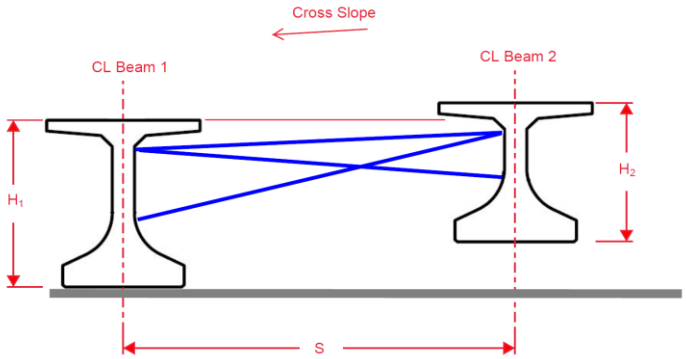
Analysis #4

E

A2B ENGINEERING, LLC CONSULTING ENGINEERS	Subject: Girder Bracing Design		
	Comp by: MLS	Date: 09/13/18	Sheet Number: of
	Check by: PRS	Job Number: 135-17-1	



Analysis No. =	4				
Description =	E				
Left Girder Height =	54	[in]	Overturning Moment =	85.8	[ft*kip]
Right Girder Height =	54	[in]	Horizontal Force =	18.9	[kip]
Girder Spacing =	9	[ft]			
Distance from top of left girder to bracing =	12.96	[in]	Brace E =	29000	[ksi]
Distance from bot. of left girder to bracing =	25.56	[in]	Brace A =	2	[in^2]
Distance from bot. of right girder to bracing =	12.96	[in]	Brace I =	2.85	[in^4]
Distance from bot. of right girder to bracing =	25.56	[in]			
Cross Slope =	0				

Brace Type =	MB 8'-14'
Lines of horizontal Bracing per brace line =	1
Lines of diagonal bracing per brace line =	1

	Member		
	1	2	3
Tensile Strength	14.371	14.371	14.371
Compressive Strenght	14.371	14.371	14.371
Member Force (Stage 2 H)	-1.429	-1.398	-16.264
Member Force (Stage 3 OM)	30.534	29.878	-60.744
Member Force Per Brace (Stage 2 H)	-1.429	-1.398	-16.264
Member Force Per Brace (Stage 3 OM)	30.534	29.878	-60.744
Bracing lines Multiplier (stage 2 H)	1	1	2
Bracing Lines Multiplier (Stage 3 OM)	3	3	5

Bracing Lines Multiplier Required =	5	
Stiffness =	7191	[kip-ft/rad]
Span Length =	131	[ft]
Bracing Point Type =	Mid-Span Bracing	
Empirical Scale Factor =	1.4	
Pu =	75	[psf]
Pavg =	37.5	[psf]
Beam Weight =	971.4375	[plf]
C0 =	3.045672807	
C =	0.797631529	>1
Check =	NG	