

CORRESPONDENCE, ETC. RELATING TO
UNION CONSTRUCTION LTD

- 1 27.03.87 Gerald Shirtcliff to Cathedral Properties.
- 2 Peter Scott's Pingon tower crane technical drawing used to construct the building.
- 3 Budget and quantities ex Tony Scott (note reinforcing rods to suspended slabs).
- 4 March Construction piling programme.
- 5 Piling plans and layout.

(1-5 relate to witness clause 22)

- 6 Letter to Alan Reay from A Scott re Amuri Corporation, Chester Street.
- 7 D Harding's preliminary structural sketches with references to Madras Street design CTV building.

(Relates to witness clauses 13 and 14)

- 8 Memo from M Brooks to Union directors re Amuri Corporation, Chester Street.
- 9 A Scott memo to directors 21.09.87.
- 10 A Scott report to Management Committee 18.06.87.
- 11 Quote for column forms to be used on CTV building.
- 12 Invitation to tender from Alan Reay to Union. Bill Jones assisted with this tender.
- 13a & b A Scott tender submission.
- 14 Draft affidavit for A Scott from Phillips Shayle-George.

(This relates to my clauses 28, 29 and 30. The date of 6 September 1987 on the Affidavit assists to determine the approximate date of assignment of CTV contract from Williams to Union.)

Stephen Smart met Brooks, Shirtcliff and Scott in Christchurch at Quality Inn, Durham Street, a few weeks after this date to agree the solution described in clauses 28, 29 and 30.

The assignment followed a few days after this meeting and involved an exchange of signatures by fax on the original contract with Prime West. Signatories were M J Brooks on behalf of Union Construction Ltd, and S J Smart for Richmond Smart Group, new owners of Williams Construction Canterbury.

I was present at Williams' offices when M Brooks signed the document and faxed it to S Smart and saw the return fax signed by S Smart.

This was the first time M Brooks had been back to Williams' offices since his dismissal in March 1987).

- 15 Construction budget calculations for CTV building prepared by Sandy Robertson, Staff QS Williams and Union (dates important 23.03.87 and 13.02.87).

(This illustrates how the pumping costs of concrete to walls and columns was budgeted. Sandy also liaised with Bill Jones on site).

agstott.
10-4-12.

UNION CONSTRUCTION CANTERBURY LTD

c/- Sparks Erskine & Co
1 Rimu St
Riccarton
CHRISTCHURCH

27th March 1987

The Manager
Cathedral Properties Pty Ltd
C/- 1 Grafton Mews
60-62 Grafton Rd
AUCKLAND

Attention: Mr. S. Grant

Dear Sir,

RE: VICTORIA ST PROPERTY

As discussed enclosed are 2 copies of bar chart and critical path programme for the construction of the above project.

I apologise for the poor quality of the prints, but this was caused in the reduction process.

Yours faithfully,

G.Shirtcliff
CONSTRUCTION MANAGER

CONSTRUCTION PROGRAM CATHEDRAL PROPERTIES VICTORIA ST.

MONTH	APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER				OCTOBER				NOVEMBER				DECEMBER				JANUARY				FEB			
WEEK	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
SITE																																												
ESTD																																												
PILING	complete																																											
DRAINAGE																																												
FOUND																																												
FOUND																																												
GROUNDWORK																																												
TRASH																																												
TRASH																																												
LIFT MOTOR																																												
ROOF																																												
PRECAST																																												
PIERS																																												
WINDOWS																																												
FIRE LINING																																												
PARTITION																																												
FRAME																																												
CEILING																																												
LININGS																																												
PAINTER																																												
TILER																																												
JOINER																																												
HARDWARE																																												
PLUMBING																																												
FITOUT																																												
ELEC																																												
FITOUT																																												
MECH																																												
SERVICES																																												
LIFTS																																												
SITE																																												
WORKS																																												
FINAL																																												
CLEAN																																												
HANDOVER																																												

ANNUAL CHRISTMAS HOLIDAY BUD IND

UNION CONSTRUCTION (CANBY) LTD

DATE: - 27.3.87

Drawn G. SHIRCLIFF.

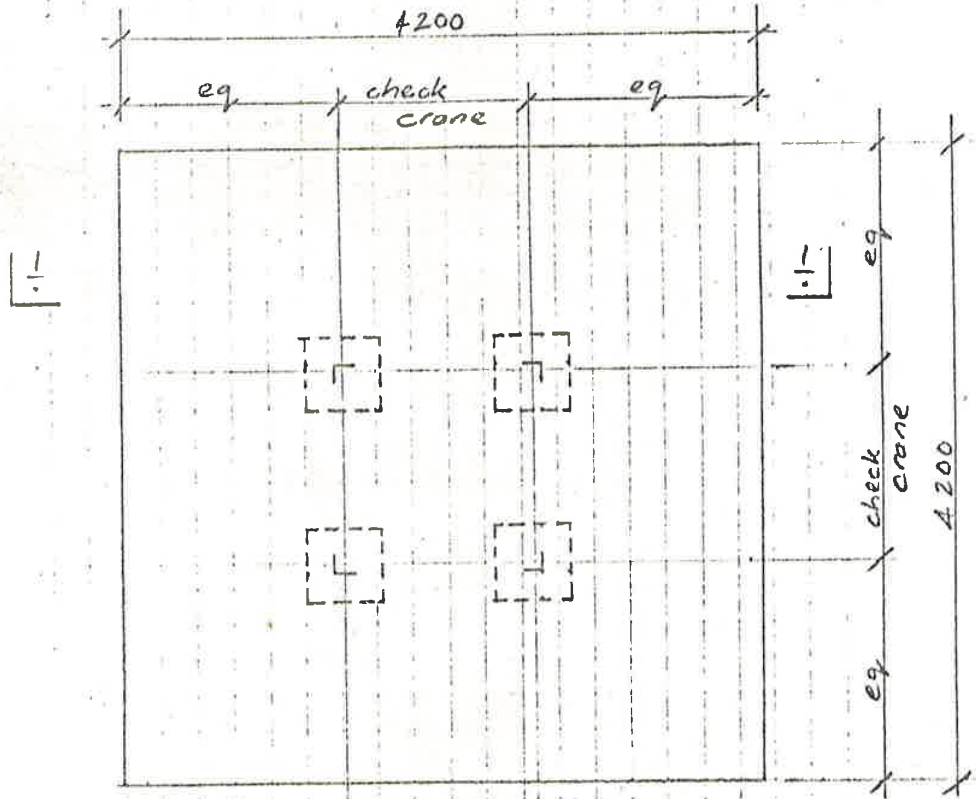
2

SKETCH

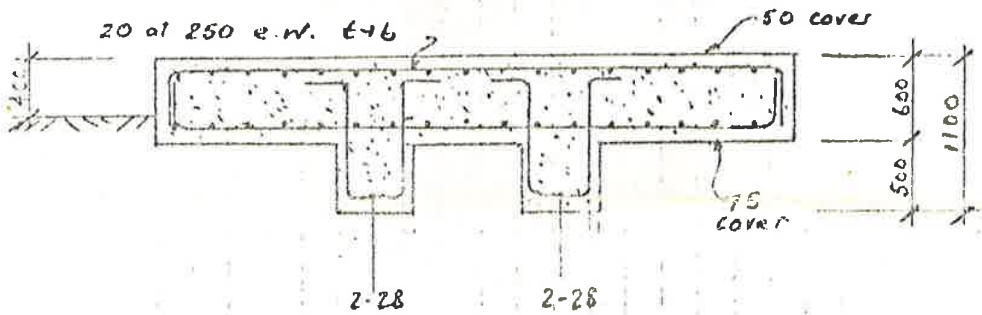
Holmes Wood Poole & Johnstone
Consulting Engineers
Christchurch & Wellington

RADIO NZ

Job No	153/5A
Date	9/6/77
Drawn	R C W
Scales	1:50



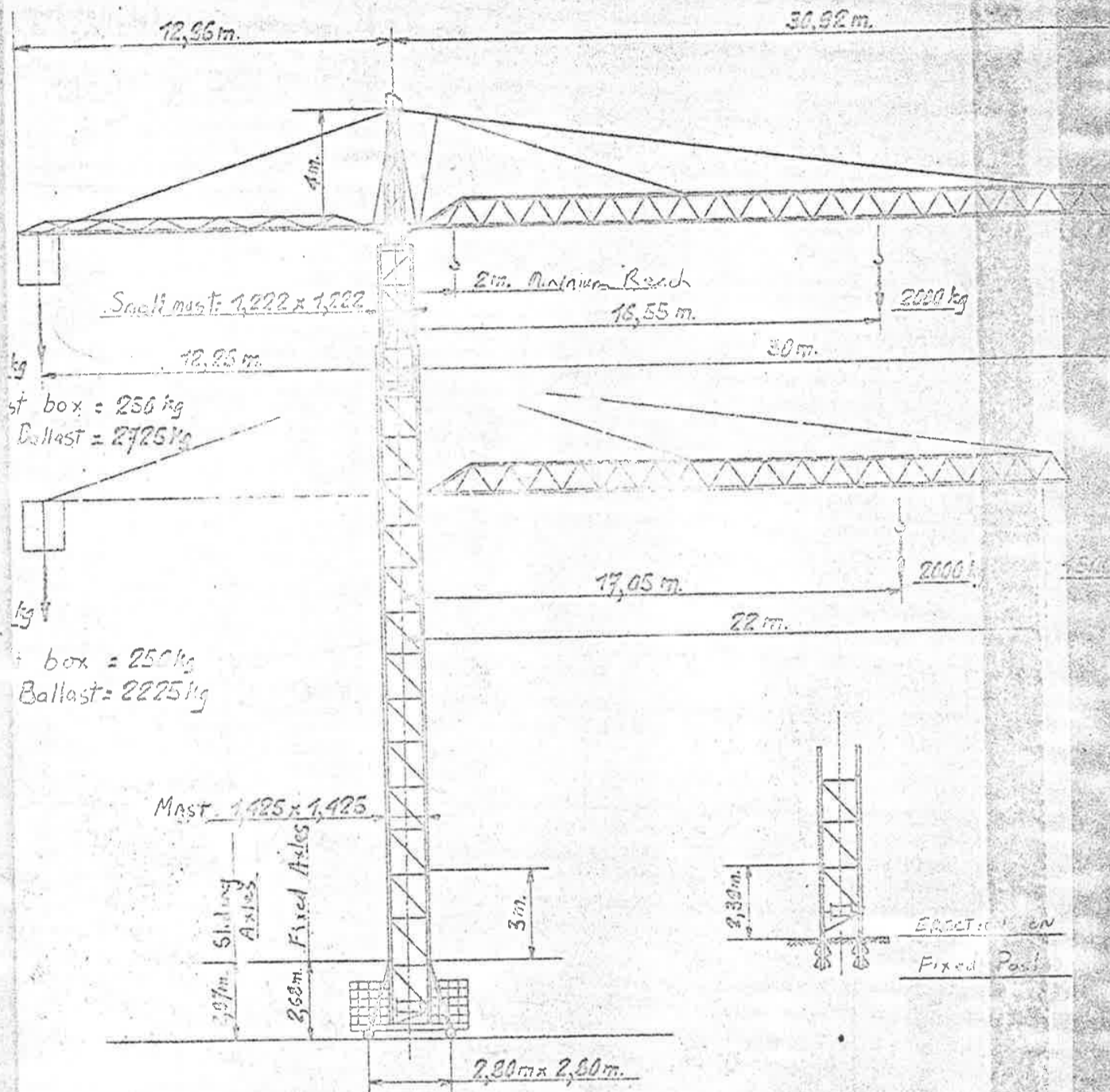
BASE PLAN



Copies to: Williams Constr. (2)

