

*WELLESLEY FACILITIES MAINTENANCE
DEPARTMENT (FMD)*



***Police Station Roofing &
Envelope Study***

Joint Presentation

Board of Selectmen, PBC & Advisory

October 5, 2015

Presenters

- *Facilities Maintenance*
 - *Joseph McDonough, PE*
- *Wellesley Police*
 - *Deputy Chief Jack Pilecki*
 - *Lt. Marie Cleary*
- *Simpson, Gumpertz & Heger (SGH)*
 - *Scott Tomlinson, PE (Project Manager)*
 - *Niklas Vigener, PE (Principal)*

Presentation Overview

- *Project Background*
 - *Joe McDonough*
- *Impacts to the WPD*
 - *Deputy Chief Pilecki & Lt. Cleary*
- *Study Summary*
 - *Scott Tomlinson*
- *Next Steps*
 - *Joe McDonough*

PROJECT BACKGROUND

Project Background

- *20-Year Old Building*
- *History of Roof Leaks & Window Problems*
- *Winter 2014-2015 Worst So Far*
 - *\$15,000 in repairs in FY15*
 - *Significant impact to WPD*
 - *Attempted Repairs have failed*
 - *Patches, cables, temp adjustments*
- *\$50,000 FY16 Capital Project - Study*

Project Background (Cont.)

- *Study was “Fast Tracked”*
 - *Limit exposure to one more winter*
- *RFP/Designer Selection – April to June*
- *Study began on July 1st*
- *Report submitted October 2nd*
- *Schedule Driver:*
 - *Provide boards (BOS, PBC, AC) with as much information as possible prior to STM*

IMPACTS TO POLICE DEPARTMENT

Impacts to WPD

- *Damage: ceilings, carpet, walls, equipment & personal items*
- *Offices and work spaces lost*
 - *Displaced staff*
 - *Operations disrupted*
- *WPD/FMD Staff Safety Issues*
 - *Removing ice dams on roof*
- *Costs: \$15,000 in expenses (repair and cleanup)*
- *Mold concerns*
- *Cold drafts through windows*

STUDY SUMMARY

SIMPSON GUMPERTZ & HEGER

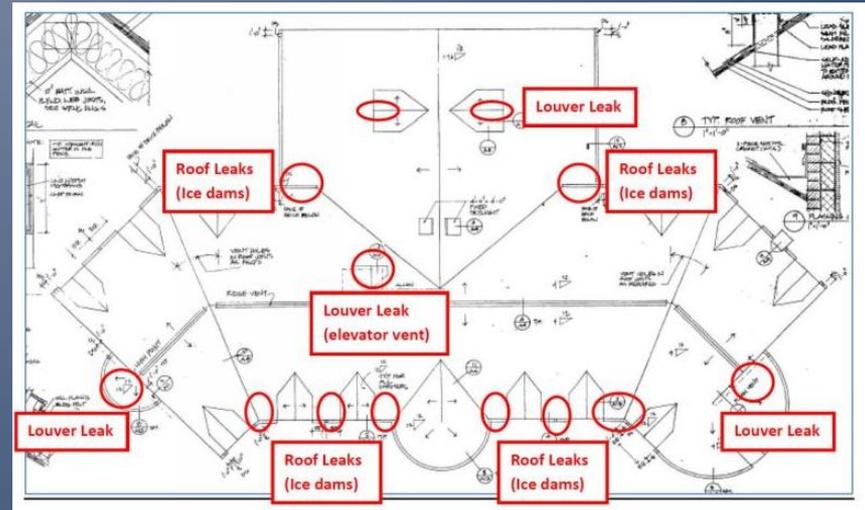


Engineering of Structures
and Building Enclosures

Niklas W. Vigener, P.E.
Scott A. Tomlinson, P.E.

