

# TECHNICAL REPORT

NAME OF WORK:-

Construction of B/T Road Manadar to Rowara via Rowara ghata Km 5/500 to 11/500

Adm. & Financial :-

Necessity of Project :-

At present road between 5/500 to 9/500 is badly damaged track & ghat section. Villagers and traffic are facing problems and inconvenience to travel through this short distance road.

Scope of Project :-

It is proposed to 20 MM PMC & Seal Coat Type "B", WBM & CD work taken as require in road.

Specification:-

1. Site clearance in both side of road in 3.0m width
2. Rock cutting proposed to achieve desired grade, GSB 150mm, WBM (G2+G3) Proposed on road.
3. 20mm PMC & Type "B" seal Coat.
4. GSB Shoulder both side 150 MM thick & 1.875 M & 1.0M Width.
5. 150 mm thick PCC M10, RR Masonary 1:4, M-30 controlled CC and NP-4 RRC hume pipe for adequate cross drainage.
6. Actual quantity of rock cutting worked out after detail survey report. <sup>will be</sup> <sub>Sometra</sub>

Rates

:- Rates based on BSR for road of BSR of roads PWD. Circle Sirohi wef 1 st april 2016.

Agency

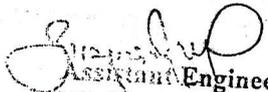
:- The work shall be got executed after sanction & calling competitive tenders.

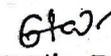
Index Map

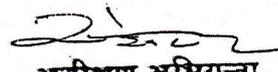
:- Enclosed.

Estimated cost

:- The project cost of the above work comes to Rs 334.00 Lacs

  
Assistant Engineer  
PWD Sub-Div. Sheoganj

  
Executive Engineer  
PWD Div. Sirohi

  
अधीक्षण अभियन्ता  
सा नि वि वृत्त सिरोही

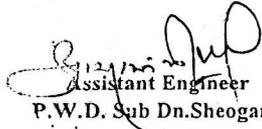
GENERAL ABSTRACT

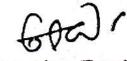
Name of Work :- Construction of B/T Road Manadar to Rowara  
via Rowara ghata Km 5/500 to 11/500

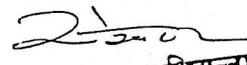
Sl.No.	Part	Particulars	Amount
1	2	3	4
	Part -A	Road Work	15753737.00
	Part -B	CD & Protection Work	12666905.00
		<b>Total Rs.</b>	<b>28420642</b>
		Add 3% for Contingency	852619
		Add 1% for QC	284206
		<b>Total Rs.</b>	<b>29557468</b>
		Add 13% for Prorata Charges	3842471
		<b>Total Rs.</b>	<b>33399938</b>

Say in Lacs

334.00

  
Assistant Engineer  
P.W.D. Sub Dn. Sheoganj

  
Executive Engineer  
P W D Dn. Sirohi

  
अधीक्षण अभियन्ता  
सा नि वि वृत सिरौही

PART 'A' Road Work

Name of Work :- Construction of B/T Road Manadar to Rowara via Rowara ghata Km 5/500 to 11/500

S. No	Item	Qty.	Rate	Unit	Amount
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth upto 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material upto a lead of 1000m including removal and disposal of top organic soil not exceeding in 150 mm thickness as per MORTH specification clause 201 By mechanical Means .A. In area of light jungle	2.58	11789.80	Hect.	30418.00
2	Earth work in excavation, including stacking/disposal of surplus material with all lifts and lead upto 495 metres, exclusive of compensation of earth [MoRTH specification : Clause 301 to 305] In Hard Soil When excavation and loading is done mechanically using Bull Dozar, F.E.Loader and carriage is done by tipper/dumper (6T capacity).	5912.00	96.00	Cum	567552.00
3	Extra for laying earth as per specification for compaction in 200 mm thick loose layers and dressing [MoRTH Specification Clause 305.3.5]. BY MECHANICAL MEANS, using Motor Grader, from earth in stock piles with all lead and lift but excluding rolling and watering.	5912.00	20.00	Cum	118240.00
4	Extra for watering the earth to bring the earth upto required O.M.C excluding rolling & Extra for rolling to specification with Power Roller, 8-10 tonne when earth is at suitable moisture content with dry field density not less than 100 % of maximum dry density (Ordinary Procter test).excluding watering.	5912.00	34.00	Cum	201008.00
5	Earth work in excavation, including stacking/disposal of surplus material with all lifts and lead upto 495 metres, exclusive of compensation of earth [MoRTH specification : Clause 301 to 305] Blasting, including Blasting materials.				
A	Soft Rock, with lead upto 50m. and lift upto 0.5m.	6723.75	119.60	Cum	804161.00
B	Hard rock, with lead upto 50m, and lift upto 0.5m	15688.75	243.80	Cum	3824917.00

