ABSTRACT

MGNREGS - Announcement of the Hon'ble Minister (Municipal Administration and Rural Development, Implementation of Special Programme) on the Floor of the Legislative Assembly on 04.06.2018 – Construction of Culverts/Cross Drainage Structures (Culverts, Minor Bridges and Causeways) at a total cost of Rs.134.58 crore under MGNREGS for the year 2018-19 – Permission accorded - Guidelines approved – Orders - Issued.

RURAL DEVELOPMENT AND PANCHAYAT RAJ (CGS.1) DEPARTMENT

G.O.(Ms) No. 120 **Dated: 05.09.2018**

Read:

1. Announcement of the Honourable Minister for Municipal Administration and Rural Development, Implementation of Special Programme in the floor of the Legislative Assembly on 04.06.2018.
2. From the Director of Rural Development and Panchayat Raj, Letter No.24426/2018/MGNREGS–1-2, dated 03.05.2018.

ORDER:

The Hon'ble Minister for Municipal Administration and Rural Development, implementation of Special programme has made the following announcement in the floor of the Legislative Assembly on 04.06.2018 :-

"ஊரகப்பகுதிகளில் போக்குவரத்தினை மேம்படுத்திடவும் மற்றும் நீர்நிலைகளை கடந்திட ஏதுவாக மாண்புமிகு இதயதெய்வம் புரட்சித்தலைவி அம்மா அவர்களின் ஆசியுடன், மாண்புமிகு முதலமைச்சர் அவர்களின் ஆணைப்படி, 2018–19 ஆம் நிதியாண்டில் ஊரகப் பகுதிகளில், 600 குறு பாலங்கள், 250 சிறு பாலங்கள் மற்றும் 100 தரைப் பாலங்கள் மொத்தம் 134 கோடியே 58 இலட்சம் ரூபாய் மதிப்பீட்டில் கட்டப்படும்".

2. In the letter 2nd read above, the Director of Rural Development and Panchayat Raj has stated that Government of India has approved Labour Budget of 25 Crore persondays under MGNREGS to Tamil Nadu for the year 2018-19.

3. The Director of Rural Development and Panchayat Raj has also stated the total Rural Road network of Tamil Nadu is about 1.49 lakh kilometres. In this, cross drainage structures like Culverts, Minor Bridges and Causeways play a major role in allowing flood water and stream water to pass from one side to other side of the road without affecting regular traffic. Further, some of the existing Cross Drainage

structures are not functioning either due to severe damage or insufficient vent way and therefore, it is essential to replace them with new Cross Drainage structures so that regular traffic flow remains unhindered.

4. Further, the Director of Rural Development and Panchayat Raj has stated that the type of Cross Drainage structures may vary according to the site conditions, based on linear water way of the course like Maximum Water Level (MWL), velocity, quantity duration of flow, and height of road embankment etc. As per the restructured list of permissible works communicated by GoI, *Construction of Culverts/Cross Drainage Structures for community* is one of the permissible works listed in Sl.No.100 under the category of "D Assets". These works cannot be taken as stand-alone cross drainage works in regular schemes like Pradhan Mantri Gram Sadak Yojana (PMGSY), National Bank for Agriculture and Rural Development (NABARD), Tamil Nadu Rural Roads Improvement Scheme (TNRRIS), etc.,

5. The Director of Rural Development and Panchayat Raj has proposed to construct 300 units of 1.5m Span Culvert, 300 units of 3.00m Span Culvert, 250 units of Minor Bridges and 100 units of Causeways as standalone works under MGNREGS during the financial year 2018-19. 100% of the Labour cost is borne by the GoI and the material cost is shared by the GoI and the State Government in the ratio of 75:25. Further The Director of Rural Development and Panchayat Raj has worked out the funding pattern as follows:-

(Rupees in Crore)

Description of Work	Material Component			Labour Component (Central Share 100%)	Grand Total
	Central Share (75%)	State Share (25%)	Total		
300 units of 1.5m Span Culvert	8.53	2.84	11.37	1.38	12.75
300 units of 3.00m Span Culvert	13.43	4.48	17.91	2.37	20.28
250 units of Minor Bridges	44.16	14.72	58.88	7.67	66.55
100 units of Causeways	23.97	7.99	31.96	3.04	35.00
Total	90.09	30.03	120.12	14.46	134.58

6. The Director of Rural Development and Panchayat Raj has therefore requested permission for construction of 300 units of 1.5m Span Culvert, 300 units of 3.00m Span Culvert, 250 units of Minor Bridges and 100 units of Causeways as standalone works at a total cost of Rs.134.58 Crore under MGNREGS during the year 2018-19 and approval of the guidelines therefor.

