

General Description:

- **Location:**
Clarksville, Tennessee
- **Profile:**
Approx. 200,000 sq. ft.
- **Project:**
Roof Evaluation &
StructureScan™ Survey

Services Provided:

- Evaluation
- *StructureScan™* Survey
- Development of Five-Year Long-Range Program
- Guide Specification for Maintenance

Challenge:

- Extensive, intermittent leaks throughout the facility
- Multiple types of roofs with retrofit layers of roofing
- Extensive rooftop equipment

Solution:

- Extensive evaluation performed on entire building envelope
- Used test cuts to determine construction and infrared survey to detect wet insulation
- Documented and illustrated on detailed schematics

Precision Printing & Packaging, Inc.

An Anheuser-Busch Company

Precision Printing & Packaging was experiencing significant leakage conditions. These condi-

these challenges as the evaluation began. In order to find the multiple leaks, an extensive evaluation was performed on the wall panels, building envelope cladding, siding transitions, and wall flashings, as well as the actual roof components and equipment. The multiple types of roof and retrofit areas were investigated thoroughly, and extensive test cuts were taken to determine the total roof construction. The *StructureScan™* Survey showed areas which contained wet insulation in the



Overview of wet insulation markings and field of the roof.

tions were occurring intermittently throughout the entire facility. Their existing plan involved merely chasing and patching the leaks. StructureTec was contracted to perform an evaluation and a *StructureScan™* survey of the roof and develop a strategic program for repair and replacement. There were many challenges involved in the evaluation. First, finding the areas of water ingress was a challenge because the leaks were intermittent throughout the facility. There were also multiple types of roofs, ranging from built-up roofing to single-ply systems. In addition, areas of the roof had been retrofitted with additional systems installed over the original systems. Finally, there were multiple projections and extensive rooftop equipment in the field of the roof which were required for the manufacturing and printing processes. StructureTec analyzed

different layers of roofing. The extensive rooftop equipment and projections were documented and illustrated on detailed schematics. Proper flashings with attention to detail were designed for the equipment and the projections. The evaluation also included information on the condition of the roof membrane, copings, parapets, counterflashings, flashings, perimeters, and drainage systems. A roof condition index rating was given to each roof as a means to objec-



Extensive rooftop equipment is required for the manufacturing process.



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

All rights reserved.



Areas of wet insulation were detected by the infrared *StructureScan™* Survey.



Roof equipment is not properly flashed. Previous caulking repair was unsuccessful.

tively review conditions and help develop priorities. A Strategic Long-Range Roof Management Program was developed, with prioritized areas delineated for maintenance, repair, and replacement. Budgets for all of these aspects were also included. As a supplement to the program, a guide specification for proper maintenance and repair was assembled to ensure that all the maintenance work would be performed properly. In conclusion, Precision Printing and Packaging was able to analyze the cause of their problems, which enabled them to prioritize,



Overview of extensive ductwork resting on the roof surface.

FEATURES	BENEFITS
Delineated integrity of each specific roof area	Able to prioritize roof replacement
Delineated which roofs need to be replaced and which need to be maintained	Able to allocate resources properly, maximizing the return on investment
Developed a roof condition index rating	Established budgets for future work
Determined the exact extent of wet, saturated insulation	Saved dollars by eliminating unnecessary roof replacement
High level of accuracy as opposed to guesswork	Eliminate leakage conditions with precise repairs
Scientific approach to problem solving	Addressed cause of problem, not just effect
Ascertained the extent of substrata degradation where maintenance is not viable	Properly invest dollars in areas that absolutely required replacement
Total building evaluation and review	Able to develop a long-range strategic plan

budget, and establish their roofing strategy, ensuring the greatest return on investment. ■