



# **HIGHWAYS AND MINOR PORTS DEPARTMENT**

## **PERFORMANCE BUDGET**

**2016-2017**

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**Government of Tamil Nadu  
2017**



# **PERFORMANCE OF HIGHWAYS AND MINOR PORTS DEPARTMENT DURING 2016-2017**

## **I. HIGHWAYS DEPARTMENT**

### **1. INTRODUCTION**

The development of the road network plays an important role in the economic development of a country. The kilometerage of paved roads existing in a country is used as an index to assess the extent of its development. The proper development of the road network not only reduces the cost of transportation, both in terms of money and time, but also helps in the integration of various regions within the country. Roads act as great feeders to other means of transportation. By developing road infrastructure in relation to traffic demand and road safety characteristics, safety of men and material transport is ensured.

The implementation of works like widening/improvements of roads, construction of bridges, flyovers and formation of bypasses are done through Highways Department.

The detailed physical and financial performance of the department during 2016 - 2017 is elaborated below:-

#### **1.1 ASSETS BEING MAINTAINED BY HIGHWAYS DEPARTMENT**

Government roads to a length of 62468 km are being maintained by the Highways Department. The classification of roads, their lengths, the type of existing bridges and their numbers are tabulated in Table 1 and Table 2 respectively. The surface-wise details and lane-wise details of the roads are tabulated in Table 3 and Table 4 respectively.

**TABLE 1: CLASSIFICATION OF ROADS**

<b>Classification of Road</b>	<b>Length (km)</b>
<b>National Highways (NH)</b>	
Maintained by NH wing	1985
Maintained by NHA I	3009
<b>NH -Total</b>	<b>4994</b>
State Highways (SH)	12095
Major District Roads (MDR)	11628
Other District Roads (ODR)	33751
<b>Total</b>	<b>62468</b>

**TABLE 2: TYPES OF BRIDGES AND THEIR NUMBERS**

<b>Types of Bridges</b>	<b>Nos.</b>
Major Bridges and Minor Bridges*	8753
Culverts	122197
Railway Over Bridges at Railway level crossing(ROB)	132
Railway Under Bridges at Railway level crossing (RUB)	46
Pedestrian Sub Way	14
<b>Total</b>	<b>131142</b>

\* includes bridges with Linear Waterway 6m-60 m and more than 60m

**TABLE 3: SURFACE-WISE LENGTH**

(length in km)

S. No.	Category of Road	Cement Concrete (C.C)	Black Topped (B.T)	Metalled	Total
1	National Highways	2	4992	-	4994
2	State Highways	21	12074	-	12095
3	Major District Roads	28	11600	-	11628
4	Other District Roads	88	33663	-	33751
<b>Total</b>		<b>139</b>	<b>62329</b>	<b>-</b>	<b>62468</b>

**TABLE 4: LANE-WISE DETAILS OF ROADS**

(length in km)

S. No	Category of road	Single lane	Inter mediate lane	Double lane	Multi lane	Total
<b>1</b>	<b>National Highways</b>					
	a) National Highways wing	12	26	1825	122	1985
	b) National Highways Authority of India	-	-	906	2103	3009
	<b>Sub-Total</b>	<b>12</b>	<b>26</b>	<b>2731</b>	<b>2225</b>	<b>4994</b>
	Percentage of lane-wise width of roads	-	-	55%	45%	
<b>2</b>	<b>State Highways</b>	<b>56</b>	<b>350</b>	<b>9795</b>	<b>1894</b>	<b>12095</b>
	Percentage of lane-wise width of roads	<b>0.4%</b>	<b>3%</b>	<b>81%</b>	<b>15.6%</b>	

<b>S. No</b>	<b>Category of road</b>	<b>Single lane</b>	<b>Inter mediate lane</b>	<b>Double lane</b>	<b>Multi lane</b>	<b>Total</b>
<b>3</b>	<b>Major District Roads</b>	<b>422</b>	<b>7663</b>	<b>3367</b>	<b>176</b>	<b>11628</b>
	Percentage of lane-wise width of roads	<b>3.5%</b>	<b>66%</b>	<b>29%</b>	<b>1.5%</b>	
<b>4</b>	<b>Other District Roads</b>	<b>29287</b>	<b>3507</b>	<b>893</b>	<b>64</b>	<b>33751</b>
	Percentage of lane-wise width of roads	<b>87%</b>	<b>10%</b>	<b>3%</b>	<b>0%</b>	
	<b>Total</b>	<b>29777</b>	<b>11546</b>	<b>16786</b>	<b>4359</b>	<b>62468</b>
	<b>Percentage of lane width to the total length of roads</b>	<b>48%</b>	<b>18%</b>	<b>27%</b>	<b>7%</b>	

## **1.2 PERFORMANCE UNDER PLAN SCHEMES**

### **1.2.1 FINANCIAL PERFORMANCE**

The financial performance under the plan schemes for the year 2016-2017 and Budget Estimate for the year 2017-2018 are given in Table 5.

