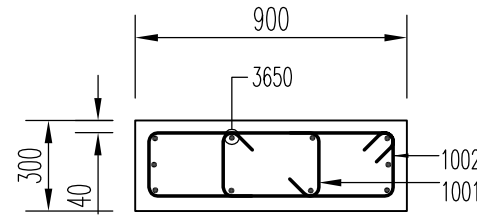
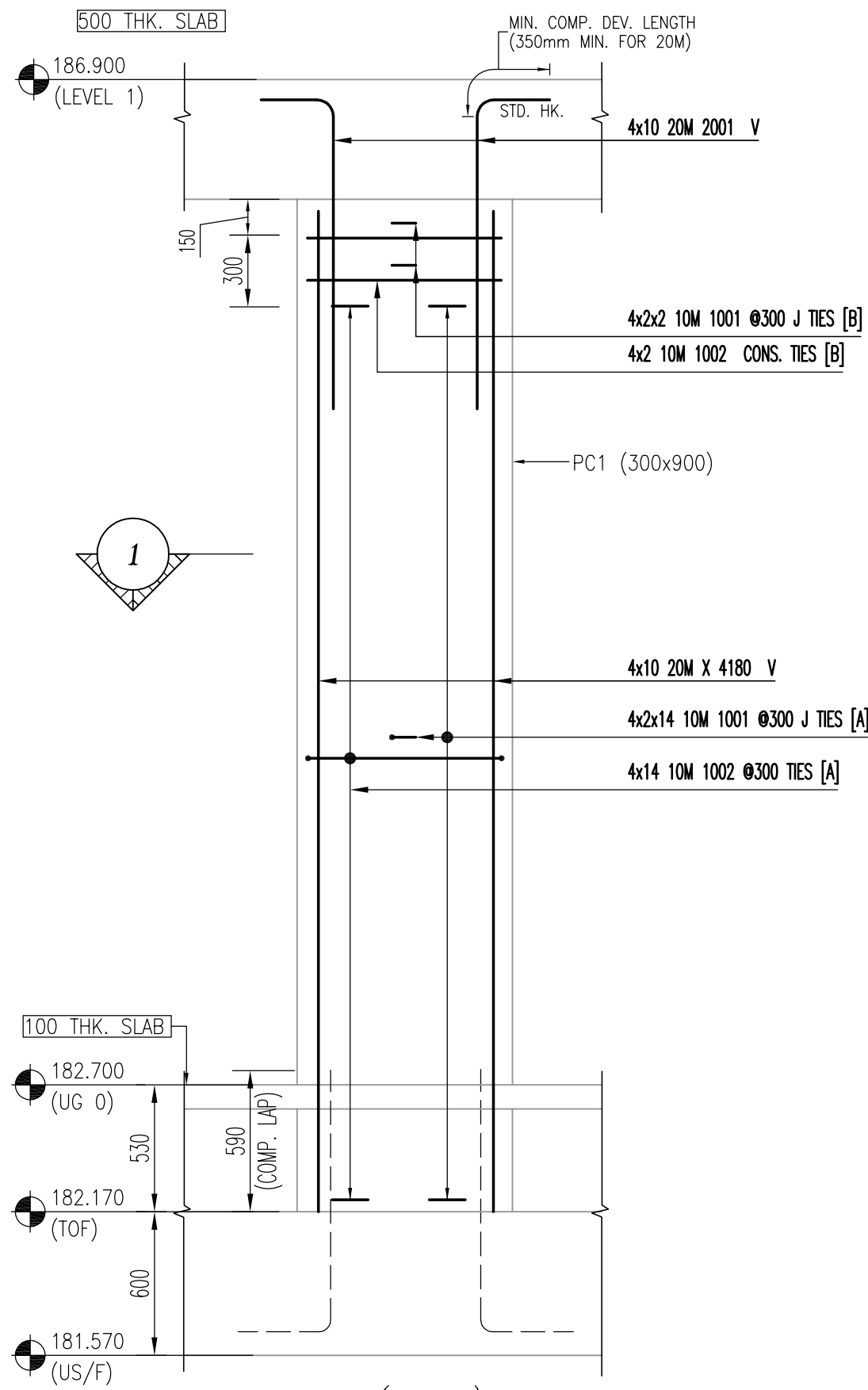


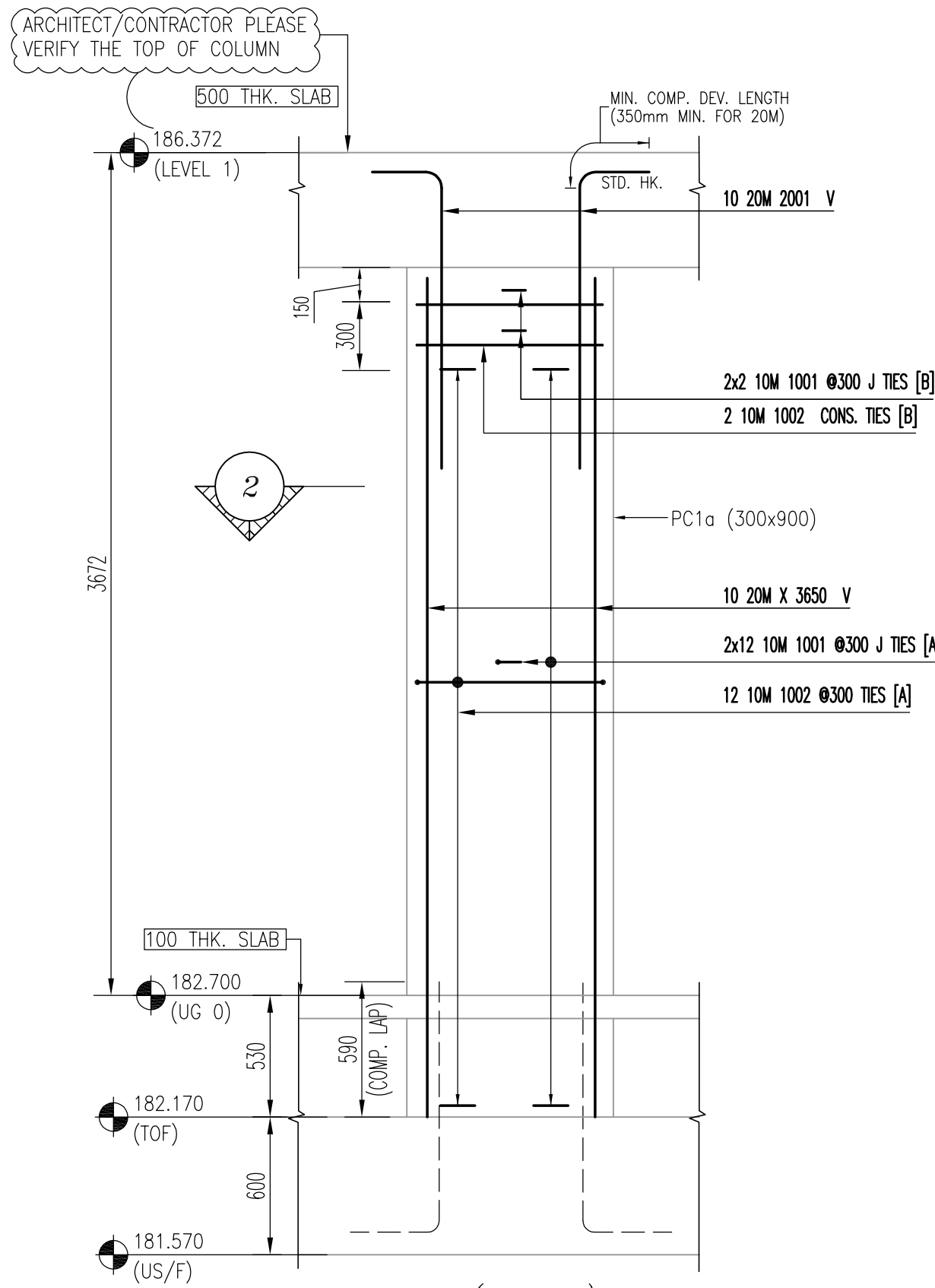
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SCALE: 1:25



SECTION 2
SCALE: 1:25

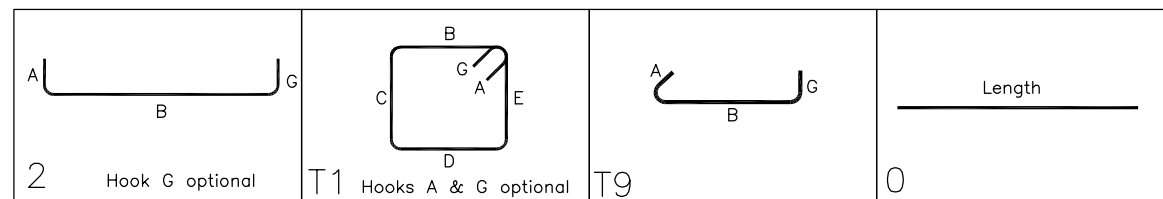


COL (PC1)
SCALE: 1:25
(4 NOS REQ'D)



COL (PC1a)
SCALE: 1:25
(1 NOS REQ'D)

Release Code: R3.12 COL F-GF P#13 BENDING DETAILS.											
Bar Mark	Qty	Size	Total length	Type	'A'	'B'	'C'	'D'	'E'	'F'	'G'
40 20M	4180	4180	4180								
10 20M	3650	3650									
1001	156	10M	420	T9	100	220					100
1002	78	10M	2280	T1	100	820	220				100
2001	50	20M	1610	2	310	1500					



DRAWING REVIEW

This review of this drawing does not in any way relieve the contractor of responsibility for its accuracy or for compliance with the contract documents.

☒ No comment	☐ See comment
☐ Amend & Resubmit	☐ Rejected See Remarks

Submission No. _____
Project No. 19066
By AF
Date 19 May 2021

JABLONSKY, AST AND PARTNERS
Consulting Engineers
9 Concorde Gate, North York, ON M3C 4H9

NOTES

- ALL STEEL TO BE GRADE 400W
- STRENGTH OF CONCRETE
35MPa - INTERIOR COLUMNS & WALLS

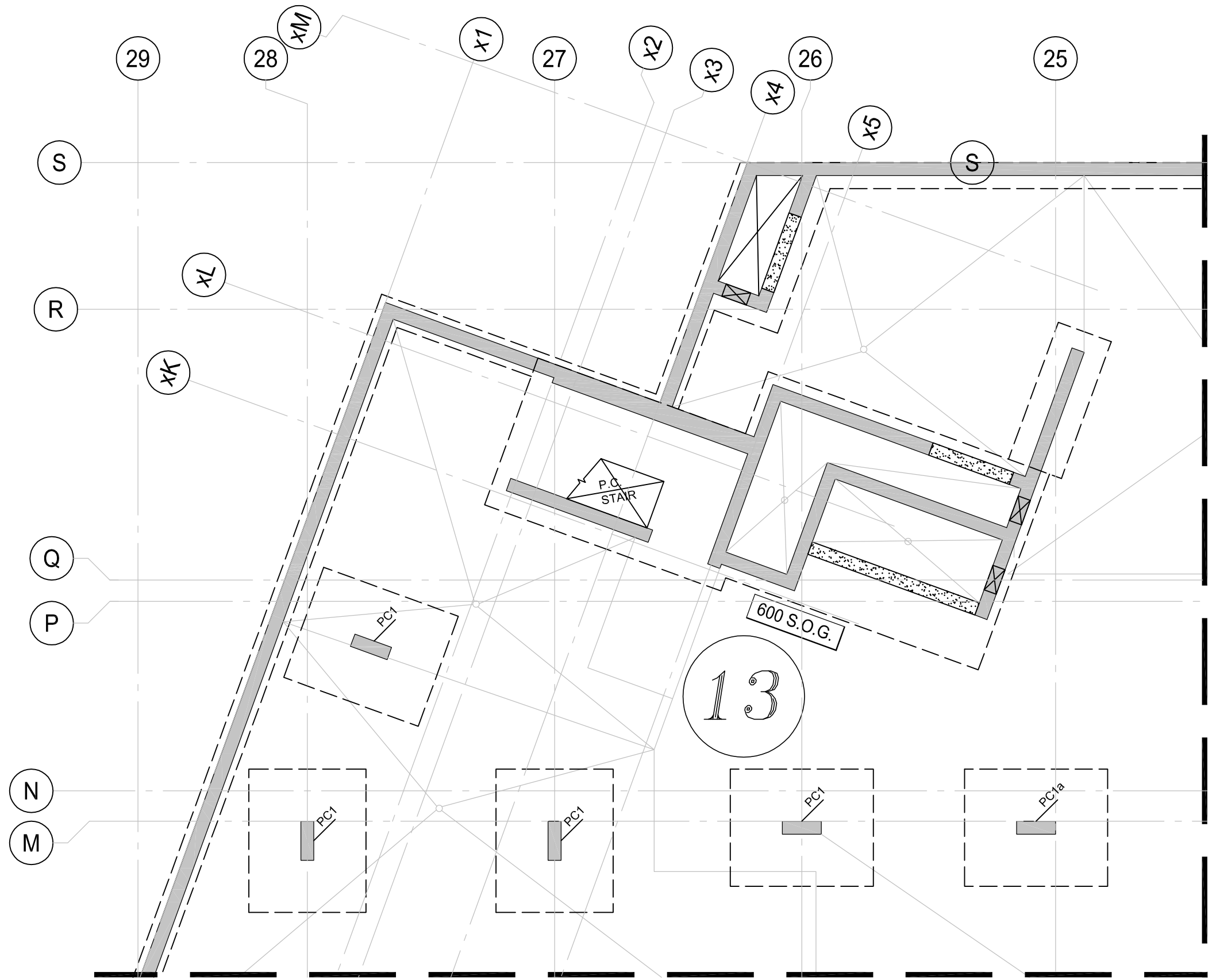
- CONCRETE COVER:
TIES --- 40mm

4. COMPRESSION LAP SPLICE

BAR SIZE	STANDARD LAP (mm)
10M	300
15M	440
20M	590
25M	730
30M	880
35M	1030

5. TENSION LAP SPLICE (Ls) & DEVELOPMENT LENGTH (Ld) (FOR WALL OR COL & Ld IN CAP OR FTG.)

BAR SIZE	fc=25		fc=30		fc=35	
	L.S	L.d	L.S	L.d	L.S	L.d
10M	490	380	450	350	420	320
15M	740	570	670	520	620	480
20M	980	750	890	690	830	640
25M	1530	1170	1390	1070	1290	990
30M	1830	1410	1670	1290	1550	1190
35M	2130	1640	1950	1500	1800	1390