PINGON

P.30X.1030



GENERAL CHARACTERISTICS

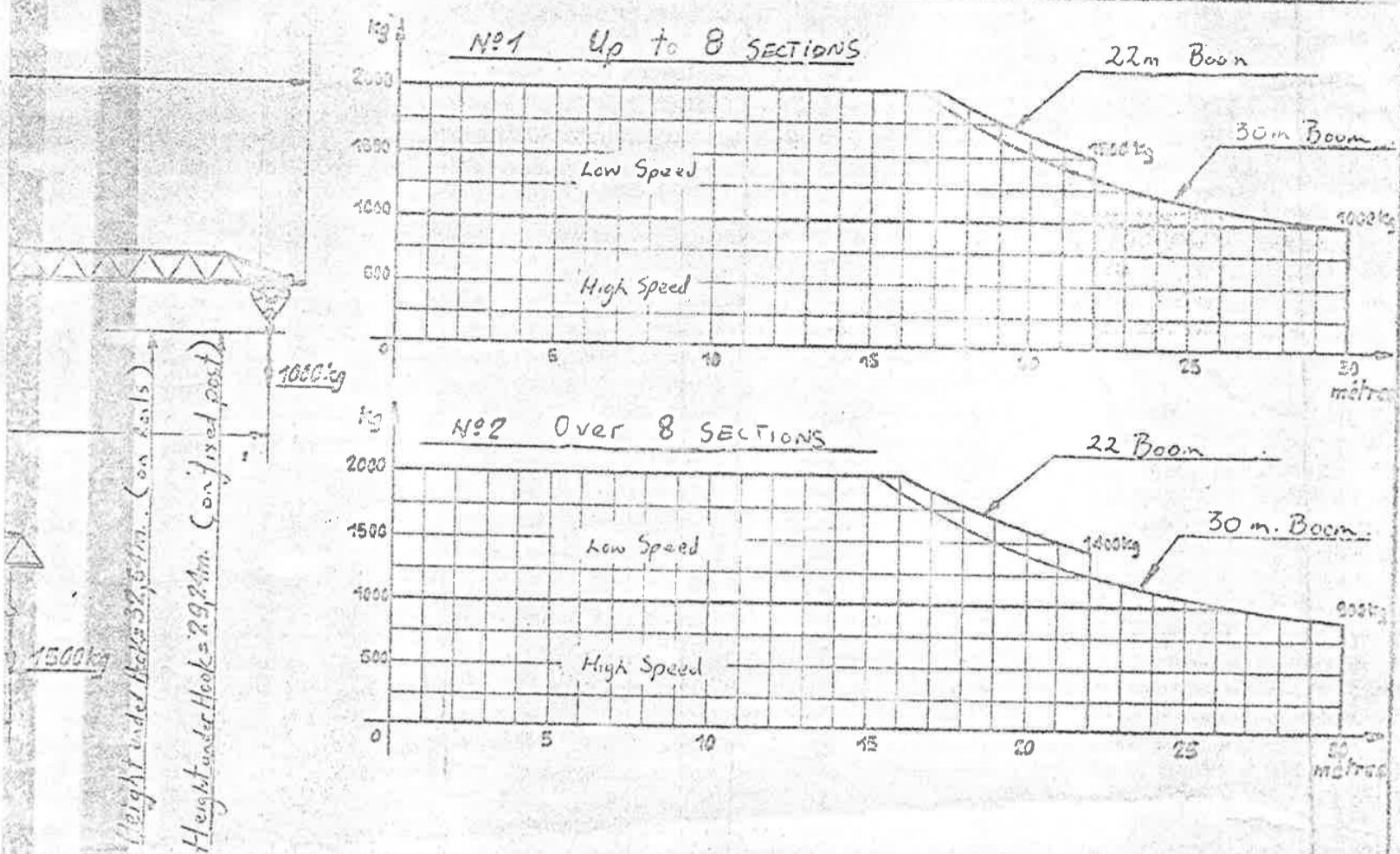
height of crane = 32.54 m
 travel on curve with sliding axles
 in order $R_{min} = 3.5m$
 weight of crane without ballast = 14,187 kg
 out of service the boom must be
 allowed to swing free
 height on fixed post minus anchorage = 29.24m
 height on fixed post with anchorage = 59.24m
 telescoping height = 59.24m

ELECTRICAL INSTALLATION

POWER REQUIRED 25 KVA
 - SECTION OF SUPPLY CABLES

VOLTAGE	LENGTH IN METERS			
	100	200	300	400
360-320V	4x10mm ²	4x16mm ²	4x25mm ²	4x40mm ²
200-220V	4x16mm ²	4x25mm ²	4x40mm ²	4x60mm ²

ENGLISH Specification



MECHANISMS				STABILITY				
Motion	Motor Powers	Motor Speeds	SPEEDS	Number of Sections	Height under Hook		Ballast Required	Righting moment
					Straight track	Sidiny rails		
SLEWING	2.5 HP.	3000 R.P.M.	0.8 R.P.M.	1	3,54m.	6,02m.	20T	
Trolley	1.5 HP	1500 R.P.M.	31,5 m/mn.	2	11,54m.	11,82m.	20T	
Long TRAVEL	3 HP.	3000 R.P.M.	30 m/mn.	3	17,54m.	17,82m.	20T	
Hoist				4	17,54m.	17,82m.	26T	
Motor		SPEEDS		5	23,54m.	23,82m.	26T	
Power	SPEED	SPEEDS		6	23,54m.	23,82m.	26T	
11-13 H.P.	1500 R.P.M.	23 m/mn.		7	26,54m.	26,82m.	25T	
	3000 R.P.M.	46 m/mn.		8	29,54m.	29,82m.	26T	
Micro Speed		1,5 m/mn.		9	32,54m.	32,82m.	26T	5
IMPORTANT NOTE				OVER 8 SECTIONS USE LOAD CURVE No 2 OVER 7 SECTIONS, THE CRANE SHOULD BE MOORED WHEN OUT OF SERVICE				
There is no manual speed on the hook micro speed. All speeds are obtained electrically.								

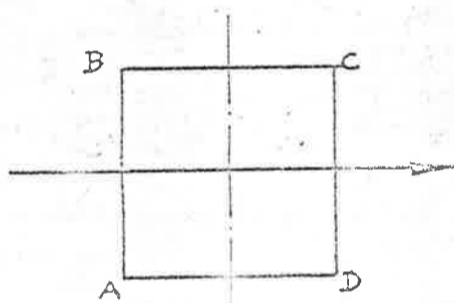
31.15.48.83 D

CRANE TYPES P20 to P30

CRANE ON FIXED MOUNTING
FORCES ON THE ANCHORAGE L'S

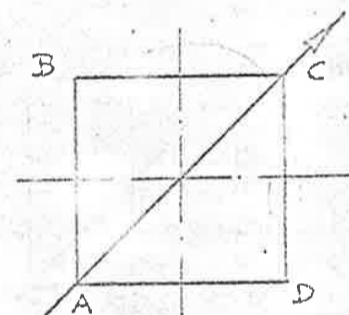
IN SERVICE WIND

WIND ON SIDE



BOOM PARALLEL TO SIDE

WIND ON DIAGONAL



BOOM AT 15° WITH RESPECT TO SIDE

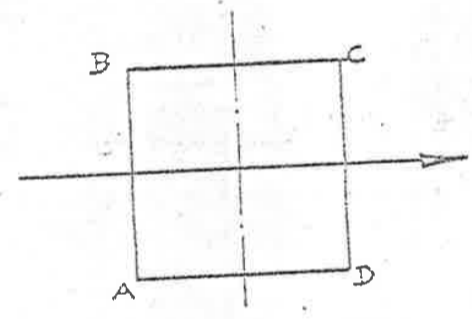
Total moment at ground Tons-ft	Reactions at points				N ^o s sections	Total moment at ground Tons-ft	Reactions at points			
	A Tons	B Tons	C Tons	D Tons			A Tons	B Tons	C Tons	D Tons
80.4	+5.72	+5.72	-12.34	-12.34	2	81.5	+9.64	-3.31	-16.25	-3.31
87.6	+6.63	+6.63	-13.50	-13.50	3	89.3	+10.72	-3.44	-17.60	-3.44
95.7	+7.20	+7.20	-14.29	-14.29	4	98.1	+12.01	-3.56	-19.10	-3.56
104.8	+8.10	+8.10	-15.47	-15.47	5	107.9	+13.41	-3.68	-20.77	-3.68
114.9	+9.11	+9.11	-16.71	-16.71	6	118.7	+15.04	-3.80	-22.65	-3.80
125.8	+10.20	+10.20	-18.06	-18.06	7	130.4	+16.78	-3.92	-24.62	-3.92
137.8	+11.47	+11.47	-19.58	-19.58	8	143.1	+18.71	-4.05	-26.80	-4.05
150.2	+12.76	+12.76	-21.10	-21.10	9	157.1	+20.40	-4.18	-29.15	-4.18

The + sign indicates a TENSILE force on the foundations
The - sign indicates a COMPRESSIVE force on the foundations

CRANE TYPES P20 to P30
CRANE ON FIXED MOUNTING
FORCES ON THE ANCHORAGE L's

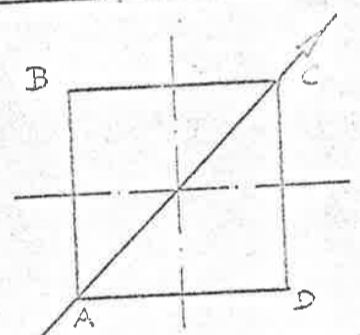
'OUT OF SERVICE' WIND

WIND ON SIDE



BOOM PARALLEL TO SIDE

WIND ON DIAGONAL



BOOM AT 45° WITH RESPECT TO SIDE

Total moment at ground Tons-ft	Reactions at points				Nos sections	Total moment at ground Tons-ft	Reactions at points			
	A Tons	B Tons	C Tons	D Tons			A Tons	B Tons	C Tons	D Tons
43.7	+2.23	+2.23	-7.60	-7.60	2	46.8	+4.75	-2.68	-10.12	-2.68
60.4	+3.98	+3.98	-9.60	-9.60	3	64.5	+7.41	-2.82	-13.02	-2.82
79.5	+6.01	+6.01	-11.89	-11.89	4	85.5	+10.68	-2.94	-16.55	-2.94
127.8	+11.29	+11.29	-17.41	-17.41	5	137.2	+18.75	-3.06	-24.88	-3.06
155.6	+14.38	+14.38	-20.80	-20.80	6	168.0	+23.35	-3.18	-29.05	-3.18
					7					
					8					
					9					

The + sign indicates a tensile force on the foundation
 The - sign indicates a compressive force on the foundation

N.B. WHEN OUT OF SERVICE, THE BOOM MUST BE FREE TO SWING WITH THE WIND.

CATHEDRAL PROPERTIES CONFIRMED BUDGET

Preliminaries	156,425
Sub-Floor, structure and upper-floors	544,038
Metalwork	36,055
Roofing	21,000
Carpentry	173,057
Drainage	6,000
Joinery	48,846
Suspended Ceilings	50,000
Aluminium Windows	426,409
Plumbing	84,140
Electrical	146,600
Glazing	12,965
Tiling	15,435
Painting	54,500
Mechanical services	308,066
Siteworks	27,519
Floor Coverings	-
Elevators	-
Specialist services	-
Margin	205,000
<u>TOTAL</u>	<u>2,316,055</u>

e) CONTRACTS IN PROGRESS

1. 138 Victoria Street

Client: Cathedral Properties Ltd

Contract: Master Builders - negotiated

Consultants: Architect - Ian Krause
Engineer - Holmes, Wood, Pool, Johnstone

Price: \$2,185m - Fixed.

Site Manager: Mr. Peter Garland

Brief Description: 8 Storeys approx 28,000 sq.ft including showroom, offices, penthouse. R.C. frame, piled foundations with Hi-Bond floor on steel primary and secondary beams. Glass facade.

Programme: Minimum contract period of 8.5 months quoted from 1st May 1987.

Progress: Piling completed approx 2 weeks late due principally to legal action by nearby contractor. Main contract commenced on 30.4.87. Foundation work currently in progress with first concret pour due on 14.5.87. Scheduled to be 'out of ground' with ground floor slab poured by 9.6.87

3.

Cathedral
Budget

Quantities.

Gerald

①

Foundations: -

Being

Typed
ManTrim tops of Piles
to Found. level

30 No

set-out Foundations
and levels.

Sum

Attend on excavator
for Foundation-Beams

Sum

Ditto for Back-fill
+ hardfill.

Sum

De-watering + shoring

Sum

25mpa concrete
in Foundation Beams71 m³

Ditto in pile-caps

7.5 m³Ditto in 100mm br
Floor slab.35 m³

Place + float slab

350 m²

Moistep DPL.

350 m²

66S mesh

350 m²Edge Formwork to
slab

76 m

Formwork to found
beams + pads.216 m²Place Rein. steel
to found. beams

13.4 t

Total of Found Beams.

(b) Structural Frame

30 mpa concrete column	54	m ³
Place + strip circular column - Forms 400 dia 3-4m height	56	No
(steel Forms, Props + Dynabolts supplied by Williams)		
Ditto 500 Diameter	21	No
Pre-fabricate Formwork to 400 square columns (ply-shutters) 12 No	16	m ²
Place + strip Fwk to 400 sq. columns.	130	m ²
Build-in metalwork cleats to tops of columns.	101	No
Place column Reinforcing steel	6.5	t
30 mpa concrete to core + shear walls.	227	m ³
Wall Formwork Prefabricate Ply on Falsework	185	m ²
Erect + strip incl. infills and inserts	1360	m ²
Remedial Plastering to exposed walls and columns	Sum	
Reinforcing steel to walls	18.34	t
Erection of Precast Fins.	54	No

③ Suspended Upper - Floors - Seven No

25 mpa conc in
120 mm slab
(pumped) 284 m²

Float + Finish slabs 2346 m²

Bonded tray decking
laid on steel beams
(no - propping) 2346 m²

* Nelson - studs fixing
deck to beam 3960 No

Place 666 mesh
to slabs 2346 m²

Place #10 steel
to slab @ 300cs 8.7 t

120mm edge Fwk
to slabs including
curved corners 405 m

25 mpa concrete
in 120 mm stair
landings incl finishing 6. m³

Place Rein. steel 0.5 t

Suffit Fwk to stair
landings 51 m²

Total of Upper Floors

① Provisional Labour Allowances

Precast concrete
Fins + stair treads
Manufacture + erection

(Drawings not available)

Sum

Erection of steelwork
Floor Beams.
Roof - steel + purlins
Lift shaft posts + beams.
Spandrel R/S Mullions

(Drawings to come)

⑤ Preliminaries

Ligon Tower Crane

Erection, dismantling
Foundations
Maintenance, Depreciation
Operation + Certification.
9 m. hrs

Sum

Temporary Sheds

Sum

Small-tools + miscell. plant

Sum

Safety, clean-up +
miscell. safety scaffold

Sum

Surveyor - set out + plumb
Upper-floors

Wilson

site Foreman, Insurance
Plant + consumables, Temporary
services, Telephone, exterior
scaffolding, permit + levys
+ final clean

Wilson

SummaryA FoundationsB Structural FrameC Suspended Upper FloorsD Provisional Labour allowances.E PreliminariesF Performance BonusG Contractors Margin

Total:

6.

