

25th TECHNICAL COMMITTEE MEETING FOR EVALUATION OF PMURKILSGD PROJECTS

Technical Committee Meeting for scrutiny of 25 new DPRs, 7 revised DPRs and 4 revised estimates

Meeting No: 25

Date: 12.10.2021, 11.00am to 5.00pm

Venue: Online (google meet)

AGENDA

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| I | Scrutiny of 25 nos of new DPRs prepared by PMU |
| II | Scrutiny of 7 nos of revised DPRs prepared by Consultants |
| III | Scrutiny of 4 nos revised estimates submitted by PMU |

PRESENT

Sl No	Name	Designation and Office address
1	Johnson K	Chief Engineer, LSGD
2	Dr. B.G. Sreedevi	Former Director, NATPAC
3	Dr. Jaya V	Professor, College of Engineering, Trivandrum
4	Dr. Ashalatha R	Professor, College of Engineering, Trivandrum
5	Dr. Vishnu R	Assistant Professor, NIT, Warangal
6	Dr. Nivin Philip	Professor, Saint Gits College of Engineering
7	Dr. Neethu Roy	Professor, Mar Baselios College of Engineering and Technology
8	Sri. Vishnukumar G	Project Director, PMU
9	Prasad P	Executive Engineer, PIU, Kottayam
9	Sri. Shainy N	Assistant Executive Engineer
10	Sathyanath B	Assistant Executive Engineer
11	Shiju Chandran R	Assistant Executive Engineer
12	Saravaneshvar	Assistant Executive Engineer
13	Benzilal S D	Assistant Executive Engineer
14	Binod J	Assistant Engineer
15	Remjish R S	Assistant Engineer
16	Haseena A	Assistant Engineer
17	Jithu Raj R	Assistant Engineer
18	Krishnakumar P	Assistant Engineer
19	Ripin K John	Assistant Engineer

The Chief Engineer, LID&EW started the meeting at 11.00 am

The Project Director, Project management Unit described about the projects being presented before the Technical Committee. The projects consists of 25 nos of DPRs newly prepared by PMU, 7 nos of revised DPRs prepared by Consultants and 4 numbers of revised estimates. The engineers from PMU started the presentation of DPRs prepared by PMU. The details of the projects and discussions are listed below.

I New DPRs prepared by PMU (1-10/25 nos)

1	KE Carmel Pulikal road in Kanjikkuzhy Gp (22nd TC suggested to replace 40mm BC surfacing with white topping)	
	Length of Road	892 m
	Reconstruction/Rehabilitation suggested	Rehabilitation
	Nature of Pavement Suggested	Rigid Pavement
	Pavement Configuration	WMM levelling coarse 75mm+150mm PQC M30
	Details of RWs	27 m

	Details of Culverts	Nil
	Details of Drains	Nil
	Total Cost	99 lakhs
	Per km cost	110 lakhs/km
	Comments from Technical Committee	Requirement of a provision of 7.5cm WMM as levelling coarse has to be justified. Soil classification is to be corrected. Swell potential of the subgrade to be evaluated in future projects. The proposal shall be named as a conventional rigid pavement and not white topping. DPR approved.
2	Padaharam Church Road (Presented for the second time incorporating changes suggested by earlier TC, like ensuring road width, construction strategy etc) Project Director, PMU visited the site and DPR resubmitted with relevant modifications)	
	Length of Road	760 m
	Reconstruction/Rehabilitation suggested	Reconstruction/New
	Nature of Pavement Suggested	Rigid Pavement (short panel concrete)
	Pavement Configuration	300mm cement stabilised subgrade+CTSB (CA) 150mm+PQC M30 100mm
	Details of RWs	660 m
	Details of Culverts	Pipe culvert Ch 0+540, Ch 0+630
	Details of Drains	Nil
	Total Cost	182 lakhs
	Per km cost	239 lakhs/km
	Comments from Technical Committee	TC has directed the the Project Director to use rotavator while doing cement stabilisation to ensure proper mixing of cement and insitu soil. DPR approved.
3	SN Jn Chengadakkari Chengada road in Chennam Pallippuram GP	
	Length of Road	730 m
	Reconstruction/Rehabilitation suggested	Reconstruction
	Nature of Pavement Suggested	Rigid Pavement (short panel concrete)
	Pavement Configuration	300 mm mechanically stabilised subgrade+CTSB (CA) 150mm+PQC M30 100mm
	Details of RWs	133 m
	Details of Culverts	Nil
	Details of Drains	Nil
	Total Cost	74 lakhs
	Per km cost	101 lakhs
	Comments from Technical Committee	No specific comments except clarifications. DPR approved.
4	Moorthinada to Manchadichira in Kavalam GP	
	Length of Road	298 m
	Reconstruction/Rehabilitation suggested	Reconstruction/New
	Nature of Pavement Suggested	Rigid Pavement (short panel concrete)
	Pavement Configuration	300 mm mechanically/cement stabilised subgrade+CTSB (CA) 150mm+PQC M30 100mm
	Details of RWs	105 m
	Details of Culverts	Pipe culvert Ch 0+016, Ch 0+233

