

OFFICE OF THE ADDITIONAL CHIEF ENGINEER P.W.D. ZONE UDAIPUR

No. 2109

Dated: 12.09.18

The Superintending Engineer,
P.W.D. Circle,
Pratapgarh

**Sub:- Dhariyawad- Pratapgarh-Mandsour Road Km.58/0 to 59/0
and 76/0 to 98/0 (SHW-81).**

Sir,

The Estimate for Construction of above work for Rs. 3085.34 lacs submitted to this office for technical sanction.

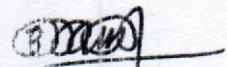
The Administrative & Financial Sanction for construction of above work accorded by The Chief Engineer (Road), PWD, Rajasthan Jaipur letter No. F7(35)A&F/SRF/Sec.-2/2018-19/D-446 dated 11.09.2018 for Rs. 3425.00 Lacs.

Technical sanction to the work for Rs. 2995.27 lacs is hereby accorded subject to the condition that the work should be done strictly as per PWD specifications and technical note for compliance.

The expenditure shall be chargeable to budget head 5054/03/337/07/90/74/GN, 5054/03/789/04/90/74/SC, 5054/03/796/04/90/74/ST and further expenditure should not exceed in any case on technical sanction and budget allotted for this work.

Encl.:- Estimate and Technical Note.

Yours faithfully



(D.R. Meghwal)

**ADDL. CHIEF ENGINEER
P. W. D. ZONE UDAIPUR**

TECHNICAL NOTE

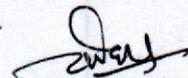
Name of Work	:- Dhariyawad- Pratapgarh-Mandsour Road Km.58/0 to 59/0 and 76/0 to 98/0 (SHW-81).
Ref of A&F	:- CE Road, PWD, Rajasthan Jaipur letter No. F7(35)A&F/SRF/Sec.-2/2018-19/D-446 dated 11.09.2018 for Rs. 3425.00 Lacs.
Job. No.	:- 106/5054/SRF/SH/2018-19.
Chargeable Head	:- 5054/03/337/07/90/74/GN , 5054/03/789/04/90/74/SC 5054/03/796/04/90/74/ST.
Estimated Cost	:- Rs. 3085.34 lacs.
Technical Sanction Cost :-	Rs. 2995.27 lacs

COMMENTS

Technical sanction to the above estimate is provisionally granted & following points are to be looked before execution of the work.

1. The work to be carried out strictly in accordance with the guidelines given by the PWD, MORTH, NRRDA and circular issued from time to time.
2. **Crust Thickness allowed provisionally which should be examined prior to execution of work after testing CBR & Bankle Beam test and traffic conditions. The design of CC pavement should be re examined before execution of work and got it approved from competent authority.**
3. In Absence of Proper design & Hydraulic Data the CD works incorporated in estimate is allowed provisionally. Work should be done as per the standard drawings of MoRTH or design should be done and got approved from Superintending Engineer.
4. Locations of the CD work & Protection Work proposed in the estimate should be again examined by the Executive Engineer according to the terrain of the ground before execution of the work & Design should be done and got approved from Superintending Engineer.
5. The certificate regarding correctness of rate & nomenclature has been given by the TA to SE as per circular, at the time of tender TA to SE should ensure that the rate and nomenclature are correct as per prevailing BSR.
6. Necessary machinery required for quality control should be deployed at site of work.
7. Proper quality control test as per norms should be conducted and should be linked with each running payment to the contractor.
8. Copy of the technically sanctioned estimate along with technical note and inspection book should be kept at work site. The Quantity of work should not be exceeded from technical sanction estimate.
9. Expenditure may be strictly restricted to Admn & financial sanction only including all centage charges.
10. Job mix design to be got approved from competent authority before execution of work.
11. The Thickness and grade of concrete used for CC Road allowed provisionally before execution of work design of thickness & grade of cement concrete be got done and get it approved from competent authorities.
12. Detail design of horizontal & vertical profile of the road alignment are not attached. During execution proper horizontal and vertical profile provided as per design data.
13. The quantity of earth work allowed provisionally before execution of work detail survey of the work should be done and get it approved from competent authority.
14. If in any scheme work done on above road after submitting the proposal than credit should be given to work.
15. The Existing Damaged CD work replaced by new CD work in estimate are allowed provisionally. Before execution of work the Suprintending Engineer should inspect the site and issued the certificate regarding damages of CD works and Const. of new CD works as per requirement of hydrolic data. If there is any Dismantalling work involved in the work the recovery of useful material should be done from contractor and credit be given to the work.

CBR should be checked by OC before execution.


(R.C. Mehta)

Executive Engineer
Cum T.A. to Addl. Chief Engineer
P.W.D. Zone Udaipur

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GOVERNMENT OF RAJASTHAN

PUBLIC WORKS DEPARTMENT

DETAILED ESTIMATE

Name of work Dhariyawad Pratapgarh Mandsaur Road Km 58/0 to 59/00 &
76/0 to 98/0 (SH-81)

Estimated Cost

Rs. ^{2995.27}~~3085.34~~ Lacs

Length 23.00 Km

Year : 2018-19

State ; Rajasthan

District : Pratapgarh

Division : PWD Dn. I Pratapgarh

Circle : PWD Circle, Pratapgarh

Zone : PWD Zone, Udaipur

**EXECUTIVE ENGINEER
PWD Dn. I PRATAPGARH**

अतिरिक्त सचिव, सार्वजनिक निर्माण विभाग, राजस्थान जयपुर की ओर से मुख्य अभियन्ता (पथ) सार्वजनिक निर्माण विभाग, राजस्थान जयपुर को लिखे पत्र क्रमांक एफ 7(35) A&F/एसआरएफ /अनु-II/ 2018-19/डी- दिनांक की प्रतिलिपि
विषय:- वित्तीय वर्ष 2018-19 में एसआरएफ मद में प्रशासनिक एवं वित्तीय स्वीकृति बाबत।

महोदय,

निर्देशानुसार राजस्थान के राज्यपाल महोदय की ओर से विभिन्न जिलों में वित्तीय वर्ष 2018-19 में एसआरएफ मद के तहत के 214 कार्यों हेतु राशि रू0 692.97 करोड की प्रशासनिक एवं वित्तीय स्वीकृति संलग्न सूची के अनुसार निम्नानुसार प्रदत्त की जाती है:-

क्र.स.	विवरण	कार्यों की संख्या	स्वीकृत लम्बाई (किमी.)	स्वीकृत लागत (करोड में)
1.	मुख्य जिला सड़कें	89	834.00	216.14
2.	राज्य राजमार्ग	125	1316.12	476.83
	योग	214	2150.12	692.97

उक्त व्यय निम्न बजट मदों में भारित किया जावेगा-

SRF-SHW works		
Gen	SC	ST
5054-सड़को एवं सेतुओं पर पुंजीगत परिव्यय 03-राज्य राजमार्ग 337-सड़क निर्माण कार्य (07)-राज्य सड़क विकास निधि से पोषित सड़कें [90]-निर्माण कार्य 74-सड़को एवं पुलों का निर्माण व्यय	5054-सड़को एवं सेतुओं पर पुंजीगत परिव्यय 03-राज्य राजमार्ग 789- अनुसूचित जातियों के लिए विशिष्ट संघटक योजना (04)-राज्य सड़क विकास निधि से पोषित सड़कें(एस एच) [90]-निर्माण कार्य 74-सड़को एवं पुलों का निर्माण व्यय	5054-सड़को एवं सेतुओं पर पुंजीगत परिव्यय 03-राज्य राजमार्ग 796- जनजातिय क्षेत्र उपयोगना (04)-राज्य सड़क विकास निधि से पोषित सड़कें(एस एच) [90]-निर्माण कार्य 74-सड़को एवं पुलों का निर्माण व्यय

SRF-MDR works		
Gen	SC	ST
5054-सड़को एवं सेतुओं पर पुंजीगत परिव्यय 04-जिला एवं अन्य सड़कें 800-अन्य सड़कें (11)-राज्य सड़क विकास निधि से पोषित सड़कें(एमडीआर) [90]-निर्माण कार्य 74-सड़को एवं पुलों का निर्माण व्यय (आयोजना)	5054-सड़को एवं सेतुओं पर पुंजीगत परिव्यय 04-जिला एवं अन्य सड़कें 789- अनुसूचित जातियों के लिए विशिष्ट संघटक योजना (06)-राज्य सड़क विकास निधि से पोषित सड़कें(एमडीआर) [90]-निर्माण कार्य 74-सड़को एवं पुलों का निर्माण व्यय (आयोजना)	5054-सड़को एवं सेतुओं पर पुंजीगत परिव्यय 04-जिला एवं अन्य सड़कें 796- जनजातिय क्षेत्र उपयोगना (08)-राज्य सड़क विकास निधि से पोषित सड़कें(एमडीआर) [90]-निर्माण कार्य 74-सड़को एवं पुलों का निर्माण व्यय (आयोजना)

उक्त स्वीकृति वित्त विभाग की आईडी क्रमांक 101805210 दिनांक 11.09.2018 एवं प्रशासनिक विभाग की आईडी संख्या 8254/एम/पीडब्ल्यूडी/2018 दिनांक 08.09.2018 के अनुसरण में निम्न शर्तों के अध्याधीन जारी की जा ही है:-

- (1) राशि का व्यय बजट प्रावधान की सीमा में करना सुनिश्चित किया जावेगा।
- (2) निविदा आमंत्रण से पूर्व प्रस्तावित कार्य की ड्राईंग एवं डिजाइन अनुमोदित करा ली हैं, तथा भूमि अधिग्रहण की आवश्यकता होने पर भूमि अधिग्रहित कर ली गई है।
- (3) निविदा आमंत्रण से पूर्व यह सुनिश्चित किया जायेगा कि प्रस्तावित कार्य पूर्व में किसी अन्य योजना में स्वीकृत नहीं है।

- (4) प्रस्तावित कार्य PWF&AR, RTPP Act/Rules, विभागीय नियमों/ योजना के दिशा-निर्देशों तथा निर्धारित मापदण्डों के अनुसार कराया जाना सुनिश्चित किया जावेगा।
- (5) प्रस्तावित कार्यों के निष्पादन में समय-समय पर राज्य सरकार द्वारा जारी पत्रों में वर्णित दिशा-निर्देशों/शर्तों की पूर्ण पालना सुनिश्चित की जायेगी।

कार्यालय मुख्य अभियन्ता, सार्वजनिक निर्माण विभाग, राजस्थान, जयपुर।

क्रमांक एफ 7(35) A&F/एसआरएफ /अनु-II/ 2018-19/डी-446 दिनांक 11/09/2018
प्रतिलिपि निम्नांकित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित है :-

- 1 अति. मुख्य अभियन्ता सा.नि.वि. संभाग.....(समस्त)
- 2 अधीक्षण अभियन्ता सा0नि0वि0 वृत्त.....(समस्त)
- 3 अधिशाषी अभियन्ता खण्ड(समस्त)
4. मु0 अभि0 (पथ)/अधीक्षण अभियन्ता (पथ)/अधिशाषी अभियन्ता (पी एण्ड एम-II/उपनिदेशक. सांख्यिकी/ बजट लिपिक (पथ)/कम्पाईलेशन लिपिक, मुख्य अभियन्ता कार्यालय, सा0नि0वि0, राजस्थान, जयपुर।

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(एम0जी0माहेश्वरी) 11/9/18
मुख्य अभियन्ता (पथ)
सा.नि.वि. राज. जयपुर:

S.No.	District	Name of Road	Non Patchable length with Chainage		Sanction Amount (in Lacs)	Bifurcation			Job. No.
			Length	Chainage		G.n.	S.C.	S.T.	
1	2	3	4	5	6	7	8	9	10
101	Pali	Phalodi Osian Sardarsamand Jadan Marwar jn Jojawar Kamlighat Deogarth Road (SH-61)	3.00	208/0 to 211/0	52.50	36.06	9.36	7.08	104 /5054/SRF/SH/2018-19
102	Pali	Phalodi Osian Sardarsamand Jadan Marwar jn Jojawar Kamlighat Deogarth Road (SH-61)	14.00	213/0 to 216/0, 246/0 to 250/0, 258/0 to 265/0	245.00	168.29	43.68	33.03	105 /5054/SRF/SH/2018-19
103	Pratapgarh	Dhariyawad-Pratapgarh-Mandsour Road Km 58/0 to 59/0, 76/0 to 98/0 SH-81	25.00	58/0 to 59/0, 76/0 to 98/0	3425.00	2352.63	610.68	461.69	106 /5054/SRF/SH/2018-19
104	Pratapgarh	Jallara-Dhariyawad Road (SH-81A)	2.00	48/0 to 50/0	100.00	68.69	17.83	13.48	107 /5054/SRF/SH/2018-19
105	Pratapgarh	Dhariyawad Parsola Bharkundi Road (SH-91)	10.00	6/00 to 15/00 16/00 to 17/00	400.00	274.76	71.32	53.92	108 /5054/SRF/SH/2018-19
106	Rajsamand	(SH-49) Mavli to Charbhujaji (SH-16) via Nathdwara, Kelwara (3.00	0/00 to 0/500, 3/00 to 4/500, 14/500 to 15/500	150.00	103.04	26.75	20.22	109 /5054/SRF/SH/2018-19
107	Rajsamand	(SH 56) Madri (SH-12) to Lassani Tal up to NH-8 via Amet, Deogarth	8.00	61/ to 63, 66/0 to 69/0, 72/0 to 73/0 & 76/0 to 78/0	140.00	96.17	24.96	18.87	110 /5054/SRF/SH/2018-19
108	Sikar	Kotputli to Losal via Sikar Dhod	12.00	145/0-157/0	765.14	525.57	136.42	103.14	111 /5054/SRF/SH/2018-19
109	Sikar	NH-8 (Antela) Distt. Jaipur to SH-8A (Khachariyawas - Kalyanpura-Renwal) Upto Distt. Border	13.00	126/500-139/500	1220.00	838.02	217.53	164.46	112 /5054/SRF/SH/2018-19
110	Sikar	Kuchaman to Srimadhapur via Chitawa, Danta, Reengus Km. 36/0 to 65/0	1.50	36/0-37/500	150.00	103.04	26.75	20.22	113 /5054/SRF/SH/2018-19
111	Sikar	Ramu Ka Bas to Badhadhar (SH-73)	2.00	349/500-151/500	300.00	206.07	53.49	40.44	114 /5054/SRF/SH/2018-19
112	Sikar	Chitawa to Srimadhapur via Nawalpali	27.00	24/0 to 31/0, 34/0 to 35/0	827.00	568.07	117.45	111.48	115 /5054/SRF/SH/2018-19

