

UNDER

THE COMMISSIONS OF INQUIRY ACT 1908

IN THE MATTER OF

**ROYAL COMMISSION OF INQUIRY INTO BUILDING
FAILURE CAUSED BY CANTERBURY
EARTHQUAKES**

**KOMIHANA A TE KARAUNA HEI TIROTIRO I NGA
WHARE I HORO I NGA RUWHENUA O WAITAHA**

AND IN THE MATTER OF

THE CTV BUILDING COLLAPSE

**STATEMENT OF EVIDENCE OF LEONARD PAGAN
IN RELATION TO THE CTV BUILDING**

DATE OF HEARING: COMMENCING 25 JUNE 2012

**STATEMENT OF EVIDENCE OF LEONARD PAGAN IN RESPECT OF THE CTV
BUILDING**

1. My full name is Leonard William Pagan. I live in Christchurch.
2. I am employed by Rawlinsons Ltd as a Quantity Surveyor and have been since November 2006. On a day to day basis I price building projects, estimate quantities of materials needed and prepare tenders. Following the 4 September 2011 earthquake I was heavily involved in preparing estimates for the cost of earthquake repairs.
3. On 29 September 2010 I went to the CTV building at 249 Madras Street to carry out a walk through inspection for the purpose of reviewing earthquake damage and to prepare an estimated cost of repairs.
4. I do not know who instructed Rawlinsons but I presume that the company was instructed by the owner of the building, Madras Equities Ltd.
5. I went around the building with the Building Manager John Drew and with David Coatsworth, a structural engineer from CPG Ltd. My report of 4 October 2010 [BUI.MAD249.0386] records both external and internal damage. I recall inspecting the outside of the building, the ground level car park and every floor.
6. Mr Drew and I were walking around looking primarily at the aesthetic damage to the building, which mainly consisted of cracks in plasterboard wall linings, wall junctions and joints and broken glass panes. I recall that Mr Coatsworth would sometimes be walking together with us but at times he was off looking at other parts of the building. For example I can recall one occasion when John Drew and I were looking at the ceiling whereas Mr Coatsworth would be off looking at the panel joints. I did not take much account of what Mr Coatsworth was taking notice of, but I do remember that he looked at the shear walls at both the north and south ends of the building. I particularly recall his interest in the shear walls at ground floor level.
7. I did see that both the north and south shear walls had hairline cracks in them. These were diagonal. From my report dated 4 October 2010 it would appear that I have discussed the cracks in the south wall with David Coatsworth at the time of our

inspection because I have written "from the initial structural investigation these are believed to be superficial only at this point". That is not a conclusion which I was qualified to draw and must have been advised by David Coatsworth in this regard. I do not have any photographs of the cracking in the southern shear wall.

8. It is my recollection that Mr Coatsworth said that he wanted to do some further investigation, which I think related to the southern shear wall. This would have been intrusive investigation work.
9. I did not look behind any ceiling panels but Mr Coatsworth looked inside ceiling spaces.
10. I recall that the inspection took 3 to 4 hours.
11. I took a number of photos during the inspection initially with my camera and then with my cell phone. I now produce those as an exhibit **[BUI.MAD249.0386A and .0386B]**. The only photo that I believe is of the north shear wall area is 013 **[BUI.MAD249.0386A.4]**.
12. I recall speaking to some women on a lower floor and recall that a couple of men on higher floors spoke to John Drew directly during our inspection. Otherwise I do not recall talking to anyone in the building.
13. From what I viewed and in the absence of a structural report I believed the visual damage sustained to the CTV building in the 4 September 2010 earthquake was repairable and from an aesthetic perspective the damage did not look that bad. I had certainly seen far worse in the CBD by this point. However I am not a structural engineer and I was assessing the damage that was visible for the purpose of preparing an estimate of how much the repairs would cost, I drew no conclusions about the structural integrity of the building.
14. My recollection is that the worst of the damage was on the first and third floors (level 2 and 4). This accords with the Indicative Estimate I prepared **[BUI.MAD249.0386.3]**. There was a partition wall on level 3 or 4, I cannot recall exactly which floor, that had quite a significant crack in the plasterboard

15. The western side of the building was the worst in terms of damage to plasterboard.
16. My report for 2010 advised John Drew that the estimated cost of repairs to the building was in the amount of \$290,000.00 excluding GST.
17. I did expect to receive a copy of Mr Coatsworth's report from Madras Equities but this was not provided to Rawlinsons before the 22 February 2011 earthquake.

Signed: 

Leonard Pagan

Date: 22 MAY 2012



QUANTITY SURVEYORS
CONSTRUCTION CONSULTANTS
COST ENGINEERS

4 October 2010

The Clinic
192 Gloucester Street
CHRISTCHURCH

Attention: John Drew

Dear John

CTV BUILDING – EARTHQUAKE DAMAGE REVIEW

Further to our building inspection carried out with yourselves and David Coatsworth from CPG on Wednesday the 29th September 2010, we confirm our estimated cost of repairs to the building in the amount of \$290,000 excluding GST. Our estimate is based on the walk through and visual review of the integrity of the above facility following the recent seismic activity.

In general we noted the following during the visual inspection:-

Externally:

- Damaged plaster to ends of spandrel panels at all floors, which will need to be reinstated
- Cracks in ground floor external plaster system which needs to be cut out and reinstated to match
- Damaged soffit lining at fifth floor level to be re-secured, made good and painted
- Cracks in escape stair plastered reveals which need to be re-plastered.

Internally:

- Damaged plasterboard wall linings mostly along the west wall which will need to be filled, stopped and the adjacent walls painted
- Cracks in plasterboard wall junctions which need to be filled, stopped and the adjacent walls painted
- Cracks in plasterboard joints which will need to be filled, stopped and the adjacent walls painted
- Cracks in junction between plasterboard lined walls and ceilings which need to be filled, stopped and the walls painted
- Cracks around junctions between structure (i.e. columns and sheer walls) and plasterboard walls and ceilings which need to be filled, stopped and the adjacent linings painting
- Damaged and bent suspended ceiling grids which need to be repaired
- Hairline cracks in concrete shear walls; from the initial structural investigation these are believed to be superficial only at this point. Provision has been made to make good to the worst effected floors with a plaster finish to match the existing concrete. Some floors have only very minor cracks and have not been plastered.
- Broken glass panes. These panels are on the upper floors and provision has been made for crantage / access equipment to aid in replacement of the glass.
- Damaged plaster joints around stairwell areas which will need to be made good and re-plastered.
- We understand that the Mechanical, Electrical and Plumbing Services are running normally and are largely un-damaged.

Please refer to the attached photos taken 29 September 2010.

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The preliminary estimate of \$290,000 is a rough order of cost based on current construction costs and should be read in conjunction with the following points / clarifications:-

- We have included for likely remedial work required on a best endeavors visual and non invasive basis from a brief walk through the building on Wednesday 29th September 2010. We note that seismic activity, although relatively minor, has occurred since this date and further damage may have occurred which is excluded from the above estimate.
- While we have made every effort we cannot guarantee that we have been able to access all areas of the building and been able to view areas such as (but not limited to) ceiling spaces, sub floors, roof void etc, the above cost does not allow for any potential items not immediately apparent from this visual inspection.
- We have not sighted a written structural report or scope of work. This may indicate further works required and the above estimate does not allow for this. It was noted during the walk through that there may potentially be damage to some concrete shear walls.
- No allowance has been made for any repairs to any services or plant or underground piped systems.
- No allowance for GST, professional fees, provision for inflation, consents and levies and for any costs arising out of loss of revenue, rental, relocation of business etc.

We enclose a copy of our estimate summary for your reference.


Yours sincerely
Rawlinsons Limited





Leonard Pagan
Quantity Surveyor


Ref: EQ Restoration Est - CTV Building Letter 04Oct10.docx


CC: Simon Wearing – Madras Equities

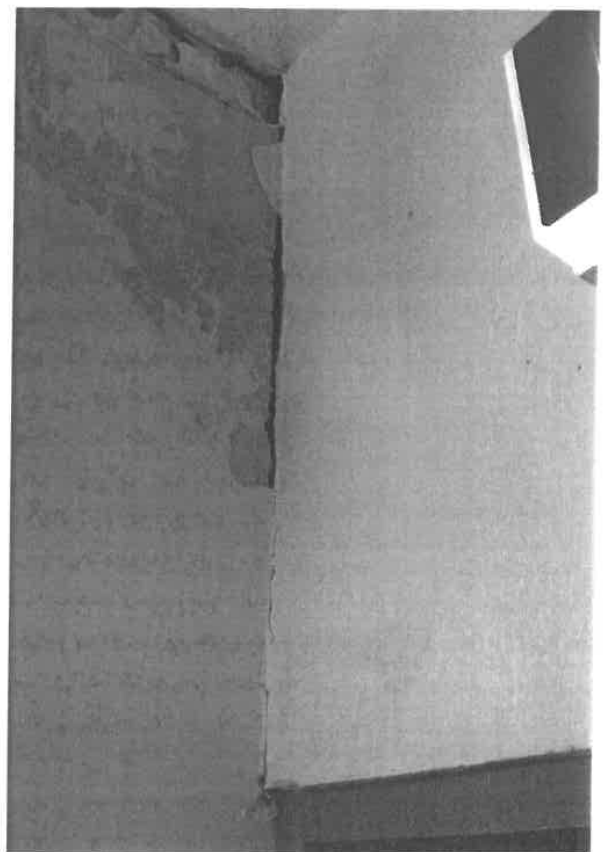
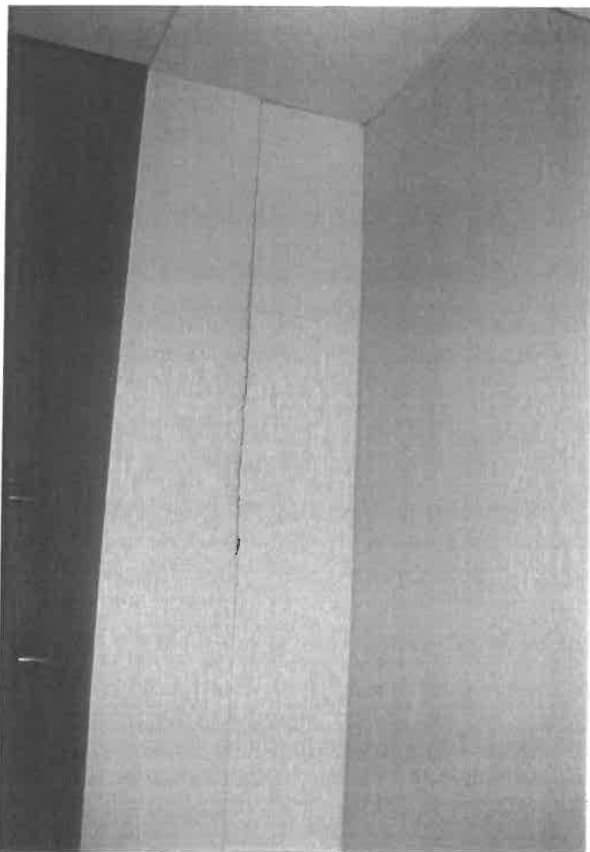
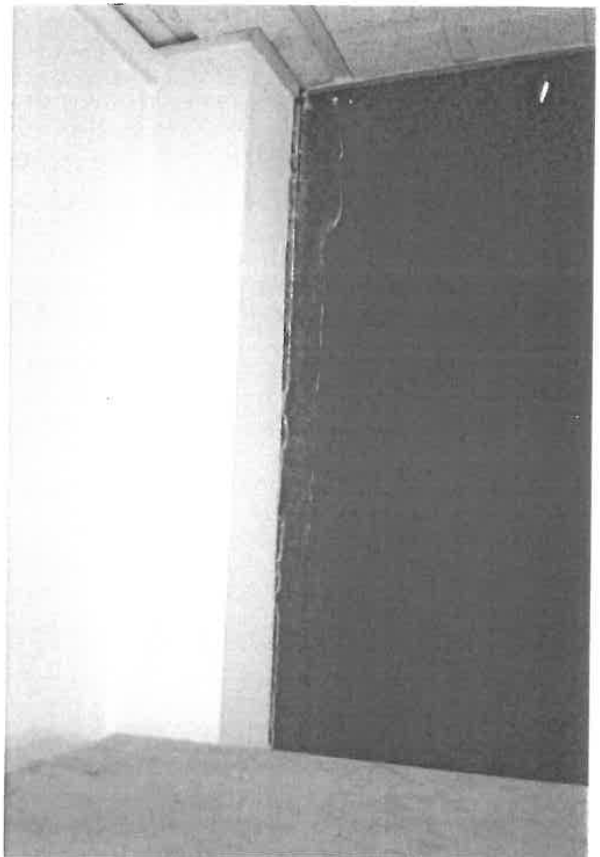
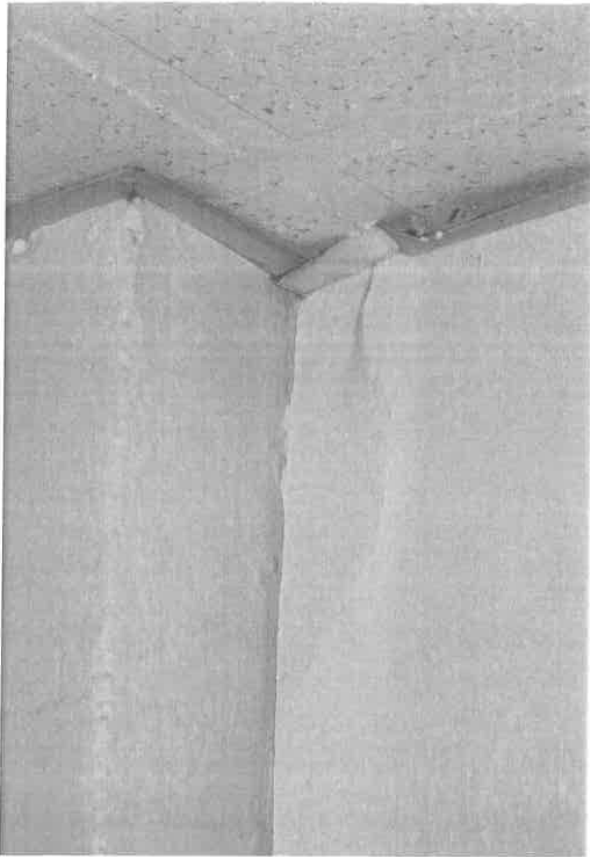
RAWLINSONS LIMITED		4 OCTOBER 2010		 RAWLINSONS		
CTV BUILDING - EARTHQUAKE RESTORATION		INDICATIVE ESTIMATE				
		QANT	UNIT	RATE	SUBTOTAL	TOTAL (rounded)
BASIS OF ESTIMATE						\$ 290,000
Site Visual Inspection with David Coatsworth (CPG)						
Photos from site inspection						
Photocopied layout of existing building						
PRELIMINARIES						72,000
1	Preliminary and General	8%			17,440	
2	Main Contract / Management Margins	10%			21,800	
3	Construction and Estimating Contingency	15%			32,700	
					-	
					-	
EXTERNAL						35,000
4	Scaffolding to external wall south end to repair Spandrel panels	250.00	m2	20.00	5,000	
5	Water blast and chip loose materials (Prep)				2,600	
6	Patch repairs to ends of panels				7,700	
7	Chase crack in external render nth/wst corner app 3.4 long and patch repair to match	1.00	item		1,560	
8	Repairs to top floor soffit lining	1.00	item		5,016	
9	Plaster repair to cracked external escape doorways; approx 400 wide x 800 wide	5.00	no	250.00	1,250	
10	Plaster repairs to external column at 5th floor	1.00	item		10,892	
					-	
GARAGE						3,000
11	Repair crack and re-secure loose hardies board	1.00	item		1,913	
12	Paint rough cast wall following patch repairs	40.30	m2	20.00	806	
					-	
GROUND FLOOR						22,000
13	Strip existing and fix new gib board wall linings	22.40	m2	62.00	1,389	
14	Make good and patch repair existing gib walls (Stopping)	26.88	m2	25.00	672	
15	Form and stop internal corner junction	22.40	m	23.00	515	
16	Form and stop junction between column and ceiling	9.20	m	35.00	322	
17	Re-paint finish existing walls	166.60	m2	15.00	2,499	
18	Provision for general patch repairs and paint finish wall joints for minor works, i.e minor junction cracks	1.00	item		10,000	
19	Solid Plaster patch repairs to concrete / blockwork walls - Walls around stair lobby / wc area	35.84	m2	75.00	2,688	
20	Repair east wall cornice	1.00	item		150	
21	Replacement seal to est façade window	1.00	item	300.00	300	
					-	
LOBBY						

