

APR 09 2009

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March 18, 2009

File # 28126

Colyvan Pacific
#202 – 5704 Balsam St.
Vancouver, B.C. V6M 4B9

Re: Delano
2893/3023/3083 W 4th Ave., Vancouver

To Whom It May Concern:

As per your request, we have completed a brief inspection of the above noted complex and offer the following findings and recommendations. The attached pictures will show areas of concern and the overall condition of the roof systems.

This complex consists of 3 buildings. The roof is a 12 year old, 4 ply asphalt and gravel system. A heavy gauge flashing has been used in all appropriate locations. The roof has a generous layer of gravel embedded in the asphalt, which protects the asphalt from the damaging UV rays of the sun. There are some buckles starting to appear in the roof. These can be caused by movement of the roof deck due to settling, or from expansion and contraction due to temperature change. There appears to be adequate ventilation, which is extremely important to the life of the roof.

All three roofs have had a number of repairs done to them in the last few years. There are still many areas that should be repaired this summer. SBS membrane patches over damaged and deteriorating areas should help keep future leaks to a minimum. A general maintenance program, with a reputable roofing contractor, would be advisable. This would be one way to extend the life of the roofs for a number of years.

The attached pictures, along with the following report, highlight typical problem areas common to all roof areas.



Photo 1: Raised roof area with metal flashing on parapets. When roofs are changed, these walls should be covered with 2 ply SBS membrane.



Photo 2: Photo showing buckles and blisters that have been covered with SBS membrane.

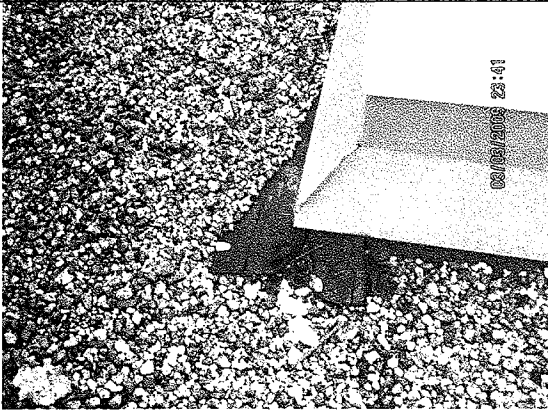


Photo 3: Corner of access hatch where membrane is starting to crack and pull away from curb.



Photo 4: Gas and electricity service for HVAC unit with mastic showing signs of cracking. These should be properly sealed.

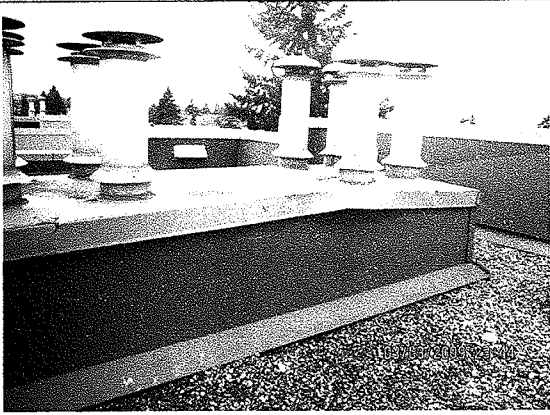


Photo 5: Chimney chase cap that has been damaged, either during rainscreen process or by high winds. These should be checked and re-secured where necessary.



Photo 6: Lower roof at front of building. When reroofing is undertaken, the stucco in these locations will need to be cut back to allow the new membrane to extend up the walls a sufficient height.



Photo 7: Here we have a drain that has obviously been leaking. Although this seems to have done the job, a more permanent solution would be to add an SBS patch over the area.

