

**D. J. LUNN**

CONSULTING ENGINEER

2 Paramount Arcade,  
Main Street,  
Arklow,  
Co. Wicklow.

Telephone 0402 - 39377

Our Ref: DJL/JAL/C1838

Your Ref:

Dublin County Council  
Block 2.  
Irish Life Centre  
Lower Abbey Street  
Dublin 1.

24th September 1991

Dear sir,

Smurfit Corrugated Walkinstown  
Planning Refs 91a/1304 & 91a/1096

We enclose herewith two copies of drawings and calculations for the above applications. We also enclose a cheque for £8685.60 which we understand are the fees due.

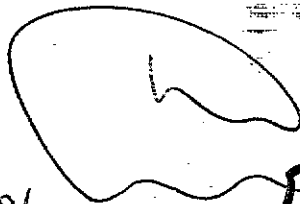
Yours sincerely

91a/1304 & 91a/1096

1. 20.6

BBL

OS 22-1



91A/1096  
BYE LAW APPLICATION.  
REC. No. N 50252  
£3841.60

91A/1304  
BYE LAW APPLICATION.  
REC. No. N 50251  
£4844.00

RECEIVED  
- 10 OCT 1991  
REG SEC.

RECEIPT CODE

# COMHAIRLE CHONTAE ÁTHA CLIATH

DUBLIN COUNTY COUNCIL

46/49 UPPER O'CONNELL STREET,  
DUBLIN 1.

BYE LAW APPLICATION.

REC. No. N 50252

PAID BY —  
CASH  
CHEQUE  
No.  
of  
1/11

£ 3841.60

Received this 1<sup>st</sup> day of October 1991

from Bedar Building Co. Ltd.

the sum of three thousand eight hundred & forty one Pounds

sixty Pence, being 100 for

bye-law application & 91A/1096

Modder Cashier

S. CAREY  
Principal Officer Class C

COMHAIRLE CHONTAE ÁTHA CLIATH

PAID BY DUBLIN COUNTY COUNCIL  
46/49 UPPER O'CONNELL STREET,  
DUBLIN 1.

[Empty box for receipt code]

BYE LAW APPLICATION.

REC. No. N 50251

£ 4844.00

Received this 1st day of October 1991

from Carter Building Co Ltd

the sum of five thousand eight hundred forty four Pounds

Pence, being 00 for

bye-law application 91A/1304

Madeline Deane Cashier

S. CAREY Principal Officer

# CONCAST

HAZELHATCH, NEWCASTLE, CO. DUBLIN.

Telephone: 5288055 / 6271346

Contract: OFFICE BLOCK BALLYMOUNT ROAD			Job No.: 02/022	
Member Element: P.C. FRAME			Sheet No.: 01.	
Drg. Ref: 02/22/01	Design: J Kavanagh	Checked by:	Date: 14/9/91	
Design Ref.	Calculations	Output		
DESIGN CALCULATIONS FOR PRECAST CONCRETE FRAME AT BALLYMOUNT ROAD.				
DESIGN REFERENCES: BS8110 1985				
<u>LOADINGS</u>				
1) ROOF:				
LIVE LOAD 0.5 kN/m <sup>2</sup>				
FINISHES 2.0 kN/m <sup>2</sup>				
P.C. UNIT S.D. 2.8 kN/m <sup>2</sup> (200 deep)				
2) FLOOR				
LIVE LOAD 5.0 kN/m <sup>2</sup>				
FINISHES 1.5 kN/m <sup>2</sup>				
P.C. UNIT S.D. 2.8 kN/m <sup>2</sup>				
<u>STABILITY</u>				
BUILDING IS BRACED FRAME WITH LATERAL (WIND) STABILITY PROVIDED BY MASONRY INFILL BLOCK PANELS.				
<table border="1"><tr><td>DUBLIN COUNTY COUNCIL Planning Dept. Registry Section APPLICATION RECEIVED 01 OCT 1991 91A/10916 REG. No. 91A/1304</td></tr></table>				DUBLIN COUNTY COUNCIL Planning Dept. Registry Section APPLICATION RECEIVED 01 OCT 1991 91A/10916 REG. No. 91A/1304
DUBLIN COUNTY COUNCIL Planning Dept. Registry Section APPLICATION RECEIVED 01 OCT 1991 91A/10916 REG. No. 91A/1304				

HOLLOWCORE UNITSROOF LEVEL

Applied Service load.  $3.5 \text{ kN/m}^2$

SPAN.  $6.700 \text{ m}$ .

REFER TO CONCAST LOAD SPAN

TABLES (C.L.S.T.) PAGE 4.

$200 \text{ mm}$  deep hollow core units with.

$18 \text{ No. } 5 \text{ mm } \phi$  WIRES can carry

$5.5 \text{ kN/m}^2$  @  $6.75 \text{ m}$  span ok.  
(by interpolation)

Roof  
 $200 \text{ dp}$   
 $18 \text{ wires}$ .

FLOOR level.

Applied load (service),  $6.5 \text{ kN/m}^2$

SPAN  $6.7 \text{ m}$ .

CLST PAGE 4:  $200$  deep units with

$22 \text{ No.}$  wires can carry  $7.1 \text{ kN/m}^2$  @

$6.75 \text{ m}$  span (by interpolation)

Floors  
 $200 \text{ dp}$   
 $22 \text{ wires}$ .

NOTE Capacity of floor unit is  
increased by structural member (by  
 $1.55 \text{ kN/m}^2$  approx).

P.C. ROOF BEAMS. I

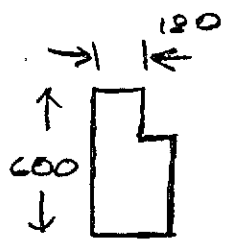
03.

LIVE LOAD  $1.5 \times 6.7/2 = 5.025 \text{ kN/m}$

FINISHES.  $2.0$   
 SELF WT (UNITS)  $2.8$  }  $\times 6.7/2 = 16.08 \text{ kN/m}$

P.C. beam self wt.  $4.3 \text{ kN/m}$

$G_k$	$Q_k$
	5.025
	20.4
	25.4
	5.025



$W_{ult} = 1.4 G_k + 1.6 Q_k \Rightarrow W_{ult} = 36.6 \text{ kN/m}$

BEAM SPAN = 6.512 METRES.

ULTIMATE MOMENT  $M_u = 36.6 \times 6.5/8 = 193.3 \text{ kNm}$

$b = 180$   
 $d_1 = 520$   
 $f_{cu} = 40$   
 $f_y = 460$

$K = M / b d_1^2 f_{cu} = 0.099$   
 $Z = 454$   
 $A_{st \text{ reqd}} = 1063 \text{ mm}^2$

Provide 2T25 + 1T16.

SHEAR  $V_u = 36.6 \times 6.5/2 = 118.95 \text{ kN}$

$V_u / b d_1 = 1.32 = V$  ( $b = 180$ )  $d_1 = 500$   
 $100 A_s / b d_1 : A_s = 2 N^{\circ} 25 \phi \text{ bars} = 1.09\% \Rightarrow V_c = 0.65 \text{ N/mm}^2$

$A_{sv} / s_v = (1.32 - 0.65) \times 180 / 0.87 \times 250 = 0.554$

(Minimum steel 300 wide beam) = 0.3 mm<sup>2</sup>/mm  $\phi$ lylyide

Use T10e 200 first metre  
 Use T10e 300 thereafter.

FLOOR BEAMS

LIVE LOAD  $5.0 \times 6.7/2 = Q_k = 16.75 \text{ kN/m}^2$   
 FINISHES  $1.5$   
 SELF WT  $2.8$  }  $4.3 \times 6.7/2 = G_{k1} = 14.9 \text{ kN/m}$   
 beam self wt  $G_{k2} = 5.04 \text{ kN/m}$

blockwork on beam

2 NO. 100mm leaves of block  $\times 2.8 \text{ m high}$   
@  $4.4 \text{ kN/m}^2$ .

$G_{k3} = 12.22 \text{ kN/m}$

$\Sigma G_k = 31.6 \quad \Sigma Q_k = 16.75$

$1.4 G_k + 1.6 Q_k = 71.04 \text{ kN/m}$

SPAN 6512  $\phi$   $\phi$  columns (300x300)  
6212 Face to Face.

Corbel bearing length 150

EFFECTIVE SPAN  $6212 - 150 = 6062 \text{ mm}$

$M_u = 71.04 \times 6.062^2 / 8 = 326.3 \text{ kNm}$

$B = 180$

$d_i = 670$

$f_{cu} = 40$

$f_y = 460$

$K = M / b d^2 f_{cu} = 0.10$

$Z = 583 \text{ mm}$

$A_{st reqd} = 1398$

Provide 3T25 ( $A_{st} = 1972$ )

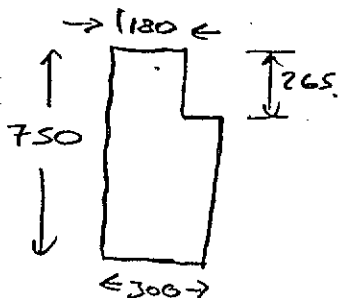
Shear  $V_u = 71.04 \times 6.062 / 2 = 215.3 \text{ kN}$

$V_u / b d = 1.07$

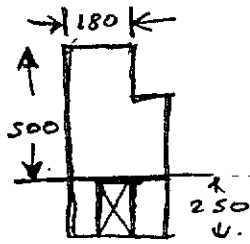
$100 A_{st} / b d = 1.77\% = 0.675$

NOMINAL STEEL

Provide T10 LINKS @ 300c/c



BEAM HALF JOINT



$V_u$  on end = 215.3 kN.

$b = 180$

$D = 500$

$D1 = d^* = 500 - 20^* - 10 - 12 = 458$  \* reduced cover.

$f_{cu} = 40$

$V_u / bd = 215.3 \times 10^3 / 180 \times 458 = 2.611$

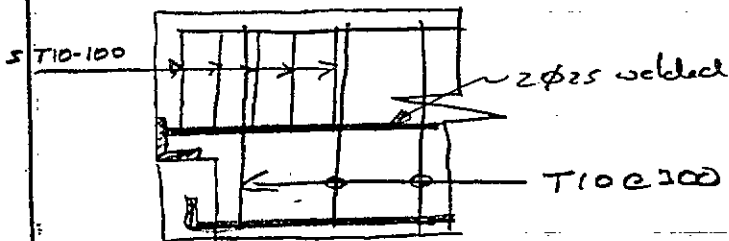
Provide welded anchor bars 2 No 25  $\phi$

$100 A_s / bd = 1.18\% \Rightarrow V_c = 0.669 \text{ N/mm}^2$

Shear Links required.

$A_{sv} / s_v = (2.611 - 0.669) \times 180 / 0.87 \times 460 = 0.873 \text{ mm}^2/\text{mm}$

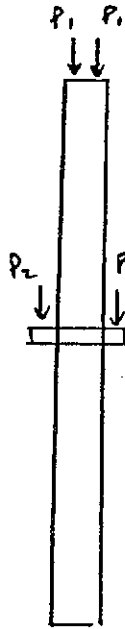
Provide ST10@100 at support.



END ELEVATION



P.C. COLUMN. 300 x 300



	LIVE	DEAD
2P1 Roof load. Live $2 \times (1.5 \times 6.7/2) \times (6.512/2)$	32.72	
Dead $2 \times [(2.0 + 2.8) \times 6.3 + 4.3] \times (6.512/2)$		132.7
(2P2) Floor load		
Live $5 \times 6.7 \times 6.512/2$	109.0	
Dead Floor - $(1.5 + 2.8) \times 6.3$		206.46
Beam 5.0		
Block 12.3		
<b>Total</b>	<b>141.72</b>	<b>339.1</b>

COLUMN BRACED

EFFECTIVE LENGTH =  $0.8 \times 6 = 2.16$  SHORT COLUMN

MAX N =  $1.4GL + 1.6QL = 701.4$  KN

COLUMN SIZE 300 x 300

$N/bh = 7.79$  ? Provide 4T25 steel  
 min nominal  $\hookrightarrow$  Provide RB Lvl @ 300crs.

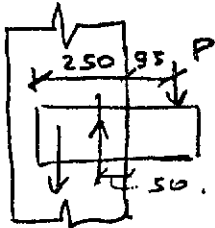
COLUMN CORBEL

MAX LOAD FLOOR  $= 2P_1 = 109 + 206 = 315 \text{ kN}$

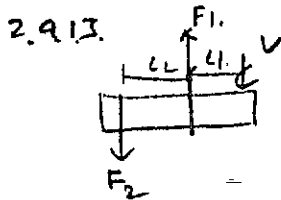
$\Rightarrow P_1 = 157.5 \text{ kN service}$   
 $231.4 \text{ kN ultimate}$

Propose:  $200 \times 100 \times 10$  RHS. INSERT  $\phi$  steel

ULTIMATE LOAD  $231.4 \text{ kN}$



Refer to "STRUCTURAL JOINTS IN PRECAST CONCRETE" PUBLISHED BY "THE INSTITUTION OF STRUCTURAL ENGINEERS"



$F_2 = V \cdot L_1 / L_2$

$V = 231.4$

$L_1 = 195$

$L_2 = 200$

$F_2 = 167.67$

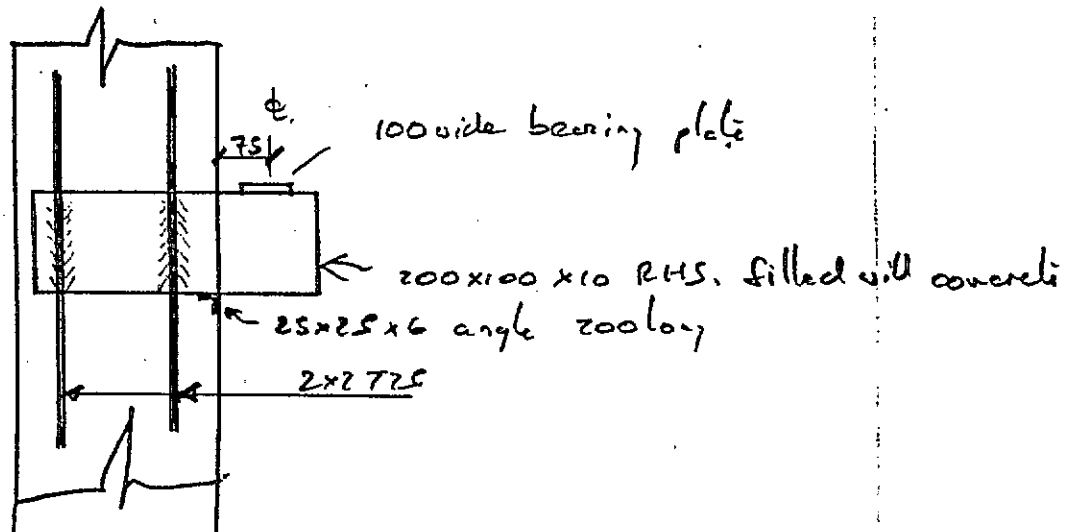
$F_2 =$

$F_1 = V + F_2$

$F_1 = 399.0 \text{ kN}$

Provide 2T25 FOR  $F_1$ ,  
 Provide 2T25 FOR  $F_2$  } WELDED TO SIDES OF BOX.

Provide Also 25x25 ANGLE ON LEADING EDGE OF CORBEL TO



STABILITY TIES.

3.12.3.4.2

$$F_T = 70 + 4 \text{ NS} = 28 \text{ KN} \quad L = 6.7$$

$$\frac{q_u + q_w}{7.5} \cdot \frac{L}{5} \times F_T = \text{INTERNAL TIE FORCES}$$

$$\text{For roof } q_u + q_w = 6.3 \text{ KN/m}^2 \quad \text{TIE} = 31.5$$

$$\text{For floor } q_u + q_w = 3.3 \text{ KN/m}^2 \quad \text{TIE} = 46.52$$

A142 mesh provides  $142 \times 460 \times 10^3 = 64.4 \text{ KN/m}$  in both directions. on floor.

Provide A142 mesh floor and roof.

Peripheral ties. Tie force = 28 KN.

Provide R12 TIE BAR = 28.2 KN

ANCHOR RC BEAMS TO FLOOR (INTERNAL TIES)  
by R12 bars @ 200 c/s. Anchor force = 62.8 KN/m OK.

Anchor roof beams to roof slab by providing R8 @ 200 c/s (as floor)

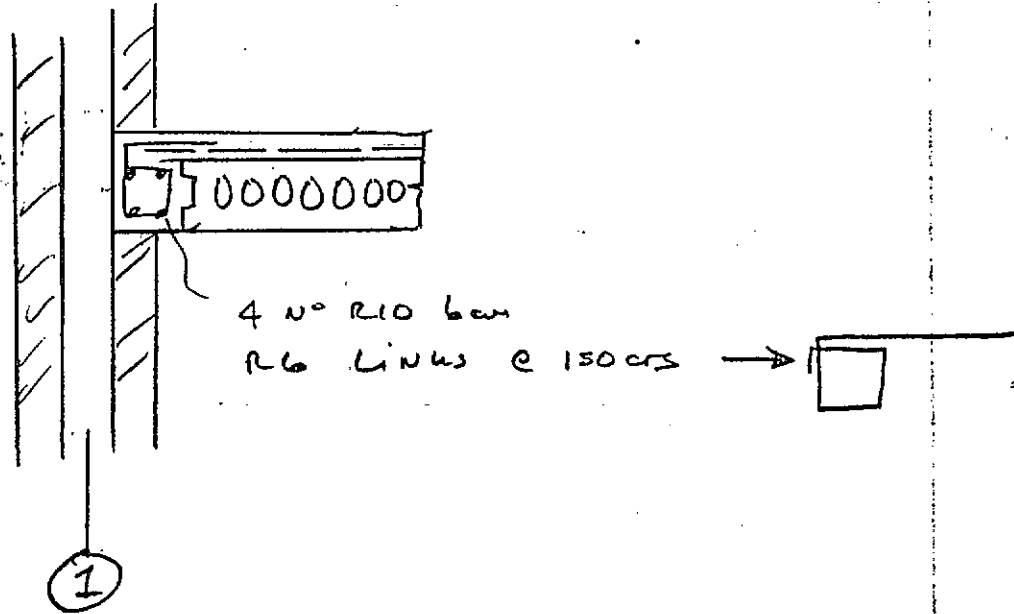
Provide edge tie beam at each end gable

with peripheral tie bar = R12, a equivalent

Use UBLOCK BAND OR 215 x 215 BEAM  
with 4 R10 + R6 LWS @ 150

Provide R6 TIES @ 250 c/s. FORCE = 47 KN/m OK

P



SECTION AT FIRST FLOOR AND ROOF.

3.1223.6. COLUMN ANCHORS.

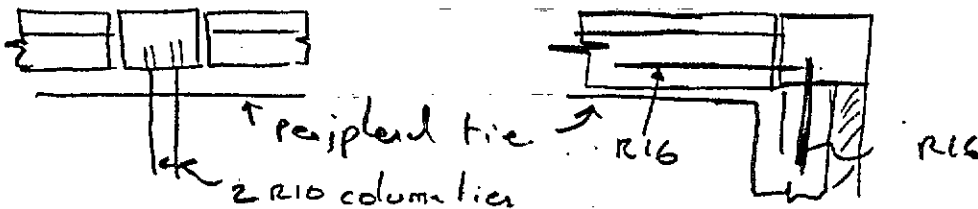
PROVIDE COLUMN ANCHOR INTO FLOOR AT FIRST FLOOR LEVEL.

$3\% \text{ Ultimate load} = 21.0$   
 $2 \text{ FT} = 56 \text{ KN.}$   
 $2.75 / 2.5 \times 28 = 30.8$  } lesser of: 30.8 } Greater of: 30.8.

100mm

PROVIDE 2 R10 TIES FROM EACH COLUMN.

FOR CORNER COLUMNS PROVIDE 1 R16 each direction.



"INTERNAL" COLUMN

CORNER COLUMN

# CONCAST LOAD SPAN TABLES

**KEY:**

**N...** IS THE NUMBER OF WIRES IN THE BOTTOM OF UNIT

**SPAN (3.0M - 11.0M)...** IS THE EFFECTIVE SPAN IN METRES.

**ULT. MOM...** INDICATES THE ULTIMATE MOMENT CAPACITY OF SECTION (IN KILONEWT METRES) DUE TO WIRE PATTERN ONLY

**VO...** INDICATES THE ULTIMATE SHEAR FORCE (IN KILONEWTONS), UNCRACKED SECTION. TABLE ENTRIES CONSIST OF FOUR VALUES:

THE FIRST VALUE IS THE MAXIMUM ALLOWABLE LOADING (IN KILONEWTONS PER METRE) EXCLUDING SELFWEIGHT \*.

THE SECOND VALUE INDICATES DEFLEXION (IN MILLIMETRES) AT TIME OF DELIVER

THE THIRD VALUE INDICATES LONG TERM DEFLEXION (IN MILLIMETRES)

THE FOURTH VALUE, OMITTED IF ZERO, INDICATES THE NUMBER OF WIRES IN COMPRESSIVE SECTION OF UNIT, FULLY STRESSED.

**MAXIMUM WIRES** (in bottom of unit): 24 in 150mm deep unit, 32 all other units.

\* Self weight includes weight of structural screed in the case of structural screed tables.

**Example**

Span 8.0 Metres.  
Structural screed 50mm 1.2 KN/M<sup>2</sup>.  
Live Load 5.0 KN/M<sup>2</sup>.

200mm deep unit and 50 structural screed

DUBLIN COUNTY COUNCIL  
Planning Dept. Registry Section  
APPLICATION RECEIVED  
01 OCT 1991  
91A/1096  
REG No. 91A/1304.

Page (10): Unpropped tables - 25 wires gives 5.1 KN/M<sup>2</sup> + self weight + screed

Page (13): Propped tables - 24 wires gives 5.2 KN/M<sup>2</sup> + self weight + screed.

250mm Deep unit.

Page (16): (No screed) 24 wires gives 6.5 KN/M<sup>2</sup> + self weight only.

Page (19): Unpropped tables - 20 wires gives 5.4 KN/M<sup>2</sup> + self weight + screed

Page (22): Propped tables - 20 wires gives 5.4 KN/M<sup>2</sup> + self weight + screed.

Note: propped tables can be shown (by hand) to be increased by 5% in certain cases

CONCAST FLOOR UNIT --000-- WIDTH: 1200 MM DEPTH: 155 MM																				
N	2.0M	2.5M	3.0M	3.5M	4.0M	4.5M	5.0M	5.5M	6.0M	6.5M	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	ULT.	MDH.	VCD
9	32.4	29.0	13.2	9.1	6.5	4.7	3.4	2.4	1.7	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.12	81.84	
	-1.1	-1.5	-2.0	-2.4	-2.6	-2.5	-2.1	-1.2	0.3	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
	-3.6	-0.0	-0.9	0.7	-0.1	1.0	-2.8	3.0	4.1	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
10	36.0	20.3	14.0	10.3	7.4	5.4	3.9	2.9	2.1	1.5	1.0	-0.0	0.0	0.0	0.0	0.0	0.0	36.60	81.72	
	-1.2	-1.7	-2.3	-2.0	-2.1	-3.2	-2.9	-2.0	-0.7	1.2	4.3	0.0	0.0	0.0	0.0	0.0	0.0			
	-0.7	-1.0	-1.1	-0.9	-0.4	0.5	2.2	4.4	4.0	5.1	5.3	0.0	0.0	0.0	0.0	0.0	0.0			
11	39.6	24.6	16.4	11.5	8.3	6.1	4.5	3.4	2.5	1.8	1.2	-0.0	0.0	0.0	0.0	0.0	0.0	40.02	82.23	
	-1.3	-1.7	-2.8	-3.2	-3.6	-3.8	-3.7	-3.2	-2.0	-0.1	2.2	6.5	0.0	0.0	0.0	0.0	0.0			
	-0.8	-1.1	-1.3	1.2	-0.8	0.1	1.4	4.0	5.5	5.9	6.2	4.3	0.0	0.0	0.0	0.0	0.0			
12	43.0	25.7	18.0	12.6	9.2	6.8	5.1	3.8	2.7	2.1	1.5	1.1	0.0	0.0	0.0	0.0	0.0	43.46	84.44	
	-1.4	-2.1	-2.9	-3.6	-4.1	-4.5	-4.5	-4.1	-3.2	-1.5	1.1	4.7	0.0	0.0	0.0	0.0	0.0			
	-0.7	-1.2	-1.5	-1.5	-1.2	-0.4	1.1	3.5	4.2	6.7	7.1	7.4	0.0	0.0	0.0	0.0	0.0			
13	43.5	27.1	17.6	13.0	10.1	7.5	5.7	4.3	3.3	2.5	1.8	1.3	0.2	0.0	0.0	0.0	0.0	46.82	87.58	
	-1.6	-2.3	-3.1	-3.9	-4.6	-5.1	-5.3	-5.1	-4.3	-2.8	-0.5	2.2	7.6	0.0	0.0	0.0	0.0			
	-0.7	-1.4	-1.7	-1.7	-1.5	-0.8	0.5	2.2	5.0	7.5	8.1	8.4	8.6	0.0	0.0	0.0	0.0			
14	44.0	31.3	21.1	14.7	10.9	8.2	6.2	4.8	3.7	2.8	2.1	1.6	1.1	0.0	0.0	0.0	0.0	50.12	88.42	
	-1.7	-2.5	-3.4	-4.3	-5.1	-5.8	-6.1	-6.1	-5.0	-4.2	-2.0	1.1	5.5	0.0	0.0	0.0	0.0			
	-0.9	-1.5	-1.8	-2.0	-1.8	-1.2	-0.6	1.0	3.0	6.3	7.0	7.5	7.8	0.0	0.0	0.0	0.0			
15	44.5	33.5	22.6	16.3	11.9	8.7	6.8	5.2	4.0	3.1	2.4	1.8	1.3	0.9	0.0	0.0	0.0	53.44	89.40	
	-1.8	-2.7	-3.7	-4.7	-5.7	-6.4	-6.7	-7.0	-6.6	-5.5	-3.6	-0.6	3.5	7.0	0.0	0.0	0.0			
	-0.9	-1.6	-2.0	-2.3	-2.2	-1.7	-0.4	1.5	4.2	8.3	7.7	10.5	10.9	11.1	0.0	0.0	0.0			
16	44.9	35.5	24.1	17.3	12.6	9.5	7.3	5.7	4.4	3.4	2.7	2.0	1.5	1.1	0.8	0.0	0.0	56.42	90.22	
	-1.7	-2.7	-4.0	-5.1	-6.2	-7.1	-7.7	8.0	-9.2	-6.8	-5.1	-2.4	1.5	6.7	13.6	0.0	0.0			
	-0.9	-1.8	-2.2	-2.5	-2.5	-2.1	-1.1	0.7	3.5	7.4	10.0	11.5	12.1	12.4	12.5	0.0	0.0			

