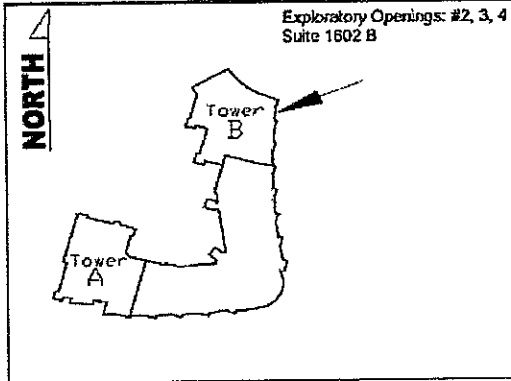
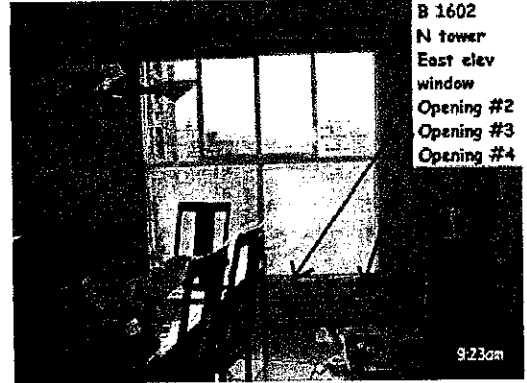


