

**Sub: Construction Management System - Circular No. -35**

**Ref: Guidelines for Fire fighting services & Procurement of their equipments to be taken up under RUSDIP.**

Fire fighting Sector has so far been a neglected sector particularly and most of the cities being covered under RUSDIP do not have adequate fire fighting facilities although skeleton system exists for these towns. The importance of this sector cannot be under estimated keeping in view of its impact on loss of property and human life. The sector being in infancy in the state needs to be adopted carefully so as to ensure its success, adoption by the society and with this view major interventions are proposed under RUSDIP (Tranche-III). Detailed Project Report (DPR) is to be prepared for this sector in consultation with the ULBs. The standard guide lines for fire fighting services and procurement of their equipments are as follows for ready reference:

1. On the basis of present population and its projection the number of beneficiaries shall be assessed. The present and projected population for the future years shall be considered as follows:

S.No	Town	Population				
		2001	2011	2021	2026	2041
1	Alwar	266203	346554	451706	515770	768429
2	Jaisalmer	57537	82346	118845	143186	253659
3	Jhalawar- Jhalrapatan	78157	99606	126910	143228	205881
4	Churu	101874	123309	149240	164119	217768
5	Barmer	83591	104113	129253	143922	198640
6	Sikar	185925	240783	311749	354765	523840
7	Nagaur	93915	123580	162954	187168	283877
8	Dholpur	97795	127790	167873	192321	287339
9	Sawai Madhopur	101997	131716	170234	193305	281028
10	Bharatpur	205235	273916	366799	424629	659519
11	Karauli	66239	83140	104896	117822	166207
12	Baran	78665	102211	133232	152104	225839
13	Chhabra	22796	29002	37049	41870	60204
14	Bundi	88871	114963	149206	169968	250611
15	Chittorgarh	96219	134330	188656	224033	378772
16	Rajsamand	55687	76297	105055	123281	198914

2. Fire station requirement for each town shall be assessed on the following basis -
  - (i) One fire station per 10 Sq.Km. in urban area.

- (ii) Fire service response time maximum 5 minutes in urban area.

The above criteria should be made flexible without any restriction on the Municipal body to locate the fire station at closer or greater distance depending upon the topography, terrain, etc, of the locality, as well as the fire risk involved and the time taken to effectively cover such risk.

3. Considering the life of major fire fighting equipment as 10 years, the requirement of major fire fighting equipments for each town shall be assessed for average population of the year 2021 on the basis of following guidelines and as detailed in table.

- (i) One fire tender per 50,000 population up to 3 lacs population. One additional fire tender per one lac population or a fraction thereof plus a reserve of 20% of the total water tender.
- (ii) One rescue tender per 3 to 10 lacs population.
- (iii) One or more special vehicle viz. Fire tender (Foam) , extra heavy water tender (Water Bouser) and Hydraulic Plate form/Turn Table Ladder for high rise building (more than 15 meter height). However the numbers of special vehicle shall be assessed with the advice of Municipal body on the basis of actual risk analysis.
- (iv) Fire accessories along with fire tender ,rescue tender and special vehicle and additional accessories like extra hose length for narrow lanes of towns, hose coupling, fireman's axe, fire hooks, fire bell, ladders, self-contained breathing apparatus, electric motor siren, helmet, oxy-acetelene cutting set, fire protective uniform...etc shall be assessed with the advice of Municipal body.

The nature/ capacity of different type of fire tenders and their requirement in accordance to the population on basis of guide lines of the Ministry of Home Affairs Directorate of General Civil Defense (DGCD-fire) may be assessed as follows:

S.No	Population Range	No. of Equipment required				
		Fire Tender(water)		Special Vehicle		Rescue Tender
		2000 lit. capacity	4500 lit. capacity	Fire Tender Foam (foam500lit+water4000 lit.) capacity	Water Bouser (12000lit) capacity	Vehicle with rescue equipments
1	Up to 0.50 lac	1	-	-	-	-
2	0.5-1.00 lac	1	-	1	-	-
3	1.00-1.50 lacs	1	1	1	-	-
4	1.50-2.00 lacs	2	1	1	-	-
5	2.00-2.50 lacs	2	1	1	1	-
6	2.50-3.00 lacs	3	1	1	1	-
7	More than 3.00 lacs	3	2	1	1	1
Estimated Rate of each unit(enquired from CFO,JMC)		20.00 lacs	30.00 lacs	35.00 lacs	35.00 lacs	40.00 lacs

- (v) The technical specifications of 2000/4500 lit. capacity Fire Tender(water)/ Fire Tender Foam (foam500 lit.+water4000 lit.)/ Water Bouser (12000 lit) capacity/emergency (rescue) small tenders and turntable ladder may be collected from TL, IPMC/ APO in-charge in PMU.

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4. There should be provision of O&M for 3 years (provision of drivers & other operating personnel etc.) in the bid documents where no adequate man power is available to operate the additional fire equipments.

