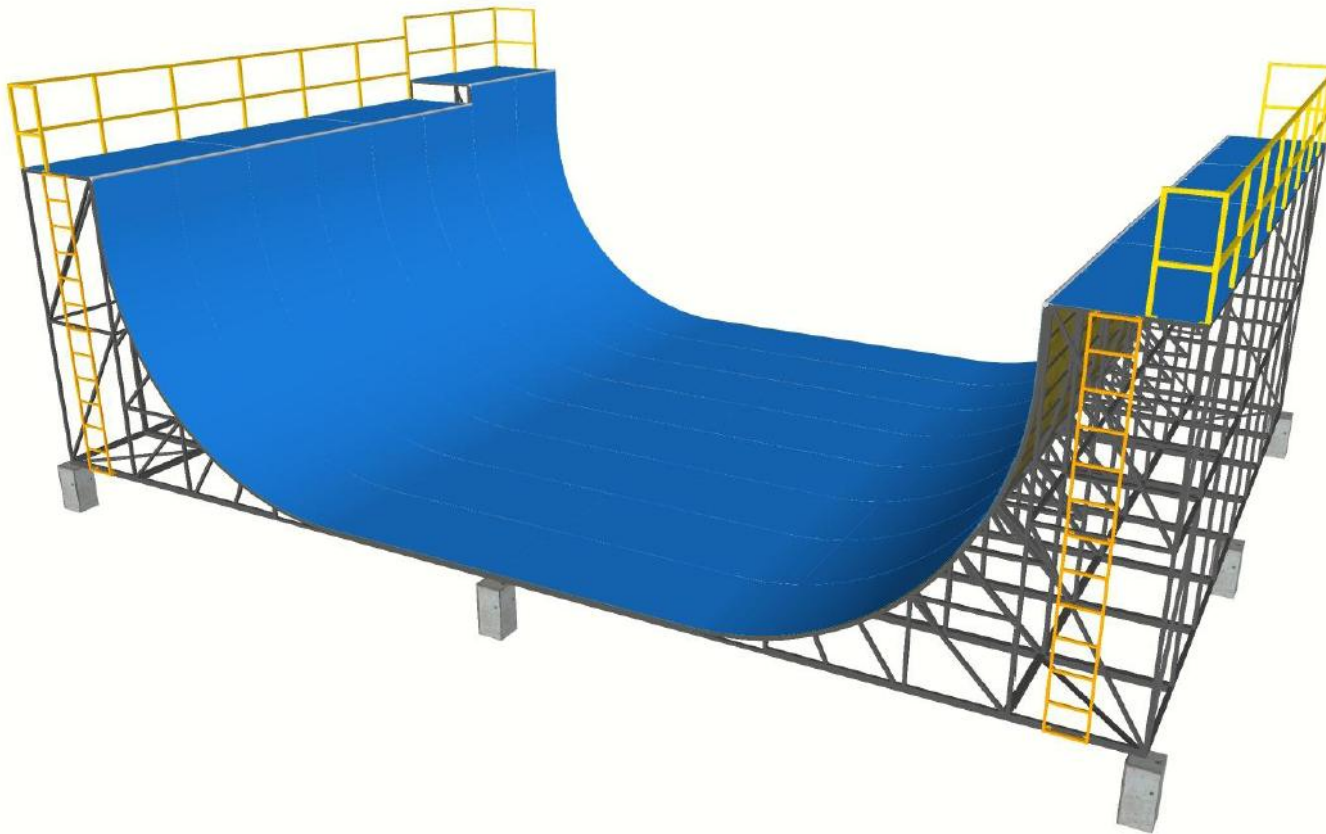
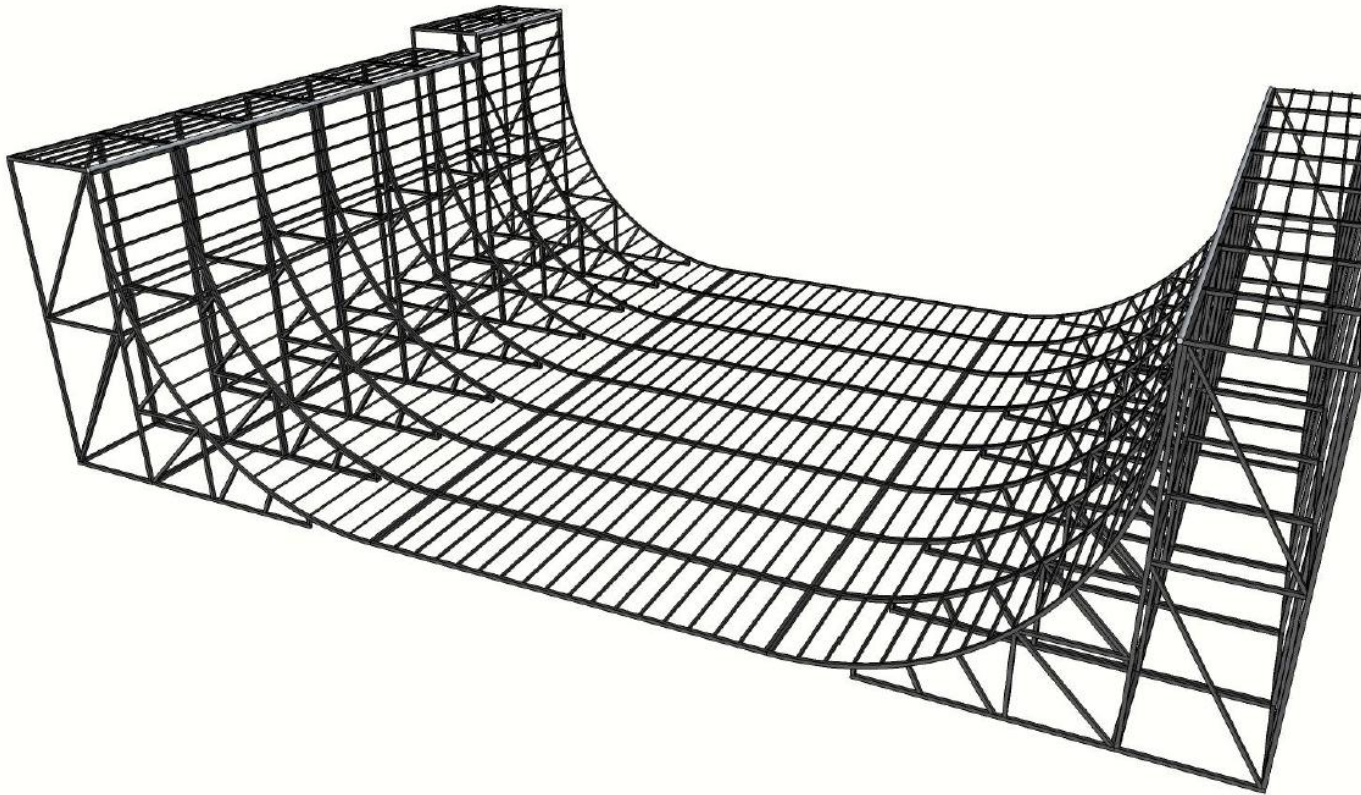


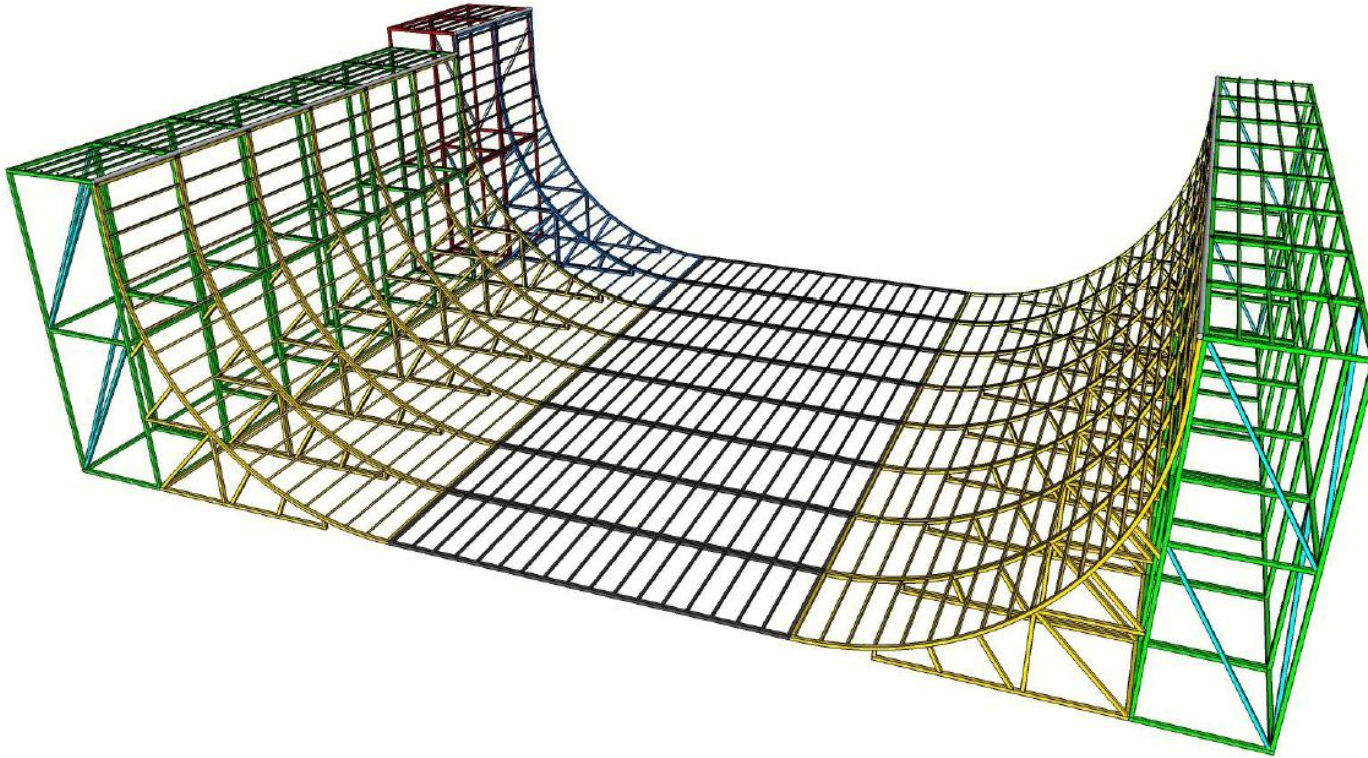
12ft Vert Ramp



Frame View

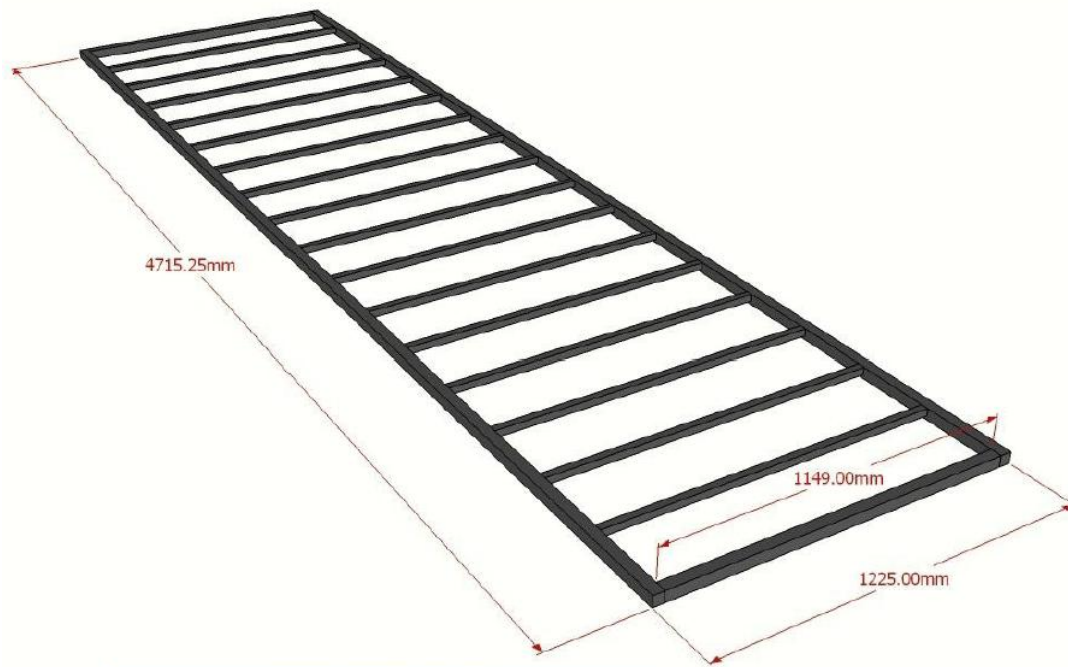


Frame Index



Here you will find where each module in the design goes. Each parts design and measurements can be found by going to the page with the matching dot on the right.