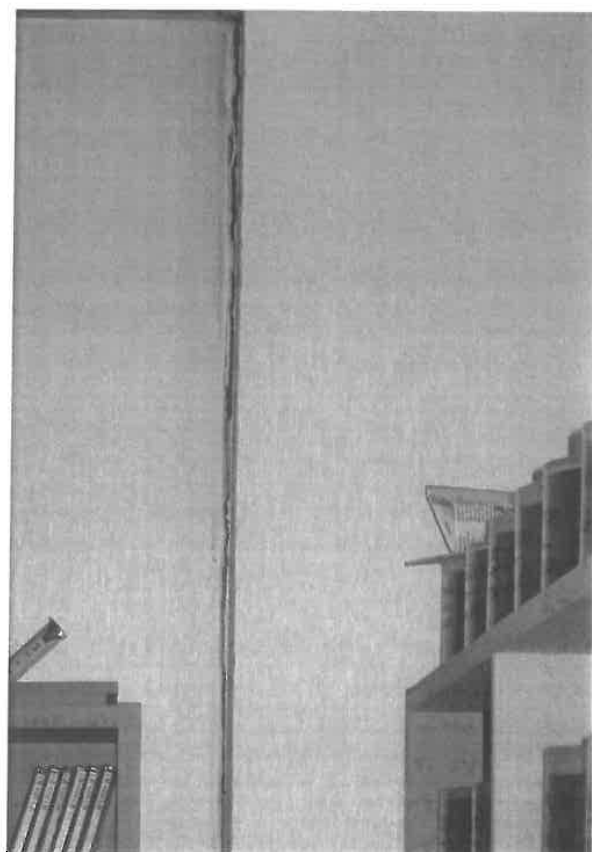
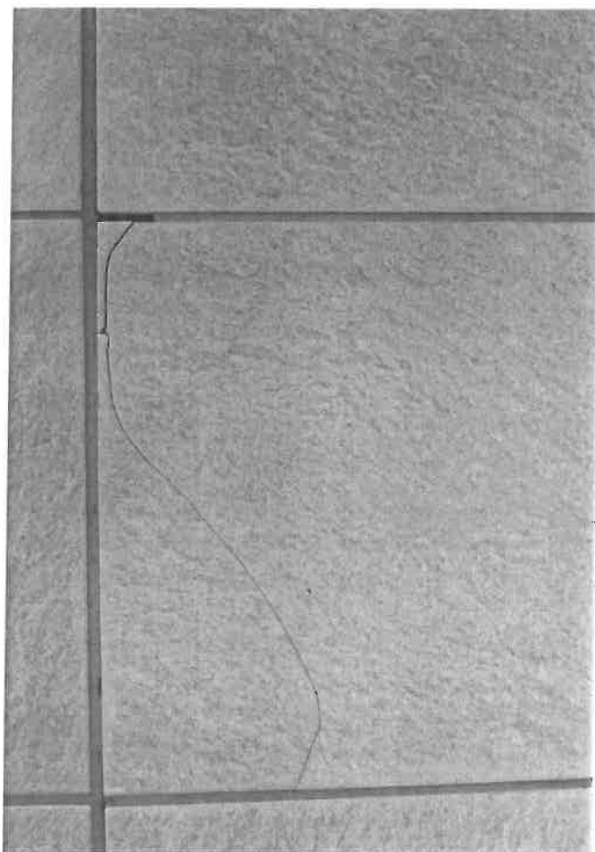
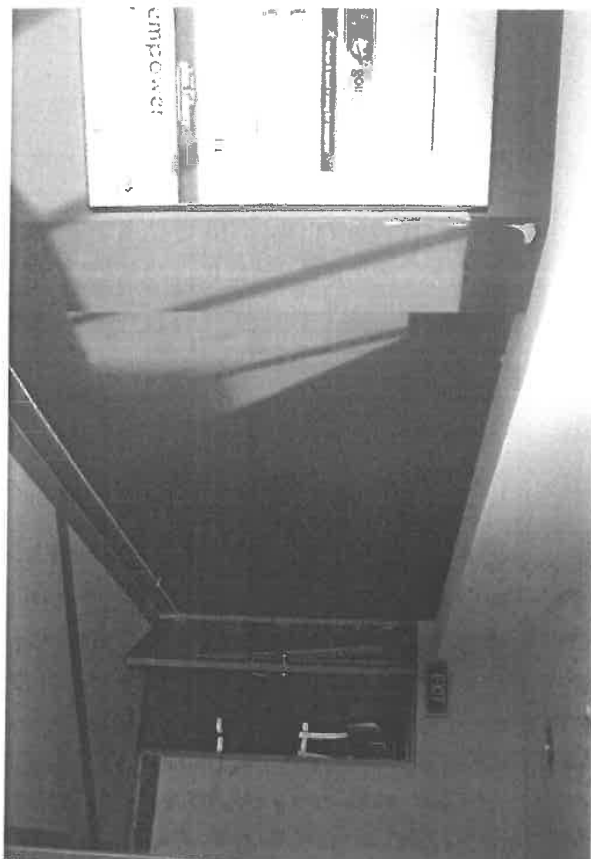
RAWLINSONS LIMITED		4 OCTOBER 2010			 RAWLINSONS	
CTV BUILDING - EARTHQUAKE RESTORATION						
INDICATIVE ESTIMATE						
	QANT	UNIT	RATE	SUBTOTAL	TOTAL (rounded)	
22	1.00	item		360		
23	6.72	m2	75.00	504		
24	55.44	m2	15.00	832		
25	4.00	m2	250.00	1,000		
FIRST FLOOR						33,000
26	91.28	m2	62.00	5,659		
27	172.72	m2	25.00	4,318		
28	411.84	m2	15.00	6,178		
29	23.20	m	23.00	534		
30	15.20	m	35.00	532		
31	1.00	item		8,400		
32	19.60	m2	75.00	1,470		
33	1.00	item	276.00	276		
34	1.00	item	750.00	750		
35	1.00	item	2,664.00	2,664		
36	1.00	item	1,800.00	1,800		
SECOND FLOOR						25,000
37	115.36	m2	62.00	7,152		
38	64.40	m2	25.00	1,610		
39	70.00	m2	15.00	1,050		
40	22.40	m	23.00	515		
41	15.20	m	35.00	532		