Pacific Point

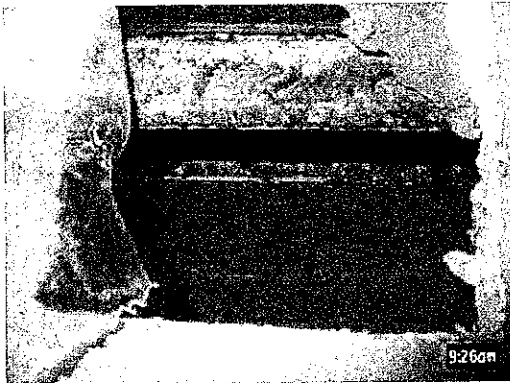
Exploratory Opening #03 1602



Opening 03 - A

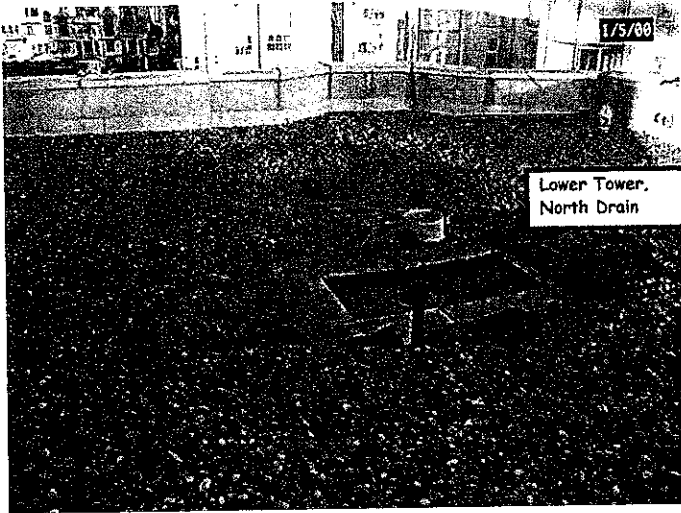


Opening 03 - B

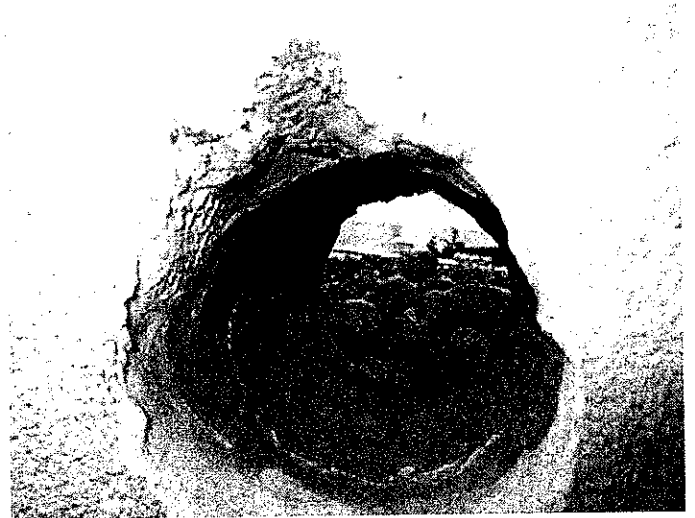


Opening 03 - C

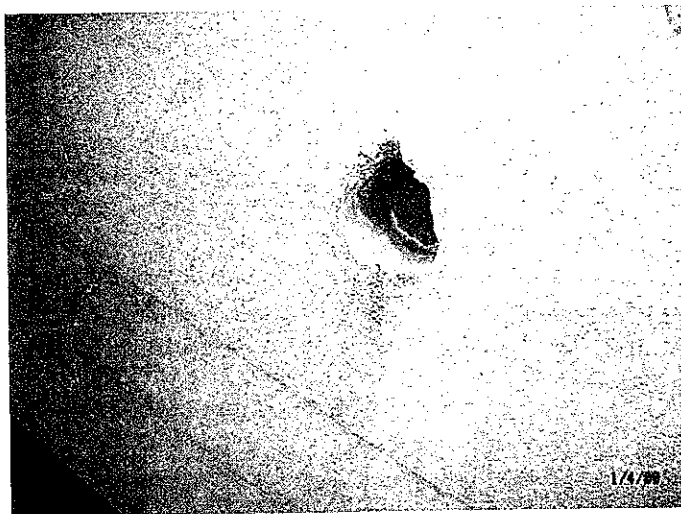
Pacific Point



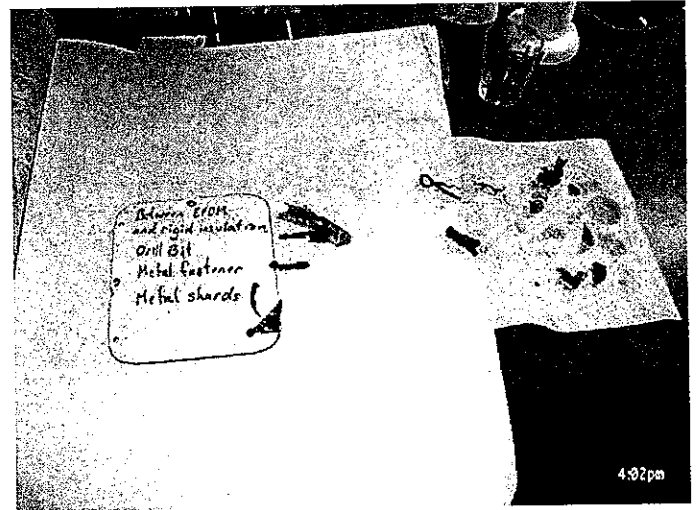
J-01



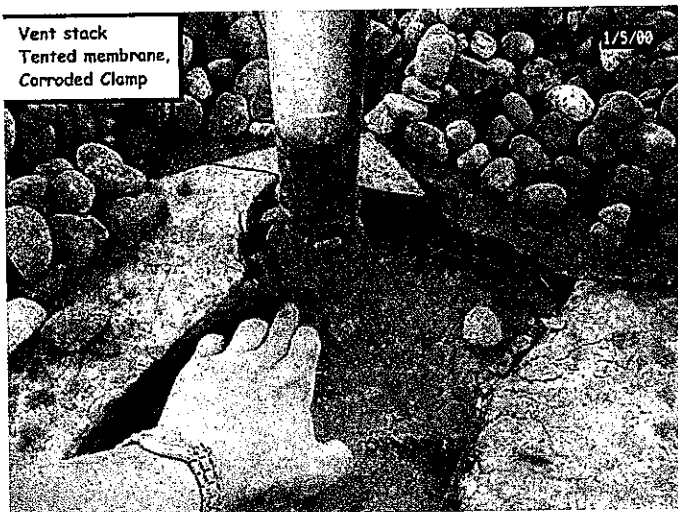
J-02



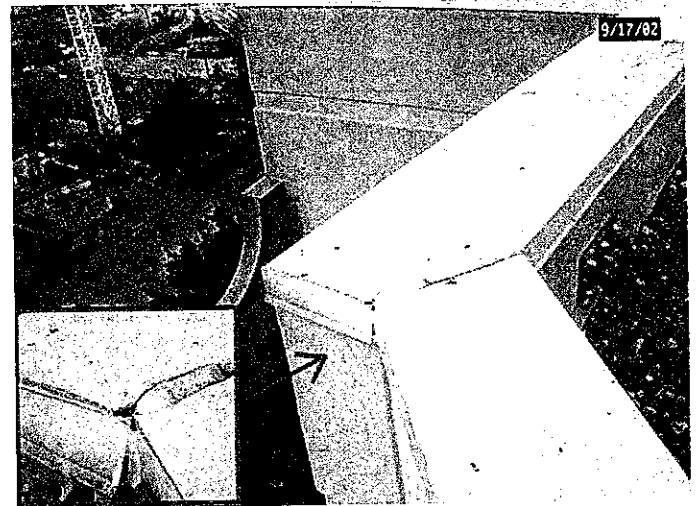
J-03



J-04

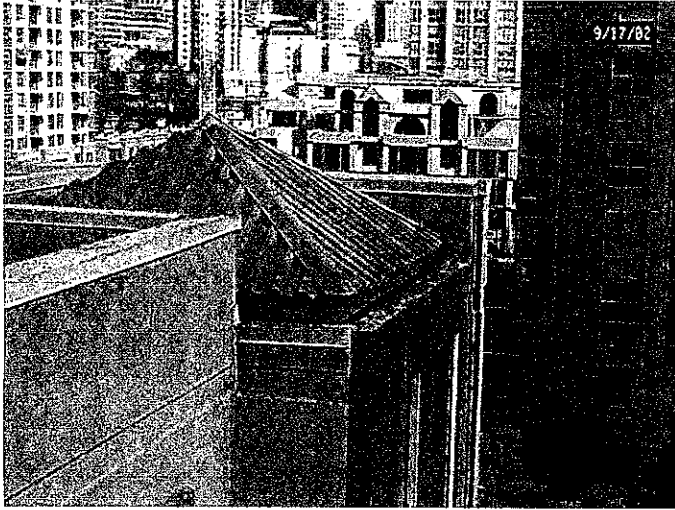


J-05



J-06

Pacific Point

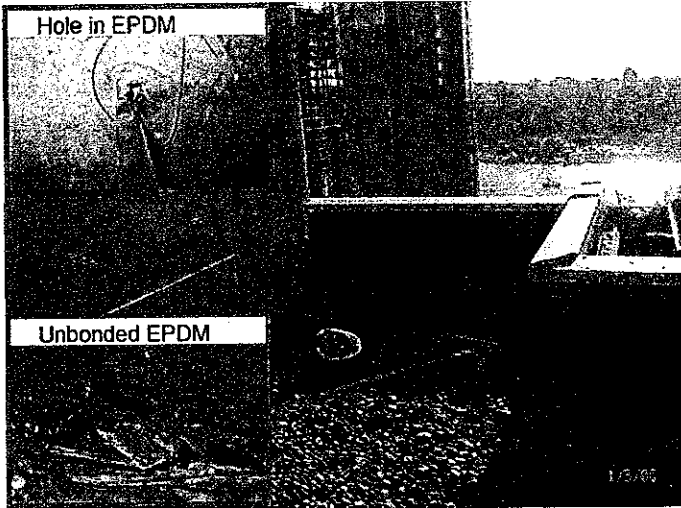


J-07

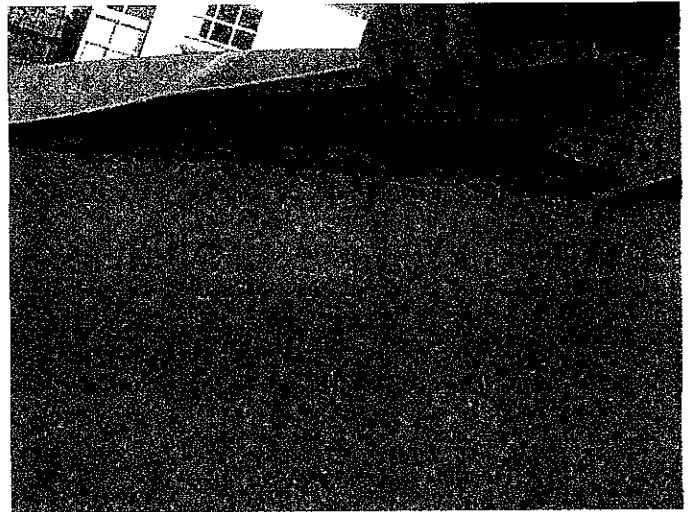


J-08

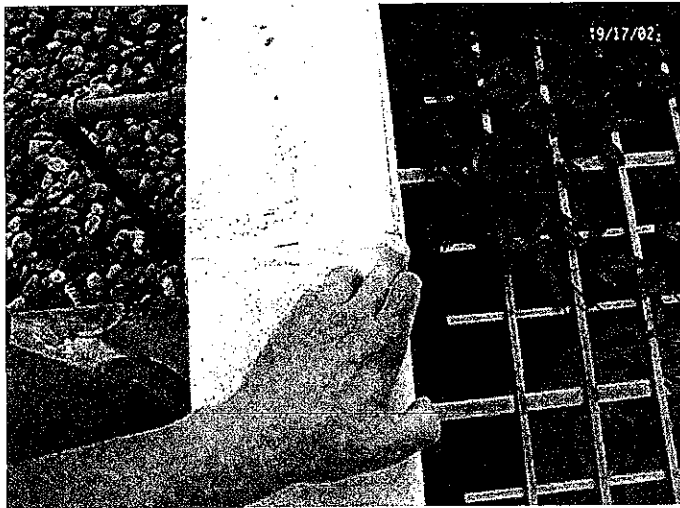
Pacific Point



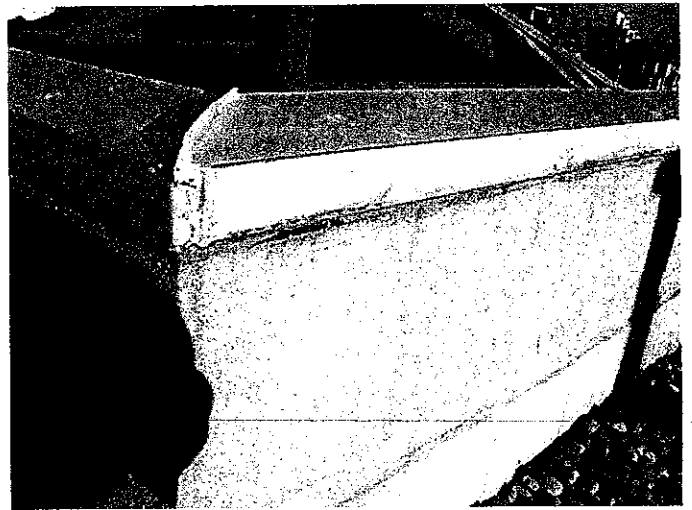
K-01



K-02



K-03



K-04

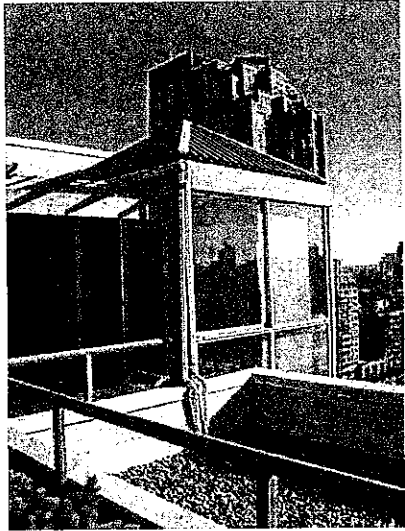


K-05

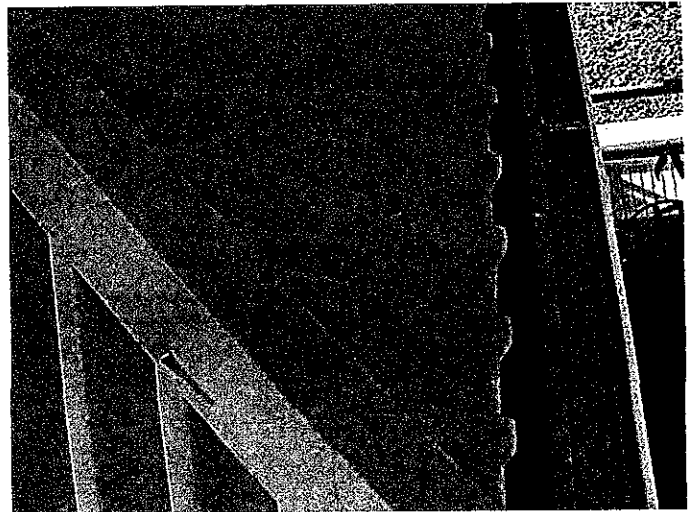


K-06

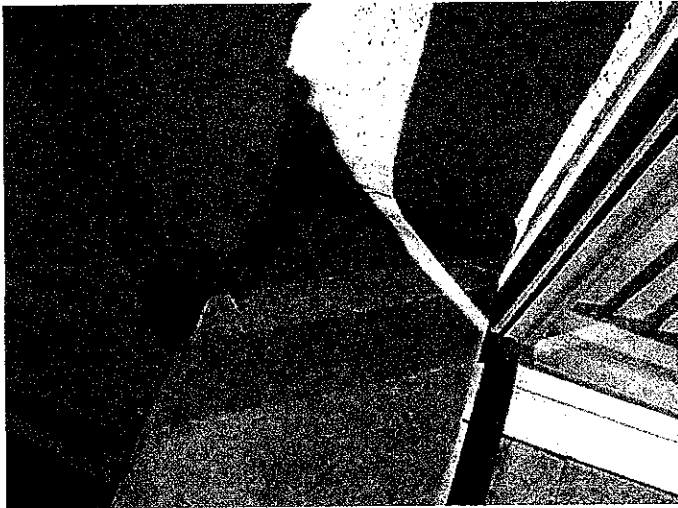
Pacific Point



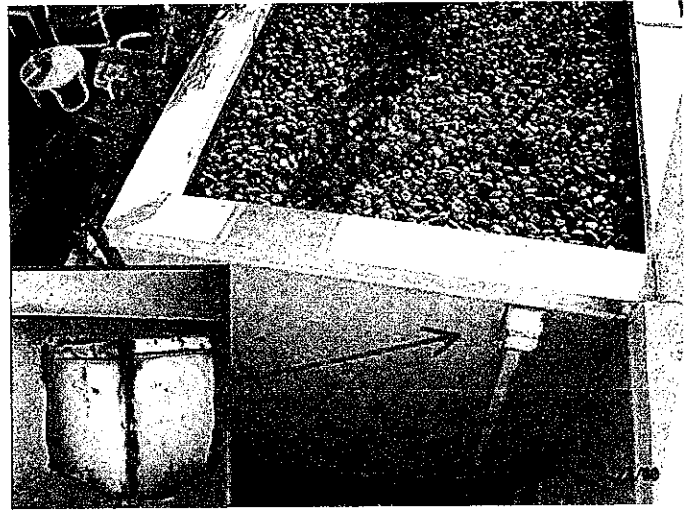
K-07



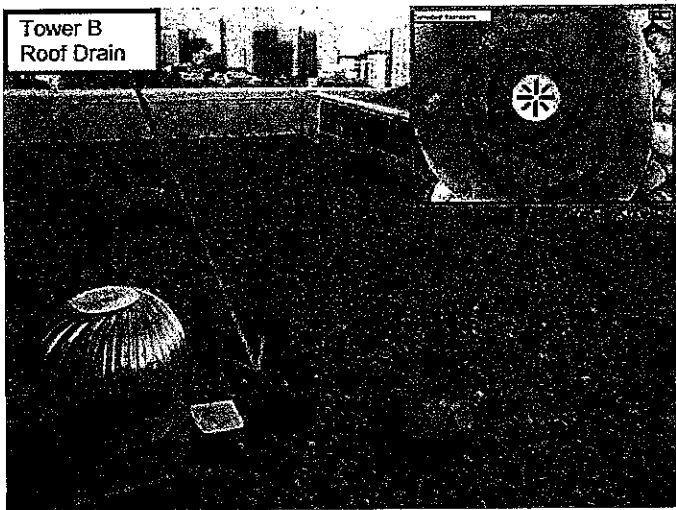
K-08



K-09

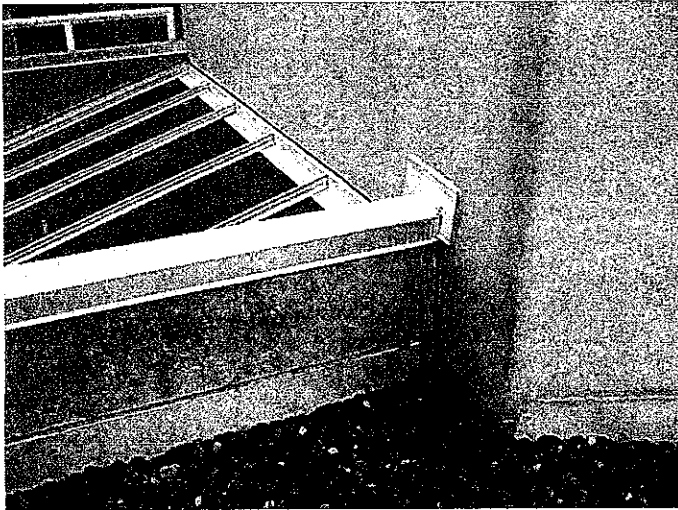


K-10

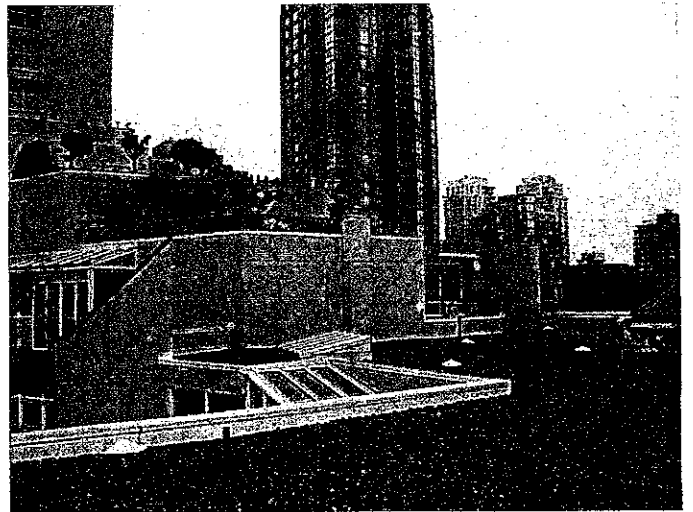


K-11

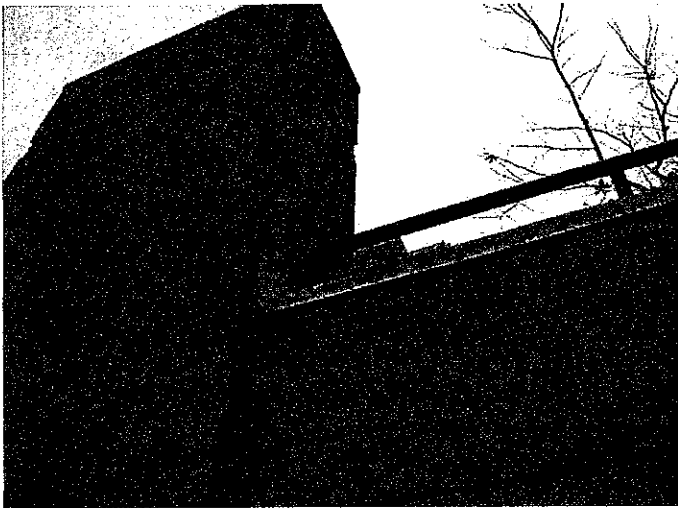
Pacific Point



L-01



L-02



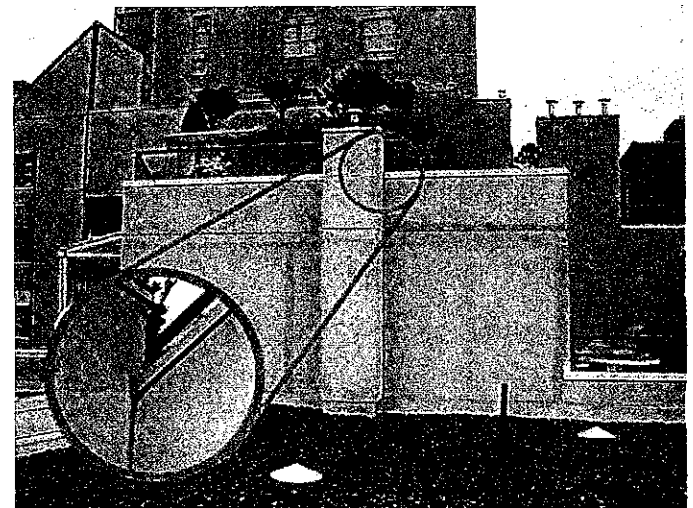
L-03



L-04



L-05

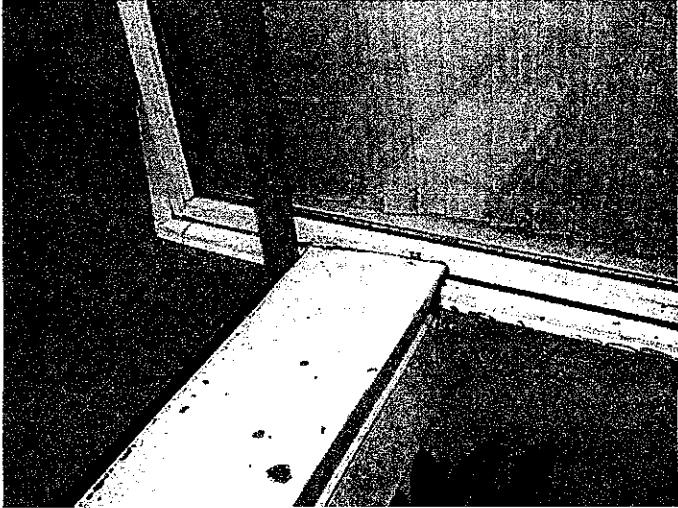


L-06

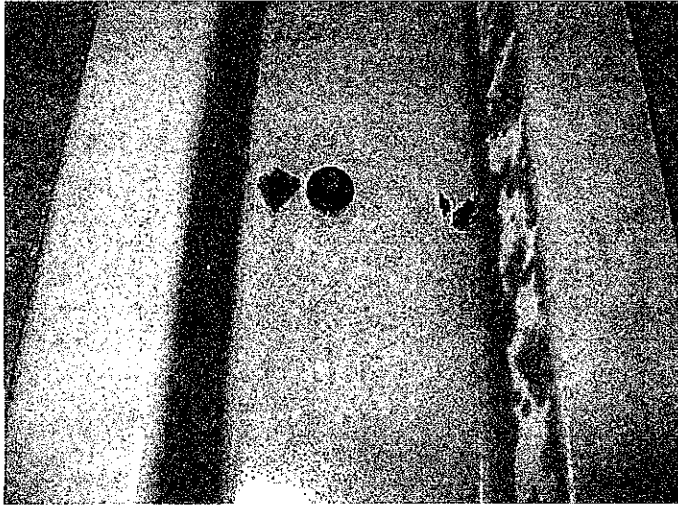
Pacific Point



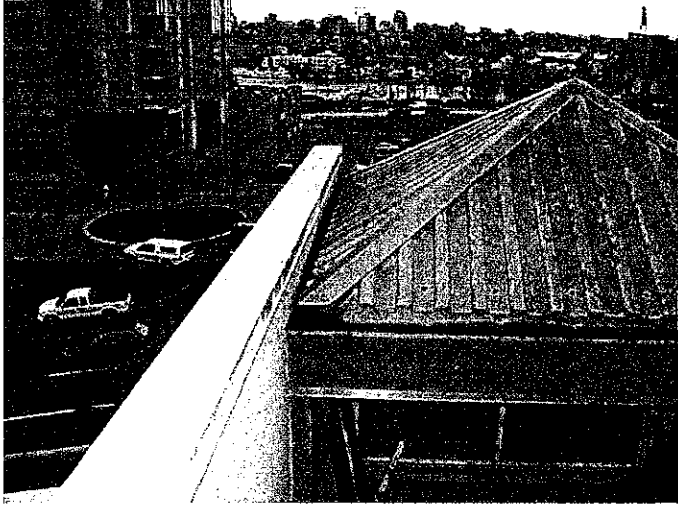
L-07



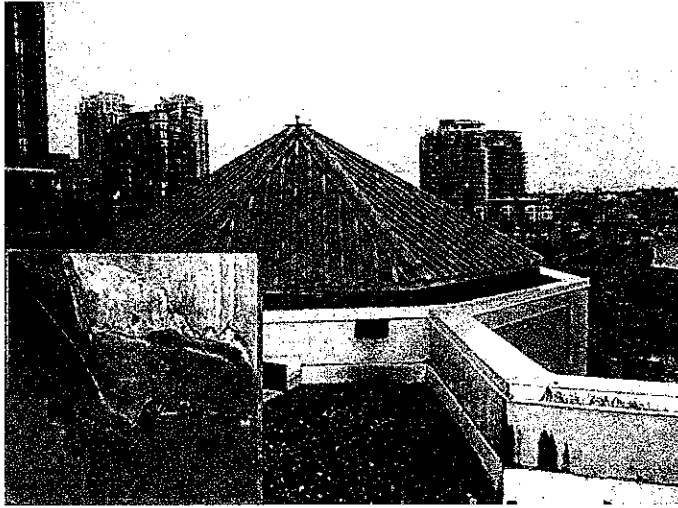
L-08



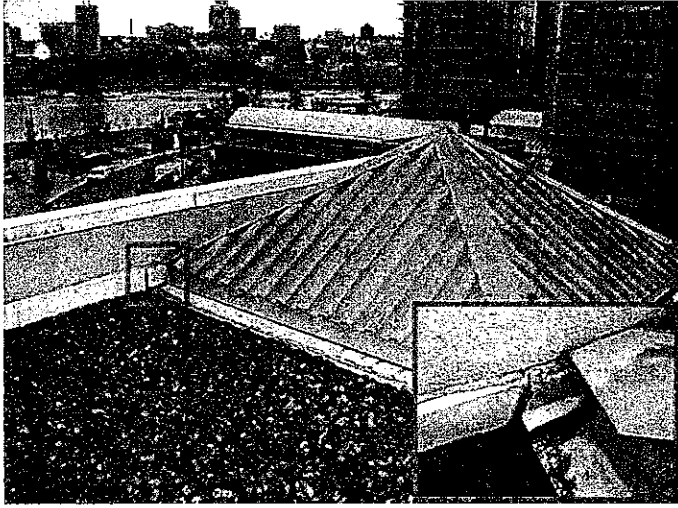
L-09



L-10

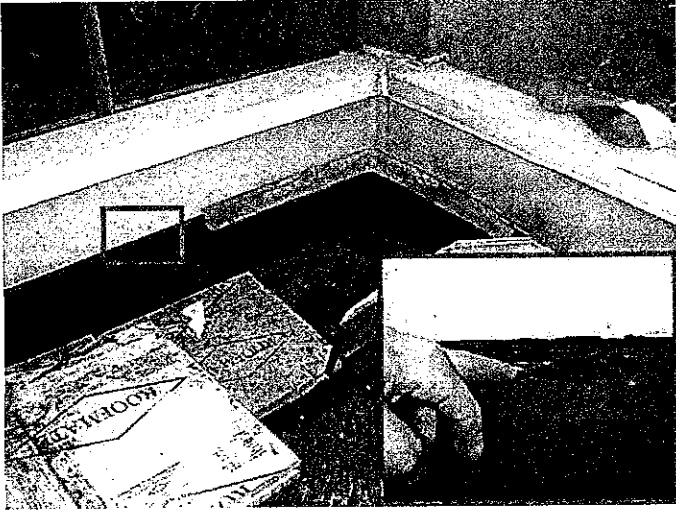


L-11

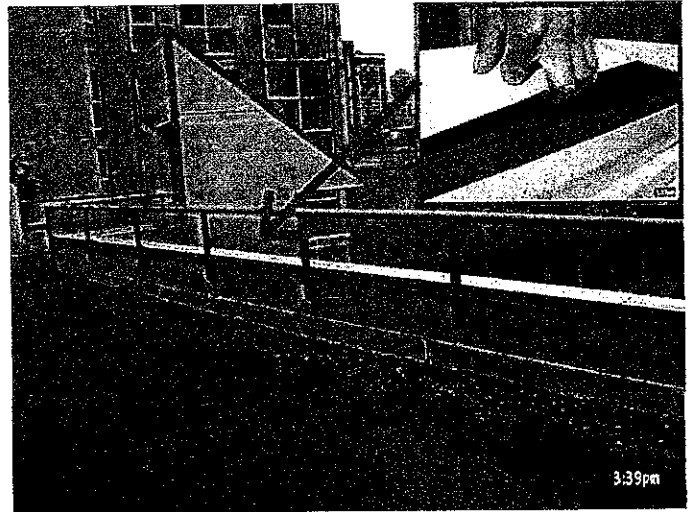


L-12

Pacific Point



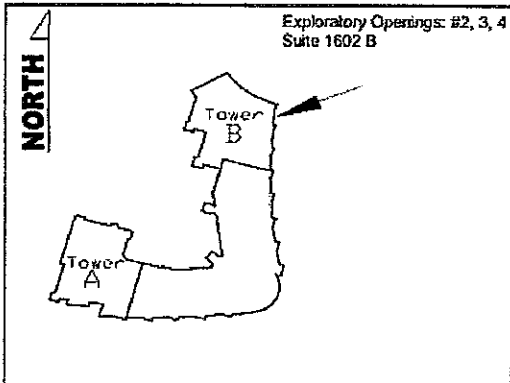
L-13



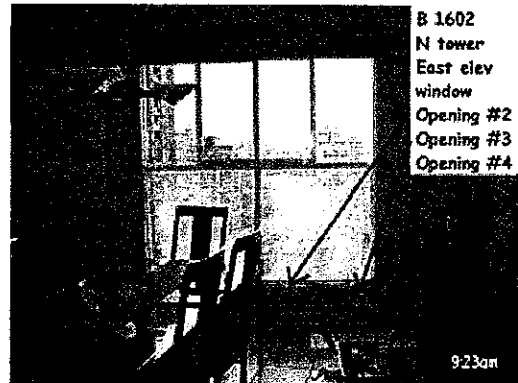
L-14

Pacific Point

Exploratory Opening #04 1602



Opening 04 - A



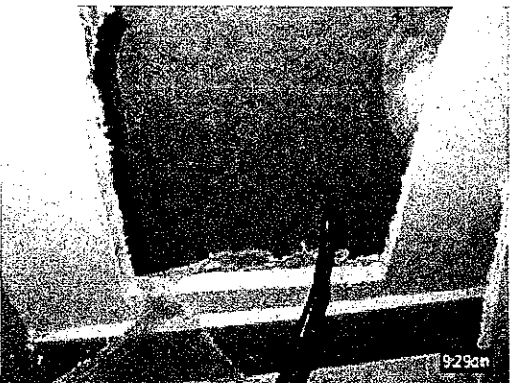
Opening 04 - B



Opening 04 - C



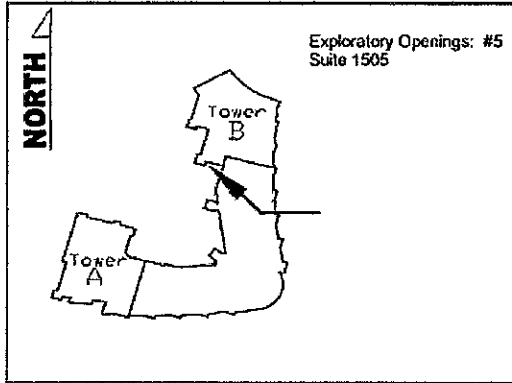
Opening 04 - D



Opening 04 - E

Pacific Point

Exploratory Opening #05 1505



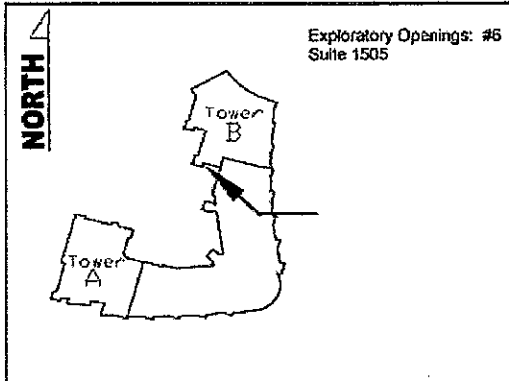
Opening 05 - A



Opening 05 - B

Pacific Point

Exploratory Opening #06 1505



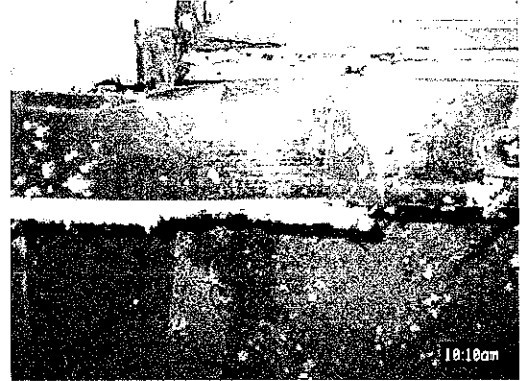
Opening 06 - A



Opening 06 - B



Opening 06 - C



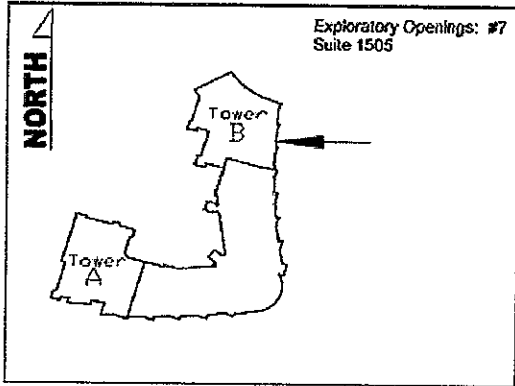
Opening 06 - D



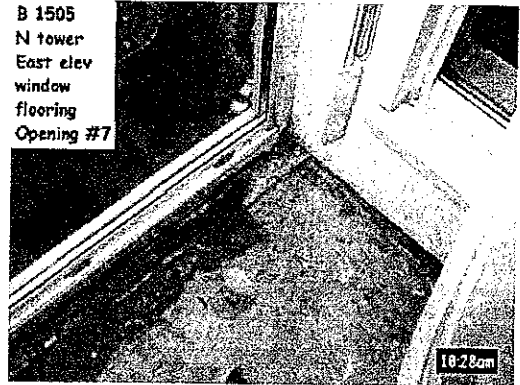
Opening 06 - E