Flat Bottom

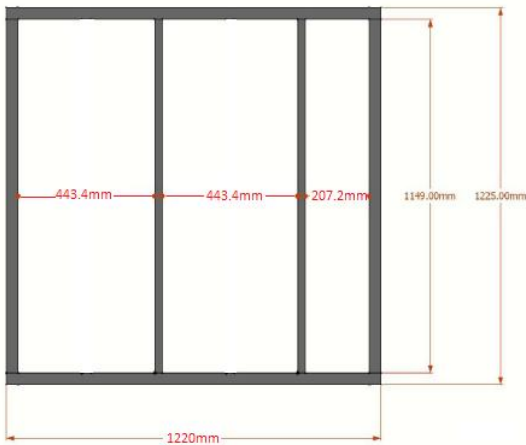
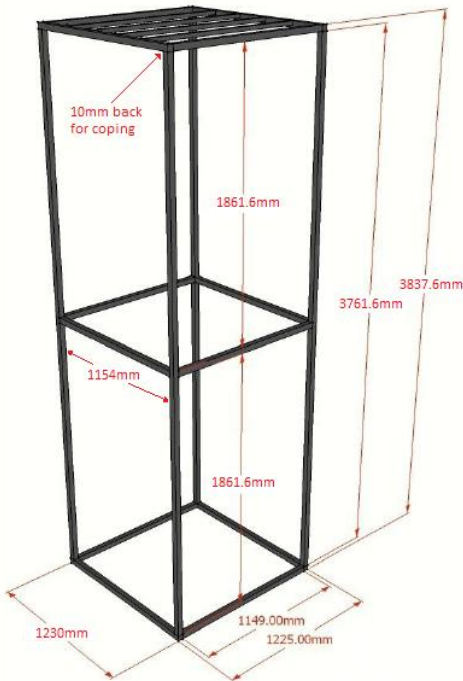


SECTION MATERIALS LIST			
Material Type	Material Size	Length in mm	Qty
Square Tubing	38 x 38 x 2mm	4715.25	2
Square Tubing	38 x 38 x 2mm	1149.00	2
Angle Iron	25 x 25 x 5mm	1149.00	16



[illegible]

Deck Box

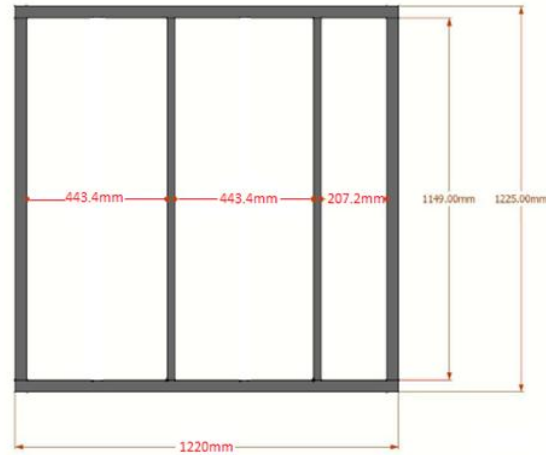
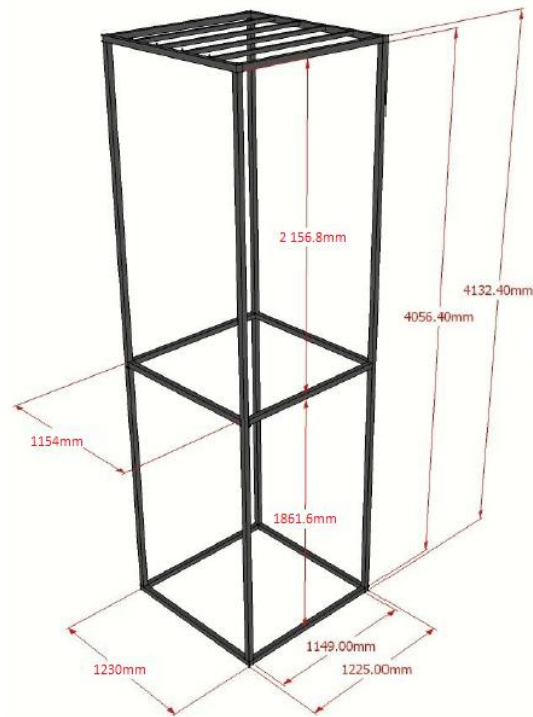


SECTION MATERIALS LIST			
Material Type	Material Size	Length in mm	Qty
Square Tubing	38 x 38 x 2mm	3761.60	4
Square Tubing	38 x 38 x 2mm	1149.00	6
Square Tubing	38 x 38 x 2mm	1154.00	2
Square Tubing	38 x 38 x 2mm	1230.00	2
Square Tubing	38 x 38 x 2mm	1220.00	2
Angle Iron	25 x 25 x 5mm	1149.00	2

Note: The one side of the box is 1,220 mm. The reason behind it is so the ply wood sheet will fit and so the metal surface will hang off on the one side by 5mm to cover the gap between the frame and the coping. Look at the coping detail for more information on this.

Also note on the frame index that the deck boxes going on each corner of the ramp will have four extra angled supports. Find them by their color reference to get the correct lengths and info for them.

Deck Box - Extension

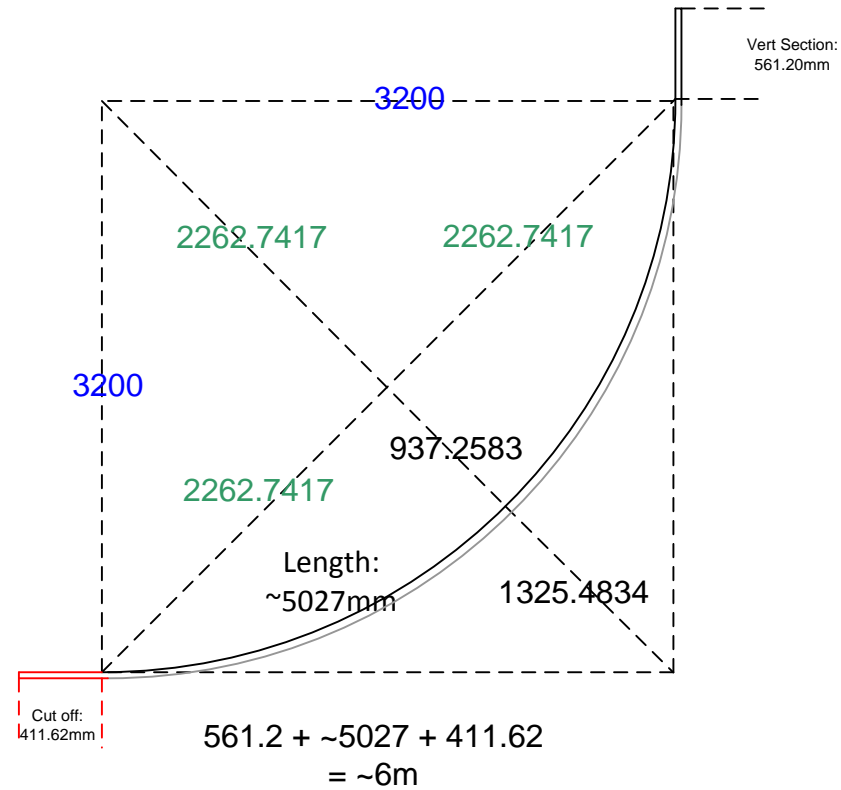


SECTION MATERIALS LIST			
Material Type	Material Size	Length in mm	Qty
Square Tubing	38 x 38 x 2mm	4056.40	4
Square Tubing	38 x 38 x 2mm	1149.00	6
Square Tubing	38 x 38 x 2mm	1154.00	2
Square Tubing	38 x 38 x 2mm	1230.00	2
Square Tubing	38 x 38 x 2mm	1220.00	2
Angle Iron	25 x 25 x 5mm	1149.00	2

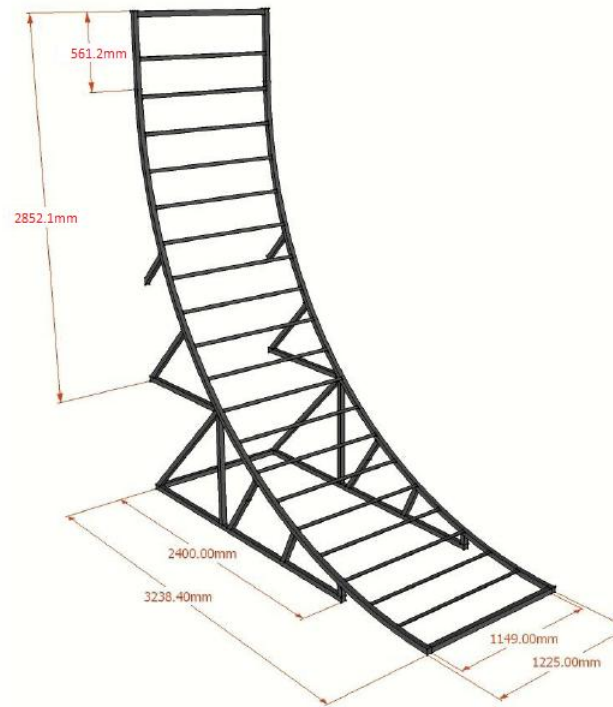
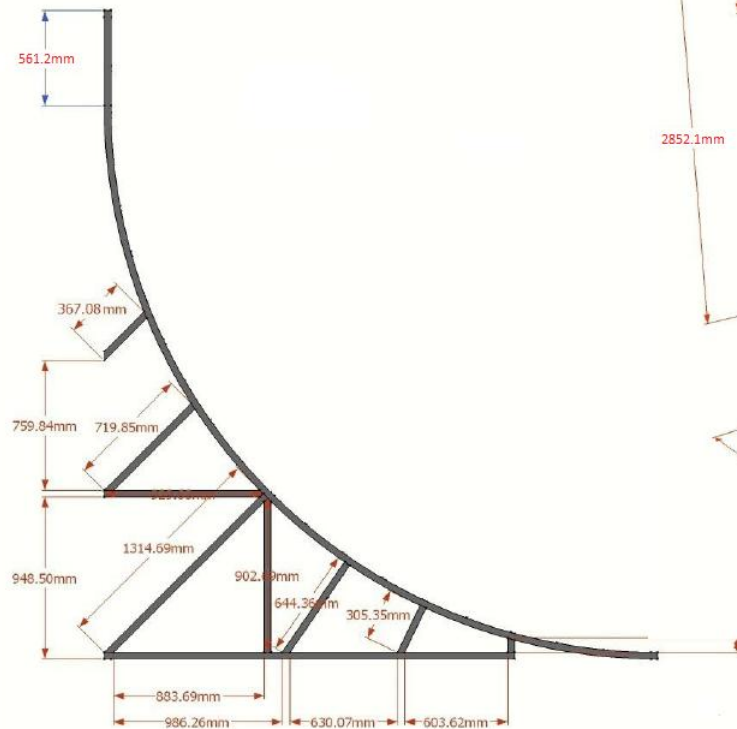
Note: The one side of the box is 1,230 mm. The reason behind it is so the ply wood sheet will fit and so the metal surface will hang off on the one side by 5mm to cover the gap between the frame and the coping. Look at the coping detail for more information on this.

Also note on the frame index that the deck boxes going on each corner of the ramp will have four extra angled supports. Find them by their color reference to get the correct lengths and info for them.