FOUNDATION PLAN
SCALE: 1:100

- ELEVATIONS AND DIMENSIONS SHOWN ARE FOR VERIFICATION PURPOSES ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION
- ALL CONFIRMS/VERIFIES WILL BE ASSUMED CORRECT AND APPROVED AS IS UNLESS COMMENTED ON THE APPROVAL DRWGS

LEGEND	LEGEND	LEGEND
ALT = ALTERNATE BOT = BOTTOM BIS = BEND INTO SLAB CB = CORNER BAR CJS = CUT TO SUIT SITE COND. DWL = DOWELS EE = EACH END EF = EACH FACE EJ = EXPANSION JOINT ES = EACH SIDE EW = EACH WAY	FF = FAR FACE GID = GROUT IN DOWELS H = HORIZONTAL IF = INSIDE FACE LL = LOWER LAYER MID = MIDDLE MIN = MINIMUM NF = NEAR FACE OC = ON CENTER	OF = OUTSIDE FACE SC = SAW CUT END STG = STAGGER STR = STRIPS T = TOP THR/1 = THREAD LEND THR/2 = THREAD ZENDS UL = UPPER LAYER U/N = UNLESS NOTED V = VERTICAL TT = TEMPL. TIES

STRAIGHT BARS LABEL FORMAT	BENT BARS LABEL FORMAT	GRADES OF STEEL
7 B15M X 3600 QUANTITY	7 B15M B1501 QUANTITY	B = GRADE 400W C = GRADE 500W S = STAINLESS W = WELDABLE

FOR APPROVAL	MAY/17/21	JU
ISSUE	REMARKS	DATE
ISSUE	REMARKS	DATE

MANSTEEL REBAR	MANSTEEL REBAR 105 Industrial Road, Richmond Hill, Ontario L4C 2Y4 Canada Phone: 905-737-9797 Fax: 905-737-9704 Email: info@mansteelrebar.com
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PROJECT
FORESTSIDE TOWNHOUSES
-BRAMPTON, ON

COLUMNS FTG-GF -P#13

CUSTOMER : ROYAL PINE HOMES

DETAILED BY: JU

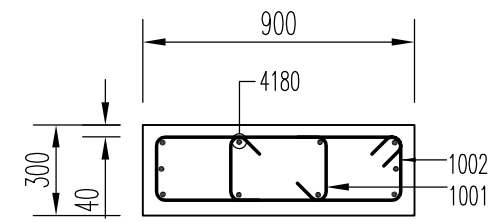
CHECKED BY:

Project no. 2177

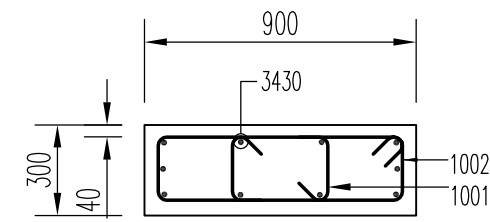
SCALE: AS SHOWN

DRAWING No.

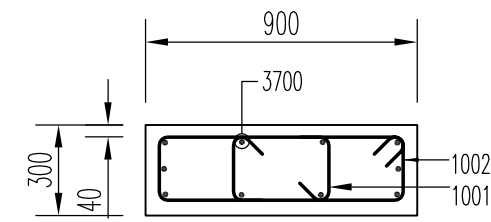
R3.12



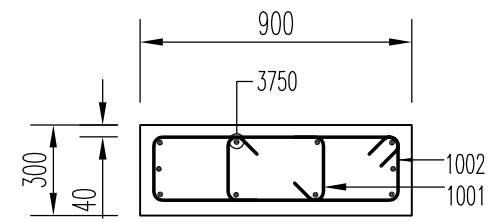
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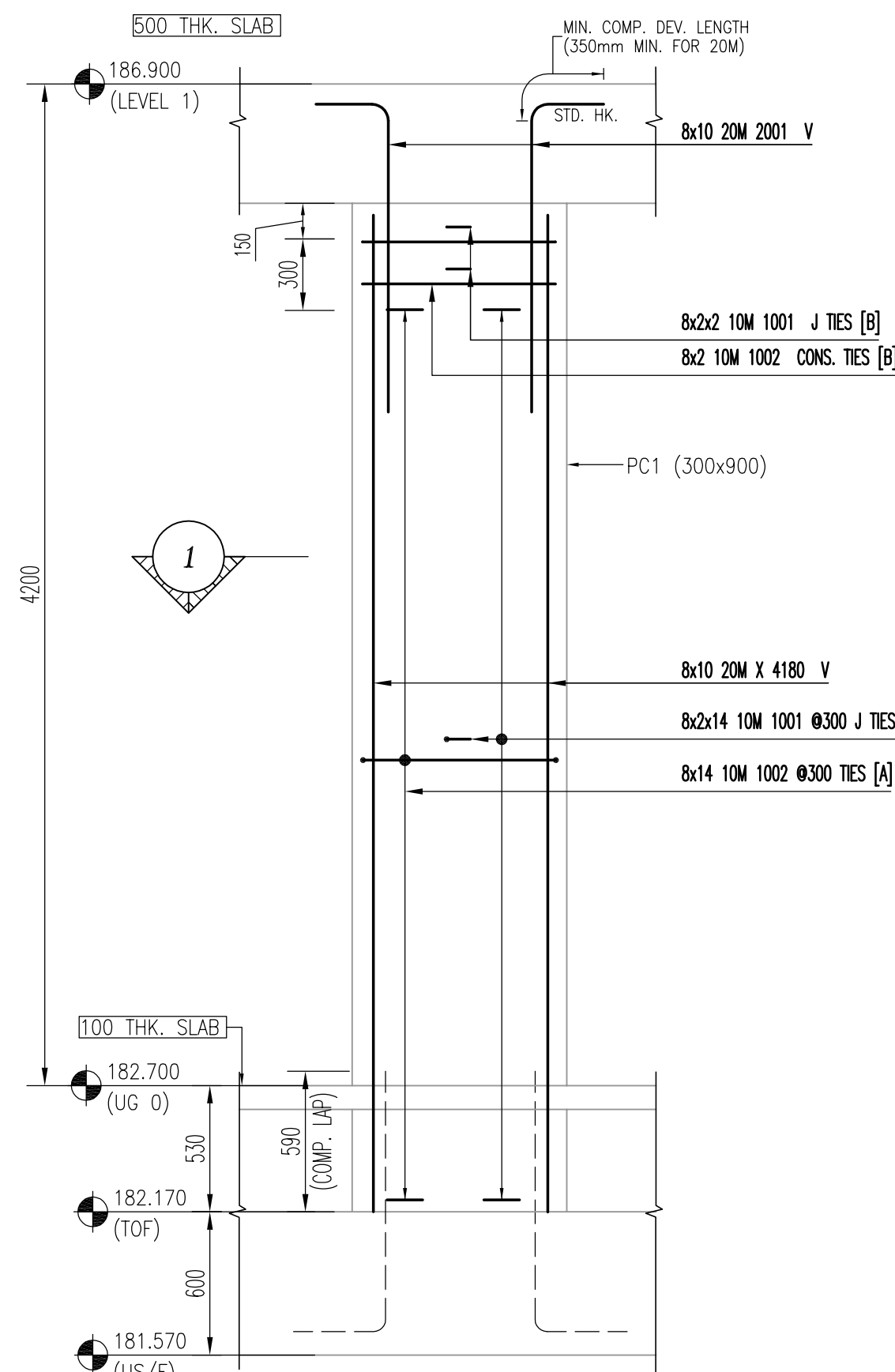
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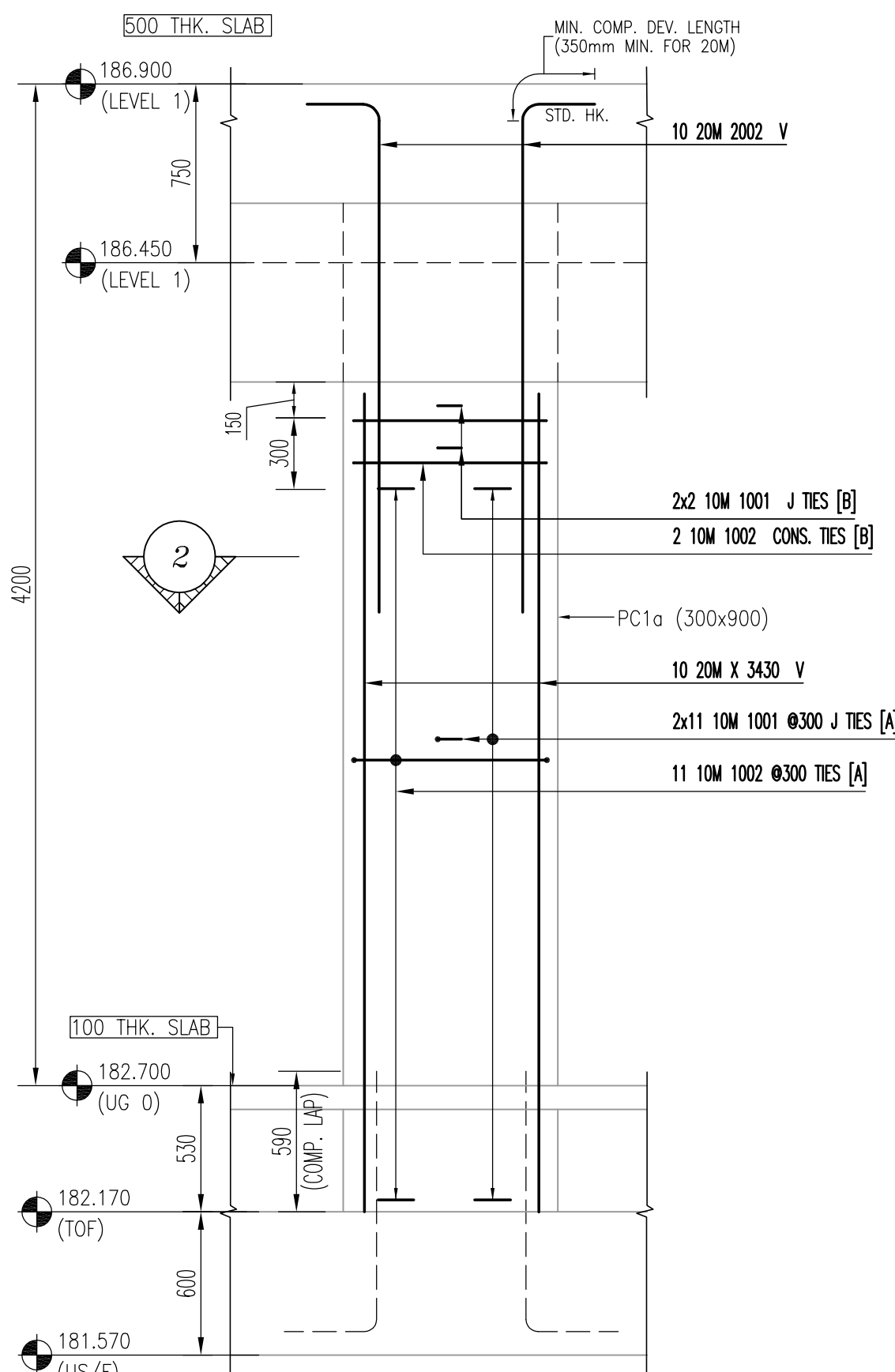
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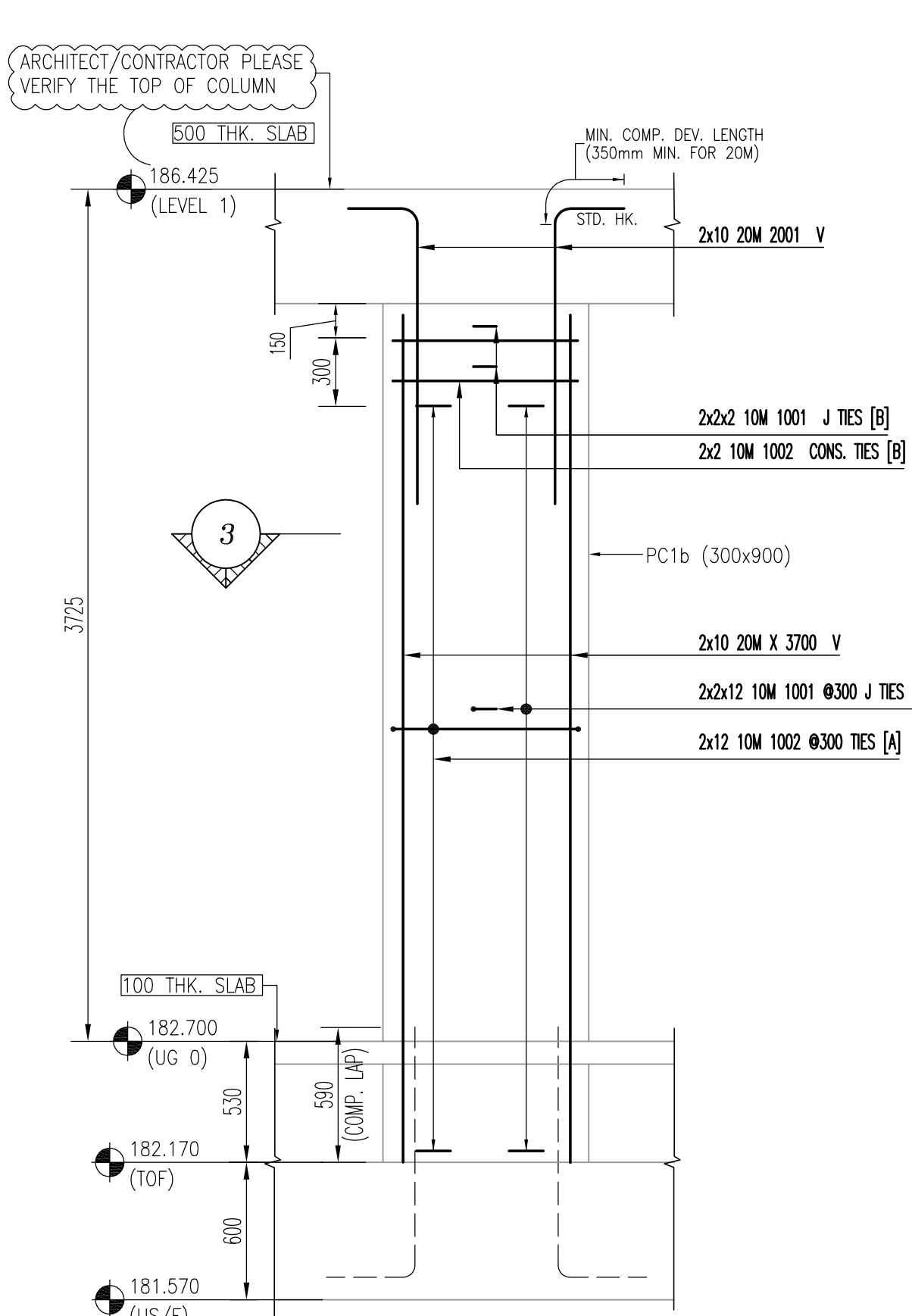
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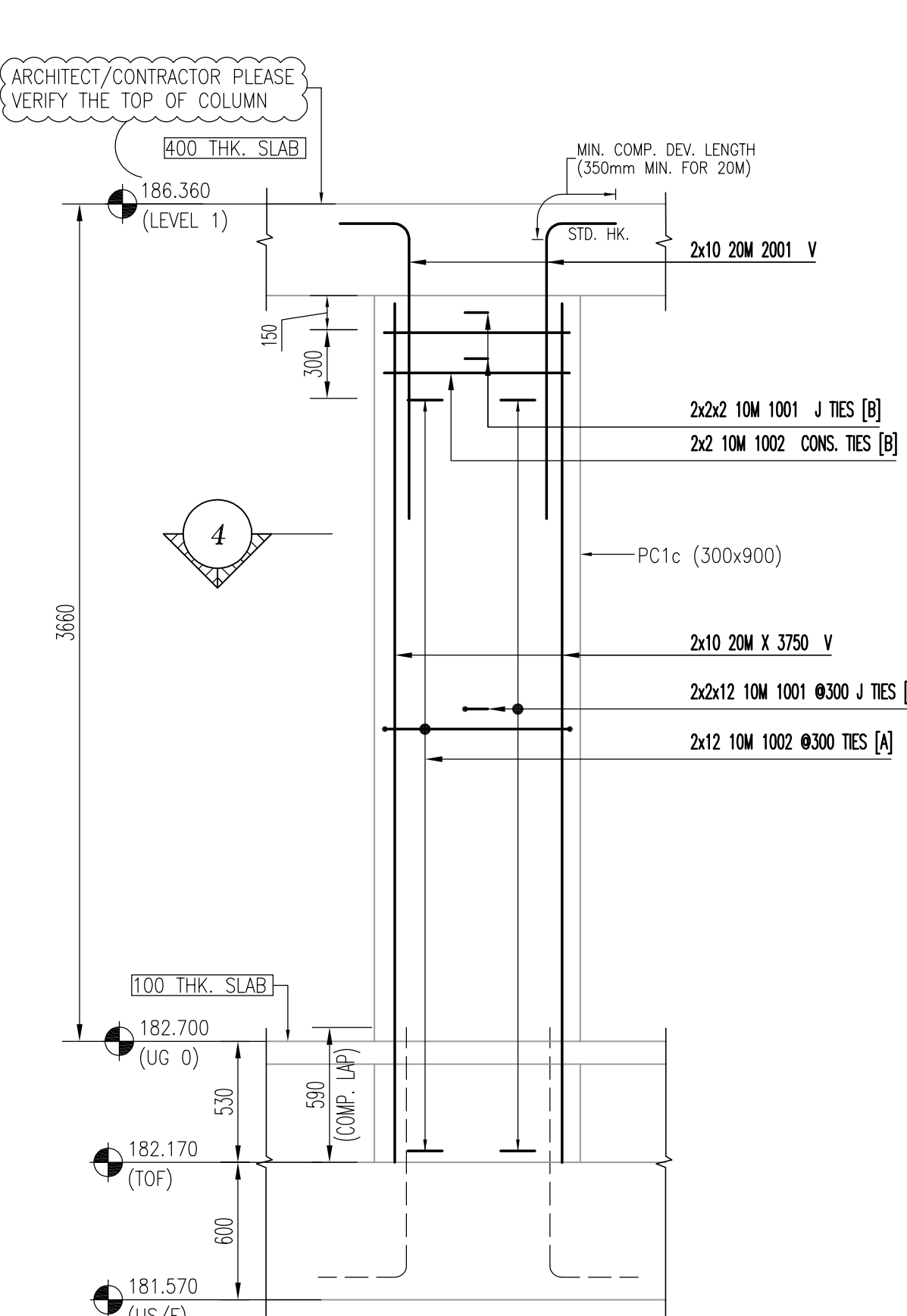
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SCALE: 1:25
(8 NOS REQ'D)



