Tab 1	**SB 330** by **Gainer**; (Identical to H 00109) Transportation Facility Designations/Lieutenant Ewart T. Sconiers Highway

885218 A S RCS ATD, Gainer Delete L.18: 11/15 02:54 PM

The Florida Senate

COMMITTEE MEETING EXPANDED AGENDA

APPROPRIATIONS SUBCOMMITTEE ON TRANSPORTATION, TOURISM, AND ECONOMIC DEVELOPMENT
Senator Simpson, Chair
Senator Powell, Vice Chair

MEETING DATE: Wednesday, November 15, 2017
TIME: 1:00—3:00 p.m.
PLACE: *Toni Jennings Committee Room,* 110 Senate Office Building

MEMBERS: Senator Simpson, Chair; Senator Powell, Vice Chair; Senators Benacquisto, Bradley, Gainer, Galvano, Gibson, Rader, Stargel, and Thurston

TAB	BILL NO. and INTRODUCER	BILL DESCRIPTION and SENATE COMMITTEE ACTIONS	COMMITTEE ACTION
1	**SB 330** Gainer (Identical H 109)	Transportation Facility Designations/Lieutenant Ewart T. Sconiers Highway; Providing an honorary designation of a certain transportation facility in a specified county, etc. TR 10/24/2017 Favorable ATD 11/15/2017 Fav/CS AP	Fav/CS Yeas 8 Nays 0
2	Discussion of Impacts on Infrastructure, Current Responses, and Potential Needs and Responses Due to Hurricane Irma		Presented
	Other Related Meeting Documents		

The Florida Senate

BILL ANALYSIS AND FISCAL IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: The Professional Staff of the Appropriations Subcommittee on Transportation, Tourism, and Economic Development

BILL:	PCS/SB 330 (851442)
INTRODUCER:	Appropriations Subcommittee on Transportation, Tourism, and Economic Development; and Senator Gainer
SUBJECT:	Transportation Facility Designations/Lieutenant Ewart T. Sconiers Highway
DATE:	November 17, 2017 REVISED:

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Price	Miller	TR	**Favorable**
2.	McAuliffe	Hrdlicka	ATD	**Recommend: Fav/CS**
3.			AP	

Please see Section IX. for Additional Information:

COMMITTEE SUBSTITUTE - Substantial Changes

I. Summary:

PCS/SB 330 designates the portion of U.S. 90/S.R. 10 between S.R. 285 and N. 9th Street/S.R. 83 in Walton County as "Lieutenant Ewart T. Sconiers Highway" and directs the Florida Department of Transportation (FDOT) to erect suitable markers.

The estimated cost to the FDOT to install the designation markers required under this bill is $1,000.

The bill takes effect upon becoming a law.

II. Present Situation:

Transportation Facility Designations

Section 334.071, F.S., provides that legislative designations of transportation facilities are for honorary or memorial purposes, or to distinguish a particular facility. Such designations do not require any action by local governments or private parties regarding the changing of any street signs, mailing addresses, or 911 emergency telephone number system listings, unless the legislation specifically provides for such changes.[1]

[1] Section 334.071(1), F.S.

When the Legislature establishes road or bridge designations, the FDOT is required to place markers only at the termini specified for each highway segment or bridge designated by the law creating the designation, and to erect any other markers it deems appropriate for the transportation facility.[2]

The FDOT may not erect the markers for honorary road or bridge designations unless the affected city or county commission enacts a resolution supporting the designation. When the designated road or bridge segment is located in more than one city or county, each affected local government must pass resolutions supporting the designations before installation of the markers.[3]

Lieutenant Ewart T. Sconiers

Lieutenant Sconiers was born in 1915 and raised in DeFuniak Springs, Florida. He attended the University of Florida before enlisting in the Army on September 16, 1941. He was shot down and captured by the Germans on October 21, 1942. He was imprisoned in German-occupied Poland and passed away there on January 24, 1944. In April of 2017, his remains were found and positively identified. Lieutenant Sconiers will be buried in DeFuniak Springs with full military honors on January 27, 2018.

III. Effect of Proposed Changes:

The bill designates the portion of U.S. 90/S.R. 10 between S.R. 285 and N. 9th Street/S.R. 83 in Walton County as "Lieutenant Ewart T. Sconiers Highway" and directs the FDOT to erect suitable markers for the described designation.

The bill takes effect upon becoming a law.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

V. Fiscal Impact Statement:

A. Tax/Fee Issues:

None.

[2] Section 334.071(2), F.S.
[3] Section 334.071(3), F.S.

B. Private Sector Impact:

None.

C. Government Sector Impact:

The estimated cost to erect the designation markers required by PCS/SB 330 is $1,000, based on the assumptions that two markers are required, and each marker costs the FDOT at least $500. The estimate includes sign fabrication, installation, and maintenance over time but does not include any additional expenses related to maintenance of traffic, the dedication event, or replacement necessitated by damage, vandalism, or storm events.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Statutes Affected:

The bill creates an undesignated section of Florida Law.

IX. Additional Information:

A. Committee Substitute – Statement of Substantial Changes:
(Summarizing differences between the Committee Substitute and the prior version of the bill.)

Recommended CS by Appropriations Subcommittee on Transportation, Tourism, and Economic Development on November 15, 2017:
The committee substitute changes the effective date of the bill from July 1, 2018, to upon becoming a law.

B. Amendments:

None.

This Senate Bill Analysis does not reflect the intent or official position of the bill's introducer or the Florida Senate.

885218

LEGISLATIVE ACTION

Senate	.	House
Comm: RCS	.	
11/15/2017	.	
	.	
	.	
	.	

Appropriations Subcommittee on Transportation, Tourism, and Economic Development (Gainer) recommended the following:

Senate Amendment

Delete line 18

and insert:

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

By Senator Gainer

2-00481-18 2018330__

A bill to be entitled

An act relating to transportation facility designations; providing an honorary designation of a certain transportation facility in a specified county; directing the Department of Transportation to erect suitable markers; providing an effective date.

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

Section 1. Lieutenant Ewart T. Sconiers Highway designated; Department of Transportation to erect suitable markers.—

(1) That portion of U.S. 90/S.R. 10 between S.R. 285 and N. 9th Street/S.R. 83 N. in Walton County is designated as "Lieutenant Ewart T. Sconiers Highway."

(2) The Department of Transportation is directed to erect suitable markers designating Lieutenant Ewart T. Sconiers Highway as described in subsection (1).

Section 2. This act shall take effect July 1, 2018.

CODING: Words ~~stricken~~ are deletions; words underlined are additions.

THE FLORIDA SENATE

Tallahassee, Florida 32399-1100

COMMITTEES:
Transportation, *Chair*
Commerce and Tourism, *Vice Chair*
Appropriations
Appropriations Subcommittee on Transportation, Tourism, and Economic Development
Banking and Insurance

JOINT COMMITTEE:
Joint Administrative Procedures Committee

SENATOR GEORGE B. GAINER
2nd District

October 24, 2017

Re: SB 330

Dear Chair Bradley,

I am respectfully requesting Senate Bill 330, related to Transportation Facility Designations/Lieutenant Ewart T. Sconiers Highway, be placed on the agenda for the next Appropriations Subcommittee on Transportation, Tourism, and Economic Development.

I appreciate your consideration of this bill. If there are any questions or concerns, please do not hesitate to call my office at (850) 487-5002.

Thank you,

Senator George Gainer
District 2

Cc. Jennifer Hrdlicka, Tempie Sailors, Mary Lee, Steven Richardson

REPLY TO:
❒ 302 Senate Office Building, 404 South Monroe Street, Tallahassee, Florida 32399-1100 (850) 487-5002

Senate's Website: *www.flsenate.gov*

JOE NEGRON
President of the Senate

ANITERE FLORES
President Pro Tempore

fhba
FLORIDA HOME
BUILDERS ASSOCIATION

FHBA

Responds to Hurricane Irma

IT'S ANECDOTAL

- The FHBA analysis that the Florida Building Code worked is anecdotal at this point--a forensic study will be forthcoming;
- To assure the code was not deficient, teams of code experts will conduct a forensic examination;
  - If they find failures—note: fallen trees are not a code failure—the next step will be to determine why a failure occurred;
    - Was it built prior to current code? Or was it a workmanship issue?
- If a code failure is found, then adjust code standards.
- This occurred post-2004-05 Hurricanes
  - Water intrusion was a problem so FHBA supported a code change that wasn't in the International Building Code.

THE BUILDING CODE PROCESS WORKS

- The success of the Florida Building Code is much more than implementation of a book of standards;
  - It also relies on inspectors and contractors being trained to a single document so that code compliance is achieved, something that didn't happen until after Hurricane Andrew.

PRESS REPORTS OF THE FLORIDA BUILDING CODE EFFECTIVENESS

SAINTPETERSBLOG

LIFE AND POLITICS FROM THE SUNSHINE STATE'S BEST CITY

Syd Kitson: Proud to be a Floridian

— by Guest Author

Storms are a fact of li… the 20-plus million that call ours… Mother Nature reminded … Hurricane Irma made her on… the first major hurricane to m… Florida since Wilma in 2005.

Before and after Irma's impact, Floridians respo…

With Gov. **Rick Scott**'s leadership, Florida safely…

encouraging. For Irma, teams of building code experts will be conducting a deep dive looking at code performance and will continue to learn and improve, but one thing is for certain, the homes built under the current Florida Building Code performed remarkably well. Special thanks to the leaders of the Florida Home Builders Association and the Association of Florida Community Developers for working to make Florida stronger.

THE WALL STREET JOURNAL.

Home World U.S. Politics Economy Business Tech Markets Opinion Life & Arts Real Estate

Homes Built to Stricter Standards Fared Better in Storm

Florida owners benefit from homes built to more-stringent codes: 'Tree branches bounced off of our roof. fine.'

Ms. Carr credits the more-stringent building code with saving her home and their lives. "For anyone who doubts these codes, I invite them to sit in a pre-code structure in a Category 3 storm or higher," she said.

"Florida significantly strengthened its defenses after hits from past major hurricanes, and those improvements were instrumental in helping the state weather this potentially devastating storm," Levy notes. "As a result, damage to Florida commercial real estate is relatively minor outside of the Keys."

NATIONAL REAL ESTATE Investor

OFFICE

Stricter Building Codes Saved Florida's Commercial Buildings from Irma's Wrath

Single-family houses bore the brunt of Hurricane Irma's fury.

Patricia Kirk | Sep 29, 2017

HOW DID THE CODES PERFORM AFTER IRMA?

- FHBA believes the code passed the test based on preliminary research;
- Solicited opinions from smaller custom builders, firms that market workforce housing, publicly- traded home-building firms and insurance companies.

BARRIERS TO REBUILDING FLORIDA

WORKFORCE ISSUES

- The construction industry was experiencing a shortage of workers before Hurricane Irma (and Harvey);
- Due to the statewide impact of Hurricane Irma (37 counties), the construction industry workforce will be stretched thinner with ongoing rebuilding efforts;
- FHBA along with other statewide construction associations will be seeking legislation this session to create a permanent Workforce Coalition to coordinate and promote careers in construction.

