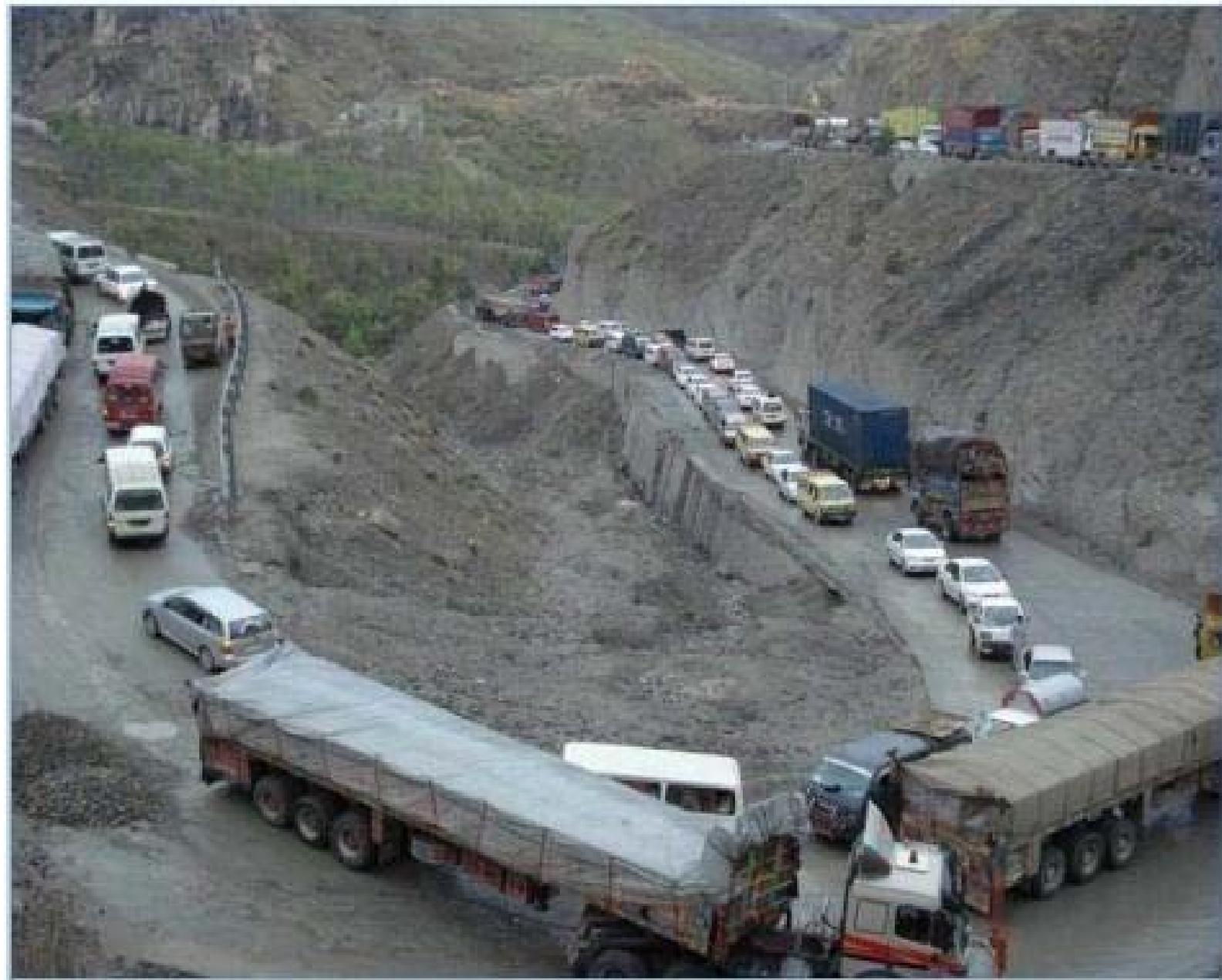




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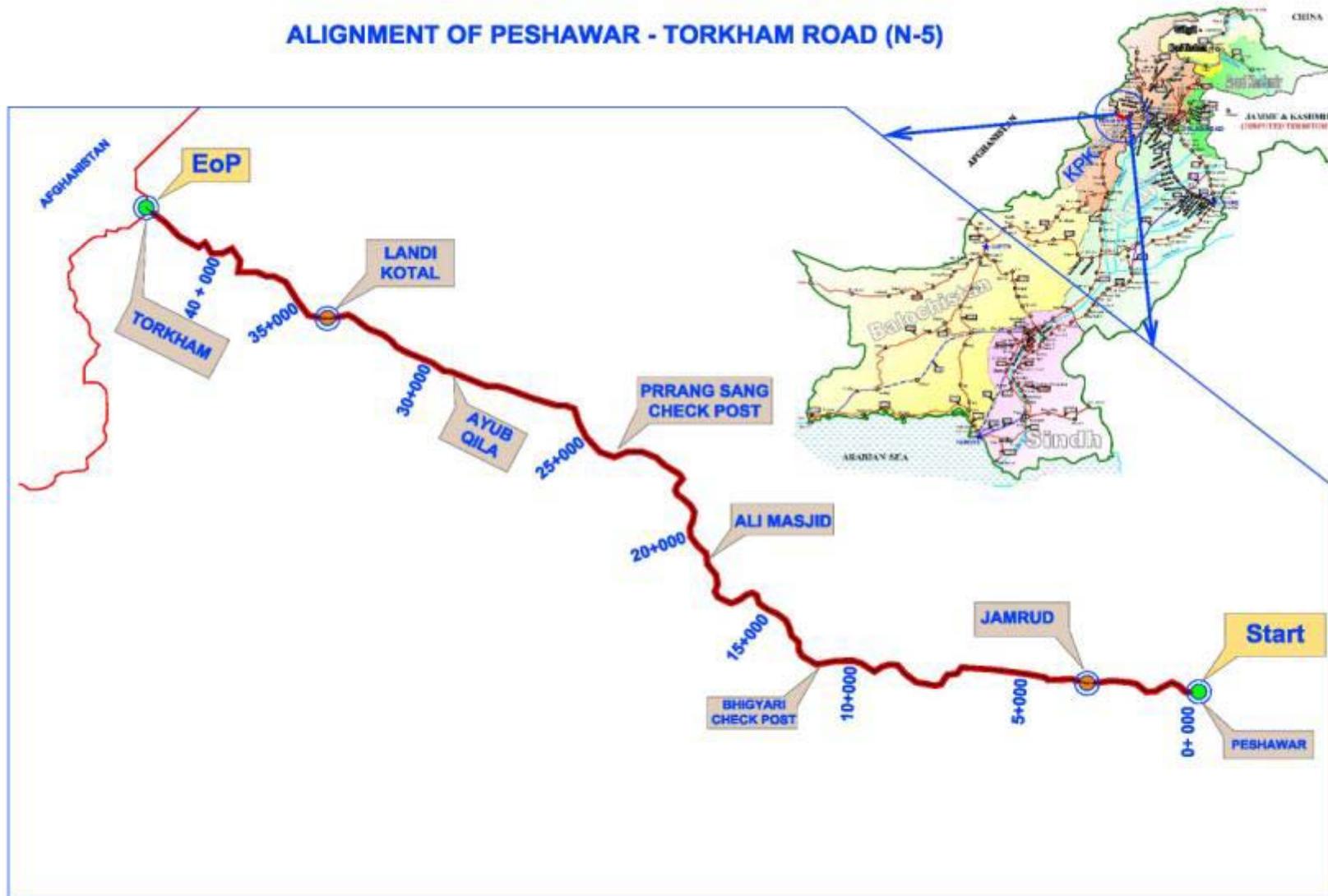
**STRENGTHENING & IMPROVEMENT OF PESHAWAR - TORKHAM ROAD
KHYBER AGENCY, FATA**

**MONTHLY PROGRESS REPORT # 21
OCTOBER 2014**

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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 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 project was commenced by FWO on October 15, 2012. Now as per Article 4 of the Activity Agreement No AID-015-DOD, the works needs to be completed by December 31, 2014. Under the circumstances and ground conditions, the Activity Completion Date needs to be extended. Three PILs signed for Sec I, II and III are also going to expire on December 31, 2014.

During the reporting month (October, 2014), rigid as well as asphaltic pavement construction was almost completed in Sec II and III. Similarly, construction work continued in Sec IV & V. The contractor teams could work 18 days of 21 available working days in the reporting month. The overall certified amount till the end of reporting month was USD 23,970,464.

FWO was constantly advised for demonstrating good environmental practice in conformity with the construction environmental management plan.

Physical progress till the end of reporting period presented as under:

| | |
|--------------------------------------|-----|
| Section I - (KM: 0+000 To 9+000) | 98% |
| Section II - (KM: 9+000 To 14+000) | 91% |
| Section III - (KM: 14+000 To 19+000) | 85% |
| Bridge (KM: 9+560) | 96% |
| Bridge (KM: 18+475) | 44% |
| Bridge (KM: 23+850) | 52% |
| Bridge (KM: 27+250) | 37% |
| Multicell Culvert (KM: 11+190) | 98% |
| Multicell Culvert (KM: 22+925) | 76% |

About 19 KM of the road pavement is complete and open for traffic. About 5 KM Asphaltic Base Course has been cumulatively completed in Sec IV (KM: 19+000 To 24+000) and Sec V (KM: 24+000 To 29+000). Although various activities up to KM: 35+000 are in progress, the sections beyond this point could not be opened by FWO for construction activities due to multiple reasons primarily the heavy traffic management in this most difficult corridor of the project.

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 | Section – VIII | Section – IX |
| Kilometers | 0+000 to 9+000 | 9+000 to 14+000 | 14+000 to 19+000 & Loop-I | 19+000 to 21+000 22+400 to 24+400 & Loop-II | 21+100 to 22+400 24+400 to 29+000 | 29+000 to 33+000 | 33+000 to 37+000 | 37+000 to 41+000 | 41+000 to 43+041 & Loop-III |
| 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.

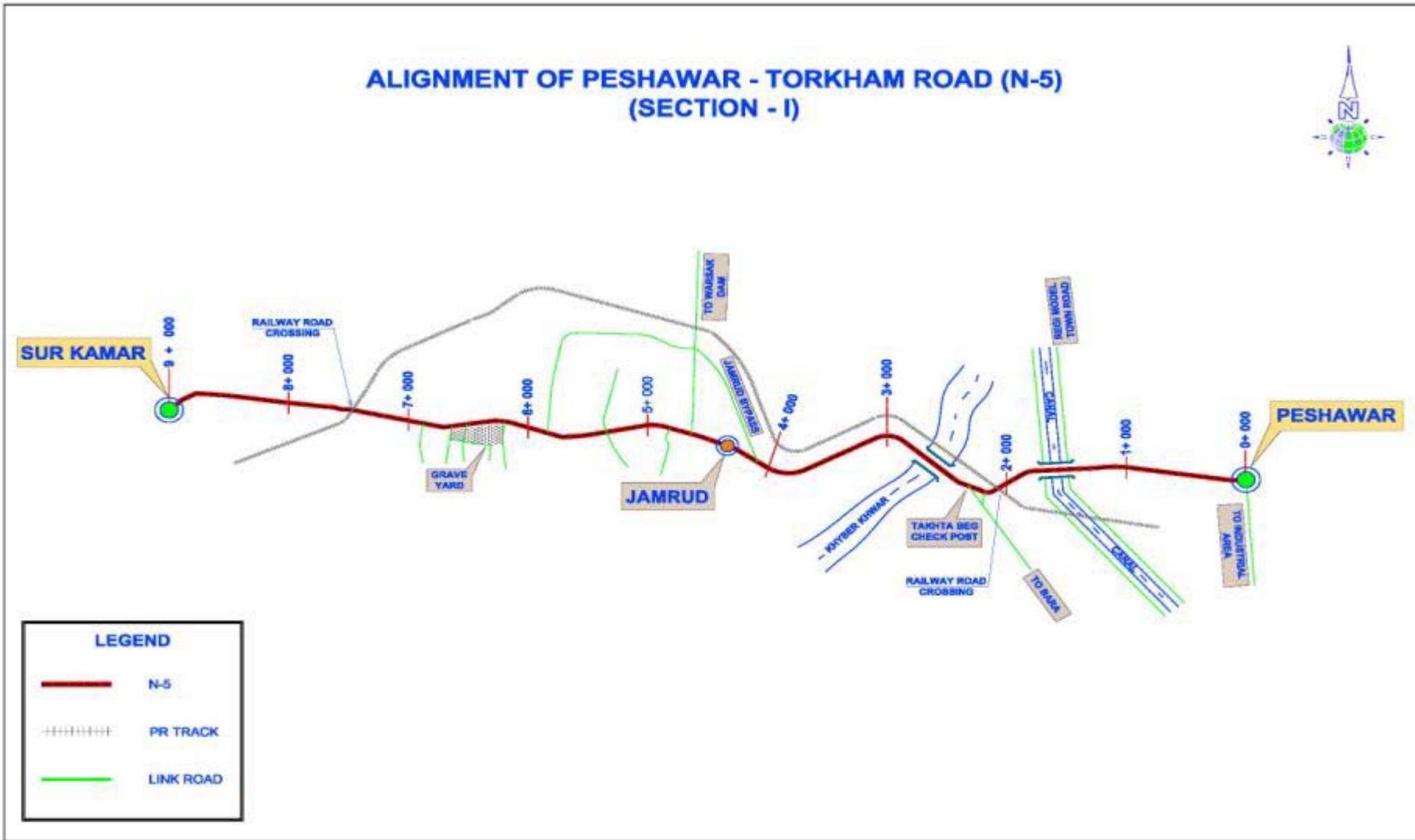
1.3 GENERAL CONTRACT DATA

| | | |
|-----|--|--|
| 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 |

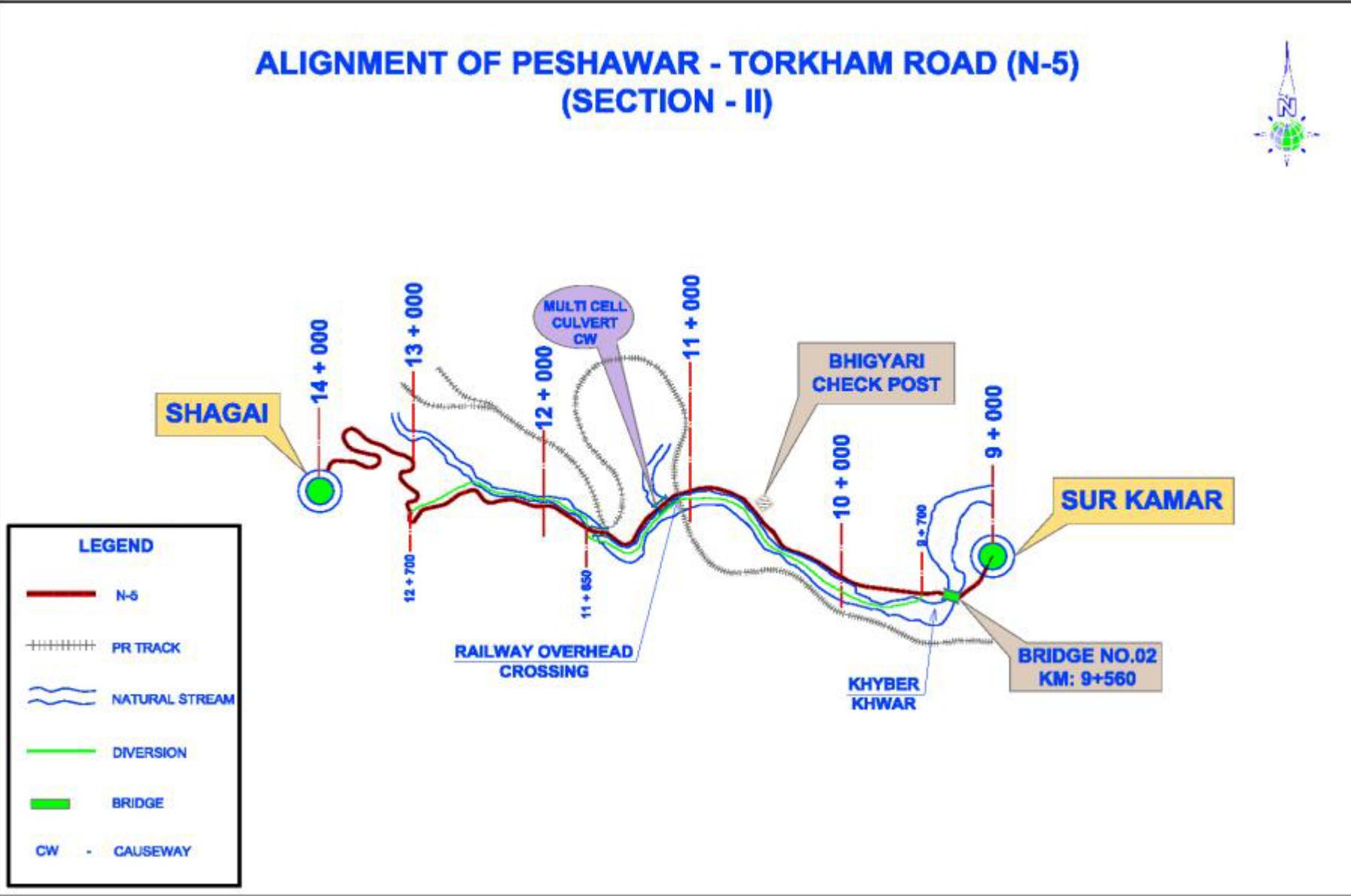
1.4 SECTIONS DATA

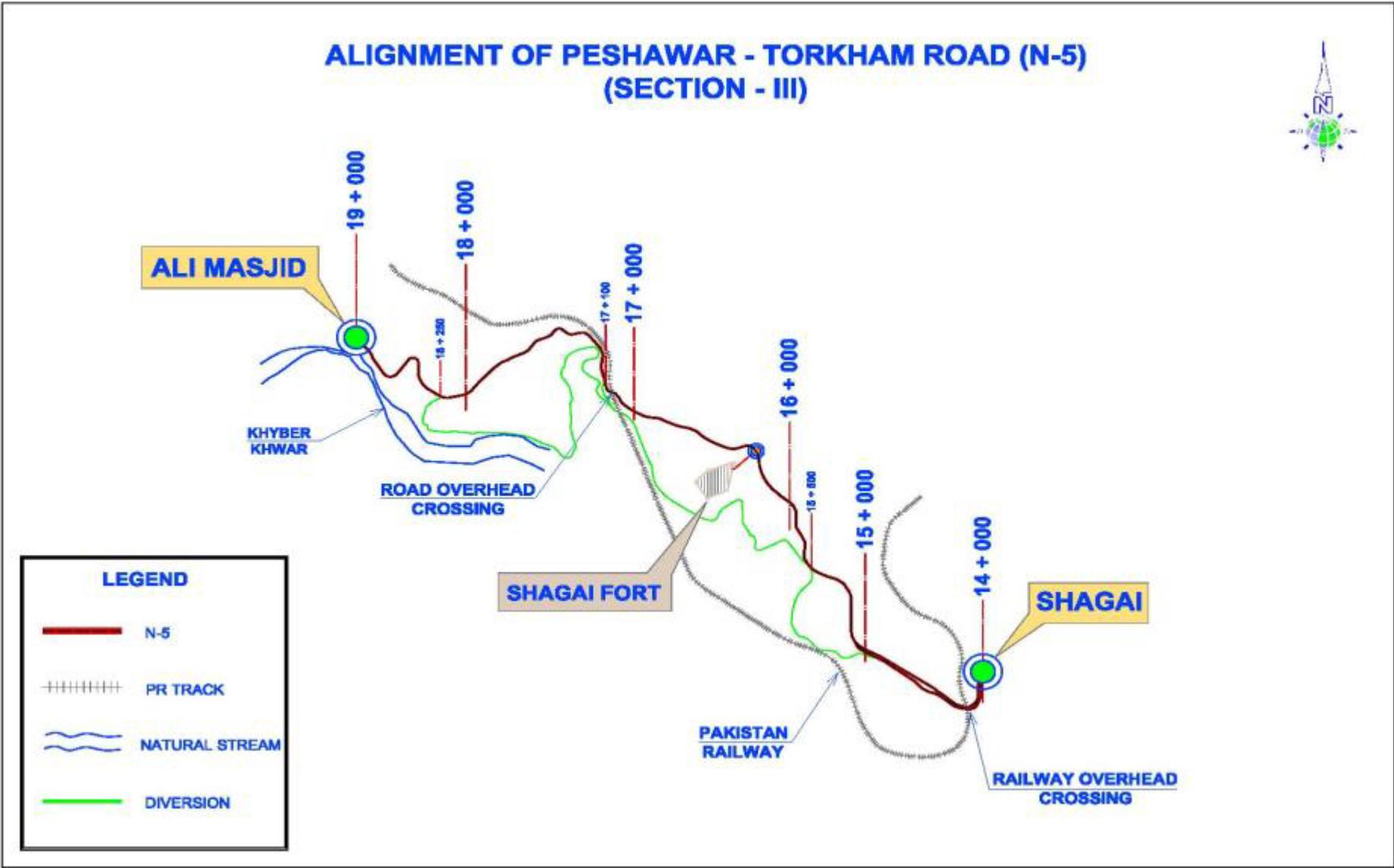
| | | |
|----|---------------------------------|--|
| 1. | Name of Package | Section – I (CH: KM: 0+000 to CH: KM: 9+000) |
| 2. | PIL Cost (Section – I) | Rs. 937.939 Million (US \$ 9.978 M) |
| 3. | Approval of PIL (Section – I) | Jan 10, 2013 |
| 1. | Name of Package | Section – II (CH: KM: 9+000 to CH: KM: 14+000) |
| 2. | PIL Cost (Section – II) | Rs. 985.266 Million (US \$ 9.383 M) |
| 3. | Approval of PIL (Section – II) | Dec, 18, 2013 |
| 1. | Name of Package | Section – III (CH: KM: 14+000 to CH: KM: 19+000 & Loop-I) |
| 2. | PIL Cost (Section – III) | Rs. 989.320 Million (US \$ 9.512 M) |
| 3. | Approval of PIL (Section – III) | Feb, 04, 2014 |
| 1. | Name of Package | Construction of Two Bridges and Two Multi-cell Culverts |
| 2. | PIL Cost | Rs. 348.5 Million (US \$ 3.668 M) |
| 3. | Approval of PIL | June 27, 2014 |

