

DEVELOPMENT REVIEW COMMITTEE

Tuesday, September 25, 2012

AGENDA

The Monroe County Development Review Committee will conduct a meeting on Tuesday, September 25, 2012, beginning at 1:00 PM at the Marathon Government Center, Media & Conference Room (1<sup>st</sup> floor, rear hallway), 2798 Overseas Highway, Marathon, Florida.

CALL TO ORDER

ROLL CALL

DRC MEMBERS:

Townsley Schwab, Senior Director of Planning and Environmental Resources  
Mike Roberts, Sr. Administrator, Environmental Resources  
Joe Haberman, Planning & Development Review Manager  
DOT Representative  
Steve Zavalney, Captain, Fire Prevention  
Public Works Department Representative

STAFF MEMBERS

Christine Hurley, Growth Management Division Director  
Jerry Smith, Assistant Building Official  
Mitch Harvey, Comprehensive Plan Manager  
Mayte Santamaria, Assistant Director of Planning and Environmental Resources  
Rey Ortiz, Planner  
Tim Finn, Planner  
Emily Schemper, Planner  
Gail Creech, Planning Commission Coordinator

CHANGES TO THE AGENDA

MINUTES FOR APPROVAL

MEETING

New Items:

1. Proposed CVS/Pharmacy, 5610 Overseas Highway, Stock Island, Mile Marker 5: A request for a minor conditional use permit in order to construct a 14,600 SF CVS/Pharmacy with a drive-through. The subject property is legally described as Square 24, Lots 1 through 20, Maloney Subdivision (PB1-55) and an abandoned portion of US 1, Stock Island, Monroe County, Florida, having real estate number 00124090.000000

(File 2012-072)

[2012-072 SR DRC 9.25.12-Revised.PDF](#)

[2012-072 File.PDF](#)

[2012-072 COMBINED plans recvd 5.21.12.pdf](#)

[2012-072 Traffic Study.pdf](#)

[2012-072 Traffic Signal Warrant Analysis.pdf](#)

2. AN ORDINANCE BY THE MONROE COUNTY BOARD OF COUNTY COMMISSIONERS APPROVING AMENDMENTS TO THE TIER OVERLAY DISTRICT MAP DESIGNATIONS FOR APPROXIMATELY ONE HUNDRED TWELVE (112) PARCELS THAT HAVE NO PREVIOUSLY DESIGNATED TIER OR WHICH HAVE A TIER DESIGNATION RECOMMENDED FOR CHANGE; PROVIDING FOR SEVERABILITY AND REPEAL OF INCONSISTENT PROVISIONS; PROVIDING FOR TRANSMITTAL TO THE SECRETARY OF STATE AND THE STATE LAND PLANNING AGENCY; AND PROVIDING FOR AN EFFECTIVE DATE

(File 2012-118)

[2012-118 SR DRC 09.25.12.pdf](#)

3. AN ORDINANCE BY THE MONROE COUNTY BOARD OF COUNTY COMMISSIONERS AMENDING THE FUTURE LAND USE MAP (FLUM) DESIGNATION FROM INDUSTRIAL (I) TO MIXED USE/COMMERCIAL (MC) FOR PARCELS OF LAND ON STOCK ISLAND, HAVING REAL ESTATE NUMBERS 00123660-000000, 00123720-000400, 00123760-000200, 00123720-000100, 00123720-000200, 00123730-000100, 00123740-000000, 00123770-000000, 00127290-000000, 00127380-000000, 00127250-000000, 00127280-000000, 00123600-000100, 00123600-000102, 00123600-000101, 00123590-000000, 00123570-000000, and 00123540-000000, LOCATED ON SOUTH STOCK ISLAND; PROVIDING FOR SEVERABILITY; PROVIDING FOR THE REPEAL OF INCONSISTENT PROVISIONS; PROVIDING FOR TRANSMITTAL TO THE STATE LAND PLANNING AGENCY; PROVIDING FOR THE FILING WITH SECRETARY OF STATE AND FOR AN EFFECTIVE DATE; AND PROVIDING FOR THE INCLUSION IN THE MONROE COUNTY 2010 COMPREHENSIVE PLAN.

File 2012-075

[2012-075 SR DRC 9.25.12-with Exhibits.pdf](#)

4. AN ORDINANCE BY THE MONROE COUNTY BOARD OF COUNTY COMMISSIONERS AMENDING MONROE COUNTY 2010 COMPREHENSIVE PLAN TO CREATE POLICIES WITHIN THE CONSERVATION AND COASTAL MANAGEMENT ELEMENT TO ESTABLISH SUB-AREA POLICIES APPLICABLE TO A SPECIFIC GEOGRAPHIC AREA OF SUBMERGED LANDS TO ENACT SITE-SPECIFIC, TAILORED PARAMETERS FOR THE RE-DREDGING OF PRIVATELY-OWNED SUBMERGED LANDS AND TO AMEND POLICIES TO DEFINE THE SPECIFIC, LIMITED CIRCUMSTANCES AND CONDITIONS WHICH SHALL MUST BE MET TO ALLOW THE RE-DREDGING OF PRIVATELY-OWNED ACCESS CHANNELS; PROVIDING FOR SEVERABILITY; PROVIDING FOR THE REPEAL OF INCONSISTENT PROVISIONS; PROVIDING FOR TRANSMITTAL TO THE STATE LAND PLANNING AGENCY; PROVIDING FOR THE FILING WITH SECRETARY OF STATE AND FOR AN EFFECTIVE DATE; AND PROVIDING FOR THE INCLUSION IN THE MONROE COUNTY 2010 COMPREHENSIVE PLAN.

(File 2010-046)

[2010-046 SR DRC 9.25.12.PDF](#)

## ADJOURNMENT

ADA ASSISTANCE: If you are a person with a disability who needs special accommodations in order to participate in this proceeding, please contact the County Administrator's Office, by phoning (305) 292-4441, between the hours of 8:30 a.m. - 5:00 p.m., no later than five (5) calendar days prior to the scheduled meeting; if you are hearing or voice impaired, call "711".



## MEMORANDUM

### MONROE COUNTY PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT

*We strive to be caring, professional and fair*

To: The Development Review Committee &  
Townasley Schwab, Senior Director of Planning & Environmental Resources

From: Timothy Finn, Planner **T.F.**  
Michael Roberts, Senior Administrator of Environmental Resources

Date: September 21, 2012

Subject: *Request for a Minor Conditional Use Permit to allow a CVS Pharmacy on a parcel of land at approximate mile marker 5 on the Overseas Highway, Stock Island, having Real Estate #00124090.000000 (File #2012-072)*

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**Meeting: September 25, 2012**

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1  
2 I REQUEST  
3

4 The applicant is requesting approval of a minor conditional use permit to allow a CVS  
5 Pharmacy consisting of 14,600 SF of non-residential floor area. The commercial retail  
6 building would serve as a pharmacy and have a drive through window.  
7



Subject Property (outlined) (2012)

1 Location:

2  
3 Address: 5610 Overseas Highway (US 1), between the 2nd Street and 3rd Street  
4 intersections, Stock Island, approximate mile marker 5, Atlantic Ocean side of US 1

5  
6 Legal Description: Square 24, Lots 1 through 20, Maloney Subdivision (PB1-55), and an  
7 abandoned portion of US 1, Stock Island, Monroe County, Florida

8  
9 Real Estate (RE) Number: 00124090.000000

10  
11 Applicant:

12 Property Owner: Keys Federal Credit Union

13  
14 Agent: Boos Development Group, Inc.  
15  
16

17 **II RELEVANT PRIOR COUNTY ACTIONS:**

18  
19 On January 7, 1997, the Planning Commission approved a request for a major conditional use  
20 permit to construct a 35,200 SF mini-storage warehouse facility on the subject property. In  
21 addition, the Planning Commission approved a variance to the off-street parking  
22 requirements for the facility. The approvals were memorialized in Planning Commission  
23 Resolutions #P2-97 and #P3-97. Note: The mini-storage warehouse facility was never  
24 constructed.  
25

26 On January 17, 2002, Monroe County entered into a settlement agreement with Richard  
27 Osborne (Case #CAK-01-108). A purpose of the settlement agreement was to allow the  
28 property owner to construct the 35,200 SF mini-storage warehouse facility without meeting  
29 the requirement to enter the county's Nonresidential Rate of Growth Ordinance (NROGO)  
30 permit allocation system.  
31

32 The settlement agreement has been amended several times to authorize amendments  
33 including the establishment of Keys Federal Credit Union as a successor in interest to  
34 Richard Osborne and extensions of the time periods for building permit application and  
35 construction.  
36

37 The most recent version of the settlement agreement in the Planning & Environmental  
38 Resources Department's files is the Fourth Amended Settlement Agreement. Per the Fourth  
39 Amended Settlement Agreement, Monroe County agreed to process promptly upon submittal  
40 the building permit application for the credit union building within ROGO Year 16 (July 14,  
41 2007 through July 13, 2008).  
42

43 On October 30, 2007, the Director of Planning & Environmental Resources approved a  
44 request for a minor conditional use permit to construct a 13,405 SF commercial retail/office  
45 building, to be used by Keys Federal Credit Union (Planning Department file #27038). The  
46 approval was memorialized in Development Order #10-07. Note: The commercial  
47 retail/office building was never constructed.  
48

49 On May 21, 2012, the applicant submitted an application for an administrative variance of 5'  
50 from the required 15' front yard setback along the US 1 right-of-way (northern property line)

1 (Planning Department file #2012-070). The variance is necessary in order to receive  
2 approval to construct a portion of 39 parking spaces within the setback. The application was  
3 reviewed concurrently with this minor conditional use application. On August 23, 2012,  
4 following surrounding property owner notification and property posting, the Director of  
5 Planning & Environmental Resources approved the administrative variance of 5' from the  
6 required 15' front yard setback along the US 1 right-of-way.  
7

8 III BACKGROUND INFORMATION:  
9

- 10 A. Size of Site: 105,374 SF (2.42 acres)
- 11 B. Land Use District: Urban Commercial (UC)
- 12 C. Future Land Use Map (FLUM) Designation: Mixed Use/Commercial (MC)
- 13 D. Tier Designation: Tier 3
- 14 E. Flood Zone: AE – EL 9
- 15 F. Existing Use: Vacant
- 16 G. Existing Vegetation / Habitat: Scarified
- 17 H. Community Character of Immediate Vicinity: Mixed Use - commercial retail, office,  
18 marina, multi-family residential, mobile home and commercial recreation  
19  
20

21 IV REVIEW OF APPLICATION:  
22

23 MCC §110-67 provides the standards which are applicable to all conditional uses. When  
24 considering applications for a conditional use permit, the Development Review Committee  
25 and Director of Planning & Environmental Resources shall consider the extent to which:  
26

- 27 A. *The conditional use is consistent with the purposes, goals, objectives and standards of the*  
28 *comprehensive plan and the land development regulations:*  
29

30 The proposed commercial retail use would be consistent with the purposes, goals,  
31 objectives and standards of the MC future land use category and UC district.  
32

33 The commercial retail use would be consistent with the purpose of the MC future land  
34 use category as set forth in Monroe County Year 2010 Comprehensive Plan Policy  
35 101.4.5, which is to provide for the establishment of commercial zoning districts where  
36 various types of commercial retail and office may be permitted at intensities which are  
37 consistent with the community character and the natural environment.  
38

39 Furthermore, the proposed pharmacy/commercial retail use would be consistent with the  
40 purpose of the UC district, which, according to MCC §130-47, is to designate appropriate  
41 areas for high-intensity commercial uses intended to serve retail sales and service,  
42 professional services and resort activities needs at a regional or multiple planning area  
43 scale. This district should be established at discrete nodes along U.S. 1 and should be  
44 designed so as to serve the needs of both residents and visitors.  
45

1 Any development on Stock Island shall be consistent with all goals, strategies and action  
2 items of the Master Plan for the Future Development of Stock Island & Key Haven (aka  
3 the Livable CommuniKeys Plan). Although there are several action items requiring  
4 compliance, the following action items are of concern:  
5

- 6 • Action Item 5.1.1: Promote the importance of maritime industries by incorporating  
7 the theme of Stock Island’s historic maritime industry in public art and design  
8 guidelines.
- 9 • Action Item 5.1.2: Emphasize maritime industries in all aspects of community design.
- 10 • Action Item 9.4.2: Create a continuous sidewalk network.
- 11 • Action Item 9.4.3: Require the provision of bicycle facilities and parking in all new  
12 development and redevelopment.

13  
14 *B. The conditional use is consistent with the community character of the immediate vicinity:*  
15

16 There are several existing commercial retail uses and other nonresidential uses located on  
17 other parcels along US 1 on Stock Island. The proposed use, a pharmacy/commercial  
18 retail store with a drive through window, will serve the needs of the immediate planning  
19 area in which it is located. Therefore, the proposed development would be consistent with  
20 the community character of the immediate vicinity.  
21

22 *C. The design of the proposed development minimizes adverse effects, including visual*  
23 *impacts, on adjacent properties:*  
24

25 The proposed pharmacy/commercial retail building would be larger than many of the  
26 existing non-residential buildings along US 1; however the building’s larger scale would  
27 not be out of context. In any event, staff shall requests that the applicant utilize  
28 architectural features that provide visual interest and break up the mass of the structure  
29 and that similar and consistent design, materials, and colors be utilized for all new  
30 structures, including signage, in order to make the development more cohesive with the  
31 Stock Island community. In addition, as part of the development, it shall be required that  
32 additional trees and landscaping elements be introduced to the site. Therefore, the  
33 proposed development minimizes adverse effects, including visual impacts, on adjacent  
34 properties.  
35

36 *D. The proposed use will have an adverse impact on the value of surrounding properties:*  
37

38 There are several existing commercial retail uses and other nonresidential uses located on  
39 other parcels along US 1 on Stock Island. Therefore, it is not anticipated that the  
40 proposed development will have an adverse impact on the value of the surrounding  
41 properties.  
42

43 *E. The adequacy of public facilities and services:*  
44

45 1. Roadways:  
46

1 Localized Impacts & Access Management: Access to and from the development shall  
2 be approved by the Public Works Division and the Florida Department of  
3 Transportation (FDOT) and in compliance with the Land Development Code.  
4

5 Level of Service (LOS): A traffic evaluation study shall be approved by the county's  
6 traffic consultant.  
7

8 2. Stormwater: The applicant shall coordinate with the Public Works Division, and, if  
9 necessary, the South Florida Water Management District (SFWMD) to determine  
10 compliance with all applicable regulations.  
11

12 3. Sewer: The applicant shall coordinate with Key West Resort Utilities to determine  
13 compliance with all applicable regulations.  
14

15 4. Water: The applicant shall coordinate with the Florida Keys Aqueduct Authority  
16 with all applicable regulations.  
17

18 5. Refuse Disposal: The applicant shall coordinate with Monroe County Solid Waste  
19 Management to determine compliance with all applicable regulations.  
20

21 6. Emergency Management: The applicant shall coordinate with the Office of the Fire  
22 Marshall to determine compliance with the Florida Fire Prevention Code and the  
23 Florida Building Code.  
24

25 *F. The applicant has the financial and technical capacity to complete the development as*  
26 *proposed:*  
27

28 Staff has no evidence to support or disprove the applicant's financial and technical  
29 capacity.  
30

31 *G. The development will adversely affect a known archaeological, historical, or cultural*  
32 *resource:*  
33

34 The proposed redevelopment will not adversely affect a known archaeological, historical,  
35 or cultural resource.  
36

37 *H. Public access to public beaches and other waterfront areas is preserved as part of the*  
38 *proposed development:*  
39

40 The property is land-locked. Therefore, the proposed redevelopment will not have an  
41 adverse impact on public access to a waterfront area.  
42

43 *I. The project complies with all additional standards imposed on it by the Land*  
44 *Development Regulations:*  
45

46 1. Residential Rate of Growth Ordinance (ROGO) (§138-19 – §138-28): *Not applicable.*

1  
2 2. Non-Residential Rate of Growth Ordinance (NROGO) (§138-47 – §138-56): *In*  
3 *compliance following receipt of allocations or revised settlement agreement.*  
4

5 The most recent version of the settlement agreement in the Planning & Environmental  
6 Resources Department's files is the Fourth Amended Settlement Agreement. Per the  
7 Fourth Amended Settlement Agreement, Monroe County agreed to process promptly  
8 upon submittal the building permit application for the credit union building within  
9 ROGO Year 16 (July 14, 2007 through July 13, 2008). This required date of  
10 submittal has passed. Further, the agreement was for a credit union or mini-storage  
11 facility, not a pharmacy.  
12

13 The applicant has indicated that the settlement agreement will be amended again to  
14 reflect current dates and current proposal. However, the Planning & Environmental  
15 Resources Department has not received such an amended version as of the date of this  
16 report.  
17

18 In the event the settlement agreement is not amended, the applicant shall be required  
19 to receive NROGO allocations for the square footage prior to issuance of any  
20 building permit for the building.  
21

22 3. Purpose of the UC District (§130-47): *In compliance.*  
23

24 The purpose is to designate appropriate areas for high-intensity commercial uses  
25 intended to serve retail sales and service, professional services and resort activities  
26 needs at a regional or multiple planning area scale. This district should be established  
27 at discrete nodes along U.S. 1 and should be designed so as to serve the needs of both  
28 residents and visitors.  
29

30 4. Permitted Uses (§130-97): *In compliance following receipt of required minor*  
31 *conditional use permit.*  
32

33 The proposed CVS Pharmacy is a commercial retail use. According to the application  
34 and the traffic study, there would be 14,600 SF of floor area within the building.  
35

36 A traffic study by CPH Engineers, Inc. indicates that the CVS Pharmacy would  
37 generate 1,287 daily trips. According to that finding, there would be 88 daily trips  
38 per 1,000 SF of non-residential floor area. Commercial retail uses that generate  
39 between 50 and 100 average daily trips per 1,000 SF of floor area are medium-  
40 intensity.  
41

42 In the UC district, medium-intensity commercial retail uses greater than 5,000 SF but  
43 less than 20,000 SF of floor area may be permitted with minor conditional use permit  
44 approval, provided that access to US 1 is by way of a) an existing curb cut; b) a  
45 signalized intersection; or c) a curb cut that is separated from any other curb cut on  
46 the same side of US 1 by at least 400'.

- 1  
2  
3  
4
5. Residential Density and Maximum Floor Area Ratio (§130-157, §130-162 & §130-164): *In compliance.*

<i>Land Use</i>	<i>Floor Area Ratio (FAR)</i>	<i>Size of Site</i>	<i>Maximum Allowed</i>	<i>Amount of Floor Area</i>	<i>Potential Used</i>
Commercial Retail (medium-intensity)	0.40 FAR	105,374 SF	42,150 SF	14,600 SF	35%

- 5  
6  
7  
8
6. Required Open Space (§118-9, §118-12, §130-157, §130-162 & §130-164): *In compliance.*

9  
10  
11

In the UC district, there is a required open space ratio of at least 0.20 or 20 percent. Therefore, at least 21,075 SF of the total land area must be open space.

12  
13  
14  
15

The proposed site plan indicated that 72,112.6 SF of impervious coverage would be established; therefore the remaining area, 33,262 SF, would be pervious area/open space.

- 16  
17
7. Minimum Yards (§130-186): *In compliance.*

18  
19  
20  
21

The required non-shoreline setbacks in the UC district for nonresidential development are as follows: Front yard – 15’; Rear yard – 10’; and Side yard – 10’/15’ (where 10’ is required for one side and 15’ is the minimum combined total of both sides).

22  
23  
24  
25

Note: An administrative variance of 5’ was approved from the required 15’ front yard setback along the US 1 right-of-way (northern property line) in order to receive permit approval to construct portions of 39 of the 97 parking spaces.

- 26  
27
8. Maximum Height (§130-187): *Compliance to be determined.*

28  
29  
30

Staff will need documentation of the elevation of the building from the “crown of the road”. At grade, from the buildings base the elevation is 28 feet.

- 31  
32  
33  
34
9. Surface Water Management Criteria (§114-3): *Full compliance to be determined by prior to issuance of a building permit. A South Florida Water Management District permit will be required prior to issuance.*

35  
36  
37  
38  
39  
40  
41

The plans submitted, dated May 18, 2012 and received May 21, 2012 appear to comply with MCC Chapter 114-3. However the plans do not include calculations for the stormwater treatment requirements. Upon submittal to the Building Department, please provide stormwater criteria on the plans and confirm that the dry pre-treatment ponds provide a minimum of ½ inch pretreatment (approximately 4,390 cubic feet of storage) prior to discharge to the drainage wells (MCC §114-3(f)(2)3).

1 10. Wastewater Treatment Criteria (§114-5): *Compliance to be determined by Key West*  
2 *Resort Utilities prior to the issuance of a building permit.*

3  
4 11. Fencing (§114-20): *Full compliance to be determined upon submittal to Building*  
5 *Department.*

6  
7 The plans depict a retaining wall along the southern property line. The plans  
8 submitted do not provide construction details.

9  
10 12. Floodplain Management (§122-1 – §122-6): *Full compliance to be determined upon*  
11 *submittal to Building Department.*

12  
13 The site is designated within an AE – EL 9 flood zone on the Federal Emergency  
14 Management Agency (FEMA)'s flood insurance rate maps. All new structures must  
15 be built to floodplain management standards that meet or exceed those for flood  
16 protection.

17  
18 13. Energy Conservation Standards (§114-45): *Full compliance to be determined upon*  
19 *submittal to Building Department.*

20  
21 The development proposal includes the provision of a bicycle rack, installation of  
22 native plants in required landscaping, which will reduce the requirements for water  
23 and maintenance; the installation of several shade trees, which will provide shade for  
24 parking areas; and the provision of structural shading.

25  
26 14. Potable Water Conservation Standards (§114-46): *Compliance to be determined*  
27 *upon submittal to Building Department.*

28  
29 15. Environmental Design Criteria and Mitigation Standards (§118-6, §118-7 & §118-8):  
30 *In compliance.*

31  
32 16. Required Parking (§9.5-114-67): *In compliance.*

33  
34 The development would be subject to the following off-street parking requirements:

35

<i>Specific Use</i>	<i>Multiplier</i>	<i>Total Proposed</i>	<i>Required Spaces</i>
Commercial retail	3 spaces / 1,000 SF	14,600 SF	44 spaces

36  
37 The site plan shows 97 total parking spaces for the proposed CVS Pharmacy.

38  
39 If there are 76 to 100 total parking spaces in a lot, at least four accessible parking  
40 spaces are required. According to the site plan, 97 spaces are provided and four of the  
41 off-street parking spaces are handicap-accessible. Each of these handicap spaces are  
42 12' in width and 18' in length. Such spaces shall be designed and marked for  
43 exclusive use of those individuals who have a severe physical disability and have  
44 permanent or temporary mobility problems who have been issued either a disabled  
45 parking permit or a license plate. In addition, parking access aisles must be part of an

1 accessible route to the building entrance. The access aisle shall be striped diagonally  
2 to designate it as a no-parking zone. Curb ramps must be located outside of the  
3 disabled parking spaces and access aisles.  
4

5 The proposal includes 90 degree parking spaces. All regular parking spaces at these  
6 angles must be at least 8'6" in width by 18' in length. The site plan shows these  
7 parking spaces at 9' in width by 18' in length. Further, each required parking space  
8 shall have direct and unrestricted access to an aisle of the following minimum width:  
9

<i>Parking Pattern</i>	<i>One Way Aisle Width</i>	<i>Two Way Aisle Width</i>
90 degrees	24'	24'

10  
11 17. Required Loading and Unloading Spaces (§114-69): *In compliance.*  
12

13 One (1) loading/unloading space of 11' by 55' is required for the site. A  
14 loading/unloading space is shown on the site plan.  
15

16 18. Required Landscaping (§114-99 – §114-105): *In compliance.*  
17

18 Since the parking area is to contain six or more spaces and is within a UC district, a  
19 class "C" landscaping standard is required. The Class C standard requires 430 SF of  
20 planting area, including 2 canopy trees and 5 shrubs, for each 24 parking spaces  
21 provided. The plans submitted show 97 total parking spaces, therefore 1,738 SF of  
22 landscaping consisting of 8 canopy trees and 20 shrubs is required for the project.  
23 The Landscape Plan (Sheet L-1) submitted with the plans meets the standards of  
24 §114-99.  
25

26 19. Required Bufferyards (§114-124 – §114-130): *In compliance.*  
27

28 A class "B" major street buffer is required along the US 1 frontage. The plans show  
29 506 LF of frontage and further the plans show the appropriate required buffer  
30 consisting of 12 canopy trees, 4 understory trees and 40 shrubs.  
31

32 A land use district bufferyard is required along a portion of the southern property line  
33 as there is an Urban Residential Medium (URM) district on the south side of East  
34 Laurel Avenue. Along a UC/URM boundary line, a class "C" district boundary  
35 bufferyard is required, as described/illustrated in MCC §114-128. The landscape plan  
36 provided indicates a 15' bufferyard in this location including the minimum required  
37 number and type of vegetation for a class "C" bufferyard.  
38

39 20. Outdoor Lighting (§114-159 – §114-162): *Full compliance to be determined upon*  
40 *submittal to Building Department.*  
41

42 21. Signs (§142-1 – §142-7): *Full compliance to be determined upon submittal to*  
43 *Building Department.*  
44

45 22. Access Standards (§114-195 – §114-201): *In compliance*

1  
2 There are two proposed access drives to the site, one from 3<sup>rd</sup> Street and one from 2<sup>nd</sup>  
3 Street. There would be no direct access to/from US 1.  
4

5 A traffic study by CPH Engineers, Inc. indicates that the project would generate 1,287  
6 daily trips and 656 of these trips would be new trips. Moreover, the proposed  
7 pharmacy is anticipated to generate 151 PM peak trips, 77 of which are new trips.  
8

9 The County's traffic consultant reviewed the traffic impact analysis as part of a  
10 development approval application and determined that there was adequate capacity  
11 along US1 and the level of service would not be reduced to an unacceptable level.  
12 According to the 2011 US 1 Arterial Travel Time and Delay Study, Segment 1 of US  
13 1 had a "B" level of service.  
14

- 15 23. Chapter 533, Florida Statutes: *Full compliance to be determined upon submittal to*  
16 *Building Department.*  
17

18 According to the site plan, 4 of the 97 off-street parking spaces provided would be  
19 handicap accessible only. This is compliant with the Florida Accessibility Code for  
20 Building Construction, which states that if 76 to 100 parking spaces are provided, 4  
21 spaces are required to be limited to handicap-accessible parking. The proposed  
22 handicap parking spaces are of correct dimensions, located in proximity to the  
23 building entrance and would have access aisles. Compliance of signage requirements  
24 shall be determined upon submittal to the Building Department.  
25

- 26 24. Other Issues:  
27

28 The applicant submitted a warrant analysis for a new traffic signal. Based on the  
29 information provided, the county's traffic consultant does not recommend signaling  
30 the 3<sup>rd</sup> Street and US 1 intersection at this time (see attachment).  
31

32 The applicant has proposed opening 2<sup>nd</sup> Street to US 1. The Planning &  
33 Environmental Resources Department does not object to this proposal; however such  
34 an action requires approval/permits from both FDOT and the Public Works Division.  
35 Coordination with any affected private property owner is also required. The Building  
36 Department and Planning Department do not issue right of way permits for county  
37 roads.  
38

39 **V RECOMMENDED ACTION:**  
40

41 Staff recommends approval with the following conditions:  
42

- 43 A. Prior to the issuance of a development order, the applicant shall submit  
44 documentation indicating a) highest natural elevation of the ground surface, prior to  
45 construction, next to the proposed walls of the structure, or b) the crown or curb of

1 the nearest road directly adjacent to the structure, whichever is higher, so that staff  
2 can verify compliance with the maximum height requirements.

- 3  
4 B. Prior to the issuance of a development order, the applicant shall submit a revised site  
5 plan removing reference to a traffic signal at the 3<sup>rd</sup> Street and US 1 intersection.  
6  
7 C. Prior to the issuance of a development order, the Public Works Division shall approve  
8 of the opening 2nd Street to US 1 or the applicant shall submit a revised site plan  
9 removing reference to the opening.  
10  
11 D. Prior to the issuance of a building permit(s), the proposed development and structures  
12 shall be found in compliance by the Monroe County Building Department, Floodplain  
13 Administrator, Office of the Fire Marshal and Project Management Department.  
14  
15 E. Prior to the issuance of a building permit for the construction of the building, a) all  
16 necessary allocation(s) for its area shall be acquired through the NROGO permit  
17 allocation system or b) the applicant shall provide an amended settlement agreement  
18 to Case #CAK-01-108 vesting the project.  
19  
20 F. Similar and consistent design, materials and colors shall be utilized for all new  
21 structures, including signage, in order to make the development more attractive and  
22 cohesive. The architecture of the building shall be compatible with the architectural  
23 guidelines set forth within the Master Plan for the Future Development of Stock  
24 Island & Key Haven. The applicant may not deviate from the designs depicted on  
25 building elevations and site plan without approval from the Director of Planning.  
26  
27 G. There shall be curbing to delineate between the roadways and their adjacent  
28 walkways.  
29  
30 H. There shall be directional signage to direct motorists though the site.  
31  
32 I. All business signage shall have a nautical theme in accordance with the Master Plan  
33 for the Future Development of Stock Island & Key Haven.  
34

35 VI PLANS REVIEWED:

- 36  
37 a. Cover Sheet (Sheet C-1) by Maria C. Zapata, P.E. signed and sealed 5/18/2012.  
38 b. ALTA/ACSM Land Title Survey (Sheet 1 of 1) by Daniel C. Fortin, dated 2/27/12.  
39 c. Site Plan (Sheet C-4) by Maria C. Zapata, P.E. signed and sealed 5/18/2012.  
40 d. Grading and Drainage Plan (Sheet C-5) by Maria C. Zapata, P.E. signed and sealed  
41 5/18/2012.  
42 e. Composite Utility Plan (Sheet C-6) by Maria C. Zapata, P.E. signed and sealed  
43 5/18/2012.  
44 f. Erosion and Sedimentation Plan (Sheet C-7) by Maria C. Zapata, P.E. signed and sealed  
45 5/18/2012.

- 1 g. Stormwater Pollution Prevention Notes and Details (Sheet C-8) by Maria C. Zapata, P.E.
- 2 signed and sealed 5/18/2012.
- 3 h. Drainage Details (Sheet C-10) by Maria C. Zapata, P.E. signed and sealed 5/18/2012.
- 4 i. Landscape Plan (Sheet L-1) by Galen J. Pugh, RLA, signed and sealed 5/17/2012.
- 5 j. Landscape Notes and Details (Sheet L-2) by Galen J. Pugh, RLA, signed and sealed
- 6 5/17/2012.
- 7 k. Floor Plan (A-1.1) by Jose Gordillo, signed and sealed 5/15/2012.
- 8 l. Exterior Elevations (A-4.1) by Jose Gordillo, signed and sealed 5/15/2012.
- 9 m. Photometric Plan (PH-1) by Jose Gordillo, signed and sealed 5/15/2012.
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July 30, 2012

Ms. Gail Creech – Planning Commission Coordinator  
**MONROE COUNTY PLANNING DEPARTMENT**  
2798 Overseas Highway - Suite 410  
Marathon, Florida 33050-2227

via e-Mail & US Mail

**Re: CVS Pharmacy – Stock Island (US 1 – MM 5)  
Traffic Impact Study and Traffic Signal Warrant Analysis - Review**

Dear Ms. Creech:

We have reviewed the traffic impact and signal warrant analysis studies submitted by *CPH Engineers, Inc. (CPH)* for the applicant *CVS Pharmacy*. Applicant is proposing to build a pharmacy at the southeast corner of the intersection of US 1 and 3<sup>rd</sup> Street, in Stock Island. The proposed development will consist of a 14,600 square foot building. Our findings are as follows:

- **Background Data:** The project site appears to be currently vacant. Two-way access drives are proposed along two of the abutting streets – 3<sup>rd</sup> Street and 2<sup>nd</sup> Street. The project site could be accessed from US 1 via 2<sup>nd</sup> and 3<sup>rd</sup> Streets; 2<sup>nd</sup> Street does not connect to US 1 at its existing configuration, applicant is proposing to create a future connection of 2<sup>nd</sup> Street with US 1.
  - Paragraph two of page seven of Traffic Impact Study makes reference to trips from existing land use - clarify. Also, if reference to pass by trips is being made make appropriate editorial corrections.
  - Background growth rate calculation sheet is missing from Appendix C as referenced in page ten of Traffic Impact Study.
  
- **Trip Generation & Analysis:** Based on the *Eighth Edition of ITE Trip Generation Manual*, the proposed pharmacy is anticipated to generate 1,287 daily trips - 656 of these trips would be new trips. Similarly, the proposed pharmacy is anticipated to generate 151 PM peak hour trips, 77 of which are new trips. Three nearby signalized intersections and four unsignalized intersections, including the 2<sup>nd</sup> Street and the 3<sup>rd</sup> Street unsignalized intersections along US 1 are analyzed and shown to function adequately with and without the project trips. An arterial analysis of US 1 is presented to show that there is adequate capacity along US 1 to accommodate the project trips.
  - We agree with the trip generation calculations and the operational analysis presented in the traffic study.

URS Corporation Southern  
3343 West Commercial Boulevard  
Suite 100  
Fort Lauderdale, FL 33309  
Tel: 954.739.1881  
Fax: 954.739.1789

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3  
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- **Signal Warrant Analysis:** Applicant is proposing to signalize the 3<sup>rd</sup> Street and US 1 intersection to provide "...safe and adequate access to and from the site...." A separate signal warrant analysis is presented to justify the proposed signal.
  - There is adequate access to the site without signalizing 3<sup>rd</sup> Street and US 1 intersection; we disagree with the perception that a signalized intersection would provide a safer access to the project site. Vehicular delay and frequency of certain types of crashes are sometimes greater under traffic signal control, therefore as recommended by the MUTCD consideration should be given to providing alternatives to traffic signals even if one or more warrants have been satisfied. Applicant should explore the possibility of widening 3<sup>rd</sup> street and adding an exclusive right turn lane to accommodate for the high turning volume expected at the 3<sup>rd</sup> Street intersection with US-1. Alternatively, certain turn restrictions could be implemented at the 3<sup>rd</sup> Street and US 1 intersection to reroute the turning vehicles to safely access the existing signalized intersection at MacDonald Avenue and US 1. Furthermore, the HCM analysis provided for future conditions indicates that delay time and queue length will be worst under signalized conditions than stop control conditions at the 3<sup>rd</sup> Avenue and US 1 intersection.
  - The level of service (LOS) along approximately 108 miles of US 1 in Monroe County is based on the overall operating speeds. An overall operating speed of 45 mph is the LOS C threshold along US 1 to maintain the transportation concurrency. The existing overall operating speed is slightly above the LOS threshold at 47.1 mph (2011 Annual Travel Time Delay Study – Monroe County). A signal at the 3<sup>rd</sup> Street and US 1 intersection is likely to create additional delays to the through traffic on US 1, and will have an effect on the overall travel speeds. Therefore, alternative means to preserve "safety" and access should be explored before deciding to add a signalized intersection along US 1.
  - US 1 near the proposed CVS pharmacy site is designated as Access Class 3 by the Florida Department of Transportation. The minimum signal spacing for Access Class 3 is 0.5 miles; the proposed signal would be at a much shorter distance of approximately 1,750 feet from the nearby MacDonald Avenue and US 1 signalized intersection.

Although we agree with the study findings, we do not agree with signalizing the 3<sup>rd</sup> Street and US 1 intersection. We recommend that the applicant propose alternative means to improve and accommodate the project traffic.

Should you have any questions, feel free to call me.

Sincerely,

  
URS Corporation Southern

Raj Shanmugam, P.E.  
Senior Traffic Engineer

cc: Mr. Joe Haberman – Senior Planner, Monroe County Planning  
Mr. Ali Khalilhamadi P.E., – FDOT Permits

C:\monroe\County\Projects\2012\2012-07-30\CVS\51610\51610

**File #:** 2012-072

**Owner's Name:** Keys Federal Credit Union

**Applicant:** CVS Pharmacy

**Agent:** Boos Development Group, Inc

**Type of Application:** Minor Conditional Use

**Key:** Stock Island

**RE:** 00124090-000000

# **Additional Information added to File 2012-072**

July 26, 2012

Mr. Joe Haberman, Planner  
Monroe County Planning Department  
Marathon Government Center  
2798 Overseas Highway, Suite 400  
Marathon, Florida 33037

**Subject: Sievers Commercial R.O.W. Abandonment Request  
Engineers Project No 07-213-A**

**Dear Haberman:**

WFM requests a time extension on the above request to locate the new owner of Mr. Isler's property and to obtain a response from them.

We started this abandonment process in February of 2010 and have been successful with all utility vendors and governmental agencies. The two neighboring property owners have been more of a challenge. Recently we received a response from Mr. Correa which is attached and states that he hasn't any objections to the abandonment. This is a response to the July letter rather than the March letter that our firm sent out. Mr. Isler has sold to a Mr. Woodbury, whom our client is now in touch with. The Monroe County Property Appraiser's office has recently updated their website to reflect the sales transaction. We hope to conclude this effort within sixty days and have a response in your hands by that time.

Thank you for your assistance. Please do not hesitate to call 305-394-7743 or 772-770-1093 to speak to me or staff, if needed.

Regards,



William F McCain, P. E.  
President- Principal Engineer  
W.F. McCain and Associates

WFM:jfl

Attachment

cc: Ron Sievers



**LARGE D.F. ILLUMINATED PYLON  
STANDARD DESIGN**

SCALE: 3/16"=1'-0"

WOODEN PANEL  
PYLON TOP "DECK"

STANDARD CVS  
PYLON MAIN I.D.  
CABINET  
(MINCED ONION)

CABINET FACE  
RETAINERS  
WOOD FINISH

STANDARD CVS  
ELECTRONIC  
MESSAGE BOARD

"BARREL" PYLON  
LEG SECTION  
w/ DECORATIVE  
"ANCHOR TRELLIS"

ROPE

"DOCK PILING"  
ROUND  
PYLON BASE(S)



**LARGE D.F. ILLUMINATED PYLON  
CUSTOM "NAUTICAL MARITIME" DESIGN**

SCALE: 3/16"=1'-0"

**ANCHORS ON THE DOCKS**



**PROTOTYPE**

**D/F Internally Illuminated  
Pylon Sign Concept**

PROJECT #:  
**749**

SUBMITTAL IS:  APPROVED

APPROVED AS NOTED

REVISED AND RESUBMIT

CLIENT CONTRACTOR

DATE

FILE PATH: **...Active\ACCOUNTS\C\CVS pharmacy\Locations 2012\Project 749\  
66622\_Nautical\_Pylon\_R1.cdr**

DATE: **05/30/12**

Rev. 1: **00/00/00**

Rev. 2: **00/00/00**

Rev. 3: **00/00/00**

Rev. 4: **00/00/00**

Rev. 5: **00/00/00**

SCALE:

**As Noted**

DRAWN BY:

**AR**

PAGE #:

**1**

DRAWINGS PREPARED BY:

*The Icon Companies®*



Drawings are the exclusive property of Icon Identity Solutions Inc.. Any unauthorized use or duplication is not permitted.

Date 7-24-12

William F. McCain, P.E.

1171 19<sup>th</sup> Street

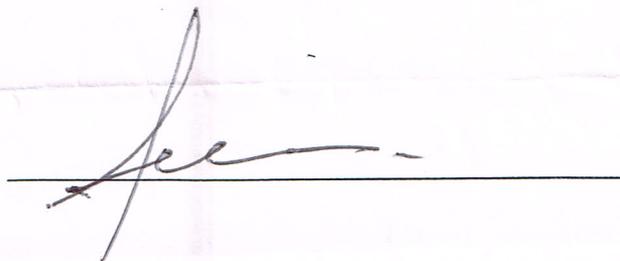
Vero Beach, FL 32960

RE: Mr. Siever's Alley Abandonment

Dear Mr. McCain,

I, Francisco Correa the owner of the adjacent property to the subject alley am responding in the affirmative to proceeding with the right-of-way abandonment of the alley behind the three lots (Property Id #s 00538170, 00538180 and 00538190). I understand that the land next to my property will have landscaping in it when construction on the three lots is completed. This will include maintaining cross access between the two streets through the alley in the rear of the 3 lot project. Mr. Siever's landscaping effort will occur after all permits have been obtained and construction commences but prior to certificate of occupancy.

Sincerely,

A handwritten signature in dark ink, appearing to read "Francisco Correa", is written over a horizontal line. The signature is stylized and cursive.

Date 7-28-2012

William F. McCain, P.E.

1171 19<sup>th</sup> Street

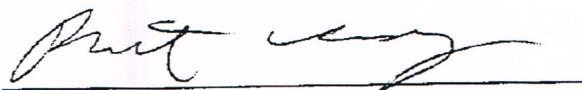
Vero Beach, FL 32960

RE: Mr. Siever's Alley Abandonment

Dear Mr. McCain,

I, ROBERT WOODBERRY the owner of the adjacent property to the subject alley am responding in the affirmative to proceeding with the right-of-way abandonment of the alley behind the three lots (Property Id #s 00538170, 00538180 and 00538190). I understand that the land next to my property will have landscaping in it when construction on the three lots is completed. This will include maintaining cross access between the two streets through the alley in the rear of the 3 lot project. Mr. Siever's landscaping effort will occur after all permits have been obtained and construction commences but prior to certificate of occupancy.

Sincerely,



847-571-7826

County of Monroe  
Growth Management Division

Planning & Environmental Resources  
Department

2798 Overseas Highway, Suite 410  
Marathon, FL 33050  
Voice: (305) 289-2500  
FAX: (305) 289-2536



Board of County Commissioners

Mayor David Rice, Dist. 4  
Mayor Pro Kim Wigington Tem Dist. 1  
Heather Carruthers, Dist. 3  
George Neugent, Dist. 2  
Sylvia J. Murphy, Dist. 5

*We strive to be caring, professional and fair*

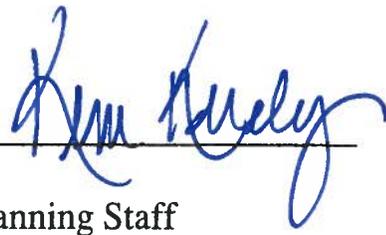
Date: 5.21.12  
Time: \_\_\_\_\_

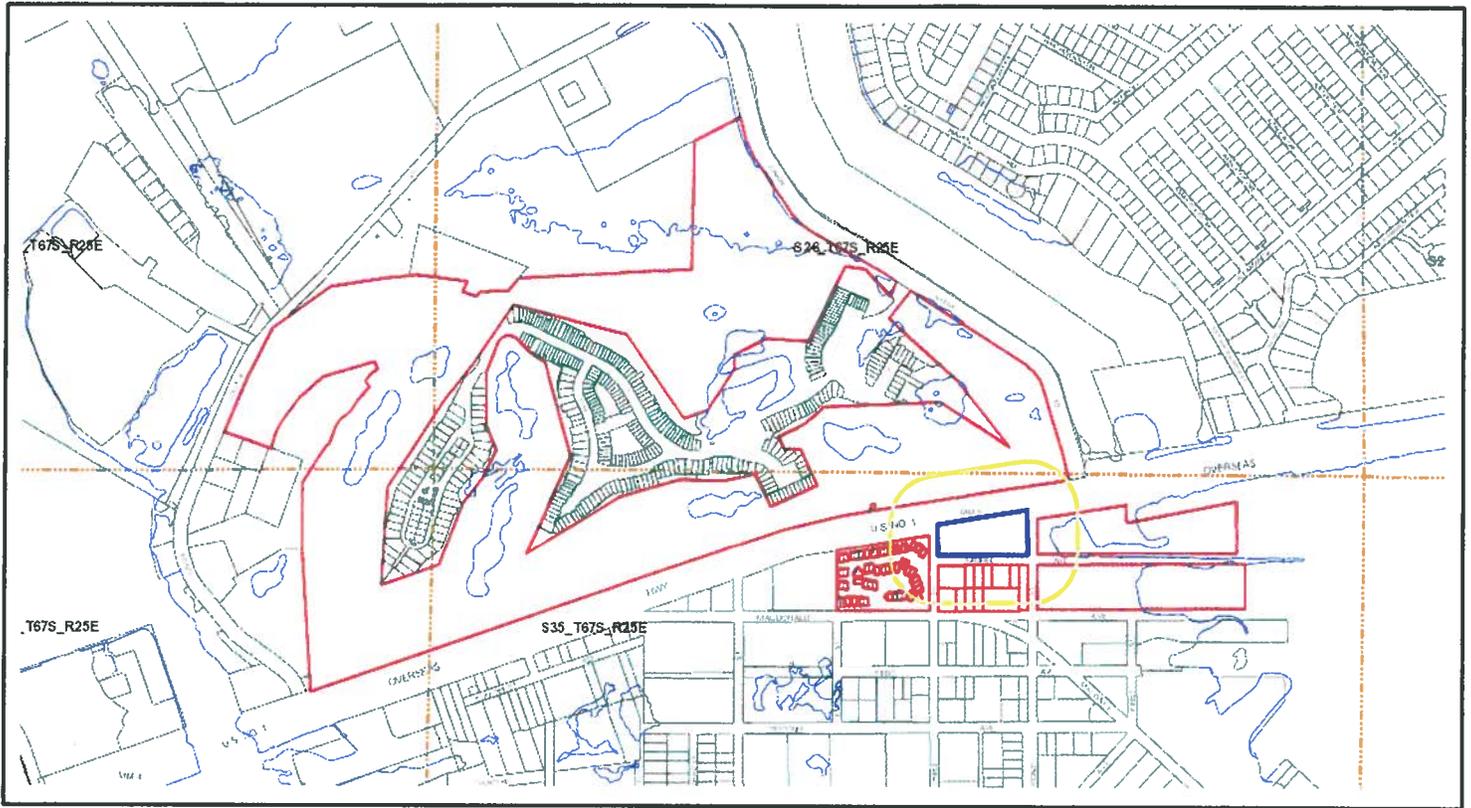
Dear Applicant:

This is to acknowledge submittal of your application for Minor  
Type of application

CVS Pharmacy  
Project / Name to the Monroe County Planning Department.

Thank you.

  
Planning Staff



Printed: May 21, 2012

*[Handwritten signature]*

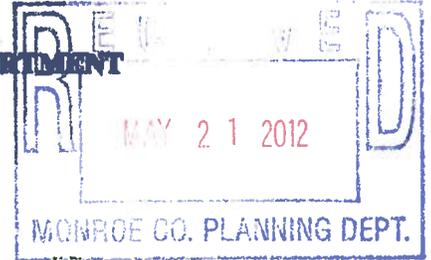
## Monroe County, Florida MCPA GIS Public Portal



DISCLAIMER: The Monroe County Property Appraiser's office maintains data on property within the County solely for the purpose of fulfilling its responsibility to secure a just valuation for ad valorem tax purposes of all property within the County. The Monroe County Property Appraiser's office cannot guarantee its accuracy for any other purpose. Likewise, data provided regarding one tax year may not be applicable in prior or subsequent years. By requesting such data, you hereby understand and agree that the data is intended for ad valorem tax purposes only and should not be relied on for any other purpose.

**End of Additional File 2012-072**

**APPLICATION  
MONROE COUNTY  
PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT**



**Request for a Minor Conditional Use Permit / Amendment to a Minor Conditional Use Permit**

**An application must be deemed complete and in compliance with the Monroe County Code by the Staff prior to the item being scheduled for review**

**Minor Conditional Use Permit Application Fee: \$3,484.00**

*In addition to the application fee, the following fees also apply:  
Advertising Costs: \$245.00*

**Surrounding Property Owner Notification: \$3.00 for each property owner required to be noticed**

**Date of Submittal:** 05 / 21 / 2012  
Month Day Year

**Property Owner:**

Keys Federal Credit Union  
Scott Duszynski

**Name**

553 Peary Court Rd.

Key West, FL 33040

**Mailing Address (Street, City, State, Zip Code)**

**Daytime Phone**

**Email Address**

**Agent (if applicable):**

Boos Development Group, Inc.  
Paul Tremblay

**Name**

5789 NW 151st Street Suite#B

Miami Lakes, FL 33014

**Mailing Address (Street, City, State, Zip Code)**

(305) 828-8284

**Daytime Phone**

ptremblay@boosdevelopment.com

**Email Address**

**Legal Description of Property:**

**(If in notes and bounds, attach legal description on separate sheet)**

See Attachment

<b>Block</b>	<b>Lot</b>	<b>Subdivision</b>	<b>Key</b>
Parcel ID:00124090-000000			1158224
<b>Real Estate (RE) Number</b>		<b>Alternate Key Number</b>	
5610 Overseas Highway, Stock Island, Monroe County, FL Apprx. Mile Marker 5			
<b>Street Address (Street, City, State, Zip Code)</b>		<b>Approximate Mile Marker</b>	

## APPLICATION

**Land Use District Designation(s):** Urban Commercial (UC) (Zoning)  
**Present Land Use of the Property:** Mixed Use/Commercial (MC) (Land Use)  
**Proposed Land Use of the Property:** Same  
**Total Land Area:** 2.42 acres

**If non-residential or commercial floor area is proposed, please provide:**

1 Total number of non-residential buildings  
14,600 sf. Total non-residential floor area in square feet

**If residential dwelling units are proposed, please provide:**

\_\_\_\_\_ Total number of residential buildings  
\_\_\_\_\_ Total number of permanent, market-rate units  
\_\_\_\_\_ Total number of permanent, affordable / employee housing units  
\_\_\_\_\_ Total number of transient units (hotel rooms, recreational vehicle / campground spaces)

Has a previous application been submitted for this site within the past two years? Yes \_\_\_ No X

All of the following must be submitted in order to have a complete application submittal:  
(Please check as you attach each required item to the application)

- Complete minor conditional use permit application (unaltered and unbound);
- Correct fee (check or money order to Monroe County Planning & Environmental Resources);
- Proof of ownership (i.e. Warranty Deed);
- Current Property Record Card(s) from the Monroe County Property Appraiser;
- Location map;
- Photograph(s) of site from adjacent roadway(s);
- Signed and Sealed Boundary Survey, prepared by a Florida registered surveyor – 6 sets (at a minimum, survey should include elevations; location and dimensions of all existing structures, paved areas and utility structures; all bodies of water on the site and adjacent to the site; total acreage by land use district; and total acreage by habitat);
- Written description of project;
- Signed and Sealed Site Plans, prepared by a Florida registered architect, engineer or landscape architect – 6 sets (drawn to a scale of 1 inch equals 20 feet, except where impractical and the Director of Planning authorizes a different scale). At a minimum, the site plan should include the following:
  - Date, north point and graphic scale;
  - Boundary lines of site, including all property lines and mean high-water lines;
  - Land use district of site and any adjacent land use districts;
  - Flood zones pursuant to the Flood Insurance Rate Map(s);

## APPLICATION

- Locations and dimensions of all existing and proposed structures and drives;
  - Type of ground cover (i.e. concrete, asphalt, grass, rock);
  - Adjacent roadways;
  - Setbacks as required by the land development regulations;
  - Location and dimensions of all parking spaces (including handicap accessible, bicycle and scooter) and loading zones;
  - Calculations for open space ratios, floor area ratios, residential density and parking;
  - Location and type of outdoor lighting;
  - Extent and area of wetlands, open space areas and landscape areas;
  - Location of solid waste storage;
  - Location of sewage treatment facilities;
  - Location of existing and proposed fire hydrants or fire wells;
- Floor Plans for all proposed structures and for any existing structures to be redeveloped – 6 sets (drawn at an appropriate standard architectural scale and including handicap accessibility features);
- Elevations for all proposed structures and for any existing structures to be modified – 6 sets (with the elevations of the following features referenced to NGVD: existing grade; finished grade; finished floor elevations (lowest supporting beam for V-zone development); roofline; and highest point of the structure);
- Landscape Plan by a Florida registered landscape architect – 6 sets (may be shown on the site plan; however, if a separate plan, must drawn to a scale of 1 inch equals 20 feet, except where impractical and the Director of Planning authorizes a different scale). At a minimum, the landscaping plan should include the following:
- Date, north point and graphic scale;
  - Boundary lines of site, including all property lines and mean high-water lines;
  - Locations and dimensions of all existing and proposed structures and drives;
  - Open space preservation areas;
  - Existing natural features;
  - Size and type of buffer yards including the species, size and number of plants;
  - Parking lot landscaping including the species, size and number of plants;
  - Specimen trees, or threatened and endangered plants to be retained and those to be relocated or replaced;
  - Transplantation plan (if required);
- Conceptual Drainage Plan – 6 sets (with drainage calculations; existing and proposed topography; all drainage structures; retention areas; drainage swales; and existing and proposed permeable and impermeable areas);
- Traffic Study, prepared by a licensed traffic engineer;
- Construction Management Plan, stating how impacts on near shore water and surrounding property will be managed (i.e. construction barriers, hay bales, flagging);
- Typed name and address mailing labels of all property owners within a 300 foot radius of the property. This list should be compiled from the current tax rolls of the Monroe County Property Appraiser. In the event that a condominium development is within the 300 foot radius, each unit owner must be included;
- Letters of Coordination are required from the following:
- Florida Keys Aqueduct Authority (FKAA);
  - Florida Keys Electric Cooperative (FKEC) or Keys Energy Services;
  - Monroe County Office of the Fire Marshal;
  - Monroe County Health Department;
  - Monroe County Solid Waste Management;
- KWRU Letter

APPLICATION

- Florida Department of Health if wastewater flows are less than or equal to 5,000 gallons per day or Florida Department of Environmental Protection if wastewater flows exceed 5,000 gallons per day

If applicable, the following must be submitted in order to have a complete application submittal:

- Notarized Agent Authorization Letter (note: authorization is needed from all owner(s) of the subject property)
- Vegetation Survey or Habitat Evaluation Index (please contact Monroe County Environmental Resources prior to application submittal to determine if this documentation is necessary) (See Survey)
- Construction Phasing Plan
- Additional Letters of Coordination may be required for your project, please contact with the Planning & Environmental Resources Department to identify other agencies expected to review the project. Other agencies may include, but are not limited to

- Key Largo Wastewater Treatment District (KLWTD)
- South Florida Water Management District (SFWMD)
- Florida Department of Transportation (FDOT)
- Florida Department of Environmental Protection (FDEP) Water, Sewer, Drainage (see attached emails)
- Florida Department of State, Division of Historic Resources
- Florida Game and Freshwater Fish Commission (FGFFC)
- U.S. Army Corps of Engineers (ACOE)
- U.S. Fish and Wildlife Service (USFW)

If deemed necessary to complete a full review of the application, the Planning & Environmental Resources Department reserves the right to request additional information.

If for any reason the minor conditional use permit application requires review and consideration by the Monroe County Planning Commission, additional fees, mailing labels and copies of all plans shall be required prior to item being scheduled for commission review

I certify that I am familiar with the information contained in this application, and that to the best of my knowledge such information is true, complete and accurate.

Signature of Applicant: [Signature] Date: 5/9/2012

Sworn before me this 9th day of May 2012

[Signature]  
Notary Public  
My Commission Expires

Please send the complete application package to the Monroe County Planning & Environmental Resources Department, Marathon Government Center, 2798 Overseas Highway, Suite 400, Marathon, FL 33050.



SHELBI RUE D'AVIGNON  
NOTARY PUBLIC  
STATE OF FLORIDA  
Comm# EE093039  
Expires 5/11/2015

## LEGAL DESCRIPTION:

### Parcel 1:

All of Block 24 of Maloney Subdivision, Stock Island, Monroe County, Florida; as recorded in Plat Book 1 at Page 55, of the Public Records of Monroe County, Florida; said Block being described by metes and bounds as follows: Begin at the Southeast corner of said Block and run thence South 89 degrees 51 minutes 20 seconds West along the South Boundary of said Block for a distance of 500 feet to the Southwest corner of said Block; thence North 00 degrees 08 minutes 40 seconds West along the West Boundary of said Block for a distance of 119.95 feet to the Northwest corner of said Block; thence North 81 degrees 15 minutes 35 seconds East along the Northerly Boundary of said Block for a distance of 505.70 feet to the Northeast corner of said Block; thence run South 00 degrees 08 minutes 40 seconds East along the East Boundary of said Block for a distance of 195.68 feet back to the Southeast corner of said Block and the Point of Beginning.

### Parcel 2:

Commence at Station 72+70.16, as shown on FDOT Corridor Map for Section 90020, Sheet 12 of 138, also said station being the intersection of the centerlines of Third Street and Overseas Highway (US-1) in Monroe County, State of Florida, Section 35, Township 67 South, Range 25 East; thence North 80°50'25" East, a distance of 25.34 feet to a point on the centerline of Overseas Highway (US-1); thence South 00°12'35" West, a distance of 50.68 feet to the Point of Beginning; thence continue South 00°12'35" West a distance of 50.68 feet; thence North 80°50'25" East, a distance of 506.76 feet; thence North 00°12'35" East, a distance of 50.68 feet; thence South 80°50'25" West, a distance of 506.76 feet to the Point of Beginning.

RCD Apr 22 2003 10:28AM  
DANNY L KOLHAGE, CLERK

Prepared by and Return to:  
Deborah A. Candell  
The Chasing Department, Inc.  
3431 Duck Avenue  
Key West, FL 33090

DEED DOC STAMPS 11200.00  
04/22/2003 *SN* DEP CLK

### This Indenture

Wherever used herein, the term "map" shall include its title, official representation, and such other things as the instrument purports to refer to, and the printed or digital file of any graphic part thereof as printed with, printed on, or with "true" shall include all its parts and contents if these things are

Made this 3<sup>RD</sup> day of April A. D. 2003

**BETWEEN** RICHARD M. OSBORNE, Trustee of the RICHARD M. OSBORNE TRUST, dated January 13, 1995  
whose address is 8500 STATION ST, MENTOR, OH 44067  
of the County of Lake in the State of Ohio, party of the first part.

KEYS FEDERAL CREDIT UNION,  
whose address is 553 Peary Court Road, Key West, Florida 33090  
of the County of Monroe in the State of Florida, party of the second part.

Witnesseth, that the said party of the first part, for and in consideration of the sum of **TEN AND NO/100 (\$10.00) DOLLARS AND OTHER GOOD AND VALUABLE CONSIDERATION** Dollars to him in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged, has granted, bargained and sold to the said party of the second part his heirs and assigns forever, the following described land, situate lying and being in the County of Monroe State of Florida, to wit:

All of Block 24 of Malmsey Subdivision, Beach Island, Monroe County, Florida; as recorded in Plat Book 1 at Page 55 of the Public Records of Monroe County, Florida; said Block being described by metes and bounds as follows: Begin at the Southeast corner of said Block and run thence South 89 degrees 31 minutes 30 seconds West along the South Boundary of said Block for a distance of 500 feet to the Southwest corner of said Block; thence North 89 degrees 00 minutes 40 seconds West along the West Boundary of said Block for a distance of 119.95 feet to the Northwest corner of said Block; thence North 81 degrees 15 minutes 35 seconds East along the Northern Boundary of said Block for a distance of 505.76 feet to the Northwest corner of said Block; thence run South 89 degrees 00 minutes 40 seconds East along the East Boundary of said Block for a distance of 195.00 feet back to the Southeast corner of said Block and the Point of Beginning.

SUBJECT TO taxes for the year 2003 and subsequent years.  
SUBJECT TO easements, restrictions and reservations of record, but this reference thereto shall not operate to reimpose same.

Property Appraiser's Parcel Identification Number: 00L24094-000000 Alt. Key 1158224

And the said party of the first part does hereby fully warrant the title to said land, and will defend the same against the lawful claims of all persons whatsoever.

In Witness Whereof, the said party of the first part has hereunto set his hand and seal the day and year first above written.

Signed, Sealed and Delivered in Our Presence:

Witness:  
Melvyn E. Resnick

Richard M. Osborne Trustee  
L.S.  
RICHARD M. OSBORNE, Trustee of the RICHARD M. OSBORNE TRUST, dated January 13, 1995

Printed Name Melvyn E. Resnick

Rebekah Reichard

Printed Name Rebekah Reichard

\_\_\_\_\_ L.S.

MONROE COUNTY  
OFFICIAL RECORDS

Seal of Clerk  
County of LAKE

The foregoing instrument was acknowledged before me 3 day of April 2003, by RICHARD M. OSBORNE, Trustee, of the RICHARD M. OSBORNE TRUST dated January 13, 1995 who is/are personally known to me or who has/have produced \_\_\_\_\_ as identification and who did (did not) take an oath.

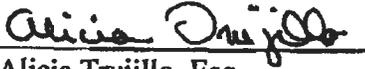
Melvyn E. Resnick, Attorney at Law  
Notary Public, State of Ohio  
My Commission Has No Expiration Date  
(SEAL) Section 147.03 R.C.

Melvyn E. Resnick  
NOTARY PUBLIC

27-SPD.03 06/99 (Valuable consideration - reserving mineral rights)

This instrument prepared by,  
or under the direction of,

Parcel No.: 3866  
Item/Segment No.: 4152302  
Managing District: Six



Alicia Trujillo, Esq.  
District General Counsel  
Florida Department of Transportation  
1000 NW 111<sup>th</sup> Avenue, Miami, Florida 33172

Doc# 1660481 08/31/2007 10:10AM  
Filed & Recorded in Official Records of  
MONROE COUNTY DANNY L. KOLHAGE

08/31/2007 10:10AM  
DEED DOC STAMP CL: RHONDA \$2,660.70

**QUITCLAIM DEED**

THIS INDENTURE, Made this 29<sup>th</sup> day of AUGUST, 2007 by and between the STATE OF FLORIDA by and through the STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION, Party of the First Part, whose address is 1000 N.W. 111<sup>th</sup> Avenue, Miami, Florida 33172 to KEYS FEDERAL CREDIT UNION, Party of the second part, whose Post Office address is 553 Peary Court, Key West, Florida 33040.

WITNESSETH

Doc# 1660481  
Bk# 2318 Pg# 793

WHEREAS, said land hereinafter described was heretofore acquired for state highway purposes;  
and

WHEREAS, said land is no longer required for such purposes, and the Party of the First Part, by action of the District Secretary, District Six, Florida Department of Transportation on June 18, 2007, pursuant to the provisions of Section 337.25 Florida Statutes, has agreed to quitclaim the land hereinafter described to the Party of the Second Part.

NOW, THEREFORE, THIS INDENTURE WITNESSETH: That the Party of the First Part for and in consideration of the sum of \$1.00 and other valuable considerations, receipt and sufficiency being hereby acknowledged, does hereby remise, release and quitclaim unto the Party of the Second Part, and assigns, forever, all the right, title and interest in all that certain land situate in Monroe County, Florida, viz:

(See Exhibit "A" attached hereto and made a part hereof)

Item/Segment No.: 4152302  
Managing District: Six  
Parcel No.: 3866

Doc# 1660481  
Bkn 2318 Pg# 794

TO HAVE AND TO HOLD, the said premises and the appurtenances thereof unto the Party of the Second Part.

RESERVING UNTO THE PARTY OF THE FIRST PART and its successors, an undivided three-fourths interest in, and title in and to, an undivided three-fourths interest in all the phosphate, minerals and metals that are or may be in, on, or under the said land and an undivided one-half interest in all the petroleum that is or may be in, on, or under said land with the privilege to mine and develop the same on all lands wherein the Party of the First Part holds the requisite interest.

IN WITNESS WHEREOF, the State of Florida Department of Transportation has caused these presents to be signed in the name of the State of Florida Department of Transportation by its District Secretary, District Six and its seal to be hereunto affixed, attested by its Executive Secretary, on the date first above written.

STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION

ATTEST: Margaret Higgins  
Margaret Higgins

By: John Martinez  
John Martinez, P.E.

Executive Secretary

District Six Secretary

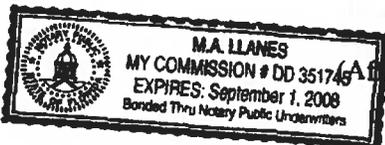
(Affix Department Seal)

STATE OF FLORIDA

COUNTY OF MIAMI-DADE

The foregoing instrument was acknowledged before me this 29<sup>th</sup> day of Aug 2007, by John Martinez, District Secretary for District Six, who is personally known to me.

M.A. Llanes  
Notary Public in and for the County and State last aforesaid.



(Affix Notary Seal)

My Commission Expires: 9/1/2008

EXHIBIT "A"

LEGAL DESCRIPTION

KEYS FEDERAL CREDIT UNION - RIGHT-OF-WAY SURPLUS

Commence at Station 72+70.16, as shown on FDOT Corridor Map for Section 90020, Sheet 12 of 138, also said station being the intersection of the centerlines of Third Street and Overseas Highway (US-1) in Monroe County, State of Florida, Section 35, Township 67 South, Range 25 East;

thence North 80°50'25" East a distance of 25.34' (feet) to a point on the centerline of Overseas Highway (US-1);

thence South 00°12'35" West, a distance of 50.68' (feet) to the Point of Beginning;

thence continue South 00°12'35" West, a distance of 50.68' (feet);

thence North 80°50'25" East a distance of 506.76' (feet);

thence North 00°12'35" East, a distance of 50.68' (feet);

thence South 80°50'25" West a distance of 506.76' (feet) to the Point of Beginning, said parcel containing 25,338 square feet, more or less.

EDHARA  
R. F. REECE, P.A.  
Professional Surveyor & Mapper  
30364 Quail Roost Trail  
Big Pine Key, Florida 33043  
Office (305) 872-1348  
Fax (305) 872-5622

  
Robert F. Reece, BSM #5632

Florida Department of Transportation, District VI

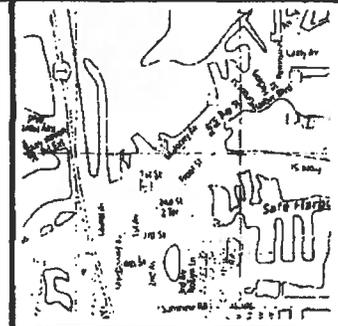
Item/Segment No.: 2502531  
W.P.I. No.: N/A  
State Project No.: 90020  
Federal Project No.: N/A  
State Road No.: S.R. 5  
County: Monroe  
Parcel No.: 3866

Sheet 1 of 2

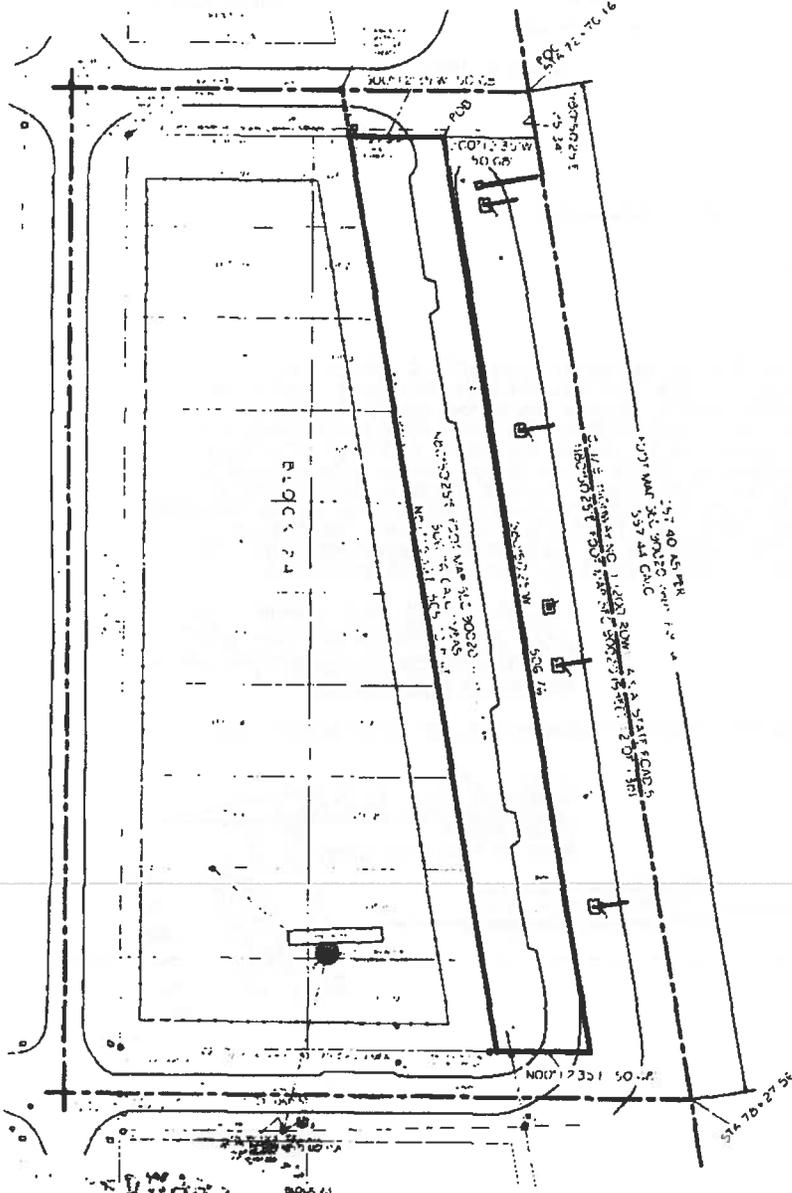
EXHIBIT "A"

SKETCH OF LEGAL DESCRIPTION

KEYS FEDERAL CREDIT UNION - RIGHT-OF-WAY SURPLUS



LOCATION MAP - N.T.S



SCALE: 1" = 100'

BEARING BASE  
 DERIVED FROM PLAT

ALL ANGLES DEPICTED  
 ARE 90 DEGREES UNLESS  
 OTHERWISE INDICATED

ADDRESS:  
 XXXXX U.S. HIGHWAY NO. 1  
 STOCK ISLAND, FL  
 33040

MONROE COUNTY  
 OFFICIAL PUBLIC RECORD

R E REECE, P.A.  
 Professional Surveyor and Mapper  
 30364 Quail Roost Trail  
 Big Pine Key, Florida 33043  
 Office (305) 872-1348  
 Fax (305) 872-5622

*Robert E. Reece*  
 Robert E. Reece, P.S.M. #5632

Florida Department of Transportation, District VI

Item/Segment No.: 2502531  
 W.P.I. No.: N/A  
 State Project No.: 90020  
 Federal Project No.: N/A  
 State Road No.: S.R. 5  
 County: Monroe  
 Parcel No.: 3866



RULES OF THE DEPARTMENT OF ADMINISTRATION ADMINISTRATION COMMISSION CHAPTER 22F-6 LAND PLANNING PART 6. BOUNDARY AND PRINCIPLES FOR GUIDING DEVELOPMENT OF THE FLORIDA KEYS AREA OF CRITICAL STATE CONCERN

22F-6.01 Purpose
22F-6.02 Boundary
22F-6.03 Principles for Guiding Development
22F-6.04 Administration
22F-6.05 Effective Date
22F-6.06 Periodic Reconsideration

22F-6.01 Purpose. Pursuant to Section 7, Article XI, of the Florida Constitution, and Section 220.05, Florida Statutes, the purpose of these rules is to define the boundary of the Florida Keys Area of Critical State Concern and to provide principles for guiding development within the critical area in order to conserve and protect the natural, environmental, historical and scenic resources, the scenic beauty, and the public health, safety and welfare of the Florida Keys. The intent of these rules is to provide a land use management system that will preserve water quality, provide for the optimum utilization of the limited water resources of the area, facilitate orderly and well-planned development, and protect the health, welfare, safety and well-being of the residents of the state. The rules should be implemented by local government through administrative processes. These processes should be strengthened to the end that local government is able to achieve the purposes herein stated without the continuation of the designation of area of critical state concern. All existing rights of private property should be preserved in accordance with the constitution of the State of Florida and the United States. General Authority: 220 F.S., Law Implemented: 220.05 F.S., History—New 1-16-76.

22F-6.02 Boundary. The following area is hereby designated as the Florida Keys Area of Critical State Concern: All lands in Monroe County, except: 1) that portion of Monroe County included within the designated exterior boundaries of the Everglades National Park and areas north of said Park; 2) all lands seaward of mean high water that are owned by local, state, or federal governments; and 3) including any federal property. General Authority: Chapter 220, F.S., Law Implemented: 220.05 F.S., History—New 1-16-76.

22F-6.03 Principles for Guiding Development
A. Objectives:
1) Support local government capabilities for managing land use and development to the end that local government is able to achieve the objectives herein stated without the continuation of the designation of area of critical state concern;
2) Protection of tidal mangroves and associated shoreline and marine resources and wildlife;
3) Minimize the adverse impacts of development on the quality of water in and around the Florida Keys;
4) Protection of coral reefs of the Florida Keys and protection of the natural and historic tropical vegetation;
5) Protection of the cultural heritage of the Florida Keys and the Florida Keys Historical Preservation District;
6) Protection of the scenic, efficiency, cost-effectiveness and unimpaired life of existing and proposed major public investments, including:
a. The Florida Keys Aqueduct and water supply facilities;
b. sewage collection and disposal facilities;
c. solid waste collection and disposal facilities;
d. Key West Naval Air Station;
e. repair and replacement of the Overseas Highway bridge and replacement and expansion of other transportation facilities;
7) Minimize the adverse impacts of proposed public investments on the natural and environmental resources of the Florida Keys; and
8) Protection of the public health, safety, welfare and economy of the Florida Keys, and the maintenance of the Keys as a unique Florida resource.
B. Elements Requiring Regulation
1) Planning and Administration
a. Local government jurisdiction should be maintained and preserved for future land use within the boundaries which are consistent with these principles. Each plan and package should be implemented through zoning ordinances and maps which are kept current and made available for responsible public distribution and inspection. Development orders should be issued in conformance with the policies and standards of the land use plan and zoning ordinances and maps.
b. Issuance of development orders should be coordinated with and made contingent upon the

608 PC 45

provision of adequate public facilities and services for the existing population and the proposed development.

c. Special zoning districts should be created for:

Note and award zones of the Key West Naval Air Station as delineated by the U.S. Navy Office of the Chief of Naval Operations. Development within such zones should be limited to that zone's air operations. Implementation of this section should be closely coordinated with the Office of the Chief of Naval Operations. Similar districts should be created around civilian airfields in cooperation with the Florida Department of Transportation and the Federal Aviation Administration. Codes for airfield districts should clearly specify height limits for structures and other appropriate restrictions on development necessary to protect air operations and public health and safety.

d. A community impact assessment statement should be submitted and approved prior to the issuance of zoning and rezoning orders or site plan approval for the following developments:

- 1. Any development which includes buildings in excess of 45 feet in height;
- 2. Any intensive land uses including: residential uses of 10 or more dwelling units per acre or, 50 or more total dwelling units; and
- 3. All business, commercial or industrial uses of 5 or more acres.

Such developments should be encouraged to use existing and designs which would reduce public facilities costs and improve the scenic quality of the development. In addition, they should conform to appropriate setback and open space requirements, stringent landscaping and land use compatibility requirements, and building and siting requirements to reduce hurricane and fire damage potential and limit and control access to the Overseas Highway.

The community impact statement should be designed to enable local governmental officials to determine the proposed development's favorable or unfavorable impact on the environment, natural resources, economy and the potential of the project to meet local or regional housing needs. The statement should also require information relative to the project's potential impact of public facilities, including without limitation, water, sewer, solid waste disposal and public transportation facilities.

2) Site Alteration Regulations

a. Site alteration and landscaping regulations should provide for:

- 1. A land clearing permit of limited duration issued upon approval of a site plan which includes a natural vegetation map, excepting minimal clearing required for survey.
- 2. Limitation of the size and species of trees allowed to be removed in clearing, including reasonable exceptions for structure sites and public safety.
- 3. Ordinance should provide protection for tropical hammocks in which the predominant tree species are tree cypresses or mature tree species characteristic of West Indian tropical hardwood hammocks.

3. Revegetation and landscaping of cleared sites after construction.

4. Stan ards which would protect mangrove areas landward of the mean high water line. Such standards should, to the extent possible, protect the

functions of the mangrove areas with respect to natural and biologic functions, water quality maintenance, shoreline stabilization, and storm surge protection. Special attention shall be given to protection of the functions of the dewatering mangrove communities which lie inland of mean high water.

2) Waste Control and Water Pollution Protection

a. The Monroe County Waste Collection and Disposal District, in cooperation with the municipal jurisdictions, shall develop site specific criteria and requirements for the siting and location of the disposal of all solid waste, waste effluents and residuals.

b. Site alteration and subdivision regulations should provide for:

- 1. Retention of construction related runoff or discharge of such runoff into adequately sized natural vegetative filtration areas in a manner approximating the natural runoff regime.

2. Permanent drainage systems which make maximum use of natural drainage patterns, vegetative retention and filtration.

4) Protection of Public Facilities and Investments

a. The Monroe County Waste Collection and Disposal District, in cooperation with the municipal jurisdictions and the Florida High Speed Rail Authority, shall amend all applicable planning codes to provide for the mandatory installation of water conserving fixtures in all new development and redevelopment.

b. Business, commercial and residential development adjacent to the Overseas Highway should provide off street parking, service roads and limited controlled access points to the Highway. Except in case of extreme hardship, highway access from any development within 250 feet of a bridge or bridge ramp should be prohibited.

c. Existing and future waste treatment and disposal sites should be protected from encroachment by land uses which would endanger their functions or existence.

5) Historical Resources Protection

a. A management and enforcement plan and ordinance should be adopted by the City of Key West providing the siting and use of development and reconstruction within the Key West Historical Preservation District shall be compatible with the existing historic architectural styles and shall protect the historical character of the District.

b. In accordance with Chapter 896.07(2), F.S., the City of Key West should establish an Architectural Review Board with the duties and responsibilities prescribed. Furthermore, pursuant to Chapter 890.06(16), F.S., the Architectural Review Board should receive notice of all applications for development within the designated area of Key West and participate in hearings as provided.

General Authority 890 F.S. Law Implemented 380.06, History - Item 9-10-02.

22F S-4 Administration.

1) The above guidelines are oriented to protect and preserve natural and historical resources and public investments of regional and state importance. The regulations developed pursuant to these principles should be:

- a. Performance oriented to maximize design

Feasibility.

b. Supplementary and complementary to existing county and municipal land use regulations.

c. Administered by the appropriate local government jurisdictions in the same manner as local ordinances and codes.

2) The South Florida Regional Planning Council is hereby requested to offer technical assistance to the local jurisdiction in preparing land development regulations consistent with these principles.

General Authority 220 F.S. Law Implemented 220.05 F.S. History—New 9-16-75

22F-6.05 Effective Date. The Board shall take effect twenty (20) days after filing with the Secretary of State.

General Authority 220.05(1), 220.05 F.S. Law Implemented 220.05 F.S. History—New 9-16-75.

22F-6.06 Periodic Reconsideration. The Division of State Planning shall, semi-annually or at the direction of the Administration Commission, from the effective date of this Chapter, appraise the progress made by all involved elements of state and local government in carrying out the provisions of the Florida State Plan of Critical State Concern, and shall present to the Administration Commission a status report which shall include the Division's recommendations for any changes or deletions of the rules in this Chapter, including without limitation the boundaries of the Area and the principles for guiding development. Such report shall also include comments and recommendations from local government.

General Authority 220 F.S. Law Implemented 220.05 F.S. History—New 9-16-75.

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FILE NO. PAGE 47

BIG CYPRESS

MONROE

Boundary. All that certain lot, piece or parcel of land situate lying and being in Monroe County in the State of Florida being more particularly bounded and described as follows:

Beginning at the point of intersection of Dade, Collier and Monroe County boundary lines in the Northeast corner of Section 1, Township 54 South, Range 34 East and; thence

(1) Running South along the Dade and Monroe Counties boundary line to the boundary of Everglades National Park, a distance of 13 miles; thence

(2) In a Westerly and Northerly direction along the boundary of Everglades National Park to its point of intersection with the Collier and Monroe Counties boundary line which point is in the Northwest corner of Section 3, Township 54 South, Range 31 East; thence

(3) Turning and running East along the boundary line of Collier and Monroe Counties a distance of 21 miles to the point or place of beginning.

CHAPT 76-190

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A bill to be entitled  
An act relating to areas of critical state  
concern; adding subsection (19) to s. 380.05,  
Florida Statutes, requiring the recordation of  
the boundaries of areas of critical state  
concern by the state land planning agency;  
providing an effective date.

Be It Enacted by the Legislature of the State of Florida:

Section 1. Subsection (19) is added to section 380.05,  
Florida Statutes, to read:

380.05 Areas of critical state concern.--

(19) Within 30 days after the designation of an area  
of critical state concern, the state land planning agency  
shall record a legal description of the boundaries of the area  
of critical state concern in the public records of the county  
or counties in which the area of critical state concern is  
located. The boundaries of the areas of critical state  
concern currently designated on the effective date of this act  
shall be recorded in the manner provided by this section  
within 60 days after the effective date of this act.

Section 2. This act shall take effect upon becoming a  
law.

566

Approved by the Governor JUN 20 1976  
Filed in Office Secretary of State JUN 21 1976

RECORDED IN OFFICE RECORDS DIVISION  
JUN 21 1976  
STATE OF FLORIDA  
CLERK OF SUPREME COURT  
TALLAHASSEE

FILE # 1303551  
BK# 1788 PG# 1257

IN THE 16<sup>TH</sup> CIRCUIT COURT OF  
FLORIDA, IN AND FOR MONROE  
COUNTY

Thora Ambrose, *et al*,

Plaintiffs,

vs.

Monroe County and the Village of Islamorada,  
Political Subdivisions of the State of Florida,  
and State of Florida, Department of  
Community Affairs,

Defendants.

CASE NO. 97-20-636-CA-18

### FINAL SUMMARY JUDGMENT FOR CERTAIN PLAINTIFFS

This cause came before the Court on April 2, 2002, on cross-motions for Final Summary Judgment. The Court, having heard argument from all parties, and after reviewing the record including pleadings, judicially noticed documents, and answers to interrogatories together with the affidavits filed by Plaintiffs, concludes there is no genuine issue as to any material fact and that the following Plaintiffs are entitled to judgment as a matter of law.

Final Summary Judgment is GRANTED in favor of the following Plaintiffs, and against Defendants.

Dorothy S. Abbott (Trustee), Stanley Alukonis, Richard Bauer and Ellen Bauer, Jill Berle, James Bernadt and Lynda C. Cody (T/E), Larry Biagi, Rudolph Blakey, Rachel M. Brooks (Individually and as Trustee), Steven B. Brown and Carol A. Brown, Tod J. Brown and Rose M. Brown, Samuel Burstyn, P.A., Edward Cabassa and Barbara Cabassa, Jose L. Campo and Maria Campo-Hunter (T/E), Giraldo Castellon, Reynolds Cochrane and America Cochrane, Thomas F. Collins and Patricia Collins, Eugene Cowart and Martha Cowart, Thomas J. Cunningham and Carmel S. Cunningham, James Davidson and Duffield W. Matson III (T/C), Randolph Dawdy, Aurelio A. Del Valle and Maria C. Del Valle, George R. Doster Jr. and Gail E. Doster Jr., Elizabeth Ennis (Trustee), Oscar M. Fell and Rosetta E. Fell, Ellan Fitzgerald (Trustee), Peter E. Flisock and Olinga M. Flisock, Antonio M. Garcia and Debra Garcia and Antonio M. Garcia, III (T/C), Karl Gollnast and Theresia Gollnast, Regina M. Gonzalez, David Hindelang and Ruth R. Hindelang, Raimundo Hung-Simons, Aldyth Innis (Trustee), Richard J. Johnson, Michael J. Kohut Living Trust, Gary Leonard and Karen Leonard, Loschim, Inc., Jack L. Lytton and Maria G. Lytton, Thomas Mawhinney, Richard C. May and Carol May, Raymond V. McHugh, Richard F. Milanese, Norman Neaderhiser, Jr. and Phyllis Neaderhiser, Jr. (Individually and as Trustees), Nils M. Norling and Mary Norling (Trustees), Donald Oliver and Rose Marie Oliver, Richard Olsen and Gisela Olsen, John D. Palmer (Trustee), Laurette C. Patterson, Charles W. Peabody, Jr. and Susan M. Peabody, Jr., Ernest C. Popplein III and Susan M. Popplein III, John D. Prior

and Henry M. Prior and Lane B. Prior (T/C), Keith P. Radenhausen, William Sears and Paulette Sears (Individually and as Trustees), Ramon Singler and Roxanne Singler, Col. Jack D. Smith, R. Tucker (Trustee), Marie Wilson, and Richard D. Worden and Linda L. Worden (hereinafter "Plaintiffs").

The prevailing Plaintiffs constitute approximately one-fifth of the Plaintiffs in this case. The Court reserves jurisdiction to enter additional Final Judgments for the remaining Plaintiffs as it may become appropriate.

## I. NATURE OF CASE

Plaintiffs own platted lots in Monroe County, Florida, within the boundaries of the Florida Keys Area of Critical State Concern (or "ACSC"). They seek a declaration of their rights under Subsection 380.05(18), Fla. Stat. (2001). Plaintiffs assert § 380.05(18) is a legislative grant of vested rights, superior and in addition to common-law vested rights. They aver that § 380.05(18) prohibits the State, and its agencies and political subdivisions, from "limiting or modifying in any way," the development rights that appertained to their platted lots before the Florida Keys ACSC was designated, or before any such limiting regulations were adopted *after* the Florida Keys ACSC designation.<sup>1</sup>

Defendants have enacted, rescinded, approved, and rejected a plethora of Land Development Regulations ("LDRs") since the Florida Keys was designated an ACSC. They argue that 380.05(18) is no more than a statement of common-law vested rights. If the Court holds otherwise, Defendants argue that (a) construction of a home is not "development authorized by" recordation of a subdivision plat, (b) that subdivisions recorded in Monroe County prior to 1973

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<sup>1</sup> Plaintiffs rely on the underscored words in § 380.05(18) as follows.

(18) Neither the designation of an area of critical state concern nor the adoption of any regulations for such an area shall in any way limit or modify the rights of any person to complete any development that has been authorized by registration of a subdivision pursuant to chapter 498 or former chapter 478, by recordation pursuant to local subdivision plat law, or by a building permit or other authorization to commence development on which there has been reliance and a change of position, and which registration or recordation was accomplished, or which permit or authorization was issued, prior to the approval under subsection (6), or the adoption under subsection (8), of land development regulations for the area of critical state concern. If a developer has by his or her actions in reliance on prior regulations obtained vested or other legal rights that in law would have prevented a local government from changing those regulations in a way adverse to the developer's interests, nothing in this chapter authorizes any governmental agency to abridge those rights.

were not recorded "pursuant to local subdivision plat law," or that (c) provisions of Chapter 163, Fla. Stat., supercede § 380.05(18).

## II. MATERIAL FACTS NOT IN DISPUTE

The Florida Keys portion of Monroe County, Florida, is an Area of Critical State Concern. Section 380.0552, Fla. Stat. (2001). Each Plaintiff owns an interest in one or more undeveloped, platted lots in a subdivision that was platted and recorded in the Public Records of Monroe County, Florida, between April 24, 1924, and June 27, 1971. Clerk's Affidavit Authenticating Plats and Plaintiffs' Affidavits on file.

## III. CONCLUSIONS OF LAW

### A. Area of Critical State Concern Designation

The enabling legislation for Areas of Critical State Concern is the Florida Environmental Land and Water Management Act, Ch. 72-317, Laws of Fla., effective July 1, 1972, at Section 380.05, Fla. Stat. Subsection 380.05(18) was enacted as part of Ch. 72-317, and reads as follows.

(18) Neither the designation of an area of critical state concern nor the adoption of any regulations for such an area shall in any way limit or modify the rights of any person to complete any development that has been authorized by registration of a subdivision pursuant to chapter 498 or former chapter 478, by recordation pursuant to local subdivision plat law, or by a building permit or other authorization to commence development on which there has been reliance and a change of position, and which registration or recordation was accomplished, or which permit or authorization was issued, prior to the approval under subsection (6), or the adoption under subsection (8), of land development regulations for the area of critical state concern. If a developer has by his or her actions in reliance on prior regulations obtained vested or other legal rights that in law would have prevented a local government from changing those regulations in a way adverse to the developer's interests, nothing in this chapter authorizes any governmental agency to abridge those rights.

On March 3, 1975, the Division of State Planning (now the Department of Community Affairs, or "DCA") recommended, to the Florida Administration Commission (the Governor and Cabinet, or "Commission"), that the Florida Keys be designated an ACSC. *Askew v. Cross Key Waterways*, 372 So. 2d. 913, 917 (Fla. 1978) ("*Askew*"). The Commission held public meetings in Key West on March 28 and April 15, 1975, to receive comments on the proposal. Ten days

later, April 25, 1975, the Commission designated the Florida Keys ACSC, and promulgated the "Principles for Guiding Development" therein, at Ch. 22F-8, Fla. Admin. Code (or "FAC").

The First District Court of Appeal rescinded the 1975 Florida Keys ACSC designation in *Cross Key Waterways v. Askew*, 351 So. 2d 1062 (Fla. 1st DCA 1977). The Supreme Court affirmed, holding both the *selection* of an ACSC, *and* creating its Principles for Guiding Development, was not delegable to an administrative agency. *Askew, supra*. After the Supreme Court's decision was final on February 15, 1979, the Legislature created the Florida Keys ACSC by statute. Sec. 6, Ch. 79-73, Laws of Fla., codified at § 380.0552, Fla. Stat. (2001). Section 380.0552 became effective July 1, 1979.

### B. Statutory Construction

**Clear Intent of Statute.** The first canon of statutory construction is to apply the plain meaning of the words in the statute. Florida's appellate courts have made it clear that legislative history and intent is a proper criterion within the rules of statutory interpretation, when and if there is a need to resort to the rules of statutory construction. However, the law is clear that legislative intent is primarily determined from the language of the statute, even if the language must be clarified by dictionary definitions, as set forth by Judge (now Florida Supreme Court Justice) Pariente in *State v. Cohen*, 696 So. 2d 435 (Fla. 4<sup>th</sup> DCA 1997), as follows.

The rules of statutory construction require that courts give statutory language its plain and ordinary meaning, unless the words are defined by statute. ... In the absence of a statutory definition, the plain and ordinary meaning of words can be ascertained, if necessary, by reference to a dictionary. ... When the language of a statute is clear and unambiguous and conveys a clear and definite meaning, there is no occasion for resorting to the rules of statutory interpretation to alter the plain meaning. *See T. R. v. State*, 677 So. 2d 270, 271 (Fla. 1996); *Overstreet v. State*, 629 So. 2d 125, 126 (Fla. 1993); *Holly v. Auld*, 450 So. 2d 217, 219 (Fla. 1984). ... However, legislative intent is determined primarily from the language of a statute. *See Overstreet*, 629 So. 2d at 126. When faced with an unambiguous statute, the courts of this state are without power to construe an unambiguous statute in a way which would extend, modify, or limit, its express terms or its reasonable and obvious implications. To do so would be an abrogation of legislative power. *Holly*, 450 So. 2d at 219... This principle is "not a rule of grammar; it reflects the constitutional obligation of the judiciary to respect the separate powers of the legislature. *State v. Brigham*, 694 So. 2d 793, 797 (Fla. 2<sup>nd</sup> DCA 1997).

Defendants argue that § 380.05(18) requires more than “mere ownership” of a platted lot and, if § 380.05(18) does apply to mere ownership, construction of a home on a platted lot is not “development authorized” by a subdivision plat. As to the first point, Defendants misinterpret § 380.05(18) by ignoring its punctuation and the word “or.” Defendants’ interpretation of the statute differs from its actual language as follows, where ~~struckthrough~~ text would have to be stricken by the Court, and double underlined text would have to be added to the Legislature’s language.

(18) ... by recordation pursuant to local subdivision plat law, ~~or~~ and by a building permit or other authorization to commence development, on which there has been reliance and a change of position, ....

The disjunctive word “or” appears before the phrase “by a building permit or other authorization,” not the conjunctive word “and,” as Defendants would erroneously have the Court read the law. Subsection 380.05(18) provides three avenues to its vested rights, as follows.

1. registration of a subdivision under Ch. 498 or former Ch. 478, Fla. Stat.,
2. recordation of a subdivision pursuant to local subdivision plat law, *or*
3. a building permit or other authorization to commence development on which there has been reliance and a change of position.

Despite Defendants’ efforts to insert one, there is no comma after the phrase “authorization to commence development.” The phrase “on which there has been reliance and a change of position” modifies only the third avenue to vesting. The sole prerequisite to vesting, that must be met by a person relying on “recordation pursuant to local subdivision plat law,” is the date of recordation must precede the *approval or adoption* of the LDRs that “limit or modify the rights of any person” to “complete development” on a platted lot. As to the first duty of the Trial Court in determining whether the language of Section 380.05 is clear and unambiguous, the Court finds the language to be clear and definite. The Court holds that the Plaintiffs’ construction of § 380.05(18) is correct.

**Legislative History and Intent.** This Court need not consider legislative intent if the statute is clear and unambiguous, as stated by the Florida Supreme Court in *Forsythe v. Longboat Key Beach Erosion District*, 604 So. 2d 452, 454-455 (Fla. 1992), as follows.

It is a fundamental principle of statutory construction that where the language of a statute is plain and unambiguous there is no occasion for judicial interpretation. As this Court set forth more than 70 years ago in *Van Pelt v. Hilliard*:

The Legislature must be understood to mean what it has plainly expressed and this excludes construction. The Legislative intent being plainly expressed, so that the act read by itself or in connection with other statutes pertaining to the same subject is clear, certain and unambiguous, the courts have only the simple and obvious duty to enforce the law according to its terms. Cases cannot be included or excluded merely because there is intrinsically no reason against it. Even where a court is convinced that the Legislature really meant and intended something not expressed in the phraseology of the act, it will not deem itself authorized to depart from the plain meaning of the language which is free from ambiguity. If a Legislative enactment violates no constitutional provision or principle it must be deemed its own sufficient and conclusive evidence of the justice, propriety and policy of its passage. Courts have then no power to set it aside or evade its operation by forced and unreasonable construction. If it has been passed improvidently the responsibility is with the Legislature and not the courts. Whether the law be expressed in general or limited terms, the Legislature should be held to mean what they have plainly expressed, and consequently no room is left for construction, but if from a view of the whole law, or from other laws *in pari materia* the evident intent is different from the literal import of the terms employed to express it in a particular part of the law, that intent should prevail, for that, in fact is the will of the Legislature. 2 SUTHERLAND'S STATUTORY CONSTRUCTION, § 366, p. 701.

75 Fla. 792, 798-99, 78 So. 693, 694-95 (1918) ... [*String citations omitted*]. The sum of these cases is that this Court is without power to construe an unambiguous statute.

Although the Court believes the statutory language is unambiguous, in light of Defendants' arguments, the importance of this case, and the possibility that an appellate Court may find the statutory language ambiguous, the Court further considers the legislative history and intent. Fortunately, the State Archivist was able to provide the legislative history of Senate Bill 629, the 1972 bill that became § 380.05, Fla. Stat.<sup>2</sup>

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<sup>2</sup> The Legislative History, a certified copy from the State Archivist, is part of Plaintiffs' Motion for Summary Judgment filed November 23, 1999. It is referred to here as History.

A June 16, 1972, letter from the Chairman of the Senate Natural Resources and Conservation Committee, to Richard H. Barry, sketches the history of Chapter 72-317, Laws of Florida (History at 145), and other documents in the History fill in the dates, as follows.

- ◆ SB 629 was introduced in the Senate on February 10, 1972, where it was sequentially referred to the Natural Resources and Conservation, and Ways and Means, Committees. History at 236. The original Bill is in History at 184-216. Governor Askew is credited with introducing the Bill. History at 286.
- ◆ A Committee Substitute (SB/CS 629) was amended and reported favorably, with a 5-2 vote, by the Committee on Natural Resources and Conservation on February 22, 1972. History at 137. The CS (without the amendments of 2/22/72) is in History at 149-182. The SB/CS 629 reported out by Natural Resources, that went to Ways and Means, is in History at 353-370.
- ◆ The Bill was very controversial. History at 237-316
- ◆ The Ways and Means Committee debated SB/CS 629 on March 6 (History at 104-136) and March 9, 1972 (History at 85-103). Ways and Means amended the Natural Resources CS, but reported out a three year "Study Committee" bill as their CS. History at 2.
- ◆ The Senate debated the bill on March 20, 1972. Somehow, not made clear in the historical materials, the Bill's proponents sidetracked the "Study Committee" bill and the Senate reverted to the previous CS as amended by Ways and Means. See 2<sup>nd</sup> Engrossed CS for SB 629, History at 3-17.
- ◆ On Monday, March 27, 1972, the Tampa Tribune quoted Senator Graham as saying the votes were there to pass the bill, but the session would probably end on Friday, March 31, without the bill coming to a vote. History at 286.
- ◆ The Senate debated the bill on March 27 and 28, 1972, passing it on the 28th.
- ◆ The House adopted the Senate Bill on April 5, 1972.

The original version of SB 629, as introduced and as adopted by the Senate Natural Resource and Conservation Committee, had the following language at § 16. History at 67.

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6 (16) Neither the designation of an area of  
7 critical state concern nor the adoption of any  
8 regulations for such an area shall in any way limit  
9 or modify the rights of any person to complete any  
10 development that has been authorized by a building  
11 permit or other authorization to commence development  
12 on which there has been substantial reliance and  
13 a material change of position, and which was issued  
14 prior to the publication of the proposed rule  
15 designating the area of critical state concern. If

16 a developer has by his actions in reliance on prior  
17 regulations obtained vested rights that in law  
18 would have prevented a local government from changing  
19 those regulations in a way adverse to his interests,  
20 nothing in this act authorizes any governmental agency  
21 to abridge those rights.

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This is common-law vested rights language, as Defendants ask this Court to find in § 380.05(18). The bill provided only common law vested rights, requiring (i) a permit or other authorization to commence development, (ii) "substantial" reliance, and (iii) a material change of position. This language turned out to be unacceptable to the Senate Ways and Means Committee.

At the Ways and Means Committee's March 6, 1972, hearing on CS/SB 629, four amendments were considered, after which the Committee rejected the Bill on an 8-8 tie vote. The first three amendments, all by Senator Haverfield of Miami,<sup>3</sup> were to subsection 16. Sen. Haverfield's Amendment #1 added "or other legal" after the word "vested" on line 17. Sen. Haverfield's Amendment #2 replaced the words "to commence," on line 11, with "permitting." Sen. Haverfield's Amendment #3 replaced the word "issued," on line 13, with "in effect." History at 106-8. Amendments 1-3 were adopted by voice vote. History at 104.

Then, Senator Plante of Oviedo (Seminole County) offered Amendment #4, which would strike everything after the enacting clause, and substitute an "Environmental Land Management Study Committee" for the substance of CS/SB 629. History at 110-14. Sen. Plante's Amendment #4 failed on a 6-10 vote. History at 105. Resuming debate on March 9, 1972, the Ways and Means Committee first adopted the following amendment offered by Senator Pope of St. Augustine (St. John's County), to line 10.

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Insert the following: after the word "by"  
"registration of the subdivision pursuant to Chapter 478,  
Florida Statutes," *or recorded pursuant to local  
subdivision plat law, or by*

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<sup>3</sup> Laws of Florida 1972 lists the home cities and districts of Florida Senate and House members.

The clause "registration of the subdivision pursuant to Chapter 478, Florida Statutes," is typewritten on the amendment sheet attributed to Senator Pope. The clause "or recorded according to local subdivision plat law" is handwritten on the same sheet. History at 117. The Committee vote record, History at 92, has this handwritten notation above the column headed Amendment #1: "*to which Pope offered amend.*" It is apparent that Senator Pope amended his amendment #1 to include the recordation language.

Amendment #2 on March 9, 1972, was offered by Senator Pope as an amendment to lines 14 and 15, and was approved by voice vote. History at 92-93, 133. Amendment #2 replaced lines 14 and 15 with the following language.

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"prior to the adoption or approval by the state land planning agency of the land development regulations for the area of critical state concern. If" [Typewritten in History.]

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There were two more amendments by Senator Pope that day, neither relevant to this inquiry. History at 93, 98. The Committee approved two amendments by Senator Haverfield, removing the words "material" and "substantial" from lines 13 and 12. History at 94, 99-100, 128-29.

In what must have been a surprising tack, Senator Williams re-introduced Senator Plante's "Study Amendment," striking everything after the enacting clause and replacing the entire substance of the bill with a study committee. The study committee amendment was approved by a 10-8 vote. History at 94. The gutted bill was recommended favorably to the whole Senate by a 14-3 vote. The Senate, however, passed the bill with section 16 reading as it did just before the study committee amendment passed in the Ways and Means Committee. The following ~~struck through~~ and underlined text shows how the Ways and Means Committee amended section 16 of SB 629.

(16) Neither the designation of an area of critical state concern nor the adoption of any regulations for such an area shall in any way limit or modify the rights of any person to complete any development that has been authorized by registration of the subdivision pursuant to Chapter 478, Florida Statutes, or recorded pursuant to local subdivision plat law, or by a building permit or other authorization to commence permitting development on which there has been ~~substantial~~ reliance and a ~~material~~ change of position, and which was ~~issued~~ in effect prior to the adoption or approval by

the state land planning agency of the land development regulations for the area of critical state concern. If prior to the publication of the proposed rule designating the area of critical state concern. If a developer has by his actions in reliance on prior regulations obtained vested or other legal rights that in law would have prevented a local government from changing those regulations in a way adverse to his interests, nothing in this act authorizes any governmental agency to abridge those rights.

The Trial Court concludes, on reviewing the legislative history, that § 380.05(18) was carefully, intentionally, and materially amended by Senators Pope and Haverfield, and by the Ways and Means Committee, to create stronger vested rights protection for owners of platted lots in Areas of Critical State Concern, than the common-law provision in the original SB 629. The Defendants' arguments that the statute provides only for common-law vested rights are neither supported by the clear and unambiguous language, nor the legislative history, of the statute.

**Development Authorized by Approved Plat.** The Court is unconvinced by the County's argument that approving and recording a plat does not authorize the development of single-family homes on the lots. Monroe County's Motion for Summary Judgment. The Illinois, Ohio, and Michigan cases cited by the County address whether a lot owner has common-law vested rights in dimensional specifications that existed when the lots were platted. The issue of whether the construction of a single-family home was *authorized* by virtue of an approved subdivision plat was not addressed in any of the cases cited. The Court concludes that the words "development that has been authorized by ... recordation pursuant to local subdivision plat law," in § 380.05(18) include the construction of a single-family home on a platted, residential subdivision lot.

**Local Subdivision Plat Law.** Defendants argue that Monroe County plats were not recorded "pursuant to local subdivision plat law." Prior to June 11, 1925, plats were valid once they were filed and recorded in the County Seat. Florida's first "plat law" was Chapter 10275, Laws of Florida, adopted June 11, 1925. Section 10 of Chapter 10275 required the grantor to place upon a plat, before recordation, a certificate —

... of approval by the County Commissioners, Town Board, or Council, or the Board of Commissioners (in municipalities having a commission form of government) or their accredited representatives, having jurisdiction over the land described in said ... plat.

Chapter 10275 was named "The Plat Act of 1925." *See Dade County v. Harris*, 90 So. 2d 316 (Fla. 1956). The 1925 law was re-designated Ch. 177, Fla. Stat., in 1955. Chapter 177 was substantially expanded in 1971 to create State-wide uniformity after the 1968 Constitution granted limited home rule to counties and municipalities. Ch. 71-339, Laws of Fla. Section 10 of the Plat Law of 1925, requiring local government approval, is now § 177.071, Fla. Stat. (1997).

Florida counties and municipalities are not sovereign units of government. They are subdivisions of the State of Florida. As subdivisions of the state, they have only those powers granted by Legislature. Non-charter counties, such as Monroe, did not have the authority to adopt their own ordinances until limited home rule was granted by Article VIII of the 1968 Constitution. Section 125.66, Fla. Stat., was adopted by the Legislature in 1969 to effectuate Article VIII. In early 1972, when the Legislature was debating the Environmental Land and Water Protection Act, few counties had platting ordinances — the DCA has identified only seven counties that had pre-1973 Special Acts dealing with plats.<sup>4</sup> The Court does not find the existence of Special Acts in seven counties sufficient to show that Monroe County was not governed by a local subdivision plat law prior to 1973.<sup>5</sup> The Court notes that Senators Pope, the author of the platted lot amendments to § 380.05(18), did not hail from any of those seven counties. Senator Pope was from St. Augustine, in St. John's County (a non-charter county)

The County's platting requirements are still subservient to Chapter 177, Fla. Stat. (1997). The Court concludes that Ch. 177, the Plat Act of 1925, still in force throughout the state, and followed in every county since 1925, was the local subdivision plat law throughout Florida until counties and municipalities adopted supplemental ordinances (or Special Acts). The Court also concludes that plats recorded in the County Seat prior to June 11, 1925, were recorded pursuant to local subdivision plat law, such as it was at the time.

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<sup>4</sup> The Department of Community Affairs' Request for Judicial Notice includes copies of pre-home rule Special Acts relating to platting, for Volusia, Leon, Pinellas, Alachua, Hendry, Escambia, and Hernando Counties.

<sup>5</sup> Monroe County adopted its first platting ordinance in 1973, No. 3-1973. Ordinance 3-1973 supplemented, but did not replace, Sec. 177, Fla. Stat. Ordinance 3-1973 was superseded in 1986 by the plat section of the *380 Plan*.

### **C. Area of Critical State Concern Regulations and Their Impact on Platted Lots**

From 1979 to 1986, DCA provided technical assistance to Monroe County's local governments, as mandated by § 380.05(7), to help draft § 380.0552-compliant Comprehensive Plans and LDRs ("*380 Plans*"). In February 1986, by Resolution 49-1986, Monroe County submitted a *380 Plan* to DCA for approval, or rejection, pursuant to § 380.05(6), Fla. Stat. In response, DCA approved portions of the County's *380 Plan* and rejected others. Ch. 9J-14.003-.004, FAC (1986). After rejecting portions of the *380 Plan*, Ch. 9J-14.003, FAC, DCA recommended a large number of *380 Plan* amendments to the Commission, for adoption pursuant to its authority at § 380.05(8), Fla. Stat. DCA's amendments were approved, Ch. 28-20.019-.021, FAC, and the *380 Plan* became effective September 15, 1986..

Several provisions of the *380 Plan* adversely affect – even render impossible – the rights to build homes on platted lots. Without attempting to be exhaustive, the Court notes that these provisions include (i) low-density, overlay Land Use Districts,<sup>6</sup> (ii) restrictive vegetation-based overlay zones, and (iii) a change in the ability to build upon platted lots.

A review of the Property Record Cards on file<sup>7</sup> shows several instances where NA (Native), SR (Suburban Residential), and SS (Sparsely Settled) land use (zoning) districts are superimposed ("overlaid") on parts or all of platted subdivisions. NA zoning allows ½ dwelling unit (DU) per upland acre; SR zoning one DU/acre, and SS zoning ½ DU/acre. The Property Record Cards show that platted lot areas typically range from ⅛ to ¼ acre. Where, prior to the *380 Plan*, these lots allowed one DU per lot, the overlay zones make it necessary to own about four to eight lots to build one single-family home in SR, and eight to sixteen lots in SS and NA.

The *380 Plan* also introduced Land Use District<sup>8</sup> and habitat<sup>9</sup> Open Space Ratios ("OSR's") to the Florida Keys. The effect of OSR's on platted lots is similar to that of low-den-

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<sup>6</sup> The County's "Land Use District Map" (zoning map) shows the lots and blocks of platted subdivisions, but overlays low-density land use districts, affecting parts or all of some subdivisions, as though their plats had been rescinded and the lots returned to acreage status.

<sup>7</sup> Plaintiffs' responses to discovery, filed by DCA.

<sup>8</sup> Section 9.5-262, Monroe County Code (hereinafter "MCC") (open space ratios assigned to land use districts)

sity Land Use District overlays. OSR's impose restrictions on "development, use, or occupation" of land, and range up to 95% on offshore islands. There is no Land Use District OSR for IS (Improved Subdivision) districts, but SR, SS, and NA Land Use District OSR's are 50%, 80%, and 80-90%, respectively. Where upland habitats, such as hammocks and pinelands, overlay platted subdivisions, habitat OSR's that go as high as 90% restrict owners of typical 1/8 to 1/4 acre lots to as little as 550 to 1,100 ft<sup>2</sup> of useable building area.

In 1986, DCA recommended, and the Commission approved, the following definition of the IS (Improved Subdivision) Land Use District.

The purpose of this district is to accommodate legally vested residential development rights of the owners of lots in subdivisions that were lawfully established and improved prior to the adoption of these regulations. ... improved lots are those which are served by a dedicated and accepted existing road of porous or nonporous material, that have a Florida Keys Aqueduct Authority approved potable water supply, and that have sufficient uplands to accommodate the proposed use in accordance with required setbacks. This districts is not intended to be used for new land use districts of this classification within the County. [Emphasis added.]

Ch. 28-20.020(9), FAC (1986). The effect of this regulation is indistinguishable from legislative rescission of those portions of a plat that did not have the listed infrastructure in place on September 15, 1986.

In 1992, Monroe County adopted Ordinance No. 016-1992, titled "Dwelling Unit Allocation Ordinance," limiting residential growth in the Florida Keys to 255 DU's per year, and adopting a point system under which property owners compete with each other for building permits. Applicants garnering the most points win "permit allocations," that are handed out quarterly. §§ 9.5-120 – 124, MCC. Also referred to as the Rate of Growth Ordinance ("ROGO"), Ordinance 016-1992 was approved by DCA, and became effective on July 13, 1992. Ch. 9J-14.014, FAC. The ROGO has since been amended, including amendments by the Administration Commission, as part of the DCA/Commission amendments to the County's *2010 Plan*. Ch. 28-20.025 and 28-20.100, FAC. ROGO places a substantial burden on *every* application for a resi-

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<sup>9</sup> Section 9.5-343, MCC (open space ratios applicable to habitat type).

dential building permit in the Florida Keys ACSC. In both its growth cap and its point system, the ROGO is inconsistent with the vested rights protected by § 380.05(18).

There have been many changes to the ordinances and regulations affecting the owners of platted lots since the Florida Keys was designated as an ACSC in 1979. The parties resisted the Court's suggestion that they prepare a complete list of all local and state regulations that adversely affect the rights of owners of platted, Florida Keys' lots. The Court agrees that making such a list is not feasible at this time. However, the Court finds there are several major, and undoubtedly many minor, regulatory impediments to the vested rights established by § 380.05(18), as the Court discusses above. These regulatory impediments have been promulgated for 16 years in complete disregard of the rights protected by § 380.05(18).

#### **D. Rulings on Defenses Presented**

**1. Preemption of § 380.05(18) by Chapter 163.** DCA argues that Chapter 163 preempts § 380.05(18). DCA's cites § 163.3211, Fla. Stat., as support for its position:

**Conflict with other statutes.** - Where this act may be in conflict with any other provision or provisions of law relating to local governments having authority to regulate the development of land, the provisions of this act shall govern unless the provisions of this act are met or exceeded by such other provision or provisions of law relating to local government, including land development regulations adopted pursuant to chapter 125 or chapter 166. Nothing in this act is intended to withdraw or diminish any legal powers or responsibilities of state agencies or change any requirement of existing law that local regulations comply with state standards or rules.

DCA's argument, that *any* Comprehensive Plan provision or LDR that has been drafted "pursuant to Chapter 163" trumps *all* state laws, is a broad interpretation of the statute indeed. The phrases "relating to local governments having authority to regulate the development of land," "law relating to local government," and "adopted pursuant to chapter 125 or chapter 166," suggest that Chapter 163 should be read as superceding earlier statutes that gave counties and municipalities the authority to enact LDRs. It does not suggest, at least to this Court, that local governments may enact their own Statutes of Limitation, and alter the Constitutionally-protected

property rights of Florida citizens, because right-thinking people are writing "land development regulations" that are superior to every other aspect of civilized behavior in the State of Florida.

The argument raised by DCA is similar to that raised by Monroe County in *Latorre v. Monroe County*, Case No. 96-1109-CA-25 (16<sup>th</sup> Jud. Cir. Fla., Payne, J.). In *Latorre*, Monroe County attempted to supercede the State of Florida's four-year Statute of Limitations with County Ordinance No. 27-1991. In Ordinance No. 27-1991, Monroe County tried to preempt Florida Statute 95.11(3)(a) where violations of the County's floodplain ordinance were involved. The notion of a County Ordinance trumping a State Statute is hard to comprehend, yet Monroe County has done it before in the name of Land Development Regulations.

The Trial Court is unimpressed with DCA's argument that Chapter 163 trumps all other laws of Florida in the name of growth management.

**Some Regulations not Adopted Pursuant to Section 380.05.** Defendants argue that "some" Florida Keys land use regulations were adopted under the authority of Section 380.05 (Areas of Critical State Concern), and that others were adopted under the authority of Sections 163.3161-.3244, Fla. Stat. (Local Government Comprehensive Planning Act). Their argument is that Monroe County "would have" adopted certain regulations "anyway," even if it were not an ACSC, and that "those" regulations should not be preempted by 380.05(18). The Court invited Defendants to identify which regulations were promulgated under which authority, but the invitation was declined. After reviewing the Florida Keys ACSC portions of the Florida Administrative Code, the Court finds it cannot accept the Defendants' argument. The Court finds it impossible to determine which LDRs the County would have adopted "anyway," when the County was always under the heavy thumb of the DCA. Furthermore, Defendants' argument is inconsistent with §163.3184(14), Fla. Stat., which negates its argument.

(14) AREAS OF CRITICAL STATE CONCERN.-No proposed local government comprehensive plan or plan amendment which is applicable to a designated area of critical state concern shall be effective *until it has been reviewed and approved as provided in § 380.05.*

Department of Community Affairs' Continuing 380 Oversight. DCA performs the ACSC oversight for the State of Florida, approving and rejecting proposed amendments to Comprehensive Plans and LDRs, and recommending those amendments it deems necessary to the Commission. DCA also reviews every development order issued in an ACSC, and may appeal same to the Florida Land and Water Adjudicatory Commission ("FLWAC," the Governor and Cabinet). Section 380.07, Fla. Stat. (2001). The extent of DCA's oversight of the Florida Keys ACSC is reflected in the number and volume of Florida Keys' ACSC rules it has promulgated. From 1986 through 1996, DCA promulgated 100 approvals and rejections of Monroe County Comprehensive Plans and LDRs, in 39 separate rule sections, an average of 9.1 approvals or rejections per year. *See* Ch. 9J-14.001 through 14.040, FAC (1976-2001).

Administration Commission's Continuing 380 Oversight. Following its initial amendments in 1986, the Commission promulgated additional amendments to Monroe County's *380 Plan* on October 5, 1989 and August 12, 1992. Ch. 28-20.022, -.023, and -.024, FAC. On January 2, 1996, July 17, 1997, and July 26, 1999, the Commission amended the Monroe County Year 2010 Comprehensive Plan and LDRs (*2010 Plan*). Ch. 28-20.025 and 20.100, FAC (1996). The State's *2010 Plan* amendments alone, promulgated under the DCA's and Administration Commission's Chapter 380 authorities, take up thirty-three fine print pages of the Florida Administrative Code.

The Court concludes that the continuing oversight by DCA and the Administration Commission flows exclusively from the designation of the Florida Keys as an ACSC. The Court finds that there are no LDRs or Comprehensive Plan provisions in effect in the Florida Keys that did not go through the oversight process of Chapter 380, and that every such regulation or provision is subject to preemption by § 380.05(18).

**Failure to Exhaust Administrative Remedies.** Defendants argue that Plaintiffs should have (i) petitioned for a declaratory statement from DCA, pursuant to § 120.65, Fla. Stat., (ii) petitioned for vested rights under § 9.5-184, MCC, and (iii) applied for building permits and appealed the denials to FLWAC.

Declaratory Statement Remedy. As Plaintiffs are in doubt about the effect of local government regulations, as well as state regulations, on their right to develop their property, and local governments are not subject to the Administrative Procedure Act, Plaintiffs are allowed to proceed directly to Circuit Court. *Hill, et al. v. Monroe County, Florida Dept. of Community Affairs, and Florida Administration Commission*, 581 So. 2d 225 (Fla. 3d DCA 1991) (property owners not required to exhaust Ch. 120 remedy before suing County and state agency in Circuit Court).

Administrative Vested Rights Remedy. As to the argument that Plaintiffs should have sought vested rights under the administrative provision in the *2010 Plan*, section 9.5-184, MCC,<sup>10</sup> that provision specifically declined to recognize vested rights set forth in § 380.05(18). Section 9.5-184, MCC, added two common-law vested rights requirements, (i) detrimental reliance and (ii) commencement of construction, to the “mere ownership” requirement of § 380.05(18). At least 22 of the 90 prevailing Plaintiffs *did* exhaust this administrative “remedy.” They petitioned Monroe County for vested rights in January 1997, pursuant to § 9.5-184, MCC. Their petitions were denied by the Monroe County Commission on March 10, 1999, by County Commission Resolution 110-1999, adopting the Recommended Order excerpted below.<sup>11</sup>

3. The Petitioners in this cause have all filed petitions to confirm vested rights to build one single-family home per platted lot, relying on the language contained in Section 380.05(18), Florida Statutes, ... Specifically, the Petitioners acknowledge that their claims for vested rights rest solely upon their ownership of platted lots. ....

5. Pursuant to Policy 101.18.2(2)(a), an applicant for a vested rights determination shall first have the burden of establishing that the applicant has reasonably relied upon an official act of the county. Pursuant to subsection (2), a properly recorded subdivision plat may constitute such an official act. Monroe County acknowledges that these Petitioners have satisfied the first element of the vested rights test by virtue of their ownership of platted, recorded subdivision lots.

6. Pursuant to subsection (b), the applicant must satisfy the second element of vested rights in demonstrating that the applicant "has made such a substantial change of position or has incurred such extensive obligations and expenses that it would be highly

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<sup>10</sup> This “remedy” only existed for one year, from January 6, 1996 until January 5, 1997

<sup>11</sup> Plaintiffs’ Notice of Filing and Request for Judicial Notice, April 29, 2002.

inequitable or unjust to affect such rights by requiring the applicant to now conform to the Comprehensive Plan and land development regulations." Finally, the applicant must also demonstrate pursuant to subsection (c) "that the development has commenced and has continued in good faith without substantial interruption."

7. As indicated hereinabove, the Petitioners herein do not assert their entitlement to vested rights determinations upon a claim that they have satisfied these last two elements. ...

10. Specifically, the Petitioners' positions rely first on their assertion that the State of Florida's passage of Section 380.05(18), Florida Statutes, preempts the latter two elements of Policy 101.18.2, as being in conflict with Section 380.05(18), Florida Statutes. Second, the Petitioners' positions rely on an interpretation of Section 380.05(18), Florida Statutes which would provide that this provision, standing alone, guarantees the owners of platted, recorded subdivision lots the right to develop a single-family dwelling on each platted lot.

11. Inasmuch as the ability, authority, and jurisdiction to decide matters of statutory interpretation is within the purview of the Courts of this State, the undersigned has no jurisdiction to determine same.

12. Based on the foregoing, it is the recommendation of the hearing officer that the Petitioners' requests for vested rights be denied.

Monroe County's one-year vested rights ordinance squarely conflicted with state law, and the County could not, by virtue of its being a subordinate body of the State of Florida, enforce an ordinance or regulation that conflicts with a state law. In *F.Y.I. Adventures, Inc. v. City of Ocala*, 698 So. 2d 583, 584 (Fla. 5<sup>th</sup> DCA 1997), the Fifth DCA cites to the Supreme Court's holding in *Thomas v. State*, 614 So. 2d 468 (Fla. 1993), as follows.

This meaning of conflict was approved in *Thomas*. The court stated that if an area of law is not preempted by the state law, then a city can pass ordinances concurrently on subjects regulated by state statute. But an ordinance, which is inferior to a state statute, cannot forbid what the statute expressly licenses, authorizes or requires. Nor may it authorize what the statute forbids.

The vested rights ordinance in question, if it was still in effect today, would be subject to invalidation on preemption grounds. The Trial Court finds that Monroe County's administrative vested rights procedure was no remedy at all, and that it would have been futile for all 500+ plaintiffs in this case to have paid the required \$500 filing fee and obtained a decision that the County had no jurisdiction to hear the plaintiffs' claims. The County's decision in Resolution 110-1999 confirms the Court's conclusion. *See Monroe County v. Gonzalez*, 593 So. 2d 1143

(Fla. 3<sup>rd</sup> DCA 1992) (no need to exhaust where administrative remedy cannot grant the relief sought).

Appeal to FLWAC. The third exhaustion argument presented by Defendants, that Plaintiffs should have applied for permits, and appealed to FLWAC, pursuant to § 380.07(2), if turned down, is disingenuous at best. Subsection 380.07(2) provides, in pertinent part:

Whenever any local government *issues any development order* in any area of critical state concern, ... Within 45 days after the order is rendered, the owner, the developer, or the state land planning agency may appeal the order to the [FLWAC] .... (Emphasis added.)

The only *development order* that can be issued for a single-family home on a platted lot is a building permit.<sup>12</sup> The only way to obtain a building permit in the Florida Keys ACSC is to submit a full set of plans into the ROGO process, and the ROGO is one of the principal regulations Plaintiffs argue is preempted by § 380.05(18). The local governments' ROGO processes allow the government to keep an applicant in the queue for a minimum of four years without issuing or denying a building permit. Forcing Plaintiffs to expend the time and money necessary to complete the ROGO process would force them to endure the very process that they believe is barred by state law. In short, the proposed FLWAC appeal route is a classic example of a "too little, too late" administrative remedy. *See Warner v. City of Miami*, 490 So. 2d 1045 (Fla. 3<sup>rd</sup> DCA 1986) (exhaustion not required where record clearly shows that the administrative remedy could not have provided adequate or timely relief); *Communities Financial Corp. v. Department of Environmental Regulation*, 416 So. 2d 813, 816 (Fla. 1st DCA 1982) (exhaustion not required where the promised administrative remedies are too little or too late).

Here, the Plaintiffs are seeking to invalidate certain state and local regulations that apply to platted lots in the Florida Keys ACSC. They are not in Court seeking building permits, only a declaration of their *right to build* free of regulations that are inconsistent with § 380.05(18). Defendants have not identified an administrative remedy that would provide Plaintiffs the relief

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<sup>12</sup> The term "development order" must include denials of building permits, or there would be no purpose in allowing the owner or developer to appeal to FLWAC.

that they can obtain in Circuit Court. The Court finds that there was no adequate or timely administrative remedy that could grant Plaintiffs the relief they seek here. *See Berkowitz v. City of Tamarac*, 654 So. 2d 982 (Fla. 5<sup>th</sup> DCA 1995), *rev. denied*, 654 So. 2d 982 (Fla. 1995) (where Plaintiff is seeking remedy than cannot be obtained in administrative proceedings, he is not required to exhaust administrative remedies).

**Other Defenses.** Many other defenses were raised during the course of this proceeding. All were considered and, even though not discussed here, rejected by the Court.

#### IV. CONCLUSION

The Court concludes that the minimum use of a platted, residential lot is a single-family home,<sup>13</sup> and that use is authorized when a local government approves a residential subdivision plat. When Subsection 380.05(18), Fla. Stat., became law on July 1, 1972, development of platted lots in Areas of Critical State Concern became vested, and any local or state ordinance, regulation, resolution, or policy that, by its language or effect, limits or modifies such development of a lot platted prior to July 1, 1972, is preempted by Subsection 380.05(18), Fla. Stat., and such ordinance, regulation, resolution, or policy may not be applied to such platted lots to prevent the construction of a single family home.. The Court's decision today does not prevent local governments, or the State, from acquiring such lots by the exercise of eminent domain, or by purchasing lots from willing sellers.

#### RELIEF SOUGHT BY PLAINTIFFS

Plaintiffs seek a declaration of the extent of the vested rights provided for in § 380.05(18), Fla. Stat. They seek ancillary relief as permitted by Sections 86.011(2), 86.101,

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<sup>13</sup> Subsection 380.05(18) does not limit its scope to residential lots, and the Court must conclude the statute also applies to platted lots that are designated, on the plat itself, for a use other than residential. The Court has reserved jurisdiction to enter final judgment for the approximately 400 remaining Plaintiffs, and this situation may well arise in that context. To determine the uses authorized on a non-residential, platted lot, the parties should be guided by the uses authorized by the local government's zoning ordinances as they existed prior to Area of Critical State Concern designation.

and 86.111, Fla. Stat. (2001), and continuing jurisdiction by this Court. Plaintiffs' Motion for Summary Judgment, November 23, 1999, Order on Summary Judgment, March 30, 2000.

**RELIEF GRANTED**

Based upon the foregoing, it is hereby ORDERED, ADJUDGED, AND DECREED:

- A. that this Court has jurisdiction over the parties and the subject matter of this action;
- B. that this Court declares Subsection 380.05(18), Fla. Stat. (2001) creates a vested right to complete the development authorized by the recordation, and approval of the County Commission if the plat was recorded after June 10, 1925, of a plat in the Official Records of Monroe County prior to July 1, 1972, and that the minimum development authorized by a subdivision plat is the construct a single-family home, unless the lot is designated for a non-residential use on the face of the plat, in which case the development authorized is that which was allowed by Monroe County's zoning regulations prior to July 1, 1979, the effective date of the Florida Keys Area of Critical State Concern designation;
- C. that the prevailing Plaintiffs named in this Judgment each own one or more lots in subdivisions platted, according to the local subdivision plat laws in effect at the time of platting, between April 24, 1924, and June 27, 1971;
- D. that the subdivision plats filed with the Court on April 2, 2002, and listed on Exhibit A attached hereto, satisfy the requirements of Subsection 380.05(18), and development of the lots therein, as described above, is thereby vested;
- E. that the following platted subdivisions, filed with the Court on April 2, 2002, were approved after July 1, 1972, and do not satisfy the requirements of Subsection 380.05(18): Port Largo Fifth Addition; Amended Plat of Dolphin Harbour; Stirrup Key Subdivision, Allotment of Dock Area "A"; Buccaneer Point; 1st Revision to Venetian Shores Plat No. 6; Reformed Plat of Grassy Key Beach; Dolphin Estates; Valhalla Island Amended Plat; Lambert Subdivision; Amended & Revised Plat of Shark Key; Sunrise Isle; and Pine Key Yacht Club Estates.
- F. that the vested rights created by Subsection 380.05(18), Fla. Stat. (2001), are superior to, and preempt, any of the State of Florida, and local governments, that were approved or adopted pursuant to Subsections 380.05 or 380.0552, Fla. Stat, and are solely applicable to, or in, the Florida Keys Area of Critical State Concern, if said ordinance, resolution, regulation, rule, or policy limits or modifies, in any way, the ability of the owner of a lot platted and recorded as set forth above. This includes those Comprehensive Plan provisions and Land Development Regulations described in Section II-C of the Court's opinion, *supra*;
- G. that Defendants are enjoined from applying or enforcing any such ordinance, resolution, regulation, rule, or policy that in any way limits or modifies Plaintiffs' vested rights to construct one single-family home on one platted lot in a subdivision listed in Exhibit A;

- H. that the Monroe County zoning codes and land development regulations in effect on June 30, 1979, apply to Plaintiffs' rights to develop said platted lots;
- I. that the Court interprets the statutory phrase "in any way limit or modify," to include temporal delays of greater than 30 days in issuing building permits, requiring Plaintiffs to obtain permit allocations pursuant to growth-limitation processes, short- and long-term moratoria, limiting clearing or building areas, or imposing any other dimensional limitations, to less than what was allowed by Monroe County's zoning code prior to July 1, 1979, limiting development to less than one dwelling unit per lot, and the like. The Court does not interpret said phrase to include Plaintiffs' obligations to obtain building permits, submit building plans for review pursuant to any national or state-wide building codes adopted by the local governments, pay fees that were required in 1979, as adjusted for inflation, and the like;
- J. that this judgment applies to successors-in-title of the prevailing Plaintiffs;
- K. that Monroe County and the Village of Islamorada shall provide a Development Letter to any Plaintiff, or a successor-in-title of any Plaintiff, within 10 working days of a written application therefore, a written determination stating that the applicant is entitled to a building permit at any time the applicant chooses or, if such is not the case, any and all reasons why the local government believes the applicant is not entitled to such a building permit. Development Letters shall be transmitted to the Department of Community Affairs as a "development order" would be;
- L. that the Court awards costs of this action to Plaintiffs, pursuant to the Uniform Rules and an appropriate motion. Said motion may be submitted any time up to 30 days after the resolution of this matter for all remaining Plaintiffs.
- M. that the Court reserves and retains jurisdiction over the parties and the subject matter for five years after this Judgment becomes final, to enter judgments for or against the remaining Plaintiffs, for the purpose of reviewing the Development Letters described above for compliance with this final judgment, and for any additional or further relief that may be necessary to effectuate this judgment.

DONE AND ORDERED in chambers, in Key West, FL, this 28<sup>th</sup> day of May

2002.

  
RICHARD G. PAYNE  
CIRCUIT JUDGE

cc: James S. Mattson, Esq.  
Andrew M. Tobin, Esq.  
Karen Cabanas, Esq.  
David Jordan, Esq.  
Mitchell Bierman, Esq.

Richard Grosso, Esq.  
Samuel Reiner II, Esq.

FILE #1303551  
BK#1788 PG#1279

MONROE COUNTY  
OFFICIAL RECORDS

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MONROE COUNTY  
OFFICIAL RECORDS  
FILE #993275  
BR#1446 PG#2205  
BCD Mar 12 1997 11:06AM  
DANNY L KOLHAGE, CLERK

RESOLUTION NO. P3-97

A RESOLUTION BY THE MONROE COUNTY PLANNING COMMISSION APPROVING THE REQUEST OF RICK OSBORNE, IN CARE OF JAMES CESSNA, FOR A MAJOR CONDITIONAL USE TO DEVELOP A 35,200 SQ. FT. MINI-STORAGE WAREHOUSE ON PROPERTY DESCRIBED AS ALL OF SQUARE 24, MALONEY SUBDIVISION, SECTIONS 26 AND 35, TOWNSHIP 67 SOUTH, RANGE 25 EAST, STOCK ISLAND, MONROE COUNTY, FLORIDA, MILE MARKER 5. THE LAND USE DESIGNATION IS URBAN COMMERCIAL AND THE REAL ESTATE NUMBER IS 00124090.

WHEREAS, during a regular meeting held on January 7, 1997, the Monroe County Planning Commission conducted a public hearing on the request filed by Rick Osborne, in care of James Cessna, for a major conditional use approval to develop a 35,200 sq. ft. mini-storage warehouse; and

WHEREAS, the proposed development is located on property legally described as all of Square 24, Maloney Subdivision, Sections 26 and 35, Township 67 South, Range 25 East, Stock Island, Monroe County; and

WHEREAS, the above-described property is located in the Urban Commercial land use district; and

WHEREAS, the Planning Commission was presented with the following evidence, which by reference is hereby incorporated as a part of the record of said hearing:

1. The Major Conditional Use Application received by Monroe County Planning Department on May 30, 1996 including survey, drainage calculations, and drainage plans prepared by Frederick H. Hildebrant on May 2, 1996, revised on October 21, 1996; site, floor and elevation plans prepared by Robert Delaune on May 28, 1996, revised November 18, 1996; landscaping plans prepared by Brown and Crebbin Design Studio, Inc. on May 6, 1996, revised on November 19, 1996; and
2. The staff report prepared by Jill Jernigan, Development Review Planner, and Dianna Stevenson, Biologist, dated December 10, 1996; and
3. The sworn testimony of the Growth Management Staff; and

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4. Presentations by Don Craig, Agent, and Robert Delaune, Architect, and James Cessna, Project Coordinator; and

**WHEREAS**, the Planning Commission has made the following Findings of Facts and Conclusions of Law based on the evidence presented:

- 1) Based on the fact that the proposed use (mini-storage) is a retail service, we find that the proposed development is a commercial retail use, pursuant to Section 9.5-4(C-13) of the Monroe County Code. Therefore, we conclude that the proposed mini-storage development is permitted in the Urban Commercial land use district, pursuant to Section 9.5.232 of the Monroe County Code; and
- 2) Based on the drainage plans, the stormwater will be controlled by injection wells and swales. The County Engineer has not reviewed these plans and therefore compliance cannot be determined at this time; and
- 3) Based on the revised site plan, no outdoor lighting fixtures are proposed. The original site plan indicated that six (6) light fixtures would be provided. If the applicant is planning to provide outdoor lighting, there is not sufficient detail to determine compliance with Sec. 9.5.292; and
- 4) Based on the floor plans for the storage units, proposed accessible routes are not shown. Therefore, we find that there is not sufficient detail to determine strict compliance with the Florida Accessibility Code for Building Construction. However, review for strict compliance can occur during the building permit process; and
- 5) Based on Planning Commission Resolution No. 297, the applicant has received a variance to the parking standards to allow 2.5 parking spaces per 1,000 sq. ft. of floor area of the proposed mini-storage warehouse;

**NOW THEREFORE,**

**BE IT RESOLVED BY THE PLANNING COMMISSION OF MONROE COUNTY, FLORIDA**, that the preceding Findings of Fact and Conclusions of Law, support their decision to **APPROVE** the Major Conditional Use request of Rick Osborne, in care of James Cessna for a 35,200 sq. ft. mini-storage warehouse, with the following conditions:

- 1) The use of the subject property shall be restricted to mini-storage warehouse uses only. Any future change of use of the property will require Planning Department approval and compliance with all regulations in place at that time; and

page 2

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- 2) Prior to the issuance of a building permit, the drainage plans shall be reviewed and approved by the County Engineer; and
- 3) Prior to the issuance of a building permit, any proposed outdoor lighting shall be in compliance with Sec. 9.5-392; and
- 4) Prior to the issuance of a building permit, the plans shall demonstrate strict compliance with the Florida Accessibility Code for Building Construction.

PASSED AND ADOPTED by the Planning Commission of Monroe County, Florida, at a regular meeting held on the 7th day of January, 1997.

Chair Hansley	<u>YES</u>
Vice-Chair Nugent	<u>YES</u>
Commissioner Chaplin	<u>YES</u>
Commissioner Mannillo	<u>YES</u>
Commissioner Gorsuch	<u>YES</u>

PLANNING COMMISSION OF  
MONROE COUNTY, FLORIDA

BY Mary Hansley  
Mary Hansley, Chair

Signed this 21<sup>st</sup> day of January, 1997.

APPROVED AS TO FORM  
AND LEGAL SUFFICIENCY

BY \_\_\_\_\_  
Attorney's Office

MONROE COUNTY  
OFFICIAL RECORDS

Initials MLC



Doc# 1683959 02/27/2008 10:20AM  
Filed & Recorded in Official Records of  
MONROE COUNTY DANNY L. KOLHAGE

Doc# 1683959  
Bk# 2347 Pg# 1102

**MONROE COUNTY, FLORIDA  
MINOR CONDITIONAL USE PERMIT  
DEVELOPMENT ORDER NO. 10-07**

A DEVELOPMENT ORDER APPROVING A REQUEST BY THE CRAIG COMPANY, ON BEHALF OF KEYS FEDERAL CREDIT UNION, FOR A MINOR CONDITIONAL USE PERMIT TO CONSTRUCT A TWO-STORY BUILDING, CONSISTING OF 13,405 SQ FT OF NON-RESIDENTIAL FLOOR AREA FOR COMMERCIAL RETAIL AND OFFICE USES, AND TO CARRY OUT ASSOCIATED SITE IMPROVEMENTS, AT PROPERTY LEGALLY DESCRIBED AS LOTS 1-20, SQUARE 24, MALONEY SUBDIVISION, PB 1-55, STOCK ISLAND, MONROE COUNTY, FLORIDA, HAVING REAL ESTATE NUMBER 00124090.000000.

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**WHEREAS**, during a regularly scheduled meeting held on June 12, 2007, the Development Review Committee of Monroe County conducted a review and consideration of the request by the Craig Company, on behalf of Keys Federal Credit Union, for a minor conditional use permit pursuant to Sections 9.5-68 and 9.5-232 of the Monroe County Code; and

**WHEREAS**, the subject property is located along the Overseas Highway (US Highway 1) on Stock Island, approximate Mile Marker 5, and is legally described as Lots 1-20, Square 24, Maloney Subdivision, PB 1-55, Stock Island, Monroe County, Florida, having Real Estate Number 00124090.000000; and

**WHEREAS**, the Applicant has requested a minor conditional use permit in order to construct one (1) two-story building consisting of 13,405 ft<sup>2</sup> of non-residential floor area and to carry out associated improvements to the site; and

**WHEREAS**, the non-residential floor area will be utilized by a combination of commercial retail and office uses; and

**WHEREAS**, the property is located in an Urban Commercial (UC) Land Use District and has a Future Land Use Map (FLUM) designation of Mixed Use / Commercial (MC); and

**WHEREAS**, pursuant to Section 9.5-232 of the Monroe County Code, in the Urban Commercial (UC) District, the development shall require minor conditional use permit approval; and

**WHEREAS**, the Development Review Committee reviewed the following documents and other information relevant to the request:

1. Minor Conditional Use application received by the Monroe County Planning & Environmental Resources Department on May 2, 2007; and
2. Site Plan (A1.1.1) by mbi | k2m Architects, Inc, dated June 1, 2007; and
3. Floor Plans (A2.1.1 & A2.1.2) by mbi | k2m Architects, Inc, dated May 2, 2007; and
4. Exterior Elevations (A3.1.1 & A3.1.2) by mbi | k2m Architects, Inc, dated June 1, 2007; and
5. Conceptual Landscape Plan (LD-001) by the Craig Company, dated April 30, 2007; and
6. Conceptual Drainage Plan (C-1) by Perez Engineering & Development, Inc, dated May 2, 2007; and
7. Boundary & Topographical Survey by Frederick H. Hildebrandt, dated May 2, 1996 and revised April 30, 2007; and
8. Traffic Impact Report (Level 3 Study) by Carter & Burgess Inc, dated May 2007; and
9. Staff report prepared by Joseph Haberman, Monroe County Planner, dated June 1, 2007; and

**WHEREAS**, in 1997, the Monroe County Planning Commission approved a request by Richard Osborne for a major conditional use permit in order to construct a 35,200 ft<sup>2</sup> mini-storage warehouse facility on the property. The approval was recorded in Resolution P3-97; and

**WHEREAS**, on January 17, 2002, Monroe County entered into a Settlement Agreement with Richard Osborne, Case No. CAK-01-108, which maintained that no building permit shall be denied on the basis of Monroe County's regulations relating to a non-residential permit allocation system or its equivalent. Therefore, the settlement agreement allowed the property owner to construct the 35,200 ft<sup>2</sup> mini-storage warehouse facility without entering into the Non-Residential Rate of Growth Ordinance (NROGO) permit allocation system; and

**WHEREAS**, the 35,200 ft<sup>2</sup> mini-storage warehouse facility was never constructed; and

**WHEREAS**, on March 19, 2003, the Settlement Agreement was amended to allow an alternate use of a 25,120 ft<sup>2</sup> credit union, banking or financial institution facility, which would be exempt from the Non-Residential Rate of Growth Ordinance (NROGO) permit allocation system; and

**WHEREAS**, the Settlement Agreement was further amended in 2006 and 2007 to authorize several amendments including the establishment of Keys Federal Credit Union as a successor in interest and an extension of the time period for building permit application and construction; and

**WHEREAS**, based upon the information and documentation submitted, the Development Review Committee made the following Findings of Fact:

1. The Future Land Use Map (FLUM) designation of the property is Mixed Use / Commercial (MC). Policy 101.4.5 of the Monroe County Year 2010 Comprehensive Plan states that the principal purpose of the Mixed Use/ Commercial (MC) land use category is to provide for the establishment of commercial zoning districts where various types of commercial retail and office may be permitted at intensities which are consistent with the community character and the natural environment. The land use category is intended to allow for the establishment of mixed use development patterns, where appropriate; and
2. The Land Use District designation of the property is Urban Commercial (UC). Section 9.5-203 of the Monroe County Code states that the purpose of the Urban Commercial (UC) District is to designate appropriate areas for high-intensity commercial uses intended to serve retail sales and service, professional services and resort activities needs at a regional or multiple planning area scale; and
3. Pursuant to Section 9.5-232 of the Monroe County Code, in the Urban Commercial (UC) District, commercial retail of low and medium intensity, office uses or any combination thereof of greater than 5,000 ft<sup>2</sup> but less than 20,000 ft<sup>2</sup> of floor area may be permitted with minor conditional use permit approval, provided that access to US Highway 1 is by way of a) an existing curb cut; b) a signalized intersection; or c) a curb cut that is separated from any other curb cut on the same side of US Highway 1 by at least 400 feet; and
4. Pursuant to Section 9.5-62 of the Monroe County Code, the Director of Planning & Environmental Resources is authorized to approve applications for minor conditional use permits in accordance with the standards provided in Section 9.5-65; and
5. Section 9.5-65 of the Monroe County Code provides the standards which are applicable to all conditional uses. When considering applications for a conditional use permit, the Development Review Committee and Director of Planning & Environmental Resources shall consider the extent to which:
  - (a) The conditional use is consistent with the purposes, goals, objectives and standards of the Monroe County Year 2010 Comprehensive Plan and Monroe County Code; and

- (b) The conditional use is consistent with the community character of the immediate vicinity of the parcel proposed for development; and
  - (c) The design of the proposed development minimizes adverse effects, including visual impacts, of the proposed use on adjacent properties; and
  - (d) The proposed use will have an adverse effect on the value of surrounding properties; and
  - (e) The adequacy of public facilities and services, including but not limited to roadways, park facilities, police and fire protection, hospital and Medicare services, disaster preparedness program, drainage systems, refuse disposal, water and sewers, judged according to standards from and specifically modified by the public facilities capital improvements adopted in the annual report required by the Monroe County Code; and
  - (f) The Applicant for conditional use approval has the financial and technical capacity to complete the development as proposed and has made adequate legal provision to guarantee the provision and development of any open space and other improvements associated with the proposed development; and
  - (g) The development will adversely affect a known archaeological, historical or cultural resource; and
  - (h) Public access to public beaches and other waterfront areas is preserved as a part of the proposed development; and
  - (i) The proposed use complies with all additional standards imposed on it by the particular provision of this chapter authorizing such use and by all other applicable requirements of the Monroe County Code; and
6. The building shall consist of 13,405 ft<sup>2</sup> of non-residential floor area and the drive-through canopy shall consist of 1,600 ft<sup>2</sup> of non-residential floor area. Therefore, in total, the development shall consists of 15,005 ft<sup>2</sup> of non-residential floor area; and
7. The property is bordered by public right-of-ways on all four (4) sides. Pursuant to Section 9.5-281 of the Monroe County Code, a front yard setback of fifteen (15) feet is required along all four (4) of property lines; and
8. Pursuant to Section 9.5-283 of the Monroe County Code, no structure or building shall be developed that exceeds a maximum height of thirty-five (35) feet; and

**WHEREAS**, the Development Review Committee made the following Conclusions of Law:

- 1. The development shall be consistent with the provisions and intent of the Monroe County Year 2010 Comprehensive Plan:

- a. The commercial retail and office use is consistent with the purpose of the Mixed Use / Commercial (MC) land use category, as set forth in Policy 101.4.5 of the Monroe County Year 2010 Comprehensive Plan; and
2. The development shall be consistent with the provisions and intent of Chapter 9.5 of the Monroe County Code:
  - a. The commercial retail and office use is consistent with the purpose of the Urban Commercial (UC) District, as set forth in Section 9.5-203 of the Monroe County Code; and
  - b. The commercial retail and office use of the property is permitted use in the Urban Commercial (UC) District, as set forth in Section. 9.5-232 of the Monroe County Code; and
3. The property has vested rights in accordance with Case No. CA-K-01-108. The settlement agreement states that the property owner is entitled to construct a 35,200 ft<sup>2</sup> mini-storage warehouse or a 25,120 ft<sup>2</sup> credit union, banking or financial institution office facility without going through the Non-Residential Rate of Growth Ordinance (NROGO) permit allocation system. Since the 15,005 ft<sup>2</sup> of new non-residential floor area shall be for a credit union facility and does not exceed 25,120 ft<sup>2</sup>, the Applicant does not have to enter the NROGO permit allocation system for any non-residential floor area for the development as currently set forth; and
4. According to the site plan submitted with the minor conditional use permit application, the setbacks would not be in compliance with Section 9.5-281 of the Monroe County Code. The site plan indicated that the proposed building would be setback approximately eleven (11) feet from the property line along Laurel Avenue and a portion of the proposed asphalt parking area would be within the required setback along 3rd Street; and
5. According to the exterior elevation plans submitted with the minor conditional use permit application, the building would not be in compliance with Section 9.5-283 of the Monroe County Code. The exterior elevations indicated that the building would have a height of approximately thirty-nine (39) feet; and
6. Following the provision of additional documentation to the Monroe County Planning & Environmental Resources Department showing that the development would be in compliance with Sections 9.5-281 and 9.5-283 of the Monroe County Code, the Applicant shall have demonstrated that all of the required standards of Section 9.5-65 of the Monroe County Code and the additional requirements of the land development regulations shall be met; and

**WHEREAS**, Staff provided the following conditions to be met prior to the issuance of a Development Order:

1. Prior to the issuance of a Development Order, the 25,338 ft<sup>2</sup> of US Highway 1 right-of-way, as shown on the site plan and included as part of the project area, shall be attained from the Florida Department of Transportation; and
2. Prior to the issuance of a Development Order, a) a variance shall be obtained in accordance with Sections 9.5-523 & 9.5-524 of the Monroe County Code to allow the proposed development within the required setbacks or b) the site plan shall be revised to show that the proposed development will not take place within the required setbacks; and
3. Prior to the issuance of a Development Order, the Applicant shall submit revised building elevations that are consistent with the site plan and indicate that the proposed building will be in compliance with Section 9.5-283 of the Monroe County Code; and
4. Prior to the issuance of a Development Order, the Applicant shall submit a revised site plan showing the locations of fire hydrants/ fire wells. In addition, as requested by the County Traffic Consultant in a letter to the Planning & Environmental Resources Department dated June 1, 2007, the revised site plan shall be modified so that the driveway along 3rd Street is widened to accommodate fire trucks and service vehicles and so that the driveways are adjusted if the vehicle maneuverability details indicate that the design vehicle will have to climb the curb to access the site; and

**WHEREAS**, the Applicant submitted a Quitclaim Deed for the right-of-way of US Highway 1, dated August 29, 2007, which met the condition imposed by the Development Review Committee to be met prior to the issuance Development Order; and

**WHEREAS**, the Applicant submitted a revised site plan, (A1.1.1) by mbi | k2m Architects, Inc, dated June 1, 2007, which met all of the conditions imposed by the Development Review Committee to be met prior to the issuance Development Order; and

**WHEREAS**, the Applicant submitted revised exterior elevation plans, (A3.1.1 & A3.1.2) by mbi | k2m Architects, Inc, dated June 1, 2007, which met the condition imposed by the Development Review Committee to be met prior to the issuance Development Order; and

**WHEREAS**, following the provision of documentation indicating that the conditions specified at the meeting on June 12, 2007 had been met, Staff recommended approval to the Director of Planning & Environmental Resources of the minor conditional use permit application with conditions; and

**WHEREAS**, the Director of Planning & Environmental Resources has duly considered the recommendation of Staff and the information and documentation submitted by the Applicant; and

**WHEREAS**, the record established, the testimonies offered, and the evidence submitted, support the Findings of Fact and Conclusions of Law adopted; and

**NOW THEREFORE, BE IT RESOLVED BY THE DIRECTOR OF PLANNING & ENVIRONMENTAL RESOURCES OF MONROE COUNTY, FLORIDA** that the request by the Craig Company, on behalf of Keys Federal Credit Union, for a Minor Conditional Use Permit to construct a two-story building, consisting of 13,405 ft<sup>2</sup> of non-residential floor area for commercial retail and office uses, and to carry out associated site improvements, at property legally described as Lots 1-20, Square 24, Maloney Sub Subdivision, PB 1-55, Stock Island, Monroe County, Florida, having Real Estate Number 00124090.000000 is hereby APPROVED, subject to the following conditions:

- A. Pursuant to the Fourth Amended Settlement Agreement CA-K-01-108, Monroe County agrees to process promptly upon submittal the building permit application for the credit union building within ROGO Year 16 (July 14, 2007 through July 13, 2008). Therefore, a building permit application must be submitted to the Building Department by July 13, 2008 in order for the proposed square footage to be exempt from obtaining an NROGO allocation; and
- B. The Applicant shall receive all required permits and necessary approvals from the Florida Department of Transportation (FDOT), including the drainage permit as indicated in a letter from FDOT to the Applicant dated May 14, 2007; and
- C. As discussed at the pre-application conference on June 21, 2005 and within the Letter of Understanding dated July 28, 2005, and in accordance with Policy 401.1.3 of the Monroe County Year 2010 Comprehensive Plan, the property owner shall work with Monroe County to establish a bike path on the site and shall reserve sufficient right-of-way for a bicycle/pedestrian facility, as well as other corridor improvements, including landscaping and pedestrian-scaled lighting. Prior to a Certificate of Occupancy, the Applicant shall submit a revised site plan that incorporates the requested corridor improvements; and
- D. As discussed at the pre-application conference on June 21, 2005 and within the Letter of Understanding dated July 28, 2005, the property owner shall continue to collaborate with Monroe County in regards to establishing a public library on the site; and
- E. The height of the building shall be in compliance with Section 9.5-283 of the Monroe County Code; and

F. Prior to the issuance of a Building Permit, the proposed development shall be found in compliance by the Building Department, the County Engineer, the Office of the Fire Marshal and the Florida Department of Health.

Date 10/30/07

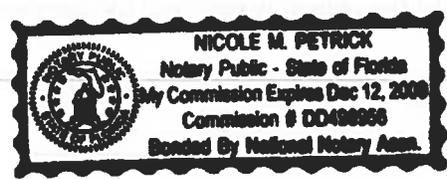
Townsley Schwab  
Townsley Schwab  
Acting Director of Planning & Environmental Resources

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 Townsley Schwab, to me known to be the person described in and who executed the foregoing instrument and she acknowledged before me the she executed the same.

WITNESS my hand and official seal in the County and State last aforesaid this 30<sup>th</sup> day of OCTOBER, 2007.

Nicole M. Petrick  
NOTARY PUBLIC, STATE OF FLORIDA

REFERENCE: In the event that this development order constitutes an amendment, extension, variation, or alteration of a previous conditional use permit, that document may be referenced by the following \_\_\_\_\_



Doc# 1683959  
BK# 2347 P# 1110

**NOTICE**

Section 9.5-72(a)(1) of the Monroe County Code states that a conditional use permit shall not be transferred to a successive owner without notification to the Development Review Coordinator within five (5) days of the transfer.

Under the authority of Section 9.5-72(a) of the Monroe County Code, this development order shall become null and void with no further notice required by the County, unless a complete building permit application for site preparation and building construction with revised plans as required herein is submitted to the Monroe County Building Official within six (6) months of the expiration of the Florida Department of Community Affairs appeal period or the date when the Florida Department of Community Affairs waives its appeal and all required certificates of occupancy are procured with two (2) years of the date of this development order is approved by the Director of Planning & Environmental Resources.

If this development order is appealed under Monroe County Code or by the Florida Department of Community Affairs, the above time limits shall be tolled until the appeals are resolved.

This instrument shall not take effect for thirty (30) working days following the date of memorialization thereof, and during that time permit shall be subject to appeal as provided in Section 9.5-521(d) of the Monroe County Code. An appeal shall stay the effectiveness of this instrument until resolved.

In addition, please be advised that pursuant to Chapter 9J-1, Florida Administrative Code, this instrument shall not take effect for forty-five (45) days following the rendition of the Florida Department of Community Affairs. During that forty-five days, the Florida Department of Community Affairs may appeal this instrument to the Florida Land and Water Adjudicatory Commission, and that such an appeal stays the effectiveness of this instrument until the appeal is resolved by agreement or order.

**MONROE COUNTY  
OFFICIAL RECORDS**

Initials JS

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RESOLUTION NO. 113 -1982

RESOLUTION VACATING AND ANNULLING PLAT

WHEREAS, the Board of County Commissioners of Monroe County, Florida, desires to vacate and annul that portion of a plat described below:

All of Block 24 of Maloney Subdivision, Stock Island, Monroe County, Florida; as recorded in Plat Book 1 at Page 55 of the Public Records of Monroe County, Florida; said Block being described by metes and bounds as follows:

Begin at the Southeast corner of said Block and run thence South 89 degrees 51 minutes 20 seconds West along the South Boundary of said Block for a distance of 500 feet to the Southwest corner of said Block; thence North 00 degrees 08 minutes 40 seconds West along the West Boundary of said Block for a distance of 119.95 feet to the Northwest corner of said Block; thence North 81 degrees 15 minutes 35 seconds East along the Northerly Boundary of said Block for a distance of 505.70 feet to the Northeast corner of said Block; thence run South 00 degrees 08 minutes 40 seconds East along the East Boundary of said Block for a distance of 195.68 back to the Southeast corner of said Block and the Point of Beginning.

and

WHEREAS, vacation by the governing body of this County will not affect the ownership or right of convenient access of persons owning other parts of the subdivision,

and

WHEREAS, the legal requirements for public notice and public hearings as set forth in Florida Statutes 177.101, Vacation and Annulment of Plats Subdividing Land have been satisfied and petitioner has complied with the requirements of the statute, now, therefore,

BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MONROE COUNTY, FLORIDA, as follows:

1. That the Board of County Commissioners of Monroe County, Florida, does hereby vacate and annul that plat described as :

All of Block 24 of Maloney Subdivision, Stock Island, Monroe County, Florida; as recorded in Plat Book 1 at Page 55 of the Public Records of Monroe County, Florida; said Block being described by metes and bounds as follows:

FILED FOR  
82 APR 23 49 '82  
MONROE COUNTY, FLORIDA

REC 852m 702

-2-

Begin at the Southeast corner of said Block and run thence South 89 degrees 51 minutes 20 seconds West along the South Boundary of said Block for a distance of 500 feet to the Southwest corner of said Block; thence North 00 degrees 08 minutes 40 seconds West along the West Boundary of said Block for a distance of 119.95 feet to the Northwest corner of said Block; thence North 81 degrees 15 minutes 35 seconds East along the Northerly Boundary of said Block for a distance of 505.70 feet to the Northeast corner of said Block; thence run South 00 degrees 08 minutes 40 seconds East along the East Boundary of said Block for a distance of 195.68 back to the Southeast corner of said Block and the Point of Beginning.

2. That the Clerk of this Board be, and he is hereby ordered to publish notice of said vacation in accordance with the provisions of Chapter 177.101, Florida Statutes.

Passed and adopted by the Board of County Commissioners of Monroe County, Florida, at a regular meeting of said Board held on the 22nd day of March, A.D. 1982.

BOARD OF COUNTY COMMISSIONERS  
OF MONROE COUNTY, FLORIDA

By

*George T. Delgado*  
Mayor/Chairman

(Seal)

Attest: **RALPH W. WHITE, CLERK**

*Virginia M. Pender*  
Clerk

APPROVED AS TO FORM  
AND LEGAL SUFFICIENCY

BY

*Kevin P. [Signature]*  
Attorney's Office

REC 8524 703

STATE OF FLORIDA,

SS.

COUNTY OF MONROE.

I HEREBY CERTIFY that the foregoing is a true copy of a Resolution adopted by the Board of County Commissioners of Monroe County, Florida, at a meeting of said Board duly held on the 22nd day of March, A.D. 1982.

WITNESS my hand and official seal this 31 day of March, A.D. 1982.

(SEAL)

Ralph W. White  
Clerk of the Circuit Court in  
and for Monroe County, Florida,  
and ex officio Clerk of the  
Board of County Commissioners  
of Monroe County, Florida.

BY: Vicki R. Garcia  
Deputy Clerk

RECORDED IN OFFICIAL RECORDS BOOK  
OF MONROE COUNTY, FLORIDA  
SERIAL 150-010  
RALPH W. WHITE  
CLERK CIRCUIT COURT

**Karl D. Borglum**  
**Property Appraiser**  
**Monroe County, Florida**

office (305) 292-3420  
fax (305) 292-3501  
Website tested on  
Internet Explorer

----- GIS Mapping requires Adobe Flash 10.3 or higher. -----

**Property Record View**

Alternate Key: 1158224 Parcel ID: 00124090-000000

**Ownership Details**

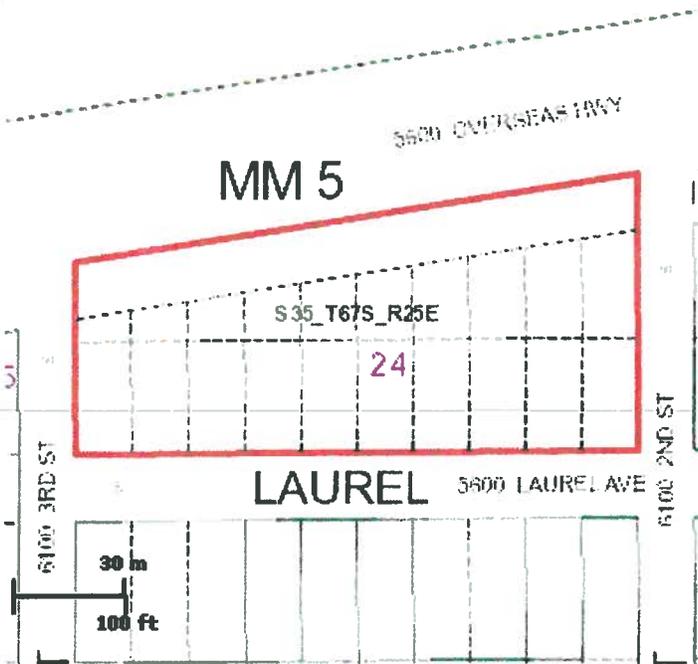
**Mailing Address:**

KEYS FEDERAL CREDIT UNION  
553 PEARY COURT RD  
KEY WEST, FL 33040

**Property Details**

**PC Code:** 10 - VACANT COMMERCIAL  
**Millage Group:** 110A  
**Affordable Housing:** No  
**Section-Township-Range:** 35-67-25  
**Property Location:** 5610 OVERSEAS HWY SOUTH STOCK ISLAND  
**Subdivision:** MALONEY SUBD  
**Legal Description:** STOCK ISLAND MALONEY SUB SUBDIVISION PB 1-55 LOT 1 THRU 20 SQR 24 AND ADJ PART OF US HWY 1 G34-419-420 G43-5-6 OR571-769 OR682-796 OR734-9/10 OR852-791/793 RESOLUTION NO 113-1982 OR1438-1537/38 OR1878-1695 OR2318-793/96QC

**Parcel Map (Click to open dynamic parcel map)**



**Land Details**

Land Use Code	Frontage	Depth	Land Area
100H - COMMERCIAL HIGHWAY	0	0	104,245.50 SF

**Misc Improvement Details**

Nbr	Type	# Units	Length	Width	Year Built	Roll Year	Grade	Life

1	CL2:CH LINK FENCE	7,560 SF	0	0	1996	1997	3	30
---	-------------------	----------	---	---	------	------	---	----

## Appraiser Notes

2007 SALE INFO STATE DOT SOLD PORTION OF US 1 (50.68 BY 506.76) TO KEYS FEDERAL FOR \$380,100 OR2318-793. THIS PARCEL HAS INCREASED LAND SIZE FOR 2008 TAX ROLL.

SLAB INSTEAD OF BUILDING 97 10000388 FENCE & PRIVACY WALLS \$15,000 4/3/97 2001/3/13 REMOVED .84 NEGATIVE ADJ FROM PROPERTY AS THERE IS NO REASON TO HAVE A NEG. ADJ ON THIS PROPERTY...BC

## Building Permits

Bldg	Number	Date Issued	Date Completed	Amount	Description	Notes
	08100180	03/24/2008	04/09/2008	15,000	Commercial	CHAIN LINK FENCE
	06100933	02/23/2006	12/29/2006	2,000	Commercial	CHAIN LINK FENCE REPAIR

## Parcel Value History

Certified Roll Values.

[View Taxes for this Parcel.](#)

Roll Year	Total Bldg Value	Total Misc Improvement Value	Total Land Value	Total Just (Market) Value	Total Assessed Value	School Exempt Value	School Taxable Value
2011	0	8,615	1,427,413	1,436,028	1,422,757	0	1,436,028
2010	0	9,265	1,330,609	1,339,874	1,293,416	0	1,339,874
2009	0	9,752	1,166,081	1,175,833	1,175,833	0	1,175,833
2008	0	10,240	1,554,150	1,564,390	1,564,390	0	1,564,390
2007	0	9,067	1,420,335	1,429,402	1,429,402	0	1,429,402
2006	0	9,473	1,420,335	1,429,808	1,429,808	0	1,429,808
2005	0	9,879	1,420,335	1,430,214	1,430,214	0	1,430,214
2004	0	10,420	1,420,335	1,430,755	1,430,755	0	1,430,755
2003	0	10,826	804,857	815,683	815,683	0	815,683
2002	0	11,232	805,800	817,032	817,032	0	817,032
2001	0	11,773	805,800	817,573	817,573	0	817,573
2000	0	7,144	676,872	684,016	684,016	0	684,016
1999	0	7,382	676,872	684,254	684,254	0	684,254
1998	0	7,700	676,872	684,572	684,572	0	684,572
1997	0	0	676,872	676,872	676,872	0	676,872
1996	0	0	676,872	406,123	406,123	0	406,123
1995	0	0	676,872	676,872	676,872	0	676,872
1994	0	2,453	676,872	679,325	679,325	0	679,325
1993	0	2,563	676,872	679,435	679,435	0	679,435
1992	0	2,673	676,872	679,545	679,545	0	679,545
1991	0	2,819	676,872	679,691	679,691	0	679,691
1990	0	2,929	398,160	401,089	401,089	0	401,089
1989	0	3,039	398,160	401,199	401,199	0	401,199

1988	0	3,185	398,160	401,345	401,345	0	401,345
1987	0	3,295	398,160	401,455	401,455	0	401,455
1986	0	3,405	398,160	401,565	401,565	0	401,565
1985	0	3,551	398,160	401,711	401,711	0	401,711
1984	0	490	274,920	275,410	275,410	0	275,410
1983	0	495	274,920	275,415	275,415	0	275,415
1982	0	500	237,000	237,500	237,500	0	237,500

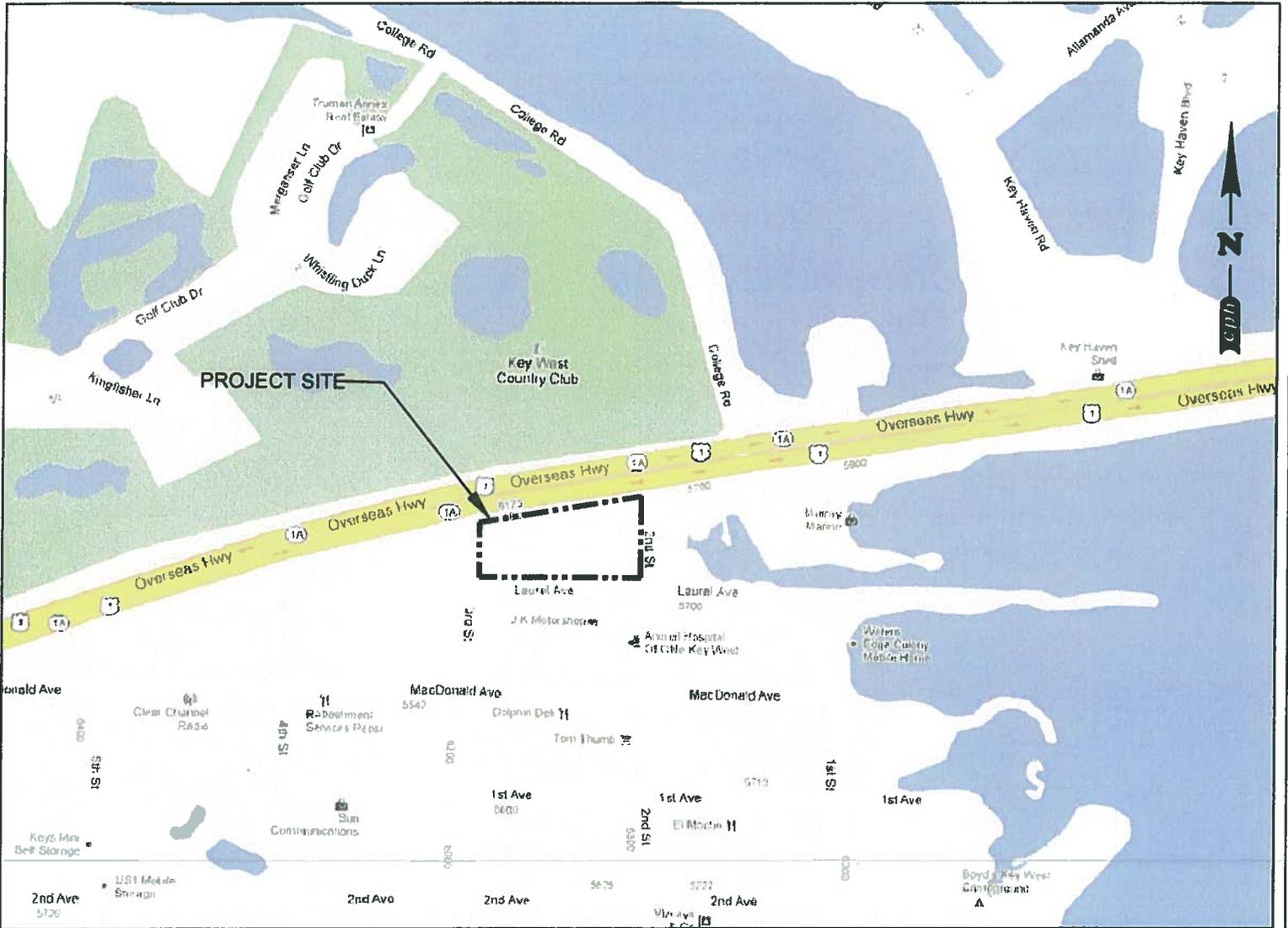
## Parcel Sales History

NOTE: Sales do not generally show up in our computer system until about two to three months after the date of sale. If a recent sale does not show up in this list, please allow more time for the sale record to be processed. Thank you for your patience and understanding.

Sale Date	Official Records Book/Page	Price	Instrument	Qualification
8/29/2007	2318 / 793	380,100	QC	G
4/3/2003	1878 / 1695	1,600,000	WD	Q
1/1/1997	1438 / 1537	750,000	WD	Q
5/1/1977	734 / 9	172,000	00	Q

This page has been visited 11,511 times.