COL (PC1a)
SCALE: 1:25

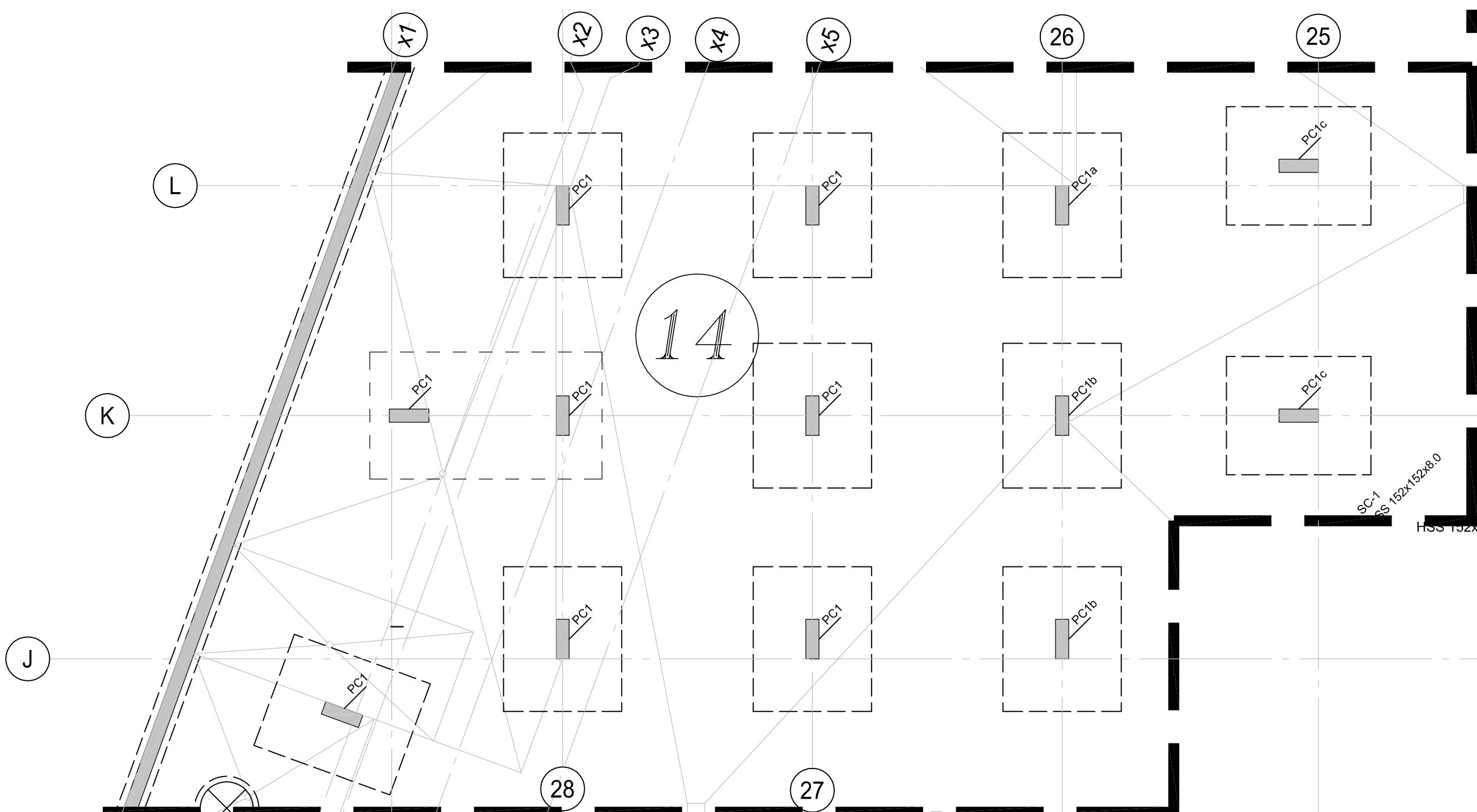


COL (PC1b)
SCALE: 1:25
(2 NOS REQ'D)



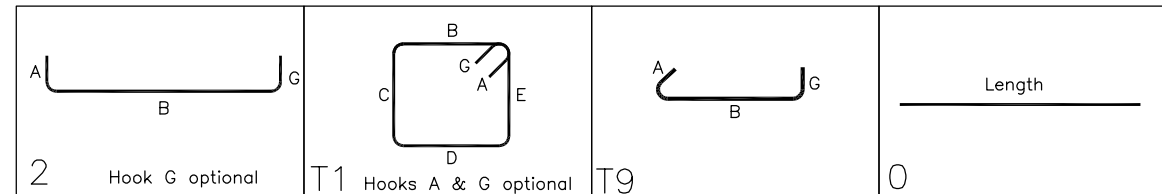
COL (PC1c)
SCALE: 1:25
(2 NOS REQ'D)

DRAWING REVIEW	
☒ No comment	☐ See comment
☐ Amend & Resubmit	☐ Rejected
☐ See Remarks	
Submission No. 19066	
Project No. AF	
By 19 May 2021	
Date	
JABLONSKY, AST AND PARTNERS	
Consulting Engineers	
3 Concorde Gate, North York, ON M3C 4H9	



FOUNDATION PLAN
SCALE: 1:100

Release Code: R3.13 COL F-GF P#14 BENDING DETAILS.													
Bar Mark	Qty	Size/Total Length	Type	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'
80	20M	4180		4180									
10	20M	3430		3430									
20	20M	3700		3700									
20	20M	3750		3750									
1002	197	10M	2280	11	100	820	220	820	220	100			
1001	394	10M	4280	19	100	220				100			
2002	10	20M	2450	2	310	2140							
2001	120	20M	1610	2	310	1300							



NOTES

- ALL STEEL TO BE GRADE 400W
- STRENGTH OF CONCRETE
35MPa - INTERIOR COLUMNS & WALLS

- CONCRETE COVER:
TIES --- 40mm

4. COMPRESSION LAP SPLICE

BAR SIZE	STANDARD LAP (mm)
10M	300
15M	440
20M	590
25M	730
30M	880
35M	1030

5. TENSION LAP SPLICE (Ls) & DEVELOPMENT LENGTH (Ld) (FOR WALL OR COL & Ld IN CAP OR FTG.)

BAR SIZE	fc=25		fc=30		fc=35	
	L.S	L.d	L.S	L.d	L.S	L.d
10M	490	380	450	350	420	320
15M	740	570	670	520	620	480
20M	980	750	890	690	830	640
25M	1530	1170	1390	1070	1290	990
30M	1830	1410	1670	1290	1550	1190
35M	2130	1640	1950	1500	1800	1390

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- ALL CONFIRMS/VERIFIES WILL BE ASSUMED CORRECT AND APPROVED AS IS UNLESS COMMENTED ON THE APPROVAL DRAWS

LEGEND		
ALT = ALTERNATE	FF = FAR FACE	OF = OUTSIDE FACE
BOT = BOTTOM	FS = FORM SAVER	SC = SAW CUT END
BIS = BEND INTO SLAB	GID = GROUT IN DOWELS	STG = STAGGER
CB = CORNER BAR	H = HORIZONTAL	STR = STRIPS
CJ = CONTROL JOINT	IF = INSIDE FACE	T = TOP
CUT = CUT TO SUIT SITE COND.	LL = LOWER LAYER	THR/1 = THREAD LEND
DWL = DOWELS	MD = MIDDLE	THR/2 = THREAD ZENDS
EE = EACH END	MIN = MINIMUM	UL = UPPER LAYER
EF = EACH FACE	NF = NEAR FACE	UNLESS NOTED
EJ = EXPANSION JOINT	OC = ON CENTER	V = VERTICAL
ES = EACH SIDE		TT = TEMP. TIES
FW = EACH WAY		