BARRIERS TO REBUILDING FLORIDA

INSURANCE ISSUES

- The Governor's Executive Order allowing contractors to do a re-roof has an insurance glitch;
  - Policies with roofing exclusions will NOT provide coverage for contractors;
  - A separate policy could be written provided the contractor meets underwriting guidelines, however, the guidelines are nearly impossible to meet on a temporary basis;

BARRIERS TO REBUILDING FLORIDA

TRIAGE ISSUES

- In the first few days following the storm, some contractors were unable to mobilize crews to triage houses due to limited access to fuel;
- Additionally, contractors had difficulty locating blue tarps immediately;

fhba
FLORIDA HOME
BUILDERS ASSOCIATION

THANK YOU

for the opportunity

THE FLORIDA SENATE

APPEARANCE RECORD

(Deliver BOTH copies of this form to the Senator or Senate Professional Staff conducting the meeting)

11/15/2017
Meeting Date

Bill Number (if applicable)

Topic Infrastruture Impact due to Hurricane Irma

Amendment Barcode (if applicable)

Name Mike Dew

Job Title Secretary

Address 605 Suwannee Street
Street

Phone 850-414-4575

Tallahassee FL 32399
City *State* *Zip*

Email mike.dew@dot.state.fl.us

Speaking: ☐ For ☐ Against ☑ Information

Waive Speaking: ☐ In Support ☐ Against
(The Chair will read this information into the record.)

Representing FDOT

Appearing at request of Chair: ☑ Yes ☐ No

Lobbyist registered with Legislature: ☑ Yes ☐ No

While it is a Senate tradition to encourage public testimony, time may not permit all persons wishing to speak to be heard at this meeting. Those who do speak may be asked to limit their remarks so that as many persons as possible can be heard.

This form is part of the public record for this meeting.

S-001 (10/14/14)

THE FLORIDA SENATE

APPEARANCE RECORD

(Deliver BOTH copies of this form to the Senator or Senate Professional Staff conducting the meeting)

11/14/17
Meeting Date

Bill Number (if applicable)

Topic Infrastructure - Bldg. Codes

Amendment Barcode (if applicable)

Name Rusty Patton

Job Title CEO Florida Home Builders Assn.

Address 2600 Centennial Place
Street

Phone 850-567-1073

Tallahassee FL 32308
City *State* *Zip*

Email rpatton@fhba.com

Speaking: ☐ For ☐ Against ☑ Information

Waive Speaking: ☐ In Support ☐ Against
(The Chair will read this information into the record.)

Representing FL Home Builders Association

Appearing at request of Chair: ☑ Yes ☐ No

Lobbyist registered with Legislature: ☑ Yes ☐ No

While it is a Senate tradition to encourage public testimony, time may not permit all persons wishing to speak to be heard at this meeting. Those who do speak may be asked to limit their remarks so that as many persons as possible can be heard.

This form is part of the public record for this meeting.

S-001 (10/14/14)

TAB 2

THE FLORIDA SENATE

APPEARANCE RECORD

(Deliver BOTH copies of this form to the Senator or Senate Professional Staff conducting the meeting)

11/15/17
Meeting Date

Bill Number (if applicable)

Amendment Barcode (if applicable)

Topic Monroe County - Hurricane Irma

Name Martin Senterfitt

Job Title Director Emergency Management

Address 423 Indies Rd
Street

Ramrod Key FL 33042
City *State* *Zip*

Phone (904) 891-7404

Email senterfitt-martin@monroecounty-fl.gov

Speaking: ☐ For ☐ Against ☑ Information

Waive Speaking: ☐ In Support ☐ Against
(The Chair will read this information into the record.)

Representing Monroe County

Appearing at request of Chair: ☐ Yes ☒ No

Lobbyist registered with Legislature: ☐ Yes ☒ No

While it is a Senate tradition to encourage public testimony, time may not permit all persons wishing to speak to be heard at this meeting. Those who do speak may be asked to limit their remarks so that as many persons as possible can be heard.

This form is part of the public record for this meeting.

S-001 (10/14/14)

THE FLORIDA SENATE

APPEARANCE RECORD

(Deliver BOTH copies of this form to the Senator or Senate Professional Staff conducting the meeting)

11/15/17
Meeting Date

Bill Number (if applicable)

Topic Hurricane Irma - Infrastructure

Amendment Barcode (if applicable)

Name Jerry Sansom

Job Title

Address PO Box 98
Street

Cocoa FL 32923
City *State* *Zip*

Phone 321-698-4400

Email fishhawk@aol.com

Speaking: ☐ For ☐ Against ☒ Information

Waive Speaking: ☐ In Support ☐ Against
(The Chair will read this information into the record.)

Representing City of Cocoa, Melbourne, Rockledge, Cape Canaveral

Appearing at request of Chair: ☐ Yes ☒ No

Lobbyist registered with Legislature: ☒ Yes ☐ No

While it is a Senate tradition to encourage public testimony, time may not permit all persons wishing to speak to be heard at this meeting. Those who do speak may be asked to limit their remarks so that as many persons as possible can be heard.

This form is part of the public record for this meeting.

S-001 (10/14/14)

THE FLORIDA SENATE

Tallahassee, Florida 32399-1100

COMMITTEES:
Appropriations Subcommittee on Higher Education, *Chair*
Appropriations
Appropriations Subcommittee on Transportation, Tourism, and Economic Development
Education
Governmental Oversight and Accountability
Rules
Transportation

JOINT COMMITTEE:
Joint Legislative Budget Commission

SENATOR BILL GALVANO
21st District

November 15, 2017

Senator Wilton Simpson
201 The Capitol
402 South Monroe Street
Tallahassee, FL 32399

Dear Leader Simpson:

I am writing to request approval to be excused from the Appropriations Subcommittee on Transportation, Tourism and Economic Development meeting scheduled for today, Wednesday, November 15, 2017.

I appreciate your consideration in this matter.

Sincerely,

Bill Galvano

cc: Jennifer Hrdlicka
Tempie Sailors

REPLY TO:
☐ 1023 Manatee Avenue West, Suite 201, Bradenton, Florida 34205 (941) 741-3401
☐ 420 Senate Office Building, 404 South Monroe Street, Tallahassee, Florida 32399-1100 (850) 487-5021

Senate's Website: *www.flsenate.gov*

JOE NEGRON
President of the Senate

ANITERE FLORES
President Pro Tempore

THE FLORIDA SENATE

Tallahassee, Florida 32399-1100

COMMITTEES:
Agriculture, *Vice Chair*
Appropriations Subcommittee on Health and Human Services
Appropriations Subcommittee on Transportation, Tourism, and Economic Development
Governmental Oversight and Accountability
Transportation

JOINT COMMITTEE:
Joint Administrative Procedures Committee, *Alternating Chair*

SENATOR KEVIN J. RADER
29th District

November 13, 2017

The Honorable Wilton Simpson
330 Senate Office Building
404 South Monroe Street
Tallahassee, FL 32399-1300

Dear Chairman Simpson:

In accordance with Senate Rule 1.21 I am writing to you to be excused from the Appropriations Subcommittee on Transportation, Tourism, and Economic Development meeting that will be held on Wednesday November 15, 2017 at 1:00pm due to business matters that need my immediate attention. I sincerely apologize for any inconvenience this may cause.

Thank you for your consideration. Please feel free to contact me at 561-866-4020 if you have any questions.

Sincerely

Kevin Rader

Kevin Rader
State Senator
District 29

cc: Jennifer Hrdlicka, Staff Director

REPLY TO:
☐ 5301 N. Federal Hwy, Suite 135, Boca Raton, Florida 33487
☐ 222 Senate Office Building, 404 South Monroe Street, Tallahassee, Florida 32399-1100 (850) 487-5029

Senate's Website: *www.flsenate.gov*

JOE NEGRON
President of the Senate

ANITERE FLORES
President Pro Tempore

CourtSmart Tag Report

Room: EL 110 **Case No.:** **Type:**
Caption: M. Senate Appropriations Subcommittee on Transportation, Tourism, and Economic Development **Judge:**

Started: 11/15/2017 1:05:55 PM
Ends: 11/15/2017 1:52:16 PM Length: 00:46:22

1:05:54 PM	Sen. Simpson (Chair)
1:07:15 PM	TAB 1 - S 330
1:07:35 PM	Sen. Gainer
1:08:50 PM	Am. 885218
1:09:07 PM	Sen. Gainer
1:09:27 PM	S 330 (cont.)
1:10:14 PM	TAB 2 - Discussion of Impacts on Infrastructure, Current Responses, and Potential Needs and
1:11:22 PM	Secretary Mike Dew, Dept. of Transportation
1:13:40 PM	Rusty Payton, CEO, Florida Home Builders Assn.
1:19:21 PM	Sen. Gibson
1:21:43 PM	R. Payton
1:22:35 PM	Sen. Gibson
1:23:02 PM	Martin Senterfitt, Director, Emergency Management, Monroe County
1:33:43 PM	Sen. Powell
1:34:00 PM	M. Senterfitt
1:34:19 PM	Sen. Powell
1:34:31 PM	M. Senterfitt
1:35:14 PM	Sen. Bradley
1:35:23 PM	M. Senterfitt
1:35:35 PM	Sen. Bradley
1:36:13 PM	M. Senterfitt
1:36:29 PM	Sen. Bradley
1:36:34 PM	M. Senterfitt
1:36:41 PM	Sen. Bradley
1:36:46 PM	M. Senterfitt
1:36:52 PM	Sen. Bradley
1:37:12 PM	Sen. Gibson
1:37:20 PM	M. Senterfitt
1:38:17 PM	Sen. Gibson
1:39:14 PM	M. Senterfitt
1:40:10 PM	Sen. Gibson
1:40:39 PM	M. Senterfitt
1:41:05 PM	Sen. Gainer
1:41:10 PM	M. Senterfitt
1:41:16 PM	Sen. Gainer
1:41:28 PM	M. Senterfitt
1:42:12 PM	Sen. Gainer
1:42:27 PM	M. Senterfitt
1:43:26 PM	Sen. Gainer
1:43:33 PM	M. Senterfitt
1:44:53 PM	Sen. Bradley
1:44:59 PM	M. Senterfitt
1:45:02 PM	Sen. Bradley
1:45:10 PM	M. Senterfitt
1:45:13 PM	M. Senterfitt
1:45:33 PM	Sen. Bradley
1:45:44 PM	M. Senterfitt
1:46:13 PM	Sen. Bradley
1:46:40 PM	Sen. Gibson
1:47:01 PM	M. Senterfitt
1:47:10 PM	Sen. Gibson
1:47:13 PM	M. Senterfitt

1:47:39 PM Sen. Gibson
1:47:44 PM M. Senterfitt
1:48:01 PM Sen. Gibson
1:48:09 PM Sen. Simpson
1:49:51 PM Jerry Sampson, Hurricane Irma Infrastructure
1:50:41 PM Sen. Simpson
1:50:47 PM Jerry Samson

Materials Distributed at the Request of Martin Senterfitt
Director Emergency Management Monroe Cty

TABLE OF CONTENTS

COVER LETTER

Architects Design Group inc AAC001'07

November 6, 2017

Mr. Roman Gastesi, County Administrator
Monroe County
1100 Simonton Street, 2-205
Key West, Florida 33040

Dear Mr. Gastesi,

Architects Design Group is pleased to submit our preliminary analysis of the new Design Criteria, Masterplan and Opinion of Probable Cost for the new Monroe County EOC to be located at a new site within the Florida Keys Marathon International Airport.

