GOVERNMENT OF MIZORAM OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS DEPARTMENT OF ENVIRONMENT, FORESTS & CLIMATE CHANGE MIZORAM::AIZAWL

No.B.22019/21/2020-FC/PCCF/\37-\88

Dated Aizawl the 6 th June, 2022

To,

Under Secretary to the Govt. of Mizoram Environment, Forests & Climate Change Department Mizoram

Subj:

Proposal for diversion of 2.43278 ha of forest land for construction of Bypass at Chhiahtlang and Serchhip (Package-1) on Aizawl – Tuipang section of NH-54 in the State of Mizoram Engineering, Procurement and Construction (EPC) mode with JICA loan assistance – reg.

Ref:

1. Ministry letter F.No. 3-MZ B 024/2021-SHI/671-72

dt. 03.06.2022

2. T.O letter No. B.22019/20/2020-FC/PCCF/117-118

dt. 10.12.2022

3. TO letter No. B. 22019/21/2020-FC/PCCF/128

Dt. 27.04.2022

Sir,

With reference to the subject and letter no. cited above, I am directed to state that the information requested by the IRO, Shillong vide their letter dt. 14.07.2021 was submitted by this office through Admin deptt. Vide letter No. B.22019/21/2020-FC/PCCF/117-118 Dt. 10.12.2021 (copy enclosed). However, the report has not been received by the IRO Shillong therefore, it is re-submitted

herewith for information and further necessary action please.

S.No	Additional Information required	Action taken
1	Soft copy of KML/Shape file for proposed Compensatory Afforestation area with GPS Coordinates	The required information is already submitted vide letter No. B.22019/20/2020-FC/PCCF/128 Dt.27.04.2022
2.	CA Scheme and Avenue Plantation Scheme to be duly approved by Competent Authority	Enclosed at Annexure I & II
3.	Proposal may be submitted in proper format of Part II	The required information is already submitted vide letter No. B.22019/20/2020-FC/PCCF/128 Dt.27.04.2022
4.	SOI toposheet map for proposed diversion may be submitted after duly signed by DFO concern	Attached as Annexure III
5.	Density of forest vegetation	Open forest (Canopy density 0.5)
6.	Nearest Distance for protected areas	19 kms
7.	Status of Forest Right Act, 2006	Not Applicable
8.	NPV calculation	Attached as Annexure-IV

	9.	Length of the road with existing and proposed RoW	Length of road – 989 kms Existing RoW – 3.6M to 4.8M
1		6.	Proposed RoW – 6.5M to 7.8 M
1	10	Undertaking for Additional amount of	Attached as Annexure VI
	-	NPV from User Agency	
1	11	Undertaking for extraction of trees from	Attached as Annexure VII
		User Agency	
	12	District profile in detail with respect to	Attached as Annexure V
-		Geographical area, Forest Area of the	9
		District	
•	13	Muck Disposal Plan with details of muck	Attached as Annexure VIII
		to be generated also with GPS Co-	
		ordinates to be approved by Competent	* *
		Authority	
ſ	14	To complete the uploading of proposal on	Uploading of Form A part I to V is
		Ministry portal as it is showing pending at	completed.
	2	State Level	•

Enclo: As above

Yours faithfully,

(MZ SINGSON)

Deputy Conservator of Forest (FC)

Memo No.B.22019/21/2020-FC/PCCF/\多子~\多る

Dated Aizawl the \ th June, 2022

Copy to:

1. Dy. Inspector General of Forests (c), Ministry of Environment, Forests & Climate Change, North Eastern Regional Office, Law-U-Sib, Lumbatngen, near MTC Workshop, Shillong-793021, E mail: ro.nez.shil@gmail.com

(VANLALNUNPUII HMAR)
Assistant Conservator of Forest (FC)



GOVERNMENT OF MIZORAM OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS DEPARTMENT OF ENVIRONMENT, FORESTS & CLIMATE CHANGE MIZORAM::AIZAWL

No.B.22019/21/2020-FC/PCCF/\\T-\\\\$

Dated Aizawl the 10 th December, 2021

To,

Under Secretary to the Govt. of Mizoram

Environment, Forests & Climate Change Department

Mizoram

Subj:

Proposal for diversion of 2.43278 ha of forest land for construction of Bypass at Chhiahtlang and Serchhip (Package-1) on Aizawl – Tuipang section of NH-54 in the State of Mizoram Engineering, Procurement and Construction (EPC) mode with JICA

loan assistance - reg.

Ref:

F.No. 3-MZ B 024/2021-SHI/532-33 dt. 14.07.2021

Sir,

With reference to the above letter, I am submitting herewith the required additional information and further necessary action –

S.No Additional Information required		Action taken		
1	Soft copy of KML/Shape file for proposed Compensatory Afforestation area with GPS Coordinates	Under Process. The CA area for 2.43278 ha is not yet available with EF&CC Dept. User Agency was informed to approached LR&S Department for transfer and mutation.		
2.	CA Scheme and Avenue Plantation Scheme to be duly approved by Competent Authority	Enclosed at Annexure I & II		
3.	Proposal may be submitted in proper format of Part II	Due to pending of transfer and Mutation of land Form A part II cannot be completed		
4.	SOI toposheet map for proposed diversion may be submitted after duly signed by DFO concern	Attached as Annexure III Open forest (Canopy density 0.5)		
5. 6.	Density of forest vegetation Nearest Distance for protected areas	19 kms		
7.	Status of Forest Right Act, 2006	Not Applicable		
8.	NPV calculation	Attached as Annexure-IV		
9.	Length of the road with existing and proposed RoW	Proposed RoW = 6.5M to 7.8 M		
10	Undertaking for Additional amount of NPV from User Agency	Attached as Annexure VI		

0/6

11	Undertaking for extraction of trees from	Attached as Annexure VII
	User Agency	
12	District profile in detail with respect to	Attached as Annexure V
	Geographical area, Forest Area of the	
	District	
13	Muck Disposal Plan with details of muck	Attached as Annexure VIII
(2)	to be generated also with GPS Co-	
	ordinates to be approved by Competent	9
	Authority	

Enclo: As above

Yours faithfully,

(RS SINHA)

Addl. Principal Chief Conservator of Forests (WP) (& Nodal Officer (FC)

Memo No.B.22019/21/2020-FC/PCCF/

Dated Aizawl the

th December, 2021

Copy to:

- 1. General Manager (Projects), NHIDCL, PMU-Seling C/o Tourist Lodge Thingsulthliah for information and to approached Land, Revenue & Settlement Department for transfer & mutation of land.
- 2. General Manager (Admn.), NHIDCL, Regional Office Aizawl 3rd Floor, T-86, Tuikhuahtlang for information, E-mail: ro-mizoram@nhidcl.com
- 3. Conservator of Forests (CC) for information.
- 4. Divisional Forest Officer, Thenzawl Forest Division for information.