Pacific Point

Exploratory Opening #07 1505



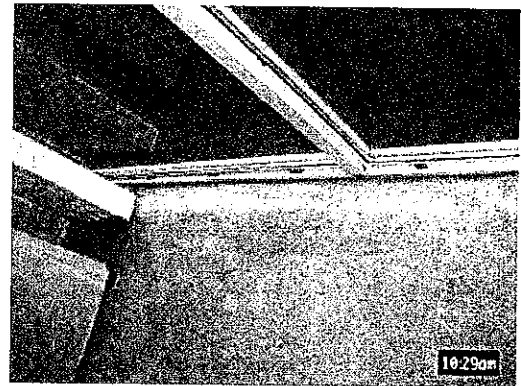
Opening 07 - A



Opening 07 - B



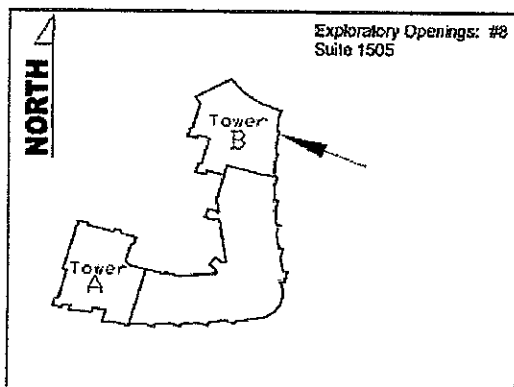
Opening 07 - C



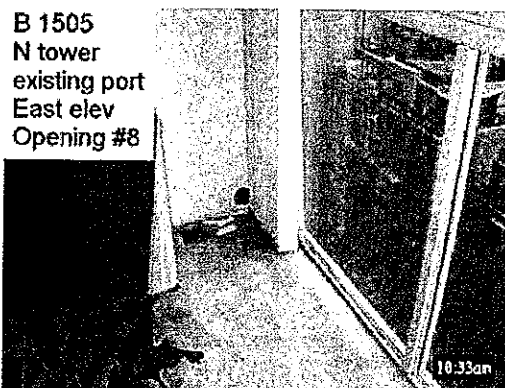
Opening 07 - D

Pacific Point

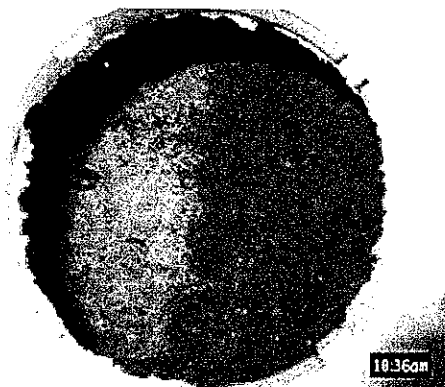
Exploratory Opening #08 1505



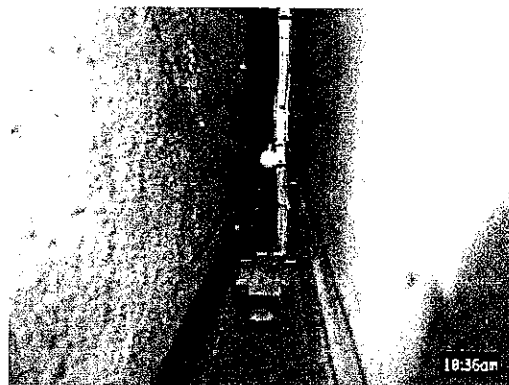
Opening 08 - A



Opening 08 - B



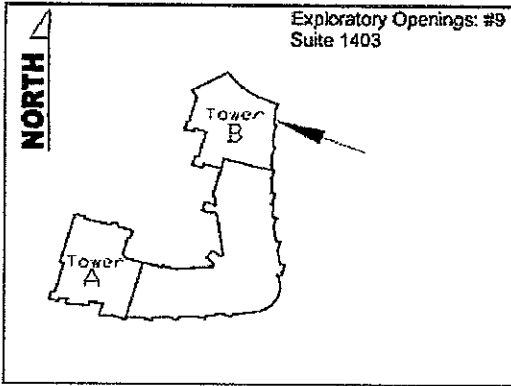
Opening 08 - C



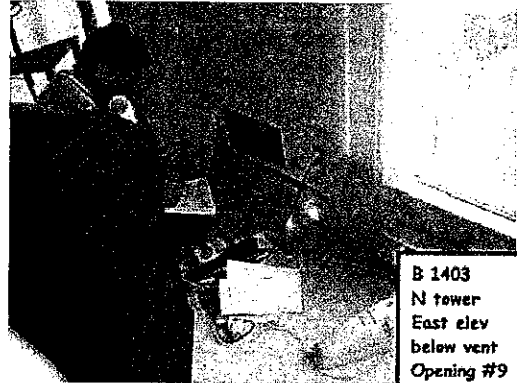
Opening 08 - D

Pacific Point

Exploratory Opening #09 1403



Opening 09 - AA



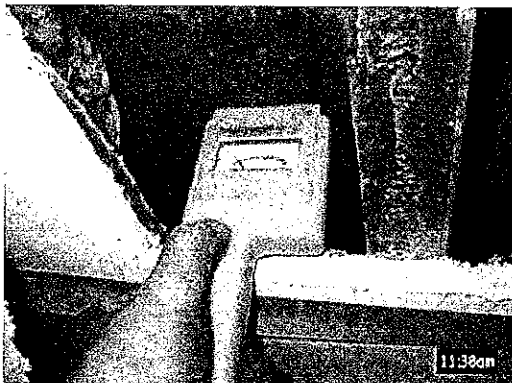
Opening 09 - AB



Opening 09 - AC



Opening 09 - AE



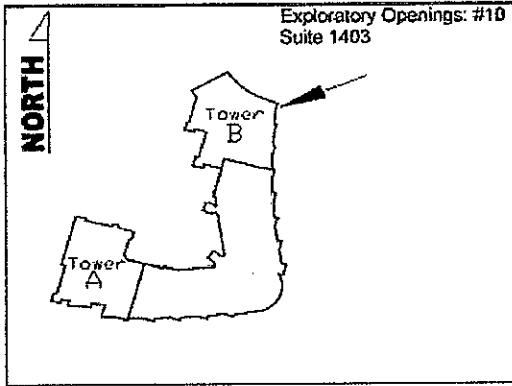
Opening 09 - AF



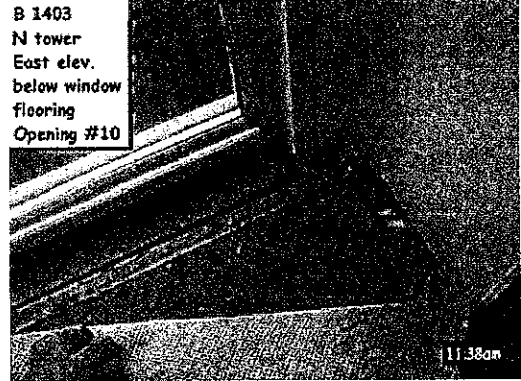
Opening 09 - AG

Pacific Point

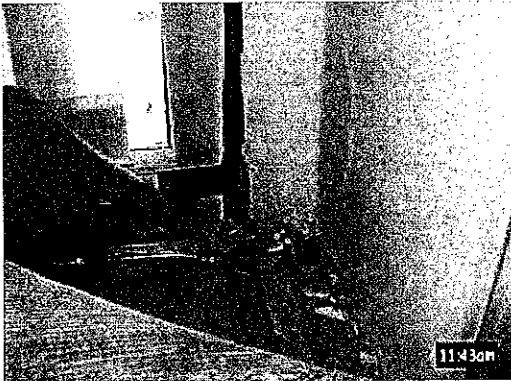
Exploratory Opening #10 1403



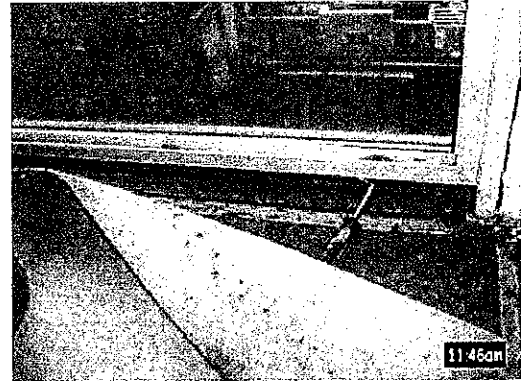
Opening 10 - A



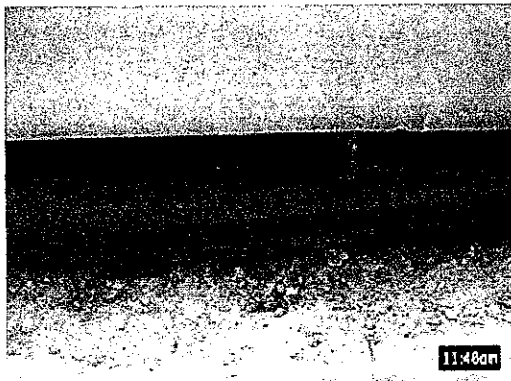
Opening 10 - B



Opening 10 - C



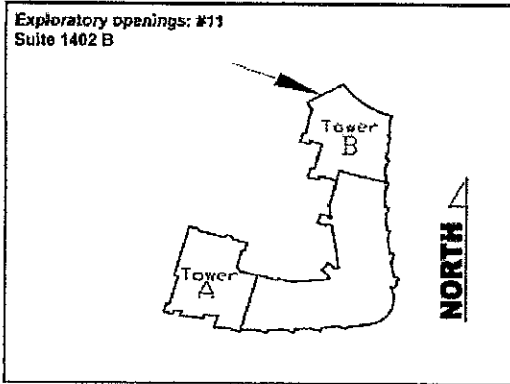
Opening 10 - D



Opening 10 - E

Pacific Point

Exploratory Opening #11 1402



Opening 11-A



Opening 11-B



Opening 11-C



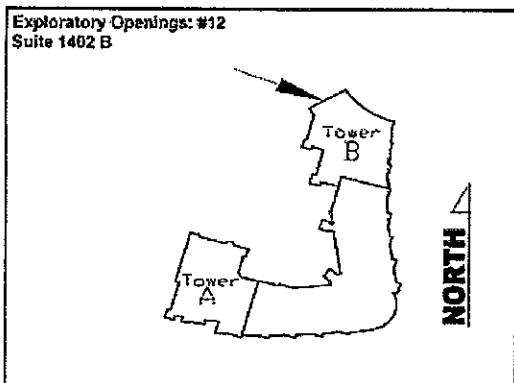
Opening 11-D



Opening 11-E

Pacific Point

Exploratory Opening #12 1402



Opening 12-A



Opening 12-B



Opening 12-C



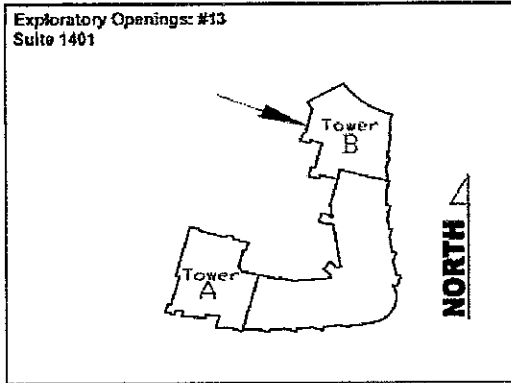
Opening 12-D



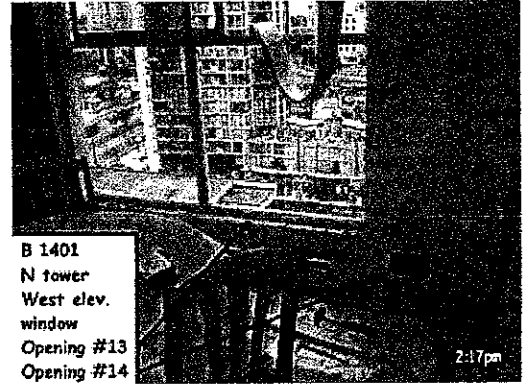
Opening 12-E

Pacific Point

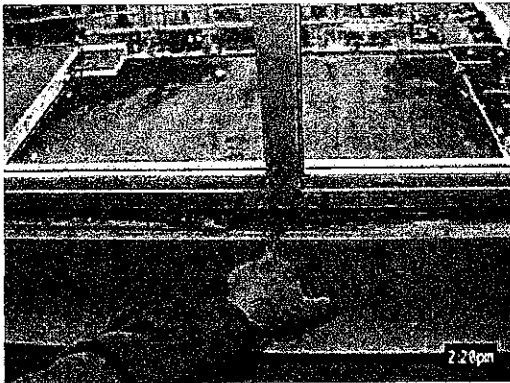
Exploratory Opening #13 1401



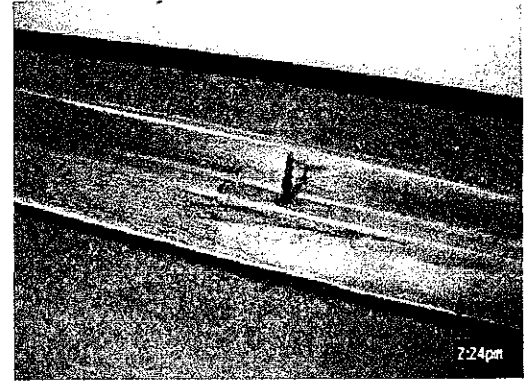
Opening 13-A



Opening 13-B



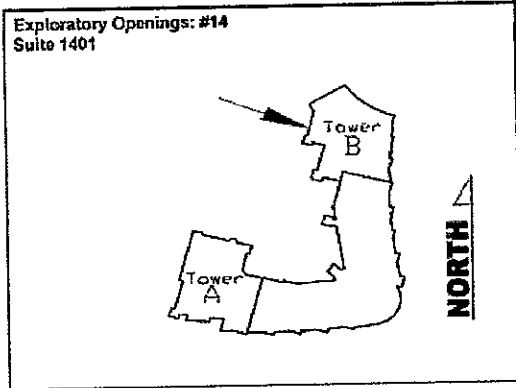
Opening 13-C



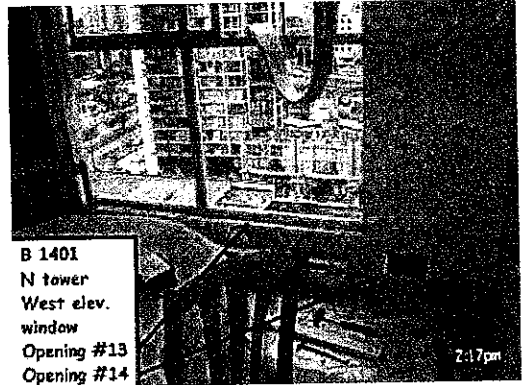
Opening 13-D

Pacific Point

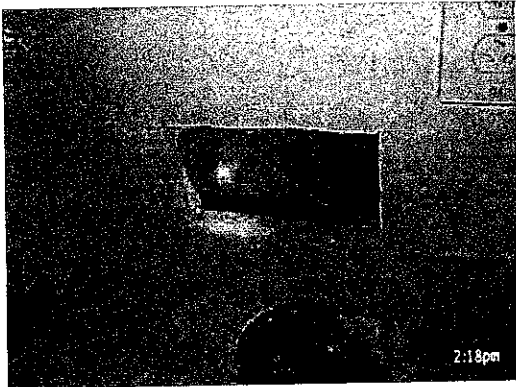
Exploratory Opening #14 1401



Opening 14-A



Opening 14-B



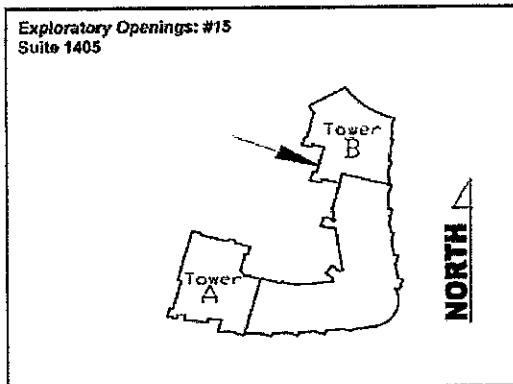
Opening 14-C



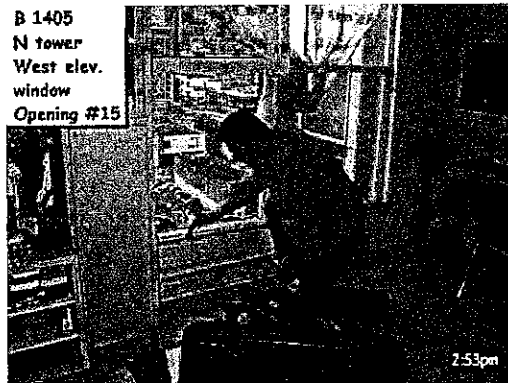
Opening 14-D

Pacific Point

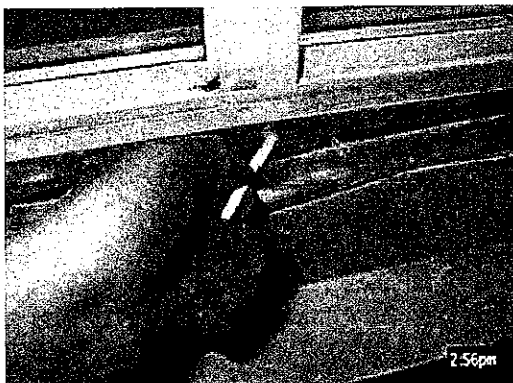
Exploratory Opening #15 1405



Opening 15-A



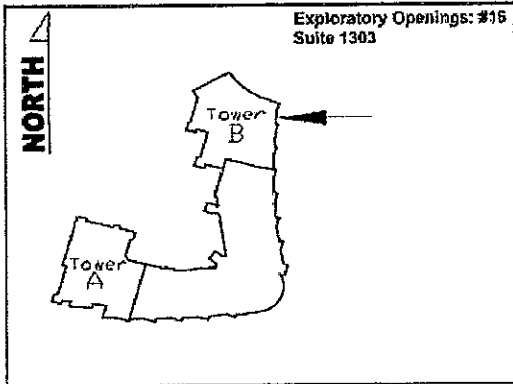
Opening 15-B



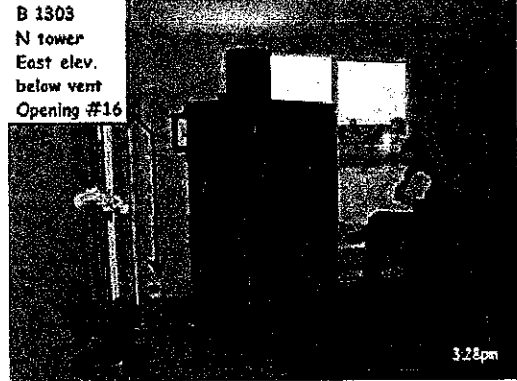
Opening 15-C

Pacific Point

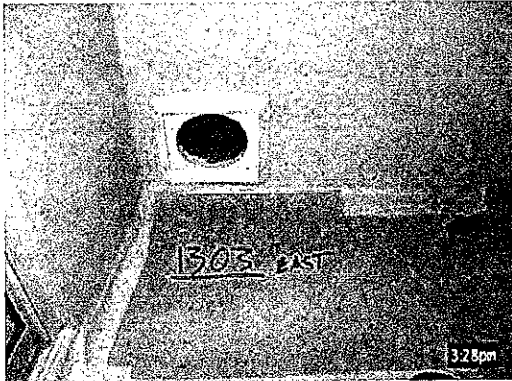
Exploratory Opening #16 1303