113	Sikar	Kodwar to Srimadhapur via Nawalpali	2.00	2/0 to 3/0	200.00	140.00	40.00	20.00	116 /5054/SRF/SH/2018-19
114	Sikar	Chitawa to Srimadhapur via Nawalpali	2.00	36/0 to 37/500	150.00	103.04	26.75	20.22	117 /5054/SRF/SH/2018-19
115	Sikar	Ramu Ka Bas to Badhadhar (SH-73)	2.00	349/500-151/500	300.00	206.07	53.49	40.44	118 /5054/SRF/SH/2018-19
116	Sikar	Chitawa to Srimadhapur via Nawalpali	27.00	24/0 to 31/0, 34/0 to 35/0	827.00	568.07	117.45	111.48	119 /5054/SRF/SH/2018-19

TECHNICAL REPORT

- 1 Name of Work : Dhariyawad Pratapgarh Mandosaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)
- 2 District : Pratapgarh
- 3 Location of 58/00, starting point and 98/00 end point of Sanctioned length : Total : 23.00 Km
- 3 Reference of sanction : Yet to be sanction
- 4 Name & Chainage of important town / Village with population and length covered in proposed work : Km 58 - Dhariyawad, Km 79 - Chiklaad, Km 82 - Ranpur, Km 86 - Deogarh, Km 94 - Chhotibambori, Km 95 -Panchimli, Km 97 - Pratapgarh
- 5 Proposed length of road (km) : **23.00 Km**
- (i) Sanction Amount :
- 6 Assembly constituency with Km proposed & Cost : Pratapgarh 11.00 Km, Badisari 12.00 Km, Dhariyawad 1.00 Km
Rs. 3085.34 Lacs
- 7 Parliamentary Constituency with Km proposed & Cost : **Pratapgarh 22.00 Km** Udaipur 1.00 Km
Rs. 3085.34 Lacs
2995.27
- 8 Name of MP :
- 9 Existing width (mts) : CW 3.00/5.5 M
- 10 Traffic details (PCU) : **PCU - 7805**
CVPD - 382
- 11 Existing Status & Necessity of work : The Dhariyawad Pratapgarh Mandosaur Road (SH-81) originates from Dhariyawad town (Km. 58/0) is an important route connecting Udaipur (Zonal HQ), Dhariyawad and adjoining towns to Pratapgarh, a prominent marketing centre of Rajasthan & Madhya Pradesh. Mandosaur is well connected by Indian Railways, so the importance of this road is well known and a number of vehicles ply on this road. The carriageway width of this road is 3.00m resulting in great inconvenience to the traffic. from Pratapgarh to Mandosaur Road is already 7.00 Mtr and Jallara to Dhariyawad is also 7.00 Mtr .

12 Proposed Scope of Work with Chainage in Brief :

(I) Bituminous pavement With ~~BC 30mm thick~~, DBM 60 mm thick, with 150mm thick WMM in 7.00 Mtr. Width & 230 mm thick Crushed stone aggregate in widening portion from km 76/0 to 88/0

(II) Bituminous pavement With BC 30mm thick, DBM 60 mm thick, with 150mm thick WMM in 7.00 Mtr. Width & 230 mm thick Crushed stone aggregate in 7.50 portion fro km 88/0 to 98/0 with Required grade Improvement

(III) C C pavement With M-30, 300mm thick with DLC 150mm thick in 1:3:6 (M-10)

(IV) 150mm Thick GSB Grade III on Shoulders

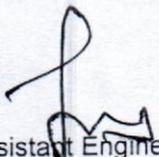
(V) ~~400mm thick earth of 7% CBR for leveling and subgrade. (for widening) as per calculation sheet.~~

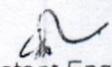
b. Other items as per Guidelines : Road furniture as per IRC specifications

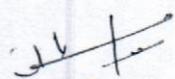
13 Specification : For all work specification will be followed as per latest addition of MoRTH, IRC 37:2012 Tentative Guidelines for the Design of Flexible Pavement, IRC 58:2015 Guidelines for the Design of Plain Jointed RIGID Pavements for the Highways

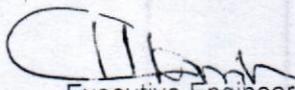
14 Basis of rates : Based on PWD Circle Pratapgarh BSR 2016.

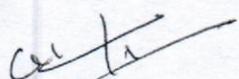
15 Agency : The work shall be executed through contractor after inviting tenders.

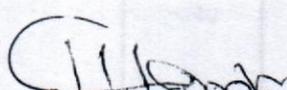

Assistant Engineer,
PWD Sub Dn. Deogarh


Assistant Engineer,
PWD Sub Dn. V, Pratapgarh


Assistant Engineer,
PWD Sub Dn. Dhariyawad


Executive Engineer
PWD Dn. I Pratapgarh


Executive Engineer
PWD Dn. Dhariyawad

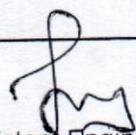

Executive Engineer
PWD Dn. III Pratapgarh


Superintending Engineer,
PWD Circle, Pratapgarh

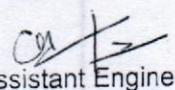
GENERAL ABSTRACT

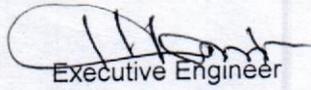
Name of work : Dhariyawad Pratapgarh Mandsaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)

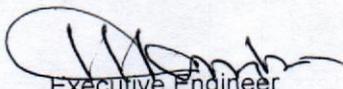
S.No.	Particulars	Amount
1	PART "A" : ROAD WORK	174208541.00 181451047.00
2	PART "B" : C.C WORK	24975300.00 25424919.00
3	PART "C" FURNITURE WORK	4600797.00 4387467.00
4	PART "D" : DRAIN WORK	6513673.00
5	PART "E" : C. D. WORK	37516494.00 37814279.00
6	PART "F" : RETAINING WALL	10788084.00
	Total=	258602889.00 266379469.00
	Add : 1.5 % Contingency charge	3879043.00 3995692.00
	Add : 1.0% Quality control charge	1526029.00 2663795.00
	Total	2765067961.00 273038956.00
	Add : 13.0% Prorata charge	34958835.00 35495064.00
	Total	299526796.00 308534020.00
	Say	2995.27 Rs. 3085.34 Lacs

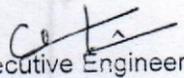

Assistant Engineer,
PWD Sub Dn. Deogarh


Assistant Engineer,
PWD Sub Dn. V, Pratapgarh


Assistant Engineer,
PWD Sub Dn. Dhariyawad


Executive Engineer
PWD Dn. I Pratapgarh


Executive Engineer
PWD Dn. III Pratapgarh


Executive Engineer
PWD Dn. Dhariyawad


Superintending Engineer,
PWD Circle, Pratapgarh

No. TS/ACEJ. 27 Dt. 28/8-19

TECHNICALLY SANCTIONED

for Rs. 2995.27 Lacs

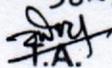
Twenty Nine Crore Ninety Five Lacs Twenty

Seven Thousand only.

Ch. head. 5054-03-337-(07)-(90)-74, 5054-

-789-04-(90)-74, 5054-03-796-(04)-

90-74 SIF - SHWS & MDP

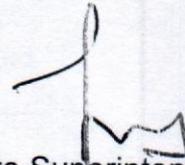

F.A.


Addl. Chief Engineer
PWD Zone, UDA/PUR

NAME OF WORK :- Dhariyawad Pratapgarh Mandsaur Road Km
58/0 to 59/00 & 76/0 to 98/0 (SH-81)

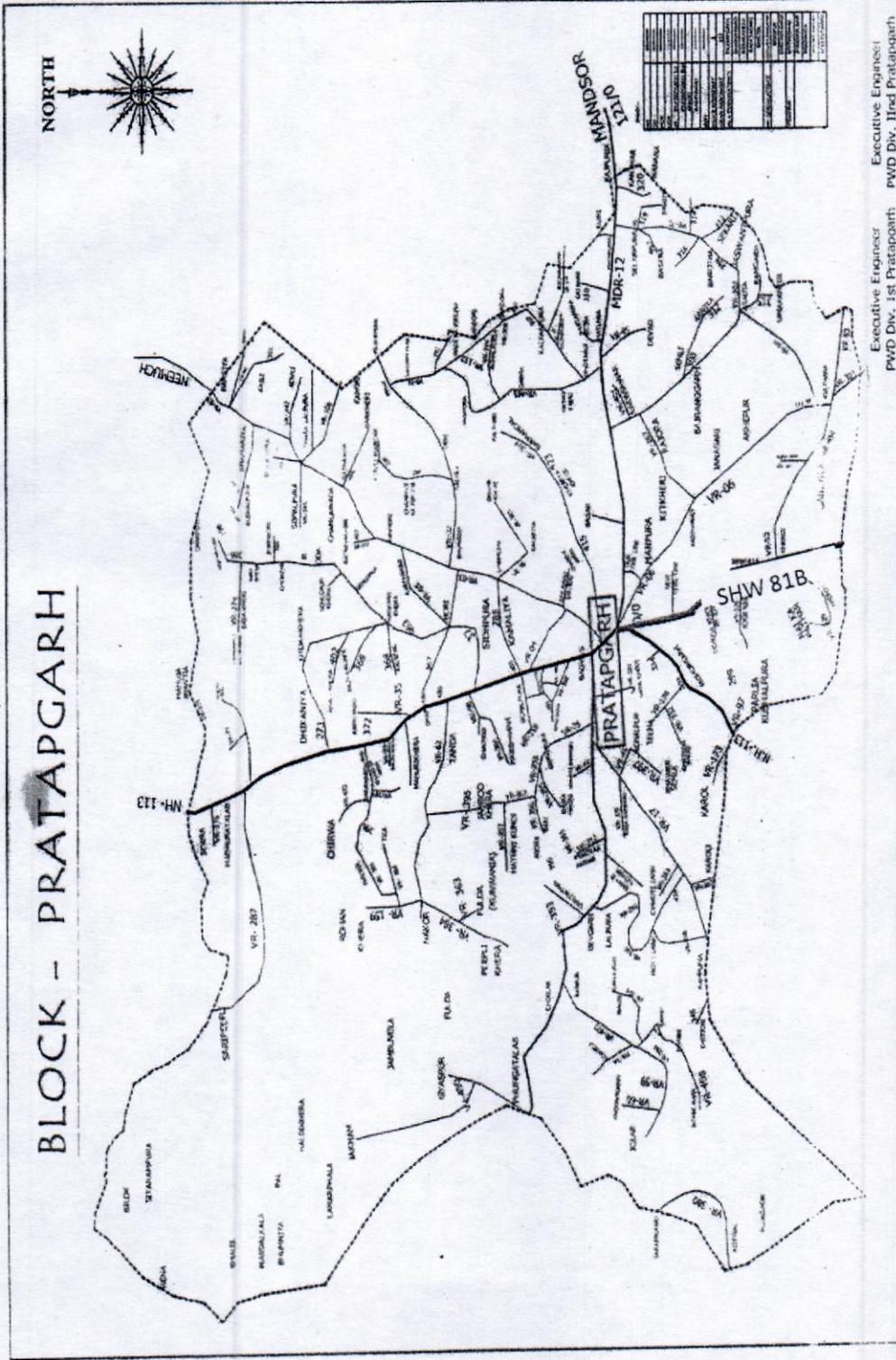
CERTIFICATE

Certified that Rates and Nomenclatures as per Road
BSR-2016, PWD Circle Pratapgarh, The Calculation Checked and
found correct.



TA to Superintending Engineer,
PWD Circle, Pratapgarh

Name of Work :- Dhariyawad Pratapgarrh Mandsaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)



Executive Engineer
PWD Div. 1st Pratappgarh

Executive Engineer
PWD Div. 11nd Pratappgarh

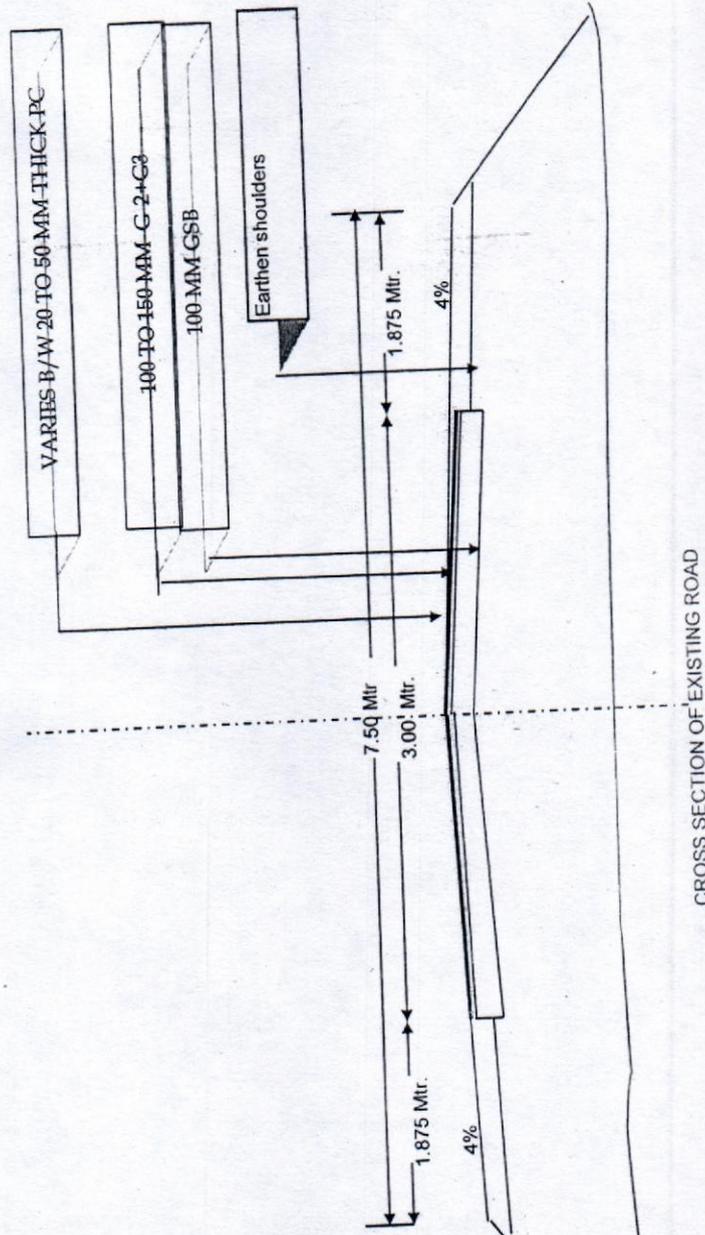
[Signature]
Executive Engineer
PWD Dn. I Pratappgarh