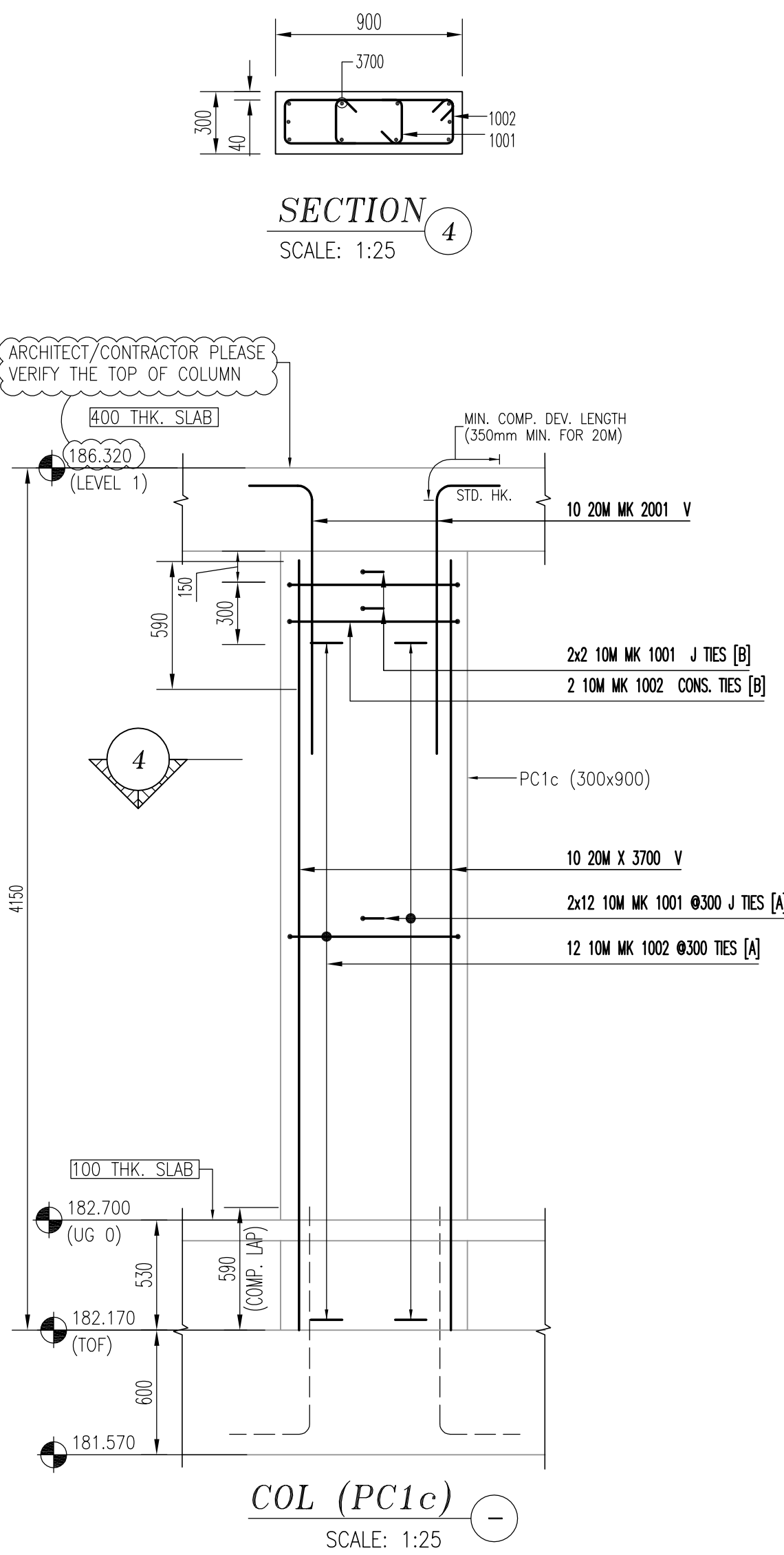
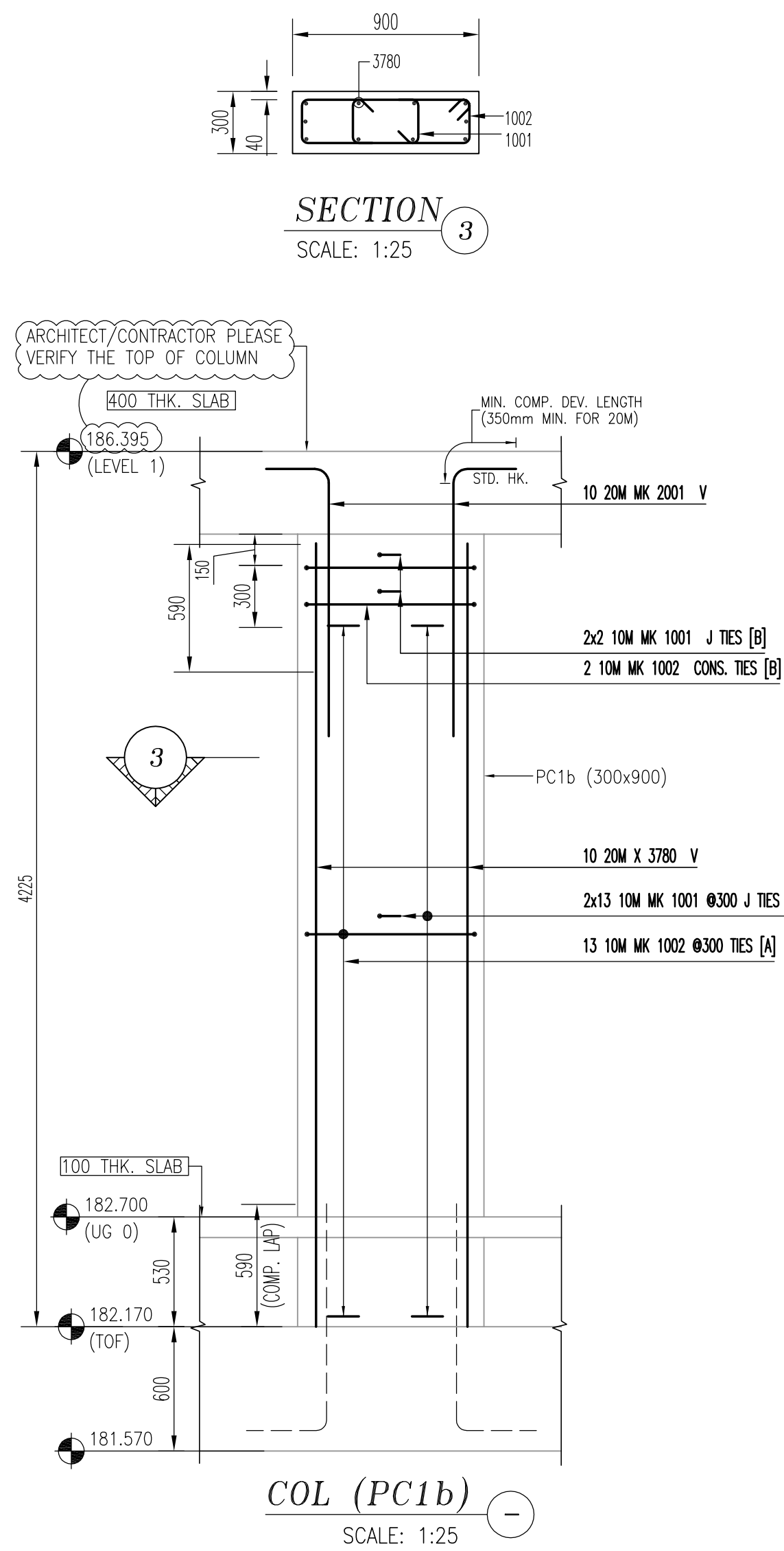
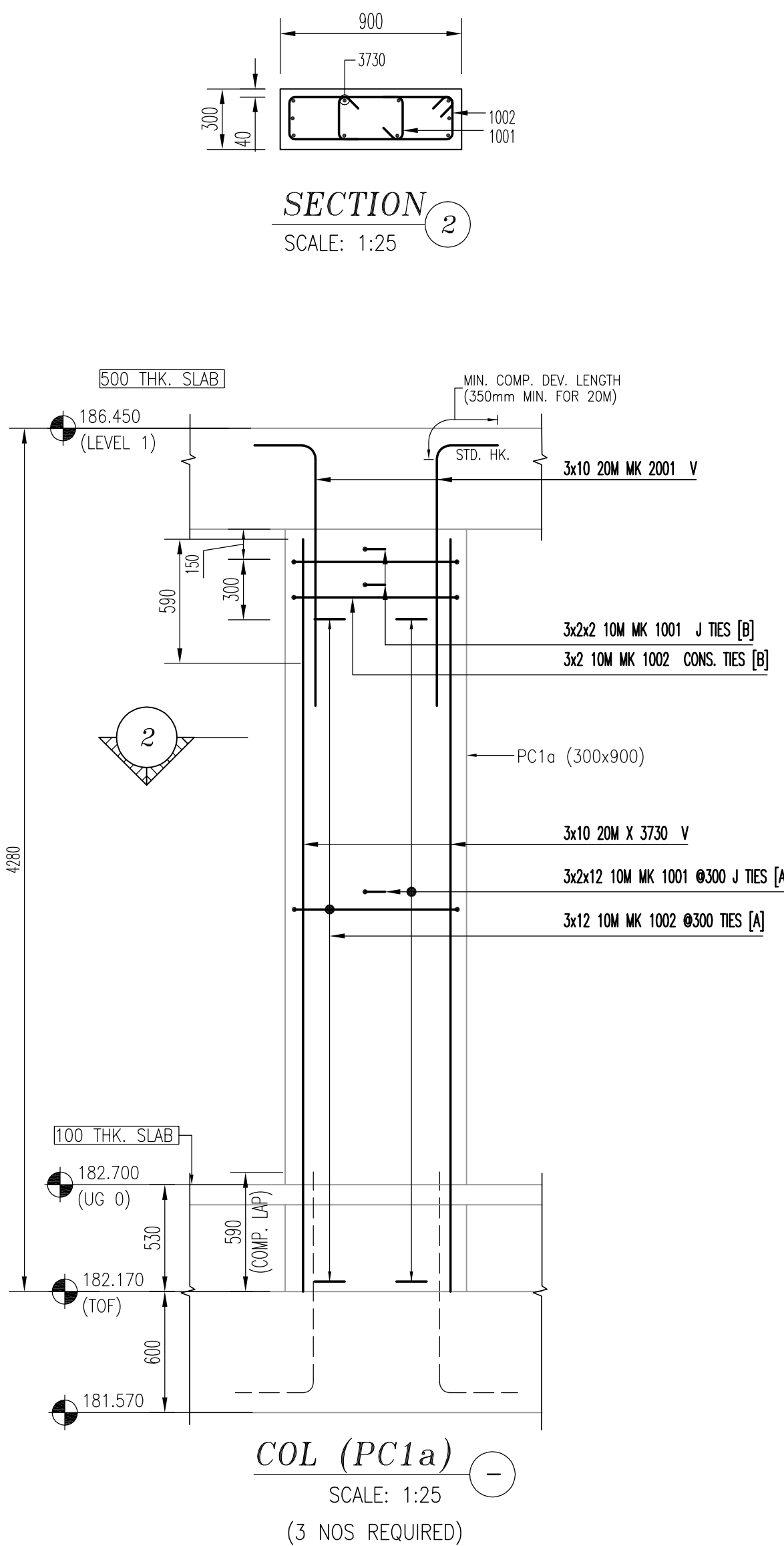
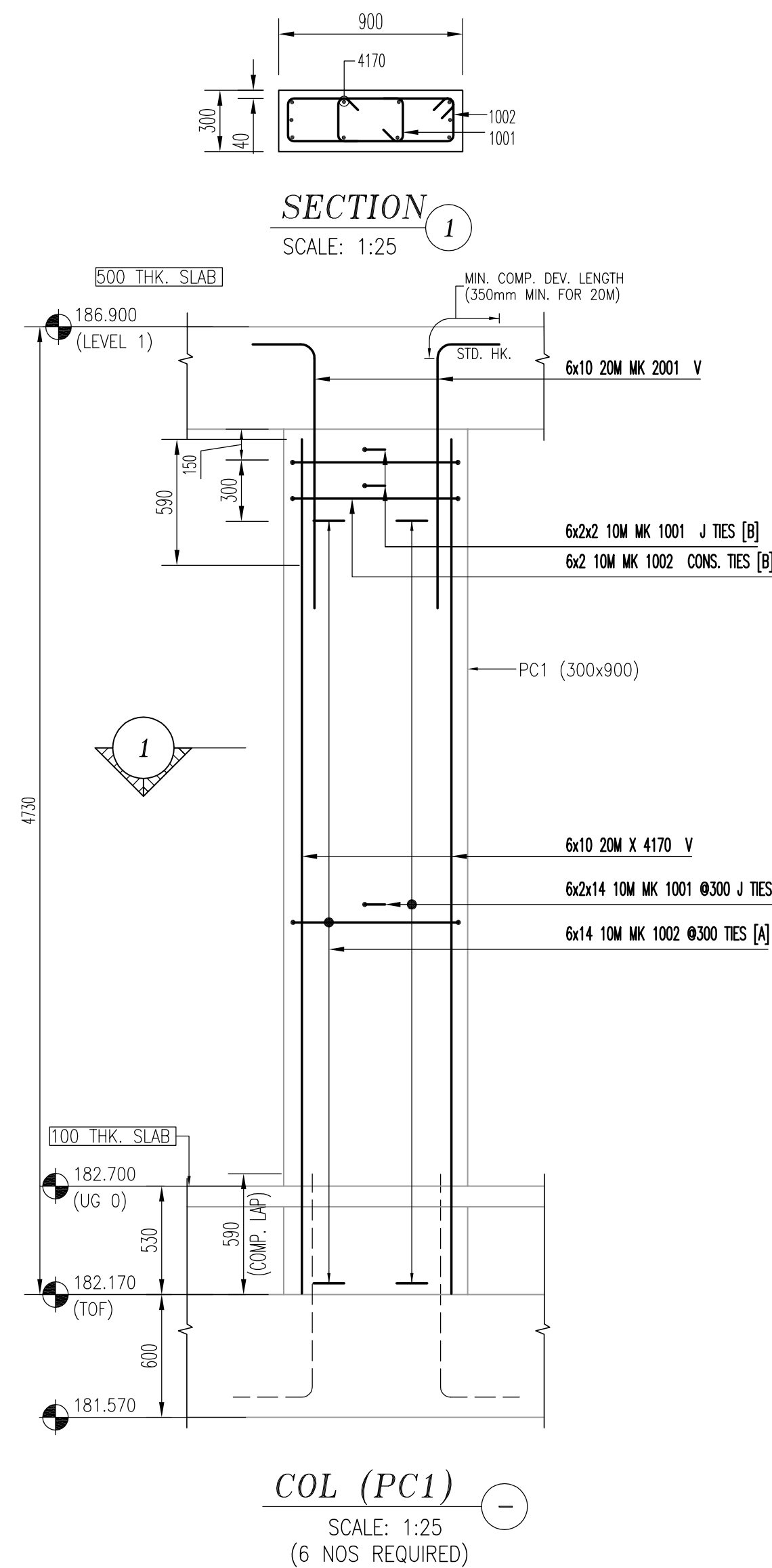
STRAIGHT BARS LABEL FORMAT		BENT BARS LABEL FORMAT	GRADES OF STEEL
7 B15M X 3600	7 B15M B1501	7 B15M B1501	B = GRADE 400W
QUANTITY	QUANTITY	QUANTITY	C = CRACK COATED
			F = F500
			S = STAINLESS
			W = WELDABLE