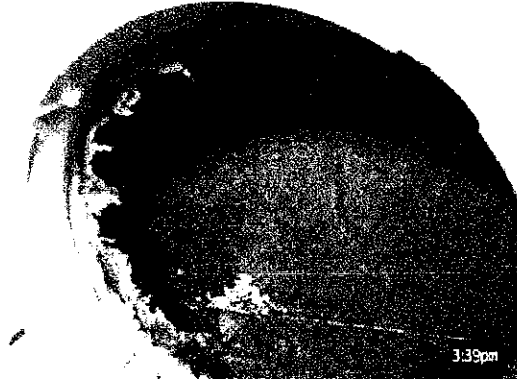
Opening 16-A



Opening 16-B



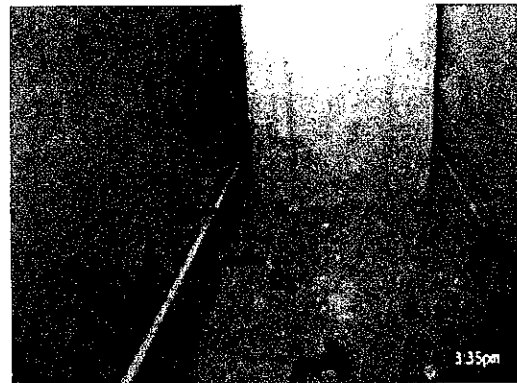
Opening 16-C



Opening 16-D



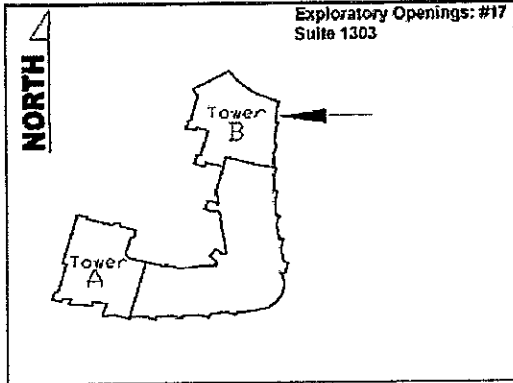
Opening 16-E



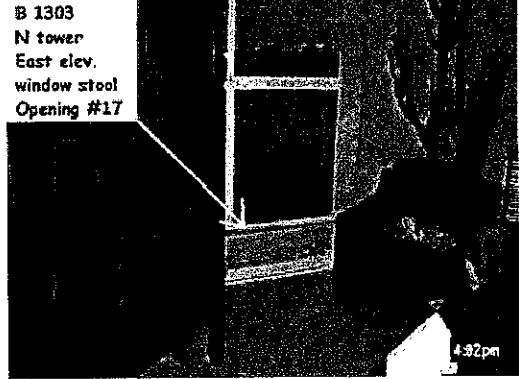
Opening 16-F

Pacific Point

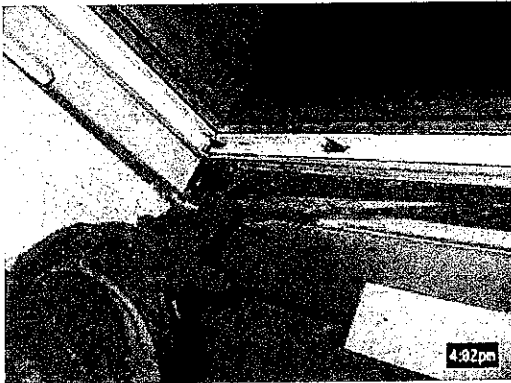
Exploratory Opening #17 1303



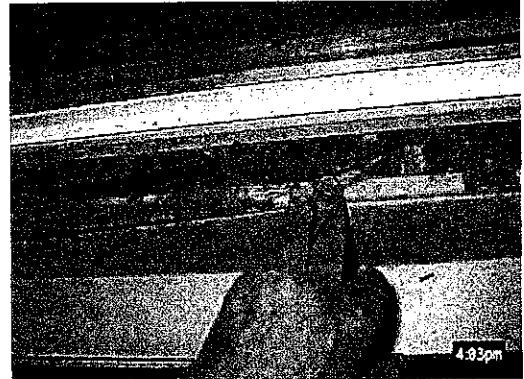
Opening 17-A



Opening 17-B



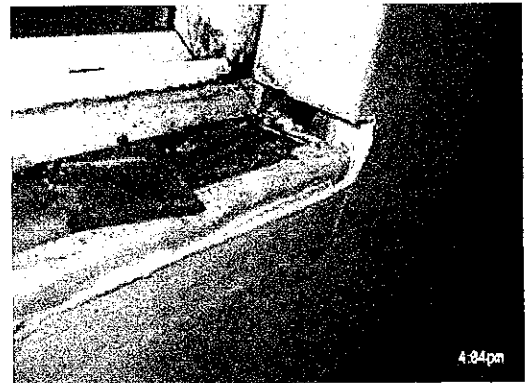
Opening 17-C



Opening 17-D



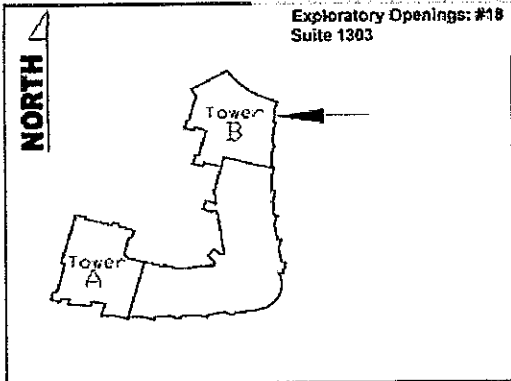
Opening 17-E



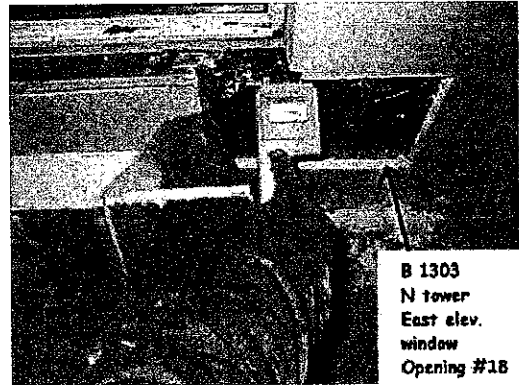
Opening 17-F

Pacific Point

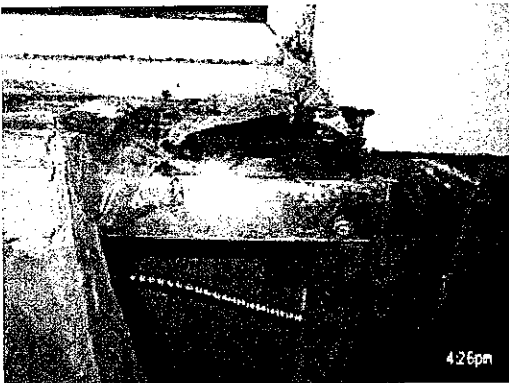
Exploratory Opening #18 1303



Opening 18-A



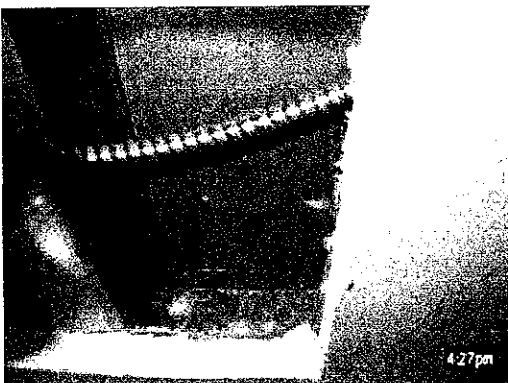
Opening 18-B



Opening 18-C



Opening 18-D



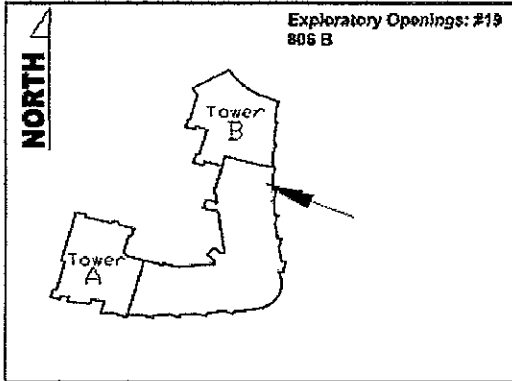
Opening 18-E



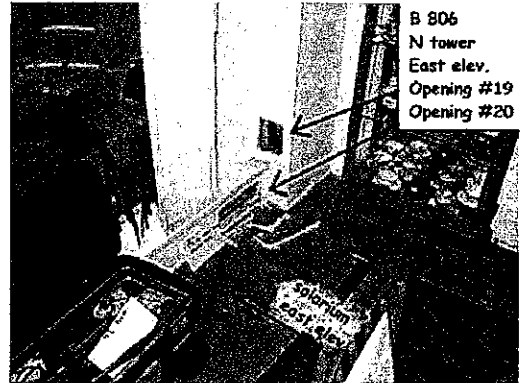
Opening 18-F

Pacific Point

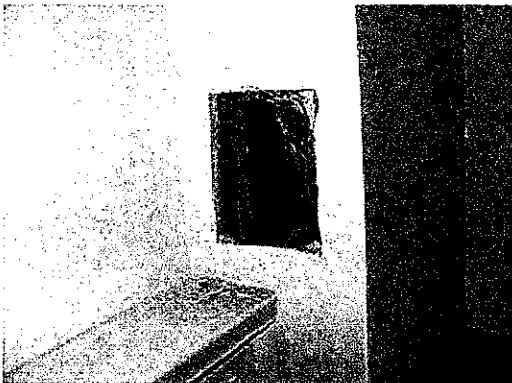
Exploratory Opening #19 806 B



Opening 19-A



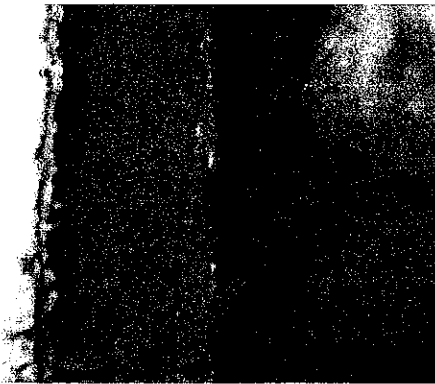
Opening 19-B



Opening 19-C



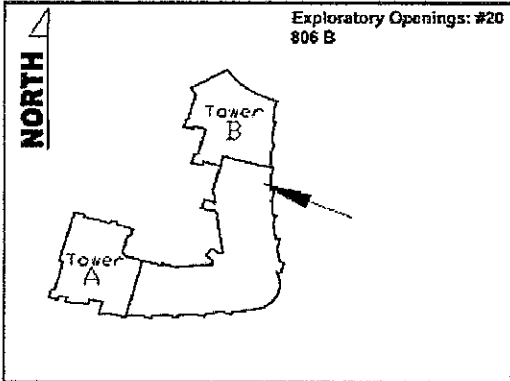
Opening 19-D



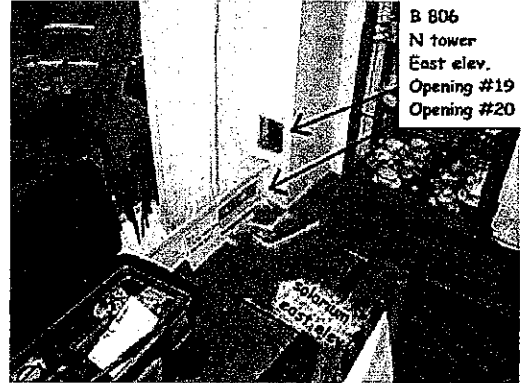
Opening 19-E

Pacific Point

Exploratory Opening #20 806 B



Opening 20-A



Opening 20-B



Opening 20-C



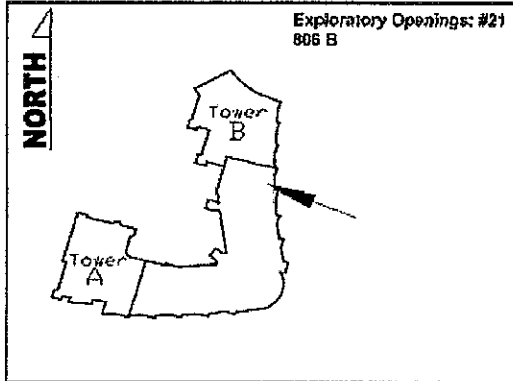
Opening 20-D



Opening 20-E

Pacific Point

Exploratory Opening #21 806 B



Opening 21-A



Opening 21-B



Opening 21-C



Opening 21-D



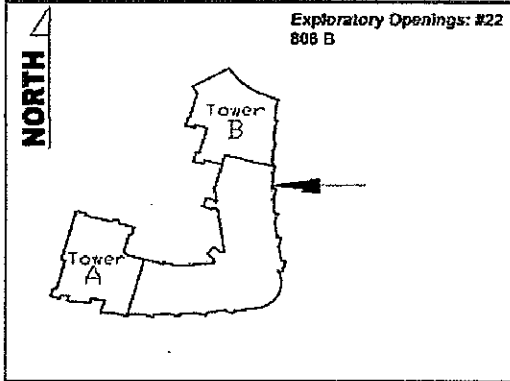
Opening 21-E



Opening 21-F

Pacific Point

Exploratory Opening #22 806 B



Opening 22-A



Opening 22-B



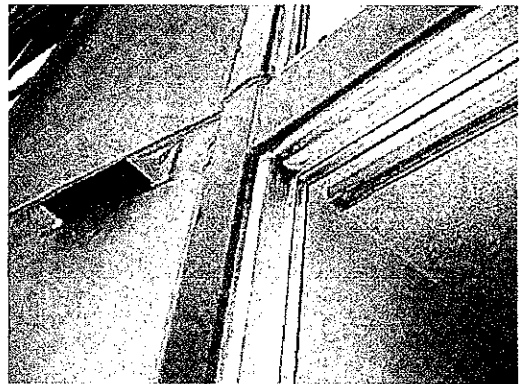
Opening 22-C



Opening 22-D



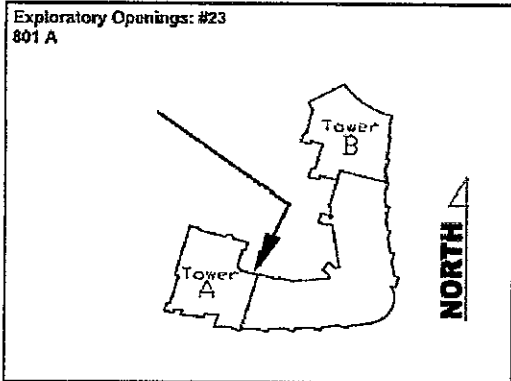
Opening 22-E



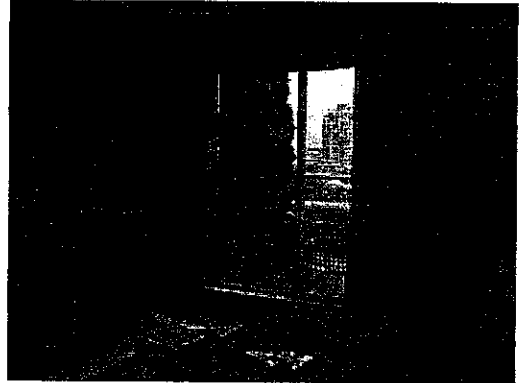
Opening 22-F

Pacific Point

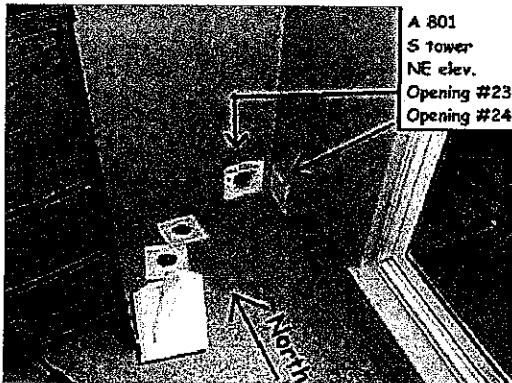
Exploratory Opening #23 801 A



Opening 23-A



Opening 23-B



Opening 23-C



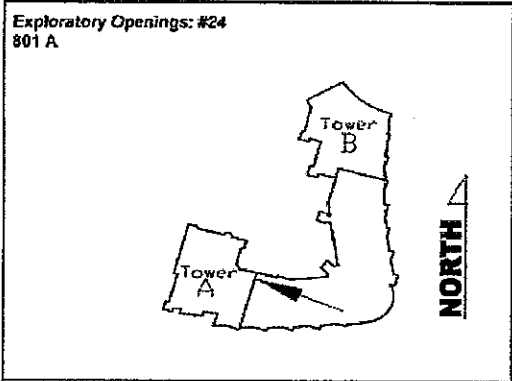
Opening 23-D



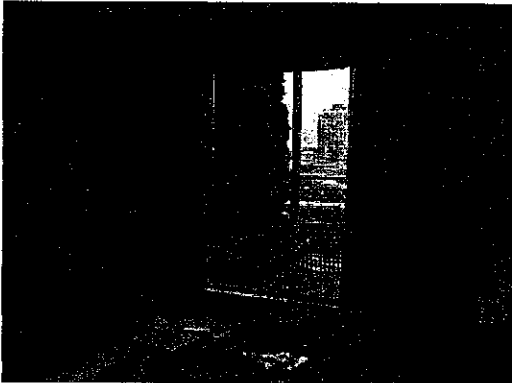
Opening 23-E

Pacific Point

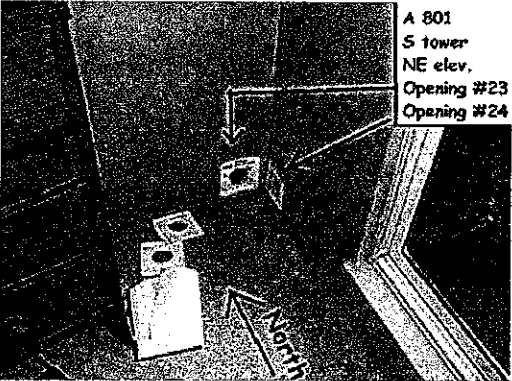
Exploratory Opening #24 801 A



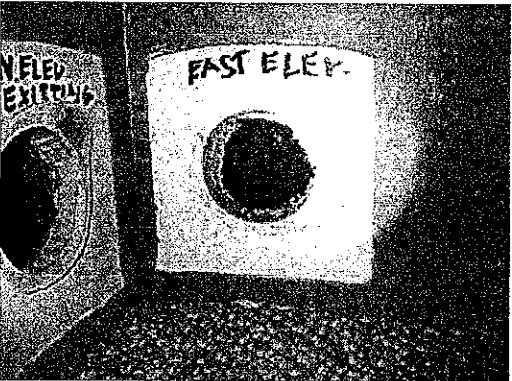
Opening 24-A



Opening 24-B



Opening 24-C



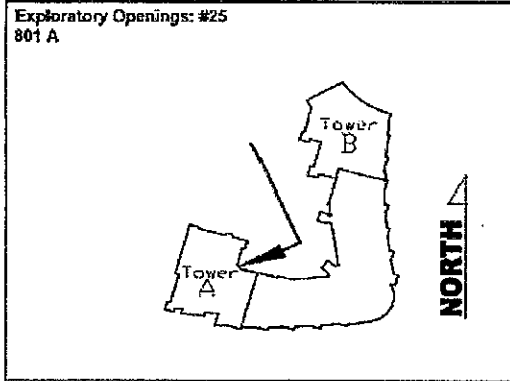
Opening 24-D



Opening 24-E

