

# 'L' PIER HEAD

FIX 'L' PIER HEAD TO BEARER WITH 'A'\* off 14-14x22 HH TEK SCREWS (\*see TABLE B & DETAIL 1)

'L' PIER HEAD

F<sub>h</sub>  
(see table)

H EZIPIER HEIGHT  
(see table)

EZIPIER  
SEE NOTES

EZIBRACE  
30x30x1.6 SHS  
(G350)

EZIBRACE JOINER  
WHERE REQUIRED.  
12 off 12-24x32 HH  
TEK SCREWS.  
6 PER SIDE

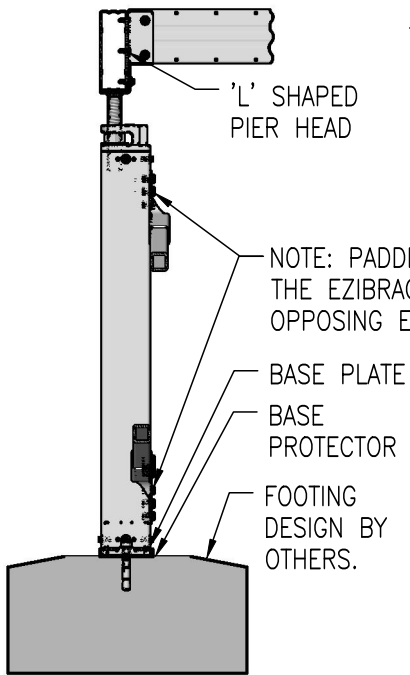
FIX EZIBRACE PADDLE TO  
EZIBRACE & PIER WITH  
6 off 12-24x32 HH TEK  
SCREWS

FIX SHS POST TO  
EZIPIER PIER HEAD  
4 off 12-24x32 HH  
TEK SCREWS

FIX EZIBRACE PADDLE  
TO POST WITH  
6 off 12-24x32 HH  
TEK SCREWS

FIX SHS POST TO  
EZIPIER BASE PLATE  
4 off 12-24x32 HH  
TEK SCREWS AS  
SHOWN.

2 HOLE BASE PLATE CONNECTED TO FOOTINGS WITH 2 OFF M12x100 LG GALV. WEDGE ANCHORS HOLE 110mm DEEP. 65mm EFFECTIVE EMBEDMENT INTO N25 CONCRETE.



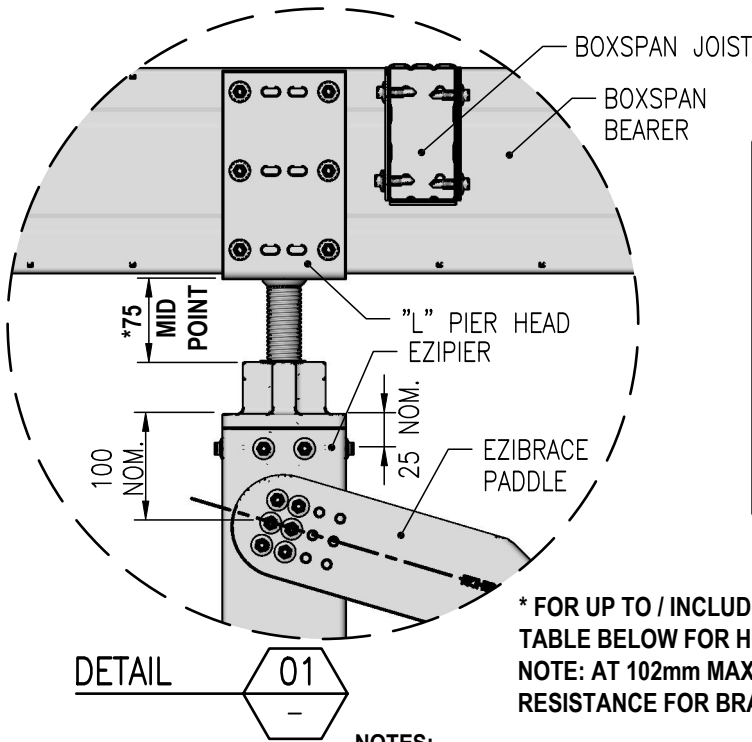
SECTION A  
NTS

NOTE: PADDLE ORIENTATION. THE EZIBRACE PADDLES ARE OPPOSING EACH OTHER.

