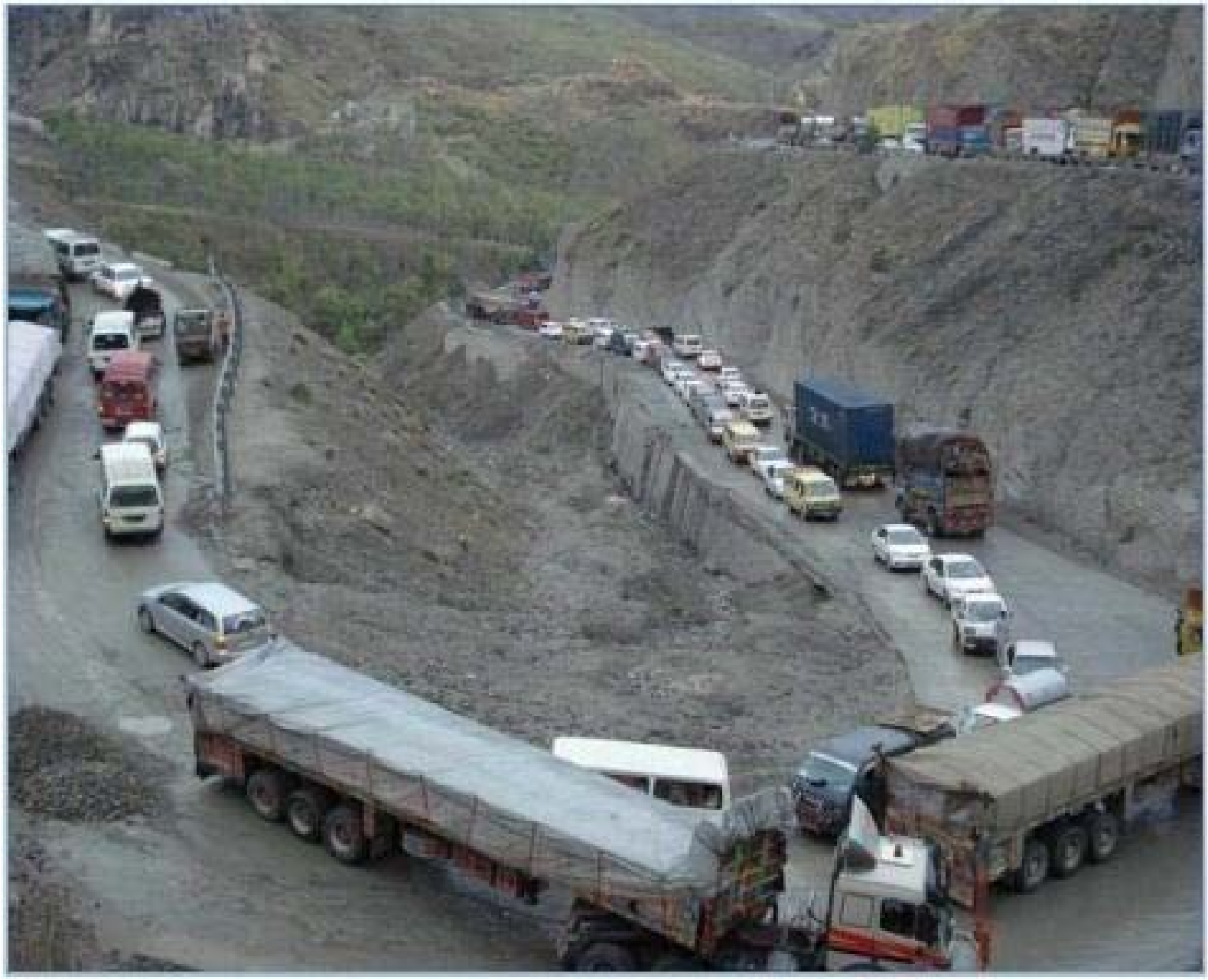
USAID | PAKISTAN
FROM THE AMERICAN PEOPLE



STRENGTHENING & IMPROVEMENT OF PESHAWAR - TORKHAM ROAD KHYBER AGENCY, FATA

MONTHLY PROGRESS REPORT # 17
April 2014

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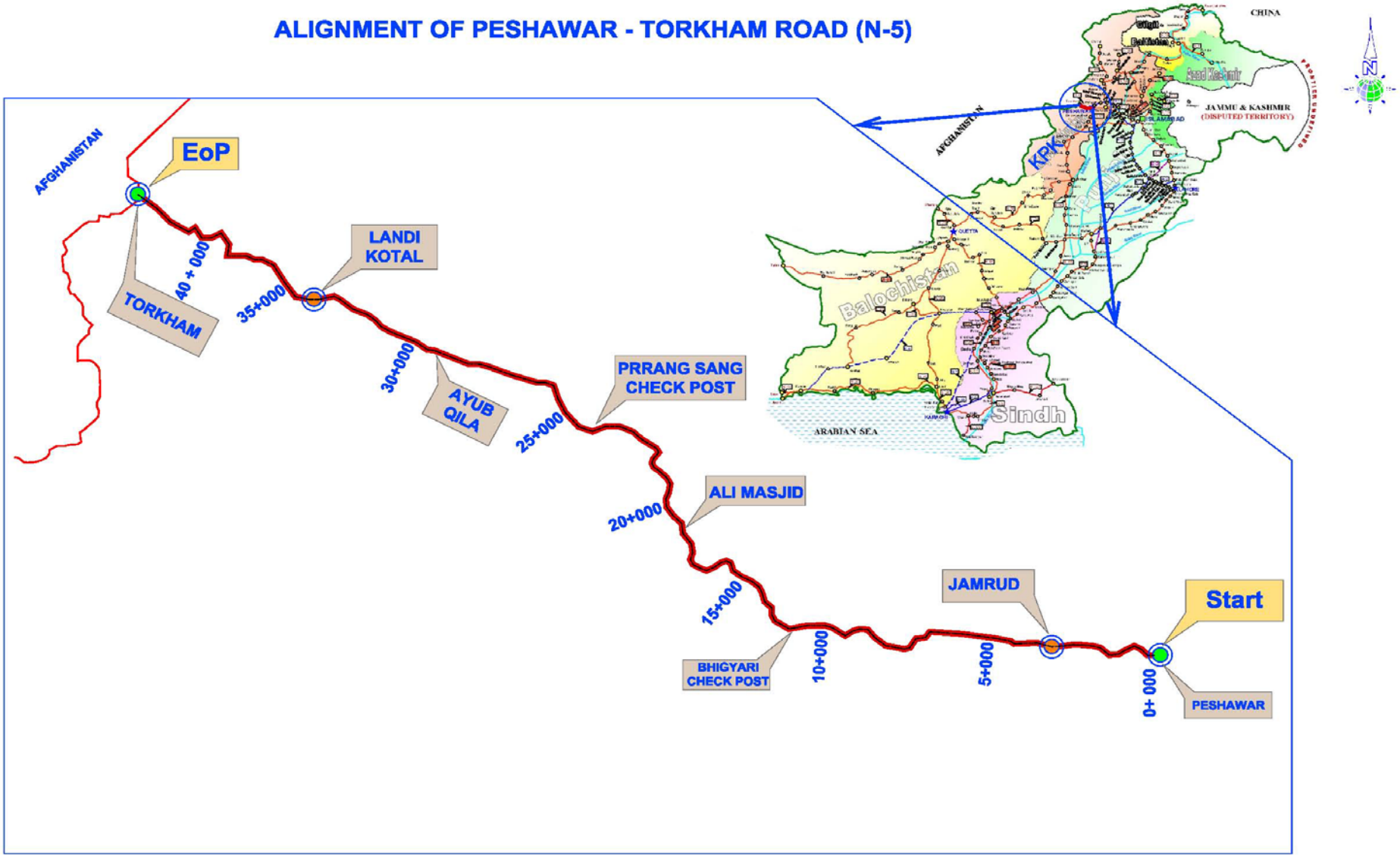

ALIGNMENT OF PESHAWAR - TORKHAM ROAD (N-5)
AFGHANISTAN
EoP
TORKHAM
40 + 000
LANDI KOTAL
35+000
30+000
AYUB QILA
25+000
PRRANG SANG CHECK POST
20+000
ALI MASJID
15+000
BHIGYARI CHECK POST
10+000
JAMRUD
5+000
0+ 000
Start
PESHAWAR
CHINA
JAMMU & KASHMIR
(DISPUTED TERRITORY)
AFGHANISTAN
KPK
Balochistan
Sindh
ARABIAN SEA

SUMMARY

Peshawar – Torkham road is an integral part of National Highway (N-5), a vital piece of the nation's infrastructure, which connects Pakistan with Afghanistan at Torkham border and plays an important role in the economic activities as well as providing timely logistic support to the security agencies deployed in Khyber Agency. The project "Strengthening & Improvement of Peshawar Torkham Road" is funded with United State Agency for International Development (USAID) grant amounting to 67 Million USD and implemented by FATA Secretariat as project proponent through Frontier Works Organization (FWO) as EPC (Engineer, Procure, and Construct) Contractor.

The 46 KM Peshawar – Torkham road (PTR) has been split into multiple sections for designing / construction purposes due to inherited site specific conditions such as live traffic corridor, gigantic hilly terrain, safety and security restrictions etc. Work on section – I of the project was initiated by FWO on October 15, 2012.

During the reporting month, the contractor team fully utilized the available 25 working days. FWO was constantly advised to demonstrating good environmental practice in conformity with the construction environmental management plan.

Interim Payment Certificates (IPC's) amounting US$ 168,209 for Section-I, US$ 666,175 for Section-II and US$ 727,789 for Section-III, were processed during the reporting month. The overall certified amount till the end of reporting month was USD 10,267,065.00

Total percent time elapsed up to 30th April, 2014 is 69.76 %.

Major physical construction activities in each section are presented as under:

SECTION – I (KM: 0+000 To 9+000)

Section – I of the project can be declared complete with respect to earthwork, Sub Base, Aggregate Base Course / WBM, Asphaltic Base Course, Asphaltic Wearing Course, Culverts and pavement marking etc, and switched on for all kind of traffic. Retaining walls have been completed 100% by the end of the reporting month. Works on construction of longitudinal drains is in progress.

SECTION – II (KM: 9+000 To 14+000)

WORK ITEM	SEC – II
o Earthwork:	93.00 %
o Sub Base (Rigid Pavement):	65.74 %
o Sub Base (Flexible):	82.60%
o Water Bound Macadam:	79.35 %
o Asphaltic Base Course:	26.09 %
o Asphaltic Wearing Course:	17.39 %
o Culverts:	94.97 %
o Retaining Walls/Breast Walls:	87.64 %

- Bulk earthwork and roadway excavation continued along with construction of 17 No's cross drainage structures & 2,025 M (cumulative) retaining/breast walls.
- Traffic continually plying on diversions / detours.

SECTION – III (KM: 14+000 To 19+000)

WORK ITEM	SEC – III
o Earthwork:	78.50 %
o Sub Base (Rigid Pavement):	41.50 %
o Sub Base (Flexible):	93.63%
o Water Bound Macadam:	93.63 %
o Asphaltic Base Course:	93.62 %
o Asphaltic Wearing Course	93.62%
o Rigid Pavement (Half width):	27.97 %
o Culverts:	67.46 %
o Retaining Walls/Breast Walls:	25.71 %

- Construction continued on 19 No's cross drainage structures & 1,800 M (cumulative) retaining walls in section – III.
- Traffic continually plying on diversions / detours.

SECTION – IV to VII (KM: 19+000 To End of Project)

- Re-adjustment of PC-1 for section-IV under progress with FWO/ NESPAK.
- Work continued to finalize the conceptual design and PC-1 for sections – V to VII.
- Sub-base paving work in section – IV & V continued.
- Work continued on construction of culverts in section - IV & V.
- Work on roadway excavation and retaining walls is in progress section - IV & V .
- Traffic continually plying on diversions / detours.

BRDIGES AND MULTICELL CULVERTS IN DIFFERENT SECTIONS

- PIL approval for 02 bridges & 02 multi-cell culverts is in progress at USAID.
- PC-1s for six bridges in progress with FWO/ NESPAK.
- Girder pre-stressing at Bridge # 2 (KM: 9+560) completed while launching remained in progress.
- Piles construction & girders casting at Bridge # 10 (KM: 23+850) completed more than 80%.
- Pile load test completed for bridge at KM: 27+350.
- Bottom slab for multi-cell culvert at KM: 11+190 completed 100% and box walls completed more than 85%.
- Bottom slab for multi-cell culvert at KM: 22+925 completed 100% and box walls completed more than 40%.

INTRODUCTION

1.1 PROJECT BACKGROUND

The Federally Administered Tribal Area (FATA) Secretariat of the Government of Pakistan (GoP) under the Quick Impact Projects (QIPs) in the Khyber Agency has inked an agreement with USAID for financial assistance in the form of a Grant for Strengthening and Improvement of 46 KM long existing two-lane, two-way carriageway from Peshawar to Torkham (N – 5). The Project will support the GoP in improving accessibility to the remotely located areas of Khyber agency and enhance logistic support to law enforcing agencies, besides assisting trade between Pakistan and Afghanistan. The Sponsoring agency for the Peshawar Torkham Road Project is FATA secretariat, headed by Additional Chief Secretary FATA. The Executing agency is Frontier Works Organization (FWO).

Table: 1

Civil Works Package Features							
Physical Limits	Peshawar to Torkham						
Feature	Section – I	Section – II	Section – III	Section – IV	Section – V	Section – VI	Section – VII
Kilometers	0+000 to 9+000	9+000 to 14+000 (Revised)	14+000 to 19+000 (Revised)	19+000 to 24+000 (Revised)	24+000 to 33+000 (Revised)	33+000 to 37+000 (Revised)	37+000 to EoP (Revised)
Black Top	Total 12.3 meter (7.3 meter carriageway & 2.5 meter structural shoulders on either side)						
Completion Period	807 Calendar Days						

1.2 SCOPE OF WORK

The project involves widening, strengthening and improvement of the existing two lane carriageway, including construction of new cross drainage structures, bridges, rigid pavements and earth retaining structures spread over 46 KM. The entire road length has been split into multiple sections for designing / construction purposes. Length of each section varies according to topographical features and live traffic conditions along the project route.

Being an EPC form of contract, FWO is fully responsible for design and construction of the project in conformity with the NHA's specifications and standard engineering practices. NESPAK is providing design and quality control services to FWO. While AGES Consultants has been entrusted with the Construction Monitoring and Evaluation Services including Quality Assurance and Environmental Monitoring of the project on behalf of the USAID Pakistan Mission.

1.3 GENERAL CONTRACT DATA

1.	Name of Project	**Strengthening and Improvement of Peshawar Torkham Road (N-5) Khyber Agency FATA**
2.	Project Construction Cost	**US $ 67 Million**
3.	Donor Agency	**USAID PAKISTAN**
4.	Donor's Agency Representative	**Engr. Farhat Ali Shah Banori, USAID/COR**
5.	Sponsoring Agency	**FATA Secretariat, Peshawar**
6.	Sponsoring Agency Representative	**Mr. Muhammad Ali, Project Director, PMU FATA**
7	Executing Agency	**Frontier Works Organization (FWO)**
8.	Executing Agency Representative	**Col. Zahid (Project Director FWO)**
9.	M&E Consultants	**AGES Consultants**
10.	M&E Consultants Representative	**Engr. Aziz-ul- Haq, Project Manager**
11.	Time for Completion	**807 Calendar Days**
12	Mode of Construction Contract	**EPC (Engineer, Procure and Construct) Contract**
13.	Chronology	

Signing of MoU (USAID–FATA–NHA)	**Sep 18, 2012**
Signing of Consultancy Contract (USAID – AGES)	**Sep 30, 2012**
M&E Consultants Mobilization	**Oct 01, 2012**
Project Date of Commencement	**Oct 15, 2012**
Project Date of Completion	**Dec 31, 2014**

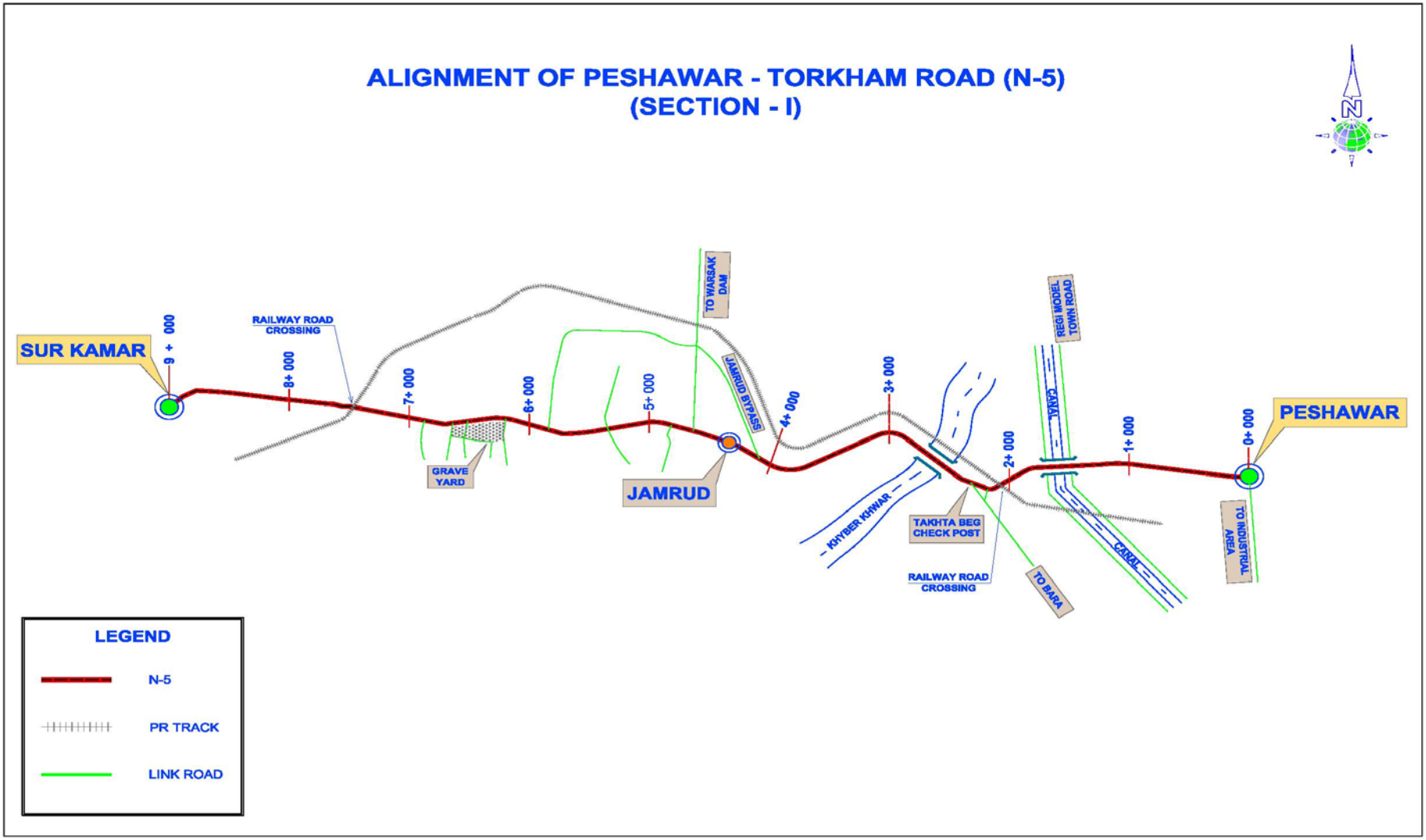
1.4 SECTIONS DATA

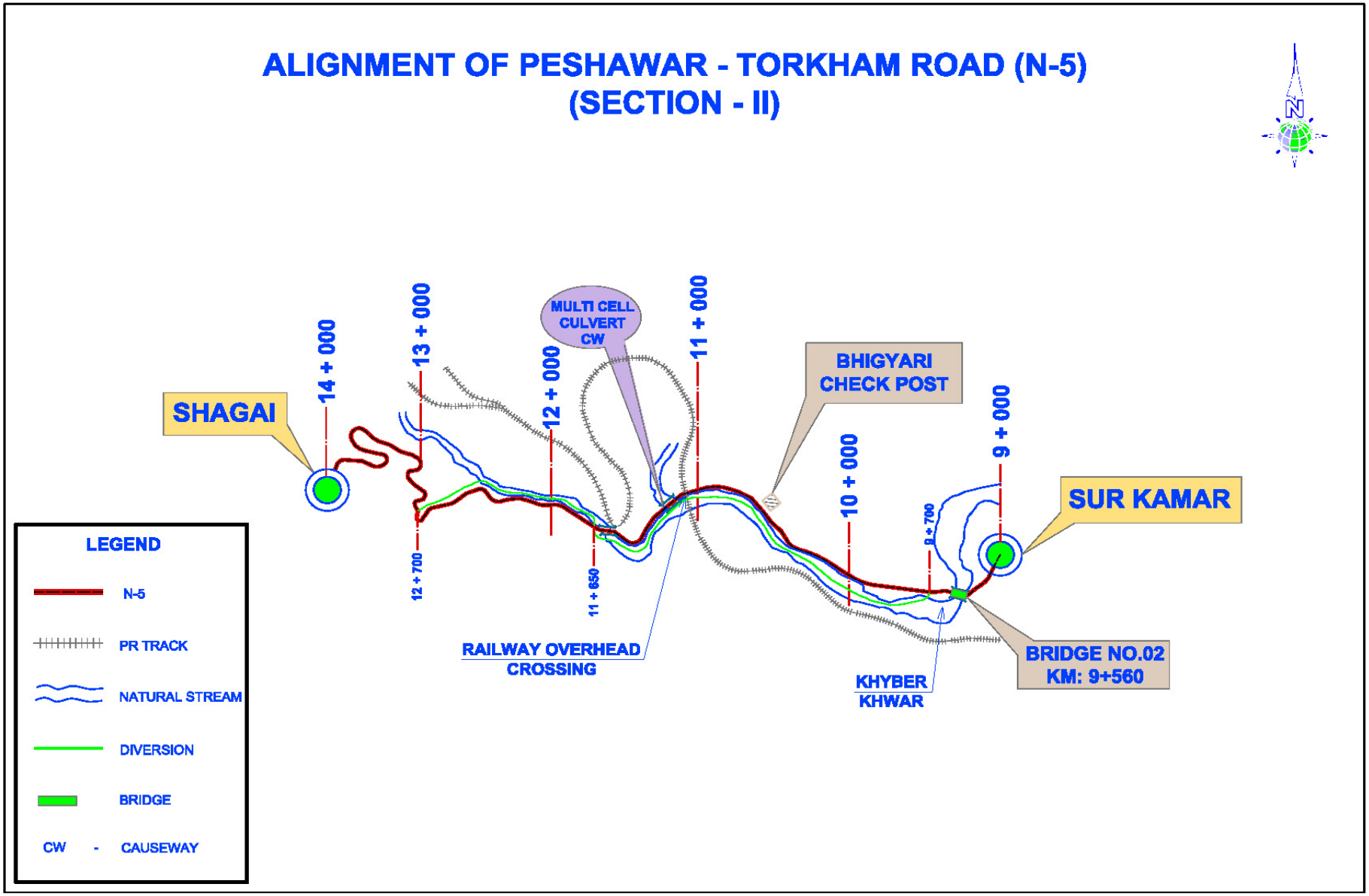
1.	Name of Package	**Section – I (CH: KM: 0+000 to CH: KM: 9+000)**
2.	PC-1 Cost (Section – I)	**Rs. 937.939 Million (PIL Cost: US $ 9.978 M)**
3.	Approval of PC – 1 (Section – I)	**Nov 20, 2012**

