

Regular Workshop – February 16, 2016  
Agenda Item 9

Agenda Item: South Fire Station Building and Facility Analysis

Presenter: Town Manager and Staff  
Todd Sweet, Sweet Sparkman Architects, Inc.

Summary: The South Fire Station at 2162 Gulf of Mexico Drive, has undergone several upgrades and renovations over the past fifteen years but continues to need major renovations warranting the need for a comprehensive analysis of the building. In 2015 the Commission authorized a comprehensive analysis of the facility.

Architect Todd Sweet, of Sweet Sparkman Architects, will present the analysis of the South Fire Station building and will outline their recommendations. Town staff will also be available to discuss the report and answer questions.

Attachments: 2-4-16 Memo, Fire Chief to Manager  
10-13-15 Sweet Sparkman Recommendations and Approach Report  
Item B: Staff PowerPoint Presentation

Recommended

Action: Pending discussion, provide direction to Manager.

## M E M O R A N D U M

Date: February 03, 2016

**TO:** Dave Bullock, Town Manager  
**FROM:** Paul B. Dezzi, Fire Chief  
**SUBJECT:** South Fire Station Building and Facility Analysis

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The Longboat Key South Fire Station (Station 92), located at 2162 Gulf of Mexico Drive, was designed in 1985 and built in 1986 prior to Hurricane Andrew (1992) and the enactment of Federal and State accessibility standards. This facility houses a 24/7/365 operation that currently includes five firefighter/paramedics, a ladder truck, ambulance and reserve fire engine. It serves all of Longboat Key, mainly responding or answering emergency calls on the south end.

The South Fire Station has undergone several upgrades and renovations over the past fifteen years but continues to need major renovations today warranting the need for a comprehensive analysis of the building. The Commission authorized a comprehensive analysis of the facility in the 2015 budget.

Seven responses were received to the Town's Request for Proposals (RFP) #15-006 South Fire Station Building and Facility Analysis. A six-member review committee comprised of employees from the Fire Department, Public Works Department, Purchasing as well as one employee from a neighboring community with experience in project management. Submitted proposals were opened on February 4, 2015 leading to the selection of and a contract with Sweet Sparkman Architects, Inc. on June 4, 2015.

Town staff met with Todd Sweet (Sweet Sparkman) and his staff of structural, mechanical, electrical, and plumbing engineers. A meeting was held at the Station 92 so that the engineers could assess the station in order to provide their analysis of all components of the facility to Todd Sweet. A final comprehensive analysis report and project recommendation and approach report were delivered on October 13, 2015.

A summary presentation of those findings and recommendations from the Longboat Key South Fire Station Building and Facility Analysis will be provided at the February 16, 2016 Town Commission Workshop. Todd Sweet, his staff, and Town staff will be available to answer questions from the Commission.

cc: Todd Sweet, Sweet Sparkman Architects  
Juan Florensa, Public Works Director  
James K. Linkogle, Public Works Projects Manager



## **SOUTH FIRE STATION FACILITY STUDY AND ANALYSIS**

### **GENERAL PROJECT DESCRIPTION**

The Town sought the services of an Architectural firm to conduct a building and facility analysis for the Town's South Fire Station, 2162 Gulf of Mexico Drive.

The work included services related to suggestions for renovations and or construction of Fire Station Facilities.



## **SOUTH FIRE STATION FACILITY STUDY AND ANALYSIS**

### **GENERAL PROJECT TIME LINES**

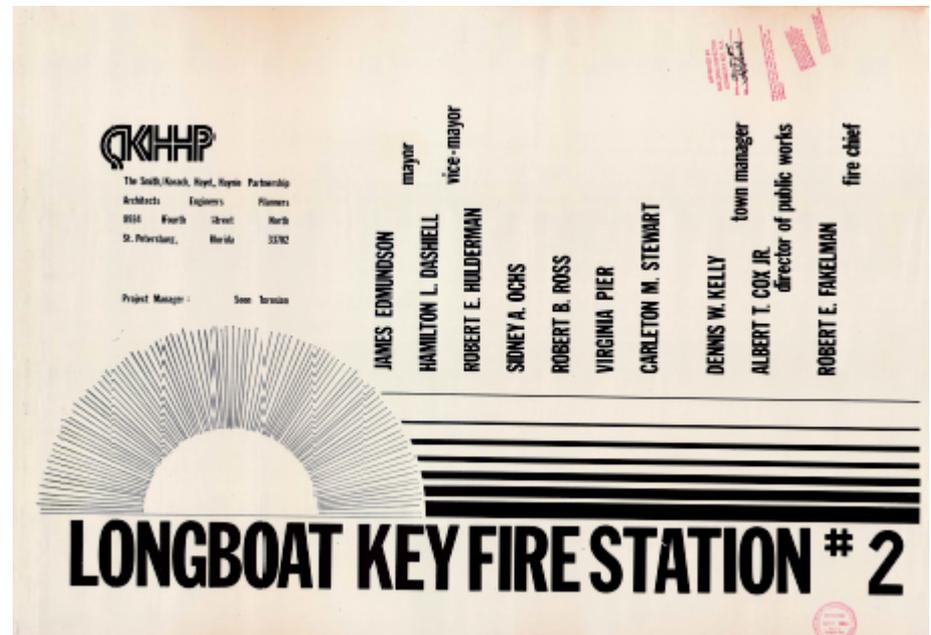
- RFP #15-006 opened 2/4/15
- Contracted with Sweet Sparkman Architects, Inc. 6/4/15
- COMPREHENSIVE FINAL ANALYSIS REPORT received 10/13/15

# TOWN OF LONGBOAT KEY

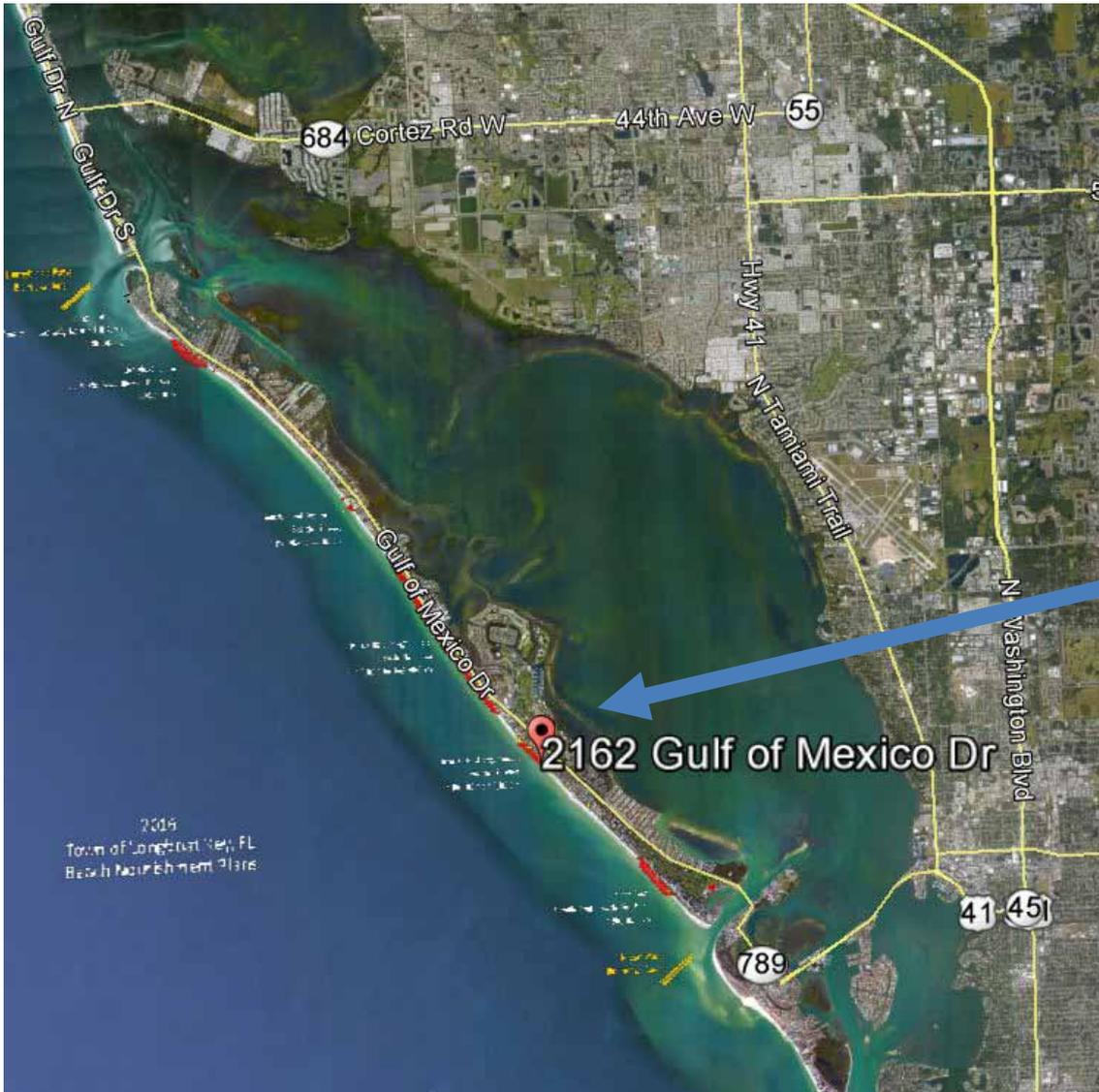


## SOUTH FIRE STATION HISTORY

- BUILDING DESIGNED IN 1982-83
- CONSTRUCTION COMPLETED, Dec. 1985
- DEDICATED 1986



# TOWN OF LONGBOAT KEY



**SOUTH  
FIRE  
STATION  
LOCATION**

2019  
Town of Longboat Key, FL  
Beach nourishment plans

# TOWN OF LONGBOAT KEY



## SOUTH FIRE STATION LOCATION

2162 GULF OF  
MEXICO DRIVE



# TOWN OF LONGBOAT KEY



## SOUTH FIRE STATION LOCATION

2162 GULF OF MEXICO DRIVE





## **SOUTH FIRE STATION PROPERTY APPRAISER 2014 VALUES**

- Just Market Value: \$1,939,800
- Land: \$1,291,300
- Improvements: \$ 648,500



## SOUTH FIRE STATION ISSUES

- Structure looks good from outside
- Building Systems need attention
  - A/C
    - Ductwork
    - Efficiency
    - Age
  - Restrooms
    - Co-Gender, non ADA Compliant
  - Sleeping Quarters
  - Kitchen
  - Emergency Back up power