CONCAST FLOOR UNIT --000-- WIDTH: 1200 MM DEPTH: 155 MM																				
N	2.0M	2.5M	3.0M	3.5M	4.0M	4.5M	5.0M	5.5M	6.0M	6.5M	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	ULT.	MDH.	VCD
17	45.4	35.9	25.6	18.2	13.5	10.2	7.8	6.1	4.8	3.8	2.9	2.3	1.7	1.3	0.9	0.0	0.0	59.91	91.12	
	-2.1	-3.1	-4.3	-5.5	-6.7	-7.7	-8.5	-8.7	-8.9	-8.2	-6.7	-4.2	-0.5	4.5	11.0	0.0	0.0			
	-0.9	-1.9	-2.4	-2.8	-2.9	-3.5	-1.6	0.0	2.7	6.5	11.7	12.6	13.3	13.7	13.9	0.0	0.0			
18	45.9	36.3	27.1	19.3	14.3	10.8	8.4	6.5	5.2	4.1	3.2	2.5	2.0	1.5	1.1	0.8	0.0	63.08	92.05	
	-2.2	-3.3	-4.6	-5.9	-7.2	-8.3	-9.3	-9.9	-10.0	-9.5	-8.2	-5.9	-2.5	2.2	8.5	16.3	0.0			
	-0.9	-1.9	-2.6	-3.0	-3.2	-2.9	-2.1	-0.4	1.9	5.6	10.4	13.6	14.4	15.0	15.4	15.4	0.0			
19	46.3	36.6	28.5	20.4	15.1	11.5	8.9	7.0	5.5	4.4	3.5	2.8	2.2	1.7	1.2	0.9	0.0	66.21	92.92	
	-2.3	-3.5	-4.8	-6.3	-7.7	-9.0	-10.1	-10.8	-11.1	-10.8	-9.7	-7.7	-4.5	-0.1	8.0	13.7	0.0			
	-0.9	-1.9	-2.8	-3.3	-3.5	-3.4	-2.7	-1.2	1.2	4.7	9.6	14.5	15.5	16.3	16.8	17.0	0.0			
20	46.0	37.0	30.0	21.5	15.9	12.1	9.4	7.4	5.9	4.7	3.7	3.0	2.4	1.8	1.4	1.0	0.0	69.31	93.78	
	-2.4	-3.7	-5.1	-6.6	-8.2	-9.6	-10.8	-11.8	-12.2	-12.1	-11.3	-9.4	-6.5	-2.3	3.4	10.9	0.0			
	-0.9	-1.9	-2.9	-3.5	-3.8	-3.8	-3.2	-1.8	0.4	3.8	8.5	14.9	16.6	17.5	18.2	18.5	0.0			
21	47.2	37.3	30.7	22.5	16.7	12.8	9.9	7.8	6.2	5.0	4.0	3.2	2.6	2.0	1.6	1.0	0.0	72.36	94.63	
	-2.6	-3.9	-5.4	-7.0	-8.7	-10.2	-11.6	-12.7	-13.3	-13.4	-12.8	-11.2	-8.5	-4.5	0.2	0.0	0.0			
	-0.9	-1.9	-3.3	-3.8	-4.2	-4.2	-3.7	-2.5	-0.3	2.9	7.5	13.7	17.7	18.8	19.6	0.0	0.0			
22	47.6	37.7	31.0	23.5	17.5	13.4	10.4	8.2	6.6	5.3	4.3	3.4	2.8	0.0	0.0	0.0	0.0	75.43	95.47	
	-2.7	-4.1	-5.7	-7.4	-9.1	-10.8	-12.4	-13.6	-14.5	-14.7	-14.3	-12.9	-10.3	0.0	0.0	0.0	0.0			
	-0.9	-1.9	-3.4	-4.0	-4.5	-4.6	-4.2	-3.0	-1.0	2.1	6.5	12.6	18.8	0.0	0.0	0.0	0.0			
23	48.1	38.0	31.3	24.5	18.3	14.0	10.9	8.6	6.9	5.6	4.5	3.6	2.9	0.0	0.0	0.0	0.0	78.32	96.31	
	-2.8	-4.3	-6.0	-7.8	-9.6	-11.5	-13.1	-14.6	-15.6	-16.0	-15.8	-14.6	-12.4	0.0	0.0	0.0	0.0			
	-0.8	-1.8	-3.4	-4.2	-4.8	-5.0	-4.7	-3.7	-1.8	1.2	5.5	11.4	19.1	0.0	0.0	0.0	0.0			
24	48.5	38.4	31.6	25.4	19.0	14.5	11.4	9.0	7.2	5.8	4.7	3.8	3.1	0.0	0.0	0.0	0.0	80.97	97.14	
	-2.9	-4.5	-6.2	-8.1	-10.1	-12.1	-13.9	-15.5	-16.7	-17.3	-17.3	-16.3	-14.4	0.0	0.0	0.0	0.0			
	-0.8	-1.8	-3.4	-4.5	-5.2	-5.5	-5.3	-4.4	-2.7	0.2	4.3	10.0	17.5	0.0	0.0	0.0	0.0			

CONCAST FLOOR UNIT --000-- WIDTH: 1200 MM DEPTH: 155 ± 50 MM SCREEN																	UNPROPPED		
N	2.0M	2.5M	3.0M	3.5M	4.0M	4.5M	5.0M	5.5M	6.0M	6.5M	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	ULT. MOM.	UCB
9	40.5	24.7	17.7	12.2	8.4	6.1	4.0	3.0	2.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.15	83.84
	-1.1	-1.5	-2.0	-2.4	-2.8	-3.0	-3.1	-3.0	-2.8	-2.6	-2.4	-2.2	-2.0	-1.8	-1.6	-1.4	-1.2		
	-0.1	0.1	0.3	0.7	1.4	2.0	2.1	2.1	2.4	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6		
10	42.9	32.0	17.9	13.7	7.0	7.0	5.1	3.6	2.6	1.7	1.0	0.0	0.0	0.0	0.0	0.0	0.0	47.81	84.73
	-1.2	-1.7	-2.3	-2.6	-3.1	-3.2	-3.1	-3.0	-2.9	-2.7	-2.5	-2.3	-2.1	-1.9	-1.7	-1.5	-1.3		
	-0.2	0.1	0.3	0.7	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3		
11	41.4	35.5	22.0	15.3	10.7	8.0	5.9	4.5	3.1	2.1	1.4	0.0	0.0	0.0	0.0	0.0	0.0	74.39	87.27
	-1.3	-1.7	-2.3	-2.6	-3.1	-3.2	-3.1	-3.0	-2.9	-2.7	-2.5	-2.3	-2.1	-1.9	-1.7	-1.5	-1.3		
	-0.2	0.3	0.5	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
17	41.7	32.9	24.0	18.0	12.1	8.9	6.8	4.7	3.8	2.8	1.6	0.8	0.0	0.0	0.0	0.0	0.0	73.87	84.06
	-1.4	-2.1	-2.7	-3.5	-4.1	-4.0	-3.9	-3.8	-3.7	-3.5	-3.3	-3.1	-2.9	-2.7	-2.5	-2.3	-2.1		
	-0.4	-0.1	0.2	0.5	1.2	2.1	3.0	3.6	4.0	4.2	4.3	4.4	4.4	4.4	4.4	4.4	4.4		
13	42.4	33.2	26.1	18.3	13.3	7.8	7.3	5.3	4.1	3.0	2.1	1.1	0.0	0.0	0.0	0.0	0.0	43.20	87.53
	-1.6	-2.3	-3.1	-3.9	-4.6	-5.1	-5.3	-5.1	-4.9	-4.7	-4.5	-4.3	-4.1	-3.9	-3.7	-3.5	-3.3		
	-0.4	-0.3	0.2	0.5	1.1	2.0	3.3	4.0	4.4	4.8	4.7	4.1	0.0	0.0	0.0	0.0	0.0		
14	42.9	32.7	27.5	17.8	14.4	10.7	8.1	6.1	4.6	3.5	2.5	1.4	0.0	0.0	0.0	0.0	0.0	47.62	86.35
	-1.7	-2.5	-3.4	-4.3	-5.1	-5.8	-6.1	-6.1	-6.0	-5.8	-5.6	-5.4	-5.2	-5.0	-4.8	-4.6	-4.4		
	-0.4	-0.2	0.1	0.2	1.1	1.9	3.0	4.4	4.7	5.1	5.4	4.1	0.0	0.0	0.0	0.0	0.0		
15	43.3	34.0	27.8	21.2	15.5	11.6	8.8	6.7	5.1	3.7	2.8	1.7	0.7	0.0	0.0	0.0	0.0	71.87	87.48
	-1.8	-2.7	-3.7	-4.7	-5.7	-6.7	-6.7	-7.0	-6.6	-6.3	-6.0	-5.6	-5.2	-4.8	-4.4	-4.0	-3.6		
	-0.4	-0.6	-0.1	0.1	1.0	1.7	3.1	4.0	5.3	5.8	6.0	5.4	4.1	0.0	0.0	0.0	0.0		
16	43.8	34.1	28.1	22.7	16.6	12.4	7.3	7.3	5.4	4.3	3.2	2.0	1.1	0.0	0.0	0.0	0.0	76.03	86.27
	-1.7	-2.9	-4.0	-5.1	-6.2	-7.1	-7.7	-6.0	-7.7	-6.8	-5.1	-2.4	1.5	0.0	0.0	0.0	0.0		
	-0.4	-0.0	-0.4	0.4	0.7	1.8	3.0	4.0	5.7	6.3	6.6	6.1	5.1	0.0	0.0	0.0	0.0		

CONCAST FLOOR UNIT --000-- WIDTH: 1200 MM DEPTH: 155 ± 50 MM SCREEN																	UNPROPPED		
N	2.0M	2.5M	3.0M	3.5M	4.0M	4.5M	5.0M	5.5M	6.0M	6.5M	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	ULT. MOM.	UCB
17	44.3	34.8	29.4	23.9	17.7	12.3	10.2	7.8	6.1	4.7	3.5	2.3	1.4	0.0	0.0	0.0	0.0	83.18	71.87
	-2.1	-3.1	-4.2	-5.0	-5.7	-7.7	-6.5	-6.7	-8.7	-8.3	-6.7	-4.2	-0.5	0.3	0.0	0.0	0.0		
	-2.4	-0.9	-0.4	0.3	0.6	1.2	2.7	4.6	6.2	6.3	7.1	6.7	5.8	0.0	0.0	0.0	0.0		
18	41.7	35.1	29.7	21.2	15.7	14.1	10.6	6.4	6.2	5.1	3.8	2.6	1.4	0.6	0.0	0.0	0.0	64.23	72.07
	-2.0	-3.3	-4.6	-5.2	-7.0	-9.3	-7.7	-7.7	-10.3	-7.5	-6.2	-5.7	-2.5	2.2	0.0	0.0	0.0		
	-0.4	-0.8	-0.8	-0.5	0.3	1.5	2.5	4.5	6.3	7.3	7.7	7.3	6.5	5.2	0.0	0.0	0.0		
19	45.2	35.5	27.1	24.4	17.8	14.7	11.5	8.7	7.5	5.5	4.2	2.5	1.7	1.1	0.0	0.0	0.0	88.20	72.72
	-2.0	-3.0	1.5	-6.3	-7.7	-7.3	-10.1	-10.3	-11.1	-10.8	-7.7	-7.7	-4.5	-0.4	0.0	0.0	0.0		
	-0.4	-0.7	-1.0	-0.3	0.7	1.5	2.2	4.3	5.6	7.8	8.2	7.7	7.3	6.0	0.0	0.0	0.0		
20	45.8	35.7	27.3	24.2	20.8	15.2	12.1	7.5	7.4	5.7	4.5	3.2	2.2	1.3	0.0	0.0	0.0	72.06	83.70
	-2.4	-3.7	-3.1	-6.6	-5.2	-7.5	-10.3	-11.8	-12.2	-12.1	-11.2	-9.4	-4.5	-2.3	0.0	0.0	0.0		
	-0.1	-0.7	-1.3	-0.6	0.6	1.4	2.1	4.2	6.4	8.2	8.7	8.6	8.0	6.3	0.0	0.0	0.0		
21	46.1	36.2	27.4	25.0	21.4	14.5	12.0	10.0	7.7	6.2	4.8	3.5	2.4	1.5	0.8	0.8	0.0	75.73	84.63
	-2.6	-3.7	-5.4	-7.2	-8.7	-10.2	-11.6	-12.7	-13.3	-13.4	-12.8	-11.2	-8.5	-4.5	0.7	0.0	0.0		
	-0.4	-0.7	-1.5	-0.7	0.4	1.3	2.4	4.0	6.2	8.7	9.2	9.2	8.6	7.6	6.0	0.0	0.0		
22	44.5	36.6	27.9	25.2	21.7	17.2	13.3	10.4	8.0	6.4	5.1	3.3	2.7	1.7	0.7	0.0	0.0	97.01	79.47
	-2.7	-4.1	-5.7	-7.4	-9.1	-10.8	-12.4	-13.6	-14.3	-14.7	-14.3	-12.7	-10.3	-6.8	-1.5	0.0	0.0		
	-0.4	-0.7	-1.6	-1.1	0.1	1.1	2.2	3.7	5.7	8.7	9.8	9.8	9.3	8.4	6.7	0.0	0.0		
23	46.9	36.7	30.2	25.8	21.9	17.6	13.8	10.8	8.6	6.9	5.4	4.0	2.7	1.7	1.1	0.0	0.0	102.02	84.31
	-2.3	-4.3	-6.0	-7.0	-7.6	-11.3	-13.1	-14.6	-15.2	-16.0	-15.8	-14.4	-12.4	-9.0	-4.0	-0.3	0.0		
	-0.4	-0.8	-1.6	-1.4	-0.3	0.7	2.0	3.5	5.6	8.3	10.3	10.4	10.0	7.2	7.8	0.0	0.0		
24	47.4	37.3	39.5	29.7	22.1	18.5	14.3	11.3	9.0	7.2	5.7	4.3	3.1	2.2	1.3	0.0	0.0	103.34	97.14
	-2.7	-4.5	-6.2	-8.1	-10.1	-12.1	-13.7	-15.3	-16.7	-17.3	-17.3	-16.3	-14.4	-11.2	-6.5	0.0	0.0		
	-0.4	-0.5	-1.6	-1.7	-0.6	0.5	1.8	3.1	5.3	8.0	10.8	10.9	10.7	7.7	8.4	0.0	0.0		

CONCAST FLOOR UNIT --000-- WIDTH: 1200 MM DEPTH: 200 MM																			
#	3.0M	3.5M	4.0M	4.5M	5.0M	5.5M	6.0M	6.5M	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	UNIT NO.	UCD
10	20.7	14.5	10.5	7.8	5.8	4.3	3.2	2.4	1.7	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.28	120.77
	-1.7	-2.4	-2.8	-3.1	-3.2	-3.1	-2.6	-1.7	-0.2	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-1.2	-1.5	-1.8	-1.3	-0.7	0.4	2.1	3.7	3.8	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	23.0	16.2	11.0	8.8	6.6	5.0	3.8	2.8	2.1	1.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	52.01	120.94
	-3.1	-2.7	-3.2	-3.6	-3.9	-3.9	-3.5	-2.7	-1.5	0.5	3.1	0.0	0.0	0.0	0.0	0.0	0.0		
	-1.3	-1.7	-1.7	-1.7	-1.2	-0.2	1.4	3.7	4.5	4.6	4.4	0.0	0.0	0.0	0.0	0.0	0.0		
12	25.2	17.8	13.0	9.7	7.4	5.7	4.3	3.3	2.5	1.8	1.3	0.0	0.0	0.0	0.0	0.0	0.0	53.78	121.12
	-2.4	-3.0	-3.6	-4.2	-4.5	-4.6	-4.4	-3.8	-2.7	-1.0	1.5	4.8	9.0	0.0	0.0	0.0	0.0		
	-1.4	-1.9	-2.2	-2.1	-1.7	-0.8	0.6	2.8	5.1	5.4	5.5	5.4	0.0	0.0	0.0	0.0	0.0		
13	27.4	19.4	14.3	10.7	8.2	6.3	4.9	3.8	2.7	2.2	1.6	1.1	0.0	0.0	0.0	0.0	0.0	54.56	121.31
	-2.6	-3.3	-4.0	-4.7	-5.1	-5.4	-5.3	-4.9	-3.7	-2.9	-0.1	3.0	0.0	0.0	0.0	0.0	0.0		
	-1.5	-2.0	2.8	-2.5	-2.2	-1.8	-0.1	1.9	4.8	4.1	4.3	4.3	0.0	0.0	0.0	0.0	0.0		
14	29.6	21.0	15.5	11.7	9.0	7.0	5.4	4.2	3.3	2.5	1.9	1.4	1.0	0.0	0.0	0.0	0.0	59.17	121.51
	-2.8	-3.6	-4.4	-5.2	-5.8	-6.1	-6.2	-5.9	-5.2	-3.8	-1.7	1.2	5.0	9.0	0.0	0.0	0.0		
	-1.7	-2.2	-2.8	-3.2	-3.7	-2.0	-0.8	1.1	3.8	4.9	2.2	7.3	7.3	0.0	0.0	0.0	0.0		
15	31.7	22.6	16.7	12.6	9.7	7.6	6.0	4.7	3.7	2.9	2.2	1.7	1.2	0.8	0.0	0.0	0.0	61.84	121.68
	-3.1	-3.7	-4.8	-5.7	-6.4	-6.9	-7.1	-7.0	-6.4	-5.2	-3.3	-0.4	3.0	7.2	0.0	0.0	0.0		
	-1.8	-2.4	-3.0	-3.3	-3.2	-2.6	-1.5	0.2	7.8	4.4	8.8	8.2	0.3	8.2	0.0	0.0	0.0		
16	33.9	24.2	17.9	13.6	10.5	8.2	6.5	5.2	4.1	3.2	2.5	1.9	1.4	1.0	0.0	0.0	0.0	68.45	121.87
	-1.3	-4.2	-5.2	-6.2	-7.0	-7.7	-8.0	-8.0	-7.6	-6.4	-4.9	-2.4	1.0	5.4	0.0	0.0	0.0		
	-1.7	-2.7	-3.2	-3.7	-3.4	-3.2	-2.2	-0.6	1.7	3.3	8.8	7.2	9.4	9.3	0.0	0.0	0.0		
17	36.0	25.8	19.1	14.5	11.3	8.9	7.0	5.6	4.5	3.6	2.8	2.2	1.7	1.2	0.9	0.0	0.0	64.02	122.06
	-3.5	-4.6	-5.6	-6.7	-7.6	-8.4	-8.9	-9.1	-8.8	-8.0	-6.5	-4.2	-1.0	3.2	8.4	0.0	0.0		
	-2.0	-2.7	-3.4	-4.1	-4.1	-3.8	-2.9	-1.0	0.7	4.7	8.3	10.1	10.4	10.5	10.4	0.0	0.0		
18	38.1	27.3	20.3	15.5	12.0	9.5	7.6	6.1	4.9	3.9	3.1	2.5	1.9	1.4	1.0	0.0	0.0	67.57	122.25
	-3.7	-4.7	-5.0	-7.2	-8.2	-9.1	-9.8	-10.1	-10.0	-9.4	-8.1	-6.0	-3.0	1.0	6.2	0.0	0.0		
	-2.1	-2.8	-3.6	-4.4	-4.6	-4.3	-3.6	-2.2	0.0	3.1	7.3	11.0	11.4	11.7	11.6	0.0	0.0		

10950  
12150  
12100

CONCAST FLOOR UNIT --000-- WIDTH: 1200 MM DEPTH: 200 MM																			
#	1.0M	3.5M	4.0M	4.5M	5.0M	5.5M	6.0M	6.5M	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	UNIT NO.	UCD
19	40.2	28.8	21.5	16.4	12.8	10.1	8.1	6.5	5.2	4.2	3.4	2.7	2.1	1.6	1.2	0.9	0.0	72.04	122.53
	-3.7	-5.2	-6.4	-7.7	-8.7	-9.7	-10.7	-11.2	-11.2	-10.8	-9.7	-7.8	-5.0	-1.2	3.7	10.0	0.0		
	-2.7	-3.0	-3.8	-4.7	-5.0	-4.9	-4.5	-3.0	-0.9	2.0	4.1	11.4	12.5	12.8	12.9	12.7	0.0		
20	42.3	30.4	22.6	17.3	13.5	10.7	8.6	6.9	5.6	4.6	3.7	3.0	2.4	1.9	1.4	1.0	0.0	76.52	122.60
	-4.2	-5.5	-6.8	-8.2	-9.5	-10.6	-11.6	-12.2	-12.4	-12.1	-11.2	-9.6	-7.8	-3.5	1.3	7.3	0.0		
	-2.4	-3.7	-4.0	-5.0	-5.5	-5.1	-4.9	-3.7	-1.8	1.0	4.9	10.0	13.5	13.9	14.2	14.1	0.0		
21	44.3	31.9	23.8	18.2	14.3	11.3	9.1	7.4	6.0	4.9	4.0	3.2	2.6	2.1	1.6	1.2	0.9	100.89	122.87
	-4.9	-6.2	-7.2	-8.7	-10.1	-11.4	-12.4	-13.2	-13.6	-13.5	-12.8	-11.3	-9.0	-5.7	-1.2	4.6	11.8		
	-2.9	-3.1	-4.2	-5.2	-5.9	-6.0	-5.5	-4.5	-2.7	-0.1	3.7	8.6	14.5	15.0	15.4	15.5	15.3		
22	46.3	33.3	24.9	19.1	15.0	11.9	9.6	7.8	6.4	5.2	4.3	3.5	2.9	2.3	1.8	1.4	1.0	107.70	123.15
	-4.6	-6.1	-7.6	-9.2	-10.7	-12.1	-13.3	-14.3	-14.8	-14.9	-14.3	-13.1	-10.9	-7.8	-3.6	1.9	8.9		
	-2.6	-1.5	-4.3	-5.5	-6.3	-6.5	-6.2	-5.3	-3.6	-1.1	3.5	7.3	13.5	16.1	16.6	16.8	16.7		
23	47.7	34.7	26.0	20.0	15.7	12.5	10.1	8.2	6.7	5.5	4.5	3.7	3.0	2.4	2.0	1.5	1.2	107.33	123.41
	-4.8	-6.3	-8.0	-9.6	-11.3	-12.8	-14.2	-15.3	-16.0	-16.2	-15.9	-14.8	-12.9	-10.0	-6.0	-3.7	6.0		
	-2.6	-3.6	-4.4	-5.7	-6.8	-7.0	-6.8	-6.0	-4.5	-2.2	1.3	5.9	11.9	17.2	17.7	18.1	18.1		
24	49.0	36.1	27.1	20.8	16.4	13.1	10.6	8.6	7.1	5.8	4.8	4.0	3.2	2.6	2.1	0.0	0.0	113.42	123.68
	-4.6	-6.1	-7.6	-9.2	-10.7	-12.1	-13.3	-14.3	-14.8	-14.9	-14.4	-13.1	-11.0	-7.9	-3.7	0.0	0.0		
	2.8	3.6	4.3	4.8	5.0	4.7	4.2	2.7	0.9	3.1	4.1	11.4	10.1	19.0	19.8	0.0	0.0		
25	49.2	37.5	28.1	21.7	17.0	13.6	11.0	9.0	7.4	6.1	5.1	4.2	3.4	0.0	0.0	0.0	0.0	117.43	123.90
	-4.8	-6.4	-8.0	-9.7	-11.3	-12.7	-14.2	-15.3	-16.0	-16.3	-15.9	-14.9	-13.0	0.0	0.0	0.0	0.0		
	-2.7	-3.7	-4.6	-5.2	-5.5	-5.4	-4.9	-3.8	-1.9	0.9	4.8	10.0	16.5	0.0	0.0	0.0	0.0		
26	49.6	38.9	29.1	22.5	17.7	14.2	11.5	9.4	7.7	6.4	5.3	4.4	3.6	0.0	0.0	0.0	0.0	121.34	124.16
	-5.0	-6.7	-8.4	-10.1	-11.9	-13.6	-15.1	-16.3	-17.2	-17.6	-17.5	-16.6	-14.9	0.0	0.0	0.0	0.0		
	-2.7	-4.1	-4.7	-5.6	-6.0	-6.0	-5.6	-4.6	-2.8	-0.2	3.5	8.5	14.9	0.0	0.0	0.0	0.0		
27	49.9	40.2	30.1	23.3	18.3	14.7	11.9	9.8	8.1	6.7	5.6	4.6	3.8	0.0	0.0	0.0	0.0	125.16	124.43
	-5.3	-6.9	-8.8	-10.6	-12.5	-14.3	-15.7	-17.3	-18.4	-19.0	-19.0	-18.3	-16.9	0.0	0.0	0.0	0.0		
	-2.7	-4.2	-5.2	-5.9	-6.4	-6.6	-6.3	-5.4	-3.8	-1.3	2.3	7.0	13.2	0.0	0.0	0.0	0.0		



CONCRETE FLOOR UNIT --000-- WIDTH: 1200 MM DEPTH: 200 MM																			
N	1.0M	1.5M	4.0M	4.5M	5.0M	5.5M	6.0M	6.5M	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	ULF. MOD.	WCD
28	50.3	41.2	30.7	23.9	18.8	15.1	12.3	10.1	8.3	6.9	5.8	4.8	4.0	3.3	0.0	0.0	0.0	170.18	171.70
	-5.5	-7.2	-9.1	-11.1	-13.1	-15.0	-16.8	-18.3	-19.6	-20.3	-20.5	-20.1	-18.8	-16.6	0.0	0.0	0.0		
	-2.7	-4.3	-5.6	-6.4	-7.0	-7.3	-7.2	-6.4	-5.0	-2.7	0.7	3.2	11.2	18.7	0.0	0.0	0.0		
	2	2	2	2	2	2	2	2	2	2	2	2	2	2					
29	50.7	42.2	31.7	24.5	19.3	15.5	12.6	10.4	8.6	7.1	5.9	5.0	4.1	3.5	0.0	0.0	0.0	171.01	172.74
	-5.7	-7.5	-9.5	-11.6	-13.7	-15.7	-17.7	-19.4	-20.7	-21.7	-22.0	-21.8	-20.7	-18.7	0.0	0.0	0.0		
	-2.7	-4.4	-5.7	-6.7	-7.4	-8.1	-8.1	-7.5	-6.2	-4.1	-0.9	3.4	9.1	14.3	0.0	0.0	0.0		
	2	2	2	2	2	2	2	2	2	2	2	2	2	2					
30	51.0	43.1	32.4	25.0	19.8	15.9	12.9	10.6	8.8	7.3	6.1	5.1	4.3	3.6	0.0	0.0	0.0	171.44	173.01
	-5.9	-7.8	-9.7	-12.1	-14.3	-16.5	-18.5	-20.4	-21.7	-23.0	-23.6	-23.5	-22.6	-20.9	0.0	0.0	0.0		
	-2.7	-4.5	-5.8	-7.2	-8.3	8.8	-9.0	-0.6	-2.5	-5.5	-2.4	1.5	6.9	13.9	0.0	0.0	0.0		
	2	2	2	2	2	2	2	2	2	2	2	2	2	2					
31	51.4	43.7	32.8	25.4	20.1	16.1	13.1	10.8	9.0	7.5	6.2	5.2	4.4	3.7	3.1	0.0	0.0	172.57	174.05
	-6.1	-8.1	-10.3	-12.6	-14.9	-17.2	-19.4	-21.3	-23.0	-24.3	-25.1	-25.2	-24.5	-23.0	-20.4	0.0	0.0		
	-2.7	-4.5	-5.8	-7.3	-8.8	-9.7	-10.0	-9.8	-8.9	-7.2	-4.6	-0.7	4.4	11.1	19.6	0.0	0.0		
	2	2	2	2	2	2	2	2	2	2	2	2	2	2					
32	52.5	44.3	33.3	25.7	20.3	16.4	13.3	11.0	9.1	7.6	6.3	5.3	4.5	3.7	3.2	0.0	0.0	172.10	173.94
	-5.7	-7.8	-9.7	-12.1	-14.3	-16.5	-18.5	-20.4	-21.7	-23.0	-23.6	-23.5	-22.7	-20.9	0.0	0.0	0.0		
	-2.8	-4.7	-6.0	-7.4	-8.7	-8.1	-8.0	-7.5	-6.2	-4.0	-0.9	3.5	9.3	16.6	0.0	0.0	0.0		
	4	4	4	4	4	4	4	4	4	4	4	4	4	4					
33	52.8	44.7	33.7	26.1	20.6	16.6	13.5	11.1	9.2	7.7	6.5	5.4	4.6	3.8	0.0	0.0	0.0	170.89	172.94
	-6.1	-8.1	-10.3	-12.6	-14.9	-17.2	-19.4	-21.4	-23.0	-24.3	-25.1	-25.2	-24.6	-23.0	0.0	0.0	0.0		
	-2.8	-4.7	-6.0	-7.5	-8.4	-9.0	-9.1	-8.8	-7.7	-5.8	-2.8	1.2	4.7	13.7	0.0	0.0	0.0		
	4	4	4	4	4	4	4	4	4	4	4	4	4	4					
34	53.2	45.1	33.9	26.3	20.8	16.7	13.6	11.2	9.3	7.8	6.5	5.5	4.6	3.9	3.2	0.0	0.0	172.73	175.23
	-6.3	-8.4	-10.7	-13.0	-15.3	-17.7	-20.2	-22.4	-24.2	-25.7	-26.4	-26.9	-26.5	-25.1	-22.8	0.0	0.0		
	-2.8	-4.7	-6.0	-7.5	-9.1	-10.1	-10.4	-10.3	-9.5	-7.8	-5.2	-1.4	3.7	10.3	18.7	0.0	0.0		
	4	4	4	4	4	4	4	4	4	4	4	4	4	4					
35	53.6	45.5	34.5	26.7	21.1	17.0	13.9	11.4	9.5	7.9	6.6	5.6	4.7	4.0	3.3	0.0	0.0	171.73	174.97
	-6.5	-8.7	-11.0	-13.5	-16.1	-18.6	-21.1	-23.3	-25.3	-27.0	-28.1	-28.6	-28.4	-27.3	-25.1	0.0	0.0		
	-2.8	-4.7	-6.1	-7.6	-9.2	-10.7	-11.4	-11.5	-10.8	-9.4	-7.0	-3.5	1.3	7.7	15.8	0.0	0.0		
	4	4	4	4	4	4	4	4	4	4	4	4	4	4					
36	53.9	45.8	35.1	27.2	21.5	17.4	14.2	11.7	9.7	8.1	6.8	5.7	4.8	4.1	3.4	0.0	0.0	171.30	174.97
	-6.7	-9.0	-11.4	-14.0	-16.6	-19.3	-21.9	-24.3	-26.5	-28.3	-29.6	-30.3	-30.3	-29.4	-27.4	0.0	0.0		
	-2.8	-4.7	-6.2	-7.7	-9.4	-11.1	-12.3	-12.5	-12.0	-10.8	-8.6	-5.3	-0.7	5.4	13.2	0.0	0.0		
	4	4	4	4	4	4	4	4	4	4	4	4	4	4					

