SPECIFICATION-OF-INTENT

ISSUED FOR
DEVELOPMENT APPROVAL
COMPRISING OF
PROVISIONAL DEVELOPMENT PLAN CONSENT
PROVISIONAL BUILDING RULES CONSENT

***MISCION PTY LTD**
STRUCTURAL DESIGN
Maitland, South Australia
www.miscion.com.au
examples@miscion.com.au
*also T/A Roy Harrison & Associates

Example No - 1788

October 2005

for

PROPOSED CANOPY MODBURY HEIGHTS

DRAWING INDEX & DOCUMENT STATUS

DRAWING NUMBER	TITLE	DOCUMENT REVISION ASSOCIATED WITH (RoV) 0
	GENERAL	
1788/G00	DRAWING INDEX	A
1788/G01	GENERAL NOTES	A
1788/G02	GENERAL NOTES	A
	STRUCTURAL	
1788/S01	SITE PLAN	A
1788/S02	FOOTING PLAN	A
1788/S03	ATTACHMENT PLAN	A
1788/S04	FRAMING PLAN	A
1788/S05	ELEVATIONS	A

RECORD OF VARIANCE (RoV) No.	DESCRIPTION OF VARIANCE
0	Original Design Concept.

SPECIFICATION–OF–INTENT

NOTES
1) S/S = superseded document.

Development Approval

***MiScion Pty Ltd**
STRUCTURAL DESIGN
www.miscion.com.au
examples@miscion.com.au
*T/A Roy Harrison & Associates

Proposed Canopy
--
Modbury Heights
--
STRUCTURAL
DRAWING INDEX

DRAWN	LJS
DESIGNED	LJS
CHECKED	
SCALE	as shown — DO NOT SCALE

SIZE	DRAWING NUMBER	REVISION
A4	1788/G00	A

CAD FILE : c1788general.dwg Thu 27 Oct 2005 16:48

GENERAL

1. The builder shall ensure that the process of construction is supervised by an appropriately qualified person.
2. The Building Code of Australia (BCA) is adopted as the primary reference specification for objective, function and performance.
3. The South Australian Housing Code (SAHC) is adopted as a specification of acceptable product and process unless noted otherwise.
4. The project specific specification–of–intent comprises of the documents listed on the cover sheet.
5. This project specification takes precedence over the BCA and the SAHC unless the BCA imposes higher levels of performance.
6. The scope of the SAHC is extended to the BCA class of the current building project subject to:
   a) The SAHC shall not be used for the sizing of Structural members
7. All materials and workmanship shall be in accordance with the latest editions of the relevant Australian codes unless noted otherwise (uno).
8. The structural drawings shall be read in conjunction with these Construction Notes and associated drawings, and with such other written instructions as may be issued by the Engineer, during the course of construction.
9. All dimensions in millimetres(mm) unless noted otherwise.
10. The Contractor shall verify setting out dimensions shown on the drawings by measurement on site.
11. The structure has been designed to meet the requirements of the Code or Standard relevant to the facility in its in–service condition. During construction and prior to hand–over the Contractor shall, at all time, ensure that the structure is protected from over–stressing and instability due to any causes whatsoever.
12. Details of component parts of each structure are typical only. Where items are not detailed the contractor or fabricator shall use similar methods to those shown on the drawings.
13. The contractor shall provide all cleats and holes for fixing to steel, timber and other components as required by the engineering and architectural drawings whether or not shown.
14. All beams shall be fabricated and installed with natural camber up.
15. The quality characteristics of all materials and components used shall be verifiable against this specification upon request.

BASIS OF DESIGN

1. Structure Importance Level : 2 (Normal)
2. Design wind loading as noted on framing plans.
3. Design live loading : Roof = 0.25 kPa
4. A maximum allowable bearing pressure of 100kPa has been assumed.
5. Footings shall be placed centrally under walls and columns uno.
6. All variations from the design specification to be referred to the design engineer for approval before proceding.

STRUCTURAL CONCRETE

1. Concrete quality shall be as tabulated, and verifiable

Concrete Element	Exposure Class'n	Class/ Grade	Slump mm	Aggregate Size mm	Cement Type
Footing Piers & Pads	A2	N20	80	20	GP

STRUCTURAL STEELWORK

1. All shop and field welds shall be classification General–Purpose (GP) uno.
2. Continuous fillet weld (CFW) shall be the lesser of: – 3mm or the thickness of the thinner element joined.
3. Butt welds shall be complete penetration(CPBW) type.
4. Bolt designation: 4.6/S refer to commercial bolts grade 4.6, tightened using a standard wrench to a snug–tight condition.
5. All bolts shall be 4.6/S uno.
6. Bolts in slotted holes shall be "finger tight" and supplied with lock nuts.
7. Seal weld a 3mm plate to the ends of all hollow sections uno.
8. All damage to protective coatings as a result of transport, welding or other building operations shall be repaired in accordance with relevant codes as approved.
9. Welds to cold–formed sections shall be continuous fillet M.I.G. welds of a size equal to the thinnest section of the material joined, wire brushed and coated with zinc silicate paint.
10. Surface treatment and coating:

