

VIEW:

TOP

NOTES:

C-channel spans the main channel above water surface but below DAQ carriage. Mounts securely to walls of the channel.

DRAWN BY

NAME

DATE

**SolidWorks Student Edition.**

**For Academic Use Only.**



Steel

PART:

C-channel Tidal Turbine

K42HRFM-LEK-M2-00  
Pacific Scientific stepper motor

30-tooth #25 chain  
sprocket




Top plate is adjustable  
up and down to allow  
for tensioning of chain

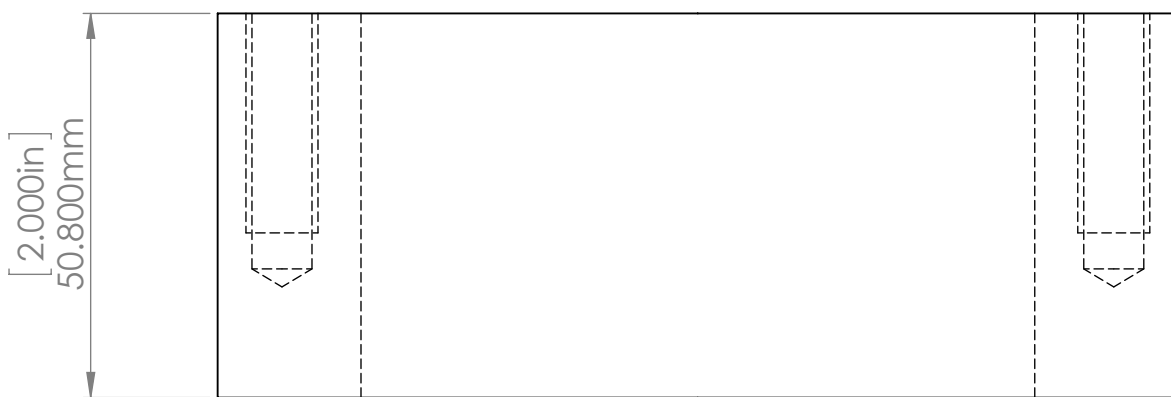
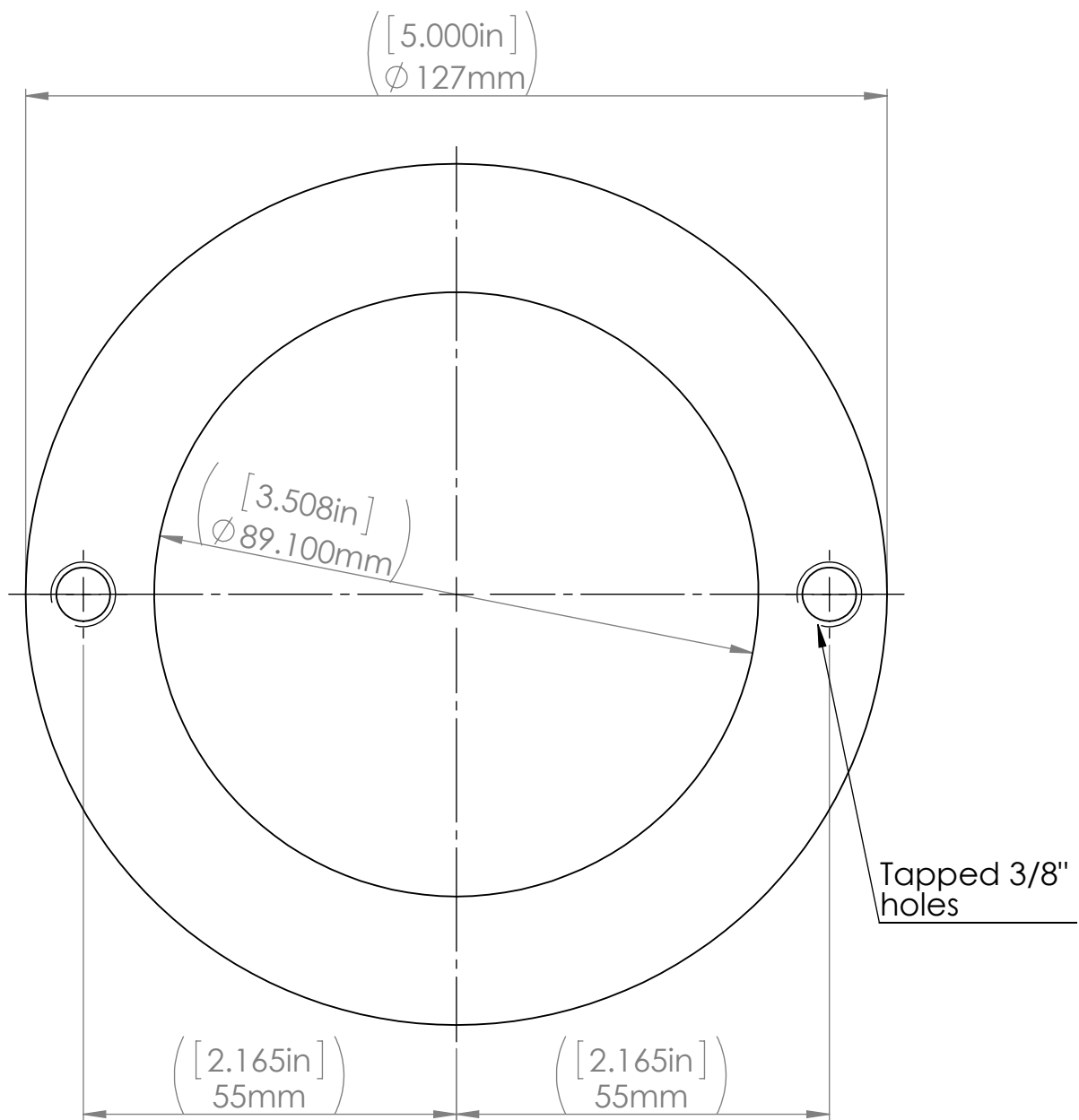
Motor Mounting  
Plate