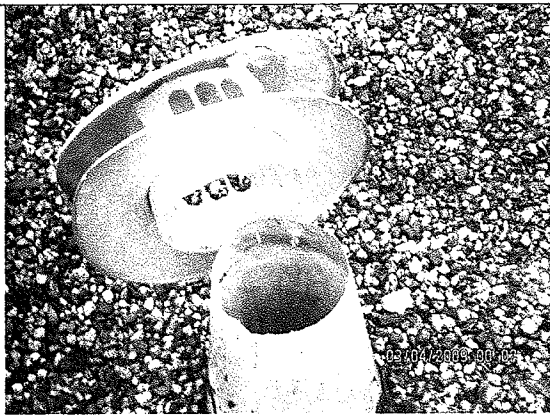


Photo 8: Cap on dryer vent that has not been secured properly.

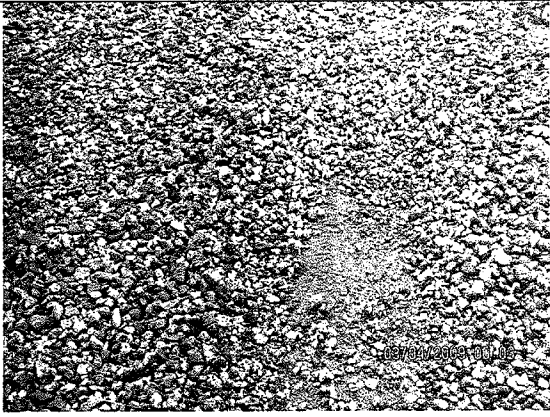


Photo 9: One of many buckles and blisters that should be covered with SBS membrane patches.

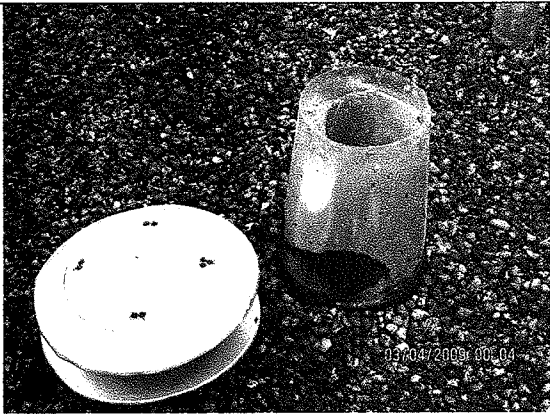


Photo 10: Another vent cap that needs to be secured.

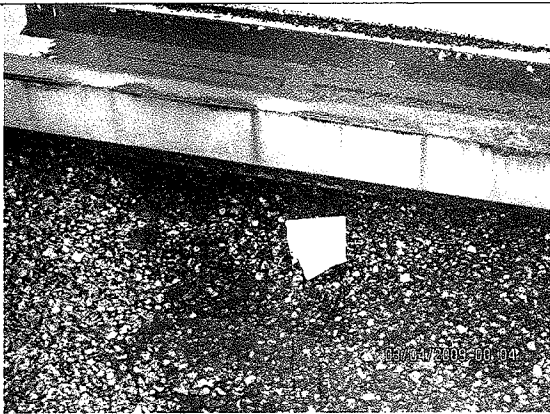


Photo 11: A lead plumbing flashing that is not being used. If this is not leaking, it can probably be left until roof is replaced.

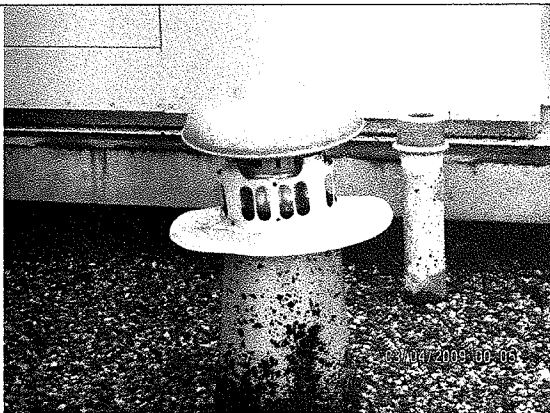


Photo 12: A vent cap that has been repaired. Not necessarily the best solution, as water can get in the sides of the broken original cap.