S. No	Description	Qty.	Rate	Unit	Amount
6	Providing and laying granular sub-base material having P.I. not more than 6, including spreading in layers not exceeding 150 mm compacted thickness and consolidation by 8-10 tonne power roller to required camber and grade including cost of water and hire charges of machinery, including T&P with all lead (Compacted thickness to be measured) as per MORTH specification table 400-1, 400-2 :For grading-III with CBR value not less than 20. to attain 100% proctor density.	5772.23	273.00	Cum	1575817.00
7	Providing, laying, spreading and compacting stone aggregate of specific as per table 400-7 to Water Bound Macadam specification including spreading in uniform thickness, hand packing roll-ing with vibratory roller in stages to proper grade and camber, applying and brooming requisite type of screening and binding materials to fill-up the interstices of coarse aggregates watering (with water browser) and rolling making necessary earthen bund to protect edges, lighting, guarding, barricading and maintenance of diversion etc. [MORTH specification : Clause 404] ( By manual means). Grading II , 63 mm to 45 mm @ 0.91 cum per 10 Sqm for compacted thickness of 75 mm. (Crusher broken) screening type 'B'	1865.36	1021.00	Cum	1904535.00
8	Providing, laying, spreading and compacting stone aggregate of specific as per table 400-7 to Water Bound Macadam specification including spreading in uniform thickness, hand packing roll-ing with vibratory roller in stages to proper grade and camber, applying and brooming requisite type of screening and binding materials to fill-up the interstices of coarse aggregates watering (with water browser) and rolling making necessary earthen bund to protect edges, lighting, guarding, barricading and maintenance of diversion etc. [MORTH specification : Clause 404] ( By manual means). Grading III, 53 mm to 22.4 mm, @ 0.91 cum per 10 Sqm for compacted thickness of 75 mm. (Crusher broken) screening type 'B'	2149.43	1039.00	Cum	2233253.00
9	Providing and applying primer coat over prepared surface or granular base with bitumen emulsion as per IS: 8887 & manufacturer's specifications @ 6 kg /10 sqm with a self propelled or towed bitumen pressure sprayer equipped for spraying the material uniformly at specified rates and temperatures as per MORTH specification CI 502,112 ( Including cleaning of road surface )	28659.00	20.00	Sqm	573180.00
10	Add extra to item No. 8 for additional 0.1 Kg per Sqm emulsion	28659.00	3.84	Sqm	110051.00

S. No	Item	Qty.	Rate	Unit	Amount
11	Providing and applying tack coat on the prepared surface with bitumen emulsion as per IS : 8887 & manufacturer's specifications @ 2 kg /10sqm. With a self propelled or towed bitumen pressure sprayer equipped for spraying the material uniformly at specified rates and temperatures as per MORTH specification CI.503,112 ( Including cleaning of Road Surface )	28659.00	7.00	Sqm	200613.00
12	Add extra to item No. 10 for additional 0.1Kg per Sqm emulsion	28659.00	4.61	Sqm	132118.00
13	Providing and laying open graded premix carpet 20mm thick (compacted) on prepared surface in a single course as wearing course aggregates as per Table 500-23, heating bituminous binder @ 14.6 Kg/10 Sqm.(VG-10 grade) and aggregates in Hot Mix Plant, transporting the mixed material with tipper and laying with paver finisher to the required level and grade, rolling with power roller, 8-10 tonne but excluding cost of tack and seal coat with lead for mix of material 1 Km.[MORTH Specification : Clause 511,112] In approved Hot Mix Plant as per clause 6.5 of Manual, including loading of aggregates with F.E loader with bitumen VG-10.	28659.00	77.00	Sqm	2206743.00
14	Providing and laying seal coat for sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall, including rolling with a smooth wheeled roller 8 - 10 tonne capacity finished to required level and grades, complete as per MORTH specification clause 513 Laying by Mechanical Means Type B - Premixed in in approved HMP as per clause 6.5 of manual having capacity 50 TPH comprising of aggregate (sand or grit) having size 2.36 mm to 180 micron @ 0.06 Cum per 10 Sqm and bitumen binder (VG-10 grade) @ 6.8 Kg / 10 sqm and laying by hydrostatic paver finisher with sensor control, including mixing, transportation, laying, rolling etc. complete - including carriage for 1 Km. lead.	28659.00	38.00	Sqm	1089042.00
15	Extra rate for carriage of mixed material additional lead from :- 2nd km to 10th km	1490.27	21.54	Tonne	32100.00
16	Supply & Instalation of sign boards made of 1.25mm M.S. sheet duly framed with 33.30mm OD MS black tube medium class as per IS:1239 (Part-I) 1979 with a inner support of M.S. flat 12x3mm whole structure is fixed on two posts of Black m.S. tube 42mm OD MS (Medium Class)as per IS : 1239 9Part-I) 1979 height 3 m. whole board is stove enamelled painting in Black & White alternate band of synthetic enamel. 120 cm. x 75 cm.	6.00	2730.00	Each	16380.00

S. No	Description	Qty.	Rate	Unit	Amount
17	Providing and fixing of retro- reflectorised inclusive cautionary, mandatory and informatory sign as per IRC-67 made of high intensity grade sheeting lettering, border & signs fixed over aluminium sheeting, 1.5 mm thick, fixed on mild steel angle iron frame 50mmx50mmx6mm supported on a mild steel angle iron post 75mmx75mmx6mm upto the top of sign board, length of post from bottom of sign board is 2.85m. upto foundation level post duly painted in black & white synthetic enamel. fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 45 Cm x 45 Cm x 60Cm, 60 cm below ground level as per approved drawing & as per MORTH specification Cl. 801. 90 Cm equilateral triangle	30.00	3848.00	Each	115440.00
18	Supply & fixing of precast reinforced cement concrete M-15 grade kilometre stone of standard design as per IRC: 8-1980, fixing in position in cement concrete 1:4:8 including painting and printing etc. Ordinary kilometre stone	7.00	1151.15	Each	8058.00
19	Supply & fixing of precast reinforced cement concrete M-15 grade kilometre stone of standard design as per IRC: 8-1980, fixing in position in cement concrete 1:4:8 including painting and printing etc. 200m stone	28.00	361.10	Each	10111.00
<b>TOTAL</b>				Rs.	<b>15753737.00</b>

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Assistant Engineer  
P W D Sub. Dn. Sheoganj

