

33rd TECHNICAL COMMITTEE MEETING FOR EVALUATION OF REVISED ESTIMATES OF PMURKILSGD PROJECTS

Technical Committee Meeting for scrutiny of revised estimates and variations from original estimates for PMURKI projects.

Meeting No: 33

Date: 29.06.2022, 11.00am to 2.00pm

Venue: Online (google meet)

AGENDA

1 Scrutiny of variations proposed in revised estimates of PMU

PRESENT

Sl No	Name
1	Johnson K Chief Engineer, LID&EW
2	Mini T N Executive Engineer, Office of the Chief Engineer, LID&EW
3	Dr. B.G. Sreedevi Former Director, NATPAC
4	Dr. Jaya V Professor, College of Engineering, Trivandrum
5	Dr. Ashalatha R Professor, College of Engineering, Trivandrum
6	Dr. Vishnu R Assistant Professor, NIT, Warangal
7	Dr. Nivin Philip Professor, Saint Gits College of Engineering
9	Sreela S Superintending Engineer (Rtd), LSGD
10	Sri. Vishnukumar G Project Director, PMU
11	Shainy N Executive Engineer, PMU
12	Prasad P Executive Engineer, PIU, Kottayam
13	Sathyanath B Assistant Executive Engineer, PMU
14	Shiju Chandran R Assistant Executive Engineer, PMU
15	Saravaneshvar Assistant Executive Engineer
16	Benzilal S D Assistant Executive Engineer
17	Hazramol M U Assistant Executive Engineer
18	Binod J Assistant Engineer
19	Praveen Assistant Engineer
20	Remjish R S Assistant Engineer
21	Haseena A Assistant Engineer
22	Syam S Assistant Engineer
23	Krishnakumar P Assistant Engineer
24	Rasheed Assistant Engineer
25	Jeo Antony Assistant Engineer
26	Anil D J Assistant Engineer
27	Riphin K John Assistant Engineer

The meeting was started at 11.00 am with Chief Engineer, LID & EW in chair.

The Project Director, Project management Unit described that there are variations from original estimates in 21 projects being executed by PMU and the meeting is scheduled essentially for discussing the variations and their admissibility for smooth progress of the works. Major variations only are minuted.

1. Madathil Kadavu Mahila Samajam Road in Kottayam District

1	AS No	G.O. (Rt.) No.224/2020/P&EA, TVM, Dated	
2	District	Kottayam	
3	AS Amount	1.84 Crore	
4	APAC	132.47049 Lakhs	
5	Type of Pavement	Short Panelled Concrete	
	Provision in Original Estimate	Variations Proposed in Revised Estimate	Decisions
	Culvert @ chainage 0+000 proposed after dismantling existing damaged culvert	Culvert proposed to be relocated adjacent to the existing culvert retaining the existing culvert.	Approved
	Culvert @ 0+194 (3m x 3m) box culvert	Proposed to be replaced by NP4 pipe culvert 120 cm dia as it is only a balancing culvert	Approved
	Culvert @ 0+825 (2mx 2m) box culvert	Proposed to be replaced by NP4 pipe culvert 120 cm dia as it is only a balancing culvert	Approved
	Mechanical Stabilization Proposed from 0+250 to 0+850	Mechanical stabilization proposed from 0+194 to 0+250 additionally	Approved
	ROW proposed in OE is 5m.	7m ROW made available by public. Hence quantity of earth filling and qty of geotextiles enhanced.	Approved
	Ring bund with gunny bags proposed in OE	Ring bund with sheet pile/ coconut pile proposed in RE	Declined
	Bailing out water, 184 Hours Provided	It has to be enhanced	Actual shall be assessed based on site condition