Addl. Principal Chief Conservator of Forests (WP)

& Nodal Officer (FC)



GOVERNMENT OF MIZORAM

OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS DEPARTMENT OF ENVIRONMENT, FORESTS & CLIMATE CHANGE MIZORAM::AIZAWL

No.B.22019/2020-FC/PCCF/128

Dated Aizawl the 27 April, 2022

To,

Under Secretary to the Govt. of Mizoram

Environment, Forests & Climate Change Department

Mizoram

Subi :

Proposal for diversion of 2.43278 ha of forest land for construction of Bypass at Chhiahtlang and Serchhip (Package-1) on Aizawl – Tuipang section of NH-54 in the State of Mizoram Engineering, Procurement and Construction (EPC) mode with IICA loan assistance – reg.

Ref:

1. Ministry letter F.No. 3-MZ B 024/2021-SHI/532-33

dt. 14.07.2021

2. T.O letter No. B.22019/21/2020-FC/117-118

Dt. 10.12.2021

Sir,

In continuation to this office letter under reference (2), I am to inform you that DFO concerned has completed Form A part II as per Ministry's letter F.No. 3-MZ B 024/2021-SHI/532-33 dt. 14.07.2021 under points no. 3. The Georeference map, SoI toposheet and Site Suitability certificate of CA land is enclosed for information and further navard submission to Regional Office, Shillong.

This is for information and necessary action.

Enclo: As above

Yours faithfully,

(RITURAL SINGH)

Addl. Principal Chief Conservator of Forests(FC)

Dated Aizawl the 27 April, 2022

Memo No.B.22019/21/2020-FC/PCCF/\28
Copy to:

- 1. General Manager (Projects), NHIDCL, PMU-Seling C/o Tourist Lodge Thingsulthliah for information.
- 2. General Manager (Admn.), NHIDCL, Regional Office Aizawl 3rd Floor, T-86, Tuikhuahtlang for information, E-mail: ro-mizoram@nhidcl.com
- 3. Conservator of Forests (CC) for information.
- 4. Divisional Forest Officer. Thenzawl Forest Division for information.

MZ SINGSON)

Deputy Conservator of Forest (FC)

GOVERNMENT OF MIZORAM OFFICE OF THE DIVISIONAL FOREST OFFICER THENZAWL FOREST DIVISION THENZAWL: MIZORAM

No.B.13021/1/2021-TFD/ 761-762

Dated the Thenzawl 4 October, 2021

To,

Addl. Principal Chief Conservator of Forests(Admn)

& Nodal Officer (FC), Mizoram

Subject:

Proposal for diversion of 2.43278 ha. of forest land for construction of Bypass at Chhiahtlang and Serchhip (Packaged-1) on Aizawl-Tuipang section of NH-54 to 2 in the state of Mizoram Engineering, Procurement and construction (EPC) mode with JICA loan assistance-reg.

Ref. :

No.B.22019/20/2020-FC/PCCF/143

dt.22.09.2021.

Sir,

With reference the above, I am submitting herewith the information sought vide reference letter No. given above.

Sl. No.	Additional Information required	Action to be taken				
1	Soft copy of KML/Shape file for proposed Compensatory Afforestation area with GPS Coordinates	Under process. The CA area of 2.43278 Ha is not yet available with EF&CC Dept and hence Revenue dept may be approached for transfer and mutation of the CA area of 2.43278 Ha.				
2	CA Scheme and Avenue Plantation -Scheme to be duly approved by Competent Authority	Enclosed at annexure –II				
3	Proposal may be submitted in proper format of Part II	Due to want of 2.43278 Ha CA area from Revenue dept, FORMA A Part II can not be completed online from this end.				
4	SOI toposheet map for proposed diversion may be submitted after duly signed by DFO Concern.	Soft copy enclosed at CD Hard copy enclosed at annexure-III				
5	Density of forest vegetation	Open Forest (canopy density 0.5)				
6	Nearest Distance for protected areas	19 Kms.				
7	Status of Forest Right Act, 2006	Not applicable				
8	NPV calculation	Enclosed at annexure-IV				
9	Length of the road with existing and proposed RoW	Length of the road-989 Mtrs. Existing RoW-3.6 m-4.8 m Proposed RoW-6.5m-7.8m.				

	10	Undertaking for Additional amount of NPV from user agency.	
-	11	Undertaking for extraction of trees	
400	. 11	from user agency.	
		District profile in detail with respect to	
	12	Geographical area, Forest Area of	Enclosed at annexure-V
		the District.	
		Muck Disposal Plan with details of	
	10	muck to be generated also with GPS	
	13	Co-ordinates to be approved by	_
		competent Authority.	

This is for kind information and necessary action.

Enclo: As above.

Yours faithfully,

(LALBIAKCHAMA CHAWNGTHU)

Divisional Forest Officer Thenzawl Forest Division Thenzawl: Mizoram

Memo No.B.13021/1/2021-TFD/_____

Dated the Thenzawl October, 2021

Copy to:

1) Conservator of Forests, Central Circle, Aizawl for kind information.

Divisional Forest Officer Thenzawl Forest Division Thenzawl : Mizoram

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ESTIMATE FOR CARRYING OUT AVENUE PLANTATION ALONG NH-54 ROAD, PACKAGE-I (CHHIAHTLANG & SERCHHIP BYPASS)

1. Project Name

Diversion of 2.43278 ha. of forest land for construction of Bypass at Chhiatlang and Serchhip (Package-1) on Aizawl-Tuipang section of NH-54 to 2 in the state of Mizoram Engineering, Procurement and construction (EPC) mode with IICA loan assistance.

2. Species proposed to be Planted

Delonix regia Messua ferrea

Artocarpus heterophyllus

Mangifera indica Azadirachta indica Ligustrum robustum Bischofia javanica

3. Implementing Agency

Environment, Forests & Climate Change

Department, Mizoram

4. Time scheduled

Advanced work, creation of plantation

and maintenance upto 8 years

(Rs. 380 /- per manday)

(1100 plants per 3 km which is taken as 1 hectare)