Motor Mount  
Attachment Plate

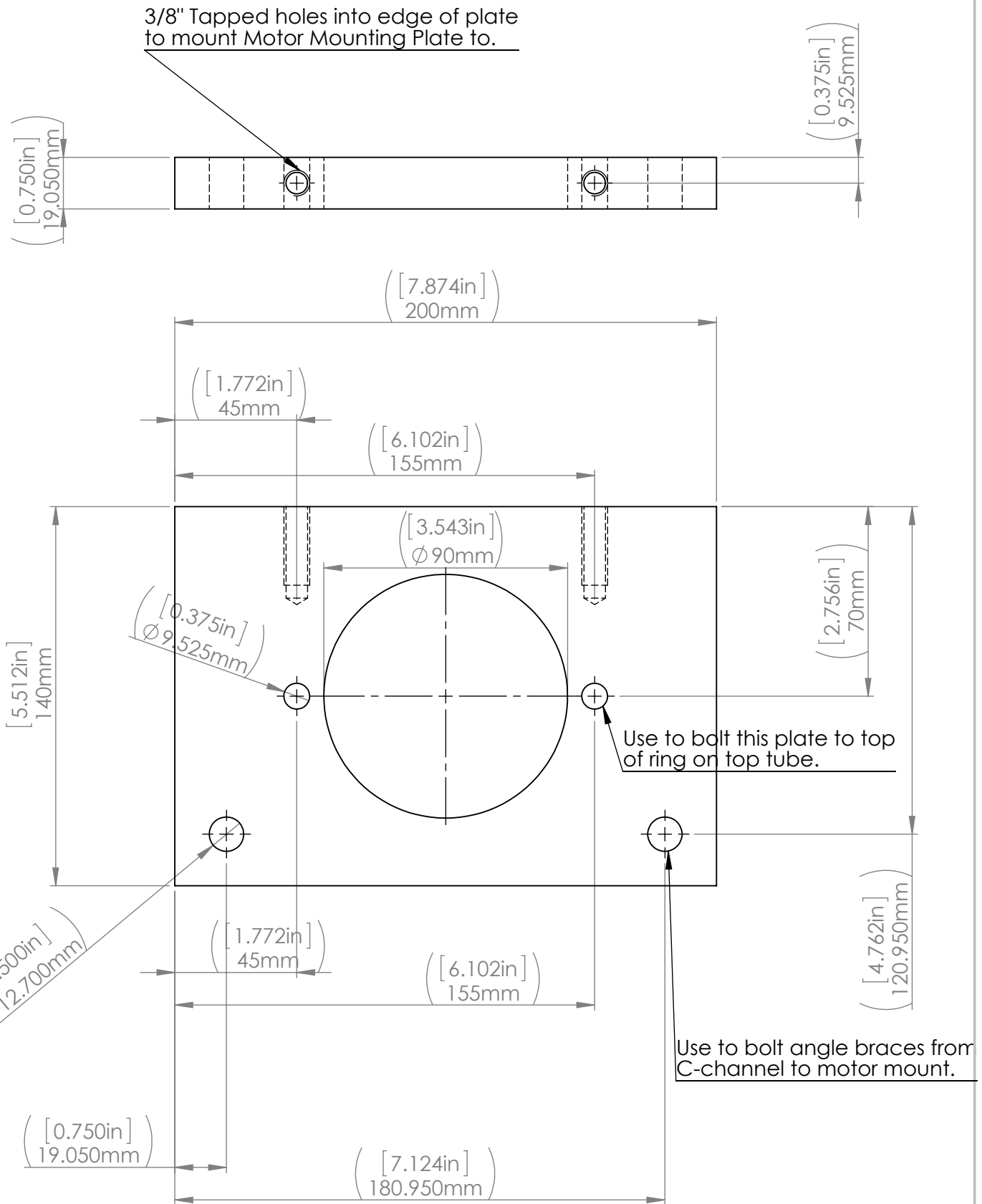
Motor Mount  
Top Tube Ring

Weld Outer Ring  
to outside of top  
tube.

VIEW: SIDE, FRONT			NOTES: Motor Mounting setup for Tidal Turbine. The larger outer ring is designed to get welded to exterior of top tube. The horizontal plate then bolts to the outer ring, and allows for the motor mount plate to be bolted to the side of that.
DRAWN BY	NAME	DATE	
SolidWorks Student Edition. For Academic Use Only.			PART: Tidal Turbine Motor Mount
			
UNIVERSITY OF MINNESOTA (UMN) - ST. ANTHONY FALLS LABORATORY (SAFL)			U.S. DEPARTMENT OF ENERGY REFERENCE HYDROKINETIC TURBINES



VIEW: TOP, SIDE			NOTES: This ring slides onto the exterior of the tidal turbine top tube. Plan is to weld it to the top tube, unless there is a better method to attach. Allows for a mounting surface for the motor mount brackets.
DRAWN BY	NAME	DATE	
  			PART: Motor Mounting Ring
UNIVERSITY OF MINNESOTA (UMN) - ST. ANTHONY FALLS LABORATORY (SAFL)			U.S. DEPARTMENT OF ENERGY REFERENCE HYDROKINETIC TURBINES



VIEW:

TOP, SIDE

NOTES:

This top plate bolts to the top of the external ring on the top tube. The motor mounting plate then bolts into the edge of this plate and allows for vertical adjustment.