**Union Construction Ltd**

Unit 1, Bealey Park
 Cnr Bealey Ave and Churchill St
 Christchurch, New Zealand
 P.O. Box 27033
 Telephone (03) 54-872
 (03) 54-873
 FAX

Allan Reay Associates
 Consulting Engineers
 P.O. Box 25-028
 CHRISTCHURCH

Attention: Mr. Allan Reay

Dear Sir,

15-5-87.

AMURI CORP DEVELOPMENT CHESTER ST

We set out below a summary of differences observed between our specification of 26.3.87 and the Architects specification received this week.

We have disclosed our budget allowances for these trades, in order that subcontractors quotes can be forwarded for approval and the client may benefit from any credits involved.

This is not intended to change the terms of our fixed price offer of 26.3.87 but enables more flexibility for the Architect and yourselves to finalise design details within budget parameters.

Drawing programme

In order that work on site may commence in mid-late June, and enable our proposed construction programme of 60 weeks to be maintained, we suggest the following design drawing sequence.

- a) May 18-29 Architectural details for budget and subcontract finalisation.
- b) June - structural and piling drawings for foundation permit, along with sufficient Architectural drawings for permit.
- c) June/early July - Construction drawings for carpark structure and piling.
- d) July - Structural and Architecturally precast drawings for prefabrication of components. Final Arch and Struct drawings for full permit by end of July.
- e) Aug - Drawings for Construction finalised and issued.

The key to our 60 week programme is sufficient information to allow the carpark and piling to commence in June/July and off-site precast manufacture in July/Aug.

AMURI OFFICE DEVELOPMENT CHESTER ST

Architects specification differences:

- a) Curtain Walling and Glazing 6mm Glaverbel reflective.
Union allowance for conventional aluminium joinery \$85,000
- b) Precast Panels - No details to hand
Union allowance \$125,000
- c) Tiling - Ceramic tiles to toilets
Tiling to penthouse decks and entry.
Union allowance - entry and intermediate decks \$8,234
Solid plastering \$36,000
- d) Carpentry - Plasterglass Fire-rated wall-linings.
- e) Metal & Butynol Roofing - Butynol to all concrete decks.
Union allowance \$31,118.
- f) Painting - Epiguard to exterior.
Union allowance \$53,140 interior and exterior. *Equus*
- g) Electrical Recessed pan light-fittings: *-Thorn \$132/F.*
Recessed downlights
Electrical skirting trunking
*Perimeter heating system - *No.*

Union allowance \$85,000. *To be as a Net. Sum designed by client (3 Tenderers)*
- h) Plumber - Fittings to be checked.
Union allowance \$55,000 *Call Air Cond*
- i) Elevators - 1.75m per sec
Union allowance \$290,000 *\$21296 :- check detectors + F.H.R.*

*check: delete interior painting tenancy
Formica linings to toilets ✓
labco partitions (Wayman roofing) ✓*

F.H.R. + Detectors ✓

Electrical to be designed + tenders - called :-

Precast + Glazing done together

check harding.

Aut Toilets - Carons a Panis + Cistern

street Drwg A.S.A.P. ✓

Wed/Thurs ^{next}

- a Budget + Pricing
- b Foundations + Carpark

Horizon Aluminium (Ch.Ch.)

P.O. Box 10-175, Phillipstown

AMURI CORP.21/5/87.

Levels 2 to 5 - CURTAIN WALL (SOUTH-WEST-NORTH.ELE)
 Balconies on 2 to 5 - Shopfront & Doors (2 PR per floor)
 level 6 Penthouse - Shopfront & Sliding doors (6 NO.)
 Ground & level 1 - Shopfront & doors (2 PR.) (SOUTH-WEST ONLY.)

NO automatic doors allowed. NO canopy allowed.

6mm stopsol grey reflective glass except to G.F.
 shopfronts & doors.

Toughened over spandrels & shear walls to WEST ELE.

NOTE: Scaffolding will be required to WEST shear walls
 for fixing & glazing. - Also to G.F & level 1.

NO fireproofing allowed between floors.
 NO cleaning allowed.

Curtain wall fixed from inside with both
 pre-glazing & inside glazing.

ESTIMATE for TOTAL AS ABOVE. \$292,852 - 00
 Supply, Install & Glaze.

ESTIMATE with frames & glazing
 to WEST shear walls deleted.

\$256,953 - 00
 Supply, Install & Glaze.
 5000 canopy

NO G.S.T.

Horizon Aluminium (Ch.Ch.)
 P.O. Box 10-175, Phillipstown

Heitch

\$261,953

Check Spec.

MB/6534

OTIS ELEVATOR COMPANY LTD.

31 DUKE ST., P.O. BOX 4050, MOORHOUSE, CHRISTCHURCH, NEW ZEALAND.

28 May 1987

Union Construction,
P.O. Box 27-033,
Christchurch

Attention Mr. T. Scott

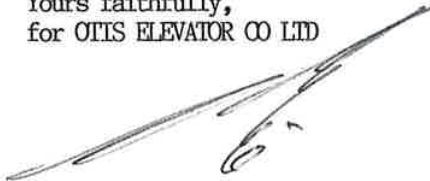
Dear Sir,

RE Amuri Corp Building

Further to our recent verbal advise, we confirm our price of \$320,000.00 for the supply and installation of two 910 kg @ 1.75 Elevonic 301 elevators, each serving 7 stops/7 openings.

Kind Regards

Yours faithfully,
for OTIS ELEVATOR CO LTD

A handwritten signature in black ink, appearing to be 'M.G. Blom', written in a cursive style. The signature is positioned to the right of the typed name and extends upwards and to the right.

M.G. Blom
Manager

Drawing Programme

Points A to E of Union Constructions letter of 15.5.87 discussed.

June - July structural drawings for Foundation Permit, piling and carpark structure confirmed.

Architectural drawing programme to commence in June, with target dates for Permit and Construction to be confirmed.

A.J. Scott
UNION CONSTRUCTION LTD

6.

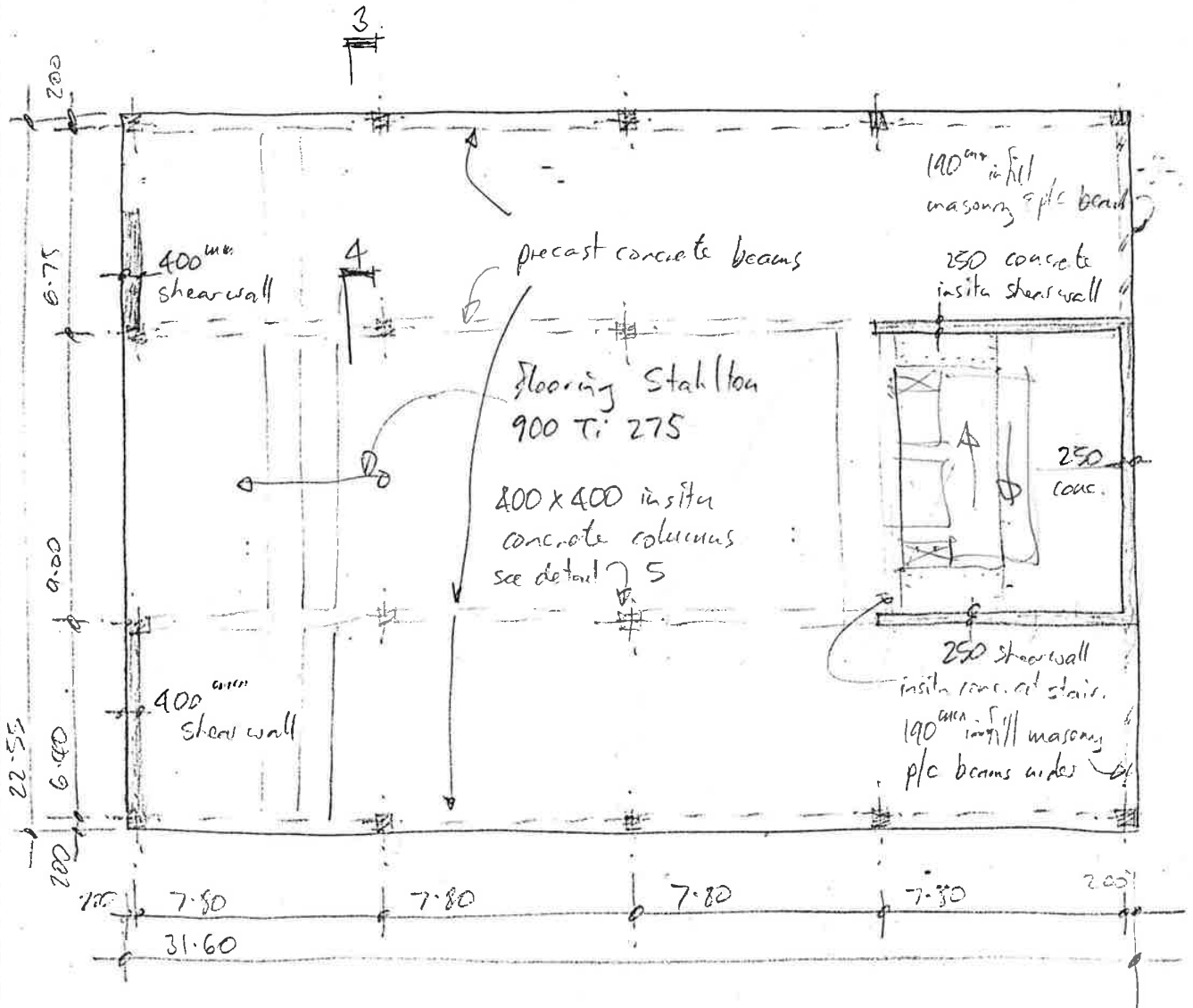
AMURI BUILDING CHESTER ST

<u>A) MAIN-CONTRACTOR</u>	<u>TOTAL</u>
Preliminaries	230,660
Foundations & Piles	376,488
Structural Frame	266,588
Upper Floor slabs	508,889
Basement carpark	218,520
Carpentry	163,890
Precast Panels	132,500
<u>B) SUB-CONTRACTORS</u>	
Structural steel	36,260
Metal & Butynol roofing	32,985
Aluminium Joinery	90,100
Plumbing	58,300
Drainage	7,420
Electrical	90,100
Joinery	21,200
Suspended ceilings	96,754
Solid plastering	38,160
Elevators	307,400
Flooring	11,236
Tiling	8,728
Painting	56,328
Glazing	4,240
Fire-protection	22,573
Siteworks	21,689
<u>TOTAL</u>	<u>\$2,801,008</u>

Margin on Subcontractors 6%

7. CONSTRUCTION DETAILS - PRELIMINARY
OFFICE BUILDING - CHESTER ST WEST

PAGE	1
SECT	SKETCH
FILE	2642
DATE	12/3/87



PLAN - TYPICAL FLOOR, LEVELS 1 to 6 (6 off)
1:200 approx

Gross Floor Area = $31.6 \times 22.55 = 712 \text{ m}^2$

length of p/c beams = $(2 \times 31.6) + (2 \times 22.6) = 110 \text{ m}$

Stahlton 900 Ti: 275
 $6/2 \begin{matrix} 8-60 \\ 24-40 \end{matrix}$
 $1238 \text{ m}^2 @ 30/m^2$

(175)

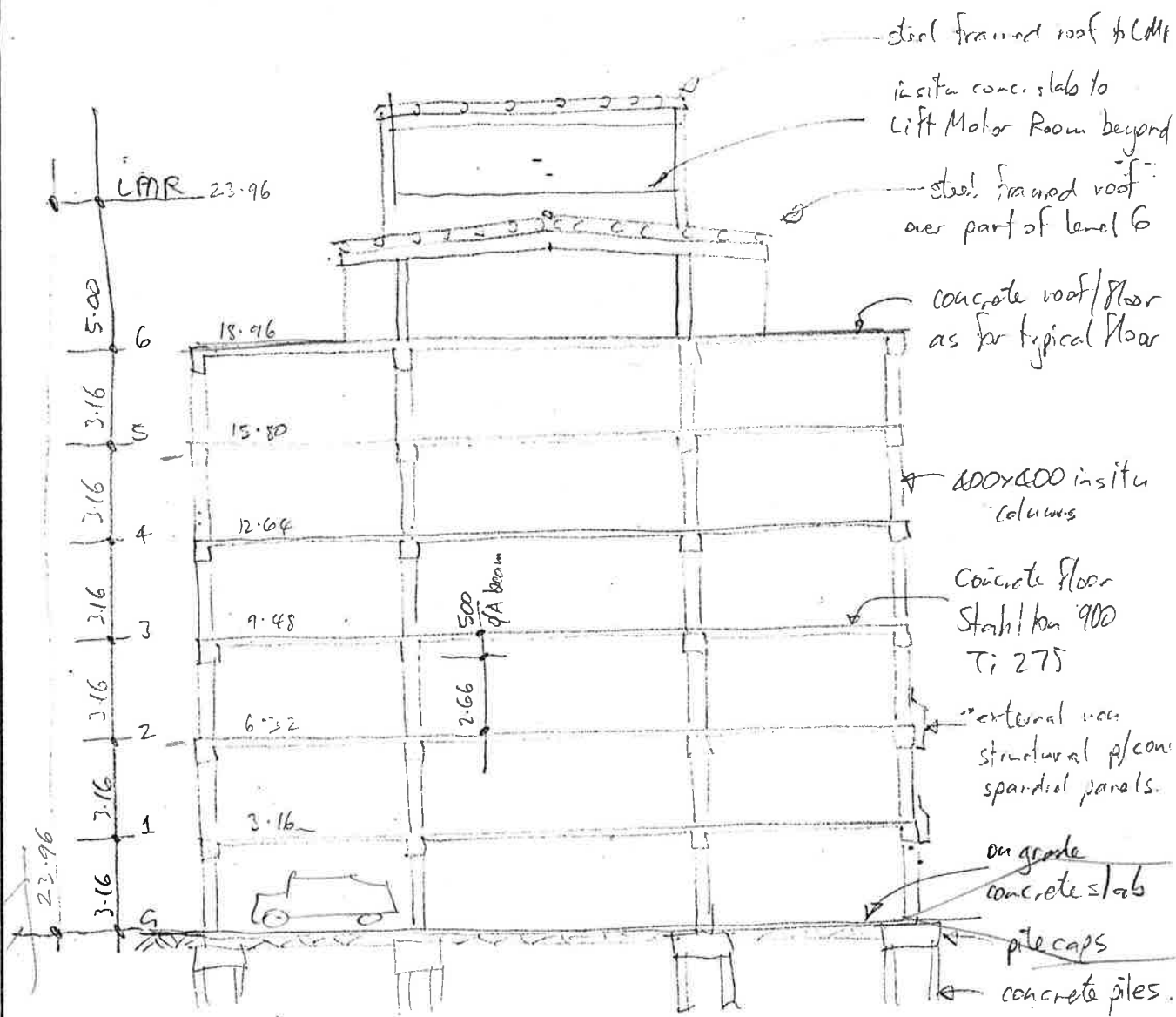
Davies, Precast

75mm Deck slabs $6/2 \begin{matrix} 31-00 \\ 5-70 \end{matrix}$
 $2120 \text{ m}^2 @ 35/m^2$ (150mm) 1.23 t/m^2

