

MEMO Date: 29 October 2018
 To: Rob Gilliland
 From: L. William Chapin, II, FAIA
 Subject: Tensile Membrane vs. Metal

While putting together my memo on tensile membrane, I was reminded that you mentioned in Commission recently that you had been told by someone that an economical metal frame building would be a cost-effective building type for the shelter. So, on the subject of non-communication of vital information- did D.B. staff ever show you the two metal versions that Marbut and I produced over three years ago? They were as inexpensive a structure type as there is (think Walmart, Publix, etc.). They were configured into pavilions connected with cheap covered exterior walkways and they appropriately provided the relative-sized pavilions to house the four populations; high risk, medium risk, recovering men, and women, in nationally confirmed ratios. They also included well-analyzed support spaces - kitchen, Halifax Health space, case worker offices, etc. The program was confirmed by my visits to the Pinellas Safe Harbor Shelter and extensive consultation with the City's homeless expert, Dr. Marbut. The designs shown were quite detailed, were used by Mr. Chisholm in staff meetings and were costed out as shown.

I was selected for the project by Chisholm following a formal RFP based on these designs. Before we could go to contract, Chisholm asked to see what a 2-pavilion solution would look like for money-saving purposes, which I am also attaching. I redesigned the two remaining pavilions so that they could also be segmented into four secure areas for security reasons. The pavilions were designed to accept photovoltaic collectors on their sloped roofs and a venturi-based circulation system was part of the design. In every instance, expansion was anticipated and planned for.

When economy remained a concern, I came forth with the tensile idea. For reasons that were never explained to me, Chisholm was unwilling to listen to the supporting information I just supplied you yesterday, and I was thereafter not included in his staff meetings regarding the shelter.

I continue to advocate tensile membrane, but these metal alternatives would still be vastly cheaper than the one currently proposed by your city, plus they hold more people efficiently. Even more importantly, they were designed to provide the critical security ingredients, and metal buildings can be erected much more swiftly than tilt-wall or masonry construction.

Again, any questions, feel free to call me or Dr. Marbut: (210) 260-9696 or email MarbutR@aol.com



THE CITY OF DAYTONA BEACH
OFFICE OF THE PURCHASING AGENT

Post Office Box 2451
Daytona Beach, Florida 32115-2451

Phone (386) 671-8080
Fax (386) 671-8085

January 28, 2016

Via Email 1/28/16: lwchapin@earthlink.net

Mr. L. William Chapin, II, FAIA
Wm Chapin Architect
315 N, Atlantic Ave.
Daytona Beach, FL 32118

Re: **RFP 0216-0250**
Volusia Safe Harbor Professional Design Services

Dear Mr. Chapin:

It is my pleasure to inform you that your firm was selected by the City Manager for negotiation of the referenced contract.

Brent Cohen, Project Manager, will be contacting you to commence contract negotiations.

Thank you for your submittal for this project. Please don't hesitate to contact me at 386-671-8082 if you have any questions or concerns.

Sincerely,

Joanne Flick, CPPO, CPPB
Purchasing Agent

C: Gary Shimum, Deputy City Manager/Administration
Patricia Bliss, Chief Financial Officer
David Waller, Acting Public Works Director
Frank VanPelt, Technical Services Director
Jim Nelson, City Engineer
Brent Cohen, Project Manager
Ben Gross, Assistant City Attorney

17 April 2016

PROGRAM:

Erect a **full-service homeless recovery facility** at the foot of Red John Road, across the street from the Stewart-Marchman ACT crisis center, and 1/4 mile from the Volusia County jail. The facility will be close to the center of the county.

The facility will consist of four residential pavilions along with staff and service components. The pavilions will be constructed of steel frame mounted on block perimeter walls, with the roof pitched 20 degrees toward the south. The pavilions will have high clerestory windows with remote motorized opening hardware on the north walls and operable windows at eye level on the south walls, so that the windows can be opened at appropriate times to enhance century effect air movement through the pavilions, which will be aided by large ceiling fans.

Three staff offices per pavilions will have both direct access into the pavilions and to the outside. The pavilions will each have lavatory and bathing components, as well as a lounge at one end of the open space. A highly efficient straight-line HVAC system will maintain a comfort level within the pavilions of 60°-80°.