**TABLE 5: FINANCIAL PERFORMANCE****(Rupees in Lakhs)**

Sl. No.	Name of Scheme	2016-2017		2017-2018 Budget Estimate
		Budget Estimate	Expenditure	
<b>Construction and Maintenance</b>				
<b>State Highways</b>				
<b>1</b>	Bridges (Part II Scheme)	0.07	0.00	0.07
<b>2</b>	Roads (Part II Scheme)	886.58	812.45	0.05
<b>3</b>	16 major works	0.00	0.00	0.00
	<b>Sub-Total</b>	<b>886.65</b>	<b>812.45</b>	<b>0.12</b>
<b>Major District Roads</b>				
<b>4</b>	Major District Roads (Part II Scheme)	0.08	0.00	0.00
<b>5</b>	16 Major works	0.00	0.00	0.00
	<b>Sub-Total</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>
<b>Other District Roads</b>				
<b>6</b>	Other District Roads (Part II Scheme)	0.04	0.90	0.01
<b>7</b>	16 major works	0.00	0.00	0.00
	<b>Sub-Total</b>	<b>0.04</b>	<b>0.90</b>	<b>0.01</b>
<b>Rehabilitation of Distressed Bridges</b>				
<b>8</b>	Rehabilitation of Distressed Bridges (Part II Scheme)	0.03	0.00	0.00
<b>9</b>	16 major works	0.00	0.00	0.00
	<b>Sub-Total</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>
<b>10</b>	Other Roads (Part II Scheme)	0.09	0.00	0.01

Sl. No.	Name of Scheme	2016-2017		2017-2018 Budget Estimate
		Budget Estimate	Expenditure	
<b>Comprehensive Road Infrastructure Development Programme</b>				
<b>11</b>	CRIDP – SH	119948.07	129576.18	124948.07
<b>12</b>	CRIDP - MDR	74734.22	77653.70	84734.22
<b>13</b>	CRIDP - ODR	53817.71	80821.59	79055.71
<b>14</b>	CRIDP - SCP	31500.00	18884.62	21262.00
	<b>Sub-Total</b>	<b>280000.00</b>	<b>306936.09</b>	<b>310000.00</b>
<b>15</b>	Improvement to Chennai Radial Roads	652.73	652.70	0.03
<b>16</b>	Acquisition of lands for bypasses(JK)			
	(i) works	0.02	0.00	0.02
	(ii) lands	10266.22	2244.31	14645.87
	<b>Acquisition of land Sub-total</b>	<b>10266.24</b>	<b>2244.31</b>	<b>14645.89</b>
<b>17</b>	Acquisition of lands for bypasses(KC)			
	(i) works	4729.50	109.07	10000.00
	(ii) lands	7179.10	2156.99	20000.00
	<b>Acquisition of land Sub-total</b>	<b>11908.60</b>	<b>2266.06</b>	<b>30000.00</b>
<b>18</b>	Improvement of vital roads in industrial areas through Tamil Nadu Road Infrastructure Development Corporation	15182.00	12983.01	10494.00
<b>19</b>	Chennai Outer Ring Road (Phase-I)	27136.00	13177.04	16195.46



Sl. No.	Name of Scheme	2016-2017		2017-2018 Budget Estimate
		Budget Estimate	Expenditure	
20	Chennai Outer Ring Road (Phase-II)	18507.00	2317.45	27799.80
21	Construction of Buildings	315.18	578.28	0.40
22	Upgradation of IT highway in Chennai	0.02	21.00	0.01
23	Formation of Roads in Tribal areas	0.00	0.00	0.00
24	Schemes implemented under State Infrastructure and Amenities fund-Controlled by CE(H) C&M	0.02	0.00	0.00
25	Special Project for attending to Road Safety - <b>KO</b>	10000.00	13099.15	13995.50
26	Palar bridge in ECR road - <b>JE</b>	449.00	598.62	0.01
27	Northern Port Access Road - <b>KN</b>	0.01	345.00	20000.01
28	Construction of CE Quarters - <b>KB</b>	0.00	22.25	0.01
29	City Traffic Improvement works - <b>JD</b>	15000.00	11252.38	5086.03
30	High Density Corridor - <b>JE</b>	367.04	4019.68	1000.00
31	Construction of flyover at Salem junction-Yercaud Road - <b>JF</b>	5000.00	10000.00	20000.00