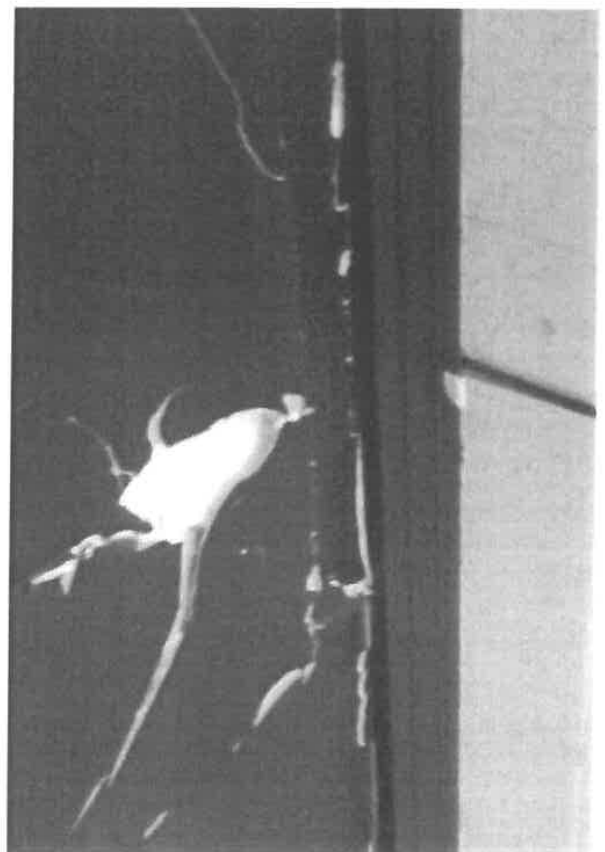
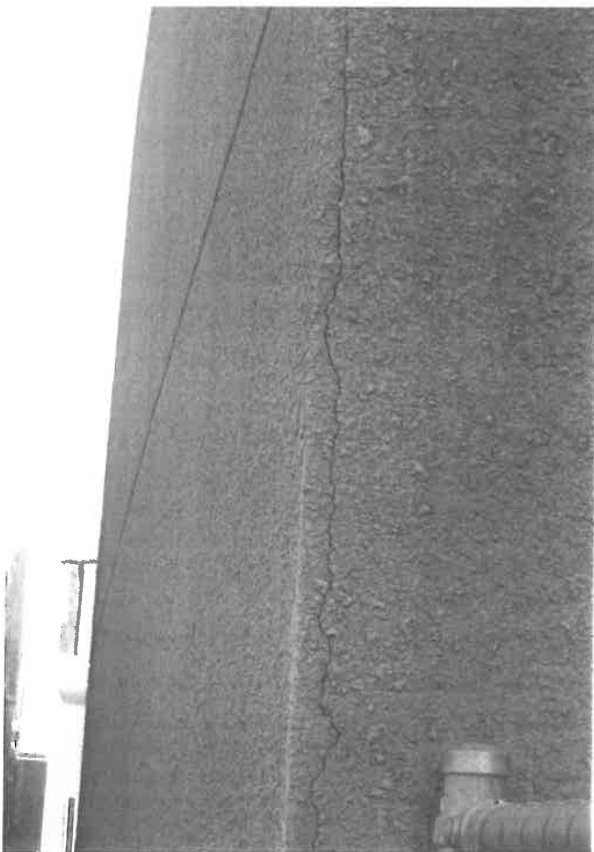
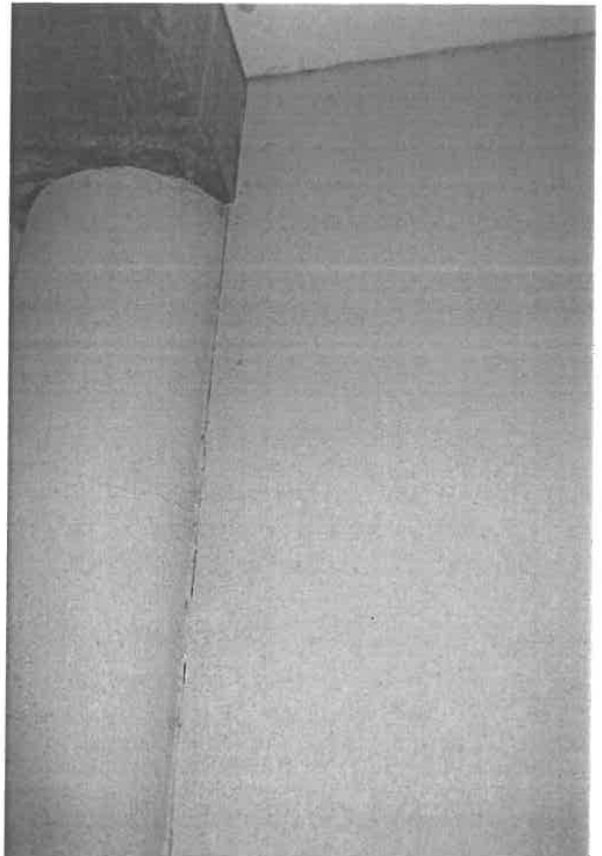
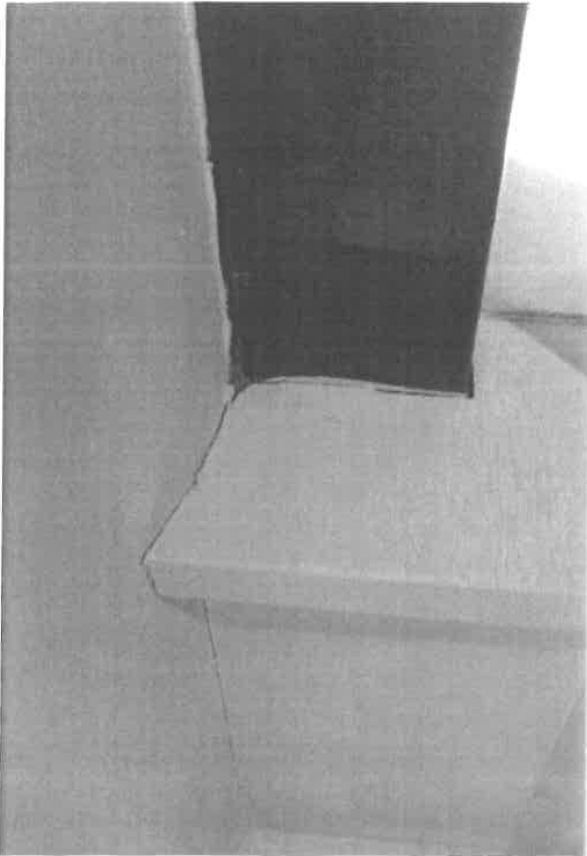
RAWLINSONS LIMITED		4 OCTOBER 2010					
CTV BUILDING - EARTHQUAKE RESTORATION							
INDICATIVE ESTIMATE							
		QANT	UNIT	RATE	SUBTOTAL	TOTAL (rounded)	
42	Provision for general patch repairs and paint finish wall joints for minor works, i.e minor junction cracks	1.00	item		7,600		
43	Solid plaster skim coat to toilet concrete shear walls	33.60	m2	75.00	2,520		
44	Provision for suspended ceiling repairs to grids	1.00	item	880.00	880		
45	Replacement seal to sth façade window (including access equipment)	1.00	item	750.00	750		
46	Dismantle pair of timber internal doors and 600 wide adjoining partition wall	1.00	no	180.00	180		
47	Construct new steel stud gib lined partition, 600 wide to door jamb	1.00	no	900.00	900		
48	Re-hang pair of doors and frame	1.00	no	360.00	360		
49	Remove and replace timber painted cornice	5.00	m	48.00	240		
	THIRD FLOOR						37,000
50	Strip off existing and fix new gib board wall linings	50.40	m2	62.00	3,125		
51	Make good and patch repair existing gib walls (Stopping)	67.20	m2	25.00	1,680		
52	Re-paint finish existing walls	792.40	m2	15.00	11,886		
53	Form and stop internal corner junction	128.80	m	23.00	2,962		
54	Form and stop junction between column and ceiling	15.20	m	35.00	532		
55	Form and stop internal corner junction at timber reveal	1.25	m	45.00	56		
56	Provision for general patch repairs and paint finish wall joints for minor works, i.e minor junction cracks	1.00	item		5,400		
57	Solid plaster skim coat to toilet concrete shear walls		m2	75.00			
58	Provision for suspended ceiling repairs to grids	1.00	item	881.00	881		
59	Replacement seal to sth façade window	1.00	item	750.00	750		
60	Remove and replace external tinted glazed panel approx (3 x 2)	4.00	no	1,800.00	7,200		
61	Make good to damaged window tint	1.00	no	500.00	500		
62	Demolish timber framed false toilet wall (remove rubbish)	3.00	hrs	45.00	135		
63	Timber framed false wall in toilet area to conceal pipework, gib lined	3.00	m2	128.00	384		
64	Timber trim to cavity wall	2.00	m	45.00	90		

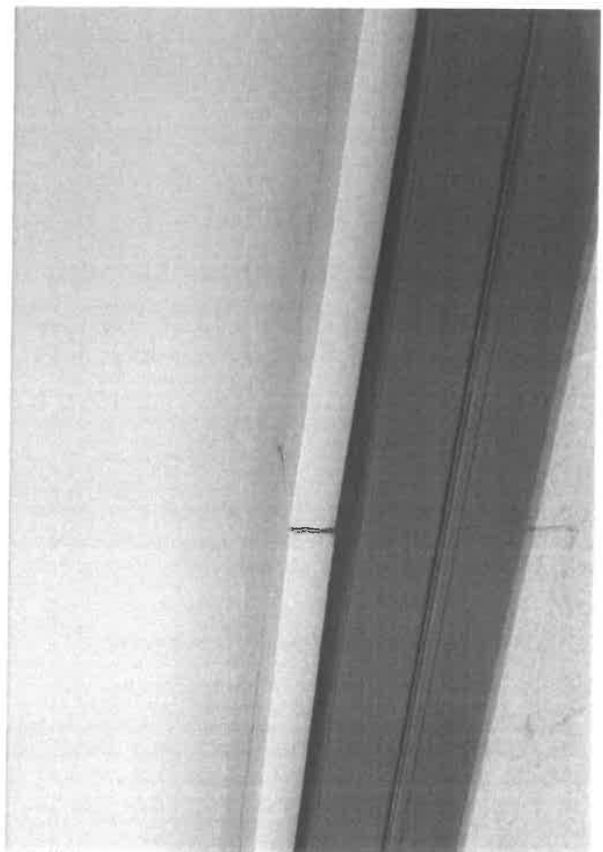
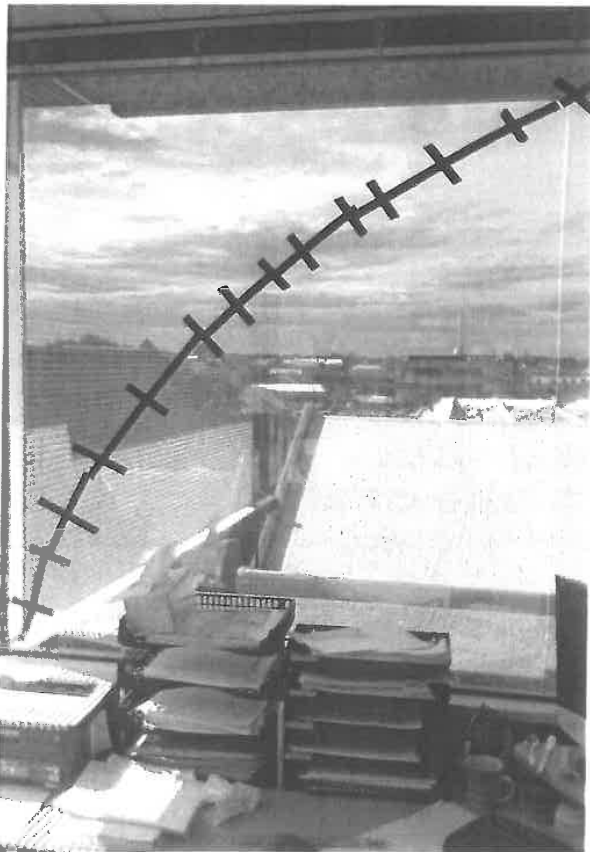
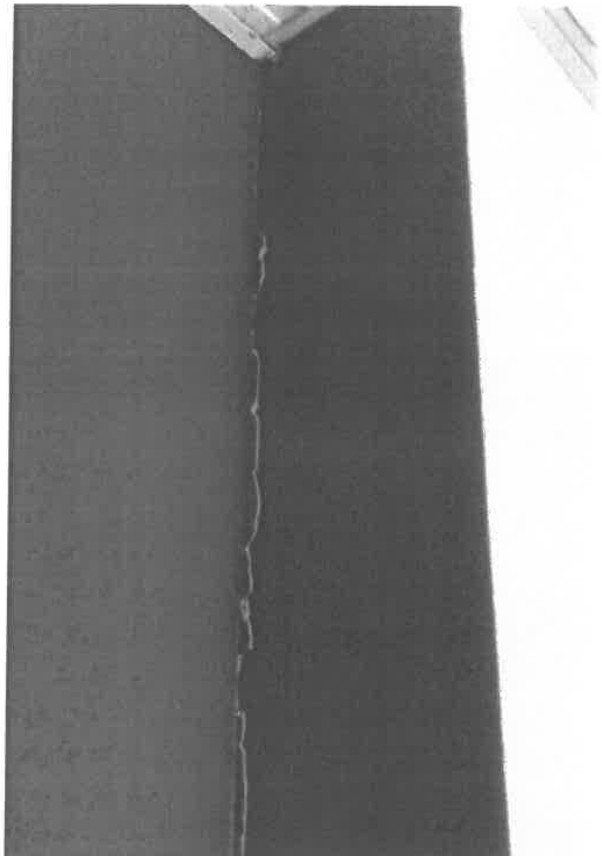
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CTV BUILDING - EARTHQUAKE RESTORATION						
INDICATIVE ESTIMATE						
	QANT	UNIT	RATE	SUBTOTAL	TOTAL (rounded)	
65				410		
66	1.00	item	400.00	400		
FOURTH FLOOR						24,000
67	16.80	m2	62.00	1,042		
68	109.20	m2	25.00	2,730		
69	652.40	m2	15.00	9,786		
70	111.60	m	23.00	2,567		
71	15.20	m	35.00	532		
72	2.80	m	45.00	126		
73	2.80	m	70.00	196		
74				5,400		
75	-	m2	75.00	-		
76	1.00	item	441.00	441		
77	1.00	item	1,000.00	1,000		
FIFTH FLOOR						14,000
78	20.16	m2	62.00	1,250		
79	63.56	m2	25.00	1,589		
80	10.76	m2	15.00	161		
81	11.20	m	38.00	426		
82	55.60	m	23.00	1,279		
83	15.20	m	35.00	532		
84				5,400		