CONCRETE FLOOR UNIT --000-- WIDTH: 1200 MM DEPTH: 200 MM																	STRUCTURAL SPACES		
																	UNITED		
N	1.0M	1.5M	4.0M	4.5M	5.0M	5.5M	6.0M	6.5M	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	ULF. MOD.	WCD
10	25.7	18.0	12.9	7.5	7.0	5.1	3.7	2.6	1.8	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	43.50	128.72
	-1.7	-2.4	-3.8	-5.1	-5.2	-4.1	-2.6	-1.7	-0.2	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	0.4	0.2	0.1	0.3	1.2	2.1	2.1	2.4	2.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	29.5	20.1	14.5	10.7	8.0	5.7	4.4	3.2	2.3	1.5	0.8	0.0	0.0	0.0	0.0	0.0	0.0	49.43	129.26
	-1.1	-2.7	-4.2	-5.6	-5.7	-4.5	-3.2	-2.2	-1.3	0.5	3.1	0.0	0.0	0.0	0.0	0.0	0.0		
	0.3	0.3	0.0	0.3	1.0	2.0	2.6	2.8	2.9	2.7	2.4	0.0	0.0	0.0	0.0	0.0	0.0		
12	11.1	22.1	16.0	11.7	9.7	6.7	5.1	3.8	2.8	1.7	1.1	0.0	0.0	0.0	0.0	0.0	0.0	75.29	131.17
	-1.1	3.3	5.6	-4.2	-4.9	-3.6	-1.4	3.3	-2.7	-1.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0		
	0.1	-2.1	-0.7	0.9	0.8	1.7	3.0	3.2	3.4	3.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0		
13	11.3	24.1	17.5	11.1	7.9	5.3	3.4	4.4	3.1	2.1	1.3	0.0	0.0	0.0	0.0	0.0	0.0	81.87	137.43
	-1.5	3.1	5.3	-3.7	-4.1	-2.8	-0.7	3.7	2.1	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0		
	0.2	-0.1	-0.3	0.1	0.6	1.7	3.0	3.5	3.0	2.7	3.6	0.0	0.0	0.0	0.0	0.0	0.0		
14	24.7	15.3	12.0	11.3	10.7	1.3	5.3	4.7	1.7	2.0	1.3	0.2	0.0	0.0	0.0	0.0	0.0	96.78	133.43
	-1.8	-3.6	4.0	-2.2	-1.8	-5.1	-5.2	-3.7	-5.2	-3.8	-1.7	1.2	0.0	0.0	0.0	0.0	0.0		
	0.2	0.1	0.1	0.1	0.7	1.3	1.7	4.0	4.2	4.4	3.1	3.3	0.0	0.0	0.0	0.0	0.0		
15	22.4	17.7	20.5	15.1	11.8	7.1	7.1	5.5	4.2	3.2	2.1	1.2	0.0	0.0	0.0	0.0	0.0	72.31	134.31
	-1.1	1.7	-0.3	-2.2	5.1	-5.7	-7.1	-5.0	4.4	-2.2	-1.1	-0.5	0.0	0.0	0.0	0.0	0.0		
	1.5	-0.3	-0.5	-0.2	0.3	1.1	2.2	3.7	1.7	4.2	3.3	3.0	0.0	0.0	0.0	0.0	0.0		
16	11.7	22.8	22.0	16.6	12.7	8.2	7.7	5.0	4.7	3.6	2.4	1.5	0.0	0.0	0.0	0.0	0.0	77.33	136.07
	-1.1	-1.2	5.2	-6.2	-7.0	-7.7	-1.0	-8.0	-7.6	-6.6	-4.7	-2.4	0.0	0.0	0.0	0.0	0.0		
	0.6	-0.7	-0.6	-0.1	0.1	0.7	2.0	1.6	3.1	2.5	2.0	4.1	0.0	0.0	0.0	0.0	0.0		
17	10.2	11.7	23.4	17.7	11.7	10.6	3.4	6.6	5.2	3.7	2.7	1.7	0.9	0.0	0.0	0.0	0.0	101.43	137.20
	-1.3	-4.3	-5.6	-6.7	-7.5	-8.4	-9.7	-8.8	-8.0	-6.5	-4.2	-1.0	0.0	0.0	0.0	0.0	0.0		
	-0.2	-2.8	-0.7	-0.5	-0.1	0.2	1.0	1.3	5.4	5.7	5.5	4.0	1.9	0.0	0.0	0.0	0.0		
18	11.5	13.5	21.8	19.4	14.3	11.4	7.0	7.1	5.4	4.3	3.0	2.0	1.2	0.0	0.0	0.0	0.0	108.02	138.37
	-1.7	-1.9	-6.0	-7.2	-8.2	-9.1	-7.8	-10.1	-10.0	-9.4	-8.1	-4.0	-2.0	0.0	0.0	0.0	0.0		
	-1.7	-0.8	-0.8	-0.6	-0.2	0.5	1.7	3.0	5.1	6.1	5.7	5.4	4.5	0.0	0.0	0.0	0.0		

BROADCAST FLOOR UNIT -000- DEPTH 1200 MM																	STRUCTURAL SCORES BY PROFILES						
	1.0M	1.5M	4.0M	4.5M	5.0M	5.5M	6.0M	6.5M	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	12.0M	13.0M	14.0M	15.0M		
16	45.0	45.4	45.1	45.2	45.5	45.1	45.2	45.6	45.1	45.4	45.3	45.3	45.4	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
	-1.1	-0.7	-0.1	0.0	0.4	0.3	1.0	2.7	1.2	1.0	0.6	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
17	47.4	47.2	47.3	47.0	47.3	47.7	47.2	47.7	47.2	47.6	47.5	47.4	47.4	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0
	-1.1	-1.0	-1.0	-0.8	-0.6	-0.6	0.1	1.0	0.1	0.4	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
18	45.0	45.2	45.1	45.2	45.4	45.4	45.6	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7
	-1.1	-1.1	-1.1	-1.0	-0.7	-0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
19	44.2	44.1	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2
	-1.1	-1.0	-1.0	-1.0	-0.7	-0.3	0.0	1.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
20	44.6	44.4	44.4	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2
	-1.1	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
21	44.8	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4
	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
22	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2
	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

BROADCAST FLOOR UNIT -000- DEPTH 1200 MM																	STRUCTURAL SCORES BY PROFILES						
	1.0M	1.5M	4.0M	4.5M	5.0M	5.5M	6.0M	6.5M	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	12.0M	13.0M	14.0M	15.0M		
23	17.3	17.7	18.0	17.4	17.1	18.4	18.9	18.0	17.6	18.0	18.4	18.4	18.5	18.7	18.7	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
	-1.5	-1.2	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
24	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6
	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
25	19.0	19.3	19.6	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4
	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
26	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
27	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

CONCRETE FLOOR UNIT --000-- WIDTH: 1200 MM DEPTH: 200 MM

SO STRUCTURAL SERIES?

Revised

NO	1.0M	3.5M	4.0M	4.5M	5.0M	5.5M	6.0M	6.5M	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	ULT. MOM.	WGT
10	25.7	12.7	9.5	7.0	3.1	3.7	2.4	1.8	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.50	128.72
	-1.3	-2.7	-3.0	-3.0	-2.0	-2.0	-1.3	0.2	2.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-0.2	-0.1	0.2	0.7	1.1	2.1	2.7	2.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	23.4	11.1	14.5	10.7	9.0	5.7	4.1	3.2	2.3	1.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	59.43	127.94
	-2.1	-2.6	-3.1	-3.2	-3.5	-3.4	-3.2	-2.4	-1.0	1.3	1.7	0.0	0.0	0.0	0.0	0.0	0.0		
	-1.2	-0.1	0.1	0.4	1.2	2.3	2.7	2.3	0.2	1.2	2.8	0.0	0.0	0.0	0.0	0.0	0.0		
12	31.1	12.1	16.0	11.7	9.7	6.7	5.1	3.8	2.8	1.7	1.3	0.0	0.0	0.0	0.0	0.0	0.0	75.29	131.17
	-2.3	-1.7	-1.7	-2.4	-4.7	-4.7	-4.1	-3.4	-2.2	-0.4	2.1	0.0	0.0	0.0	0.0	0.0	0.0		
	-0.1	-0.2	1.0	0.3	1.1	2.1	3.0	3.2	1.4	3.4	3.4	0.0	0.0	0.0	0.0	0.0	0.0		
13	21.2	21.0	17.3	13.1	7.7	7.3	3.5	4.4	3.2	2.7	1.4	1.0	0.0	0.0	0.0	0.0	0.0	81.07	132.42
	-1.7	-1.3	-2.1	-2.4	-4.7	-3.1	-2.4	-2.4	-3.4	-1.3	0.5	3.1	0.0	0.0	0.0	0.0	0.0		
	-0.7	-0.3	-0.1	0.3	1.7	1.7	3.3	3.6	3.3	4.3	4.0	1.8	0.0	0.0	0.0	0.0	0.0		
14	14.2	15.0	12.2	14.3	10.7	8.1	4.4	4.7	3.7	2.0	2.0	1.4	0.0	0.0	0.0	0.0	0.0	86.79	137.43
	-1.1	-1.2	-4.1	-4.7	-3.5	-3.3	-3.0	-3.4	-4.6	-2.1	-1.0	2.0	0.0	0.0	0.0	0.0	0.0		
	-0.4	-0.4	-0.2	0.2	0.4	1.7	1.0	4.0	1.3	4.5	1.6	4.2	0.0	0.0	0.0	0.0	0.0		
15	23.1	27.7	20.3	15.4	11.3	7.1	7.1	5.0	4.2	3.2	2.4	1.7	0.9	0.0	0.0	0.0	0.0	92.41	134.81
	-2.7	-3.4	-4.6	-3.4	-3.1	-3.7	-4.5	-3.8	-3.4	-4.3	-2.3	0.3	4.0	0.0	0.0	0.0	0.0		
	-1.2	-1.4	-0.3	0.0	0.4	1.2	2.8	4.4	4.7	3.0	2.1	3.1	4.3	0.0	0.0	0.0	0.0		
16	41.2	27.8	22.0	16.6	12.7	9.7	7.7	6.0	4.2	3.6	2.7	1.9	1.1	0.0	0.0	0.0	0.0	93.97	155.02
	-1.2	-1.1	-2.0	-2.7	-6.7	-7.3	-5.6	-3.2	-2.0	-3.9	-2.1	-1.2	2.0	0.0	0.0	0.0	0.0		
	-0.2	-0.2	-0.4	-0.1	0.2	1.3	2.3	4.2	3.2	5.0	5.7	3.6	4.7	0.0	0.0	0.0	0.0		
17	24.2	31.7	23.4	17.7	13.7	10.6	8.4	6.6	5.2	4.2	3.1	2.2	1.4	0.0	0.0	0.0	0.0	103.45	137.20
	-2.1	-4.1	-2.4	-4.4	-7.3	-9.0	-8.1	-8.5	-8.1	-7.2	-5.4	-3.2	0.1	0.0	0.0	0.0	0.0		
	-0.1	-0.4	-0.2	-0.2	0.2	1.1	2.3	3.7	2.6	4.0	6.1	4.1	5.2	0.0	0.0	0.0	0.0		
18	14.6	33.5	24.8	19.8	14.4	11.4	9.0	7.1	5.6	4.4	3.4	2.5	1.4	0.0	0.0	0.0	0.0	108.85	138.37
	-1.6	-4.7	-3.8	-6.7	-7.9	-3.7	-7.3	-7.2	-8.5	-7.1	-7.0	-1.9	2.3	0.0	0.0	0.0	0.0		
	-0.0	-0.7	-0.4	-0.3	0.2	0.9	2.1	3.7	5.8	4.3	4.8	4.4	4.1	0.0	0.0	0.0	0.0		

CONCRETE FLOOR UNIT --000-- WIDTH: 1200 MM DEPTH: 200 MM

SO STRUCTURAL SERIES?

Revised

NO	3.0M	3.5M	4.0M	4.5M	5.0M	5.5M	6.0M	6.5M	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	ULT. MOM.	WGT
19	45.0	35.4	26.0	17.9	15.0	12.1	9.6	7.6	6.1	4.8	3.8	2.7	1.7	1.1	0.0	0.0	0.0	114.10	135.21
	-2.3	-3.0	-3.2	-2.4	-2.5	-2.4	-10.1	-10.0	-10.0	-7.9	-8.7	-6.7	-3.8	0.1	0.0	0.0	0.0		
	-1.0	-2.2	-2.0	-0.9	0.0	0.7	1.2	1.4	2.0	2.0	2.3	2.1	6.7	3.8	0.0	0.0	0.0		
20	25.1	32.2	27.5	21.4	16.3	12.7	10.2	8.2	6.2	5.2	4.1	3.0	2.1	1.3	0.0	0.0	0.0	117.43	130.40
	-4.0	-2.2	-4.4	-3.8	-3.1	-10.1	-11.0	-11.5	-11.0	-10.2	-8.4	-7.7	-2.0	0.0	0.0	0.0	0.0		
	-1.2	-0.2	-0.0	-0.4	-0.1	0.6	1.6	3.1	3.2	2.4	2.6	2.0	7.2	6.5	0.0	0.0	0.0		
21	35.8	49.7	29.2	22.1	17.2	13.6	10.8	8.7	7.0	5.8	4.4	3.3	2.3	1.5	0.0	0.0	0.0	121.62	131.77
	-4.2	-2.5	-6.1	-3.1	-3.7	-10.7	-11.3	-10.5	-12.0	-12.0	-11.7	-10.1	-7.6	-4.1	0.0	0.0	0.0		
	-1.3	-0.7	-0.2	-0.7	-1.1	0.1	1.4	2.7	4.7	3.0	4.2	3.1	7.8	7.1	4.0	0.0	0.0		
22	44.2	31.1	24.3	18.0	14.3	11.4	9.2	7.4	6.0	4.6	3.5	2.6	1.8	1.1	0.0	0.0	0.0	127.42	132.35
	-4.4	-5.6	-2.3	-4.3	-10.2	-11.6	-12.7	-13.3	-13.7	-11.7	-13.2	-11.8	-9.5	-6.3	-1.8	0.0	0.0		
	-1.0	-1.1	-1.0	-0.8	-0.5	0.2	1.2	2.4	4.6	2.1	9.1	4.6	9.3	7.7	6.7	0.0	0.0		
23	44.6	37.4	31.6	24.2	18.7	15.0	12.0	9.7	7.7	6.3	4.7	3.8	2.8	2.0	1.3	0.0	0.0	134.86	134.02
	-4.7	-6.1	-7.7	-9.3	-10.8	-12.3	-13.5	-14.5	-15.1	-15.2	-14.7	-13.5	-11.4	-8.4	-4.2	0.0	0.0		
	-1.4	-1.4	-1.0	-0.7	-0.4	0.0	1.0	2.4	4.3	6.7	9.1	9.1	9.7	9.3	7.4	0.0	0.0		
24	47.0	37.8	33.0	25.3	17.8	15.7	12.4	10.2	8.3	6.7	5.2	4.0	3.0	2.2	1.4	0.0	0.0	137.55	135.17
	-4.7	-6.4	-9.1	-7.7	-11.4	-12.0	-14.4	-15.3	-16.2	-16.5	-16.3	-15.2	-13.3	-10.5	-6.5	-1.3	0.0		
	-1.4	-1.6	-1.1	-1.0	-0.7	-0.1	0.8	2.1	4.0	6.2	8.7	9.0	9.4	8.9	8.0	6.7	0.0		
25	47.4	40.1	34.3	26.1	20.6	16.4	13.2	10.7	8.7	7.0	5.5	4.3	3.2	2.4	1.6	1.0	0.0	141.77	134.27
	-5.1	-6.7	-8.4	-10.2	-12.0	-13.7	-15.2	-16.5	-17.4	-17.8	-17.7	-16.7	-15.2	-12.6	-8.8	-3.9	0.0		
	-1.4	-1.7	-1.2	-1.1	-0.9	-0.3	0.6	1.7	3.7	5.8	8.2	10.1	10.0	9.5	8.7	7.5	0.0		
26	48.5	41.1	35.5	27.3	21.4	17.1	13.8	11.2	9.1	7.4	5.8	4.6	3.5	2.6	1.8	1.2	0.0	147.51	137.54
	-4.9	-6.4	-8.1	-9.8	-11.4	-13.0	-14.4	-15.3	-16.3	-16.5	-16.2	-15.2	-13.4	-10.5	-6.6	-1.4	0.0		
	-1.4	-1.5	-0.6	-0.3	0.1	0.9	2.0	3.6	5.8	8.2	10.8	11.0	10.7	10.0	8.9	8.0	0.0		
27	48.7	41.4	35.8	28.4	22.3	17.8	14.3	11.7	9.6	7.7	6.1	4.8	3.7	2.8	2.0	1.3	0.8	151.87	140.47
	-5.1	-6.7	-8.4	-10.2	-12.0	-13.7	-15.2	-16.5	-17.4	-17.9	-17.7	-16.7	-15.2	-12.6	-8.7	-3.9	2.5		
	-1.4	-1.7	-1.2	-1.1	-0.9	-0.3	0.7	1.9	3.4	5.5	7.7	10.4	11.5	11.6	11.3	10.7	9.6	8.1	
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		

CONCAST FLOOR UNIT --000-- WIDTH: 1200 MM DEPTH: 250 MM

50 ST. See page 100  
concrete

N	3.0M	3.5M	4.0M	4.5M	5.0M	5.5M	6.0M	6.5M	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	ULT. DIM.	UD
26	19.7	41.7	36.0	29.4	23.1	18.4	11.7	12.2	10.0	8.0	4.4	5.1	1.7	7.0	2.2	1.5	0.7	159.90	151.00
	-5.3	-7.3	-9.8	-10.7	-12.6	-14.1	-16.1	-17.5	-19.5	-17.2	-12.2	-18.6	-17.1	-14.7	-11.2	-8.5	-0.3		
	-1.4	-1.7	-1.0	-0.6	-0.1	0.6	1.4	1.1	3.1	7.2	7.7	15.0	12.1	11.7	11.3	10.4	8.7		
27	22.0	42.0	35.3	30.4	23.7	17.1	13.5	12.7	10.3	8.3	6.7	5.3	4.3	3.2	2.1	1.7	1.0	164.70	152.74
	-5.3	-7.3	-7.2	-11.2	-11.2	-14.7	-19.5	-17.7	-20.5	-20.2	-20.2	-19.0	-18.8	-13.7	-9.0	-3.1			
	-1.4	-2.4	-1.3	-0.7	-0.3	0.4	1.4	2.7	3.7	4.3	7.3	15.4	12.6	15.5	12.0	11.1	9.7		
28	20.1	42.1	36.5	31.4	24.7	17.8	16.0	13.1	10.7	8.6	6.7	5.5	4.1	3.4	2.3	1.8	1.2	157.32	151.01
	-5.3	-7.3	-7.5	-11.5	-13.5	-15.3	-17.7	-17.4	-20.3	-21.7	-22.2	-21.7	-20.3	-13.2	-10.8	-11.6	-5.2		
	-1.4	-2.4	-1.0	-0.0	-0.4	0.2	1.2	2.6	3.5	4.3	8.3	11.7	13.1	13.0	12.5	11.8	10.5		
29	19.4	42.5	36.7	32.3	25.4	20.4	16.5	13.5	11.0	8.7	7.2	5.8	4.6	3.6	2.7	2.0	1.3	173.84	161.93
	-5.3	-7.3	-7.7	-12.1	-10.3	-15.5	-19.5	-19.4	-21.7	-23.5	-23.6	-21.6	-22.7	-20.4	-19.1	-14.5	-7.7		
	-1.4	-2.4	-2.1	-0.7	-0.4	0.0	1.0	2.3	3.7	5.3	8.3	11.7	13.6	13.6	10.2	13.5	11.2		
30	19.7	43.0	37.1	32.6	26.1	21.0	17.0	14.0	11.3	7.2	7.4	6.0	4.3	3.8	2.7	2.1	1.3	178.05	167.14
	-5.3	-7.3	-10.3	-12.6	-14.7	-17.2	-19.4	-21.4	-23.0	-24.3	-25.1	-23.2	-24.6	-23.0	-20.4	-16.6	-11.4		
	-1.4	-2.4	-2.4	-1.2	-0.8	-0.2	0.7	2.1	3.5	5.3	7.7	10.7	14.1	14.1	13.8	13.1	12.0		
31	19.1	43.3	37.4	32.9	26.7	21.5	17.6	14.4	11.7	7.5	7.7	6.2	5.0	3.7	3.1	2.3	1.6	182.43	170.52
	-5.3	-7.3	-10.5	-13.0	-15.3	-17.9	-20.2	-22.3	-24.2	-25.6	-26.5	-26.3	-25.1	-25.1	-22.7	-19.1	-14.2		
	-1.4	-2.4	-2.7	-1.6	-0.7	-0.4	0.5	1.7	3.1	4.7	7.2	10.1	13.6	13.7	14.5	13.8	12.7		
32	19.1	43.6	37.7	33.1	27.6	22.2	18.0	14.7	12.0	7.8	8.0	6.3	5.2	4.1	3.2	2.4	1.8	186.64	174.73
	-5.3	-7.3	-11.0	-13.5	-16.7	-19.6	-21.0	-23.7	-25.3	-26.7	-28.0	-28.5	-28.2	-27.1	-24.7	-20.6	-16.7		
	-1.4	-2.4	-2.7	-1.7	-1.1	-0.6	0.3	1.4	2.7	4.4	6.7	9.3	12.7	12.7	15.2	14.3	13.3		
33	19.5	44.5	38.0	33.9	28.3	22.7	18.5	15.2	12.4	10.2	8.3	6.8	5.5	4.4	3.4	2.6	1.9	190.74	178.83
	-5.3	-7.3	-10.6	-13.0	-15.5	-17.9	-20.2	-22.3	-24.2	-25.6	-26.5	-26.7	-26.4	-25.1	-22.7	-19.1	-14.2		
	-1.4	-2.4	-2.4	-1.2	-0.1	0.6	1.6	3.1	4.8	7.4	12.6	16.1	14.4	14.3	15.7	15.0	15.0		
34	19.5	44.8	38.7	34.0	28.0	23.2	18.7	15.6	12.8	10.4	8.5	7.0	5.7	4.5	3.6	2.8	2.1	194.14	182.23
	-5.3	-7.3	-11.0	-13.5	-16.0	-19.3	-21.0	-23.3	-25.3	-26.3	-28.0	-28.5	-28.2	-27.1	-25.0	-21.6	-16.7		
	-1.4	-2.4	-2.7	-1.6	-0.1	0.3	1.3	2.7	4.4	6.3	8.9	12.0	15.8	14.7	14.7	14.3	13.2		

CONCAST FLOOR UNIT --000-- WIDTH: 1200 MM DEPTH: 250 MM

N	3.0M	3.5M	4.0M	4.5M	5.0M	5.5M	6.0M	6.5M	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	ULT. DIM.	UD
10	22.0	19.0	13.7	10.2	7.6	5.7	4.2	3.1	2.2	1.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	65.32	147.21
	-1.3	-1.7	-2.0	-2.2	-2.3	-2.3	-2.0	-1.5	-0.6	0.7	2.5	0.0	0.0	0.0	0.0	0.0	0.0		
	-0.8	-1.0	-1.3	-1.7	-0.8	-0.2	0.8	2.3	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0		
11	30.0	21.1	15.4	11.5	8.6	6.6	5.0	3.7	2.8	2.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	71.41	149.04
	-1.5	-1.9	-2.3	-2.6	-2.8	-2.8	-2.6	-2.2	-1.4	-0.3	1.4	3.6	0.0	0.0	0.0	0.0	0.0		
	-0.8	-1.1	-1.4	-1.5	-1.2	-0.7	0.3	1.7	3.0	3.1	3.1	3.9	0.0	0.0	0.0	0.0	0.0		
12	32.9	23.3	17.0	12.8	9.7	7.4	5.7	4.4	3.3	2.4	1.7	1.2	0.0	0.0	0.0	0.0	0.0	77.72	170.40
	-1.6	-2.1	-2.5	-2.7	-3.2	-3.3	-3.3	-2.9	-2.3	-1.2	0.3	2.3	0.0	0.0	0.0	0.0	0.0		
	-0.9	-1.2	-1.6	-1.8	-1.6	-1.1	-0.3	1.0	2.9	3.6	3.4	3.6	0.0	0.0	0.0	0.0	0.0		
13	17.0	25.4	18.7	14.1	10.7	8.3	6.4	5.0	3.8	2.9	2.2	1.5	1.0	0.0	0.0	0.0	0.0	84.14	171.07
	-1.8	-2.3	-2.8	-3.3	-3.6	-3.7	-3.9	-3.7	-3.1	-2.7	-0.8	1.1	3.6	0.0	0.0	0.0	0.0		
	-1.0	-1.3	-1.7	-2.1	-2.0	-1.6	-0.0	0.4	2.1	4.1	4.2	4.2	4.1	0.0	0.0	0.0	0.0		
14	38.7	27.3	20.3	15.3	11.9	9.2	7.2	5.6	4.4	3.4	2.6	1.9	1.3	0.8	0.0	0.0	0.0	90.36	173.80
	-2.0	-2.5	-3.1	-3.6	-4.1	-4.4	-4.5	-4.4	-4.0	-3.2	-1.7	-0.2	3.2	5.3	0.0	0.0	0.0		
	-1.1	-1.5	-1.8	-2.3	-2.3	-2.0	-1.3	-0.2	1.4	3.7	4.8	4.8	4.7	0.0	0.0	0.0	0.0		
15	41.6	29.6	21.7	16.6	12.8	10.0	7.7	6.2	4.7	3.8	3.0	2.2	1.6	1.1	0.0	0.0	0.0	96.52	174.20
	-2.1	-2.7	-3.4	-4.0	-4.5	-4.9	-5.1	-5.1	-4.8	-4.2	-3.0	-1.4	0.8	3.8	0.0	0.0	0.0		
	-1.2	-1.6	-2.0	-2.4	-2.7	-2.4	-1.9	-0.8	0.7	2.8	5.3	5.5	5.6	5.5	0.0	0.0	0.0		
16	44.4	31.7	23.5	17.9	13.0	10.7	8.6	6.8	5.4	4.3	3.4	2.6	2.0	1.4	0.7	0.0	0.0	102.64	175.54
	-2.3	-3.0	-3.7	-4.3	-4.7	-5.4	-5.4	-5.7	-5.7	-5.1	-4.1	-2.6	-0.6	2.2	5.8	0.0	0.0		
	-1.2	-1.7	-2.1	-2.6	-3.0	-3.9	-2.4	-1.5	-0.0	2.0	4.8	6.1	6.3	6.3	6.1	0.0	0.0		
17	47.2	33.8	25.1	19.1	14.9	11.7	9.3	7.4	5.9	4.7	3.8	3.0	2.3	1.7	1.2	0.8	0.0	108.72	176.03
	-2.4	-3.2	-3.9	-4.7	-5.4	-6.0	-6.4	-6.6	-6.5	-6.1	-5.2	-3.9	-1.9	0.7	4.1	8.3	0.0		
	-1.3	-1.8	-2.3	-2.8	-3.3	-3.3	-2.9	-2.0	-0.7	1.2	3.9	6.8	7.0	7.0	7.0	6.7	0.0		
18	50.0	35.9	26.7	20.4	15.9	12.5	10.0	8.0	6.5	5.2	4.2	3.3	2.6	2.0	1.5	1.0	0.0	114.74	178.14
	-2.6	-3.4	-4.2	-5.0	-5.8	-6.5	-7.0	-7.3	-7.4	-7.0	-6.3	-5.1	-3.3	-0.9	2.4	6.4	0.0		
	-1.4	-1.9	-2.4	-3.0	-3.6	-3.7	-3.4	-2.6	-1.4	0.4	2.9	6.3	7.7	7.8	7.8	7.7	0.0		