CONSTRUCTION DETAILS - PRELIMINARY

OFFICE BUILDING - CHESTER ST WEST

PAGE	2
SECT	SKETCH
FILE	2642
DATE	12/3/87



TYPICAL CROSS SECTION

1:20 approx

5356m²

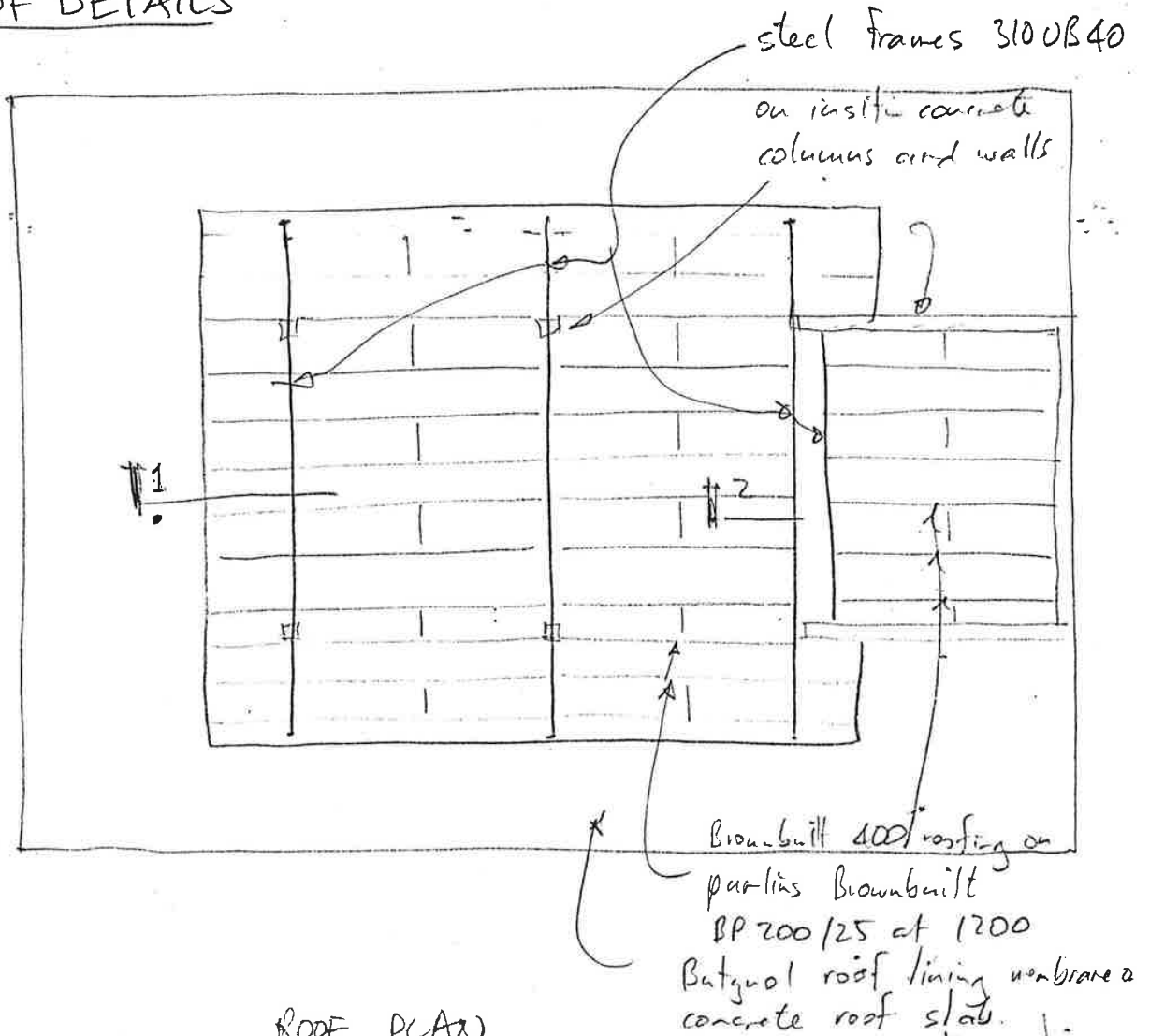
airpark \$130000:-

CONSTRUCTION DETAILS - PRELIMINARY

OFFICE BUILDING - CHESTER ST WEST

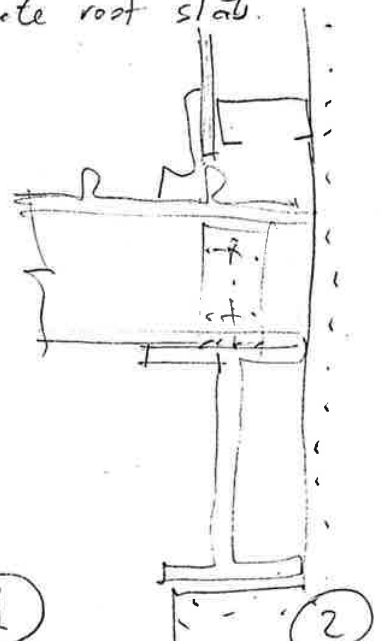
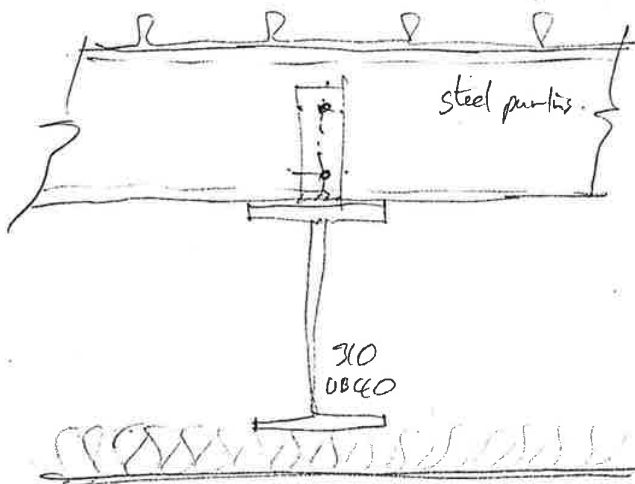
PAGE	3
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FILE	2642
DATE	12/3/87

ROOF DETAILS



ROOF PLAN

1:200 approx



1

2

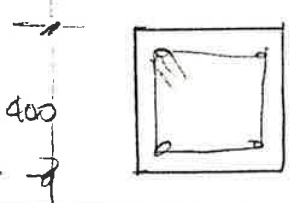
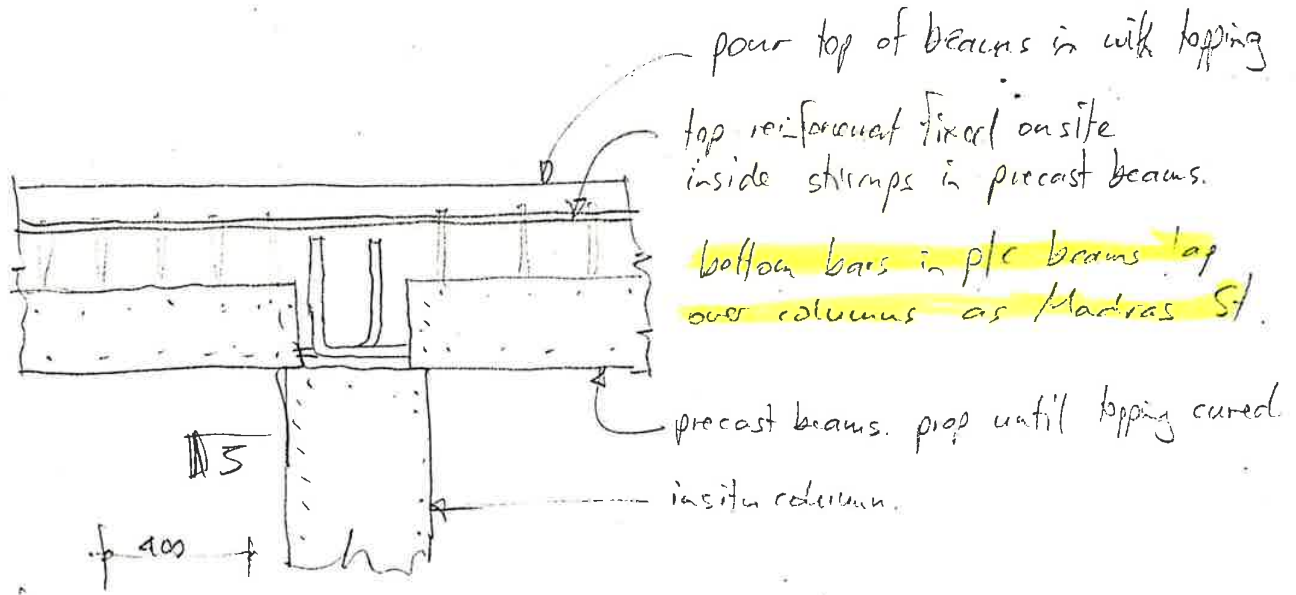
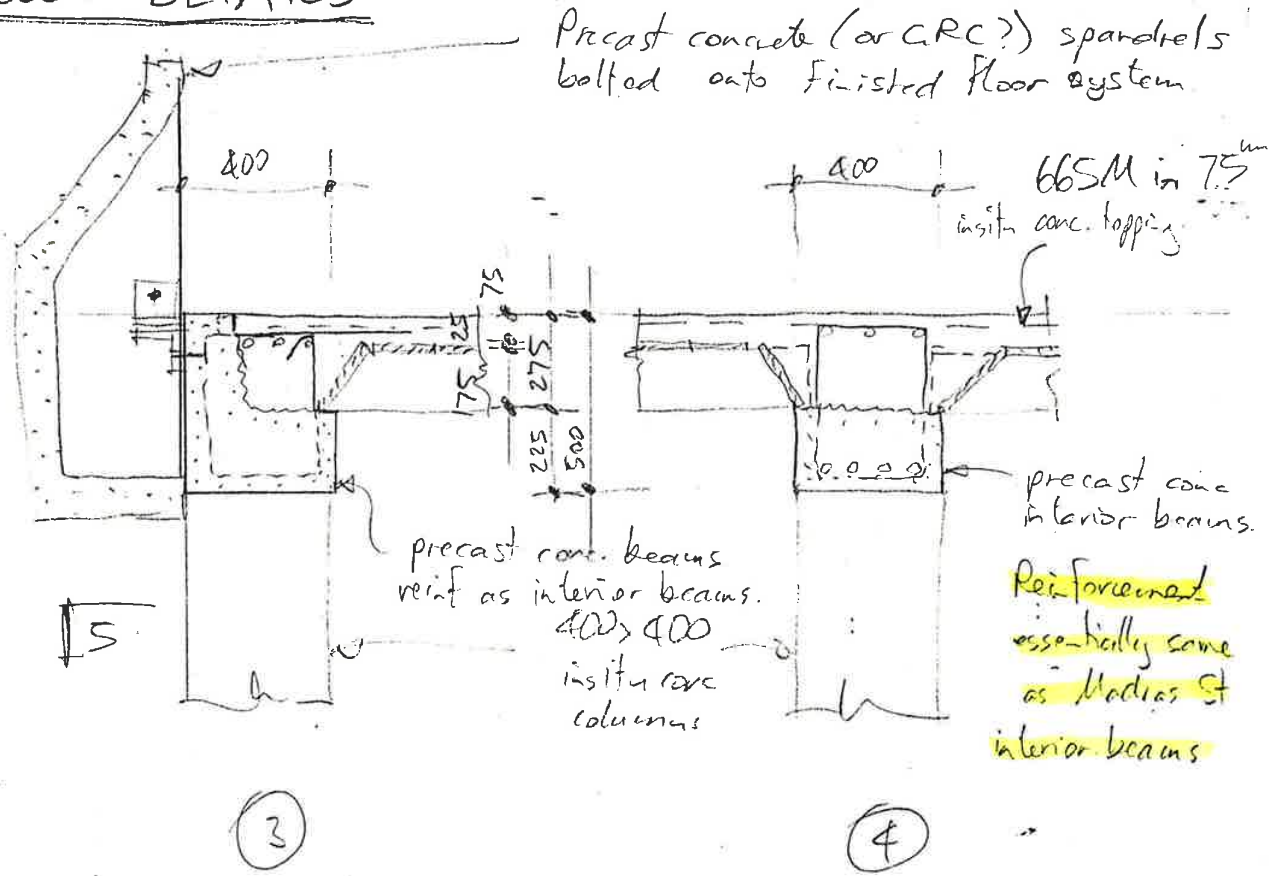
1:10 approx

CONSTRUCTION DETAILS - PRELIMINARY

OFFICE BUILDING - CHESTER ST WEST

PAGE	4
SECT	SKETCH
FILE	2642
DATE	12/3/87

FLOOR DETAILS



Typical Column.