## **SOUTH FIRE STATION MAJOR RENOVATION PROJECTS**

- **ROOF REPLACEMENT - 2003**
- **INTERIOR RENOVATIONS - 2003**
- **HURRICANE SHUTTERS / DOORS - 2005**
- **HVAC SYSTEM UPGRADES - 2003 & 2007**
- **REPLACE GENERATOR / UPGRADE - 2013**

# TOWN OF LONGBOAT KEY



## SOUTH FIRE STATION RENOVATION PROJECTS

### South Fire Station

### Upgrades and Renovations Last 15 years

5/26/99	Exterior EFIS repair and Elastomeric Coating	\$16,900
10/1/03	Replace 15 Ton Condenser	\$10,452
10/1/03	Roof repairs, modifications and replacement	\$56,915
10/1/03	Interior Renovations	\$33,000
10/31/03	Interior Painting	\$8,800
6/27/05	Install Hurricane Shutters and doors (HMGP Grant )	\$59,937
4/1/07	Replace 15 Ton HVAC w/ Dual Condenser - A/H System	\$35,797
3/1/08	Repair Irrigation Deep Well and Pump	\$3,051
12/7/10	Resurface Driveway and Parking (Approx. 1/2 of N. Sta 91 PO)	\$12,000
1/1/12	Indoor Air Quality Survey	\$1,600
1/1/12	New A/C Dampers and controls	\$2,600
3/6/13	Replace 20kw Generator with 40kw, install and Re-wiring	\$32,854
<b>RENOVATON PROJECTS TOTALS</b>		<b>= \$273,906</b>

LONGBOAT KEY SOUTH FIRE STATION  
RECOMMENDATIONS AND APPROACH

## Architectural Recommendations and Approach

### General:

- Add a Tones system throughout the facility
- The current fire station does not provide for a treatment area for patients that walk-in. In accordance with NFPA 1581, fire departments that provide emergency medical services shall provide or have access to disinfecting facilities for the cleaning and disinfecting of medical equipment while not contaminating other areas of the fire station. This room is suggested to be "contained" from the Living Quarters and close to the vestibule. This space should be programmed when considering future fire station improvements.
- The facility does not have a space designated for SCBA repair or cleaning (Cascade Room). This space should be programmed when considering future fire station improvements.
- The fire station does not have a designated "Safe Room". A space that is secure and easily monitored should be provided as the fire station is a designated Safe Place. This space should be programmed when considering future fire station improvements.
- The current fire station does not have a lightning protection system. Add a lightning protection system with air terminals OR provide a lightning preventer system to protect the facility.
- Storage seems to be lacking throughout the facility.
- All violations with the Americans with Disabilities Act (ADA) shall be corrected. This includes clearances, proper wall lengths on push/ pulls of doors, accessible toilet rooms and accessories (grab bars etc.), and step downs eliminated or ramped appropriately.
  - Several violations with accessibility (ADA) standards exist:
    - Step downs at apparatus bays with no ramps
    - Lack of accessible toilet rooms (no 60" turning circle area exists), typ.
    - Required push and pull lengths along walls at doors in the bays and at corridors are shorter than required
    - No hi-lo drinking fountain
    - Showers lack the required accessible sills and sizing with grab bars and fixtures, etc.
- Provide ADA accessible counter tops and accessible doors below the sink.
- As part of the interior fit-up, recommend providing new ceilings and diffusers (to freshen up the look) and employ use of energy-efficient light fixtures throughout the facility.

### Roof:

- Replace for broken barrel roof tile as needed.
- Replace all flashing where water seems to infiltrate mostly at parapet conditions. Repair wall construction and provide waterproofing as needed. Use prefinished aluminum flashing to match the existing flashing.

### Exterior Walls:

- Remove all damaged, cracked, or chipped EIFS system. Check for water infiltration and remove adjacent areas that are affected by any moisture infiltration. Refinish the wall as needed to match the adjacent undamaged wall surface.
- Re-grade the soil on the exterior west wall so water does not puddle at the bottom of the wall.
- Roof overhang would be beneficial to limit the amount of water exposure on the face and bottom of the wall. Gutters can be installed to capture rain water to prevent it from running down the surface of the walls.
- Pressure clean all exterior surfaces, and repaint entire building. Use 3-coat paint application suitable for coastal exposure.

### Exterior Doors & Hardware:

- Replace the metal jamb and casing at the Apparatus Bay doors.
- Remove all of the rust on the Apparatus Bay door's rails
- Replace all exterior doors (and hardware) and louvers with new doors and louvers rated to 160 mph with Risk

## Category II.

### **Windows and Aluminum doors:**

- Since the windows are no longer operable since the addition of the shutters and the wind load rating of the shutter system is unknown (required to meet 160 mph with Risk Category II), it is recommended that the shutters and windows are replaced with new laminated glazing window systems that meet 160 mph x 1.15 importance factor

### **Deck:**

- Remove existing wood deck and replace with a concrete wash-out area and permanent storage building for hoses, propane cylinders and gas grill cooking units and equipment.

### **Screened Porch #124:**

- Replace all rusted members and refinish the surface of the aluminum frame.
- Rescreen.
- Replace all wall plates with plastic wall plates to be caulk at all wall penetrations.
- Check all exterior fixtures and replace trim rings and fixtures that are rusted.

### **Apparatus Bay #118:**

- Recommend providing an additional drive-through Apparatus Bay for future apparatus including the assignment of an additional ambulance when considering future fire station improvements.
- Replace (2) exterior swing doors (see aforementioned door section)
- Replace (3) doors leading to the Living Quarters with 90 minute rated painted hollow metal doors. Provide weather stripping on all doors. Provide door stops in the correct locations
- Provide new lock sets per the Fire Department standards and security requirements.
- Replace all wall plates with plastic wall plates. Caulk at all wall penetrations.
- Check all lights and replace if missing or if rust is observed.
- Repaint all wall and ceiling surfaces. Use Low VOC paint and paint suitable for coastal exposure.
- Remove all ceramic cove base tile. Remove excess grout, sand, prime and paint wall base.
- Provide corner guards at areas of heavy traffic.
- Provide an ADA compliant water fountain

### **Apparatus Bay Support Rooms:**

- The support spaces in the Apparatus Bays are undersized and future station improvements should take into consideration enlarging these areas and providing ample space for fire station equipment. All support rooms need to be enclosed, secured and labeled in accordance with NFPA 1581.
- Include a separate room/area for bio-hazardous waste in accordance with NFPA 1581.
- None of the Apparatus Bay support rooms are ADA compliant due to the 4" step.
- Repaint all surfaces and doors. Use Low VOC paint and 3-coat paint application suitable for coastal exposure.
- The design trend in fire station design is to provide storage systems similar to "GearGrid" for the fire fighters' gear and equipment. Gear shall be in a well ventilated or air-conditioned space with individual locker storage.
- In the Work Room, remove the broken wall panel. If replacement is necessary, provide a water resistant and more durable panel.
- The facility is missing a "Decontamination Room". The room should be physically separated by four walls from other support areas and adjacent to the Apparatus Bays. This room should include, at a minimum, a shower, eye-wash station, utility sink and commercial grade extractor. It should also contain a floor drains connected to a sanitary sewer system.
- Separate the paramedic storage area from the compressed gas cylinders. The cylinders need a dedicated secure area that need to be rated (walls, door, and ceiling) per the Florida Building Code. Recommend a Cascade Room of adequate size be programmed when considering future fire station improvements.

- Remove flooring in the Paramedic Storage Room. For ease of maintenance, apply a sealer on the existing concrete floor.

**Captain's (Lieutenant's) Office #102:**

- Replace all built-in case work
- Repair damaged wall surfaces and provide corner guards
- Repaint all walls, ceiling surfaces, and doors. Use Low VOC paint.
- The design trend in fire stations is to provide separation between the Lieutenant's office and the bunk area for privacy and efficiency of operations.

**Records Room #103:**

- Replace all casework.
- This room is undersized and should be centrally located. A larger, centrally located file storage space should be programmed when considering future fire station improvements.

**Toilet #104:**

- Replace shower to be ADA compliant, add grab bars, and check for 60" turn radius configuration. Ensure at least (1) door is 36" wide.

**Staff Sleeping Quarters #115, #116, #117:**

- o Bunk Room:
  - The design trend in fire stations is to provide individual rooms for firefighters/EMS personnel for privacy, storage security, and comfort. Current space is limited and unfeasible to provide individual bunk rooms. Individual bunk rooms with a bed, storage lockers and desk should be programmed when considering future fire station improvements.
  - This room should have lighting that is tied into the Tones system and automatically turns on the lights upon a call (dim lighting). This would assist in safely dispatching firefighters from a dark bunk room for emergency responses.
  - Repaint all walls, ceiling surfaces, and doors. Use Low VOC paint.
  - In accordance with NFPA 1500, all fire department facilities shall have carbon monoxide detectors installed in locations in sleeping and living areas, such that any source of carbon monoxide would be detected before endangering the members.
- o Bathroom:
  - Provide a minimum of (1) ADA shower, sink, and fixtures as required by the 2014 Florida Accessibility Code for Building
  - Provide shelves in shower compartments for toiletries
  - Replace plastic laminate surfaces with solid-surface such as manufactured quartz or Corian.
  - Consider providing individual unisex rest rooms that can accommodate both gender when considering future fire station improvements.
  - Per code, only half of the required individual bathroom count are required to be ADA compliant if they are located near each other. Each individual rest room should include a shower, lavatory, and toilet.
- o Lockers:
  - Recommend locating lockers in individual bunk rooms as described above.
  - Remove and replace flooring with a more durable material requiring less maintenance such as porcelain tile, rubber or stained concrete.
  - Repaint all walls, ceiling surfaces, and doors. Use Low VOC paint.