(Sp	acing 3X3 m)				
SI. No.	Item of works	Mandays required - (in No.)	Labour component (in Rs.)	Material component (in Rs)	Total cost per Hectare (in Rs)
1	2	3	4	5	6
	Advance Works including Nursery.			9	
	(a) Survey and demarcation nursery site and planting site	12	4560	-	4560
	(b) Preparation of nursery bed, shed erection with netlon	20	7600	-	7600
	(c) Cost of seed	-	-	2700	2700
p1.	(d) Cost of materials like poly bags, netlon and fertilizers etc	-	-	8100	8100
	(e) Pre-treatment of seeds including cost of fungicides, fumigants, soil sterilants, etc	17	6460	- ,	6460
	(f) Sowing of seeds and weeding, watering	16	6080	-	6080
	(g) Fire protection	5	1900	-	1900
	Sub-Total	70	26600	10800	37400
	Creation of plantation				
	(a) Alignment, preparation of stakes, digging of pits, preparation of planting materials, carriage to planting sites, planting/sowing, construction of camp sheds, inspection parts, signboards and other misc. works	40	15200	-	15200
2.	(b) Weeding 4 times including vacancy filling (30+20+20+20)	90	34200	-	34200
	(c) Fire protection measures and ward and watch(5+5)	. 10	3800	-	3800
	(d) Manuring & Watering	10	3800	-	3800
	(e) Cost of manures/fertilizers	0.		5400	5400
	(f) Fencing /tree guard (Local materials) including subsequent maintenance.	-		37800	37800
	Sub-Total	150	57000	43200	100200
	Maintenance of plantation				
	(I) Maintenance after one year	2			
3	(a) Weeding 3 times including vacancy filling, manuring & watering (20+20+20+10)	70	26600		26600
0	(b) Fire protection measures & watch and	10	3800		3800

	ward(5+5)				
	(c) Cost of manures/fertilizers			5400	5400
	(d) Signboard and labeling etc	-	-	5400	5400
	Sub-Total	80	30400	10800	41200
	(II) Maintenance after two years (a) Weeding 3 times vacancy filling,				10000
	manuring & Watering (15+15+10+10)	50	19000	-	19000
	(b) Fire protection measures & watch and ward(5+5)	10	3800	-	3800
	(c) Cost of fertilizers/manures			5400	5400
	Sub-Total	60	22800	5400	28200
	(III) Maintenance after three years				
2 2	(a) Weeding 3 times vacancy filling, manuring & Watering (15+15+10+10)	50	19000	_	19000
	(b) Fire protection measures & watch and ward(5+5)	10	3800		3800
	(c) Cost of fertilizers/manures			5400	5400
	Sub-Total	60	22800	5400	28200
-	(IV) Maintenance after four years				
	(d) Weeding 3 times vacancy filling, manuring & Watering (15+15+10+10)	50	19000	-	19000
=	(e) Fire protection measures & watch and ward(5+5)	10	3800	-	3800
	(f) Cost of fertilizers/manures			5400	5400
	Sub-Total	60	22800	5400	28200
	(V) Maintenance after five years			9	
	(d) Weeding 3 times vacancy filling, manuring & Watering (15+15+10+10)	50	19000	- ,	19000
	(e) Fire protection measures & watch and ward(5+5)	10	3800		3800
	Sub-Total	60	22800		22800
	(VI) Maintenance after six years				
	(f) Weeding 3 times vacancy filling, manuring & Watering (15+15+10+10)	50	19000	-	19000
	(g) Fire protection measures & watch and ward(5+5)	10	3800		3800
	Sub-Total	60	22800		22800
	(VII) Maintenance after seven years	, , ,			
	(h) Weeding 3 times vacancy filling & manuring & Watering (15+15+10)	40	15200	-	15200
	(i) Fire protection measures & watch and ward(5+5)	10	3800		3800
	Sub-Total	50	19000		19000
	(VIII) Maintenance after eight years				
	(j) Weeding 3 times (10+10+10)	30	11400		11400
	(k) Fire protection measures & watch and ward(5+5)	10	3800		3800
*	Sub-Total	40	15200		15200
	TOTAL OF PLANTATION COST	690	262200	81000	343200
	Soil & Moisture Conservation measures	*			
	including construction of check dams, gully plugging, contour trenching, water	Ø (01			and the same and
	harvesting structures etc. whatever	. 3.	2		51480
4		19	е г		
4					
4	necessary within the project area (15% of	. 10			
	necessary within the project area (15% of plantation cost)	, 8	*		17160
5	necessary within the project area (15% of plantation cost) Fencing (5% of plantation cost)				17160
	necessary within the project area (15% of plantation cost)				17160 6864 34320

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Component-wise breakup	Forest land(ha)	Length of forest(in kms)
Road km 0.111 to km 1.100	2.43278	0.989

Therefore, Cost of raising Avenue Plantation along both side of $0.989 \mathrm{km}$ road

 $= (2x \ 0.989)/3 \times 453024$

= Rs. 2,98,693.824/-

Or Say Rs.2,98,694/-

(Rupees Two lakh, ninety eight thousand six hundred ninety four) only

(LALBIAKCHAMA CHAWNGTHU)

Divisional Forest Officer Thenzawl Forest Division Thenzawl:Mizoram

ANNEXURE ILL CA SCHEME FOR DIVERSION OF 2.43278 HA. OF FOREST LAND FOR CONSTRUCTION OF BYPASS \ \=\ AT CHHIAHTLANG AND SERCHHIP (PACKAGED-1) ON AIZAWL-TUIPANG SECTION OF NH-54

1. Model of afforestation Artificial Regeration.

2. Species proposed to be

Planted

Delonix regia Messua ferrea

Artocarpus heterophyllus

Mangifera indica Azadirachta indica Ligustrum robustum Bischofia javanica

3. Implementing Agency Environment, Forests & Climate Change

Department, Mizoram

4. Time scheduled Advanced work , creation of plantation

and maintenance upto 8 years

ANALYSIS OF PER HA RATE FOR VARIOUS WORKS ITEMS UNDER COMPENSATORY AFFORESTATION

(Rs. 380 /- per manday)

(1100 plants per hectare)

SI.	Item of works	Mandays required	Labour component	Material component	Total cost per Hectare
No.	item of works	(in No.)	(in Rs.)	(in Rs)	(in Rs)
1	2	3	4	5	6
	Advance Works including Nursery.	3	7	3	O
	(a) Survey and demarcation nursery site and				
	planting site	12	4560	-	4560
	(b) Preparation of nursery bed, shed erection		L .		
	with netlon	20	7600	-	7600
	(c) Cost of seed	-	-	2700	2700
1.	(d) Cost of materials like poly bags, netlon and			2700	2700
٠.	fertilizers etc	-		8100	8100
	(e) Pre-treatment of seeds including cost of	W 100-0			
	fungicides, fumigants, soil sterilants, etc	17	6460		6460
	(f) Sowing of seeds and weeding, watering	16	6080	-	6080
	(g) Fire protection	5	1900	-	1900
	Sub-Total	70	26600	10800	37400
	Creation of plantation				
	(a) Alignment, preparation of stakes, digging of pits, preparation of planting materials, carriage to planting sites, planting/sowing, construction of camp sheds, inspection parts, signboards and other misc. works	40	15200	-	15200
2.	(b) Weeding 4 times including vacancy filling (30+20+20+20)	90	34200	-	34200
*	(c) Fire protection measures and ward and watch(5+5)	10	3800	-	3800
	(d) Manuring & Watering	10	3800	- 1	3800 ·
	(e) Cost of manures/fertilizers	-		5400	5400
	(f) Fencing /tree guard (Local materials) including subsequent maintenance.	-	-	37800	37800
	Sub-Total	150	57000	43200	100200
	Maintenance of plantation				
	(I) Maintenance after one year				
	(a) Weeding 3 times including vacancy filling, manuring & watering (20+20+20+10)	70	26600		26600
	(b) Fire protection measures & watch and ward(5+5)	10	3800		3800
3	(c) Cost of manures/fertilizers			5400	5400
	(d) Signboard and labeling etc	•	-	5400	5400
Γ	Sub-Total	80	30400	10800	41200
	(II) Maintenance after two years				*
	(a) Weeding 3 times vacancy filling, manuring & Watering (15+15+10+10)	50	19000	-	19000

