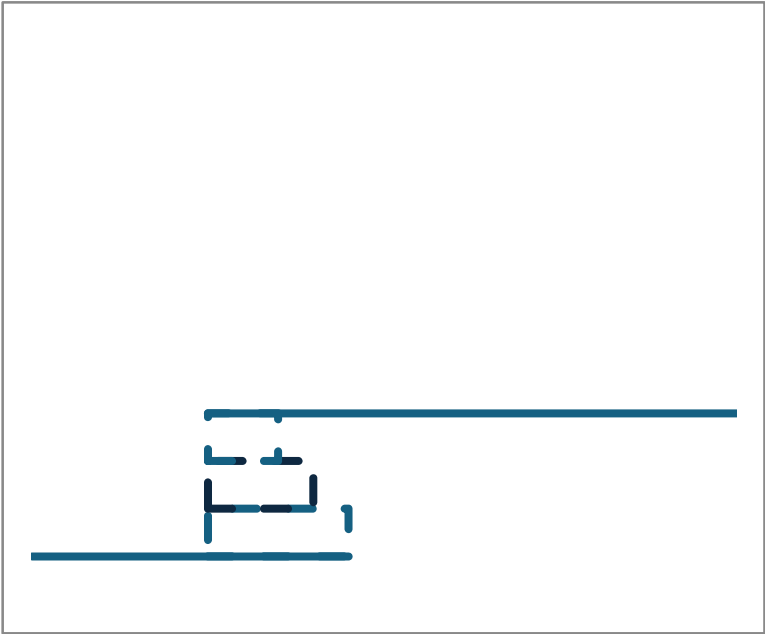
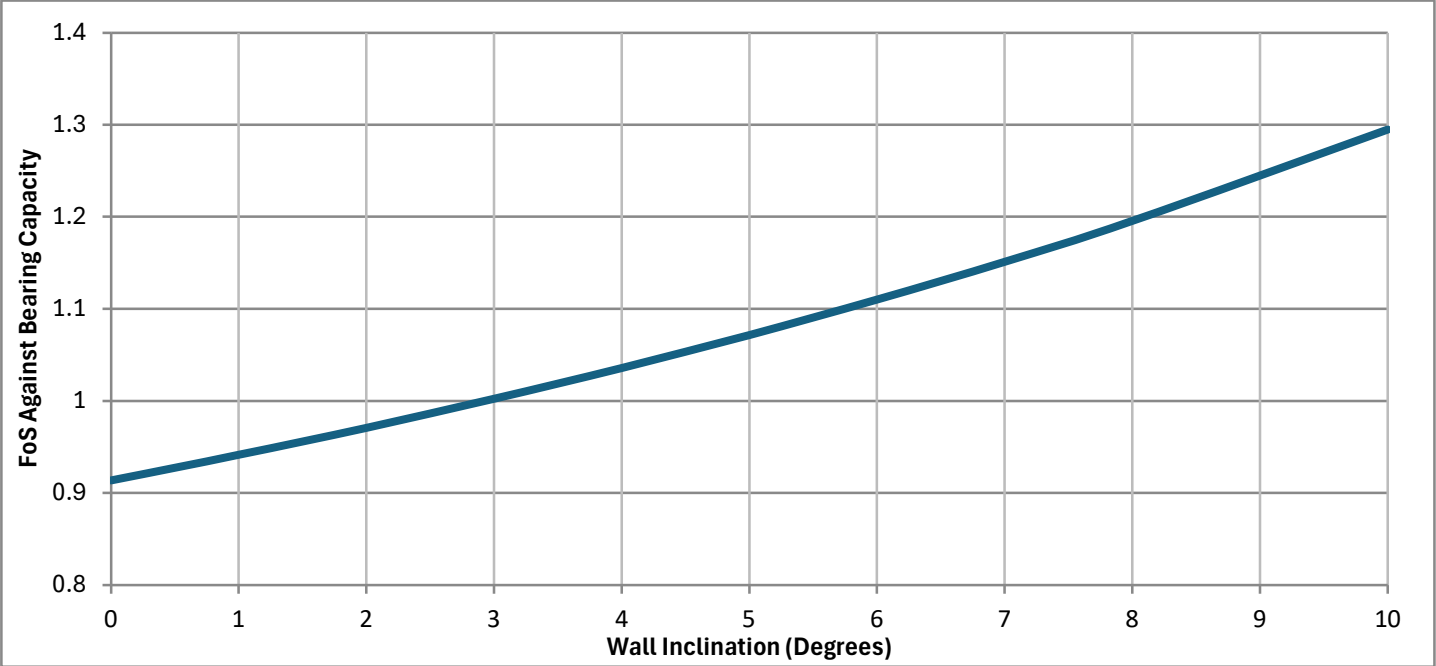