The pavilions are configured to be expandable lengthwise, and a second band of pavilions could be added northward if additional capacity were to be needed in the future. The slabs for these two more pavilions should be constructed as part of phase 1, as they would be useful for other outdoor activities as shown

Staff and service spaces are provided and connected to the pavilions by covered walkways so as to avoid costly internal corridors, similar to the strategy used to connect "portables" in schools.

The 28,000 sq. ft. of sloping roofs will provide the ability to install sufficient photovoltaic collectors to power the needs of the entire facility.

BUILDING AREAS AND COSTS:

Pavilion 1 - 6,250 sq. ft.	
Pavilion 2 - 6,200 sq. ft.	
Pavilion 3 - 6,740 sq. ft.	
Pavilion 4 - 4,650 sq. ft.	
Total pavilions - 23,840 sq. ft. @ \$85.00/ft =	\$2,026,400
Kitchen/Storage - 2,580 sq. ft. @ \$110.00/ft =	\$ 283,000
Reception/triage/support - 6,380 sq. ft. @ 120.00/ft =	\$ 701,800
Building total: 32,800 sq. ft. =	\$3,011,200

PAD AREA

Pad area = 53,000 sq. ft (1.23 acres)	
Mitigation @ \$100,000/acre.	
fill @ \$10/sq.yd placed	
\$150,000 site improvements (sewer, water, storm water, paving)	
Total pad placement complete =	\$ 475,000
SUB-TOTAL	\$3,486,200
Fees, contingencies (10%) =	\$ 349,000
PROJECT TOTAL =	\$3,835,200



PROGRAM:

Erect a **full-service homeless recovery facility** at the foot of Red John Road, across the street from the Stewart-Marchman ACT crisis center, and 1/4 mile from the Volusia County jail. The facility will be close to the center of the county.

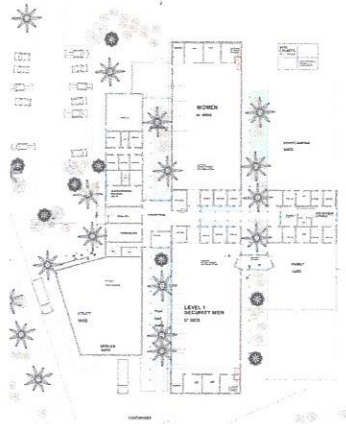
The facility will initially consist of two residential pavilions along with staff and service components. The pavilions will be constructed of steel frame mounted on block perimeter walls, with the roof pitched 20 degrees toward the south. The pavilions will have high clerestory windows with remote motorized opening hardware on the north walls and operable windows at eye level on the south walls, so that the windows can be opened at appropriate times to enhance century effect air movement through the pavilions, which will be aided by large ceiling fans.

Three staff offices per pavilion will have both direct access into the pavilions and to the outside. The pavilions will each have lavatory and bathing components, as well as a lounge at one end of the open space. A highly efficient straight-line HVAC system will maintain a comfort level within the pavilions of 60°-80°.

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The 28,000 sq. ft. of sloping roofs will provide the ability to install sufficient photovoltaic collectors to power the needs of the entire facility.



BUILDING AREAS AND COSTS:

Pavilion 1 - 6, 250 sq. ft.
Pavilion 2 - 6,200 sq. ft.

Total pavilions - 12,450 sq. ft. @ \$85.00/ft = \$1,058,250

Kitchen/Storage - 2,580 sq. ft. @ \$110.00/ft = \$ 283,000

Reception/triage/support - 6,380 sq. ft. @ 120.00/ft = \$ 701,800

Building total: 32,800 sq. ft. = \$2,043,050

PAD AREA

Pad area = 53,000 sq. ft (1.23 acres)

Mitigation @ \$100,000/acre.

fill @ \$10/sq.yd placed

\$150,000 site improvements (sewer,

water, storm water, paving)

Total pad placement complete = \$ 475,000

SUB-TOTAL \$2,518,050

Fees, contingencies (10%) = \$ 251,800

PROJECT TOTAL = \$2,769,850

ANALYSIS CONTRIBUTORS:

Coleman-Goodemote construction - Harold Goodemote
General building construction

Atlantic Central Industries - Steve Traulsen
Steel frame production and erection

Zev Cohen & Associates - Bobby Ball, CE
Civil engineering

Solar-Fit Energy Management Systems - Bill Gallagher
Solar thermal and photovoltaic systems

LEEPCORE Structural Insulated panels, Inc - John Norquist
Pavilion roof deck system