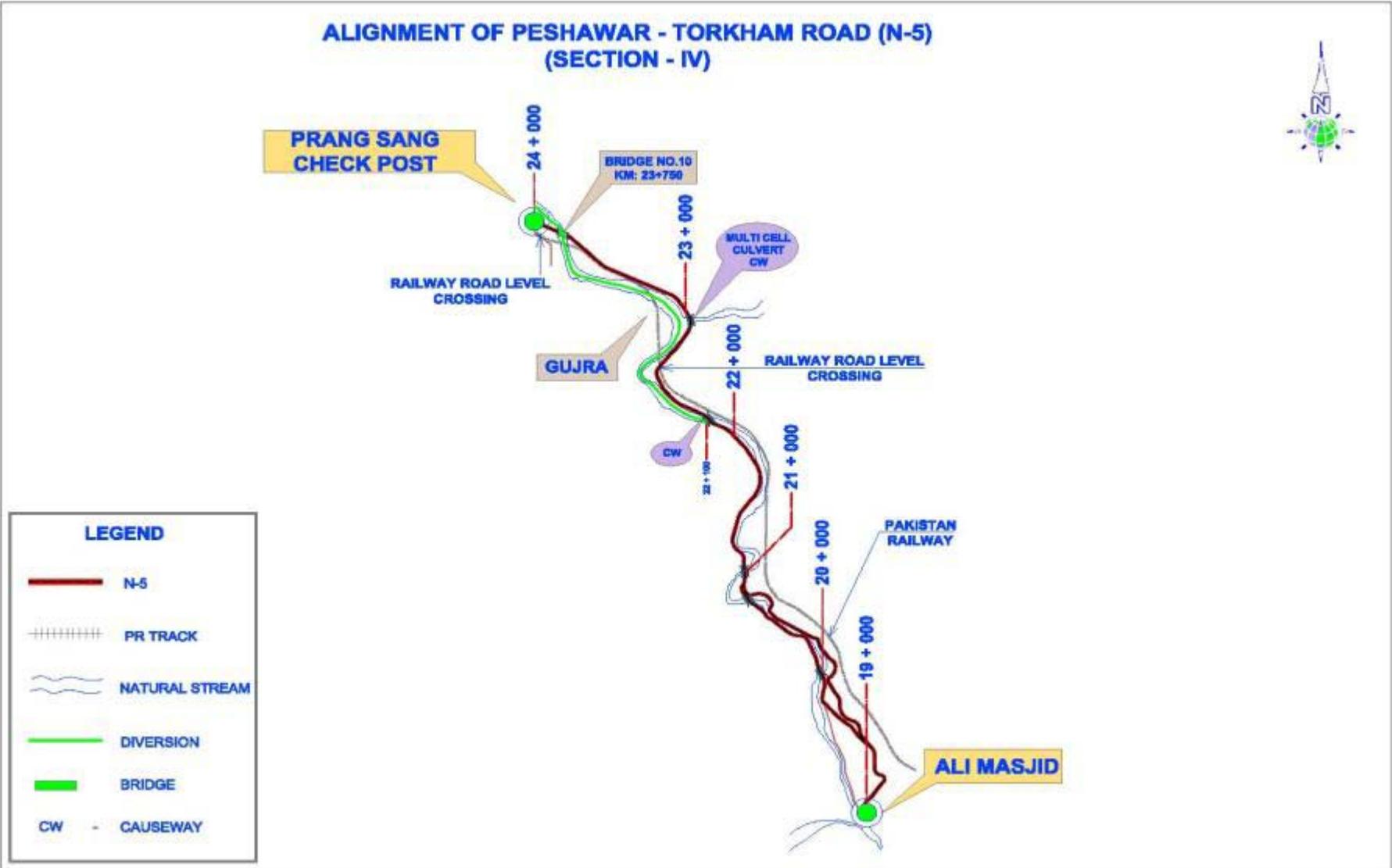
1.5 ALIGNMENT SKETCHES

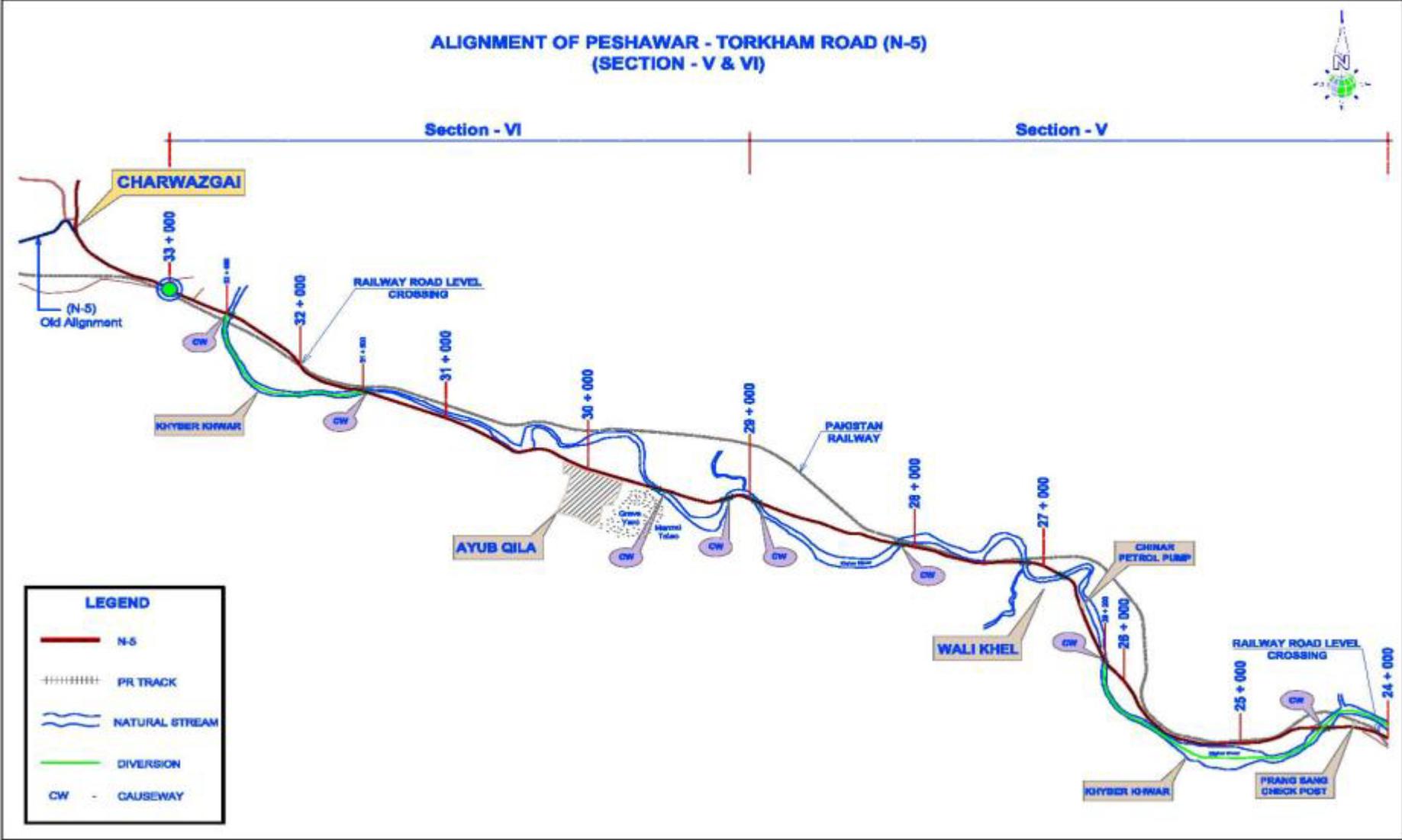


ALIGNMENT OF PESHAWAR - TORKHAM ROAD (N-5) (SECTION - II)

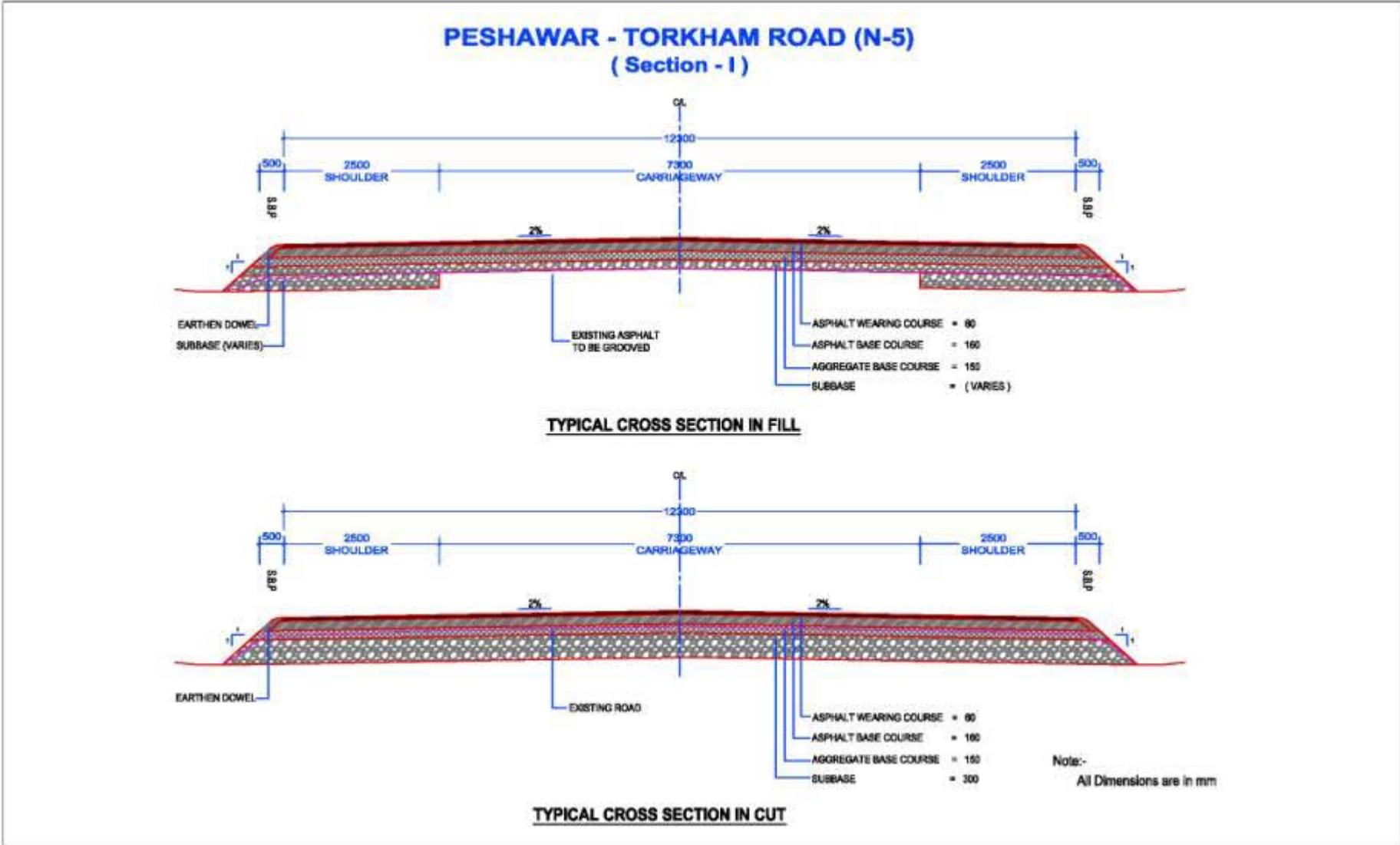


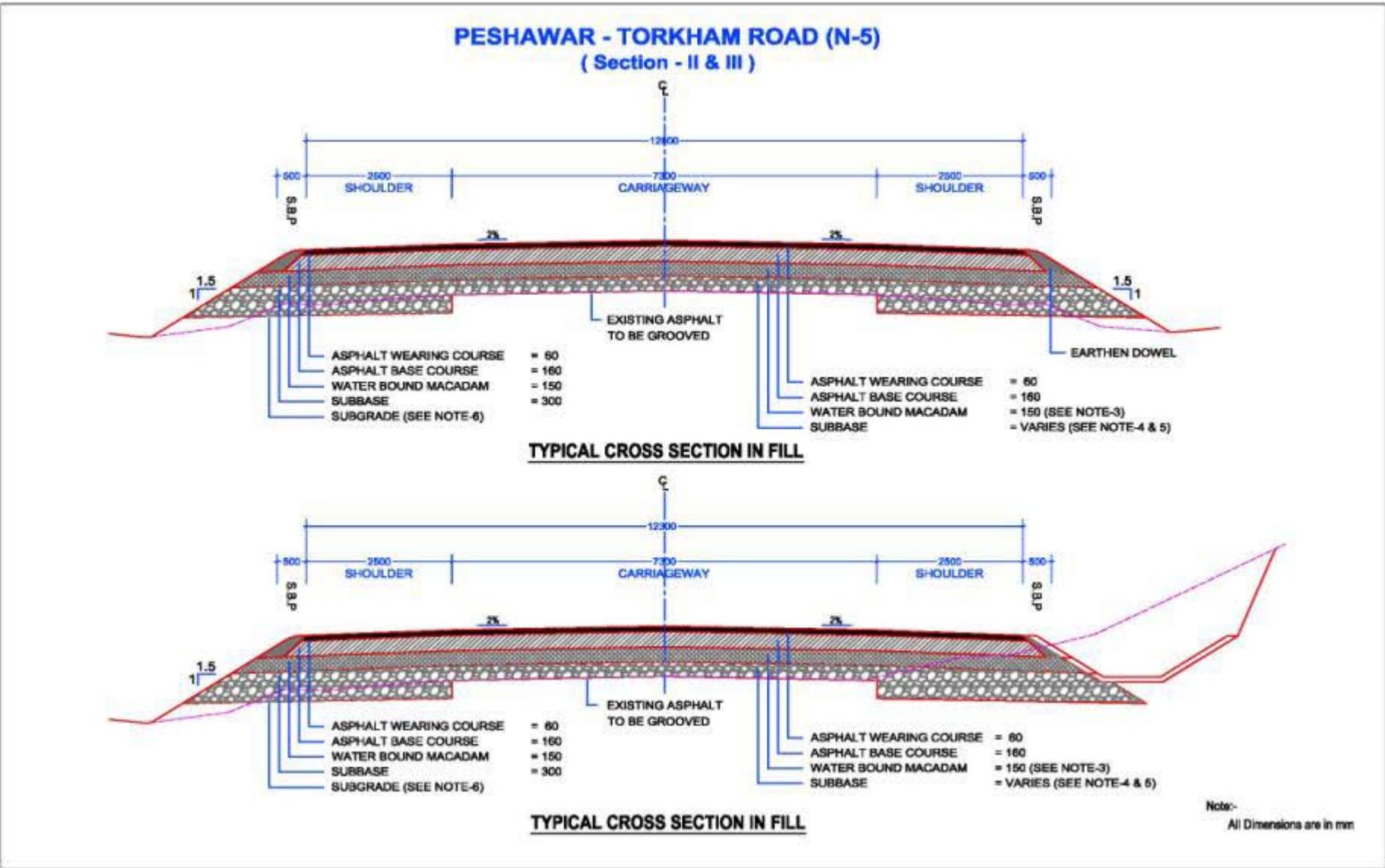


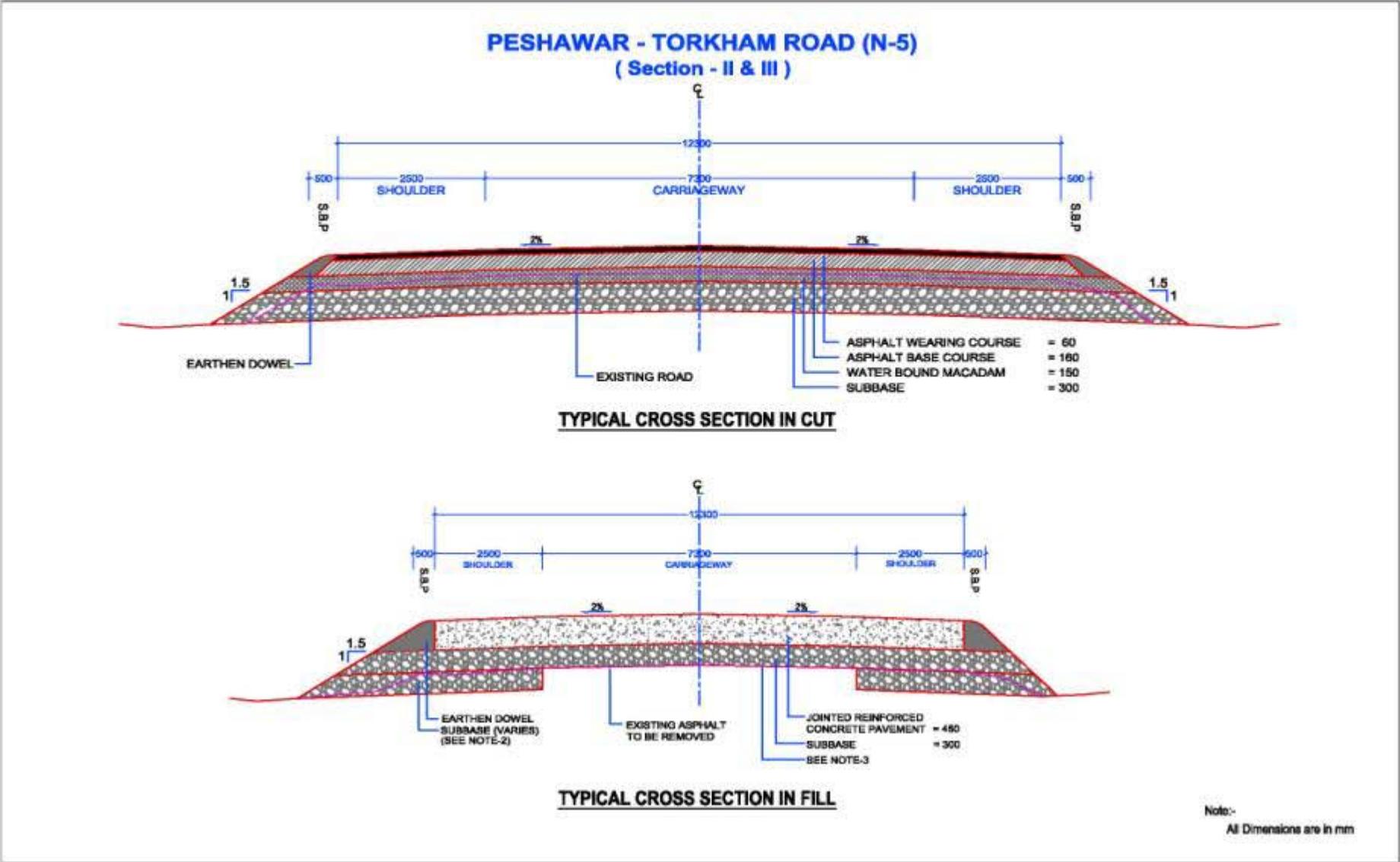




1.6 TYPICAL CROSS SECTIONS OF ROAD







M&E SERVICES & PROGRESS OF ACTIVITIES

2.1 M&E CONSULTANTS MAJOR ACTIVITIES DURING THE REPORTING MONTH

- The M&E Consultants continued to monitor the ongoing construction activities and conducted requisite material sampling & testing.
- Actively participated in on-site discussions with FWO/NESPAK regarding ongoing construction activities.
- Attended three joint co-ordination meetings at CRE / FWO office to discuss various aspects of QA/QC measures of the project, construction program/ completion status of section I, II and III prior to December 31st 2014.
- Attended USAID-FWO-NESPAK co-ordination meeting in the office of CO FWO Jamrud to discuss the completion status of section I, II and III.
- 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 advised for demonstrating good environmental practice in compliance with the construction environmental management plan.

2.2 MATTERS REQUIRING ATTENTION

2.2.1 COMPLETION OF SECTION I, II AND III BY THE END OF DEC, 2014

In order to avoid complication of financial management, delays in construction and stream lining the cash flow, the aforementioned sections need to be finalized before end the year 2014. USAID has communicated the same to FWO in joint coordination meeting held in PD 495 engineers group Peshawar on August 27, 2014.

Moreover, as per Article 4 of the Activity Agreement No AID-015-DOD, the works needs to be completed by December 31, 2014. Under the circumstances and ground conditions, the Activity Completion Date needs to be extended. Three PILs signed for Sec I, II and III are also going to expire on December 31, 2014.

2.2.2 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 Multi cell culverts), amounting in total to PKR 4,188 Million have been approved by FATA Development Working Party (FDWP). As now the FDWP's special powers of sanctioning up to PKR 1000 Million for developmental projects has been restored, approval of the remaining PC-1s needs to be expedited.

2.2.3 COMPLEXITY IN MAINTAINING TRAFFIC ON DIVERSIONS

Diversions have been provided at intervals b/w KM: 09+000 To 35+000. However, 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.