Element	Surface Treatment	Treatment or Coating
All steel fitments inc–luding Hold Down Bolts, Nuts & Washers, Cast–in steel items, external steelwork walkways & Hand–railing	. . Chemical Treatment . . .	. . Hot Dip Galvanising . . .
All other steelwork . . .	Grit blast to near white metal finish . .	Inorganic Zinc Silicate with average thickness 85 microns .

SPECIFICATION–OF–INTENT

Development Approval

*MiScion Pty Ltd
STRUCTURAL DESIGN
www.miscion.com.au
examples@miscion.com.au
*T/A Roy Harrison & Associates

Proposed Canopy
--
Modbury Heights
--
STRUCTURAL GENERAL NOTES

DRAWN	LJS
DESIGNED	LJS
CHECKED	
SCALE	as shown DO NOT SCALE

SIZE	DRAWING NUMBER	REVISION
A4	1788/G01	A

CAD FILE : c1788General.dwg Thu 27 Oct 2005 16:48

STRUCTURAL TIMBER

1. Items not explicitly described are to be to the requirements of AS1720 and AS1684.2 and the TDA construction guide for Carports, Verandahs & Pergolas.
2. Vertical Nail lamination to increase breadth of members to AS1684.2 clause 2.3
3. Posts and Rafters shall not be spliced.
4. Roof Battens shall be continuous spanned, and spliced to AS1684.2 clause 7.2.20
5. Ridge boards spliced in accordance with AS1684.2 clause 7.2.12.2
6. Fascia beams spliced at post supports.
7. Structural form is a collar–tied roof truss, therefore collar ties required to all rafters, placed at 1/3 of the rise above fascia support.
8. Post anchorage:
   a) Steel posts cast into concrete pier: embedment the lesser of full depth of pier less 100mm or 450mm embedment.
   b) Timber posts: two Pryda PSQ600 post supports per post (Free Standing canopy)
   c) Timber posts: one Pryda PSQ600 post support per post (attached canopy). Refer TDA guide Figure 3 for orientation.
   d) Timber posts: one stirrup post support per post with knee braces to corners of canopy. Refer TDA guide page 4.

CONNECTION SCHEDULE

JOINT	Canopy width less than 4.2m	Canopy width greater than 4.2m but less than 7.2m
Post/Fascia Beam	2 M10–4.6/S Bolts + ø22.5 washers	2 M12–4.6/S Bolts + ø22.5 washers
Fascia/Rafter	a) 5/ ø2.8 Nails each side of rafter b) Joist Hanger to Rafter : 5/ ø2.8 Nails each side of rafter and Joist Hanger to Fascia: 5/ ø2.8 Nails each side of rafter	2 No. 14 Type 17 wood screws.
Rafter/Ridge	5/ ø2.8 Nails each side of rafter and 32x0.8 steel Strap over ridge with 6/ø2.8 flat head Nails each end.	2 No. 14 Type 17 wood screws. + 90x45 MGP10 Ridge Collar, with 1M10 bolt + ø22.5 washers each end.
Collar–Tie/Rafter	2M10 bolts + ø22.5 washers each end for canopy spans less than 3m, increase to 3M10 bolts for canopy spans greater than 3m.	3M10 bolts + ø22.5 washers each end
Roof Batten/Rafter	1 No. 14 Type 17 Bugle Head Screw, 50mm penetration. (min. length 95mm)	