	(b) Fire protection measures & watch and	10	3800		3800
	ward(5+5) (c) Cost of fertilizers/manures			F400	F100
	Sub-Total	60	22800	5400	5400 28200
-		60	22000	5400	20200
-	(III) Maintenance after three years (a) Weeding 3 times vacancy filling,				-
	manuring & Watering (15+15+10+10)	50	19000	-	19000
	(b) Fire protection measures & watch and ward(5+5)	10	3800	a 3	3800
.	(c) Cost of fertilizers/manures			5400	5400
1	Sub-Total	60	22800	5400	28200
	(IV) Maintenance after four years				
1	(d) Weeding 3 times vacancy filling, manuring & Watering (15+15+10+10)	50	19000	-	19000
	(e) Fire protection measures & watch and ward(5+5)	10	3800	-	3800
	(f) Cost of fertilizers/manures			5400	5400
	Sub-Total	60	22800	5400	28200
-	(V) Maintenance after five years				
	(d) Weeding 3 times vacancy filling, manuring & Watering (15+15+10+10)	50	19000		19000
	(e) Fire protection measures & watch and ward(5+5)	10	3800		3800
Ī	Sub-Total	60	22800		22800
Ī	(VI) Maintenance after six years	**			
	(f) Weeding 3 times vacancy filling, manuring & Watering (15+15+10+10)	50	19000		19000
	(g) Fire protection measures & watch and ward(5+5)	10	3800		3800
T	Sub-Total	60	22800		22800
	(VII) Maintenance after seven years				
	(h) Weeding 3 times vacancy filling & manuring & Watering (15+15+10)	40	15200	-	15200
	(i) Fire protection measures & watch and ward(5+5)	10	3800		3800
	Sub-Total	50	19000		19000
Ī	(VIII) Maintenance after eight years				
	(j) Weeding 3 times (10+10+10)	30	11400		11400
	(k) Fire protection measures & watch and ward(5+5)	10	3800	*	3800
	Sub-Total	40	15200		15200
	TOTAL OF PLANTATION COST	690	262200	81000	343200
	Soil & Moisture Conservation measures including construction of check dams, gully plugging, contour trenching, water harvesting structures etc. whatever necessary within the project area (15% of				51480
	plantation cost) Fencing (5% of plantation cost)				17160
	Monitoring & Evaluation (2% of plantation cost)			a	6864
	Overheads (10% of plantation cost) Grand Total		al especiation of Service entranscourses is	A contributed out through your largest design of the contribute of	34320 453024

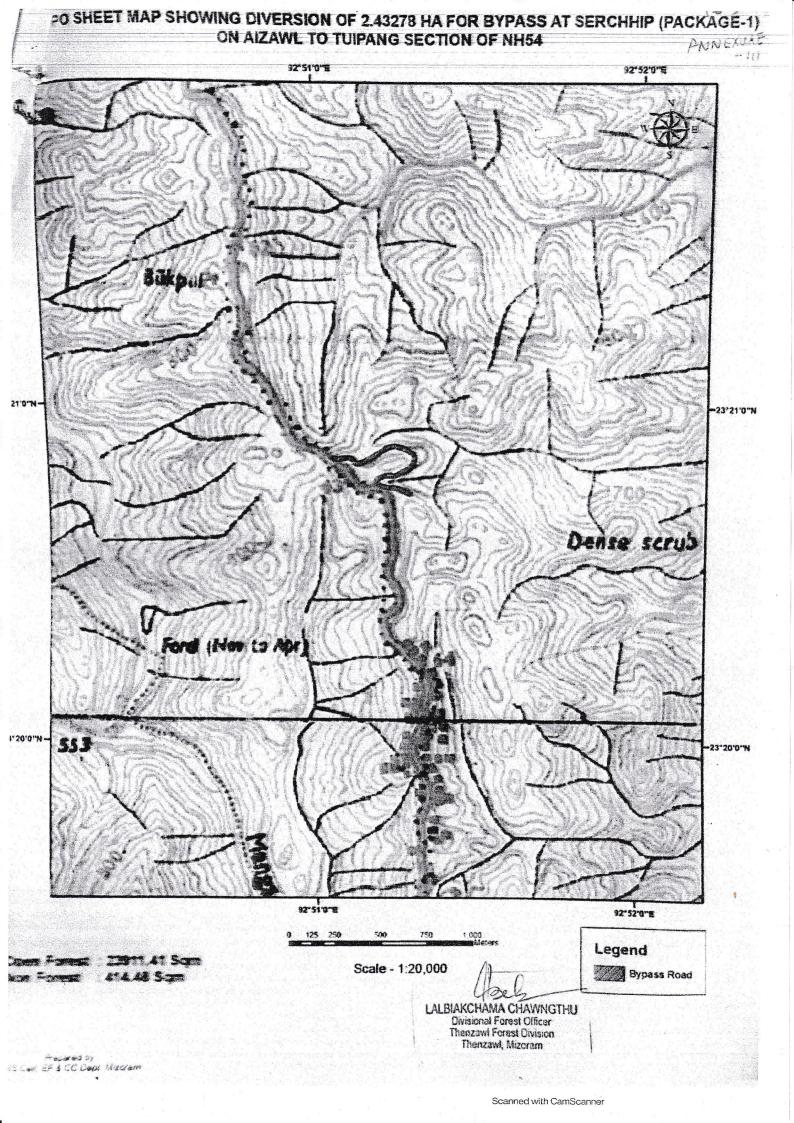
Resultant cost of CA for construction of Bypass at Chhiahtlang and Serchhip (Packaged-1) on Aizawl-Tuipang Section of NH-54

2.43278 Ha. X453024 = Rs.11,02,107.72 Or Say Rs.11,02,100/-

(Rupees eleven lakh, two thousand one hundred) only.

(LALBIAKCHAMA CHAWNGTHU)

Divisional Forest Officer Thenzawl Forest Division



Calculation of Net Present Value for diversion of 2.43278 ha. of forest land for construction of Bypass at Chhiahtlang and Serchhip (Package-1) on Aizawl – Tuipang section of NH-54.

Area of Forest land proposed to be diverted within Thenzawl Forest Division	2.43278 Ha.
Eco- class of the forest land to be diverted	Class-1
Vegetation density	Canopy density-0.5
Rate per Eco-class of the forest area	Rs.7,30,000.00
Resultant cost of Net Present Value	Rs. 17,75,929.40

Total amount of NPV payable for 2.43278 Ha. of forest land within Thenzawl Forest Division: Rs. 17,75,929.40

(Rupees seventeen lakhs seventy five thousand nine hundred twenty nine) only.

