

HIMACHAL PRADESH
PUBLIC WORKS DEPARTMENT

No.PW- E-in-C(QC&D)/D/Cell-SOR/2018-2802-08

Dated:- 01/12/2018

To

✓ The Nodal officer(IT),
H.P.P.W.D Nirman Bhawan.,
Shimla-2.

Subject: - Uploading the approved items to be included in HPSR on the
HPPWD website

Following items have been approved by the committee for Schedule
of Rates which may be uploaded on HP.PWD website immediately.

Encl :- Abstract of Analysis of rates

Engineer-in-Chief(Projects),
HPPWD,U.S.Club,Shimla-1

Copy to:-

- 1) All the Zonal Chief Engineers for information please.
- 2) The Chief Engineer (NH) for information please.
- 3) The Chief Engineer (HPRIDC) for information please.


Engineer-in-Chief (Projects)
HPPWD,U.S.Club,Shimla-1

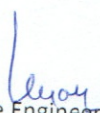
ITEM CODE	ITEM NAME	UNIT	LABOUR RATE	THROUGH RATE	REMARKS
19460000	Providing & making Gabion structure with Mechanically Woven Double Twisted Hexagonal Shaped Wire mesh Gabion Boxes as per IS 16014:2012,MORTH Clause 2500, of required size, Mesh Type 10x12 (D=100 mm with tolerance of $\pm 2\%$) zinc coated, Mesh wire diameter 3.0 mm, mechanically edged/ selvedged with partitions at every 1m interval and shall have minimum 10 numbers of openings per meter of mesh perpendicular to twist, tying with lacing wire of diameter 2.2mm, supplied @3% by weight of Gabion boxes, filled with boulders with least dimension of 200 mm, as per drawing, all complete as per direction of Engineer-in-charge.	Cum	154.50	1933.10	
19470000	Providing & making Gabion structure with Mechanically Woven Double Twisted Hexagonal Shaped Wire mesh Gabion Boxes as per IS 16014:2012,MORTH Clause 2500, of required size, Mesh Type 10x12(D=100 mm with tolerance of $\pm 2\%$) Zinc+PVC coated, Mesh wire diameter 2.7/3.7mm, mechanically edged / selvedged with partitions at every 1m interval and shall have minimum 10 numbers of openings per meter of mesh perpendicular to twist, tying with lacing wire of diameter 2.2/ 3.2mm(ID/OD), supplied @3% by weight of Gabion boxes, filled with boulders with least dimension of 200 mm, as per drawing, all complete as per directions of Engineer-in- charge.	Cum	154.50	2124.80	
19480000	Providing & making Gabion structure with Mechanically Woven Double Twisted Hexagonal Shaped Wire mesh Gabion Boxes as per IS 16014:2012,MORTH Clause 2500, of required size, Mesh Type 10x12(D=100 mm with tolerance of $\pm 2\%$), Zinc+10% Al alloy+PVC coated, Mesh wire diameter 2.7/3.7mm (ID/OD), mechanically edged /selvedged with partitions at every 1m interval and shall have minimum 10 numbers of openings per meter of mesh perpendicular to twist, tying with lacing wire of diameter 2.2/3.2mm(ID/OD), supplied @3% by weight of Gabion boxes, filled with boulders with least dimension of 200 mm, as per drawing, all complete as per directions of Engineer- in-charge.	Cum	154.50	2572.00	

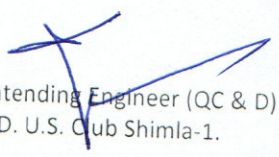
19490000	Supplying & laying of bi-axial extruded high modulus polypropylene geogrid conforming to MORTH SPECIFICATION for base/sub-base reinforcement having minimum tensile strength 15kN/m in the longitudinal and transverse direction, with 5kN/m and 7kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.	Sqm	4.25	125.60	
19500000	Supplying & laying of bi-axial extruded high modulus polypropylene geogrid conforming to MORTH SPECIFICATION for base/sub-base reinforcement having minimum tensile strength 20kN/m in the longitudinal and transverse direction, with 7kN/m and 14kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.	Sqm	4.25	143.50	
19510000	Supplying & laying of bi-axial extruded high modulus polypropylene geogrid conforming to MORTH SPECIFICATION for base/sub-base reinforcement having minimum tensile strength 30kN/m in the longitudinal and transverse direction, with 10.5 kN/m and 21kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.	Sqm	4.25	231.60	
19520000	Supplying & laying of bi-axial extruded high modulus polypropylene geogrid for base/sub-base reinforcement having minimum tensile strength 40kN/m in the longitudinal and transverse direction, with 14kN/m and 28kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.	Sqm	4.25	336.40	