Proposed Road

[Signature]
Executive Engineer
PWD Dn. III Pratappgarh

Name Of Road ---Widening & Strengthening of Dhariawad-Pratapgarh-Mandson (up to State Border) Road (Km 73/0 to 98/0)

TYPICAL CROSS SECTION OF EXISTING ROAD SURFACE IMPROVEMENT

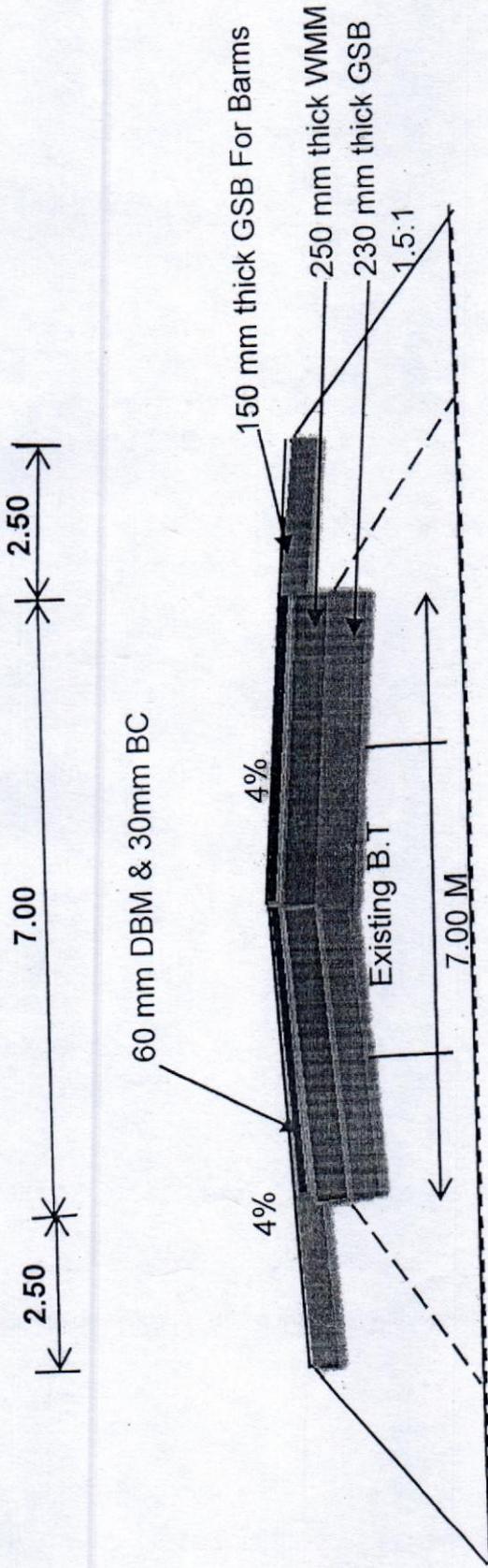


CROSS SECTION OF EXISTING ROAD

[Signature]
Executive Engineer
PWD Dn. I Pratapgarh

[Signature]
Assistant Engineer,
PWD Sub Dn. Deogarh

Name of Work :- Dhariyawad Pratapgarh Mandsaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)

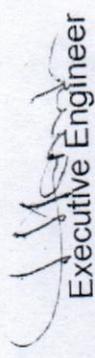


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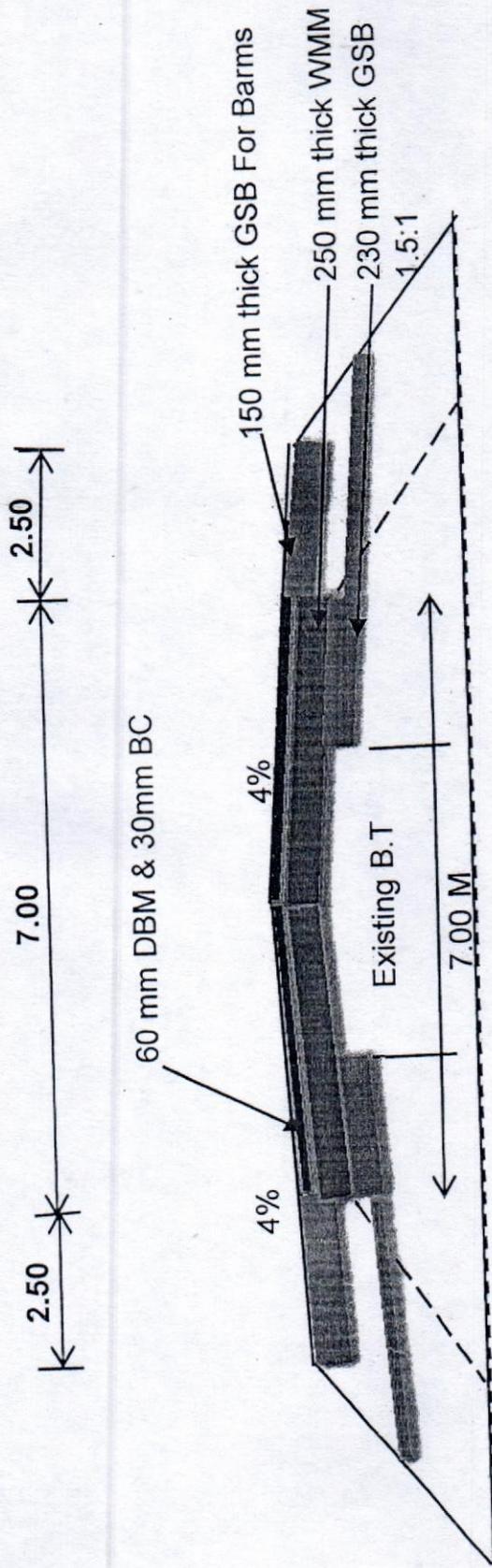
Proposed BT Road :- 

TYPICAL CORSS SECTION FOR BT 3.00M to 7.00 M (Km 88/0 to 97/0)


 Assistant Engineer
 PWD Sub Dn. Deogarh


 Executive Engineer
 PWD Dn. I Pratapgarh

Name of Work :- Dhariyawad Pratapgarh Mandsaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)



Existing BT Road :-

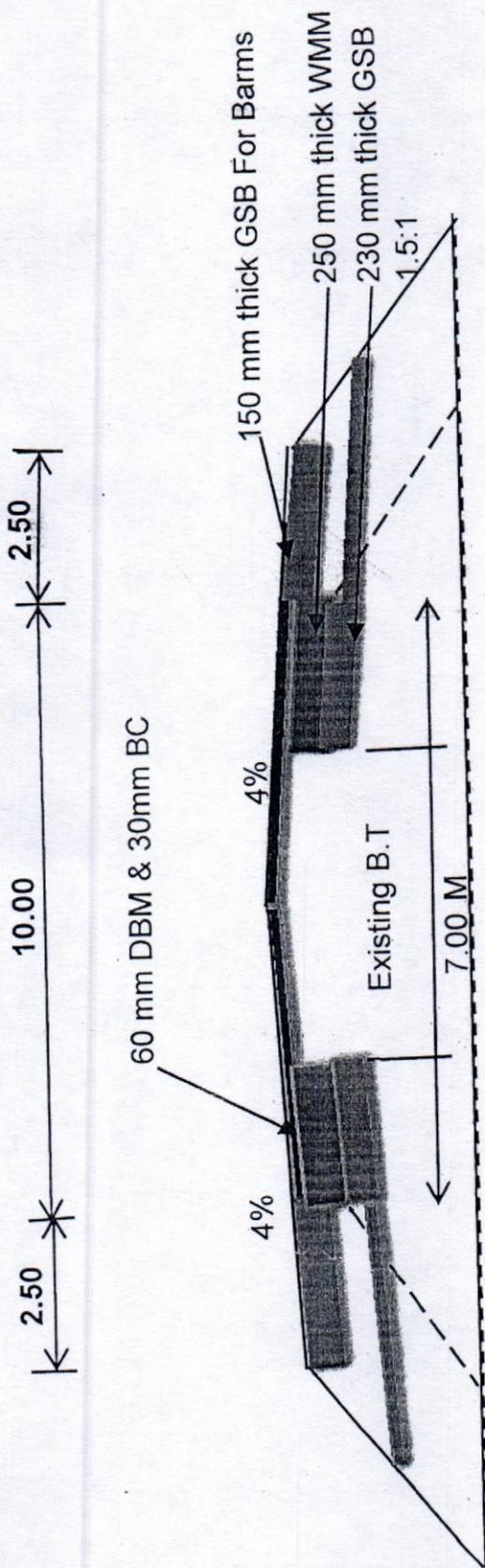
Proposed BT Road :-

TYPICAL CORSS SECTION FOR BT 3.00 M to 7.00 M (Km 76/0 to 88/0)

Assistant Engineer
PWD Sub Dn. Deogarh

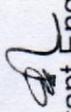
Executive Engineer
PWD Dn. I Pratapgarh

Name of Work :- Dhariyawad Pratapgarh Mandosaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)

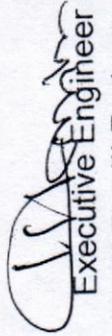


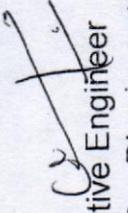
Existing BT Road :- 
 Proposed BT Road :- 

TYPICAL CORSS SECTION FOR BT 5.00 M to 10.00 M

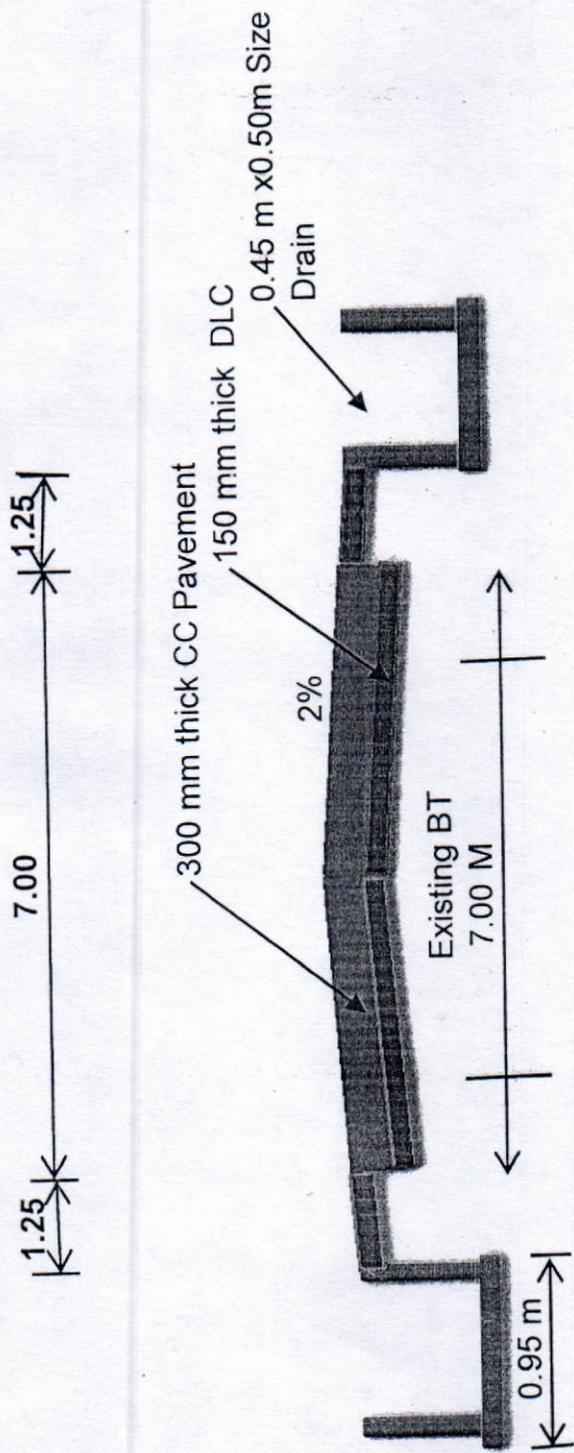

 Assistant Engineer
 PWD Sub Dn. Vth Pratapgarh


 Assistant Engineer
 PWD Sub Dn. Dhariyawad


 Executive Engineer
 PWD Dn. III Pratapgarh


 Executive Engineer
 PWD Dn. Dhariyawad

Name of Work :- Dhariyawad Pratapggarh Mandosaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)



