Planning Level Cost Estimatation Calculator using Lineal Feet and Square Feet Dimensions

KEY	CF = Cubic Feet
Materials	SF = Square Feet
Activities	LF = Lineal Feet
Input Cells	CY = Cubic Yard

Item	*Constructin Element Description*		*Assumptions*		*Unit Costs*
1	**Structural Armoring**				
	Riprap (import)	3-ft minus	$11 per Ton	0.06 Tons per CF*	$0.66 per CF
	Riprap Placing/excavating	300 series excavator	$150 per Hour	0.3 Hrs. per 250 CF	$0.18 per CF
	Riprap Total	at	250 CF per LF		**$210.00 per LF**
2	**LWD Anchored**				
	LWD	30-ft stick w/ 6-ft rootwad	$1,000 Each (delivered)	0.2 Trees per 100 Ft	$200.00 per LF
	LWD Placing and anchoring (excavator)		$150 per Hour	1 Hrs. per Each	$30.00 per LF
	LWD Total		at	20 trees per 100 Ft	**$230.00 per LF**
3	**LWD Unanchored**				
	LWD	30-ft stick w/ 6-ft rootwad	$1,000 Each (delivered)	0.18 trees per LF	$180.00 per LF
	LWD Placing (excavator)		$150 per Hour	0.3 hours per Each	$8.10 per LF
	LWD Total		at	18 Trees per 100 Ft	**$188.10 per LF**
4	**Cobble Armoring**				
	Cobbles	4-8" rounded washed	$20 per Ton	0.06 Tons per CF	$1.20 per CF
	Cobble Placing	300 series excavator	$150 per Hour	0.5 Hrs. per 250 CF	$0.30 per CF
	Cobble Armoring Total	at	100 CF per LF		**$150.00 per LF**
5	**Nourishment**				
	Material	clean sand to gravel	$16 per Ton	0.06 Tons per CF	$0.96 per CF
	Nourishment Placing	300 series excavator	$150 per Hour	0.3 Hrs. per 250 CF	$0.18 per CF
	Noursishment Total	at	120 CF per LF		**$136.80 per LF**
6	**Planting**				
	Plants	per stem (ave)	$1 each (delivered)	75 Plants per 100 SF	$0.75 per SF
	Planting		$30 per Hour	0.06666667 Hrs per Plant (4 min.)	$1.50 per SF
					$2.25 per SF
7	**TESC/Site Security**				
	silt fence & visibility fencing, installation and O&M				**$6.00 per LF**
8	**Site Stabilization**				
	fabric, topsoil (6"), hydromulch				**$8.00 per SF**
	Other Activities & Costs				
9	Grading		$150 per hour	1 hrs per 1000 SF	**$0.15 per SF**
10	Rubblizing		$200 per hour	0.75 hrs per 250 CF	**$150.00 per CF**
11	Moblization		**Assumes an individual project of approximately ~$100,000		**15% Each project****
12	Pile Removal/Disposal				**$300.00 each**
13	Debris Removal				**$30.00 CY**
	Estimates should also include:				**8.4% TAX**
					15% Contingency
				Plans, Specifications, and Estimates	**20% Engineering**

Note* Assumes 120 LBS/CF density

Riprap Densitey Calculation

$\frac{2000 \text{ lbs}}{1 \text{ ton}} \quad \frac{1 \text{ cf}}{120 \text{ lbs}} \quad \frac{16.66667 \text{ cf}}{1 \text{ ton}} \quad 0.06 \text{ tons/cf}$

Sample 100-LF of project length with 1,000 SF of disturbance, 10 CY of cleanup, and 50 piles removed

Section	*Approximate project cost*	*Rounded Values/LF*
A	$147,549	$150 /LF
B	$124,549	$125 /LF
C	$81,207	$85 /LF

NOTE: Includes full design without reused materials and 15% Mobilization, 8.4% Tax, 15% Contingency, and 20% Engineering costs