Transition Calculation



Transition - Normal

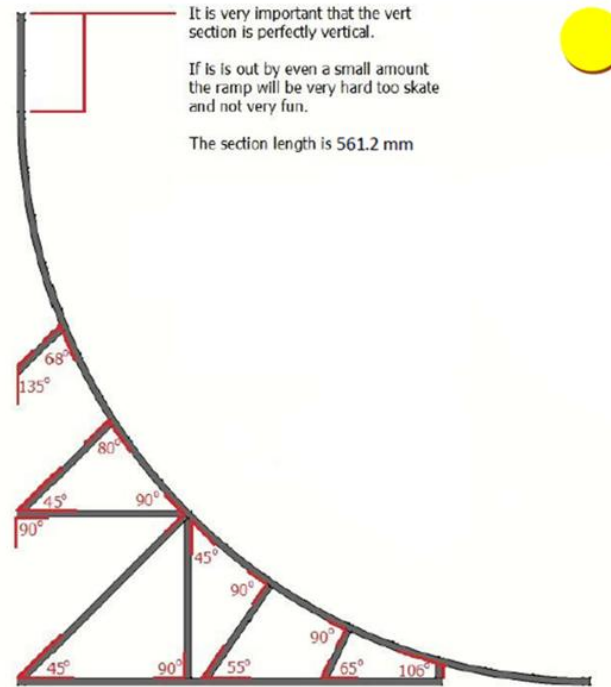


Note: The transition has a radius of 10.5 ft / 3,200.4 mm and the length of the square tube measured on the inside of the bend is 5,027.18 mm. The blue measurement indicates the amount of vert (1.5 ft / 561.2 mm)

The Spacing between the Angle Iron supports is 251.67 mm. When putting in the supports start at the bottom and work your way up. This way the spacing will be the same for the normal and extension sections. You will notice the extensions last support ends very close to the top.

Transition - Normal

SECTION MATERIALS LIST			
Material Type	Material Size	Length in mm	Qty
Square Tubing	38 x 38 x 2mm	5588.38	2
Square Tubing	38 x 38 x 2mm	1149.00	3
Square Tubing	38 x 38 x 2mm	2400.00	2
Angle Iron	25 x 25 x 5mm	1149.00	19
Frame Supports			
(Longest length Given)			
Square Tubing	38 x 38 x 2mm	83.58	2
Square Tubing	38 x 38 x 2mm	305.35	2
Square Tubing	38 x 38 x 2mm	644.36	2
Square Tubing	38 x 38 x 2mm	902.69	2
Square Tubing	38 x 38 x 2mm	1314.69	2
Square Tubing	38 x 38 x 2mm	929.63	2
Square Tubing	38 x 38 x 2mm	719.85	2
Square Tubing	38 x 38 x 2mm	367.08	2



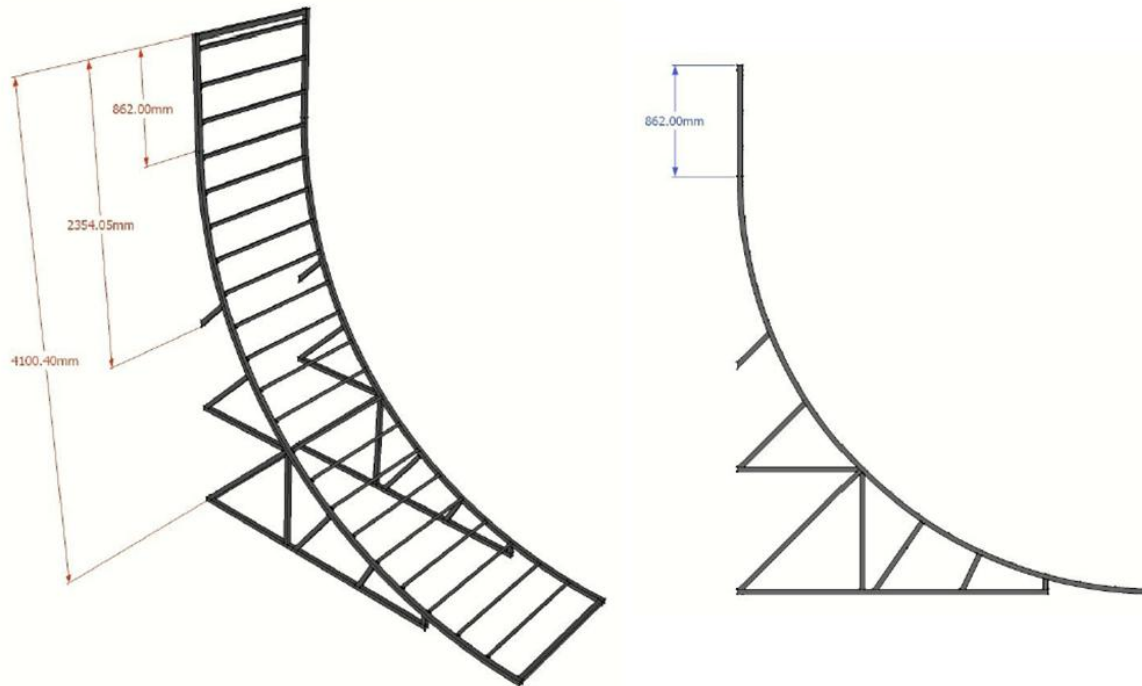
Only the longest edge length is given for the frame supports to allow for the angles to be cut. These angles are only given here as a reference. Too my knowledge they should be correct but make sure by doing some measurements of your own first after building the main structure.

I haven't actually built this ramp yet. So I cannot confirm that the angles I got here is 100% correct but they should be very close.

Please look at the sketch above for Angles.

The 6m Square tube used for the transition needs to be bent by machine to ensure correct radius. It's recommended and easier to use the entire 6m when bending and then allow for a $(6000\text{mm} - 561.2\text{mm} - 5027.18) = 411.62\text{mm}$ straight section at the bottom that needs to be cut of after the bending process.

Transition - Extension



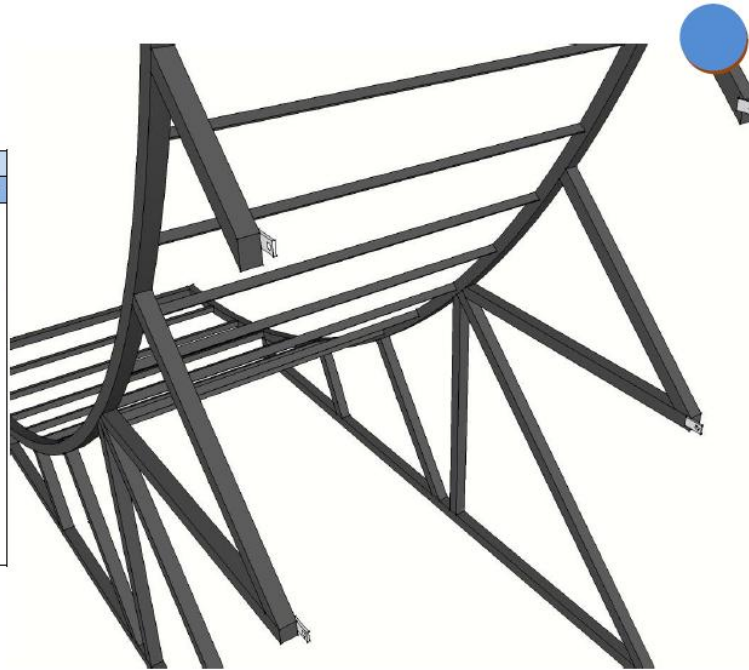
Use the Measurements from the Normal Extension. You will notice that the only difference between them is the vert section which is 862.00 mm and not 561.2 mm

Spacing of Angle Iron supports are the same as for the normal section. The last support just ends very close to the top of the transition. This is done to get a unified look between the extension and normal transition modules.

The Transition Extension section can also be made-up of a normal transition and then addition of 1ft vert section (304.8mm). This might be easier when bending the 6m square tube as mentioned above.

Transition - Extension

SECTION MATERIALS LIST			
Material Type	Material Size	Length in mm	Qty
Square Tubing	38 x 38 x 2mm	5889.18	2
Square Tubing	38 x 38 x 2mm	1149.00	3
Square Tubing	38 x 38 x 2mm	2400.00	2
Angle Iron	25 x 25 x 5mm	1149.00	19
<u>Frame Supports</u> (Longest length Given)			
Square Tubing	38 x 38 x 2mm	83.58	2
Square Tubing	38 x 38 x 2mm	305.35	2
Square Tubing	38 x 38 x 2mm	644.36	2
Square Tubing	38 x 38 x 2mm	902.69	2
Square Tubing	38 x 38 x 2mm	1314.69	2
Square Tubing	38 x 38 x 2mm	929.63	2
Square Tubing	38 x 38 x 2mm	719.85	2
Square Tubing	38 x 38 x 2mm	367.08	2



Materials for the extension are basically the same as the normal transition. The only difference here is that the Square tube for the bends is longer.

Problem with the plan that I wasn't in the mood to fix (Will have to create all images again.) Displayed above is the way the transition was supposed to work from day 1. I forgot to add the flat bar tabs on the inside of the two top supports that connect the transition with its deck box.

Each transitions top two supports need a 60x25x5 mm flat bar tab. They go on the inside and bolt to the deck box.

Remember! Where two transitions and deck boxes meet the bolt will go through the both deck box pillars and both transition support tabs.

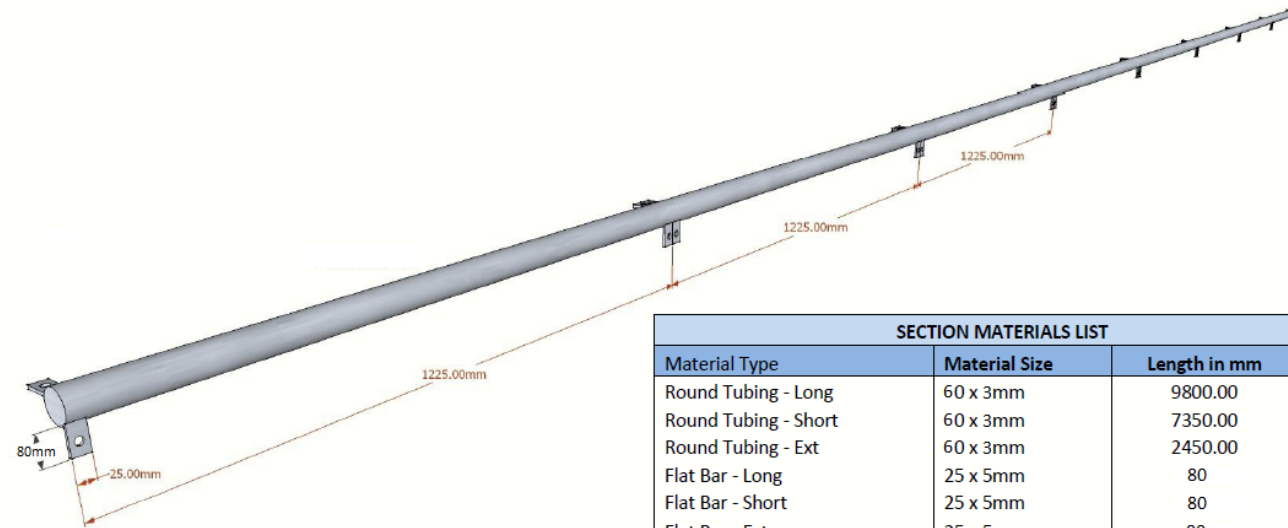
Make sure the bolts are long enough.

Another tab should be put just under the vert sections cross bar (on each side). That would be used to fix vert or top part of transition to box.

Deck Box - Angled Supports



Coping Detail - Long Side



SECTION MATERIALS LIST			
Material Type	Material Size	Length in mm	Qty
Round Tubing - Long	60 x 3mm	9800.00	1
Round Tubing - Short	60 x 3mm	7350.00	1
Round Tubing - Ext	60 x 3mm	2450.00	1
Flat Bar - Long	25 x 5mm	80	32
Flat Bar - Short	25 x 5mm	80	24
Flat Bar - Ext	25 x 5mm	80	12

The steel used to fix the coping (60mmx3mm pipe) to the ramp is 25x5 mm flat bar.