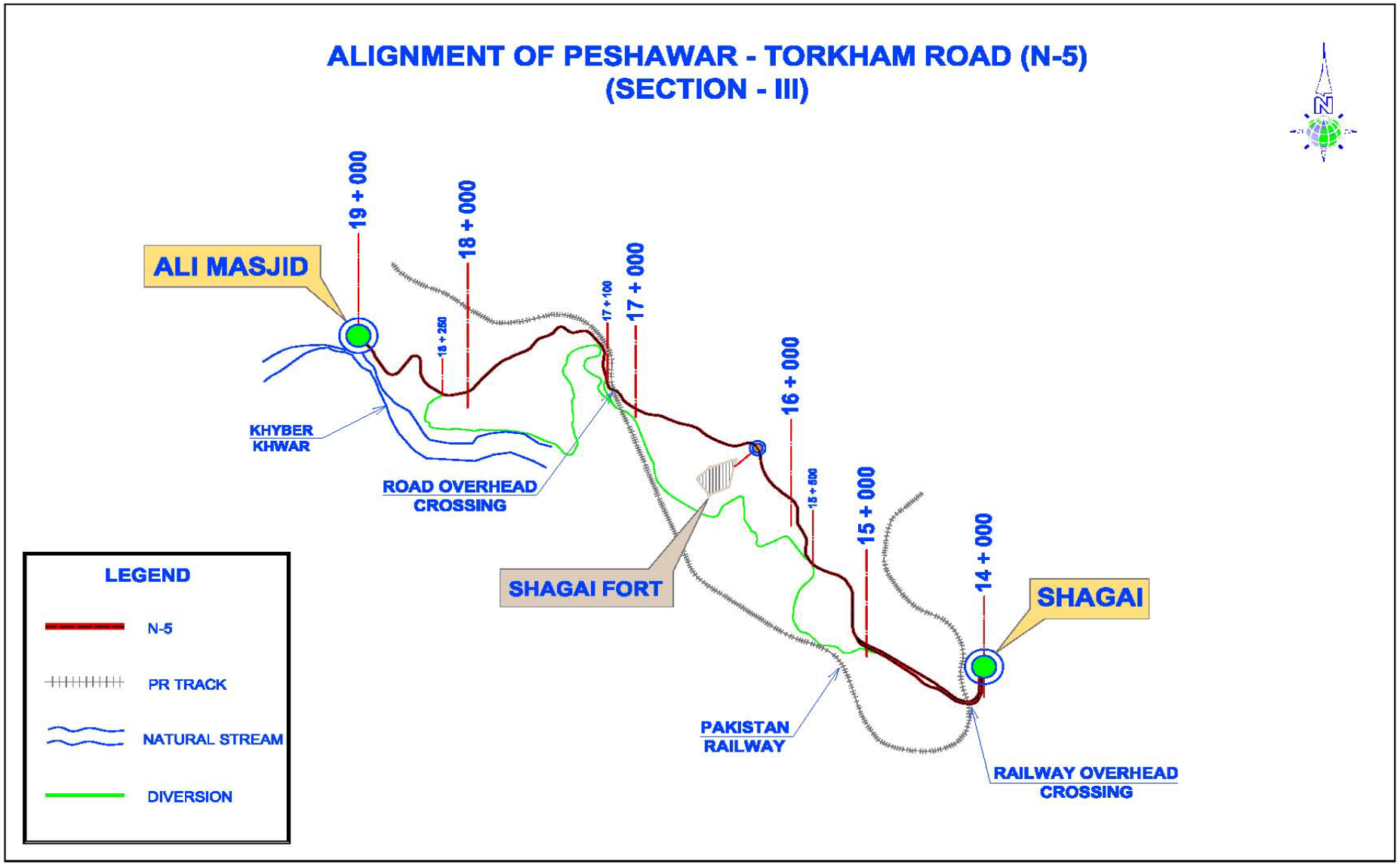
1.	Name of Package	**Section – II (CH: KM: 9+000 to CH: KM: 14+000)**
2.	PC-1 Cost (Section – II)	**Rs. 985.266 Million (PIL Cost: US $ 9.383 M)**
3.	Approval of PC – 1 (Section – II)	**Oct 08, 2013**

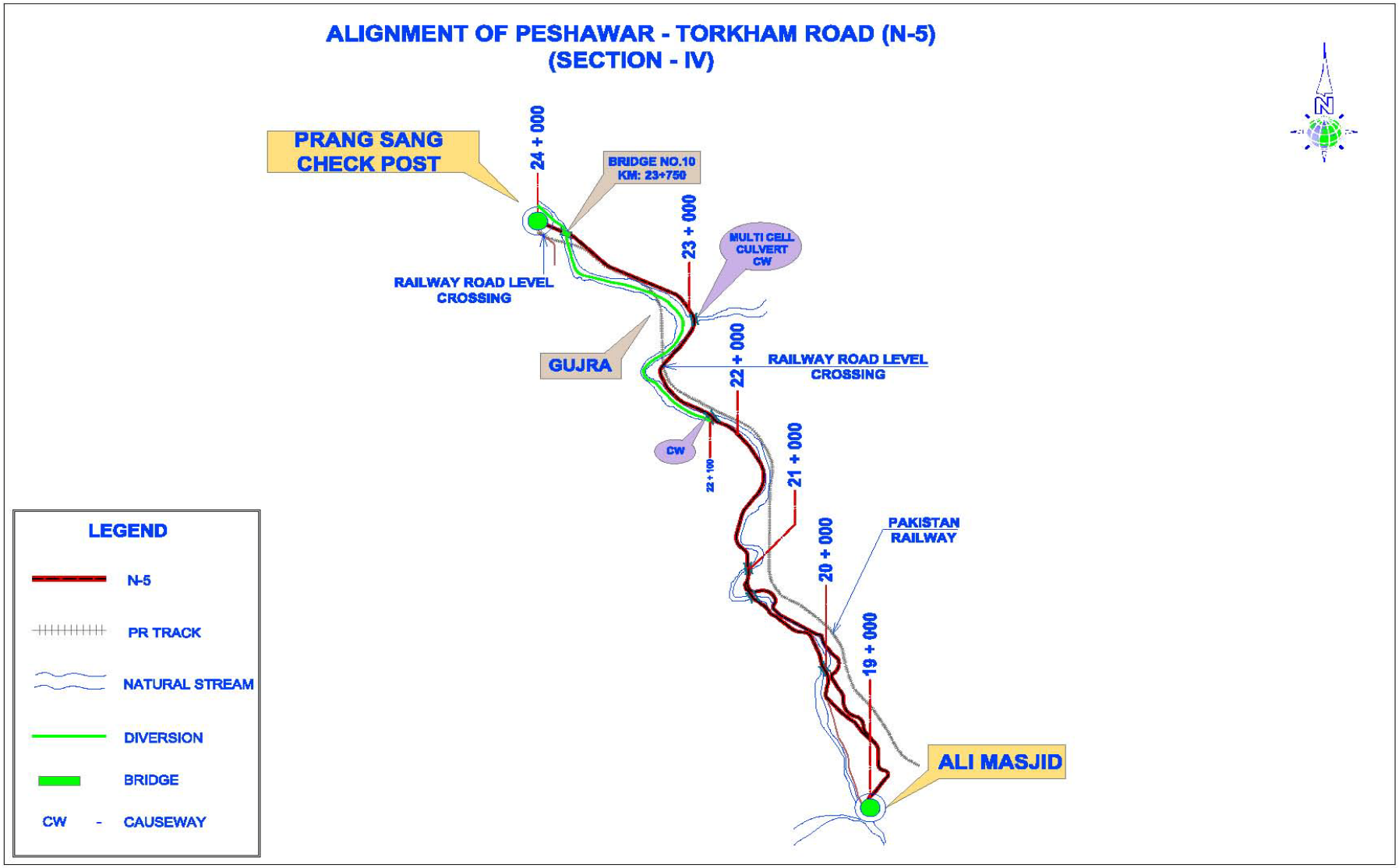
1.	Name of Package	**Section – III (CH: KM: 14+000 to CH: KM: 19+000)**
2.	PC-1 Cost (Section – III)	**Rs. 989.320 Million (PIL Cost: US $ 9.512 M)**
3.	Approval of PC – 1 (Section – III)	**Dec 20, 2013**

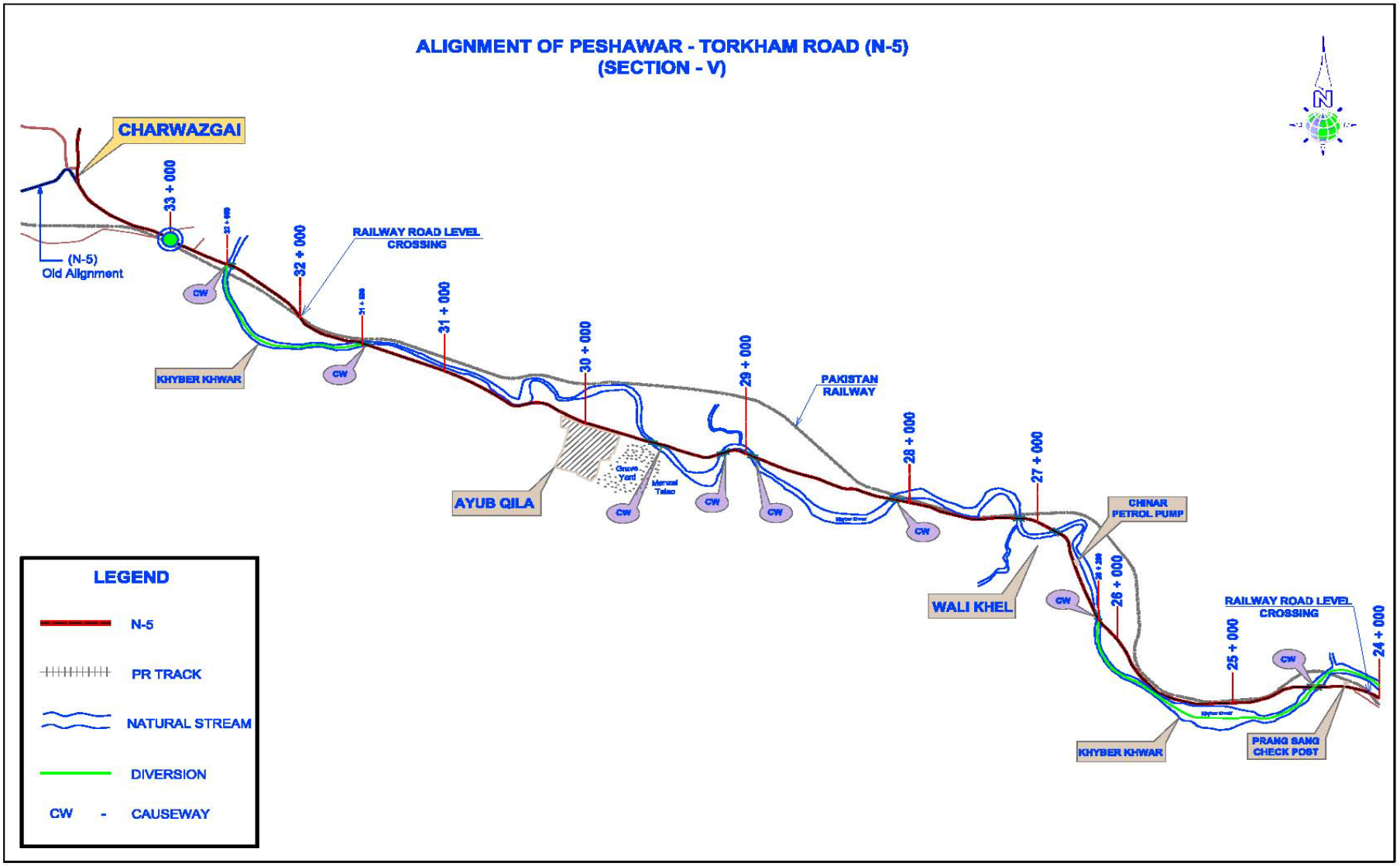
1.5 ALIGNMENT SKETCHES



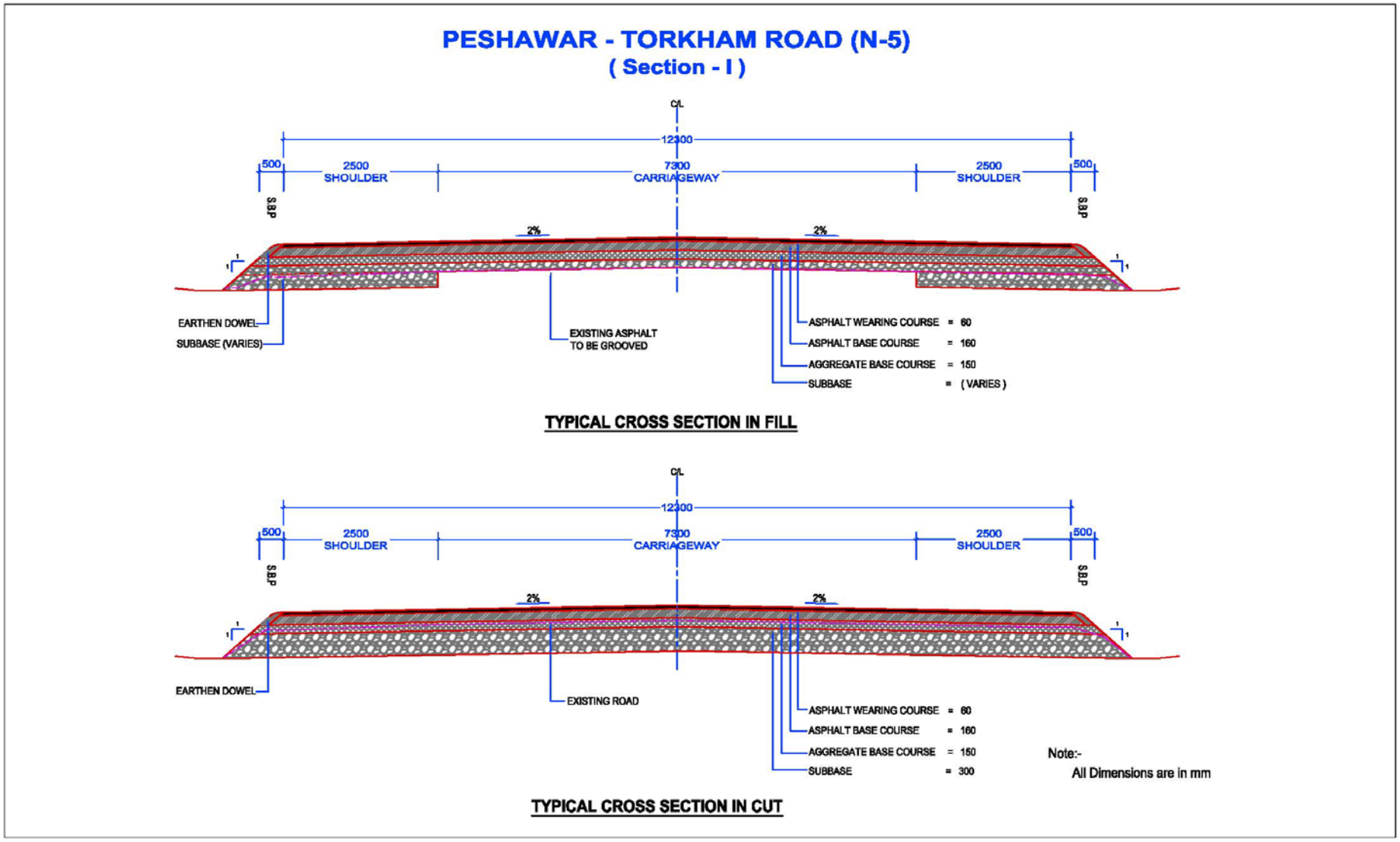

ALIGNMENT OF PESHAWAR - TORKHAM ROAD (N-5)
(SECTION - II)
N
SHAGAI
14 + 000
13 + 000
12 + 700
12 + 000
11 + 650
MULTI CELL CULVERT CW
11 + 000
BHIGYARI CHECK POST
10 + 000
9 + 700
9 + 000
SUR KAMAR
RAILWAY OVERHEAD CROSSING
KHYBER KHWAR
BRIDGE NO.02 KM: 9+560
LEGEND
N-5
PR TRACK
NATURAL STREAM
DIVERSION
BRIDGE
CW - CAUSEWAY

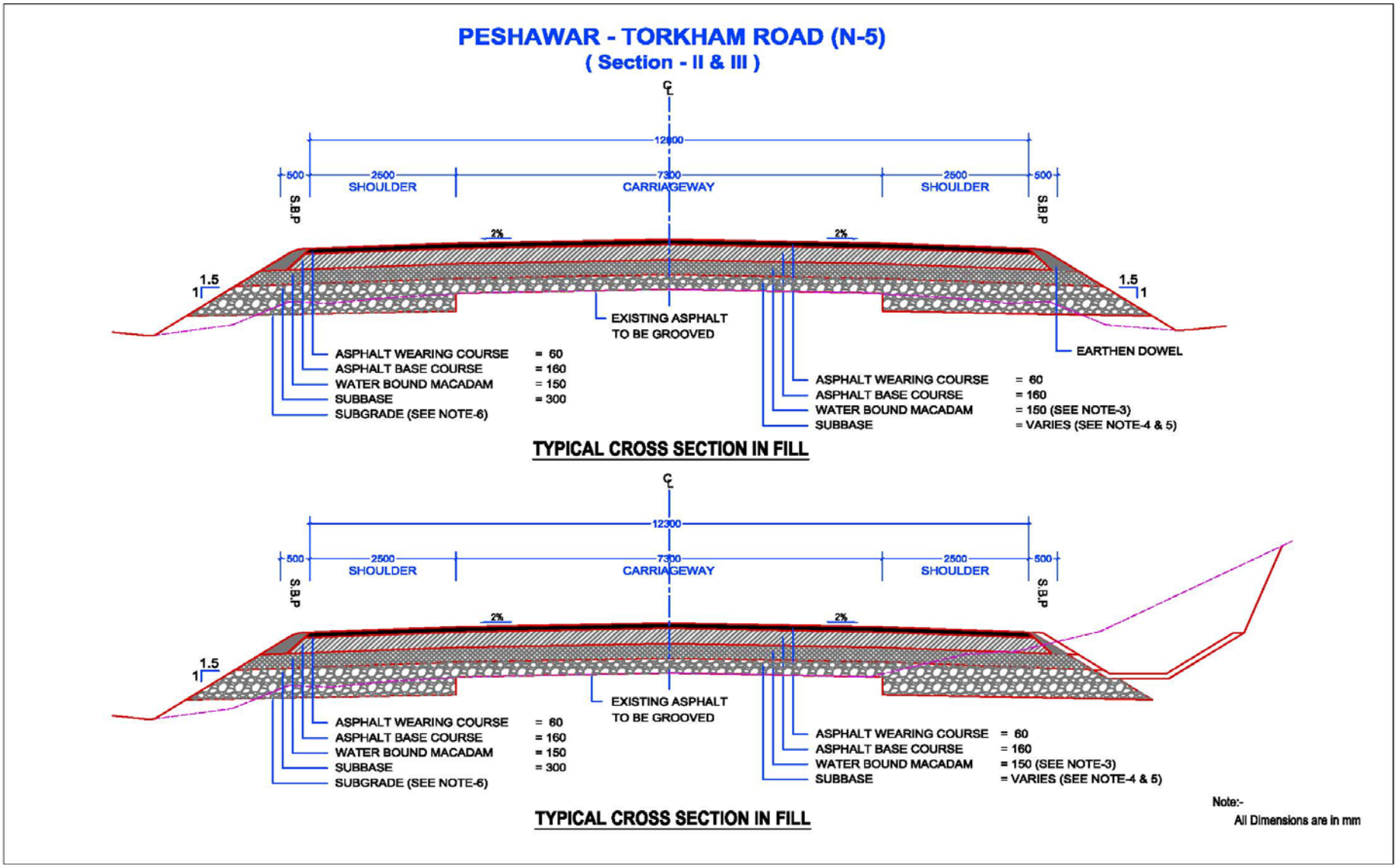

ALIGNMENT OF PESHAWAR - TORKHAM ROAD (N-5)
(SECTION - III)
N
19 + 000
18 + 000
17 + 000
16 + 000
15 + 000
14 + 000
13 + 250
17 + 100
15 + 800
ALI MASJID
KHYBER
KHWAR
ROAD OVERHEAD
CROSSING
SHAGAI FORT
SHAGAI
PAKISTAN
RAILWAY
RAILWAY OVERHEAD
CROSSING
LEGEND
N-5
PR TRACK
NATURAL STREAM
DIVERSION