Photo 13: Drain sump on 2983. The edges of these sumps can be one of the first areas to show deterioration. This one appears to have been repaired in the not too distant past.

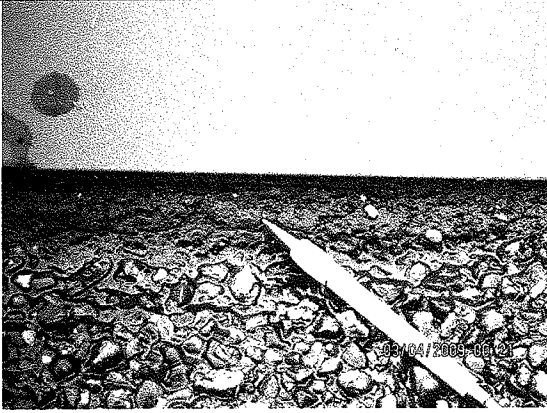


Photo 14: This shows how the membrane is starting to deteriorate along the parapets and curbing.

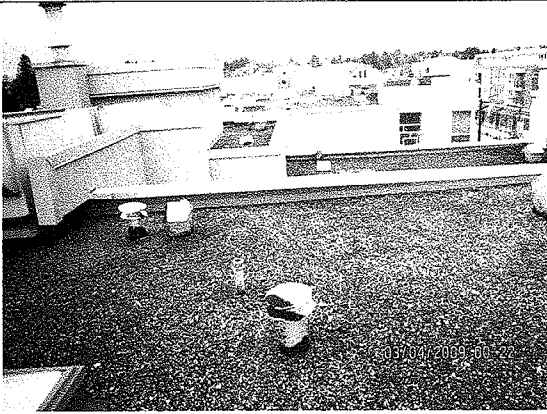


Photo 15: This photo shows that the original roof was built with a definite slope for outside parapets too the drains in the centre of the roof.

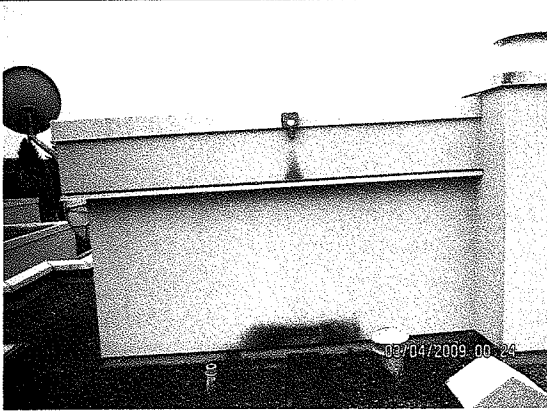


Photo 16: There should be a downpipe installed at the elevator roofs, so that rain water does not run down the stucco finish, or splash onto the lower roof and up against the stucco wall.



Photo 17: Chase cap that is not shedding water as it should. This should be corrected so that chase cap does not rust prematurely.



Photo 18: Another example of a buckle that should be repaired.

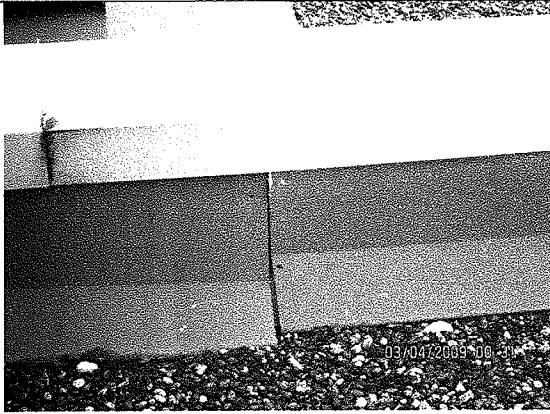


Photo 19: Here we have a piece of wall flashing that needs to be properly secured.