Prepared by,

(LALBIAKCHAMA CHAWNGTHU)

Divisional Forest Officer Thenzawl Forest Division Thenzawl : Mizoram

Annexuse-V 165

DISTRICT PROFILE OF SERCHHIP

Serchhip District is one of the eleven district of Mizoram state in India. The district occupies an area of 1421.60 km2. Serchhip town is the administrative headquarters of the district. This district came into existence on 15 September 1998. Population (2011) of 64,937, Demographics (Literacy-97.91%, Sex ratio-977 per thousand).

The district is bounded on the north and northwest by <u>Aizawl District</u>, on the west and south by <u>Lunglei District</u>, on the southeast by <u>Myanmar</u> (Burma), and on the east by <u>Champhai</u> District.

The district is mostly a hilly terrain with some alluvial benches along its rivers that are utilised for agriculture. Serchhip District lies between the <u>Mat River</u> and the <u>Tuikum River</u>. With an average elevation 888 metres (2,913 ft), the average annual daily temperature ranges from 15 °C to 27 °C and the rainfall is moderate.

In 1991 the area became home to the Khawnglung Wildlife Sanctuary, which has an area of 35 km².

Forest Cover of Serchhip District:

			2019 As	sessment	sment		
District	Geographical Area (GA)	Very Dense Forest	Mod. Dense Forest	Open Forest	Total	% of GA	
Serchhip	1,421	16.88	360.70	784.07	1,161.65	81.75	

Divisional Forest Office Thenzawl Forest Divis Thenzawl, Mizoram

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मिज़ीरम MIZORAM

01AA 219419

Date: 28.08.2021

UNDERTAKING BY USER AGENCY

For Net Present Value

NHIDCL, is liable to pay the Net Present Value cost as per the demand note to be issued by the Government. While processing the proposal, if there is any increase in Net Present Value cost decided by the Government, NHIDCL is ready to pay the increased amount.

For Additional amount of the Net Present Value

Do hereby undertake to bear the cost of Additional amount of the Net Present Value of the diverted deemed forest land measuring 2.43278 Ha in Aizawl & Serchhip District. If any becoming due after finalizing/revision of the same by the Hon'ble 'Supreme Court of India.

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(Adil Singh) General Manager (P),PMU-Seling,

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INDIANORJUDICIAL

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01AA 219418

Date: 28.08.2021

UNDERTAKING FOR EXTRACTION OF TREES

Project Name: Proposal for diversion of 2.43278 ha of forest land for Construction of Bypass at Chhiathlang & Serchhip (Package-1) on Aizawl-Tuipang section of NH-54 in the state of Mizoram Engineering, Procurement and Construction (EPC) mode with JICA loan assistance.

User Agency: National Highways & Infrastructure Development Corporation Ltd.

This is to certify that the extraction of trees in 2.43278 Hectare of forest area in Serchhip district in Mizoram State being diverted for non-forest purpose under forest Conservation Act, 1980 shall be realized by 'National Highways & Infrastructure Development Corporation Ltd.' upon the quality of forest, density and the type of species in the area as per demand note raised by DFO under guidelines of Ministry of Environment & Forest, Govt. of India.

(Adil Singh)
General Manager (Projects)
NHIDCL, PMU-Seling, Mizoram

ANNEXURE - TW (45)

Sub: Construction of Chhiahtlang and Serchhip bypasses (Package-1) on Aizawl-Tuipang section of NH-54 in the State of Mizoram on Engineering, Procurement and Construction (EPC) mode, with Japan International Cooperation Agency (JICA) Ioan assistance. "Forest Clearance" - Reg.

<u>Muck Disposal Plan</u>

At the time of Execution, a large volume of muck will be generated and the same will be dumped, levelled and compacted at the proposed location of dumping ground.

In view of above, the project being on the EPC Mode of contract, the actual volume to be generated will be assessed at the time of execution and the same will be approved by the Authority engineers deployed by the user agency i.e. NHIDCL.

Design of the Muck/Spoil Bank at site:

At the disposal site on valley side, the care will taken at the time of selection of site so that there is minimum damage to the flaura & fauna and the environmental conditions.

When unsuitable material below sub-grade level in cut or below embankment foundation level is planned to be removed, the soil left in place after the removal of the unsuitable material shall be compacted to a depth of 20 cm and a density of 90 percent of the maximum dry density determined according to the relevant specifications.

Unsuitable Material shall be removed and disposed of in Spoil Banks in such a manner as to have a neat appearance and not to obstruct drainages to the highway and not to cause injury to highway works or property. If it becomes necessary to locate or relocate any Spoil Bank, the Contractor shall obtain prior approval from the Authority Engineer.

The relevant and applicable provisions "Environmental Control and Protection" shall be adhered during planning of muck disposal and its hauling.

The Spoil-Banks shall be design in accordance with the requirements shown in **Table-1** and the typical arrangement shown in **Figure-1**.