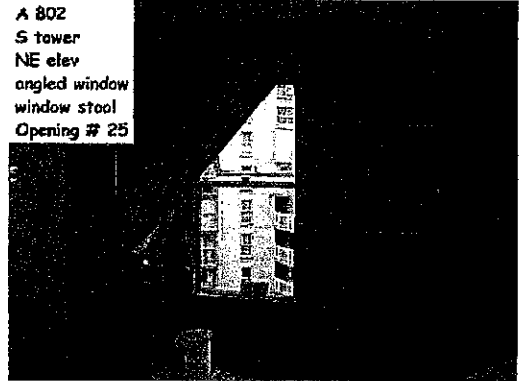
Pacific Point

Exploratory Opening #25 801 A

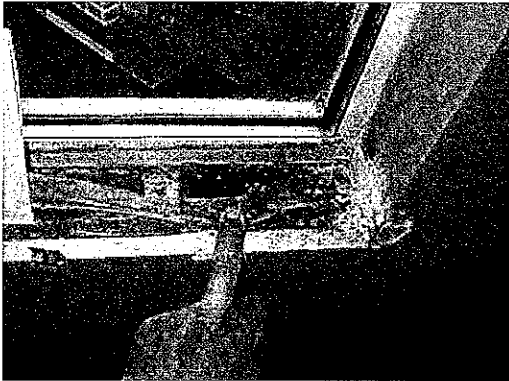


Opening 25-A

A 802
S tower
NE elev
angled window
window stool
Opening # 25



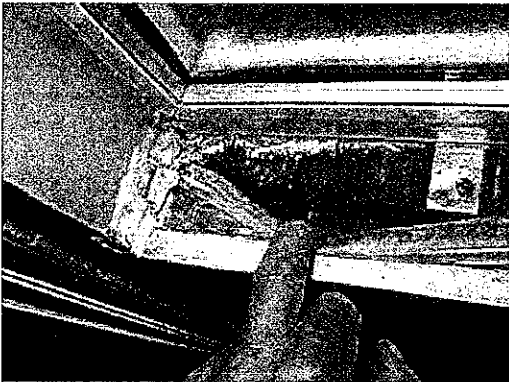
Opening 25-B



Opening 25-C



Opening 25-D



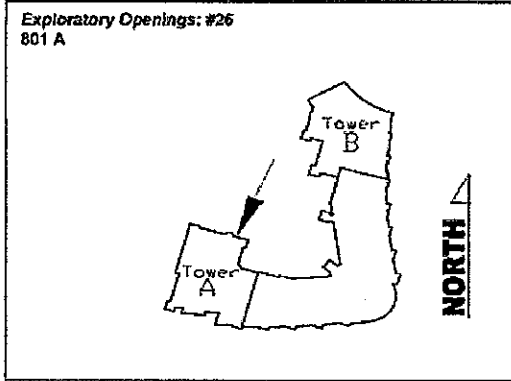
Opening 25-E



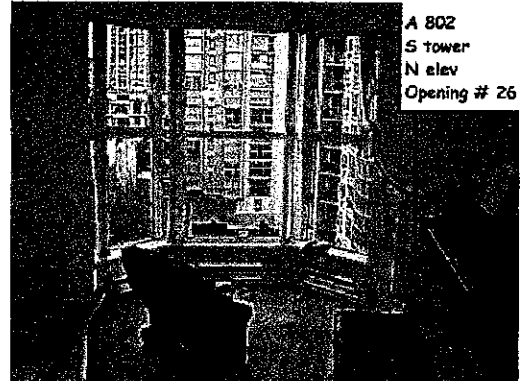
Opening 25-F

Pacific Point

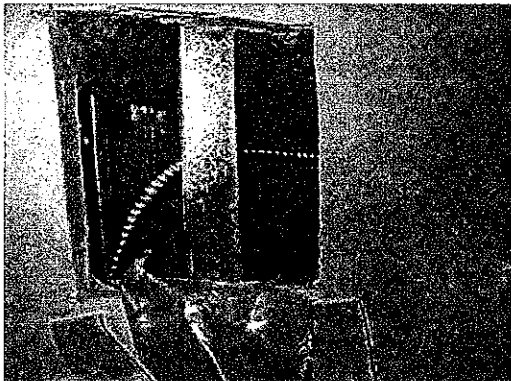
Exploratory Opening #26 801 A



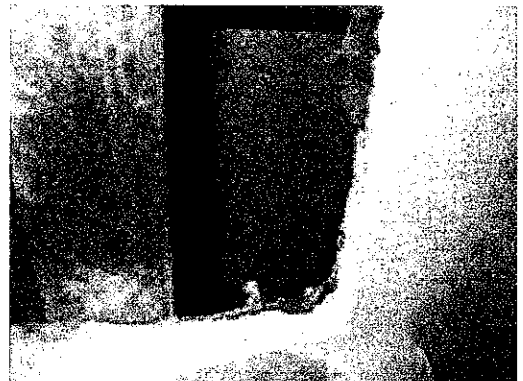
Opening 26-A



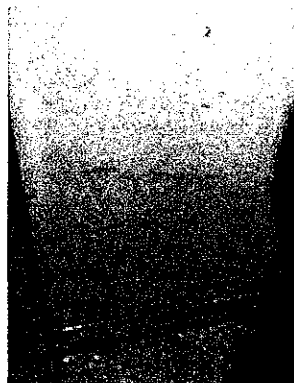
Opening 26-B



Opening 26-C



Opening 26-D



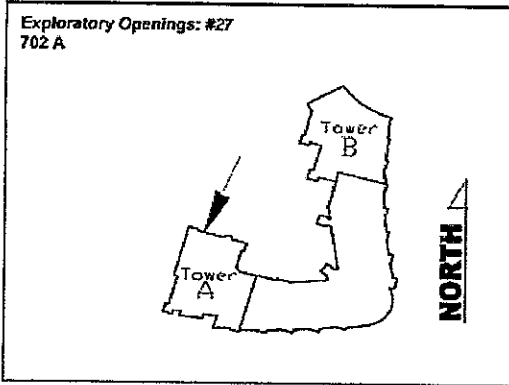
Opening 26-E



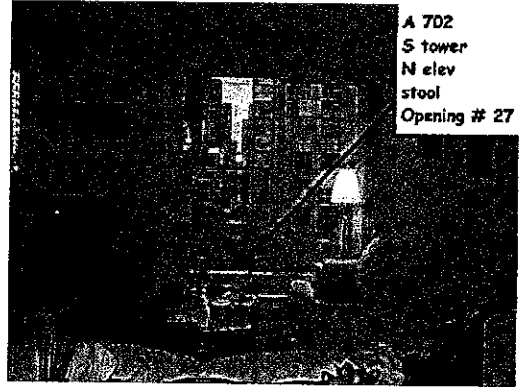
Opening 26-F

Pacific Point

Exploratory Opening #27 702 A



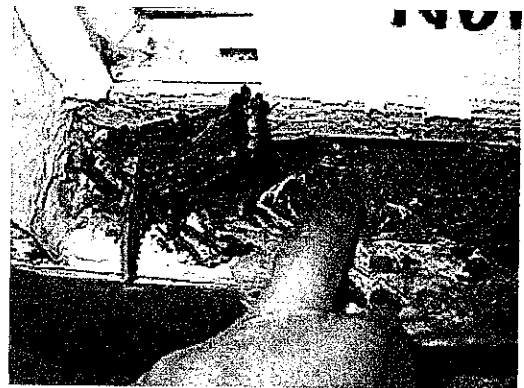
Opening 27-A



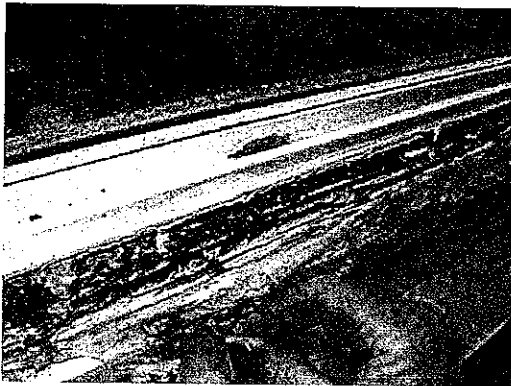
Opening 27-B



Opening 27-C



Opening 27-D



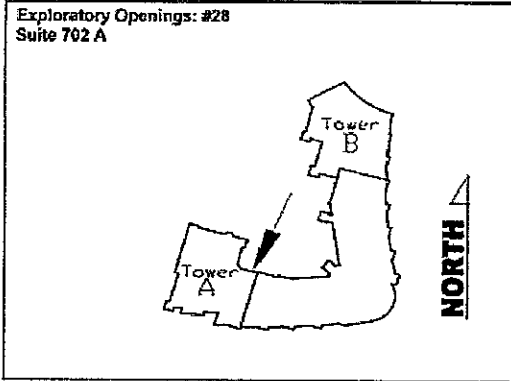
Opening 27-E



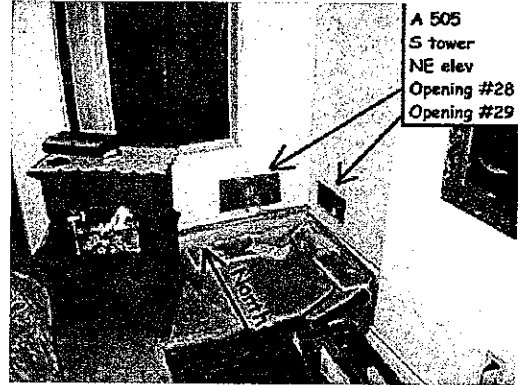
Opening 27-F

Pacific Point

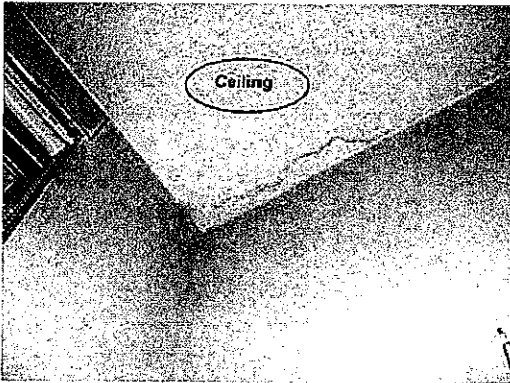
Exploratory Opening #28 505 A



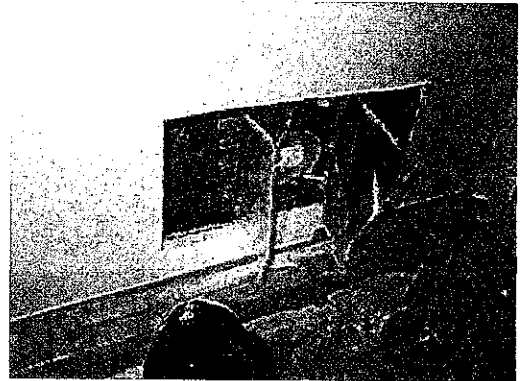
Opening 28-A



Opening 28-B



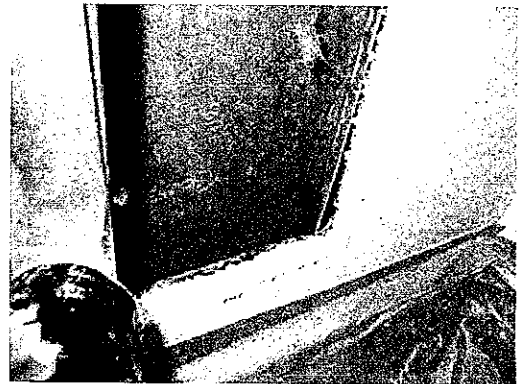
Opening 28-C



Opening 28-D



Opening 28-E



Opening 28-F

APPENDIX F – WATER PENETRATION TESTING

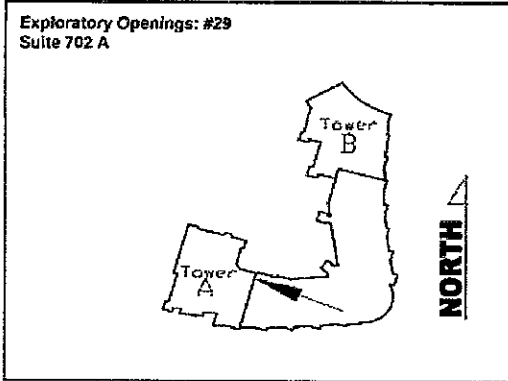
Water Penetration Test Results

Test 1	Suite 208A Punch window, facing east	Photos
	<p>Observations:</p> <ul style="list-style-type: none"> • Air Pressure differential 0 Pa. • Prior to the first cycle, water leakage into the interior of the suite occurred within the lower right condensation channel (as viewed from the interior). Water entered through the weephole. • After 2 minutes of water spray. The water within the channel stabilized at a level 1/8" above the drainage weephole. • The test was terminated to proceed with cyclic depressurization testing. 	<p>W1-SetupA W1-SetupB W1-SetupC W1-01</p>
Test 2	Suite 208A Punch window, facing east	Photos