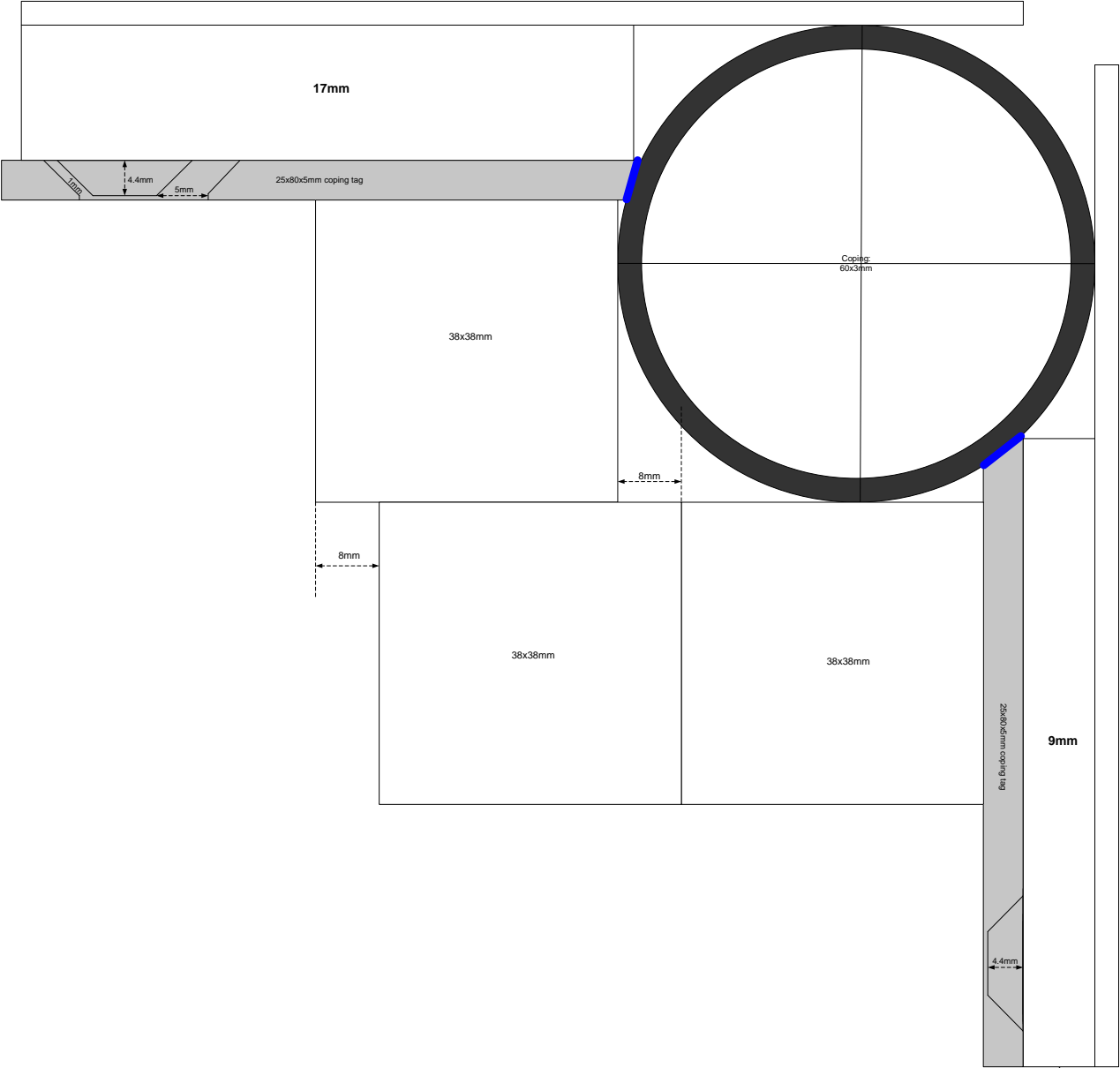
Remember when building the coping follow the next few steps to make sure the tabs are welded to their correct spots.

1. Place the coping in its final resting place or groove and align it properly to both ends.
2. Cut the 80mm long flat bar tabs.
3. Position the tab lengthwise in its correct spot and flat against the frame where it will bolt on to the deck or transition.
4. Tag weld them to the coping.
5. Remove coping and finish welding the tabs.
6. Bolt the coping to its final resting place.

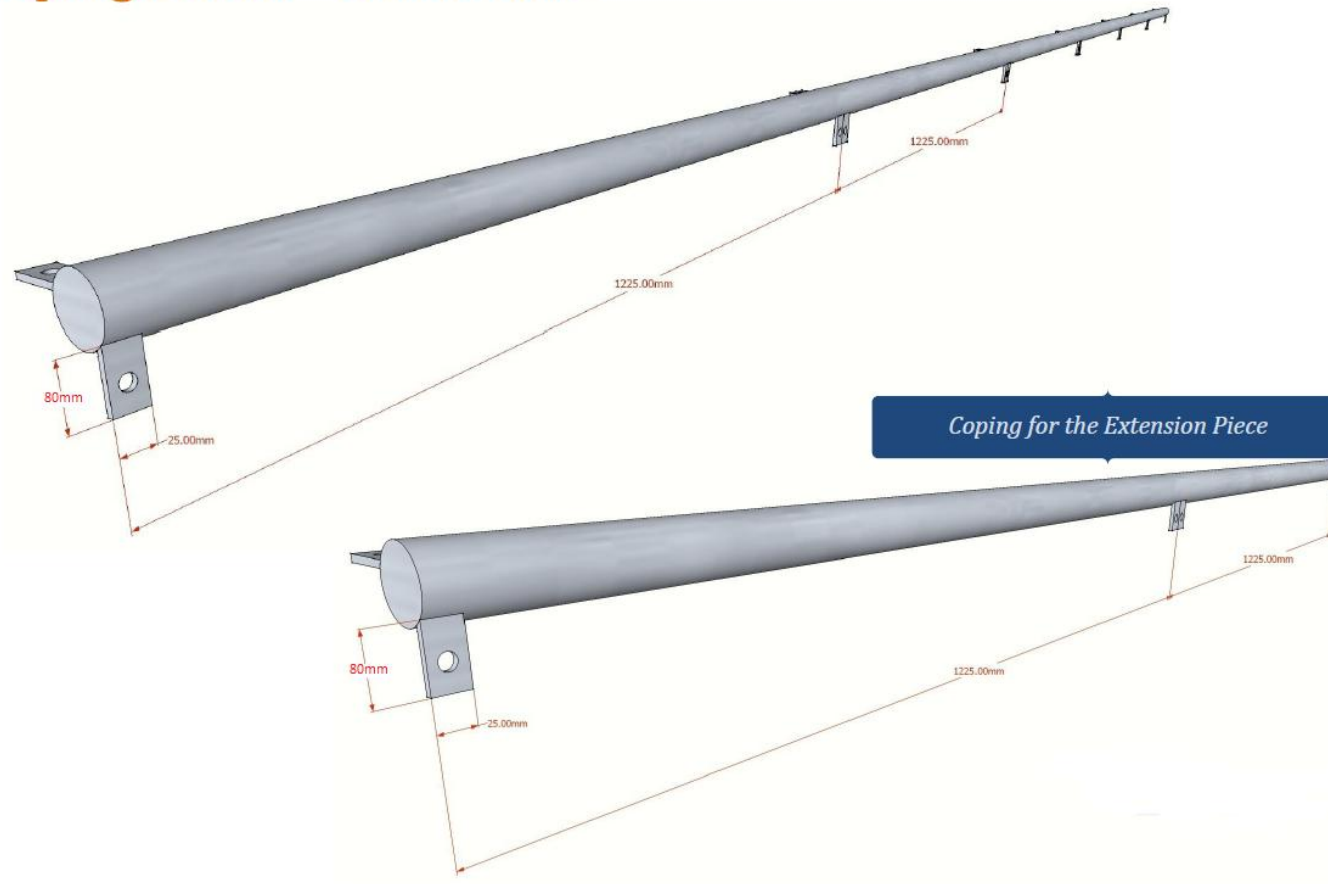
Look at the Detail Photos at the end of this document to get a better idea of how they fix to the frame.

If you like to build the coping before the ramp is finished you could use a coping jig as shown below to ensure that all the tags are in the correct place and correct angle. The coping is one of the most important aspects of the entire ramp and you should take extreme measures to ensure it 100% correct.

