HIMACHAL PRADESH PUBLIC WORKS DEPARTMENT
O/O Engineer-in-Chief (Project) HPPWD Nirman Bhawan Shimla-171002.

No. PW-E-in-C(QC&D) WS/WA-III/Appt./TPQM/2026 9385-9408 Dated: 18/2/2026

To

All the TPQMs
In Himachal Pradesh

Subject :- Guidelines to be followed for conducting TPQM inspections.

It has been observed that the inspections conducted by the TPQM are being carried out in the old format, which is now become obsolete and does not comprehensively cover all the required parameters to be checked during the inspection of road works.

In this regard, it is hereby intimated that henceforth the revised inspection format as followed in PMGSY(enclosed as **Annexure-A**) shall be strictly followed for conducting all NABARD inspections of in-progress as well as completed works. The use of the old inspection format is hereby discontinued.

All concerned TPQMs are directed to ensure strict compliance with the above instructions.

Engineer-in-Chief(Projects)
Nirman Bhawan, Nigam Vihar
Shimla

Copy forwarded to :-

1. The Engineer-in-Chief, HPPWD, Nirman Bhawan, Shimla-2 for information please.
2. All the Zonal Chief Engineers in HPPWD, for information please.
3. All the Superintending Engineers in HPPWD, through mail post for information please.
4. The Nodal Officer(IT), HPPWD, Nirman Bhawan, Shimla-1. He is requested to upload the complete Inspection format for TPQMs(copy attached as Annexure -A) on the departmental website.

Engineer-in-Chief(Projects)
Nirman Bhawan, Nigam Vihar
Shimla

Format for inspection of NABARD Work for Ongoing/Completed Work

PART I– Work Information *(To be filled-up by PIU)*

1. GENERAL:

I. Work is (***check✓ any one box***) ☐ **Ongoing** ☐ **Completed**

II. Current stage of work: (***check✓ any one box***) ☐ Stage-I ☐ Stage-II ☐ Composite

III. Date of inspection: _____

IV. Name of Quality Monitor (QM): _____ Code: _____

V. State: _____ District: _____ Block: _____

VI. Name of Road: _____

VII. Package number.: _____

VIII. Sanction length: _____km, Flexible pavement: _____km, Rigid/Semi-Rigid pavement: _____km

IX. Executed length: _____km, Flexible pavement: _____km, Rigid/Semi-Rigid pavement: _____km
(in case of completed works only)

X. Reasons for deviation (*if any*): _____

XI. Name of new technology *(if used)* _____ RD from _____km to _____km

XII. Estimated cost (as cleared by GOI): Rs. _____ Lakh

XIII. Technical sanction Cost: Rs. _____ Lakh

XIV. Awarded cost: Rs. _____ Lakh

XV. Expenditure: (*if work is ongoing*) a. Expenditure done: Rs. _____ Lakh

b. Bills pending: Rs. _____ Lakh

Total expenditure (a+b) Rs. _____ Lakh

XVI. Completion cost: (*if work is completed*) Rs. _____ Lakh

XVII. The work is a case of ***(check ✓ boxes as applicable)***

A) ☐ New Connectivity Total length: ____ km

(i) Carriageway width (m): ☐ 3m ☐ 3.75m ☐ 5.5m ☐ 7.5m

B) ☐ Up-gradation Total length: ____ km

(i) Carriageway width and length:

☐ With widening — Existing width ____ m; Proposed width ____ m — Length ____ km

☐ Without widening — Proposed width ____ m — Length ____ km

XVIII. Terrain: (**check ✓ anyone**) ☐ Plain ☐ Rolling ☐ Hilly

XIX. Date of award of work: *(date/ month/ year)* ☐☐ ☐☐ ☐☐☐☐

XX. Date of start of work:*(date/ month/ year)* ☐☐ ☐☐ ☐☐☐☐

XXI. Stipulated date of completion:*(date/ month/ year)* ☐☐ ☐☐ ☐☐☐☐

XXII. Actual date of completion: *(date/ month/ year)* ☐☐ ☐☐ ☐☐☐☐

(in case of completed work):

2. PHYSICAL PROGRESS: (Ongoing/Completed)

I. Construction Programme and Physical Progress:

Item of work (1)	Units (2)	Quantity As per DPR (3)	Quantity executed (4)	Completed percentage of item (5)	Fill in start and completion dates			Delay in months (9)
					Progress status (6)	Start Date (7)	Completion Date (8)	
i) Preparatory Work					Due			
					Actual			
ii) Earth Work& Subgrade					Due			
					Actual			
iii) CD Works					Due			
					Actual			
iv) Protection works					Due			
					Actual			
v) Sub Base including shoulders					Due			
					Actual			
vi) WBM/ WMM Base Course					Due			
					Actual			
vii) Bituminous Base/Wearing Course					Due			
					Actual			

viii) Bituminous Surface Course					Due			
					Actual			
ix) CC Pavement					Due			
					Actual			
x) Signage etc.					Due			
					Actual			

3. QUALITY CONTROL:

I. Location of field laboratory:

II. Geo-tagged photograph of laboratory uploaded on: *(date/ month/ year)*

III. Reason for delay in establishment of field laboratory*(if so)*:

IV. Details of contractor, executing the work:

Name of contractor	PAN number	Mobile number	E-mail ID.