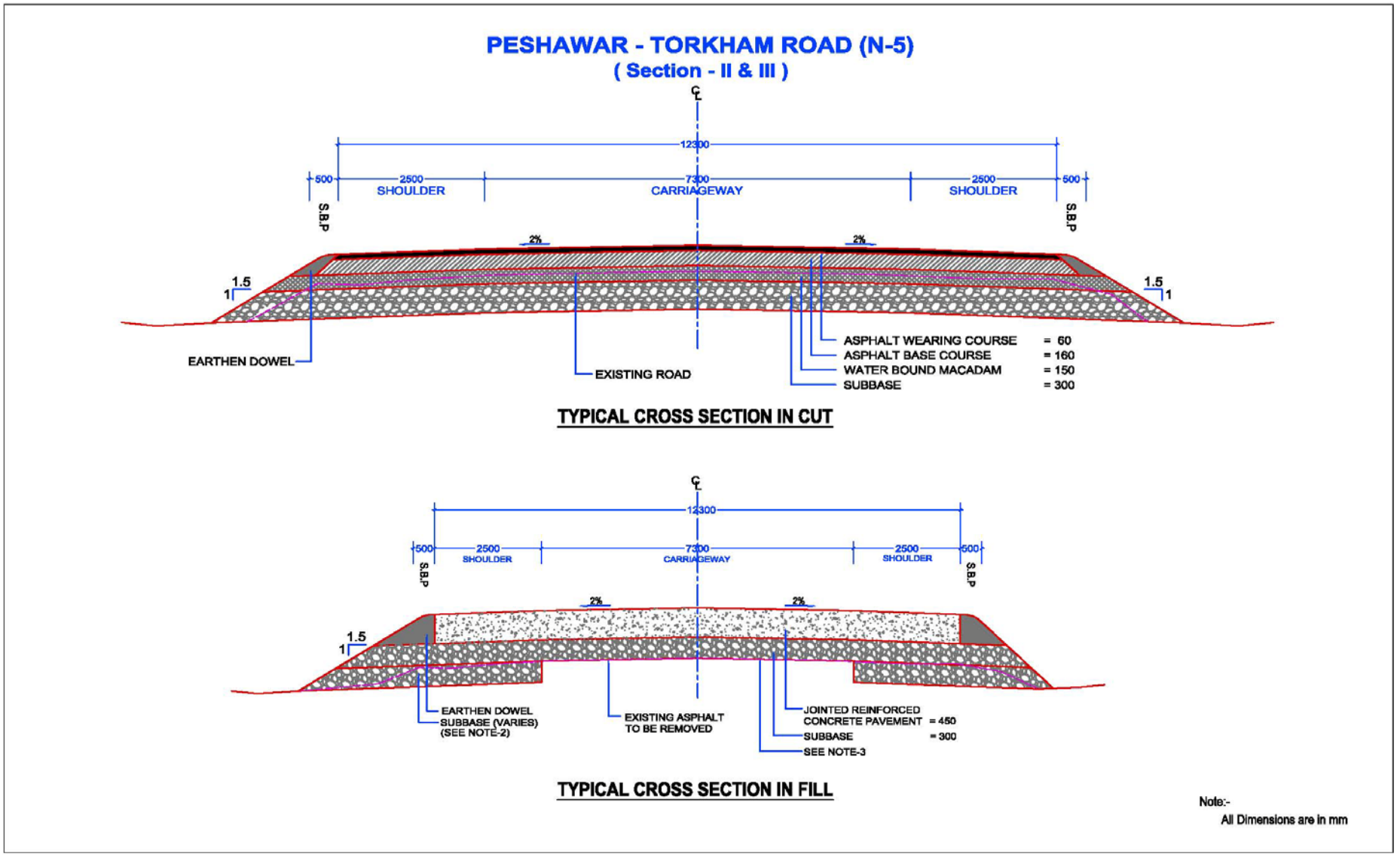

ALIGNMENT OF PESHAWAR - TORKHAM ROAD (N-5)
(SECTION - IV)
PRANG SANG CHECK POST
24 + 000
BRIDGE NO.10 KM: 23+750
23 + 000
MULTI CELL CULVERT CW
RAILWAY ROAD LEVEL CROSSING
GUJRA
22 + 000
RAILWAY ROAD LEVEL CROSSING
CW
22 + 100
21 + 000
20 + 000
PAKISTAN RAILWAY
19 + 000
ALI MASJID
LEGEND
N-5
PR TRACK
NATURAL STREAM
DIVERSION
BRIDGE
CW - CAUSEWAY


ALIGNMENT OF PESHAWAR - TORKHAM ROAD (N-5)
(SECTION - V)
CHARWAZGAI
(N-5)
Old Alignment
33 + 000
32 + 000
31 + 000
30 + 000
29 + 000
28 + 000
27 + 000
26 + 000
25 + 000
24 + 000
RAILWAY ROAD LEVEL CROSSING
KHYBER KHWAR
AYUB QILA
PAKISTAN RAILWAY
CHINAR PETROL PUMP
WALI KHEL
RAILWAY ROAD LEVEL CROSSING
KHYBER KHWAR
PRANG SANG CHECK POST
CW
LEGEND
N-5
PR TRACK
NATURAL STREAM
DIVERSION
CW - CAUSEWAY

1.6 TYPICAL CROSS SECTIONS OF ROAD




PESHAWAR - TORKHAM ROAD (N-5)
(Section - II & III)
℄
12300
500
2500
SHOULDER
7300
CARRIAGEWAY
2500
SHOULDER
500
S.B.P
S.B.P
2%
2%
1.5
1
1.5
1
EXISTING ASPHALT
TO BE GROOVED
EARTHEN DOWEL
ASPHALT WEARING COURSE = 60
ASPHALT BASE COURSE = 160
WATER BOUND MACADAM = 150
SUBBASE = 300
SUBGRADE (SEE NOTE-6)
ASPHALT WEARING COURSE = 60
ASPHALT BASE COURSE = 160
WATER BOUND MACADAM = 150 (SEE NOTE-3)
SUBBASE = VARIES (SEE NOTE-4 & 5)
TYPICAL CROSS SECTION IN FILL
℄
12300
500
2500
SHOULDER
7300
CARRIAGEWAY
2500
SHOULDER
500
S.B.P
S.B.P
2%
2%
1.5
1
EXISTING ASPHALT
TO BE GROOVED
ASPHALT WEARING COURSE = 60
ASPHALT BASE COURSE = 160
WATER BOUND MACADAM = 150
SUBBASE = 300
SUBGRADE (SEE NOTE-6)
ASPHALT WEARING COURSE = 60
ASPHALT BASE COURSE = 160
WATER BOUND MACADAM = 150 (SEE NOTE-3)
SUBBASE = VARIES (SEE NOTE-4 & 5)
TYPICAL CROSS SECTION IN FILL
Note:-
All Dimensions are in mm


PESHAWAR - TORKHAM ROAD (N-5)
(Section - II & III)
CL
12300
500
2500
SHOULDER
7300
CARRIAGEWAY
2500
SHOULDER
500
S.B.P
S.B.P
2%
2%
1.5
1
1.5
1
EARTHEN DOWEL
EXISTING ROAD
ASPHALT WEARING COURSE = 60
ASPHALT BASE COURSE = 160
WATER BOUND MACADAM = 150
SUBBASE = 300
TYPICAL CROSS SECTION IN CUT
CL
12300
500
2500
SHOULDER
7300
CARRIAGEWAY
2500
SHOULDER
500
S.B.P
S.B.P
2%
2%
1.5
1
EARTHEN DOWEL
SUBBASE (VARIES)
(SEE NOTE-2)
EXISTING ASPHALT
TO BE REMOVED
JOINTED REINFORCED
CONCRETE PAVEMENT = 450
SUBBASE = 300
SEE NOTE-3
TYPICAL CROSS SECTION IN FILL
Note:-
All Dimensions are in mm

M&E SERVICES & PROGRESS OF ACTIVTIES

2.1 M&E CONSULTANTS MAJOR ACTIVITIES DURING THE REPORTING MONTH – April 2014

- The M&E Consultants continued to monitor the ongoing construction activities and conducted requisite material sampling & testing as per NHA's guidelines during the reporting month.
- Joint site visits conducted on 29th & 30th of April, 2014 with FWO/NESPAK for proposed design validation of Section-VII, KM:37+000 to EOP.
- Actively participated in on-site discussions with FWO/NESPAK regarding ongoing construction activities.
- Milestones finalization for Bridge # 02 (KM: 9+560), #10 (KM: 23+850) & Multi-cell Culvert (KM: 11+190) of the project with FWO/NESPAK and USAID continued during the reporting period.
- Work continued to finalize the detailed design & ground survey from KM: 24+000 To EoP.
- The M&E Consultants attended coordination meetings held in the office of CRE NESPAK in the reporting month.
- The M&E consultants attended one meeting at PD FWO (495 Group), Peshawar. The agenda of the meeting was to review the status of PTR project.
- The M&E Consultants continued to liaise with relevant stakeholders about environmental, planning and other concerns relating to the strengthening / improvement of the vital national traffic corridor.
- FWO was constantly advised for demonstrating good environmental practice in conformity with the construction environmental management plan.

2.2 MATTERS REQUIRING ATTENTION

2.2.1 SLOW PROCESS OF PC-1s APPROVAL

Since project commencement in Oct 2012, 05 No: PC-1s (04 for Sec-I, II, III & IV from KM: 0+000 To 24+000, and one PC-1 for 02 bridges plus 02 MCC), amounting in total to PKR 4,188 Million have been approved by FATA Development Working Party (FDWP). However, approval of the remaining PC-1s of PTR (Sec V to VII, and bridges etc.) may be delayed due to cessation of FDWP's special powers of sanctioning up to PKR 1000 Million for developmental projects. Although FATA Secretariat has reportedly taken up the matter with the concerned authorities, FDWP currently can sanction up to their original ceiling limit of PKR 200 Million, and approval of the remaining PC-1s shall have to be obtained from Central Development Working Party (CDWP) / Executive Committee of National Economic Council (ECNEC).

Seeking approval from such an higher forum at the Federal level being a time consuming process will eventually delay finalization of PC-1's & PILS and subsequent payment to the contractor in case FDWP's sanction powers were not restored.

2.2.2 COMPLEXITY IN MAINTAINING TRAFFIC ON DIVERSIONS

Diversions have been provided at intervals b/w KM: 09+000 To 35+000. However, substandard condition of the diversion tracks has been creating difficulties for the road commuters and population. Peak hour traffic congestion and its frequency are regularly escalating the problem. Even minor traffic accident on the corridor usually results in rapid disturbance to traffic movement and some time complete blockage of diversions.

In order to ensure smooth traffic movement along the corridor, minimizing traffic delays keeping dust & noise pollution to a minimum, a higher level of communication and liaison would be required throughout the work period to meet the expectations of stakeholders and commuters.

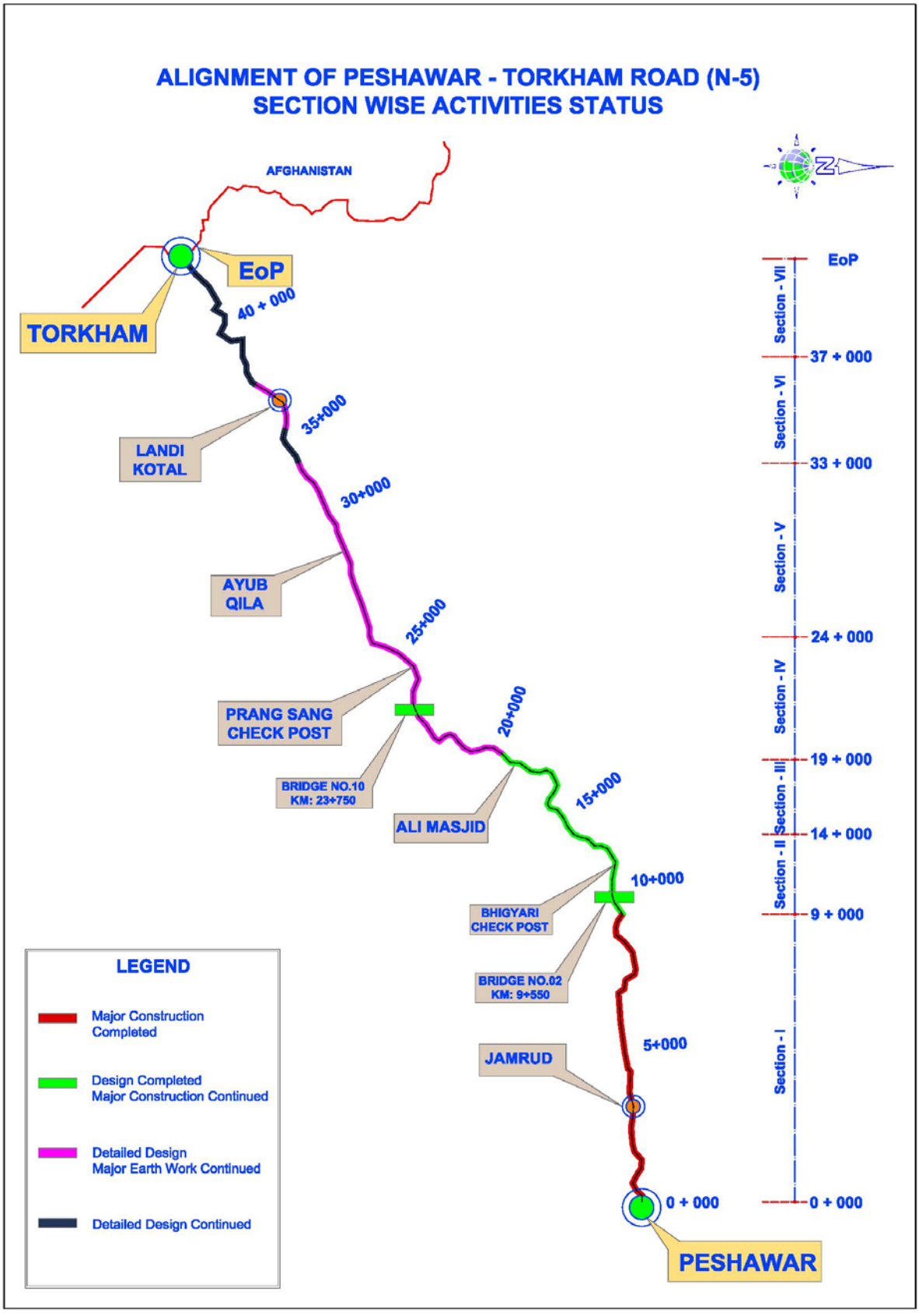
2.2.3 DELAY IN UTILITIES IDENTIFICATION / SHIFTING FROM CONSTRUCTION CORRIDOR

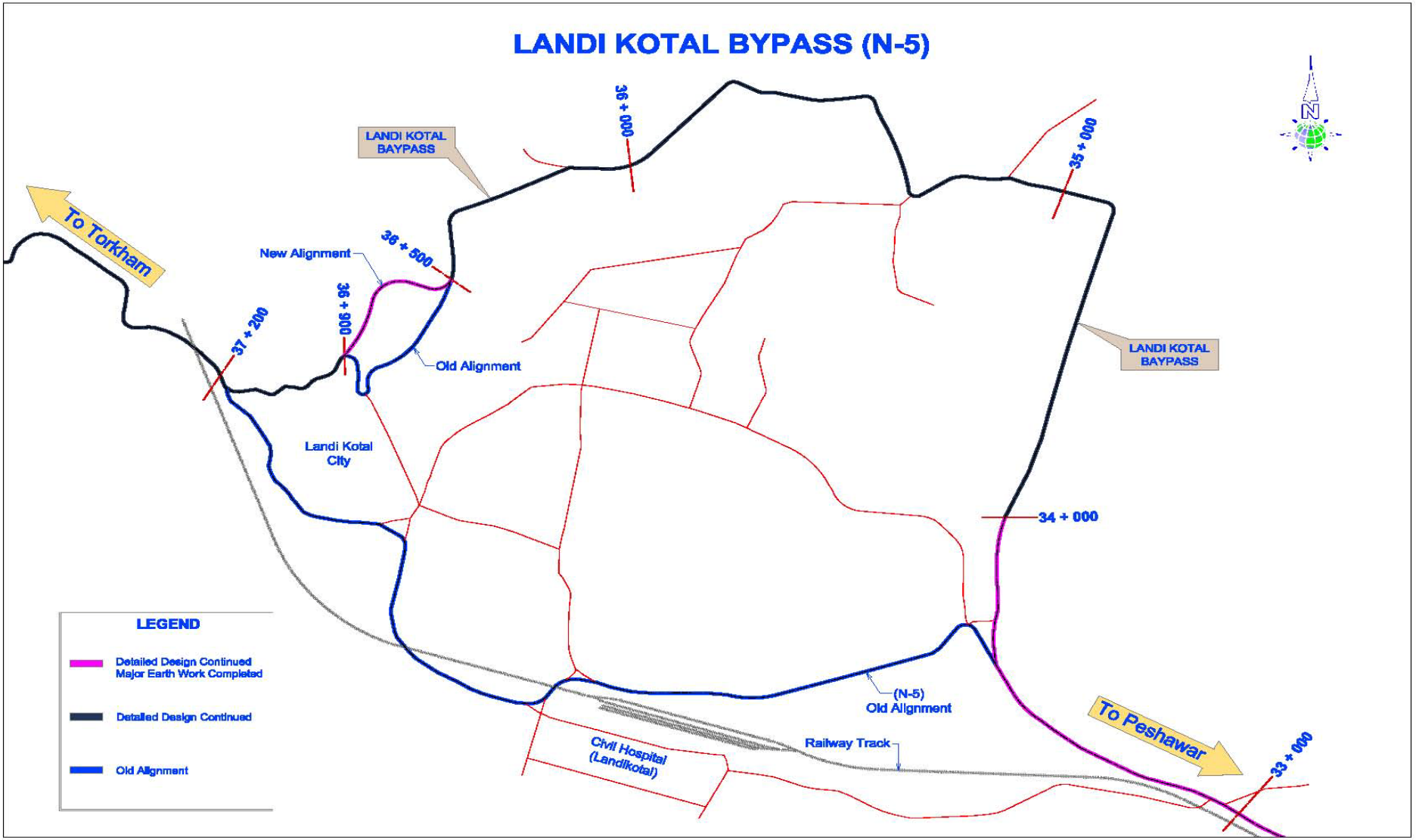
Since Peshawar Torkham road project traverses through the rolling / hilly terrain of Khyber agency, proper records of the underground utilities like water supply, sewerage lines and telephone cables etc. is hardly available. Utilities usually get identified during the construction activities. Similarly, shifting of overhead electric lines (including poles) got delayed due to nonpayment of relocation cost by FWO and cumbersome procedures involved for clearances / approvals / permissions from the concerned departments; thereby putting a constraint on the contractor's capacity to undertake construction work in an un-interrupted and continuous manner.

2.2.4 ENVIRONMENTAL COMPLIANCE

FWO needs to focus more on environmental compliance measures due to inherited site specific conditions such as live traffic corridor, heavy traffic, hilly terrain, and residential and commercial areas along the road.

2.3 SECTION WISE ACTIVITIES STATUS



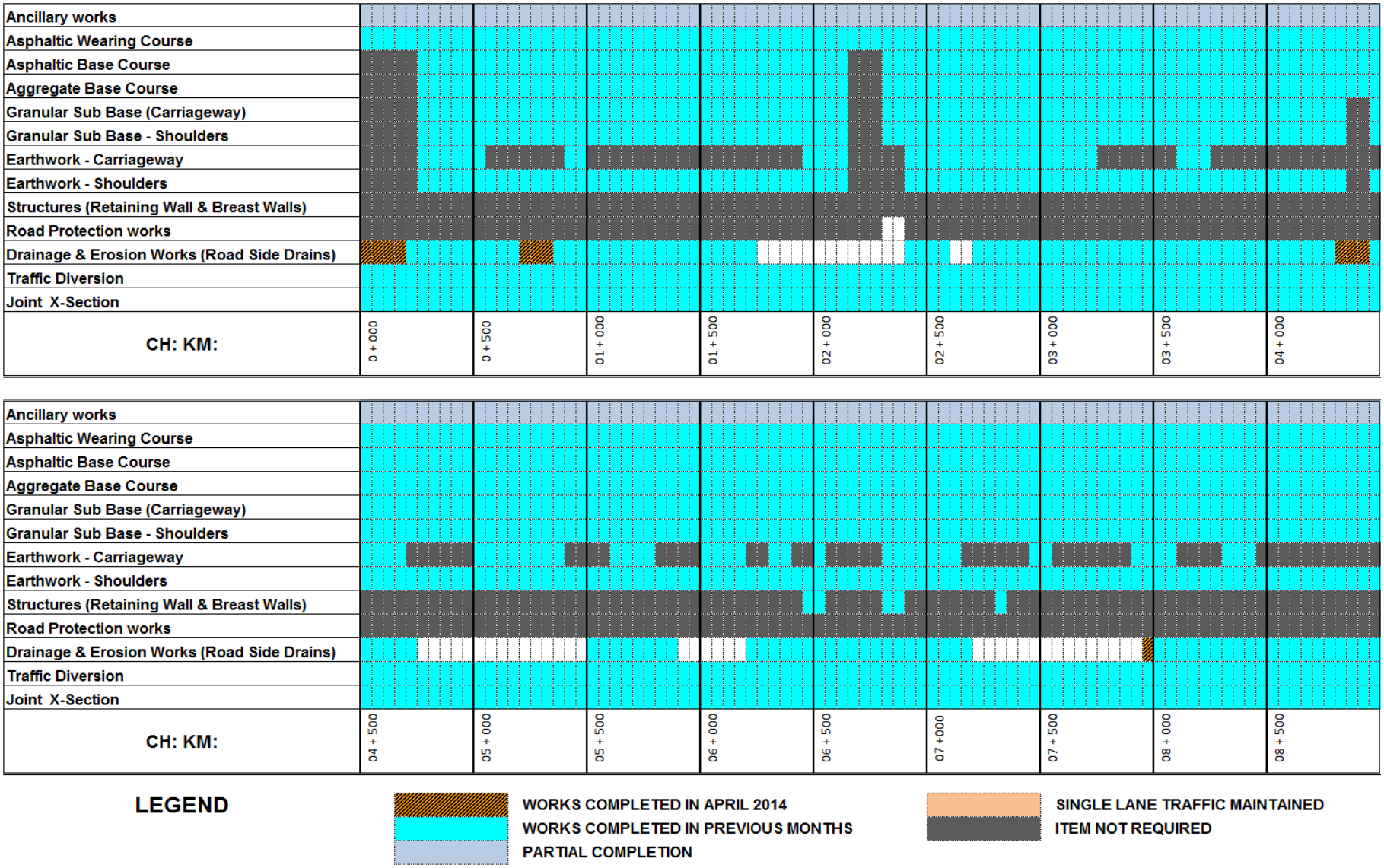

LANDI KOTAL BYPASS (N-5)
LANDI KOTAL BAYPASS
36 + 000
35 + 000
To Torkham
New Alignment
38 + 500
36 + 900
37 + 200
Old Alignment
Landi Kotal City
LANDI KOTAL BAYPASS
34 + 000
LEGEND
Detailed Design Continued Major Earth Work Completed
Detailed Design Continued
Old Alignment
(N-5) Old Alignment
Railway Track
Civil Hospital (Landikotal)
To Peshawar
33 + 000