*GAJR*  
Executive Engineer  
P W D Dn. Sirohi

**PART 'A' Road Work  
Dtails**

Name of Work :- Construction of B/T Road Manadar to Rowara via Rowara ghata Km 5/500 to 11/500

S. No	Item	No	L	B	H	Qty	Unit
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth upto 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material upto a lead of 1000m including removal and disposal of top organic soil not exceeding in 150 mm thickness as per MORTH specification clause 201 By mechanical Means .A. In area of light jungle						
	Km 5/500 to9/500	2	4000.00	1.50		12000.00	Sqm
	Km 9/500 to 11/500	2	2300.00	3.00		13800.00	Sqm
						25800.00	Sqm
						2.58	Hact
2	Earth work in excavation, including stacking/disposal of surplus material with all lifts and lead upto 495 metres, exclusive of compensation of earth [MORTH specification : Clause 301 to 305] In Hard Soil When excavation and loading is done mechanically using Bull Dozer, F.E.Loader and carriage is done by tipper/dumper (6T capacity).						
	Km 7/500 to 9/500( Plane part)	1	2000.00	7.50	0.25	3750.00	Cum
	Shoulder 9/500 to 11/500 Damaged BT	2	2300.00	1.88	0.25	2162.00	Cum
	<b>Total</b>					5912.00	Cum
3	Extra for laying earth as per specification for compaction in 200 mm thick loose layers and dressing [MORTH Specification Clause 305.3.5]. BY MECHANICAL MEANS, using Motor Grader, from earth in stock piles with all lead and lift but excluding rolling and watering.						
	Qty same as above Item No 2					5912.00	Cum
	<b>Total</b>					5912.00	Cum
4	Extra for watering the earth to bring the earth upto required O.M.C excluding rolling & Extra for rolling to specification with Power Roller, 8-10 tonne when earth is at suitable moisture content with dry field density not less than 100 % of maximum dry density (Ordinary Procter test).excluding watering.						
	Qty same as above Item No 2					5912.00	Cum
	<b>Total</b>					5912.00	Cum
5	Earth work in excavation, including stacking/disposal of surplus material with all lifts and lead upto 495 metres, exclusive of compensation of earth [MORTH specification : Clause 301 to 305] Blasting, including Blasting materials.						
	KM 5/500 to7/500 (Ghat section)	1	1000.00	3.75	1.50	5625.00	Cum
	Shoulder	1	1000.00	3.75	1.65	6187.50	Cum
	Shoulder	2	2000.00	1.00	1.80	7200.00	Cum
	Widening at Top	2	100.00	2.00	4.00	1600.00	Cum

S. No	Item	No	L	B	H	Qty	Unit
	Widening Manadar side						
	<b>Total</b>	2	200.00	1.50	3.00	1800.00	Cum
(A)	Soft Rock, with lead upto 50m. and lift upto 0.5m.					22412.50	Cum
(B)	Hard rock, with lead upto 50m, and lift upto 0.5m				0.30	6723.75	Cum
6	Providing and laying granular sub-base material having P.I. not more than 6, including spreading in layers not exceeding 150 mm compacted thickness and consolidation by 8-10 tonne power roller to required camber and grade including cost of water and hire charges of machinery, including T&P with all lead (Compacted thickness to be measured), as per MORTH specification table 400-1, 400-2 : For grading-III with CBR value not less than 20. to attain 100% proctor density.				0.70	15688.75	Cum
	KM 5/500 to 9/500						
	Shoulder	1	4000.00	4.05	0.15	2430.00	
	Shoulder Km 9/500 to 11/500	2	4000.00	1.00	0.15	1200.00	
	Plan part	2	2300.00	1.88	0.15	1297.20	
	Approaches of CD 2X10X 15 =300 M( 3.75+6.6/2=5.175)	2	550.00	1.88	0.15	310.20	
	At curve	20	15.00	5.18	0.15	232.88	
	New PC	20	15.00	2.75	0.15	123.75	
	<b>Total</b>	6	15.00	6.60	0.30	178.20	
7	Providing, laying, spreading and compacting stone aggregate of specific as per table 400-7 to Water Bound Macadam specification including spreading in uniform thickness, hand packing roll-ing with vibratory roller in stages to proper grade and camber, applying and brooming requisite type of screening and binding materials to fill-up the interstices of coarse aggregates watering (with water browser) and rolling making necessary earthen bund to protect edegs, lighting, guarding, barricading and maintenance of diversion etc. [MORTH specification : Clause 404] ( By manual means). Grading II , 63 mm to 45 mm @ 0.91 cum per 10 Sqm for compacted thickness of 75 mm. (Crusher broken) screening type 'B'					5772.23	Cum
	KM 5/500 to 9/500	1	4000.00	3.75	0.075	1125.00	
	KM 9/500 to 11/500	0.80	2300.00	3.75	0.075	517.50	
	Approaches of CD 2X10X 15 =300 M( 3.75+6.6/2=5.175)	20	15.00	5.18	0.075	116.44	
	At curve	20	15.00	2.75	0.075	61.88	
	New PC	6	15.00	6.60	0.075	44.55	
	<b>Total</b>					1865.36	Cum