ATTACHMENT OF CANOPY TO EXISTING STRUCTURE, AND STRENGTHENING OF EXISTING STRUCTURE

1. Beams not to overhang connection brackets, unless beams and house structure designed to suit.
2. Canopy Dimension to be a whole number multiple of the rafter spacing.
3. Extenda Brackets: Brackets to be fastened to rafter directly above house wall framing, else rafter stiffening to be provided.
4. Long Pergola brackets: Brackets not to extend beyond house fascia more than 150mm
5. Joist hangers: Fascia to rafter connection to be strengthened using Pryda Fascia support bracket.
6. Fabricated brackets as detailed to achieve full support of canopy at beam ends, and house corners.
7. Posts to be provided at hip corners.
8. Minimum house structure:
   a) Rafters : 120x35 F5 not notched more than 40mm (Not greater than 600 c/c for tiled roof, not greater than 1200 c/c for sheet roof)
   b) Fascia : 190 x 19
8. Rafter Stiffener to all rafters supporting connection brackets. Minimum length of stiffener as specified or full length of rafter, which ever is the lesser. Timber stiffeners fixed to rafters with 2/ ø3.06 x 75 long nails at 150 centres. Rafter Backspan support connection to be strengthened with 1/30x0.8 steel strap AS1684.2–1999 Table 9.22, detail (b) unless bolted connection present.
9. Tie–downs to all rafters supporting connection brackets, exceptions as noted.
10. Type–1 Tie–Down: 1/30x0.8 steelstrap over rafter, 1M10 bolt each end to added steelwork.
11. Type–2 Tie–Down: 1/30x0.8 steel strap looped around ø10 rod expoxy doweled to brickwork; minimum of 1.2m wide x 12 courses high of brickwork above anchor point. Strap fastened to rafter with 3/ø2.8 nails each end.
12. Type–3 Tie–Down: Duragal angle 30x30x2.5 CA, 1M10 bolt top to rafter, bottom anchored above 2nd course of brickwork from bottom of wall, minimum of 1.2m wide x fullheight brickwork above anchor point free from openings.
13. Type–4 Tie–Down: M10 threaded steel rod, welded to 40x40x2 SHS C350LO tube at lower end. Tube sealed each end with 5 PL end plates. Bottom anchored above 2nd course of brickwork from bottom of wall, minimum of 1.2m wide x fullheight brickwork above anchor point free from openings. Top bolted through bottom flange of added steel z–lintels, or over batten as required.
14. For openings upto 2.4m wide install Prydabeam PB1.4 z–section. Beam to extend to first stud each side of opening, fasten to manufacturers instructions. Install Type–4 tie–downs to each end of lintel, anchor point to be centre of 1.2m width of brickwork. Ensure 2.4m width of brickwork between adjacent openings.
15. Multiple rafters maybe tied–down by the use of one Type–4 Tie–down to each end of an over batten (35x70 F7). Threaded end of tie–down to pass through batten no more than 50mm from side of rafter support. Each rafter to be strapped to over batten. Tie–downs at no more than 2.4m centres, each anchored into 1.2m width of fullheight brickwork.
16. If inadequate brickwork to install Type–2 tie–downs then Type–4 tie–downs with over battens shall be used. Over batten postioned to achieve required area of brickwork for Type–4 tiedowns.
17. Canopies not to be attached to light weight timber framed construction. Additional posts and piers to be provided adjacent to house.
18. Fascia plates to be bolted to house gable end walls only, using M10 dynabolts at 600 c/c, staggered vertically. Minimum of 2m rise of gable end above fascia at location of ridge, else tie fascia plate to bottom of wall using ø10 steel rods at 2.4m centres.

SPECIFICATION–OF–INTENT

Development Approval

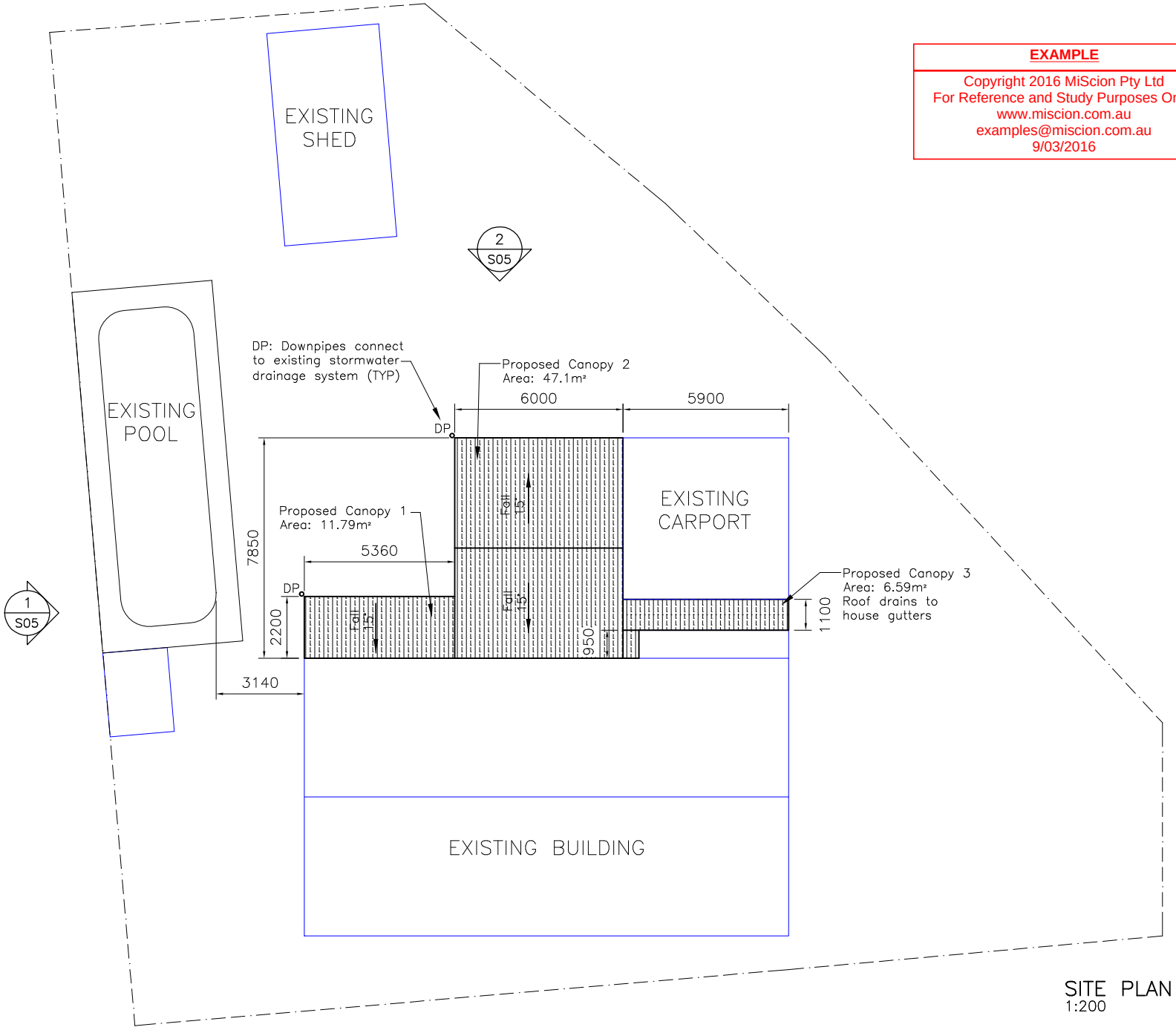
*MiScion Pty Ltd
STRUCTURAL DESIGN
www.miscion.com.au
examples@miscion.com.au
*T/A Roy Harrison & Associates

