

GOVERNMENT OF INDIA AND GOVERNMENT OF PUNJAB

PUNJAB ROADS & BRIDGES DEVELOPMENT BOARD



MONTHLY PROGRESS REPORT No 4 (JANUARY – FEBRUARY 2015)

**Monitoring of Output and Performance Based Road Contract (OPRC) for Sangrur Mansa
Bathinda Network in Punjab (India)
Contract Agreement No. 1 of 2014-15**



TNM TECHNOLOGY AND
MANAGEMENT LTD.



TNM – ICRA Management Consulting Services Ltd

Monitoring Consultant – Project Office

Construction Division – PWD B&R

D.A.C Block – 2

Sangrur, Punjab - 148001

ABBREVIATIONS

A – Association.
AASHTO - American Association of State Highway and Transportation Officials
AADT - Annual Average Daily Traffic (AADT).
AC - Asphalt Concrete (AC):
ASTM – American Society for Testing and Materials.
BANK - World Bank
Base Year – Last Completed Financial Year at the time of receipt of the Bids
BC – Bituminous Concrete
BDPO-Block Development and Panchayat Officer
BDS - Bid Data Sheet
BM-Bituminous Macadam
BoQ – Bill of Quantities
C - Consortium
CBR - California Bearing Ratio
CoI – Corridor of Impact
CQAMP – Contract Quality Assurance Management Plan
DBM- Dense Bituminous Macadam
DCP- Dynamic Cone Penetrometer
dgMarket – International portal for tenders and procurement opportunities from governments and international organisations (www.dgmarket.com)
DRB - Dispute Review Board
EHS – Environment Health and Safety
EIA – Environmental Impact Assessment
EMP - Environmental Management Plan
EIRR - Economic Internal Rate of Return
ESA- Equivalent Standard Axle
ESMF-Environmental Social Management Framework
FIDIC - Federation International Des Ingénieurs-Conseils - International Federation of Consulting Engineers
FWD - Falling Weight Deflectometer
FWP – Forward Work Programme
GC or GCC- General Conditions of Contract
GDP - Gross Domestic Product
GoI - Government of India
GoP - Government of Punjab
IBRD – International Bank for Rehabilitation and Development
ICB – International Competitive Bidding
IDA – International Development Association
INR – Indian Rupees
IRC- Indian Roads Congress
IRI - International Roughness Index
IRR- Internal Rate of Return
ITB - Instructions to Bidders
JV - Joint Venture
JVA - Joint Venture Agreement.
km - Kilometer
LoS - Level of Service.
MDR – Major District Road

MoEF – Ministry of Environment and Forests
Section I – Instruction to Bidders 9
Government of Punjab (Public Works Department Buildings and Roads)
MORT&H – Ministry of Road Transport and Highways
MPa - Mega Pascal. Unit of Measurement
MPD – Mean Profile Depth
MPM- Management Performance Measures
MSA – Million (Equivalent) Standard Axels
NABARD – National Bank for Agriculture and Rural Development
NH – National Highway
NHAI – National Highways Authority of India
NPV - Net Present Value
ODR – Other District Road
OPRC - Output and Performance based Road Contracts.
PAP – Project Affected Person
PC – Particular Conditions of Contract
PCU – Passenger Car Unit
PIRR- Project Internal Rate of Return (PIRR)
PMGSY – Pradhan Mantri Gram SadakYojana
PSPCB – Punjab State Pollution Control Board
PWD – Public Works Department
PRBDB – Punjab Roads and Bridges Development Board
PSRSP – Punjab State Road Sector Project
QA – Quality Assurance
QC - Quality Control
RAP - Resettlement Action Plan
RDPM – Road Durability Performance Measure
ROMDAS – Road Measurement Data Acquisition System
RoW – Right of Way
RPM – Raised Pavement Marker
RUS&CPM – Road User Service and Comfort Performance Measure
SDBC – Semi Dense Bituminous Concrete
SH – State Highway
SIA – Social Impact Assessment
TMP – Traffic Management Plan
ToR – Terms of Reference
UNDB online - United Nations Development Business online (www.devbusiness.com)
WB – World Bank

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1 PROJECT OVERVIEW

1.1 INTRODUCTION BACKGROUND

The Government of India received financing from the International Bank for Reconstruction and Development (IBRD) towards the cost of Punjab State Road Sector Project, and applied through Punjab Roads & Bridges Development Board (PRBDB) a portion of the funds for the Monitoring/Supervision of its state road network pertaining to the Sangrur-Mansa-Bathinda sections.

The Government of Punjab (GoP) through **Punjab Public Works Department, Building & Roads, PWD (B&R)** has allotted **PATEL INFRASTRUCTURE PVT. LTD** the work for Improvement, Rehabilitation and Routine Maintenance of approximately 204 Km of its state road network comprising the Sangrur-Mansa-Bathinda network, who begin the contract on 05-Dec-2012 with expected date of completion being 04-Dec-2022.

The contract allotted, is an **Output and Performance based Road Contract (OPRC)** whereby the Contractor is responsible for the overall management of the network, including all of the routine maintenance works, design and construction of the required surfacing renewal, pavement rehabilitation and improvement works and the management of any necessary emergency works.

Technology and Management Limited, Israel in association with ICRA Management Consulting Services Ltd, India was selected as the preferred bidder to undertake the role of the Monitoring Consultant (MC) on behalf of Punjab Roads and Bridges Development Board, a statutory body established under the Punjab Roads and Bridges Development Board Act, 1998 (Punjab Act No. 22 of 1998). The initial term of the Monitoring Consultancy services will be for a period of five (5) years.

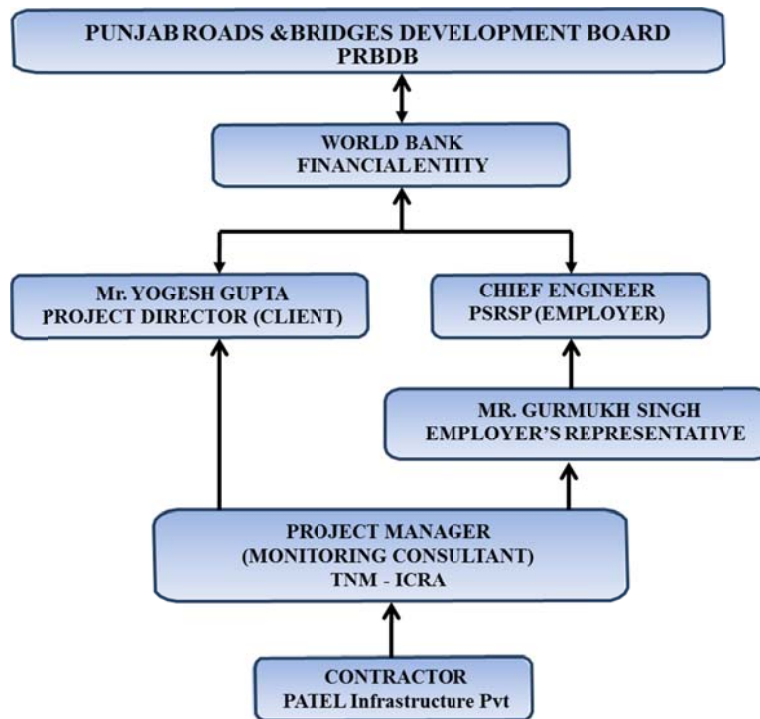


Figure 1-1 : Project Organization Chart

ENTITIES INVOLVED IN THE PROJECT		
CLIENT	PUNJAB STATE ROAD SECTOR PROJECT PUNJAB ROADS AND BRIDGES DEVELOPMENT BOARD – PRBDB	Yogesh Gupta - Project Director Anil Kumar Sharma – Deputy Project Director
EMPLOYER'S REPRESENTATIVE	PUNJAB STATE ROAD SECTOR PROJECT - SANGRUR	Mr. Gurmukh Singh - Executive Engineer Mr. Pawan Kumar Garg - Sub Divisional Engineer
FUNDING AGENCY	INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT (IBRD)	
MONITORING CONSULTANT	TNM Technology and Management Limited, - ICRA Management Consulting Services Ltd	Haim Bonjack - Authorized Signatory Wilson Perez – Team Leader
	DATE MOBILIZED ON	October 7, 2014
	Duration of Contract	5 years
CONTRACTOR	PATEL INFRASTRUCTURE PVT. LTD	Shri Arvindbhai V. Patel – Managing Director Mukesh Kumar – Road Manager
	Duration	10 Years
	Start Date	December 4, 2012
	Date of Signing of Contract	December 10, 2012
	End Date	December 4, 2022
	Value of contract signed	INR 596.36 Crs

Figure 1-2 : Entities Involved in the Project

1.2 ORGANISATION CHART OF CONTRACTOR

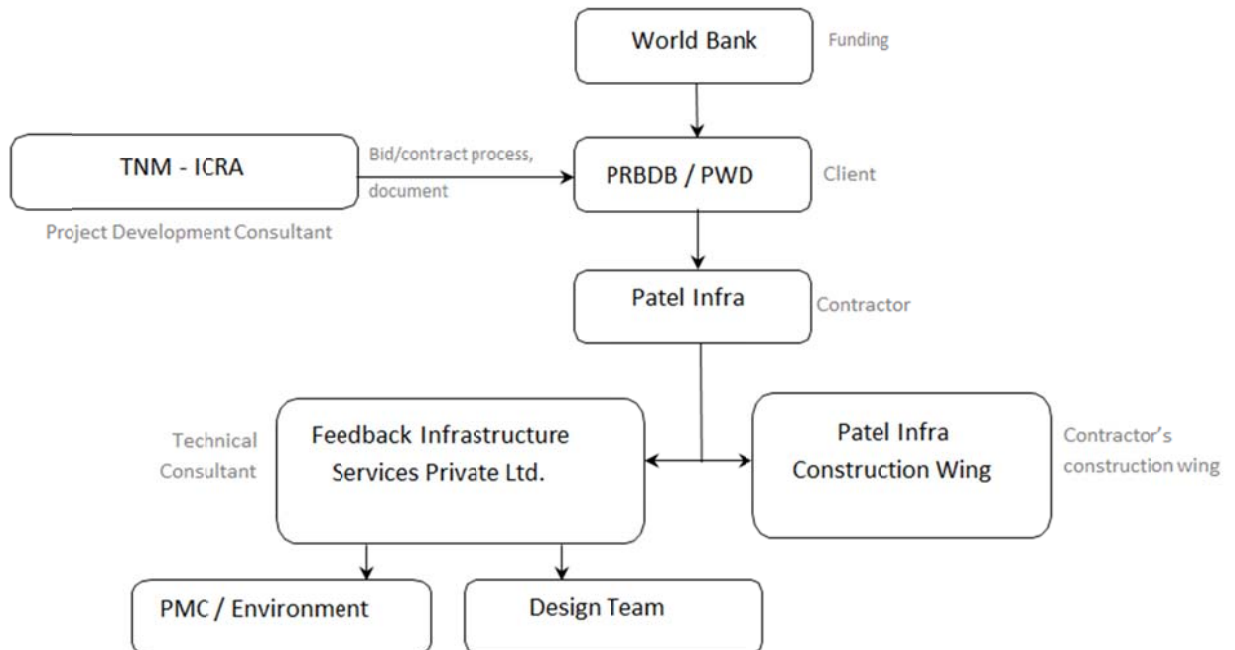


Figure 1-3 : Institutional Organization Chart of Contractor

1.3 ORGANISATION & RESPONSABILITIES - MC

The appointed Monitoring Consultant shall be responsible for assisting the Employer's Representative in implementing and maintaining an appropriate regime for managing the OPRC contract.

The Consultant will represent the Client as the Project Manager under the General Conditions for an Output and Performance based Road Contract. Accordingly, the objective of the Consultant's role is to provide timely and orderly required advice to minimize any potential risk to the Employer by verifying the achievement of all of contractual requirements under the works contract within the stipulated time and budget.

As a representative of the Employer, the Monitoring Consultant (MC) will be responsible for the administration of the above described Contract and for the verification of works and services to be performed by the Contracting Entity (CE) for the Civil Works. The above includes the continuous assessment of the CE's technical performance.

1.3.1 RESPONSIBILITIES OF THE MONITORING CONSULTANT

- Monitoring the performance of the Contractor based on the approved Work Programme.
- Overall monitoring of the road construction being done by the Contractor, based on achieving and maintaining the required and designed levels of service.
- Evaluation of the quality and residual life of road pavement, both presented, designed, constructed and maintained by the Contractor.
- Evaluation and recommendation of designs proposed by the Contractor for acceptance to Employer.
- Evaluation and monitoring of the performance of Environmental Impact Management Plan and Resettlement & Rehabilitation Plan by the Contractor.
- Managing the Quality Assurance of the roads and bridges and Monitoring the quality control of the Contractor.
- Monitoring, overall supervision and recommendation for acceptance of data for inventory updating submitted by the Contractor.
- The review of all technical documentation required for payment and recommendations for approvals of the monthly billing presented by the Contractor.
- Review and monitor the process leading to the creation and updating of the asset data base using technology acceptable to the Client.

1.3.2 PROJECT ORGANIZATION

In Figure 1-4 : Organization Chart, is observing the internal distribution of all members of the staff of the Monitoring Consultant and then relationship with the Client and Contractor.