In November 2009, Architects Design Group completed the Construction Documents for a new EOC Facility for Monroe County. It was determined by the County to not move forward with the construction of this facility at that time. In October 2017, just before Hurricane Irma hit Florida, Monroe County Emergency Management contacted us to discuss revising the project. The new scope of work for the project will increase the size from approximately 16,000 square feet to 22,500 square feet (inclusive of conditioned user areas and non-conditioned mechanical space). The new facility will now include a larger EOC, additional break-out rooms surrounding the EOC and will also be designed to include an Administration component.

Project Description:

The Monroe County Emergency Operations Center will be approximately 22,500 square foot building designed to meet the Florida Division of Emergency Management requirements and survivable to a 10,000-year storm surge. This facility envelope will also be protected from large missiles impact as required by the State and will be designed to be operational during and after a hurricane event for up to 72 HR off the grid. Please refer to the Architectural Narrative for specific information on the Design Criteria for this new facility.

Since the original drawings were produced, there have been substantive code changes adopted by the State of Florida, which will affect the design of the proposed present-day facility. We have clarified these changes and submitted them, along with Architectural and Engineering Narratives (also included herein) to Construction Consultants & Associates (CC&A), who prepared an Opinion of Probable cost for this project.

The construction costs for this project have increased since the original facility was designed. These additional costs are directly related to:

- The additional program elements that have been added to the scope
- The increased requirements outlined in the new codes
- The present construction climate – general construction fees are higher than they were in 2009
- The impact that Hurricane Irma had on the construction climate and the availability of general contractors, subcontractors and material availability

2.0 Community Impact:

The Monroe County Emergency Operations Center is a facility providing strategic space for the emergency management department involved in the event of a natural disaster. It also provides communications and technology systems for such situations. Therefore, while the physical impact to the community will be low, the result of efficient communications and development of services during an emergency event will be of significant benefit.

3.0 Preliminary Opinion of Project Development Costs:

The following Opinion of Probable Costs Summary combines the Hard Costs (site construction and bricks and mortar costs for the building) with the Contractor Fees (insurance, overhead/profit and general conditions) and the Architecture/ Engineering Design Fees to outline the summary of the total costs associated with this project. A detailed Opinion of Probable Construction Cost, prepared by CC&A, outline in the specific construction cost breakdowns for the hard costs associated with the building and site construction. This detailed information is included later in this report. The Preliminary Project Development Cost Summary below utilizes "allowances" for costs that may vary depending on the final scope of work included in the project.

Preliminary Project Development Cost Summary:

Project Hard Costs:		
1.1	Site Development (see breakdown later in the report)	$ 2,096,385.00
1.2	Building Cost (see breakdown later in the report)	$ 13,275,139.00
1.3	**Subtotal of Hard Costs (Bricks & Mortar)**	**$ 15,371,524.00**
Construction Management Fees:		
1.4	Contractor Pre-Con Fee / General Conditions @ 12% [1]	$ 1,844,583.00
1.5	Contractor Overhead & Profit @ 7.5%	$ 1,291,208.00
1.6	Project Contingency @ 5%	$ 860,805.00
1.7	P & P Bond & Insurance @ 3.5%	$ 677,884.00
1.8	**Subtotal of Construction Management Fees**	**$ 4,674,480.00**
1.9	**Total Brick & Mortar / Construction Management Fee**	**$ 20,046,004.00**
Architecture & Engineering Fees:		
1.10	A/E Basic Services	$ 2,863,704.00
1.11	Specialty Consultants' Fees	$ 58,442.00
1.12	FAA Coordination (Allowance)	$ 30,000.00
1.13	Cost Estimating (Allowance)	$ 25,000.00
1.14	**Pre-Subtotal of A/E Fees**	**$ 2,977,146.00**
1.15	Professional A/E Fee Discount [2]	$ (844,811.00)
1.16	A/E Reimbursable Expenses (Allowance)	$ 42,000.00
1.17	**Subtotal of A/E Fees**	**$ 2,174,335.00**
1.18	**Total Preliminary Project Development Cost**	**$ 22,220,339.00**

We look forward to working with Monroe County and the State of Florida on this very important and exciting project. The information included in this report outlines the new, larger facility requested by the County on the newly proposed site, still within the Florida Keys Marathon Airport. Thank you.

I remain sincerely yours.

Rodney McManus, LEED AP
Vice President

[1] Includes fees for mobilization and material procurement in the present Florida Keys Construction climate.
[2] Rebate of fees associated with work still valid from the Original Project design and documentation.

ARCHITECTURAL DESIGN CRITERIA

Architects Design Group, Inc. AAC001197

Memorandum

to:	Design Team	**from:**	Sergio Baca, Associate
		re:	Monroe County EOC. 817/1.27

PROJECT DESIGN CRITERIA:

The original design for this facility was based on the HB 7121 / HMGP Grant Program, State of Florida DEM EOC #08-EC-30-11-54-01-039 and included requirements noted below and approved by the Florida Department of Emergency Management and recommendations to the Monroe County by Mr. Danny J. Kilcollins, FPEM, Florida Division of Emergency Management, 850-413-9859 www.floridadisaster.org

Mr. Danny Kilcollins reviewed and approved the original design documents and the new design documents will follow his recommendations and review comments.

Additionally and for comparative purposes only, we conducted a review of the Florida Building Code (FBC) 2017, 6th edition, which is currently in effect, and identified the different design and construction requirements for this facility.

Optional "Best Practice" upgrades were also reviewed and recommendations are included:

MONROE HB 7121 EOC SCOPE OF WORK:

A. *The EOC shall be constructed with sufficient space to house people and equipment for day-to-day and sustained continuous emergency operations, and capable of full staffing for the most extensive emergency anticipated. At a minimum, the designated EOC functional area(s), and essential shared-use area(s) if applicable, shall be designed for an emergency operations staff size of 62 persons per shift and a workspace floor area of 5,270 gross square feet.*

B. *At a minimum, the EOC shall meet the hurricane hazard safety criteria established in Standards for Hurricane Evacuation Shelter Selection (ARC 4496).*

C. *The EOC and essential ancillary structures and service equipment shall be designed to resist the effects of a major hurricane. The wind load design requirements shall be in accordance with the American Society of Civil Engineers (ASCE) Standard 7, Minimum Design Loads for Buildings and Other Structures. The minimum wind design criteria shall include:*

Design Wind Speed = 225 miles per hour (3 second gust)
Wind Importance Factor, I = 1.00
Exposure Category = C
Directionality Factor, K_d = 1.00
Internal Pressure Coefficient, GC_{pi} = +/- 0.18

All components and cladding assemblies necessary to maintain a structurally enclosed condition and prevent rainwater intrusion shall be designed to meet the wind design criteria. Structural metal decking and cladding materials shall be 22 gauge or thicker. Roof cover waterproofing barriers shall meet the wind design criteria. Loose roof ballast shall not be used on the roof cover. Rooftop equipment shall be designed and installed to meet the wind design criteria.

D. *The EOC and essential ancillary structures and service equipment shall resist penetration by windborne debris impact. At a minimum, all exterior enclosure components, claddings and assemblies (i.e., walls, roofs, louvers, windows, doors, etc.) located within 60 feet in height above finish grade shall meet the hurricane windborne debris impact criteria specified in the Department of Energy's (DOE) Standard, Natural Phenomena Hazards Design and Evaluation Criteria, DOE-STD-1020-2002. That is, the building enclosure must resist penetration by a nominal 2"x4" lumber plank weighing 15 pounds propelled at 50 miles per hour (74 feet per second) striking end-on and normal to the assemblysurface, or equivalent performance as approved by the Division. As applicable, impact test procedures shall be consistent with recognized state and national standards; such as, Test Standard for Determining Impact Materials (ASTM) Standards ASTM E 1886 and ASTM E 1996, and Florida Building Code Testing Protocols TAS 201, TAS 202 and TAS 203. The impact test procedures may be modified as necessary to accommodate the required missile weight and velocity.*

E. *The following information related to wind loads and flooding shall be shown on the construction drawings: 1. wind design per ASCE 7 with applicable year of revision; 2. design wind speed; 3. wind importance factor, I; 4. design wind exposure category; 5. wind directionality factor, K_d; 6. design internal pressure coefficient, GC_{pi}; 7. design wind pressures in terms of pounds per square foot (psf) to be used for the design of exterior component and cladding materials not specifically designed by the principal licensed design professional; 8. windborne debris impact performance criteria; 9. finish floor elevation measured relative to the National Geodetic Vertical Datum (NGVD); and comparison reference of the finished floor elevation to the base flood elevation, or historical flood elevation if base flood elevation is not determined.*

F. *The lowest floor for the EOC and essential ancillary structures and service equipment shall at a minimum be elevated above: Category 5 hurricane storm surge elevation plus 20 percent; the base flood elevation plus three (3) feet; the 500-year (0.2 percent annual chance) flood elevation (if determined) plus two (2) feet; the highest recorded flood elevation plus three (3) feet if the area is not in a mapped special flood hazard area; whichever is greater. The site (point maximum, one square mile) hydrologic design shall ensure that the EOC and essential ancillary structures and service equipment are not flooded due to a 24 hour, 37.0 inch rainfall event applied over a precedent 24 hour, 100-year rainfall event.*

G. *Where secondary (emergency) roof drains or scuppers are required by the Florida Building Code—Plumbing, the secondary system shall be sized for a rainfall rate of eleven (11.0) inches per hour.*

H. *The EOC shall be designated as a threshold building, and special structural inspections required. Special inspections shall be conducted in compliance with section 553.79, Florida Statutes and other applicable statutes, laws and rules.*

I. *The EOC shall at a minimum be designed for 72 hours of self-contained continuous operation and shall not be solely reliant upon off-site services and utilities (e.g., water, natural gas fuel, electricity, etc.)*

J. *Force protection and security measures shall be consistent with the guidance published in Florida's Homeland Security Comprehensive Assessment Model (HLSCAM), United States Air Force Installation Force Protection Guide, or other federal or state recognized best-practices guide(s) as approved by the Division.*

FBC 2017, 6TH EDITION REQUIREMENTS:

- **PROJECT DESCRIPTION:**

The Monroe County EOC is located on the City of Marathon, Florida. The proposed constructions systems will be consistent with:

  - Occupancy – Business
  - Construction- Type IIB
  - Sprinkled – yes

- **BUILDING CLASSIFICATION:**

  Based on the definition included in the Florida Building Code, this building is an ESSENTIAL FACILITY: *Buildings and other structures that are intended to remain operational in the event of extreme environmental loading from flood, wind, snow or earthquakes.* See attached.

  An Essential Facility requires to be classified as a Risk Category IV as indicated on Table 1604.5.

- **WIND LOADS AND IMPACT PROTECTION REQUIREMENTS:**

  Additionally, this building envelope should be designed to sustain 200mph (3-second gust) including the roof uplift pressures, according to the FBC Basic Wind Speed map illustrated in Figure 1609.3(2) attached and opening protections for Special Wind Regions and according to ASTM E 1996 and section 1609.1.2 of the FBC 2017, 6th edition. The openings protection should be provided with an Enhanced Protection (Essential Facilities) Level "E", or 9lb 2x4 lumber propelled @ 55 mph (see copy of ASTM E 1996 attached).

- **FLOOD PLAIN CONSIDERATIONS:**

  The building finish floor elevation should be determined by taking into account and consideration the data on the community's Flood Insurance Rate Map (FIRM) per section 1603.1.7.