4-H28 rods

R10 at 250 hoops.

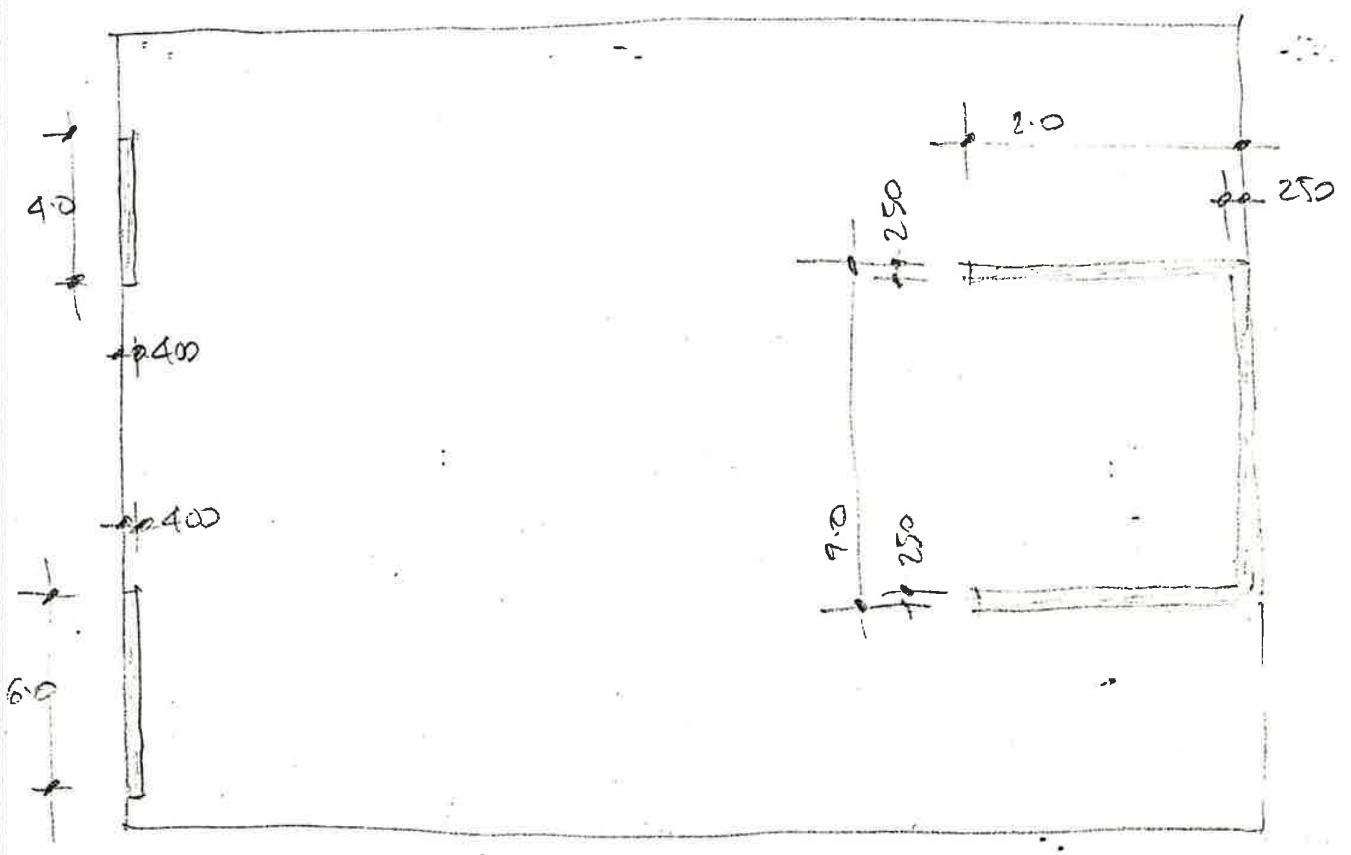
$f'_c = 30 \text{ MPa}$ ground level. 25 MPa top levels.

CONSTRUCTION DETAILS - PRELIMINARY

OFFICE BUILDING - CHESTER ST WEST

PAGE	5
SECT	SKETCH
FILE	2642
DATE	12/3/87

CONCRETE SHEAR WALLS



PLAN

Reinforcement in walls virtually same total weight as in Madras St. Job.

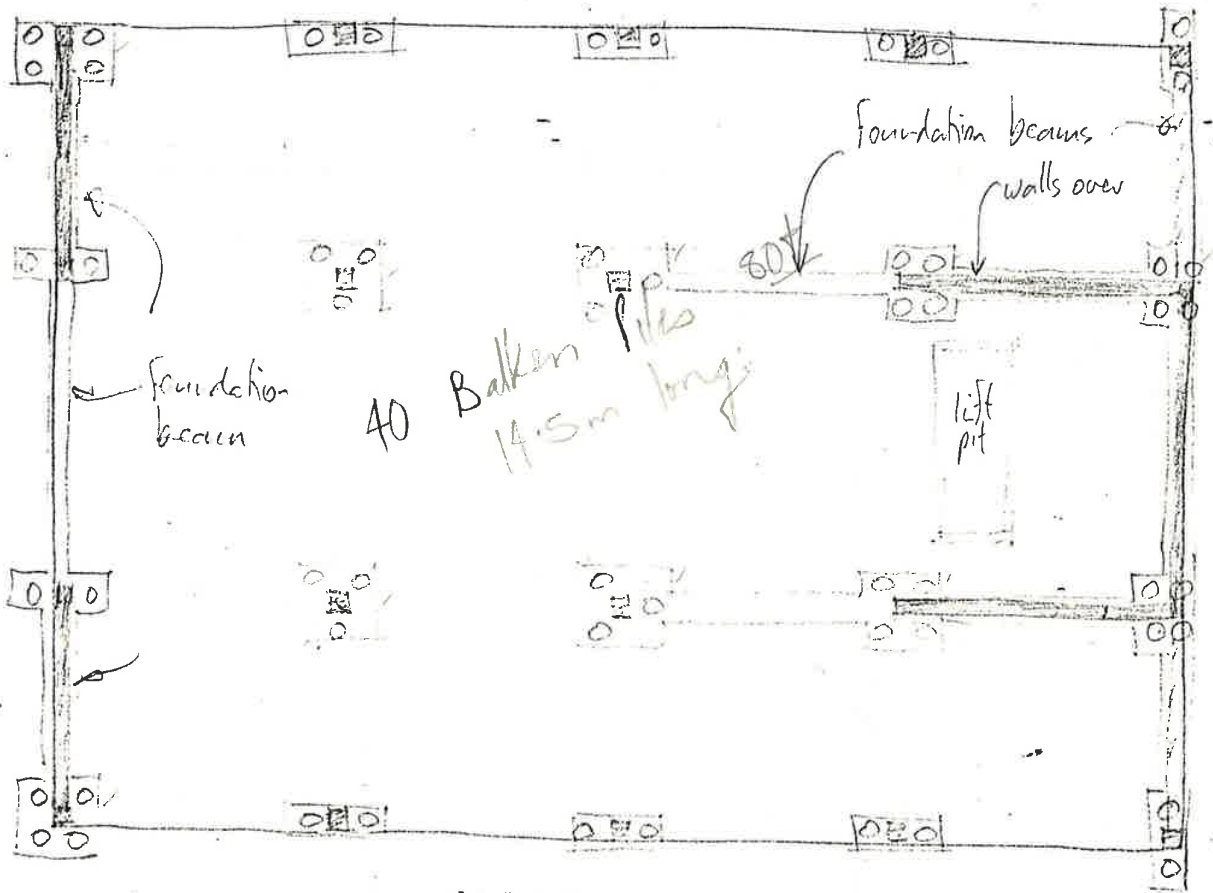
- M28 rods at ends of walls with confining loops
- M12 reinforcement horizontally & vertically.

CONSTRUCTION DETAILS - PRELIMINARY

OFFICE BUILDING - CHESTER ST WEST

PAGE	6
SECT	SKETCH
FILE	2642
DATE	12/3/87

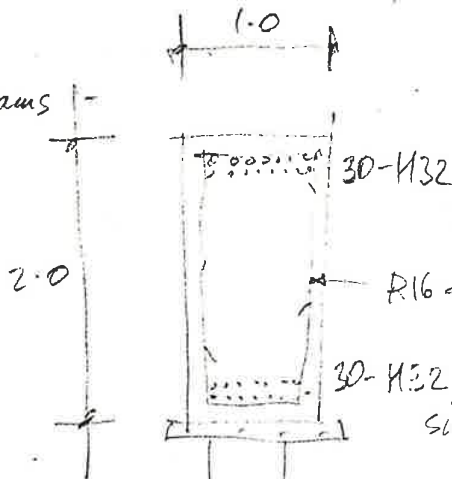
FOUNDATIONS



PLAN

56 of, 60 frame piles - Balken piles
 or - Frank piles

Foundation beams



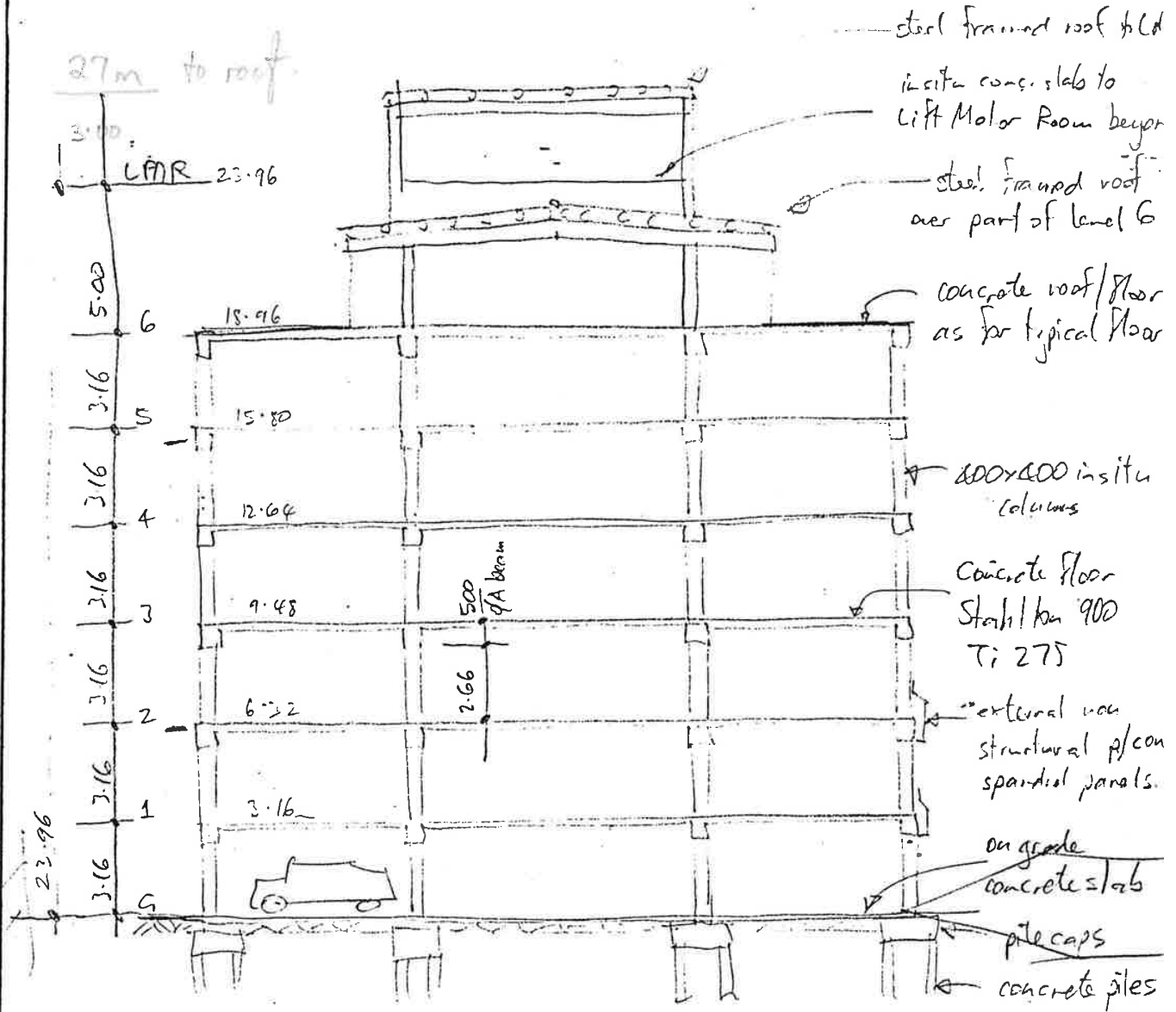
dimensions & reinforcement
 similar to Madras St.

piles as shown on plan.