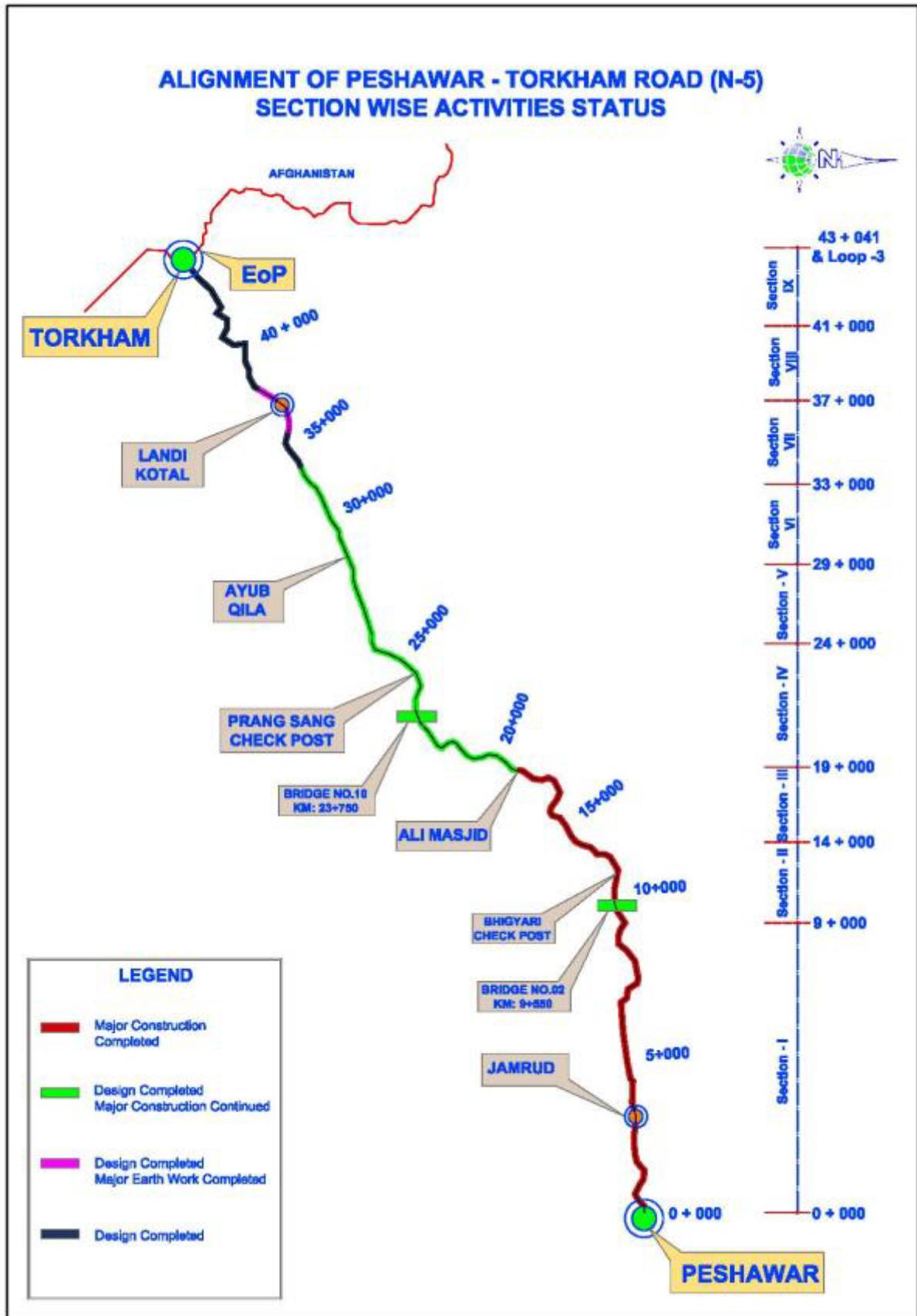
2.2.4 DELAY IN UTILITIES SHIFTING FROM CONSTRUCTION CORRIDOR

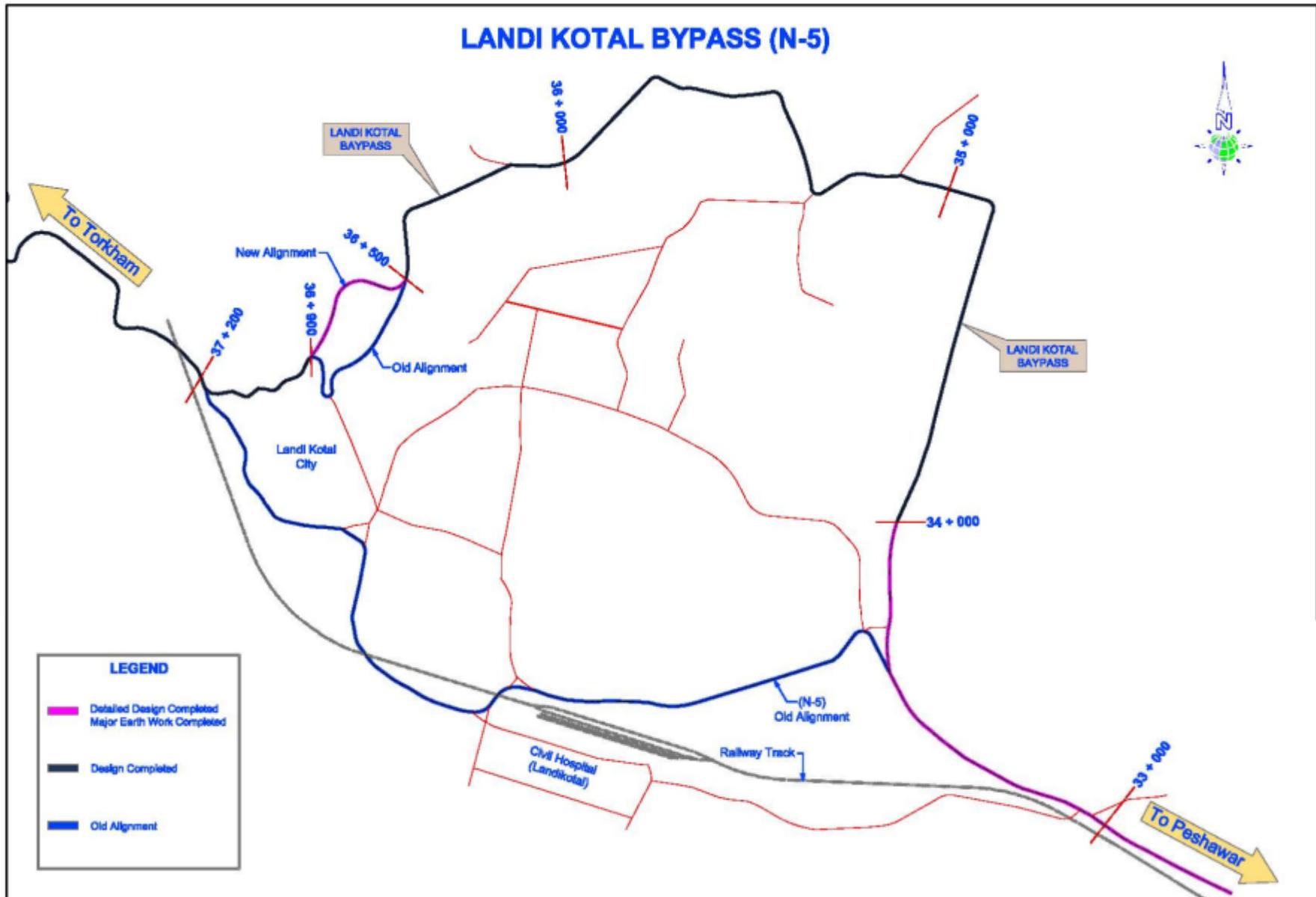
Shifting of overhead electric lines (including poles) and underground Optical Fiber Cable (OFC) got delayed despite payment by FWO to the concerned GoP departments, thereby putting a constraint on the contractor's capacity to undertake construction work in an un-interrupted and continuous manner.

2.2.5 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



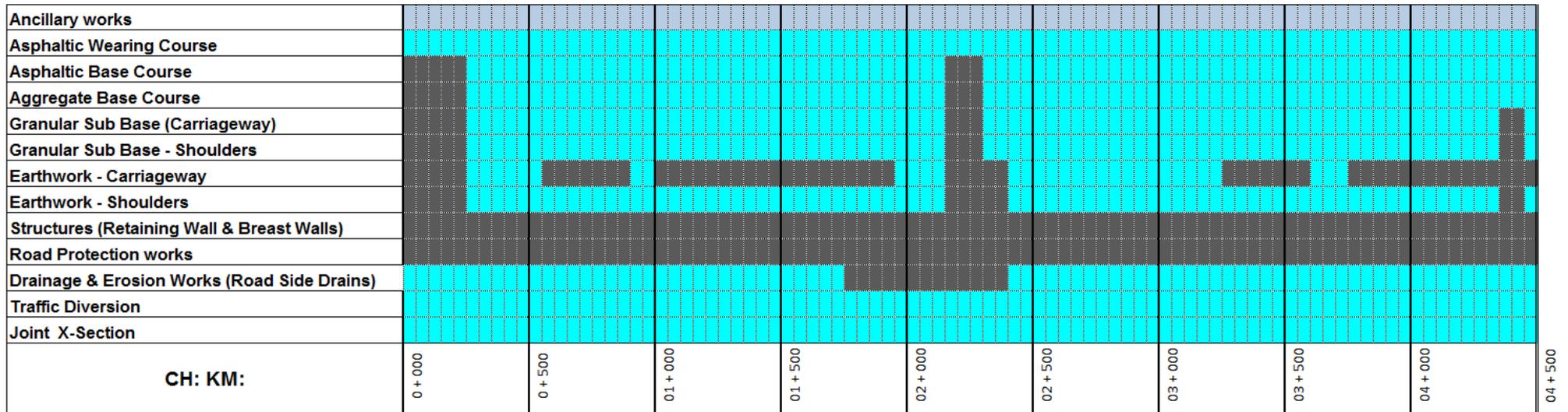


CIVIL WORKS SECTION-I

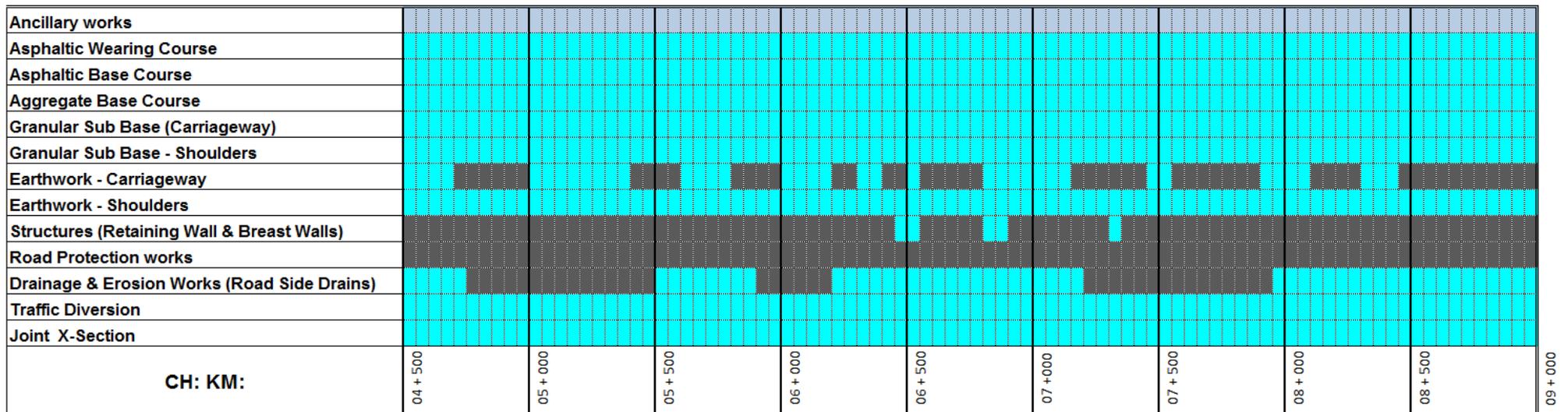
3.1 CUMULATIVE MILESTONE WISE PROGRESS STATUS (SECTION-I)

| BILL NO | DESCRIPTION | MILESTONE UNIT | NUMBER OF MILESTONES | AMOUNT AS PER MILESTONE (US \$) | TOTAL AMOUNT (US \$) | PROGRESS UPTO PREVIOUS MONTH | | | PROGRESS IN THE REPORTING MONTH | | | MILESTONE WISE CUMULATIVE 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 | 57,059 | 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 | 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 | 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 | 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 | 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 | 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 | 2.00 | 21,315.10 | 100.00 | | | | 2.00 | 21,315.10 | 100.00 |
| 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 | 4.95 | 1,232,563.76 | 90.00 | | - | - | 4.95 | 1,232,563.76 | 90.00 |
| ii | DRAIN TYPE D-1a & D-2a (UNCOVERED) | KM | 3 | 110,128.52 | 330,385.56 | 2.73 | 300,100.22 | 90.83 | | - | - | 3.00 | 330,385.56 | 100.00 |
| iii | DRAIN TYPE D-3 (Converted to D-2 type) | KM | 1.5 | 135,439.74 | 203,159.61 | 1.50 | 203,159.61 | 100.00 | | | | 1.50 | 203,159.61 | 100.00 |
| 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 | 0.43 | 23,381.46 | 43.00 | 0.90 | 48,937.94 | 90.00 |
| 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 | | 9,759,298 | 97.81 | | 23,381.46 | 0.23 | | 9,812,965 | 98.35 |

3.2 PHYSICAL PROGRESS STATUS (SECTION-I)



04 + 500

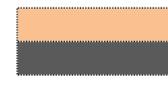


09 + 000

LEGEND



WORKS COMPLETED IN OCTOBER 2014
 WORKS COMPLETED IN PREVIOUS MONTHS
 PARTIAL COMPLETION



SINGLE LANE TRAFFIC MAINTAINED
 ITEM NOT REQUIRED

3.3 CULVERTS PHYSICAL PROGRESS STATUS (SECTION-I)

| | | | | | | | | | | | | | | | |
|--|--|-------|---------|---------|--------------------------------|---------|-------|---------|---------|---------|---------|---------|---------|---------|---------|
| RCC Railing | Deleted - Replaced with Pipe Culvert Extension | | | | Culvert shifted to Section-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 | | | | | | | | | | | | | | | |
| Size of Culvert (No. of Span*Width*Height) | | | 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 |
| Activity | | | | | | | | | | | | | | | |
| KM | 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 | |



ACTIVITIES COMPLETED IN PREVIOUS MONTHS



ACTIVITIES NOT REQUIRED

CIVIL WORKS SECTION-II

4.1 CUMULATIVE MILESTONE WISE PROGRESS STATUS (SECTION – II)

| BILL NO | DESCRIPTION OF BILL | MILESTONE UNIT | NUMBER OF MILESTONES | AMOUNT AS PER MILESTONE (US \$) | TOTAL AMOUNT (US \$) | PROGRESS UPTO PREVIOUS MONTH | | | 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 | 9.50 | 961,828 | 95.00 | 0.50 | 50,623 | 5.00 | 10.00 | 1,012,450 | 100.00 |
| 2 | SUB BASE AND BASE COURSE | | | | | | | | | | | | | |
| a | GRANULAR SUB BASE | 500 m | 10 | 27,073 | 270,730 | 9.50 | 257,194 | 95.00 | 0.50 | 13,537 | 5.00 | 10.00 | 270,730 | 100.00 |
| b | WATER BOUND MACADAM | 500 m | 4.6 | 28,702 | 132,029 | 4.00 | 114,808 | 86.96 | 0.60 | 17,221 | 13.04 | 4.60 | 132,029 | 100.00 |
| c | ASPHALTIC BASE COURSE | 500 m | 4.6 | 221,168 | 1,017,373 | 3.50 | 774,088 | 76.09 | 1.10 | 243,284.85 | 23.91 | 4.60 | 1,017,373 | 100.00 |
| 3 | SURFACE COURSES AND PAVEMENT | | | | | | | | | | | | | |
| a | ASPHALTIC CONCRETE FOR WEARING COURSE AND ALLIED ACTIVITIES | 500 m | 4.6 | 104,708 | 481,657 | 3.50 | 366,478 | 76.09 | 1.10 | 115,178.85 | 23.91 | 4.60 | 481,657 | 100.00 |
| b | RIGID PAVEMENT (6.15 m Width Lane of 500 m) | 500 m | 10.8 | 262,510 | 2,835,108 | 10.40 | 2,730,104 | 96.30 | 0.40 | 105,004 | 3.70 | 10.80 | 2,835,108 | 100.00 |
| 4a | STRUCTURES (RETAINING WALL /BREAST WALL) | | | | | | | | | | | | | |
| 4a - i | RETAINING WALL - 1975 M | 100 m | 19.75 | 70,864 | 1,399,564 | 18.25 | 1,293,268 | 92.41 | 1.11 | 78,305 | 5.59 | 19.36 | 1,371,573 | 98.00 |
| 4a - ii | BREAST WALL - 325 M | 100 m | 3.25 | 28,169 | 91,549 | 3.00 | 84,506 | 92.31 | 0.19 | 5,211.23 | 5.69 | 3.19 | 89,718 | 98.00 |
| 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 | 1.996 | 66,613 | 99.80 | 0.004 | 133.49 | 0.20 | 2.000 | 66,746 | 100.00 |
| | 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 | 0.05 | 2,167.50 | 2.50 | 2.00 | 86,700 | 100.00 |
| | 1 x 2 x 3 (Rigid Pavement) | No | 0 | - | - | - | - | - | - | - | - | - | - | - |
| | 1 x 2 x 3 (15° skew) | No | 1 | 44,585 | 44,585 | 0.92 | 41,019 | 92.00 | 0.08 | 3,566.83 | 8.00 | 1.00 | 44,585 | 100.00 |
| | 1 x 2 x 3 (30° skew) | No | 1 | 48,068 | 48,068 | 0.96 | 46,145 | 96.00 | 0.04 | 1,922.70 | 4.00 | 1.00 | 48,068 | 100.00 |

CUMULATIVE MILESTONE WISE PROGRESS STATUS (SECTION – II)

| BILL NO | DESCRIPTION OF BILL | MILESTONE UNIT | NUMBER OF MILESTONES | AMOUNT AS PER MILESTONE (US \$) | TOTAL AMOUNT (US \$) | PROGRESS UPTO PREVIOUS QUARTER | | | PROGRESS IN THIS QUARTER | | | 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 | 2.81 | 92,963 | 93.67 | 0.19 | 6,285.77 | 6.33 | 3.00 | 99,249 | 100.00 |
| | 1 x 2 x 2.5 (30° skew)(Flexible Pavement) | No | 1 | 36,376 | 36,376 | 0.94 | 34,193 | 94.00 | 0.06 | 2,182.56 | 6.00 | 1.00 | 36,376 | 100.00 |
| | 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 | 0.90 | 80,467 | 90.00 | 0.10 | 8,940.80 | 10.00 | 1.00 | 89,408 | 100.00 |
| | 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 | 0.96 | 80,221 | 96.00 | 0.04 | 3,342.56 | 4.00 | 1.00 | 83,564 | 100.00 |
| | 1 x 3 x 2.5 (15° skew) | No | 1 | 38,000 | 38,000 | 0.95 | 36,100 | 95.00 | 0.05 | 1,900.00 | 5.00 | 1.00 | 38,000 | 100.00 |
| | 1 x 3 x 4.5 (15° skew) | No | 1 | 88,589 | 88,589 | 0.95 | 84,159 | 95.00 | 0.05 | 4,429.43 | 5.00 | 1.00 | 88,589 | 100.00 |
| | Service Ducts | No | 23 | 2,666 | 61,318 | 19.00 | 50,654 | 82.61 | 4.00 | 10,664.00 | 17.39 | 23.00 | 61,318 | 100.00 |
| 5a | DRAINAGE & EROSION WORKS (ROAD SIDE DRAIN) | | | | | | | | | | | | | |
| i | DRAIN TYPE D-1 (COVERED) - (0.8 KM) | JOB | 1 | 161,945 | 161,945 | 0.38 | 60,729 | 37.50 | 0.00 | - | - | 0.38 | 60,729 | 37.50 |
| ii | DRAIN TYPE D-4 (0.875 KM) | JOB | 1 | 232,586 | 232,586 | 0.66 | 152,809 | 65.70 | 0.00 | - | - | 0.66 | 152,809 | 65.70 |
| 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 | 4.00 | 122,316.00 | 80.00 | 1.00 | 30,579.00 | 20.00 | 5.00 | 152,895.00 | 100.00 |
| 8 | MISCELLANEOUS (Relocation of utilities and plantation) | JOB | 1 | 17,460 | 17,460 | - | - | - | - | - | - | - | - | - |
| | TOTAL | | | | 9,383,484 | | 7,846,309 | 83.62 | | 704,478 | 7.51 | | 8,550,787 | 91.13 |

4.3 CULVERTS PHYSICAL PROGRESS STATUS (SECTION-II)

| | | | | | | | | | | | | | | | | | | |
|--|------------|----------|------------------|------------------|----------------|------------------|----------|------------------|---------|------------------|-----------|------------------|------------------|------------------|------------------|--------|------------------|---------|
| RCC Railing | U/S side | | | | | | | | | | | | | | | | | |
| | D/S side | | | | | | | | | | | | | | | | | |
| Roll Pointing | Abt No1 | | | | | | | | | | | | | | | | | |
| | Abt No2 | | | | | | | | | | | | | | | | | |
| Flooring/Cut-off wall/ Riprap | B/W Abts | | | | | | | | | | | | | | | | | |
| RCC Slab cast insitu | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | | | | |
| Pavement Type | Rigid/Flex | Flexible | Flexible | Flexible | Flexible | Flexible | Flexible | Flexible | Rigid | Rigid | Rigid | Rigid | Rigid | Rigid | | Rigid | Rigid | Rigid |
| Construction Sequence (FW/HW) | | FW | FW | FW | FW | FW | FW | FW | FW | HW LHS | HW LHS | FW | FW | FW | FW | FW | FW | FW |
| Size of Culvert (No. of Span*Width*Height) | | 1*2*3 | 1*2*2.5 (22M) | 1*2*4.5 (22M) | 1*3*4 (22M) | 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 | | 10+050 | 10+502 | 10+562 | 10+602 | 10+788 | | 10+961 | 11+372 | 11+691 | 11+841 | 12+178 | 12+337 | 12+460 | 12+975 | 13+212 | 13+333 | 13+565 |
| KM as per Drawing | | 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 OCTOBER 2014