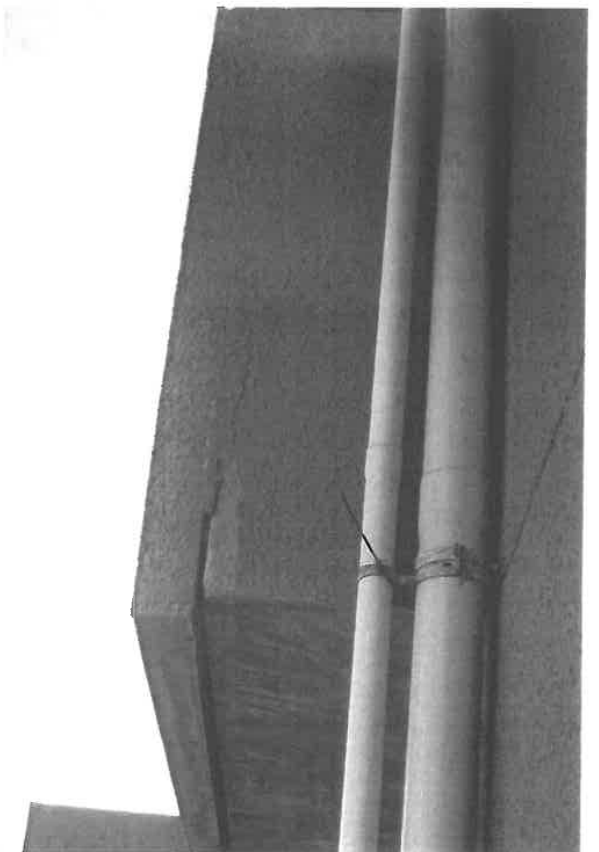
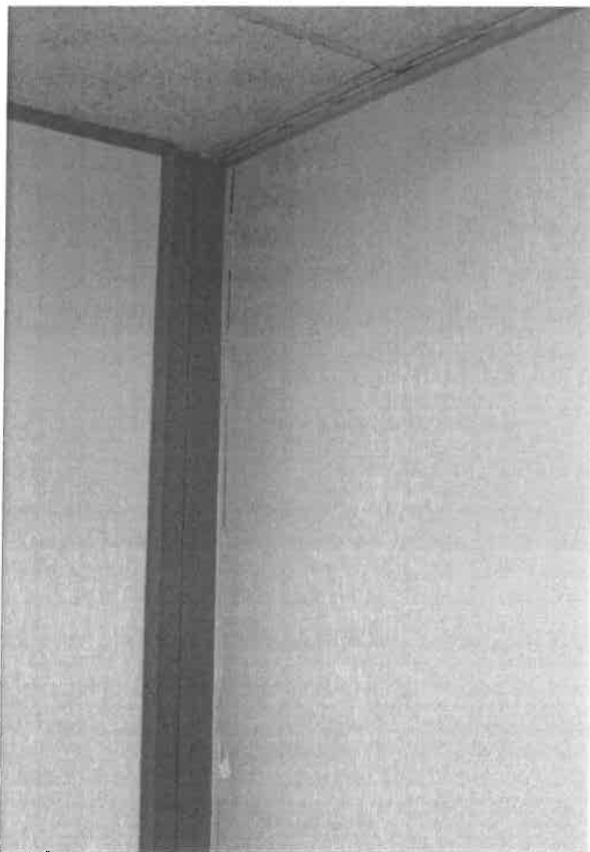
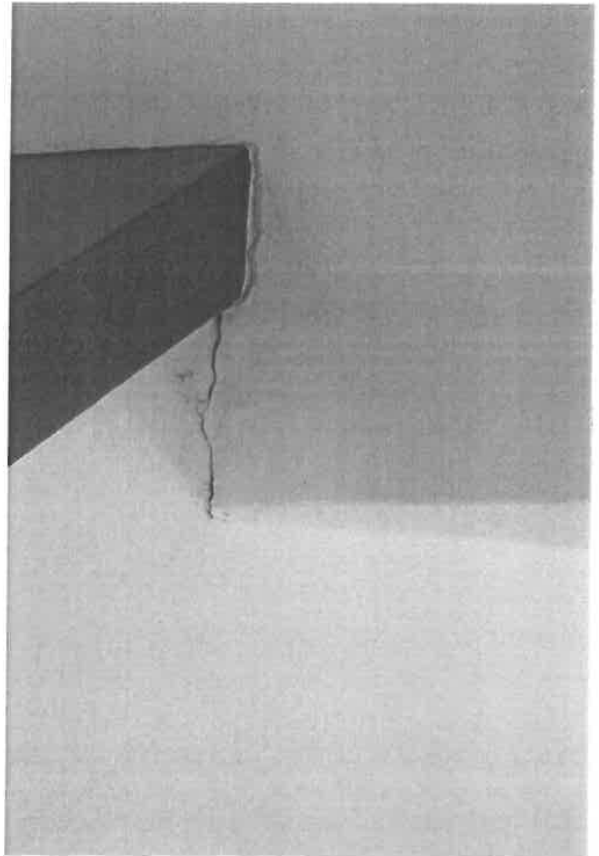
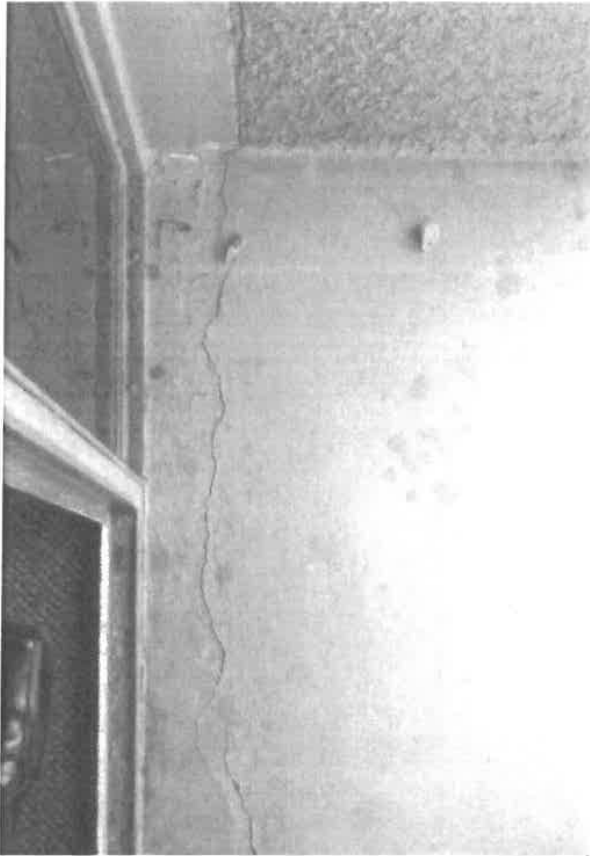
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CTV BUILDING - EARTHQUAKE RESTORATION						
INDICATIVE ESTIMATE						
	QANT	UNIT	RATE	SUBTOTAL	TOTAL (rounded)	
85	1.00	item	465.68	466	-	-
Provision for suspended ceiling repairs to grids (Straightening of existing grid and re-fixing)						
86	2.40	m2	100.00	240	-	-
Solid Plaster to soffit of concrete beam, paint finish						
87	21.28	m2	80.00	1,702	-	-
Solid Plaster to internal column, paint finish - provision for 4 No. girthed						
88	1.00	no	250.00	250	-	-
Ease and re-align single timber internal door						
STAIR WELLS AND GENERAL					-	25,000
89	160.00	hrs	55.00	8,800	-	-
Patch repairs to plaster walls around stairwells at junction with structure - 2 men 2 days per floor to patch repair						
90	83.20	m2	15.00	1,248	-	-
Paint finish walls - rough area per floor						
	41.60	m2	15.00	624	-	-
91	83.20	m2	15.00	1,248	-	-
Paint finish ceiling - rough area per floor						
92					-	-
Strip off and replace existing Hardies wall lining						
93	1.00	item	4,760.00	4,760	-	-
Access provision to replace glazing panels over two floors and re-seal second floor windows						
94	5.00	no	50.00	250	-	-
Replacement emergency exist sign cover						
95	1.00	item	7,800.00	7,800	-	-
Provision for repairs to wall framing generally including straightening and securing						
ESTIMATE TOTAL						290,000

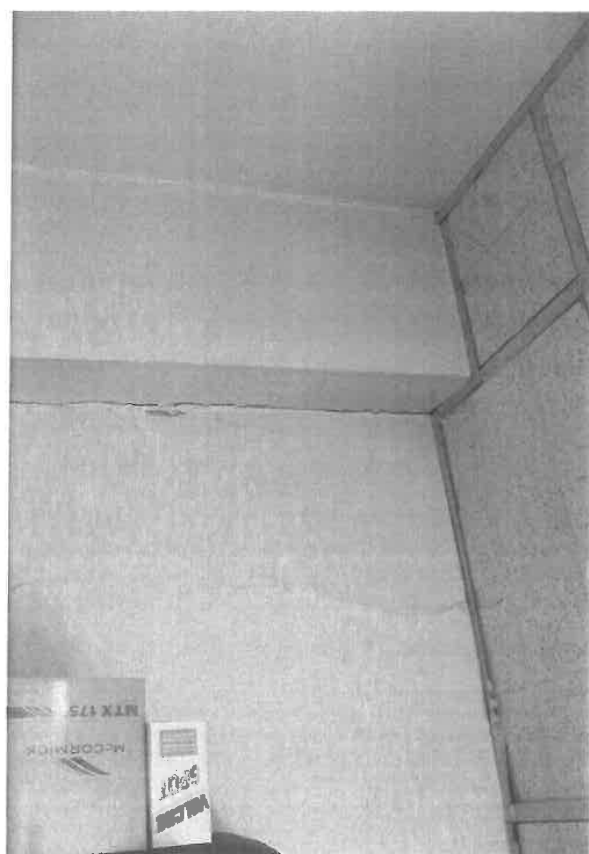
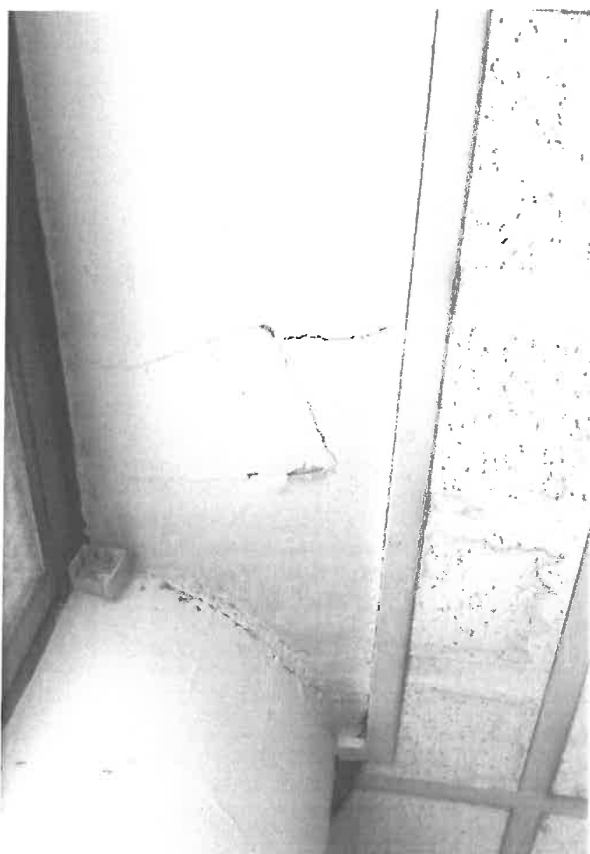
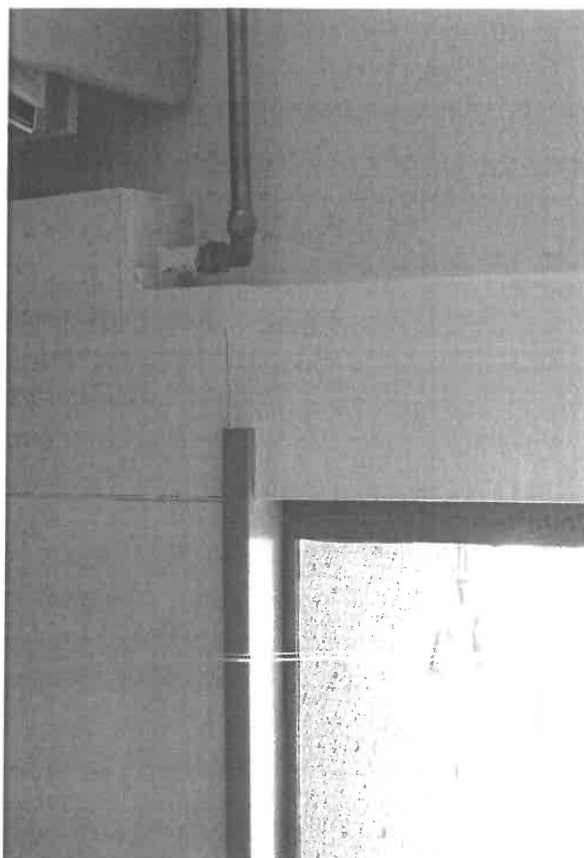
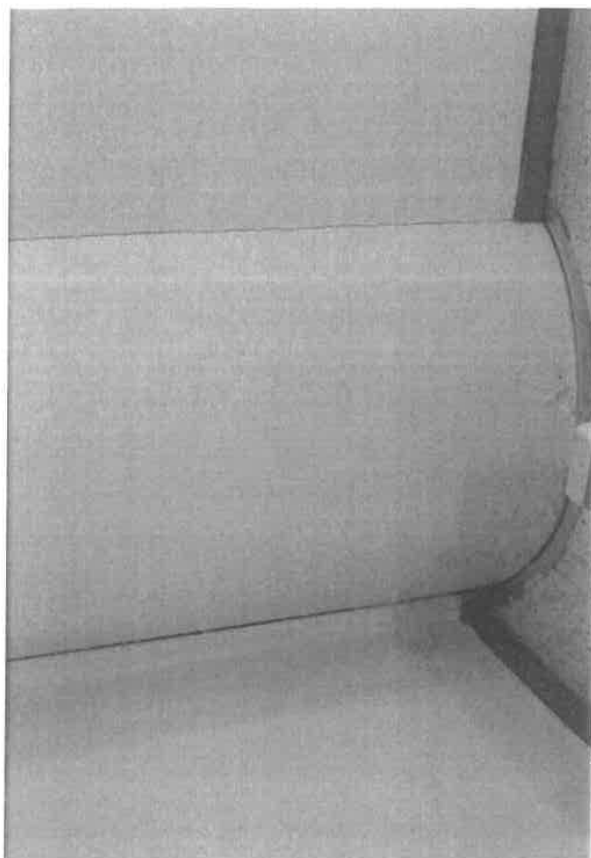


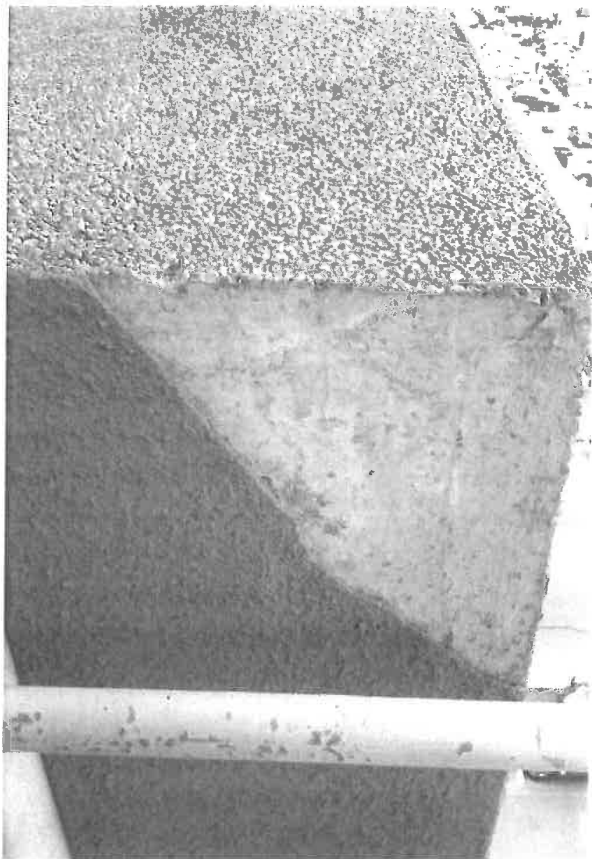
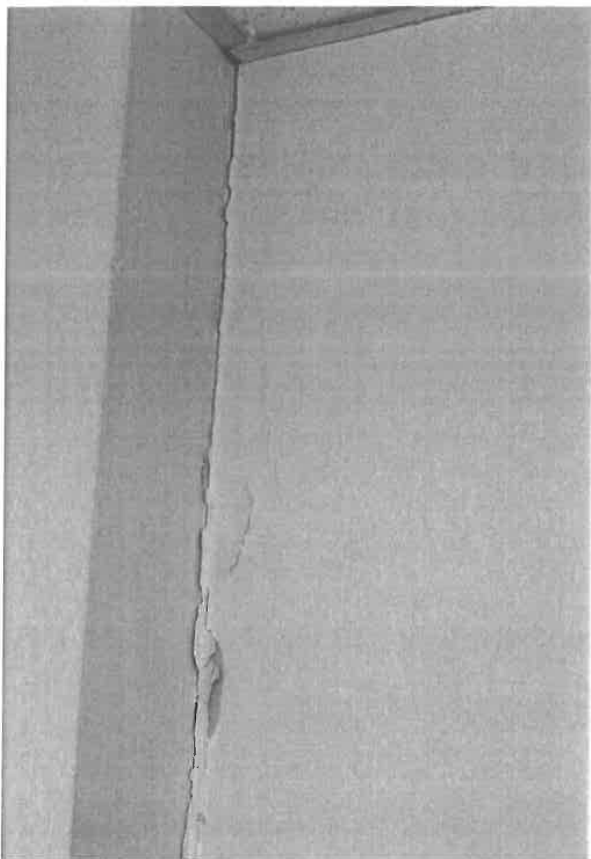