28/8/2021

ADIL SINGH General Manager (P) PMU-Seling NHIDCL

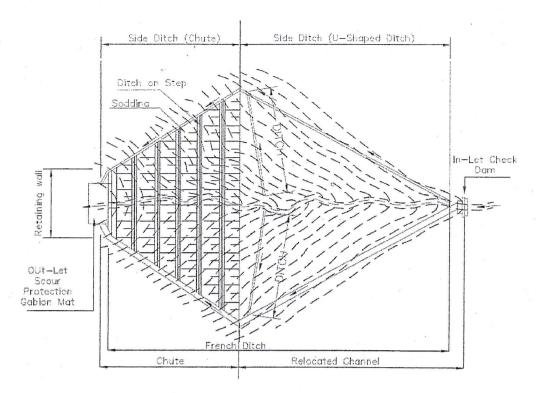


Figure-1(a): Typical Arrangement for Spoil Banks: Plan

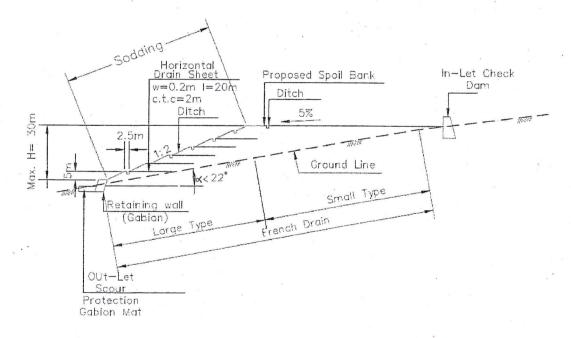


Figure-1(b): Typical Arrangement for Spoil Banks: Profile

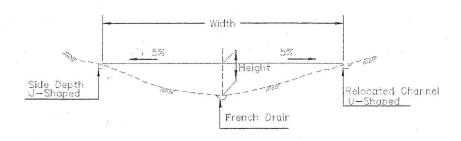
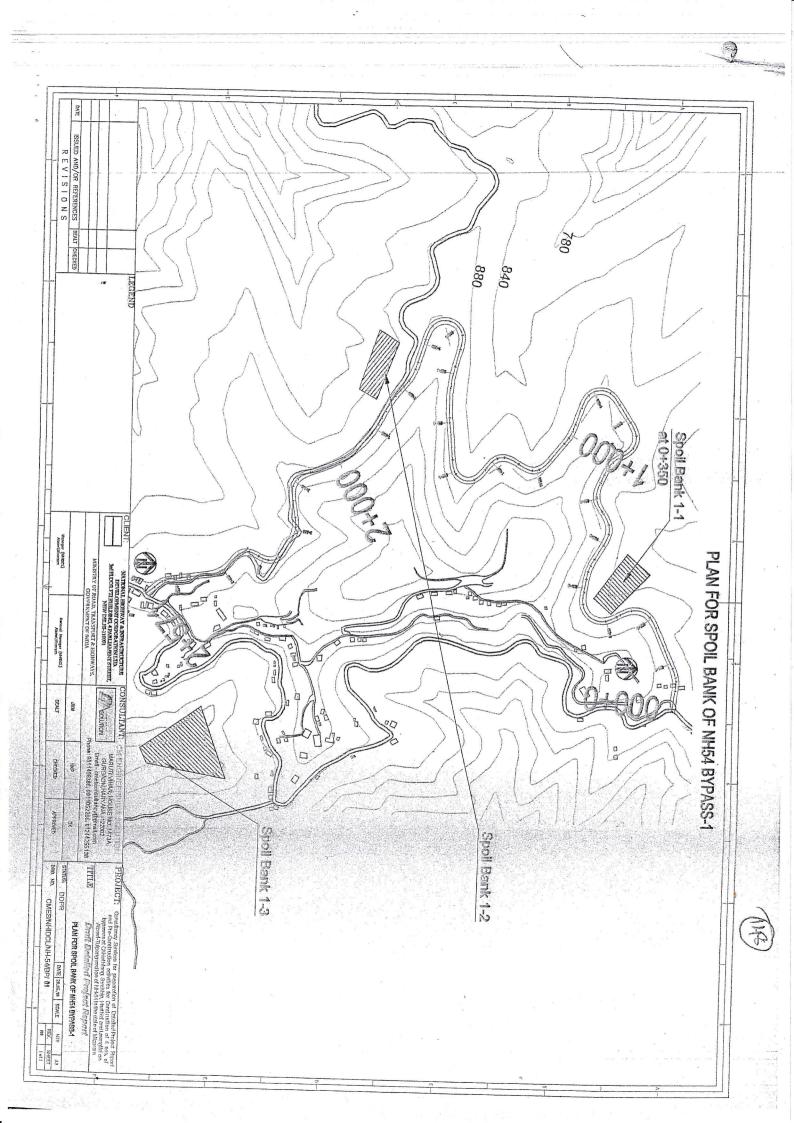


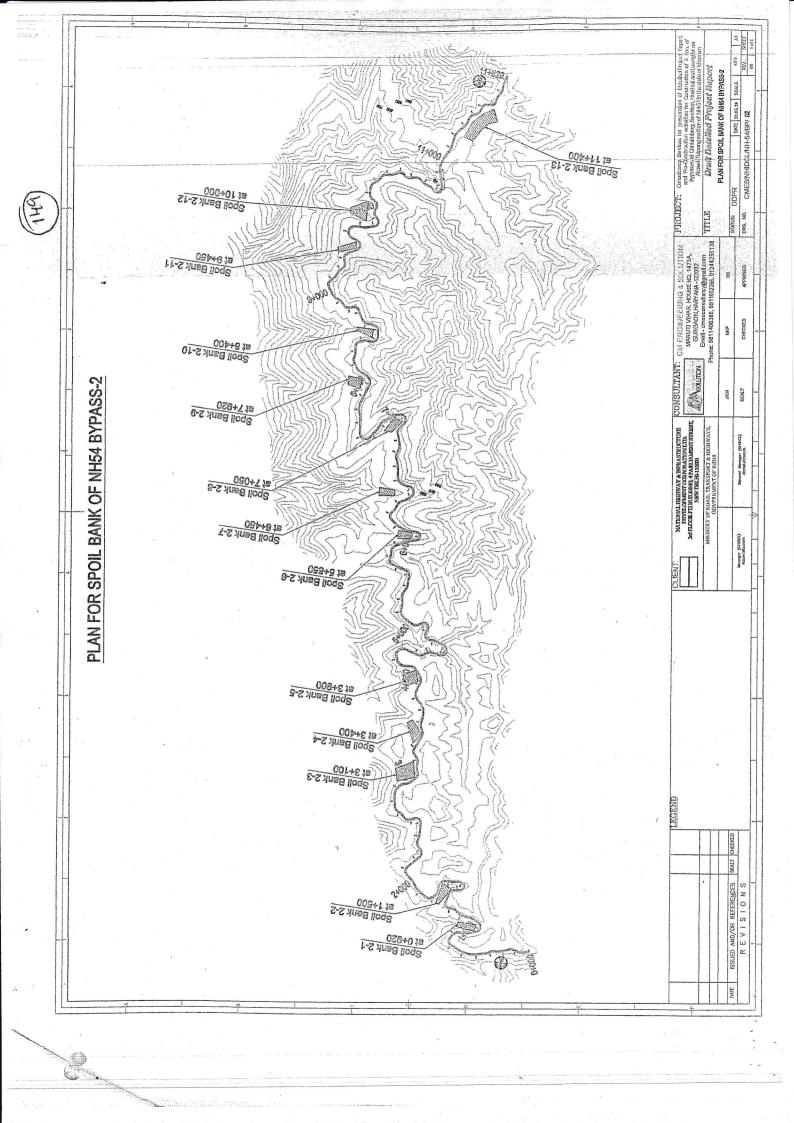
Figure-1(c): Typical Arrangement for Spoil Banks: Cross Section of French Drain

The Gabion wall and retaining wall has been proposed to protect the slope on valley side and the same shall be compacted and levelled properly, so that Playground and other community places can be developed for the public purposes. The details of dumping ground and the GPS Coordinates has been attached at **Enclosure-I.**

The Typical drawing for the construction of Gabion and retaining wall has been attached at **Enclosure-II.**

The Linear Plan of Muck Disposal Site/Spoil Banks has been attached at Enclosure-III.