S. No	Item						
8	Providing, laying, spreading and compacting stone aggregate of specific as per table 400-7 to Water Bound Macadam specification including spreading in uniform thickness, hand packing roll-ing with vibratory roller in stages to proper grade and camber, applying and brooming requisite type of screening and binding materials to fill-up the interstices of coarse aggregates watering (with water browser) and rolling making necessary earthen bund to protect edegs, lighting, guarding, barricading and maintenance of diversion etc. [MoRTH specification : Clause 404] ( By manual means), Grading III, 53 mm to 22.4 mm, @ 0.91 cum per 10 Sqm for compacted thickness of 75 mm. (Crusher broken) screening type 'B'						
	KM 5/500 to 9/500	1	4000.00	3.75	0.075	1125.00	
	KM 9/500 to 11/500	1	2300.00	3.75	0.075	646.88	
	Plan part	1	550.00	3.75	0.075	154.69	
	Approaches of CD 2X10X 15 =300 M( 3.75+6.6/2=5.175)	20	15.00	5.18	0.075	116.44	
	At curve	20	15.00	2.75	0.075	61.88	
	New PC	6	15.00	6.60	0.075	44.55	
	<b>Total</b>					<b>2149.43</b>	<b>Cum</b>
9	Providing and applying primer coat over prepared surface or granular base with bitumen emulsion as per IS: 8887 & manufacturer's specifications @ 6 kg /10 sqm with a self propelled of towed bitumen pressure sprayer equipped for spraying the material uniformly at specified rates and temperatures as per MORTH specification CI 502,112 ( Including cleaning of road surface )						
	KM 5/500 to 9/500	1	4000.00	3.75		15000.00	
	KM 9/500 to 11/500	1	2300.00	3.75		8625.00	
	Plan part	1	550.00	3.75		2062.50	
	Approaches of CD 2X10X 15 =300 M( 3.75+6.6/2=5.175)	20	15.00	5.18		1552.50	
	At curve	20	15.00	2.75		825.00	
	New PC	6	15.00	6.60		594.00	Sqm
	<b>Total</b>					<b>28659.00</b>	<b>Sqm</b>

S. No	Item	No	L	B	H	Qty	Unit
10	Add extra to item No. 8.1 for additional 0.1Kg per Sqm emulsion						
	<b>Total</b>					28659.00	Sqm
11	Providing and applying tack coat on the prepared surface with bitumen emulsion as per IS : 8887 & manufacturer's specifications @ 2 kg /10sqm. With a self propelled or towed bitumen pressure sprayer equipped for spraying the material uniformly at specified rates and temperatures as per MORTH specification CI.503,112 ( Including cleaning of Road Surface )					28659.00	Sqm
	Qty same as Item 8						
12	Add extra to item No. 6.2 for additional 0.1Kg per Sqm emulsion					28659.00	Sqm
	<b>Total</b>					28659.00	Sqm
13	Providing and laying open graded premix carpet 20mm thick (compacted) on prepared surface in a single course as wearing course aggregates as per Table 500-23, heating bituminous binder @ 14.6 Kg/10 Sqm.(VG-10 grade) and aggregates in Hot Mix Plant, transporting the mixed material with tipper and laying with paver finisher to the required level and grade, rolling with power roller, 8-10 tonne but excluding cost of tack and seal coat with lead for mix of material 1 Km.[MORTH Specification : Clause 511,112] In approved Hot Mix Plant as per clause 6.5 of Manual, including loading of aggregates with F.E loader with bitumen VG-10.					28659.00	Sqm
	Qty same as Item 8						
	<b>Total</b>					28659.00	Sqm
14	Providing and laying seal coat for sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall, including rolling with a smooth wheeled roller 8 - 10 tonne capacity finished to required level and grades, complete as per MORTH specification clause 513 Laying by Mechanical Means Type B - Premixed in approved HMP as per clause 6.5 of manual having capacity 50 TPH comprising of aggregate (sand or grit) having size 2.36 mm to 180 micron @ 0.06 CLM per 10 Sqm and bitumen binder (VG-10 grade) @ 6.8 Kg / 10 sqm and laying by hydrostatic paver finisher with sensor control, including mixing, transportation, laying, rolling etc. complete - including carriage for 1 Km. lead.					28659.00	Sqm
	Qty same as Item 8						
15	Extra rate for carriage of mixed material additional lead from :- 2nd km to 10th km (7.0 KM )	1	28659.0	0.026	2.0	28659.00	Sqm
						1490.27	Tonne

S. No	Item	No	L	B	H	Qty	Unit
16	Supply of sign boards made of 1.25mm M.S. sheet duly framed with 33.30mm OD MS black tube medium class as per IS:1239 (Part-I) 1979 with a inner support of M.S. flat 12x3mm whole structure is fixed on two posts of Black m.S. tube 42mm OD MS (Medium Class) as per IS : 1239 9Part-I) 1979 height 3 m. whole board is stove enamelled painting in Black & White alternate band of synthetic enamel. 120 cm. x 75 cm.	6				6.00	Each
17	Providing and fixing of retro- reflectorised inclusive cautionary, mandatory and informatory sign as per IRC-67 made of high intensity grade sheeting lettering, border & signs fixed over aluminium sheeting, 1.5 mm thick, fixed on mild steel angle iron frame 50mmx50mmx6mm supported on a mild steel angle iron post 75mmx75mmx6mm upto the top of sign board, length of post from bottom of sign board is 2.85m. upto foundation level post duly painted in black & white synthetic enamel. fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 45 Cm x 45 Cm x 60Cm, 60 cm below ground level as per approved drawing & as per MORTH specification Cl. 801. 90 Cm equilateral triangle	30				30.00	Each
18	Supply & fixing of precast reinforced cement concrete M-15 grade kilometre stone of standard design as per IRC: 8-1980, fixing in position in cement concrete 1:4:8 including painting and printing etc. Ordinary kilometre stone	7				7.00	Each
19	Supply & fixing of precast reinforced cement concrete M-15 grade kilometre stone of standard design as per IRC: 8-1980, fixing in position in cement concrete 1:4:8 including painting and printing etc. 200m stone	28				28.00	Each