Monroe County Property Appraiser  
Karl D. Borglum  
P.O. Box 1176  
Key West, FL 33041-1176



# LOCATION MAP

SCALE 1" = 500'

**PROPOSED CVS PHARMACY @  
SEC OF OVERSEAS HIGHWAY AND 3RD STREET,  
STOCK ISLAND FL**

# Photographs

Proposed CVS Pharmacy at SEC Overseas Highway and 3rd Street - Stock Island



Photo 1



Photo 2



Photo 3



Photo 4

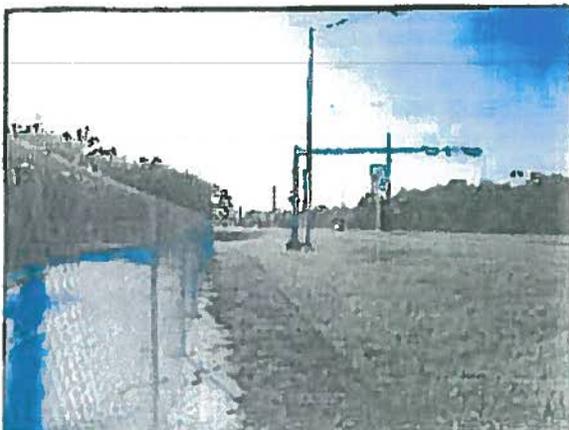


Photo 5



Photo 6

# Photographs

Proposed CVS Pharmacy at SEC Overseas Highway and 3rd Street - Stock Island



Photo 7



Photo 8

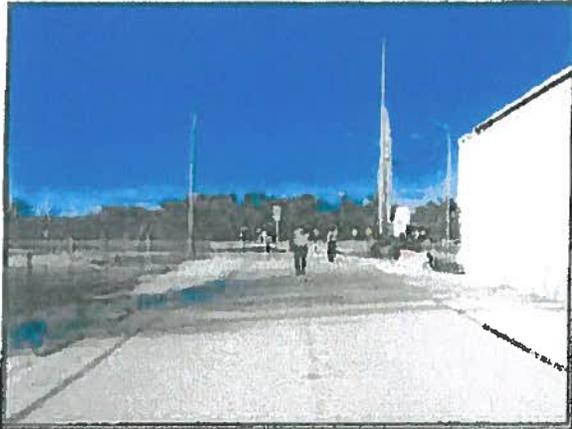


Photo 9



Photo 10



Photo 11



Photo 12

CVS Pharmacy to be located at SEC of Overseas Highway and 3<sup>RD</sup> Street  
Stock Island, Monroe County, Florida

**Project Description:**

This project consists of the construction of a 14,600 ft<sup>2</sup> building with a drive-thru and required infrastructure for a CVS Pharmacy on a ± 2.42 ac site located at the SEC of Overseas Highway and 3<sup>rd</sup> Street in Stock Island, Monroe County, Florida. Access to the site will be from 3<sup>rd</sup> Street and from 2<sup>nd</sup> Street. The project will be designed per Monroe County, FDOT, SFWMD and FDEP regulations.

---

KEYS FEDERAL CREDIT UNION  
553 PEARY COURT RD  
KEY WEST, FL 33040

ROMAN LUBOSLAV  
3404 EAGLE AVE  
KEY WEST, FL 33040-4652

TYCLAY LP  
3908 RYALWOOD CT  
VALRICO, FL 33596-6493

WATERS EDGE COLONY INC  
2625 GULFVIEW DR  
KEY WEST, FL 33040

DEY JOSEPH S III  
636 CEDAR GROVE  
ORANGE, CT 06477

VOYTIK GARY J  
2700 WEST SIDE DR NW STE 309  
CLEVELAND, TN 37312

CORAL HAMMOCK HOMEOWNERS  
ASSC INC C/O CHRISTIAN STERLING  
201 FRONT ST UNIT 103  
KEY WEST, FL 33040

VINTNER RESERVE LLC  
274 SPRUCE ST  
MORGANTOWN, WV 26505

TINES JEANETTE R LIVING TR AGREE  
DTD 4/9/03  
26 UPPER CONWAY LN  
CHESTERFIELD, MO 63017

MURRAY MARINE SALES AND SERVICE  
INC  
5710 U S HIGHWAY 1  
KEY WEST, FL 33040

JABOUR ROBERT S REV TR 1/04/2007  
1 CORAL WAY  
KEY WEST, FL 33040-5911

CMT PROPERTY MANAGEMENT LLC  
2911 STAPLES AVE  
KEY WEST, FL 33040

~~R AND S OF KEY WEST INC  
PO BOX 6032  
KEY WEST, FL 33041-6032~~

STIAG CORAL HAMMOCK LLC  
5300 US HIGHWAY 1  
KEY WEST, FL 33040

GLASER WILLIAM D  
118 CARIBBEAN DR  
SUMMERLAND KEY, FL 33042

MONROE COUNTY  
1100 SIMONTON ST  
KEY WEST, FL 33040-3110

SMITH KIT CARSON LEE  
PO BOX 11  
KEY WEST, FL 33041-0011

CLARK ROBERT L JR  
10510 MOXLEY RD  
DAMASCUS, MD 20872-1353

~~DOT/ST.OF FL (STATE OF FLORIDA -  
H/W)  
TALLAHASSEE, FL 32399~~

BURRIN FRED R DVM  
6150 SECOND ST  
KEY WEST, FL 33040-5997

~~DEY JOSEPH S III  
365 CEDAR GROVE  
ORANGE, CT 06477~~

LIBERATORE STEVEN  
47 CORAL WAY  
KEY WEST, FL 33040

TELLERD CYNTHIA  
896 CORPORATE WAY STE 440  
WESTLAKE, OH 44145

RILEY BRIAN R  
14525 SW MILLIKAN WAY UNIT 18920  
BEAVERTON, OR 97005-2343

SCROGGINS HAROLD S AND DONNA  
18784 SE JUPITER DR  
JUPITER, FL 33458

~~BRASWELL EDGAR  
5635 MACDONALD AVE  
KEY WEST, FL 33040~~

LAKWOOD ENTERPRISES INC  
P O BOX 344  
KEY WEST, FL 33041

SKINNER GEORGIANNA  
52 CORAL WAY UNIT 138  
KEY WEST, FL 33040-5913

~~R AND S OF KEY WEST INC  
PO BOX 6032  
KEY WEST, FL 33041-6032~~

ROSSI MARK  
24 HILTON HAVEN RD  
KEY WEST, FL 33040

FAHEY BARBARA J  
39 CORAL WAY  
KEY WEST, FL 33040

BONNETT MATTHEW R  
5650 LAUREL AVE  
KEY WEST, FL 33040-5915

SVENNINGSSEN ROY A  
41 CORAL WAY  
KEY WEST, FL 33040-5911

BRASWELL EDGAR  
5635 MACDONALD AVE  
KEY WEST, FL 33040

**Bartel, James & Corrine**  
**6150 Second Steet**  
**Key West, FL 33040**

R AND S OF KEY WEST INC  
PO BOX 6032  
KEY WEST, FL 33041

**Van Loon, David**  
**Wardlow, Angela**  
**22210 Elmira Blvd**  
**Port Charlotte, FL**  
**33952**

PEREZ ALLEN JR AND ANN MARIE  
6 EVERGREEN CT  
KEY WEST, FL 33040

ENG GARY  
4905 34TH ST S 5800  
SAINT PETERSBURG, FL 33711

PENDER ROBERT G AND PAULA ANN  
22210 ELMIRA BLVD  
PORT CHARLOTTE, FL 33952

CITY OF KEY WEST  
PO BOX 1409  
KEY WEST, FL 33041-1409

TAYLOR JOHN CLIFTON AND VALERIE  
H  
44 CORAL WAY  
KEY WEST, FL 33040

ALLEN JEFFREY E AND MONICA R H/W  
819 PEACOCK PLAZA STE 809  
KEY WEST, FL 33040

**SURFACE WATER MANAGEMENT REPORT  
FOR  
CVS PHARMACY**

**LOCATED AT  
SEC of Overseas Highway and 3<sup>RD</sup> Street**

**Monroe County, Florida**

**CPH Job # B11269**



**Engineers  
Planners  
Landscape Architects  
Surveyors  
Construction Management  
Design/Build**

*Certificate of Authorization No. 00003215*

1992 SW 1<sup>st</sup> Street  
Miami, Florida 33135  
Phone: 305.274.4805 Fax: 305.274.4807  
[www.cphengineers.com](http://www.cphengineers.com)

**PRELIMINARY**

Type Engineer's Name Here - Sign Above Line

PE NUMBER 54567

P.E. Number

DATE

Date

## **SUMMARY**

This project consists of the construction of a 14,600 ft<sup>2</sup> CVS Pharmacy with a drive-thru to be located at the SEC of Overseas Highway and 3<sup>rd</sup> Street in Stock Island, Monroe County. This report presents the drainage calculations for the proposed stormwater system. The site will be designed to treat ½ inch of dry pre-treatment prior to discharge to drainage wells. The drainage wells are being designed to accommodate the peak flow for the 25 year storm.

The stormwater onsite is being collected through a series of inlets and pipes and directed to a dry pond for pre-treatment. This pond is a detention pond and its bottom is at elev. 4.5. There are two (2) control structures on the pond, each with a 4" orifice at elev. 4 and a flat grate at elev. 7.6. When the water level in the pond reaches elev. 7.6, it will be directed through stormwater pipes to three (3) drainage wells. The top of the well is at elev. 2.5 that correspond to the SHWT.

## **CALCULATIONS**

### **1) Data Collection**

Rainfall data:

5yr- 1 day = 6.5 in

10 yr – 1 day = 8 in

25 yr – 1 day = 9 in

25 yr – 3 day = 11 in

100 yr – 1 day = 11.5 in

100 yr – 3 day = 14 in

Total Drainage Area: 2.42 ac

Pervious area: 0.76 ac

Impervious area: 1.66 ac (68.6%)

Hydrologic location: Zone 11 (FDOT IDF curves)

---

Design Frequency: 25 yr

Groundwater elevation: SHWT= ELEV. 2.5 (based on soil report)

Well Design data (based on information from other wells near the project site) =

- Well capacity: 1,000 GPM /ft of head
- Depth to Interface: 60 ft

Runoff coefficient =

Ci: 0.95

Cp: 0.30

### **2) Determine Dry Pre-treatment volume**

$$\text{Required} = (1/2") 1 \text{ ft} / 12" \times 2.42 \text{ ac} \times (43,560 \text{ ft}^2 / \text{ac}) = 4,393 \text{ ft}^3$$

Proposed = Dry pre-treatment ponds #1 and #2 total volume at EL 7.6 is 4,540 35 ft<sup>3</sup> (see pond calculation), therefore O.K.

### 3) Determine the peak discharge rate into the gravity well system

$$\text{Weighted runoff coefficient: } C = \frac{C_i \cdot A_i + C_p \cdot A_p}{A} \quad C = 0.75$$

Time of concentration: 10 minutes

$$\begin{aligned} \text{Rainfall Intensity (using FDOT IDF curves for Zone 11), } & i = 7.2 \text{ in/hr} \\ \text{Peak discharge} = C \cdot i \cdot A = (0.75) (7.2) (2.42) & = 13.07 \text{ ft}^3/\text{s} \end{aligned}$$

### 4) Calculate the infiltration capacity of one gravity well

Effective head: Control elevation – SHWT – headloss due to fresh - salt water hydrostatic balance (2 ft)

Effective head: 7.6 (top of outlet structure in pond) - 2.5 - 2 = 3.1 ft of head

$$\text{One well capacity: } (1,000 \text{ GPM} / \text{ft of head}) (3.1 \text{ ft of head}) (0.00223) = 6.913 \text{ ft}^3/\text{s}$$

### 5) Determine the required number of gravity wells

Safety factor (SF): 1.5

$$\text{Number of gravity wells: } SF (13.07) / 6.913 = 2.84 \text{ wells, therefore use 3 wells}$$

### 6) Determine the 90-second retention volume for each gravity well

Required detention volume

$$V_{90\text{sec}} = 90 (13.07) / 3 = 392.1 \text{ ft}^3$$

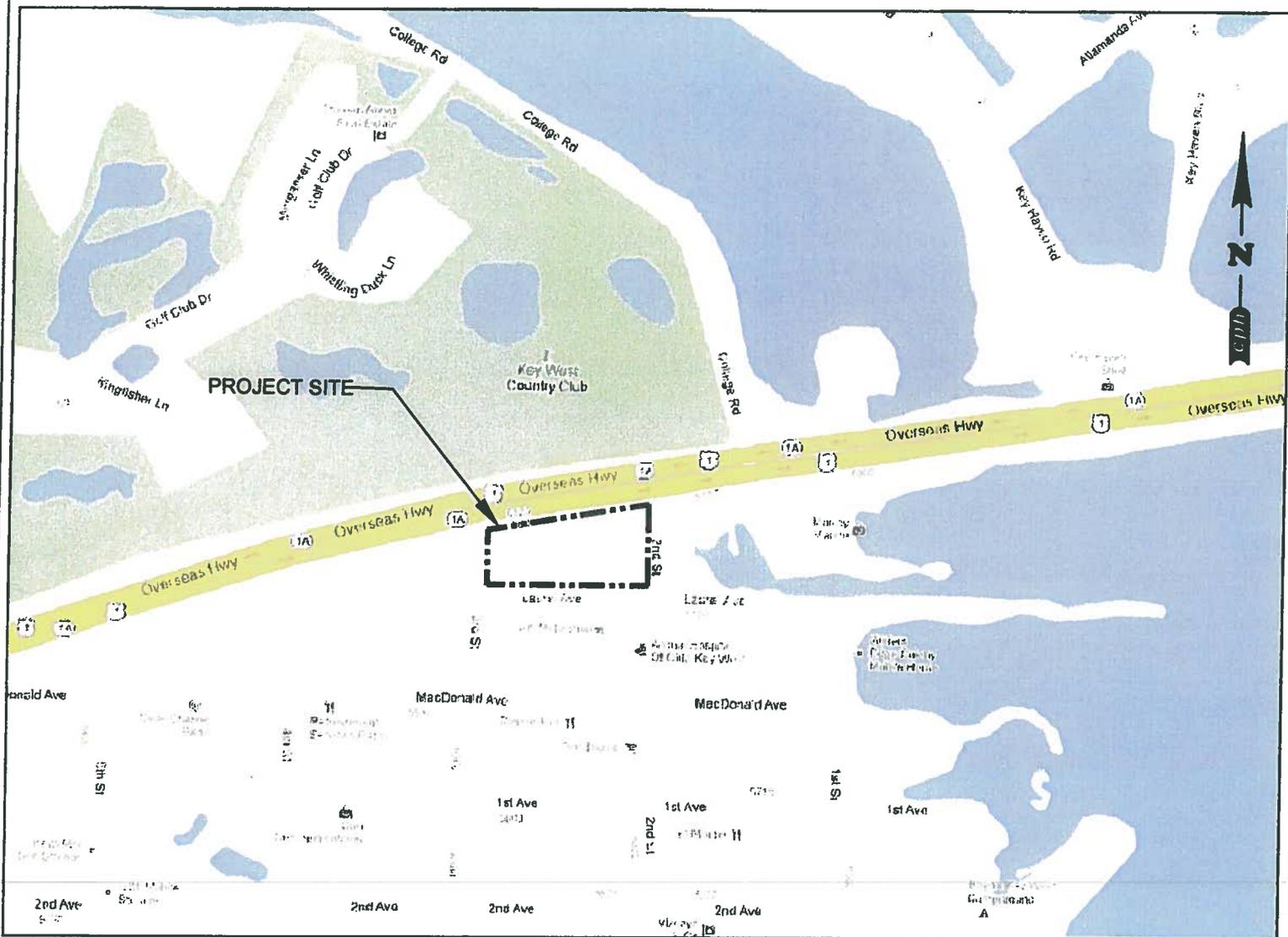
Volume provided in each well is 402.5 ft<sup>3</sup>, therefore O.K.

### 7) Determine the maximum velocity at pipe entrance (well)

$$Q = v \times A$$

$$\text{Area of 24" pipe} = 3.14 \text{ ft}^2$$

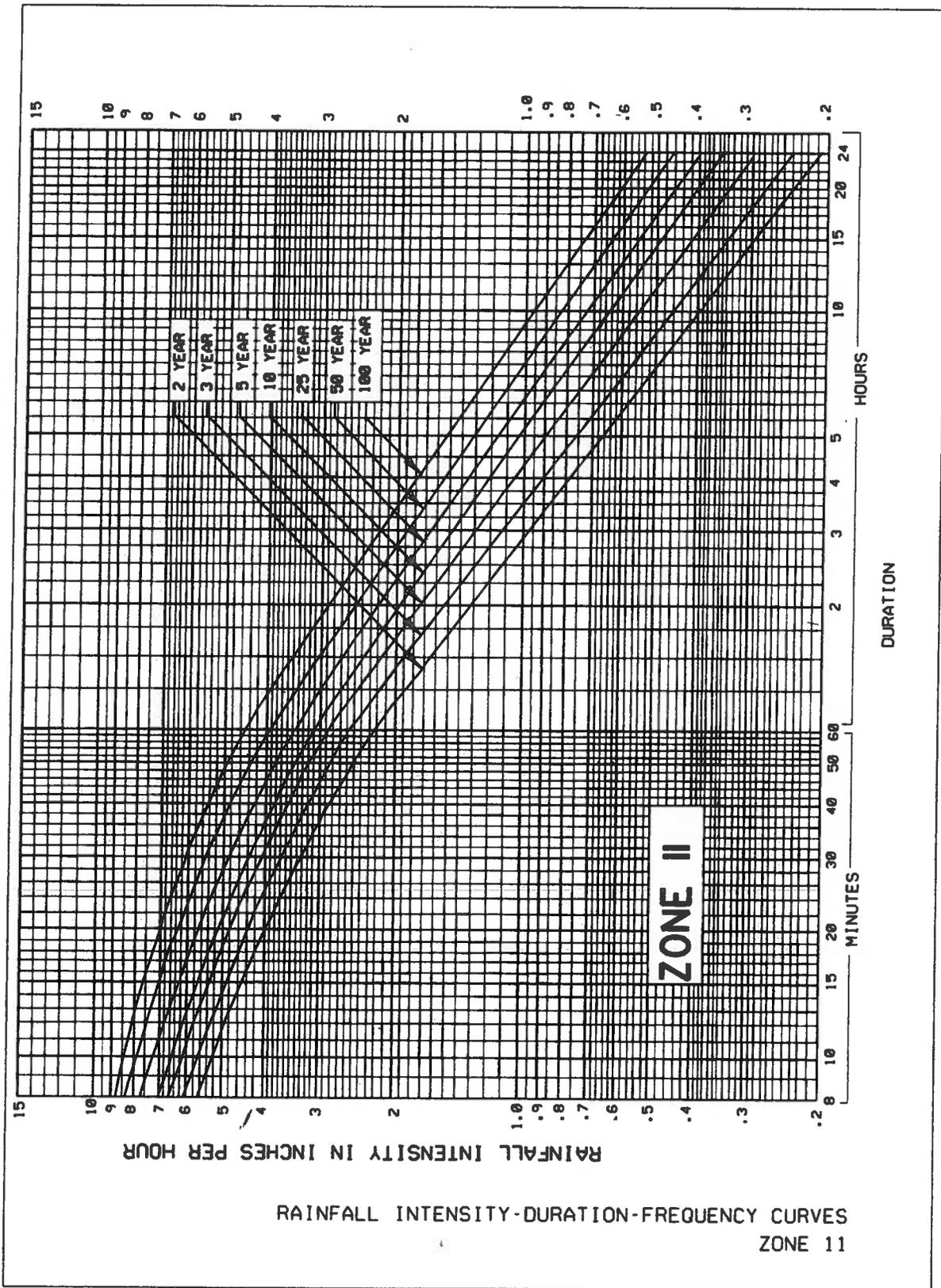
$$\text{Velocity} = (6.913 \text{ ft}^3/\text{s}) / 3.14 \text{ ft}^2 = 2.2 \text{ ft/s}$$



## **LOCATION MAP**

**SCALE 1" = 500'**

**PROPOSED CVS PHARMACY @  
SEC OF OVERSEAS HIGHWAY AND 3RD STREET,  
STOCK ISLAND FL**



## POND 1 VOLUME

<u>EI</u>	<u>Area (SF)</u>	<u>Volume (CF)</u>	<u>Accumulated volume (CF)</u>
4.5	102.31	-	-
5.0	252.87	88.80	88.80
6.0	701.24	477.06	565.85
7.0	1,328.75	1,015.00	1,580.85
7.6	1,757.40	925.84	2,506.69
8.0	2,079.45	767.37	3,274.06
9.0	2,947.30	2,513.38	5,787.44

## POND 2 VOLUME

<u>EI</u>	<u>Area (SF)</u>	<u>Volume (CF)</u>	<u>Accumulated volume (CF)</u>
4.5	118.13	-	-
5.0	238.04	89.04	89.04
6.0	581.29	409.67	498.71
7.0	1,042.63	811.96	1,310.67
7.6	1,367.34	722.99	2,033.66
8.0	1,616.30	596.73	2,630.39
9.0	2,304.50	1,960.40	4,590.79

**Total Volume Ponds 1 & 2 (at el 7.6)** 4,540.35

## TOTAL VOLUME (PONDS 1 and 2)

<u>EI</u>	<u>Volume (CF)</u>	<u>Accumulated volume (CF)</u>
4.5	-	-
5.0	177.84	177.84
6.0	886.72	1,064.56
7.0	1,826.96	2,891.51
7.6	1,648.84	4,540.35
8.0	1,364.10	5,904.45
9.0	4,473.78	10,378.22





**AGENT OF RECORD LETTER**

TO THE MONROE BOARD OF COUNTY COMMISSIONERS, MONROE COUNTY, KEY WEST RESORT UTILITIES CORP., FLORIDA KEYS AQUEDUCT AUTHORITY, MONROE COUNTY BUILDING DEPARTMENT, MONROE COUNTY HEALTH DEPARTMENT, SFWMD, STATE DEPARTMENT OF ECONOMIC OPPORTUNITY, FDEP, FDOT, KEYS ENERGY SERVICES, FLORIDA POWER AND LIGHT and AT&T.

For the property identified as Parcel ID number 00124090-000000 Alt Key 1158224 I, SCOTT DUSZYNSKI, hereby designate and appoint Paul Tremblay, Director of Development for Boos Development Group, Inc. or Michael Mallard, Project Manager for Boos Development Group, Inc. as my/our Agent of Record, for the purposes of representing me/us during the Development Review Process and/or hearing process. My/our Agent of Record is hereby vested with authority to make any representations, agreements, or promises that are necessary or desirable in conjunction with the review process. My Agent of Record is also authorized to accept or reject any conditions imposed by any reviewing board or entity.

Date: 13 March 2012

Scott Duszynski, Keys Federal Credit Union  
APPLICANT OWNER (PRINT)

Scott Duszynski  
APPLICANT OWNER'S SIGNATURE

President/CEO  
APPLICANT OWNER'S TITLE

Paul Tremblay, Director of Development  
APPLICANT'S REPRESENTATIVE (PRINT)

Paul Tremblay  
APPLICANT REPRESENTATIVE'S SIGNATURE

Michael Mallard, Project Manager  
APPLICANT'S REPRESENTATIVE (PRINT)

Michael Mallard  
APPLICANT REPRESENTATIVE'S SIGNATURE

5789 NW 151<sup>st</sup> Street #B  
ADDRESS

Miami Lakes, FL 33014  
CITY, STATE, ZIP

(305) 828-8284  
TELEPHONE

(CVS 5610 Overseas Hwy, South Stock Island)

STATE OF Florida  
COUNTY OF Monroe

I HEREBY CERTIFY that on this day personally appeared before me this 13<sup>th</sup> day of March, 2012, who is personally known to me or who has produced \_\_\_\_\_ as identification.

WITNESS my hand and official seal in the County and State last aforesaid this 13<sup>th</sup> day of March, 2012.



Laura Washington  
NOTARY PUBLIC  
State of Florida at Large

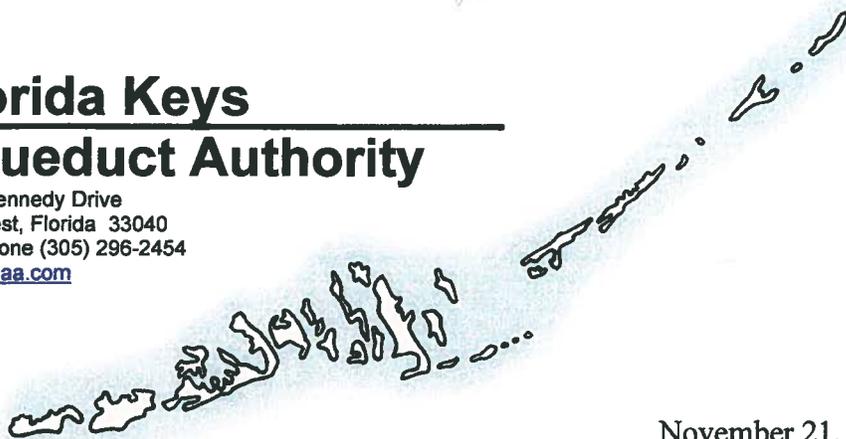
My Commission Expires:

NOTE: If an Agent of Record is to be designated, all property owners of the subject property must sign this form.



# Florida Keys Aqueduct Authority

1100 Kennedy Drive  
Key West, Florida 33040  
Telephone (305) 296-2454  
[www.fkaa.com](http://www.fkaa.com)



J. Robert Dean  
Chair  
District 3

Antoinette M. Appe  
Vice-Chair  
District 4

Brian L. Barroso  
Secretary/Treasurer  
District 1

David C. Ritz  
District 5

Melva G. Wagner  
District 2

James C. Reynolds  
Executive Director

November 21, 2011

Jason L. James, E.I.  
CPH Engineers, Inc.  
1992 SW 1st Street  
Miami, FL 33135

RE: Proposed Pharmacy-5610 Overseas Highway, Stock Island (Corner of 3<sup>rd</sup> Street and Overseas Highway-5671 Laurel Avenue)  
RE #00124090-000000, Location # 011196

Dear Mr. James,

This letter will serve as proof of coordination of the above referenced project with the Florida Keys Aqueduct Authority.

The FCAA has no objection to you obtaining whatever permits that may be necessary to construct the proposed complex at the above referenced site. There is a 4" water main located on Laurel Avenue and is currently being fed with a 5/8" water meter which appears adequate to serve this project.

A complete set of Civil and Architectural plans will be required to determine meter requirements and system development charges.

Should you have any questions or require any further information please feel free to call me.

Sincerely,  
Florida Keys Aqueduct Authority

Marnie L. Walterson  
Distribution Design Specialist

CC Sue Reich, Customer Service Manager Tavernier  
Dori Anderson, Customer Service Manager Marathon  
Karla Hernandez, Customer Service Manager Key West



## KW Resort Utilities, Corp.

6630 Front Street  
Key West, FL 33040  
305.295.3301  
FAX 305.295.0143  
[www.kwru.com](http://www.kwru.com)

January 17, 2012

Jason L. James, E.I.  
CPH Engineers, Inc.  
1992 SW 1st Street  
Miami, FL 33135  
Phone: 305-274-4805  
Fax: 305-274-4807

RE: Letter of Coordination (RE#124090.0000)

To Whom It May Concern:

KW Resort Utilities, at this time, does have the capacity to treat the sewage that will be generated from the proposed project on the parcel identified by RE#124090.0000. The parcel is bound by U.S. Highway 1, Third Street, E. Laurel Ave, and Second Street. The project as presented by CPH Engineers, Inc, (via email of January 12, 2012) is a single retail facility of approximately 14,600 sq. ft. with 2 toilet fixtures and 2 sink fixtures. The reference drawing is CVS Pharmacy dated 11/22/2011 Titled Concept 1.3, Sheet SK-1, Job#B11254.31. Should the project diverge substantially from the description and plans as referenced above, KW Resort Utilities, Corp, reserves the right to rescind this letter and provide notification of said action to any and all agencies involved directly or indirectly as it relates to the property/project.

KW Resort Utilities, Corp., hereby guarantees that the capacity will be available for the period of 1 year from the date of this letter. We wish you success with your project.

Christopher A. Johnson  
President, KW Resort Utilities, Corp.

*Chris kw @ belboth.net*



Transfield Services North America  
Transportation Infrastructure

3100 Overseas Highway  
Marathon, FL 33050  
T: (305) 289-4360  
F: (305) 289-4361

**FDOT Letter of Coordination**

December 02, 2011

Jason L. James, E.I.  
CPH Engineers, Inc.  
1992 SW 1st Street  
Miami, FL 33135

RE: Proposed CVS Pharmacy to be located at approx. Section 90020, MP 0.387, Stock Island, FL 33040

Mr. James,

Per your request, this office has completed a preliminary review of the rough sketch provided for the referenced subject proposed commercial retail property.

The Florida Department of Transportation will require the submittal of both an access and drainage permit application to be processed by this office. For this new development, plans currently show the utilization of side street access from 3<sup>rd</sup> Steet and possibly 2<sup>nd</sup> Street. Further information and a traffic study will be required for the Department to further investigate the reopening of the 2<sup>nd</sup> Street access to SR 5.

Per our telephone conversation, the construction of a multi-use path may be desired as well. This type of construction will require a Construction Agreement Permit and supporting documentation.

Any other changes or work related to the property, such as landscaping, for example, within the Department's Right-of-Way may require other permits from the Department accordingly.

---

The initial processing of the permit applications once submitted may take up to 30 days, in which this office will inform the applicant of any required additional information.

This letter is advisory in nature only, and the results are non-binding on the Department and the applicant. This review does not constitute preliminary or final Department's approval of the proposed site plan. Additionally, any preliminary comments provided may only be valid until such time as the site or roadway characteristics change. All plans shall comply with the Department's standards and specifications for design and construction.

If you have any further questions, please feel free to contact me at (305) 289-4360.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Salinger".

Jordan Salinger  
Permits Coordinator

---

AT&T – FLORIDA  
650 United Street  
Key West, FI 33040

**November 9, 2011**

Jason L. James, E.I.  
CPH Engineers, Inc.  
1992 SW 1st Street  
Miami, FL 33135

**RE: 15,000 sq ft pharmacy, US-1 & 3<sup>rd</sup> Street - Stock Island, Key West, Monroe County, Florida**

**To Whom It May Concern:**

**This is in response to a request for confirmation of service availability by AT&T. The above referenced project is located in an area served by AT&T.**

**Prior to providing service to this project, AT&T will require information such as site plans, support structures and agreements with respect to service arrangements for the project. No preparatory work towards providing service will begin at this time.**

**Thank you for contacting AT&T.**

**Sincerely,**



**Herb Bradshaw**

**Manager Outside Plant Planning & Design SE/CA  
AT&T – Florida  
305-296-9077  
hb0196@att.com**

---



(305) 295-1000  
1001 James Street  
PO Box 6100  
Key West, FL 33041-6100  
www.KeysEnergy.com

---

UTILITY BOARD OF THE CITY OF KEY WEST

November 16, 2011

Mr. Jason James, E.I.  
CPH Engineers, Inc.  
1992 SW 1<sup>st</sup> Street  
Miami, FL 33135

Re: Availability of Service for:  
5610 Overseas Highway, Stock Island, Florida

Dear Mr. James:

Keys Energy Services has reviewed your request for the availability of electrical service for the above referenced project. This letter confirms that Keys Energy Services can provide 3 phase 120/208 or 277/480 secondary voltage or single phase 120/240 secondary voltage. Please provide our office with a full set of plans and a project review form (see attached).

I hope you find this information useful to your purpose. Should you have any questions or concerns, please contact me at (305) 295-1115.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sabrina Hall", is written over a horizontal line.

Sabrina Hall  
Customer Services Supervisor

SH/am

C:  
A. Tejeda, Customer Services Director  
D. Finigan, Director of Engineering  
File: CUS-200



**BOARD OF COUNTY COMMISSIONERS**

Mayor David Rice, District 4  
Mayor Pro Tem Kim Wigington, District 1  
George Neugent, District 2  
Heather Carruthers, District 3  
Sylvia J. Murphy, District 5



Solid Waste Management  
1100 Simonton Street, Room 2-231  
Key West, Fl. 33040

April 11, 2012

Maria Zapata, P.E.  
CPH Engineers  
1992 SW 1<sup>st</sup> Street  
Miami FL 33135

Re: **Proposed CVS Pharmacy on Stock Island**

Dear Ms. Zapata:

The proposed plan for your project; including demolition waste, waste reduction, and recycling; shows adequate provision for solid waste and recycling management.

**Waste Management of the Florida Keys** is available to assist in the set up of any additional recycling or other services. Please call 305-296-8297 for assistance.

Sincerely,

A handwritten signature in cursive script that reads 'Joan Sherry'.

Joan Sherry, Sr. Specialist – Customer Service  
Solid Waste Management



**BOARD OF COUNTY COMMISSIONERS**

Mayor David Rice, District 4  
Mayor Pro Tem Kim Wigington, District 1  
George Neugent, District 2  
Heather Carruthers, District 3  
Sylvia J. Murphy, District 5



OFFICE of  
the FIRE MARSHAL  
490 63<sup>rd</sup> Street  
Marathon, FL 33050  
PHONE: (305) 289-6010  
FAX: (305) 289-6013

Maria Zapata, P.E.  
CPH Engineers  
1992 SW 1<sup>st</sup> Street  
Miami, Florida 33135

Date: 4-12-12

RE: Letter of Coordination, CVS Pharmacy AT Overseas Hwy and 3RD Street in Stock Island

Ms. Zapata;

Pursuant to the requirements of the Monroe County Planning Department Development Permit Application, this shall serve as the letter of coordination between the Monroe County Fire Marshal's Office and the agent and/or property owner for the project owner of CVS Pharmacy project to be located at Stock Island Fl.

1. The Fire Marshal's Office enforces the Florida Fire Prevention Code (2010), The Florida Building Code (2010), National Fire Protection Code (NFPA 1), Life Safety Code (NFPA 101) and related NFPA standards as applicable and adopted by the State of Florida.
2. All fire rated penetrations shall be caulked with a UL approved product per manufacturer's specifications. A detail sheet shall be included with the final set of approved and sealed plans on each method used the fire stop system. A single manufacturer of Fire Penetration sealant shall be used throughout the structure. Expanding "foam" products shall not be permitted anywhere in the structure.
3. Approved fire hydrants shall be provided for building to meet necessary fire flow requirements as determined by the NFPA 1, Ch.18, and approved by the Florida Keys Aqueduct Authority (FKAA).
4. Fire Department access shall comply with NFPA 1, Ch.18.

It is understood that after conceptual review of the project has been granted, preliminary fire protection plans shall be included with improvements to water supply via fire hydrant and shall be submitted to Fire Marshal's Office prior to final plan review and issuance of a building permit. The Monroe County Fire Rescue Department provides fire suppression service to the proposed project location.

Sincerely,  
Lt. Timmy Leonard

FDEP - SEWER

**Zapata, Maria (P.E.)**

---

**From:** Coleman, Maria [Maria.Coleman@dep.state.fl.us] **Sent:** Wed 4/11/2012 9:41 AM  
**To:** Zapata, Maria (P.E.)  
**Cc:**  
**Subject:** RE: Proposed CVS Pharmacy AT Overseas Hwy and 3RD Street in Stock Island - Request for Letter of Coordination

**Attachments:**

Good morning,

Thank you for coordinating with the Department on this project. This project would be exempt from receiving a DEP Permit. Should you have any concerns or questions feel free to contact me at the number below.

Sincerely,

Maria Coleman

[maria.coleman@dep.state.fl.us](mailto:maria.coleman@dep.state.fl.us)  
Senior Clerk - Water Facilities

South District Office  
2295 Victoria Avenue, Ste 364  
P.O. Box 2549  
Fort Myers, FL 33902

239-344-5624 Direct Number

239-344-5600 Main Number

850-412-0590 Fax Number

---

**PLEASE NOTE:** Florida has a very broad public records law. Most written communications to or from state owned e-mail accounts are considered to be public records and will be made available to the public or the media upon request. Therefor, your e-mail messages may be subject to public disclosure.

Please take a few minutes to share your comments on the service you received from the department by clicking on this link. [DEP Customer Survey](#).

**From:** Zapata, Maria (P.E.) [mailto:mzapata@cphengineers.com]  
**Sent:** Monday, April 09, 2012 12:03 PM

**To:** Coleman, Maria

**Cc:** Moon, Nolin

**Subject:** Proposed CVS Pharmacy AT Overseas Hwy and 3RD Street in Stock Island - Request for Letter of Coordination

Maria,

We are going to submit for site plan approval for this project at Monroe County. The County requires that we coordinate with the pertinent regulatory agencies and obtain a letter of coordination.

We are proposing to install a 6" sewer lateral and connect to an existing 6" vacuum sewer line located on East Laurel Avenue. This line is operated by KW Resorts Utilities, Corp. We will install a 6" deep valve pit (vacuum chamber) and connect to an existing sub-out.

We understand that since this is a lateral connection, we will not require an FDEP permit for this project. Please confirm.

Please let me know if you need any other information to send us the Letter of Coordination.

Thank you,

---

Maria Zapata, P.E.

CPH Engineers

1992 SW 1<sup>st</sup> Street

Miami, Florida 33135

(305)274-4805

[mzapata@cphengineers.com](mailto:mzapata@cphengineers.com)

FDEP - WATER

**Zapata, Maria (P.E.)**

---

**From:** Oni, James [James.Oni@dep.state.fl.us]  
**Sent:** Wednesday, April 11, 2012 1:18 PM  
**To:** Zapata, Maria (P.E.)  
**Cc:** Shoemaker, Bennie  
**Subject:** FW: Proposed CVS Pharmacy AT Overseas Hwy and 3RD Street - Request for Letter of Coordination

This is (1) a service line (which splits into domestic service and fire service) to a single building plus (2) a fire hydrant and hydrant lead. No permit required per Rule 62-555.520(1)(d)12 and 13.

*Please take a few minutes to share your comments on the service you received from the department by clicking on this link. [DEP Customer Survey](#).*

**From:** Zapata, Maria (P.E.) [<mailto:mzapata@cphengineers.com>]  
**Sent:** Monday, April 09, 2012 11:21 AM  
**To:** Shoemaker, Bennie  
**Subject:** Proposed CVS Pharmacy AT Overseas Hwy and 3RD Street - Request for Letter of Coordination

Bennie,

We are going to submit for site plan approval for this project at Monroe County. The County requires that we coordinate with the pertinent regulatory agencies and obtain a letter of coordination.

We are proposing to connect to an existing 12" water line located on 2<sup>ND</sup> Street. A hydrant is proposed as shown on the attached plan. We are proposing a 6" line and a double detector backflow preventer for fire and a 1and 1/2 domestic line with reduced pressure zone backflow preventer and meter.

We understand we will require an FDEP permit Form 62-555.900(7) for this project.

Please let me know if you need any other information to send us the Letter of Coordination.

---

Thank you,

Maria Zapata, P.E.  
CPH Engineers  
1992 SW 1<sup>st</sup> Street  
Miami, Florida 33135  
(305)274-4805  
[mzapata@cphengineers.com](mailto:mzapata@cphengineers.com)

4/16/2012

## FDEP - DRAINAGE WELLS

**Zapata, Maria (P.E.)**

---

**From:** Rhodes, David [David.Rhodes@dep.state.fl.us]  
**Sent:** Thursday, April 12, 2012 1:55 PM  
**To:** Zapata, Maria (P.E.)  
**Subject:** RE: Proposed CVS Pharmacy at SEC of Overseas Highway and 3rd Street in Stock Island, Monroe County

Ms. Zapata,

Please have the representative from whomever is requiring "proof of coordination" call me. The FDEP, to my knowledge, does not produce letters that state that we, (FDEP), would have no objection to obtaining permits necessary for the project. The FDEP would formulate it's objection or no objection stance as a result of a technical review of permit applications.

The FDEP is the entity from whom the owner is required by law to obtain permits. Failure to obtain the necessary permits from FDEP for regulated activities will result in FDEP being required by state law to initiate legal action. Therefore, there's nothing, that I know of, for FDEP to "coordinate".

If the owner wishes to perform a FDEP regulated activity, the expectation, under state law, is that the proper permits will be obtained. Whether or not the appropriate permits are, in fact, obtainable is the direct outcome of the permitting process and whether or not a project is able to obtain a permit is not something FDEP would set forth in a letter prior to any application being made. The FDEP will state that the agency will review any application made for an activity regulated by FDEP upon submittal of the application on the proper forms and with the appropriate fee.

Respectfully,

David Rhodes, P.G.

UIC Program Manager

Groundwater Team Coordinator

FDEP South District Office

2295 Victoria Avenue, Ste 364

Fort Myers, FL 33902

David.Rhodes@dep.state.fl.us

239/344-5687 - PLEASE NOTE MY DIRECT DIAL PHONE NUMBER

-

Please take a few minutes to share your comments on the service you received from the department by clicking on this link [DEP Customer Survey](#).

From: Zapata, Maria (P.E.) [mailto:mzapata@cphengineers.com]  
Sent: Thursday, April 12, 2012 10:42 AM  
To: Rhodes, David  
Subject: Proposed CVS Pharmacy at SEC of Overseas Highway and 3rd Street in Stock Island, Monroe County

David,

4/16/2012

I talked to you about this project this week. To submit for site plan approval, we need a Letter of Coordination form the permitting Agencies. This Letter is for coordination purposes only. I have attached a sample letter from another agency for your use. I have also attached a conceptual drainage plan.

Please let me know if you need any other information from me.

Maria Zapata, P.E.

CPH Engineers

1992 SW 1st Street

Miami, Florida 33135

(305)274-4805

**Zapata, Maria (P.E.)**

---

**From:** Ahmadi, Abdul [Abdul.Ahmadi@dep.state.fl.us]  
**Sent:** Monday, April 16, 2012 10:53 AM  
**To:** Zapata, Maria (P.E.)  
**Subject:** FW: Proposed CVS Pharmacy at SEC of Overseas Highway and 3rd Street in Stock Island, Monroe County

Dear Ms. Zapata:

Please see the note below from Lucy Blair concerning ERP permits review if required.

Thank you,

Abdul B. Ahmadi, P.E.

-----Original Message-----

**From:** Blair, Lucy  
**Sent:** Friday, April 13, 2012 5:23 PM  
**To:** Rhodes, David; Ahmadi, Abdul  
**Cc:** Rios, Gus; Oni, James; Maier, Gary  
**Subject:** RE: Proposed CVS Pharmacy at SEC of Overseas Highway and 3rd Street in Stock Island, Monroe County

DEP would not review the ERP aspects of this project. Pursuant to our Operating Agreement, the SFWMD would be the appropriate agency to review.

-----Original Message-----

**From:** Rhodes, David  
**Sent:** Friday, April 13, 2012 9:58 AM  
**To:** Ahmadi, Abdul  
**Cc:** Blair, Lucy; Rios, Gus; Oni, James; Maier, Gary  
**Subject:** RE: Proposed CVS Pharmacy at SEC of Overseas Highway and 3rd Street in Stock Island, Monroe County

I will come and see you about this - not an application we handle but our knowledge of the project is being sought...I think.

Dave

-----Original Message-----

**From:** Ahmadi, Abdul  
**Sent:** Friday, April 13, 2012 9:54 AM  
**To:** Rhodes, David  
**Cc:** Blair, Lucy; Rios, Gus; Oni, James; Maier, Gary  
**Subject:** RE: Proposed CVS Pharmacy at SEC of Overseas Highway and 3rd Street in Stock Island, Monroe County

David:

This is the first time seeing this application. Do we have any UIC application for stormwater for this project? Just let Ms. Zapata know that a UIC permit for stormwater, ERP, domestic wastewater and Potable water permits may be required from this agency acknowledging the receipt of the attached form.

Thanks, AA.

-----Original Message-----

**From:** Rhodes, David  
**Sent:** Friday, April 13, 2012 9:37 AM  
**To:** Ahmadi, Abdul  
**Cc:** Maier, Gary

Subject: FW: Proposed CVS Pharmacy at SEC of Overseas Highway and 3rd Street in Stock Island, Monroe County

Who prepares these? See the attachment, page 2 at the little red arrow. The "coordination" being sought is relative to a drainage well needed for stormwater control.

Dave

-----Original Message-----

From: Zapata, Maria (P.E.) [mailto:mzapata@cphengineers.com]

Sent: Thursday, April 12, 2012 4:16 PM

To: Rhodes, David

Subject: RE: Proposed CVS Pharmacy at SEC of Overseas Highway and 3rd Street in Stock Island, Monroe County

David,

Attached is the application that requires us to provide letters of coordination.

Maria

---

From: Zapata, Maria (P.E.)

Sent: Thu 4/12/2012 4:02 PM

To: Rhodes, David

Subject: RE: Proposed CVS Pharmacy at SEC of Overseas Highway and 3rd Street in Stock Island, Monroe County

David,

The letter can state the following:

"The FDEP is the agency that will review any application made for an activity regulated by FDEP upon submittal of the application on the proper forms and with the appropriate fee"

That is all we need in the letter. Is for them to know we contacted you regarding this project.

Thank you,

Maria Zapata, P.E.

CPH Engineers

(305)274-4805

---

From: Rhodes, David [mailto:David.Rhodes@dep.state.fl.us]

Sent: Thu 4/12/2012 1:54 PM

To: Zapata, Maria (P.E.)

Subject: RE: Proposed CVS Pharmacy at SEC of Overseas Highway and 3rd Street in Stock Island, Monroe County

Ms. Zapata,

Please have the representative from whomever is requiring "proof of coordination" call me. The FDEP, to my knowledge, does not produce letters that state that we, (FDEP), would have no objection to obtaining permits necessary for the project. The FDEP would formulate it's objection or no objection stance as a result of a technical review of permit applications.

The FDEP is the entity from whom the owner is required by law to obtain permits. Failure to obtain the necessary permits from FDEP for regulated activities will result in FDEP being required by state law to initiate legal action. Therefore, there's nothing, that I know of, for FDEP to "coordinate".

If the owner wishes to perform a FDEP regulated activity, the expectation, under state law, is that the proper permits will be obtained. Whether or not the appropriate permits are, in fact, obtainable is the direct outcome of the permitting process and whether or not a project is able to obtain a permit is not something FDEP would set forth in a letter prior to any application being made. The FDEP will state that the agency will review any application made for an activity regulated by FDEP upon submittal of the application on the proper forms and with the appropriate fee.

Respectfully,

David Rhodes, P.G.  
UIC Program Manager

Groundwater Team Coordinator  
FDEP South District Office  
2295 Victoria Avenue, Ste 364  
Fort Myers, Fl 33902  
David.Rhodes@dep.state.fl.us  
239/344-5687 - PLEASE NOTE MY DIRECT DIAL PHONE NUMBER

Please take a few minutes to share your comments on the service you received from the department by clicking on this link DEP Customer Survey <<http://survey.dep.state.fl.us/?refemail=David.Rhodes@dep.state.fl.us>> .

From: Zapata, Maria (P.E.) [mailto:mzapata@cphengineers.com]  
Sent: Thursday, April 12, 2012 10:42 AM  
To: Rhodes, David

---

Subject: Proposed CVS Pharmacy at SEC of Overseas Highway and 3rd Street in Stock Island, Monroe County

David,

I talked to you about this project this week. To submit for site plan approval, we need a Letter of Coordination form the permitting Agencies. This Letter is for coordination purposes only. I have attached a sample letter from another agency for your use. I have also attached a conceptual drainage plan.

Please let me know if you need any other information from me.

Maria Zapata, P.E.

CPH Engineers

1992 SW 1st Street

Miami, Florida 33135

(305) 274-4805



PARCEL ID: 00124080-000000

# CONSTRUCTION PLANS FOR

# CVS/PHARMACY STORE NO. 10122

SEC. OVERSEAS HIGHWAY AND 3RD STREET  
STOCK ISLAND, MONROE COUNTY, FLORIDA



PROTOTYPICAL 14,800  
CHAMFER DRIVE-THRU  
STORE NUMBER # 10122  
845 OVERSEAS HIGHWAY  
STOCK ISLAND, FLORIDA  
PROJECT TYPE: NEW  
DEAL TYPE: FEE FOR SERVICE  
CS PROJECT NUMBER: 08822



CONSULTANT:  
GPH  
Architecture / Landscape Architects  
Site Planning  
Construction Management  
2000 W. 10th Street  
Miami, FL 33135  
Phone: (305) 351-2000  
Fax: (305) 351-2007  
Company of Administrator No. 228

CONSULTANT:  
Boos Development Group, Inc.  
1100 NW 11th Street  
Miami, FL 33136  
Phone: (305) 524-2000  
Fax: (305) 524-2000

DEVELOPER:  
Boos Development Group, Inc.  
1100 NW 11th Street  
Miami, FL 33136  
Phone: (305) 524-2000  
Fax: (305) 524-2000

SEAL

REVISIONS:

DRAWING BY: TEAM  
DATE: APR 18, 2002  
JOB NUMBER: 011088  
TITLE:

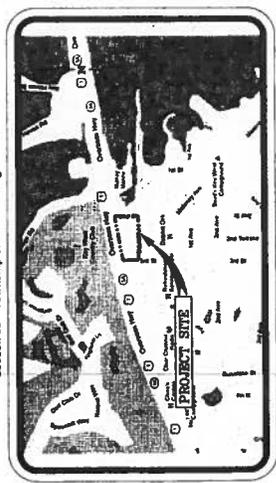
COVER SHEET  
SHEET NUMBER:  
C-1  
CONTRACT:  
NOT RELEASED FOR CONSTRUCTION

### INDEX

- CIVIL SHEETS
- C-1 COVER SHEET
- B-1 SURVEY SHEET 1 OF 1
- C-2 GENERAL NOTES
- C-3 DEMOLITION PLAN
- C-4 SITE DIMENSION PLAN
- C-5 GRADING AND STORM DRAINAGE PLAN
- C-6 STORMWATER POLLUTION PREVENTION PLAN
- C-7 STORMWATER UTILITY PLAN
- C-8 STORMWATER POLLUTION PREVENTION NOTES AND DETAILS
- C-9 GENERAL DETAILS
- C-10 (R) SECTIONS
- C-11 (R) UTILITY DETAILS
- C-12 (R) ACCESS PLAN
- C-13 (R) RETAINING WALL
- L-1 LANDSCAPE PLAN
- L-2 LANDSCAPE DETAILS
- IR-1 IRRIGATION PLAN
- IR-2 IRRIGATION DETAILS
- ARCHITECTURAL SHEETS
- A-1.1 FLOOR PLAN
- A-4.1 EXTERIOR ELEVATIONS
- PH-1 PHOTOMETRIC PLAN

(R) = NOT INCLUDED IN THIS SUBMITTAL

Section 35 - Township 07 South - Range 25 East



VICINITY MAP  
NOT TO SCALE

### NOTES

1. ALL CONSTRUCTION MUST MEET ALL MONROE COUNTY CODES AND LAND DEVELOPMENT REGULATIONS.
2. ALL OTHER PERMITS OBTAINED FOR THIS PROJECT MUST BE OBTAINED FROM THE APPROPRIATE AGENCIES AND ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER AN IMPACT PERMIT FROM THE MONROE COUNTY DEPARTMENT OF ENVIRONMENTAL REGULATION AND WATER.
3. CONTRIBUTION OF CONSTRUCTION FROM THE DEVELOPER OF RECORD TO BE SUBMITTED TO THE COUNTY FROM 10-1-02.

### PERMITTING AGENCIES

FLORIDA ENVIRONMENTAL RECONSTRUCTION DEPARTMENT  
1000 N. GULF BLVD., SUITE 610  
MARATHON, FLORIDA 33906  
PHONE: (239) 394-3200  
ATTN: JOSEPH HANSEN

BUILDING DEPARTMENT  
1000 N. GULF BLVD., SUITE 208  
MARATHON, FLORIDA 33906  
PHONE: (239) 394-3291  
ATTN: JERRY SMITH

FOOD SERVICE  
2205 VICTORIA AVE. SUITE 304  
FORT MYERS, FLORIDA 33902  
PHONE: (239) 344-6883  
ATTN: HOLLI MOON

STATE DEPARTMENT OF TRANSPORTATION  
1000 N. GULF BLVD., SUITE 304  
FORT MYERS, FLORIDA 33902  
PHONE: (239) 344-6883  
ATTN: EDUARDO LOPEZ

MONROE COUNTY FIRE RESCUE  
600 6803 ST. OCEAN  
KEY WEST, FLORIDA 33903  
PHONE: (239) 394-4988  
ATTN: JAMES K. CALLAHAN

STOWN DISTRICT WATER  
3201 GUN CLUB ROAD  
KEY WEST, FLORIDA 33908  
PHONE: (239) 394-4988  
ATTN: EDUARDO LOPEZ

MONROE COUNTY PUBLIC WORKS  
1100 BROWNSTON STREET SUITE 2-201  
KEY WEST, FLORIDA 33909  
PHONE: (239) 394-4988  
ATTN: DEBBY PERDUE / JUDITH CLARK

FOOD SERVICE  
3100 OVERSEAS HIGHWAY  
MARATHON, FLORIDA 33909  
PHONE: (239) 394-4988  
ATTN: JORDAN BALLINGER

STATE DEPARTMENT OF ENVIRONMENTAL REGULATION  
1000 N. GULF BLVD., SUITE 610  
MARATHON, FLORIDA 33906  
PHONE: (239) 394-3200  
ATTN: DAVID PROFFER

### UTILITIES

WATER SERVICE / FURCOBAGET AUTHORITY  
1100 KENNEDY DRIVE  
KEY WEST, FLORIDA 33941-0208  
PHONE: (239) 294-5484

ELECTRIC SERVICE  
KEYS ENERGY SERVICES  
1100 KENNEDY DRIVE  
KEY WEST, FLORIDA 33941-0208  
PHONE: (239) 294-5484

SEWER SERVICE  
KEYS ENERGY SERVICES  
1100 KENNEDY DRIVE  
KEY WEST, FLORIDA 33941-0208  
PHONE: (239) 294-5484

WATER SERVICE  
KEYS ENERGY SERVICES  
1100 KENNEDY DRIVE  
KEY WEST, FLORIDA 33941-0208  
PHONE: (239) 294-5484

WATER SERVICE  
KEYS ENERGY SERVICES  
1100 KENNEDY DRIVE  
KEY WEST, FLORIDA 33941-0208  
PHONE: (239) 294-5484

WATER SERVICE  
KEYS ENERGY SERVICES  
1100 KENNEDY DRIVE  
KEY WEST, FLORIDA 33941-0208  
PHONE: (239) 294-5484

WATER SERVICE  
KEYS ENERGY SERVICES  
1100 KENNEDY DRIVE  
KEY WEST, FLORIDA 33941-0208  
PHONE: (239) 294-5484

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DEVELOPER  
BOOS DEVELOPMENT GROUP, INC.  
1100 NW 11th Street Suite B  
Miami, FL 33136  
PHONE: (305) 524-2000  
FAX: (305) 524-2000  
ATTN: PAUL TROSBELAY

ENGINEER  
GPH  
2000 W. 10th Street  
Miami, FL 33135  
PHONE: (305) 351-2000  
FAX: (305) 351-2007  
ATTN: MARGA C. ZAPATA, P.E.

ARCHITECT  
BOOS DEVELOPMENT GROUP, INC.  
1100 NW 11th Street Suite B  
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PHONE: (305) 524-2000  
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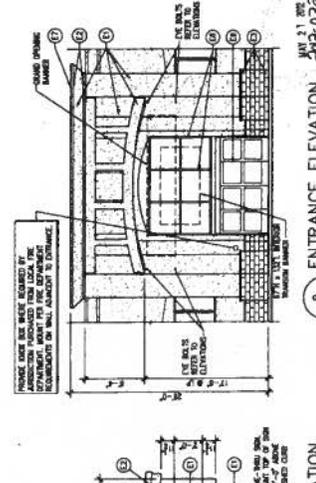
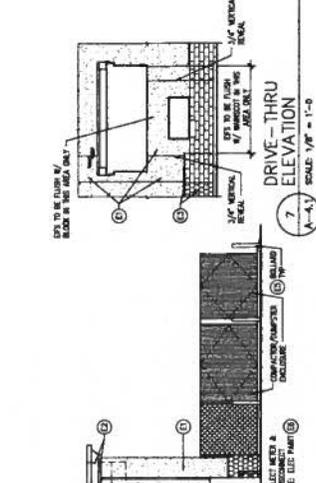
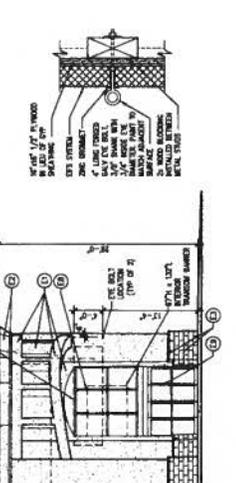
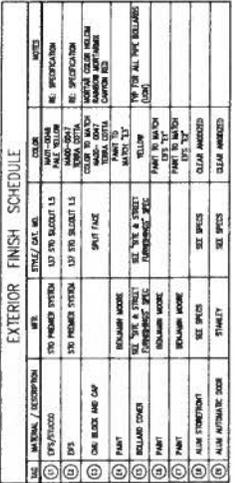
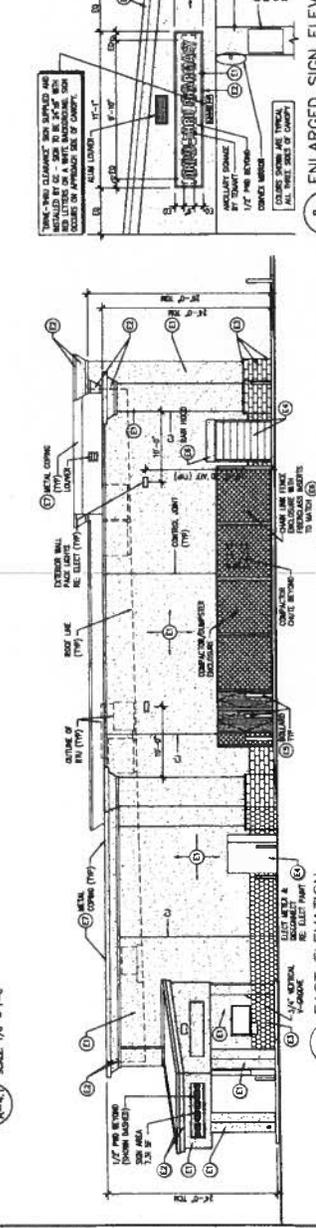
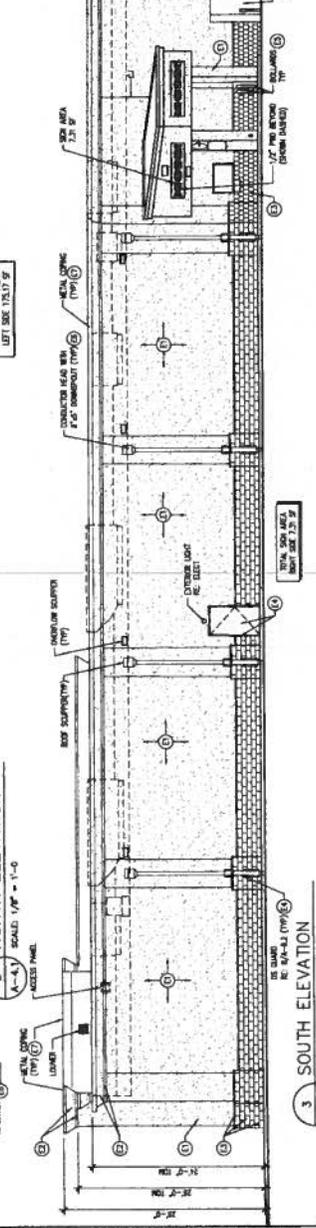
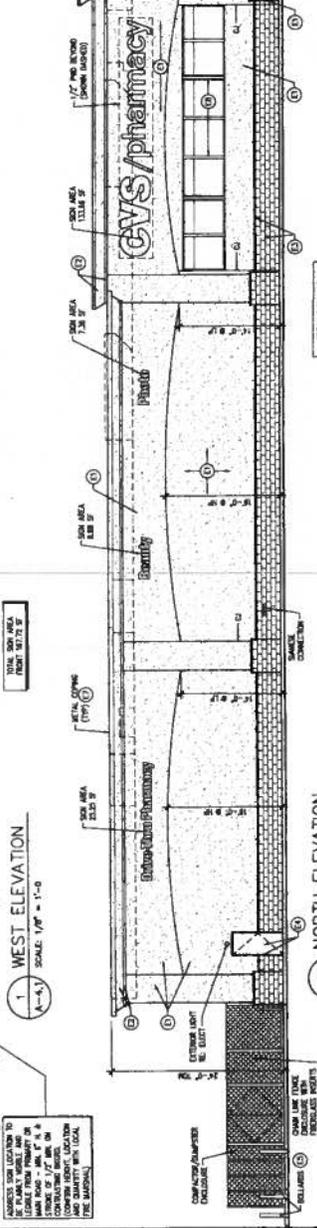
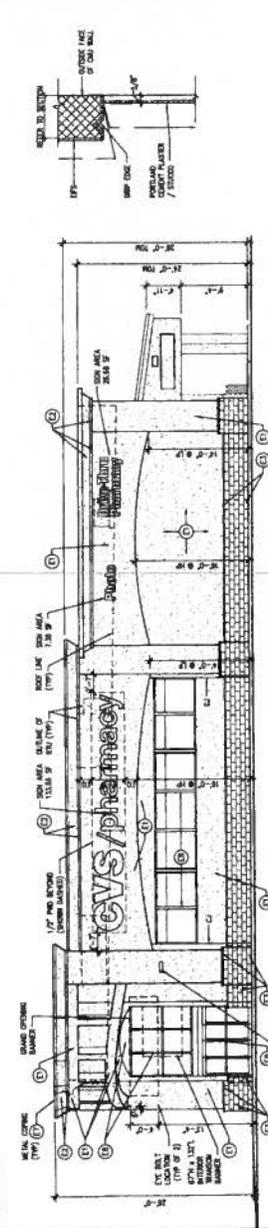


**EXTERIOR FINISH SCHEDULE**

NO.	DESCRIPTION	FINISH	NOTES
1	CONCRETE	AS SHOWN	
2	PAINT	AS SPECIFIED	
3	GLASS	AS SPECIFIED	
4	WOOD	AS SPECIFIED	
5	ROOFING	AS SPECIFIED	
6	MECHANICAL	AS SPECIFIED	
7	ELECTRICAL	AS SPECIFIED	
8	PLUMBING	AS SPECIFIED	
9	INSULATION	AS SPECIFIED	
10	FOUNDATION	AS SPECIFIED	
11	LANDSCAPE	AS SPECIFIED	
12	SMOKE EXHAUST	AS SPECIFIED	
13	SCREENING	AS SPECIFIED	
14	WALLS	AS SPECIFIED	
15	CEILING	AS SPECIFIED	
16	FLOORING	AS SPECIFIED	
17	MECHANICAL	AS SPECIFIED	
18	ELECTRICAL	AS SPECIFIED	
19	PLUMBING	AS SPECIFIED	
20	INSULATION	AS SPECIFIED	
21	FOUNDATION	AS SPECIFIED	
22	LANDSCAPE	AS SPECIFIED	
23	SMOKE EXHAUST	AS SPECIFIED	
24	SCREENING	AS SPECIFIED	
25	WALLS	AS SPECIFIED	
26	CEILING	AS SPECIFIED	
27	FLOORING	AS SPECIFIED	
28	MECHANICAL	AS SPECIFIED	
29	ELECTRICAL	AS SPECIFIED	
30	PLUMBING	AS SPECIFIED	
31	INSULATION	AS SPECIFIED	
32	FOUNDATION	AS SPECIFIED	
33	LANDSCAPE	AS SPECIFIED	
34	SMOKE EXHAUST	AS SPECIFIED	
35	SCREENING	AS SPECIFIED	
36	WALLS	AS SPECIFIED	
37	CEILING	AS SPECIFIED	
38	FLOORING	AS SPECIFIED	
39	MECHANICAL	AS SPECIFIED	
40	ELECTRICAL	AS SPECIFIED	
41	PLUMBING	AS SPECIFIED	
42	INSULATION	AS SPECIFIED	
43	FOUNDATION	AS SPECIFIED	
44	LANDSCAPE	AS SPECIFIED	
45	SMOKE EXHAUST	AS SPECIFIED	
46	SCREENING	AS SPECIFIED	
47	WALLS	AS SPECIFIED	
48	CEILING	AS SPECIFIED	
49	FLOORING	AS SPECIFIED	
50	MECHANICAL	AS SPECIFIED	
51	ELECTRICAL	AS SPECIFIED	
52	PLUMBING	AS SPECIFIED	
53	INSULATION	AS SPECIFIED	
54	FOUNDATION	AS SPECIFIED	
55	LANDSCAPE	AS SPECIFIED	
56	SMOKE EXHAUST	AS SPECIFIED	
57	SCREENING	AS SPECIFIED	
58	WALLS	AS SPECIFIED	
59	CEILING	AS SPECIFIED	
60	FLOORING	AS SPECIFIED	

**LEGEND**

1 - RE. EXTERIOR FINISH SCHEDULE  
 2 - RE. EXTERIOR FINISH SCHEDULE  
 3 - RE. EXTERIOR FINISH SCHEDULE



**REVISIONS:**

DATE: 15 MAY 2012  
 JOB NUMBER: 1224  
 TITLE: EXTERIOR ELEVATIONS  
 SHEET NUMBER: A-4.1  
 COMMENTS: NOT RELEASED FOR CONSTRUCTION









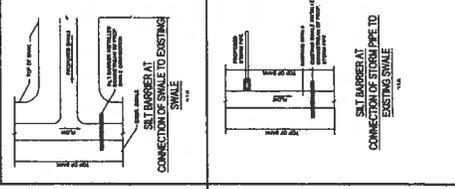
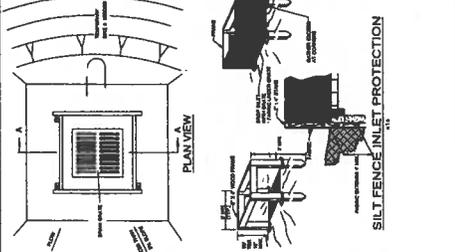
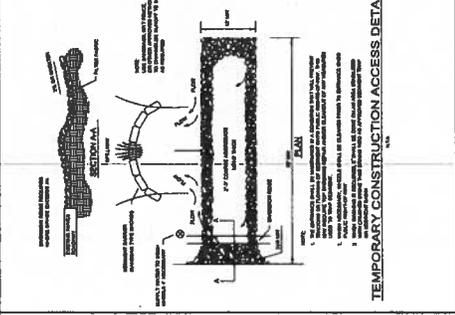
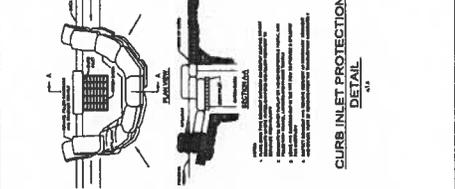
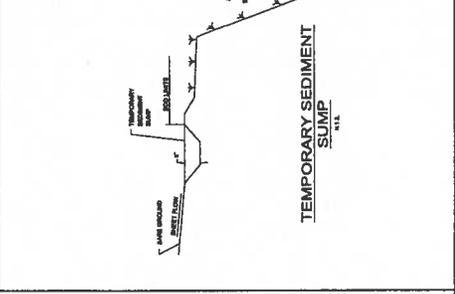
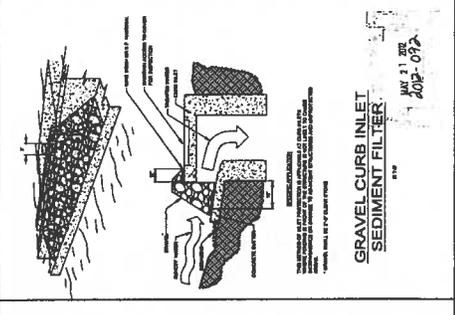
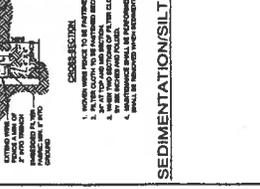
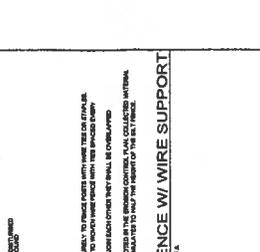
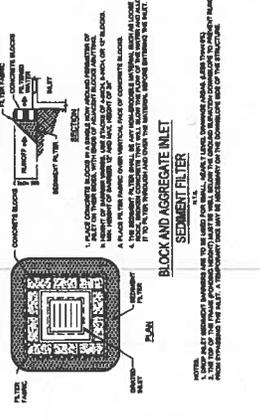
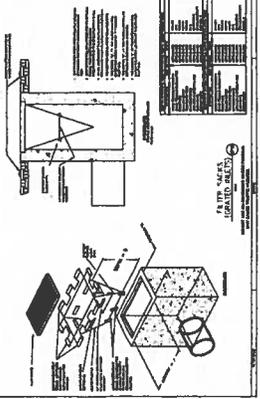
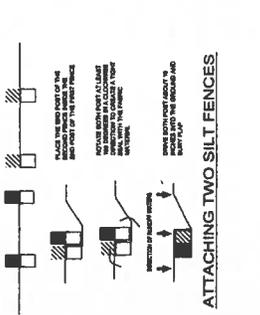
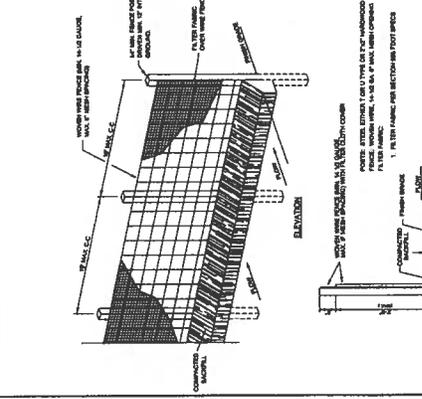
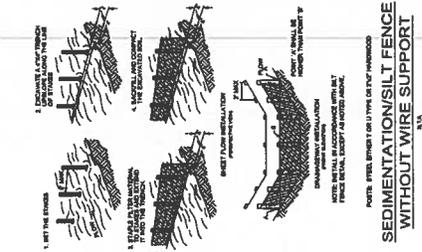
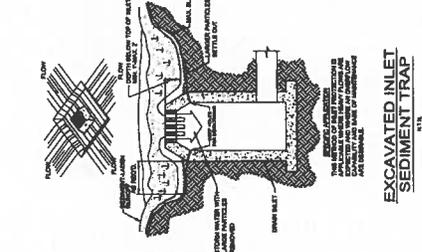
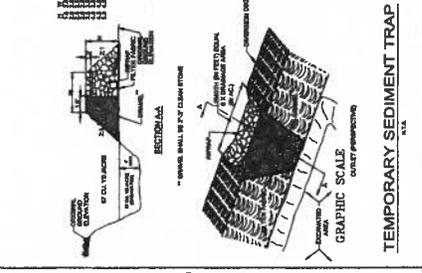
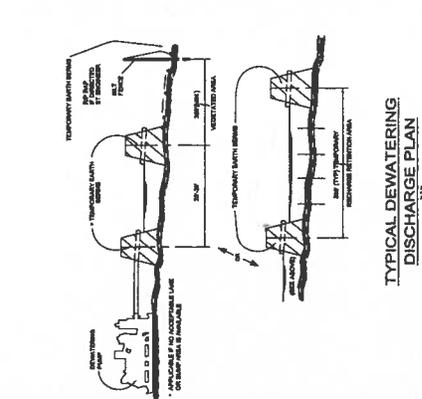


**CVS pharmacy**  
 PROTOTYPICAL 14,600  
 CHAMBER DRIVE THRU  
 STORE NUMBER 4 10122  
 800 S. GARDNER AVENUE  
 BOONVILLE, MISSOURI  
 PROJECT TYPE: NEW  
 IDEAL TYPE: FREE FOR SERVICE  
 CS PROJECT NUMBER: 68022

**cph**  
 CONSULTANT  
 2102  
 Planning / Landscape Architecture  
 1000 S. GARDNER AVENUE  
 BOONVILLE, MISSOURI 64608  
 PHONE: (417) 335-1100  
 FAX: (417) 335-1100  
 WWW: WWW.CPHARCHITECTS.COM  
 CONFIRMATION OF CONSULTATION No. 2002

CONSULTANT  
 DEVELOPER: **Boons Development Group, Inc.**  
 5-18-12

REVISIONS:  
 DRAWING BY: TEAM  
 DATE: MARCH 28, 2012  
 BY: JRM  
 THE FORWATER POLLUTION PREVENTION NOTES AND DETAILS SHEET NUMBER: C-8  
 COMMENTS:  
 NOT RELEASED FOR CONSTRUCTION







**CVS pharmacy**

PROTOTYPICAL 4,600 SQUARE FOOT DRIVE-THRU STORE NUMBER # 10122

CONTRACT NUMBER: 68622

CONTRACT TYPE: NEW

CONTRACT NUMBER: 68622

**Cph**

Engineers  
Planners / Landscape Architects  
Environmental Scientists  
www.cph.com  
10000  
Arlington, VA 22203  
Phone: 703.241.4000  
Fax: 703.241.4007  
Company of International No. 232

CONTRACTOR:

*[Signature]*

DATE: 05/11/2012

DEVELOPER:

BOONS Development Group, Inc.

10000  
Arlington, VA 22203  
Phone: 703.241.4000  
Fax: 703.241.4007

SEAL:

REVISIONS:

TITLE:

LANDSCAPE NOTES AND DETAILS

SHEET NUMBER:

L-2

DATE:

05/11/2012

BY:

BT/MS

SCALE:

AS SHOWN

DATE: 05/11/2012

BY: BT/MS

**PALE INSPECTION NOTES (REQUIRED)**

D.P.L. INSPECTION NOTE:  
ALL PALMS SHALL HAVE A VALID INSPECTION REPORT FROM THE DIVISION OF PLANT INDUSTRY (DPI) TO BE SUBMITTED TO THE CONTRACTOR PRIOR TO CONSTRUCTION. THE DPI CERTIFICATION MUST BE PROVIDED TO THE CONTRACTOR AND MAINTAINED WITH THE CONSTRUCTION RECORDS.

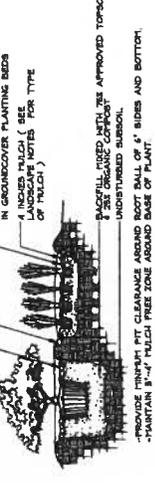
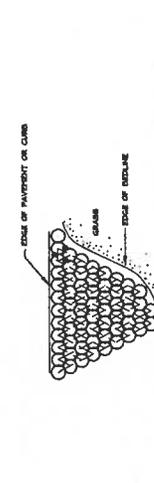
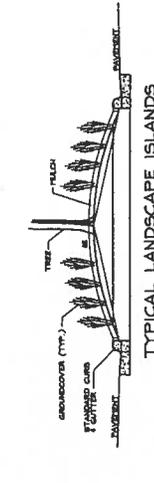
D.P.L. INSPECTION OF ALL PLANT MATERIAL, SHRUBS AND SOIL SHALL BE CONDUCTED BY THE DIVISION OF FLORIDA PLANT INDUSTRY (DPI) PRIOR TO TRANSPORTATION TO THE CONSTRUCTION SITE. ALL PLANT MATERIAL SHALL BE SUBMITTED TO DPI AND A COPY OF THIS CERTIFICATION MUST BE PROVIDED TO THE CONTRACTOR AND MAINTAINED WITH THE CONSTRUCTION RECORDS.

**PALM HEIGHT/TRUNK SPECIFICATIONS**

OVERALL HEIGHT (CALCULATED)  
HEIGHT FROM THE CANOPY TO THE TOP OF THE TRUNK SHALL BE THE POSITION OF THE LAST FULLY EXPANDED LEAF. THE TRUNK SHALL BE MEASURED TO THE POINT OF THE LAST FULLY EXPANDED LEAF. THE TRUNK SHALL BE MEASURED TO THE POINT OF THE LAST FULLY EXPANDED LEAF. THE TRUNK SHALL BE MEASURED TO THE POINT OF THE LAST FULLY EXPANDED LEAF.

TRUNK HEIGHT (CALCULATED)  
HEIGHT FROM THE SOIL LINE TO THE POINT OF THE LAST FULLY EXPANDED LEAF SHALL BE THE TRUNK HEIGHT. THE TRUNK SHALL BE MEASURED TO THE POINT OF THE LAST FULLY EXPANDED LEAF. THE TRUNK SHALL BE MEASURED TO THE POINT OF THE LAST FULLY EXPANDED LEAF.

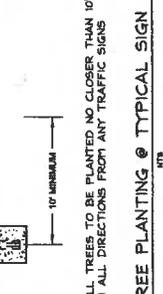
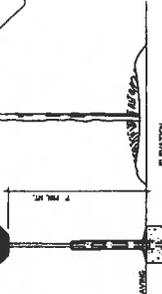
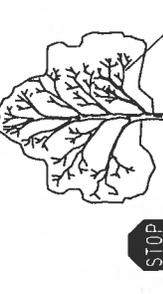
TRUNK CLEARANCE (CALCULATED)  
HEIGHT FROM THE SOIL LINE TO THE POINT OF THE LAST FULLY EXPANDED LEAF SHALL BE THE TRUNK CLEARANCE. THE TRUNK SHALL BE MEASURED TO THE POINT OF THE LAST FULLY EXPANDED LEAF. THE TRUNK SHALL BE MEASURED TO THE POINT OF THE LAST FULLY EXPANDED LEAF.



**LANDSCAPE NOTES:**

1. The Landscape Contractor shall be responsible for all materials and work as defined in the contract documents and shall be responsible for the quality of the work.
2. The Landscape Contractor shall be responsible for the quality of the work.
3. The Landscape Contractor shall be responsible for the quality of the work.
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18. The Landscape Contractor shall be responsible for the quality of the work.
19. The Landscape Contractor shall be responsible for the quality of the work.
20. The Landscape Contractor shall be responsible for the quality of the work.

**ALL PALMS TO HAVE CLEAR MOOD INDICATED ABOVE UNLESS OTHERWISE SPECIFIED.**



**PALE INSPECTION NOTES (REQUIRED)**

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ALL PALMS SHALL HAVE A VALID INSPECTION REPORT FROM THE DIVISION OF PLANT INDUSTRY (DPI) TO BE SUBMITTED TO THE CONTRACTOR PRIOR TO CONSTRUCTION. THE DPI CERTIFICATION MUST BE PROVIDED TO THE CONTRACTOR AND MAINTAINED WITH THE CONSTRUCTION RECORDS.

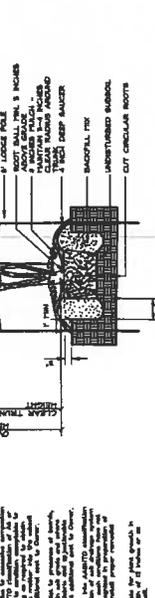
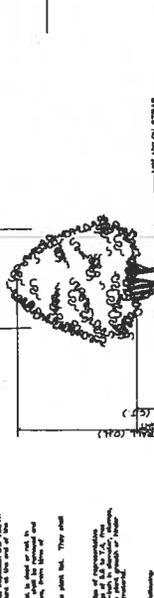
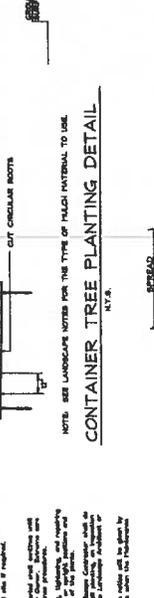
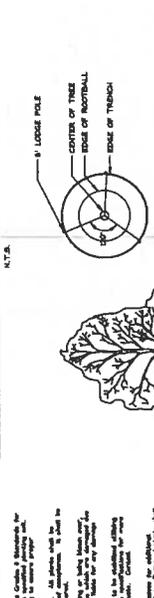
D.P.L. INSPECTION OF ALL PLANT MATERIAL, SHRUBS AND SOIL SHALL BE CONDUCTED BY THE DIVISION OF FLORIDA PLANT INDUSTRY (DPI) PRIOR TO TRANSPORTATION TO THE CONSTRUCTION SITE. ALL PLANT MATERIAL SHALL BE SUBMITTED TO DPI AND A COPY OF THIS CERTIFICATION MUST BE PROVIDED TO THE CONTRACTOR AND MAINTAINED WITH THE CONSTRUCTION RECORDS.

**PALM HEIGHT/TRUNK SPECIFICATIONS**

OVERALL HEIGHT (CALCULATED)  
HEIGHT FROM THE CANOPY TO THE TOP OF THE TRUNK SHALL BE THE POSITION OF THE LAST FULLY EXPANDED LEAF. THE TRUNK SHALL BE MEASURED TO THE POINT OF THE LAST FULLY EXPANDED LEAF. THE TRUNK SHALL BE MEASURED TO THE POINT OF THE LAST FULLY EXPANDED LEAF.

TRUNK HEIGHT (CALCULATED)  
HEIGHT FROM THE SOIL LINE TO THE POINT OF THE LAST FULLY EXPANDED LEAF SHALL BE THE TRUNK HEIGHT. THE TRUNK SHALL BE MEASURED TO THE POINT OF THE LAST FULLY EXPANDED LEAF. THE TRUNK SHALL BE MEASURED TO THE POINT OF THE LAST FULLY EXPANDED LEAF.

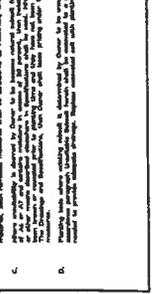
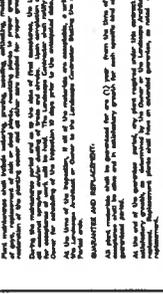
TRUNK CLEARANCE (CALCULATED)  
HEIGHT FROM THE SOIL LINE TO THE POINT OF THE LAST FULLY EXPANDED LEAF SHALL BE THE TRUNK CLEARANCE. THE TRUNK SHALL BE MEASURED TO THE POINT OF THE LAST FULLY EXPANDED LEAF. THE TRUNK SHALL BE MEASURED TO THE POINT OF THE LAST FULLY EXPANDED LEAF.



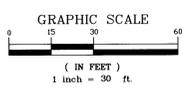
**LANDSCAPE NOTES:**

1. The Landscape Contractor shall be responsible for all materials and work as defined in the contract documents and shall be responsible for the quality of the work.
2. The Landscape Contractor shall be responsible for the quality of the work.
3. The Landscape Contractor shall be responsible for the quality of the work.
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20. The Landscape Contractor shall be responsible for the quality of the work.

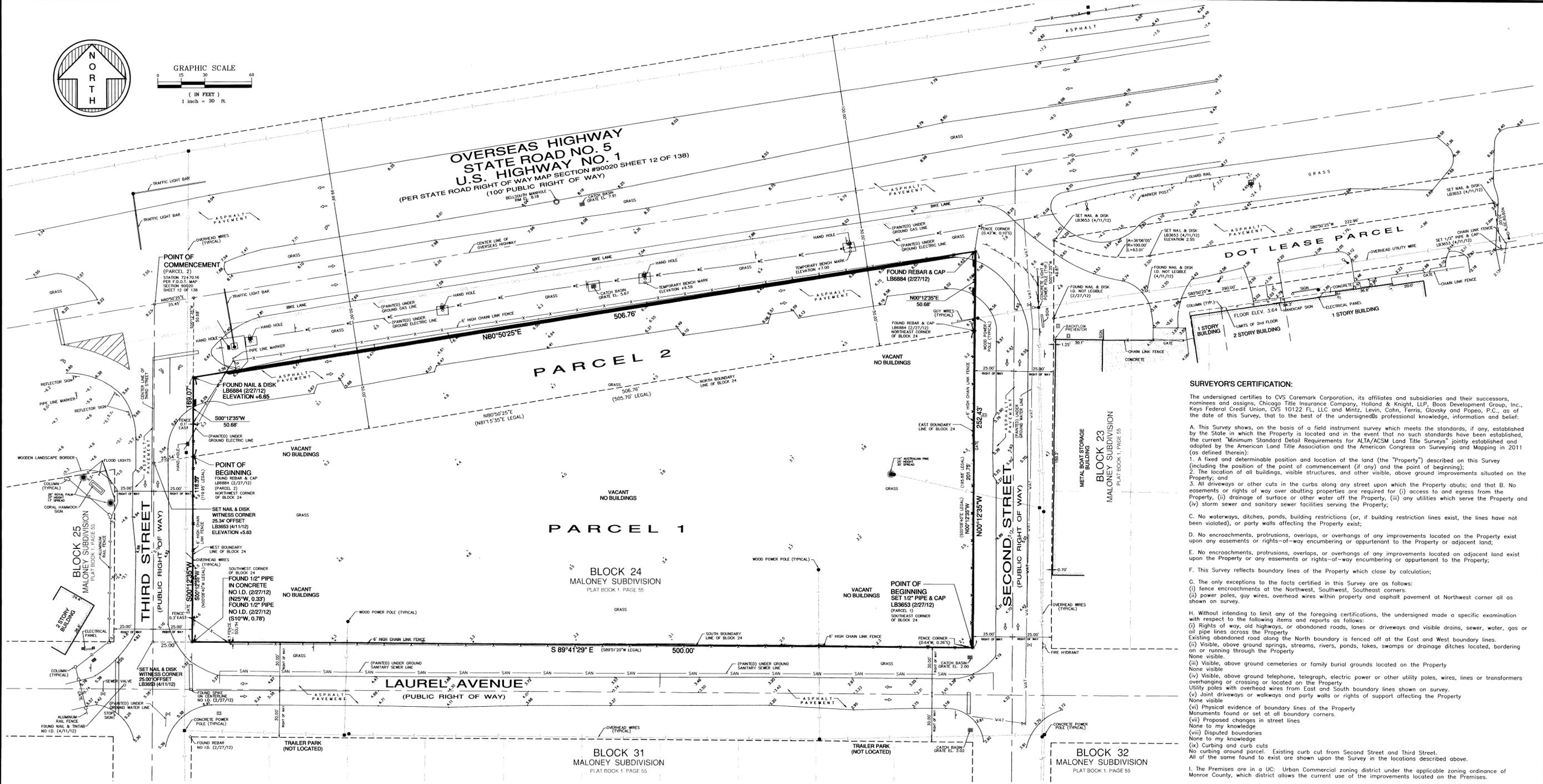
**ALL PALMS TO HAVE CLEAR MOOD INDICATED ABOVE UNLESS OTHERWISE SPECIFIED.**







**OVERSEAS HIGHWAY  
STATE ROAD NO. 5  
U.S. HIGHWAY NO. 1**  
(PER STATE ROAD RIGHT OF WAY MAP SECTION #90020 SHEET 12 OF 138)  
(100' PUBLIC RIGHT OF WAY)



**SURVEYOR'S CERTIFICATION:**

The undersigned certifies to CVS Coremark Corporation, its affiliates and subsidiaries and their successors, nominees and assigns, Chicago Title Insurance Company, Holland & Knight, LLP, Boss Development Group, Inc., Keys Federal Credit Union, CVS 10122 FL, LLC and Mintz Levin, Cohn, Ferris, Glovsky and Popeo, P.C., as of the date of this Survey, that to the best of the undersigned's professional knowledge, information and belief:

A. This Survey shows, on the basis of a field instrument survey which meets the standards, if any, established by the State in which the Property is located and in the event that no such standards have been established, the current Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys jointly established and adopted by the American Land Title Association and the American Congress on Surveying and Mapping in 2011 (as defined therein):

1. A fixed and determinable position and location of the land (the "Property") described on this Survey (including the position of the point of commencement (if any) and the point of beginning);
2. The location of all buildings, visible structures, and other visible, above ground improvements situated on the Property; and
3. All driveways or other cuts in the curbs along any street upon which the Property abuts; and that B. No easements or rights of way over abutting properties are required for (i) access to and egress from the Property, (ii) drainage of surface or other water of the Property, (iii) any utilities which serve the Property and (iv) storm sewer and sanitary sewer facilities serving the Property.

C. No waterways, ditches, ponds, building restrictions (or, if building restriction lines exist, the lines have not been violated), or party walls affecting the Property exist.

D. No encroachments, protrusions, overlaps, or overhangs of any improvements located on the Property exist upon any easements or rights-of-way encumbering or appurtenant to the Property or adjacent land;

E. No encroachments, protrusions, overlaps, or overhangs of any improvements located on adjacent land exist upon the Property or any easements or rights-of-way encumbering or appurtenant to the Property.

F. This Survey reflects boundary lines of the Property which close by calculation;

G. The only exceptions to the facts certified in this Survey are as follows:  
(i) fence encroachments at the Northwest, Southwest, Southeast corners  
(ii) power poles, guy wires, overhead wires within property and asphalt pavement at Northwest corner all as shown on survey.

H. Without intention to limit any of the foregoing certifications, the undersigned made a specific examination with respect to the following items and reports as follows:  
(i) Rights of way, old highways, or abandoned roads, lanes or driveways and visible drains, sewer, water, gas or oil pipe lines across the Property  
Existing abandoned road along the North boundary is fenced off at the East and West boundary lines.  
(ii) Visible, above ground springs, streams, rivers, ponds, lakes, swamps or drainage ditches located, bordering None visible.  
(iii) Visible, above ground cemeteries or family burial grounds located on the Property None visible.  
(iv) Visible, above ground telephone, telegraph, electric power or other utility poles, wires, lines or transformers overhanging or crossing or located on the Property Utility poles with overhead wires from East and South boundary lines shown on survey.  
(v) Joint driveways or walkways and party walls or rights of surface affecting the Property None visible.  
(vi) Physical evidence of boundary lines of the Property Monuments found or set at all boundary corners.  
(vii) Proposed changes in street lines None to my knowledge  
(viii) Disputed boundaries None to my knowledge  
(x) Curbing and curb cuts No curbing around parcel. Existing curb cut from Second Street and Third Street.  
All of the same found to exist are shown upon the Survey in the locations described above.

I. The Premises are in a UC - Urban Commercial zoning district under the applicable zoning ordinance of Monroe County, which district allows the current use of the improvements located on the Premises.

J. The following provisions of the zoning ordinance apply to the Premises:  
1. Front yard set back: 15 ft. (all four sides are front)  
2. Maximum height: 35 feet

K. The Premises shown on the Survey has access to and from a dedicated public roadway contiguous to the Premises, which access between the Premises and said roadway as shown upon said survey exists without restriction and is sufficient to meet the reasonable needs of the current or proposed use, as the case may be, of the Premises and all applicable requirements of public authorities.

L. Water supply, sanitary water, sanitary sewer, storm drainage, electricity, and other utilities are available in adequate quantities at the lot lines of the Premises at the locations indicated on the foregoing survey, and the building improvements are connected and tied into the same.

M. All easements and other rights in the Premises appearing in the title report submitted to the undersigned which are capable of location on a survey have been located on the Survey and the undersigned has not been advised of any other easements or rights-of-way affecting the Property, nor is there any visible evidence of possible unrecorded easements or rights of way affecting the Property. Unless otherwise shown and detailed on the Survey, no easements over land of others are required for:  
(i) access to and egress from the Premises,  
(ii) drainage of surface or other water off the Premises,  
(iii) any utilities which serve the Premises and said improvements,  
(iv) any sewer facilities serving the Premises and said improvements.

N. As of the date of the Survey, the Premises does lie within a flood plain or flood-prone area, or a flood plain area having special flood hazards identified as such under the Flood Disaster Protection Act of 1973.

O. The undersigned has reviewed the most recent Flood Insurance Rate Map issued by the Federal Emergency Management Agency under the National Flood Insurance Program applicable to the Premises and has determined that the Premises is in Zone AE EL 9, a Special Flood Hazard Area.

This is to certify that this "Boundary and Topographic Survey" was made under my responsible charge on February 27, 2012, in accordance with the 2011 Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys, jointly established and adopted by ALTA and NSPS, and meets the applicable codes as set forth in the Florida Administrative Code, pursuant to Section 472.027, Florida Statutes.

*Not valid without the signature and the original raised seal of a Florida Licensed Surveyor and Mapper.*

**FORTIN, LEAVY, SKILES, INC. LB3653**

**LEGAL DESCRIPTION:**

**Parcel 1:**  
All of Block 24 of Maloney Subdivision, Stock Island, Monroe County, Florida; as recorded in Plat Book 1 of Page 55, of the Public Records of Monroe County, Florida; said Block being described by metes and bounds as follows: Begin at the Southeast corner of said Block and run thence South 89 degrees 51 minutes 20 seconds West along the South Boundary of said Block for a distance of 500 feet to the Southwest corner of said Block; thence North 00 degrees 08 minutes 40 seconds West along the West Boundary of said Block for a distance of 119.95 feet to the Northwest corner of said Block; thence North 81 degrees 15 minutes 35 seconds East along the Northernly Boundary of said Block for a distance of 506.76 feet to the Northeast corner of said Block; thence run South 00 degrees 08 minutes 40 seconds East along the East Boundary of said Block for a distance of 195.68 feet back to the Southeast corner of said Block and the Point of Beginning.

**Parcel 2:**  
Commence at Station 72+70.16, as shown on FDOT Corridor Map for Section 90020, Sheet 12 of 138, also said station being the intersection of the centerlines of Third Street and Overseas Highway (US-1) in Monroe County, State of Florida, Section 35, Township 67 South, Range 25 East; thence North 80°50'25" East, a distance of 25.34 feet to a point on the centerline of Overseas Highway (US-1); thence South 00°12'35" West, a distance of 50.68 feet to the Point of Beginning; thence continue South 00°12'35" West a distance of 50.68 feet; thence North 80°50'25" East, a distance of 506.76 feet; thence North 00°12'35" East, a distance of 50.68 feet; thence South 80°50'25" West, a distance of 506.76 feet to the Point of Beginning.

**SURVEYOR'S NOTES:**

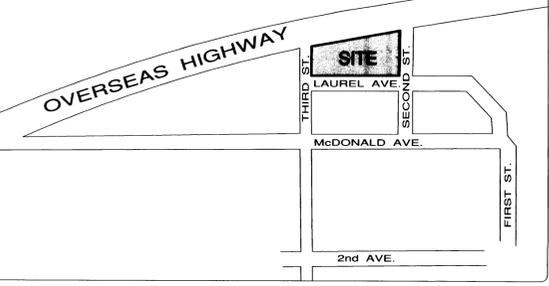
- This site lies in Section 35, Township 67 South, Range 25 East, Stock Island, Monroe County, Florida.
- The Northernly line of Parcel 1 is contiguous to the Southerly line of Parcel 2 without gaps or overlaps.
- All documents are recorded in the Public Records of Monroe County, Florida unless otherwise noted.
- The parcel as a whole is adjacent to public right of ways on all four sides.
- Lands shown hereon were abstracted for restrictions, easements and/or rights-of-way of records per Chicago Title Insurance Company, Order No. 3694467 with an effective date of November 01, 2011. All easements and/or rights of way of record per title commitment that are plottable are shown on this "Boundary Survey".

**SURVEYOR'S NOTES (CONTINUED):**

- SCHEDULE B SECTION 2
- 1-5 Standard Exceptions
  6. Florida Keys Area of Critical Concern recorded in O.R.B. 668, Page 43, and O.R.B. 1788, Page 1257.
  - Affects CVS Parcel 1 and Parcel 2 but not subject to location.
  7. Resolution recorded in O.R.B. 1445, Page 2205. Restrictions affect CVS Parcel 1 and Parcel 2 but not subject to location.
  8. Quitclaim Deed recorded in O.R.B. 2318, Page 793. Reservations affect Parcel 2 but not subject to location.
  9. Monroe County, Florida Minor Conditional Use Permit Development Order 10-07 recorded in O.R.B. 2347, Page 1102. Restrictions affect CVS Parcel 1 and Parcel 2 but not subject to location.
- Bearings hereon are referred to an assumed value of N80°50'25"E and as shown on state road right of way map section #90020, sheet 12 of 138 being the South right of way line of Overseas Highway, and evidenced found nail & disk and found rebar & cap.
  - Elevations shown hereon are relative to the National Geodetic Vertical Datum of 1929, based on NGS Monument Designation R 397, Published Elevation +7.12 N.A.V.D., (8.47 N.G.V.D.), Located on U.S. #1, East of Boog Powells Marina.
  - Lands shown hereon are located within an area having a Zone Designation AE (EL 9) by the Federal Emergency Management Agency (FEMA), on Flood Insurance Rate Map No. 12087C1528K, for Community No. 125129, map revised date 2/18/2005, and is relative to the National Geodetic Vertical Datum of 1929.
  - Dimensions indicated hereon are field measured by electronic measurement, unless otherwise noted.
  - Lands shown hereon containing 105,375 square feet, or 2,419 acres, more or less.
  - Trees shown are surveyed for their horizontal location and/or size. Identification and/or name verification of all trees should be confirmed by the Division of Forestry County Forester or a professional in that field.
  - No marked parking spaces on site.
  - Underground improvements and/or underground encroachments not shown unless otherwise indicated.
  - The approximate location of all utilities shown hereon were determined from As-Built plans and/or on-site locations and should be verified before construction.

**SURVEYOR'S NOTES (CONTINUED):**

- Zoning: Information provided by Monroe County, Florida.
- Minimum Building Setbacks are 15 FT (All four sides).
- This firm recommends that the client obtain a certified zoning verification letter from the city, county or agency responsible for zoning classification for the parcel.
- Legal description shown hereon per title commitment furnished by client and no claims as to ownership are made or implied.



**LOCATION SKETCH**  
NOT TO SCALE

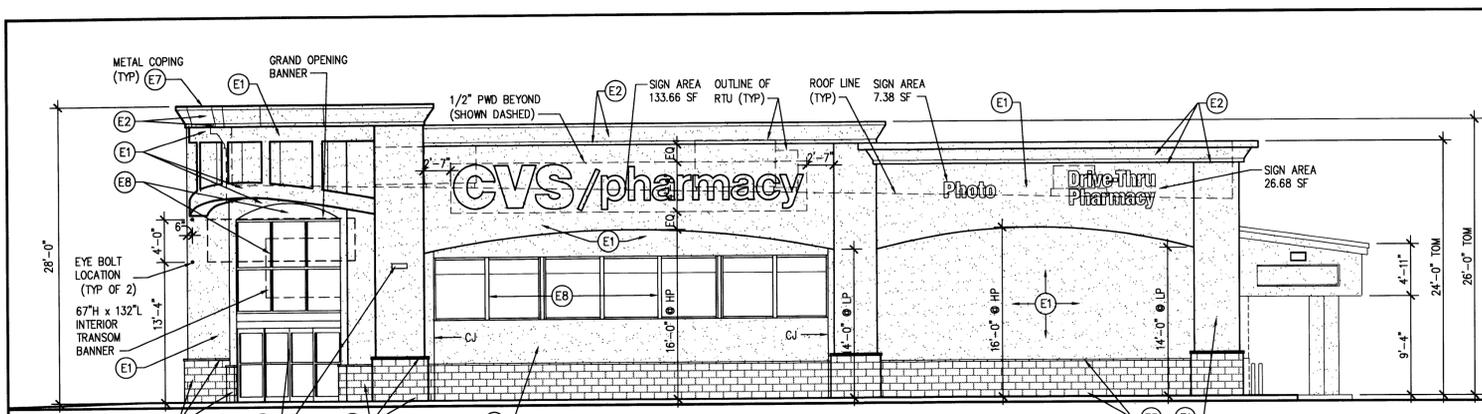
Donal C. Fortin, For The Firm  
Surveyor and Mapper, LS2853  
State of Florida.

**LEGEND**

☐ = CATCH BASIN	— = 0.5' CURB
○ = MANHOLE	— = 2.00' CURB & GUTTER
⊕ = LIGHT POLE	— = CHAIN LINK FENCE
⊖ = WATER METER	EL. = GRADE ELEVATION
⊕ = WATER VALVE	INV. = INVERT
⊕ = CATCH BASIN INLET	P.R.M. = SANITARY
⊕ = UTILITY POLE	P.R.M. = PERMANENT REFERENCE MONUMENT
⊕ = RISER	B.O.S. = BOTTOM OF STRUCTURE
⊕ = FIRE HYDRANT	T.O.B. = TOP OF BARREL
⊕ = HANDHOLE	T.B.M. = TEMPORARY BENCH MARK
⊕ = SIGN	— = CONCRETE
	— = ASPHALT PAVEMENT

**811** KNOW WHAT'S BELOW  
**ALWAYS CALL 811**  
**BEFORE YOU DIG**  
It's fast. It's free. It's the law.  
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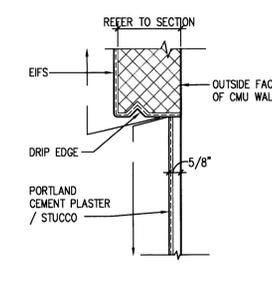


1 WEST ELEVATION  
A-4.1 SCALE: 1/8" = 1'-0"

TOTAL SIGN AREA FRONT 167.72 SF

ADDRESS SIGN LOCATION TO BE PLAINLY VISIBLE AND LEGIBLE FROM PRIMARY OR MAIN ROAD - MIN. 6" H. & STROKE OF 1/2" MIN. ON CONTRASTING BKGRD. (CONFIRM HEIGHT, LOCATION AND QUANTITY WITH LOCAL FIRE MARSHAL)

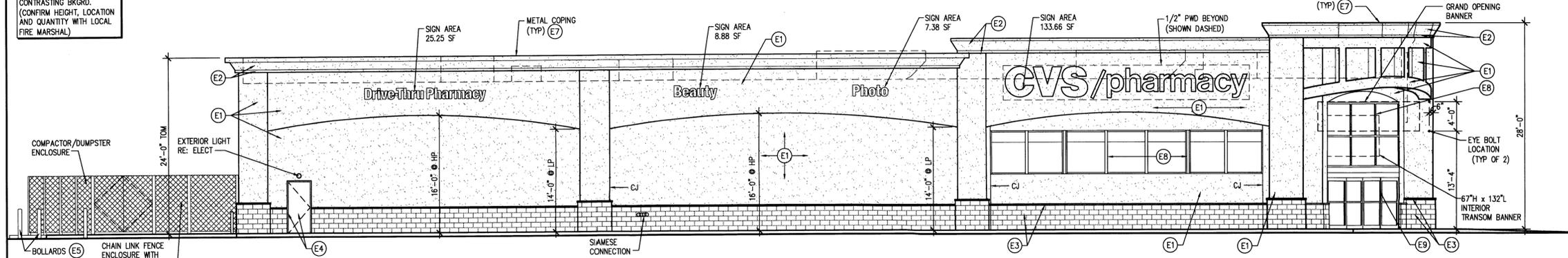
EXTERIOR FINISH SCHEDULE					
TAG	MATERIAL / DESCRIPTION	MFR.	STYLE / CAT. NO.	COLOR	NOTES
E1	EIFS/STUCCO	STO PREMIER SYSTEM	137 STO SILCOLIT 1.5	NA01-0048 PALE YELLOW	RE: SPECIFICATION
E2	EIFS	STO PREMIER SYSTEM	137 STO SILCOLIT 1.5	NA00-0047 TERRA COTTA	RE: SPECIFICATION
E3	CMU BLOCK AND CAP		SPLIT FACE	COLOR TO MATCH NA00-0047 TERRA COTTA	MORTAR COLOR HOLCIM RAINBOW MORTARMIX CANYON RED
E4	PAINT	BENJAMIN MOORE		PAINT TO MATCH "E3"	
E5	BOLLARD COVER	SEE "SITE & STREET FURNISHINGS" SPEC	SEE "SITE & STREET FURNISHINGS" SPEC	YELLOW	TYP FOR ALL PIPE BOLLARDS (UON)
E6	PAINT	BENJAMIN MOORE		PAINT TO MATCH EIFS "E1"	
E7	PAINT	BENJAMIN MOORE		PAINT TO MATCH EIFS "E2"	
E8	ALUM STOREFRONT	SEE SPECS	SEE SPECS	CLEAR ANODIZED	
E9	ALUM AUTOMATIC DOOR	STANLEY	SEE SPECS	CLEAR ANODIZED	



LEGEND

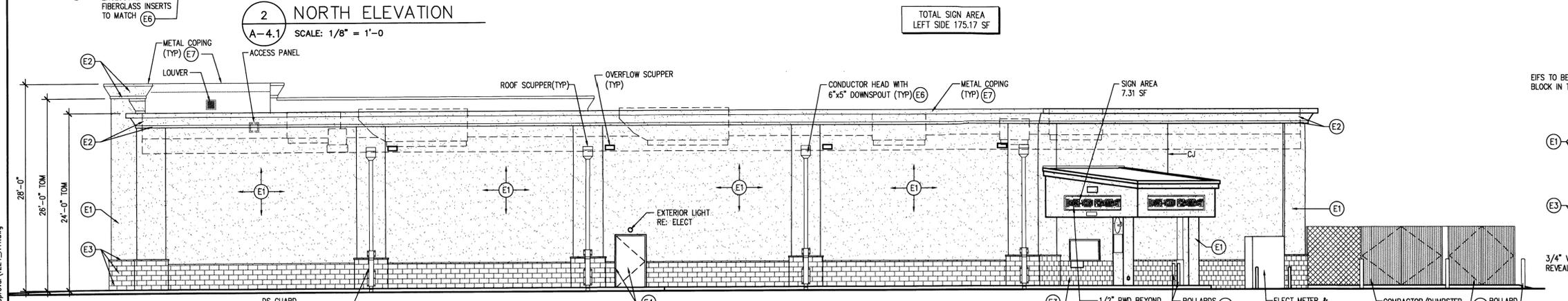
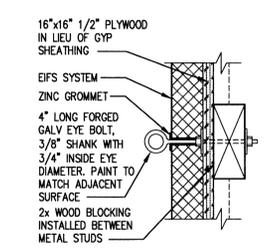
(X) - RE: EXTERIOR FINISH SCHEDULE

NOTE: SIGNAGE UNDER SEPARATE PERMIT



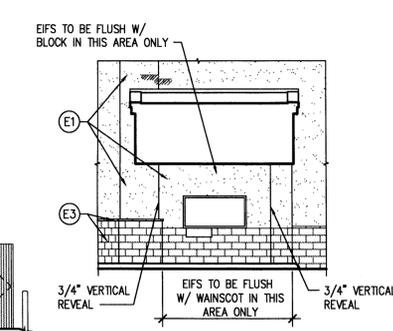
2 NORTH ELEVATION  
A-4.1 SCALE: 1/8" = 1'-0"

TOTAL SIGN AREA LEFT SIDE 175.17 SF

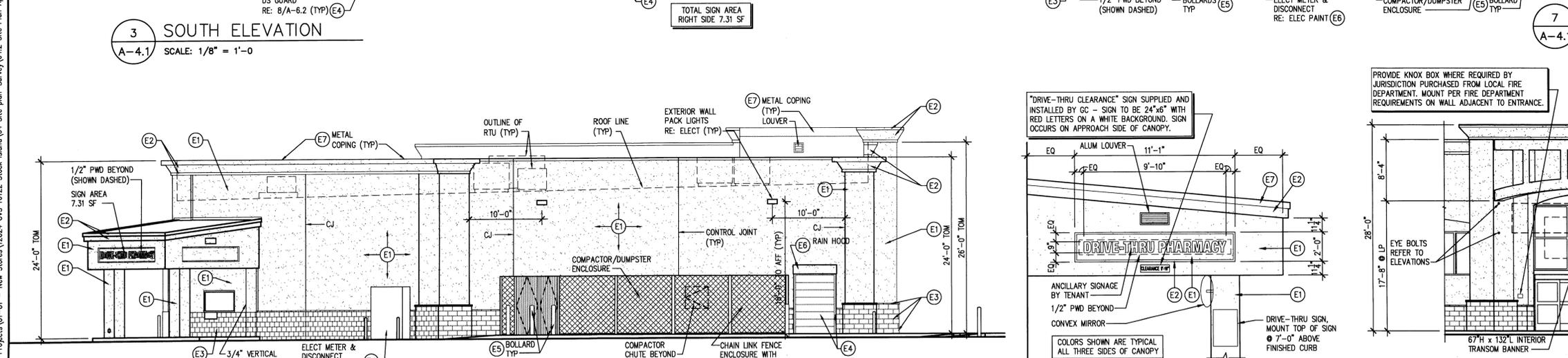


3 SOUTH ELEVATION  
A-4.1 SCALE: 1/8" = 1'-0"

TOTAL SIGN AREA RIGHT SIDE 7.31 SF

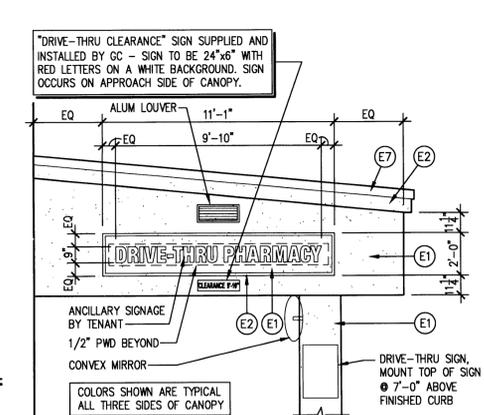


7 DRIVE-THRU ELEVATION  
A-4.1 SCALE: 1/8" = 1'-0"

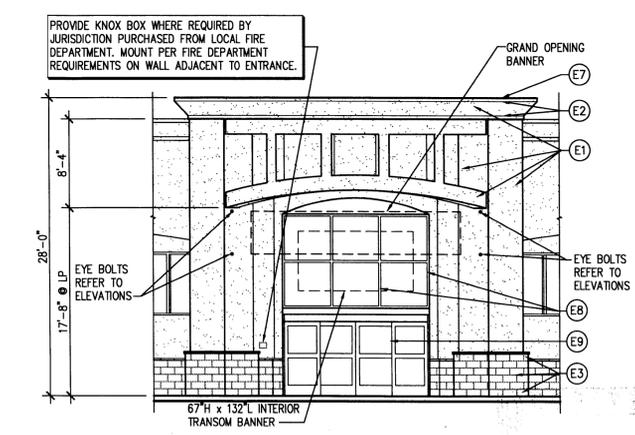


4 EAST ELEVATION  
A-4.1 SCALE: 1/8" = 1'-0"

TOTAL SIGN AREA REAR 7.31 SF



8 ENLARGED SIGN ELEVATION  
A-4.1 SCALE: 1/4" = 1'-0"



9 ENTRANCE ELEVATION  
A-4.1 SCALE: 1/8" = 1'-0"

MAY 21 2012  
2012-072

**CVS pharmacy**  
FLORIDA COASTAL  
14,600-LEFT  
CHAMFER DRIVE-THRU  
STORE NUMBER: 10122  
5610 OVERSEAS HIGHWAY  
STOCK ISLAND, FL  
PROJECT TYPE: NEW  
DEAL TYPE: FEE FOR SERVICE  
CS PROJECT NUMBER: 66622

ARCHITECT OF RECORD  
**Robert Reid Wedding Architects & Planners, AIA, Inc.**  
4112 Cypress Street - Tampa, Florida 33607 - 813-878-6996  
812 South Military Trail - Deerfield Beach, Florida 33442 - 954-428-8361  
Florida License No. Architecture/Interior Design: AA-C01123

CONSULTANT:

DEVELOPER:  
**Boos Development Group, Inc.**  
5789 NW 151 Street, #B  
MIAMI LAKES, FL 33014  
TEL (305) 828-8294  
FAX (305) 828-9594  
CONTACT: PAUL TREMBLAY

SEAL:  
5/15/12  
Jose Gordillo  
FL REG # AR0013760

REVISIONS:

DRAWING BY: IUU  
DATE: 15 MAY 2012  
JOB NUMBER: 1224  
TITLE: EXTERIOR ELEVATIONS  
SHEET NUMBER: A-4.1  
COMMENTS: NOT RELEASED FOR CONSTRUCTION

User = Inker User  
Date = Tuesday, May 15, 2012 3:33:30 PM  
Filename = V:\CVS Projects\01-01 - New Stores\2012\04 Site Plan-Survey\04 Site Plan Approval\1224\_A41.dwg

# CONSTRUCTION PLANS FOR CVS/PHARMACY STORE NO. 10122

**SEC. OVERSEAS HIGHWAY AND 3RD STREET  
STOCK ISLAND, MONROE COUNTY, FLORIDA**

**DEVELOPER**  
BOOS DEVELOPMENT GROUP, INC.  
5789 NW 151st. STREET SUITE B  
MIAMI LAKES, FL 33014  
PHONE: (305) 828-8284  
FAX: (305) 828-9594  
ATTN: PAUL TREMBLAY

**ENGINEER**  
CPH ENGINEERS, INC.  
1992 SW 1ST STREET  
MIAMI, FLORIDA 33135  
PHONE: (305) 274-4805  
FAX: (305) 274-4807  
ATTN: MARIA C. ZAPATA, P.E.

**ARCHITECT**  
ROBERT REID WEDDING ARCHITECTS & PLANNERS AIA  
612 SOUTH MILITARY TRAIL  
DEERFIELD BEACH, FLORIDA 33442  
PHONE: (954) 428-9361  
ATTN: JOSE GORDILLO, AIA

**SURVEYOR**  
FORTIN, LEAVY, SKILES, INC.  
180 NE 168TH STREET  
NORTH MIAMI BEACH, FLORIDA 33162  
PHONE: (305) 653-4493  
ATTN: DANIEL C. FORTIN, R.L.S.

**LANDSCAPE ARCHITECT**  
CPH ENGINEERS, INC.  
500 WEST FULTON STREET  
SANFORD, FLORIDA 32771  
PHONE: (407) 322-6841  
FAX: (407) 330-0639  
ATTN: GALEN J. PUGH, R.L.A., A.I.C.P.

**SOILS CONSULTANT**  
PROFESSIONAL SERVICE INDUSTRIES, INC.  
7950 NW 64TH STREET  
MIAMI, FLORIDA 33186  
PHONE: (305) 471-7721  
FAX: (305) 593-1915  
ATTN: DREW BADRI, P.E.

**UTILITIES**

**WATER SERVICE**  
FLORIDA KEYS AQUEDUCT  
AUTHORITY  
1100 KENNEDY DRIVE  
P.O. BOX 1239  
KEY WEST, FLORIDA 33041-1239  
PHONE: (305) 296-2454

**ELECTRIC SERVICE**  
KEYS ENERGY SERVICES  
1001 JAMES STREET  
P.O. BOX 6100  
KEY WEST, FLORIDA 33041-6100  
PHONE: (305) 295-1000  
ATTN: D. FINIGAN

**SEWER SERVICE**  
KEY WEST RESORT UTILITIES, CORP.  
6630 FRONT STREET  
KEY WEST, FLORIDA 33040  
PHONE: (305) 295-3301  
ATTN: CHRISTOPHER A. JOHNSON

**PHONE SERVICE**  
AT&T - FLORIDA  
650 UNITED STREET  
KEY WEST, FLORIDA 33040  
PHONE: (305) 296-9077  
ATTN: HERB BRADSHAW

**GAS SERVICE**

**PERMITTING AGENCIES**

**PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT**  
2798 OVERSEAS HIGHWAY, SUITE 410  
MARATHON, FLORIDA 33050  
PHONE: (305) 289-2500  
FAX: (305) 289-2536  
ATTN: JOSEPH HABERMAN

**BUILDING DEPARTMENT**  
2798 OVERSEAS HIGHWAY, SUITE 330  
MARATHON, FLORIDA 33050  
PHONE: (305) 289-2501  
ATTN: JERRY SMITH

**FDEP (SEWER)**  
2295 VICTORIA AVE. SUITE 364  
FORT MYERS, FLORIDA 33902  
PHONE: (239) 344-5672  
ATTN: NOLIN MOON

**FDEP (WATER)**  
2295 VICTORIA AVE. SUITE 364  
FORT MYERS, FLORIDA 33902  
PHONE: (239) 344-5693  
ATTN: BENNIE SHOEMAKER

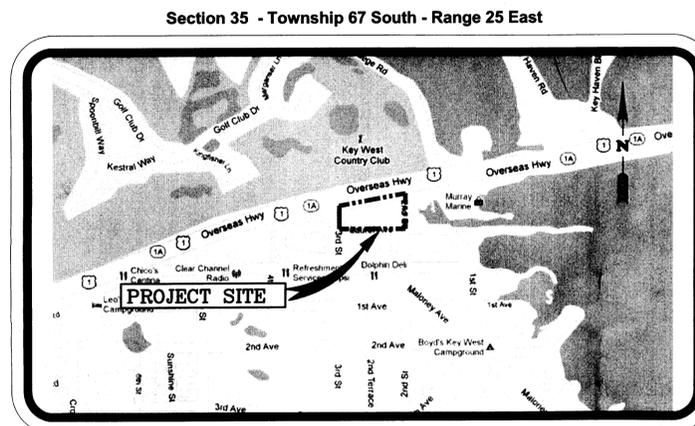
**MONROE COUNTY FIRE RESCUE**  
490 63RD ST. OCEAN  
MARATHON, FLORIDA 33050  
PHONE: (305) 289-6088  
ATTN: JAMES K. CALLAHAN

**SFWMD (STORMWATER)**  
3301 GUN CLUB ROAD  
WEST PALM BEACH, FLORIDA 33406  
PHONE: (561) 686-8800  
ATTN: EDUARDO LOPEZ

**MONROE COUNTY PUBLIC WORKS**  
1100 SIMONTON STREET SUITE 2-231  
KEY WEST, FLORIDA 33040  
PHONE: (305) 292-4560  
ATTN: DENT PIERCE / JUDITH CLARK

**FDOT**  
FDOT TRAFFIC CONSULTANT: TRANSFIELD SERVICES  
3100 OVERSEAS HIGHWAY  
MARATHON, FLORIDA 33050  
PHONE: (305) 289-4360  
FAX: (305) 289-4361  
ATTN: JORDAN SALINGER

**FDEP (STORM WATER DRAINAGE WELLS)**  
P.O. BOX 2549  
FORT MYERS, FLORIDA 33902-2549  
PHONE: (239) 344-5687  
ATTN: DAVID RHODES



**VICINITY MAP**  
NOT TO SCALE

**NOTES**

1. ALL CONSTRUCTION MUST MEET ALL MONROE COUNTY CODES AND LAND DEVELOPMENT REGULATIONS.
2. ALL OTHER PERMITS REQUIRED FOR THIS PROJECT MUST BE OBTAINED. A FLORIDA DEP NOTICE OF INTENT (NOI) FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER AN NPDES PERMIT MUST BE FILED WITH FLORIDA DEP FOR ALL SITES WHICH ARE ONE (1) ACRE AND GREATER.
3. CERTIFICATION OF COMPLETION FROM THE ENGINEER OF RECORD TO BE SUBMITTED TO THE COUNTY PRIOR TO C.O.

**INDEX**

**CIVIL SHEETS**

- C-1 COVER SHEET
- S-1 SURVEY SHEET 1 OF 1
- C-2 (X) GENERAL NOTES
- C-3 (X) DEMOLITION PLAN
- C-4 SITE DIMENSION PLAN
- C-5 GRADING AND STORM DRAINAGE PLAN
- C-6 COMPOSITE UTILITY PLAN
- C-7 EROSION CONTROL PLAN
- C-8 STORMWATER POLLUTION PREVENTION NOTES AND DETAILS
- C-9 (X) GENERAL DETAILS
- C-10 DRAINAGE DETAILS
- C-10A (X) SECTIONS
- C-11 (X) UTILITY DETAILS
- C-12 (X) ACCESS PLAN
- C-13 (X) RETAINING WALL
- L-1 LANDSCAPE PLAN
- L-2 LANDSCAPE DETAILS
- IR-1 (X) IRRIGATION PLAN
- IR-2 (X) IRRIGATION DETAILS

**ARCHITECTURAL SHEETS**

- A-1.1 FLOOR PLAN
- A-4.1 EXTERIOR ELEVATIONS
- PH-1 PHOTOMETRIC PLAN

(X) = NOT INCLUDED IN THIS SUBMITTAL



PROTOTYPICAL 14,600  
CHAMFER DRIVE-THRU  
STORE NUMBER: # 10122  
5610 OVERSEAS HIGHWAY  
STOCK ISLAND, FLORIDA  
PROJECT TYPE: NEW  
DEAL TYPE: FEE FOR SERVICE  
CS PROJECT NUMBER: 66622

CONSULTANT:



Engineers  
Surveyors  
Planners / Landscape Architects  
Environmental Scientists  
Construction Management  
www.cphengineers.com  
1992 SW 1st Street  
Miami, FL 33135  
Phone: 305.274.4805  
Fax: 305.274.4807  
Certificate of Authorization No. 3215

CONSULTANT:

M. Zapata  
MARIA C. ZAPATA P.E.  
REG-# 54567  
5-18-12

DEVELOPER: 5789 NW 151st STREET, SUITE B MIAMI LAKES, FL. 33014 PHONE: (305) 828-8284 FAX: (305) 828-9594



SEAL:

REVISIONS:

DRAWING BY: TEAM

DATE: APR 16, 2012

JOB NUMBER: B11269

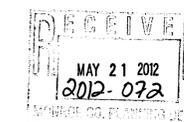
TITLE:

COVER SHEET

SHEET NUMBER:

C-1

COMMENTS:  
NOT RELEASED FOR CONSTRUCTION

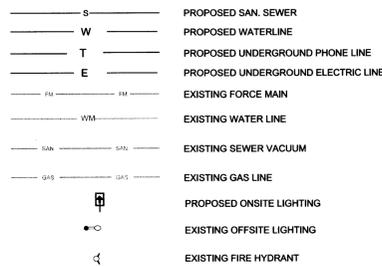




**PROPOSED STORM SCHEDULE**

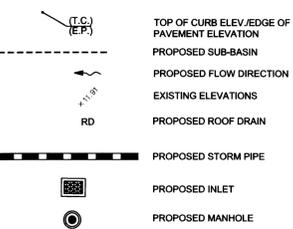
- S-1 VOID
- S-2 TYPE "E" INLET PER FDOT INDEX # 232  
GRATE ELEV. 9.0  
W. INV. = 4.81  
E. INV. = 5.11
- S-3 47 L.F. 24" RCP PIPE @ 0.15%
- S-4 TYPE "P" MANHOLE 0' 4"  
PER F.D.O.T. INDEX NO. 200 & 201  
RIM ELEV. = 9.53  
W. INV. = 5.04  
S. INV. = 5.04
- S-5 57 L.F. 24" RCP PIPE @ 0.16%
- S-6 TYPE "E" INLET PER FDOT INDEX # 232  
GRATE ELEV. 9.2  
E. INV. = 4.95  
W. INV. = 4.95
- S-7 100 L.F. 24" RCP PIPE @ 0.15%
- S-8 TYPE "E" INLET PER FDOT INDEX # 232  
GRATE ELEV. 9.3  
E. INV. = 4.8  
W. INV. = 4.8
- S-9 123 L.F. 24" RCP PIPE @ 0.15%
- S-10 TYPE "E" INLET PER FDOT INDEX # 232  
GRATE ELEV. 9.0  
W. INV. = 4.81  
E. INV. = 0.28
- S-11 55 L.F. 24" RCP PIPE @ 0.15%
- S-12 TYPE "E" INLET PER FDOT INDEX # 232  
GRATE ELEV. 4.5 (BUBBLE-UP)  
S. INV. = 0.00  
E. INV. = 0.00
- S-13 116 L.F. 30" RCP PIPE @ 0%
- S-14 TYPE "E" INLET PER FDOT INDEX # 232  
GRATE ELEV. 4.5 (BUBBLE-UP)  
N. INV. = 0.00  
W. INV. = 0.00
- S-15 VOID
- S-16 VOID
- S-17 VOID
- S-18 TYPE "E" INLET PER FDOT INDEX # 232  
GRATE ELEV. 8.4  
E. INV. = 0.14 (TOWARDS POND)  
W. INV. = 4.54
- S-19 28 L.F. 24" RCP PIPE @ 0.15%
- S-20 VOID
- S-21 79 L.F. 24" RCP PIPE @ 0.15%
- S-22 TYPE "E" INLET PER FDOT INDEX # 232  
GRATE ELEV. 8.9  
E. INV. = 4.66  
W. INV. = 4.66
- S-23 96 L.F. 24" RCP PIPE @ 0.16%
- S-24 TYPE "E" INLET PER FDOT INDEX # 232  
GRATE ELEV. 9.1  
E. INV. = 4.81  
W. INV. = 4.81
- S-25 74 L.F. 24" RCP PIPE @ 0.15%
- S-26 TYPE "E" INLET PER FDOT INDEX # 232  
GRATE ELEV. 9.0  
E. INV. = 4.92  
W. INV. = 4.92
- S-27 68 L.F. 18" RCP PIPE @ 0.15%
- S-28 TYPE "E" INLET PER FDOT INDEX # 232  
GRATE ELEV. 8.9  
E. INV. = 5.02  
W. INV. = 5.02
- S-29 VOID
- S-30 TYPE "E" INLET PER FDOT INDEX # 232  
GRATE ELEV. 8.7  
N. INV. = 5.12
- S-31 59 L.F. 18" RCP PIPE @ 0.14%
- S-32 59 L.F. 18" RCP PIPE @ 0.15%
- S-33 TYPE "E" INLET PER FDOT INDEX # 232  
GRATE ELEV. 8.5  
E. INV. = 5.11
- S-34 CONTROL STRUCTURE NO.1  
(SEE DETAIL SHEET C-10)
- S-35 21 L.F. 18" RCP PIPE @ 0.48%
- S-36 DRAINAGE WELL NO.1  
(SEE DETAIL SHEET C-10)
- S-37 CONTROL STRUCTURE NO.2  
(SEE DETAIL SHEET C-10)
- S-38 22 L.F. 18" RCP PIPE @ 0.45%
- S-39 DRAINAGE WELL NO.2  
(SEE DETAIL SHEET C-10)
- S-40 36 L.F. 18" RCP PIPE @ 0.14%
- S-41 TYPE "P" MANHOLE 0' 4"  
PER F.D.O.T. INDEX NO. 200 & 201  
RIM ELEV. = 9.22  
E. INV. = 3.28  
W. INV. = 3.28
- S-42 392 L.F. 18" RCP PIPE @ 0.15%
- S-43 DRAINAGE WELL NO.3  
(SEE DETAIL SHEET C-10)

**UTILITY LEGEND**



**PAD PREPARATION NOTE:**  
CONTRACTOR TO REFER TO GEOTECHNICAL REPORT BY PSI DATED FEB. 20, 2012 FOR PAD PREPARATION.

**DRAINAGE SYMBOLS LEGEND**



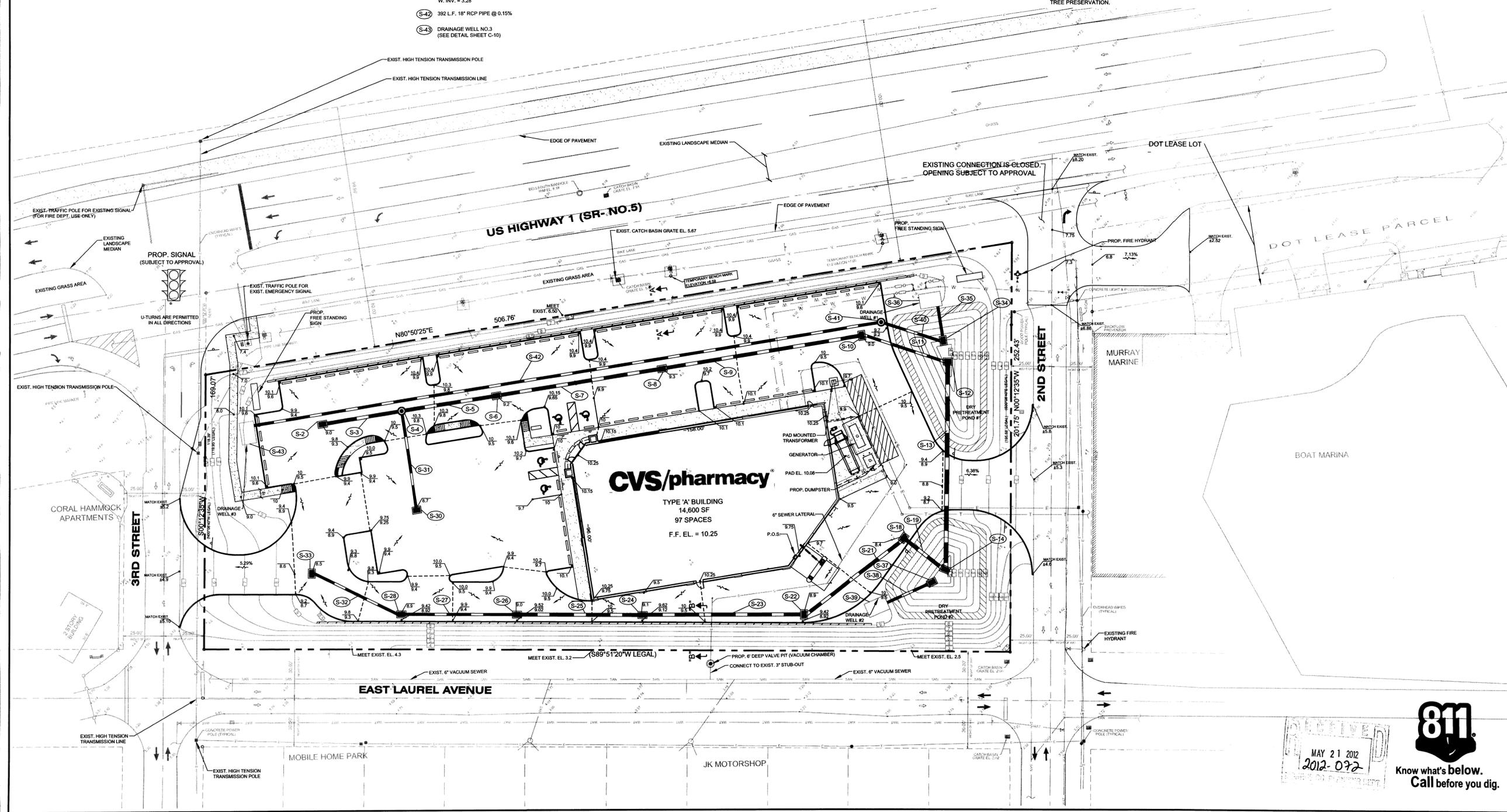
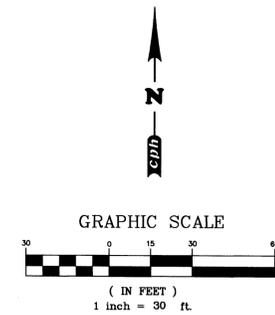
**EROSION SEDIMENTATION CONTROL NOTES**

MAINTENANCE OF EROSION CONTROL MEASURES IS OF PARAMOUNT IMPORTANCE TO CVS PHARMACY. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. THE EROSION CONTROL SYSTEM DESCRIBED WITHIN THE CONSTRUCTION DOCUMENTS SHOULD BE CONSIDERED TO REPRESENT THE MINIMUM ACCEPTABLE STANDARDS FOR THIS PROJECT. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDENT UPON THE STAGE OF CONSTRUCTION. THE SEVERITY OF THE RAINFALL EVENT AND/OR AS DEEMED NECESSARY AS A RESULT OF ON-SITE INSPECTIONS BY THE OWNER, THEIR REPRESENTATIVES OR THE JURISDICTIONAL AUTHORITIES. THESE ADDITIONAL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER. IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO ASSURE THAT THE STORM WATER DISCHARGE FROM THE SITE DOES NOT EXCEED THE TOLERANCES ESTABLISHED BY ANY OF THE JURISDICTIONAL AUTHORITIES. REFERENCE THE EROSION CONTROL PLAN AND DETAILS.

NOTE: THE PRESENCE OF GROUNDWATER MAY BE ENCOUNTERED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.

**STORM SYSTEM NOTES**

- ALL STRUCTURE INVERTS SHALL BE CONSTRUCTED PER F.D.O.T. INDEX NO. 201 UNLESS OTHERWISE NOTED.
- ALL DRAINAGE STRUCTURES, INCLUDING CLEAN-OUTS, SHALL BE INSTALLED WITH TRAFFIC BEARING GRATES, FRAMES, TOPS, RINGS AND COVERS, ETC., AS APPLICABLE.
- ALL PROPOSED INLET GRATES SHALL BE RETICULINE STEEL.
- SEE LANDSCAPE PLAN FOR SOG / SEED & MULCH LIMITS AND TREE PRESERVATION.



**CVS pharmacy**

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PHONE: (305) 828-8284  
FAX: (305) 828-9594

**B** Boos Development Group, Inc.

SEAL:

REVISIONS:

DRAWING BY: TEAM  
DATE: MARCH 29, 2012  
JOB NUMBER: B11269

GRADING AND DRAINAGE PLAN  
SHEET NUMBER:  
C-5

COMMENTS:  
NOT RELEASED FOR CONSTRUCTION





THIS PLAN HAS BEEN PREPARED TO ENSURE COMPLIANCE WITH RULES OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, CHAPTER 17-25 FAC.

**SITE**

- A. SITE CONDITIONS**
1. SITE OPERATOR (CONTRACTOR) SHALL PREPARE A CONSTRUCTION SCHEDULE THAT INCLUDES THE DATE GRADING WILL BEGIN AND THE EXPECTED DATE OF STABILIZATION AND SHALL INCLUDE THE CONSTRUCTION SCHEDULE AS PART OF THIS STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
  2. SEQUENCE OF IMPLEMENTATION OF CONTROLS
  3. INSTALLATION OF CONTROL MEASURES
  4. CLEARING, GRUBBING AND EXCAVATION
  5. CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE BUILDING, SITE DEVELOPMENT, AND INFRASTRUCTURE NECESSARY TO SERVE THE PROPOSED PROJECT.
  6. FINAL STABILIZATION.

**CONTROLS**

EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO, OR AS THE FIRST STEP IN CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. THE EROSION CONTROL SYSTEM DESCRIBED WITHIN THE CONSTRUCTION DOCUMENTS SHOULD BE CONSIDERED TO REPRESENT THE MINIMUM ACCEPTABLE STANDARDS FOR THIS PROJECT. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDENT UPON THE STAGE OF CONSTRUCTION, THE SEVERITY OF THE RAINFALL EVENT AND/OR AS DEEMED NECESSARY AS A RESULT OF ON-SITE INSPECTIONS BY THE OWNER, THEIR REPRESENTATIVES, OR THE APPLICABLE JURISDICTIONAL AUTHORITIES. THESE ADDITIONAL MEASURES (IF NEEDED) SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER. IT IS NOTED THAT THE MEASURES IDENTIFIED ON THIS PLAN ARE ONLY SUGGESTED BEST MANAGEMENT PRACTICES (BMPs). THE CONTRACTOR SHALL PROVIDE POLLUTION PREVENTION AND EROSION CONTROL MEASURES AS SPECIFIED IN FOOT NOTES FROM THROUGH FOOT AND AS NECESSARY FOR EACH SPECIFIC APPLICATION. IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO ASSURE THAT THE STORMWATER DISCHARGE FROM THE SITE DOES NOT EXCEED THE TOLERANCES ESTABLISHED BY ANY OF THE APPLICABLE JURISDICTIONAL AUTHORITIES.

**PROTECTION OF SURFACE WATERS**

- A. WHERE PRACTICAL, STORMWATER SHALL BE CONVEYED BY SWALES. SWALES SHALL BE CONSTRUCTED AS SHOWN ON PLANS.**
- B. EROSION CONTROL MEASURES SHALL BE EMPLOYED TO MINIMIZE TURBIDITY OF SURFACE WATERS WILL BE SITE SPECIFIC, THEY SHALL BE EMPLOYED AS NEEDED IN ACCORDANCE WITH THE FOLLOWING:**
- I. IN GENERAL, EROSION SHALL BE CONTROLLED AT THE FURTHEST PRACTICAL UPSTREAM LOCATION.
  - II. NEW AND EXISTING STORMWATER INLETS AND OUTFALL STRUCTURES SHALL BE PROTECTED DURING CONSTRUCTION. PROTECTION MEASURES SHALL BE EMPLOYED IMMEDIATELY AS REQUIRED DURING THE VARIOUS STAGES OF CONSTRUCTION.
  - III. PERIMETER EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL FINAL SITE STABILIZATION HAS BEEN ESTABLISHED.
- C. HEAVY CONSTRUCTION EQUIPMENT PARKING AND MAINTENANCE AREAS SHALL BE DESIGNED TO PREVENT OIL, GREASE, AND LUBRICANTS FROM ENTERING SITE DRAINAGE FEATURES INCLUDING STORMWATER COLLECTION AND TREATMENT SYSTEMS. CONTRACTORS SHALL PROVIDE BROAD DIKES OR SILT SCREENS AROUND, AND SEDIMENT SUMPS WITHIN, SUCH AREAS AS REQUIRED TO CONTAIN SPILLS OF OIL, GREASE, LUBRICANTS, OR OTHER CONTAMINANTS. CONTRACTORS SHALL HAVE AVAILABLE AND SHALL USE ABSORBENT FILTER PADS TO CLEAN UP SPILLS IMMEDIATELY.**

**A. EROSION AND SEDIMENT CONTROLS**

**GENERAL EROSION CONTROL**

1. CLEARING AND GRUBBING OPERATIONS SHALL BE CONTROLLED SO AS TO MINIMIZE UNPROTECTED ERODIBLE AREAS EXPOSED TO WEATHER. GENERAL EROSION CONTROL BMPs SHALL BE EMPLOYED TO MINIMIZE SOIL EROSION AND OFF-SITE SEDIMENTATION. WHILE THE VARIOUS TECHNIQUES REQUIRED WILL BE SITE AND PLAN SPECIFIC, THEY SHOULD BE EMPLOYED PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. EXCAVATED MATERIAL WILL NOT BE DEPOSITED IN LOCATIONS WHERE IT COULD BE WASHED AWAY BY HIGH WATER OR STORM WATER RUNOFF. STOCKPILED MATERIAL SHALL BE COVERED OR ENCRUSTED WITH SEDIMENT CONTAINMENT DEVICES.
3. STABILIZATION MEASURES SHALL BE INITIATED FOR EROSION AND SEDIMENT CONTROL ON DISTURBED AREAS AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. CLEARED SITE DEVELOPMENT AREAS WHICH WILL REMAIN AT ROUGH GRADE FOR 14 DAYS OR MORE SHOULD BE STABILIZED IMMEDIATELY BY COVERING WITH ADEQUATE AMOUNTS OF HAY, COVER SEEDS AND PERIODICALLY WATERED. SUFFICIENT TO STABILIZE THE TEMPORARY GROUND COVER, OR BY THE USE OF AN APPROPRIATE ALTERNATIVE BMP.
4. ALL GRASS SLOPES CONSTRUCTED STEEPER THAN 4H:1V SHALL BE SODDED IMMEDIATELY AFTER FINAL GRADE IS ESTABLISHED.
5. WHERE REQUIRED TO PREVENT EROSION FROM SHEET FLOW ACROSS BARE GROUND FROM ENTERING A LAKE OR SWALE, A TEMPORARY SEDIMENT SUMP SHALL BE CONSTRUCTED. THE TEMPORARY SEDIMENT SUMP SHALL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED ON THE GROUND DRAINING TO THE SUMP.
6. PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREAS SHALL BE COMPLETED IMMEDIATELY AFTER FINAL GRADING. WHEN IT IS NOT POSSIBLE TO PERMANENTLY PROTECT A DISTURBED AREA IMMEDIATELY AFTER GRADING OPERATIONS, TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED. ALL TEMPORARY PROTECTION SHALL BE MAINTAINED UNTIL PERMANENT MEASURES ARE IN PLACE AND ESTABLISHED.

**CONTROL OF WIND EROSION**

1. BARE EARTH AREAS SHALL BE WATERED DURING CONSTRUCTION AS NECESSARY TO MINIMIZE THE TRANSPORT OF FUGITIVE DUST. IT MAY BE NECESSARY TO LIMIT CONSTRUCTION VEHICLE SPEED IF BARE EARTH HAS NOT BEEN EFFECTIVELY WATERED. IN NO CASE SHALL FUGITIVE DUST BE ALLOWED TO LEAVE THE SITE UNDER CONSTRUCTION.
  2. AS REQUIRED AFTER COMPLETION OF CONSTRUCTION, BARE EARTH AREAS SHALL BE VEGETATED.
  3. AT ANY TIME BOTH DURING AND AFTER SITE CONSTRUCTION THAT WATERING AND/OR VEGETATION ARE NOT EFFECTIVE IN CONTROLLING WIND EROSION AND/OR TRANSPORT OF FUGITIVE DUST, OTHER METHODS AS ARE NECESSARY FOR SUCH CONTROL, SHALL BE EMPLOYED. THESE METHODS MAY INCLUDE ERECTION OF DUST CONTROL FENCES. IF REQUIRED, DUST CONTROL FENCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAIL FOR A SILT FENCE EXCEPT THE MINIMUM HEIGHT SHALL BE 4 FEET. IN ADDITION TO THOSE RESPONSIBILITIES OUTLINED WITHIN THE CONSTRUCTION PLANS AND DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING MEASURES:
    1. PROJECT SCHEDULE WITH EROSION AND SEDIMENT CONTROL INSTALLATION AND MAINTENANCE TIED TO SPECIFIC DATES OF CONSTRUCTION ACTIVITIES.
    2. ALTERATIONS TO THE DESIGN EROSION AND SEDIMENT CONTROLS DUE TO DIFFERENCES BETWEEN THE DESIGN PLANS AND ANTICIPATED CONSTRUCTION PHASING AND THE CONTRACTOR'S CONSTRUCTION METHODS.
    3. NAME AND PHONE NUMBER OF CONTRACTOR'S REPRESENTATIVE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROL INSTALLATION AND MAINTENANCE ON A 24 HOUR BASIS.
    4. THE CONTRACTOR WILL FURNISH, INSTALL, MAINTAIN AND SUBSEQUENTLY REMOVE ALL NECESSARY EROSION CONTROL. THE CONTRACTOR WILL FURNISH AND INSTALL ALL NECESSARY PERMANENT EROSION CONTROLS.
    5. THE DEVELOPMENT OF THE APPLICABLE BMPs TO ENSURE THE CONTROL OF OFF-SITE TRACKING (SPILLAGE, SANITARY WASTE, FERTILIZERS & PESTICIDES, SOLID WASTE DISPOSAL, AND NON-STORMWATER DISCHARGES & HAZARDOUS WASTE, WHEN THE CONTRACTOR ENCOUNTERS A SPILL, CONSTRUCTION WILL STOP AND WORK WILL NOT RESUME UNTIL DIRECTED BY THE PROJECT ENGINEER. DISPOSAL OF HAZARDOUS WASTE WILL BE MADE IN ACCORDANCE WITH ANY REQUIREMENTS AND REGULATIONS OF ANY LOCAL, STATE, OR FEDERAL AGENCY HAVING JURISDICTION.
- THE CONTRACTOR IS ADVISED THAT THE CONTRACT DRAWINGS ONLY INDICATE EROSION, SEDIMENT, AND TURBIDITY CONTROLS AT LOCATIONS DETERMINED IN THE DESIGN PROCESS. HOWEVER, THE CONTRACTOR IS REQUIRED TO PROVIDE ANY ADDITIONAL CONTROLS NECESSARY TO PREVENT THE POSSIBILITY OF SILTING ANY ADJACENT LOWLAND PARCEL OR RECEIVING WATER.

**STORM WATER MANAGEMENT**

THE STORM WATER RUNOFF FROM THE PROJECT AREA WILL BE COLLECTED IN A SYSTEM OF INLETS AND CONVEYED TO A DRY PRETREATMENT POND FOR WATER QUALITY TREATMENT. AFTER THAT IT WILL BE DIRECTED TO DRAINAGE WELLS ON-SITE.

**MAINTENANCE**

MAINTENANCE OF EROSION CONTROL DEVICES IS OF PARAMOUNT IMPORTANCE TO CVS PHARMACY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL POLLUTION PREVENTION CONTROLS. DAILY REVIEW SHALL BE MADE BY THE CONTRACTOR TO DETERMINE IF CONSTRUCTION ACTIVITIES HAVE ALTERED THE EFFECTIVENESS OF EROSION, SEDIMENTATION, TURBIDITY, AND POLLUTION CONTROL MEASURES. CORRECTIVE ACTION SHALL BE PERFORMED IMMEDIATELY. THE CONTRACTOR WILL COMPLETE A REPORT DETAILING MEASURES THAT ARE NOT ACHIEVING PERMIT COMPLIANCE AND THE CORRECTIVE ACTION THAT IS TAKEN, UNLESS OTHERWISE SPECIFIED. ACCUMULATED SEDIMENTS SHOULD BE REMOVED BEFORE THEY REACH ONE-HALF OF THE CAPACITY OF THE CONTROL DEVICE.

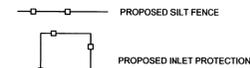
**INSPECTION**

THE CONTRACTOR IS REQUIRED TO INSPECT AND MAINTAIN CONTROLS WEEKLY AND WITHIN 24 HOURS AFTER A RAINFALL IN EXCESS OF 0.25 INCHES. THE CONTRACTOR SHALL REPORT ALL INSPECTION FINDINGS AND CORRECTIVE ACTIONS TAKEN AS A RESULT OF THE INSPECTION. INSPECTION REPORTS SHALL BE SIGNED BY THE INSPECTOR AND CONTRACTOR AND MAINTAINED FOR FUTURE REFERENCE AS NEEDED. THE INSPECTOR MUST BE A QUALIFIED EROSION AND SEDIMENT CONTROL INSPECTOR AS DEFINED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

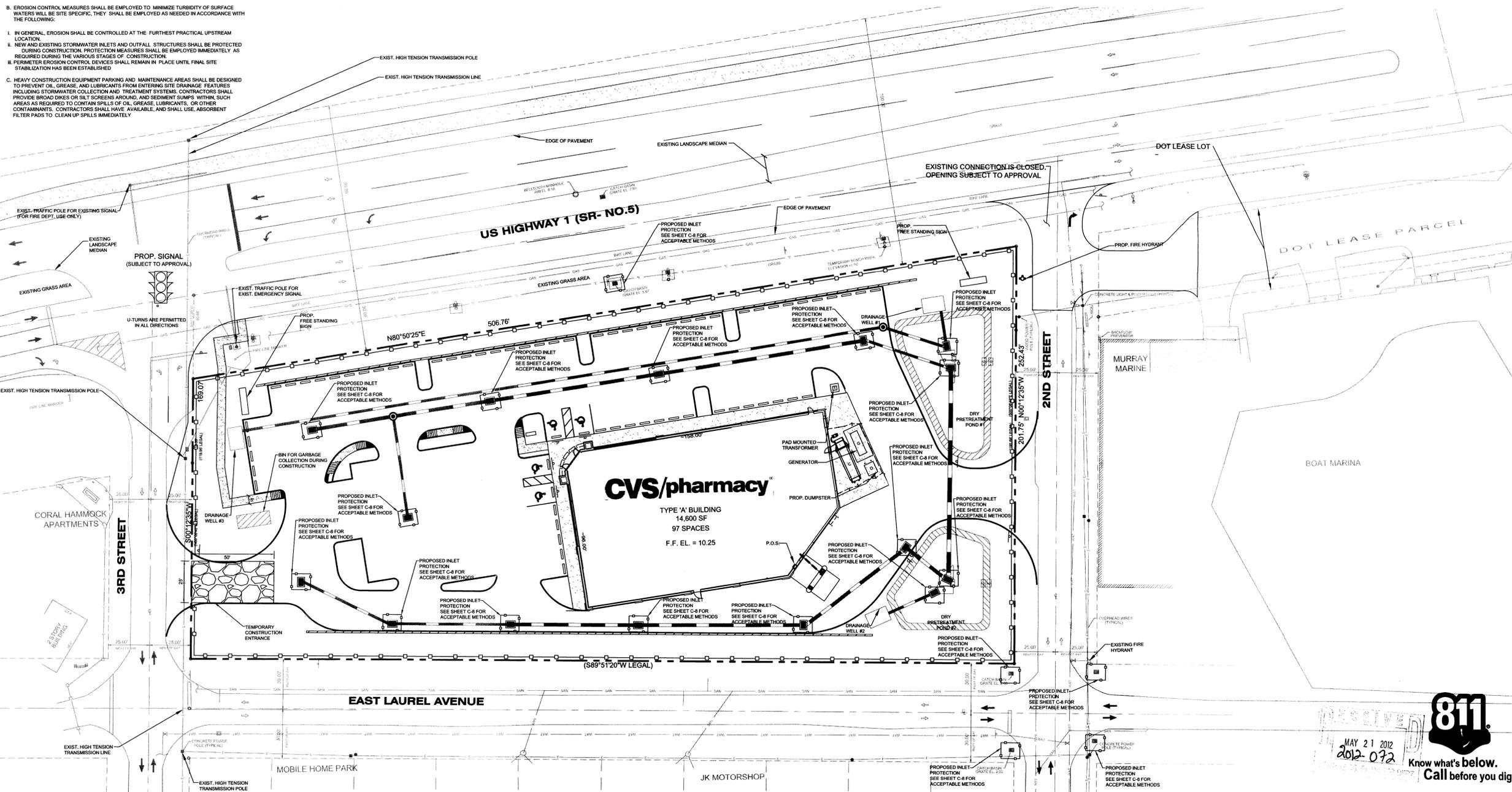
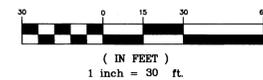
IT IS THE CONTRACTOR'S RESPONSIBILITY (FOR ALL SITES WHICH ARE ONE (1) ACRE AND GREATER) TO FILE NOTICE OF INTENT (NOI) FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER A NPDES GENERAL PERMIT (EPA FORM 4510-9 OR LATEST VERSION) TO EPA AND "NOTICE OF INTENT TO USE GENERAL PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES" (DEP FORM 62-621.300(4)(B) OR LATEST VERSION) TO FDEP TO THE FOLLOWING ADDRESSES:

1. STORM WATER NOTICE OF INTENT (4203M) USEPA 1200 PENNSYLVANIA AVENUE NW WASHINGTON, D.C. 20460
2. NPDES STORMWATER NOTICES CENTER, MS #2510 FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION 2600 BLAIR STONE ROAD TALLAHASSEE, FLORIDA 32399-2400

**DRAINAGE SYMBOLS LEGEND**



**GRAPHIC SCALE**



PROTOTYPICAL 14,600  
CHAMFER DRIVE-THRU  
STORE NUMBER: # 10122  
5610 OVERSEAS HIGHWAY  
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DEAL TYPE: FEE FOR SERVICE  
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Construction Management  
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MARIA C. ZAPATA, P.E.  
REG.# 9457  
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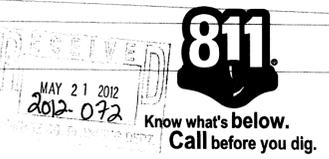
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Development  
Group, Inc.

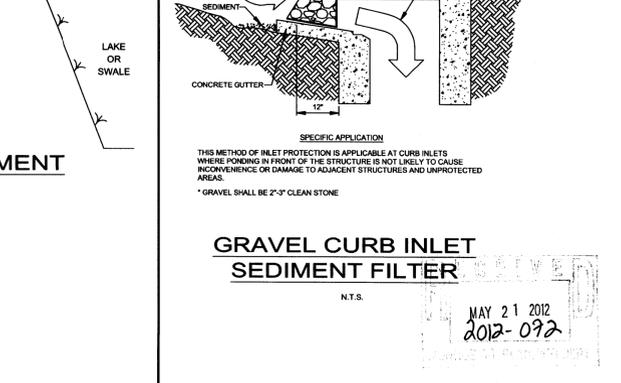
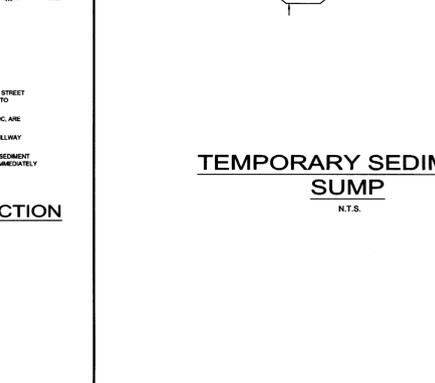
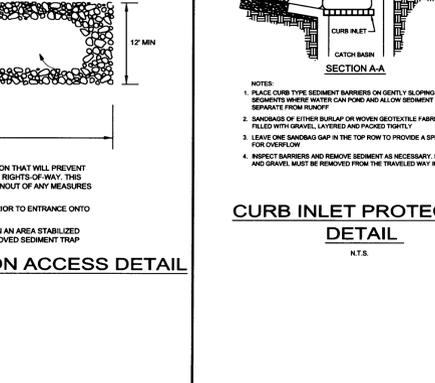
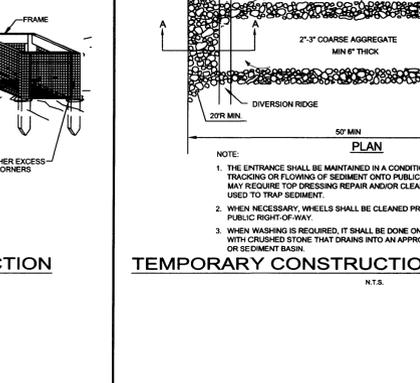
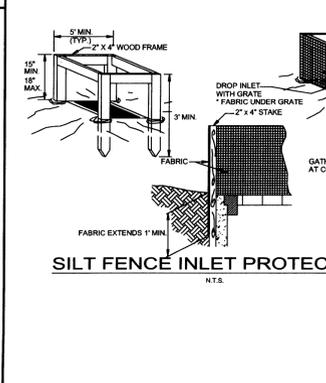
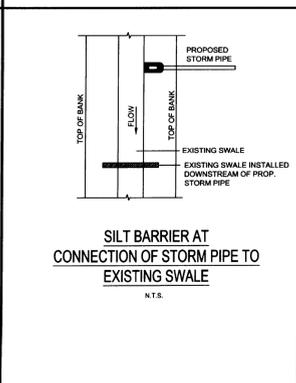
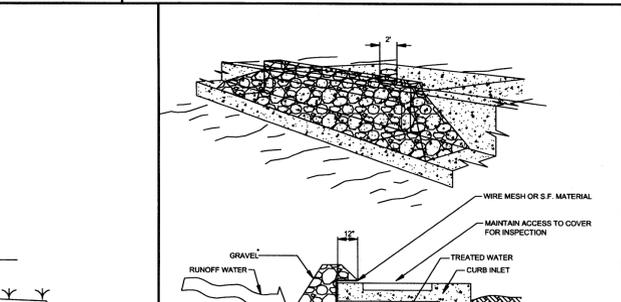
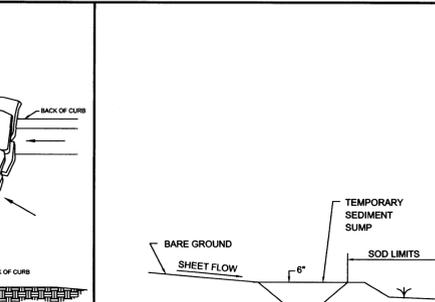
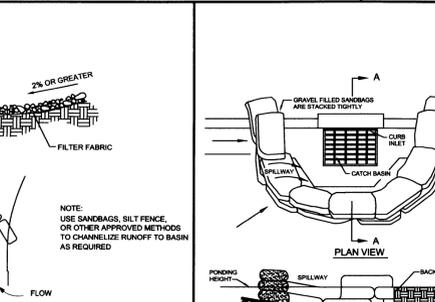
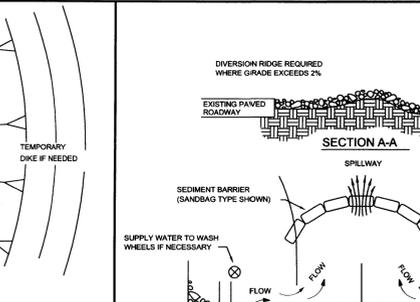
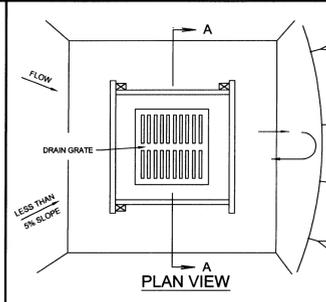
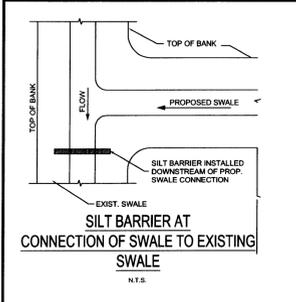
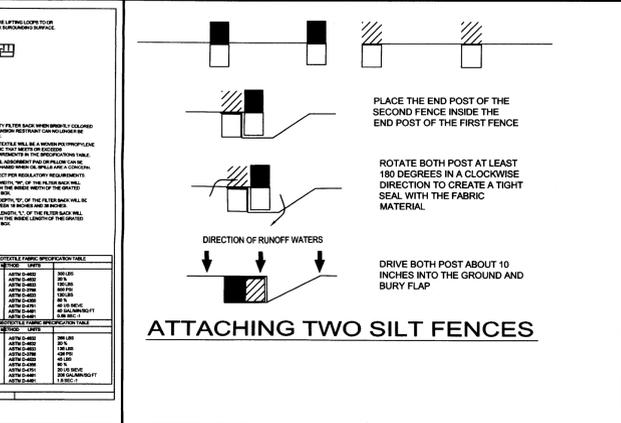
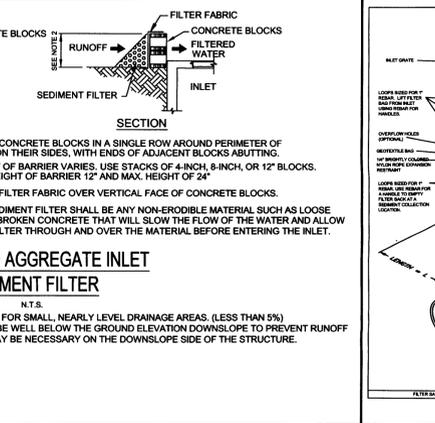
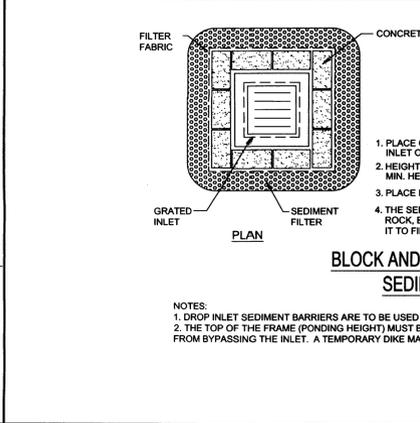
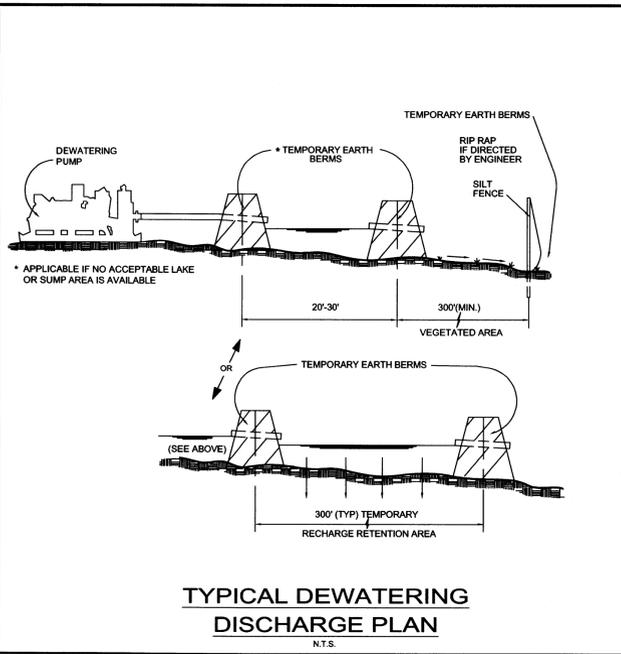
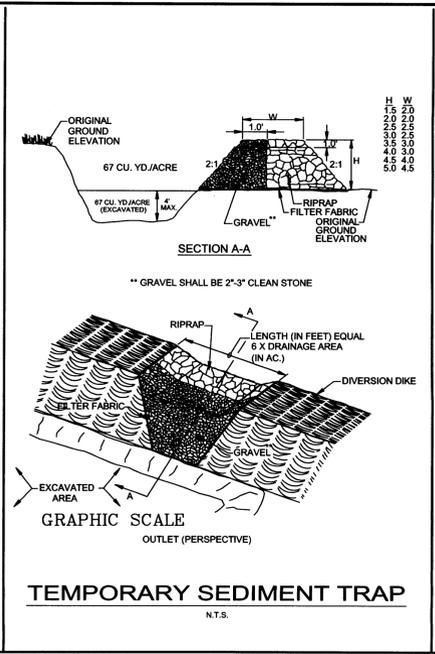
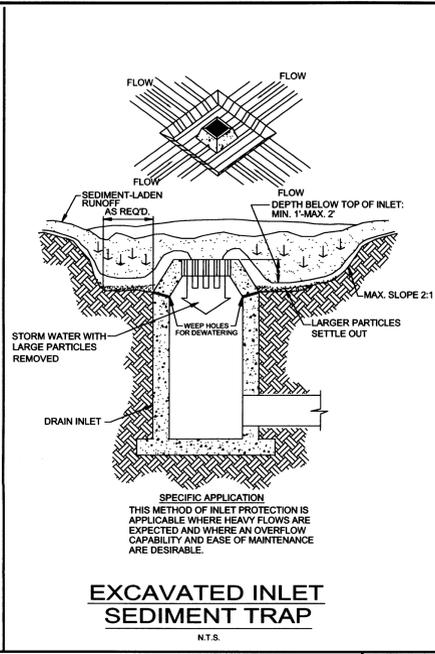
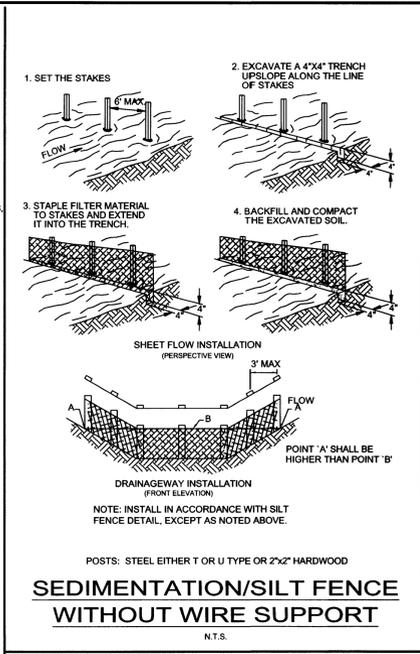
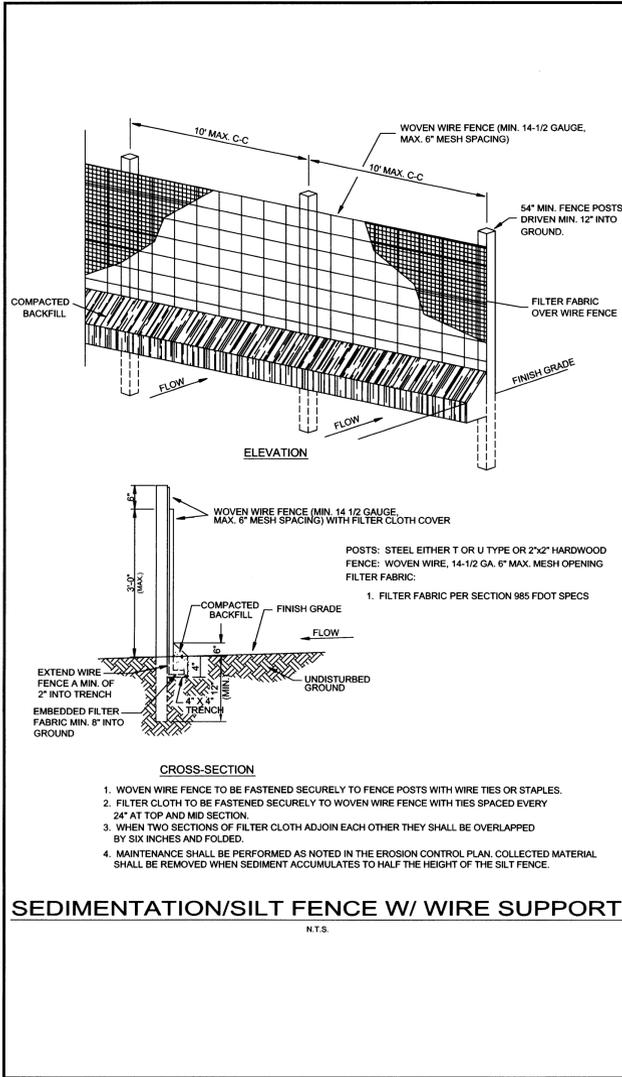
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REVISIONS:

NO.	DESCRIPTION	DATE

DRAWING BY: TEAM  
DATE: MARCH 29, 2012  
JOB NUMBER: B11269  
TITLE: EROSION AND SEDIMENTATION PLAN  
SHEET NUMBER: C-7  
COMMENTS: NOT RELEASED FOR CONSTRUCTION





**CVS pharmacy**

PROTOTYPICAL 14,600  
CHAMFER DRIVE-THRU  
STORE NUMBER: # 10122  
5610 OVERSEAS HIGHWAY  
STOCK ISLAND, FLORIDA  
PROJECT TYPE: NEW  
DEAL TYPE: FEE FOR SERVICE  
CS PROJECT NUMBER: 66622

CONSULTANT:

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Surveyors  
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**Boos Development Group, Inc.**

SEAL:

REVISIONS:

DRAWING BY: TEAM  
DATE: MARCH 29, 2012  
JOB NUMBER: B11269  
TITLE: STORMWATER POLLUTION PREVENTION NOTES AND DETAILS  
SHEET NUMBER: C-8  
COMMENTS: NOT RELEASED FOR CONSTRUCTION





PROTOTYPICAL 14,600  
 CHAMFER DRIVE-THRU  
 STORE NUMBER: # 10122  
 5810 OVERSEAS HIGHWAY  
 STOCK ISLAND, FLORIDA  
 PROJECT TYPE: NEW  
 DEAL TYPE: FEE FOR SERVICE  
 CS PROJECT NUMBER: 66622

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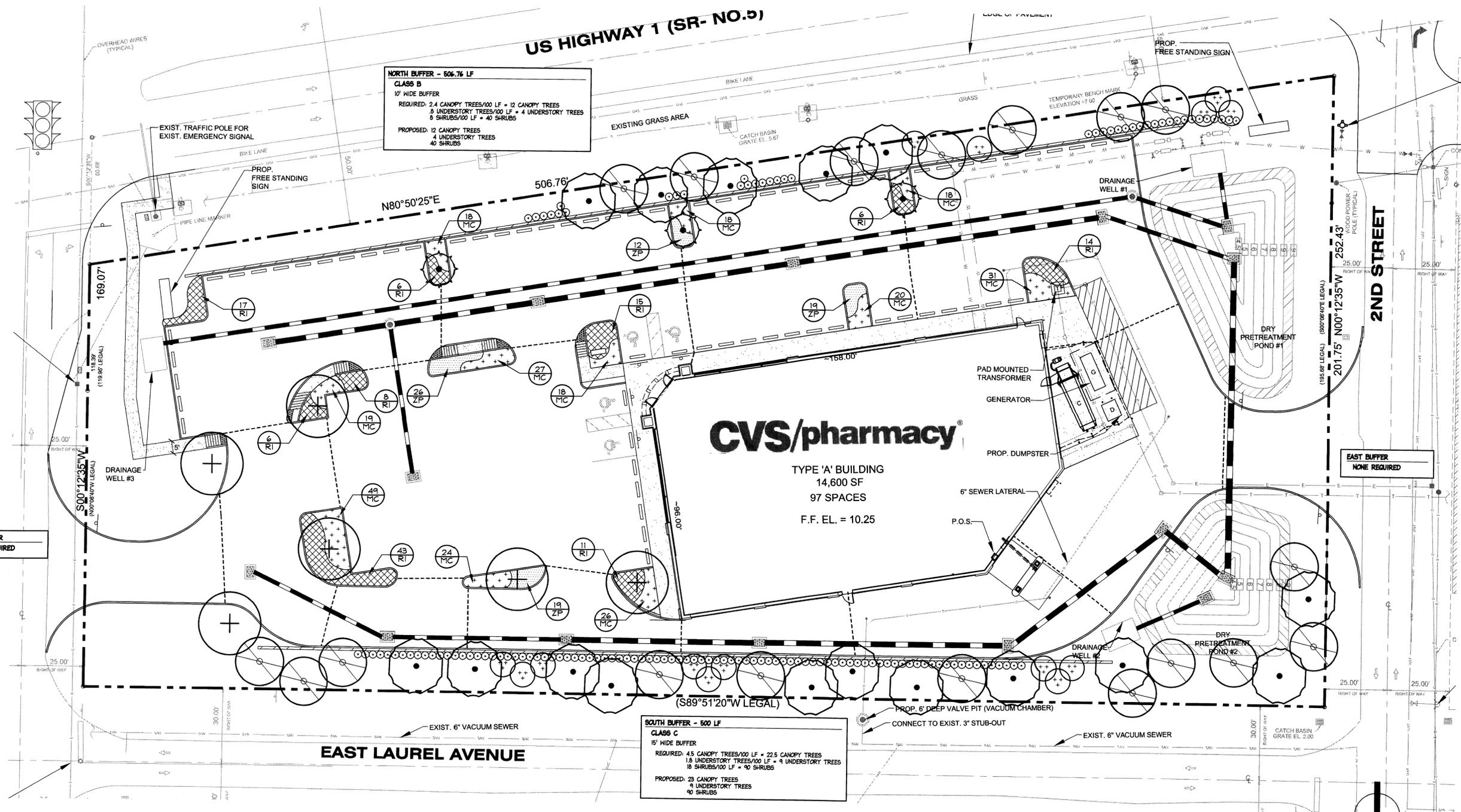


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DRAWING BY: RES  
 DATE: MAY 11, 2012  
 JOB NUMBER: B11269  
 TITLE: LANDSCAPE PLAN  
 SHEET NUMBER: L-1

COMMENTS:  
 NOT RELEASED FOR CONSTRUCTION

MAY 21 2012  
 2012-072



**VEHICULAR USE AREA**  
**CLASS C REQUIRED**  
 480 SF OF PLANTING AREA/24 PARKING SPACES  
 47 SPACES PROPOSED = 97/24 = 4.04x480 = 1788 SF REQUIRED  
 5286 SF PROPOSED

2 CANOPY TREES/24 PARKING SPACES = 8 CANOPY TREES REQUIRED  
 8 CANOPY TREES PROPOSED

5 SHRUBS/24 PARKING SPACES = 20 SHRUBS REQUIRED  
 20+ SHRUBS PROPOSED

**NORTH BUFFER - 506.76 LF**  
**CLASS B**  
 10' WIDE BUFFER  
 REQUIRED: 2.4 CANOPY TREES/100 LF = 12 CANOPY TREES  
 3 UNDERSTORY TREES/100 LF = 4 UNDERSTORY TREES  
 8 SHRUBS/100 LF = 40 SHRUBS

PROPOSED: 12 CANOPY TREES  
 4 UNDERSTORY TREES  
 40 SHRUBS

**SOUTH BUFFER - 500 LF**  
**CLASS C**  
 15' WIDE BUFFER  
 REQUIRED: 4.5 CANOPY TREES/100 LF = 22.5 CANOPY TREES  
 1.8 UNDERSTORY TREES/100 LF = 9 UNDERSTORY TREES  
 18 SHRUBS/100 LF = 90 SHRUBS

PROPOSED: 23 CANOPY TREES  
 9 UNDERSTORY TREES  
 90 SHRUBS

**PLANT LIST**

SYM.	COMMON NAME	BOTANICAL NAME	DESCRIPTION	QTY
<b>TREES</b>				
CE	SILVER BUTTWOOD	CONOCARPUS ERECTUS	30 GAL., 12' MIN. HT., STANDARD	18
CO	SATINLEAF	CHRYSOPHYLLUM OLIVIFORME	25 GAL., 12' MIN. HT.	16
CS	GEIGER TREE	CORDIA SEBESTENA	30 GAL., 12' MIN. HT.	6
EA	WHITE STOPPER	EUGENIA AXILLARIS	15 GAL., 5' MIN. HT., STANDARD	14
SP	CABBAGE PALM	SABAL PALMETTO	12' MIN. C.T.	3
<b>HEDGES &amp; ACCENT</b>				
MF	SIMPSON STOPPER	MYRTICANTHES FRAGRANS	3 GAL., 30' MIN. HT., 36' O.C.	130
<b>SHRUBS &amp; GROUNDCOVER</b>				
RI	INDIAN HAWTHORN	RHAPHIDOLEPIS INDICA	3 GAL., 12' MIN. HT., 12' SPRD., 36' O.C.	126
MC	MULHY GRASS	MULHINBERGIA CAPILLARIS	3 GAL., FULL, 24" O.C.	268
ZP	COONTIE	ZAMIA PUMILA	1 GAL., FULL, 24" O.C.	76
BAHIA	ARGENTINE BAHIA SOD	PASPALUM NOTATUM 'ARGENTINE'	SOLID SOD, CONTRACTOR TO VERIFY QTY.	
SOD	ST. AUGUSTINE GRASS	STENOTAPHRUM SECUNDATUM	SOLID SOD, CONTRACTOR TO VERIFY QTY.	