V. Details of contractor's engineer available at site: (Responsible for maintaining quality control register part-1

Sl. no.	Name of contractor's engineer at site	Identity number	Mobile number	Duration of posting at site	
				From	To

VI. Details of Head of PIU supervising the work:

Sl. no.	Head of PIU (Executive engineer)	Employ number	Duration of posting at site	
			From	To

VII. Details of Assistant engineer supervising the work and maintaining quality control register Part-II:

Sl. no.	Name of Assistant engineer	Employ number	Mobile number	Duration of posting at site	
				From	To

VIII. Details of the Junior engineer supervising the work:

Sl. no.	Name of Junior engineer	Employ number	Mobile number	Duration of posting at site	
				From	To

IX. List of equipments available in field lab:

Table (IX) a

Available equipments that are in working condition (1)	Available equipments that are **not** in working condition (2)

X. List of equipments not available in field lab:

XI. Reasons put forth by PIU for non availability of equipments in field lab:

XII. Equipments and documents ready to be made available to QM before or during the inspection:

4. DETAILS OF MIX DESIGN(s) (if provided in the sanctioned project):

If not provided *(***check ✓ the box)**

	Not applicable

Sl. No.	Mix Design	Mix Design Strength	Institute/laboratory where mix design was done	Date
i.	Cement Concrete M20			
ii.	Cement Concrete M 30			
iii.	Dense Bituminous Macadam			
iv.	Semi Dense Bituminous Concrete			
v.	Bituminous Concrete			

5. EARLIER INSPECTIONS BY TPQM or SENIOR DEPARTMENTAL OFFICERS (SEs & CEs) AND ACTION TAKEN STATEMENT:

(Please indicate chronologically name and designation of the officer who had inspected the work):

Date of Visit (1)	Name and Designation of Inspecting officer (TPQM/CE/SE) (2)	Road Distance (RD)		Level of work at the time of inspection (5)	Major Observations (6)	Action Taken by PIU with Date (7)
		From (3)	To (4)			

Signature of the Head of PIU…….…….

Seal of PIU

Name and Designation of the Head of PIU …….…….

Mobile Number of the Head of PIU…….……

E-mail of the Head of PIU…….……

Address of the PIU……..

Date:……..……..

Report of Third Party Quality Monitor (TPQM)

PART II– Observations of TPQM for Ongoing/Completed Work

(To be filled-up by QM)

1. GENERAL DETAILS:

I. Date of inspection:

II. Name of Quality Monitor (QM)

III. State: District: Block:

IV. Name of Road:

V. Package number:

VI. RD of inspection: From RD: Km to RD: Km

VII. Current stage of work: (***check✓ anyone***)

- ☐ *Stage-I construction*
- ☐ *Stage-II construction*
- ☐ *Composite construction*

VIII. Physical status of work: ***(check✓ anyone)***

- ☐ Ongoing
- ☐ Completed

IX. Present status of work: ***(check✓ boxes as applicable)***

- ☐ Earthwork & Subgrade
- ☐ GSB
- ☐ Base course
- ☐ Surface course
- ☐ Shoulder
- ☐ Cross drainage work
- ☐ Protection work
- ☐ Drains
- ☐ Finishing stage

2. *QUALITY ARRANGEMENTS-OBSERVATIONS:* (in case of ongoing works only): (Geo-tagged photograph of the laboratory showing the available equipment's to be uploaded)

I. Whether field laboratory established***:(****check ✓ any one box*) ☐ Yes ☐ Partly ☐ No

II. Whether location of field laboratory is same as indicated by PIU in format part-I*: (****check ✓ any one box****)* ☐ Yes ☐ No

III. Whether necessary equipments as indicated in part-1 are actually available: **(check ✓ any one box)** ☐ Yes ☐ Partly ☐ No

IV. Whether equipment's have been used: ***(check ✓ any one box)*** ☐ Yes ☐ Partly ☐ No

V. If all necessary equipments are not available, whether you have verified them with the list of deficient equipment's provided by PIU in format Part-I*:* ***(check✓ any one box)*** ☐ Yes ☐ No

VI. Whether contractor's engineer as per Part-I of this format, is available at site: ***(check✓ any one box)*** ☐ Yes ☐ No

VII. If contractor's engineer as per Part-I of this report is not available, whether you are satisfied with alternative arrangement made to maintain QCR-I: ***(check ✓ any one box)*** ☐ Yes ☐ Partly ☐ No

Item Grading-2: ***(Check✓ any one box)*** ☐ S ☐ SRI ☐ U

If this item is graded SRI/U, write clear reasons and suggestions for improvement, indicating important deficient equipments:

3. ATTENTION TO QUALITY *(in case of ongoing works)*:

I. Maintenance of QC Registers:

(a) Based on executed quantities, whether all mandatory tests conducted: ***(check✓ any one box)*** ☐ Yes ☐ Partly ☐ No

(b) Whether QC Register Part I maintained as per provisions: ***(check ✓ any one box)*** ☐ Yes ☐ Partly ☐ No

(c) Whether QC Register Part II maintained and test results monitored as per provisions**:** ***(check ✓ any one box)*** ☐ Yes ☐ Partly ☐ No

II. *(a):* Adequacy of Quality Control Tests, as per QCR-1*:*

Item of Work (1)	Quantity as per DPR (2)	Quantity Executed (3)	Name of the Test (4)	Number of Tests required (*as per executed quantity*) (5)	Number of Tests actually conducted (6)	Testing adequate (*Yes/No*) (7)
Earth Work / Sub Grade						
Granular Sub-Base						
Granular Base Course						
Bituminous Base Course						
Bituminous Surface Course						
Rigid/ Semi rigid pavement						

(b) **If testing found inadequate, the reason for less testing*: (Check ✓ one or more box)***

- ☐ Negligence
- ☐ Lack of equipment in lab
- ☐ Lack of knowledge
- ☐ Any other, please specify: ☐

(c) **Verification of test results:** ***(C: conforming, N: non-conforming)***

Quality control tests to be conducted by QM and the results to be matched with test results previously recorded in QCR-I, at or near the test pit of QM.

Location RD (1)	Name of Test (2)	Results of the test conducted by QM at a defined location. (C /N) (3)	Test results as per QCR-I at the nearest location. *(Mention the Page no. of QC Register)* (4)	Results of the test conducted previously by QM at defined location. (C /N) (5)	Whether the test results recorded in QCR-I register and as conducted by QM are in conformity? (Yes /No) (6)

Note: QM to choose the location of test pit, which is representative sample of the stretch being inspected by QM and near to the test location recorded in the QCR-I so that it can be compared.