MJ Civil Engineering	Project:	40 Sweetwater Park			By:MAJ
	Calculation:	Gabion Wall Design			
	Sheet Number:	2	Date:14.06.2025	Approved: JAJ	
Results					
Pressures @ Base					
Total Unfactored Overturning Force			27.84	kN/m	
Total Unfactored Restoring Force			155.91	kN/m	
Eccentricity			0.09	Reaction Within Middle Third of Base	
Pressure at Toe			90.07	kN/m ²	
Pressure at Heel			51.01	kN/m ²	
Factor of Safety			1.11		
Allowable Factor of Safety			1.00	Pass	
Design Approach 1					
Partial Factors on Actions - Section A.3.1 - Combination 1					
Action Factor Set - A1					
Permanent unfavourable action			1.35		
Permanent favourable action			1.00		
Variable unfavourable action			1.50		
Variable favourable action			0.00		
Partial factors for soil parameters - Section A.3.2 - Combination 1					
Soil Factor Set - M1					
Angle of Shearing Resistance			1.00		
Weight Density			1.00		
Whole Structure					
Overturning Moment	45.96kN	Overturning Resistance	133.64kN		
Factor of Safety	2.91	Allowable FoS	1.00	Pass	
Sliding Force	35.85kN	Sliding Resistance	84.94kN		
Factor of Safety	2.37	Allowable FoS	1.00	Pass	
Check Overturning & Sliding Between Courses 1 & 2					
Overturning Moment	15.45kN	Overturning Resistance	55.6kN		
Factor of Safety	3.60	Allowable FoS	1.00	Pass	
Sliding Force	17.18kN	Sliding Resistance	47.69kN		
Factor of Safety	2.78	Allowable FoS	1.00	Pass	
Check Overturning & Sliding Between Courses 2 & 3					
Overturning Moment	2.55kN	Overturning Resistance	15.29kN		
Factor of Safety	6.00	Allowable FoS	1.00	Pass	
Sliding Force	7.78kN	Sliding Resistance	25.74kN		
Factor of Safety	3.66	Allowable FoS	1.00	Pass	
Check Overturning & Sliding Between Courses 3 & 4					
Overturning Moment		Overturning Resistance			
Factor of Safety		Allowable FoS	1.00		
Sliding Force		Sliding Resistance			
Factor of Safety		Allowable FoS	1.00		
Check Overturning & Sliding Between Courses 4 & 5					
Overturning Moment		Overturning Resistance			
Factor of Safety		Allowable FoS	1.00		
Sliding Force		Sliding Resistance			
Factor of Safety		Allowable FoS	1.00		
Check Overturning & Sliding Between Courses 5 & 6					
Overturning Moment		Overturning Resistance			
Factor of Safety		Allowable FoS	1.00		

