

General Description:

- **Location:**
Grand Rapids, Michigan
- **Profile:**
Hospital Campus
- **Project:**
Building Envelope Program - Evaluation & Long-Range Plan

Services Provided:

- Building Envelope Evaluation
- Roof Evaluation
- DMS Implementation
- DMS IT Task Management
- Development of Long-Range Program

Challenge:

- Vast varieties of construction methods & materials
- Short deadline for budget submittal
- Sparse documentation regarding original construction

Solution:

- Used systematic approach to organize and analyze
- Used several crews with organized data acquisition
- Performed additional testing and research

Spectrum Health Blodgett Campus

Spectrum Health, the largest healthcare provider in Southwest Michigan and the largest employer in Grand Rapids, needed an assessment of their Blodgett Campus, the oldest of their nine campuses. With a growing



Overview of the 1954 Building

patient influx, Spectrum Health wanted to develop a maintenance and restoration plan that would revitalize this historical campus. Although Spectrum Health had used different architectural/engineering firms in the past, they wanted a specialist to perform this very specific building envelope assessment. StructureTec was contracted to perform an extensive evaluation of all of the buildings. StructureTec's systematic approach, comprehensive program, and industry expertise were desirable characteristics that Spectrum Health wanted as a part of their program. StructureTec faced several major challenges at the outset of the project. With buildings ranging from 1910's construction through to the 1970's, the

vast differences in construction methods and materials posed the first challenge. StructureTec was also faced with a very short deadline as Spectrum Health required this information for their annual budget submittal. With organization, a

systematic approach, and a detailed program, StructureTec was able to overcome these challenges. An additional challenge arose because of the sparse documentation regarding all the aspects of the original construction. StructureTec conducted additional testing and research to better identify all the as-

pects of these unknown components. All the components on each building were entered into the building envelope management program individually, then evaluated and rated. When this was complete, the program was able to establish a picture of the campus as a whole. More research was then conducted to determine what current construction technology



Overview of the 1976 Building



Web: www.structuretec.com
Email: geninfo@structuretec.com

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The terra cotta balcony was experiencing expansive deterioration with vertical cracking of spindles and spalling of the underside.



The spalling of the terra cotta on the balcony was caused by the rusting of the embedded steel, as well as extensive freeze/thaw cycles.

could be implemented to restore these older buildings. At the completion of this process, StructureTec was able to establish realistic budgets for completing the restoration of the entire campus. StructureTec then conferred with the client to establish priorities and determine their long-term objectives. From these priorities and objectives, StructureTec assembled a detailed, long-range budget plan for restoring the facilities. This information was then submitted by the facilities department as part of their annual budget. In conclusion, Spectrum Health now had a very clear understanding of their Blodgett Campus build-

ing envelope assets, as well as a feasible, accurate, long-range plan on how to restore these facilities and achieve the greatest return on investment. ■



The embedded steel shelf angle is exhibiting rust deterioration indicative of failed coating and a high concentration of moisture.

FEATURES	BENEFITS
Delineates integrity of each building envelope component and of each roof area	Ability to prioritize necessary building envelope restoration and roof replacement
Develops a weatherproofing condition index and a roof condition index	Establishes budgets for future capital projects and ongoing maintenance
Delineates which weatherproofing components and roof areas require restoration/replacement and which require maintenance	Allocates their resources properly for both building envelopes and roofs, maximizing the return on investment
Prioritization which encompasses all weatherproofing components and all roof areas	Provides an inventory of all facility assets to enable accurate forecasting
Presents an organized, structured report containing all acquired information	Supplies a presentation tool which can be better understood by upper management

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(800) 745-7832