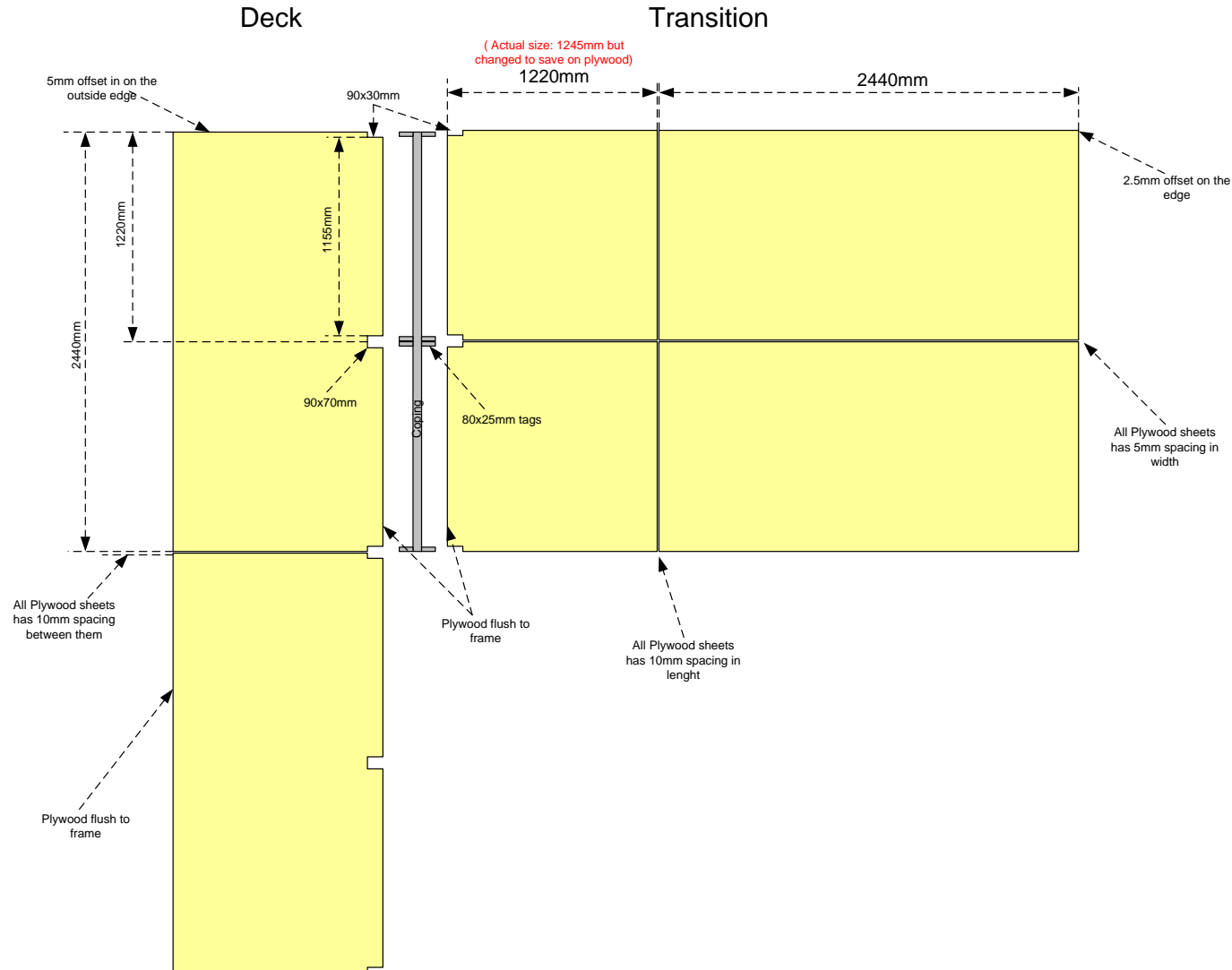
60 mm Coping Jig



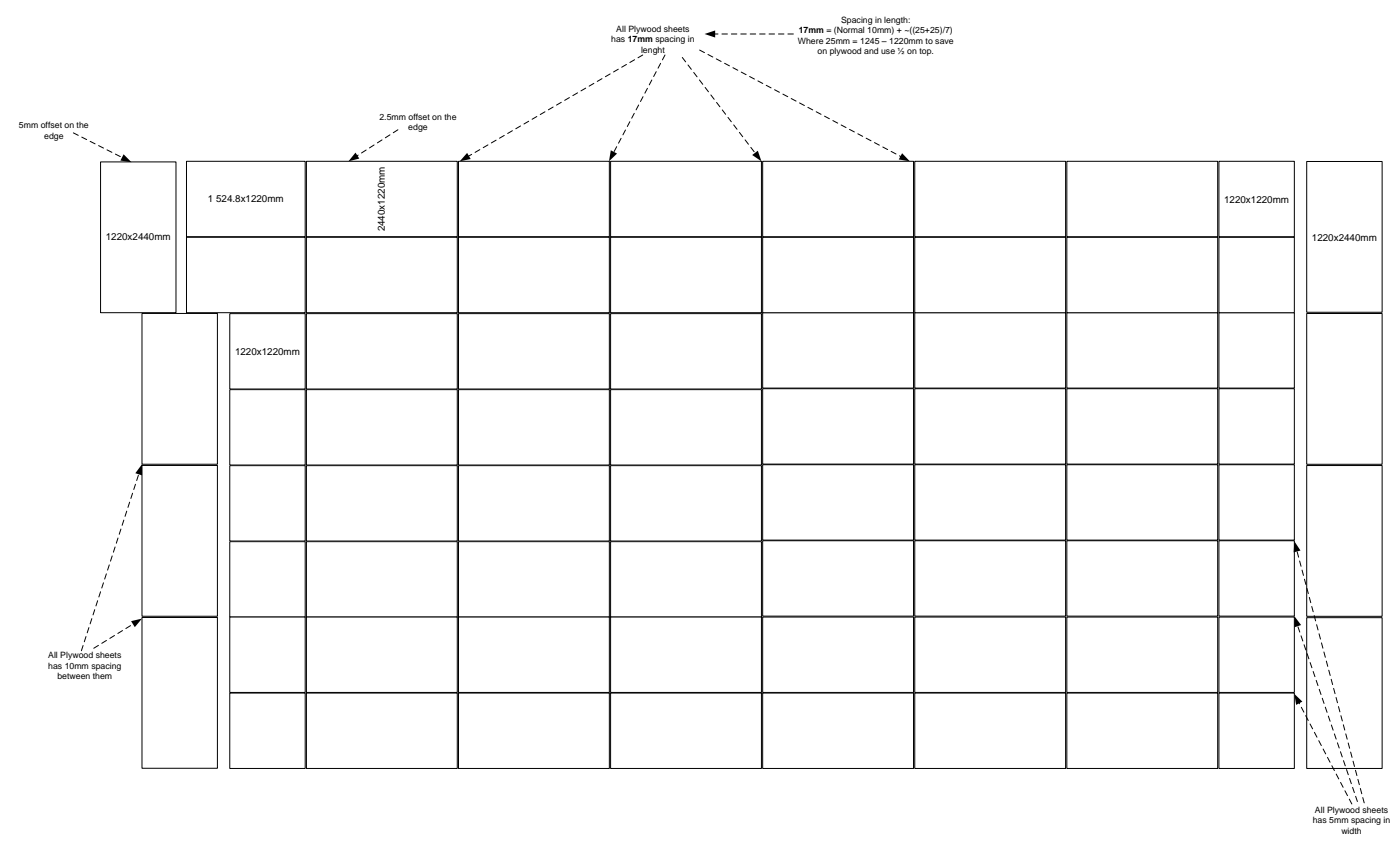
Coping Detail - Short Side



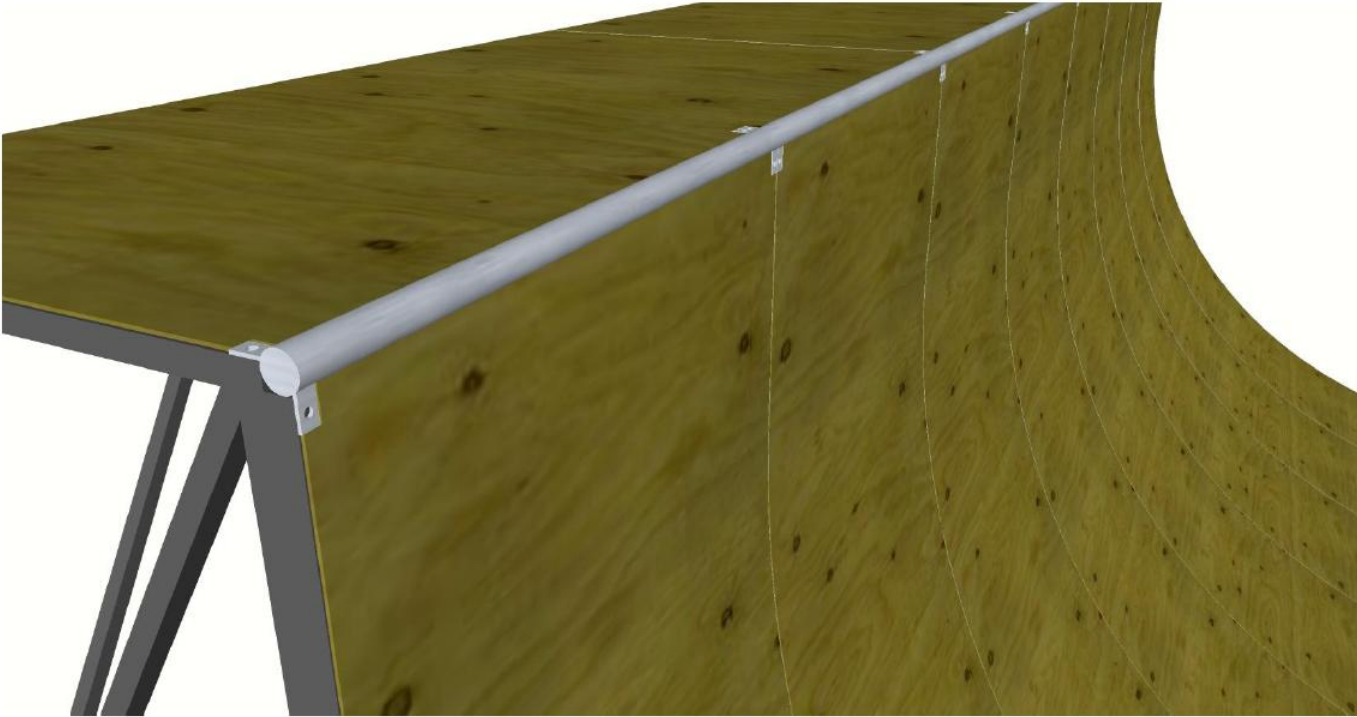
Plywood Deck Box & Transition



Plywood Layout

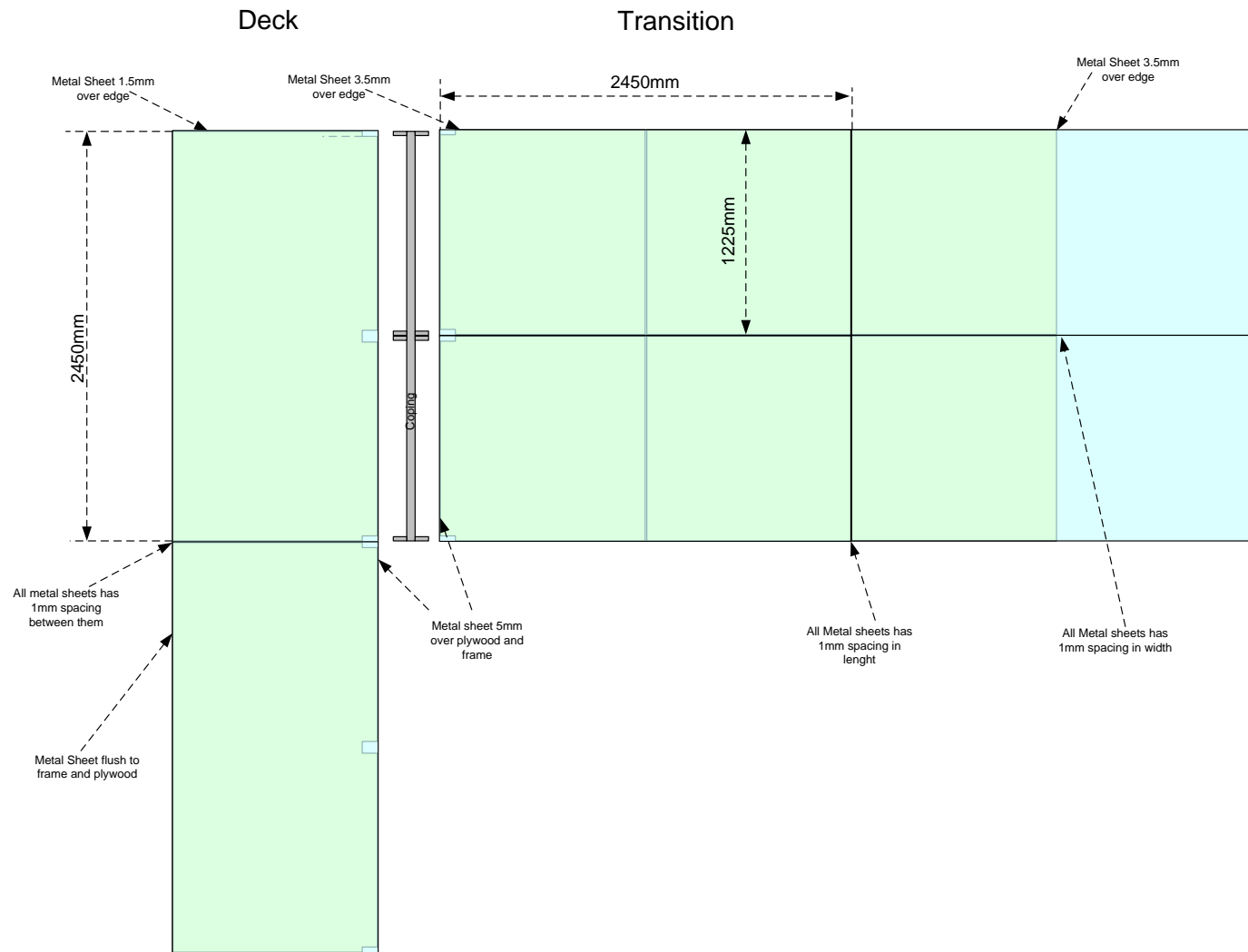


Plywood detail - View

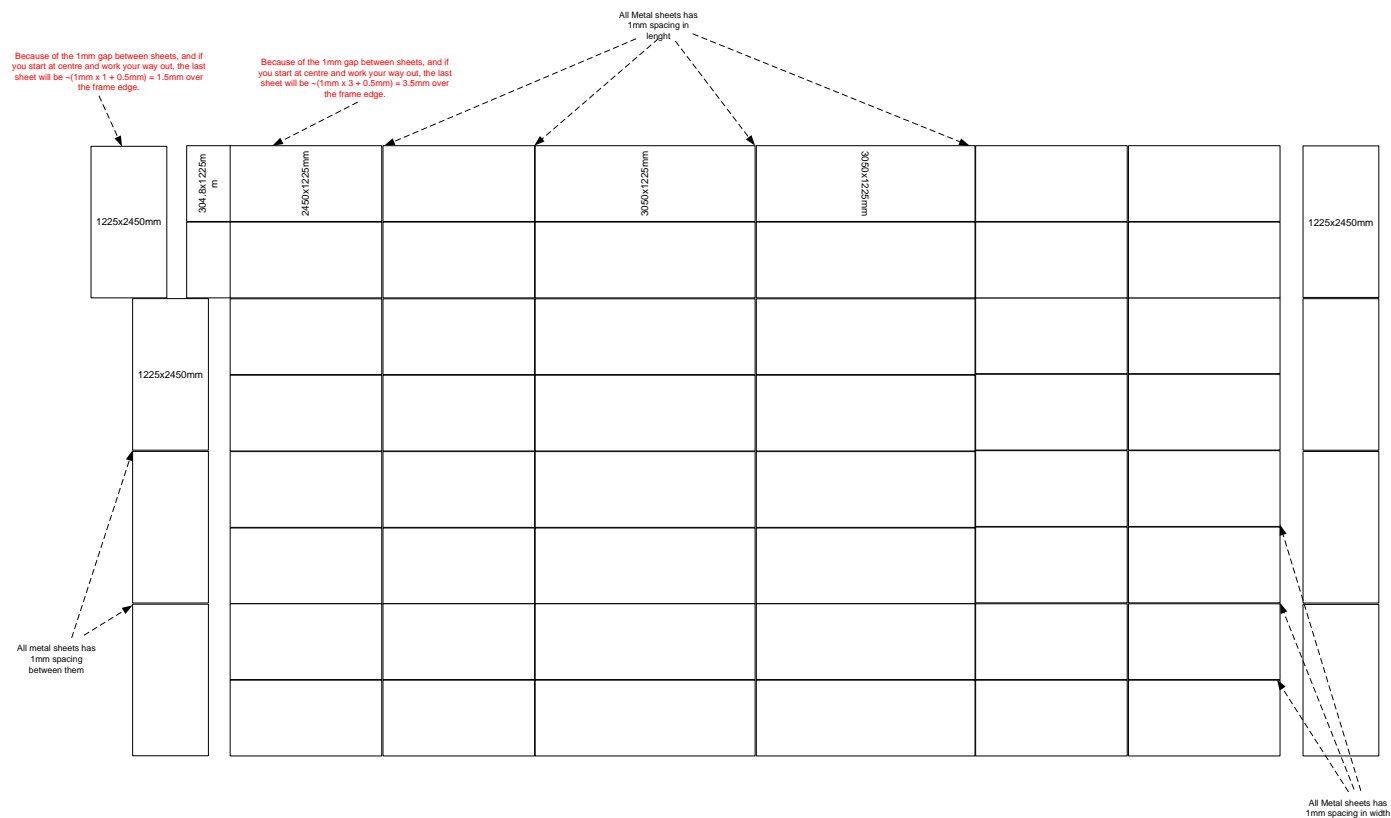


Plywood used: 2440x1220x9mm

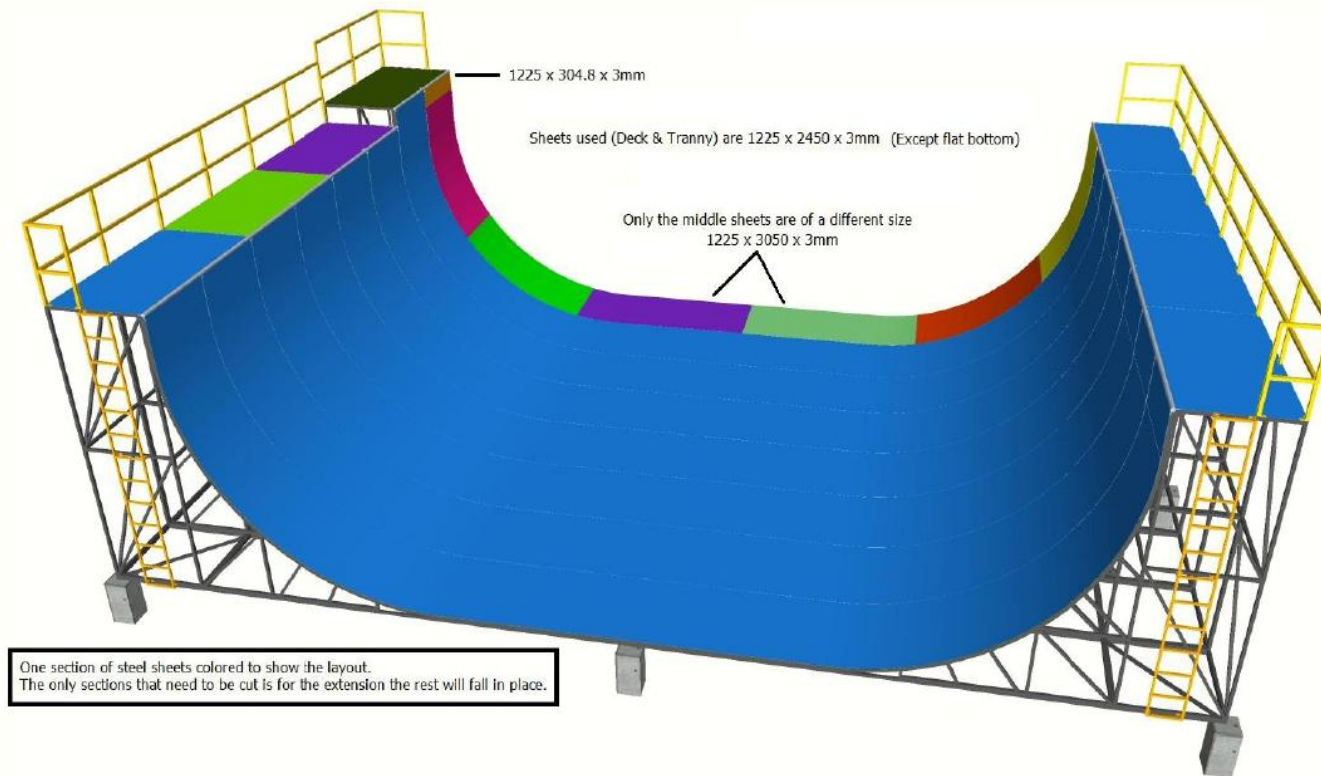