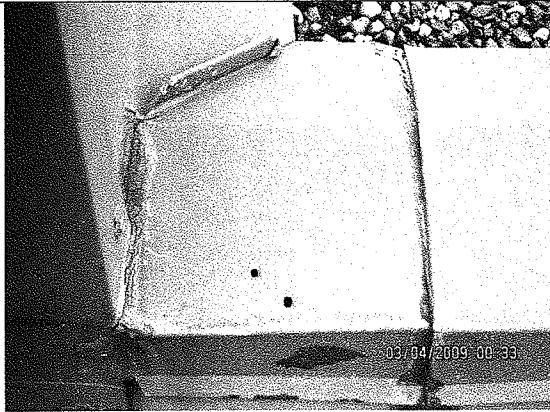


Photo 20: Holes in flashing should be sealed to protect area beneath.

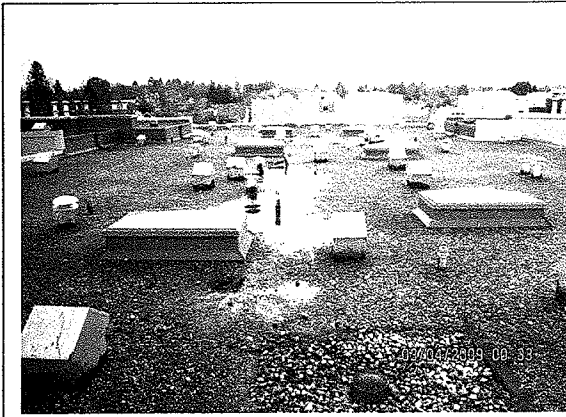


Photo 21: This shows some minor ponding in the area between two drains. With an organic membrane roof like this, we do not like to see water sitting for any length of time. This is something to consider when replacing the existing roof.

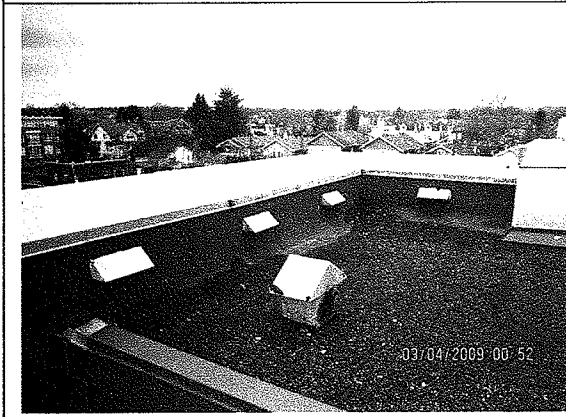


Photo 22: On 3023, the metal flashing has been replaced with an SBS membrane. I would assume that this was done in conjunction with the rainscreening process.



Photo 23: Here we have a chase cap that is beginning to rust. Any rusting flashings should be cleaned and give a fresh coat of rust resistant paint.

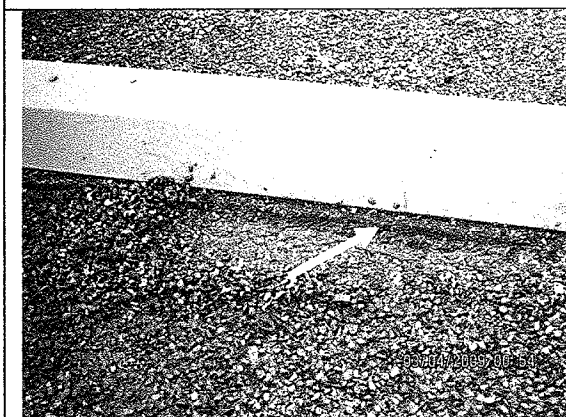


Photo 24: Another curb where the membrane is starting to crack at the transition.