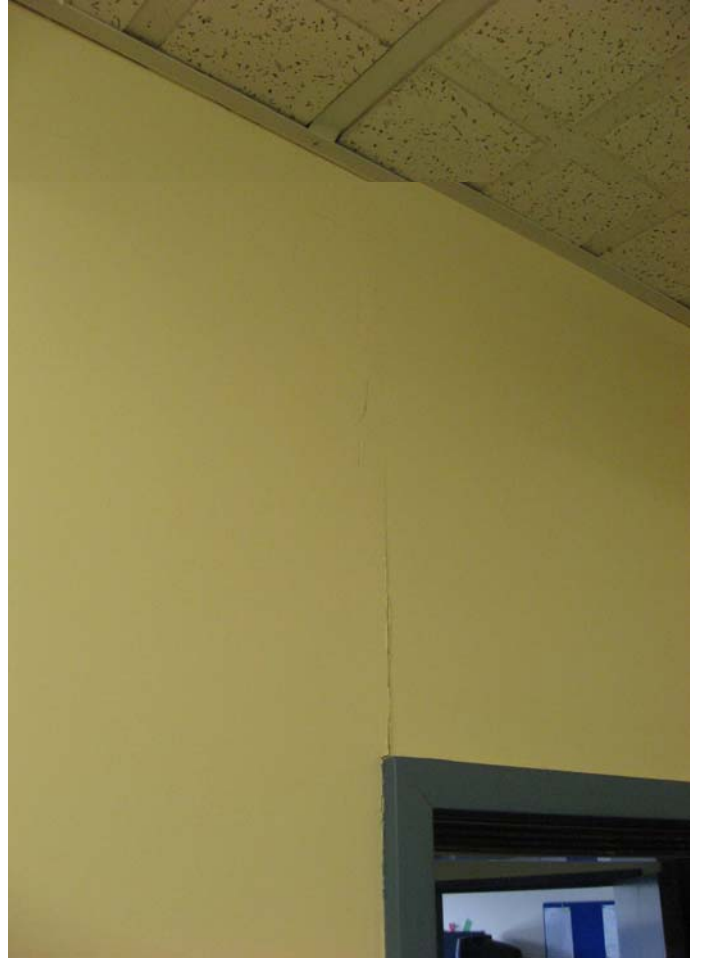
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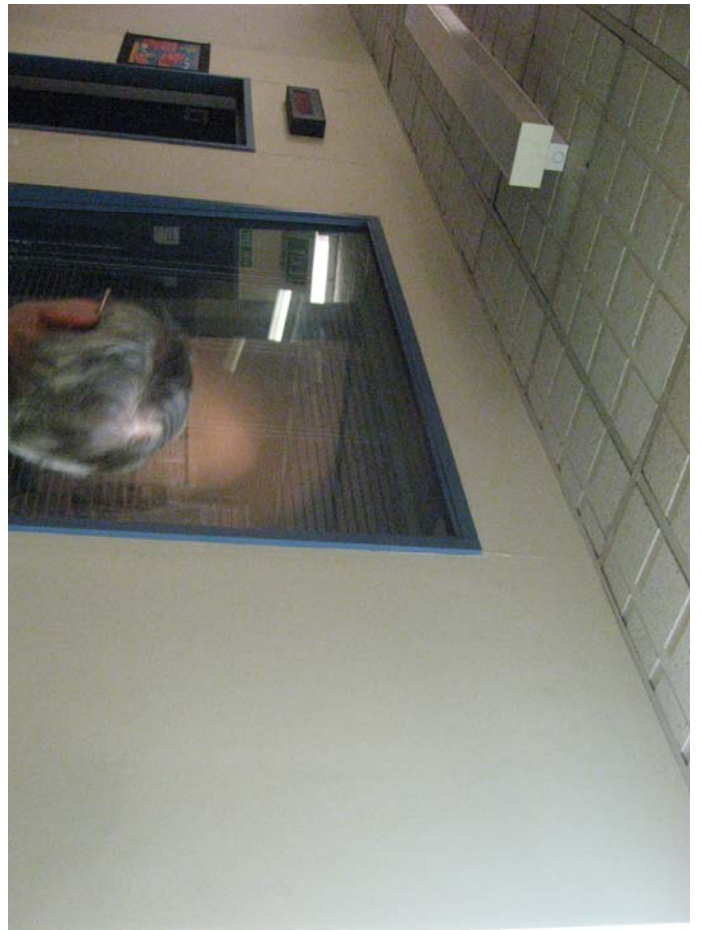
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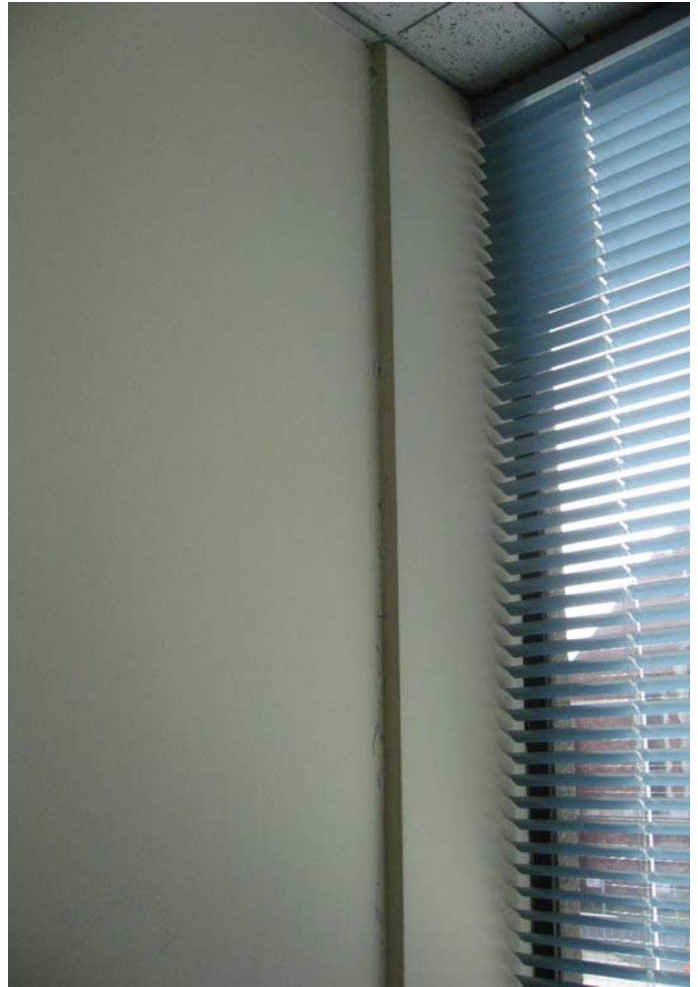
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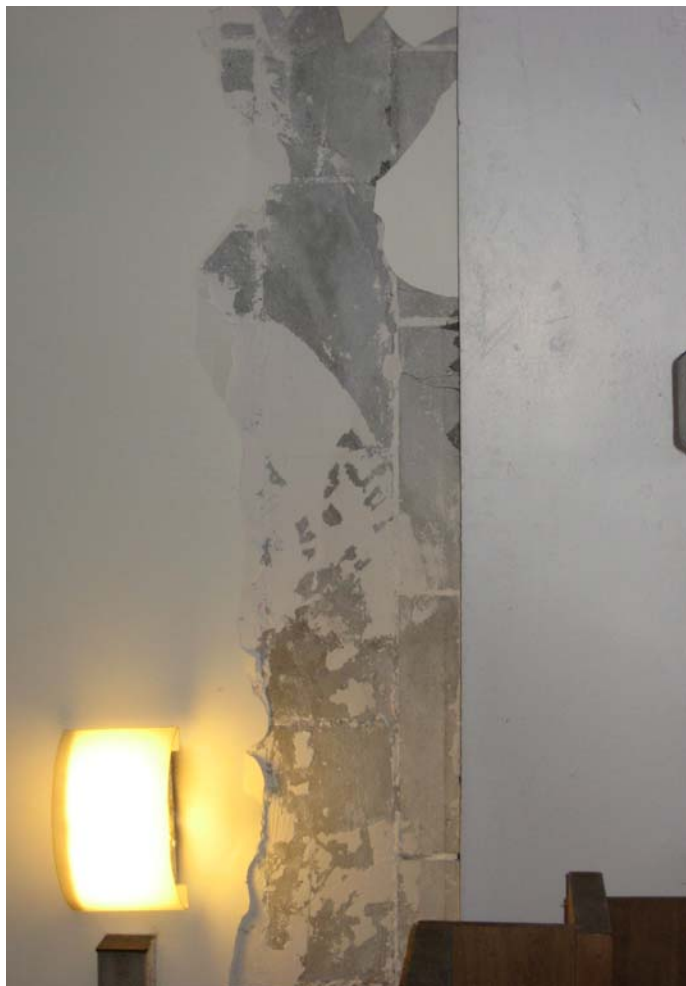
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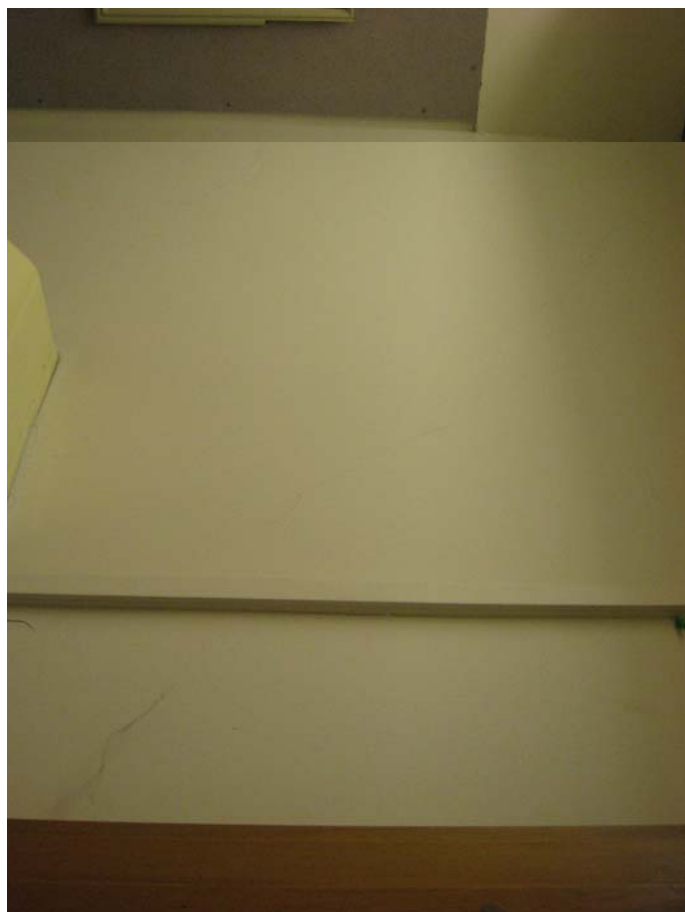
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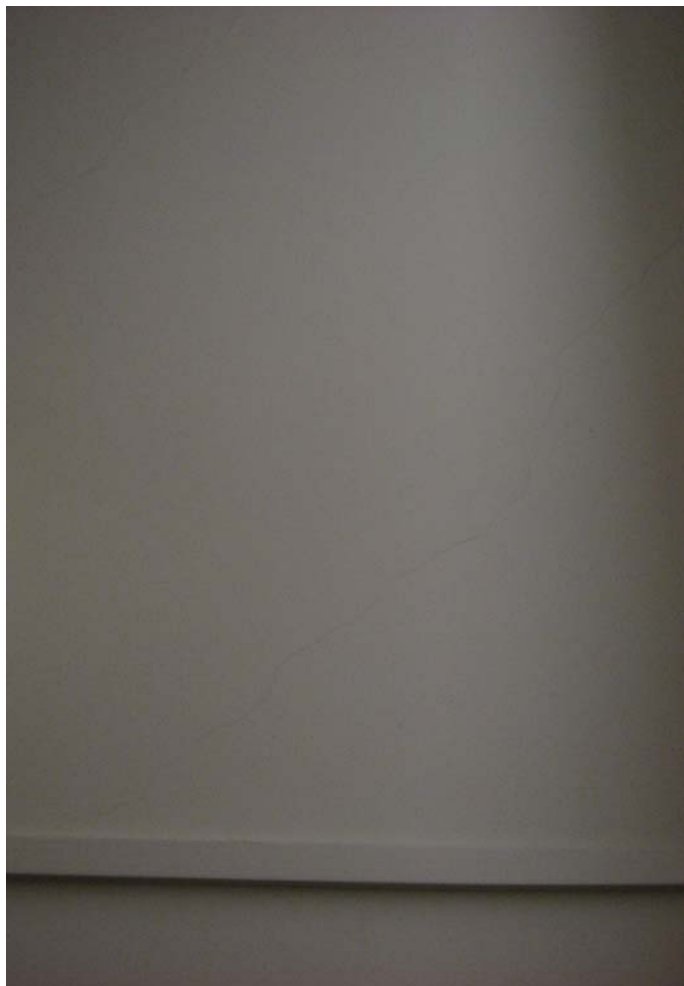
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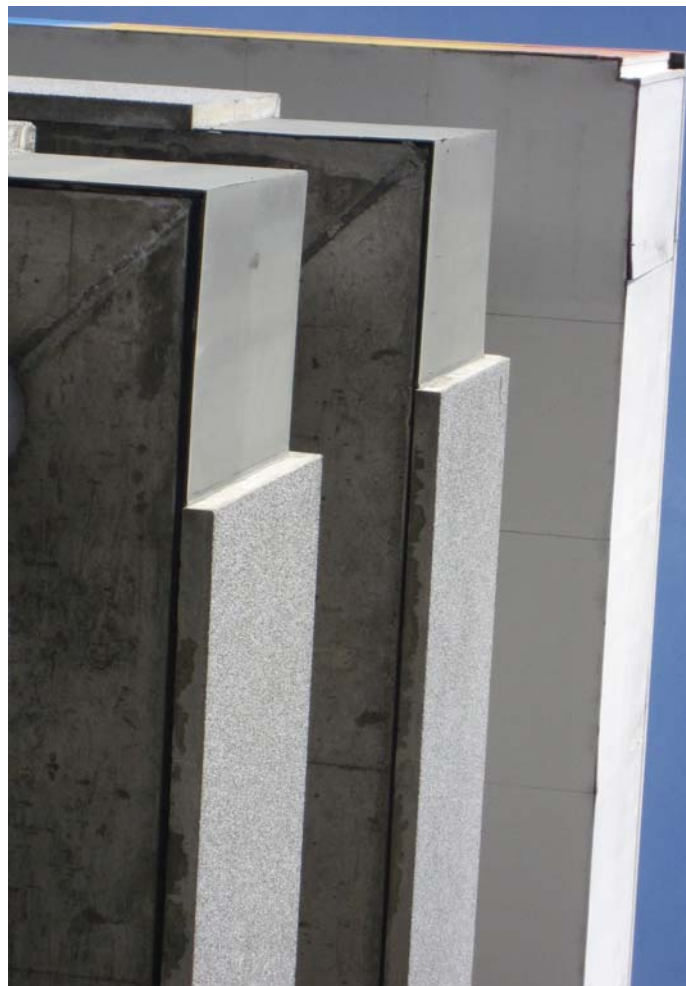
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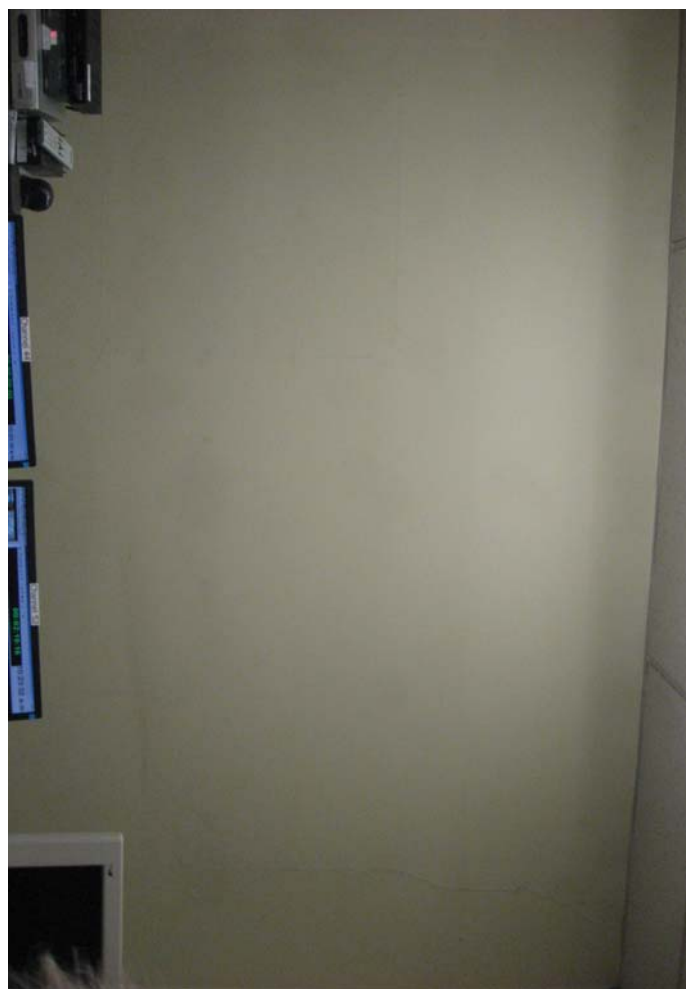


