

## कार्यालय प्रमुख अभियन्ता एवं विभागाध्यक्ष, "प्रकीर्ण वर्ग" लो०नि०वि०, उत्तराखण्ड, देहरादून



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दिनांक: 23 /02/2017

## परिपत्र

MORD द्वारा जारी Specifications for Rural Roads (1st Revision -2014) एवं MORTH द्वारा जारी Specifications for Road and Bridge Works (5th Revision - 2013) में Traffic Signage एवं Road Furniture से सम्बन्धित मदों की विशिष्टियों को पुनरीक्षित किया गया है तथा कुछ नई मदों को भी सम्मिलित किया गया है।

Retro-Reflective Sheeting हेतु MORD की विशिष्टियों में Class A (Type I – Engineering Grade Sheeting एवं Type II- Super Engineering Grade Sheeting) तथा Class B (Type III- High Intensity Grade Sheeting) एवं Type IV- High Intensity Micro Prismatic Grade Sheeting) का प्राविधान किया गया है। इसी प्रकार MORTH की विशिष्टियों में Retro-Reflective Sheeting हेतु High Intensity Grade (Type III) Sheeting, High Intensity Micro Prismatic Grade Sheeting (HIP) (Type IV), Prismatic Grade Sheeting (Type VIII, IX एवं XI) का प्राविधान किया गया है। इसके अतिरिक्त Road Furniture से सम्बन्धित कुछ नई मदें जैसे Road Studs, Solar Road Studs, Median Marker, Spring Post, Aluminium Prismatic Sheeting इत्यादि भी MORD एवं MORTH की विशिष्टियों में सिम्मिलित की गई है।

परन्तु वर्तमान में लोक निर्माण विभाग के केन्द्रीय शेड्यूल ऑफ रेट्स में केवल Glass Beaded Sheeting से संबंधित मदों की दरें उपलब्ध है। चूँकि वित्तीय वर्ष 2017-18 हेतु केन्द्रीय शेड्यूल ऑफ रेट्स का पुनरीक्षण प्रस्तावित है, जिसके उपरान्त ही उपरोक्त नई मदों को केन्द्रीय शेड्यूल ऑफ रेट्स में सम्मिलित किया जाना संभव होगा। अतः तब तक उदाहरणार्थ उपरोक्तानुसार Traffic Signage हेतु नई Sheetings तथा Road Furniture की नई मदों के दर विश्लेषण एवं उनमें प्रयुक्त संसाधनों की मूल दरें संलग्न कर इस आशय से प्रेषित हैं कि केन्द्रीय शेड्यूल ऑफ रेट्स को वित्तीय वर्ष 2017-18 हेतु पुनरीक्षित किए जाने तक, आगणन गठित किये जाने हेतु संलग्न दर विश्लेषण का प्रयोग किया जाए।

संलग्न दर विश्लेषण में नवीन विशिष्टियों के अनुसार रायपुर विकासखण्ड के लिए दरें ली गई हैं। अन्य विकासखण्डों हेतु आगणन गठित करने के लिए संलग्न दर विश्लेषण में, केन्द्रीय शेड्यूल ऑफ रेट्स में उपलब्ध सम्बन्धित विकासखण्ड के संसाधनों की दरें प्रयुक्त कर दर विश्लेषण किया जाए।

विभिन्न प्रकार की Sheetings के प्रयोग एवं विशिष्टियों के सम्बन्ध में MORTH एवं MORD द्वारा जारी विशिष्टियों के अतिरिक्त IRC द्वारा जारी IRC:67-2012 (Code of Practice for Road Signs), IRC:SP:73-2015 (Manual of Standards and Specifications for Two Laning of Highways with Paved Shoulders), एवं IRC:SP:84-2014 (Manual of Standards and Specifications for Two Laning of Highways through Public Private Partnership) का संज्ञान लिया जा सकता है।

प्रमुख अभियन्ता लो०नि०वि०

# प्रतिलिपि निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषितः

1. मुख्य अभियन्ता, मुख्यालय, विभागाध्यक्ष कार्यालय, लो० नि० वि० देहरादून।

2. समस्त मुख्य अभियन्ता, क्षेत्रीय कार्यालय/राष्ट्रीय राजमार्ग/ए०डी०बी०/वर्ल्ड बैंक/पी०एम०जी०एस०वाई, लोक निर्माण विभाग, उत्तराखण्ड देहरादून/पौड़ी/टिहरी/हल्द्वानी/पिथौरागढ/अल्मोड़ा को इस आशय से प्रेषित कि अपने अधीनस्थ कार्यालयों को भी अपने स्तर से अवगत करायें।

3. वरिष्ठ स्टाफ ऑफिसर  $I\setminus II$  , विभागाध्यक्ष कार्यालय, लो० नि० वि० देहरादून।

4. समस्त तकनीकी स्टाफ, विभागाध्यक्ष कार्यालय, लोक निर्माण विभाग, उत्तराखण्ड, देहरादून।

5. अधिशासी अभियन्ता, टी०ए०सी, वित्त विभाग, उत्तराखण्ड शासन।

6. प्राविधिक वर्ग, विभागाध्यक्ष कार्यालय, लो० नि० वि० देहरादून।

संलग्नः उपरोक्तानुसार

प्रमुख अभियन्ता ्रे लो०नि०वि०

## Basic Rates of Resources used for Traffic Signage and Road Furniture

Sl. No.	Name of Resource	Type	Unit	Basic Rate
1	Drilling Machine	Machine	Hour	50.00
2	Adhesive	Material	Kg.	1575.00
3	Road Studs	Material	No.	160.00
4	Solar Studs	Material	No.	2200.00
5	Spring Post (750 mm Height)	Material	No.	575.00
6	Spring Post (900 mm Height)	Material	No.	660.00
7	Bolt with washer	Material	No.	5.00
8	Road Delineator	Material	No.	500.00
9	PVC Traffic Cones (600 mm height, 3.0 kg weight)	Material	No.	525.00
10	PVC Traffic Cones (750 mm height, 3.5 kg weight)	Material	No.	615.00
11	PVC Traffic Cones (900 mm height, 4.0 kg weight)	Material	No.	660.00
12	Reflective Glass Beads	Material	Kg.	80.00
13	Hot Applied Thermoplastic Compound	Material	Litre	190.00
14	Median Marker	Material	No.	275.00
15	Aluminium Flexible Prismatic Sheeting / Hazard Marker	Material	Roll/ 145 Sq.ft.	67320.00
16	Type IV Retroreflective HIP Sheeting pasted on Aluminium Composite Panel (ACP) Sheet 3 mm thick inc. all for retro reflective signs	Material	Sq.m	5725.00
17	Type IV Retroreflective HIP Sheeting pasted on Aluminium Composite Panel (ACP) Sheet 4 mm thick inc. all for retro reflective signs	Material	Sq.m	6170.00
18	Type XI Retroreflective DG Sheeting pasted on Aluminium Composite Panel (ACP) Sheet 3 mm thick inc. all for retro reflective signs	Material	Sq.m	10170.00
19	Type XI Retroreflective DG Sheeting pasted on Aluminium Composite Panel (ACP) Sheet 4 mm thick inc. all for retro reflective signs	Material	Sq.m	10610.00

Rajbeer Singh Charham

(रवना **थपलिया**ल)

अधीक्षण अभियन्ता नवम् कृत, लोजिःविः

देहराद्व

Sr. N	Rate Analysis for Retro Reflective Type IV B	UNIT	QTY	RATE	TOTAL
	Providing & fixing of retro reflective signs with a corrosion resistant 3mm thick aluminium composite panel face to be fully covered with High Intensity Prismatic sheeting Type IV as per IRC-67:2012 retro reflective sheeting with MS angle frame of 35X35X5 mm size	imus k Imus k Imunita Injorden Sus min		Alles ereat Accomplicat Accomplicat Accomplication	
	Unit - Sq. Mtr		100		
	Output - 1 Sq. Mtr				
a	Material				
	Aluminium Composite Panel, 3mm thick including 2% Freight, 2% CST & 5% wastage	sq.m	1.05	659.00	691.95
PAG	A2 HIP Grade Type IV sheeting (inluding 5% F&I & 2% CST)	sq.m	1.00	1317.00	1317.00
	Add for border, arrows, destination name, distance etc	sq.m	0.60	1317.00	790.20
	Angle Iron 35mm X 35mm X 5mm for framing and bracing including fabrication & wastage	Kg	14.56	40.40	588.22
V. S	5 Stainless Steel nuts, Bolts, washers & rivets				100.00
				Total	3487.37
)	Miscellaneous		The exicts	ANIOCALA	
T	of Plotting	L.S.		1211/12/2011	200.00
	D2 Pasting	L.S.		DATE DE LOCATION	200.00
	3 Riveting	L.S.	To the	Estimate 1	150.00
	04 Transfer Tape	L.S.	Transleton		150.00
	5 Anti Corrosive Paint	L.S.			110.00
				Total	810.00
	7 (0743-1096)		Tota	I (a+b)	4297.37
;	Add Excise Duty @12.36% on (a+b)				531.16
1	Add Freight Charges & Packing Charges @5% on (a+b)		eneri 2 pr		214.87
)	Add VAT @ 13.5% on (a to d)	o of gha		MAYESHI Sun	680.86
	Marie I and I and I and I and I are a second and I			st per sq.m	5724.26
		100	5	Say	5725.00

