitted to the District along with any other final operation and maintenance documents required by Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit applications within the South Florida Water Management District, prior to lot or units sales or prior to the completion of the system, whichever comes first. Other documents concerning the establishment and authority of the operating entity must be filed with the Secretary of State, county or municipal entities. Final operation and maintenance documents must be received by the District when maintenance and operation of the system is accepted by the local government entity. Failure to submit the appropriate final documents will result in the permittee remaining liable for carrying out maintenance and operation of the permitted system and any other permit conditions.
10. Should any other regulatory agency require changes to the permitted system, the permittee shall notify the District in writing of the changes prior to implementation so that a determination can be made whether a permit modification is required.
11. This permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations prior to the start of any activity approved by this permit. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40E-4 or Chapter 40E-40, F.A.C..
12. The permittee is hereby advised that Section 253.77, F.S. states that a person may not commence any excavation, construction, or other activity involving the use of sovereign or other lands of the State, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.
13. The permittee must obtain a Water Use permit prior to construction dewatering, unless the work qualifies for a general permit pursuant to Subsection 40E-20.302(3), F.A.C., also known as the "No Notice" Rule.
14. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any system authorized by the permit.
15. Any delineation of the extent of a wetland or other surface water submitted as part of the permit

GENERAL CONDITIONS

application, including plans or other supporting documentation, shall not be considered binding, unless a specific condition of this permit or a formal determination under Section 373.421(2), F.S., provides otherwise.

16. The permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of a permitted system or the real property on which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of Rules 40E-1.6105 and 40E-1.6107, F.A.C.. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations prior to the sale, conveyance or other transfer of the system.
17. Upon reasonable notice to the permittee, District authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with the plans and specifications approved by the permit.
18. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the appropriate District service center.
19. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

SPECIAL CONDITIONS

1. The construction phase of this permit shall expire on October 7, 2013.
2. Operation of the surface water management system shall be the responsibility of the permittee.
3. Discharge Facilities:

1-15" W X 14.28" H RECTANGULAR NOTCH weir with crest at elev. 12.4' NGVD 29.
1-3" dia. CIRCULAR ORIFICE with invert at elev. 10' NGVD 29.
55 LF of 18" dia. HIGH DENSITY POLYETHYLENE culvert.
1-drop inlet with crest at elev. 13.57' NGVD 29.

Receiving body : Salerno Road right-of-way
Control elev : 10 feet NGVD 29.
4. The permittee shall be responsible for the correction of any erosion, shoaling or water quality problems that result from the construction or operation of the surface water management system.
5. Measures shall be taken during construction to insure that sedimentation and/or turbidity violations do not occur in the receiving water.
6. The District reserves the right to require that additional water quality treatment methods be incorporated into the drainage system if such measures are shown to be necessary.
7. Facilities other than those stated herein shall not be constructed without an approved modification of this permit.
8. A stable, permanent and accessible elevation reference shall be established on or within one hundred (100) feet of all permitted discharge structures no later than the submission of the certification report. The location of the elevation reference must be noted on or with the certification report.
9. The permittee shall provide routine maintenance of all of the components of the surface water management system in order to remove all trapped sediments/debris. All materials shall be properly disposed of as required by law. Failure to properly maintain the system may result in adverse flooding conditions.
10. This permit is issued based on the applicant's submitted information which reasonably demonstrates that adverse water resource related impacts will not be caused by the completed permit activity. Should any adverse impacts caused by the completed surface water management system occur, the District will require the permittee to provide appropriate mitigation to the District or other impacted party. The District will require the permittee to modify the surface water management system, if necessary, to eliminate the cause of the adverse impacts.
11. The permittee acknowledges, that pursuant to Rule 40E-4.101(2), F.A.C., a notice of Environmental Resource or Surface Water Management Permit may be recorded in the county public records. Pursuant to the specific language of the rule, this notice shall not be considered an encumbrance upon the property.
12. Minimum building floor elevation: BASIN: Site - 14.94 feet NGVD 29.
13. Minimum road crown elevation: Basin: Site - 13.10 feet NGVD 29.
14. Prior to the commencement of construction, the permittee shall conduct a pre-construction meeting with field representatives, contractors and District staff. The purpose of the meeting will be to discuss construction methods and sequencing, including type and location of turbidity and erosion controls to be implemented during construction, mobilization and staging of contractor equipment, methods of vegetation clearing, and wetland/buffer protection methods, with the permittee and contractors. The permittee shall

SPECIAL CONDITIONS

contact District Environmental Resource Compliance staff from the Martin St Lucie Service Center at (772)223-2600 to schedule the pre-construction meeting.

15. Silt screens, hay bales, turbidity screens/barriers or other such sediment control measures shall be utilized during construction. The selected sediment control measures shall be installed prior to the commencement of construction in accordance with Exhibit #2.1 and shall remain in place until all adjacent construction is completed. All areas shall be stabilized and vegetated immediately after construction to prevent erosion into the surface waters.
16. Prior to the commencement of construction activities on the site, the permittee shall obtain permit authorization/letter from Martin County for excavation; and work within roadway right-of-ways (internal and at SE Salerno Road), and submit a copy of the authorization to the District's Environmental Resource Compliance staff in the service center where the permit application was processed.
17. Land use within the permitted facilities is agricultural. Any proposed change in land use may require modification of this permit and must be reported to the District for a determination of permit requirements.
18. Any proposed change in land use or crop type may require modification of this permit and must be reported to the District.
19. A Water Use Permit must be obtained prior to irrigation withdrawals, unless the work is exempt pursuant to Chapter 40E-2.051 F.A.C.
20. Prior to the commencement of agricultural use or activities on the site including, but not limited to, livestock or nursery uses, the permittee shall apply for and receive a standard general permit modification of this permit. The permit modification shall address the nutrient loading analysis for discharge from the site and an animal waste management plan if animals are included in the use. Any other changes or additions to the site must also be addressed.

NOTICE OF RIGHTS

As required by Sections 120.569(1), and 120.60(3), Fla. Stat., following is notice of the opportunities which may be available for administrative hearing or judicial review when the substantial interests of a party are determined by an agency. Please note that this Notice of Rights is not intended to provide legal advice. Not all the legal proceedings detailed below may be an applicable or appropriate remedy. You may wish to consult an attorney regarding your legal rights.

RIGHT TO REQUEST ADMINISTRATIVE HEARING

A person whose substantial interests are or may be affected by the South Florida Water Management District's (SFWMD or District) action has the right to request an administrative hearing on that action pursuant to Sections 120.569 and 120.57, Fla. Stat. Persons seeking a hearing on a District decision which does or may determine their substantial interests shall file a petition for hearing with the District Clerk within 21 days of receipt of written notice of the decision, unless one of the following shorter time periods apply: 1) within 14 days of the notice of consolidated intent to grant or deny concurrently reviewed applications for environmental resource permits and use of sovereign submerged lands pursuant to Section 373.427, Fla. Stat.; or 2) within 14 days of service of an Administrative Order pursuant to Subsection 373.119(1), Fla. Stat. "Receipt of written notice of agency decision" means receipt of either written notice through mail, or electronic mail, or posting that the District has or intends to take final agency action, or publication of notice that the District has or intends to take final agency action. Any person who receives written notice of a SFWMD decision and fails to file a written request for hearing within the timeframe described above waives the right to request a hearing on that decision.

Filing Instructions

The Petition must be filed with the Office of the District Clerk of the SFWMD. Filings with the District Clerk may be made by mail, hand-delivery or facsimile. **Filings by e-mail will not be accepted.** Any person wishing to receive a clerked copy with the date and time stamped must provide an additional copy. A petition for administrative hearing is deemed filed upon receipt during normal business hours by the District Clerk at SFWMD headquarters in West Palm Beach, Florida. Any document received by the office of the SFWMD Clerk after 5:00 p.m. shall be filed as of 8:00 a.m. on the next regular business day. Additional filing instructions are as follows:

- Filings by mail must be addressed to the Office of the SFWMD Clerk, P.O. Box 24680, West Palm Beach, Florida 33416.
- Filings by hand-delivery must be delivered to the Office of the SFWMD Clerk. **Delivery of a petition to the SFWMD's security desk does not constitute filing. To ensure proper filing, it will be necessary to request the SFWMD's security officer to contact the Clerk's office.** An employee of the SFWMD's Clerk's office will receive and file the petition.
- Filings by facsimile must be transmitted to the SFWMD Clerk's Office at (561) 682-6010. Pursuant to Subsections 28-106.104(7), (8) and (9), Fla. Admin. Code, a party who files a document by facsimile represents that the original physically signed document will be retained by that party for the duration of that proceeding and of any subsequent appeal or subsequent proceeding in that cause. Any party who elects to file any document by facsimile shall be responsible for any delay, disruption, or interruption of the electronic signals and accepts the full risk that the document may not be properly filed with the clerk as a result. The filing date for a document filed by facsimile shall be the date the SFWMD Clerk receives the complete document.

Initiation of an Administrative Hearing

Pursuant to Rules 28-106.201 and 28-106.301, Fla. Admin. Code, initiation of an administrative hearing shall be made by written petition to the SFWMD in legible form and on 8 and 1/2 by 11 inch white paper. All petitions shall contain:

1. Identification of the action being contested, including the permit number, application number, District file number or any other SFWMD identification number, if known.
2. The name, address and telephone number of the petitioner and petitioner's representative, if any.
3. An explanation of how the petitioner's substantial interests will be affected by the agency determination.
4. A statement of when and how the petitioner received notice of the SFWMD's decision.
5. A statement of all disputed issues of material fact. If there are none, the petition must so indicate.
6. A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the SFWMD's proposed action.
7. A statement of the specific rules or statutes the petitioner contends require reversal or modification of the SFWMD's proposed action.
8. If disputed issues of material fact exist, the statement must also include an explanation of how the alleged facts relate to the specific rules or statutes.
9. A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the SFWMD to take with respect to the SFWMD's proposed action.