	Details of Drains	Nil
	Total Cost	52 lakhs
	Per km cost	174 lakhs/km
	Comments from Technical Committee	Signs and marking shall be shown more appropriately in future projects. DPR approved.
5	Madam to Mattancherri road in Kavalam GP	
	Length of Road	380 m
	Reconstruction/Rehabilitation suggested	New Construction
	Nature of Pavement Suggested	Rigid Pavement (short panel concrete)
	Pavement Configuration	300 mm compacted subgrade+CTSB (CA) 150mm+PQC M30 100mm
	Details of RWs	228 m
	Details of Culverts	Pipe culvert Ch 0+267, Ch 0+375, Box Culvert Ch 0+351
	Details of Drains	Nil
	Total Cost	80 lakhs
	Per km cost	210 lakhs/km
	Comments from Technical Committee	No specific comments except clarifications. DPR approved.
6	Pekkalli bridge to kadakam road in Veliyanad Gp	
	Length of Road	896 m
	Reconstruction/Rehabilitation suggested	Reconstruction/New
	Nature of Pavement Suggested	Rigid Pavement (short panel concrete)
	Pavement Configuration	300 mm mechanically stabilised subgrade+CTSB (CA) 150mm+PQC M30 100mm
	Details of RWs	15 m
	Details of Culverts	Box Culvert Ch 0+152
	Details of Drains	Nil
	Total Cost	95 lakhs
	Per km cost	103 lakhs/km
	Comments from Technical Committee	No specific comments except clarifications. DPR approved.
7	PS Kavala Chudukattumpuram Chooramana road in Thykattussery	
	Length of Road	2042 m
	Reconstruction/Rehabilitation suggested	Rehabilitation
	Nature of Pavement Suggested	Rigid Pavement
	Pavement Configuration	WMM levelling coarse 75mm+150mm PQC M30
	Details of RWs	1113 m
	Details of Culverts	Box Culvert Ch 0+176, Ch 0+840
	Details of Drains	Nil
	Total Cost	317 lakhs
	Per km cost	155 lakhs/km
	Comments from Technical Committee	Requirement of a provision of 7.5cm WMM as levelling coarse has to be justified. DPR approved.
8	Therambilpadi road (balance portion) in Thalavady Gp	
	Length of Road	802 m
	Reconstruction/Rehabilitation suggested	Reconstruction