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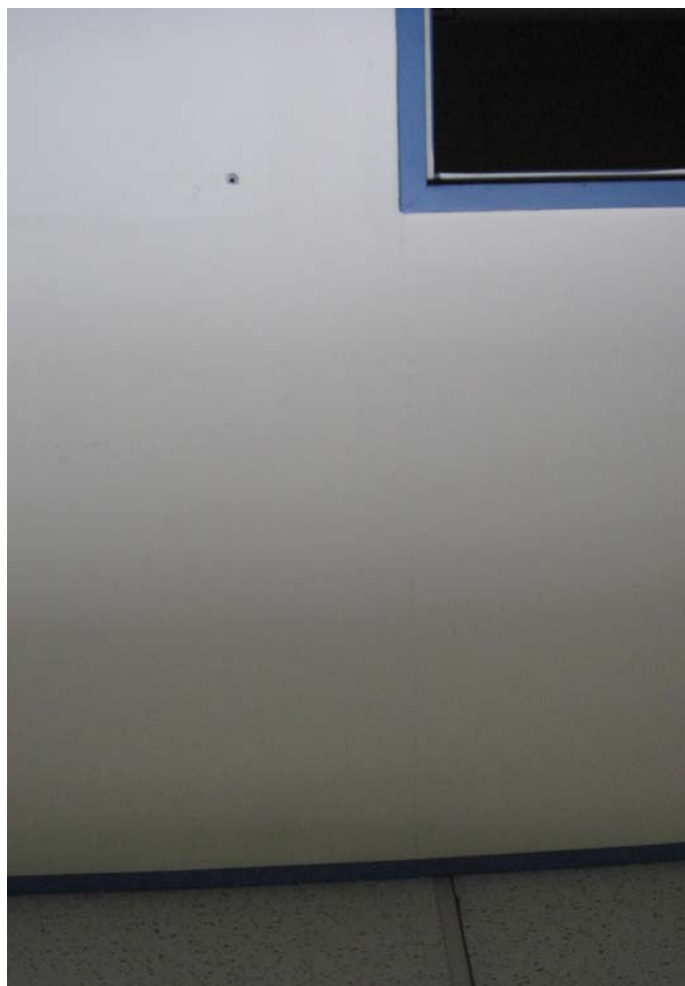
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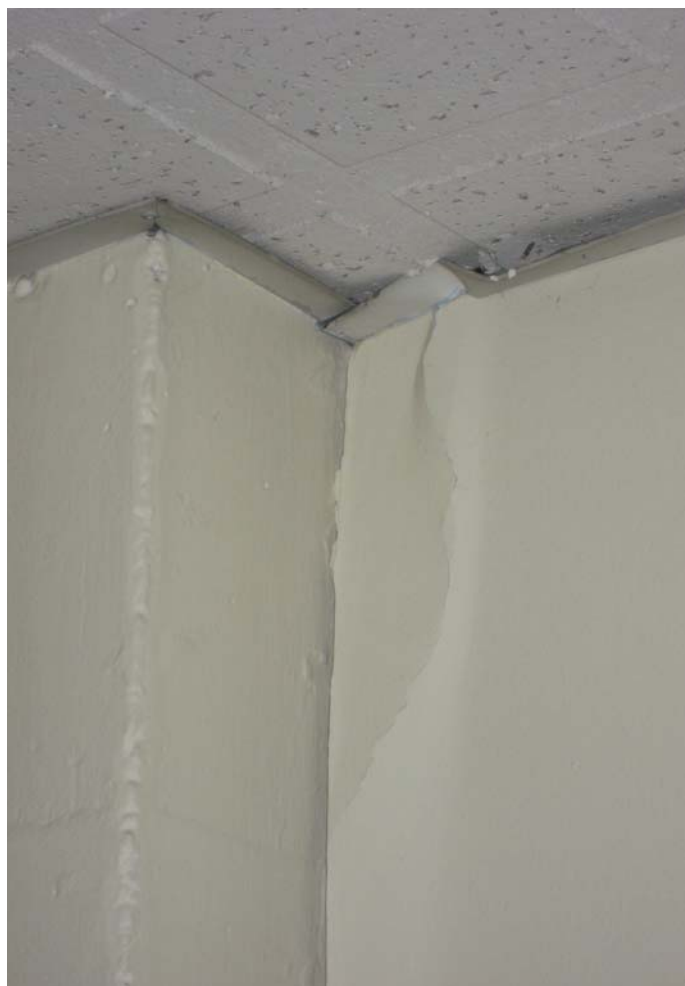


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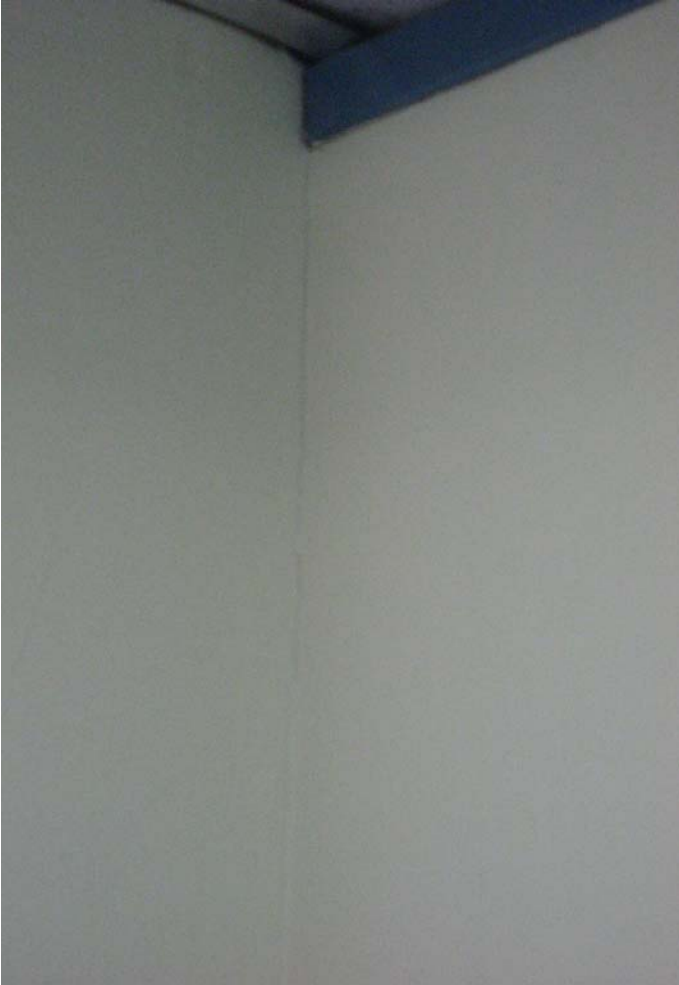
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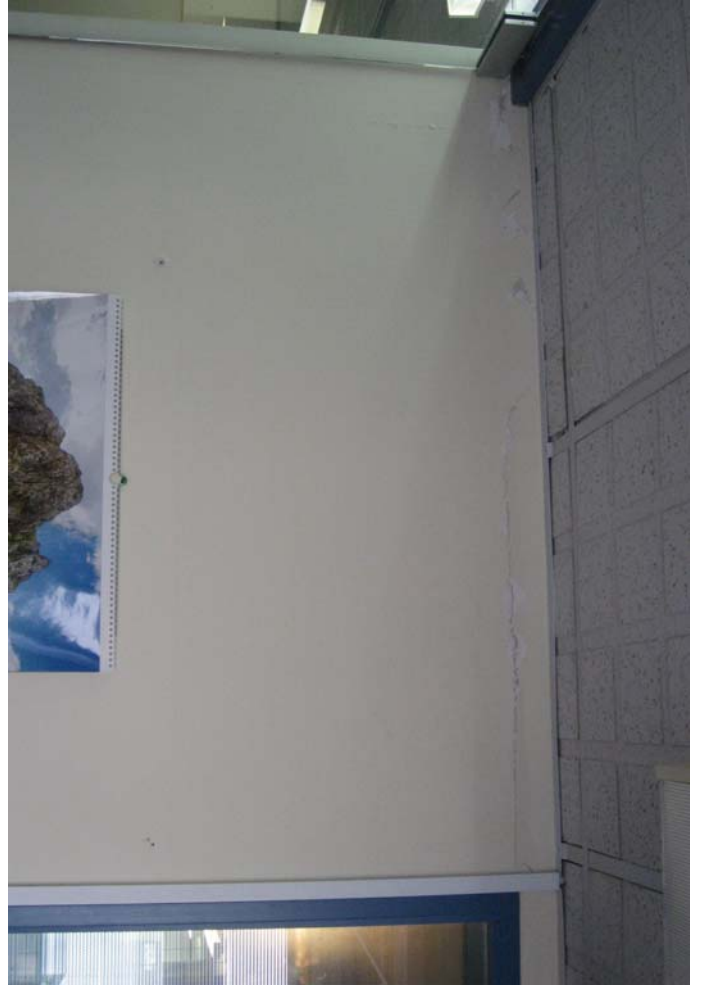