CONCAST FLOOR UNIT --000-- MIDNITE 1200 NH DEPIH 250 NH																			
N	3.0H	3.5H	4.0H	4.5H	5.0H	5.5H	6.0H	6.5H	7.0H	7.5H	8.0H	8.5H	9.0H	9.5H	10.0H	10.5H	11.0H	ULT. MOD.	UCB
19	52.8	37.9	28.3	21.6	14.9	13.4	10.7	8.6	7.0	5.6	4.6	3.6	2.9	2.3	1.7	1.2	0.8	120.77	127.35
	-2.7	-3.6	-4.5	-5.4	-6.2	-7.0	-7.6	-8.0	-8.2	-8.0	-7.4	-6.3	-4.7	-2.4	0.7	4.6	7.4		
	-1.5	-2.0	-2.5	-3.1	-3.8	-4.1	-3.8	-3.2	-2.1	-0.4	2.1	5.3	8.4	0.6	8.7	8.6	8.3		
20	55.6	40.0	29.8	22.9	17.2	14.2	11.4	9.2	7.5	6.1	4.9	4.0	3.2	2.5	2.0	1.5	1.0	124.71	180.57
	-2.9	-3.8	-4.7	-5.7	-6.6	-7.5	-8.2	-8.7	-9.0	-9.0	-8.5	-7.6	-6.1	-3.9	-1.0	2.7	7.4		
	-1.4	-2.1	-2.7	-3.3	-4.0	-4.5	-4.3	-3.6	-2.7	-1.1	1.2	4.3	8.3	9.4	9.5	9.5	9.4		
21	58.4	42.0	31.4	24.1	18.9	15.0	12.1	9.8	8.0	6.5	5.3	4.3	3.5	2.8	2.2	1.7	1.2	132.66	191.83
	-3.0	-4.0	-5.0	-6.0	-7.1	-8.0	-8.8	-9.5	-9.0	-8.2	-7.6	-6.8	-5.4	-3.5	-2.7	0.8	5.4		
	-1.6	-2.2	-2.8	-3.5	-4.2	-4.9	-4.8	-4.3	-3.4	-1.9	0.3	3.3	7.2	10.1	10.4	10.5	10.4		
22	60.5	44.0	32.9	25.3	19.2	15.0	12.0	10.4	8.5	7.0	5.7	4.7	3.8	3.1	2.5	1.9	1.4	138.55	191.06
	-3.2	-4.2	-5.3	-6.4	-7.5	-8.5	-9.4	-10.2	-10.7	-10.7	-10.7	-10.0	-8.8	-7.0	-4.4	-1.0	3.3		
	-1.7	-2.1	-2.6	-3.2	-4.4	-5.2	-5.3	-4.9	-4.0	-2.6	-0.5	2.3	6.1	10.9	11.2	11.4	11.4		
23	61.0	46.0	34.4	26.5	20.8	16.6	13.4	11.0	9.0	7.4	6.1	5.0	4.1	3.3	2.7	2.1	1.6	144.30	191.28
	-3.3	-4.4	-5.5	-6.6	-7.9	-9.0	-10.0	-10.7	-11.5	-11.8	-11.2	-10.2	-8.5	-6.1	-2.9	1.3			
	-1.7	-2.4	-3.1	-3.8	-4.6	-5.5	-5.7	-5.4	-4.7	-3.4	-1.4	1.3	5.0	9.7	12.1	12.3	12.4		
24	61.4	46.0	35.0	27.7	21.0	17.4	14.1	11.5	9.5	7.8	6.5	5.4	4.4	3.6	2.9	2.4	1.8	150.79	195.47
	-3.5	-4.6	-5.8	-7.1	-8.3	-9.5	-10.6	-11.6	-12.3	-12.7	-12.8	-12.4	-11.5	-10.0	-7.7	-4.7	-0.7		
	-1.7	-2.5	-3.2	-4.0	-4.9	-5.7	-6.7	-6.0	-5.3	-4.1	-2.2	0.4	3.9	8.5	12.9	13.2	13.4		
25	62.6	50.0	37.5	29.2	23.8	18.2	14.8	12.1	10.0	8.3	6.7	5.7	4.7	3.9	3.2	2.6	2.0	156.04	197.88
	-3.3	-4.4	-5.6	-6.7	-7.9	-9.0	-10.1	-10.7	-11.5	-11.8	-11.8	-11.3	-10.2	-8.6	-6.2	-3.0	1.2		
	-1.7	-2.7	-3.5	-4.0	-4.4	-4.5	-4.4	-3.8	-3.0	-2.0	-1.2	1.1	4.2	8.2	13.3	14.4	14.9		
26	63.0	51.9	39.0	30.1	23.7	19.0	15.5	12.7	10.5	8.7	7.2	6.0	5.0	4.2	3.4	2.8	2.2	161.75	199.76
	-3.5	-4.6	-5.9	-7.1	-8.3	-9.6	-10.7	-11.6	-12.4	-12.8	-12.9	-12.5	-11.4	-10.1	-7.0	-4.8	-0.8		
	-1.7	-2.8	-3.6	-4.3	-4.7	-4.9	-4.8	-4.4	-3.4	-2.4	-1.9	-0.3	3.2	7.1	12.1	15.2	15.8		
27	63.5	53.9	40.4	31.3	24.7	19.8	16.1	13.2	10.9	9.1	7.6	6.3	5.3	4.4	3.7	3.0	2.4	167.34	199.44
	-3.6	-4.8	-6.1	-7.4	-8.0	-10.1	-11.3	-12.3	-13.2	-13.7	-13.9	-13.7	-12.9	-11.6	-9.5	-6.6	-2.9		
	-1.7	-2.7	-3.7	-4.6	-5.0	-5.3	-5.3	-4.9	-4.1	-3.2	-2.6	-2.3	-1.6	-0.8	16.0	16.6	17.1		

CONCAST FLOOR UNIT --000-- MIDNITE 1200 NH DEPIH 250 NH																			
N	3.0H	3.5H	4.0H	4.5H	5.0H	5.5H	6.0H	6.5H	7.0H	7.5H	8.0H	8.5H	9.0H	9.5H	10.0H	10.5H	11.0H	ULT. MOD.	UCB
28	63.7	54.3	41.9	32.4	25.6	20.6	16.8	13.8	11.4	9.5	8.0	6.7	5.6	4.7	3.9	3.2	2.6	172.91	199.61
	-3.8	-5.0	-6.4	-7.8	-9.2	-10.6	-11.9	-13.0	-14.0	-14.7	-15.0	-14.9	-14.3	-13.1	-11.2	-8.5	-4.9		
	-1.7	-2.9	-3.8	-4.8	-5.3	-5.7	-5.8	-5.5	-4.7	-3.4	-2.4	-1.4	1.3	4.9	9.6	15.4	17.5		
29	64.3	54.6	43.1	33.2	26.5	21.3	17.4	14.3	11.9	9.9	8.3	7.0	5.9	4.9	4.1	3.4	2.8	178.39	199.77
	-3.9	-5.2	-6.7	-8.1	-9.6	-11.1	-12.5	-13.7	-14.8	-15.6	-16.0	-16.1	-15.6	-14.6	-12.8	-10.3	-6.9		
	-1.7	-2.9	-4.0	-5.0	-5.7	-6.1	-6.2	-6.0	-5.3	-4.1	-3.3	-2.4	-1.5	3.9	8.4	14.1	16.4		
30	64.7	55.0	44.8	34.7	27.4	22.1	18.0	14.9	12.4	10.3	8.7	7.3	6.2	5.2	4.3	3.6	3.0	183.70	199.92
	-4.1	-5.4	-6.9	-8.4	-10.0	-11.6	-13.1	-14.4	-15.6	-16.5	-17.1	-17.3	-17.0	-16.1	-14.5	-12.1	-8.9		
	-1.7	-2.9	-4.1	-5.1	-6.0	-6.8	-7.7	-8.5	-9.0	-9.3	-8.4	-7.4	-6.4	-5.4	-4.4	-3.4	-2.0		
31	65.1	55.3	46.1	35.2	28.3	22.8	18.6	15.4	12.8	10.7	9.0	7.6	6.4	5.4	4.6	3.8	3.0	188.94	199.07
	-4.1	-5.4	-6.9	-8.4	-10.0	-11.6	-13.1	-14.4	-15.6	-16.4	-17.4	-18.2	-18.5	-18.3	-17.5	-16.1	-13.9		
	-1.7	-2.9	-4.2	-5.3	-6.3	-7.1	-8.0	-8.8	-9.4	-9.6	-8.8	-7.8	-6.8	-5.8	-4.8	-3.8	-2.0		
32	64.3	56.3	47.5	36.8	29.2	23.5	19.3	15.9	13.2	11.1	9.4	7.9	6.7	5.7	4.8	0.0	0.0	194.14	199.47
	-4.1	-5.4	-6.7	-8.0	-9.4	-10.8	-12.1	-13.3	-14.4	-15.6	-16.6	-17.1	-17.3	-17.0	-16.1	-14.5	0.0		
	-1.9	-3.0	-4.0	-4.6	-5.1	-5.4	-5.4	-5.1	-4.2	-2.9	-0.8	2.0	5.7	10.5	16.2	0.0	0.0		
33	64.6	56.6	48.8	37.7	30.0	24.2	19.8	16.4	13.7	11.5	9.7	8.2	6.9	5.9	4.9	0.0	0.0	199.28	200.59
	-4.2	-5.6	-7.2	-8.8	-10.4	-12.1	-13.7	-15.1	-16.4	-17.5	-18.2	-18.5	-18.3	-17.6	-16.2	0.0	0.0		
	-1.7	-2.9	-4.2	-4.9	-5.4	-5.8	-5.9	-5.6	-4.9	-3.6	-1.7	1.0	4.5	9.0	14.6	0.0	0.0		
34	67.0	57.0	49.4	38.9	30.9	24.7	20.4	16.9	14.1	11.7	10.0	8.5	7.2	6.1	5.1	4.3	0.0	204.27	201.70
	-4.4	-5.8	-7.4	-9.1	-10.8	-12.6	-14.3	-15.8	-17.2	-18.4	-19.2	-19.7	-19.7	-19.1	-17.8	-15.8	0.0		
	-1.7	-2.9	-4.5	-5.1	-5.8	-6.2	-6.4	-6.2	-5.6	-4.4	-2.6	-0.1	3.2	7.5	12.9	19.5	0.0		
35	67.4	57.3	49.7	39.7	31.7	25.6	21.0	17.4	14.5	12.2	10.3	8.7	7.4	6.3	5.3	4.5	0.0	209.21	202.81
	-4.5	-6.0	-7.7	-9.4	-11.2	-13.1	-14.8	-16.5	-18.0	-19.3	-20.3	-20.9	-21.0	-20.5	-19.5	-17.6	0.0		
	-1.7	-2.9	-4.6	-5.4	-6.1	-6.6	-6.9	-6.8	-6.2	-5.2	-3.4	-1.3	1.9	6.0	11.2	17.7	0.0		
36	67.8	57.6	50.0	40.8	32.4	26.2	21.5	17.8	14.9	12.5	10.6	8.9	7.6	6.4	5.5	4.6	0.0	213.62	203.91
	-4.7	-6.2	-7.9	-9.8	-11.7	-13.6	-15.4	-17.2	-18.8	-20.2	-21.3	-22.1	-22.0	-21.1	-19.4	0.0			
	-1.7	-2.9	-4.6	-5.7	-6.5	-7.0	-7.4	-7.4	-7.0	-6.1	-4.6	-2.4	-0.6	4.5	9.6	15.9	0.0		





CO ST. SCREED

Propped

CORNER FLOOR UNIT --DUR-- WIDTH 1200 MM DEPTH 250 MM

NO	1.0M	3.0M	4.0M	4.5M	5.0M	5.5M	6.0M	6.5M	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	ULT. MOM.	VCO
17	58.0	44.0	33.0	25.0	17.5	10.0	2.5	7.0	6.0	4.7	3.7	3.0	2.2	1.9	0.8	0.4	147.21	177.37	
	-2.7	-3.0	-4.1	-5.2	-6.3	-7.3	-8.2	-9.1	-9.8	-10.5	-11.1	-11.7	-12.2	-12.7	-13.1	-13.5	2.0	2.3	
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	
20	58.0	46.0	33.0	25.0	17.5	10.0	2.5	7.0	6.0	4.7	3.7	3.0	2.2	1.9	0.8	0.4	146.00	176.57	
	-2.7	-3.0	-4.1	-5.2	-6.3	-7.3	-8.2	-9.1	-9.8	-10.5	-11.1	-11.7	-12.2	-12.7	-13.1	-13.5	2.0	2.3	
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	
23	58.0	47.0	34.0	26.0	18.0	10.5	3.0	7.5	6.5	5.0	4.0	3.2	2.4	2.0	1.0	0.5	152.27	177.27	
	-2.7	-3.0	-4.1	-5.2	-6.3	-7.3	-8.2	-9.1	-9.8	-10.5	-11.1	-11.7	-12.2	-12.7	-13.1	-13.5	2.0	2.3	
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	
27	58.0	50.0	37.0	29.0	20.0	12.0	4.0	8.0	7.0	5.5	4.5	3.5	2.7	2.2	1.0	0.5	157.27	182.27	
	-2.7	-3.0	-4.1	-5.2	-6.3	-7.3	-8.2	-9.1	-9.8	-10.5	-11.1	-11.7	-12.2	-12.7	-13.1	-13.5	2.0	2.3	
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	
27	58.0	50.0	37.0	29.0	20.0	12.0	4.0	8.0	7.0	5.5	4.5	3.5	2.7	2.2	1.0	0.5	157.27	182.27	
	-2.7	-3.0	-4.1	-5.2	-6.3	-7.3	-8.2	-9.1	-9.8	-10.5	-11.1	-11.7	-12.2	-12.7	-13.1	-13.5	2.0	2.3	
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	
24	58.0	51.0	38.0	30.0	21.0	13.0	4.5	8.5	7.5	6.0	5.0	4.0	3.2	2.7	1.0	0.5	162.27	187.27	
	-2.7	-3.0	-4.1	-5.2	-6.3	-7.3	-8.2	-9.1	-9.8	-10.5	-11.1	-11.7	-12.2	-12.7	-13.1	-13.5	2.0	2.3	
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	
25	58.0	51.0	38.0	30.0	21.0	13.0	4.5	8.5	7.5	6.0	5.0	4.0	3.2	2.7	1.0	0.5	162.27	187.27	
	-2.7	-3.0	-4.1	-5.2	-6.3	-7.3	-8.2	-9.1	-9.8	-10.5	-11.1	-11.7	-12.2	-12.7	-13.1	-13.5	2.0	2.3	
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	
24	58.0	51.0	38.0	30.0	21.0	13.0	4.5	8.5	7.5	6.0	5.0	4.0	3.2	2.7	1.0	0.5	162.27	187.27	
	-2.7	-3.0	-4.1	-5.2	-6.3	-7.3	-8.2	-9.1	-9.8	-10.5	-11.1	-11.7	-12.2	-12.7	-13.1	-13.5	2.0	2.3	
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	
27	58.0	52.0	39.0	31.0	22.0	14.0	5.0	9.0	8.0	6.5	5.5	4.5	3.7	3.2	1.0	0.5	167.27	192.27	
	-2.7	-3.0	-4.1	-5.2	-6.3	-7.3	-8.2	-9.1	-9.8	-10.5	-11.1	-11.7	-12.2	-12.7	-13.1	-13.5	2.0	2.3	
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	

CORNER FLOOR UNIT --DUR-- WIDTH 1200 MM DEPTH 250 MM

CO ST. SCREED Propped

NO	3.0M	3.5M	4.0M	4.5M	5.0M	5.5M	6.0M	6.5M	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	ULT. MOM.	VCO
22.4	33.0	16.0	17.0	29.0	33.0	17.0	17.0	12.0	10.0	8.8	7.3	5.9	4.7	3.4	2.7	2.0	302.14	192.61	
	-3.7	-4.2	-4.3	-7.0	-9.2	-12.2	-12.6	-13.5	-14.1	-14.3	-14.1	-13.4	-12.1	-10.1	-7.3	-3.6			
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	
23.2	33.0	16.0	17.0	29.0	33.0	17.0	17.0	12.0	10.0	8.8	7.3	5.9	4.7	3.4	2.7	2.0	308.34	193.27	
	-3.7	-4.2	-4.3	-7.0	-9.2	-12.2	-12.6	-13.5	-14.1	-14.3	-14.1	-13.4	-12.1	-10.1	-7.3	-3.6			
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	
23.3	33.0	16.0	17.0	29.0	33.0	17.0	17.0	12.0	10.0	8.8	7.3	5.9	4.7	3.4	2.7	2.0	314.91	194.22	
	-3.7	-4.2	-4.3	-7.0	-9.2	-12.2	-12.6	-13.5	-14.1	-14.3	-14.1	-13.4	-12.1	-10.1	-7.3	-3.6			
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	
23.0	33.0	16.0	17.0	29.0	33.0	17.0	17.0	12.0	10.0	8.8	7.3	5.9	4.7	3.4	2.7	2.0	321.23	195.07	
	-3.7	-4.2	-4.3	-7.0	-9.2	-12.2	-12.6	-13.5	-14.1	-14.3	-14.1	-13.4	-12.1	-10.1	-7.3	-3.6			
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	
23.1	33.0	16.0	17.0	29.0	33.0	17.0	17.0	12.0	10.0	8.8	7.3	5.9	4.7	3.4	2.7	2.0	327.50	197.21	
	-3.7	-4.2	-4.3	-7.0	-9.2	-12.2	-12.6	-13.5	-14.1	-14.3	-14.1	-13.4	-12.1	-10.1	-7.3	-3.6			
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	
23.0	33.0	16.0	17.0	29.0	33.0	17.0	17.0	12.0	10.0	8.8	7.3	5.9	4.7	3.4	2.7	2.0	333.74	198.34	
	-3.7	-4.2	-4.3	-7.0	-9.2	-12.2	-12.6	-13.5	-14.1	-14.3	-14.1	-13.4	-12.1	-10.1	-7.3	-3.6			
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	
23.0	33.0	16.0	17.0	29.0	33.0	17.0	17.0	12.0	10.0	8.8	7.3	5.9	4.7	3.4	2.7	2.0	337.93	201.70	
	-3.7	-4.2	-4.3	-7.0	-9.2	-12.2	-12.6	-13.5	-14.1	-14.3	-14.1	-13.4	-12.1	-10.1	-7.3	-3.6			
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	
23.0	33.0	16.0	17.0	29.0	33.0	17.0	17.0	12.0	10.0	8.8	7.3	5.9	4.7	3.4	2.7	2.0	344.07	202.81	
	-3.7	-4.2	-4.3	-7.0	-9.2	-12.2	-12.6	-13.5	-14.1	-14.3	-14.1	-13.4	-12.1	-10.1	-7.3	-3.6			
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	
23.0	33.0	16.0	17.0	29.0	33.0	17.0	17.0	12.0	10.0	8.8	7.3	5.9	4.7	3.4	2.7	2.0	352.17	203.91	
	-3.7	-4.2	-4.3	-7.0	-9.2	-12.2	-12.6	-13.5	-14.1	-14.3	-14.1	-13.4	-12.1	-10.1	-7.3	-3.6			
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.1	2.1	



CONCRETE FLOOR UNIT --000-- WIDTH: 1200 MM DEPTH: 250 MM - WITH 7 MM WIRES

N	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	11.5M	12.0M	12.5M	13.0M	13.5M	14.0M	14.5M	15.0M	ULT. MOM.	UCR
10	6.2	4.7	3.7	3.0	2.4	1.7	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	115.52	140.08
	-4.4	-3.7	-2.5	-0.7	1.4	4.4	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	7.8	7.1	4.4	4.7	4.9	7.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	7.1	5.7	4.6	3.6	2.0	2.2	1.6	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	126.24	150.19
	5.6	-5.1	-4.1	2.6	0.6	2.2	5.7	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	1.9	4.7	7.3	7.7	8.1	8.2	8.4	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	8.0	4.5	5.3	4.2	3.4	2.7	2.0	1.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	136.02	170.56
	-4.8	-6.5	-5.7	-4.4	-2.6	-0.1	3.2	7.3	12.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	1.0	3.2	4.1	9.7	7.0	9.4	9.0	9.8	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
13	9.7	7.3	5.7	4.8	3.1	3.1	2.5	1.7	1.4	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	147.24	174.11
	-9.0	-7.9	-7.1	-6.2	-4.4	-2.3	0.8	4.6	7.5	15.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	9.1	2.2	7.0	8.4	10.3	10.8	11.1	11.3	11.4	11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14	7.7	9.0	6.6	3.4	4.4	3.6	2.9	2.3	1.8	1.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	157.52	174.14
	-9.2	-9.2	-8.8	-8.0	-6.5	-4.5	-1.7	1.7	6.3	12.1	18.7	0.0	0.0	0.0	0.0	0.0	0.0		
	-9.7	1.2	7.0	7.3	11.4	12.0	12.5	12.0	13.0	12.7	12.2	0.0	0.0	0.0	0.0	0.0	0.0		
15	10.4	8.8	7.3	6.0	5.0	4.1	3.3	2.7	2.1	1.6	1.2	0.8	0.0	0.0	0.0	0.0	0.0	167.44	170.15
	-10.4	-10.6	-10.4	-9.7	-8.5	-6.7	-4.1	-0.7	1.6	8.9	15.4	23.2	0.0	0.0	0.0	0.0	0.0		
	-1.6	9.7	7.7	6.0	10.3	13.2	13.0	14.3	14.6	14.7	14.6	14.2	0.0	0.0	0.0	0.0	0.0		
14	11.5	9.5	7.9	6.6	5.3	4.3	3.7	3.1	2.5	1.9	1.5	1.1	0.0	0.0	0.0	0.0	0.0	177.42	180.33
	-11.6	-12.0	-11.7	-11.3	-10.3	-8.9	-6.3	-3.4	0.7	5.7	11.9	17.1	0.0	0.0	0.0	0.0	0.0		
	-2.4	-0.7	1.6	4.8	8.8	14.0	15.1	15.7	16.2	16.4	16.4	16.2	0.0	0.0	0.0	0.0	0.0		
17	12.3	10.2	8.6	7.2	6.0	5.0	4.2	3.4	2.8	2.2	1.8	1.4	1.0	0.0	0.0	0.0	0.0	187.44	187.29
	-12.8	-13.3	-13.5	-13.2	-12.4	-11.0	-8.9	-6.0	-2.3	2.5	8.5	15.2	24.2	0.0	0.0	0.0	0.0		
	-3.7	-1.7	0.5	3.5	2.4	12.4	14.4	15.1	15.7	16.1	16.3	16.2	12.7	0.0	0.0	0.0	0.0		
18	13.1	11.0	9.2	7.7	6.5	5.4	4.6	3.8	3.1	2.5	2.0	1.5	1.0	0.0	0.0	0.0	0.0	197.11	181.23
	-14.0	-14.7	-15.0	-14.7	-14.4	-13.2	-11.3	-9.7	-5.1	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-4.0	-2.6	-0.5	2.3	4.1	10.8	14.8	16.5	17.2	17.8	18.0	18.0	0.0	0.0	0.0	0.0	0.0		

CONCRETE FLOOR UNIT --000-- WIDTH: 1200 MM DEPTH: 250 MM - WITH 7 MM WIRES

N	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	11.5M	12.0M	12.5M	13.0M	13.5M	14.0M	14.5M	15.0M	ULT. MOM.	UCR
19	13.9	11.7	9.8	8.3	7.0	5.7	5.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	206.44	184.15
	-15.1	-16.0	-16.5	-16.7	-16.3	-15.3	-13.7	-11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-4.6	-3.5	-1.6	1.1	4.7	9.3	15.1	19.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	14.8	12.4	10.4	8.8	7.5	6.3	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	216.28	188.05
	-16.3	-17.3	-18.0	-18.4	-18.2	-17.5	-16.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-5.4	-4.4	-2.6	-0.0	3.4	7.9	13.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
21	15.5	13.0	11.0	9.3	7.9	6.7	5.7	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	225.27	189.93
	-17.4	-18.7	-19.6	-20.1	-20.1	-19.4	-18.4	-16.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-4.4	-3.3	-3.4	-1.2	2.0	6.3	11.7	18.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	16.2	13.6	11.3	9.8	8.3	7.1	6.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	232.47	191.86
	-18.6	-20.0	-21.1	-21.8	-22.0	-21.7	-20.8	-19.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-7.4	-6.5	-5.0	-2.7	0.3	4.4	7.6	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
23	16.6	14.0	11.8	10.1	8.6	7.3	6.3	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	237.93	193.64
	-19.7	-21.3	-22.5	-23.4	-23.7	-23.8	-23.1	-21.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-8.6	-8.0	-6.7	-4.7	-1.8	2.0	4.9	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
24	16.7	14.2	12.1	10.3	8.8	7.5	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	241.05	197.07
	-18.1	-19.4	-20.4	-21.0	-21.2	-20.8	-19.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-5.0	-3.7	-1.8	0.9	4.4	9.0	14.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	2	2	2	2	2	2	2												
25	17.2	14.5	12.3	10.5	8.9	7.7	6.5	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	244.78	200.65
	-19.2	-20.7	-21.9	-22.7	-23.1	-22.9	-22.1	-20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-6.5	-5.3	-3.9	-1.4	1.9	6.2	11.6	18.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	2	2	2	2	2	2	2	2											
26	17.4	14.7	12.5	10.6	9.1	7.8	6.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	247.40	202.61
	-20.4	-22.0	-23.4	-24.4	-25.0	-25.0	-24.4	-23.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-8.2	-7.4	-6.0	-3.7	-0.9	3.1	8.1	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	2	2	2	2	2	2	2	2											
27	17.7	15.0	12.7	10.8	9.3	7.9	6.8	5.8	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	251.02	204.36
	-21.5	-23.3	-24.9	-26.1	-26.8	-27.1	-26.7	-25.7	-23.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-9.6	-9.1	-7.9	-6.1	-3.4	0.3	5.0	11.0	18.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	2	2	2	2	2	2	2	2	2										

CONCRETE FLOOR UNIT --000-- WIDTH 1200 MM DEPTH 250 MM - WITH 7 MM WIRES

N	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	11.5M	12.0M	12.5M	13.0M	13.5M	14.0M	14.5M	15.0M	ULT. MOM.	WCD
20	18.0	15.2	12.9	11.0	9.4	8.1	7.0	6.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	254.55	246.02
	-22.6	-24.6	-26.3	-27.7	-28.7	-29.2	-29.0	-28.2	-26.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-11.1	-10.8	-9.0	-8.2	-5.0	-2.4	2.0	7.7	14.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
21	18.3	15.5	13.2	11.3	9.6	8.3	7.1	6.1	5.2	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	250.81	242.81
	-23.0	-25.7	-27.8	-29.4	-30.6	-31.2	-31.3	-30.7	-29.4	-27.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-12.5	-12.4	-11.7	-10.4	-8.2	-5.1	-1.0	4.3	11.8	19.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	19.6	15.7	13.4	11.4	9.8	8.4	7.2	6.2	5.3	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	261.38	249.52
	-24.9	-27.3	-29.3	-31.0	-32.4	-33.3	-33.6	-33.3	-32.1	-30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-13.7	-14.0	-13.6	-12.3	-10.6	-7.8	-4.0	1.0	7.3	15.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
23	19.7	16.0	13.6	11.6	10.0	8.6	7.4	6.3	5.5	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	264.58	244.21
	-26.0	-28.5	-30.7	-32.7	-34.3	-35.4	-35.9	-35.8	-34.7	-33.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-14.6	-15.6	-15.4	-14.6	-12.9	-10.4	-6.9	-2.2	1.8	11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
24	19.2	16.2	13.8	11.8	10.1	8.7	7.5	6.5	5.6	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	267.28	242.88
	-22.1	-24.7	-26.2	-27.3	-28.1	-27.4	-26.1	-24.6	-22.6	-20.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-14.7	-14.5	-17.2	-16.6	-15.3	-13.0	-9.0	-5.4	-2.2	7.3	14.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	17.4	16.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	271.85	242.84
	-23.3	-27.9	-30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-13.1	-13.1	-12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	274.12	247.84
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	277.12	247.84
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	280.04	247.84
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

CONCRETE FLOOR UNIT --000-- WIDTH 1200 MM DEPTH 250 + 25 MM SCREED

Unfloored

N	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	11.5M	12.0M	12.5M	13.0M	13.5M	14.0M	14.5M	15.0M	ULT. MOM.	WCD
28	12.5	10.2	8.4	6.8	5.5	4.4	3.5	2.7	1.8	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	209.22	174.28
	-9.3	-9.6	-9.2	-8.4	-7.1	-5.0	-2.3	1.3	5.8	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	4.0	3.8	6.7	7.2	7.6	7.9	8.1	8.1	7.7	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	13.1	10.7	8.8	7.2	5.8	4.7	3.7	2.7	2.1	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	215.50	172.88
	-10.2	-10.3	-10.0	-9.3	-8.1	-6.2	-3.5	-0.1	4.3	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	3.9	3.6	7.0	7.5	8.0	8.3	8.5	8.4	8.2	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
30	13.6	11.2	9.2	7.5	6.2	5.0	4.0	3.1	2.3	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	221.20	169.20
	-10.8	-11.0	-10.8	-10.2	-9.1	-7.3	-4.3	-1.2	2.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	3.8	3.3	7.3	7.8	8.3	8.7	9.0	9.1	8.8	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
31	14.1	11.6	9.6	7.7	6.5	5.3	4.2	3.4	2.5	1.6	0.7	0.0	0.0	0.0	0.0	0.0	0.0	227.21	172.21
	-11.4	-11.7	-11.6	-11.1	-10.1	-8.4	-6.0	-3.0	1.3	6.4	12.7	0.0	0.0	0.0	0.0	0.0	0.0		
	3.6	3.3	7.5	8.1	8.6	9.1	9.4	9.6	9.3	8.4	7.2	0.0	0.0	0.0	0.0	0.0	0.0		
32	14.7	12.1	10.0	8.3	6.8	5.6	4.5	3.6	2.7	1.8	1.1	0.0	0.0	0.0	0.0	0.0	0.0	234.14	188.21
	-12.0	-12.4	-12.4	-12.0	-11.0	-9.5	-7.2	-4.2	-0.2	4.8	10.9	0.0	0.0	0.0	0.0	0.0	0.0		
	3.5	3.2	7.3	8.2	9.0	9.5	9.8	10.1	9.8	9.0	7.8	0.0	0.0	0.0	0.0	0.0	0.0		
33	15.2	12.6	10.4	8.6	7.1	5.8	4.8	3.8	2.9	2.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	240.30	181.91
	-12.6	-13.0	-13.2	-12.9	-12.0	-10.6	-8.5	-5.5	-1.7	3.2	9.1	0.0	0.0	0.0	0.0	0.0	0.0		
	3.4	3.0	7.1	8.0	9.3	9.8	10.2	10.5	10.3	9.6	8.5	0.0	0.0	0.0	0.0	0.0	0.0		
34	15.7	13.0	10.8	9.0	7.4	6.1	5.0	4.1	3.1	2.2	1.4	0.0	0.0	0.0	0.0	0.0	0.0	246.48	182.20
	-13.2	-13.7	-14.0	-13.7	-13.0	-11.7	-9.7	-6.9	-3.2	1.6	7.4	0.0	0.0	0.0	0.0	0.0	0.0		
	3.3	4.7	7.0	7.1	7.7	10.2	10.7	11.0	10.8	10.1	9.1	0.0	0.0	0.0	0.0	0.0	0.0		
35	16.2	13.4	11.2	9.3	7.7	6.4	5.3	4.3	3.3	2.4	1.6	0.7	0.0	0.0	0.0	0.0	0.0	252.14	181.80
	-13.8	-14.4	-14.7	-14.6	-14.0	-12.8	-10.9	-8.2	-4.6	-2.1	3.6	12.6	0.0	0.0	0.0	0.0	0.0		
	3.1	4.7	6.8	7.3	10.0	10.6	11.1	11.4	11.4	10.7	9.7	8.3	0.0	0.0	0.0	0.0	0.0		
36	16.6	13.8	11.5	9.6	8.0	6.6	5.5	4.5	3.5	2.6	1.8	1.1	0.0	0.0	0.0	0.0	0.0	257.49	184.87
	-14.4	-15.1	-15.5	-15.3	-15.0	-13.7	-12.1	-9.6	-6.1	-1.7	3.9	10.7	0.0	0.0	0.0	0.0	0.0		
	2.9	4.3	6.6	7.1	10.3	10.9	11.4	11.8	11.9	11.2	10.3	9.0	0.0	0.0	0.0	0.0	0.0		