	Nature of Pavement Suggested	Rigid Pavement
	Pavement Configuration	Earth filling+GSB 100mm+WMM 75mm+PQC M30 150 mm
	Details of RWs	329 m
	Details of Culverts	Nil
	Details of Drains	Nil
	Total Cost	242 lakhs
	Per.km cost	300 lakhs/km
	Comments from Technical Committee	Adequate longitudinal gradient shall be ensured so as to ensure adequate drainage. DPR approved.
9	Anchangadi bridge to Mancompu govt LPS in Pulinkunnu Gp	
	Length of Road	1365 m
	Reconstruction/Rehabilitation suggested	New Construction
	Nature of Pavement Suggested	Rigid Pavement (short panel concrete)
	Pavement Configuration	300 mm cement stabilised subgrade+CTSB (CA) 150mm+PQC M30 100mm
	Details of RWs	1070 m
	Details of Culverts	Box Culvert Ch 0+569, Ch 0+860, Pipe Culvert Ch 0+470
	Details of Drains	Nil
	Total Cost	322 lakhs
	Per km cost	235 lakhs/km
	Comments from Technical Committee	Guard post shall be painted to ensure proper visibility. Painting already included in data. DPR approved.
10	Kanichukulangarakavala Kalathilveedu road in Kanjikkuzhy Gp	
	Length of Road	1222
	Reconstruction/Rehabilitation suggested	Rehabilitation
	Nature of Pavement Suggested	Flexible
	Pavement Configuration	150mm WMM+40mm BC
	Details of RWs	15 m
	Details of Culverts	Nil
	Details of Drains	Nil
	Total Cost	154
	Per km cost	126
	Comments from Technical Committee	TC suggested to consider binder layer also as the traffic is T6, moderate surface condition and possible diverted traffic from NH to Pathiramanal. The design portion shall be presented in the next TC.
III	Scrutiny of 4 nos revised estimates submitted by PMU	
1	Chirackarapadi Chetalapuncha road in Alapuzha District	
	PMU presented the following variations in the design proposal of the road	
	<u>Original Proposal for the road</u>	
	Length of Road	2710 m
	Reconstruction	649 m
	Rehabilitation	2061 m
	Design CBR	6.75 for rehabilitation stretch and 10 for reconstruction stretch
	Traffic	0.50 msa
	Design Cross section as per DPR	

	Rehabilitation Portion	
	Subgrade	Existing
	Sub base	Existing
	Base (WMM)	180 mm
	Wearing Coarse (BC 2)	40 mm
	Reconstruction Portion	
	Subgrade (cement stabilised)	300 mm
	Sub base (GSB)	100 mm
	Base (WMM)	180 mm
	Wearing Coarse (BC 2)	40 mm
	Revised estimate is proposed due to the following variations in input parameters brought out by the PIU.	
	1) Frequent flooding in the intermediate stretch of the road from Ch 0+860 to Ch 1+540	
	2) Development of a BC production plant and pipe manufacturing plant at Ch 1+535	
	3) Extensive damage from Ch 1+535 to 2+100 due to the construction traffic	
	Project Director, PMU engaged a team headed by Technical Committee member Dr. Vishnu, NIT Warangal and members Sri. Sajish, EE, PMU, Sri. Shiju Chandran R., AEE, PMU, Sri. Benzilal, AEE, PIU, Sri. Binod, AE, PMU, Sri. Jiju, AE, PMU, Sri. Krishnakumar, AE, PIU to formulate recommendations for the revised proposal. The following are the recommendations of the committee.	
	1) The road has been very severely damaged than that observed during DPR data collection. This is due to the traffic from the crusher, construction traffic to the new facilities being built and flooding during rainy seasons.	
	2) The traffic along the road has to be reassessed based on the possible generated traffic from the newly constructed facilities.	
	3) Dr. Vishnu R., NIT Warangal suggested to consider Rigid Pavement for vulnerable sections and recommended to adopt polymer modified bitumen for flexible wearing course considering the proneness of the road to frequent flooding.	
	4) The drainage condition along the road has to be improved by longitudinal profile correction and by constructing additional drains if required.	
	Accordingly the improved profile of the road has been finalised between the PIU and the PMU Engineers. Pavement proposal has been modified based on the newly assessed traffic. Required drains and one culvert provided to improve the drainage conditions.	
	Modified Pavement Proposal	
	Length of Road	2710 m
	Reconstruction	2710 m
	Rehabilitation	Nil
	Design CBR	10
	Traffic	1.66 msa
	Modified Design Cross sections	
	Rigid (Ch 0+860 to 1+540)	
	Subgrade (cement stabilised)	300 mm
	Sub base (CTSB using crushed aggregate)	150 mm
	Wearing Coarse (PQC M30)	180 mm
	Flexible (Ch 0+000 to Ch 0+860 and 1+540 to Ch 2+710)	