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-				5	מוונים ומ לי מנו ע	Chinanuang L. Sel Chinip Dypass Oil NRT-34 Alzawi-Luipang Koad (Package-1) Shoil Bank Loration	Choil Rank Location	Luipang Koad (I	ackage-1)			The second secon
Spoil	= =	Bypass	GPS Coordina	GPS Coordinate (Point No. 1)	GPS Coordinat	te (Point No.2)		GPS Coordinate (Point No.3)		GPS Coordinate (Point No.4)	Design Chainage (km)	Estimated Capacity (Cum)
SB-1-1	ī	Chhiahtlang	23° 23' 25.101"	92° 50' 36.962"	23° 23' 22.587"	92° 50' 39.826"	23° 23' 21.385"	92° 50' 38.726"	23° 23' 23.602"	92° 50' 35.527"	0+350	19,654
SB-1-1	Ξ	Chhiahtlang	23° 23' 6.845"	92° 50' 24.784"	23° 23' 5.69"	92° 50' 24.094"	23° 23' 6.954"	92° 50' 19.771"	23° 23' 8.203"	92° 50' 20.725"	-	79,764
SB-	SB-1-3	Chhiahtlang	23° 22' 57.39"	92° 50' 52.578"	23° 22' 52.079"	92° 50' 51.536"	23° 22' 51.635"	92° 50' 50.378"	23° 22' 55.684"	92° 50' 47.213"	5	76,650
SB-2-1	2-1	Serchhip	23° 20' 47.977"	92° 51' 13.879"	23° 20' 47.521"	92° 51' 18.457"	23° 20' 46.413"	92° 51' 18.198"	23° 20' 46.356"	92° 51' 13.499"	0+620	35,534
SB-2-2	7-7	Serchhip	23° 20' 42.88"	92° 51' 23.915"	23° 20' 42.581"	92° 51' 24.686"	23° 20' 37.864"	92° 51' 23.724"	23° 20' 38.907"	92° 51' 21.296"	1+500	50,297
SB-	SB-2-3	Serchhip	23° 20' 15.333"	92° 51' 39.527"	23° 20' 12,491"	92" 51' 40.406"	23° 20' 10.173"	92° 51' 36.046"	23° 20' 13,962"	92° 51' 35.271"	3+100	91,194
SB-	SB-2-4	Serchhip	23° 20' 5.853"	92° 51' 37.011"	23° 20' 1.36"	92° 51' 39.382"	23° 20' 0.423"	92° 51' 38.108"	23° 20' 3.453"	92° 51' 35.176"	3+400	63,524
SB-	SB-2-5	Serchhip	23° 19' 52.683"	92° 51' 41.054"	23° 19' 50.226"	92" 51" 42.356"	23° 19' 48.662"	92° 51' 39.33"	23° 19' 51.168"	92° 51' 38.255"	3+900	24,428
SB-	SB-2-6	Serchhip	23° 19' 18.217"	92° 51' 49.248"	23° 19' 16.386"	92° 51' 49.45"	23° 19' 16.343"	92° 51' 45.769"	23° 19' 17.81"	92° 51' 45.702"	5+850	20,805
SB	SB-2-7	Serchhip	23°.19' 8.729"	92° 51' 55.802"	23° 19' 6.846"	92° 51' 56"	23° 19' 6.817"	92° 51' 51.974"	23° 19' 8.174"	92° 51' 51.831"	6+450	28,764
88	SB-2-8	Serchhip	23° 18' 53.201"	92° 51' 57.07"	23° 18' 49.81"	92° 51' 54.953"	23° 18' 50.496"	92° 51' 52.964"	23° 18' 53.343"	92° 51' 55.179"	7+050	32,542
SB-2-9	6-7	Serchhip	23° 18' 43.777"	92° 52' 8.186"	23° 18' 41.73"	92° 52' 8.404"	23° 18' 41.896"	92" 52' 4.8"	23° 18' 44.164"	92º 52' 5.063"	7+920	20,377
SB-2-10	-10	Serchhip	23° 18' 30.557"	92° 52' 7.95"	23° 18' 29,776"	92° 52' 8.302"	23° 18' 29,663"	92" 52' 4.041"	23° 18' 31,71"	92" 52" 4.044"	8+400	27,548
SB-2-11	Ę.	Serchhip	23° 18' 12.096"	92° 52' 16.208"	23° 18' 11.01"	92° 52' 16.491"	23° 18' 8.992"	92° 52' 12.101"	23° 18' 10.422"	92° 52' 11.894"	9+450	35,533
SB-2-12	-12	Serchhip	23° 18' 2.425"	92° 52' 14.746"	23° 18' 1.21"	92° 52' 14.937"	23° 17' 59"	92° 52' 10.708"	23° 18' 3.784"	92" 52" 10.481"	10+000	63,121
SB-2-13	2-13	Serchhip	23° 17' 40.243"	92° 51' 48.971"	23° 17' 32.473"	92° 51' 42.445"	23° 17' 35.453"	92° 51' 41.15"	23° 17' 40.98"	92° 51' 46.627"	11+400	248,922
								Total	Total Capacity of Spoil Bank (cum)	il Bank (cum)		918,658
		2	a a	8				Tot	Total Quantity of Cutting (cum)	Cutting (cum)		1,186,310
The state of the s								L	Total Quantity of filling (cum)	f filling (cum)		136,717
					4		 -	Total Quantity of muck to be disposed (cum)	f muck to be di	(uno) pesods		1,049,594
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TYPICAL DETAILS OF RETAINING WALL (2/3) GABION & GRAVITY WET MASONRY WALLS

SCALE 1:100

TYPE-A (GW-A) FRONT GRADES 1:0.00 FOR EMBANKMENT SLOPE

TYPE-A (GB-A) FRONT GRADES 1:0.3 FOR CUT SLOPE

FRONT GRADES 1:0.10 FOR EMBANKMENT SLOPE TYPE-B (GW-B)



- ANCHOR PIN (D12, L=B.70m)

