

Roof Name: Upper Flat Roof
Roof Size: 49,140 sq. ft.
Est. Replacement Cost: \$196,560
Existing System Type: Ballasted EPDM
Year Installed: 1985 (Estimated)
Height: 30 feet
Slope: Slight
Interior Sensitivity: Normal
Drainage: Adequate
Currently Leaking? Unknown
History of Leaking? Yes

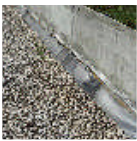






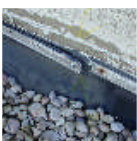
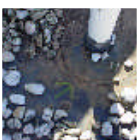


Drainage and Leak Details: The roof appeared to have adequate drainage toward the roof drains and no ponding water was noticed at the time of this inspection. It has been reported that leaks occur along the walls in the past. The current extent and location of "active" roof leaks was not known at the time of this inspection.



Existing Roof System Construction

Layer Type	Description	Method of Attachment
Deck	Metal	Spot welded
Insulation	Isocyanurate	Loose laid
Membrane	Single ply - unreinforced	Loose laid
Surfacing	Ballast Rock	Loose laid

Roof Defects

Photo	Type of Defect	Severity	Details
	Bridged flashing	Major	Flashing has bridged and pulled loose from the walls. Without proper base tie-in securement, the flashing membrane has been able to shrink, pull away from the wall and tear along the bottom of the termination bar. Water easily enters the roof assembly and interior of the building.
	Hole in flashing	Moderate	Several holes were noticed throughout the flashing areas.
	Masonry defect	Moderate	The joints in the parapet walls are open. The sealant has deteriorated and cracked open from contraction and expansion. The coating on the walls has deteriorated and there is some "spalding" occurring in a few areas.
	Masonry defect	Moderate	The joints in the parapet walls are open. The sealant has deteriorated and cracked open from contraction and expansion.
	Masonry defect	Moderate	The sealant in the joints on top of the parapet walls has completely deteriorated in many areas. This condition will allow water to enter the roof assembly and interior of the facility.
	Open flashing	Major	The membrane is pulling loose from under the termination bar.
	Open flashing	Major	The flashings are pulling loose from the walls and tears are occurring at stress points.
	Open flashing	Major	The termination bar is loose in some areas. The flashings in these areas will begin to pull away from the wall and create roof leaks.
	Open flashing	Moderate	The flashings around the penetrations are open and will allow water to enter the roof system.

Roof Defects continued...

Photo	Type of Defect	Severity	Details
	Open pitchpocket	Moderate	The pitchpockets throughout the roof area need to be re-sealed with pourable sealer to prevent water from entering the roof system.
	Open pitchpocket	Moderate	Open pitchpockets were noticed throughout the roof area.

Overall Roof Inspection Assessments

Date	Inspection Type	Inspecting Company	Inspector Name
Sep, 2005	Visual Inspection	Dry-Tech Commercial Roofing Services, Inc.	Mark Krider

The overall condition of the "field" of the roof is fair. However, the flashings throughout the roof are in very poor condition. The flashings are bridged, loose, torn and open throughout the roof area. The main cause of the poor flashing condition is the result of a failed or improper base tie-in detail. As the membrane ages it shrinks. Without proper base tie-in details or termination, the membrane will pull away from the walls as it shrinks. When this occurs, the membrane will bridge and tear open which is the case on this roof area. Holes and loose termination bar were also evident throughout the flashings. It is highly recommended that all wall, curb and penetration flashings are replaced in order to prolong the life of the roof (see recommendations).

The parapet walls themselves are in need of work as well. The joints are open, the coating has deteriorated and some spaulding was observed. It is highly recommended that any exposed parapet wall above the roof flashing is repaired and sealed (see recommendations).

Recommendations - Details

Budget Year	Type of Activity	Action Item?	Allocation	Urgency	Budget \$
Details					
2005	Restoration				
<p><u>Re-flash walls (863 lin. ft.):</u></p> <p>1.) Remove existing flashing membrane and termination bar and dispose of debris. 2.) Install proper base tie-in detail at base of vertical walls. 3.) Install new EPDM flashing to extend out onto existing roof at least 8" and up parapet wall a minimum of 12". 4.) Install water-block sealant behind top edge of new flashings. 5.) Install new bar termination along top edge of new flashings.</p> <p><u>Curb flashing repairs (328 lin. ft.):</u></p> <p>1.) Replace bridged or failed existing curb flashing using EPDM membrane and EPDM membrane flashing as needed. 2.) Seal corners of applicable curb flashings using EPDM membrane flashing as needed.</p> <p><u>Penetration repairs (27 total):</u></p> <p>1.) Reseal open pitch pockets using pourable sealer. 2.) Seal around all pitch pockets, roof drains, pipes and vent stacks using alternate courses of elastomeric flashing grade mastic and polyester reinforced mesh.</p> <p><u>Parapet walls (863 lin. ft.):</u></p> <p>1.) Clean parapet walls above roof flashing to remove loose and deteriorated existing coating. 2.) Seal parapet wall joints and cement coping stone joints using alternate courses of elastomeric flashing grade mastic and polyester reinforced mesh. 3.) Seal parapet walls and stone coping using high grade elastomeric coating.</p> <p><u>Re-flash back roof edge (135 lin. ft.):</u></p> <p>1.) Clean and prime along back perimeter roof edge. 2.) Re-flash back perimeter roof edge using EPDM membrane flashing.</p>					
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