



**HEBERT  
CONSTRUCTION  
LLC**

9 GOULD ROAD  
LEWISTON, MAINE  
04240

TEL 207.783.1091  
FAX 207.783.4778

**Commercial  
Institutional  
Residential**

**General Contractors  
Construction Managers**

May 11, 2004

Michael J. Nugent, Inspection Services Manager  
City of Portland  
229 Congress Street  
Portland, ME 04101

RE: *Maine Medical Center - Display Kiosk Conversion*

Dear Michael:

Hebert Construction, together with Maine Medical Center, Sebago Technical and Becker Engineering have been working to develop a roofing assembly that will satisfy both the needs of Maine Medical and the requirements of the city of Portland. Together we have come up with a system that will accomplish our goals.

The information provided in this letter and all attachments are to show that new loads are equal to or greater than the existing loads on the roof. The system has also been designed to comply with the loading requirements of the chloride roofing system, attachment "B". Becker Engineering has performed the calculations for the existing assembly and as they existed and proposed and these calculations are on the following page as attachment "A".

As you will see in the letter from G&E Roofing, the Clark's System system is designed to have a load of 16 lbs per square foot to weigh down the assembly. The calculations completed from Becker Engineering shows that the existing loading at the decked areas was only 9 1/2 lbs/sf and the new loading at the decked areas will be 9 1/2 lbs/sf. With that in mind Hebert Construction has come up with the following solutions to provide an additional half to one pound of weight to the decked areas to provide adequate coverage if deemed necessary.

- Add 1" rigid insulation between deck & wiring - 1 1/4 lbs/sf
- Use existing ballast under deck as needed to make up balance
- Dig and install 2 mil poly and ball between the framing members
- Bolt some sections together to provide gradual square foot coverage

Additional options will be discussed once all the factors are detailed and analyzed in order to provide the hospital with the most useful, cost saving system. Eshern Construction would like to extend our thanks for your cooperation with this matter and allowing us to perform the additional work and re-spraying of the roof panel to having all aspects of construction worked through completely. I am available sometime to discuss this subject and you can be reached at 781-283-2291.

Respectfully,

  
Timothy A. Esher

Cc: Michael P. Lee, Maine Medical Center  
Well Community, Sebago Terrace

ATTACHMENT "A"

# BECKER

STRUCTURAL ENGINEERS, INC.

75 Van Ness St. Boston, MA 02111-4530  
Tel: 617-552-8888 Fax: 617-552-1922

Project: MAINE MEDICAL CENTER Roof Repair  
Vol. 1194 Sheet 3 of 3  
Calculation By: TPL Date: 1/24/04  
Checked By: \_\_\_\_\_ Date: \_\_\_\_\_

REMOVE EXISTING ROOF FOR 1.00AS

2 1/2" STONE BALLAST

23 #/sq<sup>2</sup>

INSULATION

1/2 #/sq<sup>2</sup>

MEMBRANE # FBT

1/2 #/sq<sup>2</sup>

1" RIGID INSULATION

1 #/sq<sup>2</sup>

2.7 #/sq<sup>2</sup>

AT EXISTING DECKED AREAS, ROOF IS UNBALLASTED

EXISTING DECKING

1 #/sq<sup>2</sup>

MEMBRANE # FBT

1/2 #/sq<sup>2</sup>

1" RIGID INSULATION

1 #/sq<sup>2</sup>

1 1/2 #/sq<sup>2</sup>

# BECKER

Structural Engineers, Inc.

78 York Street, Boston, MA 02117-2480  
Tel: 307-878-1888 ■ Fax: 307-878-1888

Project: Main Entrance Canopy Roof Access  
W/F: 04 Store: 013  
Designed By: TFC Date: 17th Nov 2001  
Checked By: \_\_\_\_\_ Date: \_\_\_\_\_

## REVISSED NEW ROOFTOP LOADS

### AT DECKED AREAS (NEW ROOF MEMBRANE)

CONCRETE SLAB

$$5 \#/ft^2$$

(2) 2x1 @ PERIMETER

$$18 \#/ft^2$$

2x4 @ 24" O.C

$$38 \#/ft^2$$

(NEW MEMBRANE)

$$6 \frac{3}{4} \#/ft^2$$

EXIST. ROOF MEMBRANE  
& ROOFING FELT

$$1 \frac{1}{2} \#/ft^2$$

EXIST. 1" RIGID INSULATION

$$1 \#/ft^2$$

$$2 \frac{1}{2} \#/ft^2$$

TOTAL DEAD LOAD ASSUME  
ROOF DECK AT  
DECKED AREAS:

$$4 \frac{1}{4} \#/ft^2$$

# BECKER

STRUCTURAL ENGINEERS P.C.