	<p>Observations: (As viewed from the interior.)</p> <ul style="list-style-type: none"> • Air Pressure differential 50 Pa (across specimen) • Prior to and during the first cycle, water ingress into the interior of the suite occurred in both the upper and lower condensation channels. • Ingress occurred prior to cycle #1 (prior to depressurization). The ingress occurred in the upper left condensation channel, adjacent to the operable vent. It appeared that the moe-hair seal was the point of ingress. The channel filled to a depth of ¼" after depressurization. • Ingress occurred prior to cycle #1 (prior to depressurization). The ingress occurred in the condensation channel beneath the lower right fixed lite. Water was entering through the weephole. At the start of cycle 1 (depressurization) the channel completely filled. • Ingress occurred at the start of cycle #1 (after depressurization). The ingress occurred in condensation channel beneath the lower left fixed lite. Water was entering through the weephole. The depth of water increased throughout the test, however the water did not flow over the channel. • Leak #1 was first observed 3rd cycle, 4th minute. The leak was first viewed through an exploratory opening in the interior gypsum. (The opening was located beneath the window, aligned with the vertical mullion) Water drops were observed within the wall cavity. The water drops fell with a frequency of 1 drop per 4 seconds. <p>A review of the window after the completion of the test involved removal of the wood stool and removal of additional interior gypsum beneath the window. Water was observed to be dripping through a hardware fastener penetration in the bottom surface of the condensation channel. A significant amount of water was pooling on the plywood liner beneath the window frame. The water had spread horizontally across the length of the liner. At intermittent locations the water spilled over the front.</p>	<p>W2-01 W2-02 W2-03 W2-04 W2 – Post test</p>

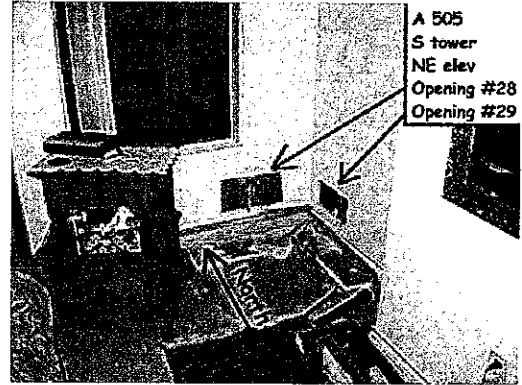
Test 3	Suite 208A Punch window, facing east	Photos
	<p>Observations: (As viewed from the interior.)</p> <ul style="list-style-type: none"> • Air Pressure differential 100 Pa (across window specimen) • Prior to and during the first cycle, water ingress into the interior of the suite occurred in both the upper and lower condensation channels. • Ingress occurred prior to cycle #1 (prior to depressurization) in the upper left condensation channel, adjacent to the operable vent. It appeared