*[Handwritten Signature]*  
 08

Assistant Engineer  
 P W D Sub. Dn. Sheoganj

*[Handwritten Signature]*  
 Executive Engineer  
 P W D Dn. Sirohi

## Abstract

## PART 'B' CD &amp; Protection Work

Name of Work :- Construction of B/T Road Manadar to Rowara via Rowara ghata Km  
5/500 to 11/500

S. No	Item	Qty.	Rate	Unit	Amount
1	Earth work in excavation for foundation of structure complete with all lift, dewatering shoring and shuttering etc.including refilling of trenches in 25.mm layers, ramming, watering and disposal of surplus soil within a lead of 1000 metres, as per drawing and technical specification.[MoRTH Specification : Clause : 304] In Ordinary/Soft rock [MoRTH Specification: Clause : 301 ]In hard rock (requiring blasting) [MoRTH Specification : Clause :301,302]	3474.75	399.05	Cum	1386599.00
2	Providing and laying mechanically mixed and vibrated Cement Concrete in foundation upto a depth of 1.5 metres below ground level and 1.50 metres above Ground/Bed level.[MoRTH Specification : Clause 1000/1700] Cement concrete 1:3:6 mix with stone aggregate 40mm crusher broken.	462.60	3306.00	Cum	1529356.00
3	Providing and laying Random Rubble masonry in foundation upto a depth of 1.50 metres and 1.50 metres above Ground /Bed level.[MoRTH Specification: Clause 1000/1400] Cement sand mortar 1:4	2204.01	3406.30	Cum	7507519.00
4	Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub-base with 43 grade cement @ 400 Kg per cum , coarse and fine aggregate conforming to IS: 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per MoRTH specification clause 602.	90.00	5125.00	Cum	461250.00
5	Providing and laying reinforced cement concrete pipes N.P.4 for culverts including jointing ends and fixing collar with cement mortar 1:2 [MoRTH Specification : Clause : 1000/2900] 900 mm dia	150.00	4685.00	RM	702750.00

S. No	Item	Qty.	Rate	Unit	Amount
6	Providing and laying reinforced cement concrete pipes N.P.4 for culverts including jointing ends and fixing collar with cement mortar 1:2 [MoRTH Specification : Clause : 1000/2900] 600mm dia	75.00	2842.00	RM	213150.00
7	Providing and laying reinforced cement concrete pipes N.P.4 for culverts including jointing ends and fixing collar with cement mortar 1:2 [MoRTH Specification : Clause : 1000/2900] 300 mm dia	30.00	1069.50	RM	32085.00
8	Providing Cement plaster 12mm thick in cement mortar 1:3 at all levels [MoRTH Specification: Clause:1000/1300]	2681.10	159.00	Sqm	426295.00
9	Sand filling and compaction by mechanical means in foundation trenches, in 150mm layers, with all lead and lift, as per drawing and technical specification, to achieve field density. [MoRTH Specification : Clause : 304]	270.00	465.75	Cum	125753.00
10	Plain/reinforced cement concrete in substructure complete as per drawing and technical specifications MoRTH Section 1500,1700, 2200. PCC Grade M-20 Height upto 5.00m. *	74.15	3805.35	Cum	282148.00
			<b>TOTAL</b>	Rs.	<b>12666905.00</b>

*Prasad*  
TE

Assistant Engineer  
P W D Sub. Dn. Sheoganj

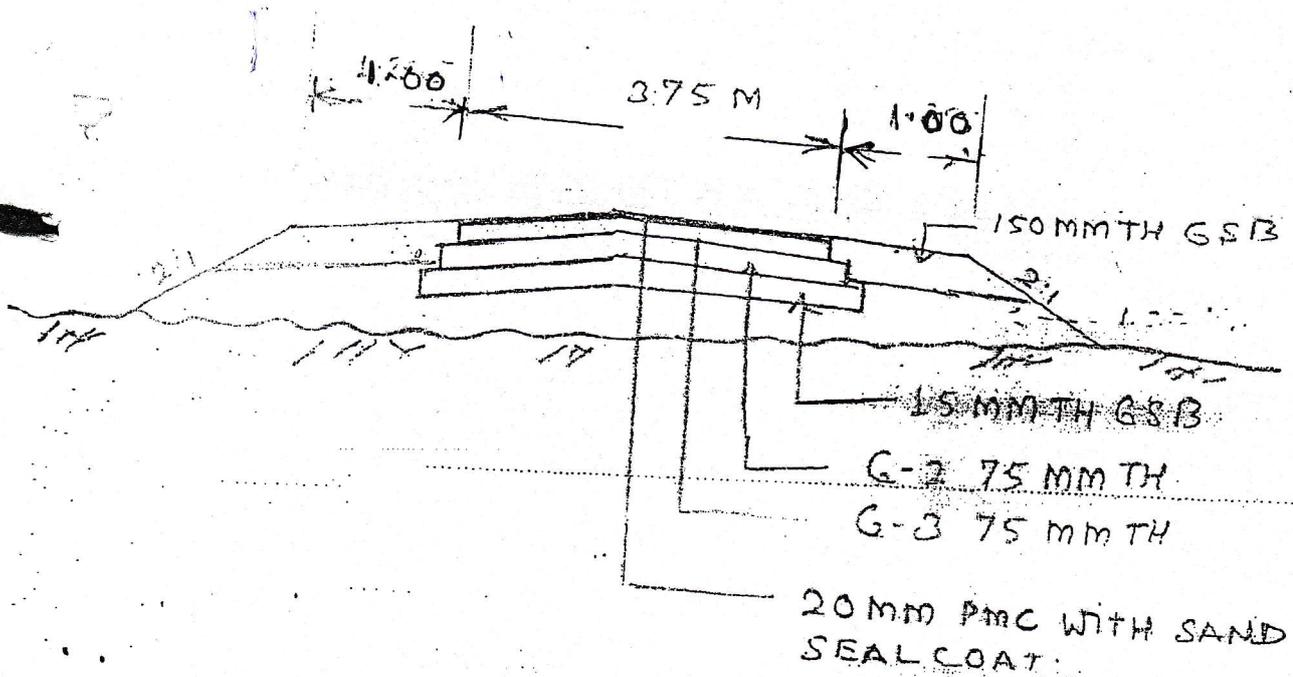
*GAJ*  
Executive Engineer  
P W D Dn. Sirohi