CIVIL WORKS PROGRESS STATUS

3.1 SECTION - I CUMULATIVE MILESTONE WISE PROGRESS STATUS

BILL NO	DESCRIPTION	MILESTONE UNIT	NUMBER OF MILESTONES	AMOUNT AS PER MILESTONE (US $)	TOTAT AMOUNT (US $)	PROGRESS UPTO PREVIOUS MONTHS			PROGRESS IN THE REPORTING MONTH			MILESTONE WISE COMULATIVE PROGRESS		
						MILESTONE ACHIEVED	AMOUNT (US $)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US $)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US $)	PROGRESS %
1	EARTH WORK	KM	9	6,339.85	57,058.65	9.00	57,058.65	100.00	-	-	-	9.00	57,058.65	100.00
2	SUB BASE AND BASE COURSE													
i	GRANULAR SUB BASE	KM	9	111,763.61	1,005,872.49	9.00	1,005,872.49	100.00	-	-	-	9.00	1,005,872.49	100.00
ii	AGGREGATE BASE COURSE	KM	9	73,611.56	662,504.04	9.00	662,504.04	100.00	-	-	-	9.00	662,504.04	100.00
iii	ASPHALTIC BASE COURSE	KM	9	416,608.69	3,749,478.21	9.00	3,749,478.21	100.00	-	-	-	9.00	3,749,478.21	100.00
3	SURFACE COURSES AND PAVEMENT	KM	9	213,785.71	1,924,071.39	9.00	1,924,071.39	100.00	-	-	-	9.00	1,924,071.39	100.00
4a	STRUCTURES (RETAINING WALL/BREAST WALL)	JOB	1	38,812.31	38,812.31	1.00	38,812.31	100.00	-	-	-	1.00	38,812.31	100.00
4b	STRUCTURES (CULVERTS)													
I	WIDENING AND REPAIR OF EXISTING CULVERTS AT RD 1+290 & 5+692	NUMBER	2	10,657.55	21,315.10	-	-	-	-	-	-	-	-	-
II	CONSTRUCTION OF NEW CULVERTS (No. of Span x Span Width x Height)													
	1 x 2 x 1.5	NUMBER	7	19,268.30	134,878.10	7.00	134,878.10	100.00	-	-	-	7.00	134,878.10	100.00
	1 x 3 x 1.5	NUMBER	3	25,204.07	75,612.21	3.00	75,612.21	100.00	-	-	-	3.00	75,612.21	100.00
	2 x 3 x 1.5	NUMBER	2	40,950.75	81,901.50	2.00	81,901.50	100.00	-	-	-	2.00	81,901.50	100.00
	3 x 3 x 1.5	NUMBER	1	54,597.59	54,597.59	1.00	54,597.59	100.00	-	-	-	1.00	54,597.59	100.00
	5 x 3 x 1.5	NUMBER	1	75,007.57	75,007.57	1.00	75,007.57	100.00	-	-	-	1.00	75,007.57	100.00
5a	DRAINAGE & EROSION WORKS (ROAD SIDE DRAIN)													
i	DRAIN TYPE D-1 & D-2 (COVERED)	KM	5.5	249,002.78	1,369,515.29	3.78	939,985.49	68.64	0.68	168,076.88	12.27	4.45	1,108,062.37	80.91
ii	DRAIN TYPE D-1a & D-2a (UNCOVERED)	KM	3	110,128.52	330,385.56	2.53	278,074.51	84.17	0.20	22,025.70	6.67	2.73	300,100.22	90.83
iii	DRAIN TYPE D-3 (Converted to D-2 type)	KM	1.5	135,439.74	203,159.61	1.23	166,590.88	82.00	0.20	26,410.75	13.00	1.43	193,001.63	95.00
5b	ROAD PROTECTION WORKS (100 M)	JOB	1	11,047.54	11,047.54	-	-	-	-	-	-	-	-	-
6	ANCILLARY WORKS COMPLETE IN ALL RESPECT	JOB	1	54,375.49	54,375.49	0.47	25,556.48	47.00	-	-	-	0.47	25,556.48	47.00
7	DIVERSION	KM	9	12,978.72	116,808.48	9.00	116,808.48	100.00	-	-	-	9.00	116,808.48	100.00
8	PLANTATION OF TREES (450 Nos)	KM	9	1,297.87	11,680.83	-						-	-	-
	TOTAL PROJECT COST (SECTION-I)				**9,978,082**		**9,386,810**	**94.07**		**216,513.33**	**2.17**		**9,603,323**	**96.24**

3.2 SECTION - I PAVEMENT CONSTRUCTION PHYSICAL PROGRESS STATUS



3.3 SECTION - I CULVERTS PHYSICAL PROGRESS STATUS

Activity	1+230	2+611	3+081	4+480	4+590	5+202	5+354	5+905	6+050	6+191	6+501	6+648	6+883	7+384
size of culvert		1*2*1.5	1*2*1.5	1*3*1.5		1*2*1.5	1*3*1.5	1*2*1.5	3*3*1.5	2*3*1.5	5*3*1.5	1*2*1.5	1*2*1.5	2*3*1.5
RCC Railing	Deleted - Replaced with Pipe Culvert Extension				Culvert shifted to Sec-III									
Roll Pointing														
RCC Slab Cast in situ														
Flooring/Cut-off wall/ Rip rap														
Back Filling														
Bed plate/Curtain wall														
Stone Masonry (Wing Walls)														
Stone Masonry (Abutments/ Pier)														
Lean Concrete														
Structural Excavation														
Dismantling of Existing Structure														

ACTIVITIES COMPLETED IN APRIL 2014

ACTIVITIES COMPLETED IN PREVIOUS MONTH

ACTIVITIES NOT REQUIRED

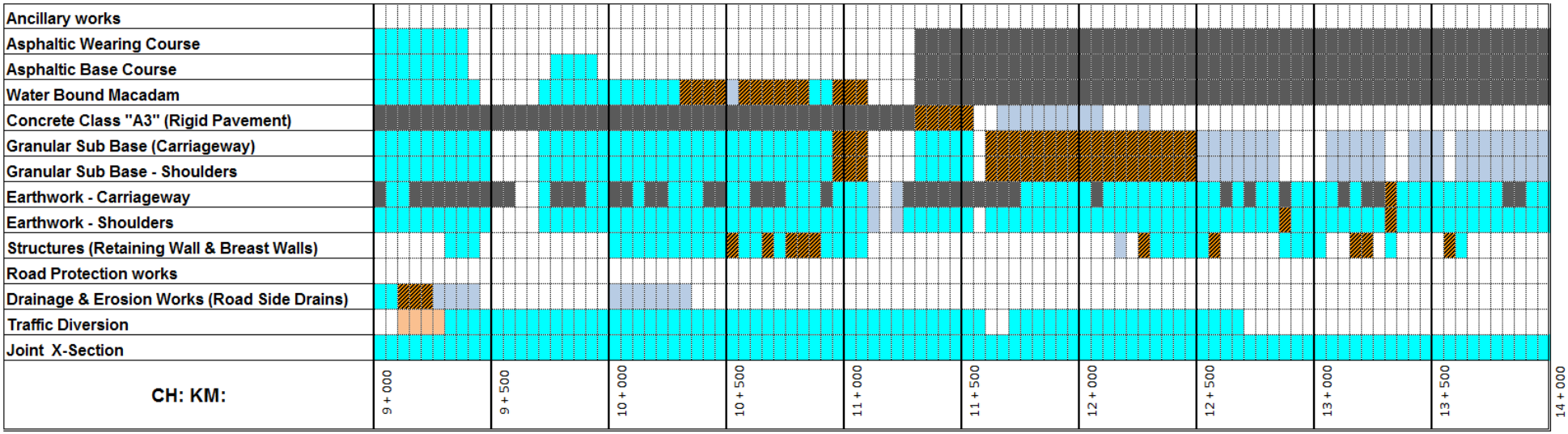
3.4 SECTION - II CUMULATIVE MILESTONE WISE PROGRESS STATUS

BILL NO	DESCRIPTION OF BILL	MILESTONE UNIT	NUMBER OF MILESTONES	AMOUNT AS PER MILESTONE (US $)	TOTAL AMOUNT (US $)	PROGRESS UPTO PREVIOUS MONTHS			PROGRESS IN THE REPORTING MONTH			MILESTONE WISE COMULATIVE PROGRESS		
						MILESTONE ACHIEVED	AMOUNT (US $)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US $)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US $)	PROGRESS %
1	EARTH WORK (INCLUDING EARTHEN DOWELS)	500 m	10	101,245	1,012,450	9.10	921,330	91.00	0.20	20,249	2.00	9.30	941,579	93.00
2	**SUB BASE AND BASE COURSE**													
a	GRANULAR SUB BASE	500 m	10	27,073	270,730	6.40	173,267	64.00	0.80	21,658	8.00	7.20	194,926	72.00
b	WATER BOUND MACADAM	500 m	4.6	28,702	132,029	2.40	68,885	52.17	1.25	35,877	27.17	3.65	104,762	79.35
c	ASPHALTIC BASE COURSE	500 m	4.6	221,168	1,017,373	1.20	265,402	26.09	-	-	-	1.20	265,402	26.09
3	**SURFACE COURSES AND PAVEMENT**													
a	ASPHALTIC CONCRETE FOR WEARING COURSE AND ALLIED ACTIVITIES	500 m	4.6	104,708	481,657	0.80	83,766	17.39	-	-	-	0.80	83,766	17.39
b	RIGID PAVEMENT (6.15 m Width Lane of 500 m)	500 m	10.8	262,510	2,835,108	-	-	-	2.00	525,020	18.52	2.00	525,020	18.52
4a	**STRUCTURES (RETAINING WALL /BREAST WALL)**													
4a - i	RETAINING WALL - 1975 M	100 m	19.75	70,864	1,399,564	17.00	1,204,688	86.08	0.25	17,716	1.27	17.25	1,222,404	87.34
4a - ii	BREAST WALL - 325 M	100 m	3.25	28,169	91,549	3.00	84,506	92.31	0.00	-	-	3.00	84,506	92.31
4b	**STRUCTURES (CULVERTS)**													
	CONSTRUCTION OF NEW CULVERTS (No. of Span x Span Width x Height)													
	1 x 2 x 2.5 (15 skew, Flexible Pavement)	No	2	33,373	66,746	1.99	66,412	99.50	0.00	-	-	1.99	66,412	99.50
	1 x 2 x 2.5 (22 m long, Flexible Pavement)	No	1	49,109	49,109	1.00	49,109	100.00	0.00	-	-	1.00	49,109	100.00
	1 x 2 x 3 (Flexible Pavement)	No	2	43,350	86,700	1.95	84,533	97.50	0.00	-	-	1.95	84,533	97.50
	1 x 2 x 3 (Rigid Pavement)	No	0		-	-	-	-	-	-	-	-	-	-
	1 x 2 x 3 (15° skew)	No	1	44,585	44,585	0.89	39,681	89.00	0.00	-	-	0.89	39,681	89.00
	1 x 2 x 3 (30° skew)	No	1	48,068	48,068	0.85	40,857	85.00	0.11	5,287.43	11.00	0.96	46,145	96.00

SECTION - II CUMULATIVE MILESTONE WISE PROGRESS STATUS

BILL NO	DESCRIPTION OF BILL	MILESTONE UNIT	NUMBER OF MILESTONES	AMOUNT AS PER MILESTONE (US $)	TOTAL AMOUNT (US $)	PROGRESS UPTO PREVIOUS MONTHS			PROGRESS IN THIS MONTH			MILESTONE WISE COMULATIVE PROGRESS		
						MILESTONE ACHIEVED	AMOUNT (US $)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US $)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US $)	PROGRESS %
	CONSTRUCTION OF NEW CULVERTS (REPLACEMENT OF OLD) (No. of Span x Span Width x Height)													
	1 x 2 x 2.5 (Rigid Pavement)	No	3	33,083	99,249	2.73	90,317	91.00	0.06	1,984.98	2.00	2.79	92,302	93.00
	1 x 2 x 2.5 (30° skew)(Flexible Pavement)	No	1	36,376	36,376	0.93	33,830	93.00	0.01	363.76	1.00	0.94	34,193	94.00
	1 x 3 x 4.0	No	1	76,130	76,130	1.00	76,130	100.00	0.00	-	-	1.00	76,130	100.00
	1 x 2 x 4 (22 m length)	No	1	89,408	89,408	0.80	71,526	80.00	0.10	8,940.80	10.00	0.90	80,467	90.00
	1 x 2 x 4.5 (22 m length)	No	1	105,875	105,875	1.00	105,875	100.00	0.00	-	-	1.00	105,875	100.00
	1 x 2 x 4.5 (15° skew)	No	1	83,564	83,564	0.83	69,358	83.00	0.13	10,863.32	13.00	0.96	80,221	96.00
	1 x 3 x 2.5 (15° skew)	No	1	38,000	38,000	0.95	36,100	95.00	0.00	-	-	0.95	36,100	95.00
	1 x 3 x 4.5 (15° skew)	No	1	88,589	88,589	0.79	69,985	79.00	0.06	5,315.32	6.00	0.85	75,300	85.00
	Service Ducts	No	23	2,666	61,318	19.00	50,654	82.61	0.00	-	-	19.00	50,654	82.61
5a	**DRAINAGE & EROSION WORKS (ROAD SIDE DRAIN)**													
i	DRAIN TYPE D-1 (COVERED) - (0.8 KM)	JOB	1	161,945	161,945	-	-	-	0.13	20,243.08	12.50	0.13	20,243	12.50
ii	DRAIN TYPE D-4 (0.875 KM)	JOB	1	232,586	232,586	-	-	-	0.17	39,772.21	17.10	0.17	39,772	17.10
iii	DRAIN TYPE D-3a (3.725 KM)	KM	3.725	34,924	130,092	-	-	-	-	-	-	-	-	-
5b	ROAD PROTECTION WORKS (75 M)	JOB	1	404,279	404,279	-	-	-	-	-	-	-	-	-
6	ANCILLARY WORKS COMPLETE IN ALL RESPECTS	JOB	1	70,050	70,050	-	-	-	-	-	-	-	-	-
7	DIVERSION	KM	5	30,579	152,895	1.25	38,223.75	25.00	0.45	13,760.55	9.00	1.70	51,984.30	34.00
8	MISCELLANEOUS (Relocation of utilities and plantatio	JOB	1	17,460	17,460	-	-	-	-	-	-	-	-	-
	TOTAL				**9,383,484**		**3,724,435**	**39.69**		**727,052**	**7.75**		**4,451,487**	**47.44**

SECTION - II PAVEMENT CONSTRUCTION PHYSICAL PROGRESS STATUS



LEGEND

- WORKS COMPLETED IN APRIL 2014
- WORKS COMPLETED IN PREVIOUS MONTHS
- PARTIAL COMPLETION
- SINGLE LANE TRAFFIC MAINTAINED
- ITEM NOT REQUIRED

#

3.5 SECTION - II CULVERTS PHYSICAL PROGRESS STATUS

RCC Railing	U/S side																	
	D/S side																	
Roll Pointing	Abt No1																	
	Abt No2																	
Flooring/Cut-off wall/ Rip rap	B/W Abts																	
RCC Slab cast insitu	FW																	
Bed plate/Curtain wall	Abt No1																	
	Abt No2																	
Back filling	Abt No1																	
	Abt No2																	
	B/W Abts																	
Stone Masonry (Wing Walls)	U/S side																	
	D/S side																	
Stone Masonry (Abutments/ Pier)	Abt No1																	
	Abt No2																	
Lean Concrete	Abt No1																	
	Abt No2																	
Structural Excavation	Abt No1																	
	Abt No2																	
Dismantling of Existing Structure	Abt No1																	
	Abt No2																	
Pavement Type	Rigid/Flex	Flexible	Flexible	Flexible	Flexible	Flexible	Flexible	Flexible	Rigid	Rigid	Rigid	Rigid	Rigid	Rigid	Rigid	Rigid	Rigid	Rigid
Construction Sequence(FW / HW)	(FW/HW)	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
Size of Culvert	Nos*width *Height	1*2*3	1*2*2.5 (22 M)	1*2*4.5 (22 M)	1*3*4 (22 M)	1*2*2.5	1*2*3	1*2*2.5	1*2*2.5	1*2*3	1*2*2.5	1*3*4.5	1*2*2.5	1*3*2.5	1*2*4.5	1*2*4	1*2*3	1*2*2.5
KM as per site	KM	10+050	10+500	10+572	10+602	10+788	10+850	10+961	11+372	11+691	11+841	12+178	12+337	12+460	12+975	13+212	13+333	13+565
KM as in Drawing	KM	10+025	10+500	10+571	10+615	10+790 (skew)	10+850	10+965 (skew)	11+375	11+690 (skew)	11+840	12+200 (skew)	12+336 (skew)	12+460 (skew)	12+975 (skew)	13+215	13+325 (skew)	13+650

ACTIVITIES COMPLETED IN APRIL 2014

ACTIVITIES COMPLETED IN PREVIOUS MONTHS

ACTIVITIES NOT REQUIRED

ACTIVITIES IN PROGRESS

SECTION - III CUMULATIVE MILESTONE WISE PROGRESS STATUS

BILL NO	DESCRIPTION OF BILL	MILESTONE UNIT	NUMBER OF MILESTONES	AMOUNT AS PER MILESTONE (US $)	TOTAL AMOUNT (US $)	PROGRESS UPTO PREVIOUS MONTHS			PROGRESS IN THE REPORTING MONTH			MILESTONE WISE COMULATIVE PROGRESS		
						MILESTONE ACHIEVED	AMOUNT (US $)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US $)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US $)	PROGRES S %
1	**EARTH WORK**	500m	10	104,451.00	1,044,510.00	7.4	772,937.40	74	0.45	47,002.95	4.50	7.85	819,940.35	78.50
2	**SUB BASE AND BASE COURSE**													
a	GRANULAR SUB BASE	500m	11.80	39,882.00	470,607.60	7.0	279,174.00	59.32	0.5	19,941.00	4.24	7.5	299,115.00	63.56
b	WATER BOUND MACADAM	500m	4.70	28,023.00	131,708.10	3.4	95,278.20	72.34	1.0	28,023.00	21.28	4.4	123,301.20	93.62
c	ASPHALTIC BASE COURSE	500m	4.70	212,362.00	998,101.40	2.3	488,432.60	48.94	2.1	445,960.20	44.68	4.4	934,392.80	93.62
d	EARTHEN DOWEL	JOB	1.00	24,249.00	24,249.00	-	-	-	-	-	-	-	-	-
3	**SURFACE COURSES AND PAVEMENT**													
a	ASPHALTIC CONCRETE FOR WEARING COURSE AND ALLIED ACTIVITIES	500m	4.70	101,000.00	474,700.00	1.3	131,300.00	27.66	3.1	313,100.00	65.96	4.4	444,400.00	93.62
b	RIGID PAVEMENT **(HALF PAVEMENT WIDTH)**	500m	14.30	216,504.00	3,096,007.20	3.2	692,812.80	22.38	0.8	173,203.20	5.59	4.0	866,016.00	27.97
4a	**STRUCTURES (RETAINING WALL /BREAST WALL)**													
4a - i	RETAINING WALL (RW-2) - TOTAL L = 2780 M													
a	RETAINING WALL (RW-2) : H= 1.5 M ; L= 475 M	200M	2.38	18,706.00	44,426.75	0.5	9,353.00	21.05	0.00	-	0.00	0.50	9,353.00	21.05
b	RETAINING WALL (RW-2) : H= 2.0 M ; L= 100 M	JOB	1.00	13,980.00	13,980.00	-	-	-	-	-	-	-	-	-
c	RETAINING WALL (RW-2) : H= 2.5 M ; L= 1075 M	100M	10.75	19,044.00	204,723.00	-	-	-	-	-	-	-	-	-
d	RETAINING WALL (RW-2) : H= 3.0 M ; L= 150 M	JOB	1.00	37,862.00	37,862.00	0.83	31,425.46	83.00	0	-	0.00	0.83	31,425.46	83.00
e	RETAINING WALL (RW-2) : H= 4.0 M ; L= 105 M	JOB	1.00	44,200.00	44,200.00	0.476	21,039.20	47.60	0.00	-	0.00	0.48	21,039.20	47.60
f	RETAINING WALL (RW-2) : H= 6.0 M ; L= 600 M	100M	6.00	93,510.00	561,060.00	2.00	187,020.00	33.33	0.00	-	0.00	2.00	187,020.00	33.33
g	RETAINING WALL (RW-2) : H= 7.0 M ; L= 175 M	100M	1.75	124,511.00	217,894.25	-	-	-	-	-	-	-	-	-
h	RETAINING WALL (RW-2) : H= 8.0 M ; L= 100 M	100M	1.00	164,173.00	164,173.00	0.75	123,129.75	75.00	0.00	-	0.00	0.75	123,129.75	75.00
4a - ii	BREAST WALL - 225 M	100M	2.25	34,037.00	76,583.25	-	-	-	-	-	-	-	-	-

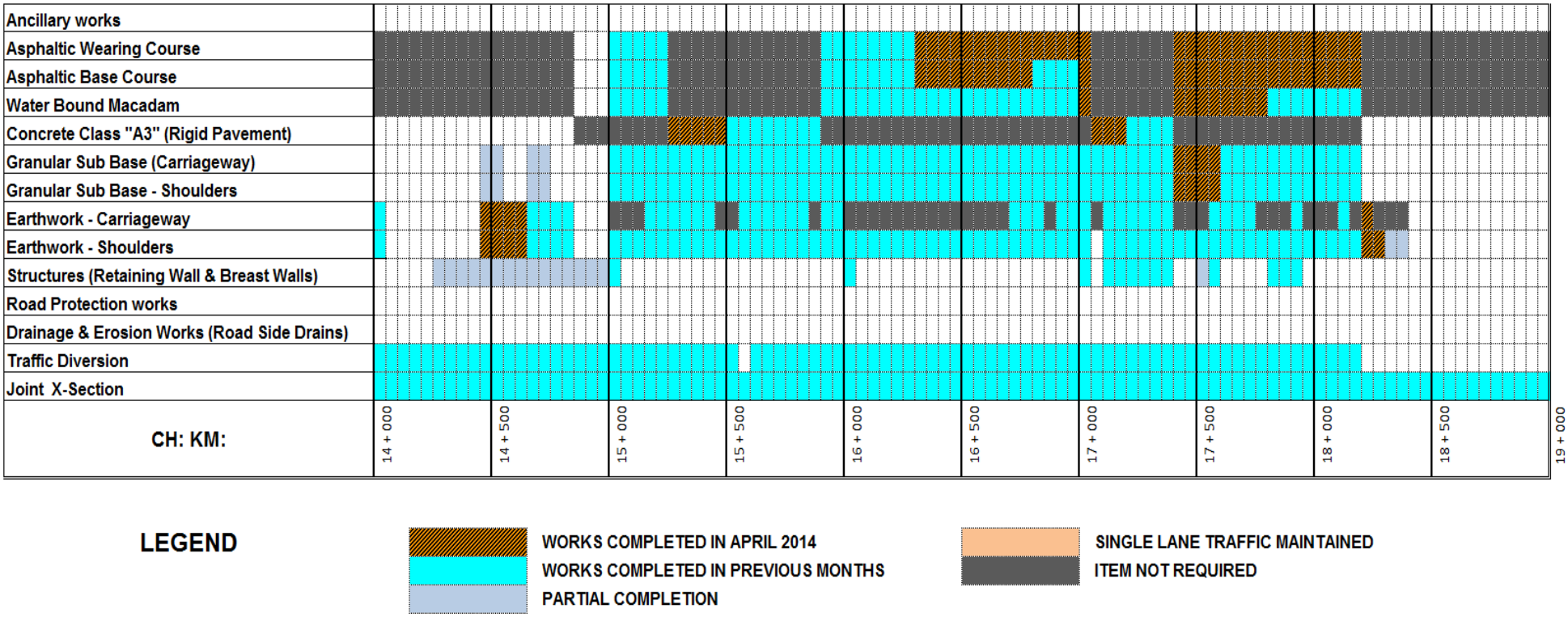
SECTION - III CUMULATIVE MILESTONE WISE PROGRESS STATUS

BILL NO	DESCRIPTION OF BILL	MILESTONE UNIT	NUMBER OF MILESTONES	AMOUNT AS PER MILESTONE (US $)	TOTAL AMOUNT (US $)	PROGRESS UPTO PREVIOUS MONTHS			PROGRESS IN THIS MONTHS			MILESTONE WISE COMULATIVE PROGRESS		
						MILESTONE ACHIEVED	AMOUNT (US $)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US $)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US $)	PROGRESS %
4b	**STRUCTURES (CULVERTS)**													
NS	**CONSTRUCTION OF NEW CULVERTS (No. of Span x Span Width x Height)**													
	1 x 2 x 2.5 (Flexible Pavement)	No	1	33,442.00	33,442.00	0.92	30,766.64	92.00	0	-	0.00	0.92	30,766.64	92.00
	1 x 2 x 3 (Flexible Pavement)	No	1	44,315.00	44,315.00	0.98	43,428.70	98.00	0	-	0.00	0.98	43,428.70	98.00
	1 x 2 x 4.5 (Flexible Pavement)	No	1	83,501.00	83,501.00	0.96	80,160.96	96.00	0.01	835.01	1.00	0.97	80,995.97	97.00
	1 x 2 x 3 (Loop-1 Rigid Pavement)	No	2	40,667.00	81,334.00	1.03	41,887.01	51.50	-	-	-	1.03	41,887.01	51.50
	2 x 2 x 3 (Loop-1 Rigid Pavement)	No	1	52,479.00	52,479.00	0.03	1,574.37	3.00	0.14	7,347.06	14.00	0.17	8,921.43	17.00
NS	**CONSTRUCTION OF NEW CULVERTS(REPLACEMENT OF OLD) (No. of Span x Span Width x Height)**													
	1 x 2 x 2	No	1	27,031.00	27,031.00	0.96	25,949.76	96.00	0.00	-	0.00	0.96	25,949.76	96.00
	1 x 2 x 2.5	No	2	33,621.00	67,242.00	1.83	61,526.43	91.50	0.00	-	0.00	1.83	61,526.43	91.50
	1 x 2 x 2.5 (Rigid Pavement)	No	2	33,818.00	67,636.00	1.85	62,563.30	92.50	0.00	-	0.00	1.85	62,563.30	92.50
	1 x 2 x 2.5(15° skew)	No	1	34,445.00	34,445.00	0.98	33,756.10	98.00	-	-	-	0.98	33,756.10	98.00
	1 x 2 x 2.5(30° skew)	No	1	37,186.00	37,186.00	0.96	35,698.56	96.00	-	-	-	0.96	35,698.56	96.00
	1 x 2 x 3 (15° skew)	No	1	45,559.00	45,559.00	0.98	44,647.82	98.00	-	-	-	0.98	44,647.82	98.00
	1 x 2 x 3 (30° skew)	No	1	49,119.00	49,119.00	0.93	45,680.67	93.00	0.01	491.19	1.00	0.94	46,171.86	94.00
	1 x 2 x 2.5 (Loop-1)	No	3	30,901.00	92,703.00	1.75	54,076.75	58.33	0.52	16,068.52	17.33	2.27	70,145.27	75.67
	2 x 2 x 2.5	No	1	39,933.00	39,933.00	0.05	1,996.65	5.00	0.29	11,580.57	29.00	0.34	13,577.22	34.00
	Service Ducts	No	6	2,725.00	16,350.00	-	-	-	-	-	-	-	-	-
5a	**DRAINAGE & EROSION WORKS (ROAD SIDE DRAIN)**													
i	DRAIN TYPE D-3a (7.0 KM)	500m	14	18,007.00	252,098.00	-	-	-	-	-	-	-	-	-
ii	DRAIN TYPE D-3b (0.225 KM)	JOB	1	16,610.00	16,610.00	-	-	-	-	-	-	-	-	-
5b	**ROAD PROTECTION WORKS**													
i	STONE PITCHING (100M)	JOB	1	5,416.00	5,416.00	-	-	-	-	-	-	-	-	-
ii	METAL GUARD RAIL (475M)	JOB	1	40,008.00	40,008.00	-	-	-	-	-	-	-	-	-
iii	BARRIER (150M)	JOB	1	45,775.00	45,775.00	-	-	-	-	-	-	-	-	-