2. T V Puram Theeradesha Road in Kottayam District

1	AS No	G.O. (Rt.) No.224/2020/P&EA, TVM, Dated 26/05/2020 (53.136Cr)	
2	District	Kottayam	
3	AS Amount	3.5 Crore	
4	APAC	294.00702 Lakhs	
5	Type of Pavement	Rigid Pavement	
	Provision in Original Estimate	Variations Proposed in Revised Estimate	Decisions
	Existing Carriageway width of 3m provided	Due to pipeline shifting by KWA available Carriageway is only 1.5 to 2m. Hence GSB and WMM quantity increased.	Approved
	Protection work for approach road to culvert is missing in original estimate and wing walls provided for insufficient length.	Protection work for approach road provided using RCC M20 and additional wing wall proposed in DR masonry.	Approved
	Scarifying existing bituminous surface not provided in original estimate.	It is included in revised estimate	Approved
	Interlocking concrete tiles not provided in original estimate	Provided in locations of utility crossings as duct cannot be provided considering site restrictions Additional amount of approximately 15 lakhs required for the project	Approved
			PMU to take necessary action

3. Pathinanchilkadavu Illikkal Road in Kottayam District

1	AS No	G.O. (Rt.) No.224/2020/P&EA, TVM, Dated 26/05/2020 (53.136Cr)
2	District	Kottayam
3	AS Amount	4 Crore
4	APAC	294.46364 Lakhs
5	Type of Pavement	Flexible Pavement

Provision in Original Estimate	Variations Proposed in Revised Estimate	Decisions
Existing ROW of 6.5 is considered in OE	Actual ROW as per site condition is 6.5 to 11m. Hence embankment filling enhanced. Also width of shoulder need to be enhanced from 0.3m to 0.6m. This warranted Retaining wall of higher length and height and quantity of DR enhanced.	Approved
DR and RCC L- type retaining walls are proposed in original estimate	Several portions of the road were required to be raised more than that proposed in the original estimate considering public demand. RCC retaining walls of lesser depths were proposed almost through the length of the road to retain the earth used for raising the road to an average height of 60 cm. But as the actual width of the road increased, retaining walls were to be constructed from the extreme end of the road so as to prevent encroachment at a later stage. As a result, at many places, retaining wall of higher depths were required and most of such places were paddy fields. Hence it was proposed to construct retaining wall using dry rubble masonry for a certain height and RCC L shaped retaining wall on top portion.	Approved
60% reuse of available aggregates amounting to 636.3 m ³	Only 518 m ³ of reclaimed material obtained.	Approved
Area of prime coat of 1536 proposed in original estimate which was a mistake	10427 m ² to be primed as per requirement	Approved
Utility shifting provision provided was 36 lakh	24 lakhs of this provision utilised for meeting variation of quantities of the estimate.	to be checked by PMU

4. Cheepunkal – Malikayal Chira Road in Kottayam District

AS No	G.O. (Rt.) No.404/2020/P&EA, TVM, Dated 23/10/2020 (40 Cr)	
District	Kottayam	
AS Amount	1.48 Crore	
APAC	123.1804 Lakhs	
Type of Pavement	Rigid Pavement	
Provision in Original Estimate	Variations Proposed in Revised Estimate	Decisions
Culvert @ Ch: 0+705 (2 x 2 m)	To be replaced with 1.2m dia NP4 pipe considering limitations of coconut piling due to vicinity of residences.	Approved
RCC wing walls proposed in original estimate	May be replaced with DR wing walls considering site conditions, accordingly DR quantity varies.	Approved
Width of pavement proposed is 3.6m	Existing road has varying width from 9 to 4 m. Public demands execution of road to at least existing width.	Approved

5. Anicadu - Pravidakunnu road in Ernakulam District

AS No	G.O. (Rt.) No.404/2020/P&EA, TVM, Dated 23/10/2020 (40 Cr)	
District	Ernakulam	
AS Amount	1.3 Crore	
APA	108.82984 Lakhs	

5 Type of Pavement		Rigid Pavement	
Provision in Original Estimate	Variations Proposed in Revised Estimate	Decisions	
Dismantling RCC culvert quantity is 9.917 m3 in original estimate.	50.22 m3 quantity is required as per site condition considering the existing structure was massive than accounted with lock and shutter arrangement for irrigation structure with RCC slab, pier and base slab.	Approved	
Shoulder Filling Qty is 4.422 m3 in original estimate	Actual requirement was 53.07m3 considering site condition.	Approved	
Wing wall dimensions inappropriate to site in original estimate	Wing wall was redesigned and accordingly earth work and concrete quantities increased	Approved	
Length of road 1166 in in original estimate	865m is sufficient as per site condition.	Approved	