19530000	Supplying & laying of drainage composite for use behind walls, between two different fills, alongside-drains of road, below concrete lining of canals etc. Geocomposite for planar drainage, realized by thermo bonding a draining core in extruded monofilaments with two filtering nonwoven geotextiles that may also be working as separation or protecting layers. The draining three dimensional core will have a "W" configuration as longitudinal parallel channels. Minimum thickness to be 7.2mm, with two filtering UV stabilized polypropylene nonwoven geotextile of minimum thickness of 0.75mm characteristic opening size (O90) of 110 micron and tensile strength of 8.0 kN/m that will be working as separation or protecting layer, geocomposite having in plane flow capacity of 2.1 L / (m.s) at hydraulic gradient of 1.0 & 20 kPa pressure and tensile strength of 18 kN/m , with mass per unit area of 740 gsm, supplied in the form of roll for easy transportation to site of work as per detailed specification all complete as per directions of Engineer in charge.	Sqm	4.25	648.20	
19540000	Supplying & laying of drainage composite for use behind walls, between two different fills, alongside drains of road, below concrete lining of canals etc. having thermobonding a draining core - HDPE geonet comprises of two sets of parallel overlayed ribs integrally connected to have a rhomboidal shape with a polyethylene film and a nonwoven geotextile having mass per unit area 130 gsm and tensile strength of 8.0 kN/m that will be working as separation or protecting layer, geocomposite having in plane flow capacity of 0.7 L / (m.s) at hydraulic gradient of 1.0 & 20 kPa pressure and tensile strength of 13.5 kN/m , with mass per unit area of 830 gsm, at easily accessible location including top and bottom, with all leads and lifts, manpower and machinery, materials, labour etc. complete and as directed by Engineer -in - Charge.	Sqm	4.25	770.80	
19550000	Supplying and laying high strength flexible geogrids (HSFG) as soil reinforcement / basal reinforcement as per MORTH 3100 and IRC 113, made of high tenacity polyester core with polyethylene coating with minimum Long Term Design Strength (LTDS) of more than 50% of ultimate tensile strength at 30 degree Celcius corresponding to 12 % strain .				

19550100	Ultimate tensile strength- 100 kN/m	Sqm	4.25	259.80	
19550200	Ultimate tensile strength- 150 kN/m	Sqm	4.25	285.30	
19550300	Ultimate tensile strength- 200 kN/m	Sqm	4.25	387.50	
19550400	Ultimate tensile strength- 250 kN/m	Sqm	4.25	425.90	
19550500	Ultimate tensile strength- 300 kN/m	Sqm	4.25	451.40	
19550600	Ultimate tensile strength- 350 kN/m	Sqm	4.25	502.50	
19550700	Ultimate tensile strength- 400 kN/m	Sqm	4.25	540.80	
19550800	Ultimate tensile strength- 500 kN/m	Sqm	4.25	643.10	
19550900	Ultimate tensile strength- 600 kN/m	Sqm	4.25	706.90	
19551000	Ultimate tensile strength- 700 kN/m	Sqm	4.25	834.70	
19551100	Ultimate tensile strength- 800 kN/m	Sqm	4.25	908.80	
19551200	Ultimate tensile strength- 900 kN/m	Sqm	4.25	1078.70	
19551300	Ultimate tensile strength- 1000 kN/m	Sqm	4.25	1218.00	
19551400	Ultimate tensile strength- 1100 kN/m	Sqm	4.25	1281.90	
19551500	Ultimate tensile strength- 1200 kN/m	Sqm	4.25	1394.30	


Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Executive Engineer (QC & D)
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Superintending Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Engineer in Chief (Projects)
HP.PWD. U.S. Club Shimla-1.

Providing & making Gabion structure with Mechanically Woven Double Twisted Hexagonal Shaped Wire mesh Gabion Boxes as per IS 16014:2012, MORTH Clause 2500, of required size, Mesh Type 10x12 (D=100 mm with tolerance of $\pm 2\%$) zinc coated, Mesh wire diameter 3.0 mm, mechanically edged/ selvedged with partitions at every 1m interval and shall have minimum 10 numbers of openings per meter of mesh perpendicular to twist, tying with lacing wire of diameter 2.2mm, supplied @3% by weight of Gabion boxes, filled with boulders with least dimension of 200 mm, as per drawing, all complete as per direction of Engineer-in-charge. Details cost of one Gabion box/Crates of size 2mx1mx1m = 2 cum

MATERIAL

Crates made of Mesh type 10x12 (D=100 mm) Zn coated. (Mesh wire diameter 3.00 mm). Surface area required = 11.00 sqm	Sqm	11.00	190.00	2090.00
Stone boulder with least dimension 200mm	Cum	2.00	300.00	600.00

CARRIAGE :

Soling stone and filling crate				
1 KM BY MECH. TRANSPORT	Cum	2.00	130.50	261.00
100 MTRS BY HEAD LOAD	Cum	2.00	54.35	108.70
Carriage of Gabion structure	L.S.			3.00

LABOUR

Mate.	Each	0.10	116.67	11.67
Mason (for plain stone work) 2nd class	Each	0.50	158.67	79.34
Beldar	Each	1.50	116.67	175.01
				3328.71

Add 1 % Water charges

33.29

3361.99

Add 10 % Contractor's profit.