that the moe-hair seal was the point of ingress. • Leak #1: Ingress occurred prior to cycle #1 (prior to depressurization). The ingress occurred in the condensation channel beneath the lower right fixed lite. Water was entering through the weephole. At the start of cycle 1 (depressurization) the condensation track completely filled. After 1 minute into cycle 1, the channel overflowed at the right corner miter. The test was terminated at that time. • Ingress occurred at the start of cycle #1 (after depressurization) in the condensation channel of the lower left fixed lite. Water was entering through the weephole. 	W3-01
Test 4	Suite 208A Punch window, facing east	Photos
	<p>Observations: (As viewed from the interior.)</p> <ul style="list-style-type: none"> • Air Pressure differential 150 Pa (across window specimen) • Prior to the test the weepholes in the condensation channels were sealed to prevent water ingress at these locations. • Leak # 1: Ingress occurred prior to cycle #1 (prior to depressurization) in the upper left condensation channel, adjacent to the operable vent. It appeared that the moe-hair seal was the point of ingress. The channel filled with water and overflowed within the 45 seconds of the first cycle at which time the test was terminated. 	W4-01
Test 5	Suite 208A Punch window, facing east	
	<p>Observations: (As viewed from the interior.)</p> <ul style="list-style-type: none"> • Air Pressure differential 150 Pa (across window specimen) • Prior to the test the weepholes in the condensation channels were sealed to prevent water ingress at these locations. Sheet polyethylene was taped over the operable vent to restrict water ingress. • Leak #1: Ingress occurred in cycle 1 @ 45 seconds at the lower left fixed lite. Water entered between the glazing and the glazing tape, at the interface between the vertical mullion and the lower frame. The water filled the condensation channel. The condensation channel overflowed and the test was terminated in the 3rd minute of the 2nd cycle. • Ingress occurred in cycle 1 @ 4minutes in the lower right fixed lite. Water entered between the glazing and the glazing tape, at the interface between the vertical mullion and the lower frame. Water continued to enter until the test was terminated. 	W5-01 W5-02 W5-03