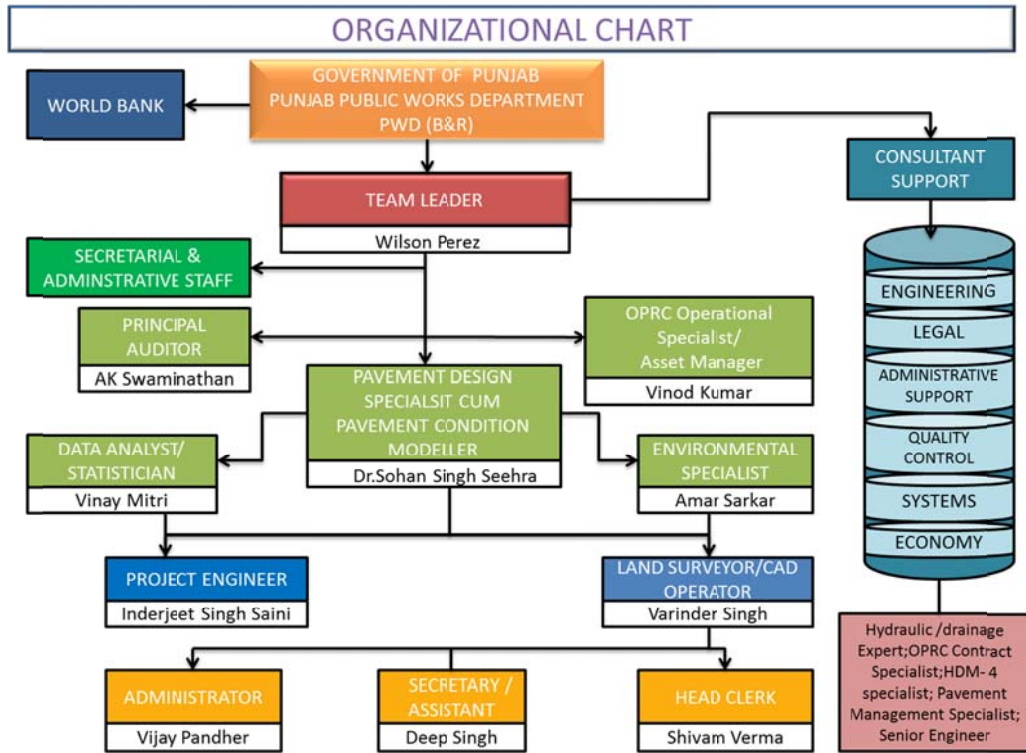


Figure 1-4 : Organization Chart of Monitoring Consultant

1.4 BASIC CONTRACT FEATURES

1.4.1 PROJECT BRIEF

According to the Contractor’s Bidding Document, the major components of the Work Contract are given in:

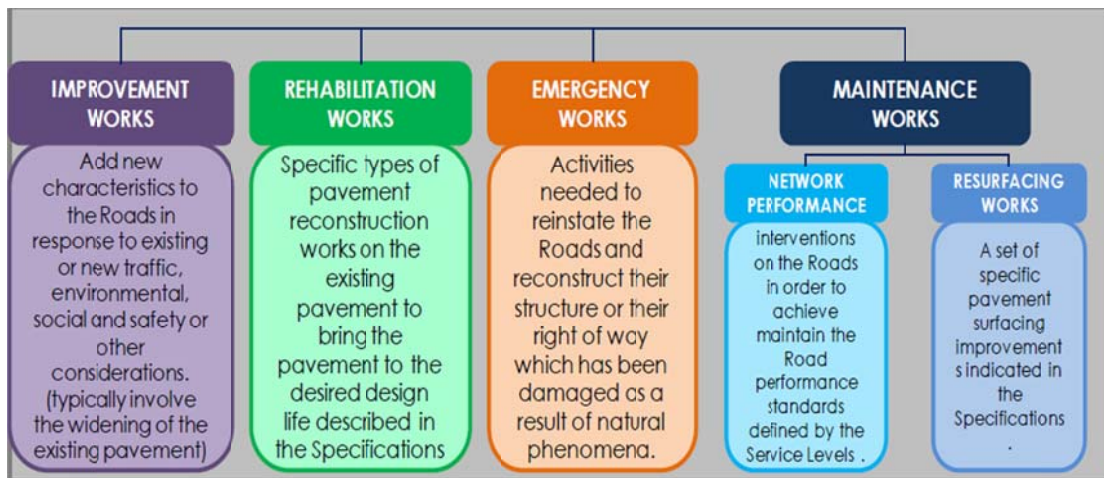


Figure 1-5 : Major components civil Works OPRC Contract for Packages 1 and 2

The roads under the OPRC Contract and their main intervention are given in Table 1-1.

Table 1-1 : Roads under OPRC Contract

Road section	Road Section Name	Classification	Length (km)	Type of intervention
S1	Sangrur - Sunam (MDR 21)	MDR	11.3	Rehabilitation and Resurfacing
S2	Bhawanigarh - Sunam - Bhikhi - SH13 Intersection -	SH	106.13	Improvement Works (widening) and Resurf.
S3	Barnala - Mansa: (SH13)	SH	7.29	Rehabilitation and Resurfacing
S4	Mansa - Talwandi Sabo (up to intersection with B8):	ODR	24.97	Improvement Works (widening) and Resurf.
S5	Dhanaula - Bhikhi: (MDR 14)	MDR	25.34	Rehabilitation and Resurfacing
B8	Bathinda - Kotshamir - Talwandi Sabo (up to	SH	28.65	Rehabilitation and Resurfacing
			203.68	

The principles amidst which this project using OPRC methodology has been designed are those of payments of completed and finished parts of the works (depending on the component under evaluation) if and when they meet the required levels of service, described by qualitative and quantitative parameters during the life-span of the project, i.e the 10 years period. These civil works are based on fixed payments against demonstrated performance for the implementation of works. The following table details out the work schedule to be undertaken by the Contractor over the 10 year period. It is included program work as per both contract and approved by the employer that is in force.

Table 1-2 : Work Schedule to be undertaken by the Contractor

YEAR	IMPROVEMENT			REHABILITATION			RESURFACING		
	As per Contract	As per Approved	Achieved work	As per Contract	As per Approved	Achieved work	As per Contract	As per Approved	Achieved work
1	27.20	27.20	25.91	0.00	25.34	25.34	34.20	0.00	0.00
2	47.60	60.81	24.44	7.29	11.30	3.00 (DBM)	0.00	28.65	23.00
3	54.10	0.00	-	0.00	0.00	-	0.00	-	-
4	0.00			25.34			11.30		
5	0.00			5.05			23.60		
6	0.00			2.20			10.20		
7	0.00			34.90			0.00	58.36	
8	0.00			0.00			56.00	60.81	
9	0.00			0.00	22.85		68.30	61.66	
10	0.00			0.00			0.00		
Contract Total	128.90	88.01	50.35	74.78	59.49	25.34	203.6	209.48	23.0

2 REVIEW AND COMMENTS OF PROGRESS WORKS.

2.1 KEY DATA FROM CONTRACTOR'S MONTHLY REPORT

This Sub Chapter summarizes the aspects different included in the Contractor's Monthly Report to January, 2015 according to contract requirements. Therefore this chapter includes: the Key Staff, the critical equipment, the summary and the progress works.

2.1.1 KEY STAFF

Table 2-1 : Contractor's Key Staff on Monthly Report

Contractor Organization Chart			
S.N #.	Position		Name of Person
1	Road Manager	1	Mukesh Kumar
2	Road Asset Manager/Risk Manager	1	Vijay Kumar
3	Senior Site Engineer	1	Upendra Kumar Thakur
4	Site Engineer (Construction)	2	Satyendra Kumar
			Vinit Kumar
5	Site Engineer (Maintenance)	2	Pankaj Kumar
			Rakesh Kumar
6	Material Engineer	1	Sanjay Pandey
7	Contract Financial Manager	1	Praveen Kahar
8	Plant & Equipment Engineer	1	R K singh
9	Store Manager	1	Bhagwaan Jha
10	Technical Staff	15	
11	Non Technical Staff	25	
12	Conformance Management Unit	1	
	Team Leader		S.S.Sidhu
	Field Engineer-Section-I	1	Pankaj Kumar
	Field Engineer-Section-II	1	Rakesh Kumar
	Sr. Environmentalist	1	P.K. Roy
	Jr. Environmentalist	1	Ram Singh
	Jr. Environmentalist	1	Navneet Kumar

2.1.2 EQUIPMENT DETAIL

Table 2-2 : Contractor's Equipment on Monthly Report

List of Construction Equipment				
S No	Equipment Type	Min Capacity	Nos.	Remarks
1	Faling Weight Deflectometer (FWD)	250 KN	1	
2	Ho: Mix Plant (Batch Type Apollo)	128 TPH	1	
3	Ho: Mix Plant (Batch Type Linnhoff)	200 TPH	1	
4	WMM Mixing Plant (Mackmax)	250 TPH	1	
5	Sensor Paver (Bitumirous Works)	600 TPH	3	
6	Hydraulic Excavators	0.9-1.0 cum.	2	
7	Motor Grader	120 cum/hr	4	
8	Loader	1.6-1.7 & 2.4 cum.	4	
9	JCB Backhoe Loader	.3 & 1.2 cum	2	
10	Paver Mechanical	200 TPH	1	
11	Contract Patrol and response vehicles		2	
12	Contract general Inspection Vehicles		18	
13	Tandem Rollers		5	
14	Vibratory Rollers, Soil Compactor	8-10 T	3	
15	Pneumatic Tyre Roller	15 MT	1	
16	Tipper / trucks	14-24 cum.	28	
17	Water Tanker	12000 L	4	
18	Pavement marking plant	-	-	
19	Mini Bitumen Pressure Distributor		2	
20	Bitumen Pressure distributor	4-6 MT	3	
21	DC Set	456 KVA	1	
22	DC Set	320KVA	1	
23	DC Set	40KVA	1	
24	DC Set	125KVA	1	
25	DC Set	500 KVA	1	
26	DC Set	82.5 KVA	1	
27	Trector/Trolley		6	
28	Trailor		1	
29	Power broomer	-	2	
30	Miling Machine		1	
31	Self Loading Transit Mixer	2 cum.	1	
32	Stetic Roller		2	
33	Tower Light	9 M	4	
34	Diesel Tanker	4000L ,8000L	2	
35	Air Compressor	100 CFM	3	

2.1.3 PROGRESS WORK IN IMPROVEMENT REHABILITATION AND RESURFACING

The Contractor didn't carry out works of Improvement, Rehabilitation and Resurfacing on the January Month, because he finished the works corresponding to 2th year in November month (with some exceptions explained forward).

2.1.4 NETWORK PERFORMANCE- NON-CONFORMANCE SCORE

Table 2-3 : ACCUMULATED DURING THE CONTRACT - NON – CONFORMES

Month	S1	S2	S3	S4	S5	B8	MPM	Non – Conformance
March – 2013	2	12	0	10	6	4	-	34
July – 2013	2	12	0	6	1	4	-	25
Aug – 2013	2	11	1	2	3	5	-	24
Sep – 2013	1	14	0	10	2	6	-	33
Oct – 2013	2	16	0	4	0	5	-	27
nov-13	1	12	0	5	1	5	-	24
Dec - 2013	2	13	0	4	2	5	-	26
Total – 2013	12	90	1	41	15	34	0	193
Jan – 2014	0	9	3	3	3	6	-	24
Feb – 2014	1	9	0	2	2	6	-	20
March – 2014	1	17	0	2	2	4	-	26
April – 2014	1	11	0	1	3	4	-	20
May – 2014	1	10	0	3	2	5	-	21
June – 2014	1	7	0	0	0	1	-	9
July – 2014	0	5	0	0	0	0	-	5
Aug – 2014	0	3	0	0	0	3	-	6
Sep – 2014	1	9	0	6	4	3	-	23
Oct – 2013	1	13	1	1	3	2	-	21
Nov – 2014	7	20	0	13	1	17	-	58
Dec – 2014	14	42	3	11	24	35	16	145
Total – 2014	28	155	7	42	44	86	16	378
Jan – 2015	2	13	1	0	3	4	24	47
Accumulated Total	42	258	9	83	62	124	40	618

Table 2-4 : SUMMARY - NON – CONFORMES – JANUARY 2015

Name of Work : Output Performance Based Road Contract(OPRC) for Improvement, Rehabilitation, Resurfacing and Rountine Mainteance Works of Sangrur-Mansa-Bathinda			
Date : 01-feb-2015			
Period of Payment : 01-01-2015 to 31-01-2015			
Summary of Network Performance System of December -2014			
S.N.	Item Description	Scores	Remarks
1	Total Management Performance Non-Conformance Score (MPM'S)	24	
2	Total Road Durability Non-Conformance Score (RDPM'S)	0	
3	Total Road User Safety & Comfort Non-Conformance Score (RUS & CPM'S)	23	
Total Score of Non-Conformance		47	

Table 2-5 : MANAGEMENT PERFORMANCE MEASURES (MPM'S) – JANUARY 2015

MANAGEMENT PERFORMANCE MEASURES (MPM'S) - REFER TO WEIGHTINGS IN THE SPECIFICATION						
Date: 01-02-15						
Period of Payment: 01/1/2015 to 31/1/2015						
Reference to Bidding Document Section VI	Item Description	Performance Measure Compliance	Number of Non-Conformances Recorded A	Non-Conformance Weighting B	Sub-Weighting Days/Weeks/Months of Recorded Non Conformance C	Total Non-Conformance Score AxBxC
MPM 1	Quality Assurance System	No Non-Conformance due to FWD data not submitted. FWD Data submitted vide our letter no. PIPL/OPRC/481A/2015 dated 28.01.2015 to Submission of Environmental Management Plan (EMP) Environmental Screening Report (ESR) Environmental Impact Assessment (EIA) submitted on 02.08.13 (Last date of submission of COAMP 04.01.2014) (COAMP submitted on 30.12.13).	1	2	Each week of delay (8)	16
MPM 2	Contractor's Programs	No Non-Conformance for submission of Contractor's Programme for 2nd year. (Last date of submission is 04-11-2013).(Contractor's Programme Submitted on 27-11-13.)	0	1	Each day of delay	0
MPM 3	Contractor's Reports	No Non-Conformance for submission of Contractor's Reports (Contractor's all reports submitted on time)	0	2	Each day of non receipt after deadline	0
MPM 4	Traffic Management	No Non-Conformance for submission of Traffic Management Plan (TMP) (Submission of Initial TMP atleast 3 weeks before the start of work on any site.) (TMP Submitted on 12-12-2013)	0	4	Each day of non receipt after deadline or each day of traffic Management non- conformance is recorded	0
MPM 5	Inventory Database Management	No Non-Conformance for submission of Inventory Database Management (IDM) (IDM Report Submitted.) (IDM Report Submitted on 11-01-13.)	0	2	Each week of delay	0
MPM 6	Detailed Design (A)	No Non-Conformance for Detailed Design (Detail Design submitted.) work programme accepted date 29-01-2013. So submission of detailed design is on 12-02-2013 (Submission of DD within 2 weeks after acceptance of the annual programme.) 1st year Design Submitted on 29- 05-2013.	0	4	Each week of delay	0
MPM 6	Construction Methodology (B)	No Non-Conformance for Construction Methodology (Construction Methodology submitted.) (Submission of CM within 2 weeks after acceptance of the annual programme.) Construction Methodology Submitted 12-12-2013	0	4	Each week of delay	0
Any MPM	Repeated Non-Conformance	MPM1 repeated from Dec-14 to Jan-15 (2 months)	1	4	Number of Months Since non-conformance first identified.(2)	8
Total Management Performance Non-Conformance Score						24

Table 2-6 : ROAD DURABILITY PERFORMANCE MEASURES (RDPM'S) – JANUARY 2015

ROAD DURABILITY PERFORMANCE MEASURES (RDPM'S) - REFER TO WEIGHTINGS IN THE SPECIFICATION						
Date: 01-02-15						
Period of Payment: 01/1/2015 to 31/1/2015						
Reference to Bidding Document Section VI	Item Description	Number of Non-Conformances Recorded A	Non-Conformance Weighting B	Sub-Weighting Days/Weeks/Months of Recorded Non Conformance C	Total Non-Conformance Score AxBxC	Comments
RDPM2	Pavement Roughness	0	5		0	No Non-Conformance recorded during the month
RDPM3	Pavement Deflection	0	5		0	No Non-Conformance recorded during the month
RDPM4	Roadway Cut and Embankment Slopes	0	5		0	No Non-Conformance recorded during the month
Total Road Durability Non-Conformance Score					0	