FOR APPROVAL	MAY/17/21	JU
ISSUE	REMARKS	DATE
ISSUE	REMARKS	DATE

MANSTEEL	MANSTEEL REBAR
105 Industrial Road, Richmond Hill, Ontario L4C 2Y4 Canada	Phone: 905-737-9797
Fax: 905-737-9704	Email: info@mansteelrebar.com

PROJECT	FORESTSIDE TOWNHOUSES -BRAMPTON, ON
PART OF STRUCTURE	COLUMNS FTG-GF -P#14

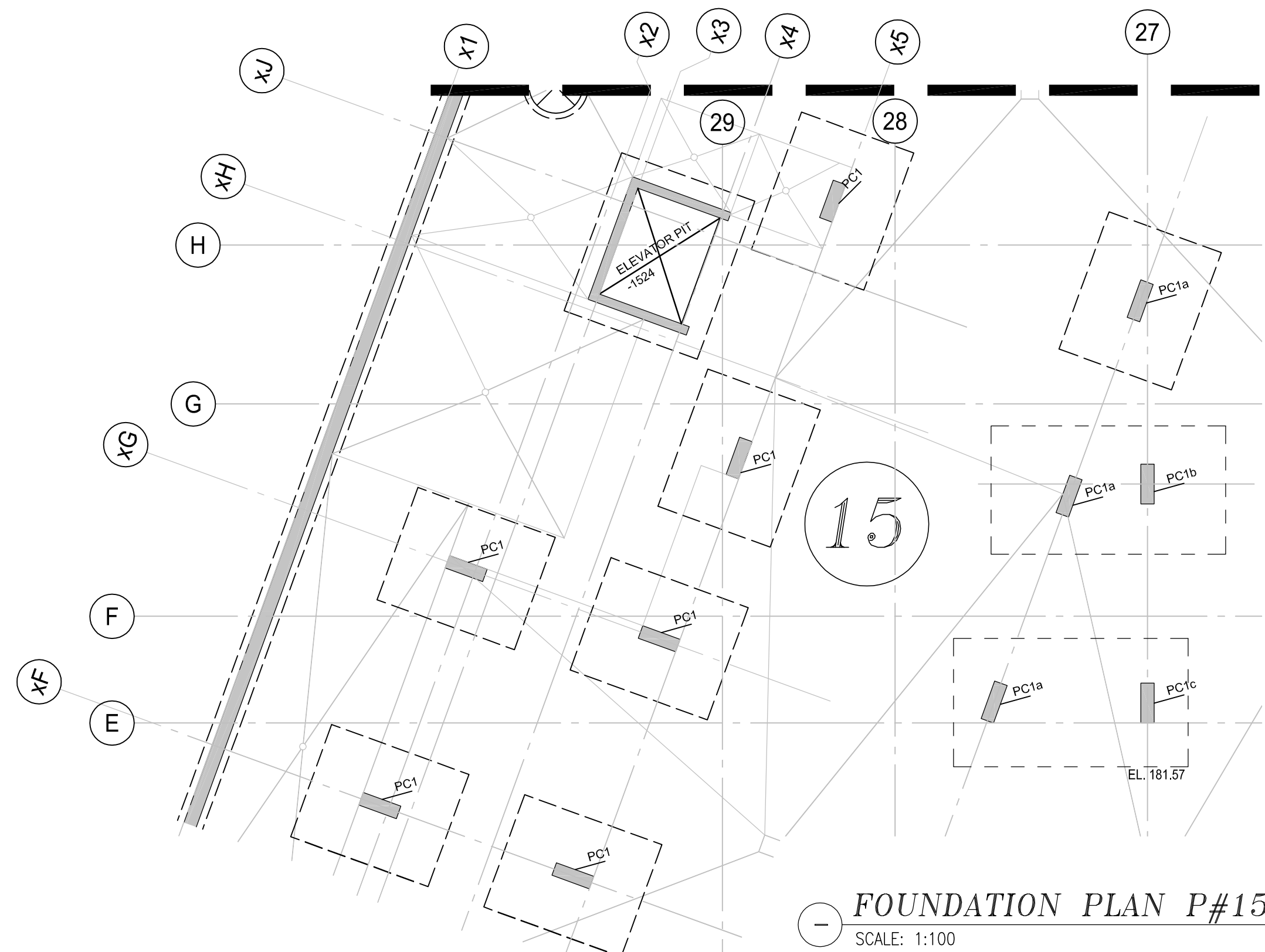
CUSTOMER :	ROYAL PINE HOMES	Project no. 2177
SCALE	AS SHOWN	DRAWING No.
DETAILED BY: JU	BAR LIST No.	R3.13
CHECKED BY:		



DRAWING REVIEW
This review of this drawing does not in any way relieve the contractor of responsibility for its accuracy or for compliance with the contract documents.

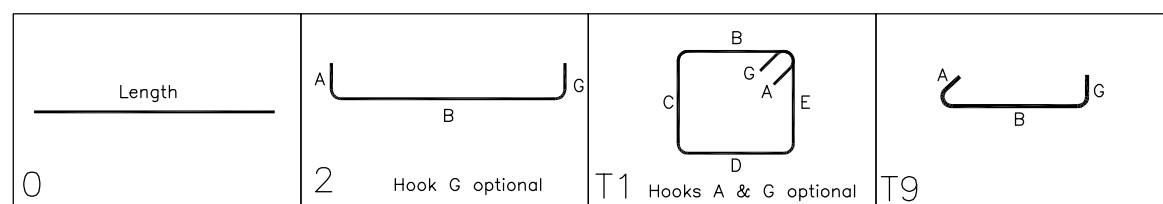
☒ No comment	☐ See comment
☐ Amend & Resubmit	☐ Rejected See Remarks

Submission No. _____
Project No. **19066**
By **AF**
Date **19 May 2021**
JABLONSKY, AST AND PARTNERS
Consulting Engineers
3 Concorde Gate, North York, ON M3C 4H9



Release Code: R3.14 COL F-GF P#15 BENDING DETAILS.

Bar Mark	Qty	Size	Total length	Type	A'	B'	C'	D'	E'	F'	G'	H'	I'	J'	K'	L'	M'	N'	O'	P'	Q'	R'
60 20M	4770					4170																
30 20M	3730					3730																
10 20M	3780					3780																
10 20M	3700					3700																
1001	334 10M	420 T9	100	220							100											
1002	167 10M	2280 T1	100	820	220	820	220				100											
2001	110 20M	1690 T2	310	1300																		



NOTES

1. ALL STEEL TO BE GRADE 400W
2. STRENGTH OF CONCRETE
35MPa – INTERIOR COLUMNS & WALLS
3. CONCRETE COVER:
TIES

-- 40mm

4. COMPRESSION LAP SPLICE

BAR SIZE	STANDARD LAP (mm)
10M	300
15M	440
20M	590
25M	730
30M	880
35M	1030

5. TENSION LAP SPLICE (L.S.) & DEVELOPMENT LENGTH (Ld)
(FOR WALL OR COL & Ld IN CAP OR FTG.)

BAR SIZE	fc=25		fc=30		fc=35	
	L.S	L.d	L.S	L.d	L.S	L.d
10M	490	380	450	350	420	320
15M	740	570	670	520	620	480
20M	980	750	890	690	830	640
25M	1530	1170	1390	1070	1290	990
30M	1830	1410	1670	1290	1550	1190
35M	2130	1640	1950	1500	1800	1390

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* ALL CONFIRMS/VERIFIES WILL BE ASSUMED CORRECT AND APPROVED AS IS UNLESS COMMENTED ON THE APPROVAL DRWGS

LEGEND

ALT = ALTERNATE BOT = BOTTOM BIS = BEND INTO SLAB CB = CORNER BAR CJS = CUT TO SUIT SITE COND. DWL = DOWELS EE = EACH END EF = EACH FACE EJ = EXPANSION JOINT ES = EACH SIDE EW = EACH WAY	FF = FAR FACE FS = FORM SAVER GID = GROUT 'N DOWELS H = HORIZONTAL IF = INSIDE FACE LL = LOWER LAYER MD = MIDDLE MIN = MINIMUM NF = NEAR FACE OC = ON CENTER	OF = OUTSIDE FACE SFW = SAW CUT END STG = STAGGER STR = STRIPS T = TOP THR/2 = THREAD LEND THR/2 = THREAD ZENDS UL = UPPER LAYER U/N = UNLESS NOTED V = VERTICAL TT = TIE
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STRAIGHT BARS LABEL FORMAT