Proposed Canopy
--
Modbury Heights
--
STRUCTURAL GENERAL NOTES

DRAWN	LJS
DESIGNED	LJS
CHECKED	
SCALE	as shown — DO NOT SCALE

SIZE	DRAWING NUMBER	REVISION
A4	1788/G02	A

CAD FILE : c1788General.dwg Thu 27 Oct 2005 16:48



SPECIFICATION–OF–INTENT

NOTES

1) Site dimensions are approximate only. Fabricator and Builder shall confirm all dimensions before commencing work.

2) Eaves overhang assumed to be 640mm from face of wall to fascia, measured on plan.

Area of proposed canopies: 66.5m²

Development Approval

*MiScion Pty Ltd
STRUCTURAL DESIGN
www.miscion.com.au
examples@miscion.com.au
*T/A Roy Harrison & Associates

Proposed Canopy
--
Modbury Heights
--
STRUCTURAL SITE PLAN

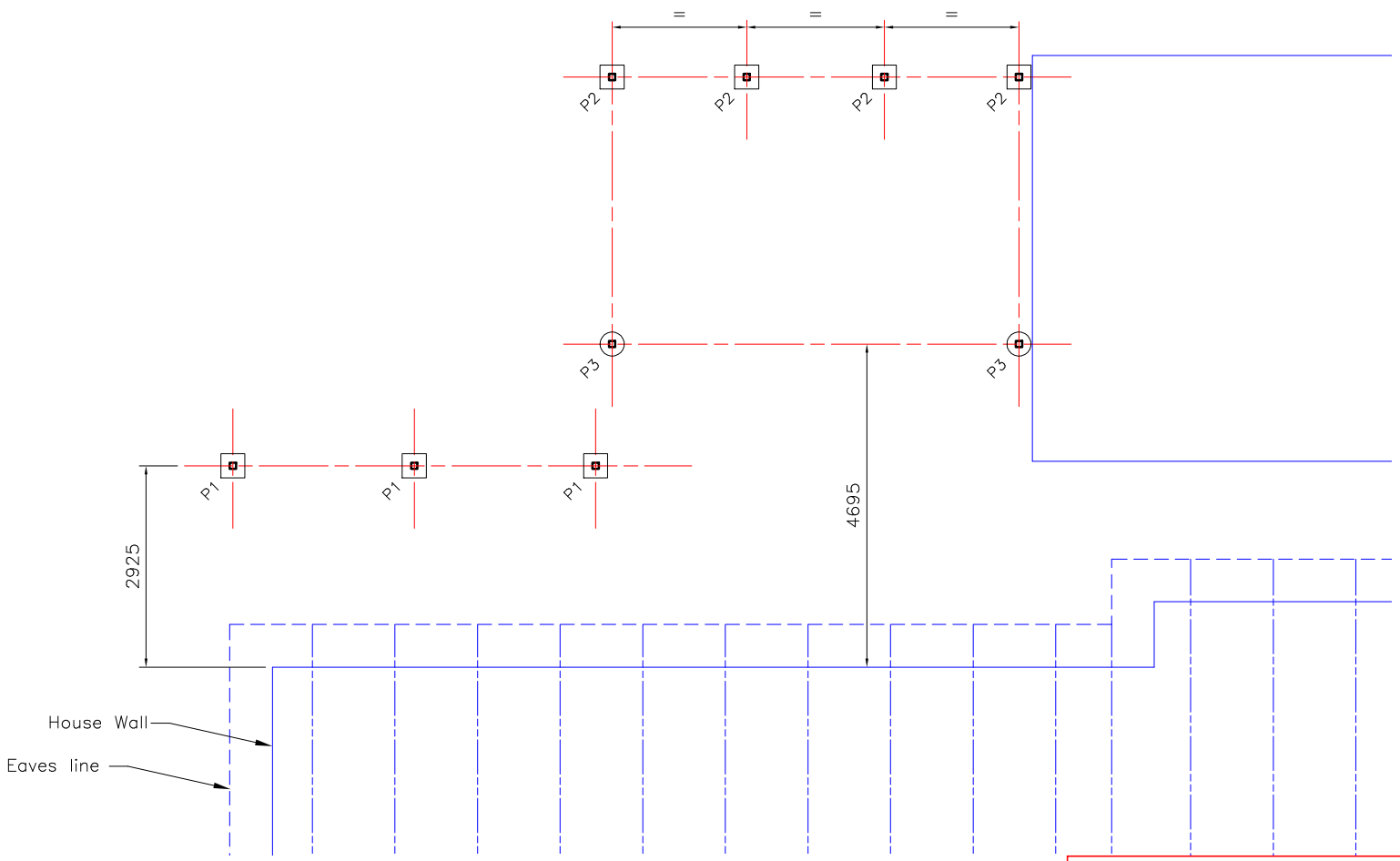
DRAWN	LJS
DESIGNED	LJS
CHECKED	
SCALE	as shown / DO NOT SCALE

SIZE	DRAWING NUMBER	REVISION
A4	1788/S01	A

CAD FILE : c1788Struct.dwg | Thu 27 Oct 2005 16:48

FOOTING SCHEDULE

P1: 350SQ. x 600 DEEP CONCRETE PIER
P2: 350SQ. x 600 DEEP CONCRETE PIER
P3: ø350 x 1000 DEEP CONCRETE PIER



FOOTING LAYOUT
1:100

SPECIFICATION–OF–INTENT

Development Approval

***MiScion Pty Ltd**
STRUCTURAL DESIGN
www.miscion.com.au
examples@miscion.com.au
*T/A Roy Harrison & Associates

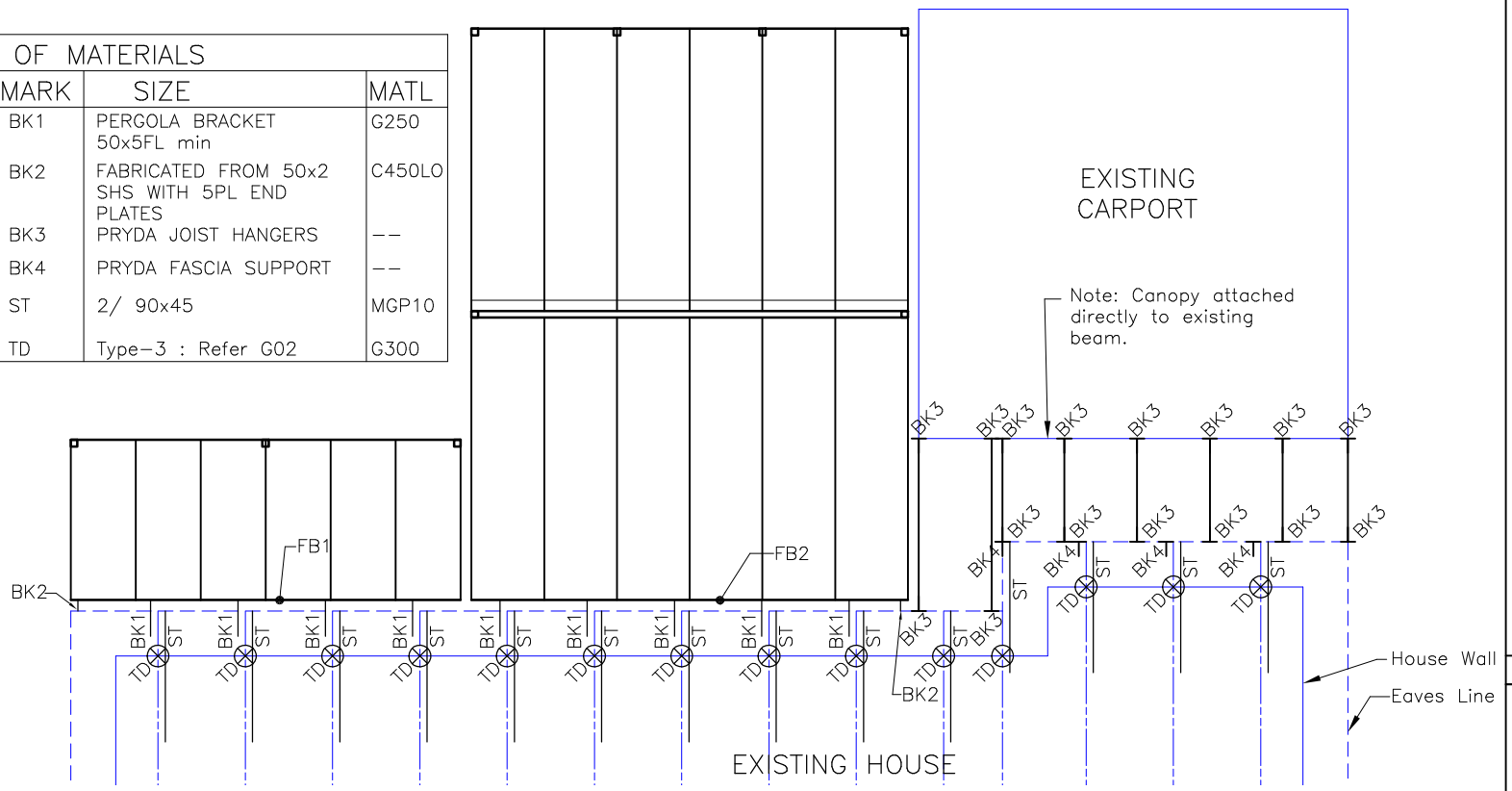
Proposed Canopy
--
Modbury Heights
--
STRUCTURAL
FOOTING PLAN