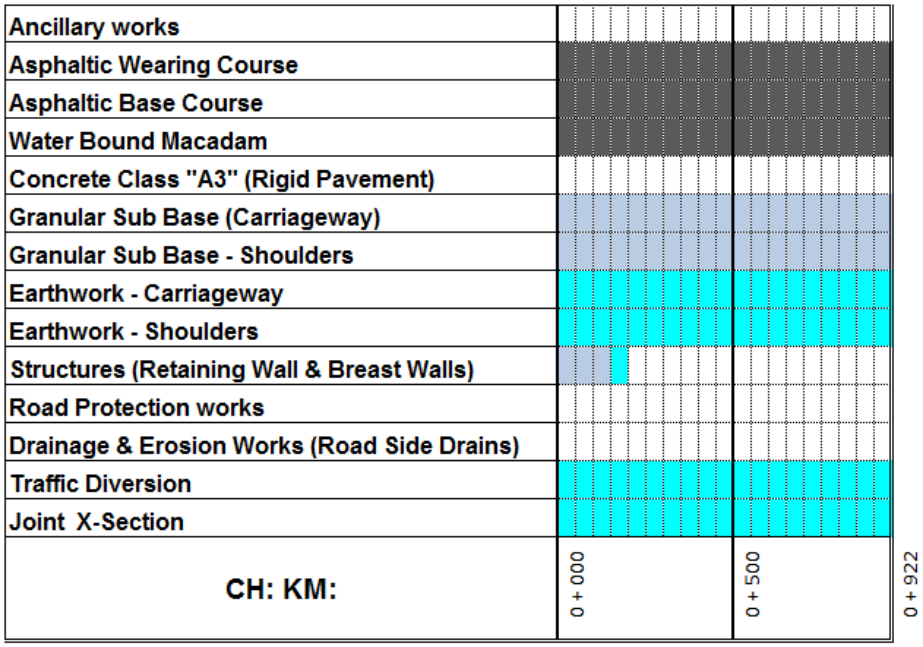
SECTION - III CUMULATIVE MILESTONE WISE PROGRESS STATUS

BILL NO	DESCRIPTION OF BILL	MILESTONE UNIT	NUMBER OF MILESTONES	AMOUNT AS PER MILESTONE (US $)	TOTAL AMOUNT (US $)	PROGRESS UPTO PREVIOUS MONTHS			PROGRESS IN THIS MONTH			MILESTONE WISE COMULATIVE PROGRESS		
						MILESTONE ACHIEVED	AMOUNT (US $)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US $)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US $)	PROGRESS %
6	**ANCILLARY WORKS(TRAFFIC ROAD SIGNS, PAVEMENT MARKING / STUDS & KM POSTS)**													
i	TRAFFIC SIGNS / KM POSTS	JOB	1	18,894.00	18,894.00	-	-	-	-	-	-	-	-	-
ii	PAVEMENT MARKINGS / STUDS	JOB	1	50,671.00	50,671.00	-	-	-	-	-	-	-	-	-
7	**DIVERSION**	KM	5	31,259.00	156,295.00	1.25	39,073.75	25.00	0.00	-	0.00	1.25	39,073.75	25.00
8	**MISCELLANEOUS**													
a	PLANTATION OF TREES (450 NOS)	JOB	1	10,514.00	10,514.00	-	-	-	-	-	-	-	-	-
b	SHIFTING OF UTILITIES (OPTIC FIBRE UPTO KM 19)					-	-	-	-	-	-	-	-	-
i	SHIFTING OF O.F.C FROM KM: 04 TO KM: 09	JOB	1	58,744.00	58,744.00	-	-	-	-	-	-	-	-	-
ii	SHIFTING OF O.F.C FROM KM: 09 TO KM: 14	JOB	1	58,744.00	58,744.00	-	-	-	-	-	-	-	-	-
iii	SHIFTING OF O.F.C FROM KM: 14 TO KM: 19	JOB	1	58,744.00	58,744.00	-	-	-	-	-	-	-	-	-
c	RELOCATION OF ELECTRIC POLES (UPTO KM 30)													
i	RELOCATION OF 45 NO OF ELECTRIC POLES (KM: 09 TO KM:26)	JOB	1	57,708.00	57,708.00	-	-	-	-	-	-	-	-	-
ii	RELOCATION OF 45 NO OF ELECTRIC POLES (KM: 26 TO KM:32+325)	JOB	1	57,708.00	57,708.00	-	-	-	-	-	-	-	-	-
iii	RELOCATION OF 45 NO OF ELECTRIC POLES (KM:32+325 TO KM: 35+010)	JOB	1	57,708.00	57,708.00	-	-	-	-	-	-	-	-	-
d	RELOCATION OF FC CHECK POSTS & RELOCATION OF SHOP AT KM 14+100													
i	RELOCATION OF FC CHECK POSTS BLOCK - 1 (454 SQ-M)	JOB	1	80,620.00	80,620.00	-	-	-	-	-	-	-	-	-
ii	RELOCATION OF FC CHECK POSTS BLOCK - 2 (298 SQ-M)	JOB	1	52,918.00	52,918.00	-	-	-	-	-	-	-	-	-
iii	RELOCATION OF FC CHECK POSTS BLOCK - 3 (298 SQ-M)	JOB	1	52,918.00	52,918.00	-	-	-	-	-	-	-	-	-
iv	RELOCATION OF SHOP AT KM 14+100 (20 SQ-M)	JOB	1	3,552.00	3,552.00	-	-	-	-	-	-	-	-	-
	TOTAL				**9,512,705.55**		**3,434,690**	**36.11**		**1,063,553**	**11.18**		**4,498,243**	**47.29**

3.6 SECTION - III PAVEMENT CONSTRUCTION PHYSICAL PROGRESS STATUS



3.7 SECTION - III (LOOP NO. 1) PAVEMENT CONSTRUCTION PHYSICAL PROGRESS STATUS



LEGEND

- WORKS COMPLETED IN APRIL 2014
- WORKS COMPLETED IN PREVIOUS MONTHS
- PARTIAL COMPLETION
- SINGLE LANE TRAFFIC MAINTAINED
- ITEM NOT REQUIRED

3.8 SECTION - III CULVERTS PHYSICAL PROGRESS STATUS

RCC Railing	U/S side																			
	D/S side																			
Roll Pointing	Abt No1																			
	Abt No2																			
Flooring/Cut-off wall/ Rip rap	B/W Abts																			
	US/DS Apr																			
RCC Slab cast insitu	FW																			
Bed plate/Curtain wall	Abt No1																			
	Abt No2																			
Back filling	Abt No1																			
	Abt No2																			
	B/W Abts																			
Stone Masonry (Wing Walls)	U/S side																			
	D/S side																			
Stone Masonry (Abutments/ Pier)	Abt No1																			
	Abt No2																			
Lean Concrete	Abt No1																			
	Abt No2																			
Structural Excavation	Abt No1																			
	Abt No2																			
Dismantling of Existing Structure	Abt No1																			
	Abt No2																			
Pavement Type	Rigid/Flex	Rigid	Rigid	Rigid	Rigid	Rigid	Rigid	Rigid	Flexible	Rigid	Rigid	Flexible	Flexible	Flexible	Flexible	Flexible	Flexible	Flexible	Flexible	Flexible
Construction Sequence	(FW/HW)	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW		FW	FW	FW	
size of Culvert	Nos*width *Height	2*2*2.5	2*2*3	1*2*2.5	1*2*3	1*2*2.5	1*2*3	1*2*2.5	1*2*2	1*2*2.5	1*2*2.5	1*2*2.5	1*2*3	1*2*2.5	1*2*2.5	1*2*2.5	1*2*4.5	1*2*3	1*2*3	1*2*2.5
KM as per site	KM	14+256	14+256			14+433	14+433	14+600	15+139	15+647	15+795	16+316	16+618	16+740	17+010	17+434	17+562	17+666	17+901	18+146
KM as in Drawing	KM	14+250	14+250 Loop-1	14+300	14+300 Loop-1	14+431	14+431 Loop-1	14+600	15+138	15+640	15+795	16+313 skew 30	16+625	16+750 (skew)	16+996	17+400	17+561	17+665 skew 15	17+909 skew 30	18+142 skew 15

ACTIVITIES COMPLETED IN APRIL 2014

ACTIVITIES NOT REQUIRED

ACTIVITIES COMPLETED IN PREVIOUS MONTHS

ACTIVITIES IN PROGRESS

3.9 BRIDGE NO. 2 PHYSICAL PROGRESS STATUS

BRIDGES	DESCRIPTION	TOTAL	COMPLETED	REMARKS
KM: 09+560				
BRIDGE NO: 02	Piles	36	36	
	Pile Caps	4	4	
	Abutments/ Piers	4	4	
	Transom	4	4	
	Girder Casting	15	15	
	Girder Prestressing	15	15	
	Girder Launching	15	6	
	Deck Slab / Barrier	3		
	Expansion Joint	4		
	Approach Slab	2		

WORKS COMPLETED IN APRIL 2014

WORKS COMPLETED IN PREVIOUS MONTHS

PARTIAL COMPLETION

3.10 BRIDGE NO. 10 PHYSICAL PROGRESS STATUS

BRIDGES	DESCRIPTION	TOTAL	COMPLETED	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	REMARKS
KM: 23+850														
BRIDGE NO: 10	Piles	30	26											
	Pile Caps	3	1											
	Abutments/ Piers	3												
	Transom	3												
	Girder Casting	10	9											
	Girder Prestressing	10												
	Girder Launching	10												
	Deck Slab / Barrier	2												
	Expansion Joint	3												
	Approach Slab	2												

WORKS COMPLETED IN APRIL 2014

WORKS COMPLETED IN PREVIOUS MONTHS

PARTIAL COMPLETION

3.11 MULTICELL CULVERT PHYSICAL PROGRESS STATUS

MONTH: APRIL-2014						
Approach Slab Construction	U/S Side					
	D/S Side					
RCC Railing	U/S Side					
	D/S Side					
Backfilling	Near end					
	Far end					
Gabion wall Construction	U/S Side					
	D/S Side					
Retaining wall construction	Near end					
	Far end					
RCC Top Slab Concrete	FW					
RCC Wing Walls Concrete	U/S Side					
	D/S Side					
Concrete Apron Construction	U/S Side					
	D/S Side					
RCC Walls Concrete (Box)						
RCC Bottom Slab concrete	FW					
Lean Concrete	FW					
Structural Excavation	FW					
Dismantling of Existing Structure	Causeway					
Pavement Type	Rigid/Flex	Flexible	Flexible			
Construction Sequence(FW / HW)	(FW/HW)	FW	FW			
Size of Culvert	Nos*width *Height	15*3*3 15-cell	10*3*3 10-cell	10*3*3 10-cell		
KM as per site	KM	11+190	22+925			
KM as in Drawing	KM	11+190	22+926	41+950		

ACTIVITIES COMPLETED IN APRIL 2014

ACTIVITIES COMPLETED IN PREVIOUS MONTHS

ACTIVITIES NOT REQUIRED

ACTIVITIES IN PROGRESS

QUALITY TEST REPORTS

4.1 SUBBASE FIELD DENSITY REPORT

S.No	Location (KM)	Description	Station (KM)	MMD (g/cc)	OMC (%)	Adj.MDD (g/cc)	M.C (%)	Achieved Compection	Required Compection	Remarks
1	26+700 ~ 26+750 F/W	Sube Base 2nd	26+740 C/L	2.335	5.2	2.41	4.6	99.4	98	Pass

4.2 WATER BOUND MACADAM FIELD DENSITY TESTS REPORT

S.No	Location (KM)	Description	Station (KM)	MMD (g/cc)	OMC (%)	Adj.MDD (g/cc)	M.C (%)	Achieved Compection	Required Compection	Remarks	
1	17+875 ~ 18+000 F/W	WBM	17+925 R/S	2.376	4.7	2.485	2.3	96	100	Fail	Note 01
2	10+050 ~ 10+200 F/W	WBM	10+125 C/L	2.376	4.7	2.474	2.7	95.2	100	Fail	Note 01
3	10+250 ~ 10+350	WBM	10+305 R/S	2.376	4.7	2.47	2.2	94.8	100	Fail	Note 01
4	10+250 ~ 10+350 F/W	WBM	10+310 L/S	2.376	4.7	2.466	2.1	97.5	100	Fail	Note 01
5	10+350 ~ 10+450 F/W	WBM	10+402 L/S	2.376	4.7	2.48	2.3	90.8	100	Fail	Note 01
6	10+250 ~ 10+350 F/W	WBM	10+290 L/S	2.376	4.7	2.476	3.1	100.2	100	Re- test Pass	
7	10+350 ~ 10+450 F/W	WBM	10+390	2.376	4.7	2.462	2.2	95.7	100	Fail	Note 01
8	10+450 ~ 10+500 F/W	WBM	10+470 R/S	2.376	4.7	2.482	2.7	99.1	100	Fail	Note 01
9	10+350 ~ 10+450 F/W	WBM	10+396 R/S	2.376	4.7	2.476	3	100.4	100	Re-test Pass	
10	10+450 ~ 10+500 F/W	WBM	10+478 R/S	2.376	4.7	2.479	2.8	101	100	Pass	
11	10+850 ~ 10+950 F/W	WBM	10+937 L/S	2.376	4.7	2.376	2.7	95.2	100	Fail	Note 01
	Note 01	Subsequent layers placement and compaction postponded untilprevious layer properly compacted/retested and accepted.									

4.3 ASPHALTIC BASE COURSE QUALITY TESTS REPORT

Specific Gravity A.C (Gb) 1.030									Combined Specific Gravity of Aggregate (Gsb) 2.665							
Pavying Date	% A.C By Wt of Mix Pb	Sieves analysis							Bulk Sp. Gr. (Gmb)	Maximum Sp.Gravity (G_{mm})	% Air Voids (V_a)	VMA (%)	VFA (%)	Stability (Kg)	Los of Stability (%)	Flow (0.01") (0.25mm)
		2"	1½"	3/4"	#4	#8	#50	#200								
10-Apr-14	3.76	100	100	69.9	26.6	20.1	8.1	4.3	2.468	2.598	5.0	12.08	58.4	1671	16.3	11.1
22-Apr-14	3.85	100	100	79	37.9	25.8	9.9	5.4	2.443	2.585	5.4	12.91	58.5	1714	15.9	107
JMF LIMITS	3.1 ~ 3.7	100	93~100	59~73	24 ~ 38	19 ~ 27	3.8~11.8	3 ~ 5	-	-	4 ~ 8	13 % Min	55 ~ 75	1000 Kg Min	25% Max	8 ~ 14 at (0.01")

4.4 ABSORBTION AND COMPRESSION STRENGTH OF BRICKS REPORT

Description		Brick for Drain Type 2											
Sourse		From Site Stock				Station			8+090				
Location		Km: 09				Testing Date			18-Apr-2014				
Specimen No.	Identification (Trade Mark)	Absorption (%) of Full (Total) Bricks					Compressive Strength (Kg/cm²)						
		Oven Dry Weight in (grams)	SSD Weight (grams)	Weight of Water (grams)	Indivisual Absorption (%)	Average Absorption (%)	Dimintion of Half Brick (cm)		Area (cm²)	Load in (Kn)	Achieved Strength (kg/cm²)	Average Strength (kg/cm²)
							Length	Width				
1	PR	2672	3166	494	18.5	18.7	11.3	10.6	119.78	183	155.8	156.5
2	PR	2704	3193	489	18.1		10.8	10.3	111.24	169	154.9	
3	PR	2712	3243	531	19.6		11	10.4	114.4	178	158.7	
Maximum Allowable Absorption (%)						16.7	Required Strength (kg/cm²)					140.8	

4.5 DATA SHEET FOR PRIMECOAT/TACK COAT(AASHTO M-82)

Description		Prime Coat Spray Rate For Asphaltic Base Course										
Temprature During Spray		69 ˚C			Date				4/Apr/2014			
Location		17+600 ~ 17+900 F/W			Type of Material				MC-70			
S.No	Station	Dimention of Sheet		Area of Sheet (M^2)	Weight of Sheet Before Test (grams)	Weight of Sheet After Test (grams)	Weight of Bitumen in (grams)	Weight of Bitumen in (kg)	Rate of Application (kg/m^2)	Specific gravity of MC 70	Rate of Application (Ltr/m^2)	Avg.Rate of Application (Ltr/m^2)
		Length (M)	Wedth (M)									
1	17+650	0.3048	0.3040	0.0927	475.0	557.0	82.0	0.082	0.88	0.92	0.96	0.96
2	17+725	0.3048	0.3040	0.0927	485.0	568.0	83.0	0.083	0.90		0.97	
3	17+830	0.3048	0.3040	0.0927	492	572	80	0.08	0.86		0.94	
Specified Spray Rate for Prime Coat is = 0.65 ~ 1.65 , Specific Gravity of MC 70 Prime Coat Material = 0.92												

4.6 ASPHALTIC BASE COURSE LAYER CORES COMPACTION REPORT

S.No	CORE NO.	TESTING DATE	COVERED AREA	STATION	OFFSET FROM C/L	WT. IN AIR (g)	WT. IN WATER(g)	SSD. WT (g)	VOLUME (cc)	DENSITY (g/cc)	LAB.DENSITY (GMB)	ACHIEVED COMPACTION	REQUIRED COMPACTION	REMARKS
Asphaltic Base Course 1st Layer														
1	C-1	12-Apr-2014	17+612~17+712	17+625	3.0m L/S	1333.6	784.2	1340.2	556	2.399	2.472	97.0	97	OK
2	C-2			17+675	5.5m R/S	1270.6	745.7	1274.8	529.1	2.401	2.472	97.1	97	OK
3	C-3		17+712~17+812	17+725	2.5m L/S	1095.8	646.9	1101.1	454.2	2.413	2.472	97.6	97	OK
4	C-4			17+775	5.3m R/S	1663	978.4	1666.6	688.2	2.416	2.472	97.8	97	OK
5	C-5		17+812~17+912	17+820	2.0m L/S	1378	808.5	1382.6	574.1	2.400	2.472	97.1	97	OK
6	C-6			17+875	5.4m R/S	1328.2	778.2	1332.5	554.3	2.396	2.472	96.9	98	OK
7	C-7		17+912~18+012	17+930	1.5m L/S	1208.8	711.8	1213.5	501.7	2.409	2.472	97.5	99	OK
8	C-8			17+975	5.0m R/S	1308	768.5	1313.2	544.7	2.401	2.472	97.1	100	OK
9	C-9		18+012~18+112	18+025	1.5m L/S	1060.5	623.2	1066.1	442.9	2.394	2.472	96.9	101	OK
10	C-10			18+075	5.5m R/S	1413.6	828.5	1417.5	589	2.400	2.472	97.1	102	OK
11	C-11		18+112~18+212	18+125	1.0m L/S	1360.1	799.5	1365.4	565.9	2.403	2.472	97.2	103	OK
12	C-12			18+200	5.5m R/S	1347.9	791.2	1353.2	562	2.398	2.472	97.0	104	OK

ASPHALTIC BASE COURSE LAYER CORES COMPACTION REPORT

S.No	CORE NO.	TESTING DATE	COVERED AREA	STATION	OFFSET FROM C/L	WT. IN AIR (g)	WT. IN WATER(g)	SSD. WT (g)	VOLUME (cc)	DENSITY (g/cc)	LAB.DENSITY (GMB)	ACHIEVED COMPACTION	REQUIRED COMPACTION	REMARKS
Summary of Asphaltic Base Course Cores Compaction April 2014														
Asphaltic Base Course 2nd Layer														
1	C-1	20-Apr-14	17+612 ~17+712	17+628	5.5 R/S	1521.2	882.1	1526.9	644.8	2.359	2.396	98.5	97	OK
2	C-2			17+685	1.5m L/S	1704.9	993.2	1712.3	719.1	2.371	2.396	99.0	97	OK
3	C-3		17+712 ~ 812	17+725	5.0 R/S	1364.8	792.6	1372.5	579.9	2.354	2.396	98.2	97	OK
4	C-4			17+790	5.5m L/S	1281	749.5	1289.5	540	2.372	2.396	99.0	97	OK
5	C-5		17+812 ~ 17+912	17+840	5.2 R/S	2075.9	1201.9	2086.1	884.2	2.348	2.396	98.0	97	OK
6	C-6			17+885	0.5m L/S	1201.6	699.2	1209.9	510.7	2.353	2.396	98.2	97	OK
7	C-7		17+912 ~ 18+012	17+930	5.0 R/S	1709	994.3	1712.5	718.2	2.380	2.396	99.3	97	OK
8	C-8			17986	2.5m L/S	1783.3	1029.6	1792.3	762.7	2.338	2.396	97.6	97	OK
9	C-9		18+012 ~ 18+112	18+030	5.4 R/S	1440.3	865.3	1471.4	606.1	2.376	2.396	99.2	97	OK
10	C-10			18+078	3.1m L/S	1234.5	715.2	1241.9	526.7	2.344	2.396	97.8	97	OK
11	C-11		18+112 ~ 18+225	18+130	5.0 R/S	1258.2	739.5	1266.5	527	2.387	2.396	99.6	97	OK
12	C-12			18+200	2.0m L/S	1325.2	791.2	1353.2	562	2.358	2.396	98.4	97	OK