CONSTRUCTION DETAILS - PRELIMINARY

PAGE	2
SECT	SKETCH
FILE	2642
DATE	12/3/87

OFFICE BUILDING - CHESTER ST WEST



TYPICAL CROSS SECTION

1:20 approx

\$252000

533

airpack \$150000

GENERAL COMMENTS

MJB/MMcD

9 September 1987

The site is in the immediate vicinity of the Law Courts (currently under extension).

Other properties include East House (Radio N.Z.), Chancery Court Building, Durham Towers Hotel, Park Royal Hotel, Statistics Dept. building and Waitaki N.Z.N. offices.

MEMO

TO: DIRECTORS
This general area has developed rapidly over the past ten years, the Law Courts initially being the focus of activity.

SUBJECT: AMURI DEVELOPMENT - CHRISTCHURCH

The Amuri Corporation have indicated a willingness to consider the outright sale of their land in Chester Street, Christchurch.

I recommend that the Parent Company purchases the land and undertakes the development and accordingly authorises me to submit an unconditional offer in the form attached.

A summarised financial feasibility is attached.

1. Floor Plan - natural lighting to three sides - relatively easy to subdivide floors.

M.J. Brooks

GENERAL MANAGER

To: Mr. Don McFarlane
Mr. Warwick Angus
Mr. Peter Tong

Copy to: Mr. Lloyd Ferris

CONCLUSION

In conclusion I would strongly recommend that this site be acquired if possible. Whilst accepting that the proposal is speculative, the degree of interest about the site is justified by the potential returns and long term investment prospects.

GENERAL COMMENTSLOCATION

The site is in the immediate vicinity of the Law Courts (currently under extension).

Adjoining properties include Kent House (Radio N.Z.), Chancery House, (Court Building), Durham Towers Hotel, Park Royal Hotel, Statistics Dept. building and Waitaki N.Z.R. offices.

This general area has developed rapidly over the past ten years, the Law Courts initially being the focus or magnet. A common feature of sites in this area being ease of access and relatively good parking opportunities.

ZONING

The plans comply substantially with Scheme requirements but for a minor matter currently subject to Council approval. If declined only a minor amendment to the drawings is required.

TENANCY LEASING

Salient features that make this building a good leasing prospect are

1. Floor Plan - natural lighting to three sides - relatively easy to subdivide floors.
2. Location - relative to Law Courts and Hotels
3. Car Parking - Minimum 46 spaces on site - no other building proposed at present can offer this number
4. Rentals - Conservative rentals of \$18 - \$21 per sq.ft including carpet and air conditioning. Current rentals for similar new buildings range from \$16-50 to over \$25 in the commercial centre.
5. Returns - A particularly conservative approach has been taken. Even with a capitalisation rate of 10% a potential capital gain of close to 30% is demonstrated.

CONCLUSION

In conclusion I would strongly recommend that this site be acquired if possible. Whilst accepting that the proposal is speculative, the degree of inherent short term risk is justified by the potential return and long term investment prospects.

CONSTRUCTION COST - CASH FLOW

Contract Price - \$3,200,000

Construction Period - 1st October 1987 to 30 September 1988
12 months.

Progress Claim No.	Gross Value	Net Claim
1	32,000	28,800
2	160,000	144,000
3	192,000	182,400
4	224,000	212,800
5	256,000	243,200
6	320,000	304,000
7	352,000	343,200
8	352,000	363,200
9	352,000	348,480
10	384,000	348,480
11	320,000	316,800
12	256,000	253,440
		131,200
		<u>80,000</u>
TOTAL	3,200,000	3,200,000

Interest on construction @ 22% p.a. (1.83% p.m) - \$326,419
say \$325,000

SUMMARY OF DEVELOPMENT COSTS

Land		\$2,000,000
Interest on Land @ 18% p.a.	\$3,350,000	360,000
Building contract	1st October 1987 to 10 12 months.	3,200,000
Interest on construction	Gross Value	325,000
Design Fees	12,000	180,000
R.E. fees (Leasing)	160,000	80,000
Legal	say 100,000	20,000
	220,000	\$6,165,000

TOTAL COSTS \$6.165 m

Value Income \$798,321 p.a. @ 10%	= say	\$8.0 m
" " " 9%	151,000	\$8.87 m
" " " 8.75%	192,000	\$9.12 m
Capital gain/equity	minimum 352,000	\$1.84 m
	maximum 334,000	\$2.96 m
Return on cost	<u>12.95% p.a.</u>	

10

12

230,000

3,200,000

3,200,000

Interest on construction @ 12% p.a. (1.816 p.a.)

332,000

LEASABLE AREAS:

First:	6490 ft ²		
Second:	6490 ft ²		
Third:	6490 ft ²		
Dealer's Room	19472 ft ²	@ \$18	\$350,506 p.a.
Fourth	6490 ft ²		
Fifth	6490 ft ²		
	12980 ft ²	@ \$20	259,600
Sixth	3931 ft ²	@ \$21	82,565
Balconies			
First, Second, Third	3 x 370 ft ²	x \$18 x 50%	9,990
Fourth & Fifth	2 x 370 ft ²	x \$20 x 50%	7,400
Sixth	3206 ft ²	@ \$5 say	16,500
		TOTAL RENTAL	\$726,561
	46 car parks	@ \$30	<u>71,760</u>
		TOTAL INCOME	<u>\$798,321</u>

9.



Union Construction Ltd

Unit 1, Bealey Park
Cnr Bealey Ave and Churchill St
Christchurch, New Zealand
P.O. Box 27033
Telephone (03) 54-872
(03) 54-873
FAX

F A X M E S S A G E

ATTENTION: Mr Don McFarlane

FIRM: Angus Construction (Well) Ltd

FAX NO: 04-662-480

FROM: M Brooks / T Scott

NO. OF PAGES (excluding this one) 1 / 4

COMMENTS:

NB - Our Fax is manual and is therefore operational during office hours only.



Union Construction Ltd

Unit 1, Bealey Park
Cnr Bealey Ave and Churchill St
Christchurch, New Zealand
P.O. Box 27033
Telephone (03) 54-872
(03) 54-873
FAX

M E M O R A N D A

TO Directors
FROM A J Scott
SUBJECT Allocation of Overheads and P&G in Contract Estimating, for comment.
DATE 21 September 1987

A) Hourly Rate

Carpenters working Saturday Morning.

Basic rate	\$7.796	
Service Allowance	0.277	
40 hrs ordinary	322.92	
5 hrs T $\frac{1}{2}$	60.54	
4 hrs Sat Morning		
3 x T $\frac{1}{2}$ - 1 x 2	36.32	
	16.14	
Travel 3 hrs	24.21	
Industry	52.43	
Boots	1.65	
Clothes	1.33	
Tools	11.41	
		526.95
ACC Levy	26.09	
Annual Hols & Stat	52.69	
Sick Allowance	10.53	
Total		\$616.26
	12.57/Hr	

A similar exercise is done for Leading hands, Hammer-hands, Labourers and Apprentices.

These rates are then averaged depending upon the number and mix of skills on a particular contract, and is referred to as the "composite crew factor".

The accuracy of the calculated hourly rate is important when estimating for a contract in excess of 50,000 man hours.

Present Union construction contracts are priced at \$14.00 (Opawa Road) \$13.50 (Octagon Towers and Verkerks \$13.00 (Cathedral Properties and Amuri Corporation).

In the case of a Cost Reimbursable, or a Negotiated contract, where the hourly rate is disclosed to the client, a new rate would be assessed to include for a) Consumables, b) Small tools, c) Vehicles, d) Overheads.

This would then make the agreed margin net rather than gross.

The intech computer software now operating has the facility to report on average Labour rates per contract per week.

B) Labour Man-Hours

These are assessed by the estimator, based upon feed-back from previous completed contracts, and by detailed assessment with the construction management. ie: Formwork Systems, Craneage, work sequence and specific personnel.

Wet-time is allowed for as a lump-sum depending upon the time of the year and type of contract, eg: Durham Towers approximately 400 wet-time hours were incurred out of 76,000 over 21 months.

Wet-time can be treated as a risk item, or averaged out and included in the hourly-rate. Non-productive time and attendance on Sub-contractors is included in the respective trade-costing and not in P&G.

C) Preliminary and General

All direct site related costs are included as a contract cost under the following headings:

* enclosed breakdown

Preliminary and General is one of the more difficult areas of contract Costing for the estimator, as expenditure is dependent upon how the contract is set-up and supervised. Numerous items require advice from Construction Management.

Plant and equipment are to be allocated from Plant cost-centre.

D) Overheads

Assuming that overheads are not included in the hourly-rate of P&G then this item must be included in the Gross margin.

The overhead percentage is dependent upon turnover and in the case of Union Construction is approximately 3.2% ie $\frac{\$355,300}{11,072,308}$ (excluding Plant depreciation and interest on debenture)

Gross margins for tendered work in Christchurch are between 3% and 6% and most Christchurch Contractors treat overheads as part of Gross margin.

Margins for Design-build and negotiated contracts are 6% - 10% depending upon the extent of expertise given by the Contractor to the client, the feasibility of financial return of the project, and the degree of risk taken when submitting a firm price on preliminary drawings.

Your comments on these guidelines are to be discussed at the Management meeting of 24th September so that a definite Policy may be adapted.

A J Scott

To: Mr Don McFarlane
Mr Warwick Angus
Mr Peter Tong

Copy to: Mr Lloyd Ferris

*** OCTAGON TOWERS - PRELIMINARY & GENERAL****SUMMARY****LEVY'S & FEES**

Development Levy
 Permit
 Branz
 Insurances C.A. Risks

SUPERVISION

Site Manager
 Vehicle

TOWER CRANE

Rental months
 Erection, climbing & dismantle
 Driver & Dogman
 Loading Platforms and tie-ins

SITE ACCOMODATION

Gantry & 4 Portacoms
 Footpath rental
 Construction Loading zone
 Hoarding
 Office & Site Expenses

TEMPORARY SERVICES

Toilets, Drainage & Water
 Compressed Air
 Temporary Power

SCAFFOLDING

Stairs & Elevator-shaft
 Podium Levels
 Roof Level
 Perimeter rails
 Cable-climber

MISCELLANEOUS

Security
 Surveyor
 Telephones
 Signboard
 Plant and equipment
 Consumables & small tools
 Clean up
 Waste-takers
 Final clean

TOTAL OF PRELIMINARY & GENERAL

U N I O N C O N S T R U C T I O N L T D

Report to Management Committee Meeting

Computerised Financial Control

A visit to Angus Construction Wellington was made by Mike Brooks and Tony Scott on Thursday June 4th, for the purpose of investigating their in-house Computer System.

The extent and details of the Intech Software was explained by Accounts and Administration staff (Chin Chye Lee and Murray Armstrong) including Contract Costing, Subcontractors and Creditors, Payroll and Costing, Plant and General Ledger.

The various categories of the intech system are very compatible with Union Constructions envisaged requirements, although on a smaller scale, for the first year of operation.

We were impressed with the total control Angus staff had on Data input, checking of print-outs and experimentation to fine-tune the programmes, by the use of an additional Terminal and programme.

It is our recommendation that a similar computer facility be installed in Union Constructions offices in liason with Lawrence Anderson Buddle.

Two of our existing staff are experienced in Data processing and have spare capacity available to operate the system. Another benefit of in-house facilities is that Management and Staff are able to work the system and become totally conversant with its capabilities.

Further programmes for programming; estimating and historical analysis of contracts are available on the market, presently and may be added to the Intech facility, if required.

We propose a budget of \$25,000 for the supply of a two-terminal A.T. Computer along with the associated Intech software.

A detailed quotation from Intech Christchurch is enclosed for your information.

A.J. Scott
DEVELOPMENT MANAGER
18.6.87



BURNS & FERRALL (S.I.) LIMITED.

106 CARMEN ROAD, CHRISTCHURCH, NEW ZEALAND
P.O. BOX 16105, HORNBY 4. TELEGRAPHIC ADDRESS 'BURFER'. TELEPHONE 495-394

STAINLESS STEEL FABRICATORS

OFFICE COPY

18 September 1986

Williams Construction Limited,
P.O. Box 538,
CHRISTCHURCH.

Dear Sir,

Re: Development Job

Further to our recent conversation, please find enclosed the drawing and price for the stainless steel columns.

If the price meets with your approval we would require an order number and exact measurements before commencing the job, G.S.T. is not included in this price.