DN000PFD

CONCAST FLOOR UNIT ---000--- WIDTH 1200 MM DEPTH 250 x 75 MM SCREEN																			
	7.0H	7.5H	8.0H	8.5H	9.0H	9.5H	10.0H	10.5H	11.0H	11.5H	12.0H	12.5H	13.0H	13.5H	14.0H	14.5H	15.0H	ULT. MOM.	VEN
19	7.4 -4.0 3.3	5.7 -3.2 3.8	4.4 -2.0 4.0	3.3 -0.3 4.1	2.4 2.1 4.1	1.6 5.1 4.1	0.7 3.3 3.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	148.41	157.39
20	8.0 -4.6 3.8	6.3 -4.0 4.1	4.7 -2.8 4.3	3.7 -1.2 4.5	2.7 1.1 4.5	1.7 4.0 4.5	1.2 7.7 5.3	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	153.47	158.37
21	8.6 -5.3 4.0	6.8 -4.7 4.4	5.3 -3.6 4.4	4.1 -2.1 4.3	3.1 0.0 4.2	2.3 2.3 4.2	1.5 4.4 4.8	0.7 10.7 4.5	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	162.45	167.34
22	9.2 -5.7 4.3	7.3 -5.4 4.6	5.8 -4.4 4.9	4.5 -3.0 5.0	3.5 -1.0 5.3	2.6 1.7 5.4	1.8 5.2 5.3	1.2 7.3 5.1	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	169.36	176.61
23	9.7 -6.3 4.5	7.8 -6.1 4.9	6.2 -5.2 5.3	4.7 -3.7 5.5	3.8 -2.0 5.7	2.7 0.6 5.8	2.1 3.7 5.8	1.4 8.1 5.6	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	176.47	181.67
24	10.3 -7.1 4.3	8.3 -6.8 5.2	6.7 -6.0 5.6	5.3 -4.8 5.7	4.2 -3.0 6.1	3.2 -0.6 6.2	2.4 2.7 6.3	1.7 6.7 6.1	1.0 11.8 5.6	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	182.95	187.72
25	10.9 -7.7 4.4	18.8 -7.5 5.4	7.1 -6.8 5.9	5.7 -5.7 6.2	4.5 -4.0 6.5	3.5 -1.7 6.7	2.7 1.4 6.7	1.7 5.4 6.6	1.2 10.3 4.1	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	189.63	194.76
26	11.4 -8.3 4.3	7.3 -8.2 5.7	7.5 -7.6 6.2	6.1 -6.6 6.5	4.8 -5.0 6.9	3.8 -2.8 7.1	2.7 0.2 7.2	2.2 4.0 7.1	1.4 8.3 6.4	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	196.23	201.80
27	12.0 -8.7 4.1	19.8 -8.7 5.9	8.0 -8.4 6.4	6.4 -7.3 6.9	5.2 -6.0 7.2	4.1 -3.9 7.5	3.2 -1.1 7.6	2.4 2.6 7.7	1.6 7.3 7.2	0.8 12.7 6.1	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	202.77	207.83

CONCAST FLOOR UNIT ---000--- WIDTH 1200 MM DEPTH 300 MM																			
	7.0H	7.5H	8.0H	8.5H	9.0H	9.5H	10.0H	10.5H	11.0H	11.5H	12.0H	12.5H	13.0H	13.5H	14.0H	14.5H	15.0H	ULT. MOM.	VEN
10	3.1 0.8 1.2	1.2 1.3 1.4	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	75.71	158.55
11	2.7 0.3 1.7	1.8 1.3 1.8	1.0 2.6 1.7	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	83.27	157.29
12	3.1 0.2 2.2	2.3 2.7 2.1	1.5 2.0 2.1	0.8 3.7 2.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	70.63	201.82
13	3.9 0.7 2.1	2.7 0.7 2.3	2.0 1.4 2.4	1.3 2.7 2.4	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	97.72	202.24
14	4.6 1.2 2.3	3.1 0.3 2.7	2.5 0.7 2.8	1.7 3.2 2.8	1.0 4.2 2.7	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	105.18	203.45
15	5.2 1.7 2.4	3.7 1.0 3.0	2.7 0.1 3.1	2.1 1.5 3.2	1.4 3.4 3.2	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	112.40	204.66
16	5.8 2.2 2.2	4.5 1.3 3.1	3.4 0.5 3.5	2.5 0.8 3.4	1.8 2.6 3.6	1.1 4.7 3.6	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	119.57	205.86
17	6.4 -2.6 1.8	5.0 -2.1 3.3	3.7 -1.2 3.8	2.7 0.1 4.0	2.1 1.8 4.0	1.5 4.0 4.0	0.7 6.7 3.7	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	126.73	207.03
18	7.0 -3.1 1.4	5.5 -2.6 3.1	4.3 -1.8 4.2	3.3 0.6 4.4	2.5 1.0 4.5	1.8 3.1 4.5	1.2 5.7 4.4	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	133.83	208.24

CONCRETE FLOOR UNIT ---0000--- WIDTH: 1200 MM DEPTH: 300 MM																			
M	7.0H	7.5H	8.0H	8.5H	9.0H	9.5H	10.0H	10.5H	11.0H	11.5H	12.0H	12.5H	13.0H	13.5H	14.0H	14.5H	15.0H	U.C.T. NOM.	W.D.
17	7.4	6.1	4.8	3.7	2.9	2.1	1.5	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	146.70	207.42
	-3.4	-3.2	-2.4	-1.3	0.2	2.2	4.0	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	1.1	2.7	4.5	4.7	4.7	5.0	5.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	9.2	6.6	5.2	4.1	3.2	2.4	1.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	147.72	210.59
	4.1	-3.7	-3.0	-2.0	0.6	1.3	3.8	6.0	9.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	0.7	2.2	4.3	5.1	5.3	5.5	5.7	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
21	8.8	7.1	5.7	4.6	3.6	2.8	2.1	1.5	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	154.71	211.76
	4.5	4.2	-1.7	-2.7	-1.4	0.5	2.8	5.8	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	0.1	1.8	1.8	5.5	5.8	6.0	4.0	6.0	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	7.4	2.4	4.2	5.0	3.7	3.1	2.4	1.7	1.2	0.0	0.0	-0.0	0.0	0.0	0.0	0.0	0.0	161.86	212.92
	-5.0	-4.8	-4.3	-3.4	-2.2	-0.4	1.0	4.7	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	0.0	1.4	1.3	5.7	6.2	6.4	6.6	6.4	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
23	10.0	8.1	6.6	5.4	4.3	3.4	2.6	2.0	1.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	168.77	211.07
	5.3	7.3	4.7	-4.1	-2.9	-1.3	0.7	3.5	7.1	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	0.4	1.9	7.8	5.1	4.6	6.9	7.1	7.1	7.1	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
24	10.6	8.6	7.1	5.7	4.7	3.7	2.9	2.2	1.7	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	175.64	215.72
	-6.0	-5.7	-5.5	-4.8	-3.7	-2.2	-0.1	2.6	5.7	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	-0.0	0.5	2.4	4.8	7.1	7.4	7.5	7.7	7.7	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	11.1	9.1	7.5	6.1	5.0	4.0	3.2	2.5	1.9	1.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	182.47	214.36
	-4.4	6.4	-6.1	5.5	-4.5	-3.0	-1.0	1.5	4.8	8.7	13.5	0.0	0.0	0.0	0.0	0.0	0.0		
	-1.1	0.1	1.7	4.7	7.2	7.8	8.1	8.3	8.3	8.2	8.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	11.7	7.6	7.9	6.5	5.4	4.4	3.5	2.8	2.1	1.6	1.1	0.0	0.0	0.0	0.0	0.0	0.0	189.24	217.47
	-6.9	-7.0	-6.7	-6.2	-5.3	-3.9	-2.0	0.5	3.6	7.5	12.1	0.0	0.0	0.0	0.0	0.0	0.0		
	-1.5	0.1	1.4	3.7	6.6	8.1	8.6	8.7	7.0	8.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0		
27	12.1	10.1	8.4	6.9	5.7	4.7	3.8	3.0	2.4	1.8	1.3	0.8	0.0	0.0	0.0	0.0	0.0	196.01	218.67
	7.4	7.5	7.4	-6.9	-6.0	-4.8	-3.0	-0.6	2.4	6.2	10.7	16.2	0.0	0.0	0.0	0.0	0.0		
	-1.8	-0.7	1.0	3.2	6.0	8.8	9.2	7.4	7.6	7.4	7.5	7.1	0.0	0.0	0.0	0.0	0.0		

CONCRETE FLOOR UNIT ---0000--- WIDTH: 1200 MM DEPTH: 300 MM																			
M	7.0H	7.5H	8.0H	8.5H	9.0H	9.5H	10.0H	10.5H	11.0H	11.5H	12.0H	12.5H	13.0H	13.5H	14.0H	14.5H	15.0H	U.C.T. NOM.	W.D.
28	12.7	10.6	8.8	7.3	6.0	5.0	4.1	3.3	2.6	2.0	1.5	1.0	0.0	0.0	0.0	0.0	0.0	207.75	219.75
	-7.8	9.0	-8.0	7.4	-6.8	-5.6	-3.7	-1.6	1.3	4.9	7.4	14.7	0.0	0.0	0.0	0.0	0.0		
	0.2	-1.1	0.5	2.4	5.4	7.0	7.7	10.0	10.2	10.3	10.2	7.7	0.0	0.0	0.0	0.0	0.0		
29	13.4	11.1	9.3	7.7	6.4	5.3	4.3	3.5	2.0	-2.2	1.7	1.2	0.8	0.0	0.0	0.0	0.0	209.40	220.87
	8.3	8.6	-8.6	8.3	-7.6	-6.5	-4.7	2.7	0.1	3.7	8.0	13.2	17.4	0.0	0.0	0.0	0.0		
	-2.5	1.5	0.0	0.1	4.8	8.3	10.2	10.6	10.8	10.7	10.7	10.7	10.3	0.0	0.0	0.0	0.0		
10	14.0	11.6	9.7	8.1	6.7	5.5	4.6	3.8	3.1	2.4	1.7	1.4	0.7	0.0	0.0	0.0	0.0	216.03	221.58
	-9.8	7.1	-9.2	-9.3	9.4	-7.3	-5.8	-3.2	-1.9	2.4	6.4	11.7	17.8	0.0	0.0	0.0	0.0		
	-2.7	-1.9	-0.4	1.4	4.3	7.6	10.7	11.1	11.4	11.6	11.6	11.5	11.2	0.0	0.0	0.0	0.0		
11	14.6	12.1	10.1	8.5	7.1	5.7	4.7	4.0	3.3	2.6	2.1	1.5	1.1	0.0	0.0	0.0	0.0	222.63	223.08
	-2.2	-2.6	-9.8	7.6	7.1	-8.2	-6.8	-4.3	-2.2	1.2	3.3	10.3	16.2	0.0	0.0	0.0	0.0		
	-1.2	-2.3	0.7	1.1	3.7	7.0	11.1	11.7	12.0	12.3	12.3	12.3	12.0	0.0	0.0	0.0	0.0		
12	15.1	12.6	10.6	9.0	7.4	6.2	5.2	4.3	3.5	2.9	2.2	1.7	1.3	0.8	0.0	0.0	0.0	227.19	224.19
	-7.7	-10.2	10.4	-10.3	9.9	-7.0	-5.7	-3.3	-3.3	-0.1	3.7	8.8	14.6	21.5	0.0	0.0	0.0		
	-3.6	-2.7	-0.3	2.4	3.1	6.3	10.4	12.2	12.6	12.7	13.1	13.1	12.9	12.5	0.0	0.0	0.0		
13	15.5	13.1	11.0	9.2	7.7	6.5	5.4	4.5	3.7	3.0	2.4	1.7	1.4	1.0	0.0	0.0	0.0	235.71	225.28
	-10.2	-10.7	-11.0	-11.0	-10.7	-9.7	-8.7	-6.7	-4.5	-1.3	2.3	7.3	13.0	17.7	0.0	0.0	0.0		
	-1.7	-3.1	-1.8	0.1	2.5	5.7	7.7	12.0	13.2	13.6	13.8	13.8	13.7	13.3	0.0	0.0	0.0		
14	16.2	13.6	11.4	9.6	8.1	6.8	5.7	4.8	4.0	3.2	2.6	2.1	1.6	1.1	0.8	0.0	0.0	242.18	226.37
	-10.6	-11.2	-11.6	-11.7	-11.4	-10.7	-9.6	-7.9	-5.6	-2.6	1.2	5.8	11.4	18.0	25.8	0.0	0.0		
	-4.2	-3.4	-2.2	-0.4	2.0	5.1	7.0	13.3	13.8	14.2	14.5	14.4	14.5	14.2	13.7	0.0	0.0		
35	16.8	14.1	11.8	10.0	8.4	7.1	6.0	5.0	4.2	3.4	2.8	2.2	1.7	1.3	0.9	0.0	0.0	248.63	227.46
	-11.1	-11.8	-12.2	-12.4	-12.2	-11.6	-10.5	-9.9	-6.7	-3.8	-0.2	4.4	9.8	16.3	23.9	0.0	0.0		
	-4.6	-3.8	-2.4	-0.9	1.4	4.4	8.3	13.0	14.4	14.7	15.2	15.4	15.4	15.1	14.7	0.0	0.0		
16	17.3	14.5	12.2	10.3	8.7	7.4	6.2	5.3	4.4	3.6	3.0	2.4	1.9	1.4	1.0	0.0	0.0	255.03	228.54
	-11.5	-12.3	-12.8	-13.0	-12.9	-12.4	-11.5	-10.9	-7.9	-5.1	-1.5	2.9	8.2	14.6	22.1	0.0	0.0		
	-4.9	-4.2	-3.1	-1.4	0.8	3.8	7.6	12.2	15.0	15.5	15.9	16.1	16.2	16.0	15.6	0.0	0.0		

CONCRETE FLOOR UNIT - 4000 - WIDTH 1200 MM DEPTH 300 MM - WITH 7 MM WIRES																			
NO	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	11.5M	12.0M	12.5M	13.0M	13.5M	14.0M	14.5M	15.0M	ULT. MOM.	WSD
17	18.0	15.1	12.0	10.0	9.2	7.8	6.4	5.4	4.7	3.9	3.2	2.6	2.1	1.6	1.2	0.9	0.0	262.74	229.75
	-12.1	-13.0	-13.4	-13.7	-13.7	-13.5	-13.7	-11.3	-9.3	-4.7	-3.3	1.0	6.2	13.4	19.7	26.2	0.0		
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
20	17.1	14.0	13.4	11.5	9.9	8.3	7.1	6.0	5.1	4.3	3.6	3.0	2.4	1.7	1.5	1.1	0.0	275.30	242.04
	-13.0	-14.0	-14.8	-15.2	-15.4	-15.2	-14.5	-13.3	-11.3	-9.1	-5.9	1.7	3.1	9.0	16.1	24.4	0.0		
	4.0	5.5	4.5	3.1	1.0	1.7	7.3	7.7	15.0	17.5	10.1	18.5	18.8	18.8	18.6	18.2	0.0		
21	20.1	16.7	14.4	12.2	10.1	8.9	7.6	6.3	5.5	4.7	3.9	3.3	0.0	0.0	0.0	0.0	0.0	287.47	251.12
	-13.7	-15.0	-15.7	-15.6	-16.7	-16.8	-16.3	-15.3	-13.7	-11.5	-8.5	-5.5	0.0	0.0	0.0	0.0	27.7		
	4.4	4.2	5.3	4.0	2.1	2.5	3.9	8.2	13.4	10.8	17.4	9.0	0.0	0.0	0.0	0.0	19.3		
22	21.1	17.8	15.1	12.9	11.0	9.5	8.1	6.9	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	277.51	240.23
	-12.0	-13.7	-14.4	-14.0	-14.7	-14.7	-14.0	-12.7	-10.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	3.3	2.3	0.9	1.0	3.5	6.7	11.0	16.0	17.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
23	22.1	19.7	15.7	13.4	11.4	10.0	8.5	7.3	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	311.57	272.21
	-13.7	-14.7	-15.6	-16.1	-16.4	-16.3	-15.8	-14.7	-13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	1.7	1.1	-1.8	0.0	2.4	5.5	7.3	11.0	19.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
24	23.1	19.5	16.4	14.2	12.1	10.4	8.9	7.6	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	373.87	344.23
	-14.3	-15.7	-16.7	-17.5	-17.9	-18.0	-17.6	-16.7	-15.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	4.6	3.7	2.8	1.2	1.0	3.9	7.5	12.0	17.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	23.7	20.2	17.2	14.7	12.6	10.8	9.3	8.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	334.41	244.70
	-15.4	-16.7	-17.9	-18.0	-19.4	-19.4	-19.4	-18.7	-17.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	5.4	4.7	3.7	2.4	2.2	2.3	3.8	10.1	15.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	24.7	20.7	17.8	15.2	13.1	11.2	9.7	8.4	7.2	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	344.21	248.16
	-16.3	-17.8	-19.0	-20.1	-20.8	-21.2	-21.2	-20.7	-19.6	-17.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	4.2	5.8	5.0	3.7	1.8	0.0	4.0	8.2	13.2	17.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	25.4	21.4	18.4	15.7	13.5	11.7	10.1	8.7	7.5	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	352.17	250.10
	-17.2	-18.8	-20.7	-21.4	-22.3	-22.8	-23.0	-22.7	-21.0	-20.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	7.1	4.8	6.1	4.7	3.2	0.8	7.3	6.3	11.2	17.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

CONCRETE FLOOR UNIT - 4000 - WIDTH 1200 MM DEPTH 300 MM - WITH 7 MM WIRES																			
NO	7.0M	7.5M	8.0M	8.5M	9.0M	9.5M	10.0M	10.5M	11.0M	11.5M	12.0M	12.5M	13.0M	13.5M	14.0M	14.5M	15.0M	ULT. MOM.	WSD
28	23.8	21.7	18.7	16.1	13.7	12.0	10.4	9.0	7.8	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	354.40	272.03
	-18.1	-19.8	-21.3	-22.4	-23.7	-24.4	-24.0	-24.6	-23.7	-22.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	0.3	0.1	2.5	4.5	4.9	2.6	0.2	2.3	7.1	14.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	26.3	22.3	19.1	16.1	14.2	12.3	10.4	9.2	8.0	7.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	360.14	253.24
	-19.9	-20.8	-22.4	-23.9	-25.1	-26.0	-26.5	-26.4	-26.1	-25.0	-23.2	0.0	0.0	0.0	0.0	0.0	0.0		
	9.3	9.3	8.9	8.0	4.6	4.5	1.7	1.7	6.5	12.2	17.9	3.0	0.0	0.0	0.0	0.0	0.0		
30	26.7	22.7	19.1	16.2	14.4	12.5	10.8	9.4	8.2	7.1	6.2	0.0	0.0	0.0	0.0	0.0	0.0	343.27	251.31
	-17.9	-21.7	-23.6	-25.2	-26.4	-27.4	-28.3	-28.5	-28.3	-27.3	-25.7	0.0	0.0	0.0	0.0	0.0	0.0		
	12.4	10.5	10.3	9.6	8.1	6.6	4.0	3.0	9.1	15.6	9.0	0.0	0.0	0.0	0.0	0.0	0.0		
31	27.2	23.1	19.8	17.0	14.7	12.7	11.1	9.6	8.3	7.3	6.3	5.3	0.0	0.0	0.0	0.0	0.0	370.59	257.72
	-22.4	-23.7	-24.7	-26.5	-28.0	-29.2	-30.1	-30.5	-30.4	-29.6	-28.3	-26.1	0.0	0.0	0.0	0.0	0.0		
	11.4	11.7	11.7	11.2	10.1	8.3	6.1	3.0	1.1	4.2	12.3	15.9	0.0	0.0	0.0	0.0	0.0		
32	27.6	23.4	20.1	17.3	15.0	13.0	11.3	9.8	8.6	7.5	6.5	0.0	0.0	0.0	0.0	0.0	0.0	375.44	263.29
	-19.5	-21.4	-23.2	-24.8	-26.1	-27.1	-27.7	-27.5	-26.5	-25.0	-23.0	0.0	0.0	0.0	0.0	0.0	0.0		
	8.9	8.7	8.2	7.3	5.7	3.5	0.6	3.2	7.7	13.7	8.0	0.0	0.0	0.0	0.0	0.0	0.0		
33	28.0	23.8	20.4	17.6	15.2	13.2	11.5	10.0	8.7	7.6	6.6	0.0	0.0	0.0	0.0	0.0	0.0	380.07	245.12
	-20.4	-22.4	-24.3	-26.0	-27.5	-28.7	-29.5	-29.8	-29.6	-28.9	-27.4	0.0	0.0	0.0	0.0	0.0	0.0		
	9.7	10.0	9.7	8.9	7.6	5.6	2.9	0.6	7.1	10.6	17.3	0.0	0.0	0.0	0.0	0.0	0.0		
34	28.4	24.1	20.7	17.8	15.4	13.4	11.7	10.2	8.9	7.7	6.7	0.0	0.0	0.0	0.0	0.0	0.0	384.59	244.74
	-21.2	-23.4	-25.4	-27.3	-28.7	-30.3	-31.2	-31.7	-31.8	-31.2	-30.0	0.0	0.0	0.0	0.0	0.0	0.0		
	11.0	11.3	11.1	10.5	9.4	7.7	5.2	1.7	2.3	7.6	14.0	0.0	0.0	0.0	0.0	0.0	0.0		
35	28.7	24.5	21.0	18.1	15.7	13.6	11.8	10.3	9.0	7.9	6.9	6.0	0.0	0.0	0.0	0.0	0.0	389.02	248.74
	-22.1	-24.4	-26.4	-28.4	-30.3	-31.8	-33.0	-33.7	-33.7	-33.5	-32.5	-30.7	0.0	0.0	0.0	0.0	0.0		
	12.1	12.5	12.5	12.1	11.2	9.7	7.4	4.4	0.4	4.5	10.7	17.0	0.0	0.0	0.0	0.0	0.0		
36	29.1	24.9	21.3	18.3	15.9	13.8	12.0	10.5	9.2	8.0	7.0	6.1	0.0	0.0	0.0	0.0	0.0	393.32	250.54
	-22.9	-25.4	-27.7	-29.8	-31.8	-33.4	-34.7	-35.6	-36.0	-35.8	-35.0	-33.4	0.0	0.0	0.0	0.0	0.0		
	13.1	13.7	13.7	13.7	13.0	11.7	9.7	6.9	3.2	1.5	7.4	14.4	0.0	0.0	0.0	0.0	0.0		

CONCAST FLOOR UNIT ---000--- WIDTH: 1200 MM DEPTH: 300 x 50 MM SCREEN

*UNPOLED*

N	7.0H	7.5H	8.0H	8.5H	9.0H	9.5H	10.0H	10.5H	11.0H	11.5H	12.0H	12.5H	13.0H	13.5H	14.0H	14.5H	15.0H	ULT. MOM.	WCD
19	8.4	6.4	5.1	3.7	2.7	2.1	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	102.75	291.17
20	9.1	7.2	5.7	4.1	3.3	2.4	1.7	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	176.54	291.57
21	9.7	7.8	6.2	4.3	3.7	2.8	2.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	178.33	291.74
22	10.4	8.3	6.7	5.3	4.1	3.1	2.3	1.6	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	185.73	291.72
23	11.0	8.9	7.2	5.7	4.5	3.5	2.6	1.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	173.45	291.37
24	11.7	9.5	7.7	6.2	4.7	3.8	2.7	2.2	1.5	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	201.31	291.22
25	12.3	10.0	8.1	6.4	5.3	4.2	3.3	2.4	1.7	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	208.97	291.34
26	12.9	10.6	8.6	7.0	5.7	4.5	3.6	2.7	2.0	1.4	0.8	0.0	0.0	0.0	0.0	0.0	0.0	216.37	291.37
27	13.6	11.1	9.1	7.5	6.1	4.9	3.7	3.0	2.3	1.6	1.0	0.0	0.0	0.0	0.0	0.0	0.0	223.70	291.42

CONCAST FLOOR UNIT ---000--- WIDTH: 1200 MM DEPTH: 300 x 50 MM SCREEN

*UNPOLED*

N	7.0H	7.5H	8.0H	8.5H	9.0H	9.5H	10.0H	10.5H	11.0H	11.5H	12.0H	12.5H	13.0H	13.5H	14.0H	14.5H	15.0H	ULT. MOM.	WCD
28	14.2	11.7	9.3	7.9	5.3	5.0	4.2	3.3	2.5	1.3	1.2	0.0	0.0	0.0	0.0	0.0	0.0	231.46	297.75
29	14.9	12.2	10.1	8.3	6.3	5.6	4.5	3.6	2.3	2.1	1.3	0.7	0.0	0.0	0.0	0.0	0.0	230.75	297.37
30	15.5	12.3	10.4	8.3	7.2	5.9	4.8	3.9	3.0	2.3	1.7	1.1	0.0	0.0	0.0	0.0	0.0	216.24	291.23
31	16.1	13.5	11.1	7.2	7.8	6.3	5.1	4.1	3.3	2.5	1.7	1.2	0.3	0.0	0.0	0.0	0.0	233.63	291.65
32	16.7	13.9	11.5	7.8	7.8	6.2	5.4	4.1	3.5	2.3	2.1	1.5	1.0	0.0	0.0	0.0	0.0	260.96	294.15
33	17.4	14.4	12.0	10.0	8.3	6.7	5.7	4.7	3.8	3.0	2.3	1.7	1.2	0.0	0.0	0.0	0.0	268.24	297.23
34	18.0	15.0	12.5	10.4	8.7	7.3	6.0	5.0	4.0	3.2	2.5	1.7	1.3	0.8	0.0	0.0	0.0	275.48	296.37
35	18.6	15.3	13.0	10.8	7.1	7.6	6.3	5.2	4.3	3.5	2.7	2.1	1.3	1.0	0.0	0.0	0.0	282.48	297.46
36	19.2	16.3	13.4	11.3	9.5	7.9	6.6	5.5	4.5	3.7	2.9	2.3	1.7	1.1	0.0	0.0	0.0	289.83	298.54

