ROOF INSPECTION TECHNIQUES

Why, When and How
WHY?

- Safety
- Preventative maintenance
- Planning
WHEN?

- Minimum once per year
- Twice a year is better!
- After major storms
The right information
The right tools
Multi step process
The paper trail

- Review previous inspection reports and photos
- Review any current leak reports
- Review repair paperwork
- Obtain roof top drawing if available

PROCESS

"THE RIGHT INFORMATION"
Tools and equipment

- Clipboard
- Pencil and graph paper
- Camera
- Measuring wheel
- Repair materials if appropriate

PROCESS
“THE RIGHT TOOLS”
PROCESS

“THE ROOF INSPECTION”

- Interior
- Exterior
- Rooftop
INTERIOR INSPECTION

- Purpose
  - Safety
  - Leak locations
EXTERIOR INSPECTION

- Building condition
- Counterflashing
- Efflorescence or staining
ROOFTOP INSPECTION

- Overall impressions
- Perimeters, projections, drains and equipment
- Membrane
ROOFTOP INSPECTION (CONT’D)

- Overall impressions
  - Ponding or signs of ponding
  - Debris
  - Overhanging trees
  - Vegetation
  - Severity of obvious problems
> Record any observations for closer examination
> Take overall photos
> Complete roof drawing if one not available
PERIMETER AND EQUIPMENT FLASHING

- Metal counterflashing
- Slippage
- Reglet joints
- Holes or open laps
- Deterioration
Inspect Perimeter Metal Flashings
Inspect Base Flashing Membrane
Inspect Caulking Condition Around Base Flashing & Projections
Concrete Pavers Deterioration
Sealant at Perimeter Metal Counterflashing
Observations After Poor Weather Conditions
Damaged Metal Counterflashing at Roof Top Units
Poor Base Flashing at Perimeter Edge of Roof
Poor Base Flashing at Perimeter Edge of Roof
Poor Flashing Detail
Open Seam At Base Flashing
Loose metal counterflashing
DRAINS

- Debris
- Lack of drain screens
- Blocked or plugged
- Loose clamping ring
Minor Debris Around Drains
Poor Drainage
Broken Drain Screen
Debris on Roof
- Record problem drains on drawing
- Identify if plumber required to correct
PENETRATIONS

- Pitch pockets
- Signs of movement
- Waterproofing integrity
Poor Pitch Pans
Sealant Poor Condition
Open Wall Penetrations
Sealant Poor Condition
Sealant Poor Condition
No Insulation Inside Stack. Condensation Issue
- Record locations of problems
- Record severity and action required
- Photograph and log
- Compile list of emergency items
- Compile list of other repairs
- Develop plan for completion of identified items
- Record and file completed work
INSPECTING THE BUILT UP ROOF
Windscour in Corner
Vegetation Growth Through Possible Membrane Split
Membrane Split
Loss of Gravel Embedment
Ridging
Severe Blistering
Bitumen Erosion Leading to Bare Felts
INSPECTING MODIFIED BITUMEN ROOFS
Cracked Base Flashing
Granule Loss
Split Developing in Cap Ply
Corner Flashing Open
Loose Granules Collecting at Drain
Loss of Adhesion at Perimeter
Alligating Due to Granule Loss
Base Flashing Open at Top
Detail showing Signs of Failure
Drainage Ineffective
Granule Loss Due To Foot Traffic
Ridging within the roof membrane
INSPECTING SINGLE PLY MEMBRANES
Membrane Shrinkage
Hole From Missing Fastener
Hole In Membrane
Shrinkage of EPDM Membrane
Failed Seam
Puncture Possibility - Cracked Patio Slabs
Cuts in the membrane
Dirt Accumulation at Drain
Incorrect Detail – Incorrect Repair
NON-DESTRUCTIVE SURVEYS