Yours faithfully,
BURNS & FERRALL (S.I.) Limited

Andy Innes





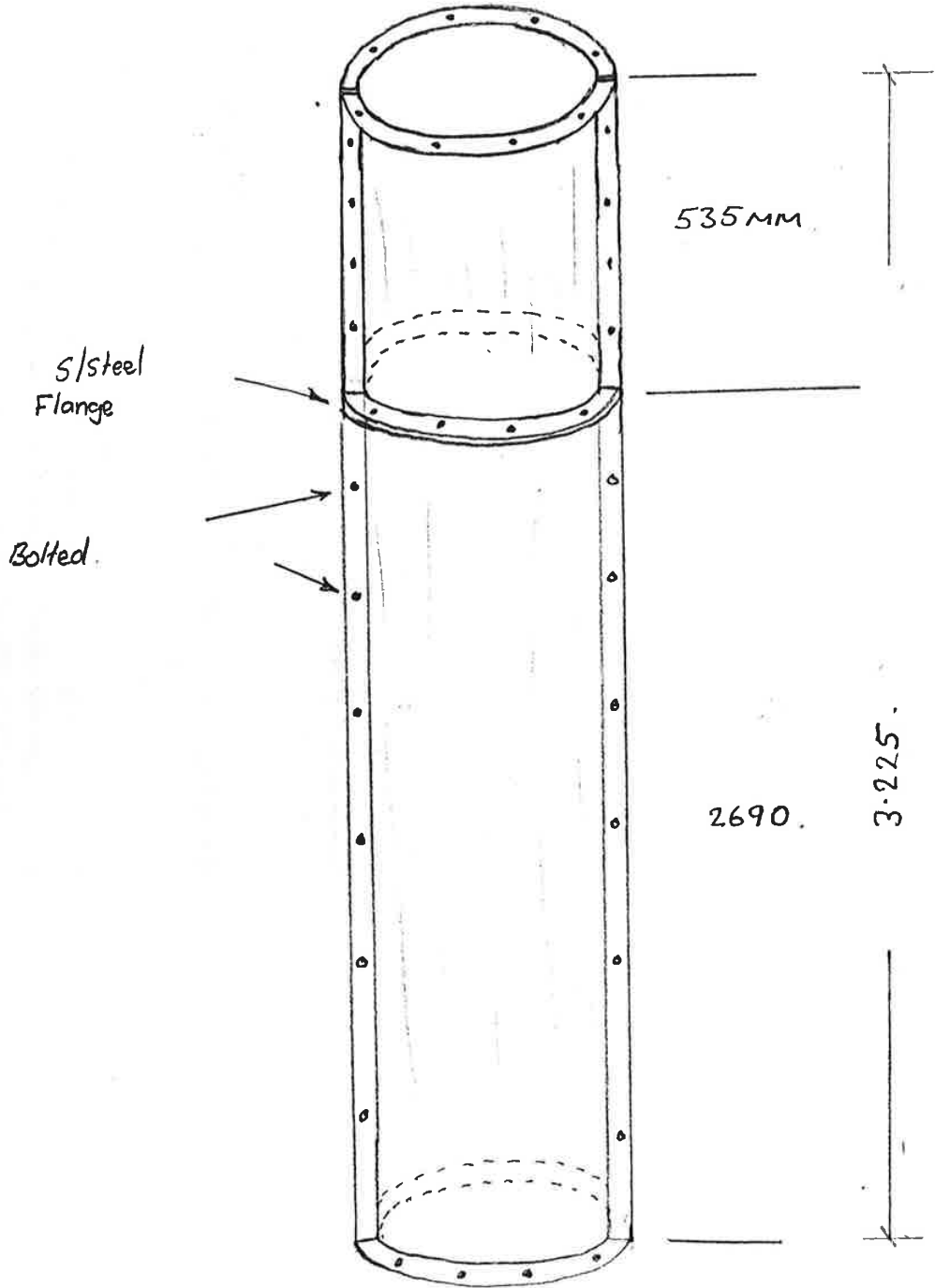
BURNS & FERRALL (S.I.) LIMITED.

106 CARMEN ROAD, CHRISTCHURCH, NEW ZEALAND
P.O. BOX 16105, HORNBY 4. TELEGRAPHIC ADDRESS 'BURFER'. TELEPHONE 495-394

STAINLESS STEEL FABRICATORS

BUI.MAD249.0324.43

4 SETS OF COLUMNS.



YOURS FAITHFULLY
ANDY INNES

QUOTED \$597 EACH SET.

12.

ALAN M. REAY CONSULTING ENGINEER147 KILMORE STREET
BOX 25-028, VICTORIA ST.
CHRISTCHURCH, 1.

Telephone: 60-434

File 2993

ALAN M. REAY
B.E. (Hons.), Ph.D.
M.N.Z.I.E.
Registered Engineer
Structural Consultant

18 November 1987

Mr M. Brookes,
Managing Director,
Union Construction Limited,
P.O. Box 27-033
CHRISTCHURCH

Dear Mike

Re: AMURI - MANDEVILLE STREET STAGE IIA

As requested by Amuri Corporation, we enclose four copies of the drawings and specification for this proposed building. Could you please provide a quotation for the erection of this building on or before the 2 December 1987.

The erection of this building will influence the development of other buildings on this site and it is therefore necessary to determine which building will be erected next at an early date.

The following trades are not finally determined and therefore P.C. sums should be allowed as follows:-

Drainage \$5000.00

Electrical \$50,000.00

Site Works (Outside building area) \$20,000.00

Yours faithfully,



Dr A.M. Reay

c.c. Mr D. Brown
Amuri Corporation

No tablet construction

#626/74

13a

2 December 1987

Alan M Reay
Consulting Engineer
PO Box 25-028
CHRISTCHURCH

Dear Sir

AMURI - MANDEVILLE STREET STAGE II A

We have pleasure in submitting our quotation for the above proposed development in accordance with plans, specifications and your letter of 18 November 1987 amounting to \$659,126.00 (Six hundred and fifty nine thousand one hundred and twenty six dollars).

This price is based upon current materials prices and labour awards, being subject to fluctuations in accordance with NZS 623.

We are in a position to commence work on site when the Building Permit is available, and envisage a construction time of six months.

Trusting this quotation to be acceptable we enclose our summary schedule and await your advice.

Yours faithfully

A J Scott
DEVELOPMENT MANAGER

AJS:MG

136

RICCARTON ESTATE AMURI CORPORATIONSTAGE II A

Preliminaries	46,204.00	
Excavation & Hardfill (No removal of existing foundations) 150mm hardfill allowed	3,990.00	Laings
Drainlaying P.C Sum	<u>190</u> <u>130</u> 5,000.00	Union
<i>check</i> Concrete Work <u>50%</u>	126,797.00 * <u>OK</u>	
Structural Steel	36,250.00	C S F
<i>check</i> Reinforcing steel	30,921.00 *	Fletchers
<i>check</i> Carpentry <i>check</i>	53,002.00 \$6,000.	Union
Joinery	8,095.00	J Hooper
✓ Suspended Ceilings	39,140.00	Angus
✓ Tiling	18,902.00	Brymac
✓ Vinyl Flooring	3,621.00	Reese Bros
✓ Metal Windows	103,948.00	H I Products
✓ Roofing	27,750.00	Wayman
✓ Painting	13,000.00	Spectrum
* Plumbing	26,230.00	P Diver
✓ Glazing	5,015.00	Oakleys
Electrical P.C Sum	50,000.00	50,000.00
Siteworks P.C Sum	20,000.00	
Hardware	10,039.00	Architectural Hardware
Contractors Margin	31,222.00	
TOTAL	<u>659,126.00</u>	

6400

PHILLIPS SHAYLE-GEORGE

BARRISTERS SOLICITORS AND NOTARY PUBLIC

Government Life Insurance Building, Customhouse Quay, Wellington, New Zealand
(Offices at Auckland and Lower Hutt)

PO Box 2791 Wellington FAX (04) 727 429 Telex NZ 30924 Telephone (04) 726 289

FACSIMILE COVER SHEET

Matter No: UN108546-001

Date: 11 September 1987

Fax No: (03) 54-873

Please deliver the following pages to

Name: M. J. Brooks

Firm: Union Construction Limited

Address: Unit 1 Bealey Park, Cnr Bealey Ave and Churchill
Christchurch

Telephone No:

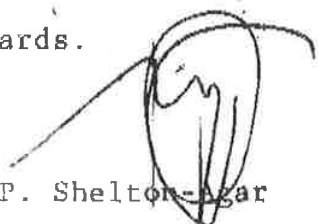
Name of Sender: M. P. Shelton-Agar

Message:

Please peruse attached Affidavits and advise of any changes/alterations required. I need to know of any changes before 4.00pm today.

Confirm will subsequently courier to your home address the completed Affidavits for swearing.

Regards.



M. P. Shelton-Agar

ATS page 4 clause 20 - delete significant
Page 6 clause 37 - delete Mr Brooks

Transmitted by:

28 pages transmitting (including cover sheet) - Group 3 Canon

PARTNERS

Denis Grenville Thom
Bruce Charles Davidson
Alasdair Donald McBeth
Gerard James Coles
Paul Vincent May
Malcolm Paul Shelton-Agar

William Ross Muirholland
Richard Norman Martin
Richard James Buxton Fowler
Mark Francis Ford
Sean Martin O'Sullivan
Melvina James Easton

Michael Robert Camp
Gry Stratton Thompson
Craig Andrew Lashman
John Calvin Craig
Anne Elvera Gaskell

John Russell Strahl
Paul Harry Westbury
Craig Martin Stevens
Christopher Patrick Hunt
Lloyd John Collins

IN THE HIGH COURT OF NEW ZEALAND
CHRISTCHURCH REGISTRY

No. 321/87

BETWEEN WILLIAMS CONSTRUCTION
(CANTERBURY) LIMITED

Plaintiff

AND M.J. BROOKS

First Defendant

AND UNION CONSTRUCTION LIMITED

Second Defendant

AND CATHEDRAL PROPERTIES
LIMITED

Third Defendant

I, ANTHONY JOSEPH SCOTT of Christchurch, Quantity Surveyor, swear:

1. I have read the Affidavits of Ian Adrian Lloyd Patterson, Denis Matthew Sheard and Stephen James Smart in support of the Application for the Interim Injunction and in answer say as follows. *+ M.J. Brooks.*

2. I have been a Quantity Surveyor since 1970 and became registered in 1977.

3. I started with the Plaintiff company on the 5th of August 1985.

General Background

4. AS a Quantity Surveyor and by way of general background I have three different approaches I take when a job is presented to me for pricing, depending on the nature of the way the job is presented.

-2-

5. THE one relevant to these proceedings is what I call a negotiated tender on partial documents.
6. WHEN I am asked to price a job on the basis of a negotiated tender on partial documents I would usually be presented with preliminary architectural and structural design drawings along with an outline specification.
7. I would then measure preliminary quantities on an elemental analysis basis i.e. that means it follows a pattern; in a multi-storey building you would measure the foundations, upper floors, structural frame, exterior walls, plumbing, electrical, etc.
8. USUALLY subcontractors would be negotiated for with the specialist trades i.e. curtain walling, surfaces and interior finishes.
9. THE most important point to remember on this particular type of negotiated contract is to qualify your tender submission with a brief specification delineating the documents, the methods of construction and the subcontractors used.
10. THE Cathedral Properties job was a negotiated tender on partial documents.
11. ON or about the 23rd of December 1986 I was presented with a schedule of reinforcing contents from the Structural Engineer along with drawings P3 and P4 (which are structural drawings), along with architectural drawings numbers 1-4 including a preliminary outline specification. By normal standards this was very brief information.
12. I started work on pricing the job on the 11th of January 1987. I knew that two other

-3-

contractors were doing the same exercise. I believed them to be Downer Construction and Armitage Construction.

13. MANY subcontractors had been approached by these two companies over the holiday period and I made contact with many of my contacts around Christchurch who had already put a subcontract price in place.

14. THESE prices were subsequently forwarded to me at the Plaintiff company and I completed my elemental analysis based on the drawings provided.

15. THE first preliminary estimate was submitted on the 20th of January 1987 and the figure was \$2.46 million.

16. SUBSEQUENTLY an updated fixed price tender was submitted. Fixed price tender means that you put in the tender an allowance to account for fluctuations for price.

17. THE fixed price tender excluded the elevators and amounted to \$2.185 million and was submitted on the 11th of February 1987. At the same time a cash draw down was submitted to Cathedral Properties. A cash draw down is a monthly estimation of progress claims throughout the duration of the contract.

18. THIS price was still based on the preliminary drawings and I was aware that if drawings were changed by the consultants the price would have to be updated.

19. IN or about early March 1987 revised drawings were received by me from Cathedral Properties' consultants but were not acted on by me.

-4-

20. THE biggest difference between the revised drawings and the preliminary drawings provided to me were that the reinforcing steel element in the revised drawing was now drawn up which superceded the schedule of reinforcing contents previously drawn up, which had a ^{an} significant effect in increasing the cost of the job. X

21. I took no steps on these revised drawings at this stage because I felt there was so much new detail coming through that the job would have to be repriced and I would commence to do that once all the information was in.

22. SUBSEQUENTLY I was advised that the Plaintiff company had not been successful in its tender to Cathedral Properties. *changed*

Post-Resignation Cathedral Properties

23. I left the Plaintiff company on the 30th of April 1987 and started with the Second Defendant on the 1st of May 1987.

24. MY first job with the Second Defendant was the Cathedral Properties job.

25. I took took no documents with me relating to any jobs whatsoever when I left the Plaintiff company.

26. AS with the Plaintiff company the pricing of the Cathedral Properties job by myself for the Second Defendant was on the basis of a negotiated tender.

27. HOWEVER on this occasion I was provided with structural drawings S1-21 inclusive as well as architectural drawings 1A to 31A inclusive being

-5-

in total almost 50 drawings compared to the six I was given when I looked at the job for the Plaintiff company.

28. BY the time I had joined the Second Defendant Mr Brooks had approached most of the subcontractors to explain the new company and inviting them to submit quotations for the Cathedral Properties contract. On the new plans quotations were necessary because of the change in the plans and specifications.

29. THE Structural Engineer's plans were very much delayed and in fact the final details were not received until the end of May 1987.

30. THE Second Defendant's fixed price was submitted on the 18th of May 1987 at a substantially increased figure from that submitted by the Plaintiff company, the new figure being \$2.632 million.

31. WHEN I worked on this job for the Second Defendant I relied on no previous documentation whatsoever and got completely new information from the consultants for Cathedral Properties.