(d) Whether non-conformities recorded in QCR-II by AE have been rectified and recorded in QCR-I again as conformities, after conducting necessary tests:

(***Check✓ any one box)*** ☐ Yes ☐ No

Item Grading-3: ☐ S ☐ SRI ☐ U
(Check✓ any one box)

If this item is graded SRI/U, write clear reasons and suggestions for improvement, are to be recorded:

4. GEOMETRICS:

The QM should take at least two measurements in 1 Km length, and if it is found that the roadway and carriageway are inadequate at certain locations, QM should take more observations:

(Photographs of measurement of the roadway or carriageway width, superelevation, camber, and in case of roads in rolling or hilly terrain, longitudinal gradients and slopes should be uploaded by NQM/SQM)

I. Observations: Roadway, Carriageway, and Camber

Location RD	4(I)a Roadway Width (m)			4(I)b Carriageway Width (m)			4(I)c Camber (%)		
	As per DPR	Actual at site	Grade (S/U)	As per DPR	Actual at site	Grade (S/U)	As per DPR	Actual at site	Grade (S/U)

II. Observations: Superelevation and extra widening at curves in case of plain terrain -

Location RD	4 (II)a Super Elevation (%)			4(II)b Extra Widening provided (m)		
	As per DPR	Actual at site	Grade (S/U)	As per DPR	Actual at site	Grade (S/U)

III. Observations: Longitudinal gradient in case of road in hilly/rolling terrain:

(not applicable in case of plain terrain)

Ref. between RD		4(III)a Longitudinal Gradient (%)		
From	To	As per DPR	Actual at site	Grade(S/U)

Item Grading-4: ***(Check ✓ any one box)*** ☐ S ☐ U

(This item should be graded U, if any of the geometric elements provided is inadequate). *Also, QM should bring out the deviations caused due to actual ground conditions vis-à-vis sanctioned DPR.*

OBSERVATIONS REGARDING THE QUALITY OF ITEMS OF WORK:

5. EARTHWORK & SUB GRADE:

I. Quality of material for embankment / sub-grade:

(Group symbol of soil used is to be reported based on visual observation)

Sl. No. (1)	Location (RD) (2)	Group Symbol of soil as per DPR (3)	Group Symbol of soil as observed (4)	Suitability from Plasticity angle (Y/N) (5)	Quality of material used (S/U) (6)

a) Name and location of source: [ ]

b) Distance of source of earth (lead) [ ] (km)

c) Whether long lead distance for the transportation of material is justified or not:

(Check ✓ any one box) [ ] Yes [ ] No

d) QM should mandatorily comment on the quality of local earth, if the lead of earth used in the project is more than 5km:

Sub-Item Grading 5-I: [ ] S [ ] U

(Check ✓ any one box)

(This item is graded U, clear reasons and suggestions for improvement are to be recorded).

II. Compaction for Embankment and Sub-grade Construction:

(Photograph of density tests to be uploaded)

Maximum dry density (MDD) [ ] kN/m^3, Optimum moisture content (OMC) [ ] % - As per lab record.

(Record dry density and % compaction from QCR-I, at the same or nearby RD)

Sl no.	Location (RD)	(As per QCR-I)			Degree of Compaction (Measured by QM)			
		Dry density kN/m^3	% Compaction	Date of test as per QCR-I	Field Moisture Content (%)	Dry Density kN/m^3	% Compaction	Grade (S/U)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Sub-Item Grading 5-II: [ ] S [ ] U

(check ✓ any one box)

(This item is graded as U, clear reasons and suggestions for improvement are to be recorded)

III. Side slopes and profile of embankment:

(a) Side slope and embankment profile in the plain area:

Record side slopes of embankment proposed in DPR: ***(check ✓ any one box)***

	2 H: 1 V		1.5 H: 1 V

Sl no. (1)	Location (RD) (2)	Side Slopes Observed by QM- H:V (3)	Whether Side Slopes Satisfactory (Y/N) (4)	Whether profile is Satisfactory (Y/N) (5)	Grading (S/U) (6)

(b) Cut slope and profile in Hilly/Rolling terrain or high embankments:

Sl no. (1)	Location (RD) (2)	Whether cut slopes & profile appears to be stable (S/U) (3)

(c) Whether stability analysis has been carried out in DPR:

(check ✓ any one box) | | Yes | | No |

*If **NO**, then write down your observations about adequacy of slopes provided*:

Sub-Item Grading 5-III: | | S | | U |

(Check ✓ any one box)

(This item is graded as U, clear reasons and suggestions for improvement are to be recorded).

6. GRANULAR SUB-BASE (GSB):

I. Provision made in the sanctioned DPR: ***(check ✓ any one box)*** | | Yes | | No |

II. Item execution status: ***(check ✓ any one box)*** | | Completed | | Ongoing | | Not yet started |

III. GSB Grading as per DPR: ☐ Grade-I ☐ Grade-II ☐ Grade-II

(check ✓ any one box)

IV. Maximum Dry density-☐ kN/m^3 (*as per DPR*)

V. Optimum Moisture Content-☐ % (*as per QCR-I*)

(Response in 6b and 6f should be based on test datasheet of Sieve analysis and density tests conducted by QM at the site)

(Table VI**)** Observations- Quality of Material and workmanship

6a Location (RD) (1)	6b Conforms to Grading (Y/N) (2)	6c Material Suitable from plasticity angle (Y/N) (3)	6d Dry density kN/m^3 (4)	6e % Comp-action (5)	6f Whether compaction is adequate (Y/N**)** (6)	6g Thickness as per DPR (in mm) (7)	6h Measured Thickness (in mm) (8)	6i Prescribed Thickness provided (Y/N) (9)

VI. Whether GSB has been constructed in layers: ***(check ✓ any one box)*** ☐ Yes ☐ No

(if **yes**, ***check✓ the number of layers***) ☐ In one layer ☐ In two layer

VII. Whether compaction has been done as per the provision in DPR: ***(Check ✓ any one box)*** ☐ Yes ☐ No

Item Grading-6 ☐ S ☐ U

(Check ✓ any one box)

(if this item is graded as U, clear reasons and suggestions for improvement are to be recorded).