Details  
PART - 'B' CD & Protection Work

Name of Work :- Construction of B/T Road Manadar to Rowara via Rowara ghata Km 5/500 to 11/500

S. No	Item	No	L	B	H	Qty	Unit
1	Earth work in excavation for foundation of structure complete with all lift, dewatering shoring and shuttering etc.including refilling of trenches in 25.mm layers, ramming, watering and disposal of surplus soil within a lead of 1000 metres, as per drawing and technical specification.[MoRTH Specification : Clause : 304] In Ordinary/Soft rock [MoRTH Specification: Clause : 301 ]In hard rock (requiring blasting) [MoRTH Specification : Clause :301,302]						
	US PC	6	10.00	1.35	2.00	162.00	
	DS PC	6	10.00	1.35	2.00	162.00	
	Pipe Hoda	6	4.00	6.0	1.00	144.00	
	US FC	1	50.00	1.15	1.50	86.25	
	DS FC	1	50.00	1.35	1.80	121.50	
	P/Wall	1	1350.00	1.2	1.50	2430.00	
	Apron Wall	1	45.00	1.00	1.20	54.00	
	Drain	1	500.00	1.05	0.60	315.00	
	<b>Total</b>					3474.75	Cum
2	Providing and laying mechanically mixed and vibrated Cement Concrete in foundation upto a depth of 1.5 metres below ground level and 1.50 metres above Ground/Bed level.[MoRTH Specification : Clause 1000/1700] Cement concrete 1:3:6 mix with stone aggregate 40mm crusher broken.						
	Apron Wall	1	45.00	1.00	0.15	6.75	Cum
	Apron Under Floor	1	38.00	3.5	0.150	19.95	Cum
	US PC	6	10.00	1.35	0.15	12.15	Cum
	DS PC	6	10.00	1.35	0.15	12.15	Cum
	Pipe Base	6	4.00	6.0	0.15	21.60	Cum
	US FC	1	50.00	1.15	0.15	8.63	Cum
	DS FC	1	50.00	1.35	0.15	10.13	Cum
	Hoda FC	1	50.00	6.60	0.15	49.50	Cum
	P/Wall	1	1350.00	1.2	0.15	243.00	Cum
	Drain	1	500.00	1.05	0.15	78.75	Cum
	<b>Total</b>					462.60	Cum
3	Providing and laying Random Rubble masonry in foundation upto a depth of 1.50 metres and 1.50 metres above Grounc /Bed level.[MoRTH Specification: Clause 1000/1400] Cement sand mortar 1:4						
	Apron Wall	1	45.00	0.62	1.00	27.90	Cum
	US PC	6	10.00	0.8	2.20	105.60	Cum
	DS PC	6	10.00	0.8	2.20	105.60	Cum
	PC Parapet	6	3.00	0.5	0.60	4.86	Cum
	US FC	1	50.00	0.67	1.50	50.25	Cum
	DS FC	1	50.00	0.82	1.80	73.80	Cum
	P/Wall	1	1350.00	0.7	1.80	1701.00	Cum
	Drain	2	500.00	0.30	0.45	135.00	Cum
	<b>Total</b>					2204.01	Cum

Name of work: Construction of BT Road - Mandar to Povera  
Via Roore plots km 5/100 to 11/500



Typical cross section of road

*Drawn*  
12

*6/10*  
12

4	Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub-base with 43 grade cement @ 400 Kg per cum , coarse and fine aggregate conforming to IS: 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler,						
	FC	1	50.00	7.50	0.15	56.25	Cum
	PC	6	5.00	7.50	0.15	33.75	Cum
	<b>Total</b>					<b>90.00</b>	<b>Cum</b>
5	Providing and laying reinforced cement concrete pipes N.P.4 for culverts including jointing ends and fixing collar with cement mortar 1:2 [MoRTH Specification : Clause : 1000/2900] 900 mm dia						
		20	7.50			150.00	RM
6	Providing and laying reinforced cement concrete pipes N.P.4 for culverts including jointing ends and fixing collar with cement mortar 1:2 [MoRTH Specification : Clause : 1000/2900] 600mm dia						
		10	7.50			75.00	RM
7	Providing and laying reinforced cement concrete pipes N.P.4 for culverts including jointing ends and fixing collar with cement mortar 1:2 [MoRTH Specification : Clause : 1000/2900] 300 mm dia						
		4	7.50			30.00	RM
8	Providing Cement plaster 12mm thick in cement mortar 1:3 at all levels [MoRTH Specification: Clause:1000/1300]						
	Apron Wall	1	45.00	0.30		13.50	Sqm
	US PC	6	10.00	1.50		90.00	Sqm
	DS PC	6	10.00	1.50		90.00	Sqm
	PC Parapet	6	3.50	0.60		12.60	Sqm
	P/Wall	1	1350.00	1.50		2025.00	Sqm
	Drain	2	500.00	0.45		450.00	Sqm
	<b>Total</b>					<b>2681.10</b>	<b>Sqm</b>
9	Sand filling and compaction by mechanical means in foundation trenches, in 150mm layers, with all lead and fill, as per drawing and technical specification, to achieve field density. [MoRTH Specification : Clause : 304]						
	PC	6	5.00	6.00	1.50	270.00	Cum
10	Plain/reinforced cement concrete in substructure complete as per drawing and technical specifications MoRTH Section 1500,1700, 2200. PCC Grade M-20 Height upto 5.00m.						
	Apron Floor	1	38.00	3.90	0.10	14.82	Cum
	P/Wall Copping	1	1350.00	0.45	0.050	30.38	Cum
	PC Parapet/Wall	12	10.00	0.45	0.050	2.70	Cum
	Drain	2	500.00	0.30	0.05	15.00	Cum
	Drain	1	500.00	0.45	0.050	11.25	Cum
	<b>Total</b>					<b>74.15</b>	<b>Cum</b>

