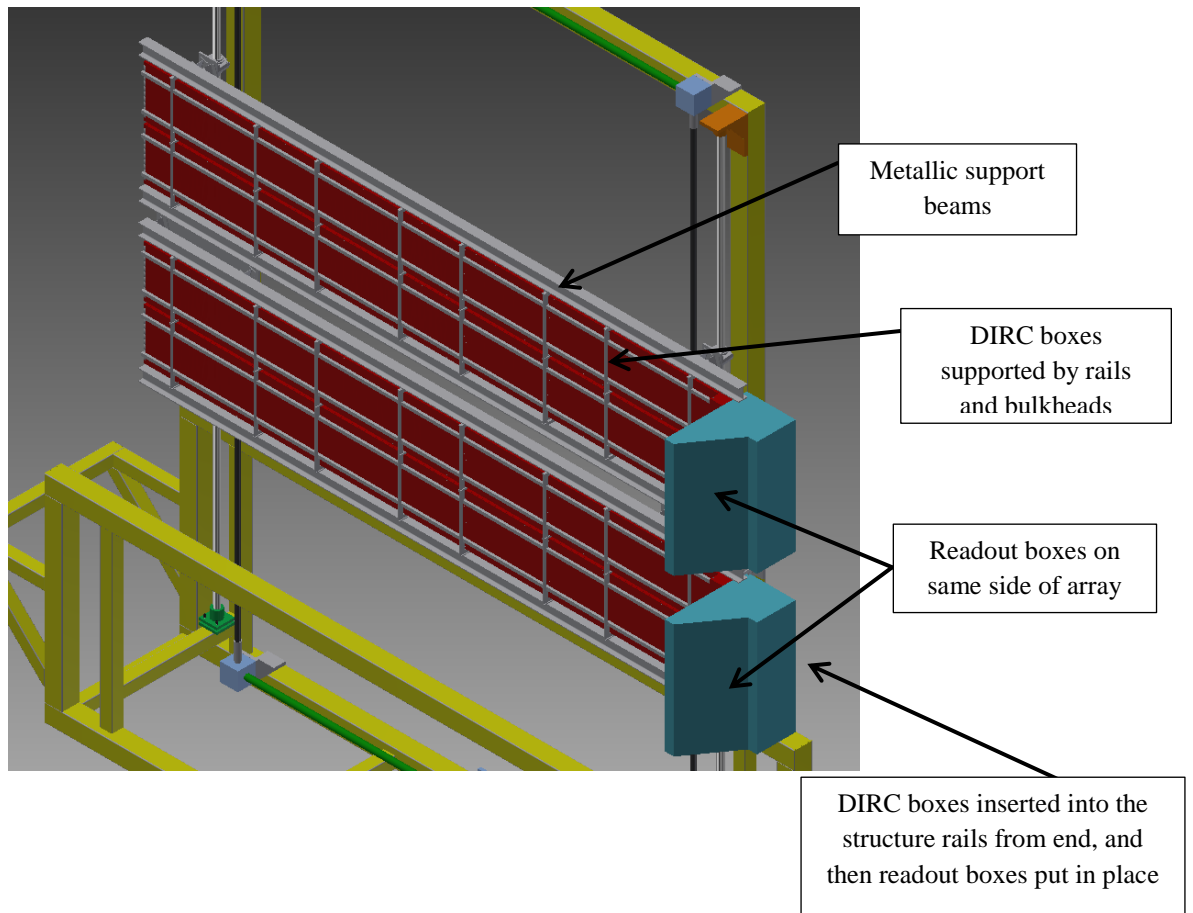