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Rate Analysis for Retro Reflective Type IV Education roviding & fixing of retro reflective signs with a corrosion desistant 4 mm thick aluminium composite panel face to be	UNIT	QTY	RATE	TOTAL
esistant 4 mm thick aluminium composite panel face to be	INDEX TO	manufactural		
ully covered with High Intensity Prismatic sheeting Type IV s per IRC-67:2012 retro reflective sheeting with MS angle rame of 35X35X5 mm size	inguis s distribution in other	adi dise Sent dise C-87-2013	misvorii mateizare acca giloti Sil san es as consti	
Init - Sq. Mtr		111	62.65	
Output - 1 Sq. Mtr		Sp. Altr.		
laterial			Secretaria.	4
luminium Composite Panel, 4 mm thick including 5% wastage, &I, CST but excluding VAT	sq.m	1.05	1090.00	1144.50
IIP Grade Type IV sheeting (inluding 5% F&I & 2% CST)	sq.m	1.00	1317.00	1317.00
dd for border, arrows, destination name, distance etc	sq.m	0.60	1317.00	790.20
ngle Iron 35mm X 35mm X 5mm for framing and bracing accluding fabrication & wastage	Kg	14.56	40.40	588.22
tainless Steel nuts, Bolts, washers & rivets				100.00
			Total	3939.92
1iscellaneous				
Plotting				200.00
Pasting				200.00
Riveting			31	150.00
				150.00
nti Corrosive Paint	L.S.			110.00
		-		810.00
		lota	il (a+b)	4749.92
dd Excise Duty @12.36% on [(a+b)-a1]	Mg F C	374-73		445.63
dd Freight Charges & Packing Charges @5% on (a+b)	LA S			237.50
dd VAT @ 13.5% on (a to d)			YAVELL	733.46
	+			
		Total	st per sq.m	6166.51
1 2 2 1	iscellaneous otting asting iveting ransfer Tape nti Corrosive Paint  dd Excise Duty @12.36% on [(a+b)-a1]  dd Freight Charges & Packing Charges @5% on (a+b)	iscellaneous lotting L.S. lasting L.S. liveting L.S. ransfer Tape L.S. Inti Corrosive Paint L.S.  dd Excise Duty @12.36% on [(a+b)-a1]  dd Freight Charges & Packing Charges @5% on (a+b)	iscellaneous	Total

SE, NH 10th Circle

SE Sth Circles

Sr. No.	Rate Analysis for Retro Reflective Type XI Bo	UNIT	QTY	RATE	TOTAL
JI. 140.	Providing & fixing of retro reflective signs with a corrosion	OIVII	QII	IVAIL	TOTAL
	resistant 3 mm thick aluminium composite panel face to be fully		Limb A	in Islamit	
	covered with High Intensity Prismatic sheeting Type XI as per IRC-		SELECTION OF	COVERED	
	67:2012 retro reflective sheeting with MS angle frame of 35X35X5		201 (0100)	\$103:58	
	mm size			grade origin	
	THIN SIZE				
	Unit - Sq. Mtr		1019		210
	Output - 1 Sq. Mtr		III, IEIEE	**************************************	
	Material	30.2			
	Aluminium Composite Panel 3 mm thick including 2% Freight 2%	SELECTION OF THE PERSON OF THE	OURIDO N		
a1	CST & 5% wastage	sq.m	1.05	659.00	691.95
a2	DG Grade Type XI sheeting (inluding 5% F&I & 2% CST)	sq.m	1.00	3293.00	3293.00
a3	Electro Cut Film for arrows, destination name, distance etc	sq.m	1.00	1262.00	1262.00
a4	Angle Iron 35mm X 35mm X 5mm for framing and bracing including		STITION		
	fabrication & wastage	Kg	18.20	40.40	735.28
a5	Stainless Steel nuts, Bolts, washers & rivets	PROFIL			100.00
				Total	6082.23
)	Miscellaneous	LUPE, IN	V. Silver	STEEL STATE	31.76
	Plotting	L.S.			400.00
	Pasting	L.S.			400.00
	Riveting	L.S.			300.00
	Transfer Tape	L.S.			300.00
b5	Anti Corrosive Paint	L.S.			150.00
				Total	1550.00
			Tota	al (a+b)	7632.23
	Add Excise Duty @12.36% on (a+b)	#(05.a/	9.30°E		943.34
1	Add Freight Charges & Packing Charges @5% on (a+b)		Tapara.		381.61
)	Add VAT @ 13.5% on (a to d)				1209.22
30.0	Add 4A1 @ 13.3% off (a to d)				1209.22
			Total co	st per sq.m	10166.41
1001				Say	10170.00

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	Rate Analysis for Retro Reflective Type XI Bo	UNIT	OTY		
Sr. No.	Providing & fixing of retro reflective signs with a corrosion	UNIT	QTY	RATE	TOTA
	resistant 4mm thick aluminium composite panel face to be fully	The state of	Same 15	- Tell resident	
	covered with High Intensity Prismatic sheeting Type XI as per IRC-	Miles II	ally nave	STATE OF THE STATE	
	67:2012 retro reflective sheeting with MS angle frame of 35X35X5	5-01/12	o for Other	\$ 167:201 P	
	mm size			esta num Te	Lage
444	2007 English State Manual or a property state of a great state of				
	Unit - Sq. Mtr			0.23	
	Output - 1 Sq. Mtr				
	Material				
	Aluminium Composite Panel, 4 mm thick including 5% wastage, F&I,				
a1	CST but excluding VAT	sq.m	1.05	1090.00	1144.50
a2	DG Grade Type XI sheeting (inluding 5% F&I & 2% CST)	sq.m	1.00	3293.00	3293.00
a3	Electro Cut Film for arrows, destination name, distance etc	sq.m	1.00	1262.00	1262.00
a4	Angle Iron 35mm X 35mm X 5mm for framing and bracing including	10 7			
	fabrication & wastage	Kg	18.20	40.40	735.28
a5	Stainless Steel nuts, Bolts, washers & rivets		2016		100.00
	TESTS OF SUBJECT SHAPE THE ENGINEERING BY STREET			Total	6534.78
	Miscellaneous				10000
b1	Plotting	L.S.			400.00
b2	Pasting	L.S.		- Charles Big	400.00
b3	Riveting	L.S.			300.00
	Transfer Tape	L.S.			300.00
b5	Anti Corrosive Paint	L.S.			150.00
				Total	1550.00
			Tota	l (a+b)	8084.78
	Add Excise Duty @12.36% on [(a+b)-a1]				Single 7
	- Tala Excise Baty @12.00% On [(a+b)-a1]				857.82
	Add Freight Charges & Packing Charges @5% on (a+b)				404.24
	Add VAT @ 13.5% on (a to d)	97 (g) (f)		Tayret	1261.82

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Item Description	Rate	Unit

8-4

#### Retro-Reflective Traffic Signs -

Providing and fixing of corrosion resistant 2mm thick **Type IV** retro- reflective cautionary, mandatory, informatory sign board with 7 year warranty as per IRC:67, made of high intensity sheeting fixed over ACP (Aluminium Composite Panel) 3 mm thick (including framing and bracing with fabrication, plotting, pasting, riveting, taping and nut, bolts, washers and rivets etc for fixing), supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing, issued in original by retro-reflective sheeting manufacturer having operations in India by their indian subsidary. (Clause No. 801 of MORTH)

98205 8-4-(i)	90 cm equilateral triangle			3,886.03	each
S.No .	TEND TO LEGISLATION OF THE PERSON OF THE PER	Qty.	Rate	Unit	Amount
abour Group					
1 PL14	Mate	0.01	283.25	day	2.83
2 PL15	Beldar/mazdoor (unskilled)	0.25	257.50	day	64.38
fachine Group					
1 PMC074	Tractor	0.01	345.00	hours	3.45
laterial Group			I Land Land Land		
1 PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.	767,60
2	Retro reflective Type IV HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.35	5,725.00	sq.m	2003.75
			Total Res	ource Amount	2,842.01
S.No.					
1 3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2 11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	587.67
3 10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
		T	Total Child Item Amo	ount	656.80
ver Heads					
	14. Contractor's	Profit +Overhe	ead Charges 12.5% or	(All Resource)	355.25
	102. Lab	our Cess 1% or	n ( Resource Cost + O	ver Head Cost)	31.97
			Tot	al OH Amount	387.22
Total Cost for	1.00 each = Sub	Items Cost +	Resource Cost + 0	verhead Cost	3,886.03
Item Rate Per each					3,886.03

2. Rate for excavation, cement concrete M-15 and painting may be taken from respective chapters 3. The depth of foundation and quantity of cement concrete in the foundation are indicative. These may be increased for areas having higher wind velocities like in coastal areas. This is applicable to all road signs and directions boards.