**Staff Living Quarters:**

- o Kitchen #123:
  - Repair and/or adjust the cabinet doors and drawers.
  - Replace the counter top with a solid-surface material such as Corian or manufactured quartz.
  - Add tile or stainless steel backsplash.
  - Extend a soffit down to the top of the cabinets or replace upper cabinets to extend to underside of ceiling.

- Consider replacing the kitchen millwork in its entirety as this may be a more affordable option than the recommendations above.
- o Dining Room / Library #106:
  - When considering future fire station improvements, we recommend providing separate areas for the Dining Room and Report Writing Area/Library.
  - The report writing/library millwork should be replaced in its entirety
  - Repair damaged wall areas and provide corner guards
  - Repaint all walls, ceiling surfaces, and doors. Use Low VOC paint.
  - Remove the existing flooring and replace with a more durable material requiring less maintenance such as porcelain tile, rubber or stained concrete
  - Provide more durable window treatment.
- o Living Room #105:
  - Repaint all walls, ceiling surfaces, and doors. Use Low VOC paint.
  - Replace damaged ceiling tiles.
- o Exercise Room #108:
  - When considering future fire station improvements, we recommend providing a larger exercise room to accommodate the current fitness equipment. If possible, gain additional ceiling height.
  - Repair damaged wall areas and provide corner guards
  - Repaint all walls, ceiling surfaces, and doors. Use Low VOC paint.
  - Relocate the water heater in a more convenient location.
- o Corridor #107:
  - Remove and replace existing flooring with a more durable material requiring less maintenance such as porcelain tile, rubber or stained concrete.
  - Replace wall base.
  - Provide corner guards.
  - Provide ADA compliant drinking fountain
  - Repaint all walls, ceiling surfaces, and doors. Use Low VOC paint.
- o ADA Toilet #104:
  - Provide the missing ADA compliant pipe protection under the sink and the grab bar on the back of the toilet.
  - Repaint all walls, ceiling surfaces, and doors. Use Low VOC paint.
- o Vestibule #100:
  - Repaint all walls, ceiling surfaces, and doors. Use Low VOC paint.
  - When considering future fire station improvements, we recommend a contained treatment (disinfecting) area is located in a separate room and the Vestibule becomes a reception, entry area. See recommendations under General Notes.

**Mechanical:**

- o Mechanical room #109
  - Repaint all walls, ceiling surfaces, and doors. Patch all damaged areas. Use epoxy paint in this area.
  - Replace all rusted hardware and doors as needed.
  - Consider air-conditioning this space.
  - Other Mechanical Room recommendations are noted in the HVAC report.
- o Emergency Generator #110:
  - Repaint all walls, ceiling surfaces, and doors. Patch all damaged areas. Use epoxy paint in this area. Replace all rusted hardware and doors as needed.
  - Relocate the generator outside the building.

## Structural Recommendations and Approach

Recommendations for strengthening the building to meet today's codes are as follows:

- Add vertical reinforcing to the perimeter block walls. This reinforcing would be epoxied into the foundations at ground level and into the grouted block or concrete tie-beam at the top of the wall. This can be done from the inside or the outside.
- Add truss tie-down straps where they have not been added. At most locations this will be a surface applied metal twist strap screwed to the inside or outside face of the block wall and nailed to the side of the truss.
- Add a wood shear wall over the top of the interior block bearing wall (corridor #107 wall). This will consist of a 2x4 stud wall from the top of the block to the underside of the roof sheathing. The 39 foot long stud shear wall will be sheathed one side with 5/8" plywood.
- At the front & rear gable ends of the Apparatus Bay add 2x6 bracing to the gable wall at 5 locations each wall. (SEE PHOTO #7)
- Add 2x4 framing between the roof trusses at the attic vent hole through the roof sheathing.



Photo #7: Apparatus Bay Gable wall to be braced.

## HVAC Recommendations and Approach

- The Air Conditioning system appears to be in good working condition and is well maintained. If the maintenance is continued the two systems could function adequately for several more years.
- A manual volume damper should be installed in the existing outdoor air duct so that the required outdoor air can be brought into the building through the AHU's.
- It is highly recommended that the attic is sealed and that insulation is applied to the underside of the roof deck. This will reduce the chance of outdoor air from entering the building through the roof making the building tighter and easier to control temperature and humidity. At a minimum the ceiling insulation should be checked and any missing insulation should be replaced.
- The thermostats should be programmed to "on" mode so that they operate the AHU's during all occupied periods.
- Air distribution devices should all be cleaned. Any diffusers that show signs of rust need to be replaced.
- The dryer vent should be repaired and internally cleaned.
- All unprotected exterior louvers should be replaced with Florida high wind-load impact resistance louvers or hurricane screens should be installed over them.
- It is recommended to provide permanent openings in the Apparatus Bay to allow cross ventilation when the exhaust fan is operating and the large roll up doors are closed. This can be achieved by installing one or more hurricane rated louvers or replacing the two man doors per the original construction documents.
- Air distribution in the Bunk Room may be compromised due to the installation of the privacy curtains. To improve the airflow small supply diffusers could be installed in each bunk area. The diffusers could be provided with dampers to allow occupants to adjust the airflow.

## Electrical Recommendations and Approach

- The main electrical power ground visually appears to be in a compromised state. Since this is the safety ground for the staff and personnel, immediate attention is required by the Owner. It is our recommendation that the ground be tested by a licensed and bonded electrician without delay. In addition, it appears that some of the communications services to the building may not be adequately grounded to the power ground. All services must be bonded / grounded together per the National Electric Code. A licensed and bonded electrician can verify these conditions and correct them as required.

- Once the condition of the grounding system has been ascertained, install surge protection on the electrical service.
- Repair or replace the exterior lighting that cannot be maintained. Perform routine maintenance on the remaining fixtures.
- Close openings in electrical boxes that are still in service.
- Replace/reinstall all lighting wall mounted toggle switches to ADA height.
- Replace the existing fire alarm in total and provide new fire alarm devices that meet the current code for sleeping quarters and occupant notification (visual devices) at the current ADA height.
- Consider re-circuiting the apparatus bay exhaust fans so they would be on generator power.
- Consider new exhaust fan controls so they exhaust fans would run automatically upon operation of the overhead apparatus bay doors.

### **Plumbing Recommendations and Approach**

- In general, the water closets and lavatories appear in fair and operable condition. There appears to be enough fixtures to meet the minimum plumbing requirements of the current Florida Plumbing Code, but there does not appear to be adequate access in accordance with either the Florida Accessibility Code or the Americans With Disabilities (ADA) Act. Any renovations to the existing rest rooms to provide adequate access would require that all the water closets and lavatories be replaced with appropriate accessible fixtures.
- In the event that accessibility is addressed by other means and the existing rest rooms are renovated in their current configuration, it is recommended that the water closets and lavatories are replaced with new fixtures that meet the Energy Policy Act of 1992 for fixture performance requirements. This requires that the water closets use a maximum of 1.6 gallons per flush and that the faucets use a maximum of 2.5 gpm. With improvements in fixture efficiency, fixtures are readily available that exceed these requirements and it would be further recommended that the owner consider 1.28 GPF water closets and 1.0 gpm aerators on all lavatory faucets.
- The hot water piping at the water heater should be insulated in accordance with the Florida Energy Efficiency Code.

### **Site Recommendations and Approach**

- Any modifications or relocation of the existing fueling system/fueling tank will require permitting through Florida Department of Environmental Protection(FDEP)
- Any driveway modification, relocation, or new driveway will require permitting authorization through the Florida Department of Transportation (FDOT).
- Any modifications, new construction, or additional impervious areas most likely will require permitting through the Southwest Florida Water Management District (SWFWMD). Once the proposed site improvements have been conceptually determined, we recommend pre-application with the SWFWMD at their Sarasota office to determine the appropriate permitting requirements.
- All new site improvements will need to be in accordance with SWFWMD and the Town of Longboat Key regulations.
- If the existing building is to remain, adding gutters and downspouts is recommended to prevent erosion around the existing building and foundations.
- If the existing stormwater system is left in place, we recommend that the existing permitted conveyance swales be re-established to provide positive drainage/flow towards the dry retention area.
- Existing potable water and sanitary sewer capacity serving the site should be adequate to serve any addition to the existing building or a new fire station. New water service lines and fire lines may be required to connect to the existing 12" water main depending on the proposed improvements and water demands of the new system. Sanitary sewer can utilize the existing sanitary sewer service.