Existing BT Road :-

Proposed CC Road :-

TYPICAL CORSS SECTION FOR C.C. Pavement 7.00 Mtr

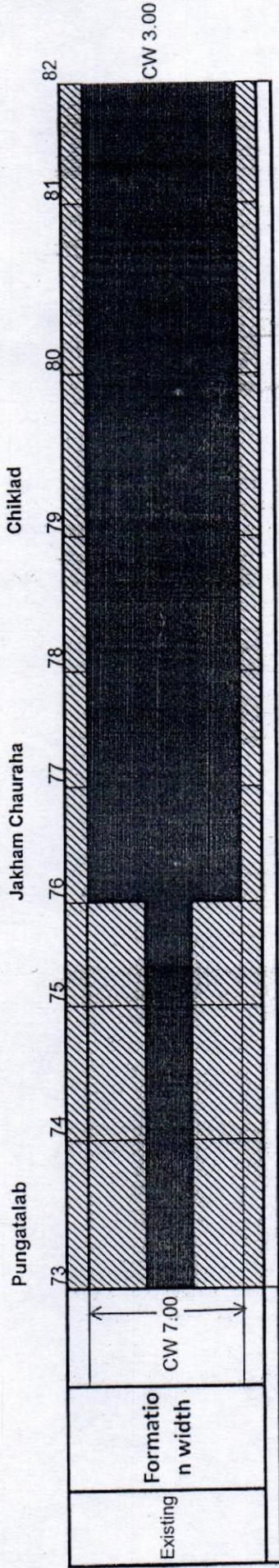
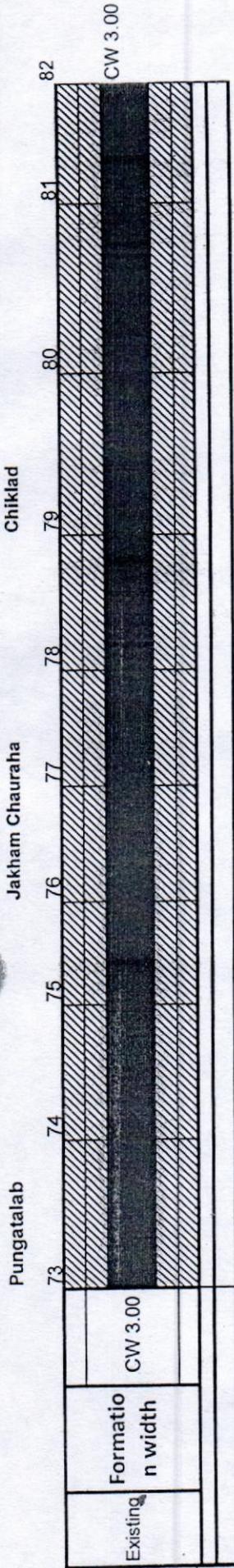
(Drain for Village Portion Only)

Assistant Engineer
PWD Sub Dn. Deogarh

Executive Engineer
PWD Dn. I Pratapggarh

LINEAR CHART

Dharyawad Pratapgadh Mandosaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)



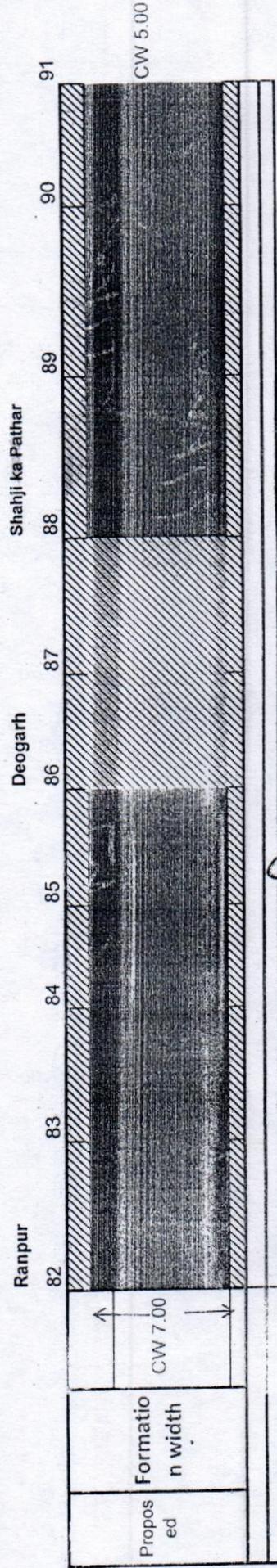
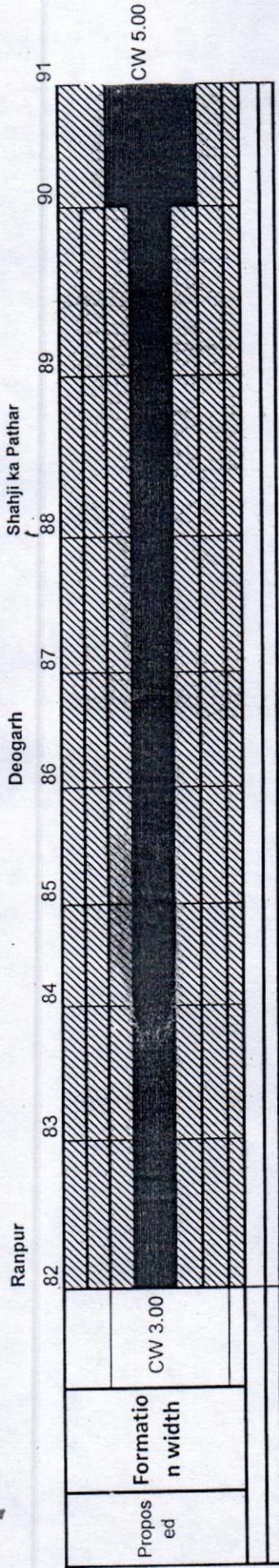
INDEX

-  Black Top
-  Shoulder
-  F.W.

[Signature]
 Assistant Engineer,
 PWD SUB DN Deogadh

[Signature]
 Executive Engineer,
 PWD DN I Pratapgadh

Dharyawad Pratapgadh Mandsaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)



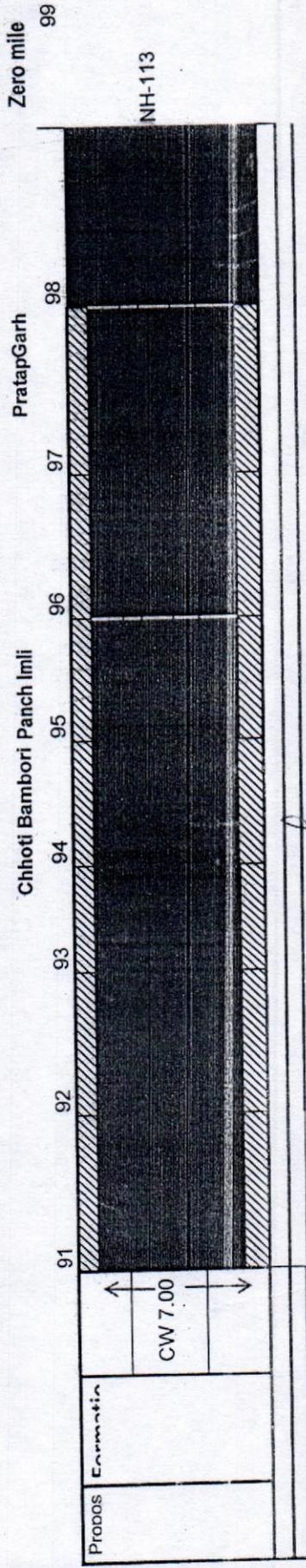
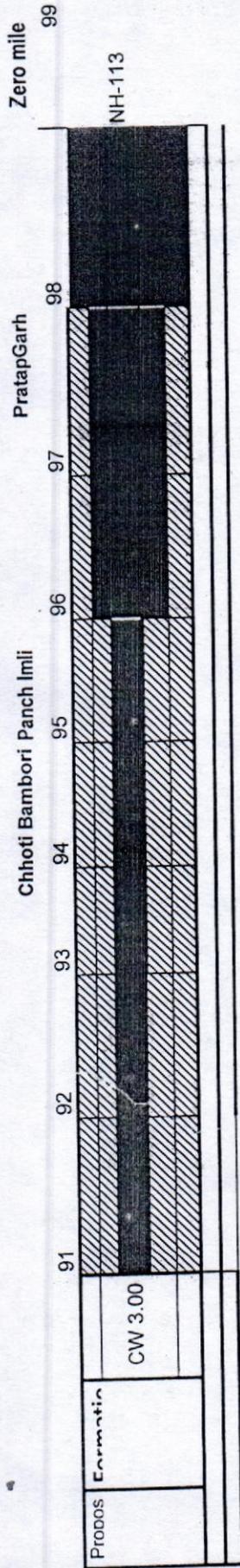
INDEX

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-  Shoulder
-  F.W.


 Assistant Engineer,
 PWD SUB DN Deogarh


 Executive Engineer,
 PWD DN I Pratapgadh

Dharyawad Pratapgath Mandsaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)

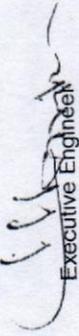


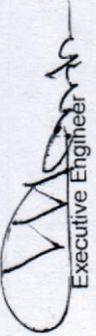
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-  Black Top
-  Shoulder
-  F.W.


 Assistant Engineer,
 PWD SUB DN Deogarth


 Assistant Engineer,
 PWD SUB DN Vth Pratapgath


 Executive Engineer,
 PWD DN I Pratapgath


 Executive Engineer,
 PWD DN III Pratapgath

DETAILED & ABSTRACT OF COST

Name of Work : Dhariyawad Pratapgarh Mandsaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)

PART "A" : ROAD WORK

S.No.	Description of Item	No	L (m)	B (m)	D (m)	Qty	Unit	Rate(Rs)	Unit	Amount
1	2	3	4	5	6	7	8	8	9	10
1	Clearing and grubbing road land including uprooting rank vegetation, grass, brush, shrubs, saplings and trees of girth upto 300mm, removal of stumps, disposal of unserviceable Material and stacking of serviceable Material upto 1000m from road boundary. (MoRTH Specification : Clause 201).BY MECHANICAL MEANS.In area of Light Jungle	2	21000.00	3.00		126000.00				
	Km 76/0 to 97/0	2	1000.00	4.00		8000.00				
	Km 97/0 to 98/0					134000.00	Hect	12825.00	P.Hect.	171855.00
2	Dismantling of flexible pavements and disposal of dismantled Materials upto a lead of 1000 mtrs. Stacking serviceable and unserviceable Materials separately. (MoRTH specification : Clause 202) BY MECHANICAL MEANS Bituminous Courses	1	21000.00	3.00	0.04	2520.00	Cum			415800.00
	Existing BT				Total	2520.00	Cum	165.00	PCum	
3	Earthwork in excavation for roadway in soil, including stacking / disposal of surplus Material exclusive of compensation of earth By Hydraulic Excavator CK-90 of 0.9 cum bucket capacity and tipper with disposal upto 1000 mtrs.	As Per E/Wcutting Quantity				18558.42	Cum			
	Km 76/0 to 97/0	2	1000.00	2.00	0.48	1920.00	Cum			
	Km 97/0 to 98/0	2	500.00	3.50	0.48	1680.00	Cum			
	Km 58/0 to 59/0				Total	22158.42	Cum	34.00	PCum	753386.00
4	Construction of embankment with approved Materials deposited at site from roadway cutting and excavation from drain and foundation of other structures graded and compacted by vibratory roller 8-10 tonne to meet requirement of Tale 300-2 as per MoRTH specification : Clause No. 305	As Per Cutting quantity				22158.42	Cum			

S.No.	Description of Item	No	L (m)	B (m)	D (m)	Qty	Unit	Rate(Rs)	Unit	Amount
1	2	3	4	5	6	7	8	8	9	10
					Total	22158.42	Cum	30.00	PCum	664753.00
5	Construction of embankment with approved Material obtained from borrow-pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacting by vibratory roller 8-10 tonne to meet requirement of Table 300-2 including cost of compensation for earth taken from private land with lead upto 1 km as per MoRTH Specification : Clause No. 305. By Mix in Place Method Grading-III									
		As Per E/W Filling Quantity				101846.52	Cum			
	Km 76/0 to 97/0	2	1000.00	2.50	0.80	4000.00	Cum			
	Km 97/0 to 98/0	2	1000.00	2.50	0.80	4000.00	Cum			
	Km 58/0 to 59/0					22158.42				
					Total	83688.10	Cum	98.00	PCum	8201434.00
6	Providing, laying and spreading of granular sub-base by providing coarse graded Material, spreading in uniform layers with motor grader on prepared surface mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per MoRTH Specification : clause No. 401. Grading-III									
				1.50		10350.00				
	For Shoulders	2	23000	2.50	0.15	47250.00				2659950.00
					Total	47250.00	Cum	257.00	PCum	4433250.00
7	Providing, laying and spreading and compacting specified graded crushed stone in sub-base course including premixing the Material at OMC in mechanical mixer (Pug mill), carriage of mixed Material, laying in uniform layers with Motor Grader, F.E. Loader, on a prepared surface and compacting with Vibratory Compactor to achieve the desired density including all Material, labour, machinery, lighting barricading and maintenance of Driversion complete. (MoRTH specification clause 401). with all lead & lift									
	Km 58/0 to 59/0	2	500.00	3.50	0.230	805.00				
	Km 76/0 to 88/0	2	10060.00	2.25	0.230	10412.10				
	Km 88/0 to 97/0	1	9000.00	7.50	0.230	15525.00				
	Km 97/0 to 98/0	2	1000.00	2.65	0.230	1219.00				
					Total	27961.10				

S.No.	Description of Item	No	L (m)	B (m)	D (m)	Qty	Unit	Rate(Rs)	Unit	Amount
1	2 For extra widening at curves ramps and Junctions Etc (2%)	3	4	5	6	7	8	8	9	10
				1.50		559.22				
	For Shoulders (drainage layer)	2	20560.00	2.96	0.10	12171.52	Cum	911.00	P.Cum	37070266.00
					G.Total	34688.32				31601060.00
8	Providing, laying, spreading and compacting crushed graded stone aggregate as per Table 400-10 & 400.11 to Wet Mix Macadam specifications including premixing the Material with water to OMC in mechanical mixer (Pug mill) as per design mix, carriage of mixed Material by tipper to site laying in uniform layers, with motor grader/F.E. loader/Paver Finisher, in sub-base/base course on a well prepared under-base and compacting with Vibratory Roller to achieve the desired density including lighting, guarding, barricading and maintenance of Diversion etc. (MoRTH specification : Clause 406). with all lead & lift	2	500.00	3.50	0.250	875.00				
	Km 58/0 to 59/0	1	10060.00	7.00	0.250	17605.00				
	Km 76/0 to 88/0	1	9000.00	7.00	0.250	15750.00				
	Km 88/0 to 97/0	2	1000.00	2.50	0.250	1250.00				
	Km 97/0 to 98/0				Total	35480.00				
	For extra widening at curves ramps and Junctions Etc (2%)					709.60				
	Total				G.Total	36189.60	Cum	1050.00	P.Cum	37999080.00
9	Providing and applying primer coat over prepared surface of 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 (including cleaning of road surface) as per MoRTH specification : Cl. 502, 112	1	1000.00	10.00		10000.00				
	Km 58/0 to 59/0	1	10060.00	7.00		70420.00				
	Km 76/0 to 88/0	1	9000.00	7.00		63000.00				
	Km 88/0 to 97/0	1	1000.00	10.00		10000.00				
	Km 97/0 to 98/0				Total	153420.00				
	For extra widening at curves ramps and Junctions Etc (2%)					3068.40				
	Total				G.Total	156488.40	Sqm	24.00	P.Sqm	3755722.00