98206 8-4-(ii) 5.No .	60 cm equilateral triangle	Qty.	Rate	2,650.08 Unit	each Amount
Labour Group					
1 PL14	Mate	0.01	283.25	day	2.83
2 PL15	Beldar/mazdoor (unskilled)	0.25	257.50	day	64.38
Machine Group					
1 PMC074	Tractor	0.01	345.00	hours	3.45
Material Group					
1 PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.	767.60
2	Retro reflective Type IV HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.16	5,725.00	sq.m	916.00
			Total Res	ource Amount	1,754.26
S.No.			- P		
1 3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2 11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	587.67
3 10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
The second second second		1	otal Child Item Am	ount	656.80
Over Heads					
	14. Contractor's	Profit +Overhe	ad Charges 12.5% or	(All Resource)	219.28
	102. Lab	our Cess 1% or	( Resource Cost + C	ver Head Cost)	19.74
			Tot	al OH Amount	239.02
Total Cost for	1.00 each = Sub	Items Cost +	Resource Cost + 0	verhead Cost	2,650.08
		Iten	n Rate Per each		2,650.08

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98207 8-4-(iii)	60 cm circular		10.0	3,430.68	B each
abour Group		Qty.	Rate	Unit	Amour
1 PL14	Mate	0.01	283.25	I day I	2.02
2 PL15	Beldar/mazdoor (unskilled)	0.01	257.50	day	2.83 64.38
achine Group	[Beldal/filazdool (dilskilled)	0.23	237.30	day	04.38
1 PMC074	Tractor	0.01	345.00	hours	3.45
aterial Group		0.02	515.00	I nours	3,43
1 PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.	767.60
2	Retro reflective Type IV HIP sheeting pasted on	0.28	5,725.00	sq.m	1603.0
Section 22 division	3mm thick ACP/ ACM including all	A CONTRACTOR	min that pay	1	
L. A. C.	STEEL CHARLES TO HAVE BEEN THE CONTROL OF THE PARTY.		Total Res	ource Amount	2,441.2
S.No.		HEROE SOUN	All Break and the second		
1 3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2 11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	587.67
3 10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
rer Heads			Total Child Item Am	ount	656.80
rei rieaus	14 Contractor's	Profit + Overhe	ead Charges 12.5% or	All Bassures	305.16
STURIST	102. Lah	our Cess 1% of	n ( Resource Cost + C	over Head Cost)	27.46
		00.0000		al OH Amount	332.62
Total Cost for	1.00 each = Sub	Items Cost +	Resource Cost + C		3,430.6
			n Rate Per each		3,430.6
9300 9 4 (1-)	90 (0				
08208 8-4-(iv)	80 cm x 60 cm rectangular	Otv	Doto	4,731.69	
bour Group		Qty.	Rate	Unit	Amoun
1 PL14	Mate	0.01	283.25	day	2.83
2 PL15	Beldar/mazdoor (unskilled)	0.25	257.50	day	64.38
chine Group	(diskined)	0.25	237.30	l day	04.30
1 PMC074	Tractor	0.01	345.00	hours	3.45
iterial Group			5.0.00	I Hours	3.43
1 PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.	767.60
2	Retro reflective Type IV HIP sheeting pasted on	0.48	5,725.00	sq.m	2748.00
2 2 1 1 1 1 4 2 2 4 6 10 1 L	3mm thick ACP/ ACM including all			54	
			Total Res	ource Amount	3,586.2
S.No.	by the second				
1 3-5-1 2 11-4-2-2	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
3 10-6	PCC Grade M15	0.12	4897.27	,cu.m	587.67
3/10-0	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
er Heads			otal Child Item Amo	ount	656.80
	14. Contractor's I	Profit + Overhe	ad Charges 12.5% or	(All Pasourca)	448.28
an bearing to the	102 Labo	our Cess 1% or	( Resource Cost + O	ver Head Cost)	40.35
	102, 200	Jul CC33 1 70 01		al OH Amount	488.63
Total Cost for	1.00 each = Sub	Items Cost +	Resource Cost + O		4,731.6
	CONTRACTOR DE LA CONTRA		Rate Per each		4,731.6
0200 0443			Second Control		4017
8209 8-4-(v)	60 cm x 45 cm rectangular	Otto	Dete	3,365.63	
oour Group		Qty.	Rate	Unit	Amount
1 PL14	Mate	0.01	283.25	dou	2.83
2 PL15	Beldar/mazdoor (unskilled)	0.25	257.50	day	64.38
chine Group	[	0.25	237.30	uay	04.38
1 PMC074	Tractor	0.01	345.00	hours	3.45
terial Group			7,0,00	nouis	3,43
1 PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.	767.60
2	Retro reflective Type IV HIP sheeting pasted on	0.27	5,725.00	sq.m	1545.75
100	3mm thick ACP/ ACM including all			100000000000000000000000000000000000000	
			Total Reso	ource Amount	2,384.01
.No.					R.
1 3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2 11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	587.67
3 10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
ar Hoods		T	otal Child Item Amo	unt	656.80
er Heads		unfib : 0 :	1.01		
	14. Contractor's P	rofit + Overhea	ad Charges 12.5% on	(All Resource)	298.00
	102. Labo	ur Cess 1% on	( Resource Cost + O		26.82
Total Cost for	1.00 each = Sub I	tome Cost	Resource Cost + O	I OH Amount	324.82
	= 500	LEITIS COST +	RESOURCE COST + O	vernead Costi	3,365.63
Total Cost for			Rate Per each		3,365.63

SE, NH 10th circles

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00210 9 4 (-4)	60 cm x 60 cm square			3,951.09	
98210 8-4-(vi) S.No .	oo chi x oo chi square	Qty.	Rate	Unit	Amount
abour Group		A COLUMN TO THE			
1 PL14	Mate	0.01	283.25	day	2.83
2 PL15	Beldar/mazdoor (unskilled)	0.25	257.50	day	64.38
	Deidai/mazaoor (anishmes)				
Machine Group 1 PMC074	Tractor	0.01	345.00	hours	3.45
	Tructor				
Material Group	MS Flat / Structural Steel	19.00	40,400.00	M.T.	767.60
1 PM0101 2	Retro reflective Type IV HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.36	5,725.00	sq.m	2061.00
			Total Res	source Amount	2,899.26
S.No.					25.47
1 3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2 11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	587.67
3 10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
3 10-0	Tunking on otto our sate		Total Child Item Am	ount	656.80
Over Heads		Destit & Oscarba	ead Charges 12.5% o	in (All Resource)	362.41
	14. Contractor s	hour Coss 1% o	n ( Resource Cost +	Over Head Cost)	32.62
	102. Ld	bour cess 170 0	To	tal OH Amount	395.02
T - 10 - 10 - 1	1.00 and = Sul	Items Cost +	- Resource Cost +		3,951.09
Total Cost for	1.00 each = Sui		n Rate Per each		3,951.09

98211 8-4-(vii)	90 cm high octagon	Otri	Rate	5,967.64 Unit	each Amount
S.No .	A HEEL OLD SERVICE AND ADDRESS OF THE PERSON	Qty.	Nate	Onic	ranount
abour Group		0.01	283.25	day	2.83
1 PL14	Mate		257.50	day	64.38
2 PL15	Beldar/mazdoor (unskilled)	0.25	237.30	uay	01100
Aachine Group			245.00	T	3.45
1 PMC074	Tractor	0.01	345.00	hours	3.43
Material Group		Color Color		T 1/2	767.60
1 PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.	767.60
2	Retro reflective Type IV HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.67	5,725.00	sq.m	3835.75
		191	Total Res	ource Amount	4,674.01
S.No.					25.17
1 3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	587.67
2 11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	
3 10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
5/200			Total Child Item Am	ount	656.80
Over Heads	14 Combination	Drofit I Overh	ead Charges 12.5% o	n (All Resource)	584.25
	14. Contractor's	Coss 194 o	on ( Resource Cost + C	Over Head Cost)	52.58
	102, Lac	our cess 1% 0	To	tal OH Amount	636.83
					5,967.64
Total Cost for	1.00 each = Sub		+ Resource Cost + C	overnead Cost	5,967.64
			m Rate Per each		

Notes: 1. Any one area of ACP sheeting given at (i) to (vii) may be adopted as per site requirement and in accordance with IRC 67:2012. Rate for excavation, cement concrete M-15 and painting may be taken from respective chapters 3. The depth of foundation and quantity of cement concrete in the foundation are indicative. These may be increased for areas having higher wind velocities like in coastal areas. This is applicable to all road signs and directions boards.