**NOTE:**  
 PLANT DESCRIPTIONS ARE FOR MINIMUM ACCEPTABLE SPECIFICATIONS. ALL CRITERIA LISTED FOR CONTAINER SIZE, CALIPER, HEIGHT, SPREAD, ETC. MUST BE MET FOR PLANT MATERIAL ACCEPTANCE. FOR EXAMPLE, IF A THREE GALLON SHRUB DOES NOT MEET THE HEIGHT OR SPREAD SPECIFICATION, IT WILL NOT BE ACCEPTED.

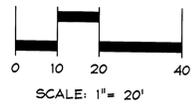
IF SPECIFIED PLANTS ARE UNAVAILABLE AT TIME OF CONSTRUCTION, CONTRACTOR MAY REPLACE SPECIFIED PLANTS WITH PLANTS APPROVED BY LANDSCAPE ARCHITECT AND CITY STAFF.

ALL OPEN SPACE AREAS WITHIN THE PROPERTY SHALL BE SODDED UNLESS PAVED, SEEDDED AND MULCHED OR PLANTED WITH SHRUBS AND GROUND COVER.

ALL LANDSCAPED AREAS WILL BE 100% IRRIGATED WITH A CENTRAL AUTOMATIC IRRIGATION SYSTEM INCLUDING A RAIN SENSOR.

CONTRACTOR TO MODIFY EXISTING IRRIGATION SYSTEM TO INSURE ADEQUATE IRRIGATION FOR ALL NEW PLANT MATERIAL.

CONTRACTOR SHALL REPLACE ANY EXISTING SOD OR OTHER PLANT MATERIALS DAMAGED DURING CONSTRUCTION IN AREAS THAT ARE OUTSIDE PROPOSED LANDSCAPE AS SHOWN ON THE PLAN.







**Traffic Impact Study**  
**For Submittal to FDOT & Monroe County**

**CVS Pharmacy, Stock Island**  
**Northeast Quadrant of US 1 (Overseas Highway & 3<sup>rd</sup> Street)**  
**Stock Island, Monroe County, Florida**

*Prepared for:*



2651 McCormick Drive  
Clearwater, FL 33759

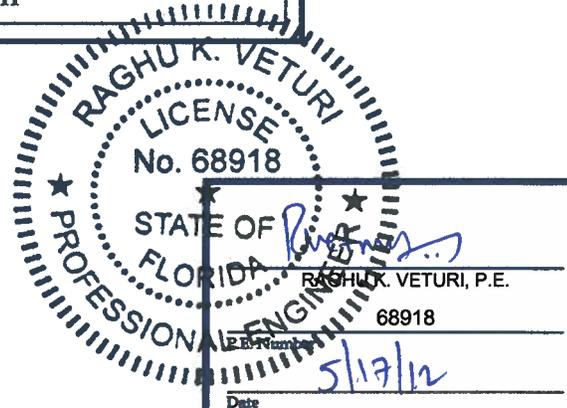
May 2012



**Engineers**  
**Planners**  
**Landscape Architects**  
**Surveyors**  
**Construction Management**  
**Design/Build**

Certificate of Authorization No. 00003215

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APPENDIX B ITE TRIP GENERATION

APPENDIX C TRAFFIC DATA

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APPENDIX F REFERENCES

## 1.0 Executive Summary

The applicant proposes to develop a 14,600 square foot (sf) CVS Pharmacy located in the northeast corner of the intersection of US 1 (Overseas Highway) & 3rd Street, Stock Island, Monroe County, Florida (see Figure 1, Site Location Map). The project is planned to be operational in the year 2013. CPH Engineers, Inc. (CPH) has prepared this Traffic Impact Study for submittal to the Monroe County and the Florida Department of Transportation to address the impacts of the project including traffic concurrency requirements and to provide specific recommendations for safe and adequate ingress and egress to and from the site.

Access from the site to the roadway network is proposed via two access points described as:

- a full-access driveway on 3<sup>rd</sup> Street; and
- a full-access driveway on 2<sup>nd</sup> Street.

The proposed project is anticipated to generate less than 100 trips per 1000 sq.ft. on a daily basis. Therefore this project is considered as a minor conditional use. Based upon the analysis, the roadway segments in the study area are anticipated to operate with adequate capacity and thus acceptable LOS with the addition of future background trips and project trips.

Based upon the intersection analysis conducted, the study area signalized intersections are expected to operate at LOS D or better. The study area unsignalized intersections are expected to operate at acceptable levels of service with the exception of US 1 & College Road North. For the intersection of US 1 & College Road North, the westbound stop controlled approach is expected to operate at LOS F, indicating that the side street LOS and delay are calculated regardless of the volume of minor-street left turning traffic. Generally longer minor street delays are considered tolerable, such as in this instance where there is a need for progression along major streets.

To provide for safe and adequate access to and from the site, the applicant is proposing to construct a traffic signal at the intersection of US 1 & 3<sup>rd</sup> Street. Based upon traffic signal warrant analysis conducted at this intersection (provided under separate cover), a traffic signal is warranted and is recommended for installation.

For the intersection of US 1 & 3<sup>rd</sup> Street, the westbound right-turn lane length required is 350 feet. However, due to existing constraints such as at-grade high power transmission poles and proximity of the driveway, a total turn lane length of 90 feet was provided at this intersection. Further coordination with the County staff will be required regarding the feasibility of this turn lane.

## 2.0 Introduction

The Applicant proposes to develop a 14,600 square foot (sf) CVS Pharmacy located in the northeast corner of the intersection of US 1 (Overseas Highway) & 3rd Street, Stock Island, Monroe County, Florida. See Figure 1 and 2 for site location map for reference. The site is currently vacant. The project is anticipated to be completed and operational in the year 2013. The report is being provided in accordance with the Monroe County requirements for a traffic impact study. This report addresses the following:

1. traffic impacts of the project
2. traffic concurrency requirements
3. specific recommendations for safe and adequate access to and from the site.

CPH coordinated with the Monroe County Consultant staff prior to commencing the study, submitted a traffic impact study methodology, and implemented agreed upon methodology discussions in conducting this study.



**FIGURE 2-1 SITE LOCATION MAP**

**CVS Pharmacy, Stock Island, FL  
NE Quadrant of US 1 & 3<sup>rd</sup> Street  
Monroe County, Florida**



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## 2.1 Traffic Impact Analysis Procedures

This analysis was conducted for the proposed project based upon the agreed upon methodology with the County's consultant and subsequent coordination. The facilities to be analyzed include the following roadways and intersections. Please see the attached methodology correspondence Appendix A for reference.

### ***Intersections***

- US 1 & Roosevelt Boulevard;
- US 1 & College Road North;
- US 1 & Cross Street;
- US 1 & McDonald Avenue;
- US 1 & 3<sup>rd</sup> Street;
- US 1 & College Parkway North;
- US 1 & Key Haven Boulevard; and
- US 1 & 2<sup>nd</sup> Street.

### ***Roadway Segments***

- Segments 1 through 9 (MM 4.0 to MM 29.5).

In addition to the above analysis, a traffic signal warrant analysis at the intersection of US 1 & 3<sup>rd</sup> Street was conducted using projected traffic volumes and based upon the requirements published in *Manual on Uniform Traffic Control Devices (MUTCD)*. This report is provided under separate cover.

## 2.2 Site Access

Access to the site is proposed through the following driveways:

- a full access driveway on 3<sup>rd</sup> Street which connects to the intersection of US 1 & 3<sup>rd</sup> Street;
- a full access driveway on 2<sup>nd</sup> Avenue, 2<sup>nd</sup> Avenue is currently closed and is proposed to be opened for connection to US 1. The applicant is pursuing re-opening of 2<sup>nd</sup> Street connection to US 1.

### 2.3 Data Collection

PM peak hour turning movement count data was collected at the following study area intersections:

- US 1 & Roosevelt Boulevard;
- US 1 & College Road North;
- US 1 & Cross Street;
- US 1 & McDonald Avenue;
- US 1 & 3<sup>rd</sup> Street;
- US 1 & College Parkway North; and
- US 1 & Key Haven Boulevard;

Raw turning movement count data for the study area intersections are attached in the Appendix C. Appropriate Peak Season Correction Factor (PSCF) was applied to the raw turning movement counts based upon PSCF factors published by the FDOT for Monroe County. Please refer to the attached PSCF sheet in Appendix C.

### 3.0 Project Trip Generation

The trip generation potential for the proposed project was determined based upon *the Institute of Transportation Engineers (ITE) Trip Generation, 8th Edition*. ITE land use code 881, Pharmacy/Drugstore with Drive-Through Window was used for the proposed project. A pass-by rate of 49% was applied based upon *ITE Trip Generation Handbook, 2nd Edition*. Table 3-1, shows a summary of ITE Trip Generation. Please see Appendix B for ITE Trip Generation worksheets.

**Table 3-1 ITE Trip Generation**

Land Use	ITE Land Use Code	Size (ksf's)	Gross Daily	Net-New PM Peak Hour Trips
Pharmacy/Drugstore with Drive-Through Window	881	14.6	1,287	77

Note: ksf = thousand square feet

Based upon preliminary trip generation projection, it is anticipated that the proposed project will generate 1,287 gross daily trips and 77 net-new pm peak hour trips after subtracting the trips from the existing land use. Please see the attached trip generation worksheets in Appendix B for reference.

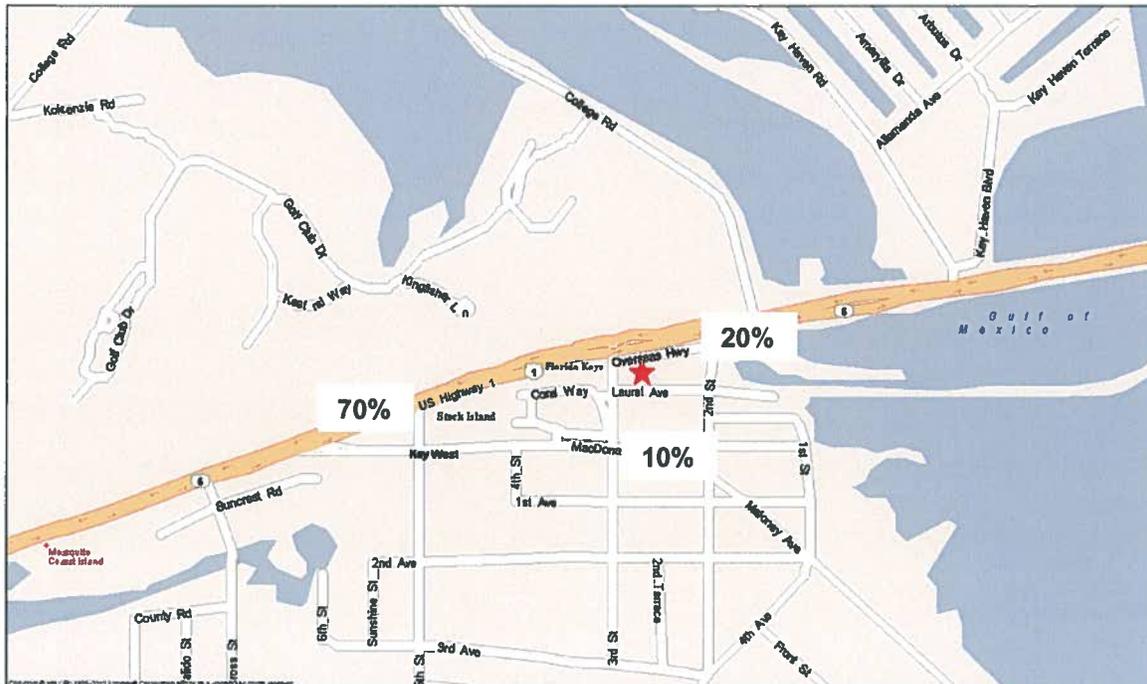
#### 4.0 Project Trip Distribution and Assignment

Trip distribution for the proposed project was determined based upon existing travel patterns observed through available traffic count data and engineering judgment. Based upon existing traffic volumes, the project distribution is as follows:

- 20% to/from north on US 1;
- 70% to/from south on US 1; and
- 10% to/from east from 3<sup>rd</sup> Street and 2<sup>nd</sup> Street (local).

For trip assignment and roadway analysis, a trip length of 12.5 miles to north and was used. Trip length of 12.5 miles was based upon the location of the nearest CVS Pharmacy in Big Pine Key which is approximately 25 miles north from the proposed project site. The nearest pharmacy to the south (in Key West is approximately) 3 miles from the proposed project site. Therefore, a trip length of 1.5 miles to the south was used.

**Figure 4-1 Project Trip Distribution**



## 5.0 Planned/Scheduled/Funded Improvements

Based upon review of the FDOT five-year work program and the Monroe County Capital Improvement Program (CIP), there are no improvements planned/scheduled/funded on the roadways in the vicinity of the project site.

## 6.0 Analysis Scenarios

### *Existing Traffic Conditions*

The year 2012 is considered the base year traffic conditions or existing conditions. Based upon discussions with staff, existing condition vehicle turning movements were collected. Appropriate peak season correction factors were applied to the raw turning movement counts to account for the seasonal variations in the traffic. Please see traffic volume figures in Appendix D for reference.

### *Future Background Traffic Conditions*

The proposed project is anticipated to be completed for construction and operational in the year 2013. Future background traffic conditions, also referred to as future non-project traffic conditions, are those present in the study area in the year 2013, prior to the construction and operation of the proposed project. Future background growth rate calculations yielded a growth rate of less than one (1) percent. Hence a growth rate of 1% per year was used for conservative analysis purposes. Please see Appendix C for future background growth rate calculation sheet. Future background traffic volumes were calculated by background traffic to the existing pm peak hour, peak season traffic volumes. Please see traffic volume figures in Appendix D for reference.

### *Future Total Traffic Conditions*

The pm peak hour future total traffic volumes were calculated by adding the future background traffic volumes and project traffic volumes. Please see traffic volume figures in Appendix D for reference.

## 6.1 Intersection Analysis

The intersections were analyzed for each traffic condition based upon methodologies published in the *Highway Capacity Manual (HCM)*, using Highway Capacity Software (HCS). The signalized intersection level of service and delay for each traffic condition is shown in Table 6-1, PM Peak Hour Signalized Intersection Level of Service and Delay and intersection analysis worksheets are attached in Appendix E.

**Table 6-1 PM Peak Hour Signalized Intersection Level of Service and Delay**

Intersection	Existing		Future Background		Future Total	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
US 1 & Roosevelt Blvd.	D	39.3	D	41.0	D	44.0
US 1 & College Road South	C	22.5	C	22.9	C	23.1
US 1 & Cross Street	B	11.1	B	11.2	B	11.3
US 1 & McDonald Avenue	B	19.7	C	20.3	C	20.3
US 1 & 3rd Street	-	-	-	-	B*	13.0*

\* Indicates LOS and Delay with Intersection Improvements (Signalization of US 1 & 3<sup>rd</sup> Street)

Based upon the intersection analysis conducted, the study area signalized intersections are expected to operate at LOS D or better. Table 6-2 below shows the unsignalized intersections approach levels of service.

**Table 6-2 PM Peak Hour Unsignalized Intersection Approach Levels of Service**

Intersection	Existing				Future Background				Future Total			
	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB
US 1 & 3rd Street	-	C	-	-	-	C	-	-	-	D	-	-
US 1 & College Road North	E	F	-	-	E	F	-	-	E	F	-	-
US 1 & Key Haven Boulevard	C	-	-	-	C	-	-	-	D	-	-	-
US 1 & 2nd Street	-	-	-	-	-	-	-	-	-	B	-	-

-Indicates no approach or free-flow approach.

The study area unsignalized intersections are operating at acceptable LOS with the exception of US 1 & College Road North. For this intersection, the westbound stop controlled approach is operating at LOS F indicating that the side street LOS and delay are calculated regardless of the volume of minor-street left turning traffic. Generally longer minor street delays are considered tolerable, such as in this instance where there is a need for progression along major streets.

## **6.2 Arterial Trip Assignment Summary**

The proposed project is located along Monroe County's designated US 1 Segment 1. Table 6-3 depicts a summary of daily US 1 arterial traffic volume and proposed site traffic. There are 2,131 available trips on Segment 1. The proposed development's traffic volume is 630 net-new daily trips. With the proposed development trips the remaining trips on Segment 1 are 1,501.

Table 6-3 Arterial Trip Assignment Summary

Project	CVS Pharmacy, Stock Island, FL	
Location	Northeast Quadrant of US 1 & 3rd Street, Stock Island, FL (MM 4.8)	
Type of Development	Pharmacy/Drugstore with Drive-Through Window	
Project Size	ITE Land Use Code	881
Average Trip Length	Average Daily Trips (7-Day Average)	1,236

Total Daily Trips	Percent Pass-By Trips	Percent Primary Trips	Primary Trips	US-1 Segment Number	US-1 Segment Limits		Percent Directional Split	% Impact Based on Trip Length	Project Generated Daily Trips	Project Trips	2011 Reserve Volume	2011 Remaining Reserve Volume
					Begin MM	End MM						
1,236	49%	51%	630	#1	4.0	5.0	(80%) / (20%)	100%	$(630 \times 0.8 \times 1) / (630 \times 0.2 \times 1) = 504/126$	630	2,131	1,501
				#2	5.0	9.0	20%	91%	$(630 \times 0.2 \times 0.91) = 115$	115	5,683	5,568
				#3	9.0	10.5	20%	80%	$(630 \times 0.2 \times 0.8) = 101$	101	522	421
				#4	10.5	16.5	20%	65%	$(630 \times 0.2 \times 0.65) = 82$	82	3,074	2,991
				#5	16.5	20.5	20%	45%	$(630 \times 0.2 \times 0.45) = 57$	57	2,131	2,074
				#6	20.5	23.0	20%	32%	$(630 \times 0.2 \times 0.32) = 41$	41	2,401	2,361
				#7	23.0	25.0	20%	23%	$(630 \times 0.2 \times 0.23) = 29$	29	2,004	1,975
				#8	25.0	27.5	20%	14%	$(630 \times 0.2 \times 0.14) = 18$	18	2,247	2,229
				#9	27.5	29.5	20%	5%	$(630 \times 0.2 \times 0.05) = 7$	7	2,608	2,602
				#10	29.5	33.0	20%	0%	$(630 \times 0.2 \times 0.00) = 0$	0	845	845
				#11	33.0	40.0	20%	0%	$(630 \times 0.2 \times 0.00) = 0$	0	6,723	6,723
				#12	40.0	47.0	20%	0%	$(630 \times 0.2 \times 0.00) = 0$	0	5,180	5,180
				#13	47.0	54.0	20%	0%	$(630 \times 0.2 \times 0.00) = 0$	0	17,408	17,408
				#14	54.0	60.5	20%	0%	$(630 \times 0.2 \times 0.00) = 0$	0	3,074	3,074
				#15	60.5	63.0	20%	0%	$(630 \times 0.2 \times 0.00) = 0$	0	1,431	1,431
				#16	63.0	73.0	20%	0%	$(630 \times 0.2 \times 0.00) = 0$	0	5,246	5,246
				#17	73.0	77.5	20%	0%	$(630 \times 0.2 \times 0.00) = 0$	0	-671	-671
				#18	77.5	79.5	20%	0%	$(630 \times 0.2 \times 0.00) = 0$	0	-328	-328
				#19	79.5	84.0	20%	0%	$(630 \times 0.2 \times 0.00) = 0$	0	951	951
				#20	84.0	86.0	20%	0%	$(630 \times 0.2 \times 0.00) = 0$	0	692	692
				#21	86.0	91.5	20%	0%	$(630 \times 0.2 \times 0.00) = 0$	0	4,418	4,418
				#22	91.5	99.5	20%	0%	$(630 \times 0.2 \times 0.00) = 0$	0	11,128	11,128
				#23	99.5	106.0	20%	0%	$(630 \times 0.2 \times 0.00) = 0$	0	9,234	9,234
				#24	106.0	112.5	20%	0%	$(630 \times 0.2 \times 0.00) = 0$	0	8,932	8,932

Project Segment (MM 4.8) →

## 7.0 Turn Lane Length Analysis

Turn lane warrant analysis was conducted at the intersection of 3<sup>rd</sup> Street & Driveway 1 based upon *National Cooperative Highway Research Program (NCHRP) Report 457*. Based upon the turn lane warrant analysis, an eastbound left-turn lane is not warranted. Please see that attached turn lane warrant analysis worksheet in Appendix F for reference.

Turn lane length analysis was conducted at the intersection of US 1 & 3rd Street. The analysis was conducted using HCS 95th percentile queue length data and FDOT Design Standards Index 301. Turn lane length analysis results are shown in Table 10-1, PM Peak Hour Turn Lane Length Data.

**Table 10-1 PM Peak Hour Turn Lane Length Data**

Intersection	Movement	Turning Volume (vph)	Posted Speed (mph)	Design Speed (mph)	Deceleration Length (feet)	95th Percentile BOQ (Vehicle Lengths)	Queue Length (feet)	Total Length	Existing Length (feet)
US 1 & 3rd Street	WBR	158	25	30	145	8.2*	205	350	90
	NBR	54	45	50	290	1.4	35	325	360
	SBL	127	45	50	290	6.5	163	453	455

\* Indicates 95<sup>th</sup> percentile BOQ with improvements (assumes future traffic signal at US 1 & 3<sup>rd</sup> Street)

For the intersection of US 1 & 3rd Street, the westbound right-turn lane length requires is 350 feet. However, due to existing constraints such as high power transmission line and proximity of the driveway to a total turn lane length of 90 feet was provided at this intersection. Further coordination with the County staff will be required regarding the feasibility of this turn lane.

## 8.0 Conclusions

The applicant proposes to develop a 14,600 square foot (sf) CVS Pharmacy located in the northeast corner of the intersection of US 1 (Overseas Highway) & 3rd Street, Stock Island, Monroe County, Florida. The project is planned to be operational in the year 2013. CPH Engineers, Inc. (CPH) has prepared this Traffic Impact Analysis for submittal to the Monroe County and the Florida Department of Transportation (FDOT) to address the impacts of the project including traffic concurrency requirements and to provide specific recommendations for safe and adequate ingress and egress to and from the site.

The proposed project is anticipated to generate less than 100 trips per 1000 sq.ft. on a daily basis. Therefore this project is considered as a minor conditional use. Based upon the analysis, the roadway segments in the study area are anticipated to operate with adequate capacity and thus acceptable LOS with the addition of future background trips and project trips.

Based upon the intersection analysis conducted, the study area signalized intersections are expected to operate at LOS D or better. The study area unsignalized intersections are expected to operate at acceptable levels of service with the exception of US 1 & College Road North. For the intersection of US 1 & College Road North, the westbound stop controlled approach is expected to operate at LOS F, indicating that the side street LOS and delay are calculated regardless of the volume of minor-street left turning traffic. Generally longer minor street delays are considered tolerable, such as in this instance where there is a need for progression along major streets.

To provide for safe and adequate access to and from the site, the applicant is proposing to construct a traffic signal at the intersection of US 1 & 3<sup>rd</sup> Street. Based upon traffic signal warrant analysis conducted at this intersection, a traffic signal is warranted and is recommended as an improvement. Traffic signal warrant analysis is provided under separate cover.

For the intersection of US 1 & 3<sup>rd</sup> Street, the westbound right-turn lane length required is 350 feet. However, due to existing constraints such as at-grade high power transmission poles and proximity of the driveway, a total turn lane length of 90 feet was provided at this intersection. Further coordination with the County staff will be required regarding the feasibility of this turn lane.

**APPENDIX A**

**METHODOLOGY CORRESPONDENCE**

---

## Veturi, Raghu P.E.

---

**From:** Shanmugam, Raj [raj.shanmugam@urs.com]  
**Sent:** Friday, April 20, 2012 12:23 PM  
**To:** Veturi, Raghu P.E.  
**Cc:** Smith-Patricia; Melendez, John; Hendrix, Todd H. (P.E.); Zapata, Maria (P.E.); Ali.Khalilahmadi@dot.state.fl.us  
**Subject:** RE: CVS Pharmacy, Stock Island, Traffic Study Methodology Letter

Good Morning Raghu,

I have reviewed the methodology letter you had presented and generally agree with your approach. However, I like to note the potential issues related to the proposed traffic signal at either 2<sup>nd</sup> OR 3<sup>rd</sup> Street intersection with US 1.

The LOS on US 1 in Monroe County is based on travel speeds rather than the traffic volumes. Adding a traffic signal along US 1 tends to have a negative impact on the travel speeds, thus meeting the concurrency requirements. Therefore, any proposal to add traffic signals along US 1 should be thoroughly analyzed not only for the segment immediately next to the project (Segment # 1), but the entire 108 miles of US 1. I recommend that you present the potential alternative solutions, including directional traffic controls at 2<sup>nd</sup> and 3<sup>rd</sup> Street intersections with US 1, and utilizing existing signalized intersections to provide access to this site.

Also, the trip percentage distribution of 40/50/10 (north/south/local) seems to be not accurate. Other projects in the area have used the population densities to determine the trip distribution and estimated to be 20/80 (north/south & local). Please confirm your trip distributions.

Thanks and let me know if you have any further questions.

Rajendran Shanmugam, P.E.

Vice President / Branch Manager

**URS Corporation Southern**

The Exchange

3343 West Commercial Boulevard, Suite 100

Fort Lauderdale, FL 33309

Tel: 954.739.1881

Dir: 954.670.2601

Fax: 954.739.1789

[Raj.Shanmugam@URS.com](mailto:Raj.Shanmugam@URS.com)

---

**From:** Veturi, Raghu P.E. [mailto:rveturi@cphengineers.com]  
**Sent:** Wednesday, April 18, 2012 5:29 PM  
**To:** Shanmugam, Raj  
**Cc:** Smith-Patricia; Melendez, John; Hendrix, Todd H. (P.E.); Zapata, Maria (P.E.)  
**Subject:** CVS Pharmacy, Stock Island, Traffic Study Methodology Letter

Hi Raj,

Per our conversation, attached is the traffic study methodology for the above mentioned project. Please review and let us know if you have any questions or comments.

Thank you,

Raghu K. Veturi, PE, PTOE

**CPH Engineers, Inc.**

Tel: (813) 288-0233

Fax: (813) 288-0433

April 18, 2012  
(via e-mail)

Raj Shanmugam, P.E.  
Vice President/Branch Manager  
URS Corporation Southern  
The Exchange  
3343 West Commercial Boulevard, Suite 100  
Fort Lauderdale, Florida 33309  
E-mail: [Raj.Shanmugam@URS.com](mailto:Raj.Shanmugam@URS.com)



5601 Mariner Street  
Suite 240  
Tampa, Florida 33609  
Phone: 813.288.0233  
Fax: 813.288.0433

[www.cphengineers.com](http://www.cphengineers.com)

**RE: Traffic Impact Study Methodology Letter  
Proposed 14,600 s.f. CVS Pharmacy  
Southeast Quadrant of US 1 (Overseas Highway) & 3<sup>rd</sup> Street  
Stock Island, Monroe County, Florida  
CPH Project Number: B11269**

Dear Mr. Shanmugam:

Provided here for your review and comment is a Traffic Impact Study methodology for the above referenced project. The methodology has been prepared to be consistent with Monroe County Traffic Study Requirements and per our conversation.

#### **Introduction**

This following Traffic Impact study methodology outlines the procedures and data that will be used to evaluate the projected traffic impacts of the proposed 14,600 s.f. CVS Pharmacy located in the southeast quadrant of the intersection of US 1 & 3<sup>rd</sup> Street in Stock Island, Monroe County, Florida. Please see the attached site location map and site plan for reference. Access to the proposed site is provided via two (2) driveways:

- a full access driveway on 3<sup>rd</sup> Street;
- a full-access driveway on 2<sup>nd</sup> Street.

#### **Study Area**

The study area includes pm peak hour traffic data collection at the following intersections and 24-hour tube counts on US 1 at two locations north and south of 3<sup>rd</sup> Street:

#### **Roadways**

- US 1 from Roosevelt Boulevard to Key Haven Road; and
- US 1 from Key Haven Road to Rockland Drive.

#### **Intersections**

- US 1 & Roosevelt Boulevard;
- US 1 & College Road West;
- US 1 & Cross Street;
- US 1 & McDonald Avenue;
- US 1 & 3<sup>rd</sup> Street;
- US 1 & College Road East;
- US 1 & Key Haven Road; and
- All Site Entrances.

#### **Analysis Year Scenarios**

The future analysis year will be 2013, given the anticipated date for completion of construction of the proposed project.

### **Project Trip Generation**

The trip generation potential for the project, a 14,600 s.f. CVS Pharmacy will be determined based upon rates or equations contained in the *Institute of Transportation Engineers (ITE) Trip Generation, 8<sup>th</sup> Edition*. Based upon a preliminary projection it was determined that the project is anticipated to generate 1,287 average daily trips, 39 gross am peak hour and 151 gross pm peak hour trips. Pass-by rates will be applied based upon *ITE Trip Generation Handbook, 2<sup>nd</sup> Edition*. Please see the attached trip generation worksheet. Pass-by rate will be checked to be less than ten percent of the adjacent street pm peak hour traffic.

For trip assignment purposes a weighted average of weekday and Saturday trips on daily basis will be considered as follows. Sunday trip generation data was not included as this data is not available from *ITE Trip Generation, 8<sup>th</sup> Edition*.

Weekday pm peak hour trip generation = 151  
Weekday daily trip generation = 1,287  
Weekday pm peak to daily ratio =  $151/1,287 = 11.7\%$

Saturday peak hour trip generation = 115  
Therefore, Saturday daily trip generation =  $(115 \times 100) / 11.7 = 983$

6-day weighted average trip generation =  $[(5 \times 1,287) + 983] / 6 = 1,236$

### **Project Trip Distribution**

Trip distribution for the proposed project will be determined based upon existing travel patterns observed through available traffic count data and engineering judgment. Based upon existing traffic volumes, the project distribution is as follows:

- 40% to/from north on US 1
- 50% to/from south on US 1
- 10% to/from east of US 1

For trip assignment and roadway analysis, a trip length of 12.5 miles to north and will be used. Trip length of 12.5 miles was based upon the location of the nearest CVS Pharmacy in Big Pine Key which is approximately 25 miles north from the proposed project site. The nearest pharmacy to the south (in Key West is approximately) 3 miles from the proposed project site. Therefore, a trip length of 1.5 miles to the south will be used.

### **Background (Vested) Traffic**

Background traffic volumes will be calculated based upon FDOT historical traffic count data available from 2010 FDOT Traffic Information. Future background growth rate calculations yielded a growth rate of less than 1.0%. Hence a growth rate of 1.0 percent per year will be used. Please see the attached growth rate calculation sheets for reference.

### **Traffic Count Data**

PM peak hour (4pm – 6pm) manual traffic counts will be conducted at study area intersections. In addition, 24-hour tube counts on US 1 will be conducted for projected signal warrant analysis at the US 1 & 3<sup>rd</sup> Street. All traffic volumes (counts) will be adjusted to peak-season conditions using Florida Department of Transportation (FDOT) seasonal adjustment factors for Monroe County.

### **Scheduled/Planned Improvements**

Improvements scheduled for construction by Monroe County or the FDOT will be included in the analysis if contained in the existing plus one year work programs (Transportation Improvement Program or Capital Improvement Program).

**Traffic Analysis**

Intersection capacity analysis for the study area intersections will be conducted using Highway Capacity Software (HCS) software for existing, future background, and future total traffic conditions for pm peak hour conditions.

Based upon our coordination with FDOT Permits Office, a traffic signal at the intersection of US 1 & 3rd Street will be allowed if warranted. Accordingly, a traffic signal warrant analysis will be conducted at this intersection based upon projected traffic volumes for submittal to the County staff for review. Hourly distribution percentages will be obtained from three (3) similar land uses at other locations in Monroe County.

**Turn Lane Analysis**

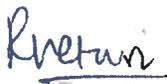
A review of the turn lane needs, requirements, and design as applicable, will be performed based upon *National Cooperative Highway Research Program (NCHRP) Report 457* and *FDOT Design Standards Index 301*.

**Report**

A signed and sealed report which details the procedures, data, and results of the traffic analysis outlined above will be provided to the County staff for review and comment.

Please feel free to contact us at (813) 288-0233 if you have any questions or comments regarding this proposed methodology or require additional information.

Sincerely,  
**CPH ENGINEERS, INC.**  
(Certificate of Authorization: 00003215)



Raghu K. Veturi, P.E.  
Traffic Engineer

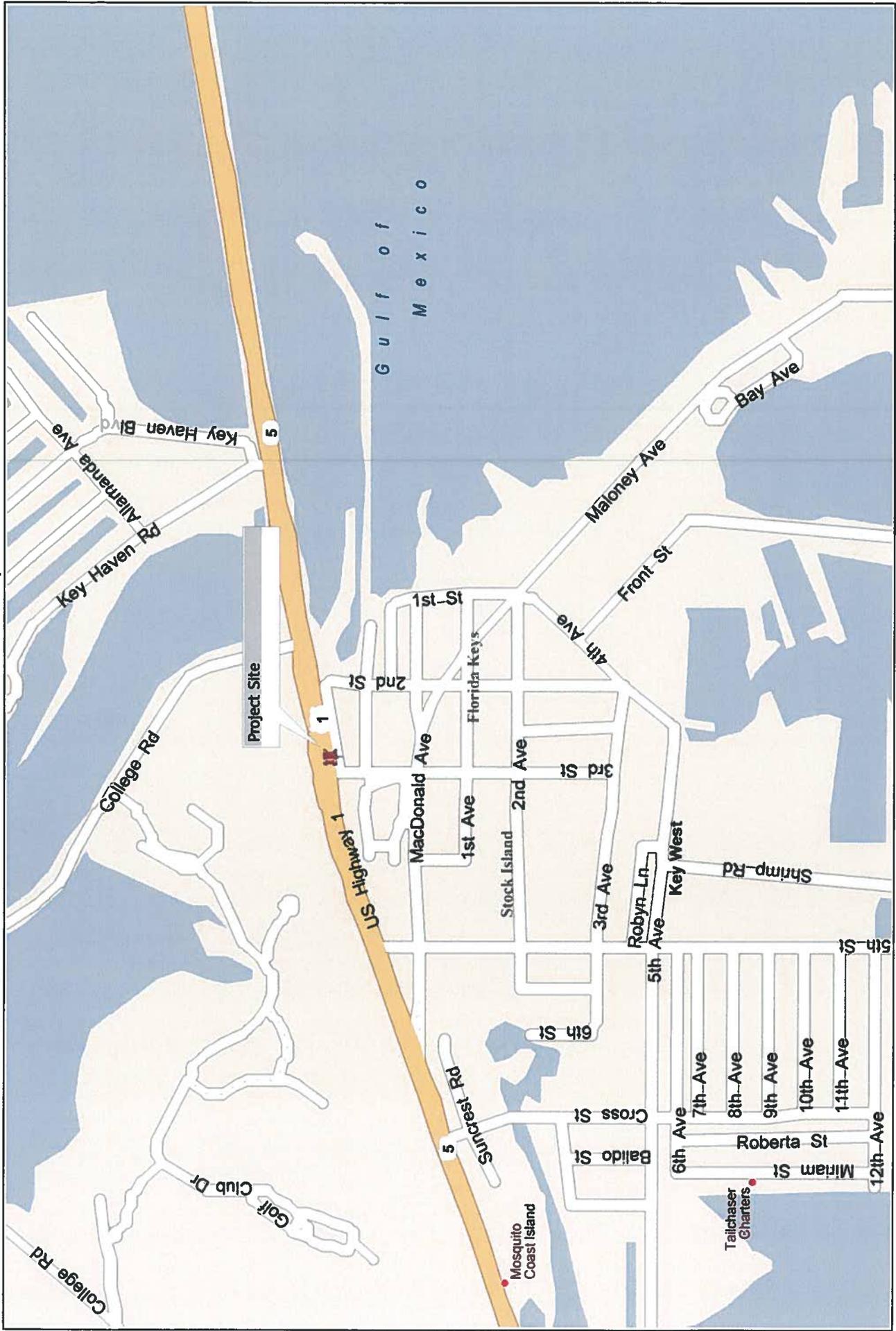
Attachments

cc: Patricia Smith, Monroe County



C. John Melendez III  
Transportation Division Manager

# Site Location Map



Copyright © and (P), 1988-2010 Microsoft Corporation and/or its suppliers. All rights reserved. <http://www.microsoft.com/streets/>  
 Certain mapping and direction data © 2010 NAVTEC. All rights reserved. The Data for areas of Canada includes information taken with permission from Canadian authorities, including: © Her Majesty the Queen in Right of Canada, © Queen's Printer for Ontario, NAVTEC and NAVTEC ON BOARD are trademarks of NAVTEC. © 2010 Tele Atlas North America, Inc. All rights reserved. Tele Atlas and Tele Atlas North America are trademarks of Tele Atlas, Inc. © 2010 by Applied Geographic Systems. All rights reserved.

**CVS pharmacy**  
 PROTOTYPE 14,600  
 CHAMBER DRIVE THRU  
 STORE NUMBER # 10122  
 8110 OVERSEAS HIGHWAY  
 FT. GIBSON, ALABAMA  
 PROJECT TYPE: NEW  
 IDEAL TYPE: FREE FOR SERVICE  
 CS PROJECT NUMBER: 66522

**eph**  
 2012  
 Construction Management  
 10000 Highway 101  
 Ft. Gibson, AL 36735  
 Phone: (205) 724-6800  
 Fax: (205) 724-6800

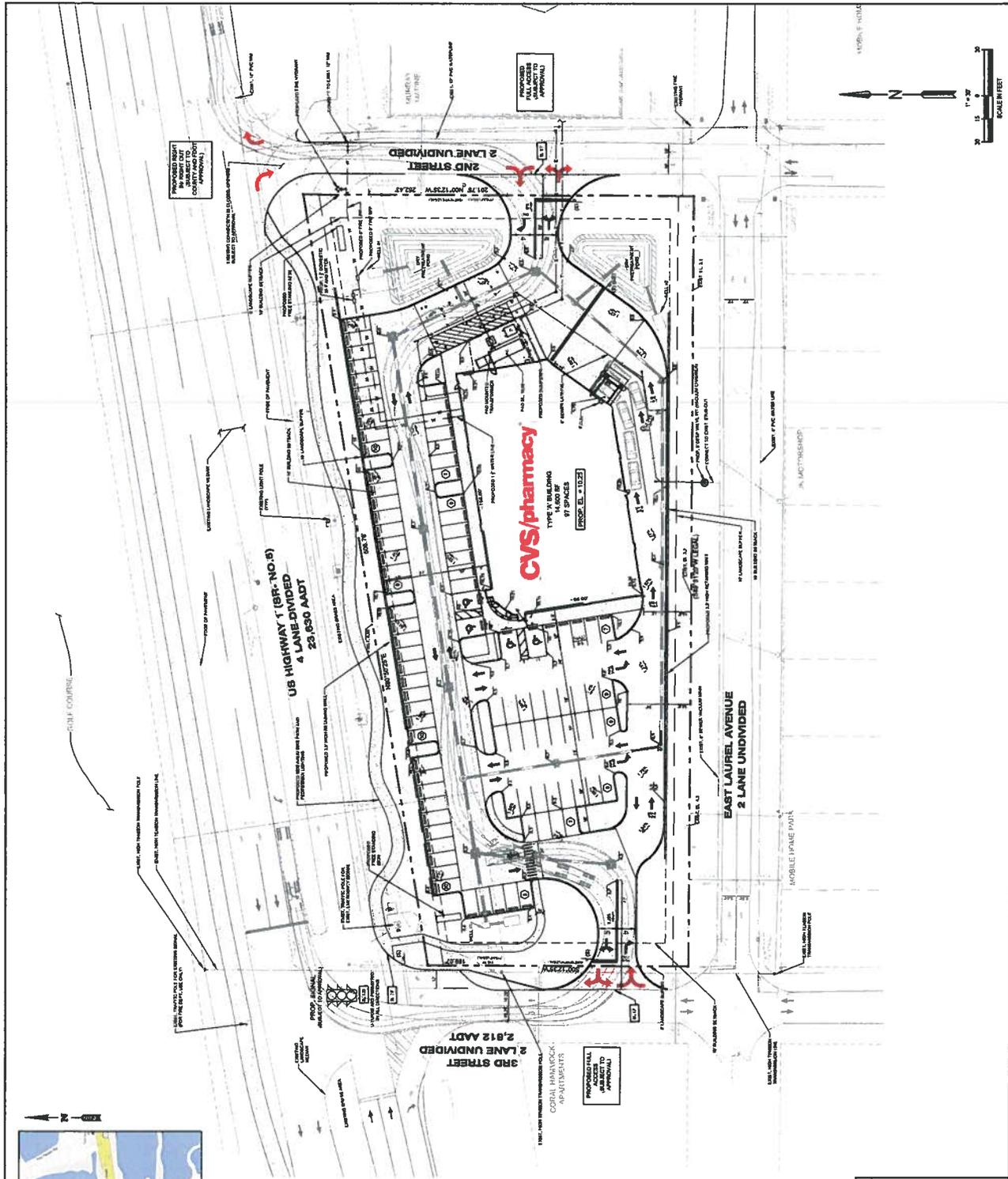
CONSULTANT:  
 "UNDESIGNED" P.E.  
 "REGISTERED"

DEVELOPER:  
 BOOS DEVELOPMENT GROUP, INC.  
 1515 15TH STREET  
 SUITE 100  
 MIAMI LAKES, FL 33054  
 Phone: (305) 552-0901  
 Fax: (305) 552-0901

SEAL:  
 REVISIONS:

NO.	DATE	DESCRIPTION
1	MARCH 28, 2012	CONCEPT 1.0

TEAM  
 PROJECT NO. 66522  
 DATE: MARCH 28, 2012  
 SHEET NUMBER: 011000  
 CONCEPT 1.0  
 SHEET NUMBER  
 SP-1  
 NOT RELEASED FOR CONSTRUCTION



**PHASE SUMMARY**

NO.	DESCRIPTION	AREA (SQ. FT.)	ADT
1	PHASE 1: CIVIL WORK	14,600	20,630
2	PHASE 2: BUILDING	14,600	20,630
3	PHASE 3: PAVING	14,600	20,630
4	PHASE 4: UTILITIES	14,600	20,630
5	PHASE 5: LANDSCAPING	14,600	20,630
6	PHASE 6: SIGNAGE	14,600	20,630
7	PHASE 7: FURNITURE	14,600	20,630
8	PHASE 8: MOBILITY	14,600	20,630
9	PHASE 9: SECURITY	14,600	20,630
10	PHASE 10: FINISHES	14,600	20,630

**ESTIMATED CONSTRUCTION QUANTITIES**

ITEM	QUANTITY
CONCRETE	10,000 CY
STEEL	500 TONS
PAVING	10,000 SQ. YD.
UTILITIES	10,000 L.F.
LANDSCAPING	10,000 SQ. YD.
SIGNAGE	10,000 SQ. YD.
FURNITURE	10,000 SQ. YD.
SECURITY	10,000 SQ. YD.
FINISHES	10,000 SQ. YD.

**LEGEND**

- PROPOSED TRUCK TRUCKS (BY TRUCK)
- PROPOSED PARKING COUNT
- TRANSFORMATION
- HEAVY DUTY ASPHALT
- MEDIUM DUTY ASPHALT
- HEAVY DUTY CONCRETE
- CONCRETE

**SITE DATA**

ITEM	VALUE
PROPOSED TRUCK TRUCKS (BY TRUCK)	10
PROPOSED PARKING COUNT	100
TRANSFORMATION	10
HEAVY DUTY ASPHALT	10
MEDIUM DUTY ASPHALT	10
HEAVY DUTY CONCRETE	10
CONCRETE	10

**SITE RISK ASSESSMENTS**

THE FOLLOWING ARE THE ASSUMPTIONS MADE BY THE CONSULTANT:

- A REVIEW OF THE SITE PLAN AND THE PROPOSED CONSTRUCTION PLAN WAS CONDUCTED TO DETERMINE THE POTENTIAL FOR EROSION, SEDIMENTATION, AND POLLUTION.
- THE CONSULTANT HAS CONDUCTED VISUAL QUALITY ASSESSMENTS AND HAS DETERMINED THAT THE PROPOSED CONSTRUCTION WILL NOT CAUSE SIGNIFICANT VISUAL IMPACTS TO THE SURROUNDING AREA.
- THE CONSULTANT HAS CONDUCTED AIR QUALITY ASSESSMENTS AND HAS DETERMINED THAT THE PROPOSED CONSTRUCTION WILL NOT CAUSE SIGNIFICANT AIR QUALITY IMPACTS TO THE SURROUNDING AREA.
- THE CONSULTANT HAS CONDUCTED NOISE ASSESSMENTS AND HAS DETERMINED THAT THE PROPOSED CONSTRUCTION WILL NOT CAUSE SIGNIFICANT NOISE IMPACTS TO THE SURROUNDING AREA.
- THE CONSULTANT HAS CONDUCTED TRAFFIC ASSESSMENTS AND HAS DETERMINED THAT THE PROPOSED CONSTRUCTION WILL NOT CAUSE SIGNIFICANT TRAFFIC IMPACTS TO THE SURROUNDING AREA.
- THE CONSULTANT HAS CONDUCTED CULTURAL RESOURCE ASSESSMENTS AND HAS DETERMINED THAT THE PROPOSED CONSTRUCTION WILL NOT CAUSE SIGNIFICANT CULTURAL RESOURCE IMPACTS TO THE SURROUNDING AREA.
- THE CONSULTANT HAS CONDUCTED HISTORIC PRESERVATION ASSESSMENTS AND HAS DETERMINED THAT THE PROPOSED CONSTRUCTION WILL NOT CAUSE SIGNIFICANT HISTORIC PRESERVATION IMPACTS TO THE SURROUNDING AREA.
- THE CONSULTANT HAS CONDUCTED ARCHAEOLOGICAL ASSESSMENTS AND HAS DETERMINED THAT THE PROPOSED CONSTRUCTION WILL NOT CAUSE SIGNIFICANT ARCHAEOLOGICAL IMPACTS TO THE SURROUNDING AREA.
- THE CONSULTANT HAS CONDUCTED PALEONTOLOGICAL ASSESSMENTS AND HAS DETERMINED THAT THE PROPOSED CONSTRUCTION WILL NOT CAUSE SIGNIFICANT PALEONTOLOGICAL IMPACTS TO THE SURROUNDING AREA.
- THE CONSULTANT HAS CONDUCTED PLANT AND ANIMAL LIFE ASSESSMENTS AND HAS DETERMINED THAT THE PROPOSED CONSTRUCTION WILL NOT CAUSE SIGNIFICANT PLANT AND ANIMAL LIFE IMPACTS TO THE SURROUNDING AREA.
- THE CONSULTANT HAS CONDUCTED SOIL CONSERVATION ASSESSMENTS AND HAS DETERMINED THAT THE PROPOSED CONSTRUCTION WILL NOT CAUSE SIGNIFICANT SOIL CONSERVATION IMPACTS TO THE SURROUNDING AREA.
- THE CONSULTANT HAS CONDUCTED WATER QUALITY ASSESSMENTS AND HAS DETERMINED THAT THE PROPOSED CONSTRUCTION WILL NOT CAUSE SIGNIFICANT WATER QUALITY IMPACTS TO THE SURROUNDING AREA.
- THE CONSULTANT HAS CONDUCTED AIR QUALITY ASSESSMENTS AND HAS DETERMINED THAT THE PROPOSED CONSTRUCTION WILL NOT CAUSE SIGNIFICANT AIR QUALITY IMPACTS TO THE SURROUNDING AREA.
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- THE CONSULTANT HAS CONDUCTED CULTURAL RESOURCE ASSESSMENTS AND HAS DETERMINED THAT THE PROPOSED CONSTRUCTION WILL NOT CAUSE SIGNIFICANT CULTURAL RESOURCE IMPACTS TO THE SURROUNDING AREA.
- THE CONSULTANT HAS CONDUCTED HISTORIC PRESERVATION ASSESSMENTS AND HAS DETERMINED THAT THE PROPOSED CONSTRUCTION WILL NOT CAUSE SIGNIFICANT HISTORIC PRESERVATION IMPACTS TO THE SURROUNDING AREA.
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- THE CONSULTANT HAS CONDUCTED SOIL CONSERVATION ASSESSMENTS AND HAS DETERMINED THAT THE PROPOSED CONSTRUCTION WILL NOT CAUSE SIGNIFICANT SOIL CONSERVATION IMPACTS TO THE SURROUNDING AREA.
- THE CONSULTANT HAS CONDUCTED WATER QUALITY ASSESSMENTS AND HAS DETERMINED THAT THE PROPOSED CONSTRUCTION WILL NOT CAUSE SIGNIFICANT WATER QUALITY IMPACTS TO THE SURROUNDING AREA.

CVS Pharmacy, Stock Island, FL  
 Summary of Trip Generation Calculation  
 For 14.6 Th.Sq.Ft. GFA of Pharmacy / Drugstore with Drive-Thru  
 April 13, 2012

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	88.16	14.37	1.00	1287
7-9 AM Peak Hour Enter	1.52	0.00	1.00	22
7-9 AM Peak Hour Exit	1.14	0.00	1.00	17
7-9 AM Peak Hour Total	2.66	1.80	1.00	39
4-6 PM Peak Hour Enter	5.18	0.00	1.00	76
4-6 PM Peak Hour Exit	5.18	0.00	1.00	76
4-6 PM Peak Hour Total	10.35	5.72	1.00	151
AM Pk Hr, Generator, Enter	3.86	0.00	1.00	56
AM Pk Hr, Generator, Exit	4.01	0.00	1.00	59
AM Pk Hr, Generator, Total	7.87	3.21	1.00	115
PM Pk Hr, Generator, Enter	4.61	0.00	1.00	67
PM Pk Hr, Generator, Exit	4.61	0.00	1.00	67
PM Pk Hr, Generator, Total	9.21	4.06	1.00	134
Saturday 2-Way Volume	0.00	0.00	1.00	0
Saturday Peak Hour Enter	3.93	0.00	1.00	57
Saturday Peak Hour Exit	3.93	0.00	1.00	57
Saturday Peak Hour Total	7.85	3.69	1.00	115
Sunday 2-Way Volume	0.00	0.00	1.00	0
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.00	0.00	1.00	0

Note: A zero indicates no data available.  
 Source: Institute of Transportation Engineers  
 Trip Generation, 8th Edition, 2008.

TRIP GENERATION BY MICROTRANS

**ITE TRIP GENERATION**

**DAILY TRIP GENERATION**

Land Use	ITE Land Use Code	Size (ksf)	Rate	Directional Distribution (%)		Gross Trips			Pass-By			Net-New Trips		
				Enter	Exit	Enter	Exit	Total	Rate	Trips	Enter	Exit	Total	
Pharmacy/Drugstore with Drive-Through Window	881	14.6	88.16	50%	50%	644	644	1,287	49%	631	328	328	656	

**AM PEAK HOUR TRIP GENERATION**

Land Use	ITE Land Use Code	Size (ksf)	Rate	Directional Distribution (%)		Gross Trips			Pass-By			Net-New Trips		
				Enter	Exit	Enter	Exit	Total	Rate	Trips	Enter	Exit	Total	
Pharmacy/Drugstore with Drive-Through Window	881	14.6	2.66	57%	43%	22	17	39	49%	19	11	9	20	

**PM PEAK HOUR TRIP GENERATION**

Land Use	ITE Land Use Code	Size (ksf)	Rate	Directional Distribution (%)		Gross Trips			Pass-By			Net-New Trips		
				Enter	Exit	Enter	Exit	Total	Rate	Trips	Enter	Exit	Total	
Pharmacy/Drugstore with Drive-Through Window	881	14.6	10.35	50%	50%	76	76	151	49%	74	39	39	77	

Notes:

ksf = Thousand Square Feet  
 Rates from ITE Trip Generation, 8th Edition

Florida Department of Transportation  
 Transportation Statistics Office  
 2010 Historical AADT Report

County: 90 - MONROE

Site: 0165 - SR-5/US-1 200 FT E COW KEY BRDG#00000170 MONROE CO

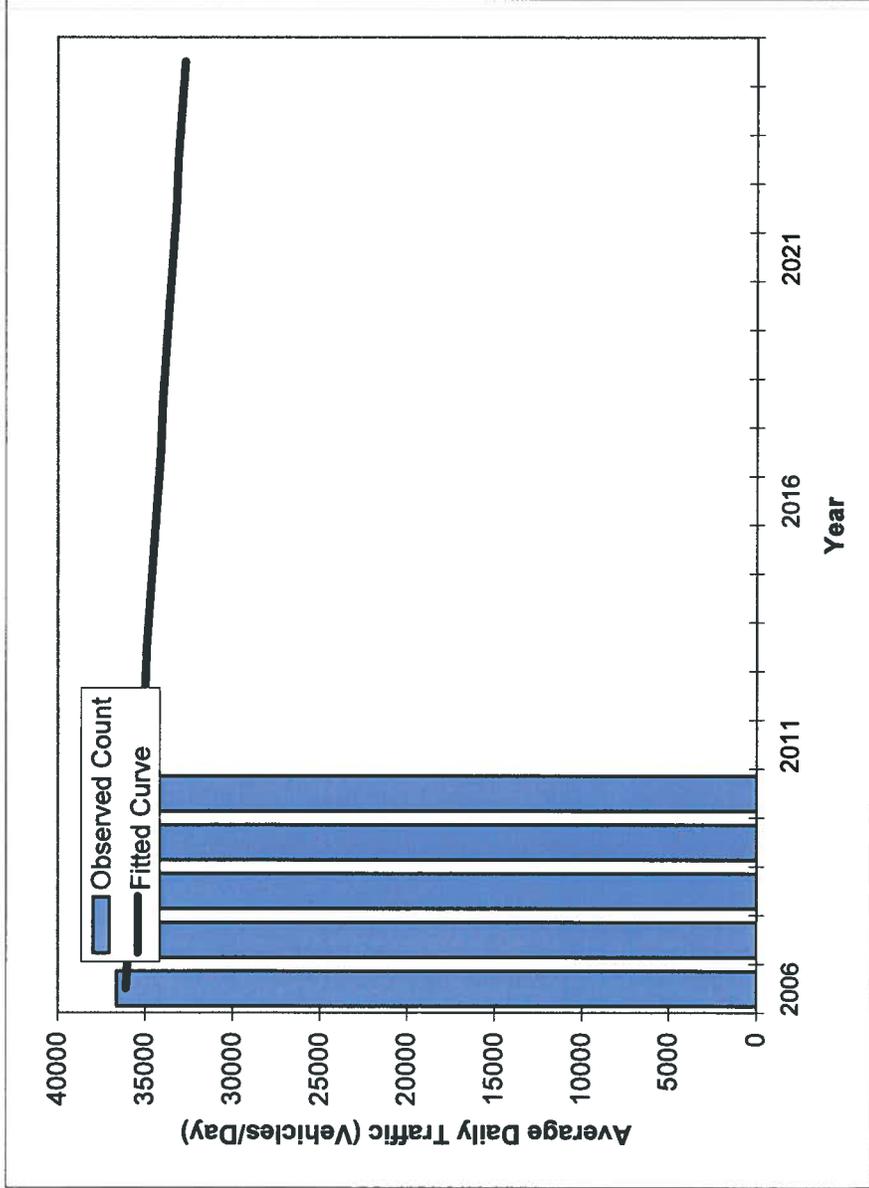
Year	AADT	Direction 1	Direction 2	K Factor	D Factor	T Factor	
2010	36027	C	N 17980	S 18047	9.71	56.29	3.80
2009	35471	C	N 17672	S 17799	9.59	58.14	4.10
2008	34602	C	N 17266	S 17336	10.14	56.24	8.60
2007	36080	C	N 18055	S 18025	9.60	57.50	6.60
2006	36598	C	N 18353	S 18245	9.61	57.90	7.40
2005	37137	C	N 18583	S 18554	9.40	58.50	5.50
2004	37926	C	N 19091	S 18835	9.40	58.50	7.30
2003	37403	C	N 19079	S 18324	9.60	56.70	6.60
2002	37478	C	N 18912	S 18566	9.60	56.40	6.20
2001	37401	C	N 18863	S 18538	9.60	57.60	6.00
2000	35472	C	N 18190	S 17282	9.60	56.80	6.10
1999	29838	C	N 16018	S 13820	8.20	57.40	4.60
1998	28452	C	N 15434	S 13018	8.20	60.20	4.00
1997	29201	C	N 15727	S 13474	8.10	58.80	4.90
1996	29256	C	N 15523	S 13733	9.20	55.50	5.90
1995	31696	C	N 15758	S 15938	8.80	53.20	7.20

AADT Flags: C = Computed; E = Manual Estimate; F = First Year Estimate  
 S = Second Year Estimate; T = Third Year Estimate; X = Unknown

# TRAFFIC TRENDS

## US 1 -- 200 feet East of Cow Key Bridge

<b>County:</b> Monroe	
<b>Station #:</b> 90	
<b>Highway:</b> US 1	



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2006	36600	36100
2007	36100	35900
2008	34600	35800
2009	35500	35600
2010	36000	35400
2013 Opening Year Trend		
2013	N/A	34900
2014 Mid-Year Trend		
2014	N/A	34700
2020 Design Year Trend		
2020	N/A	33600
TRANPLAN Forecasts/Trends		

**\*\* Annual Trend Increase:** -180  
**Trend R-squared:** 14.1%  
**Trend Annual Historic Growth Rate:** -0.48%  
**Trend Growth Rate (2010 to Design Year):** -0.51%  
**Printed:** 18-Apr-12

Straight Line Growth Option

\*Axle-Adjusted

**APPENDIX B**

**ITE TRIP GENERATION**

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**ITE TRIP GENERATION**

**DAILY TRIP GENERATION**

Land Use	ITE Land Use Code	Size (ksf)	Rate	Directional Distribution (%)		Gross Trips			Pass-By			Net-New Trips		
				Enter	Exit	Enter	Exit	Total	Rate	Trips	Enter	Exit	Total	
Pharmacy/Drugstore with Drive-Through Window	881	14.6	88.16	50%	50%	644	644	1,287	49%	631	328	328	656	

**AM PEAK HOUR TRIP GENERATION**

Land Use	ITE Land Use Code	Size (ksf)	Rate	Directional Distribution (%)		Gross Trips			Pass-By			Net-New Trips		
				Enter	Exit	Enter	Exit	Total	Rate	Trips	Enter	Exit	Total	
Pharmacy/Drugstore with Drive-Through Window	881	14.6	2.66	57%	43%	22	17	39	49%	19	11	9	20	

**PM PEAK HOUR TRIP GENERATION**

Land Use	ITE Land Use Code	Size (ksf)	Rate	Directional Distribution (%)		Gross Trips			Pass-By			Net-New Trips		
				Enter	Exit	Enter	Exit	Total	Rate	Trips	Enter	Exit	Total	
Pharmacy/Drugstore with Drive-Through Window	881	14.6	10.35	50%	50%	76	76	151	49%	74	39	39	77	

Notes:  
ksf = Thousand Square Feet  
Rates from ITE Trip Generation, 8th Edition

CVS Pharmacy, Stock Island, FL  
 Summary of Trip Generation Calculation  
 For 14.6 Th.Sq.Ft. GFA of Pharmacy / Drugstore with Drive-Thru  
 April 13, 2012

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	88.16	14.37	1.00	1287
7-9 AM Peak Hour Enter	1.52	0.00	1.00	22
7-9 AM Peak Hour Exit	1.14	0.00	1.00	17
7-9 AM Peak Hour Total	2.66	1.80	1.00	39
4-6 PM Peak Hour Enter	5.18	0.00	1.00	76
4-6 PM Peak Hour Exit	5.18	0.00	1.00	76
4-6 PM Peak Hour Total	10.35	5.72	1.00	151
AM Pk Hr, Generator, Enter	3.86	0.00	1.00	56
AM Pk Hr, Generator, Exit	4.01	0.00	1.00	59
AM Pk Hr, Generator, Total	7.87	3.21	1.00	115
PM Pk Hr, Generator, Enter	4.61	0.00	1.00	67
PM Pk Hr, Generator, Exit	4.61	0.00	1.00	67
PM Pk Hr, Generator, Total	9.21	4.06	1.00	134
Saturday 2-Way Volume	0.00	0.00	1.00	0
Saturday Peak Hour Enter	3.93	0.00	1.00	57
Saturday Peak Hour Exit	3.93	0.00	1.00	57
Saturday Peak Hour Total	7.85	3.69	1.00	115
Sunday 2-Way Volume	0.00	0.00	1.00	0
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.00	0.00	1.00	0

Note: A zero indicates no data available.  
 Source: Institute of Transportation Engineers  
 Trip Generation, 8th Edition, 2008.

TRIP GENERATION BY MICROTRANS

**APPENDIX C**

**TRAFFIC DATA**

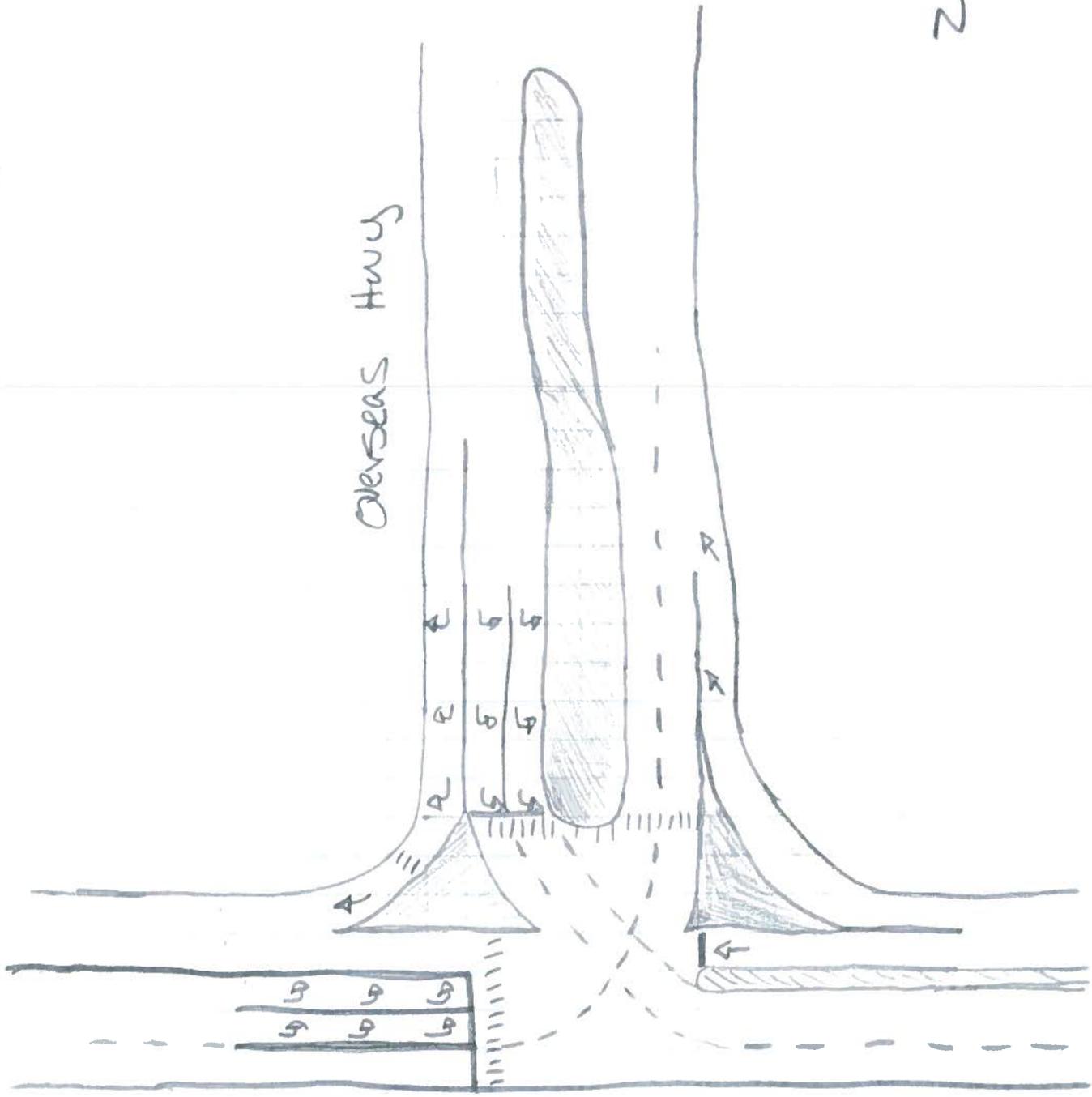
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2010 Peak Season Factor Category Report - Report Type: ALL  
 Category: 9000 MONROE COUNTYWIDE

MOCF: 0.93

Week	Dates	SF	PSCF
1	01/01/2010 - 01/02/2010	1.05	1.13
2	01/03/2010 - 01/09/2010	1.03	1.11
3	01/10/2010 - 01/16/2010	1.01	1.09
4	01/17/2010 - 01/23/2010	1.00	1.08
5	01/24/2010 - 01/30/2010	0.99	1.07
6	01/31/2010 - 02/06/2010	0.97	1.04
* 7	02/07/2010 - 02/13/2010	0.96	1.03
* 8	02/14/2010 - 02/20/2010	0.95	1.02
* 9	02/21/2010 - 02/27/2010	0.94	1.01
*10	02/28/2010 - 03/06/2010	0.92	0.99
*11	03/07/2010 - 03/13/2010	0.90	0.97
*12	03/14/2010 - 03/20/2010	0.89	0.96
*13	03/21/2010 - 03/27/2010	0.90	0.97
*14	03/28/2010 - 04/03/2010	0.91	0.98
*15	04/04/2010 - 04/10/2010	0.92	0.99
*16	04/11/2010 - 04/17/2010	0.93	1.00
*17	04/18/2010 - 04/24/2010	0.94	1.01
*18	04/25/2010 - 05/01/2010	0.95	1.02
*19	05/02/2010 - 05/08/2010	0.96	1.03
20	05/09/2010 - 05/15/2010	0.97	1.04
21	05/16/2010 - 05/22/2010	0.97	1.04
22	05/23/2010 - 05/29/2010	0.98	1.06
23	05/30/2010 - 06/05/2010	0.98	1.06
24	06/06/2010 - 06/12/2010	0.99	1.07
25	06/13/2010 - 06/19/2010	0.99	1.07
26	06/20/2010 - 06/26/2010	0.99	1.07
27	06/27/2010 - 07/03/2010	0.99	1.07
28	07/04/2010 - 07/10/2010	0.99	1.07
29	07/11/2010 - 07/17/2010	1.00	1.08
30	07/18/2010 - 07/24/2010	1.00	1.08
31	07/25/2010 - 07/31/2010	1.01	1.09
32	08/01/2010 - 08/07/2010	1.02	1.10
33	08/08/2010 - 08/14/2010	1.02	1.10
34	08/15/2010 - 08/21/2010	1.03	1.11
35	08/22/2010 - 08/28/2010	1.05	1.13
36	08/29/2010 - 09/04/2010	1.08	1.16
37	09/05/2010 - 09/11/2010	1.10	1.18
38	09/12/2010 - 09/18/2010	1.13	1.22
39	09/19/2010 - 09/25/2010	1.11	1.20
40	09/26/2010 - 10/02/2010	1.10	1.18
41	10/03/2010 - 10/09/2010	1.09	1.17
42	10/10/2010 - 10/16/2010	1.08	1.16
43	10/17/2010 - 10/23/2010	1.07	1.15
44	10/24/2010 - 10/30/2010	1.07	1.15
45	10/31/2010 - 11/06/2010	1.07	1.15
46	11/07/2010 - 11/13/2010	1.06	1.14
47	11/14/2010 - 11/20/2010	1.06	1.14
48	11/21/2010 - 11/27/2010	1.05	1.13
49	11/28/2010 - 12/04/2010	1.05	1.13
50	12/05/2010 - 12/11/2010	1.05	1.13
51	12/12/2010 - 12/18/2010	1.05	1.13
52	12/19/2010 - 12/25/2010	1.03	1.11
53	12/26/2010 - 12/31/2010	1.01	1.09

\* Peak Season



N Roosevelt Blvd

Overseas Hwy

2A

US 1 & Blvd.

TABLE 4  
RECOMMENDED CONTROLLER TIMINGS

CONTROLLER SETTINGS

INTERSECTION: US 1 & ROOSEVELT BOULEVARD

BASIC FUNCTIONS

	PH: NO:	1	2	3	4	5	6	7	8
INTERVAL TYPE									
EBL									
EW									
INITIAL									
PASSAGE									
YELLOW CLEAR									
RED CLEAR									
MAX GREEN 1									
MAX GREEN 2									
WALK									
PED CLEAR									
MIN RECALL									
MAX RECALL									
PED RECALL									
DET NON-LOCK									
CMA1									
CMA2									
FLASHING WALK									
PHASE OMIT									
PED OMIT									
SOFT RECALL									

COORDINATION FUNCTIONS

	PH: NO:	1	2	3	4	5	6	7	8
CYCLE									
OFFSET									
EW									
SB									
1									
2									
3									
4									
5									
6									

IMPLEMENTATION SCHEDULE

DAY	TIME
M-F	7:30 - 06:30
M-F	6:30 - 16:30

Runs Free  
18:30 to 6:30  
morning

\* Timing changed on PH. 2 Initial from 15 sec. to 8 sec.  
\* Timing changed on PH. 4 MAX GREEN 1 from 40 sec to 55 sec.  
\* Timing changed on 1-17-02 BY TALEN

*[Signature]*  
1/17/02

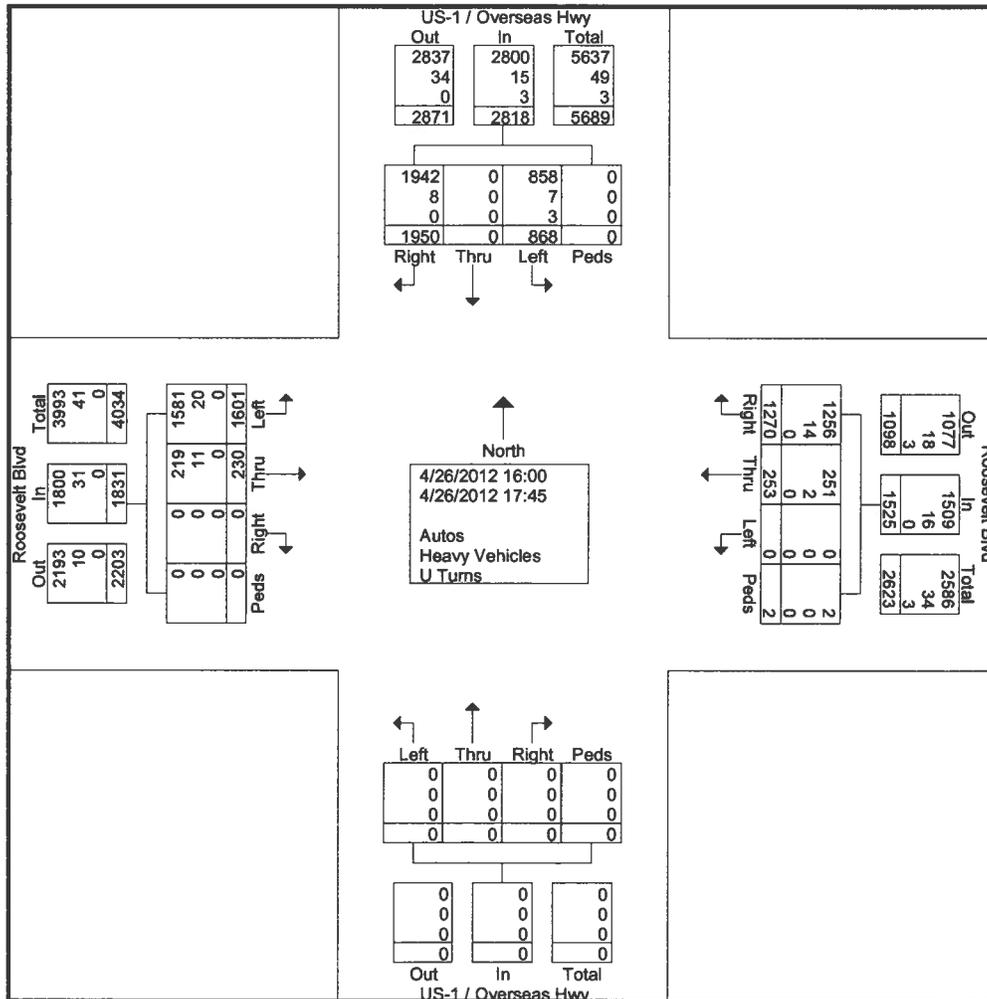
# Video Data Solutions, Inc.

CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 7-Roosevelt Blvd @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 1

## Groups Printed- Autos - Heavy Vehicles - U Turns

Start Time	US-1 / Overseas Hwy SOUTH BOUND				Roosevelt Blvd WEST BOUND				US-1 / Overseas Hwy NORTH BOUND				Roosevelt Blvd EAST BOUND				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
16:00	236	0	118	0	139	38	0	1	0	0	0	0	0	29	122	0	683
16:15	273	0	96	0	170	26	0	0	0	0	0	0	0	35	217	0	817
16:30	290	0	117	0	136	34	0	0	0	0	0	0	0	29	172	0	778
16:45	256	0	104	0	177	34	0	0	0	0	0	0	0	33	201	0	805
<b>Total</b>	<b>1055</b>	<b>0</b>	<b>435</b>	<b>0</b>	<b>622</b>	<b>132</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>126</b>	<b>712</b>	<b>0</b>	<b>3083</b>
17:00	283	0	133	0	184	34	0	0	0	0	0	0	0	31	216	0	881
17:15	212	0	112	0	179	29	0	0	0	0	0	0	0	22	219	0	773
17:30	225	0	101	0	139	30	0	0	0	0	0	0	0	36	227	0	758
17:45	175	0	87	0	146	28	0	1	0	0	0	0	0	15	227	0	679
<b>Total</b>	<b>895</b>	<b>0</b>	<b>433</b>	<b>0</b>	<b>648</b>	<b>121</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>104</b>	<b>889</b>	<b>0</b>	<b>3091</b>
<b>Grand Total</b>	<b>1950</b>	<b>0</b>	<b>868</b>	<b>0</b>	<b>1270</b>	<b>253</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>230</b>	<b>1601</b>	<b>0</b>	<b>6174</b>
Apprch %	69.2	0	30.8	0	83.3	16.6	0	0.1	0	0	0	0	0	12.6	87.4	0	
Total %	31.6	0	14.1	0	20.6	4.1	0	0	0	0	0	0	0	3.7	25.9	0	
Autos	1942	0	858	0	1256	251	0	2	0	0	0	0	0	219	1581	0	6109
% Autos	99.6	0	98.8	0	98.9	99.2	0	100	0	0	0	0	0	95.2	98.8	0	98.9
Heavy Vehicles	8	0	7	0	14	2	0	0	0	0	0	0	0	11	20	0	62
% Heavy Vehicles	0.4	0	0.8	0	1.1	0.8	0	0	0	0	0	0	0	4.8	1.2	0	1
U Turns	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
% U Turns	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0

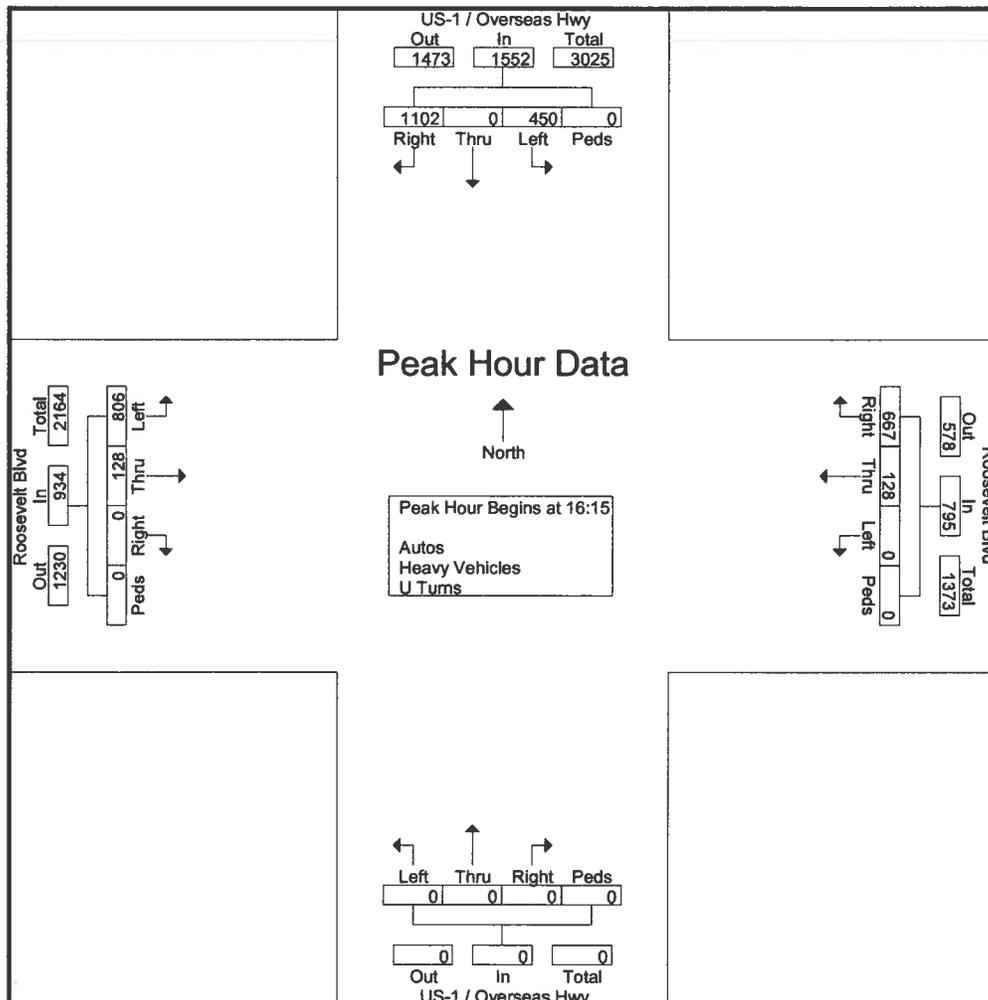


# Video Data Solutions, Inc.

CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 7-Roosevelt Blvd @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 2

Start Time	US-1 / Overseas Hwy SOUTH BOUND					Roosevelt Blvd WEST BOUND					US-1 / Overseas Hwy NORTH BOUND					Roosevelt Blvd EAST BOUND					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:15																					
16:15	273	0	96	0	369	170	26	0	0	196	0	0	0	0	0	0	35	217	0	252	817
16:30	290	0	117	0	407	136	34	0	0	170	0	0	0	0	0	0	29	172	0	201	778
16:45	256	0	104	0	360	177	34	0	0	211	0	0	0	0	0	0	33	201	0	234	805
17:00	283	0	133	0	416	184	34	0	0	218	0	0	0	0	0	0	31	216	0	247	881
Total Volume	1102	0	450	0	1552	667	128	0	0	795	0	0	0	0	0	0	128	806	0	934	3281
% App. Total	71	0	29	0		83.9	16.1	0	0		0	0	0	0		0	13.7	86.3	0		
PHF	.950	.000	.846	.000	.933	.906	.941	.000	.000	.912	.000	.000	.000	.000	.000	.000	.914	.929	.000	.927	.931

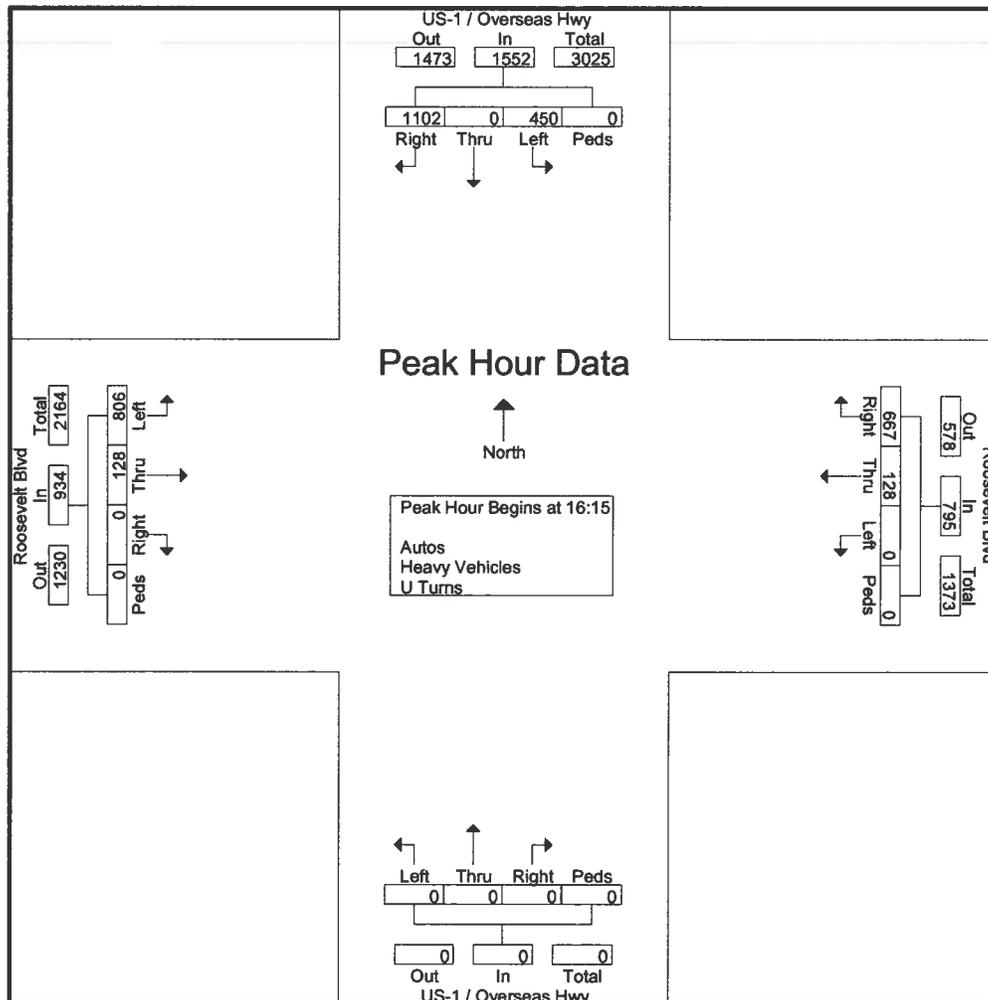


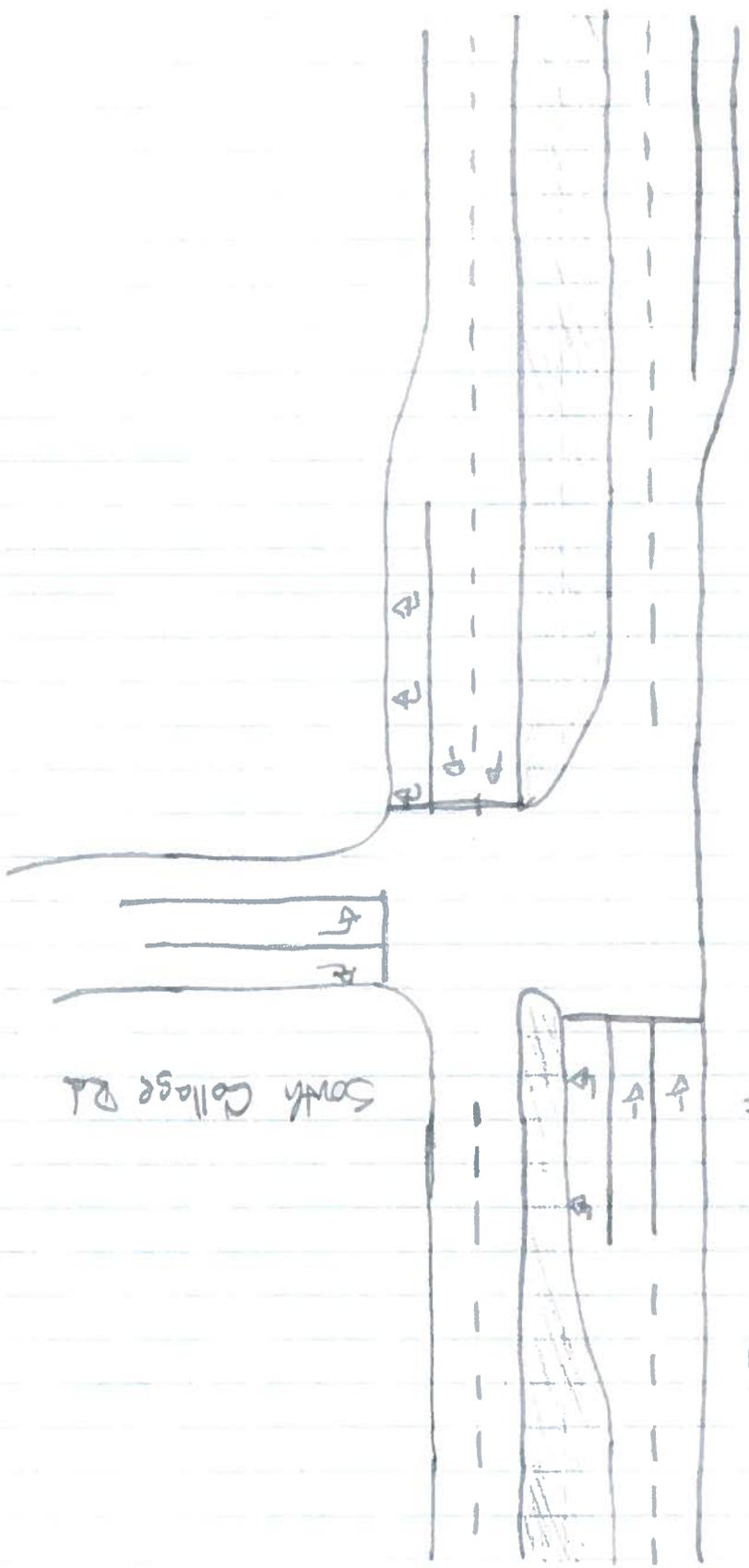
# Video Data Solutions, Inc.

CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 7-Roosevelt Blvd @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 3

Start Time	US-1 / Overseas Hwy SOUTH BOUND					Roosevelt Blvd WEST BOUND					US-1 / Overseas Hwy NORTH BOUND					Roosevelt Blvd EAST BOUND					Int. Total
	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Right	Thr u	Left	Peds	App. Total	Right	Thr u	Left	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:15																					
16:15	273	0	96	0	369	170	26	0	0	196	0	0	0	0	0	0	35	217	0	252	817
16:30	290	0	117	0	407	136	34	0	0	170	0	0	0	0	0	0	29	172	0	201	778
16:45	256	0	104	0	360	177	34	0	0	211	0	0	0	0	0	0	33	201	0	234	805
17:00	283	0	133	0	416	184	34	0	0	218	0	0	0	0	0	0	31	216	0	247	881
Total Volume	1102	0	450	0	1552	667	128	0	0	795	0	0	0	0	0	0	128	806	0	934	3281
% App. Total	71	0	29	0		83.9	16.1	0	0		0	0	0	0	0	0	13.7	86.3	0		
PHF	.950	.000	.846	.000	.933	.906	.941	.000	.000	.912	.000	.000	.000	.000	.000	.000	.914	.929	.000	.927	.931





South College Rd

Overseas Hwy

↑  
2

TABLE 4 (Continued)  
RECOMMENDED CONTROLLER TIMINGS

INTERSECTION: US 1 & COLLEGE ROAD		CONTROLLER SETTINGS							
BASIC FUNCTIONS		PH: NO:		RING 1		RING 2			
INTERVAL TYPE		1	2	3	4	5	6	7	8
NBL			SB				NB		EB
INITIAL PASSAGE		5	20				20		10
YELLOW CLEAR		2.0	3.0				3.0		2.5
RED CLEAR		3.5	4.0				4.0		4.0
MAX GREEN 1		1.0	1.0				1.0		2.0
MAX GREEN 2		10	50				50		20
WALK			7						
PED CLEAR			6						
MIN RECALL			X				X		
MAX RECALL									
PED RECALL									
DET NON-LOCK									
CNA1			X				X		
CNA2									
FLASHING WALK									
PHASE OMIT									
PED OMIT									
SOFT RECALL									
COORDINATION FUNCTIONS		PH: NO:		RING 1		RING 2			
TIMING PATTERN		1	2	3	4	5	6	7	8
CYCLE		NBL	SB				NB		EB
OFFSET		46 70	75 10				16 90		20
1	110	93							
2	100	92	82 57				82 77		23
3									
4									
5									
6									

IMPLEMENTATION SCHEDULE  
DAY TIME  
M-F 7:30-09:30  
M-F 8:30-18:30

*[Handwritten Signature]*  
Date: \_\_\_\_\_

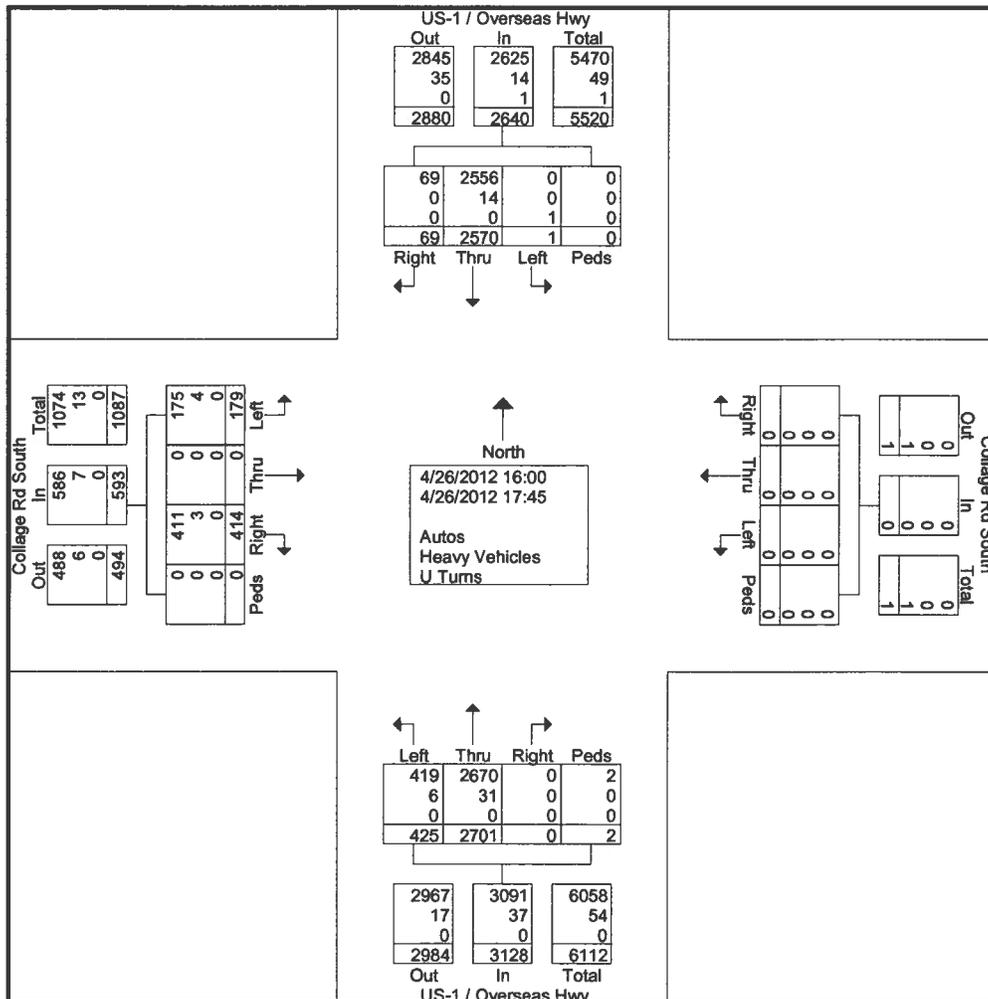
# Video Data Solutions, Inc.

CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 6-Collage Rd South @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 1

## Groups Printed- Autos - Heavy Vehicles - U Turns

Start Time	US-1 / Overseas Hwy SOUTH BOUND				Collage Rd South WEST BOUND				US-1 / Overseas Hwy NORTH BOUND				Collage Rd South EAST BOUND				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
16:00	10	354	0	0	0	0	0	0	0	236	55	0	57	0	28	0	740
16:15	6	312	0	0	0	0	0	0	0	355	51	0	47	0	16	0	787
16:30	13	338	0	0	0	0	0	0	0	337	38	0	55	0	27	0	808
16:45	8	324	1	0	0	0	0	0	0	352	53	0	54	0	23	0	815
<b>Total</b>	<b>37</b>	<b>1328</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1280</b>	<b>197</b>	<b>0</b>	<b>213</b>	<b>0</b>	<b>94</b>	<b>0</b>	<b>3150</b>
17:00	10	329	0	0	0	0	0	0	0	362	67	2	77	0	31	0	878
17:15	8	342	0	0	0	0	0	0	0	376	64	0	45	0	26	0	861
17:30	9	288	0	0	0	0	0	0	0	352	35	0	49	0	18	0	751
17:45	5	283	0	0	0	0	0	0	0	331	62	0	30	0	10	0	721
<b>Total</b>	<b>32</b>	<b>1242</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1421</b>	<b>228</b>	<b>2</b>	<b>201</b>	<b>0</b>	<b>85</b>	<b>0</b>	<b>3211</b>
<b>Grand Total</b>	<b>69</b>	<b>2570</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2701</b>	<b>425</b>	<b>2</b>	<b>414</b>	<b>0</b>	<b>179</b>	<b>0</b>	<b>6361</b>
Apprch %	2.6	97.3	0	0	0	0	0	0	0	86.3	13.6	0.1	69.8	0	30.2	0	
Total %	1.1	40.4	0	0	0	0	0	0	0	42.5	6.7	0	6.5	0	2.8	0	
Autos	69	2556	0	0	0	0	0	0	0	2670	419	2	411	0	175	0	6302
% Autos	100	99.5	0	0	0	0	0	0	0	98.9	98.6	100	99.3	0	97.8	0	99.1
Heavy Vehicles	0	14	0	0	0	0	0	0	0	31	6	0	3	0	4	0	58
% Heavy Vehicles	0	0.5	0	0	0	0	0	0	0	1.1	1.4	0	0.7	0	2.2	0	0.9
U Turns	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% U Turns	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0

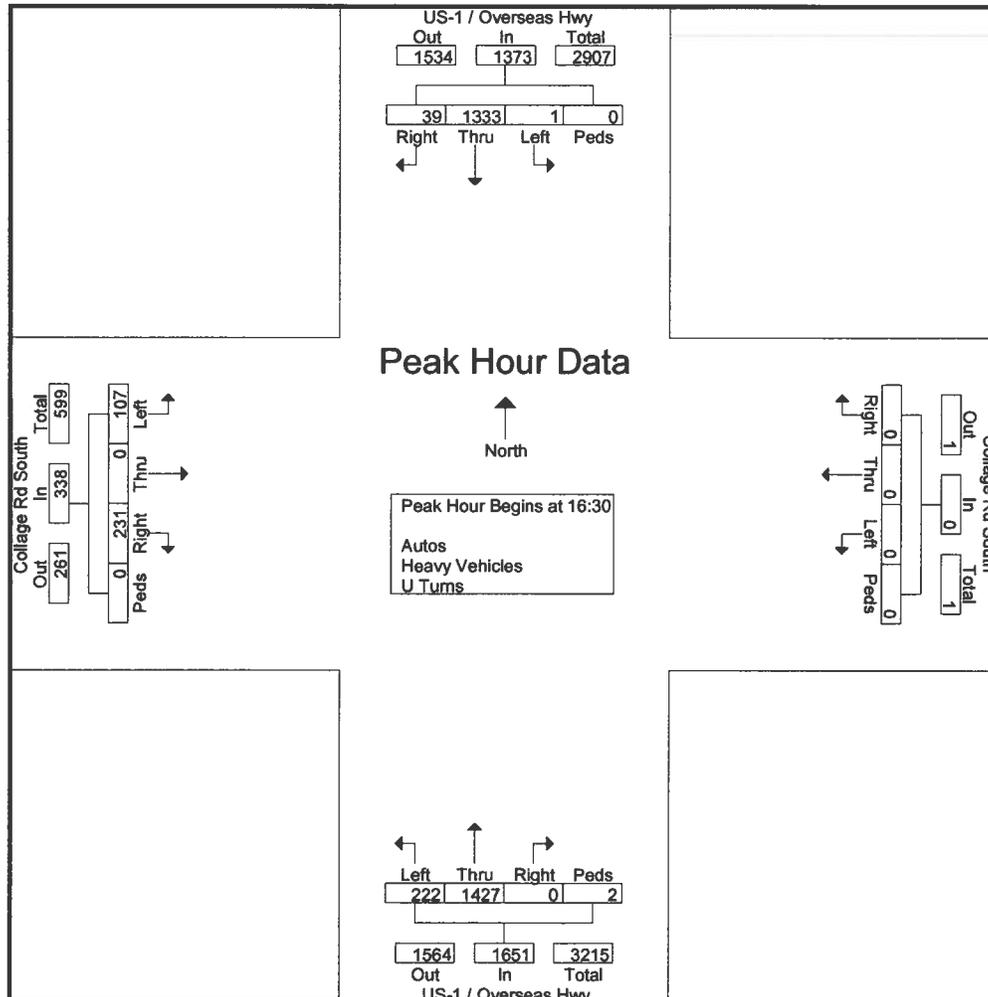


# Video Data Solutions, Inc.

CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 6-Collage Rd South @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 2

Start Time	US-1 / Overseas Hwy SOUTH BOUND					Collage Rd South WEST BOUND					US-1 / Overseas Hwy NORTH BOUND					Collage Rd South EAST BOUND					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	13	338	0	0	351	0	0	0	0	0	0	337	38	0	375	55	0	27	0	82	808
16:45	8	324	1	0	333	0	0	0	0	0	0	352	53	0	405	54	0	23	0	77	815
17:00	10	329	0	0	339	0	0	0	0	0	0	362	67	2	431	77	0	31	0	108	878
17:15	8	342	0	0	350	0	0	0	0	0	0	376	64	0	440	45	0	26	0	71	861
Total Volume	39	1333	1	0	1373	0	0	0	0	0	0	1427	222	2	1651	231	0	107	0	338	3362
% App. Total	2.8	97.1	0.1	0		0	0	0	0		0	86.4	13.4	0.1		68.3	0	31.7	0		
PHF	.750	.974	.250	.000	.978	.000	.000	.000	.000	.000	.000	.949	.828	.250	.938	.750	.000	.863	.000	.782	.957

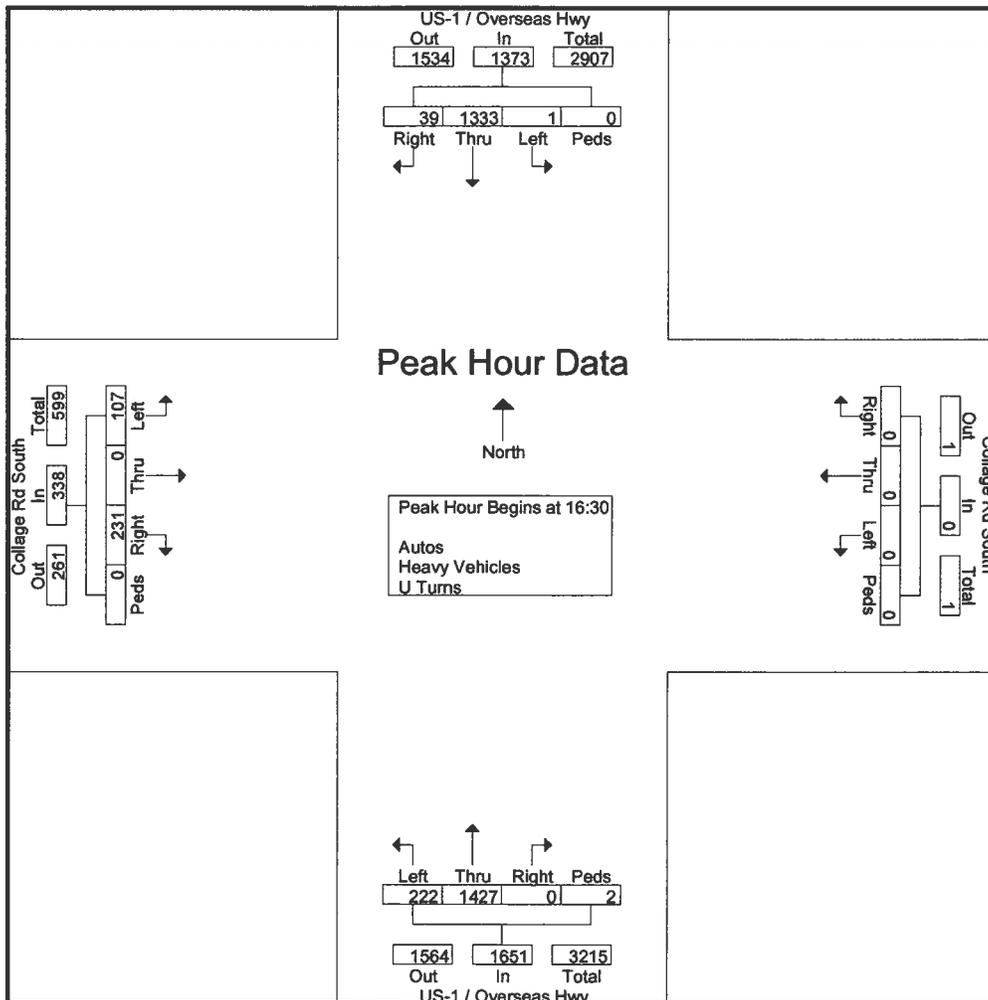


# Video Data Solutions, Inc.

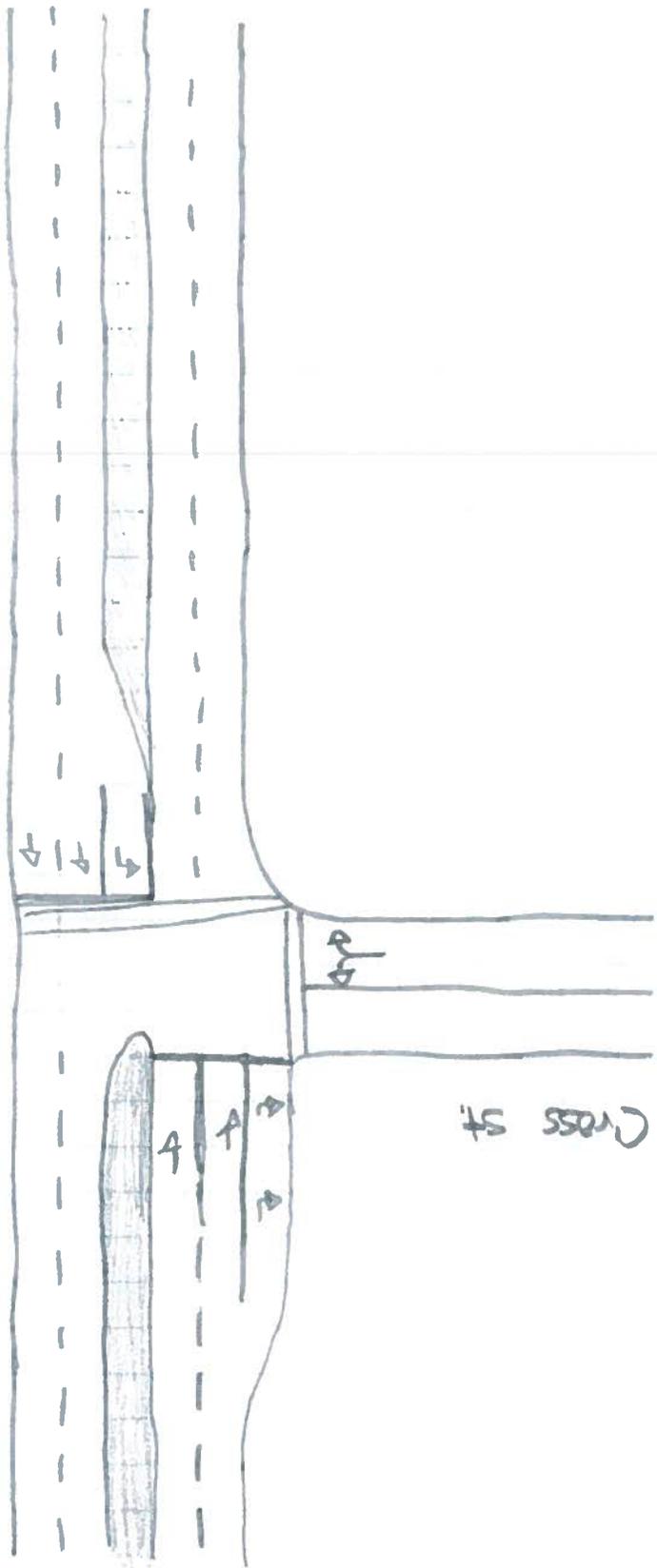
CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 6-Collage Rd South @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 3

Start Time	US-1 / Overseas Hwy SOUTH BOUND					Collage Rd South WEST BOUND					US-1 / Overseas Hwy NORTH BOUND					Collage Rd South EAST BOUND					Int. Total
	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Right	Thr u	Left	Peds	App. Total	Right	Thr u	Left	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	13	338	0	0	351	0	0	0	0	0	0	337	38	0	375	55	0	27	0	82	808
16:45	8	324	1	0	333	0	0	0	0	0	0	352	53	0	405	54	0	23	0	77	815
17:00	10	329	0	0	339	0	0	0	0	0	0	362	67	2	431	77	0	31	0	108	878
17:15	8	342	0	0	350	0	0	0	0	0	0	376	64	0	440	45	0	26	0	71	861
Total Volume	39	1333	1	0	1373	0	0	0	0	0	0	1427	222	2	1651	231	0	107	0	338	3362
% App. Total	2.8	97.1	0.1	0		0	0	0	0		0	86.4	13.4	0.1		68.3	0	31.7	0		
PHF	.750	.974	.250	.000	.978	.000	.000	.000	.000	.000	.000	.949	.828	.250	.938	.750	.000	.863	.000	.782	.957



Overseas Hwy



Cross St.

2/6/84

TABLE 4 (Continued)  
RECOMMENDED CONTROLLER TIMINGS

INTERSECTION: US 1 & CROSS STREET		CONTROLLER SETTINGS							
BASIC FUNCTIONS		PH: NO: 14	RING 1		RING 2		RING 3		
INTERVAL TYPE		1	2	3	4	5	6	7	8
INITIAL PASSAGE	WB		NS						
YELLOW CLEAR	10		20				20		
RED CLEAR	2.5		3.0				3.0		
MAX GREEN 1	4.0		4.0				4.0		
MAX GREEN 2	1.0		1.0				1.0		
WALK	25		50				50		
PED CLEAR	7		7				7		
MIN RECALL	13		9				9		
PED RECALL			X				X		
DET NON-LOCK									
CNA1			X				X		
CNA2									
FLASHING WALK									
PHASE OMIT									
PED OMIT									
SOFT RECALL									

COORDINATION FUNCTIONS		CONTROLLER SETTINGS							
TIMING PATTERN		PH: NO: 14	RING 1		RING 2		RING 3		
CYCLE	OFFSET	1	2	3	4	5	6	7	8
1	WB		NS						
2	110	31	79				79		
3	100	94	73				73		
4									
5									
6									

IMPLEMENTATION SCHEDULE	DAY	TIME
M-F	M-F	7:30 - 08:30
M-F	M-F	6:30 - 16:30

ADD

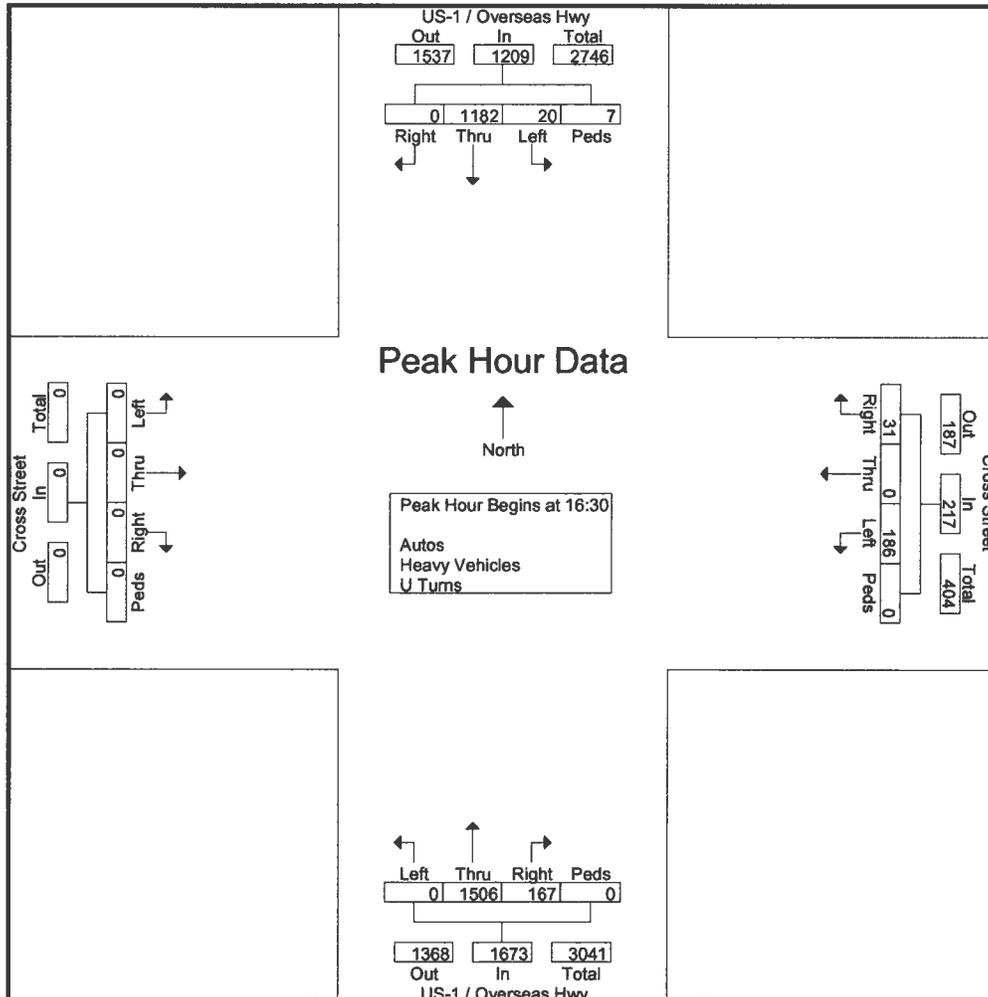


# Video Data Solutions, Inc.

CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 5-Cross St @ US-1  
 Site Code : 0000000  
 Start Date : 4/26/2012  
 Page No : 2

Start Time	US-1 / Overseas Hwy SOUTH BOUND					Cross Street WEST BOUND					US-1 / Overseas Hwy NORTH BOUND					Cross Street EAST BOUND					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	0	325	8	2	335	10	0	47	0	57	31	382	0	0	413	0	0	0	0	0	805
16:45	0	280	6	1	287	5	0	54	0	59	48	362	0	0	410	0	0	0	0	0	756
17:00	0	276	2	4	282	11	0	40	0	51	39	351	0	0	390	0	0	0	0	0	723
17:15	0	301	4	0	305	5	0	45	0	50	49	411	0	0	460	0	0	0	0	0	815
Total Volume	0	1182	20	7	1209	31	0	186	0	217	167	1506	0	0	1673	0	0	0	0	0	3099
% App. Total	0	97.8	1.7	0.6		14.3	0	85.7	0		10	90	0	0		0	0	0	0		
PHF	.000	.909	.625	.438	.902	.705	.000	.861	.000	.919	.852	.916	.000	.000	.909	.000	.000	.000	.000	.000	.951

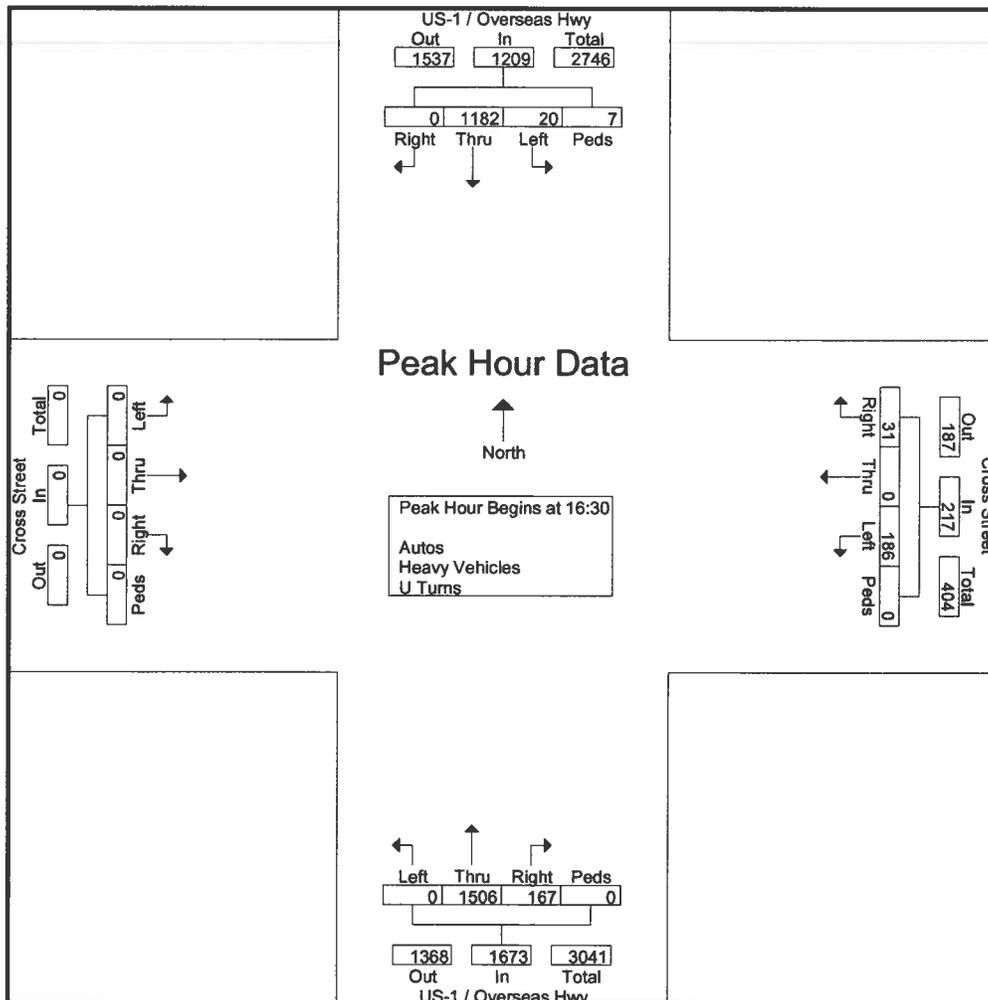


# Video Data Solutions, Inc.

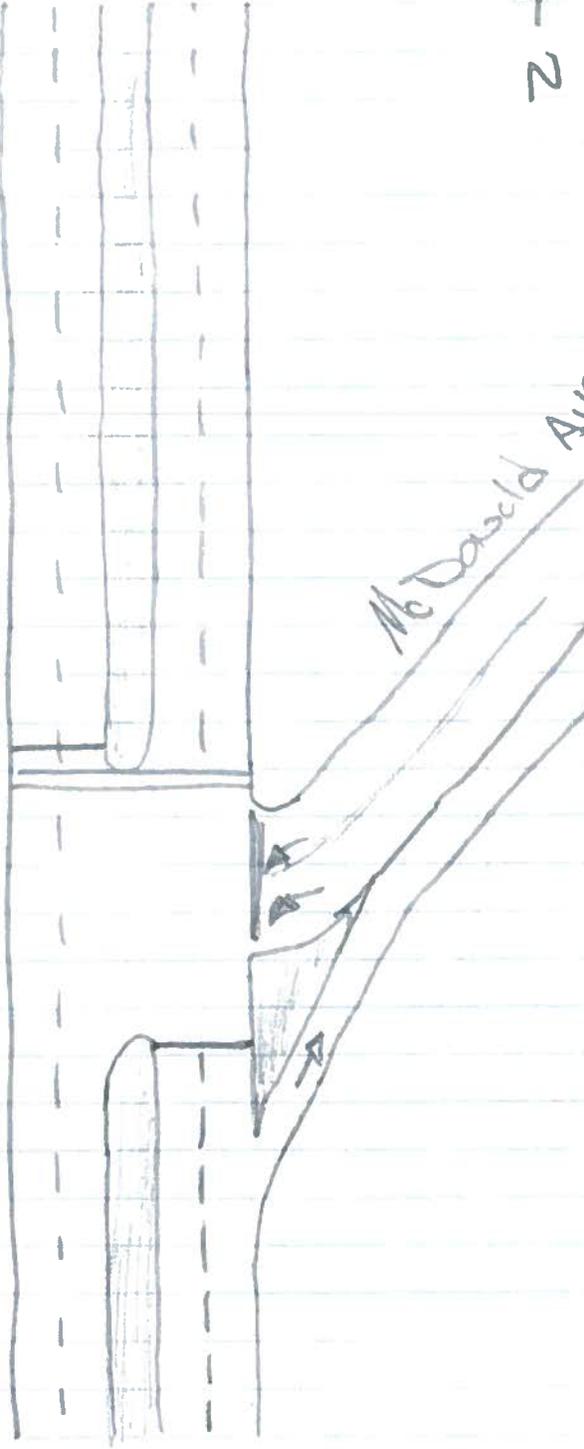
CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 5-Cross St @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 3

Start Time	US-1 / Overseas Hwy SOUTH BOUND					Cross Street WEST BOUND					US-1 / Overseas Hwy NORTH BOUND					Cross Street EAST BOUND					Int. Total
	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Right	Thr u	Left	Peds	App. Total	Right	Thr u	Left	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	0	325	8	2	335	10	0	47	0	57	31	382	0	0	413	0	0	0	0	0	805
16:45	0	280	6	1	287	5	0	54	0	59	48	362	0	0	410	0	0	0	0	0	756
17:00	0	276	2	4	282	11	0	40	0	51	39	351	0	0	390	0	0	0	0	0	723
17:15	0	301	4	0	305	5	0	45	0	50	49	411	0	0	460	0	0	0	0	0	815
Total Volume	0	1182	20	7	1209	31	0	186	0	217	167	1506	0	0	1673	0	0	0	0	0	3099
% App. Total	0	97.8	1.7	0.6		14.3	0	85.7	0		10	90	0	0		0	0	0	0		
PHF	.000	.909	.625	.438	.902	.705	.000	.861	.000	.919	.852	.916	.000	.000	.909	.000	.000	.000	.000	.000	.951



Overseas Hwy



Mc Donald Ave

N  
2

TABLE 4 (Continued)  
RECOMMENDED CONTROLLER TIMINGS

CONTROLLER SETTINGS

INTERSECTION: US 1 & MACDONALD AVENUE

BASIC FUNCTIONS

	PH: NO:	1	2	3	4	5	6	7	8
INTERVAL									
TYPE		WB	NS						
INITIAL		10	20						
PASSAGE		2.5	3.0						
YELLOW CLEAR		4.0	4.0						
RED CLEAR		1.0	1.0						
MAX GREEN 1		25	50						
MAX GREEN 2									
WALK		7	7						
PED CLEAR		13	5						
MIN RECALL			X						
MAX RECALL									
PED RECALL									
DET NON-LOCK									
CNA1			X						
CNA2									
FLASHING WALK									
PHASE OMIT									
PED OMIT									
SOFT RECALL									

COORDINATION FUNCTIONS

	PH: NO:	1	2	3	4	5	6	7	8
TIMING									
PATTERN									
	CYCLE	WB	NS						
1	100	28	82						
2	110	27	73						
3									
4									
5									
6									

IMPLEMENTATION  
SCHEDULE  
DAY TIME  
M-F 7:30-09:30  
M-F 6:30-18:30

*M.D.*

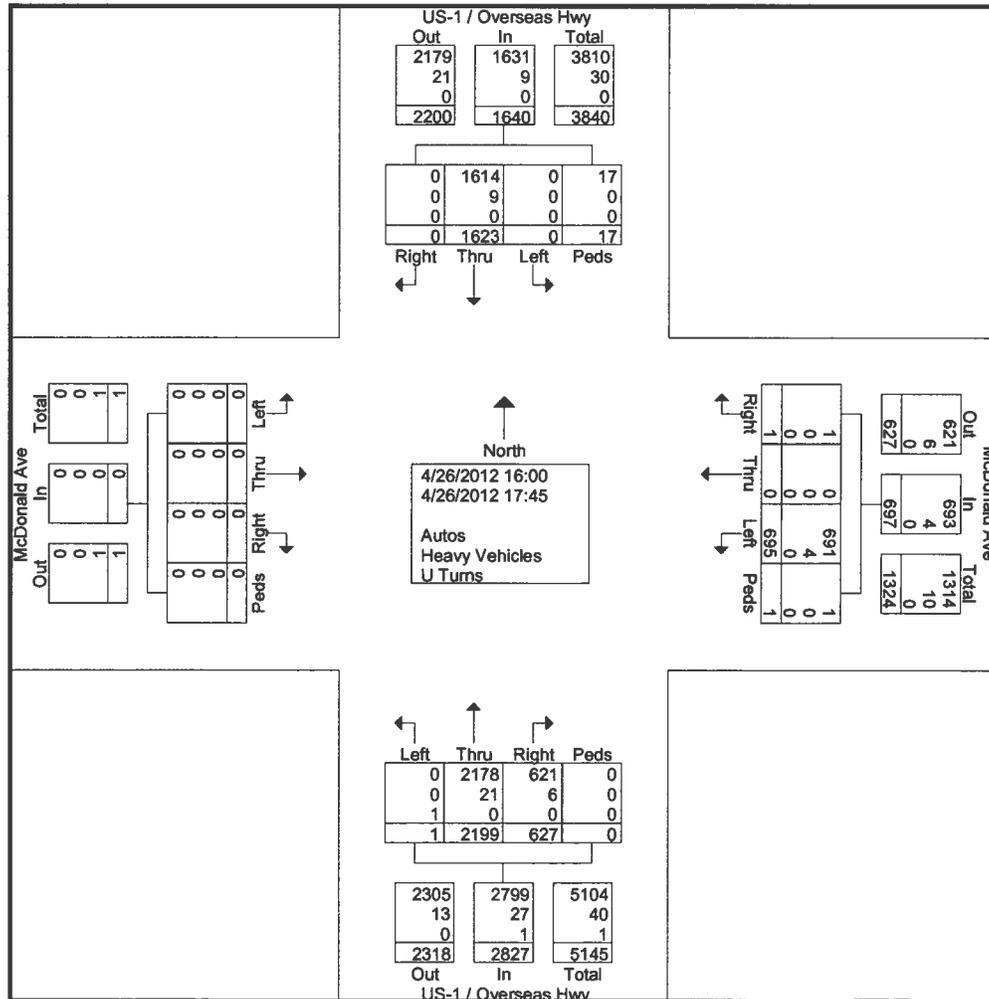
# Video Data Solutions, Inc.

CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 4-McDonald @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 1

## Groups Printed- Autos - Heavy Vehicles - U Turns

Start Time	US-1 / Overseas Hwy SOUTH BOUND				McDonald Ave WEST BOUND				US-1 / Overseas Hwy NORTH BOUND				McDonald Ave EAST BOUND				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
16:00	0	224	0	0	0	0	104	0	77	203	0	0	0	0	0	0	608
16:15	0	195	0	0	1	0	79	1	82	272	0	0	0	0	0	0	630
16:30	0	242	0	0	0	0	92	0	82	305	1	0	0	0	0	0	722
16:45	0	193	0	0	0	0	87	0	81	285	0	0	0	0	0	0	646
<b>Total</b>	<b>0</b>	<b>854</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>362</b>	<b>1</b>	<b>322</b>	<b>1065</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2606</b>
17:00	0	209	0	0	0	0	105	0	81	271	0	0	0	0	0	0	666
17:15	0	215	0	1	0	0	94	0	81	356	0	0	0	0	0	0	747
17:30	0	181	0	8	0	0	76	0	64	263	0	0	0	0	0	0	592
17:45	0	164	0	8	0	0	58	0	79	244	0	0	0	0	0	0	553
<b>Total</b>	<b>0</b>	<b>769</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>333</b>	<b>0</b>	<b>305</b>	<b>1134</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2558</b>
<b>Grand Total</b>	<b>0</b>	<b>1623</b>	<b>0</b>	<b>17</b>	<b>1</b>	<b>0</b>	<b>695</b>	<b>1</b>	<b>627</b>	<b>2199</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5164</b>
Apprch %	0	99	0	1	0.1	0	99.7	0.1	22.2	77.8	0	0	0	0	0	0	
Total %	0	31.4	0	0.3	0	0	13.5	0	12.1	42.6	0	0	0	0	0	0	
Autos	0	1614	0	17	1	0	691	1	621	2178	0	0	0	0	0	0	5123
% Autos	0	99.4	0	100	100	0	99.4	100	99	99	0	0	0	0	0	0	99.2
Heavy Vehicles	0	9	0	0	0	0	4	0	6	21	0	0	0	0	0	0	40
% Heavy Vehicles	0	0.6	0	0	0	0	0.6	0	1	1	0	0	0	0	0	0	0.8
U Turns	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
% U Turns	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0

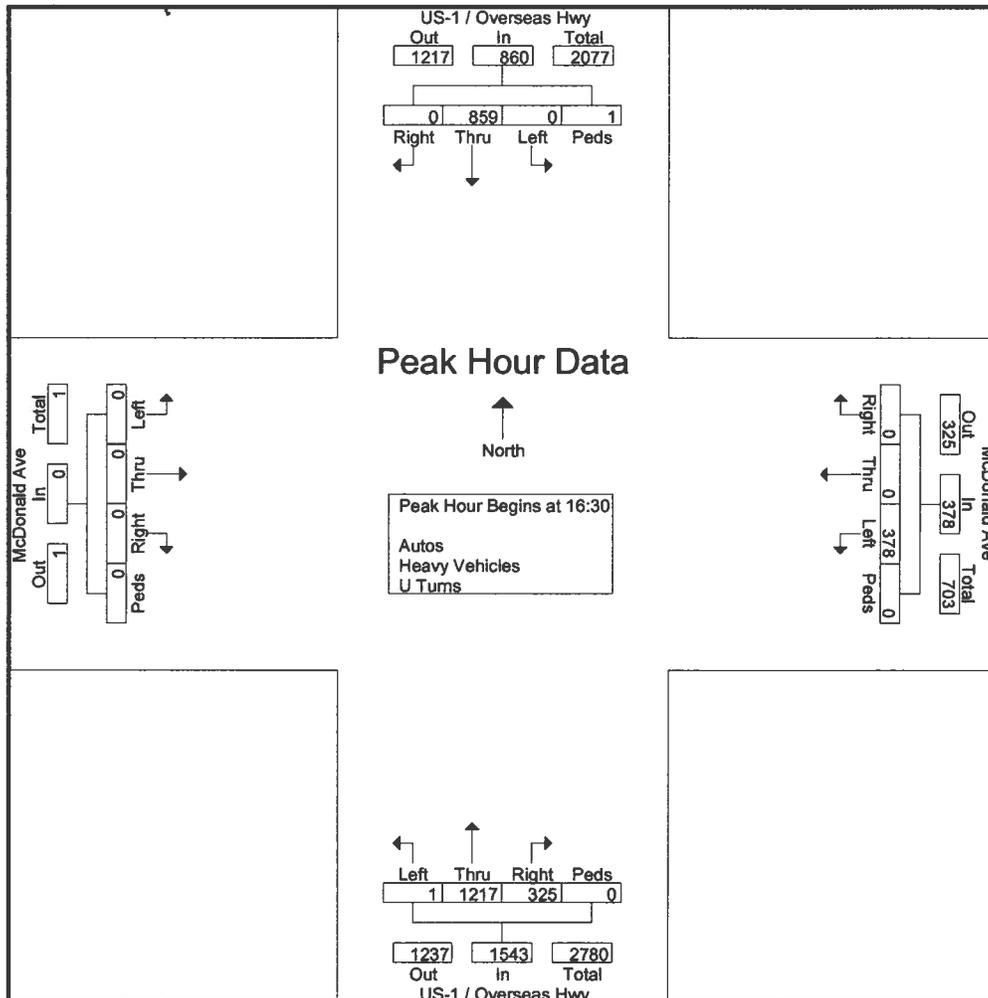


# Video Data Solutions, Inc.

CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 4-McDonald @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 2

Start Time	US-1 / Overseas Hwy SOUTH BOUND					McDonald Ave WEST BOUND					US-1 / Overseas Hwy NORTH BOUND					McDonald Ave EAST BOUND					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	0	242	0	0	242	0	0	92	0	92	82	305	1	0	388	0	0	0	0	0	722
16:45	0	193	0	0	193	0	0	87	0	87	81	285	0	0	366	0	0	0	0	0	646
17:00	0	209	0	0	209	0	0	105	0	105	81	271	0	0	352	0	0	0	0	0	666
17:15	0	215	0	1	216	0	0	94	0	94	81	356	0	0	437	0	0	0	0	0	747
Total Volume	0	859	0	1	860	0	0	378	0	378	325	1217	1	0	1543	0	0	0	0	0	2781
% App. Total	0	99.9	0	0.1		0	0	100	0		21.1	78.9	0.1	0		0	0	0	0		
PHF	.000	.887	.000	.250	.888	.000	.000	.900	.000	.900	.991	.855	.250	.000	.883	.000	.000	.000	.000	.000	.931

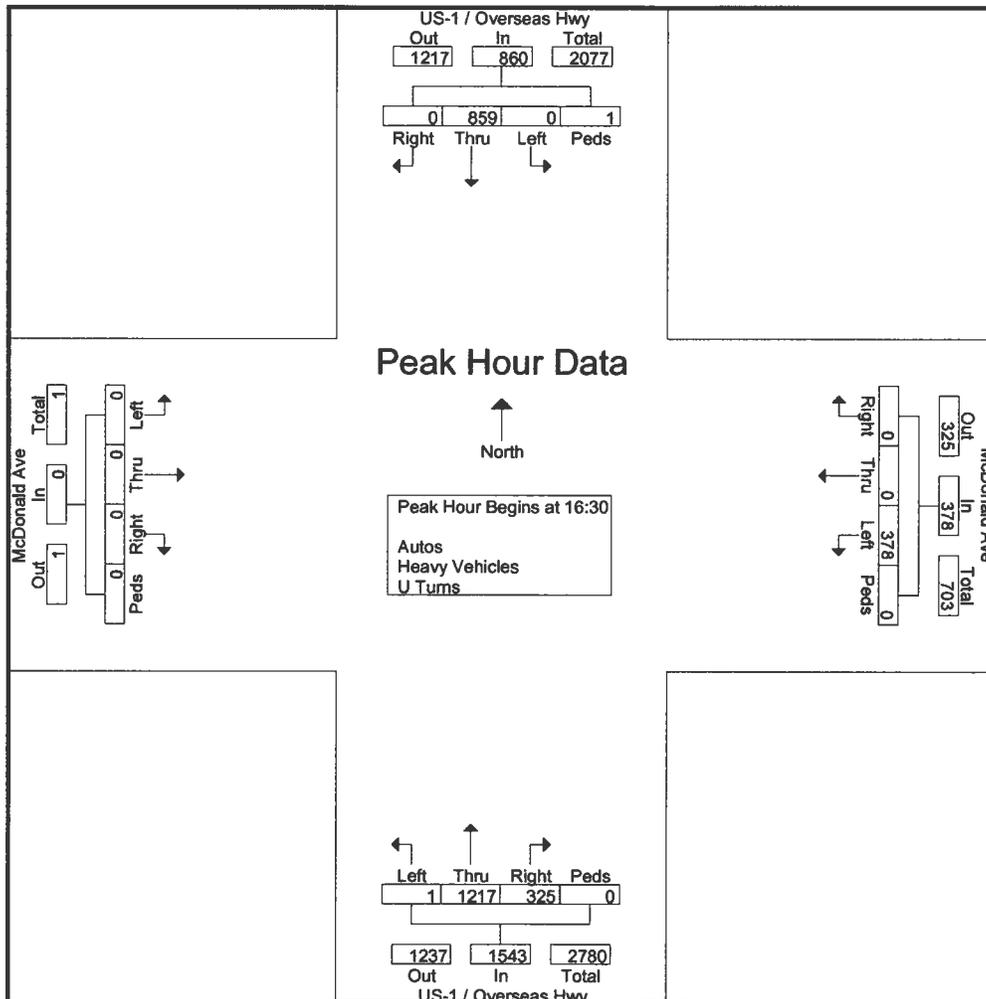


# Video Data Solutions, Inc.

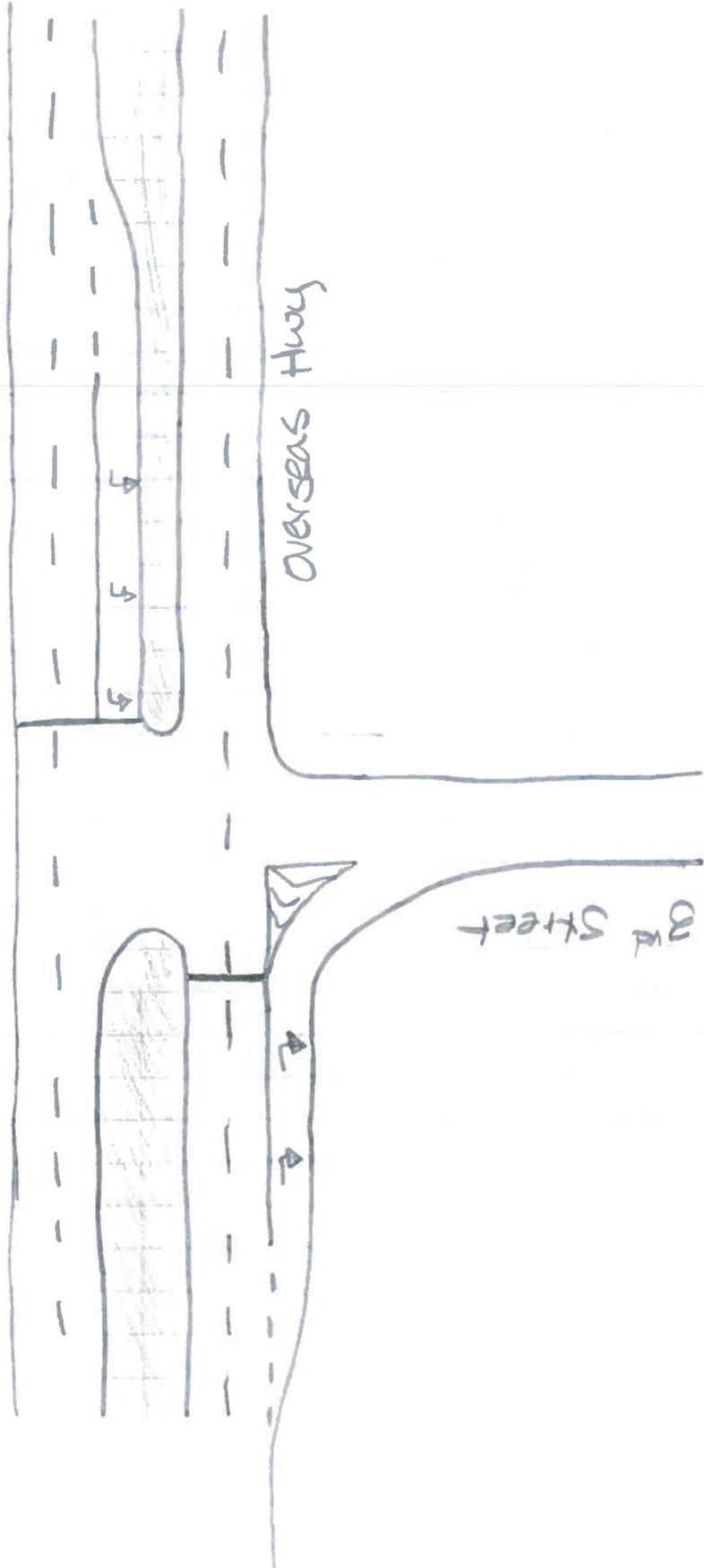
CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 4-McDonald @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 3

Start Time	US-1 / Overseas Hwy SOUTH BOUND					McDonald Ave WEST BOUND					US-1 / Overseas Hwy NORTH BOUND					McDonald Ave EAST BOUND					Int. Total
	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Right	Thr u	Left	Peds	App. Total	Right	Thr u	Left	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	0	242	0	0	242	0	0	92	0	92	82	305	1	0	388	0	0	0	0	0	722
16:45	0	193	0	0	193	0	0	87	0	87	81	285	0	0	366	0	0	0	0	0	646
17:00	0	209	0	0	209	0	0	105	0	105	81	271	0	0	352	0	0	0	0	0	666
17:15	0	215	0	1	216	0	0	94	0	94	81	356	0	0	437	0	0	0	0	0	747
Total Volume	0	859	0	1	860	0	0	378	0	378	325	1217	1	0	1543	0	0	0	0	0	2781
% App. Total	0	99.9	0	0.1		0	0	100	0		21.1	78.9	0.1	0		0	0	0	0		
PHF	.000	.887	.000	.250	.888	.000	.000	.900	.000	.900	.991	.855	.250	.000	.883	.000	.000	.000	.000	.000	.931



2A



# TRANSYT 1880E CONTROLLER SETTINGS

BASIC FUNCTIONS	PH NO:		RING 1			RING 2			SPECIAL FUNCTIONS (PH. 0)
	1	2	3	4	5	6	7	8	
01 INITIAL									BASIC PRE EMT FUNCTIONS (PH 9)
02 PASSAGE									01 MIN GREEN
03 YELLOW CLEAR									02 TR CLEAR GR 1
04 RED CLEAR									03 TR CLEAR GR 2
05 MAX GREEN 1									04 MIN DWELL
06 MAX GREEN 2									05 TR CLEAR YEL 1
07 WALK									06 TR CLEAR ALL RED 1
08 PED CLEAR									07 TR CLEAR YEL 2
09 MIN RECALL									08 TR CLEAR ALL RED 2
10 MAX RECALL									09 YEL CLEAR AFT P-E
11 PED RECALL									10 RED CLEAR AFT P-E
12 DET NON-LOCK									27 SPECIAL O/L CLEAR
13 CNA 1									28 SPECIAL PED CLEAR
14 CNA 2									41 WALK
15 FLASHING WALK									42 PED CLEAR
16 PHASE OMT									43 PED ALL RED CL
17 PED OMT									51 DEL BEFORE P-E
18 SOFT RECALL									56 # OF CYC TO HOLD REC
									57 # OF CYC TO HLD MAX GR

**NOTES:**

1. T.C.C. MAY OVERRIDE MAX., OFFSET, OR CYCLE LENGTH.
2. CONTROLLER IS TRUE MAX. & TRUE MIN.
3. PHASE 0, INTERVAL 96=0 MEANS TRUE M
4. BLANKS, 'X' OR '----' MEAN ZERO OR N/A
5. KEYBOARD MUST BE LEFT 'OFF'.

Init. By	KC, BR	Date	5-10-12
Checked		Date	
In Serv.		Date	
Timing		Ph.No.	
Asset No.			

\* PREEMPTION LIGHT FOR  
FIRE STATION

Intersection Of:	US-1
	3 <sup>rd</sup> ST.

**SSRM SETTINGS**

CYCLE LENGTH:	%
RELEASE ( S1 )	%
AVG. OFFSET ( R1 )	%
AM OFFSET ( R2 )	%
PM OFFSET ( R3 )	%

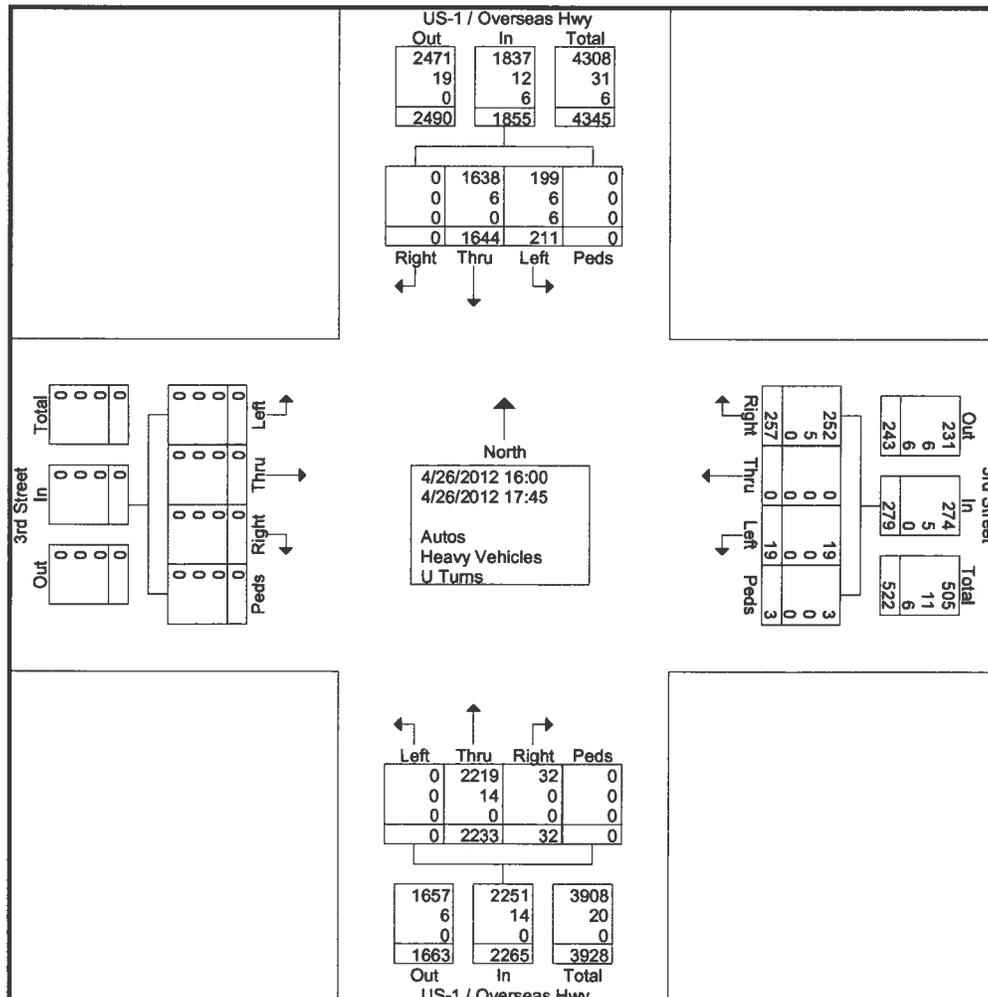
# Video Data Solutions, Inc.

CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 3-3rd Street @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 1

## Groups Printed- Autos - Heavy Vehicles - U Turns

Start Time	US-1 / Overseas Hwy SOUTH BOUND				3rd Street WEST BOUND				US-1 / Overseas Hwy NORTH BOUND				3rd Street EAST BOUND				Int. Total	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds		
16:00	0	231	39	0	39	0	6	0	2	214	0	0	0	0	0	0	0	531
16:15	0	202	33	0	29	0	2	0	4	248	0	0	0	0	0	0	0	518
16:30	0	251	26	0	31	0	0	0	8	319	0	0	0	0	0	0	0	635
16:45	0	190	26	0	35	0	2	0	3	288	0	0	0	0	0	0	0	544
Total	0	874	124	0	134	0	10	0	17	1069	0	0	0	0	0	0	0	2228
17:00	0	198	25	0	43	0	2	3	5	278	0	0	0	0	0	0	0	554
17:15	0	218	22	0	34	0	4	0	4	330	0	0	0	0	0	0	0	612
17:30	0	181	13	0	32	0	1	0	2	286	0	0	0	0	0	0	0	515
17:45	0	173	27	0	14	0	2	0	4	270	0	0	0	0	0	0	0	490
Total	0	770	87	0	123	0	9	3	15	1164	0	0	0	0	0	0	0	2171
Grand Total	0	1644	211	0	257	0	19	3	32	2233	0	0	0	0	0	0	0	4399
Apprch %	0	88.6	11.4	0	92.1	0	6.8	1.1	1.4	98.6	0	0	0	0	0	0	0	
Total %	0	37.4	4.8	0	5.8	0	0.4	0.1	0.7	50.8	0	0	0	0	0	0	0	
Autos	0	1638	199	0	252	0	19	3	32	2219	0	0	0	0	0	0	0	4362
% Autos	0	99.6	94.3	0	98.1	0	100	100	100	99.4	0	0	0	0	0	0	0	99.2
Heavy Vehicles	0	6	6	0	5	0	0	0	0	14	0	0	0	0	0	0	0	31
% Heavy Vehicles	0	0.4	2.8	0	1.9	0	0	0	0	0.6	0	0	0	0	0	0	0	0.7
U Turns	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
% U Turns	0	0	2.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1

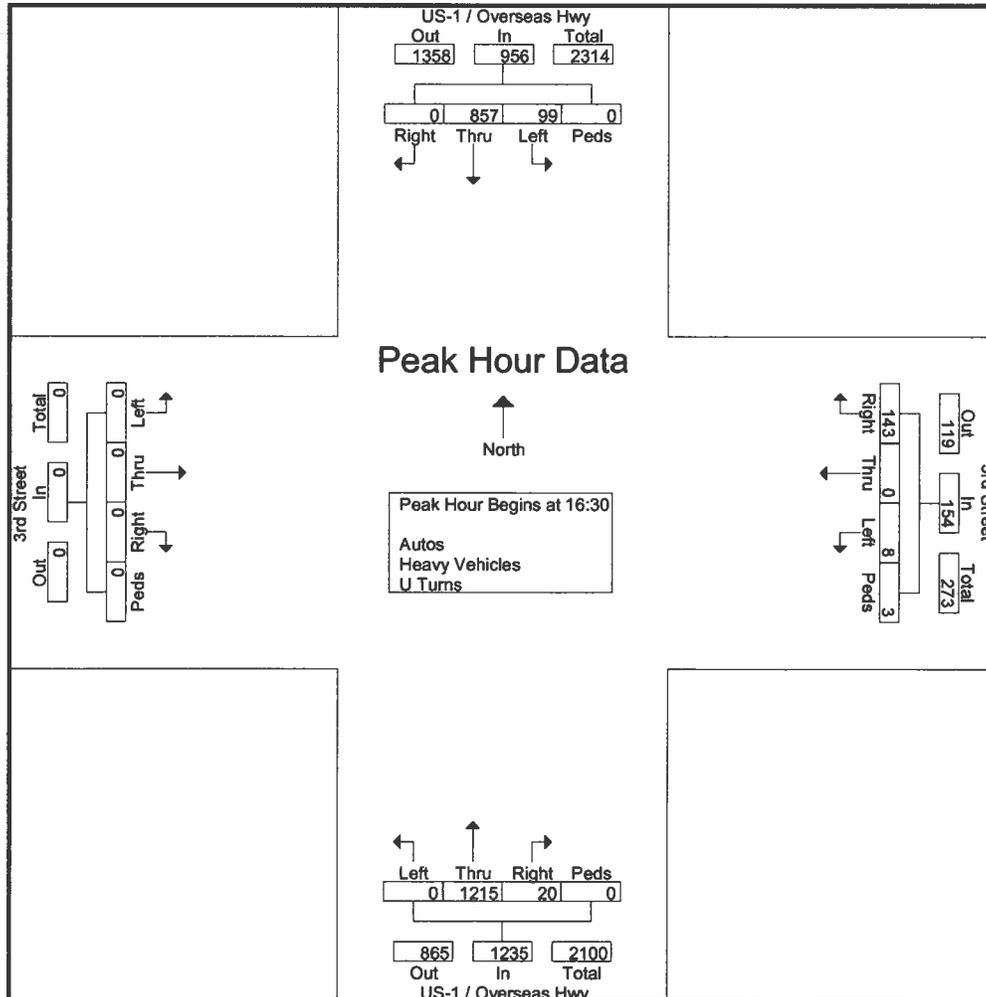


# Video Data Solutions, Inc.

CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 3-3rd Street @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 2

Start Time	US-1 / Overseas Hwy SOUTH BOUND					3rd Street WEST BOUND					US-1 / Overseas Hwy NORTH BOUND					3rd Street EAST BOUND					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	0	251	26	0	277	31	0	0	0	31	8	319	0	0	327	0	0	0	0	0	635
16:45	0	190	26	0	216	35	0	2	0	37	3	288	0	0	291	0	0	0	0	0	544
17:00	0	198	25	0	223	43	0	2	3	48	5	278	0	0	283	0	0	0	0	0	554
17:15	0	218	22	0	240	34	0	4	0	38	4	330	0	0	334	0	0	0	0	0	612
Total Volume	0	857	99	0	956	143	0	8	3	154	20	1215	0	0	1235	0	0	0	0	0	2345
% App. Total	0	89.6	10.4	0		92.9	0	5.2	1.9		1.6	98.4	0	0		0	0	0	0		
PHF	.000	.854	.952	.000	.863	.831	.000	.500	.250	.802	.625	.920	.000	.000	.924	.000	.000	.000	.000	.000	.923

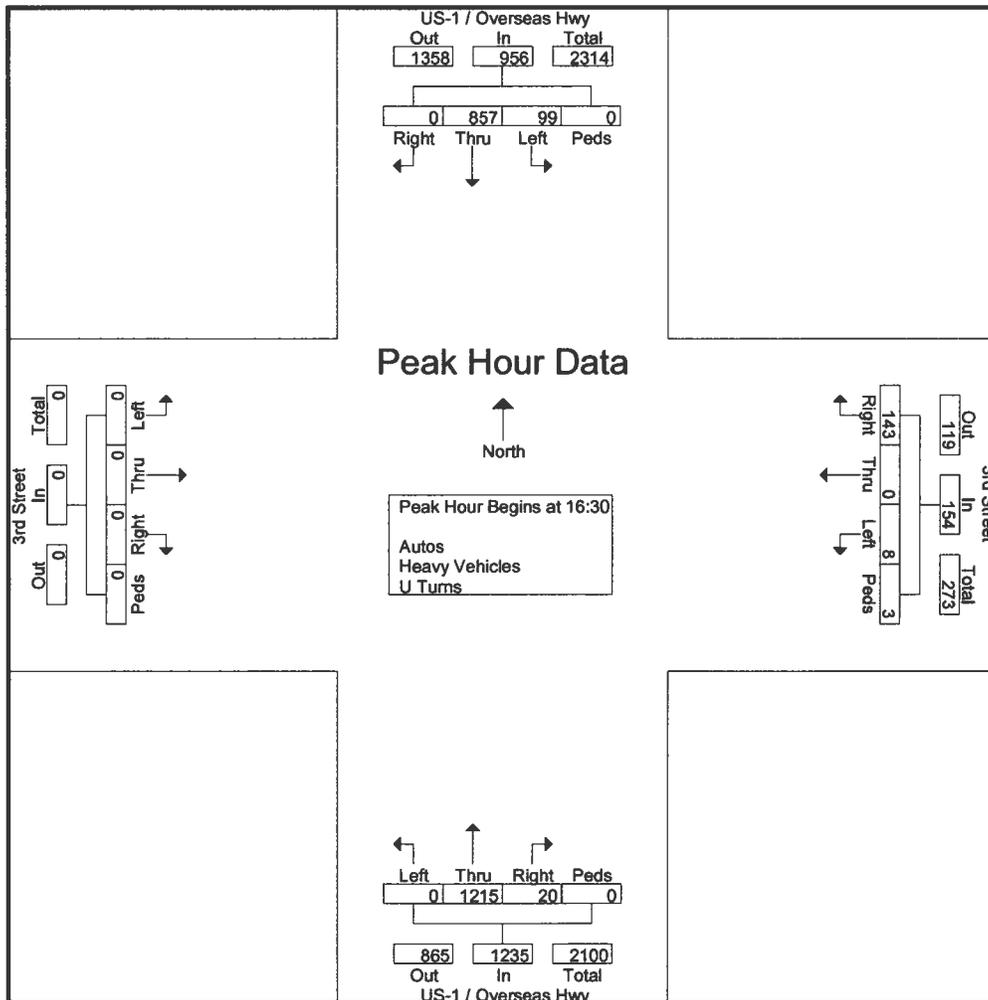


# Video Data Solutions, Inc.

CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 3-3rd Street @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 3

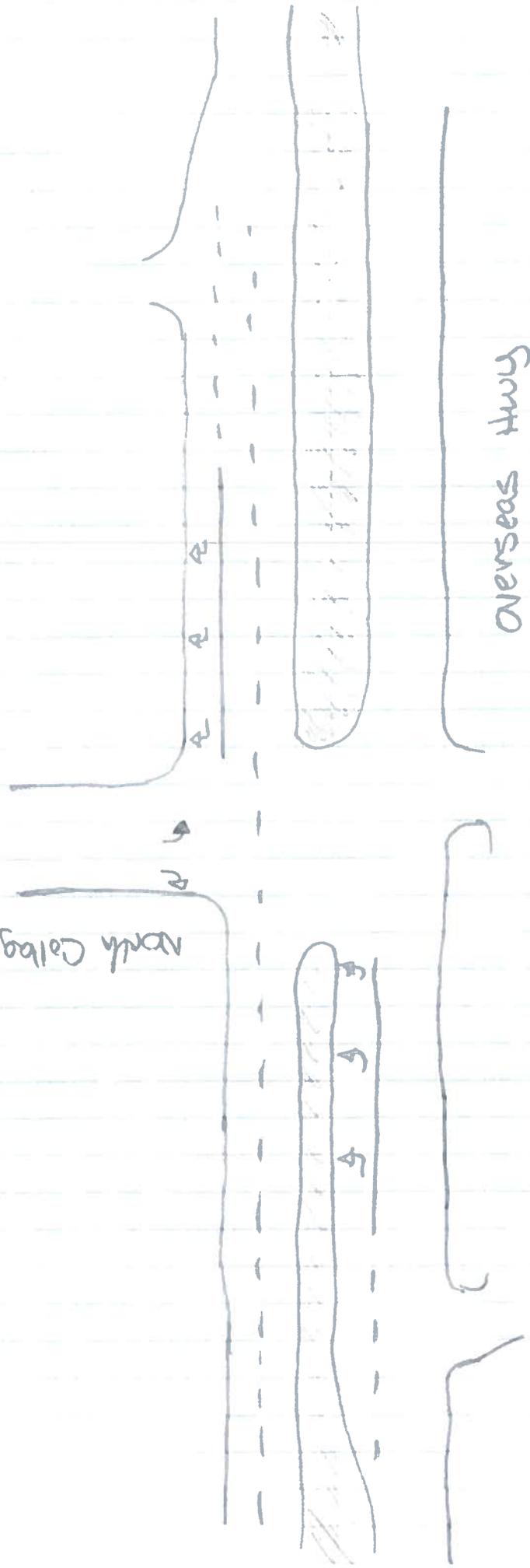
Start Time	US-1 / Overseas Hwy SOUTH BOUND					3rd Street WEST BOUND					US-1 / Overseas Hwy NORTH BOUND					3rd Street EAST BOUND					Int. Total
	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Right	Thr u	Left	Peds	App. Total	Right	Thr u	Left	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	0	251	26	0	277	31	0	0	0	31	8	319	0	0	327	0	0	0	0	0	635
16:45	0	190	26	0	216	35	0	2	0	37	3	288	0	0	291	0	0	0	0	0	544
17:00	0	198	25	0	223	43	0	2	3	48	5	278	0	0	283	0	0	0	0	0	554
17:15	0	218	22	0	240	34	0	4	0	38	4	330	0	0	334	0	0	0	0	0	612
Total Volume	0	857	99	0	956	143	0	8	3	154	20	1215	0	0	1235	0	0	0	0	0	2345
% App. Total	0	89.6	10.4	0		92.9	0	5.2	1.9		1.6	98.4	0	0		0	0	0	0		
PHF	.000	.854	.952	.000	.863	.831	.000	.500	.250	.802	.625	.920	.000	.000	.924	.000	.000	.000	.000	.000	.923



N →

North College Rd

Overseas Hwy



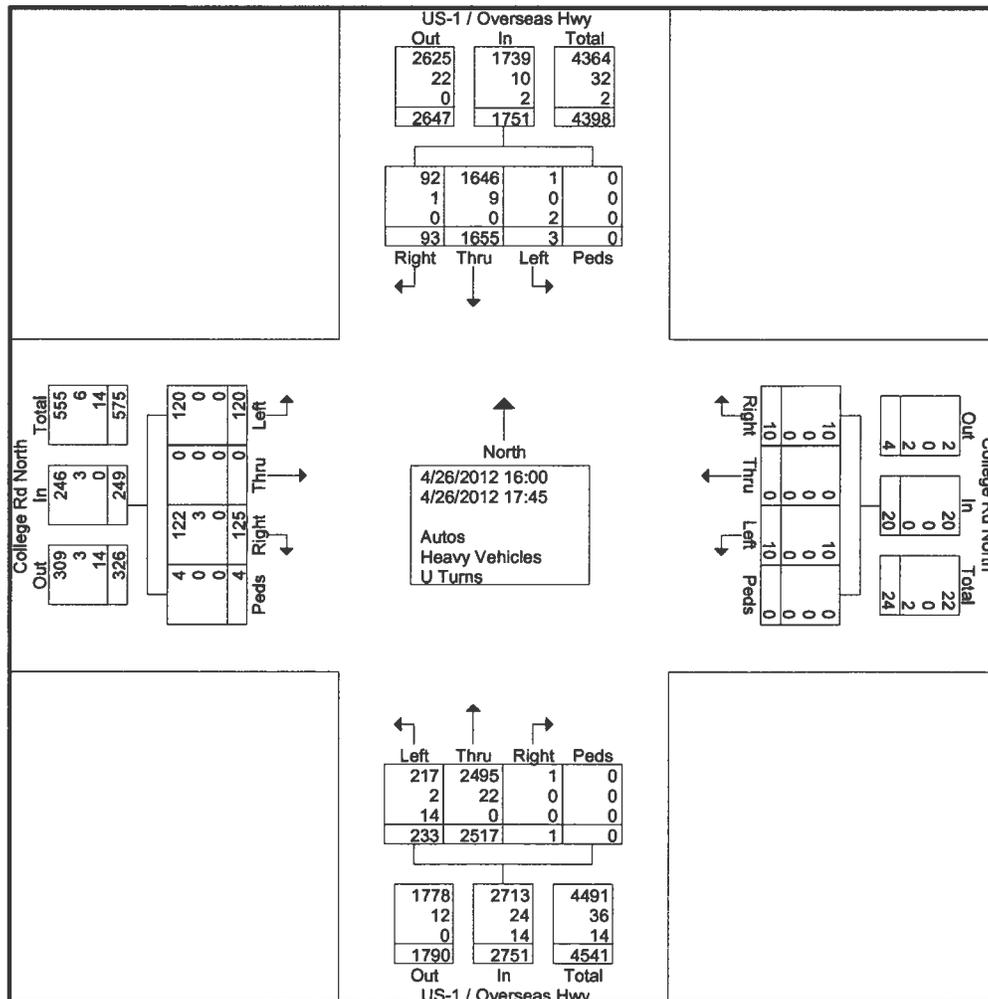
# Video Data Solutions, Inc.

CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 2-College Rd North @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 1

## Groups Printed- Autos - Heavy Vehicles - U Turns

Start Time	US-1 / Overseas Hwy SOUTH BOUND				College Rd North WEST BOUND				US-1 / Overseas Hwy NORTH BOUND				College Rd North EAST BOUND				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
16:00	12	226	0	0	3	0	0	0	0	240	20	0	16	0	18	2	537
16:15	7	227	0	0	2	0	1	0	0	294	19	0	16	0	16	0	582
16:30	14	223	0	0	0	0	1	0	1	353	29	0	20	0	15	0	656
16:45	11	215	1	0	3	0	1	0	0	351	24	0	14	0	23	0	643
Total	44	891	1	0	8	0	3	0	1	1238	92	0	66	0	72	2	2418
17:00	15	216	0	0	1	0	2	0	0	328	31	0	15	0	12	0	620
17:15	14	197	1	0	1	0	3	0	0	368	45	0	15	0	15	1	660
17:30	13	177	1	0	0	0	1	0	0	309	34	0	12	0	14	0	561
17:45	7	174	0	0	0	0	1	0	0	274	31	0	17	0	7	1	512
Total	49	764	2	0	2	0	7	0	0	1279	141	0	59	0	48	2	2353
Grand Total	93	1655	3	0	10	0	10	0	1	2517	233	0	125	0	120	4	4771
Apprch %	5.3	94.5	0.2	0	50	0	50	0	0	91.5	8.5	0	50.2	0	48.2	1.6	
Total %	1.9	34.7	0.1	0	0.2	0	0.2	0	0	52.8	4.9	0	2.6	0	2.5	0.1	
Autos	92	1646	1	0	10	0	10	0	1	2495	217	0	122	0	120	4	4718
% Autos	98.9	99.5	33.3	0	100	0	100	0	100	99.1	93.1	0	97.6	0	100	100	98.9
Heavy Vehicles	1	9	0	0	0	0	0	0	0	22	2	0	3	0	0	0	37
% Heavy Vehicles	1.1	0.5	0	0	0	0	0	0	0	0.9	0.9	0	2.4	0	0	0	0.8
U Turns	0	0	2	0	0	0	0	0	0	0	14	0	0	0	0	0	16
% U Turns	0	0	66.7	0	0	0	0	0	0	0	6	0	0	0	0	0	0.3

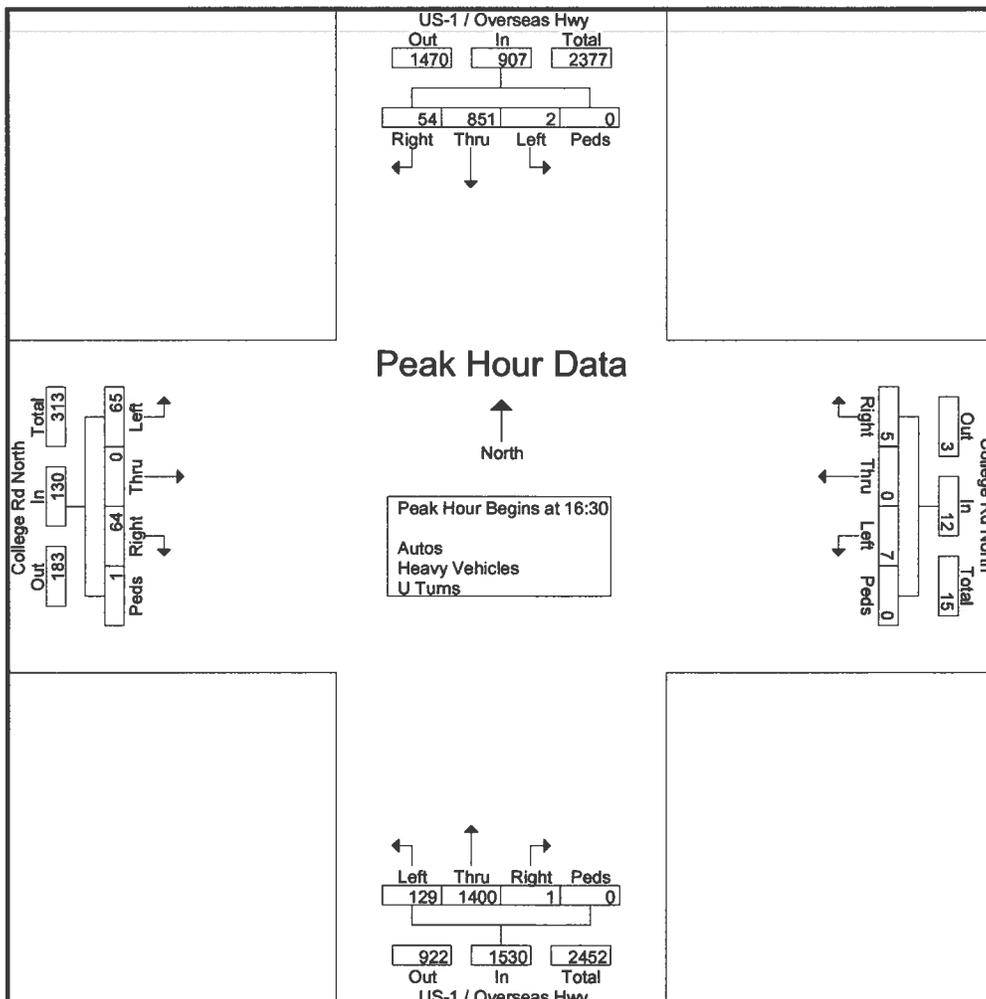


# Video Data Solutions, Inc.

CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 2-College Rd North @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 2

Start Time	US-1 / Overseas Hwy SOUTH BOUND					College Rd North WEST BOUND					US-1 / Overseas Hwy NORTH BOUND					College Rd North EAST BOUND					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	14	223	0	0	237	0	0	1	0	1	1	353	29	0	383	20	0	15	0	35	656
16:45	11	215	1	0	227	3	0	1	0	4	0	351	24	0	375	14	0	23	0	37	643
17:00	15	216	0	0	231	1	0	2	0	3	0	328	31	0	359	15	0	12	0	27	620
17:15	14	197	1	0	212	1	0	3	0	4	0	368	45	0	413	15	0	15	1	31	660
Total Volume	54	851	2	0	907	5	0	7	0	12	1	1400	129	0	1530	64	0	65	1	130	2579
% App. Total	6	93.8	0.2	0		41.7	0	58.3	0		0.1	91.5	8.4	0		49.2	0	50	0.8		
PHF	.900	.954	.500	.000	.957	.417	.000	.583	.000	.750	.250	.951	.717	.000	.926	.800	.000	.707	.250	.878	.977

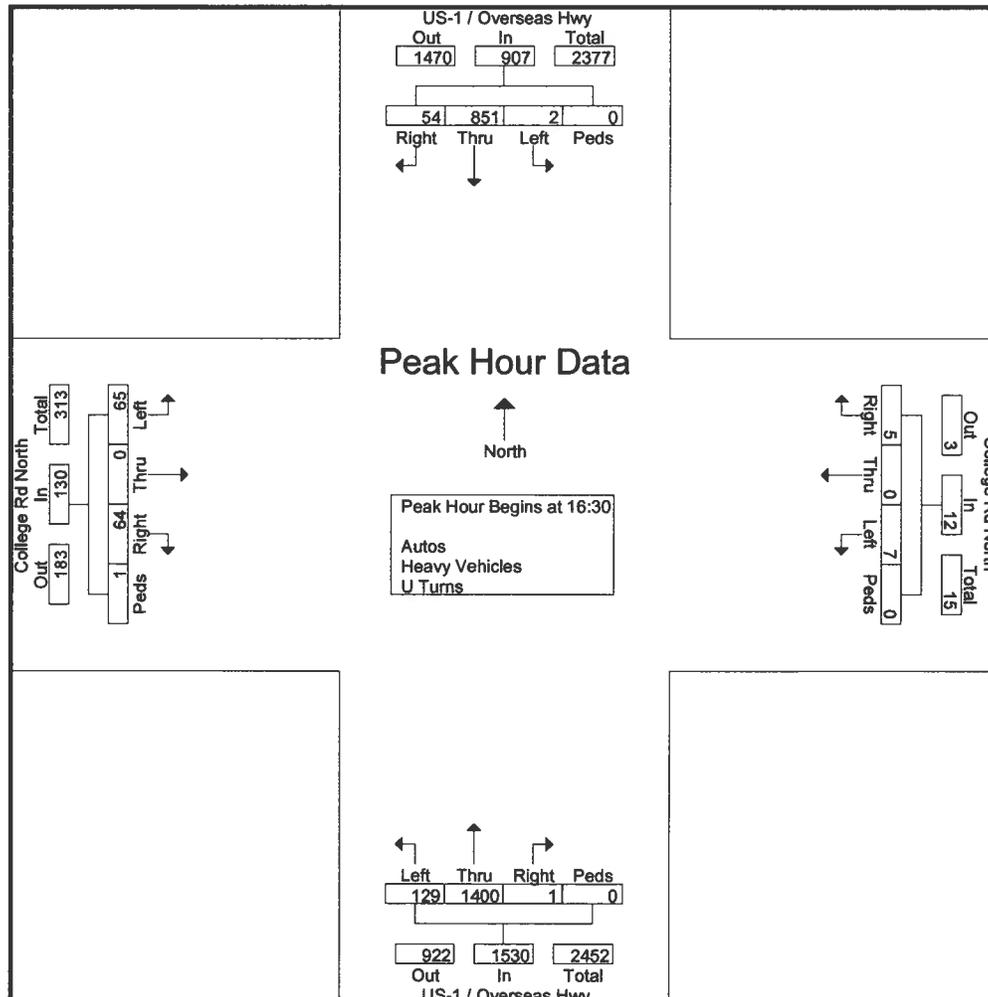


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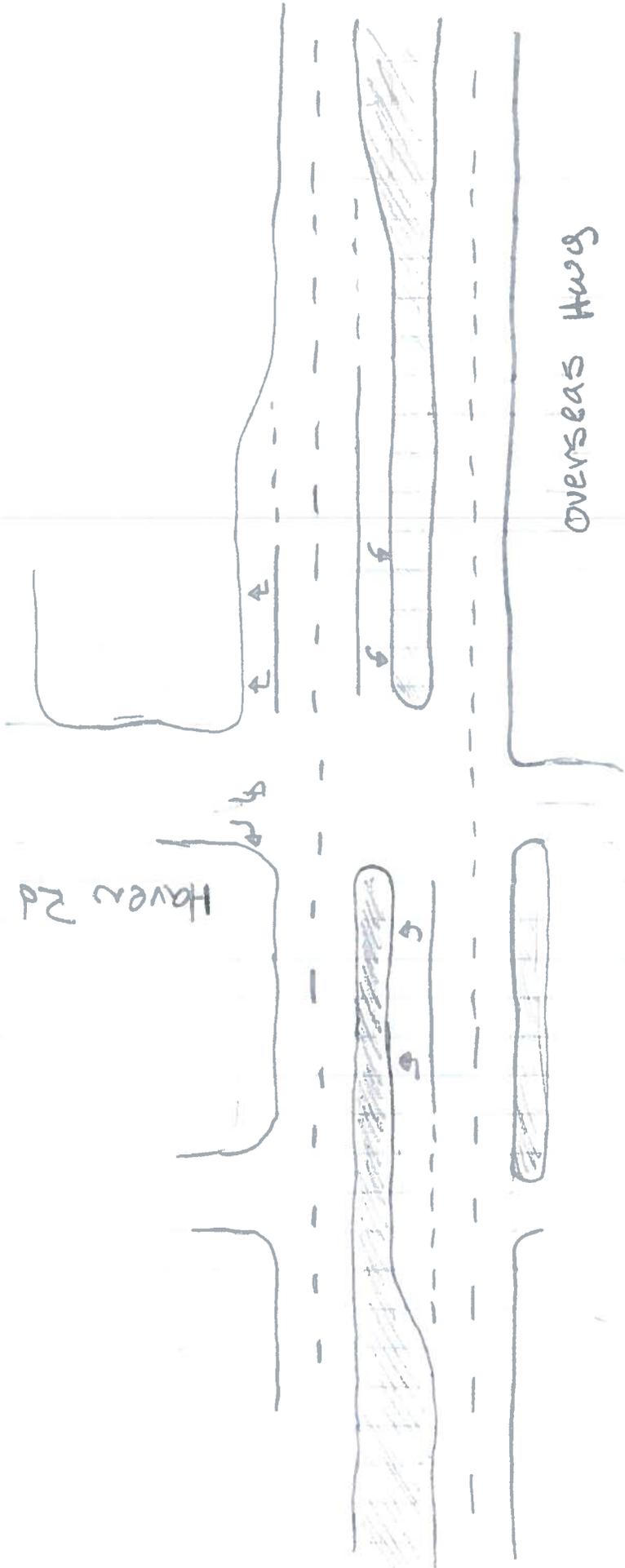
CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 2-College Rd North @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 3

Start Time	US-1 / Overseas Hwy SOUTH BOUND					College Rd North WEST BOUND					US-1 / Overseas Hwy NORTH BOUND					College Rd North EAST BOUND					Int. Total
	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Right	Thr u	Left	Peds	App. Total	Right	Thr u	Left	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	14	223	0	0	237	0	0	1	0	1	1	353	29	0	383	20	0	15	0	35	656
16:45	11	215	1	0	227	3	0	1	0	4	0	351	24	0	375	14	0	23	0	37	643
17:00	15	216	0	0	231	1	0	2	0	3	0	328	31	0	359	15	0	12	0	27	620
17:15	14	197	1	0	212	1	0	3	0	4	0	368	45	0	413	15	0	15	1	31	660
Total Volume	54	851	2	0	907	5	0	7	0	12	1	1400	129	0	1530	64	0	65	1	130	2579
% App. Total	6	93.8	0.2	0		41.7	0	58.3	0		0.1	91.5	8.4	0		49.2	0	50	0.8		
PHF	.900	.954	.500	.000	.957	.417	.000	.583	.000	.750	.250	.951	.717	.000	.926	.800	.000	.707	.250	.878	.977



Haven Rd



Overseas Hwy

2 →

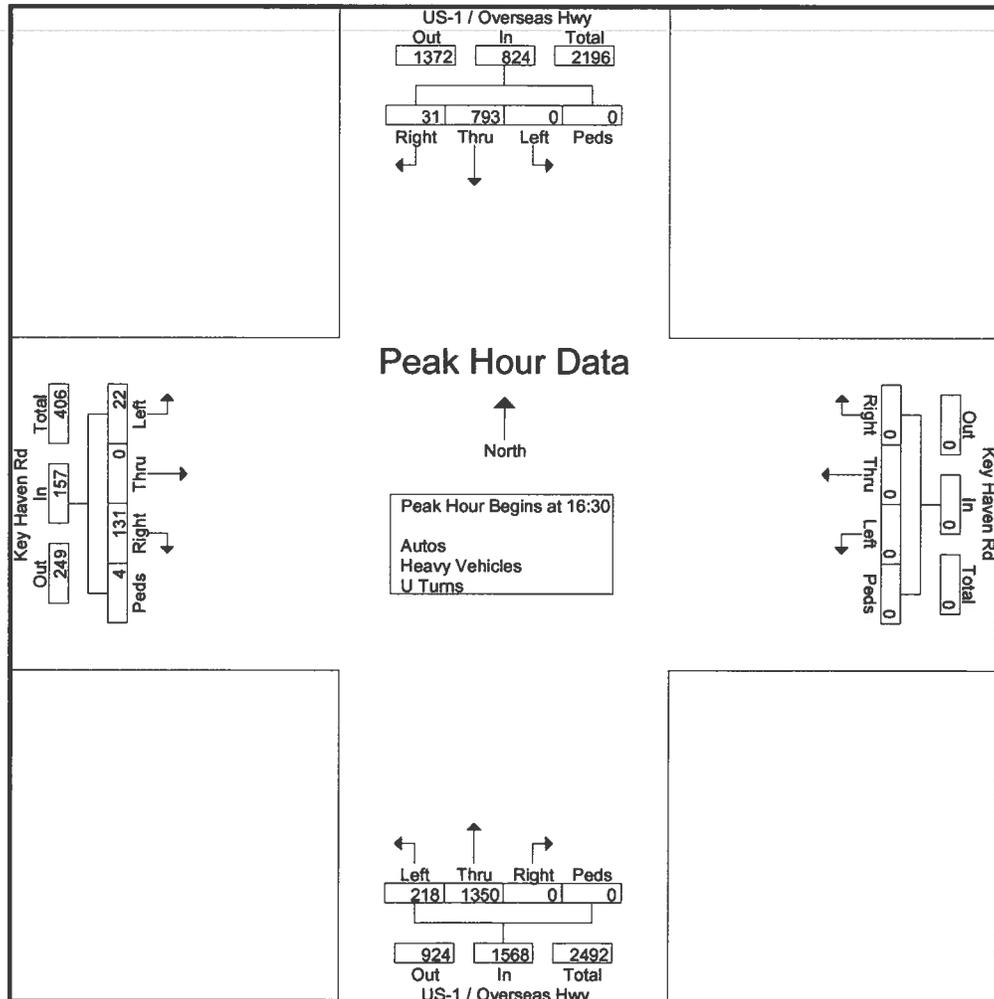


# Video Data Solutions, Inc.

CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 1-Key Haven @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 2

Start Time	US-1 / Overseas Hwy SOUTH BOUND					Key Haven Rd WEST BOUND					US-1 / Overseas Hwy NORTH BOUND					Key Haven Rd EAST BOUND					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	5	223	0	0	228	0	0	0	0	0	0	365	34	0	399	22	0	1	3	26	653
16:45	7	183	0	0	190	0	0	0	0	0	0	348	59	0	407	34	0	5	0	39	636
17:00	16	196	0	0	212	0	0	0	0	0	0	294	54	0	348	36	0	7	0	43	603
17:15	3	191	0	0	194	0	0	0	0	0	0	343	71	0	414	39	0	9	1	49	657
Total Volume	31	793	0	0	824	0	0	0	0	0	0	1350	218	0	1568	131	0	22	4	157	2549
% App. Total	3.8	96.2	0	0		0	0	0	0		0	86.1	13.9	0		83.4	0	14	2.5		
PHF	.484	.889	.000	.000	.904	.000	.000	.000	.000	.000	.000	.925	.768	.000	.947	.840	.000	.611	.333	.801	.970

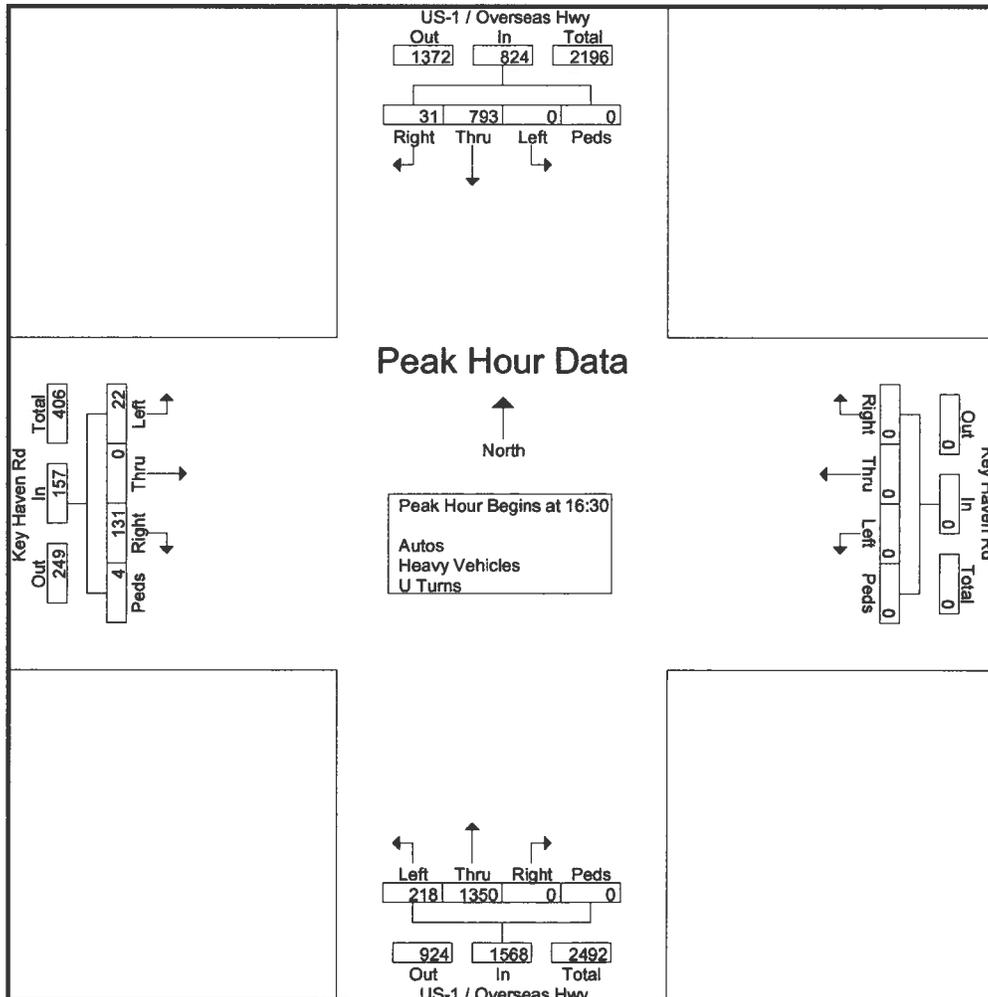


# Video Data Solutions, Inc.

CLINET : CPH Engineers, Inc.  
 JOB NO : 2012-11  
 PROJECT: CVS  
 COUNTY : MONROE

File Name : 1-Key Haven @ US-1  
 Site Code : 00000000  
 Start Date : 4/26/2012  
 Page No : 3

Start Time	US-1 / Overseas Hwy SOUTH BOUND					Key Haven Rd WEST BOUND					US-1 / Overseas Hwy NORTH BOUND					Key Haven Rd EAST BOUND					Int. Total
	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Right	Thr u	Left	Peds	App. Total	Right	Thr u	Left	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	5	223	0	0	228	0	0	0	0	0	0	365	34	0	399	22	0	1	3	26	653
16:45	7	183	0	0	190	0	0	0	0	0	0	348	59	0	407	34	0	5	0	39	636
17:00	16	196	0	0	212	0	0	0	0	0	0	294	54	0	348	36	0	7	0	43	603
17:15	3	191	0	0	194	0	0	0	0	0	0	343	71	0	414	39	0	9	1	49	657
Total Volume	31	793	0	0	824	0	0	0	0	0	0	1350	218	0	1568	131	0	22	4	157	2549
% App. Total	3.8	96.2	0	0		0	0	0	0		0	86.1	13.9	0		83.4	0	14	2.5		
PHF	.484	.889	.000	.000	.904	.000	.000	.000	.000	.000	.000	.925	.768	.000	.947	.840	.000	.611	.333	.801	.970

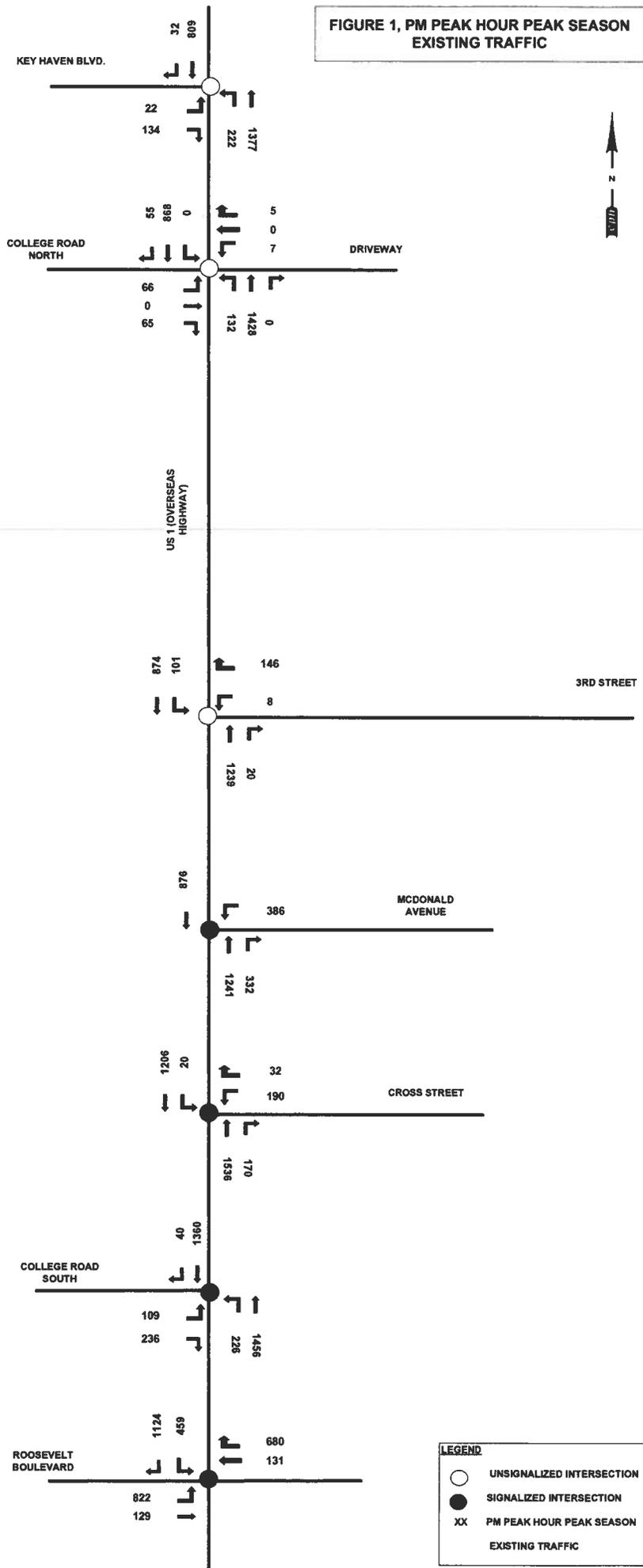


**APPENDIX D**

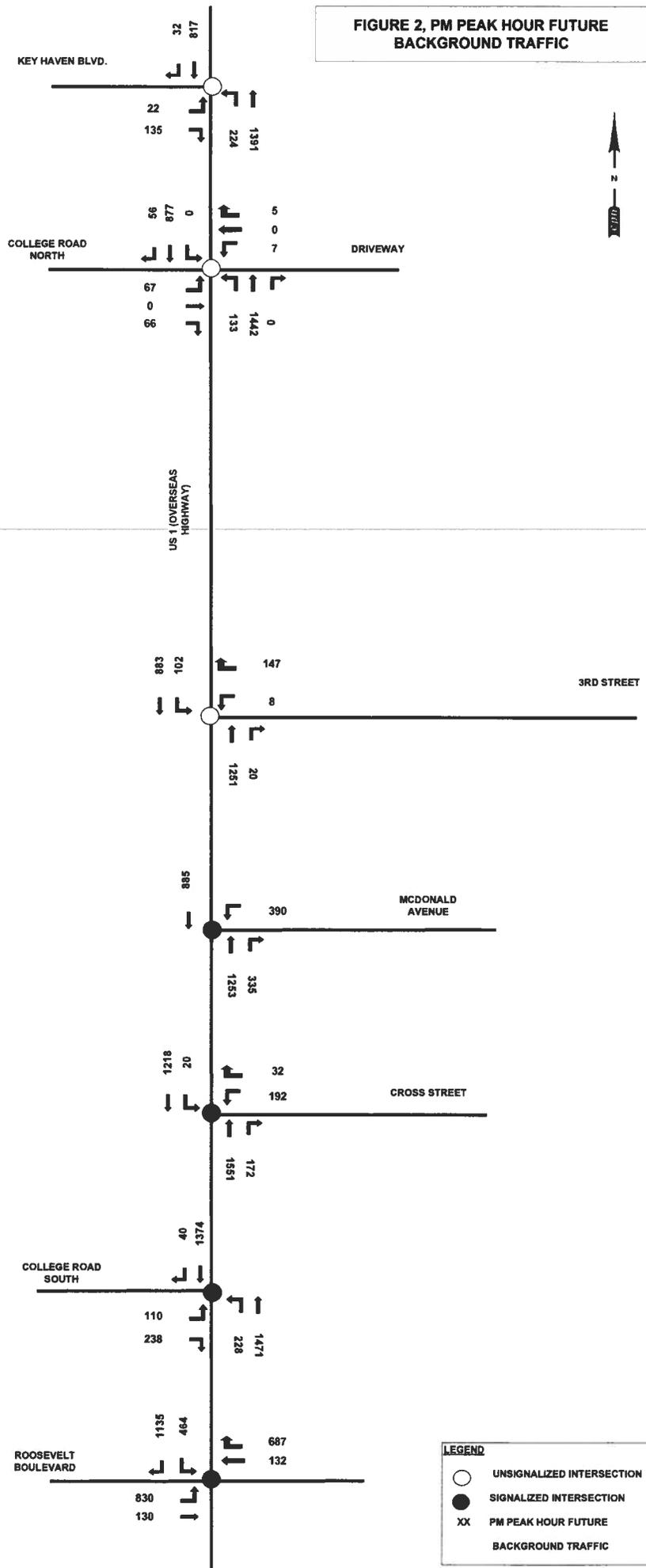
**TRAFFIC VOLUME FIGURES**

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**FIGURE 1, PM PEAK HOUR PEAK SEASON  
EXISTING TRAFFIC**



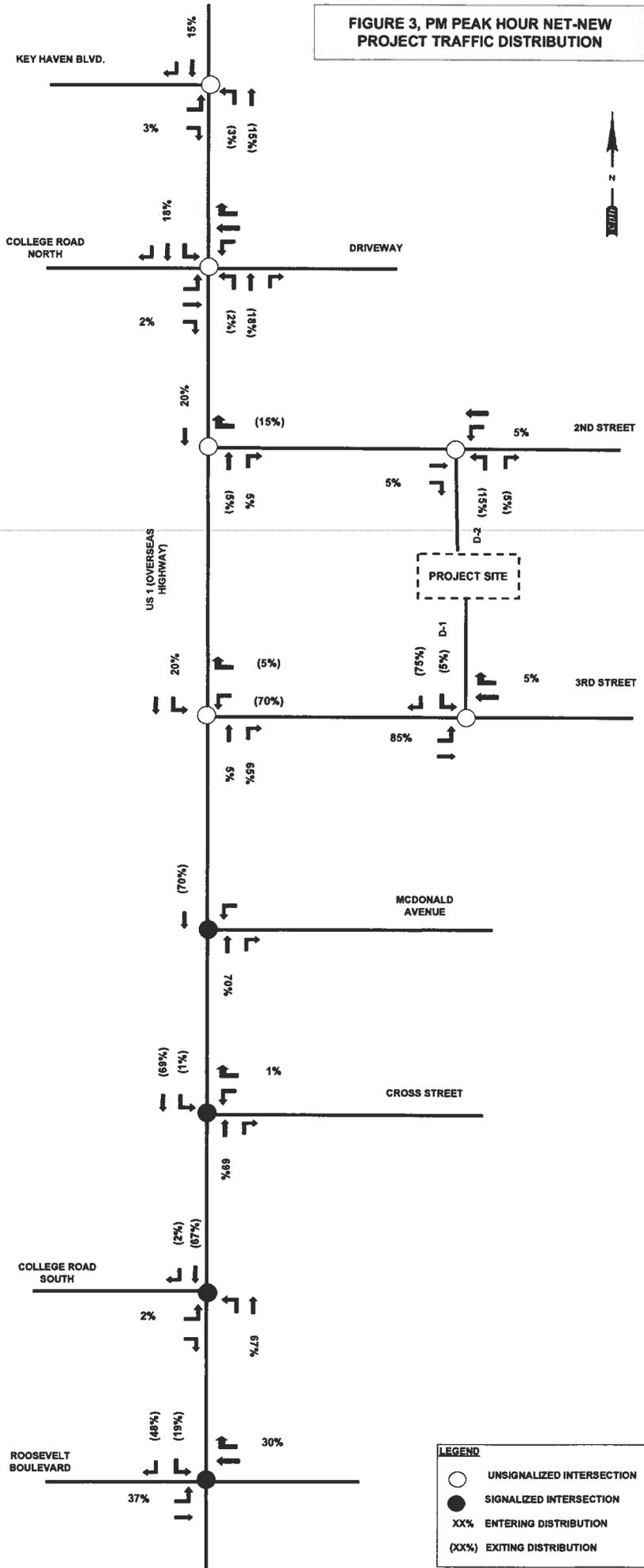
**FIGURE 2, PM PEAK HOUR FUTURE  
BACKGROUND TRAFFIC**



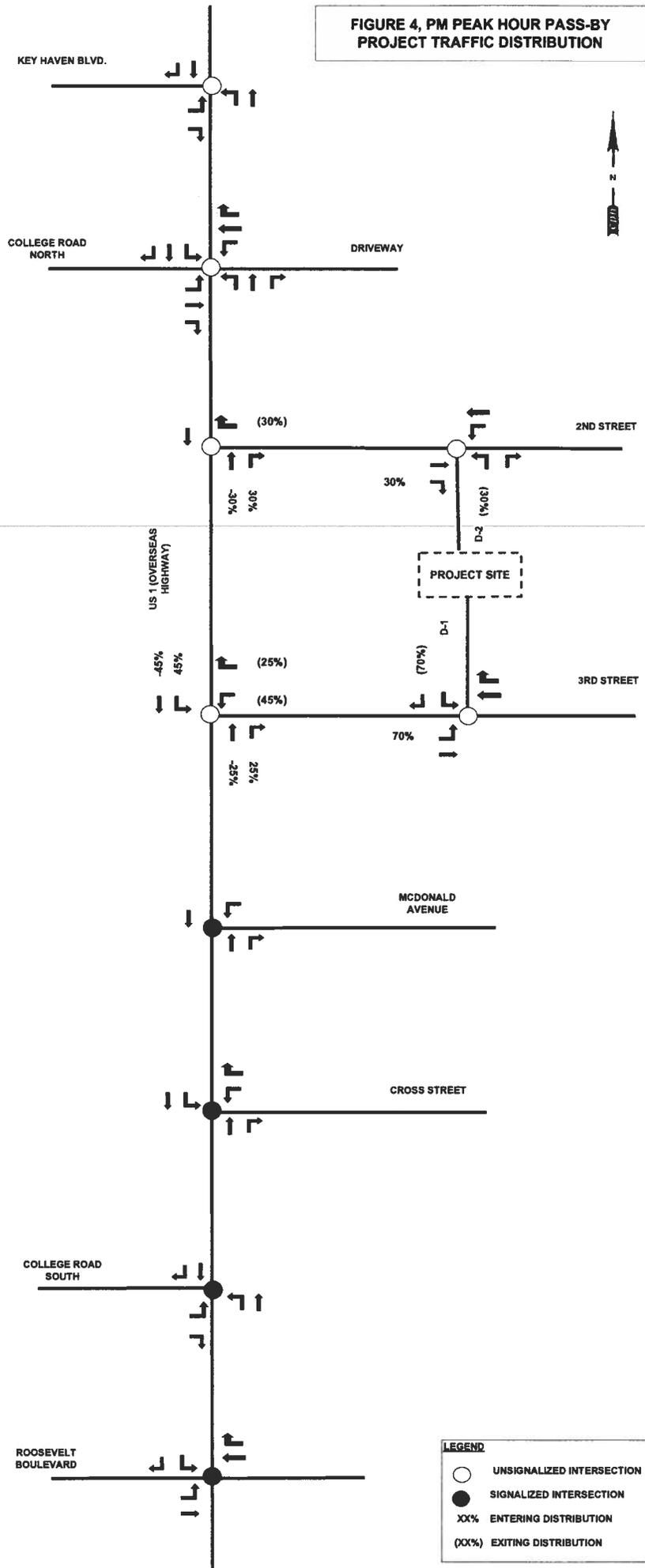
**LEGEND**

- UNSIGNALIZED INTERSECTION
- SIGNALIZED INTERSECTION
- XX PM PEAK HOUR FUTURE BACKGROUND TRAFFIC

**FIGURE 3, PM PEAK HOUR NET-NEW PROJECT TRAFFIC DISTRIBUTION**



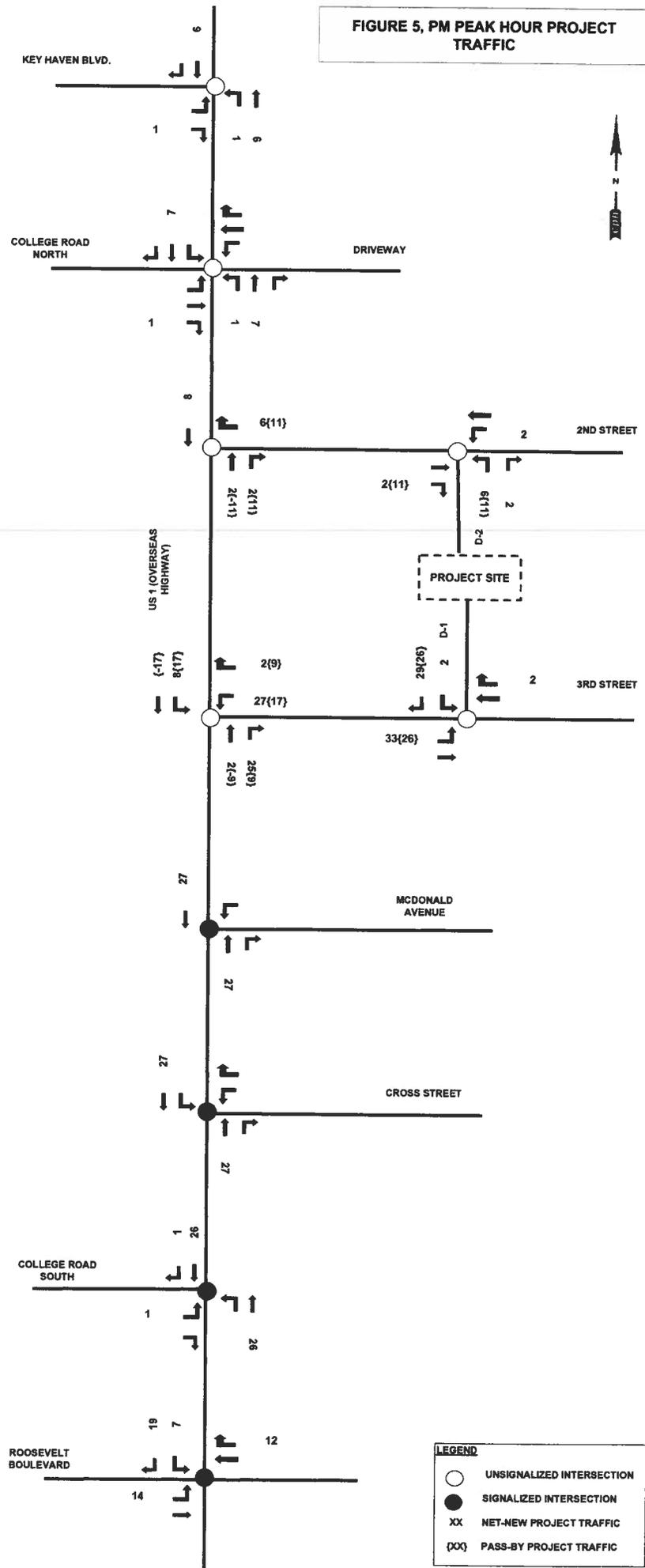
**FIGURE 4, PM PEAK HOUR PASS-BY PROJECT TRAFFIC DISTRIBUTION**



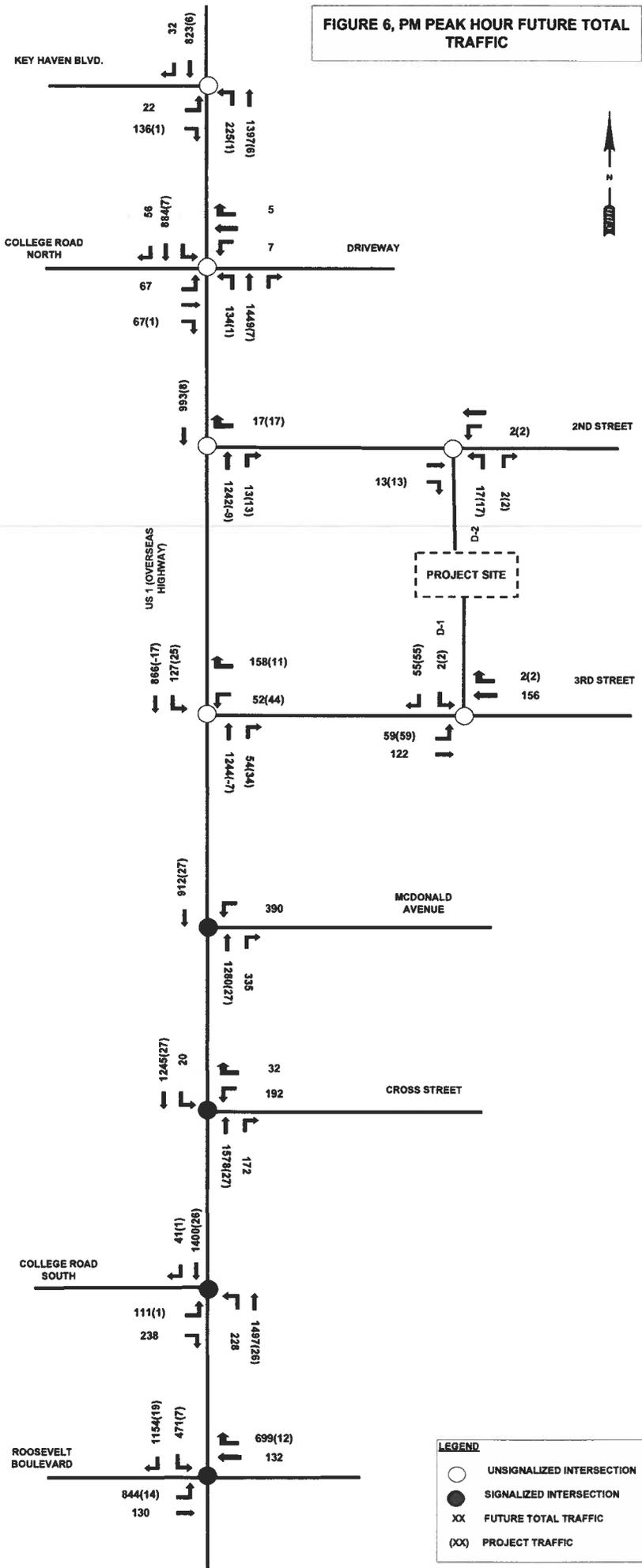
**LEGEND**

- UNSIGNALIZED INTERSECTION
- SIGNALIZED INTERSECTION
- XX% ENTERING DISTRIBUTION
- (XX%) EXITING DISTRIBUTION

**FIGURE 5, PM PEAK HOUR PROJECT TRAFFIC**



**FIGURE 6, PM PEAK HOUR FUTURE TOTAL TRAFFIC**



**LEGEND**

- UNSIGNALIZED INTERSECTION
- SIGNALIZED INTERSECTION
- XX FUTURE TOTAL TRAFFIC
- (XX) PROJECT TRAFFIC

**APPENDIX E**

**INTERSECTION ANALYSIS WORKSHEETS**

**EXISTING**

HCS+: Signalized Intersections Release 5.2

Analyst: RV  
 Agency: CPH  
 Date: 5/10/2012  
 Period: 4pm-6pm  
 Project ID: CVS Stock Island  
 E/W St: Roosevelt Boulevard

Inter.: US 1 & Roosevelt Blvd  
 Area Type: All other areas  
 Jurisd: Monroe County  
 Year : Existing  
 N/S St: US 1

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	1	0	0	1	1	0	0	0	2	0	1
LGConfig	L	T			T	R				L		R
Volume	822	129			131	680				459		1124
Lane Width	12.0	12.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		A			NB Left			
Thru		A			Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru				A	Thru			
Right				A	Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right		A			WB Right	A		
Green		48.5	14.0			23.0		
Yellow		3.5	4.0			4.0		
All Red		1.0	1.0			1.0		

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS
Eastbound								
L	1667	3437	0.52	0.49	18.0	B		
T	1248	1863	0.11	0.67	5.9	A	16.4	B
Westbound								
T	261	1863	0.53	0.14	42.0	D	79.2	E
R	665	1583	1.08	0.42	86.4	F		
Northbound								
Southbound								
L	791	3437	0.61	0.23	35.9	D		
							32.7	C
R	1211	1583	0.98	0.76	31.4	C		

Intersection Delay = 39.3 (sec/veh) Intersection LOS = D

Phone: Fax:  
E-Mail:

OPERATIONAL ANALYSIS

Analyst: RV  
Agency/Co.: CPH  
Date Performed: 5/10/2012  
Analysis Time Period: 4pm-6pm  
Intersection: US 1 & Roosevelt Blvd  
Area Type: All other areas  
Jurisdiction: Monroe County  
Analysis Year: Existing  
Project ID: CVS Stock Island  
E/W St: Roosevelt Boulevard N/S St: US 1

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
Volume	822	129			131	680				459		1124	
% Heavy Veh	2	2			2	2				2		2	
PHF	0.95	0.95			0.95	0.95				0.95		0.95	
PK 15 Vol	216	34			34	179				121		296	
Hi Ln Vol													
% Grade		0			0					0			
Ideal Sat	1900	1900			1900	1900				1900		1900	
ParkExist													
NumPark													
No. Lanes		2	1	0	0	1	1	0	0	0	2	0	1
LGConfig	L		T			T	R				L		R
Lane Width	12.0	12.0			12.0	12.0				12.0		12.0	
RTOR Vol						0						0	
Adj Flow	865	136			138	716				483		1183	
%InSharedLn													
Prop LTs			0.000			0.000							
Prop RTs		0.000			0.000	1.000						1.000	
Peds Bikes					0			0		0			
Buses	0	0			0	0				0		0	
%InProtPhase													
Duration	0.25												

Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0			0.0	0.0				0.0		0.0
Arriv. Type	3	3			3	3				3		3
Unit Ext.	3.0	3.0			3.0	3.0				3.0		3.0
I Factor		1.000			1.000						1.000	
Lost Time	2.0	2.0			2.0	2.0				2.0		2.0
Ext of g	2.0	2.0			2.0	2.0				2.0		2.0
Ped Min g					3.2			3.2			3.2	

PHASE DATA

Phase Combination	1	2	3	4	5	6	7	8
EB Left Thru Right Peds	A	A			NB Left Thru Right Peds			
WB Left Thru Right Peds		A			SB Left Thru Right Peds	A	A	
NB Right					EB Right			
SB Right	A				WB Right	A		
Green	48.5	14.0			23.0			
Yellow	3.5	4.0			4.0			
All Red	1.0	1.0			1.0			

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	822	129		131	680					459		1124
PHF	0.95	0.95		0.95	0.95					0.95		0.95
Adj flow	865	136		138	716					483		1183
No. Lanes	2	1	0	0	1	1	0	0	0	2	0	1
Lane group	L	T		T	R					L		R
Adj flow	865	136		138	716					483		1183
Prop LTs		0.000			0.000							
Prop RTs		0.000		0.000	1.000							1.000

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound	
	L	T	R	T	R				L	R	
So	1900	1900		1900	1900				1900	1900	
Lanes	2	1	0	1	1	0	0	0	2	0	
fW	1.000	1.000		1.000	1.000				1.000	1.000	
fHV	0.980	0.980		0.980	0.980				0.980	0.980	
fG	1.000	1.000		1.000	1.000				1.000	1.000	
fP	1.000	1.000		1.000	1.000				1.000	1.000	
fBB	1.000	1.000		1.000	1.000				1.000	1.000	
fA	1.000	1.000		1.000	1.000				1.000	1.000	
fLU	0.971	1.000		1.000	1.000				0.971	1.000	
fRT		1.000		1.000	0.850					0.850	
fLT	0.950	1.000		1.000					0.950		
Sec.											
fLpb	1.000	1.000		1.000					1.000		
fRpb		1.000		1.000	1.000					1.000	
S	3437	1863		1863	1583				3437	1583	
Sec.											

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Capacity (c)	Group-- v/c Ratio
Eastbound							
Prot Perm Left	L	865	3437	0.25	0.49	1667	0.52
Prot Perm Thru Right	T	136	1863	0.07	0.67	1248	0.11
Westbound							
Prot Perm Left Prot Perm Thru Right	T R	138 716	1863 1583	# 0.07 0.45	0.14 0.42	261 665	0.53 1.08
Northbound							
Prot Perm Left Prot Perm Thru Right							
Southbound							
Prot Perm Left Prot Perm Thru Right	L R	483 1183	3437 1583	0.14 # 0.75	0.23 0.76	791 1211	0.61 0.98

Sum of flow ratios for critical lane groups,  $Y_c = \text{Sum (v/s)} = 0.82$   
Total lost time per cycle,  $L = 9.50 \text{ sec}$   
Critical flow rate to capacity ratio,  $X_c = (Y_c) (C) / (C-L) = 0.91$

Control Delay and LOS Determination												
Appr/ Lane Grp	Ratios		Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Res Del d2	Res Del d3	Lane Group		Approach	
	v/c	g/C							Delay	LOS	Delay	LOS
Eastbound												
L	0.52	0.49	17.7	1.000	1667	0.12	0.3	0.0	18.0	B		
T	0.11	0.67	5.9	1.000	1248	0.11	0.0	0.0	5.9	A	16.4	B
Westbound												
T	0.53	0.14	39.9	1.000	261	0.13	2.0	0.0	42.0	D	79.2	E
R	1.08	0.42	29.0	1.000	665	0.50	57.4	0.0	86.4	F		
Northbound												
Southbound												
L	0.61	0.23	34.5	1.000	791	0.20	1.4	0.0	35.9	D		
											32.7	C

Intersection delay = 39.3 (sec/veh) Intersection LOS = D

## SUPPLEMENTAL PERMITTED LT WORKSHEET

for exclusive lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C				100.0 sec
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				
Number of lanes in opposing approach, No				
Adjusted LT flow rate, VLT (veh/h)				
Proportion of LT in LT lane group, PLT				
Proportion of LT in opposing flow, PLTo				
Adjusted opposing flow rate, Vo (veh/h)				
Lost time for LT lane group, tL				
Computation				
LT volume per cycle, LTC=VLTC/3600				
Opposing lane util. factor, fLUo	1.000	1.000		
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)				
gf=G[exp(- a * (LTC ** b))]-tL, gf<=g				
Opposing platoon ratio, Rpo (refer Exhibit 16-11)				
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]				
gq, (see Exhibit C16-4,5,6,7,8)				
gu=g-gq if gq>=gf, or = g-gf if gq<gf				
n=Max(gq-gf)/2,0				
PTHo=1-PLTo				
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]				
EL1 (refer to Exhibit C16-3)				
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g				
gdiff=max(gq-gf,0)				
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)				
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)], (fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT				
For special case of single-lane approach opposed by multilane approach, see text.				
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.				
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.				
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.				

## SUPPLEMENTAL PERMITTED LT WORKSHEET

for shared lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C				100.0 sec
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				

Number of lanes in opposing approach, No  
Adjusted LT flow rate, VLT (veh/h)  
Proportion of LT in LT lane group, PLT 0.000 0.000  
Proportion of LT in opposing flow, PLTo  
Adjusted opposing flow rate, Vo (veh/h)  
Lost time for LT lane group, tL  
Computation  
LT volume per cycle, LTC=VLTC/3600  
Opposing lane util. factor, fLUo 1.000 1.000  
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)  
 $gf = G[\exp(-a * (LTC ** b))] - tL$ ,  $gf <= g$   
Opposing platoon ratio, Rpo (refer Exhibit 16-11)  
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]  
gq, (see Exhibit C16-4,5,6,7,8)  
 $gu = g - gq$  if  $gq >= gf$ , or  $= g - gf$  if  $gq < gf$   
 $n = \text{Max}(gq - gf) / 2, 0$   
PTHo=1-PLTo  
 $PL* = PLT[1 + (N-1)g / (gf + gu / EL1 + 4.24)]$   
EL1 (refer to Exhibit C16-3)  
 $EL2 = \text{Max}((1 - Ptho * n) / Plto, 1.0)$   
 $fmin = 2(1 + PL) / g$  or  $fmin = 2(1 + PL) / g$   
 $gdiff = \text{max}(gq - gf, 0)$   
 $fm = [gf/g] + [gu/g] / [1 + PL(EL1 - 1)]$ , (min=fmin;max=1.00)  
 $flt = fm = [gf/g] + [gu/g] / [1 + PL(EL1 - 1)] + [gdiff/g] / [1 + PL(EL2 - 1)]$ , (fmin<=fm<=1.00)  
or  $flt = [fm + 0.91(N-1)] / N **$   
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach,  
see text.  
\* If  $Pl >= 1$  for shared left-turn lanes with  $N > 1$ , then assume de-facto  
left-turn lane and redo calculations.  
\*\* For permitted left-turns with multiple exclusive left-turn lanes,  $flt = fm$ .  
For special case of multilane approach opposed by single-lane approach  
or when  $gf > gq$ , see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				



	Eastbound			Westbound		Northbound			Southbound		
	L	T		T	R				L	R	
LaneGroup	L	T		T	R				L	R	
Init Queue	0.0	0.0		0.0	0.0				0.0	0.0	
Flow Rate	445	136		138	716				248	1183	
So	1900	1900		1900	1900				1900	1900	
No.Lanes	2	1	0	1	1	0	0	0	2	0	1
SL	1770	1863		1863	1583				1770	1583	
LnCapacity	858	1248		261	665				407	1211	
Flow Ratio	0.3	0.1		0.1	0.5				0.1	0.7	
v/c Ratio	0.52	0.11		0.53	1.08				0.61	0.98	
Grn Ratio	0.49	0.67		0.14	0.42				0.23	0.76	
I Factor		1.000		1.000					1.000		
AT or PVG	3	3		3	3				3	3	
Pltn Ratio	1.00	1.00		1.00	1.00				1.00	1.00	
PF2	1.00	1.00		1.00	1.00				1.00	1.00	
Q1	8.5	1.3		3.6	19.9				6.2	30.6	
kB	0.7	0.8		0.3	0.6				0.4	0.8	
Q2	0.7	0.1		0.4	11.0				0.6	9.4	
Q Average	9.2	1.4		3.9	30.9				6.8	40.0	
Q Spacing	25.0	25.0		25.0	25.0				25.0	25.0	
Q Storage	0	0		0	0				0	0	
Q S Ratio											
70th Percentile Output:											
FB%	1.2	1.2		1.2	1.1				1.2	1.1	
BOQ	10.9	1.7		4.7	35.4				8.1	45.5	
QSRatio											
85th Percentile Output:											
FB%	1.5	1.6		1.6	1.4				1.5	1.4	
BOQ	14.0	2.3		6.1	43.5				10.5	55.1	
QSRatio											
90th Percentile Output:											
FB%	1.7	1.8		1.7	1.5				1.7	1.5	
BOQ	15.2	2.6		6.8	45.9				11.5	58.2	
QSRatio											
95th Percentile Output:											
FB%	1.9	2.1		2.0	1.6				1.9	1.6	
BOQ	17.1	3.0		7.8	49.7				13.0	62.6	
QSRatio											
98th Percentile Output:											
FB%	2.2	2.6		2.4	1.8				2.3	1.7	
BOQ	20.2	3.8		9.6	55.4				15.6	69.8	
QSRatio											

ERROR MESSAGES

No errors to report.

HCS+: Signalized Intersections Release 5.2

Analyst: RV  
 Agency: CPH  
 Date: 5/10/2012  
 Period: 4pm-6pm  
 Project ID: CVS Stock Island  
 E/W St: College Road South

Inter.: US 1 & College Road South  
 Area Type: All other areas  
 Jurisd: Monroe County  
 Year : Existing  
 N/S St: US 1

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	0	1	0	0	0	1	2	0	0	2	1
LGConfig	L		R				L	T			T	R
Volume	109		236				226	1456			1360	40
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
RTOR Vol			0									0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		A			NB Left	A		
Thru					Thru	A	A	
Right		A			Right			
Peds					Peds			
WB Left					SB Left			
Thru					Thru		A	
Right					Right		A	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	17.0				15.5	52.0		
Yellow	4.0				3.5	4.0		
All Red	2.0				1.0	1.0		

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS
<b>Eastbound</b>								
L	301	1770	0.38	0.17	37.6	D		
R	269	1583	0.92	0.17	75.7	E	63.6	E
<b>Westbound</b>								
<b>Northbound</b>								
L	274	1770	0.87	0.16	65.7	E		
T	2554	3547	0.60	0.72	7.3	A	15.1	B
<b>Southbound</b>								
T	1844	3547	0.78	0.52	21.5	C	21.2	C
R	823	1583	0.05	0.52	11.9	B		

Intersection Delay = 22.5 (sec/veh) Intersection LOS = C

Phone: Fax:  
E-Mail:

OPERATIONAL ANALYSIS

Analyst: RV  
Agency/Co.: CPH  
Date Performed: 5/10/2012  
Analysis Time Period: 4pm-6pm  
Intersection: US 1 & College Road South  
Area Type: All other areas  
Jurisdiction: Monroe County  
Analysis Year: Existing  
Project ID: CVS Stock Island  
E/W St: College Road South N/S St: US 1

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	109		236				226	1456			1360	40
% Heavy Veh	2		2				2	2			2	2
PHF	0.95		0.95				0.95	0.95			0.95	0.95
PK 15 Vol	29		62				59	383			358	11
Hi Ln Vol												
% Grade		0						0			0	
Ideal Sat	1900		1900				1900	1900			1900	1900
ParkExist												
NumPark												
No. Lanes	1	0	1	0	0	0	1	2	0	0	2	1
LGConfig	L		R				L	T			T	R
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
RTOR Vol			0									0
Adj Flow	115		248				238	1533			1432	42
%InSharedLn												
Prop LTs								0.000			0.000	
Prop RTs			1.000					0.000			0.000	1.000
Peds Bikes	0			0							0	
Buses	0		0				0	0			0	0
%InProtPhase												
Duration	0.25											

Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0		0.0				0.0	0.0			0.0	0.0
Arriv. Type	3		3				3	3			3	3
Unit Ext.	3.0		3.0				3.0	3.0			3.0	3.0
I Factor		1.000						1.000			1.000	
Lost Time	2.0		2.0				2.0	2.0			2.0	2.0
Ext of g	2.0		2.0				2.0	2.0			2.0	2.0
Ped Min g		3.2			3.2						3.2	

PHASE DATA

Phase Combination	1	2	3	4	5	6	7	8
EB Left Thru Right Peds	A				NB Left Thru Right Peds	A	A	
WB Left Thru Right Peds					SB Left Thru Right Peds		A	A
NB Right					EB Right			
SB Right					WB Right			
Green	17.0				15.5	52.0		
Yellow	4.0				3.5	4.0		
All Red	2.0				1.0	1.0		

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	109		236				226	1456			1360	40
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Adj flow	115		248				238	1533			1432	42
No. Lanes	1	0	1	0	0	0	1	2	0	0	2	1
Lane group	L		R				L	T			T	R
Adj flow	115		248				238	1533			1432	42
Prop LTs								0.000			0.000	
Prop RTs			1.000					0.000			0.000	1.000

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
So	1900		1900				1900	1900			1900	1900
Lanes	1	0	1	0	0	0	1	2	0	0	2	1
fW	1.000		1.000				1.000	1.000			1.000	1.000
fHV	0.980		0.980				0.980	0.980			0.980	0.980
fG	1.000		1.000				1.000	1.000			1.000	1.000
fP	1.000		1.000				1.000	1.000			1.000	1.000
fBB	1.000		1.000				1.000	1.000			1.000	1.000
fA	1.000		1.000				1.000	1.000			1.000	1.000
fLU	1.000		1.000				1.000	0.952			0.952	1.000
fRT			0.850					1.000			1.000	0.850
fLT	0.950						0.950	1.000			1.000	
Sec.												
fLpb	1.000						1.000	1.000			1.000	
fRpb			1.000					1.000			1.000	1.000
S	1770		1583				1770	3547			3547	1583
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot Perm Left	L	115	1770	0.06	0.17	301	0.38
Prot Perm Thru Right	R	248	1583	# 0.16	0.17	269	0.92
Westbound							
Prot Perm Left Prot Perm Thru Right							
Northbound							
Prot Perm Left	L	238	1770	# 0.13	0.16	274	0.87
Prot Perm Thru Right	T	1533	3547	0.43	0.72	2554	0.60
Southbound							
Prot Perm Left Prot Perm Thru Right	T R	1432 42	3547 1583	# 0.40 0.03	0.52 0.52	1844 823	0.78 0.05

Sum of flow ratios for critical lane groups,  $Y_c = \text{Sum (v/s)} = 0.69$   
Total lost time per cycle,  $L = 15.50 \text{ sec}$   
Critical flow rate to capacity ratio,  $X_c = (Y_c)(C)/(C-L) = 0.82$

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Res Del d2	Res Del d3	Lane Group Delay LOS	Approach Delay LOS
Eastbound									
L	0.38	0.17	36.8	1.000	301	0.11	0.8	0.0	37.6 D
R	0.92	0.17	40.8	1.000	269	0.44	34.8	0.0	75.7 E
Westbound									
Northbound									
L	0.87	0.16	41.3	1.000	274	0.40	24.4	0.0	65.7 E
T	0.60	0.72	6.9	1.000	2554	0.19	0.4	0.0	7.3 A
Southbound									
T	0.78	0.52	19.3	1.000	1844	0.33	2.2	0.0	21.5 C

Intersection delay = 22.5 (sec/veh) Intersection LOS = C

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for exclusive lefts

Input

	EB	WB	NB	SB
--	----	----	----	----

Opposed by Single(S) or Multiple(M) lane approach  
 Cycle length, C 100.0 sec  
 Total actual green time for LT lane group, G (s)  
 Effective permitted green time for LT lane group, g(s)  
 Opposing effective green time, go (s)  
 Number of lanes in LT lane group, N  
 Number of lanes in opposing approach, No  
 Adjusted LT flow rate, VLT (veh/h)  
 Proportion of LT in LT lane group, PLT  
 Proportion of LT in opposing flow, PLTo  
 Adjusted opposing flow rate, Vo (veh/h)  
 Lost time for LT lane group, tL

Computation

LT volume per cycle, LTC=VLTC/3600  
 Opposing lane util. factor, fLUo 0.952 0.952  
 Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)  
 $gf = G[\exp(-a * (LTC ** b))] - tL$ ,  $gf \leq g$   
 Opposing platoon ratio, Rpo (refer Exhibit 16-11)  
 Opposing Queue Ratio, qro=Max[1-Rpo(go/C), 0]  
 $gq$ , (see Exhibit C16-4,5,6,7,8)  
 $gu = g - gq$  if  $gq \geq gf$ , or  $= g - gf$  if  $gq < gf$   
 $n = \text{Max}(gq - gf) / 2, 0$   
 $PTHo = 1 - PLTo$   
 $PL* = PLT[1 + (N-1)g / (gf + gu / EL1 + 4.24)]$   
 EL1 (refer to Exhibit C16-3)  
 $EL2 = \text{Max}((1 - Ptho ** n) / Plto, 1.0)$   
 $fmin = 2(1 + PL) / g$  or  $fmin = 2(1 + Pl) / g$   
 $gdifff = \text{max}(gq - gf, 0)$   
 $fm = [gf/g] + [gu/g] / [1 + PL(EL1 - 1)]$ , (min=fmin;max=1.00)  
 $flt = fm = [gf/g] + [gu/g] / [1 + PL(EL1 - 1)] + [gdifff/g] / [1 + PL(EL2 - 1)]$ , (fmin<=fm<=1.00)  
 or  $flt = [fm + 0.91(N-1)] / N **$   
 Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.  
 \* If  $Pl \geq 1$  for shared left-turn lanes with  $N > 1$ , then assume de-facto left-turn lane and redo calculations.  
 \*\* For permitted left-turns with multiple exclusive left-turn lanes,  $flt = fm$ .  
 For special case of multilane approach opposed by single-lane approach or when  $gf > gq$ , see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for shared lefts

Input

	EB	WB	NB	SB
--	----	----	----	----

Opposed by Single(S) or Multiple(M) lane approach  
 Cycle length, C 100.0 sec  
 Total actual green time for LT lane group, G (s)  
 Effective permitted green time for LT lane group, g(s)  
 Opposing effective green time, go (s)  
 Number of lanes in LT lane group, N

Number of lanes in opposing approach, No  
Adjusted LT flow rate, VLT (veh/h)  
Proportion of LT in LT lane group, PLT 0.000 0.000  
Proportion of LT in opposing flow, PLTo  
Adjusted opposing flow rate, Vo (veh/h)  
Lost time for LT lane group, tL  
Computation  
LT volume per cycle, LTC=VLTC/3600  
Opposing lane util. factor, fLUo 0.952 0.952  
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)  
 $gf = G[\exp(-a * (LTC ** b))] - tL$ ,  $gf <= g$   
Opposing platoon ratio, Rpo (refer Exhibit 16-11)  
Opposing Queue Ratio, qro=Max[1-Rpo(go/C), 0]  
gq, (see Exhibit C16-4,5,6,7,8)  
 $gu = g - gq$  if  $gq >= gf$ , or  $= g - gf$  if  $gq < gf$   
 $n = \text{Max}(gq - gf) / 2, 0$   
PTHo=1-PLTo  
 $PL * = PLT [1 + (N - 1)g / (gf + gu / EL1 + 4.24)]$   
EL1 (refer to Exhibit C16-3)  
 $EL2 = \text{Max}((1 - Ptho ** n) / Plto, 1.0)$   
 $fmin = 2(1 + PL) / g$  or  $fmin = 2(1 + PL) / g$   
 $gdiff = \text{max}(gq - gf, 0)$   
 $fm = [gf / g] + [gu / g] / [1 + PL(EL1 - 1)]$ , (min=fmin;max=1.00)  
 $flt = fm = [gf / g] + [gu / g] / [1 + PL(EL1 - 1)] + [gdiff / g] / [1 + PL(EL2 - 1)]$ , (fmin<=fm<=1.00)  
or  $flt = [fm + 0.91(N - 1)] / N **$   
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach,  
see text.  
\* If  $Pl >= 1$  for shared left-turn lanes with  $N > 1$ , then assume de-facto  
left-turn lane and redo calculations.  
\*\* For permitted left-turns with multiple exclusive left-turn lanes,  $flt = fm$ .  
For special case of multilane approach opposed by single-lane approach  
or when  $gf > gq$ , see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
--	----	----	----	----

Effective pedestrian green time, gp (s)  
Conflicting pedestrian volume, Vped (p/h)  
Pedestrian flow rate, Vpedg (p/h)  
OCCpedg  
Opposing queue clearing green, gq (s)  
Eff. ped. green consumed by opp. veh. queue, gq/gp  
OCCpedu  
Opposing flow rate, Vo (veh/h)  
OCCr  
Number of cross-street receiving lanes, Nrec  
Number of turning lanes, Nturn  
ApbT  
Proportion of left turns, PLT  
Proportion of left turns using protected phase, PLTA  
Left-turn adjustment, fLpb  
Permitted Right Turns  
Effective pedestrian green time, gp (s)  
Conflicting pedestrian volume, Vped (p/h)  
Conflicting bicycle volume, Vbic (bicycles/h)  
Vpedg  
OCCpedg  
Effective green, g (s)  
Vbicg

OCCbicg  
 OCCr  
 Number of cross-street receiving lanes, Nrec  
 Number of turning lanes, Nturn  
 ApbT  
 Proportion right-turns, PRT  
 Proportion right-turns using protected phase, PRTA  
 Right turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

EBLT    WBLT    NBLT    SBLT

Cycle length, C 100.0    sec  
 Adj. LT vol from Vol Adjustment Worksheet, v  
 v/c ratio from Capacity Worksheet, X  
 Protected phase effective green interval, g (s)  
 Opposing queue effective green interval, gq  
 Unopposed green interval, gu  
 Red time  $r=(C-g-gq-gu)$   
 Arrival rate,  $qa=v/(3600(\max[X,1.0]))$   
 Protected ph. departure rate,  $Sp=s/3600$   
 Permitted ph. departure rate,  $Ss=s(gq+gu)/(gu*3600)$   
 XPerm  
 XProt  
 Case  
 Queue at beginning of green arrow, Qa  
 Queue at beginning of unsaturated green, Qu  
 Residual queue, Qr  
 Uniform Delay, dl

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

Appr/ Lane Group	Initial	Dur.	Uniform Delay		Initial	Final	Initial	Lane
	Unmet Demand Q veh	Unmet Demand t hrs.	Unadj. ds	Adj. dl sec	Queue Param. u	Unmet Demand Q veh	Queue Delay d3 sec	Group Delay d sec
<b>Eastbound</b>								
L	0.0	0.00	41.5	36.8	0.00	0.0	0.0	37.6
	0.0						0.0	
R	0.0	0.00	41.5	40.8	0.00	0.0	0.0	75.7
<b>Westbound</b>								
	0.0						0.0	
	0.0						0.0	
	0.0						0.0	
<b>Northbound</b>								
L	0.0	0.00	42.3	41.3	0.00	0.0	0.0	65.7
T	0.0	0.00	14.0	6.9	0.00	0.0	0.0	7.3
	0.0						0.0	
<b>Southbound</b>								
	0.0						0.0	
T	0.0	0.00	24.0	19.3	0.00	0.0	0.0	21.5
R	0.0	0.00	24.0	11.8	0.00	0.0	0.0	11.9

Intersection Delay 22.5    sec/veh    Intersection LOS C

BACK OF QUEUE WORKSHEET

	Eastbound		Westbound			Northbound			Southbound		
	L	R				L	T		T	R	
LaneGroup	L	R				L	T		T	R	
Init Queue	0.0	0.0				0.0	0.0		0.0	0.0	
Flow Rate	115	248				238	805		752	42	
So	1900	1900				1900	1900		1900	1900	
No.Lanes	1	0	1	0	0	0	2	0	0	2	1
SL	1770	1583				1770	1862		1862	1583	
LnCapacity	301	269				274	1341		968	823	
Flow Ratio	0.1	0.2				0.1	0.4		0.4	0.0	
v/c Ratio	0.38	0.92				0.87	0.60		0.78	0.05	
Grn Ratio	0.17	0.17				0.16	0.72		0.52	0.52	
I Factor		1.000					1.000		1.000		
AT or PVG	3	3				3	3		3	3	
Pltn Ratio	1.00	1.00				1.00	1.00		1.00	1.00	
PF2	1.00	1.00				1.00	1.00		1.00	1.00	
Q1	2.8	6.8				6.5	11.0		16.8	0.6	
kB	0.4	0.3				0.3	0.9		0.7	0.7	
Q2	0.2	2.2				1.6	1.3		2.3	0.0	
Q Average	3.1	8.9				8.1	12.3		19.1	0.6	
Q Spacing	25.0	25.0				25.0	25.0		25.0	25.0	
Q Storage	0	0				0	0		0	0	
Q S Ratio											
70th Percentile Output:											
fB%	1.2	1.2				1.2	1.2		1.2	1.2	
BOQ	3.6	10.6				9.6	14.5		22.2	0.7	
QSRatio											
85th Percentile Output:											
fB%	1.6	1.5				1.5	1.5		1.5	1.6	
BOQ	4.8	13.6				12.4	18.5		27.9	1.0	
QSRatio											
90th Percentile Output:											
fB%	1.7	1.7				1.7	1.6		1.6	1.8	
BOQ	5.3	14.8				13.5	19.9		29.7	1.1	
QSRatio											
95th Percentile Output:											
fB%	2.0	1.9				1.9	1.8		1.7	2.1	
BOQ	6.1	16.7				15.2	22.2		32.7	1.3	
QSRatio											
98th Percentile Output:											
fB%	2.5	2.2				2.2	2.1		1.9	2.7	
BOQ	7.6	19.7				18.1	25.7		36.9	1.6	
QSRatio											

ERROR MESSAGES

No errors to report.

HCS+: Signalized Intersections Release 5.2

Analyst: RV  
 Agency: CPH  
 Date: 5/10/2012  
 Period: 4pm-6pm  
 Project ID: CVS Stock Island  
 E/W St: Cross Street

Inter.: US 1 & Cross Street  
 Area Type: All other areas  
 Jurisd: Monroe County  
 Year : Existing  
 N/S St: US 1

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	0	0	0	2	1	1	2	0
LGConfig					LR					L	T	
Volume				190		32		1536	170	20	1206	
Lane Width					12.0			12.0	12.0	12.0	12.0	
RTOR Vol						0			0			

Duration 0.25 Area Type: All other areas  
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru	A		
Right					Right	A		
Peds					Peds			
WB Left		A			SB Left	A		
Thru					Thru	A		
Right		A			Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green		22.0				68.0		
Yellow		4.0				4.0		
All Red		1.0				1.0		

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS

Eastbound

Westbound

Northbound

LR	385	1751	0.61	0.22	37.9	D	37.9	D
T	2412	3547	0.67	0.68	10.1	B	9.7	A
R	1076	1583	0.17	0.68	5.8	A		
Southbound								
L	128	188	0.16	0.68	6.4	A		
T	2412	3547	0.53	0.68	8.2	A	8.2	A

Intersection Delay = 11.1 (sec/veh) Intersection LOS = B

Phone: Fax:  
E-Mail:

OPERATIONAL ANALYSIS

Analyst: RV  
Agency/Co.: CPH  
Date Performed: 5/10/2012  
Analysis Time Period: 4pm-6pm  
Intersection: US 1& Cross Street  
Area Type: All other areas  
Jurisdiction: Monroe County  
Analysis Year: Existing  
Project ID: CVS Stock Island  
E/W St: Cross Street N/S St: US 1

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume				190		32	1536	170		20	1206	
% Heavy Veh				2		2	2	2		2	2	
PHF				0.95		0.95	0.95	0.95		0.95	0.95	
PK 15 Vol				50		8	404	45		5	317	
Hi Ln Vol												
% Grade					0			0			0	
Ideal Sat					1900			1900	1900	1900	1900	
ParkExist												
NumPark												
No. Lanes	0	0	0	0	0	0	0	2	1	1	2	0
LGConfig					LR			T	R	L	T	
Lane Width					12.0			12.0	12.0	12.0	12.0	
RTOR Vol						0			0			
Adj Flow					234			1617	179	21	1269	
%InSharedLn												
Prop LTs					0.855			0.000		1.000	0.000	
Prop RTs					0.145			0.000	1.000		0.000	
Peds Bikes	0			0			0					
Buses					0			0	0	0	0	
%InProtPhase												
Duration	0.25			Area Type: All other areas								

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet					0.0			0.0	0.0	0.0	0.0	
Arriv. Type					3			3	3	3	3	
Unit Ext.					3.0			3.0	3.0	3.0	3.0	
I Factor					1.000			1.000			1.000	
Lost Time					2.0			2.0	2.0	2.0	2.0	
Ext of g					2.0			2.0	2.0	2.0	2.0	
Ped Min g		3.2			3.2			3.2				

PHASE DATA

Phase Combination	1	2	3	4	5	6	7	8
EB Left Thru Right Peds					NB Left Thru Right Peds	A	A	
WB Left Thru Right Peds	A				SB Left Thru Right Peds	A	A	
NB Right					EB Right			
SB Right					WB Right			
Green	22.0				68.0			
Yellow	4.0				4.0			
All Red	1.0				1.0			

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V				190		32	1536	170		20	1206	
PHF				0.95		0.95	0.95	0.95		0.95	0.95	
Adj flow				200		34	1617	179		21	1269	
No. Lanes	0	0	0	0	0	0	0	2	1	1	2	0
Lane group					LR			T	R	L	T	
Adj flow					234			1617	179	21	1269	
Prop LTs					0.855			0.000		1.000	0.000	
Prop RTs					0.145			0.000	1.000		0.000	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound				Westbound			Northbound		Southbound	
LG					LR			T	R	L	T
So					1900			1900	1900	1900	1900
Lanes	0	0	0	0	0	0	0	2	1	1	2
fW					1.000			1.000	1.000	1.000	1.000
fHV					0.980			0.980	0.980	0.980	0.980
fG					1.000			1.000	1.000	1.000	1.000
fP					1.000			1.000	1.000	1.000	1.000
fBB					1.000			1.000	1.000	1.000	1.000
fA					1.000			1.000	1.000	1.000	1.000
fLU					1.000			0.952	1.000	1.000	0.952
fRT					0.980			1.000	0.850		1.000
fLT					0.959			1.000		0.101	1.000
Sec.											
fLpb					1.000			1.000		1.000	1.000
fRpb					1.000			1.000	1.000		1.000
S					1751			3547	1583	188	3547
Sec.											

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru							
Right							
Westbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LR	234	1751	# 0.13	0.22	385	0.61
Right							
Northbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	T	1617	3547	# 0.46	0.68	2412	0.67
Right	R	179	1583	0.11	0.68	1076	0.17
Southbound							
Prot							
Perm							
Left	L	21	188	0.11	0.68	128	0.16
Prot							
Perm							
Thru	T	1269	3547	0.36	0.68	2412	0.53
Right							

Sum of flow ratios for critical lane groups,  $Y_c = \text{Sum (v/s)} = 0.59$   
Total lost time per cycle,  $L = 10.00 \text{ sec}$   
Critical flow rate to capacity ratio,  $X_c = (Y_c)(C)/(C-L) = 0.66$

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Res Del d2	Res Del d3	Lane Group Delay LOS	Approach Delay LOS
Eastbound									
Westbound									
LR	0.61 0.22	35.1	1.000	385	0.19	2.8	0.0	37.9 D	37.9 D
Northbound									
T	0.67 0.68	9.4	1.000	2412	0.24	0.7	0.0	10.1 B	9.7 A
R	0.17 0.68	5.8	1.000	1076	0.11	0.1	0.0	5.8 A	
Southbound									
L	0.16 0.68	5.8	1.000	128	0.11	0.6	0.0	6.4 A	
T	0.53 0.68	8.0	1.000	2412	0.13	0.2	0.0	8.2 A	8.2 A

Intersection delay = 11.1 (sec/veh) Intersection LOS = B

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for exclusive lefts

Input	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				M
Cycle length, C				100.0 sec
Total actual green time for LT lane group, G (s)				68.0
Effective permitted green time for LT lane group, g(s)				68.0
Opposing effective green time, go (s)				68.0
Number of lanes in LT lane group, N				1
Number of lanes in opposing approach, No				2
Adjusted LT flow rate, VLT (veh/h)				21
Proportion of LT in LT lane group, PLT				1.000
Proportion of LT in opposing flow, PLTo				0.00
Adjusted opposing flow rate, Vo (veh/h)				1617
Lost time for LT lane group, tL				5.00
Computation				
LT volume per cycle, LTC=VLTC/3600				0.58
Opposing lane util. factor, fLUo	1.000		0.952	0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)				23.59
gf=G[exp(- a * (LTC ** b))]-tL, gf<=g				0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)				1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]				0.32
gq, (see Exhibit C16-4,5,6,7,8)				23.58
gu=g-gq if gq>=gf, or = g-gf if gq<gf				44.42
n=Max(gq-gf)/2,0)				11.79
PTHo=1-PLTo				1.00
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]				1.00
EL1 (refer to Exhibit C16-3)				6.47
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g				0.06
gdiff=max(gq-gf,0)				0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)				0.10
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)], (fmin<=fm<=1.00) or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT				0.101
For special case of single-lane approach opposed by multilane approach, see text.				
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.				
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.				
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.				

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for shared lefts

Input	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C				100.0 sec
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				

Number of lanes in opposing approach, No  
Adjusted LT flow rate, VLT (veh/h)  
Proportion of LT in LT lane group, PLT 0.855 0.000 0.000  
Proportion of LT in opposing flow, PLTo  
Adjusted opposing flow rate, Vo (veh/h)  
Lost time for LT lane group, tL  
Computation  
LT volume per cycle, LTC=VLTC/3600  
Opposing lane util. factor, fLUo 1.000 0.952 0.952  
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)  
 $gf = G[\exp(-a * (LTC ** b))] - tL$ ,  $gf <= g$   
Opposing platoon ratio, Rpo (refer Exhibit 16-11)  
Opposing Queue Ratio, qro=Max[1-Rpo(go/C), 0]  
gq, (see Exhibit C16-4,5,6,7,8)  
 $gu = g - gq$  if  $gq >= gf$ , or  $= g - gf$  if  $gq < gf$   
 $n = \text{Max}(gq - gf) / 2, 0$   
 $PTHo = 1 - PLTo$   
 $PL* = PLT[1 + (N - 1)g / (gf + gu / EL1 + 4.24)]$   
EL1 (refer to Exhibit C16-3)  
 $EL2 = \text{Max}((1 - Ptho ** n) / Plto, 1.0)$   
 $fmin = 2(1 + PL) / g$  or  $fmin = 2(1 + Pl) / g$   
 $gdiff = \text{max}(gq - gf, 0)$   
 $fm = [gf / g] + [gu / g] / [1 + PL(EL1 - 1)]$ , (min=fmin;max=1.00)  
 $flt = fm = [gf / g] + [gu / g] / [1 + PL(EL1 - 1)] + [gdiff / g] / [1 + PL(EL2 - 1)]$ , (fmin<=fm<=1.00)  
or  $flt = [fm + 0.91(N - 1)] / N **$   
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.  
\* If  $Pl >= 1$  for shared left-turn lanes with  $N > 1$ , then assume de-facto left-turn lane and redo calculations.  
\*\* For permitted left-turns with multiple exclusive left-turn lanes,  $flt = fm$ .  
For special case of multilane approach opposed by single-lane approach or when  $gf > gq$ , see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
--	----	----	----	----

Effective pedestrian green time, gp (s)  
Conflicting pedestrian volume, Vped (p/h)  
Pedestrian flow rate, Vpedg (p/h)  
OCCpedg  
Opposing queue clearing green, gq (s)  
Eff. ped. green consumed by opp. veh. queue, gq/gp  
OCCpedu  
Opposing flow rate, Vo (veh/h)  
OCCr  
Number of cross-street receiving lanes, Nrec  
Number of turning lanes, Nturn  
ApbT  
Proportion of left turns, PLT  
Proportion of left turns using protected phase, PLTA  
Left-turn adjustment, fLpb

Permitted Right Turns

Effective pedestrian green time, gp (s)  
Conflicting pedestrian volume, Vped (p/h)  
Conflicting bicycle volume, Vbic (bicycles/h)  
Vpedg  
OCCpedg  
Effective green, g (s)  
Vbicg



	Eastbound			Westbound		Northbound		Southbound	
LaneGroup				LR		T	R	L	T
Init Queue				0.0		0.0	0.0	0.0	0.0
Flow Rate				234		849	179	21	666
So				1900		1900	1900	1900	1900
No.Lanes	0	0	0	0	0	0	2	1	1
SL				1751		1862	1583	188	1862
LnCapacity				385		1266	1076	128	1266
Flow Ratio				0.1		0.5	0.1	0.1	0.4
v/c Ratio				0.61		0.67	0.17	0.16	0.53
Grn Ratio				0.22		0.68	0.68	0.68	0.68
I Factor				1.000		1.000			1.000
AT or PVG				3		3	3	3	3
Pltn Ratio				1.00		1.00	1.00	1.00	1.00
PF2				1.00		1.00	1.00	1.00	1.00
Q1				5.9		13.9	1.8	0.2	9.2
kB				0.4		0.8	0.8	0.2	0.8
Q2				0.6		1.7	0.2	0.0	0.9
Q Average				6.5		15.5	1.9	0.3	10.1
Q Spacing				25.0		25.0	25.0	25.0	25.0
Q Storage				0		0	0	0	0
Q S Ratio									
70th Percentile Output:									
fB%				1.2		1.2	1.2	1.2	1.2
BOQ				7.7		18.2	2.3	0.3	11.9
QSRatio									
85th Percentile Output:									
fB%				1.5		1.5	1.6	1.6	1.5
BOQ				10.0		23.0	3.1	0.4	15.4
QSRatio									
90th Percentile Output:									
fB%				1.7		1.6	1.8	1.8	1.6
BOQ				10.9		24.6	3.4	0.5	16.6
QSRatio									
95th Percentile Output:									
fB%				1.9		1.8	2.0	2.1	1.8
BOQ				12.4		27.2	4.0	0.5	18.7
QSRatio									
98th Percentile Output:									
fB%				2.3		2.0	2.6	2.7	2.2
BOQ				14.9		31.1	5.0	0.7	21.9
QSRatio									

ERROR MESSAGES

No errors to report.

HCS+: Signalized Intersections Release 5.2

Analyst: RV  
 Agency: CPH  
 Date: 5/10/2012  
 Period: 4pm-6pm  
 Project ID: Future Total  
 E/W St: McDonald Avenue

Inter.: US 1 & McDonald Avenue  
 Area Type: All other areas  
 Jurisd: Monroe County  
 Year : Existing  
 N/S St: US 1

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	0	0	2	1	0	2	0
LGConfig				L				T	R		T	
Volume				386				1241	332		876	
Lane Width				12.0				12.0	12.0		12.0	
RTOR Vol									0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru	A		
Right					Right	A		
Peds					Peds			
WB Left		A			SB Left			
Thru					Thru	A		
Right					Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green		22.0				68.0		
Yellow		4.0				4.0		
All Red		1.0				1.0		

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS

Eastbound

Westbound

Northbound

Southbound

L	389	1770	1.04	0.22	96.5	F	96.5	F
T	2412	3547	0.54	0.68	8.4	A	8.0	A
R	1076	1583	0.32	0.68	6.7	A		
T	2412	3547	0.38	0.68	7.0	A	7.0	A

Intersection Delay = 19.7 (sec/veh) Intersection LOS = B

Phone: Fax:  
E-Mail:

OPERATIONAL ANALYSIS

Analyst: RV  
 Agency/Co.: CPH  
 Date Performed: 5/10/2012  
 Analysis Time Period: 4pm-6pm  
 Intersection: US 1 & McDonald Avenue  
 Area Type: All other areas  
 Jurisdiction: Monroe County  
 Analysis Year: Existing  
 Project ID: Future Total  
 E/W St: McDonald Avenue N/S St: US 1

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume				386			1241	332		876		
% Heavy Veh				2			2	2		2		
PHF				0.95			0.95	0.95		0.95		
PK 15 Vol				102			327	87		231		
Hi Ln Vol												
% Grade					0		0			0		
Ideal Sat				1900			1900	1900		1900		
ParkExist												
NumPark												
No. Lanes	0	0	0	1	0	0	0	2	1	0	2	0
LGConfig				L			T	R		T		
Lane Width				12.0			12.0	12.0		12.0		
RTOR Vol								0				
Adj Flow				406			1306	349		922		
%InSharedLn												
Prop LTs							0.000			0.000		
Prop RTs							0.000	1.000		0.000		
Peds Bikes	0						0					
Buses				0			0	0		0		
%InProtPhase												
Duration	0.25			Area Type: All other areas								

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet				0.0			0.0	0.0		0.0		
Arriv. Type				3			3	3		3		
Unit Ext.				3.0			3.0	3.0		3.0		
I Factor					1.000		1.000			1.000		
Lost Time				2.0			2.0	2.0		2.0		
Ext of g				2.0			2.0	2.0		2.0		
Ped Min g		3.2						3.2				

PHASE DATA

Phase Combination	1	2	3	4	5	6	7	8
EB Left Thru Right Peds					NB Left Thru Right Peds	A		
WB Left Thru Right Peds		A			SB Left Thru Right Peds		A	
NB Right					EB Right			
SB Right					WB Right			
Green		22.0				68.0		
Yellow		4.0				4.0		
All Red		1.0				1.0		

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment	Eastbound			Westbound			Northbound			Southbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
Volume, V				386			1241	332			876		
PHF				0.95			0.95	0.95			0.95		
Adj flow				406			1306	349			922		
No. Lanes	0	0	0	1	0	0	0	2	1	0	2	0	
Lane group				L			T	R			T		
Adj flow				406			1306	349			922		
Prop LTs							0.000			0.000			
Prop RTs							0.000	1.000		0.000			

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG			L				T	R		T		
So			1900				1900	1900		1900		
Lanes	0	0	1	0	0	0	2	1	0	2	0	
fW			1.000				1.000	1.000		1.000		
fHV			0.980				0.980	0.980		0.980		
fG			1.000				1.000	1.000		1.000		
fP			1.000				1.000	1.000		1.000		
fBB			1.000				1.000	1.000		1.000		
fA			1.000				1.000	1.000		1.000		
fLU			1.000				0.952	1.000		0.952		
fRT							1.000	0.850		1.000		
fLT			0.950				1.000			1.000		
Sec.												
fLpb			1.000				1.000			1.000		
fRpb							1.000	1.000		1.000		
S			1770				3547	1583		3547		
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Capacity (c)	Group v/c Ratio
Eastbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru							
Right							
Westbound							
Prot							
Perm							
Left	L	406	1770	# 0.23	0.22	389	1.04
Prot							
Perm							
Thru							
Right							
Northbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	T	1306	3547	# 0.37	0.68	2412	0.54
Right	R	349	1583	0.22	0.68	1076	0.32
Southbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	T	922	3547	0.26	0.68	2412	0.38
Right							

Sum of flow ratios for critical lane groups,  $Y_c = \text{Sum (v/s)} = 0.60$   
Total lost time per cycle,  $L = 10.00 \text{ sec}$   
Critical flow rate to capacity ratio,  $X_c = (Y_c)(C)/(C-L) = 0.66$

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Res Del d2	Del d3	Lane Group Delay	Approach LOS
Eastbound									
Westbound									
L	1.04	0.22	39.0	1.000	389	0.50	57.5	0.0	96.5 F
Northbound									
T	0.54	0.68	8.1	1.000	2412	0.14	0.3	0.0	8.4 A
R	0.32	0.68	6.6	1.000	1076	0.11	0.2	0.0	6.7 A
Southbound									
T	0.38	0.68	6.9	1.000	2412	0.11	0.1	0.0	7.0 A

Intersection delay = 19.7 (sec/veh) Intersection LOS = B

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for exclusive lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C		100.0	sec	
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				
Number of lanes in opposing approach, No				
Adjusted LT flow rate, VLT (veh/h)				
Proportion of LT in LT lane group, PLT				
Proportion of LT in opposing flow, PLTo				
Adjusted opposing flow rate, Vo (veh/h)				
Lost time for LT lane group, tL				
Computation				
LT volume per cycle, LTC=VLTC/3600				
Opposing lane util. factor, fLUo			0.952	0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)				
gf=G[exp(- a * (LTC ** b))]-tL, gf<=g				
Opposing platoon ratio, Rpo (refer Exhibit 16-11)				
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]				
gq, (see Exhibit C16-4,5,6,7,8)				
gu=g-gq if gq>=gf, or = g-gf if gq<gf				
n=Max(gq-gf)/2,0)				
PTHo=1-PLTo				
PL*=[PLT[1+(N-1)g/(gf+gu/EL1+4.24)]]				
EL1 (refer to Exhibit C16-3)				
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g				
gdifff=max(gq-gf,0)				
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)				
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdifff/g]/[1+PL(EL2-1)], (fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT				
For special case of single-lane approach opposed by multilane approach, see text.				
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.				
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.				
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.				

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for shared lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C		100.0	sec	
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				

Number of lanes in opposing approach, No  
Adjusted LT flow rate, VLT (veh/h)  
Proportion of LT in LT lane group, PLT 0.000 0.000  
Proportion of LT in opposing flow, PLTo  
Adjusted opposing flow rate, Vo (veh/h)  
Lost time for LT lane group, tL  
Computation  
LT volume per cycle, LTC=VLTC/3600  
Opposing lane util. factor, fLUo 0.952 0.952  
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)  
 $gf = G[\exp(-a * (LTC ** b))] - tL$ ,  $gf <= g$   
Opposing platoon ratio, Rpo (refer Exhibit 16-11)  
Opposing Queue Ratio, qro=Max[1-Rpo(go/C), 0]  
gq, (see Exhibit C16-4,5,6,7,8)  
 $gu = g - gq$  if  $gq >= gf$ , or  $= g - gf$  if  $gq < gf$   
 $n = \text{Max}(gq - gf) / 2, 0$   
 $PTHo = 1 - PLTo$   
 $PL* = PLT [1 + (N - 1)g / (gf + gu / EL1 + 4.24)]$   
EL1 (refer to Exhibit C16-3)  
 $EL2 = \text{Max}((1 - Ptho * n) / Plto, 1.0)$   
 $fmin = 2(1 + PL) / g$  or  $fmin = 2(1 + Pl) / g$   
 $gdiff = \text{max}(gq - gf, 0)$   
 $fm = [gf / g] + [gu / g] / [1 + PL(EL1 - 1)]$ , (min=fmin;max=1.00)  
 $flt = fm = [gf / g] + [gu / g] / [1 + PL(EL1 - 1)] + [gdiff / g] / [1 + PL(EL2 - 1)]$ , (fmin<=fm<=1.00)  
or  $flt = [fm + 0.91(N - 1)] / N **$   
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach,  
see text.  
\* If  $Pl >= 1$  for shared left-turn lanes with  $N > 1$ , then assume de-facto  
left-turn lane and redo calculations.  
\*\* For permitted left-turns with multiple exclusive left-turn lanes,  $flt = fm$ .  
For special case of multilane approach opposed by single-lane approach  
or when  $gf > gq$ , see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				

OCCbicg  
 OCCr  
 Number of cross-street receiving lanes, Nrec  
 Number of turning lanes, Nturn  
 ApbT  
 Proportion right-turns, PRT  
 Proportion right-turns using protected phase, PRTA  
 Right turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

EBLT WBLT NBLT SBLT

Cycle length, C 100.0 sec  
 Adj. LT vol from Vol Adjustment Worksheet, v  
 v/c ratio from Capacity Worksheet, X  
 Protected phase effective green interval, g (s)  
 Opposing queue effective green interval, gq  
 Unopposed green interval, gu  
 Red time  $r=(C-g-gq-gu)$   
 Arrival rate,  $qa=v/(3600(\max[X,1.0]))$   
 Protected ph. departure rate,  $Sp=s/3600$   
 Permitted ph. departure rate,  $Ss=s(gq+gu)/(gu*3600)$   
 XPerm  
 XProt  
 Case  
 Queue at beginning of green arrow, Qa  
 Queue at beginning of unsaturated green, Qu  
 Residual queue, Qr  
 Uniform Delay, d1

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

Appr/ Lane Group	Initial	Dur.	Uniform Delay		Initial	Final	Initial	Lane
	Unmet Demand Q veh	Unmet Demand t hrs.	Unadj. ds	Adj. d1 sec	Queue Param. u	Unmet Demand Q veh	Queue Delay d3 sec	Group Delay d sec
Eastbound								
	0.0						0.0	
	0.0						0.0	
	0.0						0.0	
Westbound								
L	0.0	0.00	39.0	39.0	0.00	4.2	0.0	96.5
	0.0						0.0	
	0.0						0.0	
Northbound								
	0.0						0.0	
T	0.0	0.00	16.0	8.1	0.00	0.0	0.0	8.4
R	0.0	0.00	16.0	6.6	0.00	0.0	0.0	6.7
Southbound								
	0.0						0.0	
T	0.0	0.00	16.0	6.9	0.00	0.0	0.0	7.0
	0.0						0.0	
Intersection Delay			19.7	sec/veh	Intersection LOS		B	

BACK OF QUEUE WORKSHEET

	Eastbound	Westbound	Northbound	Southbound
LaneGroup		L	T R	T
Init Queue		0.0	0.0 0.0	0.0
Flow Rate		406	685 349	484
So		1900	1900 1900	1900
No.Lanes	0 0 0	1 0 0	0 2 1	0 2 0
SL		1770	1862 1583	1862
LnCapacity		389	1266 1076	1266
Flow Ratio		0.2	0.4 0.2	0.3
v/c Ratio		1.04	0.54 0.32	0.38
Grn Ratio		0.22	0.68 0.68	0.68
I Factor		1.000	1.000	1.000
AT or PVG		3	3 3	3
Pltn Ratio		1.00	1.00 1.00	1.00
PF2		1.00	1.00 1.00	1.00
Q1		11.3	9.6 4.0	5.8
kB		0.4	0.8 0.8	0.8
Q2		5.8	1.0 0.4	0.5
Q Average		17.1	10.6 4.3	6.3
Q Spacing		25.0	25.0 25.0	25.0
Q Storage		0	0 0	0
Q S Ratio				
70th Percentile Output:				
fb%		1.2	1.2 1.2	1.2
BOQ		19.9	12.5 5.2	7.5
QSRatio				
85th Percentile Output:				
fb%		1.5	1.5 1.6	1.5
BOQ		25.1	16.0 6.8	9.8
QSRatio				
90th Percentile Output:				
fb%		1.6	1.6 1.7	1.7
BOQ		26.8	17.4 7.5	10.7
QSRatio				
95th Percentile Output:				
fb%		1.7	1.8 2.0	1.9
BOQ		29.6	19.5 8.6	12.2
QSRatio				
98th Percentile Output:				
fb%		2.0	2.1 2.4	2.3
BOQ		33.6	22.7 10.5	14.7
QSRatio				

ERROR MESSAGES

No errors to report.

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	RV	Intersection	US 1 & 3rd Street
Agency/Co.	CPH	Jurisdiction	Monroe County
Date Performed	5/10/2012	Analysis Year	Existing
Analysis Time Period	4pm-6pm		

Project Description <i>CVS Stock Island</i>	
East/West Street: <i>3rd Street</i>	North/South Street: <i>US 1</i>
Intersection Orientation: <i>North-South</i>	Study Period (hrs): <i>0.25</i>

Vehicle Volumes and Adjustments						
Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1239	20	101	874	
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	0	1304	21	106	920	0
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type	<i>Raised curb</i>					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				8		146
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	0	0	0	8	0	153
Percent Heavy Vehicles	2	0	2	2	0	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

Delay, Queue Length, and Level of Service								
Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L	L		R			
v (veh/h)		106	8		153			
C (m) (veh/h)		517	144		466			
v/c		0.21	0.06		0.33			
95% queue length		0.76	0.17		1.42			
Control Delay (s/veh)		13.8	31.5		16.5			
LOS		B	D		C			
Approach Delay (s/veh)	--	--	17.2					
Approach LOS	--	--	C					

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	RV	Intersection	US 1 & Collge Road North
Agency/Co.	CPH	Jurisdiction	Monroe County
Date Performed	5/10/2012	Analysis Year	Existing
Analysis Time Period	4pm-6pm		

Project Description <i>CVS Stock Island</i>	
East/West Street: <i>College Road North</i>	North/South Street: <i>US 1</i>
Intersection Orientation: <i>North-South</i>	Study Period (hrs): <i>0.25</i>

Vehicle Volumes and Adjustments						
Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	132	1428			868	55
Peak-Hour Factor, PHF	0.95	0.95	1.00	1.00	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	138	1503	0	0	913	57
Percent Heavy Vehicles	2	--	--	0	--	--
Median Type	<i>Raised curb</i>					
RT Channelized			0			0
Lanes	1	2	0	0	2	1
Configuration	L	T			T	R
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	66		65	7	0	5
Peak-Hour Factor, PHF	0.95	1.00	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	69	0	68	7	0	5
Percent Heavy Vehicles	2	0	2	2	2	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	1	0	1	0
Configuration	L		R		LTR	

Delay, Queue Length, and Level of Service								
Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L			LTR		L		R
v (veh/h)	138			12		69		68
C (m) (veh/h)	706			87		123		603
v/c	0.20			0.14		0.56		0.11
95% queue length	0.72			0.46		2.73		0.38
Control Delay (s/veh)	11.3			52.9		66.4		11.7
LOS	B			F		F		B
Approach Delay (s/veh)	--	--	52.9			39.3		
Approach LOS	--	--	F			E		

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	RV	Intersection	US 1 & Key Haven
Agency/Co.	CPH	Jurisdiction	Monroe County
Date Performed	5/10/2012	Analysis Year	Existing
Analysis Time Period	4pm-6pm		

Project Description <i>CVS Stock Island</i>	
East/West Street: <i>Key Haven Blvd.</i>	North/South Street: <i>US 1</i>
Intersection Orientation: <i>North-South</i>	Study Period (hrs): <i>0.25</i>

### Vehicle Volumes and Adjustments

Major Street Movement	Northbound			Southbound		
	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	222	1377			809	32
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	233	1449	0	0	851	33
Percent Heavy Vehicles	2	--	--	0	--	--
Median Type	<i>Raised curb</i>					
RT Channelized			0			0
Lanes	1	2	0	0	2	1
Configuration	L	T			T	R
Upstream Signal		0			0	

Minor Street Movement	Eastbound			Westbound		
	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	22		134			
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	23	0	141	0	0	0
Percent Heavy Vehicles	2	0	2	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	1	0	0	0
Configuration	L		R			

### Delay, Queue Length, and Level of Service

Approach Movement	Northbound	Southbound	Westbound			Eastbound		
	1	4	7	8	9	10	11	12
Lane Configuration	L					L		R
v (veh/h)	233					23		141
C (m) (veh/h)	761					122		627
v/c	0.31					0.19		0.22
95% queue length	1.30					0.66		0.86
Control Delay (s/veh)	11.8					41.2		12.4
LOS	B					E		B
Approach Delay (s/veh)	--	--				16.4		
Approach LOS	--	--				C		

## **FUTURE BACKGROUND**

HCS+: Signalized Intersections Release 5.2

Analyst: RV  
 Agency: CPH  
 Date: 5/10/2012  
 Period: 4pm-6pm  
 Project ID: CVS Stock Island  
 E/W St: Roosevelt Boulevard

Inter.: US 1 & Roosevelt Blvd  
 Area Type: All other areas  
 Jurisd: Monroe County  
 Year : Future Background  
 N/S St: US 1

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	1	0	0	1	1	0	0	0	2	0	1
LGConfig	L	T			T	R				L		R
Volume	830	130			132	687				464		1136
Lane Width	12.0	12.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas  
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		A			NB Left			
Thru		A	A		Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru			A		Thru			
Right			A		Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right		A			WB Right	A		
Green		48.5	14.0			23.0		
Yellow		3.5	4.0			4.0		
All Red		1.0	1.0			1.0		

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS
Eastbound								
L	1667	3437	0.52	0.49	18.1	B		
T	1248	1863	0.11	0.67	5.9	A	16.4	B
Westbound								
T	261	1863	0.53	0.14	42.1	D	82.2	F
R	665	1583	1.09	0.42	90.0	F		
Northbound								
Southbound								
L	791	3437	0.62	0.23	36.0	D		
R	1211	1583	0.99	0.76	34.1	C	34.7	C
Intersection Delay = 41.0 (sec/veh) Intersection LOS = D								

Phone: Fax:  
E-Mail:

OPERATIONAL ANALYSIS

Analyst: RV  
Agency/Co.: CPH  
Date Performed: 5/10/2012  
Analysis Time Period: 4pm-6pm  
Intersection: US 1 & Roosevelt Blvd  
Area Type: All other areas  
Jurisdiction: Monroe County  
Analysis Year: Future Background  
Project ID: CVS Stock Island  
E/W St: Roosevelt Boulevard N/S St: US 1

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	830	130			132	687				464		1136
% Heavy Veh	2	2			2	2				2		2
PHF	0.95	0.95			0.95	0.95				0.95		0.95
PK 15 Vol	218	34			35	181				122		299
Hi Ln Vol												
% Grade		0			0					0		
Ideal Sat	1900	1900			1900	1900				1900		1900
ParkExist												
NumPark												
No. Lanes	2	1	0	0	1	1	0	0	0	2	0	1
LGConfig	L	T			T	R				L		R
Lane Width	12.0	12.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0
Adj Flow	874	137			139	723				488		1196
%InSharedLn												
Prop LTs		0.000			0.000							
Prop RTs		0.000			0.000	1.000						1.000
Peds Bikes					0		0			0		
Buses	0	0			0	0				0		0
%InProtPhase												
Duration	0.25			Area Type: All other areas								

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0			0.0	0.0				0.0		0.0
Arriv. Type	3	3			3	3				3		3
Unit Ext.	3.0	3.0			3.0	3.0				3.0		3.0
I Factor		1.000			1.000						1.000	
Lost Time	2.0	2.0			2.0	2.0				2.0		2.0
Ext of g	2.0	2.0			2.0	2.0				2.0		2.0
Ped Min g					3.2		3.2				3.2	

PHASE DATA

Phase Combination		1	2	3	4	5	6	7	8
EB	Left Thru Right Peds	A	A						
NB	Left Thru Right Peds								
WB	Left Thru Right Peds		A						
SB	Left Thru Right Peds		A						
NB	Right								
EB	Right								
SB	Right	A							
WB	Right					A			
Green		48.5	14.0			23.0			
Yellow		3.5	4.0			4.0			
All Red		1.0	1.0			1.0			

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	830	130		132	687					464		1136
PHF	0.95	0.95		0.95	0.95					0.95		0.95
Adj flow	874	137		139	723					488		1196
No. Lanes	2	1	0	0	1	1	0	0	0	2	0	1
Lane group	L	T		T	R					L		R
Adj flow	874	137		139	723					488		1196
Prop LTs		0.000			0.000							
Prop RTs		0.000		0.000	1.000							1.000

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

LG	Eastbound				Westbound			Northbound			Southbound	
	L	T			T	R				L	R	
So	1900	1900			1900	1900				1900	1900	
Lanes	2	1	0	0	1	1	0	0	0	2	0	1
fW	1.000	1.000			1.000	1.000				1.000	1.000	
fHV	0.980	0.980			0.980	0.980				0.980	0.980	
fG	1.000	1.000			1.000	1.000				1.000	1.000	
fP	1.000	1.000			1.000	1.000				1.000	1.000	
fBB	1.000	1.000			1.000	1.000				1.000	1.000	
fA	1.000	1.000			1.000	1.000				1.000	1.000	
fLU	0.971	1.000			1.000	1.000				0.971	1.000	
fRT		1.000			1.000	0.850					0.850	
fLT	0.950	1.000			1.000					0.950		
Sec.												
fLpb	1.000	1.000			1.000					1.000		
fRpb		1.000			1.000	1.000					1.000	
S	3437	1863			1863	1583				3437	1583	
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Capacity (c)	Group-- v/c Ratio
Eastbound							
Prot							
Perm							
Left	L	874	3437	0.25	0.49	1667	0.52
Prot							
Perm							
Thru	T	137	1863	0.07	0.67	1248	0.11
Right							
Westbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	T	139	1863	# 0.07	0.14	261	0.53
Right	R	723	1583	0.46	0.42	665	1.09
Northbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru							
Right							
Southbound							
Prot							
Perm							
Left	L	488	3437	0.14	0.23	791	0.62
Prot							
Perm							
Thru							
Right	R	1196	1583	# 0.76	0.76	1211	0.99

Sum of flow ratios for critical lane groups,  $Y_c = \text{Sum (v/s)} = 0.83$   
Total lost time per cycle,  $L = 9.50 \text{ sec}$   
Critical flow rate to capacity ratio,  $X_c = (Y_c)(C)/(C-L) = 0.92$

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Res Del d2	Res Del d3	Lane Group Delay LOS	Approach Delay LOS
Eastbound									
L	0.52	0.49	17.8	1.000	1667	0.13	0.3	0.0	18.1 B
T	0.11	0.67	5.9	1.000	1248	0.11	0.0	0.0	5.9 A 16.4 B
Westbound									
T	0.53	0.14	40.0	1.000	261	0.14	2.1	0.0	42.1 D 82.2 F
R	1.09	0.42	29.0	1.000	665	0.50	61.0	0.0	90.0 F
Northbound									
Southbound									
L	0.62	0.23	34.5	1.000	791	0.20	1.5	0.0	36.0 D 34.7 C

R 0.99 0.76 11.3 1.000 1211 0.49 22.8 0.0 34.1 C

Intersection delay = 41.0 (sec/veh) Intersection LOS = D

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for exclusive lefts

Input

EB WB NB SB

Opposed by Single(S) or Multiple(M) lane approach  
Cycle length, C 100.0 sec  
Total actual green time for LT lane group, G (s)  
Effective permitted green time for LT lane group, g(s)  
Opposing effective green time, go (s)  
Number of lanes in LT lane group, N  
Number of lanes in opposing approach, No  
Adjusted LT flow rate, VLT (veh/h)  
Proportion of LT in LT lane group, PLT  
Proportion of LT in opposing flow, PLTo  
Adjusted opposing flow rate, Vo (veh/h)  
Lost time for LT lane group, tL  
Computation  
LT volume per cycle, LTC=VLTC/3600  
Opposing lane util. factor, fLUo 1.000 1.000  
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)  
gf=G[exp(- a \* (LTC \*\* b))] - tL, gf<=g  
Opposing platoon ratio, Rpo (refer Exhibit 16-11)  
Opposing Queue Ratio, qro=Max[1-Rpo(go/C), 0]  
gq, (see Exhibit C16-4,5,6,7,8)  
gu=g-gq if gq>=gf, or = g-gf if gq<gf  
n=Max(gq-gf)/2, 0  
PTHo=1-PLTo  
PL\*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]  
EL1 (refer to Exhibit C16-3)  
EL2=Max((1-Ptho\*\*n)/Plto, 1.0)  
fmin=2(1+PL)/g or fmin=2(1+Pl)/g  
gdifff=max(gq-gf, 0)  
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)  
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdifff/g]/[1+PL(EL2-1)], (fmin<=fm<=1.00)  
or flt=[fm+0.91(N-1)]/N\*\*  
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach,  
see text.

\* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto  
left-turn lane and redo calculations.

\*\* For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach  
or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for shared lefts

Input

EB WB NB SB

Opposed by Single(S) or Multiple(M) lane approach  
Cycle length, C 100.0 sec  
Total actual green time for LT lane group, G (s)  
Effective permitted green time for LT lane group, g(s)  
Opposing effective green time, go (s)  
Number of lanes in LT lane group, N

Number of lanes in opposing approach, No  
Adjusted LT flow rate, VLT (veh/h)  
Proportion of LT in LT lane group, PLT 0.000 0.000  
Proportion of LT in opposing flow, PLTo  
Adjusted opposing flow rate, Vo (veh/h)  
Lost time for LT lane group, tL  
Computation  
LT volume per cycle, LTC=VLTC/3600  
Opposing lane util. factor, fLUo 1.000 1.000  
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)  
 $gf=G[\exp(-a * (LTC ** b))]-tL$ ,  $gf \leq g$   
Opposing platoon ratio, Rpo (refer Exhibit 16-11)  
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]  
gq, (see Exhibit C16-4,5,6,7,8)  
 $gu=g-gq$  if  $gq \geq gf$ , or  $= g-gf$  if  $gq < gf$   
 $n=Max(gq-gf)/2,0$   
 $PTHo=1-PLTo$   
 $PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]$   
EL1 (refer to Exhibit C16-3)  
 $EL2=Max((1-Ptho**n)/Plto, 1.0)$   
 $fmin=2(1+PL)/g$  or  $fmin=2(1+Pl)/g$   
 $gdiff=max(gq-gf,0)$   
 $fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]$ , (min=fmin;max=1.00)  
 $flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)]$ , (fmin<=fm<=1.00)  
or  $flt=[fm+0.91(N-1)]/N**$   
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach,  
see text.

\* If  $Pl \geq 1$  for shared left-turn lanes with  $N > 1$ , then assume de-facto  
left-turn lane and redo calculations.

\*\* For permitted left-turns with multiple exclusive left-turn lanes,  $flt=fm$ .

For special case of multilane approach opposed by single-lane approach  
or when  $gf > gq$ , see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

EB WB NB SB

Effective pedestrian green time, gp (s)  
Conflicting pedestrian volume, Vped (p/h)  
Pedestrian flow rate, Vpedg (p/h)  
OCCpedg  
Opposing queue clearing green, gq (s)  
Eff. ped. green consumed by opp. veh. queue, gq/gp  
OCCpedu  
Opposing flow rate, Vo (veh/h)  
OCCr  
Number of cross-street receiving lanes, Nrec  
Number of turning lanes, Nturn  
ApbT  
Proportion of left turns, PLT  
Proportion of left turns using protected phase, PLTA  
Left-turn adjustment, fLpb  
Permitted Right Turns  
Effective pedestrian green time, gp (s)  
Conflicting pedestrian volume, Vped (p/h)  
Conflicting bicycle volume, Vbic (bicycles/h)  
Vpedg  
OCCpedg  
Effective green, g (s)  
Vbicg

OCCbicg  
 OCCr  
 Number of cross-street receiving lanes, Nrec  
 Number of turning lanes, Nturn  
 ApbT  
 Proportion right-turns, PRT  
 Proportion right-turns using protected phase, PRTA  
 Right turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

EBLT WBLT NBLT SBLT  
 Cycle length, C 100.0 sec  
 Adj. LT vol from Vol Adjustment Worksheet, v  
 v/c ratio from Capacity Worksheet, X  
 Protected phase effective green interval, g (s)  
 Opposing queue effective green interval, gq  
 Unopposed green interval, gu  
 Red time  $r=(C-g-gq-gu)$   
 Arrival rate,  $qa=v/(3600(\max[X,1.0]))$   
 Protected ph. departure rate,  $Sp=s/3600$   
 Permitted ph. departure rate,  $Ss=s(gq+gu)/(gu*3600)$   
 XPerm  
 XProt  
 Case  
 Queue at beginning of green arrow, Qa  
 Queue at beginning of unsaturated green, Qu  
 Residual queue, Qr  
 Uniform Delay, dl

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

Appr/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay		Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
			Unadj. ds	Adj. dl sec				
Eastbound								
L	0.0	0.00	25.8	17.8	0.00	0.0	0.0	18.1
T	0.0	0.00	16.5	5.9	0.00	0.0	0.0	5.9
	0.0						0.0	
Westbound								
	0.0						0.0	
T	0.0	0.00	43.0	40.0	0.00	0.0	0.0	42.1
R	0.0	0.00	29.0	29.0	0.00	14.5	0.0	90.0
Northbound								
	0.0						0.0	
	0.0						0.0	
	0.0						0.0	
Southbound								
L	0.0	0.00	38.5	34.5	0.00	0.0	0.0	36.0
	0.0						0.0	
R	0.0	0.00	11.8	11.3	0.00	0.0	0.0	34.1
Intersection Delay			41.0	sec/veh	Intersection LOS		D	

BACK OF QUEUE WORKSHEET

LaneGroup	Eastbound			Westbound		Northbound			Southbound		
	L	T		T	R				L	R	
Init Queue	0.0	0.0		0.0	0.0				0.0	0.0	
Flow Rate	450	137		139	723				251	1196	
So	1900	1900		1900	1900				1900	1900	
No.Lanes	2	1	0	1	1	0	0	0	2	0	1
SL	1770	1863		1863	1583				1770		1583
LnCapacity	858	1248		261	665				407		1211
Flow Ratio	0.3	0.1		0.1	0.5				0.1		0.8
v/c Ratio	0.52	0.11		0.53	1.09				0.62		0.99
Grn Ratio	0.49	0.67		0.14	0.42				0.23		0.76
I Factor		1.000		1.000						1.000	
AT or PVG	3	3		3	3				3		3
Pltn Ratio	1.00	1.00		1.00	1.00				1.00		1.00
PF2	1.00	1.00		1.00	1.00				1.00		1.00
Q1	8.6	1.4		3.6	20.1				6.3		31.9
kB	0.7	0.8		0.3	0.6				0.4		0.8
Q2	0.7	0.1		0.4	11.7				0.7		10.2
Q Average	9.4	1.5		4.0	31.8				6.9		42.1
Q Spacing	25.0	25.0		25.0	25.0				25.0		25.0
Q Storage	0	0		0	0				0		0
Q S Ratio											
70th Percentile Output:											
fB%	1.2	1.2		1.2	1.1				1.2		1.1
BOQ	11.0	1.7		4.7	36.4				8.2		47.8
QSRatio											
85th Percentile Output:											
fB%	1.5	1.6		1.6	1.4				1.5		1.4
BOQ	14.2	2.3		6.2	44.6				10.6		57.9
QSRatio											
90th Percentile Output:											
fB%	1.7	1.8		1.7	1.5				1.7		1.4
BOQ	15.5	2.6		6.8	47.1				11.7		61.0
QSRatio											
95th Percentile Output:											
fB%	1.9	2.1		2.0	1.6				1.9		1.6
BOQ	17.4	3.0		7.8	50.9				13.2		65.6
QSRatio											
98th Percentile Output:											
fB%	2.2	2.6		2.4	1.8				2.3		1.7
BOQ	20.5	3.8		9.6	56.8				15.8		73.3
QSRatio											

ERROR MESSAGES

No errors to report.

HCS+: Signalized Intersections Release 5.2

Analyst: RV  
 Agency: CPH  
 Date: 5/10/2012  
 Period: 4pm-6pm  
 Project ID: CVS Stock Island  
 E/W St: College Road South

Inter.: US 1 & College Road South  
 Area Type: All other areas  
 Jurisd: Monroe County  
 Year : Future Background  
 N/S St: US 1

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	0	1	0	0	0	1	2	0	0	2	1
LGConfig	L		R				L	T			T	R
Volume	110		238				228	1471			1374	40
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
RTOR Vol			0									0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		A			NB Left	A		
Thru					Thru	A	A	
Right		A			Right			
Peds					Peds			
WB Left					SB Left			
Thru					Thru		A	
Right					Right		A	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	17.0				15.5	52.0		
Yellow	4.0				3.5	4.0		
All Red	2.0				1.0	1.0		

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS
Eastbound								
L	301	1770	0.39	0.17	37.7	D	65.4	E
R	269	1583	0.93	0.17	78.3	E		
Westbound								
Northbound								
L	274	1770	0.88	0.16	66.9	E		
T	2554	3547	0.61	0.72	7.4	A	15.4	B
Southbound								
T	1844	3547	0.78	0.52	21.7	C	21.5	C
R	823	1583	0.05	0.52	11.9	B		

Intersection Delay = 22.9 (sec/veh) Intersection LOS = C

Phone: Fax:  
E-Mail:

OPERATIONAL ANALYSIS

Analyst: RV  
Agency/Co.: CPH  
Date Performed: 5/10/2012  
Analysis Time Period: 4pm-6pm  
Intersection: US 1 & College Road South  
Area Type: All other areas  
Jurisdiction: Monroe County  
Analysis Year: Future Background  
Project ID: CVS Stock Island  
E/W St: College Road South N/S St: US 1

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	110		238				228	1471			1374	40
% Heavy Veh	2		2				2	2			2	2
PHF	0.95		0.95				0.95	0.95			0.95	0.95
PK 15 Vol	29		63				60	387			362	11
Hi Ln Vol												
% Grade		0						0			0	
Ideal Sat	1900		1900				1900	1900			1900	1900
ParkExist												
NumPark												
No. Lanes	1	0	1	0	0	0	1	2	0	0	2	1
LGConfig	L		R				L	T			T	R
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
RTOR Vol			0									0
Adj Flow	116		251				240	1548			1446	42
%InSharedLn												
Prop LTs								0.000			0.000	
Prop RTs			1.000					0.000			0.000	1.000
Peds Bikes	0			0							0	
Buses	0		0				0	0			0	0
%InProtPhase												
Duration	0.25			Area Type: All other areas								

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0		0.0				0.0	0.0			0.0	0.0
Arriv. Type	3		3				3	3			3	3
Unit Ext.	3.0		3.0				3.0	3.0			3.0	3.0
I Factor		1.000						1.000			1.000	
Lost Time	2.0		2.0				2.0	2.0			2.0	2.0
Ext of g	2.0		2.0				2.0	2.0			2.0	2.0
Ped Min g		3.2			3.2						3.2	

PHASE DATA

Phase Combination	1	2	3	4	5	6	7	8
EB Left Thru Right Peds	A				NB Left Thru Right Peds	A	A	
WB Left Thru Right Peds					SB Left Thru Right Peds		A	A
NB Right					EB Right			
SB Right					WB Right			
Green	17.0				15.5	52.0		
Yellow	4.0				3.5	4.0		
All Red	2.0				1.0	1.0		

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	110		238				228	1471			1374	40
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Adj flow	116		251				240	1548			1446	42
No. Lanes	1	0	1	0	0	0	1	2	0	0	2	1
Lane group	L		R				L	T			T	R
Adj flow	116		251				240	1548			1446	42
Prop LTs								0.000			0.000	
Prop RTs			1.000					0.000			0.000	1.000

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
So	1900		1900				1900	1900			1900	1900
Lanes	1	0	1	0	0	0	1	2	0	0	2	1
fW	1.000		1.000				1.000	1.000			1.000	1.000
fHV	0.980		0.980				0.980	0.980			0.980	0.980
fG	1.000		1.000				1.000	1.000			1.000	1.000
fP	1.000		1.000				1.000	1.000			1.000	1.000
fBB	1.000		1.000				1.000	1.000			1.000	1.000
fA	1.000		1.000				1.000	1.000			1.000	1.000
fLU	1.000		1.000				1.000	0.952			0.952	1.000
fRT			0.850					1.000			1.000	0.850
fLT	0.950						0.950	1.000			1.000	
Sec.												
fLpb	1.000						1.000	1.000			1.000	
fRpb			1.000					1.000			1.000	1.000
S	1770		1583				1770	3547			3547	1583
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot Perm Left	L	116	1770	0.07	0.17	301	0.39
Prot Perm Thru Right	R	251	1583	# 0.16	0.17	269	0.93
Westbound							
Prot Perm Left Prot Perm Thru Right							
Northbound							
Prot Perm Left	L	240	1770	# 0.14	0.16	274	0.88
Prot Perm Thru Right	T	1548	3547	0.44	0.72	2554	0.61
Southbound							
Prot Perm Left Prot Perm Thru Right	T R	1446 42	3547 1583	# 0.41 0.03	0.52 0.52	1844 823	0.78 0.05

Sum of flow ratios for critical lane groups,  $Y_c = \text{Sum (v/s)} = 0.70$   
Total lost time per cycle,  $L = 15.50 \text{ sec}$   
Critical flow rate to capacity ratio,  $X_c = (Y_c) (C) / (C-L) = 0.83$

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios		Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Res Del d2	Res Del d3	Lane Group		Approach	
	v/c	g/C							Delay	LOS	Delay	LOS
Eastbound												
L	0.39	0.17	36.9	1.000	301	0.11	0.8	0.0	37.7	D		
R	0.93	0.17	40.9	1.000	269	0.45	37.3	0.0	78.3	E	65.4	E
Westbound												
Northbound												
L	0.88	0.16	41.3	1.000	274	0.40	25.6	0.0	66.9	E		
T	0.61	0.72	7.0	1.000	2554	0.19	0.4	0.0	7.4	A	15.4	B
Southbound												
T	0.78	0.52	19.5	1.000	1844	0.33	2.3	0.0	21.7	C	21.5	C

R 0.05 0.52 11.8 1.000 823 0.11 0.0 0.0 11.9 B

Intersection delay = 22.9 (sec/veh) Intersection LOS = C

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for exclusive lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C		100.0	sec	
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				
Number of lanes in opposing approach, No				
Adjusted LT flow rate, VLT (veh/h)				
Proportion of LT in LT lane group, PLT				
Proportion of LT in opposing flow, PLTo				
Adjusted opposing flow rate, Vo (veh/h)				
Lost time for LT lane group, tL				
Computation				
LT volume per cycle, LTC=VLTC/3600				
Opposing lane util. factor, fLUo			0.952	0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)				
gf=G[exp(- a * (LTC ** b))]-tL, gf<=g				
Opposing platoon ratio, Rpo (refer Exhibit 16-11)				
Opposing Queue Ratio, qro=Max[1-Rpo(go/C), 0]				
gq, (see Exhibit C16-4,5,6,7,8)				
gu=g-gq if gq>=gf, or = g-gf if gq<gf				
n=Max(gq-gf)/2, 0)				
PTHo=1-PLTo				
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]				
EL1 (refer to Exhibit C16-3)				
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g				
gdifff=max(gq-gf, 0)				
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)				
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdifff/g]/[1+PL(EL2-1)], (fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT				
For special case of single-lane approach opposed by multilane approach, see text.				
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.				
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.				
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.				

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for shared lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C		100.0	sec	
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				

Number of lanes in opposing approach, No  
Adjusted LT flow rate, VLT (veh/h) 0.000 0.000  
Proportion of LT in LT lane group, PLT  
Proportion of LT in opposing flow, PLTo  
Adjusted opposing flow rate, Vo (veh/h)  
Lost time for LT lane group, tL  
Computation  
LT volume per cycle, LTC=VLTC/3600  
Opposing lane util. factor, fLUo 0.952 0.952  
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)  
 $gf = G[\exp(-a * (LTC ** b))] - tL$ ,  $gf <= g$   
Opposing platoon ratio, Rpo (refer Exhibit 16-11)  
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]  
gq, (see Exhibit C16-4,5,6,7,8)  
 $gu = g - gq$  if  $gq >= gf$ , or  $= g - gf$  if  $gq < gf$   
 $n = \text{Max}(gq - gf) / 2, 0$   
PTHo=1-PLTo  
 $PL* = PLT[1 + (N-1)g / (gf + gu / EL1 + 4.24)]$   
EL1 (refer to Exhibit C16-3)  
 $EL2 = \text{Max}((1 - Ptho ** n) / Plto, 1.0)$   
 $fmin = 2(1 + PL) / g$  or  $fmin = 2(1 + Pl) / g$   
 $gdiff = \text{max}(gq - gf, 0)$   
 $fm = [gf/g] + [gu/g] / [1 + PL(EL1 - 1)]$ , (min=fmin;max=1.00)  
 $flt = fm = [gf/g] + [gu/g] / [1 + PL(EL1 - 1)] + [gdiff/g] / [1 + PL(EL2 - 1)]$ , (fmin<=fm<=1.00)  
or  $flt = [fm + 0.91(N-1)] / N **$   
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.  
\* If  $Pl >= 1$  for shared left-turn lanes with  $N > 1$ , then assume de-facto left-turn lane and redo calculations.  
\*\* For permitted left-turns with multiple exclusive left-turn lanes,  $flt = fm$ .  
For special case of multilane approach opposed by single-lane approach or when  $gf > gq$ , see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				

OCCbicg  
 OCCr  
 Number of cross-street receiving lanes, Nrec  
 Number of turning lanes, Nturn  
 ApbT  
 Proportion right-turns, PRT  
 Proportion right-turns using protected phase, PRTA  
 Right turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

EBLT    WBLT    NBLT    SBLT

Cycle length, C 100.0    sec  
 Adj. LT vol from Vol Adjustment Worksheet, v  
 v/c ratio from Capacity Worksheet, X  
 Protected phase effective green interval, g (s)  
 Opposing queue effective green interval, gq  
 Unopposed green interval, gu  
 Red time  $r=(C-g-gq-gu)$   
 Arrival rate,  $qa=v/(3600(\max[X,1.0]))$   
 Protected ph. departure rate,  $Sp=s/3600$   
 Permitted ph. departure rate,  $Ss=s(gq+gu)/(gu*3600)$   
 XPerm  
 XProt  
 Case  
 Queue at beginning of green arrow, Qa  
 Queue at beginning of unsaturated green, Qu  
 Residual queue, Qr  
 Uniform Delay, d1

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

Appr/ Lane Group	Initial	Dur.	Uniform Delay		Initial	Final	Initial	Lane
	Unmet Demand Q veh	Unmet Demand t hrs.	Unadj. ds	Adj. d1 sec	Queue Param. u	Unmet Demand Q veh	Queue Delay d3 sec	Group Delay d sec
<b>Eastbound</b>								
L	0.0	0.00	41.5	36.9	0.00	0.0	0.0	37.7
	0.0						0.0	
R	0.0	0.00	41.5	40.9	0.00	0.0	0.0	78.3
<b>Westbound</b>								
	0.0						0.0	
	0.0						0.0	
	0.0						0.0	
<b>Northbound</b>								
L	0.0	0.00	42.3	41.3	0.00	0.0	0.0	66.9
T	0.0	0.00	14.0	7.0	0.00	0.0	0.0	7.4
	0.0						0.0	
<b>Southbound</b>								
	0.0						0.0	
T	0.0	0.00	24.0	19.5	0.00	0.0	0.0	21.7
R	0.0	0.00	24.0	11.8	0.00	0.0	0.0	11.9
Intersection Delay			22.9	sec/veh	Intersection LOS		C	

BACK OF QUEUE WORKSHEET

LaneGroup	Eastbound		Westbound	Northbound			Southbound		
	L	R		L	T		T	R	
Init Queue	0.0	0.0		0.0	0.0		0.0	0.0	
Flow Rate	116	251		240	813		759	42	
So	1900	1900		1900	1900		1900	1900	
No.Lanes	1	0	1	0	0	0	0	2	1
SL	1770	1583		1770	1862		1862	1583	
LnCapacity	301	269		274	1341		968	823	
Flow Ratio	0.1	0.2		0.1	0.4		0.4	0.0	
v/c Ratio	0.39	0.93		0.88	0.61		0.78	0.05	
Grn Ratio	0.17	0.17		0.16	0.72		0.52	0.52	
I Factor		1.000			1.000			1.000	
AT or PVG	3	3		3	3		3	3	
Pltn Ratio	1.00	1.00		1.00	1.00		1.00	1.00	
PF2	1.00	1.00		1.00	1.00		1.00	1.00	
Q1	2.9	6.9		6.5	11.2		17.1	0.6	
kB	0.4	0.3		0.3	0.9		0.7	0.7	
Q2	0.2	2.3		1.7	1.3		2.4	0.0	
Q Average	3.1	9.2		8.2	12.5		19.5	0.6	
Q Spacing	25.0	25.0		25.0	25.0		25.0	25.0	
Q Storage	0	0		0	0		0	0	
Q S Ratio									
70th Percentile Output:									
fB%	1.2	1.2		1.2	1.2		1.2	1.2	
BOQ	3.7	10.8		9.7	14.7		22.6	0.7	
QSRatio									
85th Percentile Output:									
fB%	1.6	1.5		1.5	1.5		1.5	1.6	
BOQ	4.8	14.0		12.6	18.8		28.4	1.0	
QSRatio									
90th Percentile Output:									
fB%	1.7	1.7		1.7	1.6		1.6	1.8	
BOQ	5.4	15.2		13.7	20.2		30.2	1.1	
QSRatio									
95th Percentile Output:									
fB%	2.0	1.9		1.9	1.8		1.7	2.1	
BOQ	6.2	17.1		15.5	22.6		33.2	1.3	
QSRatio									
98th Percentile Output:									
fB%	2.5	2.2		2.2	2.1		1.9	2.7	
BOQ	7.7	20.1		18.3	26.1		37.5	1.6	
QSRatio									

ERROR MESSAGES

No errors to report.

HCS+: Signalized Intersections Release 5.2

Analyst: RV  
 Agency: CPH  
 Date: 5/10/2012  
 Period: 4pm-6pm  
 Project ID: CVS Stock Island  
 E/W St: Cross Street

Inter.: US 1 & Cross Street  
 Area Type: All other areas  
 Jurisd: Monroe County  
 Year : Future Background  
 N/S St: US 1

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	0	0	0	2	1	1	2	0
LGConfig					LR			T	R	L	T	
Volume				192		32	1551	172		20	1218	
Lane Width					12.0		12.0	12.0		12.0	12.0	
RTOR Vol						0			0			

Duration 0.25 Area Type: All other areas  
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru	A		
Right					Right	A		
Peds					Peds			
WB Left		A			SB Left	A		
Thru					Thru	A		
Right		A			Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green		22.0				68.0		
Yellow		4.0				4.0		
All Red		1.0				1.0		

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS

Eastbound

Westbound

Northbound

Southbound

LR	385	1752	0.61	0.22	38.0	D	38.0	D
T	2412	3547	0.68	0.68	10.3	B	9.8	A
R	1076	1583	0.17	0.68	5.9	A		
L	124	183	0.17	0.68	6.4	A		
T	2412	3547	0.53	0.68	8.2	A	8.2	A

Intersection Delay = 11.2 (sec/veh) Intersection LOS = B

Phone: Fax:  
E-Mail:

OPERATIONAL ANALYSIS

Analyst: RV  
Agency/Co.: CPH  
Date Performed: 5/10/2012  
Analysis Time Period: 4pm-6pm  
Intersection: US 1& Cross Street  
Area Type: All other areas  
Jurisdiction: Monroe County  
Analysis Year: Future Background  
Project ID: CVS Stock Island  
E/W St: Cross Street N/S St: US 1

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume				192		32	1551	172		20		1218
% Heavy Veh				2		2	2	2		2		2
PHF				0.95		0.95	0.95	0.95		0.95		0.95
PK 15 Vol				51		8	408	45		5		321
Hi Ln Vol												
% Grade					0			0			0	
Ideal Sat					1900			1900	1900	1900	1900	
ParkExist												
NumPark												
No. Lanes	0	0	0	0	0	0	0	2	1	1	2	0
LGConfig					LR			T	R	L	T	
Lane Width					12.0			12.0	12.0	12.0	12.0	
RTOR Vol						0			0			
Adj Flow					236			1633	181	21	1282	
%InSharedLn												
Prop LTs					0.856			0.000		1.000	0.000	
Prop RTs					0.144			0.000	1.000		0.000	
Peds Bikes	0			0			0					
Buses					0			0	0	0	0	
%InProtPhase												
Duration	0.25			Area Type: All other areas								

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet					0.0			0.0	0.0	0.0	0.0	
Arriv. Type					3			3	3	3	3	
Unit Ext.					3.0			3.0	3.0	3.0	3.0	
I Factor					1.000			1.000			1.000	
Lost Time					2.0			2.0	2.0	2.0	2.0	
Ext of g					2.0			2.0	2.0	2.0	2.0	
Ped Min g		3.2			3.2			3.2				

PHASE DATA

Phase Combination	1	2	3	4	5	6	7	8
EB Left Thru Right Peds					NB Left Thru Right Peds	A	A	
WB Left Thru Right Peds	A				SB Left Thru Right Peds	A	A	
NB Right					EB Right			
SB Right					WB Right			
Green	22.0				68.0			
Yellow	4.0				4.0			
All Red	1.0				1.0			

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V				192		32	1551	172		20	1218	
PHF				0.95		0.95	0.95	0.95		0.95	0.95	
Adj flow				202		34	1633	181		21	1282	
No. Lanes	0	0	0	0	0	0	0	2	1	1	2	0
Lane group					LR			T	R	L	T	
Adj flow					236			1633	181	21	1282	
Prop LTs					0.856			0.000		1.000	0.000	
Prop RTs					0.144			0.000	1.000		0.000	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound				Westbound			Northbound		Southbound		
	L	T	R		LR			T	R	L	T	
LG					LR			T	R	L	T	
So					1900			1900	1900	1900	1900	
Lanes	0	0	0	0	0	0	0	2	1	1	2	0
fW					1.000			1.000	1.000	1.000	1.000	
fHV					0.980			0.980	0.980	0.980	0.980	
fG					1.000			1.000	1.000	1.000	1.000	
fP					1.000			1.000	1.000	1.000	1.000	
fBB					1.000			1.000	1.000	1.000	1.000	
fA					1.000			1.000	1.000	1.000	1.000	
fLU					1.000			0.952	1.000	1.000	0.952	
fRT					0.981			1.000	0.850		1.000	
fLT					0.959			1.000		0.098	1.000	
Sec.												
fLpb					1.000			1.000		1.000	1.000	
fRpb					1.000			1.000	1.000		1.000	
S					1752			3547	1583	183	3547	
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
	Prot						
	Perm						
	Left						
	Prot						
	Perm						
	Thru						
	Right						
Westbound							
	Prot						
	Perm						
	Left						
	Prot						
	Perm						
	Thru	LR	236	# 0.13	0.22	385	0.61
	Right						
Northbound							
	Prot						
	Perm						
	Left						
	Prot						
	Perm						
	Thru	T	1633	# 0.46	0.68	2412	0.68
	Right	R	181	0.11	0.68	1076	0.17
Southbound							
	Prot						
	Perm						
	Left	L	21	0.11	0.68	124	0.17
	Prot						
	Perm						
	Thru	T	1282	0.36	0.68	2412	0.53
	Right						

Sum of flow ratios for critical lane groups,  $Y_c = \text{Sum (v/s)} = 0.60$   
Total lost time per cycle,  $L = 10.00 \text{ sec}$   
Critical flow rate to capacity ratio,  $X_c = (Y_c)(C)/(C-L) = 0.66$

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Res Del d2	Res Del d3	Lane Group Delay LOS	Approach Delay LOS
Eastbound									
Westbound									
LR	0.61	0.22	35.2	1.000	385	0.20	2.9	0.0	38.0 D
Northbound									
T	0.68	0.68	9.5	1.000	2412	0.25	0.8	0.0	10.3 B
R	0.17	0.68	5.8	1.000	1076	0.11	0.1	0.0	5.9 A
Southbound									
L	0.17	0.68	5.8	1.000	124	0.11	0.6	0.0	6.4 A
T	0.53	0.68	8.0	1.000	2412	0.13	0.2	0.0	8.2 A

Intersection delay = 11.2 (sec/veh) Intersection LOS = B

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for exclusive lefts

Input	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				M
Cycle length, C				100.0 sec
Total actual green time for LT lane group, G (s)				68.0
Effective permitted green time for LT lane group, g(s)				68.0
Opposing effective green time, go (s)				68.0
Number of lanes in LT lane group, N				1
Number of lanes in opposing approach, No				2
Adjusted LT flow rate, VLT (veh/h)				21
Proportion of LT in LT lane group, PLT				1.000
Proportion of LT in opposing flow, PLTo				0.00
Adjusted opposing flow rate, Vo (veh/h)				1633
Lost time for LT lane group, tL				5.00
Computation				
LT volume per cycle, LTC=VLTC/3600				0.58
Opposing lane util. factor, fLUo	1.000		0.952	0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)				23.82
gf=G[exp(- a * (LTC ** b))]-tL, gf<=g				0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)				1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]				0.32
gq, (see Exhibit C16-4,5,6,7,8)				24.12
gu=g-gq if gq>=gf, or = g-gf if gq<gf				43.88
n=Max(gq-gf)/2,0)				12.06
PTHo=1-PLTo				1.00
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]				1.00
EL1 (refer to Exhibit C16-3)				6.58
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g				0.06
gdifff=max(gq-gf,0)				0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)				0.10
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdifff/g]/[1+PL(EL2-1)], (fmin<=fm<=1.00) or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT				0.098
For special case of single-lane approach opposed by multilane approach, see text.				
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.				
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.				
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.				

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for shared lefts

Input	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C				100.0 sec
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				

Number of lanes in opposing approach, No  
Adjusted LT flow rate, VLT (veh/h)  
Proportion of LT in LT lane group, PLT 0.856 0.000 0.000  
Proportion of LT in opposing flow, PLTo  
Adjusted opposing flow rate, Vo (veh/h)  
Lost time for LT lane group, tL  
Computation  
LT volume per cycle, LTC=VLTC/3600  
Opposing lane util. factor, fLUo 1.000 0.952 0.952  
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)  
 $gf = G[\exp(-a * (LTC ** b))] - tL$ ,  $gf <= g$   
Opposing platoon ratio, Rpo (refer Exhibit 16-11)  
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]  
gq, (see Exhibit C16-4,5,6,7,8)  
 $gu = g - gq$  if  $gq >= gf$ , or  $= g - gf$  if  $gq < gf$   
 $n = \text{Max}(gq - gf) / 2, 0$   
PTHo=1-PLTo  
 $PL* = PLT[1 + (N-1)g / (gf + gu / EL1 + 4.24)]$   
EL1 (refer to Exhibit C16-3)  
 $EL2 = \text{Max}((1 - Ptho ** n) / Plto, 1.0)$   
 $fmin = 2(1 + PL) / g$  or  $fmin = 2(1 + Pl) / g$   
 $gdiff = \text{max}(gq - gf, 0)$   
 $fm = [gf/g] + [gu/g] / [1 + PL(EL1 - 1)]$ , (min=fmin;max=1.00)  
 $flt = fm = [gf/g] + [gu/g] / [1 + PL(EL1 - 1)] + [gdiff/g] / [1 + PL(EL2 - 1)]$ , (fmin<=fm<=1.00)  
or  $flt = [fm + 0.91(N-1)] / N **$   
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach,  
see text.  
\* If  $Pl >= 1$  for shared left-turn lanes with  $N > 1$ , then assume de-facto  
left-turn lane and redo calculations.  
\*\* For permitted left-turns with multiple exclusive left-turn lanes,  $flt = fm$ .  
For special case of multilane approach opposed by single-lane approach  
or when  $gf > gq$ , see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				



	Eastbound			Westbound		Northbound		Southbound		
LaneGroup				LR		T	R	L	T	
Init Queue				0.0		0.0	0.0	0.0	0.0	
Flow Rate				236		857	181	21	673	
So				1900		1900	1900	1900	1900	
No.Lanes	0	0	0	0	0	0	2	1	1	2
SL				1752		1862	1583	183	1862	
LnCapacity				385		1266	1076	124	1266	
Flow Ratio				0.1		0.5	0.1	0.1	0.4	
v/c Ratio				0.61		0.68	0.17	0.17	0.53	
Grn Ratio				0.22		0.68	0.68	0.68	0.68	
I Factor				1.000		1.000			1.000	
AT or PVG				3		3	3	3	3	
Pltn Ratio				1.00		1.00	1.00	1.00	1.00	
PF2				1.00		1.00	1.00	1.00	1.00	
Q1				5.9		14.1	1.8	0.2	9.4	
kB				0.4		0.8	0.8	0.2	0.8	
Q2				0.6		1.7	0.2	0.0	0.9	
Q Average				6.5		15.8	2.0	0.3	10.3	
Q Spacing				25.0		25.0	25.0	25.0	25.0	
Q Storage				0		0	0	0	0	
Q S Ratio										
70th Percentile Output:										
fB%				1.2		1.2	1.2	1.2	1.2	
BOQ				7.8		18.5	2.4	0.3	12.1	
QSRatio										
85th Percentile Output:										
fB%				1.5		1.5	1.6	1.6	1.5	
BOQ				10.1		23.4	3.1	0.4	15.6	
QSRatio										
90th Percentile Output:										
fB%				1.7		1.6	1.8	1.8	1.6	
BOQ				11.1		25.0	3.5	0.5	16.9	
QSRatio										
95th Percentile Output:										
fB%				1.9		1.7	2.0	2.1	1.8	
BOQ				12.5		27.7	4.0	0.5	19.0	
QSRatio										
98th Percentile Output:										
fB%				2.3		2.0	2.6	2.7	2.2	
BOQ				15.1		31.6	5.0	0.7	22.2	
QSRatio										

ERROR MESSAGES

No errors to report.

HCS+: Signalized Intersections Release 5.2

Analyst: RV  
 Agency: CPH  
 Date: 5/10/2012  
 Period: 4pm-6pm  
 Project ID: Future Total  
 E/W St: McDonald Avenue

Inter.: US 1 & McDonald Avenue  
 Area Type: All other areas  
 Jurisd: Monroe County  
 Year : Future Background  
 N/S St: US 1

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	0	0	2	1	0	2	0
LGConfig				L				T	R		T	
Volume				390				1253	335		885	
Lane Width				12.0				12.0	12.0		12.0	
RTOR Vol									0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left								
Thru						A		
Right						A		
Peds								
WB Left		A						
Thru						A		
Right								
Peds								
NB Right								
SB Right								
Green		22.0				68.0		
Yellow		4.0				4.0		
All Red		1.0				1.0		

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS

Eastbound

Westbound

Northbound

Southbound

L	389	1770	1.06	0.22	100.3	F	100.3	F
T	2412	3547	0.55	0.68	8.4	A	8.1	A
R	1076	1583	0.33	0.68	6.8	A		
T	2412	3547	0.39	0.68	7.0	A	7.0	A

Intersection Delay = 20.3 (sec/veh) Intersection LOS = C



PHASE DATA

Phase Combination	1	2	3	4	5	6	7	8
EB Left Thru Right Peds					NB Left Thru Right Peds	A	A	
WB Left Thru Right Peds		A			SB Left Thru Right Peds	A		
NB Right					EB Right			
SB Right					WB Right			
Green		22.0				68.0		
Yellow		4.0				4.0		
All Red		1.0				1.0		

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V				390			1253	335		885		
PHF				0.95			0.95	0.95		0.95		
Adj flow				411			1319	353		932		
No. Lanes	0	0	0	1	0	0	0	2	1	0	2	0
Lane group				L			T	R		T		
Adj flow				411			1319	353		932		
Prop LTs							0.000			0.000		
Prop RTs							0.000	1.000		0.000		

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	T	R		T		
LG				L			T	R		T		
So				1900			1900	1900		1900		
Lanes	0	0	0	1	0	0	0	2	1	0	2	0
fW				1.000			1.000	1.000		1.000		
fHV				0.980			0.980	0.980		0.980		
fG				1.000			1.000	1.000		1.000		
fP				1.000			1.000	1.000		1.000		
fBB				1.000			1.000	1.000		1.000		
fA				1.000			1.000	1.000		1.000		
fLU				1.000			0.952	1.000		0.952		
fRT							1.000	0.850		1.000		
fLT				0.950			1.000			1.000		
Sec.												
fLpb				1.000			1.000			1.000		
fRpb							1.000	1.000		1.000		
S				1770			3547	1583		3547		
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru							
Right							
Westbound							
Prot							
Perm							
Left	L	411	1770	# 0.23	0.22	389	1.06
Prot							
Perm							
Thru							
Right							
Northbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	T	1319	3547	# 0.37	0.68	2412	0.55
Right	R	353	1583	0.22	0.68	1076	0.33
Southbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	T	932	3547	0.26	0.68	2412	0.39
Right							

Sum of flow ratios for critical lane groups,  $Y_c = \text{Sum (v/s)} = 0.60$   
Total lost time per cycle,  $L = 10.00 \text{ sec}$   
Critical flow rate to capacity ratio,  $X_c = (Y_c)(C)/(C-L) = 0.67$

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Res Del d2	Res Del d3	Lane Group Delay LOS	Approach Delay LOS
Eastbound									
Westbound									
L	1.06 0.22	39.0	1.000	389	0.50	61.3	0.0	100.3 F	100.3 F
Northbound									
T	0.55 0.68	8.2	1.000	2412	0.15	0.3	0.0	8.4 A	8.1 A
R	0.33 0.68	6.6	1.000	1076	0.11	0.2	0.0	6.8 A	
Southbound									
T	0.39 0.68	6.9	1.000	2412	0.11	0.1	0.0	7.0 A	7.0 A

Intersection delay = 20.3 (sec/veh) Intersection LOS = C

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for exclusive lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C		100.0	sec	
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				
Number of lanes in opposing approach, No				
Adjusted LT flow rate, VLT (veh/h)				
Proportion of LT in LT lane group, PLT				
Proportion of LT in opposing flow, PLTo				
Adjusted opposing flow rate, Vo (veh/h)				
Lost time for LT lane group, tL				
Computation				
LT volume per cycle, LTC=VLTC/3600				
Opposing lane util. factor, fLUo			0.952	0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)				
gf=G[exp(- a * (LTC ** b))]-tL, gf<=g				
Opposing platoon ratio, Rpo (refer Exhibit 16-11)				
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]				
gq, (see Exhibit C16-4,5,6,7,8)				
gu=g-gq if gq>=gf, or = g-gf if gq<gf				
n=Max(gq-gf)/2,0)				
PTHo=1-PLTo				
PL*=[PLT[1+(N-1)g/(gf+gu/EL1+4.24)]]				
EL1 (refer to Exhibit C16-3)				
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g				
gdifff=max(gq-gf,0)				
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)				
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdifff/g]/[1+PL(EL2-1)], (fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT				
For special case of single-lane approach opposed by multilane approach, see text.				
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.				
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.				
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.				

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for shared lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C		100.0	sec	
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				

Number of lanes in opposing approach, No  
Adjusted LT flow rate, VLT (veh/h)  
Proportion of LT in LT lane group, PLT 0.000 0.000  
Proportion of LT in opposing flow, PLTo  
Adjusted opposing flow rate, Vo (veh/h)  
Lost time for LT lane group, tL  
Computation  
LT volume per cycle, LTC=VLTC/3600  
Opposing lane util. factor, fLUo 0.952 0.952  
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)  
 $gf = G[\exp(-a * (LTC ** b))] - tL$ ,  $gf <= g$   
Opposing platoon ratio, Rpo (refer Exhibit 16-11)  
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]  
gq, (see Exhibit C16-4,5,6,7,8)  
 $gu = g - gq$  if  $gq >= gf$ , or  $= g - gf$  if  $gq < gf$   
 $n = \text{Max}(gq - gf) / 2, 0$   
 $PTHo = 1 - PLTo$   
 $PL* = PLT[1 + (N - 1)g / (gf + gu / EL1 + 4.24)]$   
EL1 (refer to Exhibit C16-3)  
 $EL2 = \text{Max}((1 - Ptho ** n) / Plto, 1.0)$   
 $fmin = 2(1 + PL) / g$  or  $fmin = 2(1 + Pl) / g$   
 $gdiff = \text{max}(gq - gf, 0)$   
 $fm = [gf / g] + [gu / g] / [1 + PL(EL1 - 1)]$ , (min=fmin;max=1.00)  
 $flt = fm = [gf / g] + [gu / g] / [1 + PL(EL1 - 1)] + [gdiff / g] / [1 + PL(EL2 - 1)]$ , (fmin<=fm<=1.00)  
or  $flt = [fm + 0.91(N - 1)] / N **$   
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.  
\* If  $Pl >= 1$  for shared left-turn lanes with  $N > 1$ , then assume de-facto left-turn lane and redo calculations.  
\*\* For permitted left-turns with multiple exclusive left-turn lanes,  $flt = fm$ .  
For special case of multilane approach opposed by single-lane approach or when  $gf > gq$ , see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				

OCCbicg  
 OCCr  
 Number of cross-street receiving lanes, Nrec  
 Number of turning lanes, Nturn  
 ApbT  
 Proportion right-turns, PRT  
 Proportion right-turns using protected phase, PRTA  
 Right turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

EBLT    WBLT    NBLT    SBLT

Cycle length, C 100.0    sec  
 Adj. LT vol from Vol Adjustment Worksheet, v  
 v/c ratio from Capacity Worksheet, X  
 Protected phase effective green interval, g (s)  
 Opposing queue effective green interval, gq  
 Unopposed green interval, gu  
 Red time  $r=(C-g-gq-gu)$   
 Arrival rate,  $qa=v/(3600(\max[X,1.0]))$   
 Protected ph. departure rate,  $Sp=s/3600$   
 Permitted ph. departure rate,  $Ss=s(gq+gu)/(gu*3600)$   
 XPerm  
 XProt  
 Case  
 Queue at beginning of green arrow, Qa  
 Queue at beginning of unsaturated green, Qu  
 Residual queue, Qr  
 Uniform Delay, d1

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

Appr/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay		Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
			Unadj. ds	Adj. d1 sec				
<b>Eastbound</b>								
	0.0						0.0	
	0.0						0.0	
	0.0						0.0	
<b>Westbound</b>								
L	0.0	0.00	39.0	39.0	0.00	5.5	0.0	100.3
	0.0						0.0	
	0.0						0.0	
<b>Northbound</b>								
	0.0						0.0	
T	0.0	0.00	16.0	8.2	0.00	0.0	0.0	8.4
R	0.0	0.00	16.0	6.6	0.00	0.0	0.0	6.8
<b>Southbound</b>								
	0.0						0.0	
T	0.0	0.00	16.0	6.9	0.00	0.0	0.0	7.0
	0.0						0.0	

Intersection Delay 20.3    sec/veh    Intersection LOS C

	Eastbound	Westbound	Northbound	Southbound
LaneGroup		L	T R	T
Init Queue		0.0	0.0 0.0	0.0
Flow Rate		411	692 353	489
So		1900	1900 1900	1900
No.Lanes	0 0 0	1 0 0	0 2 1	0 2 0
SL		1770	1862 1583	1862
LnCapacity		389	1266 1076	1266
Flow Ratio		0.2	0.4 0.2	0.3
v/c Ratio		1.06	0.55 0.33	0.39
Grn Ratio		0.22	0.68 0.68	0.68
I Factor		1.000	1.000	1.000
AT or PVG		3	3 3	3
Pltn Ratio		1.00	1.00 1.00	1.00
PF2		1.00	1.00 1.00	1.00
Q1		11.4	9.8 4.0	5.9
kB		0.4	0.8 0.8	0.8
Q2		6.2	1.0 0.4	0.5
Q Average		17.6	10.8 4.4	6.4
Q Spacing		25.0	25.0 25.0	25.0
Q Storage		0	0 0	0
Q S Ratio				
70th Percentile Output:				
fb%		1.2	1.2 1.2	1.2
BOQ		20.5	12.7 5.2	7.6
QSRatio				
85th Percentile Output:				
fb%		1.5	1.5 1.6	1.5
BOQ		25.8	16.3 6.9	9.9
QSRatio				
90th Percentile Output:				
fb%		1.6	1.6 1.7	1.7
BOQ		27.6	17.6 7.6	10.9
QSRatio				
95th Percentile Output:				
fb%		1.7	1.8 2.0	1.9
BOQ		30.4	19.8 8.7	12.3
QSRatio				
98th Percentile Output:				
fb%		2.0	2.1 2.4	2.3
BOQ		34.5	23.1 10.6	14.8
QSRatio				

ERROR MESSAGES

No errors to report.

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	RV	Intersection	US 1 & 3rd Street
Agency/Co.	CPH	Jurisdiction	Monroe County
Date Performed	5/10/2012	Analysis Year	Future Background
Analysis Time Period	4pm-6pm		

Project Description <i>CVS Stock Island</i>	
East/West Street: <i>3rd Street</i>	North/South Street: <i>US 1</i>
Intersection Orientation: <i>North-South</i>	Study Period (hrs): <i>0.25</i>

### Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1251	50	102	883	
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	0	1316	52	107	929	0
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type	<i>Raised curb</i>					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				8		147
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	0	0	0	8	0	154
Percent Heavy Vehicles	2	0	2	2	0	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

### Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L	L		R			
v (veh/h)		107	8		154			
C (m) (veh/h)		498	141		462			
v/c		0.21	0.06		0.33			
95% queue length		0.81	0.18		1.45			
Control Delay (s/veh)		14.2	32.1		16.6			
LOS		B	D		C			
Approach Delay (s/veh)	--	--	17.4					
Approach LOS	--	--	C					

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	RV	Intersection	US 1 & Collge Road North
Agency/Co.	CPH	Jurisdiction	Monroe County
Date Performed	5/10/2012	Analysis Year	Future Background
Analysis Time Period	4pm-6pm		

Project Description <i>CVS Stock Island</i>	
East/West Street: <i>College Road North</i>	North/South Street: <i>US 1</i>
Intersection Orientation: <i>North-South</i>	Study Period (hrs): <i>0.25</i>

### Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
	1	2	3	4	5	6
Movement	L	T	R	L	T	R
Volume (veh/h)	133	1442			877	56
Peak-Hour Factor, PHF	0.95	0.95	1.00	1.00	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	140	1517	0	0	923	58
Percent Heavy Vehicles	2	--	--	0	--	--
Median Type	<i>Raised curb</i>					
RT Channelized			0			0
Lanes	1	2	0	0	2	1
Configuration	L	T			T	R
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
	7	8	9	10	11	12
Movement	L	T	R	L	T	R
Volume (veh/h)	67		66	7	0	5
Peak-Hour Factor, PHF	0.95	1.00	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	70	0	69	7	0	5
Percent Heavy Vehicles	2	0	2	2	2	2
Percent Grade (%)	0			0		
Flared Approach	<i>N</i>			<i>N</i>		
Storage	0			0		
RT Channelized			0			0
Lanes	1	0	1	0	1	0
Configuration	L		R		LTR	

### Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
	1	4	7	8	9	10	11	12
Movement	L			LTR		L		R
v (veh/h)	140			12		70		69
C (m) (veh/h)	699			85		120		598
v/c	0.20			0.14		0.58		0.12
95% queue length	0.74			0.47		2.88		0.39
Control Delay (s/veh)	11.4			54.2		70.3		11.8
LOS	B			F		F		B
Approach Delay (s/veh)	--	--	54.2			41.3		
Approach LOS	--	--	F			E		

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	RV	Intersection	US 1 & Key Haven
Agency/Co.	CPH	Jurisdiction	Monroe County
Date Performed	5/10/2012	Analysis Year	Future Background
Analysis Time Period	4pm-6pm		

Project Description: CVS Stock Island	
East/West Street: Key Haven Blvd.	North/South Street: US 1
Intersection Orientation: North-South	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments						
Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	224	1391			817	32
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	235	1464	0	0	860	33
Percent Heavy Vehicles	2	-	-	0	-	-
Median Type	Raised curb					
RT Channelized			0			0
Lanes	1	2	0	0	2	1
Configuration	L	T			T	R
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	22		135			
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	23	0	142	0	0	0
Percent Heavy Vehicles	2	0	2	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	1	0	0	0
Configuration	L		R			

Delay, Queue Length, and Level of Service								
Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L					L		R
v (veh/h)	235					23		142
C (m) (veh/h)	755					119		623
v/c	0.31					0.19		0.23
95% queue length	1.33					0.68		0.87
Control Delay (s/veh)	11.9					42.4		12.5
LOS	B					E		B
Approach Delay (s/veh)	--	--				16.6		
Approach LOS	--	--				C		

**FUTURE TOTAL**

HCS+: Signalized Intersections Release 5.2

Analyst: RV  
 Agency: CPH  
 Date: 5/10/2012  
 Period: 4pm-6pm  
 Project ID: CVS Stock Island  
 E/W St: Roosevelt Boulevard

Inter.: US 1 & Roosevelt Blvd  
 Area Type: All other areas  
 Jurisd: Monroe County  
 Year : Future Total  
 N/S St: US 1

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	1	0	0	1	1	0	0	0	2	0	1
LGConfig	L	T			T	R				L		R
Volume	844	130			132	699				471		1154
Lane Width	12.0	12.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		A			NB Left			
Thru		A	A		Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru			A		Thru			
Right			A		Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right		A			WB Right	A		
Green		48.5	14.0			23.0		
Yellow		3.5	4.0			4.0		
All Red		1.0	1.0			1.0		

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS
Eastbound								
L	1667	3437	0.53	0.49	18.2	B		
T	1248	1863	0.11	0.67	5.9	A	16.6	B
Westbound								
T	261	1863	0.53	0.14	42.1	D	88.2	F
R	665	1583	1.11	0.42	96.9	F		
Northbound								
Southbound								
L	791	3437	0.63	0.23	36.2	D		
R	1211	1583	1.00	0.76	38.4	D	37.8	D
Intersection Delay = 44.0 (sec/veh) Intersection LOS = D								

Phone: Fax:  
E-Mail:

OPERATIONAL ANALYSIS

Analyst: RV  
Agency/Co.: CPH  
Date Performed: 5/10/2012  
Analysis Time Period: 4pm-6pm  
Intersection: US 1 & Roosevelt Blvd  
Area Type: All other areas  
Jurisdiction: Monroe County  
Analysis Year: Future Total  
Project ID: CVS Stock Island  
E/W St: Roosevelt Boulevard N/S St: US 1

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
Volume	844	130			132	699				471		1154	
% Heavy Veh	2	2			2	2				2		2	
PHF	0.95	0.95			0.95	0.95				0.95		0.95	
PK 15 Vol	222	34			35	184				124		304	
Hi Ln Vol													
% Grade		0			0					0			
Ideal Sat	1900	1900			1900	1900				1900		1900	
ParkExist													
NumPark													
No. Lanes		2	1	0	0	1	1	0	0	0	2	0	1
LGConfig	L		T			T	R				L		R
Lane Width	12.0	12.0			12.0	12.0				12.0		12.0	
RTOR Vol						0						0	
Adj Flow	888	137			139	736				496		1215	
%InSharedLn													
Prop LTs			0.000			0.000							
Prop RTs		0.000			0.000	1.000						1.000	
Peds Bikes					0			0		0		0	
Buses	0	0			0	0				0		0	
%InProtPhase													
Duration	0.25												

Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0			0.0	0.0				0.0		0.0
Arriv. Type	3	3			3	3				3		3
Unit Ext.	3.0	3.0			3.0	3.0				3.0		3.0
I Factor		1.000			1.000						1.000	
Lost Time	2.0	2.0			2.0	2.0				2.0		2.0
Ext of g	2.0	2.0			2.0	2.0				2.0		2.0
Ped Min g					3.2			3.2			3.2	

PHASE DATA

Phase Combination	1	2	3	4	5	6	7	8
EB Left Thru Right Peds	A	A						
WB Left Thru Right Peds							A	A
NB Right								
SB Right		A						
Green	48.5	14.0			23.0			
Yellow	3.5	4.0			4.0			
All Red	1.0	1.0			1.0			

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	844	130			132	699				471		1154
PHF	0.95	0.95			0.95	0.95				0.95		0.95
Adj flow	888	137			139	736				496		1215
No. Lanes	2	1	0	0	1	1	0	0	0	2	0	1
Lane group	L	T			T	R				L		R
Adj flow	888	137			139	736				496		1215
Prop LTs		0.000			0.000							
Prop RTs		0.000			0.000	1.000						1.000

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

LG	Eastbound				Westbound			Northbound			Southbound	
	L	T			T	R				L	R	
So	1900	1900			1900	1900				1900	1900	
Lanes	2	1	0	0	1	1	0	0	0	2	0	1
fW	1.000	1.000			1.000	1.000				1.000	1.000	
fHV	0.980	0.980			0.980	0.980				0.980	0.980	
fG	1.000	1.000			1.000	1.000				1.000	1.000	
fP	1.000	1.000			1.000	1.000				1.000	1.000	
fBB	1.000	1.000			1.000	1.000				1.000	1.000	
fA	1.000	1.000			1.000	1.000				1.000	1.000	
fLU	0.971	1.000			1.000	1.000				0.971	1.000	
fRT		1.000			1.000	0.850					0.850	
fLT	0.950	1.000			1.000					0.950		
Sec.												
fLpb	1.000	1.000			1.000					1.000		
fRpb		1.000			1.000	1.000					1.000	
S	3437	1863			1863	1583				3437	1583	
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Capacity (c)	Group-- v/c Ratio
Eastbound							
Prot Perm Left	L	888	3437	0.26	0.49	1667	0.53
Prot Perm Thru Right	T	137	1863	0.07	0.67	1248	0.11
Westbound							
Prot Perm Left Prot Perm Thru Right	T R	139 736	1863 1583	# 0.07 0.46	0.14 0.42	261 665	0.53 1.11
Northbound							
Prot Perm Left Prot Perm Thru Right							
Southbound							
Prot Perm Left Prot Perm Thru Right	L R	496 1215	3437 1583	0.14 # 0.77	0.23 0.76	791 1211	0.63 1.00

Sum of flow ratios for critical lane groups,  $Y_c = \text{Sum (v/s)} = 0.84$   
Total lost time per cycle,  $L = 9.50 \text{ sec}$   
Critical flow rate to capacity ratio,  $X_c = (Y_c)(C)/(C-L) = 0.93$

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios		Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Res Del d2	Res Del d3	Lane Group		Approach	
	v/c	g/C							Delay	LOS	Delay	LOS
Eastbound												
L	0.53	0.49	17.9	1.000	1667	0.14	0.3	0.0	18.2	B		
T	0.11	0.67	5.9	1.000	1248	0.11	0.0	0.0	5.9	A	16.6	B
Westbound												
T	0.53	0.14	40.0	1.000	261	0.14	2.1	0.0	42.1	D	88.2	F
R	1.11	0.42	29.0	1.000	665	0.50	67.9	0.0	96.9	F		
Northbound												
Southbound												
L	0.63	0.23	34.6	1.000	791	0.21	1.6	0.0	36.2	D		
											37.8	D

R 1.00 0.76 11.8 1.000 1211 0.50 26.7 0.0 38.4 D

Intersection delay = 44.0 (sec/veh) Intersection LOS = D

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for exclusive lefts

Input EB WB NB SB

Opposed by Single(S) or Multiple(M) lane approach  
Cycle length, C 100.0 sec  
Total actual green time for LT lane group, G (s)  
Effective permitted green time for LT lane group, g(s)  
Opposing effective green time, go (s)  
Number of lanes in LT lane group, N  
Number of lanes in opposing approach, No  
Adjusted LT flow rate, VLT (veh/h)  
Proportion of LT in LT lane group, PLT  
Proportion of LT in opposing flow, PLTo  
Adjusted opposing flow rate, Vo (veh/h)  
Lost time for LT lane group, tL  
Computation  
LT volume per cycle, LTC=VLTC/3600  
Opposing lane util. factor, fLUo 1.000 1.000  
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)  
gf=G[exp(- a \* (LTC \*\* b))]-tL, gf<=g  
Opposing platoon ratio, Rpo (refer Exhibit 16-11)  
Opposing Queue Ratio, gro=Max[1-Rpo(go/C),0]  
gq, (see Exhibit C16-4,5,6,7,8)  
gu=g-gq if gq>=gf, or = g-gf if gq<gf  
n=Max(gq-gf)/2,0  
PTHo=1-PLTo  
PL\*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]  
EL1 (refer to Exhibit C16-3)  
EL2=Max((1-Ptho\*\*n)/Plto, 1.0)  
fmin=2(1+PL)/g or fmin=2(1+Pl)/g  
gdifff=max(gq-gf,0)  
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)  
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdifff/g]/[1+PL(EL2-1)], (fmin<=fm<=1.00)  
or flt=[fm+0.91(N-1)]/N\*\*  
Left-turn adjustment, fLT  
  
For special case of single-lane approach opposed by multilane approach,  
see text.  
\* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto  
left-turn lane and redo calculations.  
\*\* For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.  
For special case of multilane approach opposed by single-lane approach  
or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for shared lefts

Input EB WB NB SB

Opposed by Single(S) or Multiple(M) lane approach  
Cycle length, C 100.0 sec  
Total actual green time for LT lane group, G (s)  
Effective permitted green time for LT lane group, g(s)  
Opposing effective green time, go (s)  
Number of lanes in LT lane group, N

Number of lanes in opposing approach, No  
Adjusted LT flow rate, VLT (veh/h)  
Proportion of LT in LT lane group, PLT 0.000 0.000  
Proportion of LT in opposing flow, PLTo  
Adjusted opposing flow rate, Vo (veh/h)  
Lost time for LT lane group, tL  
Computation  
LT volume per cycle, LTC=VLTC/3600  
Opposing lane util. factor, fLUo 1.000 1.000  
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)  
 $gf = G[\exp(-a * (LTC ** b))] - tL$ ,  $gf <= g$   
Opposing platoon ratio, Rpo (refer Exhibit 16-11)  
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]  
gq, (see Exhibit C16-4,5,6,7,8)  
 $gu = g - gq$  if  $gq >= gf$ , or  $= g - gf$  if  $gq < gf$   
 $n = \text{Max}(gq - gf) / 2, 0$   
 $PTHo = 1 - PLTo$   
 $PL* = PLT[1 + (N - 1)g / (gf + gu / EL1 + 4.24)]$   
EL1 (refer to Exhibit C16-3)  
 $EL2 = \text{Max}((1 - Ptho ** n) / Plto, 1.0)$   
 $fmin = 2(1 + PL) / g$  or  $fmin = 2(1 + Pl) / g$   
 $gdiff = \text{max}(gq - gf, 0)$   
 $fm = [gf / g] + [gu / g] / [1 + PL(EL1 - 1)]$ , (min=fmin;max=1.00)  
 $flt = fm = [gf / g] + [gu / g] / [1 + PL(EL1 - 1)] + [gdiff / g] / [1 + PL(EL2 - 1)]$ , (fmin<=fm<=1.00)  
or  $flt = [fm + 0.91(N - 1)] / N **$   
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.  
\* If  $Pl >= 1$  for shared left-turn lanes with  $N > 1$ , then assume de-facto left-turn lane and redo calculations.  
\*\* For permitted left-turns with multiple exclusive left-turn lanes,  $flt = fm$ .  
For special case of multilane approach opposed by single-lane approach or when  $gf > gq$ , see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
--	----	----	----	----

Effective pedestrian green time, gp (s)  
Conflicting pedestrian volume, Vped (p/h)  
Pedestrian flow rate, Vpedg (p/h)  
OCCpedg  
Opposing queue clearing green, gq (s)  
Eff. ped. green consumed by opp. veh. queue, gq/gp  
OCCpedu  
Opposing flow rate, Vo (veh/h)  
OCCr  
Number of cross-street receiving lanes, Nrec  
Number of turning lanes, Nturn  
ApbT  
Proportion of left turns, PLT  
Proportion of left turns using protected phase, PLTA  
Left-turn adjustment, fLpb

Permitted Right Turns

Effective pedestrian green time, gp (s)  
Conflicting pedestrian volume, Vped (p/h)  
Conflicting bicycle volume, Vbic (bicycles/h)  
Vpedg  
OCCpedg  
Effective green, g (s)  
Vbicg



LaneGroup	Eastbound			Westbound		Northbound			Southbound		
	L	T		T	R				L	R	
Init Queue	0.0	0.0		0.0	0.0				0.0	0.0	
Flow Rate	457	137		139	736				255	1215	
So	1900	1900		1900	1900				1900	1900	
No.Lanes	2	1	0	1	1	0	0	0	2	0	1
SL	1770	1863		1863	1583				1770		1583
LnCapacity	858	1248		261	665				407		1211
Flow Ratio	0.3	0.1		0.1	0.5				0.1		0.8
v/c Ratio	0.53	0.11		0.53	1.11				0.63		1.00
Grn Ratio	0.49	0.67		0.14	0.42				0.23		0.76
I Factor		1.000		1.000						1.000	
AT or PVG	3	3		3	3				3		3
Pltn Ratio	1.00	1.00		1.00	1.00				1.00		1.00
PF2	1.00	1.00		1.00	1.00				1.00		1.00
Q1	8.8	1.4		3.6	20.4				6.4		33.8
kB	0.7	0.8		0.3	0.6				0.4		0.8
Q2	0.8	0.1		0.4	13.0				0.7		11.4
Q Average	9.6	1.5		4.0	33.4				7.1		45.2
Q Spacing	25.0	25.0		25.0	25.0				25.0		25.0
Q Storage	0	0		0	0				0		0
Q S Ratio											
70th Percentile Output:											
fB%	1.2	1.2		1.2	1.1				1.2		1.1
BOQ	11.3	1.7		4.7	38.2				8.4		51.2
QSRatio											
85th Percentile Output:											
fB%	1.5	1.6		1.6	1.4				1.5		1.4
BOQ	14.5	2.3		6.2	46.7				10.9		61.8
QSRatio											
90th Percentile Output:											
fB%	1.6	1.8		1.7	1.5				1.7		1.4
BOQ	15.8	2.6		6.8	49.3				11.9		65.2
QSRatio											
95th Percentile Output:											
fB%	1.9	2.1		2.0	1.6				1.9		1.5
BOQ	17.7	3.0		7.8	53.2				13.5		70.0
QSRatio											
98th Percentile Output:											
fB%	2.2	2.6		2.4	1.8				2.3		1.7
BOQ	20.8	3.8		9.6	59.3				16.1		78.2
QSRatio											

ERROR MESSAGES

No errors to report.