- **REDUNDANCY SYSTEMS CONSIDERATION:**

  The FBC requires that essential facilities be operational during and after an event and therefore, redundant systems for power, HVAC, voice and data, water and sewer should be design and included. Those systems will include, but are not limited to, emergency power generator, water supply and sewer collection as well as HVAC systems. These redundant systems should be protected accordingly and in a manner consistent with the building envelope code requirements.

- **OPTIONAL "BEST PRACTICE" UPGRADE RECOMMENDATIONS:**

➢ **NFPA® 1221 Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems 2010 Edition:**

The Monroe County EOC would consider the NFPA 1221 standards for design and construction provided that these standards do not supersede the Florida Division of Emergency Management:

- *4.2.2 Where the building that houses a communications center is located within 150 ft. of the potential collapse zone of a taller structure, the roof shall be designed to resist damage from collapse of the exposing structure.*
- *4.4.1.2 - HVAC systems shall be independent systems that serve only the communications center.*
- *4.4.1.5* - Backup HVAC systems shall be provided for the operations room and other spaces housing electronic equipment determined by the AHJ to be essential to the operation of the communications center.*
- *4.4.1.6* - HVAC systems shall be designed so that the communications center is capable of uninterrupted operation with the largest single HVAC unit or component out of service.*
- *4.6.2 - Entry to the communications center shall be restricted to authorized persons.*
- *4.6.6 Means shall be provided to prevent unauthorized vehicles from approaching the building housing the communications center to a distance of no less than 82 ft. (25 m).*
- *4.6.7 As an alternative to 4.6.6, unauthorized vehicles shall be permitted to approach closer than 82 ft (25m) if the building has been designed to be blast resistant, as approved by the AHJ.*
- *4.7.1.1 At least two independent and reliable power sources shall be provided, one primary and one secondary, each of which shall be of adequate capacity for operation of the communications center.*
- *4.7.1.2 Power sources shall be monitored for integrity, with annunciation provided in the operations room.*
- *4.7.2 Primary Power Source. One of the following shall supply primary power:*
  1) A feed from a commercial utility distribution system
  2) An approved engine-driven generator installation or equivalent designed for continuous operation, where a person specifically trained in is operation is on duty at all times.
  3) An approved engine-driven generator installation or equivalent arranged for cogeneration with commercial light and power, where a person specifically trained in its operation is on duty at all times.
- *4.7.3.1 The secondary power source shall consist of one or more standby generators installed in accordance with NFPA 70, National Electric Code, Article 701.*
- *4.7.3.2 Upon failure of the primary power, transfer to the standby source shall be automatic.*
- *4.7.8.3* - Engine-driven generators shall be sized to supply power for the operation of all functions of the communications center and for any additional loads determined by the AHJ.*

- *4.7.8.12 Fuel to operate the engine-driven generator for 24 hours at full load shall be available on site.*

- *4.7.9.1 All uninterruptible power supply (UPS) and battery systems shall be installed in accordance with the requirements of NFPA 111 and the provisions of 4.7.9.*

- *4.7.9.2 Each UPS shall be provided with a bypass switch that maintains the power connection during switchover and that is capable of isolating all UPS components while allowing power to flow from the source to the load.*

- *4.7.9.3 The following UPS conditions shall be annunciated in the operations room:*
  1) Source power failure, overvoltage, and under voltage
  2) High and low battery voltage
  3) UPS in bypass mode

➢ **NFPA® 75 Standard for the Protection of Electronic Computer/Data Processing Equipment:**

The Monroe County EOC would consider the NFPA 75 standards for design and construction provided that these standards do not supersede the Florida Division of Emergency Management recommendations:

- *1-2: Applicability. The application of this standard is based on the risk considerations outlined in Chapter 2. The mere presence of the electronic computer/data processing equipment does not constitute the need to invoke the requirements of this standard.*

- *3-1.3 - The computer area shall be separated from other occupancies within the building, including atria or other open-space construction, by fire-resistant-rated construction. The computer room shall be separated from other occupancies in the computer area by fire-resistant-rated construction. The fire resistance rating shall be commensurate with the exposure but not less than 1 hour for both.*

- *3-3.2 A structural floor where a computer system is located, or that supports a raised floor installation, shall incorporate provisions for drainage from domestic water leakage, sprinkler operation, coolant leakage, or fire-fighting operations.*

- *3-5.3 The air ducts shall be provided with automatic fire and smoke dampers where the ducts pass through fire-resistant-rated construction.*

- *6-1.3 Sprinkler systems protecting computer areas shall be valves separately from other sprinkler systems.*

- *8-1 Heating, Ventilation, and Air Conditioning (HVAC). Any HVAC system that serves other occupancies shall also be permitted to serve the computer area. Automatic fire and smoke dampers shall be provided.*

- *8.4.1 - Where there is a critical need to protect data in process, reduce equipment damage, and facilitate return to service, consideration shall be given to the use of a gaseous agent inside units or total flooding systems in sprinkled or non-sprinkled information technology equipment areas.*

CONCLUSIONS AND RECOMMENDATIONS:

The original building design met the requirements and in most respects exceeded the current Florida Building Code for Essential Facilities.

We believe that the current building design per the recommendations by the Florida Department of Emergency Management and provided criteria meets and exceeds the current building code for buildings of this type and would recommend to also implementing the optional "Best Practice" upgrades features from the NFPA 1221 and NFPA 75 design standards as noted.

Prepared by:

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Associate

ENGINEERING DESIGN NARRATIVE

Monroe County EOC
Applicable Code Updates and Technology Updates Review

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The following information is provided as a planning document to assist the cost estimator in adjusting the costs associated with the new EOC building originally designed in 2009/2010. Since the original design was submitted there have been numerous codes adopted that will have an impact on the MEP system designs. This report also includes information related to the technology upgrades that would be required to implement in the new facility based on the latest available technologies to provide Monroe County with the most cost effective and up to date solutions. The design team anticipates that the following adopted codes for 2018 will have an effect on the project and costs associated with the design update:

FBC 2014, 5th edition; FBC 2017, 6th edition (anticipated adoption January 2018)
Florida Fire Prevention Code
National Electric Code

Florida Building Code Required Updates:

1. Fire Partitions (fire dampers):
   a. FBC 2010 Section 716.5.4 – **"Ducts and air transfer openings that penetrate fire partitions shall be protected with listed fire dampers installed in accordance with their listing" Exceptions 1, 2, and 3 apply.**
   b. FBC 2014 Section 717.5.4 – Same Code requirement. Except Exception 4 added – **"Such walls are penetrated by ducted HVAC systems, have a require fire-resistance rating of 1 hour or less, and are in buildings equipped with an automatic sprinkler system.**
   c. FBC 2017 – Pending – **Don't anticipate additional changes.**
2. Building Envelope Requirements:
   a. 2014 Table C402.3 – Building Envelope Requirements: Fenestration
   b. 2017 Table C402.4 – Building Envelope Fenestration Maximum U-Factor and SHGC Requirements – Revised to clarify the table values are maximum. Criteria regarding orientation has been added to the table based on criteria in Table C402.3.3.1.
3. Increased vertical fenestration and SHGC
   a. 2014 – C402.3.3.2 – There will be an SHGC maximum of 0.40 for all windows that are entirely placed at least 6 ft above the finished floor in Climate Zones 1-3.
   b. 2014 – C402.3.3.2 – Increased skylight SHGC – Skylights above daylighting zones that have automated control systems will have a maximum SHGC of 0.60 in Climate Zones 1-6.
4. Stairway and shaft vents
   a. 2017 - C403.2.4.3 and Outdoor intakes and exhaust – Shutoff dampers and Outdoor intakes and exhaust – Provisions associated with leakage rates, sealing, dampers, etc. of mechanical system openings, vents, grills, etc. for air intakes, exhaust openings, stairways and shafts have consolidated in new Section C403.2.4.3. Requires dampers to be labeled by an approved agency.
5. Increased skylight U-factor
   a. 2014 – C402.3.3.4 – Skylights above daylighting zones that have automated control systems will have a maximum U-factor of 0/90 in Climate Zones 1-3 and 0.75 in Climate Zones 4-8.
6. Calculation of heating and cooling loads
   a. 2010 – 503.2.1
   b. 2014 – C403.2.1 – Sentence added that the required design loads must account for building envelope, lighting, ventilation, and occupancy-related loads of the project.
7. Minimum efficiency requirements: electrically operated unitary air conditioners and condensing units
   a. 2010 – Table 503.2.3(1)-(7)
   b. 2014 – Table C403.2.3 (1)-(10) - An additional column has been added titled **"Heating Section Type," which differentiates electric** resistance equipment from other types in some areas of the table. Some additional equipment types (e.g., through-the-wall, air-cooled) have been added, numerous quantitative changes have been made to the SEER requirements, and some test procedures have changed, but otherwise these tables have the same format as in the 2010 version. Two additional tables have been added for heat rejection and heat transfer equipment. Florida specific amendments have been deleted and replaced with the base code requirements.
   c. 2017 – Table C403.2.3 (1)-(11) - Tables updated to match the increased equipment efficiency requirements found in ASHRAE 90.1. New table added specifying minimum efficiency requirements for air conditioners and condensing units serving computer rooms.

8. Minimum efficiency requirements: electrically operated unitary air conditioners and condensing units
    a. 2010 – 503.2.3(1)
    b. 2014 – Table C403.2.3 (1) - Added a column covering the type of heating section provided with the air conditioner. Added provisions for small-duct high-velocity air-cooled equipment and condensing units over 135K Btu/h air, water or evaporative cooled. Minimum efficiency for air-cooled air conditioners under 65K Bth/h and for through-the-wall air-cooled units not over 30K Btu/h did not change. Minimum energy efficiency ratios for air, water, or evaporative cooled air conditioners changed in some instances, based on part because of the new distinction associated with the type of heating section and the addition in all cases of a minimum IEER as well.
9. Minimum efficiency requirements: electrically operated unitary air conditioners and condensing units
    a. 2010 – 503.2.3(2)
    b. 2014 – Table C403.2.3(2) - Added a column covering the type of heating section provided with the heat pump that applies to the cooling mode of air-cooled heat pumps. Added heating and cooling mode provisions for single- (small) duct high-velocity air equipment. Efficiency for air-cooled cooling mode heat pumps remains unchanged or increased based on capacity and all now have a minimum IEER in addition to the previous energy efficiency requirements. Water-source cooling mode provisions are unchanged. Added a rating point and energy efficiency requirement (77F/13.4 EER) for groundwater source heat pumps in the cooling mode. Deleted cooling efficiency for ground source heat pumps. Added new classifications and efficiency requirements for the cooling and heating modes of water source water-to-water and ground water source brine-to-water equipment. Heating seasonal performance factor for heating mode of air-cooled under 65K Btu/h and through-the-wall heat pumps remain unchanged. COP for heating mode of air- cooled heat pumps at least 65K Btu/h remain unchanged for high-temperature rating condition but added a new low-temperature rating condition and COP requirement. Heating mode efficiency of water-source, groundwater-source, and ground source heat pumps remain unchanged.
10. Minimum efficiency requirements: electrically operated unitary air conditioners and condensing units
    a. 2010 – 503.2.3(3)
    b. 2014 – Table C403.2.3 (3) - Added new minimum efficiencies for packaged terminal air conditioner and packaged terminal heat pump equipment listed in the 2010 FBCEC that are effective October 18, 2012. Until then, the same provisions in the 2010 FBCEC are retained. Also added provisions for single package vertical equipment and a number of room air conditioner types effective before October 18, 2012, and after that date as well based on input capacity and select test conditions.
11. Minimum efficiency air conditioners and condensing units serving computer rooms.
    a. 2014 – Table C403.2.3 (10) – Added new table covering minimum efficiencies for air conditioners and condensing units serving computer rooms.
12. Automatic start capabilities
    a. 2014 – C403.2.4.3.3 – Automatic start controls are required on all HVAC systems and must adjust the daily starting time to bring all occupied spaces to desired temperature immediately before scheduled occupancy.
13. Demand Control Ventilation
    a. 2010 – 503.2.5.1
    b. 2014 – C403.2.5.1 - Demand control ventilation is now required where average occupancy load is 25 people per 1,000 ft². An additional exception has been made for ventilation used only for process loads.
    c. 2017 – C403.2.8 – Maximum Net Exhaust Flow Rate, CFM per Linear Foot of Hood Length – New provisions for kitchen exhaust systems intended to prohibit "short-circuit" hoods. Provisions are consistent with ASHRAE 90.1.
14. Protection of piping insulation
    a. 2014 – Exposed piping insulation must be protected from damage from sunlight, moisture, maintenance, wind, and solar radiation. Adhesive tape is not allowed.
15. HVAC System Completion
    a. 2010 – 503.2.9
    b. 2014 – C403.2.9 – Mechanical Systems Commissioning and completion requirements - All of Section 503.2.9 and its subsections have been moved to Section C408.2. Florida-specific requirements have been deleted and replaced with the base code requirements.
    c. 2017 – C403.2.12.3 – Fan Efficiency - New provisions for fan efficiency requiring fans to have a fan efficiency grade (FEG) of not less than 67 when determined in accordance with AMCA 205. Exceptions provided for the specified conditions.
16. Static Pressure Sensor Location
    a. 2010 – 503.4.2.2
    b. 2014 – C403.4.2.1 - Revised to require sensors downstream of duct splits to have a sensor in each branch.
17. Efficient heated water supply piping - New sections addressing the installation of hot water piping so that the delivery is more efficient. Specifies limits on pipe length and pipe volume.
    a. 2017 – C404.5 – Efficient heated water supply piping.
    b. 2017 – C404.5.1 – Maximum allowable pipe length method.
    c. 2017 – C404.5.2 – Maximum allowable pipe volume method.
    d. 2017 – C404.5.2.1 – Water Volume determination.
    e. 2017 – Table C404.5.1 – Piping Volume and Maximum Piping Lengths.

