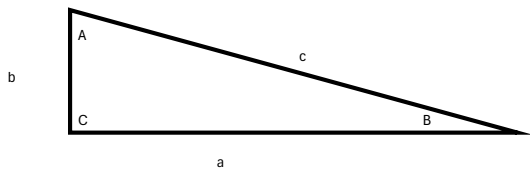
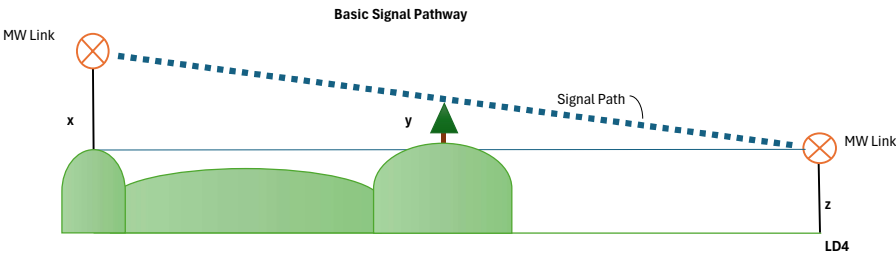


Assessing Mast Heights Required to Overcome Topological Obstructions

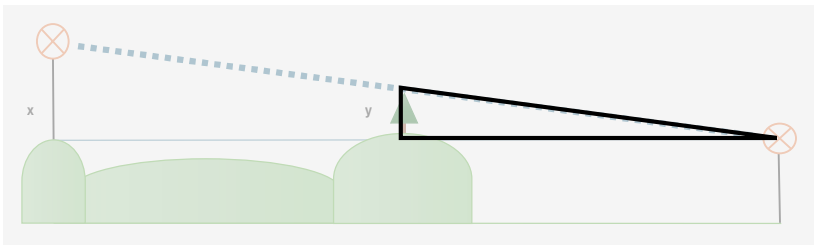
PVOL #4		Topological Obstruction		LD4		
Proposed Location		y		z		
x	Height (m)		Height (m)		Height (m)	
Proposed AOD	42	Peak AOD	59	LD4 AOD	33	FIXED
Required Mast	47 (xH)	Tree+FZ Allowance	30	LD4 Mast	32	Variable
		Total Obstruction AOD	89 (yH)	Total	65 (zH)	Answer
Distance from LD4	15600	Distance from LD4	12170			



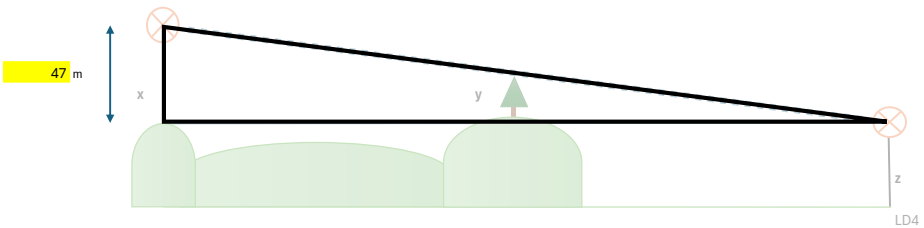
Finding the Angle of "B"

$$\angle B = \arccos\left(\frac{c^2 + a^2 - b^2}{2ca}\right)$$

$$c = \sqrt{b^2 + a^2 - 2ba \cos(C)}$$



a = Distance from LD4	b = Total Obstruction AOD	C = 90degrees
a	b	C
12170	24	90 Degrees
		1.570796 Radians
C = $\sqrt{a^2 + b^2}$		
c = 12170.02366	(m)	
$\angle B = \arccos(a/c)$		
$\angle B = 0.112990709$ Degrees		



Finding the height of b

$$b = \sqrt{c^2 - a^2}$$

24 meters

$$c = \sqrt{b^2 + a^2 - 2ba \cos(C)}$$

Proposed Mast Height (b+'zH')-'xAOD' = 47