BASE PLATE  
BASE PROTECTOR  
FOOTING DESIGN BY OTHERS.

TABLE B BOXSPAN LEGEND		
BEAM	WEB BMT	TEK SCREWS 'A'
B100-16*	0.8	8
B150-16	0.8	6
B200-16	0.8	6
B150-20	1.0	6
B200-20	1.0	6
B250-20	1.0	6

\*INSTALL 6 TEKS IN OUTSIDE HOLES. 2 EXTRA TEKS ON INSIDE SLOTS SO THEY ARE IN CONTACT WITH OUTSIDE OF ELONGATED HOLE.



DETAIL 01

\* FOR UP TO / INCLUDING 75mm MID POINT ADJUSTMENT SEE TABLE BELOW FOR HORIZONTAL RESISTANCE.  
NOTE: AT 102mm MAX. ADJUSTMENT USE 12kN HORIZONTAL RESISTANCE FOR BRACE ANGLES 1-50°.

STRUCTURAL DESIGN CERTIFICATION



REF. # 3333  
DATE 23/11/2022

SIGNATURE  
HA NGUYEN  
BE(Hons) PhD MIEAust CPEng NER 4188792  
PE0001349 (VIC), RPEQ24385 (QLD), TAS 727649808

NOTES:

- THE LOADS ARE THE ULTIMATE LIMIT CAPACITIES BASED ON THESE STANDARDS: AS1170.1, AS4055, AS4100, AS4600, AS5216. ALL LOADS ARE IN kN AND DIMENSIONS ARE mm
- THE TABLE GIVES THE MAXIMUM HORIZONTAL WIND FORCE THAT EZIBRACE CAN RESIST TOGETHER WITH THE ACCOMPANYING UPLIFT FOR THE EZIBRACE, A 'L' SHAPED PIER HEAD AND EZIPIER WITH A 2 HOLE BASE PLATE. THE SYSTEM IS SUITABLE FOR ANY NORMAL WIND. THE TABLE SHOWS THE CAPACITY BASED ON THE BOXSPAN WEBS 0.8 AND 1.0 BMT. THE EZIPIER SOLUTION SHOULD BE CHECKED FOR ANY ADDITIONAL LOADS, ESPECIALLY UPLIFT BY A COMPETENT PERSON. CYCLONIC AND EARTHQUAKE LOADS REQUIRE SPECIFIC DESIGNS.
- THE EZIBRACE IS SELECTED BASED ON THE ULTIMATE DESIGN LOADS CARRIED TO THE FOOTINGS. THE LOADS IN THE TABLE ARE BASED ON THE STRENGTH OF THE EZIBRACE. THE ULTIMATE TENSION FORCE FOR EZIBRACE IS 18.5kN. THE EZIBRACE IS A SQ STEEL TUBE 30x1.6SHS TO AS1163 - C350L0.
- BASE PLATES ARE CONNECTED TO THE FOOTING BY 2/M12x100 GALV. WEDGE ANCHORS, HOLE 110 DEEP MIN 65mm EFFECTIVE EMBEDMENT INTO N25 CONCRETE.
- ULTIMATE MOMENT FOR BASE PLATES:  
THE BASE PLATE IS SUFFICIENTLY STRONG SO IT IS NOT THE GOVERNING LIMIT. THE BASE PLATE CONNECTION CAN CARRY THE MOMENTS TRANSFERRED BY THE BRACING INTO THE CONCRETE FOOTING. THE FOOTING SHOULD BE DESIGNED BY AN ENGINEER BASED ON THE LOADS AND SOIL TYPE.
- THE EZIPIER CAN BE 90x2SHS OR 89x3.5SHS TO AS1163 - C350L0. THE PIER SHOULD BE CHECKED FOR STRENGTH BY AN ENGINEER.
- FOR PROTECTIVE COATING SYSTEMS REFER TO: NCC VOLUME 2, NASH STANDARD RESIDENTIAL AND LOW-RISE STEEL FRAMING PART 2: DESIGN SOLUTIONS, AS/NZS 4680 HOT-DIP ZINC COATINGS ON FABRICATED FERROUS ARTICLES, AS/NZS 4792 HOLLOW SECTIONS PRODUCED BY WELDING PRE-GALVANIZED STEEL STRIP.
- THE 2 HOLE BASE PLATE CAN BE UPGRADED TO A 4 HOLE BASE PLATE AND A U SHAPE PIER HEAD CAN BE USED. THE BRACING SYSTEM WILL BE STRONGER.
- SEE DRAWING P04-03 FOR THE EZIPIER WITH 'L' SHAPED PIER HEAD. SEE DRAWING P14 FOR THE 2 AND 4 HOLE BASE PLATE STRENGTH.