S.No.	Description of Item	No	L (m)	B (m)	D (m)	Qty	Unit	Rate(Rs)	Unit	Amount
1	2	3	4	5	6	7	8	8	9	10
10	Providing and applying tack coat on the prepared surface, with bitumen emulsion as per IS:8887 & manufacturer's specifications @0.2 kg/sqm with a self propelled or towed bitumen pressure sprayer equipped for spraying the Material uniformly at specified rates and temperatures (including cleaning of road surface) as per MoRTH specification Cl. 502, 112.									
	Km 58/0 to 59/0	1	1000.00	10.00		10000.00				
	Km 76/0 to 88/0	1	10060.00	7.00		70420.00				
	Km 88/0 to 97/0	1	9000.00	7.00		63000.00				
	Km 97/0 to 98/0	1	1000.00	10.00		10000.00				
					Total	153420.00				
	For extra widening at curves ramps and Junctions Etc (2%)									
						3068.40				
					G.Total	156488.40	Sqm	9.00	P.Sqm	1408396.00
11	Providing and laying Dense Bituminous Macadam on prepared surface with specified graded crushed aggregates (as per table 500-9, 500-10 and design mix) for base/binder course including loading of Material with F.E. loader, heating of binder (including cost of anti stripping compound, wherever required) aggregates and filler in hot mix plant (40-60 TPH), transporting the mixed Material by tippers and laying with sensor paver finisher as per clause 504.3.5 to the required level and grade, rolling by self propelled power rollers and vibratory rollers or pneumatic tyred roller, 150-250 KN. TP=0.7 Mpa, to achieve the desired density (approved by the department) but excluding primer/tack coat. (MoRTH specification : clause 505, 112). with all lead & lift.50-75mm compacted thickness with 4.25% bitumen content VG30 grade with all lead of mixed Material.									
	Km 58/0 to 59/0	1	1000.00	10.00	0.060	600.00				
	Km 76/0 to 88/0	1	10060.00	7.00	0.060	4225.20				
	Km 88/0 to 97/0	1	9000.00	7.00	0.060	3780.00				
	Km 97/0 to 98/0	1	1000.00	10.00	0.060	600.00				
					Total A	9205.20				
	For extra widening at curves ramps and Junctions Etc (2%)					184.10				
					G Total	9389.30	Cum	5582.00	P.Cum	52411073.00

S.No.	Description of Item	No	L (m)	B (m)	D (m)	Qty	Unit	Rate(Rs)	Unit	Amount
1	2	3	4	5	6	7	8	8	9	10
12	Providing and laying Bituminous Concrete as per Design Mix on prepared surface with specified graded stone aggregates as per Table 500-17, for wearing course including loading of aggregates with F.E. loader and hot mixing of binder (including cost of anti-stripping compound, wherever required) and 3% cement filler with aggregates in Hot Mix Plant 40-60 TPH, transporting the mixed Material with tipper to paver and laying with sensor paver finisher (as per clause 504-3.5) to the required level, grades and rolling with vibratory compactor and pneumatic tyred roller 150-250 kN, TP = 0.7 Mpa, to achieve the desired density (approved by the department as per job mix) excluding cost of primer/tack coat. (MoRTH specification : clause 507).30-45mm compacted with 6% binder with all lead of mix Material. With straight run bitumen grade VG30									
	30-45mm compacted with 6% binder with all lead of mix material									
	Km 58/0 to 59/0	1	1000.00	10.00	0.030	300.00				
	Km 76/0 to 88/0	1	10060.00	7.00	0.030	2112.60				
	Km 88/0 to 97/0	1	9000.00	7.00	0.030	1890.00				
	Km 97/0 to 98/0	1	1000.00	10.00	0.030	300.00				
					Total	4602.60				
	For extra widening at curves ramps and Junctions Etc (2%)					92.05				
					Total A	4694.65	Cum	7181.00	P.Cum	33712282.00
13	Providing and laying Reinforced cement concrete pipes NP-3 for culverts including jointing ends and fixing collar with cement mortar 1:2. (MoRTH specification : clause 1000/2900).300 mm dia	25	15.00			375.00				
					Total	375.00	Mtr	1210.00	P.Rmt.	453750.00
										Total (Part "A") = 481451047.00

Assistant Engineer,
P.W.D Sub Dn. Deogarh

Executive Engineer
P.W.D Dn. I Pratapgarh

Assistant Engineer,
P.W.D Sub Dn. V. Pratapgarh

Executive Engineer
P.W.D Dn. III Pratapgarh

Assistant Engineer,
P.W.D Sub Dn. Dhariyawad

Executive Engineer
P.W.D Dn. Dhariyawad

1742085410

UNTAILED & ABSTRACT OF COST

Name of Work : Dhariyawad Pratapgarh Mandasaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)

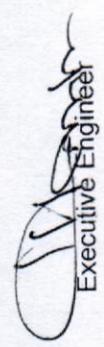
PART "B" : C.C WORK

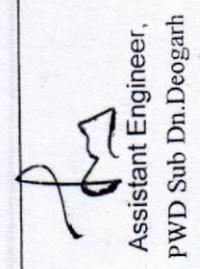
S. No.	Description of Item	No	L (m)	B (m)	D (m)	Qty	Unit	Rate(Rs)	Unit	Amount
1	2	3	4	5	6	7	8	8	9	10
1	Providing, laying and spreading and compacting specified graded crushed stone in sub-base course including premixing the Material at OMC in mechanical mixer (Pug mill), carriage of mixed Material, laying in uniform layers with Motor Grader, F.E. Loader, on a prepared surface and compacting with Vibratory Compactor to achieve the desired density including all Material, labour, machinery, lighting barricading and maintenance of Diversion complete. (MoRTH specification clause 401). with all lead & lift.	1	1700	12.00	0.15	3060.00				
	New C.C (86/540 to 88/240)	1	240	1.50	0.15	54.00				
	Widening (86/300 to 86/540)				G.Total	3114.00	Cum	911.00	P.Cum	2836854.00
2	Providing and Laying Rolled cement concrete of M-10 mix base course with coarse and fine aggregate conforming to IS:383, the size of coarse aggregate not exceeding 25mm with minimum, aggregate cement content of 200 kg/cum, aggregate gradation to be as per Table 600-4 after blending, mixing in batching plant at optimum moisture content, transporting to site, laying with a paver with electronic sensor, compacting with 8-10 tonnes smooth wheeled vibratory roller to achieve, the designed flexural strength, finishing and curing as per MoRTH Specification : Clause No. 603, 112.	1	1700.00	7.20	0.15	1836.00				
	New C.C (86/540 to 88/240)	1	240.00	1.50	0.15	54.00				
	Widening (86/300 to 86/540)									

S. No.	Description of Item	No	L (m)	B (m)	D (m)	Qty	Unit	Rate (Rs)	Unit	Amount
1	2 For extra widening at curves ramps and Junctions Etc ^{15%} ^{2%}	3	4	5	6	7	8	8	9	10
	Total				G.Total	91.80 1984.80	37.80 Cum	1050.00 2518	P.Cum	20446675.00 2080890.00 4854200.00
3	Providing and Laying un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub-base with 43 grade cement, coarse and fine aggregate conforming to IS:383, maximum size of coarse aggregate not exceeding 25mm, 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 and vacuum processing pump as approved, curing compound, finishing to lines and grades as per drawing as per MoRTH Specification : Clause No. 602, 112. Using Cement concrete M ₂₀ pavement Grade	1	1700.00	7.00	0.25	3570.00	2975.00			
	New C.C (86/540 to 88/240) ^{15%}	1	240.00	1.50	0.15	54.00	36.00			
	Widening (86/300 to 86/540)	1	240.00	7.00	0.15	252.00	252.00			
	Total				Total	3876.00	3263.00			
	For extra widening at curves ramps and Junctions Etc ^{15%} ^{2%}					493.80	65.26	5175.00		
	Total				G Total	4069.80	Cum	5024.00	P.Cum	20446675.00
5	Providing and laying Reinforced cement concrete pipes NP-3 for culverts including jointing ends and fixing collar with cement mortar 1:2. (MoRTH specification : clause 1000/2900). 300 mm dia					3328.26				17223746.00
	Total	5	10.00		Total	50.00	Mtr	1210.00	P.Rmt.	60500.00
	Total (Part "B") =									25424919.00

~~22141528000~~

249 75300.00


Executive Engineer
PWD Dn. I Pratapgarh


Assistant Engineer,
PWD Sub Dn. Deogarh

DETAILED & ABSTRACT OF COST

Name of Work : Dhariyawad Pratapgarh Mandasaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)

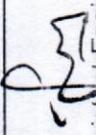
PART "C" : ROAD FURNISHING

S.No.	Description of item	Qty.	Unit	Rate(Rs)	Unit	Amount (Rs)
1	Reinforced cement concrete M15grade kilometre stone of standard design as per IRC:8-1980, fixing in position including painting and printing etc.5th kilometre stone (precast)	3	Nos.	5	6	7
2	Reinforced cement concrete M15grade kilometre stone of standard design as per IRC:8-1980, fixing in position including painting and printing etc.Ordinary kilometre stone (precast)	5	Nos.	2431.00	Each	12155.00
3	Reinforced cement concrete M15grade kilometre stone of standard design as per IRC:8-1980, fixing in position including painting and printing etc.Hectometer stone (precast)	19	Nos.	1454.00	Each	27626.00
4	Providing and Fixing of Retro Reflectorised 900mm Cautionary sign boards made out of retro reflective sheeting of High Intensity prismatic grade conforming to IRC-67: 2012 & Type IV standards of ASTM D4956-09 specifications, fixed over 2 mm thick Al/4mm thick ACP sheet supported with Back support frame of 25x25x3mm mild steel angle as approved , supported on a mild steel angle iron post 75 mm X 75 mm X 6 mm - 3 mtr height, firmly fixed to the ground by means of properly designed foundation with M20 grade cement concrete 45 cm X 45 cm X 60 cm , 60 cm below ground level as per approved drawing. 7 years Warranty for Retro Reflective Sheeting from the original sheeting manufacturer & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be submitted by the contractor.Regulatory sign boards of 90 cm Triangle. Size 90 cms. Triangle	92	Nos.	415.00	Each	38180.00
5	Providing and Fixing of Retro Reflectorised 600 x 800 mm Facility sign boards made out of retro reflective sheeting of High Intensity prismatic grade conforming to IRC-67: 2012 & Type IV standards of ASTM D4956-09 specifications, fixed over 2 mm thick Al/4mm thick ACP sheet supported with Back support frame of 25x25x3mm mild steel angle as approved , supported on a mild steel angle iron post 75 mm X 75 mm X 6 mm - 3 mtr height, firmly fixed to the ground by means of properly designed foundation with M20 grade cement concrete 45 cm X 45 cm X 60 cm , 60 cm below ground level as per approved drawing. 7 years Warranty for Retro Reflective Sheeting from the original sheeting manufacturer & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be submitted by the contractor.Regulatory sign boards of 60 x 80 cm Rectangle. Size 60 x 80 cms. Rectangle	30	Nos.	2998.00	Each	89940.00
		12	Nos.	2502.00	Each	30024.00

S.No.	Description of Item	Qty.	Unit	Rate(Rs)	Unit	Amount (Rs)
1		3	4	5	6	7
6	Providing and erecting direction and place identification retro-reflectorised sign as per IRC:67 made of high intensity grade sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick 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	14.40	Sqm			
	16 x 1.20 x 0.75 =	14.40	Sqm	3471.00	Each	49982.00
7	Providing and erecting direction and place identification retro-reflectorised sign as per IRC:67 made of high intensity grade sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick 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					
	TOTAL=	14.40	Sqm	6298.00	Each	90691.00
8	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes.					
	center line	1150.00				
	Edge Line	1380.00				
	zebra crossing	456.00	Sqm.	547.00	P.Sqm	1682572.00
	14 x 2 x 13 x 5.00 x 0.30 =	2686.00	Sqm.			4469242.00
9	Supplying and installation of delineators (road way indicators, hazard markers, object markers), 80-100 cm high above ground level, painted black and white in 15 cm wide strips, fitted with 80 x 100 mm rectangular or 75 mm dia circular reflectorised panels at the top, buried or pressed into the ground and conforming to IRC-79 and the drawings.	42.00	Nos	473.00	Each	19866.00

S.No.	Description of Item	Qty.	Unit	Rate(Rs)	Unit	Amount (Rs)
10	<p>Raised Pavment Marker (Cats Eyes): Supplying and Fixing of Molded Shank Raised Pavement Markers made of polycarbonate and ABS moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000 kg tested in accordance to ASTM D 4280 Type H and complying to Specifications of Category A of MORTH Circular No RW/NH/33023/10-97 – DO III Dt 11.06. 1997. The height, width and length shall not exceed 50 mm, 100 mm and 100 mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35 +/- 5 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 +/- 2 mm and height not less than 30 +/- 2 mm) from the body is to be a minimum value of 700 Kgf. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacturer's recommendation and complete as directed by the engineer. The contractor shall submit 2 years pre qualified warranty certificate from the manufacturer for satisfactory field performance during the time of bid submission</p>	4500.00	Nos	186.00	Each	837000.00
11	<p>Providing and Erecting typical Citizens Information Board as per approved drawing & specification of MoRD, made of two MS Sheet of 1.6 mm thick each of size 900 mm x 750 mm stiffened by angle iron 25 mm x 25 mm x 3 mm all around the plate and plates fixed on frame of 75 mm dia pipe of 12 SWG sheet (vertical post 3050 m with angle holdfasts and horizontal member 900 mm) to be joined by 5 mm thick MS plate at 12 places (65 x 50 mm) duly embedded in cement concrete M-15 grade of block of 600 mm x 600 mm x 750 mm size below ground level as per enclosed drawings & as directed by Engineering - In-Charge. All MS will be stove enameled on both side, Lettering, figuring and border will be with ready mixed synthetic enamel paint of superior quality in required shade and colour etc. complete in all respect. All sections of framed post and steel tube will be painted with primer and two coat of epoxy paint as per drawing and as per MoRD specification.</p>	2.00	Nos	8300.00	Each	16600.00
(i)	Truss and Vertical Support 1 x 3.50 tonne	3.50	Tonne	64951.00	P.Tonne	227329.00
(ii)	Aluminium Alloy Plate for Over Head Sign 1 x 2 x 12.00 m x 1.80 m	43.20	Sqm	560.00	P.Sqm	24192.00