Metal Sheet Deck Box & Transition



Metal Sheet Layout

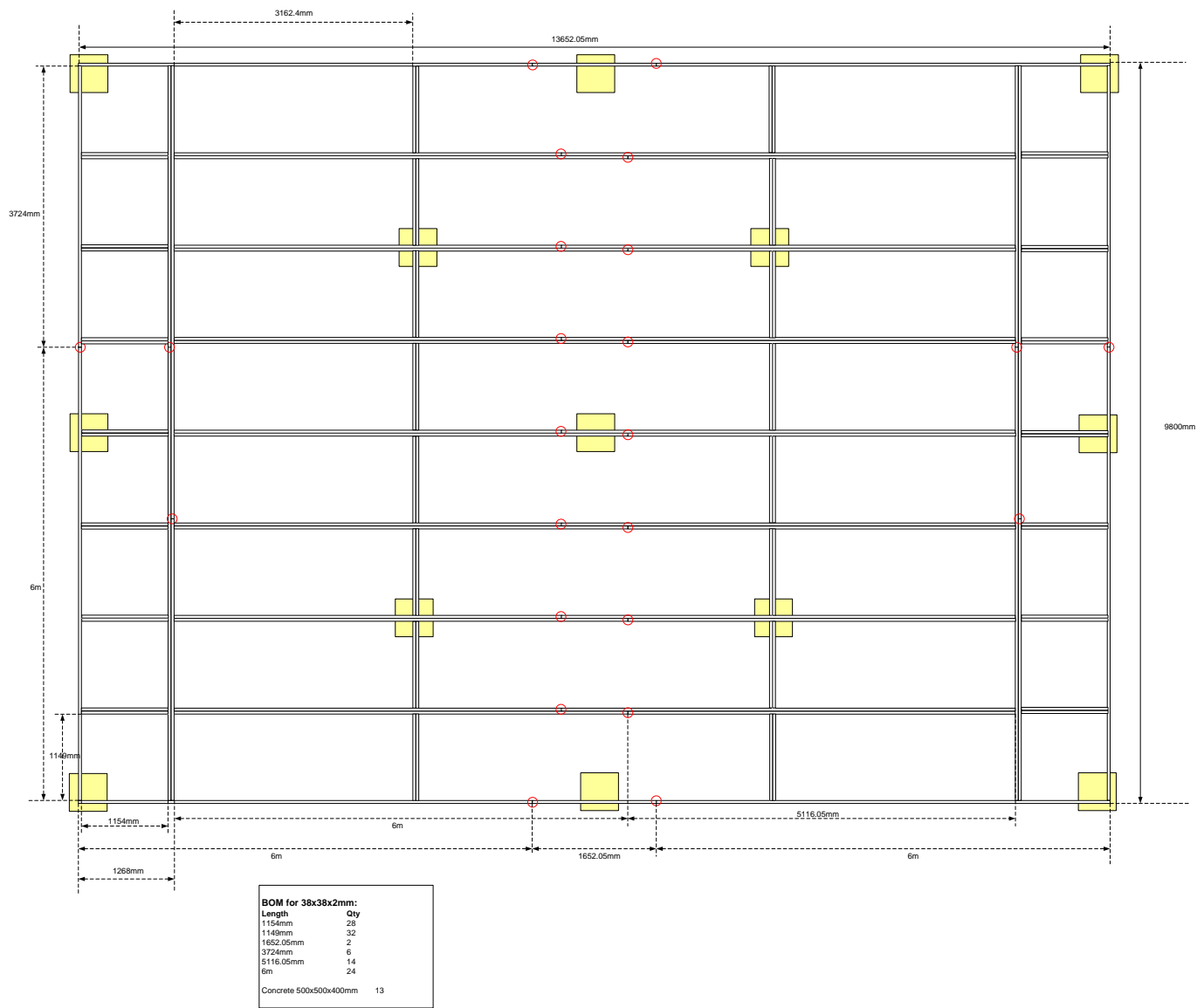


Steel Sheet detail - Layout

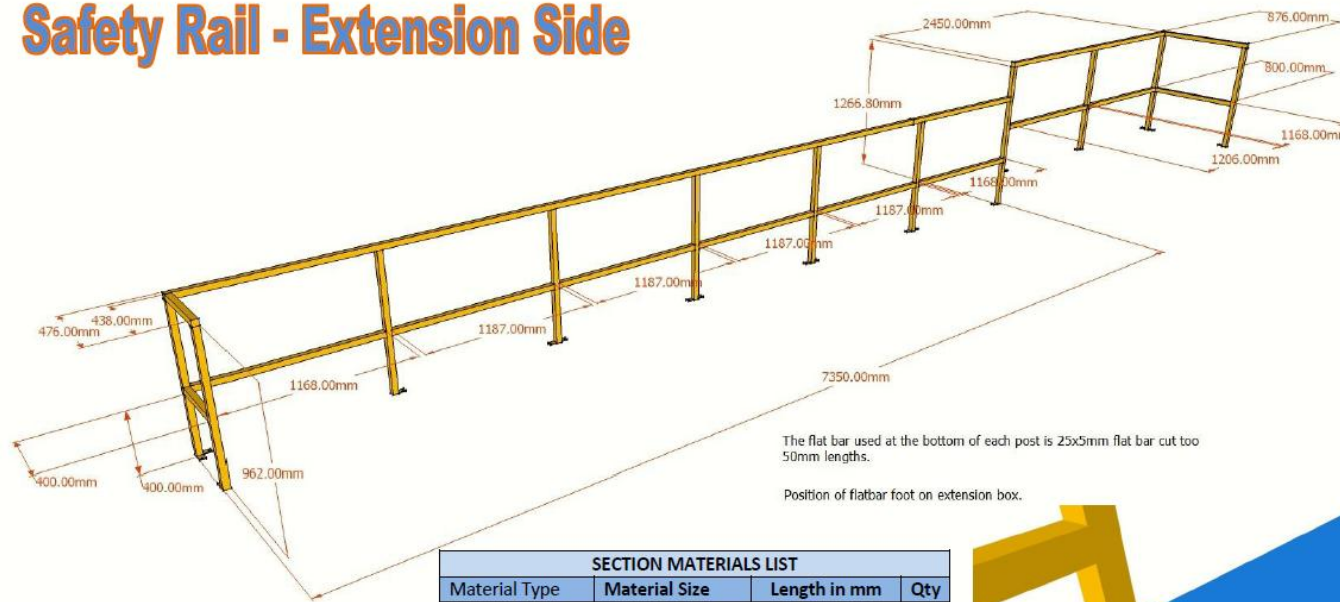


Note: All sheets used are the same size except for the two sheets used in the flat bottom. The Ramp was designed around these sizes so that it wouldn't be necessary to cut the steel sheets. Cutting sheet metal is a serious pain.