A person may file a request for an extension of time for filing a petition. The SFWMD may, for good cause, grant the request. Requests for extension of time must be filed with the SFWMD prior to the deadline for filing a petition for hearing. Such requests for extension shall contain a certificate that the moving party has consulted with all other parties concerning the extension and that the SFWMD and any other parties agree to or oppose the extension. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

If the District's Governing Board takes action with substantially different impacts on water resources from the notice of intended agency decision, the persons who may be substantially affected shall have an additional point of entry pursuant to Rule 28-106.111, Fla. Admin. Code, unless otherwise provided by law.

Mediation

The procedures for pursuing mediation are set forth in Section 120.573, Fla. Stat., and Rules 28-106.111 and 28-106.401-.405, Fla. Admin. Code. The SFWMD is not proposing mediation for this agency action under Section 120.573, Fla. Stat., at this time.

RIGHT TO SEEK JUDICIAL REVIEW

Pursuant to Sections 120.60(3) and 120.68, Fla. Stat., a party who is adversely affected by final SFWMD action may seek judicial review of the SFWMD's final decision by filing a notice of appeal pursuant to Florida Rule of Appellate Procedure 9.110 in the Fourth District Court of Appeal or in the appellate district where a party resides and filing a second copy of the notice with the SFWMD Clerk within 30 days of rendering of the final SFWMD action.

ENVIRONMENTAL RESOURCE PERMITS CHAPTER 40E-4 (01/07)

40E-4.321 Duration of Permits.

(1) Unless revoked or otherwise modified the duration of an environmental resource permit issued under this chapter or Chapter 40E-40, F.A.C., is as follows:

(a) For a conceptual approval, two years from the date of issuance or the date specified as a condition of the permit, unless within that period an application for an individual or standard general permit is filed for any portion of the project. If an application for an environmental resource permit is filed, then the conceptual approval remains valid until final action is taken on the environmental resource permit application. If the application is granted, then the conceptual approval is valid for an additional two years from the date of issuance of the permit. Conceptual approvals which have no individual or standard general environmental resource permit applications filed for a period of two years shall expire automatically at the end of the two year period.

(b) For a conceptual approval filed concurrently with a development of regional impact (DRI) application for development approval (ADA) and a local government comprehensive plan amendment, the duration of the conceptual approval shall be two years from whichever one of the following occurs at the latest date:

1. The effective date of the local government's comprehensive plan amendment,
2. The effective date of the local government development order,
3. The date on which the District issues the conceptual approval, or 4. The date on which the District issues a final order pertaining to the resolution of any Section 120.57, F.S., administrative proceeding or other legal appeals.

(c) For an individual or standard general environmental resource permit, the construction phase authorizing construction, removal, alteration or abandonment of a system shall expire five years from the date of issuance or such amount of time as made a condition of the permit.

(d) For an individual or standard general environmental resource permit, the operational phase of the permit is perpetual for operation and maintenance.

(e) For a noticed general permit issued pursuant to Chapter 40E-400, F.A.C., five years from the date the notice of intent to use the permit is provided to the District.

(2)(a) Unless prescribed by special permit condition, permits expire automatically according to the timeframes indicated in this rule. If application for extension is made by electronic mail at the District's e-Permitting website or in writing pursuant to subsection (3), the permit shall remain in full force and effect until:

1. The Governing Board takes action on an application for extension of an individual permit, or
2. Staff takes action on an application for extension of a standard general permit.

(b) Installation of the project outfall structure shall not constitute a vesting of the permit.

(3) The permit extension shall be issued provided that a permittee files a written request with the District showing good cause prior to the expiration of the permit. For the purpose of this rule, good cause shall mean a set of extenuating circumstances outside of the control of the permittee. Requests for extensions, which shall include documentation of the extenuating circumstances and how they have delayed this project, will not be accepted more than 180 days prior to the expiration date.

(4) Substantial modifications to Conceptual Approvals will extend the duration of the Conceptual Approval for two years from the date of issuance of the modification. For the purposes of this section, the term "substantial modification" shall mean a modification which is reasonably expected to lead to substantially different water resource or environmental impacts which require a detailed review.

(5) Substantial modifications to individual or standard general environmental resource permits issued pursuant to a permit application extend the duration of the permit for three years from the date of issuance of the modification. Individual or standard general environmental resource permit modifications do not extend the duration of a conceptual approval.

(6) Permit modifications issued pursuant to paragraph 40E-4.331(2)(b), F.A.C. (letter modifications) do not extend the duration of the permit.

(7) Failure to complete construction or alteration of the surface water management system and obtain operation phase approval from the District within the permit duration shall require a new permit authorization in order to continue construction unless a permit extension is granted.

Specific Authority 373.044, 373.113, 668.003, 668.004, 668.50 FS. Law Implemented 373.413, 373.416, 373.419, 373.426, 668.003, 668.004, 668.50 FS. History-New 9-3-81, Amended 1-31-82, 12-1-82, Formerly 16K-4.07(4), Amended 7-1-86, 4-20-94, 10-3-95, 5-28-00, 10-1-06.

Last Date For Agency Action: 01-NOV-2008

GENERAL ENVIRONMENTAL RESOURCE PERMIT STAFF REPORT

Project Name: Cove Salerno Partners Llc

Permit No.: 43-02237-P

Application No.: 080401-3

43-02095-
W

Related SFWMD PERMIT

Application Type: Environmental Resource (New General Permit)

Location: Martin County, HANSON GRANT T39S/R41E

Permittee : Cove Salerno Partners Llc

Operating Entity : Cove Salerno Partners Llc

Project Area: 47.39 acres

Project Land Use: Agricultural

Drainage Basin: TIDAL ST LUCIE

Receiving Body: South Fork of St Lucie River

Class: CLASS III

Special Drainage District: NA

Conservation Easement To District : No

Sovereign Submerged Lands: No

PROJECT PURPOSE:

This application is a request for an Environmental Resource Permit to authorize construction and operation of a surface water management system to serve 47.39 acres of agricultural development.

PROJECT EVALUATION:

PROJECT SITE DESCRIPTION:

The site is located between Salerno Road and Cove Road, 100 feet east of Kanner Highway (State Route 76), east of the Golf World PUD in northeastern Martin County. Please refer to Exhibit 1.

There are no permitted surface water management facilities within the project area. The site contains approximately 72 bermed fish ponds distributed over 22.5 acres. The berms, one to four feet high, were formed from the pond spoil. The site also contains concrete fish tanks along Cove Road and the west property line. As the current land use is agricultural, any proposed change in land use may require modification of this permit and must be reported to the District for a determination of permit requirements.

Single story structures are located at the Salerno Road (3) and Cove Road (1) access points. An internal access road runs from Cove Road, at the south-central portion of the site, along the west property line, to the north boundary of the site.

There are no wetlands or other surface waters located within or affected by the proposed project.

PROPOSED PROJECT:

The proposed project consists of filling approximately 72 existing fish ponds (22.34 acres total). The three structures (two CBS homes and a metal building) at the northwest property corner, as well as portions of the existing gravel road to allow access at the north and south property boundaries, will remain, graded to a minimum elevation of 13.10' NGVD. The remainder of the existing gravel road internal to the site, and all concrete fish tanks, will be removed. No agricultural or other use of the site is proposed at this time.

The proposed stormwater management system for the project considers the site as a single basin. Runoff from the project area will sheet flow to the proposed dry detention area located along the north property line. Once water quality treatment and storm attenuation requirements are met, the dry detention area will discharge through the proposed control structure to the dry swale located in the SE Salerno Road right-of-way. Please refer to Exhibit #2.1, four (4) pages.

Facilities other than those stated herein shall not be constructed without an approved modification of this permit. The permittee has indicated that the site will be used for agricultural purposes but the actual agricultural use (nursery, livestock, or other) has not been determined. Any proposed change in use, including agricultural use, will require modification of this permit and the water use permit, and must be reported to the District. As part of any permit modification, the permittee must demonstrate that the proposed project will not contribute to the existing water quality impairment (Section 4.2.4.5, BOR). This demonstration may include, but should not be limited to, phosphorous calculations including a pre-post development analysis which demonstrates that the project will not result in an increased phosphorous loading or discharge rate. Further, the permittee shall submit a nutrient and/or animal waste management plan, which corresponds to the proposed operation of the agricultural facility and phosphorus calculations.

LAND USE:

Construction:

Project:

Total Project

Building Coverage	.21	acres
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Total Project

Driveway	.08	acres
Dry Detention Bottom	2.75	acres
Dry Detention Sides	.21	acres
Pervious	44.14	acres
Total:	47.39	

WATER QUANTITY :**Discharge Rate :**

As shown in the table below, the proposed project discharge is within the allowable limit for the area, given the pre- vs. post-discharge analysis conducted. Further, the proposed discharge rate is less than the permitted discharge rate for Basin ZMBWET2, Permit No. 43-01050-P, Martin's Crossing, which is downstream of the proposed project.