7. BASE COURSE: 1st Layer:

I. Provision made in the first layer in sanctioned DPR: ***(Check ✓ any one box)***

☐ WBM Grade II ☐ WBM Grade-III ☐ WMM ☐ **Not** Provided

II. Item execution status: ***(Check ✓ any one box)*** ☐ Completed ☐ Ongoing ☐ Not yet started

III. Actual execution in first layer of the Base course: (***Check ✓ any one box***)

☐ WBM Grade II ☐ WBM Grade-III ☐ WMM ☐ **Not** Provided

IV. Reason for change in actual execution at site w.r.t provision made in DPR: (if applicable)

V. Observations- Quality of Material and Workmanship:

(Response in 7b and 7e, will be based on test datasheet of Sieve analysis and volumetric analysis for density)

7a Location (RD) (1)	7b Grading of Aggregates (S/U) (2)	7c Plasticity of Filler material (S/U) (3)	7d Volume of filler material percent of coarse Aggregate (4)	7e Compaction based on volumetric analysis (S/U) (5)	7f Design thickness as per DPR (mm) (6)	7g Thickness of each layer of WBM/ WMM (mm) (7)	7h Thickness adequate (S/U) (8)

Item Grading- 7: ☐ S ☐ U

(Check ✓ any one box)

(This item is graded as U, clear reasons and suggestions for improvement are to be recorded).

8. BASE COURSE: 2nd Layer:

I. Provision made in the second layer in the sanctioned DPR: ***(check ✓ any one box)***

☐ WBM Grade II ☐ WBM Grade-III ☐ WMM ☐ Not Provided

II. Item execution status: ***(Check ✓ any one box)*** ☐ Completed ☐ Ongoing ☐ Not yet started

III. Actual execution in the second layer of the Base course: (***check ✓ any one box***)

☐ WBM Grade II ☐ WBM Grade-III ☐ WMM ☐ Not Provided

IV. Reason for change in actual execution at site w.r.t provision made in DPR: (if applicable)

V. Observations- Quality of Material and Workmanship:

(Response in 8b and 8e, will be based on test datasheet of Sieve analysis and volumetric analysis for density)

8a Location (RD) (1)	8b Grading of Aggregates (S/U) (2)	8c Plasticity of Filler material (S/U) (3)	8d Volume of filler material percent of coarse Aggregate (4)	8e Compaction based on volumetric analysis (S/U) (5)	8f Design thickness as per DPR (mm) (6)	8g Thickness of each layer of WBM/ WMM (mm) (7)	8h Thickness adequate (S/U) (8)

Item Grading- 8: ☐ S ☐ U

(Check ✓ any one box)

(This item is graded as U, clear reasons and suggestions for improvement are to be recorded).

9. BASE COURSE: 3rd Layer:

I. Provision made in the third layer in the sanctioned DPR: ***(check ✓ any one box)***

☐ WBM Grade II ☐ WBM Grade-III ☐ WMM ☐ Not Provided

II. Item execution status: ***(check ✓ any one box)*** ☐ Completed ☐ Ongoing ☐ Not yet started

III. Actual execution in the third layer of the Base course: (***check ✓ any one box***)

☐ WBM Grade II ☐ WBM Grade-III ☐ WMM ☐ Not Provided

IV. Reason for change in actual execution at site w.r.t provision made in DPR: (*if applicable*)

V. Observations- Quality of Material and Workmanship:

(Response in 16b and 16e, will be based on test datasheet of Sieve analysis and volumetric analysis for

9a Location (RD) (1)	9b Grading of Aggregates (S/U) (2)	9c Plasticity of Filler material (S/U) (3)	9d Volume of filler material percent of coarse Aggregate (4)	9e Compaction based on volumetric analysis (S/U) (5)	9f Design thickness as per DPR (mm) (6)	9g Thickness of each layer of WBM/ WMM (mm) (7)	9h. Thickness adequate (S/U) (8)

Item Grading-9: ☐ S ☐ U

(Check✓ any one box)

(This item is graded as U, clear reasons and suggestions for improvement are to be recorded).

10. BITUMINOUS BASE COURSE:

(Please do not fill this section if not provided in the DPR)

I. Provision made in the sanctioned DPR: (***check ✓ any one box***)

☐ BM ☐ DBM ☐ Not provided

II. Item execution status: ***(check ✓any one box)*** ☐ Completed ☐ Ongoing ☐ Not yet started

III. Actual execution at the site: ***(check✓ any one box)*** ☐ BM ☐ DBM

IV. Thickness of layer as per DPR: ☐ mm

V. Type and grade of binder used: ☐

VI. Brand name of bitumen: ☐ (as per record)

VII. Whether the invoices for the whole quantity of bitumen used at site are available: ***(check ✓ any one box)*** ☐ Yes ☐ No

VIII. If the invoice of sufficient quantity not available reason thereof:

IX. Bitumen Content as per DPR: ☐ %

X. Whether mix design is done: (in case of BM or DBM) (***Check✓ any one box***) ☐ **Yes** ☐ No

XI. Marshal stability as per mix design (in case of BM or DBM): ☐ KN

XII. Whether inspection of hot mix plant done by PIU/SE: (***Check✓ any one box***) ☐ **Yes** ☐ No

Date of inspection:……

Table: 10(XIII) Note: Fill bitumen content in the 5th column compulsorily

a Location (RD) (1)	b Grading of Coarse Aggregates (S/U) (2)	c Laying Temperature of the mix as per QCR-I (3)	d Bitumen content %			e Marshal stability as per QCR-1 (KN) (7)	f Observed thickness of layer (mm)	
			As per QCR-I (4)	As measured by QM (5)	S/U (6)		As measured by QM (8)	S/U (9)

Item Grading-10: ☐ S ☐ U

(Check ✓ any one box)

(This item is graded as U, clear reasons and suggestions for improvement are to be recorded).

