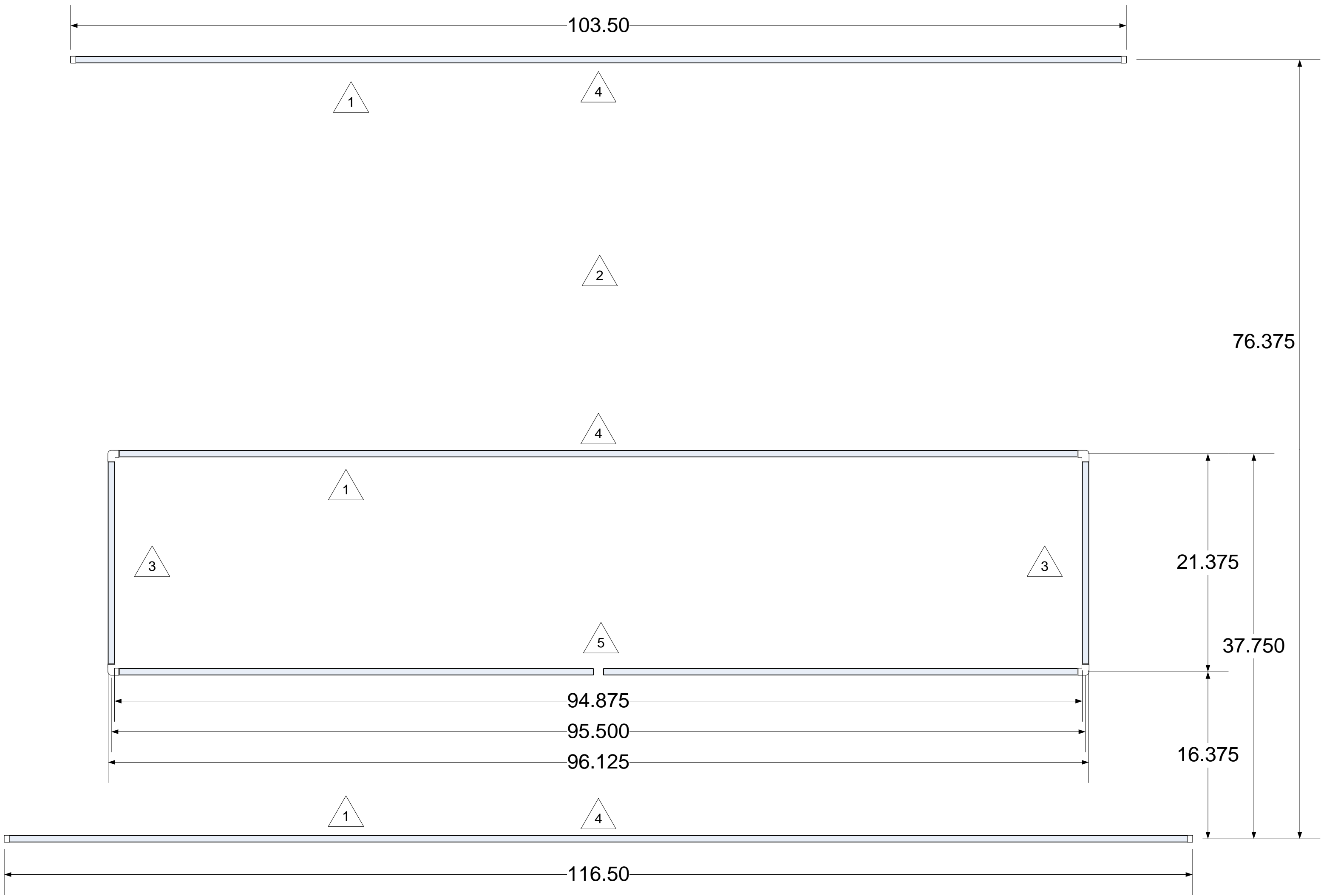


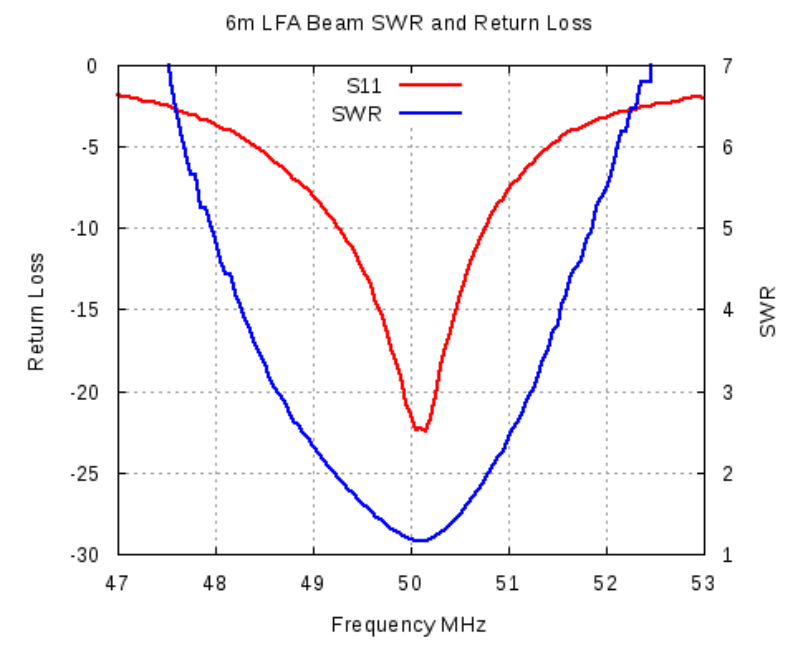
REV.	DESCRIPTION	DATE	BY
-	INITIAL	2012-06-14	JSH

NOTES:

- ALL TUBES AND FITTINGS ARE BASED ON 1/2" COPPER PLUMBING PIPE WITH OD 0.625 INCH. COPPER PLUMBING PIPE COMES IN VARIOUS WALL THICKNESSES, BUT HAS A CONSISTENT OUTER DIAMETER.
- THIS ANTENNA IS BASED ON THE 3 ELEMENT 1.9 METER BOOM LFA ANTENNA DESIGN BY JUSTIN JOHNSON (G0KSC) AND MAY BE THE SUBJECT OF A PATENT. PLEASE VISIT [HTTP://WWW.G0KSC.CO.UK/](http://www.g0ksc.co.uk/) FOR DETAILS AND GENEROUS PERMISSIONS FOR AMATEUR RADIO USE.
- NEC4 WAS USED TO OPTIMIZE JOHNSON'S DESIGN TO COPPER PIPE, BUT NEC2 PRODUCED SIMILAR RESULTS THANKS TO THE CONSISTENT DIAMETER OF THE DRIVEN ELEMENT. THE 5/8" DIA. COPPER PIPE DRIVEN LOOP SIMULATES TO A CENTER FREQUENCY OF 50.150 MHZ USING NEC4 VS. 50.120 MHZ USING NEC2... A 30 KHZ DIFFERENCE. JOHNSON'S STAGGERED DIAMETERS IN HIS ALUMINUM VERSION SIMULATES 50.270 MHZ FOR NEC4 VS. 50.080 MHZ WITH NEC2... A 190 KHZ DIFFERENCE. JOHNSON'S SUGGESTION TO USE NEC4 IS PRUDENT FOR ANY NEC USER, BUT NEC2 WILL WORK QUITE WELL WITH THE CONSTANT DIAMETER COPPER LOOP DESCRIBED IN THIS DRAWING.