336.20

Add 5 % overheads

168.10

3866.29

Cost of 2 cum

1933.15

Cost of 1 cum

Say Rs. 1933.10 Per cum

LABOUR :

Mate.	Each	0.10	116.67	11.67
Mason (for plain stone work) 2nd class	Each	0.50	158.67	79.34
Beldar	Each	1.50	116.67	175.01

266.01

TOTAL :

2.66

ADD FOR WATER CHARGES @ 1% :

268.67

TOTAL :

26.87

Add 10 % Contractor's profit.

13.43

Add 5 % overheads

308.97


Labour for 2 cum


154.48

Labour per cum

Say Rs. 154.50 per cum


Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


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Superintending Engineer (QC & D)
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Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

Providing & making Gabion structure with Mechanically Woven Double Twisted Hexagonal Shaped Wire mesh Gabion Boxes as per IS 16014:2012, MORTH Clause 2500, of required size, Mesh Type 10x12 (D=100 mm with tolerance of $\pm 2\%$) Zinc+PVC coated, Mesh wire diameter 2.7/3.7mm, mechanically edged/ selvedged with partitions at every 1m interval and shall have minimum 10 numbers of openings per meter of mesh perpendicular to twist, tying with lacing wire of diameter 2.2/ 3.2mm (ID/OD), supplied @3% by weight of Gabion boxes, filled with boulders with least dimension of 200 mm, as per drawing, all complete as per directions of Engineer-in-charge.

Details cost of one Gabion box/Crates of size 2mx1mx1m = 2 cum

MATERIAL

Crates made of Mesh type 10x12 (D=100 mm) Zn+PVC coated. Mesh wire diameter 2.70/3.70 mm (ID/OD).

Surface area required = 11.00 sqm

Stone boulder with least dimension 200mm

Sqm	11.00	220	2420.00
Cum	2.00	300	600.00

CARRIAGE :

Soling stone and filling crate

1 KM BY MECH. TRANSPORT

100 MTRS BY HEAD LOAD

Carriage of Gabion structure

Cum	2.00	130.50	261.00
Cum	2.00	54.35	108.70
L.S.			3.00

LABOUR

Mate

Mason (for plain stone work) 2nd class

Beldar

Each	0.10	116.67	11.67
Each	0.50	158.67	79.34
Each	1.50	116.67	175.01

3658.71

Add 1 % Water charges

36.59

3695.29

Add 10 % Contractor's profit

369.53

Add 5 % overheads

184.76

Cost of 2 cum

4249.59

Cost of 1 cum

2124.79

Say Rs. 2124.80 Per cum

LABOUR :

Mate.

Mason (for plain stone work) 2nd class

Beldar

Each	0.10	116.67	11.67
Each	0.50	158.67	79.34
Each	1.50	116.67	175.01

TOTAL :

266.01

ADD FOR WATER CHARGES @ 1% :

2.66

TOTAL :

268.67

Add 10 % Contractor's profit.

26.87

Add 5 % overheads

13.43

Labour for 2 cum

308.97

Labour per cum

154.48

Say Rs. 154.50 per cum

Assistant Engineer (QC & D)
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Superintending Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

ANALYSIS OF RATE

Providing & making Gabion structure with Mechanically Woven Double Twisted Hexagonal Shaped Wire mesh Gabion Boxes as per IS 16014:2012, MORTH Clause 2500, of required size, Mesh Type 10x12 (D=100 mm with tolerance of $\pm 2\%$), Zinc+10% Al alloy+PVC coated, Mesh wire diameter 2.7/3.7mm (ID/OD), mechanically edged/selvedged with partitions at every 1m interval and shall have minimum 10 numbers of openings per meter of mesh perpendicular to twist, tying with lacing wire of diameter 2.2/3.2mm (ID/OD), supplied @3% by weight of Gabion boxes, filled with boulders with least dimension of 200 mm, as per drawing, all complete as per directions of Engineer- incharge.

Details cost of one Gabion box/Crates of size 2mx1mx1m = 2 cum

MATERIAL

Crates made of Mesh type 10x12 (D=100 mm) Zn+10%
Al alloy + PVC coated. Mesh wire diameter 2.70/3.70
mm (ID/OD) Surface area required = 11.00
sqm.

	Sqm	11.00	290.00	3190.00
Stone boulder with least dimension 200mm	Cum	2.00	300.00	600.00

CARRIAGE :

Soling stone and filling crate				
1 KM BY MECH. TRANSPORT	Cum	2.00	130.50	261.00
100 MTRS BY HEAD LOAD	Cum	2.00	54.35	108.70
Carriage of Gabion structure	L.S.			3.00

LABOUR

Mate	Each	0.10	116.67	11.67
Mason (for plain stone work) 2nd class	Each	0.50	158.67	79.34
Beldar	Each	1.50	116.67	175.01

4428.71

Add 1 % Water charges

44.29

4472.99

Add 10 % Contractor's profit

447.30

Add 5 % overheads

223.65

Cost of 2 cum

5143.94

Cost of 1 cum

2571.97

Say Rs. 2572.00 Per cum

LABOUR :

Mate.	Each	0.10	116.67	11.67
Mason (for plain stone work) 2nd class	Each	0.50	158.67	79.34
Beldar	Each	1.50	116.67	175.01

266.01

TOTAL :

ADD FOR WATER CHARGES @ 1% :

2.66

TOTAL :

268.67

Add 10 % Contractor's profit

26.87

Add 5 % overheads

13.43

Labour for 2 cum

308.97

Labour per cum

154.48

Say Rs. 154.50 per cum

ANALYSIS OF RATE

19490000

Supplying & laying of bi-axial extruded high modulus polypropylene geogrid conforming to MORTH SPECIFICATION for base/sub-base reinforcement having minimum tensile strength 15kN/m in the longitudinal and transverse direction, with 5kN/m and 7kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.