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SE, NH 10th circle

9th circle

Direction and Place Identification Signs upto 0.9 sqm Size Board.

Providing and erecting direction and place identification sign with corrosion resistant 2mm thick Type IV retro-reflective cautionary, mandatory, informatory sign board with 7 year warranty as per IRC:67 made of high intensity sheeting fixed over ACP (Aluminium Composite Panel) 3 mm thick (including framing and bracing with fabrication, plotting, pasting, riveting, taping and nut, bolts, washers and rivets etc for fixing) with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45  $\times$ 45 x 60 cm, 60 cm below ground level as per approved drawing. (Clause No. 801 of MORTH)

				0,430.70	54.111
S.No .		Qty.	Rate	Unit	Amount
abour Group	Section 1981 Conference of the				
1 PL14	Mate	0.01	283.25	day	2.83
2 PL15	Beldar/mazdoor (unskilled)	0.20	257.50	day	51.50
lachine Group					
1 PMC074	Tractor	0.02	345.00	hours	6.90
laterial Group					
1 PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.	767.60
2	Retro reflective Type IV HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.90	5,725.00	sq.m	5152.50
	it out to grave		Total Res	ource Amount	5,981.33
S.No.		Language .		CHEROP- GRAD	12.5
1 3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2 11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	587.67
3 10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
			Total Child Item Am	ount	656.80
ver Heads	ENT PERFECUE				110.10
	54. Material for Drilling, Gripping, Fixing, Fabrication	n and Welding	Consumables 2% on (	Material Group)	118.40
	14. Contractor's	Profit + Overh	ead Charges 12.5% of	n (All Resource)	762.47
102. Labour Cess 1% on ( Resource Cost + Over Head Cost)					68.62
				tal OH Amount	949.49
Total Cost for	Total Cost for 0.90 sq.m = Sub Items Cost + Resource Cost + Overhead Cost			Overhead Cost	7,587.63
	Item Rate Per sq.m				8,430.70

Notes: i) Lettering and arrow marks on sign board to be provided as per IRC 67:2012 requirement. Rates of these items have been considered in pricing ii) Rat for excavation, cement concrete M-15 and painting may be taken from respective chapters

98213 8-6

Direction and Place Identification Signs with size more than 0.9 sqm size Board.

Providing and erecting direction and place identification sign with corrosion resistant 2mm thick Type IV retro-reflective cautionary, mandatory, informatory sign board with 7 year warranty as per IRC:67 made of high intensity sheeting fixed over ACP (Aluminium Composite Panel) 4 mm thick (including framing and bracing with fabrication, plotting, pasting, riveting, taping and nut, bolts, washers and rivets etc for fixing) with area exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing. (Clause No. 801 of MORTH)

				9,277.91	sq.m
S.No.		Qty.	Rate	Unit	Amount
abour Group					
1 PL14	Mate	0.01	283.25	day	2.83
2 PL15	Beldar/mazdoor (unskilled)	0.30	257.50	day	77.25
fachine Group					
1 PMC074	Tractor	0.02	345.00	hours	6.90
laterial Group	THE RESIDENCE OF THE PROPERTY OF	effective buryl	CALCULATION PLAN		2 - 1- 1-1
1 PM0101	MS Flat / Structural Steel	38.00	40,400.00	M.T.	1,535.20
2	Retro reflective Type IV HIP sheeting pasted on 4mm thick ACP/ ACM including all	1.50	6,170.00	sq.m	9255.00
	-2		Total Res	ource Amount	10,877.18
S.No.					
1 3-5-1	Manual Means (Depth upto 1.5 m)	0.43	114.42	cu.m	49.20
2 11-4-2-2	PCC Grade M15	0.24	4897.27	cu.m	1175.34
3 10-6	Painting on Steel Surfaces	0.86	102.23	sq.m	87.92
			Total Child Item Am	ount	1312.46
Over Heads					215.00
City of State Control	54. Material for Drilling, Gripping, Fixing, Fabrication	n and Welding (	Consumables 2% on (	Material Group)	215.80
			ead Charges 12.5% o		1386.62
	102. Lab	our Cess 1% o	n ( Resource Cost + C		124.80
				tal OH Amount	1,727.22
Total Cost for	1.50 sq.m = Sub	Items Cost +	- Resource Cost + C	Overhead Cost	13,916.87
		Ite	m Rate Per sq.m		9,277.91

Notes: i) Lettering and arrow marks on sign board to be provided as per IRC 67:2012 requirement. Rates of these items have been considered in pricing ii) I for excavation, cement concrete M-15 and painting may be taken from respective chapters

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### Overhead Signs

Providing and erecting overhead signs with a corrosion resistant 2mm thick **Type IV** HIP retroreflective sheeting with 07 year warranty made of high intensity sheeting fixed over ACP (Aluminium Composite Panel) 4 mm thick (including framing and bracing with fabrication, plotting, pasting, riveting, taping and nut, bolts, washers and rivets etc for fixing), installed as per clause 802.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans issued in original by retro-reflective sheeting manufacturer having operations in India by their indian subsidary. (Clause No. 802 of MORTH)

98214 8-7-A	Truss and Vertical Support			93,497.01	tonne	
30214 0-7-A	Truss and vertical support	Qty.	Rate	Unit	Amount	
Labour Group						
1 PL03	Blacksmith 1st class/Electrician	2.00	468.65	day	937.30	
2 PL14	Mate	0.24	283.25	day	67.98	
3 PL15	Beldar/mazdoor (unskilled)	4.00	257.50	day	1,030.00	
Machine Group						
1 PMC033	Truck 10 t capacity	0.50	400.00	hours	200.00	
2 PMC044	Cranes c) 3 tonnes	3.00	365.00	hours	1,095.00	
Material Group				THE STEAM	NEED AND	
1 PM0201	Aluminium alloy/galvanised steel	1.05	62,800.00	tonne	65,940.00	
211110202			Total Res	ource Amount	69,270.28	
S.No.						
1 3-5-1	Manual Means (Depth upto 1.5 m)	0.86	114.42	cu.m	98.40	
2 11-4-2-2	PCC Grade M15	0.48	4897.27	cu.m	2350.69	
3 10-6	Painting on Steel Surfaces	3.44	102.23	sq.m	351.67	
5 100	T annual of the second	Transport Lawrence Control	otal Child Item Am	ount	2800.76	
Over Heads					650.40	
	55. Steel for Welding Consumab	les, Nuts & Bolts and D	rilling Holes 1% on (	Material Group)	659.40	
	54. Material for Drilling, Gripping, Fixing, Fab	rication and Welding Co	onsumables 15% on (	Material Group)	9,891.00	
	14. Cont	ractor's Profit + Overhe	ead Charges 12.5% or	n (All Resource)	9,977.59	
		102. Labour Cess 1% o			897.98	
			Tot	tal OH Amount	21,425.97	
Total Cost for	1.00 tonne	= Sub Items Cost +	Resource Cost + C	Overhead Cost	93,497.01	
10001001101			n Rate Per tonne		93,497.01	

98215 8-7-B	Type IV HIP retro- reflective sheeting		Dete	Linit	Amount
S.No .		Qty.	Rate	Unit	Amount
abour Group					16.07
1 PL03	Blacksmith 1st class/Electrician	0.10	468.65	day	46.87
2 PL14	Mate	0.02	283.25	day	5.67
3 PL15	Beldar/mazdoor (unskilled)	0.15	257.50	day	38.63
Material Group					
1	Retro reflective Type IV HIP sheeting pour shield ACP/ ACM including all	asted on 1.00	6,170.00	sq.m	6170.00
	NAME OF TAXABLE PARTY.		Total Res	ource Amount	6,261.16
ver Heads		dulie y proro -			- T
	14. Co	ontractor's Profit + Ov	erhead Charges 12.5% o	n (All Resource)	782.64
		102. Labour Cess 1	% on ( Resource Cost + 0	Over Head Cost)	70.44
			To	tal OH Amount	853.08
Total Cost for	1.00 sq.m		= Resource Cost + C	verhead Cost	7,114.24
			Item Rate Per sq.m		7,114.24

Notes: 1. The cost of excavation and foundation concrete for fixing of vertical support system to be worked out separately as per the approved drawing/design and to be included in the estimate. 2. Lettering and arrow marks on sign board to be provided separately as per actual requirement. Rates for these items have been included separately in this chapter.