18. Lighting Controls
    a. 2014 – C405.2 through C405.2.4
    b. 2017 – C405.2 through C405.2.5 - Sections pertaining to lighting controls have been completely reorganized into a more logical format. Adds lounge, locker room, and warehouse spaces to the list for occupancy sensor controls. Modifies control functions and threshold for both sidelight and toplight daylight controls. Requires automatic light controls for hotel and motel sleeping units. Exterior lighting controls are required rather than just control capability. Bi-level controls have been added for general all-night applications such as parking lots to reduce lighting when not needed. Control of facade and landscaping lighting not needed after midnight has been added. Clarifies the provisions for daylight zones and appropriate controls for each type of daylight space for alignment with ASHRAE 90.1.
19. Light reduction controls
    a. 2014 – C405.2.12 - Each area that is required to have a manual control shall also allow the occupant to reduce the connected lighting load by at least 50 percent; exceptions also identified.
    b. 201 – C405.2.2.2 - Change in requirement from area requiring manual control to area requiring light-reduction controls; exception provided for daylight zones and daylight responsive controls complying with Section C405.2.3.
20. Automatic time switch control devices
    a. 2014 – C405.2.2.1 – New section on automatic time switch control devices.
21. Occupancy Sensors
    a. 2014 – C405.2.2.2 - Occupancy sensors shall either be manual on or shall be controlled to automatically turn the lighting on to not more than 50% power. An exception for full automatic-on in lieu of 50%-on allowed for areas where this type of operation would endanger safety or security of the room or building occupants (e.g., restrooms, public corridors, stairways, etc.).
22. Daylight zone control
    a. 2010 – 505.2.2.3
    b. 2014 – C405.2.2.3 - Lighting in daylight zones must be controlled separately from other areas and must conform to Section C405.2.2.3.1 or C405.2.2.3.2. Daylight control zones must not be greater than 2,500 ft². Contiguous zones and zones under skylights still follow the 2010 FBCEC.
    c. 2017 – C405.2.3 – Daylight-responsive controls - Identifies control functions for both sidelight and toplight daylight controls. Clarifies the area defined as sidelight and toplight daylight zones.
23. Interior Lighting power
    a. 2010 – 505.5.3
    b. 2014 – C405.5.2 - In addition to Table C405.5.2 (1), used for the building area method, a second table has been created, Table C405.5.2 (2) for a space-byspace method. The approach is similar, choosing the appropriate category, multiplying the given number by the floor area, and then taking the sum of all numbers. However, the second table allows for specific spaces within a building type (e.g., dining areas, lobbies within a hotel). Documented justification for the need for higher power in some areas is allowed according to the authority having jurisdiction. The original table has been changed slightly, but the general format remains the same.
24. Interior Lighting Power Allowances: Building Area Method
    a. 2014 – Table C405.5.2(1)
    b. 2017 – Table C405.4.2(1) - The lighting power allowances have been adjusted to values and methodology for determining allowances that will lead to high energy-efficiency while still allowing high quality lighting and sufficient light levels. Provides consistency with ASHRAE 90.1.
25. Interior Lighting Power Allowances: Space-by-Space Method
    a. 2014 – Table C405.5.2(1)
    b. 2017 – Table C405.4.2(2) - The lighting power allowances have been adjusted to values and methodology for determining allowances that will lead to high energy-efficiency while still allowing high quality lighting and sufficient light levels. Provides consistency with ASHRAE 90.1.
26. Electrical transformers (Mandatory)
    a. 2017 – C405.7 - New section and table added addressing efficiency levels for low-voltage dry-type distribution transformers for consistency with ASHRAE 90.1.
27. System Commissioning General
    a. 2014 – C408.1 - This entire section has been added to the previous code and applies to the commissioning of systems in Sections C403 and C405.
    b. 2014 – C408.2 – Mechanical systems commissioning and completion requirements - Before completion of the final inspection, documentation must be provided with evidence of mechanical systems commissioning. Exceptions exist for systems with a capacity of less than 480K Btu/h cooling and 600K Btu heating and for systems from Section C403.3 that serve dwelling units in hotels, motels, etc.
    c. 2014 – C408.2.1 – Commissioning Plan - Must include: (1) a narrative description of each phase of the commissioning and personnel required; (2) a list of the equipment and appliances to be tested; (3) functions (e.g., calibrations) to be tested; (4) environmental conditions (e.g., seasonal) for testing; and (5) performance criteria.

d. 2014 – C408.2.2 – Systems adjusting and balancing - HVAC systems should be balanced and adjusted within product specification tolerances.
e. 2014 – C408.2.2.1 – Air systems balancing - Supply air outlets and zone terminals must have air balancing that meets FBCM Chapter 6. Discharge dampers cannot be used with constant volume fans and VAV motors >10 hp. Must first minimize throttling losses then adjust fan speed to meet design conditions. An exception exists for fan motors.
f. 2014 – C408.2.3 – Functional performance testing - Testing is required for equipment, controls, and economizers according to Sections C408.2.3.1-C408.2.3.3.

National Electric Code Updates:

1. Separation of the respective emergency (NEC Article 700), legally required (NEC Article 701) and optional standby (NEC Article 702) systems provided by either separate vertical sections of the generator switchboard or by separate enclosures (such as enclosed circuit breakers or fused disconnect switches) in accordance with NEC Article 700.
2. Latest requirements for Critical Operations Power Systems (COPS) in accordance with NEC Article 708. This item needs to be discussed with Monroe County to determine if/how requirements will be implemented for the new facility.
3. Identification of all automatic transfer switch equipment to comply with the latest 8th Edition of UL 1008.

NFPA Updates:

1. Florida building code and NFPA require a two-way radio enhancement system to be provided in existing and new facilities. The requirement will be determined by the public safety radio frequency signal strength within the facility.

Technology Updates:

1. The audio/video system shall be updated to implement latest technology for audio/video distribution. TLC recommends the use of the latest streaming video technology (Crestron NVX) for maximum flexibility and future proofing of the AV system.
    a. Projectors and displays require a technology refresh to the latest technologies. Projection screens are required to be updated to 16:10 format for technology refresh.
2. Security cameras shall be updated to Axis P33 series cameras per technology updates.
    a. All cameras shall be PoE, exterior cameras shall be provided with in-line surge suppression on the Cat 6 cabling.
    b. Recommendation to provide the facility with an integrated security platform utilizing Mercury Boards for access control system and video management system platform by security platform (Genetec, Lenel, S2 integrated system, etc.).
3. TLC recommends the use of Cat 6 cabling for the horizontal communications cabling. The design team and Owner shall review the possibility of utilizing Cat 6a to provide a level of future proofing.

OPINION OF PRELIMINARY PROJECT DEVELOPMENT COST DETAIL

CSI Item Description	Qty	Unit	Unit Price	Total Price	Area Total
A. Site Work					
2100 Site Preparation					
2110 Mobilization	1	ls	29,950.00	29,950	
2110 Clearing & Grubbing	2	ac	5,739.15	13,143	
2110 Siltation Control	1,220	lf	3.79	4,622	
Site Preparation Total					$47,714
2200 Earthwork					
2210 Fine Grading	93,400	sf	0.31	29,368	
2210 Fine Grade berms	6,700	sf	0.36	2,408	
2210 Rough Grading	93,400	sf	0.24	22,376	
2224 Backfill - Bldg. Berm, borrow fill	1,100	sf	20.00	22,000	
2224 Backfill - Bldg. Pad, borrow fill	3,300	sf	20.00	66,000	
2280 Termite Control	14,500	sf	0.27	3,908	
Earthwork Total					$146,059
2350 Piles and Caissons					
2362 Auger Cast Pile Test & Layout	1	ls	67,000.00	67,000	
2370 Auger Cast Piles - Layout	251	mhrs	59.89	15,033	
2370 Auger Cast Piles 18"	12,550	lf	75.87	952,146	
2370 Dispose of Auger Cast Spoils	1,040	cy	14.97	15,572	
Piles and Caissons Total					$1,049,751
2500 Paving and Surfacing					
2500 Stabilized Subgrade 12"	3,000	sy	9.88	29,647	
2500 Limerock Base 6"	2,920	sy	10.48	30,605	
2500 Asphalt Paving 1 1/2"	2,920	sy	7.49	21,861	
2520 Sidewalk	2,958	sf	7.49	22,145	
2520 Sidewalk Thickened Edge	150	lf	9.73	1,460	
2580 Pavement Markings	1	ls	750.00	750	
Paving and Surfacing Total					$106,467
2610 Storm Drainage					
2610 Storm Drainage System	1	ls	285,000.00	285,000	
Storm Drainage Total					$285,000
2650 Domestic Water Systems					
2651 Water Systems	1	ls	7,500.00	7,500	
Domestic Water Systems Total					$7,500
2670 Fire Water Systems					
2671 Fire Water Systems	1	ls	30,000.00	30,000	
Fire Water Systems Total					$30,000