*[Signature]*  
P.D.

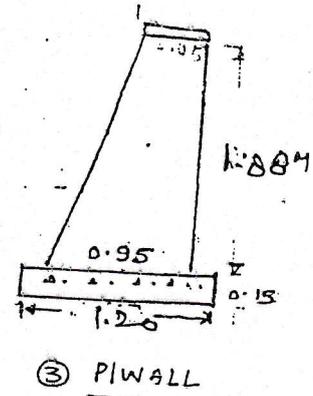
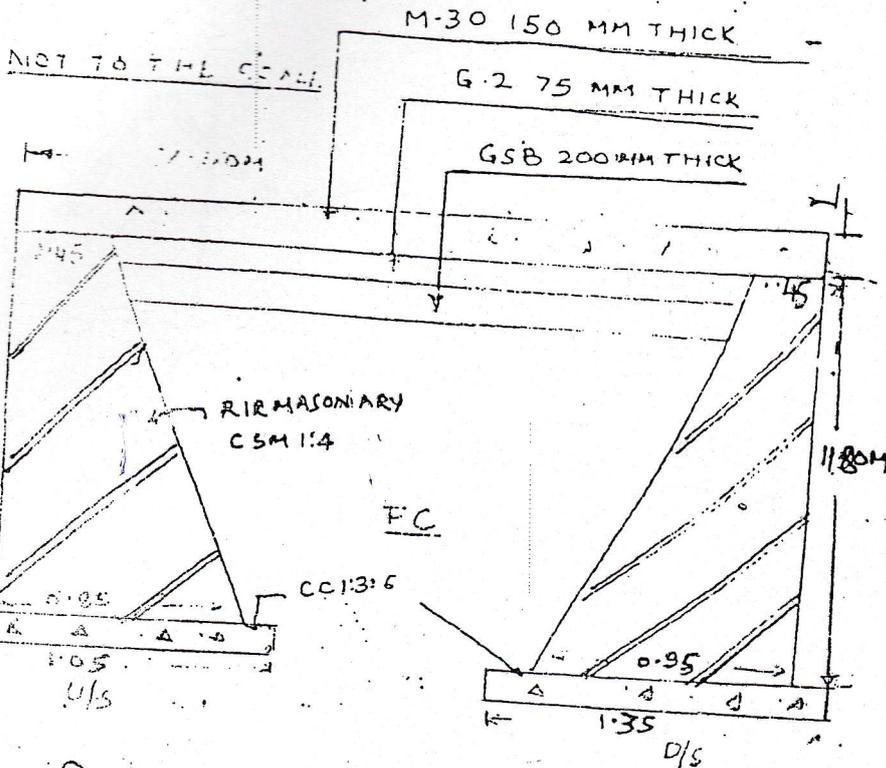
Assistant Engineer  
P W D Sub. Dn. Sheoganj