75 West Street, 20th Fl., NE 40501-5550  
Tel. 404-572-4555 • Fax 404-572-1555

Project: AMC TORCH CENTER Roof (2nd)  
W.O. 134 Sheet 2 of 3  
Calculated By: J. P. C. Date: 19 May 10 2009  
Checked By: \_\_\_\_\_ Date: \_\_\_\_\_

## EXISTING NEW ROOFTOP LOADS

### AT TURNED AREAS

FIELD TUBE SYSTEM 110 #/ft<sup>2</sup>

FELT & 1" RIGID INSULATION 1/2 #/ft<sup>2</sup>

1/2" ROOF BALLAST 1/2 #/ft<sup>2</sup>

(ROOF MEMBRANE) 2 1/2 #/ft<sup>2</sup>

EXIST. ROOF MEMBRANE & ROOFING FELT 1/2 #/ft<sup>2</sup>

EXIST. 1" RIGID INSULATION 1 #/ft<sup>2</sup>

2 1/2 #/ft<sup>2</sup>

TOTAL DEAD LOAD ABOVE ROOF WALK AT TURNED AREAS 2.5 #/ft<sup>2</sup>

Attachment 1.1.2



12875227397 • 4040 S. JESSIE • JEFFERSON, MISSOURI 64131 • (314) 688-8800 • FAX (314) 688-7467

Member Since: 10/1/97  
 Status: Good Standing

### Underwriters Laboratories Approvals Design "C" Loose Laid Protected Roofing System (1)(2)

Membrane Types: .045" or .060" thick Non-Reinforced EPDM Membrane  
 .045" or .060" thick Reinforced EPDM Membrane  
 Sure Tough Reinforced EPDM Membrane

UL Class "A"			
Deck Type	Insulation (1)	Insulation Thickness	Maximum Slope
Non-Combustible and Combustible	Foamular PS4	4" Max.	2°
	Dow Styrofoam Extruded or Pl. Insulite	4" Max.	2°

**Notes:**

- (1) Ballast to be nominal 1-1/2" diameter river washed stone at a minimum 10 pounds per square foot. Individual granite pavers (minimum 15 pounds per square foot) or approved lightweight interlocking pavers (maximum 10 pounds per square foot) may also be used. 1/8" maximum spacing between pavers is permitted.
- (2) Carlsol HP Protective Mat may be used between the ballast and the extruded polystyrene insulation.
- (3) Insulation products listed are for use above the EPDM membrane. One layer of any UL classified insulation may be added below the membrane without changing the rating.

# Carlisle SynTec Systems

Carlisle SynTec Systems  
 Division of Carlisle Companies Inc.  
 87 North Main Street  
 Westbrook, ME 04092  
 207-625-2100 Fax 207-625-2100



June 2, 1992

Mr. Norm Elvin  
 C & E Roofing Company, Inc.  
 675 Riverside Drive  
 Augusta, ME 04330

RE: Maine Medical Center  
 Portland, ME

Dear Mr. Elvin:

Our office has reviewed the wood deck area of the referenced project which incorporates Carlisle's Design "C" Roofing System. As verification, the patio area (as well as the typical roof areas) will be eligible for a 15 Golden Seal™ Total Systems Warranty upon completion of the project in accordance with our current Specifications and Details (including requirements outlined in Carlisle's Specification Bulletin 4-92) and upon acceptance of the installation after final inspection.

The Design "C" roofing assembly at the wood deck area has been designed to consist of the following components:

- Structural concrete roof deck
- 1" thick Sure-Seal HP Polystyreneurethane (loose laid)
- .045" thick, non re-inforced EPDM membrane (loose laid)
- 2" thick Sure-Seal HP Foamular  
 Sure-Seal HP Protective Mat
- Wood supports (2" x 4") over the HP Mat with the 4" dimension laid flat over the HP Mat.

Please be advised that it is Carlisle's policy to warrant the watertight performance of membrane systems through normal roof conditions, subject to specified limits. In order to clarify the warranty limitations of the Carlisle Golden Seal Total Systems Warranty, it is important to call your attention to the following.

1. Some warranty limitations are negligence, accidents and misuse. Because patio installations may subject the membrane system to an increased probability of these hazards, it is important that the building owner not be left to assume that acts of negligence and misuse are covered by our warranty.
2. At the time of Carlisle's inspection, it will be the responsibility of the building owner to provide access to the membrane roofing system, as required by the Carlisle Technical Representative, to verify the correct installation of applicable details if any additional objects are placed above the concrete pavers.



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Maine Medical Center  
Portland, ME  
June 2, 1991

- 3. On the chance that we may be asked to investigate a warranty claim and make warranty related repairs, the building owner must understand that providing access to the membrane (removing and replacing the wood deck above HP Mat which may limit access) will be his responsibility.
- 4. As a normal condition in our Golden Seal Total Systems Warranty, the owner must understand that if we are asked to investigate a problem which is found to be due to causes other than our roofing system, there will be a charge for that service. The amount will be based upon the price current at that time plus portal-to-portal expenses.
- 5. After issuance, the Carlisle Golden Seal Total Systems Warranty shall be considered null and void if any alterations or repairs are made on or through the roof or objects such as, but not limited to structures, fixtures or utilities are placed upon or attached to the roof without first obtaining written authorization from Carlisle.

It is important that the above items be completely understood as they contribute to a further understanding of the Golden Seal Total Systems Warranty. Carlisle's warranty cannot be issued until a signed statement is received from the building owner which acknowledges the items noted herein. Please have the building owner review the terms of this letter and forward the signed original to our office.

Sincerely,

*Duane G. Schrade*  
Duane G. Schrade  
Senior Design Analyst  
Northeast Region

I have read, understand and agree to the terms of this letter and am authorized by the building owner to agree to its contents.

Accepted: *Alvin Wood Carter*

DCS/bjk

Signed: \_\_\_\_\_

cc: Beacon Sales Company  
Inspection Paperwork  
Project File  
Sat Raymond  
DHF

By: *ALVIN WOOD CARTER*

Title: \_\_\_\_\_

Date: \_\_\_\_\_