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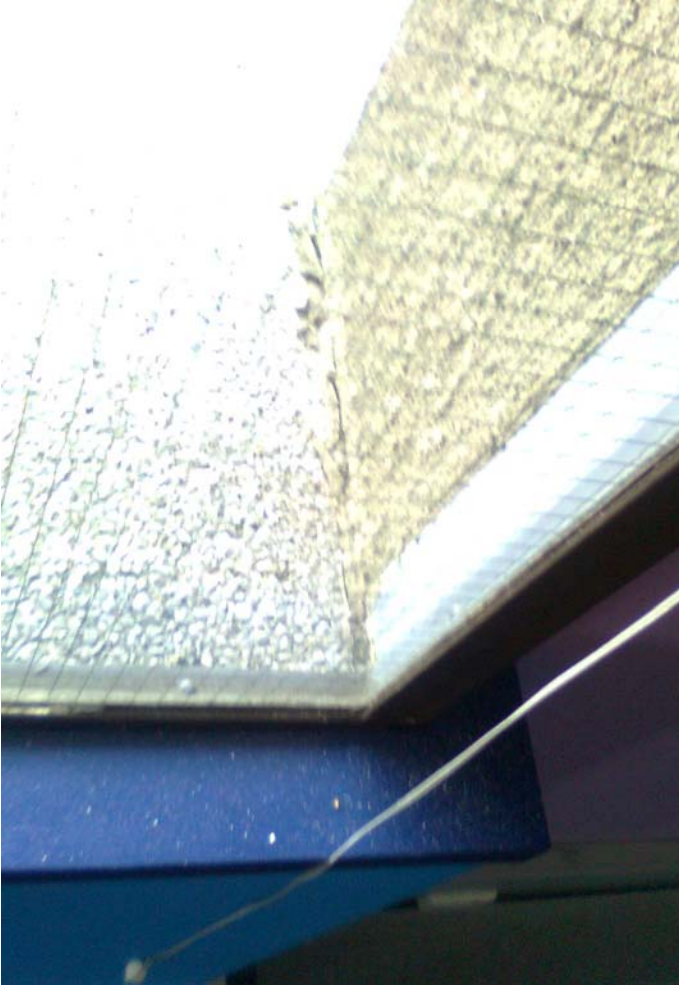
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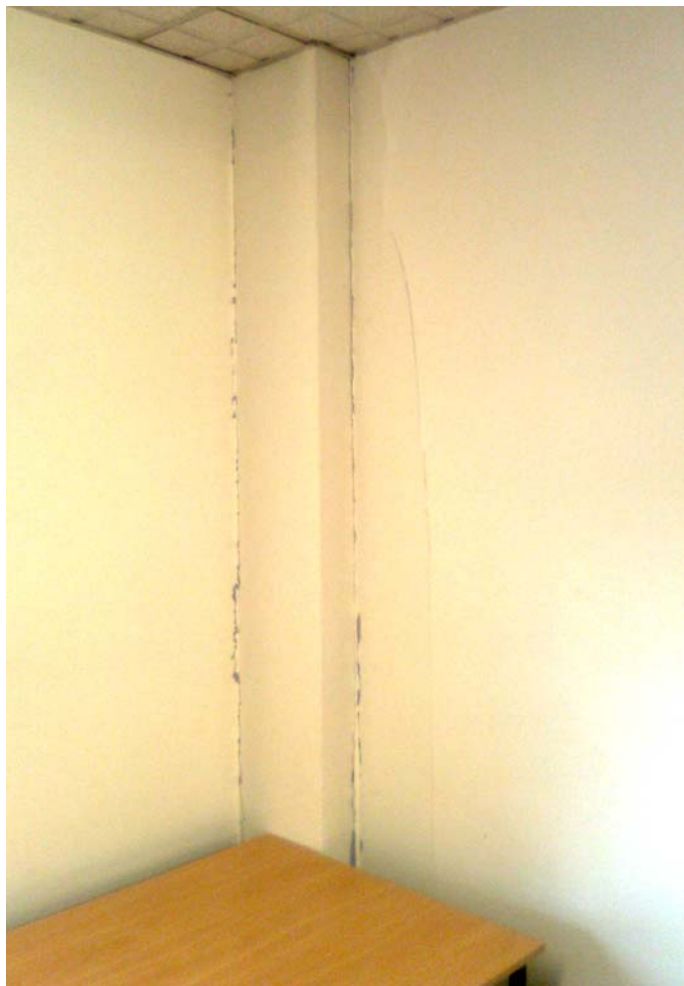
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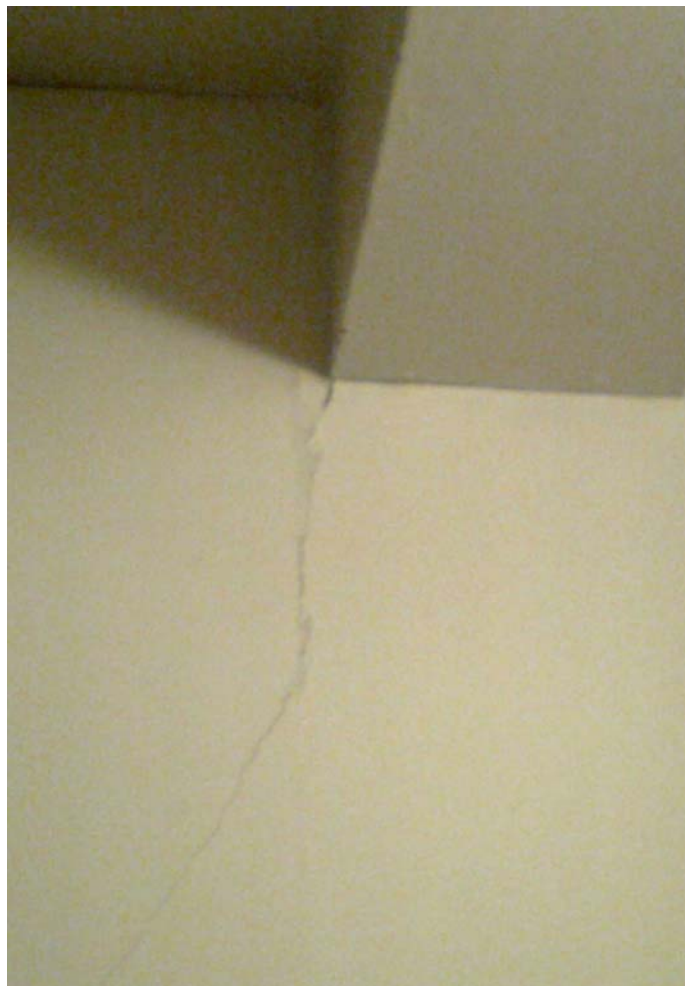
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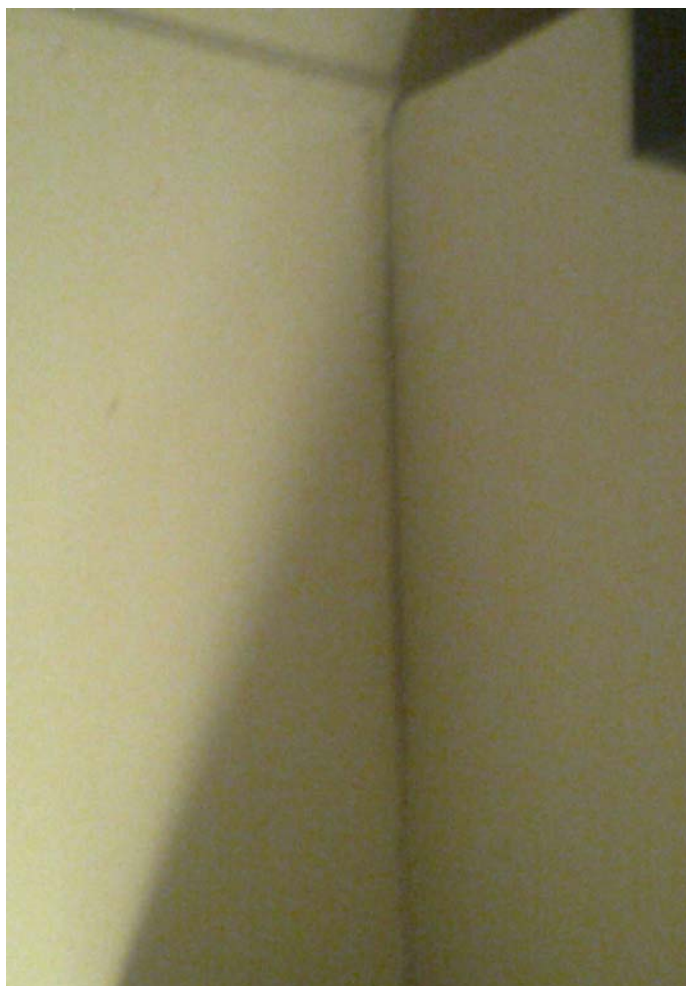
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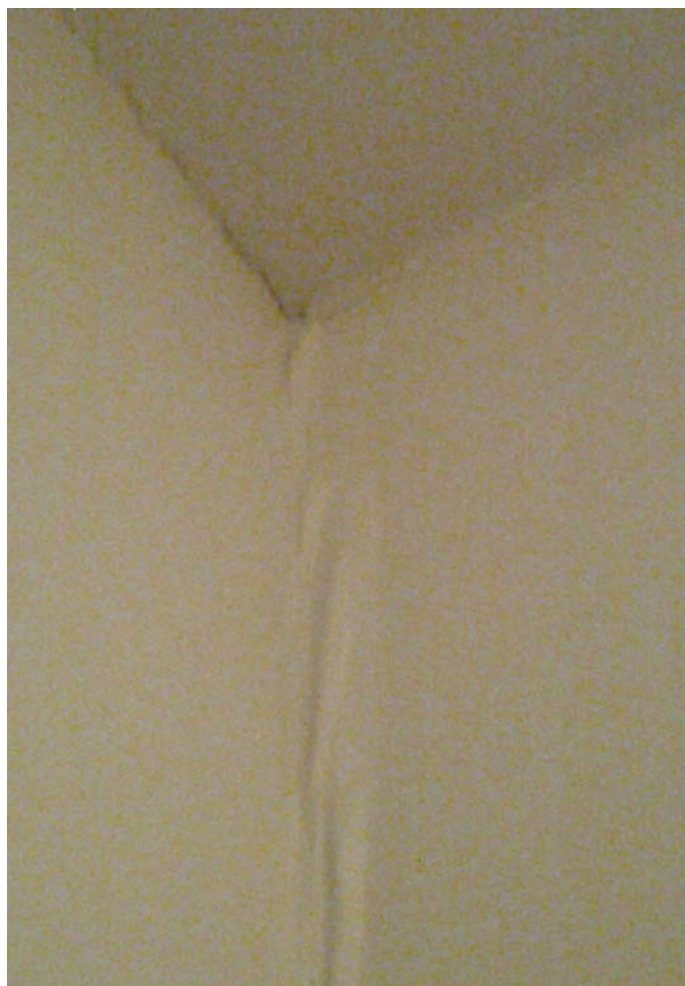
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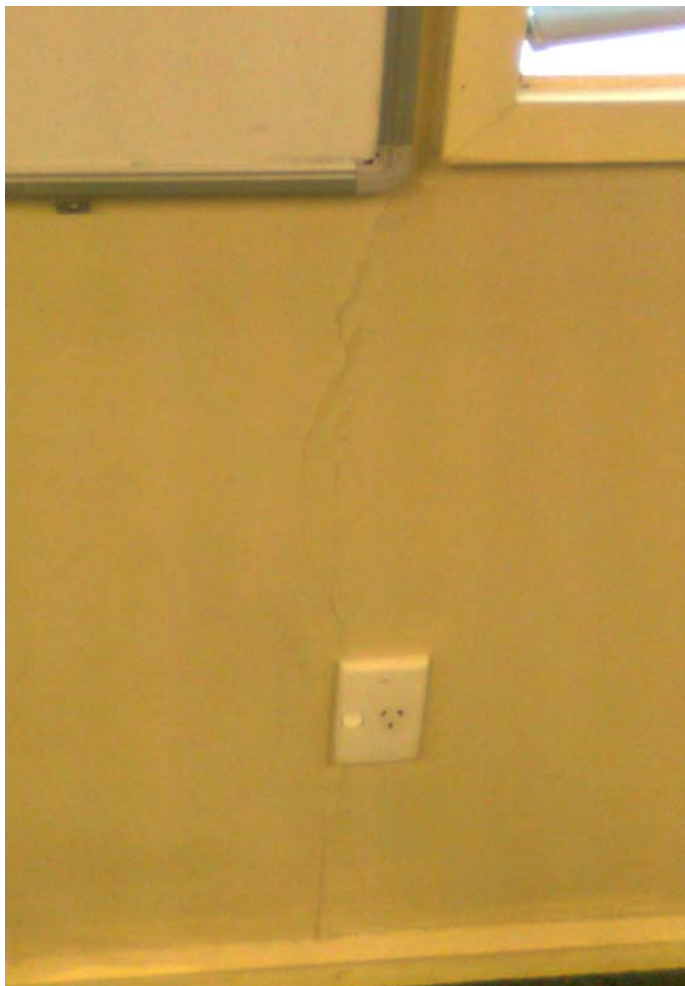