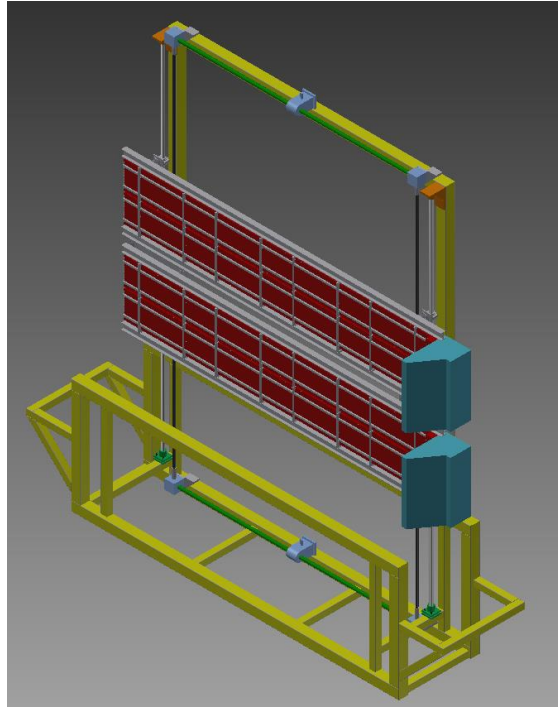
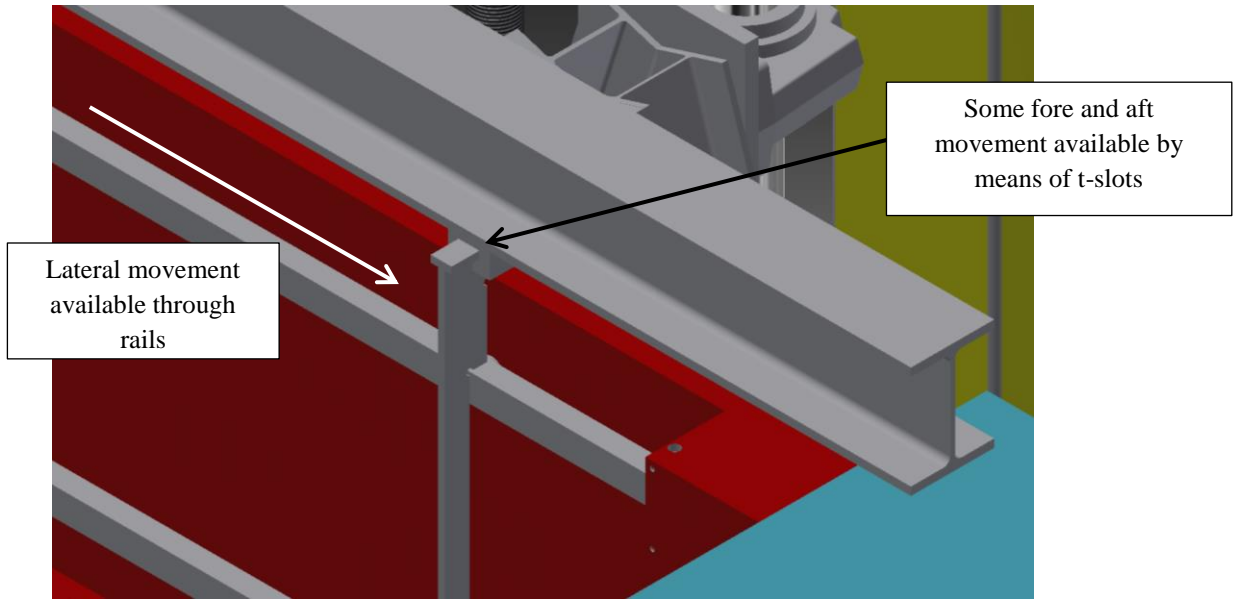