Sl. No.	Name of Scheme	2016-2017		2017-2018 Budget Estimate
		Budget Estimate	Expenditure	
32	By-Pass at Kelambakkam and Tiruporur in Rajiv Gandhi Salai with JICA assistance- TNIPP Phase 2	0.00	0.00	5000.00
33	Programme for Plastic and Litter free-Highways	0.01	0.00	0.00
	<b>Plan – Total</b>	<b>395670.74</b>	<b>381326.37</b>	<b>474217.29</b>
34	Tsunami – Centrally assisted	0.01	0.00	0.01
	<b>Plan Total</b>	<b>395670.75</b>	<b>381326.37</b>	<b>474217.30</b>
<b>NABARD and Rural Roads Wing</b>				
35	Improvements to Major District Roads/ Other District Roads under NABARD loan assistance	5000.01	5520.84	4227.01
36	Construction / Reconstruction of Bridges in Government roads with loan assistance from NABARD	467.26	172.67	37.74
37	Construction of bridges in Government and Panchayat Union roads	26343.30	23075.93	31000.00

Sl. No.	Name of Scheme	2016-2017		2017-2018 Budget Estimate
		Budget Estimate	Expenditure	
38	Improvements to Rural Roads with NABARD loan assistance	117.31	234.19	117.31
39	Improvements to Bus Route with NABARD loan assistance	0.02	0.00	0.02
40	Improvements to Rural roads with loan assistance from NABARD under Special Component Plan	0.02	0.00	0.02
41	Construction of bridges under Tsunami Emergency Assistance Project with loan assistance from ADB	2.43	1.57	0.01
42	By-pass works (L.A.)	4216.28	820.53	4177.93
	<b>Plan – Total</b>	<b>36146.63</b>	<b>29825.73</b>	<b>39560.04</b>
43	Tsunami Rehabilitation Programme	0.00	0.00	0.00
	<b>Total</b>	<b>36146.63</b>	<b>29825.73</b>	<b>39560.04</b>
	<b>Project Wing</b>			
44	Construction of over and under bridges in lieu of existing level crossings JJ	23394.59	14008.72	33625.40

Sl. No.	Name of Scheme	2016-2017		2017-2018 Budget Estimate
		Budget Estimate	Expenditure	
45	Construction of ROB in Chennai Metro Area for Traffic Management JD	3171.26	2518.68	552.69
46	Construction / Reconstruction of bridges JE	4315.27	4411.21	8904.88
47	Construction/ Reconstruction of bridges and improvement of roads with loan assistance from NABARD JQ	333.58	55.50	0.12
48	Provision for road works under TNUDP JN	92.54	92.50	0.03
49	Construction of Road Over Bridge/Road Under Bridge in lieu of level crossings JT	51532.54	14802.34	38003.48
50	Madurai Radial Roads (PHASE-I) JU	0.01	0.00	0.00
51	CRIDP - Madurai Radial Roads (Phase - II) JY	0.01	0.00	0.00
52	Rural Roads - Marketing centre JU	0.01	0.00	0.00
53	Roads in cyclone affected areas JV	0.01	0.00	0.00

Sl. No.	Name of Scheme	2016-2017		2017-2018 Budget Estimate
		Budget Estimate	Expenditure	
54	Construction of Interchange at the junction of Pondy-Krishnagiri road under IS&EI (JA-Head)	0.01	0.00	0.00
55	City Traffic Improvement works - CE (Projects) UA	0.01	0.00	0.00
56	Arbitration case trestle approaches to Road Over Bridge at V.M Street near Tondiarpet Railway stations (Funds received from Contingency Fund 2014-15) JG	0.01	0.00	0.00
57	Construction of over and under bridges in lieu of existing level crossings JG	3192.60	523.24	2965.59
58	Construction of Bridges with loan assistance from HUDCO (Land acquisition payment) – JB	0.01	0.00	0.01
	<b>Total for Chief Engineer (H) Projects Wing</b>	<b>86032.46</b>	<b>36412.19</b>	<b>84052.20</b>