7. The Government, after careful examination of the proposal of the Director of Rural Development and Panchayat Raj, accord permission for the construction of 300 units of 1.5m Span Culvert, 300 units of 3.00m Span Culvert, 250 units of Minor Bridges and 100 units of Causeways as standalone works at a total cost of Rs.134.58 Crore under MGNREGS during the year 2018-19 and approved the guidelines annexed to this order, subject to the condition that the Financial sanction shall be approved after getting the release of Central share.

8. This order is issued with the concurrence of Finance Department vide its U.O.No. 34976 / Finance(RD) / 2018, dated 19.07.2018.

(BY ORDER OF THE GOVERNOR)

HANS RAJ VERMA
ADDITIONAL CHIEF SECRETARY
TO GOVERNMENT

To
The Director of Rural Development and Panchayat Raj, Chennai – 15.
All District Collectors (Except Chennai)
(Thro' the Director of Rural Development and Panchayat Raj,
Chennai – 15)
All Project Directors, District Rural Development Agencies
(Thro' the Director of Rural Development and Panchayat Raj,
Chennai – 15)
The Accountant General, Chennai – 18.

Copy to:
The Pay and Accounts Office (South), Chennai – 35.
The Finance (RD) Department, Chennai – 9
Chief Minister's Office, Secretariat, Chennai-9.
The Senior Personal to Hon'ble Minister (Municipal Administration
& Rural Development, Implementation of Special Programme),
Chennai – 9.
The Principal Private Secretary to Additional Chief Secretary to
Government, Rural Development and Panchayat Raj
Department, Chennai – 9.
The Rural Development and Panchayat Raj (OP.2) Department,
Chennai – 9
The National Informatics Centre, Chennai – 9.
Spare copy/Stock file.

//FORWARDED BY ORDER//

SECTION OFFICER

ANNEXURE

Guidelines for Construction of Culverts/Cross Drainage Structures (Culverts, Minor Bridges and Causeways) in Rural areas under MGNREGS

(G.O.Ms) No. 120, RURAL DEVELOPMENT AND PANCHAYAT RAJ (CGS-1) DEPARTMENT, DATED 05.09 .2018)

Introduction:

The total Rural Road network of Tamil Nadu is about 1.49 lakh kilometres. In this, cross drainage structures like Culverts, Minor Bridges and Causeways play a major role in flood water and stream water to pass from one side to other side of the road without affecting regular traffic. Further, some of the existing Cross Drainage structures are not functioning either due to severe damage or insufficient vent way and to balance the required vent way when compared to the existing one, it is essential to replace them or balance with new Cross Drainage structures so that regular traffic flow remains unhindered during floods.

Culvert: Culvert is a cross-drainage structure having a total length of 6m or less between the inner faces of dirt walls or extreme vent way boundaries.

Minor bridge: A bridge is said to be a minor bridge if its total length is from 6m to 60m.

Causeways: A causeway is a paved submersible structure with or without openings (vents) which allows flood to pass through and /or over it.

Work Selection:

- Construction of cross drainage structures shall be selected on the following basis (i) roads which are connecting habitations, (ii) taluk /panchayat head quarters, (iii) roads linking to marketing centres, educational centres, health centres, etc.,

- The Existing damaged cross drainage structures and cross drainage structures having insufficient vent way shall also be selected.

- Normally, when the ground generally slopes from one side to another, the embankment intercepts natural flow of rainwater. In such cases, balancing culverts are provided at the rate of one per 500m length of road to avoid water logging.

- Selection of type of cross drainage structure for a particular road primarily depends on the linear waterway and hydraulic particulars apart from topography, catchment area, Cross-section of the stream at proposed crossing, High Flood Level / Maximum Flood Level and Road Top Level, etc.,

- Span of the culvert, Minor bridge and causeway shall be fixed based on linear waterway of the channel/stream.

- Generally, for catchment area of less than 1.25 sq km (125 hectares), a culvert is required and if the catchment area is more than 1.25 sq km, a minor bridge is to be provided.
- Causeways should be adopted only after knowing the duration and magnitude of floods in the past, spread and depth of water during floods and post monsoon period. Causeways may be provided wherever the velocity of water flow does not exceed 6m/sec. The causeway is to be constructed on a particular road which should be of not much economic importance.
- The opinion of the local farmers/ Residents of that area shall also be taken into account in deciding the need for causeway.