LONGBOAT KEY SOUTH FIRE STATION  
OPTIONS AND ASSOCIATED COSTS

Option 1 - 2 Bay Renovation/Expansion

Option 1A - 3 Bay Renovation/Expansion

Option 2 - New single story Fire Station

Option 3 - New two-story Fire Station

## Option 1 - 2 Bay Renovation/Expansion

Option 1 includes a 2,000 +/-square foot addition to the existing fire station to provide spaces in accordance with the Proposed Architectural Program. The preliminary budget for the expansion and renovation includes the following:

### Building:

- Building expansion occurs to the north (with additional support spaces for the Apparatus Bays) and to the south with expansion of the Living Areas.
- The existing Living Areas are at a base floor elevation (BFE) of 11.00. The existing Apparatus Bays are 1'-0" below the BFE. The Apparatus Bays will remain -1'-0". The renovated Living Areas will be at BFE and the new addition will be +1'-0" in accordance with the Longboat Key Code of Ordinances which requires building modifications to be 1'-0" above BFE. As a result, interior ramps will be added to the Living Areas to transverse the grade changes.
- The bearing height of the proposed addition will be raised in response to the elevated floor height.
- One (1) interior bearing wall was salvaged to limit cost impact. New openings are proposed in this bearing wall.
- The addition of support spaces immediately north of the existing bays. The proposed design shows new openings in the north exterior wall with columns (or existing wall sections) to remain between the existing and proposed addition.
- A new generator will be provided to services the enlarged facility. The new generator will be located in a new remote enclosure.
- Other improvements as per RECOMMENDATIONS AND APPROACH as detailed in the previous section of this Report.

### Site:

- The parking areas have been revised to provide additional parking to the southwest of the fire station while eliminating three spaces to the south where the building will be expanded.
- Site improvements also include a new dumpster enclosure, new exterior generator enclosure and expanded driveway apron to accommodate the third Apparatus Bay. A rear turn-around provide the required access for a garbage truck.
- The existing stormwater system will be enlarged to accommodate an increase in impervious area. The existing permitted conveyance swales will be re-established to provide positive drainage/flow towards the dry retention area(s).

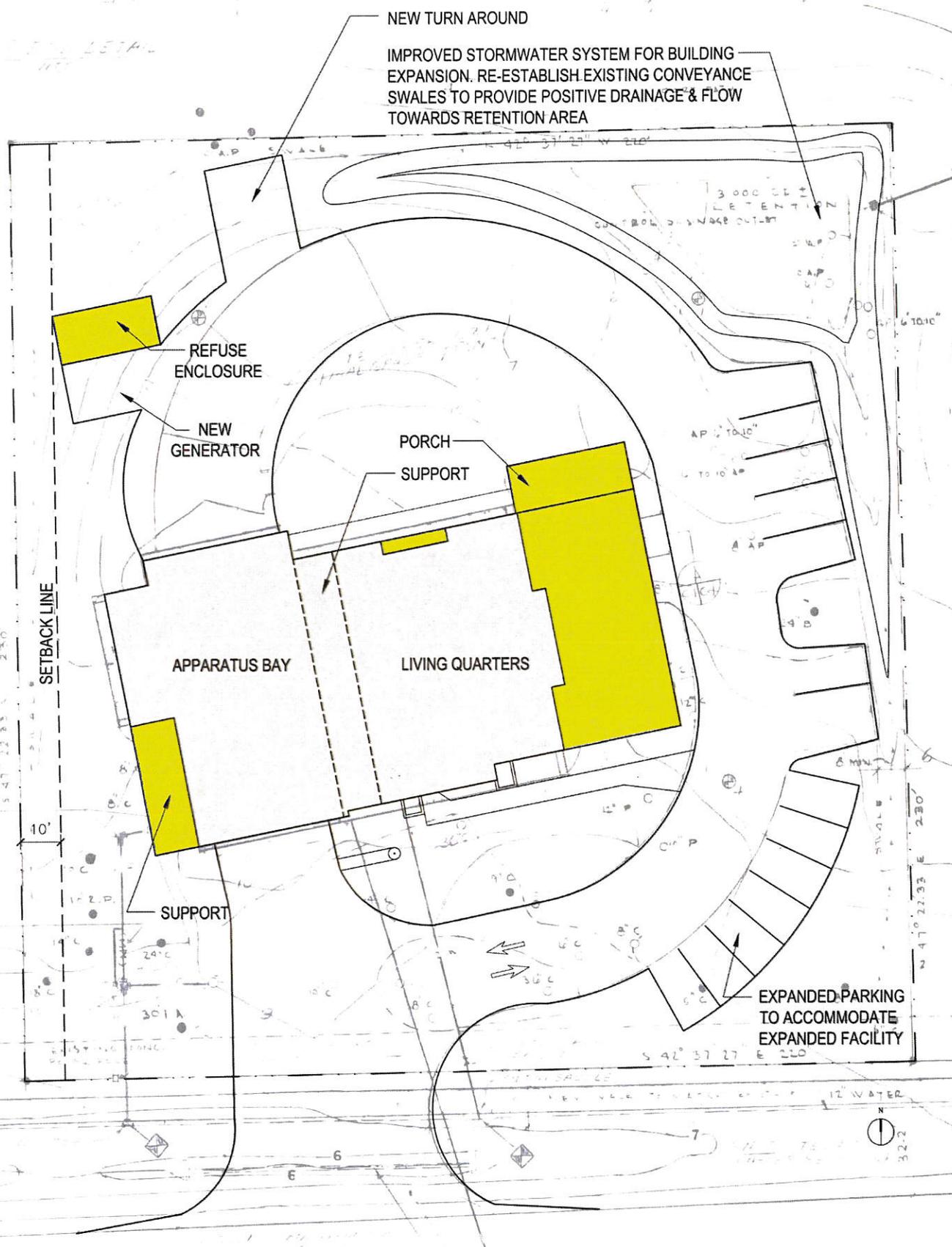
### Structural:

The Architectural plan shows possible future expansion on the north and south sides of the existing building. The structural description of that construction is as follows:

- Foundations: New shallow spread footings with most footings being 2' wide x 1' thick with (3) #5 continuous. The floor slab in the south addition (low roof) will be 4" thick with 6x6-w1.4xW1.4 WWF. The floor slab in the north addition (high roof) will be 6" thick with 6x6-w2.9xW2.9 WWF.
- Perimeter Walls: New perimeter walls will be 8" reinforced masonry with #5 at 48" on center at the low roof south addition and 12" block with (2) #5 at 32" on center at the high roof north addition.
- Roof: The new roof will be pre-engineered wood trusses at 2' on center with tie-down straps to the masonry walls. At the interface between the existing truck bay and the new truck bay there will be (3) steel columns supporting a 3-ply LVL wood beam which will support the existing & new wood trusses. The three columns will have new footings for gravity load support and to resist the uplift. New wood trusses & new roof overbuild (on top of the existing trusses) will frame the new high roof.

### Other considerations:

- The expansion and renovation will require the fire station operations to be relocated during the construction. The Town of Longboat Key may want to include a budget for temporary relocation and operation from a remote facility which could last for 12 months +/-.
- The expansion to the north is within 10'-0" of the north property line. The side yard setback is not known but maybe as much as 20'-0" (based on information found on Sheet C-2 of the original set of construction documents). If the side yard setback is greater than 10'-0", a setback variance will be required form the Town of Longboat Key.
- The ground floor elevation in Option A varies between the Apparatus Bays, original living areas and expanded living areas. These area are transverses with the inclusion of handicap accessible ramps. This is not an ideal situation and would be avoided with new construction.



NEW TURN AROUND

IMPROVED STORMWATER SYSTEM FOR BUILDING EXPANSION. RE-ESTABLISH EXISTING CONVEYANCE SWALES TO PROVIDE POSITIVE DRAINAGE & FLOW TOWARDS RETENTION AREA