ACTIVITIES NOT REQUIRED



ACTIVITIES COMPLETED IN PREVIOUS MONTHS



ACTIVITIES IN PROGRESS

CIVIL WORKS SECTION-III

5.1 CUMULATIVE MILESTONE WISE PROGRESS STATUS (SECTION - III)

| BILL NO | DESCRIPTION OF BILL | MILESTONE UNIT | NUMBER OF MILESTONES | AMOUNT AS PER MILESTONE (US \$) | TOTAL AMOUNT (US \$) | PROGRESS UPTO PREVIOUS QUARTER | | | PROGRESS IN THE REPORTING QUARTER | | | MILESTONE WISE COMULATIVE PROGRESS | | |
|---------|---|----------------|----------------------|---------------------------------|----------------------|--------------------------------|----------------|------------|-----------------------------------|----------------|------------|------------------------------------|----------------|------------|
| | | | | | | MILESTONE ACHIEVED | AMOUNT (US \$) | PROGRESS % | MILESTONE ACHIEVED | AMOUNT (US \$) | PROGRESS % | MILESTONE ACHIEVED | AMOUNT (US \$) | PROGRESS % |
| 1 | EARTH WORK | 500m | 10 | 104,451.00 | 1,044,510.00 | 9.5 | 992,284.50 | 95 | 0.4 | 41,780.40 | 4.00 | 9.9 | 1,034,064.90 | 99.00 |
| 2 | SUB BASE AND BASE COURSE | | | | | | | | | | | | | |
| a | GRANULAR SUB BASE | 500m | 11.80 | 39,882.00 | 470,607.60 | 11.0 | 438,702.00 | 93.22 | 0.682 | 27,199.52 | 5.78 | 11.7 | 465,901.52 | 99.00 |
| b | WATER BOUND MACADAM | 500m | 4.70 | 28,023.00 | 131,708.10 | 4.7 | 131,708.10 | 100.00 | 0.0 | - | 0.00 | 4.7 | 131,708.10 | 100.00 |
| c | ASPHALTIC BASE COURSE | 500m | 4.70 | 212,362.00 | 998,101.40 | 4.4 | 934,392.80 | 93.62 | 0.3 | 63,708.60 | 6.38 | 4.7 | 998,101.40 | 100.00 |
| 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 | 4.4 | 444,400.00 | 93.62 | 0.3 | 30,300.00 | 6.38 | 4.7 | 474,700.00 | 100.00 |
| b | RIGID PAVEMENT (HALF PAVEMENT WIDTH) | 500m | 14.30 | 216,504.00 | 3,096,007.20 | 11 | 2,381,544.00 | 76.92 | 2.89 | 625,696.56 | 20.21 | 13.9 | 3,007,240.56 | 97.13 |
| 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 | - | - | - | 0.00 | - | 0.00 | - | - | 0.00 |
| c | RETAINING WALL (RW-2) : H= 2.5 M ; L= 1075 M | 100M | 10.75 | 19,044.00 | 204,723.00 | 10.00 | 190,440.00 | 93.02 | 0.00 | - | 0.00 | 10.00 | 190,440.00 | 93.02 |
| 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 | 0.48 | 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 | 4.25 | 397,417.50 | 70.83 | 0.00 | - | 0.00 | 4.25 | 397,417.50 | 70.83 |
| 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 | - | - | - | - | - | - | - | - | - |

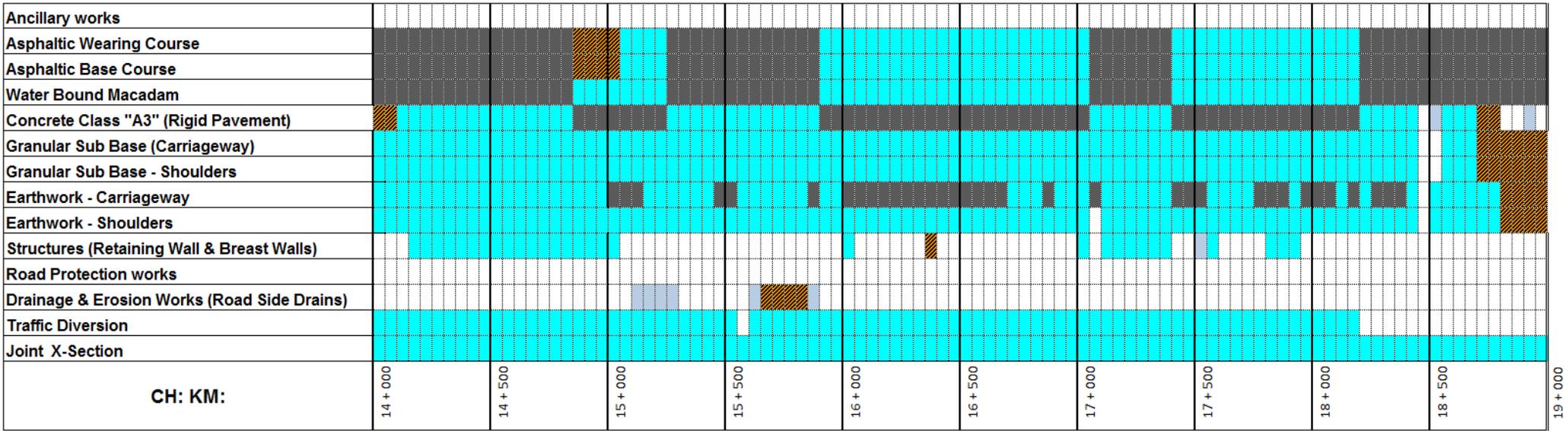
CUMULATIVE MILESTONE WISE PROGRESS STATUS (SECTION – III)

| BILL NO | DESCRIPTION OF BILL | MILESTONE UNIT | NUMBER OF MILESTONES | AMOUNT AS PER MILESTONE (US \$) | TOTAL AMOUNT (US \$) | PROGRESS UPTO PREVIOUS QUARTER | | | PROGRESS IN THIS QUARTER | | | 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 | 1.00 | 33,442.00 | 100.00 | 0 | - | 0.00 | 1.00 | 33,442.00 | 100.00 |
| | 1 x 2 x 3 (Flexible Pavement) | No | 1 | 44,315.00 | 44,315.00 | 1.00 | 44,315.00 | 100.00 | 0 | - | 0.00 | 1.00 | 44,315.00 | 100.00 |
| | 1 x 2 x 4.5 (Flexible Pavement) | No | 1 | 83,501.00 | 83,501.00 | 1.00 | 83,501.00 | 100.00 | 0 | - | 0.00 | 1.00 | 83,501.00 | 100.00 |
| | 1 x 2 x 3 (Loop-1 Rigid Pavement) | No | 2 | 40,667.00 | 81,334.00 | 1.62 | 65,880.54 | 81.00 | 0 | - | 0.00 | 1.62 | 65,880.54 | 81.00 |
| | 1 x 2 x 3 (Loop-1 Rigid Pavement) | No | 1 | 52,479.00 | 52,479.00 | 0.744 | 39,044.38 | 74.40 | 0 | - | 0.00 | 0.744 | 39,044.38 | 74.40 |
| 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 | 1.00 | 27,031.00 | 100.00 | 0.00 | - | 0.00 | 1.00 | 27,031.00 | 100.00 |
| | 1 x 2 x 2.5 | No | 2 | 33,621.00 | 67,242.00 | 1.91 | 64,216.11 | 95.50 | 0.09 | 3,025.89 | 4.50 | 2.00 | 67,242.00 | 100.00 |
| | 1 x 2 x 2.5 (Rigid Pavement) | No | 2 | 33,818.00 | 67,636.00 | 1.97 | 66,621.46 | 98.50 | 0.03 | 1,014.54 | 1.50 | 2.00 | 67,636.00 | 100.00 |
| | 1 x 2 x 2.5(15° skew) | No | 1 | 34,445.00 | 34,445.00 | 1.00 | 34,445.00 | 100.00 | 0.00 | - | - | 1.00 | 34,445.00 | 100.00 |
| | 1 x 2 x 2.5(30° skew) | No | 1 | 37,186.00 | 37,186.00 | 1.00 | 37,186.00 | 100.00 | 0.00 | - | - | 1.00 | 37,186.00 | 100.00 |
| | 1 x 2 x 3 (15° skew) | No | 1 | 45,559.00 | 45,559.00 | 0.99 | 45,103.41 | 99.00 | 0.01 | 455.59 | - | 1.00 | 45,559.00 | 100.00 |
| | 1 x 2 x 3 (30° skew) | No | 1 | 49,119.00 | 49,119.00 | 0.98 | 48,136.62 | 98.00 | 0.02 | 982.38 | 2.00 | 1.00 | 49,119.00 | 100.00 |
| | 1 x 2 x 2.5 (Loop-1) | No | 3 | 30,901.00 | 92,703.00 | 2.87 | 88,685.87 | 95.67 | 0.13 | 4,017.13 | 4.33 | 3.00 | 92,703.00 | 100.00 |
| | 2 x 2 x 2.5 | No | 1 | 39,933.00 | 39,933.00 | 0.91 | 36,339.03 | 91.00 | 0.00 | - | 0.00 | 0.91 | 36,339.03 | 91.00 |
| | Service Ducts | No | 6 | 2,725.00 | 16,350.00 | 6.00 | 16,350.00 | 100.00 | 0.00 | - | 0.00 | 6.00 | 16,350.00 | 100.00 |
| 5a | DRAINAGE & EROSION WORKS (ROAD SIDE DRAIN) | | | | | | | | | | | | | |
| i | DRAIN TYPE D-3a (7.0 KM) | 500m | 14 | 18,007.00 | 252,098.00 | - | - | - | 0.42 | 7562.94 | 3.00 | 0.42 | 104871.80 | 3.00 |
| 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 | - | - | - | - | - | - | - | - | - |

CUMULATIVE MILESTONE WISE PROGRESS STATUS (SECTION – III)

| BILL NO | DESCRIPTION OF BILL | MILESTONE UNIT | NUMBER OF MILESTONES | AMOUNT AS PER MILESTONE (US \$) | TOTAL AMOUNT (US \$) | PROGRESS UPTO PREVIOUS QUARTER | | | PROGRESS IN THIS QUARTER | | | 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 | 4 | 125,036.00 | 80.00 | 0.50 | 15,629.50 | 10.00 | 4.5 | 140,665.50 | 90.00 |
| 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 | 1 | 58,744.00 | 100.00 | 0.00 | | 0 | 1 | 58,744.00 | 100.00 |
| ii | SHIFTING OF O.F.C FROM KM: 09 TO KM: 14 | JOB | 1 | 58,744.00 | 58,744.00 | 1 | 58,745.00 | 100.00 | 0.00 | | 0 | 1 | 58,744.00 | 100.00 |
| iii | SHIFTING OF O.F.C FROM KM: 14 TO KM: 19 | JOB | 1 | 58,744.00 | 58,744.00 | - | - | - | - | - | 0 | - | - | 0 |
| 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 | - | - | - | 0.93 | 53,668.44 | 93.00 | 1 | 57,708.00 | 100.00 |
| 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 | - | - | - | 1.00 | 52,918.00 | 100.00 | 1 | 52,918.00 | 100.00 |
| 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 | | 7,068,659 | 74.31 | | 927,959 | 9.75 | | 8,097,966 | 85.13 |

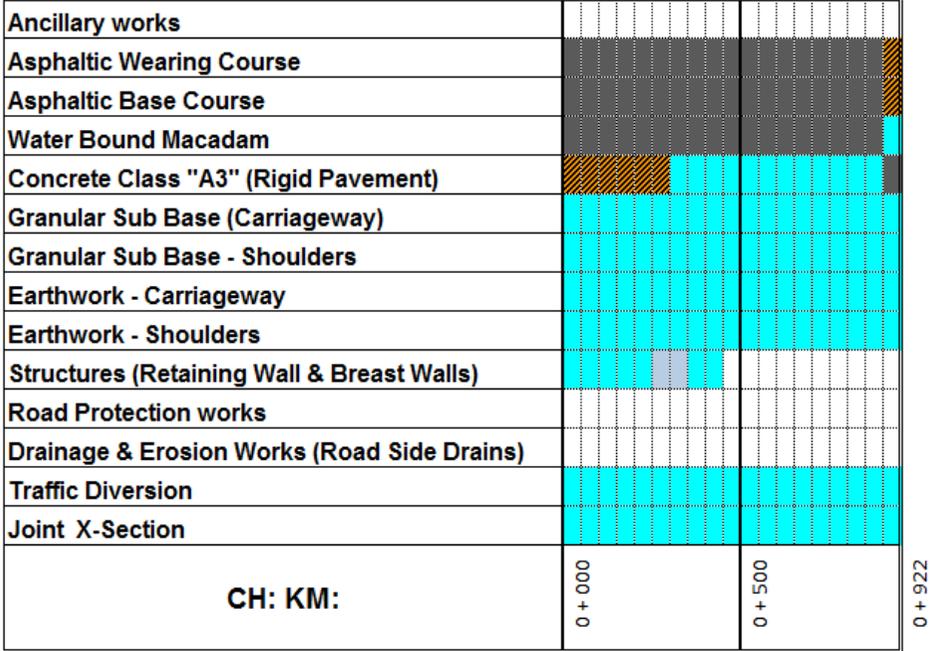
5.2 PAVEMENT CONSTRUCTION PHYSICAL PROGRESS STATUS (SECTION – III)



LEGEND



PAVEMENT CONSTRUCTION PHYSICAL PROGRESS STATUS (Loop-I)



LEGEND

-  WORKS COMPLETED IN OCTOBER 2014
-  WORKS COMPLETED IN PREVIOUS MONTHS
-  PARTIAL COMPLETION

-  SINGLE LANE TRAFFIC MAINTAINED
-  ITEM NOT REQUIRED

5.3 CULVERTS PHYSICAL PROGRESS STATUS (SECTION – III)

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|---------|------------------|---------|------------------|---------|------------------|---------|-----------|---------|---------|----------|----------|----------|----------|----------|-----------|-----------|---------------|----------|-----------|-----------|-----------|-----------|
| RCC Railing | U/S side | | | | | | | | | | | | | | | | | | | | | | | |
| | D/S side | | | | | | | | | | | | | | | | | | | | | | | |
| Roll Pointing | Abt No1 | | | | | | | | | | | | | | | | | | | | | | | |
| | Abt No2 | | | | | | | | | | | | | | | | | | | | | | | |
| Flooring/Cut-off wall/ Riprap | B/W Abts | | | | | | | | | | | | | | | | | | | | | | | |
| RCC Slab/Precast Pannels | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | | | | | | | | | | |
| Pavement Type | Rigid/ Flex | Rigid | Rigid | Rigid | Rigid | Rigid | Rigid | Rigid | | Rigid | Rigid | Flexible | Flexible | Flexible | Flexible | Flexible | Flexible | Flexible | Flexible | Flexible | Flexible | | | |
| Construction Sequence(FW / HW) | | FW | FW | FW | FW | FW | FW | FW | HW RHS | FW | FW | FW | FW | FW | FW | FW | HW LHS | HW RHS | FW | FW | HW LHS | HW RHS | HW LHS | HW RHS |
| Size of Culvert (No. of Span*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*3 | 1*2*2.5 | | | |
| KM as per site | | | | | | 14+333 | | | 15+139 | 15+647 | 15+795 | 16+316 | 16+618 | 16+740 | 17+010 | 17+435 | 17+562 | 17+666 | 17+901 | 18+146 | | | | |
| KM as in Drawing | | 14+250 | 14+250 (Loop) | 14+300 | 14+300 (Loop) | 14+431 | 14+431 (Loop) | 14+600 | 15+138 | 15+640 | 15+795 | 16+313 | 16+625 | 16+750 | 16+996 | 17+400 | 17+561 | 17+665 | 17+909 (Skew) | 18+142 | | | | |



ACTIVITIES COMPLETED IN OCTOBER 2014



ACTIVITIES NOT REQUIRED



ACTIVITIES COMPLETED IN PREVIOUS MONTHS



ACTIVITIES IN PROGRESS

BRIDGES

6.1 BRIDGE (KM: 09+560) CUMULATIVE MILESTONE WISE PROGRESS STATUS

| S No | Description | Unit Cost (\$) | Progress upto Previous Month | | | Progress in this Month | | | Cumulative Progress | | |
|------|--|------------------|------------------------------|---------------------|--------------|------------------------|---------------------|------------|---------------------|---------------------|--------------|
| | | | Milestone Value | Milestone Cost (\$) | Progress % | Milestone Value | Milestone Cost (\$) | Progress % | Milestone Value | Milestone Cost (\$) | Progress % |
| 1 | Pile Load Test | 19,330 | 1 | 19,330 | 100 | - | - | - | 1 | 19,330 | 100 |
| | Construction of Piles | 290,674 | 1 | 290,674 | 100 | - | - | - | 1 | 290,674 | 100 |
| 2 | Pile Caps | 108,538 | 1 | 108,538 | 100 | - | - | - | 1 | 108,538 | 100 |
| | Abut walls, wing walls, pier shafts & transoms | 169,925 | 1 | 169,925 | 100 | - | - | - | 1 | 169,925 | 100 |
| 3 | Girders | 242,915 | 1 | 242,915 | 100 | - | - | - | 1 | 242,915 | 100 |
| | Launching of Girders | 15,169 | 1 | 15,169 | 100 | - | - | - | 1 | 15,169 | 100 |
| 4 | Deck Slabs ,Diaphragms, Barrier & Railing | 277,403 | 0.95 | 263,533 | 95 | - | - | - | 0.95 | 263,533 | 95.00 |
| 5 | Surface course & Pavement | 14,400 | | - | - | 1 | 14,400 | 100 | 1 | 14,400 | 100.00 |
| | Structural Excavation and Backfill | 19,361 | 0.30 | 5,808 | 30 | 0.7 | 13,553 | 70 | 1 | 19,361 | 100.00 |
| | Approach Slabs | 14,152 | | - | - | 1 | 14,152 | 100 | 1 | 14,152 | 100.00 |
| | Drainage & Erosion works including 45.30M Stone Masonry Retaining Walls & Gabion protection works | 52,425 | 0.50 | 26,213 | 50 | - | - | - | 0.5 | 26,213 | 50.00 |
| | Ancillary Works including (i) 02 Number Road Sign Category -3a. (ii) 195M Pavement marking in Reflective TP Paint for Lines of 15 cm width (iii) 26 number Reflectorized pavement Studs Raised Profile Type - (Double) | 1,673 | | - | - | - | - | - | | - | - |
| | | 1,225,965 | | 1,142,105 | 93.16 | | 42,105 | 3 | | 1,184,209 | 96.59 |

6.2 BRIDGE (KM: 09+560) PHYSICAL PROGRESS STATUS

| BRIDGES | DESCRIPTION | TOTAL | COMPLETED | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | REMARKS |
|---------------------------|-------------------------|-------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|---------|
| | | | | | | | | | | | | | | |
| KM: 09+560 | | | | | | | | | | | | | | |
| BRIDGE #2 (KM: 09+560) | Piles | 36 | 36 | | | | | | | | | | | |
| | Pile Caps | 4 | 4 | | | | | | | | | | | |
| | Abutments/ Piers | 4 | 4 | | | | | | | | | | | |
| | Transom/ Abutment Seats | 4 | 4 | | | | | | | | | | | |
| | Girder Casting | 15 | 15 | | | | | | | | | | | |
| | Girder Prestressing | 15 | 15 | | | | | | | | | | | |
| | Girder Launching | 15 | 15 | | | | | | | | | | | |
| | Deck Slab / Barrier | 3 | 3 | | | | | | | | | | | |
| | Expansion Joint | 4 | | | | | | | | | | | | |
| | Approach Slab | 2 | 2 | | | | | | | | | | | |



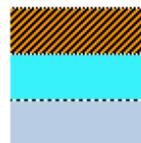
WORKS COMPLETED IN OCTOBER 2014

WORKS COMPLETED IN PREVIOUS MONTHS

PARTIAL COMPLETION

6.3 BRIDGE (KM: 18+475) PHYSICAL PROGRESS STATUS

| BRIDGES | DESCRIPTION | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | REMARKS | | |
|--------------------------|--|-------------------|-----|-----|-------------------|-----|-----|-------------------|-----|-----|-------------------|---------|--|--|
| | | KM: 18+475 | | | | | | | | | | | | |
| BRIDGE #5 (KM:18+475) | Dismantling of Existing structure | [100% completion] | | | | | | | | | | | | |
| | Structural Excavation for Slab on Ground | [100% completion] | | | | | | | | | | | | |
| | Lean Concrete | [100% completion] | | | | | | | | | | | | |
| | Foundation Slab & cutoff wall concrete | [100% completion] | | | | | | | | | | | | |
| | Abutment walls construction | [100% completion] | | | [100% completion] | | | [100% completion] | | | [100% completion] | | | |
| | Abutment seat construction | [0% completion] | | | | | | | | | | | | |
| | Curtain wall and Approach slab seat | [0% completion] | | | | | | | | | | | | |
| | RCC Deck slab | [0% completion] | | | | | | | | | | | | |
| | Protection Works | [0% completion] | | | | | | | | | | | | |
| | Backfilling | [0% completion] | | | | | | | | | | | | |
| | NJ Barrier | [0% completion] | | | | | | | | | | | | |
| | Footpath Paving | [0% completion] | | | | | | | | | | | | |
| | Bridge Railing | [0% completion] | | | | | | | | | | | | |
| | Approach slabs | [0% completion] | | | | | | | | | | | | |
| Ancillary Works | [0% completion] | | | | | | | | | | | | | |