Discharge Storm Frequency : 25 YEAR-3 DAY

Design Rainfall : 11.5 inches

Basin	Allow Disch (cfs)	Method Of Determination	Peak Disch (cfs)	Peak Stage (ft, NGVD 29)
Site	5.58	Pre Vs Post	5.54	13.6

Finished Floors :

Building Storm Frequency : 100 YEAR-3 DAY

Design Rainfall : 14.5 inches

Basin	Peak Stage (ft, NGVD 29)	Proposed Min. Finished Floors (ft, NGVD 29)	FEMA Elevation (ft, NGVD 29)
Site	14.1	14.94	N/A

Road Design :

Road Storm Frequency : 10 YEAR-1 DAY

Design Rainfall: 7 inches

Basin	Peak Stage (ft, NGVD 29)	Proposed Min. Road Crown (ft, NGVD 29)
Site	13.09	13.1

Control Elevation :

Basin	Area (Acres)	Ctrl Elev (ft, NGVD 29)	WSWT Ctrl Elev (ft, NGVD 29)	Method Of Determination
Site	47.39	10	10.00	Wet Season Soil Borings

Receiving Body :

Basin	Str.#	Receiving Body
Site	CS-1	Salerno Road right-of-way

Discharge Structures: Note: The units for all the elevation values of structures are (ft, NGVD 29)

Discharge Structures:**Bleeders:**

Basin	Str#	Count	Type	Width	Height	Length	Dia.	Invert Angle	Invert Elev.
Site	CS-1	1	Circular Orifice				3"		10

Culverts:

Basin	Str#	Count	Type	Width	Length	Dia.
Site	CS-1	1	High Density Polyethylene		55'	18"

Inlets:

Basin	Str#	Count	Type	Width	Length	Dia.	Crest Elev.
Site	CS-1	1	Fdot Mod C Drop Inlet				13.57

Weirs:

Basin	Str#	Count	Type	Width	Height	Length	Dia.	Elev.
Site	CS-1	1	Rectangular Notch	15"	14.28"			12.4 (crest)

WATER QUALITY:

Water quality volume equivalent to one inch over the project area is provided in the proposed dry detention area.

No adverse water quality impacts are anticipated as a result of the proposed project. Silt screens, hay bales, turbidity screens/barriers or other such sediment control measures shall be utilized during construction. The selected sediment control measures shall be installed prior to the commencement of construction in accordance with Exhibit #2.1A and shall remain in place until all adjacent construction is completed. All areas shall be stabilized and vegetated immediately after construction to prevent erosion into the surface waters.

Basin	Treatment Method	Vol Req'd (ac-ft)	Vol Prov'd
Site	Treatment Dry Detention	2.96 acres 3.95	3.95

WETLANDS:

There are offsite wetlands adjacent to the northeast and southeast end of the property. The proposed project consist of filling approximately 72 existing fish ponds and is not anticipated to result in any detrimental effects to the adjacent wetlands. Precautions to protect the adjacent wetlands from heavy equipment have been taken by providing preserve area barricades (refer to Exhibit 2.1).

LEGAL ISSUES:

The access to the project site from Salerno Road is through a parcel not owned by the permittee. The permittee has stated that there is currently no access easement which addresses this area; the adjacent property owner allows the access. Legal access is available from Cove Road.

Prior to the commencement of construction activities on the site, the permittee shall obtain permit authorization/letter from Martin County for excavation and work within roadway right-of-ways (internal and at SE Salerno Road). Please refer to Exhibit #2.2 (correspondence from the Martin County Board of County Commissioners dated August 21, 2008) (one page).

CERTIFICATION AND MAINTENANCE OF THE WATER MANAGEMENT SYSTEM:

It is suggested that the permittee retain the services of a Professional Engineer registered in the State of Florida for periodic observation of construction of the surface water management (SWM) system. This will facilitate the completion of construction completion certification Form #0881 which is required pursuant to Section 10 of the Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District, and Rule 40E-4.361(2), Florida Administrative Code (F.A.C.).

Pursuant to Chapter 40E-4 F.A.C., this permit may not be converted from the construction phase to the operation phase until certification of the SWM system is submitted to and accepted by this District. Rule 40E-4.321(7) F.A.C. states that failure to complete construction of the SWM system and obtain operation phase approval from the District within the permit duration shall require a new permit authorization unless a permit extension is granted.

For SWM systems permitted with an operating entity who is different from the permittee, it should be noted that until the permit is transferred to the operating entity pursuant to Rule 40E-1.6107, F.A.C., the permittee is liable for compliance with the terms of this permit.

The permittee is advised that the efficiency of a SWM system will normally decrease over time unless the system is periodically maintained. A significant reduction in flow capacity can usually be attributed to partial blockages of the conveyance system. Once flow capacity is compromised, flooding of the project may result. Maintenance of the SWM system is required to protect the public health, safety and the natural resources of the state. Therefore, the permittee must have periodic inspections of the SWM system performed to ensure performance for flood protection and water quality purposes. If deficiencies are found, it is the responsibility of the permittee to correct these deficiencies in a timely manner.

RELATED CONCERNS:

Water Use Permit Status:

The applicant has indicated that no irrigation water is needed for the project. A Water Use Permit must be obtained prior to irrigation withdrawals associated with any future agricultural use, unless the work is exempt pursuant to Chapter 40E-2.051 F.A.C.

The applicant has indicated that dewatering is not required for construction of this project.

This permit does not release the permittee from obtaining all necessary Water Use authorization(s) prior to the commencement of activities which will require such authorization, including construction dewatering and irrigation, unless the work qualifies for a No-Notice Short-Term Dewatering permit pursuant to Chapter 40E-20.302(3) or is exempt pursuant to Section 40E-2.051, FAC.

CERP:

The proposed project is not located within or adjacent to a Comprehensive Everglades Restoration Project component.

Potable Water Supplier:

General Water Use Permit No. 43-02095-W was issued to Cove Salerno Partners LLC on October 1, 2007, for a Proposed Public Water Supply well. It appears that this proposed well would be located in the vicinity of existing metal building and two CBS homes located/to remain in the northwest corner of the proposed project.

Waste Water System/Supplier:

None required.

Right-Of-Way Permit Status:

A Right-of-Way Permit is not required for this project.

DRI Status:

This project is not a DRI.

Historical/Archeological Resources:

No information has been received that indicates the presence of archaeological or historical resources or that the proposed activities could cause adverse impacts to archaeological or historical resources.

DCA/CZM Consistency Review:

The District has not received a finding of inconsistency from the Florida Department of Environmental Protection or other commenting agencies regarding the provisions of the federal Coastal Zone Management Plan.

Third Party Interest:

No third party has contacted the District with concerns about this application.

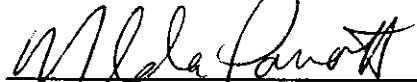
Enforcement:

There has been no enforcement activity associated with this application.

STAFF REVIEW:

DIVISION APPROVAL:

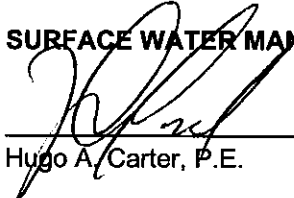
NATURAL RESOURCE MANAGEMENT:



Melinda Parrott

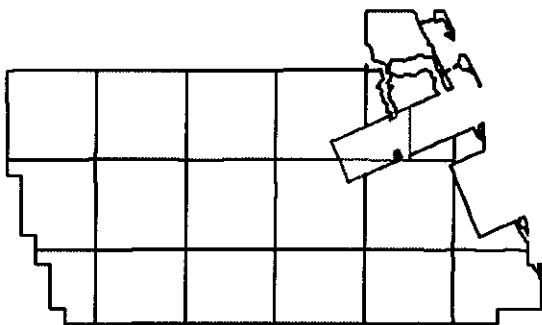
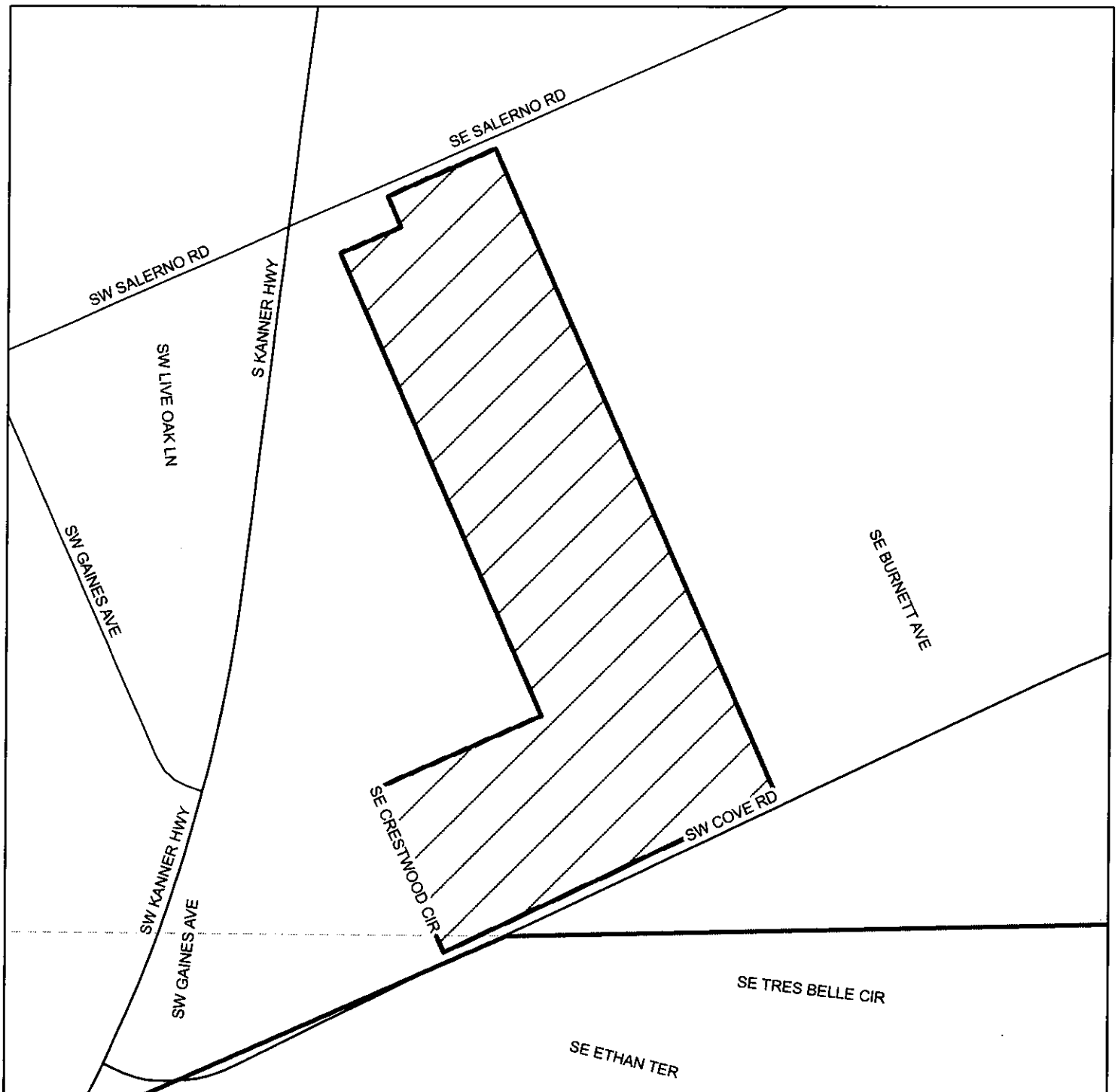
DATE: 9-22-08

SURFACE WATER MANAGEMENT:



Hugo A. Carter, P.E.