Table 2-7 : ROAD USER SERVICE AND COMFORT PERFORMANCE MEASURES – JANUARY 2015

NAME OF WORK : Output Performance Based Road Contract(OPRC) for Improvement , Rehabilitation, Resurfacing and Routine Maintenance Works of Sangrur-Mansa-Bathinda				
Section	Chainage From To		Audit Length in (Kms)	Audit Score of January -15 Assesment-1
Name of Road :- Sangrur-Sunam (S1)				
S111	0.000	5.000	5.000	
S112	5.000	11.300	6.300	2
Total Length of S1 Road: 11.300 k		Total Non-Conformances S1		2
Name of Road :- Bhawanigarh-Sunam-Bhikhi-Kotshamir (S2)				
S211	2.240	10.000	7.760	
S212	10.000	15.000	5.000	3
S213	15.000	20.000	5.000	2
S214	20.000	25.000	5.000	
S215	25.000	30.000	5.000	2
S216	30.000	35.000	5.000	
S217	35.000	40.000	5.000	
S218	40.000	45.000	5.000	
S219	45.000	50.000	5.000	2
S220	50.000	55.000	5.000	2
S221	55.000	60.000	5.000	
S222	60.000	65.000	5.000	2
S223	65.000	70.000	5.000	
S224	70.000	75.000	5.000	
S225	75.000	80.000	5.000	
S226	80.000	85.000	5.000	
S227	85.000	90.000	5.000	
S228	90.000	95.000	5.000	
S229	95.000	100.000	5.000	
S230	100.000	108.770	8.770	
Total Length of S2 Road: 106.130		Total Non-Conformances S2		13
Name of Road :- Barnala-Mansa (Mansa Kainchian to Ram Ditte Wala Chowk) (S3)				
S311	119.640	126.930	7.290	1
Total Length of S3 Road: 7.290 k		Total Non-Conformances S3		1
Name of Road :- Mansa-Talwandi Sabo upto Ramtirath Jaga (S4)				
S411	0.000	5.000	5.000	
S412	5.000	10.000	5.000	
S413	10.000	15.000	5.000	
S414	15.000	20.000	5.000	
S415	20.000	24.970	4.970	
Total Length of S4 Road: 24.970 k		Total Non-Conformances S4		0
Name of Road :- Dhanula-Bhikhi (S5)				
S511	0.000	5.000	5.000	2
S512	5.000	10.000	5.000	0
S513	10.000	15.000	5.000	
S514	15.000	20.000	5.000	
S515	20.000	25.340	5.340	1
Total Length of S5 Road: 25.340 k		Total Non-Conformances S5		3
Name of Road :- Bathinda-Kotshamir-Talwandi Sabo upto Ramtirath Jaga (B8)				
B811	9.200	15.000	5.800	2
B812	15.000	20.000	5.000	0
B813	20.000	25.000	5.000	
B814	25.000	30.000	5.000	1
B815	30.000	37.850	7.850	1
Total Length of B8 Road: 28.650 k		Total Non-Conformances B8		4
Total Contract Road Length: 203.680 K - TOTAL NON-CONFORMANCES				23

2.2 MONITORING CONSULTANT VIEWS ON CONTRACTOR'S MONTHLY REPORT

2.2.1 CONTRACTOR'S STAFF PRESENT

Table 2-8 : CONTRACTOR'S STAFF PRESENT ON SITE

M/S PATEL INFRASTRUCTURE PVT. LTD.(ORGANISATION CHART)			
SI #	Position Numbers	Name of Person	Contact No.
1	Road Manager	Mukesh Kumar	8288032760
2	Team Leader	S.S. Sidhu	8288032757
3	Design Engineer	Pranav Ranjan (Feedback Consultant)	
4	Bridge Engineer	Mrs. Aruna (Feedback Consultant)	
5	Environmental Engineer	Parveen Kumar (Feedback Consultant)	
6	Social Specialist	Dr. Ananda (Feedback Consultant)	
7	IT Manager	Chirag Rana	
8	Field Engineer	Pankaj Kumar	8288032763
9	Senior Site Engineer	Upendra Kumar Thakur	8288032770
10	Site Engineer Construction	Vineet Yadav	8288032758
11	HR & Adm.	ParveenKahar	8288032780
12	Road Asset Manager	Rohit Malik/Vijay Kumar (New Joining)	8288032754
13	Plant & Equipment Engineer	R.K. Singh	8288032782
15	Contract Financial Manager	Parveen Kahar	8288032780
16	Road Safety officer	Ramesh Patil	8288032778
17	Billing/QS	Vijay Kumar	8288032754
18	Quality Control Incharge	Sanjay Pandey	8288032753
19	Junior Environmentalist	Ram Singh/Navneet	8288032793
20	Technician	Pargat Singh, Buta Singh, Jasbir, Hardev Singh, Jagtar Singh, Amandeep Singh, Gurjeet Singh, Dilveer Singh	N.A
21	Skilled Staff	49 Nos.	N.A
22	Semi Skilled	19 Nos.	N.A

2.2.2 CONTRACTOR'S STAFF UNDER CONTRACT

Table 2-9 : CONTRACTOR'S STAFF UNDER CONTRACT

Sr. No.	Position	Availability requirement
1	Road Manager	Full time
2	Road Asset Manager/Risk Manager	Full time
3	Senior Site Engineer	Full time
4	Site Engineer (Construction)	Full time
5	Site Engineer (Maintenance)	Full time
6	Conformance Management (Quality Assurance) Unit Leader	Full time
7	Material Engineer	Full time
8	Contract Financial Manager	Full time
9	Plant & Equipment Engineer	Full time

2.2.3 CONTRACTOR'S EQUIPMENT - WORKING/NO WORKING

Table 2-10 : CONTRACTOR'S EQUIPMENT – WORKING / NO WORKING

Item	Equipment Type and Characteristics	Min Capacity	Min. No.
1	Hot Mix Plant (Batch type)	100 TPH	1
2	WMM Mixing Plant	60 TPH	1
3	Paver Finisher Hydrostatic with sensor control (Bituminous Works)	100 TPH	2
4	Hydraulic excavators	1.0M ³ bucket	2
5	Backhoes	0.5 M ³ bucket	2
6	Motor Grader	150kW	1
7	Loader	1M ³ Bucket	2
8	Paver Finisher Mechanical for WMM Work	100TPH	1
9	Contractor's patrol and response vehicles		2
10	Contractor's general Inspection Vehicles (with GPS & Displacement meters)		3
11	Vibratory Rollers	8-10 T	3
12	Pneumatic Tyre Roller	8-10 T	2
13	Tipper / Trucks	5.5M ³	15
14	Water Tanker	6M ³	3
15	Pavement Marking Plant		1
16	Bitumen Pressure Distributor		1
17	Power Broom		2
18	Falling Weight Deflectometer (pavement deflection testing)		1
19	Calibrated Roughness Profilometer		1

2.2.4 CONTRACTOR'S EQUIPMENT UNDER CONTRACT

Table 2-11 : CONTRACTOR'S EQUIPMENT UNDER CONTRACT

Item	Equipment Type and Characteristics	Min Capacity	Min. No.
1	Hot Mix Plant (Batch type)	100 TPH	1
2	WMM Mixing Plant	60 TPH	1
3	Paver Finisher Hydrostatic with sensor control (Bituminous Works)	100 TPH	2
4	Hydraulic excavators	1.0M ³ bucket	2
5	Backhoes	0.5 M ³ bucket	2
6	Motor Grader	150kW	1
7	Loader	1M ³ Bucket	2
8	Paver Finisher Mechanical for WMM Work	100TPH	1
9	Contractor's patrol and response vehicles		2
10	Contractor's general Inspection Vehicles (with GPS & Displacement meters)		3
11	Vibratory Rollers	8-10 T	3
12	Pneumatic Tyre Roller	8-10 T	2
13	Tipper / Trucks	5.5M ³	15
14	Water Tanker	6M ³	3
15	Pavement Marking Plant		1
16	Bitumen Pressure Distributor		1
17	Power Broom		2
18	Falling Weight Deflectometer (pavement deflection testing)		1
19	Calibrated Roughness Profilometer		1

2.2.5 PROGRESS WORK IN IMPROVEMENT REHABILITATION AND RESURFACING

As reported in other subchapter, the Contractor didn't carry out works of Improvement, Rehabilitation and Resurfacing on the January Month, because he finished the works corresponding to 2th year in November month (with some exceptions explained forward).

The MC doesn't have the data both deflections and IRI regarding to quality and comfort of improvement, rehabilitation and resurfacing works.

Regarding to deflections at this time we only have hard copy of deflection data and with this data it isn't possible neither assessment the service levels of the roads nor calculate the score of NON-CONFORMANCES corresponding to Road Durability Performance Measures - RDPM, because it requires additional information.

Regarding the IRI, at this time we only have data of the 20 meters average and with this data it isn't possible neither assessment the service levels of the roads nor calculate the score of NON-CONFORMANCES.

Anyway in routine inspections, we can see some sites with early damages on pavements, which are presented in Chapter 3 - Results of detailed inspection. This early damages can mean low service levels regarding to Road Durability Performance.

2.2.6 NETWORK PERFORMANCE CONFORMANCE / NON CONFORMANCE - SCORES

Table 2-12 : NETWORK PERFORMANCE - CONFORMANCE / NON-CONFORMANCE – SCORES

Refer Not Above	Non-Conformance	Number of Non-Conformances A contractor	Number of Non-Conformances A MC	Multiplication Factor		Score A*B*C contractor	Score A*B*C MC
				Weighting B	Sub Weighting C		
A	RDPM Non-Conformance					-	-
B	MPM-1 Quality Assurance System					24	38
C	RUS & CPM-1 Pavement Maintenance	0	0	2	1	0	0
D	RUS & CPM-2 Unsealed Shoulder Maintenance	0	31	1	1	0	31
E	RUS & CPM-3 Drainage Maintenance	8	10	2	1	16	20
F	RUS & CPM-4 Routine Maintenance of Bridges & Other Structures	0	1	2	1	0	2
G	RUS & CPM-5 Obstructions on the Pavement Surface and Shoulders	7	7	1	1	7	7
H	RUS & CPM-6 Incident Response & Emergency Works Response	0	0	2	1	0	0
I	RUS & CPM-7 Vegetation control	0	0	1	1	0	0
J	RUS & CPM-8 Road Signs Maintenance	0	11	2	1	0	22
K	RUS & CPM-9 Raised Pavement Markers	0	0	2	1	0	0
L	RUS & CPM-10 Pavement Marking	0	20	2	1	0	40
M	RUS & CPM-11 Traffic Island and Roundabout Maintenance	0	2	1	1	0	2
N	RUS & CPM-12 Crash Barrier Maintenance	0	0	1	1	0	0
O	RUS & CPM-13 Sight Rail, Hand Rail and Pedestrian Barrier Maintenance	0	0	1	1	0	0
P	RUS & CPM-14 Marker Post Maintenance	0	0	2	1	0	0
Q	Repeated Non-Conformance in Consecutive Months					0	36
R	Any Employer or Monitoring Consultant generated Non - Conformance					0	0
S	Any Immediate Safety Hazard to Road Users Instructed for Repair					0	0
Monthly Aggregated Contract Non-Conformance score						47	198

2.3 SUMMARY & COMPARISON – NON CONFORMANCES.

2.3.1 CONTRACTOR’S STAFF

It is undertaken a reviewing of Contractor’s Key Staff included in the proposal, regarding the current Key Staff that is included in Contractor's Monthly Progress Report. In said reviewing is found that any Key Staff included in the proposal is working now in the project. As Project's documental support it requires to Employer's Representative, the documents in which is approved the changes of the personal.

2.3.2 CONTRACTOR’S EQUIPMENT

It is also undertaken a reviewing of Contractor’s equipment included in the proposal regarding the current equipment that is included in Contractor's Monthly Progress Report. In said reviewing is found that the Contractor's all Equipment is in the site. However cannot saw working because at this time the Contractor carries out only Network Performance Works.

2.3.3 ANALYSIS AND COMMENTS OF THE PERFORMANCE AUDIT INSPECTION

This chapter provides a description and analysis of the inspection audit reports submitted by the contractor, corresponding to January 2015 comparison with the inspection audit of the MC.

Network Performance Inspection of each one of the below items:

- Management Performance Measures (MPM’s)
- Road User Service and Comfort Performance Measures (RUS&CPM’s)
- Road Durability Performance Measures (RDPM’s).

According to the Contract Specifications (Appendix 8), the contractor and MC performs the Audit Inspections using the format RM03. Below is included a summary the audit for each of the types of Performance Measures set out in the contract.

Table 2-13 : Summary NON-CONFORMANCES

ID	DESCRIPTION	SCORES Contractor	SCORES MC
1	Total Management Performance Non-Conformance Score (MPM’S)	24	38
2	Total Road User Safety & Comfort Non-Conformance Score (RUS&CPM’S)	23	160
3	Total Road Durability Non-Conformance Score (RDPM’S)	0	Unavailable Data
	Total Score of NON-CONFORMANCES	47	198

In the above table the comparison of the NON-CONFORMANCES submitted by the Contractor with the score done by the MC is given.

It is very important to report that after review and analysis of the contractor's Monthly Performance Audit Report of the road network corresponding to January 2015, the Contractor recorded 47 NON - CONFORMANCES, which is not according to the score calculated by MC (198 NON - CONFORMANCES), during the inspection carried out on the different sectors that make up the network, whereby the network don't achieve the service levels required. The details of the Monthly Detailed Inspection are presented in the following chapter (Chapter 3).

Therefore it is required to immediately repair of all defects and problems existing in the roads and delivery the reports in the terms according the contract, for avoid the delayed delivery of MPR both the contractor and the Monitoring Consultant according with the Clause 15.1 of the Section VI - Specifications (paragraph 4th).

The Monitoring Consultant recommends to the Client to take those NON-CONFORMANCES into account in the payment to Contractor corresponding to the Month January, 2015. The details of each kind of Non-Conformances are including below.

2.3.4 MANAGEMENT PERFORMANCE MEASURES (MPM's)

According the Contract Agreement, the Management Performance Measures (MPM's) reflect the ability of the Contractor to successfully manage the contract outputs including the quality and efficiency of his reporting of information to the Employer.

Regarding the Management Performance Measures, it is presented below a table a summary of the documents submitted for the Contractor corresponding to January 2015 and the comparison with the reported by the MC.

Table 2-14 : Management Performance Measures (MPM's)

MANAGEMENT PERFORMANCE MEASURES (MPM'S) - REFER TO WEIGHTINGS IN THE SPECIFICATION							
Month : January 2015							
Reference to Bidding Document Section VI	Item Description	Performance Measure Compliance	Non-Conformance Weighting	Sub-Weighting Days/Weeks/Months of Recorded Non Conformance	N° Non-Con X Weigh x SubW	Total Non-Conformance Score AxBxC Contractor	Total Non-Conformance Score AxBxC MC
MPM 1	Quality Assurance System	Non Conformance due IRI data not submitted submission of Environmental Management Plan (EMP) Environmental Screeninn Report (ESR) Environmental Impact Assessment (EIA) submitted on 02.08.13 (Last date of submission of CQAMP 04.01.2014) (CQAMP submitted on 30.12.13)	2	Each week of delay	1 * 2 * 8	16	0
MPM 3	Contractor's Reports	Non-Conformance for submission of Contractor's FWD / IRI Survey	2	Each day of non receipt after deadline	1 * 2 * 8	0	16
MPM 3	Contractor's Reports	Non-Conformance for submission of Contractor's Report (Annual Bridge Inspection Report)	2	Each day of delay	1 * 2 * 7	0	14
Any MPM	Repeated Non-Conformance	No MPM repeat during the month	2	Number of Months since non-conformance first identified.	1 * 4 * 2	8	8
Total Management Performance Non-Conformance Score						24	38

The Contractor includes Non - Conformances corresponding to delay of the delivery of the data IRI, in the issue of Quality Assurance (Code MPM 1). The IRI data is a report and the Contractor should include this NON-CONFORMANCE on MPM 3. The Contractor also includes the Repeated Non-Conformance during one month.

The Monitoring Consultant is agrees with those NON-CONFORMANCES submitted for the contractor.