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SE, NH

9th circle

#### Retro-Reflective Traffic Signs -

Providing and fixing of corrosion resistant 2mm thick DG Grade **Type XI** retro-reflective cautionary, mandatory, informatory sign board with 10 year warranty as per IRC:67 made of high intensity sheeting fixed over ACP (Aluminium Composite Panel) 3 mm thick (including framing and bracing with fabrication, plotting of letters on Electro cut film, pasting, riveting, taping and nut, bolts, washers and rivets etc for fixing), supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing issued in original by retro-reflective sheeting manufacturer having operations in India by their indian subsidary. (Clause No. 801 of MORTH)

98205 8-4-(i) S.No .	90 cm equilateral triangle		04.	Dut	5,653.76	
			Qty.	Rate	Unit	Amount
Labour Group	D.C.				1	
1 PL14	Mate		0.01	283.25	day	2.83
2 PL15	Beldar/mazdoor (unskilled)		0.25	257.50	day	64.38
Machine Group				The state of the s		
1 PMC074	Tractor		0.01	345.00	hours	3.45
Material Group						
1 PM0101	MS Flat / Structural Steel		19.00	40,400.00	M.T./Kg	767.60
2 PM2280	Retro reflective Type XI DG3 HIP sh pasted on 3mm thick ACP/ ACM incl		0.35	10,170.00	sq.m	3559.50
S.No.				Total Res	source Amount	4,397.76
1 3-5-1	Manual Means (Depth upto 1.5 m)		0.22	114.42	Cu.m	25.17
2 11-4-2-2	PCC Grade M15		0.12	4897.27	cu.m	587.67
3 10-6	Painting on Steel Surfaces		0.43	102.23	sq.m	43.96
				Total Child Item Am	ount	656.80
Over Heads	Last programme con access a plant and a	And the same				
	14.	Contractor's I	Profit + Overhe	ead Charges 12.5% o	n (All Resource)	549.72
The report Hall he will		102. Labo	our Cess 1% o	n ( Resource Cost + 0	Over Head Cost)	49.47
				To	tal OH Amount	599.19
Total Cost for	1.00 each	= Sub	Items Cost +	Resource Cost + 0	Overhead Cost	5,653.76
	Distribution of the Committee of the	L	Iter	n Rate Per each		5,653.76
Notes: 1 Any one area of alu	minium/ACP/ACM sheeting given at (i) to	o (vii) may he	adopted as per	cite requirement and in	accordance with II	

Notes: 1. Any one area of aluminium/ACP/ACM sheeting given at (i) to (vii) may be adopted as per site requirement and in accordance with IRC: 67:2012

2. Rate for excavation, cement concrete M-15 and painting may be taken from respective chapters 3. The depth of foundation and quantity of cement concrete in the foundation are indicative. These may be increased for areas having higher wind velocities like in coastal areas. This is applicable to all road signs and directions boards.

98206 8-4-(ii) S.No .	60 cm equilateral triangle		Qty.	Rate	3,458.18 Unit	each Amount
Labour Group						
1 PL14	Mate		0.01	283.25	day	2.83
2 PL15	Beldar/mazdoor (unskilled)		0.25	257.50	day	64,38
Machine Group						
1 PMC074	Tractor		0.01	345.00	hours	3.45
Material Group						
1 PM0101	MS Flat / Structural Steel		19.00	40,400.00	M.T. /kg	767.60
2 Pm 2280	Retro reflective Type XI DG3 I- pasted on 3mm thick ACP/ ACI		0.16	10,170.00	sq.m	1627.20
S.No.				Total Res	source Amount	2,465.46
1 3-5-1	Manual Means (Depth upto 1.5	m)	0.22	114.42	T 1	25.17
2 11-4-2-2	PCC Grade M15	III)	0.12	4897.27	cu.m	587.67
3 10-6	Painting on Steel Surfaces		0.43	102.23	cu.m	43.96
	i uniting on oteer buriaces		0.45	Total Child Item Am	sq.m	656.80
Over Heads				Total Cilia Item All	iodiici	030.00
		14. Contractor's	Profit + Overh	nead Charges 12.5% o	n (All Resource)	308.18
				on ( Resource Cost + 0		27.74
	MIN TO THE REST				tal OH Amount	335.92
Total Cost for	1.00 each	= Sub	Items Cost	+ Resource Cost + 0		3,458.18
		1 5		em Rate Per each		3,458.18

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SE, NH 10th Circle

oth circle

98207 8-4-(iii)	60 cm circular			4,844.86	
98207 8-4-(111)	oo ciii cii cuiui	Qty.	Rate	Unit	Amount
abour Group					2.02
1 PL14	Mate	0.01	283.25	day	2.83
2 PL15	Beldar/mazdoor (unskilled)	0.25	257.50	day	64.38
Machine Group	100 800 0000 80 14	LETTER STATE OF STATE			2.45
1 PMC074	Tractor	0.01	345.00	hours	3.45
Material Group				1 .cm	767.60
1 PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.	
2 PM 2280	Retro reflective Type XI DG3 HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.28	10,170.00	sq.m	2847.60
			Total Res	ource Amount	3,685.86
S.No.					25.47
1 3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2 11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	587.67
3 10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
			Total Child Item Am	ount	656.80
Over Heads		5 50 0 1		n (All Decourse)	460.73
	14. Contractor's	Profit + Overne	ead Charges 12.5% on ( Resource Cost + 0	Over Head Cost)	41.47
TIP (SIX-9)	102. Lai	bour Cess 1% 0	To	tal OH Amount	502.20
	- Sub	Itams Cost +	Resource Cost + 0	The state of the s	4,844.86
Total Cost for	1.00 each = Sub		n Rate Per each		4,844.86

80 cm x 60 cm rectangular	Qty.	Rate	7,155.99 Unit	each Amount
				2.02
Mate		- Charles Control		2.83
Beldar/mazdoor (unskilled)	0.25	257.50	day	64.38
Tractor	0.01	345.00	hours	3.45
MS Flat / Structural Steel	19.00		M.T.	767.60
Retro reflective Type XI DG3 HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.48	10,170.00	sq.m	4881.60
		Total Res	ource Amount	5,719.86
		SERVICE AND LAND		25.15
Manual Means (Depth upto 1.5 m)				25.17
PCC Grade M15			cu.m	587.67
Painting on Steel Surfaces			sq.m	43.96
	ı	otal Child Item Am	ount	656.80
14 Contractorio	Brofit + Overhe	ad Charges 12 5% of	n (All Resource)	714.98
14. Contractors	hour Case 1% or	( Pasource Cost + C	over Head Cost)	64.35
102. Lat	0001 Cess 1 70 01			779.33
	Thoma Cost 4	Resource Cost + C		7,155.99
1.00 each = Sub				.,
	Mate Beldar/mazdoor (unskilled)  Tractor  MS Flat / Structural Steel Retro reflective Type XI DG3 HIP sheeting pasted on 3mm thick ACP/ ACM including all  Manual Means (Depth upto 1.5 m) PCC Grade M15 Painting on Steel Surfaces	Mate	Mate	Qty.   Rate   Unit