Details of Cost for 300 Sqm

MATERIAL

Bi-Axial Extruded GeoGrids of Minimum Tensile Strength 15 kN/m in the longitudinal and transverse direction

Sqm	300.00	95.00	28500.00
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Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops / lugs for joining reinforcing elements with the facia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 28500=2850

2850.00

LABOUR

Mate

Each	0.36	116.67	42.00
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Beldar

Each	6.00	116.67	700.02
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Skilled Beldar

Each	3.00	116.67	350.01
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32442.03

Add Water charges @ 1%

324.42

32766.45

Add Contractor's profit @ 10%

3276.645

Add overheads @ 5%

1638.32

Cost for 300 Sqm

37681.42

Cost per Sqm

125.6047

Say Rs. 125.60 Per sqm

LABOUR :

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

TOTAL :

1092.03

ADD FOR WATER CHARGES @ 1% :

10.92

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15

Labour for 300 Sqm

1268.39

Labour per Sqm

4.23

Say Rs. 154.50 per cum

Assistant Engineer (QC & D)

Executive Engineer (QC & D)

Superintending Engineer (QC & D)

Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

Supplying & laying of bi-axial extruded high modulus polypropylene geogrid conforming to MORTH SPECIFICATION for base/sub-base reinforcement having minimum tensile strength 20kN/m in the longitudinal and transverse direction, with 7kN/m and 14kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.

Details of Cost for 300 Sqm

MATERIAL

Bi-Axial Extruded GeoGrids of Minimum Tensile Strength 20kN/m in the longitudinal and transverse direction

Sqm 300.00 109.00 32700.00

Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops / lugs for joining reinforcing elements with the fascia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 327000=3270

3270.00

LABOUR

Mate	Each	0.36	116.67	42.00
Beldar	Each	6.00	116.67	700.02
Skilled Beldar	Each	3.00	116.67	350.01

37062.03

Add Water charges @ 1%

370.62

37432.65

Add Contractor's profit @ 10%

3743.265

Add overheads @ 5%

1871.63

Cost for 300 Sqm

43047.55

Cost per Sqm

143.4918

Say Rs. 143.50 Per sqm

LABOUR :

Mate	Each	0.36	116.67	42.00
Beldar	Each	6.00	116.67	700.02
Skilled Beldar	Each	3.00	116.67	350.01

TOTAL :

1092.03

ADD FOR WATER CHARGES @ 1% :

10.92

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15


Labour for 300 Sqm


1268.39

Labour per Sqm


4.23

Say Rs. 4.25 per sqm


Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Superintending Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

ANALYSIS OF RATE

Supplying & laying of bi-axial extruded high modulus polypropylene geogrid conforming to MORTH SPECIFICATION for base/sub-base reinforcement having minimum tensile strength 30kN/m in the longitudinal and transverse direction, with 10.5 kN/m and 21kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.

Details of Cost for 300 Sqm

MATERIAL

Bi-Axial Extruded GeoGrids of Minimum Tensile Strength 30kN/m in the longitudinal and transverse direction

Sqm 300.00 178.00 53400.00

Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 53400=5340

5340.00

LABOUR

Mate

Each 0.36 116.67 42.00

Beldar

Each 6.00 116.67 700.02

Skilled Beldar

Each 3.00 116.67 350.01

59832.03

Add Water charges @ 1%

598.32

Add Contractor's profit @ 10%

60430.35

Add overheads @ 5%

6043.035

Cost for 300 Sqm

3021.52

Cost per Sqm

69494.90

231.6497

Say Rs. 231.60 Per sqm

LABOUR :

Mate

Each 0.36 116.67 42.00

Beldar

Each 6.00 116.67 700.02

Skilled Beldar

Each 3.00 116.67 350.01

TOTAL :

1092.03

ADD FOR WATER CHARGES @ 1% :

10.92

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15

Labour for 300 Sqm

1268.39

Labour per Sqm

4.23

Say Rs. 4.25 per sqm

Assistant Engineer (QC & D)

Executive Engineer (QC & D)

Superintending Engineer (QC & D)

Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

ANALYSIS OF RATE

Supplying & laying of bi-axial extruded high modulus polypropylene geogrid for base/sub-base reinforcement having minimum tensile strength 40kN/m in the longitudinal and transverse direction, with 14kN/m and 28kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.