CSI Item Description	Qty	Unit	Unit Price	Total Price	Area Total
2700 Sanitary Sewage					
2710 Sanitary Sewer Lift Station & Tank - Allowance	1	ls	150,000.00	150,000	
Sanitary Sewage Total					$150,000
2800 Site Improvements					
2800 Concrete Bollards	26	ea	748.65	19,465	
2800 Flagpoles	2	ea	5,240.55	10,481	
2800 Signage - H/C Parking	5	ea	187.16	936	
2800 Signage - Traffic	1	ls	1,500.00	1,500	
2800 Dumpster Enclosure	1	ls	45,000.00	45,000	
2830 Chain-link Fence - 7', green coated	730	lf	22.43	16,374	
2830 Barbed wire - 3 rows toward 1 side	730	lf	5.54	4,044	
2830 CLF Gate - 24' wide w/operators	3	ea	11,229.75	33,689	
2840 Precast Parking Bumper	48	ea	36.43	1,749	
2870 Bench	2	ea	2,695.14	5,390	
2870 Trash Receptacle	2	ea	1,497.30	2,995	
2870 Bike Rack	1	ea	1,871.63	1,872	
Site Improvements Total					$143,494
2900 Landscaping					
2900 Landscape/Irrigation - Allowance	1	ls	75,000.00	75,000	
Landscaping Total					$75,000
16100 Site Electrical					
16100 Alum. Light Poles	8	ea	5,989.20	47,914	
Site Electrical Total					$47,914
16700 Communications					
16700 2 - 4" PVC Conduit in Trench	200	lf	37.43	7,487	
Communications Total					$7,487
A. Site Work Total				2,096,385	
B. Building					
3900 Concrete Work					
3910 Continuous Footings	109	cy	550.00	59,950	
3920 Pile Caps	174	cy	540.00	93,960	
3920 Grade Beams	433	cy	595.00	257,635	
3930 Slab on Grade, berm	194	cy	525.00	101,850	
3930 Slab on Grade, bldg.	382	cy	550.00	210,100	
3930 Slab on Grade, ramp	24	cy	595.00	14,280	
3930 Slab on Grade, walkway ramp	15	cy	600.00	9,000	
3930 Slab on Grade Thicken Edge	69	cy	550.00	37,950	
3940 Column - Round & Rectangle	70	cy	1,200.00	84,000	
3950 Spandrel Beam	115	cy	1,100.00	126,500	
3960 Elevated Formed Two-way Slab	540	cy	1,300.00	702,000	
3960 Floor Deck Topping	122	cy	475.00	57,950	

CSI Item Description	Qty	Unit	Unit Price	Total Price	Area Total
3960 Roof Deck Topping	585	cy	475.00	277,875	
3970 P.I.P. Wall, bldg.	975	cy	1,385.00	1,350,377	
3970 P.I.P. Wall, find	244	cy	1,010.00	246,440	
3980 Conc. Fill - Stl Pan Stairs	6	cy	2,000.00	12,000	
3980 Stairs - Conc. - Cast in Place on Ground	400	vlf	75.00	30,000	
Concrete Work Total					$3,671,867
4150 Masonry Accessories					
4150 Precast Concrete Lintels	65	lf	18.72	1,217	
Masonry Accessories Total					$1,217
4200 Unit Masonry					
4200 Block Wall 8"	4,256	ea	15.00	63,840	
4200 Add for Grout Fill	20	cy	300.00	6,000	
4200 Add for Rebar	1.2	tn	1,871.63	2,246	
Unit Masonry Total					$72,086
5100 Structural Metal Framing					
5121 Tube Steel Columns	11.5	tn	5,800.00	66,700	
5123 Steel WF Beams	97	tn	4,400.00	426,800	
5130 Steel Angles	3	tn	6,100.00	18,300	
5130 Stainless Steel Canopy Frame	252	sf	75.00	18,900	
Structural Metal Framing Total					$530,700
5300 Metal Decking					
5315 Steel Roof Deck 20 Ga 1 1/2" Galv. "B"	22,400	sf	2.77	62,048	
Metal Decking Total					$62,048
5500 Metal Fabrications					
5505 Embedded Miscellaneous Iron	1	ls	15,000.00	15,000	
5510 Metal Pan Stairs	147	riser	525.00	77,175	
5515 Ladders - Roof Access w/cage	2	e	7,500.00	15,000	
5520 Alum Panel Guardrails	26	lf	190.00	4,940	
Metal Fabrications Total					$112,115
5700 Ornamental Metal					
5700 TS Galv. SS Mesh - Redundancy Area	1,583	sf	142.24	225,171	
5700 TS Galv. SS Mesh - Access Gates	280	sf	224.60	62,887	
5700 TS Galv. SS Mesh - Parking Area	2,052	sf	142.24	291,884	
5700 TS Galv. SS Mesh - Access Gates	336	sf	224.60	75,464	
Ornamental Metal Total					$655,406
6100 Rough Carpentry					
6100 Blocking - Roof	2,300	lf	3.65	8,403	
6100 Blocking - Millwork	1,500	lf	5.48	8,220	
6100 Blocking - Door/Window	750	lf	4.94	3,706	
Rough Carpentry Total					$20,329

CSI Item Description	Qty	Unit	Unit Price	Total Price	Area Total
6400 Architectural Woodwork					
6400 Base Cabinet	129	lf	275.00	35,475	
6400 Base Desk	34	lf	180.00	6,120	
6400 Wall Cabinet	63	lf	140.00	8,820	
6400 Wall Shelving	100	lf	50.00	5,000	
6400 Vanity Top Base	38	lf	115.00	4,370	
6400 Security Counter	13	lf	1,500.00	19,500	
6400 Mailbox Slots	23	lf	300.00	6,900	
6400 Countertop Solid Surface	350	lf	65.00	22,750	
6400 Architectural Woodwork Misc.	1	ls	35,000.00	35,000	
Architectural Woodwork Total					$143,935
6600 Plastic Fabrications					
6610 Acrylic Resin Panels	128	sf	27.70	3,546	
Plastic Fabrications Total					$3,546
7100 Waterproofing					
7150 Waterproofing at Elev Pits	320	sf	7.49	2,396	
Waterproofing Total					$2,396
7200 Insulation					
7212 Rigid Insulation - 2" at Deck	15,755	sf	1.92	30,195	
7212 Rigid Insulation - 2" at Walls	8,470	sf	2.02	17,121	
7220 Roof Deck Dens deck Bd.	23,000	sf	1.84	42,359	
7220 Roof Deck Insulation - Polyisocanurate 3 1/2"	23,000	sf	3.53	81,273	
7220 Roof Deck Insulation - Add for Tapered	8,500	sf	1.99	16,927	
Insulation Total					$187,875
7500 Membrane Roofing					
7500 Modified Bitumen Fully Adhered	23,000	sf	15.00	345,000	
Membrane Roofing Total					$345,000
7600 Flashing and Sheet metal					
7600 Stainless Steel Coping	600	lf	25.00	15,000	
7600 Stainless Steel Reglet Flashing 8"	500	lf	27.00	13,500	
7600 Stainless Steel Scuppers	28	ea	275.00	7,700	
Flashing and Sheet metal Total					$36,200
7900 Joint Sealers					
7920 Caulking - Acrylic Latex Based	2,200	lf	2.93	6,456	
Joint Sealers Total					$6,456
8100 Metal Doors and Frames					
8115 Hollow Metal Door 12ga 3-0x7-0	14	ea	1,422.44	19,914	
8115 Hollow Metal Doors Placed	14	ea	86.84	1,216	
8120 Hollow Metal Frame 14ga 3-0x7-0	6	ea	374.33	2,246	

CSI Item Description	Qty	Unit	Unit Price	Total Price	Area Total
8120 Hollow Metal Frame 14ga 6-0x7-0	4	ea	524.06	2,096	
8120 Hollow Metal Frame 16ga 3-0x7-0	67	ea	131.76	8,828	
8120 Hollow Metal Frame 16ga 6-0x7-0	10	ea	181.17	1,812	
8120 Hollow Metal Frames Install	87	ea	74.87	6,513	
8120 Addition for Welding Frames	87	ea	11.23	977	
8120 Grout Hollow Metal Frames	15	ea	76.36	1,145	
8120 Hollow Metal Frames - Add for Rating	55	ea	24.71	1,359	
Metal Doors and Frames Total					$46,106
8200 Wood and Plastic Doors					
8200 Solid Core Door - Birch 3-0x7-0	87	ea	449.19	39,080	
8200 Solid Core Doors Placed	87	ea	89.84	7,816	
Wood and Plastic Doors Total					$46,895
8300 Special Doors					
8300 Roll-down Fire Doors - Motorized	105	sf	67.38	7,075	
Special Doors Total					$7,075
8400 Entrances and Storefronts					
8400 Aluminum Storefront Int. - std glazing	128	sf	37.43	4,791	
8400 Aluminum Entry Ext. - impact glazing	101	sf	224.60	22,684	
8400 Aluminum Storefront Windows - impact glazing	341	sf	224.60	76,587	
8400 Aluminum & Glass Ext. Drs - Leaf, impact glazing	2	ea	7,486.50	14,973	
8450 Frame-less Storefront - Int	1,300	sf	74.87	97,325	
8450 Frame-less Storefront Door - Int	9	ea	5,240.55	47,165	
Entrances and Storefronts Total					$263,525
8700 Hardware					
8700 Door Hardware - Exterior	14	ea	935.81	13,101	
8700 Door Hardware - Interior	87	ea	554.00	48,198	
Hardware Total					$61,299
8800 Glazing					
8818 Ballistic Glazing	88	sf	250.00	22,000	
Glazing Total					$22,000
9200 Lath and Plaster					
9220 Suspended Plaster Ceilings	252	sf	12.05	3,037	
Lath and Plaster Total					$3,037
9250 Gypsum Board					
9250 Add for Batt Insulation	2,500	sf	0.82	2,059	
9250 Add for Soffit/Drops	500	lf	22.46	11,230	
9260 Drywall - Standard 5/8" on Walls	66,580	sf	2.14	142,557	
9260 Drywall - Standard 5/8" on Ceilings	6,165	sf	2.38	14,677	
9260 Drywall - Standard 5/8" on Cove/Bulkheads/Soffi	4,750	sf	2.47	11,735	
9260 Drywall - Tape and Finish - Walls	66,580	sf	2.14	142,557	