WORKS COMPLETED IN OCTOBER 2014
WORKS COMPLETED IN PREVIOUS MONTHS
PARTIAL COMPLETION

6.4 BRIDGE (KM: 23+850) CUMULATIVE MILESTONE WISE PROGRESS STATUS

| Sl No | Description | Unit Cost (\$) | Progress upto Previous Month | | | Progress in this Month | | | Cumulative Progress | | |
|-------|--|------------------|------------------------------|---------------------|--------------|------------------------|---------------------|-------------|---------------------|---------------------|--------------|
| | | | Milestone Value | Milestone Cost (\$) | Progress % | Milestone Value | Milestone Cost (\$) | Progress % | Milestone Value | Milestone Cost (\$) | Progress % |
| 1 | Pile Load Test | 19,330 | 1 | 19,330 | 100 | - | - | - | 1 | 19,330 | 100 |
| | Construction of Piles | 309,308 | 1 | 309,308 | 100 | - | - | - | 1 | 309,308 | 100 |
| 2 | Pile Caps | 106,579 | 1 | 106,579 | 100 | - | - | - | 1 | 106,579 | 100 |
| | Abut walls, wing walls, pier shafts & transoms | 90,180 | 0.33 | 29,759 | 33 | 0.67 | 60,421 | 67 | 1 | 90,180 | 100 |
| 3 | Girders | 187,363 | 1 | 187,363 | 100 | 0 | - | - | 1 | 187,363 | 100 |
| | Launching of Girders | 11,914 | - | - | - | 1 | 11,914 | 100 | 1 | 11,914 | 100 |
| 4 | Deck Slabs ,Diaphragms, Barrier & Railing | 254,785 | - | - | - | - | - | - | - | - | - |
| 5 | Surface course & Pavement | 13,125 | - | - | - | - | - | - | - | - | - |
| | Structural Excavation and Backfill | 57,939 | - | - | - | - | - | - | - | - | - |
| | Approach Slabs | 17,235 | - | - | - | - | - | - | - | - | - |
| | Drainage & Erosion works including 45.30M Stone Masonry Retaining Walls & Gabion protection works | 322,224 | - | - | - | - | - | - | - | - | - |
| | Ancillary Works including (i) 02 Number Road Sign Category -3a. (ii) 195M Pavement marking in Reflective TP Paint for Lines of 15 cm width (iii) 26 number Reflectorized pavement Studs Raised Profile Type - (Double) | 2,320 | - | - | - | - | - | - | - | - | - |
| | | 1,392,302 | | 652,339 | 46.85 | | 72,335 | 5.20 | | 724,674 | 52.05 |

6.5 BRIDGE (KM: 23+850) PHYSICAL PROGRESS STATUS

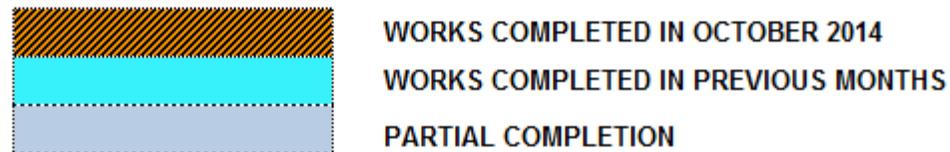
| BRIDGES | DESCRIPTION | TOTAL | COMPLETED | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | REMARKS |
|---------------------------|-------------------------|-------|-----------|----------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|---------|
| | | | | | | | | | | | | | | |
| KM: 23+850 | | | | | | | | | | | | | | |
| BRIDGE #10 (KM:23+850) | Piles | 30 | 30 | [100% Complete] | | | | | | | | | | |
| | Pile Caps | 3 | 3 | [100% Complete] | | | | | | | | | | |
| | Abutments/ Piers | 3 | 3 | [100% Complete] | | | | | | | | | | |
| | Transom/ Abutment Seats | 3 | 3 | [100% Complete] | | | | | | | | | | |
| | Girder Casting | 10 | 10 | [100% Complete] | | | | | | | | | | |
| | Girder Prestressing | 10 | 10 | [100% Complete] | | | | | | | | | | |
| | Girder Launching | 10 | 10 | [Partial Completion] | | | | | | | | | | |
| | Deck Slab / Barrier | 2 | | [0% Complete] | | | | | | | | | | |
| | Expansion Joint | 3 | | [0% Complete] | | | | | | | | | | |
| | Approach Slab | 2 | | [0% Complete] | | | | | | | | | | |



WORKS COMPLETED IN OCTOBER 2014
WORKS COMPLETED IN PREVIOUS MONTHS
PARTIAL COMPLETION

6.6 BRIDGE (KM: 27+250) PHYSICAL PROGRESS STATUS

| BRIDGES | DESCRIPTION | TOTAL | COMPLETED | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | REMARKS |
|--------------------------|-------------------------|-------|-----------|--|-----|-----|-----|-----|-----|-----|-----|-----|------|---------|
| | | | | KM: 27+250 | | | | | | | | | | |
| BRIDGE#12 (KM:27+250) | Piles | 36 | 34 | [Progress bar: 94.4% completed in previous months] | | | | | | | | | | |
| | Pile Caps | 6 | 1 | [Progress bar: 16.7% completed in October 2014] | | | | | | | | | | |
| | Abutments/ Piers | 5 | | [Progress bar: 0% completed] | | | | | | | | | | |
| | Transom/ Abutment Seats | 5 | | [Progress bar: 0% completed] | | | | | | | | | | |
| | Pre cast Panels Casting | 65 | 26 | [Progress bar: 40% completed in previous months] | | | | | | | | | | |
| | Girder Launching | 65 | | [Progress bar: 0% completed] | | | | | | | | | | |
| | Deck Slab / Barrier | 5 | | [Progress bar: 0% completed] | | | | | | | | | | |
| | Expansion Joint | 6 | | [Progress bar: 0% completed] | | | | | | | | | | |
| | Approach Slab | 2 | | [Progress bar: 0% completed] | | | | | | | | | | |



6.7 MCC (KM: 11+190) CUMULATIVE MILESTONE WISE PROGRESS STATUS

| S No | Description | Unit Cost (\$) | Progress upto Previous Month | | | Progress in this Month | | | Cumulative Progress | | |
|------|--|----------------|------------------------------|---------------------|--------------|------------------------|---------------------|------------|---------------------|---------------------|--------------|
| | | | Milestone Value | Milestone Cost (\$) | Progress % | Milestone Value | Milestone Cost (\$) | Progress % | Milestone Value | Milestone Cost (\$) | Progress % |
| 1 | Bottom Slab & Cutt-off wall | 131,970 | 1 | 131,970 | 100.00 | - | - | - | 1 | 131,970 | 100.00 |
| | Box Walls | 86,096 | 1 | 86,096 | 100.00 | - | - | - | 1 | 86,096 | 100.00 |
| 2 | Top Slab | 150,422 | 1 | 150,422 | 100.00 | - | - | - | 1 | 150,422 | 100.00 |
| | Wing Walls & Apron | 149,336 | 1 | 149,336 | 100.00 | - | - | - | 1 | 149,336 | 100.00 |
| 3 | Approach Slabs | 14,537 | 1 | 14,537 | 100.00 | - | - | - | 1 | 14,537 | 100.00 |
| | Stone Pitching 60 meter length | 6,671 | - | - | - | - | - | - | - | - | - |
| 4 | Surface course & Pavement | 11,293 | 1 | 11,293 | 100.00 | - | - | - | 1 | 11,293 | 100.00 |
| | Drainage & Erosion works including 51.0M stone masonry R/Walls including Gabion protection works | 52,803 | 0.95 | 50,163 | 95.00 | - | - | - | 0.95 | 50,163 | 95.00 |
| | Ancillary Works including (i) 02 Number Road Sign Category - 3a. (ii) 142M Pavement marking in Reflective TP Paint for Lines of 15 cm width (iii) 12 Number Reflectorized pavement Stud Raised Profile Type - (Double) | 1,423 | - | - | - | - | - | - | - | - | - |
| | | 604,551 | | 593,817 | 98.22 | | - | - | | 593,817 | 98.22 |

6.8 MCC (KM: 22+925)

CUMULATIVE MILESTONE WISE PROGRESS STATUS

| S No | Units | Unit Cost (\$) | Progress upto Previous Month | | | Progress in this Month | | | Cumulative Progress | | |
|------|--|----------------|------------------------------|---------------------|--------------|------------------------|---------------------|--------------|---------------------|---------------------|--------------|
| | | | Milestone Value | Milestone Cost (\$) | Progress % | Milestone Value | Milestone Cost (\$) | Progress % | Milestone Value | Milestone Cost (\$) | Progress % |
| 1 | Bottom Slab & Cutt-off wall | 113,545 | 1 | 113,545 | 100.00 | - | - | - | 1 | 113,545 | 100.00 |
| | Box Walls | 79,827 | 1 | 79,827 | 100.00 | - | - | - | 1 | 79,827 | 100.00 |
| 2 | Top Slab | 97,807 | 0.5 | 48,904 | 50.00 | 0.5 | 48,904 | 50.00 | 1 | 97,807 | 100.00 |
| | Wing Walls & Apron | 96,200 | | - | - | 0.5 | 48,100 | 50.00 | 0.5 | 48,100 | 50.00 |
| 3 | Approach Slabs | 15,008 | | - | - | - | - | - | | - | - |
| | Stone Pitching 32.80 meter length | 8,231 | | - | - | - | - | - | | - | - |
| 4 | Surface course & Pavement | 8,628 | | - | - | - | - | - | | - | - |
| | Drainage & Erosion works including 51.0M stone masonry R/Walls including Gabion protection works | 25,166 | | - | - | - | - | - | | - | - |
| | Ancillary Works including (i) 02 Number Road Sign Category - 3a. (ii) 142M Pavement marking in Reflective TP Paint for Lines of 15 cm width (iii) 12 Number Reflectorized pavement Stud Raised Profile Type - (Double) | 1,303 | | - | - | - | - | - | | - | - |
| | | 445,715 | | 242,276 | 54.36 | | 97,004 | 21.76 | | 339,279 | 76.12 |

6.9 MULTICELL CULVERT PHYSICAL PROGRESS STATUS

| | | | | | | |
|---|------------------|-------------------|-------------------|--|--|--|
| Gabion wall Construction | U/S Side | | | | | |
| | D/S Side | | | | | |
| Retaining wall Construction | Near end | | | | | |
| | Far end | | | | | |
| RCC Railing | Near end | | | | | |
| | Far end | | | | | |
| Approach Slab Construction | Near end | | | | | |
| | Far end | | | | | |
| Backfilling | Near end | | | | | |
| | Far end | | | | | |
| RCC Top Slab | HW Near End | | | | | |
| | HW Far End | | | | | |
| RCC Wing Walls | U/S Side | | | | | |
| | D/S Side | | | | | |
| Concrete Cutoff wall & Apron Construction | U/S Side | | | | | |
| | D/S Side | | | | | |
| RCC Walls (Box only) | outer Walls | | | | | |
| | Inner Walls | | | | | |
| RCC Bottom Slab | 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 | | | |
| KM as per site | KM | 11+190 | 22+925 | | | |
| KM as in Drawing | KM | 11+190 | 22+926 | | | |

| | |
|---|---|
|  | ACTIVITIES COMPLETED IN OCTOBER 2014 |
|  | ACTIVITIES COMPLETED IN PREVIOUS MONTHS |
|  | ACTIVITIES NOT REQUIRED |
|  | ACTIVITIES IN PROGRESS |

QUALITY TEST REPORTS

7.1 SUMMARY OF FIELD DENSITY TESTS

| Sub Base Field Density Tests Report. | | | | | | | | | | | | |
|--|-------------|---|---------------|--------------|------------|---------|----------------|---------|---------------------|---------------------|---------|---------|
| S.No | Date | Location (KM) | Description | Station (KM) | MDD (g/cc) | OMC (%) | Adj.MDD (g/cc) | M.C (%) | Achieved Compaction | Required Compaction | Remarks | Remarks |
| 1 | 17-Oct-2014 | 17+750 ~ 18+800 F/W | Sube Base 2nd | 18+770 R/S | 2.363 | 5.8 | 2.363 | 5.2 | 98.9 | 98 | Pass | Pass |
| 2 | 19-Oct-2014 | 31+475 ~ 31+525 F/W | Sube Base 1st | 31+490 L/S | 2.371 | 5.1 | 2.374 | 4.5 | 99.1 | 98 | Pass | Pass |
| 3 | 20-Oct-2014 | 18+900 ~ 18+975 F/W | Sube Base 1st | 18+950 R/S | 2.363 | 5.8 | 2.367 | 5.0 | 98.5 | 98 | Pass | Pass |
| Water Bound Macadam Field Density Tests Report. | | | | | | | | | | | | |
| S.No | Date | Location (KM) | Description | Station (KM) | MDD (g/cc) | OMC (%) | Adj.MDD (g/cc) | M.C (%) | Achieved Compaction | Required Compaction | Remarks | Remarks |
| 1 | 15-Oct-2014 | 9+400 ~ 9+483 F/W | WBM | 9+460 L/S | 2.416 | 4.8 | 2.494 | 3.2 | 100.3 | 100 | Pass | Pass |
| 2 | 15-Oct-2014 | 9+575 ~ 9+675 F/W | WBM | 9+600 R/S | 2.416 | 4.8 | 2.475 | 3.6 | 100.4 | 100 | Pass | Pass |
| 3 | 20-Oct-2014 | 23+100 ~ 23+200 F/W | WBM | 23+175 R/S | 2.397 | 4.4 | 2.505 | 3.7 | 100.8 | 100 | Pass | Pass |
| 4 | 30-Oct-2014 | 23+400 ~ 23+500 F/W | WBM | 23+435 L/S | 2.397 | 4.4 | 2.487 | 3.5 | 97.6 | 100 | Note-1 | Note-1 |
| Note-1: | | Subsequent layers placement and compaction postponed until previous layer properly compacted/retested and accepted and accepted | | | | | | | | | | |

7.2 SUMMARY OF EARTH WORK QUALITY TESTS

| Sub Base Material Quality Tests for the Month of October 2014 | | | | | | | | | | | | | | | | | | |
|--|-----------------|-------------|----------------|-------|-------|-------|-------|-------|------|------------|-------|---------|-----------------|---------|------|------------------|---------------|---------|
| 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 | 30+000 ~ 32+000 | Sub Base | 100 | 73.8 | 49.3 | 38.3 | 28.4 | 18.1 | 12.2 | 2.371 | 5.1 | 27.8 | 29.1 | 74 | 81 | 2.772 | 4.6 | |
| 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 | |

7.3 WATER BOUND MACADAM QUALITY TEST REPORTS

| SUMMARY OF WATER BOUND MACADAM QUALITY TESTS FOR THE MONTH OF OCTOBER 2014 | | | | | | | | | | | | | | | | |
|---|-------------|---------------------|------------------|----------------|---------------|--------------|-------------|------------|------------|----------|----------------|-----------------|----------------|----------------|------------------|---------|
| S.No | Date | Location (KM) | Sampling Station | Sieve Analysis | | | | | MDD (g/cc) | OMC % | L.A (%) | Flakiness Index | Soundness (%) | Absorption (%) | Specific gravity | Remarks |
| | | | | 3" | 2½" | 2" | 1½" | 3/4" | | | | | | | | |
| 1 | 15-Oct-2014 | 9+400 ~ 9+483 F/W | 9+460 | - | - | - | - | - | - | - | - | - | - | 0.86 | 2.781 | |
| 2 | 23-Oct-2014 | 30+600 ~ 30+700 F/W | 30+650 | 100 | 84.9 | 37.4 | 10.3 | 4.4 | - | - | - | - | - | - | - | |
| 3 | 30-Oct-2014 | 31+000 ~ 32+000 F/W | 31+410 | 100 | 89 | 47.7 | 12.5 | 0.9 | 2.410 | 4.5 | 25.6 | 3.4 | - | 0.43 | 2.815 | |
| Specification Limits for Water Bound | | | | 100 | 90~100 | 25~75 | 0~15 | 0~5 | - | - | 45% Max | 15% Max | 12% Max | - | - | |
| Total Nos.of Tests | | | | 2 | | | | | 1 | 1 | 1 | 1 | - | 1 | 2 | |

7.4 ASPHALTIC BASE COURSE QUALITY TESTS REPORT

ASPHALTIC BASE COURSE QUALITY TESTS

| <u>Specific Gravity A.C (Gb) 1.030</u> | | | | | | | | | | <u>Combined Specific Gravity of Aggregate (Gsb) 2.766 (Repeated)</u> | | | | | | | |
|--|-------------|-----------------------|-----------------|--------|-------|---------|---------|----------|-------|--|---------------------------------------|-------------------------------|----------|---------|----------------|----------------------|-----------------------|
| S. No. | Paving 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" | ¾" | #4 | #8 | #50 | #200 | | | | | | | | |
| 1 | 1-Oct-14 | 3.31 | 100 | 100 | 66.3 | 31.2 | 22.9 | 6.2 | 3.0 | 2.512 | 2.649 | 5.2 | 12.2 | 57.4 | 1461 | 18.2 | 10.5 |
| 2 | 17-Oct-14 | 3.96 | 100 | 100 | 73.8 | 37 | 25.2 | 9.6 | 6.0 | 2.571 | 2.65 | 3.0 | 10.72 | 72.3 | 1727 | 20.1 | 12.0 |
| 3 | 22-Oct-14 | 2.383 | 100 | 100 | 75 | 34.2 | 23.2 | 7.9 | 4.9 | 2.514 | 2.662 | 5.6 | 12.62 | 55.9 | 1396 | 16.8 | 9.5 |
| 4 | 29-Oct-14 | 3.71 | 100 | 100 | 67.1 | 35.7 | 23 | 8.5 | 4.5 | 2.579 | 2.654 | 2.8 | 10.24 | 72.2 | 1694 | 14.8 | 10.3 |
| 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") |

ASPHALTIC WEARING COURSE QUALITY TESTS

| <u>Specific Gravity A.C (Gb) 1.030</u> | | | | | | | | | | <u>Combined Specific Gravity of Aggregate (Gsb) 2.689</u> | | | | | | | |
|--|-------------|-----------------------|-----------------|---------|-------|---------|---------|--------|---------|---|---------------------------------------|-------------------------------|----------|---------|----------------|----------------------|-----------------------|
| S. No | Paving 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) |
| | | | 1" | ¾" | 3/8" | #4 | #8 | #50 | #200 | | | | | | | | |
| 1 | 25-Oct-14 | 4.3 | 100 | 97.3 | 70.2 | 44.5 | 28 | 10.3 | 6.9 | 2.529 | 2.625 | 3.7 | 9.99 | 63.4 | 1513 | 16.5 | 9.9 |
| JMF LIMITS | | 3.6 ~ 4.2 | 100 | 85 ~ 99 | 59~73 | 38 ~ 46 | 24 ~ 32 | 6 ~ 14 | 3.7~5.7 | - | - | 4 ~ 7 | 13 % Min | 65 ~ 75 | 1000 Kg Min | 20% | 8 ~ 14 at (0.01") |

7.5 AGGREGATE QUALITY TESTS FOR CONCRETE

| Coarse Aggregate Quality Tests for Concrete | | | | | | | | | | | | | | | | | | | | | | | |
|--|----------------------|--------------------|--------------|----------------|--------|------|-------|------|-------|--------|------|-------|------|-------|------|-----|---------|----------------|------------------|-----------|---------|--------------|---|
| S.No | Location | | Description | Sieve Analysis | | | | | | | | | | | | FM | L.A % | Absorption (%) | Specific Gravity | Soundness | Remarks | | |
| | | | | 2" | 1½" | 1" | ¾" | ½" | 3/8" | #4 | #8 | #16 | #30 | #50 | #100 | | | | | | | #200 | |
| 1 | Stock Pile | For "A-3" Concrete | 38mm Agg | 100 | 99.1 | 16.4 | 0.5 | 0.3 | 0.0 | 0.0 | - | - | - | - | - | - | - | - | - | - | - | | |
| | | | 25mm Agg | - | - | 99.4 | 65.9 | 2.2 | 0.7 | 0.4 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | 19mm Agg | - | - | 100 | 99.8 | 95.7 | 80.8 | 20.9 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Combined Grading | | 48,30 & 22 % | 100 | 99.6 | 59.7 | 42.0 | 21.9 | 18.0 | 4.7 | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Specification Limits | | | 100 | 95~100 | - | 35~70 | - | 10~30 | 0~5 | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Stock Pile | "A-3" Con. | Sand | - | - | - | - | - | 98 | 96.0 | 84.7 | 66.9 | 52.2 | 14.7 | 2.7 | 1.4 | 2.8 | - | - | - | - | Natural Sand | |
| | Specification Limits | | | - | - | - | - | - | 100 | 95~100 | - | 45~80 | - | 10~30 | 2~10 | 0~3 | 2.3~3.1 | - | - | - | - | - | |