7 B15M X 3600
QUANTITY
GRADE
LENGTH

BENT BARS LABEL FORMAT

7 B15M B1501
QUANTITY
GRADE
LENGTH

GRADES OF STEEL

B = GRADE 400W
C = GRADE 500W
E = GRADE 600W
S = STAINLESS
W = WELDABLE

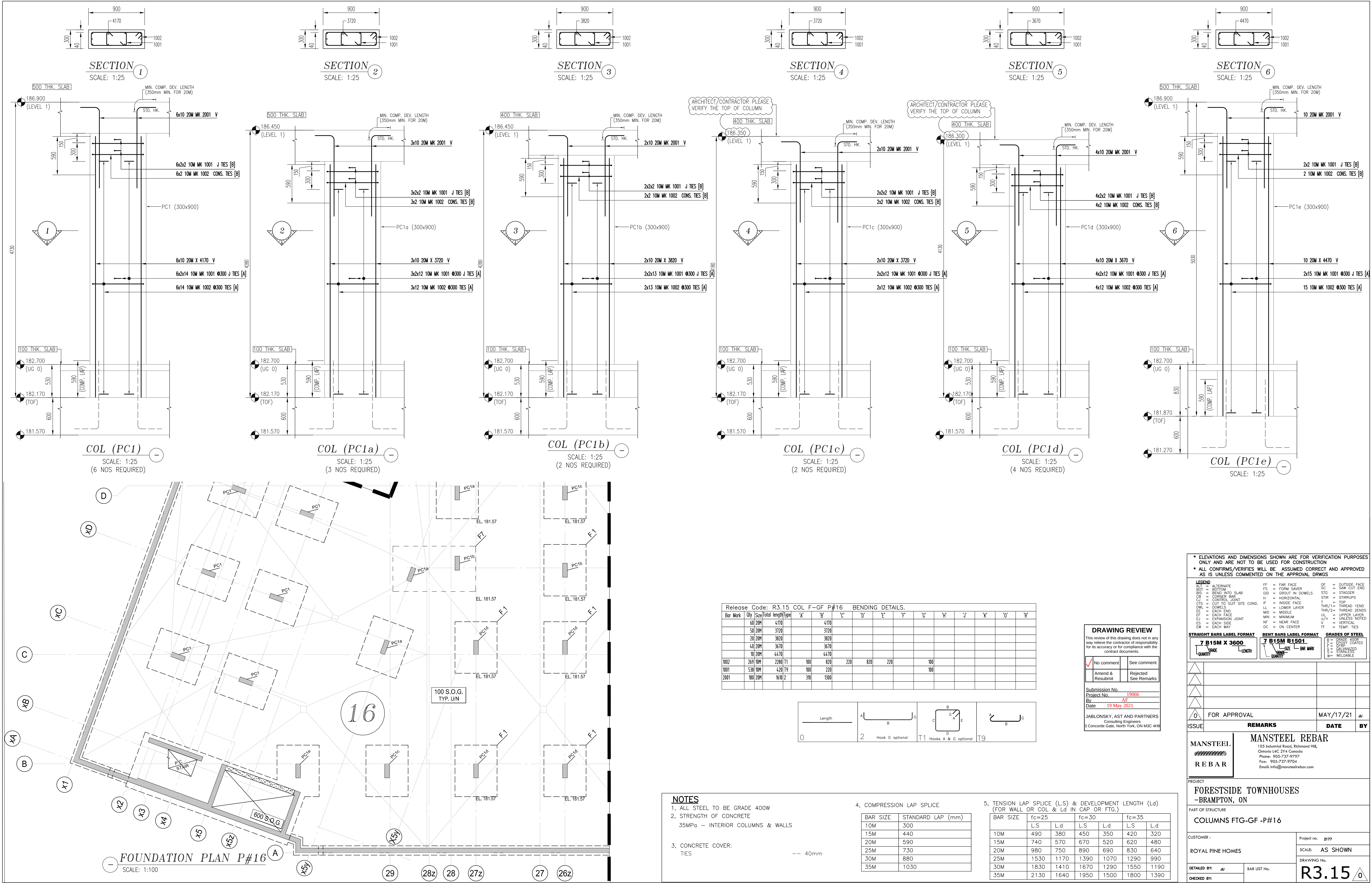
FOR APPROVAL
MAY/17/21
J

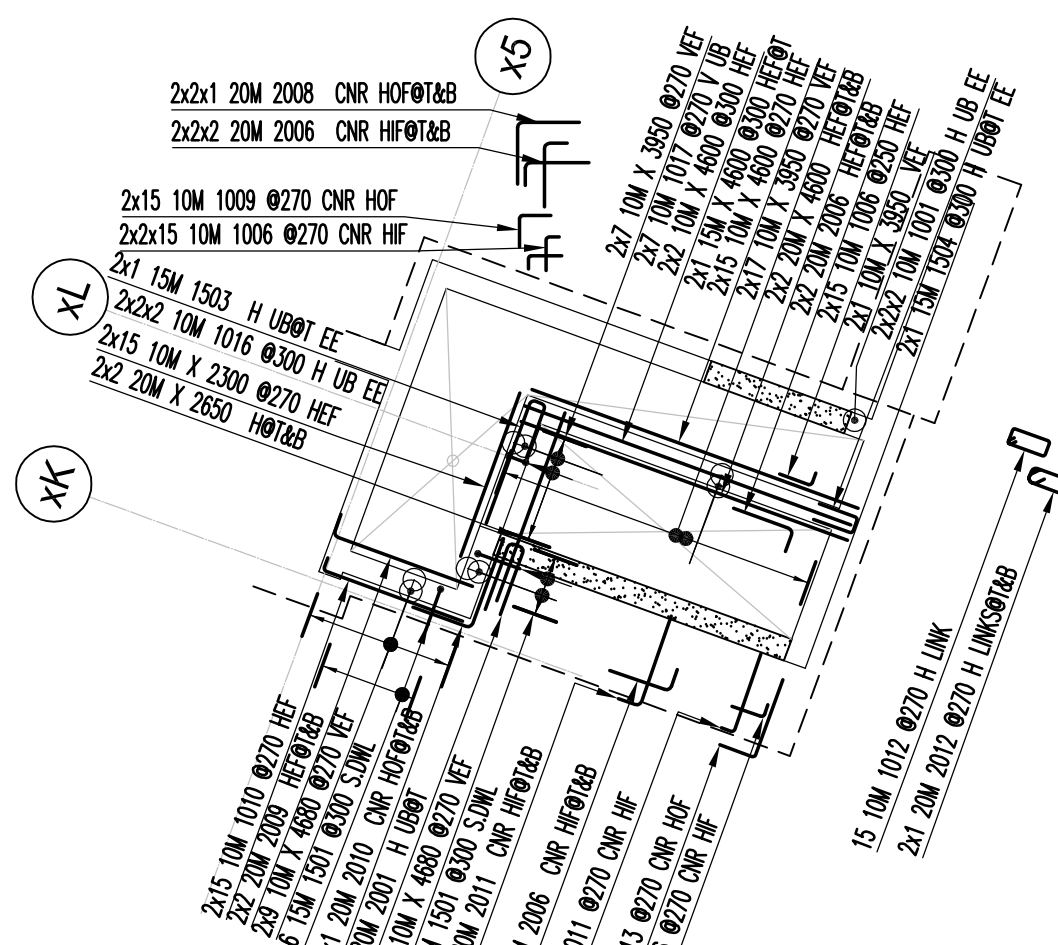
MANSTEEL REBAR
105 Industrial Road, Richmond Hill, Ontario L4C 2Y4 Canada
Phone: 905-737-9797
Fax: 905-737-9704
Email: info@mansteelrebar.com

FORESTSIDE TOWNHOUSES -BRAMPTON, ON
PART OF STRUCTURE
COLUMNS FTG-GF -P#15

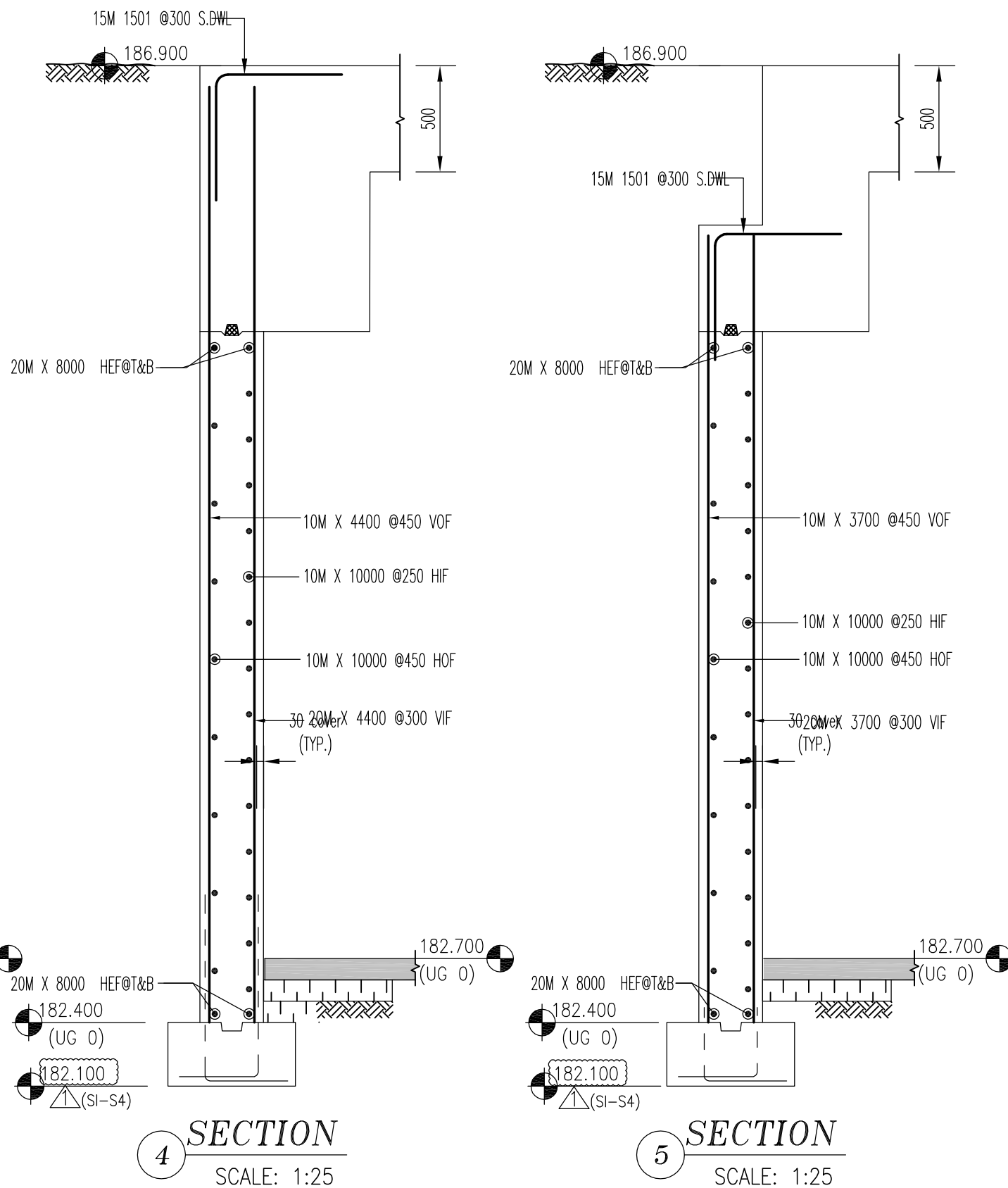
CUSTOMER: ROYAL PINE HOMES
DETAILED BY: JU
CHECKED BY:

Project no. 2177
SCALE: AS SHOWN
DRAWING No. **R3.14**





EXTERNAL WALL PLAN
SCALE: 1:100 (POUR-13)



NOTES

1, ALL STEEL TO BE GRADE 400W

2, STRENGTH OF CONCRETE

35MPa - INTERIOR COLUMNS & WALLS

BAR SIZE	STANDARD LAP (mm)
10M	300
15M	440
20M	590
25M	730
30M	880
35M	1030

BAR SIZE	fc=25		fc=30		fc=35	
	L.S	L.d	L.S	L.d	L.S	L.d
10M	490	380	450	350	420	320
15M	740	570	670	520	620	480
20M	980	750	890	690	830	640
25M	1530	1170	1390	1070	1290	990
30M	1830	1410	1670	1290	1550	1190
35M	2130	1640	1950	1500	1800	1390

Figure 1 shows nine diagrams of various types of hooks, labeled 0 through 26. The diagrams illustrate different hook shapes and configurations, including straight hooks, hooks with a loop, hooks with a hook, and hooks with a hook and a loop. The diagrams are arranged in a vertical column, with each diagram labeled on the left and its corresponding label on the right.

- 0**: A simple straight hook with points A, B, C, D, E, F, G, H, K, L, O, P, Q, R, S, T, U, V, W, X, Y, Z.
- 17**: A hook with a loop, showing points A, B, C, D, E, F, G, H, K, L, O, P, Q, R, S, T, U, V, W, X, Y, Z.
- 3**: A hook with a hook, showing points A, B, C, D, E, F, G, H, K, L, O, P, Q, R, S, T, U, V, W, X, Y, Z.
- 21**: A hook with a hook and a loop, showing points A, B, C, D, E, F, G, H, K, L, O, P, Q, R, S, T, U, V, W, X, Y, Z.
- 2**: A hook with a hook and a loop, showing points A, B, C, D, E, F, G, H, K, L, O, P, Q, R, S, T, U, V, W, X, Y, Z.
- T1**: A hook with a hook and a loop, showing points A, B, C, D, E, F, G, H, K, L, O, P, Q, R, S, T, U, V, W, X, Y, Z.
- S5**: A hook with a hook and a loop, showing points A, B, C, D, E, F, G, H, K, L, O, P, Q, R, S, T, U, V, W, X, Y, Z.
- 30**: A hook with a hook and a loop, showing points A, B, C, D, E, F, G, H, K, L, O, P, Q, R, S, T, U, V, W, X, Y, Z.
- 26**: A hook with a hook and a loop, showing points A, B, C, D, E, F, G, H, K, L, O, P, Q, R, S, T, U, V, W, X, Y, Z.

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* ALL CONFIRMS/VERIFIES WILL BE ASSUMED CORRECT AND APPROVED AS IS UNLESS COMMENTED ON THE APPROVAL DRWGS

STRAIGHT BARS LABEL FORMAT	BENT BARS LABEL FORMAT	GRADES OF STEEL
 7 B15M X 3600 QUANTITY GRADE LENGTH	 7 B15M B1501 QUANTITY GRADE SIZE BAR MARK	B = GRADE 400R C = EPOXY COATED F = GFRP G = GALVANIZED S = STAINLESS W = WELDABLE