DATE: 24 Sept 08



MARTIN COUNTY, FLORIDA

Legend

 Application

Application Number: 080401-3

Permit Number:

Project Name: COVE SALERNO PARTNERS LLC



Map Date: 9/9/2008

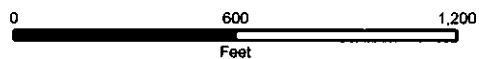


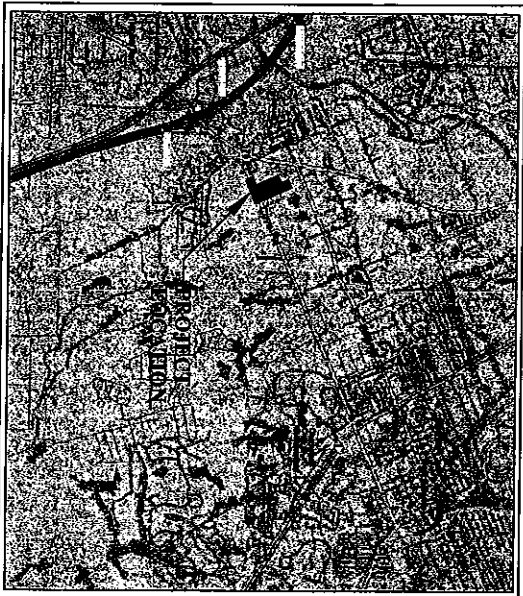
Exhibit : 1



The MHC Group, Inc.
 17750 E. Main Street, Suite 100
 Fort Worth, Texas 76155
 Tel: 817.336.7000
 Fax: 817.336.7001
 www.mhcgroupprojects.com

Sheet	Area	Scale	Notes
1	100' x 100'	1" = 100'	
2	100' x 100'	1" = 100'	
3	100' x 100'	1" = 100'	
4	100' x 100'	1" = 100'	

ENGINEERING PLANS AND SPECIFICATIONS FOR COVE / SALERNO PARTNERS LLC HANSON GRANT, TOWNSHIP 39 SOUTH, RANGE 41 EAST MARTIN COUNTY, FLORIDA

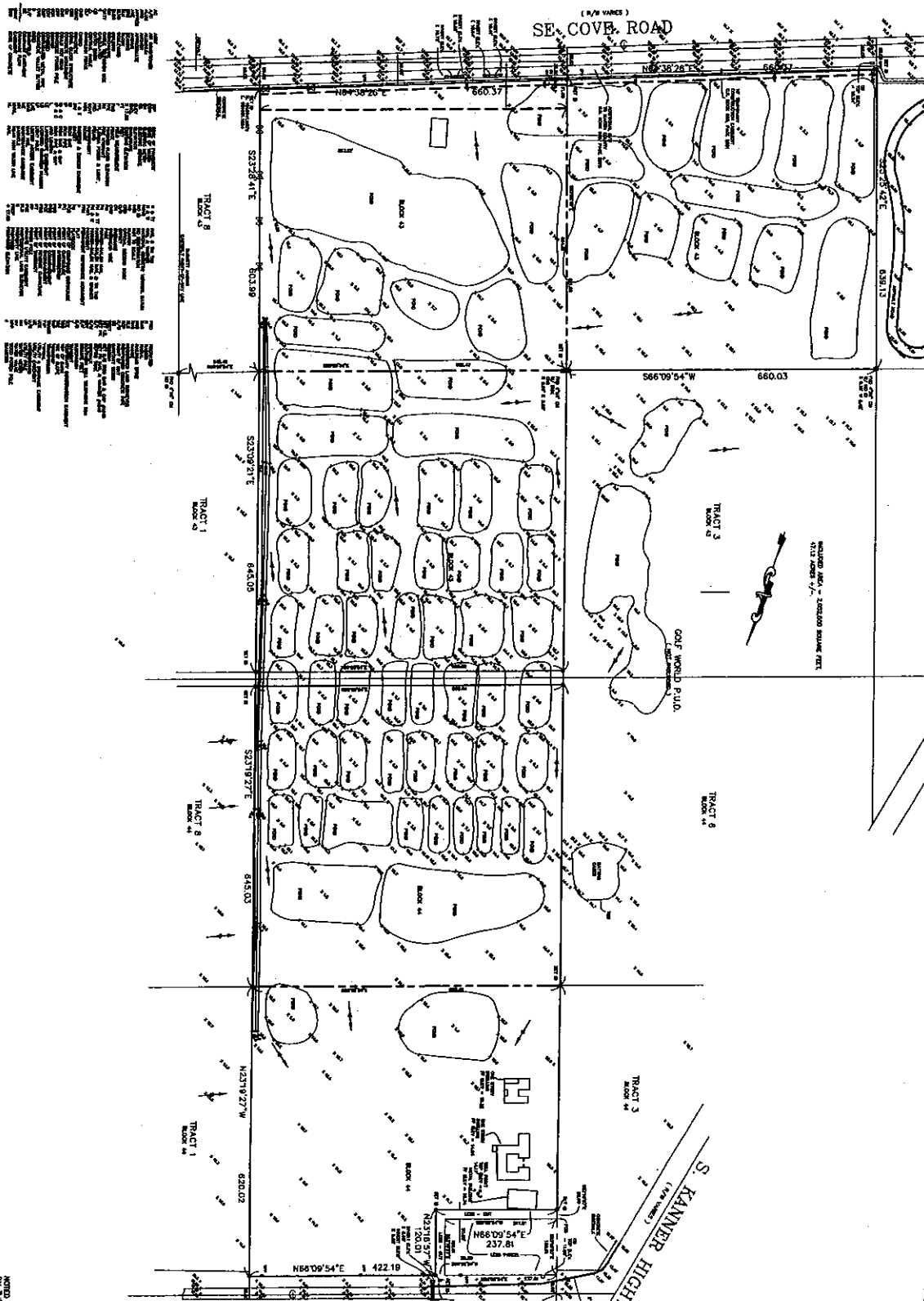


LOCATION MAP

<u>SHEET INDEX</u>	<u>SHEET TITLE/DESCRIPTION</u>
1	COVER
2	EXISTING CONDITIONS
3	PROPOSED GRADING
4	GRADING & DRAINAGE DETAILS



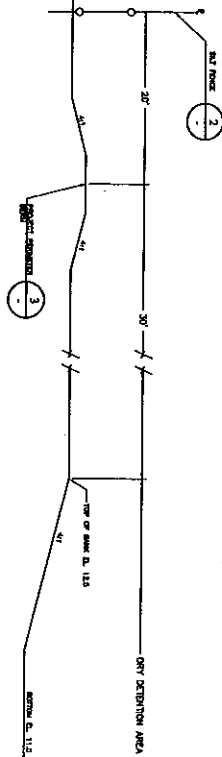
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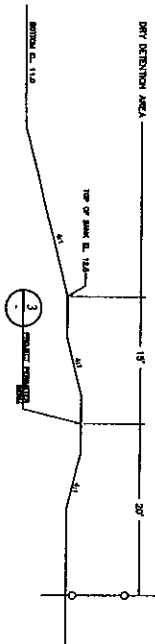
NOTED EXISTING ARE SHOWN
IN RED
ON THIS PLAN
(08/02/08)

<p>2 of 4</p>	<p>EXISTING CONDITIONS</p>		<p>100 0 100 200</p> <p>(IN FEET)</p> <p>1 inch = 100 feet</p>	<p>The MiCor Group, Inc.</p> <p>2075 NE Wimpey Blvd., Suite 200, Fort Lauderdale, FL 33305</p> <p>PH: (772) 553-8800 Fax: (772) 556-7287</p> <p>Web: www.micorgroup.com</p> <p>Certificate of Authorization: 25046</p>	<p>10-15-08 Revised Per 57540</p> <p>03-03 Revised Per 57540</p> <p>01-01 Revised</p>	<p>Designed: M.A.C. 08-17-08</p> <p>Drawn: M.A.C.</p> <p>Checked: M.A.C.</p> <p>Engineered: M.A.C.</p> <p>Scale: as shown</p>	<p>Project: 080401-3</p> <p>File: 080401-08-01.dwg</p> <p>By: [Signature]</p>	<p>Madison G. Corbett, P.E.</p> <p>Aug 29 2008</p> <p>No. 00292</p>
	<p>COVE/SALERNO PARTNERS LLC</p> <p>MARTIN COUNTY, FLORIDA</p>							