	Subgrade (mechanically stabilised)	300 mm
	Sub base (GSB)	150 mm
	Base (WMM)	150 mm
	Binder Coarse (DBM)	50 mm
	Wearing Coarse (BC 2)	30 mm
	Adequate drains and culverts provided.	
	Comments from Technical Committee	TC opined to maintain adequate longitudinal slope for flexible pavement surface. Relevant GOs shall be complied while preparing RE. The revised design approved.
2	Kavanathinkara Manchira Road in Kottayam District	
	PMU presented the following variations in the design proposal of the road	
	<u>Original Proposal for the road</u>	
	Length of Road	1305 m
	Design Proposal	White topping with PQC M30 15 cm thick with levelling coarse
	Revised estimate is proposed due to the following variations in input parameters brought out by the PIU.	
	Road section from Ch 0+430 to Ch 1+305 severely damaged in subsequent floods and chipping carpet layer completely got removed	
	Pavement redesigned as conventional rigid pavement replacing white topping	
	<u>Modified Design Cross sections</u>	
	Subgrade	Existing subgrade and sub base maintained considering practical difficulties in dismantling existing layers(k adopted=30)
	Sub base (GSB)	100 mm
	Base (WMM)	75 mm
	Wearing Coarse (PQC M30)	150 mm
	Comments from Technical Committee	TC opined Relevant GOs shall be complied while preparing RE. The revised design approved.
3	Girideepam Kadathukadavu road in Kottayam District	
	The following changes are sought in the estimate considering satisfactory completion of the work	
	1) Provision of cement is to be included in estimate in the EBM layer as it is missing in the original estimate	
	2) Additional chapaths at 6 locations are warranted considering changes inland development in the adjoining area and for effective cross drainage	
	3) Ring bund and bailing out provision to be included in the estimate considering site condition	
	Comments from Technical Committee	The changes suggested in revision approved.
4	Kunnumpuram Mahilasamajam road in Kottayam District	
	The following changes are sought in the DPR considering satisfactory completion of the work	

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	1) The slab culvert at Ch 0/390 may be replaced with Box Culvert. This variation in proposal is suggested considering the low initial resistance to coconut piles driven during construction. The box culvert typical drawing as per MoRTH adopted for similar span.
	2) A new RCC retaining wall proposed at Ch 0/100 considering possible failure of the project road affecting inhabitants in the residential building nearby.
	Comments from Technical Committee
	The changes suggested in revision approved.
I New DPRs prepared by PMU (11/25 nos) (contd..)	
11	Upgradation of Kallanchery Tharassery Road in Kumbalangi GP in Ernakulam District
	Length of Road
	Stretch 1= 485 m, Stretch 2= 1065 m
	Reconstruction/Rehabilitation suggested
	Stretch 1- Reconstruction, Stretch 2-Rehabilitation
	Nature of Pavement Suggested
	Rigid Pavement
	Pavement Configuration
	Stretch 1 (100 mm GSB+75 mm WMM+150mm PQC M30; Stretch 2(75mm WMM levelling coarse+150 mm PQC M30); Bund connection road (Subgrade 300mm+GSB 150mm+WMM 150mm+interlock 100mm)
	Details of RWs
	70 m
	Details of Culverts
	Slab culverts Ch 0+000, Ch 0+120
	Details of Drains
	Stretch 1- 485m, Stretch 2 -
	Total Cost
	310 lakhs
	Per km cost
	200 lakhs/km
	Comments from Technical Committee
	TC suggested to provide coconut piling at RHS bund for confinement. Considering difficulties in installation of geo textile behind left bund, it is recommended to be excluded.

Srb
Dr. Sreedhar. B. G.

[Signature]
Dr. Nivedita

[Signature]
Dr. Vishwan.

[Signature]
Dr. Jayal

[Signature]
Dr. Ashok R

[Signature]
SREELA. S.

[Signature]
Dr. Neelhu Roy

[Signature]
JOHNSON. K.
PEN 538757
CHIEF ENGINEER
OFFICE OF THE CHIEF ENGINEER
LSGD (LID&EW)
THIRUVANANTHAPURAM.

[Signature]