11. BITUMINOUS SURFACE COURSE:

I. Provision made in the sanctioned DPR: ***(check ✓any one box)***

☐ OGPC & seal coat ☐ SDBC ☐ Mix Seal Surface

☐ Surface dressing in one layer ☐ Surface dressing in two layer ☐ Bituminous Concrete

II. Item execution status: ***(check ✓any one box)*** ☐ Completed ☐ Ongoing ☐ Not yet started

III. Type of bituminous surface executed: ***(check ✓any one box)***

☐ OGPC & seal coat ☐ SDBC ☐ Mix Seal Surface

☐ Surface dressing in one layer ☐ Surface dressing in two layer ☐ Bituminous Concrete

IV. Thickness of layer as per DPR: ☐ mm

V. Type and Grade of Binder used: ☐

VI. Brand name of bitumen supplier: ☐ *(as per record)*

VII. Whether the invoices for the whole quantity of bitumen used at site are available: ***(check ✓any one box)*** ☐ Yes ☐ No

VIII. If invoice of sufficient quantity not available reason thereof:

☐

IX. Bitumen Content as per DPR: ☐ %

X. Whether mix design done: (***check ✓any one box***) ☐ Yes ☐ No
*(*Only in case of SDBC or BC*)*

XI. Marshal stability as per mix design: ☐ KN
(Only in case of SDBC or BC)

XII. Any signs of distress on surface*: **(check ✓any one)*** ☐ Yes ☐ No
(**If yes**, check✓ one or more boxes)

☐	Due to laying at low temperature	☐	Due to poor workmanship of base course
☐	Due to over rolling	☐	Due to less/excess bitumen content

Table **(**XIII)

a Location (RD) (1)	b Grading of Coarse Aggregate (S/U) (2)	c Laying Temperature of the mix as per QCR-I (3)	d Bitumen content %			e Observed thickness of layer		f surface un evenness (S/U) (9)
			As per QCR-I (4)	As measured by NQM/SQM (5)	S/U (6)	As measured by NQM/SQM (7)	S/U (8)	

Item Grading-11: ☐ S ☐ SRI ☐ U

(Check ✓ any one box)

(*This item is graded as SRI/U, clear reasons and suggestions for improvement are to be recorded*).

12. SHOULDERS:

I. Item execution status: ***(check ✓ any one box)***

	Completed		Ongoing		Not yet started

II. Observations- Quality of Shoulders (in case of completed works only):-

Location (RD)	Quality of the Material from hand feel test (S/SRI/U)	Degree of Compaction			Camber		
		As per QCR-I	As measured by QM (%)	Grading (S//U)	As per DPR (%)	As measured by QM (%)	Grading (S//U)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

Item Grading-12: ***(check ✓ any one box)***

	S		SRI		U

(This item is graded as SRI/U, clear reasons and suggestions for improvement are to be recorded).

13. CROSS DRAINAGE WORKS: (Pipe Culverts):

I. Total number of pipe culverts as per sanctioned DPR: ☐

II. Cushion over Pipe Culverts as per DPR: ☐ cm

III. Type of Pipes provided in DPR: (***write numbers of each type)***) NP2 ☐ NP3 ☐

IV. Grade of Concrete for headwall as per DPR: (***Check ✓any one box***) ☐ M15 ☐ M20

Table-13 (V)

RD at which CD is located (1)	Type of Pipe used at Site (2)	Measured Cushion over Pipes (mm) (3)	Strength of concrete used in head walls as per QCR (4)	Quality of material and workmanship (S/SRI/U) (5)

VI. If cushion over the pipes is inadequate, whether appropriate protection to the pipes as concrete cover or concrete jacketing has been provided: ***(check ✓any one box)*** ☐ **Yes** ☐ NO

VII. Whether invert level of pipe at upstream end has been appropriately placed to avoid silting of pipes: ***(check ✓ any one box)*** ☐ **Yes** ☐ NO

Item Grading-13: ***(Check ✓ any one box)*** ☐ S ☐ SRI ☐ U

(This item is graded as SRI/U, clear reasons and suggestions for improvement are to be recorded).

14. CROSS DRAINAGE WORK: (Slab Culverts):

I. Grade of Concrete for slab culvert as per DPR: (***check ✓any one box)*** ☐ M15 ☐ M20 ☐ M25

II. Total number of slab culverts as per sanctioned DPR: ☐

Table-14 (III)

RD at which CD is located	Thickness of Slab		Grade of concrete proposed as per DPR	Strength of concrete used in head walls as per QCR	Quality of material and Quality of workmanship is acceptable(Y/N)
	As per DPR (mm)	As measured by QM (mm)			
(1)	(2)	(3)	(4)	(5)	(6)

Item Grading-14: ***(check ✓ any one box)*** ☐ S ☐ SRI ☐ U

(This item is graded as SRI/U, clear reasons and suggestions for improvement are to be recorded).

15. PROTECTION WORK:

I. Whether sanctioned DPR has the provision of protection works: ☐ Yes ☐ No
(check✓ any one box)

II. Type of protection work: ***(check✓ boxes as applicable, and write the corresponding length)***

☐	Retaining wall	Length m	☐	Breast wall	Length m
☐	Parapet wall	Length m			

	Any other type of Protection work	Length (m)
	a.	
	b.	