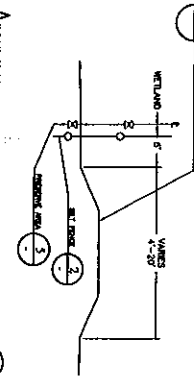
△ DRY DETENTION AREA ALONG WESTERN PERIMETER BERM (B)
SCALE: NONE



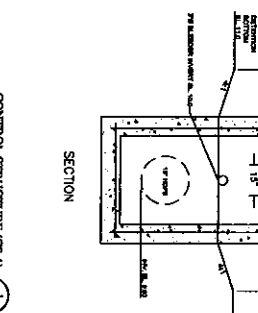
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SCALE: NONE



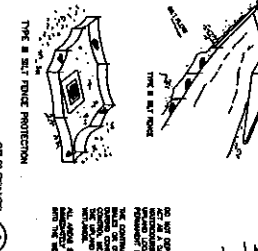
△ PERIMETER BERM ADJACENT TO OFFSITE WETLAND (C)
SCALE: NONE



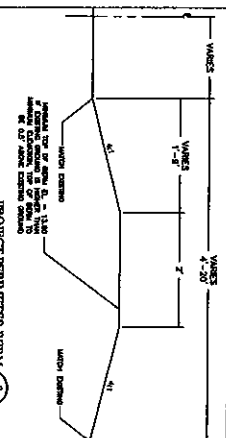
CONTROL STRUCTURE (CS-1)
SCALE: NONE



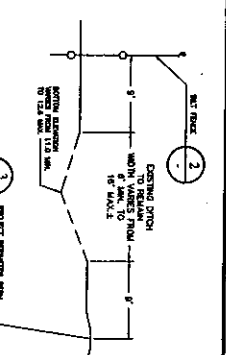
SILT FENCE (2)
SCALE: NONE



PROJECT PERIMETER BERM (3)
SCALE: NONE



EXISTING DITCH & BERM (4)
SCALE: NONE





MARTIN COUNTY
BOARD OF COUNTY COMMISSIONERS
2401 S.E. MONTEREY ROAD • STUART, FL 34996

August 21, 2008

Telephone: 772-288-5956
Fax: 772-288-5955
Email: jtoebe@martin.fl.us

DOUG SMITH
Commissioner, District 1

SUSAN L. VALLIERE
Commissioner, District 2

LEE WEBERMAN
Commissioner, District 3

SARAH HEARD
Commissioner, District 4

MICHAEL DITERLIZZI
Commissioner, District 5

DUNCAN BALLANTYNE
County Administrator

STEPHEN FRY
County Attorney

Melissa G. Corbett, P.E.
The MilCor Group, Inc.
2672 Willoughby Boulevard
Stuart, Florida 34994

RE: RFS-75084
Former Fish Farm Parcel located between Cove & Salerno Roads, just east of SR-76

Dear Ms. Corbett,

The Martin County Engineering Department has reviewed your letter dated August 14, 2008, addressing proposed excavation and fill activities on the parcel of land owned by Cove-Salerno Partners, LLC located between Cove Road and Salerno Road just east of Kanner Highway (SR-76).

Your letter indicates that the owners of the property are proposing to fill-in ponds left from a former fish farm and install a mitered end section along Salerno Road. The Engineering Department has no objection to the conceptual plan. In order to conduct the proposed work the property owner is required to obtain an Excavation and Fill Permit for the filling of the ponds. This will require a site plan and all proposed filling must comply with Martin County Land Development Regulations.

The property owner will also have to obtain two Right-of-Way (ROW) Use Permits. One ROW Use Permit will be required for the construction of the mitered end section in the Salerno Road ROW. The other ROW Use Permit will be required for the filling of the ponds that are located in the 30-foot platted, unimproved ROW located between Tract 2, Block 43 and Tract 7, Block 44. The County has no objection to the filling of the ponds located in this unimproved ROW as proposed.

If you have any questions or require additional information please feel free to contact John Toebe, Associate Project Manager at the phone number or e-mail listed above.

Sincerely,

Don G. Donaldson, P.E.
Engineering Department Director/
County Engineer

DD:jt

TELEPHONE
772-288-5400

WEB ADDRESS
<http://www.martin.fl.us>

RECEIVED
SEP 02 2008
MSLSC

STAFF REPORT DISTRIBUTION LIST

COVE SALERNO PARTNERS LLC

Application No: 080401-3

Permit No: 43-02237-P

INTERNAL DISTRIBUTION

- X Carolyn McCreedy - 4220
- X Jose Vega - 4260
- X Hugo A. Carter, P.E. - 4220
- X Melinda Parrott - 4250
- X ERC Martin/St. Lucie - 6880
- X Permit File

EXTERNAL DISTRIBUTION

- X Permittee - Cove Salerno Partners Llc
- X Engr Consultant - The Milcor Group, Inc

GOVERNMENT AGENCIES

- X Div of Recreation and Park - District 7 - FDEP
- X Martin County - Community Development Director
- X Martin County - County Administrator
- X Martin County Board of County Commissioners
- X Martin County Engineer

STAFF REPORT DISTRIBUTION LIST

ADDRESSES

Cove Salerno Partners Llc
12825 S E Suzanne Drive
Hobe Sound FL 33455

The Milcor Group, Inc
2672 Willoughby Blvd
Stuart FL 34994

Div of Recreation and Park - District 7 - FDEP
13798 Se Federal Highway
Hobe Sound FL 33455

Martin County - Community Development Director
2401 Se Monterey Road
Stuart FL 34996

Martin County - County Administrator
2401 Se Monterey Road
Stuart FL 34996

Martin County Board of County Commissioners
Po Box 9000
Stuart FL 34995-9000

Martin County Engineer
2401 Se Monterey Road
Stuart FL 34996



MARTIN COUNTY ENGINEERING DEPARTMENT
ENGINEER'S OPINION OF PROBABLE EXCAVATION, FILL, AND HAULING

(To be submitted with applications for Master Site Plan or Final Site Plan approval or Excavation and Fill Permits)

NAME OF FINAL SITE PLAN: Cove-Salerno Development

TYPE OF APPLICATION

If more than 10,000 cubic yards are hauled to or from the site, the application must be filed as a Major Development

1) Net cubic yards to be excavated:	123,500	
2) Net cubic yards to be filled:	115,400	
3) Cubic yards to be hauled from site:	8,100	(subtract line 2 from line 1)

TYPE OF APPLICATION: MINOR

HAULING FEE CALCULATION

The hauling fee for fill hauled *from* the site is calculated at \$0.21 per cubic yard and is due upon approval of the Final Site Plan application or issuance of the Excavation and Fill Permit

HAULING FEE: \$1,701.00

Prepared by:

Kenneth Rau

Professional Engineer's Name

Professional Engineer's Signature / Seal

77738

P.E. No.

1-31-20

Date

The MilCor Group, CA # 28246

Firm's Name and Certificate of Authorization No. (if applicable)

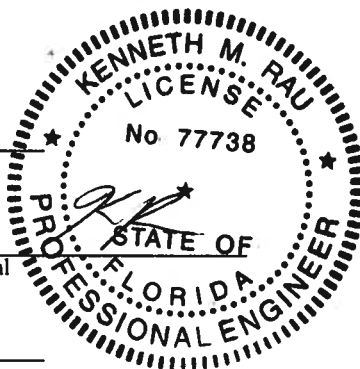
10975 S.E. Federal Highway, Hobe Sound, Florida 33455