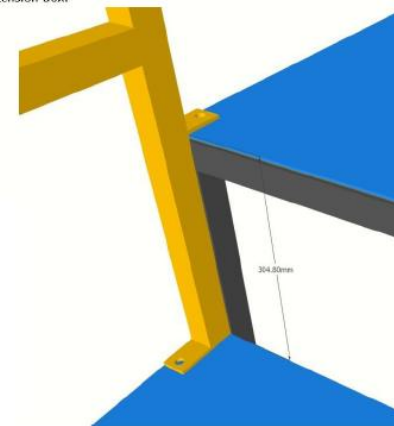
Base Frame



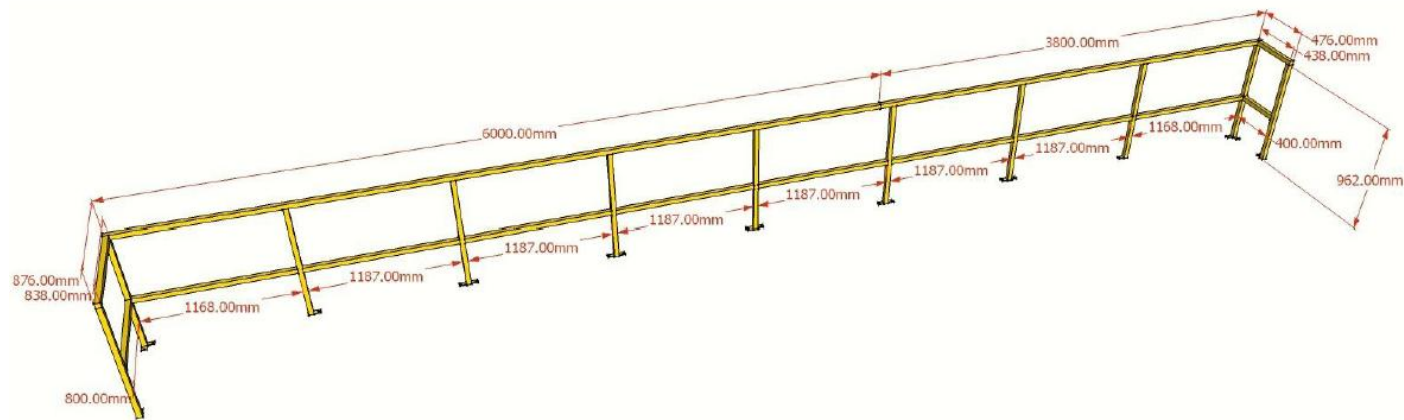
Safety Rail - Extension Side



SECTION MATERIALS LIST			
Material Type	Material Size	Length in mm	Qty
Square Tubing	38 x 38 x 2mm	6000.00	1
Square Tubing	38 x 38 x 2mm	1350.00	1
Square Tubing	38 x 38 x 2mm	2450.00	1
Square Tubing	38 x 38 x 2mm	876.00	1
Square Tubing	38 x 38 x 2mm	438.00	1
Square Tubing	38 x 38 x 2mm	962.00	10
Square Tubing	38 x 38 x 2mm	1266.80	1
Square Tubing	38 x 38 x 2mm	800.00	1
Square Tubing	38 x 38 x 2mm	1206.00	1
Square Tubing	38 x 38 x 2mm	1168.00	3
Square Tubing	38 x 38 x 2mm	400.00	1
Square Tubing	38 x 38 x 2mm	1187.00	4
Flat Bar	25 x 5mm	50.00	18

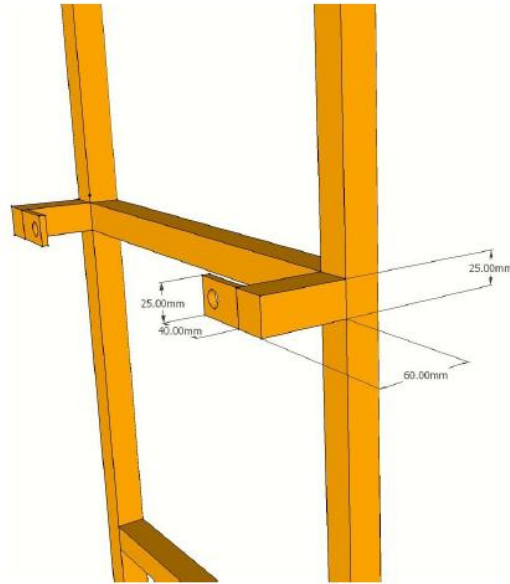
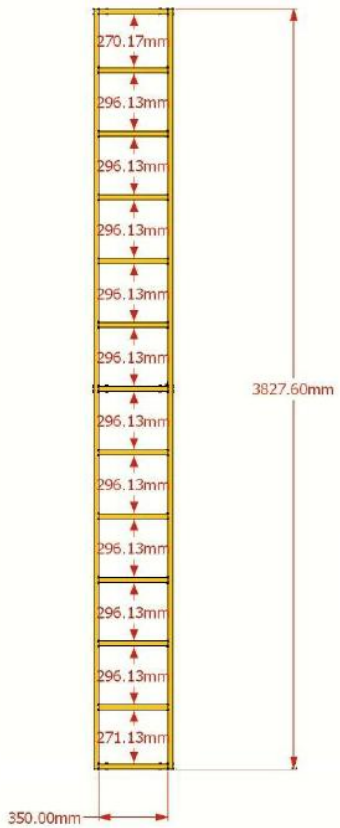


Safety Rail - Long Side



SECTION MATERIALS LIST			
Material Type	Material Size	Length in mm	Qty
Square Tubing	38 x 38 x 2mm	6000.00	1
Square Tubing	38 x 38 x 2mm	3800.00	1
Square Tubing	38 x 38 x 2mm	438.00	1
Square Tubing	38 x 38 x 2mm	836.00	1
Square Tubing	38 x 38 x 2mm	962.00	11
Square Tubing	38 x 38 x 2mm	1168.00	2
Square Tubing	38 x 38 x 2mm	1187.00	6
Square Tubing	38 x 38 x 2mm	800.00	1
Square Tubing	38 x 38 x 2mm	400.00	1
Flat Bar	25 x 5mm	50.00	18

Ladder



SECTION MATERIALS LIST			
Material Type	Material Size	Length in mm	Qty
Square Tubing	25 x 25 x 2mm	3827.60	2
Square Tubing	25 x 25 x 2mm	350.00	13
Square Tubing	25 x 25 x 2mm	60.00	6
Flat Bar	25 x 25 x 2mm	40.00	6

Technical drawing of a large circular structure, likely a dome or a large pipe, showing dimensions and a radius label.

Dimensions and Labels:

- Radius: 3200.4mm / 10 ft Radius
- Vertical dimensions on the left: 1000.00mm, 862.00mm, 557.20mm
- Horizontal dimensions at the base: 1230mm, 2400.00mm, 3238.40mm, 4715.25mm, 13652.05mm

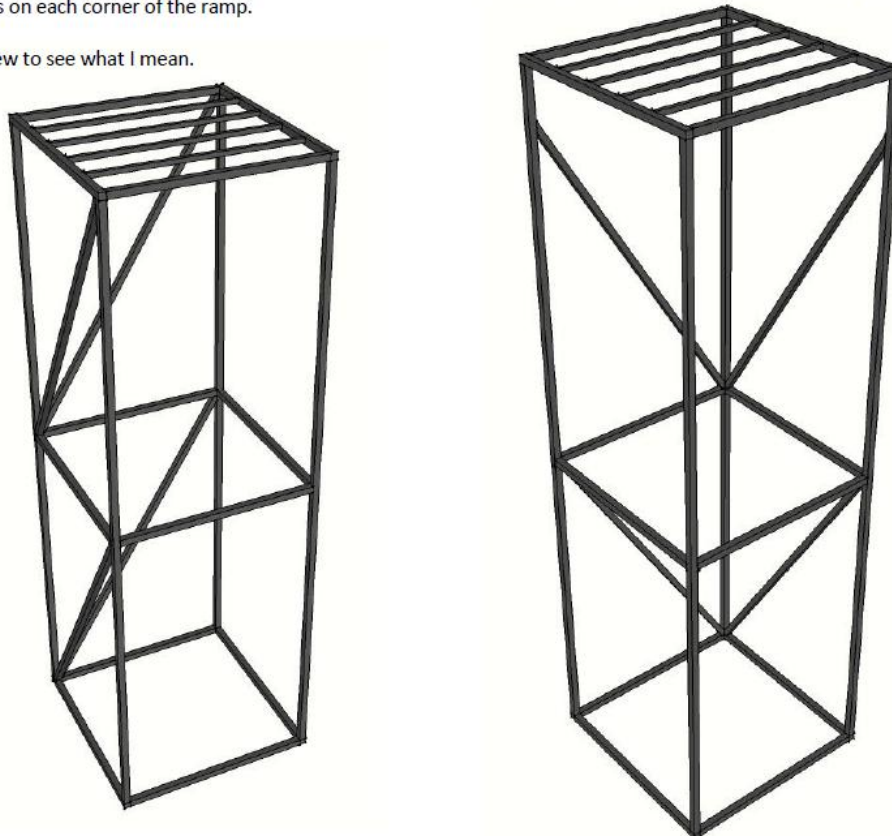
Proportions from Back



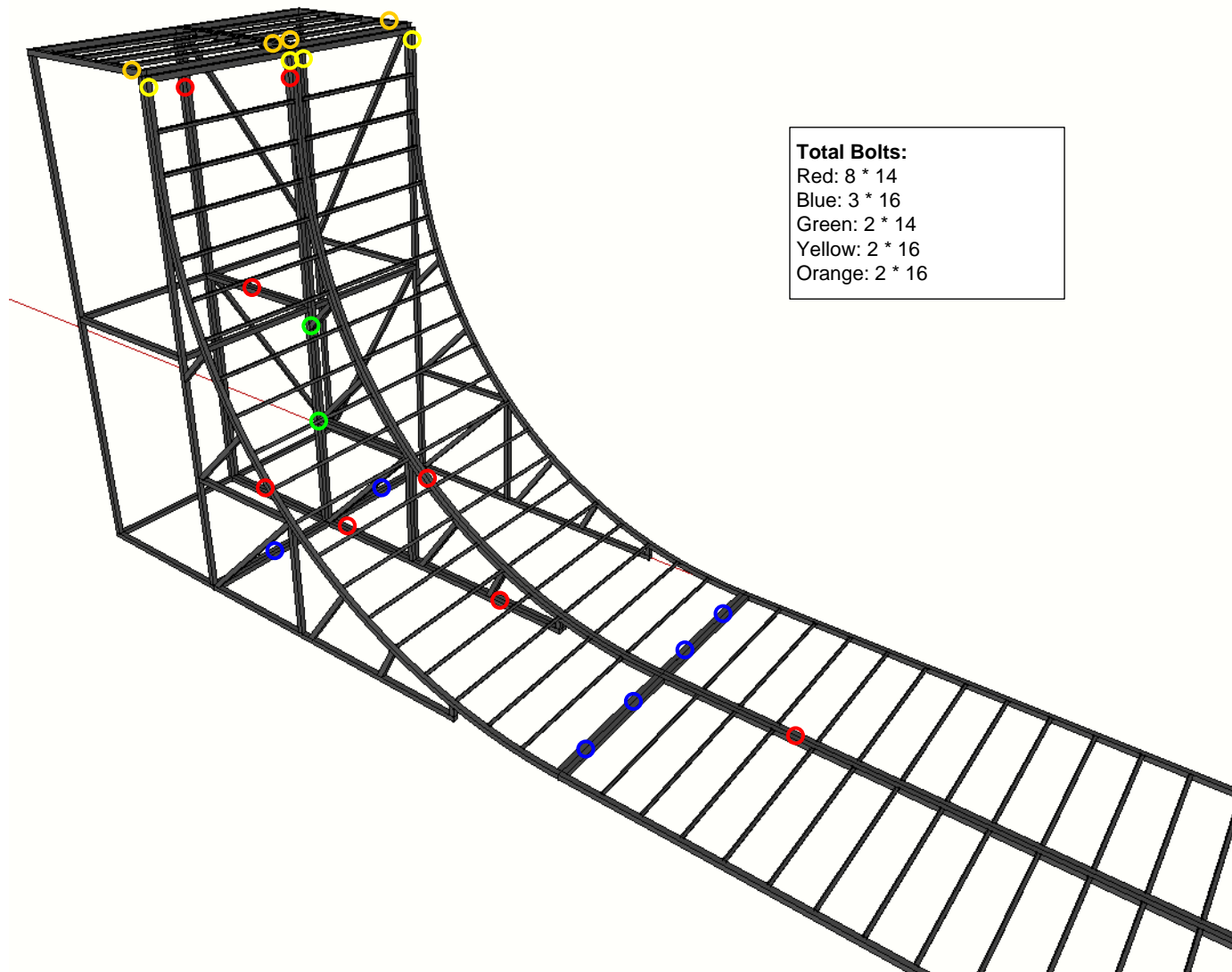
Corner Boxes

This should give you a pretty good idea where to put the angle supports. You basically build the normal deck box and then just add the angled supports to the ones on each corner of the ramp.

Check the Frame View to see what I mean.