HCS+: Signalized Intersections Release 5.2

Analyst: RV  
 Agency: CPH  
 Date: 5/10/2012  
 Period: 4pm-6pm  
 Project ID: CVS Stock Island  
 E/W St: College Road South

Inter.: US 1 & College Road South  
 Area Type: All other areas  
 Jurisd: Monroe County  
 Year : Future Total  
 N/S St: US 1

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	0	1	0	0	0	1	2	0	0	2	1
LGConfig	L		R				L	T			T	R
Volume	111		238				228	1497			1400	41
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
RTOR Vol			0									0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		A			NB Left	A		
Thru					Thru	A	A	
Right		A			Right			
Peds					Peds			
WB Left					SB Left			
Thru					Thru		A	
Right					Right		A	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	17.0				15.5	52.0		
Yellow	4.0				3.5	4.0		
All Red	2.0				1.0	1.0		

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS
Eastbound								
L	301	1770	0.39	0.17	37.7	D	65.4	E
R	269	1583	0.93	0.17	78.3	E		
Westbound								
Northbound								
L	274	1770	0.88	0.16	66.9	E		
T	2554	3547	0.62	0.72	7.5	A	15.4	B
Southbound								
T	1844	3547	0.80	0.52	22.3	C	22.0	C
R	823	1583	0.05	0.52	11.9	B		

Intersection Delay = 23.1 (sec/veh) Intersection LOS = C

Phone: Fax:  
E-Mail:

OPERATIONAL ANALYSIS

Analyst: RV  
Agency/Co.: CPH  
Date Performed: 5/10/2012  
Analysis Time Period: 4pm-6pm  
Intersection: US 1 & College Road South  
Area Type: All other areas  
Jurisdiction: Monroe County  
Analysis Year: Future Total  
Project ID: CVS Stock Island  
E/W St: College Road South N/S St: US 1

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	111		238				228	1497			1400	41
% Heavy Veh	2		2				2	2			2	2
PHF	0.95		0.95				0.95	0.95			0.95	0.95
PK 15 Vol	29		63				60	394			368	11
Hi Ln Vol												
% Grade		0						0			0	
Ideal Sat	1900		1900				1900	1900			1900	1900
ParkExist												
NumPark												
No. Lanes	1	0	1	0	0	0	1	2	0	0	2	1
LGConfig	L		R				L	T			T	R
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
RTOR Vol			0									0
Adj Flow	117		251				240	1576			1474	43
%InSharedLn												
Prop LTs								0.000			0.000	
Prop RTs			1.000					0.000			0.000	1.000
Peds Bikes	0			0							0	
Buses	0		0				0	0			0	0
%InProtPhase												
Duration	0.25											
Area Type:	All other areas											

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0		0.0				0.0	0.0			0.0	0.0
Arriv. Type	3		3				3	3			3	3
Unit Ext.	3.0		3.0				3.0	3.0			3.0	3.0
I Factor		1.000						1.000			1.000	
Lost Time	2.0		2.0				2.0	2.0			2.0	2.0
Ext of g	2.0		2.0				2.0	2.0			2.0	2.0
Ped Min g		3.2			3.2						3.2	

PHASE DATA

Phase Combination	1	2	3	4	5	6	7	8
EB Left Thru Right Peds	A				NB Left Thru Right Peds	A	A	
WB Left Thru Right Peds					SB Left Thru Right Peds		A	A
NB Right					EB Right			
SB Right					WB Right			
Green	17.0				15.5	52.0		
Yellow	4.0				3.5	4.0		
All Red	2.0				1.0	1.0		

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	111		238				228	1497			1400	41
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Adj flow	117		251				240	1576			1474	43
No. Lanes	1	0	1	0	0	0	1	2	0	0	2	1
Lane group	L		R				L	T			T	R
Adj flow	117		251				240	1576			1474	43
Prop LTs								0.000			0.000	
Prop RTs			1.000					0.000			0.000	1.000

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

LG	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
So	1900		1900				1900	1900			1900	1900
Lanes	1	0	1	0	0	0	1	2	0	0	2	1
fW	1.000		1.000				1.000	1.000			1.000	1.000
fHV	0.980		0.980				0.980	0.980			0.980	0.980
fG	1.000		1.000				1.000	1.000			1.000	1.000
fP	1.000		1.000				1.000	1.000			1.000	1.000
fBB	1.000		1.000				1.000	1.000			1.000	1.000
fA	1.000		1.000				1.000	1.000			1.000	1.000
fLU	1.000		1.000				1.000	0.952			0.952	1.000
fRT			0.850					1.000			1.000	0.850
fLT	0.950						0.950	1.000			1.000	
Sec.												
fLpb	1.000						1.000	1.000			1.000	
fRpb			1.000					1.000			1.000	1.000
S	1770		1583				1770	3547			3547	1583
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot Perm Left	L	117	1770	0.07	0.17	301	0.39
Prot Perm Thru Right	R	251	1583	# 0.16	0.17	269	0.93
Westbound							
Prot Perm Left Prot Perm Thru Right							
Northbound							
Prot Perm Left	L	240	1770	# 0.14	0.16	274	0.88
Prot Perm Thru Right	T	1576	3547	0.44	0.72	2554	0.62
Southbound							
Prot Perm Left Prot Perm Thru Right	T R	1474 43	3547 1583	# 0.42 0.03	0.52 0.52	1844 823	0.80 0.05

Sum of flow ratios for critical lane groups,  $Y_c = \text{Sum (v/s)} = 0.71$   
Total lost time per cycle,  $L = 15.50 \text{ sec}$   
Critical flow rate to capacity ratio,  $X_c = (Y_c)(C)/(C-L) = 0.84$

Control Delay and LOS Determination												
Appr/ Lane Grp	Ratios		Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Del d2	Res Del d3	Lane Group		Approach	
	v/c	g/C							Delay	LOS	Delay	LOS
Eastbound												
L	0.39	0.17	36.9	1.000	301	0.11	0.8	0.0	37.7	D		
R	0.93	0.17	40.9	1.000	269	0.45	37.3	0.0	78.3	E	65.4	E
Westbound												
Northbound												
L	0.88	0.16	41.3	1.000	274	0.40	25.6	0.0	66.9	E		
T	0.62	0.72	7.1	1.000	2554	0.20	0.5	0.0	7.5	A	15.4	B
Southbound												
T	0.80	0.52	19.7	1.000	1844	0.34	2.6	0.0	22.3	C	22.0	C

R 0.05 0.52 11.8 1.000 823 0.11 0.0 0.0 11.9 B

Intersection delay = 23.1 (sec/veh) Intersection LOS = C

SUPPLEMENTAL PERMITTED LT WORKSHEET

for exclusive lefts

Input

EB WB NB SB

Opposed by Single(S) or Multiple(M) lane approach

Cycle length, C 100.0 sec

Total actual green time for LT lane group, G (s)

Effective permitted green time for LT lane group, g(s)

Opposing effective green time, go (s)

Number of lanes in LT lane group, N

Number of lanes in opposing approach, No

Adjusted LT flow rate, VLT (veh/h)

Proportion of LT in LT lane group, PLT

Proportion of LT in opposing flow, PLTo

Adjusted opposing flow rate, Vo (veh/h)

Lost time for LT lane group, tL

Computation

LT volume per cycle, LTC=VLTC/3600

Opposing lane util. factor, fLUo

0.952 0.952

Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)

$gf=G[\exp(-a * (LTC ** b))] - tL$ ,  $gf \leq g$

Opposing platoon ratio, Rpo (refer Exhibit 16-11)

Opposing Queue Ratio, qro=Max[1-Rpo(go/C), 0]

gq, (see Exhibit C16-4,5,6,7,8)

$gu=g-gq$  if  $gq \geq gf$ , or  $= g-gf$  if  $gq < gf$

$n=Max(gq-gf)/2, 0$

PTHo=1-PLTo

$PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]$

EL1 (refer to Exhibit C16-3)

$EL2=Max((1-Ptho**n)/Plto, 1.0)$

$fmin=2(1+PL)/g$  or  $fmin=2(1+Pl)/g$

$gdiff=max(gq-gf, 0)$

$fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]$ , (min=fmin;max=1.00)

$flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)]$ , (fmin= $\leq$ fm $\leq$ 1.00)

or  $flt=[fm+0.91(N-1)]/N**$

Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.

\* If  $Pl \geq 1$  for shared left-turn lanes with  $N > 1$ , then assume de-facto left-turn lane and redo calculations.

\*\* For permitted left-turns with multiple exclusive left-turn lanes,  $flt=fm$ .

For special case of multilane approach opposed by single-lane approach or when  $gf > gq$ , see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET

for shared lefts

Input

EB WB NB SB

Opposed by Single(S) or Multiple(M) lane approach

Cycle length, C 100.0 sec

Total actual green time for LT lane group, G (s)

Effective permitted green time for LT lane group, g(s)

Opposing effective green time, go (s)

Number of lanes in LT lane group, N

Number of lanes in opposing approach, No  
Adjusted LT flow rate, VLT (veh/h)  
Proportion of LT in LT lane group, PLT 0.000 0.000  
Proportion of LT in opposing flow, PLTo  
Adjusted opposing flow rate, Vo (veh/h)  
Lost time for LT lane group, tL  
Computation  
LT volume per cycle, LTC=VLTC/3600  
Opposing lane util. factor, fLUo 0.952 0.952  
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)  
 $gf = G[\exp(-a * (LTC ** b))] - tL$ ,  $gf <= g$   
Opposing platoon ratio, Rpo (refer Exhibit 16-11)  
Opposing Queue Ratio, qro=Max[1-Rpo(go/C), 0]  
gq, (see Exhibit C16-4,5,6,7,8)  
 $gu = g - gq$  if  $gq >= gf$ , or  $= g - gf$  if  $gq < gf$   
 $n = \text{Max}(gq - gf) / 2, 0$   
 $PTHo = 1 - PLTo$   
 $PL* = PLT [1 + (N - 1)g / (gf + gu / EL1 + 4.24)]$   
EL1 (refer to Exhibit C16-3)  
 $EL2 = \text{Max}((1 - Ptho ** n) / Plto, 1.0)$   
 $fmin = 2(1 + PL) / g$  or  $fmin = 2(1 + Pl) / g$   
 $gdiff = \text{max}(gq - gf, 0)$   
 $fm = [gf / g] + [gu / g] / [1 + PL(EL1 - 1)]$ , (min=fmin;max=1.00)  
 $flt = fm = [gf / g] + [gu / g] / [1 + PL(EL1 - 1)] + [gdiff / g] / [1 + PL(EL2 - 1)]$ , (fmin<=fm<=1.00)  
or  $flt = [fm + 0.91(N - 1)] / N **$   
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach,  
see text.  
\* If  $Pl >= 1$  for shared left-turn lanes with  $N > 1$ , then assume de-facto  
left-turn lane and redo calculations.  
\*\* For permitted left-turns with multiple exclusive left-turn lanes,  $flt = fm$ .  
For special case of multilane approach opposed by single-lane approach  
or when  $gf > gq$ , see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				



LaneGroup	Eastbound		Westbound			Northbound			Southbound		
	L	R				L	T		T	R	
Init Queue	0.0	0.0				0.0	0.0		0.0	0.0	
Flow Rate	117	251				240	827		774	43	
So	1900	1900				1900	1900		1900	1900	
No.Lanes	1	0	1	0	0	0	2	0	0	2	1
SL	1770	1583				1770	1862		1862	1583	
LnCapacity	301	269				274	1341		968	823	
Flow Ratio	0.1	0.2				0.1	0.4		0.4	0.0	
v/c Ratio	0.39	0.93				0.88	0.62		0.80	0.05	
Grn Ratio	0.17	0.17				0.16	0.72		0.52	0.52	
I Factor		1.000					1.000		1.000		
AT or PVG	3	3				3	3		3	3	
Pltn Ratio	1.00	1.00				1.00	1.00		1.00	1.00	
PF2	1.00	1.00				1.00	1.00		1.00	1.00	
Q1	2.9	6.9				6.5	11.6		17.7	0.6	
kB	0.4	0.3				0.3	0.9		0.7	0.7	
Q2	0.2	2.3				1.7	1.4		2.6	0.0	
Q Average	3.1	9.2				8.2	12.9		20.3	0.6	
Q Spacing	25.0	25.0				25.0	25.0		25.0	25.0	
Q Storage	0	0				0	0		0	0	
Q S Ratio											
70th Percentile Output:											
FB%	1.2	1.2				1.2	1.2		1.2	1.2	
BOQ	3.7	10.8				9.7	15.2		23.5	0.7	
QSRatio											
85th Percentile Output:											
FB%	1.6	1.5				1.5	1.5		1.5	1.6	
BOQ	4.9	14.0				12.6	19.4		29.4	1.0	
QSRatio											
90th Percentile Output:											
FB%	1.7	1.7				1.7	1.6		1.5	1.8	
BOQ	5.4	15.2				13.7	20.8		31.3	1.1	
QSRatio											
95th Percentile Output:											
FB%	2.0	1.9				1.9	1.8		1.7	2.1	
BOQ	6.2	17.1				15.5	23.2		34.3	1.3	
QSRatio											
98th Percentile Output:											
FB%	2.5	2.2				2.2	2.1		1.9	2.7	
BOQ	7.7	20.1				18.3	26.8		38.7	1.7	
QSRatio											

ERROR MESSAGES

No errors to report.

HCS+: Signalized Intersections Release 5.2

Analyst: RV  
 Agency: CPH  
 Date: 5/10/2012  
 Period: 4pm-6pm  
 Project ID: CVS Stock Island  
 E/W St: Cross Street

Inter.: US 1 & Cross Street  
 Area Type: All other areas  
 Jurisd: Monroe County  
 Year : Future Total  
 N/S St: US 1

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	0	0	0	2	1	1	2	0
LGConfig					LR			T	R	L	T	
Volume				192		32		1578	172	20	1245	
Lane Width					12.0			12.0	12.0	12.0	12.0	
RTOR Vol						0			0			

Duration 0.25 Area Type: All other areas  
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru	A		
Right					Right	A		
Peds					Peds			
WB Left		A			SB Left	A		
Thru					Thru	A		
Right		A			Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green		22.0				68.0		
Yellow		4.0				4.0		
All Red		1.0				1.0		

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS

Eastbound

Westbound

Northbound

LR	385	1752	0.61	0.22	38.0	D	38.0	D
T	2412	3547	0.69	0.68	10.5	B	10.0+	B
R	1076	1583	0.17	0.68	5.9	A		
Southbound								
L	118	174	0.18	0.68	6.6	A		
T	2412	3547	0.54	0.68	8.4	A	8.3	A

Intersection Delay = 11.3 (sec/veh) Intersection LOS = B

Phone: Fax:  
E-Mail:

OPERATIONAL ANALYSIS

Analyst: RV  
Agency/Co.: CPH  
Date Performed: 5/10/2012  
Analysis Time Period: 4pm-6pm  
Intersection: US 1& Cross Street  
Area Type: All other areas  
Jurisdiction: Monroe County  
Analysis Year: Future Total  
Project ID: CVS Stock Island  
E/W St: Cross Street N/S St: US 1

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume				192		32	1578	172		20	1245	
% Heavy Veh				2		2	2	2		2	2	
PHF				0.95		0.95	0.95	0.95		0.95	0.95	
PK 15 Vol				51		8	415	45		5	328	
Hi Ln Vol												
% Grade					0			0			0	
Ideal Sat					1900		1900	1900		1900	1900	
ParkExist												
NumPark												
No. Lanes	0	0	0	0	0	0	0	2	1	1	2	0
LGConfig					LR			T	R	L	T	
Lane Width					12.0			12.0	12.0	12.0	12.0	
RTOR Vol						0			0			
Adj Flow					236			1661	181	21	1311	
%InSharedLn												
Prop LTs					0.856			0.000		1.000	0.000	
Prop RTs					0.144			0.000	1.000		0.000	
Peds Bikes	0			0			0					
Buses					0			0	0	0	0	
%InProtPhase												
Duration	0.25			Area Type: All other areas								

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet					0.0			0.0	0.0	0.0	0.0	
Arriv. Type					3			3	3	3	3	
Unit Ext.					3.0			3.0	3.0	3.0	3.0	
I Factor					1.000			1.000			1.000	
Lost Time					2.0			2.0	2.0	2.0	2.0	
Ext of g					2.0			2.0	2.0	2.0	2.0	
Ped Min g		3.2			3.2			3.2				

PHASE DATA

Phase Combination	1	2	3	4	5	6	7	8
EB Left Thru Right Peds					NB Left Thru Right Peds	A	A	
WB Left Thru Right Peds	A				SB Left Thru Right Peds	A	A	
NB Right					EB Right			
SB Right					WB Right			
Green	22.0				68.0			
Yellow	4.0				4.0			
All Red	1.0				1.0			

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V				192		32	1578	172		20	1245	
PHF				0.95		0.95	0.95	0.95		0.95	0.95	
Adj flow				202		34	1661	181		21	1311	
No. Lanes	0	0	0	0	0	0	0	2	1	1	2	0
Lane group					LR			T	R	L	T	
Adj flow					236			1661	181	21	1311	
Prop LTs					0.856			0.000		1.000	0.000	
Prop RTs					0.144			0.000	1.000		0.000	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound				Westbound			Northbound		Southbound	
LG					LR			T	R	L	T
So					1900			1900	1900	1900	1900
Lanes	0	0	0	0	0	0	0	2	1	1	2
fw					1.000			1.000	1.000	1.000	1.000
fHV					0.980			0.980	0.980	0.980	0.980
fG					1.000			1.000	1.000	1.000	1.000
fP					1.000			1.000	1.000	1.000	1.000
fBB					1.000			1.000	1.000	1.000	1.000
fA					1.000			1.000	1.000	1.000	1.000
fLU					1.000			0.952	1.000	1.000	0.952
fRT					0.981			1.000	0.850		1.000
fLT					0.959			1.000		0.093	1.000
Sec.											
fLpb					1.000			1.000		1.000	1.000
fRpb					1.000			1.000	1.000		1.000
S					1752			3547	1583	174	3547
Sec.											

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru							
Right							
Westbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LR	236	1752	# 0.13	0.22	385	0.61
Right							
Northbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	T	1661	3547	# 0.47	0.68	2412	0.69
Right	R	181	1583	0.11	0.68	1076	0.17
Southbound							
Prot							
Perm							
Left	L	21	174	0.12	0.68	118	0.18
Prot							
Perm							
Thru	T	1311	3547	0.37	0.68	2412	0.54
Right							

Sum of flow ratios for critical lane groups,  $Y_c = \text{Sum (v/s)} = 0.60$   
Total lost time per cycle,  $L = 10.00 \text{ sec}$   
Critical flow rate to capacity ratio,  $X_c = (Y_c)(C)/(C-L) = 0.67$

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Res Del d2	Res Del d3	Lane Group Delay LOS	Approach Delay LOS
Eastbound									
Westbound									
LR	0.61 0.22	35.2	1.000	385	0.20	2.9	0.0	38.0 D	38.0 D
Northbound									
T	0.69 0.68	9.6	1.000	2412	0.26	0.8	0.0	10.5 B	10.0+ B
R	0.17 0.68	5.8	1.000	1076	0.11	0.1	0.0	5.9 A	
Southbound									
L	0.18 0.68	5.8	1.000	118	0.11	0.7	0.0	6.6 A	
T	0.54 0.68	8.1	1.000	2412	0.14	0.3	0.0	8.4 A	8.3 A

Intersection delay = 11.3 (sec/veh) Intersection LOS = B

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for exclusive lefts

Input	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				M
Cycle length, C				100.0 sec
Total actual green time for LT lane group, G (s)				68.0
Effective permitted green time for LT lane group, g(s)				68.0
Opposing effective green time, go (s)				68.0
Number of lanes in LT lane group, N				1
Number of lanes in opposing approach, No				2
Adjusted LT flow rate, VLT (veh/h)				21
Proportion of LT in LT lane group, PLT				1.000
Proportion of LT in opposing flow, PLTo				0.00
Adjusted opposing flow rate, Vo (veh/h)				1661
Lost time for LT lane group, tL				5.00
Computation				
LT volume per cycle, LTC=VLTC/3600				0.58
Opposing lane util. factor, fLUo	1.000		0.952	0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)				24.23
gf=G[exp(- a * (LTC ** b))]-tL, gf<=g				0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)				1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]				0.32
gq, (see Exhibit C16-4,5,6,7,8)				25.09
gu=g-gq if gq>=gf, or = g-gf if gq<gf				42.91
n=Max(gq-gf)/2,0)				12.55
PTHo=1-PLTo				1.00
PL*=[PLT[1+(N-1)g/(gf+gu/EL1+4.24)]]				1.00
EL1 (refer to Exhibit C16-3)				6.77
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g				0.06
gdifff=max(gq-gf,0)				0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)				0.09
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdifff/g]/[1+PL(EL2-1)], (fmin<=fm<=1.00) or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT				0.093
For special case of single-lane approach opposed by multilane approach, see text.				
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.				
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.				
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.				

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for shared lefts

Input	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C				100.0 sec
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				

Number of lanes in opposing approach, No  
Adjusted LT flow rate, VLT (veh/h)  
Proportion of LT in LT lane group, PLT 0.856 0.000 0.000  
Proportion of LT in opposing flow, PLTo  
Adjusted opposing flow rate, Vo (veh/h)  
Lost time for LT lane group, tL  
Computation  
LT volume per cycle, LTC=VLTC/3600  
Opposing lane util. factor, fLUo 1.000 0.952 0.952  
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)  
 $gf = G[\exp(-a * (LTC ** b))] - tL$ ,  $gf <= g$   
Opposing platoon ratio, Rpo (refer Exhibit 16-11)  
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]  
gq, (see Exhibit C16-4,5,6,7,8)  
 $gu = g - gq$  if  $gq >= gf$ , or  $= g - gf$  if  $gq < gf$   
 $n = \text{Max}(gq - gf) / 2, 0$   
PTHo=1-PLTo  
 $PL* = PLT[1 + (N-1)g / (gf + gu / EL1 + 4.24)]$   
EL1 (refer to Exhibit C16-3)  
 $EL2 = \text{Max}((1 - Ptho ** n) / Plto, 1.0)$   
 $fmin = 2(1 + PL) / g$  or  $fmin = 2(1 + Pl) / g$   
 $gdiff = \text{max}(gq - gf, 0)$   
 $fm = [gf/g] + [gu/g] / [1 + PL(EL1 - 1)]$ , (min=fmin;max=1.00)  
 $flt = fm = [gf/g] + [gu/g] / [1 + PL(EL1 - 1)] + [gdiff/g] / [1 + PL(EL2 - 1)]$ , (fmin<=fm<=1.00)  
or  $flt = [fm + 0.91(N-1)] / N **$   
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach,  
see text.  
\* If  $Pl >= 1$  for shared left-turn lanes with  $N > 1$ , then assume de-facto  
left-turn lane and redo calculations.  
\*\* For permitted left-turns with multiple exclusive left-turn lanes,  $flt = fm$ .  
For special case of multilane approach opposed by single-lane approach  
or when  $gf > gq$ , see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				

OCCbicg  
 OCCr  
 Number of cross-street receiving lanes, Nrec  
 Number of turning lanes, Nturn  
 ApbT  
 Proportion right-turns, PRT  
 Proportion right-turns using protected phase, PRTA  
 Right turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

EBLT WBLT NBLT SBLT  
 Cycle length, C 100.0 sec  
 Adj. LT vol from Vol Adjustment Worksheet, v  
 v/c ratio from Capacity Worksheet, X  
 Protected phase effective green interval, g (s)  
 Opposing queue effective green interval, gq  
 Unopposed green interval, gu  
 Red time  $r=(C-g-gq-gu)$   
 Arrival rate,  $qa=v/(3600(\max[X,1.0]))$   
 Protected ph. departure rate,  $Sp=s/3600$   
 Permitted ph. departure rate,  $Ss=s(gq+gu)/(gu*3600)$   
 XPerm  
 XProt  
 Case  
 Queue at beginning of green arrow, Qa  
 Queue at beginning of unsaturated green, Qu  
 Residual queue, Qr  
 Uniform Delay, d1

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

Appr/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay		Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
			Unadj. ds	Adj. d1 sec				
Eastbound								
	0.0						0.0	
	0.0						0.0	
	0.0						0.0	
Westbound								
	0.0						0.0	
LR	0.0	0.00	39.0	35.2	0.00	0.0	0.0	38.0
	0.0						0.0	
Northbound								
	0.0						0.0	
T	0.0	0.00	16.0	9.6	0.00	0.0	0.0	10.5
R	0.0	0.00	16.0	5.8	0.00	0.0	0.0	5.9
Southbound								
	0.0						0.0	
L	0.0	0.00	16.0	5.8	0.00	0.0	0.0	6.6
T	0.0	0.00	16.0	8.1	0.00	0.0	0.0	8.4
	0.0						0.0	
Intersection Delay			11.3	sec/veh	Intersection LOS		B	

	Eastbound			Westbound		Northbound		Southbound	
LaneGroup				LR		T	R	L	T
Init Queue				0.0		0.0	0.0	0.0	0.0
Flow Rate				236		872	181	21	688
So				1900		1900	1900	1900	1900
No.Lanes	0	0	0	0	0	2	1	1	2
SL				1752		1862	1583	174	1862
LnCapacity				385		1266	1076	118	1266
Flow Ratio				0.1		0.5	0.1	0.1	0.4
v/c Ratio				0.61		0.69	0.17	0.18	0.54
Grn Ratio				0.22		0.68	0.68	0.68	0.68
I Factor				1.000		1.000			1.000
AT or PVG				3		3	3	3	3
Pltn Ratio				1.00		1.00	1.00	1.00	1.00
PF2				1.00		1.00	1.00	1.00	1.00
Q1				5.9		14.6	1.8	0.2	9.7
kB				0.4		0.8	0.8	0.2	0.8
Q2				0.6		1.8	0.2	0.0	1.0
Q Average				6.5		16.4	2.0	0.3	10.7
Q Spacing				25.0		25.0	25.0	25.0	25.0
Q Storage				0		0	0	0	0
Q S Ratio									
70th Percentile Output:									
fB%				1.2		1.2	1.2	1.2	1.2
BOQ				7.8		19.1	2.4	0.3	12.6
QSRatio									
85th Percentile Output:									
fB%				1.5		1.5	1.6	1.6	1.5
BOQ				10.1		24.2	3.1	0.4	16.1
QSRatio									
90th Percentile Output:									
fB%				1.7		1.6	1.8	1.8	1.6
BOQ				11.1		25.8	3.5	0.5	17.5
QSRatio									
95th Percentile Output:									
fB%				1.9		1.7	2.0	2.1	1.8
BOQ				12.5		28.5	4.0	0.5	19.6
QSRatio									
98th Percentile Output:									
fB%				2.3		2.0	2.6	2.7	2.1
BOQ				15.1		32.5	5.0	0.7	22.9
QSRatio									

ERROR MESSAGES

No errors to report.

HCS+: Signalized Intersections Release 5.2

Analyst: RV  
 Agency: CPH  
 Date: 5/10/2012  
 Period: 4pm-6pm  
 Project ID: Future Total  
 E/W St: McDonald Avenue

Inter.: US 1 & McDonald Avenue  
 Area Type: All other areas  
 Jurisd: Monroe County  
 Year : Future Total  
 N/S St: US 1

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	0	0	2	1	0	2	0
LGConfig				L				T	R		T	
Volume				390				1280	335		912	
Lane Width				12.0				12.0	12.0		12.0	
RTOR Vol									0			

Duration 0.25 Area Type: All other areas  
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left								
Thru								
Right								
Peds								
WB Left		A						
Thru								
Right								
Peds								
NB Right								
SB Right								
Green		22.0				68.0		
Yellow		4.0				4.0		
All Red		1.0				1.0		

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS

Eastbound								
Westbound								
L	389	1770	1.06	0.22	100.3	F	100.3	F
Northbound								
T	2412	3547	0.56	0.68	8.5	A	8.2	A
R	1076	1583	0.33	0.68	6.8	A		
Southbound								
T	2412	3547	0.40	0.68	7.1	A	7.1	A

Intersection Delay = 20.2 (sec/veh) Intersection LOS = C

Phone: Fax:  
E-Mail:

OPERATIONAL ANALYSIS

Analyst: RV  
Agency/Co.: CPH  
Date Performed: 5/10/2012  
Analysis Time Period: 4pm-6pm  
Intersection: US 1 & McDonald Avenue  
Area Type: All other areas  
Jurisdiction: Monroe County  
Analysis Year: Future Total  
Project ID: Future Total  
E/W St: McDonald Avenue N/S St: US 1

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume				390			1280	335		912		
% Heavy Veh				2			2	2		2		
PHF				0.95			0.95	0.95		0.95		
PK 15 Vol				103			337	88		240		
Hi Ln Vol												
% Grade					0		0			0		
Ideal Sat				1900			1900	1900		1900		
ParkExist												
NumPark												
No. Lanes	0	0	0	1	0	0	0	2	1	0	2	0
LGConfig				L			T	R		T		
Lane Width				12.0			12.0	12.0		12.0		
RTOR Vol								0				
Adj Flow				411			1347	353		960		
%InSharedLn												
Prop LTs							0.000			0.000		
Prop RTs							0.000	1.000		0.000		
Peds Bikes	0						0					
Buses				0			0	0		0		
%InProtPhase												
Duration	0.25			Area Type: All other areas								

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet				0.0			0.0	0.0		0.0		
Arriv. Type				3			3	3		3		
Unit Ext.				3.0			3.0	3.0		3.0		
I Factor					1.000		1.000			1.000		
Lost Time				2.0			2.0	2.0		2.0		
Ext of g				2.0			2.0	2.0		2.0		
Ped Min g		3.2						3.2				

PHASE DATA

Phase Combination	1	2	3	4	5	6	7	8
EB Left Thru Right Peds					NB Left Thru Right Peds	A	A	
WB Left Thru Right Peds		A			SB Left Thru Right Peds		A	
NB Right					EB Right			
SB Right					WB Right			
Green		22.0						68.0
Yellow		4.0						4.0
All Red		1.0						1.0

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
Volume, V				390			1280	335			912		
PHF				0.95			0.95	0.95			0.95		
Adj flow				411			1347	353			960		
No. Lanes	0	0	0	1	0	0	0	2	1	0	2	0	
Lane group				L			T	R			T		
Adj flow				411			1347	353			960		
Prop LTs							0.000				0.000		
Prop RTs							0.000	1.000			0.000		

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	T	R	L	T	R	
LG				L			T	R		T		
So				1900			1900	1900		1900		
Lanes	0	0	0	1	0	0	0	2	1	0	2	0
fW				1.000			1.000	1.000		1.000		
fHV				0.980			0.980	0.980		0.980		
fG				1.000			1.000	1.000		1.000		
fP				1.000			1.000	1.000		1.000		
fBB				1.000			1.000	1.000		1.000		
fA				1.000			1.000	1.000		1.000		
fLU				1.000			0.952	1.000		0.952		
fRT							1.000	0.850		1.000		
fLT				0.950			1.000			1.000		
Sec.												
fLpb				1.000			1.000			1.000		
fRpb							1.000	1.000		1.000		
S				1770			3547	1583		3547		
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru							
Right							
Westbound							
Prot							
Perm							
Left	L	411	1770	# 0.23	0.22	389	1.06
Prot							
Perm							
Thru							
Right							
Northbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	T	1347	3547	# 0.38	0.68	2412	0.56
Right	R	353	1583	0.22	0.68	1076	0.33
Southbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	T	960	3547	0.27	0.68	2412	0.40
Right							

Sum of flow ratios for critical lane groups,  $Y_c = \text{Sum (v/s)} = 0.61$   
Total lost time per cycle,  $L = 10.00 \text{ sec}$   
Critical flow rate to capacity ratio,  $X_c = (Y_c)(C)/(C-L) = 0.68$

Control Delay and LOS Determination												
Appr/ Lane Grp	Ratios		Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Del d2	Res Del d3	Lane Group		Approach	
	v/c	g/C							Delay	LOS	Delay	LOS
Eastbound												
Westbound												
L	1.06	0.22	39.0	1.000	389	0.50	61.3	0.0	100.3	F	100.3	F
Northbound												
T	0.56	0.68	8.3	1.000	2412	0.16	0.3	0.0	8.5	A	8.2	A
R	0.33	0.68	6.6	1.000	1076	0.11	0.2	0.0	6.8	A		
Southbound												
T	0.40	0.68	7.0	1.000	2412	0.11	0.1	0.0	7.1	A	7.1	A

Intersection delay = 20.2 (sec/veh) Intersection LOS = C

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for exclusive lefts

Input

EB WB NB SB

Opposed by Single(S) or Multiple(M) lane approach

Cycle length, C 100.0 sec

Total actual green time for LT lane group, G (s)

Effective permitted green time for LT lane group, g(s)

Opposing effective green time, go (s)

Number of lanes in LT lane group, N

Number of lanes in opposing approach, No

Adjusted LT flow rate, VLT (veh/h)

Proportion of LT in LT lane group, PLT

Proportion of LT in opposing flow, PLTo

Adjusted opposing flow rate, Vo (veh/h)

Lost time for LT lane group, tL

Computation

LT volume per cycle, LTC=VLTC/3600

Opposing lane util. factor, fLUo

0.952 0.952

Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)

gf=G[exp(- a \* (LTC \*\* b))]-tL, gf<=g

Opposing platoon ratio, Rpo (refer Exhibit 16-11)

Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]

gq, (see Exhibit C16-4,5,6,7,8)

gu=g-gq if gq>=gf, or = g-gf if gq<gf

n=Max(gq-gf)/2,0)

PTHo=1-PLTo

PL\*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]

EL1 (refer to Exhibit C16-3)

EL2=Max((1-Ptho\*\*n)/Plto, 1.0)

fmin=2(1+PL)/g or fmin=2(1+Pl)/g

gdifff=max(gq-gf,0)

fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)

flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdifff/g]/[1+PL(EL2-1)], (fmin<=fm<=1.00)

or flt=[fm+0.91(N-1)]/N\*\*

Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.

\* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

\*\* For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for shared lefts

Input

EB WB NB SB

Opposed by Single(S) or Multiple(M) lane approach

Cycle length, C 100.0 sec

Total actual green time for LT lane group, G (s)

Effective permitted green time for LT lane group, g(s)

Opposing effective green time, go (s)

Number of lanes in LT lane group, N

Number of lanes in opposing approach, No  
Adjusted LT flow rate, VLT (veh/h)  
Proportion of LT in LT lane group, PLT 0.000 0.000  
Proportion of LT in opposing flow, PLTo  
Adjusted opposing flow rate, Vo (veh/h)  
Lost time for LT lane group, tL  
Computation  
LT volume per cycle, LTC=VLTC/3600  
Opposing lane util. factor, fLUo 0.952 0.952  
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)  
 $gf=G[\exp(-a * (LTC ** b))]-tL$ ,  $gf \leq g$   
Opposing platoon ratio, Rpo (refer Exhibit 16-11)  
Opposing Queue Ratio,  $gro=Max[1-Rpo(go/C), 0]$   
 $gq$ , (see Exhibit C16-4,5,6,7,8)  
 $gu=g-gq$  if  $gq \geq gf$ , or  $= g-gf$  if  $gq < gf$   
 $n=Max(gq-gf)/2, 0$   
 $PTHo=1-PLTo$   
 $PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]$   
EL1 (refer to Exhibit C16-3)  
 $EL2=Max((1-Ptho*n)/Plto, 1.0)$   
 $fmin=2(1+PL)/g$  or  $fmin=2(1+Pl)/g$   
 $gdiff=max(gq-gf, 0)$   
 $fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]$ , (min=fmin;max=1.00)  
 $flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)]$ , (fmin<=fm<=1.00)  
or  $flt=[fm+0.91(N-1)]/N**$   
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach,  
see text.  
\* If  $Pl \geq 1$  for shared left-turn lanes with  $N > 1$ , then assume de-facto  
left-turn lane and redo calculations.  
\*\* For permitted left-turns with multiple exclusive left-turn lanes,  $flt=fm$ .  
For special case of multilane approach opposed by single-lane approach  
or when  $gf > gq$ , see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				

OCCbicg  
 OCCr  
 Number of cross-street receiving lanes, Nrec  
 Number of turning lanes, Nturn  
 Apbt  
 Proportion right-turns, PRT  
 Proportion right-turns using protected phase, PRTA  
 Right turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

Cycle length, C 100.0 sec EBLT WBLT NBLT SBLT  
 Adj. LT vol from Vol Adjustment Worksheet, v  
 v/c ratio from Capacity Worksheet, X  
 Protected phase effective green interval, g (s)  
 Opposing queue effective green interval, gq  
 Unopposed green interval, gu  
 Red time  $r=(C-g-gq-gu)$   
 Arrival rate,  $qa=v/(3600(\max[X,1.0]))$   
 Protected ph. departure rate,  $Sp=s/3600$   
 Permitted ph. departure rate,  $Ss=s(gq+gu)/(gu*3600)$   
 XPerm  
 XProt  
 Case  
 Queue at beginning of green arrow, Qa  
 Queue at beginning of unsaturated green, Qu  
 Residual queue, Qr  
 Uniform Delay, d1

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

Appr/ Lane Group	Initial	Dur.	Uniform Delay		Initial	Final	Initial	Lane
	Unmet Demand Q veh	Unmet Demand t hrs.	Unadj. ds	Adj. d1 sec	Queue Param. u	Unmet Demand Q veh	Queue Delay d3 sec	Group Delay d sec
<b>Eastbound</b>								
	0.0						0.0	
	0.0						0.0	
	0.0						0.0	
<b>Westbound</b>								
L	0.0	0.00	39.0	39.0	0.00	5.5	0.0	100.3
	0.0						0.0	
	0.0						0.0	
<b>Northbound</b>								
	0.0						0.0	
T	0.0	0.00	16.0	8.3	0.00	0.0	0.0	8.5
R	0.0	0.00	16.0	6.6	0.00	0.0	0.0	6.8
<b>Southbound</b>								
	0.0						0.0	
T	0.0	0.00	16.0	7.0	0.00	0.0	0.0	7.1
	0.0						0.0	

Intersection Delay 20.2 sec/veh Intersection LOS C

BACK OF QUEUE WORKSHEET

	Eastbound			Westbound			Northbound		Southbound	
LaneGroup				L			T	R	T	
Init Queue				0.0			0.0	0.0	0.0	
Flow Rate				411			707	353	504	
So				1900			1900	1900	1900	
No.Lanes	0	0	0	1	0	0	2	1	2	0
SL				1770			1862	1583	1862	
LnCapacity				389			1266	1076	1266	
Flow Ratio				0.2			0.4	0.2	0.3	
v/c Ratio				1.06			0.56	0.33	0.40	
Grn Ratio				0.22			0.68	0.68	0.68	
I Factor					1.000		1.000		1.000	
AT or PVG				3			3	3	3	
Pltn Ratio				1.00			1.00	1.00	1.00	
PF2				1.00			1.00	1.00	1.00	
Q1				11.4			10.1	4.0	6.1	
kB				0.4			0.8	0.8	0.8	
Q2				6.2			1.1	0.4	0.6	
Q Average				17.6			11.2	4.4	6.7	
Q Spacing				25.0			25.0	25.0	25.0	
Q Storage				0			0	0	0	
Q S Ratio										
70th Percentile Output:										
fB%				1.2			1.2	1.2	1.2	
BOQ				20.5			13.2	5.2	7.9	
QSRatio										
85th Percentile Output:										
fB%				1.5			1.5	1.6	1.5	
BOQ				25.8			16.9	6.9	10.3	
QSRatio										
90th Percentile Output:										
fB%				1.6			1.6	1.7	1.7	
BOQ				27.6			18.2	7.6	11.3	
QSRatio										
95th Percentile Output:										
fB%				1.7			1.8	2.0	1.9	
BOQ				30.4			20.4	8.7	12.8	
QSRatio										
98th Percentile Output:										
fB%				2.0			2.1	2.4	2.3	
BOQ				34.5			23.7	10.6	15.4	
QSRatio										

ERROR MESSAGES

No errors to report.

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	RV	Intersection	US 1 & 3rd Street
Agency/Co.	CPH	Jurisdiction	Monroe County
Date Performed	5/10/2012	Analysis Year	Future Total
Analysis Time Period	4pm-6pm		

Project Description: CVS Stock Island	
East/West Street: 3rd Street	North/South Street: US 1
Intersection Orientation: North-South	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments						
Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1244	54	127	866	
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	0	1309	56	133	911	0
Percent Heavy Vehicles	2	-	-	0	-	-
Median Type	Raised curb					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				52		158
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	0	0	0	54	0	166
Percent Heavy Vehicles	2	0	2	0	0	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

Delay, Queue Length, and Level of Service								
Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L	L		R			
v (veh/h)		133	54		166			
C (m) (veh/h)		510	138		465			
v/c		0.26	0.39		0.36			
95% queue length		1.04	1.66		1.60			
Control Delay (s/veh)		14.5	46.9		17.0			
LOS		B	E		C			
Approach Delay (s/veh)	--	--	24.3					
Approach LOS	--	--	C					

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	RV	Intersection	US 1 & Collge Road North
Agency/Co.	CPH	Jurisdiction	Monroe County
Date Performed	5/10/2012	Analysis Year	Future Total
Analysis Time Period	4pm-6pm		

Project Description <i>CVS Stock Island</i>	
East/West Street: <i>College Road North</i>	North/South Street: <i>US 1</i>
Intersection Orientation: <i>North-South</i>	Study Period (hrs): <i>0.25</i>

### Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	134	1449			884	56
Peak-Hour Factor, PHF	0.95	0.95	1.00	1.00	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	141	1525	0	0	930	58
Percent Heavy Vehicles	2	-	-	0	-	-
Median Type	<i>Raised curb</i>					
RT Channelized			0			0
Lanes	1	2	0	0	2	1
Configuration	L	T			T	R
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	67		67	7	0	5
Peak-Hour Factor, PHF	0.95	1.00	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	70	0	70	7	0	5
Percent Heavy Vehicles	2	0	2	2	2	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	1	0	1	0
Configuration	L		R		LTR	

### Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L			LTR		L		R
v (veh/h)	141			12		70		70
C (m) (veh/h)	695			83		119		596
v/c	0.20			0.14		0.59		0.12
95% queue length	0.76			0.48		2.91		0.40
Control Delay (s/veh)	11.5			55.6		71.4		11.8
LOS	B			F		F		B
Approach Delay (s/veh)	--	--		55.6			41.6	
Approach LOS	--	--		F			E	

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	RV	Intersection	US 1 & Key Haven
Agency/Co.	CPH	Jurisdiction	Monroe County
Date Performed	5/10/2012	Analysis Year	Future Total
Analysis Time Period	4pm-6pm		

Project Description <i>CVS Stock Island</i>	
East/West Street: <i>Key Haven Blvd.</i>	North/South Street: <i>US 1</i>
Intersection Orientation: <i>North-South</i>	Study Period (hrs): <i>0.25</i>

Vehicle Volumes and Adjustments						
Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	225	1397			823	32
Peak-Hour Factor, PHF	0.95	0.95	1.00	1.00	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	236	1470	0	0	866	33
Percent Heavy Vehicles	2	--	--	0	--	--
Median Type	<i>Raised curb</i>					
RT Channelized			0			0
Lanes	1	2	0	0	2	1
Configuration	L	T			T	R
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	22		136			
Peak-Hour Factor, PHF	0.95	1.00	0.95	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	23	0	143	0	0	0
Percent Heavy Vehicles	2	0	2	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	1	0	0	0
Configuration	L		R			

Delay, Queue Length, and Level of Service								
Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L					L		R
v (veh/h)	236					23		143
C (m) (veh/h)	751					118		621
v/c	0.31					0.19		0.23
95% queue length	1.35					0.69		0.88
Control Delay (s/veh)	12.0					42.7		12.5
LOS	B					E		B
Approach Delay (s/veh)	--	--				16.7		
Approach LOS	--	--				C		

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	RV	Intersection	US 1 & 2nd Street
Agency/Co.	CPH	Jurisdiction	Monroe County
Date Performed	5/10/2012	Analysis Year	Future Total
Analysis Time Period	4pm-6pm		

Project Description: CVS Stock Island	
East/West Street: 2nd Street	North/South Street: US 1
Intersection Orientation: North-South	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments						
Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1242			993	
Peak-Hour Factor, PHF	0.95	0.95	1.00	1.00	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	0	1307	0	0	1045	0
Percent Heavy Vehicles	2	--	--	0	--	--
Median Type	Raised curb					
RT Channelized			0			0
Lanes	0	2	0	0	2	0
Configuration		T			T	
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						17
Peak-Hour Factor, PHF	0.95	1.00	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	0	0	0	0	0	17
Percent Heavy Vehicles	2	0	2	0	0	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	1
Configuration						R

Delay, Queue Length, and Level of Service								
Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					R			
v (veh/h)					17			
C (m) (veh/h)					465			
v/c					0.04			
95% queue length					0.11			
Control Delay (s/veh)					13.0			
LOS					B			
Approach Delay (s/veh)	--	--	13.0					
Approach LOS	--	--	B					

Analyst: RV  
 Agency: CPH  
 Date: 5/10/2012  
 Period: 4pm-6pm  
 Project ID: CVS Stock Island  
 E/W St: 3rd Street

Inter.: US 1 & 3rd Street  
 Area Type: All other areas  
 Jurisd: Monroe County  
 Year : Future Total with Improvements  
 N/S St: US 1

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	0	2	1	1	2	0
LGConfig				L		R		T	R	L	T	
Volume				52		158		1244	54	127	866	
Lane Width				12.0		12.0		12.0	12.0	12.0	12.0	
RTOR Vol						0			0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru A			
Right					Right A			
Peds					Peds			
WB Left		A			SB Left	A		
Thru					Thru A			
Right		A			Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green		25.0				63.0		
Yellow		4.0				4.0		
All Red		2.0				2.0		

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS

Eastbound

Westbound

L	443	1770	0.12	0.25	29.2	C	31.4	C
R	396	1583	0.42	0.25	32.1	C		
Northbound								
T	2235	3547	0.59	0.63	11.2	B	11.1	B
R	997	1583	0.06	0.63	7.1	A		
Southbound								
L	181	288	0.74	0.63	27.8	C		
T	2235	3547	0.41	0.63	9.3	A	11.7	B

Intersection Delay = 13.0 (sec/veh) Intersection LOS = B

Phone: Fax:  
E-Mail:

OPERATIONAL ANALYSIS

Analyst: RV  
 Agency/Co.: CPH  
 Date Performed: 5/10/2012  
 Analysis Time Period: 4pm-6pm  
 Intersection: US 1 & 3rd Street  
 Area Type: All other areas  
 Jurisdiction: Monroe County  
 Analysis Year: Future Total with Improvements  
 Project ID: CVS Stock Island  
 E/W St: 3rd Street N/S St: US 1

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume				52		158	1244	54		127	866	
% Heavy Veh				2		2	2	2		2	2	
PHF				0.95		0.95	0.95	0.95		0.95	0.95	
PK 15 Vol				14		42	327	14		33	228	
Hi Ln Vol												
% Grade					0			0			0	
Ideal Sat				1900		1900	1900	1900		1900	1900	
ParkExist												
NumPark												
No. Lanes	0	0	0	1	0	1	0	2	1	1	2	0
LGConfig				L		R		T	R	L		T
Lane Width				12.0		12.0	12.0	12.0		12.0	12.0	
RTOR Vol						0			0			
Adj Flow				55		166	1309	57		134	912	
%InSharedLn												
Prop LTs								0.000		1.000	0.000	
Prop RTs						1.000	0.000	1.000			0.000	
Peds Bikes	0			0			0					
Buses				0		0	0	0		0	0	
%InProtPhase												
Duration	0.25			Area Type: All other areas								

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet				0.0		0.0	0.0	0.0		0.0	0.0	
Arriv. Type				3		3	3	3		3	3	
Unit Ext.				3.0		3.0	3.0	3.0		3.0	3.0	
I Factor					1.000		1.000				1.000	
Lost Time				2.0		2.0	2.0	2.0		2.0	2.0	
Ext of g				2.0		2.0	2.0	2.0		2.0	2.0	
Ped Min g		3.2			3.2			3.2				

PHASE DATA

Phase Combination	1	2	3	4	5	6	7	8
EB Left Thru Right Peds					NB Left Thru Right Peds	A	A	
WB Left Thru Right Peds	A				SB Left Thru Right Peds	A	A	
NB Right					EB Right			
SB Right					WB Right			
Green	25.0				63.0			
Yellow	4.0				4.0			
All Red	2.0				2.0			

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V				52		158	1244	54		127	866	
PHF				0.95		0.95	0.95	0.95		0.95	0.95	
Adj flow				55		166	1309	57		134	912	
No. Lanes	0	0	0	1	0	1	0	2	1	1	2	0
Lane group				L		R	T	R		L	T	
Adj flow				55		166	1309	57		134	912	
Prop LTs							0.000			1.000	0.000	
Prop RTs						1.000	0.000	1.000		0.000		

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	T	R	L	T	R	
LG				L		R	T	R	L	T		
So				1900		1900	1900	1900	1900	1900		
Lanes	0	0	0	1	0	1	0	2	1	1	2	0
fw				1.000		1.000	1.000	1.000	1.000	1.000		
fHV				0.980		0.980	0.980	0.980	0.980	0.980		
fG				1.000		1.000	1.000	1.000	1.000	1.000		
fP				1.000		1.000	1.000	1.000	1.000	1.000		
fBB				1.000		1.000	1.000	1.000	1.000	1.000		
fA				1.000		1.000	1.000	1.000	1.000	1.000		
fLU				1.000		1.000	0.952	1.000	1.000	0.952		
fRT						0.850	1.000	0.850		1.000		
fLT				0.950			1.000		0.154	1.000		
Sec.												
fLpb				1.000			1.000		1.000	1.000		
fRpb						1.000	1.000	1.000		1.000		
S				1770		1583	3547	1583	288	3547		
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru							
Right							
Westbound							
Prot							
Perm							
Left	L	55	1770	0.03	0.25	443	0.12
Prot							
Perm							
Thru							
Right	R	166	1583	# 0.10	0.25	396	0.42
Northbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	T	1309	3547	0.37	0.63	2235	0.59
Right	R	57	1583	0.04	0.63	997	0.06
Southbound							
Prot							
Perm							
Left	L	134	288	# 0.47	0.63	181	0.74
Prot							
Perm							
Thru	T	912	3547	0.26	0.63	2235	0.41
Right							

Sum of flow ratios for critical lane groups,  $Y_c = \text{Sum (v/s)} = 0.57$   
Total lost time per cycle,  $L = 12.00 \text{ sec}$   
Critical flow rate to capacity ratio,  $X_c = (Y_c)(C)/(C-L) = 0.65$

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Res Del d2	Res Del d3	Lane Group Delay LOS	Approach Delay LOS
Eastbound									
Westbound									
L	0.12 0.25	29.0	1.000	443	0.11	0.1	0.0	29.2 C	31.4 C
R	0.42 0.25	31.4	1.000	396	0.11	0.7	0.0	32.1 C	
Northbound									
T	0.59 0.63	10.8	1.000	2235	0.18	0.4	0.0	11.2 B	11.1 B
R	0.06 0.63	7.1	1.000	997	0.11	0.0	0.0	7.1 A	
Southbound									
L	0.74 0.63	12.8	1.000	181	0.30	15.0	0.0	27.8 C	
T	0.41 0.63	9.2	1.000	2235	0.11	0.1	0.0	9.3 A	11.7 B

Intersection delay = 13.0 (sec/veh) Intersection LOS = B

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for exclusive lefts

Input	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				M
Cycle length, C				100.0 sec
Total actual green time for LT lane group, G (s)				63.0
Effective permitted green time for LT lane group, g(s)				63.0
Opposing effective green time, go (s)				63.0
Number of lanes in LT lane group, N				1
Number of lanes in opposing approach, No				2
Adjusted LT flow rate, VLT (veh/h)				134
Proportion of LT in LT lane group, PLT				1.000
Proportion of LT in opposing flow, PLTo				0.00
Adjusted opposing flow rate, Vo (veh/h)				1309
Lost time for LT lane group, tL				6.00
Computation				
LT volume per cycle, LTC=VLTC/3600				3.72
Opposing lane util. factor, fLUo			0.952	0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)				19.10
gf=G[exp(- a * (LTC ** b))]-tL, gf<=g				0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)				1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]				0.37
gq, (see Exhibit C16-4,5,6,7,8)				16.87
gu=g-gq if gq>=gf, or = g-gf if gq<gf				46.13
n=Max(gq-gf)/2,0)				8.43
PTHo=1-PLTo				1.00
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]				1.00
EL1 (refer to Exhibit C16-3)				4.74
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g				0.06
gdifff=max(gq-gf,0)				0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)				0.15
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdifff/g]/[1+PL(EL2-1)], (fmin<=fm<=1.00) or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT				0.154
For special case of single-lane approach opposed by multilane approach, see text.				
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.				
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.				
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.				

SUPPLEMENTAL PERMITTED LT WORKSHEET  
for shared lefts

Input	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C				100.0 sec
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				

Number of lanes in opposing approach, No  
Adjusted LT flow rate, VLT (veh/h)  
Proportion of LT in LT lane group, PLT 0.000 0.000  
Proportion of LT in opposing flow, PLTo  
Adjusted opposing flow rate, Vo (veh/h)  
Lost time for LT lane group, tL  
Computation  
LT volume per cycle, LTC=VLTC/3600  
Opposing lane util. factor, fLUo 0.952 0.952  
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)  
 $gf=G[\exp(-a * (LTC ** b))]-tL$ ,  $gf \leq g$   
Opposing platoon ratio, Rpo (refer Exhibit 16-11)  
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]  
gq, (see Exhibit C16-4,5,6,7,8)  
 $gu=g-gq$  if  $gq \geq gf$ , or  $= g-gf$  if  $gq < gf$   
 $n=Max(gq-gf)/2,0$   
 $PTHo=1-PLTo$   
 $PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]$   
EL1 (refer to Exhibit C16-3)  
 $EL2=Max((1-Ptho**n)/Plto, 1.0)$   
 $fmin=2(1+PL)/g$  or  $fmin=2(1+Pl)/g$   
 $gdiff=max(gq-gf,0)$   
 $fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]$ , (min=fmin;max=1.00)  
 $flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)]$ , (fmin<=fm<=1.00)  
or  $flt=[fm+0.91(N-1)]/N**$   
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach,  
see text.  
\* If  $Pl \geq 1$  for shared left-turn lanes with  $N > 1$ , then assume de-facto  
left-turn lane and redo calculations.  
\*\* For permitted left-turns with multiple exclusive left-turn lanes,  $flt=fm$ .  
For special case of multilane approach opposed by single-lane approach  
or when  $gf > gq$ , see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

EB      WB      NB      SB

Effective pedestrian green time, gp (s)  
Conflicting pedestrian volume, Vped (p/h)  
Pedestrian flow rate, Vpedg (p/h)  
OCCpedg  
Opposing queue clearing green, gq (s)  
Eff. ped. green consumed by opp. veh. queue, gq/gp  
OCCpedu  
Opposing flow rate, Vo (veh/h)  
OCCr  
Number of cross-street receiving lanes, Nrec  
Number of turning lanes, Nturn  
ApbT  
Proportion of left turns, PLT  
Proportion of left turns using protected phase, PLTA  
Left-turn adjustment, fLpb  
Permitted Right Turns  
Effective pedestrian green time, gp (s)  
Conflicting pedestrian volume, Vped (p/h)  
Conflicting bicycle volume, Vbic (bicycles/h)  
Vpedg  
OCCpedg  
Effective green, g (s)  
Vbicg

OCCbicg  
 OCCr  
 Number of cross-street receiving lanes, Nrec  
 Number of turning lanes, Nturn  
 ApbT  
 Proportion right-turns, PRT  
 Proportion right-turns using protected phase, PRTA  
 Right turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

EBLT WBLT NBLT SBLT

Cycle length, C 100.0 sec  
 Adj. LT vol from Vol Adjustment Worksheet, v  
 v/c ratio from Capacity Worksheet, X  
 Protected phase effective green interval, g (s)  
 Opposing queue effective green interval, gq  
 Unopposed green interval, gu  
 Red time  $r=(C-g-gq-gu)$   
 Arrival rate,  $qa=v/(3600(\max[X,1.0]))$   
 Protected ph. departure rate,  $Sp=s/3600$   
 Permitted ph. departure rate,  $Ss=s(gq+gu)/(gu*3600)$   
 XPerm  
 XProt  
 Case  
 Queue at beginning of green arrow, Qa  
 Queue at beginning of unsaturated green, Qu  
 Residual queue, Qr  
 Uniform Delay, d1

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

Appr/ Lane Group	Initial	Dur.	Uniform Delay		Initial	Final	Initial	Lane
	Unmet Demand Q veh	Unmet Demand t hrs.	Unadj. ds	Adj. d1 sec	Queue Param. u	Unmet Demand Q veh	Queue Delay d3 sec	Group Delay d sec
Eastbound								
	0.0						0.0	
	0.0						0.0	
	0.0						0.0	
Westbound								
L	0.0	0.00	37.5	29.0	0.00	0.0	0.0	29.2
	0.0						0.0	
R	0.0	0.00	37.5	31.4	0.00	0.0	0.0	32.1
Northbound								
	0.0						0.0	
T	0.0	0.00	18.5	10.8	0.00	0.0	0.0	11.2
R	0.0	0.00	18.5	7.1	0.00	0.0	0.0	7.1
Southbound								
L	0.0	0.00	18.5	12.8	0.00	0.0	0.0	27.8
T	0.0	0.00	18.5	9.2	0.00	0.0	0.0	9.3
	0.0						0.0	
Intersection Delay		13.0	sec/veh		Intersection LOS		B	

BACK OF QUEUE WORKSHEET

	Eastbound			Westbound		Northbound		Southbound		
LaneGroup				L	R	T	R	L	T	
Init Queue				0.0	0.0	0.0	0.0	0.0	0.0	
Flow Rate				55	166	687	57	134	478	
So				1900	1900	1900	1900	1900	1900	
No.Lanes	0	0	0	1	0	1	0	2	1	0
SL				1770	1583	1862	1583	288	1862	
LnCapacity				443	396	1173	997	181	1173	
Flow Ratio				0.0	0.1	0.4	0.0	0.5	0.3	
v/c Ratio				0.12	0.42	0.59	0.06	0.74	0.41	
Grn Ratio				0.25	0.25	0.63	0.63	0.63	0.63	
I Factor					1.000		1.000		1.000	
AT or PVG				3	3	3	3	3	3	
Pltn Ratio				1.00	1.00	1.00	1.00	1.00	1.00	
PF2				1.00	1.00	1.00	1.00	1.00	1.00	
Q1				1.2	3.9	11.2	0.6	2.6	6.6	
kB				0.5	0.4	0.8	0.7	0.3	0.8	
Q2				0.1	0.3	1.1	0.0	0.7	0.6	
Q Average				1.2	4.2	12.3	0.7	3.3	7.2	
Q Spacing				25.0	25.0	25.0	25.0	25.0	25.0	
Q Storage				0	0	0	0	0	0	
Q S Ratio										
70th Percentile Output:										
fB%				1.2	1.2	1.2	1.2	1.2	1.2	
BOQ				1.5	5.0	14.4	0.8	3.9	8.5	
QSRatio										
85th Percentile Output:										
fB%				1.6	1.6	1.5	1.6	1.6	1.5	
BOQ				2.0	6.5	18.5	1.0	5.1	11.0	
QSRatio										
90th Percentile Output:										
fB%				1.8	1.7	1.6	1.8	1.7	1.7	
BOQ				2.2	7.2	19.9	1.2	5.7	12.0	
QSRatio										
95th Percentile Output:										
fB%				2.1	2.0	1.8	2.1	2.0	1.9	
BOQ				2.6	8.2	22.2	1.4	6.5	13.6	
QSRatio										
98th Percentile Output:										
fB%				2.6	2.4	2.1	2.7	2.5	2.3	
BOQ				3.3	10.1	25.7	1.7	8.1	16.3	
QSRatio										

ERROR MESSAGES

No errors to report.

## **APPENDIX F**

## **REFERENCES**

## 2011 LEVEL OF SERVICE AND RESERVE CAPACITY

SEGMENT	LENGTH (miles)	FACILITY TYPE	POSTED SPEED		ADJ. FOR SIGNAL (mph)	ADJUSTED LOS C CRITERIA (mph)	MEDIAN TRAVEL SPEED (mph)	LOS	RESERVE SPEED (mph)	2011		2010	
			Limits (mph)	Average (mph)						MAXIMUM RESERVE VOLUME (trips)	5% ALLOCATION BELOW LOS C (trips)	MAXIMUM RESERVE VOLUME (trips)	5% ALLOCATION BELOW LOS C (trips)
1 Stock Island (4.0- 5.0)	1.1	4-L/D	30/35/45	38.3	N/A	22.0	33.7	B	11.7	2,131	N/A	2,186	N/A
2 Boca Chica (5.0- 9.0)	3.9	4-L/D	55/45	54.1	N/A	49.6	58.4	A	8.8	5,683	N/A	4,973	N/A
3 Big Coppitt (9.0- 10.5)	1.5	2-L/U	45/55	48.3	N/A	43.8	45.9	C	2.1	522	N/A	0	549
4 Saddlebunch (10.5- 16.5)	5.8	2-L/U	45/55	54.1	N/A	49.6	52.8	B	3.2	3,074	N/A	2,593	N/A
5 Sugarloaf (16.5- 20.5)	3.9	2-L/U	45/55	52.1	4.2	43.4	46.7	B	3.3	2,131	N/A	266	N/A
6 Cudjoe (20.5- 23.0)	2.5	2-L/U	45/55	45.5	N/A	41.0	46.8	B	5.8	2,401	N/A	2,525	N/A
7 Summerland (23.0- 25.0)	2.2	2-L/U	45	45.0	N/A	40.5	46.0	B	5.5	2,004	N/A	1,967	N/A
8 Ramrod (25.0- 27.5)	2.3	2-L/U	45	45.0	N/A	40.5	46.4	B	5.9	2,247	N/A	1,866	N/A
9 Torch (27.5- 29.5)	2.1	2-L/U	45	45.0	N/A	40.5	48.0	A	7.5	2,608	N/A	2,087	N/A
10 Big Pine (29.5- 33.0)	3.4	2-L/U	45	45.0	3.3	37.2	38.7	C	1.5	845	N/A	1,520	N/A
11 Bahia Honda (33.0- 40.0)	7.0	2-L/U (70%) 4-L/D (30%)	45/50/55	52.1	N/A	47.6	53.4	B	5.8	6,723	N/A	7,187	N/A
12 7-Mile Bridge (40.0- 47.0)	6.8	2-L/U	55	55.0	N/A	50.5	55.1	B	4.6	5,180	N/A	3,716	N/A
13 Marathon (47.0- 54.0)	7.3	2-L/U (13%) 4-L/D (87%)	35/45	42.2	N/A	22	36.4	A	14.4	17,408	N/A	17,771	N/A
14 Grassy (54.0- 60.5)	6.4	2-L/U	45/55	54.4	1.5	48.4	51.3	C	2.9	3,074	0	0	0
15 Duck (60.5- 63.0)	2.7	2-L/U	55	55.0	N/A	50.5	53.7	B	3.2	1,431	N/A	1,565	N/A
16 Long (63.0- 73.0)	9.9	2-L/U	55/45	53.5	N/A	49	52.2	B	3.2	5,246	N/A	6,722	N/A
17 L Matecumbe (73.0- 77.5)	4.5	2-L/U	55	55.0	N/A	50.5	49.6	D	-0.9	(671)	1196	0	940
18 Tea Table (77.5- 79.5)	2.2	2-L/U	55/45	54.6	N/A	50.1	49.2	D	-0.9	(328)	571	0	727
19 U Matecumbe (79.5- 84.0)	4.1	2-L/U	45	45.0	N/A	40.5	41.9	C	1.4	951	N/A	611	N/A
20 Windley (84.0- 86.0)	1.9	2-L/U	45	45.0	N/A	40.5	42.7	C	2.2	692	N/A	4,468	N/A
21 Plantation (86.0- 91.5)	5.8	2-L/U	45	45.0	3.6	36.9	41.5	B	4.6	4,418	N/A	2,881	N/A
22 Tavernier (91.5- 99.5)	8.0	4-L/D	45/50	47.1	2.2	40.4	48.8	A	8.4	11,128	N/A	9,539	N/A
23 Key Largo (99.5- 106.0)	6.8	4-L/D	35/45	44.4	3.3	36.6	44.8	A	8.2	9,234	N/A	9,121	N/A
24 Cross (106.0- 112.5)	6.2	2-L/U	35/45/55	48.2	N/A	43.7	52.4	A	8.7	8,932	N/A	7,187	N/A
Overall	108.3					45.0	47.1	C	2.1				
												97,064	

**TURN LANES • CURBED AND UNCURBED MEDIANS**

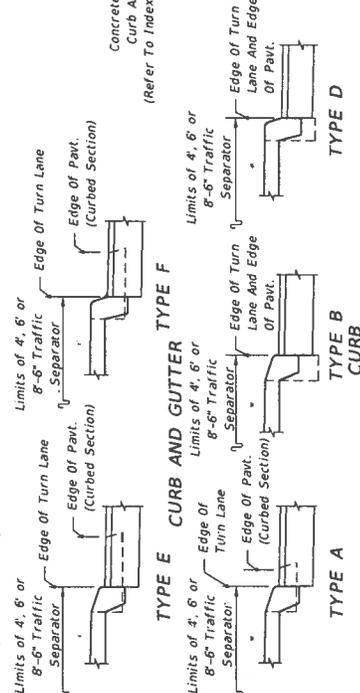
Design Speed (mph)	URBAN CONDITIONS			RURAL CONDITIONS		
	Clearance Distance $L_1$	Brake To Stop Distance $L_2$	Total Decel. Distance $L$	Clearance Distance $L_1$	Brake To Stop Distance $L_2$	Total Decel. Distance $L$
35	70	75	145	110	—	—
40	80	75	155	120	—	—
45	85	100	185	135	—	—
50	40/44	105	135	240	160	160
55	48	125	—	225	350	195
60	52	145	—	260	405	230
65	55	170	—	290	460	270

**DESIGN NOTES**

1. Basis for turn-lane configurations:
  - Informed Driver.
  - Stop condition (With Or Without Stop Control).
  - Wet Pavement.
  - Reaction preceding entry point.
  - Minimum braking distance for urban conditions.
  - 75 min. for  $L_1$ .
  - Comfortable deceleration rates for rural conditions. (ASHTO 2001 threshold rate of 11.2 ft./s<sup>2</sup>).

**GENERAL NOTES**

1. The plan views shown are for turn lane taper shapes and dimensional purposes only, they do not prescribe the use of curb, curb and gutter, shoulders nor separators specifically to either rural or urban conditions.
2. Total deceleration distances must not be reduced except where lesser values are imposed by unreluctable control points.
3. Right turn lane tapers and distances identical to left turn lanes under stop control conditions. Right turn lane tapers and/or distances are site specific under free flow or yield conditions.
4. These left turn configurations apply to continuous left turn lanes only where specifically called for in the plans.
5. For pavement markings see Index No. 17346.



**MEDIAN CURB AND TRAFFIC SEPARATOR JUNCTURE DETAILS**



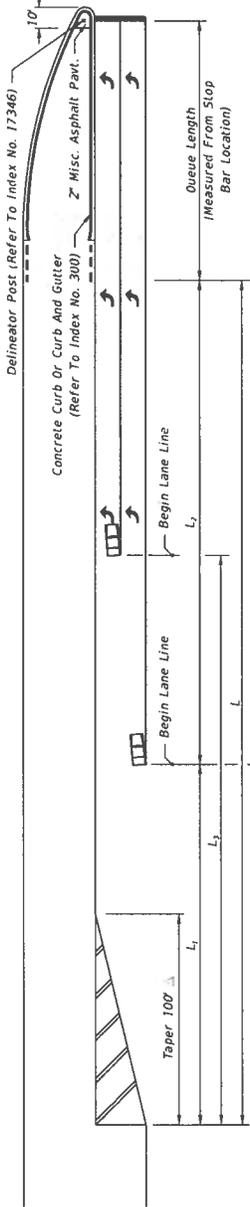
DESCRIPTION:

LAST REVISION	07/01/05
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FDOT DESIGN STANDARDS  
FY 2012/2013

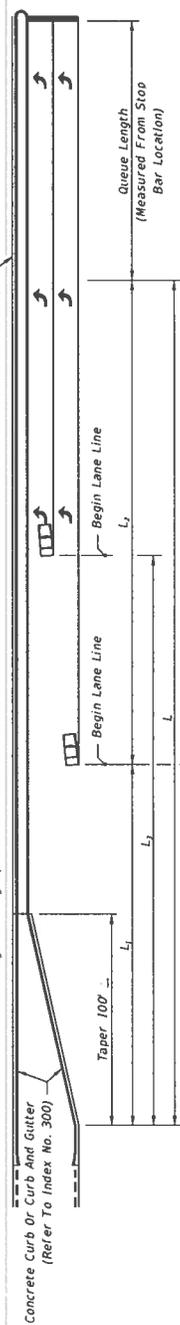
TURN LANES

SHEET NO.	301
INDEX NO.	1



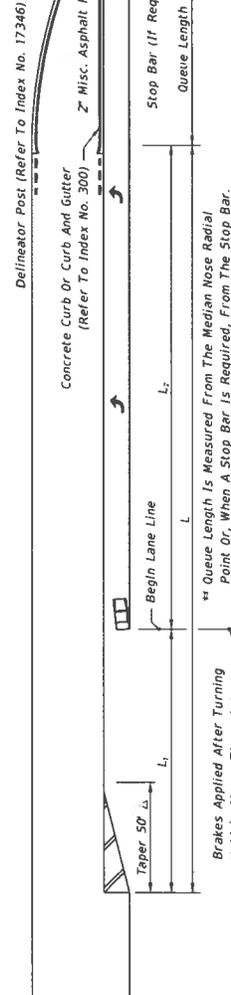
**FLUSH AND/OR CURBED SEPARATION**

Traffic Separator (Refer To Index No. 302)



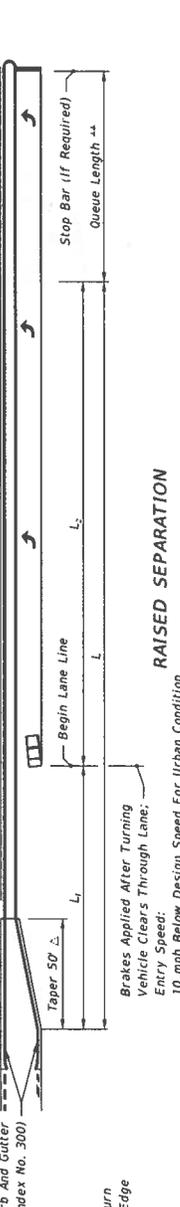
**RAISED SEPARATION**

**DOUBLE LEFT TURNS**



**FLUSH AND/OR CURBED SEPARATION**

Traffic Separator (Refer To Index No. 302)



**RAISED SEPARATION**

**SINGLE LEFT TURNS**

- The length of taper may be increased to  $L_1$  for single left turns and  $L_1$  for double left turns when:
  - a. Left turn queue vehicles are adequately provided for within the design queue length.
  - b. Through vehicle queues will not block access to left turn lane.
  - c. Approved by District Design Engineer.

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

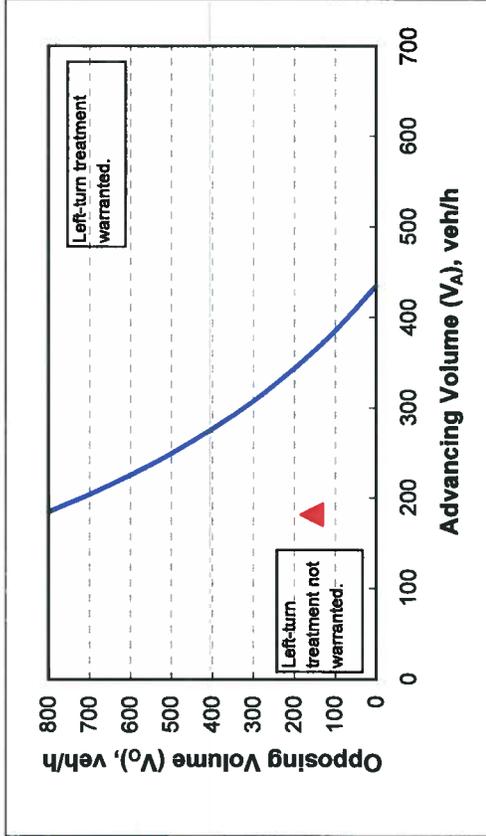
2-lane roadway (English)

INPUT

Variable	Value
85 <sup>th</sup> percentile speed, mph:	25
Percent of left-turns in advancing volume ( $V_A$ ), %:	33%
Advancing volume ( $V_A$ ), veh/h:	181
Opposing volume ( $V_O$ ), veh/h:	158

OUTPUT

Variable	Value
Limiting advancing volume ( $V_A$ ), veh/h:	360
<b>Guidance for determining the need for a major-road left-turn bay:</b> Left-turn treatment <b>NOT</b> warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

**Traffic Signal Warrant Analysis**  
**For Submittal to FDOT & Monroe County**

**CVS Pharmacy, Stock Island**  
**Northeast Quadrant of US 1 (Overseas Highway & 3<sup>rd</sup> Street)**  
**Stock Island, Monroe County, Florida**

*Prepared for:*



2651 McCormick Drive  
Clearwater, FL 33759

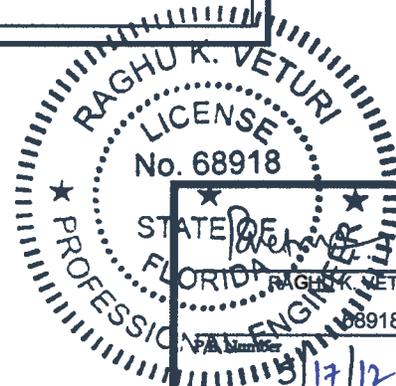
May 2012



**Engineers**  
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*Certificate of Authorization No. 00003215*

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STATE OF FLORIDA	RAGHU K. VETURI, P.E.
PROFESSIONAL ENGINEER	68918
PA Number	
Date	5/17/12

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APPENDIX G	TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS - EXISTING

## 1.0 Executive Summary

CPH Engineers, Inc. (CPH) has prepared this Traffic Signal Warrant Study for submittal to Monroe County and the Florida Department of Transportation associated with a CVS Pharmacy proposed for construction in the year 2013 located in the northeast quadrant of the intersection of US 1 (Overseas Highway) & 3rd Street, Stock Island, Monroe County, Florida (see Figure 1, Site Location Map).

This Traffic Signal Warrant Analysis evaluated the adjacent, subject intersection of US 1 & 3<sup>rd</sup> Street for the installation of a traffic signal based upon existing and proposed conditions, Monroe County requirements, and criteria detailed in the Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition, Chapter 4 Section C. Data for the Traffic Signal Warrant Analysis included the trip generation data, hourly traffic distribution data for similar CVS Pharmacies and existing traffic counts at the proposed location on US 1 and 3<sup>rd</sup> Street. A field visit was conducted on Tuesday May 15, 2012 to observe the existing conditions and local roadway network connectivity.

The Traffic Signal Warrant Analysis of the existing conditions plus the projected CVS traffic volumes indicate Warrants 1 and 2 will be met with the addition of the project, and thus a traffic signal may be considered for installation. In addition to evaluating the proposed future traffic volumes with the project, a supplemental Traffic Signal Warrant Analysis was conducted for the existing traffic volumes only (see analysis sheets in Appendix G), and the results indicate Warrants 1 and 2 are also met not only upon the proposed conditions, but also the existing conditions and traffic volumes recorded in April alone.

According to *Monroe County Traffic Report Guidelines Manual*, the effect of traffic signal on travel speed on US 1 should be evaluated. Accordingly, an analysis was conducted to evaluate the effects of new traffic signal on travel speed along US 1. Based on the analysis, the proposed signal is not anticipated to reduce the LOS on the US 1 corridor from Key West to mainland Monroe County (a total of 108 miles).

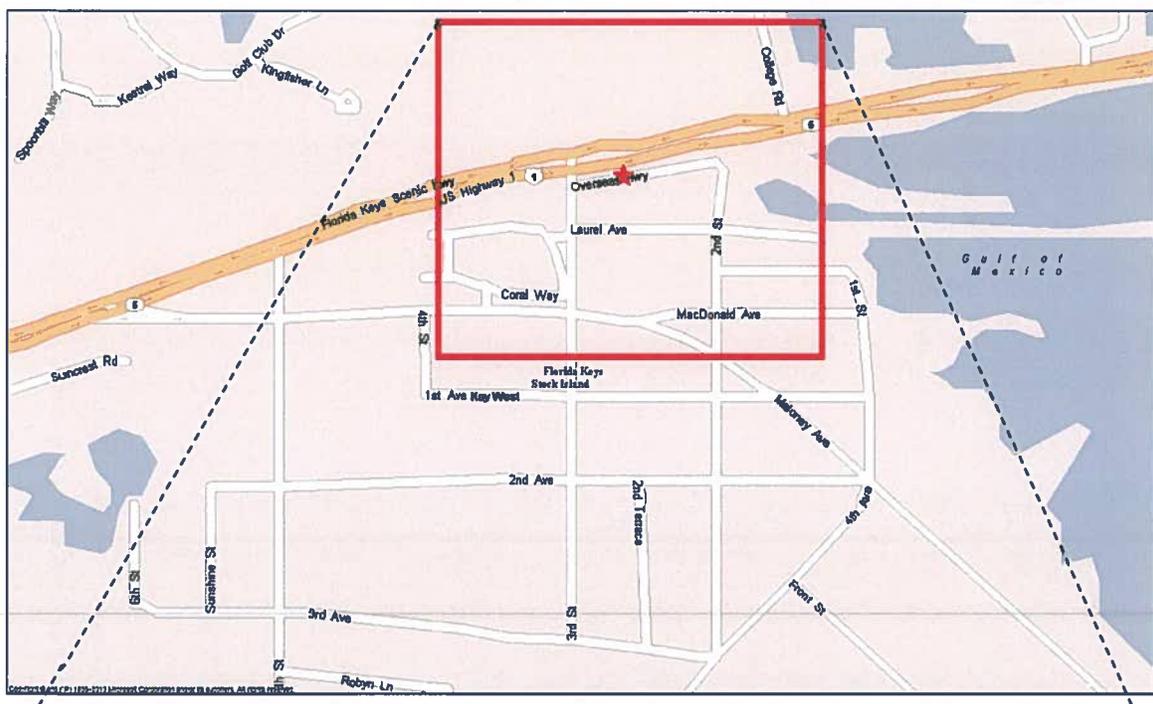
Pursuant to discussions with Monroe County staff, alternatives to the installation of a traffic signal should be considered including median design modification and alternative routes. Based upon the anticipated travel patterns, traffic volumes, and Florida Department of Transportation design guidelines, median modifications or other non-signalized traffic control modifications are not anticipated to substitute for the installation of a traffic signal since no crash patterns or history have been identified at this location.

In addition, while the site has indirect access to an existing traffic signal through a local road network on the south/east side of US 1, given existing traffic volumes and patterns and the results which indicate a traffic signal is warranted based upon the existing traffic volumes alone (and the fact those vehicles could use the alternate traffic signal at MacDonald Avenue & US 1) and an anticipated pass-by traffic rate of 49% associated with the proposed CVS, a traffic signal is recommended for installation at the intersection of US 1 & 3<sup>rd</sup> Street with the construction of the proposed CVS Pharmacy.

## 2.0 Introduction

CPH Engineers, Inc. (CPH) has conducted a traffic signal warrant analysis for the proposed CVS Pharmacy in the northeast quadrant of the intersection of US 1 (Overseas Highway) & 3<sup>rd</sup> Street in Stock Island, Monroe County County, Florida for the intersection of US 1 & 3<sup>rd</sup> Street. This Traffic Signal Warrant Analysis was conducted based upon the projected traffic conditions at the subject project driveway intersections. The proposed signalized intersection is indicated in Figure 1, site location and in Figure 2, site plan.

The procedures used to conduct the Traffic Signal Warrant Analysis were in accordance with the criteria detailed in the Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition, Chapter 4 Section C. The data for the Traffic Signal Warrant Analysis included the trip generation data, hourly traffic distribution data for similar CVS Pharmacies and existing traffic counts at the proposed locations on US 1 and 3<sup>rd</sup> Street.



**FIGURE 2-1 SITE LOCATION MAP**  
**CVS Pharmacy, Stock Island, FL**  
**NE Quadrant of US 1 & 3<sup>rd</sup> Street**  
**Monroe County, Florida**



Engineers  
Planners  
Landscape Architects  
Surveyors  
Construction Management  
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[www.cphengineers.com](http://www.cphengineers.com)



### 3.0 Existing Conditions

The proposed signalized intersection of US 1 & 3<sup>rd</sup> Street is located in Stock Island, Monroe County, Florida as shown in Appendix A, Site Location. US 1 (Overseas Highway), referred to as the major street throughout this report, is a four-lane divided roadway with a speed limit of approximately 45 miles per hour (mph) around the subject intersection. US 1 primarily runs north and south. A field visit was conducted on May 15, 2012.

3<sup>rd</sup> Street, referred to as the minor street throughout this report, is a two-lane undivided roadway with a posted speed limit of 25 mph. 3<sup>rd</sup> Street serves as access for traffic in and out of CVS Pharmacy and to the local traffic.

Please see the following pictures of the subject intersection, US 1 & 3<sup>rd</sup> Street.



US 1, Looking North



US 1, Looking South



3<sup>rd</sup> Street, Looking West

#### 4.0 Data Collection

CPH coordinated and conducted the following data collection efforts at the following subject intersections for existing conditions.

- 72 hour machine (tube) counts
- Basic condition Diagram showing the existing conditions

72 hour machine (tube) counts were collected at the location of the proposed signalized intersection of US 1 (major street) and 3<sup>rd</sup> Street (minor street). The data was collected from April 26, 2012 through April 28, 2012 for a 72-hour period in one-hour intervals. The data collected was then processed and a determination was made to identify the eight highest hourly volumes at the proposed intersections.

72-hour tube counts on driveways at three (3) similar CVS Pharmacies at Islamorada, Key Largo and Tavernier were collected to determine the hourly distribution. In addition, the projected traffic data from the proposed Driveways were split into hourly volumes using CVS Hourly traffic distribution (See Appendix D) data to determine the approach volumes from 3<sup>rd</sup> Street to be used as minor street approach input. Trip generation data and traffic volume figures are attached in Appendix B and Appendix C for reference

The eight highest hourly volumes from minor street approach, 3<sup>rd</sup> Street were determined, and used as input for the analysis, along with the traffic counts for the same eight highest hours on the major street approaches (processed tube counts). The traffic projected from the proposed CVS Pharmacy and existing traffic on 3<sup>rd</sup> Street was utilized as the minor street volumes.

The total approach volumes of the minor streets were considered as input for signal warrant analysis given the magnitude of left and right turn traffic volumes. The eight highest hours determined were between 7:00 am to 9:00 am and 12:00 pm to 6:00 pm. The raw machine counts (tube counts) are included in Appendix A. Per the MUTCD criteria for traffic signal warrant analysis the minor street approach volumes may be considered to be sum of traffic on the approach (left, thru and right) or a combination of select movements based on engineering judgment. Further detailed Worksheets related to the Traffic Signal Warrant Analysis are included in Appendix D and Appendix E.

## 5.0 Traffic Signal Warrant Analysis

A review of the signal warrant criteria and guidelines published in the *Manual on Uniform Traffic Control Devices (MUTCD) 2009 edition* was performed to identify the signal warrant criteria that applies to the subject intersection. The existing traffic volume data collected at the subject intersections, as well as the following factors, were considered in order to determine which of the warrants 1 through 9 apply to the subject intersections:

### ***US 1 & 3<sup>rd</sup> Street***

- the posted speed on the major street is 45 mph;
- the lane geometry on each of the major approaches is 2 lanes or more (3 lanes);
- Currently, an emergency signal exists at this intersection;
- the lane geometry on the highest minor street (westbound) approach is considered as 1 lane approach;
- this intersection is not subject to an adjacent land use which attracts or discharges large number of vehicles over a short time;
- excessive existing pedestrian delays in crossing the major street, as well as considerable pedestrian volumes, were not considered given that the proposed intersection has not been constructed;
- school children do not cross the major street at this location;
- the subject intersection is a not a part of a coordinated signal system; and
- this being a future proposed intersection crash warrant was not performed, as frequency or severity of traffic crashes were not the principal reason for considering a traffic signal at this location.

### ***Warrant Criteria***

Based upon a review of the Traffic Signal Warrants 1 through 8, the data collected, and the factors identified above, it was determined that traffic signal warrants 1, and 2 are the warrant criteria most appropriate for the subject intersections based on the available information.

### ***Warrants 1 & 2***

The traffic volumes and intersection data were evaluated on the basis of warrants 1 and 2. A summary of the results are presented in detail in Table 4-1, and detailed analysis is provided in Appendix D, Traffic Signal Warrant Worksheets. The 70% rule, as detailed in the worksheets in the Appendix D, is considered in lieu of the 100% rule when the posted speed limit on the major street exceeds 45 mph or the community is isolated with a population of less than 10,000.

The population of Monroe County, where the project site is located has a population less than 10,000 and at the subject intersection, the posted speed limit on major street approach segment is approximately 45 mph as noted earlier. Thus the condition is evaluated for the 70% rule.

A summary of traffic signal warrant analysis results are presented in Table 5-1.

**Table 5-1 Traffic Signal Warrant Analysis Results**

<b>Warrants and Conditions</b>	<b>Are Warrant and Condition Criteria Met?</b>			<b>Is the Warrant Met?</b>
<b>Warrant 1</b>	<b>Eight-Hour Vehicular Volume</b>			Yes
	<b>100%</b>	<b>80%</b>	<b>70%</b>	
	No	No	No	
<b>Condition A</b>	No	No	No	Yes
<b>Condition B</b>	Yes	Yes	Yes	
<b>Warrant 2</b>	<b>Four-Hour Vehicular Volume</b>			Yes
	100%		70%	
	No		Yes	
<b>MUTCD Graphs 4C-1 and 4C-2</b>	Peak Hour			N/A
	N/A			
<b>Warrant 3</b>	Pedestrian Volume			N/A
	N/A			
<b>Warrant 4</b>	School Crossing			N/A
	N/A			
<b>Warrant 5</b>	Coordinated Signal System			N/A
	N/A			
<b>Warrant 6</b>	Crash Experience			N/A
	N/A			
<b>Warrant 7</b>	Roadway Network			N/A
	N/A			
<b>Warrant 8</b>	Intersection Near a Grade Crossing			N/A
	N/A			
<b>Warrant 9</b>				

Based upon the results of the analysis, for the intersection of US 1 & 3<sup>rd</sup> Street, Warrants 1 and 2 for the 70% rule were met. Hence a traffic signal may be considered for installation at this intersection based upon projected volumes.

Since no crash history or patterns were identified as discussed with Monroe County staff, Warrant 7, Crash Experience was not applicable and was not evaluated. In addition, since no operational or traffic crash patterns were identified, no median modifications or alternative measured have been identified.

## 6.0 Effect of New Traffic Signal on Travel Speed along US 1

According to *Monroe County Traffic Report Guidelines Manual*, the effect of traffic signal on travel speed on US 1 should be evaluated. Accordingly, the following analysis was conducted to evaluate the effects of new traffic signal on travel speed along US 1:

The new traffic signal is anticipated to create an additional delay due to lost time, reaction time, and deceleration time, and stop time due to red signal. The following are the assumptions utilized in calculating the revised travel time:

Lost Time = 4 seconds

Brake-Reaction Time = 2.5 seconds

Deceleration Time = 3.0 seconds

Stop Time due to Red Signal = 10.5 seconds

Total Signal Delay =  $4+2.5+3.0+10.5 = 20$  seconds

Median Travel Speed on Segment 1 = 33.7 mph

Length of Segment 1 = 1.1 miles

Median Travel Speed =  $1.1 \times 3600 \text{ seconds per hour} / \text{Average Travel Time}$

Therefore, Average Travel Time =  $1.1 \times 3600 / 33.7 = 117.5$  seconds

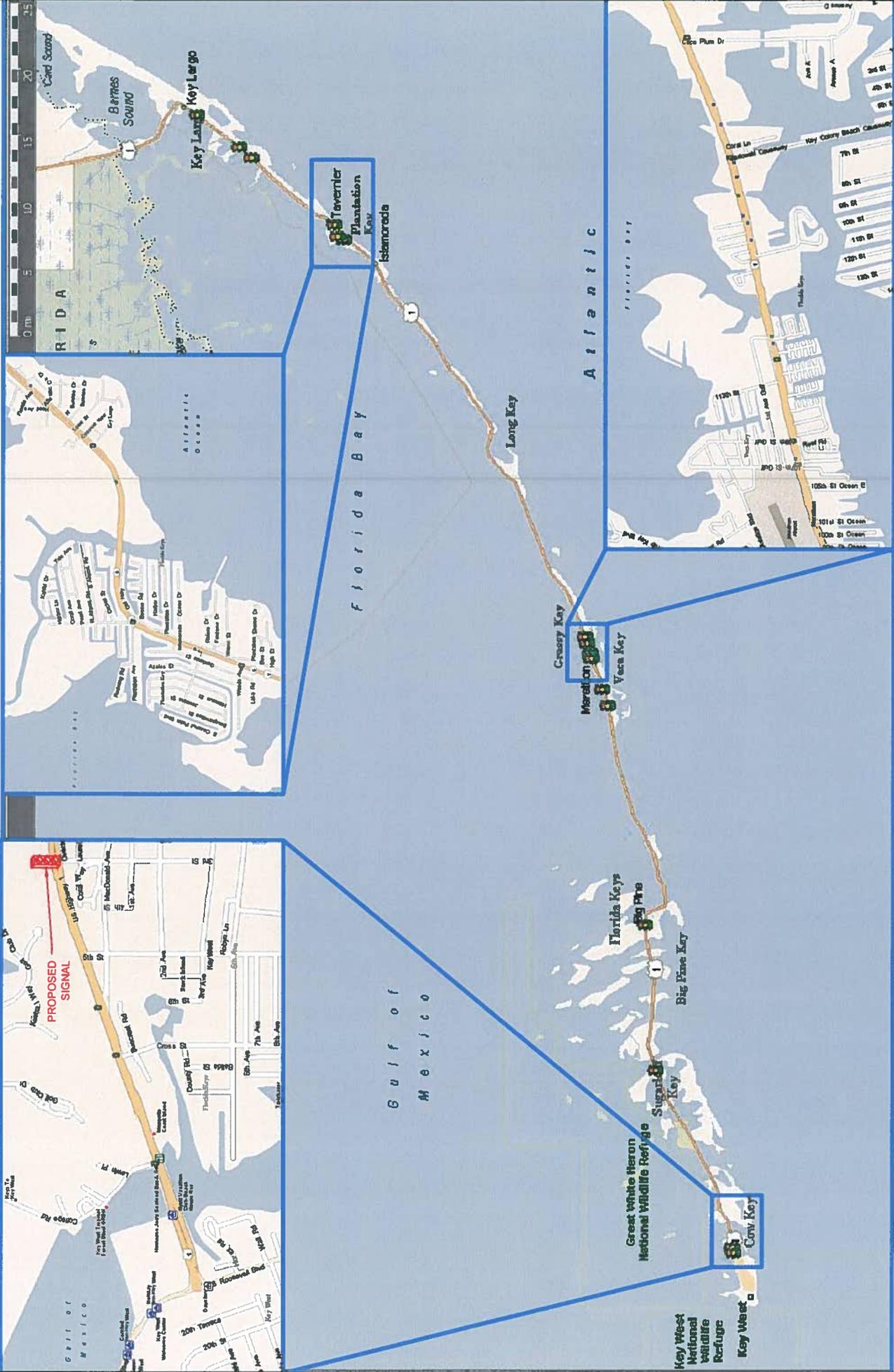
Revised Average Travel Time due to New Signal =  $117.5 + 20 = 137.5$  seconds

Revised Median Travel Speed =  $1.1 \times 3600 / 137.5 = 28.8$  mph

Adjusted Speed for signal =  $33.7 - 28.8 = 4.9$  mph

Please see the revised 2011 Level of Service and Reserve Capacity table. In addition, please see Figure 6-1, Signal Location Map for locations of signals along the US 1 study corridor from the mainland to Key West. Based on these calculations, the proposed signal is not anticipated to reduce the LOS on the US 1 corridor from Key West to mainland Monroe County (a total of 108 miles). Please see Table 6-1 for revised LOS and Reserve Capacity on US 1 for 108 miles.

FIGURE 6-1 SIGNAL LOCATION MAP



**gph**

Engineers (C.O.A. No. 3215)  
 Architects (L.C. No. A42600256)  
 Surveyors (L.B. No. 7143)  
 Landscape Arch. (L.C. No. LC0000286)  
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TABLE 6-1 2011 LEVEL OF SERVICE AND RESERVE CAPACITY (REVISED)

SEGMENT	LENGTH (miles)	FACILITY TYPE	POSTED SPEED		ADJ. FOR SIGNAL (mph)	ADJUSTED LOS C CRITERIA (mph)	MEDIAN TRAVEL SPEED (mph)	LOS	RESERVE SPEED (mph)	2011	
			Limits (mph)	Average (mph)						MAXIMUM RESERVE VOLUME (trips)	5% ALLOCATION BELOW LOS C (trips)
1. Stock Island (4.0 - 5.0)	1.1	4-L/D	30/35/45	38.3	4.9	22.0	28.8	B	6.8	1,239	N/A
2. Boca Chica (5.0 - 9.0)	3.9	4-L/D	55/45	54.1	N/A	49.6	58.4	A	8.8	5,683	N/A
3. Big Coppitt (9.0 - 10.5)	1.5	2-L/U	45/55	48.3	N/A	43.8	45.9	C	2.1	522	N/A
4. Saddlebunch (10.5 - 16.5)	5.8	2-L/U	45/55	54.1	N/A	49.6	52.8	B	3.2	3,074	N/A
5. Sugarloaf (16.5 - 20.5)	3.9	2-L/U	45/55	52.1	4.2	43.4	46.7	B	3.3	2,131	N/A
6. Cudjoe (20.5 - 23.0)	2.5	2-L/U	45/55	45.5	N/A	41.0	46.8	B	5.8	2,401	N/A
7. Sumerland (23.0 - 25.0)	2.2	2-L/U	45	45	N/A	40.5	46.0	B	5.5	2,004	N/A
8. Ramrod (25.0 - 27.5)	2.3	2-L/U	45	45	N/A	40.5	46.4	B	5.9	2,247	N/A
9. Torch (27.5 - 29.5)	2.1	2-L/U	45	45	N/A	40.5	48.0	A	7.5	2,608	N/A
10. Big Pine (29.5 - 33.0)	3.4	2-L/U	45	45	3.3	37.2	38.7	C	1.5	845	N/A
11. Bahia Honda (33.0 - 40.0)	7	2-L/U (70%) 4-L/D (30%)	45/50/55	52.1	N/A	47.6	53.4	B	5.8	6,723	N/A
12. 7-Mile Bridge (40.0 - 47.0)	6.8	2-L/U	55	55	N/A	50.5	55.1	B	4.6	5,180	N/A
13. Marathon (47.0 - 54.0)	7.3	2-L/U (13%) 4-L/D (87%)	35/45	42.2	N/A	22.0	36.4	A	14.4	17,408	N/A
14. Grassy (54.0 - 60.5)	6.4	2-L/U	45/55	54.4	1.5	48.4	51.3	C	2.9	3,074	0
15. Duck (60.5 - 63.0)	2.7	2-L/U	55	55	N/A	50.5	53.7	B	3.2	1,431	N/A
16 Long (63.0 - 73.0)	9.9	2-L/U	55/45	53.5	N/A	49.0	52.2	B	3.2	5,246	N/A
17. L Matecumbe (73.0 - 77.5)	4.5	2-L/U	55	55	N/A	50.5	49.6	D	-0.9	-671	1196
18. Tea Table (77.5 - 79.5)	2.2	2-L/U	55/45	54.6	N/A	50.1	49.2	D	-0.9	-328	571
19. U Matecuba (79.5 - 84.0)	4.1	2-L/U	45	45	N/A	40.5	41.9	C	1.4	951	N/A
20. Windley (84.0 - 86.0)	1.9	2-L/U	45	45	N/A	40.5	42.7	C	2.2	692	N/A
21. Plantation (86.0 - 91.5)	5.8	2-L/U	45	45	3.6	36.9	41.5	B	4.6	4,418	N/A
22. Tavernier (91.5 - 99.5)	8	4-L/D	45/50	47.1	2.2	40.4	48.8	A	8.4	11,128	N/A
23. Key Largo (99.5 - 106.0)	6.8	4-L/D	35/45	44.4	3.3	36.6	44.8	A	8.2	9,234	N/A
24. Cross (106.0 - 112.5)	6.2	2-L/U	35/45/55	48.2	N/A	43.7	52.4	A	8.7	8,932	N/A
<b>Overall</b>	<b>108.3</b>					<b>45.0</b>	<b>47.1</b>	<b>C</b>	<b>2.1</b>	<b>96,172</b>	

## 7.0 Conclusions

Based upon the existing and projected conditions at the subject intersection, the factors identified that are critical to the analysis, and the review of the signal warrant criteria and guidelines published in the *Manual of Uniform Traffic Control Devices (MUTCD) 2003 Edition*, it has been determined that for the intersection of US 1 & 3<sup>rd</sup> Street, Warrants 1, and 2 were met as a result of this analysis based upon both existing and projected conditions. In addition, no alternative measures have been identified since the warrants addressed are volume-based, and no existing operational or safety issues have been identified. Since a traffic signal is warranted based on MUTCD warrant criteria, and the traffic signal is anticipated to accommodate the needs of both existing and projected traffic volumes, and the LOS on US 1 is not anticipated to change due to the proposed signal, a traffic signal is recommended for installation at subject intersection of US 1 & 3<sup>rd</sup> Street.

**APPENDIX A**  
**TRAFFIC DATA**

---

2010 Peak Season Factor Category Report - Report Type: ALL  
 Category: 9000 MONROE COUNTYWIDE

Week	Dates	SF	MOCF: 0.93	PSCF
1	01/01/2010 - 01/02/2010	1.05		1.13
2	01/03/2010 - 01/09/2010	1.03		1.11
3	01/10/2010 - 01/16/2010	1.01		1.09
4	01/17/2010 - 01/23/2010	1.00		1.08
5	01/24/2010 - 01/30/2010	0.99		1.07
6	01/31/2010 - 02/06/2010	0.97		1.04
* 7	02/07/2010 - 02/13/2010	0.96		1.03
* 8	02/14/2010 - 02/20/2010	0.95		1.02
* 9	02/21/2010 - 02/27/2010	0.94		1.01
*10	02/28/2010 - 03/06/2010	0.92		0.99
*11	03/07/2010 - 03/13/2010	0.90		0.97
*12	03/14/2010 - 03/20/2010	0.89		0.96
*13	03/21/2010 - 03/27/2010	0.90		0.97
*14	03/28/2010 - 04/03/2010	0.91		0.98
*15	04/04/2010 - 04/10/2010	0.92		0.99
*16	04/11/2010 - 04/17/2010	0.93		1.00
*17	04/18/2010 - 04/24/2010	0.94		1.01
*18	04/25/2010 - 05/01/2010	0.95		1.02
*19	05/02/2010 - 05/08/2010	0.96		1.03
20	05/09/2010 - 05/15/2010	0.97		1.04
21	05/16/2010 - 05/22/2010	0.97		1.04
22	05/23/2010 - 05/29/2010	0.98		1.06
23	05/30/2010 - 06/05/2010	0.98		1.06
24	06/06/2010 - 06/12/2010	0.99		1.07
25	06/13/2010 - 06/19/2010	0.99		1.07
26	06/20/2010 - 06/26/2010	0.99		1.07
27	06/27/2010 - 07/03/2010	0.99		1.07
28	07/04/2010 - 07/10/2010	0.99		1.07
29	07/11/2010 - 07/17/2010	1.00		1.08
30	07/18/2010 - 07/24/2010	1.00		1.08
31	07/25/2010 - 07/31/2010	1.01		1.09
32	08/01/2010 - 08/07/2010	1.02		1.10
33	08/08/2010 - 08/14/2010	1.02		1.10
34	08/15/2010 - 08/21/2010	1.03		1.11
35	08/22/2010 - 08/28/2010	1.05		1.13
36	08/29/2010 - 09/04/2010	1.08		1.16
37	09/05/2010 - 09/11/2010	1.10		1.18
38	09/12/2010 - 09/18/2010	1.13		1.22
39	09/19/2010 - 09/25/2010	1.11		1.20
40	09/26/2010 - 10/02/2010	1.10		1.18
41	10/03/2010 - 10/09/2010	1.09		1.17
42	10/10/2010 - 10/16/2010	1.08		1.16
43	10/17/2010 - 10/23/2010	1.07		1.15
44	10/24/2010 - 10/30/2010	1.07		1.15
45	10/31/2010 - 11/06/2010	1.07		1.15
46	11/07/2010 - 11/13/2010	1.06		1.14
47	11/14/2010 - 11/20/2010	1.06		1.14
48	11/21/2010 - 11/27/2010	1.05		1.13
49	11/28/2010 - 12/04/2010	1.05		1.13
50	12/05/2010 - 12/11/2010	1.05		1.13
51	12/12/2010 - 12/18/2010	1.05		1.13
52	12/19/2010 - 12/25/2010	1.03		1.11
53	12/26/2010 - 12/31/2010	1.01		1.09

\* Peak Season

# Video Data Solutions, Inc.

CLIENT : CPH ENGINEERS, INC.  
 JOB NO : B11269  
 PROJECT: Stock Island, FL  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 Overseas Hwy South of 3rd Street

Start Time	26-Apr-12 Thu	NB	SB	Combined Total	
12:00 AM		103	58	161	█
01:00		65	45	110	█
02:00		43	28	71	█
03:00		51	34	85	█
04:00		92	82	174	█
05:00		154	143	297	█
06:00		391	585	976	█
07:00		576	1291	1867	█
08:00		645	958	1603	█
09:00		664	761	1425	█
10:00		741	798	1539	█
11:00		783	874	1657	█
12:00 PM		883	854	1737	█
01:00		813	846	1659	█
02:00		869	912	1781	█
03:00		1038	971	2009	█
04:00		1143	987	2130	█
05:00		1283	866	2149	█
06:00		887	729	1616	█
07:00		593	513	1106	█
08:00		589	361	950	█
09:00		554	272	826	█
10:00		399	229	628	█
11:00		219	111	330	█
Total		13578	13308		
Percent		50.5%	49.5%		

# Video Data Solutions, Inc.

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

CLIENT : CPH ENGINEERS, INC.  
 JOB NO : B11269  
 PROJECT: Stock Island, FL  
 COUNTY : Monroe

Date Start: 26-Apr-12  
 Overseas Hwy South of 3rd Street

Start Time	27-Apr-12 Fri	NB	SB	Combined Total	
12:00 AM		128	82	210	█
01:00		57	43	100	█
02:00		54	37	91	█
03:00		60	41	101	█
04:00		71	75	146	█
05:00		165	209	374	█
06:00		363	565	928	█
07:00		535	1205	1740	█
08:00		633	913	1546	█
09:00		673	764	1437	█
10:00		773	784	1557	█
11:00		828	881	1709	█
12:00 PM		854	918	1772	█
01:00		812	831	1643	█
02:00		899	997	1896	█
03:00		1011	1004	2015	█
04:00		1157	943	2100	█
05:00		1175	916	2091	█
06:00		898	700	1598	█
07:00		641	498	1139	█
08:00		630	404	1034	█
09:00		571	336	907	█
10:00		385	318	703	█
11:00		257	194	451	█
Total		13630	13658		
Percent		49.9%	50.1%		

# Video Data Solutions, Inc.

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 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 Overseas Hwy South of 3rd Street

Start Time	28-Apr-12 Sat	NB	SB	Combined Total	
12:00 AM		184	115	299	
01:00		120	68	188	
02:00		83	13	96	
03:00		61	12	73	
04:00		95	116	211	
05:00		131	108	239	
06:00		201	246	447	
07:00		288	461	749	
08:00		422	551	973	
09:00		571	664	1235	
10:00		815	765	1580	
11:00		776	943	1719	
12:00 PM		759	933	1692	
01:00		760	964	1724	
02:00		707	912	1619	
03:00		845	877	1722	
04:00		894	777	1671	
05:00		765	699	1464	
06:00		749	605	1354	
07:00		592	506	1098	
08:00		566	368	934	
09:00		513	349	862	
10:00		405	265	670	
11:00		302	145	447	
Total		11604	11462		
Percent		50.3%	49.7%		
Grand Total		38812	38428		
Percentage		50.2%	49.8%		
ADT		ADT 25,747		AADT 25,747	

**Video Data Solutions, Inc.**

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 JOB NO : B11269  
 PROJECT: Stock Island  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 Overseas Hwy North of 3rd Street

Start Time	26-Apr-12 Thu	NB	SB	Combined Total	
12:00 AM		112	63	175	█
01:00		74	62	136	█
02:00		41	28	69	█
03:00		56	37	93	█
04:00		97	85	182	█
05:00		151	156	307	█
06:00		390	558	948	█
07:00		652	1418	2070	█
08:00		716	1113	1829	█
09:00		723	856	1579	█
10:00		803	862	1665	█
11:00		845	968	1813	█
12:00 PM		981	922	1903	█
01:00		902	959	1861	█
02:00		946	971	1917	█
03:00		1130	1066	2196	█
04:00		1254	1078	2332	█
05:00		1395	935	2330	█
06:00		988	803	1791	█
07:00		632	547	1179	█
08:00		635	408	1043	█
09:00		567	310	877	█
10:00		424	252	676	█
11:00		226	122	348	█
Total		14740	14579		
Percent		50.3%	49.7%		

**Video Data Solutions, Inc.**

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 PROJECT: Stock Island  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 Overseas Hwy North of 3rd Street

Start Time	27-Apr-12 Fri	NB	SB	Combined Total	
12:00 AM		144	84	228	█
01:00		59	42	101	█
02:00		55	39	94	█
03:00		59	44	103	█
04:00		84	80	164	█
05:00		163	186	349	█
06:00		359	572	931	█
07:00		581	1289	1870	█
08:00		730	1054	1784	█
09:00		710	876	1586	█
10:00		845	856	1701	█
11:00		916	943	1859	█
12:00 PM		961	1013	1974	█
01:00		931	898	1829	█
02:00		956	1100	2056	█
03:00		1105	1074	2179	█
04:00		1263	1081	2344	█
05:00		1267	978	2245	█
06:00		970	768	1738	█
07:00		688	562	1250	█
08:00		661	441	1102	█
09:00		613	374	987	█
10:00		415	335	750	█
11:00		276	203	479	█
Total		14811	14892		
Percent		49.9%	50.1%		

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 PROJECT: Stock Island  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 Overseas Hwy North of 3rd Street

Start Time	28-Apr-12 Sat	NB	SB	Combined Total	
12:00 AM		193	120	313	████████
01:00		131	67	198	██████
02:00		83	23	106	███
03:00		66	14	80	██
04:00		100	117	217	██████
05:00		120	110	230	██████
06:00		222	246	468	██████████
07:00		303	493	796	██████████
08:00		449	605	1054	██████████
09:00		616	709	1325	██████████
10:00		829	852	1681	██████████
11:00		850	976	1826	██████████
12:00 PM		831	1020	1851	██████████
01:00		806	1065	1871	██████████
02:00		785	956	1741	██████████
03:00		876	925	1801	██████████
04:00		959	846	1805	██████████
05:00		809	742	1551	██████████
06:00		792	668	1460	██████████
07:00		629	565	1194	██████████
08:00		569	384	953	██████████
09:00		547	356	903	██████████
10:00		418	286	704	██████████
11:00		314	163	477	██████
Total		12297	12308		
Percent		50.0%	50.0%		
Grand Total		41848	41779		
Percentage		50.0%	50.0%		
ADT		ADT 27,876		AADT 27,876	

# Video Data Solutions, Inc.

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 JOB NO : B11269  
 PROJECT: Stock Island  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 3rd Street East of Overseas Hwy

Start Time	26-Apr-12 Thu	EB	WB	Combined Total	
12:00 AM		7	12	19	█
01:00		11	4	15	█
02:00		3	4	7	█
03:00		8	6	14	█
04:00		14	11	25	█
05:00		19	14	33	█
06:00		59	33	92	█
07:00		157	85	242	█
08:00		159	96	255	█
09:00		103	76	179	█
10:00		92	86	178	█
11:00		106	99	205	█
12:00 PM		103	114	217	█
01:00		133	107	240	█
02:00		103	129	232	█
03:00		106	115	221	█
04:00		134	153	287	█
05:00		96	126	222	█
06:00		77	92	169	█
07:00		62	60	122	█
08:00		47	54	101	█
09:00		33	28	61	█
10:00		29	23	52	█
11:00		11	12	23	█
Total		1672	1539		
Percent		52.1%	47.9%		

# Video Data Solutions, Inc.

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 PROJECT: Stock Island  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 3rd Street East of Overseas Hwy

Start Time	27-Apr-12 Fri	EB	WB	Combined Total	
12:00 AM		8	15	23	█
01:00		2	1	3	█
02:00		2	5	7	█
03:00		7	7	14	█
04:00		10	11	21	█
05:00		13	16	29	█
06:00		45	35	80	█
07:00		139	87	226	█
08:00		134	105	239	█
09:00		126	81	207	█
10:00		101	89	190	█
11:00		98	119	217	█
12:00 PM		117	92	209	█
01:00		115	118	233	█
02:00		86	119	205	█
03:00		123	116	239	█
04:00		143	141	284	█
05:00		90	111	201	█
06:00		69	82	151	█
07:00		74	46	120	█
08:00		58	56	114	█
09:00		38	56	94	█
10:00		33	29	62	█
11:00		21	23	44	█
Total		1652	1560		
Percent		51.4%	48.6%		

# Video Data Solutions, Inc.

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 JOB NO : B11269  
 PROJECT: Stock Island  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 3rd Street East of Overseas Hwy

Start Time	28-Apr-12 Sat	EB	WB	Combined Total	
12:00 AM		10	16	26	█
01:00		3	11	14	█
02:00		3	4	7	█
03:00		5	7	12	█
04:00		7	7	14	█
05:00		12	12	24	█
06:00		28	23	51	█
07:00		67	36	103	█
08:00		64	60	124	█
09:00		79	63	142	█
10:00		93	55	148	█
11:00		85	79	164	█
12:00 PM		92	85	177	█
01:00		99	78	177	█
02:00		69	77	146	█
03:00		81	71	152	█
04:00		77	73	150	█
05:00		72	66	138	█
06:00		67	56	123	█
07:00		66	47	113	█
08:00		32	46	78	█
09:00		35	35	70	█
10:00		28	35	63	█
11:00		22	17	39	█
<b>Total</b>		<b>1196</b>	<b>1059</b>		
<b>Percent</b>		<b>53.0%</b>	<b>47.0%</b>		
<b>Grand Total</b>		<b>4520</b>	<b>4158</b>		
<b>Percentage</b>		<b>52.1%</b>	<b>47.9%</b>		
<b>ADT</b>		<b>ADT 2,893</b>		<b>AADT 2,893</b>	

**APPENDIX B**  
**TRIP GENERATION**

---

CVS Pharmacy, Stock Island, FL  
 Summary of Trip Generation Calculation  
 For 14.6 Th.Sq.Ft. GFA of Pharmacy / Drugstore with Drive-Thru  
 April 13, 2012

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	88.16	14.37	1.00	1287
7-9 AM Peak Hour Enter	1.52	0.00	1.00	22
7-9 AM Peak Hour Exit	1.14	0.00	1.00	17
7-9 AM Peak Hour Total	2.66	1.80	1.00	39
4-6 PM Peak Hour Enter	5.18	0.00	1.00	76
4-6 PM Peak Hour Exit	5.18	0.00	1.00	76
4-6 PM Peak Hour Total	10.35	5.72	1.00	151
AM Pk Hr, Generator, Enter	3.86	0.00	1.00	56
AM Pk Hr, Generator, Exit	4.01	0.00	1.00	59
AM Pk Hr, Generator, Total	7.87	3.21	1.00	115
PM Pk Hr, Generator, Enter	4.61	0.00	1.00	67
PM Pk Hr, Generator, Exit	4.61	0.00	1.00	67
PM Pk Hr, Generator, Total	9.21	4.06	1.00	134
Saturday 2-Way Volume	0.00	0.00	1.00	0
Saturday Peak Hour Enter	3.93	0.00	1.00	57
Saturday Peak Hour Exit	3.93	0.00	1.00	57
Saturday Peak Hour Total	7.85	3.69	1.00	115
Sunday 2-Way Volume	0.00	0.00	1.00	0
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.00	0.00	1.00	0

Note: A zero indicates no data available.  
 Source: Institute of Transportation Engineers  
 Trip Generation, 8th Edition, 2008.

TRIP GENERATION BY MICROTRANS

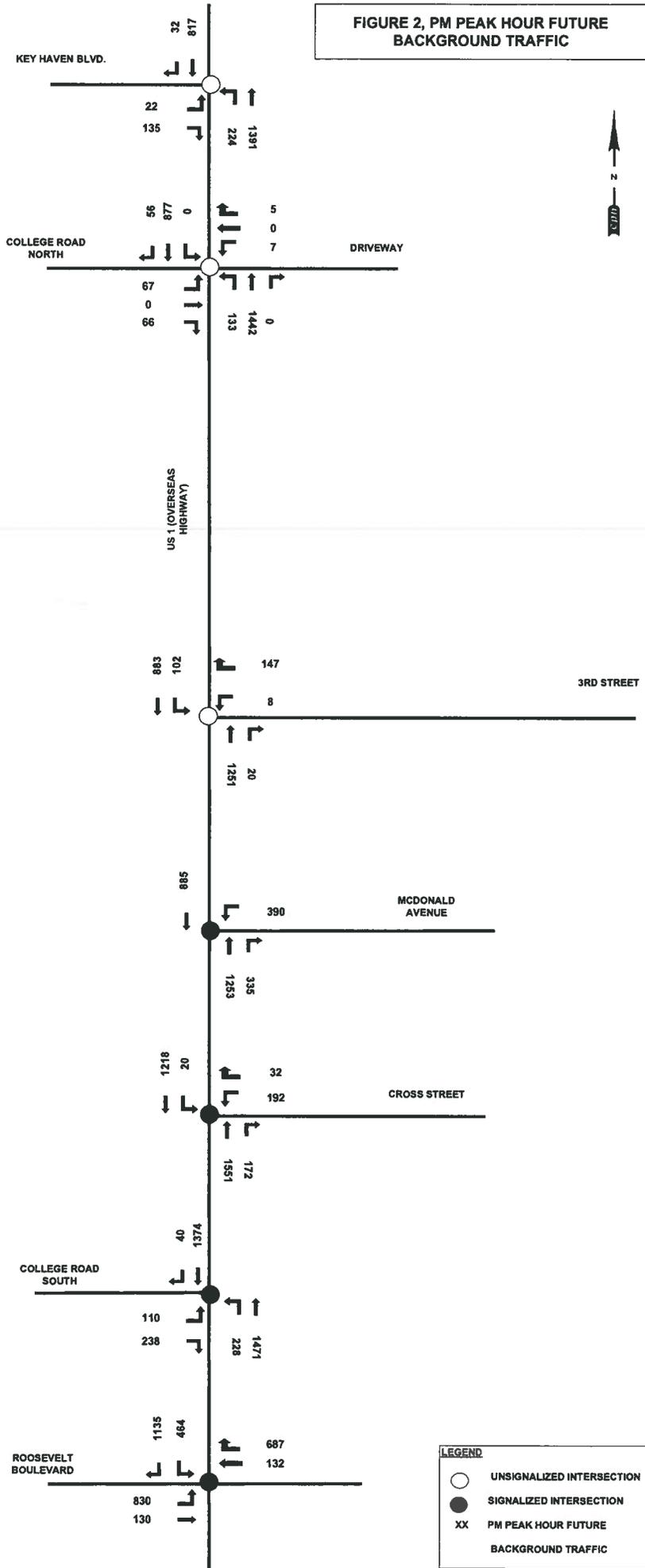
**APPENDIX C**  
**TRAFFIC VOLUME FIGURES**

---

**FIGURE 1, PM PEAK HOUR PEAK SEASON EXISTING TRAFFIC**



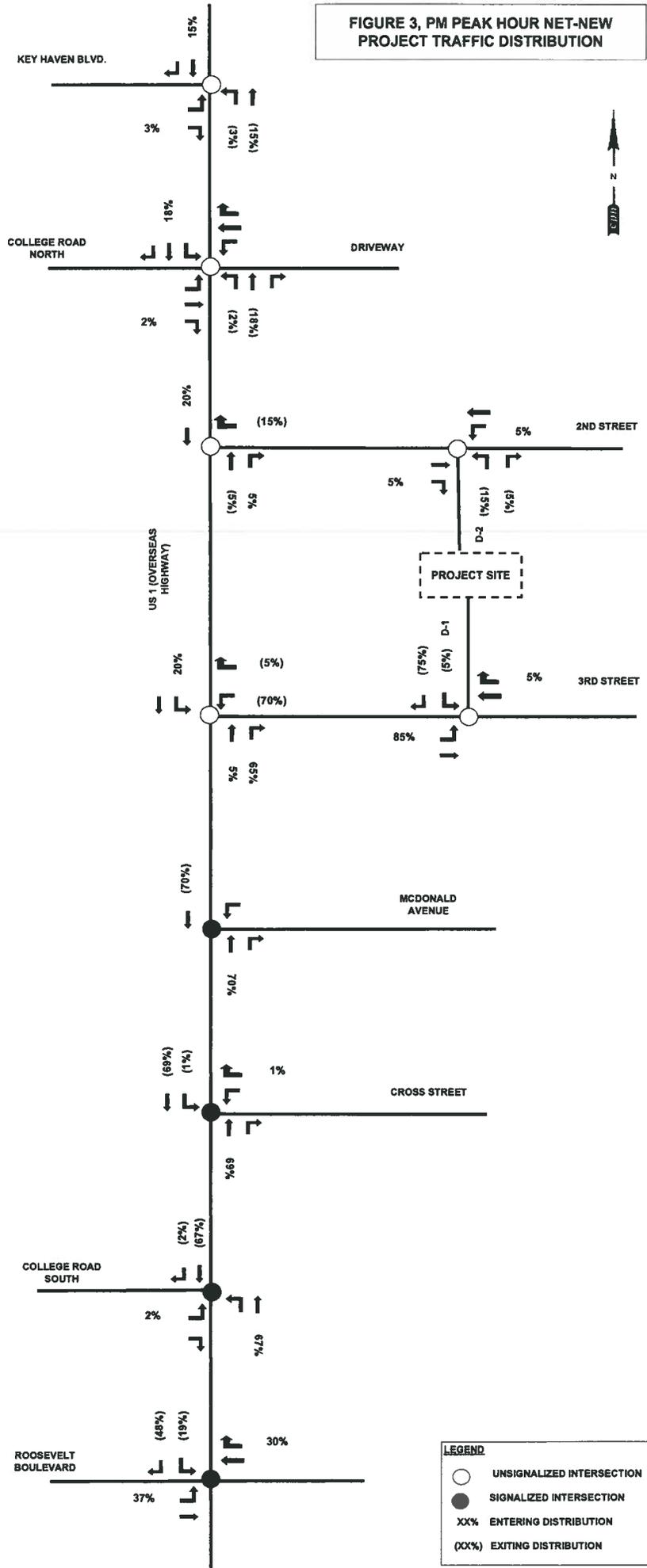
**FIGURE 2, PM PEAK HOUR FUTURE  
BACKGROUND TRAFFIC**



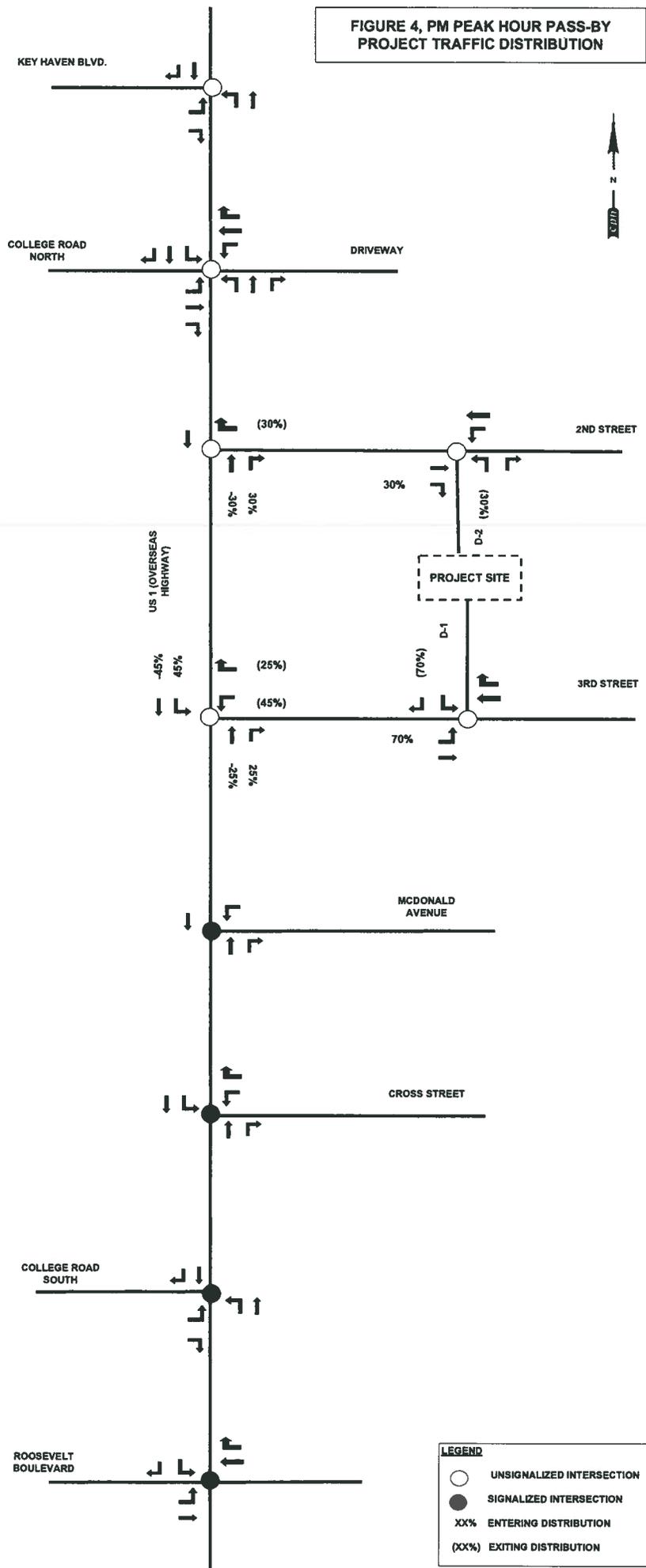
**LEGEND**

- UNSIGNALIZED INTERSECTION
- SIGNALIZED INTERSECTION
- XX PM PEAK HOUR FUTURE BACKGROUND TRAFFIC

**FIGURE 3, PM PEAK HOUR NET-NEW PROJECT TRAFFIC DISTRIBUTION**

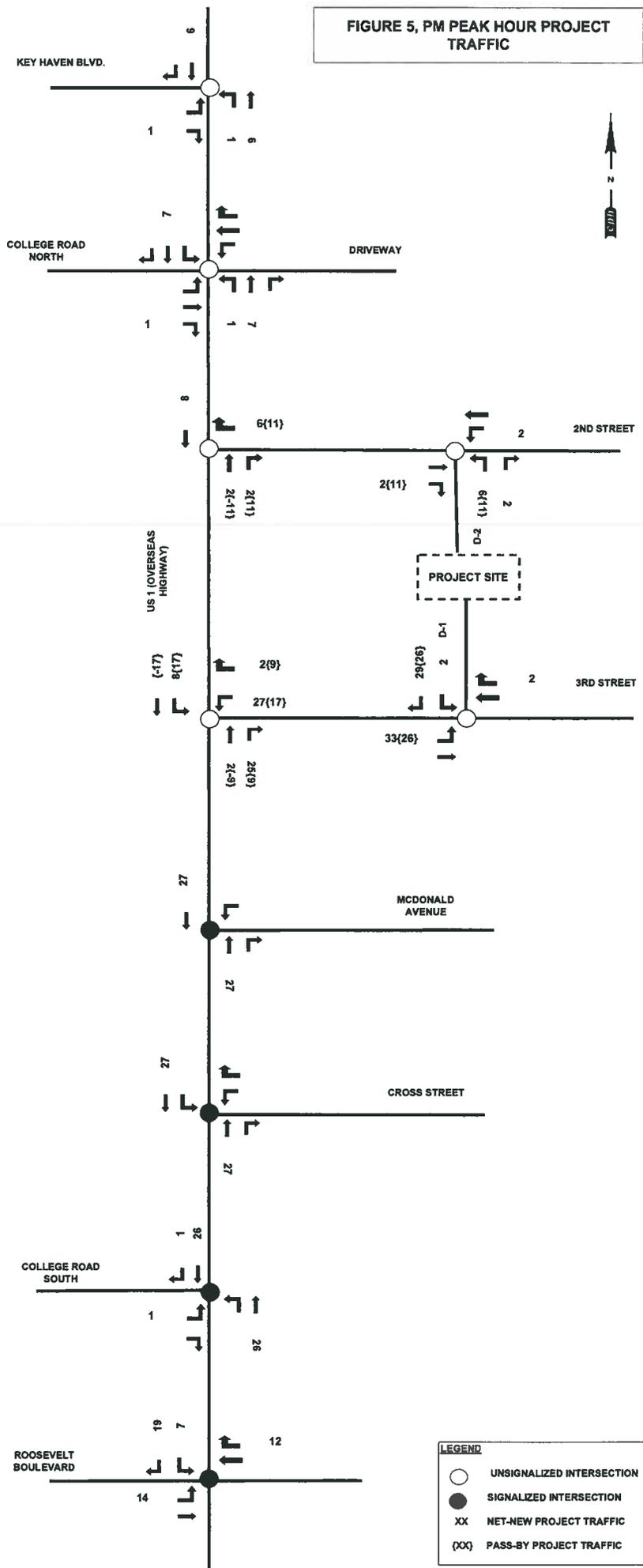


**FIGURE 4, PM PEAK HOUR PASS-BY PROJECT TRAFFIC DISTRIBUTION**

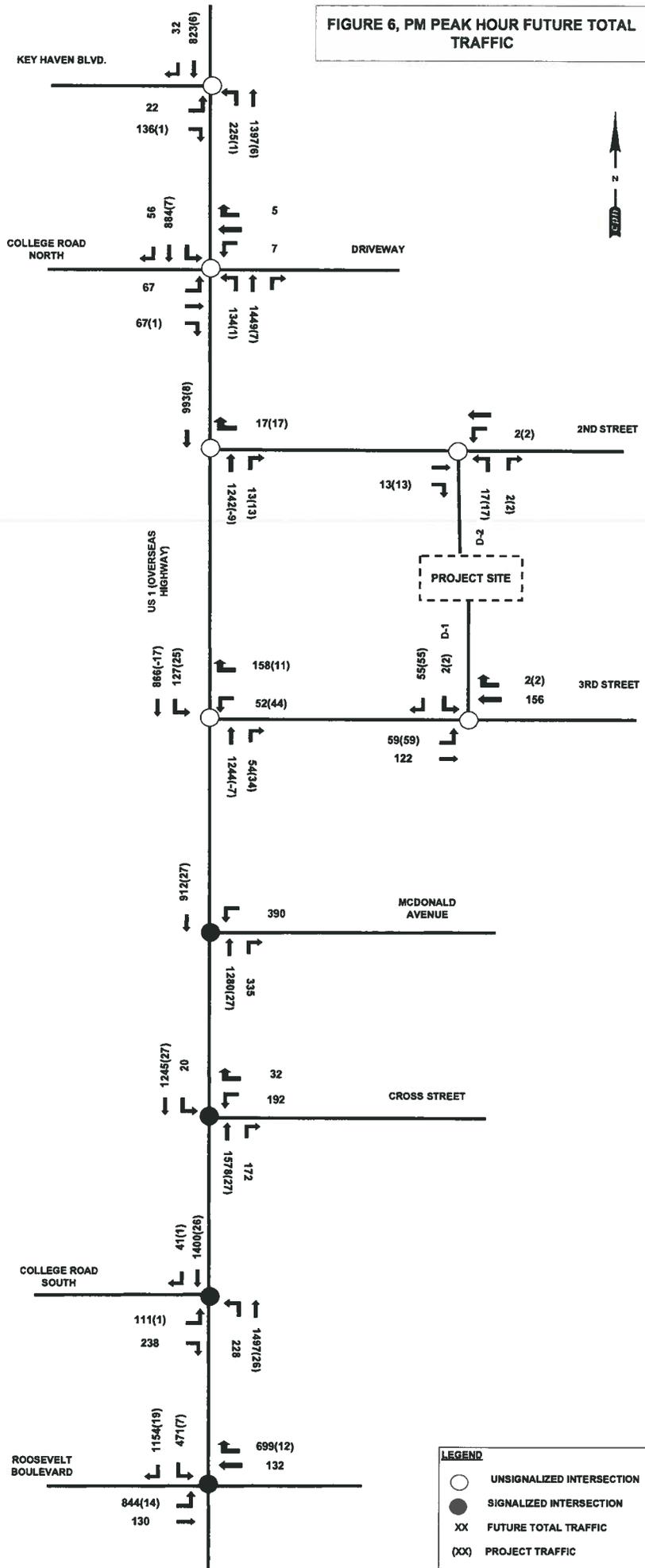


LEGEND	
○	UNSIGNALIZED INTERSECTION
●	SIGNALIZED INTERSECTION
XX%	ENTERING DISTRIBUTION
(XX%)	EXITING DISTRIBUTION

**FIGURE 5, PM PEAK HOUR PROJECT TRAFFIC**



**FIGURE 6, PM PEAK HOUR FUTURE TOTAL TRAFFIC**



**APPENDIX D**

**CVS PHARMACY DAILY DISTRIBUTION**

---

## CVS Pharmacy Hourly Trip Distribution

(Based upon April 2012 Data Collection)

Time Interval	Percent of Daily Volume
12:00 AM to 1:00 AM	0.16%
1:00 AM to 2:00 AM	0.04%
2:00 AM to 3:00 AM	0.00%
3:00 AM to 4:00 AM	0.30%
4:00 AM to 5:00 AM	0.20%
5:00 AM to 6:00 AM	0.15%
6:00 AM to 7:00 AM	0.52%
7:00 AM to 8:00 AM	1.54%
8:00 AM to 9:00 AM	4.03%
9:00 AM to 10:00 AM	6.17%
10:00 AM to 11:00 AM	7.51%
11:00 AM to 12:00 PM	8.80%
12:00 PM to 1:00 PM	8.51%
1:00 PM to 2:00 PM	7.76%
2:00 PM to 3:00 PM	8.23%
3:00 PM to 4:00 PM	8.57%
4:00 PM to 5:00 PM	8.27%
5:00 PM to 6:00 PM	7.43%
6:00 PM to 7:00 PM	6.24%
7:00 PM to 8:00 PM	5.60%
8:00 PM to 9:00 PM	4.69%
9:00 PM to 10:00 PM	3.23%
10:00 PM to 11:00 PM	1.61%
11:00 PM to 12:00 AM	0.43%
	<b>100.00%</b>

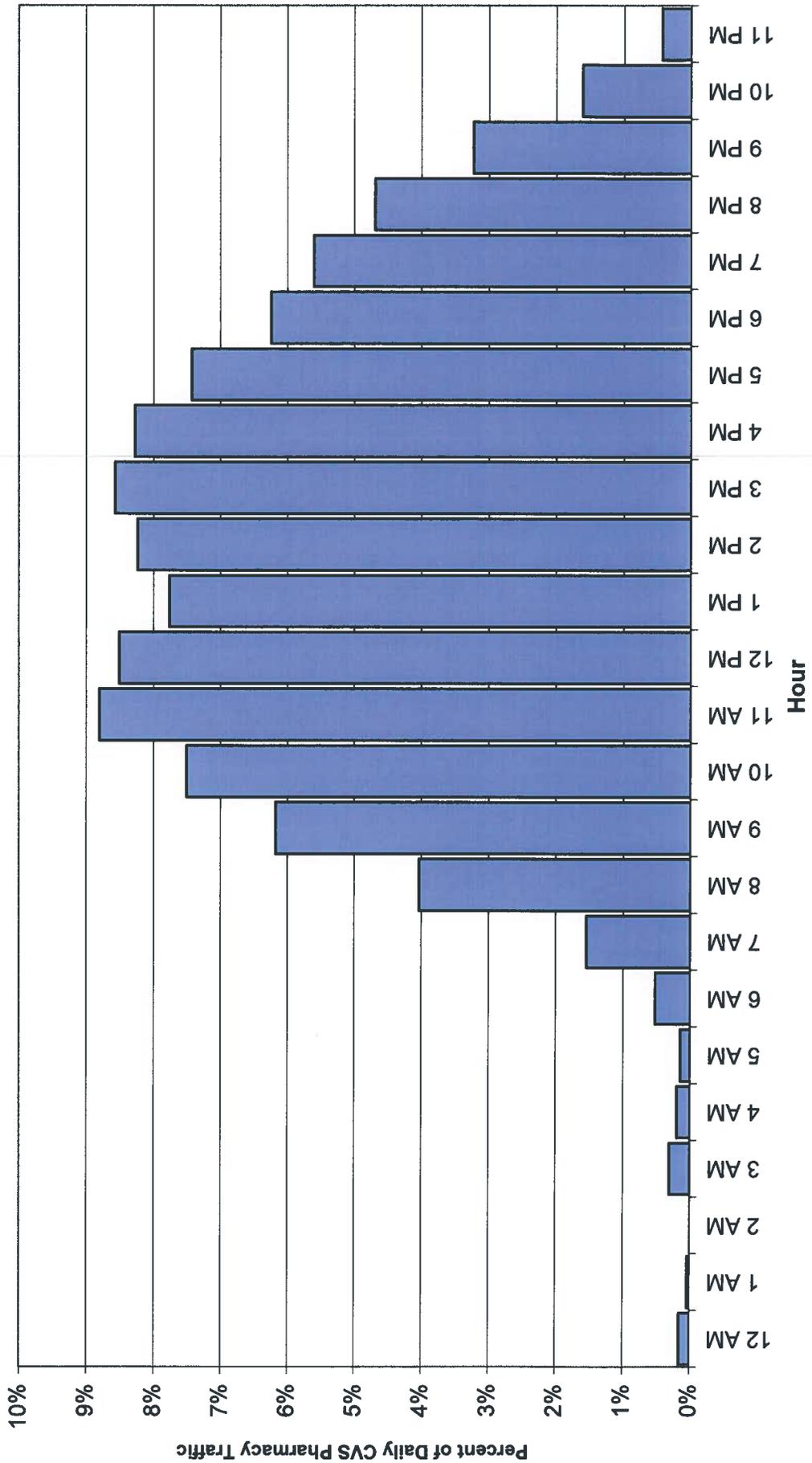
# CVS Pharmacy Hourly Trip Generation Determination CVS Pharmacy, Stock Island

Daily Trip Generation:  
Daily Outbound Traffic on 3rd Street @ US 1

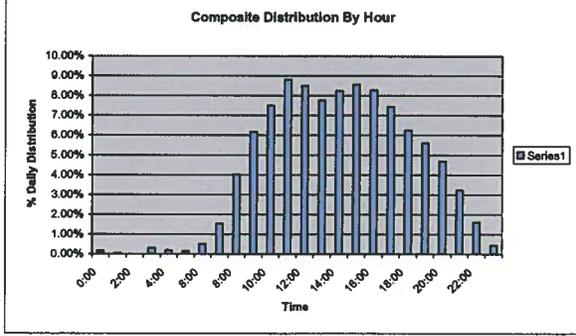
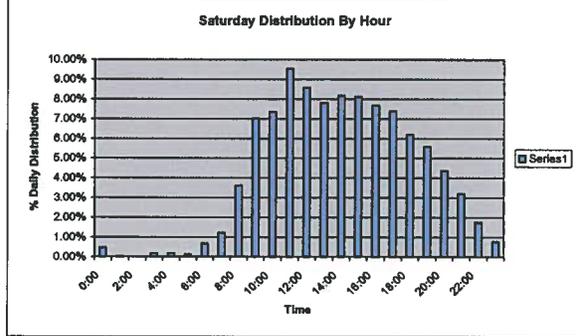
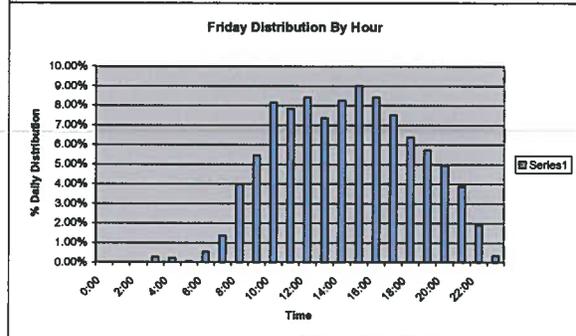
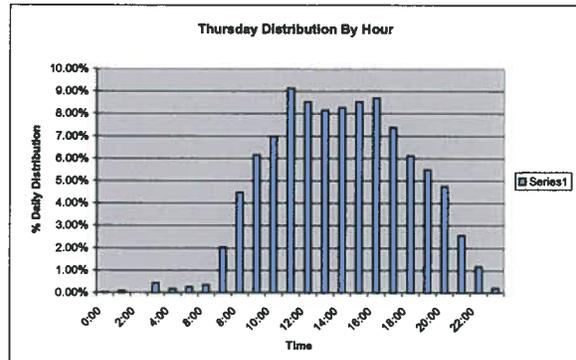
1,287	<-- Start Here
70%	

Time Interval			Percent of Daily Volume	Total Trips
12:00 AM	to	1:00 AM	0.16%	1
1:00 AM	to	2:00 AM	0.04%	0
2:00 AM	to	3:00 AM	0.00%	0
3:00 AM	to	4:00 AM	0.30%	1
4:00 AM	to	5:00 AM	0.20%	1
5:00 AM	to	6:00 AM	0.15%	1
6:00 AM	to	7:00 AM	0.52%	2
7:00 AM	to	8:00 AM	1.54%	7
8:00 AM	to	9:00 AM	4.03%	18
9:00 AM	to	10:00 AM	6.17%	28
10:00 AM	to	11:00 AM	7.51%	34
11:00 AM	to	12:00 PM	8.80%	40
12:00 PM	to	1:00 PM	8.51%	38
1:00 PM	to	2:00 PM	7.76%	35
2:00 PM	to	3:00 PM	8.23%	37
3:00 PM	to	4:00 PM	8.57%	39
4:00 PM	to	5:00 PM	8.27%	37
5:00 PM	to	6:00 PM	7.43%	33
6:00 PM	to	7:00 PM	6.24%	28
7:00 PM	to	8:00 PM	5.60%	25
8:00 PM	to	9:00 PM	4.69%	21
9:00 PM	to	10:00 PM	3.23%	15
10:00 PM	to	11:00 PM	1.61%	7
11:00 PM	to	12:00 AM	0.43%	2
<b>Totals:</b>			<b>100.00%</b>	<b>450</b>

**CVS Pharmacy Hourly Trip Distribution  
(Based upon 2012 Traffic Counts)**



Time	Average						Average	%
	Date							
	4/26/2012 (Thursday)		4/27/2012 (Friday)		4/28/2012 (Saturday)			
Driveway	%	Driveway	%	Driveway	%			
0:00	0	0.03%	0	0.00%	5	0.46%	2	0.16%
1:00	1	0.09%	0	0.00%	0	0.03%	0	0.04%
2:00	0	0.00%	0	0.00%	0	0.00%	0	0.00%
3:00	5	0.45%	3	0.28%	2	0.18%	3	0.30%
4:00	2	0.18%	3	0.22%	2	0.18%	2	0.20%
5:00	3	0.27%	1	0.08%	1	0.12%	2	0.15%
6:00	4	0.36%	8	0.53%	7	0.68%	8	0.52%
7:00	23	2.03%	18	1.37%	13	1.23%	17	1.54%
8:00	50	4.48%	49	3.96%	39	3.63%	46	4.03%
9:00	89	8.15%	65	5.44%	78	7.00%	70	6.17%
10:00	78	6.99%	97	8.15%	80	7.34%	85	7.51%
11:00	102	9.13%	94	7.84%	103	9.52%	100	8.80%
12:00	95	8.54%	101	8.42%	93	8.57%	96	8.51%
13:00	91	8.15%	88	7.36%	85	7.80%	88	7.76%
14:00	92	8.27%	99	8.26%	89	8.17%	93	8.23%
15:00	95	8.54%	108	9.01%	88	8.11%	97	8.57%
16:00	97	8.69%	101	8.42%	83	7.68%	94	8.27%
17:00	82	7.37%	90	7.50%	80	7.40%	84	7.43%
18:00	88	8.12%	76	6.39%	67	6.21%	71	6.24%
19:00	81	5.49%	68	5.72%	61	5.59%	63	5.60%
20:00	53	4.75%	59	4.94%	47	4.36%	53	4.69%
21:00	29	2.57%	46	3.88%	35	3.20%	37	3.23%
22:00	13	1.18%	23	1.90%	19	1.75%	16	1.81%
23:00	2	0.21%	4	0.33%	8	0.77%	5	0.43%
TOTAL	1,117	100.00%	1,195	100.00%	1,085	100.00%	1,132	100.00%



**CVS PHARMACY – ISLAMORADA**

---

Store Location	CVS Islamorada							
	Time	Date						Average
		4/26/2012		4/27/2012 (Friday)		4/28/2012 (Saturday)		
	Driveway	%	Driveway	%	Driveway	%	Driveway	%
0:00	0	0.00%	0	0.00%	0	0.00%	0	0.00%
1:00	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2:00	0	0.00%	0	0.00%	0	0.00%	0	0.00%
3:00	5	0.52%	3	0.27%	2	0.18%	2	0.18%
4:00	2	0.21%	4	0.36%	2	0.18%	2	0.18%
5:00	4	0.42%	2	0.18%	2	0.18%	2	0.18%
6:00	0	0.00%	0	0.00%	2	0.18%	2	0.18%
7:00	9	0.94%	9	0.82%	9	0.83%	9	0.83%
8:00	49	5.12%	40	3.64%	40	3.69%	43	3.69%
9:00	56	5.85%	47	4.28%	70	6.46%	58	6.46%
10:00	66	6.90%	93	8.46%	87	8.03%	82	8.03%
11:00	97	10.14%	91	8.28%	111	10.25%	100	10.25%
12:00	81	8.46%	93	8.46%	97	8.96%	90	8.96%
13:00	74	7.73%	100	9.10%	81	7.48%	85	7.48%
14:00	83	8.67%	86	7.83%	96	8.86%	88	8.86%
15:00	85	8.88%	122	11.10%	91	8.40%	99	8.40%
16:00	83	8.67%	99	9.01%	96	8.86%	93	8.86%
17:00	66	6.90%	79	7.19%	93	8.59%	79	8.59%
18:00	75	7.84%	70	6.37%	57	5.26%	67	5.26%
19:00	62	6.48%	53	4.82%	61	5.63%	59	5.63%
20:00	41	4.28%	44	4.00%	54	4.99%	46	4.99%
21:00	14	1.46%	52	4.73%	23	2.12%	30	2.12%
22:00	5	0.52%	10	0.91%	9	0.83%	8	0.83%
23:00	0	0.00%	2	0.18%	0	0.00%	1	0.00%
<b>TOTAL</b>	<b>957</b>	<b>100.00%</b>	<b>1,099</b>	<b>100.00%</b>	<b>1,083</b>	<b>100.00%</b>	<b>1,046</b>	<b>100.00%</b>

# Video Data Solutions, Inc.

CLIENT : CPH ENGINEERS, INC.  
 JOB NO : B11269  
 PROJECT: CVS Islamorada  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 82894 Overseas Hwy, Islamorada  
 CVS Entrance

Start Time	26-Apr-12 Thu	EB - Out	WB - In	Combined Total
12:00 AM		0	0	0
01:00		0	0	0
02:00		0	0	0
03:00		3	2	5
04:00		1	1	2
05:00		2	2	4
06:00		0	0	0
07:00		2	7	9
08:00		24	25	49
09:00		27	29	56
10:00		32	34	66
11:00		54	43	97
12:00 PM		38	43	81
01:00		39	35	74
02:00		39	44	83
03:00		42	43	85
04:00		42	41	83
05:00		34	32	66
06:00		40	35	75
07:00		28	34	62
08:00		23	18	41
09:00		10	4	14
10:00		4	1	5
11:00		0	0	0
<b>Total</b>		<b>484</b>	<b>473</b>	
<b>Percent</b>		<b>50.6%</b>	<b>49.4%</b>	

# Video Data Solutions, Inc.

CLIENT : CPH ENGINEERS, INC.  
 JOB NO : B11269  
 PROJECT: CVS Islamorada  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 82894 Overseas Hwy, Islamorada  
 CVS Entrance

Start Time	27-Apr-12 Fri	EB - Out	WB - In	Combined Total	
12:00 AM		0	0	0	
01:00		0	0	0	
02:00		0	0	0	
03:00		2	1	3	■
04:00		2	2	4	■
05:00		1	1	2	■
06:00		0	0	0	
07:00		2	7	9	■
08:00		21	19	40	■
09:00		24	23	47	■
10:00		47	46	93	■
11:00		40	51	91	■
12:00 PM		45	48	93	■
01:00		53	47	100	■
02:00		45	41	86	■
03:00		60	62	122	■
04:00		48	51	99	■
05:00		39	40	79	■
06:00		38	32	70	■
07:00		28	25	53	■
08:00		22	22	44	■
09:00		28	24	52	■
10:00		8	2	10	■
11:00		1	1	2	■
Total		554	545		
Percent		50.4%	49.6%		

# Video Data Solutions, Inc.

CLIENT : CPH ENGINEERS, INC.  
 JOB NO : B11269  
 PROJECT: CVS Islamorada  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 82894 Overseas Hwy, Islamorada  
 CVS Entrance

Start Time	28-Apr-12 Sat	EB - Out	WB - In	Combined Total
12:00 AM		0	0	0
01:00		0	0	0
02:00		0	0	0
03:00		1	1	2
04:00		1	1	2
05:00		1	1	2
06:00		1	1	2
07:00		2	7	9
08:00		20	20	40
09:00		34	36	70
10:00		40	47	87
11:00		55	56	111
12:00 PM		49	48	97
01:00		39	42	81
02:00		45	51	96
03:00		44	47	91
04:00		46	50	96
05:00		49	44	93
06:00		31	26	57
07:00		33	28	61
08:00		28	26	54
09:00		15	8	23
10:00		7	2	9
11:00		0	0	0
<b>Total</b>		<b>541</b>	<b>542</b>	
<b>Percent</b>		<b>50.0%</b>	<b>50.0%</b>	
<b>Grand Total</b>		<b>1579</b>	<b>1560</b>	
<b>Percentage</b>		<b>50.3%</b>	<b>49.7%</b>	
<b>ADT</b>		<b>ADT 1,054</b>	<b>ADT 1,054</b>	

**CVS PHARMACY – KEY LARGO**

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Store Location	CVS Key Largo															
	Time	4/26/2012 (Thursday)				4/27/2012 (Friday)				4/28/2012 (Saturday)				Average		
		Northwest Driveway	Southeast Driveway	Drive-Thru	Total	%	Northwest Driveway	Southeast Driveway	Drive-Thru	Total	%	Northwest Driveway	Southeast Driveway		Drive-Thru	Total
0:00	0	0	1	1	0.07%	0	0	0	0	0	0.00%	8	6	1	15	1.22%
1:00	0	0	0	0	0.00%	0	0	0	0	0	0.00%	1	0	0	1	0.08%
2:00	0	0	0	0	0.00%	0	0	0	0	0	0.00%	0	0	0	0	0.00%
3:00	4	4	0	8	0.59%	2	3	0	5	0.36%	2	2	0	4	0.33%	
4:00	0	2	0	2	0.15%	0	2	0	2	0.14%	1	0	0	1	0.08%	
5:00	2	3	0	5	0.37%	0	0	0	0	0.00%	1	1	0	2	0.16%	
6:00	5	4	0	9	0.67%	9	9	0	18	1.30%	8	6	0	14	1.14%	
7:00	20	20	0	40	2.96%	11	7	2	18	1.30%	14	9	0	23	1.88%	
8:00	22	43	0	65	4.80%	33	36	1	69	4.97%	18	24	0	42	3.43%	
9:00	39	36	0	75	5.54%	36	52	0	88	6.34%	41	59	2	102	8.33%	
10:00	56	61	2	119	8.80%	44	58	3	102	7.35%	42	28	3	73	5.96%	
11:00	56	68	3	127	9.39%	56	57	4	113	8.14%	48	56	1	105	8.57%	
12:00	48	51	5	104	7.69%	66	61	4	127	9.15%	50	55	1	106	8.65%	
13:00	62	42	1	105	7.76%	44	51	3	95	6.84%	45	46	1	92	7.51%	
14:00	49	59	3	111	8.20%	53	66	4	119	8.57%	42	49	5	96	7.84%	
15:00	47	55	5	107	7.91%	50	49	3	99	7.13%	33	34	2	69	5.63%	
16:00	46	55	2	103	7.61%	45	48	1	93	6.70%	34	48	0	82	6.69%	
17:00	48	49	6	103	7.61%	45	51	5	96	6.92%	38	46	2	86	7.02%	
18:00	38	27	2	67	4.95%	34	51	1	85	6.12%	34	61	1	96	7.84%	
19:00	28	28	2	58	4.29%	39	29	1	68	4.90%	34	30	1	65	5.31%	
20:00	20	37	3	60	4.43%	44	44	2	88	6.34%	23	26	4	53	4.33%	
21:00	22	27	3	52	3.84%	22	30	1	52	3.75%	16	23	0	39	3.18%	
22:00	15	10	0	25	1.85%	19	22	0	41	2.95%	19	17	0	36	2.94%	
23:00	3	4	0	7	0.52%	6	4	0	10	0.72%	13	10	0	23	1.88%	
<b>TOTAL</b>	<b>630</b>	<b>685</b>	<b>38</b>	<b>1,353</b>	<b>100.00%</b>	<b>658</b>	<b>730</b>	<b>35</b>	<b>1,388</b>	<b>100.00%</b>	<b>565</b>	<b>636</b>	<b>24</b>	<b>1,225</b>	<b>100.00%</b>	<b>1,322</b>

# Video Data Solutions, Inc.

CLIENT : CPH ENGINEERS, INC.  
 JOB NO : B11269  
 PROJECT: CVS Key Largo  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 99434 Overseas Hwy, Key Largo  
 Northwest Driveway

Start Time	26-Apr-12 Thu	EB - IN	WB - Out	Combined Total
12:00 AM		0	0	0
01:00		0	0	0
02:00		0	0	0
03:00		2	2	4
04:00		0	0	0
05:00		2	0	2
06:00		5	0	5
07:00		13	7	20
08:00		10	12	22
09:00		26	13	39
10:00		32	24	56
11:00		33	23	56
12:00 PM		27	21	48
01:00		43	19	62
02:00		37	12	49
03:00		34	13	47
04:00		31	15	46
05:00		32	16	48
06:00		20	18	38
07:00		17	11	28
08:00		11	9	20
09:00		10	12	22
10:00		12	3	15
11:00		2	1	3
Total		399	231	
Percent		63.3%	36.7%	

# Video Data Solutions, Inc.

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

CLIENT : CPH ENGINEERS, INC.  
 JOB NO : B11269  
 PROJECT: CVS Key Largo  
 COUNTY : Monroe

Date Start: 26-Apr-12  
 99434 Overseas Hwy, Key Largo  
 Northwest Driveway

Start Time	27-Apr-12 Fri	EB - IN	WB - Out	Combined Total
12:00 AM		0	0	0
01:00		0	0	0
02:00		0	0	0
03:00		1	1	2
04:00		0	0	0
05:00		0	0	0
06:00		8	1	9
07:00		7	4	11
08:00		20	13	33
09:00		28	8	36
10:00		28	16	44
11:00		32	24	56
12:00 PM		43	23	66
01:00		32	12	44
02:00		33	20	53
03:00		29	21	50
04:00		31	14	45
05:00		30	15	45
06:00		23	11	34
07:00		24	15	39
08:00		25	19	44
09:00		15	7	22
10:00		13	6	19
11:00		4	2	6
Total		426	232	
Percent		64.7%	35.3%	

# Video Data Solutions, Inc.

CLIENT : CPH ENGINEERS, INC.  
 JOB NO : B11269  
 PROJECT: CVS Key Largo  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 99434 Overseas Hwy, Key Largo  
 Northwest Driveway

Start Time	28-Apr-12 Sat	EB - IN	WB - Out	Combined Total	
12:00 AM		6	2	8	█
01:00		1	0	1	█
02:00		0	0	0	
03:00		1	1	2	█
04:00		1	0	1	█
05:00		1	0	1	█
06:00		8	0	8	█
07:00		10	4	14	█
08:00		13	5	18	█
09:00		25	16	41	█
10:00		28	14	42	█
11:00		34	14	48	█
12:00 PM		30	20	50	█
01:00		27	18	45	█
02:00		28	14	42	█
03:00		23	10	33	█
04:00		22	12	34	█
05:00		25	13	38	█
06:00		18	16	34	█
07:00		24	10	34	█
08:00		12	11	23	█
09:00		8	8	16	█
10:00		15	4	19	█
11:00		10	3	13	█
Total		370	195		
Percent		65.5%	34.5%		
Grand Total		1195	658		
Percentage		64.5%	35.5%		
ADT		ADT 651		AADT 651	

**Video Data Solutions, Inc.**  
 A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

CLIENT : CPH ENGINEERS, INC.  
 JOB NO : B11269  
 PROJECT: CVS Key Largo  
 COUNTY : Monroe

Date Start: 26-Apr-12  
 99494 Overseas Hwy, Key Largo  
 CVS Drive-Thru

Start Time	26-Apr-12 Thu	Oneway EB
12:00 AM		1
01:00		0
02:00		0
03:00		0
04:00		0
05:00		0
06:00		0
07:00		0
08:00		0
09:00		0
10:00		2
11:00		3
12:00 PM		5
01:00		1
02:00		3
03:00		5
04:00		2
05:00		6
06:00		2
07:00		2
08:00		3
09:00		3
10:00		0
11:00		0
Total		38
AM Peak		11:00
Vol.		3
PM Peak		17:00
Vol.		6

**Video Data Solutions, Inc.**  
 A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

CLIENT : CPH ENGINEERS, INC.  
 JOB NO : B11269  
 PROJECT: CVS Key Largo  
 COUNTY : Monroe

Date Start: 26-Apr-12  
 99494 Overseas Hwy, Key Largo  
 CVS Drive-Thru

Start Time	27-Apr-12 Fri	Oneway EB
12:00 AM		0
01:00		0
02:00		0
03:00		0
04:00		0
05:00		0
06:00		0
07:00		2
08:00		1
09:00		0
10:00		3
11:00		4
12:00 PM		4
01:00		3
02:00		4
03:00		3
04:00		1
05:00		5
06:00		1
07:00		1
08:00		2
09:00		1
10:00		0
11:00		0
Total		35
AM Peak		11:00
Vol.		4
PM Peak		17:00
Vol.		5

**Video Data Solutions, Inc.**  
 A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

CLIENT : CPH ENGINEERS, INC.  
 JOB NO : B11269  
 PROJECT: CVS Key Largo  
 COUNTY : Monroe

Date Start: 26-Apr-12  
 99494 Overseas Hwy, Key Largo  
 CVS Drive-Thru

Start Time	28-Apr-12 Sat	Oneway EB
12:00 AM		1
01:00		0
02:00		0
03:00		0
04:00		0
05:00		0
06:00		0
07:00		0
08:00		0
09:00		2
10:00		3
11:00		1
12:00 PM		1
01:00		1
02:00		5
03:00		2
04:00		0
05:00		2
06:00		1
07:00		1
08:00		4
09:00		0
10:00		0
11:00		0
Total		24
AM Peak		10:00
Vol.		3
PM Peak		14:00
Vol.		5
Grand Total		97

AADT 33

ADT 33

ADT

# Video Data Solutions, Inc.

CLIENT : CPH ENGINEERS, INC.  
 JOB NO : B11269  
 PROJECT: CVS Key Largo  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 99434 Overseas Hwy, Key Largo  
 Southeast Driveway

Start Time	26-Apr-12 Thu	EB - Out	WB - In	Combined Total
12:00 AM		0	0	0
01:00		0	0	0
02:00		0	0	0
03:00		3	1	4
04:00		1	1	2
05:00		3	0	3
06:00		4	0	4
07:00		15	5	20
08:00		24	19	43
09:00		22	14	36
10:00		40	21	61
11:00		44	24	68
12:00 PM		31	20	51
01:00		31	11	42
02:00		41	18	59
03:00		37	18	55
04:00		32	23	55
05:00		31	18	49
06:00		16	11	27
07:00		18	10	28
08:00		16	21	37
09:00		18	9	27
10:00		9	1	10
11:00		2	2	4
Total		438	247	
Percent		63.9%	36.1%	



**Video Data Solutions, Inc.**

CLIENT : CPH ENGINEERS, INC.  
 JOB NO : B11269  
 PROJECT: CVS Key Largo  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 99434 Overseas Hwy, Key Largo  
 Southeast Driveway

Start Time	28-Apr-12 Sat	EB - Out	WB - In	Combined Total	
12:00 AM		4	2	6	
01:00		0	0	0	
02:00		0	0	0	
03:00		1	1	2	
04:00		0	0	0	
05:00		1	0	1	
06:00		5	1	6	
07:00		8	1	9	
08:00		11	13	24	
09:00		40	19	59	
10:00		18	10	28	
11:00		30	26	56	
12:00 PM		36	19	55	
01:00		28	18	46	
02:00		29	20	49	
03:00		21	13	34	
04:00		30	18	48	
05:00		37	9	46	
06:00		37	24	61	
07:00		18	12	30	
08:00		14	12	26	
09:00		14	9	23	
10:00		14	3	17	
11:00		7	3	10	
Total		403	233		
Percent		63.4%	36.6%		
Grand Total		1309	742		
Percentage		63.8%	36.2%		
ADT		ADT 431		AADT 431	

**CVS PHARMACY - TAVERNIER**

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Store Location	CVS Tavernier												
	Time	Date						Average					
		4/26/2012 (Thursday)			4/27/2012 (Friday)			4/28/2012 (Saturday)			Average		
	Eastern Driveway	Western Driveway	Total	%	Eastern Driveway	Western Driveway	Total	%	Eastern Driveway	Western Driveway	Total	%	
0:00	0	0	0	0.00%	0	0	0	0.00%	0	0	0	0.00%	0
1:00	2	1	3	0.29%	0	0	0	0.00%	0	0	0	0.00%	1
2:00	0	0	0	0.00%	0	0	0	0.00%	0	0	0	0.00%	0
3:00	1	1	2	0.19%	1	1	2	0.18%	0	0	0	0.00%	1
4:00	1	1	2	0.19%	1	1	2	0.18%	1	2	3	0.32%	2
5:00	0	0	0	0.00%	0	0	0	0.00%	0	0	0	0.00%	0
6:00	2	1	3	0.29%	1	0	1	0.09%	3	3	6	0.63%	3
7:00	16	3	19	1.83%	16	6	22	2.00%	8	0	8	0.84%	16
8:00	27	9	36	3.46%	24	10	34	3.10%	25	11	36	3.80%	35
9:00	61	14	75	7.21%	45	15	60	5.46%	46	10	56	5.91%	64
10:00	36	13	49	4.71%	91	6	97	8.83%	65	14	79	8.34%	75
11:00	70	12	82	7.88%	58	19	77	7.01%	77	17	94	9.93%	84
12:00	79	22	101	9.71%	67	15	82	7.47%	76	0	76	8.03%	86
13:00	80	14	94	9.04%	55	14	69	6.28%	65	16	81	8.55%	81
14:00	65	18	83	7.98%	64	27	91	8.29%	56	18	74	7.81%	83
15:00	89	5	94	9.04%	81	21	102	9.29%	89	15	104	10.98%	100
16:00	80	25	105	10.10%	86	24	110	10.02%	50	22	72	7.60%	96
17:00	61	17	78	7.50%	74	20	94	8.56%	53	9	62	6.55%	78
18:00	50	13	63	6.06%	62	12	74	6.74%	37	12	49	5.17%	62
19:00	51	13	64	6.15%	68	16	84	7.65%	41	15	56	5.91%	68
20:00	50	8	58	5.58%	31	14	45	4.10%	28	7	35	3.70%	46
21:00	15	5	20	1.92%	29	6	35	3.19%	34	8	42	4.44%	32
22:00	8	1	9	0.87%	15	2	17	1.55%	10	2	12	1.27%	13
23:00	0	0	0	0.00%	0	0	0	0.00%	2	0	2	0.21%	1
<b>TOTAL</b>	<b>844</b>	<b>196</b>	<b>1,040</b>	<b>100.00%</b>	<b>869</b>	<b>229</b>	<b>1,098</b>	<b>100.00%</b>	<b>766</b>	<b>181</b>	<b>947</b>	<b>100.00%</b>	<b>1,028</b>

# Video Data Solutions, Inc.

CLIENT : CPH ENGINEERS, INC.  
 JOB NO : B11269  
 PROJECT: CVS Tavernier  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 91410 Overseas Hwy, Tavernier  
 East Driveway (Main Entrance)

Start Time	26-Apr-12 Thu	NB - In	SB - Out	Combined Total	
12:00 AM		0	0	0	
01:00		0	2	2	█
02:00		0	0	0	
03:00		1	0	1	█
04:00		1	0	1	█
05:00		0	0	0	
06:00		2	0	2	█
07:00		10	6	16	██████
08:00		13	14	27	██████████
09:00		29	32	61	██████████████████
10:00		13	23	36	██████████████
11:00		39	31	70	██████████████████
12:00 PM		44	35	79	██████████████████
01:00		43	37	80	██████████████████
02:00		31	34	65	██████████████
03:00		50	39	89	██████████████████
04:00		40	40	80	██████████████████
05:00		26	35	61	██████████████
06:00		20	30	50	██████████████
07:00		28	23	51	██████████████
08:00		23	27	50	██████████████
09:00		4	11	15	██████
10:00		3	5	8	███
11:00		0	0	0	
Total		420	424		
Percent		49.8%	50.2%		

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 JOB NO : B11269  
 PROJECT: CVS Tavernier  
 COUNTY : Monroe

Date Start: 26-Apr-12  
 91410 Overseas Hwy, Tavernier  
 East Driveway (Main Entrance)

Start Time	27-Apr-12 Fri	NB - In	SB - Out	Combined Total	
12:00 AM		0	0	0	
01:00		0	0	0	
02:00		0	0	0	
03:00		1	0	1	
04:00		1	0	1	
05:00		0	0	0	
06:00		0	1	1	
07:00		10	6	16	████████
08:00		10	14	24	██████████
09:00		23	22	45	██████████████
10:00		48	43	91	████████████████████
11:00		31	27	58	████████████████
12:00 PM		33	34	67	██████████████████
01:00		29	26	55	████████████████
02:00		32	32	64	██████████████████
03:00		50	31	81	████████████████████
04:00		41	45	86	████████████████████
05:00		39	35	74	██████████████████
06:00		28	34	62	████████████████
07:00		36	32	68	██████████████████
08:00		13	18	31	██████████
09:00		14	15	29	██████████
10:00		7	8	15	██████
11:00		0	0	0	
<b>Total</b>		<b>446</b>	<b>423</b>		
<b>Percent</b>		<b>51.3%</b>	<b>48.7%</b>		

**Video Data Solutions, Inc.**

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 JOB NO : B11269  
 PROJECT: CVS Tavernier  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 91410 Overseas Hwy, Tavernier  
 East Driveway (Main Entrance)

Start Time	28-Apr-12 Sat	NB - In	SB - Out	Combined Total	
12:00 AM		0	0	0	
01:00		0	0	0	
02:00		0	0	0	
03:00		0	0	0	
04:00		1	0	1	
05:00		0	0	0	
06:00		2	1	3	
07:00		4	4	8	
08:00		12	13	25	
09:00		26	20	46	
10:00		35	30	65	
11:00		47	30	77	
12:00 PM		39	37	76	
01:00		30	35	65	
02:00		29	27	56	
03:00		49	40	89	
04:00		24	26	50	
05:00		26	27	53	
06:00		17	20	37	
07:00		19	22	41	
08:00		16	12	28	
09:00		19	15	34	
10:00		3	7	10	
11:00		1	1	2	
Total		399	367		
Percent		52.1%	47.9%		
Grand Total		1265	1214		
Percentage		51.0%	49.0%		
ADT		ADT 885		AADT 885	

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 JOB NO : B11269  
 PROJECT: CVS Tavernier  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 91410 Overseas Hwy, Tavernier  
 West Driveway

Start Time	26-Apr-12 Thu	NB - In	SB- Out	Combined Total	
12:00 AM		0	0	0	
01:00		1	0	1	■
02:00		0	0	0	
03:00		0	1	1	■
04:00		0	1	1	■
05:00		0	0	0	
06:00		0	1	1	■
07:00		0	3	3	■■■
08:00		4	5	9	■■■■■
09:00		6	8	14	■■■■■■■
10:00		7	6	13	■■■■■■■
11:00		4	8	12	■■■■■■■
12:00 PM		12	10	22	■■■■■■■■■
01:00		5	9	14	■■■■■■■
02:00		10	8	18	■■■■■■■■■
03:00		2	3	5	■■■
04:00		15	10	25	■■■■■■■■■■
05:00		9	8	17	■■■■■■■■■
06:00		5	8	13	■■■■■■■
07:00		6	7	13	■■■■■■■
08:00		2	6	8	■■■■
09:00		2	3	5	■■■
10:00		0	1	1	■
11:00		0	0	0	
<b>Total</b>		<b>90</b>	<b>106</b>		
<b>Percent</b>		<b>45.9%</b>	<b>54.1%</b>		

# Video Data Solutions, Inc.

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 JOB NO : B11269  
 PROJECT: CVS Tavernier  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 91410 Overseas Hwy, Tavernier  
 West Driveway

Start Time	27-Apr-12 Fri	NB - In	SB- Out	Combined Total
12:00 AM		0	0	0
01:00		0	0	0
02:00		0	0	0
03:00		0	1	1
04:00		0	1	1
05:00		0	0	0
06:00		0	0	0
07:00		2	4	6
08:00		5	5	10
09:00		6	9	15
10:00		0	6	6
11:00		8	11	19
12:00 PM		11	4	15
01:00		4	10	14
02:00		11	16	27
03:00		9	12	21
04:00		14	10	24
05:00		11	9	20
06:00		5	7	12
07:00		8	8	16
08:00		8	6	14
09:00		1	5	6
10:00		2	0	2
11:00		0	0	0
<b>Total</b>		<b>105</b>	<b>124</b>	
<b>Percent</b>		<b>45.9%</b>	<b>54.1%</b>	

# Video Data Solutions, Inc.

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 PROJECT: CVS Tavernier  
 COUNTY : Monroe

A Traffic Data Collection Co.  
 Tel (305) 235-1553 Fax (305) 235-7703

Date Start: 26-Apr-12  
 91410 Overseas Hwy, Tavernier  
 West Driveway

Start Time	28-Apr-12 Sat	NB - In	SB- Out	Combined Total	
12:00 AM		0	0	0	
01:00		0	0	0	
02:00		0	0	0	
03:00		0	0	0	
04:00		0	2	2	█
05:00		0	0	0	
06:00		1	2	3	██
07:00		0	0	0	
08:00		6	5	11	██████████
09:00		4	6	10	██████████
10:00		4	10	14	██████████
11:00		5	12	17	██████████
12:00 PM		4	2	6	██████
01:00		7	9	16	██████████
02:00		8	10	18	██████████
03:00		6	9	15	██████████
04:00		12	10	22	██████████
05:00		4	5	9	██████
06:00		5	7	12	██████████
07:00		6	9	15	██████████
08:00		3	4	7	██████
09:00		2	6	8	██████
10:00		2	0	2	██
11:00		0	0	0	
<b>Total</b>		<b>79</b>	<b>108</b>		
<b>Percent</b>		<b>42.2%</b>	<b>57.8%</b>		
<b>Grand Total</b>		<b>274</b>	<b>338</b>		
<b>Percentage</b>		<b>44.8%</b>	<b>55.2%</b>		
<b>ADT</b>		<b>ADT 236</b>	<b>ADT 236</b>	<b>AAADT 236</b>	

**APPENDIX E**

**TRAFFIC VOLUMES FOR SIGNAL WARRANT ANALYSIS**

---

TRAFFIC VOLUMES

RAW

US 1 & 3rd Street				3rd Street				
US 1		Total		EB		WB		Total
Time	NB	SB						
0:00	103	63	166	12	12	12	12	12
1:00	85	62	127	4	4	4	4	4
2:00	43	28	71	4	4	4	4	4
3:00	51	37	66	6	6	6	6	6
4:00	82	85	177	11	11	11	11	11
5:00	154	156	310	14	14	14	14	14
8:00	391	558	948	33	33	33	33	33
7:00	578	1418	1994	85	85	85	85	85
8:00	645	1113	1758	96	96	96	96	96
9:00	664	856	1520	76	76	76	76	76
10:00	741	862	1603	96	96	96	96	96
11:00	783	968	1751	99	99	99	99	99
12:00	883	822	1805	114	114	114	114	114
13:00	813	859	1772	107	107	107	107	107
14:00	869	971	1840	128	128	128	128	128
15:00	1038	1066	2104	115	115	115	115	115
16:00	1143	1078	2221	153	153	153	153	153
17:00	1283	895	2216	126	126	126	126	126
18:00	867	803	1690	82	82	82	82	82
19:00	583	547	1140	60	60	60	60	60
20:00	569	408	997	54	54	54	54	54
21:00	554	310	864	28	28	28	28	28
22:00	389	252	651	23	23	23	23	23
23:00	219	122	341	12	12	12	12	12
Total	13,578	14,579	26,157	0	1,539	1,539	0	1,539

PSCF

US 1 & 3rd Street				3rd Street				
US 1		Total		EB		WB		Total
Time	NB	SB						
0:00	105	64	169	12	12	12	12	12
1:00	66	63	130	4	4	4	4	4
2:00	44	29	72	4	4	4	4	4
3:00	52	38	90	6	6	6	6	6
4:00	94	87	181	11	11	11	11	11
5:00	157	159	316	14	14	14	14	14
6:00	398	568	966	34	34	34	34	34
7:00	588	1,446	2,034	87	87	87	87	87
8:00	658	1,135	1,793	98	98	98	98	98
9:00	677	873	1,550	78	78	78	78	78
10:00	756	879	1,635	88	88	88	88	88
11:00	789	887	1,786	101	101	101	101	101
12:00	801	940	1,841	116	116	116	116	116
13:00	829	978	1,807	108	108	108	108	108
14:00	888	990	1,877	132	132	132	132	132
15:00	1,059	1,087	2,146	117	117	117	117	117
16:00	1,166	1,100	2,265	156	156	156	156	156
17:00	1,309	954	2,262	129	129	129	129	129
18:00	605	819	1,424	94	94	94	94	94
19:00	605	558	1,163	81	81	81	81	81
20:00	601	416	1,017	55	55	55	55	55
21:00	585	316	881	29	29	29	29	29
22:00	407	257	664	23	23	23	23	23
23:00	223	124	348	12	12	12	12	12
Total	13,850	14,871	28,720	0	1,570	1,570	0	1,570

SORTING

US 1 & 3rd Street				3rd Street				
US 1		Total		EB		WB		Total
Time	NB	SB						
18:00	1,166	1,100	2,265	156	156	156	156	156
17:00	1,309	954	2,262	128	128	128	128	128
15:00	1,059	1,087	2,146	117	117	117	117	117
7:00	588	1,446	2,034	87	87	87	87	87
14:00	888	980	1,877	132	132	132	132	132
12:00	801	940	1,841	116	116	116	116	116
13:00	829	979	1,807	109	109	109	109	109
8:00	658	1,135	1,793	88	88	88	88	88
11:00	789	887	1,786	101	101	101	101	101
18:00	905	819	1,724	94	94	94	94	94
10:00	756	879	1,635	88	88	88	88	88
8:00	677	873	1,550	78	78	78	78	78
19:00	605	558	1,163	81	81	81	81	81
20:00	601	416	1,017	55	55	55	55	55
6:00	399	569	968	34	34	34	34	34
21:00	585	316	881	29	29	29	29	29
22:00	407	257	664	23	23	23	23	23
23:00	223	124	348	12	12	12	12	12
5:00	157	159	316	14	14	14	14	14
4:00	94	87	181	11	11	11	11	11
0:00	105	64	169	12	12	12	12	12
1:00	66	63	130	4	4	4	4	4
2:00	44	29	72	4	4	4	4	4
3:00	52	38	90	6	6	6	6	6
1:00	66	63	130	4	4	4	4	4
2:00	44	29	72	4	4	4	4	4
3:00	52	38	90	6	6	6	6	6
4:00	94	87	181	11	11	11	11	11
5:00	157	159	316	14	14	14	14	14
6:00	398	568	966	34	34	34	34	34
7:00	588	1,446	2,034	87	87	87	87	87
8:00	658	1,135	1,793	98	98	98	98	98
9:00	677	873	1,550	78	78	78	78	78
10:00	756	879	1,635	88	88	88	88	88
11:00	789	887	1,786	101	101	101	101	101
12:00	801	940	1,841	116	116	116	116	116
13:00	829	978	1,807	108	108	108	108	108
14:00	888	990	1,877	132	132	132	132	132
15:00	1,059	1,087	2,146	117	117	117	117	117
16:00	1,166	1,100	2,265	156	156	156	156	156
17:00	1,309	954	2,262	129	129	129	129	129
18:00	605	819	1,424	94	94	94	94	94
19:00	605	558	1,163	81	81	81	81	81
20:00	601	416	1,017	55	55	55	55	55
21:00	585	316	881	29	29	29	29	29
22:00	407	257	664	23	23	23	23	23
23:00	223	124	348	12	12	12	12	12
Total	13,850	14,871	28,720	0	1,570	1,570	0	1,570

PEAK 8 HOURS

US 1 & 3rd Street				3rd Street				
US 1		Total		EB		WB		Total
Time	NB	SB						
7:00	588	1,446	2,034	87	87	87	87	87
8:00	658	1,135	1,793	86	86	86	86	86
12:00	901	940	1,841	116	116	116	116	116
13:00	828	978	1,807	109	109	109	109	109
14:00	888	980	1,877	132	132	132	132	132
15:00	1,059	1,087	2,146	117	117	117	117	117
16:00	1,166	1,100	2,265	156	156	156	156	156
17:00	1,309	954	2,262	129	129	129	129	129

US 1		Total	
Time	Project	WB	Total
7:00	7	97	94
8:00	18	98	116
12:00	39	118	154
13:00	35	109	144
14:00	37	132	169
15:00	39	117	156
16:00	37	156	193
17:00	33	129	162

PEAK 4 HOURS

US 1 & 3rd Street				3rd Street				
US 1		Total		EB		WB		Total
Time	NB	SB						
7:00	588	1,446	2,034	87	87	87	87	87
15:00	1,059	1,087	2,146	117	117	117	117	117
16:00	1,166	1,100	2,265	156	156	156	156	156
17:00	1,309	954	2,262	128	128	128	128	128

US 1		Total	
Time	Project	WB	Total
7:00	7	87	94
15:00	38	117	156
16:00	37	156	183
17:00	33	128	162

**APPENDIX F**

**TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS - [PROPOSED]**

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# TRAFFIC SIGNAL WARRANT SUMMARY

City: Stock Island  
 County: Monroe

Engineer: CPH  
 Date: May 5, 2011

Major Street: US 1  
 Minor Street: 3rd Street

Lanes: 4 Critical Approach Speed: 45  
 Lanes: 1

**Volume Level Criteria**

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No  
 If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

**WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME**

Applicable:  Yes  No  
 Satisfied:  Yes  No

*Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.  
 Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied.*

**Condition A - Minimum Vehicular Volume**

100% Satisfied:  Yes  No  
 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours																			
					1		2 or more		7:00 AM -	8:00 AM -	8:00 AM -	9:00 AM -	12:00 PM -	1:00 PM -	1:00 PM -	2:00 PM -	2:00 PM -	3:00 PM -	3:00 PM -	4:00 PM -	4:00 PM -	5:00 PM -	5:00 PM -	6:00 PM -
					100%	70%	100%	70%																
Both Approaches on Major Street	500 (400)	350	600 (480)	420	2,034	1,793	1,841	1,807	1,877	2,146	2,265	2,262												
Highest Approach on Minor Street	150 (120)	105	200 (160)	140	0	0	0	0	0	0	0	0												
					94	116	154	114	169	156	193	162												

EB  
WB

*Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if parenthetical volumes are met for eight hours.*

**Condition B - Interruption of Continuous Traffic**

*Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.*

Applicable:  Yes  No  
 Excessive Delay:  Yes  No  
 100% Satisfied:  Yes  No  
 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours																			
					1		2 or more		7:00 AM -	8:00 AM -	8:00 AM -	9:00 AM -	12:00 PM -	1:00 PM -	1:00 PM -	2:00 PM -	2:00 PM -	3:00 PM -	3:00 PM -	4:00 PM -	4:00 PM -	5:00 PM -	5:00 PM -	6:00 PM -
					100%	70%	100%	70%																
Both Approaches on Major Street	750 (600)	525	900 (720)	630	2,034	1,793	1,841	1,807	1,877	2,146	2,265	2,262												
Highest Approach on Minor Street	75 (60)	53	100 (80)	70	0	0	0	0	0	0	0	0												
					94	116	154	114	169	156	193	162												

EB  
WB

*Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if parenthetical volumes are met for eight hours.*

# TRAFFIC SIGNAL WARRANT SUMMARY

City: Stock Island  
 County: Monroe

Engineer: CPH  
 Date: May 5, 2011

Major Street: US 1  
 Minor Street: 3rd Street

Lanes: 4 Critical Approach Speed: 45  
 Lanes: 1

**Volume Level Criteria**

- 1. Is the critical speed of major street traffic > 70 km/h (40 mph) ?  Yes  No
  - 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

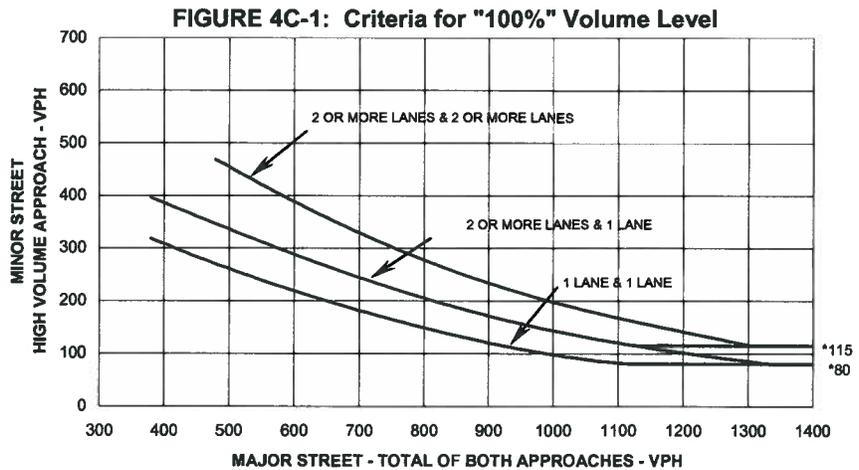
**WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME**

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

Applicable:  Yes  No  
 Satisfied:  Yes  No

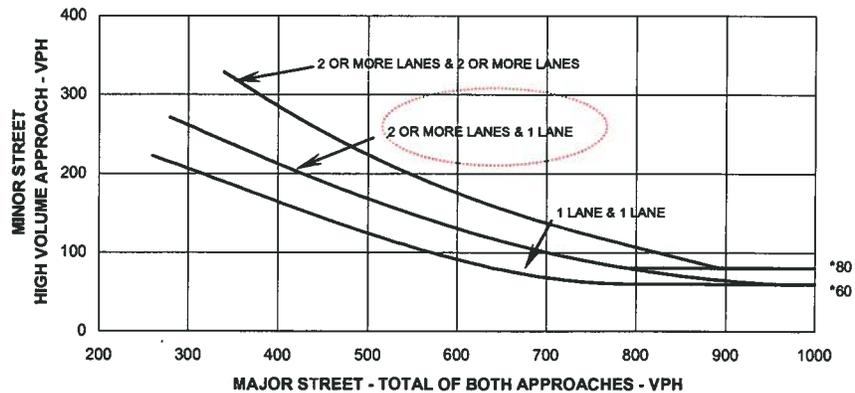
*Plot four volume combinations on the applicable figure below.*

Four Highest Hours	Volumes	
	Major Street	Minor Street
7:00 AM - 8:00 AM	2,034	94
12:00 PM - 1:00 PM	2,146	156
4:00 PM - 5:00 PM	2,265	193
5:00 PM - 6:00 PM	2,262	162



\* 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.