Sliding Force	Sliding Resistance	
Factor of Safety	Allowable FoS	1.00
Check Overturning & Sliding Between Courses 6 & 7		
Overturning Moment	Overturning Resistance	
Factor of Safety	Allowable FoS	1.00
Sliding Force	Sliding Resistance	
Factor of Safety	Allowable FoS	1.00
Check Overturning & Sliding Between Courses 7 & 8		
Overturning Moment	Overturning Resistance	
Factor of Safety	Allowable FoS	1.00
Sliding Force	Sliding Resistance	
Factor of Safety	Allowable FoS	1.00
Check Overturning & Sliding Between Courses 8 & 9		
Overturning Moment	Overturning Resistance	
Factor of Safety	Allowable FoS	1.00
Sliding Force	Sliding Resistance	
Factor of Safety	Allowable FoS	1.00

MJ Civil Engineering	Project:	40 Sweetwater Park				By:MAJ
	Calculation:	Gabion Wall Design				
	Sheet Number:	3	Date:14.06.2025		Approved: JAJ	
Design Approach 1						
Partial Factors on Actions - Section A.3.1 - Combination 2						
Action Factor Set - A2						
Permanent unfavourable action				1.00		
Permanent favourable action				1.00		
Variable unfavourable action				1.30		
Variable favourable action				0.00		
Partial factors for soil parameters - Section A.3.2 - Combination 2						
Soil Factor Set - M2						
Angle of Shearing Resistance				1.25		
Weight Density				1.00		
Whole Structure						
Overturning Moment		42.74kN	Overturning Resistance		135.78kN	
Factor of Safety		3.18	Allowable FoS		1.00	Pass
Sliding Force		31.73kN	Sliding Resistance		68.53kN	
Factor of Safety		2.16	Allowable FoS		1.00	Pass
Check Overturning & Sliding Between Courses 1 & 2						
Overturning Moment		14.55kN	Overturning Resistance		56.3kN	
Factor of Safety		3.87	Allowable FoS		1.00	Pass
Sliding Force		22.44kN	Sliding Resistance		66.59kN	
Factor of Safety		2.50	Allowable FoS		1.00	Pass
Check Overturning & Sliding Between Courses 2 & 3						
Overturning Moment		2.49kN	Overturning Resistance		15.37kN	
Factor of Safety		6.18	Allowable FoS		1.00	Pass
Sliding Force		7.43kN	Sliding Resistance		25.85kN	
Factor of Safety		3.16	Allowable FoS		1.00	Pass
Check Overturning & Sliding Between Courses 3 & 4						
Overturning Moment			Overturning Resistance			
Factor of Safety			Allowable FoS		1.00	
Sliding Force			Sliding Resistance			
Factor of Safety			Allowable FoS		1.00	
Check Overturning & Sliding Between Courses 4 & 5						
Overturning Moment			Overturning Resistance			
Factor of Safety			Allowable FoS		1.00	
Sliding Force			Sliding Resistance			
Factor of Safety			Allowable FoS		1.00	
Check Overturning & Sliding Between Courses 5 & 6						
Overturning Moment			Overturning Resistance			
Factor of Safety			Allowable FoS		1.00	
Sliding Force			Sliding Resistance			
Factor of Safety			Allowable FoS		1.00	
Check Overturning & Sliding Between Courses 6 & 7						
Overturning Moment			Overturning Resistance			
Factor of Safety			Allowable FoS		1.00	
Sliding Force			Sliding Resistance			
Factor of Safety			Allowable FoS		1.00	
Check Overturning & Sliding Between Courses 7 & 8						
Overturning Moment			Overturning Resistance			
Factor of Safety			Allowable FoS		1.00	



Results Sumamry

Eccentricity	Reaction within Middle Third of Base	
Bearing Capacity FoS	1.11	
Combintion 1	Overturning	Sliding
Whole Structure	2.91	2.37
Between Levels 1 & 2	3.60	2.78
Between Levels 2 & 3	6.00	3.66
Combintion 2	Overturning	Sliding
Whole Structure	3.18	2.16
Between Levels 1 & 2	3.87	2.50
Between Levels 2 & 3	6.18	3.16