CONCAST FLOOR UNIT --000-- WIDTH: 1200 MM DEPTH: 300 x 75 MM SCREEN																	UNSPOTTED		
N	7.0H	7.5H	8.0H	8.5H	9.0H	9.5H	10.0H	10.5H	11.0H	11.5H	12.0H	12.5H	13.0H	13.5H	14.0H	14.5H	15.0H	ULT. MM.	UCB
19	9.1 -3.6 2.7	7.1 -3.2 2.7	5.6 -2.4 3.1	4.3 -1.3 3.2	3.1 0.2 3.3	2.2 0.2 3.2	1.4 0.0 3.1	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	177.09	209.42
20	9.0 -4.1 2.8	7.8 -3.7 3.2	6.1 -3.3 3.4	4.7 -2.0 3.5	3.6 -0.6 3.6	2.6 1.3 3.6	1.8 3.8 3.5	1.3 6.8 3.3	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	185.45	210.59
21	10.5 -4.5 2.4	8.4 -4.2 3.4	6.2 -3.7 3.5	5.2 -2.7 3.8	4.0 -1.4 3.7	3.0 0.5 3.7	2.1 2.3 3.7	1.4 5.1 3.7	0.3 0.0 4.0	0.0 0.3 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	174.15	211.76
22	11.2 -5.0 2.5	9.0 -4.8 3.4	7.2 -4.3 3.3	5.7 -3.4 4.3	4.4 -2.2 4.2	3.4 -0.4 4.3	2.3 1.8 4.2	1.7 4.7 4.1	1.0 8.3 3.9	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	202.53	212.72
23	12.0 -5.5 2.4	9.6 -5.3 3.6	7.8 -4.7 4.1	6.2 -4.1 4.3	4.9 -2.9 4.5	3.8 -1.3 4.6	2.0 0.7 4.6	2.0 3.6 4.5	1.3 7.1 4.3	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	210.70	214.07
24	12.7 -6.0 2.2	10.3 -5.7 3.4	8.3 -5.3 4.3	6.7 -4.8 4.6	5.3 -3.7 4.8	4.1 -2.2 4.7	3.2 -0.1 5.0	2.3 2.6 4.9	1.6 5.7 4.8	0.7 10.0 4.5	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	219.12	215.22
25	13.4 -6.4 2.1	10.9 -6.1 3.3	8.8 -5.5 4.5	7.1 -4.5 4.8	5.7 -3.5 5.1	4.5 -3.0 5.2	3.5 -1.0 5.3	2.6 1.5 5.3	1.7 4.3 5.2	1.2 8.7 5.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	227.35	216.34
26	14.0 -6.7 2.0	11.5 -7.0 3.1	9.4 -6.7 4.6	7.8 -6.2 5.1	6.1 -5.3 5.4	4.9 -3.7 5.6	3.8 -2.0 5.7	2.9 0.5 5.7	2.1 3.6 5.6	1.4 7.3 5.4	0.8 12.1 5.1	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	235.47	217.48
27	14.7 -7.4 1.8	12.1 -7.3 3.0	9.7 -6.7 4.5	8.1 -6.7 5.4	6.5 -6.0 5.7	5.3 -4.8 5.9	4.2 -3.0 6.1	3.2 -0.6 6.1	2.4 2.4 6.1	1.7 6.2 5.9	1.1 10.7 5.8	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	243.51	218.62

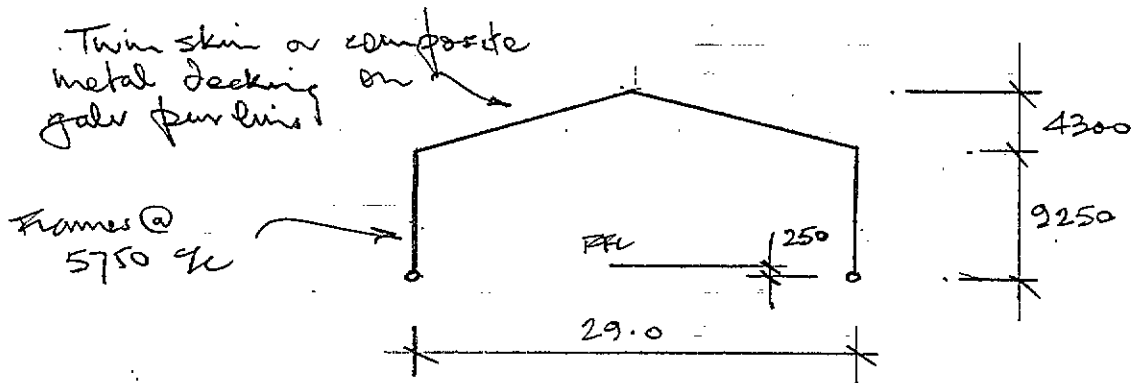
CONCAST FLOOR UNIT --000-- WIDTH: 1200 MM DEPTH: 300 x 75 MM SCREEN																	UNSPOTTED		
N	7.0H	7.5H	8.0H	8.5H	9.0H	9.5H	10.0H	10.5H	11.0H	11.5H	12.0H	12.5H	13.0H	13.5H	14.0H	14.5H	15.0H	ULT. MM.	UCB
28	15.4 -7.8 1.7	12.7 -8.0 2.8	10.4 -8.0 4.3	8.5 -7.5 5.6	7.0 -6.3 5.9	5.6 -5.6 6.2	4.5 -3.7 6.4	3.5 -1.6 6.5	2.7 1.3 6.5	1.7 4.7 6.4	1.3 9.4 6.1	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	251.48	217.75
29	16.1 -8.3 1.6	13.2 -8.6 2.7	10.9 -9.3 4.1	9.0 -8.3 5.7	7.4 -7.6 6.2	6.0 -6.5 6.5	4.8 -4.7 6.8	3.3 -2.7 6.9	3.0 0.1 6.7	2.2 3.7 6.3	1.5 0.0 6.6	0.7 13.2 6.1	0.3 0.0 6.8	0.3 0.0 6.8	0.3 0.0 6.8	0.0 0.0 6.8	0.0 0.0 6.8	257.37	219.37
30	16.7 -8.8 1.4	13.8 -9.1 2.5	11.4 -9.2 3.7	9.4 -9.0 5.7	7.9 -8.4 6.5	6.4 -7.3 6.8	5.2 -5.0 7.1	4.1 -3.7 7.3	3.2 -1.0 7.3	2.1 2.4 7.3	1.8 6.6 7.1	1.1 11.7 7.1	0.0 0.0 6.6	0.3 0.0 6.6	0.3 0.0 6.6	0.3 0.0 6.6	0.0 0.0 6.6	267.18	221.56
31	17.4 -9.2 1.3	14.4 -9.6 2.3	11.9 -9.8 3.7	7.7 -9.6 5.5	8.2 -9.1 6.8	6.7 -8.2 7.1	5.5 -6.0 7.4	4.3 -4.3 7.6	3.5 -2.2 7.7	2.7 1.2 7.7	2.3 3.3 7.6	1.3 10.3 7.1	0.0 0.0 6.0	0.3 0.0 6.0	0.3 0.0 6.0	0.0 0.0 6.0	0.0 0.0 6.0	274.57	223.08
32	18.0 -9.7 1.1	14.9 -10.2 2.2	12.4 -10.4 3.6	10.3 -10.3 5.3	8.6 -9.7 7.1	7.1 -9.0 7.5	5.3 -7.7 7.8	4.2 -3.8 8.0	3.7 3.3 8.1	2.9 -0.1 8.5	2.2 3.7 8.1	1.5 8.8 7.6	0.8 14.6 6.5	0.0 0.0 6.0	0.3 0.0 6.0	0.3 0.0 6.0	0.0 0.0 6.0	282.44	224.17
33	18.7 -10.2 1.0	15.5 -10.7 2.0	12.7 -11.0 3.4	10.8 -11.0 5.1	8.7 -10.7 7.3	7.4 -9.7 7.8	6.1 -8.7 8.1	5.0 -6.9 8.4	4.0 -4.5 8.6	3.2 -1.3 8.6	2.4 2.3 8.5	1.7 7.3 8.1	1.0 13.0 7.1	0.3 0.0 6.0	0.0 0.0 6.0	0.0 0.0 6.0	0.0 0.0 6.0	290.10	225.28
34	19.3 -10.6 0.9	16.1 -11.2 1.9	13.4 -11.6 3.2	11.2 -11.7 4.9	9.3 -11.4 7.0	7.8 -10.7 8.1	6.4 -9.6 8.3	5.3 -7.7 8.8	4.3 -5.6 9.0	3.4 -2.6 9.1	2.6 1.2 9.0	1.9 5.8 8.7	1.1 11.4 7.6	0.0 0.0 6.0	0.0 0.0 6.0	0.0 0.0 6.0	0.0 0.0 6.0	297.80	226.37
35	20.0 -11.1 0.8	16.6 -11.8 1.7	13.7 -12.2 3.1	11.5 -12.4 4.7	9.7 -12.2 6.8	8.1 -11.6 8.4	6.8 -10.5 8.8	5.6 -8.7 9.1	4.5 -6.7 9.4	3.6 -3.8 9.5	2.3 -0.1 9.5	2.1 4.4 9.2	1.3 9.8 8.2	0.8 0.0 6.0	0.0 0.0 6.0	0.0 0.0 6.0	0.0 0.0 6.0	305.46	227.45
36	20.6 -11.5 0.6	17.2 -12.3 1.6	14.4 -12.8 2.9	12.1 -12.9 4.5	10.1 -12.4 6.6	8.5 -11.5 8.7	7.1 -10.0 9.1	5.9 -7.9 9.5	4.0 -7.9 9.8	3.7 -5.1 10.0	3.1 -1.5 10.0	2.3 2.9 9.7	1.5 8.2 8.7	0.8 14.6 7.5	0.0 0.0 6.0	0.0 0.0 6.0	0.0 0.0 6.0	313.05	228.54

1,000  
10,000  
19

Smooth Corrugated  
Walnutown

①

Store No. 1 Steelwork



load

Roof  $0.75 \times 1.6 = 1.2$

Cladding Purlins Steel }  $0.35 \times 1.4 = 0.49$   
 $1.69 \text{ kN/m (Factored load)}$

load on frame  $1.69 \times 5.75 = 9.717 \text{ kN/m}$

Design using Institution Structural Engineers' "Manual for Design of Steelwork Buildings Structures"

$L/h = \frac{29}{9.25} = 3.13$

$r/L = \frac{4.3}{29} = 0.148$

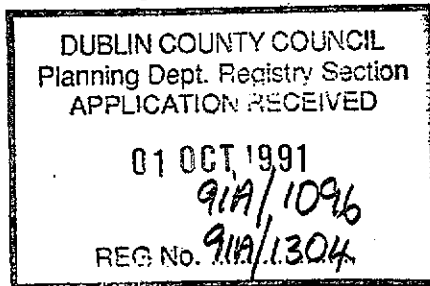
$WL^2 = 9.72 \times 29^2 = 8174.52$

Horizontal reaction factor = 0.21

$H_a = 0.21 \times 9.72 \times 29 = 57.78 \text{ kN}$

Mp ratio for rafters = 0.031

$M_{pr} = 0.031 \times 8174.52 = 253.41 \text{ kNm}$





Mp ratio for stanchion 0.059

$$M_{ps} = 0.059 \times 8174.52 = 482.29 \text{ kNm}$$

Plastic Modulus required

$$\text{Raft} = \frac{253.41 \times 10^6}{275 \times 10^3} = 921.5 \text{ cm}^3 - \text{Try } 533 \times 210 \times 82$$

$$\text{Stanchion} = \frac{482.29 \times 10^6}{275 \times 10^3} = 1753.8 \text{ cm}^3$$

Try 610 x 229 x 101

Sway Stability

Member 610 x 229 x 101 = 75720 cm<sup>4</sup>

— — — 533 x 210 x 82 = 47491 cm<sup>4</sup>

$$\alpha = \frac{2 \times 75720}{47491} \times \frac{29}{9.25} = 9.99$$

$$L_B = 29 - 2.9 = 26.1 \text{ m}$$

$$L_T = 2 \sqrt{4.3^2 + 14.5^2} = 30.24 \text{ m}$$

$$W_D = 29 \times 9.717 = 281.8 \text{ kN}$$

$$W_B = \frac{16 \times 2056 \times 10^3 \times 275}{29 \times 10^3 \times 10^3} = 311.94$$

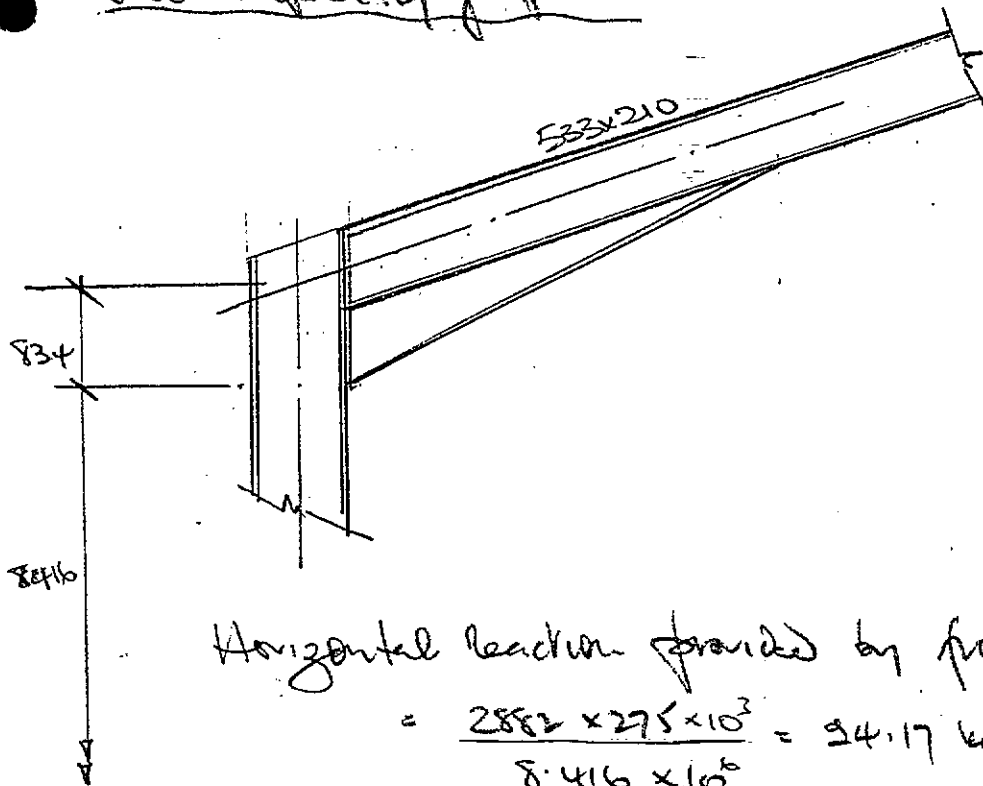
$$\Omega = \frac{281.8}{311.94} = 0.9$$

$$\frac{44}{0.9} \times \frac{29}{9.25} \times \frac{9.99}{\left(4 + \frac{9.99 \times 30.24}{29}\right)} \times \frac{275}{275} = 106.26$$

$$\frac{L_B}{D} = \frac{26.1 \times 10^3}{528} = 49.43 < 106.26$$

Sway satisfactory

load capacity of frame

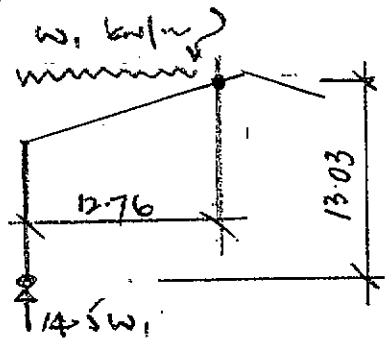


Horizontal reaction provided by frame

$$= \frac{2882 \times 275 \times 10^3}{8.416 \times 10^6} = 94.17 \text{ kN}$$

Location of rafter hinge

$$0.44 \times 29 = 12.76 \text{ m}$$



$$M_{\text{rafter}} = \frac{2056 \times 10^3 \times 275}{10^6} = 565.4 \text{ kN.m}$$

$$14.5w_1 - 94.17 \times 13.03 - \frac{12.76^2 w_1}{2} = 565.4$$

$$w_1 = 26.79 \text{ kN/m} > 9.717 \text{ kN/m}$$

Plate Gage Restraint

Rafter  $f_c = \frac{59.19 \times 10^3}{104.4 \times 10^2} = 5.67 \text{ N/mm}^2$

$$L_m = \frac{38 \times 4.38 \times 10}{\sqrt{\frac{5.67}{130} + 1 \times \left(\frac{41.6}{36}\right)^2}} = 1417 \text{ mm}$$

Stanchion

$$f_c = \frac{9.717 \times 14.5 \times 10^3}{129 \times 10^2} = 10.92 \text{ N/mm}^2$$

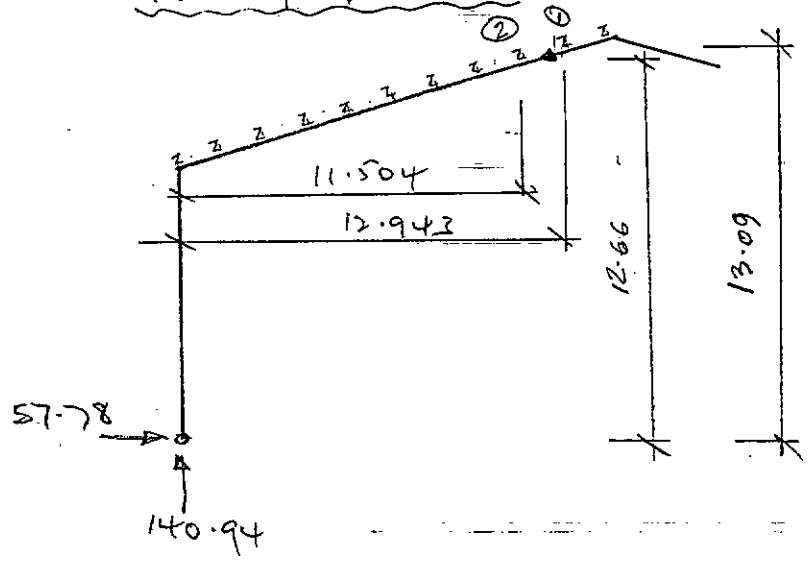
$$L_m = \frac{38 \times 4.75 \times 10}{\sqrt{\frac{10.92}{130} + 1 \times \left(\frac{43}{36}\right)^2}} = 1469$$

Rafter Design

Pin end assumed at 1500 q<sub>w</sub>

$$Q_{w/r} = \frac{1500}{4.38 \times 10} = 34.24$$

9.72 kN/m



$$M_{\text{①}} = 140.94 \times 12.943 - 57.78 \times 13.09 - 9.72 \times \frac{12.943^2}{2} = 253.69$$

$$M_{\text{②}} = 140.94 \times 11.504 - 57.78 \times 12.66 - 9.72 \times \frac{11.504^2}{2} = 246.7 \text{ kNm}$$

$$\beta = \frac{246.7}{253.69} = 0.97 \quad m = 0.98$$

$$M_r = 0.98 \times 253.69 = 248.61 \text{ kNm}$$

$$A = 38.24 \quad f_b = 272$$

$$M_f = \frac{272 \times 20600 \times 10^3}{10^6} = 560.32 > 248.61$$

Stanchion -

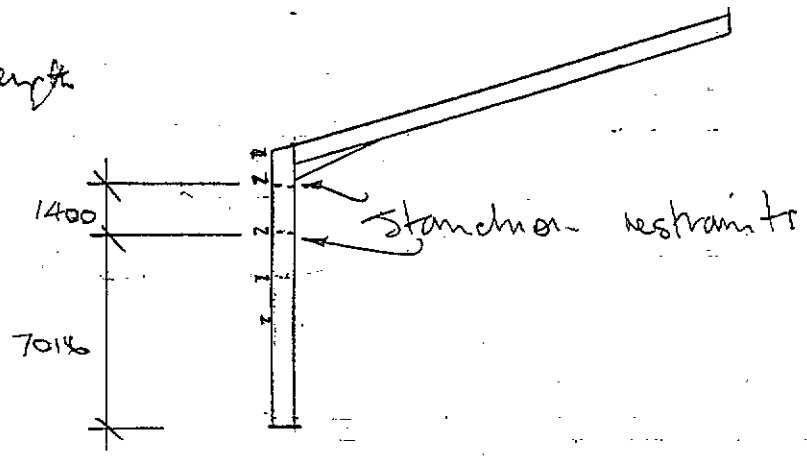
$$e_{ly} = \frac{1500}{4.75 \times 10} = 31.57$$

$$e_{rz} = \frac{9250}{24.2 \times 10} = 38.2 \quad \phi_c = 250 \text{ N/mm}^2$$

$e_{ly}$  for lower length

$$= \frac{7016}{4.75 \times 10} = 147$$

$$\phi_c = 76 \text{ N/mm}^2$$



Moment at lower restraint =  $57.78 \times 7.016 = 405.38 \text{ kN.m.}$

$$M_f = 300 \text{ kN.m.} \quad m = 0.57$$

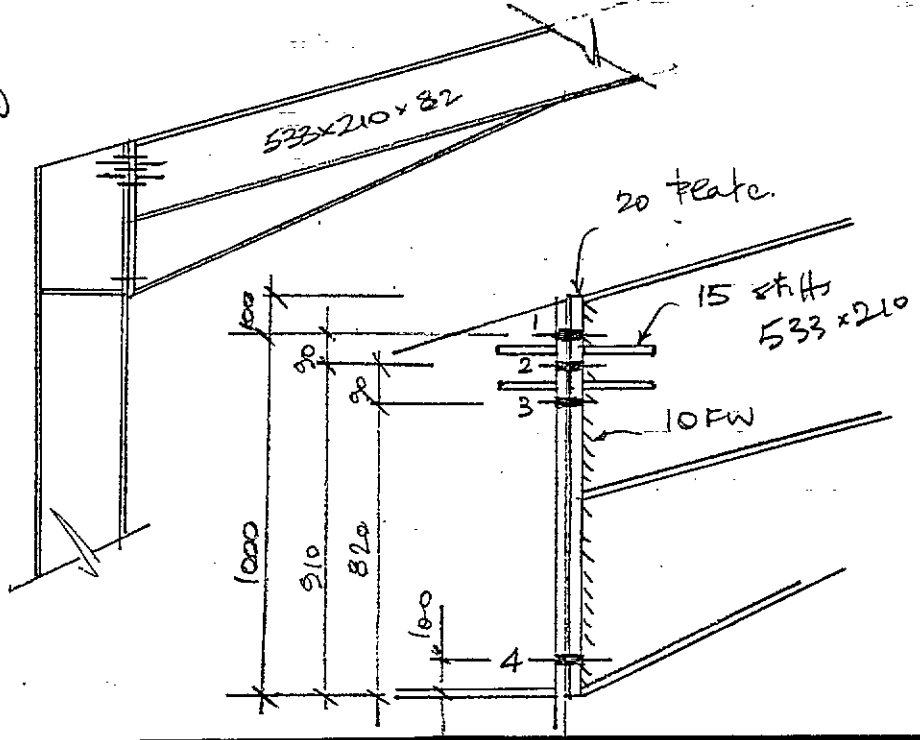
Load on stanchion =  $9.72 \times 14.5 = 140.94 \text{ kN.}$

$$\frac{140.94 \times 10^3}{129 \times 10^2 \times 76} + \frac{0.57 \times 405.38}{300} = 0.914 < 1.0$$

Rafter Connection

Connection formed

- with
- M20 8.8 Grade bolts.
- 10 Fillet weld.
- 15mm stiffeners



(6)

Max Force on belt = 110 kN.

Row 1 = 110 kN.

Row 2 =  $\frac{910}{1000} \times 110 = 100.1$  kN.Row 3 =  $\frac{820}{1000} \times 110 = 90.2$  kN.

Resistance of Group

$$2(110 \times 1.0 + 100.1 \times 0.91 + 90.2 \times 0.82)$$

$$= 550.1 \text{ kN.m} > 482.29 \text{ kN.m}$$

Shear:

Shear to be taken on belts at row 4.

Then strength into base = 92.0 kN

Shear capacity - 2 belts

$$2 \times 92 = 184 \text{ kN} > 140.94 \text{ kN}$$

Crane Posts:Wind load

Wind Speed 46 m/s

$$S_1 = 1.0, S_2(38) = 0.81, S_3 = 1.0$$

Design Speed  $0.81 \times 46 = 37.26$  m/s.

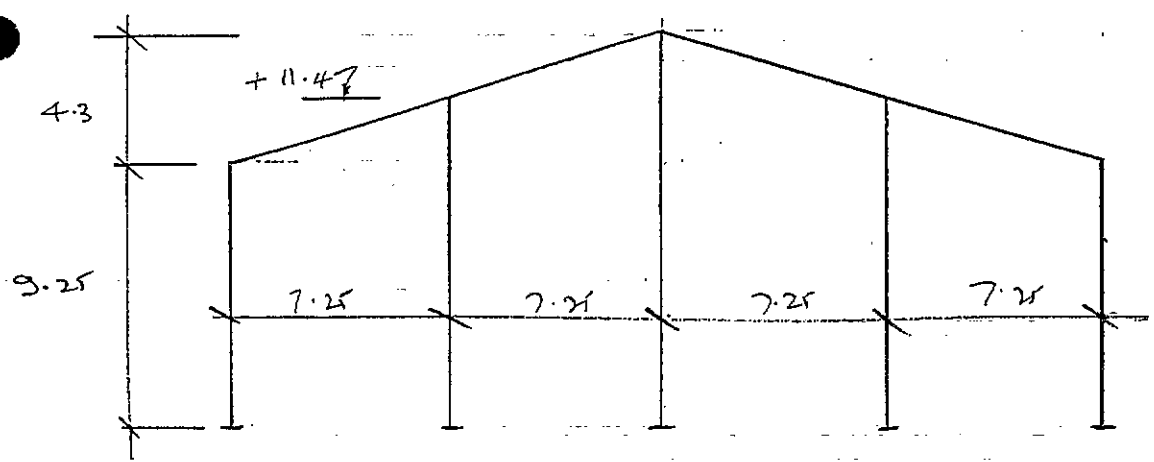
$$q = \frac{0.613 \times 37.26^3}{63} = 0.851 \text{ kN/m}^2$$

$$h/w = \frac{9.25}{29} = 0.32 \quad C_{pe} = 0.7$$

$$l/w = \frac{34.5}{29} = 1.19$$

$$\text{Wind load} = 0.7 \times 0.851 = 0.595$$

$$\text{Say } 0.6 \text{ kN/m}^2$$



Wind on Gable roof =  $0.6 \times 7.25 = 4.35 \text{ kN/m}$

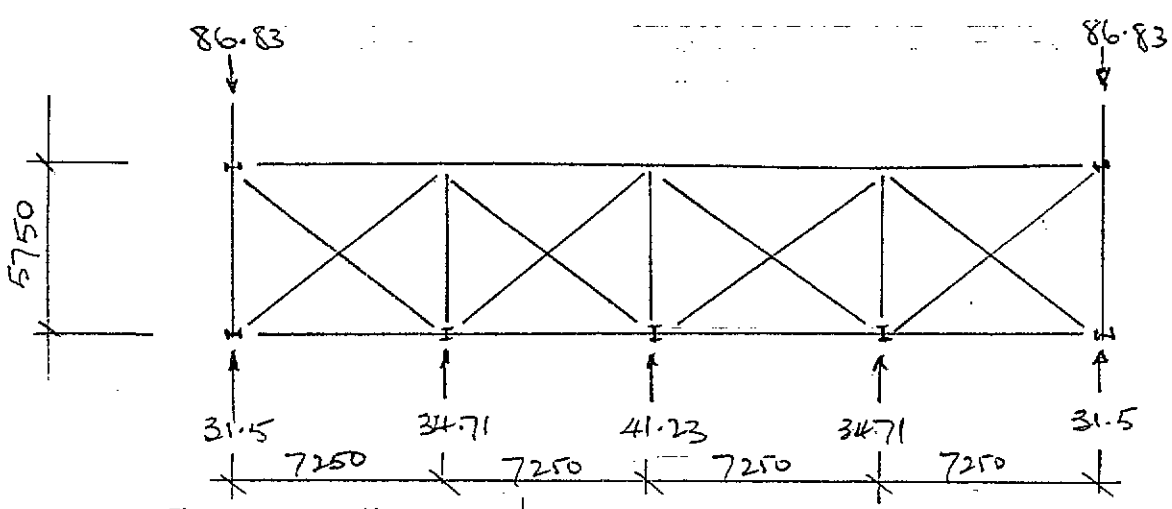
Roof load =  $4.35 \times 1.4 = 6.09 \text{ kN/m}$

$M = \frac{6.09 \times 11.4^2}{8} = 98.93 \text{ kNm}$

Roof restrained by wall & cladding rails. For purpose of design assume fully restrained

Use 305x127x37 ( $M_c = 148 \text{ kNm}$ )

Roof Truss



By inspection provide  
 Eaves Tie beam 254x146x31 UB  
 Struts in Truss 152x152x23 UC

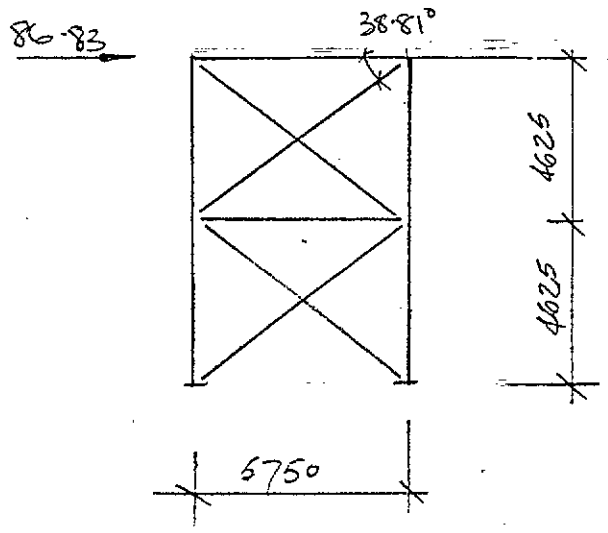
Force in Diagonal tie

$$= 86.83 - 31.5 = 55.33 \text{ kN}$$

Force in tie  $\frac{55.33}{\cos 51.58} = 89 \text{ kN}$

Use 60x60x6 clipped to parallel

Wall Bracing



Force in tie =  $\frac{86.83}{\cos 38.81} = 111.4 \text{ kN}$

Use 60x60x6 L

Strut force = 86.83 - Use 254x146x31

Fondakair:

Stanchion Base

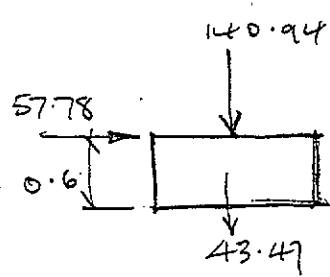
Vertical load from Stanchion = 140.94 kN

Horizontal force = 57.78 kN

Try base size 1.5 x 1.5 x 600 deep

Wt base  $1.5 \times 1.5 \times 0.6 \times 23 \times 1.4 = 43.47$  kN.