The Contractor didn't include the delay of the delivery of the bridges Annual Inspection Report nor the delay of the delivery of the Monthly Progress Report.

2.3.5 ROAD USER SERVICE AND COMFORT PERFORMANCE MEASURES - RUS&CPM

According the Contract Agreement the Road User Service and Comfort Performance Measures (RUS&CPM) reflect the road user's expectation about the day to day serviceability of the roads under the Contract. The Contractor must comply with the Contract Standards specified for each RUS&CPM.

The objectives of the Contract Standards are to ensure that a defined Level of Service is maintained which reflects the road user's day to day serviceability expectations across the range of Contract assets, and to permit auditing of the Contractor's performance.

The Monitoring Consultant reported 160 NON-CONFORMES according with the Inspection carried out in site and after review of the reports submitted by the contractor while the Contractor reports only 23 NON-CONFORMANCES.

On the below table is done the comparison of the NON-CONFORMES submitted by the Contractor with the score done for the MC regarding to Road User Service and Comfort Performance Measures - RUS&CPM. It is observed that the scores are different.

The calculation of the RUS score includes NON-CONFORMANCES due to deficient maintenance of the following elements: unsealed shoulders, drainages, routine maintenance of bridges, obstruction on pavement surfaces, roadside signs, pavement markings and repeat NON-CONFORMANCES in consecutive months.

Regarding to the deficient maintenance of the pavement markings corresponding to the edge lines and centre line, the NON-CONFORMANCES is due to the lack of edge lines in Sections S5 and B8 and due to that the Centre line doesn't have reflectivity and is observed worn out on Section S5. Also, on the centre line on Sector S5 there is some sections with more than 20 metres (within any continuous 1km centreline length) that are not clearly visible during the day and at night, when we viewed from the centre of the lane from a distance of 160 m with headlights on full beam and 80 m on dipped beam, measured by the calibrated vehicle displacement meter of the Monitoring Consultant (As per Clause 15.13.3 - Paragraph A - Subparagraph ii) of the Contract Agreement).

LEGAL JUSTIFICATION FOR MARKING CENTER LINE AND EDGE LINE IN ALL SECTORS

According the Contract Agreement, the Contractor should include in the Contractor's Lump Sum price for Network Performance Works, the cost of any additional pavement remarking required to bring the Contract's roads up to the required standard for the defined road category.

The Contract Agreement also says in the Clause 15.13.2, that at any time during the contract, all network should be perfectly demarcated with lines of demarcation (Centre line and edge line), with the exception of the first year in which the lines are not painted before the improvement works, rehabilitation or resurfacing.

The same Clause says "All State Highways (SH) and Major District Roads (MDR) shall have a painted centreline and edge lines in place". According with Contract, the Section S5 is classified as a Major District Road (MDR).

The roads conforming the network of the project OPRC are characterized for to have visibility low in the nights, in winter season and on presence of monsoons, therefore are very important both the

centreline and the edge lines on all sectors of the network, for safety of the road's users. (IRC-35 - Subchapter 8.6.1. and 8.6.2.).

Therefore, all sectors conforming the network shall be marked during the Contract besides shall have a good reflectivity for ensure the safety of road's users without excuses.

The Monitoring Consultant highlights the fact that the Contractor doesn't detected 76 (205-129) NON-CONFORMANCES regarding to RUS& CPM Measures. According to the Contract Agreement this NON-CONFORMANCES have a weighting equal to 6 and a sub-weighting equal to 1 whereby each NON-CONFORMANCE don't detected by the Contractor is equivalent to 6 NON-CONFORMANCES which increase the score on 6 times. It is advises to the Contractor shall to include all NON-CONFORMANCES on the next MPR for avoid increase of score for this criteria. The next Monthly Report of the MC will include this NON-CONFORMANCE in the final score.

Table 2-15 : Accumulated Summary of NON-CONFORMANCES –RUS&CPM Measures

ROAD USER SERVICE & COMFORT PERFORMANCE MEASURES (RUS&CPM's) - REFER TO WEIGHTINGS IN THE SPECIFICATION - SUMMARY				
Month : January 2015				
Reference to Bidding Document Section VI	Item Description	Minimum Audit Length for Each Recorded Non - Conformance	Total Non-Conformance Score A+B+C Contractor	Total Non-Conformance Score A+B+C MC
RUS&CPM1	Pavement Maintenance	5km (1km for cracking)	0	0
RUS&CPM2	Unsealed Shoulder Maintenance	5km (1km for cracking)	0	31
RUS&CPM3	Drainage Maintenance	1km	16	20
RUS&CPM4	Routine Maintenance of Bridge and other Structures	5km (1km for cracking)	0	2
RUS&CPM5	Obstructions on the Pavement Surface and Shoulders	1km	7	7
RUS&CPM6	Incident and Emergency Works Response	N/A	0	0
RUS&CPM7	Vegetation Control	5km	0	0
RUS&CPM8	Roadside Signs Maintenance	5km	0	22
RUS&CPM9	Raised Reflective Pavement Markers	5km/1km	0	0
RUS&CPM10	Pavement Markings - (Lines, Text, Symbols etc)	5km	0	40
RUS&CPM11	Traffic Island and Roundabout Maintenance	5km	0	2
RUS&CPM12	Crash Barrier Maintenance	5km	0	0
RUS&CPM13	Sight Rails, Hand Rail and Pedestrian Barrier Maintenance	5km	0	0
RUS&CPM14	Marker Posts (Guard Stones, Boundry, Edge, Culvert, Distance Markers, Hazard)	5km	0	0
Any RUS&CPM	Repeated Non-Conformance in Consecutive Months	5km	0	36
Any RUS&CPM	Any Employer or Monitoring Consultant generated Non - Conformance	5km	0	0
Any Road Safety Hazards	Any Immediate Safety Hazard to Road Users Instructed for Repair	5km	0	0
Total Score			23	160

2.3.5.1 SUMMARY OF THE NETWORK PERFORMANCE INSPECTION

EARLY DISTRESSES ON THE PAVEMENTS

On the inspections of Month January, the Monitoring Consultant has noted Early Distresses pertaining to pavement such as presence of cracks, segregation and Rutting on new pavements.

It has required to client a survey regarding to early damages found in the new pavements with the object of search the true causes of the problem and raise the solution.



Figure 2-1 : Sector S2 – Cracking – km 5+560 R.H.S

SHOULDERS MAINTENANCE

Also, the Monitoring Consultant has noted CONSTRUCTION DEFECTS pertaining to the Unsealed Shoulders Maintenance. In those sites of the network, the scale between the non-paved shoulders with respect to pavement level is greater than 5 cm (threshold as per the contract). In some places the water accumulation is between the pavement edge and unpaved shoulders which generate a high risk of water infiltration that decrease the structural capacity of the pavement and its remaining life.

This is due to the fact that the Routine Maintenance is very poor and the shoulder does not have sufficient slope for to drain water. Also it observed that the quality material used for the maintenance of the Unsealed Shoulders doesn't fulfill with the specifications and it is observed without compaction.

Other sites have accumulation of waste placed on shoulders that obstruct the normal flow of the water. These deficiencies are observed with more frequency in the sectors S5 and B8.

VEGETATION CONTROL

In some sectors of the network it is observed DEFECTS AND NON-CONFORMANCES regarding to the vegetation control. The trees obstruct the visibility of the road and the road signs. The cutting of the vegetation shall ensure the perfect visibility of the road and of the signals in accordance with the contract specifications and the norms of the Forest Department.



Figure 2-2 : S5 - Water and Marking

DEFICIENT SIGNS

During the visit to the network it is observed that the signaling is very deficient, mainly of signs "warning" near the sites of risk on the road such as dangerous curves. The Section S4 doesn't have warning signs throughout the sector and the regulatory signals are very slim. It is very important to remember that the signals shall be installed in accordance to the standards IRC 93–1985 and IRC 67–2001, for both location and to determine the quantity of signals.

The contractor should have submitted the signs design along with the drawings corresponding to location details of each sign in accordance to the standards IRC 93–1985 and IRC 67–2001.

DRAINAGE MAINTENANCE

The drainage system also has defects and NON-CONFORMANCES due to that the drains are wholly or partially obstructed, resulting in stagnation of the water and subsequent infiltration which in turn may damage to the pavement structure.

MARKER POST MAINTENANCE

The MARKER POST MAINTENANCE is deficient in the different sectors that make up the network. The paint has a deficient maintenance, besides is require replacement some the reference posts and stones. Also, it is deficient the markings maintenance of the culverts, because it doesn't comply the desired standards. It has observed that some posts were destroyed and should be replaced immediately.

MARKINGS

The Marking lines are very poor in different sectors; even there are some sections without demarcation both of the edge lines as is observed on the Section S5 besides the center line is practically erased. The Section S2 also has a few sections in which the line's marks are can barely watch.



Figure 2-3 : Sector S2- Culvert clogged - Km 59+200 B.H.S

2.3.5.2 RECOMMENDATION OF NETWORK PERFORMANCE WORKS

The Network Performance is deficient due to inadequate onsite manpower of the project by the Contractor for carry out the Network Performance Works.

As per international experiences, for the present kind of network, it is recommended to Contractor, form groups of 8 and 10 persons for carry out routine maintenance work, per 40 or 50 kilometres of road length. The personas number may be adjusted according to yields, local conditions and type of sector.

The work teams in charge of routine maintenance should have a daily program of work of all activities that perform routine maintenance and a daily average of 2 kilometres.

2.3.6 ROAD DURABILITY PERFORMANCE MEASURES

According to the Contract Agreement, Road Durability Performance Measures (RDPM's) are the measures undertaken by the Contractor to protect the pavement & surfacing assets, and check the consumption of these assets over the duration of the contract. The Contractor should take full ownership of the intent of these measures and manage their performance proactively throughout the year.

Contract requirements specify the minimum quantity of asset preservation works that the Contractor must achieve throughout the contract. The Contractor must achieve full Conformance with the following RDPM's.

The Road Durability Performance Measures (RDPM's) are the measurements made by the contractor to protect the pavement and the active surface of the pavement. Below it is described the current state of each Performance Measure.

Table 2-16 : Road Durability Performance Measures (RDPM's).

Nomenclature	Road Durability Performance Measures (RDPM's)	Action in Case of Non-Conformance
RDPM-1	Minimum Annual Asset Preservation Quantities	Liquidated Damages (Clause 8.2.1.1)
RDPM-2	Pavement Roughness	Deduction in certain %age of payment due / released for the work in defaulting Section (Clause 8.2.2.4) on new construction
RDPM-3	Pavement deflection	Deduction in certain %age of payment due / released for the work in defaulting Section (Clause 8.2.3.4) on new construction
RDPM-4	Roadway Cut and Embankment Slopes	Non-conformances will be included in the monthly aggregated non-conformance score (Clause 8.2.4.1).

Table 2-17 : Accumulated Summary of NON–CONFORMANCES -RDPM Measures

Reference to Bidding Document Section VI	Item Description	Number of Non-Conformances Recorded	Non-Conformance Weighting	Sub-Weighting Days/Weeks/Months of Recorded Non Conformance	Total Non-Conformance Score AxBxC Contractor	Total Non-Conformance Score AxBxC MC
RDPM2	Pavement Roughness	0	5		0	-
RDPM3	Pavement Deflection	0	5		0	-
RDPM4	Roadway Cut and Embankment Slopes	0	5		0	-
Total Road Durability Non-Conformance Score					0	-

On above table of Road Durability Performance Measures, don't include score values due to reasons that are explained in the next sub-chapter. Therefore this Monthly Progress Report doesn't include scores regarding to Road Durability Performance Measures.

2.3.6.1 MINIMUM ANNUAL ASSET PRESERVATION QUANTITIES – WORK PROGRAM

As explained in Subchapter 2.1 this measure pertains to the fulfilment in the Contractor's work annual program that was approved for the employer for three years and is binding on the Contractor.

In this moment the project has not a fixed program work due to the issue of the Forest Department corresponding to works in the Section No 2.

This implies the delay of works, the consumption of assets during the contract period and uncertainty regarding the planning and execution of the third year of work.

Therefore the Contractor only can begin working in the Section S1. Regarding to the Section S3, this has pending the approving of the changes for Four Lanning and the budget, required by the employer.

The Monitoring Consultant recommends to Client resolve the pending issues as soon as possible for avoid major consumption of the assets during the validity of the contract.

2.3.6.2 PAVEMENT ROUGHNESS (RDPM-2).

The roughness is a measure of comfort of road users and in accordance with the provisions of Chapters 8 and 16 of Part 2A of the contract specifications, the liability of the measure is by employer, who must measure semi-annually the values corresponding to parameter which is the IRI

(International Roughness Index). Also is very important clearly understanding that this shall not limit the right the employer to carry out measurements any time during the entire contract.

Regarding to Road Durability Performance Measures, corresponding to the roughness parameter, the client has in its possession the ROMDAS equipment used for the measurement of the aforesaid parameter with great precision.

The equipment was calibrated and it is did a test of verification, but still isn't beginning the measures on the network. Therefore until now there are not records of roughness measures in the site and is not possible to define the Conformance of this parameter and the current state of the network.

We hope will to have the roughness records and the analyses of the information in the next Monthly Progress Report for to calculate the score (RDPM-2).

The contractor on his own has carried out measurement of the roughness and has records Technical data of Section S2 (2+240 to 18+400 and 68+000 to 79+000) and the Section S5, which has been reported with state "good". It is may be observed that the individual values has an average range between 1 and 1.5 m/km. This average is bellow of the thresholds established in the contract, but is needs to check them, because the Employer wants that test should be done with ROMDAS.

We have noticed that some subsectors of the network might exceed the threshold and Service Level required in the specifications of the contract, based in our experience and upon the site visits undertaken which is will verified and clarified in the next Monthly Progress Report.

In accordance with the Clause 8.2.2 of the specifications of the contract, the contractor shall ensure that the roughness of the paved surface conforms to the criteria throughout the duration of the contract.

2.3.6.3 PAVEMENT DEFLECTION (RDPM-3)

It is not found deflection records in the available files of the Employer's Representative, of the Sections under Improvement Works and Rehabilitation Works built in the first year, nor neither in the works of the second year.

As per the Contract Agreement, the contractor purchases the equipment Falling Weight Deflectometer Dynatest 8000, which only until November of 2014 begins with testing, adjustment and pavement deflection measurements.

The contractor has submitted a data report which does not conform to the specifications of ASTM required whereby this report has been returned to the contractor for complementation.

Therefore to the cut-off date of this report, we don't have outcomes of measurement of pavement deflection and at this time not possible to know the structural capacity of the pavement in the different sections of the network which is calculated based on the Central Deflection Do and the Curvature Do – D200 (mm). Nor can determine CONFORMANCES OR NON-CONFORMANCES with respect to measures of deflections and curvature. Furthermore it is not known some official document certifying the calibration of said equipment.

We hope will to have the deflection records and the analyses of the information in the next Monthly Progress Report for to calculate the score (RDPM-3).

2.3.6.4 ROADWAY CUT AND EMBANKMENT SLOPES (RDPM-4)

The contractor does not report events regarding to the measures of Roadway Cut and Embankment Slopes. On field observations carried out by the Consultant, also not are detected problems with regard to this topic.