7.6 SUMMARY OF CONCRETE COMPRESSIVE STRENGTH

| Description | Casting date | Testing date | Age/Days | 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" Bridge # 12 ,(27+350) Girder #11,12 | 24/Sep/2014 | 1/Oct/2014 | 7 Days | 472 | 30.48 | 15.24 | 182.4 | 48130 | 263.9 | 271.3 | 210 | |
| | | | | 514 | 30.48 | | | 52413 | 287.3 | | | |
| | | | | 470 | 30.48 | | | 47926 | 262.8 | | | |
| Concrete Class "A-3" Bridge # 12 ,(27+350) Pile # 10, Abutment # 2 | 24/Sep/2014 | 1/Oct/2014 | 7 Days | 482 | 30.48 | 15.24 | 182.4 | 49150 | 269.5 | 265.0 | 210 | |
| | | | | 487 | 30.48 | | | 49659 | 272.3 | | | |
| | | | | 453 | 30.48 | | | 46192 | 253.2 | | | |
| Concrete Class "A-1" of Culvert Top Slab at KM: 24+416 | 25/Sep/2014 | 2/Oct/2014 | 7 Days | 297 | 30.48 | 15.24 | 182.4 | 30285 | 166.0 | 174.6 | 157.5 | |
| | | | | 332 | 30.48 | | | 33854 | 185.6 | | | |
| | | | | 308 | 30.48 | | | 31407 | 172.2 | | | |
| Concrete Class "A-3" Bridge # 12 ,(27+350) Pile # 3, Pier # 2 | 25/Sep/2014 | 2/Oct/2014 | 7 Days | 522 | 30.48 | 15.24 | 182.4 | 53228 | 291.8 | 280.3 | 210 | |
| | | | | 493 | 30.48 | | | 50271 | 275.6 | | | |
| | | | | 489 | 30.48 | | | 49863 | 273.4 | | | |
| Concrete Class "A-1" of Multicell Culvert inlet Apron slab at KM: 22+725 | 25/Sep/2014 | 2/Oct/2014 | 7 Days | 332 | 30.48 | 15.24 | 182.4 | 33854 | 185.6 | 176.8 | 157.5 | |
| | | | | 311 | 30.48 | | | 31713 | 173.9 | | | |
| | | | | 306 | 30.48 | | | 31203 | 171.1 | | | |
| Concrete Class "A-3" Bridge # 12 ,(27+350) Gider # 13,14 | 26/Sep/2014 | 3/Oct/2014 | 7 Days | 505 | 30.48 | 15.24 | 182.4 | 51495 | 282.3 | 270.4 | 210 | |
| | | | | 468 | 30.48 | | | 47722 | 261.6 | | | |
| | | | | 478 | 30.48 | | | 48742 | 267.2 | | | |
| Concrete Class "A-3" Rigid Pavement 14+308.8 ~ 14+325.3 R/S 14+341.8 ~ 14+358.3 R/S 14+374.8 ~ 14+391.3 R/S 14+407.8 ~ 14+424.3 R/S 14+440.8 ~ 14+457.3 R/S | 8/Sep/2014 | 6/Oct/2014 | 28 Days | 580 | 30.48 | 15.24 | 182.4 | 59143 | 324.2 | 336.4 | 280 | |
| | | | | 610 | 30.48 | | | 62202 | 341.0 | | | |
| | | | | 615 | 30.48 | | | 62712 | 343.8 | | | |
| Concrete Class "A-3" Bridge #12 ,(27+350) Pile # 9, Abutment #2 | 9/Sep/2014 | 7/Oct/2014 | 28 Days | 534 | 30.48 | 15.24 | 182.4 | 54452 | 298.5 | 296.1 | 280 | |
| | | | | 525 | 30.48 | | | 53534 | 293.5 | | | |
| | | | | 530 | 30.48 | | | 54044 | 296.3 | | | |
| Concrete Class "A-3" Rigid Pavement 14+473.8 ~ 14+490.3 R/S 14+506.3 ~ 14+523.3 R/S 14+539.8 ~ 14+556.3 R/S 14+572.8 ~ 14+589.3 R/S | 9/Sep/2014 | 7/Oct/2014 | 28 Days | 620 | 30.48 | 15.24 | 182.4 | 63221 | 346.6 | 356.7 | 280 | |
| | | | | 665 | 30.48 | | | 67810 | 371.8 | | | |
| | | | | 629 | 30.48 | | | 64139 | 351.6 | | | |
| Concrete Class "A-3" Multicell Culvert 2nd Top Slab , KM : 11+190 | 10/Sep/2014 | 8/Oct/2014 | 28 Days | 590 | 30.48 | 15.24 | 182.4 | 60162 | 329.8 | 317.7 | 280 | |
| | | | | 570 | 30.48 | | | 58123 | 318.7 | | | |
| | | | | 545 | 30.48 | | | 55574 | 304.7 | | | |

SUMMARY OF CONCRETE COMPRESSIVE STRENGTH

| Description | Casting date | Testing date | Age/Days | 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" Bridge # 12 ,(27+350) Gider # 15,16 | 1/Oct/2014 | 8/Oct/2014 | 7 Days | 455 | 30.48 | 15.24 | 182.4 | 46396 | 254.4 | 260.3 | 210 | |
| | | | | 470 | 30.48 | | | 47926 | 262.8 | | | |
| | | | | 472 | 30.48 | | | 48130 | 263.9 | | | |
| Concrete Class "A-3" Bridge # 12 ,(27+350) Pile # 7, Abutment #1 & Pile #4 , Pier #2 | 13/Sep/2014 | 11/Oct/2014 | 28 Days | 597 | 30.48 | 15.24 | 182.4 | 60876 | 333.8 | 329.3 | 280 | |
| | | | | 554 | 30.48 | | | 56491 | 309.7 | | | |
| | | | | 616 | 30.48 | | | 62814 | 344.4 | | | |
| Concrete Class "D-1" Bridge # 12 ,(27+350) Girder # 2 | 14/Sep/2014 | 12/Oct/2014 | 28 Days | 645 | 30.48 | 15.24 | 182.4 | 65771 | 360.6 | 371.4 | 350 | |
| | | | | 658 | 30.48 | | | 67096 | 367.9 | | | |
| | | | | 690 | 30.48 | | | 70359 | 385.7 | | | |
| Concrete Class "A-3" of Multicell Culvert Approach Slab Concrete 11+190 | 15/Sep/2014 | 13/Oct/2014 | 28 Days | 648 | 30.48 | 15.24 | 182.4 | 66077 | 362.3 | 367.1 | 280 | |
| | | | | 680 | 30.48 | | | 69340 | 380.2 | | | |
| | | | | 642 | 30.48 | | | 65465 | 358.9 | | | |
| Concrete Class "A-3" Rigid Pavement 14+754.3 ~ 14+770.8 L/S 14+127.3 ~ 14+143.8 R/S 14+655.3 ~ 14+671.8 R/S | 16/Sep/2014 | 14/Oct/2014 | 28 Days | 582 | 30.48 | 15.24 | 182.4 | 59347 | 325.4 | 314.4 | 280 | |
| | | | | 579 | 30.48 | | | 59041 | 323.7 | | | |
| | | | | 526 | 30.48 | | | 53636 | 294.1 | | | |
| Concrete Class "A-3" Bridge # 12 ,(27+350) Pile #2 , Pier #4 | 17/Sep/2014 | 15/Oct/2014 | 28 Days | 542 | 30.48 | 15.24 | 182.4 | 55268 | 303.0 | 308.4 | 280 | |
| | | | | 559 | 30.48 | | | 57001 | 312.5 | | | |
| | | | | 554 | 30.48 | | | 56491 | 309.7 | | | |
| Concrete Class "A-3" Bridge # 12 ,(27+350) Pile # 1 , Pier # 2 | 18/Sep/2014 | 16/Oct/2014 | 28 Days | 600 | 30.48 | 15.24 | 182.4 | 61182 | 335.4 | 338.4 | 280 | |
| | | | | 606 | 30.48 | | | 61794 | 338.8 | | | |
| | | | | 610 | 30.48 | | | 62202 | 341.0 | | | |
| Concrete Class "A-1" of Bridge # 2 , 9+560 Approach Slab Concrete | 19/Sep/2014 | 17/Oct/2014 | 28 Days | 440 | 30.48 | 15.24 | 182.4 | 44867 | 246.0 | 249.3 | 210 | |
| | | | | 453 | 30.48 | | | 46192 | 253.2 | | | |
| | | | | 445 | 30.48 | | | 45377 | 248.8 | | | |
| Concrete Class "A-3" Bridge # 12 ,(27+350) Girder #11,12 | 24/Sep/2014 | 22/Oct/2014 | 28 Days | 582 | 30.48 | 15.24 | 182.4 | 59347 | 325.4 | 342.9 | 280 | |
| | | | | 630 | 30.48 | | | 64241 | 352.2 | | | |
| | | | | 628 | 30.48 | | | 64037 | 351.1 | | | |

SUMMARY OF CONCRETE COMPRESSIVE STRENGTH

| Description | Casting date | Testing date | Age/Days | 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" Bridge # 12 ,(27+350) Pile # 10,Abutment # 2 | 24/Sep/2014 | 22/Oct/2014 | 28 Days | 540 | 30.48 | 15.24 | 182.4 | 55064 | 301.9 | 315.5 | 280 | |
| | | | | 581 | 30.48 | | | 59245 | 324.8 | | | |
| | | | | 572 | 30.48 | | | 58327 | 319.8 | | | |
| Concrete Class "A-1" of Culvert Top Slab at KM: 24+416 | 25/Sep/2014 | 23/Oct/2014 | 28 Days | 460 | 30.48 | 15.24 | 182.4 | 46906 | 257.2 | 251.9 | 210 | |
| | | | | 443 | 30.48 | | | 45173 | 247.7 | | | |
| | | | | 449 | 30.48 | | | 45785 | 251.0 | | | |
| Concrete Class "A-3" Bridge # 12 ,(27+350) Pile # 3, Pier # 2 | 25/Sep/2014 | 23/Oct/2014 | 28 Days | 584 | 30.48 | 15.24 | 182.4 | 59550 | 326.5 | 323.3 | 280 | |
| | | | | 560 | 30.48 | | | 57103 | 313.1 | | | |
| | | | | 591 | 30.48 | | | 60264 | 330.4 | | | |
| Concrete Class "A-1" of Multicell Culvert inlet Apron slab at KM: 22+725 | 25/Sep/2014 | 23/Oct/2014 | 28 Days | 412 | 30.48 | 15.24 | 182.4 | 42012 | 230.3 | 235.2 | 210 | |
| | | | | 430 | 30.48 | | | 43847 | 240.4 | | | |
| | | | | 420 | 30.48 | | | 42827 | 234.8 | | | |
| Concrete Class "A-3" Bridge # 12 ,(27+350) Gider # 13,14 | 26/Sep/2014 | 24/Oct/2014 | 28 Days | 640 | 30.48 | 15.24 | 182.4 | 65261 | 357.8 | 359.8 | 280 | |
| | | | | 650 | 30.48 | | | 66281 | 363.4 | | | |
| | | | | 641 | 30.48 | | | 65363 | 358.3 | | | |
| Concrete Class "A-3" Rigid Pavement 18+726.6 ~ 18+749.4 L/S | 18/Oct/2014 | 25/Oct/2014 | 7 Days | 470 | 30.48 | 15.24 | 182.4 | 47926 | 262.8 | 281.4 | 210 | |
| | | | | 526 | 30.48 | | | 53636 | 294.1 | | | |
| | | | | 514 | 30.48 | | | 52413 | 287.3 | | | |
| Concrete Class "A-3" Bridge # 12 ,(27+350) Gider # 21,22 | 1/Oct/2014 | 29/Oct/2014 | 28 Days | 630 | 30.48 | 15.24 | 182.4 | 64241 | 352.2 | 355.7 | 280 | |
| | | | | 640 | 30.48 | | | 65261 | 357.8 | | | |
| | | | | 639 | 30.48 | | | 65159 | 357.2 | | | |
| Concrete Class "A-1" Jurssy Barior at KM: | 22/Oct/2014 | 29/Oct/2014 | 7 Days | 300 | 30.48 | 15.24 | 182.4 | 30591 | 167.7 | 167.0 | 157.5 | |
| | | | | 300 | 30.48 | | | 30591 | 167.7 | | | |
| | | | | 296 | 30.48 | | | 30183 | 165.5 | | | |
| Concrete Class "A-1" Bridge # 12 ,(27+350) Pile cap of Pier # 4 | 23/Oct/2014 | 30/Oct/2014 | 7 Days | 325 | 30.48 | 15.24 | 182.4 | 33140 | 181.7 | 189.7 | 157.5 | |
| | | | | 335 | 30.48 | | | 34160 | 187.3 | | | |
| | | | | 358 | 30.48 | | | 36505 | 200.1 | | | |

7.7 SUMMARY OF ASPHALTIC BASE COURSE CORE COMPACTION 1ST LAYER

| Summary of Asphaltic Base Course, Cores Compaction 1st Layer | | | | | | | | | | | | | | |
|--|----------|-------------|-----------------|---------|-----------------|----------------|-----------------|-------------|-------------|----------------|-------------------|---------------------|---------------------|---------|
| S. No | CORE NO. | 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 |
| 1 | C-1 | 13-Aug-2014 | 26+175 ~ 16+075 | 26+150 | 5.4m R/S | 1229.9 | 739 | 1235.5 | 496.5 | 2.477 | 2.494 | 99.3 | 97 | OK |
| 2 | C-2 | | | 26+100 | 5.0m L/S | 1391.2 | 836.8 | 1402.4 | 565.6 | 2.460 | 2.494 | 98.6 | 97 | OK |
| 3 | C-3 | | 26+075 ~ 25+975 | 26+055 | 5.4m R/S | 1164.1 | 700.4 | 1172.5 | 472.1 | 2.466 | 2.494 | 98.9 | 97 | OK |
| 4 | C-4 | | | 26+015 | 5.0m L/S | 1520.6 | 913.1 | 1527 | 613.9 | 2.477 | 2.494 | 99.3 | 97 | OK |
| 5 | C-5 | | 25+975 ~ 25+875 | 25+950 | 1.5m R/S | 1305.6 | 782.9 | 1310.3 | 527.4 | 2.476 | 2.511 | 98.6 | 97 | OK |
| 6 | C-6 | | | 25+900 | 4.6m L/S | 1397.6 | 837.5 | 1400.9 | 563.4 | 2.481 | 2.511 | 98.8 | 97 | OK |
| 7 | C-7 | | 25+875 ~ 25+775 | 25+850 | 0.8m R/S | 1545.5 | 933.7 | 1554.7 | 621 | 2.489 | 2.511 | 99.1 | 97 | OK |
| 8 | C-8 | | | 25+805 | 4.2m L/S | 1231.8 | 740.2 | 1237.5 | 497.3 | 2.477 | 2.511 | 98.6 | 97 | OK |
| 9 | C-9 | | 25+775 ~ 25+675 | 25+745 | 2.0m R/S | 1403.7 | 845.5 | 1410.9 | 565.4 | 2.483 | 2.511 | 98.9 | 97 | OK |
| 10 | C-10 | | | 25+690 | 4.8m L/S | 1261.2 | 755.4 | 1264.1 | 508.7 | 2.479 | 2.511 | 98.7 | 97 | OK |
| 11 | C-11 | | 25+675 ~ 25+575 | 25+615 | 1.0m R/S | 1326 | 797.6 | 1332 | 534.4 | 2.481 | 2.511 | 98.8 | 97 | OK |
| 12 | C-12 | | | 25+575 | 5.0m L/S | 1252.8 | 756.2 | 1259 | 502.8 | 2.492 | 2.511 | 99.2 | 97 | OK |
| 13 | C-13 | | 25+575 ~ 25+475 | 25+525 | 0.5m R/S | 1378.6 | 828.8 | 1385.8 | 557 | 2.475 | 2.511 | 98.6 | 97 | OK |
| 14 | C-14 | | | 25+495 | 5.0m L/S | 1435.1 | 862.1 | 1442.5 | 580.4 | 2.473 | 2.511 | 98.5 | 97 | OK |
| 15 | C-15 | | 25+475 ~ 25+375 | 25+440 | 2.3m R/S | 1523 | 916 | 1531.2 | 615.2 | 2.476 | 2.511 | 98.6 | 97 | OK |
| 16 | C-16 | | | 25+390 | 4.8m L/S | 1274.9 | 768.9 | 1281.6 | 512.7 | 2.487 | 2.511 | 99.0 | 97 | OK |
| 17 | C-17 | | 25+375 ~ 25+275 | 25+335 | 2.0m R/S | 1331.9 | 801.4 | 1339.8 | 538.4 | 2.474 | 2.511 | 98.5 | 97 | OK |
| 18 | C-18 | | | 25+295 | 4.7m L/S | 1272.9 | 765.1 | 1280.4 | 515.3 | 2.470 | 2.511 | 98.4 | 97 | OK |
| 19 | C-19 | | 25+275 ~ 25+225 | 25+250 | 3.0m R/S | 1488.2 | 888.9 | 1494.8 | 605.9 | 2.456 | 2.511 | 97.8 | 97 | OK |

SUMMARY OF ASPHALTIC BASE COURSE CORE COMPACTION 1ST LAYER

| Summary of Asphaltic Base Course Cores Compaction 1st Layer (October 2014) | | | | | | | | | | | | | | |
|--|----------|-------------|-----------------|---------------|-----------------|---------------|-----------------|-------------|-------------|----------------|-------------------|---------------------|---------------------|---------------|
| S. No | CORE NO. | 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 |
| 1 | C-1 | 17-Oct-2014 | 14+850 ~ 14+950 | 14+870 | 0.7m L/S | 1620 | 968 | 1626 | 658 | 2.462 | 2.500 | 98.5 | 97 | OK |
| 2 | C-2 | | | 14+915 | 3.3m R/S | 1440 | 859 | 1448 | 589 | 2.445 | 2.500 | 97.8 | 97 | OK |
| 3 | C-3 | | 14+950 ~ 15+037 | 14+965 | 1.4m L/S | 1280 | 767 | 1288 | 521 | 2.457 | 2.500 | 98.3 | 97 | OK |
| 4 | C-4 | | | 15+010 | 3.3m R/S | 1159 | 694 | 1166 | 472 | 2.456 | 2.500 | 98.2 | 97 | OK |
| 5 | C-5 | | | 0+900 ~ 0+922 | 0+910 | 2.0m L/S | 1108 | 663 | 1113 | 450 | 2.462 | 2.500 | 98.5 | 97 |
| 1 | C-1 | 21-Oct-2014 | 9+400 ~ 9+487 | 9+420 | 1.0m L/S | 1264 | 755 | 1270 | 515 | 2.454 | 2.513 | 97.7 | 97 | OK |
| 2 | C-2 | | | 9+470 | 5.6m R/S | 1270 | 760 | 1278.3 | 518.3 | 2.450 | 2.513 | 97.5 | 97 | OK |
| 3 | C-3 | | 9+570 ~ 9+670 | 9+580 | 1.4m R/S | 1096.5 | 654 | 1103.1 | 449.1 | 2.442 | 2.513 | 97.2 | 97 | OK |
| 4 | C-4 | | | 9+640 | 5.6m L/S | 1420.9 | 845.5 | 1429 | 583.5 | 2.435 | 2.513 | 96.9 | 97 | OK |
| 5 | C-5 | | 9+670 ~ 9+762 | 9+685 | 1.0m R/S | 1543.3 | 924.4 | 1549 | 624.6 | 2.471 | 2.513 | 98.3 | 97 | OK |
| 6 | C-6 | | | 9+725 | 5.8m L/S | 1289 | 769.9 | 1297.8 | 527.9 | 2.442 | 2.513 | 97.2 | 97 | OK |
| 1 | C-1 | 22-Oct-2014 | 9+571 | R/S | | 2144.9 | 1270.6 | 2160.8 | 890.2 | 2.409 | 2.513 | 95.9 | 97 | Not OK |
| 2 | C-2 | | | L/S | | 2133.3 | 1266 | 2141.9 | 875.9 | 2.436 | 2.513 | 96.9 | 97 | OK |
| 3 | C-3 | | 9+485 | L/S | | 1745.6 | 1035.5 | 1758.2 | 722.7 | 2.415 | 2.513 | 96.1 | 97 | Not OK |
| 4 | C-4 | | | R/S | | 1418.6 | 849.7 | 1430 | 580.3 | 2.445 | 2.513 | 97.3 | 97 | OK |
| 1 | C-1 | 25-Oct-2014 | 9+485 | L/S | | 1494 | 891.5 | 1502.5 | 611 | 2.445 | 2.513 | 97.3 | 97 | OK (Recoring) |
| 2 | C-2 | | 9+571 | R/S | | 2000.1 | 1196.4 | 2012.3 | 815.9 | 2.451 | 2.513 | 97.5 | 97 | OK (Recoring) |
| 1 | C-1 | 27-Oct-2017 | 21+700 ~ 21+800 | 21+725 | 3.0 m R/S | 1181 | 707.4 | 1185.2 | 477.8 | 2.472 | 2.512 | 98.4 | 97 | OK |
| 2 | C-2 | | | 21+780 | 4.8m L/S | 1523.6 | 911.7 | 1525.5 | 613.8 | 2.482 | 2.512 | 98.8 | 97 | OK |

7.8 SUMMARY OF ASPHALTIC BASE COURSE CORE COMPACTION 2ND LAYER

| Summary of Asphaltic Base Course Cores Compaction 2nd Layer (October 2014) | | | | | | | | | | | | | | |
|--|----------|-------------|-----------------|---------------|-----------------|----------------|-----------------|-------------|-------------|----------------|-------------------|---------------------|---------------------|---------|
| S. No | CORE NO. | 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 |
| 1 | C-1 | 19-Oct-2014 | 14+850 ~ 14+950 | 14+870 | 0.5m L/S | 1285 | 770.1 | 1292 | 521.9 | 2.462 | 2.506 | 98.3 | 97 | OK |
| 2 | C-2 | | | 14+920 | 3.0m R/S | 1297.2 | 774.9 | 1304 | 529.1 | 2.452 | 2.506 | 97.8 | 97 | OK |
| 3 | C-3 | | 14+950 ~ 15+037 | 14+975 | 0.8m L/S | 1209 | 724.8 | 1215 | 490.2 | 2.466 | 2.506 | 98.4 | 97 | OK |
| 4 | C-4 | | | 15+010 | 3.6m R/S | 1197 | 719.2 | 1204 | 484.8 | 2.469 | 2.506 | 98.5 | 97 | OK |
| 5 | C-5 | | | 0+900 ~ 0+922 | 0+910 | 3.0m L/S | 1322 | 790.3 | 1329 | 538.7 | 2.454 | 2.506 | 97.9 | 97 |
| 1 | C-1 | 25-Oct-2014 | 9+487 ~ 9+387 | 9+475 | 3.1m L/S | 1390.4 | 829.1 | 1394 | 564.9 | 2.461 | 2.514 | 97.9 | 97 | OK |
| 2 | C-2 | | | 9+440 | 5.0m R/S | 1394.1 | 836.3 | 1399 | 562.7 | 2.478 | 2.514 | 98.5 | 97 | OK |
| 3 | C-3 | | 9+387 ~ 9+375 | 9+390 | 1.7m L/S | 1304.3 | 789 | 1312.1 | 523.1 | 2.493 | 2.514 | 99.2 | 97 | OK |
| 1 | C-1 | 29-Oct-2014 | 9+570 ~ 9+670 | 9+580 | 4.3m R/S | 1341 | 810 | 1358.8 | 548.8 | 2.444 | 2.576 | 94.9 | 97 | Note-1 |
| 2 | C-2 | | | 9+640 | 3.5m L/S | 1158.4 | 693.4 | 1164.2 | 470.8 | 2.460 | 2.576 | 95.5 | 97 | Note-1 |
| 3 | C-3 | | 9+670 ~ 9+760 | 9+680 | 3.0m R/S | 1277.7 | 762.7 | 1280.5 | 517.8 | 2.468 | 2.576 | 95.8 | 97 | Note-1 |
| 4 | C-4 | | | 9+735 | 3.2m L/S | 1368.5 | 810.5 | 1372.6 | 562.1 | 2.435 | 2.576 | 94.5 | 97 | Note-1 |