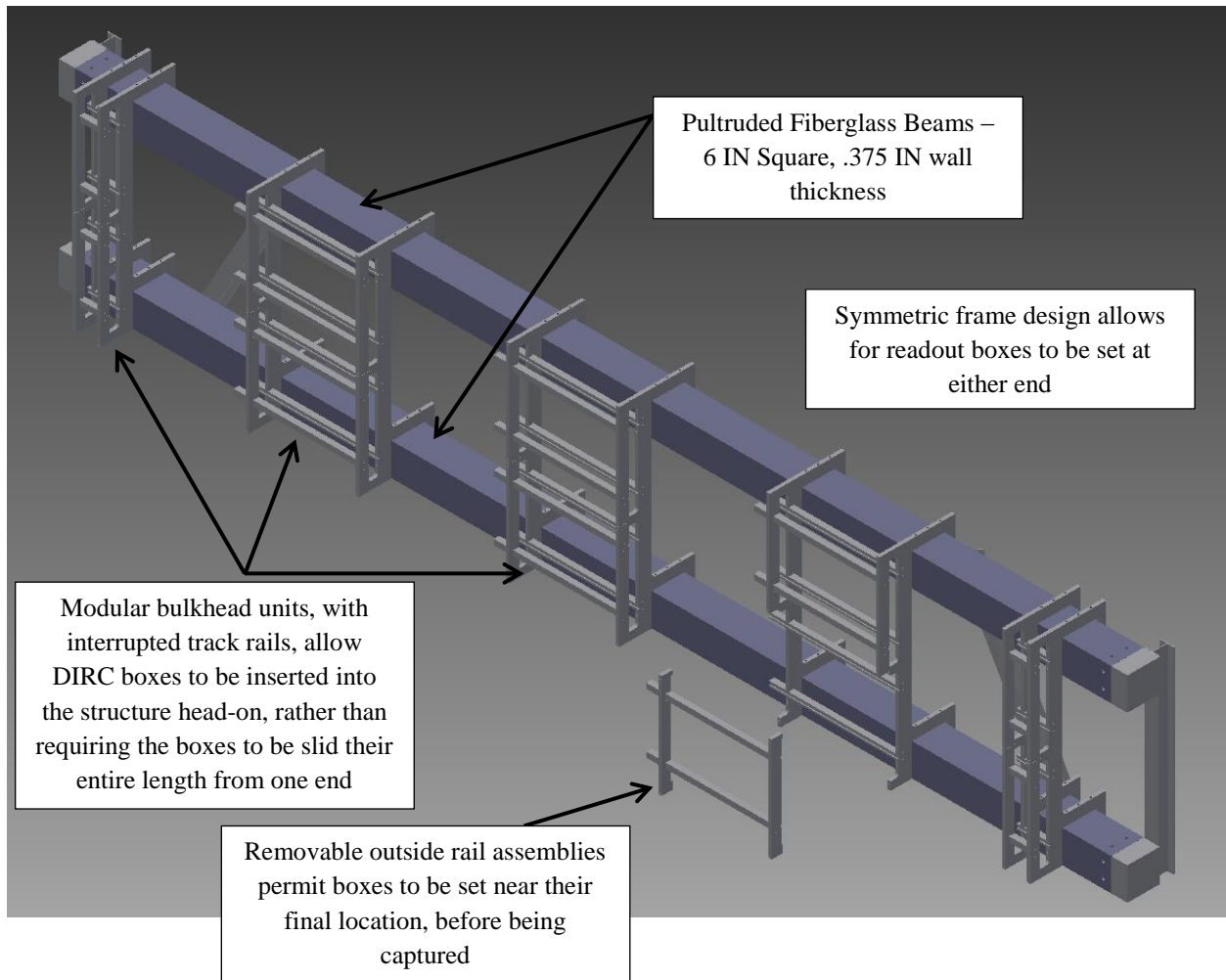