DRAWN	LJS
DESIGNED	LJS
CHECKED	
SCALE	as shown — DO NOT SCALE
SIZE	A4
DRAWING NUMBER	1788/S02
REVISION	A

CAD FILE : c1788Struct.dwg | Thu 27 Oct 2005 16:48

SCHEDULE OF MATERIALS

MEMBER	MARK	SIZE	MATL
BRACKETS	BK1	PERGOLA BRACKET 50x5FL min	G250
	BK2	FABRICATED FROM 50x2 SHS WITH 5PL END PLATES	C450LO
	BK3	PRYDA JOIST HANGERS	--
	BK4	PRYDA FASCIA SUPPORT	--
STIFFENER	ST	2/ 90x45	MGP10
TIE DOWN	TD	Type-3 : Refer G02	G300



WARNING: Roof Cladding Shall NOT be attached to frame until house rafter strengthening and tie downs have been installed.

Note: Location of windows and doors to existing not shown. Tie down and strengthening shown indicative. Refer general notes sheet G02 for detail concerning tie downs and spanning of openings.

ATTACHMENT/STRENGTHENING PLAN
1:100

SPECIFICATION-OF-INTENT

NOTES
Member sizes taken from AS1684.2 & supplements

Wind Class: N1

Development Approval

*MiScion Pty Ltd
STRUCTURAL DESIGN
www.miscion.com.au
examples@miscion.com.au
*T/A Roy Harrison & Associates