Non-Negotiable Items:

1. Citizen Information Board shall be kept at the work site in 3 X 4 feet with all necessary information as per the framework given by the Government of India vide Ref No: k11023 /1 / 12017 – MGNREGA (IV), MORD, Dated 07.04.2017. Since this is a community type structure, the cost of Citizen Information Board will be fixed at Rs.4,500/- per unit. The cost of the Citizen Information Board shall be included in the estimate itself.
2. Geo Tagging of the Assets shall be done for all 3 stages namely Before, During and After completion of the work.
3. MGNREGS work file (Checklist / Contents) as per the instructions of GoI, vide Ref no: J11001017/6/12016 – MGNREGA (VII), MORD, Dt 21.12.2016 has to be maintained for all works.
4. The Rural Schedule of Rate finalised in G.O. Ms. No.56, RD&PR (CGS.1) Department, Dated: 17.04.2018 shall be adopted. In case of any revision made in Rural Schedule of Rates in future, the same shall be adopted.

Technical Specifications for execution of works:

General

- The Cross drainage structures should generally be located on the straight alignment of the road.
- The Cross drainage structure has to be designed according to the hydraulic data and soil stratum.
- The type of foundation has to be designed as per the soil type and safe bearing capacity of soil at site.
- Based on the hydraulic particulars, the span of the culvert/Minor bridge/ Cause way have to be decided.
- The design of vented causeway has to be done as per IRC SP 20-2002
- The overall width of the culvert/Minor bridge / Cause way should be equal to the formation width of the road.

- However, from cost and low traffic point of view, 6m formation (roadway width) can also be adopted for such roads, which connect only a small habitation and where length of the road is minimal.

Overall Width of Cross Drainage Works (IRC SP : 20 – 2002)

Type of CD Work	7.50m roadway width		6.00m roadway width	
	Overall Width (m)	Carriage way width (m)	Overall Width (m)	Carriage way width (m)
Culverts	7.50m	6.60m	6.00m	5.50m
Small and Minor Bridges	6.40m	5.50m	6.00m	5.50m
Submersible Bridges (Causeways)	7.50m	6.60m	6.00m	5.50m

Culverts

- Number of culverts, Description of type, the direction of flow and their chainages should be inscribed on the left hand side end faces of returns in both directions.
- The culverts should generally be sited on the straight alignment of a road.
- From the consideration of maintenance of culverts, it is preferable that the clear waterway of slab culvert is a minimum of 1.5m.
- Weep holes should be provided in culverts so as to prevent building up of hydrostatic pressure behind abutments and wing walls.
- Design of Deck slab for culverts should be as per IRC – SP: 20.

Minor Bridge

- In case of Minor Bridges, the foundation soil has to be designed based on "**Safe Bearing Capacity** by conducting **Standard Penetration Test**" before preparing the estimate.
- As per IRC – SP:20, the roadway width between the kerb (exclusive of parapet) shall be 5.5m , however, where the traffic is less than 100 motorised vehicles per day and it is not likely to grow, the roadway width may be reduced to 4.25 m.
- Decks of the minor bridge should follow the same profile as that of the road section, without any break in the grade line.

- Elastomeric slab seal or compression seal expansion joints should be provided for minor bridges having multiple spans with individual span more than 10 m.
- Necessary Bed Protection should be provided based on the scour calculation.

Causeway

- As per IRC – SP:20, the roadway width at causeway shall be 7.5m for plain and rolling terrain and 6m for mountainous and steep terrain.
- In case of causeways, higher the constriction of natural waterway, higher will be the afflux and the velocity of flow through the vents. It is therefore, desirable to keep the constriction of waterway to the minimum in order to reduce expenditure on providing raised face walls and protection of bed.
- The vent area should not be less than 30% of the area of the stream measured between the stream bed level and the proposed top level of the road.
- As the causeways are expected to allow the flood water to pass over them and the traffic requirements demand immediate use, the road surface on the causeway should be such that it does not get damaged due to frequent over topping. Therefore, sufficiently stable pavement should be provided for the full width of the causeway.
- Necessary Bed Protection should be provided based on the scour calculation.
- The guard stone should be provided on both sides along the causeway and also flood level marker post/pillar with colour code indicating danger level should be provided at the midpoint in the lines of guard stones.

HANS RAJ VERMA
ADDITIONAL CHIEF SECRETARY TO GOVERNMENT

// True copy//

SECTION OFFICER
5/9/18