- ALL ELEMENTS ARE FREE FLOATING AND NOT ELECTRICALLY ATTACHED TO THE BOOM OR ANY OTHER CONDUCTIVE STRUCTURE.
- THE FULL WAVE LOOP IS NATURALLY BALANCED REDUCING THE NEED FOR ANY BALUN OR BALANCING TECHNIQUE AT THE FEEDPOINT... YES YOU REALLY CAN JUST CONNECT COAX AND GET GOOD RESULTS WITH THIS LOOP FED YAGI-UDA DESIGN. SEE "THE FOLDED DIPOLE: A SELF-BALANCING ANTENNA" BY BUXTON, STUTZMAN, NEALY AND ORNDORFF FOR INITIATION INTO THIS TOPIC.
- THE CENTER FREQUENCY OF THE ANTENNA MADE TO THIS DRAWING IS ABOUT 50.1 +/- .05 MHZ. FOR ALL PRACTICAL PURPOSES THIS IS IN FULL AGREEMENT WITH SIMULATION.



ACTUAL MEASUREMENTS OF THIS COPPER 3 EL 6M LFA ANTENNA



UNIT: INCHES TOL: 0.125"		JOHN S. HUGGINS			
COPPER 3 ELEMENT 6M LOOP FED YAGI-UDA BEAM ANTENNA DIMENSIONS					
COPYRIGHT 2012 JOHN S. HUGGINS		SIZE KX4O	FSCM NO KX4O	DWG NO 000057	REV -
SCALE NONE		SHEET 1 OF 1			