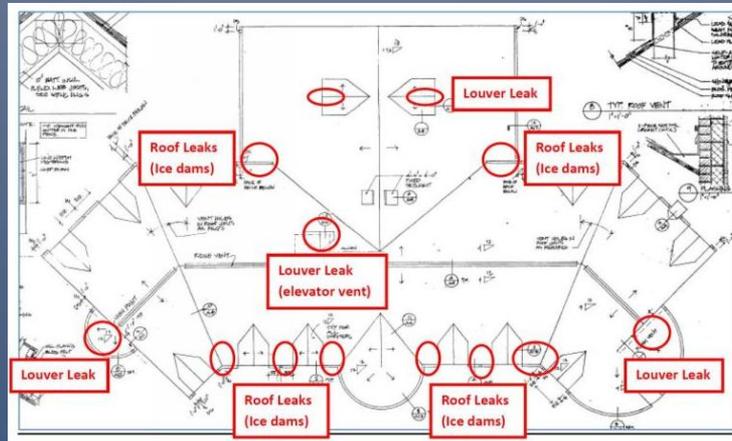
ISSUES REPORTED TO SGH

- Water leaks below the roof leaks
 - Typically when ice dams are present
 - Occasionally during rain events
- Large icicles at eaves (falling hazard)
- Water leaks below louvers in roof dormers
- Water leaks into the basement Fitness and Storage Rooms
- Air leaks through most of the windows (“drafty”) and water leaks below a few windows