6. Thadikkadavu Vayalodam Road in Ernakulam

1 AS No	G.O. (Rt.) No.224/2020/P&EA, TVM, Dated 26/05/2020, (53.136) Crore		
2 District	Ernakulam		
3 AS Amount	1.38 Crore		
4 APAC	91.40128		
5 Type of Pavement	Rigid Pavement		
Provision in Original Estimate	Variations Proposed in Revised Estimate	Decisions	
Carriage way width provided is 3m in original estimate	Proposed to increase the carriage way to 4m as road acts as a major link road connecting Thadikkakadavu junction to the Veliyathnadu road.hence variation in profile correction course items like GSB, WMM, earth etc. The remaining length of the road is developed by local bodies for a width of 4m.	Approved	
Culverts reconstruction at chainghe ch 0/340 and ch 0/650.	a variation in estimated quantity and additional provision like ring bund and pumping required , as 1/3 portion of these culvert passing under an irrigation canal which is to be demolished and reconstructed .	Approved	
Road deliniators not provided in original estimate	Delineators with reflectors are provided between the road edges and the irrigation channel for the safety of road users ,as an irrigation canal running parallel to this road for entire stretch.	Approved	

7. St. Marys - Swaraj road in Ernakulam

1 AS No	G.O. (Rt.) No.224/2020/P&EA, TVM, Dated 26/05/2020, (53.136) Crore		
2 District	Ernakulam		
3 AS Amount	60 Lakhs		
4 APAC	50.10576		
5 Type of Pavement	Rigid Pavement		
Provision in Original Estimate	Variations Proposed in Revised Estimate	Decisions	
Paved shoulders not provided in original estimate	Paved shoulders proposed in revised estimate considering safety of passengers and site conditions	Approved	

8. AV Mukk Sharangakavu Road in Alappuzha District

1	AS No	G.O. (Rt.) No.224/2020/P&EA, TVM, Dated
2	District	26/05/2020 (53.136Cr)
3	AS Amount	Alappuzha
4	APAC	232
5	Type of Pavement	204.9531
		Rigid Pavement

Provision in Original Estimate	Variations Proposed in Revised Estimate	Decisions
Box Drain leading to River is provided in original estimate	This is to be omitted and replaced by Irish drain since alternate disposal points are identified and requested by LSGI. [Since new bridge by PWD is proposed drain is not feasible in this	Approved
Byroads are provided in original estimate	Byroads may be excluded as it is already done by Grama Panchayaths	Approved

9. Kulikkanpalam Shappupadi Road in Alappuzha District

1	AS No	G.O. (Rt.) No.224/2020/P&EA, TVM, Dated
2	District	26/05/2020 (53.136Cr)
3	AS Amount	Alappuzha
4	APAC	273
5	Type of Pavement	205.99701
		Rigid Pavement

Provision in Original Estimate	Variations Proposed in Revised Estimate	Decisions
By roads are provided in original estimate	These are done by GP and hence to be omitted in RE	Approved
Earthen shoulder is provided in original estimate	This is to be replaced by paved shoulder to ensure water flow from Carriage Way to drain laterally on one side.	Approved, to be limited to actual requirements at Site

10. PMURKILSGD 2021-22:Improvement of Pazhaya - Kochira Road in Vandanmedu GP, Udumbanchola LAC, Idukki-No:26

1	AS No	GORTNo 485/2019/P&EA 15-11-2019
2	District	Idukki
3	AS Amount	2,66,30,37,000 /-
4	APAC	12,552,769.60
5	Type of Pavement	Rigid Pavement

Provision in Original Estimate	Variations Proposed in Revised Estimate	Decisions
Dry rubble masonry for protection works – is 200 m3	Required quantity is 340 m3	Approved
Protection wall with Nominal mix 1:2.5:5 – is 368 m3	Need to increase upto 430m3	Approved
Hard rock found in excavation	Extra item - blasting hard rock	Approved