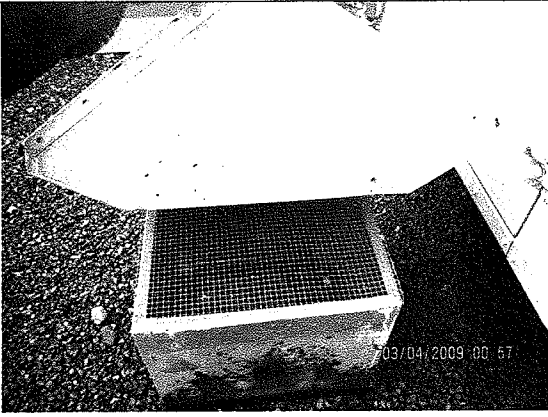


Photo 25: A BUR vent that needs to be secured.



Photo 26: Another example of deterioration of the membrane at the curb.

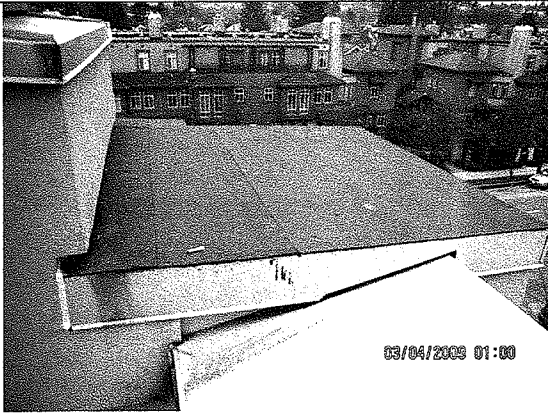


Photo 27: Here is a typical lower flat section that has been reroofed with SBS during the rainscreen process. These roofs should be good for a long time yet.

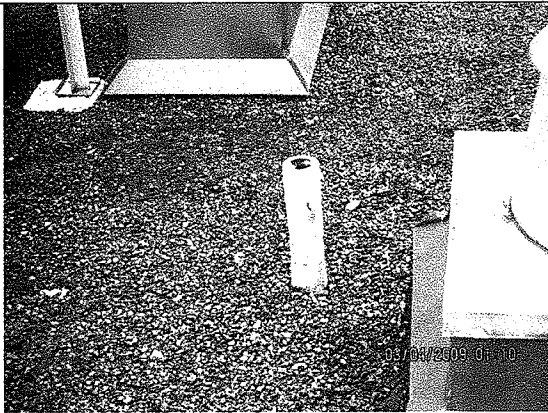


Photo 28: Plumbing stack that is missing the settlement cap.

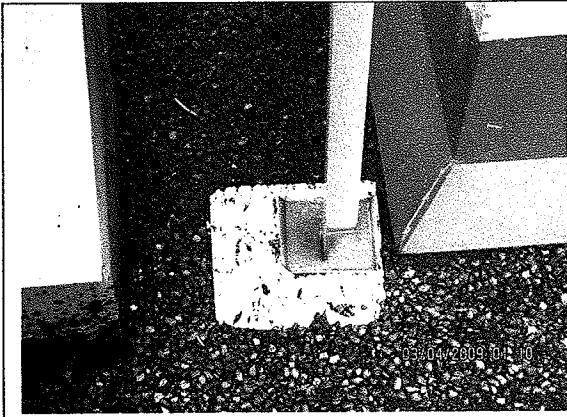


Photo 29: Styrofoam pads at the HVAC units are breaking down. These should be replaced to keep the sheet metal legs from resting and possible puncturing the existing roof membrane.



Photo 30: Another HVAC service vent that requires sealing.

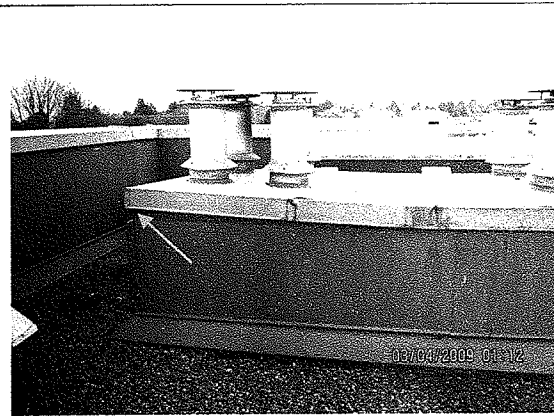


Photo 31: Another chase cap that is not sitting on the chimney chase properly. It is possible for water to get in at the corner of this chase.