3 MONITORING CONSULTANT'S VERIFICATION INSPECTION AUDIT

3.1 INSPECTION'S DETAIL REPORT

Table 3-1 : VERIFICATION INSPECTION AUDIT – SECTION S1 – K 5.00 TO KM 11.30

ROAD USER SERVICE & COMFORT PERFORMANCE MEASURES (RUS&CPM's) - REFER TO WEIGHTINGS IN THE SPECIFICATION								
Month : January 2015			6,3 km Audit Length Start Location S1 km 5.00 to km 11.30 = km 6.300					
Reference to Bidding Document Section VI	Item Description	Minimum Audit Length for Each Recorded Non - Conformance	Number of Non-Conformances Recorded Minimum Audit Length A Contractor	Number of Non-Conformances Recorded Minimum Audit Length A MC	Non-Conformances Weighting B	Sub-Weighting No of Consecutive Weeks/Months C	Total Non-Conformance Score A+B+C Contractor	Total Non-Conformance Score A+B+C MC
RUS&CPM1	Pavement Maintenance	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM2	Unsealed Shoulder Maintenance	5km (1km for cracking)	0	0	1	1	0	0
RUS&CPM3	Drainage Maintenance	1km	0	0	2	1	0	0
RUS&CPM4	Routine Maintenance of Bridge and other Structures	5km (1km for cracking)	0	1	2	1	0	2
RUS&CPM5	Obstructions on the Pavement Surface and Shoulders	1km	2	2	1	1	2	2
RUS&CPM6	Incident and Emergency Works Response	N/A	0	0	2	1	0	0
RUS&CPM7	Vegetation Control	5km	0	0	1	1	0	0
RUS&CPM8	Roadside Signs Maintenance	5km	0	1	2	1	0	2
RUS&CPM9	Raised Reflective Pavement Markers	5km/1km	0	0	2	1	0	0
RUS&CPM10	Pavement Markings - (Lines, Text, Symbols etc)	5km	0	0	2	1	0	0
RUS&CPM11	Traffic Island and Roundabout Maintenance	5km	0	0	1	1	0	0
RUS&CPM12	Crash Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM13	Sight Rails, Hand Rail and Pedestrian Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM14	Marker Posts (Guard Stones, Boundry, Edge, Culvert, Distance Markers, Hazard)	5km	0	0	2	1	0	0
Any RUS&CPM	Repeated Non-Conformance in Consecutive Months	5km	0	2	6	1	0	12
Any RUS&CPM	Any Employer or Monitoring Consultant generated Non - Conformance	5km	0	2	6	1	0	12
Any Road Safety Hazards	Any Immediate Safety Hazard to Road Users Instructed for Repair	5km	0	0	6		0	0
Total Score							2	30

Table 3-2 : VERIFICATION INSPECTION AUDIT – SECTION S2 – K 10 TO KM 15

ROAD USER SERVICE & COMFORT PERFORMANCE MEASURES (RUS&CPM's) - REFER TO WEIGHTINGS IN THE SPECIFICATION								
Month : January 2015		5 km Audit Length Start Location		S2 km 10 to km 15				
Reference to Bidding Document Section VI	Item Description	Minimum Audit Length for Each Recorded Non - Conformance	Number of Non-Conformances Recorded Minimum Audit Length A Contractor	Number of Non-Conformances Recorded Minimum Audit Length A MC	Non-Conformances Weighting B	Sub-Weighting No of Consecutive Weeks/Months C	Total Non-Conformance Score A+B+C Contractor	Total Non-Conformance Score A+B+C MC
RUS&CPM1	Pavement Maintenance	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM2	Unsealed Shoulder Maintenance	5km (1km for cracking)	0	0	1	1	0	0
RUS&CPM3	Drainage Maintenance	1km	1	1	2	1	2	2
RUS&CPM4	Routine Maintenance of Bridge and other Structures	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM5	Obstructions on the Pavement Surface and Shoulders	1km	1	1	1	1	1	1
RUS&CPM6	Incident and Emergency Works Response	N/A	0	0	2	1	0	0
RUS&CPM7	Vegetation Control	5km	0	0	1	1	0	0
RUS&CPM8	Roadside Signs Maintenance	5km	0	1	2	1	0	2
RUS&CPM9	Raised Reflective Pavement Markers	5km/1km	0	0	2	1	0	0
RUS&CPM10	Pavement Markings - (Lines, Text, Symbols etc)	5km	0	0	2	1	0	0
RUS&CPM11	Traffic Island and Roundabout Maintenance	5km	0	0	1	1	0	0
RUS&CPM12	Crash Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM13	Sight Rails, Hand Rail and Pedestrian Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM14	Marker Posts (Guard Stones, Boundry, Edge, Culvert, Distance Markers, Hazard)	5km	0	0	2	1	0	0
Any RUS&CPM	Repeated Non-Conformance in Consecutive Months	5km	0	0	6		0	0
Any RUS&CPM	Any Employer or Monitoring Consultant generated Non - Conformance	5km	0	1	6	1	0	6
Any Road Safety Hazards	Any Immediate Safety Hazard to Road Users Instructed for Repair	5km	0	0	6		0	0
Total Score							3	11

Table 3-3 : VERIFICATION INSPECTION AUDIT – SECTION S2 – K 15 TO KM 20

ROAD USER SERVICE & COMFORT PERFORMANCE MEASURES (RUS&CPM's) - REFER TO WEIGHTINGS IN THE SPECIFICATION								
Month : January 2015		5 km Audit Length Start Location S2 km 15 to km 20						
Reference to Bidding Document Section VI	Item Description	Minimum Audit Length for Each Recorded Non - Conformance	Number of Non-Conformances Recorded Minimum Audit Length A Contractor	Number of Non-Conformances Recorded Minimum Audit Length A MC	Non-Conformances Weighting B	Sub-Weighting No of Consecutive Weeks/Months C	Total Non-Conformance Score A+B+C Contractor	Total Non-Conformance Score A+B+C MC
RUS&CPM1	Pavement Maintenance	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM2	Unsealed Shoulder Maintenance	5km (1km for cracking)	0	0	1	1	0	0
RUS&CPM3	Drainage Maintenance	1km	1	1	2	1	2	2
RUS&CPM4	Routine Maintenance of Bridge and other Structures	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM5	Obstructions on the Pavement Surface and Shoulders	1km	0	0	1	1	0	0
RUS&CPM6	Incident and Emergency Works Response	N/A	0	0	2	1	0	0
RUS&CPM7	Vegetation Control	5km	0	0	1	1	0	0
RUS&CPM8	Roadside Signs Maintenance	5km	0	1	2	1	0	2
RUS&CPM9	Raised Reflective Pavement Markers	5km/1km	0	0	2	1	0	0
RUS&CPM10	Pavement Markings - (Lines, Text, Symbols etc)	5km	0	0	2	1	0	0
RUS&CPM11	Traffic Island and Roundabout Maintenance	5km	0	0	1	1	0	0
RUS&CPM12	Crash Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM13	Sight Rails, Hand Rail and Pedestrian Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM14	Marker Posts (Guard Stones, Boundry, Edge, Culvert, Distance Markers, Hazard)	5km	0	0	2	1	0	0
Any RUS&CPM	Repeated Non-Conformance in Consecutive Months	5km	0	0	6		0	0
Any RUS&CPM	Any Employer or Monitoring Consultant generated Non - Conformance	5km	0	1	6	1	0	6
Any Road Safety Hazards	Any Immediate Safety Hazard to Road Users Instructed for Repair	5km	0	0	6		0	0
Total Score							2	10

Table 3-4 : VERIFICATION INSPECTION AUDIT – SECTION S2 – K 25 TO KM 30

ROAD USER SERVICE & COMFORT PERFORMANCE MEASURES (RUS&CPM's) - REFER TO WEIGHTINGS IN THE SPECIFICATION								
Month : January 2015		5 km Audit Length Start Location	S2	km 25 to km 30				
Reference to Bidding Document Section VI	Item Description	Minimum Audit Length for Each Recorded Non - Conformance	Number of Non-Conformances Recorded Minimum Audit Length A Contractor	Number of Non-Conformances Recorded Minimum Audit Length A MC	Non-Conformances Weighting B	Sub-Weighting No of Consecutive Weeks/Months C	Total Non-Conformance Score A+B+C Contractor	Total Non-Conformance Score A+B+C MC
RUS&CPM1	Pavement Maintenance	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM2	Unsealed Shoulder Maintenance	5km (1km for cracking)	0	0	1	1	0	0
RUS&CPM3	Drainage Maintenance	1km	1	1	2	1	2	2
RUS&CPM4	Routine Maintenance of Bridge and other Structures	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM5	Obstructions on the Pavement Surface and Shoulders	1km	0	0	1	1	0	0
RUS&CPM6	Incident and Emergency Works Response	N/A	0	0	2	1	0	0
RUS&CPM7	Vegetation Control	5km	0	0	1	1	0	0
RUS&CPM8	Roadside Signs Maintenance	5km	0	1	2	1	0	2
RUS&CPM9	Raised Reflective Pavement Markers	5km/1km	0	0	2	1	0	0
RUS&CPM10	Pavement Markings - (Lines, Text, Symbols etc)	5km	0	0	2	1	0	0
RUS&CPM11	Traffic Island and Roundabout Maintenance	5km	0	0	1	1	0	0
RUS&CPM12	Crash Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM13	Sight Rails, Hand Rail and Pedestrian Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM14	Marker Posts (Guard Stones, Boundry, Edge, Culvert, Distance Markers, Hazard)	5km	0	0	2	1	0	0
Any RUS&CPM	Repeated Non-Conformance in Consecutive Months	5km	0	0	6		0	0
Any RUS&CPM	Any Employer or Monitoring Consultant generated Non - Conformance	5km	0	1	6	1	0	6
Any Road Safety Hazards	Any Immediate Safety Hazard to Road Users Instructed for Repair	5km	0	0	6		0	0
Total Score							2	10

Table 3-5 : VERIFICATION INSPECTION AUDIT – SECTION S2 – K 45 TO KM 50

ROAD USER SERVICE & COMFORT PERFORMANCE MEASURES (RUS&CPM's) - REFER TO WEIGHTINGS IN THE SPECIFICATION								
Month : January 2015		5 km Audit Length Start Location		S2 km 45 to km 50				
Reference to Bidding Document Section VI	Item Description	Minimum Audit Length for Each Recorded Non - Conformance	Number of Non-Conformances Recorded Minimum Audit Length A Contractor	Number of Non-Conformances Recorded Minimum Audit Length A MC	Non-Conformances Weighting B	Sub-Weighting No of Consecutive Weeks/Months C	Total Non-Conformance Score A+B+C Contractor	Total Non-Conformance Score A+B+C MC
RUS&CPM1	Pavement Maintenance	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM2	Unsealed Shoulder Maintenance	5km (1km for cracking)	0	0	1	1	0	0
RUS&CPM3	Drainage Maintenance	1km	1	1	2	1	2	2
RUS&CPM4	Routine Maintenance of Bridge and other Structures	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM5	Obstructions on the Pavement Surface and Shoulders	1km	0	0	1	1	0	0
RUS&CPM6	Incident and Emergency Works Response	N/A	0	0	2	1	0	0
RUS&CPM7	Vegetation Control	5km	0	0	1	1	0	0
RUS&CPM8	Roadside Signs Maintenance	5km	0	0	2	1	0	0
RUS&CPM9	Raised Reflective Pavement Markers	5km/1km	0	0	2	1	0	0
RUS&CPM10	Pavement Markings - (Lines, Text, Symbols etc)	5km	0	0	2	1	0	0
RUS&CPM11	Traffic Island and Roundabout Maintenance	5km	0	0	1	1	0	0
RUS&CPM12	Crash Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM13	Sight Rails, Hand Rail and Pedestrian Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM14	Marker Posts (Guard Stones, Boundry, Edge, Culvert, Distance Markers, Hazard)	5km	0	0	2	1	0	0
Any RUS&CPM	Repeated Non-Conformance in Consecutive Months	5km	0	0	6		0	0
Any RUS&CPM	Any Employer or Monitoring Consultant generated Non - Conformance	5km	0	0	6	1	0	0
Any Road Safety Hazards	Any Immediate Safety Hazard to Road Users Instructed for Repair	5km	0	0	6		0	0
Total Score							2	2

Table 3-6 : VERIFICATION INSPECTION AUDIT – SECTION S2 – K 50 TO KM 55

ROAD USER SERVICE & COMFORT PERFORMANCE MEASURES (RUS&CPM's) - REFER TO WEIGHTINGS IN THE SPECIFICATION								
Month : January 2015		5 km Audit Length Start Location		S2 km 50 to km 55				
Reference to Bidding Document Section VI	Item Description	Minimum Audit Length for Each Recorded Non - Conformance	Number of Non-Conformances Recorded Minimum Audit Length A Contractor	Number of Non-Conformances Recorded Minimum Audit Length A MC	Non-Conformances Weighting B	Sub-Weighting No of Consecutive Weeks/Months C	Total Non-Conformance Score A+B+C Contractor	Total Non-Conformance Score A+B+C MC
RUS&CPM1	Pavement Maintenance	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM2	Unsealed Shoulder Maintenance	5km (1km for cracking)	0	0	1	1	0	0
RUS&CPM3	Drainage Maintenance	1km	1	1	2	1	2	2
RUS&CPM4	Routine Maintenance of Bridge and other Structures	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM5	Obstructions on the Pavement Surface and Shoulders	1km	0	0	1	1	0	0
RUS&CPM6	Incident and Emergency Works Response	N/A	0	0	2	1	0	0
RUS&CPM7	Vegetation Control	5km	0	0	1	1	0	0
RUS&CPM8	Roadside Signs Maintenance	5km	0	0	2	1	0	0
RUS&CPM9	Raised Reflective Pavement Markers	5km/1km	0	0	2	1	0	0
RUS&CPM10	Pavement Markings - (Lines, Text, Symbols etc)	5km	0	0	2	1	0	0
RUS&CPM11	Traffic Island and Roundabout Maintenance	5km	0	0	1	1	0	0
RUS&CPM12	Crash Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM13	Sight Rails, Hand Rail and Pedestrian Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM14	Marker Posts (Guard Stones, Boundry, Edge, Culvert, Distance Markers, Hazard)	5km	0	0	2	1	0	0
Any RUS&CPM	Repeated Non-Conformance in Consecutive Months	5km	0	0	6		0	0
Any RUS&CPM	Any Employer or Monitoring Consultant generated Non - Conformance	5km	0	0	6	1	0	0
Any Road Safety Hazards	Any Immediate Safety Hazard to Road Users Instructed for Repair	5km	0	0	6		0	0
Total Score							2	2