11. PMURKILSGD 2021-22:Improvement of Panachikuzhi road in Rajakkad GP, Udumbanchola LAC,Idukki-No: 07

1	AS No	GoRtNo485/2019/P&EA 15-11-2019
2	District	Idukki
3	AS Amount	2,66,30,37,000 /-
4	APAC	32,497,489.13
5	Type of Pavement	Flexible Pavement

Provision in Original Estimate	Variations Proposed in Revised Estimate	Decisions
Retaining wall @ 1300 m - Counterfort Retaining Wall for 25 m length	15 m counterfort retaining wall and 10 m cantilever retaining wall – as per site condition [design of cantilever retaining wall will be submitted later]	Approved. Design shall be got approved from the TC.
Dry rubble masonry for protection works @1450 m – 0m3	Need to add as extra item – for protection wall 4 m height & 25 m length	Approved

Culvert @ 3541m - width provided As per site condition, - of 7.50 m with a Approved
is 6.0 m collection pit is required

12. PMURKILSGD 2021-22: Improvement of Ambankuthu 6th mile Road in Mankulam GP, Devikulam LAC, Idukki-No:9

1	AS No	Go Rt No 485/2019/P&EA 15-11-2019
2	District	Idukki
3	AS Amount	2,66,00,00,000 /-
4	APAC	31,899,071.00
5	Type of Pavement	Flexible Pavement
	Provision in Original Estimate	Variations Proposed in Revised Estimate
	Culvert @ CH 2+761 - 3.0 m span single cell box culvert	3.0 m span single cell box culvert - 1.50m double cell box culvert , as existing is double cell
	Gabion wall @ 1300 m - cage size 2 m x 1 m x 0.3	5m x 1m x 1m , 5m x1.50 m x 1m - Due to availability and suitability to site condition
		Approved

13. PMURKILSGD 2020-21: Improvement of Adivaram - Ottalanagalpady city road in Rajakkad GP, Udumbanchola LAC, Idukki No:6

1	AS No	GO RT No 485/2019/P&EA 15-11-2019
2	District	Idukki
3	AS Amount	2,66,30,37,000 /-
4	APAC	22,511,409.67
5	Type of Pavement	Both rigid & flexible
	Provision in Original Estimate	Variations Proposed in Revised Estimate
	BOX CULVERT @0/355 – bye road starting - 2 x 1.5 size	Change size to 1x1 m - Only cross drain required as per site condition
	bye road 829 m- 3.75 m carriage way	bye road width varying from 3.5 to 6m . To provide a uniform width proposed to reduce the carriage way width to 3.0 m
	Dry rubble masonry for protection works – 413.89m ³	Need increased to 700 m ³
		Approved, to be limited to actual requirements at Site
	RCC works for DR belt 16.68m ³	Need 24.50 m ³
		Approved

14. PMURKILSGD2021-22:Improvement Of Perikkankaval-Kollamkulambadi-Kaikavala Road in Vathikudy GP Idukki LAC Idukki - 27

1	AS No	GORTNo 485/2019/P&EA 15-11-2019
2	District	Idukki
3	AS Amount	1,32,29,97,000 /-
4	APAC	15,678,043.54
5	Type of Pavement	Rigid
	Provision in Original Estimate	Variations Proposed in Revised Estimate
	Culvert @ 0/506 m – provided to dismantle in original estimate	PMU directed to maintain and provide necessary maintenance as it is good in condition -and the irrigation department re-directed the stream
	Dry rubble masonry for protection works – foundation depth 0.60 m	For an expected length of 8-20 m , foundation depth may increased to a depth around 4.0 m . In approved design only 0.60 m depth is provided
		Approved, to be limited to actual requirements at Site
		During execution depth will vary and this varied depth will inform in next committee

15. Improvement of Aashramam Pottanpady Road in Arakkulam GP, Idukki LAC, Idukki-No 18

Due to the landslide in this road major changes are found necessary for satisfactory completion of this road. So it is necessary to construct additional protection works and culverts. The following changes are required in the estimate.