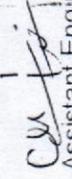
S.No.	Description of Item	Qty.	Unit	Rate(Rs)	Unit	Amount (Rs)
1	2.	3	4	5	6	7
13	<p>Metal Beam Crash Barrier Type - A, "W" : Metal Beam Crash Barrier Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fittings to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per clause 810</p> <p>29/2</p>	400.00	RM	2601.00	RM	1040400.00
14	<p>29/25</p> <p>Providing and Fixing of Retro Reflectorised 600 x 500 mm Chevro sign boards made out of retro reflective sheeting of High Intensity prismatic grade conforming to IRC-67: 2012 & Type IV standards of ASTM D4956-09 specifications, fixed over 2 mm thick Al/4mm thick ACP sheet supported with Back support frame of 25x25x3mm mild steel angle as approved, supported on a mild steel angle iron post 75 mm X 75 mm X 6 mm - 3 mtr height, firmly fixed to the ground by means of properly designed foundation with M20 grade cement concrete 45 cm X 45 cm X 60 cm, 60 cm below ground level as per approved drawing. 7 years Warranty for Retro Reflective Sheeting from the original sheeting manufacturer & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be submitted by the contractor. Regulatory sign boards of 60 x 50 cm Rectangle. Size 60 x 50 cms. Rectangle</p>	120.00	Nos	2647.00	Each	317640.00
15	<p>29/6</p> <p>Reinforced cement concrete M15 grade boundary pillars of standard design as per IRC:25 1967, fixed in position including finishing and lettering but excluding painting</p>	300.00	Nos	322.00	Each	96600.00
Total (Part "C") =						4606797.00 -4387467.00

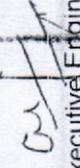

Assistant Engineer,
PWD Sub Dn. Deogarh


Executive Engineer
PWD Dn. I Pratapgarh


Assistant Engineer,
PWD Sub Dn. V, Pratapgarh


Executive Engineer
PWD Dn. III Pratapgarh

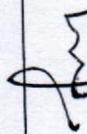

Assistant Engineer,
PWD Sub Dn. Dhariyawad


Executive Engineer
PWD Dn. Dhariyawad

Name of Work : Dhariyawad Pratapgadh Mandasaur Road Km 58/0 to 59/0 & 76/0 to 98/0 (.SH-81)

PART "D" : DRAIN WORK

S.No.	Description of Item	Measurement	Qty.	Unit	Rate Rs	Amount Rs	
1	2	3	4	5	6	7	
4	Providing and laying Plain Cement Concrete M-15 Mix with stone aggregate 20mm nominal size mechanically mixed and vibrated, in superstructure upto 4 meter above 1.50 m level from ground/bed level. [MoRTH Specification : Clause 1000/1700]						
	Drain Floor	2	800.00	0.45	0.05	3238.00	116568.00
		2	750.00	0.45	0.05	3238.00	109283.00
5	Providing and fabricating Steel reinforcement for RCC works including cutting, bending, placing in position and binding complete including cost of binding wire. (MoRTH specification : Clause 1000/1600). HYSD bars						
			905.00	Cum	@	35.00	31.68
						KG/Cum	MT
Total (Part "A") =						6513673.00	


Assistant Engineer,
PWD Sub Dn. Deogarh

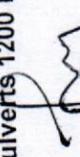

Executive Engineer
PWD Dn. I Pratapgadh

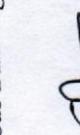
DETAILS OF CD WORKS (EXISTING AND PROPOSED)

s no	chainage	Existing			Proposed			Remarks
		HPC	Slab Culvert	Arch	HPC	Widening of Existing HPC	Slab Culvert	
1	76210	1x600			1x1200			Reconstruction
2	77200		1x0.8		1x1200			Reconstruction
3	77550		1x0.8		1x1200			Reconstruction
4	77670	1x600			1x1200			Reconstruction
5	78200		1x2				1x2.0x2.0	Recunstruction Due to Poor Condition
6	78380	1x600			1x1200			Reconstruction
7	78980	1x600			1x1200			Reconstruction
8	79770	1x600			1x1200			Reconstruction
9	80030	1x600			1x1200			Reconstruction
10	80160	1x1000				1x1000		Widening
11	80345	1x600			1x1200			Reconstruction
12	80490	1x600			1x1200			Reconstruction
13	80680		3x4					Retain & Repair
14	81450	1x600			1x1200			Reconstruction
15	81670	2x600			1x1200			Reconstruction
16	82110		2x2.00&1x6.00					widening & Repair
17	82675		1x2.00				1x2.00	Widening
18	82735	2x600			1x1200			Reconstruction
19	85975	1x600			1x1200			Reconstruction
20	86310	1x600			1x1200			Reconstruction
21	87020	1x600			1x1200			Reconstruction
22	87415		1x2.00				1x2.00	Widening
23	87490	3x600						Reconstruction
24	87880		1x2				1x2.0x2.0	Recunstruction Due to Poor Condition
25	88675		1x2				1x2	Widening
26	89250		12x900, 3x600,1x3.00				5x8	Reconstruction
27	89660		3x2.5				1x8	Reconstruction
28	89870		1x2				1x2	Widening
29	91035		1x6 & 2x4				1x6 & 2x4	Widening
30	91930	1x600			1x1200			Reconstruction
31	92350	1x600			1x1200			Reconstruction
32	92535	1x600			1x1200			Reconstruction
33	92815	2x600			1x1200			Reconstruction
34	93065		1x4				1x4	Widening

s no	chainage	Existing		Proposed				Remarks
		HPC	Slab Culvert	Arch	HPC	Widening of Existing HPC	Slab Culvert	
35	93540	1x600			1x1200			Reconstruction
36	93850		1x5			1x5		Widening
37	95495	2x300			1x1200			Reconstruction
38	96555	1x1000			1x1000			Widening
39	96735	1x1000	1x2				1x3x3	Retain & Repair
40	96810		1x2.5				2x2.0x2.0	Retain & Repair
41	97110				1x1000			Reconstruction
41	97900	1x1000						Widening

NEW HPC Culverts 1200 mm 4 Nos. (for Balancing)


Assistant Engineer,
PWD Sub Dn. Deogarh


Assistant Engineer,
PWD Sub Dn. Vth Pratapgarh

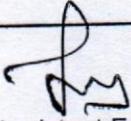

Executive Engineer
PWD Dn. I Pratapgarh


Executive Engineer
PWD Dn. III Pratapgarh

Summary of Cost of CD Works

Name of Work : Dhariyawad Pratapgarh Mandsaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)

S.No.	Particulars	Amount
1	Reconstruction of HP CULVERT - 1200MM DIA SINGLE ROW (22 Nos.)	5352028.00 ✓
2	NEW HP CULVERT - 1200MM DIA SINGLE ROW (4 Nos.)	975740.00 ✓
3	Widening of HP CULVERT - 1000MM DIA SINGLE ROW (3 Nos.)	482085.00 ✓
4	Widening of Slab Culverts (1X2M) (4 Nos.)	2887788.00 2940876.00
5	Widening of Slab Culverts (1X4M) (1 No.)	786079.00 805261.00
6	Widening of Slab Culverts (1X5M) (1 No.)	825799.00 848560.00
7	Reconstruction of Slab Culverts (1X8M) (1 No.)	3379404.00 4009098.00
8	Reconstruction of Slab Culverts (5x8M) (1 No.)	11954728.00 12039156.00
9	Widening of Slab Culverts (1x6M& 2x4) (1 No.)	4798393.00 4873817.00
10	Widening of Slab Culverts (1x6M& 2x2) (1 No.)	1827103.00 1840313.00
11	BOX Culverts 1X2.0x2.0 (3 Nos.)	2197068.00 ✓
12	BOX Culverts 1X3.0x3.0 (1 Nos.)	1264871.00 ✓
13	Repair of Slab & HPC Culverts (3 Nos)	185406.00 ✓
	Total	37516494.00 37814279.00


Assistant Engineer,
PWD Sub Dn. Deogarh


Assistant Engineer,
PWD Sub Dn. Vth Pratapgarh


Executive Engineer
PWD Dn. I Pratapgarh


Executive Engineer
PWD Dn. III Pratapgarh

DETAILED & ABSTRACT OF CCOT

Name of Work : Dhariyawad Pratapgarh Mandasaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)

Reconstruction of HP CULVERT - 1200MM DIA SINGLE ROW

At Chainage :-

76210,77200,77550,77670,78380,78980,79770,80030,80345,80490,81450,81670,82735,85975,86310,87020,91930,92350,92535,92815,93540,95495(22 Nos.)

S. No.	Description of Item	Measurement	Qty	Unit	Rate Rs	Unit	Amount Rs
1	2	3	4	4	6	5	7
1	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled Material, disposal of unserviceable Material and stacking the serviceable Material with all lift and lead of 1000 metres. [MoRTH Specification: Clause 202].BY MECHANICAL MEANS Rubble stone masonry in cement mortar Wing Wall	2 6.25 0.60 Total : 2.00	15.00	Cum	151.00	P.Cum	2265.00
2	Removing of all type of hume pipes & stacking with in a lead of 100 m including earthwork and dismantling of masonry works. (MoRTH specification : Clause 202) Above 600mm to 900mm dia	1 3.00 2.50 Total :	7.50	Meter	102.00	P.RM	765.00
3	Earthwork in excavation of foundation structures as per drawing and technical specifications (MoRTH specification : clause No. 304) By Mechanical Means (dewatering not required) Ordinary soil Wing Wall Under Pipe for stone pitching apron U/S for stone pitching apron D/S	2 6.90 1.40 1 2.00 9.85 1 1.50 3.45 1 3.00 4.45 Total :	19.32 10.84 1.55 4.01 35.72	Cum Cum Cum Cum Cum	29.00	P.Cum	1036.00

S. No.	Description of Item	Measurement	Qty	Unit	Rate Rs	Unit	Amount Rs
1		3	4	4	6	5	7
4	Providing & laying mechanically mixed and vibrated Cement Concrete in foundation upto a depth of 1.5mtr, below ground level and 1.5mtr. above ground/bed level. [MoRTH Specification : Clause 1000/1700].Cement concrete 1:3:6 mix with stone aggregate 40 mm crusher broken.	2 6.90 1.40 0.15	2.90	Cum			
	Wing Wall	1 1.50 $\frac{(10.40 + 10.50)}{2}$ 0.20	3.14	Cum			
	Under Pipe	Total :	6.04	Cum	2855.00	P.Cum	17244.00
5	Providing and laying Plain Cement Concrete M-15 mix with stone aggregate 20mm nominal size mechanically mixed and vibrated in foundation upto a depth of 1.50 below ground level and or 1.50mtr. above ground/bed level. [MoRTH Specification : Clause 1000/1700]	2 6.90 $\frac{(1.25 + 0.40)}{2}$ 2.70	30.74	Cum			
	Wing Wall	2 2.00 0.40 0.40 0.60	0.38	Cum			
	Pillars	2 $\frac{3.14}{4}$ $\frac{(1.00 + 0.60)}{2}$ $(1.44)^2$	-2.60	Cum			
	Deduction	Total :	28.52	Cum	3238.00	P.Cum	92348.00
6	Providing and laying Reinforced cement concrete pipes NP-4 for culverts including jointing ends and fixing collar with cement mortar 1:2. (MoRTH specification : clause 1000/2900). 1200mm dia	1 12.50	12.50	Rmtr	5864.00	P.Rmtr	73300.00
7	Providing and filling in foundation trenches and at the back of abutment wing walls etc. and below pipe bed in layers not exceeding 150 mm thick including watering and compacting including all leads and lifts. Selected granular Material in filling (MORTH sp. Clause 2200)	1 11.00 6.90 1.87	141.93	Cum			
		1 1.50 $\frac{(11.30 + 10.50)}{2}$ 1.38	22.56	Cum			
	Deduction	1 $\frac{3.14}{4}$ $\frac{(11.30 + 10.50)}{2}$ $(1.44)^2$	-17.74	Cum			

S. No.	Description of Item	Measurement	Qty	*Unit	Rate Rs	Unlt	Amount Rs
1	2	3	4	4	6	5	7
8	Providing and laying pitching on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and technical specifications. (MoRTH specification: Clause 2504 & 1700). With R.R. stone, weighing not less than 40 kg thickness not less than 150mm (specific gravity not less than 2.65)	Total :	146.75	Cum	332.00	P.Cum	48721.00
9	Providing and laying graded stone aggregate filter Material underneath pitching on slopes complete as per drawing and technical specification. (MoRTH specification : clause 2504).	4 4.409 0.30	5.29	Cum	836.00	P.Cum	4422.00
		4 4.409 0.20	3.53	Cum	899.00	P.Cum	3173.00
Total :							243274.00
For 22 Nos. CD Work							5352028.00


 Assistant Engineer,
 PWD Sub Dn. Deogarh


 Executive Engineer
 PWD Dn. I Pratapgarh

DETAILED & ABSTRACT OF COST

Name of Work : Dhariyawad Pratapgarh Mandasaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)

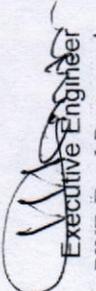
NEW HP CULVERT - 1200MM DIA SINGLE ROW

At Chainage :- for Balancing (4 Nos.)