Sl. No.	Name of Scheme	2016-2017		2017-2018 Budget Estimate
		Budget Estimate	Expenditure	
	<b>Metro Wing</b>			
<b>59</b>	Chennai Metropolitan Development Plan	30660.00	11089.78	42673.99
	<b>Total</b>	<b>30660.00</b>	<b>11089.78</b>	<b>42673.99</b>
	<b>National Highways</b>			
<b>60</b>	Revamped Central Road Fund	16112.22	16291.63	50000.00
<b>61</b>	Inter State Connectivity	0.01	0.00	0.00
<b>62</b>	Economic Importance	0.01	0.00	0.00
<b>63</b>	Bharat Nirman Scheme (Maintenance borne by State Government)	457.42	568.90	503.52
<b>64</b>	State Plan - Miscellaneous Original Works	44.01	0.00	0.00
<b>65</b>	Western ghats development programme	0.01	0.00	0.00
	<b>Total</b>	<b>16613.68</b>	<b>16860.53</b>	<b>50503.52</b>
	<b>Tamil Nadu Road Sector Project</b>			
<b>66</b>	TNRSP	122027.50	83232.72	150809.70
	<b>Total</b>	<b>122027.50</b>	<b>83232.72</b>	<b>150809.7</b>
	<b>Highways Research Station</b>			
<b>67</b>	Equipment for Laboratories	0.00	0.00	0.00

Sl. No.	Name of Scheme	2016-2017		2017-2018 Budget Estimate
		Budget Estimate	Expenditure	
68	Institute of Highway Research and Management	0.01	0.00	0.01
69	Operation and Maintenance of Road Measurement and data acquisition system in respect of ODR and NH	5.4	4.77	5.4
70	Tamilnadu Innovative Initiatives Fund (TANII) 2016 - 2017. 3054 80 004 JG 0005 3054 80 004 JH 0003	28.70	16.96	7.01
71	Tamilnadu Innovative Initiatives Fund (TANII) 2017 - 2018 3054 80 004 JI 0001, 3054 80 004 JJ 0009, 3054 80 004 JK 0007.			255.00
	<b>Total</b>	<b>34.11</b>	<b>21.73</b>	<b>267.42</b>

Sl. No.	Name of Scheme	2016-2017		2017-2018 Budget Estimate
		Budget Estimate	Expenditure	
	<b>Director General</b>			
<b>72</b>	Operation and Maintenance of Advanced Data Collection Equipments in respect of SH, MDR and NHAI Roads	2.17	3.5	0.02
	<b>Total</b>	<b>2.17</b>	<b>3.50</b>	<b>0.02</b>
	<b>Plan Total</b>	<b>687187.29</b>	<b>558772.55</b>	<b>842084.17</b>
<b>73</b>	Tsunami Rehabilitation programme	0.02	746.57	0.02
	<b>Total</b>	<b>0.02</b>	<b>746.57</b>	<b>0.02</b>
	<b>Grand Total</b>	<b>687187.31</b>	<b>559519.12</b>	<b>842084.19</b>

### 1.2.2 PHYSICAL PERFORMANCE

The physical achievements under the plan schemes for the year 2016-2017 and targets for the year 2017-2018 are given in Table 6.



**TABLE 6: PHYSICAL PERFORMANCE**

S. No	Name of Scheme	Achievements 2016-2017		Targets 2017-2018	
		Bridges/ Culverts/ Structures in Nos.	Roads length in km	Bridges/ Culverts/ Structures in Nos.	Roads length in km.
<b>Construction and Maintenance</b>					
1	Part II Scheme Buildings	19		1	
2	Comprehensive Road Infrastructure Development Programme				
	State Highways	118	1099	284	890
	Major District Roads	78	781	172	660
	Other District Roads	117	1999	228	2045
	Other District Roads Special Component Plan (CRIDP)	11	464	9	570
	<b>Sub-Total</b>	<b>324</b>	<b>4343</b>	<b>693</b>	<b>4165</b>
	<b>Roads/ Bridges</b>	<b>324</b>	<b>4343</b>	<b>693</b>	<b>4165</b>
	<b>Buildings</b>	<b>19</b>		<b>1</b>	
	<b>Tsunami Centrally assisted</b> -	<b>2</b>		<b>4</b>	
<b>NABARD and Rural Roads</b>					
3	Improvements to Major District Roads/ Other District Roads under NABARD loan assistance		113.46		87.19