Note-1: Subsequent layer placement postponed until previous layer properly compacted/retested and accepted

7.9 SUMMARY OF ASPHALTIC BASE COURSE CORE COMPACTION BOTH LAYERS

| Summary of Asphaltic Base Course Cores Compaction Both Layers (October 2014) | | | | | | | | | | | | | | |
|--|----------|-------------|-----------------|---------|-----------------|----------------|-----------------|-------------|-------------|----------------|-------------------|---------------------|---------------------|---------|
| S. No | CORE NO. | 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 |
| 1 | C-1 | 18-Oct-2014 | 11+100 ~ 11+150 | 11+135 | 2.0m R/S | 2560 | 1556 | 2569.1 | 1013.1 | 2.527 | 2.571 | 98.3 | 97 | OK |
| 2 | C-2 | | 11+210 ~ 11+300 | 11+230 | 1.0m L/S | 2388.4 | 1434.5 | 2392.5 | 958 | 2.493 | 2.571 | 97.0 | 97 | OK |
| 3 | C-3 | | | 11+275 | 5.0m R/S | 2473 | 1491.4 | 2476.8 | 985.4 | 2.510 | 2.571 | 97.6 | 97 | OK |
| 1 | C-1 | 27-Oct-2014 | 21+800 ~ 21+900 | 21+815 | 5.0m R/S | 2409 | 1444 | 2415.2 | 971.2 | 2.480 | 2.512 | 98.7 | 97 | OK |
| 2 | C-2 | | | 21+880 | 2.0m L/S | 2475.5 | 1496.3 | 2486.5 | 990.2 | 2.500 | 2.512 | 99.5 | 97 | OK |
| 3 | C-3 | | 21+900 ~ 22+000 | 21+930 | 4.0m R/S | 2457.1 | 1468.2 | 2466.3 | 998.1 | 2.462 | 2.512 | 98.0 | 97 | OK |
| 4 | C-4 | | | 21+975 | 1.0m L/S | 2197.8 | 1321 | 2206.9 | 885.9 | 2.481 | 2.512 | 98.8 | 97 | OK |
| 5 | C-5 | | 22+000 ~ 22+090 | 22+025 | 4.5m R/S | 2643 | 1575.1 | 2649 | 1073.9 | 2.461 | 2.512 | 98.0 | 97 | OK |
| 6 | C-6 | | | 22+075 | 5.5m L/S | 2397 | 1437.5 | 2406 | 968.5 | 2.475 | 2.512 | 98.5 | 97 | OK |

7.10 SUMMARY OF CORE THICKNESS OF ASPHALTIC BASE COURSE 1ST LAYER

| Summary of Cores Thickness of Asphaltic Base Course 1st Layer (October 2014) | | | | | | | | | | | | |
|---|----------|--------------|-----------------|---------|------------------|----------------------|------|------|------|------------------------|-------------------------|---------|
| 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 | | | |
| 1 | T-1 | 17-Oct-2014 | 14+850 ~ 14+950 | 14+870 | 3.1m L/S | 9.6 | 9.6 | 9.9 | 9.9 | 9.8 | 8.0 | OK |
| 2 | T-2 | | | 14+915 | 1.0m R/S | 8.4 | 8.6 | 8.6 | 8.3 | 8.5 | 8.0 | OK |
| 3 | T-3 | | 14+950 ~ 15+037 | 14+965 | 2.7m L/S | 8.8 | 8.6 | 8.9 | 8.8 | 8.8 | 8.0 | OK |
| 4 | T-4 | | | 15+010 | 2.0m R/S | 7.8 | 8.3 | 8.3 | 7.6 | 8.0 | 8.0 | OK |
| 5 | T-5 | | 0+900 ~ 0+922 | 0+910 | 1.5m R/S | 7.5 | 7.8 | 7.5 | 7.8 | 7.7 | 8.0 | OK |
| 1 | T-1 | 21-Oct-2014 | 9+400 ~ 9+487 | 9+420 | 5.5m L/S | 8.1 | 7.7 | 8.0 | 8.2 | 8.0 | 8.0 | OK |
| 2 | T-2 | | | 9+470 | 2.0m R/S | 8.3 | 7.8 | 7.9 | 8.2 | 8.1 | 8.0 | OK |
| 3 | T-3 | | 9+570 ~ 9+670 | 9+580 | 5.9m R/S | 8.0 | 8.4 | 7.6 | 7.8 | 8.0 | 8.0 | OK |
| 4 | T-4 | | | 9+640 | 1.5m L/S | 9.0 | 9.5 | 9.6 | 9.3 | 9.4 | 8.0 | OK |
| 5 | T-5 | | 9+670 ~ 9+762 | 9+685 | 5.0m R/S | 8.5 | 8.8 | 8.4 | 8.6 | 8.6 | 8.0 | OK |
| 6 | T-6 | | | 9+725 | 1.2m L/S | 8.2 | 8.5 | 8.5 | 8.5 | 8.4 | 8.0 | OK |
| 1 | T-1 | 22-Oct-2014 | 9+571 | | R/S | 14.2 | 13.7 | 13.8 | 14.3 | 14.0 | 8.0 | OK |
| 2 | T-2 | | | | L/S | 13.2 | 13.5 | 12.9 | 13.4 | 13.3 | 8.0 | OK |
| 3 | T-3 | | 9+485 | | L/S | 11.8 | 11.6 | 11.6 | 11.9 | 11.7 | 8.0 | OK |
| 4 | T-4 | | | | R/S | 11.0 | 11.2 | 10.8 | 10.9 | 11.0 | 8.0 | OK |
| 1 | T-1 | 27-Oct-2014 | 21+700 ~ 21+800 | 21+725 | 5.0 m R/S | 7.8 | 7.9 | 7.7 | 8.2 | 7.9 | 8.0 | OK |
| 2 | T-2 | | | 21+780 | 2.0m L/S | 9.2 | 8.6 | 8.9 | 9.3 | 9.0 | 8.0 | OK |

7.11 SUMMARY OF CORE THICKNESS OF ASPHALTIC BASE COURSE 2nd LAYER

| Summary of Cores Thickness of Asphaltic Base Course 2nd Layer (October 2014) | | | | | | | | | | | | |
|--|----------|-------------|-----------------|---------|------------------|----------------------|-----|-----|-----|------------------------|-------------------------|---------|
| S.No | CORE NO. | DATE | COVER AREA | STATION | OFF SET FROM C/L | CORES THICKNESS (cm) | | | | Average Thickness (cm) | Required Thickness (cm) | REMARKS |
| | | | | | | 1 | 2 | 3 | 4 | | | |
| 1 | T-1 | 19-Oct-2014 | 14+850 ~ 14+950 | 14+870 | 3.5m L/S | 8.6 | 8.4 | 8.3 | 8.6 | 8.5 | 8.0 | OK |
| 2 | T-2 | | | 14+920 | 1.0m R/S | 8.4 | 8.8 | 8.8 | 8.5 | 8.6 | 8.0 | OK |
| 3 | T-3 | | 14+950 ~ 15+037 | 14+975 | 3.1m L/S | 7.7 | 7.9 | 7.8 | 7.6 | 7.8 | 8.0 | OK |
| 4 | T-4 | | | 15+010 | 1.3m R/S | 7.5 | 7.8 | 7.8 | 7.6 | 7.7 | 8.0 | OK |
| 5 | T-5 | | 0+900 ~ 0+922 | 0+910 | 2.0m L/S | 8.9 | 8.7 | 8.6 | 9.1 | 8.8 | 8.0 | OK |
| 1 | T-1 | 25-Oct-2014 | 9+487 ~ 9+387 | 9+475 | 3.1m L/S | 8.6 | 8.9 | 8.8 | 8.9 | 8.8 | 8.0 | OK |
| 2 | T-2 | | | 9+440 | 5.0m R/S | 8.9 | 8.5 | 8.5 | 8.8 | 8.7 | 8.0 | OK |
| 3 | T-3 | | 9+387 ~ 9+375 | 9+390 | 1.7m L/S | 7.8 | 8.3 | 8.4 | 8.4 | 8.2 | 8.0 | OK |
| 1 | T-1 | 29-Oct-2014 | 9+570 ~ 9+670 | 9+580 | 1.0m R/S | 8.8 | 9.2 | 9.2 | 8.6 | 9.0 | 8.0 | OK |
| 2 | T-2 | | | 9+640 | 3.5m L/S | 6.9 | 6.5 | 7.3 | 7.4 | 7.0 | 8.0 | OK |
| 3 | T-3 | | 9+670 ~ 9+760 | 9+680 | 3.0m R/S | 8.8 | 8.4 | 8.4 | 8.7 | 8.6 | 8.0 | OK |
| 4 | T-4 | | | 9+735 | 3.2m L/S | 8.0 | 8.4 | 8.4 | 7.8 | 8.2 | 8.0 | OK |

7.12 SUMMARY OF CORE THICKNESS OF ASPHALTIC BASE COURSE BOTH LAYERS

| Summary of Cores Thickness of Asphaltic Base Course Both Layers (October 2014) | | | | | | | | | | | | |
|---|----------|-------------|-----------------|---------|------------------|----------------------|------|------|------|------------------------|-------------------------|---------|
| S.No | CORE NO. | DATE | COVER AREA | STATION | OFF SET FROM C/L | CORES THICKNESS (cm) | | | | Average Thickness (cm) | Required Thickness (cm) | REMARKS |
| | | | | | | 1 | 2 | 3 | 4 | | | |
| 1 | T-1 | 18-Oct-2014 | 11+100 ~ 11+150 | 11+135 | 4.5m L/S | 16.3 | 16.6 | 16.6 | 16.2 | 16.4 | 16.0 | OK |
| 2 | T-2 | | 11+210 ~ 22+300 | 11+230 | 4.5m L/S | 16.6 | 16.5 | 16.7 | 16.3 | 16.5 | 16.0 | OK |
| 3 | T-3 | | | 11+275 | 1.5m R/S | 15.7 | 16.0 | 16.3 | 16.1 | 16.0 | 16.0 | OK |
| 1 | T-1 | 27-Oct-2014 | 21+800 ~ 21+900 | 21+815 | 1.5m R/S | 15.5 | 15.5 | 15.2 | 15.1 | 15.3 | 16.0 | Note-1 |
| 2 | T-2 | | | 21+880 | 4.9m L/S | 16.8 | 16.5 | 16.9 | 16.3 | 16.6 | 16.0 | OK |
| 3 | T-3 | | 21+900 ~ 22+000 | 21+930 | 2.5m R/S | 16.0 | 15.7 | 16.3 | 16.3 | 16.1 | 16.0 | OK |
| 4 | T-4 | | | 21+975 | 5.3m L/S | 14.1 | 14.3 | 14.4 | 14.4 | 14.3 | 16.0 | Note-1 |
| 5 | T-5 | | 22+000 ~ 22+090 | 22+025 | 2.5m R/S | 16.6 | 16.1 | 16.2 | 16.2 | 16.3 | 16.0 | OK |
| 6 | T-6 | | | 22+075 | 2.2m L/S | 15.7 | 15.4 | 15.4 | 15.7 | 15.6 | 16.0 | Note-1 |
| Note-1: Deficient layer to be adjusted by additional ACWC as per specification requirements | | | | | | | | | | | | |

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: 29+000

Persons Consulted at Site:

1. Mr. Majid Abbasi, Site Engineer, FWO
2. Mr. Rizwan Shahid, Site Engineer, FWO
3. Mr. Faisal, Site Supervisor, FWO
4. Mr. Idrees, Site Supervisor, FWO
5. Mr. Saqib, Site Supervisor, FWO
6. Mr. Sobidar Sultan Mehmood, Site Supervisor, FWO

Work Status:

- Work in progress.
- Work Stopped
- Work Completed

Quality of Environment Compliance:

- Good
- Satisfactory
- Poor

Issues at site:

- Proper traffic sign boards were found missing along the road.
- Though water sprinkled on road to control dust pollution but the problem still remains at few work places along the road.
- FWO staff was found hesitant while sharing their EHS plan with AGES Socio-Environmental team at FWO Labor camp.
- Record concerning workers illness and treatment was found missing both at FWO labor camp and work places at site.
- While working at sites workers were found without using PPE's (Personal protective equipments).
- Risk assessment report not present at work site.
- Work sites are devoid of the EHS arrangements, such as first aid boxes and ambulance services are still not provided to the workers at site.
- Though promised in the previous meeting with FWO at their Labor camp, the EHS inspectors or Environmental Specialist still not deployed at site

Environmental Monitoring Check List for the Site

| S. # | Activity | Mitigation Measures | Monitoring indicators | Observations |
|---------------------------|---|--|--|---|
| Construction Phase | | | | |
| 1 | Use of heavy equipments | <ul style="list-style-type: none"> 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 | During site visit, proper maintenance of heavy and light machinery was observed at FWO labor camp. While noticing further, all the vehicles, machinery and equipments are also used and parked properly at work places. Therefore, there was seen no damage to the trees roots and prevented soil compaction at project site. To comply with such activities, Health and Safety plan and labor safeguards for the safety of labor are also needed at project site (Please refer to photo # 03). |
| 2 | Flood protection | <ul style="list-style-type: none"> 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 sewage disposal, safety measures, such as side drains, culverts and retaining walls construction in sections III, IV and V are in progress. (Please refer to photos # 05, 07, 11 and 16). |
| 3 | Handling and transportation of hazardous waste | <ul style="list-style-type: none"> 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, there was found no hazardous material along the road site; therefore, no further action as such is required. |

| | | | | |
|---|--|--|---|---|
| 4 | Handling of solid Waste | <ul style="list-style-type: none"> 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 | <p>During site visit, it was observed that there was missing a segregation plan for handling and disposal of solid waste at site area. Further, FWO staff was also suggested for strict compliance on solid waste management plan to prevent contamination of construction materials. So far arrangements at main storage, to handle construction materials were enough, while insufficient for such activities at project site. It was also advised to the FWO subcontractors to observe environmental compliance on health and safety protocols. However, it is advised to the subcontractors to provide bins for handling of solid waste, especially during retaining walls and culverts construction at sites (Please refer to photos # 05, 07, 11 and 16).</p> |
| 5 | Construction crews, camps & Accommodation | <ul style="list-style-type: none"> 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. | Ground water pollution and conflicts with locals. | <p>During site visit , it was found that the FWO camp was properly renovated and maintained in order to provide basic facilities to the construction crew, such as 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. Further, guidelines given to FWO labor force to communicate with locals were also found satisfactory at camp.</p> |

| | | | | |
|-----------------|---|--|-----------------------|---|
| | | <p>j. Prohibit domestic pets / livestock to enter into the site.</p> | | |
| <p>6</p> | <p>Material handling, use, and storage</p> | <p>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.</p> <p>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.</p> <p>c. Avoid spray of any bitumen products on vegetation outside the road area.</p> <p>d. Avoid concrete mixing on ground.</p> <p>e. Use of wet gravel at site.</p> <p>f. Avoid direct fall of drainage water into sensitive areas.</p> <p>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.</p> <p>h. Collect and deliver empty cement bags to recycling plants.</p> <p>i. Storage of contaminated water should not allow to over flow, and will be protected from rain water.</p> | <p>Dust pollution</p> | <p>FWO labor force was also suggested for providing a safe passage to dumpers while carrying construction materials from main storage to the work places. Further also, suggested that appropriate measures, such as properly secured loaded material will prevent material spillage to minimize visual impacts of stockpiles. Among the FWO subcontractors, there was also missing protocols compliance about proper placement and handling of building materials, especially during retaining walls and culvert construction at project site (Please refer to photos # 05,07,11 and 16)</p> |

| | | | | |
|---|--|--|---|---|
| 7 | Materials extraction, Quarrying & logging | <ul style="list-style-type: none"> 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, there was found a general negligence about the environmental compliance at project area. FWO construction crew was hesitant while sharing their health and safety plans with AGES Socio-environmental monitoring team. Therefore, it is strictly advised to the FWO labor force to comply with H& S protocols and avoid risk, if any during construction activities at site. Moreover, proper maintenance of building materials at quarry areas is also required once the activities accomplished (Please refer to photos # 06 & 13). |
| 8 | Site clearing & leveling | <ul style="list-style-type: none"> 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 | Loss of vegetation, soil erosion, stability, water pollution, health of workers and | During site visit, there was found no impact on vegetation as the project area is mostly rugged, and of hilly nature. However, excavation activities for widening of road continued at the shoulders of the existing road. Moreover, plantation along Peshawar-Torkham road |

| | | | | |
|-----------------|--|---|--|--|
| | | <p>to protect people and the environment.</p> <ul style="list-style-type: none"> 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. | <p>local community.</p> | <p>is also needed on emergency basis. In this regard, some project specific plants species to be identified as specified in the Environment Management Plan. Therefore, it is strongly recommended to the FWO contractor that they should on immediate basis coordinate with Forest department in this regard. There was found no use of herbicides at project site. Measures taken about soil conservation were enough and appropriate because of the soil being rocky and hilly nature consisting of sand, silt and gravels.</p> |
| <p>9</p> | <p>Excavation , cutting , and filling</p> | <ul style="list-style-type: none"> 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 | <p>Soil erosion, stability and surface water contamination</p> | <p>The process of excavation in section III, IV and V for widening of road, culverts and retaining walls construction continues at project site. While compliance of H&S protocols about such activities in the above sections are generally missing. At KM.18+100, 19+850, 20+000 Rocks excavation for the purpose of road widening continued, while compliance of safety protocols & personal protective measures about such activities was missing (Please refer to photo # 08). During site visit, it was also recommended to the subcontractors that they should properly cover and fence all culverts construction at work places. At the time of excavation activities, a proper drainage system is also needed for a smooth flow of water fall at site. Water Sprinkling and proper dumping of excavated materials are also required to avoid dust pollution at site (Please refer to photos # 10, 15, 17 & 18).</p> |

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| | | road temporarily used for traffic. | | |
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| 10 | Traffic Control and management | <ul style="list-style-type: none"> 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 | <p>Traffic flows with diversions along the existing road. Despite arrangements for diversions, proper traffic signboards for traffic control are missing which have further put traffic management at risk. Therefore, FWO contractors are strongly suggested: Install temporary traffic sign boards with reflective materials to maximize drivers' visibility at night. Construction of speed breakers to ensure maximum speed limit for heavy machinery at site, which should not exceed 20Km/hr.</p> |
| 11 | Blasting | <ul style="list-style-type: none"> 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 | <p>Currently, rock excavation for widening of road in section-III and IV is in progress. Safety protocols compliance regarding such activities is generally missing at site. Therefore, FWO is advised to provide PPEs (personal protective equipments) to workers to ensure their safety at site (Please refer to photos # 04,05,08,09, 11 and 14).</p> |
| 12 | Sources of building materials | <ul style="list-style-type: none"> a. Develop logging, quarrying and borrowing plans to provide cumulative effects of environmental compliance at site. b. Adherence to plans and monitoring over | Damages to the aquatic, terrestrial ecosystems | <p>Health & Safety plan or other monitoring measures, such as about extraction activities were found missing at quarry sites. Therefore, FWO is required to develop logging, quarrying and borrowing plans for</p> |

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| | | <p>impacts of extraction activities at site. Try to modify these plans as much as required.</p> <p>c. Fill in quarries and pits before the abandoning of the construction activity.</p> <p>d. Control runoff into pits.</p> | <p>erosion , siltation, and vector-borne diseases</p> | <p>environmental compliance and safety of labor at site.</p> |
| 13 | Dust Pollution | <p>a. Water spraying.</p> <p>b. Covering of Trucks with tarpaulins.</p> | <p>Nuisance to the public, undermining the quality of air and water due to contamination</p> | <p>At this site visit, there were observed water sprayed on road, while problem of dust pollution still continues at some places (Please refer to photos # 10, 15, 17 and 18).</p> |
| 14 | Borrow Areas | <p>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.</p> | <p>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.</p> | <p>No activities were seen about borrow areas at site. Moreover, borrow areas still to be identified, if required.</p> |
| 15 | Damages to the existing infrastructure | <p>a. Locate different locations of existing infrastructure on both sides of road.</p> <p>b. Avoid damages to locations of water pipes and electricity pylons etc.</p> | <p>Facilities to the locals</p> | <p>During site visit, it was advised to the FWO authorities to take care of the infrastructure, if any, and avoid damages to water pipes and electricity pylons etc. especially observed during culverts construction at site. It was also suggested to the workers to inform FWO/ NESPAK / WAPDA/PTCL departments before the excavation activities started at site (Please refer to photo # 16).</p> |
| 16 | Health & Safety of the workers | <p>a. Prepare and implement a Health and Safety Plan at site.</p> | <p>Workers and public at risk</p> | <p>During the site visit, it is observed that the compliance of Health and Safety protocols is</p> |