MANSTEEL



REBAR

MANSTEEL REBAR

105 Industrial Road, Richmond Hill,
Ontario L4C 2Y4 Canada

Phone: 905-737-9797

Fax: 905-737-9704

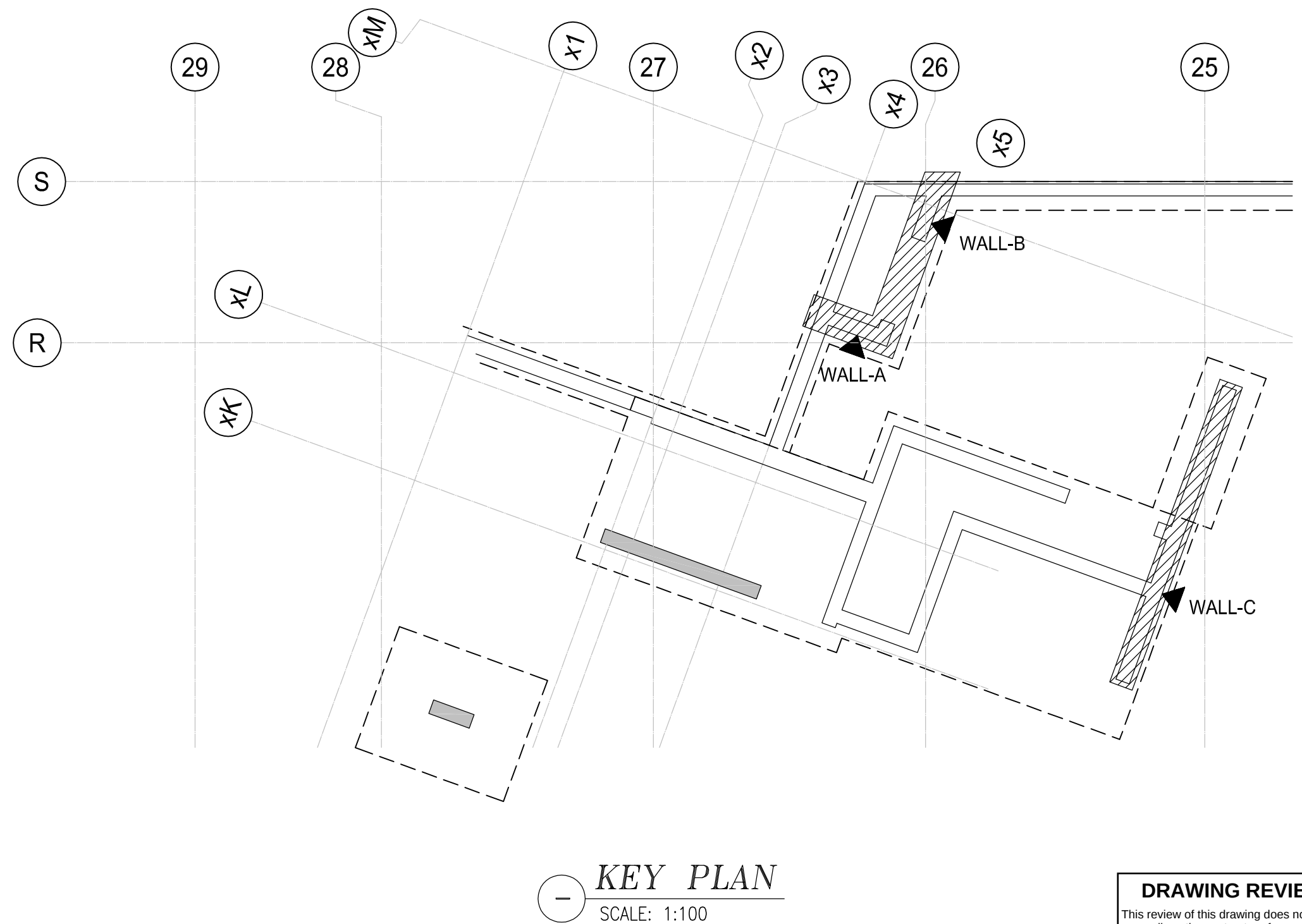
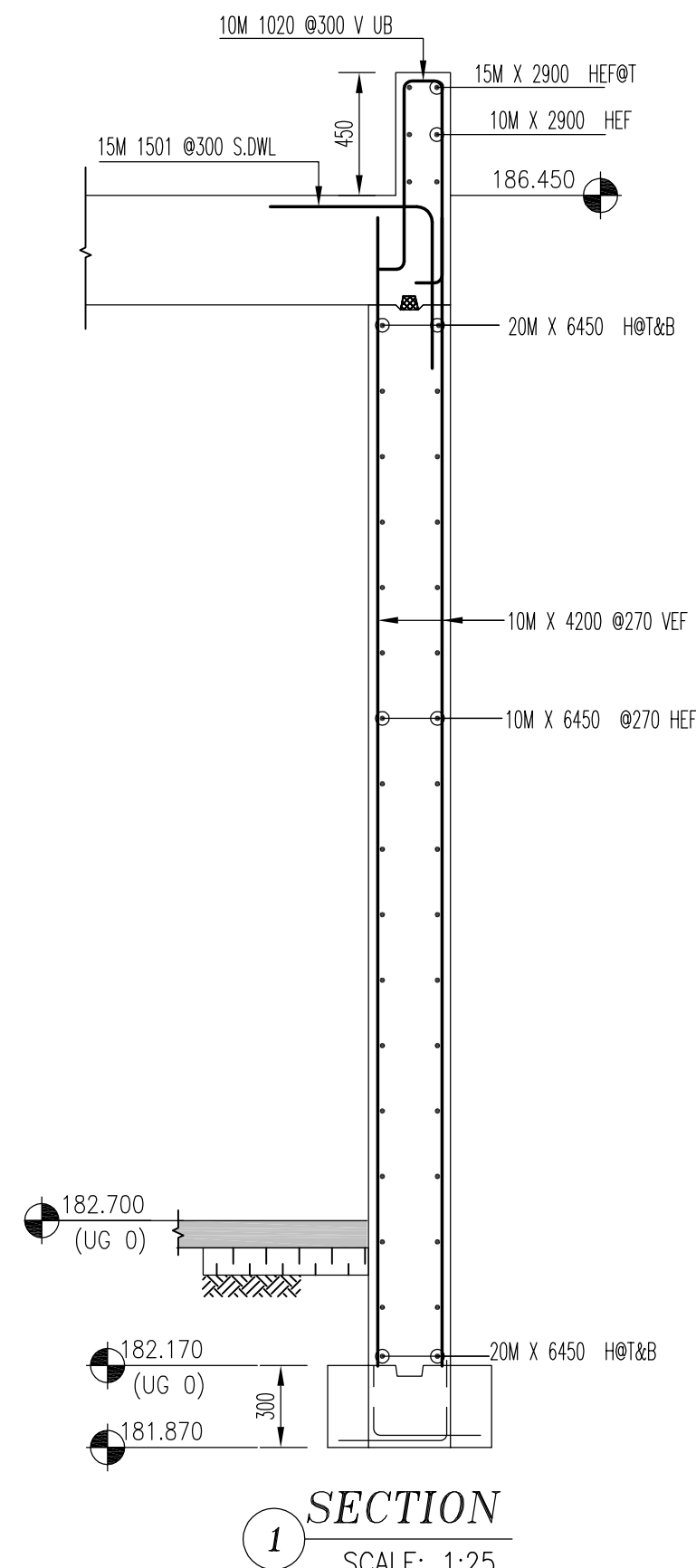
Email: info@mansteelrebar.com

PART OF STRUCTURE

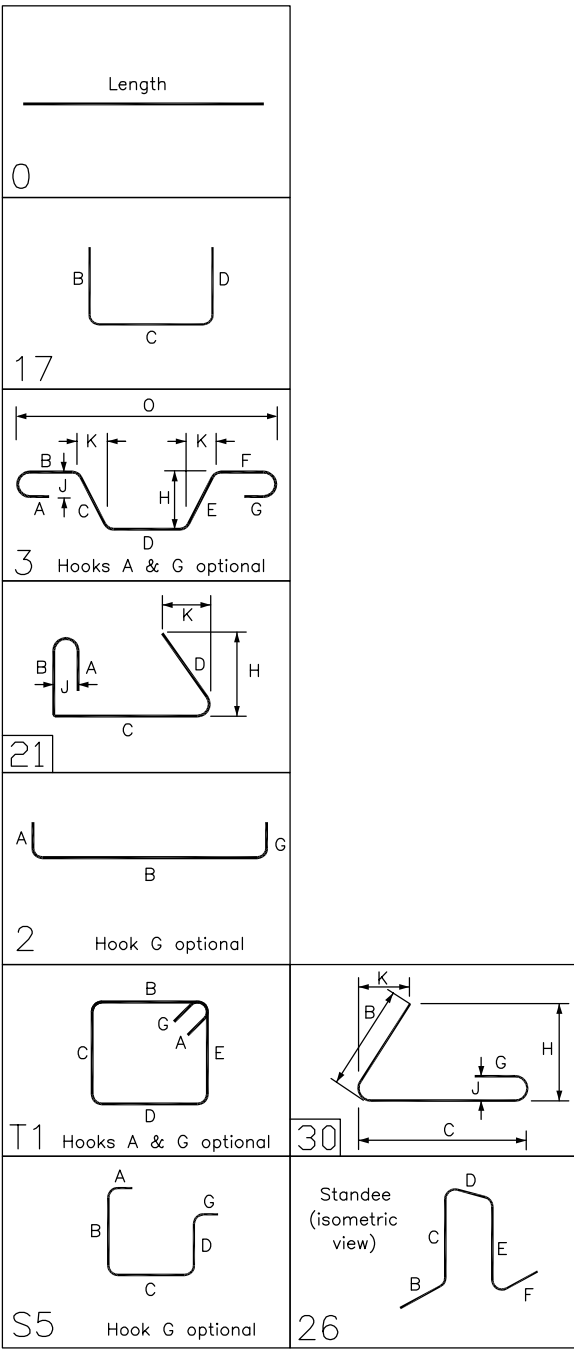
EXTERIOR WALLS FTG-GF -P#13

	DRAWING No.
--	-------------

1



Release	Code:	R4.6A	EXT	WALLS	P#13	BENDING DETAILS.												
Bar Mark	Qty	Size	Total length	Type	'	"	'	"	'	"	'	"	'	"	'	"	'	"
	4	20M	6450															
	22	10M	3970															
	50	10M	4200															
	16	10M	3000															
	4	20M	3350															
	14	10M	1000															
	8	10M	550															
	4	5M	2020															
	2	5M	2060															
	4	10M	2000															
	2	5M	3000															
	2	5M	4200															
	30	10M	6450															
1002	14	10M	1330	3					265					255			80	1165
1003	16	10M	125	21					175		244			245			70	
1004	7	10M	2260	17					744		230	1770						
1001	50	10M	1330	17					550		230	550						
1020	20	10M	1800	55		100			750		150	700			100			
1022	4	10M	1800	17					900									
1021	4	10M	1800	2		800			900									
1023	2	10M	1745	30					980		165			930			320	
1025	2	10M	1000	30					770					870			295	
1024	2	10M	895	30					710					690			225	
1008	8	10M	520	11		100		435	225	435	225			100	70			
1017	20	10M	1600	2		800			550									
1019	7	10M	1350	17					550		250	550						
2002	2	20M	1590	3					905		325			305			1175	
2003	2	20M	1240	21					965		275			290			70	
1507	2	5M	1800	17					950		950							
1530	1	5M	1330	30					970		200			1010			350	
1509	1	5M	1125	30					865		260			820			280	
1505	4	5M	3510	2		260			3250									
2007	4	20M	1810	2		300			550									
1506	2	5M	1200	2		260			950									
1508	1	5M	2845	30					1100		195			1070			370	
2001	8	20M	1250	17					950		230	950						
1501	23	5M	1200	17					600		600							



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* ALL CONFIRMS/VERIFIES WILL BE ASSUMED CORRECT AND APPROVED AS IS UNLESS COMMENTED ON THE APPROVAL DEDWS

LEGEND		STRAIGHT BARB LABEL FORMAT		BENT BARB LABEL FORMAT		GRADES OF STEEL	
AL	= ALTERNATE	FF	= FURT FACE	GC	= OUTSIDE FACE	W	= GRADE COR
BT	= BOTTOM BAR	FS	= FORM SAVED	SC	= SURF CUT END	Y	= GRADE COR
BIS	= BEND INTO SLAB	GF	= GROUT IN DOWELS	STG	= STAGGER	Z	= GRADE COR
CS	= CORNER BAR	HS	= HORIZONTAL	STR	= STRIPPER		
CT	= CONTROL JOINT	IF	= INSIDE FACE	T	= TOP		
CS	= CUT OUT SUIT SITE COND.	LL	= LOWER LAYER	THR/2	= THROAT LEND		
DWL	= DOWELS	MD	= MIDDLE	THR/2	= THROAT ZENDS		
EA	= EACH END	MF	= MINIMUM	UL	= UPPER LAYER		
ES	= EACH FACE	NN	= NEAR FACE	UNL	= UNLESS NOTED		
EX	= EXPANSION JOINT	NC	= ON CENTER	V	= VERTICAL		
ES	= EACH SIDE			TT	= TEMP. TIES		
DW	= EACH WAY						

7 B15M X 360		7 B15M B1501		GRADES OF STEEL	
QUANTITY	WAVE	QUANTITY	SIZE	W	= GRADE COR
	LENGTH		BAR MARK	Y	= GRADE COR
				Z	= GRADE COR
					= UNFINISHED
					= STAINLESS
					= WELDABLE

ISSUE	REV.	PER	COMM. (&S-1)	JUN 15/21	JU
0			FOR FAB.	MAY 17/21	JU
			FOR APPROVAL		

REMARKS	DATE	BY

MANSTEEL REBAR

105 Industrial Road, Richmond Hill,
Ontario L4C 2Y4 Canada

Phones: 905-737-9797
Fax: 905-737-9794
Email: info@mansteelrebar.com

NOTES

- 1, ALL STEEL TO BE GRADE 400W
2, STRENGTH OF CONCRETE
35MPa - INTERIOR COLUMNS & WALLS

3, CONCRETE COVER:
VERTICALS

-- 30mm

BAR SIZE	STANDARD LAP (mm)
10M	300
15M	440
20M	590
25M	730
30M	880
35M	1030

5, TENSION LAP SPLICE (L.S) & DEVELOPMENT LENGTH (Ld)
(FOR WALL OR COL & Ld IN CAP OR FTG.)

BAR SIZE	fc=25		fc=30		fc=35	
	L.S	L.d	L.S	L.d	L.S	L.d
10M	490	380	450	350	420	320
15M	740	570	670	520	620	480
20M	980	750	890	690	830	640
25M	1530	1170	1390	1070	1290	990
30M	1830	1410	1670	1290	1550	1190
35M	2130	1640	1950	1500	1800	1390

CUSTOMER :

ROYAL PINE HOMES

DETAILED BY

BAR LIST No.

Project no. 2177

SCALE: AS SHOWN

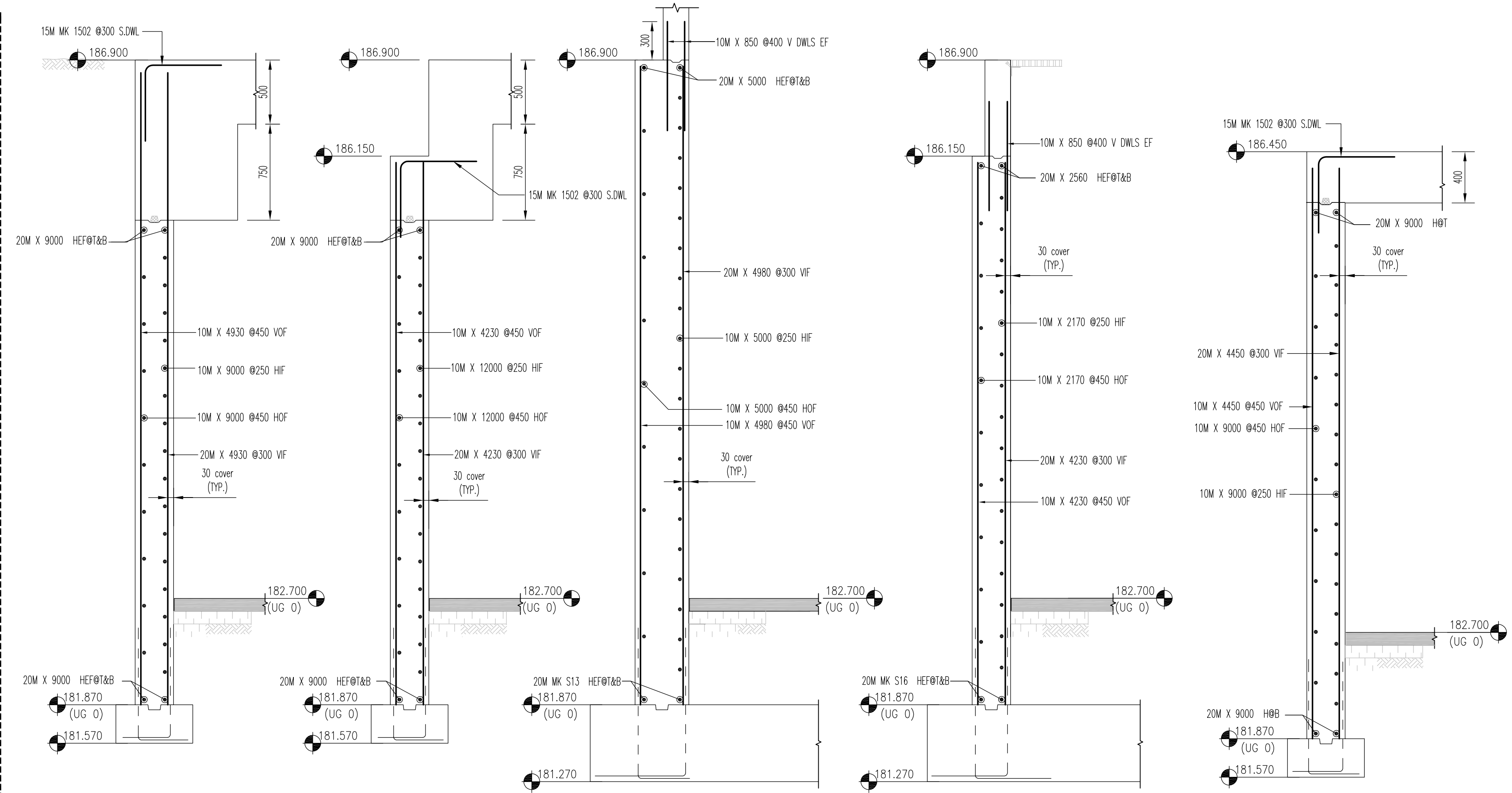
DRAWING No.