Table 3-7 : VERIFICATION INSPECTION AUDIT – SECTION S2 – K 60 TO KM 65

ROAD USER SERVICE & COMFORT PERFORMANCE MEASURES (RUS&CPM's) - REFER TO WEIGHTINGS IN THE SPECIFICATION								
Month : January 2015		5 km Audit Length Start Location S2		km 60 to km 65				
Reference to Bidding Document Section VI	Item Description	Minimum Audit Length for Each Recorded Non - Conformance	Number of Non-Conformances Recorded Minimum Audit Length A Contractor	Number of Non-Conformances Recorded Minimum Audit Length A MC	Non-Conformances Weighting B	Sub-Weighting No of Consecutive Weeks/Months C	Total Non-Conformance Score A+B+C Contractor	Total Non-Conformance Score A+B+C MC
RUS&CPM1	Pavement Maintenance	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM2	Unsealed Shoulder Maintenance	5km (1km for cracking)	0	0	1	1	0	0
RUS&CPM3	Drainage Maintenance	1km	1	1	2	1	2	2
RUS&CPM4	Routine Maintenance of Bridge and other Structures	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM5	Obstructions on the Pavement Surface and Shoulders	1km	0	0	1	1	0	0
RUS&CPM6	Incident and Emergency Works Response	N/A	0	0	2	1	0	0
RUS&CPM7	Vegetation Control	5km	0	0	1	1	0	0
RUS&CPM8	Roadside Signs Maintenance	5km	0	0	2	1	0	0
RUS&CPM9	Raised Reflective Pavement Markers	5km/1km	0	0	2	1	0	0
RUS&CPM10	Pavement Markings - (Lines, Text, Symbols etc)	5km	0	0	2	1	0	0
RUS&CPM11	Traffic Island and Roundabout Maintenance	5km	0	0	1	1	0	0
RUS&CPM12	Crash Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM13	Sight Rails, Hand Rail and Pedestrian Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM14	Marker Posts (Guard Stones, Boundry, Edge, Culvert, Distance Markers, Hazard)	5km	0	0	2	1	0	0
Any RUS&CPM	Repeated Non-Conformance in Consecutive Months	5km	0	0	6		0	0
Any RUS&CPM	Any Employer or Monitoring Consultant generated Non - Conformance	5km	0	0	6	1	0	0
Any Road Safety Hazards	Any Immediate Safety Hazard to Road Users Instructed for Repair	5km	0	0	6		0	0
Total Score							2	2

Table 3-8 : VERIFICATION INSPECTION AUDIT – SECTION S3 – K 00 TO KM 7.290

ROAD USER SERVICE & COMFORT PERFORMANCE MEASURES (RUS&CPM's) - REFER TO WEIGHTINGS IN THE SPECIFICATION								
Month : January 2015		7 km Audit Length Start Location S3 km 0 to km 7.290						
Reference to Bidding Document Section VI	Item Description	Minimum Audit Length for Each Recorded Non - Conformance	Number of Non-Conformances Recorded Minimum Audit Length A Contractor	Number of Non-Conformances Recorded Minimum Audit Length A MC	Non-Conformances Weighting B	Sub-Weighting No of Consecutive Weeks/Months C	Total Non-Conformance Score A+B+C Contractor	Total Non-Conformance Score A+B+C MC
RUS&CPM1	Pavement Maintenance	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM2	Unsealed Shoulder Maintenance	5km (1km for cracking)	0	0	1	1	0	0
RUS&CPM3	Drainage Maintenance	1km	0	1	2	1	0	2
RUS&CPM4	Routine Maintenance of Bridge and other Structures	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM5	Obstructions on the Pavement Surface and Shoulders	1km	1	1	1	1	1	1
RUS&CPM6	Incident and Emergency Works Response	N/A	0	0	2	1	0	0
RUS&CPM7	Vegetation Control	5km	0	0	1	1	0	0
RUS&CPM8	Roadside Signs Maintenance	5km	0	0	2	1	0	0
RUS&CPM9	Raised Reflective Pavement Markers	5km/1km	0	0	2	1	0	0
RUS&CPM10	Pavement Markings - (Lines, Text, Symbols etc)	5km	0	0	2	1	0	0
RUS&CPM11	Traffic Island and Roundabout Maintenance	5km	0	0	1	1	0	0
RUS&CPM12	Crash Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM13	Sight Rails, Hand Rail and Pedestrian Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM14	Marker Posts (Guard Stones, Boundry, Edge, Culvert, Distance Markers, Hazard)	5km	0	0	2	1	0	0
Any RUS&CPM	Repeated Non-Conformance in Consecutive Months	5km	0	0	6		0	0
Any RUS&CPM	Any Employer or Monitoring Consultant generated Non - Conformance	5km	0	1	6	1	0	6
Any Road Safety Hazards	Any Immediate Safety Hazard to Road Users Instructed for Repair	5km	0	0	6		0	0
Total Score							1	9

Table 3-9 : VERIFICATION INSPECTION AUDIT – SECTION S5 – K 0 TO KM 5

ROAD USER SERVICE & COMFORT PERFORMANCE MEASURES (RUS&CPM's) - REFER TO WEIGHTINGS IN THE SPECIFICATION								
Month : January 2015		5 km Audit Length Start Location S5 km 0 to km 5						
Reference to Bidding Document Section VI	Item Description	Minimum Audit Length for Each Recorded Non - Conformance	Number of Non-Conformances Recorded Minimum Audit Length A Contractor	Number of Non-Conformances Recorded Minimum Audit Length A MC	Non-Conformances Weighting B	Sub-Weighting No of Consecutive Weeks/Months C	Total Non-Conformance Score A+B+C Contractor	Total Non-Conformance Score A+B+C MC
RUS&CPM1	Pavement Maintenance	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM2	Unsealed Shoulder Maintenance	5km (1km for cracking)	0	5	1	1	0	5
RUS&CPM3	Drainage Maintenance	1km	1	1	2	1	2	2
RUS&CPM4	Routine Maintenance of Bridge and other Structures	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM5	Obstructions on the Pavement Surface and Shoulders	1km	0	0	1	1	0	0
RUS&CPM6	Incident and Emergency Works Response	N/A	0	0	2	1	0	0
RUS&CPM7	Vegetation Control	5km	0	0	1	1	0	0
RUS&CPM8	Roadside Signs Maintenance	5km	0	1	2	1	0	2
RUS&CPM9	Raised Reflective Pavement Markers	5km/1km	0	0	2	1	0	0
RUS&CPM10	Pavement Markings - (Lines, Text, Symbols etc)	5km	0	5	2	1	0	10
RUS&CPM11	Traffic Island and Roundabout Maintenance	5km	0	0	1	1	0	0
RUS&CPM12	Crash Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM13	Sight Rails, Hand Rail and Pedestrian Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM14	Marker Posts (Guard Stones, Boundry, Edge, Culvert, Distance Markers, Hazard)	5km	0	0	2	1	0	0
Any RUS&CPM	Repeated Non-Conformance in Consecutive Months	5km	0	1	6	1	0	6
Any RUS&CPM	Any Employer or Monitoring Consultant generated Non - Conformance	5km	0	11	6	1	0	66
Any Road Safety Hazards	Any Immediate Safety Hazard to Road Users Instructed for Repair	5km	0	0	6		0	0
Total Score							2	91

Table 3-10 : VERIFICATION INSPECTION AUDIT – SECTION S5 – K 5 TO KM 10

ROAD USER SERVICE & COMFORT PERFORMANCE MEASURES (RUS&CPM's) - REFER TO WEIGHTINGS IN THE SPECIFICATION								
Month : January 2015		5 km Audit Length Start Location S5 km 5 to km 10						
Reference to Bidding Document Section VI	Item Description	Minimum Audit Length for Each Recorded Non - Conformance	Number of Non-Conformances Recorded Minimum Audit Length A Contractor	Number of Non-Conformances Recorded Minimum Audit Length A MC	Non-Conformances Weighting B	Sub-Weighting No of Consecutive Weeks/Months C	Total Non-Conformance Score A+B+C Contractor	Total Non-Conformance Score A+B+C MC
RUS&CPM1	Pavement Maintenance	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM2	Unsealed Shoulder Maintenance	5km (1km for cracking)	0	5	1	1	0	5
RUS&CPM3	Drainage Maintenance	1km	0	1	2	1	0	2
RUS&CPM4	Routine Maintenance of Bridge and other Structures	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM5	Obstructions on the Pavement Surface and Shoulders	1km	0	0	1	1	0	0
RUS&CPM6	Incident and Emergency Works Response	N/A	0	0	2	1	0	0
RUS&CPM7	Vegetation Control	5km	0	0	1	1	0	0
RUS&CPM8	Roadside Signs Maintenance	5km	0	1	2	1	0	2
RUS&CPM9	Raised Reflective Pavement Markers	5km/1km	0	0	2	1	0	0
RUS&CPM10	Pavement Markings - (Lines, Text, Symbols etc)	5km	0	0	2	1	0	0
RUS&CPM11	Traffic Island and Roundabout Maintenance	5km	0	0	1	1	0	0
RUS&CPM12	Crash Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM13	Sight Rails, Hand Rail and Pedestrian Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM14	Marker Posts (Guard Stones, Boundry, Edge, Culvert, Distance Markers, Hazard)	5km	0	0	2	1	0	0
Any RUS&CPM	Repeated Non-Conformance in Consecutive Months	5km	0	1	6	1	0	6
Any RUS&CPM	Any Employer or Monitoring Consultant generated Non - Conformance	5km	0	7	6	1	0	42
Any Road Safety Hazards	Any Immediate Safety Hazard to Road Users Instructed for Repair	5km	0	0	6		0	0
Total Score							0	57

Table 3-11 : VERIFICATION INSPECTION AUDIT – SECTION S5 – K 20 TO KM 25.340

ROAD USER SERVICE & COMFORT PERFORMANCE MEASURES (RUS&CPM's) - REFER TO WEIGHTINGS IN THE SPECIFICATION								
Month : January 2015		5 km Audit Length Start Location S5 km 20 to km 25,340						
Reference to Bidding Document Section VI	Item Description	Minimum Audit Length for Each Recorded Non - Conformance	Number of Non-Conformances Recorded Minimum Audit Length A Contractor	Number of Non-Conformances Recorded Minimum Audit Length A MC	Non-Conformances Weighting B	Sub-Weighting No of Consecutive Weeks/Months C	Total Non-Conformance Score A+B+C Contractor	Total Non-Conformance Score A+B+C MC
RUS&CPM1	Pavement Maintenance	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM2	Unsealed Shoulder Maintenance	5km (1km for cracking)	0	5	1	1	0	5
RUS&CPM3	Drainage Maintenance	1km	0	0	2	1	0	0
RUS&CPM4	Routine Maintenance of Bridge and other Structures	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM5	Obstructions on the Pavement Surface and Shoulders	1km	1	1	1	1	1	1
RUS&CPM6	Incident and Emergency Works Response	N/A	0	0	2	1	0	0
RUS&CPM7	Vegetation Control	5km	0	0	1	1	0	0
RUS&CPM8	Roadside Signs Maintenance	5km	0	1	2	1	0	2
RUS&CPM9	Raised Reflective Pavement Markers	5km/1km	0	0	2	1	0	0
RUS&CPM10	Pavement Markings - (Lines, Text, Symbols etc)	5km	0	0	2	1	0	0
RUS&CPM11	Traffic Island and Roundabout Maintenance	5km	0	0	1	1	0	0
RUS&CPM12	Crash Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM13	Sight Rails, Hand Rail and Pedestrian Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM14	Marker Posts (Guard Stones, Boundry, Edge, Culvert, Distance Markers, Hazard)	5km	0	0	2	1	0	0
Any RUS&CPM	Repeated Non-Conformance in Consecutive Months	5km	0	1	6	1	0	6
Any RUS&CPM	Any Employer or Monitoring Consultant generated Non - Conformance	5km	0	6	6	1	0	36
Any Road Safety Hazards	Any Immediate Safety Hazard to Road Users Instructed for Repair	5km	0	0	6		0	0
Total Score							1	50

Table 3-12 : VERIFICATION INSPECTION AUDIT – SECTION B8 – K 9.200 TO KM 15

ROAD USER SERVICE & COMFORT PERFORMANCE MEASURES (RUS&CPM's) - REFER TO WEIGHTINGS IN THE SPECIFICATION								
Month : January 2015		5 km Audit Length Start Location B8			Km 9,2 to Km 15			
Reference to Bidding Document Section VI	Item Description	Minimum Audit Length for Each Recorded Non - Conformance	Number of Non-Conformances Recorded Minimum Audit Length A Contractor	Number of Non-Conformances Recorded Minimum Audit Length A MC	Non-Conformances Weighting B	Sub-Weighting No of Consecutive Weeks/Months C	Total Non-Conformance Score A+B+C Contractor	Total Non-Conformance Score A+B+C MC
RUS&CPM1	Pavement Maintenance	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM2	Unsealed Shoulder Maintenance	5km (1km for cracking)	0	1	1	1	0	1
RUS&CPM3	Drainage Maintenance	1km	1	1	2	1	2	2
RUS&CPM4	Routine Maintenance of Bridge and other Structures	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM5	Obstructions on the Pavement Surface and Shoulders	1km	0	0	1	1	0	0
RUS&CPM6	Incident and Emergency Works Response	N/A	0	0	2	1	0	0
RUS&CPM7	Vegetation Control	5km	0	0	1	1	0	0
RUS&CPM8	Roadside Signs Maintenance	5km	0	1	2	1	0	2
RUS&CPM9	Raised Reflective Pavement Markers	5km/1km	0	0	2	1	0	0
RUS&CPM10	Pavement Markings - (Lines, Text, Symbols etc)	5km	0	0	2	1	0	0
RUS&CPM11	Traffic Island and Roundabout Maintenance	5km	0	0	1	1	0	0
RUS&CPM12	Crash Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM13	Sight Rails, Hand Rail and Pedestrian Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM14	Marker Posts (Guard Stones, Boundry, Edge, Culvert, Distance Markers, Hazard)	5km	0	0	2	1	0	0
Any RUS&CPM	Repeated Non-Conformance in Consecutive Months	5km	0	0	6		0	0
Any RUS&CPM	Any Employer or Monitoring Consultant generated Non - Conformance	5km	0	2	6	1	0	12
Any Road Safety Hazards	Any Immediate Safety Hazard to Road Users Instructed for Repair	5km	0	0	6		0	0
Total Score							2	17

Table 3-13 : VERIFICATION INSPECTION AUDIT – SECTION B8 – K 15 TO KM 20

ROAD USER SERVICE & COMFORT PERFORMANCE MEASURES (RUS&CPM's) - REFER TO WEIGHTINGS IN THE SPECIFICATION								
Month : January 2015		5 km Audit Length Start Location B8 Km 15 to Km 20						
Reference to Bidding Document Section VI	Item Description	Minimum Audit Length for Each Recorded Non - Conformance	Number of Non-Conformances Recorded Minimum Audit Length A Contractor	Number of Non-Conformances Recorded Minimum Audit Length A MC	Non-Conformances Weighting B	Sub-Weighting No of Consecutive Weeks/Months C	Total Non-Conformance Score A+B+C Contractor	Total Non-Conformance Score A+B+C MC
RUS&CPM1	Pavement Maintenance	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM2	Unsealed Shoulder Maintenance	5km (1km for cracking)	0	5	1	1	0	5
RUS&CPM3	Drainage Maintenance	1km	0	0	2	1	0	0
RUS&CPM4	Routine Maintenance of Bridge and other Structures	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM5	Obstructions on the Pavement Surface and Shoulders	1km	0	0	1	1	0	0
RUS&CPM6	Incident and Emergency Works Response	N/A	0	0	2	1	0	0
RUS&CPM7	Vegetation Control	5km	0	0	1	1	0	0
RUS&CPM8	Roadside Signs Maintenance	5km	0	1	2	1	0	2
RUS&CPM9	Raised Reflective Pavement Markers	5km/1km	0	0	2	1	0	0
RUS&CPM10	Pavement Markings - (Lines, Text, Symbols etc)	5km	0	5	2	1	0	10
RUS&CPM11	Traffic Island and Roundabout Maintenance	5km	0	0	1	1	0	0
RUS&CPM12	Crash Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM13	Sight Rails, Hand Rail and Pedestrian Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM14	Marker Posts (Guard Stones, Boundry, Edge, Culvert, Distance Markers, Hazard)	5km	0	0	2	1	0	0
Any RUS&CPM	Repeated Non-Conformance in Consecutive Months	5km	0	0	6		0	0
Any RUS&CPM	Any Employer or Monitoring Consultant generated Non - Conformance	5km	0	11	6	1	0	66
Any Road Safety Hazards	Any Immediate Safety Hazard to Road Users Instructed for Repair	5km	0	0	6		0	0
Total Score							0	83