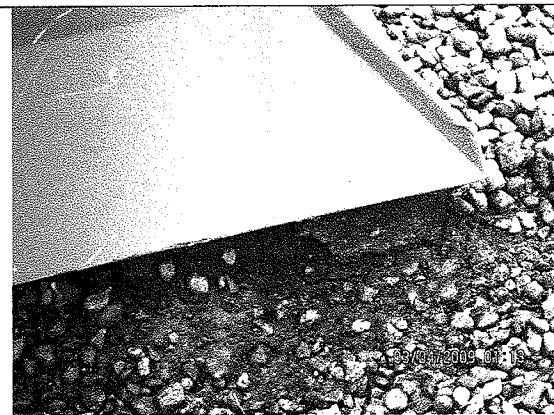


Photo 32: Deteriorated roof membrane at curb. Definitely needs to be repaired.

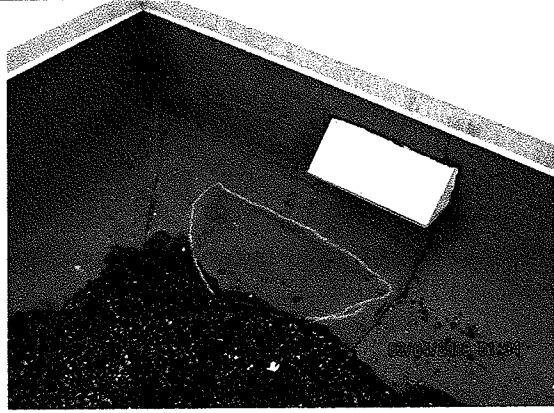


Photo 33: There seems to be water, or air, trapped between the SBS stripping and the existing asphalt and gravel roof. This should be opened up and examined to determine where it is coming from.



Photo 34: This photo shows build up of moss on roof at front of building. This should be removed, as it has a tendency to hold moisture in the area, which can cause premature deterioration. It also shows how the stucco has been cut back during the rainscreen process. This should help when it comes time to replace the existing roof.

Summary

The flat roofs on these 3 buildings are still in fair condition. A lot of the vents on the roofs are in need of attention, be it painting, caulking, or repairing. If repairs are made, I am fairly confident that these roofs could last at least another 2 - 4 years, though I would suggest doing another re-inspection in 1 - 2 years.

Steps that should be taken are as follows:

1. Install SBS patches over all buckles and blisters.
2. Install SBS stripping along curbs that are beginning to crack.
3. Reseal the HVAC service vents.
4. Refasten any loose flashings.
5. Ensure that all areas that rely on caulking are cleaned and a new bead of quality urethane caulking is applied.
6. Chase caps should be secured in a fashion that water no longer puddles on them.
7. Clean all moss from the roofs.
8. Paint the rusty vents chase caps and HVAC venting.
9. Make sure all dryer vent and BUR vent caps are in place and properly secured.
10. Install downpipes at elevator shaft roofs to prevent premature deterioration of roof membrane and stucco.

Remember, there is no guarantee on how long these roofs will last. These roofs could last longer or shorter than I have estimated.

Budget

This complex has approximately 28,500 sq. ft. of roof area. It is our opinion that the cost to re-roof the complex with a 2 ply SBS membrane would be approximately \$12.00 per square foot for a total of \$342,000 plus GST.

The initial repair cost for these roofs should probably be somewhere between \$5000 - \$8000, depending on time of year and availability.

A yearly maintenance program should cost somewhere between \$2000 - \$5000.

Should you have any questions or concerns regarding this report please do not hesitate to call.

Sincerely,

Ross Carey
ATC Consulting Inc.