32. I relied on my expertise as a Quantity Surveyor to price the job.

33. I priced the job for the Second Defendant on a detailed schedule of quantities prepared by myself as opposed to the elemental analysis method I used when with the Plaintiff company. In the elemental analysis method you use bulk rates to verify pricing quantities as opposed to the detailed quantity method, where far more detailed rates are involved and naturally a more precise cost can be obtained.

-6-

34. THE only "inside" knowledge I could say that I had was the knowledge of the previous subcontractors who had priced the job for the Plaintiff company, Downer Construction and Armitage[^]Construction.

35. IT was certainly the case that when the subcontractors priced the job for the Second Defendant they already had a detailed knowledge of the particular contract from their involvement with the three companies mentioned in the preceding paragraph and I have no doubt that the information available to the subcontractors was in the public domain in the sense that there was certainly nothing confidential about it.

Resignation Issue

X 36. ON the morning of 18th March 1987 I had a meeting with Mr Brooks and Mr Shirtcliff and we all agreed on the principle that we would resign from the Plaintiff company.

37. LATER in the day I had a meeting with Mr Patterson in which Mr Shirtcliff and Mr Brooks were present in which I indicated that I was dissatisfied with the way I had been treated by the Plaintiff company, in particular the salary review was overdue by about eight months, and share options had not been considered by the Plaintiff company.

38. I stated as firmly as I could that I did intend to leave on the 29th of April being the period of notice that I had given.

39. ALTHOUGH I was subsequently offered various inducements to remain with the Plaintiff company

-7-

which I declined, I continued with my intention to leave the company on the 29th of April and did so on that date.

SWORN at Christchurch)
this day of)
1987)
before me:-)

A Solicitor of the High Court of New Zealand

15.

Excludes Morgan + GST.
No adras It

As at Jan 31st 1987

To ground floor level

285025-00

Structural Frame
Beams, Core walls

90025-00

Precast Beams

Drainage

3000-00

Electrical

903-00

Design Fees

46000-00

Material On site level 1 tie bond

15273-00

Preliminaries

60102-00

GROSS

550328-00

Ledger Material

37512-00

Ledger Labour

131072-00

Ledger Subs

143268-00

311852-00

Design Fees

46000-00

407852-00

		L.A.S.	\$	Mat
To Get Old Slab	1408		20982.00	70211.00
Upper Floor Slab Lime + Reinforcement Formwork	6754		14629.00	44907.00
Walls	5803		41839.00	2591.00 2899.00
Columns	1164		12909.00	10652.00
Build in	33		361.00	112.00
End Wall framing	606		7106.00	19613.00
Spandrel	1002		5873.00	28434.00
Gutters	46		506.00	1086.00
Trimmy Sincure Core	537		5907.00	6563.00
Landings	137		1507.00	2758.00
Shrapping	105		1155.00	1085.00
Five Walls Roof space, etc	910		10010.00	4467.00
Soffits + Parapets	286		3146	7111.00
		17772.00	195492.00	83380.00
				195492.00
				529292.00

External wall frames etc	606.37	23492 88
Spanrel walls etc	1443.21	28033.70
Entry	136.86	2758 -11
Internal Walls	627.02	7134 -10
Skipping	104.70	1084.62
Firewalls	910.04	9967 40
Gutters	285.62	7110 -97
	45696.02	79581 -78
		45696.02
		125248 20

Plant & Lift Machine rooms

Skirting Greening

?

Precast Beams

	COOR.	ACTUAL	ALLOWED LAB	ACTUAL	ALLOWED MAT.
Formwork	300	495	1388.00		5824.00
Concrete	380	299	302.00		9181.00
Crane	060	-	-	-	4475.00
Site works	380		-	-	876.00
			1690.00		20356.00

380 L	To	Date	Value	300 L
	To	30-9-86	152	
	To	28-10-86	272	
			424	
	To	4-11-86	71	299
			495	299

060 To 21-10-86 1163.75

380 M.	300 M.
\$7102.06 To 16-10-86	\$146.26 TOTAL
876.00	
71.50	

CONCRETE.

ISARC	Date	Qty	Rate	Total
	13/10/86	3	380	
	14/10/86	1.2	380	
	15/10/86	2.4	380	
	16/10/86	2.6	380	

78.00 - 79.90 INC \$1.90

13/2/87

Madras St

Propping to beams + slabs

Schedule allowance

Beams	3 @ 88 hrs	264	\$176	528.00
	2 @ 100 hrs	<u>200</u>	\$200	<u>400.00</u>
		464 hrs		928.00
		<u>5 levels</u>		<u>5</u>
		2320		\$4640.00
		<u>12</u>		
		27840		\$27840.00
				\$32480.00

Slabs	5 @ 347 hrs	1735	\$187	3935.00
		<u>12</u>		<u>20820.00</u>
		\$20820.00		\$24755.00
		24755.00		
		<u>32480.00</u>		
		<u>\$57235.00</u>		

Professing. \$3000 per floor = 15000.00

Purchase of 150 x 50 Scag 160/3600 2000.00

Wilson's Work 2 men 3 days x 9 hrs x 5 = 3240.00
\$20240.00

Allow for possible purchase of extra timber

1000.00
\$21240.00

Formwork to Circular Columns

	L	M	Steel Form	2500.00
* Steel Form	3.20	25.51	Reel 1 19	98
2 Cover Props	20	2.50	" 26 90	* 25.51
2 Hub Straps	20	5.00	98	Self Cal
Summar	25	1.00		
	3.85	36.000		
Strip Clean	1.97			
" " " "	1.20			
WT	59			
	7.02			

* Handle Lams	50
Bolt 1/2"	2.20
Brack + Humbs	50
	3.20

Pumpings to columns + Walls (22.8 m² (0.15))

T.T 57.25	125.00
Wet up 57.32	175.00
Cement	50.00
	350.00
	11.5
	8.50

Pumpings 4.50
1300 + Concrete

Accessories	1.75
LOR	37
W/R	17
	2.29

FORMING 59.00 2.5 x 1.2 = 20.50 m²

Rebar's required

400 x 400 COLUMN 2.150

beam 300 x 3.150

100 x 50	32 / 3-150	100.80
	16 / 3-150	50.40
	16 / 1-200	6.72
	8 / 1-200	3.20
	8 / 300	2.40
	<u>101.52</u>	



BRACE	16 / 3-500	56.00	30.00
BOLTS	16 No 4	11.20	1.20
COLLAR TIES	24 No 2	12.00	12.00
FORMING	8 No	39.00	12.00
		<u>121.20</u>	
		90	
		10.20	
		2.80	
		<u>121.00</u>	

Expensible

100 x 50 Floor Panel	8 / 500	4.00	7.20
Strips	16 No	16.00	12.20
			6
			<u>29.40</u>
			9.9
			<u>29.6</u>

Subtotal

FORMING	59.00	2.00
BRACE	101.20	6.00
WALERS	15.00	5.00
		<u>29.00</u>

FORM BRACE + PANEL	2.1 x 6	12.00
FLOOR PANEL	2.1 x 2.1	24.00
COLLAR TIES	144 x 2	12.00
		8.00
STRIPS + PANEL		17.00
		<u>126.00</u>
		135.00
		1.00
		1.00
		<u>262.00</u>

HI-BOND

QUOTED \$20.67 m² + TRIM CUT \$100 - \$150 m² END CAPS -37

SAY 21-00

RA 1 25

22-50

END CAPS

22-25

11 PER LENGTH

1% 22

= 160 x 4 x 37

22-47

FIXINGS 3

22 50

= 236.80

22-50

00

605

2425 FORMS

22-90 m²

= 37

HANDLES 150 Nos 1/2" 20-00

3

CAIMS 282 No 3m 14 25

00

END CAPS 600 No 6m 60-00

FOLD LINES 1020 No 1m 32-00

WROGERS 620 No 1/2" 15-50

205.85

L.P 03.23

W.R 20.58

269.66 ÷ 605 = 0.44

PROPPING

150 x 25 SOLID PLATE 30 x 3 x 3

= 276 @ 135

372.60

6 x 1

2 / 150 x 50 BRACKETS

= 276 @ 5.42

1495.92

1868.52

2 FLOORS - RAIL

1868.52

605 m² x 5 2225 + 26 = 3251

3737.04

3251

= 1.15

SOLID PLATE 276m .08 22-00

SAY 1-20 m²

BRACKETS 276m .15 21-40

PROPS 1242 @ 25 31050

111.98

STAIR 17.33

BACK PROP 70 25 1750

STAIR 1.00

172.01

L.P 26.29

W.R 1723

1723

HI PRODUCTS LIMITED

HOME IMPROVEMENTS PRODUCTS LTD.

260 DYERS ROAD
P.O. Box 27039,
CHRISTCHURCH.

TELEPHONE: 844-079

COMMERCIAL DIVISION

6 April 1987

Williams Construction Limited
P.O. Box 538
CHRISTCHURCH

Attention Sandy Robertson

Dear Sir

Re Madras Street Development

We have pleasure in confirming our verbal quotation of approximately the 25th March 1987 of \$64,861.00 (Sixty four Thousand Eight hundred and sixty one dollars), for the supply, installation and glazing of all aluminium windows, shopfronts and commercial doors to the above contract all as per plans.

WINDOW CONSTRUCTION

Windows will be fabricated from our 39mm full commercial suite of extrusions, not fitted with timber reveals. Awning sashes are hung on heavy duty interlock stays and fitted with wedge fasteners. Generally sections are extruded from commercial grade aluminium (6263T5) with a nominal wall thickness of 2.0mm or greater. Windows have been allowed to be lug fixed all round with aluminium angle lugs. The head fixing details 16 and 17 on sheet A 9 to an ex25mm Rimu reveal would not be strong enough to resist normal loadings.

SHOPFRONTS

Shopfronts will be fabricated from our 100mm range of sections, complete with neoprene dry glazing gaskets, removable cill heads and extruded cill flashing. All joints are mechanically screw fixed. The entry doors will be fabricated from our standard commercial doors extrusions, again with dry glazing gaskets and weather stripping. Hardware includes Gibbons floor springs, Lockwood 590/1 deadlock, special 38mm diameter stainless steel handles, and two flush bolts fitted to the non locking door leaf and doorstops.

FINISH

All aluminium will be finished in 20 micron Dark Bronze anodised.

SEALANT

All aluminium frames are sealed to the structure with Uraflex one sealant. Our price is based upon opening being correctly prepared to give a normal clearance around each window frame without the need of extra sealant or special flashings.

2.

GLASS

Windows will be glazed as per plans/specifications. Generally glass will be 6mm clear float to windows and entry doors and 6mm clear bondlite to glazing bars.

PROTECTION AND CLEANING

Protection will be our responsibility until frames are stored on site or installed at which point any damage would be the main contractors responsibility. Aluminium and glass will be given a trade clean at installation. No final clean has been allowed for.

PAYMENT

We would require payment for all materials and hardware purchased when received into our factory for manufacture, ie. off site payment based on our suppliers invoices, and our administration costs. We would also require full payment on our invoices within 30 (thirty) days of submission of our invoice on a progress claim basis up to completion of the total contract.

We have NOT Allowed For

1. Scaffolding.
2. Protection and Final Clean (as noted previously)
3. Epoxy paints or similar sealing of concrete openings prior to installation of window frames.
4. Preparing openings, making good same or any other builders work.
5. G.S.T.
6. No steel windows or doors allowed for.
7. Cranage: With reasonable notice given we would expect to be able to use on site craneage to lift material to each level.

We thank you for this opportunity to quote and look forward to working with you on this contract in the near future.

Yours faithfully
HOME IMPROVEMENT PRODUCTS LIMITED



John Hinchey
COMMERCIAL MANAGER

AMURI BUILDING - CHESTER STREETBUDGET SUMMARY:- (Preliminary)

Foundations and Piles	310,122	
Structural Walls and Columns	219,595	
Upper Floor Slabs	419,184	
Basement car-park	180,000	
Structural Steelwork	34,208	
Metal and Butynol roofing	31,118	
Precast Panels	125,000	
Carpentry	135,000	
Aluminium Windows	85,000	
Plumbing	55,000	
Drainage	7,000	
Electrical	85,000	
Joinery	20,000	
Suspended Ceilings	91,278	
Solid Plastering	36,000	
Elevators	290,000	
Flooring	10,600	
Tiling	8,234	
Painting	53,140	
Glazing	4,000	
Fire Protection	21,296	
Siteworks	20,233	
Preliminaries	190,000	
Conservative Figures 19/12/8	Fixed-Price Contingency	150,000
	Margin	220,000

TOTAL 2,801,008

to be confirmed early to mid-June

Design - Build Summary		9-11-87.
(A)	Main-Contractor	
	Preliminaries	215,000
	Foundations + footing	223,333
	Structural Frame	231,888
	Upper floors	428,168
	Basement Carpark	106,083
	Carpentry	176,519
	Precast Panels	131,500
(B)	Subcontractors	
	Structural steel	34,208
	Metal + Butynol roofing	31,118
	Aluminium Joinery + Glazing	262,000
	Plumbing	55,000
	Drainage	7,000
	Electrical - Nett Sum	85,000
	Joinery	26,000
	Suspended ceilings	112,718
	Solid plastering	36,000
	Elevators	334,500
	Flooring	10,600
	Tiling	8,234
	Painting	50,850
	Glazing	4,000
	Fire-Protection	21,296
	Sitemworks	20,233
	Sub-Total	\$ 2,591,808
	Overhead + Margin	163,576
	Fixed Price Guarantee	162,822
3 Floors	Rental Guarantee	7,000
	Total	\$ 2,992,206