Table 3-14 : VERIFICATION INSPECTION AUDIT – SECTION B8 – K 25 TO KM 30

ROAD USER SERVICE & COMFORT PERFORMANCE MEASURES (RUS&CPM's) - REFER TO WEIGHTINGS IN THE SPECIFICATION								
Month : January 2015		5 km Audit Length Start Location B8 Km 25 to Km 30						
Reference to Bidding Document Section VI	Item Description	Minimum Audit Length for Each Recorded Non - Conformance	Number of Non-Conformances Recorded Minimum Audit Length A Contractor	Number of Non-Conformances Recorded Minimum Audit Length A MC	Non-Conformances Weighting B	Sub-Weighting No of Consecutive Weeks/Months C	Total Non-Conformance Score A+B+C Contractor	Total Non-Conformance Score A+B+C MC
RUS&CPM1	Pavement Maintenance	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM2	Unsealed Shoulder Maintenance	5km (1km for cracking)	0	5	1	1	0	5
RUS&CPM3	Drainage Maintenance	1km	0	0	2	1	0	0
RUS&CPM4	Routine Maintenance of Bridge and other Structures	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM5	Obstructions on the Pavement Surface and Shoulders	1km	1	1	1	1	1	1
RUS&CPM6	Incident and Emergency Works Response	N/A	0	0	2	1	0	0
RUS&CPM7	Vegetation Control	5km	0	0	1	1	0	0
RUS&CPM8	Roadside Signs Maintenance	5km	0	1	2	1	0	2
RUS&CPM9	Raised Reflective Pavement Markers	5km/1km	0	0	2	1	0	0
RUS&CPM10	Pavement Markings - (Lines, Text, Symbols etc)	5km	0	5	2	1	0	10
RUS&CPM11	Traffic Island and Roundabout Maintenance	5km	0	0	1	1	0	0
RUS&CPM12	Crash Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM13	Sight Rails, Hand Rail and Pedestrian Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM14	Marker Posts (Guard Stones, Boundry, Edge, Culvert, Distance Markers, Hazard)	5km	0	0	2	1	0	0
Any RUS&CPM	Repeated Non-Conformance in Consecutive Months	5km	0	0	6		0	0
Any RUS&CPM	Any Employer or Monitoring Consultant generated Non - Conformance	5km	0	11	6	1	0	66
Any Road Safety Hazards	Any Immediate Safety Hazard to Road Users Instructed for Repair	5km	0	0	6		0	0
Total Score							1	84

Table 3-15 : VERIFICATION INSPECTION AUDIT – SECTION B8 – K 30 TO KM 37.850

ROAD USER SERVICE & COMFORT PERFORMANCE MEASURES (RUS&CPM's) - REFER TO WEIGHTINGS IN THE SPECIFICATION								
Month : January 2015		5 km Audit Length Start Location		B8 Km 30.00 to Km 37.850				
Reference to Bidding Document Section VI	Item Description	Minimum Audit Length for Each Recorded Non - Conformance	Number of Non-Conformances Recorded Minimum Audit Length A Contractor	Number of Non-Conformances Recorded Minimum Audit Length A MC	Non-Conformances Weighting B	Sub-Weighting No of Consecutive Weeks/Months C	Total Non-Conformance Score A+B+C Contractor	Total Non-Conformance Score A+B+C MC
RUS&CPM1	Pavement Maintenance	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM2	Unsealed Shoulder Maintenance	5km (1km for cracking)	0	5	1	1	0	5
RUS&CPM3	Drainage Maintenance	1km	0	0	2	1	0	0
RUS&CPM4	Routine Maintenance of Bridge and other Structures	5km (1km for cracking)	0	0	2	1	0	0
RUS&CPM5	Obstructions on the Pavement Surface and Shoulders	1km	1	1	1	1	1	1
RUS&CPM6	Incident and Emergency Works Response	N/A	0	0	2	1	0	0
RUS&CPM7	Vegetation Control	5km	0	0	1	1	0	0
RUS&CPM8	Roadside Signs Maintenance	5km	0	1	2	1	0	2
RUS&CPM9	Raised Reflective Pavement Markers	5km/1km	0	0	2	1	0	0
RUS&CPM10	Pavement Markings - (Lines, Text, Symbols etc)	5km	0	5	2	1	0	10
RUS&CPM11	Traffic Island and Roundabout Maintenance	5km	0	2	1	1	0	2
RUS&CPM12	Crash Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM13	Sight Rails, Hand Rail and Pedestrian Barrier Maintenance	5km	0	0	1	1	0	0
RUS&CPM14	Marker Posts (Guard Stones, Boundry, Edge, Culvert, Distance Markers, Hazard)	5km	0	0	2	1	0	0
Any RUS&CPM	Repeated Non-Conformance in Consecutive Months	5km	0	1	6	1	0	6
Any RUS&CPM	Any Employer or Monitoring Consultant generated Non - Conformance	5km	0	13	6	1	0	78
Any Road Safety Hazards	Any Immediate Safety Hazard to Road Users Instructed for Repair	5km	0	0	6		0	0
Total Score							1	104

3.2 PHOTOGRAPHIC RECORD

3.2.1 PHOTOGRAPHIC RECORD – SECTION S1



**1. Water ponding on pavement :
S1 - (0+800 R.H.S)**



**2. Potholes in shoulder Area:
S1 - (4+7000 L.H.S)**



**3. Parapet wall is inclined and rigid foundation is required:
S1 - (6+200 L.H.S)**



**4. Lack of grading in shoulder part
S1 - (3+400 R.H.S)**

3.2.2 PHOTOGRAPHIC RECORD – SECTION S2

3.2.2.1 Drainage water adjoining pavement edge

S2 – K 24+800 L.H.S

S2 – K 54+010 L.H.S

S2 – K 54+000 R.H.S

S2 – K 42+300 L.H.S



1. Drainage water adjoining pavement edge:
S2 – K 54+010 L.H.S)



**2. Low Level Pavement Shoulder:
S2 - (34+100 L.H.S)**



**3. Low Level Pavement Shoulder:
S - 2 (40+900 R.H.S).**



**4. Bottom Main Bars (work in progress)
S - 2 (45+100 R.H.S)**

3.2.3 PHOTOGRAPHIC RECORD – SECTION S3



**1. Drainage water stagnant on deck slab (R.O.B):
S3 - (5+200 R.O.B)**



**2. Drainage water adjoining pavement edge:
S3 - (6+200 R.H.S)**



**3. Paved & Earthen shoulder not maintain:
S3 - (124+800 R.H.S)**



**4. Worn out pavement marking:
S3 - (124+820 Centre)**

3.2.4 PHOTOGRAPHIC RECORD – SECTION S4



**1. Rain Cuts (Improper embankment slopes):
S4-(0+150 to 0+200 L.H.S)**



**2. Preparing GSB (work in progress):
S4 - (16+680 L.H.S)**



**3. Crushed material (work in construction):
S4 - (16+690 L.H.S)**



4. Improvement work in progress:
S4 - (21+400 to 21+500 L.H.S)



5. Improvement work in progress:
S4 - (21+420 L.H.S)



6. Culvert Board Damaged:
S4 - (23+170 L.H.S)



7. Improvement work in progress:
S4 - (17+500 R.H.S)



**8. Water Stagnant:
S4 - (15+150 R .H.S)**



**9. Crushed material used for GSB:
S4 - (17+510 R.H.S)**



**10. Crushed material used for GSB:
S4 - (17+550 R.H.S)**

3.2.5 PHOTOGRAPHIC RECORD – SECTION S5



**1. Parapet wall Damaged/not painted:
S – 5 (25+000 R.H.S)**



**2. Worn out pavement marking:
S – 5 (0+200 to 0+400 Centreline)**

3.2.6 PHOTOGRAPHIC RECORD – SECTION B8



**1. No Pavement Marking:
B8 - (18+105 L.H.S)**



**2. Unsealed earthen shoulder
B8 - (24+140 R.H.S)**



**3. Bridge safety railing damaged:
B8 - (20+600 R.H.S)**



**4. Improper Compaction:
B8 - (25+750 B.H.S)**

3.3 QC TASKS UNDERTAKEN & REPORTED BY THE CONTRACTOR

The following table summarizes the QC tasks undertaken and reported by the Contractor pertaining to the month of January, 2014

The MC has suggested to the contractor that they would intimate them at least 48 hrs prior of such Request for Inspection or Request for Survey work being undertaken onsite. This would ensure MC's availability for the slated inspections.

Table 3-16 : QC tasks undertaken & reported by the Contractor - January, 2015

Summary (Compressive Strength)						
Sl. #	Date of Casting	Description/Chainage	Grade of Concrete	Average Compressive Strength N/mm ² 7 Days	Average Compressive Strength N/mm ² 28 Days	Remarks
1	07.01.15	51+040 RS- HW- 4th Lift	M-15	13.48	19.85	
2	08.01.15	51+370 RS- Pcc for Abutment	M-15	12.74	19.85	
3	10.01.15	44+520 BS- Pcc for Abutment	M-15	13.18	19.7	
4	10.1.15	51+370 BS- Bed Block	M-25	19.85	27.41	
5	11.01.15	39.250 BS- Pcc for HW & Ist Lift	M-15	12.3	19.85	
6	11.01.15	51+370 BS- Slab	M-30	24.15	37.48	
7	12.01.15	35.770 BS- pcc for Abutment	M-15	13.18	20	
8	13.01.15	39+250 BS- HW- IInd Lift	M-15	11.85		
		39+250 BS- Pipe Bed Pcc				
9	13.01.15	44.520BS- Bed Block	M-25	19.41		
10	15.01.15	39+250 BS -HW- IIIrd Lift	M-15	12.44		
		39+250 LS- HW- 4th Lift				
11	15.01.15	44+520 BS- Slab	M-30	25.63		
12	16.01.15	39+250 RS -HW- 4th lift	M-15	12.74		

		39+250 RS- 5th Lift			
		37+100 LS- Pcc for HW			
		37+100 LS- HW- Ist Lift			
		34+730 BS- Pcc for Abutment & Return Wall			
13	17.01.15	37+100 LS- Pipe Bed Pcc & HW- Iind lift	M-15	11.85	
		37+700 LS- Pcc for Abutment & Returnwall			
14	18.01.15	37+100 LS- HW- IIIrd & 4th Lift		13.04	
		32+300 BS- Pcc for Abutment & ReturnWall			
		32+100 BS- Pcc for Abutment & ReturnWall			
		30+650 BS- Pcc for Abutment & ReturnWall			
15	19.01.15	32+300 BS- Bed Block	M-25	18.82	
16	19.01.15	31+500 BS- Pcc for HW	M-15	13.33	
		30+650 LS- Pcc for Abutment			
17	20.01.15	32+300 BS- Slab	M-30	26.07	
18	20.01.15	34+730 BS - Bed Block	M-25	19.26	
19	20.01.15	31+500 LS- Pcc for HW	M-15	12.59	
20	21.01.15	29.850 LS- Pcc for Abutment	M-15	12.89	
		31+500 BS- HW- Ist Lift			
21	22.01.15	34+730 BS- slab	M-30	28.3	
22	22.01.15	38+170 RS- Pcc for HW	M-15	12.45	
23	23.01.15	38+170 RS- HW- Ist Lift	M-15	12.89	
		38+170 LS- Pcc for HW			
24	23.01.15	30+650 BS- Bed Block	M-25	19.85	
25	24.01.15	38+170 LS- HW- Ist Lift	M-15	12.59	
		38+170 RS- Pipe Bed Pcc			
		35+210 RS- HW- Ist Lift			
		35+210 RS- Pcc for HW			
26	24.01.15	30+650 BS- Slab	M-30	27.56	
27	24.01.15	32.100 BS- Bed Block	M-25	18.52	
28	25.01.15	57+030 BS- Pcc for HW	M-15	11.85	
		38+170 RS- HW- Iind Lift			
		38+170 LS- Pipe Bed Pcc			
		35+210 LS- Pcc for HW			
		29+850 RS Pcc for Abutment			
29	27.01.15	38+170 RS- HW- IIIrd Lift	M-15	12.3	
		38+170 LS- HW- Iind Lift			
		35+210 LS- HW- Ist Lift			
		31+500 BS- pipe Bed Pcc			
30	28.01.15	38+170 RS -HW- 4 th lift	M-15	12.45	
		38+170 LS-HW- IIIrd lift			
		35+210 BS- Pipe bed Pcc			
		31+500 BS- HW- Iind Lift			
31	28.01.15	29.850 RS- Bed block	M-25	18.82	
		35+770 LS- Bed Block			
32	29.01.15	35.21 RS- HW- Iind Lift	M-15	12.59	
		31+500 BS- HW- IIIrd Lift			
33	29.01.15	29+850 RS -Slab	M-30	27.41	
		32+100 BS- Slab			
34	30.01.15	38+170 LS- HW- 4th Lift	M-15	12.15	

		35+210 RS- HW- IIIrd Lift			
35	31.01.15	35+770 LS- Slab	M-30	26.82	
36	31.01.15	35+210 RS- HW- 4 th Lift	M-15	12.45	
		35+210 LS- HW IInd Lift			
		35+210 LS- HW- IIIrd Lift			
		33+700 RS- Pcc for Abutment			
37	01.02.15	35+210 LS- HW- 4 th Lift	M-15	12.3	
		35+210 RS -HW- 5 th Lift			
		34+600 RS- Pcc for HW			
38	02.02.15	57+030 BS- HW- Ist Lift	M-15	12.15	
39	04.02.15	57+030 BS-Pipe Bed Pcc	M-15		
		57+030 BS- HW- Ist Lift			
40	04.02.15	33+700 RS -Bed Block	M-15		
41	05.02.15	57+030 BS- HW- IIIrd Lift	M-15		
42	05.02.15	29+480 LS- Pcc for Abutment	M-15		
43	06.02.15	33+700 RS- Slab	M-30		
44	06.02.15	34+000 RS- HW- Pcc & Ist lift	M-15		
45	06.02.15	29+480 LS- Bed Block	M-25		
		49+300 BS- Bed Block			
46	07.02.15	29+480 LS- Slab	M-30		
47	07.02.15	34+600 RS- Pipe bed Pcc	M-15		
		34+600 RS- HW- Ist Lift			
48	08.02.15	49+300 BS- Slab	M-30		

4 PAYMENTS & DISPUTES

This Chapter describes the recommendation from Monitoring Consultant regarding to approve of the Contractor's next payment corresponding to the Month January, 2015. This Chapter also included a current description of the Claims submitted by the Contractor to the Client.

4.1 CONTRACTOR'S PAYMENT – MONTH OF JANUARY, 2015

The Monitoring Consultant recommend use of below table for calculate the value of the Contractor's payment corresponding to the Month January, 2015, which summary the Monthly Contract Non-Conformance Score, with base of the detail scores of NON-CONFORMANCES included in the Subchapter 2.3.

Therefore according to Chapter 18 of the Contract Agreement, it is recommending to use the percent achieved by the Contractor for the payment of the Month January, 2015 that is 80.42 %.