SGH ON-SITE INVESTIGATION (7/30 - 8/3/2015)

- Roof openings
 - Front roof dormer
 - Valley/eave/sidewall (sally port wing)
 - Intake Louver (sally port wing)
- Air/water testing at two windows
- Three brick masonry openings
 - Head and sill of one window
 - Inside building corner
- Interior visual survey



VENTILATION AND ICE DAMS

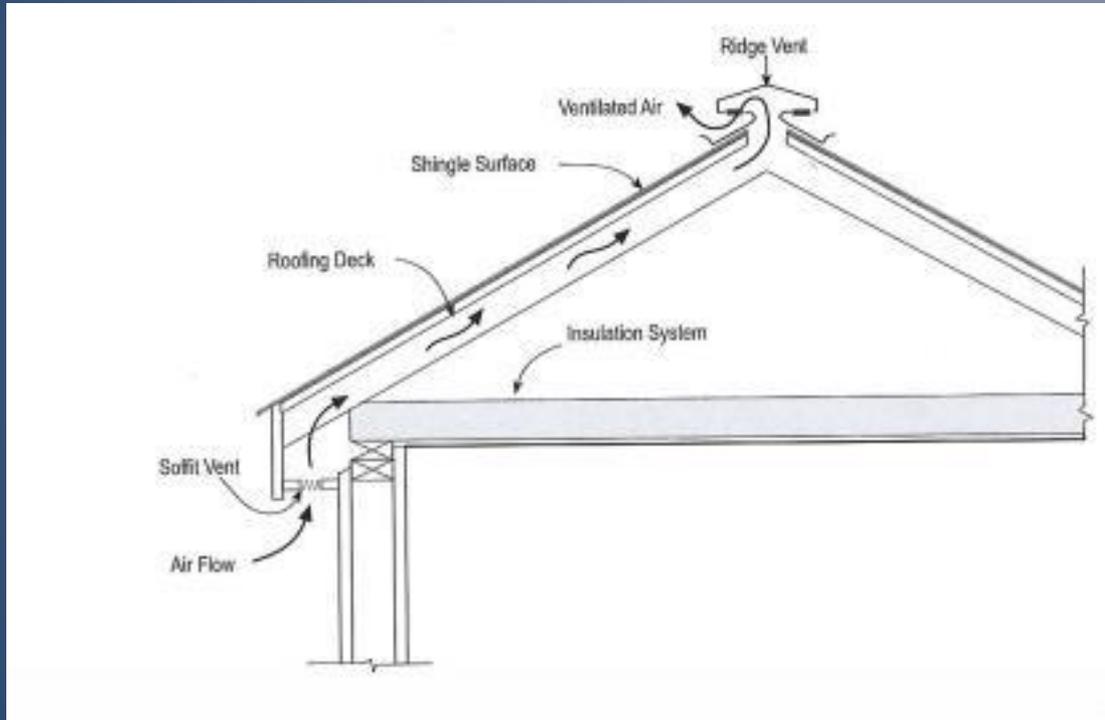
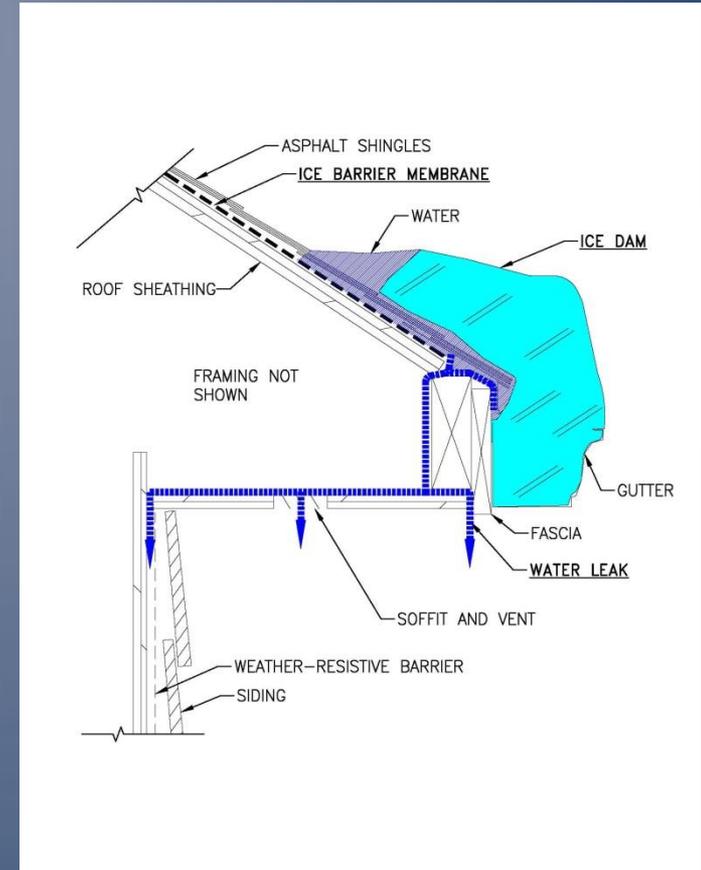