Pacific Point

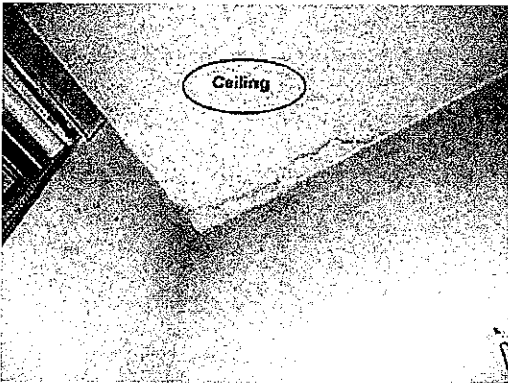
Exploratory Opening #29 505 A



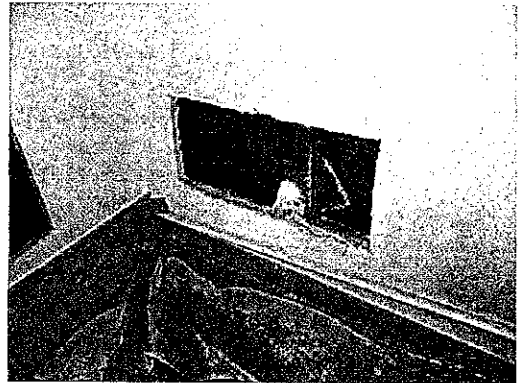
Opening 29-A



Opening 29-B



Opening 29-C



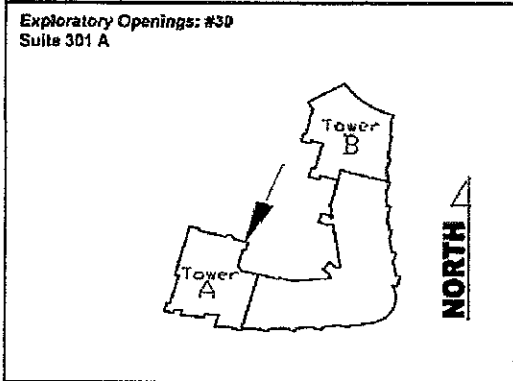
Opening 29-D



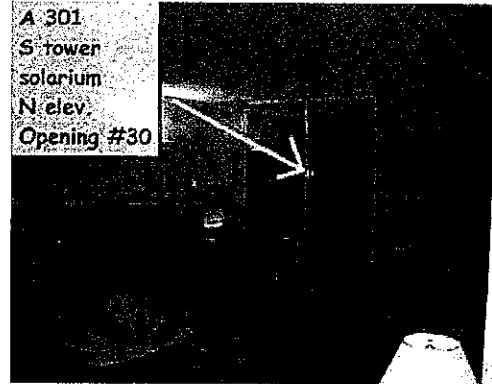
Opening 29-E

Pacific Point

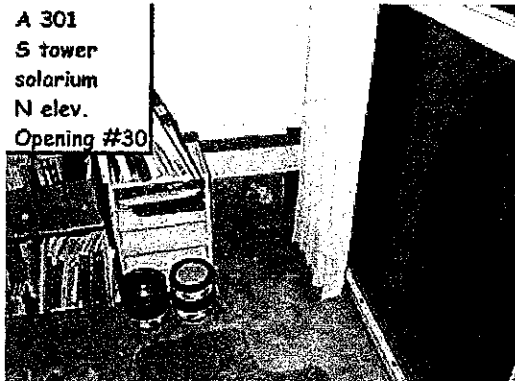
Exploratory Opening #30 301 A



Opening 30-A



Opening 30-B



Opening 30-C



Opening 30-D



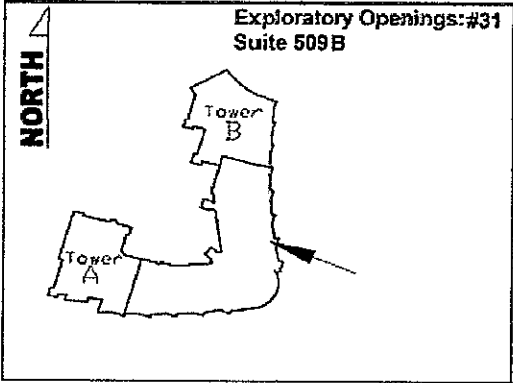
Opening 30-E



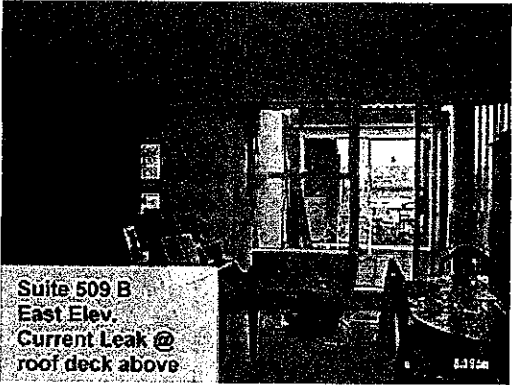
Opening 30-F

Pacific Point

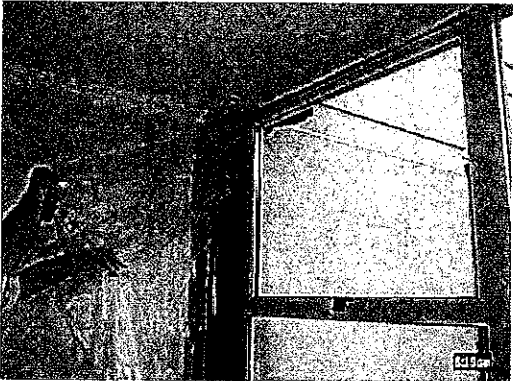
Exploratory Opening #31 509 B



Opening 31-A



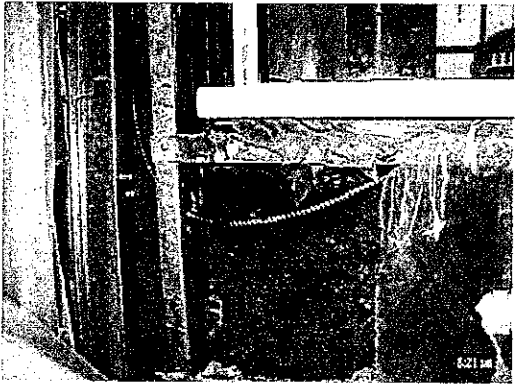
Opening 31-B



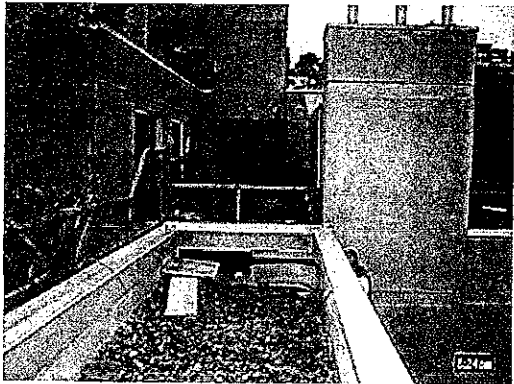
Opening 31-C



Opening 31-D



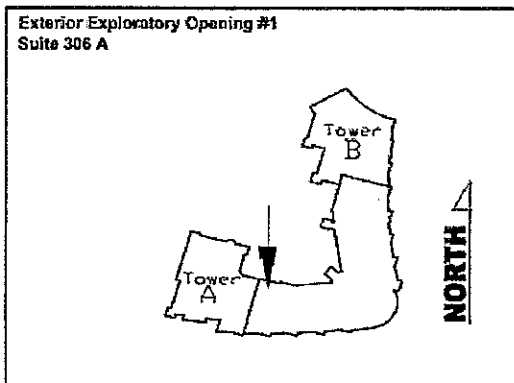
Opening 31-E



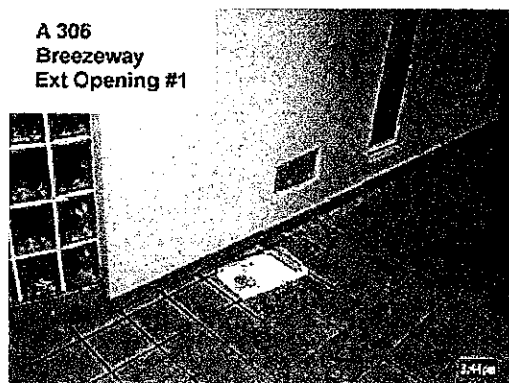
Opening 31-F

Pacific Point

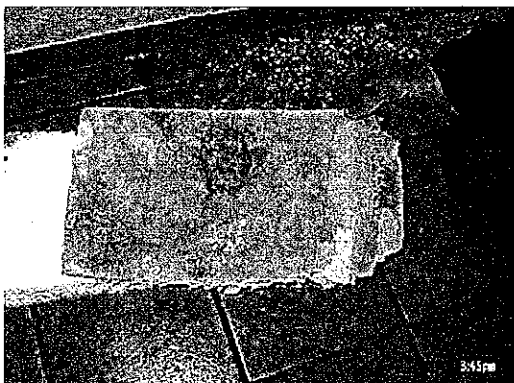
Exterior Exploratory Opening #1 A 306



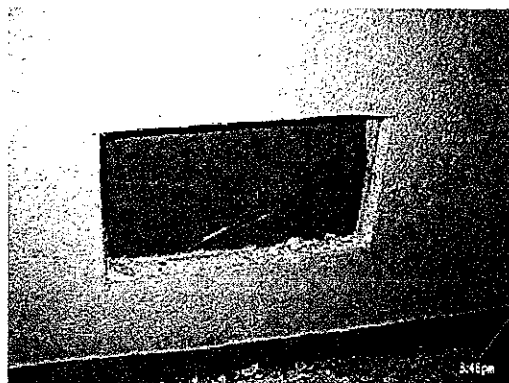
Ext Exp 1-A



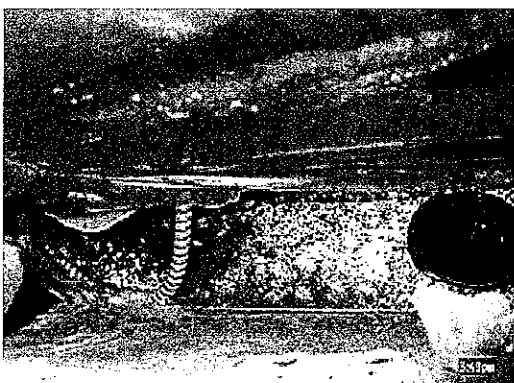
Ext Exp 1-B



Ext Exp 1-C



Ext Exp 1-E



Ext Exp 1-F



Ext Exp 1-G

- Extension pipes are not incorporated into the roof deck overflow scuppers. (Photo J-03)
- RDH reviewed metal flashing debris and discarded fasteners that were found against the membrane by a resident handyman. (Photo J-04)
- Corroded clamp fasteners and tenting in the EPDM membrane around plumbing stack vents. (Photo J-05)
- Corrosion on the compression clamps and fasteners at various roof drains.
- Failed sealant was observed on the joints between cap flashing segments. (Photo J-06)
- Long-term bird infestation was observed beneath and around the sloped metal roof facades. (Photo J-07)
- The parapet terminates into the sloped metal roof over the northwest enclosed balcony. (Photo J-08)
- One of the roof decks has been upgraded to a modified bitumen SBS torch-on roof system.

Roof Observations – Tower B

- The main roof assembly consists of the following: gravel ballast, filter cloth, rigid insulation, EPDM membrane.
- A parapet encloses the perimeter of the main roof. In some areas the EPDM membrane terminates at the inner sidewall of the parapet. A metal flashing covers this interface. In other areas, the EPDM membrane extends up the side and onto the top surface of the parapet. In this configuration the membrane on the inner side of the parapet is fully exposed. (Photo K-01)
- At some parapet locations, the EPDM beneath the cap flashing is lapped onto the face of the EIFS cladding. At other locations, the EPDM is terminated beneath the cap flashing and does not lap onto the face of the EIFS cladding. (Photo K-02)
- A segmented metal cap flashing covers the top surface of the parapet. A caulking sealant has been applied at the flat joints between flashing segments. A standing seam joint was observed at various corner joints.
- Failed sealant was noted at various joints in the cap flashing. (Photo K-03)
- A self-adhered membrane was observed beneath the metal cap flashing at various locations. Deterioration of the membrane was observed at locations where the membrane application extends below the side flange of the metal cap flashing (exposure to sunlight). (Photo K-04)
- An EPDM patch at the deck interface with the parapet was exposed for review. The patch is not bonded. Water was observed beneath the patch. (Photo K-01)

- Failed bond was observed at various EPDM seams on the inner face of the parapet. (Photo K-05)
- Tenting of the EPDM was observed at various exposed locations on the parapet. (Photo K-06)
- A ¼" diameter hole through the EPDM was noted on an exposed sidewall of the parapet. (Photo K-01)
- The parapet of a 16th floor roof deck is positioned in front of an enclosed balcony window. (Photo K-07)
- Corrosion was observed on the sloped metal roof fasteners over the enclosed balcony on the 16th floor. (Photo K-08)
- The cap flashings on the parapets do not have crickets incorporated at the saddle flashing interfaces with adjoining walls. Typically the EIFS terminates onto the top surface of the cap flashing. At some locations the sealant at this interface has failed. (Photo K-09)
- Corrosion was observed on the metal cap flashing where the paint coating is discontinuous.
- The parapet drain scupper at a secondary roof was severely corroded. Additionally the penetration through the exterior EIFS cladding was not sealed with caulking. (Photo K-10)
- Only one roof drain was observed on the main roof. A perforated metal shroud that retains the gravel ballast encloses the drain. Significant corrosion was observed on the fasteners that retain the compression clamp. Deteriorated sealant was observed at this interface. The location of the second drain was not confirmed. (As indicated on the drawings). (Photo K-11)
- Bird infestation was observed beneath and around the sloped metal roof facades.

Roof Observations – Connector Building

- The main roof assembly consists of the following: gravel ballast, filter cloth, rigid insulation, EPDM membrane. Concrete pavers are typically observed on the accessible deck areas. A wood deck assembly is noted at one deck area.
- A concrete parapet encloses the various roof and deck areas. Typically the EPDM membrane extends up the parapet and terminates at the inner sidewall. A metal base flashing covers this interface. Other low parapet configurations are noted. (Photo L-01, L-02)
- A segmented metal cap flashing covered the top surface of the parapet. A caulking sealant has been applied at the flat joints between flashing segments. A standing seam joint is typical at the corner joints.

- New saddle flashings were observed at some of the interfaces between parapet cap flashings and exterior walls. At one location self-adhered membrane is located beneath the cap flashing. (Photo L-03)
- Failed / discontinuous caulking was noted at several saddle flashings. (Photo L-04)
- At several locations the metal cap flashing is terminated into the EIFS cladding. A bead of caulking along the interface was noted at the locations reviewed; however the condition of the caulking often appears to be poor. (Photo L-05)
- At some locations concentrated run-off staining is present on the exterior walls below the parapets. (Photo L-06)
- At one location reviewed the parapet is terminated within 1.5 "of the window glazing. (Photo L-07).
- At one location, the top of the parapet interfaces with the window frame. The parapet cap flashing interrupts the continuity of the sill flashing. Caulking is located along this interface, however it is in poor condition. (Photo K-08)
- Corrosion on the sloped metal roof fasteners is typical. (Photo K-09)
- The gutters at the perimeter of the sloped metal roofs are typically lined with EPDM membrane. At several locations, poor detailing was observed where the gutter assembly interfaces with adjoining exterior walls. (Photo K-10)
- Significant ponding water was typically observed within the gutters of the sloped metal roofs. Debonded membrane was observed at the seams in the EPDM membrane. (Photo K-11)
- Failed sealant and dislodged joints in base flashings were noted. (Photo K-12)
- Large quantities of remedial sealant were noted on the metal flashings throughout.
- Debonded EPDM membrane was observed at the membrane termination into the concrete parapet. (Others were uncovered at this location during a leak investigation. The location of the water ingress was not confirmed) (Photo K-13)
- A membrane layer was not observed beneath the metal cap flashing on the parapet. (Roof-deck walkway.) A similar condition was observed at a nearby parapet located above a current leak. (Photo K-14)

APPENDIX G – ROOF OBSERVATIONS