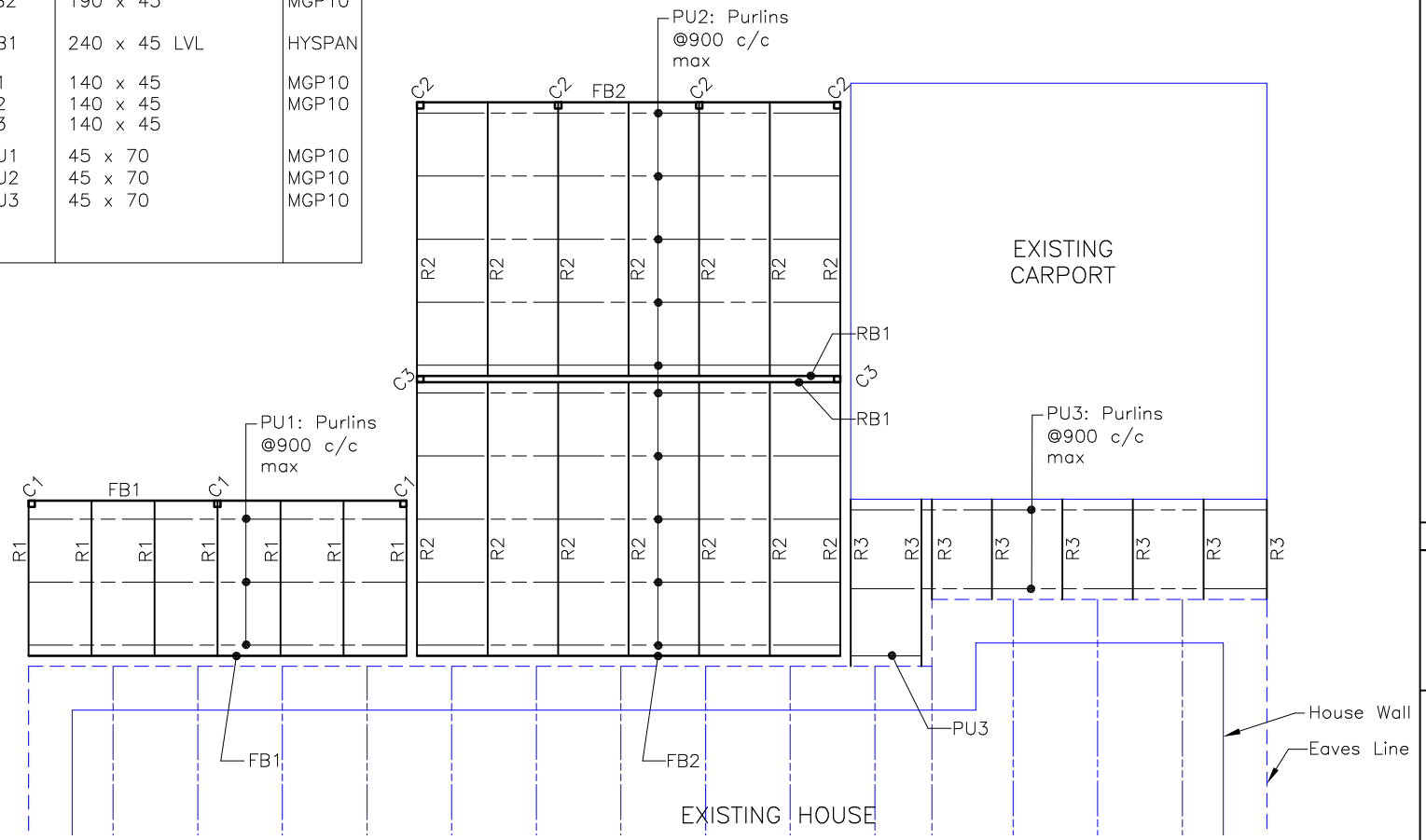
Proposed Canopy
--
Modbury Heights
--
STRUCTURAL ATTACHMENT PLAN

DRAWN	LJS
DESIGNED	LJS
CHECKED	
SCALE	as shown / DO NOT SCALE
SIZE	A4
DRAWING NUMBER	1788/S03
REVISION	A

CAD FILE : c1788Struct.dwg | Thu 27 Oct 2005 16:48

SCHEDULE OF MATERIALS

MEMBER	MARK	SIZE	MATL
COLUMNS	C1	90 x 90	MGP10
	C2	90 x 90	MGP10
	C3	90x90x2.5 SHS	C450LO
FASCIAS	FB1	190 x 45	MGP10
	FB2	190 x 45	MGP10
BEAMS	RB1	240 x 45 LVL	HYSPAN
RAFTERS	R1	140 x 45	MGP10
	R2	140 x 45	MGP10
	R3	140 x 45	
PURLINS	PU1	45 x 70	MGP10
	PU2	45 x 70	MGP10
	PU3	45 x 70	MGP10



FRAMING PLAN
1:100

WARNING: Roof Cladding Shall NOT be attached to frame until house rafter strengthening and tie downs to dwg. S03 have been installed.

EXAMPLE

SPECIFICATION–OF–INTENT

NOTES
Member sizes taken from AS1684.2 & supplements

Wind Class: N1

Development Approval

*MiScion Pty Ltd
STRUCTURAL DESIGN
www.miscion.com.au
examples@miscion.com.au
*T/A Roy Harrison & Associates