III. Total length of all protection work provided in DPR: ☐ (m)

IV. Quality of Materials:

Location / RD (1)	Structure Type (Retaining Wall/ Breast Wall/ Parapets) (2)	Type of Protection work (CC/ Masonry/wire crate) (3)	General quality of material conforms to specifications (Y/N) (4)	Average Width and Height mm x mm		Whether compressive strength of material is as per design from QCR-I (Y/N) (7)
				As per DPR (5)	As per records (6)	

V. Workmanship of retaining structures:

Location / RD (1)	Workmanship of retaining structures (S/SRI/U) (2)	Whether honeycombing/any other defects are observed (Y/N) (3)	Have weep holes been provided (Yes/No) (4)	Spacing of weep holes (if provided) (mm)	
				As per drawing (5)	Actual at site (6)

VI. In case, Stone masonry is used in retaining structure:

a) Workmanship of stone masonry is acceptable: ***(check✓ any one box)*** ☐ Yes ☐ No

b) Bond stone has been provided in stone masonry: ***(check✓ any one box)*** ☐ Yes ☐ No

Item Grading-15: ***(Check ✓ any one box)*** ☐ S ☐ SRI ☐ U

(This item is graded as SRI/U, clear reasons and suggestions for improvement are to be recorded).

16. CRASH BARRIERS AND ROAD SAFETY SIGNBOARDS:

I. Whether sanctioned DPR has the provision of crash barriers & road safety boards: ***(check✓ any one box)*** ☐ Yes ☐ No

II. Total length of crash barriers: ☐ (m)

Table-16 (III)

Location (RD) (1)	Type of Crash Barrier (2)	Whether provision of crash barriers and safety measures made in the DPR (Yes / No (3)	Overall quality of safety measures in road (S/SRI/U) (4)	Mandatory and cautionary signboards fixed at appropriate location (Yes / No) (5)

IV. Total number of road safety signboards: ☐

Item Grading-16: ***(check ✓ any one box)*** ☐ S ☐ SRI ☐ U

(This item is graded as SRI/U, clear reasons and suggestions for improvement are to be recorded).

17. SIDE DRAINS AND CATCH WATER DRAINS: (Earthen)

I. Whether sanctioned DPR has the provision of side drains and catch water drains:
(check ✓any one box) ☐ Yes ☐ No

II. Whether the drains have adequate longitudinal slope:
(check ✓any one box) ☐ Yes ☐ No

Table-17 (III)

Location (RD) where side drains constructed.		Location (RD) of drain at which observation made.	Whether general quality of the side drains/catch-water drains is acceptable. (Y/N)	Whether side drains are integrated to outfall. (Y/N)
From (1)	To (2)	(3)	(4)	(5)

Item Grading-17: ☐ S ☐ SRI ☐ U
(Check ✓ any one box)
(This item is graded as SRI/U, clear reasons and suggestions for improvement are to be recorded).

18. CEMENT CONCRETE/SEMI-RIGID (SR) PAVEMENTS:

I. Item execution status:
(check ✓ any one box) ☐ Completed ☐ Ongoing ☐ Not yet started

II. Type of Cement Concrete Pavement:
(check ✓any one box) ☐ Conventional ☐ Cell filled ☐ Panelled concrete
☐ Interlocking concrete block pavement (ICBP)

III. Grade of Concrete as per DPR:
(check ✓any one box) ☐ M30 ☐ M35 ☐ M40

IV. CC /SR pavement length proposed as per sanctioned DPR: Proposed length: ☐ (m)
Executed length: ☐ (m)

Table-18 (V) Note: Observation should be made for each portion of CC course

Reference RD of CC / SR pavements (m)		RD at which observation made (m)	Quality of material Concrete/ stone/ CC blocks pavements etc. (Visual inspection) (S/SRI/U)	28 days Strength of Concrete as per QCR-I MPa	Quality of Workmanship wearing surface, joints, edges etc. (S/SRI/U)	Thickness		
From	To					As per DPR (mm)	As Measured by QM (mm)	Acceptable (Y/N)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

VI. Quality of cuts and joints is acceptable: ***(check✓ any one box)*** ☐ Yes ☐ Partly ☐ No

VII. Whether the joints have been properly filled with a sealant ***(check✓ any one box)*** ☐ Yes ☐ Partly ☐ No

VIII. Whether surface texture of the pavement is acceptable: ***(check✓ any one box)*** ☐ Yes ☐ Partly ☐ No

IX. Whether any honeycombing observed on edges of pavement: ***(check✓ any one box)*** ☐ Yes ☐ Partly ☐ No

X. Whether adequate camber is provided: ***(check✓ any one box)*** ☐ Yes ☐ No

XI. Check strength with rebound hammer; is it acceptable: ***(check✓ any one box)*** ☐ Yes ☐ No

XII. Whether CC pavement was existing earlier and credit for the same was given in DPR: ***(check✓ any one box)*** ☐ Yes ☐ No

Item Grading-18: ☐ S ☐ U

(Check ✓ any one box)

(This item is graded as U, clear reasons and suggestions for improvement are to be recorded).

19. CEMENT CONCRETE PUCCA DRAINS:

I. Whether sanctioned DPR has the provision of side drains and catch water drains:
(check ✓any one box) ☐ Yes ☐ No

II. Shape of CC/Pucca side drain as per DPR:
(check ✓any one box) ☐ **U** ☐ **V** ☐ **L**

III. Length of CC drain as per DPR: ☐ m

IV. Item execution status:
(*check ✓any one box*) ☐ Completed ☐ Ongoing ☐ Not yet started

V. Grade of concrete proposed for side drains:
(*check ✓any one box*) ☐ M20 ☐ M25

Table 19(VI) Note: Observation should be made for the each portion of the drain

Location (RD) of CC/Pucca side drains		RD at which observation made	Cross-section size			Strength of Concrete as per QCR –I MPa	General quality of material and work-manship
			size as per DPR B x D in mm	size as measured B x D in mm	size of drains is acceptable (Y/N)		
From (1)	To (2)	(3)	(4)	(5)	(6)	(7)	(8)