Address

772-223-8850

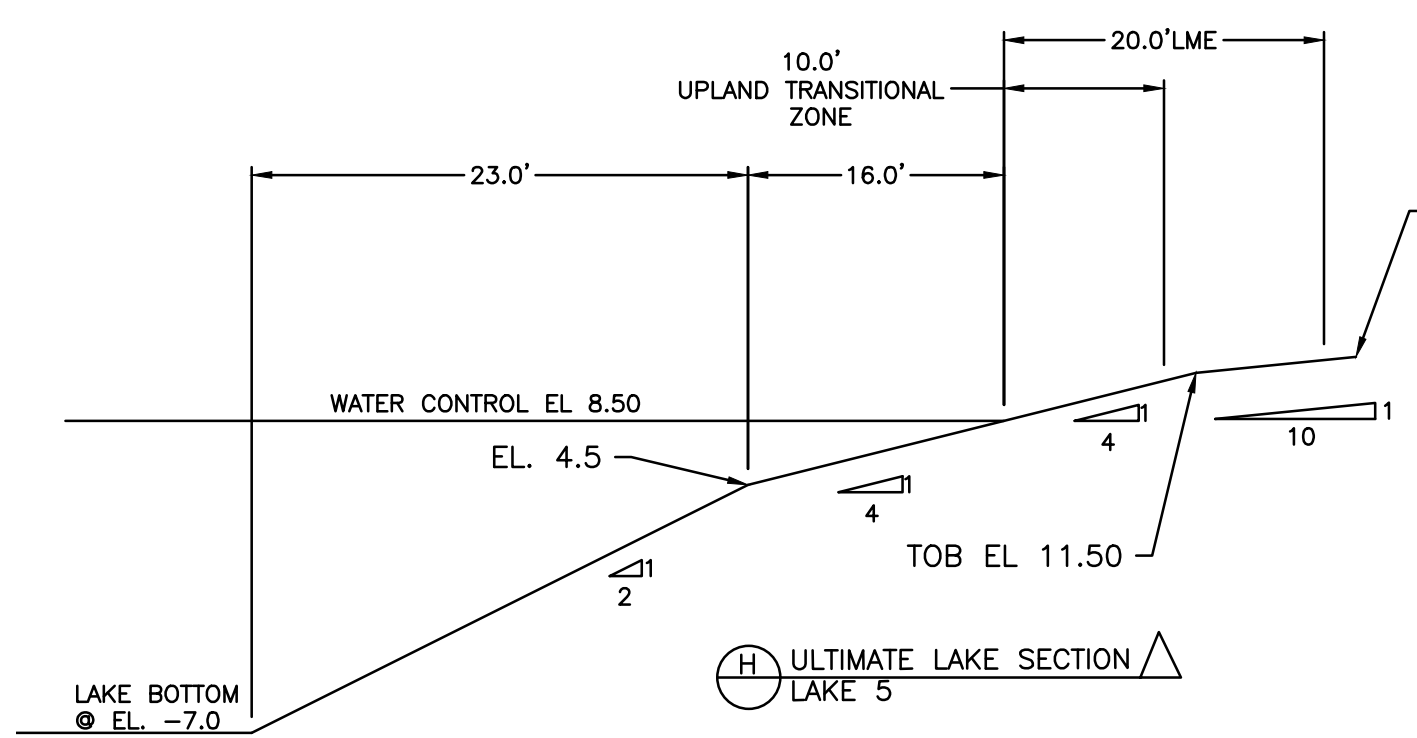
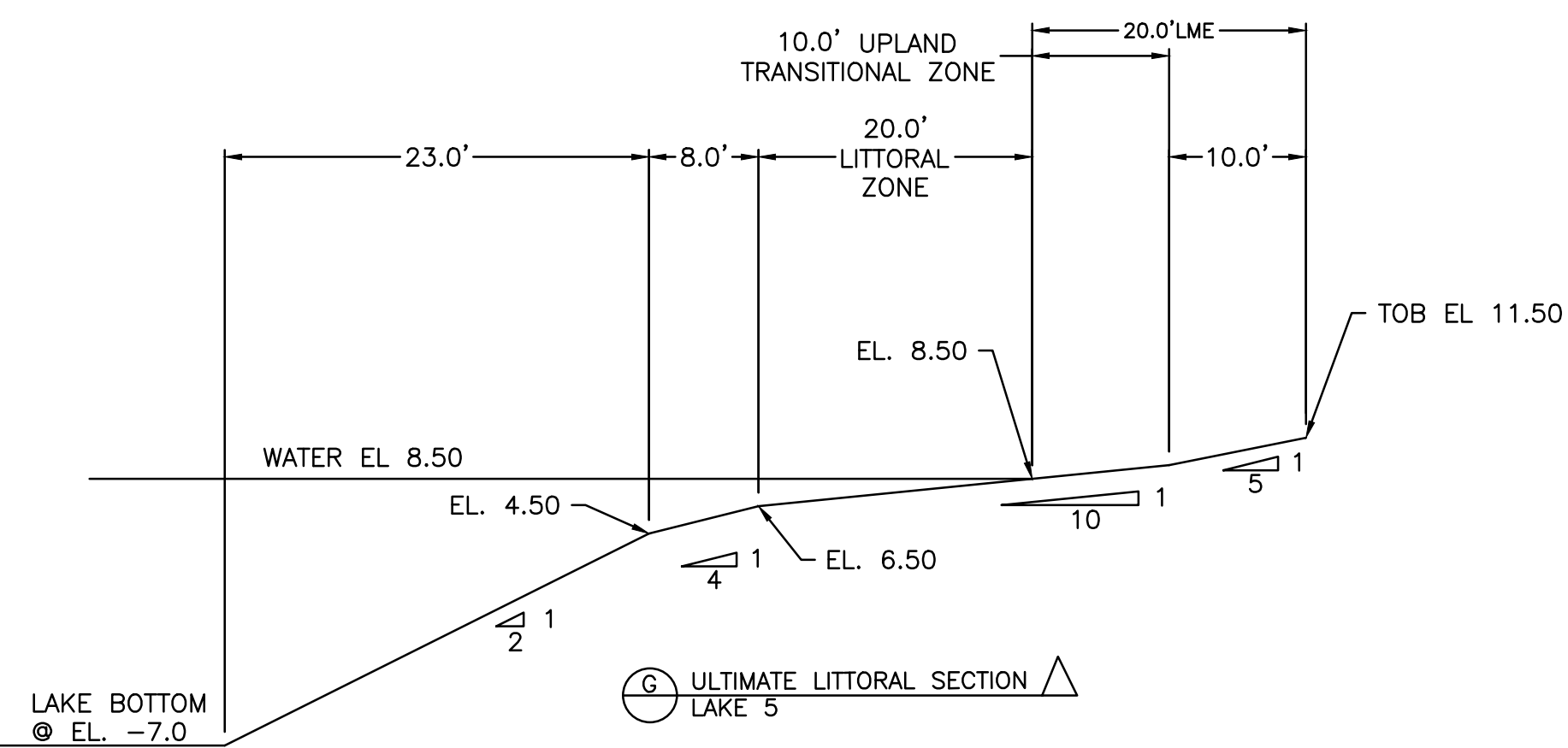
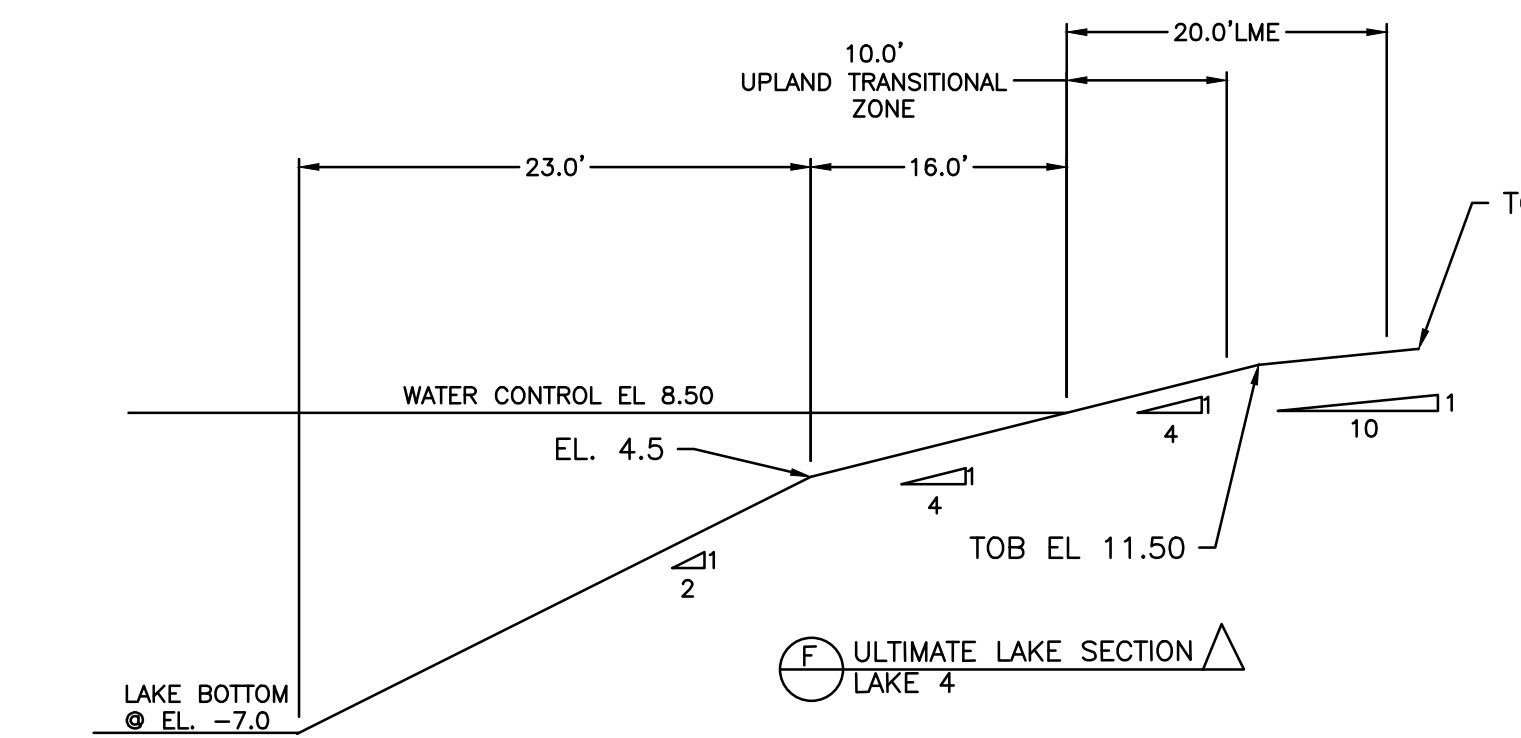
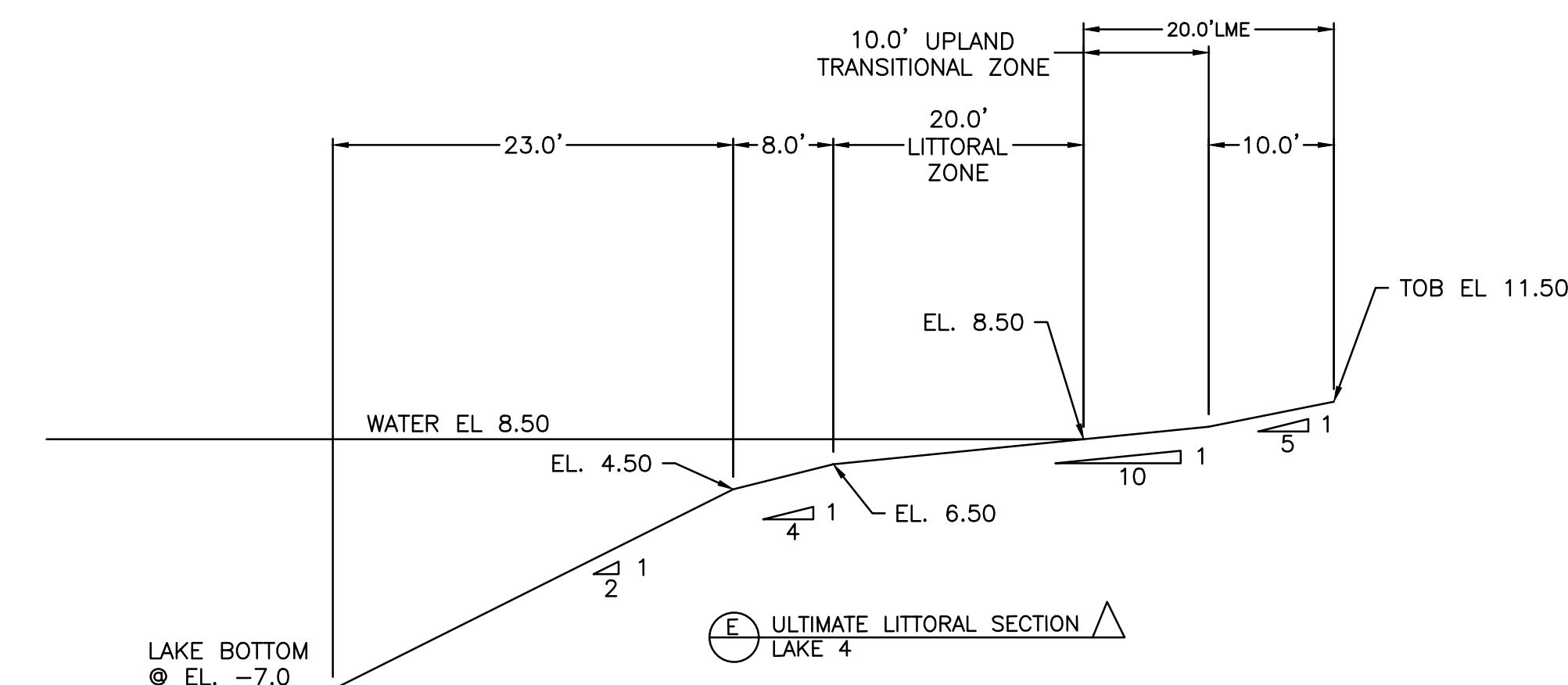