ASPHALTIC BASE COURSE LAYER CORES COMPACTION REPORT

S.No	CORE NO.	TESTING DATE	COVERED AREA	STATION	OFFSET FROM C/L	WT. IN AIR (g)	WT. IN WATER(g)	SSD. WT (g)	VOLUME (cc)	DENSITY (g/cc)	LAB.DENSITY (GMB)	ACHIEVED COMPACTION	REQUIRED COMPACTION	REMARKS
Summary of Asphaltic Base Course Cores Compaction April 2014														
Asphaltic Wearing Course														
1	C-1	30-Apr-2014	17+612~17712	17+625	3.5m L/S	908.8	526.9	916.2	389.3	2.334	2.410	96.9	97	OK
2	C-2			17+686	4.5m R/S	744.9	436	752.9	316.9	2.351	2.410	97.5	97	OK
3	C-3		17+712~17+812	17+730	1.2m L/S	1054.6	618.6	1058.6	440	2.397	2.410	99.5	97	OK
4	C-4			17+785	4.0m R/S	950	558.8	958.3	399.5	2.378	2.410	98.7	97	OK
5	C-5		17+812~17+912	17+840	1.0m L/S	1010.5	584.5	1014.8	430.3	2.348	2.410	97.4	97	OK
6	C-6			17+908	2.5m R/S	1059.4	621.2	1065.5	444.3	2.384	2.410	98.9	97	OK
7	C-7		17+912~18+012	17+950	4.0m L/S	1054	617.2	1058.5	441.3	2.388	2.410	99.1	97	OK
8	C-8			17+995	5.0m R/S	1097.5	638.5	1107	468.5	2.343	2.410	97.2	97	OK
9	C-9		18+012~18+112	18+030	2.0m L/S	1038.8	604	1043.5	439.5	2.364	2.410	98.1	97	OK
10	C-10			18+095	1.5m R/S	1149.3	667.5	1159.8	492.3	2.335	2.410	96.9	97	OK
11	C-11		18+112~18+225	18+125	1.0m L/S	1212.4	708.2	1222	513.8	2.360	2.410	97.9	97	OK
12	C-12			18+190	5.0m R/S	1181	686.6	1188.8	502.2	2.352	2.410	97.6	97	OK

4.7 ASPHALTIC BASE COURSE CORES THICKNESS REPORT

S.No	CORE NO.	TESTING DATE	COVER AREA	STATION	OFF SET FROM C/L	CORES THICKNESS (cm)				Average Thickness (cm)	Required Thickness (cm)	REMARKS	
						1	2	3	4				
Asphaltic Base Course 1st Layer													
1	T-1	12-Apr-14	17+612 ~ 17+712	17+625	5.5m L/S	8.2	8.1	8.1	7.8	8.1	8.0	OK	
2	T-2			17+675	2.5m R/S	8.8	8.8	9.2	9.1	9.0	8.0	OK	
3	T-3		17+712 ~ 17+812	17+725	4.5m L/S	9	9	8.7	9.1	9.0	8.0	OK	
4	T-4			17+775	1.5m R/S	7.6	7.6	7.4	7.5	7.5	8.0	OK	
5	T-5		17+812 ~ 17+912	17+820	5.0m L/S	5.5	5.5	5.4	5.4	5.5	8.0	Not OK	Note 01
6	T-6			17+875	3.0m R/S	8.1	8.1	8	8	8.1	8.0	OK	
7	T-7		17+912 ~ 18+012	17+930	4.5m L/S	7.6	7.4	7.4	7.6	7.5	8.0	OK	
8	T-8			17+975	2.5m R/S	7.7	7.9	7.8	7.9	7.8	8.0	OK	
9	T-9		18+012 ~ 18+112	18+025	4.8m L/S	7.5	7.5	7.4	7.7	7.5	8.0	OK	
10	T-10			18+075	3.5m R/S	8.4	8.5	8.5	8.4	8.5	8.0	OK	
11	T-11		18+112 ~ 18+212	18+125	4.0m L/S	8	8	8.1	8	8.0	8.0	OK	
12	T-12			18+200	2.0m R/S	7.6	7.9	7.9	7.7	7.8	8.0	OK	
		Note 01	Deficient layer to be adjusted by additional ACBC or ACWC as per specification requirments										

ASPHALTIC BASE COURSE CORES THICKNESS REPORT

S.No	CORE NO.	TESTING DATE	COVER AREA	STATION	OFF SET FROM C/L	CORES THICKNESS (cm)				Average Thickness (cm)	Required Thickness (cm)	REMARKS	
						1	2	3	4				
Asphaltic Base Course 2nd Layer													
1	T-1	20-Apr-14	17+612 ~17+712	17+628	2.2 R/S	8.1	8.1	8	7.8	8.0	8.0		
2	T-2			17+685	4.5m L/S	9.8	9.8	10.2	10.3	10.0	8.0		
3	T-3		17+712 ~ 812	17+725	1.5 R/S	8.2	8.2	7.9	7.8	8.0	8.0		
4	T-4			17+790	1.0m L/S	7.2	7.1	7.4	7.4	7.3	8.0	12.6 Full Depth	Note 01
5	T-5		17+812 ~ 17+912	17+840	2.0 R/S	9.8	9.8	9.5	9.6	9.7	8.0		
6	T-6			17+885	4.5m L/S	8.8	8.8	8.9	8.8	8.8	8.0		
7	T-7		17+912 ~ 18+012	17+930	1.5 R/S	8.6	8.6	8.4	8.5	8.5	8.0		
8	T-8			17986	5.8m L/S	8.4	8.7	8.7	8.7	8.6	8.0		
9	T-9		18+012 ~ 18+112	18+030	2.3 R/S	8.2	8	7.7	7.8	7.9	8.0		
10	T-10			18+078	5.2m L/S	7.6	7.6	7.3	7.7	7.6	8.0		
11	T-11		18+112 ~ 18+225	18+130	1.5 R/S	9.9	9.8	9.8	9.6	9.8	8.0		
12	T-12			18+200	2.0m L/S	7.7	7.6	7.9	7.9	7.8	8.0		
		Note 01	Deficient layer to be adjusted by additional ACBC or ACWC as per specification requirments										

ASPHALTIC BASE COURSE CORES THICKNESS REPORT

S.No	CORE NO.	TESTING DATE	COVER AREA	STATION	OFF SET FROM C/L	CORES THICKNESS (cm)				Average Thickness (cm)	Required Thickness (cm)	REMARKS	
						1	2	3	4				
Asphaltic Wearing Course													
1	T-1	30-Apr-2014	17+612 ~ 17712	17+625	3.0m L/S	5.2	5.2	5.4	4.7	5.1	6.0	Not OK	Note 01
2	T-2			17+686	3.5m R/S	3.8	4.1	4.2	4.1	4.1	6.0	Not OK	Note 01
3	T-3		17+712 ~ 17+812	17+730	4.2m L/S	5.8	5.9	5.9	6	5.9	6.0		
4	T-4			17+785	1.0m R/S	5.6	5.8	5.8	5.8	5.8	6.0		
5	T-5		17+812 ~ 17+912	17+840	3.5m L/S	5.9	6.1	6.1	6	6.0	6.0		
6	T-6			17+908	4.2m R/S	6.2	5.8	5.8	5.9	5.9	6.0		
7	T-7		17+912 ~ 18+012	17+950	2.0m L/S	5.7	5.8	5.9	5.9	5.8	6.0		
8	T-8			17+995	1.5m R/S	6.1	6.2	6	6.1	6.1	6.0		
9	T-9		18+012 ~ 18+112	18+030	4.2m L/S	5.9	5.9	6.2	5.8	6.0	6.0		
10	T-10			18+095	4.8m R/S	6.5	6.6	6.8	6.6	6.6	6.0		
11	T-11		18+112 ~ 18+225	18+125	4.5m L/S	6.4	6.5	6.5	6.4	6.5	6.0		
12	T-12			18+190	1.3m R/S	6.5	6.3	6.3	6	6.3	6.0		
		Note 01	Deficient layers to be adjusted by additional ACBC or ACWC as per specification requirements.										

4.8 SUBBASE MATERIAL QUALITY TESTS REPORT

S.No	Location (KM)	Description	Sieve Analysis							MDD (g/cc)	OMC %	L.A %	Sand Equivalent	CBR% at		Specific gravity	Plastic Index	Remarks
			2"	1"	3/8"	#4	#10	#40	#200					0.1"	0.2"			
1	10+700 ~ 11+150 F/W	Sub Base	100	93.4	61.7	45.1	29	14.3	8.4	2.34	5.5	36.6	38.3	53	76	2.703	3.9	
Specification Limits for Sub Base			100	55~85	40~70	30~60	20~50	10~30	5~15	-	-	50% Max	25% Min	50% Min		-	6 Max	
Total Nos.of Tests			1							1	1	1	1	1	1	0	1	

4.9 WATER BOUND MACADAM QUALITY TESTS REPORT

S.No	Location (KM)	Station	Sieve Analysis					MDD (g/cc)	OMC %	L.A (%)	Flakiness Index	Elongation (%)	Soundness (%)	Specific gravity	Remarks
			3"	2½"	2"	1½"	3/4"								
1	10+225 ~ 10+400 F/W	10+250 C/L	100	84.6	56.6	20.8	3.3	-	-	-	-	-	-	-	
2	10+350 ~ 10+500 F/W	10+450	100	87.5	58.6	18.8	4.0	2.376	4.9	26.9	9.4	-	0.14	2.754	
Specification Limits for WBM			100	90~100	25~75	0~15	0~5	-	-	45% Max	15% Max	-	12% Max	-	
Total Nos.of Tests			2								-	-	-		

4.10 AGGREGATE QUALITY TESTS FOR CONCRETE REPORT

S.No	Location	Description	Agg. Size	Sieve Analysis													FM	L.A %	Sand Equivalent	Specifi Gravity	Soundness
				2″	1½″	1″	3/4″	1/2″	3/8″	#4	#8	#16	#30	#50	#100	#200					
1	Stock Pile	For "A-3" Concrete & Riged Pavement	38mm Agg	100	100	98.6	66.7	5.8	2.2	0.8	-	-	-	-	-	-	-	-	-	2.806	-
			25mm Agg	-	-	100	99.9	69.1	37.6	1.2	-	-	-	-	-	-	-	-	-	2.801	-
			19mm Agg	-	-	-	100.0	100.0	99.8	15.5	-	-	-	-	-	-	-	-	-	2.782	-
	Combined Grading		**48,37 & 15 %**	**100**	**100**	**99.3**	**84.0**	**43.4**	**29.9**	**3.2**	-	-	-	-	-	-	-	-	-	-	-
	Specification Limits			**100**	**95~100**	-	**35~70**	-	**10~30**	**0~5**	-	-	-	-	-	-	-	-	-	-	-
2	Stock Pile	For "A-3" Concrete & Riged Pavement	38mm Agg	100	100	55.8	4.5	0.2	0.1	0.0	-	-	-	-	-	-	-	-	-	2.806	-
			25mm Agg	-	-	100.0	93.9	1.1	0.5	0.2	-	-	-	-	-	-	-	-	-	2.801	-
			19mm Agg	-	-	-	100.0	98.9	78.9	12.0	-	-	-	-	-	-	-	-	-	2.782	-
	Combined Grading		**48,37 & 15 %**	**100**	**100**	**78.8**	**51.9**	**15.3**	**12.1**	**2.3**	-	-	-	-	-	-	-	-	-	-	-
	Specification Limits			**100**	**95~100**	-	**35~70**	-	**10~30**	**0~5**	-	-	-	-	-	-	-	-	-	-	-
3	Stock Pile	For "D-1" Concrete	25mm Agg	-	-	100.0	99.9	69.1	37.6	1.2	-	-	-	-	-	-	-	-	-	2.801	-
			19mm Agg	-	-	-	100.0	100.0	99.8	15.5	-	-	-	-	-	-	-	-	-	2.782	-
	Combined Grading		**55 & 45 %**	-	**100**	**100.0**	**99.9**	**83.0**	**65.6**	**7.6**	-	-	-	-	-	-	-	-	-	-	-
	Specification Limits			-	**100**	**95~100**		**25~60**		**0~10**	-	-	-	-	-	-	-	-	-	-	-
4	Stock Pile	For "D-1" Concrete	25mm Agg	-	-	100.0	93.9	1.1	0.5	0.1	-	-	-	-	-	-	-	-	-	2.801	-
			19mm Agg	-	-	-	100.0	98.9	78.9	12.0	-	-	-	-	-	-	-	-	-	2.782	-
	Combined Grading		**55 & 45 %**	-	**100**	**100.0**	**96.6**	**45.1**	**35.8**	**5.5**	-	-	-	-	-	-	-	-	-	-	-
	Specification Limits			-	**100**	**95~100**		**25~60**		**0~10**	-	-	-	-	-	-	-	-	-	-	-
5	Stock Pile	For "A-1" Concrete	25mm Agg	-	-	100.0	99.9	69.1	37.6	1.2	-	-	-	-	-	-	-	-	-	2.801	-
			19mm Agg	-	-	-	100.0	100.0	99.8	15.5	-	-	-	-	-	-	-	-	-	2.782	-
	Combined Grading		**55 & 45 %**	-	-	**100.0**	**99.9**	**83.0**	**65.6**	**7.6**	-	-	-	-	-	-	-	-	-	-	-
	Specification Limits			-	-	**100**	**90~100**	-	**20~55**	**0 ~ 10**	-	-	-	-	-	-	-	-	-	-	-
6	Stock Pile	For "A-1" Concrete	25mm Agg	-	-	100.0	93.9	1.1	0.5	0.2	-	-	-	-	-	-	-	-	-	2.801	-
			19mm Agg	-	-	-	100.0	98.9	78.9	12.0	-	-	-	-	-	-	-	-	-	2.782	-
	Combined Grading		**55 & 45 %**	-	-	**100.0**	**96.6**	**45.1**	**35.8**	**5.5**	-	-	-	-	-	-	-	-	-	-	-
	Specification Limits			-	-	**100**	**90~100**	-	**20~55**	**0 ~ 10**	-	-	-	-	-	-	-	-	-	-	-

4.11 AGGREGATE QUALITY TESTS FOR ASPHALTIC BASE COURSE

S.No	Location	Description	Sieve Analysis												FM	L.A %	Absorption (%)	Specifi Gravity	Soundness	Remarks
			2″	1½″	1″	3/4″	1/2″	3/8″	#4	#8	#16	#30	#50	#100	#200						
1	Asphalt Plant Stock Pile	Bin #1 , 32%	100	100	61.6	4.0	0.8	0.3	-	-	-	-	-	-	-	-	-	0.78	2.640	1	Margala Aggregate
2	Asphalt Plant Stock Pile	Bin #2 , 20%	-	-	100	77.1	6.4	1.9	1.3	1.0	-	-	-	-	-	-	-	0.83	2.626		
3	Asphalt Plant Stock Pile	Bin #3 , 18%	-	-	-	100	98.6	90.2	22.5	2.6	-	-	2.2	-	1.5	-	-	0.95	2.622		
4	Asphalt Plant Stock Pile	Bin #4 , 30%	-	-	-	-	100.0	100	98.6	83.5	-	-	29.7	-	14.5	-	-	2.05	2.565		
Combined Grading			**100**	**100**	**88**	**64.7**	**49.3**	**46.7**	**33.9**	**25.7**	**-**	**-**	**9.3**	**-**	**4.6**	**-**	**-**	**-**	**-**	**-**	
JMF Limits			**100**	**93~100**	**-**	**59~73**	**-**	**-**	**24~38**	**19~27**	**-**	**-**	**3~11**	**-**	**3.2~5.2**	**-**	**-**	**-**	**-**	**-**	

4.12 AGGREGATE QUALITY TEST FOR ASPHALTIC WEARING COURSE

S.No	Location	Description	Sieve Analysis												FM	L.A %	Absorption (%)	Specifi Gravity	Soundness	Remarks
			2″	1½″	1″	3/4″	1/2″	3/8″	#4	#8	#16	#30	#50	#100	#200						
1	Asphalt Plant Stock Pile	Bin #1 , 29%	-	-	100.0	77.1	6.4	1.9	1.3	1.0	-	-	-	-	-	-	-	0.8	2.638	1	Margal Aggregate
2	Asphalt Plant Stock Pile	Bin #2 , 37%	-	-	-	100.0	98.6	90.2	22.5	2.6	-	-	2.2	-	1.5	-	-	0.91	2.633		
3	Asphalt Plant Stock Pile	Bin #3 , 34%	-	-	-	-	100.0	100.0	98.6	93.5	-	-	29.7	-	14.5	-	-	2.21	2.568		
Combined Grading			**-**	**-**	**100**	**93**	**72.3**	**67.9**	**42.2**	**33.0**	**-**	**-**	**10.9**	**-**	**5.5**	**-**	**-**	**-**	**-**		
1	Asphalt Plant Stock Pile	Bin #1 , 32%	-	-	100.0	92.3	13.1	1.9	0.4	0.0	-	-	-	-	-	-	-	-	-	2	Local Aggregate
2	Asphalt Plant Stock Pile	Bin #2 , 35%	-	-	-	100.0	97.5	85.6	22.3	0.8	-	-	0.4	-	0.3	-	-	-	-		
3	Asphalt Plant Stock Pile	Bin #3 , 33%	-	-	-	-	-	100.0	99.6	82.1	-	-	27.5	-	11.9	-	-	-	-		
Combined Grading			**-**	**-**	**100**	**97.5**	**71.3**	**63.6**	**40.8**	**27.4**	**-**	**-**	**9.2**	**-**	**4**	**-**	**-**	**-**	**-**		
JMF Limits			**-**	**-**	**100**	**90~100**	**-**	**59~73**	**38~46**	**24~32**	**-**	**-**	**6~13**	**-**	**3.7~5.7**	**-**	**-**	**-**	**-**	**-**	

4.13 SUMMARY OF CONCRETE COMPRESSIVE STRENGTH

Description	Casting date	Testing date	Age	Load in (KN)	Length (cm)	Dia (cm)	Area (cm^2)	Load in Kg	Strength (Kg/cm^2)			Remarks
									Achieved	Average	Required	
Concrete Class "A-3" Rigid Pavement 15+811 ~ 15+833.8 L/S 15+583 ~ 15+605.8 R/S	4/Mar/2014	1/Apr/2014	28 Days	654	30.48	15.24	182.4	66688	365.6	372.0	280	OK
				683	30.48			69646	381.8			
				659	30.48			67198	368.4			
Concrete Class "A-3" of Multicell Culvert R.D. 11+190	4/Mar/2014	1/Apr/2014	28 Days	599	30.48	15.24	182.4	61080	334.9	337.5	280	OK
				604	30.48			61590	337.7			
				608	30.48			61998	339.9			
Concrete Class "A-3" Rigid Pavement 15+492~15+515 15+423~15+446	5/Mar/2014	2/Apr/2014	28 Days	726	30.48	15.24	182.4	74030	405.9	415.0	280	OK
				749	30.48			76376	418.7			
				752	30.48			76681	420.4			
Concrete Class "D-1" Bridge #10 (23+750) Girder #5	26/Mar/2014	2/Apr/2014	7 Days	546	30.48	15.24	182.4	55676	305.2	300.0	262	OK
				533	30.48			54350	298.0			
				531	30.48			54146	296.9			
Concrete Class "A-1" Culvert Top Slab 12+178	27/Mar/2014	3/Apr/2014	7 Days	404	30.48	15.24	182.4	41196	225.9	223.4	157.5	OK
				417	30.48			42521	233.1			
				378	30.48			38545	211.3			
Concrete Class "A-3" Rigid Pavement 17+080.8~17+103.6 R/S 17+050~17+072.8 R/S	30/Mar/2014	6/Apr/2014	7 Days	470	30.48	15.24	182.4	47926	262.8	248.8	210	OK
				461	30.48			47008	257.7			
				404	30.48			41196	225.9			
Concrete Class "A-3" Rigid Pavement 17+194.8 ~ 15+217.6	31/Mar/2014	7/Apr/2014	7 Days	526	30.48	15.24	182.4	53636	294.1	271.7	210	OK
				464	30.48			47314	259.4			
				468	30.48			47722	261.6			

SUMMARY OF CONCRETE COMPRESSIVE STRENGTH

Description	Casting date	Testing date	Age	Load in (KN)	Length (cm)	Dia (cm)	Area (cm^2)	Load in Kg	Strength (Kg/cm^2)			Remarks
									Achieved	Average	Required	
Concrete Class "A-3" Rigid Pavement 17+103.8~17+126.4L/S	1/Apr/2014	8/Apr/2014	7 Days	568	30.48	15.24	182.4	57919	317.5	323.1	210	OK
				566	30.48			57715	316.4			
				600	30.48			61182	335.4			
Concrete Class "A-3" Rigid Pavement 15+719.8 ~ 15+742.6L/S	12/Mar/2014	9/Apr/2014	28 Days	652	30.48	15.24	182.4	66484	364.5	370.8	280	OK
				678	30.48			69136	379.0			
				660	30.48			67300	369.0			
Concrete Class "A-3" Rigid Pavement 17+072.8~17+080.8 L/S 15+514.6~15+537.4 L/S	3/Apr/2014	10/Apr/2014	7 Days	494	30.48	15.24	182.4	50373	276.2	271.3	210	OK
				478	30.48			48742	267.2			
				484	30.48			49353	270.6			
Concrete Class "A-1" Bridge No.2 (9+560) Transom of Pier #1	14/Mar/2014	11/Apr/2014	28 Days	439	30.48	15.24	182.4	44765	245.4	252.9	210	OK
				461	30.48			47008	257.7			
				457	30.48			46600	255.5			
Concrete Class "A-3" Bridge No.10 (23+750) Pile #2 , Abutment #1	14/Mar/2014	11/Apr/2014	28 Days	556	30.48	15.24	182.4	56695	310.8	326.1	280	OK
				624	30.48			63629	348.8			
				570	30.48			58123	318.7			
Concrete Class "A-3" Rigid Pavement 17+080.8 ~ 17+103.6 L/S 17+050 ~ 17+072.8 L/S	4/Apr/2014	11/Apr/2014	7 Days	583	30.48	15.24	182.4	59449	325.9	315.7	210	OK
				593	30.48			60468	331.5			
				518	30.48			52820	289.6			