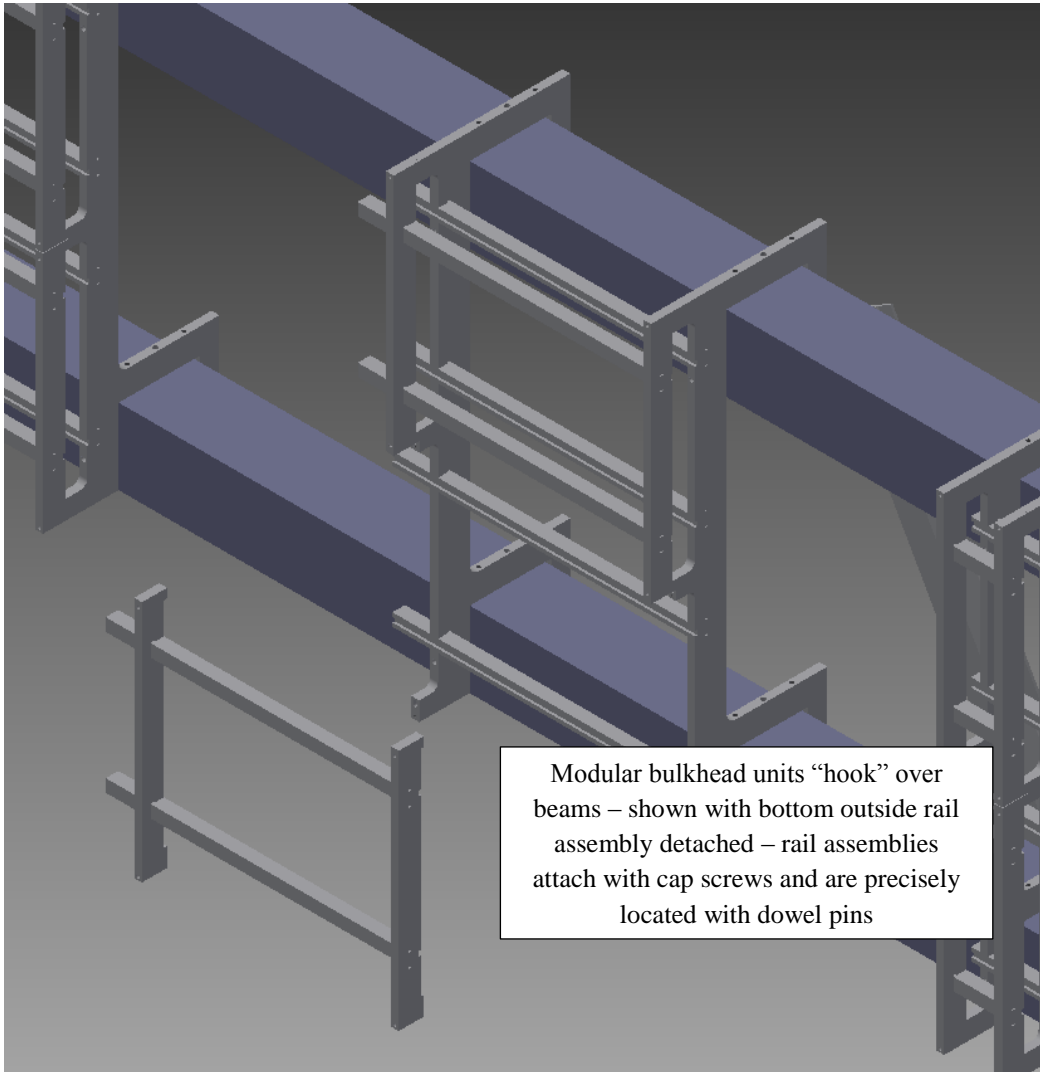
Initial DIRC Support Structure Concept





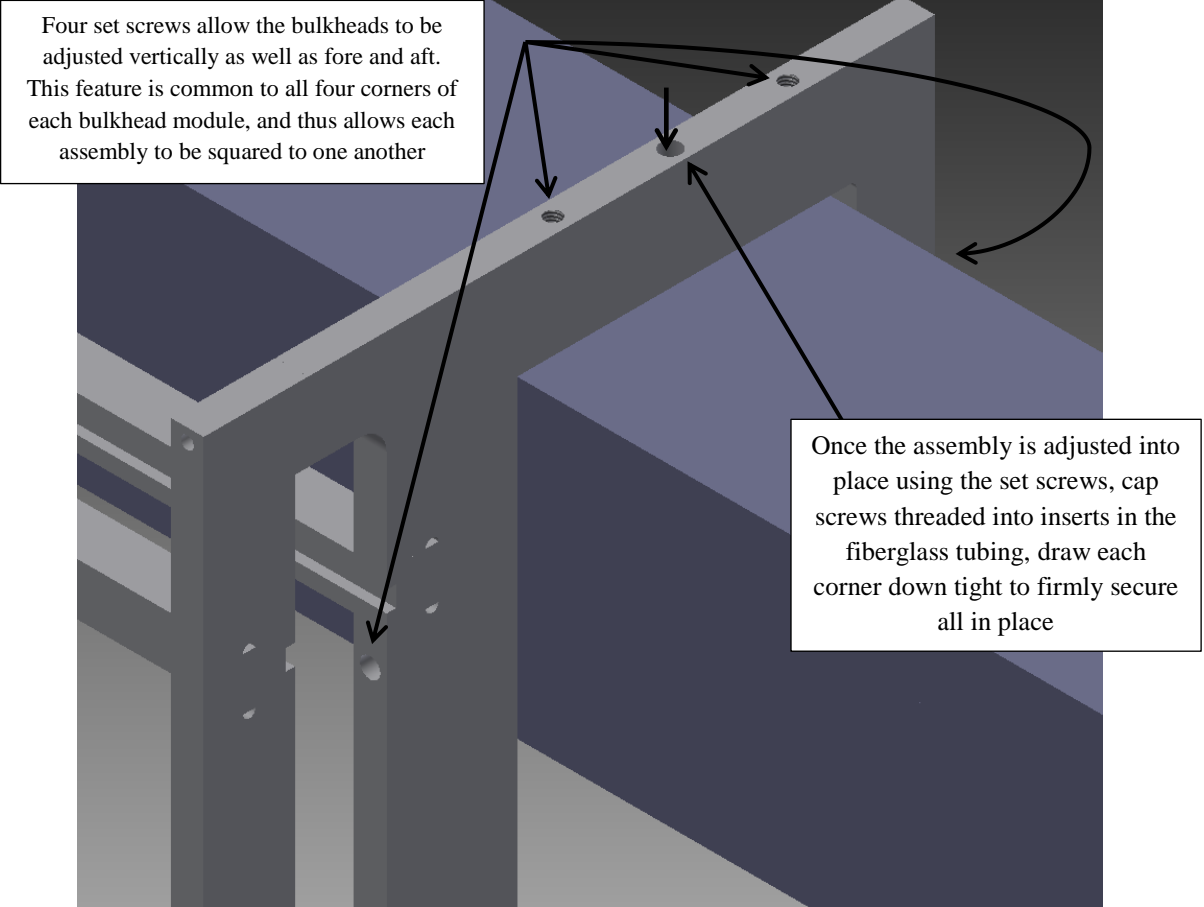
Developing Design – Opposed Oil Boxes





Modular bulkhead units “hook” over beams – shown with bottom outside rail assembly detached – rail assemblies attach with cap screws and are precisely located with dowel pins

Adjustability in bulkheads



Proposal to replace cam and roller assemblies

The existing cams and rollers on the bar boxes engage the track sections a very minor amount, around .125 in or ~3 mm. From the aspect of lifting the bar boxes into place head-on with the overhead crane, rather than rolling the box in from the end, this minimal engagement is an issue to consider. To increase the amount of engagement, we propose replacing the cam and roller assemblies with brass posts, attached to the bar boxes with two screws as are currently used. These posts will have a taller overall dimension than the bearing assemblies and thus will provide more engagement within the tracks.

Existing cams and rollers engage the track sections a very minimal amount.