REFUSE ENCLOSURE

NEW GENERATOR

PORCH SUPPORT

APPARATUS BAY

LIVING QUARTERS

SUPPORT

EXPANDED PARKING TO ACCOMMODATE EXPANDED FACILITY

SETBACK LINE

GULF OF MEXICO DRIVE

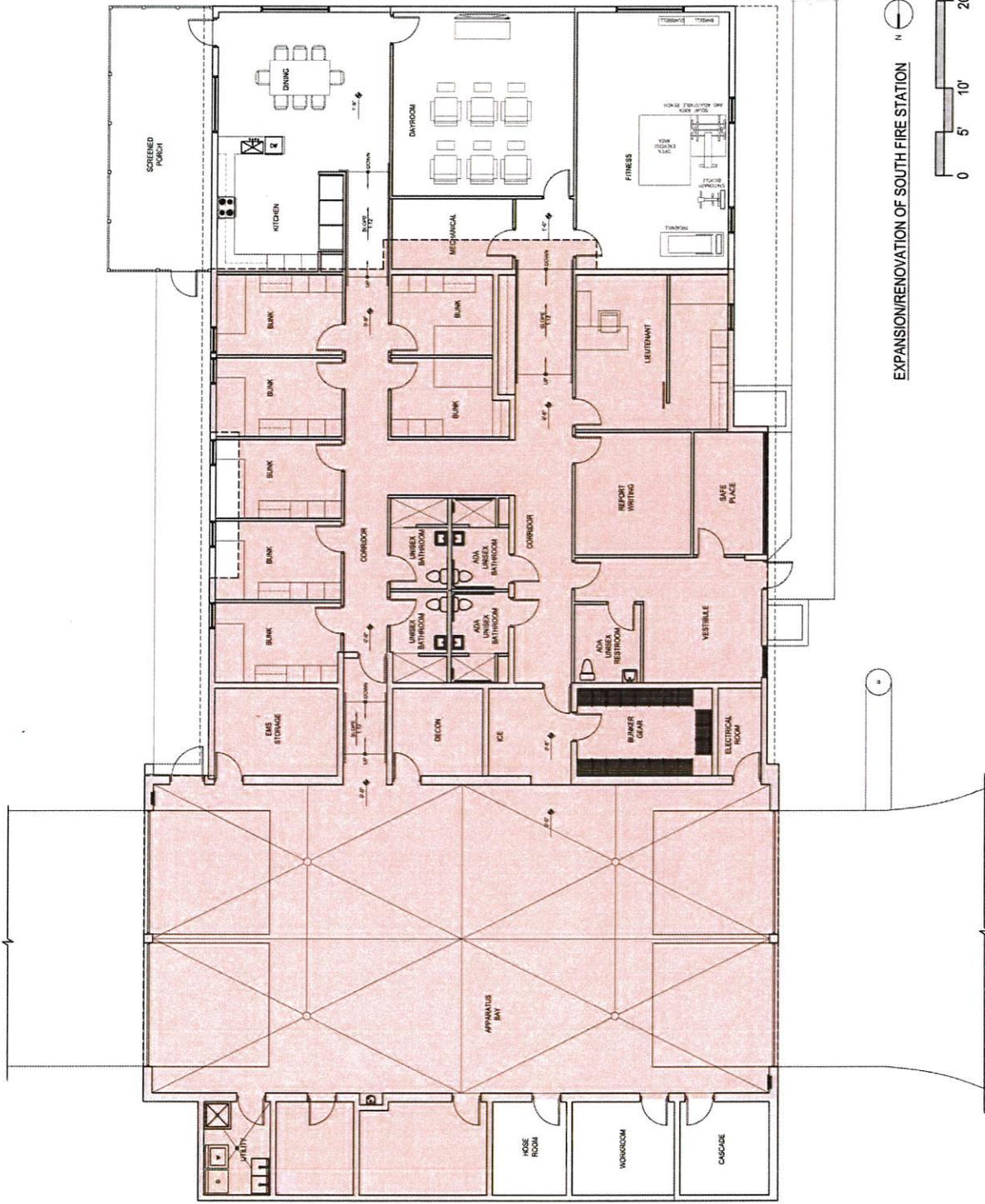
Option 1 - 2 Bay Renovation/Expansion

Total = 9,100 sf

DATE: 11/20/09  
 DRAWN BY: [signature]  
 CHECKED BY: [signature]

Option 1

9,100 sf



EXPANSION/RENOVATION OF SOUTH FIRE STATION



Existing Fire Station footprint

**LONGBOAT KEY SOUTH FIRE STATION**  
**Option 1 - 2 Bay Renovation / Expansion**  
 October 15, 2015  
**SCHEMATIC BUDGET**

Gross Building Area 9100

CSI CODE	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL	DIVISION TOTAL	COST PSF
1	GENERAL REQUIREMENTS					139,500	15.33
	General Conditions	11	mo	11000	121000		
	Permit Allowance	1	ls	15000	15000		
	Material/Compaction Testing	1	ls	3500	3500		
	Temporary Trailers for living quarters	NIC					
2	SITE WORK					131,175	14.41
	Prep New Building Pad/Import Fill	250	cy	35	8750		
	Silt Fence/Erosion Control	1	ls	1500	1500		
	Clear & Grubb Site	7300	sf	0.5	3650		
	Rough Grading	7300	sf	0.75	5475		
	Final Grading	7300	sf	1	7300		
	New Sidewalks/Wash Pad	1	ls	6000	6000		
	Add Site Signage/Striping	1	ls	2000	2000		
	New dumpster enclosure/slab	1	ls	7500	7500		
	Retaining Wall	1	ls	7000	7000		
	Asphalt/Base for new parking spaces/Drive	240	sy	100	24000		
	Utility relocations/Modifications - Allowance	1	ls	8000	8000		
	Landscape/Irrigation - Allowance	1	ls	15000	15000		
	Selective Demolition:	1	ls	35000	35000		
3	CONCRETE					103,772	11.40
	#5 rebar added @ 48" o/c - drilled & epoxied	112	ea	300	33600		
	Concrete Fill - 3000 psi - pumped	14	cy	200	2800		
	Concrete Footings @ 8" CMU	26	cy	450	11700		
	Concrete Slab-on-grade (Non-Apparatus Areas)	2387	sf	6	14322		
	Concrete Slab-on-grade (Apparatus Bay)	330	sf	10	3300		
	Concrete Beams	35	cy	850	29750		
	Concrete Ramps	172	sf	25	4300		
	Concrete Patching @ demo trenches	1	ls	4000	4000		
4	MASONRY					41,424	4.55
	Masonry (8")	3452	blk	12	41424		
5	STEEL & MISC. METALS					61,359	6.74
	Grab Rails @ Ramps	1	ls	4000	4000		
	Screen Porch Complete	344	sf	30	10320		
	Metal Roof Trusses	2767	sf	17	47039		
6	WOOD & PLASTIC					126,253	13.87
	Rough Carpentry Materials	2767	sf	5	13835		
	Rough Carpentry - Labor	2767	sf	4	11068		
	Existing Carpentry Items:						
	2x4 roof bracing @ 16" o/c	1	ls	6500	6500		
	Additional truss straps	1	ls	3850	3850		
	Wood Shearwall (2x4)	300	sf	25	7500		
	install 2x6 bracing @ Gables	1	ls	3500	3500		
	Cabinetry Complete	1	ls	80000	80000		
7	THERMAL & MOISTURE					134,314	14.76
	Existing Roofing Repairs - Allowance	1	ls	7500	7500		
	Roofing - match existing	5106	sf	19	97014		
	Icynene Insulation	14900	sf	2	29800		
8	DOORS/FRAMES/WINDOWS/HARDWARE					111,320	12.23
	New Windows/Storefront - impact	950	sf	65	61750		
	Interior Storefront	48	sf	40	1920		
	New HM Doors & Frames	19	ea	1350	25650		
	New HM Doors & Frames - exterior/apparatus support	11	ea	2000	22000		
9	FINISHES					288,310	31.68
	Drywall, insulation & furring	475	lf	40	19000		
	Drywall, insulation & metal framing	502	lf	85	42670		
	Drywall Ceilings, & framing	1300	sf	12	15600		
	Acoustical Ceilings	9100	sf	3	27300		
	Flooring	6600	sf	4	26400		
	Ceramic Tile	1	ls	14560	14560		
	Sealed Concrete Floors	2500	sf	1	2500		
	Painting	9100	gsf	2	18200		
	EIFS - New and patching	3052	sf	40	122080		

10	SPECIALTIES					18,040	1.98
	Toilet Accessories	5	ls	1100	5500		
	Fire Extinguishers & Cabinets	1	ls	3000	3000		
	Signage	31	ea	140	4340		
	Marker Boards/Tack Boards	1	ls	1200	1200		
	Corner Guards	1	ls	4000	4000		
11	EQUIPMENT					3,000	0.33
	Projection Screens/Projector Mounts	1	ls	3000	3000		
	Appliances - By Owner						
	Bunk Gear & Lockers - By Owner				0		
	Washing Equipment - By Owner				0		
12	FURNISHINGS					3,850	0.42
	Window Treatments	1	ls	3850	3850		
	FF&E - By Owner				0		
13	SPECIAL CONSTRUCTION					0	
14	ELEVATORS					0	
15	MECHANICAL					373,100	41.00
	Fire Sprinklers	9100	gsf	4	36400		
	Plumbing	9100	gsf	17	154700		
	New HVAC Complete	9100	gsf	20	182000		
16	ELECTRICAL					427,500	46.98
	New Generator & Enclosure	1	ls	200000	200000		
	New Electrical Complete (service is existing)	9100	gsf	25	227500		
17	MISC.					170,688	18.76
	Schematic Estimate Contingency - 8%			0.08	170688		
	SUBTOTAL					2,133,605	234.46
	GL Insurance				0.0095	22,205	
	Builder's Risk Insurance					11,166	
	CM Fee				0.0650	142,655	
	SUBTOTAL					2,309,631	
	Performance & Payment Bond				0.01200	27,716	
						<b>2,337,346</b>	256.85

## Option 1A - 3 Bay Renovation/Expansion

Option 1A includes a 3,000 +/- square foot addition to the existing fire station to provide spaces in accordance with the Proposed Architectural Program. The preliminary budget for the expansion and renovation includes the following:

### Building:

- Building expansion occurs to the north (with the addition of a third Apparatus Bay) and to the south with expansion of the Living Areas.
- The existing Living Areas are at a base floor elevation (BFE) of 11.00. The existing Apparatus Bays are 1'-0" below the BFE. The Apparatus Bays will remain -1'-0". The renovated Living Areas will be at BFE and the new addition will be +1'-0" in accordance with the Longboat Key Code of Ordinances which requires building modifications to be 1'-0" above BFE. As a result, interior ramps will be added to the Living Areas to transverse the grade changes.
- The bearing height of the proposed addition will be raised in response to the elevated floor height.
- One (1) interior bearing wall was salvaged to limit cost impact. New openings are proposed in this bearing wall.
- The addition of a third Apparatus Bay is located immediately north of the existing bays. The proposed design shows new openings in the north exterior wall with columns (or existing wall sections) to remain between the existing and proposed addition.
- A new generator will be provided to services the enlarged facility. The new generator will be located in a new remote enclosure.
- Other improvements as per RECOMMENDATIONS AND APPROACH as detailed in the previous section of this Report.

### Site:

- The parking areas have been revised to provide additional parking to the southwest of the fire station while eliminating three spaces to the south where the building will be expanded.
- Site improvements also include a new dumpster enclosure, new exterior generator enclosure and expanded driveway apron to accommodate the third Apparatus Bay. A rear turn-around provide the required access for a garbage truck.
- The existing stormwater system will be enlarged to accommodate an increase in impervious area. The existing permitted conveyance swales will be re-established to provide positive drainage/flow towards the dry retention area(s).