Details of Cost for 300 Sqm

MATERIAL

Bi-Axial Extruded GeoGrids of Minimum Tensile Strength 40kN/m in the longitudinal and transverse direction

Sqm 300.00 260.00 78000.00

Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 78000=7800

7800.00

LABOUR

Mate

Each 0.36 116.67 42.00

Beldar

Each 6.00 116.67 700.02

Skilled Beldar

Each 3.00 116.67 350.01

86892.03

Add Water charges @ 1%

868.92

87760.95

Add Contractor's profit @ 10%

8776.095

Add overheads @ 5%

4388.05

Cost for 300 Sqm

100925.09

Cost per Sqm

336.417

Say Rs. 336.40 Per sqm

LABOUR :

Mate

Each 0.36 116.67 42.00

Beldar

Each 6.00 116.67 700.02

Skilled Beldar

Each 3.00 116.67 350.01

TOTAL :

1092.03

ADD FOR WATER CHARGES @ 1% :

10.92

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15

Labour for 300 Sqm

1268.39

Labour per Sqm

4.23

Say Rs. 4.25 per sqm

Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Superintending Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

ANALYSIS OF RATE

Supplying & laying of drainage composite for use behind walls, between two different fills, along side-drains of road, below concrete lining of canals etc. Geocomposite for planar drainage, realized by thermo bonding a draining core in extruded monofilaments with two filtering nonwoven geotextiles that may also be working as separation or protecting layers. The draining three dimensional core will have a "W" configuration as longitudinal parallel channels. Minimum thickness to be 7.2mm, with two filtering UV stabilized polypropylene nonwoven geotextile of minimum thickness of 0.75mm characteristic opening size (O90) of 110 micron and tensile strength of 8.0 kN/m that will be working as separation or protecting layer, geocomposite having in plane flow capacity of 2.1 L / (m.s) at hydraulic gradient of 1.0 & 20 kPa pressure and tensile strength of 18 kN/m, with mass per unit area of 740 gsm, supplied in the form of roll for easy transportation to site of work as per detailed specification all complete as per directions of Engineer in charge.

Details of Cost for 300 Sqm

MATERIAL

Geosynthetic Drainage Composite

Sqm 300.00 504.00 151200.00

Add 10 per cent of the cost of synthetic Composites for wastage and accessories for joining sheets with the facia panels, overlaps and other protective elements for synthetic Composites and other miscellaneous activities required to complete the item in all respect including transportation & takes. 10% of 151200=15120

15120.00

LABOUR

Mate

Each 0.36 116.67 42.00

Beldar

Each 6.00 116.67 700.02

Skilled Beldar

Each 3.00 116.67 350.01

167412.03

Add Water charges @ 1%

1674.12

Add Contractor's profit @ 10%

169086.15

Add overheads @ 5%

16908.62

Cost for 300 Sqm

8454.31

Cost per Sqm

194449.07

648.16

Say Rs. 648.20 Per sqm

LABOUR :

Mate

Each 0.36 116.67 42.00

Beldar

Each 6.00 116.67 700.02

Skilled Beldar

Each 3.00 116.67 350.01

TOTAL :

1092.03

ADD FOR WATER CHARGES @ 1% :

10.92

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15

Labour for 300 Sqm

1268.39

Labour per Sqm

4.23

Say Rs. 4.25 per sqm

Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Superintending Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

ANALYSIS OF RATE

Supplying & laying of drainage composite for use behind walls, between two different fills, alongside drains of road, below concrete lining of canals etc. having thermo bonding a draining core - HDPE geonet comprises of two sets of parallel overlayed ribs integrally connected to have a rhomboidal shape with a polyethylene film and a nonwoven geotextile having mass per unit area 130 gsm and tensile strength of 8.0 kN/m that will be working as separation or protecting layer, geocomposite having in plane flow capacity of 0.7 L / (m.s) at hydraulic gradient of 1.0 & 20 kPa pressure and tensile strength of 13.5 kN/m, with mass per unit area of 830 gsm, at easily accessible location including top and bottom, with all leads and lifts, manpower and machinery, materials, labour etc. complete and as directed by Engineer -in - Charge.

Details of Cost for 300 Sqm

MATERIAL

Geosynthetic Drainage Composite

Sqm 300.00 600.00 180000.00

Add 10 per cent of the cost of synthetic Composites for wastage and accessories for joining sheets with the facia pannels, overlaps and other protective elements for synthetic Composites and other miscellaneous activities required to complete the item in all respect including transportation & takes. 10% of 180000=18000

18000.00

LABOUR

Mate

Each 0.36 116.67 42.00

Beldar

Each 6.00 116.67 700.02

Skilled Beldar

Each 3.00 116.67 350.01

199092.03

Add Water charges @ 1%

1990.92

201082.95

Add Contractor's profit @ 10%

20108.3

Add overheads @ 5%

10054.15

Cost for 300 Sqm

231245.39

Cost per Sqm

770.82

Say Rs. 770.80 Per sqm

LABOUR :

Mate

Each 0.36 116.67 42.00

Beldar

Each 6.00 116.67 700.02

Skilled Beldar

Each 3.00 116.67 350.01

TOTAL :

1092.03

ADD FOR WATER CHARGES @ 1% :

10.92

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15

Labour for 300 Sqm

1268.39

Labour per Sqm

4.23

Say Rs. 4.25 per sqm

Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Superintending Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

ANALYSIS OF RATE

19550000 Supplying and laying high strength flexible geogrids (HSFG) as soil reinforcement / basal reinforcement as per MORTH 3100 and IRC 113, made of high tenacity polyester core with polyethylene coating with minimum Long Term Design Strength (LTDS) of more than 50% of ultimate tensile strength at 30 degree Celcius corresponding to 12 % strain .