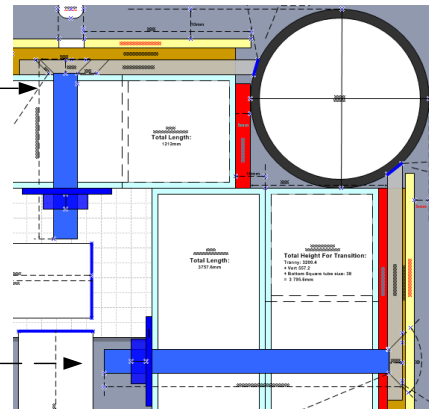
Bolt Locations and Qty



Bolt Sizes

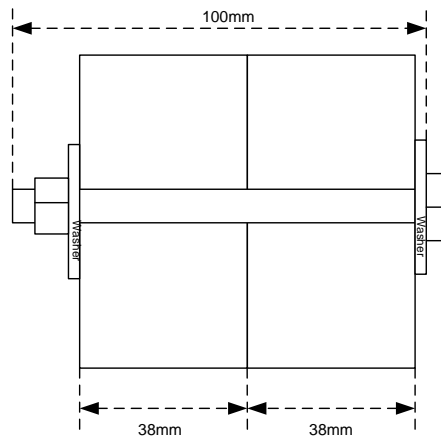
- 60mmx8mm HEX SOCKET COUNTERSUNK HEAD SCREW
- 30mmx2mm washer
- Bolt Nut

- 100mmx8mm HEX SOCKET COUNTERSUNK HEAD SCREW
- 30mmx2mm washer
- Bolt Nut



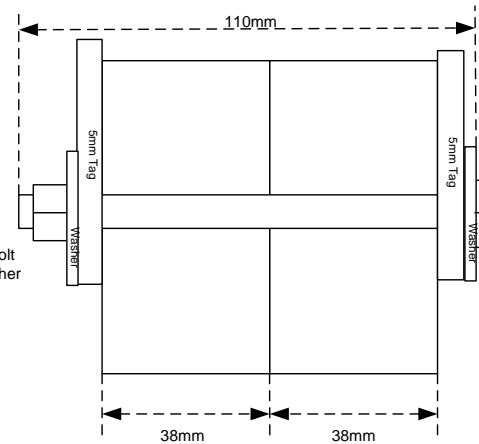
NB : Length include head

- 100mmx10mm Bolt
- 30mmx2mm washer
- Bolt Nut



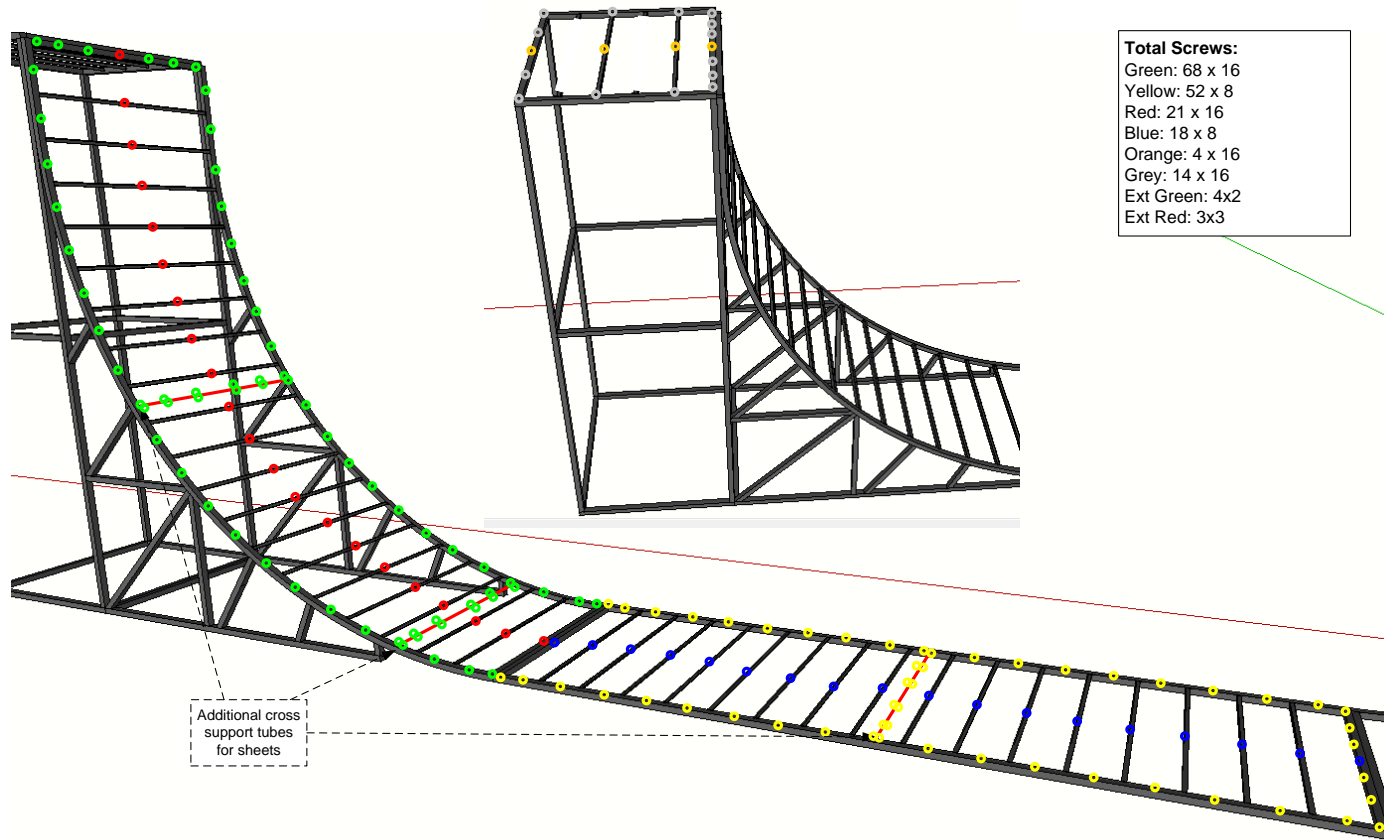
NB : Length excluding head of 10mm

- 115mmx10mm Bolt
- 30mmx2mm washer
- Bolt Nut



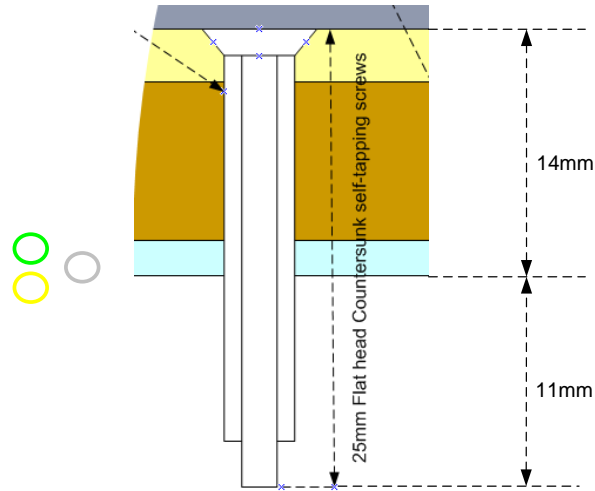
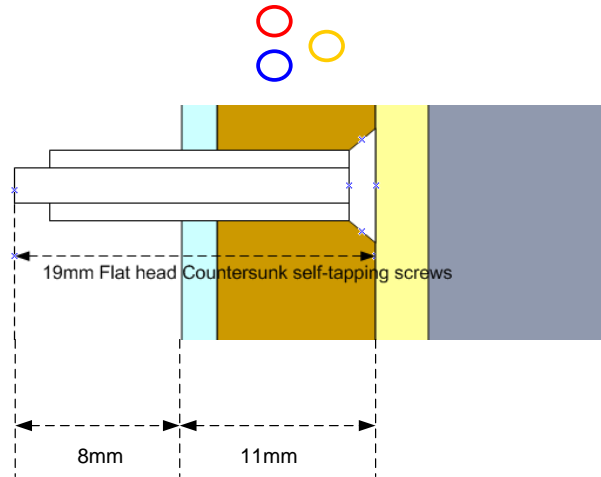
<http://www.acornweb.co.za/CatalogueData.asp?Category=Bolts&ID=133>

Screw Location and Qty



Screw Sizes

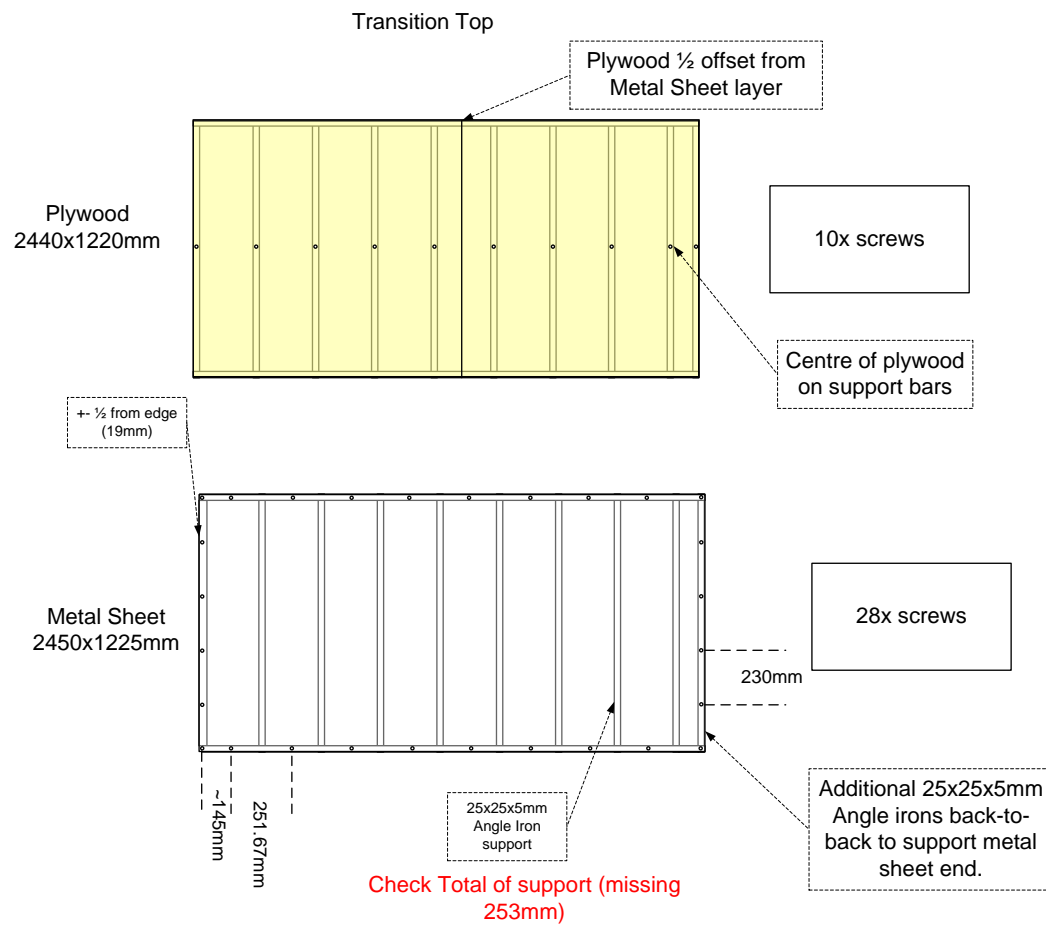
COUNTERSUNK POZI SELF TAPPING SCREW



<http://www.acornweb.co.za/CatalogueData.asp?Category=Screws&ID=140>

Screw Sheet location

Spacing of screws TBD



Disclaimer

I am not an engineer or boilermaker. The plans given here are formed from different people's suggestions and comments all over the skateboarding industry.

These plans are given as is and is not guaranteed to be correct. Every possible measure has been taken though to insure that it is as accurate as a human being can make them.

If you use these plans too design and build a ramp you do so at your own discretion and risk. I Werner du Plessis and Vert.co.za will not be responsible for any damages incurred by you using then plans or building the ramp contained herein.

All I can say is if you build this take one step at a time. Build a box and take a tape measure and double check the sizes given for supports before actually cutting them. Check if what you are measuring corresponds to what is on the plan.

Because I haven't yet built this thing I cannot say that every supports length will be correct. The ramp was designed in a 3D program and errors can find their way into plans pretty quickly.

If you do build the ramp then send us a couple of photos. You can find our email addresses at the following site:

www.vert.co.za

Use of these plans is at your own risk!!!