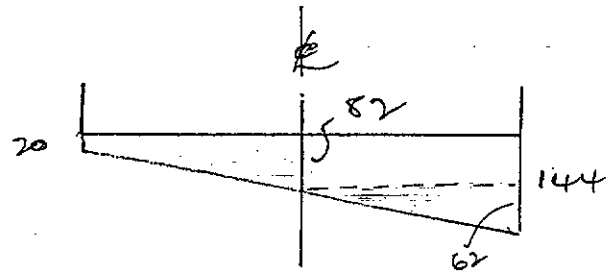
$Z = \frac{1.5 \times 1.5^2}{6} = 0.56$



$e = \frac{57.78 \times 0.6}{184.41} = 0.188$

$\frac{184.41}{1.5 \times 1.5} \pm \frac{184.41 \times 0.188}{0.56}$

81.96 ± 61.9  
+143.86 ± 20 kN/m<sup>2</sup>



Moment =  $82 \times \frac{0.75}{2} + \frac{62 \times 0.75}{2} \times \frac{0.75}{3} = 28.875$  kN.m

Shear at k =  $144 \times 0.75 \times 1.5 + \frac{62 \times 0.75}{2} \times 1.5 = 196.87$  kN

$\frac{M}{bd^2 f_{cu}} = \frac{28.875 \times 10^6}{1500 \times 550^2 \times 25} = 0.002$

$A_s = \frac{28.875 \times 10^6}{0.87 \times 460 \times 0.95 \times 550} = 138$  mm<sup>2</sup> - nominal



Min  $\sigma_c = 0.13$

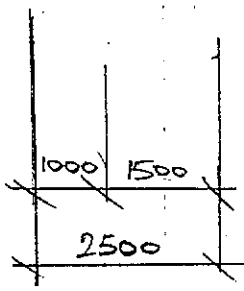
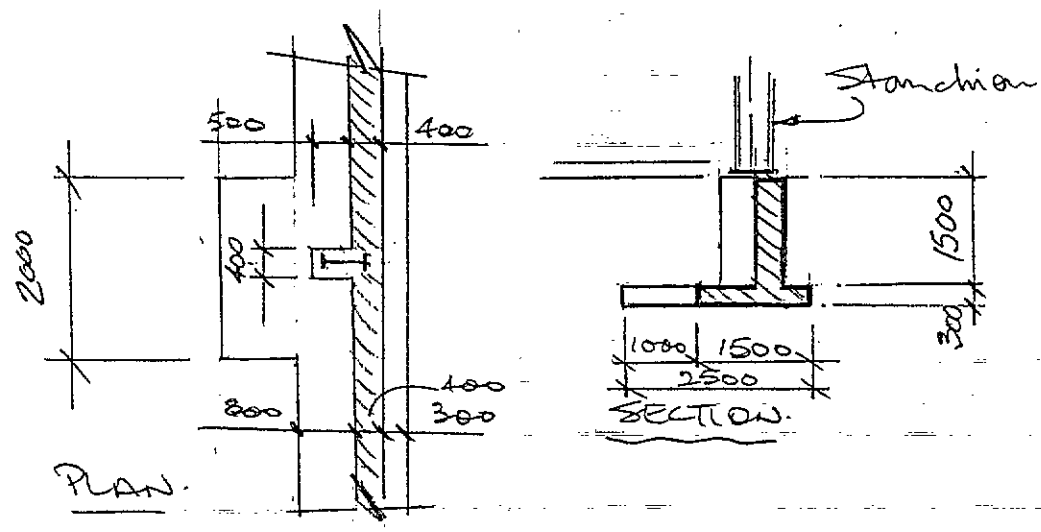
$0.13 \times \frac{1500 \times 600}{100} = 1170 \text{ mm}$

Use 6 T16 (1206)

Shear @ E base  $\frac{127.12 \times 10^3}{1500 \times 550} = 0.15 \text{ N/mm}^2$  - nominal

$V_c = \frac{100 \times 1206}{1500 \times 550} = 0.42 > 0.11$

Anchor at Retaining Wall.



Load on floor = 25 kN/m<sup>2</sup>

Density soil = 16 kN/m<sup>3</sup>

$\phi = 30^\circ$

Anchor loads

	Factored	Service
Vertical	140.94	91.71
Horizontal	58.78	40.53

Overturning moment from stanchion horizontal force will be taken over 2.0m.

OTM.

$$M_{1e} = \left( \frac{16 \times 1.8^2}{2} \times 0.5 \times \frac{1.8}{3} \right) \times 2 = 15.55$$

$$M_{2e} = \left( 25 \times 1.8 \times 0.5 \times \frac{1.8}{2} \right) \times 2 = 40.50$$

Horiz. Force from stanchion  $40.53 \times 1.8 = \frac{72.96}{129.01} \text{ kNm}$

km Moments about toe

	wt.	Arm.	Moment.
Wall	27.6	0.5	13.8
Rev	6.9	0.95	6.55
Base	34.5	1.25	43.12
Soil	2x34.56	1.6	110.6
- " -	12.48	1.85	23.09
Super	90	1.6	144.0
Partial	91.71	0.8	73.37
	<u>332.31</u>		<u>414.53</u>

$$C_{11} = \frac{414.53}{332.31} = 1.247 \text{ from toe}$$

Factor Safety =  $\frac{414.53}{129.01} = 3.2$   
overturning

Sliding  $\mu = 0.4$

Horizontal force

$$2 \left( \frac{16 \times 1.8^2}{2} \times 0.5 + 25 \times 1.8 \times 0.5 \right) + 40.53 = 111.45 \text{ kN}$$

Resistance =  $332.31 \times 0.4 = 132.92$

Factor Safety =  $\frac{132.92}{111.45} = 1.2$  + Existing concrete  
Yard slab - OK

$$Z = \frac{2 \times 2.5^2}{6} = 2.08 \quad e = \frac{129.01}{332.31} = 0.388$$

$$e \cdot P = \frac{332.31}{2 \times 2.5} \pm \frac{332.31 \times 0.388}{2.08} = 66.46 \pm 62 = 128.46 \text{ kN/m}^2$$

# Check stability of wall without pier.

(12)

OTM

$$M_e = \frac{16 \times 1.8^2}{2} \times 0.5 \times \frac{1.8}{3} = 7.77$$

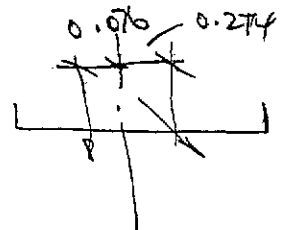
$$M_s = 25 \times 1.8 \times 0.5 \times \frac{1.8}{2} = 20.25$$

<u>Dist</u>	<u>WV</u>	<u>Arm</u>	<u>Moment</u>
Wall	13.8	0.5	6.9
Base	10.35	0.75	7.76
Soil	19.2	1.1	21.12
Surf	20.0	1.1	22.0
8/Walk	16.5	0.5	8.25
	79.85		66.03

$$C_e = \frac{66.03}{79.85} = 0.826 \text{ m from toe.}$$

$$F_{fs} \text{ overturning} = \frac{79.85}{28.02} = 2.85$$

$$Z = \frac{1 \times 1.5^2}{6} = 0.375 \quad e = \frac{28.02}{79.85} = 0.35$$



$$\frac{79.85}{1.5 \times 1} \pm \frac{79.85 \times 0.274}{0.375}$$

$$53.23 \pm 58.34$$

$$\underline{+111.57 \text{ E } -5.11 \text{ kN/m}^2}$$

## Wall Design

$$M_e = 7.77 \times 1.4 = 10.88$$

$$M_s = 20.25 \times 1.6 = 32.40$$

$$\underline{43.28 \text{ kNm}}$$

$$\frac{M}{bd^2 f_m} = \frac{43.28 \times 10^6}{10^3 \times 350^2 \times 35} = 0.01 \quad a_1 = 0.94$$

$$A_s = \frac{43.28 \times 10^6}{0.87 \times 460 \times 0.94 \times 350} = 328 \text{ mm}^2$$

Min  $A_s = 0.13\%$

$$\frac{0.13 \times 400 \times 10^3}{100} = 520$$

Use T12 @ 200mm

Base

at Stanchion

Item	Wt.	Moment
Wall	27.6 x 1.4	19.32
ln	6.9 x 1.4	9.17
Base	34.5 x 1.4	60.37
Soil	69.12 x 1.4	154.84
in	12.48 x 1.4	32.33
Super	90 x 1.6	280.4
Partial	140.94	112.75
	<u>495.78 kN</u>	<u>-619.18 kN.m</u>

$$C_{cr} = \frac{619.18}{495.78} = 1.249$$

OTM

$$M_e = 15.55 \times 1.4 = 21.77$$

$$M_s = 40.5 \times 1.6 = 64.8$$

$$\text{Hogging Force } 58.78 \times 1.8 = 105.8$$

$$\frac{192.37}{192.37} \text{ kN.m}$$

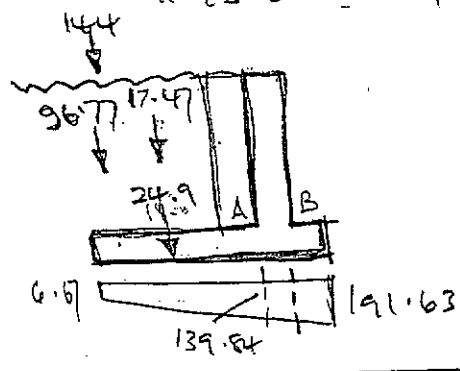
$$e = \frac{192.37}{495.78} = 0.388$$

Factored GR

$$\frac{495.78}{2 \times 2.5} \pm \frac{495.78 \times 0.388}{2.09}$$

$$99.15 \quad - \quad 92.48$$

$$191.63 \text{ E} \quad - \quad 6.67$$



$$2 \left( \frac{6.67 \times 1.8^2}{2} + \frac{133.17 \times 1.8 \times 1.8}{2} \right) - 96.77 \times 0.9 - 17.47 \times 1.15 - 144 \times 0.9 - 24.9 \times 0.9$$

$$M @ A = 93.76 \text{ kNm}$$

$$M @ B = \frac{191.63 \times 0.3^2}{2} = 8.67 \text{ kNm}$$

$$\frac{M}{b d^2 f_{cu}} = \frac{93.76 \times 10^6}{10^3 \times 250^2 \times 35} = 0.04 \quad \eta = 0.94$$

$$A_s = \frac{93.76 \times 10^6}{0.97 \times 460 \times 0.94 \times 250} = 996.9$$

Use T16 @ 200

Column under Stanchion

By inspection the loads and moments applied to the column are nominal  $\therefore$  provide minimum reinforcement  $= 0.4\%$

$$\frac{900 \times 400 \times 0.4}{100} = 1440$$

Use 3T25 each face

Blockwork

Blockwork panels 575 x 3.0 high

Thin panels with 150 mm skin & 100 outer skin

Block strength 5 N/mm<sup>2</sup> 1:1:6 Mortar

Effective thickness  $= \frac{2}{3} (150 + 100) = 216$

Limiting dimensions  $\frac{1350 \times 216^2}{106} = 62.98$

Area of panel  $575 \times 3 = 1725 < 62.98$

Panel provided with mesh band beam  
∴ wall simply supported on 4 sides

$$\mu = \frac{0.25}{0.51} = 0.49$$

$$h/L = \frac{3}{5.75} = 0.52$$

$$\alpha = 0.028$$

Wind load = 0.6 kN/m<sup>2</sup>

$$M_{\text{fact}} = 0.028 \times 0.6 \times 1.2 \times 5.75^2 = 0.666 \text{ kN.m}$$

$$M_{\text{fav}} = 0.49 \times 0.666 = 0.327 \text{ kN.m}$$

$$Z_{\text{inner steel}} = \frac{10^3 \times 150^2}{6} = 3.75 \times 10^6$$

$$Z_{\text{outer steel}} = \frac{10^3 \times 100^2}{6} = \frac{1.67 \times 10^6}{5.42 \times 10^6}$$

$$\text{Proportion of moment on inner steel} = \frac{3.75}{5.42} = 0.69$$

Moment on inner steel

$$M_{\text{fact}} = 0.666 \times 0.69 = 0.459 \text{ kN.m}$$

$$M_{\text{fav}} = 0.327 \times 0.69 = 0.225$$

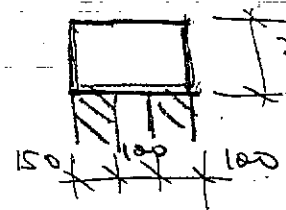
Moment Resistance factor (inner steel)

$$f_{kx \text{ fav}} = 0.25 \quad f_{kx \text{ fact}} = 0.51 \quad \gamma_m = 3-1$$

$$M_{R \text{ fact}} = \frac{0.51 \times 3.75 \times 10^6}{3-1} = 0.617 > 0.459$$

$$M_{R \text{ fav}} = \frac{0.25 \times 3.75 \times 10^6}{3-1} = 0.302 > 0.225$$

Band Beam



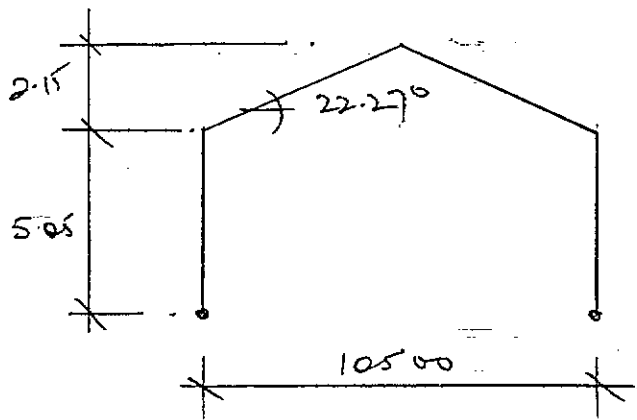
$$\text{load} = 0.6 \times 1.2 \times \frac{3}{2} = 1.08 \text{ kN/m}$$

$$M = \frac{1.08 \times 5.75^2}{8} = 4.46 \text{ kN.m nominal}$$

provide min reinforcement  
4 T12 @ 210 c/c  
@ 250c/c

# Access Stone Steelwork

(16)



Frames @ 630046

low Super  $0.75 \times 1.6 = 1.2$

Cladding  
Purlins  
Steel }  $0.35 \times 1.4 = \frac{0.49}{1.69 \text{ kN/m}}$

load on frame

$1.69 \times 6.3 = 10.65 \text{ kN/m}$

$L/h = \frac{10.5}{5.05} = 2.08$

$r/L = \frac{2.15}{10.5} = 0.2$

$WL^2 = 10.65 \times 10.5^2 = 1174$

Horiz reaction factor = 0.14

$H_A = 0.14 \times 10.65 \times 10.5 = 15.65 \text{ kN}$

Mp ratio for rafter = 0.032

$M_{pr} = 0.032 \times 1174 = 37.56 \text{ kNm}$

Mp ratio for standard = 0.063

$M_{ps} = 0.063 \times 1174 = 73.96 \text{ kNm}$

Plastic Modulus required

Rafter =  $\frac{37.56 \times 10^6}{275 \times 10^3} = 136.6 \text{ Tm } 178 \times 102 \times 19$

Standard =  $\frac{73.96 \times 10^6}{275 \times 10^3} = 268.94 \text{ Tm } 254 \times 146 \times 31$

## Sway Stability

(17)

$$I_{254 \times 446 \times 31} = 44440 \text{ cm}^4$$

$$I_{178 \times 102 \times 19} = 1360 \text{ cm}^4$$

$$Q = \frac{2 \times 44440}{1360} \times \frac{10.5}{5.05} = 13.57$$

$$L_B = 10.5 - 1.05 = 9.45$$

$$L_r = 2 \sqrt{2.15^2 + 5.25^2} = 11.34$$

$$W_r = 10.5 \times 10.65 = 111.82 \text{ kN}$$

$$W_b = \frac{16 \times 171 \times 10^3 \times 275}{10.5 \times 10^3 \times 10^2} = 71.65$$

$$S_L = \frac{111.82}{71.65} = 1.56$$

$$\frac{44}{1.56} \times \frac{10.5}{2.15} \times \frac{13.57}{\left(4 + \frac{13.57 \times 11.34}{10.5}\right)} \times \frac{275}{275} = 100.19$$

$$\frac{L_B}{D} = \frac{9.45 \times 10^3}{178} = 53 < 100.19$$

Sway satisfactory

## load capacity of frame

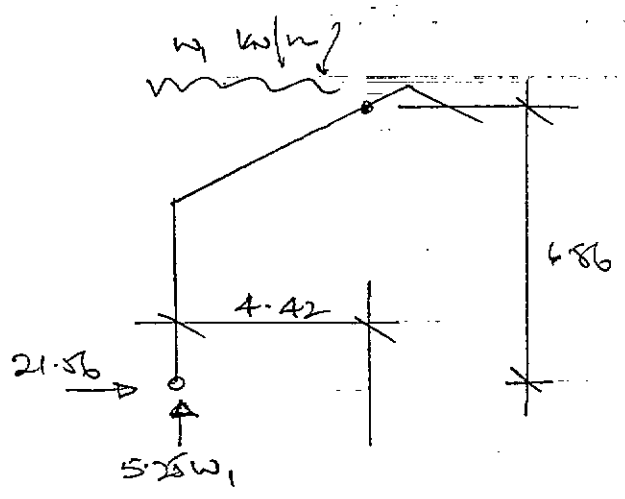
Horizontal reaction provided by frame:

$$= \frac{396 \times 275 \times 10^3}{5.05 \times 10^6} = 21.56 \text{ kN}$$

location of rafter hinge  $0.44 \times 10.05 = 4.42$

$$M_p \text{ rafter} = \frac{171 \times 275 \times 10^3}{106} = 47.02 \text{ kNm}$$





$$5.25w_1 - 21.56 \times 6.86 - \frac{4.42^2 w_1}{2} - 47.82 = 0$$

$$-4.51w_1 - 194.92 = 0$$

$$w_1 = \frac{194.92}{4.51} = 43.21 > 10.65$$

Plastic hinge location

Rafter  $f_c = \frac{15.65 \times 10^3}{24.2 \times 10^2} = 6.47 \text{ N/mm}^2$

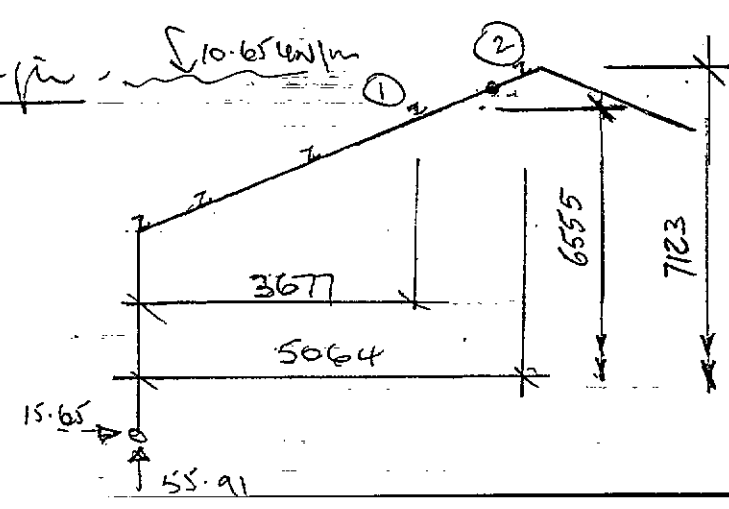
$$L_m = \frac{38 \times 2.39 \times 10}{\sqrt{\frac{6.47 + (1)^2}{130} \times \left(\frac{22.6}{36}\right)^2}} = 1368$$

Standard

$$f_c = \frac{55.91 \times 10^3}{40 \times 10^2} = 13.97$$

$$L_m = \frac{38 \times 3.35 \times 10}{\sqrt{\frac{13.97 + (1)^2}{130} \times \left(\frac{29.4}{36}\right)^2}} = 1446$$

Rafter Design  $10.65 \text{ k/m}$



$$M_D = 55.91 \times 3.677 - 15.65 \times 6.555 - 10.65 \times 3.677^2 = 30.99$$

$$M_B = 55.91 \times 5.064 - 15.65 \times 7.123 - 10.65 \times 5.064^2 = 35.1$$

$$\beta = \frac{30.99}{35.1} = 0.88 \quad m = 0.95$$

$$m = 0.95 \times 35.1 = 33.34$$

$$\lambda = \frac{1500}{239 \times 10} = 62.76 \quad f_b = 234 \text{ N/mm}^2$$

$$M_b = \frac{234 \times 171 \times 10^3}{10^6} = 40.01 > 33.34$$

Use 175 x 102 x 19 UB

Stomdmoin - Casa in concrete full height  
Nominal head  $\therefore 254 \times 14.6 \times 31 \text{ mm}$

Form Daku

$$L_{ov} = 55.91 \text{ kN}$$

$$H_{ov} = 15.65 \text{ kN}$$

Nominal head

Use base 1500 x 1000 x 600 deep

Office Block Foundation.

Load from the column (see concrete calcs.)

Ultimate loads = 701.4 kN

Service loads = 480.82 kN

Try base 2.0 x 2.0 x 0.975 deep

WT base  $2 \times 2 \times 0.975 \times 23 = 89.7 \text{ kN}$

$\therefore$  Total Service load =  $480.82 + 89.7 = 570.52 \text{ kN}$

GF  $\frac{570.52}{2 \times 2} = \underline{142.63 \text{ kN/m}^2}$

Base Design.

Ultimate GF  $\frac{701.4}{2 \times 2} = 175.35 \text{ kN/m}^2$

Moment at column face

$\frac{175.35 \times 1^2}{2} \times 2 = 175.3 \text{ kNm}$

$\frac{M}{bd^2 f_{cr}} = \frac{175.3 \times 10^6}{2000 \times 900^2 \times 35} = 0.0031 \quad \alpha = 0.94$

$A_s = \frac{175.3 \times 10^6}{0.97 \times 460 \times 0.94 \times 900} = 517 \text{ mm}^2$

Min  $A_s = \frac{0.13 \times 975 \times 2000}{100} = 2340$

Use 8T20 bottoming (2513 mm<sup>2</sup>)

Shear  $v = \frac{701.4 \times 10^3 \times 0.5}{2000 \times 900} = 0.194 \text{ N/mm}^2$

$\frac{100 A_s}{bd} = \frac{100 \times 2513}{2000 \times 900} = 0.14 \quad v_c = 0.34 > 0.194$

Reinforcement Shear Taken on depth below column

$\frac{701.4 \times 10^3}{4 \times 300 \times 300} = 1.94 \text{ N/mm}^2 < 0.8 \sqrt{35} = 4.73$

Store No. 2.

Round roof structure to match existing.

Load

$$\begin{aligned} \text{Super roof} &= 1.6 \times 1.2 \\ \text{Cladding} &= 0.45 \times 1.4 = 0.63 \\ \text{Purlins} & \\ \text{Steel} & \end{aligned} \quad \begin{array}{l} \\ \\ \\ \\ \hline 1.83 \text{ kN/m} \end{array}$$

Frames at  $4.57 \times 1.83 = 8.36 \text{ kN/m}$

Load at node points on frame =  $8.36 \times 2.5 = 20.9 \text{ kN}$

Stanchion

Load =  $8.36 \times 15.25 = 63.74 \text{ kN}$

Height = 5900

Stanchion restrained by cladding rails on weak axis at 1500mm. Unrestrained on major axis

Try 203x133x25

$e/r_y = \frac{1500}{3.1 \times 10} = 49 \quad f_c = 238 \text{ N/mm}^2$

$e/r_x = \frac{5900}{8.54 \times 10} = 69 \quad f_c = 225 \text{ N/mm}^2$

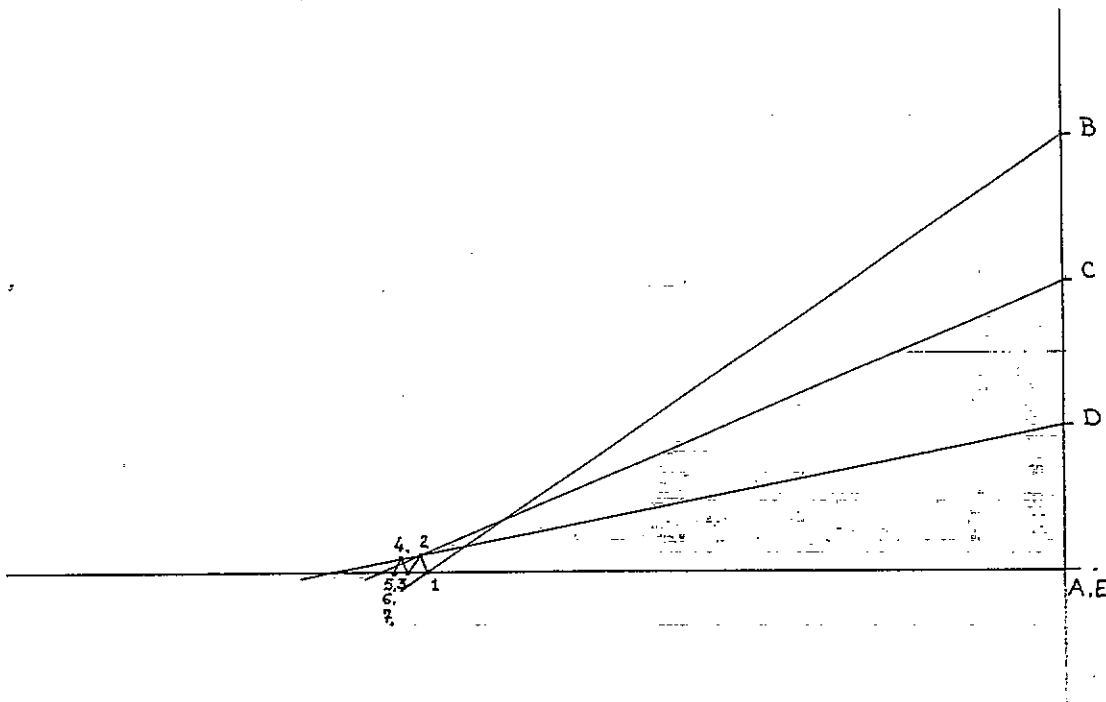
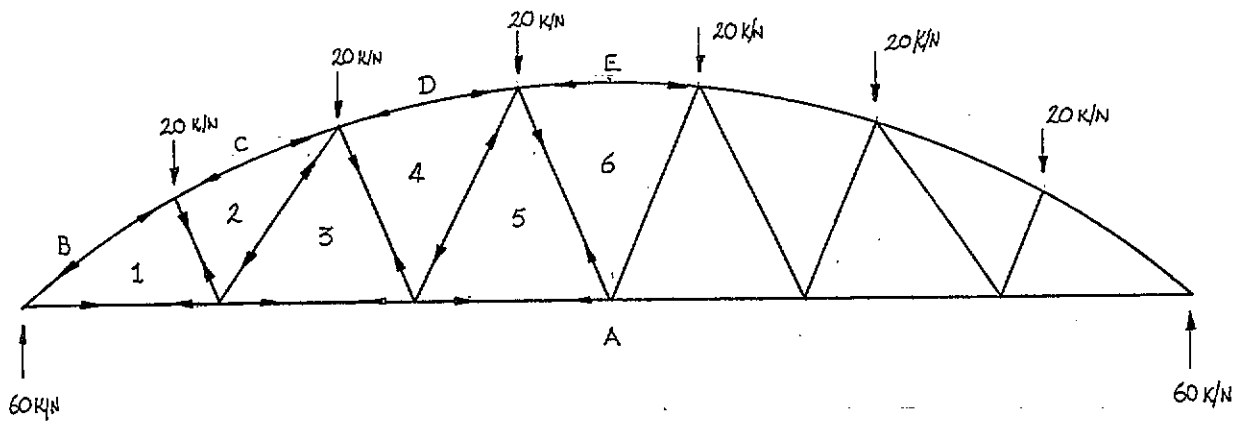
$W/A = \frac{63.74 \times 10^3}{32.3 \times 10^2} = 19.73 < 225 \text{ N/mm}^2$

Use 203x133x25.

Foundation

63.74 kN load - nominal

Provide 1.0x1.0x0.6 deep



FORCES	TENSION/COMPRESSION	LENGTH	MEMBER SIZE
1/B	+ 99	2400	100×100×8 L
2/C	+ 88	2400	"
4/D	+ 85	2400	"
6/E	+ 84	2400	"
1/A	- 79	2500	70×70×6 L
3/A	- 82	2600	"
5/A	- 84	2500	"
1/2	- 4	1600	80×80×6 L
3/4	- 2	2600	"
5/6	- 0	3200	"
2/3	+ 4	2900	80×80×6 L
4/5	+ 2	3200	"

# DUBLIN COUNTY COUNCIL

Tel. 724755 (ext. 262/264)

PLANNING DEPARTMENT,  
BLOCK 2,  
IRISH LIFE CENTRE,  
LR, ABBEY STREET,  
DUBLIN 1.