S. No.	Description of Item	Measurement	Qty	Unit	Rate Rs	Unit	Amount Rs
		3	4	4	6	5	7
1	Earthwork in excavation of foundation structures as per drawing and technical specifications (MoRTH specification : clause No. 304) By Mechanical Means (dewatering not required) Ordinary soil						
	Wing Wall	2 6.90 1.40	19.32	Cum			
	Under Pipe	1 2.00 9.85	10.84	Cum			
	for stone pitching apron U/S	1 1.50 3.45	1.55	Cum			
	for stone pitching apron D/S	1 3.00 4.45	4.01	Cum			
		Total :	35.72	Cum	29.00	P.Cum	1036.00
2	Providing & laying mechanically mixed and vibrated Cement Concrete in foundation upto a depth of 1.5mtr, below ground level and 1.5mtr. above ground/bed level. [MoRTH Specification : Clause 1000/1700].Cement concrete 1:3:6 mix with stone aggregate 40 mm crusher broken.						
	Wing Wall	2 6.90 1.40	2.90	Cum			
	Under Pipe	1 1.50 (10.40 + 10.50) 2	3.14	Cum			
		Total :	6.04	Cum	2855.00	P.Cum	17244.00
3	Providing and laying Plain Cement Concrete M-15 mix with stone aggregate 20mm nominal size mechanically mixed and vibrated in foundation upto a depth of 1.50 below ground level and or 1.50mtr. above ground/bed level. [MoRTH Specification : Clause 1000/1700]						
	Wing Wall	2 6.90 (1.25 + 0.40) 2	31.88	Cum			
	Pillars	2 2.00 0.40 0.40 0.60	0.38	Cum			
	Deduction	2 3.14 (1.00 + 0.60) (1.44) ²	-2.60	Cum			
		4 2	29.66	Cum	3238.00	P.Cum	96039.00

S. No.	Description of Item	Measurement	Qty*	Unit	Rate Rs	Unit	Amount Rs
1	2	3	4	4	6	5	7
4	Providing and laying Reinforced cement concrete pipes NP-4 for culverts including jointing ends and fixing collar with cement mortar 1:2. (MoRTH specification : clause 1000/2900). 1200mm dia	1 12.50	12.50	Rmtr	5864.00	P.Rmtr	73300.00
5	Providing and filling in foundation trenches and at the back of abutment wing walls etc. and below pipe bed in layers not exceeding 150 mm thick including watering and compacting including all leads and lifts. Selected granular Material in filling (MORTH sp. Clause 2200	1 11.00 6.90 1.87	141.93	Cum			
		1 1.50 $\frac{(11.30 + 10.50)}{2}$ 1.38	22.56	Cum			
	Deduction	1 $\frac{3.14}{4}$ $\frac{(11.30 + 10.50)}{2}$ $(1.44)^2$	-17.74	Cum			
		Total :	146.75	Cum	332.00	P.Cum	48721.00
6	Providing and laying pitching on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and technical specifications. (MoRTH specification: Clause 2504 & 1700). With R.R. stone, weighing not less than 40 kg thickness not less than 150mm (specific gravity not less than 2.65)	4 4.409 0.30	5.29	Cum	836.00	P.Cum	4422.00
7	Providing and laying graded stone aggregate filter Material underneath pitching on slopes complete as per drawing and technical specification. (MoRTH specification : clause 2504).	4 4.409 0.20	3.53	Cum	899.00	P.Cum	3173.00
		Total :					243935.00
		For 4 Nos. CD Work					975740.00


 Assistant Engineer,
 PWD Sub Dn. Deogarh


 Executive Engineer
 PWD Dn. I Pratapgarh

DETAILED & ABSTRACT OF COST

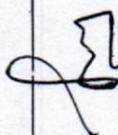
Name of Work : Dhariyawad Pratapgarh Mandsaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)

Widening of HP CULVERT - 1000MM DIA SINGLE ROW At Chainage :- 80/160,96555,97900 (3 Nos.)

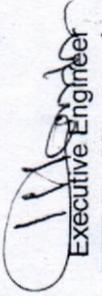
S. No.	Description of Item	Measurement	Qty	Unit	Rate Rs	Unit	Amount Rs
1	2	3	4	4	6	5	7
1	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled Material, disposal of unserviceable Material and stacking the serviceable Material with all lift and lead of 1000 metres. [MoRTH Specification: Clause 202].BY MECHANICAL MEANS Rubble stone masonry in cement mortar Wing Wall	2 8.50 0.40 2.00	13.60	Cum	151.00	P.Cum	2054.00
2	Earthwork in excavation of foundation structures as per drawing and technical specifications (MoRTH specification : clause No. 304) By Mechanical Means (dewatering not required) Ordinary soil Wing Wall Under Pipe for stone pitching apron U/S for stone pitching apron D/S	Total : 2.00	13.60	Cum	151.00	P.Cum	2054.00
3	Providing & laying mechanically mixed and vibrated Cement Concrete in foundation upto a depth of 1.5mtr, below ground level and 1.5mtr. above ground/bed level. [MoRTH Specification : Clause 1000/1700].Cement concrete 1:3:6 mix with stone aggregate 40 mm crusher broken. Wing Wall Under Pipe	2 6.90 1.40 1.00	19.32	Cum			
		1 2.00 9.85 0.55	10.84	Cum			
		1 1.50 3.45 0.30	1.55	Cum			
		1 3.00 4.45 0.30	4.01	Cum			
		Total :	35.72	Cum	29.00	P.Cum	1036.00
		Total :	5.77	Cum	2855.00	P.Cum	16473.00
2	6.25 1.40 0.15	2.63	Cum				
1	1.50 (10.40 + 10.50) 0.20	3.14	Cum				
	Total :	5.77	Cum	2855.00	P.Cum	16473.00	

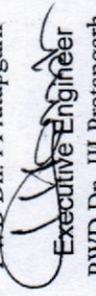
S. No.	Description of Item	Measurement	Qty	Unit	Rate Rs	Unit	Amount Rs
1		3	4	4	6	5	7
4	Providing and laying Plain Cement Concrete M-15 mix with stone aggregate 20mm nominal size mechanically mixed and vibrated in foundation upto a depth of 1.50 below ground level and or 1.50mtr. above ground/bed level. [MoRTH Specification : Clause 1000/1700] Wing Wall	$\frac{(1.25 + 0.40)}{2}$ 2.70	27.84	Cum			
	Pillars	2.00 0.40 0.40 0.60	0.38	Cum			
	Deduction	$\frac{3.14}{4}$ $\frac{(1.00 + 0.60)}{2}$ $(1.23)^2$	-1.90	Cum			
		Total :	26.32	Cum	3238.00	P.Cum	85224.00
5	Providing and laying Reinforced cement concrete pipes NP-4 for culverts including jointing ends and fixing collar with cement mortar 1:2. (MoRTH specification : clause 1000/2900). 1000mm dia		5.00	Rmtr	5144.00	P.Rmtr	25720.00
6	Providing and filling in foundation trenches and at the back of abutment wing walls etc. and below pipe bed in layers not exceeding 150 mm thick including watering and compacting including all leads and lifts. Selected granular Material in filling (MORTH sp. Clause 2200)		58.44	Cum			
		1.50 $\frac{(11.30 + 10.50)}{2}$ 1.38	22.56	Cum			
	Deduction	$\frac{3.14}{4}$ $\frac{(11.30 + 10.50)}{2}$ $(1.23)^2$	-12.95	Cum			
		Total :	68.05	Cum	332.00	P.Cum	22593.00
7	Providing and laying pitching on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and technical specifications. (MoRTH specification: Clause 2504 & 1700). With R.R. stone, weighing not less than 40 kg thickness not less than 150mm (specific gravity not less than 2.65)		5.29	Cum	836.00	P.Cum	4422.00
		4 4.409 0.30					

S. No.	Description of Item	Measurement	Qty	Unit	Rate Rs	Unit	Amount Rs
1	2	3	4	4	6	5	7
8	Providing and laying graded stone aggregate filter Material underneath pitching on slopes complete as per drawing and technical specification. (MoRTH specification : clause 2504).	4 4.409 0.20	3.53	Cum	899.00	P.Cum	3173.00
Total :							160695.00
			For 3 Nos. CD Work				482085.00


 Assistant Engineer,
 PWD Sub Dn. Deogarh


 Assistant Engineer,
 PWD Sub Dn Vth Pratapgarrh


 Executive Engineer
 PWD Dn. I Pratapgarrh


 Executive Engineer
 PWD Dn. III Pratapgarrh

DETAILED & ABSTRACT OF COST

Name of Work : Dhariyawad Pratapgarh Mandsaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)

Widening of Slab Culverts (1X2M)

CH. 82675,87415,88675,89870 (3 Nos.)

S.No.	Particulars	Qty	Unit	Rate	Unit	Amount					
1	2	4	5	6	7	8					
	Measurement										
	3										
1	Earthwork in excavation of foundation structures as per drawing and technical specifications (MoRTH specification : clause No. 304) By Mechanical Means (dewatering not required) Ordinary soil										
	Abutment	2 x	4.00	x	5.10	x	1.50	=	61.20	Cum	
	Wing Wall	4 x	(3.4+2)/2	x	3.00	x	1.50	=	48.60	Cum	
							Total	=	109.80	Cum	3184.00
2	Providing & laying mechanically mixed and vibrated Cement Concrete in foundation upto a depth of 1.5mtr. below ground level and 1.5mtr. above ground/bed level. [MoRTH Specification : Clause 1000/1700]. (b) Cement concrete 1:3:6 mix with stone aggregate 40 mm crusher broken.	2 x	4.00	x	5.10	x	0.15	=	6.12	Cum	
	abutment	4 x	(3.4+2.0)/2	x	3.00	x	0.15	=	4.86	Cum	
	Wing Wall						Total	=	10.98	Cum	31348.00
3	Providing and filling in foundation trenches and at the back of abutment wing walls etc. and below pipe bed in layers not exceeding 150 mm thick including watering and compacting including all leads and lifts. Filter media behind abutment wing walls and return walls (MORTH sp. Clause 2505)	2 x	2.515	x	2.80	x	2.80	=	39.44	Cum	
							Total	=	39.44	Cum	19089.00
									2855.00	P.Cum	31348.00
									484.00	P.Cum	19089.00

S.No.	Particulars	Measurement	Qty	Unit	Rate	Unit	Amount
1		3	4	5	6	7	8
4	Structural cement concrete (Design Mix) in open foundations, with form work, at any level. Cement concrete for plain/reinforced concrete in open foundations as per drawing and technical specification. [MoRTH Specification : Section 1700 & 1500]. With 20mm nominal size aggregate. By using concrete mixer.R.C.C. M-20 grade						
	Abutments		2 x 4.00 x 3.60 x 0.20 =	5.76	Cum		
			2 x 4.00 x 3.20 x 0.20 =	5.12	Cum		
			2 x 4.00 x 2.80 x 0.40 =	8.96	Cum		
			2 x 4.00 x 2.40 x 0.40 =	7.68	Cum		
			2 x 4.00 x 2.00 x 0.30 =	4.80	Cum		
			Sob total	32.32	Cum		
	Wing wall		4 x 3.00 x 2.085 x 0.40 =	10.01	Cum		
			4 x 3.00 x 1.685 x 0.40 =	8.09	Cum		
			4 x 3.00 x 2.395 x 0.40 =	11.50	Cum		
			4 x 3.00 x 1.185 x 0.30 =	4.27	Cum		
			Sob total	33.87	Cum		
			Total	66.19	Cum	3912.00	258920.00
5	Structural cement concrete for plain concrete/ reinforced concrete for substructure at any level, complete as per drawing and technical specification.Design mix concrete – [MoRTH Specification : Section 1500 & 1700]. RCC M-20 grade, including form work Upto 5 mtr. height						
	Abutments		2 x 4.00 x 1.50 x 2.30 =	27.600	Cum		
			2 x 4.00 x 0.50 x 0.50 =	2.000	Cum		
	Wing wall		4 x 3.00 x 0.74 x 1.60 =	14.21	Cum		
			Sob total	43.81	Cum		
	Abutment Cap		2 x 4.00 x 0.400 x 0.30 =	0.96	Cum		
			Sob total	0.96	Cum		
			Total	44.77	Cum	3909.00	174998.00
6	Providing and fabricating steel reinforcement for R.C.C works including cutting, bending, placing in position and binding complete including cost of binding wire . [MoRTH Specification : Clause 1000/1600]. HYSD bars.						
			62.88 @	35 kg/cum	=	2200.80	KG

S.No.	Particulars	Measurement	Qty	Unit	Rate	Unit	Amount
1		3	4	5	6	7	8
			= 2.201	MT	53586.00	P.MT	117932.00

7 Providing A.C. pipe Weep holes 150mm dia in Masonry/plain Concrete/Reinforced Concrete abutment, wing wall/return wall complete as per drawing and technical specification. [MoRTH Specification : Clause 2205].

4 x	2.00	8.00	Rmt				
Total =		8.00	Rmt	97.00	P.Mtr		776.00

8 Reinforced cement concrete M-30 mix with stone aggregate 20mm nominal size mechanically mixed and vibrated for reinforced concrete work in slab in superstructure at any level excluding steel reinforcement, but including centering and shuttering laid in position (MoRTH specification : clause 1000/1700).

1 x	4.40 x 2.60 x 2.60	3.432	Cum				
Total =		3.43	Cum	4878.00	P.Cum		16741.00

9 Providing and fabricating steel reinforcement for R.C.C works including cutting, bending, placing in position and binding complete including cost of binding wire . [MoRTH Specification : Clause 1000/1600]. HYSD bars.

3.43	@	120 kg/cum	=	411.84	KG		
			=	0.412	MT	53586.00	P.MT
							22069.00

10 Reinforced cement concrete wearing coat M-30 grade at any level including formwork and reinforcement complete as per drawing and technical Specification. [MoRTH Specification : Clause 2204, 1500 & 1700].