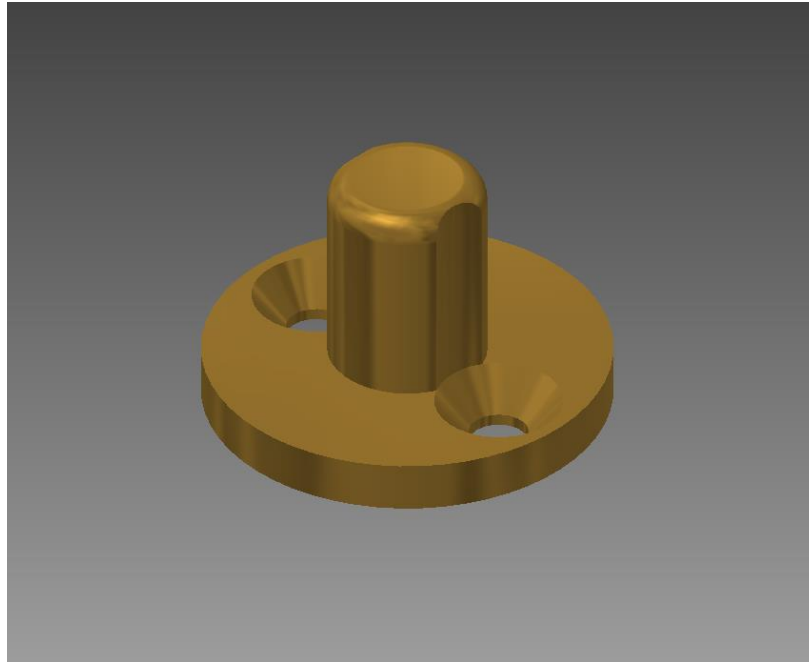
Assemblies are fixed to the bar boxes by means of flat head screws

ITEM	REQ	PART NUMBER	DESCRIPTION												
1	125	ZL7552	ALUMINUM 6061-T6												
<table border="1"> <tr> <td>WBS #</td> <td>DWG SIZE</td> <td>STAR DRAWING NUMBER</td> <td>REV</td> <td>RVC DRAWING NUMBER</td> <td>REV</td> </tr> <tr> <td></td> <td>B</td> <td></td> <td></td> <td>350-330-06</td> <td>-</td> </tr> </table>				WBS #	DWG SIZE	STAR DRAWING NUMBER	REV	RVC DRAWING NUMBER	REV		B			350-330-06	-
WBS #	DWG SIZE	STAR DRAWING NUMBER	REV	RVC DRAWING NUMBER	REV										
	B			350-330-06	-										
UNLESS OTHERWISE SPECIFIED															
ALL DIMENSIONS ARE MILLIMETERS															
LAWRENCE BERKELEY LABORATORY															
UNIVERSITY OF CALIFORNIA - BERKELEY															
BABAR DETECTOR															
BAR ASSEMBLY BOX															
X = 1:15 ANGLES 45°															

2x 0.2 THRU
4.0 x 82° C/SINK
127

0.300 REAM THRU
127

ITEM	REQ	PART NUMBER	DESCRIPTION												
1	125	ZL7577	ALUMINUM 6061-T6												
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WBS #	DWG SIZE	STAR DRAWING NUMBER	REV	RVC DRAWING NUMBER	REV										
	B			350-330-08	-										
UNLESS OTHERWISE SPECIFIED															
ALL DIMENSIONS ARE MILLIMETERS															
LAWRENCE BERKELEY LABORATORY															
UNIVERSITY OF CALIFORNIA - BERKELEY															
BABAR DETECTOR															
BAR ASSEMBLY BOX															
WHEEL PLATE															
DETAIL 000000 SCALE: 1:1															



By replacing the cam and roller assemblies with the brass posts, the boxes all become symmetric. This allows for a wider choice of boxes, as we do not have to rely on specific boxes with the proper cam/roller orientations. Since the boxes are not being rolled or moved long distances in the tracks, the need for the free rolling bearings is diminished. The brass posts can also be adjusted in situ if binding within the track becomes a problem, by means of a stone or fine file.