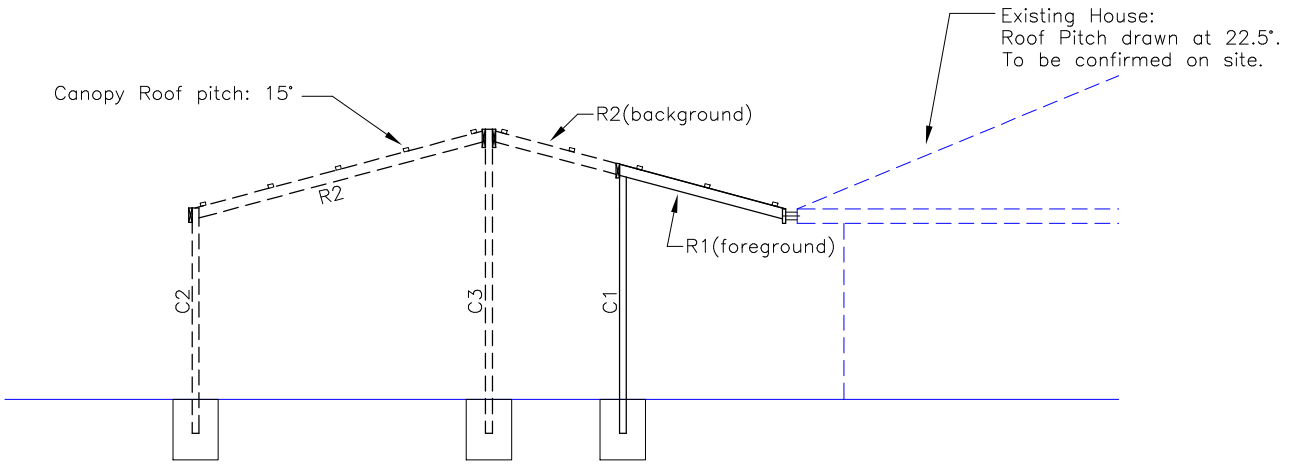
Proposed Canopy
7 Curlew Ct
Modbury Heights

STRUCTURAL FRAMING PLAN

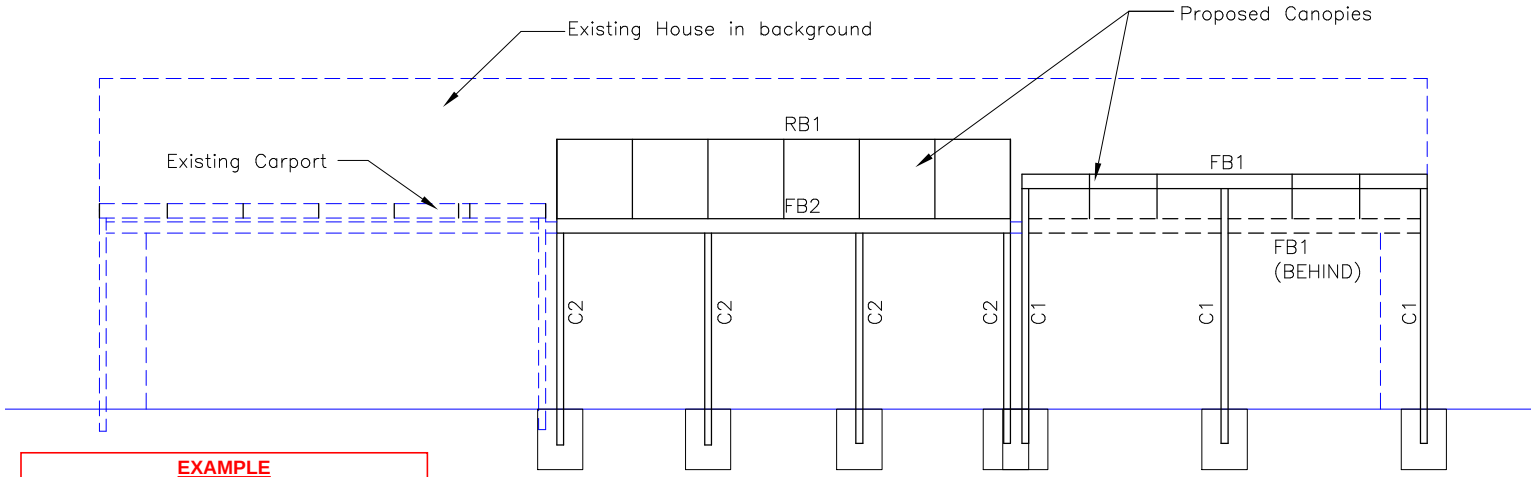
DRAWN	LJS
DESIGNED	LJS
CHECKED	
SCALE	as shown — DO NOT SCALE

SIZE	DRAWING NUMBER	REVISION
A4	1788/S04	A

CAD FILE : c1788Struct.dwg | Thu 27 Oct 2005 16:48



ELEVATION 1/S01
1:100



ELEVATION 2/S01
1:100

SPECIFICATION–OF–INTENT

Development Approval

*MiScion Pty Ltd
STRUCTURAL DESIGN
www.miscion.com.au
examples@miscion.com.au
*T/A Roy Harrison & Associates

Proposed Canopy
--
Modbury Heights
--
STRUCTURAL ELEVATIONS

DRAWN	LJS
DESIGNED	LJS
CHECKED	
SCALE	as shown — DO NOT SCALE

SIZE	DRAWING NUMBER	REVISION
A4	1788/S05	A

CAD FILE : c1788Struct.dwg Thu 27 Oct 2005 16:48