CSI Item Description	Qty	Unit	Unit Price	Total Price	Area Total
9260 Drywall - Tape and Finish - Ceilings	6,165	sf	2.34	14,400	
9260 Drywall - Tape and Finish - Misc.	4,750	sf	2.67	12,660	
9260 Metal Studs NLB - 20ga. 3-5/8" @16"o.c.	21,840	sf	1.90	41,530	
9260 Metal Studs NLB - 20ga. 6" @16"o.c.	1,080	sf	2.10	2,264	
9260 Metal Studs LB - 20ga. 8" @16"o.c.	3,390	sf	4.37	14,821	
9260 Susp. System 3-5/8" CRC and Furring 16"o.c.	6,165	sf	3.56	21,969	
9260 Metal Furring Channels 1" @16"o.c.- Walls	8,470	sf	1.17	9,892	
Gypsum Board Total					$442,352
9300 Tile					
9310 Ceramic Tile - Wall	2,806	sf	9.10	25,545	
9310 Porcelain Tile Floor	9,590	sf	12.04	115,447	
9310 Porcelain Tile Base	2,325	lf	13.31	30,948	
Tile Total					$171,940
9500 Acoustical Treatment					
9510 Acoustical Ceilings 2 x 2, square edge	9,850	sf	3.37	33,184	
9510 Special ACT - Perforated Panel	1,600	sf	37.43	59,892	
Acoustical Treatment Total					$93,076
9650 Resilient Flooring					
9660 Resilient Tile Flooring VCT	362	sf	3.22	1,165	
9660 Resilient Tile Static Dissipative Flooring VCT	1,150	sf	6.74	7,749	
9660 Vinyl base 4"	6,500	lf	2.99	19,465	
Resilient Flooring Total					$28,379
9680 Carpet					
9690 Carpet Tile	547	sy	50.00	27,350	
9690 Carpet Tile - Static Dissipative	258	sy	65.00	16,770	
Carpet Total					$44,120
9900 Painting					
9910 Concrete Walls - Solar Reflective	22,793	sf	2.62	59,724	
9920 Ceilings - Wall Board	6,115	sf	1.12	6,867	
9920 Ceilings - Cement or Sand finish Plaster	252	sf	1.17	294	
9920 Walls - Wall Board	66,580	sf	1.17	77,758	
9920 Walls - Block	5,400	sf	1.69	9,137	
9920 Floors - Concrete Seal	16,332	sf	0.70	11,493	
9920 Doors	130	ea	120.32	15,642	
9920 Hollow Metal Frames	130	ea	86.78	11,282	
Painting Total					$192,197
10100 Visual Display Boards					
10115 Marker boards/Tack boards	1	ls	3,750.00	3,750	
10140 Conference Cabinet	1	ls	3,750.00	3,750	
Visual Display Boards Total					$7,500

CSI Item Description	Qty	Unit	Unit Price	Total Price	Area Total
10150 Compartments and Cubicles					
10160 Metal Toilet Partition - stainless	6	ea	1,500.00	9,000	
10160 Metal Toilet Partition - stainless wheelchair	3	ea	1,800.00	5,400	
10160 Metal Urinal Screen - stainless	3	ea	525.00	1,575	
Compartments and Cubicles Total					$15,975
10200 Louvers and Vents					
10210 Metal Wall Louvers, Stormproof	192	sf	149.73	28,748	
Louvers and Vents Total					$28,748
10270 Access Flooring					
10270 Pedestal Access Floors	2,016	sf	29.95	60,371	
Access Flooring Total					$60,371
10400 Identifying Devices					
10430 Signage - Interior Bldg. - Allowance	1	ls	25,000.00	25,000	
10430 Signage - Exterior Bldg. - Allowance	1	ls	27,000.00	27,000	
10430 Signage - Installation - Allowance	1	ls	8,000.00	8,000	
10430 Signage - Bldg. Plaque - Allowance	1	ls	5,000.00	5,000	
Identifying Devices Total					$65,000
10500 Lockers					
10500 Metal Lockers - Double Tier 12"x15"x36"	16	ea	142.24	2,276	
Lockers Total					$2,276
10520 Fire Protection Specialties					
10522 Fire Extinguishers w/Cabinets	5	ea	336.89	1,684	
10522 Fire Extinguishers w/Bracket	3	ea	172.19	517	
Fire Protection Specialties Total					$2,201
10650 Operable Partitions					
10650 Operable Partitions	135	sf	50.00	6,750	
Operable Partitions Total					$6,750
10700 Exterior Prot. Devices for Openings					
10705 Exterior Sun Control Devices	99	lf	275.00	27,225	
Exterior Prot. Devices for Openings Total					$27,225
10800 Toilet and Bath Accessories					
10800 Toilet Accessories	1	ls	15,000.00	15,000	
Toilet and Bath Accessories Total					$15,000
11130 Audio-Visual Equipment					
11130 Projection Screens, electric	44	sf	34.74	1,528	
Audio-Visual Equipment Total					$1,528

CSI Item Description	Qty	Unit	Unit Price	Total Price	Area Total
11400 Food Service Equipment					
11400 Refrigerator - Reach-in	1	ea	5,390.28	5,390	
11400 Freezer - Reach-in	1	ea	5,390.28	5,390	
11400 Ice Maker	1	ea	4,042.71	4,043	
11400 Range - 6 Burner 2 Oven	1	ea	6,887.58	6,888	
Food Service Equipment Total					$21,711
11450 Residential Equipment					
11450 Trash Compactor 4 to 1	1	ea	1,796.76	1,797	
11452 Built-in Dishwasher	1	ea	1,497.30	1,497	
11452 Refrigerator	1	ea	1,647.03	1,647	
11452 Microwave Countertop	1	ea	868.43	868	
11452 Washer & Dryer	1	ea	2,695.14	2,695	
Residential Equipment Total					$8,505
11680 Office Equipment					
11680 Special Equipment - Allowance	1	ls	37,500.00	37,500	
Office Equipment Total					$37,500
12100 Artwork					
12100 Graphics - Allowance	1	ls	15,000.00	15,000	
Artwork Total					$15,000
12500 Window Treatment					
12510 Window Treatment - Allowance	1	ls	25,000.00	25,000	
Window Treatment Total					$25,000
12600 Furniture and Accessories					
12600 F F & E - N.I.C.					
Furniture and Accessories Total					
12670 Rugs and Mats					
12670 Entrance Mats	50	sf	80.00	4,000	
Rugs and Mats Total					$4,000
14200 Elevators					
14240 Hydraulic Elevator - Passenger 2 Story	2	ea	95,000.00	190,000	
14240 Hydraulic Elevator - Cab Finish Allowance	2	ea	7,500.00	15,000	
Elevators Total					$205,000
15300 Fire Protection					
15300 Fire Protection - Gird Fl	13,467	sf	4.12	55,451	
15300 Fire Protection - 1st Fl	19,107	sf	4.49	85,827	
15300 Fire Protection - Sapphire Fire Suppression	8,290	cf	5.50	45,595	
Fire Protection Total					$186,873

CSI Item Description	Qty	Unit	Unit Price	Total Price	Area Total
15400 Plumbing					
15400 Plumbing - Fixture/Piping	51	ea	2,245.95	114,543	
15400 Plumbing - Roof Drain 4" C.I. 10'	25	ea	1,647.03	41,176	
15400 Plumbing - Roof Drain 4" C.I. additional foot	600	lf	41.92	25,155	
15400 Plumbing - Hose Bibb/Piping	14	ea	1,122.98	15,722	
15400 Plumbing - HWH/Piping w/pump	2	ea	11,229.75	22,460	
15400 Plumbing - Instant HW	2	ea	2,245.95	4,492	
15400 Plumbing - Floor Drain/Piping	16	ea	1,796.76	28,748	
15400 Plumbing - EWC	2	ea	2,994.60	5,989	
15400 Plumbing - Elev Pit Drains	2	ea	2,245.95	4,492	
15400 Plumbing - Water Tank Above Ground	1	ls	14,973.00	14,973	
15400 Plumbing - Fuel Tank Above Ground	1	ls	14,973.00	14,973	
15400 Plumbing - Grease Trap	1	ls	7,486.50	7,487	
Plumbing Total					$300,209
15500 HVAC					
15500 HVAC - Split System w/VAV's	67	tn	12,000.00	804,000	
HVAC Total					$804,000
16200 Power Generation					
16200 Power Generator - 350kw	2	ea	190,000.00	380,000	
16200 ATS	4	ea	7,500.00	30,000	
Power Generation Total					$410,000
16400 Electrical					
16400 Electrical System	22,007	sf	90.00	1,980,630	
16400 Electrical - Service Concrete Duct bank	140	lf	265.00	37,100	
16400 Electrical - Lighting at Gird Floor	17,418	sf	20.00	348,360	
Electrical Total					$2,366,090
16600 Special Systems					
16600 UPS System - Allowance	1	ls	125,000.00	125,000	
16600 A/V System - Allowance	1	ls	455,000.00	455,000	
16600 CCTV System - Allowance	1	ls	87,500.00	87,500	
16600 Card Access/Security System - Allowance	1	ls	140,000.00	140,000	
16630 IT Cabling - Allowance	1	ls	450,000.00	450,000	
16630 Cell Phone Booster System - Allowance					
Excludes Carrier Equipment	1	ls	70,000.00	70,000	
16630 Deployable Tower 80mph - Allowance	1	ls	8,000.00	8,000	
16630 700/800MHz Public Safety DAS - Allowance	1	ls	50,000.00	50,000	
Special Systems Total					$1,385,500
B. Building Total				**13,275,139**	

RECAP		
A. Site Work Total		**2,096,385**
B. Building Total		**13,275,139**
SUBTOTAL		**15,371,524**
Contractor General Conditions	12.00%	1,844,583
Subtotal		17,216,107
Contractor O. H.& P.	7.50%	1,291,208
Estimate Contingency	5.00%	860,805
Subtotal		19,368,120
P & P Bond & Insurance	3.50%	677,884
TOTAL PROBABLE CONSTRUCTION COST		**20,046,005**

CLARIFICATION / ALLOWANCES / EXCLUSIONS

1. The above budgets are updates of the 2009 budget that CC&A prepared and was based on the then current design drawings as prepared by ADG.
2. The approx budgets are projected for a construction start in mid 2018.
3. The above budget includes the following Allowances;

Sanitary Sewer Lift Station & Tank	1	ls	$ 150,000
Landscape/Irrigation	1	ls	$ 75,000
Signage - Interior Bldg.	1	ls	$ 25,000
Signage - Exterior Bldg.	1	ls	$ 27,000
Signage - Installation	1	ls	$ 8,000
Signage - Bldg. Plaque	1	ls	$ 5,000
Special Equipment	1	ls	$ 37,500
Graphics	1	ls	$ 15,000
Window Treatment	1	ls	$ 25,000
Elevator Cab Finishes	1	ls	$ 15,000
UPS System	1	ls	$ 125,000
A/V Systems	1	ls	$ 455,000
CCTV Systems	1	ls	$ 87,500
Card Access/Security Systems	1	ls	$ 140,000
IT Cabling	1	ls	$ 450,000
Cell Phone Booster System	1	ls	$ 70,000
Deployable Tower 80mph	1	ls	$ 8,000
700/800MHz Public Safety DAS System	1	ls	$ 50,000

4. The above budget excludes the following;
   - Off-site Improvements
   - Impact Fees/Design Fees/Development Costs
   - F.F. & E. Costs
   - Owner Temporary Quarters & Move-In Costs
   - Cell Phone Carrier Equipment Costs