19550100 Ultimate tensile strength- 100 kN/m

Details of Cost for 300 Sqm

MATERIAL

Synthetic Geogrid

Sqm 300.00 200.00 60000.00

Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 60000=6000

6000.00

LABOUR

Mate

Each 0.36 116.67 42.00

Beldar

Each 6.00 116.67 700.02

Skilled Beldar

Each 3.00 116.67 350.01

67092.03

Add Water charges @ 1%

670.92

67762.95

Add Contractor's profit @ 10%

6776.295

Add overheads @ 5%

3388.15

Cost for 300 Sqm

77927.39

Cost per Sqm

259.76

Say Rs. 259.80 Per sqm

LABOUR :

Mate

Each 0.36 116.67 42.00

Beldar

Each 6.00 116.67 700.02

Skilled Beldar

Each 3.00 116.67 350.01

TOTAL :

1092.03

ADD FOR WATER CHARGES @ 1% :

10.92

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15

Labour for 300 Sqm

1268.39

Labour per Sqm

4.23

Say Rs. 4.25 per sqm

Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1

Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Superintending Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

19550200 Ultimate tensile strength- 150 kN/m

Details of Cost for 300 Sqm

MATERIAL

Synthetic Geogrid

Sqm	300.00	220.00	66000.00
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Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 66000=6600

6600.00

LABOUR

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

73692.03

Add Water charges @ 1%

736.92

74428.95

Add Contractor's profit @ 10%

7442.895

Add overheads @ 5%

3721.45

Cost for 300 Sqm

85593.29

Cost per Sqm

285.31

Say Rs. 285.30 Per sqm

LABOUR :

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

1092.03

TOTAL :

10.92

ADD FOR WATER CHARGES @ 1% :

1102.95

TOTAL :

110.30

Add Contractor's profit @ 10%

55.15

Add overheads @ 5%

1268.39

Labour for 300 Sqm

Labour per Sqm

4.23

Say Rs. 4.25 per sqm

Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Superintending Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

19550300 Ultimate tensile strength- 200 kN/m

Details of Cost for 300 Sqm

MATERIAL

Synthetic Geogrid

Sqm	300.00	300.00	90000.00
-----	--------	--------	----------

Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 90000=9000

9000.00

LABOUR

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

100092.03

Add Water charges @ 1%

1000.92

101092.95

Add Contractor's profit @ 10%

10109.3

Add overheads @ 5%

5054.65

Cost for 300 Sqm

116256.89

Cost per Sqm

387.52

Say Rs. 387.50 Per sqm

LABOUR :

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

1092.03

TOTAL :

ADD FOR WATER CHARGES @ 1% :

10.92

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15

Labour for 300 Sqm


1268.39


Labour per Sqm


4.23

Say Rs. 4.25 per sqm


Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Superintending Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

19550400 Ultimate tensile strength- 250 kN/m

Details of Cost for 300 Sqm

MATERIAL

Synthetic Geogrid

Sqm 300.00 330.00 99000.00

Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the facia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 99000=9900

9900.00

LABOUR

Mate

Each 0.36 116.67 42.00

Beldar

Each 6.00 116.67 700.02

Skilled Beldar

Each 3.00 116.67 350.01

109992.03

Add Water charges @ 1%

1099.92

111091.95

Add Contractor's profit @ 10%

11109.2

Add overheads @ 5%

5554.60

Cost for 300 Sqm

127755.74

Cost per Sqm

425.85

Say Rs. 425.90 Per sqm

LABOUR :

Mate

Each 0.36 116.67 42.00

Beldar

Each 6.00 116.67 700.02

Skilled Beldar

Each 3.00 116.67 350.01

1092.03

TOTAL :

10.92

ADD FOR WATER CHARGES @ 1% :

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15

Labour for 300 Sqm

1268.39

Labour per Sqm

4.23

Say Rs. 4.25 per sqm

Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Superintending Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

19550500

Ultimate tensile strength- 300 kN/m

Details of Cost for 300 Sqm

MATERIAL

Synthetic Geogrid

Sqm 300.00 350.00 105000.00

Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 105000 = 10500

10500.00

LABOUR

Mate

Each 0.36 116.67 42.00

Beldar

Each 6.00 116.67 700.02

Skilled Beldar

Each 3.00 116.67 350.01

116592.03

Add Water charges @ 1%

1165.92

117757.95

Add Contractor's profit @ 10%

11775.8

Add overheads @ 5%

5887.90

Cost for 300 Sqm

135421.64

Cost per Sqm

451.41

Say Rs. 451.40 Per sqm

LABOUR :

Mate

Each 0.36 116.67 42.00

Beldar

Each 6.00 116.67 700.02

Skilled Beldar

Each 3.00 116.67 350.01

1092.03

TOTAL :