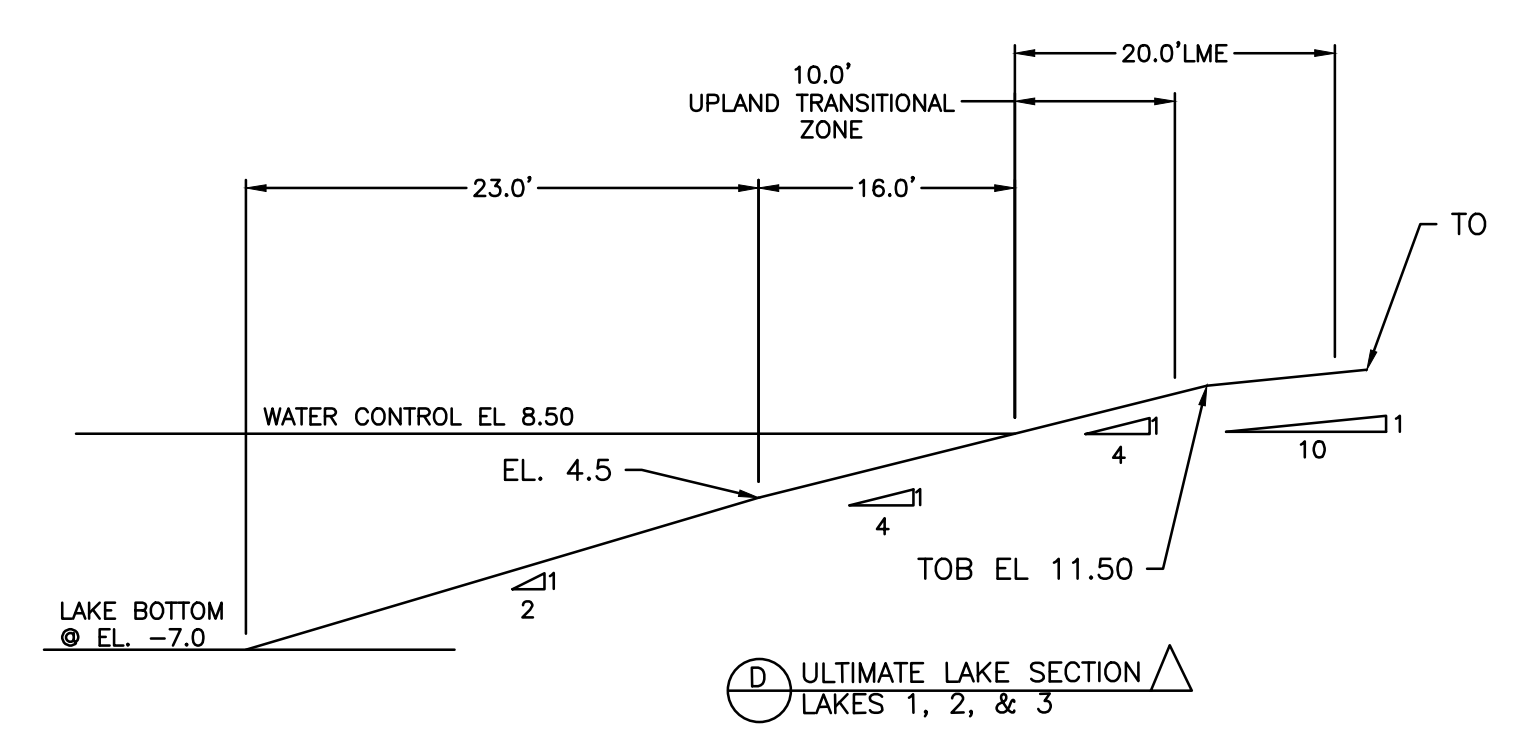
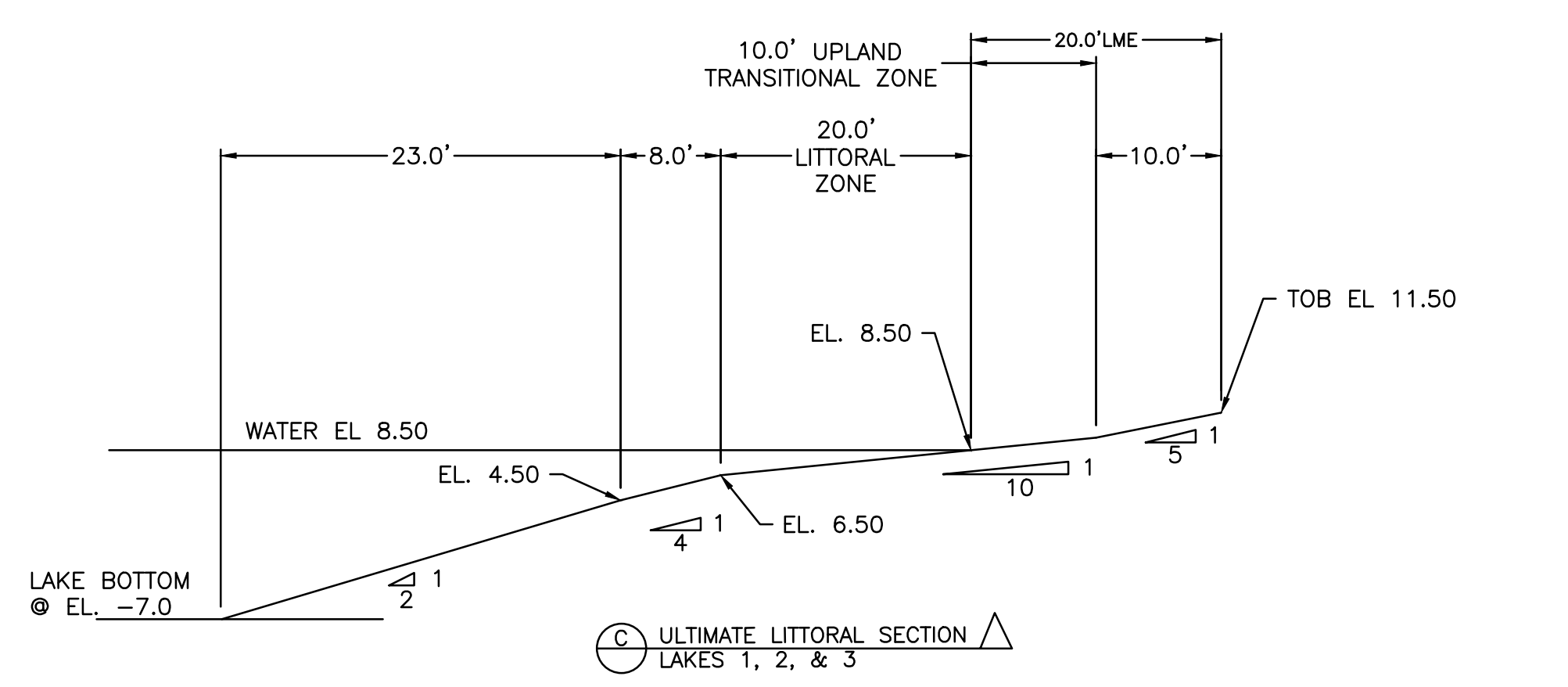
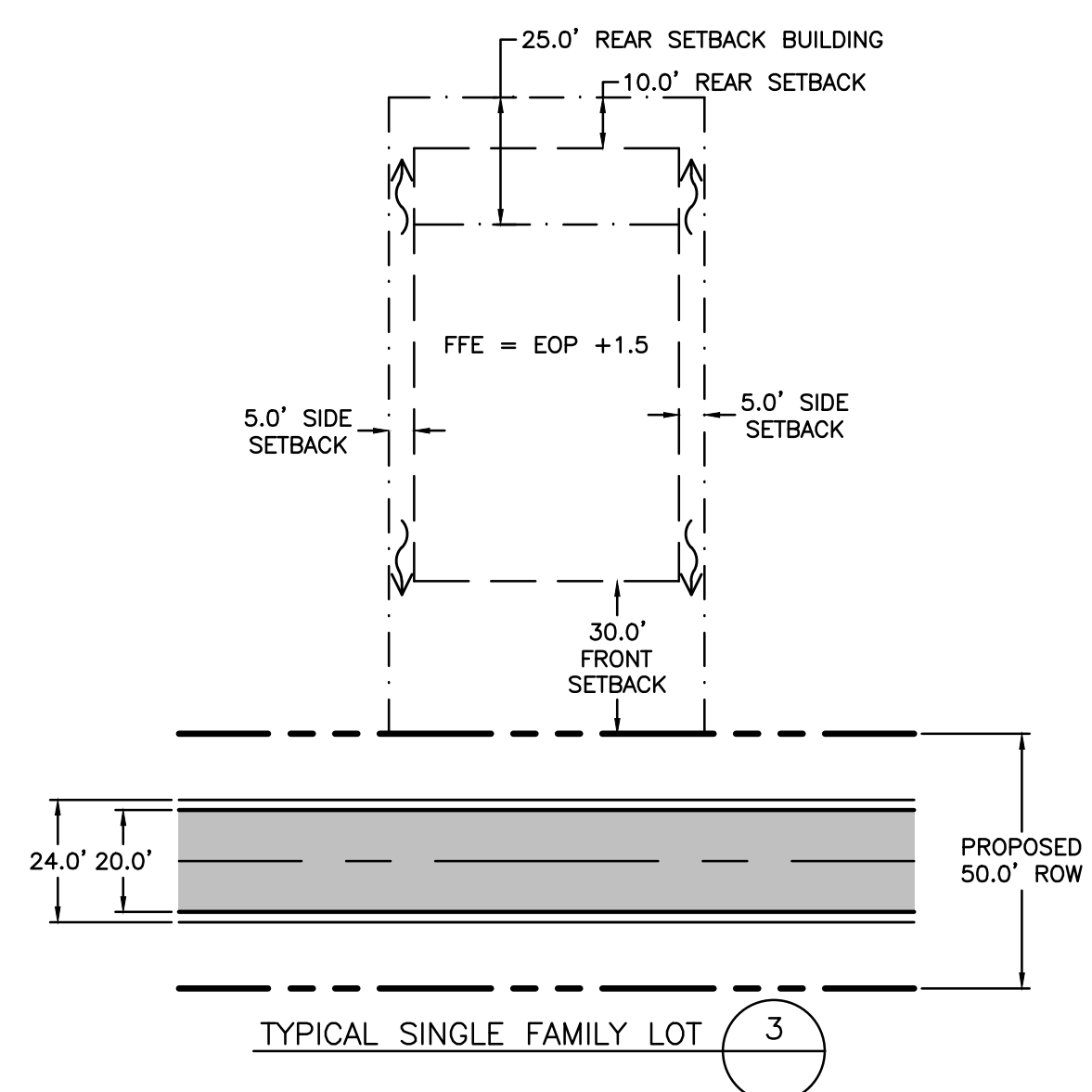
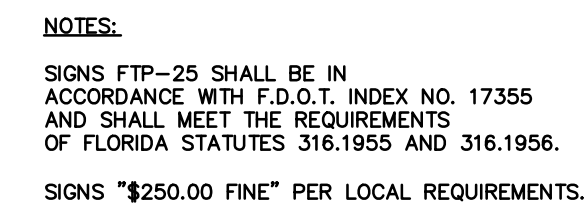
Phone No.