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	National Highways & Infrastructure Development Corporation Limited	JAPAN INTERNATIONAL COOPERATION AGENCY
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	TYPICAL DETAILS OF RETAINING WALL	Drawing No:-	NH-54-C-2	100	Sheet No. 2 OF 3	
WIDENING AND UPGRADATION TO 2 LANE WITH PAVED SHOULDER CONFIGURATION AND GEOMETRIC	DF MIZORAM	Approved.		Deta.		
SHOULDER CONFIGURATION AND GEOMETRIC	IMPROVEMENTS IN THE STATE OF MIZORAM	Checked		Scale,	1:100	
WIDENING AND I	IIVIPROVEM	Designed.				
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1,50 A3 REV, SHEET 10 1 of 1 THE CONTRACTOR SHALL PRIST SEGAL WAS PROPOSED PROPREDAY BRAND OF CABBON CHAIRS AND EXPENSION SHALL COMPLY WHEN THE EXPENSION SHALL COMPLY WHEN THE EXPENSION SHALL COMPLY WHEN THE EXPENSION SHALL CAMPLY SECRETARIES SECRETARIES TO SEGAL SHALL EXCAVATION FOR COMMODING SHOLL BE CARRIED OUT UN ACCORDANCE VATH
CAMES JOH OF THE TECHNOLICE, STEERFOLMSE, DUSTRAN, DE MONOTHALE
STANDELLE, MATERIAL SHALL BE CARRIED DUT IN STAIL A RANGE THAN HOT DANIGE.
SIS CAUSED IN POBLIC, PRINTING THAN HOS PROPRESTIES, THE CONNACIOUS SHALL
BE HELD RESPINSIBLE FOR SUCH JOANNES DIE THIS RECLIBERCE. FORBIATEN SWALL BE TAKEN BEEF ENDLEH TO REST EN KILDUÐ MYTENFAL SÆFE FERN SKRIÐEN MAN SEMFOKNTEN, TI SKRIÐEN EN FREDISKEL LIKE GRAFE MYN LEVELS, KETTEN VITH KYNEP AND TRODHGHAV EDPARTED. AND SKALL HAVE BEEN APPRINCED IV ITHE ENGINEER PROTE TO EDPHENEDENFY OF VURHK, JF ROCK STRATA IS ENCOMPTORED, THE ROCK SHALL BE EXCAVATED TO A DEPTH PETOMAN MINIMAN AND THEN TO THE RESIDENCE LINES REAL SHALL SHE REMOVED THE OWNER AND LETCHAS. THE REMOVED AND PROTECT AND OTHER DOWNER, WHITCHALL SHALL BE REMOVED AND DEPTH OF THEN DEPTH OF THE PLANTED BY THE OWNER TO BE GAMMALE, SUBSASE AND SHE AND SHALL AS DIRECTED. LUGGIN CHARLE AND THE RE THE STRONG MA A MODE OF THE THILL CURTH OF THE WALL OR THE WALL IS THO DING, FOR A MADERING STRONG CHARLES TO THE WALL THE WALL STRONG CHARLES THE THE STRONG THE STRONG STRONG THE SHALL STRONG THE STRONG THE STRONG THE SHALL STRONG THE STRONG THE STRONG THE SHALL STRONG THE STRONG THE STRONG THE STRONG THE SHALL STRONG THE STRONG THE STRONG THE STRONG THE SHALL STRONG THE STRONG II. EXTRENE CARE SHALL BE TAKEN TI ENSURE THAT THE WIGHE, WORK 15 PROPERLY EXCUSTED AND SOUTH THAT VIFIL IS CONCEITED, HE EXPOSED FALE OF THE PETAINDS WALL VILL, REPERO KETA NO SUBSTANTIALLY TRUE TO LINES. LEVELS, AND SLOPE, BOTH FROM PLAN NO ELEVATION. STONES SHALL BE OF HOH SPECIFIC GRAMY, VIGAMEN-RESISTANT AND SUFFICIENTY MAND. THE MOST APPROPRIATE SIZE OF STONES WHITE IT FOLKS. TO 2.3 THES TO 2.5 THE THE DALESTON OF THE MESS STALL BE PROCURED FROM APPROVED SOURCES. THE COMPRACTOR SHALL SET OUT THE POSTION ACCURATELY AND GET IT APPROVED BY THE BUCKNETS. THE CONTRACTOR SHALL FORTHWITH ARRANGE FOR PRODURENEUT OF GABION CRARES AND GEOFEXTILE, FABRIC UPON APPROVAL OF THE WORKING DRAWINGS BY THE ENGINEER! THE STATE SALL IN MANDEPACT IN CARRIER SALL IN THE STATE SALL IN THE STATE SALL IN THE SAL THE DUTES AT THE WIST OF VIEW, BE OF VERTICAL STEP THE THE DUTES THE OF THE OP CAUTH CAVITY INC. VERTICAL STEP THE OP CAUTH CAVITY INC. VERTICAL STAND. INC. CLUSE IN PRINCIPAL OF ANY STAND USE OF VERTICAL STAND INC. OF THE OPEN STAND INC. OPEN STAND I 2. THE REQUIREMENT OF BREAST WALL IS ETHER AS SHOWN RI THE DRAWNES OR AS DIREC. BY THE ENGINEER ON SITE. THE TOP SURFACE OF THE UPPER MUST ROW OF GABION CRATE SHALL BE FINISHED LEVEL. THIS MAY BE ACHIEVED BY USING SHALLER STIDNES THE PELLING VOIDS. END GABION CRATES IN EACH ROW OF CRATES MAY BE OF A DIFFERENT SIZE FROM WHAT IS SPECIFIED TO SUIT SITE CONDITIONS. O, DINLY SKILLED LABBUR EXPERIENCED IN GABION HASONRY WORK SHALL EMPLOYED. GEOTEXTILE FABRIC SHALL FIRST DE LAID ON THE PREPARED FOUNDAT AT BOTH EURO DE VALL, THE FABRIC SHALL DE TURNED DE AND HADE COVER THE FOLL VIDTH OF WALL. DANGE TO HILL SLOPE AND BREAST VALL DUE TO SOIL ENGSION CAUS BY MATER FLUVING THROUGH THE GROSS BETWEEN ENUS OF VALL AND HILLSONE SLOPES SHALL BE RECOTFIED BY THE CONTRACTOR AT HIS DA GOST AND RISK. DETAILED PROJECT REPORT TYPICAL DETAILS OF GABION RETAINING WALL THERE SHALL BE ND CONTRIDUS HORIZONFAL OR VERTICAL JOINTS BETVEEN ADJACENT RDWS OF GABION GRAFES, BACKFILLING TO RETAINING WALL INCLUDING THE CAPPING SHALL BE BDMC HI CORPACTED LAYERS IN ACCORDANCE WITH CLAUSE 304.3.7 DF THE TECHNICAL SPECIFICATIONS. Widening to 2-lane of NiH 54 Between Km 431/00 To Km 562/00 In The State of Mizoram. DATE 12,08,16 SCALE CMES/MPWD/NH-54/MISC/ 12 ADDITIONAL SPECIFICATIONS: (S. AL. DIMENSIONS ARE. H. MA UNLESS OTHERWISE SPECIFIED. STATUS: DPR DRAWING 10, ERECTION OF RETAINING WALL :-PROJECT DRG. NO, TITLE CONSULTANT: CM ENGINEERING & SOLUTION
MARUTI VIHAR, HOUSE NO. 1473A,
GURGAON HARVANA. 72202,
Famil - crisescendifuncy@mel.com
Phone: 9811406386, 981105286, 01244255138 čį. APPROVED . K 5.5 4.5 CHECKED 0 MO BASE WIDTHS Walls 3.5 5 2.5 DEALT 75 4 Retaining MINISTRY OF SHIPPING, ROAD TRANSPORT
A HIGHWAYS
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HIGHWAY Supernlanding Engineer,PM Multi Model Project Crese Loxagiol : Misorom 2.0 5 Erecutha Engineer,PAD Matt Madel Project Dirigion Loangttel : Mizorom N Gabion Base width (B)m Wall height (H)M Sub-Divisional Officer, PWD

List Model Project

Sub-Birishan-i
Lavegilst : Usaram CLIENT: 200 Free draining backfill GABION SIZES 1.5mx1mx1m 2mx1mx1m ROAD LEVEL ISSUED AND/OR REFERENCES DEALT CHECKED 0L KEY 1mx1mx1.5m Filter fabric as REVISIONS 1mx1mx2m the engineer directed by DATE