**Notification of Decision to Grant Permission/**

**Local Government (Planning and Development) Acts, 1963-1983**

To: Smurfit Corrugated Ireland, Decision Order P/4384/91, 03.10.1991  
 Number and Date  
 c/o D. J. Lunn, Register Reference No. 91A/1304

2 Paramount Arcade, Main St.,  
 Arklow, Co. Wicklow. Planning Control No. 07/08.1991

Applicant: Smurfit Corrugated Ireland

In pursuance of its functions under the above-mentioned Acts, the Dublin County Council, being the Planning Authority for the County Health District of Dublin, did by Order dated as above make a decision to grant Permission/ for -  
 construct a single storey area and to extend existing buildings at  
 Ballymount Road, Walkinstown.

**SUBJECT TO THE FOLLOWING CONDITIONS**

CONDITIONS	REASONS FOR CONDITIONS
1. The development to be carried out in its entirety in accordance with the plans, particulars and specifications lodged with the application, save as may be required by the other conditions attached hereto.	1. To ensure that the development shall be in accordance with the permission and that effective control be maintained.
2. That before development commences, approval under the Building Bye-Laws be obtained, and all conditions of that approval be observed in the development.	2. In order to comply with the Sanitary Services Acts, 1878-1964.
3. That the requirements of the Supervising Environmental Health Officer be ascertained and strictly adhered to in the development.	3. In the interest of health.

- Contd.../

Signed on behalf of the Dublin County Council

*[Signature]*  
 For Principal Officer

3rd October, 1991.

Date

**IMPORTANT: Turn overleaf for further information**

CONDITIONS

REASONS FOR CONDITIONS

4. That a financial contribution in the sum of £9962. be paid by the proposer to the Dublin County Council towards the cost of provision of public services in the area of the proposed development and which facilitate this development; this contribution to be paid before the commencement of development on the site.

4. The provision of such services in the area by the Council will facilitate the proposed development. It is considered reasonable that the developer should contribute towards the cost of providing the services.

5. That the colour of the proposed metal cladding and corrugated asbestos shall harmonise with that of the roof of the existing premises and shall be agreed with the Planning Authority before development commences.

5. In the interest of visual amenity.

6. That the water supply and drainage arrangements, including the disposal of surface water, be in accordance with the requirements of the County Council.

6. In order to comply with the Sanitary Services Acts 1878-1964.

7. That off street car parking be provided in accordance with the requirement of the Dublin County Development Plan, 1983.

7. In the interest of the proper planning and development of the area.

*[Handwritten signature]*

NOTE:

If there is no appeal to An Bord Pleanala against this decision PERMISSION/APPROVAL will be granted by the Council as soon as may be after the expiration of the period for the taking of such appeal. If every appeal made in accordance with the Acts has been withdrawn, the Council will grant the PERMISSION/APPROVAL after the withdrawal.

An appeal against the decision may be made to An Bord Pleanala. The applicant may appeal within one month from the date of receipt by him of this notification. ANY OTHER PERSON may appeal within twenty-one days beginning on the date of the decision.

An appeal shall be in writing and shall state the subject matter and grounds of the appeal. It should be addressed to:— An Bord Pleanala, Blocks 6 and 7, Irish Life Centre, Lower Abbey Street, Dublin 1.

(1) An appeal lodged by an applicant or his agent with An Bord Pleanala will be invalid unless accompanied by a fee of £36 (Thirty-six Pounds). (2) A party to an appeal making a request to An Bord Pleanala for an Oral Hearing of an appeal must, in addition to (1) above, pay to An Bord Pleanala a fee of £36 (Thirty-six Pounds). (3) A person who is not a party to an appeal must pay a fee of £10 (Ten Pounds) to An Bord Pleanala when making submissions or observations to An Bord Pleanala in relation to an appeal.

Approval of the Council under Building Bye-Laws must be obtained and the terms of the approval must be complied with in the carrying out of the work before any development which may be permitted is commenced.

Building Control Department,  
Liffey House,  
Tara Street,  
Dublin 1.  
Telephone: 773066



Bloc 2, Ionad Bheatha na hEireann,  
Block 2, Irish Life Centre,  
Sraid na Mainistreach Iacht,  
Lower Abbey Street,  
Baile Atha Cliath 1.  
Dublin 1.  
Telephone. (01)724755  
Fax. (01)724896

Register Reference : 91A/1304

Date : 8th August 1991

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963 TO 1990

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Dear Sir/Madam,

DEVELOPMENT : Construct a single storey storage area and to extend  
existing buildings

LOCATION : Ballymount Road, Walkinstown

APPLICANT : Smurfit Corrigated Ireland

APP. TYPE : PERMISSION

With reference to the above, I acknowledge receipt of your application  
received on 7th August 1991.

Yours faithfully,

.....  
for PRINCIPAL OFFICER

Smurfit Corrigated Ireland,  
C/o D.J. Lunn,  
2 Paramount Arcade,  
Main Street,  
Arklow, Co. Wicklow.





PLEASE READ INSTRUCTIONS AT BACK BEFORE COMPLETING FORM. ALL QUESTIONS MUST BE ANSWERED.

1. Application for Permission  Outline Permission  Approval  Place  in appropriate box.  
 Approval should be sought only where an outline permission was previously granted. Outline permission may not be sought for the retention of structures or continuances of uses.

2. Postal address of site or building BALLYMOUNT ROAD  
 (If none, give description sufficient to identify) WALKINSTOWN DUBLIN 12.

3. Name of applicant (Principal not Agent) SMURFIT CORRUGATED IRELAND  
 Address BALLYMOUNT RD DUBLIN 12 Tel. No. 505196

4. Name and address of person or firm responsible for preparation of drawings D. J. LUNN CONSULTING ENGINEER  
2 PARAMOUNT ARCADE MAIN ST. ADELPHI Tel. No. 0402 39377

5. Name and address to which notifications should be sent SMURFIT CORRUGATED IRELAND % D. J. LUNN  
2 PARAMOUNT ARCADE MAIN ST. ADELPHI CO. WICKLOW

6. Brief description of proposed development SINGLE STOREY DEVELOPMENT FOR STORAGE PURPOSES

7. Method of drainage MAINS 8. Source of Water Supply MAINS

9. In the case of any building or buildings to be retained on site, please state:-  
 (a) Present use of each floor or use when last used N/A

(b) Proposed use of each floor

Stamp: 2422 07/18  
1147448

10 Does the proposal involve demolition, partial demolition or change of use of any habitable house or part thereof? NO

11 (a) Area of Site 44370 Sq. m.  
 (b) Floor area of proposed development 1384 Sq. m.  
 (c) Floor area of buildings proposed to be retained within site 16573 Sq. m.

07. AUG. 91

12. State applicant's legal interest or estate in site (i.e. freehold, leasehold, etc.) OWNER

13. Are you now applying also for an approval under the Building Bye Laws?  
 Yes  No  Place  in appropriate box.

14. Please state the extent to which the Draft Building Regulations have been taken in account in your proposal:  
CONSIDERED TO COMPLY

15. List of documents enclosed with application:

CO. DUBLIN We are applying for permission to construct a single storey storage area and to extend existing buildings at Ballymount Road, Walkinstown. Signed Smurfit Corrugated Ireland.

4 Copies drawings - 1838/10, 11 E12  
Newspaper Advertisement

16. Gross floor space of proposed development (See back) 1384 Sq. m.

No of dwellings proposed (if any) 0 Class(es) of Development 4

Fee Payable £ 2422 Basis of Calculation @ £1.75 m<sup>2</sup>

Signature of Applicant (or his Agent) [Signature] Date 2 August 1991

Application Type P REGISTERED FOR OFFICE USE ONLY

Register Reference 91A/1304

Amount Received £

Receipt No 1.12.0

Date 22/1

LOCAL GOVERNMENT (PLANNING & DEVELOPMENT) REGULATIONS 1977 to 1984.

Outline of requirements for applications for permission or Approval under the Local Government (Planning & Development) Acts 1963 to 1983. The Planning Acts and Regulations made thereunder may be purchased from the Government Publications Sales Office, Sun Alliance House, Molesworth Street, Dublin 2.

1. Name and Address of applicant.
2. Particulars of the interest held in the land or structure, i.e. whether freehold, leasehold, etc.
3. The page of a newspaper, circulating in the area in which the land or structure is situate, containing the required statutory notice. The newspaper advertisement should state after the heading Co. Dublin.
  - (a) The address of the structure or the location of the land.
  - (b) The nature and extent of the development proposed. If retention of development is involved, the notice should be worded accordingly. Any demolition of habitable accommodation should be indicated.
  - (c) The name of the applicant.

**NB. Applications must be received within 2 weeks from date of publication of the notice.**
4. Four (4) sets of drawings to a stated scale must be submitted. Each set to include a layout or block plan, proposed and existing services to be shown on this drawing, location map, and drawings of relevant floor plans, elevations, sections, details of type and location of septic tank (if applicable) and such other particulars as are necessary to identify the land and to describe the works or structure to which the application relates (new work to be coloured or otherwise distinguished from any retained structures). Buildings, roads, boundaries and other features bounding the structure or other land to which the application relates shall be shown on site plans or layout plans. The location map should be of scale not less than 1:2500 and should indicate the north point. The site of the proposed development must be outlined in red. Plans and drawings should indicate the name and address of the person by whom they were prepared. Any adjoining lands in which the applicant has an interest must be outlined in blue.
5. In the case of a proposed change of use of any structure or land, requirements in addition to 1, 2, & 3 are:
  - (a) a statement of the existing use and the proposed use, or, where appropriate, the former use and the use proposed.
  - (b) (i) Four (4) sets of the drawings to a stated scale must be submitted. Each set to consist of a plan or location map (marked or coloured in red so as to identify the structure or land to which the application relates) to a scale of not less than 1:2500 and to indicate the North point. Any adjoining lands in which the application has an interest must be outlined in blue.
    - (ii) A layout and a survey plan of each floor of any structure to which the application relates.
  - (c) Plans and drawings should indicate the name and address of the person by whom they were prepared.
6. Applications should be addressed to: Dublin County Council, Planning Department, Irish Life Centre, Lr. Abbey Street, Dublin 1, Tel. 724755.

**SEPTIC TANK DRAINAGE:** Where drainage by means of a septic tank is proposed, before a planning application is considered, the applicant may be required to arrange for a trial hole to be inspected and declared suitable for the satisfactory percolation of septic tank effluent. The trial hole to be dug seven feet deep at or about the site of the septic tank. Septic tanks are to be in accordance with I.I.R.S. S.R. 6:75.

**INDUSTRIAL DEVELOPMENT:**

The proposed use of an industrial premises should, where possible, be stated together with the estimated number of employees, (male and female). Details of trade effluents, if any, should be submitted.

Applicants to comply in full with the requirements of the Local Government (Water Pollution) Act, 1977 in particular the licencing provisions of Sections 4 and 16.

PLANNING APPLICATIONS

CLASS NO.	DESCRIPTION	FEE
1.	Provision of dwelling — House/Flat.	£32.00 each
2.	Domestic extensions/other improvements.	£16.00
3.	Provision of agricultural buildings (See Regs.)	£40.00 minimum
4.	Other buildings (i.e. offices, commercial, etc.)	£1.75 per sq. metre (Min. £40.00)
5.	Use of land (Mining, deposit or waste)	£25.00 per 0.1 ha (Min. £250.00)
6.	Use of land (Camping, parking, storage)	£25.00 per 0.1 ha (Min. £40.00)
7.	Provision of plant/machinery/tank or other structure for storage purposes.	£25.00 per 0.1 ha (Min. £100.00)
8.	Petrol Filling Station.	£100.00
9.	Advertising Structures.	£10.00 per m <sup>2</sup> (min £40.00)
10.	Electricity transmission lines.	£25.00 per 1,000m (Min. £40.00)
11.	Any other development.	£5.00 per 0.1 ha (Min. £40.00)

BUILDING BYE-LAW APPLICATIONS

CLASS NO.	DESCRIPTION	FEE
A	Dwelling (House/Flat)	£55.00 each
B	Domestic Extension	
C	(improvement/alteration) Building — Office/ Commercial Purposes	£30.00 each £3.50 per m <sup>2</sup> (min. £70.00)
D	Agricultural Buildings/Structures	£1.00 per m <sup>2</sup> in excess of 300 sq. metres (min. - £70.00) (Max. - £300.00)
E	Petrol Filling Station	£200.00
F	Development or Proposals not coming within any of the foregoing classes.	£9.00 per 0.1 ha (£70.00 min.)
		Min. Fee £30.00 Max. Fee £20,000

Cheques etc. should be made payable to: Dublin County Council.

Gross Floor space is to be taken as the total floor space on each floor measured from the inside of the external walls.

For full details of Fees and Exemptions see Local Government (Planning and Development) (Fees) Regulations, 1984.

**COMHAIRLE CHONTAE ATHA CLIATH**

RECEIPT CODE

PAID BY **DUBLIN COUNTY COUNCIL**

CASH **46/49 UPPER O'CONNELL STREET**

CHEQUE **DUBLIN 1.**

M.O.

B.L.

I.T.

Issue of this receipt is not an acknowledgment that the fee tendered is the prescribed application fee. **N 47448**

£ 2422 00

Received this 7<sup>th</sup> day of August 1991

from Ordan Building Co. LD

the sum of ten thousand four hundred twenty two Pounds

Pence being zero

planning application at Ballymount Rd.

Maureen Deane Cashier

**S. CAREY** Class 11  
Principal Officer

BYE LAW APPLICATION FEES

REF. NO.: 91A/1304      CERTIFICATE NO.: 16451<sup>3</sup>  
 PROPOSAL: Dev. of storage  
 LOCATION: Ballymount Rd.  
 APPLICANT: Smurfit Corrugated Inc.

	1	2	3	4	5	6	7
CLASS	DWELLINGS/AREA LENGTH/STRUCTURE	RATE	AMT. OF FEE REQUIRED	AMT. LODGED	BALANCE DUE	RED. FEE APPL.	AMT. OF RED. FEE
A	Dwelling (Houses/Flats)	@ £55					
B	Domestic Ext. (Improvement/Alts.)	@ £30					
C <i>See 26285</i>	Building for office or other comm. purpose <i>1384 m<sup>2</sup></i>	@ £3.50 per M <sup>2</sup> or £70	<i>4844.00 / 4844</i>		<i>—</i>		
D	Building or other structure for purposes of agriculture	@ £1.00 per M <sup>2</sup> in excess of 300 M <sup>2</sup> Min. £70					
E	Petrol Filling Station	@ £200					
F	Dev. of prop. not coming within any of the forgoing classes	£70 or £9 per .1 hect. whichever is the greater					

Column 1 Certified: Signed: \_\_\_\_\_ Grade: \_\_\_\_\_ Date: \_\_\_\_\_

Column 1 Endorsed: Signed: \_\_\_\_\_ Grade: \_\_\_\_\_ Date: \_\_\_\_\_

Columns 2,3,4,5,6 & 7 Certified: Signed: *N. De* Grade: *III* Date: *4/10/94*

Columns 2,3,4,5,6 & 7 Endorsed: Signed: \_\_\_\_\_ Grade: \_\_\_\_\_ Date: \_\_\_\_\_

PLANNING APPLICATION FEES

Reg. Ref. 91A/1304 Cert. No. 26285  
 PROPOSAL Extension of new single storey storage area  
 LOCATION Baldymore Road, Wickinstown, D12  
 APPLICANT Smefit Co. Limited

CLASS	DWELLINGS/AREA LENGTH/STRUCT.	RATE	AMT. OF FEE REC.	AMOUNT LODGED	BALANCE DUE	BALANCE PAID
1	Dwellings	@£32				
2	Domestic,	@£16				
3	Agriculture	@50p per m2 in excess of 300m2. Min. £40				
4	Metres <u>1384m</u>	@£1.75 per m2 or £40	<u>£222</u>	<u>£222</u>		
5	<u>(12.00)</u> x .1 hect.	@£25 per .1 hect. or £250				
6	x .1 hect.	@£25 per .1 hect. or £40				
7	x .1 hect.	@£25 per .1 hect. or £100				
8		@£100				
9	x metres	@£10 per m2 or £40				
10	x 1,000m	@£25 per £1000m or £40				
11	x .1 hect.	@£5 per .1 hect. or £40				

Column 1 Certified: Signed: [Signature] Grade S.D. Date 13-8-91  
 Column 1 Endorsed: Signed: [Signature] Grade..... Date.....  
 Columns 2,3,4,5,6 & 7 Certified: Signed: [Signature] Grade S.2 Date 12/8/91  
 Columns 2,3,4,5,6 & 7 Endorsed: Signed:..... Grade..... Date.....

LOCATION GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1953 TO 1962

ASSESSMENT OF FINANCIAL CONTRIBUTION

EG. REF.:

4713 / 1304

CONT. RES.:

SERVICES INVOLVED: WATER/FOUL SEWER/SURFACE WATER

EXISTING TO BE DEMOLISHED

AREA OF SITE:

LOOR AREA OF PRESENT PROPOSAL:

74,847 sq ft

~ 150m<sup>2</sup> = 1614 sq ft

ENSURED BY:

*[Signature]*

CHECKED BY:

EXISTING TO BE

METHOD OF ASSESSMENT:

REDEMPTED = 324m<sup>2</sup>

TOTAL ASSESSMENT

= 3487 sq ft

ANASER'S ORDERED NO: B/ DATED

14897 Proposed  
1614 Demolition

4/11/91

14897

ENTERED IN CONTRIBUTIONS REGISTER:

13,283

1200 @ 70

37245  
111725

@ 70 = 996225

11,172.75

DEVELOPMENT CONTROL ASSISTANT GRADE

9962

11173

*[Signature]* 3/10/91

*[Signature]*

*[Signature]* 1/10

*[Signature]*

2/10/91

Mary Galvin

PLANNING DEPARTMENT

BOOK FOLIO

DUBLIN COUNTY COUNCIL

(1) Date Lodged  
1.10.91

LOCATION: **Sallymount Road, Faldintown**

9. DEC 1991 91A/1304  
91A/1098

APPLICANT: **Saurfit Corrugated Ireland**

ENVIRONMENTAL HEALTH  
OFFICERS

PROPOSAL: **Office Development**

DUBLIN  
9 DEC 1991  
ENVIRONMENTAL HEALTH  
OFFICERS

(2) Date referred

Chief Medical Officer, Eastern Health Board

(3) Rec'd San.  
Services

*No objections provided  
compliance with Office Premises  
Act 1958 and regulations thereunder*

(4) Dispatched by  
San. Ser. to  
C.M.O.:

*a) Canteen/tea room facilities  
are not indicated on plans.*

*These must be provided within  
reasonable access for workers.*

(5) Rec'd  
Planning:

*b) Drinking water facilities must  
be provided within reasonable  
access for workers.*

(6) Date to  
Planner:

*Jackie Kelly  
EHO 11/12/91*

PLANNING DEPT.  
DEVELOPMENT CONTROL SECT  
Date ..... 13.12.91 .....  
Time ..... 3.30 .....

(7) D.P.O. Report  
to be  
submitted  
before:

(9) Decision due:

(8) DPO Report  
submitted to  
S.A.O.:

ENDORSED:

*Stg Devine  
for John O'Reilly EHO*

DATE: 12-12-91

*Niall O'Byrne*

*SS 7000*

PLANNING DEPARTMENT

BOOK FOLIO

91A/1004  
91A/1098

(1) Date Lodged  
1.10.91

LOCATION: Ballymount Road, Walkinstown

REG. REF.

APPLICANT: Smurfit Corrugated Ireland

PROPOSAL: Office Development

(2) Date referred:

*Report received from Sanitary Engineer - EAO 11/10*

FOUL SEWER

*Available to existing system.  
Drainage details relating to the particular  
extension should be submitted before work  
commences.*

DUBLIN Co. COUNCIL  
(3) Rec'd San. Ser.

15 OCT 1991

DUBLIN COUNTY COUNCIL  
SANITARY SERVICES

-6 DEC 1991

Returned *GL*

SURFACE WATER

*Inappropriate information  
Before any permission or approval could issue as  
a result of this submission, the applicant must demonstrate that  
they have complied with all Dublin County Council Engineering Services  
requirements in respect of surface water pollution. At present, the subject of correspondence  
surface water run off is subject to the  
provision of the Water Pollution Act.*

(5) Date to Planning

*Block 5.12.91*

(6) Date to Planner

PLANNING DEPT.  
DEVELOPMENT CONTROL SECT.  
Date *9.12.91*  
Time *4.00*

(7) D.P.O. report  
to be submitted  
before:

(8) D.P.O. report  
submitted to  
S.A.O.:

(9) Decision due:

*10/10/91*

ENDORSED \_\_\_\_\_ DATE \_\_\_\_\_

*Blumhorne*  
9.11.91

*J.R.*  
*11/11/91*

*EAO*  
*10/10*



PLANNING DEPARTMENT

BOOK FOLIO

(1) Date Lodged  
1.10.91

LOCATION: Ballymount Road, Walkinstown

REG. REF.

91A/1304  
91A/1008

APPLICANT: Saurfit Corrugated Ireland

PROPOSAL: Office Development

WATER SUPPLY

Applicant to submit details of existing water mains on site, and details of how they are affected by the proposed extensions. *L. J. Span* refer to C.F.O. 25  
18 Oct 91

*R. Sully*  
18 Oct 91

PLANNING DEPT.  
DEVELOPMENT CONTROL SECT  
Date ..... 9.12.91 .....  
Time ..... 4.00 .....

ENDORSED: \_\_\_\_\_ DATE 6 Dec '91

P/4384/91

# COMHAIRLE CHONTAE ÁTHA CLIATH

## Record of Executive Business and Manager's Orders

Register Reference : 91A/1304

Date Received : 7th August 1991

Correspondence : Smurfit Corrigated Ireland,  
Name and : C/o D.J. Lunn,  
Address : 2 Paramount Arcade,  
Main Street,  
Arklow, Co. Wicklow.

Development : Construct a single storey storage area and to extend existing buildings

Location : Ballymount Road, Walkinstown

Applicant : Smurfit Corrigated Ireland

App. Type : Permission

Zoning :

Floor Area : Sq.metres

<sup>NOB</sup>  
(NOB/BB)

<u>CONTRIBUTION:</u>	
Standard:	<del>1173</del>
Roads:	€ 9962
S. Sers:	
Open Space:	
Other:	
<u>SECURITY:</u>	
Bond / C.I.F.:	
Cash:	

Report of Dublin Planning Officer dated 12th September, 1991.

This is an application for PERMISSION to construct a single storey area and to extend existing buildings at the Smurfit premises at Ballymount Road.

The site is located in an area subject to the zoning objective "to provide for industrial and related uses".

Reg. Ref. 85A/363 refers to a decision to grant permission for a factory extension. This permission was not implemented and has expired.

Reg. Ref. 85A/1678 refers to a decision to grant permission for a new <sup>BALE LOADING</sup> boundary shed.

Reg. Ref. 88A/901 refers to a decision to grant permission for a replacement water storage tank.

Reg. Ref. 91A/1096 refers to a current application for permission for a 2 storey office block and a single storey area.

The current application is for extensions to the factory area. An additional 1384 sq. metre of new floor space is proposed with 170 sq. metres of buildings being demolished. The site of the proposed development is mostly an open concrete apron used for the storage and manoeuvring of large vehicles.

The external finish proposed is pebble dash to match the existing buildings and asbestos and metal cladding on a steel frame.

# COMHAIRLE CHONTAE ÁTHA CLIATH

## Record of Executive Business and Manager's Orders

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Location: Ballymount Road, Walkinstown

The proposed colour of the metal cladding has not been indicated. Existing finish colour is grey or natural.

The 9 metre height of the extension to the rear is required for vertical storage of large paper reems.

Alterations are also proposed to waste treatment and drainage on the site.

Sanitary Services report *not available*

*By* C.M.O. reports that the proposal is acceptable subject to compliance with the Safety in Industry Act 1955/80 and the Health Safety and Welfare at Work Act 1979

The proposed extension to this existing industrial enterprise is acceptable.

I recommend that a decision to GRANT PERMISSION be made under the Local Government (Planning and Development) Acts, 1963-1990 subject to the following conditions:-

### CONDITIONS / REASONS

01 The development to be carried out in its entirety in accordance with the plans, particulars and specifications lodged with the application save as may be required by the other conditions attached hereto.

REASON: To ensure that the development shall be in accordance with the permission and that effective control be maintained.

02 That before development commences, approval under the Building Bye-Laws be obtained and all conditions of that approval be observed in the development.

REASON: In order to comply with the Sanitary Services Acts, 1878-1964.

03 That the requirements of the Supervising Environmental Health Officer be ascertained and strictly adhered to in the development.

REASON: In the interest of health.

*le* 04 That a financial contribution in the sum of £ ~~1473~~ <sup>9962</sup> be paid by the proposer to the Dublin County Council towards the cost of provision of public services in the area of the proposed development and which facilitate this development; this contribution to be paid before the

# COMHAIRLE CHONTAE ÁTHA CLIATH

## Record of Executive Business and Manager's Orders

Reg. Ref: 91A/1304

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Location: Ballymount Road, Walkinstown

commencement of development on the site.

REASON: The provision of such services in the area by the Council will facilitate the proposed development. It is considered reasonable that the developer should contribute towards the cost of providing the services.

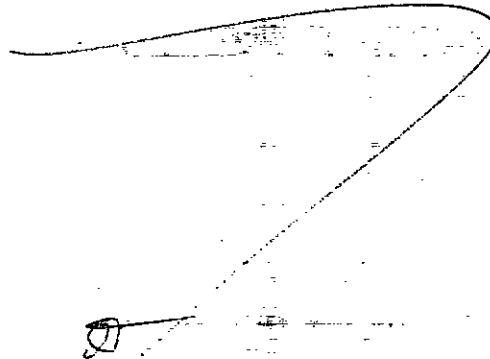
- 05 That the colour of the proposed metal cladding and corrugated asbestos shall harmonise with that of the roof of the existing premises and shall be agreed with the Planning Authority before development commences.

REASON: In the interest of visual amenity.

- 06 That the water supply and drainage arrangements, including the disposal of surface water, be in accordance with the requirements of the County Council.

REASON: In order to comply with the Sanitary Services Acts, 1878-1964.

7. That <sup>street</sup> ~~of~~ parking be provided in accordance with the requirements <sup>of the County</sup> of the Development Plan 1982.  
Reason: in the interest of the proper planning & development of the area.



# COMHAIRLE CHONTAE ÁTHA CLIATH

## Record of Executive Business and Manager's Orders

Reg. Ref: 91A/1304

Page No: 0004

Location: Ballymount Road, Walkinstown

*Eny*

*[Signature]*

Endorsed:-----  
for Principal Officer

*[Signature]*  
.....  
for Dublin Planning Officer

Order: A decision pursuant to Section 26(1) of the Local Government (Planning and Development) Acts, 1963-1990 to GRANT PERMISSION for the above proposal subject to the (7) conditions set out above is hereby made.

Dated : ..... *3/10/91* .....

*[Signature]*  
ASSISTANT CITY & COUNTY MANAGER

*Applied Officer*

to whom the appropriate powers have been delegated by order of the Dublin City and County Manager dated 4 September, 1991. *[Signature]*

Register Reference : 918-1304

Date : 13/8/91

Development : Singlet's Storage area + extend Bldgs.

LOCATION : Badymount Rd, Clonsilla

Applicant : Summit

App. Type : (P)

Planning officer : No Byrne

Date Recd. : 7/8/91

Attached is a copy of the application for the above development. Your report would be appreciated within the next 28 days.

Yours faithfully,

*Paul Dolin*

PRINCIPAL OFFICER

The proposal is acceptable subject to  
① Compliance with the Safety & Industries Act 1955/89

DUBLIN COUNTY CC  
16 AUG 1991  
ENVIRONMENTAL HEALTH

② Compliance with the Health, Safety & Welfare at Work Act 1989.

PLANNING DEPT.  
DEVELOPMENT CONTROL SECT  
Date ..... 26.8.91 .....  
Time ..... 4.15 .....  
.....

for *John O'Keilly*  
SUPER. ENVIRON. HEALTH OFFICER,  
33 GARDINER PLACE,  
DUBLIN 1.

21/8/91

N.O.B.

Register Reference : 918-1304

Date : 13/8/91

Development : Single Storage area + extend Bldgs.

LOCATION : Badymount Rd, Clonsilla

Applicant : Summit

App. Type : (P)

Planning officer : No Byrne

Date Recd. : 7/8/91

Attached is a copy of the application for the above development. Your report would be appreciated within the next 28 days.

Yours faithfully,

Paul Dolin

PRINCIPAL OFFICER

The proposal is acceptable subject to  
① Compliance with the Safety, Health & Welfare  
act 1989/90

DUBLIN COUNTY CC  
16 AUG 1991  
ENVIRONMENTAL HEALTH

② Compliance with the Health, Safety & Welfare  
at Work Act 1989.

PLANNING DEPT.  
DEVELOPMENT CONTROL SECT  
Date ..... 26.08.91 .....  
Time ..... 10.30 .....

for ofa Devine  
John O'Reilly  
SUPER. ENVIRON. HEALTH OFFICER,  
33 GARDINER PLACE,  
DUBLIN 1.

21/8/91