TABLE A EZIBRACE ULTIMATE HORIZONTAL RESISTANCE 2 HOLE BASEPLATE and L PIERHEAD F <sub>h</sub> - Horizontal Force (Wind Shear) - kN																				
Eziplier Height H - m	S Eziplier Spacing - m																			
	1.5		1.8		2.1		2.4		2.7		3.0		3.3		3.6		3.9		4.2	
BMT mm	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0
0.6	12.2	15.6	12.2	15.9	12.2	16.1	12.2	16.3	12.2	16.4	12.2	16.4	12.2	16.5	12.2	16.5	12.2	16.6	12.2	16.6
0.9	12.2	14.4	12.2	15.0	12.2	15.4	12.2	15.7	12.2	15.9	12.2	16.1	12.2	16.2	12.2	16.3	12.2	16.3	12.2	16.4
1.2	12.2	13.1	12.2	14.0	12.2	14.6	12.2	15.0	12.2	15.3	12.2	15.6	12.2	15.8	12.2	15.9	12.2	16.0	12.2	16.1
1.5	11.9	11.9	12.2	12.9	12.2	13.6	12.2	14.2	12.2	14.7	12.2	15.0	12.2	15.3	12.2	15.5	12.2	15.7	12.2	15.8
1.8	10.7	10.7	11.9	11.9	12.2	12.7	12.2	13.4	12.2	14.0	12.2	14.4	12.2	14.7	12.2	15.0	12.2	15.2	12.2	15.4
2.1			10.9	10.9	11.9	11.9	12.2	12.6	12.2	13.2	12.2	13.7	12.2	14.2	12.2	14.5	12.2	14.8	12.2	15.0
2.4					11.0	11.0	11.9	11.9	12.2	12.5	12.2	13.1	12.2	13.6	12.2	14.0	12.2	14.3	12.2	14.6
2.7							11.1	11.1	11.9	11.9	12.2	12.5	12.2	13.0	12.2	13.4	12.2	13.8	12.2	14.1
3.0									11.2	11.2	11.9	11.9	12.2	12.4	12.2	12.9	12.2	13.3	12.2	13.6
3.3											11.3	11.3	11.9	11.9	12.2	12.4	12.2	12.8	12.2	13.2
3.6											10.7	10.7	11.3	11.3	11.9	11.9	12.2	12.3	12.2	12.7
3.9													10.8	10.8	11.4	11.4	11.9	11.9	12.2	12.3
4.2															10.9	10.9	11.4	11.4	11.9	11.9

See Double X Brace BR09-07 when using a U Pier Head & BR09-04 when using a L Pier Head for heights within this area

C	CERTIFICATION STAMP CHANGED	MR	18/11/22
B	PROTECTIVE COATING NOTE ADDED	MR	11/05/22
REV.	DESCRIPTION	DRN.	DATE