SUMMARY OF CONCRETE COMPRESSIVE STRENGTH

Description	Casting date	Testing date	Age	Load in (KN)	Length (cm)	Dia (cm)	Area (cm^2)	Load in Kg	Strength (Kg/cm^2)			Remarks
									Achieved	Average	Required	
Concrete Class "A-1" Transom of Pier #2	6/Apr/2014	13/Apr/2014	7 Days	340	30.48	15.24	182.4	34670	190.1	187.3	157.5	OK
				329	30.48			33548	183.9			
				336	30.48			34262	187.8			
Concrete Class "A-3" Rigid Pavement 17+194.8~17+217.6 R/S	18/Mar/2014	15/Apr/2014	28 Days	695	30.48	15.24	182.4	70869	388.5	385.9	280	OK
				690	30.48			70359	385.7			
				686	30.48			69951	383.5			
Concrete Class "A-3" Multicell Culvert Walls 11+190	19/Mar/2014	16/Apr/2014	28 Days	609	30.48	15.24	182.4	62100	340.5	344.0	280	OK
				611	30.48			62304	341.6			
				626	30.48			63833	350.0			
Concrete Class "A-3" Rigid Pavement 15+250.8 ~ 15+273.8 L/S 15+309.2 ~ 15+332.4 L/S	9/Apr/2014	16/Apr/2014	7 Days	551	30.48	15.24	182.4	56185	308.0	319.6	210	OK
				576	30.48			58735	322.0			
				588	30.48			59958	328.7			
Concrete Class "A-3" Rigid Pavement 11+322.8 ~ 11+345.6 R/S 11+391.2 ~ 11+414.0 R/S	11/Apr/2014	18/Apr/2014	7 Days	522	30.48	15.24	182.4	53228	291.8	293.5	210	OK
				519	30.48			52922	290.1			
				534	30.48			54452	298.5			
Concrete Class "A-3" Rigid Pavement 11+345.6 ~ 11+368.6 L/S	14/Apr/2014	21/Apr/2014	7 Days	564	30.48	15.24	182.4	57511	315.3	313.6	210	OK
				557	30.48			56797	311.4			
				562	30.48			57307	314.2			
Mortar Grout of Girders at Bridge # 2 (9+560)	**14/Apr/2014**	**21/Apr/2014**	**7 Days**	**48**	**30.48**	**5*5 Area**	**25**	**4895**	**195.8**	**182.2**	**170**	**OK**
				42	**30.48**			**4283**	**171.3**			
				44	**30.48**			**4487**	**179.5**			

SUMMARY OF CONCRETE COMPRESSIVE STRENGTH

Description	Casting date	Testing date	Age	Load in (KN)	Length (cm)	Dia (cm)	Area (cm^2)	Load in Kg	Strength (Kg/cm^2)			Remarks
									Achieved	Average	Required	
Concrete Class "D-1" Bridge #10 (23+750) Girder #5	26/Mar/2014	23/Apr/2014	28 Days	696	30.48	15.24	182.4	70971	389.1	384.4	350	OK
				694	30.48			70767	388.0			
				673	30.48			68626	376.2			
Concrete Class "A-3" Bridge #10 (23+750) Pile # 1 , Abutment #2	16/Apr/2014	23/Apr/2014	7 Days	386	30.48	15.24	182.4	39360	215.8	214.5	210	OK
				389	30.48			39666	217.5			
				376	30.48			38341	210.2			
Concrete Class "A-1" Culvert Top Slab 12+178	27/Mar/2014	24/Apr/2014	28 Days	548	30.48	15.24	182.4	55880	306.4	302.3	210	OK
				546	30.48			55676	305.2			
				528	30.48			53840	295.2			
Concrete Class "A-3" Rigid Pavement	17/Apr/2014	24/Apr/2014	7 Days	533	30.48	15.24	182.4	54350	298.0	292.0	210	OK
				515	30.48			52515	287.9			
				519	30.48			52922	290.1			
Concrete Class "A-3" Rigid Pavement 17+080.8~17+103.6 R/S 17+050~17+072.8 R/S	30/Mar/2014	27/Apr/2014	28 Days	622	30.48	15.24	182.4	63425	347.7	343.8	280	OK
				602	30.48			61386	336.5			
				621	30.48			63323	347.2			
Concrete Class "A-3" Rigid Pavement 17+194.8 ~ 15+217.6	31/Mar/2014	28/Apr/2014	28 Days	661	30.48	15.24	182.4	67402	369.5	364.3	280	OK
				620	30.48			63221	346.6			
				674	30.48			68728	376.8			
Concrete Class "A-3" Rigid Pavement 11+687.6~11+710.4 L/S 11+733.2~11+756.0 L/S	21/Apr/2014	28/Apr/2014	7 Days	530	30.48	15.24	182.4	54044	296.3	308.2	210	OK
				569	30.48			58021	318.1			
				555	30.48			56593	310.3			
Concrete Class "A-3" Rigid Pavement 17+103.8~17+126.4L/S	1/Apr/2014	29/Apr/2014	28 Days	661	30.48	15.24	182.4	67402	369.5	368.0	280	OK
				667	30.48			68014	372.9			
				647	30.48			65975	361.7			

ENVIRONMENTAL COMPLIANCE MONITORING

Environmental Compliance Officer: **Shabir Ahmad Khan**

Field Monitor (Social): **Jamil Khan**

Road Section under Construction: Section-I KM: 0+000 to KM: 9+000
Section-II KM: 9+000 to KM: 14+000
Section-III KM: 14+000 to KM: 19+000
Section-IV KM: 19+000 to KM: 24+000
Section-V KM: 24+000 to KM: 33+000

Persons Consulted at Site:

1. Mr. Farooq, Site Engineer, FWO
2. Mr. Zeeshan, Site Engineer, FWO
3. Mr Masood, Site Engineer, FWO
4. Mr. Mohammad Irfan, Surveyor, FWO
5. Mr. Balkyaz, Surveyor, FWO
6. Mr Mujeeb, Surveyor, FWO

Work Status:

➢ Work in progress.	√
➢ Work Stopped	
➢ Work Completed	

Quality of Environment Compliance:

➢ Good	
➢ Satisfactory	√
➢ Poor	

Issues at site:

- Installation of traffic sign boards, both for speed limits and diversion direction has not been done yet.
- FWO/NESPAK has not deployed an EHS specialist or any other EHS staff on site.
- The contractor has not worked on preparing a Health and safety plan that should be implemented on site. In addition to that the contractor should keep an EHS record.
- Workers on site has not provided with PPE's (Personal Protective Equipments).
- Risk assessment report is not provided by the contractor.
- Though mentioned in previous reports, the contractor has not yet done the necessary EHS arrangements at work sites. There are neither first aid boxes provided nor any ambulance available at the construction site.

Environmental Monitoring Check List for the Site

S. #	Activity	Mitigation Measures	Monitoring indicators	Observations
Construction Phase				
1	**Use of heavy equipments**	a. Set protocols for vehicle Maintenance. b. Check fuel level, deliveries, and use. c. Check pipes and joints for leaks. d. Tight & check generators cables and fuel lines. e. Prevent over filling of main storage and vehicles tanks. f. Avoid parking of heavy equipments under trees to prevent soil compaction and damage to the roots of the trees.	Soil contaminations, stability and erosion	Over all, there was a general compliance found about the use and maintenance of both heavy and light machinery at project site. Compacted routes were followed while carrying materials from quarry areas to the work places. No damage to vegetation during construction activities was seen at site as the heavy machinery is parked properly at a fenced area near FWO Jamrud camp. A good H&S plan is also needed to further comply with safety protocols about such activities.
2	**Flood protection**	a. Culverts construction to control flood damages and provide safety to embankments. b. Take measures to protect road along the river side. c. Construction of retaining walls. d. Provide new causeways for smooth flow to flood water during rainy seasons.	Road protection and Safety	Road protection from flood water, and for providing a smooth flow to sewerage disposal, safety measures, such as culverts and retaining walls construction in section -II and III are in progress. It was observed, during site visit that in section- I culverts constructions for the said purpose are already completed (Please refer to photos # 09 and 15).

3	**Handling and transportation of hazardous waste**	a. Prevent dumping of hazardous materials near villages and water bodies. b. Burn waste oil which is not reusable. c. Recyclable material should not contain heavy metals that are inflammable, investigate and use less toxic alternative products. d. Prohibit use of waste oil for cooking purposes.	Soil Contamination and Safety	During site visit, no hazardous material along the road site was found; therefore, no action as such is further required.
4	**Handling of solid Waste**	a. Site manager should feel responsible for collection and disposal of solid waste. b. Provide Training to the site personnel in waste management and its handling procedures. c. Separation of chemical waste for special handling. d. Record the amount of waste, generated recycled and reused. e. Proper storage and well managed site practices will minimize the damage to potentially contaminate construction materials. f. Store general refuse in enclosed bins to control its further mixing with construction materials. g. Engage a reputable waste collection firm for waste collection and removal of general refuse at site.	Toxicity, Soil Contamination and Pollution	During site visit, it was observed that there was missing a proper solid waste segregation plan for waste disposal and further handling at site area. It was suggested that FWO should strictly comply with solid waste management plan to further avoid such circumstances. So far arrangements, to handle construction materials at main storage were enough, but found insufficient at project site. Further, FWO subcontractors also do not follow health and safety protocols compliance related environmental issues. However, it is strongly advised to the subcontractors to provide bins for solid waste management, especially during culverts construction at sites (Please refer to photos #6, 07, 08, 9 and 15).

5	**Construction crews, camps& Accommodation**	a. Check quality and maintenance of accommodations for site crew. b. Avoid cutting of vegetation as much as possible. c. Provide sanitation, such as pit latrines to the site crew on temporary basis. d. Use of local labor. e. Screening test for potentially affected HIV and tuberculosis viruses' site crews. f. Provide education and enforced guidelines to local inhabitants. g. Set guidelines to prohibit poaching and plants collection. h. Provide an adequate and good quality of food to the work force. i. Drinking water should meet WHO standards, and clearly demarcated from water for construction purposes. j. Prohibit domestic pets / livestock to enter into the site.	Ground water pollution and conflicts with locals.	Over all, there was seen a proper maintenance with regard to the FWO construction crew accommodation at Jamrud camp. FWO camp has been renovated in order to ensure basic accommodation facilities to work force e.g. washrooms, kitchen, TV lounge, café shop etc., The quality of food provided to the FWO labor force was good and found sufficiently enough. Other facilities, such as health hygiene were also found satisfactory. FWO workforce was also found complied with guidelines to further communicate with local inhabitants.

6	**Material handling, use, and storage**	a. Securing of construction materials will ensure a safe passage between destinations for transport system. Loaded vehicles shall be properly covered to prevent spillage, and contractor should be held responsible to clear them off. b. Transfer and deposit construction materials directly to the site for use. Avoid stockpiles to create less visual impacts. Leftover of any foreign materials at site should clearly be off, and the project area should also be properly reinstated affected by any construction activity. c. Avoid spray of any bitumen products on vegetation outside the road area. d. Avoid concrete mixing on ground. e. Use of wet gravel at site. f. Avoid direct fall of drainage water into sensitive areas. g. Control all runoff from batching plants so that cement do not contaminate water, and if any, it should be collected, stored and disposed of at a designated site. h. Collect and deliver empty cement bags to recycling plants. i. Storage of contaminated water should not allow to over flow, and will be protected from rain water.	Dust pollution	FWO staff was also advised for providing a safe passage to dumpers while carrying construction materials from main storage to the site. Further also, suggested that appropriate measures, such as securing of properly loaded material will prevent spillage and create less visual impacts. During site visit, it was found that loaded vehicles were not properly covered to prevent spillage. Concrete materials found misused, and were also seen placed improperly at some site places during site visit. Protocols compliance among the FWO subcontractors about proper handling of building materials was found missing, especially during culvert construction (Please refer to photos # 09, 12, 13 and 15)

7	**Materials extraction, Quarrying & logging**	a. Identify environment friendly materials within budget. b. Use materials from local road cuts first, only if it produces an aggregate of materials for stabilizing surfaces and filling embankments. c. Project area should be properly restored and treated with erosion control measures once materials removed at site. d. Develop logging, quarrying and borrowing plans, and also take into account its accumulative effects. e. Take photos at site before the start of excavation, so that restoration can match the original site as much as possible. Also make sure that site quarries and gravel pits are invisible to travelers on road. f. Adhere and monitor the plans to minimize side impacts due to extraction activities. Try to modify the plans as much as required. g. Restore and sustain the site area once the extraction activity is over. h. Install drainage structures to direct the water away from pits. i. Implement safety protocols to minimize the risks occurring due to collapse of quarry walls, rocks falling, debris, or any other accidental falls from clefts. j. Discuss the use of retaining walls pits and water ponds with local community as an option used for crops, grazing of cattle, or similar use.	Change in landscape & Creation of water ponds.	During construction activities, it was observed that there was found a general negligence among FWO labor force about the safety protocols compliance related environmental issues at project area. FWO construction crew was found reluctant to share their health and safety plans with AGES Socio-environmental compliance monitoring team. Therefore, it is strictly advised to the FWO labor force to comply with H& S protocols to avoid risk, if any is found during construction activities at site. Moreover, a proper maintenance of quarry areas and building materials is also required once the activities accomplished (Please refer to photos # 04 & 11).

8	**Site clearing &leveling**	a. Minimize disturbance to local flora during construction activities as much as possible. b. Minimize the amount of clearance of small areas for active work once at a time. c. Avoid use of herbicides. Any such use should follow health and safety procedures to protect people and the environment. d. Limit for herbicides use should specified by the manufacturers. e. Clear the project area without destroying plants and turfs, and take measures to preserve and replant where ever is possible. f. Remove Vegetation during dry periods only, and preserve soil top surface if required re spreading. While if it is removed during wet periods, don't disturb soil just before the actual start of construction. g. Use of erosion control measures such as hay bales. h. Replant and re –vegetate the local flora on immediate basis once removed the equipment from site.	Loss of vegetation, soil erosion, stability, water pollution, health of workers and local community.	There was found no impact on vegetation as the project area is mostly rugged, and of hilly nature. However, excavation activities continued at the shoulders of road already existed. Moreover, plantation on emergency basis is required along Peshawar-Torkham road. Some specific plants species, in this regard, needs to be identified in the project as per provisions in the Environment Management Plan. Therefore, it is strongly recommended, that FWO contractor should on immediate basis coordinate with Forest department in this regard. Use of herbicides was found missing at site, and measures taken about soil conservation were enough and found appropriate due to the soil of being rocky and hilly nature consisting of sand, silt and gravels of compact nature.

9	**Excavation , cutting & filling**	a. Cover Piles with plastic sheets, prevent run off with hay bales, or use similar measures. b. Fencing around excavation activities. c. Investigate shallow over excavation and alternatives. d. Construction crews and supervisors must aware of the historic burials, socio-cultural and religious objects. And, if recovered should properly be guarded to avoid any destruction. e. Ensure that excavation is accompanied by a well-engineered drainage system. f. Don't fill the flow line of a watershed. In arid areas, even the occasional rains may create a strong flow of water in channels. g. Adopt best engineering practices, for example, don't use the soil alone, first lay a bed of rock and then gravel it. h. Balance cuts and fills, wherever is possible to minimize the earth work movement. i. Water sprinkling to avoid dust solution on road temporarily used for traffic.	Soil erosion, stability and surface water contamination	The excavation process in section II and III for road widening, culverts and retaining walls construction needs H&S protocols. Protocols compliance with regard to construction activities in the above sections are generally missing. At KM. 12+178,18+600,19+000 and 24+325 Rocks and structural excavation activities continued for culverts construction, while safety protocols compliance & personal protective measures were found missing about such activities. During rocks excavation, It was also noticed that traffic control was poorly managed putting the life of people further at danger. During site visit, it was also recommended that culverts construction should properly be covered and fenced at all sites. A proper drainage system is also needed to provide a smooth flow to waterfall during excavation activities. Water sprinkling and proper dumping of excavated materials are also required to avoid dust pollution (Please refer to photos # 10, 11, 12, 13& 15).

10	**Traffic Control and management**	a. Need for practical efforts in order to control and accommodate traffic along the road as far as much as possible. b. Provide sign boards in order to give directions, and guide drivers about diversions. c. Provide proper traffic management training to the contractor staff at the site before the construction activities take place. d. Avoid as much as possible temporary by passes during land clearing at site. e. Maximum speed limit at project site for heavy machinery should not exceed 20Km/hr. f. Try to keep the road partly closed to provide all time maximum safe passage to the vehicles/pedestrians g. Try to conduct work when traffic volume is low h. Organize a proper schedule in order to deliver sand trucks at the time of less traffic.	Health and Safety of workers &local population	Traffic flows with diversions along the same road. Despite arrangements of diversions, proper traffic signboards are missing which have further put the traffic control at risk. Therefore, FWO contractors are strongly suggested: Install temporary sign boards with reflective materials to further maximize drivers' visibility at night. Speed breakers are also needed to ensure maximum speed limit for heavy machinery at site, which should not exceed 20Km/hr.

11	**Blasting**	a. Allow minimum blasting as much as possible at site. b. Take Safety measures to provide protection to workers and locals from injuries due to falling of rocks and avalanches. c. Provide protective equipments to the workforce on individual basis.	Noise pollution and occupational safety	Currently, rock excavation in section-II and III for widening of road is in progress. Whereas safety protocols regarding such activities are generally not followed. Therefore, FWO is advised to provide protective equipments to workers to ensure their safety further at site (Please refer to photos # 11& 12).
12	**Sources of building materials**	a. Develop logging, quarrying and borrowing plans for providing cumulative effects. b. Adherence to plans and monitoring over impacts of extraction activities at site. Try to modify these plans as much as required. c. Fill in quarries and pits before the abandoning of the construction activity. d. Control runoff into pits.	Damages to the aquatic, terrestrial ecosystems erosion , siltation, and vector-borne diseases	Compliance of safety plan or other monitoring measures taken during extraction activities were found missing at quarry sites. Therefore, FWO is requested to develop logging, quarrying and borrowing plans to bring cumulative effects in this regard.
13	**Dust Pollution**	a. Water spraying. b. Covering of Trucks with tarpaulins.	Nuisance to the public, undermining the quality of air and water due to contamination	At this site visit, Vehicles sprinkling water on road were observed at some places, while the problem of dust pollution still continues at some places (Please refer to photo # 10).

14	**Borrow Areas**	These impacts of borrow areas can be reversed if a diligent restoration process is placed by the contractor as well as approved by the Highway Division.	Rugged landscape, its interference with the local aesthetics; posing of danger to livestock and local community children; holding of stagnant water and taking up of agricultural land.	No activities about borrow areas were seen at site. Moreover, borrow areas still needs to be identified, if required.
15	**Damages to the existing infrastructure**	a. Locate different locations of existing infrastructure on both sides of road. b. Avoid damages to locations of water pipes and electricity pylons etc.	Facilities to the locals	During site visit, it was advised to the FWO authorities to take care of the existing infrastructure, and avoid damages to water pipes and electricity pylons etc. especially during culverts construction at site. It was also suggested to the workers at site they should early inform FWO/ NESPAK / WAPDA/PTCL departments as the excavation activities started (Please refer to Photo # 15).

16	**Health & Safety of the workers**	a. Prepare and implement a Health and Safety Plan at site. b. Exclude public from site area. c. Ensure that workers use Personal Protective Equipments. d. Provide Health & Safety Training (including HIV/AIDS transmission process) to all personnel; e. Follow documented procedures for all activities at site; f. Keep reports and records of accidents.	Workers and public at risk due to accidents at site	Health and safety protocols are generally followed at camp, while remains neglected during construction activities at site. In this regard, FWO officials are advised to observe safety protocols, prepare H&S plan and take measures for keeping records of accidents, illness and treatments about workers etc. Moreover, training about H&S protocols is also very important to ensure workers safety and good health at site. Health facilities, such as facilities of ambulance and first aid etc. should also be provided to the workers at site. Personal protective equipments were also found missing at project area. Activities, such as retaining walls, culverts constructions and materials extracted at quarry areas should comply with the above mentioned guidelines (Please refer to Photos # 6, 7,8,9,11,12 and 15).
17	**Local Employment**	Contractor should hire at least 50% of local workforce at project site.	Economic benefits to the local people	Majority of the FWO workforce are regular employees. Therefore, a sporadic local labor force is hired, especially when a subcontract is placed.
18	**Others concerns like Resettlement etc.**	a. Resettlement, if any. b. Provide pedestrians and road access to local people. c. Avoid social disturbances over Infrastructure damages, such as telephone cables, sewerage, water supply schemes etc. d. Avoid Social Conflicts with locals.	Resettlement & Social management	Resettlement or relocation issues occurring due to construction activities were found missing at site area because the newly constructed road continues on its existing corridor. Infrastructure facilities, such as sewerage, telephone cables and electricity lines etc. at project area should properly cared, protected, and remain undisturbed. During site visit, some social conflicts were also noticed that needed attention to avoid such issues with locals. Activities, like drains constructions in section-V KM: 24+325 are in progress.

	Operation and Maintenance of newly constructed road			
19	**Road maintenance**	a. Monitor and Maintain cleanliness of drainage structures, channels, ditches and culverts. b. Fill mud and pot holes with a good quality of gravels, and also remove trees and wooden limbs lying down on road. c. Use water from retention ponds and basins settled for road maintenance.	Road Maintenance	Majority of the construction work in section -I of the Peshawar-Torkham road has already been completed, while side drains construction for water disposal along the newly constructed road are in progress.
20	**Use and maintenance of equipments**	Install concrete pads, drains and oil/water for vehicles maintenance. Areas separation, where equipments, vehicles are maintained and fueled on regular basis.	Water and soil pollution	No compliance was shown at site. The required protocol may properly be addressed.
21	**Accidents due to hazardous materials**	a. In case of a spill, concerned department should be consulted on emergency basis. b. Need for establishing of an administrative department which will administer and monitor the road accidents occurring due to hazardous substances	Cases of accidents	No compliance was shown at site. The required protocol may properly be addressed.
22	**Vehicles management**	a. Prohibit vehicles to travel on road which promote noise pollution. b. Proper education about noise and air pollution to locals, and how to keep the road clean.	Visual inspection	No compliance was shown at site. The required protocol may properly be addressed.