D 4

R4.6A



1 EXTERNAL WALL PLAN
SCALE: 1:100 (POUR-16)



1 SECTION SCALE: 1:25
2 SECTION SCALE: 1:25
3 SECTION SCALE: 1:25
4 SECTION SCALE: 1:25
5 SECTION SCALE: 1:25

Release Code: R4.8 EXT WALLS P#16 BENDING DETAILS.													
Bar Mark	Qty	Size	total lengthType	A'	B'	C'	D'	E'	F'	G'	H'	J'	K'
18	20M	4980			4980								
19	10M	4980			4980								
53	20M	4230			4230								
36	10M	4230			4230								
86	20M	4450			4450								
58	10M	4450			4450								
50	10M	12000			12000								
16	20M	9000			9000								
50	10M	9000			9000								
25	10M	3000			3000								
4	20M	6500			6500								
37	10M	4930			4930								
51	20M	4930			4930								
4	20M	5000			5000								
23	10M	4700			4700								
30	10M	850			850								
4	20M	3000			3000								
4	20M	5000			5000								
31	10M	5000			5000								
4	20M	2560			2560								
25	10M	2770			2770								
4	20M	5140			5140								
25	10M	4850			4850								
1002	37	10M	840	17		420	420						
1003	16	10M	1285	3		780	505						
1001	64	10M	630	2	180	450							
1004	9	10M	1105	3		840	265				255	80	920
1005	9	10M	770	3		455	315				300	100	555
2001	6	20M	1660	17		830	830						
2002	8	20M	1140	2	310	830							
1502	173	15M	1200	17		600	600						
1501	19	15M	1630	17		600	600	430					
2003	2	20M	1635	3		855	780				740	250	1105
2004	2	20M	1125	3		855	270				260	75	930
2005	2	20M	1160	3		840	320				305	90	930

DRAWING REVIEW

This review of this drawing does not in any way relieve the contractor of responsibility for its accuracy or for compliance with the contract documents.

✓ No comment

Amend & Resubmit

See comment

Rejected See Remarks

Submission No.

Project No. 19066

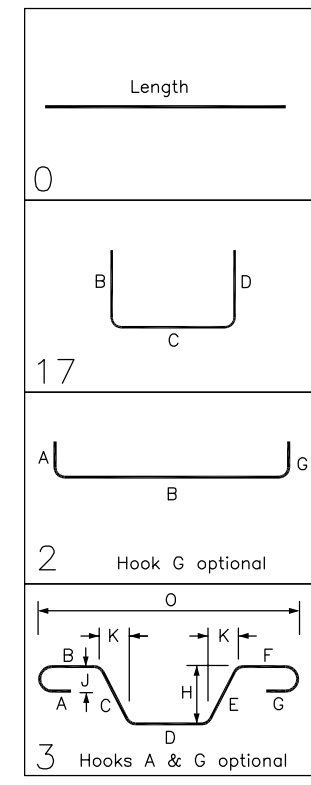
By: AJ

Date: 19 May 2021

JABLONSKY, AST AND PARTNERS

Consulting Engineers

3 Concorde Gate, North York, ON M3C 4H9



* ELEVATIONS AND DIMENSIONS SHOWN ARE FOR VERIFICATION PURPOSES ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION

* ALL CONFIRMS/VERIFIES WILL BE ASSUMED CORRECT AND APPROVED AS IS UNLESS COMMENTED ON THE APPROVAL DRAWS

LEGEND

ALT = ALTERNATE
BOT = BOTTOM
BIS = BEND INTO SLAB
CB = CORNER BAR
CJ = CONTROL JOINT
CUT = CUT TO SUIT SITE COND.
DNL = DOWELS
EE = EACH END
EF = EACH FACE
EJ = EXPANSION JOINT
ES = EACH SIDE
EW = EACH WAY

FF = FAR FACE
FS = FORM SAVER
GID = GROUT 'N DOWELS
H = HORIZONTAL
IF = INSIDE FACE
LL = LOWER LAYER
MID = MIDDLE
MIN = MINIMUM
NF = NEAR FACE
OC = ON CENTER

OF = OUTSIDE FACE
SC = SAW CUT END
STG = STAGGER
STR = STRIPS
T = TOP
THR/1 = THREAD LEND
THR/2 = THREAD ZENDS
UL = UPPER LAYER
UNLESS NOTED
V = VERTICAL
TT = TYP. TIES

STRAIGHT BARS LABEL FORMAT

7 B15M X 3600

QUANTITY

BENT BARS LABEL FORMAT

7 B15M B1501

SIZE

QUANTITY

GRADES OF STEEL

B = GRADE 400C
C = GRADE 50C
E = EP60
S = STAINLESS
W = WELDABLE

FOR APPROVAL

ISSUE

REMARKS

DATE

BY

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NOTES

- ALL STEEL TO BE GRADE 400W
- STRENGTH OF CONCRETE
35MPa - INTERIOR COLUMNS & WALLS

- CONCRETE COVER:
VERTICALS

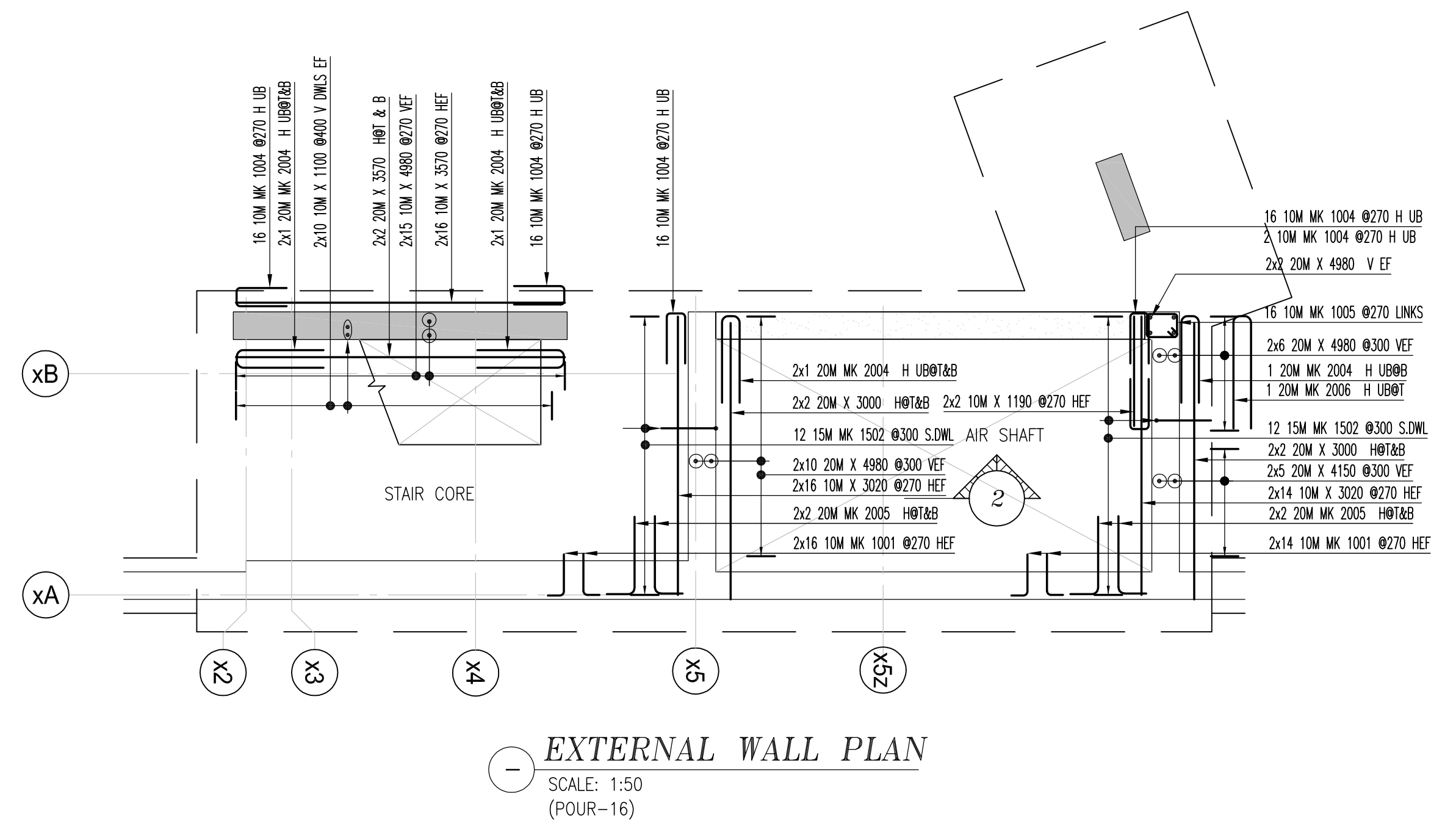
-- 30mm

4. COMPRESSION LAP SPLICE

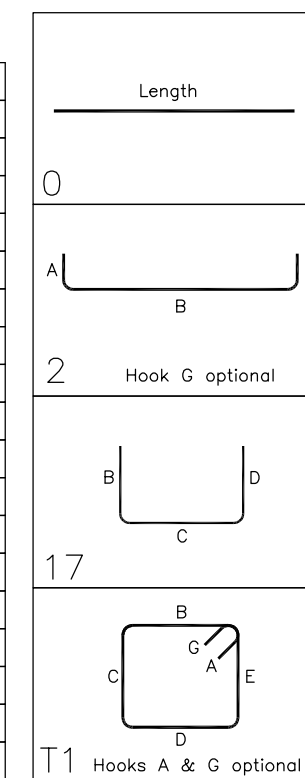
BAR SIZE	STANDARD LAP (mm)
10M	300
15M	440
20M	590
25M	730
30M	880
35M	1030

5. TENSION LAP SPLICE (LS) & DEVELOPMENT LENGTH (Ld)
(FOR WALL OR COL & Ld IN CAP OR FTG.)

BAR SIZE	fc=25		fc=30		fc=35	
	L.S	L.d	L.S	L.d	L.S	L.d
10M	490	380	450	350	420	320
15M	740	570	670	520	620	480
20M	980	750	890	690	830	640
25M	1530	1170	1390	1070	1290	990
30M	1830	1410	1670	1290	1550	1190
35M	2130	1640	1950	1500	1800	1390



Release Code: R5.6 WALLS P#16					BENDING DETAILS.											
Bar Mark	Qty	Size	length	type	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'O'	'R'
	60	10M	3020			3020										
	4	10M	1190			1190										
	36	20M	4980			4980										
	8	20M	3000			3000										
	30	10M	4980			4980										
	4	20M	3570			3570										
	32	10M	3570			3570										
	20	10M	1100			1100										
	10	20M	4150			4150										
1005	16	10M	1400	T1		300	340	260	340	260		100		70		
1004	66	10M	1310	T7		550	210	550								
1001	60	10M	630	Z	180	450										
2005	8	20M	1160	Z	310	850										
2004	7	20M	2210	T7		950	210	950								
1502	24	15M	1200	T7		600	600									
2006	1	20M	2670	T7		1230	210	1230								

[illegible]

0	FOR APPROVAL	MAY/14/21	JU	
ISSUE	REMARKS	DATE	BY	

MANSTEEL



REBAR

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PROJECT		
FORESTSIDE TOWNHOUSES -BRAMPTON, ON		
PART OF STRUCTURE		
SHEAR WALLS FTG-GF -P#15,16		
CUSTOMER :		Project no. 2177
ROYAL PINE HOMES		SCALE: AS SHOWN
DETAILED BY: JU		DRAWING No.
CHECKED BY:	BAR LIST No.	R5.6 

- ## NOTES
1. ALL STEEL TO BE GRADE 400W
 2. STRENGTH OF CONCRETE
35MPa – INTERIOR COLUMNS & WALLS
 3. CONCRETE COVER:
VERTICALS

BAR SIZE	STANDARD LAP (mm)
10M	300
15M	440
20M	590
25M	730
30M	880
35M	1030

- | BAR SIZE | fc=25 | | fc=30 | | fc=35 | |
|----------|-------|------|-------|------|-------|------|
| | L.S | L.d | L.S | L.d | L.S | L.d |
| 10M | 490 | 380 | 450 | 350 | 420 | 320 |
| 15M | 740 | 570 | 670 | 520 | 620 | 480 |
| 20M | 980 | 750 | 890 | 690 | 830 | 640 |
| 25M | 1530 | 1170 | 1390 | 1070 | 1290 | 990 |
| 30M | 1830 | 1410 | 1670 | 1290 | 1550 | 1190 |
| 35M | 2130 | 1640 | 1950 | 1500 | 1800 | 1390 |