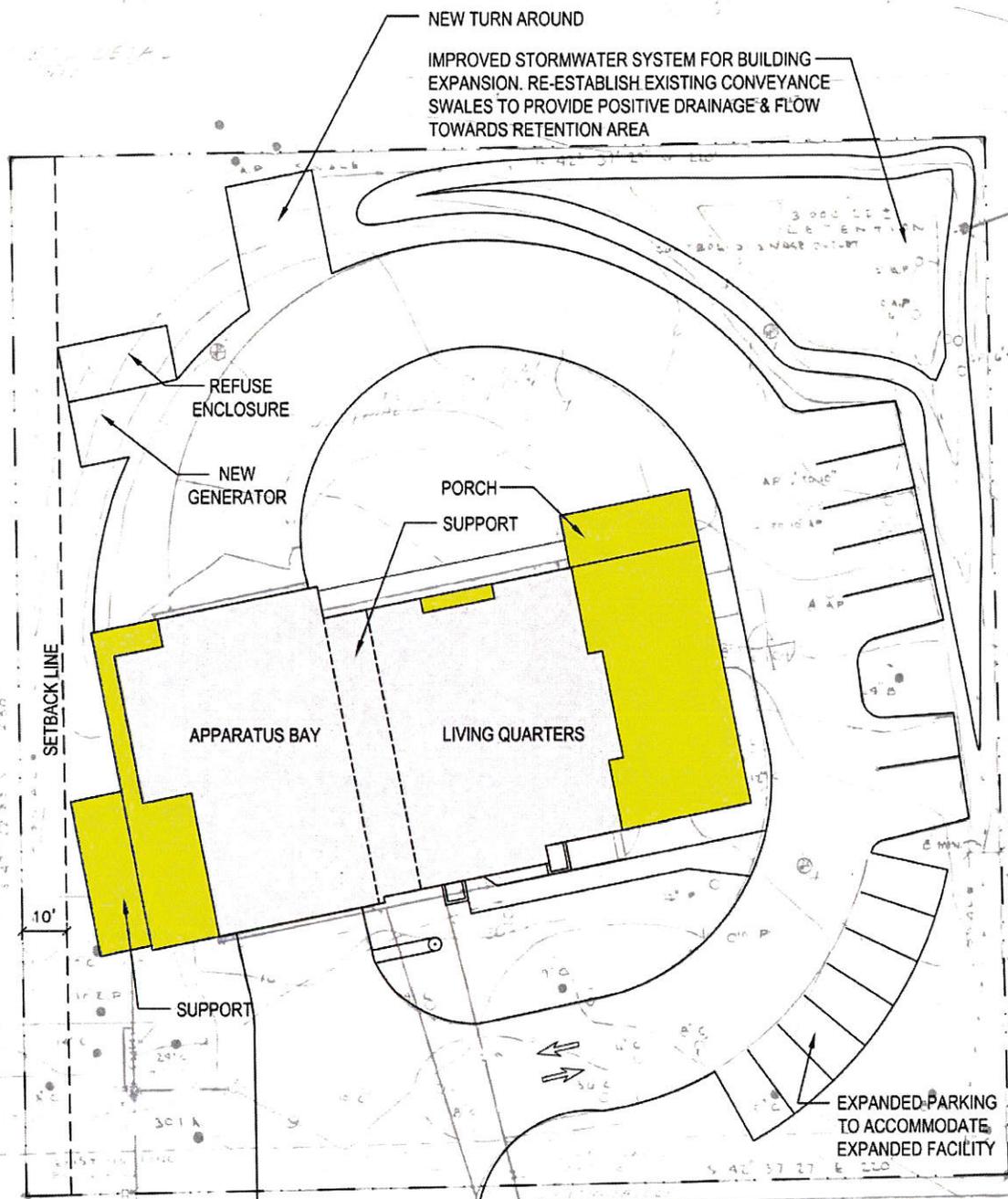
### Structural:

The Architectural plan shows possible future expansion on the north and south sides of the existing building. The structural description of that construction is as follows:

- Foundations: New shallow spread footings with most footings being 2' wide x 1' thick with (3) #5 continuous. The floor slab in the south addition (low roof) will be 4" thick with 6x6-w1.4xW1.4 WWF. The floor slab in the north addition (high roof) will be 6" thick with 6x6-w2.9xW2.9 WWF.
- Perimeter Walls: New perimeter walls will be 8" reinforced masonry with #5 at 48" on center at the low roof south addition and 12" block with (2) #5 at 32" on center at the high roof north addition.
- Roof: The new roof will be pre-engineered wood trusses at 2' on center with tie-down straps to the masonry walls. At the interface between the existing truck bay and the new truck bay there will be (3) steel columns supporting a 3-ply LVL wood beam which will support the existing & new wood trusses. The three columns will have new footings for gravity load support and to resist the uplift. New wood trusses & new roof overbuild (on top of the existing trusses) will frame the new high roof.

### Other considerations:

- The expansion and renovation will require the fire station operations to be relocated during the construction. The Town of Longboat Key may want to include a budget for temporary relocation and operation from a remote facility which could last for 12 months +/-.
- The expansion to the north is within 10'-0" of the north property line. The side yard setback is not known but maybe as much as 20'-0" (based on information found on Sheet C-2 of the original set of construction documents). If the side yard setback is greater than 10'-0", a setback variance will be required form the Town of Longboat Key.
- The ground floor elevation in Option A varies between the Apparatus Bays, original living areas and expanded living areas. These area are transverses with the inclusion of handicap accessible ramps. This is not an ideal situation and would be avoided with new construction.



Option 1A - 3 Bay Renovation/Expansion

Total = 10,100 sf



GULF OF MEXICO DRIVE



**LONGBOAT KEY SOUTH FIRE STATION**  
Option 1A - 3 Bay Renovation/Expansion

October 12, 2015  
**SCHEMATIC BUDGET**

						Gross Building Area	10100
CSI CODE	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL	DIVISION TOTAL	COST PSF
1	GENERAL REQUIREMENTS					152,500	15.10
	General Conditions	12	mo	11000	132000		
	Permit Allowance	1	ls	17000	17000		
	Material/Compaction Testing	1	ls	3500	3500		
	Temporary Trailers for living quarters		NIC				
2	SITE WORK					158,375	15.68
	Prep New Building Pad/Import Fill	275	cy	35	9625		
	Silt Fence/Erosion Control	1	ls	1500	1500		
	Clear & Grubb Site	7000	sf	0.5	3500		
	Rough Grading	7000	sf	0.75	5250		
	Final Grading	7000	sf	1	7000		
	New Sidewalks/Wash Pad	1	ls	6000	6000		
	Add Site Signage/Striping	1	ls	2000	2000		
	New dumpster enclosure/slab	1	ls	7500	7500		
	Retaining Wall	1	ls	7000	7000		
	Asphalt/Base for new parking spaces/Drive	240	sy	100	24000		
	Concrete Apron for apparatus bay	3000	sf	9	27000		
	Utility relocations/Modifications - Allowance	1	ls	8000	8000		
	Landscape/Irrigation - Allowance	1	ls	15000	15000		
	Selective Demolition:	1	ls	35000	35000		
3	CONCRETE					123,070	12.19
	#5 rebar added @ 48" o/c - drilled & epoxied	112	ea	300	33600		
	Concrete Fill - 3000 psi - pumped	20	cy	150	3000		
	Concrete Footings @ 12" CMU	18	cy	400	7200		
	Concrete Footings @ 8" CMU	20	cy	350	7000		
	Concrete Slab-on-grade (Non-Apparatus Areas)	3770	sf	5	18850		
	Concrete Slab-on-grade (Apparatus Bay)	1680	sf	9	15120		
	Concrete Beams	40	cy	750	30000		
	Concrete Ramps	172	sf	25	4300		
	Concrete Patching @ demo trenches	1	ls	4000	4000		
4	MASONRY					69,738	6.90
	Masonry (8")	3052	blk	9	27468		
	Masonry (12")	2818	blk	15	42270		
5	STEEL & MISC. METALS					77,220	7.65
	Grab Rails @ Ramps	1	ls	4000	4000		
	Screen Porch Complete	344	sf	30	10320		
	Metal Roof Trusses	3700	sf	17	62900		
6	WOOD & PLASTIC					127,250	12.60
	Rough Carpentry Materials	3700	sf	4	14800		
	Rough Carpentry - Labor	3700	sf	3	11100		
	Existing Carpentry Items:						
	2x4 roof bracing @ 16" o/c	1	ls	6500	6500		
	Additional truss straps	1	ls	3850	3850		
	Wood Shearwall (2x4)	300	sf	25	7500		
	install 2x6 bracing @ Gables	1	ls	3500	3500		
	Cabinetry Complete	1	ls	80000	80000		
7	THERMAL & MOISTURE					144,765	14.33
	Existing Roofing Repairs - Allowance	1	ls	7500	7500		
	Roofing - match existing	5550	sf	19	105450		
	Icynene Insulation	15907.5	sf	2	31815		
8	DOORS/FRAMES/WINDOWS/HARDWARE					133,320	13.20
	New Windows/Storefront - impact	950	sf	65	61750		
	Interior Storefront	48	sf	40	1920		
	New HM Doors & Frames	19	ea	1350	25650		
	New HM Doors & Frames - exterior/apparatus support	11	ea	2000	22000		
	Apparatus Bay Doors	2	ea	11000	22000		
9	FINISHES					339,975	33.66
	Drywall, insulation & furring	441	lf	40	17640		
	Drywall, insulation & metal framing	482	lf	85	40970		
	Drywall Ceilings, & framing	2600	sf	12	31200		
	Acoustical Ceilings	4850	sf	3	14550		
	Flooring	6300	sf	4	25200		
	Ceramic Tile	10100	sf	1.4	14140		
	Sealed Concrete Floors	3800	sf	1	3800		
	Painting	10100	gsf	1.75	17675		
	EIFS - New and patching	4370	sf	40	174800		