VII. Whether the provision of CC/pucca side drains made in DPR is justified in your opinion:
(check ✓any one box) ☐ **Yes** ☐ NO

VIII. Whether the side drains have been constructed as per the DPR:
(check ✓any one box) ☐ **Yes** ☐ NO

IX. If not, in your opinion, whether the pavement performance is likely to be adversely affected*:* ***(check ✓any one box)*** ☐ **Yes** ☐ NO

X. Whether surface texture of the drain is acceptable:
(check ✓any one box) ☐ **Yes** ☐ NO

XI. Whether any honeycombing observed on edges of drain:
(check ✓any one box) ☐ **Yes** ☐ NO

XII. Whether longitudinal gradient is sufficient:
(check ✓any one box) ☐ **Yes** ☐ NO

XIII. Check that drain is terminating in stormwater drain:
(check ✓any one box) ☐ **Yes** ☐ NO

XIV. Slope of gap between pavement and drain is towards drain
(***check ✓any one box)*** ☐ **Yes** ☐ NO

XV. Whether the drains provided are serving the purpose of stormwater drain: (***check ✓any one box)*** ☐ **Yes** ☐ NO

Item Grading-19: *(Check ✓ any one box)*		S		U

(This item is graded as U, clear reasons and suggestions for improvement are to be recorded).

20. ROAD FURNITURE AND MARKINGS:

I. Observations - Quality Road Furniture and Markings (in case of ongoing/completed works):

(Photographs to be uploaded)

a) Main Informatory Board Fixed: (***check ✓any one box***) | | **Yes** | | NO |

b) Citizen Information Board Fixed: (***check ✓any one box***) | | **Yes** | | NO |

c) Maintenance Board Fixed: (***check ✓any one box***) ***(in case of completed works only)*** | | **Yes** | | NO |

II. Observations - Quality Road Furniture and Markings (in case of completed works):

Sl. No.	Furniture Type:	Number of furniture to be provided	Furniture provided at site
i.	Logo Boards Fixed		
ii.	200 m Stones Fixed		
iii.	1 Km. Stone Fixed		
iv.	Guard Stones fixed on Curves		

Note: Numbers and quality of the furniture should be taken into consideration while grading for this item

Item Grading-20: ***(Check ✓ any one box)***		S		U

(if this item is graded as U, clear reasons and suggestions for improvement should be recorded).

21. General Observations of QM, (including the observations made during the interaction with PIU staff and Contractor/Consultant Engineers):

A. Observations about deficiency in project preparation: (Give detailed observations about deficiencies in general and items which have been left but are required as per site conditions): (check✓ I or II)

☐ I. No deficiency in project preparation noticed during the interaction with PIU Staff and Contractor/Consultant engineers:

☐ II. Deficiencies Observed: (**Check✓ one or multiple box**)

- ☐ a) Nomenclature of BOQ Items is not clearly stated such as what type of binder (VG Grade/Emulsion) has to be used and the quantity of such items.
- ☐ b) Location & Invert levels of cross drainage structures are incorrect and causing flooding situation.
- ☐ c) CD structures numbers are insufficient as per the site's hydrological condition.
- ☐ d) No provision of side drain in DPR but as per site conditions it is required.
- ☐ e) Hydraulic Design & calculation for CD structures and side drains not provisioned in DPR.
- ☐ f) Junction design and its selected parameter (i.e. Junction's radius, Sightline, Islands size) are inappropriate and can leads to accidents.
- ☐ g) Guard stone/Crash barrier/Road studs shall be provisioned in DPR on horizontal curves.
- ☐ h) Deviation from proposed Alignment.
- ☐ i) Proposed earthwork quantity (in Cut & fill) is not balanced, hence required external source of material for earthwork and subsequently increased project cost.
- ☐ j) Proposed pavement layers & thickness is not as per projected traffic.

- **Any other comment :**

22. QUALITY GRADING OF ITEMS AND SUB-ITEMS OF WORK:

The grading of every sub- item and item of work is givenbelow.

#	Sub item for observation	In case of work	Awardable Grades	Awarded Grade
1	**2**	**3**	**4**	**5**
1. General details				
Item 2 - Quality Arrangements				
	Quality Arrangements	On-going	S/SRI/U	
	Item Grading		S/SRI/U	
Item 3 - Attention to Quality				
a	Maintenance of QC Registers	On-going	S/SRI/U	
b	Verification of test results	On-going/ Complete	S/U	
	Item Grading		S/SRI/U	
Item 4 – Geometrics				
a	Road way width	Ongoing / complete	S/U	
b	Carriageway width		S/U	
c	Camber		S/U	
d	Super elevation	Ongoing / complete	S/U	
e	Extra Widening at Curves	Ongoing / complete	S/U	
f	Longitudinal Gradient in case of road in hilly/ rolling terrain.	Ongoing/ complete	S/U	
	Item Grading		S/U	
Item 5 - Earth Work and Sub-grade in Embankment/ Cutting				
a	Quality of Material for Embankment/ Sub-grade	Ongoing or complete	S/U	
b	Compaction		S/U	
c	Side Slopes	Complete	S/U	
d	Profile	Complete	S/U	
e	Adequacy of Slope Protection (in case of high embankments /hilly / rolling terrain)	Ongoing or complete	S/U	
	Item Grading		S/U	
Item 6 – Granular Sub-Base (GSB)				
a	Grain Size	Ongoing or complete	S/U	
b	Plasticity		S/U	
c	Compaction	Ongoing or complete	S/U	
d	Total Thickness of Layer	Ongoing or complete	S/U	
	Item Grading		S/U	