1	AS No	GOR/No 485/2019/P&EA 15-11-2019
2	District	Idukki
3	AS Amount	1,32,29,97,000 /-
4	APAC	15,678,043.54
5	Type of Pavement	Rigid

Provision in Original Estimate	Variations Proposed in Revised Estimate	Decisions
	Culvert @ ch: 1208 m – need to reconstruct	Approved
	Retaining wall and guard posts@ ch: 0/510m	Approved
	Retaining wall guard posts @ ch: 1175m	Approved
	Crash barrier @0/005,0/512,1/127& 1/200m	Approved
	Guide wall @ ch: 1240m – to redirect the flow to the nearest culvert	Approved
	Dowel bars – for foundation of retaining wall @ ch: 0/510m& @ ch: 1175m	Approved
	Kerb – through out in RHS	Approved

16. Ex-Servicemen Colony Centre Road in Athirappally GP in Thrissur District

1	AS No	GO(Rt) No 62/2021/P&EA dated 03/02/2021 03-02-2021(42.32 Cr)
2	District	Thrissur
3	AS Amount	2.60 Crores
4	APAC	204.4392 Lakhs
5	Type of Pavement	Flexible Pavement (WMM+BC)

Provision in Original Estimate	Variations Proposed in Revised Estimate	Decisions
Culvert @ chainage 1/380 proposed after dismantling existing culvert.	Omitted due to lack of proper inlet and outlet.	Approved
Loosening of the ground up to a level of 500mm below sub-grade level.	Earth Cutting and filling is required in widening portion and also in reconstruction portion for profile correction. Also earth filling from outside is required in shoulders where RoW is greater.	Approved
No drain is proposed for connecting storm water from culvert @ Ch: 0/435 to culvert @ Ch: 0/495.	RCC drain wall is proposed since the height of the wall is more than 1m in M20 grade concrete for easy flowing of storm water.	Approved
Irish drain M20 grade concrete thickness as per OE is only 10 cm.	As the WMM+BC thickness comes to 22cm, 10 cm irish drain is not sufficient. It may be increased to 10cm M10 grade + 5cm M20 grade concrete for the effective berm protection.	Approved
Earthwork excavation in ordinary soil is in OE.	During execution hard rock obtained at culvert and drain portions. So it may be included.	Approved
Road crossing pipes for cables, waterlines etc are not proposed in OE.	Duct pipes are unavoidable for crossing of cables and different waterlines. So RCC duct pipe is proposed for road crossings.	Approved

17. Kuranchery Nayarangadi Kallampara Colony Road in Thrissur District

1	AS No	G.O. (Rt.) No. 404/2020/P&EA, Dated 23/10/2020 (40.50 Cr)
2	District	Thrissur
3	AS Amount	12.50 Crores
4	APAC	982.84512 Lakhs
5	Type of Pavement	Flexible Pavement (DBM+BC)

Provision in Original Estimate	Variations Proposed in Revised Estimate	Decisions
Earthwork excavation in ordinary soil is in OE.	During execution hard rock obtained at culvert and retaining wall portions. Hence it may be included.	Approved
Earth cutting is included for widening portion only.	Cutting quantity increased as reconstruction/profile correction proposed in addition to widening.	Approved
Earth filling quantity is not sufficient.	As the RoW is increased due to free surrender of land, earth filling in shoulders is increased. Also earth filling from outside is required in shoulders due to shortage of departmental material.	Approved
CC wall is included from Ch: 0/980 to 1/090 adjacent to Irrigation canal.	Since the height of the wall ranging from 5 to 8.5m and the one side of wall meets Irrigation canal, CC wall is replaced with Cantilever & Counterfort retaining walls (RCC) using M20 grade concrete.	Approved
Berm protection/Irish Drain is not included.	Berm protection/Irish drain with 10cm thickness using M20 grade concrete is required for safety of the road and easy flowing of rain water where CC drain is not available and the one side of the road is located near to forest	Approved, to be limited to actual requirements at Site