DRAWN BY

NAME

DATE

**SolidWorks Student Edition.**

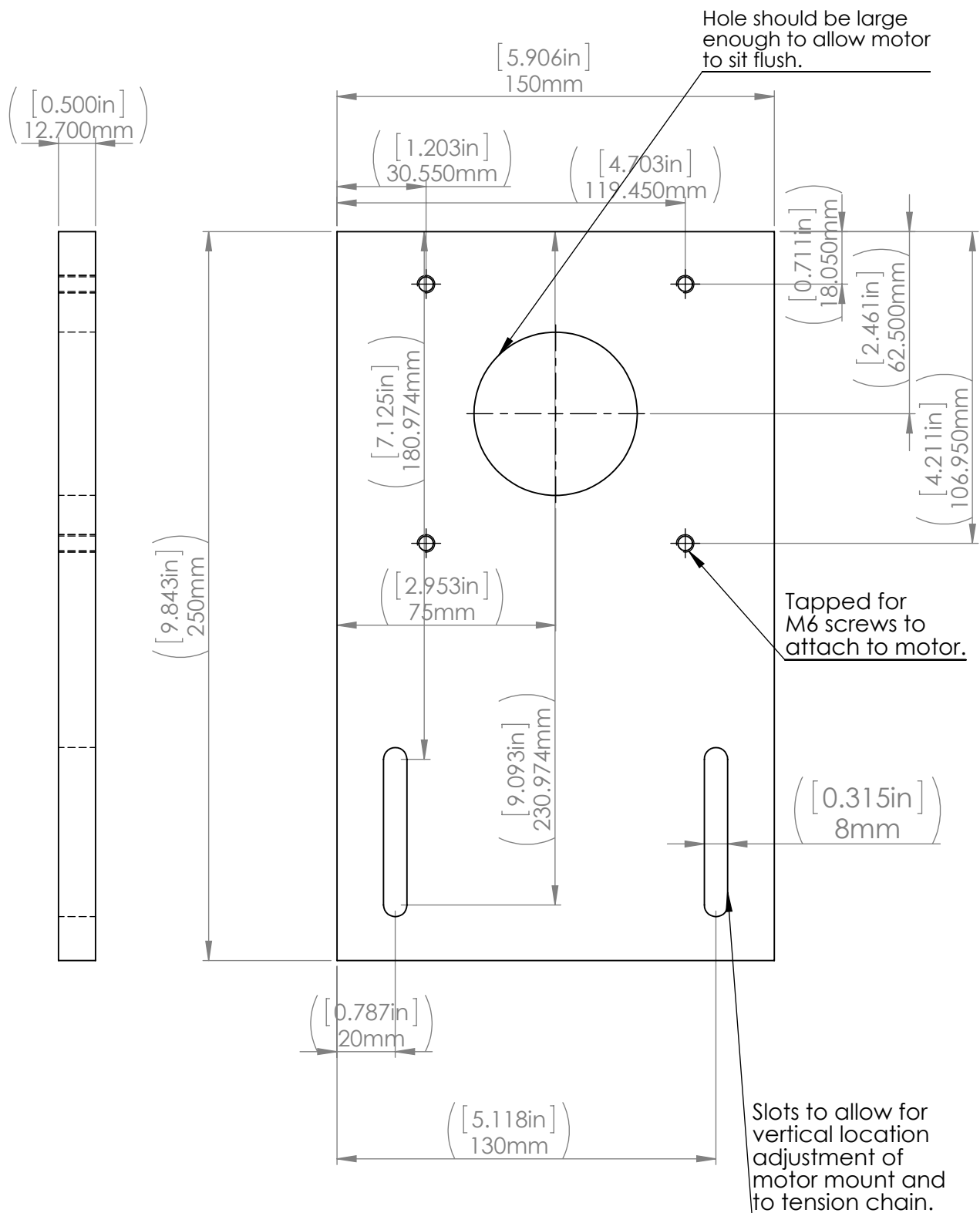
**For Academic Use Only.**



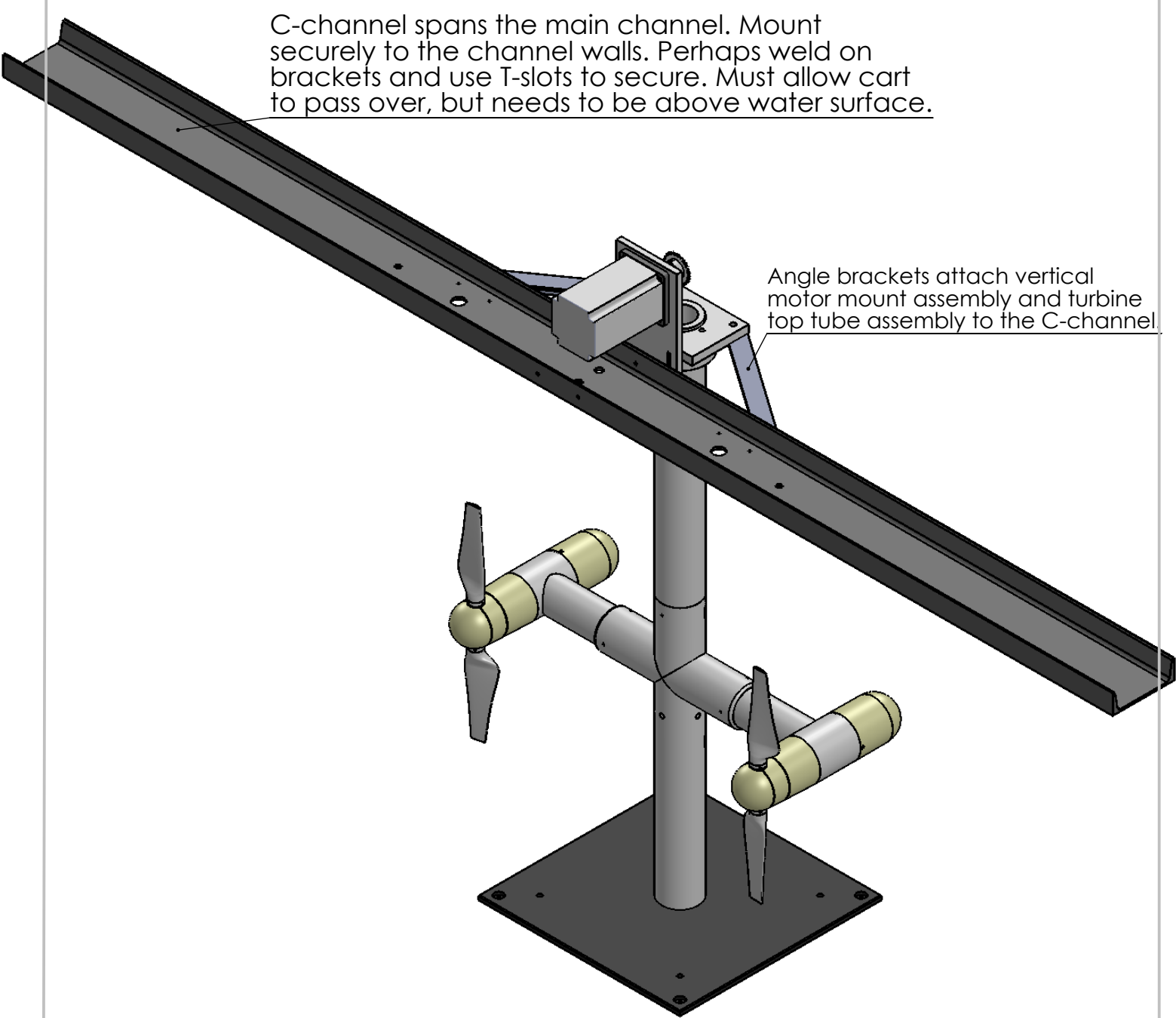
Aluminum




PART:

Motor mount top plate



VIEW: SIDE, FRONT		NOTES: Mounting Plate for the K42HRFM-LEK-M2-00 Pacific Scientific stepper motor.	
DRAWN BY	NAME	DATE	
SolidWorks Student Edition.			
SAFL UNIVERSITY OF MINNESOTA		PART: Motor Mounting Plate	
UNIVERSITY OF MINNESOTA (UMN) - ST. ANTHONY FALLS LABORATORY (SAFL)		U.S. DEPARTMENT OF ENERGY REFERENCE HYDROKINETIC TURBINES	



VIEW: Setup View			NOTES: Shows C-channel that spans the main channel. This and the motor will need to sit low enough to let the DAQ cart pass overhead, but needs to be out of the water. Needs to mount securely to channel walls, use T-slots and brackets.
DRAWN BY	NAME	DATE	
<div><div>SAFL</div><div>UNIVERSITY OF MINNESOTA</div><div></div></div>			PART: Tidal Turbine
UNIVERSITY OF MINNESOTA (UMN) - ST. ANTHONY FALLS LABORATORY (SAFL)			U.S. DEPARTMENT OF ENERGY REFERENCE HYDROKINETIC TURBINES