SE, NH 10th circle

SE 3th circle

98209 8-4-(v)	60 cm x 45 cm rectangular			4,729.3	0 ег
S.No .		Qty.	Rate	Unit	Amc
1 PL14	Mate	0.01	283.25	day	2.8.
2 PL15	Beldar/mazdoor (unskilled)	0.25	257.50	day	64.38
1 PMC074				THE RESERVE	
faterial Group	Tractor	0.01	345.00	hours	3.45
1 PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.	767.60
2 PM 2280	Retro reflective Type XI DG3 HIP sheeting	0.27	10,170.00	sq.m	2745.90
	pasted on 3mm thick ACP/ ACM including all				
S.No.			Total Res	ource Amount	3,584.16
1 3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2 11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	587.67
3 10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
ver Heads			Total Child Item Am	ount	656.80
	14. Contractor	's Profit + Overh	nead Charges 12.5% or	(All Resource)	448.02
	102. L	abour Cess 1% (	on ( Resource Cost + C	al OH Amount	40.32
Total Cost for	1.00 each = St	b Items Cost	+ Resource Cost + C		4,729.30
	en may total		m Rate Per each		4,729.30
98210 8-4-(vi)	60 cm x 60 cm square			5,769.3	1 each
.N		Qty.	Rate	Unit	Amount
1 PL14	Mate	1 000	202.25		
2 PL15	Beldar/mazdoor (unskilled)	0.01	283.25 257.50	day	2.83 64.38
achine Group	(anskined)	0.25	237.30	day	04.38
1 PMC074	Tractor	0.01	345.00	hours	3.45
aterial Group 1 PM0101	MC First / Company of Company	1 10 00			
2 Pm2280	MS Flat / Structural Steel Retro reflective Type XI DG3 HIP sheeting	19.00 0.36	40,400.00 10,170.00	M.T.	767.60
111111111111111111111111111111111111111	pasted on 3mm thick ACP/ ACM including all	0.30	10,170.00	sq.m	3661.20
			Total Res	ource Amount	4,499.46
S.No.					
1 3-5-1 2 11-4-2-2	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
3 10-6	PCC Grade M15 Painting on Steel Surfaces	0.12	4897.27 102.23	cu.m	587.67
	Transmis on oteer ourraces		Total Child Item Amo	sq.m	43.96 656.80
ver Heads					030.00
Minima could be	14. Contractor	s Profit + Overhe	ead Charges 12.5% on	(All Resource)	562.43
	102. La	abour Cess 1% o	n ( Resource Cost + O		50.62
Total Cost for	1.00 each = Su	b Items Cost +	- Resource Cost + O	ol OH Amount	613.05 <b>5,769.31</b>
Author Man			n Rate Per each	criicad cost	5,769.31
98211 8-4-(vii)	90 cm high octagon			9,351.57	each
S.No .	UL ANNELS MENTALLE STORY AND THE REPORT	Qty.	Rate	Unit	Amount
bour Group 1 PL14	Made				J 75234
2 PL15	Mate Beldar/mazdoor (unskilled)	0.01	283.25 257.50	day	2.83
achine Group	(ulbalieu)	0.23	237.30	day	64.38
1 PMC074	Tractor	0.01	345.00	hours	3.45
aterial Group	MC Flot / Comment of Co.				
	MS Flat / Structural Steel Retro reflective Type XI DG3 HIP sheeting	19.00 0.67	40,400.00	M.T.	767.60
2 Pm 2280	pasted on 3mm thick ACP/ ACM including all	0.07	10,170.00	sq.m	6813.90
ultp.	The State of the S		Total Reso	urce Amount	47,652.16
5.No. 1 3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42		1831
2 11-4-2-2	PCC Grade M15	0.22	114.42 4897.27	cu.m	25.17 587.67
3 10-6	Painting on Steel Surfaces	0.12	102.23	cu.m sq.m	43.96
			otal Child Item Amo	unt	656.80
er Heads					
	14. Contractor's	hour Cess 194	ad Charges 12.5% on ( Resource Cost + Ov	(All Resource)	956.52
	102. Ld	CC33 170 OF		OH Amount	86.09 1042.61
	100	Itoms Cost +	Resource Cost + Ov		
Total Cost for	1.00 each = Sub	Titellis Cost T	Resource Cost + UV	ernead Costi	9,351.57

foundation are indicative. These may be increased for areas having higher wind velocities like in coastal areas. This is applicable to all road signs and directions boards.

#### Direction and Place Identification Signs upto 0.9 sqm Size Board.

Providing and erecting direction and place identification sign with corrosion resistant 2mm thick DG Grade Type XI retro- reflective cautionary, mandatory, informatory sign board with 10 year warranty as per IRC:67 made of high intensity sheeting fixed over ACP (Aluminium Composite Panel) 3 mm thick (including framing and bracing with fabrication, plotting of letters on Electro cut film, pasting, riveting, taping and nut, bolts, washers and rivets etc for fixing), with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing. (Clause No. 801 of MORTH)

	(Clause No. 801 of MORTH)				13,582.34	sq.m
S.No .			Qty.	Rate	Unit	Amount
abour Group						
1 PL14	Mate		0.01	283.25	day	2.83
2 PL15	Beldar/mazdoor (unskilled)		0.20	257.50	day	51.50
Machine Group						
1 PMC074	Tractor		0.02	345.00	hours	6.90
Material Group				Defracile Co.		
1 PM0101	MS Flat / Structural Steel		19.00	40,400.00	M.T.	767.60
2 PM 2280	Retro reflective Type XI DG3 H	IIP sheeting	0.90	10,170.00	sq.m	9153.00
	pasted on 3mm thick ACP/ ACM	M including all			- 600 M	
				Total Res	ource Amount	9,981.83
S.No.						TO T
1 3-5-1	Manual Means (Depth upto 1.5	m)	0.22	114.42	cu.m	25.17
2 11-4-2-2	PCC Grade M15		0.12	4897.27	cu.m	587.67
3 10-6	Painting on Steel Surfaces		0.43	102.23	sq.m	43.96
	LOS ELECTRON CONTROL OF THE	THEY	T	otal Child Item Am	ount	656.80
Over Heads						- Carlot
	54. Material for Drilling, Gripping,					198.41
The state of the state of		14. Contractor's	s Profit + Overhe	ad Charges 12.5% or	(All Resource)	1272.53
		102. La	bour Cess 1% or	( Resource Cost + C	over Head Cost)	114.53
			Brown Lot Head	Tot	al OH Amount	1585.47
Total Cost for	0.90 sq.m	= Sul		Resource Cost + C	verhead Cost	12,224.11
			Iten	n Rate Per sq.m		13,582.34

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#### Direction and Place Identification Signs with size more than 0.9 sqm size Board.

Providing and erecting direction and place identification sign with corrosion resistant 2mm thick DG Grade Type XI retro- reflective cautionary, mandatory, informatory sign board with 10 year warranty as per IRC:67 made of high intensity sheeting fixed over ACP (Aluminium Composite Panel) 4 mm thick (including framing and bracing with fabrication, plotting of letters on Electro cut film, pasting, riveting, taping and nut, bolts, washers and rivets etc for fixing), with area exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing. (Clause

an pi	No. 801 of MORTH)				14,423.76	sq.m
S.No.		H. Bell Company	Qty.	Rate	Unit	Amount
abour Group						
1 PL14	Mate		0.01	283.25	day	2.83
2 PL15	Beldar/mazdoor (unskilled)		0.30	257.50	day	77.25
lachine Group						
1 PMC074	Tractor	1,000	0.02	345.00	hours	6.90
laterial Group	PENT					
1 PM0101	MS Flat / Structural Steel		38.00	40,400.00	M.T.	1,535.20
2 PM229	Retro reflective Type XI DG3 pasted on 4 mm thick ACP/ A		1.50	10,610.00	sq.m	15915.00
				Total Res	ource Amount	17,537.18
S.No.						
1 3-5-1	Manual Means (Depth upto 1.:	5 m)	0.43	114.42	cu.m	49.20
2 11-4-2-2	PCC Grade M15		0.24	4897.27	cu.m	1175.34
3 10-6	Painting on Steel Surfaces		0.86	102.23	sq.m	87.92
		100	T	otal Child Item Amo	ount	1312.46
ver Heads	53		Y. T.			
	54. Material for Drilling, Gripping					349.00
	35 cm 26	14. Contractor's	Profit + Overhe	ad Charges 12.5% or	(All Resource)	2235.77
- 1		102. Lab	our Cess 1% or	( Resource Cost + O	ver Head Cost)	201.22
	3191	YTEM		Tot	al OH Amount	2,786.00
Total Cos	st for 1.50 sq.m	= Sub		Resource Cost + 0	verhead Cost	21,635.64
			Iten	Rate Per sq.m		14,423.76

for excavation, cement concrete M-15 and painting may be taken from respective chapters

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#### Overhead Signs

Providing and erecting overhead signs with a corrosion resistant 2mm thick DG Grade Type XI retro- reflective sheeting with 10 year warranty made of high intensity sheeting fixed over ACP (Aluminium Composite Panel) 4 mm thick (including framing and bracing with fabrication, plotting of letters on Electro cut film, pasting, riveting, taping and nut, bolts, washers and rivets etc for fixing), installed as per clause 802.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans issued in original by retro-reflective sheeting manufacturer having operations in India by their indian subsidary. (Clause No. 802 of

98214 8-7-A	Truss and Vertical Support			93,497.01	tonne
S.N		Qty.	Rate	Unit	Amount
Labour Group					
1 PL03	Blacksmith 1st class/Electrician	2.00	468.65	day	937.30
2 PL14	Mate	0.24	283.25	day	67.98
3 PL15	Beldar/mazdoor (unskilled)	4.00	257.50	day	1,030.00
Machine Group			Carlo de Carallo III de		
1 PMC033	Truck 10 t capacity	0.50	400.00	hours	200.00
2 PMC044	Cranes c) 3 tonnes	3.00	365.00	hours	1,095.00
Material Group					
1 PM0201	Aluminium alloy/galvanised steel	1.05	62,800.00	tonne	65,940.00
	CERES TO THE PART OF THE PART		Total Res	ource Amount	69,270.28
S.No.				1000	
1 3-5-1	Manual Means (Depth upto 1.5 m)	0.86	114.42	cu.m	98.40
2 11-4-2-2	PCC Grade M15	0.48	4897.27	cu.m	2350.69
3 10-6	Painting on Steel Surfaces	3.44	102.23	sq.m	351.67
			Total Child Item Am	ount	2800.76
Over Heads	never an interest in the second and				
	55. Steel for Welding Cons	sumables, Nuts & Bolts a	nd Drilling Holes 1% on (	Material Group)	659.40
	54. Material for Drilling, Gripping, Fixing	g, Fabrication and Weldin	ng Consumables 15% on (	Material Group)	9,891.00
			verhead Charges 12.5% or		9,977.59
THE RESERVE		102. Labour Cess 1	% on ( Resource Cost + C	Over Head Cost)	897.98
			Tot	tal OH Amount	21,425.97
Total Cost for	1.00 tonne	= Sub Items Co	st + Resource Cost + C	Overhead Cost	93,497.01
		X THE RELEASE	Item Rate Per tonne	STATE AND ADDRESS.	93,497.01