Item 7 - Base Course – Water Bound Macadam (WBM-Grade-II)				
a	Grain Size of Course Aggregate	Ongoing or complete	S/U	
b	Plasticity of Crushable Aggregate used as fillers		S/U	
c	Adequacy of Compaction through Volumetric analysis.		S/U	
d	Thickness of every layer of WBM.		S/U	
	Item Grading		S/U	
Item 8 - Base Course – Water Bound Macadam (WBM-Grade-III)				
a	Grain Size of Course Aggregate	Ongoing or complete	S/U	
b	Plasticity of Crushable Aggregate used as fillers		S/U	
c	Adequacy of Compaction through Volumetric analysis.		S/U	
d	Thickness of every layer of WBM.		S/U	
	Item Grading		S/U	
Item 9 - Base Course – Wet Mix Macadam (WMM)				
a	Grain Size of Course Aggregate	Ongoing or complete	S/U	
b	Plasticity of Crushable Aggregate used as fillers		S/U	
c	Adequacy of Compaction through Volumetric analysis.		S/U	
d	Thickness of every layer of WMM.		S/U	
	Item Grading		S/U	
Item 10- Bituminous Base Course: Bituminous Macadam (BM) and Dense BM				
a	Grading of Coarse Aggregate	complete	S/U	
b	Bitumen Content		S/U	
c	Thickness of Layer		S/U	
	Item Grading		S/U	
Item 11 - Bituminous Surface Course: – OGPC / Seal coat/ Surface Dressing (SD) / SDBC				
a	Gradation of Aggregate	Ongoing	S/U	
b	Laying Temperature of Mix.	Ongoing	S/U	
c	Bitumen content	Ongoing	S/U	
d	Thickness of layer	Ongoing or complete	S/U	
e	Surface Evenness	Ongoing or complete	S/U	
	Item Grading		S/U	

Item 12 – Shoulders				
a	Quality of material for shoulders	Complete	S/SRI/U	
b	Degree of compaction	Complete	S/SRI/U	
c	Camber.	Complete	S/SRI/U	
	Item Grading		S/SRI/U	
Item 13 - Cross Drainage Works (Pipe Culvert)				
a	Cushion over Hume pipes including size etc.	Ongoing or complete	S/SRI/U	
b	Quality of Workmanship such as positioning of pipes, wing walls, cushion over Hume Pipes etc.		S/SRI/U	
	Item Grading		S/SRI/U	
Item 14 - Cross Drainage Works (Slab Culvert)				
a	Thickness of Slab	Ongoing or complete	S/SRI/U	
b	Quality of material & workmanship		S/SRI/U	
	Item Grading		S/SRI/U	
	Item 15- Protection Work (Retaining wall /Breast wall/Parapets:			
a	Quality of Material	Ongoing or complete	S/SRI/U	
b	Workmanship of retaining structure		S/SRI/U	
	Item Grading		S/SRI/U	
	Item 16- Crash Barriers and Road Safety Sign Boards			
a	Overall quality of safety measures in road	Completed Projects	S/SRI/U	
b	Fixing of mandatory and cautionary sign boards		S/SRI/U	
	Item Grading		S/SRI/U	
Item 17 - Side Drain and Catch Water Drain (Earthen)				
	General quality of Side Drains/ Catch Water Drains and their integration with CDs.	Ongoing or complete	S/SRI/U	
	Item Grading		S/SRI/U	
Item 18 – Cement Concrete / Semi Rigid Pavements				
a	Quality of Material – Concrete, Stone/ Concrete Block Pavement etc.	Ongoing or complete	S/U	
b	Strength of CC in Concrete Pavement/ Concrete Block Pavement		S/U	

c	Quality of Workmanship – Wearing surface texture, Adequacy of setting of concrete, Joints, Edges etc.		S/U	
d	Thickness of Layer		S/U	
	Item Grading		S/U	
Item 19- Cement Concrete Pucca Drains				
a	Thickness of concrete layer	Ongoing or complete	S/U	
b	Strength of concrete		S/U	
c	General Quality of material and Workmanship		S/U	
	Item Grading		S/U	
Item 20 - Road Furniture and Markings				
a	Citizen Information Board, Main Informatory Board, Quality and whether fixed during construction.	Ongoing	S/U	
b	Logo boards, 200 m stones and Km stones, quality and whether fixed after completion.	Complete	S/U	
c	Whether the information in boards is given in local language.	Complete/ Ongoing	S/U	
	Item Grading		S/U	

23. OVERALL GRADING OF WORK:

The overall grading calculated on the basis of item and sub-item wise grading is given below:

#	Item	Awardable Grades	Awarded Grade
1	Quality Control Arrangements	S/SRI/U	
2	Attention to Quality	S/SRI/U	
3	Geometrics	S/U	
4	Earthwork and Sub-grade in Embankment/Cutting	S/U	
5	Granular Sub-base	S/U	
6	Base Course (WBM-II)	S/U	
7	Base Course (WBM-III)	S/U	
8	Base Course (WMM)	S/U	
9	Bituminous Course (BM and DBM)	S/U	
10	Bituminous Surface Course (OGPC/ Seal coat/ SD/SDBC)	S/U	
11	Shoulders	S/SRI/U	
12	Cross Drainage Work (Pipe Culvert)	S/SRI/U	
13	Cross Drainage Work (Slab Culvert)	S/SRI/U	
14	Protection Work (Retaining wall /Breast wall/Parapets	S/SRI/U	
15	Crash Barriers and Road Safety Sign Boards	S/SRI/U	
16	Side Drains and Catch Water Drains	S/SRI/U	
17	Cement Concrete / Semi Rigid Pavements	S/U	
18	Cement Concrete Pucca Drains	S/U	
19	Road Furniture and Markings	S/U	
Overall Grading		S/SRI/U	

Whether the work can be considered as excellent based on the test results and visual observations made by the quality monitor ***(check✓ any one box)*** ☐ Yes ☐ No

Signature of QM:……..

Name Of QM:……

Date: ……