County Engineer's (or designee) Acceptance



- EXCAVATION & CONSTRUCTION OF LAKE 5
- CONSTRUCT STORMWATER MANAGEMENT FACILITIES WITHIN PHASE 2, INCLUDING CULVERTS, DRAINAGE STRUCTURES, AND CONTROL STRUCTURES
- CONSTRUCT DRAINAGE CONNECTIONS BETWEEN PHASE 1 AND 2
- MODIFY THE EXISTING CONTROL STRUCTURE IN DRY DETENTION AREA AS REQUIRED
- CONSTRUCT THE TURN LANES WITHIN COVE ROAD
- REMOVE COVE ROAD DRIVEWAY GATE & KNOX BOX
- CONSTRUCT ALL OTHER PHASE 2 ROADWAYS
- CONSTRUCT MULTI-FAMILY LOTS

1




NOTE:
THE INFORMATION SHOWN ON THIS PLAN IS FOR
CONCEPTUAL PURPOSES ONLY & IS NOT BINDING

COVE SALERNO PARCEL

[illegible]

VERTICAL DATUM NAVD 88			
DRAWN:	D.W.	1-21-2019	
PROJECT:	C0103		
FILE:	MASTER PLAN.dwg		



THE
MILCOR
GROUP,
INC.

CIVIL ENGINEERS
10975 SE FEDERAL HIGHWAY
HOBE SOUND, FL 33455

725 SE PORT ST LUCIE BLVD
UNIT 104
PORT ST. LUCIE, FL 34984

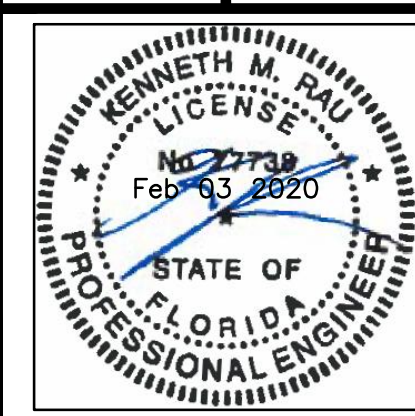
PH: (772) 223--8850
FAX: (772) 223--8851

WWW.THEMILCORGROUP.COM

CERTIFICATE OF AUTHORIZATION:
28246

MASTER PAVING GRADING AND DRAINAGE PLAN

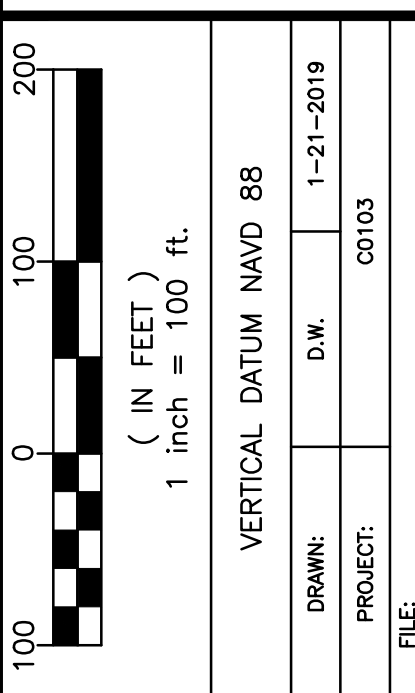
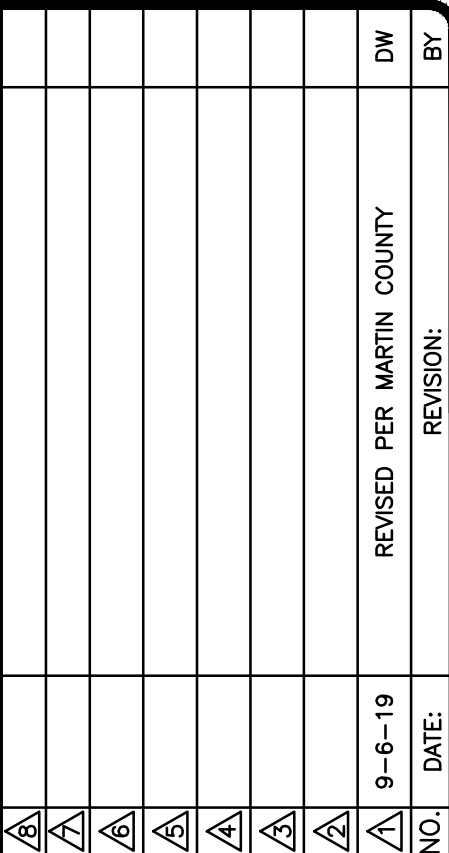
COVE SALERNO PARCEL



SHEET NO.

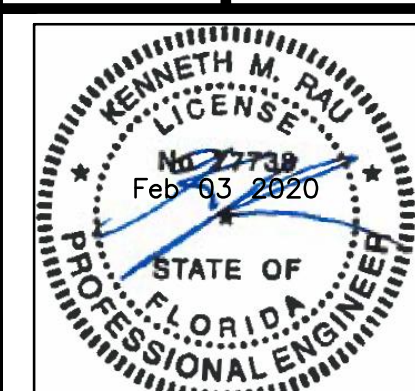
2

- CONSTRUCT REMAINING PHASE 2 WATERMAINS
- CONSTRUCT PHASE 2 WATER SERVICES
- CONSTRUCT PHASE 2 FIRE HYDRANTS
- CONSTRUCT GRAVITY SEWERS WITHIN PHASE 2
- CONSTRUCT PHASE 2 SEWER SERVICES



WWW.THEMILCORGROUP.COM
CERTIFICATE OF AUTHORIZATION
28246

COVE SALERNO PARCEL



3

COVE SALERNO PARCEL
MARTIN COUNTY, FLORIDA