**FIGURE 4C-2: Criteria for "70%" Volume Level**  
 (Community Less than 10,000 population or above 70 km/hr (40 mph) on Major Street)



\* 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.

# TRAFFIC SIGNAL WARRANT SUMMARY

City: Stock Island  
 County: Monroe

Engineer: CPH  
 Date: May 5, 2011

Major Street: US 1  
 Minor Street: 3rd Street

Lanes: 4 Critical Approach Speed: 45  
 Lanes: 1

**Volume Level Criteria**

1. Is the critical speed of major street traffic > 70 km/h (40 mph)?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  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

Plot volume combination on the applicable figure below.

Unusual condition justifying use of warrant:

\_\_\_\_\_

\_\_\_\_\_

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

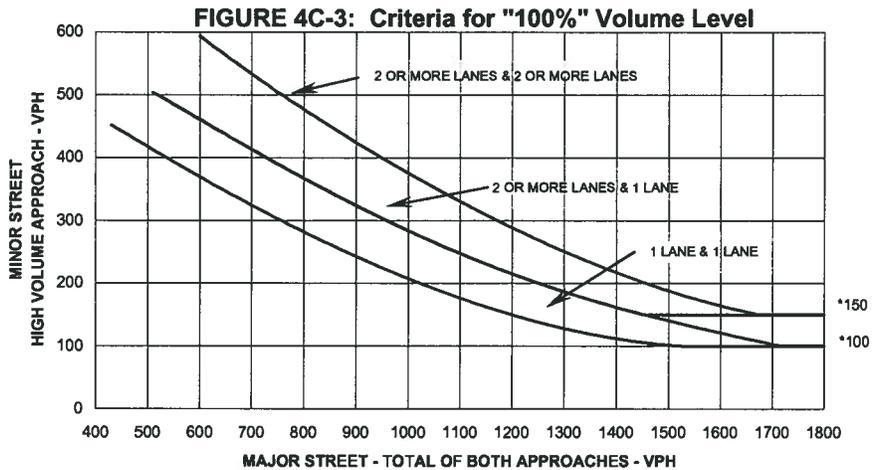
Peak Hour		

**Criteria**

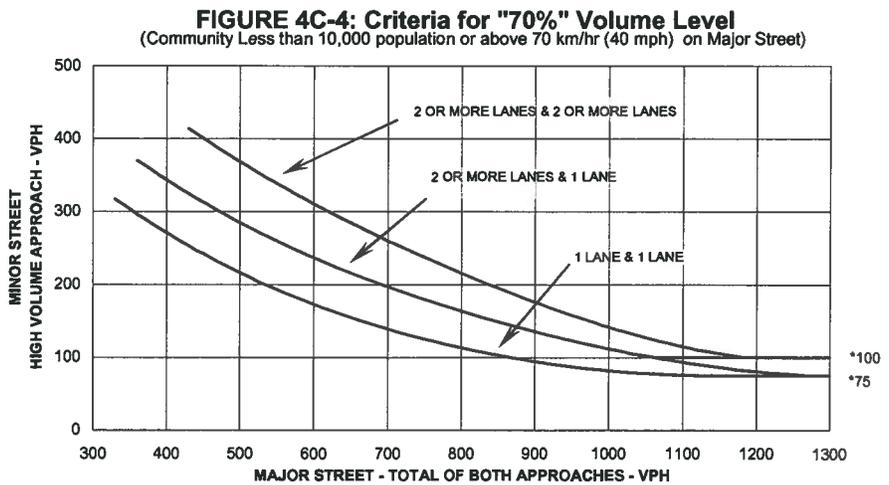
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*		
Fulfilled?:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

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

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



\* 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.

## TRAFFIC SIGNAL WARRANT SUMMARY

City: Stock Island  
 County: Monroe

Engineer: CPH  
 Date: May 5, 2011

Major Street: US 1  
 Minor Street: 3rd Street

Lanes: 4 Critical Approach Speed: 45  
 Lanes: 1

### WARRANT 4 - PEDESTRIAN VOLUME

*Record hours where criteria are fulfilled and the corresponding volume or gap frequency in the boxes provided. The warrant is satisfied if condition 1 or 2 is fulfilled and condition 3 is fulfilled.*

Applicable:  Yes  No  
 Satisfied:  Yes  No

Criteria	Hour	Pedestrian Volume	Pedestrian Gaps	Fulfilled?	
				Yes	No
1. Pedestrian volume crossing the major street is 100 ped/hr or more for each of any four hours <u>and</u> there are less than 60 gaps per hour in the major street traffic stream of adequate length.					
2. Pedestrian volume crossing the major street is 190 ped/hr or more for any one hour <u>and</u> there are less than 60 gaps per hour in the major street traffic stream of adequate length.					
3. The nearest traffic signal along the major street is located more than 90 m (300 ft) away, or the nearest signal is within 90 m (300 ft) but the proposed traffic signal will not restrict the progressive movement of traffic.					

### WARRANT 5 - SCHOOL CROSSING

*Record hours where criteria are fulfilled and the corresponding volume or gap frequency in the boxes provided. The warrant is satisfied if all three of the criteria are fulfilled.*

Applicable:  Yes  No  
 Satisfied:  Yes  No

Criteria	Fulfilled?	
	Yes	No
1. There are a minimum of 20 students crossing the major street during the highest crossing hour.	Students:	Hour:
2. There are fewer adequate gaps in the major street traffic stream during the period when the children are using the crossing than the number of minutes in the same period.	Minutes:	Gaps:
3. The nearest traffic signal along the major street is located more than 90 m (300 ft) away, or the nearest signal is within 90 m (300 ft) but the proposed traffic signal will not restrict the progressive movement of traffic.		

### WARRANT 6 - COORDINATED SIGNAL SYSTEM

*Indicate if the criteria are fulfilled in the boxes provided. The warrant is satisfied if either criterion is fulfilled. This warrant should not be applied when the resulting signal spacing would be less than 300 m (1,000 ft).*

Applicable:  Yes  No  
 Satisfied:  Yes  No

Criteria	Fulfilled?	
	Yes	No
1. On a one-way street or a street that has traffic predominately in one direction, the adjacent signals are so far apart that they do not provide the necessary degree of vehicle platooning.		N/A
2. On a two-way street, adjacent signals do not provide the necessary degree of platooning, and the proposed and adjacent signals will collectively provide a progressive operation.	x	

## TRAFFIC SIGNAL WARRANT SUMMARY

City: Stock Island  
 County: Monroe

Engineer: CPH  
 Date: May 5, 2011

Major Street: US 1  
 Minor Street: 3rd Street

Lanes: 4 Critical Approach Speed: 45  
 Lanes: 1

### 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?		
			Yes	No	Yes	No	
1. One of the warrants to the right is met.	Warrant 1, Condition A (80% satisfied)						
	Warrant 1, Condition B (80% satisfied)						
	Warrant 4, Pedestrian Volume at 80% of volume requirements: 80 ped/hr for four (4) hours or 152 ped/hr for one (1) hour						
2. Adequate trial of other remedial measure has failed to reduce crash frequency.	Measure tried:						
3. Five or more reported crashes, of types susceptible to correction by signal, have occurred within a 12-mo. period.	Number of crashes per 12 months:						

### WARRANT 8 - ROADWAY NETWORK

Record hours where criteria are fulfilled, and the corresponding volume or other information in the boxes provided. The warrant is satisfied if at least one of the criteria is fulfilled and if all intersecting routes have one or more of the characteristics listed.

Applicable:  Yes  No  
 Satisfied:  Yes  No

Criteria	Met?		Fulfilled?	
	Yes	No	Yes	No
1. Both of the criteria to the right are met.	a. Total entering volume of at least 1,000 veh/hr during a typical weekday peak hour.		Entering Volume:	
	b. Five-year projected volumes that satisfy one or more of Warrants 1, 2, or 3.		Warrant:	1    2    3
			Satisfied?:	
2. Total entering volume at least 1,000 veh/hr for each of any 5 hrs of a non-normal business day (Sat. or Sun.)			← Hour	
			← Volume	

Characteristics of Major Routes	Met?		Fulfilled?	
	Yes	No	Yes	No
1. Part of the street or highway system that serves as the principal roadway network for through traffic flow.	Major Street:			
	Minor Street:			
2. Rural or suburban highway outside of, entering, or traversing a city.	Major Street:			
	Minor Street:			
3. Appears as a major route on an official plan.	Major Street:			
	Minor Street:			

### CONCLUSIONS

Warrants Satisfied: 

1	2						
---	---	--	--	--	--	--	--

Remarks: \_\_\_\_\_  
 \_\_\_\_\_

**APPENDIX G**

**TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS - [EXISTING]**

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## TRAFFIC SIGNAL WARRANT SUMMARY

City: Stock Island  
 County: Monroe

Engineer: CPH  
 Date: May 5, 2011

Major Street: US 1  
 Minor Street: 3rd Street

Lanes: 4 Critical Approach Speed: 45  
 Lanes: 1

**Volume Level Criteria**

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

**WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME**

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.  
 Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied.

Applicable:  Yes  No  
 Satisfied:  Yes  No

**Condition A - Minimum Vehicular Volume**

100% Satisfied:  Yes  No  
 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours																			
					1		2 or more		7:00 AM -	8:00 AM -	8:00 AM -	9:00 AM -	12:00 PM -	1:00 PM -	1:00 PM -	2:00 PM -	2:00 PM -	3:00 PM -	3:00 PM -	4:00 PM -	4:00 PM -	5:00 PM -	5:00 PM -	6:00 PM -
					100%	70%	100%	70%	7:00 AM -	8:00 AM -	8:00 AM -	9:00 AM -	12:00 PM -	1:00 PM -	1:00 PM -	2:00 PM -	2:00 PM -	3:00 PM -	3:00 PM -	4:00 PM -	4:00 PM -	5:00 PM -	5:00 PM -	6:00 PM -
Both Approaches on Major Street	500 (400)	350	600 (480)	420	2,034	1,793	1,841	1,807	1,877	2,146	2,265	2,262												
Highest Approach on Minor Street	150	105	200	140	0	0	0	0	0	0	0	0												
	(120)		(160)		87	98	116	109	132	117	156	129												

EB  
WB

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if parenthetical volumes are met for eight hours.

**Condition B - Interruption of Continuous Traffic**

Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.

Applicable:  Yes  No  
 Excessive Delay:  Yes  No  
 100% Satisfied:  Yes  No  
 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours																			
					1		2 or more		7:00 AM -	8:00 AM -	8:00 AM -	9:00 AM -	12:00 PM -	1:00 PM -	1:00 PM -	2:00 PM -	2:00 PM -	3:00 PM -	3:00 PM -	4:00 PM -	4:00 PM -	5:00 PM -	5:00 PM -	6:00 PM -
					100%	70%	100%	70%	7:00 AM -	8:00 AM -	8:00 AM -	9:00 AM -	12:00 PM -	1:00 PM -	1:00 PM -	2:00 PM -	2:00 PM -	3:00 PM -	3:00 PM -	4:00 PM -	4:00 PM -	5:00 PM -	5:00 PM -	6:00 PM -
Both Approaches on Major Street	750 (600)	525	900 (720)	630	2,034	1,793	1,841	1,807	1,877	2,146	2,265	2,262												
Highest Approach on Minor Street	75	53	100	70	0	0	0	0	0	0	0	0												
	(60)		(80)		87	98	116	109	132	117	156	129												

EB  
WB

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if parenthetical volumes are met for eight hours.

# TRAFFIC SIGNAL WARRANT SUMMARY

City: Stock Island Engineer: CPH  
 County: Monroe Date: May 5, 2011  
 Major Street: US 1 Lanes: 4 Critical Approach Speed: 45  
 Minor Street: 3rd Street Lanes: 1

**Volume Level Criteria**

1. Is the critical speed of major street traffic > 70 km/h (40 mph)?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No

If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

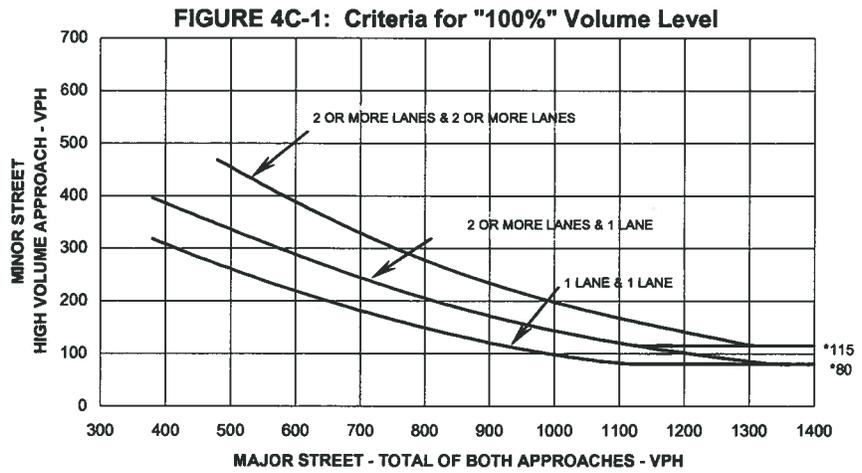
**WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME**

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

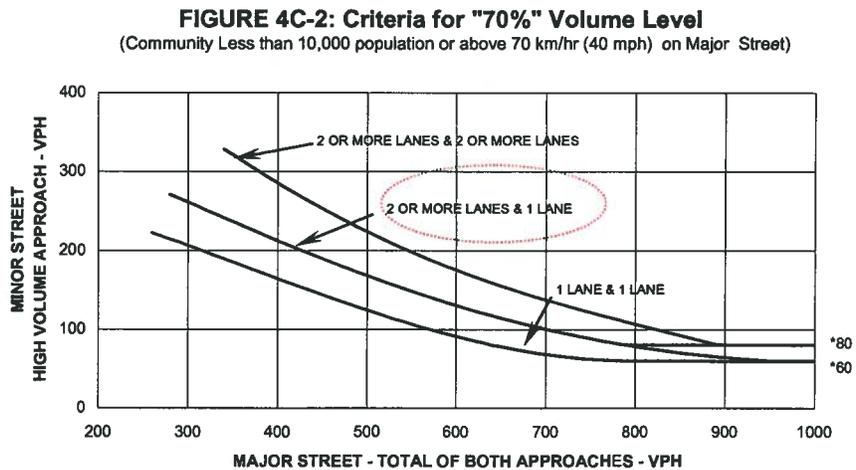
Applicable:  Yes  No  
 Satisfied:  Yes  No

*Plot four volume combinations on the applicable figure below.*

Four Highest Hours	Volumes	
	Major Street	Minor Street
7:00 AM - 8:00 AM	2,034	87
12:00 PM - 1:00 PM	2,146	117
4:00 PM - 5:00 PM	2,265	156
5:00 PM - 6:00 PM	2,262	129



\* 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.



\* 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.

# TRAFFIC SIGNAL WARRANT SUMMARY

City: Stock Island  
 County: Monroe

Engineer: CPH  
 Date: May 5, 2011

Major Street: US 1  
 Minor Street: 3rd Street

Lanes: 4 Critical Approach Speed: 45  
 Lanes: 1

**Volume Level Criteria**

1. Is the critical speed of major street traffic > 70 km/h (40 mph)?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  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

Plot volume combination on the applicable figure below.

Unusual condition justifying use of warrant:

\_\_\_\_\_

\_\_\_\_\_

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

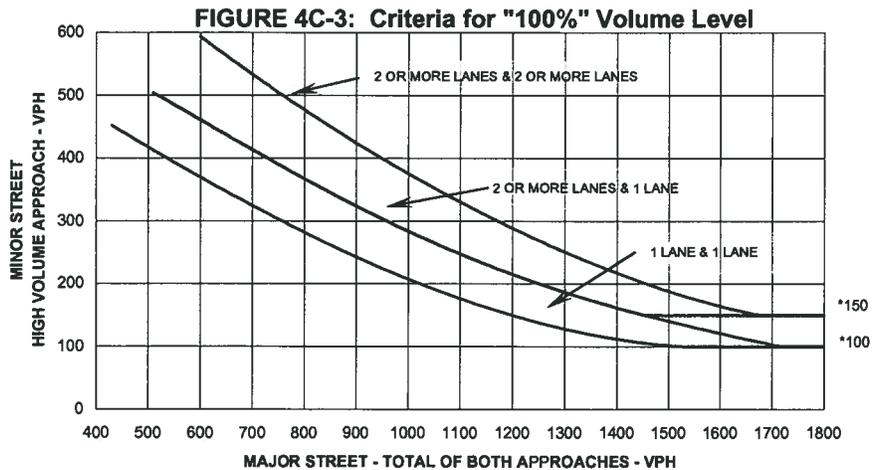
Peak Hour		

**Criteria**

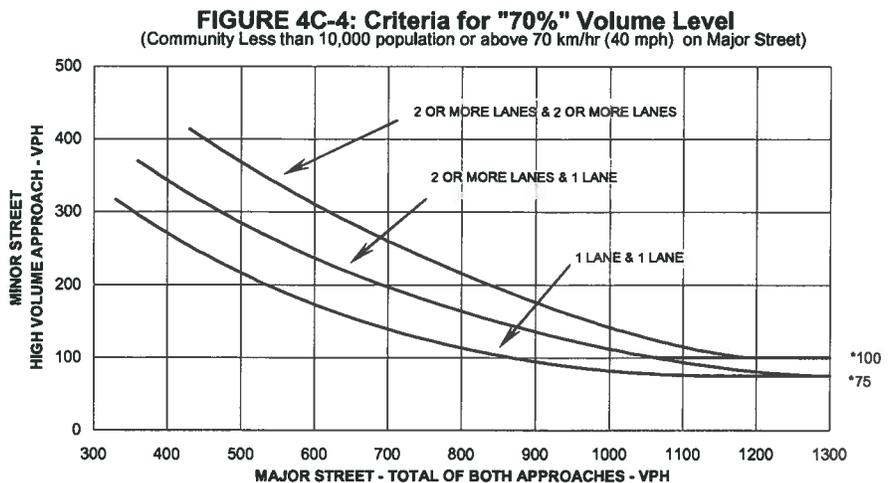
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*		
Fulfilled?:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

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

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



\* 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.

## TRAFFIC SIGNAL WARRANT SUMMARY

City: Stock Island  
 County: Monroe

Engineer: CPH  
 Date: May 5, 2011

Major Street: US 1  
 Minor Street: 3rd Street

Lanes: 4 Critical Approach Speed: 45  
 Lanes: 1

### WARRANT 4 - PEDESTRIAN VOLUME

Applicable:  Yes  No  
 Satisfied:  Yes  No

*Record hours where criteria are fulfilled and the corresponding volume or gap frequency in the boxes provided. The warrant is satisfied if condition 1 or 2 is fulfilled and condition 3 is fulfilled.*

Criteria	Hour	Pedestrian Volume	Pedestrian Gaps	Fulfilled?	
				Yes	No
1. Pedestrian volume crossing the major street is 100 ped/hr or more for each of any four hours <u>and</u> there are less than 60 gaps per hour in the major street traffic stream of adequate length.					
2. Pedestrian volume crossing the major street is 190 ped/hr or more for any one hour <u>and</u> there are less than 60 gaps per hour in the major street traffic stream of adequate length.					
3. The nearest traffic signal along the major street is located more than 90 m (300 ft) away, or the nearest signal is within 90 m (300 ft) but the proposed traffic signal will not restrict the progressive movement of traffic.					

### WARRANT 5 - SCHOOL CROSSING

Applicable:  Yes  No  
 Satisfied:  Yes  No

*Record hours where criteria are fulfilled and the corresponding volume or gap frequency in the boxes provided. The warrant is satisfied if all three of the criteria are fulfilled.*

Criteria	Fulfilled?	
	Yes	No
1. There are a minimum of 20 students crossing the major street during the highest crossing hour.	Students:	Hour:
2. There are fewer adequate gaps in the major street traffic stream during the period when the children are using the crossing than the number of minutes in the same period.	Minutes:	Gaps:
3. The nearest traffic signal along the major street is located more than 90 m (300 ft) away, or the nearest signal is within 90 m (300 ft) but the proposed traffic signal will not restrict the progressive movement of traffic.		

### WARRANT 6 - COORDINATED SIGNAL SYSTEM

Applicable:  Yes  No  
 Satisfied:  Yes  No

*Indicate if the criteria are fulfilled in the boxes provided. The warrant is satisfied if either criterion is fulfilled. This warrant should not be applied when the resulting signal spacing would be less than 300 m (1,000 ft).*

Criteria	Fulfilled?	
	Yes	No
1. On a one-way street or a street that has traffic predominately in one direction, the adjacent signals are so far apart that they do not provide the necessary degree of vehicle platooning.		N/A
2. On a two-way street, adjacent signals do not provide the necessary degree of platooning, and the proposed and adjacent signals will collectively provide a progressive operation.	x	

## TRAFFIC SIGNAL WARRANT SUMMARY

City: Stock Island  
 County: Monroe

Engineer: CPH  
 Date: May 5, 2011

Major Street: US 1  
 Minor Street: 3rd Street

Lanes: 4 Critical Approach Speed: 45  
 Lanes: 1

### 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?		
			Yes	No	Yes	No	
1. One of the warrants to the right is met.	Warrant 1, Condition A (80% satisfied)						
	Warrant 1, Condition B (80% satisfied)						
	Warrant 4, Pedestrian Volume at 80% of volume requirements: 80 ped/hr for four (4) hours or 152 ped/hr for one (1) hour						
2. Adequate trial of other remedial measure has failed to reduce crash frequency.	Measure tried:						
3. Five or more reported crashes, of types susceptible to correction by signal, have occurred within a 12-mo. period.	Number of crashes per 12 months:						

### WARRANT 8 - ROADWAY NETWORK

Record hours where criteria are fulfilled, and the corresponding volume or other information in the boxes provided. The warrant is satisfied if at least one of the criteria is fulfilled and if all intersecting routes have one or more of the characteristics listed.

Applicable:  Yes  No  
 Satisfied:  Yes  No

Criteria	Met?		Fulfilled?		
	Yes	No	Yes	No	
1. Both of the criteria to the right are met.	a. Total entering volume of at least 1,000 veh/hr during a typical weekday peak hour.	Entering Volume:			
	b. Five-year projected volumes that satisfy one or more of Warrants 1, 2, or 3.	Warrant:	1	2	3
		Satisfied?:			
2. Total entering volume at least 1,000 veh/hr for each of any 5 hrs of a non-normal business day (Sat. or Sun.)			← Hour		
			← Volume		

Characteristics of Major Routes	Met?		Fulfilled?	
	Yes	No	Yes	No
1. Part of the street or highway system that serves as the principal roadway network for through traffic flow.	Major Street:			
	Minor Street:			
2. Rural or suburban highway outside of, entering, or traversing a city.	Major Street:			
	Minor Street:			
3. Appears as a major route on an official plan.	Major Street:			
	Minor Street:			

### CONCLUSIONS

Warrants Satisfied: 

1	2						
---	---	--	--	--	--	--	--

Remarks: \_\_\_\_\_  
 \_\_\_\_\_

**MEMORANDUM**  
**MONROE COUNTY PLANNING DEPARTMENT**

*We strive to be caring, professional and fair*



To: Monroe County Board Development Review Committee

Through: Christine Hurley, AICP, Growth Management Director

From: Michael Roberts, CEP, PWS; Sr. Administrator/Environmental Resources

Date: September 21, 2012

Re: Tier Designation Review Committee (TDRC) Recommendations Staff Report

Meeting Date: September 25, 2012

---

1 **I. BACKGROUND**

2

3 The Monroe County Board of County Commissioners adopted Ordinances 08-  
4 2006, 09-2006, 10-2006, 11-2006 and 13-2006 in March of 2006. These  
5 Ordinances established the criteria for determining the Tier designation, revised  
6 the ROGO and NROGO point system and implemented the Tier Overlay maps  
7 for unincorporated Monroe County, excluding Ocean Reef. On June 16, 2006 the  
8 Department of Community Affairs published notice of Final Orders determining  
9 that the above ordinances were consistent with Chapter 380 F.S. and were  
10 approved.

11 On July 7, 2006 Florida Keys Citizens Coalition, Inc. and Protect Key West and  
12 the Florida Keys, Inc. d/b/a Last Stand [Petitioners] filed a petition for  
13 administrative hearing regarding the Final Orders. The final administrative  
14 hearing was held in February 2007 and the Administrative Law Judge (ALJ)  
15 issued a Recommended Order. The majority of the challenges raised by the  
16 Petitioners were rejected by the ALJ, however two (2) key assertions were upheld  
17 and the ALJ determined:

- 18
- 19 • The four (4) acre minimum threshold for Tier 1 designation was arbitrary  
20 and
  - 21 • The one (1) acre minimum threshold for Special Protection Areas (Tier  
22 III-A SPA) was likewise arbitrary.
- 23

1 The Amended Final Order incorporating the findings of the ALJ was issued by  
2 the Department of Community Affairs on January 2, 2008, requiring Monroe  
3 County to revise Chapter 130-130 of the Land Development Code to reflect the  
4 findings of the Amended Final Order, specifically deleting the acreage criteria  
5 that was found to be arbitrary.

6  
7 The 2008 "30 day report" submitted to and accepted by the Governor and Cabinet  
8 regarding progress under the 10 year work program required Monroe County to  
9 prepare new habitat data based on the best available ortho-photography and to  
10 establish a Tier Designation Review Committee (TDRC) with members selected  
11 by the DCA. The TDRC was established to make recommendations to the  
12 Monroe County Board of County Commissioners on proposed adjustments to the  
13 Tier boundaries.

14  
15 On May 19, 2010 the BOCC at the request of the Environmental Law Center  
16 (ELC) on behalf of Last Stand, directed staff to evaluate the Tier designation of  
17 approximately 171- 249 additional parcels. The actual number of parcels  
18 determined to be included in the request was 393 parcels. Growth Management  
19 Division staff included 77 off shore island parcels for review that had not been  
20 given a Tier designation at the time of the adoption of the original Ordinances in  
21 2006.

22  
23 During the course of review of the above parcels, Growth Management staff  
24 included for review an additional forty five (45) parcels that had a Tier that staff  
25 wished to verify.

26  
27 The TDRC reviewed the maps and associated data at the TDRC meetings held on  
28 September 30, 2010 and on August 25, 2011.

29  
30 **Parcel Information**

31  
32 The direction by the Board of County Commissioners and subsequent Staff  
33 additions discussed above resulted in 515 parcels being evaluated by the TDRC.

34  
35 Twelve (12) of the 515 parcels are currently competing in ROGO. These parcels  
36 have been scored based on the Tier designation in place at the time of application  
37 and for two (2) of these parcels the Tier designation is recommended to be  
38 changed from Tier III-A (SPA) to Tier III. The remaining 10 parcels are  
39 recommended to maintain their current designation

40  
41 Of the 515 parcels reviewed by the Tier Designation Review Committee, one  
42 hundred eleven (111) are recommended to have their Tier designation changed.  
43 The TDRC recommendations result in 10 of the reviewed parcels changing to a

1 more restrictive Tier. The TDRC recommendations are summarized in the tables  
 2 below.

3  
 4  
 5  
 6

**Table 1. Summary of Tier Designation Review Committee Recommendations**

<b>Parcels With TDRC recommended Tier Change</b>		
<b>More Restrictive Tier</b>		
Tier III to Tier I	1	MCLA property
Tier III to Tier III-A	5	
Tier III-A to Tier I	4	
<b>Total</b>	<b>10</b>	
<b>Less Restrictive Tier</b>		
Tier III-A to Tier III	15	
Tier I to Tier III-A	0	
Tier I to Tier III	5	
<b>Total</b>	<b>20</b>	
<b>No Previous Tier</b>		
Tier I	77	offshore islands
Tier III-A	0	
Tier III	3	
<b>Total</b>	<b>80</b>	
<b>Total Parcels Changed</b>	<b>110</b>	

7

**Table 2. Summary of Tier Changes associated with TDRC Recommendations**

<b>Parcels Changed Tier 3 to Tier 1</b>	<b>1</b>
<b>Parcels Changed Tier 3 to SPA</b>	<b>5</b>
<b>Parcels Changed SPA to Tier 1</b>	<b>4</b>
<b>Parcels Changed Tier 1 to SPA</b>	<b>0</b>
<b>Parcels Changed Tier 1 to Tier 3</b>	<b>5</b>
<b>Parcels Changed SPA to Tier 3</b>	<b>15</b>
<b>Parcels With No Change</b>	<b>405</b>
<b>Parcels Previous No Tier to Tier I</b>	<b>77</b>
<b>Parcels Previous No Tier to Tier III</b>	<b>3</b>

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**Table 3. Summary of Monroe County Planning & Environmental Resources Staff Recommendations**

Parcels With Staff recommended Tier Change		
<b>More Restrictive Tier</b>		
Tier III to Tier I	1	County
Tier III to Tier III-A	3	
Tier III-A to Tier I	4	
<b>Total</b>	<b>8</b>	
<b>Less Restrictive Tier</b>		
Tier III-A to Tier III	16	
Tier I to Tier III-A	0	
Tier I to Tier III	5	
<b>Total</b>	<b>21</b>	
<b>No Previous Tier</b>		
Tier I	77	offshore islands
Tier III-A	0	
Tier III	3	
<b>Total</b>	<b>80</b>	
<b>Total Parcels Changed</b>	<b>109</b>	

**Table 4. Summary of Tier Changes associated with Staff Recommendations**

<b>Parcels Changed Tier 3 to Tier 1</b>	<b>1</b>
<b>Parcels Changed Tier 3 to SPA</b>	<b>3</b>
<b>Parcels Changed SPA to Tier 1</b>	<b>4</b>
<b>Parcels Changed Tier 1 to SPA</b>	<b>0</b>
<b>Parcels Changed Tier 1 to Tier 3</b>	<b>5</b>
<b>Parcels Changed SPA to Tier 3</b>	<b>16</b>
<b>Parcels With No Change</b>	<b>406</b>
<b>Parcels Previous No Tier to Tier I</b>	<b>77</b>
<b>Parcels Previous No Tier to Tier III</b>	<b>3</b>

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1  
2 **II. PROCESS**

3  
4 Tier overlay amendments are processed as changes to the land use district map  
5 (130-130(e)). The Director of Planning shall review and process Tier Overlay map  
6 revisions and pass them on to the Development Review Committee and the  
7 Planning Commission for recommendation and final approval by the BOCC.

8 The Planning Commission shall hold at least one public hearing on the proposed  
9 map revisions. The Planning Commission shall review the revised maps, the  
10 reports and recommendations of the Tier Designation Review Committee  
11 (TDRC), the Department of Planning & Environmental Resources and the  
12 Development Review Committee, and the testimony given at the public hearing,  
13 and shall submit its recommendations and findings to the BOCC. The BOCC  
14 shall consider the staff report, recommendations, and testimony given at the  
15 public hearings before it. Because of the statutory notice and Monroe County  
16 Code notice requirements, two required notification processes will be followed.  
17 Individual notices to parcel owners and newspaper advertising will be provided.  
18 Two hearings will be required before the BOCC because of statutory  
19 requirements for contiguous parcels of more than 10 acres. If the BOCC adopts  
20 the ordinances, they are sent to DCA for consideration and approval by a final  
21 order, published in the Florida Administrative Weekly. There is a 21 day appeal  
22 period before the ordinances are considered final.

23  
24 **III. ISSUES**

25  
26 As shown in the summary tables, the majority of parcels reviewed (404, or 78%)  
27 were not recommended for a change. The most affected category of parcels  
28 recommended for Tier change were the off-shore parcels located on the Palo Alto  
29 Keys and Pumpkin Key. These parcels were not assigned a Tier designation at  
30 the time of the original adoption, presumably because they were thought to be  
31 part of the Ocean Reef Club planned development. These parcels (77 in total)  
32 were all recommended for a Tier I designation based on Comprehensive Plan  
33 Policy 102.7.3 which states: *Monroe County shall discourage developments*  
34 *proposed on offshore islands by methods including, but not limited to, designated*  
35 *offshore islands as Tier I Lands* [9J-5.006(3)(c)6].

36  
37 Planning and Environmental Resources staff recommendations differ from that of  
38 the TDRC for two (2) parcels. For Parcels 00517180-000000 and 00517440-  
39 000000 located between Central Avenue and Gumbo Limbo Avenue in the Bay  
40 Haven subdivision in Key Largo, the TDRC recommended a Tier designation of  
41 Tier III-A (SPA) based on the habitat connectivity. However, staff believes these  
42 parcels should maintain their Tier III designation based on the criteria contained  
43 in the Tier boundary criteria in §130

44 §130-130 (c) (2) a (3) *Property lines of developed lots or vacant lots with*  
45 *a ROGO allocation award or an issued building permit, as of September*

1  
2

28, 2005, located within a Land Use District that allows only one unit per lot;



Figure 1. Parcels 00517180-000000 and 00517440-000000

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As seen in Figure 1 above, the property lines of the developed parcels surrounding the subject parcels would break the connectivity of the hammock, thereby reducing the intact hammock to fragment of less than 0.35 acres.

10 **IV. Consistency with the Principles for Guiding Development in the Florida**  
11 **Keys Area of Critical State Concern pursuant to F.S. Chapter 380.0552(7).**

12  
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15  
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For the purposes of reviewing consistency of the Land Development Code or any amendments to the Code with the principles for guiding development and any amendments to the principles, the principles shall be construed as a whole and no specific provision shall be construed or applied in isolation from the other provisions.

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- (a) To strengthen local government capabilities for managing land use and development so that local government is able to achieve these objectives without the continuation of the area of critical state concern designation.
- (b) To protect shoreline and marine resources, including mangroves, coral reef formations, seagrass beds, wetlands, fish and wildlife, and their habitat.
- (c) To protect upland resources, tropical biological communities, freshwater wetlands, native tropical vegetation (for example, hardwood hammocks and pinelands), dune ridges and beaches, wildlife, and their habitat.

1 (d) To ensure the maximum well-being of the Florida Keys and its  
2 citizens through sound economic development.

3 (e) To limit the adverse impacts of development on the quality of  
4 water throughout the Florida Keys.

5 (f) To enhance natural scenic resources, promote the aesthetic benefits  
6 of the natural environment, and ensure that development is compatible  
7 with the unique historic character of the Florida Keys.

8 (g) To protect the historical heritage of the Florida Keys.

9 (h) To protect the value, efficiency, cost-effectiveness, and amortized  
10 life of existing and proposed major public investments, including:

- 11 1. The Florida Keys Aqueduct and water supply facilities;
- 12 2. Sewage collection and disposal facilities;
- 13 3. Solid waste collection and disposal facilities;
- 14 4. Key West Naval Air Station and other military facilities;
- 15 5. Transportation facilities;
- 16 6. Federal parks, wildlife refuges, and marine sanctuaries;
- 17 7. State parks, recreation facilities, aquatic preserves, and other  
18 publicly owned properties;
- 19 8. City electric service and the Florida Keys Electric Co-op; and
- 20 9. Other utilities, as appropriate.

21 (i) To limit the adverse impacts of public investments on the  
22 environmental resources of the Florida Keys.

23 (j) To make available adequate affordable housing for all sectors of the  
24 population of the Florida Keys.

25 (k) To provide adequate alternatives for the protection of public safety  
26 and welfare in the event of a natural or manmade disaster and for a  
27 post disaster reconstruction plan.

28 (l) To protect the public health, safety, and welfare of the citizens of  
29 the Florida Keys and maintain the Florida Keys as a unique Florida  
30 resource.

31 Staff finds the proposed amendment consistent with the Principles for Guiding  
32 Development as a whole and is not inconsistent with any one principle.

33  
34 **V. Staff Recommendation:**

35  
36 Staff recommends **approval** of the Map series (A through Z including maps AA  
37 and BB) with Staff revisions for Map M and TDRC recommended changes for  
38 Maps A, AA, BB, I, J, K, N, R, X, Y, Z.

39  
40 **VI. Exhibits**

41 Volume A Map Series Maps A through Z, including Maps AA and BB.

- 1 Tier Designation Review Committee (TDRC) Recommendation Maps (Volume
- 2 A; Maps A, AA, BB, I, J, K, M, N, R, X, Y, Z)
- 3 Monroe County Environmental Resources Staff Recommendation Maps (Volume
- 4 A; Map M)



## MEMORANDUM

### MONROE COUNTY PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT

*We strive to be caring, professional and fair*

**To:** Monroe County Development Review Committee &  
Townshley Schwab, Senior Director of Planning & Environmental Resources

**From:** Mayté Santamaria, Assistant Director of Planning

**Date:** September 19, 2012

**Subject:** Request by Safe Harbor Marina Property Owners Association, Inc., to amend the Comprehensive Plan Future Land Use Map from Industrial (I) to Mixed Use Commercial (MC) for 18 parcels on Stock Island.

**Meeting:** September 25, 2012

#### I. REQUEST

Safe Harbor Marina Property Owners Association, Inc., is requesting to amend the Comprehensive Plan Future Land Use Map for parcels of land on Stock Island, having real estate numbers 00123660-000000, 00123720-000400, 00123760-000200, 00123720-000100, 00123720-000200, 00123730-000100, 00123740-000000, 00123770-000000, 00127290-000000, 00127380-000000, 00127250-000000, 00127280-000000, 00123600-000100, 00123600-000102, 00123600-000101, 00123590-000000, 00123570-000000, and 00123540-000000, located on South Stock Island; from Industrial (I) to Mixed Use/Commercial (MC).

#### II. BACKGROUND INFORMATION

A. Safe Harbor Marina Property Owners Association, Inc., is requesting to amend the Future Land Use Map for 18 parcels on Stock Island from Industrial to Mixed Use/Commercial.

The parcels included in amendment request, are as follows:

Property Owner(s)	Real Estate Number	Property Address	Current FLUM	Proposed FLUM	Tier & Zoning	Land Area (upland acres)	Existing Uses
Robbie's Safe Harbor Marine Enterprises, Inc., a Florida corporation	00123660-000000	7281 Shrimp Road, Key West, Florida 33040	Industrial (I)	Mixed Use Commercial (MC)	Tier III Maritime Industrial (MI)	10.41	Marine activities, boat yard, engine repair, boat building, storage space, deep water access, commercial fishing, affordable housing.

Property Owner(s)	Real Estate Number	Property Address	Current FLUM	Proposed FLUM	Tier & Zoning	Land Area (upland acres)	Existing Uses
Safe Harbor Enterprises, Inc., a Florida corporation	00123720-000400	Vacant Land, South Stock Island; Vacant Land, Shrimp Road	Industrial (I)	Mixed Use Commercial (MC)	Tier III Maritime Industrial (MI)	4.2	Commercial Fishing, storage, boat repair, commercial waterfront.
Longstock II, LLC, a Florida limited liability company	00123760-000200, 00123720-000100, 0123720-000200	7000 and 7009 Shrimp Road, Key West, Florida 33040	Industrial (I)	Mixed Use Commercial (MC)	Tier III Maritime Industrial (MI)	12.25	Marine activities, boat yard, artist's studios, engine repair, boat building, dog park, commercial space, storage space, warehouse space, deep water dockage, working waterfront, commercial fishing, live-a-boards, residential upland units, gym, office space.
Constellation Yachts, Inc., a Florida corporation	00123730-000100	6811 Shrimp Road, Stock Island, Florida 33040	Industrial (I)	Mixed Use Commercial (MC)	Tier III Maritime Industrial (MI)	0.76	Boat building, boat storage, boat repairs
3D of Key West, Inc., a Florida corporation	00123740-000000	6801 Shrimp Road, Stock Island, Florida 33040	Industrial (I)	Mixed Use Commercial (MC)	Tier III Maritime Industrial (MI)	2.07	Boat yard, boat repair, boat storage, boat dockage
Bernstein Family Trust	00123770-000000, 00127250-000000, 00127280-000000, 00127290-000000, 00127380-000000	5550 Fifth Avenue, 5700 Fourth Street, South Stock Island, Florida 33040	Industrial (I)	Mixed Use Commercial (MC)	Tier III Maritime Industrial (MI)	9.52	Commercial Fishing, storage, boat repair, commercial waterfront.
Island Trust	00123600-000100	6500 Front Street, Key West, Florida 33045-2455	Industrial (I)	Mixed Use Commercial (MC)	Tier III Maritime Industrial (MI)	2.11	Commercial Fishing, storage, boat repair, commercial waterfront.
Key West Transfer & Hauling Service, Inc., a Florida corporation	00123600-000102	6500 Front Street, Stock Island, Florida 33040	Industrial (I)	Mixed Use Commercial (MC)	Tier III Maritime Industrial (MI)	2.51	Storage, trash transfer station

Property Owner(s)	Real Estate Number	Property Address	Current FLUM	Proposed FLUM	Tier & Zoning	Land Area (upland acres)	Existing Uses
KW Resort Utilities Corp., a Florida corporation	00123600-000101	6630 Front Street, Stock Island, Florida 33040	Industrial (I)	Mixed Use Commercial (MC)	Tier III Maritime Industrial (MI)	2.00	Wastewater treatment
Safe Harbor Properties, LLC, a Florida limited liability company	00123590-000000	6810 Front Street, Key West, Florida 33040	Industrial (I)	Mixed Use Commercial (MC)	Tier III Maritime Industrial (MI)	2.21	Marine activities, artist's studios, commercial space, storage space, warehouse space, deep water dockage, working waterfront, commercial fishing, live-a-boards, residential upland units, office space, restaurant/bar space
Bama One, LLC, a Florida limited liability company	00123570-000000	Vacant Land South Stock Island	Industrial (I)	Mixed Use Commercial (MC)	Tier III Maritime Industrial (MI)	0.43	Deep water dockage, commercial fishing, live-a-board vessels, residential
6840 Front Street, LLC, a Florida limited liability company	00123540-000000	6840 Front Street, Stock Island, Florida 33040	Industrial (I)	Mixed Use Commercial (MC)	Tier III Maritime Industrial (MI)	0.93	Commercial fisheries, retail, commercial dockage
<b>Total Upland Acreage</b>						<b>49.40</b>	

1  
2  
3 **B. Legal descriptions of the above properties are provided in Exhibit 1.**

4  
5 **C. Associated Text Amendment Application & Background:**  
6 A property owner on South Stock Island, Longstock II, LLC, submitted an application for a  
7 comprehensive plan text amendment to amend the Mixed Use/Commercial (MC) Future Land Use  
8 Map category description (Policy 101.4.5) and amend Policy 101.4.21 to assign the Maritime  
9 Industries (MI) zoning district to the MC category, amend the density ranges and the maximum  
10 intensity range for the MC future land use map category in August 2011. The Monroe County  
11 Development Review Committee considered the proposed amendment on October 17, 2011. On  
12 December 1, 2011, the Monroe County Planning Commission (PC) held a public hearing  
13 considering the transmittal of the proposed amendment to the State Land Planning Agency. The PC  
14 recommended that the BOCC not transmit the proposed amendment because the County had not  
15 adopted amendments to preserve and enhance working waterfront uses – which are found on South  
16 Stock Island. The PC had concerns that the proposed amendment by Longstock II, LLC, may

1 impact working waterfront uses. Longstock, II, LLC, and County staff recommended revisions to  
 2 the proposed amendment to address the concerns raised by the PC.

3  
 4 On February 13, 2012, the BOCC held a public hearing considering the transmittal of the proposed  
 5 amendment to the State Land Planning Agency. The BOCC voted to transmit the amendment, with  
 6 the staff’s recommended provisions to preserve and enhance working waterfront while allowing  
 7 moderate redevelopment of other uses, to the State Land Planning Agency. The State Land Planning  
 8 Agency reviewed the amendment and issued an Objections, Recommendations and Comments  
 9 (ORC) Report on May 4, 2012. The ORC report did not identify any issues with the proposed  
 10 amendment.

11  
 12 The BOCC will consider adoption of this amendment on September 21, 2012. If adopted by the  
 13 BOCC and found in-compliance by the State Land Planning Agency, the parcels requesting the  
 14 FLUM amendment would be subject to the working waterfront provisions of the Mixed  
 15 Use/Commercial (MC) Future Land Use Map category.

16  
 17 The text amendment includes the following provisions:

- 18
- 19 ○ Requires maintaining a minimum of 35% of the upland area of the property for working
- 20 waterfront and water dependent uses, excludes transient residential development
- 21 ○ Requires preserving at least 20% of existing wet slips for vessels involved with recreational and
- 22 commercial working waterfront uses, excluding live-aboard vessels solely used as a residence
- 23 and not for navigation
- 24 ○ Requires preserving at least 10% of new wet slips for vessels involved with recreational and
- 25 commercial working waterfront uses, excluding live-aboard vessels solely used as a residence
- 26 and not for navigation
- 27 ○ Requires dockage preserved for recreational and commercial working waterfront uses be
- 28 documented on the final development plan and be a written condition of any permit approval
- 29 ○ Limits permanent residential development to commercial apartments or employee housing
- 30 ○ Requires preservation of a public access walkway for all parcels with direct access to the water
- 31 ○ Limits commercial retail uses to less than 5,000 square feet of floor area.
- 32

Future Land Use Densities and Intensities			
Future Land Use Category And Corresponding Zoning	Allocated Density <sup>(b)</sup> (per acre)	Maximum Net Density <sup>(a)(b)(i)</sup> (per buildable acre)	Maximum Intensity (floor area ratio)
Mixed Use/Commercial (MC) <sup>(a)</sup> <u>(i)</u> (SC, UC, DR, RV, and MU and <u>MI zoning</u> )	1-6 du 5-15 rooms/spaces <u>1 du (MI zoning)</u>	<u>2</u> 6-18 du 10-25 rooms/spaces <u>2 du (MI zoning)</u>	0.10-0.45 (SC, UC, DR, RV, and MU zoning) <u>0.30-0.60 (MI zoning)</u>

33  
 34 Note, the text amendment also specifies the permitted uses within the MC FLUM category, such as  
 35 maritime industry, light industrial uses, commercial fishing, transient and permanent residential,  
 36 institutional, public, and commercial retail uses).

1  
2 **D. Current Comprehensive Plan FLUM Policies & MC FLUM Category Text Amendment**  
3

4 **Policy 101.4.7**

5 The principal purpose of the **Industrial** land use category is to provide for the development of industrial,  
6 manufacturing, and warehouse and distribution uses. Other commercial, public, residential, and  
7 commercial fishing-related uses are also allowed.  
8

9 **Policy 101.5.4**

10 The principal purpose of the **Mixed Use/Commercial** land use category is to provide for the  
11 establishment of commercial zoning districts where various types of commercial retail and office may be  
12 permitted at intensities which are consistent with the community character and the natural environment.  
13 Employee housing and commercial apartments are also permitted.  
14

15 This land use category is also intended to allow for the establishment of mixed use development patterns,  
16 where appropriate. Various types of residential and non-residential uses may be permitted; however,  
17 heavy industrial uses and similarly incompatible uses shall be prohibited.  
18

19 In order to protect environmentally sensitive lands, the following development controls shall apply to all  
20 hammocks, pinelands, and disturbed wetlands within this land use category:  
21

- 22 1. only low intensity commercial uses shall be allowed;
- 23 2. a maximum floor area ratio of 0.10 shall apply; and
- 24 3. maximum net residential density shall be zero.  
25

26 **MC FLUM Policy – Text Amendment (described above)**  
27

28 **Policy 101.4.5**

29 The principal purpose of the Mixed Use/Commercial land use category is to provide for the establishment of  
30 commercial land use (zoning) districts where various types of commercial retail and office may be permitted  
31 at intensities which are consistent with the community character and the natural environment. Employee  
32 housing and commercial apartments are also permitted. In addition, Mixed Use/Commercial land use districts  
33 are to establish and conserve areas of mixed uses, which may include maritime industry, light industrial uses,  
34 commercial fishing, transient and permanent residential, institutional, public, and commercial retail uses.  
35

36 The land use category is also intended to allow for the establishment of mixed use development patterns,  
37 where appropriate. Various types of residential and non-residential uses may be permitted; however, heavy  
38 industrial uses and similarly incompatible uses shall be prohibited. The County shall continue to take a  
39 proactive role in encouraging the maintenance and enhancement of community character and recreational and  
40 commercial working waterfronts.  
41

42 In order to protect environmentally sensitive lands, the following development controls shall apply to all  
43 hammocks, pinelands, and disturbed wetlands within this land use category:  
44

- 45 1. only low intensity commercial uses shall be allowed;
- 46 2. a maximum floor area ratio of 0.10 shall apply; and
- 47 3. maximum net residential density shall be zero.  
48

In order to preserve and promote recreational and commercial working waterfront uses, as defined by 342.07, F.S., the following criteria shall apply to all lands designated with the Maritime Industries (MI) land use (zoning) district within this land use category:

1. When a mixture of uses is proposed for parcels designated as MI land use (zoning) district, working waterfront and water dependent uses, such as marina, fish house/market, boat repair, boat building, boat storage, or other similar uses but excluding transient uses, shall be preserved by maintaining a minimum of 35% of the upland area of the property for those uses.
2. Parcels within the MI zoning district that have existing wet slips shall preserve at least 20% of the wet slips for vessels involved with recreational and commercial working waterfront uses, excluding live-aboard vessels solely used as a residence and not for navigation.
3. Parcels within the MI zoning district creating new wet slips shall preserve at least 10% of the wet slips for vessels involved with recreational and commercial working waterfront uses, excluding live-aboard vessels solely used as a residence and not for navigation.
4. The preservation of dockage for recreational and commercial working waterfront uses shall be documented on the final development plan and shall be a written condition of any permit approval.
5. For permanent residential development, parcels within the MI zoning district shall be limited to commercial apartments or employee housing. Commercial apartment means an attached or detached residential dwelling unit located on the same parcel of land as a nonresidential use that is intended to serve as permanent housing for the owner or employees of that nonresidential use. The term does not include a tourist housing use or vacation rental use.
6. The preservation of a public access walkway shall be required for all parcels with direct access to the water. Consideration shall be given to security and the physical constraints of the parcel. The public access walkway shall be documented on the final development plan to link a continuous walkway and shall be a written condition of any permit approval.
7. Parcels within the MI zoning district shall be limited to commercial retail uses of less than 5,000 square feet of floor area.

**Policy 101.4.21**

Monroe County hereby adopts the following density and intensity standards for the future land use categories, which are shown on the Future Land Use Map and described in Policies 101.4.1 - 101.4.17:

<b>Future Land Use Densities and Intensities</b>			
<b>Future Land Use Category And Corresponding Zoning</b>	<b>Allocated Density <sup>(b)</sup> (per acre)</b>	<b>Maximum Net Density <sup>a)(b)(i)</sup> (per buildable acre)</b>	<b>Maximum Intensity (floor area ratio)</b>
Agriculture (A) <sup>(h)</sup> (no directly corresponding zoning)	0 du 0 rooms/spaces	N/A N/A	0.20-0.25
Airport (AD) (AD zoning)	0 du 0 rooms/spaces	N/A N/A	0.10
Conservation (C) (CD zoning)	0 du 0 rooms/spaces	N/A N/A	0.05
Education (E) <sup>(h)</sup> (no directly corresponding zoning)	0 du 0 rooms/spaces	N/A N/A	0.30
Industrial (I) (I and MI zoning)	1 du 0 rooms/spaces	2 du N/A	0.25-0.60
Institutional (INS) <sup>(h)</sup> (no directly corresponding zoning)	0 du 3-15 rooms/spaces	N/A 6-24 rooms/spaces	0.25-0.40

Mainland Native (MN) (MN zoning)	0.01 du 0 rooms/spaces	N/A N/A	0.10
Military (M) (MF zoning)	6 du 10 rooms/spaces	12 du 20 rooms/spaces	0.30-0.50
Mixed Use/Commercial (MC) <sup>(a)</sup> <u>(i)</u> (SC, UC, DR, RV, and MU and <u>MI zoning</u> )	1-6 du 5-15 rooms/spaces <u>1 du (MI zoning)</u>	<del>2</del> 4-18 du 10-25 rooms/spaces <u>2 du (MI zoning)</u>	0.10-0.45 <u>(SC, UC, DR, RV, and MU zoning)</u> <u>0.30-0.60 (MI zoning)</u>
Mixed Use/Commercial Fishing (MCF) <sup>(a)</sup> (CFA, CFV <sup>(c)</sup> , CFSD zoning)	Approx. 3-8 du 0 rooms/spaces	12 du 0 rooms/spaces	0.25-0.40
Public Facilities (PF) <sup>(h)</sup> (no directly corresponding zoning)	0 du 0 rooms/spaces	N/A N/A	0.10-0.30
Public Buildings/Grounds (PB) <sup>(h)</sup> (no directly corresponding zoning)	0 du 0 rooms/spaces	N/A N/A	0.10-0.30
Recreation (R) (PR zoning)	0.25 du 2 rooms/spaces	N/A N/A	0.20
Residential Conservation (RC) (OS and NA zoning)	0-0.25 du 0 rooms/spaces	N/A N/A	0-0.10
Residential Low (RL) (SS <sup>(d)</sup> , SR, and SR-L zoning)	0.25-0.50 du 0 rooms/spaces	5 du N/A	0.20-0.25
Residential Medium (RM) (IS zoning)	approx. 0.5-8 du (1 du/lot) 0 rooms/spaces	N/A N/A	0
Residential High (RH) (IS-D <sup>(e)</sup> , URM <sup>(e)</sup> , and UR <sup>(f)</sup> zoning)	approx. 3-16 du (1-2 du/lot) 10 rooms/spaces	12 du 20 rooms/spaces	0

**Notes:**

- (a) "N/A" means that maximum net density bonuses shall not be available.
- (b) The allocated densities for submerged lands, salt ponds, freshwater ponds, and mangroves shall be 0 and the maximum net densities bonuses shall not be available.
- (c) The allocated density for CFV zoning shall be 1 dwelling unit per lot and the maximum net density bonuses shall not be available.
- (d) Maximum net density bonuses shall not be available to the SS district.
- (e) The allocated density for IS-D and URM zoning shall be 2 and 1 dwelling units per lot, respectively and the maximum net density bonuses shall not be available.
- (f) The maximum net density for the UR district shall be 25 for units where all units are designated as affordable housing.
- (g) For properties consisting of hammocks, pinelands or disturbed wetlands within the Mixed Use/ Commercial and Mixed Use/ Commercial Fishing land use categories, the floor area ratio shall be 0.10 and the maximum net residential density bonuses not apply.
- (h) Uses under the categories of Agriculture, Education, Institutional, Public Facilities, and Public Buildings and Uses, which have no directly corresponding zoning, may be incorporated into new or existing zoning districts as appropriate.
- (i) The Maximum Net Density is the maximum density allowable with the use of TDRs.
- (j) A mixture of uses shall be maintained for parcels designated as MI zoning district that are within the MC future land use category. Working waterfront and water dependent uses, such as marina, fish house/market, boat repair, boat building, boat storage, or other similar uses, shall comprise a minimum of 35% of the upland area of the property, pursuant to Policy 101.4.5.

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1 **E. Evaluation of existing uses versus proposed uses corresponding with the requested FLUM amendment**  
 2 **from Industrial (I) to Mixed Use/Commercial (MC)**  
 3

Allowed Uses Based Upon FLUM Designations	
Industrial FLUM	Mixed Use Commercial FLUM (includes text amendment)
Industrial	Light Industrial Uses
Manufacturing	Maritime Industry
Warehouse	
Distribution uses	
Commercial Fishing-Related Uses	Commercial Fishing
Commercial	Commercial retail
Residential	Transient and Permanent Residential
	Employee Housing & Commercial apartments
Public	Public
	Institutional
	Office

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6 **F. Amendment Basis:**

7 As can be noted in the Safe Harbor Marina Property Owners Association application (excerpt  
 8 included in Exhibit #2) as well as the adopted Monroe County Evaluation and Appraisal Report  
 9 (Economic Trends and Opportunities In Unincorporated Monroe County Report) and the Stock  
 10 Island/Key Haven Livable CommuniKeys Master Plan, Volume 1 (excerpt in Exhibit #3), this  
 11 amendment is predicated on the changing trends in the economy, the opportunity to allow additional  
 12 uses to promote economic diversity and realize the community’s desire to preserve working  
 13 waterfront and commercial fishing uses.

14  
15 **Excerpt from: Economic Trends and Opportunities in Unincorporated Monroe County Report**

16  
17 *The Keys began a rapid transition from fishing to tourism beginning in 1975; declines in fisheries and catch*  
 18 *volume were pronounced in the 1980s. In 1994, the “Net Ban” further diminished the fishing industry.*  
 19 *Inexpensive seafood competition from foreign sources made revenues decline for those remaining. Catch*  
 20 *volume has declined further during the most recent decade from 2000-2009. A transition of land uses through*  
 21 *redevelopment has shifted marine and waterfront related uses to seasonal housing and condominium uses.*

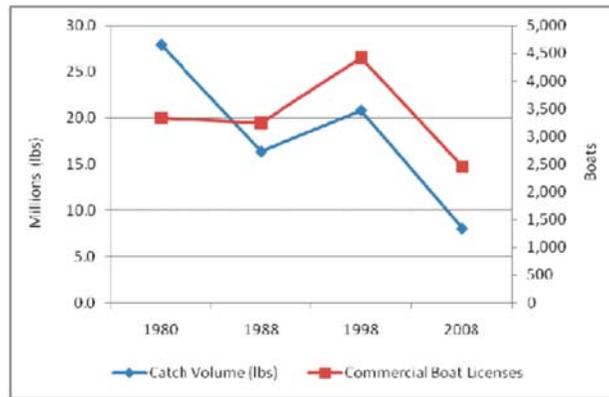
22  
23 *The transition away from fishing and marine related industry is typical and well documented in similar island*  
 24 *communities throughout Florida. For island communities however, this represents a shift away from the*  
 25 *historic and cultural aspects which gave rise to the community in the first place.*

26  
27 *Occupational license data was reviewed to assess marine related employment and activity. Occupational*  
 28 *license data includes charter boats and captains, marina and boat storage, mobile marine repair, marine*  
 29 *related retail, marine wholesale supply, and marine repair. There are 1,928 such licenses. Some boat and*  
 30 *captain licenses are duplicative resulting in an estimated 1,500 active occupational licenses. Not all of these*  
 31 *licenses will result in a full time job and many hold a captain’s license but are simply not active. Based on*  
 32 *this information we find marine and marine related services remains the smallest employment category in*  
 33 *Monroe County.*

1 Through a century of change, the marine industry has declined while other areas of employment have grown  
 2 in dramatic fashion. In terms of the volume and share of employment, there is very little fishing, food  
 3 processing or water transportation related employment today, compared with employment in retail, finance  
 4 and the broader service sector. The fishing industry accounts for only 1 percent of employment in island  
 5 communities. Adding food processing, marine shipping, marine repair and marina raises the share to 2  
 6 percent in Monroe County. Water related employment is the smallest employment segment among island  
 7 communities today, and equally small elsewhere in Florida. Based on trends in commercial registrations,  
 8 fish and shellfish catch volumes, and covered employment, the marine industry is not a growth industry in  
 9 Monroe County. Nor is it a growth industry in other island communities or elsewhere in Florida.

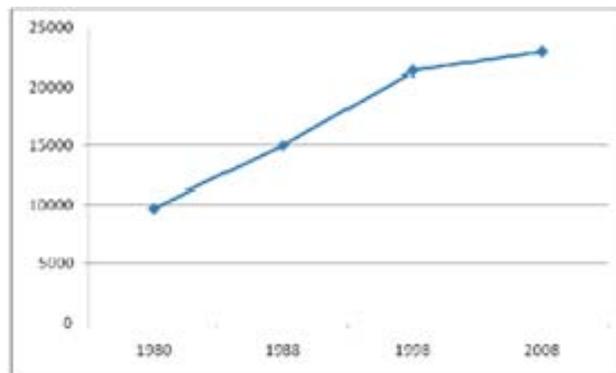
10  
 11 The marine industry as it relates to fishing can become a cultural focal point, support surrounding uses and  
 12 continue to support and build the local restaurant industry. However, the marine industry is not likely to  
 13 become a substantial employment generator in the future, nor a large-scale or growing aspect of the Keys  
 14 economy.

15  
 16 As measured by commercial fishing licenses, the volume and size of the commercial fishing industry has  
 17 declined sharply over the past 30 years. Commercial fishing licenses have fallen by 25% and the volume of  
 18 seafood catch has declined some 70%.



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**Figure 12 - Commercial Fishing Industry - Monroe County**

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 35 Recreational boating has expanded. This has opened opportunities for pleasure boat repair, boat  
 36 maintenance and storage. Pleasure boat licenses have more than doubled in the Keys since 1980.



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**Figure 11 - Pleasure Boat Licenses in Monroe County**

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### III. PROPOSED AMENDMENTS

Request to amend the FLUM designation from Industrial to Mixed Use/Commercial (MC) for the property identified in purple below.



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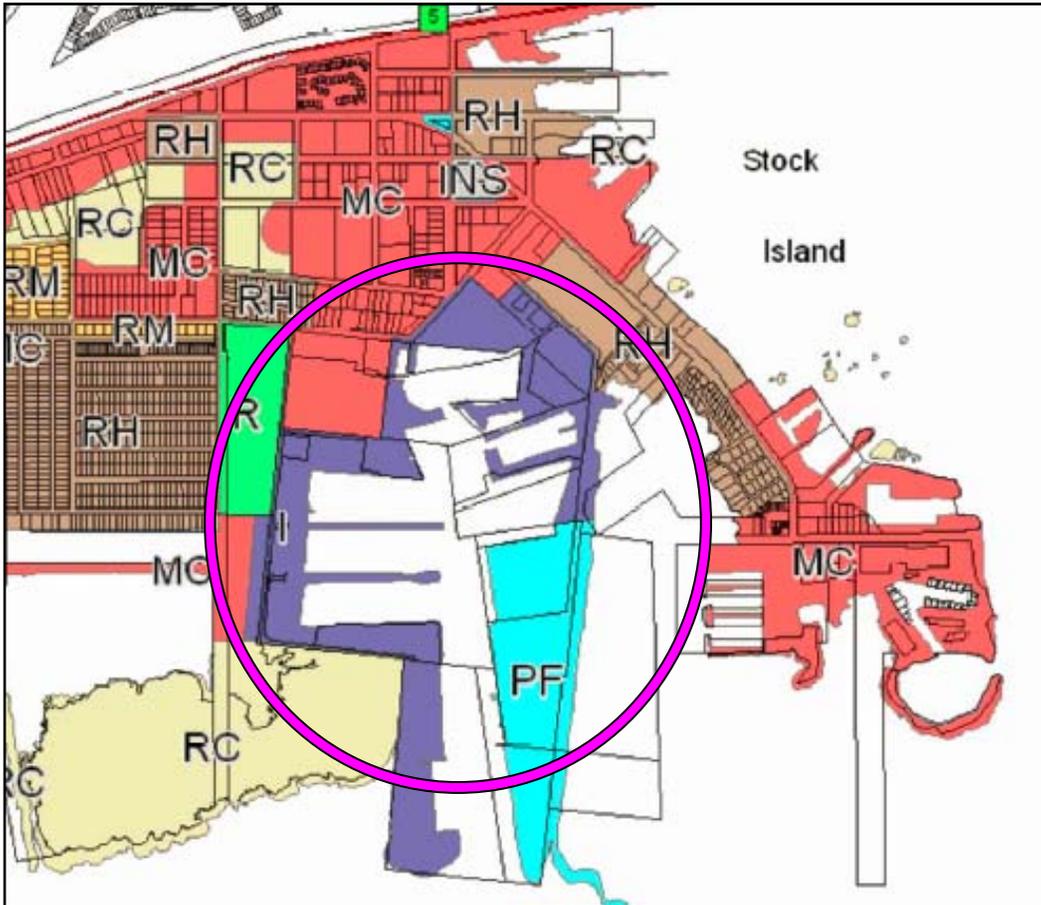
The FLUM amendment will affect 18 parcels (00123660-000000, 00123720-000400, 00123760-000200, 00123720-000100, 00123720-000200, 00123730-000100, 00123740-000000, 00123770-000000, 00127290-000000, 00127380-000000, 00127250-000000, 00127280-000000, 00123600-000100, 00123600-000102, 00123600-000101, 00123590-000000, 00123570-000000, and 00123540-000000) located on South Stock Island, totaling 49.40 upland acres.

(See Exhibit 4)

1  
2 **IV. ANALYSIS OF PROPOSED DENSITIES & INTENSITIES; COMPATABILITY; AND**  
3 **CONCURRENCY ANALYSIS**

4  
5 **Compatibility:**  
6

7 The approximate location of the proposed FLUM amendment is outlined below in the pink circle:  
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34  
35 As can be noted in the map above, many of the properties neighboring the parcels which are the  
36 subject of the requested FLUM amendment are currently designated as Mixed Use/Commercial  
37 (shown in red). The surrounding area includes a mix of uses, including but not limited to:  
38 commercial, office, industrial, service (such as engine repair), storage, warehouse, restaurants,  
39 residential housing, public utility facilities and commercial fishing uses.

40  
41 Additionally, the subject parcels which are the subject of the requested FLUM amendment are  
42 designated as Tier III, classified as developed land, and are not designated as habitat for any  
43 protected species. With the diverse set of uses located on the subject parcels and the neighboring  
44 properties, the proposed amendment is considered compatible with the existing uses, the character of  
45 the undeveloped & developed properties, and the surrounding natural resources.  
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**Maximum Allocated Density and Intensity by Future Land Use Map Designation:**

Existing FLUM	Type	Adopted Standards	Development potential
<b>Industrial FLUM</b> Total site: 49.4 acres	Residential Allocated Density/Acre	1 du	49 units
	Transient Allocated Density/Acre	0 rooms/spaces	0 rooms/spaces
	Nonresidential Maximum Intensity	0.25-0.60 FAR	537,966 sf – 1,291,118 sf
Proposed FLUM	Type	Adopted Standards	Development potential
<b>Mixed Use/ Commercial FLUM</b> Total site: 49.4 acres	Residential Allocated Density/Acre	1-6 du	49 – 296 units**
	<i>Residential Allocated Density/Acre MC FLUM &amp; MI Zoning</i>	<i>1 du</i>	<i>49 units</i>
	Transient Allocated Density/Acre (32.11 acres removed 35% of upland area* or 17.29 acres)	5-15 rooms/spaces	160 -481 rooms/spaces
	Nonresidential Maximum Intensity	0.30-0.60 FAR	645,559 sf – 1,291,118 sf
<b>Net Change in Development Potential based on FLUM</b>	Residential: + 247 du Transient: +481 rooms/spaces Nonresidential: <b>no change</b>		
<i>Note, if MC FLUM and MI Zoning – no change to residential development potential</i>			

*Note: The above table provides an approximation of the development potential for residential, transient and commercial development. Please note, Section 130-156 of the Land Development Code states: “The density and intensity provisions set out in this section are intended to be applied cumulatively so that no development shall exceed the total density limits of this article. For example, if a development includes both residential and commercial development, the total gross amount of development shall not exceed the cumulated permitted intensity of the parcel proposed for development.”*

\*Note: The MC FLUM text amendment to revise the MC FLUM Category description and assign the Maritime Industries Zoning District to the MC category, also includes a requirement that 35% of the upland area to be preserved for working waterfront and water dependent uses and exclude transient uses.

\*\*Note: The MC FLUM text amendment limits permanent residential development to employee housing or commercial apartments.

**Concurrency Analysis:**

**POTABLE WATER** - FCAA’s Water Treatment Facility in Florida City, has a maximum water treatment design capacity of 29.8 million gallons per day (MGD) and is capable of treating up to 23.8 MGD. There are also two saltwater Reserve Osmosis (RO) plants, located on Stock Island and Marathon, which are able to produce potable water under emergency conditions. The RO desalination plants have design capacities of 2.0 and 1.0 MGD of water, respectively. The annual average daily demand is 16.21 MGD and projections indicate a slight increase to an annual average daily demand to 16.54 MGD.

The applicant has submitted a letter of coordination from the Florida Keys Aqueduct Authority stating there is adequate capacity based upon the maximum density and intensity potential under the MC FLUM (see Exhibit 5).

FLUM	Comprehensive Plan Potable Water Policy 701.1.1	Max Potential Residential Development (dwelling units)	Persons/ household	Total persons	Total LOS Demand	Net Change
<b>INDUSTRIAL</b>	Residential LOS 66.50/gal/cap/day (149 gal/du/day)	49 du	2.24	109	<b>7,248</b>	<b>+36,841</b>
<b>MIXED USE / COMMERCIAL</b>	Residential LOS 66.50/gal/cap/day (149 gal/du/day)	296 du	2.24	663	<b>44,089</b>	

FLUM	Comprehensive Plan Potable Water Policy 701.1.1	Max Potential Intensity Floor Area Ratio (FAR) Square Feet	Total LOS Demand	Net Change
<b>INDUSTRIAL (0.60 FAR)</b>	Nonresidential LOS 0.35 gal/sq.ft./day	1,291,118 sf	<b>451,891</b>	<b>No changes</b>
<b>MIXED USE / COMMERCIAL (0.60 FAR)</b>	Nonresidential LOS 0.35 gal/sq.ft./day	1,291,118 sf	<b>451,891</b>	

**SOLID WASTE** - Monroe County has a contract with Waste Management, authorizing the use of in-state facilities through September 30, 2016; thereby, providing the County with approximately four years of guaranteed capacity.

The applicant has submitted a letter of coordination from Waste Management stating there is adequate capacity based upon the maximum density and intensity potential under the MC FLUM (see Exhibit 5).

FLUM	Comprehensive Plan Solid Waste Policy 801.1.1	Max Potential Residential Development (dwelling units)	Persons/household	Total persons	Total LOS Demand	Net Change
INDUSTRIAL	Residential LOS 5.44lbs/capita/day	49 du	2.24	109	592	+3,014
MIXED USE / COMMERCIAL	Residential LOS 5.44lbs/capita/day	296 du	2.24	663	3,606	

**SANITARY SEWER** – The property will be served by the Key West Resort Utilities Wastewater Treatment Plant. The applicant has submitted a letter of coordination from Key West Resort Utilities stating there is adequate capacity based upon the maximum density and intensity potential under the MC FLUM (see Exhibit 5).

**TRAFFIC CIRCULATION** – According to the 2011 US.1 Arterial Travel Time and Delay Study, at the present time, US 1 is operating overall at a LOS of “C.” In the Lower Keys Area, the Stock Island segment (Segment 1 – MM 4.0-5.0) is operating at a LOS of “B” and the segments from Boca Chica (MM5.0-9.0) north to Big Pine Key (MM 29.5-33.0) are operating at a LOS of “C” or better. (Note: Staff is awaiting a traffic analysis and may modify this section based upon the new data)

**Other Analysis – Military Compatibility:** Monroe County has adopted amendments to the Comprehensive Plan to address military compatibility criteria. Additionally, the Monroe County has amended its Land Development Regulations to delete the “1977 Air Installation Compatible Use Zones Overlay.” The Safe Harbor Marina Property Owners Association, Inc., Future Land Use Map Amendment request was submitted prior to the effective date of the recently adopted Military Compatibility Policies and does not trigger any of the additional noise study requirements.

The Navy’s 2007 AICUZ report identifies a portion of the subject properties within the 65DNL contour; however, the Navy’s Suggested Land Use Compatibility Recommendations do not prohibit the allowed uses within the MC FLUM Category. (See Exhibit 6)

For example:

- Retail is listed as **Y**
- Housing Units are listed as **N<sup>1</sup>**
- Transient lodging is listed as **N<sup>1</sup>**
- Marine craft transportation is listed as **Y**
- Warehousing and storage is listed as **Y**
- Repair Services is listed as **Y**



Key to Navy's Suggested Land Use Compatibility:

Y = Yes, Land Use and related structures compatible without restrictions.

Y<sup>1</sup> = (Yes with Restrictions) The land use and related structures are generally compatible. However, see note(s) indicated by the superscript.

N<sup>1</sup> = (No with Exceptions) The land use and related structures are generally incompatible. However, see notes indicated by the superscript.

N = No, Land Use and related structures are not compatible and should be prohibited

The superscript of (1) states:

a) Although local conditions regarding the need for housing may require residential use in these Zones, residential use is discouraged in

DNL 65-69 and strongly discouraged in DNL 70-74. The absence of viable alternative development options should be determined and an evaluation should be conducted locally prior to local approvals indicating that a demonstrated community need for the residential use would not be met if development were prohibited in these Zones.

b) Where the community determines that these uses must be allowed, *measures to achieve and outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB in DNL 65-69 and NLR of 30 dB in DNL 70-74 should be incorporated into building codes and be in individual approvals; for transient housing a NLR of at least 35 dB should be incorporated in DNL 75-79.*

**Note:** Section 6.2 of the 2007 AICUZ states: The Navy has developed land use compatibility recommendations for the APZs and noise zones as shown in Tables 6-2 and 6-3. These recommendations are intended to serve as guidelines, but final decisions as to specific land use controls to be enacted into zoning regulations are made by the local community.

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Additionally, the **DRAFT** NASKW Environmental Impact Statement (EIS) which was released by the Navy in the summer of 2012, includes a new DRAFT noise study, new DRAFT AICUZ contours based upon the Navy's proposed alternatives as well as a new **DRAFT existing conditions map of the noise contours**.

The existing conditions analysis in the DRAFT EIS is based upon:

- o Annual flight operations totaling 47,500, and detailed data on typical aircraft mix, types of airfield operations, runway and flight track utilization, and engine maintenance run-up operations
- o Existing annual FCLP operations were estimated at 1,396
- o An estimate that 2.6 percent of annual operations would occur during acoustic night (10 p.m. to 7 a.m.)
- o Climate data

The results this analysis produced a map of contours (Figure 3.1-2 of the DRAFT EIS) of the existing noise environment from NAS Key West airfield operations and does not include the parcels around Safe Harbor, Stock Island within the 65 DNL (see Exhibit 7 and below).



**V. CONSISTENCY WITH THE MONROE COUNTY YEAR 2010 COMPREHENSIVE PLAN, THE FLORIDA STATUTES, AND PRINCIPLES FOR GUIDING DEVELOPMENT**

**A. The proposed amendment is consistent with the following Goals, Objectives and Policies of the Monroe County Year 2010 Comprehensive Plan. Specifically, the amendment furthers:**

**Goal 101:** Monroe County shall manage future growth to enhance the quality of life, ensure the safety of County residents and visitors, and protect valuable natural resources.

**Objective 101.4:** Monroe County shall regulate future development and redevelopment to maintain the character of the community and protect the natural resources by providing for the compatible distribution of land uses consistent with the designations shown on the Future Land Use Map.

**Policy 101.7.2:** By January 4, 1998, Monroe County shall complete a community plan for Stock Island which shall address redevelopment needs identified by the needs assessment of potential redevelopment areas. Preparation and funding of this plan shall be coordinated with the City of Key West.

**Policy 101.20.2:** The Community Master Plans shall be incorporated into the 2010 Comprehensive Plan as a part of the plan and be implemented as part of the Comprehensive Plan. The following Community Master Plans have been completed in accordance with the principles outlined in this section and adopted by the Board of County Commissioners:

1 3. The Stock Island/Key Haven Livable CommuniKeys Plan Volume I is incorporated by  
2 reference into the 2010 Comprehensive Plan. The term Strategies in this Master Plan is  
3 equivalent to the term Objectives in the Comprehensive Plan and the term Action Item is  
4 equivalent to the term Policy; the meanings and requirements for implementation are  
5 synonymous.

6 4. Volume Two (2) of the Stock Island and Key Haven Livable CommuniKeys Master Plan  
7 titled Harbor Preservation/Redevelopment and Corridor Enhancement Plan dated  
8 November 2005 and incorporated by reference into the 2010 Comprehensive Plan. The  
9 term Strategies in this Master Plan is equivalent to the term Objectives in the  
10 Comprehensive Plan and the term Action Item is equivalent to the term Policy; the  
11 meanings and requirements for implementation are synonymous.

12  
13 **Policy 105.1.1:** Monroe County shall create an economic development framework for a  
14 sustainable visitor-based economy, not dependent on growth in the absolute numbers of  
15 tourists, that respects the unique character and outdoor recreational opportunities available  
16 in the Florida Keys.

17  
18 **Policy 105.1.2:** Monroe County shall prepare design guidelines to ensure that future uses and  
19 development are compatible with scenic preservation and maintenance of the character of  
20 the casual island village atmosphere of the Florida Keys.

21  
22 **Policy 502.1.1:** Monroe County shall permit only port and port related land uses within the  
23 Safe Harbor/Peninsular port area of Stock Island. Within twelve months of the effective  
24 date of the Comprehensive Plan, Monroe County shall adopt Land Development  
25 Regulations and amend the Land Use District Maps to only permit those land uses  
26 including but not limited to commercial and industrial port dependent uses, industry,  
27 commercial fishing, marinas, and employee housing.

28  
29 **Policy 502.1.2:** Monroe County shall permit land uses supportive, complementary or  
30 otherwise port related nearby and adjacent to the Safe Harbor/Peninsular port area of Stock  
31 Island. Within twelve months of the effective date of the Comprehensive Plan, Monroe  
32 County shall adopt Land Development Regulations and amend the Land Use District Maps  
33 to only permit those uses, including but not limited to warehousing, industry, affordable  
34 housing, marine businesses, and restaurants.

35  
36 **Policy 502.1.5:** Monroe County shall support a proposal to amend the Coastal Barrier  
37 Resources System Map adopted by the Coastal Barrier Improvement Act of 1990, to delete  
38 the improved port property along the Safe Harbor entrance channel from the system unit,  
39 FL 57.

40  
41 **Stock Island/Key Haven Livable CommuniKeys Plan Volume I:**

42  
43 **Action Item 2.1.1:** Initiate and complete a land use classification reevaluation plan for Stock  
44 Island.

45  
46 **Action Item 2.3.1:** Continue to recognize land use districts and FLUM categories as the

1 regulatory tool used for evaluating individual proposals for compliance with land  
2 development standards such as type of use and intensity of use.

3  
4 **Stock Island/Key Haven Livable CommuniKeys Plan Volume II:**

5  
6 **Action Item:** Promote a diverse mix of land uses to support increased activity in the harbor  
7 area, while remaining compatible with its working waterfront character and function.

8  
9 **B. The amendment is consistent with the Principles for Guiding Development for the Florida**  
10 **Keys Area, Section 380.0552(7), Florida Statute.**

11  
12 For the purposes of reviewing consistency of the adopted plan or any amendments to that plan  
13 with the principles for guiding development and any amendments to the principles, the principles  
14 shall be construed as a whole and no specific provision shall be construed or applied in isolation  
15 from the other provisions.

- 16  
17 (a) Strengthening local government capabilities for managing land use and development so that  
18 local government is able to achieve these objectives without continuing the area of critical  
19 state concern designation.  
20 (b) Protecting shoreline and marine resources, including mangroves, coral reef formations,  
21 seagrass beds, wetlands, fish and wildlife, and their habitat.  
22 (c) Protecting upland resources, tropical biological communities, freshwater wetlands, native  
23 tropical vegetation (for example, hardwood hammocks and pinelands), dune ridges and  
24 beaches, wildlife, and their habitat.  
25 (d) Ensuring the maximum well-being of the Florida Keys and its citizens through sound  
26 economic development.  
27 (e) Limiting the adverse impacts of development on the quality of water throughout the Florida  
28 Keys.  
29 (f) Enhancing natural scenic resources, promoting the aesthetic benefits of the natural  
30 environment, and ensuring that development is compatible with the unique historic character  
31 of the Florida Keys.  
32 (g) Protecting the historical heritage of the Florida Keys.  
33 (h) Protecting the value, efficiency, cost-effectiveness, and amortized life of existing and  
34 proposed major public investments, including:

- 35  
36 1. The Florida Keys Aqueduct and water supply facilities;  
37 2. Sewage collection, treatment, and disposal facilities;  
38 3. Solid waste treatment, collection, and disposal facilities;  
39 4. Key West Naval Air Station and other military facilities;  
40 5. Transportation facilities;  
41 6. Federal parks, wildlife refuges, and marine sanctuaries;  
42 7. State parks, recreation facilities, aquatic preserves, and other publicly owned  
43 properties;  
44 8. City electric service and the Florida Keys Electric Co-op; and  
45 9. Other utilities, as appropriate.  
46

- 1 (i) Protecting and improving water quality by providing for the construction, operation,  
2 maintenance, and replacement of stormwater management facilities; central sewage  
3 collection; treatment and disposal facilities; and the installation and proper operation and  
4 maintenance of onsite sewage treatment and disposal systems.
- 5 (j) Ensuring the improvement of nearshore water quality by requiring the construction and  
6 operation of wastewater management facilities that meet the requirements of ss.  
7 381.0065(4)(l) and 403.086(10), as applicable, and by directing growth to areas served by  
8 central wastewater treatment facilities through permit allocation systems.
- 9 (k) Limiting the adverse impacts of public investments on the environmental resources of the  
10 Florida Keys.
- 11 (l) Making available adequate affordable housing for all sectors of the population of the Florida  
12 Keys.
- 13 (m) Providing adequate alternatives for the protection of public safety and welfare in the event of  
14 a natural or manmade disaster and for a postdisaster reconstruction plan.
- 15 (n) Protecting the public health, safety, and welfare of the citizens of the Florida Keys and  
16 maintaining the Florida Keys as a unique Florida resource.

17  
18 Pursuant to Section 380.0552(7) Florida Statutes, the proposed amendment is consistent with the  
19 Principles for Guiding Development as a whole and is not inconsistent with any Principle.  
20

21 **C. The proposed amendment is consistent with the Part II of Chapter 163, Florida Statute**  
22 **(F.S.). Specifically, the amendment furthers:**

23  
24 163.3161(4), F.S. – It is the intent of this act that local governments have the ability to preserve  
25 and enhance present advantages; encourage the most appropriate use of land, water, and  
26 resources, consistent with the public interest; overcome present handicaps; and deal  
27 effectively with future problems that may result from the use and development of land within  
28 their jurisdictions. Through the process of comprehensive planning, it is intended that units  
29 of local government can preserve, promote, protect, and improve the public health, safety,  
30 comfort, good order, appearance, convenience, law enforcement and fire prevention, and  
31 general welfare; facilitate the adequate and efficient provision of transportation, water,  
32 sewerage, schools, parks, recreational facilities, housing, and other requirements and  
33 services; and conserve, develop, utilize, and protect natural resources within their  
34 jurisdictions

35  
36 163.3161(6), F.S. - It is the intent of this act that adopted comprehensive plans shall have the  
37 legal status set out in this act and that no public or private development shall be permitted  
38 except in conformity with comprehensive plans, or elements or portions thereof, prepared  
39 and adopted in conformity with this act.

40  
41 163.3177(1), F.S. - The comprehensive plan shall provide the principles, guidelines, standards,  
42 and strategies for the orderly and balanced future economic, social, physical, environmental,  
43 and fiscal development of the area that reflects community commitments to implement the  
44 plan and its elements. These principles and strategies shall guide future decisions in a  
45 consistent manner and shall contain programs and activities to ensure comprehensive plans  
46 are implemented. The sections of the comprehensive plan containing the principles and

1 strategies, generally provided as goals, objectives, and policies, shall describe how the local  
2 government's programs, activities, and land development regulations will be initiated,  
3 modified, or continued to implement the comprehensive plan in a consistent manner. It is not  
4 the intent of this part to require the inclusion of implementing regulations in the  
5 comprehensive plan but rather to require identification of those programs, activities, and land  
6 development regulations that will be part of the strategy for implementing the comprehensive  
7 plan and the principles that describe how the programs, activities, and land development  
8 regulations will be carried out. The plan shall establish meaningful and predictable standards  
9 for the use and development of land and provide meaningful guidelines for the content of  
10 more detailed land development and use regulations.

11  
12 163.3177(6)(a)2., F.S. - The future land use plan and plan amendments shall be based upon  
13 surveys, studies, and data regarding the area, as applicable, including:

- 14 a. The amount of land required to accommodate anticipated growth.
- 15 b. The projected permanent and seasonal population of the area.
- 16 c. The character of undeveloped land.
- 17 d. The availability of water supplies, public facilities, and services.
- 18 e. The need for redevelopment, including the renewal of blighted areas and the elimination of  
19 nonconforming uses which are inconsistent with the character of the community.
- 20 f. The compatibility of uses on lands adjacent to or closely proximate to military installations.
- 21 g. The compatibility of uses on lands adjacent to an airport as defined in s. 330.35 and  
22 consistent with s. 333.02.
- 23 h. The discouragement of urban sprawl.
- 24 i. The need for job creation, capital investment, and economic development that will  
25 strengthen and diversify the community's economy.
- 26 j. The need to modify land uses and development patterns within antiquated subdivisions.

27  
28 163.3177(6)(a)8., F.S. - Future land use map amendments shall be based upon the following  
29 analyses:

- 30 a. An analysis of the availability of facilities and services.
- 31 b. An analysis of the suitability of the plan amendment for its proposed use considering the  
32 character of the undeveloped land, soils, topography, natural resources, and historic  
33 resources on site.
- 34 c. An analysis of the minimum amount of land needed to achieve the goals and requirements  
35 of this section.

36  
37 163.3194(1)(b), F.S. – All land development regulations enacted or amended shall be  
38 consistent with the adopted comprehensive plan, or element or portion thereof, and any land  
39 development regulations existing at the time of adoption which are not consistent with the  
40 adopted comprehensive plan, or element or portion thereof, shall be amended so as to be  
41 consistent. If a local government allows an existing land development regulation which is  
42 inconsistent with the most recently adopted comprehensive plan, or element or portion  
43 thereof, to remain in effect, the local government shall adopt a schedule for bringing the land  
44 development regulation into conformity with the provisions of the most recently adopted  
45 comprehensive plan, or element or portion thereof. During the interim period when the  
46 provisions of the most recently adopted comprehensive plan, or element or portion thereof,

1 and the land development regulations are inconsistent, the provisions of the most recently  
2 adopted comprehensive plan, or element or portion thereof, shall govern any action taken in  
3 regard to an application for a development order.  
4

5 163.3194(3)(a), F.S. – A development order or land development regulation shall be consistent  
6 with the comprehensive plan if the land uses, densities or intensities, and other aspects of  
7 development permitted by such order or regulation are compatible with and further the  
8 objectives, policies, land uses, and densities or intensities in the comprehensive plan and if it  
9 meets all other criteria enumerated by the local government.  
10

11 163.3201, F.S. – It is the intent of this act that adopted comprehensive plans or elements  
12 thereof shall be implemented, in part, by the adoption and enforcement of appropriate local  
13 regulations on the development of lands and waters within an area. It is the intent of this act  
14 that the adoption and enforcement by a governing body of regulations for the development of  
15 land or the adoption and enforcement by a governing body of a land development code for an  
16 area shall be based on, be related to, and be a means of implementation for an adopted  
17 comprehensive plan as required by this act  
18

19 **D. The proposed amendment is consistent with the Florida Statutes (F.S.). Specifically, the**  
20 **amendment furthers:**  
21

22 342.07, F.S. - The definition of the term **recreational and commercial working waterfront**  
23 means a parcel or parcels of real property that provide access for water-dependent  
24 commercial activities, *including hotels and motels* as defined in s. 509.242(1), or provide  
25 access for the public to the navigable waters of the state. Recreational and commercial  
26 working waterfronts require direct access to or a location on, over, or adjacent to a navigable  
27 body of water. The term includes water-dependent facilities that are open to the public and  
28 offer public access by vessels to the waters of the state or that are support facilities for  
29 recreational, commercial, research, or governmental vessels. These facilities include public  
30 lodging establishments, docks, wharfs, lifts, wet and dry marinas, boat ramps, boat hauling  
31 and repair facilities, commercial fishing facilities, boat construction facilities, and other  
32 support structures over the water. As used in this [statute] section, the term “vessel” has the  
33 same meaning as in s. 327.02(39). Seaports are excluded from the definition.  
34

35 **VI. PROCESS**  
36

37 Comprehensive Plan Amendments may be proposed by the Board of County Commissioners, the  
38 Planning Commission, the Director of Planning, or the owner or other person having a contractual  
39 interest in property to be affected by a proposed amendment. The Director of Planning shall review  
40 and process applications as they are received and pass them onto the Development Review  
41 Committee and the Planning Commission.  
42

43 The Planning Commission shall hold at least one public hearing. The Planning Commission shall  
44 review the application, the reports and recommendations of the Department of Planning &  
45 Environmental Resources and the Development Review Committee and the testimony given at the  
46 public hearing. The Planning Commission shall submit its recommendations and findings to the

1 Board of County Commissioners (BOCC). The BOCC holds a public hearing to consider the  
2 transmittal of the proposed comprehensive plan amendment, and considers the staff report, staff  
3 recommendation, and the testimony given at the public hearing. The BOCC may or may not  
4 recommend transmittal to the State Land Planning Agency. The amendment is transmitted to State  
5 Land Planning Agency, which then reviews the proposal and issues an Objections,  
6 Recommendations and Comments (ORC) Report. Upon receipt of the ORC report, the County has  
7 180 days to adopt the amendments, adopt the amendments with changes or not adopt the amendment  
8

## 9 **VI. STAFF RECOMMENDATION**

10  
11 Staff recommends approval.  
12

## 13 **VII. EXHIBITS**

- 14
- 15 1. Legal Description of subject parcels on Stock Island request the FLUM amendment
- 16 2. Excerpt of FLUM amendment Application, submitted May 21, 2012
- 17 3. Excerpt of the Stock Island/Key Haven Livable CommuniKeys Master Plan
- 18 4. FLUM Amendment maps
- 19 5. Letter of Coordination from the utilities
- 20 6. Excerpt of 2007 AICUZ report
- 21 7. Existing Condition Maps from Draft NASKW EIS
- 22 8. CBRS boundary of Unit 57 on Stock Island
- 23 9. Applicant submitted data on the KWRU Corp. Abandonment Contingencies
- 24

## **LEGAL DESCRIPTIONS**

**ISLAND TRUST AGREEMENT 03/10/1989**

**LEGAL DESCRIPTION**

## LEGAL DESCRIPTION

A TRACT OF LAND ON STOCK ISLAND BEING A PART OF BLOCK 53 OF McDONALD'S PLAT OF STOCK ISLAND AS RECORDED IN PLAT BOOK 1 AT PAGE 57 OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA AND BEING ALSO A PART OF SUBMERGED LANDS DESCRIBED IN T.I.L.F. DEED NUMBER 19837-A, BEING MORE PARTICULARLY DESCRIBED BY "METES AND BOUNDS" AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF FOURTH AVENUE WITH THE SOUTHWESTERLY RIGHT-OF-WAY LINE OF FRONT STREET; THENCE S47°13'30"E ALONG SAID SOUTHWESTERLY RIGHT-OF-WAY LINE OF FRONT STREET FOR 840.50 FEET TO THE POINT OF BEGINNING OF THE PARCEL OF LAND HEREINAFTER DESCRIBED; THENCE CONTINUE S47°03'30"E ALONG SAID RIGHT-OF-WAY LINE FOR 163.26 FEET TO AN INTERSECTION WITH THE WESTERLY RIGHT-OF-WAY LINE OF A 50.00 FOOT WIDE ACCESS EASEMENT AS RECORDED IN OFFICIAL RECORDS BOOK 395, PAGES 909-910 OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA; THENCE S6°01'50"W ALONG SAID WESTERLY RIGHT-OF-WAY LINE FOR 313.78 FEET; THENCE S70°27'50"W FOR 791.00 FEET; THENCE N46°15'42"W FOR 334.66 FEET; THENCE N87°08'10"E FOR 485.00 FEET; THENCE N5°33'56"E FOR 340.04 FEET; THENCE N53°21'10"E FOR 207.18 FEET; THENCE S47°13'30"E FOR 179.69 FEET; THENCE N42°46'30"E FOR 125.00 FEET TO THE POINT OF BEGINNING.

LESS THEREFROM THE FOLLOWING DESCRIBED PARCEL KNOWN AS THE S.T.P. SITE PREVIOUSLY CONVEYED BY GRANTOR TO STOCK ISLAND UTILITY COMPANY, BY DEED RECORDED IN OFFICIAL RECORDS BOOK 465, PAGE 2465 OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA; BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

A PARCEL OF FILLED SUBMERGED LAND ON STOCK ISLAND, MONROE COUNTY, FLORIDA, BEING A PORTION OF THAT CERTAIN SUBMERGED LAND DESCRIBED IN T.I.L.F. DEED NO. 19837-A; SAID PARCEL BEING MORE PARTICULARLY DESCRIBED BY "METES AND BOUNDS" AS FOLLOWS:

COMMENCE AT THE INTERSECTION OF THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF FOURTH AVENUE AND THE SOUTHWESTERLY RIGHT-OF-WAY LINE OF FRONT STREET; THENCE S47°13'30"E ALONG SAID SOUTHWESTERLY RIGHT-OF-WAY LINE FOR 1003.76 FEET TO THE WESTERLY RIGHT-OF-WAY LINE OF A 50 FOOT WIDE ACCESS EASEMENT; THENCE S6°01'50"W ALONG SAID WESTERLY RIGHT-OF-WAY LINE FOR 313.78 FEET TO THE POINT OF BEGINNING OF THE HEREINAFTER DESCRIBED PARCEL OF LAND; THENCE S70°27'50"W FOR 240.30 FEET; THENCE N57°16'03"W FOR 234.83 FEET; THENCE N9°16'30"E FOR 304.20 FEET TO AN INTERSECTION WITH A LINE 251.44 FEET SOUTHWESTERLY OF AS MEASURED AT RIGHT ANGLES AND PARALLEL TO SAID SOUTHWESTERLY RIGHT-OF-WAY OF FRONT STREET; THENCE S47°13'30"E ALONG SAID PARALLEL LINE FOR 510.80 FEET TO THE POINT OF BEGINNING. SAID PARCEL CONTAINS 2.00 ACRES, MORE OR LESS.

SAID TRACT CONTAINS 5.28 ACRES, MORE OR LESS AND SUBJECT TO THE FOLLOWING DESCRIBED EASEMENTS:

A NON-EXCLUSIVE ACCESS EASEMENT, HAVING A MINIMUM WIDTH OF 25.00 FEET AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE INTERSECTION OF THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF FOURTH AVENUE AND THE SOUTHWESTERLY RIGHT-OF-WAY LINE OF FRONT STREET; THENCE S47°13'30"E ALONG SAID SOUTHWESTERLY RIGHT-OF-WAY LINE FOR 1003.76 FEET TO THE WESTERLY RIGHT-OF-WAY LINE OF AN EXISTING 50 FOOT WIDE ACCESS EASEMENT; THENCE S6°01'50"W ALONG SAID WESTERLY RIGHT-OF-WAY LINE FOR 313.78 FEET TO THE MOST EASTERLY CORNER OF THE S.T.P. SITE, SAID CORNER BEING THE POINT OF BEGINNING OF THE HEREINAFTER DESCRIBED NON-EXCLUSIVE ACCESS EASEMENT; THENCE N47°13'30"W ALONG THE NORTHEASTERLY BOUNDARY OF SAID S.T.P. SITE FOR 76.71 FEET; THENCE N42°46'30"E FOR 25.00 FEET; THENCE N69°24'10"E FOR 24.07 FEET TO AN INTERSECTION WITH A LINE THAT IS 25.00 FEET WESTERLY OF, AS MEASURED AT RIGHT ANGLES AND PARALLEL TO SAID WESTERLY RIGHT-OF-WAY LINE OF THE AFOREMENTIONED 50 FOOT WIDE ACCESS EASEMENT; THENCE N6°01'50"E ALONG SAID PARALLEL LINE FOR 255.73 FEET TO AN INTERSECTION WITH SAID SOUTHWESTERLY RIGHT-OF-WAY LINE OF THE AFOREMENTIONED FRONT STREET; THENCE S47°13'30"E ALONG SAID SOUTHWESTERLY RIGHT-OF-WAY LINE FOR 31.20 FEET TO AN INTERSECTION WITH SAID WESTERLY RIGHT-OF-WAY LINE OF THE AFOREMENTIONED 50 FOOT WIDE ACCESS EASEMENT; THENCE S6°01'50"W ALONG SAID WESTERLY RIGHT-OF-WAY LINE FOR 313.78 FEET TO THE POINT OF BEGINNING.

AND

A DRAINAGE EASEMENT BEING 15.00 FEET IN WIDTH; THE SOUTHERLY LINE THEREOF BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGIN AT THE MOST SOUTHERLY CORNER OF THE S.T.P. SITE AS SHOWN AND DESCRIBED HEREON; THENCE S70°27'50"W ALONG THE SOUTHWESTERLY PROLONGATION OF THE SOUTHEASTERLY BOUNDARY LINE OF SAID S.T.P. SITE FOR 250 FEET MORE OR LESS TO THE EASTERLY SHORELINE OF THE EXISTING HARBOR AND THE POINT OF TERMINATION OF SAID SOUTHERLY LINE.

**BERNSTEIN TRUST**  
**LEGAL DESCRIPTION**

IN RE: ESTATE OF  
BENJAMIN BERNSTEIN  
Deceased

Case No. 1973-CP-096-K

A parcel of land on Stock Island and being a part of Block 55 of McDonald's Plat of Stock Island as recorded in Plat Book 1 at page 55 of the Public Records of Monroe County, Florida and being also a part of submerged lands described in T. I. I. F. deed number 19837-A, all of which is described more particularly by metes and bounds as follows:

Commencing at the intersection of southerly right-of-way boundary line of Fourth Avenue with the westerly right-of-way boundary line of Front Street; thence Southeastwardly in and along the westerly right-of-way boundary line of Front Street a distance of 840.5 feet to the point of beginning of the parcel of land herein being described; thence along aforesaid right-of-way boundary line south 47 degrees 13 minutes 30 seconds East a distance of 163.26 feet to a point; thence south 6 degrees 01 minute 50 seconds West, a distance of 313.78 feet to a point; thence South 70 degrees 27 minutes 50 seconds West, a distance of 791.00 feet to a point; thence North 46 degrees 15 minutes 42 seconds West, a distance of 334.66 feet to a point; thence North 87 degrees 08 minutes 10 seconds East, a distance of 485.00 feet to a point; thence North 5 degrees 33 minutes 56 seconds East, a distance of 340.04 feet to a point; thence North 53 degrees 21 minutes 10 seconds East, a distance of 207.18 feet to a point; thence South 47 degrees 13 minutes 30 seconds East, a distance of 179.69 feet to a point; thence North 42 degrees 46 minutes 30 seconds East, a distance of 125.0 feet to the point of beginning, containing 7.28 Acres, more or less.

EXHIBIT "A"

MONROE COUNTY  
OFFICIAL RECORDS

EXHIBIT C

To The Trustees of Trust B Under The Will of Benjamin Bernstein, Deceased:

A part of Block 55, of the Plat of Stock Island, as recorded in Plat Book 1, page 55 of the Public Records of Monroe County, Florida, and is particularly described as follows: Commencing at the intersection of the Southwesterly right-of-way line of Front Street and the Southeasterly right-of-way line of Fourth Avenue of the said Plat of Stock Island, bear South 47 degrees, 13 minutes and 30 seconds East along the Southwesterly right-of-way line of Front Street for a distance of 250.00 feet to a point which is the Point of Beginning; Continue thence South 47 degrees 13 minutes and 30 seconds East along the Southwesterly right-of-way line of Front Street for a distance of 600.00 feet to a point; thence bear South 42 degrees, 47 minutes and 30 seconds West for a distance of 175.00 feet to a point; thence bear North 47 degrees, 13 minutes and 30 seconds West for a distance of 600.00 feet to a point; thence bear North 42 degrees, 47 minutes and 30 seconds East a distance of 175.00 feet back to the Point of Beginning. Together with all improvements thereon. ALSO;

A tract of land on a part of Stock Island, Monroe County, Florida, and being more particularly described by metes and bounds as follows: Commencing at the intersection of the Southerly right-of-way line of Fifth Avenue and the Easterly right-of-way line of Fifth Street of the Plat of Stock Island, recorded in Plat Book 1, Page 55 of the Public Records of Monroe County, Florida, bear South 83 degrees and 56 minutes East, 500.00 feet; thence bear South 06 degrees and 04 minutes West, 2242.25 feet; thence bear South 83 degrees and 56 minutes East, 2131.53 feet; thence bear North 06 degrees and 04 minutes East, 1981.05 feet to the Point of Beginning of the tract of land hereinafter described; from said Point of Beginning bear South 70 degrees and 30 minutes West for a distance of 1060 feet, more or less, to the centerline of the Entrance Channel; thence bear North 05 degrees and 45 minutes West along the centerline of said Entrance Channel for a distance of 12 feet, more or less, to a point; thence bear North 83 degrees and 56 minutes West for a distance of 475 feet, more or less, to a point which is 701 feet and bearing South 06 degrees and 04 minutes West from the Southerly right-of-way line of Fifth Avenue thence bear North 06 degrees and 04 minutes East for a distance of 400 feet, more or less, to the Southerly shoreline of Block 13, Block 57 of the Plat of Stock Island; thence meander the shoreline in an Easterly direction for a distance of 1440 feet, more or less, to a point which is bearing North 06 degrees and 04 minutes East from the Point of Beginning; thence bear South 06 degrees and 04 minutes West for a distance of 100 feet, more or less, back to the Point of Beginning.

Less the following parcel of land included in this legal description:

A parcel of land on Stock Island and being a part of Block 55 of McDonald's Plat of Stock Island as recorded in Plat Book 1 at page 55 of the Public Records of Monroe County, Florida and being also a part of submerged lands described in T. I. I. F.

deed number 19837-A, all of which is described more particularly by metes and bounds as follows:

Commencing at the intersection of southerly right-of-way boundary line of Fourth Avenue with the westerly right-of-way boundary line of Front Street; thence Southeastwardly in and along the westerly right-of-way boundary line of Front Street a distance of 840.5 feet to the point of beginning of the parcel of land herein being described; thence along aforesaid right-of-way boundary line South 47 degrees 13 minutes 30 seconds East a distance of 163.26 feet to a point; thence South 6 degrees 01 minute 50 seconds West, a distance of 313.78 feet to a point; thence South 70 degrees 27 minutes 50 seconds West, a distance of 791.00 feet to a point; thence North 46 degrees 15 minutes 42 seconds West, a distance of 334.66 feet to a point; thence North 87 degrees 08 minutes 10 seconds East, a distance of 485.00 feet to a point; thence North 5 degrees 33 minutes 56 seconds East, a distance of 340.04 feet to a point; thence North 53 degrees 21 minutes 10 seconds East, a distance of 207.18 feet to a point; thence South 47 degrees 13 minutes 30 seconds East, a distance of 179.69 feet to a point; thence North 42 degrees 46 minutes 30 seconds East, a distance of 125.0 feet to the point of beginning, containing 7.28 Ac., more or less.

All of Block 56, all of Lot 13, Block 57 and all of Block 55 of the Plat of Stock Island, as recorded in Plat Book 1, Page 55 of the Public Records of Monroe County, Florida, less the following described tract in Block 55:

Commencing at the intersection of the Southwesterly right-of-way line of Front Street and the Southeasterly right-of-way line of Fourth Avenue of the said Plat of Stock Island, said intersection also to be known as the Point of Beginning of the tract of land hereinafter described; bear South 47 degrees, 13 minutes and 30 seconds East along the Southwesterly right-of-way line of Front Street for a distance of 850.00 feet to a point; thence bear South 42 degrees, 47 minutes and 30 seconds West for a distance of 175.00 feet to a point; thence bear North 47 degrees 13 minutes and 30 seconds West for a distance of 850.00 feet to a point on the Southeasterly right-of-way line of Fourth Avenue; thence bear North 42 degrees, 47 minutes and 30 seconds East along the Southeasterly right-of-way line of Fourth Avenue for a distance of 175.00 feet back to the Point of Beginning. TOGETHER WITH all improvements thereon.

**6840 FRONT STREET, LLC**

**LEGAL DESCRIPTION**

PARCEL A  
A tract of land on a part of Stock Island, Monroe County, Florida and being more particularly described by metes and bounds as follows:  
Commencing at the intersection of the Southerly right-of-way line of Fifth Avenue and the Easterly right-of-way line of Fifth Street of the Plat of Stock Island, recorded in Plat Book 1, Page 55 of the Public Records of Monroe County, Florida, bear South 83 degrees and 56 minutes East, 500.00 feet; thence bear South 06 degrees and 04 minutes West, 2242.25 feet; thence bear South 83 degrees and 56 minutes East, 2131.53 feet; thence bear North 06 degrees and 04 minutes East 1105.39 feet to the Point of Beginning of the tract of land hereinafter described; from said Point of Beginning, continue bearing North 06 degrees and 04 minutes East, 368.16 feet; thence bear North 83 degrees and 56 minutes West, 45 feet, more or less, to a point; thence bear South 70 degrees and 30 minutes West, 25 feet, more or less, to a point; thence bear South 19 degrees, 15 minutes and 08 seconds West, 408.51 feet to a point which is bearing South 81 degrees, 50 minutes and 40 seconds West from the Point of Beginning; thence bear North 81 degrees, 50 minutes and 40 seconds East, 156.44 feet back to the Point of Beginning.

PARCEL C  
A tract of land and water on a part of Stock Island, Monroe County, Florida and being more particularly described by metes and bounds as follows:  
Commencing at the intersection of the Southerly right-of-way line of Fifth Avenue and the Easterly right-of-way line of Fifth Street, bear South 83 degrees and 56 minutes East, 500.00 feet; thence bear South 06 degrees and 06 minutes West, 2242.25 feet; thence bear South 83 degrees and 56 minutes East 2131.53 feet; thence bear North 06 degrees and 04 minutes East, 1105.99 feet; thence bear South 81 degrees, 50 minutes and 40 seconds West, 156.44 feet to the Point of Beginning of the tract of land and water hereinafter described; from said Point of Beginning, bear North 19 degrees, 15 minutes and 08 seconds East, 408.51 feet; thence bear South 70 degrees and 30 minutes West, 905 feet, more or less, to the centerline of an Entrance Channel; thence bear South 05 degrees, and 45 minutes East along the said centerline of Entrance Channel, 190 feet, more or less, to a point which is bearing South 81 degrees, 50 minutes and 40 seconds West from the Point of Beginning; thence bear North 81 degrees, 50 minutes and 40 seconds East for a distance of 890 feet, more or less, back to the Point of Beginning.

**BAMA ONE, LLC**  
**LEGAL DESCRIPTION**

PARCEL B

A tract of land on a part of Stock Island, Monroe County, Florida, and being more particularly described by metes and bounds as follows: COMMENCING at the intersection of the Southerly right of way line of Fifth Avenue and the Easterly right of way line of Fifth Street of the Plat of Stock Island, recorded in Plat Book 1, Page 55 of the Public Records of Monroe County, Florida, bear South 83° 56' East, 500.00 feet; thence bear South 06° 04' West, 2,242.25 feet; thence bear South 83° 56' East, 2,131.53 feet; thence bear North 06° 04' East, 1,524.15 feet to the POINT OF BEGINNING of the tract of land hereinafter described; from said Point of Beginning bear North 83° 56' West for a distance of 50.00 feet to a point; thence bear South 70° 30' West for a distance of 910 feet, more or less, to the centerline of the Entrance Channel; thence bear North 05° 45' West along the centerline of said Entrance Channel for a distance of 400 feet, more or less, to a point which is 390.58 feet measured at right angles to the preceding course; thence bear North 70° 30' East for a distance of 1,060 feet, more or less, to a point which is bearing North 06° 04' East from the Point of Beginning; thence bear South 06° 04' West for a distance of 456.90 feet back to the POINT OF BEGINNING.

LESS AND EXCEPT THE FOLLOWING

A tract of land on Stock Island, Monroe County, Florida, and being more particularly described by metes and bounds as follows: COMMENCING at the intersection of the Southerly right of way line of Fifth Avenue and the Easterly right of way line of Fifth Street of the Plat of Stock Island, recorded in Plat Book 1, Page 55, of the Public Records of Monroe County, Florida, bear South 83° 56' East 500 feet; thence bear South 06° 04' West, 2,242.25 feet; thence bear South 83° 56' East, 2,131.53 feet; thence bear North 06° 04' East, 1,528.91 feet to the POINT OF BEGINNING of the tract of land hereinafter described; thence bear North 72° 14' 31" West, 99.13 feet to a point; thence bear South 74° 24' 10" West along a line parallel with and 25 feet Northwesterly of the outside face of an existing concrete seawall, 505.60 feet to a point; thence bear North 66° 45' West, 51.21 feet to a point on the outside face of an existing concrete seawall; thence bear South 74° 24' 10" West along the outside face of an existing concrete seawall, 68.35 feet to a point; thence bear South 15° 35' 50" East parallel to the outside face of an existing concrete seawall, 113.42 feet to a point; thence bear South 70° 30' West, 260.13 feet, more or less, to a point on the centerline of the entrance channel; thence bear North 05° 45' West, along the said centerline of the entrance channel, 400 feet, more or less, to a point 390.58 feet distant from and measured at right angles to the preceding course; thence bear North 70° 30' East for a distance of 1060 feet, more or less, to a point which is bearing North 06° 04' East and distant 452.41 feet from the Point of Beginning; thence bear South 06° 04' West for a distance of 452.14 feet back to the POINT OF BEGINNING.

PARCEL D

A strip of land and water on a part of Stock Island, Monroe County, Florida, and being more particularly described by metes and bounds as follows: COMMENCING at the intersection of the Southerly right of way line of Fifth Avenue and the Easterly right of way line of Fifth Street of the Plat of Stock Island, as recorded in Plat Book 1, Page 55, of the Public Records of Monroe County, Florida, bear South 83° 56' East, 500.00 feet; thence bear South 06° 04' West, 2,242.25 feet; thence bear South 83° 56' East, 2,131.53 feet; thence bear North 06° 04' East, 1,474.18 feet to the POINT OF BEGINNING of the strip of land and water hereinafter described; from said Point of Beginning, continue bearing North 06° 04' East, 50 feet; thence bear North 83° 56' West, 50 feet; thence bear South 70° 30' West, 910 feet, more or less, to a point on the centerline of an Entrance Channel; thence bear South 05° 45' East along said centerline to a point which is 50 feet, measured at right angles to the preceding course; thence bear North 70° 30' East, 905 feet, more or less, to a point which is bearing North 83° 56' West from the Point of Beginning; thence bear South 83° 56' East, 45 feet, more or less, back to the POINT OF BEGINNING.

EXHIBIT A

MONROE COUNTY  
OFFICIAL RECORDS

FILE #137787  
BK#1900 PG#539

**LONGSTOCK, II LLC**  
**LEGAL DESCRIPTION**

**EXHIBIT A**

**Deed 1819018  
Bk# 2499 Pg# 357**

**PARCEL A:**

**A TRACT OF LAND AND SUBMERGED LANDS AT STOCK ISLAND, MONROE COUNTY, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:**

**COMMENCING AT THE INTERSECTION OF THE EASTERLY LINE OF FIFTH STREET AND THE SOUTHERLY LINE OF FIFTH AVENUE OF THE PLAT OF STOCK ISLAND, AS RECORDED IN PLAT BOOK 1, PAGE 55 OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA, BEAR SOUTH 84 DEGREES 02 MINUTES 07 SECONDS EAST; 484.79 FEET; THENCE BEAR SOUTH 05 DEGREES 39 MINUTES 55 SECONDS WEST, 938.76 FEET; THENCE BEAR SOUTH 08 DEGREES 09 MINUTES 05 SECONDS EAST 249.71 FEET; THENCE BEAR SOUTH 14 DEGREES 38 MINUTES 05 SECONDS EAST, 131.51 FEET; THENCE BEAR SOUTH 01 DEGREES 56 MINUTES 55 SECONDS WEST, 456.55 FEET TO THE POINT OF BEGINNING OF THE TRACT OF LAND AND SUBMERGED LANDS HEREIN AFTER DESCRIBED; FROM SAID POINT OF BEGINNING CONTINUE BEARING SOUTH 01 DEGREES 56 MINUTES 55 SECONDS WEST, 119.17 FEET; THENCE BEAR SOUTH 05 DEGREES 54 MINUTES 55 SECONDS WEST, 186.69 FEET; THENCE BEAR SOUTH 84 DEGREES 05 MINUTES 05 SECONDS EAST, 175.00 FEET TO A POINT; THENCE BEAR NORTH 34 DEGREES 32 MINUTES 55 SECONDS EAST, 116.44 FEET TO A POINT; THENCE BEAR NORTH 89 DEGREES 27 MINUTES 55 SECONDS EAST, 915.36 FEET TO A POINT; THENCE BEAR NORTH 06 DEGREES 02 MINUTES 03 SECONDS WEST, 230.00 FEET, TO A POINT WHICH IS BEARING NORTH 89 DEGREES 27 MINUTES 55 SECONDS EAST FROM THE AFOREMENTIONED POINT OF BEGINNING; THENCE BEAR SOUTH 89 DEGREES 27 MINUTES 55 SECONDS WEST FOR A DISTANCE OF 1108.00 FEET BACK TO THE POINT OF BEGINNING.**

**PARCEL B:**

**A TRACT OF LAND AND SUBMERGED LANDS AT STOCK ISLAND, MONROE COUNTY, FLORIDA, AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS: COMMENCING AT THE INTERSECTION OF THE EASTERLY LINE OF FIFTH STREET AND THE SOUTHERLY LINE OF FIFTH AVENUE OF THE PLAT OF STOCK ISLAND, AS RECORDED IN PLAT BOOK 1, PAGE 55, OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA, BEAR SOUTH 83 DEGREES, 56 MINUTES EAST, 485.00 FEET; THENCE BEAR SOUTH 05 DEGREES, 47 MINUTES WEST, 938.88 FEET; THENCE BEAR SOUTH 08 DEGREES, 02 MINUTES EAST, 249.71 FEET; THENCE BEAR SOUTH 14 DEGREES, 31 MINUTES EAST, 131.51 FEET; THENCE BEAR SOUTH 02 DEGREES, 04 MINUTES WEST, 262.26 FEET TO THE POINT OF BEGINNING OF THE TRACT OF LAND AND SUBMERGED LAND HEREINAFTER DESCRIBED; THENCE SOUTH 84 DEGREES 19 MINUTES EAST, 140 FEET MORE OR LESS TO THE OUTSIDE FACE OF AN EXISTING CONCRETE SEAWALL; THENCE BEAR NORTH 88 DEGREES, 56 MINUTES EAST, 970 FEET, MORE OR LESS, OUT INTO AN EXISTING SLIP; THENCE BEAR SOUTH 05 DEGREES, 55 MINUTES WEST, 180 FEET, MORE OR LESS, TO THE CENTER LINE OF AN EXISTING SPIT OF LAND; THENCE BEAR SOUTH 89 DEGREES, 32 MINUTES WEST, ALONG SAID CENTER LINE OF SAID SPIT OF LAND 1108 FEET, MORE OR LESS, TO A POINT WHICH IS BEARING SOUTH 02 DEGREES, 04 MINUTES WEST FROM THE POINT OF BEGINNING; THENCE BEAR NORTH 02 DEGREES, 04 MINUTES EAST, 194.29 FEET BACK TO THE POINT OF BEGINNING.**

**ALSO DESCRIBED AND INSURED AS:**

A TRACT OF LAND AND SUBMERGED LANDS AT STOCK ISLAND MONROE COUNTY, FLORIDA, AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE EASTERLY LINE OF FIFTH STREET AND THE SOUTHERLY LINE OF FIFTH AVENUE OF THE PLAT OF STOCK ISLAND, AS RECORDED IN PLAT BOOK 1, PAGE 55 OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA, BEAR SOUTH 84 DEGREES 02 MINUTES 07 SECONDS EAST 484.79 FEET; THENCE BEAR SOUTH 05 DEGREES 39 MINUTES 55 SECONDS WEST, 938.76 FEET; THENCE BEAR SOUTH 08 DEGREES 09 MINUTES 05 SECONDS EAST 249.71 FEET; THENCE BEAR SOUTH 14 DEGREES 38 MINUTES 05 SECONDS EAST 36.68 FEET; THENCE BEAR SOUTH 01 DEGREES 56 MINUTES 55 SECONDS WEST 262.26 FEET TO THE POINT OF BEGINNING OF THE TRACT OF LAND AND SUBMERGED LAND HEREINAFTER DESCRIBED; THENCE SOUTH 84 DEGREES 26 MINUTES 05 SECONDS EAST, 131.81 FEET TO THE OUTSIDE FACE OF AN EXISTING CONCRETE SEAWALL; THENCE BEAR NORTH 88 DEGREES 48 MINUTES 55 SECONDS EAST 977.77 FEET OUT INTO AN EXISTING SLIP; THENCE BEAR SOUTH 05 DEGREES 37 MINUTES 29 SECONDS WEST, 192.30 FEET TO THE CENTERLINE OF AN EXISTING SPIT OF LAND; THENCE BEAR SOUTH 89 DEGREES 27 MINUTES 55 SECONDS WEST, ALONG SAID CENTERLINE OF SAID SPIT OF LAND 1096.56 FEET TO A POINT WHICH IS BEARING SOUTH 01 DEGREES 56 MINUTES 55 SECONDS WEST FROM THE POINT OF BEGINNING; THENCE BEAR NORTH 01 DEGREES 56 MINUTES 55 SECONDS EAST, 194.29 FEET BACK TO POINT OF BEGINNING.

PARCEL C:

A TRACT OF LAND AND SUBMERGED LAND AT STOCK ISLAND, MONROE COUNTY, FLORIDA, AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE EASTERLY LINE OF FIFTH STREET AND THE SOUTHERLY LINE OF FIFTH AVENUE OF THE PLAT OF STOCK ISLAND AS RECORDED IN PLAT BOOK 1, PAGE 55, OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA, BEAR SOUTH 84° 02' 07" EAST, 484.79 FEET; THENCE BEAR SOUTH 05° 39' 55" WEST, 938.76 FEET; THENCE BEAR SOUTH 08° 09' 05" EAST, 249.71 FEET; THENCE BEAR SOUTH 14° 38' 05" EAST, 36.68 FEET TO THE POINT OF BEGINNING OF THE TRACT OF LAND AND SUBMERGED LANDS HEREINAFTER DESCRIBED; THENCE CONTINUE BEARING SOUTH 14° 38' 05" EAST, 94.83 FEET; THENCE BEAR SOUTH 01° 56' 55" WEST, 82.95 FEET; THENCE BEAR NORTH 89° 24' 55" EAST, 1120.76 FEET, OUT ONTO A SPIT OF LAND TO THE SHORELINE; THENCE BEAR NORTH 05° 37' 29" EAST, 161.06 FEET TO A POINT; THENCE BEAR SOUTH 89° 24' 55" WEST, 1000.60 FEET TO A POINT ON A CONCRETE SEAWALL, SAID POINT BEARING SOUTH 85° 13' 05" EAST FROM THE POINT OF BEGINNING; THENCE BEAR NORTH 85° 13' 05" WEST, 157.63 FEET TO THE POINT OF BEGINNING.

PARCEL E:

A PARCEL OF FILLED LAND AND ADJACENT BAY BOTTOM LYING SOUTHERLY OF BLOCK 57, MALONEY'S SUBDIVISION OF A PART OF STOCK ISLAND, MONROE COUNTY, FLORIDA AS RECORDED IN PLAT BOOK 1 AT PAGE 55 OF MONROE COUNTY PUBLIC RECORDS AND IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

FROM THE INTERSECTION OF THE EASTERLY LINE OF 5TH STREET (AS CONSTRUCTED) AND THE SOUTHERLY LINE OF 5TH AVENUE (AS CONSTRUCTED) GO EASTERLY ALONG THE SOUTHERLY LINE OF 5TH AVENUE A DISTANCE OF 500 FEET TO A POINT; THENCE SOUTHERLY AND AT RIGHT ANGLES A DISTANCE OF 730 FEET TO A POINT; THENCE EASTERLY AND AT RIGHT ANGLES A DISTANCE OF 191.5 FEET

TO A POINT WHICH IS THE POINT OF BEGINNING; THENCE CONTINUE EASTERLY ALONG THE PROLONGATION OF THE PREVIOUSLY DESCRIBED COURSE A DISTANCE OF 393.5 FEET TO A POINT; THENCE SOUTHERLY AND AT RIGHT ANGLES A DISTANCE OF 226.08 FEET TO A POINT; THENCE EASTERLY AND AT RIGHT ANGLES A DISTANCE OF 125 FEET TO A POINT; THENCE SOUTHERLY AND AT RIGHT ANGLES A DISTANCE OF 20 FEET TO A POINT IN AN EXISTING SEAWALL; THENCE WESTERLY AND PARALLEL WITH THE SOUTHERLY FACE OF SAID SEAWALL A DISTANCE OF 450.1 FEET TO A POINT; THENCE NORTHERLY AND AT RIGHT ANGLES TO A SOUTHERLY LINE OF FIFTH AVENUE A DISTANCE OF 30 FEET TO A POINT; THENCE WESTERLY AND AT RIGHT ANGLES A DISTANCE OF 68.5 FEET TO A POINT; THENCE NORTHERLY AND AT RIGHT ANGLES A DISTANCE OF 227.2 FEET BACK TO THE POINT OF BEGINNING.

ALSO

A PARCEL OF BAY BOTTOM SOUTHERLY OF AND ADJACENT TO THE SOUTHERLY LINE OF THE ABOVE DESCRIBED PARCEL, SAID BAY BOTTOM BEING 10 FEET WIDE.

ALSO DESCRIBED AND INSURED AS:

A PARCEL OF FILLED LAND AND ADJACENT BAY BOTTOM LYING SOUTHERLY OF BLOCK 57, MALONEY'S SUBDIVISION OF A PART OF STOCK ISLAND, MONROE COUNTY, FLORIDA AS RECORDED IN PLAT BOOK 1 AT PAGE 55 OF MONROE COUNTY PUBLIC RECORDS AND IS MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE INTERSECTION OF THE EASTERLY RIGHT-OF-WAY LINE OF FIFTH STREET AND THE SOUTHERLY RIGHT-OF-WAY LINE OF FIFTH AVENUE, OF THE PLAT OF STOCK ISLAND, AS RECORDED IN PLAT BOOK 1, PAGE 55, OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA; THENCE S 84° 02' 07" E, ALONG SAID SOUTHERLY RIGHT-OF-WAY, A DISTANCE 499.98 FEET TO THE EASTERLY LINE OF AN EASEMENT AGREEMENT AS RECORDED IN OFFICIAL RECORDS BOOK 780, PAGE 1169 OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA; THENCE S 05° 57' 53" W, ALONG SAID EASTERLY LINE, A DISTANCE 729.82 FEET TO THE SOUTHERLY LINE OF AN INGRESS/EGRESS EASEMENT AS RECORDED IN OFFICIAL RECORDS BOOK 1239, PAGE 464 OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA; THENCE S 84° 02' 07" E, ALONG SAID SOUTHERLY LINE, A DISTANCE 191.50 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE ALONG SAID SOUTHERLY LINE S 84°02'07" E, A DISTANCE OF 393.51; THENCE S 06° 00' 38" W, A DISTANCE OF 227.17 FEET; THENCE S 85° 29' 39" E, A DISTANCE OF 125.00 FEET; THENCE S 06° 01' 16" W, A DISTANCE OF 20.01 FEET TO THE SOUTHERLY FACE OF A CONCRETE SEAWALL; THENCE N 85° 29' 39" W, ALONG SAID SOUTHERLY LINE, A DISTANCE OF 450.10 FEET; THENCE N 06° 23' 31" E, A DISTANCE OF 30.00 FEET; THENCE N 85° 29' 39" W, A DISTANCE 68.50 FEET; THENCE N 05° 56' 58" E, A DISTANCE OF 227.20 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH:

A PARCEL OF BAY BOTTOM SOUTHERLY OF AND ADJACENT TO THE SOUTHERLY LINE OF THE ABOVE DESCRIBED PARCEL, SAID BAY BOTTOM BEING 10 FEET WIDE. TOGETHER WITH AN EASEMENT FOR INGRESS AND EGRESS OVER AND UPON THE FOLLOWING DESCRIBED PROPERTY, RECORDED IN OFFICIAL RECORDS BOOK 1239, PAGE 464, AND ALSO IN OFFICIAL RECORDS BOOK 2287, PAGE 719, PUBLIC RECORDS OF MONROE COUNTY, FLORIDA, SITUATED, LYING AND BEING IN THE COUNTY OF MONROE, STATE OF FLORIDA, TO WIT: A PARCEL OF LAND LYING SOUTHERLY OF BLOCK 57, MALONEY'S SUBDIVISION OF PART OF STOCK ISLAND, MONROE COUNTY, FLORIDA, AS RECORDED IN PLAT BOOK 1, AT PAGE 55, MONROE

COUNTY OFFICIAL RECORDS, AND IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

FROM THE INTERSECTION OF THE EAST LINE OF 5TH STREET (AS CONSTRUCTED) AND THE SOUTHERLY LINE OF 5TH AVENUE (AS CONSTRUCTED) GO WESTERLY ALONG THE SOUTHERLY LINE OF 5TH AVENUE A DISTANCE OF 499 FEET TO A POINT, WHICH POINT IS THE POINT OF BEGINNING; THENCE SOUTHERLY AND AT RIGHT ANGLES A DISTANCE OF 701 FEET TO A POINT; THENCE EASTERLY AND AT RIGHT ANGLES A DISTANCE OF 586 FEET TO A POINT; THENCE SOUTHERLY AND AT RIGHT ANGLES A DISTANCE OF 29 FEET TO A POINT; THENCE WESTERLY AND AT RIGHT ANGLES A DISTANCE OF 615 FEET TO A POINT; THENCE NORTHERLY AND AT RIGHT ANGLES A DISTANCE OF 730 FEET TO A POINT IN THE SOUTHERLY LINE OF 5TH AVENUE; THENCE EASTERLY AND AT RIGHT ANGLES AND ALONG THE SOUTHERLY LINE OF 5TH AVENUE A DISTANCE OF 29 FEET BACK TO THE POINT OF BEGINNING.

SAID EASEMENT ALSO DESCRIBED AND INSURED AS:

A PARCEL OF LAND LYING IN SECTION 35, TOWNSHIP 67 SOUTH, RANGE 25 EAST, MONROE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE NORTHWEST CORNER OF BLOCK 57 OF MCDONALD'S PLAT OF A PART OF STOCK ISLAND AS RECORDED IN PLAT BOOK 1, PAGE 55 OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA; THENCE ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF FIFTH AVENUE SOUTH 84°02'07" EAST, A DISTANCE OF 499.98 FEET TO THE WEST LINE OF TRUSTEE'S DEED NO.20083 AS RECORDED IN O.R. BOOK G-65, PAGE 82; THENCE LEAVING SAID LINE SOUTH 05° 57' 53" WEST, ALONG SAID LINE A DISTANCE OF 699.82 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 84° 02' 07" EAST, PARALLEL WITH THE SOUTHERLY LINE OF SAID FIFTH AVENUE A DISTANCE OF 740.00 FEET; THENCE SOUTH 05° 57' 53" WEST, A DISTANCE OF 40.00 FEET; THENCE NORTH 84° 02' 07" WEST, A DISTANCE OF 155.00 FEET; THENCE NORTH 05° 57' 53" EAST, A DISTANCE OF 10.00 FEET; THENCE NORTH 84° 02' 07" WEST, A DISTANCE OF 585.00 FEET TO THE WEST LINE OF SAID TRUSTEE'S DEED; THENCE NORTH 05° 57' 53" EAST, ALONG SAID LINE A DISTANCE OF 30.00 FEET TO THE POINT OF BEGINNING.

PARCEL F:

A TRACT OF LAND AND SUBMERGED LANDS AT STOCK ISLAND, MONROE COUNTY, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE EASTERLY LINE OF FIFTH STREET AND THE SOUTHERLY LINE OF FIFTH AVENUE OF THE PLAT OF STOCK ISLAND, AS RECORDED IN PLAT BOOK 1, PAGE 55 OF THE PUBLIC RECORDS OF MONROE COUNTY, BEAR SOUTH 83 DEGREES AND 56 MINUTES EAST, 485.00 FEET; THENCE BEAR SOUTH 05 DEGREES AND 47 MINUTES WEST, 938.88 FEET; THENCE BEAR SOUTH 08 DEGREES AND 02 MINUTES EAST, 249.71 FEET; THENCE BEAR SOUTH 14 DEGREES AND 31 MINUTES EAST, 131.51 FEET; THENCE BEAR SOUTH 02 DEGREES AND 04 MINUTES WEST, 82.95 FEET TO THE POINT OF BEGINNING OF THE TRACT OF LAND AND SUBMERGED LANDS HEREINAFTER DESCRIBED; THENCE CONTINUE BEARING SOUTH 02 DEGREES AND 04 MINUTES WEST, 179.31 FEET; THENCE BEAR SOUTH 84 DEGREES AND 19 MINUTES EAST, 140.00 FEET, MORE OR LESS, TO THE OUTSIDE FACE OF AN EXISTING CONCRETE SEAWALL; THENCE BEAR NORTH 88 DEGREES AND 56 MINUTES EAST OUT INTO A SLIP 970 FEET, MORE OR LESS, TO A POINT; THENCE BEAR NORTH 05 DEGREES AND 55 MINUTES EAST, 150.00 FEET, MORE OR LESS, TO A POINT WHICH IS BEARING NORTH 89 DEGREES AND 32 MINUTES EAST FROM THE POINT OF BEGINNING; THENCE BEAR SOUTH 89

DEGREES AND 32 MINUTES WEST, 1120.00 FEET, MORE OR LESS, BACK TO THE POINT OF BEGINNING.

**ALSO DESCRIBED AND INSURED AS:**

**A TRACT OF LAND AND SUBMERGED LANDS AT STOCK ISLAND, MONROE COUNTY, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:**

**COMMENCING AT THE INTERSECTION OF THE EASTERLY LINE OF FIFTH STREET AND THE SOUTHERLY LINE OF FIFTH AVENUE OF THE PLAT OF STOCK ISLAND, AS RECORDED IN PLAT BOOK 1, PAGE 55 OF THE PUBLIC RECORDS OF MONROE COUNTY, BEAR SOUTH 84 DEGREES 02 MINUTES 07 SECONDS EAST, 484.79 FEET; THENCE BEAR SOUTH 05 DEGREES 39 MINUTES 55 SECONDS WEST, 938.76 FEET; THENCE BEAR SOUTH 08 DEGREES 09 MINUTES 05 SECONDS EAST, 249.71 FEET; THENCE SOUTH 14 DEGREES 38 MINUTES 05 SECONDS EAST, 131.51 FEET; THENCE BEAR SOUTH 01 DEGREES 56 MINUTES 55 SECONDS WEST, 82.95 FEET TO THE POINT OF BEGINNING OF THE TRACT OF LAND AND SUBMERGED LANDS HEREINAFTER DESCRIBED; THENCE CONTINUE BEARING SOUTH 01 DEGREES 56 MINUTES 55 SECONDS WEST, 179.31 FEET; THENCE BEAR SOUTH 84 DEGREES 26 MINUTES 05 SECONDS EAST, 131.81 FEET TO THE OUTSIDE FACE OF AN EXISTING CONCRETE SEAWALL; THENCE BEAR NORTH 88 DEGREES 48 MINUTES 55 SECONDS EAST OUT INTO A SLIP, 977.77 FEET TO A POINT; THENCE BEAR NORTH 05 DEGREES 37 MINUTES 29 SECONDS EAST, 184.10 FEET TO A POINT WHICH IS BEARING NORTH 89 DEGREES 24 MINUTES 55 SECONDS EAST FROM THE POINT OF BEGINNING; THENCE BEAR SOUTH 89 DEGREES 24 MINUTES 55 SECONDS WEST, 1120.76 FEET BACK TO THE POINT OF BEGINNING.**

**PARCEL G:**

**A PARCEL OF LAND AND SUBMERGED LANDS AT STOCK ISLAND, MONROE COUNTY, FLORIDA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:**

**COMMENCING AT THE INTERSECTION OF THE EASTERLY RIGHT-OF-WAY LINE OF FIFTH STREET AND THE SOUTHERLY RIGHT-OF-WAY LINE OF FIFTH AVENUE, OF THE PLAT OF STOCK ISLAND, AS RECORDED IN PLAT BOOK 1, PAGE 55, OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA; THENCE S 84° 02' 07" E ALONG THE SAID SOUTHERLY LINE OF FIFTH AVENUE FOR 484.98 FEET; THENCE S 05° 57' 53" W FOR A DISTANCE OF 938.76 FEET; THENCE S 08° 09' 05" E FOR A DISTANCE OF 109.75 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE S 08° 09' 05" E, A DISTANCE OF 139.96 FEET; THENCE S 14° 38' 05" E, A DISTANCE OF 32.68 FEET; THENCE S 85° 13' 05" E, A DISTANCE OF 157.63 FEET; THENCE N 89° 24' 55" E, A DISTANCE OF 49.99 FEET; THENCE N 05° 12' 11" E, A DISTANCE OF 161.18 FEET; THENCE N 84° 02' 55" W, A DISTANCE OF 252.15 FEET TO THE POINT OF BEGINNING.**

**PARCEL H:**

**A TRACT OF LAND AND SUBMERGED LANDS AT STOCK ISLAND, MONROE COUNTY, FLORIDA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE INTERSECTION OF THE EASTERLY RIGHT-OF-WAY LINE OF FIFTH STREET AND THE SOUTHERLY RIGHT-OF-WAY LINE OF FIFTH AVENUE, OF THE PLAT OF STOCK ISLAND, AS RECORDED IN PLAT BOOK 1, PAGE 55, OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA; THENCE SOUTH 84° 02' 07" EAST ALONG THE SAID SOUTHERLY LINE OF FIFTH AVENUE FOR 484.79 FEET; THENCE SOUTH 05° 39' 55" WEST FOR A DISTANCE 938.76 FEET; THENCE SOUTH 08° 09' 05" EAST FOR A DISTANCE OF 42.15 FEET TO THE EASTERLY LINE OF A 30 FOOT EASEMENT AND THE EASTERLY RIGHT-OF-WAY LINE OF SHRIMP ROAD AS**

RECORDED IN O.R. BOOK 2030, PAGE 949 (PARCEL A TRACT 1), OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA AND THE POINT OF BEGINNING; THENCE LEAVING SAID LINE SOUTH 08°09'05" EAST, A DISTANCE OF 207.56 FEET; THENCE SOUTH 14°38'05" EAST, A DISTANCE OF 131.51 FEET; THENCE SOUTH 01° 56' 55" WEST, A DISTANCE OF 575.72 FEET; THENCE SOUTH 05° 54' 55" WEST, A DISTANCE OF 186.69 FEET; THENCE SOUTH 84° 05' 05" EAST, A DISTANCE OF 175.00 FEET; THENCE NORTH 34° 32' 55" EAST, A DISTANCE OF 116.44 FEET; THENCE NORTH 89° 27' 55" EAST, A DISTANCE OF 915.36 FEET; THENCE SOUTH 01° 07' 35" WEST, A DISTANCE OF 384.62 FEET; THENCE NORTH 84° 02' 07" WEST, A DISTANCE OF 30.84 FEET TO A MEAN HIGH WATER LINE; THENCE ALONG SAID MEAN HIGH WATER LINE THE FOLLOWING TWENTY SEVEN (27) COURSES: 1. NORTH 08° 33' 02" EAST, A DISTANCE OF 25.26 FEET; 2. NORTH 01°03' 10" WEST, A DISTANCE OF 36.70 FEET; 3. NORTH 16°11'45" WEST, A DISTANCE OF 18.64 FEET; 4. NORTH 01°20'32" WEST, A DISTANCE OF 27.71 FEET; 5. NORTH 05°48'23" EAST, A DISTANCE OF 27.11 FEET; 6. NORTH 07°24'12" WEST, A DISTANCE OF 86.16 FEET; 7. NORTH 11° 54'19" EAST, A DISTANCE OF 34.64 FEET; 8. NORTH 09°22'05" WEST, A DISTANCE OF 27.51 FEET; 9. NORTH 57° 40'41" WEST, A DISTANCE OF 4.94 FEET; 10. NORTH 84° 56' 08" WEST, A DISTANCE OF 14.50 FEET; 11. NORTH 61°03'44" WEST, A DISTANCE OF 14.78 FEET; 12. SOUTH 85°47'17" WEST, A DISTANCE OF 117.62 FEET; 13. SOUTH 83°15'58" WEST, A DISTANCE OF 26.59 FEET; 14. NORTH 85° 01' 19" WEST, A DISTANCE OF 21.47 FEET; 15. SOUTH 80°37'17" WEST, A DISTANCE OF 8.06 FEET; 16. NORTH 75°44'52" WEST, A DISTANCE OF 11.67 FEET; 17. SOUTH 86° 09' 28" WEST, A DISTANCE OF 82.77 FEET; 18. SOUTH 89° 59' 29" WEST, A DISTANCE OF 40.54 FEET; 19. NORTH 64°26'30" WEST, A DISTANCE OF 6.15 FEET; 20. SOUTH 88°41'05" WEST, A DISTANCE OF 60.16 FEET; 21. SOUTH 79°29'50" WEST, A DISTANCE OF 36.47 FEET; 22. NORTH 88°07'58" WEST, A DISTANCE OF 57.82 FEET; 23. NORTH 86° 26' 25" WEST, A DISTANCE OF 91.35 FEET; 24. SOUTH 88° 24' 02" WEST, A DISTANCE OF 97.85 FEET; 25. SOUTH 81°39'19" WEST, A DISTANCE OF 76.27 FEET; 26. SOUTH 86°43'16" WEST, A DISTANCE OF 75.93 FEET; 27. SOUTH 81° 33' 16" WEST, A DISTANCE OF 23.73 FEET; THENCE LEAVING SAID LINE SOUTH 07°52'54" WEST, A DISTANCE OF 138.68 FEET TO THE NORTHERLY RIGHT-OF-WAY LINE OF SHRIMP ROAD PER QUIT CLAIM DEED RECORDED IN O.R. BOOK 2030, PAGE 949, OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA; THENCE ALONG THE NORTHERLY AND EASTERLY RIGHT-OF-WAY LINE OF SAID SHRIMP ROAD THE FOLLOWING THREE (3) COURSES AND DISTANCES: 1. NORTH 84° 02' 07" WEST, A DISTANCE OF 288.11 FEET TO A POINT OF CURVATURE; 2. NORTHWESTERLY ALONG THE ARC OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 75.00 FEET, AN ARC LENGTH OF 115.28 FEET, A CENTRAL ANGLE OF 88° 03' 57", AND A CHORD BEARING AND DISTANCE OF NORTH 40°00'08" WEST, 104.26 FEET; 3. NORTH 04°01'50" EAST, A DISTANCE OF 555.62 FEET TO THE NORTHERN TERMINUS OF PARCEL A TRACT 2 OF SAID QUIT CLAIM ON THE WEST LINE OF TRUSTEES DEED NO.20083 O.R.BOOK G-65, PAGE 82; THENCE NORTH 05°57'53" EAST, ALONG SAID LINE A DISTANCE OF 606.85 FEET TO THE POINT OF BEGINNING.

**AND ALSO: BAY BOTTOM**

A TRACT OF LAND AND SUBMERGED LANDS AT STOCK ISLAND, MONROE COUNTY, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE EASTERLY RIGHT-OF-WAY LINE OF FIFTH STREET AND THE SOUTHERLY RIGHT-OF-WAY LINE OF FIFTH AVENUE, OF THE PLAT OF STOCK ISLAND, AS RECORDED IN PLAT BOOK 1, PAGE 55, OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA; THENCE S. 84°02'07" E. ALONG THE SAID SOUTHERLY LINE OF FIFTH AVENUE FOR 499.98 FEET; THENCE S. 05°57'53" W. FOR A DISTANCE OF 2242.25 FEET; THENCE S.84°02'07"E., A DISTANCE OF 1310.00 FEET, TO THE POINT OF BEGINNING; THENCE CONTINUE S.84°02'07"E., A DISTANCE OF 363.01 FEET TO THE CENTERLINE OF THE ENTRANCE OF THE

HARBOR; THENCE N.08°15'27"W., A DISTANCE OF 959.38 FEET; THENCE S. 81°44'33" W., A DISTANCE OF 132.23 FEET; THENCE N. 05°47'25" W., A DISTANCE OF 658.21 FEET; THENCE N. 83°54'54" W., A DISTANCE OF 255.03 FEET TO THE WESTERLY PART OF THE BAY BOTTOM LINE; THENCE MEANDER THE SAID BAY BOTTOM LINE SOUTHERLY FOR A CHORD OF S.14°34',07" E., A DISTANCE OF 284.16 FEET; THENCE N. 85°29'39" W., A DISTANCE OF 310.00 FEET; THENCE S. 06°01'16" W., A DISTANCE OF 10.00 FEET; THENCE N. 85°29'39" W., A DISTANCE OF 450.16 FEET; THENCE S. 06°23'31" W., A DISTANCE OF 49.85 FEET; THENCE S. 84°02'55" E., A DISTANCE OF 9.27 FEET; THENCE S. 05°12'11" W., A DISTANCE OF 161.18 FEET; THENCE N. 88°24'55" E., A DISTANCE OF 950.61 FEET; THENCE S. 05°37'29" W., A DISTANCE OF 537.46 FEET; THENCE N. 89°27'55" E., A DISTANCE OF 11.44 FEET; THENCE S. 06°02'03" E., A DISTANCE OF 230.00 FEET; THENCE S.01°07'35" W., A DISTANCE OF 384.62 FEET TO THE POINT OF BEGINNING.

**PARCEL I: Intentionally Omitted (Leasehold/Option terminated effective 7/31/2010)**

**PARCEL J:**

**A PARCEL OF LAND AND SUBMERGED LANDS AT STOCK ISLAND, MONROE COUNTY FLORIDA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:**

**COMMENCING AT THE INTERSECTION OF THE EASTERLY RIGHT-OF-WAY OF FIFTH STREET AND THE SOUTHERLY RIGHT-OF-WAY LINE OF FIFTH AVENUE, OF THE PLAT OF STOCK ISLAND, AS RECORDED IN PLAT BOOK 1, PAGE 55 OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA; THENCE S 84° 02' 07" e ALONG THE SAID SOUTHERLY LINE OF FIFTH AVENUE FOR 499.98 FEET; THENCE S 05° 57' 53" W FOR A DISTANCE OF 913.46 FEET TO THE POINT OF BEGINNING; THENCE S 84° 02' 07" E, FOR A DISTANCE OF 191.55 FEET; THENCE S 05° 56' 58" W, A DISTANCE OF 43.56 FEET; THENCE S 85° 29' 40" E, A DISTANCE OF 68.50 FEET; THENCE S 06° 23' 31" W, A DISTANCE OF 89.85 FEET; THENCE N 84° 02' 55" W, A DISTANCE OF 242.88 FEET; THENCE N 08° 09' 05" W, A DISTANCE OF 67.60 FEET; THENCE N 05° 57' 53" E, A DISTANCE OF 66.17 FEET TO THE POINT OF BEGINNING.**

**AS TO ALL PARCELS:**

**TOGETHER WITH THOSE BENEFICIAL EASEMENTS RECORDED IN OFFICIAL RECORDS BOOK 780, PAGE 1169, PUBLIC RECORDS OF MONROE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:**

**A PARCEL OF LAND ON STOCK ISLAND, MONROE COUNTY, FLORIDA, AND BEING DESCRIBED AS FOLLOWS:**

**COMMENCE AT THE NORTHWEST CORNER OF BLOCK 57 OF MCDONALD'S PLAT OF A PART OF STOCK ISLAND AS RECORDED IN PLAT BOOK 1 AT PAGE 55 OF PUBLIC RECORDS, OF MONROE COUNTY, FLORIDA AND RUN THENCE SOUTH 83 DEGREES, 56 MINUTES EAST ALONG THE NORTH BOUNDARY LINE OF SAID BLOCK 57 FOR A DISTANCE OF 470 FEET TO THE POINT OF BEGINNING OF THE PARCEL OF LAND BEING DESCRIBED HEREIN; THENCE RUN SOUTH 6 DEGREES 04 MINUTES WEST FOR A DISTANCE OF 1283.02 FEET; THENCE RUN SOUTH 41 DEGREES 58 MINUTES EAST FOR A DISTANCE OF 40.35 FEET TO THE SOUTHEAST CORNER OF TRUSTEES OF THE INTERNAL IMPROVEMENT FUND OF THE STATE OF FLORIDA DEED NO. 24078 AND THE WEST BOUNDARY LINE OF TRUSTEES OF THE INTERNAL IMPROVEMENT FUND OF THE STATE OF FLORIDA DEED NO. 20083; THENCE RUN SOUTH 6 DEGREES 04 MINUTES WEST ALONG THE WEST BOUNDARY LINE OF SAID TRUSTEES OF THE INTERNAL IMPROVEMENT FUND OF THE STATE OF FLORIDA DEED NO. 20083 FOR A DISTANCE OF 932.25 FEET TO THE SOUTHWEST CORNER OF**

SAID TRUSTEES OF THE INTERNAL IMPROVEMENT FUND OF THE STATE OF FLORIDA DEED NO. 20083; THENCE RUN SOUTH 83 DEGREES 56 MINUTES EAST ALONG THE SOUTH BOUNDARY LINE OF SAID TRUSTEES OF THE INTERNAL IMPROVEMENT FUND OF THE STATE OF FLORIDA DEED NO. 20083, THE SOUTH BOUNDARY LINE OF TRUSTEES OF THE INTERNAL IMPROVEMENT FUND OF THE STATE OF FLORIDA DEED NO. 19837-A AND THE NORTH BOUNDARY LINE OF TRUSTEES OF THE INTERNAL IMPROVEMENT FUND OF THE STATE OF FLORIDA DEED NO. 20793 FOR A DISTANCE OF 1116.72 FEET; THENCE RUN NORTH 6 DEGREES 04 MINUTES EAST FOR A DISTANCE OF 30 FEET; THENCE RUN NORTH 83 DEGREES 56 MINUTES WEST FOR A DISTANCE OF 1086.72 FEET; THENCE RUN NORTH 6 DEGREES 04 MINUTES EAST FOR A DISTANCE OF 915.62 FEET; THENCE RUN NORTH 41 DEGREES 58 MINUTES WEST FOR A DISTANCE OF 40.35 FEET TO THE WEST BOUNDARY LINE OF SAID TRUSTEES OF THE INTERNAL IMPROVEMENT FUND OF THE STATE OF FLORIDA DEED NO. 20083 AND THE EAST BOUNDARY LINE OF SAID TRUSTEES OF THE INTERNAL IMPROVEMENT FUND OF THE STATE OF FLORIDA DEED NO. 24078; THENCE RUN NORTH 6 DEGREES 04 MINUTES EAST ALONG THE WEST BOUNDARY LINE OF SAID TRUSTEES OF THE INTERNAL IMPROVEMENT FUND OF THE STATE OF FLORIDA DEED NO. 20083 AND THE EAST BOUNDARY LINE OF SAID TRUSTEES OF THE INTERNAL IMPROVEMENT FUND OF THE STATE OF FLORIDA DEED NO. 24078, EXTENDED NORTHERLY, FOR A DISTANCE OF 1269.65 FEET TO THE NORTH BOUNDARY LINE OF SAID BLOCK 57; THENCE RUN NORTH 83 DEGREES 56 MINUTES WEST ALONG THE NORTH BOUNDARY LINE OF THE SAID BLOCK 57 FOR A DISTANCE OF 30 FEET BACK TO THE POINT OF BEGINNING.

SAID EASEMENT ALSO DESCRIBED AND INSURED AS:

A PARCEL OF LAND LYING IN SECTION 35, TOWNSHIP 67 SOUTH, RANGE 25 EAST, MONROE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE NORTHWEST CORNER OF BLOCK 57 OF MCDONALD'S PLAT OF A PART OF STOCK ISLAND AS RECORDED IN PLAT BOOK 1, PAGE 55 OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA; THENCE ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF FIFTH AVENUE SOUTH 84°02'07" EAST, A DISTANCE OF 469.98 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 84°02'07" EAST, A DISTANCE OF 30.00 FEET TO THE WEST LINE OF TRUSTEE'S DEED NO. 20083 AS RECORDED IN O.R. BOOK G-65, PAGE 82; THENCE ALONG SAID LINE SOUTH 05°57'53" WEST, A DISTANCE OF 1,268.45 FEET; THENCE LEAVING SAID LINE SOUTH 42°04'07" EAST, A DISTANCE OF 40.35 FEET; THENCE SOUTH 05°57'53" WEST, A DISTANCE OF 916.82 FEET; THENCE SOUTH 84°02'07" EAST, A DISTANCE OF 1,086.72 FEET; THENCE SOUTH 05°57'53" WEST, A DISTANCE OF 30.00 FEET TO THE SOUTH LINE OF TRUSTEE'S DEED NO. 20083 AS RECORDED IN OR BOOK G-65, PAGE 82; THENCE ALONG SAID LINE NORTH 84°02'07" WEST, A DISTANCE OF 1,116.72 FEET TO THE WEST LINE OF TRUSTEE'S DEED NO. 20083 AS RECORDED IN O.R. BOOK G-65, PAGE 82; THENCE ALONG SAID LINE NORTH 05°57'53" EAST, A DISTANCE OF 933.45 FEET; THENCE LEAVING SAID LINE NORTH 42°04'07" WEST, A DISTANCE OF 40.35 FEET; THENCE NORTH 05°57'53" EAST, A DISTANCE OF 1,281.82 FEET TO THE POINT OF BEGINNING.