18. Chakram Colony Road in Wayanad District

1	AS No	G.O. (Rt.) No.404/2020/P&EA, TVM, Dated 23/10/2020 (40 Cr)
2	District	Wayanad
3	AS Amount	.93 Crore
4	APAC	75.80343 Lakhs
5	Type of Pavement	Rigid Pavement

Provision in Original Estimate	Variations Proposed in Revised Estimate	Decisions
Cement Stabilization provided in OE	Omitted in RE since quarry waste filling noted in site with sufficient thickness (0.3m), Accordingly quantities changed	Approved
Provision for foot bridge not provided in OE	It is necessary as per site condition [minor quantity variations]	Approved

19. Thandilam Manali Kecheri Road

1	AS No	G.O. (Rt.) No.224/2020/P&EA, TVM, Dated 26/05/2020 (53.136Cr)
2	District	Thrissur
3	AS Amount	5 Crore
4	APAC	366.91774 Lakhs
5	Type of Pavement	Flexible Pavement

Provision in Original Estimate	Variations Proposed in Revised Estimate	Decisions
NRBM proposed for BC in OE	Replaced with owing to non-availability of	

Shoulders are not included in OE Paved shoulders proposed in RE considering safety of road users To be limited to actual requirements at Site

No Chapaths in OE Additional Chapaths provided for safe water crossings

20. Chittanda- Padinjattumuri - Chathamkulam road

1 AS No	G.O. (Rt.) No.224/2020/P&EA, TVM, Dated 25/05/2020 (53.136Cr)	
2 District	Thrissur	
3 AS Amount	5.72 Crore	
4 APAC	340.0615 Lakhs	
5 Type of Pavement	Flexible Pavement	
	Provision in Original Estimate	Variations Proposed in Revised Estimate
	NRBM proposed for BC in OE	Replaced with owing to non-availability of
	Shoulders are not included in OE	Paved shoulders (M10 : 10cm + M20 : 5cm) proposed in RE considering safety of road users
	No Chapaths in OE	Additional Chapaths provided for safe water crossings
	GSB using reclaimed material is not provided in OE	Included in RE

21. High School Junction Nannad Eradichira Road [Bridge]

1 AS No	GO (Rt) No. 62/2021/P&EA , Dated 03/02/2021 (42.32 Cr)	
2 District	Alappuzha	
3 AS Amount	5.37 Crore	
4 APAC	448.47 Lakhs	
5 Type of Pavement	Flexible Pavement	
	Provision in Original Estimate	Variations Proposed in Revised Estimate
	Each abutment is provided with 3 nos of 1 m dia piles each as foundation of the bridge	During piling, it is observed that remains of existing bridge foundation is present at about 4m depth from bed level. The size of the concrete block is approximately 5m x 4m x 1.5m. This is followed by teak wood poles. Hence piling at this location is impossible. Also while excavating the location of abutment for piling, the adjacent building was prone to failure and hence sheet piles were suggested to be inserted for protection of the building. Also additional quantities of bailing out, sheet piles, additional soil investigation boring for identification of changed location of piles etc are required for proper completion of the project
		Approved, Additional fund and necessary AS need to obtained - Action by Project Director

22. Other Miscellaneous Items

1. In the road Chirakkarappadi Chettalapuncha road in Alappuzha District, revised design was sanctioned in technical committee no 25 dt 12.10.2021. Later during finalisation of profile approximately 40 to 50 cm earth filling was proposed in the rigid pavement section from chainage 0+860 to 1+540. Hence cement stabilisation was avoided in this stretch. Also there is a correction in length noted in the minutes and the actual length is 2+800.

Comment

It is seen that in two works (Madathilkadavu Mahilasamajam and Pathinanjilkadavu illickal) proposed ROW changes from original estimate. PMU shall ensure recording correct RoW from field while preparing DPRs in future.

The meeting was concluded at 1.30.

A. H. K.
Dr. Ashokale R

G. Jayal
Do. Jayal

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