1 x	4.00 x 2.60 x 2.60	0.075	Cum				
Total =		0.78	Cum	8085.00	P.Cum		6306.00

S.No.	Particulars	Measurement	Qty	Unit	Rate	Unit	Amount
1	2	3	4	5	6	7	8
11	Provision of an Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with M-20 grade concrete with HYSD reinforcement conforming to IRC:21 and dowel bars 25 mm dia, 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to the structure on which it is built and installed as per design given in the enclosure to MOST circular No. RW/NH - 33022/194-DO III dated 24 June 1994 as per dimensions in the approved drawing and at locations directed by the Engineer, all as specified as per MORTH Specification CI 809	1 x 2.00 x 2.60	5.200	RM	2288.00	P.RM	11898.00
		Total =	5.20	RM			
12	Drainage spout with GI pipe 100mm dia and GI bolt 10mm dia with galvanized MS flat clamp complete as per drawing and Technical Specification		2.00	Nos	1257.00	Each	2514.00
		Total =	2.00	Nos			
13	Providing and fixing 2mm thick Corrugated Copper Plate in expansion joint complete as per drawing and technical specifications in MoRTH specification : clause 2605.	1 x 2.00 x 4.00	8.000	RM	5019.00	P.RM	40152.00
		Total =	8.00	RM			
14	Providing and fixing 20mm thick Compressible Fibre Board in expansion joint complete as per drawing and technical specification in MoRTH specification : clause 2605.	1 x 2.00 x 4.00 x 0.300	2.400	Sqm	1227.00	P.Sqm	2945.00
		Total =	2.40	Sqm			
15	Providing and fixing in position 20mm thick Premoulded Joint Filler in expansion joint for fixed ends of simply supported spans not exceeding 10m to cater for a horizontal movement upto 20mm, covered with sealant complete as per drawing and technical specification in MoRTH specification : clause 2605.	1 x 2.00 x 4.00	8.000	RM	267.00	P.RM	2136.00
		Total =	8.00	RM			

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S.No.	Particulars	Measurement	Qty	Unit	Rate	Unit	Amount
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16 Providing and filling joint sealing compound as per drawings and technical specification with coarse sand and 6% bitumen by weight as per MoRTH specification : clause 2605.

B.S
10.4

1 x 2.00 x 4.00 x 1.000 = 8.000 RM/CM Depth
 Total = 8.00 RM/CM Depth

17 Providing and laying pitching on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and technical specifications. (MoRTH specification: Clause 2504 & 1700). With R.R. stone, weighing not less than 40 kg thickness not less than 150mm (specific gravity not less than 2.65)

B.S
3.1

1 x 4.00 x 6.158 x 0.300 = 7.390 Cum
 Total = 7.39 Cum

18 Providing and laying graded stone aggregate filter Material underneath pitching on slopes complete as per drawing and technical specification. (MoRTH specification : clause 2504).

B.S
3.1

1 x 4.00 x 6.158 x 0.200 = 4.926 Cum
 Total = 4.93 Cum

19 Painting with superior grade enamel apint of approved quality to give an even shade including writing, littering, figuring etc. complete as per IRC standards of :Number of bridge & culvert, (all four sides). New Work (Three Coats)

Q.S
10.2

4 = 4.00 Nos
 Total = 4.00 Nos

Each 204.00
 Total= 735219.00
 2940876.00
 2867786.00

For 4 Nos.


 Assistant Engineer,
 PWD Sub Dn. Deoghar


 Executive Engineer
 PWD Dn. I Pratapgarh

DETAILED & ABSTRACT OF COST

Name of Work : Dhariyawad Pratapgarh Mandasaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)

Widening of Slab Culverts (1X4M)

CH. 93065 (1 Nos.)

S.No.	Particulars	Qty	Unit	Rate	Unit	Amount					
1	2	4	5	6	7	8					
	Measurement										
		3									
1	Earthwork in excavation of foundation structures as per drawing and technical specifications (MoRTH specification : clause No. 304) By Mechanical Means (dewatering not required) Ordinary soil	2 x	3.80	x	5.10	x	1.50	=	58.14	Cum	
	Abutment	4 x	(3.4+2)/2	x	3.00	x	1.50	=	48.60	Cum	
	Wing Wall						Total	=	106.74	Cum	3095.00
2	Providing & laying mechanically mixed and vibrated Cement Concrete in foundation upto a depth of 1.5mtr, below ground level and 1.5mtr. above ground/bed level. [MoRTH Specification : Clause 1000/1700]. (b) Cement concrete 1:3:6 mix with stone aggregate 40 mm crusher broken.	2 x	3.80	x	5.10	x	0.15	=	5.81	Cum	
	abutment	4 x	(3.4+2.0)/2	x	3.00	x	0.15	=	4.86	Cum	
	Wing Wall						Total	=	10.67	Cum	2855.00
										P.Cum	30474.00
3	Providing and filling in foundation trenches and at the back of abutment wing walls etc. and below pipe bed in layers not exceeding 150 mm thick including watering and compacting including all leads and lifts. 1 also mania behind abutment wing walls and return walls. (MoRTH sp Clause 2505)	2 x	2.315	x	2.00	x	3.20	=	29.63	Cum	
							Total	=	29.63	Cum	484.00
										P.Cum	14341.00

S.No.	Particulars	Measurement	Qty	Unit	Rate	Unit	Amount
1	2	3	4	5	6	7	8
4	Structural cement concrete (Design Mix) in open foundations, with form work, at any level. Cement concrete for plain/reinforced concrete in open foundations as per drawing and technical specification. [MoRTH Specification : Section 1700 & 1500]. With 20mm nominal size aggregate. By using concrete mixer.R.C.C. M-20 grade						
	Abutments						
		2 x 3.80 x 3.60 x 0.20 =	5.47	Cum			
		2 x 3.80 x 3.20 x 0.20 =	4.86	Cum			
		2 x 3.80 x 2.80 x 0.40 =	8.51	Cum			
		2 x 3.80 x 2.40 x 0.40 =	7.30	Cum			
		2 x 3.80 x 2.00 x 0.30 =	4.56	Cum			
		Sob total =	30.70	Cum			
	Wing wall						
		4 x 3.00 x 2.085 x 0.40 =	10.01	Cum			
		4 x 3.00 x 1.685 x 0.40 =	8.09	Cum			
		4 x 3.00 x 2.395 x 0.40 =	11.50	Cum			
		4 x 3.00 x 1.185 x 0.30 =	4.27	Cum			
		Sob total =	33.87	Cum			
		Total =	64.57	Cum	3912.00	P.Cum	252598.00
5	Structural cement concrete for plain concrete/ reinforced concrete for substructure at any level, complete as per drawing and technical specification.Design mix concrete – [MoRTH Specification : Section 1500 & 1700]. RCC M-20 grade, including form work Upto 5 mtr. height						
	Abutments						
		2 x 3.80 x 1.50 x 2.50 =	28.500	Cum			
		2 x 3.80 x 0.50 x 0.70 =	2.660	Cum			
		4 x 3.00 x 0.74 x 1.80 =	15.98	Cum			
		Sob total =	47.14	Cum			
	Wing wall						
		2 x 3.80 x 0.400 x 0.30 =	0.91	Cum			
		Sob total =	0.91	Cum			
	Abutment Cap						
		Total =	48.05	Cum	3909.00	P.Cum	187843.00
6	Providing and fabricating steel reinforcement for R.C.C works including cutting, bending, placing in position and binding complete including cost of binding wire. [MoRTH Specification : Clause 1000/1600]. HYSD bars.						

62.77 @ 35 kg/cum = 2197.09 KG

S.No.	Particulars	Measurement	Qty	Unit	Rate	Unit	Amount
1	2	3	4	5	6	7	8
			= 2.197	MT	53586.00	P.MT	117733.00

7 Providing A.C. pipe Weep holes 150mm dia in Masonry/plain Concrete/Reinforced Concrete abutment, wing wall/return wall complete as per drawing and technical specification. [MoRTH Specification : Clause 2205].

4 x 2.00 = 8.00 Rmt
 Total = 8.00 Rmt 97.00 P.Mtr 776.00

8 Reinforced cement concrete M-30 mix with stone aggregate 20mm nominal size mechanically mixed and vibrated for reinforced concrete work in slab in superstructure at any level excluding steel reinforcement, but including centering and shuttering laid in position (MoRTH specification : clause 1000/1700).

1 x 4.40 x 4.60 x 4.60 x 0.38 = 7.691 Cum
 Total = 7.69 Cum 4878.00 P.Cum 37518.00

9 Providing and fabricating steel reinforcement for R.C.C works including cutting, bending, placing in position and binding complete including cost of binding wire . [MoRTH Specification : Clause 1000/1600]. HYSB bars.

7.69 @ 120 kg/cum = 922.94 KG
 = 0.923 MT 53586.00 P.MT 49457.00

10 Reinforced cement concrete wearing coat M-30 grade at any level including formwork and reinforcement complete as per drawing and technical Specification. [MoRTH Specification : Clause 2204, 1500 & 1700].

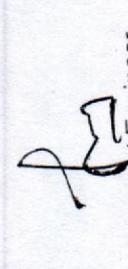
1 x 3.80 x 4.60 x 4.60 x 0.075 = 1.311 Cum
 Total = 1.31 Cum 8085.00 P.Cum 10599.00

S.No.	Particulars	Measurement	Qty	Unit	Rate	Unit	Amount
1	2	3	4	5	6	7	8
11	Provision of an Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with M-20 grade concrete with HYSD reinforcement conforming to IRC:21 and dowel bars 25 mm dia, 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to the structure on which it is built and installed as per design given in the enclosure to MOST circular No. RW/NH - 33022/1/94-DO III dated 24 June 1994 as per dimensions in the approved drawing and at locations directed by the Engineer, all as specified as per MORTH Specification CI 809	1 x 2.00 x 4.60	= 9.200	RM	2288.00	P.RM	21050.00
			Total =	9.20	RM		
12	Drainage spout with GI pipe 100mm dia and GI bolt 10mm dia with galvanized MS flat clamp complete as per drawing and Technical Specification	2	= 2.00	Nos	1257.00	Each	2514.00
			Total =	2.00	Nos		
13	Providing and fixing 2mm thick Corrugated Copper Plate in expansion joint complete as per drawing and technical specifications in MoRTH specification : clause 2605.	1 x 2.00 x 3.80	= 7.600	RM	5019.00	P.RM	38144.00
			Total =	7.60	RM		
14	Providing and fixing 20mm thick Compressible Fibre Board in expansion joint complete as per drawing and technical specification in MoRTH specification : clause 2605.	1 x 2.00 x 3.80 x 0.400	= 3.040	Sqm	1227.00	P.Sqm	3730.00
			Total =	3.04	Sqm		
15	Providing and fixing in position 20mm thick Premoulded Joint Filler in expansion joint for fixed ends of simply supported spans not exceeding 10m to cater for a horizontal movement upto 20mm, covered with sealant complete as per drawing and technical specification in MoRTH specification : clause 2605.	1 x 2.00 x 3.80	= 7.600	RM	267.00	P.RM	2029.00
			Total =	7.60	RM		

S.No.	Particulars	Measurement	Qty	Unit	Rate	Unit	Amount
		3	4	5	6	7	8
1	Providing and filling joint sealing compound as per drawings and technical specification with coarse sand and 6% bitumen by weight as per MoRTH specification : clause 2605.	1 x 2.00 x 3.80 x 1.000	=	7.600	RM/CM Depth	P.RM/CM Depth	122.00
		Total =	=	7.60	RM/CM Depth		
17	Providing and laying pitching on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and technical specifications. (MoRTH specification: Clause 2504 & 1700). With R.R. stone, weighing not less than 40 kg thickness not less than 150mm (specific gravity not less than 2.65)	1 x 4.00 x 8.042 x 0.300	=	9.650	Cum	P.Cum	8068.00
		Total =	=	9.65	Cum		
18	Providing and laying graded stone aggregate filter Material underneath pitching on slopes complete as per drawing and technical specification. (MoRTH specification : clause 2504).	1 x 4.00 x 8.042 x 0.200	=	6.434	Cum	P.Cum	5784.00
		Total =	=	6.43	Cum		
19	Painting with superior grade enamel apint of approved quality to give an even shade including writing, littering, figuring etc. complete as per IRC standards of :Number of bridge & culvert, (all four sides). New Work (Three Coats)		=	4.00	Nos	Each	204.00
		Total =	=	4.00	Nos	Total =	805261.00
							786079.00

For 1 Nos.


Executive Engineer
PWD Dn. I Pratapgarh


Assistant Engineer,
PWD Sub Dn. Deogarh

DETAILED & ABSTRACT OF COST

Name of Work : Dhariyawad Pratapgarh Mandasaur Road Km 58/0 to 59/00 & 76/0 to 98/0 (SH-81)

Widening of Slab Culverts (1x4M)

CH. 93850 (1 Nos.) $\frac{1 \times 2}{1 \times 2}$

S.No.	Particulars	Qty	Unit	Rate	Unit	Amount
1	2	4	5	6	7	8
	Measurement					
1	Earthwork in excavation of foundation structures as per drawing and technical-specifications (MoRTH specification : clause No. 304) By Mechanical Means (dewatering not required) Ordinary soil					
	Abutment	2 x 3.80	x 5.10	x 1.50	=	58.14 Cum
	Wing Wall	4 x (3.4+2)/2	x 3.00	x 1.50	=	48.60 Cum
		Total =				106.74 Cum
				29.00	P.Cum	3095.00
2	Providing & laying mechanically mixed and vibrated Cement Concrete in foundation upto a depth of 1.5mtr, below ground level and 1.5mtr. above ground/bed level. [MoRTH Specification : Clause 1000/1700]. (b) Cement concrete 1:3:6 mix with stone aggregate 40 mm crusher broken.					
	abutment	2 x 3.80	x 5.10	x 0.15	=	5.81 Cum
	Wing Wall	4 x (3.4+2.0)/2	x 3.00	x 0.15	=	4.86 Cum
		Total =				10.67 Cum
				2855.00	P.Cum	30474.00
3	Providing and filling in foundation trenches and at the back of abutment wing walls etc. and below pipe bed in layers not exceeding 150 mm thick including watering and compacting including all leads and lifts. Filter media behind abutment wing walls and return walls (MORTH sp. Clause 2505)					
		2 x 2.315	x 2.00	x 3.20	=	29.63 Cum
		Total =				29.63 Cum
				484.00	P.Cum	14341.00