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| | | <ul style="list-style-type: none"> 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. | due to accidents at site | <p>generally followed at camp, while remains neglected at site. In this regard, FWO officials are advised to observe safety protocols compliance, prepare H&S plan and take measures for keeping records of accidents, illness and treatments of workers etc. Moreover, H&S protocols' training to the workers is also very important to ensure their safety and good health at site. Health facilities, such as ambulance services, first aid etc. should also be provided to the workers at site. While PPEs (Personal protective equipments) were also missing at project area (Please refer to photos # 04, 05, 08, 09, 11, 12 and 14).</p> <p>All activities at site, such as retaining walls, culverts constructions and materials extracted for building activities at quarry areas should comply the guidelines mentioned above (Please refer photos # 06, 08 and 13).</p> |
| 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. Local labor is also hired for a subcontract at site. |
| 18 | Others concerns like Resettlement etc. | <ul style="list-style-type: none"> 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 | Relocation or Resettlement issues are missing at project area because the road construction continues on its existing corridor. At project site, infrastructure facilities, such as sewerage, telephone cables and electricity lines etc. should properly be cared, protected, and remain undisturbed (Please refer to photo # 16). During site visit, there were noticed social conflicts with locals over the damages to existing infrastructure at site. |
| Operation and Maintenance of newly constructed road | | | | |
| 19 | Road maintenance | a. Monitor and Maintain cleanliness of drainage structures, channels, ditches and culverts. | Road Maintenance | Most of the construction work in sections –I, II of the Peshawar-Torkham road has been completed |

| | | | | |
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| | | <ul style="list-style-type: none"> 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. | | |
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| | | | | |
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| 20 | Use and maintenance of equipments | <p>Install concrete pads, drains and oil/water for vehicles maintenance.</p> <p>Areas separation, where equipments, vehicles are maintained and fueled on regular basis.</p> | Water and soil pollution | No compliance was shown at site. The required protocol may properly be addressed. |
| 21 | Accidents due to hazardous materials | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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

9.1 IPC'S SUMMARY TABLE

| S.No | SECTION | PIL AMOUNT (US\$) | AMOUNT CERTIFIED (US\$) | REMAINING AMOUNT (US\$) | CERTIFIED (%) |
|--------------|---------------------|-------------------|--------------------------|-------------------------|---------------|
| 1 | I | 9,978,081 | 9,324,314 | 653,767 | 93.45 |
| 2 | II | 9,383,484 | 7,008,228 | 2,375,256 | 74.69 |
| 3 | III | 9,512,705 | 6,361,298 | 3,151,407 | 66.87 |
| 4 | 02 Bridges & 02 MCC | 3,668,533 | 1,276,624 | 2,391,909 | 34.80 |
| TOTAL | | 32,542,803 | 23,970,464 | 8,572,339 | 73.66 |

9.2 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 | 234,457,311 |
| 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 | 15,811,658 |
| 9 | | | 1,316,284 | 123,730,696 | 12-May-14 | 14-May-14 | 30-May-14 | 1,113,124 | 104,633,660 |
| UP-TO DATE CERTIFIED AMOUNT | | | | | | | | 9,324,314 | 876,485,552 |

Conversion Rate 1 US \$ = 94 PKR

9.3 CONTRACTOR IPC's (SECTION-II)

| | 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 |
| 3 | | | 2,541,722 | 266,880,810 | 12-May-14 | 14-May-14 | 30-May-14 | 2,541,722 | 266,880,810 |
| 4 | | | 2,347,005 | 246,435,540 | 23-Jul-14 | 23-Jul-14 | 9-Aug-14 | 2,347,005 | 246,435,540 |
| 5 | | | 791,415 | 83,098,567 | 25-Sep-14 | 29-Sep-14 | 30-Sep-14 | 791,415 | 83,098,567 |
| UP-TO DATE CERTIFIED AMOUNT | | | | | | | | 7,008,228 | 735,863,940 |

Conversion Rate 1 US \$ = 105 PKR

9.4 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 |
| 2 | | | 3,552,378 | 369,447,312 | 12-May-14 | 14-May-14 | 30-May-14 | 3,320,510 | 345,333,040 |
| 3 | | | 538,542 | 56,008,352 | 23-Jul-14 | 23-Jul-14 | 9-Aug-14 | 306,674 | 31,894,080 |
| 4 | | | 2,238,193 | 232,772,072 | 25-Sep-14 | 29-Sep-14 | 30-Sep-14 | 2,006,325 | 208,657,800 |
| UP-TO DATE CERTIFIED AMOUNT | | | | | | | | 6,361,298 | 661,574,976 |

Conversion Rate 1 US \$ = 104 PKR

9.5 CONTRACTOR IPC's (02 BRIDGES & 02 MC CULVERTS)

| 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 | 3,668,533 | 348,510,635 | 2,157,972 | 205,007,331 | 11-Aug-14 | 20-Aug-14 | 30-Sep-14 | 1,276,624 | 121,279,253 |
| UP-TO DATE CERTIFIED AMOUNT | | | | | | | | 1,276,624 | 121,279,253 |

Conversion Rate 1 US \$ = 95 PKR

9.6 RECORD OF COORDINATION MEETINGS / JOINT SITE VISITS

| Date | Meeting | Participants | Venue |
|-------------|-----------------------|-------------------------------------|---|
| 20 Oct'14 | Co-ordination Meeting | M&E Consultants, FWO, NESPAK | CRE office, Jamrud, Khyber Agency |
| 20 Oct'14 | Joint Site Visit | M&E Consultants, FWO, NESPAK | Sec-II & III, PTR |
| 22 Oct'14 | Co-ordination Meeting | M&E Consultants, FWO, NESPAK | CRE office, Jamrud, Khyber Agency |
| 22 Oct'14 | Co-ordination Meeting | M&E Consultants, FWO, NESPAK | C.O (FWO) office, Jamrud, Khyber Agency |
| 30 Oct'14 | Co-ordination Meeting | USAID, M&E Consultants, FWO, NESPAK | C.O (FWO) office, Jamrud, Khyber Agency |
| 30 Oct'14 | Joint Site Visit | USAID, M&E Consultants, FWO, NESPAK | Sec-II to IV, PTR |

9.7 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 | TBN | 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 | |
| 16 | Anwar Dad | Quantity Surveyor | |
| 17 | Waqar ul Mulk | Junior Architect | |
| 18 | Naeem Jan (Transferred to KQC on 15-10-2014) | Senior Surveyor | |
| 19 | Muhammad Waqas | Survey Assistant | |
| 20 | Muhammad Ayaz | Survey Assistant | |
| 21 | TBN | Survey Assistant | |
| 22 | Sana Ullah | Accountant | |
| 23 | Ihsan Ali | Assistant Office Administrator | |
| 24 | TBN | Computer Operator | |

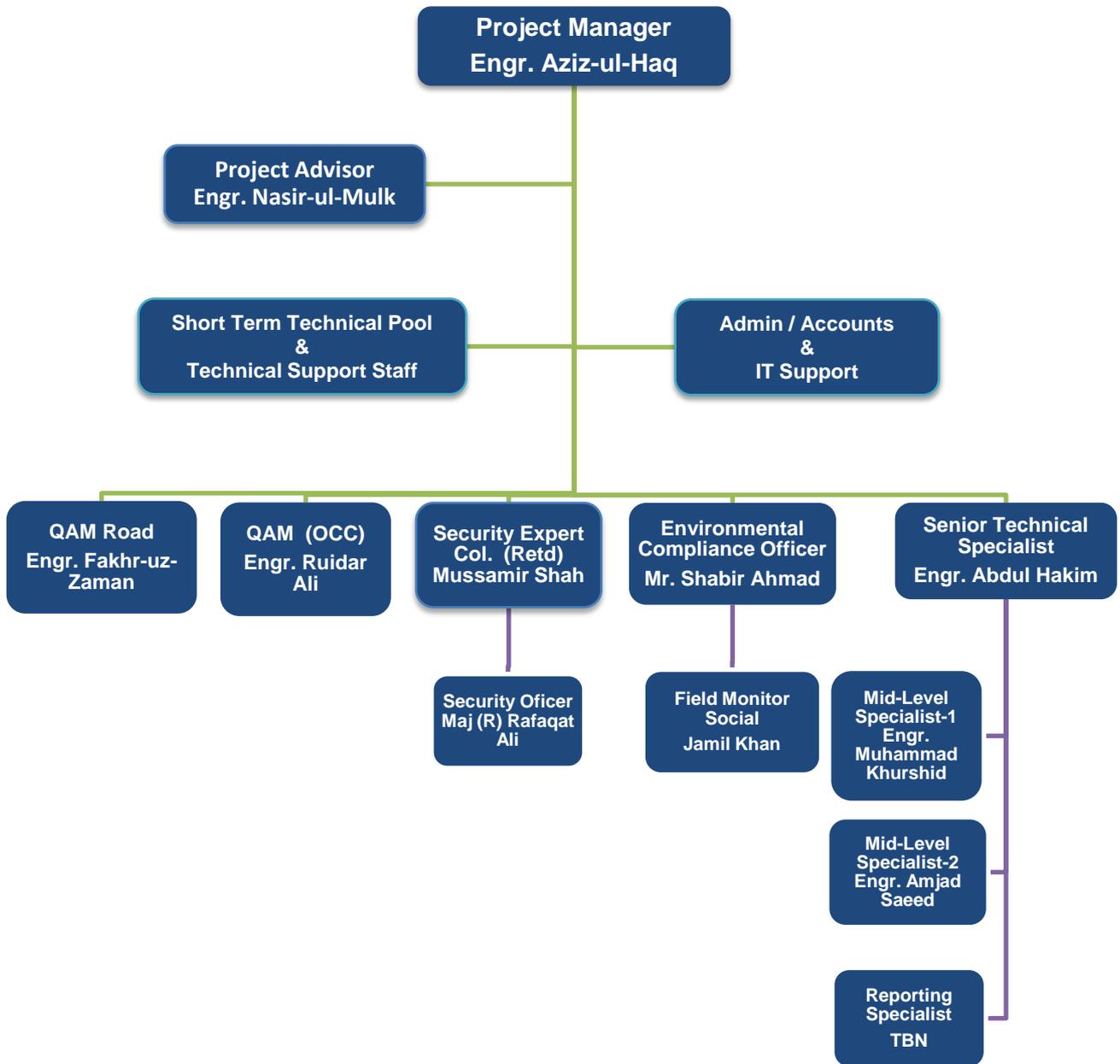
QAM OFFICE (ROAD COMPONENT)

| S. No. | Name | Designation |
|---------------|-----------------------------|----------------------------------|
| 1 | Fakhr-uz-Zaman | Quality Assurance Manager (Road) |
| 2 | Col. (Rtd.) Zafar Alam Khan | M&E Specialist Road |
| 3 | Muhammad Ilyas | Field Manager M&E |
| 4 | Muhammad Naeem | Field Manager M&E |
| 5 | Muhammad Ibrar | Office Engineer |
| 6 | Rasheed Khan | Field Monitor Road |
| 7 | Muhammad Sher | Field Monitor Road |
| 8 | Ghulam Qasim Khan | Field Monitor Road |
| 9 | Atif-ul-Haq | Field Monitor Road |
| 10 | Tariq Ibrahim Khan | Quantity Surveyor |
| 11 | Asad Khan | CAD Operator |
| 12 | Major (Rtd.) Razaqat Ali | Security Officer |
| 13 | Ihsan Ullah | Accountant |
| 14 | Hafiz-ur-Rehman | Assistant Accountant |
| 15 | Nasir Alam | Admin Officer |
| 16 | Umar Shah | Assistant Office Admin |
| 17 | Hamid Ali | Computer Operator |

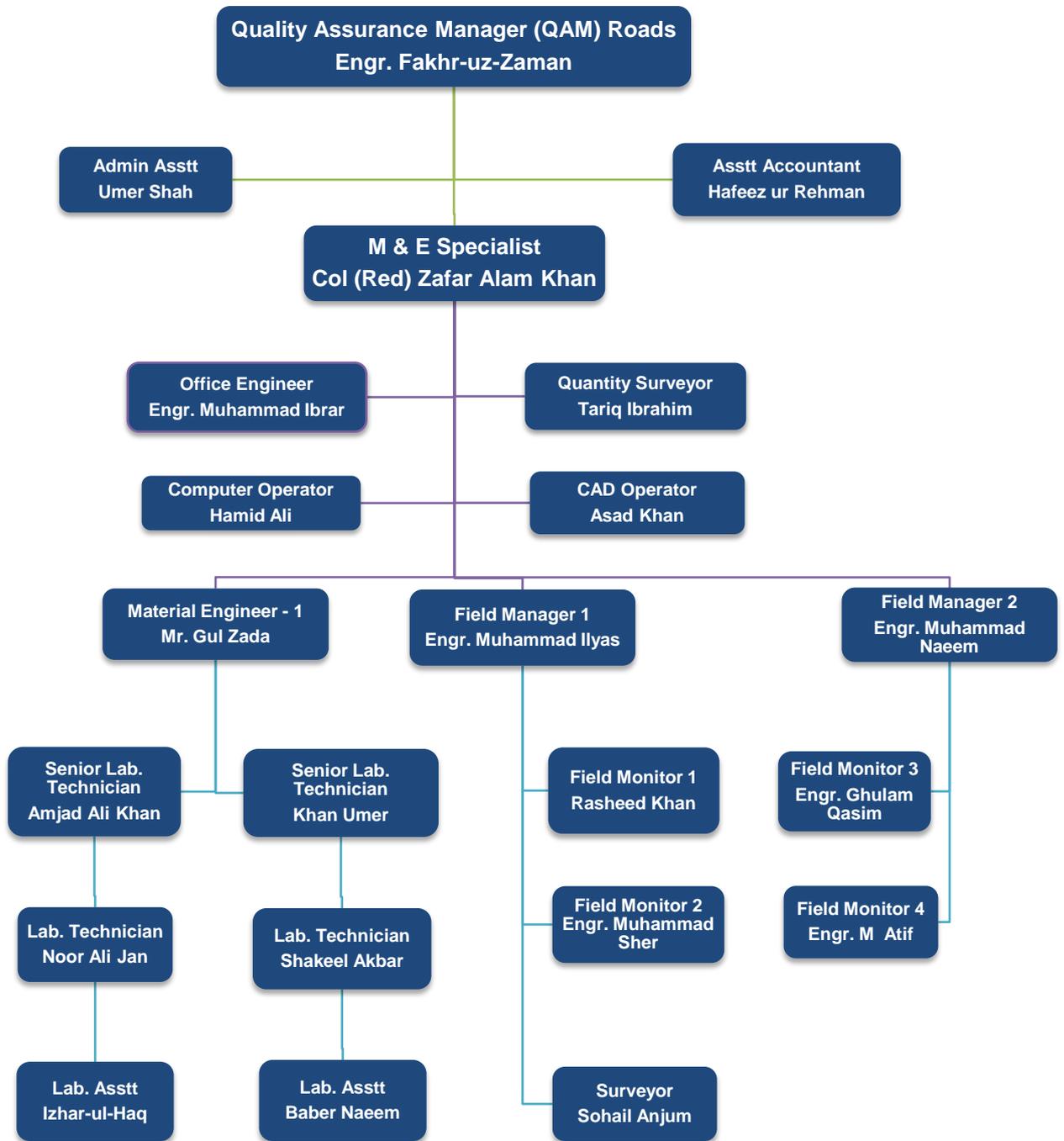
LABORATORY STAFF (ROAD COMPONENT)

| 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 | Izhar-ul-Haq | 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

PAVEMENTS



KM 0+100~0+200: Loop-I Rigid pavement joint cutting is in progress



KM 18+726~18+750 LHS: Concrete is being placed for rigid pavement



KM 18+772.2~18+795 HW LHS: Steel reinforcement mesh placed on top of rigid pavement



KM 18+931~18+954 HW RHS: Rigid pavement concrete is in progress.



KM 9+375~9+775 FW: ACWC final compaction is in progress



KM 21+100~21+300 FW: ACBC 1st layer laying in progress



KM 30+775~31+00 FW: WBM spreading & compaction in progress



KM 31+400~31+550 FW: WBM Base spreading & compaction is in progress.



KM 32+100~32+200 FW: Sub base top leveling & grading in progress



KM 32+700~32+800 FW: Existing pavement cutting is in progress.



KM 1+050~1+150 Loop-II RHS: Road way excavation is in progress

STRUCTURES



Culvert at KM 19+126: Lean concrete placed for Abutment wall-2



Culvert at KM 22+925: D/S side backfill along cutoff wall and under Apron is in progress



Culvert at KM 31+030: Stone masonry of pier is in progress



Culvert at KM 31+162: Wing wall stone masonry is in progress



Culvert at KM 35+752: Stone masonry for Abutment wall-1 is in progress.

BRIDGES



Bridge at KM 11+650: ACWC laying is in progress.



Bridge at KM 18+475: Formwork fixing of Abutment wall-2 is in progress.



Bridge at KM 23+850: Launching of Pre stressed girder # 9 is in progress



Bridge at KM 27+250: Formwork fixing for Precast Panels is in progress



Bridge at KM 27+250: Pile cap Abutment-2 lean concrete placed

RETAINING WALLS



KM 9+650~9+700 RHS: Retaining wall stone masonry in progress



KM 18+795~18+810 LHS: Raising of retaining wall is in progress



KM 19+125~19+175 LHS: Retaining wall stone masonry in progress



KM 21+411~21+500 RHS: Retaining wall stone masonry is in progress



KM 21+625~21+675 RHS: Retaining wall stone masonry in progress



KM 22+600~22+650 LHS: Retaining wall stone masonry in progress

FIELD / LAB TESTING



KM 9+485: ACBC Coring in progress



KM 11+270: ACBC Coring in progress



Cores Taken from Kerb Stone at M&E Laboratory



KM 9+571: Coring of ACBC in progress



Coring of Kerb Stone for Compressive Strength at M&E Laboratory



KM 9+460: Field Density Test of WBM



KM 16: Sampling of Sand for Gradation



KM 31+410: Sampling of WBM for Quality Testing

ENVIRONMENTAL MONITORING



Inside view of a room at FWO Labor Camp



Inside view of the Dining Hall at FWO labor camp.



View of FWO Laboratory equipments at FWO labor camp.



KM 14+850: Labor during Asphalt Base Course construction needs PPEs (personal protective equipments) and health & safety measures.



KM 15+800: Side drain construction needs proper placement of building materials & compliance on H&S protocols.



KM 16+100: Crush plant near Shagai Fort needs compliance on H&S protocols & construction materials.



KM 18+475: Bridge construction needs protection and compliance on safety measures.



KM 18+100: Drilling and blasting for widening of road needs Health & Safety measures and sign boards for protection.



KM 18+850: Rigid Pavement construction needs health & safety measures & labor safeguards.



KM 19+200: Dust pollution, needs sprinkling of water.



KM 22+925: Multi-cell culvert construction needs Health and Safety measures.



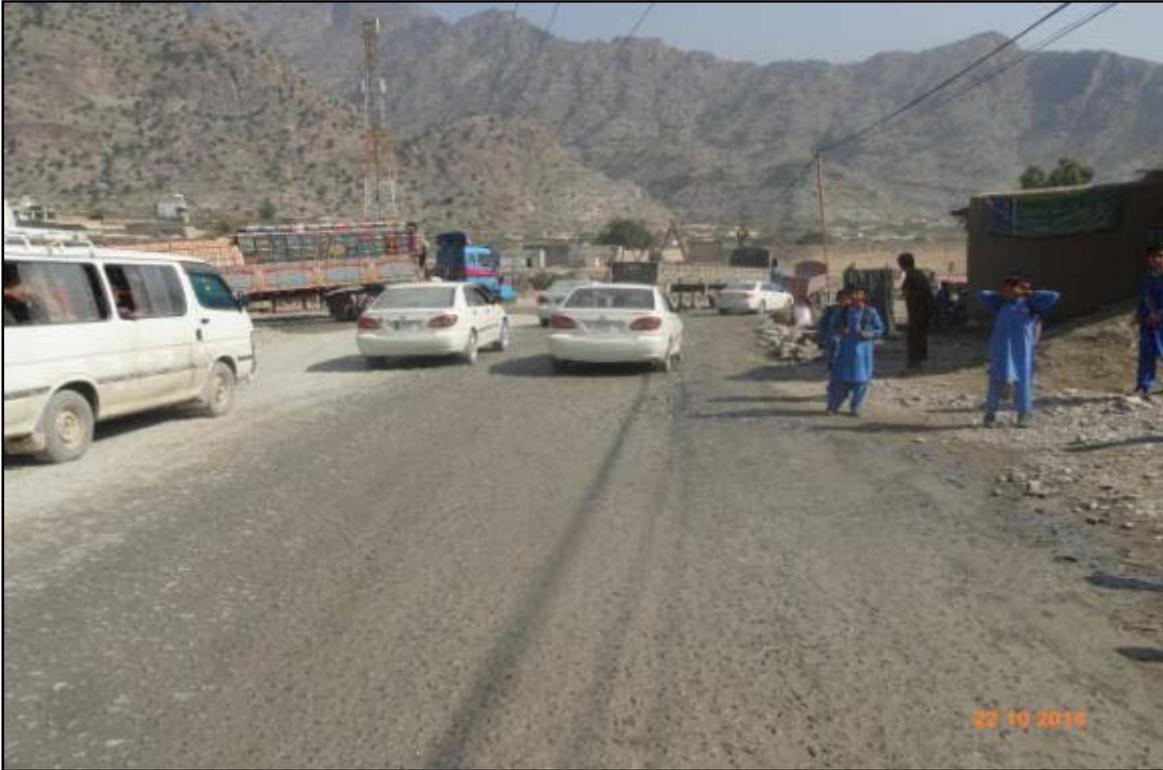
KM 23+ 850: Bridge construction needs Health and Safety measures.



KM 24+ 300: Quarry area needs compliance on H&S protocols and proper placement of construction materials.



KM 27+ 250: Pile Cap of the bridge construction needs compliance over Health and Safety measures & labor safeguards.



KM 27+300: Water sprayed to control dust pollution.



KM 31+162: Underground utilities during culvert construction needs protective measures and Safeguards.



KM 31+600: Dust pollution, needs sprinkling of water.



KM 33+275: Water sprayed to control dust pollution.