Project Title: Missouri Rush Soccer Field

Engineer: Project Descr: **Retaining Wall**  Project ID:

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## **Cantilevered Retaining Wall**

File = N:\2017\ONETIM~1\ZZMR-0~1\STRUCT~1\CALCUL~1\MISSOU~1.EC6 ENERCALC, INC. 1983-2015, Build:6.15.10.6, Ver:6.15.10.6

Licensee: AEdifica Case Engineering

Lic. #: KW-06010584

Retaining Wall - 5'-8" Tall Description:

Footing Dimensions & Strengths

## **Footing Design Results**

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		<u>Toe</u>	<u>Heel</u>
Factored Pressure	=	1,846	18 psf
Mu' : Upward	=	390	0 ft-lb
Mu' : Downward	=	83	0 ft-lb
Mu: Design	=	307	2,727 ft-lb
Actual 1-Way Shear	=	2.26	29.44 psi
Allow 1-Way Shear	=	94.87	94.87 psi
Toe Reinforcing	=	None Spec'd	·
Hard Dalatanahan		# F @ 10 00 !	

Heel Reinforcing = # 5 @ 12.00 in Key Reinforcing = None Spec'd

Other Acceptable Sizes & Spacings

Toe: Not req'd, Mu < S  $^{\star}$  Fr Heel: #4@ 15.00 in, #5@ 23.00 in, #6@ 32.75 in, #7@ 44.50 in, #8@ 48.25 in, #9@ 4

Key: No key defined

## Summary of Overturning & Resisting Forces & Moments

	OVERTURNING						RESISTING		
Item		Force lbs	Distance ft	Moment ft-lb			Force lbs	Distance ft	Moment ft-lb
Heel Active Pressure	=	739.9	2.17	1,603.7	Soil Over Heel	=	1,561.1	2.59	4,040.5
Surcharge over Heel	=	206.9	3.25	672.6	Sloped Soil Over Heel	=			
Toe Active Pressure	=	-93.8	0.83	-78.1	Surcharge Over Heel	=	250.3	2.59	647.9
Surcharge Over Toe	=				Adjacent Footing Load	=			
Adjacent Footing Load	=				Axial Dead Load on Stem	=			
Added Lateral Load	=				* Axial Live Load on Stem	=			
Load @ Stem Above Soil	=	20.0	8.50	170.0	Soil Over Toe	=	122.8	0.34	41.1
					Surcharge Over Toe	=			
					Stem Weight(s)	=	567.0	1.00	568.9
			_		Earth @ Stem Transitions	=			
Total	=	873.0	O.T.M.	= 2,368.3	Footing Weight	=	480.0	1.92	921.6
Resisting/Overturning F			=	2.63	Key Weight	=		2.00	
Vertical Loads used	for S	oil Pressure	= 2,98	31.2 lbs	Vert. Component	=		_	
					Tota	ıl = .	2,981.2 I	os R.M. =	6,220.1

<sup>\*</sup> Axial live load NOT included in total displayed, or used for overturning resistance, but is included for soil pressure calculation.