10	SPECIAL TIES					18,040	1.79
	Toilet Accessories	5	ls	1100	5500		
	Fire Extinguishers & Cabinets	1	ls	3000	3000		
	Signage	31	ea	140	4340		
	Marker Boards/Tack Boards	1	ls	1200	1200		
	Corer Guards	1	ls	4000	4000		
11	EQUIPMENT					3,000	0.30
	Projection Screens/Projector Mounts	1	ls	3000	3000		
	Appliances - By Owner						
	Bunk Gear & Lockers - By Owner				0		
	Washing Equipment - By Owner				0		
12	FURNISHINGS					3,850	0.38
	Window Treatments	1	ls	3850	3850		
	FF&E - By Owner				0		
13	SPECIAL CONSTRUCTION					0	
14	ELEVATORS					0	
15	MECHANICAL					414,100	41.00
	Fire Sprinklers	10100	gsf	4	40400		
	Plumbing	10100	gsf	17	171700		
	New HVAC Complete	10100	gsf	20	202000		
16	ELECTRICAL					452,500	44.80
	New Generator & Enclosure	1	ls	200000	200000		
	New Electrical Complete (service is existing)	10100	gsf	25	252500		
17	MISC.					192,844	19.09
	Schematic Estimate Contingency - 8%			0.08	192844		
	SUBTOTAL					2,410,547	238.67
	GL Insurance				0.0095	25,087	
	Builder's Risk Insurance					12,615	
	CM Fee				0.0650	161,172	
	SUBTOTAL					2,609,420	
	Performance & Payment Bond				0.01200	31,313	
					<b>TOTAL</b>	<b>2,640,733</b>	<b>261.46</b>

## Option 2 - New single story Fire Station

Option 2 includes a new 10,400 square foot single story (drive-through) fire station to be located on the same site as the original fire station. The existing fire station would be demolished to make way for the new construction.

### **Building:**

- The new fire station construction is assumed to be masonry bearing walls with pre-engineered metal trusses.
- The base floor elevation (BFE) will be at a minimum elevation of 12.00 (11.00 +1.00 in accordance with the Longboat Key Code of Ordinances). The Apparatus Bays can remain at elevation 11.00 if desired.
- A new generator will be provided to services the new facility. The new generator will be located in a new remote enclosure.
- The new building will be a hurricane hardened building designed to a maximum wind speed of 160 mph for an essential facility. The building will be designed and constructed in accordance with the 2014 Florida Building Code and NFPA 101- Life Safety Code (2015).

### **Site:**

- The site plan includes an additional curb-cut to the south of apparatus Bays for ingress/egress. Emergency dispatch of apparatus will remain from the existing curb-cut. The new layout avoids potential conflict with dispatching emergency vehicles and other vehicles entering the site.
- Staff and visitor parking is located to the south and east of the proposed fire station. The new layout easily accommodates (17) parking spots.
- Site improvements also include a new dumpster enclosure and new exterior generator enclosure. A rear turn-around provide the required access for a garbage truck.
- The existing stormwater system will be enlarged to accommodate an increase in impervious area. Conveyance swales will provide positive drainage/flow towards the dry retention area(s).
- Site retaining walls may be required as the new building will be a minimum of 1'-0" higher than the current fire station.

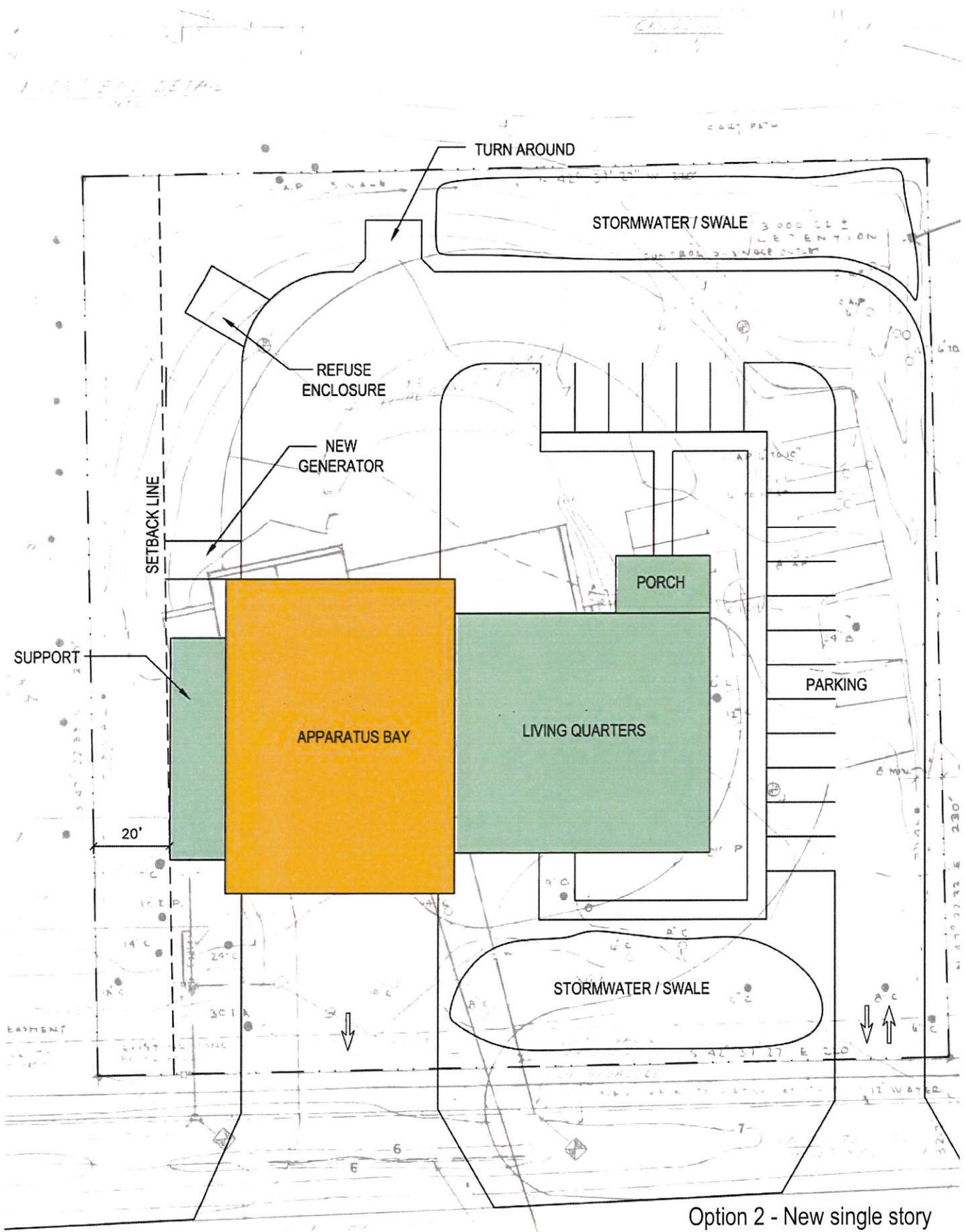
### **Structural:**

The new one story building would be constructed as follows

- Foundations: Shallow spread footings with most footings being 2' wide x 1' thick with (3) #5 continuous. The floor slab in the low roof area will be 4" with 6x6-W1.4xW1.4 WWF. The floor slab in the high roof area will be 6" thick with 6x6-w2.9xW2.9 WWF.
- Perimeter Walls: Perimeter walls will be 8" reinforced masonry with #5 at 48" on center at the low roof area and 12" block with (2) #5 at 32" on center at the high roof area.
- Roof: The new roof will be pre-engineered wood trusses at 2' on center with tie-down straps to the masonry walls.

### **Other considerations:**

- The demolition of the existing fire station and construction of the new fire station will require the fire station operations to be temporarily relocated. The Town of Longboat Key may want to include a budget for temporary relocation and operation from a remote facility which could last for 12 months +/-.