Image from ARMA 2006 Asphalt Roofing Residential Manual (Figure 3-1)



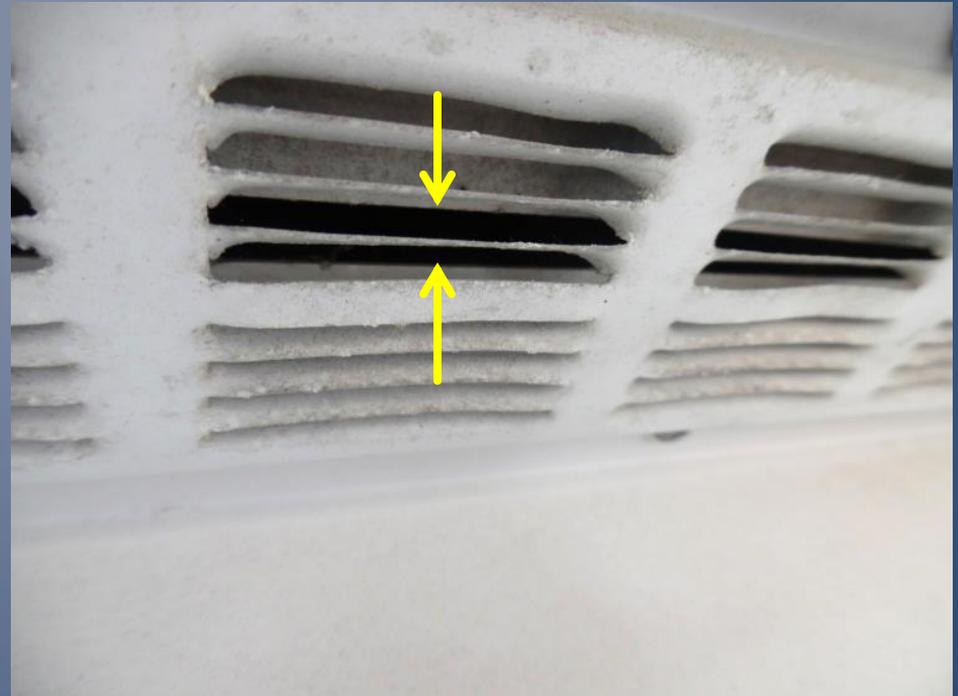
FRONT ROOF DORMER



VALLEY/EAVE/SIDEWALL



ROOF VENTILATION



ROOF VENTILATION



INTAKE LOUVER



WINDOW AIR AND WATER TESTING



WINDOW AIR LEAKAGE



WINDOW WATER LEAKAGE



WINDOW PERIMETER FLASHING



BRICK MASONRY AT INSIDE CORNER



CONCLUSIONS

- Ineffective roof ventilation
- Ineffective “Ice and Water Shield”
- Louvers lack effective flashing and a waterproofed plenum
- Windows meet current industry standards for air leakage, but provide poor thermal resistance, and lack flashing to prevent air and water leaks around the perimeter
- Water leaks through the wall and/or below-grade dampproofing at the two inside corners
- Modifications are required to address air and water leaks:
 - A new roof
 - Louver flashing and plenum waterproofing
 - Proper window flashing (incl. new windows)
 - Localized wall and below-grade dampproofing repair

RECOMMENDATIONS

- New vented roof over the existing sheathing with asphalt shingles or other lighter material
- Flash the louvers, waterproof and drain the plenums, and other air intake and louver modifications
- Replace all windows and provide proper flashing
- Locally repair the building wall and below-grade dampproofing at the two inside corners
- Replace all exterior sealant joints
- Stain all masonry joints to make new joints match existing

Budget \$100,000 for design/bid services, and \$1,955,000 for designer CA, OPM and construction costs

NEXT STEPS

Special Town Meeting – November

- *Further Vetting*
 - *Respond to Board questions this month*
- *Establish Amount of Appropriation Request*
 - *Ask PBC to request design/bidding funds from STM*

Special Town Meeting – Article 10

ARTICLE 10
Board of Selectmen
Police Station Building Repairs

To see if the Town will vote to raise and appropriate, or transfer from available funds, a sum of money, to be expended under the direction of the Permanent Building Committee, for the cost for engineering services, for preparation of plans and specifications and preparation of bid documents, for roofing and building envelope repairs, including but not limited to replacement of the roof, replacement of windows, replacing of exterior caulking, foundation waterproofing, and other building envelope elements at the Wellesley Police Station; or take any other action in relation thereto.

Final Design & Bidding Assistance

If approved at STM...

- *Begin design immediately under PBC*
 - *Bid project in Feb/March 2016*
 - *Bring “Bids-in-Hand” to 2016 ATM **
 - *Owner’s Project Manager (OPM) required*
- * *Schedule assumes PBC engages SGH for design as allowed by the RFP and FMD performs OPM duties*

Construction Funding

- *PBC would request at 2016 ATM*
- *Based on “Bids-in-Hand”*
- *Appropriation Expected to Include:*
 - *Construction cost*
 - *construction administration cost*
 - *Clerk or increased SGH site visits costs*
 - *OPM (if not performed by FMD) costs*

Construction

- *Assumes one bid package*
 - *PBC to determine*
- *July 1, 2016 start*
- *December 2016 completion*
- *Limits WPD to one more winter season*
- *Could possibly do non-roof work in 2017*

Owner's Project Manager

- *Required - project cost will exceed \$1.5M*
- *Typical OPM selection process would delay project until 2017*
- *FMD Director and Senior PM both qualified to be OPM*
- *Senior PM's duties make her well suited for this*
- *Cost savings to Town*
- *Enhance SGH's C.A. scope to help*
- *PBC would need to approve FMD as OPM*

Tonight's Request

- *FMD and WPD support the recommended plan*
- *Not requesting official votes*
- *Would like general support of BOS, PBC and AC*

QUESTIONS?