APPENDICES

CONTRACTOR IPC's (SECTION-I)

IPC No:	TOTAL PIL AMOUNT		AMOUNT CLAIMED		DATE OF SUBMISSION BY CONTRACTOR TO FATA	DATE OF SUBMISSION BY FATA TO USAID	DATE OF CERTIFICATION BY M&E CONSULTANTS	AMOUNT CERTIFIED BY M&E CONSULTANTS	
	US $	EQUIVALENT PKR	US $	EQUIVALENT PKR				US $	EQUIVALENT PKR
1	9,978,081	937,939,614	1,444,442	135,777,548	23-May-13	28-May-13	28-Jun-13	597,641	56,178,279
2			2,494,227	234,453,311	28-Jun-13	2-Jul-13	26-Jul-13	2,494,227	234,453,311
3			2,382,898	223,992,366	26-Jul-13	31-Jul-13	29-Aug-13	2,268,345	213,224,394
4			1,738,259	163,396,356	3-Sep-13	11-Sep-13	25-Sep-13	1,096,902	103,108,788
5			699,562	65,758,791	30-Sep-13	3-Oct-13	23-Oct-13	680,293	63,947,570
6			1,287,568	121,031,406	2-Dec-13	2-Dec-13	17-Dec-13	886,305	83,312,672
7			467,684	43,962,288	26-Dec-13	26-Dec-13	30-Dec-13	19,268	1,811,220
8			1,055,814	99,246,516	4-Mar-13	7-Mar-14	3-Apr-14	168,209	15,811,646
UP-TO DATE CERTIFIED AMOUNT								**8,211,190**	**771,851,892**

Conversion Rate 1 US $ = 94 PKR

CONTRACTOR IPC's (SECTION-II)

IPC No:	TOTAL PIL AMOUNT		AMOUNT CLAIMED		DATE OF SUBMISSION BY CONTRACTOR TO FATA	DATE OF SUBMISSION BY FATA TO USAID	DATE OF CERTIFICATION BY M&E CONSULTANTS	AMOUNT CERTIFIED BY M&E CONSULTANTS	
	US $	EQUIVALENT PKR	US $	EQUIVALENT PKR				US $	EQUIVALENT PKR
1	9,383,484	985,265,820	1,159,388	121,735,792	26-Dec-13	26-Dec-13	31-Dec-13	661,911	69,500,655
2			1,791,571	188,114,955	18-Mar-14	20-Mar-14	3-Apr-14	666,175	69,948,375
UP-TO DATE CERTIFIED AMOUNT								**1,328,086**	**139,449,030**

Conversion Rate 1 US $ = 105 PKR

CONTRACTOR IPC's (SECTION-III)

IPC No:	TOTAL PIL AMOUNT		AMOUNT CLAIMED		DATE OF SUBMISSION BY CONTRACTOR TO FATA	DATE OF SUBMISSION BY FATA TO USAID	DATE OF CERTIFICATION BY M&E CONSULTANTS	AMOUNT CERTIFIED BY M&E CONSULTANTS	
	US $	EQUIVALENT PKR	US $	EQUIVALENT PKR				US $	EQUIVALENT PKR
1	9,512,705	989,321,320	2,203,603	229,174,712	26/12/2013	12-Mar-14	3-Apr-14	727,789	75,690,056
UP-TO DATE CERTIFIED AMOUNT								**727,789**	**75,690,056**

Conversion Rate 1 US $ = 104 PKR

RECORD OF COORDINATION MEETINGS / JOINT SITE VISITS

Date	Meeting	Participants	Venue
01 April'14	Progress review Meeting	Commissioner Peshawar, P.A Khyber Agency, FATA, USAID, FWO, NESPAK and M&E consultant (AGES)	Commissioner office Peshawar
21 April'14	Coordination Meeting	M&E Consultants and NESPAK	CRE office, Jamrud, Kyber Agency
23 April'14	Coordination Meeting	FATA, USAID, M&E Consultants, FWO, NESPAK	PD-FWO (495 Group) Peshawar
24 April'14	Coordination Meeting	M&E Consultants and NESPAK	CRE office, Jamrud, Kyber Agency
28 April'14	Coordination Meeting	M&E Consultants, FWO, NESPAK	CRE office, Jamrud, Kyber Agency
29 April'14	Coordination Meeting	M&E Consultants, FWO, NESPAK	CRE office, Jamrud, Kyber Agency
29 April'14	Joint Site Visit	M&E Consultants, FWO, NESPAK	PTR Project (Bridge# 05, KM:18+490)
30 April'14	Joint Site Visit	M&E Consultants, FWO, NESPAK	PTR Project (Sec-VII, KM:37+000 To KM:42+050)

MOBILIZATION OF M&E STAFF

The following members of the M&E Team were mobilized as various activities of the project progressed. Other staff members will be mobilized according to demand of work load.

PROJECT MANAGER OFFICE – STAFF DEPLOYMENT

S. No	Name	Designation	
1	Aziz-ul-Haq	Project Manager	ROAD COMPONENT
2	Nasir-ul-Mulk	Project Advisor	
3	Abdul Hakim	Senior Technical Specialist	
4	Shabir Ahmad Khan	Environmental Compliance Officer	
5	Muhammad Khurshid	Mid-Level Specialist	
6	Amjad Saeed	Mid-Level Specialist	
7	Irfanullah K.Khattak	Reporting Specialist	
8	Saqib Maqbool	Junior Engineer	
9	Arshad Khan	CAD Operator	
10	Sohail Anjum	Senior Surveyor	
11	Abdul Waheed	Manager Admin/Finance	
12	Amir Habib	IT Officer	
13	Muhammad Bilal	Assistant Accountant	
14	Faizan Khan	Computer Operator	
15	Jamil Khan	Field Monitor Social	OTHER CONSTRUCTION COMPONENT
16	Anwar Dad	Quantity Surveyor	
17	Waqar ul Mulk	Junior Architect	
18	Naeem Jan	Senior Surveyor	
19	Muhammad Waqas	Survey Assistant	
20	Muhammad Ayaz	Survey Assistant	
21	Muhammad Zeeshan Atta	Survey Assistant	
22	Sana ullah	Accountant	

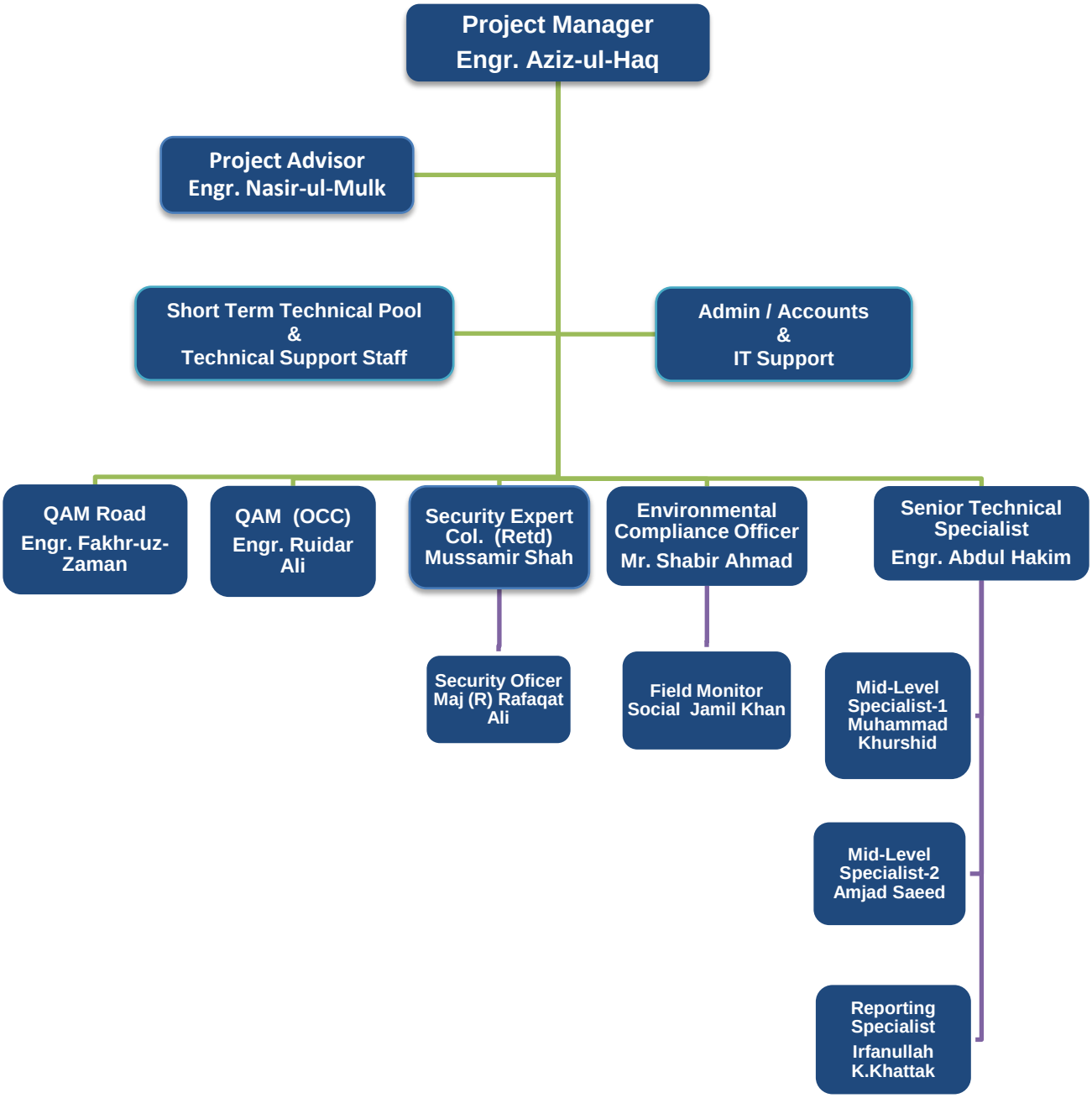
QAM Office (Road Component)

S. No.	Name	Designation
1	Fakhr-uz-Zaman	Quality Assurance Manager (Road)
2	Saeed Rehman	M&E Specialist Road
3	Muhammad Ilyas	Field Manager M&E
4	Muhammad Ibrar	Office Engineer
5	Rasheed Khan	Field Monitor Road
6	Muhammad Sher	Field Monitor Road
7	Ghulam Qasim	Field Monitor Road
8	Tariq Ibrahim Khan	Quantity Surveyor
9	Asad Khan	CAD Operator
10	Ihsan Ullah	Accountant
11	Hafiz ur Rehman	Assistant Accountant
12	Nasir Alam	Admin Officer
13	Umar Shah	Assistant Office Admin
14	Hamid Ali	Computer Operator

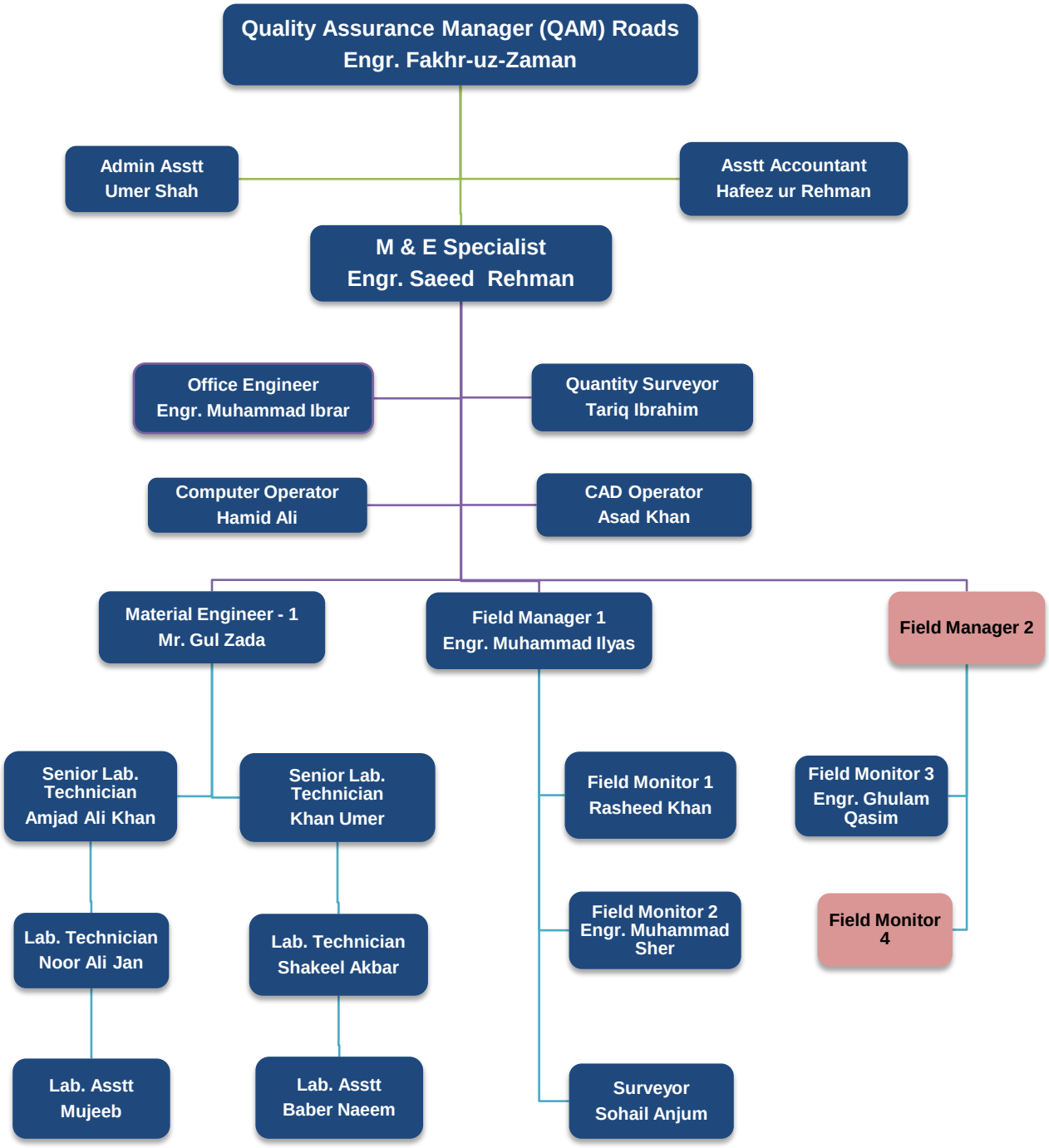
Laboratory Staff (Road Component)

S. No.	Name	Designation
1	Gul Zada	Material Engineer
2	Amjad Ali Khan	Senior Lab. Technician
3	Khan Umar	Senior Lab. Technician
4	Shakeel Akbar	Lab. Technician
5	Noor Ali Jan	Lab. Technician
6	Mujeeb Khan	Assistant Lab. Technician
7	Babar Naeem	Assistant Lab. Technician

ORGANIZATION CHART FOR CMEP OFFICE, PESHAWAR



ORGANIZATION CHART FOR ROAD COMPONENT OF CMEP PROJECT



LEGEND:

Mobilized

To be mobilized with expansion of work

PROJECT PHOTOGRAPHS

PAVEMENT

KM: 9+980 To 10+250 (Full Width) Prime coat applied

KM: 10+250 To 10+500 (Full width) Cleaning for WBM base top surface in progress.

KM: 10+575 To 10+675 (Half width RHS) WBM base spreading & leveling in progress

KM: 11+300 To 11+400 (Half width LHS) surface texturing of concrete for rigid pavement in progress

KM: 11+505 To 11+528 (Half width RHS) Rigid pavement concreting in progress

KM: 11+650 To 11+900 (Half width) Rigid Pavement concreting in progress

KM: 12+460 To 12+500 (Half width RHS) Sub Base 1st layer leveling & grading in Progress.

KM: 12+500 To 12+575 (Full width) Sub Base 1st layer leveling & grading in Progress

KM: 14+650 To 14+750 (Full width) Sub Base 1st layer leveling & grading in Progress

KM: 16+300 To 16+600 (Half width LHS) ACWC in progress

KM: 16+875 To 17+050 (Half width LHS) ACWC in progress

KM: 17+050 To 17+103 (Half Width LHS) Concreting for rigid pavement in progress

KM: 17+400 To 17+600 (Full Width) ACBC 2nd layer's final rolling in progress

KM: 17+400 To 17+800 (Full width) ACWC laying & final rolling in progress

KM: 17+500 To 17+600 (Full width) WBM Base dry compaction in progress

KM: 17+600 To 17+900 (Half width RHS) ACBC 2nd layer's final rolling in progress

KM: 17+800 To 18+225 (Half width LHS) ACWC initial rolling in progress

KM: 17+800 To 18+225 (Half width LHS) ACWC laying in progress

KM: 18+225 To 18+325 (Full width) Sub base top compaction in progress

KM: 18+700 To 19+000 (Half width RHS) Rock breaking in progress

KM: 18+800 To 19+000 (Half width RHS) Drilling for conducting blasting in progress

KM: 22+200 To 22+300 (Full width) Drilling Road way excavations completed

KM: 22+425 To 22+500 (Half width RHS) Sub grade top preparation in progress

KM: 22+500 To 22+600 (Full width) Sub base 1st layer leveling & grading completed

KM: 25+225 To 25+325 (Full width) Sub base top preparations completed

KM: 25+650 To 25+775 (Half width RHS) Sub base top leveling & grading in progress

KM: 26+700 To 26+800 (Full width) Sub base 1st layer leveling & grading in progress

KM: 27+600 To 27+650 (Full width) Sub base 1st layer leveling & grading in progress

STRUCTURES

Culvert KM: 11+190 Formworks fixing in progress for external wall of box culvert

Culvert KM: 12+975 Concrete casted for top slab of culvert

Culvert KM: 14+250 (Loop-1) Stone masonry for Abutments and wing wall in progress

Culvert KM: 14+250 Stone masonry for abutments & wing wall in progress

Culvert KM: 14+300 Stone pitching and roll pointing completed

Culvert KM: 14+431 Concrete curing for top slab in progress

Culvert KM: 14+431 (Loop-1) Stone masonry for Abutments walls in progress

Culvert KM: 19+355 Stone masonry in progress

Culvert KM: 19+539 Stone masonry Abutments and wing walls in progress

Culvert KM: 22+820 Stone masonry for abutments in progress

Culvert KM: 22+925 Formworks installation for RCC walls (6&7) of Multi-box culvert in progress

Culvert KM: 23+100 Backfilling at Abutments in progress

Culvert KM: 23+596 Structural excavation in progress

Culvert KM: 24+335 Stone masonry of wing wall in progress

Culvert KM: 25+300 Downstream side concrete for top slab casted

Culvert KM: 27+620 Roll pointing at abutment walls in progress

Culvert KM: 28+416 Stone masonry of abutment walls in progress

Culvert KM: 30+694 Stone masonry of abutment wall-1 in progress

KM: 30+785 Utility duct excavation completed

Drains

Drain KM: 0+150 To 0+200 RHS section-1 Drain type D-1 completed

Drain KM: 0+250 To 0+300 RHS section-1 drain type D-1 Completed

Drain KM: 0+700 To 0+750 LHS section-1 drain type D-1 Completed

Drain KM 2+950 To 3+000 LHS Section-1 drain type D-2 brick masonry in progress

Drain KM 3+500 To 3+550 LHS Section-1 formworks in progress for the drain's top slab

Drain KM 7+000 To 7+100 LHS section-1 drain type D-2a completed

Drain KM 7+950 To 8+000 LHS Section-1 drain type D-1a completed

Drain KM 8+650 To 8+750 LHS Section-1 drain type D-2a completed

Drain KM 8+900 To 9+000 LHS Section-1 drain type D-2a completed

Bridges

Bridge KM: 9+560 Abutment seat-2 concrete casting in progress

Bridge KM: 9+560 Abt-1 Transom seat concrete casting in progress

Bridge KM: 9+560 Girders pre-stressing in progress

Bridge KM: 9+560 Girders pre-stressing in progress

Bridge KM: 9+560 PVC pipes fixing in progress

Bridge KM: 9+560 Girder uplift during pre-stressing

Bridge KM: 9+560 Washing ducts with pressured water

Bridge KM: 9+560 Ducts grouting in progress

Bridge KM: 9+560 Placement of pre-stressed girders in progress

Bridge KM: 9+560 Placement of pre-stressed girders in progress

Bridge KM: 9+560 Placement of pre-stressed girders in progress

Bridge KM 23+850 Piles boring for Abutment-2 & pier in progress

Bridge KM: 23+850 Pile boring for pier & Abut-2 in progress

Bridge KM: 23+850 Steel reinforcement fixing for Pier Cap of Abut-1 in progress

Bridge KM: 23+850 Steel reinforcement fixing for Pier Cap of Abut-1 in progress

Bridge KM: 27+350 Pile load test in progress

Bridge KM: 27+350 Pile load test in progress

Retaining walls

KM: 0+075 To 0+100 RHS Loop-1 Retaining wall stone masonry in progress

KM: 9+560 upstream side Retaining wall stone masonry in progress

KM 10+600 To 10+700 LHS Roll pointing of parapets over R/Wall in progress

KM: 10+700 To 10+900 LHS Dressed stone masonry for parapet over R/Wall in progress

KM: 13+212 To 13+250 RHS R/Wall stone masonry in progress

KM: 13+333 To 13+350 RHS R/Wall stone masonry in progress

KM: 13+550 To 13+650 LHS PCC coping over R/Wall wall in progress

KM: 14+350 To 14+375 RHS R/Wall stone masonry in progress

KM: 14+475 To 14+575 RHS R/Wall stone masonry in progress

KM: 14+625 To 14+700 RHS R/Wall stone masonry in progress

KM: 19+250 To 19+300 LHS R/Wall pad concrete casted

KM: 22+750 To 22+800 LHS R/Wall lean concrete pouring for pad in progress

KM: 22+975 To 23+075 LHS R/Wall Stone masonry in progress

KM: 23+100 To 23+150 LHS R/Wall Lean concrete casted

KM: 25+400 To 25+500 RHS PCC class B concrete parapet walls constructed

KM: 27+600 To 27+620 RHS R/Wall stone masonry in progress

KM: 28+375 To 28+410 LHS R/Wall stone masonry in progress

FIELD / LAB TESTING

Sampling concrete cylinder for strength tests

KM 17+800 Collecting Asphaltic base core sample

KM 24+200 Core samples collected for test

Concrete Cylinder crushing at AGES LAB

Concrete Cylinder crushing at AGES LAB

Extraction Test in AGES Lab

KM 10+470 Field density test of Sub Base

KM 10+300 Field density test of WBM

KM 10+470 Field density test of WBM

Hot Bin Samples for Testing

Marshal cakes moulding in AGES

KM 9+560 stressing test of girder tendons

Preparation of GMM test in AGES lab

KM 17+450 Sampling of Asphaltic Base 2nd layer

ENVIRONMENTAL MONITORING

(Photo #1) (Photo #1) Outside view of dining hall at FWO Labor Camp

(Photo # 2) KM: 8+825 Temporary pathway construction creates sewerage blockade.

(Photo # 3) KM: 9+ 560 River bridge construction needs Health and Safety measures.

(Photo # 4) KM: 9+ 700 Quarry area needs H&S protocols and a proper quarry area for proper handling of construction materials.

(Photo #5) KM: 10+800 Water sprinkiling continues to control dust pollution.

(Photo # 6) KM: 11+500 labor at work during rigid pavement construction needs safety protocols and proper labor safeguards

(Photo # 7) KM: 11+300 improper placement of building materials observed during rigid pavement construction.

(Photo # 8) KM: 11+800 Rigid Pavement concrete pouring needs proper sign boards and H & S protocols compliance

(Photo # 9) KM: 12+178 Wings walls construction needs H&S protocols compliance, protective measures, and proper placement of building materials.

(Photo # 10) KM: 14+500 Dust pollution; needs sprinkling of water.

(Photo #11) Crushing plant near Shagai Fort needs proper quarry area and H&S protocols compliance on construction materials.

(Photo # 12)

KM: 18+600 Blasting and drilling for road widening purposes needs proper sign boards and safety measures.

(Photo # 13) KM: 18+610 Road widening with excavator needs proper sign boards.

(Photo #14) KM: 23+750 Bridge construction needs Safety measures.

(Photo #15) KM: 24+324 during culverts construction underground utilities needs protection and proper safeguards.