S. No	Name of Scheme	Achievements 2016-2017		Targets 2017-2018	
		Bridges/ Culverts/ Structures in Nos.	Roads length in km	Bridges/ Culverts/ Structure s in Nos.	Roads length in km.
4	Construction / Reconstruction of Bridges in Government roads with loan assistance from NABARD			1	
5	Construction of bridges in Government and rural roads	64		60	
6	Improvements to Rural Roads with NABARD loan assistance			1	
	<b>Total</b>	<b>64</b>	<b>113.46</b>	<b>62</b>	<b>87.19</b>
7	Tsunami Rehabilitation Programme			2	
8	Railway Works Programme			5	
	<b>Total</b>	<b>64</b>	<b>113.46</b>	<b>69</b>	<b>87.19</b>
	<b>PROJECTS</b>				
9	Road over/ under bridges in lieu of existing Level Crossings -JJ			12	
10	Construction of Over Bridges/ Under Bridges in lieu of level crossings -JT	2		7	

S. No	Name of Scheme	Achievements 2016-2017		Targets 2017-2018	
		Bridges/ Culverts/ Structures in Nos.	Roads length in km	Bridges/ Culverts/ Structure s in Nos.	Roads length in km.
11	Construction of river bridges – JE HUDCO			5	7.20
12	Construction of Road over Bridges in Chennai Metro Area for Traffic Management – JD			1	
13	Construction of over and under bridges in lieu of existing level crossings - JG			1	
	<b>Total</b>	<b>2</b>		<b>26</b>	<b>7.20</b>
<b>14</b>	<b>Chennai Metropolitan Development Plan</b>				
	a) ROB/RUB			1	
	b) Grade Separator	3		1	
	c) River Bridge	1		2	
	d) Roads/ Bridges		3.42		0.23
	<b>Total</b>	<b>4</b>	<b>3.42</b>	<b>4</b>	<b>0.23</b>
	<b>National Highways</b>				
15	Revamped Central Road Fund Scheme	1	454.11		690.00
16	Inter State Connectivity scheme				140.00

S. No	Name of Scheme	Achievements 2016-2017		Targets 2017-2018	
		Bridges/ Culverts/ Structures in Nos.	Roads length in km	Bridges/ Culverts/ Structure s in Nos.	Roads length in km.
17	Economic Importance Scheme				
	<b>Total</b>	<b>1</b>	<b>454.11</b>		<b>830.00</b>
<b>TAMILNADU ROAD SECTOR PROJECT</b>					
18	Tamil Nadu Road Sector Project-II				
19	Upgradation (DPR Preparation)		1980		99
20	Bridges/Minor Bridges				
	<b>Total</b>		<b>1980</b>		<b>99</b>
<b>Grand Total</b>					
	<b>Road and Bridges</b>	<b>395</b>	<b>6893.99</b>	<b>790</b>	<b>5188.62</b>
	<b>Buildings</b>	<b>19</b>		<b>1</b>	
	<b>Tsunami-Centrally assisted</b>	<b>2</b>		<b>6</b>	

### 1.3 PERFORMANCE UNDER NON-PLAN SCHEMES

During 2016-17, an allocation of Rs.859.27 Crore has been made for maintenance of roads and bridges and renewal of 2862 km length of roads has been completed at an expenditure of Rs.805.57 Crore.

### 1.3.1 FINANCIAL PERFORMANCE

The financial performance indicating the details of expenditure incurred during 2016-2017 under various heads of Non Plan and the allocation for 2017-18 is given in Table 7.

**TABLE 7: NON PLAN-FINANCIAL ALLOCATION AND EXPENDITURE**

(Rs.in lakhs)

S. No.	Name of Scheme	2016-2017		2017-2018
		Budget Estimate	Expenditure	Budget Estimate
1	National Highways (Urban)	234.52	234.52	234.52
2	Maintenance of Certain important Roads in the City of Chennai	2110.64	2100.00	2110.64
3	State Highways	15984.22	16406.31	16667.10
4	Major District Roads	14439.01	13965.34	15197.74
5	Other District Roads	51219.67	46213.11	53571.73
6	Sugarcane Roads	1849.79	1549.93	1849.79
7	Improvements to Nilgiris Ghat Roads	90.00	87.96	92.35
	<b>Total</b>	<b>85927.85</b>	<b>80557.17</b>	<b>89723.87</b>

### 1.3.2 PHYSICAL PERFORMANCE

The length of roads renewed under Non plan maintenance during 2016-2017 and the target for 2017-18 is given in Table-8.