*[Signature]*  
Executive Engineer  
P W D Dn. Sirahi

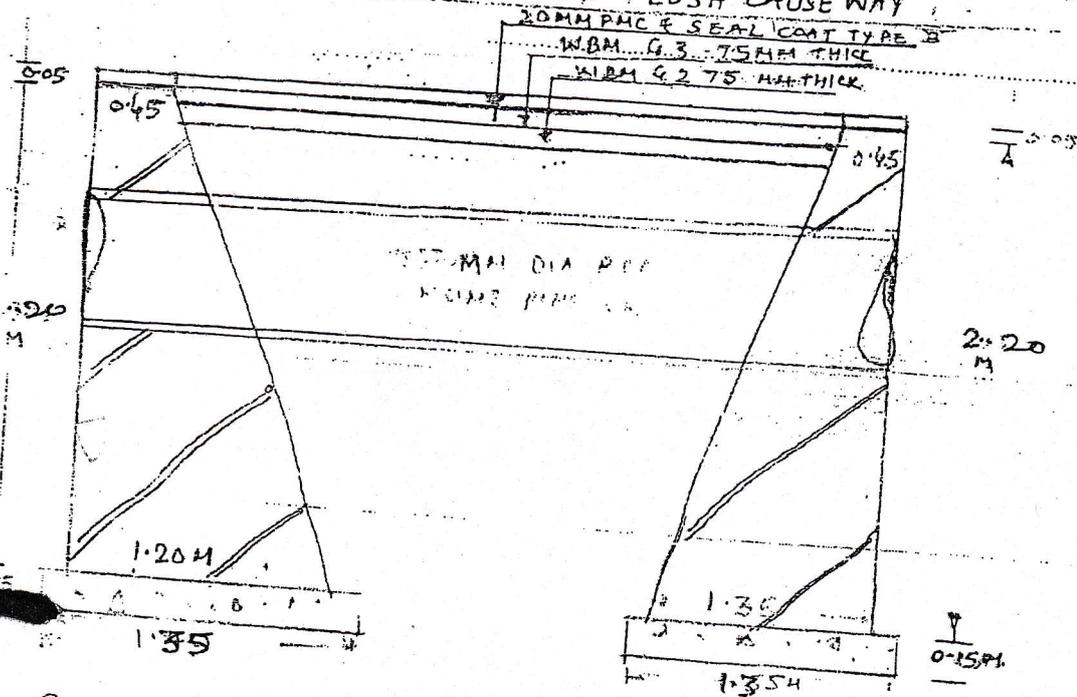
NAME OF WORK

Construction of

work from Rs 1500 to 11,000



① CROSS SECTION OF FLUSH CAUSEWAY



② CROSS SECTION OF PIPE CULVERT

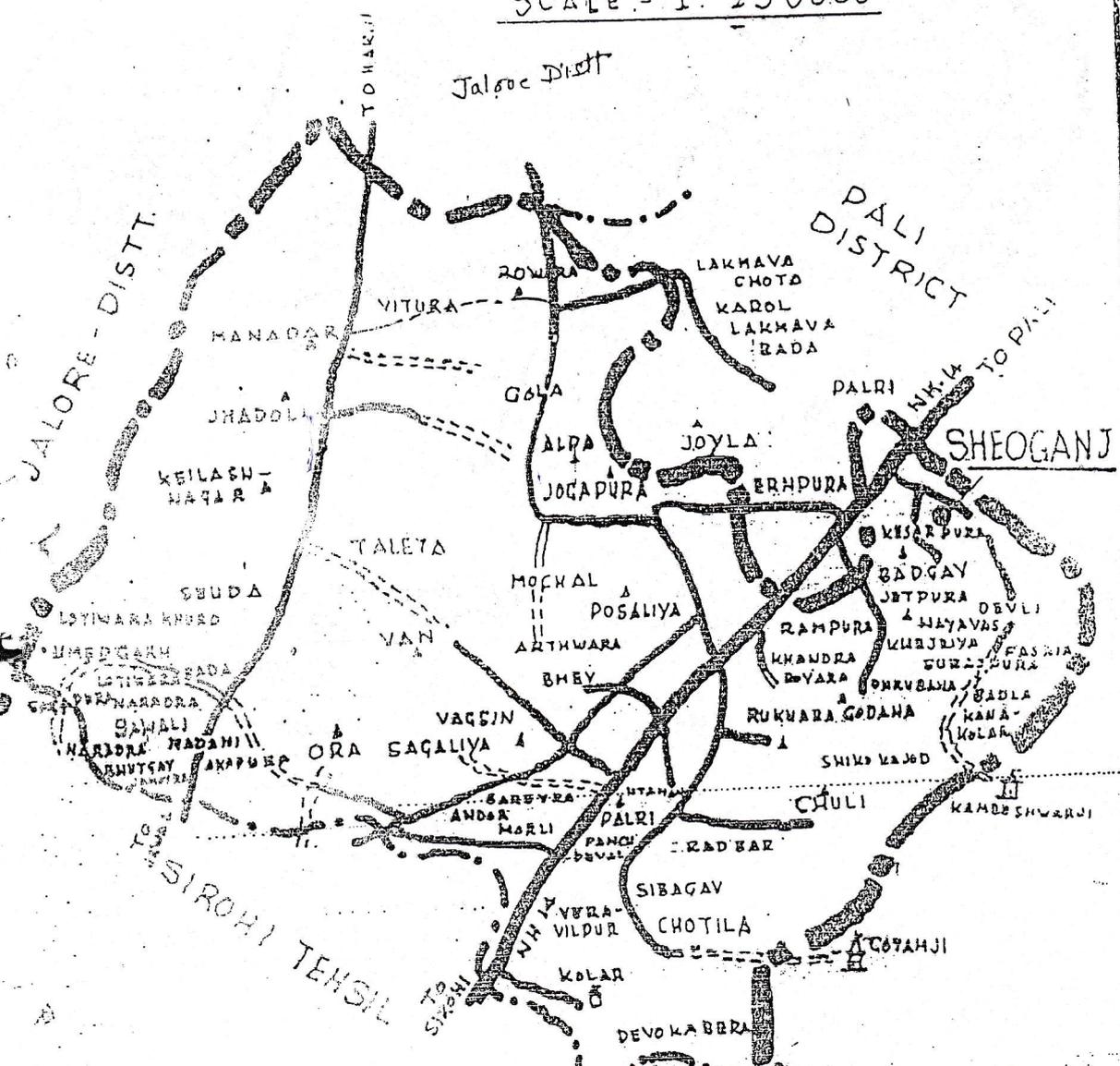
*[Signature]*  
 A.E.N.  
 PWD DN / SIROHI

*[Signature]*  
 EXECUTIVE ENGINEER  
 PWD DN / SIROHI

# ROAD MAP SHEOGANJ

Roads to Distt. Bardol. Jalore, Khandra

SCALE:- 1: 250000



REFERENCE:-

DISTRICT BOUNDARY	
TEHSIL BOUNDARY	
TEHSIL HEAD QUARTER	
BITUMINOUS ROADS	
METALLED ROADS	
GRAVEL ROADS	
FAIR WEATHER ROADS	

Proposed Road

EXECUTIVE ENGINEER  
P.W.D. DJ. SIROHI