Table 4-1 : Monthly Contract Non-Conformance Score

Refer Not Above	Non-Conformance	Number of Non-Conformances A contractor	Number of Non-Conformances A MC	Multiplication Factor		Score A*B*C MC
				Weighting B	Sub Weighting C	
A	RDPM Non-Conformance					-
B	MPM-1 Quality Assurance System					38
C	RUS & CPM-1 Pavement Maintenance	0	0	2	1	0
D	RUS & CPM-2 Unsealed Shoulder	0	31	1	1	31
E	RUS & CPM-3 Drainage Maintenance	8	10	2	1	20
F	RUS & CPM-4 Routine Maintenance of Bridges & Other Structures	0	1	2	1	2
G	RUS & CPM-5 Obstructions on the Pavement Surface and Shoulders	7	7	1	1	7
H	RUS & CPM-6 Incident Response & Emergency Works Response	0	0	2	1	0
I	RUS & CPM-7 Vegetation control	0	0	1	1	0
J	RUS & CPM-8 Road Signs Maintenance	0	11	2	1	22
K	RUS & CPM-9 Raised Pavement Markers	0	0	2	1	0
L	RUS & CPM-10 Pavement Marking	0	20	2	1	40
M	RUS & CPM-11 Traffic Island and Roundabout Maintenance	0	2	1	1	2
N	RUS & CPM-12 Crash Barrier Maintenance	0	0	1	1	0
O	RUS & CPM-13 Sight Rail, Hand Rail and Pedestrian Barrier	0	0	1	1	0
P	RUS & CPM-14 Marker Post Maintenance	0	0	2	1	0
Q	Repeated Non-Conformance in Consecutive Months					36
R	Any Employer or Monitoring Consultant generated Non -					0
S	Any Immediate Safety Hazard to Road Users Instructed for					0
Monthly Aggregated Contract Non-Conformance score						198

4.2 DISPUTES & CLAIMS

So far the Monitoring Consultant has been briefed with regards to two different claims of which one is still open. While the first claim by the Contractor pertained to the payment of price escalation as per the Contract Provisions, the second one, which has been referred to the Dispute Resolution Board (DRB), concerns the conflict that arose between the Contractor and the Client (PRBDB) in interpretation of contractual provisions w.r.t the pavement design requirements.

4.2.1 CLAIM 1

The Core issue pertained to payment of Price Escalation to the Contractor as per contractual provisions, as contained in clause 48.1 of GCC and as further detailed in PCC of the contractor.

- The recommendation of the DRB in the light of discussions and findings brought out in Para 4 above, by majority of its members (Mr. R.P. Indoria and Mr. H.P. Jamdar) are given below.
- The DRB has concluded that the claimant is entitled to receive price adjustment payment on the basis of the formula under clause 48.1 of Particular Condition (PV).
- The DRB therefore recommends as under:
 - (1) Price adjustment amount recovered from IPC-1 by the Respondent should be released to the Claimant;
 - (2) Price Adjustment payment based on the agreed formula provided under clause 48.1 of PC should be paid to the Claimant for the entire duration of the Contract;
 - (3) Respondent should pay the claimant the outstanding amount on account of price adjustment payment along with interest specified in clause 50.1 GC of the Contract, for the period of delay.

4.2.2 CLAIM 2

The Claim No 2 correspond to the Claim submitted for the contractor corresponding mainly to the Section S1. The Contractor requests the following:

1. The Contractor is bound to execute the work as per conventional minimum acceptable design solution for their lump sum price for the rehabilitated pavement within the contract area under Clause 5.5
2. The Contractor although entitled to execute the work as per its own non - conventional pavement design as long as the said design meets the minimum design criteria mentioned in Clause 5.5 and Clause 5.8 of the contract.
3. The Contractor's work is standstill because the contractor is not adopting the methodology of minimum design solution as per requirements under Clause 5.5 and Clause 5.8 for not using the method of overlaying asphaltic cement over the existing bituminous surface.
4. The Contractor's convention is completely unjust and is not in accordance with the contract and is, therefore, liable to be rejected.

5. The Employer is not permitting the contractor to proceed with the work unless the contractor agrees to execute the work as per minimum design solution provided under Clause 5.5
6. However, Bidders shall ensure that wherein asphaltic cement overlay treatment is proposed over any existing bituminous surfacing that is already cracked that the thickness of the new surfacing layer shall be greater than 175mm to mitigate the risk of reflective cracking under Clause 5.5.

After the review of the technical documents and of the Pavement Design of the Section S1, the Monitoring Consultant recommends on November 2014 accept the Pavement Design submitted by the Contractor with foundation in Non-Conventional Methods.

Finally the DRB recommendation dated 10th January 2015 is as under:

- The Claimant is not bound to execute the work as per minimum design solutions mentioned in Clause 5.5 of the Contract.
- The Contractor is entitled to execute the work as per its own pavement design as long as the said design meets the specific design criteria mentioned in Clause 5.8 of the Contract.
- All pending payments on this account should be released by the Respondent forthwith.

4.3 SUMMARY MAN-HOURS - MONITORING CONSULTANT

This Sub Chapter includes a Summary of inputs of the Monitoring Consultant in terms of man – hours for all members of the Monitoring Consultant’s Team during the Month January 2015.

Table 4-2 : MAN HOURS – KEY EXPERTS

MAN HOURS FOR THE MONTH OF JAN. 2014					
(A) KEY EXPERTS			MAN HOURS		
Sl.No.	EMPLOYEE NAME	DESIGNATION	MAN HOURS IN HOME OFFICE	MAN HOURS ON FIELD	TOTAL MAN HOURS
1	Wilson Perez	Team Leader/Project Manager	176	16	192
2	Sohan Singh Seehra	Pavement Design Specialist	-	-	-
3	Vinay Maitri	Data Analyst/Statistician	-	-	-
4	Amar Sarkar	Environmental Specialist	-	16	16
5	Vinod Kumar	Asset Manager	112	80	192
6	A. k Swaminathan	Independent Visitor Consultant	8	16	24
TOTAL -A			296	128	424

Table 4-3 : MAN HOURS – NON KEY EXPERTS

(B) NON-KEY EXPERTS			MAN HOURS		
Sl.No.	EMPLOYEE NAME	DESIGNATION	MAN HOURS IN HOME OFFICE	MAN HOURS ON FIELD	TOTAL MAN HOURS
1	Inderjeet Saini	Project Engineer	90	102	192
2	Varinder Singh	CAD Expert/Land Surveyor	156	36	192
3	Vijay Kumar	AM-Accounts/Administrator	192	-	192
4	Deep singh	Secretary/Assistant	192	-	192
5	Shivam Kumar	Head Clerk	192	-	192
6	Gadi Moshel	Senior Engineer	-	-	-
7	Emilia De La Ossa	Hydraulic/Drainage Expert	-	-	-
TOTAL-B			822	138	960
GRAND TOTAL (A+B)			1.118	266	1.384

Note: Only actual working days has included in man hours,Holiday's has not considered.

5 APPENDIX

5.1 MINUTES OF MEETING

5.1.1 MINUTES OF WORK PROGRESS REVIEW MEETINGS – DATE 20-01-2015

Discussion on:

1. Edge marking works in roads S3 & S5 and B8.
2. Sign Board works in all type of particulars as required like as School, Hospital etc. in all necessary places in all S1,S2,S3,S4,S5,B8 roads.
3. Earthen shoulder work in roads- Certified Borrow area, Rolling & compaction with sealed pavement edge, Slope with proper dimension.
4. Rectification works in cracks and Potholes in pavement surfaces and shoulder parts, Segregation in surface etc. in different chainages of S2,S3,S4,S5,B8.
5. Apply Deflection Test in pavement by FWD/ROMDAS for S2 and S1 roads.
6. Fixing of Cat eye and Delineator works in all roads after night inspection.
7. Coordination with irrigation department at chainage 85.00 in S2 road regarding sewer line.
8. Coordination with forest department for clearance.
9. T.B.M. fixing for level checking work.
10. Improvement in culvert work progress with good workmanship.

5.2 CORRESPONDENCE SENT

Table 5-1 : Correspondence Sent

DISPATCH LETTERS					
SI. #	DISPATCHED DATE	FILE NAME	SUBJECT	SENT BY	SENT TO
30	05/01/2015	TNM/SNG/0031	New joining of Mr. Vinod Kumar, Asset Manager.	Mr. Vijay	PWD
31	05/01/2015	TNM/SNG/0032	Submission of required info regarding our invoicing for Oct and Nov month.	Team Leader	PRBDB
32	05/01/2015	TNM/SNG/0033	Insurance Cover Note	Team Leader	PRBDB
33	31/12/2014	TNM/SNG/0040	Regarding next Network Performance Inspection	Team Leader	Patel infra. Pvt. Ltd.
34	08/01/2015	TNM/SNG/0041	Regarding next Network Performance Inspection	Team Leader	Patel infra. Pvt. Ltd.
35	09/01/2015	TNM/SNG/0042	Submission of MPR	Vinod Kumar	PWD
36	12/01/2015	TNM/SNG/0043	Unavailability of office equipment's at the Monitoring Consultant's office	Mr. Vijay	PWD
37	14/01/2015	TNM/SNG/0044	Submission of IRI & FWD data for 1st & 2nd year.	Vinod Kumar	Patel infra. Pvt. Ltd.
38	21/01/2015	TNM/SNG/0046	3rd year work program	Vinod Kumar	Patel infra. Pvt. Ltd.
39	16/01/2015	TNM/SNG/0046-A	Interim Payment Certificate-17	Vinod Kumar	PWD
40	22/01/2015	TNM/SNG/0047	Regarding MPR	Team Leader	PWD
41	27/01/2015	TNM/SNG/0049	Audit section for the month of jan-15	Inderjeet saini	Patel infra. Pvt. Ltd.
42	29/01/2015	TNM/SNG/0050	Return of Annual Bridge inspection report.	Vinod Kumar	Patel infra. Pvt. Ltd.
43	30/01/2015	TNM/SNG/0051	Pavement Marking	Vinod Kumar	Patel infra. Pvt. Ltd.
44	30/01/2015	TNM/SNG/0052	Borrow Area	Vinod Kumar	Patel infra. Pvt. Ltd.
45	30/01/2015	TNM/SNG/0053	3rd year work program	Vinod Kumar	Patel infra. Pvt. Ltd.
46	04/02/2015	TNM/SNG/0054	Regarding construction of new pipe culvert 600 mm dia at chainage- 42+300 in S2 road.	S.S Misra	PRBDB
47	04/02/2015	TNM/SNG/0055	3rd year work program	Vinod Kumar	PWD
48	04/02/2015	TNM/SNG/0057	Repairing of damage slab on culvert at chainage 88+750 in S2 road.	Vinod Kumar	Patel infra. Pvt. Ltd.
49	04/02/2015	TNM/SNG/0058	Submission of IRI & FWD data for 1st & 2nd year.	Vinod Kumar	Patel infra. Pvt. Ltd.
50	04/02/2015	TNM/SNG/0059	Forest Clearance	Vinod Kumar	PRBDB
51	06/02/2015	TNM/SNG/0060	Information regarding current account no. of TNM for process of 1st running Account Bill for month of Oct & Nov month.	Vinod Kumar	PRBDB
52	07/02/2015	TNM/SNG/0061	MPR for the month of Dec-2014.	Vinod Kumar	Patel infra. Pvt. Ltd.

5.3 CORRESPONDENCE RECEIVED

Table 5-2 : Correspondence Received

RECEIVED LETTERS					
Sl #.	DATE ON LETTER	FILE NAME	SUBJECT	RECEIVED DATE	REMARKS
39	01/01/2015	PIPL/OPRC/47 0/2014	Submission of low rate deduction certificate	02/01/2015	REPLY
40	02/01/2015	PIPL/OPRC/47 1/2014	Submission of CQAMP	05/01/2015	REPLY
41	02/01/2015	PIPL/OPRC/47 2/2014	Submission of Annual Bridge Inspection Report	05/01/2015	REPLY
42	03/01/2015	PIPL/OPRC/47 3-A/2014	Submission of HSE awareness report	05/01/2015	Received
43	03/01/2015	PIPL/OPRC/47 3-c/2014	Resubmission of IPC-17	05/01/2015	REPLY
44	08/05/2014	175	Vetting Report of pavement design for S2	05/01/2015	NOT
45	18/11/2014	PIPL/OPRC/26 4/2014	Submission of pavement design of S2(32+000) to for 2nd year construction program	05/01/2015	NOT
46	06/01/2015	2450	Pavement design of S2	06/01/2015	NOT
47	18/12/2014	Memo No.--- 8114-15	Phase 2, package xx1 of PSRSP	07/01/2015	Received
48	29/12/2014	IMaCS	Proposed Replacement CV for Asset Manager	07/01/2015	Received
49	09/01/2015	2467	Send copies of letter to PRBDB, Mohali office	09/01/2015	Received
50	03/01/2015	PIPL/OPRC/47 3/2014	Submission of Network performance Inspection report	05/01/2015	NOT
51	10/01/2015	PIPL/OPRC/47 5/2014	Performance Measures Conformance Report	12/01/2015	NOT
52	13/01/2015	2499	Non-submission of IRI & FWD data.	12/01/2015	REPLY
53	17/01/2015	PIPL/OPRC/47 7/2014	Hindrance detail on S2 road.	11/01/2015	Received
54	22/01/2015	PIPL/OPRC/47 8/2014	Submission of IRI & FWD data for 1st year & 2nd year.	27/01/2015	REPLY
55	22/01/2015	PIPL/OPRC/47 9/2014	Submission of 3rd year work program	27/01/2015	REPLY
56	22/01/2015	PIPL/OPRC/48 0/2014	Submission of Environmental Monitoring Report Dec-2014	27/01/2015	NOT
57	22/01/2015	PIPL/OPRC/48 1/2014	Proposal of New Pipe Culvert of 600 mm dia @ ch. 42+300 on S2 road.	27/01/2015	REPLY
58	22/01/2015	PIPL/OPRC/48 2/2014	Submission of detailed Estimte of S3(Barnala-Mansa) road.	27/01/2015	REPLY
59	29/01/2015	PIPL/OPRC/48 2-A/2014	Submission of Geometric design of 35+700 to 36+700.	30/01/2015	NOT
60	29/01/2015	PIPL/OPRC/48 3/2014	Submission of Geometric design of Gharchon Pond.	30/01/2015	NOT
61	06/01/2015	PIPL/OPRC/47 4/2014	As built drawing of S-4 road.	30/01/2015	NOT
62	23/01/2015	2559	DRB recommendation on dispute no. 2	30/01/2015	NOT
63	28/01/2015	PIPL/OPRC/48 1-A/2014	Submission of FWD data of S2 road.	02/02/2015	Received
64	02/02/2015	PIPL/OPRC/48 4/2014	Smooth implementation of project	04/02/2015	REPLY
65	03/02/2015	PIPL/OPRC/48 5/2014	Submission of N/W Performance Inspection report of Jan-2015	04/02/2015	NOT
66	03/02/2015	PIPL/OPRC/48 6/2014	Night Inspection	04/02/2015	NOT
67	05/02/2015	PIPL/OPRC/48 7/2014	3rd year work program	06/02/2015	NOT
68	05/02/2015	PIPL/OPRC/48 8/2014	Pavement Marking	06/02/2015	REPLY