MONROE COUNTY  
OFFICIAL PUBLIC RECORD

**KEY WEST TRANSFER STATION & HAULING SERVICE, INC.**

**LEGAL DESCRIPTION**

Doc# 1555014  
Bkn 2171 Pgn 410

EXHIBIT "A"

A parcel of filled submerged land on Stock Island, Monroe County, Florida, being a portion of that certain submerged land described in T.I.I.F. Deed No.: 19837-A; said parcel being more particularly described by "metes and bounds as follows: Commence at the intersection of the Southeasterly right-of-way line of Fourth Avenue and the Southwesterly right-of-way line of Front Street; then S 47° 13'30" E along said Southwesterly right-of-way line for 681.25 feet to the Point of Beginning; thence continue S 47° 13'30" E and continue along the said Southwesterly Right-of-way Line of Front Street for 323.00 feet to the Westerly right-of-way line of a 50 foot wide access easement; thence S 6° 01'50" W along said Westerly right-of-way line for 313.78 feet, thence N 47° 13'30" W for a distance of 510.80 feet; thence N 20° 39'27" E for a distance of 97.53 feet; thence N 55° 38'41" E for a distance of 165.23 feet to the Point of Beginning.

MONROE COUNTY  
OFFICIAL RECORDS

**K W RESORT UTILITIES CORP.**

**LEGAL DESCRIPTION**

REF. 866-2466

EXHIBIT A

A parcel of filled submerged land on Stock Island, Monroe County, Florida, being a portion of that certain submerged land described in T.I.I.F. Deed No. 19937-A; said parcel being more particularly described by "metes and bounds" as follows:

Commence at the intersection of the southeasterly right-of-way line of Fourth Avenue and the southwesterly right-of-way line of Front Street; thence S47° 13' 30" E along said southwesterly right-of-way line for 1603.76 feet to the westerly right-of-way line of a 50 foot wide access easement; thence S6° 01' 50" W along said westerly right-of-way line for 313.78 feet to the Point of Beginning of the hereinafter described parcel of land; thence S70° 27' 50" W for 240.30 feet; thence N57° 15' 03" W for 234.83 feet; thence N9° 16' 30" E for 304.20 feet to an intersection with a line 251.44 feet southwesterly of as measured at right angles and parallel to said southwesterly right-of-way of Front Street; thence S47° 13' 30" E along said parallel line for 510.80 feet to the Point of Beginning. Said parcel contains 2.00 acres more or less.

Together with a Non-Exclusive Drainage Easement, the legal description of which is attached hereto as EXHIBIT B.

DS Paid 687.50 Date 11-18-82

MONROE COUNTY  
RALPH WHITE, CLERK OF CIR. CT.  
*Ralph White*

866-2467

EXHIBIT B

Non-Exclusive Drainage Easement

Description of Easement Area

An area being 15 feet in width, the southerly line thereof being more particularly described as follows: begin at the most southerly corner of the property described in EXHIBIT A attached hereto (the "Sewage Treatment Plant Site"), thence south 70 degrees, 27 minutes 50 seconds west along the northwesterly prolongation of the southeasterly boundary line of said Sewage Treatment Plant Site for 250 feet more or less, to the easterly shore line of the existing harbor and the point of termination of said southerly line.

The said easement area, together with the Sewage Treatment Plant Site described in EXHIBIT A, is more particularly shown and described in the sketch attached hereto and made a part hereof as EXHIBIT C, prepared by Post, Buckley, Schuh & Jernigan, Inc., Consulting Engineers. The easement area described above is etched in black.

**SAFE HARBOUR PROPERTIES**

**LEGAL DESCRIPTION**

EXHIBIT "A"

LEGAL DESCRIPTION

A tract of land on Stock Island, Monroe County, Florida, and being more particularly described by metes and bounds as follows: COMMENCING at the intersection of the southerly right-of-way line of Fifth Avenue and the easterly right-of-way line of Fifth Street of the Plat of Stock Island, recorded in Plat Book 1, Page 55 of the Public Records of Monroe County, Florida, bear South 83 degrees and 56 minutes East 500.00 feet; thence bear South 06 degrees and 04 minutes West, 2242.25 feet; thence bear South 83 degrees and 56 minutes East, 2131.53 feet; thence bear North 06 degrees and 04 minutes East, 1528.91 feet to the Point of Beginning of the tract of land hereinafter described; thence bear North 72 degrees 14 minutes and 31 seconds West; 99.13 feet to a point; thence bear South 74 degrees 24 minutes and 10 seconds West along a line parallel with and 25 feet northwesterly of the outside face of an existing concrete seawall, 505.66 feet to a point; thence bear North 66 degrees and 45 minutes West, 51.21 feet to a point on the outside face of an existing concrete seawall; thence bear South 74 degrees 24 minutes and 10 seconds West along the outside face of an existing concrete seawall, 68.35 feet to a point; thence bear South 15 degrees 35 minutes and 50 seconds East parallel to the outside face of an existing concrete seawall, 113.42 feet to a point; thence bear South 70 degrees and 30 minutes West, 260.13 feet more or less to a point on the centerline of the entrance channel; thence bear North 05 degrees and 45 minutes West, along the said centerline of the entrance channel, 400 feet more or less to a point 390.58 feet distant from and measured at right angles to the preceding course; thence bear North 70 degrees and 30 minutes East for a distance of 1060 feet; more or less, to a point which is bearing North 06 degrees and 04 minutes East and distant 452.41 feet from the Point of Beginning; thence bear South 06 degrees and 04 minutes West for a distance of 452.14 feet back to the Point of Beginning.



MONROE COUNTY  
OFFICIAL RECORDS

MONROE COUNTY  
OFFICIAL RECORDS

**CONSTELLATION YACHTS, INC.**

**LEGAL DESCRIPTION**

A PARCEL OF LAND LYING IN SECTION 35, TOWNSHIP 67 SOUTH, RANGE 25 EAST, MONROE COUNTY, FLORIDA, AND BEING A PARCEL OF LAND ON STOCK ISLAND, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

RD

COMMENCING AT THE NORTHWEST CORNER OF BLOCK 57 OF McDONALD'S PLAT OF A PART OF STOCK ISLAND AS RECORDED IN PLAT BOOK 1 AT PAGE 55 OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA AND RUN THENCE SOUTH 84°02'07" EAST ALONG THE NORTH BOUNDARY LINE OF BLOCK 57 FOR A DISTANCE OF 499.98 FEET TO THE EAST RIGHT-OF-WAY LINE OF SHRIMP ROAD (A 30' R/W); THENCE SOUTH 05°57'53" WEST ALONG SAID EASTERLY RIGHT-OF-WAY LINE A DISTANCE OF 739.82 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 05°57'53" WEST FOR A DISTANCE OF 173.64 FEET; THENCE LEAVING SAID LINE SOUTH 84°02'07" EAST FOR A DISTANCE OF 191.55 FEET; THENCE NORTH 05°56'58" EAST FOR A DISTANCE OF 173.64 FEET; THENCE NORTH 84°02'07" WEST FOR A DISTANCE OF 191.50 FEET TO THE POINT OF BEGINNING.

Subject to Restrictions, Reservations, Easements, and Covenants of Record, and Taxes + Assessments for the year 2007 and thereafter.

**3D OF KEY WEST, INC.**

**LEGAL DESCRIPTION**

EXHIBIT "A"

A parcel of land lying Southerly of Part of Stock Island, Monroe County, Florida, as recorded in Plat Book 1, at Page 55, Monroe County Official Records, and is more particularly described as follows:

Decm 197108  
BKN 2474 PGM 1077

A

From the intersection of the east line of 5th Street (as constructed) and the southerly line of 5th Avenue (as constructed) go easterly along the southerly line of 5th Avenue a distance of 500 feet to a point; thence southerly and at right angles a distance of 1010 feet, more or less, to a point of intersection with the southerly face of the northerly seawall of the northerly slip of Safe Harbor (extended Westerly); thence easterly along the said southerly face of the northerly seawall (extended westerly) and the said southerly face of the northerly seawall a distance of 710 feet to a point, which point is the Point of Beginning; thence continue easterly along the said southerly face of the northerly seawall and the northerly bank of the said northerly slip a distance of 310 feet, more or less, to a point in the westerly bank of the main channel of Safe Harbor; thence northerly along the meanders of said westerly bank a distance of 300 feet, more or less, to a point of intersection with a line drawn parallel with and 700 feet southerly of the southerly line of 5th Avenue; thence westerly along the said parallel line a distance of 180 feet, more or less, to the northeasterly corner of a certain road easement; thence southerly and at right angles and along the easterly line of the said road easement a distance of 40 feet to a point; thence westerly and at right angles and along the southerly line of the said road easement a distance of 155 feet to a point; thence at right angles and southerly for a distance of 250 feet, more or less, to a point; thence at right angles and easterly for a distance of 125 feet back to the Point of Beginning; LESS a strip of land approximately 125 feet by 20 feet along the above described southerly face of the northerly seawall, which strip of land was previously conveyed by Warranty Deed to Standard Oil Company, dated the 16th day of June, 1964, and recorded in the Official Records of Monroe County, Florida, at Official Records Book 313, pages 53-56.

TOGETHER WITH the right to use the waterways and channels in SAFE HARBOR, Stock Island, Monroe County, Florida.

TOGETHER WITH an Easement for ingress and egress over and upon the following described property, situate, lying and being in the County of Monroe, State of Florida, to wit:

A parcel of land lying southerly of Block 57, Maloney's Subdivision of Part of Stock Island, Monroe County, Florida, as recorded in Plat Book 1, at page 55, Monroe County Official Records, and is more particularly described as follows:

From the intersection of the east line of 5th Street (as constructed) and the southerly line of 5th Avenue (as constructed) go easterly along the southerly line of 5th Avenue a distance of 500 feet to a point, which point is the Point of Beginning; thence southerly and at right angles a distance of 700 feet, more or less, to a point; thence easterly and at right angles a distance of 740 feet to a point; thence southerly and at right angles a distance of 40 feet to a point; thence westerly and at right angles a distance of 155 feet to a point; thence northerly and at right angles 10 feet to a point; thence westerly and at right angles 615 feet to a point on the westerly line of a certain road easement; thence northerly and at right angles along the westerly line of said road easement a distance of 740 feet to a point in the southerly line of 5th Avenue; thence easterly and at right angles and along the southerly line of 5th Avenue a distance of 30 feet back to the Point of Beginning.

Decm 1828118  
BKN 2273 PGM 1179

MONROE COUNTY  
OFFICIAL RECORDS

MONROE COUNTY  
OFFICIAL RECORDS \*

**SAFE HARBOUR ENTERPRISES, INC.**

**LEGAL DESCRIPTION**

Being that part or parcel of bottom land lying southerly of Square or Blocks 55 and 56, as shown on a subdivision of lots 1, 2, 3, 5, 6, Section 35, Lot 2, Section 36, Lot 3, Section 26, Lot 2, Section 36, Lot 3, Section 26 and Lot 2, Section 34, all in Township 37 South, Range 25 East and being recorded in Plat Book 1, page 55, Monroe County, Florida, Records, but better described as follows: Beginning at a point on the Easterly side of Fourth Avenue 247.35 feet distant southerly from the intersection of Fifth Avenue and Fourth Avenue; thence into the waters of the Straits of Florida and along the Easterly line of Fourth Avenue extended southerly, a distance of 2000 feet; thence at right angles, and in an Easterly direction a distance of 1,000 feet; thence at right angles and in a northerly direction a distance of 2,350 feet to a point on the shore line; thence meandering the shore line in a southwesterly and westerly direction a distance of 1070 feet, more or less; back to the point of beginning. Containing 49.93 acres, more or less, and additional lands, more fully described in Contract No. 19837-A.

**ROBBIE'S SAFE HARBOR MARINE ENTERPRISES, INC.**

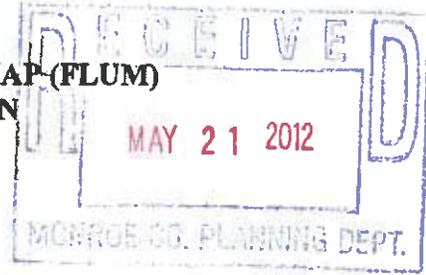
**LEGAL DESCRIPTION**

**OFFICIAL RECORD BOOK 1161, PAGE 0628, MONROE COUNTY, FLORIDA  
PUBLIC RECORDS (PROVIDED)**

A parcel of filled and submerged land consisting of part of the area described in I.I. Deed 20793 and located southerly of Block 57 according to the plat of McDonald's Plat of Part of Stock Island dated 1910, recorded in Plat Book 1 at Page 55 of Monroe County Official Records and is more particularly described as follows:

From the northwest corner of Block 57, according to said plat go easterly along the southerly line of Fifth Avenue a distance of 500 feet to a point; thence at right angles and southerly a distance of 2242.52 feet to a point; thence at right angles and easterly a distance of 1066.72 feet to a point which point is the point of beginning; thence continue easterly along the prolongation of the previously described course a distance of 515.53 feet to a point; thence southeasterly making a deflection angle of 77 degrees 25 minutes with the prolongation of the previously described course a distance of 1536.92 feet to a point; thence westerly making a deflection angle of 102 degrees 35 minutes with the prolongation of the previously described course a distance of 848.36 feet to a point; thence northerly and at right angles a distance of 1500 feet back to the point of beginning. Containing 23.48 acres, more or less.

REQUEST FOR FUTURE LAND USE MAP (FLUM)  
AMENDMENT APPLICATION



MONROE COUNTY  
PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT

An application must be deemed complete and in compliance with the Monroe County Code by the Staff prior to the item being scheduled for review

Amendment to Future Land Use Map Application Fee: \$5,531.00

In addition to the above application fees, the following fees also apply to each application:

Advertising Costs: \$245.00

Surrounding Property Owner Notification: \$3.00 for each property owner required to be noticed

Technology Fee: \$20.00

Date 05 / 21 / 2012  
Month Day Year

Property Owner:

\_\_\_\_\_  
Name

\_\_\_\_\_  
Mailing Address

\_\_\_\_\_  
Daytime Phone

\_\_\_\_\_  
Email Address

Agent (if applicable):

BARTON SMITH, P.L./BARTON SMITH, ESQ.  
Name

624 WHITEHEAD ST. KEY WEST, FL. 33040  
Mailing Address

305-296-7227  
Daytime Phone

BART@BARTONSMITHPL.COM  
Email Address

Legal Description of Property:

(If in metes and bounds, attach legal description on separate sheet)

SEE ATTACHED ADDITIONAL PAGES.

Block Lot Subdivision Key

Real Estate (RE) Number Alternate Key Number

Street Address Approximate Mile Marker

**REQUEST FOR FUTURE LAND USE MAP (FLUM)  
AMENDMENT APPLICATION**

**Current Future Land Use Map Designation(s):** SEE ATTACHED.

**Proposed Future Land Use Map Designation(s):** SEE ATTACHED.

**Current Land Use District Designation(s):** SEE ATTACHED.

**Tier Designation(s):** SEE ATTACHED.

**Total Land Area Affected in acres:** SEE ATTACHED.

**Existing Use of the Property** (If the property is developed, please describe the existing use of the property, including the number and type of any residential units and the amount and type of any commercial development):  
PLEASE SEE ATTACHED ADDITIONAL PAGES.

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**In accordance with Sec. 102-158, the BOCC may consider the adoption of an ordinance enacting the proposed change based on one or more of six factors. Please describe how one or more of the following factors shall be met (attach additional sheets if necessary):**

**1) Changed projections (e.g., regarding public service needs) from those on which the text or boundary was based:**  
PLEASE SEE ATTACHED ADDITIONAL CHANGES.

**2) Changed assumptions (e.g., regarding demographic trends):**  
PLEASE SEE ATTACHED ADDITIONAL PAGES.

**3) Data errors, including errors in mapping, vegetative types and natural features described in volume 1 of the plan:**  
PLEASE SEE ATTACHED ADDITIONAL PAGES.

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**REQUEST FOR FUTURE LAND USE MAP (FLUM)  
AMENDMENT APPLICATION**

**4) New issues:**

PLEASE SEE ATTACHED ADDITIONAL PAGES.

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**5) Recognition of a need for additional detail or comprehensiveness:**

PLEASE SEE ATTACHED ADDITIONAL PAGES.

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**6) Data updates:**

PLEASE SEE ATTACHED ADDITIONAL PAGES.

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**In no event shall an amendment be approved which will result in an adverse community change of the planning area in which the proposed development is located. Please describe how the FLUM amendment would not result in an adverse community change (attach additional sheets if necessary):**

PLEASE SEE ATTACHED ADDITIONAL PAGES.

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**Has a previous FLUM application been submitted for this site within the past two years?**

Yes \_\_\_\_\_ Date: \_\_\_\_\_

No   x  

**All of the following must be submitted in order to have a complete application submittal:**

(Please check as you attach each required item to the application)

- Complete Future Land Use Map (FLUM) amendment application (unaltered and unbound); and
- Correct fee (check or money order to Monroe County Planning & Environmental Resources); and
- Proof of ownership (i.e. Warranty Deed); and
- Current Property Record Card(s) from the Monroe County Property Appraiser; and
- Location map from Monroe County Property Appraiser; and
- Copy of Future Land Use Map (please request from the Planning & Environmental Resources Department prior to application submittal); and
- Copy of Current Land Use District Map (please request from the Planning & Environmental Resources Department prior to application submittal);
- Photograph(s) of site from adjacent roadway(s);

**REQUEST FOR FUTURE LAND USE MAP (FLUM)  
AMENDMENT APPLICATION**

- 300 foot radius map from Monroe County Property Appraiser Office
- List of surrounding property owners from 300 foot radius map
- Typed name and address mailing labels of all property owners within a 300 foot radius of the property (two (2) sets). This list should be compiled from the current tax rolls of the Monroe County Property Appraiser. In the event that a condominium development is within the 300 foot radius, each unit owner must be included, and
- Signed and Sealed Boundary Survey, prepared by a Florida registered surveyor – sixteen (16) sets (at a minimum survey should include elevations; location and dimensions of all existing structures, paved areas and utility structures; all bodies of water on the site and adjacent to the site; total acreage marked with land use district; and total acreage shown with vegetative habitat).

**If applicable, the following must be submitted in order to have a complete application submittal:**

- Notarized Agent Authorization Letter (note: authorization is needed from all owner(s) of the subject property)
- Any other Monroe County documents including Letters of Understanding pertaining to the proposed Future Land Use Map amendment

**If deemed necessary to complete a full review of the application, the Planning & Environmental Resources Department reserves the right to request additional information.**

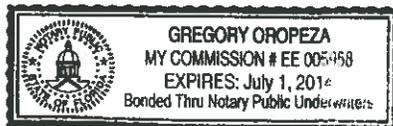
I certify that I am familiar with the information contained in this application, and that to the best of my knowledge such information is true, complete and accurate.

Signature of Applicant: \_\_\_\_\_

Date: \_\_\_\_\_

5-21-12

Sworn before me this 21<sup>st</sup> day of May 2012



\_\_\_\_\_  
Notary Public  
My Commission Expires

Please send or deliver the complete application package to:  
Monroe County Planning & Environmental Resources Department  
Marathon Government Center  
2798 Overseas Highway, Suite 400  
Marathon, FL 33050.

In accordance with Sec. 102.158 of the Monroe County Code of Ordinances, the BOCC may consider the adoption of an ordinance enacting the proposed change based on one or more of six factors. Please describe how one or more of the following facts shall be met:

**1. Changed projections from those on which the text or boundary was based:**

The property subject to this application (hereinafter referred to as "Safe Harbor") is currently zoned Industrial, but the property owners of Safe Harbor desire to be zoned Mixed Use/Commercial. Safe Harbor has experienced strong shifts away from the heavy industrial uses originally intended to occupy the Safe Harbor area since the properties were first zoned Industrial. These shifts have occurred since the 1993 adoption of the 2010 Comprehensive Plan ("2010 Comp Plan") which provides for implementation of the Industrial land use designation with respect to Safe Harbor. These shifts are away from an industrial ideology and towards a mixed use classification consisting of a cohesive blend of various industries, the majority of which are not industrial in nature. While industrial use was probably the early intent of the previous developers and owners of Safe Harbor, Safe Harbor has become something markedly different as the property owners engage in an array of uses including, but not limited to, residential, transient, artistry, dining, wastewater treatment, solid waste removal, commercial waterfront, commercial fishing, boating/diving, office space, retail space, affordable housing, marine repair dependent applications, storage and dining.

Pursuant to Policy 101.4.7 of the 2010 Comp Plan, the "principal purpose of the Industrial land use category is to provide for the development of industrial, manufacturing and warehouse and distribution uses." These uses are not the type of uses which Safe Harbor supports, nor is there demand for such uses. In contrast to the purpose of Industrial uses, the Mixed Use/Commercial land designation, pursuant to Policy 101.5.4 of the current proposed Comprehensive Plan, "is to provide for the establishment of commercial zoning districts where various types of commercial retail and offices may be permitted at intensities which are consistent with the community character and natural environment." Beginning at Robbie's Marina and working along the water's edge of Safe Harbor to Fishbusterz Fisheries, the totality of the properties within Safe Harbor exhibit intensities which are consistent with the community character and natural environment, not Industrial uses or needs.

As a water-dependent community, the existence of heavy industrial uses on Stock Island is not consistent with the surrounding community character. Heavy industrial uses create pollution and environmental concerns. The community character surrounding Safe Harbor exhibits commercial working waterfront neighboring vital needs such as affordable housing, cultural resources, utilities, dining and tourism. The proposed change of Safe Harbor to a Mixed-Use/Commercial Future Land Use Map ("FLUM") designation is consistent with Policy 101.7.2 of the 2010 Comp Plan, which requires Stock Island to address redevelopment needs identified by the needs assessment of potential redevelopment areas. The current needs of Safe Harbor are not industrial. The current needs of Safe Harbor are to support, foster and enhance the current land uses, which are diverse and varied. In conformance with Policy 105.1.2 of the 2010 Comp Plan, the proposed change in FLUM designation will prepare design guidelines to ensure that

future uses and development at Safe Harbor are compatible with the scenic preservation and maintenance of the character of the casual island village atmosphere of the Florida Keys.

The projections of the original Industrial land use category as contemplated in the 2010 Comp Plan, first adopted in 1993, are no longer valid. Safe Harbor has shifted away from heavy industrial needs and uses towards uses which span a broader spectrum, all of which are less intense than heavy industrial. Based on 2004 property records incorporated into the CommuniKeys Master Plan, only four percent (4.0%) of the acreage of Stock Island ports were being utilized for industrial uses such as warehousing and manufacturing. In the late 1980s and early 1990s, Safe Harbour was exclusively a working waterfront with boat manufacturing, commercial fishing and light industry devoted to commercial fisheries, but over time the composition of Safe Harbor changed. On Stock Island, there are three hundred eighty five (385) parcels in non-residential zoning districts. Of the three hundred eighty five non-residential parcels, no parcel's current land use is zoned industrial, further evidencing the non-industrial nature of Stock Island.

With the advent of live-aboard vessels, Safe Harbor has been and continues to address the affordable housing needs of Monroe County. Over time, more residents utilized marine vessels as a mode of residency, and continue to do so. This shift in use is a notable distinction between the Industrial land use category, which only provides for one (1) dwelling unit per acre and zero (0) rooms/spaces per acre. Mixed Use/Commercial provides for a range of one (1) to six (6) dwelling units per acre and five (5) to fifteen (15) rooms/spaces per acre. The demand for affordable housing accounts for a shift towards a more mixed-use culture, which will continue into the future and thereby creates changed projections of Safe Harbor, necessitating the need for the proposed amendment. As the CommuniKeys Master Plan indicates, "Stock Island is in dire need of improved visual and functional access to the water's edge to accommodate both the operations of marine industrial uses and the recreational needs of residents and visitors." *See CommuniKeys Master Plan.*

## **2. Changed Assumptions:**

Much like the changed projections which are anticipated to continue in the future, the assumptions of the uses, demands and composition of Safe Harbor have changed over the last several decades. Once a predominantly commercial fishing dependent use, the uses which make up Safe Harbor have shifted to a more diversified compilation of uses. In large part, this shift is due to the continued decline of the commercial fishing fleet over the last several decades. Pursuant to Table 4 of the CommuniKeys Master Plan, the average landings in millions of pounds for commercial fisheries was 20.3 in 1993, but was down to 15.8 in 2003. The drafters of the CommuniKeys Master Plan point "to the need to diversify the local economy." Lobster, finfish and shrimp fleets have declined substantially over the course of the last few decades, as evidenced by the decrease in the number of registered commercial fishing vessels. Additionally, the decrease in active fish houses and boat building vendors in and around Safe Harbor over the last few decades has accelerated.

Paragraph 3.8 of Appendix 4 of the 2010 Evaluation and Assessment Report ("2010 EAR") details the history of decline in the commercial fishery industry. **"Through a century of change,**

**the marine industry has declined while other areas of employment have grown in dramatic fashion.”** See 2010 EAR. Contrary to the uses associated with an Industrial land use classification **“there is very little fishing, food processing or water transportation related employment today, compared with employment in retail, finance and the broader service sector.”** See 2010 EAR. In contrast to the decline in commercial fishing and commercial fisheries, the recreational boating industry has experienced substantial growth. As recreational boating has experienced vast growth, “opportunities for pleasure boat repair, boat maintenance and storage” have developed.

The vacation home and second home industry is an important segment of the Monroe County economy. “Recreational waterfront activity supports redevelopment of waterfront areas such that the historic character and some historic uses and building are preserved while the economic drivers supporting waterfront properties is tourist and vacation home based.” See 2010 EAR. As the 2010 EAR recognizes, the economic drivers have led to a transition from commercial fishing related activities to service, residential and tourism related activities in waterfront properties, while incorporating the community culture into those transitions. This diversified shift was best stated by the 2010 EAR which opined “the result is a vibrant waterfront which can accommodate some historic fishing and boating related commercial activity.” See 2010 EAR. This is consistent with the trends exhibited in the commercial fishing industry. **Over the last thirty (30) years, the number of commercial fishing licenses has declined twenty-five percent (25%) together with a decline of seventy percent (70%) in the volume of fish caught.** See 2010 EAR. As the 2010 EAR states, **“trends in commercial registrations, fish and shellfish catch volumes, and covered employment, the marine industry is not a growth industry in Monroe County.”** See 2010 EAR.

In addition to the local evaluations and assessments demonstrating the changing assumptions regarding waterfront uses, the Florida legislature has recognized the need for and importance of the preservation, enhancement and sound development of waterfront properties. Florida Statutes § 163.3178(2)(g) requires local governments to incorporate a “shoreline use component that identifies public access to beach and shoreline areas and addresses the need for water-dependent and water related facilities, including marinas, along shorelines.” Additionally, pursuant to Florida Statute § 342.07, the “Legislature recognizes that there is an important state interest in facilitating boating and other recreational access to the state’s navigable waters. This access is vital to tourists and recreational uses and the marine industry in the state, to maintain or enhancing the \$57 billion economic impact of tourism and the \$14 billion economic impact of boating in the state annually and to ensuring continued access to all residents and visitors to the navigable waters of the state.”

Fla. Stat. § 342.07(1) also states that the “Legislature recognizes that there is an important state interest in maintaining viable water-dependent support facilities, such as public lodging establishments and boat hauling and repairing and commercial fishing facilities.” **The Legislature, through § 342.07(1), recognized that access to the water must be not only through commercial means, but recreational. The Legislature defined recreational and commercial working waterfront in § 342.07(2) as “a parcel or parcels of real property that provide access for water-dependent commercial activities including hotels and motels as defined in s. 509.242(1), or provide access for the public to the navigable waters of the**

**state.”** Pursuant to Florida Statute §509.242(1) hotels and motels include establishments that provide public lodging on a daily or weekly basis. This framework is consistent with Policy 502.1.2 of the 2010 Comp Plan which requires the County to permit land uses supportive, complementary or otherwise port related nearby and adjacent to the Safe Harbor/Peninsular port area of Stock Island. *See 2010 Comp Plan.* The intent of Policy 502.1.2 is to only permit those uses, including, but not limited to, warehousing, industry, affordable housing, marine businesses and restaurants. *See 2010 Comp Plan.* There is a current demand for all of these uses, and changing assumptions that a waterfront such as Safe Harbor will address them all under the Mixed Use/Commercial (MC) FLUM designation.

**3. Data errors, including errors in mapping, vegetative types and natural features described in volume 1 of the plan:**

Data errors exist which support the adoption of the proposed amendment. Currently, the Industrial (I) FLUM designation is under the Maritime Industrial (MI) land use designation. The MI district permits uses which are not allowed in the Industrial (I) district. This creates an inconsistency and a data error which warrants the instant FLUM amendment to cure the inconsistency. Currently, under the Industrial FLUM and MI zoning, while MI allows for ten (10) rooms/spaces per acre, Industrial does not permit any rooms/spaces for allocated density. Similarly, under the maximum net density, MI permits fifteen (15) rooms/spaces per acre while Industrial does not permit any rooms/spaces per acre.

**4. New Issues:**

Throughout the State of Florida and particularly in Monroe County, residents and visitors alike seek access to the waterfront and water dependent uses. Amending the FLUM designation for Safe Harbor to Mixed Use/Commercial (MC) designation will provide a framework for meeting the demands and needs of residents and visitors in Monroe County, which cannot occur under the current FLUM designation of Industrial (I). As indicated in item two (2) above, over the last several decades there has been a strong shift way from commercial fishery dependent uses towards resident and tourist related water dependent activities, which are best accomplished through the (MI) land use designation. Pursuant to the CommuniKeys Master Plan, it is “a goal to encourage businesses to retain existing and create new public waterfront access through development of a marina into a working waterfront and mixed use commercial zone.” *See CommuniKeys Master Plan.* The proposed FLUM amendment will encourage the land owners comprising Safe Harbor to maintain the current water dependent use levels, while increasing access to and use of the water dependent activities, all of which cannot occur in the Industrial (I) FLUM category. Much like the definitions set forth in the Comprehensive Plan, the CommuniKeys Master plan defines industrial uses as being devoted to “manufacturing, warehousing, assembly, packaging, processing, fabrication, storage or distribution of goods and materials whether new or used or the refinishing, repair or rebuilding of vehicles or boats.” *See CommuniKeys Master Plan.* The majority of the description of what is comprised in an Industrial (I) land use classification is not occurring at Safe Harbor and are not likely to develop in the near future at Safe Harbor, based on past and present demand and economic trends. Moreover, the majority of Industrial uses do not provide access to the waterfront; rather they limit access to the waterfront.

Recognizing the need to shift away from strictly Industrial classifications, the CommuniKeys Master Plan identified Action Item 1.2.1 as the identification of Safe Harbor as the focal point of a “downtown” district for Stock Island. *See CommuniKeys Master Plan.* In contemplating how to achieve this, the drafters recognized the need to “propose revisions to the Land Development Regulations.” *See CommuniKeys Master Plan.* Action Item 1.3.4 contemplated amending the “Land Development Regulations to eliminate the list of permitted uses that are not consistent with the purpose of the zoning district.” *See CommuniKeys Master Plan.* By providing greater flexibility for uses under the Mixed Use/Commercial FLUM designation, development and redevelopment of Safe Harbor can better adapt and evolve in line with the vision of the CommuniKeys Master Plan which is to maintain “an affordable cost of living for people of all income levels with an emphasis on housing; that fosters a sustainable local economy consisting of a working waterfront and a distinctive mix of commercial and industrial activities that complement the community.” *See CommuniKeys Master Plan.*

In developing the CommuniKeys Master Plan, Monroe County identified ten (10) issues and objectives, all of which will be addressed or improved by amending Safe Harbor from an Industrial (I) FLUM designation to a Mixed Use Commercial (MC) FLUM designation. Those ten (10) issues and objectives are: (1) Maintain affordable housing while providing a mix of housing options; (2) Promote the diversification of economic opportunities, including small businesses and home occupations; (3) Identify a commercial center within Stock Island; (4) Improve aesthetics, commercial side and visual character of south side of US 1 corridor; (5) Improve storefronts, signage and landscaping for commercial properties; (6) Enhance the community identity as a “commercial fishing” community; (7) Provide space for a working waterfront and its supporting industries; (8) Provide and improve waterfront access; (9) Provide off-street parking for vehicles and boats; (10) Provide improved public facilities, including cultural and recreational facilities and activity centers.

Under the MC designation maintaining affordable housing while providing a mix of housing options is accomplished by providing for greater density and a broader range of residential properties.<sup>1</sup> The promotion of diversification of economic opportunities is accomplished under the MC designation by providing for greater flexibility on developing water dependent uses, not strictly commercial fishing related, to which greater economic opportunities are derived from. Safe Harbor is centrally located around the only deep water port on Stock Island which is the prime location for a commercial center, which could only be accomplished through the redevelopment opportunities of the MC land use designation. Under the Industrial land use designation, unsightly commercial structures will work against the goal of improving aesthetics which can only be accomplished through diversified redevelopment under the MC land use designation. Under the MC land use designation, similar to the goal to improve aesthetics, greater economic opportunities will lead to improvements of landscaping, signage and storefronts. The working waterfront is a vital aspect of Safe Harbor and by creating greater access to the waterfront, the identity and recognition of the commercial fishing community will flourish. Under the MC FLUM designation, a diversified water dependent industry is able to

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<sup>1</sup> All housing units under the MC FLUM and MI land use district are restricted to commercial apartments.

flourish as opposed to the environmentally obtrusive and archaic nature of an Industrial (I) FLUM designation. By permitting flexibility in the types of water dependent development which can occur, providers of water dependent activities are able to better develop, maintain and improve access to the waterfront. Through redevelopment of various parcels of land the ratio of open space and intensity/density with respect to actual land size can be brought into conformance to provide for better off street parking and mobility. In an Industrial land use designation, improvement of facilities will not occur, while under the Mixed Use/Commercial land use designation demand for water access and water dependent uses will drive property owners to provide better facilities.

**5. Recognition of a need for additional detail or comprehensiveness:**

There is a need for additional detail and comprehensiveness that the proposed amended provides. Currently the Maritime Industrial (MI) zoning district is a subcategory of the Industrial (I) future land use map. The MI district permits uses which are not allowed in the Industrial (I) district. This difference creates an inconsistency which requires additional detail and or comprehensiveness to cure an inconsistency between a current land use map designation and future land use map designation. To further the need for consistency, Maritime Industrial (MI) uses such as commercial, office space, hotels, marinas, boat building and commercial fishing are all compatible and permissible uses under the Mixed-Use/Commercial (MC) future land use designation. This amendment is consistent with the uses surrounding Safe Harbor and complements the surrounding property designations as providing for a transition from waterfront to interior residential as opposed to the rigid transition of Industrial to Residential.

**6. Data Updates:**

<b>Existing FLUM</b>	<b>Type</b>	<b>Adopted Standards</b>	<b><i>Development Potential based upon allocated density</i></b>
<b>Industrial FLUM</b> Total site: 50.35 acres	<b>Residential Allocated Density/Acre*</b>	<b>1 du</b>	<b>50 units</b>
	<b>Transient Allocated Density/Acre</b> 32.67 acres – removed 35% of upland area**	<b>0 rooms/spaces</b>	<b>0 rooms/spaces</b>
	<b>Nonresidential Maximum Intensity</b>	<b>0.25-0.60 FAR</b>	<b>657,980 – 1,315,960 sf</b>
<b>Proposed FLUM</b>	<b>Type</b>	<b>Adopted Standards</b>	<b><i>Development Potential based upon allocated density</i></b>
<b>Mixed Use/</b>	<b>Residential Allocated Density/Acre*</b>	<b>1-6 du</b>	<b>50– 301 units</b>

<b>Commercial FLUM</b>  Total site: 50.35 acres	<b>Transient Allocated Density/Acre</b> 32.67 acres – removed 35% of upland area**	<b>5-15 rooms/spaces</b>	<b>163 - 490 rooms/spaces</b>
	<b>Nonresidential Maximum Intensity</b>	<b>0.25-0.45 FAR</b>	<b>548,317 – 986,970 sf</b>
	<b>Proposed Intensity Standard***</b>	<b>0.30-0.60 FAR</b>	<b>657,980 – 1,315,960 sf</b>
<b>Net Change in Development Potential</b>	<b>Residential*: +251 du</b> <b>Transient**: 490</b> <b>Nonresidential***: (0) square feet</b> Proposed Intensity Standard: no change		

\* Limited to Commercial Apartments

\*\* Transient Allocated Density must preserve 35% of traditional commercial working waterfront

\*\*\* (M1) Land Use Zoning District intensity standard in MU remains .30 - .60

## TRAFFIC STUDY

A traffic study was prepared by Traffic Tech showing there would be limited increases to traffic patterns for Safe Harbor and the surrounding properties based on an assumption of the maximum density and intensities provided for under the Mixed Use/Commercial (MC) land use designation. The traffic study is included with this application and incorporated herein by reference.

## CONCURRENCY

A letter of coordination has been provided by the Florida Keys Aqueduct Authority (FKAA) affirming there is adequate capacity of potable water based on an assumption of the maximum density and intensities provided for under the Mixed Use/Commercial (MC) land use designation. The FKAA letter of coordination is included with this application and incorporated herein by reference.

FLUM	Comprehensive Plan Potable Water Policy 701.1.1	Max Potential Residential Development (dwelling units)	Persons/household	Total persons	Total LOS Demand	Net Change
INDUSTRIAL	Residential LOS 66.5/gal/cap/day (149 gal/du/day)	50 du	2.24	112	7,450	+37,399
MIXED USE/COMMERCIAL	Residential LOS 66.5/gal/cap/day (149 gal/du/day)	301 du	2.24	674.24	44,849	
FLUM	Comprehensive Plan Potable Water Policy 701.1.1	Max Potential Floor Area Ratio (FAR) Square Feet	LOS Standard .35 Gal/sq.ft./day	Total LOS Demand	Net Change	
INDUSTRIAL (0.60 FAR)	Nonresidential LOS .35/gal/sq.ft./day	1,315,960 sf	.35	460,586	-115,146.5	
MIXED USE/COMMERCIAL (0.45)	Nonresidential LOS .35/gal/sq.ft./day	986,970 sf	.35	345,439.5		

A letter of coordination has been provided by the Keys Energy Services (KEYS) affirming there is adequate capacity of electrical service based on an assumption of the maximum density and intensities provided for under the Mixed Use/Commercial (MC) land use designation. The KEYS letter of coordination is included with this application and incorporated herein by reference.

A letter of coordination has been provided by the Key West Resort Utilities (KWRU) affirming there is adequate capacity of waste water treatment capacity based on an assumption of the

maximum density and intensities provided for under the Mixed Use/Commercial (MC) land use designation. The KWRU letter of coordination is included with this application and incorporated herein by reference.

FLUM	Comprehensive Plan Solid Waste Policy 801.1.1	Max Potential Residential Development (dwelling units)	Persons/ household	Total persons	Total LOS Demand	Net Change
INDUSTRIAL	Residential LOS 5.44lbs/capita/day	50 du	2.24	112	609.28	+3,058.59
MIXED USE/ COMMERCIAL	Residential LOS 5.44lbs/capita/day	301 du	2.24	674.24	3,667.87	

A letter of coordination has been provided by Waste Management affirming there is adequate solid waste removal capacity based on an assumption of the maximum density and intensities provided for under the Mixed Use/Commercial (MC) land use designations.

The proposed amendment will not create any new impacts under the 1977 AICUZ. While Monroe County does not have military compatibility incorporated in the 2010 Comp plan, Safe Harbor does comply with the restrictions imposed by the 1977 Air Installation Compatible Zone (AICUZ). While a small portion of Safe Harbor (the southwest corner) falls within the C1 subcategory of the AICUZ, this does not prevent redevelopment or development as Commercial Resorts are provided as a right under the Navy’s 1977 AICUZ.

Although not adopted or incorporated in the County’s Comprehensive Plan or Land Development Regulations the 2007 proposed AICUZ (“2007 AICUZ”) provides a portion of Safe Harbor within the proposed flight paths. None of the proposed uses under the Mixed Use/Commercial (MC) are expressly prohibited under the 2007 AICUZ. The de minimis amount of property located in the proposed 2007 AICUZ is further evidenced by the fact the Department of Defense chose not to include South Stock Island in Table 7-1 Land Areas of Significance – AICUZ, in the 2007 AICUZ.

May 16, 2012

Mr. Barton W. Smith, Esq.  
BARTON SMITH, P.L.  
624 Whitehead Street  
Key West, Florida 33040

**Re: Stock Island FLUM – Traffic Impact Statement**

Dear Mr. Smith:

Per your request, Traf Tech Engineering, Inc. conducted a traffic impact statement associated with 12 properties located in Stock Island in Monroe County, Florida. The 12 properties are described below:

1. Robbie's Marina
2. Longstock II, LLC
3. Island Trust Agreement Dated 3/10/1989
4. Benjamin Bernstein Residual Trust
5. Safe Harbor Enterprises
6. Safe Harbour Properties, LLC
7. Bama One, LLC
8. KWRU
9. Constellation Yachts
10. 3D of Key West, Inc.
11. Key West Transfer Station & Hauling Services, Inc.
12. 6840 Front Street, LLC

Information (current use, current permitted maximum and proposed permitted maximum) pertaining to each of the 12 properties listed above is provided in Attachment A of this report.

### **Trip Generation**

A trip generation comparison analysis was performed between the current permitted maximum and proposed permitted maximum associated with the 12 properties using the trip generation rates published in the Institute of Transportation Engineer's (ITE) *Trip Generation* manual (8<sup>th</sup> Edition). The trip generation comparison analysis was undertaken for daily, AM peak hour, and PM peak hour conditions. The analysis was based on the following assumptions:

CURRENT PERMITTED MAXIMUM

- Residential (50.25 units, say 50 units)
- Hotel (none)
- Non residential (1,315,361 square feet)

PROPOSED PERMITTED MAXIMUM

- Residential (301.5 units, say 302 units), or
- Hotel (490 Rooms), and
- Non residential (1,315,361 square feet)

According to ITE's *Trip Generation* manual (8<sup>th</sup> Edition), the trip generation rates used for the existing and proposed land uses that increase/decrease in intensity are:

APARTMENT (ITE Land Use 220)

*Daily Trip Generation*

$$T = 6.65 (X)$$

Where T = number of daily trips

X = number of residential units

*AM Peak Hour*

$$T = 0.51 (X)$$

Where T = number of AM peak hour trips

X = number of residential units

*PM Peak Hour*

$$T = 0.62 (X)$$

Where T = number of PM peak hour trips

X = number of residential units

HOTEL (ITE Land Use 310)

*Daily Trip Generation*

$$T = 8.92 (X)$$

Where T = number of daily trips

X = number of rooms

*AM Peak Hour*

$$T = 0.67 (X)$$

Where T = number of AM peak hour trips

X = number of rooms

*PM Peak Hour*

$$T = 0.70 (X)$$

Where T = number of PM peak hour trips

X = number of rooms

Using the above-listed equations from the ITE document, a trip generation comparison analysis was undertaken between the existing (i.e. maximum allowable development under the existing land-use designation) and proposed land uses. The results of the trip generation comparison analysis between the existing and proposed uses are documented in Table 1. As indicated in Table 1, the proposed land-use change for Option 2 (residential to hotel) is projected to generate approximately 4,038 new daily trips, approximately 302 new AM peak hour trips, and approximately 312 new trips during the typical afternoon peak period.

<b>TABLE 1</b>				
<b>Trip Generation Comparison Analysis</b>				
<b>Stock Island Properties</b>				
		<b>Number of Trips</b>		
<b>Land Use</b>	<b>Size</b>	<b>Daily</b>	<b>AM Peak</b>	<b>PM Peak</b>
<b>EXISTING LAND USE (Maximum Allowable Development)</b>				
Residential	50 units	333	26	31
<b>External Trips</b>		<b>333</b>	<b>26</b>	<b>31</b>
<b>PROPOSED LAND USE (Maximum Allowable Development) – Option 1</b>				
Residential	302 units	2,008	154	187
<b>External Trips</b>		<b>2,008</b>	<b>154</b>	<b>187</b>
<b>Difference Option 1</b>		<b>+1,675</b>	<b>+128</b>	<b>+156</b>
<b>PROPOSED LAND USE (Maximum Allowable Development) – Option 2</b>				
Hotel	490 rooms	4,371	328	343
<b>External Trips</b>		<b>4,371</b>	<b>328</b>	<b>343</b>
<b>Difference Option 2</b>		<b>+4,038</b>	<b>+302</b>	<b>+312</b>

Source: ITE Trip Generation Manual (8<sup>th</sup> Edition)

### **Trip Distribution**

The trip distribution associated with the difference in trips was based on existing traffic patterns and the transportation network located in the vicinity of Stock Island. Due to the location of the site, it was assumed that the majority of the project trips will arrive and depart to and from Key West located west of Stock Island. Table 2 summarizes the trip distribution used for the difference in trips.

TABLE 2 Project Trip Distribution Stock Island Properties		
Direction		% of Total Trips
North:	Florida Bay	0%
South:	Atlantic Ocean	0%
East:	Big Pine Key	30%
West:	Key West	70%
<b>Total</b>		<b>100.00%</b>

Source: Traf Tech Engineering, Inc.

### US 1 Impacts by Mile Marker

Marathon is located approximately 45 miles from Stock Island. It was assumed that the maximum trip length will be 45 miles. The average trip length was assumed to be one-half of the maximum trip length, or 23 miles. Based upon these trip length assumptions, the US 1 segments identified in Monroe County's Traffic Report Guidelines, and the trip distribution discussed previously, an estimate of the number of primary trips by segment on US 1 was performed. Table 3 summarizes the number of primary trips by segment on US 1 (Arterial Trip Assignment). As indicated in Table 3, this project will add approximately 4,038 new daily trips, and with the exception of two roadway segments, all US 1 segments impacted have sufficient capacity to absorb the additional traffic loads created by the difference in trips. The exceptions include the following two links:

- a. Stock Island (MM 4.0 to 5.0)
- b. Big Coppitt (MM 9.0 to 10.0)

Link 1 (Stock Island) has a reserve capacity of 2,131 daily trips and the traffic impacts associated with the proposed land-use change result in 2,827 new daily trips, or 696 trips over the available roadway capacity. However, applying the allowed 5% allocation below LOS C, the subject roadway segment has an additional 2,332 daily trips of reserve capacity which is sufficient to accommodate the 696 trips over capacity.

Link 3 (Big Coppitt) has a reserve capacity of 522 daily trips and the traffic impacts associated with the proposed land-use change result in 969 new daily trips, or 447 trips over the available roadway capacity. However, applying the allowed 5% allocation below LOS C, the subject roadway segment has an additional 1,066 daily trips of reserve capacity which is sufficient to accommodate the 447 trips over capacity.

**Table 3  
Arterial Trip Assignment Summary  
Stock Island Properties**

<b>Project Name:</b>	Stock Island Properties	<b>US 1 Mile Marker:</b>	4.0
<b>Location:</b>	Stock Island	<b>ITE Land Use:</b>	220 & 310
<b>Type of Dev.:</b>	Residential/Hotel	<b>Daily Trip Gen. Rate:</b>	6,65/8.92
<b>Project Size:</b>	Varies		
<b>Avg. Trip Length:</b>	23 miles		

Total Daily Trips	Percent Pass-By Trips	Percent Primary Trips	US 1 Segment Number	Percent Directional Split	% Impact Based on Trip Length	Project Generated Daily Trips	Reserve Capacity
4,038	0%	100%	1	70% / 30%	100%	2,827	2,131
			2	30%	90%	1,090	5,683
			3	30%	80%	969	522
			4	30%	75%	909	3,074
			5	30%	70%	848	2,131
			6	30%	65%	787	2,401
			7	30%	60%	727	2,004
			8	30%	55%	666	2,247
			9	30%	50%	606	2,608
			10	30%	40%	485	845

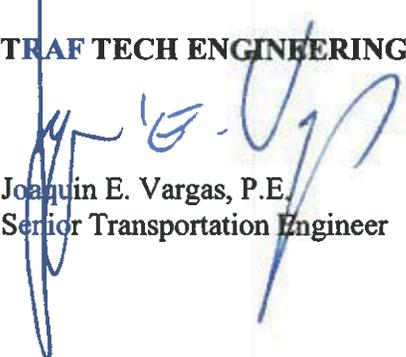
Source: Monroe County and Traf Tech Engineering.

In summary, the proposed land-use change associated with the 12 Stock Island properties is projected to generate a maximum of approximately 4,038 new daily trips, approximately 302 new AM peak hour trips, and approximately 312 new trips during the typical afternoon peak period. Using the allowed 5% allocation below LOS C, all US 1 segments impacted by the project have sufficient capacity to absorb the additional traffic loads created by the difference in trips.

Please give me a call if you have any questions.

Sincerely,

**TRAF TECH ENGINEERING, INC.**

  
Joaquin E. Vargas, P.E.  
Senior Transportation Engineer

## Exhibit 3

### Excerpt from: The Stock Island – Key Haven Livable CommuniKeys Master Plan

Pg. 7:

#### Commercial and Industrial Uses

The following chart shows each commercial/industrial zoning classification and its corresponding number of parcels.

Commercial and Industrial Zoning Districts			
	Total # Parcels	# Vacant Parcels	Total Acreage
Mixed Use	319	38	246
Urban Commercial	15	15	2
Suburban Commercial	25	23	11
Recreational Vehicle	2	0	12
Marine Industrial	24	0	142
	<b>385</b>	<b>76</b>	<b>413</b>

*Table includes both Stock Island and Key Haven*

There are a total of 413 acres of commercial and industrial-zoned land. All of the 142 acres of land zoned for Industrial uses are developed and located on Stock Island. Stock Island has more MU zoned areas than any other zoning classification. The purpose of the Mixed Use (MU) land use district is to establish or conserve areas of mixed uses, including commercial fishing, resorts, residential, institutional, and commercial uses. These areas are representative of the character, economy, and cultural history of the Florida Keys. The MU zoned areas of Stock Island include all of the above defined uses, except resorts, since there are no resorts on Stock Island or Key Haven.

#### Commercial Uses

This section includes all commercial uses other than industrial. Unlike many other communities in the Lower Keys, Stock Island and Key Haven have a US 1 commercial corridor as well as commercial uses and corridors throughout Stock Island. The planning department has identified Maloney/MacDonald Avenue and 5 Avenue as the primary intra-island commercial corridors. These corridors will be studied further to determine appropriate policies and recommendations for these areas.

There are several small-scale strip type commercial developments found throughout Stock Island which include a variety of uses ranging from office space to convenience stores. Stock Island has many of the commercial needs within walking or a short drive from the residential sections of the island. There are also a number of restaurants and retail services located throughout the island. Again, the majority of the uses are zoned Mixed Use (MU) in addition to Suburban Commercial (SC) and one parcel of Urban Commercial (UC), which is currently vacant.

There are 162 parcels taxed as commercial uses with a total taxable value of \$57,079,912 in 2003. The 2002 taxable value was \$49,281,172. This equates to a difference of \$7,798,740 or a 13% increase in the taxable value of the land.

### Industrial Uses

Industrial uses are defined as those uses devoted to the manufacture, warehousing, assembly, packaging, processing, fabrication, storage, or distribution of goods and materials whether new or used, or the refinishing, repair, or rebuilding of vehicles or boats.

There are several different industrial uses and sites located throughout Stock Island. Key Haven does not have any industrial uses or sites due to the residential nature of the subdivision. There are industrial sites throughout Stock Island with the majority of the uses located in the central section of the island. All of the industrial uses are zoned Mixed Use (MU) or Maritime Industrial (MI).

A majority of the Stock Island industrial uses are associated with maritime uses such as boat repair, boat construction and other shipping related activities. Commercial fishing outfits are also located within this classification and located within the Safe Harbor area. The total taxable value of all industrial uses as assigned by the Monroe County Property Appraiser for 2003 is \$28,541,363. The total taxable value for 2002 was \$24,875,684. There was an increase of \$3,665,679 or a 12% increase in the taxable value of the land.

The Maritime Industrial (MI) zoning district establishes and conserves areas suitable for maritime uses such as ship building, ship repair, and other water-dependent manufacturing and service uses. It should also be noted that MI zone permits certain non-maritime uses as well, such as commercial apartments, retail commercial, and hotels. There are 142 acres and 24 parcels of MI zoned land. It must be noted that the area stated here may be higher than actual land that is present, due to the amount of bay bottom that is included as part of the parcel calculations.

Pg. 12:

### Economic Development and Tourism

"Working waterfront" is becoming increasingly relevant across the state, and indeed the country. "Working waterfront" describes communities whose economy is intrinsically linked to the waters and its bounty, as is the case with Stock Island. The Stock Island economy has not transitioned to a primarily tourism-based commercial retail economy, such as that of Key West. Detailed information pertaining to the economy and waterfront areas of Stock Island are provided within the Harbor Preservation/Redevelopment and Intra-Island Transportation Plan completed by Wallace, Roberts, and Todd (WRT) in 2005.

### Tourist Housing

Tourist housing is defined by the Land Development Regulations as a dwelling unit used for tenancies of less than 28 days which includes the rental, lease, sublease, or assignment of existing dwelling units. Within the planning area there are no motels, hotels, or guesthouses. However, on Stock Island there are several RV parks or mobile home parks with RV spaces for rent.

Pg. 17:

### Planning Issues and Objectives

From the start of the planning process and through out the development of the Existing Conditions report and this Master Plan, a number of planning issues and objectives have been identified and considered in the development of this plan. The planning issues and objectives follow in no specific order of importance:

Stock Island

- Maintain affordable housing while providing a mix of housing options; and
- Promote the diversification of economic opportunities, including small businesses and home occupations; and
- Identify a commercial center within Stock Island (i.e. not US 1); and
- Improve aesthetics, commercial site and visual character of south side of US 1 corridor; and
- Improve storefronts, signage, and landscaping for commercial properties; and
- Enhance the community identity as a "commercial fishing" community; and

- Provide space for a working waterfront and its supporting industries; and
- Provide and improve waterfront access; and
- Provide off-street parking for vehicles and boats; and
- Provide improved public facilities, including cultural and recreational facilities and activity centers such as libraries.

Pg. 23:

### Analysis of Community Needs

#### Economic Diversity-Zoning and Land Use

Recent development and redevelopment activities have been focused in the MU district. According to the 2005 Property Appraisers database, 48% of the MU zoned parcels are developed with residential uses and 20% are developed with commercial and office uses. The MU district permits both residential and commercial uses. Since all the residentially zoned lands are completely developed on Stock Island, this applies additional pressure to redevelop MU lands for residential uses.

Responses from the Livable CommuniKeys survey indicate that 68% of the community agree or strongly agree with maintaining the amount of land for light industrial and commercial activity. The survey and development patterns indicate there is a need to redirect economic development and growth into appropriate infill areas and assess the availability of residentially zoned land.

#### Economic Diversity-Opportunities. Retention and Expansion

According to a report from the Chesapeake Group, the most important issues confronting commercial business operations are (in order of frequency):

- difficulty in attracting and retaining employees
- lack of visibility, inadequate signage
- inability to improve or expand
- lack of parking
- traffic
- decline in tourism
- government regulations
- degradation of the environment

In addition, the Chesapeake Group report predicts that demand for basic goods and services will grow well into the foreseeable future as a result of changing household structures and demographics and increases in visitor-based activity. Major commercial opportunities for the lower keys were identified as:

- Additional fast food operations
- Additional chain drugstores
- National large retail chains (example: Target or Wal-Mart)

#### Maintain Commercial Fishing.

The mail surveys indicate that the commercial activities the residents are mostly concerned with are those surrounding the commercial fishing industry. Specifically, 63% of the community agree or strongly agree that there is a need to protect the commercial fishing industry. Commercial fishing is permitted in both the Maritime Industrial zoning classification and the Mixed Use District, but is under pressure as those zones also allow for non-commercial fishing uses, as well as residential uses.

Current Conditions Summary

Stock Island is one of the most densely developed Keys. Very few vacant areas exist to accommodate infill, which means redevelopment will be likely over the next 20 year planning horizon. Many of the lots of Stock Island are small compared to other areas of unincorporated Monroe County. For example, the residential lots in the Lincoln Gardens subdivision neighborhood are approximately 3,440 square feet in size.

Commercial activities occur in many areas of Stock Island. This is because the predominant land use zoning district is Mixed Use (MU), which allows for a variety of both residential and commercial uses and activities. The other predominate land use zoning districts are Maritime Industries and Urban Residential Mobile Home.

Analysis of Community Needs

Through the planning process, the community identified promoting diversification of economic opportunities as a priority. In order to achieve this, a sufficient supply of appropriately zoned land needs to be available.

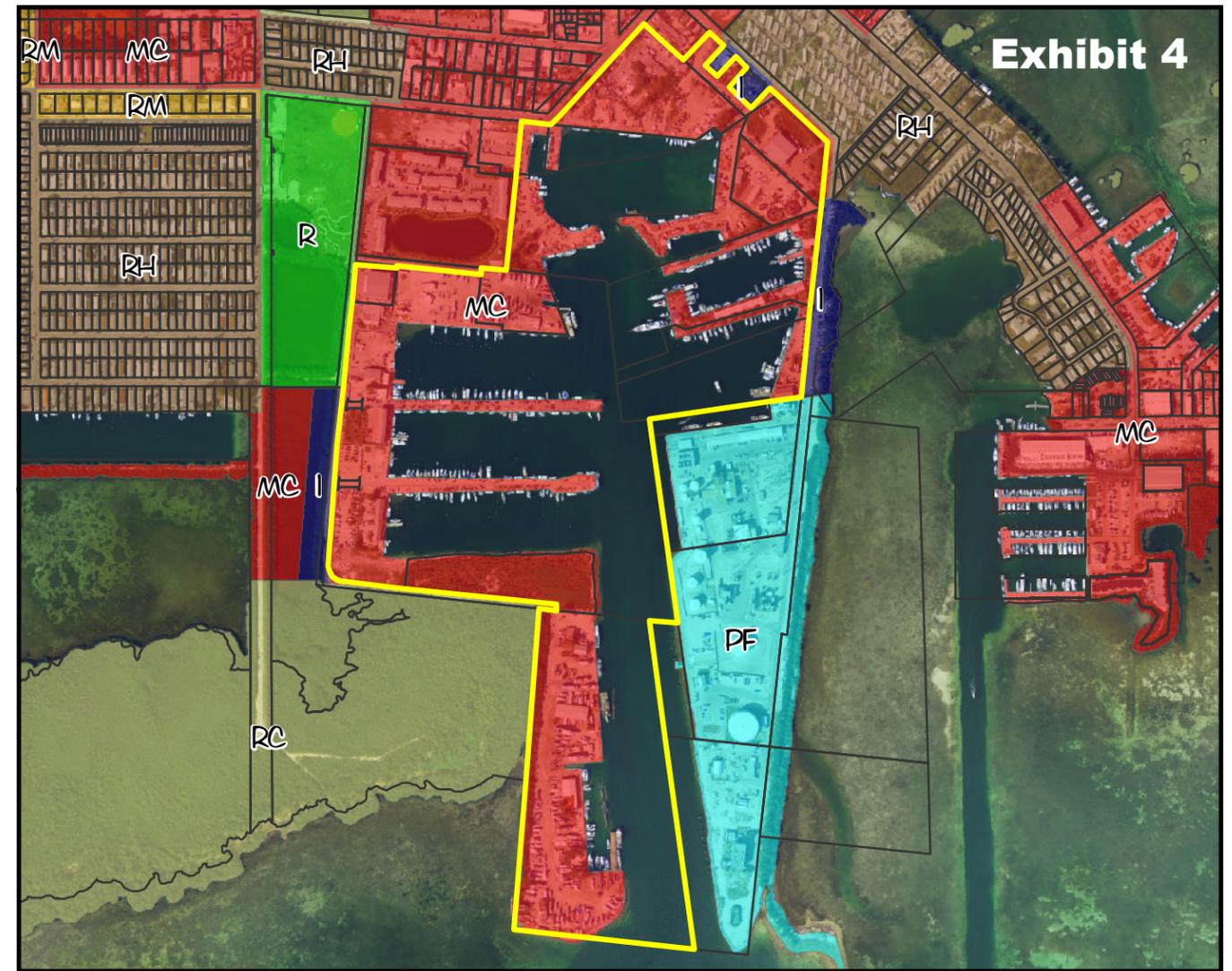
The Future Land Use Map serves as a guide for future land utilization and compliance of land uses with the policies set forth in the Comprehensive Plan. There are instances on Stock Island and Key Haven where the land use zoning district and/or the FLUM does not correspond with current land use. This results in nonconforming uses and structures. On a site-by-site basis, nonconformities create difficulties in reconciling appropriate redevelopment proposals in the context of current land use zoning district and the FLUM.

The MU zoning, which allows for both commercial and residential uses, does not adequately inherently protect commercially utilized land from being converted to residential use. Similarly, the MU zoning does not adequately protect residentially utilized land from being converted to commercial use. There is a community-wide need to be sure there is enough appropriately zoned land to accommodate future growth and redevelopment for residential and commercial utilization.

# Monroe County Future Land Use Amendment

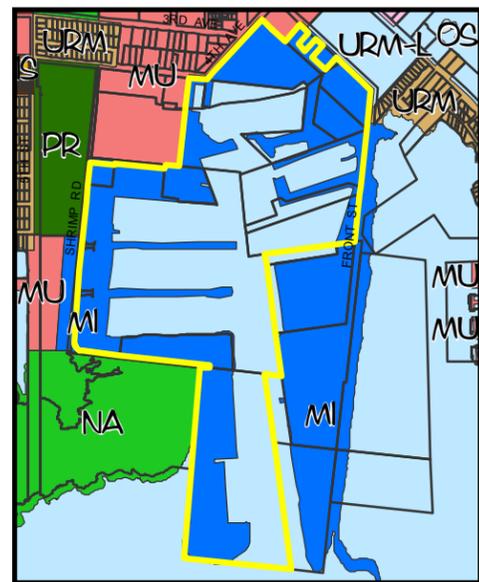


Existing Conditions

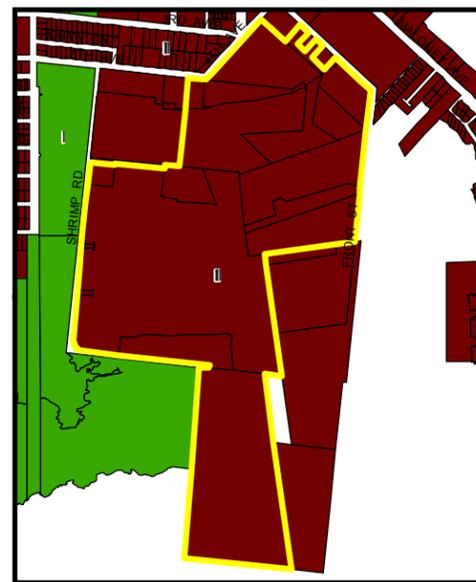


Proposed Conditions

Future Land Use Designations: RC = Residential Conservation; RL = Residential Low; RM = Residential Medium; RH = Residential High; MC = Mixed Use/Commercial; MCF = Mixed Use/Commercial Fishing; I = Industrial; R = Recreation; NS = Institutional; E = Educational; PB = Public Buildings/Grounds; PF = Public Facilities; M = Military; C = Conservation; AD = Airport District; H = Historic Overlay; RC = Residential Conservation



Land Use District



Tier Designation



**Growth Management Division**  
We strive to be caring, professional, and fair.

The Monroe County Future Land Use is proposed to be amended as indicated above and briefly described as:

Key: Stock Island Mile Marker: 5 Map Amendment #: \_\_\_\_\_  
Acreage: 51.5 Land Use District Map #: 577 & 582

Ordinance No.: \_\_\_\_\_ Planning Horizon: 2012  
Date of Adoption: June 29, 2010

Proposal: Future Land Use change of eighteen parcels from Industrial (I) to Mixed Use/Commercial (MC).

**Property Description:**

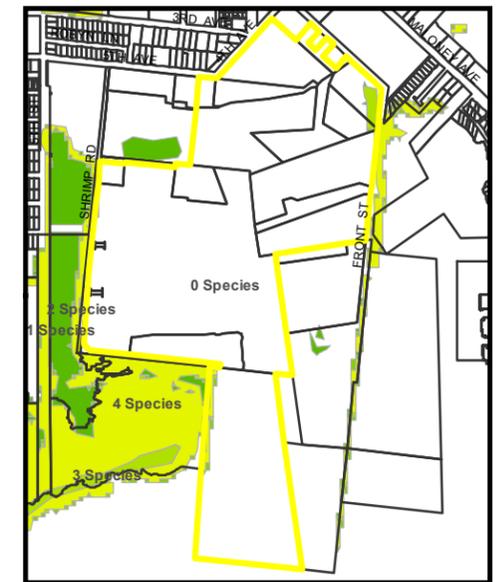
RE Numbers: 00123660-000000, 00123720-000400, 00123760-000200, 00123720-000100, 00123720-000200, 00123730-000100, 00123740-000000, 00123770-000000, 00127290-000000, 00127380-000000, 00127250-000000, 00127280-000000, 00123600-000100, 00123600-000102, 00123600-000101, 00123590-000000, 00123570-000000, and 00123540-000000

FLUM	Color	Description
AD	Light Blue	Airport District
C	Green	Conservation
E	Yellow	Educational
I	Dark Blue	Industrial
M	Light Green	Military
MC	Red	Mixed Use/Commercial
MCF	Light Red	Mixed Use/Commercial Fishing
MI	Light Blue	Mixed Use/Industrial
ML	Light Green	Mixed Use/Low Density
NA	Light Green	Natural Area
NS	Light Blue	Institutional
PH	Light Blue	Public Housing/Parade Grounds
PF	Light Blue	Public Facility
R	Light Green	Recreation
RC	Light Green	Residential Conservation
RL	Light Green	Residential Low Density
RM	Light Green	Residential Medium Density
RH	Light Green	Residential High Density

This map is for use by the Monroe County Growth Management Division only. The data contained herein is not a legal representation of boundaries, parcels, roads, right of way, or other geographical data.



Habitat Type



Number of Protected Species



**KW Resort Utilities, Corp.**

6630 Front Street  
Key West, FL 33040  
305.295.3301  
FAX 305.295.0143  
[www.kwru.com](http://www.kwru.com)

May 16, 2012

**VIA EMAIL**

Safe Harbor Property Owner's Association, Inc.  
C/O Barton W. Smith, Esq.  
BARTON SMITH, P.L.  
624 Whitehead Street  
Key West, Florida 33040

**Re: Confirmation of Additional Wastewater Treatment Capacity**

Dear Mr. Smith,

Please allow this letter to serve as confirmation that KW Resort Utilities Corp., the central wastewater treatment facility for Stock Island, has additional capacity available for future development by members of the Safe Harbor Property Owner's Association, Inc.

Please feel free to contact for additional information regarding reserving capacity.

Sincerely yours,



Christopher A. Johnson  
President



## Florida Keys Aqueduct Authority

1100 Kennedy Drive  
Key West, Florida 33040  
Telephone (305) 296-2454  
[www.fkaa.com](http://www.fkaa.com)



J. Robert Dean  
Chairman  
District 3

Antoinette M. Appe  
Vice-Chairman  
District 4

Brian L. Barroso  
Secretary/Treasurer  
District 1

Melva G. Wagner  
District 2

David C. Ritz  
District 5

Kirk C. Zuelch  
Executive Director

May 17, 2012

Mr. Gregory S. Oropeza, Esq.  
BARTON SMITH, P.L.  
624 Whitehead Street  
Key West, FL 33040

RE: Future Land Use Map Amendment to all of the properties surrounding Safe Harbor  
Stock Island  
Rezoning from Industrial (I) to Mixed Use/Commercial (MC)

Dear Mr. Oropeza,

This letter will serve as preliminary coordination of the above referenced project with the Florida Keys Aqueduct Authority.

The FCAA has no objection to Future Land Use Map Amendment to all of the properties surrounding Safe Harbor in Stock Island, Florida. (See attached list). However prior to future development a complete set of Civil and Architectural plans will be required to determine the maximum demand required for proposed development.

Should you have any questions or require any further information please feel free to call me.

Sincerely,  
Florida Keys Aqueduct Authority

Marnie L. Walterson  
Distribution Design Specialist

CC Jolynn Reynolds, Water Quality Engineer

## **Proposed Properties-Safe Harbor, Stock Island, Florida**

1. Robbie's Safe Harbor Marine Enterprises, Inc., a Florida corporation
  - a. Property Address – 7281 Shrimp Road, Key West, Florida 33040
2. Longstock II, LLC, a Florida limited liability company
  - a. Property Address – 700 and 7009 Shrimp Road, Key West, Florida 33040
3. Bernstein Family Trust - {Need legal name of trust}
  - a. Property Address – 5550 Fifth Avenue, 5700 Fourth Street and 6500 Front Street, South Stock Island, Florida 33040
4. Island Trust
  - a. Property Address – 6500 Front Street, Key West, Florida 33045-2455
5. Safe Harbor Enterprises, Inc., a Florida corporation
  - a. Property Address – Vacant Land, South Stock Island; Vacant Land, Shrimp Road
6. Safe Harbor Properties, LLC, a Florida limited liability company
  - a. Property Address – 6810 Front Street, Key West, Florida 33040
7. Key West Transfer & Hauling Service, Inc., a Florida corporation
  - a. Property Address – 6500 Front Street, Stock Island, Florida 33040
8. Bama One, LLC, a Florida limited liability company
  - a. Property Address – Vacant Land South Stock Island
9. 3D of Key West, Inc., a Florida corporation
  - a. Property Address – 6801 Shrimp Road, Stock Island, Florida 33040
10. Constellation Yachts, Inc., a Florida corporation
  - a. Property Address – 6811 Shrimp Road, Stock Island, Florida 33040
11. KW Resort Utility Corporation, a Florida corporation
  - a. Property Address – 6630 Front Street, Stock Island, Florida 33040
12. 6840 Front Street, LLC, a Florida limited liability company
  - a. Property Address – 6840 Front Street, Stock Island, Florida 33040



**WASTE MANAGEMENT OF  
THE FLORIDA KEYS, INC.**

125 Toppino Industrial Dr.  
Rockland Key, FL 33040  
(305) 296-8297  
(305) 296-8175 Fax

Safe Harbor Property Owners Association, Inc.

C/O Barton Smith P.L.

624 Whitehead Street

Key West, Florida 33040

May 16, 2012

Please accept this letter reference Future Land Map use Amendment for Safe Harbor Stock Island.

Waste Management Inc of Florida provides collection and disposal via franchisee agreement with

Monroe County for this area. All waste is transported to our Waste To Energy Plant in Broward County

Our capacity is 5000 tons per day; our current operation is at 75%, which leaves plenty of room

To handle this minimal additional waste. Please call if you have any questions. 305-797-3355

Sincerely

A handwritten signature in black ink, appearing to read 'Greg Sullivan'. The signature is fluid and cursive.

Greg Sullivan

Sr. District Manager

Monroe County & Key West

## AICUZ AND LAND USE COMPATIBILITY GUIDELINES

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APZ II is an area beyond APZ I and it has a measurable potential for aircraft accidents relative to APZ I or the Clear Zone. APZ II areas can exist in conjunction with Noise Zones 1, 2, or 3. These combinations of noise and accident potential are shown as II-3 (APZ II-Noise Zone 3) for the areas of highest noise exposure and measurable accident potential, II-2 (APZ II-Noise Zone 2) for areas of moderate noise exposure and measurable accident potential, and II-1 (APZ II-Noise Zone 1) for areas of measurable accident potential and low noise exposure. These areas have potential for accidents and noise impacts and land use controls are recommended.

Noise zones vary in intensity of noise exposure and are shown as 1, 2, and 3 in the table. Noise Zone 1 (less than 65 DNL) is an area of low impact where some land use controls may be needed, Noise Zone 2 (DNL 65-75) is an area of moderate impact where some land use controls are needed, and Noise Zone 3 (DNL 75 and above) is the most severely impacted area and requires the greatest degree of land use controls for noise exposure.

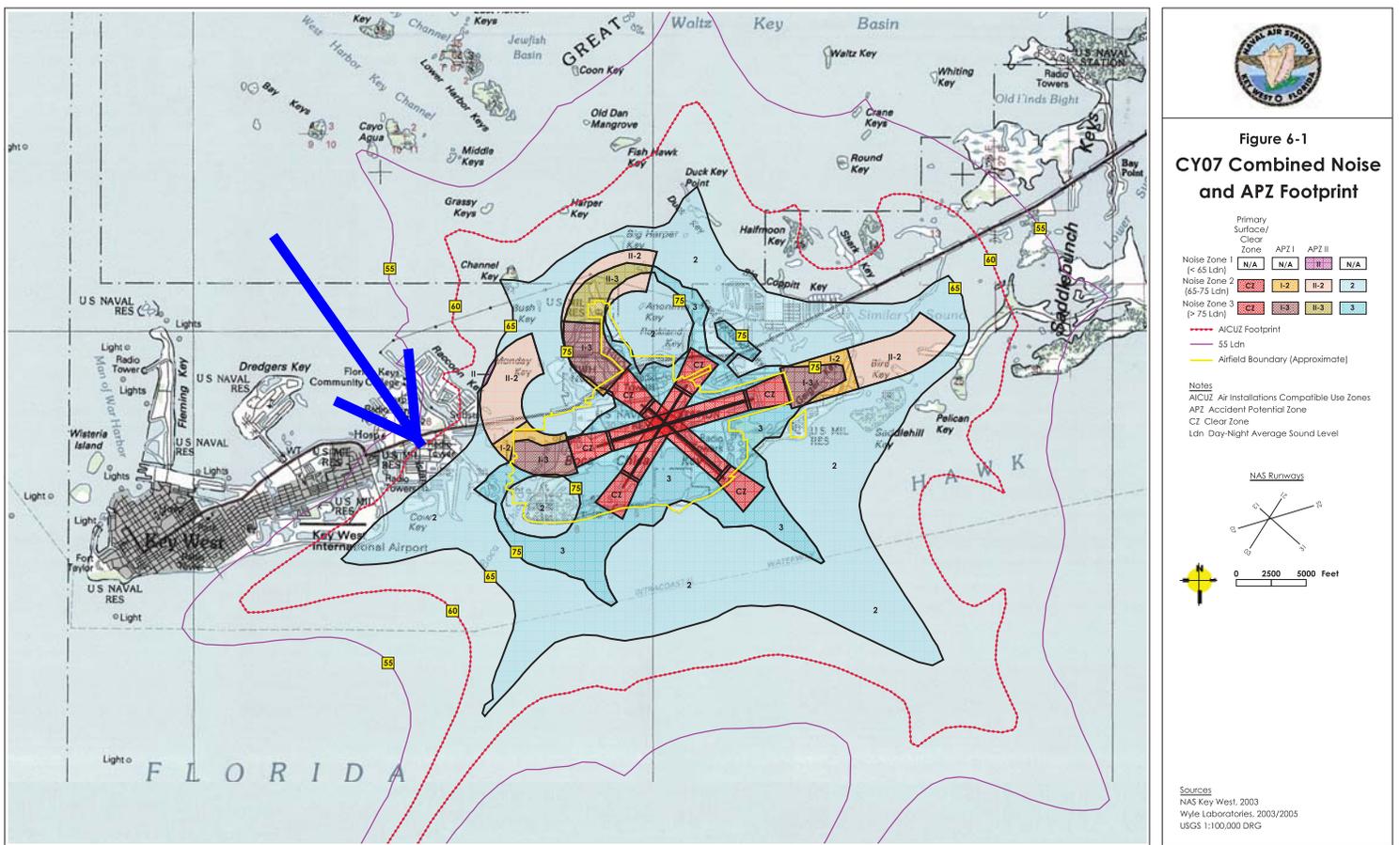
### 6.2 Suggested Land Use Compatibility within AICUZ Area

The Navy has developed land use compatibility recommendations for the APZs and noise zones as shown in Tables 6-2 and 6-3. These recommendations are intended to serve as guidelines, but final decisions as to specific land use controls to be enacted into zoning regulations are made by the local community. Noise sensitive uses including, but not limited to housing, schools, hospitals, churches, etc., are recommended to be placed outside of high noise areas. People intensive uses including, but not limited to such uses as shopping malls, theaters, and activities that would draw concentrations of people to an area, should be placed outside APZs. The purpose of the land use recommendations is not to preclude productive use of the land around Naval air facilities, but to recommend compatible future use of the land that is protective to human health, safety, and welfare.

Certain land uses are not recommended in very high noise areas and/or the APZs. Other land uses are considered compatible under certain conditions. For example, recreational uses, such as parks, are compatible under APZ 1, under the condition that the recreational use does not include a high density of people (e.g. spectator sports). Compatibility is a relative term and should be considered by local governments along with specific local land use development criteria.

The guidelines for suggested land use listed in Tables 6-2 and 6-3 are nationwide in scope. Since many air installations are in urban areas, these guidelines assume an urban environment with higher levels of ambient “background” noise that might exist in rural and suburban areas. These compatibility guidelines are, therefore, sometimes modified at the local government level to address a specific local noise environment. As noted previously in this report, the area from DNL 55 to 65 is an area where people can also sometimes be annoyed by aircraft overflight. Planners should consider this zone a buffer zone that may be impacted by higher noise levels if operations increase in the future.

The AICUZ footprint for this study includes the area from DNL 60 to 65 and recommendations are made for (1) fair disclosure statements regarding the noise levels to prospective owners and occupants and (2) site design and construction considerations to reduce the noise impact in residential areas in light of the life style in the Florida Keys. Design provisions such as berms can reduce the effect of sound traveling across the water. While many standard housing construction techniques provide some levels of sound attenuation, design considerations incorporating additional sound reduction in construction in this area can also help reduce energy consumption and should be considered. In the area from DNL 55 to 60, fair disclosure to occupants could also be considered in recognition of future unknowns.



AICUZ AND LAND USE COMPATIBILITY GUIDELINES

Table 6-2 Suggested Land Use Compatibility in Noise Zones

Land Use		Suggested Land Use Compatibility						
		Noise Zone 1 (DNL or CNEL)		Noise Zone 2 (DNL or CNEL)		Noise Zone 3 (DNL or CNEL)		
SLUCM NO	LAND USE NAME	< 55	55- 64	65 - 69	70 -74	75- 79	80 -84	85+
	<i>Residential</i>							
11	Household Units	Y	Y <sup>1</sup>	N <sup>1</sup>	N <sup>1</sup>	N	N	N
11.11	Single units: detached	Y	Y <sup>1</sup>	N <sup>1</sup>	N <sup>1</sup>	N	N	N
11.12	Single units: semidetached	Y	Y <sup>1</sup>	N <sup>1</sup>	N <sup>1</sup>	N	N	N
11.13	Single units: attached row	Y	Y <sup>1</sup>	N <sup>1</sup>	N <sup>1</sup>	N	N	N
11.21	Two units: side-by-side	Y	Y <sup>1</sup>	N <sup>1</sup>	N <sup>1</sup>	N	N	N
11.22	Two units: one above the other	Y	Y <sup>1</sup>	N <sup>1</sup>	N <sup>1</sup>	N	N	N
11.31	Apartments: walk-up	Y	Y <sup>1</sup>	N <sup>1</sup>	N <sup>1</sup>	N	N	N
11.32	Apartment: elevator	Y	Y <sup>1</sup>	N <sup>1</sup>	N <sup>1</sup>	N	N	N
12	Group quarters	Y	Y <sup>1</sup>	N <sup>1</sup>	N <sup>1</sup>	N	N	N
13	Residential Hotels	Y	Y <sup>1</sup>	N <sup>1</sup>	N <sup>1</sup>	N	N	N
14	Mobile home parks or courts	Y	Y <sup>1</sup>	N	N	N	N	N
15	Transient lodgings	Y	Y <sup>1</sup>	N <sup>1</sup>	N <sup>1</sup>	N <sup>1</sup>	N	N
16	Other residential	Y	Y <sup>1</sup>	N <sup>1</sup>	N <sup>1</sup>	N	N	N
20	<i>Manufacturing</i>							
21	Food & kindred products; manufacturing	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
22	Textile mill products; manufacturing	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
23	Apparel and other finished products; products made from fabrics, leather and similar materials; manufacturing	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
24	Lumber and wood products (except furniture); manufacturing	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
25	Furniture and fixtures; manufacturing	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
26	Paper and allied products; manufacturing	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
27	Printing, publishing, and allied industries	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
28	Chemicals and allied products; manufacturing	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
29	Petroleum refining and related industries	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N

(Continued Next Page)

# AICUZ AND LAND USE COMPATIBILITY GUIDELINES

Table 6-2 Suggested Land Use Compatibility in Noise Zones (Continued)

Land Use		Suggested Land Use Compatibility						
		Noise Zone 1 ( DNL or CNEL)		Noise Zone 2 ( DNL or CNEL)		Noise Zone 3 ( DNL or CNEL)		
SLUCM NO	LAND USE NAME	< 55	55- 64	65 - 69	70 -74	75- 79	80 -84	85+
<b>30</b>	<b><i>Manufacturing (continued)</i></b>							
31	Rubber and misc. plastic products; manufacturing	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
32	Stone, clay and glass products; manufacturing	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
33	Primary metal products; manufacturing	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
34	Fabricated metal products; manufacturing	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
35	Professional scientific, and controlling instruments; photographic and optical goods; watches and clocks	Y	Y	Y	25	30	N	N
39	Miscellaneous manufacturing	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
<b>40</b>	<b><i>Transportation, communication and utilities.</i></b>							
41	Railroad, rapid rail transit, and street railway transportation	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
42	Motor vehicle transportation	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
43	Aircraft transportation	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
44	Marine craft transportation	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
45	Highway and street right-of-way	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
46	Automobile parking	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
47	Communication	Y	Y	Y	25 <sup>5</sup>	30 <sup>5</sup>	N	N
48	Utilities	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
49	Other transportation, communication and utilities	Y	Y	Y	25 <sup>5</sup>	30 <sup>5</sup>	N	N
<b>50</b>	<b><i>Trade</i></b>							
51	Wholesale trade	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
52	Retail trade – building materials, hardware and farm equipment	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
53	Retail trade – shopping centers	Y	Y	Y	25	30	N	N
54	Retail trade - food	Y	Y	Y	25	30	N	N

(Continued Next Page)

## AICUZ AND LAND USE COMPATIBILITY GUIDELINES

Table 6-2 Suggested Land Use Compatibility in Noise Zones (Continued)

Land Use		Suggested Land Use Compatibility						
		Noise Zone 1 ( DNL or CNEL)		Noise Zone 2 ( DNL or CNEL)		Noise Zone 3 ( DNL or CNEL)		
SLUCM NO	LAND USE NAME	< 55	55- 64	65 - 69	70 -74	75- 79	80 -84	85+
<b>50</b>	<b><i>Trade (Continued)</i></b>							
55	Retail trade – automotive, marine craft, aircraft and accessories	Y	Y	Y	25	30	N	N
56	Retail trade – apparel and accessories	Y	Y	Y	25	30	N	N
57	Retail trade – furniture, home, furnishings and equipment	Y	Y	Y	25	30	N	N
58	Retail trade – eating and drinking establishments	Y	Y	Y	25	30	N	N
59	Other retail trade	Y	Y	Y	25	30	N	N
<b>60</b>	<b><i>Services</i></b>							
61	Finance, insurance and real estate services	Y	Y	Y	25	30	N	N
62	Personal services	Y	Y	Y	25	30	N	N
62.4	Cemeteries	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4,11</sup>	Y <sup>6,11</sup>
63	Business services	Y	Y	Y	25	30	N	N
63.7	Warehousing and storage	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
64	Repair Services	Y	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
65	Professional services	Y	Y	Y	25	30	N	N
65.1	Hospitals, other medical fac.	Y	Y <sup>1</sup>	25	30	N	N	N
65.16	Nursing Homes	Y	Y	N <sup>1</sup>	N <sup>1</sup>	N	N	N
66	Contract construction services	Y	Y	Y	25	30	N	N
67	Government Services	Y	Y <sup>1</sup>	Y <sup>1</sup>	25	30	N	N
68	Educational services	Y	Y <sup>1</sup>	25	30	N	N	N
6	Miscellaneous				25	30	N	N
<b>70</b>	<b><i>Cultural, entertainment and recreational</i></b>							
71	Cultural activities ( churches)		1	25	30	N	N	N
71.2	Nature exhibits		1	1	N	N	N	N
72	Public assembly		1		N	N	N	N
72.1	Auditoriums, concert halls			25	30	N	N	N
72.11	Outdoor music shells, amphitheaters		1	N	N	N	N	N
72.2	Outdoor sports arenas, spectator sports			7	7	N	N	N
73	Amusements					N	N	N
7	recreational activities (include golf courses, riding stables, water rec.)		1	1	25	30	N	N
75	esorts and group camps		1	1	1	N	N	N
76	Parks		1	1	1	N	N	N
7	Other cultural, entertainment and recreation		1	1	1	N	N	N

(Concluded Next Page)

# AICUZ AND LAND USE COMPATIBILITY GUIDELINES

Table 6-2 Suggested Land Use Compatibility in Noise Zones (Concluded)

Land Use		Suggested Land Use Compatibility						
		Noise Zone 1 ( DNL or CNEL)		Noise Zone 2 ( DNL or CNEL)		Noise Zone 3 ( DNL or CNEL)		
SLUCM NO	LAND USE NAME	< 55	55- 64	65 - 69	70 -74	75- 79	80 -84	85+
<b>80</b>	<b><i>Resource Production and Extraction</i></b>							
1	Agriculture (except live stock)					10	10,11	10,11
1.5	Livestock farming					N	N	N
1.7	Animal breeding					N	N	N
2	Agriculture related activities					10	10,11	10,11
3	Forestry Activities					10	10,11	10,11
	Fishing Activities							
5	Mining Activities							
	Other resource production or extraction							

Key:

SLUCM Standard Land Use Coding Manual, U.S. Department of Transportation

( es) Land Use and related structures compatible without restrictions.

N (No) Land Use and related structures are not compatible and should be prohibited.

( es with restrictions) The land use and related structures are generally compatible. However, see note(s) indicated by the superscript.

N<sup>x</sup> (No with exceptions) The land use and related structures are generally incompatible. However, see notes indicated by the superscript.

NL (Noise Level reduction) Noise Level reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.

25, 30, or 35 The numbers refer to Noise Level reduction levels. Land Use and related structures generally compatible however, measures to achieve NL of 25, 30 or 35 must be incorporated into design and construction of structures. However, measures to achieve an overall noise reduction do not necessarily solve noise difficulties outside the structure and additional evaluation is warranted. Also, see notes indicated by superscripts where they appear with one of these numbers.

DNL Day Night Average Sound Level.

CN L Community Noise equivalent Level (Normally within a very small decibel difference of DNL)

Ldn Mathematical symbol for DNL.

**Notes:**

1.

a) Although local conditions regarding the need for housing may require residential use in these Zones, residential use is discouraged in DNL 65-6 and strongly discouraged in DNL 70-7. The absence of viable alternative development options should be determined and an evaluation should be conducted locally prior to local approvals indicating that a demonstrated community need for the residential use would not be met if development were prohibited in these Zones.

b) Where the community determines that these uses must be allowed, measures to achieve and outdoor to indoor Noise Level reduction (NL) of at least 25 dB in DNL 65-6 and NL of 30 dB in DNL 70-7 should be incorporated into building codes and be in individual approvals for transient housing a NL of at least 35 dB should be incorporated in DNL 75-7.

c) Normal permanent construction can be expected to provide a NL of 20 dB, thus the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation, upgraded Sound Transmission Class (STC) ratings in windows and doors and closed windows year round. Additional consideration should be given to modifying NL levels based on peak noise levels or vibrations.

d) NL criteria will not eliminate outdoor noise problems. However, building location and site planning, design and use of berms and barriers can help mitigate outdoor noise exposure NL particularly from ground level sources. Measures that reduce noise at a site should be used wherever practical in preference to measures that only protect interior spaces.

Notes (Continued):

2. Measures to achieve NL of 25 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

3. Measures to achieve NL of 30 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

. Measures to achieve NL of 35 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

5. If project or proposed development is noise sensitive, use indicated NL if not, land use is compatible without NL .

6. No buildings.

7. Land use compatible provided special sound reinforcement systems are installed.

. residential buildings require a NL of 25

. residential buildings require a NL of 30.

10. residential buildings not permitted.

11. Land use not recommended, but if community decides use is necessary, hearing protection devices should be worn.

Source:

OPNAVINST 11010.36B, 2002

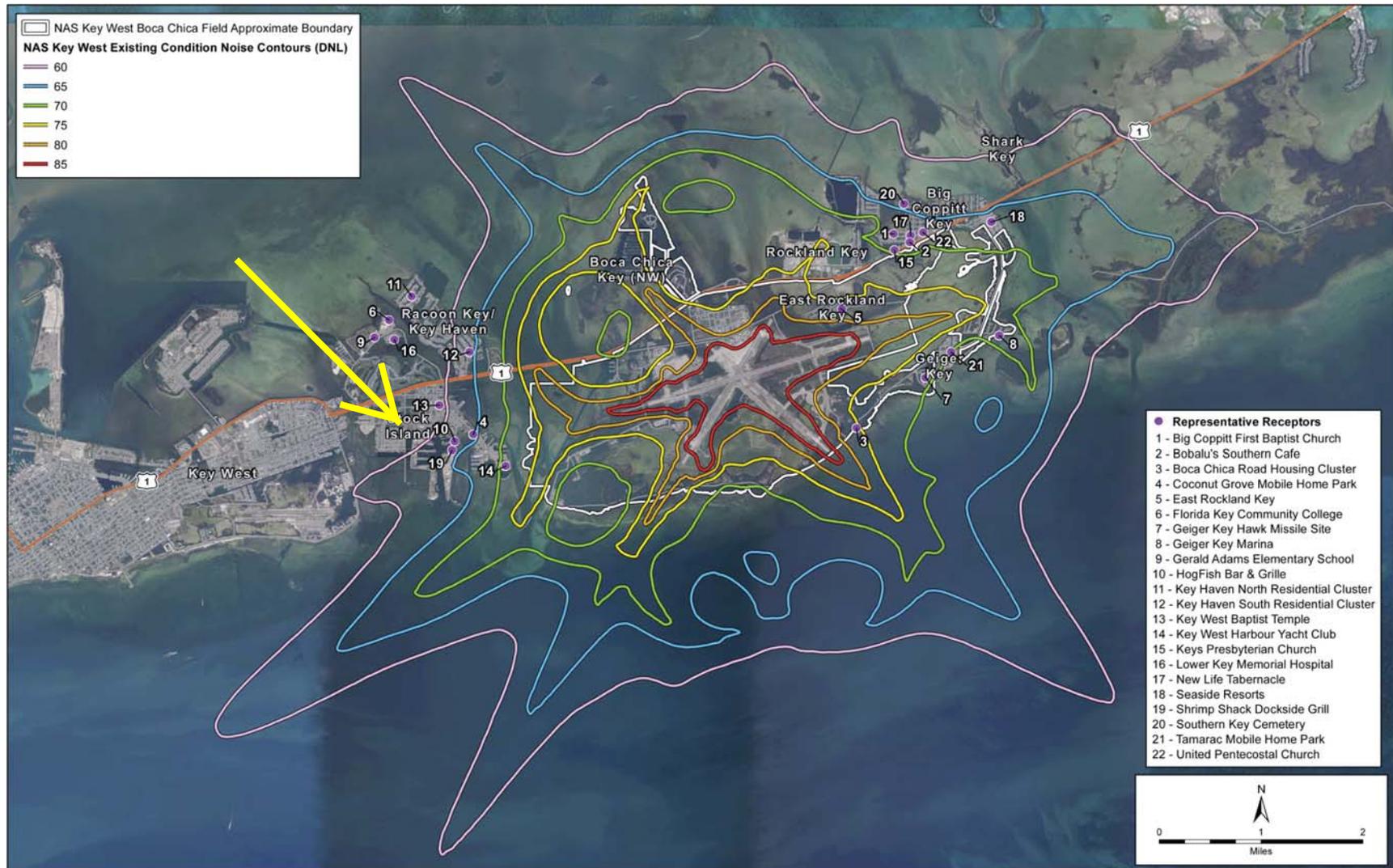


Figure 3.1-2 Existing DNL Noise Exposure from NAS Key West Airfield Operations

# Exhibit 8

00123720-000400

00123660-000000



Data Source: Federal Emergency Management Agency

	Monroe County Parcels
<b>CBRS</b>	
	COASTAL BARRIER RESOURCES SYSTEM
	OTHERWISE PROTECTED AREA

BARTON W. SMITH, ESQ.  
PRINCIPAL ATTORNEY

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**Exhibit 9**

PATRICK M. FLANIGAN, ESQ.  
ASSOCIATE ATTORNEY

GREGORY S. OROPEZA, ESQ.  
ASSOCIATE ATTORNEY

**VIA E-MAIL: santamaria-mayte@monroecounty-fl.gov**

July 16, 2012

Ms. Mayte Santamaria  
Monroe County Planning Department  
2798 Overseas Highway, Suite 400  
Marathon, Florida 33050

Re: Safe Harbor Property Owner's Association, Inc.  
FLUM Amendment  
KW Resort Utilities Corp. Abandonment Contingencies

Dear Ms. Santamaria,

Pursuant to our conversation, this letter is intended to respond to and answer questions regarding KW Resort Utilities Corp.'s ("KWRU") status as one of the applicants included as part of Safe Harbor Property Owner's Association, Inc.'s ("Association") FLUM amendment application submitted on behalf of all members of the Association whom are situated around Safe Harbor.

As a background, you have inquired as to what would occur in a circumstance wherein KWRU, as a public utility which serves the Stock Island area, determined it no longer desired to use its property for utility purposes or desired to cease utility operations.

First and foremost, KWRU has no intention in the foreseeable future to cease operations or use its property for any other intended purpose but as a public utility. In fact, KWRU is in the process of expanding its territory and facilities. KWRU intends to service the customers of Stock Island and other islands of the Lower Florida Keys for the foreseeable future.

As you are aware, KWRU is a public utility regulated by the Florida Public Service Commission ("PSC"). See Fla. Stat. § 366.01, et seq. As a public utility, KWRU's monopoly power to service an area without competition is derived from the State of Florida under its power of sovereign immunity, which protects KWRU from violation of the Sherman Anti-Trust Act and Chapter 542, Florida Statutes. In order to preserve this protection afforded under sovereign immunity and not violate anti-trust laws, KWRU must be strictly regulated by the State of Florida through the State's police power. Without the State's oversight, KWRU's tariff

and monopoly violates state and federal anti-trust laws and its tariff would be void on its face.

The State has delegated its police power to regulate utilities to the PSC, which is tasked with regulating and setting rates for public utilities. Consequently, KWRU's operations, both day to day, and overall are strictly regulated by the PSC, including KWRU's ability to operate or cease operations.

Title 25 of the Florida Administrative Code ("Code") outlines the authority and responsibility of the PSC as it pertains to public utilities. See Fla. Admin. Code Chapter 25 et seq. Pursuant to Fla. Admin. Code 25-30.011, the PSC has the sole jurisdiction in the regulation of wastewater systems. The Code's provisions are specifically intended to promote adequate and efficient service and establish the rights of both the utility and customers, including the right to reliable service. See Fla. Admin. Code 25-30.011. If a public utility fails to comply with the PSC, the PSC can fine a public utility up to \$5,000.00 per day for a continued violation. See Fla. Stat. §350.127.

In order to operate a public utility, a public utility must own the land upon which it is situated or provide proof to the PSC of a ninety-nine year lease. See Fla. Admin. Code 25-30-.033(j).<sup>1</sup> Thus, so long as KWRU desires to operate a public utility it will be required to own the land it is situated upon and be subject to PSC regulation.

If KWRU desired to sell its assets, including the land, or alternatively, to sell its assets and not sell the land, the PSC is required to approve any such sale to ensure continued service to the utilities' customers. See Fla. Admin. Code 25-30.037. In the case where a utility desires to abandon its operations, the PSC must approve the abandonment plan including the appointment of a receiver as successor in interest to guarantee service to the customers. See Fla. Admin. Code 25-30.090. Fla. Admin. Code 25-30.090 is intended to prevent service interruptions and requires a succession plan including providing the name of a receiver or successor entity. According to the PSC this rarely occurs, and where it has, a governmental entity such as Monroe County or other public utility will be appointed to take over operations from the utility that has notified the PSC of its intent to abandon its operations. Nonetheless, in any situation that would have KWRU not operating as the provider of wastewater services under no circumstances would any customer be affected.

---

<sup>1</sup> It should also be noted that to construct or purchase a public utility, the purchasing entity must provide evidence of financial solvency significant enough to ensure that operations shall continue under any conditions. See Fla. Admin. Code 25-30-.033

In conclusion and to summarize, KWRU has no intention to cease operations and is intending to serve the community for years to come, but should KWRU's assets be sold or abandoned, contingencies are in place, as promulgated by the PSC through the Florida Administrative Code, to deal with such circumstances. I have included with this memorandum all relevant statutes and codes for your review. Please feel free to contact me with any questions. Thank you again for your assistance in these matters.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Barton W. Smith', with a long horizontal flourish extending to the right.

Barton W. Smith, Esq.

BWS

Electronic Cc: Client

West's Florida Administrative Code  
Title 25. Public Service Commission  
Chapter 25-30. Water and Wastewater Utility Rules  
Part I. General Provisions

Rule 25-30.011, F.A.C.  
Fla. Admin. Code r. 25-30.011

25-30.011. Application and Scope.

Currentness

(1) These rules and regulations shall, as appropriate, apply to all water systems and/or wastewater systems which are now, or may hereafter be, subject to the jurisdiction of the Florida Public Service Commission. They are intended to define and promote good utility practices, adequate and efficient service to the public at reasonable cost, and to establish the rights and responsibilities of both the utility and the customer.

(2) No deviation from these rules shall be permitted unless authorized in writing by the Commission.

(3) It is not intended that any rule or regulation contained herein shall supersede or conflict with an applicable regulation of the Department of Health and Rehabilitative Services (DHRS) or the Department of Environmental Protection (DEP). Compliance by a utility with the regulations of the DHRS or DEP on a particular subject matter shall constitute compliance with such of these rules as relate to the same subject matter except as otherwise ordered by the Commission.

(4) The adoption of these rules shall not in any way relieve any utility from any of its duties under the laws of this State.

**Credits**

Amended Sept. 12, 1974; Transferred from 25-10.14,25-10.014; Amended Nov. 10, 1986, Jan. 31, 2000.

**AUTHORITY:** 367.121 FS. Law Implemented 367.121(1) FS.

Current with rules included in the June 22, 2012 issue of the Florida Administrative Weekly.

Rule 25-30.011, F.A.C., 25 FL ADC 25-30.011

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West's Florida Administrative Code  
Title 25. Public Service Commission  
Chapter 25-30. Water and Wastewater Utility Rules  
Part I. General Provisions

Rule 25-30.033, F.A.C.  
Fla. Admin. Code r. 25-30.033

25-30.033. Application for Original Certificate of Authorization and Initial Rates and Charges.

Currentness

(1) Each application for an original certificate of authorization and initial rates and charges shall provide the following information:

(a) The applicant's name and address;

(b) The nature of the applicant's business organization, i.e., corporation, partnership, limited partnership, sole proprietorship, association, etc.;

(c) The name(s) and address(es) of all corporate officers, directors, partners, or any other person(s) or entities owning an interest in the applicant's business organization;

(d) Whether the applicant has made an election under Internal Revenue Code § 1362 to be an S corporation;

(e) A statement showing the financial and technical ability of the applicant to provide service, and the need for service in the proposed area. The statement shall identify any other utilities within the area proposed to be served that could potentially provide service, and the steps the applicant took to ascertain whether such other service is available;

(f) A statement that to the best of the applicant's knowledge, the provision of service will be consistent with the water and wastewater sections of the local comprehensive plan as approved by the Department of Community Affairs at the time the application is filed, or, if not consistent, a statement demonstrating why granting the certificate of authorization would be in the public interest;

(g) The date applicant plans to begin serving customers;

(h) The number of equivalent residential connections (ERCs) proposed to be served, by meter size and customer class. If development will be in phases, separate this information by phase;

(i) A description of the types of customers anticipated, i.e., single family homes, mobile homes, duplexes, golf course clubhouse, commercial, etc.;

(j) Evidence, in the form of a warranty deed, that the utility owns the land upon which the utility treatment facilities are or will be located, or a copy of an agreement which provides for the continued use of the land, such as a 99-year lease. The Commission may consider a written easement or other cost-effective alternative. The applicant may submit a contract for the purchase and sale of land with an unexecuted copy of the warranty deed, provided the applicant files an executed and recorded copy of the deed, or executed copy of the lease, within 30 days after the order granting the certificate;

(k) One original and two copies of a sample tariff, containing all rates, classifications, charges, rules, and regulations, which shall be consistent with Chapter 25-9, F.A.C. Model tariffs are available from the Division of Economic Regulation, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850;

(l) A description of the territory to be served, using township, range and section references as specified in subsection 25-30.030(2), F.A.C.;

(m) One copy of a detailed system map showing the proposed lines, treatment facilities and the territory proposed to be served. The map shall be of sufficient scale and detail to enable correlation with the description of the territory proposed to be served;

(n) One copy of the official county tax assessment map, or other map showing township, range, and section with a scale such as 1" = 200' or 1" = 400' with the proposed territory plotted thereon by use of metes and bounds or quarter sections, and with a defined reference point of beginning;

(o) A statement regarding the separate capacities of the proposed lines and treatment facilities in terms of ERCs and gallons per day. If development will be in phases, separate this information by phase;

(p) A written description of the type of water treatment, wastewater treatment, and method of effluent disposal;

(q) If paragraph (p) above does not include effluent disposal by means of reuse, a statement that describes with particularity the reasons for not using reuse;

(r) A detailed financial statement (balance sheet and income statement), certified if available, of the financial condition of the applicant, that shows all assets and liabilities of every kind and character. The income statement shall be for the

preceding calendar or fiscal year. If an applicant has not operated for a full year, then the income statement shall be for the lesser period. The financial statement shall be prepared in accordance with Rule 25-30.115, F.A.C. If available, a statement of the source and application of funds shall also be provided;

(s) A list of all entities, including affiliates, upon which the applicant is relying to provide funding to the utility, and an explanation of the manner and amount of such funding, which shall include their financial statements and copies of any financial agreements with the utility. This requirement shall not apply to any person or entity holding less than 10 percent ownership interest in the utility;

(t) A cost study including customer growth projections supporting the proposed rates, charges and service availability charges. A sample cost study, and assistance in preparing initial rates and charges, are available from the Division of Economic Regulation;

(u) A schedule showing the projected cost of the proposed system(s) by uniform system of accounts (USOA) account numbers pursuant to Rule 25-30.115, F.A.C., and the related capacity of each system in ERCs and gallons per day. If the utility will be built in phases, this shall apply to the first phase;

(v) A schedule showing the projected operating expenses of the proposed system by USOA account numbers, when 80 percent of the designed capacity of the system is being utilized. If the utility will be built in phases, this shall apply to the first phase; and

(w) A schedule showing the projected capital structure including the methods of financing the construction and operation of the utility until the utility reaches 80 percent of the design capacity of the system.

(2) The base facility and usage rate structure (as defined in subsection 25-30.437(6), F.A.C.) shall be utilized for metered service, unless an alternative rate structure is supported by the applicant and authorized by the Commission.

(3) A return on common equity shall be established using the current equity leverage formula established by order of this Commission pursuant to Section 367.081(4), F.S., unless there is competent substantial evidence supporting the use of a different return on common equity.

(4) Utilities obtaining initial certificates pursuant to this rule are authorized to accrue allowance for funds used during construction (AFUDC) for projects found eligible pursuant to subsection 25-30.116(1), F.A.C.

(a) The applicable AFUDC rate shall be determined as the utility's projected weighted cost of capital as demonstrated in its application for original certificate and initial rates and charges.

(b) A discounted monthly AFUDC rate calculated in accordance with subsection 25-30.116(3), F.A.C., shall be used to ensure that the annual AFUDC charged does not exceed authorized levels.

(c) The date the utility shall begin to charge the AFUDC rate shall be the date the certificate of authorization is issued to the utility so that such rate can apply to the initial construction of the utility facilities.

**Credits**

Adopted Jan. 27, 1991; Amended Nov. 30, 1993.

**AUTHORITY:** 350.127(2), 367.045(1), 367.121, 367.1213 FS. Law Implemented 367.031, 367.045, 367.1213 FS.

Current with rules included in the June 22, 2012 issue of the Florida Administrative Weekly.

**Rule 25-30.033, F.A.C., 25 FL ADC 25-30.033**

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West's Florida Administrative Code  
Title 25. Public Service Commission  
Chapter 25-30. Water and Wastewater Utility Rules  
Part I. General Provisions

Rule 25-30.090, F.A.C.  
Fla. Admin. Code r. 25-30.090

25-30.090. **Abandonments.**

Currentness

(1) This rule applies to any person, lessee, trustee, or receiver owning, operating, managing, or controlling a utility which intends to **abandon** the utility. The provisions of this rule are intended to prevent service interruptions to the utility customers.

(2) The notice required by Section 367.165, F.S., shall include the following:

(a) The **utility's** name and address;

(b) The person to contact regarding this notice, their address and telephone number;

(c) The location of the **utility's** books and records;

(d) The date of the notice;

(e) The date the **utility** will be **abandoned**;

(f) Whether the water system, wastewater system, or both are to be **abandoned**;

(g) A statement of the reason the **utility** is to be **abandoned**;

(h) A statement of the status of the **utility** with the Department of Environmental Protection regarding outstanding citations or violations.

(3) Within 10 days of the appointment of a receiver by the circuit court, the receiver shall request from the Commission a copy of the utility's tariff and most recent annual report.

(4) Within 90 days of the appointment of the receiver, the receiver shall file a proposed tariff revision amending the title page to reflect the name, address and telephone number of the receiver. This shall not affect the certificated name of the utility.

(5) During the pendency of the receivership, the receiver shall be responsible for fulfilling the utility's obligations pursuant to Chapter 367, F.S., and Chapter 25-30, F.A.C. In no event shall a receiver be held responsible for failure to provide safe, efficient and sufficient service where such failure is substantially caused by actions or omissions pre-dating appointment of the receiver, unless the receiver is given reasonable opportunity to rectify such failure.

(6) If the receiver appointed by the circuit court is a governmental authority as defined by Section 367.021(7), F.S., the governmental authority, upon request, shall be found exempt pursuant to Section 367.022(2), F.S.

#### **Credits**

Adopted Nov. 30, 1993.

AUTHORITY: 350.127(2), 367.121 FS. Law Implemented 367.121, 367.165 FS.

Current with rules included in the June 22, 2012 issue of the Florida Administrative Weekly.

Rule 25-30.090, F.A.C., 25 FL ADC 25-30.090

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West's Florida Administrative Code  
Title 25. Public Service Commission  
Chapter 25-30. Water and Wastewater Utility Rules  
Part I. General Provisions

Rule 25-30.037, F.A.C.  
Fla. Admin. Code r. 25-30.037

25-30.037. Application for Authority to Transfer.

Currentness

(1) This rule applies to any application for the transfer of an existing water or wastewater system, regardless of whether service is currently being provided. This rule does not apply where the transfer is of an exempt or non-jurisdictional system and will result in the system continuing to be exempt from or not subject to Commission jurisdiction. The application for transfer may result in the transfer of the seller's existing certificate, amendment of the buyer's certificate or granting an initial certificate to the buyer.

(2) Each application for transfer of certificate of authorization, facilities or any portion thereof, to a non-governmental entity shall include the following information:

(a) The complete name and address of the seller;

(b) The complete name and address of the buyer;

(c) The nature of the buyer's business organization, i.e., corporation, partnership, limited partnership, sole proprietorship, or association;

(d) The name(s) and address(es) of all of the buyer's corporate officers, directors, partners or any other person(s) who will own an interest in the utility;

(e) The date and state of incorporation or organization of the buyer;

(f) The names and locations of any other water or wastewater utilities owned by the buyer;

(g) A copy of the contract for sale and all auxiliary or supplemental agreements, which shall include, if applicable:

1. Purchase price and terms of payment;

2. A list of and the dollar amount of the assets purchased and liabilities assumed or not assumed, including those of nonregulated operations or entities; and

3. A description of all consideration between the parties, for example, promised salaries, retainer fees, stock, stock options, assumption of obligations.

(h) The contract for sale shall also provide for the disposition, where applicable, of the following:

1. Customer deposits and interest thereon;

2. Any guaranteed revenue contracts;

3. Developer agreements;

4. Customer advances;

5. Debt of the utility;

6. Leases;

(i) A statement describing the financing of the purchase;

(j) A statement indicating how the transfer is in the public interest, including a summary of the buyer's experience in water or wastewater utility operations, a showing of the buyer's financial ability to provide service, and a statement that the buyer will fulfill the commitments, obligations and representations of the seller with regard to utility matters;

(k) A list of all entities upon which the applicant is relying to provide funding to the buyer, and an explanation of the manner and amount of such funding, which shall include their financial statements and copies of any financial agreements with the utility. This requirement shall not apply to any person or entity holding less than 10 percent ownership interest in

the utility;

(l) The proposed net book value of the system as of the date of the proposed transfer. If rate base has been established by this Commission, state the order number and date issued and identify all adjustments made to update this rate base to the date of transfer;

(m) A statement setting out the reasons for the inclusion of an acquisition adjustment, if one is requested;

(n) If the books and records of the seller are not available for inspection by the Commission or are not adequate for purposes of establishing the net book value of the system, a statement by the buyer that a good faith, extensive effort has been made to obtain such books and records for inspection by the Commission and detailing the steps taken to obtain the books and records;

(o) A statement from the buyer that it has obtained or will obtain copies of all of the federal income tax returns of the seller from the date the utility was first established, or rate base was last established by the Commission or, if the tax returns have not been obtained, a statement from the buyer detailing the steps taken to obtain the returns;

(p) A statement from the buyer that after reasonable investigation, the system being acquired appears to be in satisfactory condition and in compliance with all applicable standards set by the Department of Environmental Protection (DEP) or, if the system is in need of repair or improvement, has any outstanding Notice of Violation of any standard set by the DEP or any outstanding consent orders with the DEP, the buyer shall provide a list of the improvements and repairs needed and the approximate cost to make them, a list of the action taken by the utility with regard to the violation, a copy of the Notice of Violation(s), a copy of the consent order and a list of the improvements and repairs consented to and the approximate cost to make them;

(q) Evidence that the utility owns the land upon which the utility treatment facilities are located, or a copy of an agreement which provides for the continued use of the land, such as a 99-year lease. The Commission may consider a written easement or other cost-effective alternative;

(r) A statement regarding the disposition of any outstanding regulatory assessment fees, fines, or refunds owed;

(s) The original and two copies of sample tariff sheets reflecting the change in ownership; and

(t) The utility's current certificate(s), or if not available, provide an explanation of the steps the applicant took to obtain the certificate(s).

(3) In case of a change in majority organizational control, the application shall include the following information:

- (a) The complete name and address of the seller;
  
- (b) The complete name and address of the buyer;
  
- (c) The name(s) and address(es) of all of the buyer's corporate officers, directors, partners and any other person(s) who will own an interest in the utility;
  
- (d) The names and locations of any other water or wastewater utilities owned by the buyer;
  
- (e) A statement describing the financing of the purchase;
  
- (f) A statement describing how the transfer is in the public interest, including a summary of the buyer's experience in water or wastewater utility operations, a showing of the buyer's financial ability to provide service, and a statement that the buyer will fulfill the commitments, obligations and representations of the seller with regard to utility matters;
  
- (g) A list of all entities, including affiliates, that have provided, or will provide, funding to the buyer, and an explanation of the manner and amount of such funding, which shall include their financial statements and copies of any financial agreements with the utility. This requirement shall not apply to any person or entity holding less than 10 percent ownership interest in the utility;
  
- (h) A statement from the buyer that after reasonable investigation, the system being acquired appears to be in satisfactory condition and in compliance with all applicable standards set by the DEP or, if the system is in need of repair or improvement, has any outstanding Notice of Violation(s) of any standard(s) set by the DEP or any outstanding consent orders with the DEP, the buyer shall provide a list of the improvements and repairs needed and the approximate cost to make them, a list of the action taken by the utility with regard to the violations, a copy of the Notice of Violation(s), a copy of the consent order and a list of the improvements and repairs consented to and the approximate cost;
  
- (i) Evidence that the utility owns the land upon which the utility treatment facilities are located, or a copy of an agreement which provides for the continued use of the land, such as a 99-year lease. The Commission may consider a written easement or other cost effective alternative;
  
- (j) The original and two copies of sample tariff sheets reflecting the change in ownership; and
  
- (k) The utility's current certificate(s), or if not available, the applicant shall provide an explanation of the steps the applicant took to obtain the certificate(s).

(4) Each application for transfer of certificate of authorization, facilities, or any portion thereof, or majority organizational control to a governmental authority shall contain the following information:

- (a) The name and address of the utility and its authorized representative;
- (b) The name of the governmental authority and the name and address of its authorized representative;
- (c) A copy of the contract or other document transferring the utility system to the governmental authority;
- (d) A list of any utility assets not transferred to the governmental authority if such remaining assets constitute a system providing or proposing to provide water or wastewater service to the public for compensation;
- (e) A statement that the governmental authority obtained, from the utility or Commission, the most recent available income and expense statement, balance sheet, statement of rate base for regulatory purposes, and contributions-in-aid-of-construction;
- (f) The date on which the governmental authority proposes to take official action to acquire the utility;
- (g) A statement describing the disposition of customer deposits and interest thereon; and
- (h) A statement regarding the disposition of any outstanding regulatory assessment fees, fines or refunds owed.

(5) If a utility is transferring a portion of its facilities to a governmental agency, it must provide the following additional information:

- (a) A description of the remaining territory using township, range, and section references;
- (b) One copy of the official county tax assessment map, or other map, showing township, range, and section with a scale such as 1" = 200' or 1" = 400', with the remaining territory plotted thereon by use of metes and bounds or quarter sections, and with a defined reference point of beginning; and
- (c) The original and two copies of sample tariff sheets reflecting the remaining territory.

(6) Upon its receipt of items required in paragraphs (4)(a), (b), (c), (d), (e) and (f), the Commission will issue an order

**25-30.037. Application for Authority to Transfer., 25 FL ADC 25-30.037**

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acknowledging that the facilities or any portion thereof have been acquired by the governmental authority.

(7) Upon receipt of the items required in paragraphs (4)(g) and (h) and, if applicable, (5)(a), (b), and (c), and upon the completion of all pending proceedings before the Commission, the utility's certificate will be amended or cancelled. Amendment or cancellation of the certificate shall not affect the utility's obligation pursuant to Rule 25-30.120, F.A.C., Regulatory Assessment Fees.

**Credits**

Adopted Jan. 27, 1991; Amended Nov. 30, 1993.

AUTHORITY: 350.127(2), 367.121, 367.1213 FS. Law Implemented 367.071, 367.1213 FS.

Current with rules included in the June 22, 2012 issue of the Florida Administrative Weekly.

Rule 25-30.037, F.A.C., 25 FL ADC 25-30.037

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West's Florida Statutes Annotated  
Title XXVII. Railroads and Other Regulated Utilities (Chapters 350-368)  
Chapter 350. Florida Public Service Commission (Refs & Annos)

West's F.S.A. § 350.127

350.127. Penalties; rules; execution of contracts

Currentness

(1) The commission may impose upon any regulated company that is found to have refused to comply with or willfully violated any lawful rule or order of the commission, or any statute administered by the commission, a penalty for each such offense of not more than \$5,000, to be fixed, imposed, and collected by the commission, or the commission may, for any such violation, amend, suspend, or revoke any certificate issued by the commission. Each day that such refusal or violation continues shall constitute a separate offense. Each penalty shall be a lien upon the real and personal property of the regulated company, enforceable by the commission as a statutory lien under chapter 85. The net proceeds from the enforcement of any such lien shall be deposited in the General Revenue Fund.

(2) The commission is authorized to adopt, by affirmative vote of a majority of the commission, rules pursuant to ss. 120.536(1) and 120.54 to implement provisions of law conferring duties upon it.

(3) The commission may designate one or more employees to execute contracts on behalf of the commission.

**Credits**

Laws 1980, c. 80-289, § 3, eff. July 1, 1980. Amended by Laws 1998, c. 98-200, § 71, eff. July 1, 1998.

Notes of Decisions (3)

West's F. S. A. § 350.127, FL ST § 350.127

Current with chapters in effect from the 2012  
Second Regular Session and the Extraordinary  
Apportionment Session of the Twenty-Second  
Legislature through July 1, 2012End of Document

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**MEMORANDUM**  
**MONROE COUNTY PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT**  
*We strive to be caring, professional and fair*

**To:** Monroe County Development Review Committee &  
Townesley Schwab, Senior Director of Planning & Environmental Resources

**From:** Mayté Santamaria, Assistant Director of Planning *MS*

**Date:** September 18, 2012

**Subject:** Request of the Little Conch Key Development Corporation (Walker's Island Project) to amend the text of Monroe County 2010 Comprehensive Plan to allow the re-dredging of privately owned channels and basins with marine resources, subject to limitations and conditions designed to protect natural resources.

**Meeting:** September 25, 2012

**I REQUEST**

Sandra Walters, SWC has submitted a request on behalf of the Little Conch Key Development Corporation (Walker's Island Project) to amend the text of Monroe County 2010 Comprehensive Plan to create policies within the Conservation and Coastal Management Element to establish sub-area policies applicable to a specific geographic area of submerged lands to enact site-specific, tailored parameters for the re-dredging of privately-owned submerged lands and to amend policies to define the specific, limited circumstances and conditions which shall be met to allow the re-dredging of privately-owned access channels and basins.

**II. BACKGROUND INFORMATION**

A. Existing Comprehensive Plan Policies

Currently, the Monroe County Comprehensive Plan prohibits new dredging and does not allow maintenance dredging within areas vegetated with seagrass beds or characterized by hardbottom communities except for maintenance in public navigation channels.

*Policy 202.8.2 No new dredging shall be permitted in Monroe County.*

*Policy 202.8.3 No maintenance dredging shall be permitted within areas vegetated with seagrass beds or characterized by hardbottom communities except for maintenance in public navigation channels.*

1 *Policy 203.2.3 Effective upon plan adoption, Monroe County shall:*

- 2 1. *Prohibit new dredging in the Florida Keys; and*  
3 2. *Prohibit maintenance dredging within areas vegetated with seagrass beds except for*  
4 *maintenance dredging in public navigation channels.*  
5

6 Note, the Monroe County Comprehensive Plan and Land Development Code do not provide  
7 definitions for public navigation channels, channel or maintenance dredging.  
8

9 Florida Department of Environmental Rule 18-21.003, F.A.C., provides definitions for private and  
10 public channel, as follows:  
11

12 **Rule 18-21.003 Definitions.**

13 When used in these rules, the following definitions shall apply unless the context clearly indicates  
14 otherwise:

15 (46) **“Private channel”** means a channel that is dredged or maintained by private entities to provide access  
16 to or from such locations as private residences, marinas, yacht clubs, vessel repair facilities, or revenue-  
17 generating facilities.

18 (50) **“Public channel”** means a channel that is constructed or maintained by a public entity such as a  
19 federal or state agency, local government, or inland navigation district listed in Chapter 374, F.S., or that  
20 is part of a public navigation project, public water management project, or a deepwater port listed in  
21 Section 403.021(9)(b), F.S.

22 (52) **“Public navigation project”** means an activity primarily for the purpose of navigation which is  
23 authorized and funded by the United States Congress or by port authorities as defined by Section  
24 315.02(2), F.S.  
25

26 This applicant would not qualify for maintenance dredging under the existing Comprehensive Plan  
27 policies, as the applicants channel has marine resources and is not considered a “public navigation  
28 channel.”  
29

30 B. In 2010, Sandra Walters, SWC, on behalf of the Little Conch Key Development Corporation,  
31 submitted a request for a text amendment [Policies 202.8.3, 202.8.4, 202.8.5, 202.8.6, 202.8.7,  
32 2020.8.8, 203.2.3 and 204.2.2] to allow maintenance dredging within access channels vegetated by  
33 seagrass beds, subject to certain limitations and conditions. The proposed text amendment for the  
34 Walker’s Island project would have allowed maintenance dredging in areas that contain marine  
35 resources beyond that currently allowed in public navigation channels, subject to limitations and  
36 conditions. These amendments would have also allowed the use of dredged spoil for seagrass  
37 restoration projects (placement of dredged spoil within submerged lands). The proposed  
38 amendments, while affecting the Walker’s Island project, could have also affected other privately-  
39 owned submerged lands in unincorporated Monroe County (county-wide application).  
40

41 Based on the submitted amendment in 2010, staff has coordinated with the Department of Economic  
42 Opportunity (formerly the Department of Community Affairs) and other entities on the review of the  
43 proposal. To facilitate the review of the proposed amendments, several teleconferences and  
44 meetings were held to gain input from the various entities that are involved with comprehensive  
45 planning as well as dredge and fill activities. The participants included representatives from Monroe  
46 County, SWC (applicant’s consultant), Department of Economic Opportunity (DEO), Department of  
47 Environmental Protection (DEP), South Florida Water Management District (SFWMD), National

1 Oceanic and Atmospheric Administration (NOAA), Florida Keys National Marine Sanctuary  
2 (FKNMS), Environmental Protection Agency (EPA), the City of Marathon and the Village of  
3 Islamorada.

4  
5 Discussions revolved around the definition of maintenance dredging, how to define maintenance  
6 dredging and how to distinguish new dredging from maintenance dredging. The SFWMD and DEP  
7 described statutory [403.813(1)(f), F.S.] and rule [40E-4.051(2)(a), F.A.C.] exemptions for  
8 maintenance dredge projects. DEP stated that if a project does not qualify for an exemption, then the  
9 project is not considered a maintenance dredge. DEP and SFWMD also noted that maintenance  
10 dredging cannot exceed the depths, widths, and configurations that were previously achieved by  
11 previous dredging.

12  
13 During one of the teleconferences, NOAA also stated that dredging, either new or maintenance, is  
14 prohibited in the Florida Keys National Marine Sanctuary pursuant to 15CFR922.163 (a)(3) [see  
15 below] unless an applicant can get a permit.

16  
17 Federal conservation laws that are in effect and enforced by Sanctuary Officers are the National  
18 Marine Sanctuary Act (NMSA), the Magnuson Fishery Conservation and Management Act  
19 (MFCMA), the Atlantic Tunas Convention Act (ATCA), the Marine Mammal Protection Act  
20 (MMPA), the Endangered Species Act (ESA), and the Lacey Act (LA), all of which apply to  
21 resources residing within or transiting through the FKNMS. Law specifically in affect which apply to  
22 the Florida Keys National Marine Sanctuary are found under the United States Code of Federal  
23 Regulations (CFR) Chapter 15.

24  
25 **Sec. 922.163 Prohibited activities--Sanctuary-wide.**

- 26 a) Except as specified in paragraph (b) through (e) of this section, the following activities are prohibited and  
27 thus are unlawful for any person to conduct or to cause to be conducted:
- 28 (3) Alteration of, or construction on, the seabed. Drilling into, dredging, or otherwise altering the seabed of  
29 the Sanctuary, or engaging in prop-dredging; or constructing, placing or abandoning any structure, material,  
30 or other matter on the seabed of the Sanctuary, except as an incidental result of:
- 31 (i) Anchoring vessels in a manner not otherwise prohibited by this part (see Secs. 922.163(a)(5)(ii) and  
32 922.164(d)(1)(v));
- 33 (ii) Traditional fishing activities not otherwise prohibited by this part;
- 34 (iii) Installation and maintenance of navigational aids by, or pursuant to valid authorization by, any Federal,  
35 State, or local authority of competent jurisdiction;
- 36 (iv) Harbor maintenance in areas necessarily associated with Federal water resource development projects  
37 in existence on July 1, 1997, including maintenance dredging of entrance channels and repair, replacement,  
38 or rehabilitation of breakwaters or jetties;
- 39 (v) Construction, repair, replacement, or rehabilitation of docks, seawalls, breakwaters, piers, or marinas  
40 with less than ten slips authorized by any valid lease, permit, license, approval, or other authorization issued  
41 by any Federal, State, or local authority of competent jurisdiction.
- 42 (4) Discharge or deposit of materials or other matter.
- 43 (i) Discharging or depositing, from within the boundary of the Sanctuary, any material or other matter,  
44 except:
- 45 (A) Fish, fish parts, chumming materials, or bait used or produced incidental to and while conducting a  
46 traditional fishing activity in the Sanctuary;
- 47 (B) Biodegradable effluent incidental to vessel use and generated by a marine sanitation device  
48 approved in accordance with section 312 of the Federal Water Pollution Control Act, as amended,  
49 (FWPCA), 33 U.S.C. 1322 et seq.;

1 (C) Water generated by routine vessel operations (e.g., deck wash down and graywater as defined in  
2 section 312 of the FWPCA), excluding oily wastes from bilge pumping; or

3 (D) Cooling water from vessels or engine exhaust;

4 (ii) Discharging or depositing, from beyond the boundary of the Sanctuary, any material or other matter that  
5 subsequently enters the Sanctuary and injures a Sanctuary resource or quality, except those listed in  
6 paragraph (a)(4)(i) (A) through (D) of this section and those authorized under Monroe County land use  
7 permits or under State permits.

8  
9 **Sec. 922.166 Permits other than for access to the Tortugas Ecological Reserve--application procedures  
10 and issuance criteria.**

11 (a) National Marine Sanctuary General Permit.

12 (1) *A person may conduct an activity prohibited by Secs. 922.163 or 922.164, other than an activity involving*  
13 *the survey/inventory, research/recovery, or deaccession/transfer of Sanctuary historical resources, if such*  
14 *activity is specifically authorized by, and provided such activity is conducted in accordance with the scope,*  
15 *purpose, terms and conditions of, a National Marine Sanctuary General permit issued under this paragraph*  
16 *(a).*

17 (2) The Director, at his or her discretion, may issue a General permit under this paragraph (a), subject to such  
18 terms and conditions as he or she deems appropriate, if the Director finds that the activity will:

19 (i) Further research or monitoring related to Sanctuary resources and qualities;

20 (ii) Further the educational value of the Sanctuary;

21 (iii) Further the natural or historical resource value of the Sanctuary;

22 (iv) Further salvage or recovery operations in or near the Sanctuary in connection with a recent air or  
23 marine casualty;

24 (v) Assist in managing the Sanctuary; or

25 (vi) Otherwise further Sanctuary purposes, including facilitating multiple use of the Sanctuary, to the extent  
26 compatible with the primary objective of resource protection.

27 (3) The Director shall not issue a General permit under this paragraph (a), unless the Director also finds that:

28 (i) The applicant is professionally qualified to conduct and complete the proposed activity;

29 (ii) The applicant has adequate financial resources available to conduct and complete the proposed activity;

30 (iii) The duration of the proposed activity is no longer than necessary to achieve its stated purpose;

31 (iv) The methods and procedures proposed by the applicant are appropriate to achieve the proposed  
32 activity's goals in relation to the activity's impacts on Sanctuary resources and qualities;

33 (v) The proposed activity will be conducted in a manner compatible with the primary objective of  
34 protection of Sanctuary resources and qualities, considering the extent to which the conduct of the activity  
35 may diminish or enhance Sanctuary resources and qualities, any indirect, secondary or cumulative effects of  
36 the activity, and the duration of such effects;

37 (vi) It is necessary to conduct the proposed activity within the Sanctuary to achieve its purposes; and

38 (vii) The reasonably expected end value of the activity to the furtherance of Sanctuary goals and purposes  
39 outweighs any potential adverse impacts on Sanctuary resources and qualities from the conduct of the  
40 activity.

41  
42  
43 Additional discussions of the agency groups revolved around ideas and strategies to limit the scope  
44 of the potential future dredging activities to ensure there is not excessive impacts to our resources as  
45 well as to ensure that the appropriate agencies had an opportunity to provide input on proposed  
46 future dredging.

1 While this review and coordination between agencies was taking place, various significant statutory  
2 changes were also being adopted. Specifically, during the 2012 legislative session, Florida  
3 Legislature adopted House Bill 503 (amending Section 125.022, F.S.) which states:  
4

5 *For any development permit application filed with the county after July 1, 2012, a county*  
6 *may not require as a condition of processing or issuing a development permit that an*  
7 *applicant obtain a permit or approval from any state or federal agency unless the agency*  
8 *has issued a final agency action that denies the federal or state permit before the county*  
9 *action on the local development permit. Issuance of a development permit by a county*  
10 *does not in any way create any rights on the part of the applicant to obtain a permit from*  
11 *a state or federal agency and does not create any liability on the part of the county for*  
12 *issuance of the permit if the applicant fails to obtain requisite approvals or fulfill the*  
13 *obligations imposed by a state or federal agency or undertakes actions that result in a*  
14 *violation of state or federal law. A county may attach such a disclaimer to the issuance of*  
15 *a development permit and may include a permit condition that all other applicable state*  
16 *or federal permits be obtained before commencement of the development. This section*  
17 *does not prohibit a county from providing information to an applicant regarding what*  
18 *other state or federal permits may apply*  
19

20 This new statute provision, does not allow the County to require a state or federal permit prior to  
21 issuance of a County permit, as the current comprehensive plan policies stipulate. Note: the County  
22 has developed a 'Notice to Proceed' process and places a condition on permits that all other  
23 applicable state or federal permits shall be obtained before commencement of the development.  
24

25 C. Based upon these various meetings, agency discussions, information received from the agencies and  
26 the new statutory provision, the applicant submitted a revised application on April 16, 2012. The  
27 new proposal includes the creation of sub-area policies applicable to a specific geographic area of  
28 submerged lands to enact site-specific, tailored parameters for the re-dredging of privately-owned  
29 submerged lands and to amend policies to define the specific, limited circumstances and conditions  
30 which shall be met to allow the re-dredging of privately-owned access channels and basins (see  
31 proposed amendment).  
32

33 The proposal has been drafted to apply only to privately-owned submerged lands. Additionally,  
34 multiple conditions have been proposed to narrow the scope of potential dredge proposals. Also, to  
35 ensure that potential future dredge projects are individually reviewed thoroughly by the local, state  
36 and federal agencies, a site-specific comprehensive plan amendment is required (similar to the  
37 adopted Goal 107 Sub-area policies). With requiring a comprehensive plan amendment, a proposal  
38 will need to go through multiple public hearings at the County, be transmitted to the State for a  
39 consistency review (by DEO and other reviewing agencies, such as DEP), be considered for  
40 adoption at a public hearing by the County and, ultimately, found in-compliance by the State –  
41 before the applicant can apply for building permits and commence any dredge activities.  
42

43 This proposal was also provided to the state agencies for review and comment, and their  
44 recommendations have been incorporated into the draft amendment. This is reflected in an updated  
45 draft submitted by the applicant on September 7, 2012.  
46

1 **III. PROPOSED AMENDMENT INCLUDING COUNTY RECOMMENDATIONS**

2 (red = applicant) (blue = County)

3  
4 **Objective 202.8**

5 ~~By January 4, 1997, Monroe County shall adopt~~ maintain Land Development Regulations which  
6 implement county policies controlling pollutant discharges into surface waters from dredge and fill  
7 activities.

8  
9 **Policy 202.8.1**

10 Monroe County shall support state and federal policies and regulations concerning the permitting of  
11 dredge and fill activity, except in those instances where more stringent regulations adopted by Monroe  
12 County shall be maintained.

13  
14 **Policy 202.8.2**

15 No new dredging shall be permitted in Monroe County.

16  
17 **Policy 202.8.3**

18 No maintenance dredging shall be permitted within areas vegetated with seagrass beds or characterized  
19 by hardbottom communities except for maintenance in public navigation channels. As used in this  
20 policy, public navigation channel means a channel that is constructed or maintained by a public entity  
21 such as a federal or state agency, local government, or inland navigation district listed in Chapter 374,  
22 F.S., or that is part of a public navigation project, public water management project, or a deepwater port  
23 listed in Section 403.021(9)(b), F.S. [source - Rule 18-21.003, F.A.C.]

24  
25 In limited circumstances, the re-dredging of privately-owned access channels and/or boat basins with  
26 marine resources may be permitted pursuant to Policy 202.8.4 and through the adoption of a sub-area  
27 policy, applicable to the specific geographic area, pursuant to Objective 202.9.

28  
29 **Policy 202.8.4**

30 In order to facilitate navigational access and reduce continued scarring of seagrass beds, re-dredging of  
31 historically dredged privately-owned access channels and/or boat basins may be permitted, in limited  
32 circumstances. As used in this policy, re-dredging may occur within historically dredged access  
33 channels and/or boat basins vegetated with seagrass communities, attached macroalgae or other  
34 hardbottom communities, if there is a continued threat to these communities due to existing upland  
35 development and docking facilities. Re-dredging shall only be permitted to preserve or restore the  
36 function of the access channel and/or boat basin.

37  
38 Access channels are defined as artificially-created channels, constructed through excavation, serving as  
39 waterways for watercraft, and providing access to open water. Access channels do not include propeller-  
40 dredged channels. Boat basins are defined as artificially-created basins, constructed through excavation,  
41 servicing as basins for the mooring of watercraft.

42  
43 Re-dredging of access channels and/or boat basins, vegetated with marine resources may be permitted if  
44 all of the following conditions are met:

- 45 1. There is an existing access channel and/or boat basin, evidenced by permits or historical aerial  
46 photography showing a historically-dredged channel.

- a. Re-dredging shall be limited to a depth of no more than 5 feet below mean low water, if the original construction or maintenance dredging of the channel occurred and no previous permit has been issued by the Florida Department of Environmental Protection or South Florida Water Management District or the United States Army Corps of Engineers or Florida Keys National Marine Sanctuary (e.g., occurred prior to permit requirements).
2. There is an existing, lawfully-established upland development and docking facility served by the access channel and/or boat basin.
3. The submerged land within the historically-dredged access channel is privately owned by the owner of the contiguous upland property containing the lawfully-established upland development and docking facility served by the access channel and/or boat basin.
4. Demonstrable natural shoaling has reduced the upland property owner's reasonable access to open water.
5. There is a demonstrable threat of scarring to the surrounding seagrass beds.
6. At a minimum, mitigation for seagrass impacts will be provided consistent with the *Final Programmatic Environmental Impact Statement for Seagrass Restoration in the Florida Keys National Marine Sanctuary* adopted in 2004.
7. A performance bond for the re-dredging of the access channel and/or boat basin will be provided to the County prior to permit issuance.
8. The applicant shall notify the County Biologist 48 hours in advance of any re-dredging activities commencing, to accommodate monitoring and inspections.
9. A post-construction survey of the re-dredge of the access channel and/or boat basin footprint and depth will be conducted by a State-licensed surveyor and provided to the County for review, and if physical characteristics, including depth, exceed 15 percent from that specified in the permit, the applicant will be required to correct the errors prior to release of the performance bond.
10. The re-dredging cannot be used to dredge natural or manmade barriers separating a canal or canal system from adjacent wetlands and/or other surface waters.
12. The re-dredging of an access channel(s) shall require the adoption of a sub-area policy, pursuant to Objective 202.9, delineating the specific geographic area and the mitigation.

The re-dredging of the access channel and/or boat basin shall be designed to protect natural resources and shall provide reasonable assurance that the activity will reduce continued scarring of surrounding seagrass beds through the provision and perpetual maintenance of educational signage, channel markers or buoys by the contiguous, upland property owner or owners. The re-dredging methodology shall not cause degradation of water quality or secondary and/or cumulative impacts to surrounding marine resources. Turbidity controls shall be used to prevent reduction of light availability to seagrasses and increased sedimentation of adjacent surface waters and marine resources.

In addition, issuance of a County permit will include conditions that: all applicable State and federal permits be obtained before commencement of work; that the applicant shall receive a notice to proceed from the County before commencement of work; a requirement that copies of these permits be available for inspection at the construction site at all times; and that lack of the State and Federal permits at any inspection will be immediate cause for issuance of a stop work order. Applicable state and federal permits may include permits from the Florida Department of Environmental Protection or South Florida Water Management District, the U.S. Army Corps of Engineers, and the Florida Keys National Marine Sanctuary.

1  
2 **Policy 202.8.5**

3 In order to ~~prevent degradation facilitate establishment~~ of bottom vegetation, maintenance dredging in  
4 artificial waterways or the re-dredging of a historically dredged privately-owned access channel and/or  
5 boat basin shall not exceed depths greater than minus six (-6) feet mean low water or to original design  
6 depths as documented in the original permit specifications of the dredged area, whichever is more  
7 restrictive. This policy does not apply to the entrance channels into Key West Harbor and Safe Harbor.  
8

9 **Policy 202.8.5 6**

10 All dredged spoil resulting from maintenance dredging or the re-dredging of a historically dredged  
11 privately-owned access channel and/or boat basin shall be placed on permitted upland sites where  
12 drainage can be contained on-site unless utilization of the dredged spoil is an element of an approved  
13 and permitted State and/or Federal seagrass restoration project that provides reasonable assurance of no  
14 negative impacts to water quality, species or habitats.  
15

16 **Policy 202.8.6 7**

17 No "after-the-fact" permits shall be issued that violate Monroe County dredge and fill regulations. All  
18 illegal structures and fill shall be removed and damages mitigated.  
19

20 **Policy 202.8.7 8**

21 Monroe County shall develop a schedule of monetary penalties that provides for fair and equitable  
22 penalties for all dredge and fill violations. Penalty revenues obtained from these violations shall be set  
23 aside and used specifically for water quality enhancement projects.  
24

25 **Objective 202.9**

26 ~~By January 4, 1997, Monroe County shall develop and implement permitting, inspection, and~~  
27 ~~enforcement procedures designed to reduce pollutant discharges into ground and surface waters from~~  
28 ~~stormwater runoff. (See Drainage Goal 1001 and related objectives and policies.)~~  
29

30 Monroe County shall regulate the re-dredging of historically dredged privately-owned access channel  
31 and/or boat basins with seagrass communities, attached macroalgae or other hardbottom communities,  
32 through sub-area policies applicable to a specific geographic area. These sub-area policies identify  
33 parcels of submerged land and the site-specific regulations developed in order to confine potential  
34 impacts to a specific area and document the mitigation for the proposed impacts. The development  
35 parameters established for each sub-area shall be based on data and conditions specific to the site in  
36 relation to the protection of natural resources.  
37

38 **Policy 202.9.1**

39 In addition to the requirements of Policy 202.8.4, Monroe County shall regulate the re-dredging of  
40 historically-dredged, privately-owned access channels and basins serving existing, lawfully-established  
41 upland development with docking facilities, where the area has been recolonized by seagrasses, attached  
42 macroalgae or other hardbottom communities, by the enactment of site-specific regulations that allow  
43 re-dredging to occur subject to limitations and conditions designed to protect natural resources.  
44  
45  
46

**Policy 202.9.2 Walker’s Island Privately-Owned Submerged Lands**

This policy shall document the specific geographic area of the re-dredging permitted on the Walker’s Island privately-owned submerged lands and the required mitigation for the resource impacts.

Only the re-dredging specified in the Table 1 and Figure 2 (below) shall be allowed on the submerged land parcel shown as the Walker’s Island Privately-Owned Submerged Land Area, subject to conditions listed below.

Figure 1: Location Map & Parcel Boundary

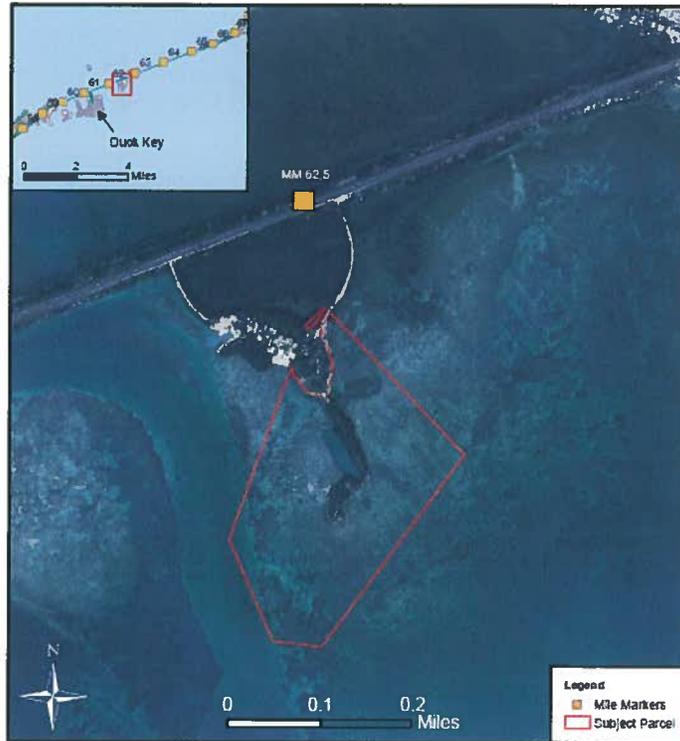
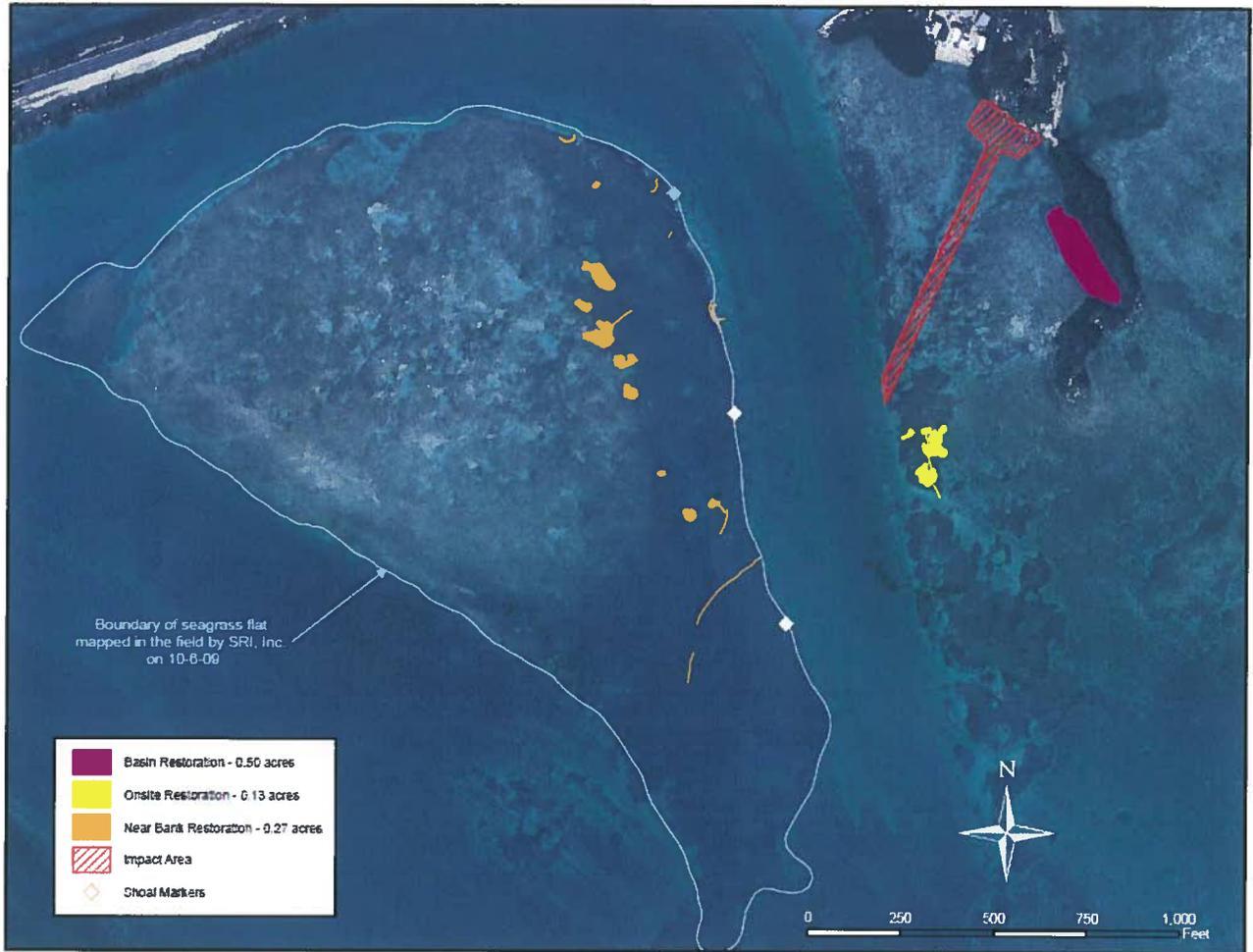


Table 1: General Description

<u>Real Estate Number</u>	<u>Total Acreage of Submerged Lands parcel</u>	<u>Impacted Acres</u>	<u>Mitigation: Conservation Easement Acreage</u>
<u>00099110-000000</u>	<u>27.22</u>	<u>0.63</u>	<u>26.93</u>
<u>Description: 15 65 34 LITTLE CONCH KEY BAY BOTTOM NE'LY SE'LY &amp; SW'LY &amp; ADJ TO LITTLE CONCH KEY OR371-544/50 OR804-1163D/C OR820-575Q OR1351-519/WILL CASE #95-10270-CP-10 OR2197-1977/78 OR2326-612/16</u>			

1 Figure 2: Re-dredge Boundary (Impact Area) and Mitigation Area

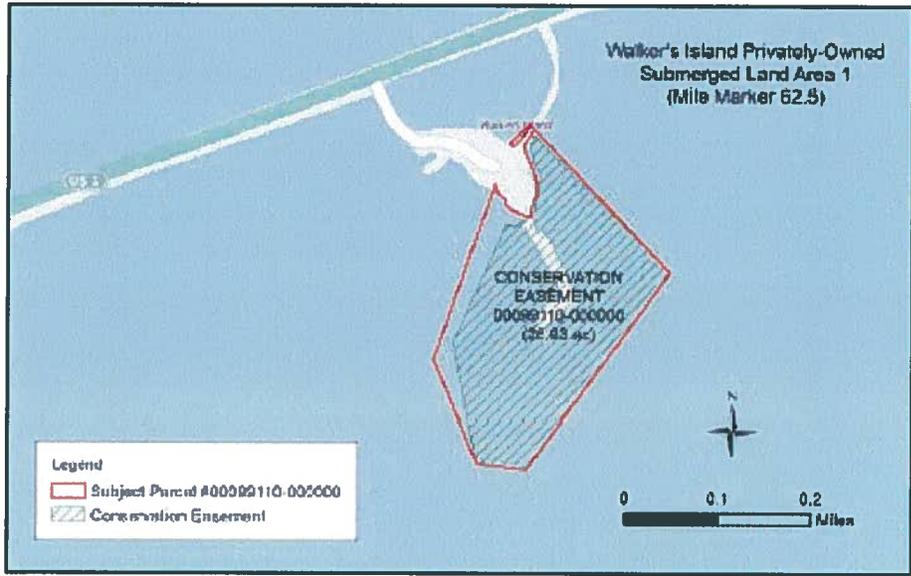


31 **Conditions:**

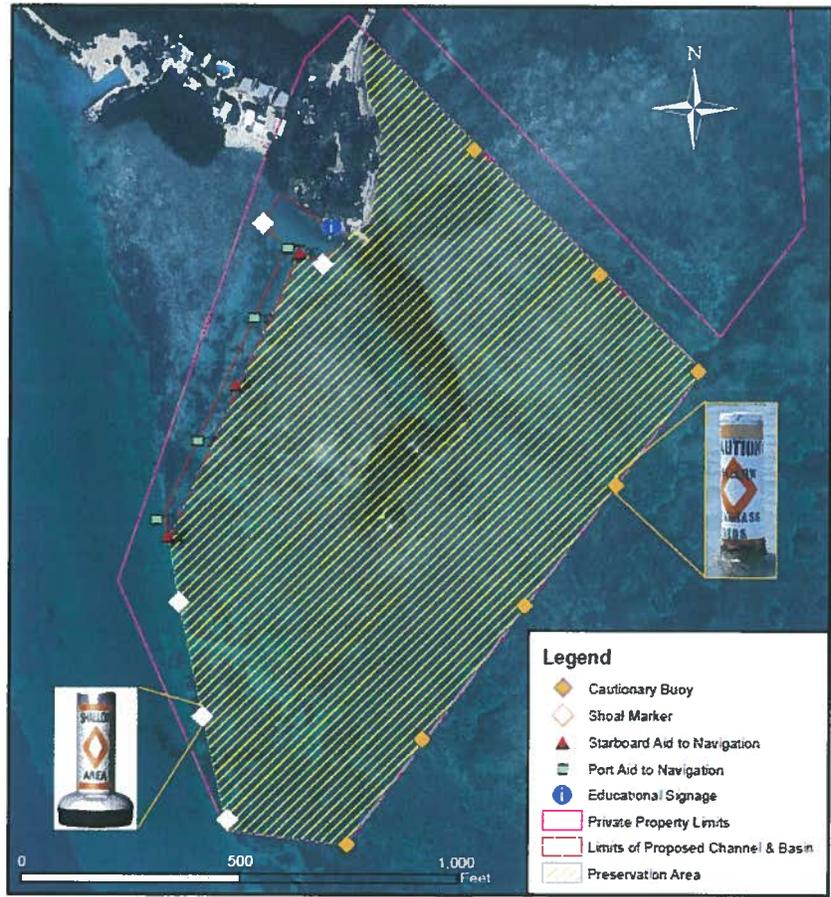
32  
33 The re-dredging at the Walker's Island Privately Owned Submerged Land Area shall be subject to all the  
34 restrictions set out below:

- 35 1. The re-dredging of the channel and basin shall be limited to no more than the acreage specified in  
36 the above table 1 to facilitate navigational access to the existing, lawfully-established upland  
37 development and docking facility.
- 38 2. The re-dredging shall not exceed a depth of 5 feet below mean low water or to depths of refusal as  
39 measured by a depth survey conducted by a State-licensed surveyor, whichever is more  
40 restrictive.
- 41 3. Recordation of a conservation easement in favor of the South Florida Water Management District,  
42 prohibiting all impacts on, and requiring perpetual maintenance of, 26.93 acres of submerged land  
43 contained in parcel 00099100-000000. The area to be conserved is delineated in the Figure 3.
- 44 4. The provision and perpetual maintenance of educational signage, channel markers or buoys by the  
45 property owner or owners; as delineated in Figure 4.
- 46

1 [Figure 3: Required Conservation Easement](#)



17  
18 [Figure 4 Required signage, channel markers or buoys](#)



1 **Objective 203.2**

2 Monroe County shall protect submerged lands vegetated with seagrasses by implementing regulations  
3 which will further reduce direct and indirect disturbances to seagrasses.  
4

5 **Policy 203.2.1**

6 Upon adoption of the Comprehensive Plan, Monroe County shall prohibit the location of mooring sites  
7 over submerged land which is vegetated with seagrasses or characterized by a hard-bottom community,  
8 regardless of water depth, except as may be permitted by the Florida Department of Environmental  
9 Protection. This prohibition shall also apply to mooring fields.  
10

11 **Policy 203.2.2**

12 Upon adoption of the Comprehensive Plan, Monroe County shall prohibit the termination of docking  
13 facilities and piers over submerged land which is vegetated with seagrasses or characterized by a hard-  
14 bottom community, regardless of water depth, except as may be permitted by the Florida Department of  
15 Environmental Protection. Design criteria to permit sunlight to reach the bottom shall be adopted. No  
16 boat shelters or gazebos shall extend over submerged lands vegetated with seagrasses or over  
17 hardbottom communities.

18 **Policy 203.2.3**

19 ~~Effective upon plan adoption,~~ Monroe County shall:

- 20 1. ~~P~~rohibit new dredging in the Florida Keys; and
- 21 2. ~~P~~rohibit maintenance dredging within areas vegetated with seagrass beds except for maintenance  
22 dredging in public navigation channels. (See Objective 202.8 and related policies.)
- 23 3. In limited circumstances, the re-dredging of privately-owned access channels and/or basins with  
24 marine resources may be permitted pursuant to Policy 202.8.4 and through the adoption of a sub-  
25 area policy applicable to a specific geographic area, pursuant to Objective 202.9.  
26

27 **Policy 203.2.4**

28 By July/August 1993, Monroe County shall seek to enter into an agreement with NOAA, EPA and DER  
29 regarding support of scientific studies of stresses on seagrass ecosystems in the Florida Keys region.  
30 This agreement shall be developed following completion of the Florida Keys National Marine Sanctuary  
31 Management Plan. This plan shall identify the research needs to be addressed in this agreement.  
32

33 **Policy 203.2.5**

34 Monroe County shall support the public education program for users of the Florida Keys National  
35 Marine Sanctuary as outlined in the Florida Keys National Marine Sanctuary Management Plan (U.S.  
36 Dept. of Commerce, NOAA, in preparation). This program shall promote user education related to,  
37 among other items, seagrass bed conservation and navigational safety in nearshore waters.  
38

39 **Policy 203.2.6**

40 By January 4, 1998, Monroe County shall enter digital information describing the location of seagrass  
41 beds in the Florida Keys into the County's Geographic Information System. These data shall be made  
42 available from the Florida Keys National Marine Sanctuary Management Program.  
43  
44  
45

1 **Objective 204.2**

2 Monroe County shall eliminate the loss of undisturbed wetlands and shall eliminate the net loss of  
3 disturbed wetlands.

4  
5 **Policy 204.2.1**

6 To protect submerged lands and wetlands the open space shall be 100 percent of the following types of  
7 wetlands:

- 8 1. submerged lands;
- 9 2. mangroves;
- 10 3. salt ponds;
- 11 4. freshwater wetlands;
- 12 5. freshwater ponds; and
- 13 6. undisturbed saltmarsh and buttonwood wetlands.

14  
15 Allocated density (dwelling units per acre) shall be assigned to freshwater wetlands and undisturbed salt  
16 marsh and buttonwood wetland only for use as transferable development rights away from these  
17 habitats. Submerged lands, salt ponds, freshwater ponds and mangroves shall not be assigned any  
18 density or intensity.

19  
20 **Policy 204.2.2**

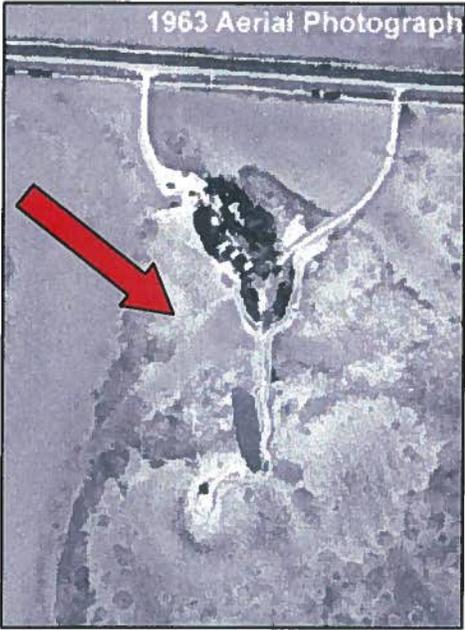
21 No structures shall be permitted in submerged lands, mangroves, salt ponds, or wetlands, except for  
22 elevated, pile-supported walkways, docks, piers and utility pilings. No fill shall be permitted in  
23 submerged lands, mangroves, salt ponds, or wetlands except;

- 24 1. as specifically allowed by Objective 212.6 and subsequent policies;
- 25 2. to fill a manmade, excavated water body such as a canal, basin or swimming pool if the Director  
26 of Environmental Resources determines that such filling will not have a significant adverse impacts  
27 on marine or wetland communities; or
- 28 3. as needed for shorelines stabilization, seagrass restoration or beach renourishment projects with a  
29 valid public purpose that furthers the goals of the Monroe County Comprehensive Plan as  
30 determined by the Directors of Planning and Environmental Resources. ~~All such projects shall~~  
31 ~~require approval by the Florida Department of Environmental Protection and the U.S. Army Corps~~  
32 ~~of Engineers prior to issuance of a County building permit.~~ Issuance of a County permit will include  
33 conditions that: all applicable State and federal permits be obtained before commencement of work;  
34 and that the applicant shall receive a notice to proceed from the County before commencement of  
35 work; a requirement that copies of these permits be available for inspection at the construction site at  
36 all times; and that lack of the State and Federal permits at any inspection will be immediate cause for  
37 issuance of a stop work order. Applicable state and federal permits may include permits from the  
38 Florida Department of Environmental Protection or South Florida Water Management District, the  
39 U.S. Army Corps of Engineers, and the Florida Keys National Marine Sanctuary.

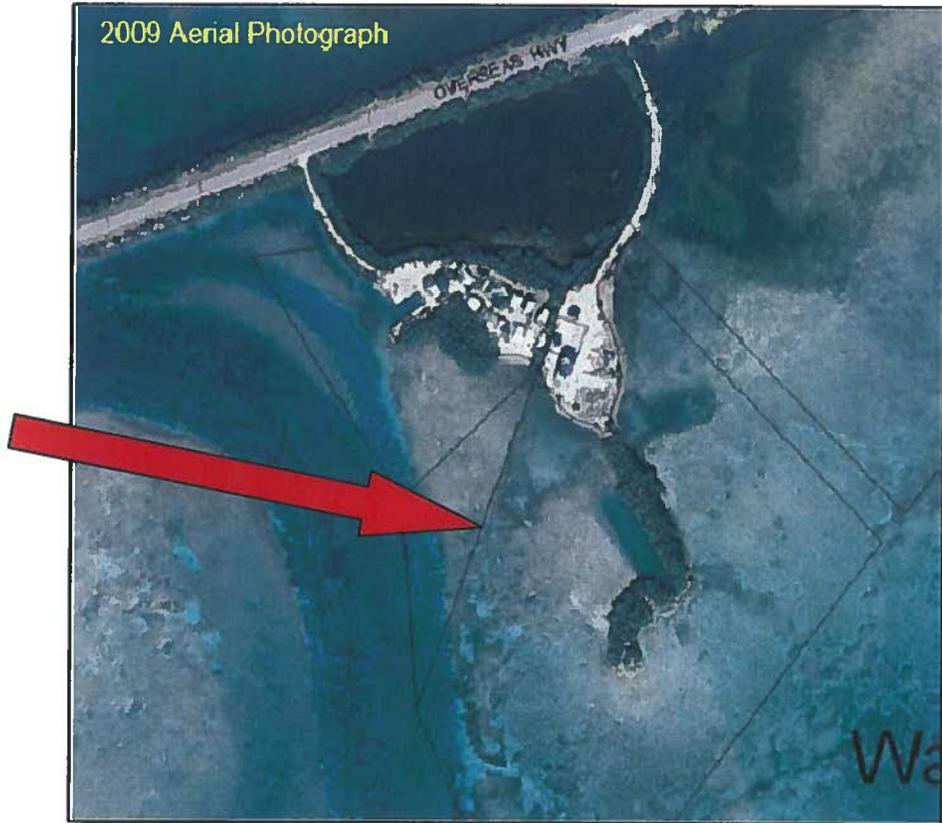
40  
41 **IV. ANALYSIS OF THE WALKER'S ISLAND PRIVATELY-OWNED SUBMERGED LAND**  
42 **AREA**

43  
44 The Walker's Island channel, which serves eight upland dwelling units, appears to have been  
45 dredged in the early 1950's and does not appear to have been maintained since that time. The  
46 historic access channel and basin has since experienced significant shoaling (see images below).

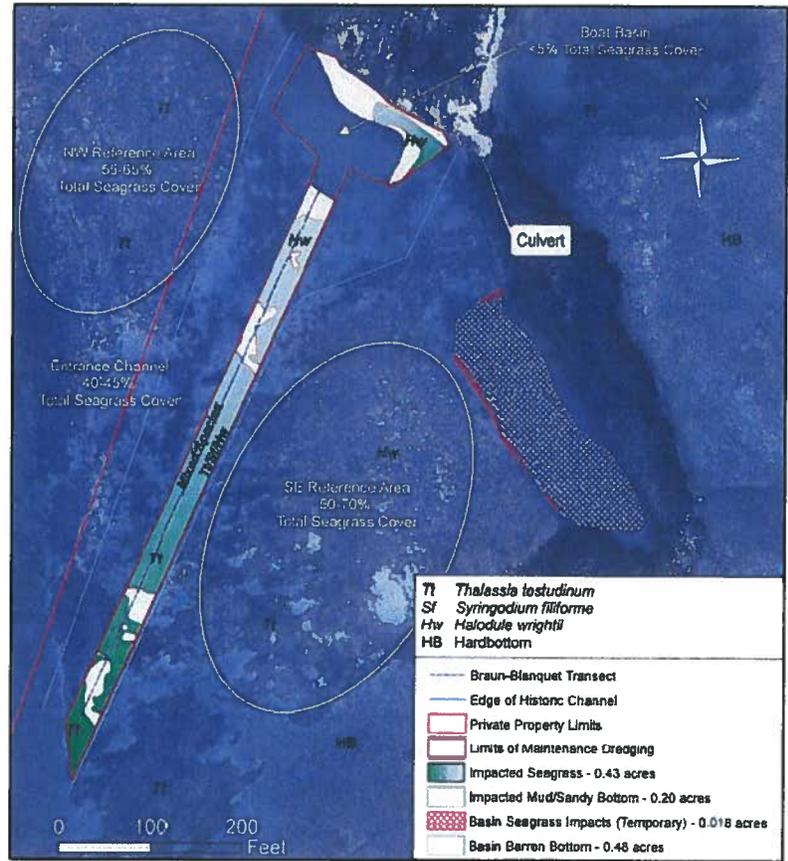
1 The Comprehensive Plan amendment application by SWC states: "An entrance channel and boat  
2 basin were excavated in the 1950s, prior to the time when State or federal environmental permits  
3 were issued for this kind of work... This entrance channel and boat basin have accumulated extensive  
4 sediment during the intervening years and currently the access depth from the nearby open water to  
5 the existing dock is quite shallow, ranging from as little as 0.47 feet to 2.86 feet with an estimated  
6 average depth of about 1.5 feet."  
7



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Additionally, data provided by the applicant indicates that there 40-45% seagrass coverage within the access channel and less than 5% within the boat basin.



1 Information has not been provided indicating that a Sanctuary permit has been applied for by the  
2 applicant. The Comprehensive Plan amendment application by SWC states that draft Essential Fish  
3 Habitat (EFH) assessment was provided to the National Marine Fisheries Service (NMFS) for  
4 preliminary review. Information has not been provided indicating if the applicant has applied for  
5 permits from the Army Corps of Engineers.  
6

7 To date, the applicant has applied for a SFWMD environmental resource permit. When the  
8 applicant submitted this environmental resource permit application with the SFWMD, DEO  
9 (formerly DCA) provided comments to the SFWMD, pursuant to the federal consistency review  
10 process, that the proposed activity was inconsistent with the Monroe County 2010 Comprehensive  
11 Plan and the Principles for Guiding Development (Section 380.0552(7), F.S.) because the permit  
12 application proposed maintenance dredging in an area with marine resources. Due to the DEO  
13 objection to the environmental resource permit, the applicant submitted an application for a  
14 comprehensive plan amendment.  
15

16 This proposal, while it provides multiple conditions that must be satisfied for a dredge project,  
17 would also establish a procedure to allow other property owners of privately-owned channels or  
18 basins in unincorporated Monroe County to request site-specific dredge amendments to restore or  
19 enhance their navigational access and reduce continued scarring of the surrounding seagrass beds.  
20

21 Note: staff does not have access to readily available information to determine the exact number of  
22 existing “privately-owned channels” or the number of previously dredge channels (historically  
23 dredged before State permitting requirements) within unincorporated Monroe County that could  
24 utilize the proposed amendment. Based on a basic GIS analysis to simply estimate the number of  
25 access channels in the County, it is estimated that there are 200 channels. Note, this does not take  
26 into account the various other proposed conditions, such as lawfully established upland  
27 development, ownership, demonstrable threat of scarring to the surrounding seagrass beds, etc  
28

29 **Example:**



41  
42 The applicant has also conducted a GIS analysis to identify potentially affected parcels and has  
43 stated, based on their analysis, that less than 83 privately-owned submerged parcels might be  
44 affected. This analysis was filtered with other data layers, such as the PC codes for residential,  
45 commercial, or vacant land. This is useful information but may or may not accurately reflect the  
46 specific condition in the proposed policy that there is an “existing, lawfully-established upland

1 development and docking facility.” (\*Note, neither the applicant nor County staff have data of the  
2 existing water depths or exact marine resource coverage of these privately-owned submerged lands).  
3

#### 4 **V. FLORIDA STATUTES AND FLORIDA ADMINISTRATIVE CODE RELATED TO** 5 **MAINTENANCE DREDGING AND DISPOSAL OF DREDGED SPOIL** 6

7 **Section 373.403, F.S. Definitions.**—When appearing in this part or in any rule, regulation, or order adopted  
8 pursuant thereto, the following terms mean:

- 9 (8) “Maintenance” or “repairs” means remedial work of a nature as may affect the safety of any dam,  
10 impoundment, reservoir, or appurtenant work or works, but excludes routine custodial maintenance.  
11 (13) “Dredging” means excavation, by any means, in surface waters or wetlands, as delineated in s.  
12 373.421(1). It also means the excavation, or creation, of a water body which is, or is to be, connected to  
13 surface waters or wetlands, as delineated in s. 373.421(1), directly or via an excavated water body or series  
14 of water bodies.  
15 (14) “Filling” means the deposition, by any means, of materials in surface waters or wetlands, as delineated  
16 in s. 373.421(1).  
17

18 **Section 373.4144, F.S. Federal environmental permitting.**—

- 19 (1) The department is directed to develop, on or before October 1, 2005, a mechanism or plan to  
20 consolidate, to the maximum extent practicable, the federal and state wetland permitting programs. It is the  
21 intent of the Legislature that all dredge and fill activities impacting 10 acres or less of wetlands or waters,  
22 including navigable waters, be processed by the state as part of the environmental resource permitting  
23 program implemented by the department and the water management districts. The resulting mechanism or  
24 plan shall analyze and propose the development of an expanded state programmatic general permit program  
25 in conjunction with the United States Army Corps of Engineers pursuant to s. 404 of the Clean Water Act,  
26 Pub. L. No. 92-500, as amended, 33 U.S.C. ss. 1251 et seq., and s. 10 of the Rivers and Harbors Act of  
27 1899. Alternatively, or in combination with an expanded state programmatic general permit, the mechanism  
28 or plan may propose the creation of a series of regional general permits issued by the United States Army  
29 Corps of Engineers pursuant to the referenced statutes. All of the regional general permits must be  
30 administered by the department or the water management districts or their designees.  
31

32 **Section 403.061, F.S. Department; powers and duties.**—The department shall have the power and the duty  
33 to control and prohibit pollution of air and water in accordance with the law and rules adopted and  
34 promulgated by it and, for this purpose, to:

- 35 (24)(a) Establish a permit system to provide for spoil site approval, as may be requested and required by  
36 local governmental agencies as defined in <sup>1</sup>s. 403.1822(3), or mosquito control districts as defined in s.  
37 388.011(5), to facilitate these agencies in providing spoil sites for the deposit of spoil from maintenance  
38 dredging of navigation channels, port harbors, turning basins, and harbor berths, as part of a federal project,  
39 when the agency is acting as sponsor of a contemplated dredge and fill operation involving an established  
40 navigation channel, harbor, turning basin, or harbor berth. A spoil site approval granted to the agency shall  
41 be granted for a period of 10 to 25 years when such site is not inconsistent with an adopted local  
42 governmental comprehensive plan and the requirements of this chapter. The department shall periodically  
43 review each permit to determine compliance with the terms and conditions of the permit. Such review shall  
44 be conducted at least once every 10 years.  
45 (b) This subsection applies only to those maintenance dredging operations permitted after July 1, 1980,  
46 where the United States Army Corps of Engineers is the prime dredge and fill agent and the local  
47 governmental agency is acting as sponsor for the operation, and does not require the redesignation of  
48 currently approved spoil sites under such previous operations.  
49 (37) Provide a supplemental permitting process for the issuance of a joint coastal permit pursuant to s.  
50 161.055 or environmental resource permit pursuant to part IV of chapter 373, to a port listed in s. 311.09(1),

1 for maintenance dredging and the management of dredged materials from maintenance dredging of all  
2 navigation channels, port harbors, turning basins, and harbor berths. Such permit shall be issued for a period  
3 of 5 years and shall be annually extended for an additional year if the port is in compliance with all permit  
4 conditions at the time of extension. The department is authorized to adopt rules to implement this  
5 subsection.  
6

7 **403.803 Definitions.**—When used in this act, the term, phrase, or word:

- 8 (2) “Canal” is a manmade trench, the bottom of which is normally covered by water with the upper edges of  
9 its sides normally above water.  
10 (3) “Channel” is a trench, the bottom of which is normally covered entirely by water, with the upper edges  
11 of its sides normally below water.  
12

13 **Section 403.813, F.S. Permits issued at district centers; exceptions.**—

- 14 (1) A permit is not required under this chapter, chapter 373, chapter 61-691, Laws of Florida, or chapter  
15 25214 or chapter 25270, 1949, Laws of Florida, for activities associated with the following types of  
16 projects; however, except as otherwise provided in this subsection, nothing in this subsection relieves an  
17 applicant from any requirement to obtain permission to use or occupy lands owned by the Board of Trustees  
18 of the Internal Improvement Trust Fund or any water management district in its governmental or proprietary  
19 capacity or from complying with applicable local pollution control programs authorized under this chapter  
20 or other requirements of county and municipal governments:  
21 (f) The performance of maintenance dredging of existing manmade canals, channels, intake and discharge  
22 structures, and previously dredged portions of natural water bodies within drainage rights-of-way or  
23 drainage easements which have been recorded in the public records of the county, where the spoil material  
24 is to be removed and deposited on a self-contained, upland spoil site which will prevent the escape of the  
25 spoil material into the waters of the state, provided that no more dredging is to be performed than is  
26 necessary to restore the canals, channels, and intake and discharge structures, and previously dredged  
27 portions of natural water bodies, to original design specifications or configurations, provided that the work  
28 is conducted in compliance with s. 379.2431(2)(d), provided that no significant impacts occur to previously  
29 undisturbed natural areas, and provided that control devices for return flow and best management practices  
30 for erosion and sediment control are utilized to prevent bank erosion and scouring and to prevent turbidity,  
31 dredged material, and toxic or deleterious substances from discharging into adjacent waters during  
32 maintenance dredging. Further, for maintenance dredging of previously dredged portions of natural water  
33 bodies within recorded drainage rights-of-way or drainage easements, an entity that seeks an exemption  
34 must notify the department or water management district, as applicable, at least 30 days prior to dredging  
35 and provide documentation of original design specifications or configurations where such exist. This  
36 exemption applies to all canals and previously dredged portions of natural water bodies within recorded  
37 drainage rights-of-way or drainage easements constructed prior to April 3, 1970, and to those canals and  
38 previously dredged portions of natural water bodies constructed on or after April 3, 1970, pursuant to all  
39 necessary state permits. This exemption does not apply to the removal of a natural or manmade barrier  
40 separating a canal or canal system from adjacent waters. When no previous permit has been issued by the  
41 Board of Trustees of the Internal Improvement Trust Fund or the United States Army Corps of Engineers  
42 for construction or maintenance dredging of the existing manmade canal or intake or discharge structure,  
43 such maintenance dredging shall be limited to a depth of no more than 5 feet below mean low water. The  
44 Board of Trustees of the Internal Improvement Trust Fund may fix and recover from the permittee an  
45 amount equal to the difference between the fair market value and the actual cost of the maintenance  
46 dredging for material removed during such maintenance dredging. However, no charge shall be exacted by  
47 the state for material removed during such maintenance dredging by a public port authority. The removing  
48 party may subsequently sell such material; however, proceeds from such sale that exceed the costs of  
49 maintenance dredging shall be remitted to the state and deposited in the Internal Improvement Trust Fund.  
50

1 **Rule 40E-4.051 Exemptions From Permitting.** Exemptions from permitting under Chapters 40E-4, 40E-40  
2 and 40E-400, F.A.C. are set forth below. The performance of activities pursuant to the provisions of the  
3 exemptions set forth in this section does not relieve the person or persons who are using the exemption or  
4 who are constructing or otherwise implementing the activity from meeting the permitting or performance  
5 requirements of other District rules. Nothing in this section shall prohibit the Department from taking  
6 appropriate enforcement action pursuant to Chapter 403, F.S., to abate or prohibit any activity otherwise  
7 exempt from permitting pursuant to this section if the Department can demonstrate that the exempted  
8 activity has caused water pollution in violation of Chapter 403, F.S.