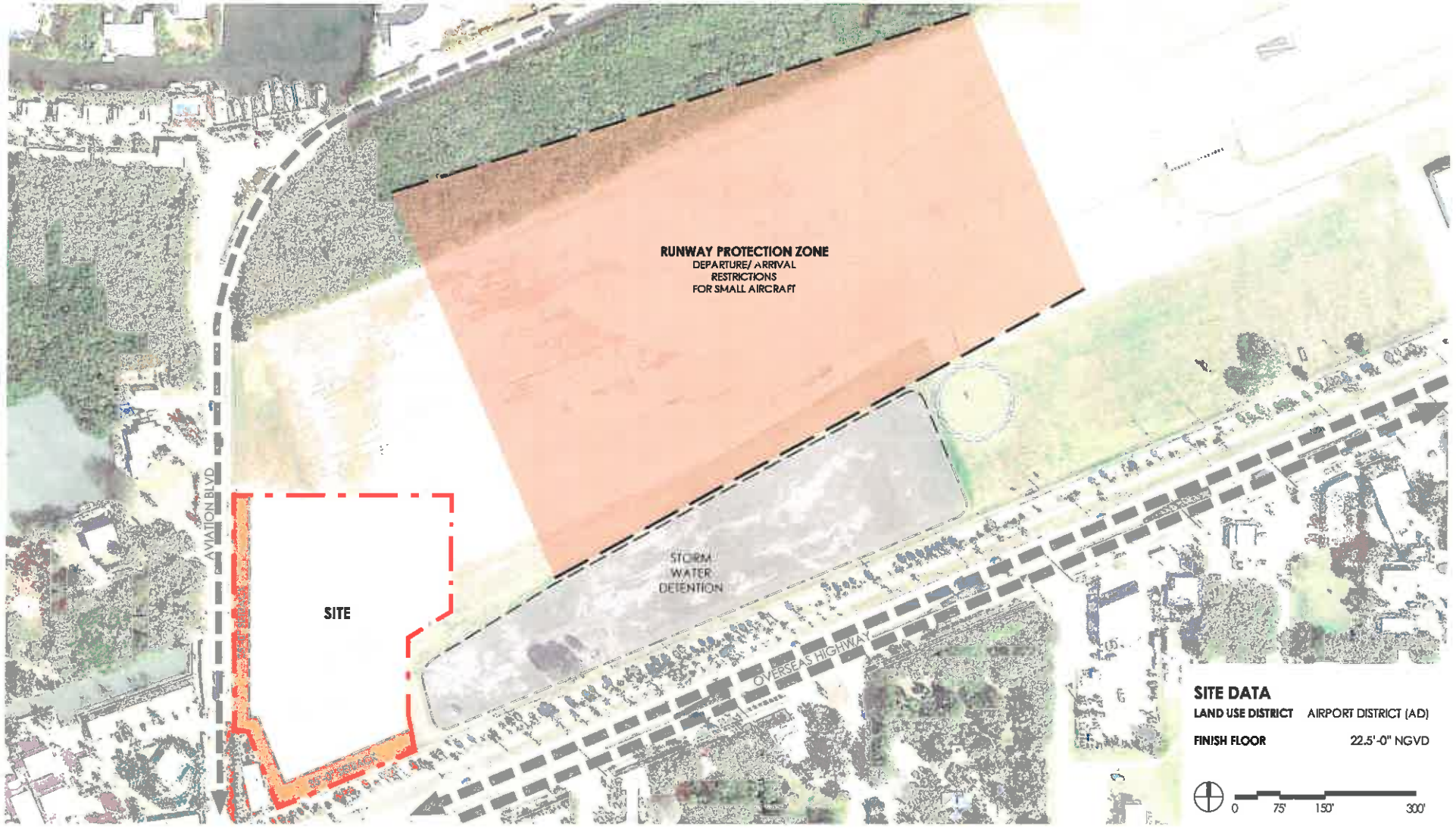
MASTER PLAN/ DESIGN VISUALIZATION

EMERGENCY OPERATIONS CENTER - MONROE COUNTY, FL

ARCHITECTS DESIGN GROUP

SITE LOCATION

2017.11.06

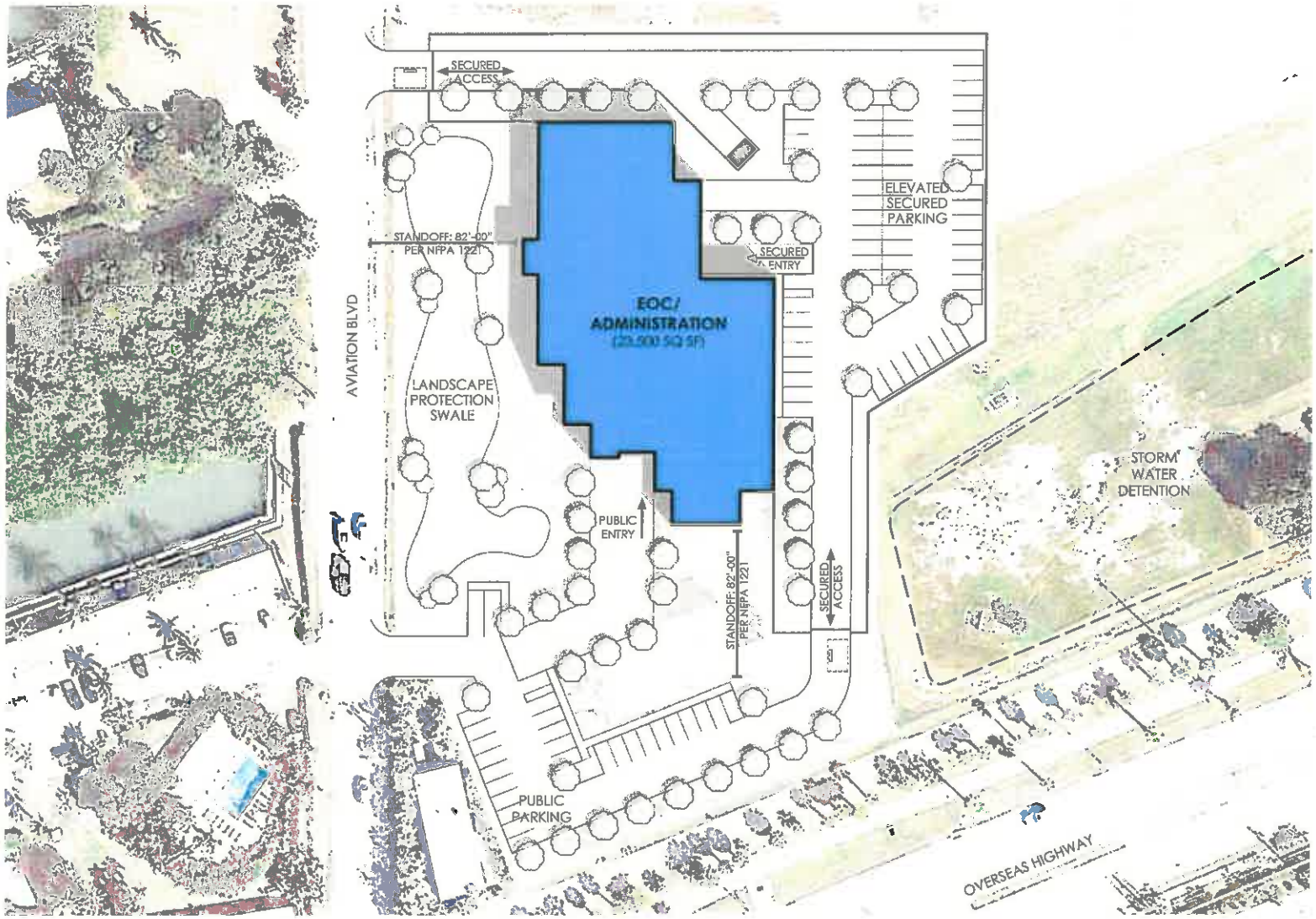


EMERGENCY OPERATIONS CENTER - MONROE COUNTY, FL

ARCHITECTS DESIGN GROUP

SITE ANALYSIS

2017.11.06



DEVELOPMENT DATA

SQUARE FOOTAGE CALCULATION

EOC	17,500 SF
ADMINISTRATION	5,000 SF
TOTAL	22,500 GSF

PARKING

SECURED	60
PUBLIC	25
TOTAL	85

MINIMUM PARKING STALL 9'-0" x 18'-0"

BUILDING CRITERIA PER FLORIDA DIVISION OF EMERGENCY MANAGEMENT

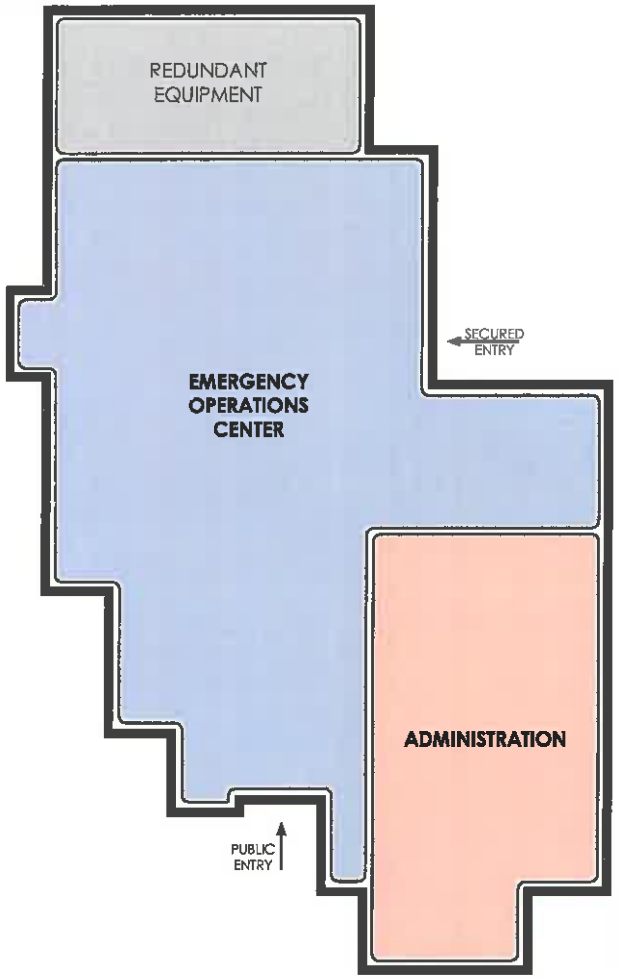
- DESIGN WIND SPEED = 225 MILES PER HOUR (3 SECOND GUST)
- MISSILE IMPACT RESISTANCE: BUILDING ENCLOSURE MUST RESIST PENETRATION BY A NOMINAL 2"X4" LUMBER PLANK WEIGHING 15 POUNDS PROPELLED AT 50 MILES PER HOUR (74 FEET PER SECOND) STRIKING END-ON.
- THE LOWEST FLOOR FOR THE EOC AND ESSENTIAL ANCILLARY STRUCTURES AND SERVICE EQUIPMENT SHALL AT A MINIMUM BE ELEVATED ABOVE: CATEGORY 5 HURRICANE STORM SURGE ELEVATION PLUS 20 PERCENT; THE BASE FLOOD ELEVATION PLUS THREE (3) FEET; THE 500-YEAR (0.2 PERCENT ANNUAL CHANCE) FLOOD ELEVATION (IF DETERMINED) PLUS TWO (2) FEET; THE HIGHEST RECORDED FLOOD ELEVATION PLUS THREE (3) FEET IF THE AREA IS NOT IN A MAPPED SPECIAL FLOOD HAZARD AREA; WHICHEVER IS GREATER.
- THE EOC SHALL AT A MINIMUM BE DESIGNED FOR 72 HOURS OF SELF-CONTAINED CONTINUOUS OPERATION AND SHALL NOT BE SOLELY RELIANT UPON OFF-SITE SERVICES AND UTILITIES (E.G., WATER, NATURAL GAS FUEL, ELECTRICITY, ETC.)

EMERGENCY OPERATIONS CENTER - MONROE COUNTY, FL

ARCHITECTS DESIGN GROUP

MASTER PLAN

2017.11.06



0 15' 30' 60'

EMERGENCY OPERATIONS CENTER - MONROE COUNTY, FL

ARCHITECTS DESIGN GROUP

ADJACENCY DIAGRAM

2017.11.06

EMERGENCY OPERATIONS CENTER - MONROE COUNTY, FL
ARCHITECTS DESIGN GROUP

ENTRANCE
2017.11.06