98215 8-7-B	Type XI DG HIP retro- reflective sheeti	ng for Over Head Sign		12,159.19 sq.m	
S.No .	Qty. Rate		Unit	Amount	
Labour Group					
1 PL03	Blacksmith 1st class/Electrician	0.10	468.65	day	46.87
2 PL14	Mate	0.02	283.25	day	5.67
3 PL15	Beldar/mazdoor (unskilled)	0.15	257.50	day	38.63
Material Group				or the state of	A DEST
1 PM2281	Retro reflective Type XI DG3 HIP sheeting pasted on 4 mm thick ACP/ ACM includin		10,610.00	sq.m	10610.00
			Total Reso	ource Amount	10,701.16
Over Heads	SECRETARY OF THE PROPERTY OF T				TA PUDGATE
	14. Cont	ractor's Profit + Overho	ead Charges 12.5% on	(All Resource)	1337.64
- I plant		102. Labour Cess 1% o	n (Resource Cost + O	ver Head Cost)	120.39
			Tot	al OH Amount	1458.03
Total Cost for	1.00 sq.m		Resource Cost + O	verhead Cost	12,159.19
		Ite	m Rate Per sq.m	55. of \$100 to 10	12,159.19

Notes: 1. The cost of excavation and foundation concrete for fixing of vertical support system to be worked out separately as per the approved drawing/design and to be included in the estimate. 2. Lettering and arrow marks on sign board to be provided separately as per actual requirement. Rates for these items have been included separately in this chapter.

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### **ROAD FURNITURE**

Road Studs / Cat Eye:

Providing and fixing Bi-directional Road Studs (Cat Eye) / Reflective Pavement Marker (RPM) with single body twin shank and plastic body moulded from ASA (Acrylic Styrene Acrylonitrite) or HIPS (Hi-impact Polystyrene) or ABS (Acrylonitrile Butadiene Styrene) or any other suitable material approved by Engineer in charge (Marker must support a load of 13635 kg tested in accordance with ASTM D 4280 and Reflective lenses conforming to ASTM D 788 or equivalent) bonded or anchored within the road surface for lane marking and delineation for night time visibility as per Clause No. 1707 of MORD and 804 of MORTH specifications.

S.No.	Resource Code	Resource	Quantity	Rate	Unit	Amount
Labour				dal dux		
1	PL14	Mate	1.00	283.25	day	283.25
2	PL17	Beldar/mazdoor (skilled)	2.00	370.80	day	741.60
3	PL18	Rock Hole Driller	1.00	283.25	day	283.25
Machine	e Group					
1		Drilling Machine	8.00	50.00	Hours	400.00
2	PMC095	Generator 33 KVA	8.00	350.00	Hour	2800.00
3	PMC074	Tractor	8.00	345.00	Hour	2760.00
Materia	Group		OT COLUMN		P. HIDY AND	
1	PM2268	Adhesive	3.18	1575.00	Kg.	5008.50
2	- 5-172	Road Studs	100.00	160.00	Nos.	16000.00
		THE LIE WAS TO	Total	Resource A	mount	28,276.60
Over H	leads					
		Contractor's	Profit Including (	Over Head @	12.5%	3534.58
	1			Labour Ces	s @1%	318.11
Name of	ed Estado			Total OH A	mount	3852.69
То	tal Cost for	100 Nos.				32,129.29
			Iten	n Rate Per	No.	321.29

Rate in Rate in DSR MORTH 243.00 128.80

#### 2 | Solar Road Studs:

Providing and fixing Solar Powered Road Studs of Rectangular / Circular shape (with super bright LEDs for long visibility from distance greater than 800 m) having twin shank and body made of aluminium alloy or poly carbonate material which shall be absolutely weather resistant and strong enough to support a load of 13635 kg tested in accordance with ASTM D 4280 and water resistance as per IP 65 in accordance with IS 12063:1987, fixed to the road surface using adhesives and the procedure recommended by the manufacturer as per Clause No. 804.6 and 804.7 of MORTH specifications.

S.No .	Resource Code	Resource	Quantity	Rate	Unit	Amount
Labour						
1	PL14	Mate	1.00	283.25	day	283.25
2	PL17	Beldar/mazdoor (skilled)	2.00	370.80	day	741.60
3	PL18	Rock Hole Driller	1.00	283.25	day	283.25
Machin	e Group	L				
1	146	Drilling Machine	8.00	50.00	Hour	400.00
2	PMC095	Generator 33 KVA	8.00	350.00	Hour	2800.00
3	PMC074	Tractor	8.00	345.00	Hour	2760.00
Materia	Group					
1	PM2264	Solar Studs	100.00	2200.00	Nos.	220000.00
2	PM2268	Adhesive	3.18	1575.00	Kg.	5008.50
	the sea		Total	Resource A	mount	232,276.60
Over H	leads					
		Contractor's	Profit Including (		-	29034.58
				Labour Cess		2613.11
E BY E			A = A	Total OH A	mount	31647.69
To	tal Cost for	100 Nos.		A		263,924.29
-			Iten	Rate Per	No	2639.24

Rate in Rate in DSR MORTH NA NA

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3 Spring Posts (750 mm height)
Supply and fixing of Plastic Spring Post 750 mm high and 100 mm in dia (having 2 strips of 75mm wide Type IV retroreflective tape fixed around the post) with base dia 400 mm fixed to the ground with adhesive and nuts and bolts.

S.No .	Resource	Resource	Quantity	Rate	Unit	Amount
Labour	Group		arentennar S. Toll			The State of the S
1	PL14	Mate	1.00	283.25	day	283.25
2	PL17	Beldar/mazdoor (skilled)	2.00	370.80	day	741.60
3	PL18	Rock Hole Driller	2.00	283.25	day	566.50
Machin	e Group					
1	140	Drilling Machine	8.00	50.00	Hour	400.00
2	PMC095	Generator 33 KVA	8.00	350.00	Hour	2800.00
3	PMC074	Tractor	8.00	345.00	Hour	2760.00
Materia	Group		Buck	JEENS!	Janes III	BE STO
1	PM2268	Adhesive	6.36	1575.00	Kg.	10017.00
2	2273	Spring Post	100.00	575.00	Nos.	57500.00
3	2277	Bolt with Washer	200.00	5.00	Nos.	1000.00
			Total F	Resource A	mount	76,068.35
Over H	eads					
		Contractor's	Profit Including C	over Head @	12.5%	9508.54
				Labour Cess	@1%	855.77
				Total OH A	mount	10364.31
То	tal Cost for	100 Nos.				86,432.66
a) Atla	9 155 011		Item	Rate Per	No.	864.33

Rate in DSR MORTH NA NA

4 Spring Posts (900 mm height):
Supply and fixing of Plastic Spring Post 900 mm high and 100 mm in dia (having 2 strips of 75 mm wide Type IV retroreflective tape fixed around the post) with base dia 400 mm

S.No .	Resource Code	Resource	Quantity	Rate	Unit	Amount
Labour	Group					Land William
1	PL14	Mate	1.00	283.25	day	283.25
2	PL17	Beldar/mazdoor (skilled)	2.00	370.80	day	741.60
3	PL18	Rock Hole Driller	2.00	283.25	day	566.50
Machin	e Group					
- 1	100	Drilling Machine	8.00	50.00	Hours	400.00
2	PMC095	Generator 33 KVA	8.00	350.00	Hour	2800.00
3	PMC074	Tractor	8.00	345.00	Hour	2760.00
Materia	Group		William I		1771	
1		Adhesive	6.36	1575.00	Kg.	10017.00
2		Spring Post	100.00	660.00	Nos.	66000.00
3		Bolt with Washer	200.00	5.00	Nos.	1000.00
			Total F	Resource A	mount	84,568.35
Over H	eads					
		Contractor's	Profit Including (	ver Head @	012.5%	10571.04
				Labour Cess	@1%	951.39
			HEROYA VALUE	Total OH A	mount	11522.44
То	tal Cost for	100 Nos.				96,090.79
2			Item	Rate Per	No.	960.91

Rate in Rate in DSR MORTH NA NA

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### 5 Road Delineators / Vertical Guide Posts:

Supply and fixing of MS delineators 1000 mm long, having a diameter of 75 mm and thickness 4mm and having atleast different colour strips of 75 mm wide Type IV retroreflective tape around the black painted pole attached with 150 mm x 25 mm x 6 mm MS flats welded at bottom to be fixed in M15 concrete base as directed by the Engineer in Charge as per IRC: 79 (Recommended Practice for Road Delineators) and Clause no. 806 of MORTH specifications.