9 (2) Maintenance of Systems.

10 (a) The performance of maintenance dredging of existing manmade canals, channels, basins, berths, and  
11 intake and discharge structures, where the spoil material is to be removed and deposited on a self-contained,  
12 upland spoil site which will prevent the escape of the spoil material and return water from the spoil site into  
13 wetlands or other surface waters, provided no more dredging is performed than is necessary to restore the  
14 canal, channels, basins, berths, and intake and discharge structures to original design specifications, and  
15 provided that control devices are used at the dredge site to prevent turbidity and toxic or deleterious  
16 substances from discharging into adjacent waters during maintenance dredging. This exemption shall apply  
17 to all canals constructed before April 3, 1970, and to those canals constructed on or after April 3, 1970,  
18 pursuant to all necessary state permits. This exemption shall not apply to the removal of a natural or  
19 manmade barrier separating a canal or canal system from adjacent wetlands or other surface waters. Where  
20 no previous permit has been issued by the Board of Trustees of the Internal Improvement Trust Fund, the  
21 Department, the District or the United States Army Corps of Engineers for construction or maintenance  
22 dredging of the existing manmade canal, channel, basin, berth or intake or discharge structure, such  
23 maintenance dredging shall be limited to a depth of no more than 5 feet below mean low water.  
24

25 **Rule 18-21.003 Definitions.**

26 When used in these rules, the following definitions shall apply unless the context clearly indicates otherwise:

27 (46) "Private channel" means a channel that is dredged or maintained by private entities to provide access to  
28 or from such locations as private residences, marinas, yacht clubs, vessel repair facilities, or revenue-  
29 generating facilities.

30 (50) "Public channel" means a channel that is constructed or maintained by a public entity such as a federal or  
31 state agency, local government, or inland navigation district listed in Chapter 374, F.S., or that is part of a  
32 public navigation project, public water management project, or a deepwater port listed in Section  
33 403.021(9)(b), F.S.

34 (52) "Public navigation project" means an activity primarily for the purpose of navigation which is authorized  
35 and funded by the United States Congress or by port authorities as defined by Section 315.02(2), F.S.  
36

37 **Rule 62-312.010 Scope of Part I.**

38 This part provides the requirements and procedures for obtaining permits and jurisdictional declaratory  
39 statements from the Department pursuant to Sections 403.91 through 403.929, F.S. Dredging or filling  
40 which is grandfathered by subsections 403.913(6), (8) and (9), F.S., is governed by Rules 62-312.150 and  
41 62-312.160, F.A.C. The requirements of this part are in addition to and not in lieu of the water quality  
42 standards which are required by other portions of these sections. Except for the definitions contained in  
43 Rule 62-312.020, F.A.C., which shall also apply to activities regulated under Part IV of Chapter 373, F.S.,  
44 the provisions of this Part shall only apply to activities in the geographical territory of the Northwest Florida  
45 Water Management District and to activities grandfathered under Sections 373.414(9), (11), (12)(a), (13),  
46 (14), (15) and (16), F.S.  
47

48 **Rule 62-312.020 Definitions.**

49 (7) "Dredging" is the excavation, by any means, in waters of the state. It is also the excavation (or creation) of  
50 a water body which is, or is to be, connected to any of the waters listed in subsection 62-312.030(2), F.A.C.,

1 directly or via an excavated water body or series of excavated water bodies.  
2

3 **Rule 62-312.400 Intent.**

- 4 (1) Part IV pertains to Outstanding Florida Waters, exclusive of all artificial water bodies, within Monroe  
5 County, as identified in Rule 62-302.700, F.A.C., and is in addition to all other applicable Departmental  
6 rules relating to environmental resource permit or grandfathered dredge and fill permit applications under  
7 Part IV of Chapter 373, F.S. Artificial water bodies shall be defined as any water body created by dredging,  
8 or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3),  
9 F.A.C., and borrow pits or waters resulting from rock mining activities.
- 10 (2)(a) The Environmental Regulation Commission finds that the waters of the Florida Keys and other  
11 Outstanding Florida Waters in Monroe County are an irreplaceable asset which require special protection.  
12 (b) Further, the Florida Legislature in adopting Section 380.0552, F.S., recognized the value of the Florida  
13 Keys to the State as a whole by designating the Keys an Area of Critical State Concern. This rule  
14 implements Section 403.061(34), F.S., and is intended to provide the most stringent protection for the  
15 applicable waters allowable by law.
- 16 (3) Pursuant to Section 380.0552(7), F.S. (1986 Supp.), the specific criteria set forth in this section are  
17 intended to be consistent with the Principles for Guiding Development as set forth in Chapter 28-29, F.A.C.  
18 (August 23, 1984), and with the principles set forth in that statute. However, the criteria in this rule does not  
19 apply to all waters within the Florida Keys. These criteria do not apply to artificial waterbodies within the  
20 Florida Keys, as described in subsection 62-312.400(1), F.A.C. In addition, the four foot water depth  
21 restriction for piers which do not provide commercial marine supplies or services and which are designed to  
22 moor between three and nine boats are not applicable within the Outstanding Florida Waters that are within  
23 the boundaries of the City of Key West or within Everglades National Park or areas north of the Park within  
24 Monroe County. Docking facilities in those areas shall instead be subject to the three foot depth restrictions  
25 specified in paragraph 62-312.420(2)(a), F.A.C. However, all other provisions of this part are applicable in  
26 those areas.  
27

28 **Rule 62-312.410 General Criteria.**

- 29 (1) Subject to the provisions of the mitigation section of this part (Rule 62-312.450, F.A.C.), no  
30 environmental resource permit or grandfathered dredge and fill permit under Part IV of Chapter 373, F.S.,  
31 shall be issued for any activity in Outstanding Florida Waters in Monroe County if such activity:  
32 (a) Alone or in combination with other activities damages the viability of a living stony coral community  
33 (Scleroactinia and Milleporina), soft coral community (Alcyonoacea, Gorgonacea and Pennatulacea), macro  
34 marine algae community (Chlorophyta, Phaeophyta and Rhodophyta), sponge bed community (Porifera), or  
35 marine seagrass (Hydrocharitaceae and Cymodoceae) bed community. This prohibition shall not include  
36 algae unattached to the bottom, nor shall it include algae growing landward of the mean high water line or  
37 growing as an epiphyte or periphyte on woody plants. For the purposes of this Part a marine seagrass bed or  
38 marine macroalgae community means an area dominated by the listed biota having an areal extent of at  
39 least 100 square feet. This paragraph does not imply that the Department cannot restrict the impact on  
40 smaller areas for such species based on other Department rules;
- 41 (b) Has been initiated or completed without benefit of an environmental resource permit or dredge and fill  
42 permit required by the Department.
- 43 (2) Subject to the provisions of the mitigation section of this part (Rule 62-312.450, F.A.C.), no permit shall  
44 be issued for the placement of fill in Outstanding Florida Waters in Monroe County unless expressly  
45 authorized by this rule or unless the Department determines that under applicable rules a permit may be  
46 issued in the following situations:
- 47 (a) Filling for projects which have been proposed by a governmental entity, public authority or public or  
48 private utility; or  
49 (b) Filling for any other projects located within the landward extent of wetlands identified solely by

1 vegetative dominance as described in paragraph 62-340.300(2)(b), F.A.C. Such areas do not include open  
2 waters or wetlands identified by vegetative dominance as described in paragraph 62-340.300(2)(a), F.A.C.,  
3 or by the provisions of paragraph 62-340.300(2)(c) or (d), F.A.C.  
4

5 **Rule 62-312.450 Mitigation.**

6 Notwithstanding any of the prohibitions contained in this rule, the Department shall consider mitigation  
7 pursuant to Section 373.414(1)(b), F.S., and applicable Department rules to determine whether the project  
8 may otherwise be permissible. In any application for mitigation, the applicant shall demonstrate before  
9 issuance of any permit for the construction of the intended project that the proposed mitigation will be  
10 effective. Mitigation shall not be permitted where it appears after due considerations that construction of the  
11 intended project will cause irreplaceable damage to the site.  
12

13 **VI. CONSISTENCY WITH THE MONROE COUNTY YEAR 2010 COMPREHENSIVE**  
14 **PLAN, THE FLORIDA STATUTES, AND PRINCIPLES FOR GUIDING**  
15 **DEVELOPMENT**

16  
17 **A. The proposed amendment is not inconsistent with the following Goals, Objectives and**  
18 **Policies of the Monroe County Year 2010 Comprehensive Plan.**  
19

20 **Goal 101:** Monroe County shall manage future growth to enhance the quality of life, ensure  
21 the safety of County residents and visitors, and protect valuable natural resources.  
22

23 **Objective 101.11:** Monroe County shall implement measures to direct future growth away  
24 from environmentally sensitive land and towards established development areas served by  
25 existing public facilities.  
26

27 **GOAL 202:** The environmental quality of Monroe County's estuaries, nearshore waters  
28 (canals, harbors, bays, lakes and tidal streams,) and associated marine resources shall be  
29 maintained and, where possible, enhanced.  
30

31 **GOAL 203:** The health and integrity of living marine resources and marine habitat, including  
32 mangroves, seagrasses, coral reefs and fisheries, shall be protected and, where possible,  
33 enhanced.  
34

35 **Objective 203.2:** Monroe County shall protect submerged lands vegetated with seagrasses by  
36 implementing regulations which will further reduce direct and indirect disturbances to  
37 seagrasses.  
38

39 **Objective 203.6:** Monroe County shall coordinate development and implementation of  
40 programs and regulations to protect the living marine resources of the Florida Keys with  
41 other federal, state and local authorities with jurisdiction over marine activities within the  
42 Florida Keys.  
43

44 **GOAL 204:** The health and integrity of Monroe County's marine and freshwater wetlands  
45 shall be protected and, where possible, enhanced.  
46

1 **B. The amendment is not inconsistent with the Principles for Guiding Development for the**  
2 **Florida Keys Area, Section 380.0552(7), Florida Statute.**  
3

4 For the purposes of reviewing consistency of the adopted plan or any amendments to that plan  
5 with the principles for guiding development and any amendments to the principles, the principles  
6 shall be construed as a whole and no specific provision shall be construed or applied in isolation  
7 from the other provisions.  
8

- 9 (a) Strengthening local government capabilities for managing land use and development so that local  
10 government is able to achieve these objectives without continuing the area of critical state concern  
11 designation.  
12 (b) Protecting shoreline and marine resources, including mangroves, coral reef formations, seagrass beds,  
13 wetlands, fish and wildlife, and their habitat.  
14 (c) Protecting upland resources, tropical biological communities, freshwater wetlands, native tropical  
15 vegetation (for example, hardwood hammocks and pinelands), dune ridges and beaches, wildlife, and  
16 their habitat.  
17 (d) Ensuring the maximum well-being of the Florida Keys and its citizens through sound economic  
18 development.  
19 (e) Limiting the adverse impacts of development on the quality of water throughout the Florida Keys.  
20 (f) Enhancing natural scenic resources, promoting the aesthetic benefits of the natural environment, and  
21 ensuring that development is compatible with the unique historic character of the Florida Keys.  
22 (g) Protecting the historical heritage of the Florida Keys.  
23 (h) Protecting the value, efficiency, cost-effectiveness, and amortized life of existing and proposed major  
24 public investments, including:  
25  
26 i. The Florida Keys Aqueduct and water supply facilities;  
27 ii. Sewage collection, treatment, and disposal facilities;  
28 iii. Solid waste treatment, collection, and disposal facilities;  
29 iv. Key West Naval Air Station and other military facilities;  
30 v. Transportation facilities;  
31 vi. Federal parks, wildlife refuges, and marine sanctuaries;  
32 vii. State parks, recreation facilities, aquatic preserves, and other publicly owned properties;  
33 viii. City electric service and the Florida Keys Electric Co-op; and  
34 ix. Other utilities, as appropriate.  
35  
36 (i) Protecting and improving water quality by providing for the construction, operation, maintenance,  
37 and replacement of stormwater management facilities; central sewage collection; treatment and  
38 disposal facilities; and the installation and proper operation and maintenance of onsite sewage  
39 treatment and disposal systems.  
40 (j) Ensuring the improvement of nearshore water quality by requiring the construction and operation of  
41 wastewater management facilities that meet the requirements of ss. 381.0065(4)(l) and 403.086(10),  
42 as applicable, and by directing growth to areas served by central wastewater treatment facilities  
43 through permit allocation systems.  
44 (k) Limiting the adverse impacts of public investments on the environmental resources of the Florida  
45 Keys.  
46 (l) Making available adequate affordable housing for all sectors of the population of the Florida Keys.  
47 (m) Providing adequate alternatives for the protection of public safety and welfare in the event of a  
48 natural or manmade disaster and for a postdisaster reconstruction plan.  
49 (n) Protecting the public health, safety, and welfare of the citizens of the Florida Keys and maintaining  
50 the Florida Keys as a unique Florida resource.

1  
2 Pursuant to Section 380.0552(7) Florida Statutes, the proposed amendment is not inconsistent  
3 with the Principles for Guiding Development as a whole and is not inconsistent with any  
4 Principle.  
5

6 **C. The proposed amendment is not inconsistent with the Part II of Chapter 163, Florida**  
7 **Statute (F.S.). Specifically, the amendment furthers:**  
8

9 163.3161(4), F.S. – It is the intent of this act that local governments have the ability to preserve  
10 and enhance present advantages; encourage the most appropriate use of land, water, and  
11 resources, consistent with the public interest; overcome present handicaps; and deal  
12 effectively with future problems that may result from the use and development of land within  
13 their jurisdictions. Through the process of comprehensive planning, it is intended that units  
14 of local government can preserve, promote, protect, and improve the public health, safety,  
15 comfort, good order, appearance, convenience, law enforcement and fire prevention, and  
16 general welfare; facilitate the adequate and efficient provision of transportation, water,  
17 sewerage, schools, parks, recreational facilities, housing, and other requirements and  
18 services; and conserve, develop, utilize, and protect natural resources within their  
19 jurisdictions  
20

21 163.3161(6), F.S. - It is the intent of this act that adopted comprehensive plans shall have the  
22 legal status set out in this act and that no public or private development shall be permitted  
23 except in conformity with comprehensive plans, or elements or portions thereof, prepared  
24 and adopted in conformity with this act.  
25

26 163.3177(1), F.S. - The comprehensive plan shall provide the principles, guidelines, standards,  
27 and strategies for the orderly and balanced future economic, social, physical, environmental,  
28 and fiscal development of the area that reflects community commitments to implement the  
29 plan and its elements. These principles and strategies shall guide future decisions in a  
30 consistent manner and shall contain programs and activities to ensure comprehensive plans  
31 are implemented. The sections of the comprehensive plan containing the principles and  
32 strategies, generally provided as goals, objectives, and policies, shall describe how the local  
33 government's programs, activities, and land development regulations will be initiated,  
34 modified, or continued to implement the comprehensive plan in a consistent manner. It is not  
35 the intent of this part to require the inclusion of implementing regulations in the  
36 comprehensive plan but rather to require identification of those programs, activities, and land  
37 development regulations that will be part of the strategy for implementing the comprehensive  
38 plan and the principles that describe how the programs, activities, and land development  
39 regulations will be carried out. The plan shall establish meaningful and predictable standards  
40 for the use and development of land and provide meaningful guidelines for the content of  
41 more detailed land development and use regulations.  
42

43 163.3177(6)(d)1.e., F.S. - Conserves, appropriately uses, and protects fisheries, wildlife,  
44 wildlife habitat, and marine habitat and restricts activities known to adversely affect the  
45 survival of endangered and threatened wildlife.  
46

1 163.3177(6)(g)1., F.S. - Maintain, restore, and enhance the overall quality of the coastal zone  
2 environment, including, but not limited to, its amenities and aesthetic values.  
3

4 163.3177(6)(g)3., F.S. - Protect the orderly and balanced utilization and preservation,  
5 consistent with sound conservation principles, of all living and nonliving coastal zone  
6 resources.  
7

8 163.3178(2)(g), F.S., - A shoreline use component that identifies public access to beach and  
9 shoreline areas and addresses the need for water-dependent and water-related facilities,  
10 including marinas, along shoreline areas.  
11

## 12 **VII. PROCESS**

13 Comprehensive Plan Amendments may be proposed by the Board of County Commissioners, the  
14 Planning Commission, the Director of Planning, or the owner or other person having a contractual  
15 interest in property to be affected by a proposed amendment. The Director of Planning shall review  
16 and process applications as they are received and pass them onto the Development Review  
17 Committee and the Planning Commission.  
18

19 The Planning Commission shall hold at least one public hearing. The Planning Commission shall  
20 review the application, the reports and recommendations of the Department of Planning &  
21 Environmental Resources and the Development Review Committee and the testimony given at the  
22 public hearing. The Planning Commission shall submit its recommendations and findings to the  
23 Board of County Commissioners (BOCC). The BOCC holds a public hearing to consider the  
24 transmittal of the proposed comprehensive plan amendment, and considers the staff report, staff  
25 recommendation, and the testimony given at the public hearing. The BOCC may or may not  
26 recommend transmittal to the State Land Planning Agency. The amendment is transmitted to State  
27 Land Planning Agency, which then reviews the proposal and issues an Objections,  
28 Recommendations and Comments (ORC) Report. Upon receipt of the ORC report, the County has  
29 180 days to adopt the amendments, adopt the amendments with changes or not adopt the amendment  
30

## 31 **VI. STAFF RECOMMENDATION**

32 Staff recommends APPROVAL of the proposed amendments, as long as the Monroe County  
33 proposed revisions are included in the amendment.  
34

## 35 **VII. EXHIBITS**

- 36
- 37 1. Applicant's Application and Rationale for Comprehensive Plan Amendments, submitted on
  - 38 April 16, 2012 and the update submissions.
  - 39 2. Adopted Goal 107 of Monroe County Comprehensive Plan
- 40  
41

## **Documents reviewed by County Staff**

Note: many of these documents are large and certain documents state: “Provided for non-commercial research and educational use only. Not for reproduction, or distribution or commercial use.”

Linking the Economy and the Environment of Florida Keys/Key West (Visitor Profiles: Florida Keys & Key West 2007-08), June 2010

Vernon R. Leeworthy, David K. Loomis and Shona K. Paterson  
Office of National Marine Sanctuaries, National Ocean Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce

Assessing the Impact of Boat Propeller Scars on Fish and Shrimp Utilizing Seagrass Beds.

Susan Bell, Margaret Hall, Sheri Soffian and Kevin Madley  
Department of Biology, University of South Florida

Benthic Habitats of the Florida Keys, Florida Marine Research Institute Technical Report TR-4, 2000  
Florida Fish and Wildlife Conservation Commission

Patterns of Propeller Scarring of Seagrass in Florida Bay

Associations with Physical and Visitor Use Factors and Implications for Natural Resource Management  
Resource Evaluation Report, SFNRC Technical Series 2008:1  
South Florida Natural Resources Center, National Park Service, U.S. Department of the Interior

A review Environmental impacts of dredging on seagrasses.

Paul Erftemeijer and Roy Robin Lewis, 2006  
Marine Pollution Bulletin, Science Direct

Final Programmatic Environmental Impact Statement For Seagrass Restoration In The Florida Keys  
National Marine Sanctuary, August 23, 2004

National Oceanic and Atmospheric Administration and Florida Department of Environmental Protection

Scars Under The Water, Propellers Are Scarring Florida’s Seagrass Meadows. Can Propr Damage Be Manged?

Ken Haddad and Frank Sargent, Florida Marine Research Institute, 1994

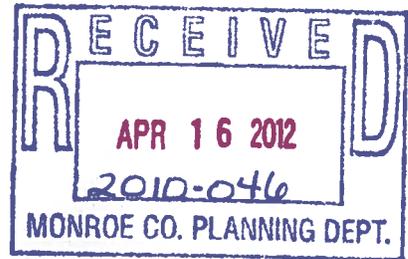
Historic Trends of Human Impacts on Seagrass Meadows in Florida

Robert Livingston, Center for Aquatic Research and Resource Management, Florida State University

Scarring of Florida’s Seagrasses: Assessment and Management Options

F.J. Sargent, T.J. Leary, D.W. Crewz and C.R. Kruer  
Florida Marine Research Institute Technical Report TR-1, 1995  
Florida Department of Environmental Protection

Exhibit 1



**RATIONALE FOR AMENDMENTS  
TO MONROE COUNTY COMPREHENSIVE PLAN  
AND LAND DEVELOPMENT REGULATIONS**

**Applicant:  
Little Conch Key Development Corp**

**Agent of Record:  
Sandra Walters, SWC**

**Prepared by:**



Planning  
Ecological  
Environmental  
Communications  
CONSULTING SERVICES

**6410 Fifth Street, Suite 3  
Key West, FL 33040**

**April 9, 2010 amended April 16, 2012**



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## LIST OF ATTACHMENTS

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A	Location and Parcel Map.....	1
B	Key West Citizen Article Regarding Prop Scars .....	1
C	Excerpt from Lignum Vitae State Aquatic Preserve Study...	3
D	Excerpt from Everglades National Park Study.....	1
E	Sebastian Inlet Study .....	3
F	Boot Key Harbor .....	1
5F	Walker's Island Site Photos.....	1
5G-3	1957 Photograph of Property .....	1
5G-4	1955 Aerial Photograph of Property .....	1
1	Bathymetric Survey .....	1 (11X17)
6H	Seagrass Restoration Overview .....	1 (11X17)
5C	2009 Benthic Resources Map .....	1
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## 1.0 INTRODUCTION

The intent of this document is to provide the rationale for the proposed Monroe County Comprehensive Plan (Comp Plan) and Land Development Regulation (LDR) amendments addressed in the application filed by SWC on behalf of the Little Conch Key Development Corp. An analysis of what parcels in unincorporated Monroe County could be affected is included in this document. The applicant has also prepared a particularly detailed explanation of the overall rationale for these amendments, in relation to other related Comp Plan policies and also to Chapter 380.0552(7) Florida Statutes (FS), the Principles for Guiding Development for the Florida Keys Area of Critical State Concern (Principles for Guiding Development). In addition, the amendments address other sections of Florida statutes and rules that apply to the Florida Keys.

Great care has been taken to craft the proposed amendments to ensure resource protection, as the special environmental sensitivity of the Florida Keys is both recognized and embraced. The project purpose that is being specifically addressed will protect public health and safety consistent with Ch. 380.0552(7)(I) FS while providing for a realistic approach to protection of benthic resources and their ecological function, and long-term management of those resources to prevent damage in the future.

## 2.0 EXECUTIVE SUMMARY

The following briefly describes what is presented in each section of this document.

**Section 3** describes the extensive nature of boat-caused impacts to submerged marine resources—and most particularly seagrass beds—in the Florida Keys. One State study found *increases* in seagrass loss *per year* of 26-66 acres, and Florida Keys National Marine Sanctuary staff estimate that less than 2% of damage is enforced and much less than that restored.

**Section 4** describes current approaches in the Keys to address seagrass restoration and prevention of seagrass impacts, citing several recent studies, which conclude that prevention is the best solution and that signage identifying appropriately marked and maintained access channels can be very effective.

**Section 5** describes the Walker's Island project, which provides the impetus for this amendment application. It discusses how the existing large dock at the property, which serves 8 vested upland units presently being redeveloped, currently is reached by a historically-dredged access channel on privately-owned baybottom that has filled in through normal shoaling processes. The applicant wishes to minimally maintenance dredge a small part of the historic access channel to provide safe boating access.

The section describes the exhaustive process the project has undergone in permit application review by the South Florida Water Management District (District), as well as in coordination with the Florida Keys National Marine Sanctuary and other federal



resource agencies, and the resulting extensive commitments by the applicant that will provide regionally-significant benefits to seagrasses through restoration and resource management. However, it notes that permits cannot be issued because of an existing prohibition in the comprehensive plan that prevents the significant environmental benefits that could result from the project and allows for continued resource damage.

**Section 6** provides the proposed amendments to the Comp Plan and LDRs and the rationale for those amendments. The amendments links a process that allows maintenance dredging in limited circumstances with a new goal and policies that provide site-by-site review of specific locations, along with the requirement that all State and federal permits be acquired prior to construction. The amendments also would allow clean dredge spoil to be used as fill as part of an appropriately-designed and implemented seagrass restoration project.

**Section 7** presents 10 other related Comp Plan objectives and policies and explains how these amendments are consistent with, and in fact enhance the intent and purpose of, these other provisions better than does the current Comp Plan language.

**Section 8** describes Monroe County's *Boating Impacts Management Plan* and *Channel Marking Master Plan*, and demonstrates how the proposed amendments are consistent with and further the goals and objectives of these plans.

**Section 9** presents the methodology and results of a GIS analysis conducted to identify potential parcels that could be affected by the proposed amendments, concluding from the data available that less than 83 privately-owned submerged land parcels might be affected.

**Section 10** discusses how the proposed amendments meet the factors to consider in amending the Comp Plan and LDRs, as listed in the application. Specifically, the amendments address changed assumptions and data updates, new issues, and recognition of a need for additional detail and comprehensiveness.

**Section 11** concludes that boat-caused damage to seagrass communities in the Florida Keys is severe, only a tiny percentage receives enforcement action or restoration, and seagrass communities in the Florida Keys will be more enhanced and better protected with the proposed amendments than with the current Comp Plan language.

### **3.0 BOAT-CAUSED SEAGRASS DAMAGE**

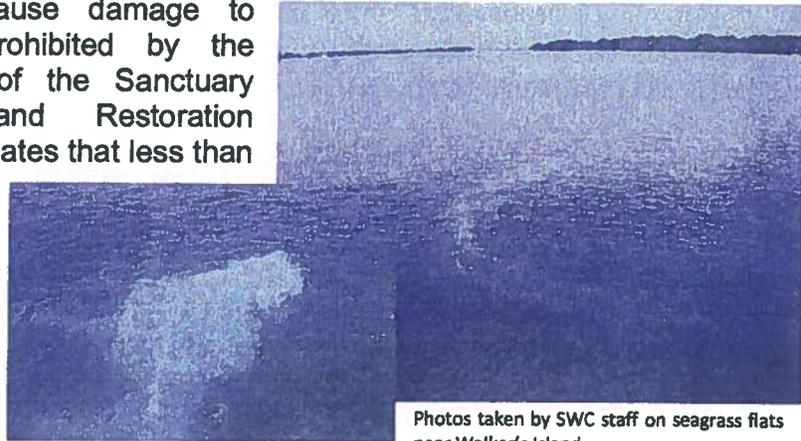
The Florida Keys National Marine Sanctuary (Sanctuary) estimates that approximately 600 seagrass propeller scar groundings occur within the Sanctuary annually. A 2008 study conducted by Everglades National Park (ENP) found that the average seagrass area lost due to prop scars alone was approximately 2.1 acres per year, and this does not include large pits called blowholes that many grounded boats create when attempting to power off a shallow flat, which adds substantially to lost acreage.



Attachment B is a news article describing the study and the seagrass carnage resulting from boat activities.

A 2008 study conducted at the Lignum Vitae State Aquatic Preserve found that seagrass loss from prop scarring *increased* by 66 acres per year between 1994 and 1997, and by 26 acres per year from 1997 to 2005 (see Attachment C).

While groundings that cause damage to marine resources are prohibited by the Sanctuary, the manager of the Sanctuary Damage Assessment and Restoration Program—Bill Precht—estimates that less than 2% of these groundings are subject to enforcement proceedings. Of this small percentage, far less is actually restored, since cases that go to court can be successfully fought as with speeding tickets.



Photos taken by SWC staff on seagrass flats near Walker's Island

The ENP study found that even willful prop dredging can be done with no practical way to enforce or prevent it in locations distant from common observation and with inadequate enforcement presence (see Attachment D, which is an excerpt from the 2008 study).

Some sites recover naturally over time, although this usually takes 10-20 years, but once a scar is made, currents often erode the edges, causing huge enlargement of the damaged area, sometimes resulting in entire seagrass beds being eroded away.

#### 4.0 SEAGRASS RESTORATION AND DAMAGE PREVENTION

To address this serious problem of seagrass loss, the Sanctuary adopted in 2004 the *Programmatic Environmental Impact Statement for Seagrass Restoration in the Florida Keys National Marine Sanctuary* (PEIS). This document summarizes the considerable amount of research that has been done in the Florida Keys regarding seagrass restoration and concluded that, if done correctly, it can be very successful. The first component of the plan outlined in the PEIS is restoration, with specific appropriate methodologies established. The second component is preventive measures to reduce vessel groundings.

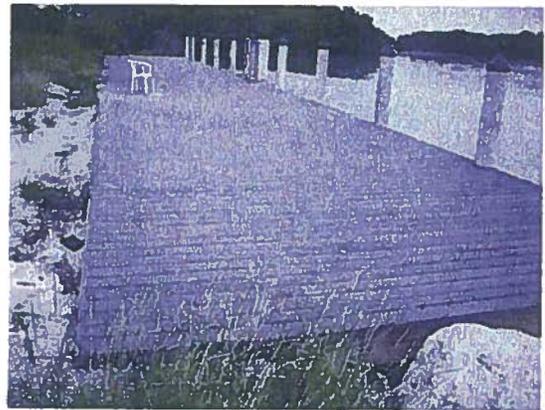
Clearly, the best solution to seagrass damage is prevention. Several recent studies have confirmed that providing appropriately marked and maintained access channels can be both effective and cost-productive in preventing and reducing boating impacts to seagrasses, as follows:



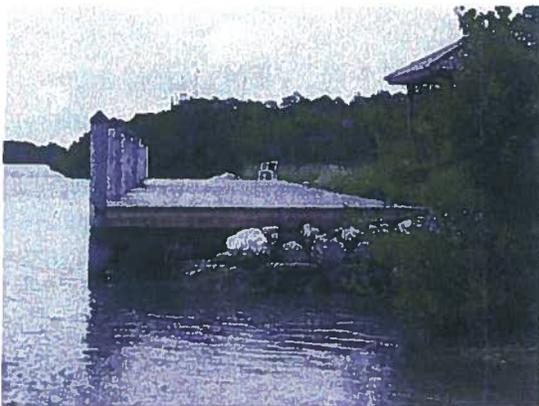
- The 2008 Lignum Vitae State Aquatic Preserve study (Attachment C) concluded that “Signage is a relatively low-cost, long-term investment that becomes cost-effective if only [0.07 acres] is averted over the life of the signs.”
- At Sebastian Inlet, a multi-year study has found that damage was reduced as much as 120 scars in a two year period as a result of appropriate marking of channels with adequate depth and shallow areas to avoid (see Attachment E).
- In Boot Key Harbor in Marathon, the City Marina manager reports that marking of a seagrass flat immediately west of the marina access has reduced groundings and seagrass prop scars by more than 90% (see Attachment F).

## 5.0 WALKER’S ISLAND PROJECT

Walker’s Island is located near MM 63, just east of Duck Key. The subject property is the easternmost upland area (the western area is comprised of guest accommodations called Conch Key Cottages). A spit of mangrove-vegetated land extends to the south from the southeastern corner of the upland, and is contained in a large parcel of privately-owned submerged land contiguous to the upland and extending to the south and west (see Location and Parcel Map, Attachment A).



The Walker’s Island project has an environmental resource permit (ERP) application currently under review by the South Florida Water Management District (District), and many attachments to this report are excerpted and retain the labels from that application.



The property currently has a large dock that accommodates up to seven vessels and was recently reconstructed following damage from Hurricane Wilma (see photos this page and Photo 1 in ERP Application Attachment 5F). An access channel and boat basin were excavated in the 1950s, prior to the time when State or federal environmental permits were issued for this kind of work (see ERP Application attachments 5G-3 and 5G-4). This access channel and boat basin have accumulated extensive sediment during the

intervening years and currently the access depth from the nearby open water to the existing dock is quite shallow, ranging from as little as 0.47 feet to 2.86 feet with an estimated average depth of about 1.5 feet (see bathymetric survey, ERP Application Attachment 1).



The upland area of the property is vested for 8 units, and redevelopment of all 8 units is presently taking place. The residents of these units will certainly use the existing dock, and will, in all likelihood, attempt to navigate good-sized vessels to and from the dock across the shallow approach between the boat basin and open water, and in point of fact, there is no legal impediment to their doing so.

As discussed above in Section 3, what inevitably happens when existing docking facilities are not reachable by access channels with adequate depth and appropriate marking is that vessels run aground occasionally on the shallow flats, creating scars and blowholes in the seagrass communities that can take many years, if ever, to recover. Both propeller scars and blowholes can get increasingly larger following the damage as the result of erosion from water currents that are redirected through the new deeper artificial "channels" in the seagrass bed.

In addition, boats not associated with the existing dock can similarly cause damage to seagrass beds through poor navigation. Examples already exist both on the subject privately-owned submerged land and adjacent State submerged lands, as can be seen on ERP Application Attachment 6H.

This boat-caused damage to benthic resources throughout the Florida Keys has been thoroughly documented and described by the Monroe County Marine Resources Department and the Sanctuary, and this is presented and discussed in relation to the proposed amendments and this project on pages 8-9 and 20-22 of this report.

### **Alternatives Analysis and Project Impacts after Elimination and Reduction**

The ERP application currently under review by the District would accommodate very limited maintenance dredging of the existing access channel and boat basin, all on privately-owned submerged lands, reconfigure the dock somewhat to accommodate 8 slips and 1 loading and unloading area, and finger docks delineating slips. While submerged resources would be affected by this maintenance dredging, the quality of the seagrass community within the proposed maintenance-dredge area, as defined by percent coverage measured with the Braun-Blanquet submerged habitat assessment method utilized by the Sanctuary, is lower than in the surrounding, previously-undisturbed flats (see ERP Application Attachment 5C).

A detailed alternatives analysis has been conducted, comparing four project alternatives with the "no action" alternative. The footprint of the proposed area for maintenance dredging was aligned in the originally-dredged area to eliminate and reduce resource impacts as much as possible. The total maintenance-dredge area of the finally-selected alternative is less than 30% of the originally-dredged access channel and basin, and the impacts to submerged resources are 23% less, with total impacts to seagrasses—following full elimination and reduction to the maximum extent practicable—of 0.43 acres. ERP Application Attachment 6B-1 shows how vessels can approach the existing dock from many directions crossing shallow flats that have never been disturbed by dredging, and the preferred alternative would direct boaters to the maintenance-dredged access channel. ERP Application Attachment 6B-2 shows all the proposed channel and informational signage being proposed as part of the project.



The Walker's Island project, or any other like it, also would require a federal ERP from the U.S. Army Corps of Engineers (USACE). As part of the coordination process to prepare that application, a draft Essential Fish Habitat (EFH) assessment was provided to the National Marine Fisheries Service (NMFS) for preliminary review. In a January 12, 2010 email, the NMFS stated that, "the selected alternative appears to be the least damaging of all the alternatives reviewed," including the no-action alternative, and commented in a pre-application meeting prior to this email that the presence of propeller scars and blowholes on the subject property demonstrate the threat to submerged resources that exists independent of any impacts that would result from the proposed project.

### **Compensatory Mitigation, Additional Restoration and Long-Term Resource Management**

Extensive compensatory mitigation as well as additional resource restoration as part of a regional restoration plan is proposed. The components of this plan include:

1. Restoration and perpetual maintenance of a 0.50-acre dredged basin to conditions comparable to the surrounding seagrass community. This basin is located near the mangrove spit extending south from the upland parcel, and currently contains virtually no vegetation of any kind due to the topographic discontinuity (depth of 6-8 feet) created by its original dredging in the 1950s. The basin would be filled to surrounding grade, capped with sediment tubes to create surface sediment characteristics appropriate for seagrass growth, and the habitat restored through a combination of plantings and natural recruitment. Success criteria should be reached in 3-5 years, as the site is surrounded with healthy seagrass beds so conditions are appropriate. Also, the site is very similar to the Blimp Pad restoration site in the Key West Salt Ponds where restoration for seagrass impacts resulting from the Smathers Beach restoration project took place, and that project was extremely successful, greatly exceeding mitigation requirements.
2. Restoration and perpetual maintenance of 0.13 acres of existing propeller scars and blowholes on the privately-owned submerged land to the southeast of the access channel. This work will be conducted by installation of sediment tubes to restore topography and appropriate sediment characteristics, and habitat restored through a combination of plantings and natural recruitment. Again, success criteria should be reached in 3-5 years, as the areas are surrounded by healthy seagrass beds and conditions are very similar to many successful restoration projects implemented by the FKNMS in the last 10 years.
3. Implementation of an extensive management plan to protect the surrounding flats from future injury, including—
  - a. Placement of almost the entire privately-owned submerged land parcel that contains the access channel and boat basin and the mangrove spit extending from the upland parcel (for a total area of 27.71 acres) under perpetual conservation easement accruing to the District;
  - b. Installation and perpetual maintenance of buoys around the boundaries of the privately-owned submerged land parcel that either indicate "Danger Seagrass" or "Danger Shoal," as appropriate to the depth characteristics in the given area;



- c. Installation and perpetual maintenance of “Danger Shoal” buoys at the corners of the boat basin to clearly delineate the boundaries of the basin and limit boat maneuvering to areas with appropriate depth;
- d. Installation and perpetual maintenance of regulatory markers (red and green US Coast Guard markers) along the access channel to the boat basin, fully gating the safe navigation channel;
- e. Installation and perpetual maintenance of signage at the access to the channel at both ends requiring idle speed only;
- f. Installation and perpetual maintenance of a sign at the dock explaining the sensitive marine habitats in the Florida Keys, and in particular seagrass;
- g. Commitment to operate the private docking facility consistent with Florida’s Clean Marina guidelines;
- h. Incorporation of riprap cribs beneath the finger docks to retard propeller wash effects and to provide habitat for fish and invertebrates;
- i. Incorporation of language into the homeowners association documents that delineates obligations under the ERP;
- j. Provision of documents to all upland unit owners that are specially designed to provide clear information understandable to the general public regarding the importance of the submerged resources being protected, appropriate boat operation to avoid injuring the resources, and the permit and associated conditions that the homeowners association is committed to and why;
- k. Commitment by the homeowners association to restore any future seagrass damage that results from member boating activities on the submerged land parcel under conservation easement; and
- l. Mailing of an informational brochure to all registered boats owners in the Florida Keys regarding the value of seagrass habitats and how to avoid boating impacts.

In addition to the above-described compensatory mitigation, which will result in more than 8 times the mitigation that would be required under Florida’s Uniform Mitigation Assessment Method (UMAM, functional loss of -0.136 and functional gain of +1.157), the applicant is proposing to restore and perpetually maintain 0.27 acres of propeller scars and blowholes on the shallow flat immediately to the west of the subject property, including installation and perpetual maintenance of “Danger Shoal” signage along the edge of the flat to inhibit future damage.

### **Coordination with County, State and Federal Agencies in Project Development**

The signage components of the above-described mitigation and restoration plan were developed in coordination with Monroe County Senior Marine Resources Administrator Rich Jones. Coordination has also been conducted with the Florida Fish and Wildlife Conservation Commission (FWC) and the US Coast Guard, which regulate this kind of marine signage.



Both the proposed onsite and offsite restoration and management activities would be implementing the regional restoration plan defined in the Sanctuary PEIS, as shown by the following excerpts from that plan:

**In addition to grounding injuries that have identified responsible parties, there are many other grounding injuries discovered each year.** Because those responsible for causing those injuries are unidentified, the locations are referred to as “orphan” sites. Each of the potential geographic areas discussed in this chapter has a large number of orphan seagrass injuries that would benefit from restoration. **These are the areas that the regional restoration plan seeks to address.**

**Preventive projects are the second component of the regional restoration plan.** Preventive projects seek to reduce the frequency of vessel groundings, thereby decreasing the amount of area that requires restoration in the future. Boater education campaigns and the posting of informative signs at boat ramps, marinas, and fuel depots are examples of preventive projects that might be considered under the regional restoration plan...

Water markers are aides to navigation, such as channel and shoal markers and regulatory signs, that assist boaters to navigate the treacherous shoals and difficult channels of shallow Florida Keys waterways. These devices help to prevent natural resource injury as these waterway markers direct boaters to use the deep water of navigation channels instead of the shallow seagrass flats, banks, and shoals where the potential for running aground is high. [emphasis added]

The applicant has met with District staff many times in the development of this project and has implemented comments and suggestions. FKNMS staff has verbally expressed support for both the planned benthic habitat restoration and overall management plan.

### **Current Status of Project**

The extensive nature of impact elimination and reduction, alternatives analysis, compensatory mitigation and additional restoration proposed in this permit application is necessary to address the requirements of State law that apply a uniquely-high level of restrictions on these activities in the Florida Keys, in addition to the standard stringent restrictions defined in the Basis of Review for Environmental Resource Permits within the South Florida Water Management District. District staff has confirmed this project is permissible under State law, with the exception of the existing restrictions in the Monroe County Comprehensive Plan that have been brought to their attention by the Florida Department of Community Affairs (DCA, now Department of Economic Opportunity or DOE) through their greater review authority resulting from Monroe County’s designation as an area of critical state concern. Hence this application.



## 6.0 PROPOSED COMP PLAN AND LDR AMENDMENTS AND RATIONALE

The following provides the current Comp Plan and LDR language with the proposed revised language indicated by underline (added), immediately followed by the rationale for the specific amendment in relation to the proposed project. Several of the amendments propose adding the South Florida Water Management District (District) as an alternate State permitting entity. This is because the District is responsible for review and issuance of State environmental resource permits for most commercial projects and private projects involving four or more residential units. Therefore, these changes correct a current inaccuracy in the Comp Plan, as commercial or larger residential projects may require District rather than Florida Department of Environmental Protection (DEP) permits for these activities.

### COMPREHENSIVE PLAN

Each Comprehensive Plan section being revised is provided below with deletions indicated by strikeout and additions in red and underlined. The changed sections are all indented with the rationale for each set of changes at full text width.

#### **Policy 202.8.3**

No maintenance dredging shall be permitted within areas vegetated with seagrass beds or characterized by hardbottom communities except for maintenance in public navigation channels and as provided by Policy 202.8.4.

#### **Policy 202.8.4**

In order to facilitate navigational safety and reduce continued scarring of seagrass beds, maintenance dredging shall be permitted, in limited circumstances, within access channels vegetated with seagrass communities if there is a continued threat to these communities due to existing upland development and docking facilities. Maintenance dredge shall only be permitted to preserve or restore the function of the access channel. Access channels are defined as artificially-created channels, constructed through excavation, serving as waterways for watercraft, and providing access to open water. Access channels do not include propeller-dredged channels.

Maintenance dredging in access channels vegetated with seagrass beds will be permitted if the following conditions are met:

1. There is an existing access channel, evidenced by permits or historical aerial photography showing a historically-dredged channel;
2. There are existing, lawfully-established upland development and docking facilities served by the access channel;
3. The submerged land within the historically-dredged access channel is privately owned by the owner of the immediately-adjacent upland



- riparian property containing the upland development and docking facilities served by the access channel;
4. Demonstrable natural shoaling has reduced the upland property owner(s) reasonable access to open water;
  5. There is evidence of scarring to the adjacent (surrounding) seagrass beds;
  6. Mitigation for seagrass impacts is provided consistent with the *Final Programmatic Environmental Impact Statement for Seagrass Restoration in the Florida Keys National Marine Sanctuary* adopted in 2004 or its successors;
  7. A performance bond for the maintenance dredging will be provided to the County prior to permit issuance;
  8. A post-construction survey of the maintenance dredge footprint and depth will be conducted by a State-licensed surveyor and provided to the County for review, and if physical characteristics, including depth, exceed 15 percent from that specified in the permit application, the applicant will be required to correct the errors prior to release of the performance bond; and
  9. The proposed maintenance dredging meets the criteria included in Goal 106 of the Monroe County Comprehensive Plan.

The proposed maintenance dredge activity shall be designed to protect natural resources and shall provide reasonable assurance that the activity will reduce continued scarring of surrounding seagrass beds through the provision and perpetual maintenance of educational signage, channel markers or buoys. The maintenance dredge methodology shall not cause degradation of water quality or secondary and/or cumulative impacts to surrounding marine resources. Turbidity controls shall be used to prevent reduction of light availability to seagrasses and increased sedimentation of adjacent surface waters and marine resources.

In addition, Issuance of a permit will include a condition that all applicable State and federal permits be obtained before commencement of work, a requirement that copies of these permits be available for inspection at the construction site at all times, and that lack of these permits at any inspection will be immediate cause for issuance of a stop work order.

#### **Rationale for Amendment to Policy 202.8.3 and Addition of Policy 202.8.4**

The purpose for this proposed amendment is to allow maintenance dredging where there are seagrass communities in certain, very limited instances where there are present and ongoing threats to seagrass communities due to use of existing docking facilities. In addition, this limited and mitigated impact would be further offset by protection of the surrounding seagrass communities. This provision will limit maintenance dredging to privately-owned submerged lands, preventing any potential for impacts on publicly-owned, State submerged lands.



While Monroe County is currently prohibited by State Statute from requiring issuance of State and federal permits as a prerequisite for issuing a County permit, this Statute specifies that it does not prohibit a county from providing applicants with “a disclaimer to the issuance of a development permit and may include a permit condition that all other applicable state or federal permits be obtained before commencement of the development.” The Statute also “does not prohibit a county from providing information to an applicant regarding what other state or federal permits may apply.” (Source of quotations: Florida HB 503, page 6 of 41).

As described above, Walker’s Island has an environmental resource permit (ERP) application pending with the South Florida Water Management District (District), which applies an extremely stringent review process to any such activity in the Florida Keys, to implement a number of specific provisions of State law and administrative code, including:

- the Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District, which implements Chapter 373, Florida Statutes (FS) and chapters 4-E-4, 40E-40 and 40E-400, Florida Administrative Code (FAC), and is adopted by reference in Rule 40E-4.091(1)(a), FAC,
- Rule 62-312, FAC, which applies specific and even more stringent requirements on docking facilities in the Florida Keys, and
- Rule 62-302.700(i)(13), FAC, which defines the Florida Keys as Outstanding Florida Waters, and requires zero degradation of water quality outside the project boundaries because of that designation.

This permitting process requires elimination and reduction of impacts to the greatest extent practicable and in the Florida Keys goes further to require a net gain in comparable ecological function. In addition, coordination is required with the Florida Fish and Wildlife Conservation Commission (FWC) and DEO, providing further special scrutiny.

At the federal level, acquisition of a permit from the USACE requires coordination with the National Marine Fisheries Service (NMFS) regarding federally-designated Essential Fish Habitat (EFH) including seagrass communities as well as protected fish and sea turtle species; and U.S. Fish and Wildlife Service (USFWS) regarding manatees. Finally, this activity is prohibited in the Florida Keys National Marine Sanctuary unless a permit from the Sanctuary is acquired, which again addresses all environmental protection and enhancement issues consistent with the Sanctuary Management Plan and the PEIS.

Therefore, meeting these conditions and acquisition of these permits will ensure protection of benthic resources consistent with Ch. 380.0552(7)(b) FS, which states, “to protect shoreline and marine resources, including mangroves, coral reef formations, seagrass beds, wetlands, fish and wildlife, and their habitat.” Further discussion in sections 7 and 8 below describe how this is consistent with and strongly supports several other current Comp Plan Objectives and Policies, and other related County plans.



**Policy 202.8.5**

In order to facilitate establishment of bottom vegetation, maintenance dredging in artificial waterways shall not exceed depths greater than minus six (-6) feet mean low water. This policy does not apply to the entrance channels into Key West Harbor and Safe Harbor.

**Policy 202.8.5 6**

All dredged spoil resulting from maintenance dredging shall be placed on permitted upland sites where drainage can be contained on-site unless utilization of the dredged spoil is an element of a seagrass restoration project that provides reasonable assurance of no negative impacts to water quality, species or habitats.

**Rationale for Amendment to Policy 202.8.5 and 202.8.6**

The purpose of these amendments is to (1) renumber from the added Policy 202.8.4, above, and (2) provide an exception from only upland disposal of dredge spoil for use in a seagrass restoration project.

Disposal of clean dredge spoil into submerged lands in the very limited instance where it is serving the purpose of seagrass community restoration will directly enhance the submerged marine resources of the Florida Keys. Fill is almost always required for a seagrass restoration project, as deeper areas caused by previous dredging or from propeller scars must be filled to the depths of surrounding seagrass beds to provide for successful restoration. In the case of Walker's Island, the clean maintenance dredge spoil material would be placed in an existing dredged basin that does not support marine life due to the discontinuity created by early dredging activities.

The State permitting process requires testing of sediment to be dredged to assure State standards for contamination are met. In addition, it requires the use of turbidity curtains and other best management practices along with monitoring during construction to ensure zero degradation of ambient surrounding water quality, which is the standard required by the State's Outstanding Florida Waters (OFW) designation applicable to the Florida Keys. Federal permitting processes administered by the USACE and FKNMS also require full water quality protection measures.

By meeting the conditions implemented in the ERP and maintained through enforcement by the State and federal permitting agencies during construction activities, the intent of Objective 202.6, which requires County policies "controlling discharges into surface waters from dredge and fill activities," will clearly be met. This is also consistent with Ch. 380.0552(7)(e) FS, which states, "To limit the adverse impacts of development on the quality of water throughout the Florida Keys." Further discussion in sections 7 and 8 below describe how this is consistent with and strongly supports several other current Comp Plan Objectives and Policies, and other related County plans.

**Policy 203.2.3**

Effective upon plan adoption, Monroe County shall:

1. prohibit new dredging in the Florida Keys; and



2. prohibit maintenance dredging within areas vegetated with seagrass beds except for maintenance dredging in public navigation channels and as provided by Policy 202.8.4. (See Objective 202.8 and related policies.)

### **Rationale for Amendment to Policy 203.2.3**

Please see the rationale for the amendment to Policy 202.8.3 and addition of Policy 202.8.4, above, which equally applies to this proposed amendment. In addition, Objective 203.2 requires Monroe County to “protect submerged lands vegetated with seagrasses by implementing regulations which will further reduce direct and indirect disturbances to seagrasses.” The Walker’s Island project is specifically designed to restore and properly mark a small part of an historic access channel serving an existing dock, as well as to manage the surrounding shallow flats that have already experienced propeller damage (which will be restored), resulting in long-term, practical reduction in direct impacts to seagrasses. The project is also designed to limit all secondary impacts of boat activity to within the dredge footprint, reducing indirect disturbances to seagrasses. Only a project so designed could meet the specific conditions outlined in the amendment and State and federal permit requirements.

Objective 203 states, “The health and integrity of living marine resources and marine habitat, including mangroves, seagrasses, coral reefs and fisheries, shall be protected and, where possible, enhanced.” The Walker’s Island project will provide extensive compensatory mitigation and additional habitat restoration that will result in significant enhancement of seagrass habitat, including long-term management to protect it from future damage necessary for acquisition of State and federal permits.

Therefore, this proposed amendment will ensure meeting the Comp Plan objectives as well as the Statutory requirements in the Principles for Guiding Development. Further discussion in sections 7 and 8 below describes how this is consistent with and strongly supports several other current Comp Plan Objectives and Policies, and other related County plans.

### **Policy 204.2.2**

No structures shall be permitted in submerged lands, mangroves, salt ponds, or wetlands, except for elevated, pile-supported walkways, docks, piers and utility pilings. No fill shall be permitted in submerged lands, mangroves, salt ponds, or wetlands except;

1. as specifically allowed by Objective 212.6 and subsequent policies;
2. to fill a manmade, excavated water body such as a canal, basin or swimming pool if the Director of Environmental Resources determines that such filling will not have a significant adverse impacts on marine or wetland communities; or
3. as needed for shorelines stabilization, seagrass restoration or beach renourishment projects with a valid public purpose that furthers the goals of the Monroe County Comprehensive Plan as determined by the Directors of Planning and Environmental Resources. ~~All such projects shall require approval by the Florida Department of Environmental~~



~~Protection or South Florida Water Management District and the U.S. Army Corps of Engineers prior to issuance of a County building permit. All such projects require permits from the Florida Department of Environmental Protection or South Florida Water Management District, the U.S. Army Corps of Engineers, and the Florida Keys National Marine Sanctuary prior to commencement of work. These permits must be kept at the project site for inspection at all times, and a stop work order will be issued at any inspection if not present. [9J-5.012(3)(c)1 and 2; 9J-5.013(2)(c)6]~~

### **Rationale for Amendment to Policy 204.2.2**

Objective 204.2 states that, "Monroe County shall eliminate the loss of undisturbed wetlands and shall eliminate the net loss of disturbed wetlands." The purpose for the proposed amendments to this policy is to provide another opportunity to meet this objective through seagrass restoration projects such as proposed at Walker's Island. The filling of the barren, previously-dredged 0.50-acre basin, and the propeller scars and blowholes on the privately-owned submerged land, will allow restoration to seagrass habitat that existed there prior to disturbance, and these activities along with the rest of the proposed compensatory mitigation and additional restoration measures will result in a significant net gain in ecological function. This is entirely consistent with the objective, as no undisturbed wetlands are lost and there is no net loss of disturbed wetlands, but rather a net gain. Again, this is consistent with the Principles for Guiding Development by providing for protection and enhancement of marine resources, and further discussion in sections 7 and 8 below describes how this is consistent with and strongly supports several other current Comp Plan Objectives and Policies, and other related County plans.

### **Goal 109**

In addition to the provisions of Policy 202.8.4, Monroe County shall regulate maintenance dredging of historically-dredged access channels serving existing legally-established upland development with existing docking facilities where the minimum maintenance dredge area has been recolonized seagrasses, by the enactment of area-specific regulations that allow maintenance dredging to occur subject to limitations and conditions designed to protect natural resources.

### **Objective 109.1**

Monroe County shall regulate use of submerged lands for maintenance dredging through Sub-Area Policies Applicable to a Specific Geographic Area. These sub-area policies identify parcels of submerged land that require narrowly-tailored regulation in order to confine the potential for impacts to a specific area. The development parameters established for each sub-area shall be based on data specific to the sub-area in relation to protection of natural resources.

**Policy 109.1.1      Reserved.**



**Policy 109.1.2 Walker’s Island Privately-Owned Submerged Land Area 1**

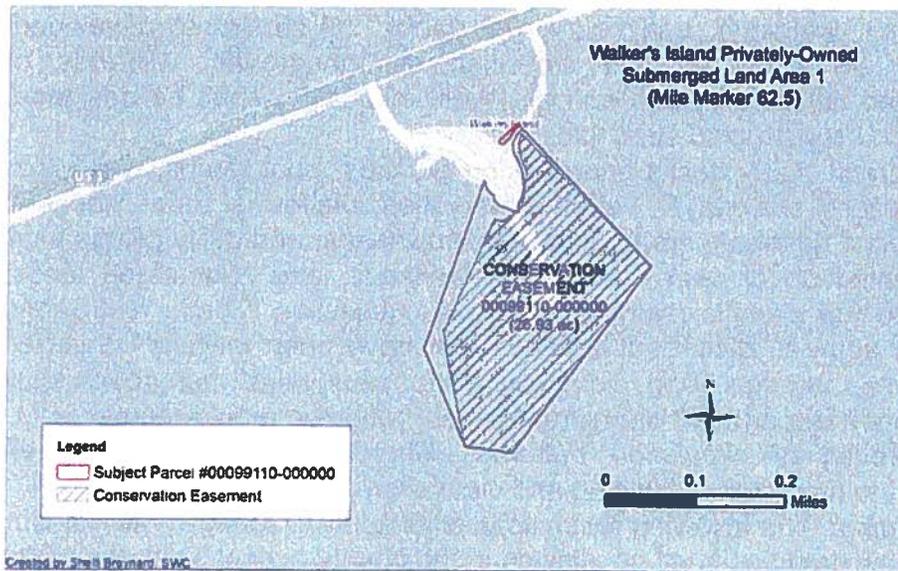
Only the maintenance dredging specified in the table below shall be allowed on the submerged land parcel shown as the Walker’s Island Privately-Owned Submerged Land Area 1, subject to conditions 1-2, below:

<u>REAL ESTATE NUMBER</u>	<u>TOTAL ACREAGE</u>	<u>IMPACT ACRES</u>	<u>CONSERVATION EASEMENT ACREAGE</u>
<u>00099110-000000</u>	<u>27.22</u>	<u>0.63</u>	<u>26.93</u>

And over which an existing docking facility exists, which serves 8 legally-established residential units on the adjacent upland parcel.

Maintenance dredging at the Walker’s Island Privately Owned Submerged Land Area 1 shall be subject to the restrictions set out below:

1. Maintenance dredging shall be limited to no more than the acreage specified in the above table to provide safe access to the existing docking facility.
2. Recordation of a conservation easement prohibiting all impacts on, and requiring perpetual maintenance of, 26.93 acres of submerged land contained in parcel 00099100-000000. The area to be conserved is delineated in the map below.





### Rationale for Goal 109

The purpose of Goal 109 is to provide Monroe County the ability to review each specific project that proposes to utilize the exception provided in the amended Policy 202.8.4 on a case-by-case basis. The numbers of parcels that could theoretically apply this policy are quite limited, as described in greater detail in Section 9.0, below. However, due to the high degree of environmental sensitivity in the Florida Keys and the great focus on protection of the submerged marine resources here, providing a case-by-case mechanism for review ensures an added level of scrutiny. This process is very similar to that in Goal 107, which provides for case-by-case reviews of specific parcels that have scarified and/or filled portions that also contain environmentally sensitive areas. Goal 106 is tailored after this precedent, as there is a clear parallel between submerged land parcels that require maintenance dredging of historically dredged access channels where seagrasses have recolonized and development in upland scarified parcels that also contain environmentally sensitive areas.

Policy 106.1.2 creates a Specific Geographic Area for the Walker's Island project, defines the parcel size and allowed maximum maintenance-dredge area, and the specific size and location of the conservation easement that must be recorded for perpetual preservation and maintenance.

Any other property owner who wishes to utilize the amended Policy 202.8.4 must apply for a Comp Plan amendment to create another Specific Geographic Area, again providing the opportunity for Monroe County to review the specific site conditions. This additional level of scrutiny will entirely ensure that the other Goals and Policies in the Comp Plan to protect marine resources are met, as well as meeting the Principles for Guiding Development in the Florida Keys Area of Critical State Concern.

## LAND DEVELOPMENT REGULATIONS

### Sec. 118-10(4)

Mangroves, wetlands, and submerged lands. All structures developed, used or occupied on land classified as mangroves, wetlands or submerged lands (all types and all levels of quality) shall be designed, located and constructed such that:

- a. *Generally*. Only docks and docking facilities, boat ramps, walkways, water access walkways, water observation platforms, boat shelters, nonenclosed gazebos, riprap, seawalls, bulkheads, and utility pilings shall be permitted on or over mangroves, wetlands, and submerged lands, subject to the specific restrictions of this subsection. These restrictions shall not apply to disturbed wetlands that have been lawfully converted into uplands through filling. Trimming and/or removal of mangroves shall meet Florida Department of Environmental Protection requirements.
- b. *Protection of circulation patterns*. Shoreline structures shall be designed to protect tidal flushing and circulation patterns.
- c. *Dredging*. The following restrictions shall apply to dredging activities:
  1. No new dredging shall be allowed in the county except as specified for boat ramps in section 118-12(1) (shoreline setback, boat ramps).



2. No maintenance dredging shall be permitted within areas vegetated with seagrass beds or characterized by hard bottom communities except for maintenance dredging in public navigation and as provided in 3 and 4, below.

3. In order to facilitate navigational safety and reduce continued scarring of seagrass beds, maintenance dredging shall be permitted, in limited circumstances, within access channels vegetated with seagrass communities if there is a continued threat to these communities due to existing upland development and docking facilities. Maintenance dredge shall only be permitted to preserve or restore the function of the access channel. Access channels are defined as artificially created channels, constructed through excavation by mechanical means, serving as a waterway for watercraft, and providing access to open water. Access channels do not include propeller-dredged channels. Maintenance dredging in access channels vegetated with seagrass beds will be permitted if the following conditions are met:

- a) There is an existing access channel, evidenced by permits or historical aerial photography showing a historically-dredged channel;
- b) There are existing, lawfully-established upland development and docking facilities served by the access channel;
- c) The submerged land within the historically-dredged access channel is privately owned by the owner of the immediately-adjacent upland riparian property containing the upland development and docking facilities served by the access channel;
- d) Demonstrable natural shoaling has reduced the upland property owner(s) reasonable access to open water;
- e) There is evidence of scarring to the adjacent (surrounding) seagrass beds;
- f) Mitigation for seagrass impacts is provided consistent with the *Final Programmatic Environmental Impact Statement for Seagrass Restoration in the Florida Keys National Marine Sanctuary* adopted in 2004 or its successors;
- g) A performance bond for the maintenance dredging will be provided to the County prior to permit issuance;
- h) A post-construction survey of the maintenance dredge footprint and depth will be conducted by a State-licensed surveyor and provided to the County for review, and if physical characteristics, including depth, exceed 15 percent from that specified in the permit application, the applicant will be required to correct the errors prior to release of the performance bond; and
- i) The proposed maintenance dredge activity shall be designed to protect natural resources and shall provide reasonable assurance that the activity will reduce continued scarring of surrounding seagrass beds through the provision and perpetual maintenance of educational signage, channel markers or buoys;



- j) The maintenance dredge methodology shall not cause degradation of water quality or secondary and/or cumulative impacts to surrounding marine resources;
- k) Turbidity controls shall be used to prevent reduction of light availability to seagrasses and increased sedimentation of adjacent surface waters and marine resources; and
- l) The proposed maintenance dredging meets the criteria included in Goal 106 of the Monroe County Comprehensive Plan.

3-4. In order to facilitate establishment of bottom vegetation, maintenance dredging in artificial waterways shall not exceed depths greater than six feet at mean low water (MLW). This policy does not apply to the entrance channels into Key West Harbor and Safe Harbor.

4-5. All dredged spoil materials shall be placed on permitted upland sites designed and located to prevent runoff of spoil material into wetlands or surface waters unless utilization of the dredged spoil is an element of a seagrass restoration project that assures no negative impacts to water quality, species or habitats.

5-6. All dredge activities require approvals by the Florida Department of Environmental Protection or South Florida Water Management District, and the U.S. Army Corps of Engineers prior to issuance of a county permit, and the Florida Keys National Marine Sanctuary prior to starting work. Issuance of a permit under 3, above will include a condition that all applicable State and federal permits be obtained before commencement of development, a requirement that copies of these permits be available for inspection at the construction site at all times, and that lack of these permits at any inspection will be immediate cause for issuance of a stop work order.

d. *Placement of fill.* No fill shall be permitted in any mangroves, wetlands, or submerged lands except:

1. As specifically allowed by this section or by section 118-12(k) and (l) shoreline setbacks, bulkheads, seawalls, riprap and boat ramps);
2. To fill a manmade, excavated water body such as a canal, basin, boat ramp, boat slip, boat basin or swimming pool if the county biologist determines that such filling will not have a significant adverse impact on marine or wetland communities;
3. As needed for shoreline stabilization, seagrass restoration or beach renourishment projects with a valid public purpose that furthers the goals of the Monroe County Comprehensive Plan, as determined by the county biologist;
4. For bridges extending over salt marsh and/or buttonwood association wetlands that are required to provide automobile or pedestrian access to dwelling units located on upland areas within the same property for which there is no alternate means of access. Such bridges shall be elevated on pilings so that the natural movement of water, including volume, rate and direction of flow shall not be disrupted or altered; or



5. As approved for Disturbed Salt Marsh and Buttonwood Association Wetlands with appropriate mitigation as defined by the wetland regulations of subsection (d)(6) of this section.

e. All such projects ~~shall require approval by~~ permits from the Florida Department of Environmental Protection or South Florida Water Management District, and the U.S. Army Corps of Engineers and the Florida Keys National Marine Sanctuary prior to commencement of work, ~~prior to issuance of a county building permit.~~ Issuance of a Monroe County permit will include a condition that all applicable State and federal permits be obtained before commencement of development, a requirement that copies of these permits be available for inspection at the construction site at all times, and that lack of these permits at any inspection will be immediate cause for issuance of a stop work order.

#### Rationale for Amendments to LDR Sec. 118-10(4)

Please see the rationale for the proposed Comp Plan amendments, above, as these proposed amendments to the LDRs simply implement changes consistent with those to the Comp Plan.

## 7.0 RELATED COMP PLAN OBJECTIVES AND POLICIES

The submerged habitat damage caused by boat traffic has been addressed at length by the Monroe County Growth Management Division, in conjunction with a number of State and federal agencies including the Sanctuary, FWC, and Monroe County's Sea Grant Extension Office. This work has been done to implement several objectives and policies in the Comp Plan, as follows:

- Policies 203.2.4 and 203.4.7 require Monroe County to work with the National Atmospheric and Oceanic Administration (NOAA, which administers the FKNMS), EPA and DEP to support "**scientific studies** of stresses to seagrass ecosystems in the Florida Keys region" [emphasis added]. This cooperation resulted in the 2004 publication by NOAA of the *Final Programmatic Environmental Impact Statement for Seagrass Restoration in the Florida Keys* (PEIS), which is based on extensive scientific study. The proposed amendments to the Comp Plan and LDRs are consistent with this document, as is the Walker's Island project which is implementing restoration methodology specified in the PEIS. Please see the specific discussion of the PEIS in relation to the Walker's Island project in Section 5, above.
- Policy 203.2.4 requires that Monroe County support the **public education program** for users developed by the Sanctuary. In addition, Policy 203.5.6 discusses a County boater education program that should particularly emphasize navigational safety, including channel locations, and seagrass bed preservation. The Walker's Island project has incorporated brochures from the FKNMS public education program in the informational materials to be distributed to all members of the homeowners association, including one titled "Keep your bottom off the bottom," which seems particularly apropos. In addition, brochures describing the value of



seagrasses and how to avoid impacts will be mailed to all Monroe County registered boaters, and a sign to this effect will be installed at the docks. All these project elements strongly support the Sanctuary public education program.

- Policy 102.5.3 and Objective 202.7 require a **boating impacts management plan** to be developed, and Policy 203.4.7 specifically requires this plan to address the problem of propeller damage to seagrasses. The *Boating Impacts Management Plan* was completed in December 1002. Relevant excerpts from this plan are listed below in Section 5.
- Policy 203.5.5 requires the County to develop and implement strategies for **protection of submerged lands in shallow water areas from boating impacts**, and specifically mentions strategies to reduce seagrass propeller scarring and to minimize vessel groundings. It also requires installation of markers following completion of the plan. The *Channel Marking Master Plan for the Florida Keys* was completed in January 1998. Relevant excerpts from this plan are listed below in Section 5.
- Policies 203.6.1, 212.5.8, 212.6.5, and 1031.7.6 discuss a **coordinated agency review** to “identify the environmental issues and contradictions in rules and authorities related to the permitting process for marinas, docking facilities, piers, mooring sites...and dredging in the Florida Keys.” Rich Jones informed us that this coordination has occurred over time relating to particular issues, including implementation of the *County Channel Marking Master Plan*, and more recently, as part of a State-sponsored study of mooring field sites. In addition, the 2004 PEIS, specifically discussed in Section 2, above, has benefited from this coordination.
- Policy 203.6.3 discusses the County **coordinating boating impacts management activities with State and federal agencies**. The proposed amendments are consistent with this policy through recognition of the degree of scrutiny and regulatory authority administered by these agencies in permitting projects in the Florida Keys that fully implement the Principles for Guiding Development [Ch. 380.0552(7)(b), (e) and (l) FS].
- Policy 207.8.3 requires the boating impacts management program to, among other things, implement the goal in Objective 207.8 of protecting the habitat of a number of **protected marine species**, including manatees and sea turtles, both of which utilize seagrass beds as habitat and a food source. The proposed amendments are entirely consistent with this policy, as any projects that move forward under the amendments that effect seagrass beds will result in a net gain in comparable ecological function, and federal permit review will require a full assessment of impacts on these marine species and specifically on Essential Fish Habitat, including seagrass beds. Walker’s Island will also implement a long-term management plan to prevent future boating impacts on these sensitive resources, which is also necessary for acquisition of State and federal permits.

Additional relevant policies include:

- Policy 204.2.7 states that “applicants for a dredge and fill permit shall be required to obtain all necessary permits from state and federal regulatory agencies prior to issuance of a County permit.” While this policy is no longer consistent with State



law, the proposed amendments to the Comp Plan and LDRs are entirely consistent with this policy, and, in fact, further implement it through recognition of the high level of protection offered by these permitting programs, entirely consistent with and implementing the Principles for Guiding Development.

- Objective 204.3 requires Monroe County to “initiate a program to restore disturbed marine and freshwater wetlands.” The proposed Comp Plan and LDR amendments are fully consistent with and supportive of this objective by providing for private restoration of submerged habitat associated with maintenance dredging that is appropriately designed to eliminate and reduce impacts, and provide compensatory mitigation that will result in a net increase in comparable ecological function. For example, the Walker’s Island project will result in more than 8 times more compensatory mitigation than required by the State Uniform Mitigation Assessment Method, will also provide offsite restoration implementing the Sanctuary’s regional restoration plan outlined in the PEIS, and will include a long-term management plan to prevent future disturbances to marine habitats. Again, all these measures are necessary for acquisition of State and federal permits.
- Policy 212.5.2.1 requires docking facilities to have a minimum depth at the terminal end and extending out to open water of at least minus four (-4) feet. The maintenance dredging proposed for Walker’s Island is designed for minus 4.5 feet, which is the minimum practicable to meet the requirement of this policy and also provide a reasonable project life, as sediment will inevitably continue to accrete into the channel over time.

## 8.0 OTHER RELATED COUNTY PLANS

### ***Monroe County’s Boating Impacts Management Plan***

The following are relevant excerpts from this plan:

- “Currently in the Keys there are numerous waterfront residences and public boat ramps that provide boaters with access to the water but not with clearly marked channels for egress and ingress to Florida Bay and the Atlantic Ocean.” [pg 48]
- “Upper, Middle, and Lower Keys Criteria [for channel marking]
  1. Sites where there is a public safety hazard or where damage is occurring to the shallow water resources of the area, shall be considered for channel markers.
  2. Sites where no better alternatives to channel marking exist for managing the threats established in criteria 1 and where it is believed that channel markers could relieve that stress, should be considered.
  4. Sites where it is not practical...to consolidate the use of the proposed waterway with a more suitable waterway nearby, should be considered.
  5. Sites where there are not sensitive habitats accessed by the channel that are more sensitive and crucial than the habitats being protected by installation of channel markers, should be considered.” [pp 48-49]



The proposed amendments address these issues by providing limited opportunities for private maintenance dredging and channel marking with full environmental protections and mitigation implemented by State and federal permitting agencies. In the case of Walker's Island, the criterion #1 above is met as there is damage to shallow water resources both on the subject privately-owned baybottom and on adjacent shallow flats. Regarding criteria #s 2 and 3, there is no access to open water from the existing dock except across the surrounding shallow flats and no way to consolidate use with another waterway so no better alternative exists, and the proposed channel marking and marking of the surrounding submerged lands will relieve the stress to these marine resources. Finally, in regard to criterion #5, the habitats within the previously-dredged access channel and basin are of lower quality than what is found on the surrounding, undisturbed flats.

### **Monroe County's Channel Marking Master Plan**

The following are relevant excerpts from this plan:

- The general introduction in the first paragraph on page 1 states that this plan has evolved "in response to growing concern over increasing impacts to the shallow-water resources. Seagrass meadows are the dominant habitat found throughout most of the coastal areas of the Keys...and are incurring significant damage from a variety of users. ...this habitat [is] vulnerable to scarring and dredging from boat traffic."
- The second paragraph continues, "The nearshore meadows experience additional impacts due to the proximity to populated shoreline areas and adjacent, deeper water destinations. Extremely shallow areas containing seagrasses are often found near launching sites and marinas... This vulnerable distribution of seagrass meadows results in the beds being damaged by boaters utilizing these areas as well as boaters en route to typically safer, deeper areas."
- "Resource managers working within the Sanctuary determined that much of the seagrass damage was occurring in areas lacking appropriate navigational aides. ...channel marking was included as one of the action plans for the developing Sanctuary management plan, and cooperating institutions (DEP, US Coast Guard, National Oceanic and Atmospheric Administration) were enlisted to provide supporting data for the project." [pp 2, pg 2]
- "Prop scars are often generated from boaters attempting to approach the numerous residences and docks adjacent to very shallow water." [pp 4, pg 8]
- The biology of propeller scar and blow hole damage is described in detail on page 10.
- "Although restoration efforts are important for badly damaged beds in particular habitats, they do not address the prevention or minimizing of prop scarring." [pp 1, pg 13]
- "Public education is an essential part of any management effort. Without public education most management strategies would not be effective, particularly in the Keys where a large percentage of boaters are not familiar with local regulations and Sanctuary management rules." [pp 3, pg 13]



- The marking strategies are described on pages 21-23, and address marker frequency, gating of routes, and the use of Danger Shoal markers to delineate shallow water to be avoided.

The proposed Comp Plan and LDR amendments are supportive of this Monroe County plan. Only limited financial resources are available for the County and other government agencies to implement appropriate marking of areas to protect marine resources. Allowing very limited and carefully designed private maintenance dredging, along with appropriate channel marking and other measures to ensure long-term protection of marine resources, as proposed for Walker’s Island, can leverage the public dollar with private investment for both installation and long-term maintenance.

## 9.0 PROPERTIES POTENTIALLY AFFECTED BY AMENDMENTS

An analysis of existing privately-owned submerged land parcels that could potentially utilize the amended Policy 202.8.4 was conducted utilizing ArcGIS software and information from the Monroe County Property Appraiser’s (MCPA) Office parcel list for December 2011, which contains 90,537 parcels. This analysis utilized the same data, programming and approach as was recently utilized for preparation of the new Technical Document for the Monroe County Comprehensive Plan.

Submerged land parcels that could—or would have reason to—implement the policy must be privately-owned, contain seagrasses, and have existing legally-established upland development served by existing docking facilities. Therefore, the total number of parcels in Monroe County was screened through several layers of analysis to arrive at a reasonable estimate.

The following table summarizes the analysis and results:

GIS Data Layer	Number of Parcels	Source of Data
Parcels in Monroe County	90,537	Monroe County Property Appraiser
Submerged land	391	Monroe County Property Appraiser
Contain seagrass	343	Florida Fish & Wildlife Conservation Commission
Unincorporated Monroe County	111	Monroe County Property Appraiser
Residential, Commercial or Vacant	85	Monroe County Property Appraiser
Privately Owned	83	Monroe County Property Appraiser

The Property Appraiser has a complex PC Code List that defines property under 99 different specific codes, mapped as GIS shape files which can be overlain and related to one another in specific, limited configurations. The Monroe County parcel list was narrowed by selecting the code for submerged land. This reduced the number of parcels to 391. The list was further filtered by overlaying the 2010 seagrass habitat map from the Florida Fish & Wildlife Conservation Commission (FWC). The number of submerged parcels intersecting seagrass habitat is 343.



In order to exclude those areas not in Unincorporated Monroe County, the parcel map was overlaid on the MCPA Unincorporated Monroe County Existing Land Use (ELU) map. The 111 parcels selected were only those that were submerged, intersected seagrass habitat, and were within Unincorporated Monroe County.

The 111 parcels were further screened by selecting parcels on residential, commercial, or vacant land, resulting in 85 parcels. Review of the ownership of the 85 parcels found two in public ownership, reducing the total potential parcels that affected by Policy 202.8.4 to 83.

An attempt was made to determine from the Property Appraiser data how many of these parcels contained existing docking facilities by selecting only those properties with the appropriate miscellaneous improvements codes. This process returned only 12 parcels from the list of 391 that are submerged land, but did not include the subject property, Walker's Island, which is known to have an existing docking facility. Therefore, it was determined that the miscellaneous improvements list in the MCPA database is not comprehensive, and therefore was not used for this evaluation. However, it is reasonable to assume that only some of the privately-owned submerged land parcels in unincorporated Monroe County have existing, legally-established upland development and existing docking facilities.

Another factor that would be evaluated on a case-by-case basis is whether historic access channels provide "continuous access to open water," as required by Section 118-12(m)(5)a., Monroe County Code. Undoubtedly, a good number of potential parcels included in the 83 identified in this analysis do not meet this criterion.

The conclusion of this analysis based on the data available is that the number of parcels that could conceivably apply amended Policy 202.8.4 is less than 83 in the entire unincorporated Monroe County.

In addition, measures to ensure that the environment of the Keys is protected include:

- the proposed new Goal 106 will apply an overlay process, allowing Monroe County to assess each applicant for a maintenance-dredging permit under Policy 202.8.4 individually; and
- the requirement that all State and federal permits be acquired prior to commencement of construction, which ensures that a highly-strenuous review, under laws and regulations many of which are specific to the Florida Keys, be taken by the environmental regulatory agencies and commenting resource management agencies.

## **10.0 FACTORS TO CONSIDER IN AMENDING COMP PLAN AND LDRs**

The following factors listed in the amendment application are relevant to the proposed amendments.



## **2) Changed assumptions and 6) Data updates.**

The first full comprehensive plan for Monroe County was adopted in 1986 and the 2010 Comp Plan adopted in 1992. Much has changed since then, including:

- The amount of boating activity in Monroe County has increased dramatically, as has the amount of boat-caused damage to marine resources, the vast majority of which goes unenforced and unrestored.
- County Marine Resources staff has implemented Comp Plan objectives and policies by working with other agencies and developing the plans described in Section 8, above, in 1992 and 1998. The proposed amendments are consistent with these plans and support their objectives.
- The Sanctuary developed its management plan in 1996, recently updated in 2007, and adopted the PEIS described in Section 4, above, in 2004. The proposed amendments are consistent with these documents and would further support implementation of the Sanctuary's regional seagrass restoration plan.
- The environmental resource permitting process at the State and federal level that provides a very high degree of scrutiny and protection to Florida Keys marine resources has developed and been fine-tuned over the last 10-15 years. This includes the 2002 federal Essential Fish Habitat (EFH) rule implemented by the National Marine Fisheries Services (NMFS). These amendments recognize this increased and rigorous regulatory environment.
- The Comp Plan and LDR amendments that add the South Florida Water Management District as one of the Florida environmental resource permit regulatory agencies updates the current code, as the District and the Florida Department of Environmental Protection adopted in 2008 a memorandum of understanding that divided this permitting authority between the two agencies.

Adoption of the proposed Comp Plan and LDR amendments recognizes these changes and addresses them in a realistic fashion to provide effective resource protection and management, consistent with the Principles for Guiding Development.

## **4) New issues:**

The prohibition of appropriately designed and permitted private maintenance dredging and access channel marking is actually contradictory to the resource management objectives and policies in the Comp Plan and to the Principles for Guiding Development, because it has and will continue to result in ongoing, unenforceable damage to marine resources that will inevitably occur from boat traffic over shallow flats to existing docking facilities. It is consistent with the Comp Plan and Principles for Guiding Development to provide a carefully regulated opportunity for responsible private parties to participate in the process of effective resource management while also protecting public health and safety through properly engineered boating facilities.

## **5) Recognition of a need for additional detail and comprehensiveness.**

The proposed changes address this consideration as follows:



- The changes to Comp Plan policies 202.8.3, 203.8.4, and 204.2.3 along with new Goal 106—which would allow maintenance dredging of historic access channels serving existing upland development and docking facilities where seagrass has recolonized—provide a means, in limited circumstances, to realistically and effectively address Comp Plan Policy 203.5.5, which requires Monroe County to develop and implement “strategies for protection of submerged lands in shallow water areas from boating impacts.” The changes also address new scientific research that has resulted in the Sanctuary’s regional seagrass restoration plan described in the PEIS.
- The changes to Comp Plan Policy 204.2.2 will serve in limited circumstances to provide a cost-effective approach for seagrass restoration, also addressing new scientific research that has resulted in the Sanctuary’s regional seagrass restoration plan described in the PEIS.

## 11.0 CONCLUSION

Driving along the Overseas Highway, many areas of boat damage to seagrass beds are clearly visible, and these are only a tiny percentage of the damage occurring. While this damage is not legal within the Sanctuary, enforcement can only occur if an officer is present and can identify the party who causes the damage. Sanctuary staff has informed us they estimate less than 2% of the boat damage to marine resources in the Sanctuary is enforced each year, and it can often take several years of litigation before restoration takes place, during which time the damaged area typically expands, sometimes hugely. Bill Precht, the director of the Sanctuary Damage Assessment and Restoration Program, has told us that boat damage is the single largest threat to seagrasses in the Florida Keys.

It is incumbent on us to view these circumstances realistically, and to recognize that simple prohibition of activities does not always result in resource protection. As the Monroe County’s *Channel Marking Master Plan* describes, boaters will navigate to and from residences and docks regardless of how shallow the water is, and damage often results. Management by restoration of adequate depth to docking facilities along with appropriate channel marking, within the limited circumstances that can address the extremely stringent permitting criteria applied by State and federal agencies for these activities in the Florida Keys, is an approach that can lead to real protection of resources, in contrast with the current circumstances where ongoing, frequent and severe damage continually occurs. It also will result in a net increase in sensitive habitat and the associated ecological functions, along with long-term protection of the resources to prevent future damage.

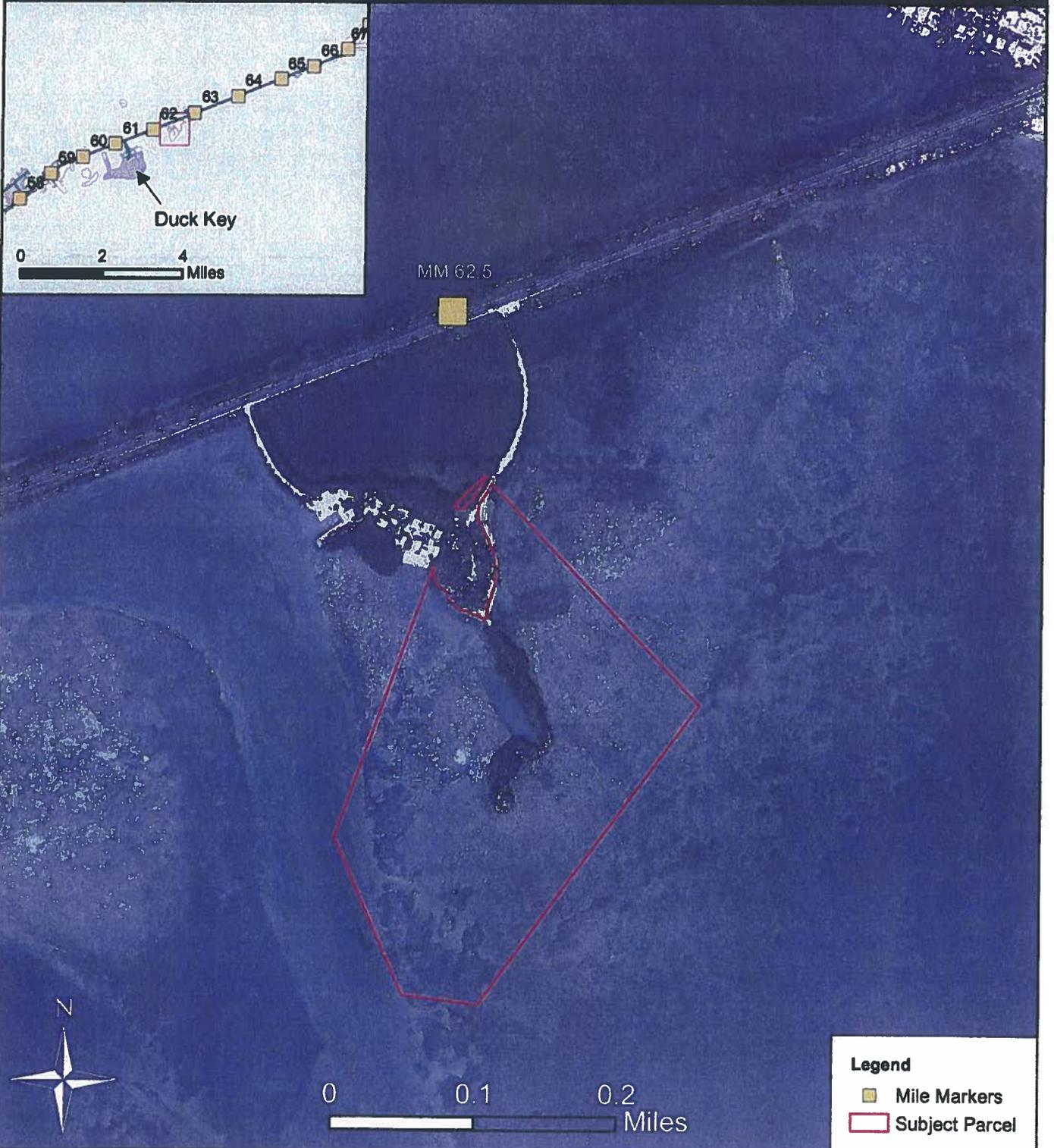
The proposed amendments are consistent with the Principles for Guiding Development and the rest of the Comp Plan, and, in fact, are more supportive of restoration policies than are the current policies. The changes recognize more recent studies, including a Sanctuary Programmatic Environmental Impact Statement, that support what is proposed, and also recognize a much more stringent environmental resource permitting



environment than existed when the original Comp Plan was developed, through which interagency coordination can be implemented. Therefore, these proposed amendments are appropriate and should be adopted.



# ATTACHMENT A Location and Parcel Map



# THE CITIZEN

KEY WEST ATTACHMENT B

December 1, 2008 • Vol. 132 • No. 331 • 16 pages

## Study: Prop scars damage environment

BY ROBERT SILK  
Citizen Staff

There are a minimum of 11,750 propeller scars in Florida Bay, according to the findings of a peer-reviewed Everglades National Park study scheduled for release next month.

"You can pretty much map the banks of Florida Bay based upon the scarring," said David Hallac, chief of the park's natural resources branch, while previewing the study at a recent workshop hosted by the Florida Keys National Marine Sanctuary.

The study, titled "Patterns of Propeller Scarring of Seagrass in Florida Bay," was funded by the park, the National Parks Conservation Association and the South Florida National Parks Trust.

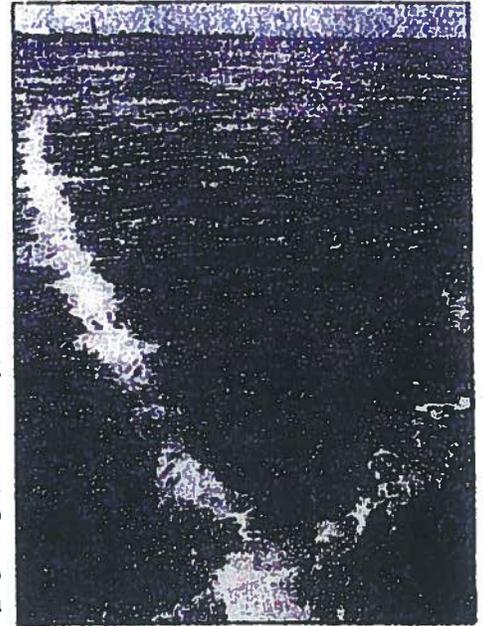
Researchers also found that at least 8,000

acres of bay bottom are scarred by propellers. The actual number, though, could be up to 10 times higher, Hallac said, because scientists did not use high-resolution cameras to record their aerial surveys. Lower resolution lenses miss many of the submerged scars.

Propeller groundings wreak havoc with the Florida Bay ecosystem, especially by damaging seagrass, which serves as a nursery for species ranging from shrimp to stone crab to yellowtail snapper.

Once damaged, some of Florida Bay's seven seagrass species can take several years to recover.

Park officials took prop scar damage into effect in spring 2007 when they released a series of alternatives for managing Florida



RGB O'NEAL/The Citizen

Propeller scars in water off of Key West. A new study proves environmental damage from boating.

See SCARS, page 5A

## Scars

Continued from page 1A

Bay and the rest of Everglades National Park waters over the coming decades. Those proposals, which in general terms would have scaled back motorboat access in park waters, set off an avalanche of criticism from South Florida fishing and boating interests.

Among other things, critics questioned the scientific basis for the park proposals, especially as they related to boat use and propeller scars.

Out of the carnage came plans for two studies — one measuring propeller scars, and another tracking changes over the years in Florida Bay boat traffic, which also is scheduled for release next month.

The two studies are playing a role in the shaping of a new and much-delayed set of Florida Bay management

alternatives. Park Planner Fred Herling now says those proposals will be out by January, more than a year after originally planned.

During his presentation last week, Hallac showed slides of three spots where researchers were able to compare recent photographs with pictures of similar quality taken five years ago.

"Our analyses suggests that from 1999 to 2004, total length of scars at all three sites increased by a factor of three," Hallac said.

The findings of the park service study are in rough congruence with a less scientific study undertaken by local fishing captain John Kipp over the past year.

In November 2007 and again in July, Kipp poled identical regions around the Buchanan Keys just west of Lignumvitae Key. During that span, the number of sites where he counted prop dam-

age increased from 59 to 155.

In the area a bit further north around Twin Key, Kipp recorded 28 GPS sites with prop scars in November 2007. He recorded 78 such locations in August.

Jerry Lorenz, a biologist who heads Audubon of Florida's Tavernier Science Center, presented Kipp's findings at the Nov. 18 workshop as part of a push for baywide caps on boat and engine size. Lorenz said multi-engine boats with powerful motors are causing massive damage to the bay.

"Clearly education is the most important thing, but there are some people who just aren't going to bother," he said.

In what could be a preview of the debate that will follow the park service's release of the new management alternatives, Lorenz's presentation drew a rebuke from fishing enthusiast Jim Trice, one of the architects of Alternative E,

a management strategy supported by a cross section of Florida Bay users. In an e-mail, Trice called Kipp's prop scar study, and Lorenz's use of it, "Totally anecdotal evidence being supported by a Ph.D."

Alternative E calls for a boater certification program that would seek to protect the shallow and tricky-to-navigate waters of the park through mandatory education. It also calls for idle speed zones along the shorelines and a noncombustible motor zone on the Snake Bite flats near Flamingo.

But Trice opposes limiting boat sizes.

Park planner Herling confirmed at the workshop that all the proposals in the next round of alternatives would include mandatory education and permitting.

Trice urged people to "think big, start small, scale up." [rsilk@keysnews.com](mailto:rsilk@keysnews.com)

# ATTACHMENT C

## **Assessing Boat Damage to Seagrass Bed Habitat in a Florida Park from a**

**Bioeconomics Perspective**

Published 2008

Running title: Boat Damage to Seagrass in Florida

Richard M. Engeman<sup>1\*</sup>, Janice A. Duquesnel<sup>2</sup>, Ernest M. Cowan<sup>3</sup>, Henry T. Smith<sup>3,4</sup>, Stephanie A. Shwiff<sup>1</sup>, Melissa Karlin<sup>3</sup>

<sup>1</sup>National Wildlife Research Center, 4101 LaPorte Ave., Fort Collins, Colorado 80521-2154, USA

<sup>2</sup>Florida Park Service, Lignumvitae Key Botanical State Park, P.O. Box 1052, Islamorada, Florida 33036, USA

<sup>3</sup>Florida Park Service, Florida Department of Environmental Protection, 13798 S.E. Federal Highway, Hobe Sound, Florida 33455, USA

<sup>4</sup>Florida Atlantic University, Wilkes Honors College, 5353 Parkside Drive, Jupiter, Florida 33458

\*Author to whom correspondence should be addressed: Richard M. Engeman,  
Tel. (970) 266-6091, Fax (970) 266-6089, e-mail  
[richard.m.engeman@aphis.usda.gov](mailto:richard.m.engeman@aphis.usda.gov)

## ABSTRACT

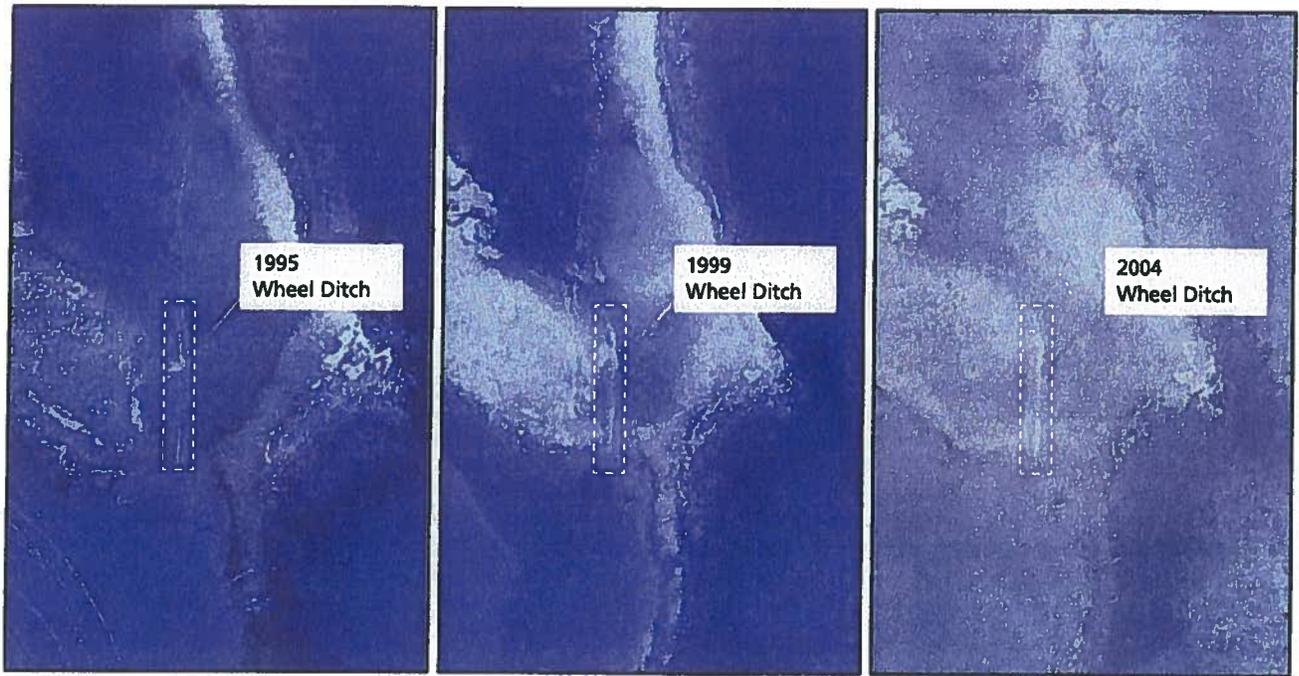
Seagrass bed habitat is an important biotic community in decline worldwide. Boat damage has been long-recognized for its negative impacts to shallow water seagrass beds, with those along the Florida coast particularly vulnerable in the face of a large human population possessing a large number of boats. Boat scars to seagrass beds recover slowly, resulting in new damage often outpacing recovery of existing damage. We examined the rate of accumulation of total area comprised by boat scars from 1994 – 2005 at Lignumvitae Key Submerged Land Managed Area, an area containing ~ 3400 ha of seagrass beds. We found the total area of damage increased from 1994 to 1997 by an average of 27.1 ha/yr, = 66 acres and from 1997 to 2005 the area of damage increased on average by 10.8 ha/yr. = 26 acres This most recent rate of damage increase represents an additional \$1,523,819 annual loss in habitat value using cost figures based on costs from Environmental Protection Agency (EPA) permitted restoration attempts. Severe groundings investigated by law enforcement officers showed increasing trends over time in the average amount and severity of damage. The size of the boat inflicting the damage was more closely related to the severity of damage than the amount of damage. **The most immediate and practical measures for preventing damage include increasing signage to warn boaters from seagrass beds, and increasing law enforcement staff. Signage is a relatively low-cost, long-term investment that becomes cost-effective if only 0.03 ha of seagrass bed damage is averted over the life of the signs.** = 0.07 acres Each additional patrol staff added becomes cost-effective if only 0.42 ha of damage is averted annually. Holding the total

area of damage constant for one year (new damage = recovery) would represent a benefit-cost ratio of 25.71 if accomplished with only one additional law enforcement officer.

ADDITIONAL INDEX WORDS: *Benefit-cost ratio, damage estimation, habitat valuation, habitat restoration, wetland*

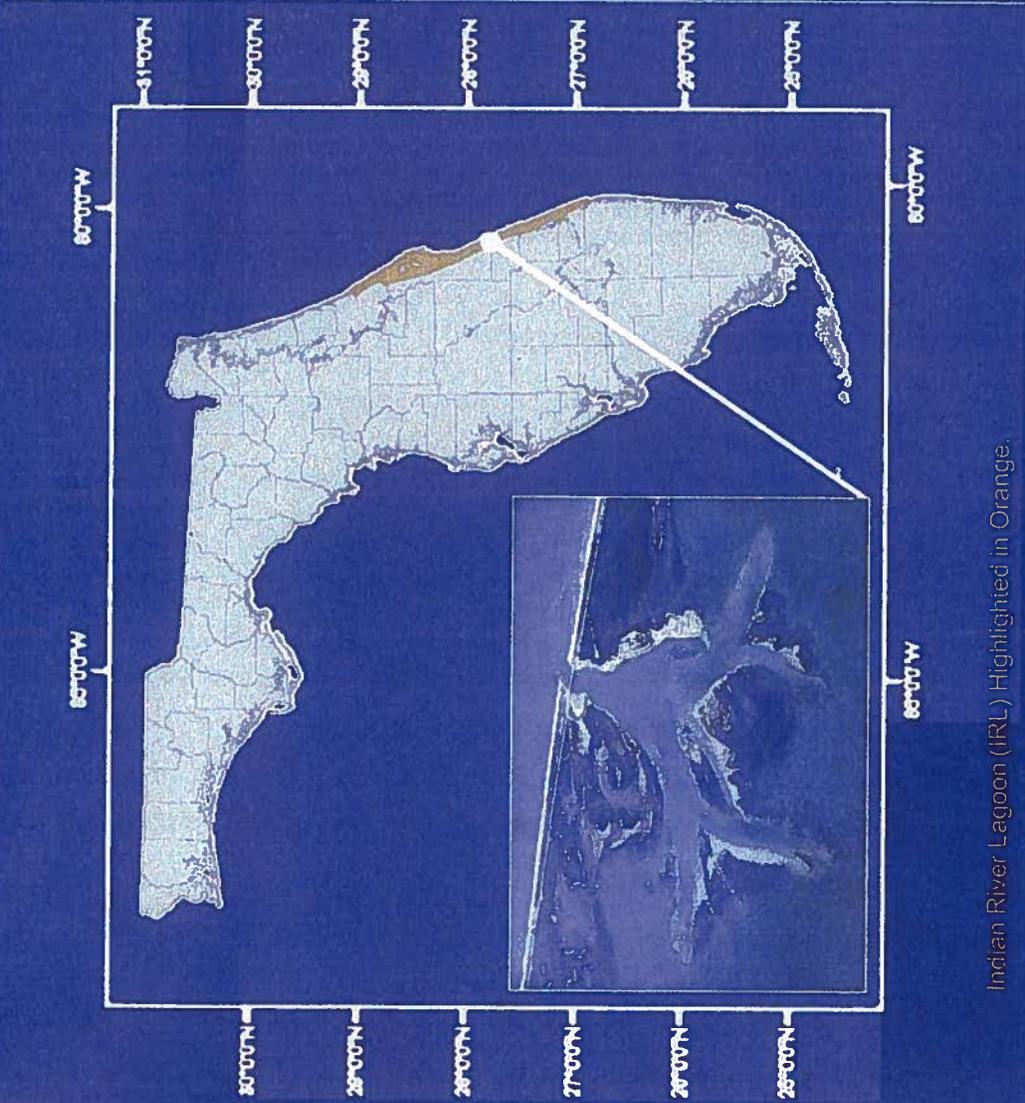
## INTRODUCTION

Coastal seagrass beds have been declining throughout the world for a variety of reasons (SHORT and WYLLIE-ECHEVERRIA, 1996). For many years, propeller scars from boats have been recognized for their significant negative impacts to seagrass beds (e.g., WOODBURN *et al.*, 1957; PHILLIPS, 1960; ZIEMAN, 1976; MATTHEWS *et al.*, 1991). Shallow water seagrass beds at < 2 m depth, such as those commonly found around Florida's coast are especially susceptible to boat damage (CREED and AMADO FILHO, 1999). Moreover, seagrass beds in Florida are particularly likely to receive boat damage because more than 8 million people live along the Florida coast with over 750,000 registered vessels (BELL *et al.*, 2002). Furthermore, boat damage may interact synergistically with other factors such as water clarity to produce further declines (ORTH and MOORE, 1983; PREEN *et al.*, 1995). Groundings create one or more injury types including propeller scars, hull impressions, hull scars, blowholes (formed when the vessel uses its engines in an attempt to dislodge itself [KIRSCH *et al.*, 2005]), and berms (SARGENT *et al.* 1995). Depending on the extent of the damage



**Figure 12.** Time sequence of digital imagery (1995-2004) showing continual expansion of propeller dredged wheel ditch on Shell Key Bank.

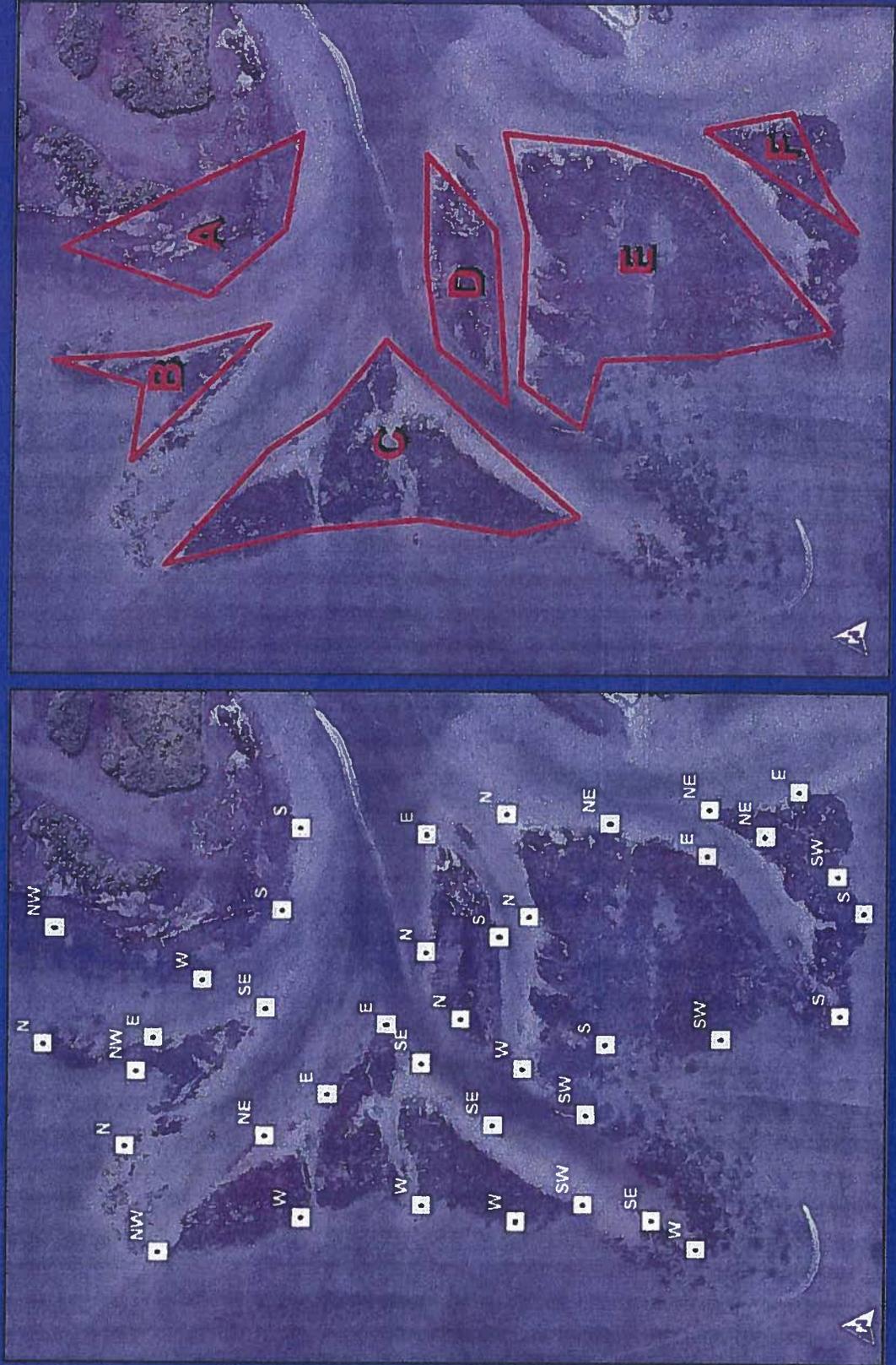
# Sebastian Inlet, FL USA



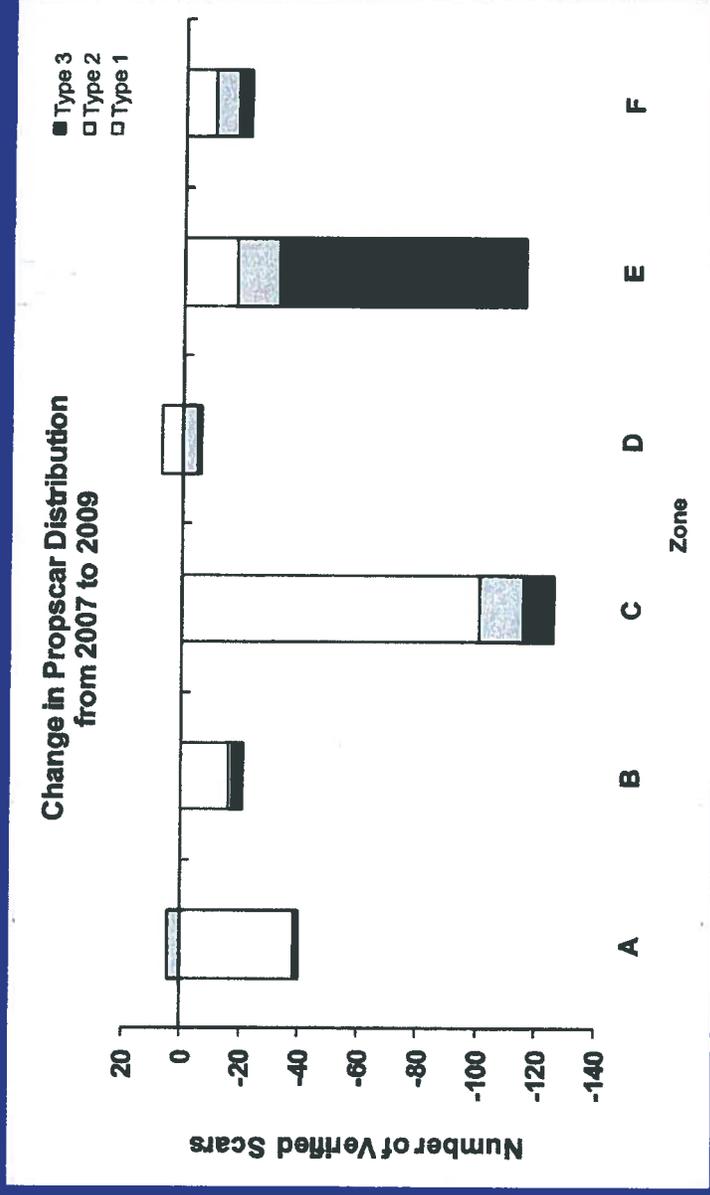
- Brevard & Indian River Counties, Florida
- 1 of only 6 inlets to the IRL
- High tidal currents
- Expanding flood tidal shoal
- Productive seagrass mixed meadow
- Aquatic Preserve (Malabar to Vero Beach)
- NMFS Critical Habitat for *Halophila johnsonii*

Indian River Lagoon (IRL) Highlighted in Orange.

# Protective Signage



# Propscar Analysis 2007-2009



- Areas of greatest change from 2007 to 2009: Zones C and E
  - Decreases in Type I and III scarring driving much of the overall pattern

# ATTACHMENT F

## Boot Key Harbor, Marathon

Boot Key Harbor has a large seagrass flat near the entrance to the City Marina that historically received frequent groundings and prop scars. The City installed cautionary buoys around the flat, and the City Marina manager reports a dramatic reduction in groundings, which he estimates as more than 90%.



## ATTACHMENT 5F Site Photographs

Photos taken by SWC staff



Photo 1: Walker's Island Shoreline, showing homes under construction, the existing dock, and the flushing culvert to be replaced. (12/18/08)



Photo 2: View from the existing dock to the southwest, in the direction the proposed entrance channel would be. (10/4/08)



Photo 3: View from the existing dock, looking south, toward the dolphin basin and the spit of land south of the project area. (10/4/08)

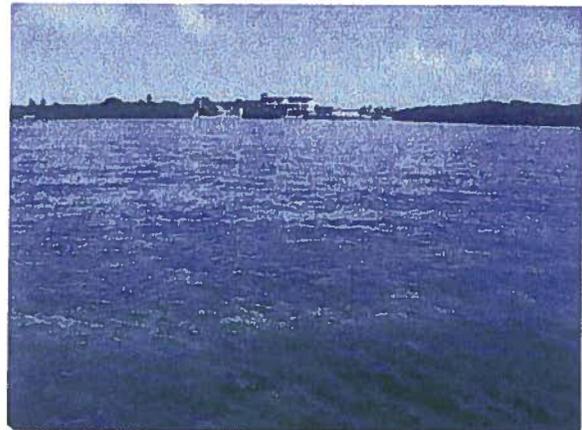


Photo 4: View toward the Walker's Island property, looking northeast. Seagrass injuries are visible in the foreground. (10/7/09)



Photo 5: View from the existing dock area toward the southeast, with the flushing culvert visible in the center. (12/18/08)

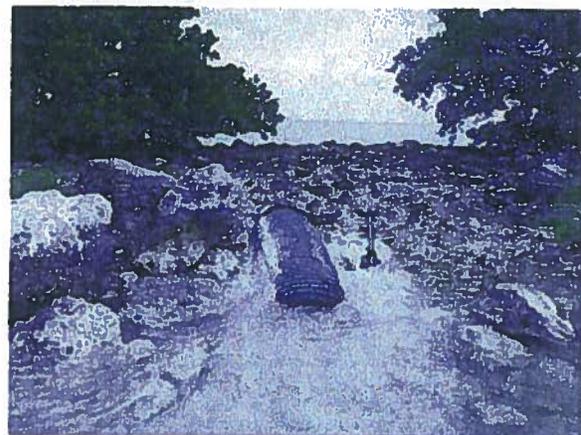
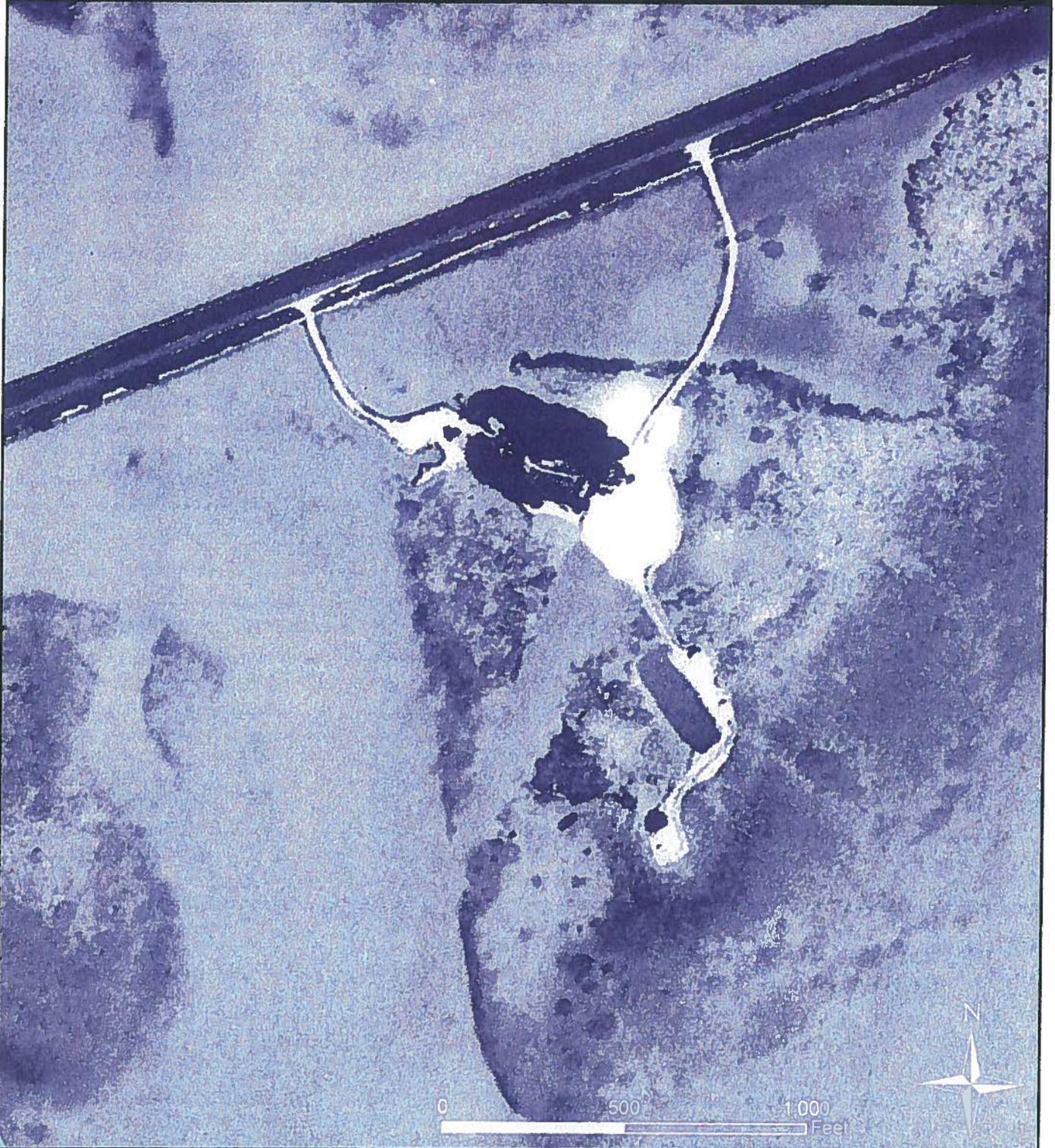


Photo 6: View from the existing dock area toward the east, with the flushing culvert visible in the center. (12/18/08)



## ATTACHMENT 5G-3 1957 Aerial Photograph of Property





MIAMI • FT. MEYERS • KEY WEST  
www.swcnc.net

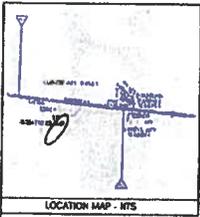
Updated Benthic Assessment, ERP Application  
Walker's Island, November 25, 2009

## ATTACHMENT 5G-4 1955 Aerial Photograph of Property

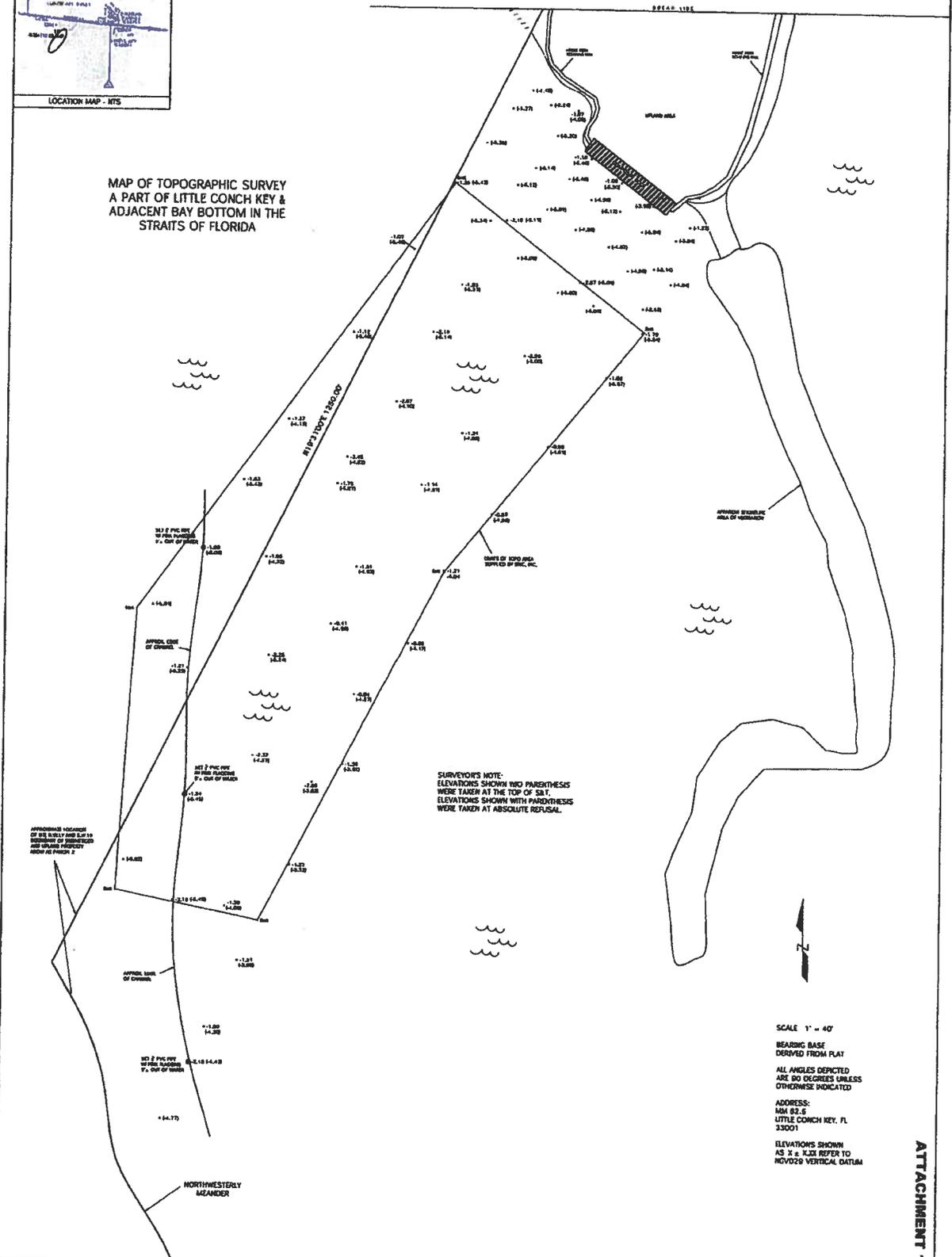


Source: Aerial from Coastal & Geodetic Survey

Adapted by Shelli Braynard, SWC



MAP OF TOPOGRAPHIC SURVEY  
A PART OF LITTLE CONCH KEY &  
ADJACENT BAY BOTTOM IN THE  
STRAITS OF FLORIDA



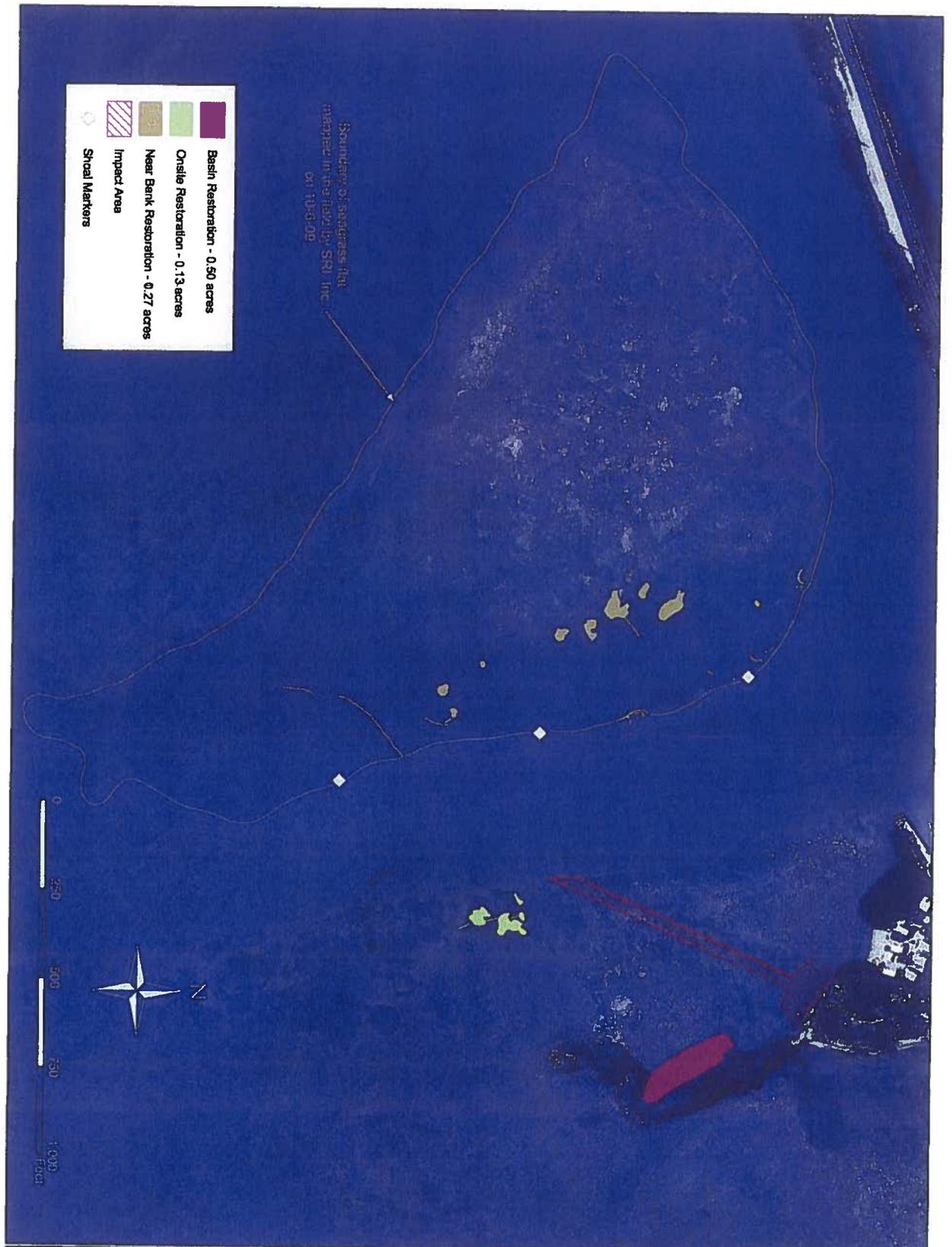
SURVEYOR'S NOTE:  
ELEVATIONS SHOWN IN PARENTHESIS  
WERE TAKEN AT THE TOP OF SLIT.  
ELEVATIONS SHOWN WITH PARENTHESIS  
WERE TAKEN AT ABSOLUTE REFUSAL.

SCALE 1" = 40'  
BEARING BASE  
DERIVED FROM FLAT  
ALL ANGLES DENOTED  
ARE 90 DEGREES UNLESS  
OTHERWISE INDICATED  
ADDRESS:  
MM 82.6  
LITTLE CONCH KEY, FL  
33001  
ELEVATIONS SHOWN  
AS X ± 0.03 REFER TO  
NOVD29 VERTICAL DATUM

ATTACHMENT 1

<p>LEGAL DESCRIPTION - N/A</p>	<p>CERTIFIED TO - LITTLE CONCH KEY, LLC</p>	<p>RECORDING INFORMATION</p>	<p>PROPERTY INFORMATION</p>
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**A.R.E. REECE, P.A.**  
 PROFESSIONAL SURVEYOR AND MAPPER  
 3204 GINA ROOSTERS, DEL REE, FL 33004  
 OFFICE (888) 678-1248  
 TX (904) 672-5022



Impact Assessment and  
Mitigation Plan (Revised)  
ERP Application  
Walker's Island  
July 30, 2010

**ATTACHMENT  
6H-1**

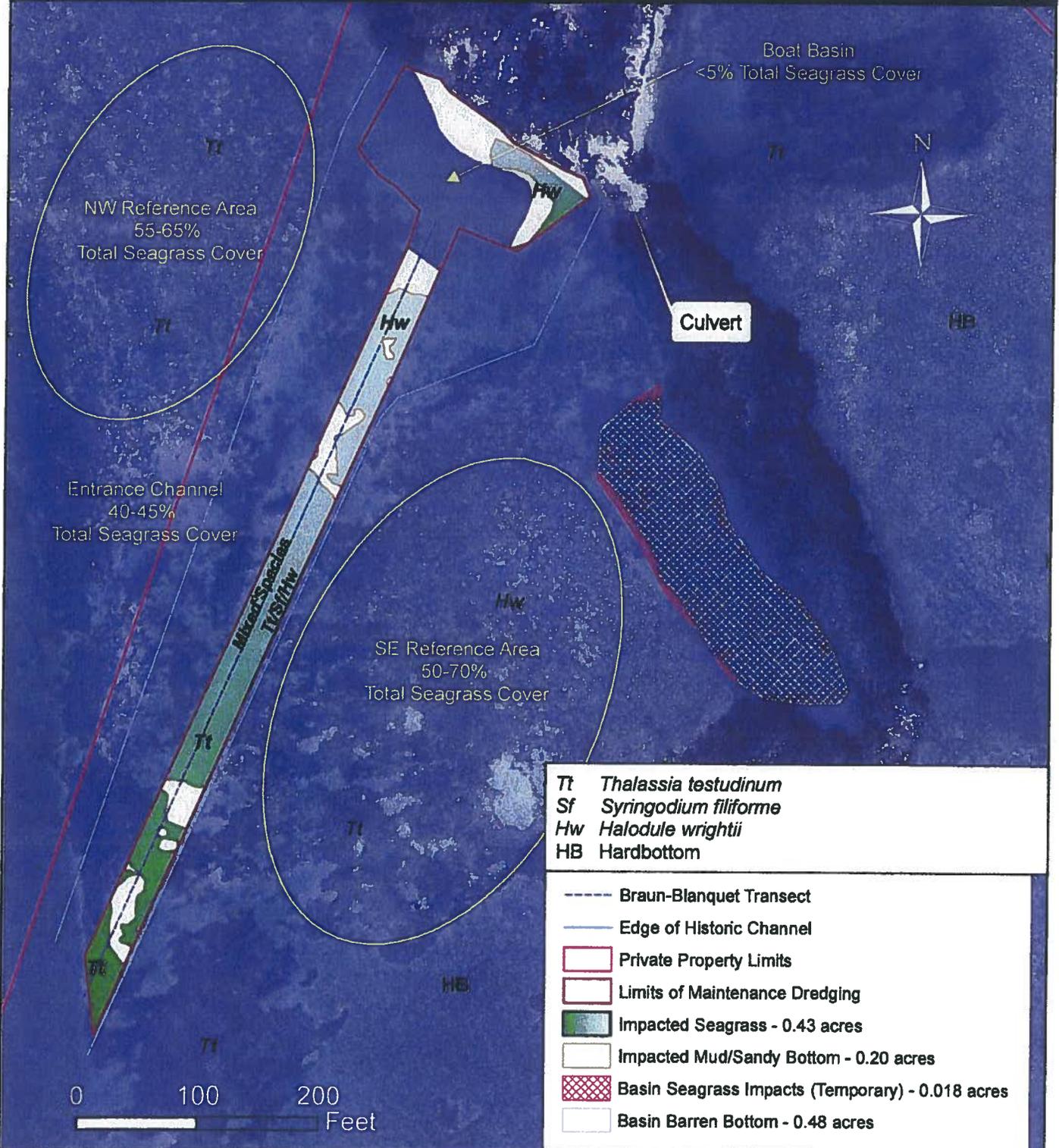
**Seagrass  
Restoration  
Overview**

Planning  
Ecological  
Environmental  
communications  
CONSULTING SERVICES  
(305) 294-1236 phone  
(305) 294-2184 fax  
www.swcinc.net

Date: September 15, 2009  
Adapted by: S Brayland, SWC  
Source: 2006 Aerial,  
Monroe County

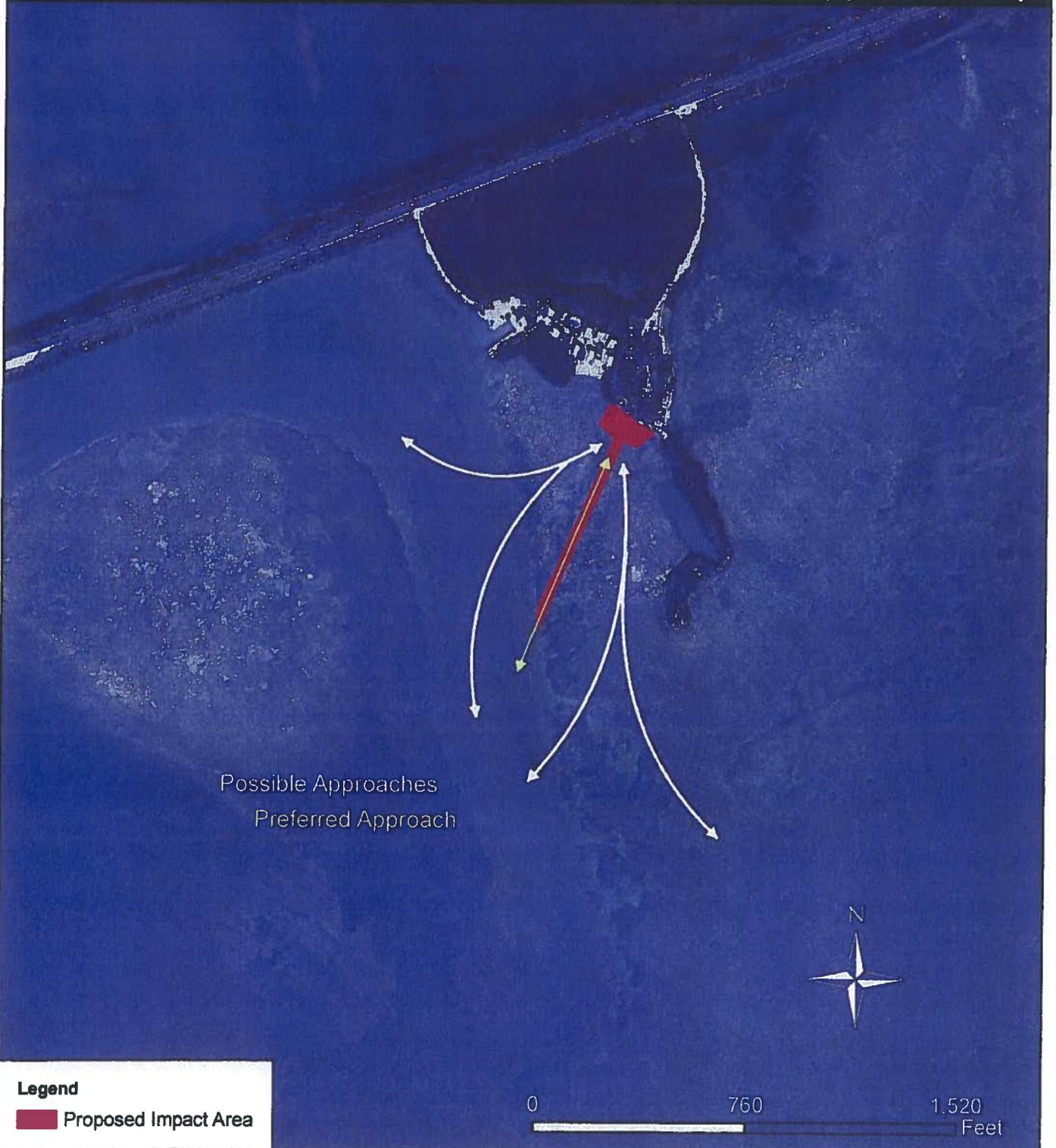


# ATTACHMENT 5C 2009 Benthic Resources Map



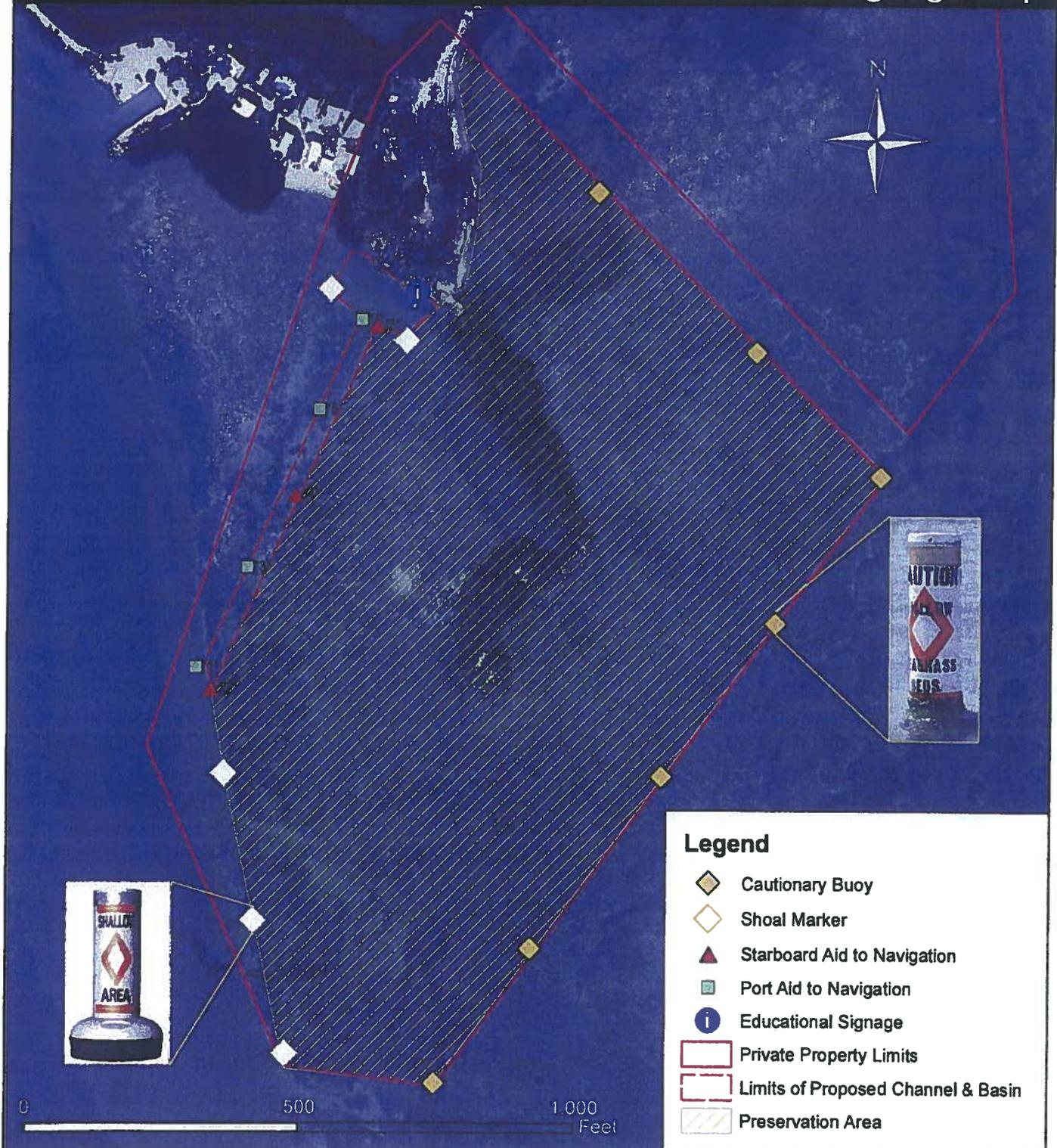


# ATTACHMENT 6B-1 Navigational Approach Map





# ATTACHMENT 6B-2 Markers & Signage Map





## 6.0 PROPOSED COMP PLAN AND LDR AMENDMENTS AND RATIONALE

The following provides the current Comp Plan and LDR language with the proposed revised language indicated by underline (added), immediately followed by the rationale for the specific amendment in relation to the proposed project. Several of the amendments propose adding the South Florida Water Management District (District) as an alternate State permitting entity. This is because the District is responsible for review and issuance of State environmental resource permits for most commercial projects and private projects involving four or more residential units. Therefore, these changes correct a current inaccuracy in the Comp Plan, as commercial or larger residential projects may require District rather than Florida Department of Environmental Protection (DEP) permits for these activities.

### COMPREHENSIVE PLAN

Each Comprehensive Plan section being revised is provided below with deletions indicated by strikethrough and additions in red and underlined. The changed sections are all indented with the rationale for each set of changes at full text width.

#### Policy 202.8.3

No ~~maintenance~~ maintenance dredging shall be permitted within areas vegetated with seagrass beds or characterized by hardbottom communities except for maintenance dredging ~~maintenance~~ in public navigation channels and re-dredging of historically-dredged channels and/or boat basins as provided by Policy 202.8.4.

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#### Policy 202.8.4

In order to facilitate navigational safety and reduce continued scarring of seagrass beds, maintenance re-dredging of historically-dredged channels and/or boat basins shall be permitted, in limited circumstances, within access channels vegetated with seagrass communities if there is a continued threat to these communities due to existing upland development and docking facilities. Maintenance Re-dredging of historically-dredged channels and/or boat basins shall only be permitted to preserve or restore the function of the access channel and/or boat basin. Access channels are defined as artificially-created channels, constructed through excavation, serving as waterways for watercraft, and providing access to open water. Boat basins are defined as artificially-created basins, constructed through excavation, serving as basins for mooring of watercraft. Access channels and boat basins do not include propeller-dredged channels and basins.

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Maintenance Re-dredging in historically-dredged channels and boat basins access channels vegetated with seagrass beds, attached macroalgae or other hardbottom communities will be permitted if the following conditions are met:

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1. There is an existing access channel and/or boat basin, evidenced by permits or historical aerial photography showing a historically-dredged channel;
2. There are existing, lawfully-established upland development and docking facilities served by the access channel;
3. The submerged land within the historically-dredged access channel and/or boat basin is privately owned by the owner of the immediately-adjacent upland riparian property containing the upland development and docking facilities served by the access channel;
4. Demonstrable natural shoaling has reduced the upland property owner(s) reasonable access to open water;
5. There is evidence of scarring to the adjacent (surrounding) seagrass beds;
6. Mitigation for seagrass impacts is provided consistent with the Final Programmatic Environmental Impact Statement for Seagrass Restoration in the Florida Keys National Marine Sanctuary adopted in 2004 or its successors;
7. A performance bond for the re-dredging of historically-dredged channels and/or boat basins maintenance dredging will be provided to the County prior to permit issuance;
8. A post-construction survey of the maintenance dredge footprint and depth will be conducted by a State-licensed surveyor and provided to the County for review, and if physical characteristics, including depth, exceed 15 percent from that specified in the permit application, the applicant will be required to correct the errors prior to release of the performance bond; and
9. The proposed maintenance dredging meets the criteria included in Goal 106 of the Monroe County Comprehensive Plan;
10. The applicant shall notify the Monroe County Biologist 48 hours before dredging activities will commence to accommodate construction inspections; and
11. This policy shall not apply to the removal of a natural or manmade barrier separating a canal or canal system from adjacent wetlands or surface waters.

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The proposed maintenance re-dredge activity shall be designed to protect natural resources and shall provide reasonable assurance that the activity will reduce continued scarring of surrounding seagrass beds through the provision and perpetual maintenance of educational signage, channel markers or buoys. The maintenance re-dredge methodology shall not cause degradation of water quality or secondary and/or cumulative impacts to surrounding marine resources. Turbidity controls shall be used to prevent reduction of light availability to seagrasses and increased sedimentation of adjacent surface waters and marine resources.

In addition, Issuance of a permit will include a condition that all applicable State and federal permits be obtained before commencement of work, a



requirement that copies of these permits be available for inspection at the construction site at all times, and that lack of these permits at any inspection will be immediate cause for issuance of a stop work order.

#### **Rationale for Amendment to Policy 202.8.3 and Addition of Policy 202.8.4**

The purpose for this proposed amendment is to allow maintenance dredging where there are seagrass communities in certain, very limited instances where there are present and ongoing threats to seagrass communities due to use of existing docking facilities. In addition, this limited and mitigated impact would be further offset by protection of the surrounding seagrass communities. This provision will limit maintenance dredging to privately-owned submerged lands, preventing any potential for impacts on publicly-owned, State submerged lands.

While Monroe County is currently prohibited by State Statute from requiring issuance of State and federal permits as a prerequisite for issuing a County permit, this Statute specifies that it does not prohibit a county from providing applicants with "a disclaimer to the issuance of a development permit and may include a permit condition that all other applicable state or federal permits be obtained before commencement of the development." The Statute also "does not prohibit a county from providing information to an applicant regarding what other state or federal permits may apply." (Source of quotations: Florida HB 503, page 6 of 41).

As described above, Walker's Island has an environmental resource permit (ERP) application pending with the South Florida Water Management District (District), which applies an extremely stringent review process to any such activity in the Florida Keys, to implement a number of specific provisions of State law and administrative code, including:

- the Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District, which implements Chapter 373, Florida Statutes (FS) and chapters 4-E-4, 40E-40 and 40E-400, Florida Administrative Code (FAC), and is adopted by reference in Rule 40E-4.091(1)(a), FAC,
- Rule 62-312, FAC, which applies specific and even more stringent requirements on docking facilities in the Florida Keys, and
- Rule 62-302.700(i)(13), FAC, which defines the Florida Keys as Outstanding Florida Waters, and requires zero degradation of water quality outside the project boundaries because of that designation.

This permitting process requires elimination and reduction of impacts to the greatest extent practicable and in the Florida Keys goes further to require a net gain in comparable ecological function. In addition, coordination is required with the Florida Fish and Wildlife Conservation Commission (FWC) and DEO, providing further special scrutiny.

At the federal level, acquisition of a permit from the USACE requires coordination with the National Marine Fisheries Service (NMFS) regarding federally-designated Essential Fish Habitat (EFH) including seagrass communities as well as protected fish and sea



turtle species; and U.S. Fish and Wildlife Service (USFWS) regarding manatees. Finally, this activity is prohibited in the Florida Keys National Marine Sanctuary unless a permit from the Sanctuary is acquired, which again addresses all environmental protection and enhancement issues consistent with the Sanctuary Management Plan and the PEIS.

Therefore, meeting these conditions and acquisition of these permits will ensure protection of benthic resources consistent with Ch. 380.0552(7)(b) FS, which states, "to protect shoreline and marine resources, including mangroves, coral reef formations, seagrass beds, wetlands, fish and wildlife, and their habitat." Further discussion in sections 7 and 8 below describe how this is consistent with and strongly supports several other current Comp Plan Objectives and Policies, and other related County plans.

**Policy 202.8.5**

In order to facilitate establishment of bottom vegetation, maintenance dredging in artificial waterways shall not exceed depths greater than minus six (-6) feet mean low water. This policy does not apply to the entrance channels into Key West Harbor and Safe Harbor.

**Policy 202.8.5 6**

All dredged spoil resulting from ~~maintenance~~ maintenance dredging, or re-dredging of historically-dredged channels and/or boat basins shall be placed on permitted upland sites where drainage can be contained on-site unless utilization of the dredged spoil is an element of a seagrass restoration project approved under Policy 202.8.4 that provides reasonable assurance of no negative impacts to water quality, species or habitats.

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**Rationale for Amendment to Policy 202.8.5 and 202.8.6**

The purpose of these amendments is to (1) renumber from the added Policy 202.8.4, above, and (2) provide an exception from only upland disposal of dredge spoil for use in a seagrass restoration project.

Disposal of clean dredge spoil into submerged lands in the very limited instance where it is serving the purpose of seagrass community restoration will directly enhance the submerged marine resources of the Florida Keys. Fill is almost always required for a seagrass restoration project, as deeper areas caused by previous dredging or from propeller scars must be filled to the depths of surrounding seagrass beds to provide for successful restoration. In the case of Walker's Island, the clean maintenance dredge spoil material would be placed in an existing dredged basin that does not support marine life due to the discontinuity created by early dredging activities.

The State permitting process requires testing of sediment to be dredged to assure State standards for contamination are met. In addition, it requires the use of turbidity curtains and other best management practices along with monitoring during construction to ensure zero degradation of ambient surrounding water quality, which is the standard required by the State's Outstanding Florida Waters (OFW) designation applicable to the

Florida Keys. Federal permitting processes administered by the USACE and FKNMS also require full water quality protection measures.

By meeting the conditions implemented in the ERP and maintained through enforcement by the State and federal permitting agencies during construction activities, the intent of Objective 202.6, which requires County policies "controlling discharges into surface waters from dredge and fill activities," will clearly be met. This is also consistent with Ch. 380.0552(7)(e) FS, which states, "To limit the adverse impacts of development on the quality of water throughout the Florida Keys." Further discussion in sections 7 and 8 below describe how this is consistent with and strongly supports several other current Comp Plan Objectives and Policies, and other related County plans.

**Policy 203.2.3**

Effective upon plan adoption, Monroe County shall:

1. prohibit new dredging in the Florida Keys; and
2. prohibit ~~maintenance dredging~~ ~~maintenance re-dredging~~ of historically-dredged channels and/or boat basins within areas vegetated with seagrass beds except for ~~maintenance~~ ~~maintenance dredging~~ dredging in public navigation channels and as provided by Policy 202.8.4. (See Objective 202.8 and related policies.)

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**Rationale for Amendment to Policy 203.2.3**

Please see the rationale for the amendment to Policy 202.8.3 and addition of Policy 202.8.4, above, which equally applies to this proposed amendment. In addition, Objective 203.2 requires Monroe County to "protect submerged lands vegetated with seagrasses by implementing regulations which will further reduce direct and indirect disturbances to seagrasses." The Walker's Island project is specifically designed to restore and properly mark a small part of an historic access channel serving an existing dock, as well as to manage the surrounding shallow flats that have already experienced propeller damage (which will be restored), resulting in long-term, practical reduction in direct impacts to seagrasses. The project is also designed to limit all secondary impacts of boat activity to within the dredge footprint, reducing indirect disturbances to seagrasses. Only a project so designed could meet the specific conditions outlined in the amendment and State and federal permit requirements.

Objective 203 states, "The health and integrity of living marine resources and marine habitat, including mangroves, seagrasses, coral reefs and fisheries, shall be protected and, where possible, enhanced." The Walker's Island project will provide extensive compensatory mitigation and additional habitat restoration that will result in significant enhancement of seagrass habitat, including long-term management to protect it from future damage necessary for acquisition of State and federal permits.

Therefore, this proposed amendment will ensure meeting the Comp Plan objectives as well as the Statutory requirements in the Principles for Guiding Development. Further discussion in sections 7 and 8 below describes how this is consistent with and strongly supports several other current Comp Plan Objectives and Policies, and other related County plans.



**Policy 204.2.2**

No structures shall be permitted in submerged lands, mangroves, salt ponds, or wetlands, except for elevated, pile-supported walkways, docks, piers and utility pilings. No fill shall be permitted in submerged lands, mangroves, salt ponds, or wetlands except;

1. as specifically allowed by Objective 212.6 and subsequent policies;
2. to fill a manmade, excavated water body such as a canal, basin or swimming pool if the Director of Environmental Resources determines that such filling will not have a significant adverse impacts on marine or wetland communities; or
3. as needed for shorelines stabilization, seagrass restoration or beach renourishment projects with a valid public purpose that furthers the goals of the Monroe County Comprehensive Plan as determined by the Directors of Planning and Environmental Resources. ~~All such projects shall require approval by the Florida Department of Environmental Protection or South Florida Water Management District and the U.S. Army Corps of Engineers prior to issuance of a County building permit.~~ All such projects require permits from the Florida Department of Environmental Protection or South Florida Water Management District, the U.S. Army Corps of Engineers, and the Florida Keys National Marine Sanctuary prior to commencement of work. These permits must be kept at the project site for inspection at all times, and a stop work order will be issued at any inspection if not present. [9J-5.012(3)(c)1 and 2; 9J-5.013(2)(c)6]

**Rationale for Amendment to Policy 204.2.2**

Objective 204.2 states that, "Monroe County shall eliminate the loss of undisturbed wetlands and shall eliminate the net loss of disturbed wetlands." The purpose for the proposed amendments to this policy is to provide another opportunity to meet this objective through seagrass restoration projects such as proposed at Walker's Island. The filling of the barren, previously-dredged 0.50-acre basin, and the propeller scars and blowholes on the privately-owned submerged land, will allow restoration to seagrass habitat that existed there prior to disturbance, and these activities along with the rest of the proposed compensatory mitigation and additional restoration measures will result in a significant net gain in ecological function. This is entirely consistent with the objective, as no undisturbed wetlands are lost and there is no net loss of disturbed wetlands, but rather a net gain. Again, this is consistent with the Principles for Guiding Development by providing for protection and enhancement of marine resources, and further discussion in sections 7 and 8 below describes how this is consistent with and strongly supports several other current Comp Plan Objectives and Policies, and other related County plans.

**Goal 109**

In addition to the provisions of Policy 202.8.4, Monroe County shall regulate maintenance re-dredging of historically-dredged access channels and/or boat basins serving existing legally-established upland development with existing docking facilities where the minimum

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maintenance re-dredge area has been recolonized seagrasses, macroalgae or other hardbottom communities by the enactment of area-specific regulations that allow maintenance dredging to occur subject to limitations and conditions designed to protect natural resources.

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**Objective 109.1**

Monroe County shall regulate use of submerged lands for maintenance re-dredging of historically-dredged channels and boat basins through Sub-Area Policies Applicable to a Specific Geographic Area. These sub-area policies identify parcels of submerged land that require narrowly-tailored regulation in order to confine the potential for impacts to a specific area. The development parameters established for each sub-area shall be based on data specific to the sub-area in relation to protection of natural resources in order to confine potential impacts to a specific area.

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**Policy 109.1.1 Reserved.**

**Policy 109.1.2 Walker's Island Privately-Owned Submerged Land Area 1**

Only the maintenance re-dredging of an historically-dredged channel and boat basin specified in the table below shall be allowed on the submerged land parcel shown as the Walker's Island Privately-Owned Submerged Land Area 1, subject to conditions 1-2, below:

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<u>REAL ESTATE NUMBER</u>	<u>TOTAL ACREAGE</u>	<u>IMPACT ACRES</u>	<u>CONSERVATION EASEMENT ACREAGE</u>
<u>00099110-000000</u>	<u>27.22</u>	<u>0.63</u>	<u>26.93</u>

And over which an existing docking facility exists, which serves 8 legally-established residential units on the adjacent upland parcel.

Maintenance Re-dredging of an historically-dredged channel and boat basin at the Walker's Island Privately Owned Submerged Land Area 1 shall be subject to the restrictions set out below:

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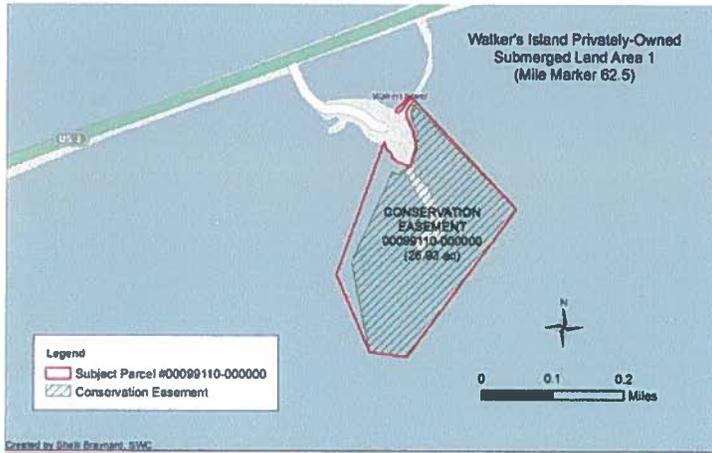
- Maintenance Re-dredging shall be limited to no more than the acreage specified in the above table to provide safe access to the existing docking facility.
- Recordation of a conservation easement in favor of the South Florida Water Management District prohibiting all impacts on, and requiring perpetual maintenance of, 26.93 acres of submerged land contained in

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parcel 00099100-000000. The area to be conserved is delineated in the map below.



#### Rationale for Goal 109

The purpose of Goal 109 is to provide Monroe County the ability to review each specific project that proposes to utilize the exception provided in the amended Policy 202.8.4 on a case-by-case basis. The numbers of parcels that could theoretically apply this policy are quite limited, as described in greater detail in Section 9.0, below. However, due to the high degree of environmental sensitivity in the Florida Keys and the great focus on protection of the submerged marine resources here, providing a case-by-case mechanism for review ensures an added level of scrutiny. This process is very similar to that in Goal 107, which provides for case-by-case reviews of specific parcels that have scarified and/or filled portions that also contain environmentally sensitive areas. Goal 106 is tailored after this precedent, as there is a clear parallel between submerged land parcels that require maintenance dredging of historically dredged access channels where seagrasses have recolonized and development in upland scarified parcels that also contain environmentally sensitive areas.

Policy 106.1.2 creates a Specific Geographic Area for the Walker's Island project, defines the parcel size and allowed maximum maintenance-dredge area, and the specific size and location of the conservation easement that must be recorded for perpetual preservation and maintenance.

Any other property owner who wishes to utilize the amended Policy 202.8.4 must apply for a Comp Plan amendment to create another Specific Geographic Area, again providing the opportunity for Monroe County to review the specific site conditions. This additional level of scrutiny will entirely ensure that the other Goals and Policies in the Comp Plan to protect marine resources are met, as well as meeting the Principles for Guiding Development in the Florida Keys Area of Critical State Concern.

**Policy 105.2.14**

Monroe County shall identify and secure possible local sources to yield a steady source of funds and secure increased funding from state and federal, and/or private sources for the Land Acquisition Program and the management and restoration of acquired resource conservation lands. With the uncertainty concerning the County's ability to successfully secure sufficient funding from state and federal governments for their fair share of the financial support for the Land Acquisition Program and the demands placed on the County's limited financial resources to address wastewater and other critical issues, it is recognized that the Land Acquisition Program may extend well beyond 20 years.

**Policy 105.2.15**

Where appropriate, as part of the Livable CommuniKeys Planning Process, Community Centers shall be designated within areas designated as Tier III (Infill Area). A Community Center is characterized as a defined geographic area with a mix of retail, personal service, office and tourist and residential uses (generally of greater than 8 units per acre). Community Centers shall be designated as receiving areas for transfer of development rights and shall receive special incentives in the non-residential permit allocation system.

**Objective 105.3**

Monroe County shall implement its 20-Year Land Acquisition Program and smart growth initiatives in conjunction with its Livable CommuniKeys Program and shall make appropriate amendments to this Plan and the Land Development Regulations including, but not necessarily limited to the residential and non-residential permit allocation systems.

**GOAL 106: Reserved**

**GOAL 107**

Monroe County shall regulate land use and development activities of scarified and/or filled portions of parcels containing environmentally sensitive areas, by the enactment of area-specific regulations that allow development to occur subject to limitations and conditions designed to protect natural resources.

**Objective 107.1**

Monroe County shall coordinate land use with the elements of the Comprehensive Plan through Future Land Use Element Sub-Area Policies Applicable to a Specific Geographic Area. These sub-area policies identify parcels of land that require narrowly-tailored regulation in order to confine development potential to an area or extent less than the maximum development potential allowed by its Future Land Use Map category. The development parameters established for each sub-area shall be based either on an inventory of uses and facilities established on the parcel or by data and analysis supporting the specific sub-area limitations.

**Policy 107.1.1 Reserved**

**Policy 107.1.2 Ramrod Key Mixed Use Area 1**

Only the land uses listed in paragraphs 1-4 below shall be allowed on the parcels shown in the table following as Ramrod Key Mixed Use Area 1:

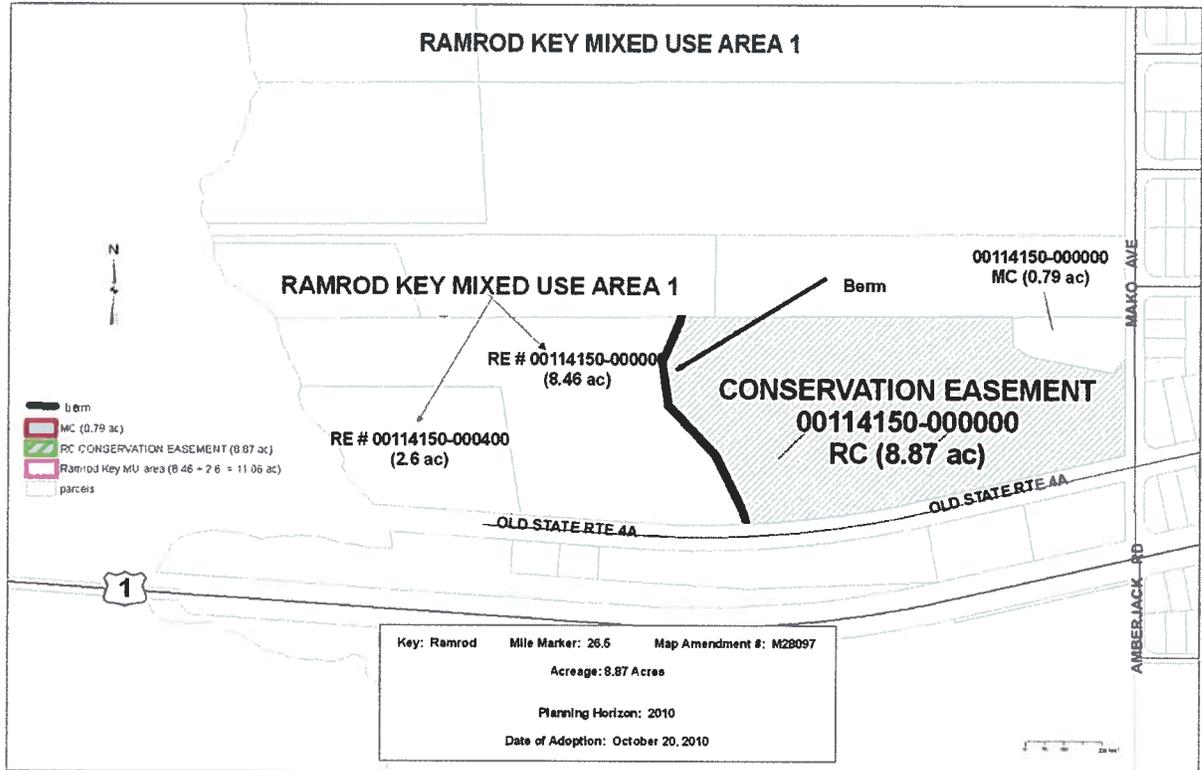
REAL ESTATE NUMBER	TOTAL ACREAGE	ACRES	FLUM DESIGNATION	CONSERVATION EASEMENT ACREAGE	BERM TO BE LOCATED ON PARCEL
00114150-000000	18.12	0.79	N/A	N/A	
		8.46	Ramrod Key Mixed Use Area 1	N/A	x
		8.87	RC	8.87	
00114150-000400	2.6	2.6	Ramrod Key Mixed Use Area 1	0	

And on which a concentration of non-residential uses exists, including approximately 15,325 square feet of commercial floor area devoted to the uses listed below.

1. Storage, warehousing, and processing of equipment and materials utilized or generated in construction, demolition and land clearing, together with ancillary activities, including, but not limited to:
  - a. Administrative offices.
  - b. Workshops and equipment maintenance areas, outdoors and within structures.
  - c. Garages and outdoor parking for construction and demolition equipment and machinery.
  - d. Outdoor and covered storage and processing of demolition debris and construction materials.
  - e. Storage buildings.
  - f. Above-ground fuel tanks.
2. An antenna supporting structure with accessory building.
3. Residential uses consistent with the former RL future land use map designation and with SS zoning. Single family residences shall be limited to the existing (including any replacement thereof) and no more than four (4) additional single family residences.
4. Outdoor storage, refinishing, repair and/or rebuilding of vehicles, boats and trailers that do not constitute a heavy industrial use.

Development of the Ramrod Key Mixed Use Area 1 shall be subject to the restrictions set out below:

1. Wetlands and hammock areas adjacent to outdoor storage shall be protected by:
  - a. Recordation of a conservation easement prohibiting all development activities on the approximately 8.87 acres of wetlands within the Easterly portion of parcel 00114150-000000. The area to be conserved is delineated on the map below.
  - b. Construction and maintenance of a berm, no less than 3 feet in height, on scarified land along the Westerly edge of the wetlands portion of parcel 00114150-000000 as depicted on the map below, to protect the wetlands from stormwater runoff. Prior to issuing any permit for berm construction, Monroe County shall require submission of a stormwater management plan adequate to protect the wetlands portion of the parcel from degradation attributable to stormwater runoff from the adjacent scarified portion utilized for outdoor storage, construction, and demolition activities.



2. Development shall be contingent on any required coordination and/or approval from the United States Fish & Wildlife Service. (Ord. 028-2010).

### Policy 107.13 Specific Limitations on Key Largo Mixed Use Area 1

The Key Largo Mixed Use Area 1 has a concentration of non-residential uses currently existing, including approximately 2,968ft<sup>2</sup> of commercial floor area. The current Real Estate Parcel number is 00440100.000000, contains 0.62 acres and is legally described as:

Lots 11, 12, 13, 14, 15, 16, 17 and 18, 19 and 20, Block 2, THOMPSONS SUBDIVISION, Section "A", according to the plat thereof, as recorded in Plat Book 1, at Page 147, of the Public Records of Monroe County, Florida; and the East 10 feet of that portion of Fisherman's Trail, adjacent and contiguous to the West boundary line of Lots 15 and 16, Block 2, lying between the North Line of Sailfish Trail and the Southeasterly Right-of-Way line of Old State Road 4A, in Thompsons Subdivision, Section "A", according to the plat thereof, as recorded in Plat Book 1, at Page 147, of the Public Records of Monroe County, Florida.

Development in the Key Largo Mixed Use Area 1 shall be subject to regulations applicable to the Mixed Use / Commercial (MC) Future Land Use Designation as well as the additional restrictions set out below:

1. The maximum commercial floor area ratio of 0.30.
2. There shall be no residential units.  
(Ord. 021-2010)