Option 2 - New single story  
 Fire Station  
 Total = 10,400 sf

**LONGBOAT KEY SOUTH FIRE STATION**

Option 2 - New single story Fire Station

October 12, 2015

**CONCEPTUAL BUDGET**

<i>Code</i>	<i>Description</i>	<i>10/12/2015 Conceptual Estimate</i>	<i>10,400 Gross S/F Costs</i>	<i>%</i>
01000	GENERAL CONDITIONS	132,186	12.71	4.06%
02100	DEMOLITION	50,000	4.81	1.53%
02200	EARTHWORK ALLOWANCE	68,166	6.55	2.09%
02100	ASPHALT PAVING & CURBS	94,389	9.08	2.90%
02110	PARKING BUMPERS & SIGNS	7,265	0.70	0.22%
02150	SITE UTILITIES	75,779	7.29	2.33%
02141	DEWATERING ALLOWANCE	10,000	0.96	0.31%
02281	SOIL TREATMENT	832	0.08	0.03%
02300	LANDSCAPE / IRRIGATION ALLOWANCE	92,000	8.85	2.82%
03000	CONCRETE	254,537	24.47	7.81%
04200	MASONRY	237,349	22.82	7.29%
05500	MISCELLANEOUS METALS	142,738	13.72	4.38%
06100	ROUGH CARPENTRY	63,876	6.14	1.96%
07200	INSULATION	30,545	2.94	0.94%
07500	ROOFING	203,280	19.55	6.24%
07910	CAULKING	7,800	0.75	0.24%
08100	DOORS, FRAMES, HARDWARE & INSTALLATION	50,715	4.88	1.56%
08312	WINDOWS & STOREFRONT	62,400	6.00	1.92%
08312	OVERHEAD DOORS	65,408	6.29	2.01%
09200	STUCCO	18,500	1.78	0.57%
09202	DRYWALL	80,702	7.76	2.48%
09301	CERAMIC TILE	14,570	1.40	0.45%
09421	SOLID SURFACE WINDOW SILLS	3,850	0.37	0.12%
09680	FLOORING	41,600	4.00	1.28%
09900	PAINTING	41,368	3.98	1.27%
10100	ACOUSTICAL CEILINGS	31,932	3.07	0.98%
10155	SHOWER DOORS & ACCESSORIES	10,500	1.01	0.32%
10200	LOUVERS & GRILLES	6,500	0.63	0.20%
10400	CODE SIGNAGE ALLOWANCE	3,850	0.37	0.12%
10520	FIRE EXTINGUISHERS & CABINETS	1,500	0.14	0.05%
10675	CLOSET SHELVING	3,500	0.34	0.11%
10800	TOILET ACCESSORIES	6,000	0.58	0.18%
11150	GEAR RACKS/LOCKERS BY OWNER	0	0.00	0.00%
11174	WASHING EQUIPMENT BY OWNER	0	0.00	0.00%
11450	APPLIANCES - BY OWNER	0	0.00	0.00%
11451	BIKE RACKS/OUTDOOR FURNITURE - ALLOWANCE	8,000	0.77	0.25%
12324	CABINETS	73,800	7.10	2.27%
12500	WINDOW TREATMENTS	3,500	0.34	0.11%
15050	H.V.A.C.	179,068	17.22	5.50%
15400	PLUMBING	159,120	15.30	4.88%
15500	FIRE SPRINKLERS	18,528	1.78	0.57%
16000	ELECTRICAL (INCLUDES GENERATOR/ENCLOSURE)	451,680	43.43	13.87%
	<b>SUB TOTAL:</b>	<b>2,807,332</b>	<b>269.94</b>	<b>86.18%</b>
	INSURANCE			
	GENERAL LIABILITY INSURANCE	28,670	2.76	0.88%
	BUILDERS RISK INCL. DEDUCTIBLES	15,637	1.50	0.48%
	PERMIT ALLOWANCE	25,000	2.40	0.77%
	IMPACT FEES	By Owner		
	PAYMENT & PERFORMANCE BOND	32,577	3.13	1.00%
	CONCEPTUAL ESTIMATE CONTINGENCY (5%)	140,367	13.50	4.31%
	CM FEE 6.5%	208,099	20.01	6.39%
	<b>TOTAL CONSTRUCTION BUDGET:</b>	<b>3,257,681</b>	<b>313.24</b>	<b>100.00%</b>
	ESCALATION CONTINGENCY	By Owner		
	OWNER CONTINGENCY	By Owner		

### Option 3 - New two-story Fire Station

Option 3 includes a new 10,900 square foot two-story (drive-through) fire station to be located on the same site as the original fire station. The existing fire station would be demolished to make way for the new construction.

#### Building:

- The new fire station construction is assumed to be masonry bearing walls with steel floor trusses, steel decking and concrete topping. Roof framing can be pre-engineered metal trusses or steel trusses.
- The increase of 500 square foot for the two-story option is attributed with the need for egress stairs and an elevator associated with a two-story scheme.
- The base floor elevation (BFE) at the ground level will be at a minimum elevation of 12.00 (11.00 +1.00 in accordance with the Longboat Key Code of Ordinances). The Apparatus Bays can remain at elevation 11.00 if desired.
- A new generator will be provided to services the new facility. The new generator will be located in a new remote enclosure.
- The new building will be a hurricane hardened building designed to a maximum wind speed of 160 mph for an essential facility. The building will be designed and constructed in accordance with the 2014 Florida Building Code and NFPA 101- Life Safety Code (2015).

#### Site:

- The site plan includes an additional curb-cut to the south of apparatus Bays for ingress/egress. Emergency dispatch of apparatus will remain from the existing curb-cut. The new layout avoids potential conflict with dispatching emergency vehicles and other vehicles entering the site.
- Staff and visitor parking is located to the south and east of the proposed fire station. The new layout easily accommodates (17) parking spots.
- Site improvements also include a new dumpster enclosure and new exterior generator enclosure. A rear turn-around provide the required access for a garbage truck.
- The existing stormwater system will be enlarged to accommodate an increase in impervious area. Conveyance swales will provide positive drainage/flow towards the dry retention area(s).
- Site retaining walls may be required as the new building will be a minimum of 1'-0" higher than the current fire station.

#### Structural:

The new two story building would be constructed as follows

- Foundations: Shallow spread footings with most footings being 2' wide x 1' thick with (3) #5 continuous. The floor slab in the low roof area will be 4" with 6x6-W1.4xW1.4 WWF. The floor slab in the high roof area will be 6" thick with 6x6-w2.9xW2.9 WWF.
- Perimeter Walls: Perimeter walls will be 8" reinforced masonry with #5 at 48" on center at the low roof area (lower level & 2nd level) and 12" block with (2) #5 at 32" on center at the high roof area. The wall supporting high roof & low roof will be 8" reinforced masonry with #5 at 48" on center. The 12" block walls will have control joints at 25' center and no more than 15' from corners. Between the high bay truck doors there will be poured concrete columns with precast block lintels.
- The second floor framing will be with a 3" concrete slab with 6x6W2.9 x W2.9 WWF on 1" x 24 gage form deck on steel open web steel joists at 3'-6" on center. The joists will be supported by masonry bearing walls.
- Roof: The new roof will be pre-engineered wood trusses at 2' on center with tie-down straps to the masonry walls.
- Interior stairs will be steel framed with concrete pan treads and landings.

#### Other considerations:

- The demolition of the existing fire station and construction of the new fire station will require the fire station operations to be temporarily relocated. The Town of Longboat Key may want to include a budget for temporary relocation and operation from a remote facility which could last for 12 months +/-.



**LONGBOAT KEY SOUTH FIRE STATION**

Option 3 - New two-story Fire Station

October 12, 2015

**CONCEPTUAL BUDGET**

<i>Code</i>	<i>Description</i>	<i>10/12/2015 Conceptual Estimate</i>	<i>10,850 Gross S/F Costs</i>	<i>%</i>
01000	GENERAL CONDITIONS	138,539	12.77	3.92%
02100	DEMOLITION	50,000	4.61	1.42%
02200	EARTHWORK ALLOWANCE	60,314	5.56	1.71%
02100	ASPHALT PAVING & CURBS	108,547	10.00	3.07%
02110	PARKING BUMPERS & SIGNS	8,173	0.75	0.23%
02150	SITE UTILITIES	75,779	6.98	2.15%
02141	DEWATERING ALLOWANCE	10,000	0.92	0.28%
02281	SOIL TREATMENT	592	0.05	0.02%
02300	LANDSCAPE / IRRIGATION ALLOWANCE	105,800	9.75	3.00%
03000	CONCRETE	358,239	33.02	10.14%
04200	MASONRY	192,070	17.70	5.44%
05500	MISCELLANEOUS METALS	143,275	13.21	4.06%
06100	ROUGH CARPENTRY	71,048	6.55	2.01%
07200	INSULATION	34,781	3.21	0.98%
07500	ROOFING	141,484	13.04	4.01%
07910	CAULKING	8,840	0.81	0.25%
08100	DOORS, FRAMES, HARDWARE & INSTALLATION	53,192	4.90	1.51%
08312	WINDOWS & STOREFRONT	65,400	6.03	1.85%
08312	OVERHEAD DOORS	65,408	6.03	1.85%
09200	STUCCO	43,600	4.02	1.23%
09202	DRYWALL	84,584	7.80	2.40%
09301	CERAMIC TILE	14,570	1.34	0.41%
09421	SOLID SURFACE WINDOW SILLS	3,850	0.35	0.11%
09680	CARPET	18,094	1.67	0.51%
09900	PAINTING	43,382	4.00	1.23%
10100	ACOUSTICAL CEILING / WALL PANELS	33,463	3.08	0.95%
10155	SHOWER DOORS	10,500	0.97	0.30%
10200	LOUVERS & GRILLES	6,867	0.63	0.19%
10400	CODE SIGNAGE ALLOWANCE	3,850	0.35	0.11%
10520	FIRE EXTINGUISHERS & CABINETS	1,850	0.17	0.05%
10675	CLOSET SHELVING	3,500	0.32	0.10%
10800	TOILET ACCESSORIES	6,000	0.55	0.17%
11150	GEAR RACKS/LOCKERS BY OWNER	0	0.00	0.00%
11174	WASHING EQUIPMENT BY OWNER	0	0.00	0.00%
11450	APPLIANCES - BY OWNER	0	0.00	0.00%
11451	BIKE RACKS/OUTDOOR FURNITURE - ALLOWANCE	8,000	0.74	0.23%
12324	CABINETS	77,390	7.13	2.19%
12500	WINDOW TREATMENTS	3,708	0.34	0.10%
14200	ELEVATORS	80,910	7.46	2.29%
15050	H.V.A.C.	205,309	18.92	5.81%
15400	PLUMBING	173,358	15.98	4.91%
15500	FIRE SPRINKLERS	44,058	4.06	1.25%
16000	ELECTRICAL (INCLUDES GENERATOR/ENCLOSURE)	484,584	44.66	13.72%
	<b>SUB TOTAL:</b>	<b>3,042,906</b>	<b>280.45</b>	<b>86.17%</b>
	INSURANCE			
	GENERAL LIABILITY INSURANCE	31,076	2.86	0.88%
	BUILDERS RISK INCL. DEDUCTIBLES	16,951	1.56	0.48%
	PERMIT ALLOWANCE	27,500	2.53	0.78%
	IMPACT FEES	By Owner		
	PAYMENT & PERFORMANCE BOND	35,315	3.25	1.00%
	CONCEPTUAL ESTIMATE CONTINGENCY (5%)	152,145	14.02	4.31%
	CM FEE 6.5%	225,561	20.79	6.39%
	<b>TOTAL CONSTRUCTION BUDGET:</b>	<b>3,531,453</b>	<b>325.48</b>	<b>100.00%</b>
	ESCALATION CONTINGENCY	By Owner		
	OWNER CONTINGENCY	By Owner		



**End of Agenda Item**