S.No.	Resource Code	Resource	Quantity	Rate	Unit	Amount
Labour		The second secon				
1	PL14	Mate	0.50	283.25	day	141.63
2	PL15	Beldar/mazdoor (unskilled)	1.00	257.50	day	257.50
Materia	l Group					
1	4112	Delineator	30.00	500.00	Nos.	15000.00
2		Concrete M- 15 (0.25 x 0.25 x 0.20)	0.38	4897.30	Cum.	1836.49
3		Excavation	0.38	244.40	Cum.	91.65
			Total	Resource A	mount	17,327.26
Over H	eads					
		Contractor's Pr	ofit Including	Over Head @	012.5%	2165.91
4				Labour Cess	s @1%	194.93
		The state of the s		Total OH A	mount	2360.84
То	tal Cost for	30 Nos.	design in	production of the	- policiti	19,688.10
	All olio	ANTE CONTRACTOR	Iten	n Rate Per	No.	656.27

Rate in Rate in DSR MORTH 561.30 548.70

### 6 PVC Traffic Cones (600 mm height):

Supply of PVC Traffic Cones of 600 mm height and 3 kg weight with square base and 2 strips of 10 mm wide reflective sheets around the cone.

S.No.	Resource Code	Resource	Quantity	Rate	Unit	Amount
Materia	Group					
1		PVC Traffice Cones	50.00	525,00	No.	26250.00
			Total	Resource A	mount	26,250.00
Over H	eads		161			
		Contractor	's Profit Including	Over Head @	012.5%	3281.25
				Labour Cess	5 @1%	295.31
				Total OH A	mount	3576.56
То	tal Cost for	50 Nos.			East t	29,826.56
			Ite	m Rate Per	No	596.53

Rate in Rate in DSR MORTH NA NA

## 7 PVC Traffic Cones (750 mm height):

Supply of PVC Traffic Cones of 750 mm height and 3,5 kg weight with square base and 3 strips of 10 mm wide reflective sheets around the cone.

S.No.	Resource Code	Resource	Quantity	Rate	Unit	Amount
Materia	Group					
- 1		PVC Traffice Cones	50.00	615.00	No.	30750.00
			Total	Resource A	mount	30,750.00
Over H	eads			100		
N. Y		Contractor	s Profit Including (	Over Head @	012.5%	3843.75
				Labour Ces	s @1%	345.94
		A)		Total OH A	mount	4189.69
То	tal Cost for	50 Nos.				34,939.69
			Iten	n Rate Per	No	698.79

Rate in Rate in DSR MORTH NA NA

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## PVC Traffic Cones (900 mm height):

Supply of PVC Traffic Cones of 900 mm height and 4.0 kg weight with square base and 3 strips of 10 mm wide reflective sheets around the cone.

S.No .	Resource Code	Resource	Quantity	Rate	Unit	Amount
Material	Group		The state of the s			
1	2285	PVC Traffice Cones	50.00	660.00	No.	33000.00
			Total F	Resource A	mount	33,000.00
Over H	eads					
		Contractor's	Profit Including C	over Head @	012.5%	4125.00
				Labour Cess	@1%	371.25
				Total OH A	mount	4496.25
To	tal Cost for	50 Nos.				37,496.25

Item Rate Per No.

Rate in Rate in DSR MORTH NA 223.00

749.93

9 Hot Applied Thermoplastic Compound:

Providing and laying of Hot Applied Thermoplastic Compound of IS1 Mark Approved Quality of 2.5 mm thickness including reflectorising glass beads @ 250 gms per sqm area, as per IRC:35. The finished surface to be level, uniform and free from streaks and holes.

S.No.	Resource Code	Resource	Quantity	Rate	Unit	Amount
Labour						
1	PL14	Mate	1.00	283.25	day	283.25
2	PI15	Beldar/mazdoor (unskilled)	2.00	257.50	day	515.00
3	PI17	Beldar/mazdoor (skilled)	2.00	370.80	day	741.60
Machine	e Group					
1	PMC065	Road Marking Machine	10.00	80.00	Hours	800.00
2	PMC074	Tractor	0.50	345.00	Hours	172.50
Materia	Group					
1	Pm0246	Hot Applied Thermoplastic Compound	1500.00	190.00	Litre	285000.00
12	PM0272	Reflectorising Glass Beads	150.00	80.00	Kg.	12000.00
		Zalijuvšija (igifalbija, i	Total	Resource A	mount	299,512.35
Over H	eads					
	Hoselin II	Contractor's P	rofit Including	Over Head @	012.5%	37439.04
			- UEOL I	Labour Cess		3369.51
				Total OH A	mount	40808.56
То	tal Cost for	600 Sqm.	Nach Land		-	340,320.91
			Ite	m Rate Per	Sam.	567.20

Rate in Rate in DSR MORTH 486.35 680.70

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### Median Markers:

Supply and fixing of Median markers made of tough high impact resistance injection moulded thermoplastic body having isosceles trapezoidal shape with dimensions not less than 120 mm X 100 mm X 100 mm and thickness not less than 18 mm. The marker must have fluoroscent yellow colour Type XI retroreflective sheeting (with a warranty of 10 years by the original sheeting manufacturer) fixed on both sides with size not less than 85 mm X 85 mm fixed with epoxy adhesive and grouting to the surface complete in all respect as per IRC accreditation and the direction of Engineer in Charge.

S.No.	Resource Code	Resource	Quantity	Rate	Unit	Amount
Labour						
1	PI14	Mate	1.00	283.25	day	283.25
2	PL15	Beldar/mazdoor (unskilled)	2.00	257.50	day	515.00
Machine	e Group					
1	146	Drilling Machine	8.00	50.00	Hour	400.00
2	PMC095	Generator 33 KVA	8.00	350.00	Hour	2800.00
Materia	Group		The second			
1	PM2268	Adhesive	3.18	1575.00	Kg.	5008.50
2	PM2266	Median Marker	100.00	275.00	No.	27500.00
			Total	Resource A	mount	36,506.75
Over H	leads					
		Contractor's P	rofit Including			4563.34
				Labour Cess	s @1%	410.70
				Total OH A	mount	4974.04
To	tal Cost for	100 No.		0		41,480.79
			Iter	n Rate Per	No.	414.81

Rate in Rate in DSR MORTH

## 11 AFP (Aluminum-backed flexible prismatic sheeting) Hazard Marker:

Providing and fixing Aluminum-backed flexible prismatic sheeting consisting of Yellow colored flexible prismatic sheeting with non-metallic prismatic lens as retro reflective elements and conforming to ASTM D 4956-09 Type VI specification values for reboundable sheeting. AFP sheeting shall be of 1ft width and laminated at the back with a 50 micron thick Aluminum (AI) foil with pressure sensitive adhesive and liner. AFP sheeting shall have screen printed arrow/slant line pattern in black color on top & shall not crack when tested for flexibility as per section S2.2.2 of ASTM D 4956-09. The AFP sheeting shall be applied with a neoprene contact adhesive with Polychloroprene as base & the edges of the product shall be sealed all around with a two-part epoxy based structural adhesive and shall be extremely resistant to peel-off & product specification shall confirm to IRC Accreditation.

S.No.	Resource Code	Resource	Quantity	Rate	Unit	Amount
Labour	Group					
1	PI14	Mate	0.20	283.25	day	56.65
2	PL15	Beldar/mazdoor (unskilled)	5.00	257.50	day	1287.50
Materia	l Group					
1	PM2269	Aluminium- backed flexible prismatic (AFP) sheeting	1.00	67320.00	Roll	67320.00
			Total	Resource A	mount	68,664.15
Over H	leads					
		Contractor's Pr	ofit Including	Over Head @	012.5%	8583.02
7				Labour Ces	s @1%	772.47
				Total OH A	mount	9355.49
To	tal Cost for	1 Roll = 145 sq ft.				78,019.64
			Ite	m Rate Per	sq ft.	538.07
		a seek to the seek	Ite	em Rate Per	sq m	5789.60

Rate in Rate in DSR MORTH NA NA

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SE, NY 10th Circle

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## Analysis for Rate of Hot applied thermoplastic compound

Assuming consumption = 5 kg / sqm (inc. 5 % wastage)

So for 600 sq.m area weight of compound required = 5 X 600 kg = 3000 kg

As per MORTH

600 sq.m area requires = 1500 litres of thermoplastic paint

ie. 1500 litres = 3000 kg of compound

1 litre = 3000/1500 kg = 2 kg / litre

Rate as quoted per kg = 95
So Rate per litre of thermoplastic paint = 95 X 2
= 190 / litre

In AE

2 EE

SE, NH 10th Wirde TSE gm circle

C'S Most