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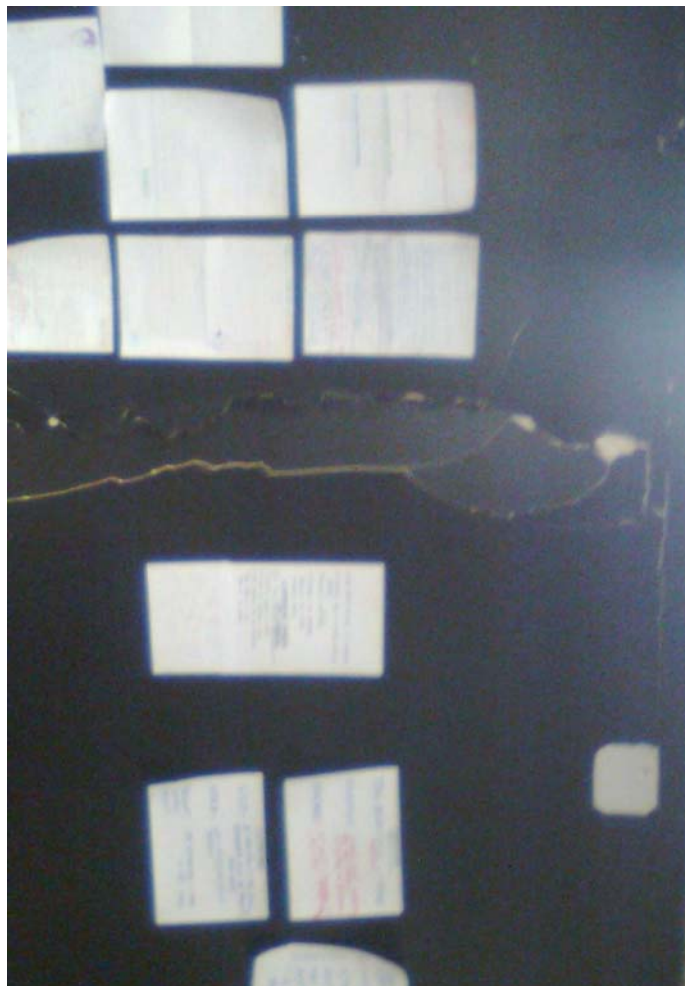
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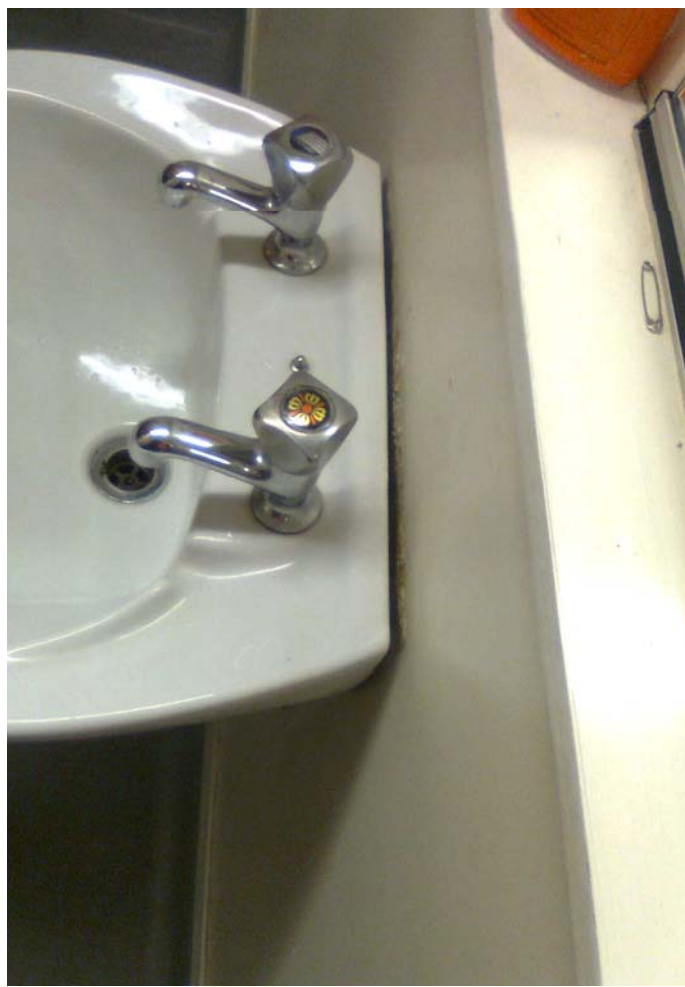
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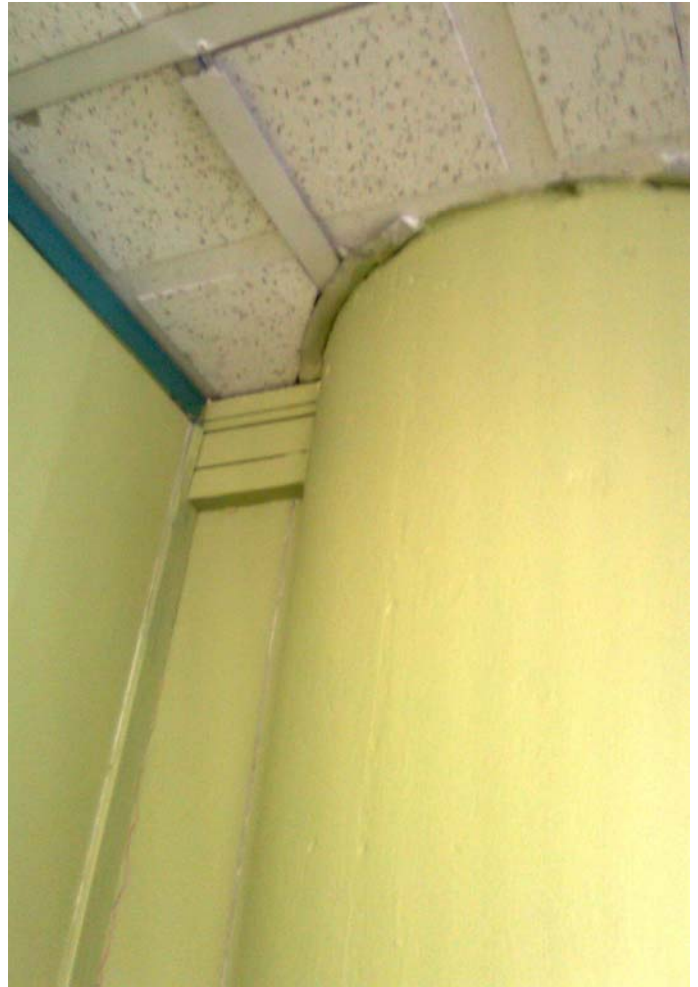
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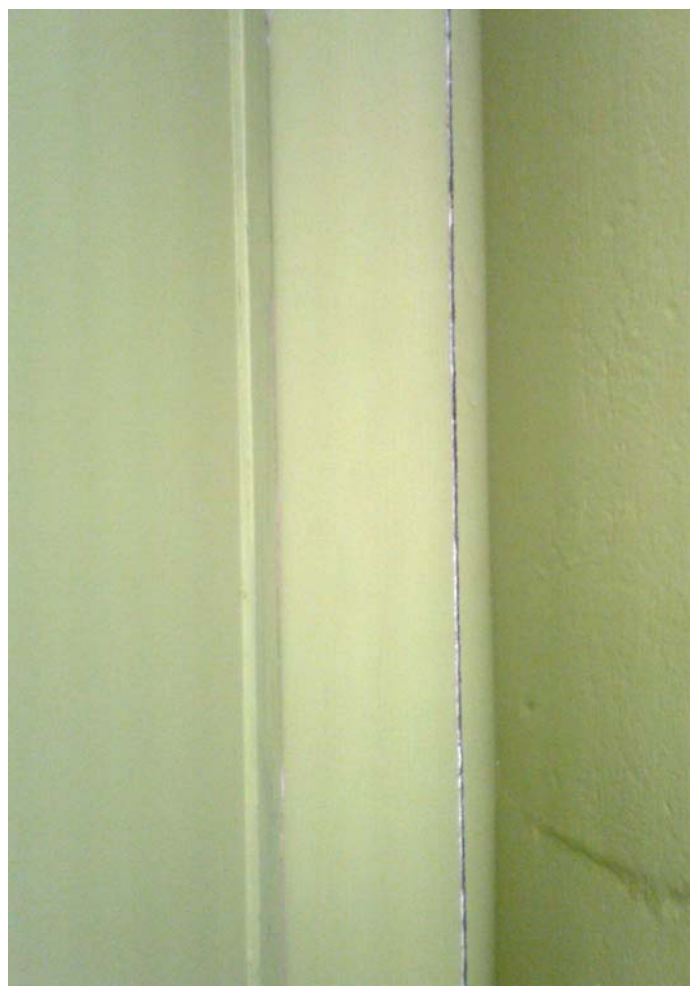
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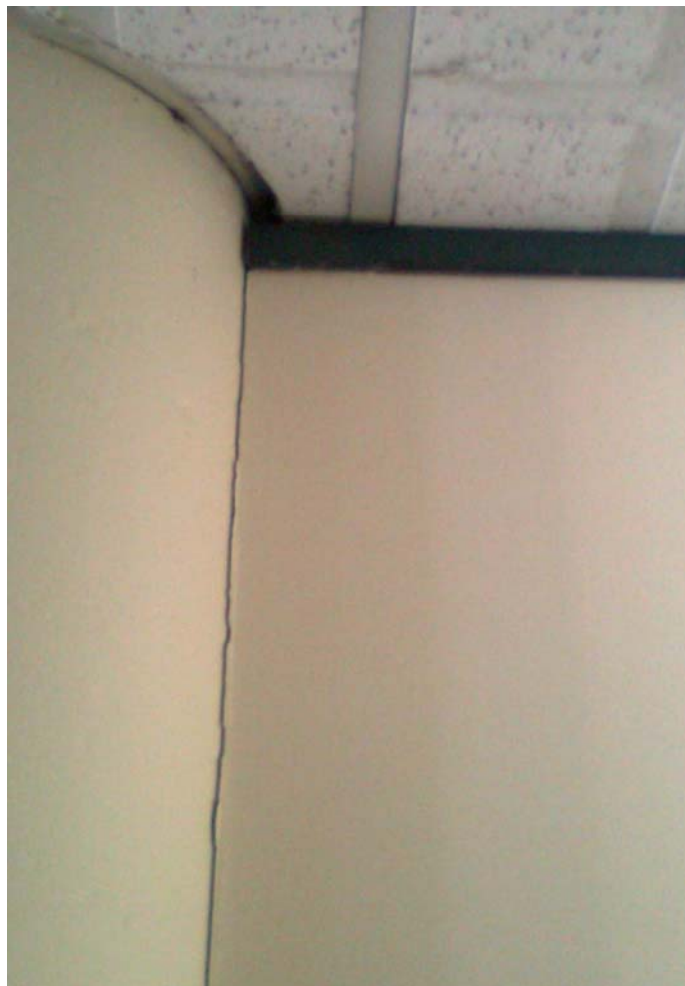
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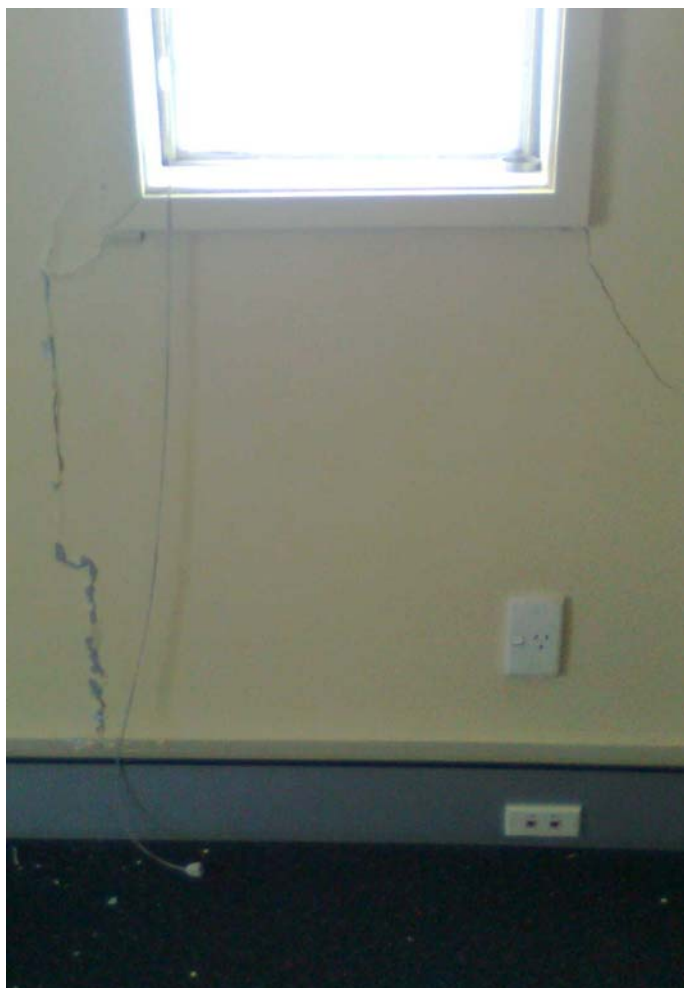
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