5. **Detailed Project Report Format:**

The report should consist two parts:

**a. City status report**

**b. Sub-project specific report**

6. The **city status report** should contain at least the following chapters:
- (a) Index
  - (b) Salient features of the town - Demographic characteristics (growth trends & projection) and population beneficiaries, land use (Industries, residential, slums...etc)
  - (c) Introduction -
    - General,
    - History of fire fighting services
    - Present Status of existing fire station facilities, fire tenders and other equipments, manpower, communication, water supply to the fire station.
    - Available staff for the services.
    - Ongoing & future plans and their status.
    - Brief details of project background, project goal, understanding of objectives of fire services including description of statutory, regulatory and advisory functions.
    - Study of fire incidences past trends and record.
    - Emergency routes of exits & their analysis.
    - Assessment of fire risk and risk status
  - (d) Analysis of deficiency in the town with present requirements and future requirements of Year 2011, 2021, 2026 and 2041, measures to mitigate the deficiencies for the improvement in existing system
  - (e) Executive summary for suggestive measures to mitigate deficiencies / long term solutions and list of proposed facilities in totality. Brief details of package, line agency, implementing agency, operation and maintenance, area of land to be acquired, cost of construction, time of completion of construction, expected benefit, salient features and adequacy of the available staff on the future plans up to 2021. Constraints if any & remedial measures.
  - (f) Identification and phasing of fire facilities to be taken up by the RUSDIP. Define role of RUSDIP/ULB/ others to meet out the deficiencies.
  - (g) Institutional Strengthening and Management-
    - Goals of Institutional Development- brief details of the agencies involved like Municipal Council / Board, District Administration and other line agencies and their common goals
    - Current Organization structure and responsible agencies - Organization structure, level of hierarchy and responsibilities.
    - System deficiencies - Indicate gap between existing facilities and requirements.
    - Administrative and functioning requirements of fire station - Brief write on general administration of fire service, hierarchy of fire persons, Powers and duties of fire officers, training( regular training of both theoretical & practical ),community awareness, control room & mobilization, response time, legislation, general requirement and suggestions.
7. The **sub-project specific report** should contain at least the following chapters:
- (a) Index
  - (b) Introduction
  - (c) Details of the sub-project specific requirement and justification.
    - Guidelines for new fire station and procurement of fire fighting equipments.

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- Proposed new fire stations, proposed location, planning concept and development of new fire station.
  - Recommendations for the
    - i. Purchase of additional equipments like fire tender, foam tender, rescue tender and extra heavy water tender (water bouser) with accessories with fire protective uniform and safety accessories.
    - ii. Manpower & additional O & M costs for the equipments.
    - iii. Improvement of water supply to the fire station.
    - iv. Improvement of communication system

**General:**

- Increase in coverage of Fire fighting system and its maintenance
- Reduction in losses due to fire
- Improvement in fire fighting facility
- Corresponding general benefits to public.

**Technical Report will contain** - narrative of the various design parameters, design aspect, like building height, rest room for firemen, locker room, control room, training room, store and service platform, two wheeler parking, parking of fire equipments, Over head water storage tank/ Underground water storage tank/ water hydrant charged with water under pressure, landscaping, electrical and general toilets, Work Program; Operation and Maintenance; Benefits expected from the investment.

- a) **Bidding document** - Incorporation of Scope of work, special conditions of contract, Technical specifications, Tender & General arrangement drawings, Estimate & Bill of quantities and preamble to BOQ etc. in Standard Bidding document.
- b) **Operation and Maintenance** - Expectations from the line agency (personal requirement / cost requirement), Expectations from the contracting firm.
- c) **Execution Methodology** - Tentative work plan, Quality Assurance and Quality Control, Safety aspect during execution.
- d) **Time line for completion of identified Fire fighting services.**
- e) **Likely Impact after the completion of sub-project under RUSDIP** - Improvement in Fire fighting facility, reduction in fire losses, number of beneficiaries/ colonies covered/ houses/Industries & beneficiary %of total city area,
- f) **Sub - Project Issues**
  - i. Status of land availability / Land acquisition for new Fire Station building.
  - ii. Inter departmental issues if any

**All the members of PMU, IPIU, IPMC and DSC should abide this circular.**

  
 (Dinesh Kumar)  
 Project Director  
 Dated: 11.08.2009

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Copy to following for information and necessary action:

1. Addl. PD / FA/ Dy. PD (T)/ Dy. PD (Adm.)/-SE (WW) / WS) / PO (all)/ Sr. AO / All APOs / AAO/ PA to PD PMU, RUIDP, Jaipur.
2. SE Jodhpur, Executive Engineer/APO's, IPIU, RUSDIP (Concerned), Alwar, Baran-Chhabra, Barmer, Bharatpur, Bundi, Chittorgarh, Churu, Dhaulpur, Jaisalmer, Jhalawar-Jhalarpatan, Karauli, Nagaur, Rajsamand, Sawai Madhopur and Sikar.
3. Team Leader IPMC, DSC-I, Bharatpur, DSC-II, Nagaur, DSC-III, Jhalawar, RUSDIP
4. DSC-I, Alwar/ Dholpur/ Karauli/ Sawai Madhopur, DSC-II, Churu/ Jaisalmer/ Barmer/ Sikar and DSC-III, Chittorgarh/ / Rajsamand/ Bundi/ Baran, RUSDIP.
- ✓ 5. ACP, RUIDP, Jaipur to send by e-mail and put up the circular on the website.

  
 Dy. Project Director (T)