10.92

ADD FOR WATER CHARGES @ 1% :

1102.95

TOTAL :

110.30

Add Contractor's profit @ 10%

55.15

Add overheads @ 5%

1268.39

Labour for 300 Sqm

4.23

Labour per Sqm

Say Rs. 4.25 per sqm

Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Superintending Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

19550600 Ultimate tensile strength- 350 kN/m

Details of Cost for 300 Sqm

MATERIAL

Synthetic Geogrid

Sqm	300.00	390.00	117000.00
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Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 117000 = 11700

11700.00

LABOUR

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

129792.03

Add Water charges @ 1%

1297.92

131089.95

Add Contractor's profit @ 10%

13109

Add overheads @ 5%

6554.50

Cost for 300 Sqm

150753.44

Cost per Sqm

502.51

Say Rs. 502.50 Per sqm

LABOUR :

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

TOTAL :

1092.03

ADD FOR WATER CHARGES @ 1% :

10.92

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15

Labour for 300 Sqm


1268.39

Labour per Sqm

4.23

Say Rs. 4.25 per sqm


Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Superintending Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

19550700 Ultimate tensile strength- 400 kN/m

Details of Cost for 300 Sqm

MATERIAL

Synthetic Geogrid

Sqm	300.00	420.00	126000.00
-----	--------	--------	-----------

Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 126000 = 12600

12600.00

LABOUR

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

139692.03

Add Water charges @ 1%

1396.92

141088.95

Add Contractor's profit @ 10%

14108.9

Add overheads @ 5%

7054.45

Cost for 300 Sqm

162252.29

Cost per Sqm

540.84

Say Rs. 540.80 Per sqm

LABOUR :

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

1092.03

TOTAL :

ADD FOR WATER CHARGES @ 1% :

10.92

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15

Labour for 300 Sqm


1268.39

Labour per Sqm

4.23

Say Rs. 4.25 per sqm


Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Superintending Engineer (Qc & D)
HP.PWD. U.S. Club Shimla-1.


Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

*19550800 Ultimate tensile strength- 500 kN/m

Details of Cost for 300 Sqm

MATERIAL

Synthetic Geogrid

Sqm	300.00	500.00	150000.00
-----	--------	--------	-----------

Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the facia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 150000 =15000

15000.00

LABOUR

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

166092.03

Add Water charges @ 1%

1660.92

167752.95

Add Contractor's profit @ 10%

16775.3

Add overheads @ 5%

8387.65

Cost for 300 Sqm

192915.89

Cost per Sqm

643.05

Say Rs.	643.10	Per sqm
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LABOUR :

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

TOTAL :

1092.03

ADD FOR WATER CHARGES @ 1% :

10.92

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15

Cost for 300 Sqm


1268.39

Cost per Sqm

4.23

Say Rs. 4.25 per sqm


Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Superintending Engineer (Qc & D)
HP.PWD. U.S. Club Shimla-1.


Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

19550900 Ultimate tensile strength- 600 kN/m

Details of Cost for 300 Sqm

MATERIAL

Synthetic Geogrid

Sqm	300.00	550.00	165000.00
-----	--------	--------	-----------

Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 165000 = 16500

16500.00

LABOUR

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

182592.03

Add Water charges @ 1%

1825.92

184417.95

Add Contractor's profit @ 10%

18441.8

Add overheads @ 5%

9220.90

Cost for 300 Sqm

212080.64

Cost per Sqm

706.94

Say Rs. 706.90 Per sqm

LABOUR :

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

TOTAL :

1092.03

ADD FOR WATER CHARGES @ 1% :

10.92

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15

Labour for 300 Sqm

1268.39

Labour per Sqm

4.23

Say Rs. 4.25 per sqm

Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Superintending Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

19551000 Ultimate tensile strength- 700 kN/m

Details of Cost for 300 Sqm

MATERIAL

Synthetic Geogrid

Sqm 300.00 650.00 195000.00

Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 195000 =19500

19500.00

LABOUR

Mate

Each 0.36 116.67 42.00

Beldar

Each 6.00 116.67 700.02

Skilled Beldar

Each 3.00 116.67 350.01

215592.03

Add Water charges @ 1%

2155.92

217747.95

Add Contractor's profit @ 10%

21774.8

Add overheads @ 5%

10887.40

Cost for 300 Sqm

250410.14

Cost per Sqm

834.70

Say Rs. 834.70 Per sqm

LABOUR :

Mate

Each 0.36 116.67 42.00

Beldar

Each 6.00 116.67 700.02

Skilled Beldar

Each 3.00 116.67 350.01

1092.03

TOTAL :

10.92

ADD FOR WATER CHARGES @ 1% :

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15

Labour for 300 Sqm

1268.39

Labour per Sqm

4.23

Say Rs. 4.25 per sqm

Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Superintending Engineer (Qc & D)
HP.PWD. U.S. Club Shimla-1.

Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

19551100 Ultimate tensile strength- 800 kN/m

Details of Cost for 300 Sqm

MATERIAL

Synthetic Geogrid

Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the facia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 212400 = 21240

Sqm	300.00	708.00	212400.00
-----	--------	--------	-----------

21240.00

LABOUR

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

234732.03

2347.32

Add Water charges @ 1%

237079.35

23707.94

Add Contractor's profit @ 10%

11853.97

Add overheads @ 5%

272641.25

Cost for 300 Sqm

908.80

Cost per Sqm

Say Rs.	908.80	Per sqm
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LABOUR :

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

1092.03

TOTAL :

10.92

ADD FOR WATER CHARGES @ 1% :

1102.95

TOTAL :

110.30

Add Contractor's profit @ 10%

55.15

Add overheads @ 5%

1268.39

Labour for 300 Sqm

4.23

Labour per Sqm

Say Rs. 4.25 per sqm

Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Superintending Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

19551200 Ultimate tensile strength- 900 kN/m

Details of Cost for 300 Sqm

MATERIAL

Synthetic Geogrid

Sqm	300.00	841.00	252300.00
-----	--------	--------	-----------

Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 252300 =25230

25230.00

LABOUR

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

278622.03

Add Water charges @ 1%

2786.22

281408.25

Add Contractor's profit @ 10%

28140.83

Add overheads @ 5%

14070.41

Cost for 300 Sqm

323619.49

Cost per Sqm

1078.73

Say Rs. 1078.70 Per sqm

LABOUR :

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

TOTAL :

1092.03

ADD FOR WATER CHARGES @ 1% :

10.92

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15

Labour for 300 Sqm

1268.39

Labour per Sqm

4.23

Say Rs. 4.25 per sqm

Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Superintending Engineer (Qc & D)
HP.PWD. U.S. Club Shimla-1.

Engineer in Chief (Projects)
HP.PWD. U.S. Club Shimla-1.

19551300 Ultimate tensile strength- 1000 kN/m

Details of Cost for 300 Sqm

MATERIAL

Synthetic Geogrid

Sqm	300.00	950.00	285000.00
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Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 285000 =28500

28500.00

LABOUR

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

314592.03

Add Water charges @ 1%

3145.92

317737.95

Add Contractor's profit @ 10%

31773.8

Add overheads @ 5%

15886.90

Cost for 300 Sqm

365398.64

Cost per Sqm

1218.00

Say Rs. 1218.00 Per sqm

LABOUR :

Mate

Each	0.36	116.67	42.00
------	------	--------	-------

Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

TOTAL :

1092.03

ADD FOR WATER CHARGES @ 1% :

10.92

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15

Labour for 300 Sqm

1268.39

Labour per Sqm

4.23

Say Rs. 4.25 per sqm

Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Superintending Engineer (Qc & D)
HP.PWD. U.S. Club Shimla-1.

Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

19551400 Ultimate tensile strength- 1100 kN/m

Details of Cost for 300 Sqm

MATERIAL

Synthetic Geogrid

Sqm	300.00	1000.00	300000.00
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Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 300000 = 30000

30000.00

LABOUR

Mate

Each	0.36	116.67	42.00
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Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

331092.03

Add Water charges @ 1%

3310.92

Add Contractor's profit @ 10%

334402.95

Add overheads @ 5%

33440.3

Cost for 300 Sqm

16720.15

Cost per Sqm

384563.39

1281.88

Say Rs. 1281.90 Per sqm

LABOUR :

Mate

Each	0.36	116.67	42.00
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Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
------	------	--------	--------

1092.03

TOTAL :

ADD FOR WATER CHARGES @ 1% :

10.92

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15

Labour for 300 Sqm

1268.39

Labour per Sqm

4.23

Say Rs. 4.25 per sqm

Assistant Engineer (QC & D)
/HP.PWD. U.S. Club Shimla-1.

Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Superintending Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.

Engineer in Chief (Project)
HP.PWD. U.S. Club Shimla-1.

19551500 Ultimate tensile strength- 1200 kN/m

Details of Cost for 300 Sqm

MATERIAL

Synthetic Geogrid

Sqm	300.00	1088.00	326400.00
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Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the facia panels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 326400 = 32640

32640.00

LABOUR

Mate

Each	0.36	116.67	42.00
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Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
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360132.03

Add Water charges @ 1%

3601.32

363733.35

Add Contractor's profit @ 10%

36373.34

Add overheads @ 5%

18186.67

Cost for 300 Sqm

418293.35

Cost per Sqm

1394.31

Say Rs. 1394.30 Per sqm

LABOUR :

Mate

Each	0.36	116.67	42.00
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Beldar

Each	6.00	116.67	700.02
------	------	--------	--------

Skilled Beldar

Each	3.00	116.67	350.01
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1092.03

TOTAL :

ADD FOR WATER CHARGES @ 1% :

10.92

TOTAL :

1102.95

Add Contractor's profit @ 10%

110.30

Add overheads @ 5%

55.15

Labour for 300 Sqm


1268.39

Labour per Sqm

4.23

Say Rs. 4.25 per sqm


Assistant Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Executive Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Superintending Engineer (QC & D)
HP.PWD. U.S. Club Shimla-1.


Engineer in Chief (Projects)
HP.PWD. U.S. Club Shimla-1.