**TABLE 8: NON PLAN -PHYSICAL PERFORMANCE**

(Length in km)

Sl. No	Name of wing	Achievement 2016-2017	Target 2017-2018
1.	Construction and Maintenance	2862 km	1000 km

## **2. PERFORMANCE UNDER MAJOR SCHEMES AND KEY PROJECTS**

During the year 2016-2017, an amount of Rs.6871.87 Crore was provided in the Budget Estimate for Highways Department and the expenditure incurred under Plan Schemes is Rs.5595.19 Crore.

### **2.1 COMPREHENSIVE ROAD INFRASTRUCTURE DEVELOPMENT PROGRAMME (CRIDP)**

In view of the need to augment the capacity of the roads, widening of all State Highways to Double Lane and widening of Major District Roads to Intermediate Lane has been given importance. During 2016-17 widening and improvements of 4165.45 km roads, construction of 223 No. of culverts/ bridges and 470 protective works were taken up under this scheme for which Rs.2500 Crore was sanctioned.

During 2016-17, Road works to a length of 4343 km and 324 Bridges / Culverts / Protective works have been completed incurring an expenditure of Rs.3069.36 Crore.

#### **2.1.1 CRIDP - STATE HIGHWAYS**

During 2016-17, spillover works of widening/ improvements to 1308.26 km length of roads and construction of 254 bridges/culverts/ protective works were taken up at a cost of Rs.2019.34 Crore.

New works of widening/improvements to 889.52 km length of roads, construction of 63 bridges/ culverts and 221 protective works were also sanctioned at a cost of Rs.997.51 Crore and are under progress.

During 2016-17, widening/ improvements in 1099 km length of roads and 118 bridges/ culverts/ protective works have been completed at a cost of Rs.1295.76 Crore.

### **2.1.2 CRIDP - MAJOR DISTRICT ROADS**

Widening/ improvements to 863.39 km length of roads and construction of 191 bridges/ culverts/ protective works were taken up as spillover works at a cost of Rs. 816.08 Crore.

During 2016-17, widening/ improvements to 660.41 km length of roads, construction of 57 bridges/ culverts and 115 protective works were sanctioned at a cost of Rs.485.49 Crore and are being implemented.

Widening/ improvements in 781.15 km length of roads and 78 bridges/culverts/ protective works have been completed at a cost of Rs.776.54 Crore in the year 2016-17.

### **2.1.3 CRIDP - OTHER DISTRICT ROADS**

Spillover works costing to a tune of Rs.1467.41 Crore comprising of widening/ improvements to 2338.77 km length of roads and construction of 244 bridges/culverts were taken up for implementation.

New works of widening/improvements to 2,044.65 km length of roads, construction of 99 bridges/culverts and 129 protective works have been sanctioned at a cost of Rs.811.88 Crore in the year 2016-17 and are under progress.

Widening/improvements in 1998.64 km length of roads and 117 bridges/ culverts/ protective works have been completed in the financial year 2016-17 at a cost of Rs.808.22 Crore

#### **2.1.4 CRIDP - OTHER DISTRICT ROADS - SPECIAL COMPONENT PLAN**

Spillover works of widening/ improvements to 497.19 km length of roads and construction of 11 bridges/culverts were taken up in the year 2016-17 at a cost of Rs.186.53 Crore.

New works of widening/improvements to 570.87 km length of roads, construction of 4 bridges/culverts and 5 protective works were sanctioned at a cost of Rs.205.12 Crore and are being implemented.

During 2016-17, road works to a length of 463.95 km and 11 bridge/culvert/protective works were completed at a cost of Rs.188.85 Crore.

#### **2.1.5 ERODE OUTER RING ROAD**

In order to ease traffic congestion in Erode Town and to ensure a free flow of traffic, Government accorded sanction for the formation of a ring road from Kokkarayanpettai to Thindal to a length of 14.80 Km.

In Phase I & II, formation of the outer ring road from Km 0/0 to 2/2 including construction of a high level bridge across Cauvery River and formation of road from Km 2/2 to 7/6 respectively were completed under CRIDP scheme and opened for public use.

In Phase III, the work of formation of the outer ring road for a length of 7.20 Km from Km 7/6 to 14/8 including construction of a Road Over Bridge at Km 11/2-11/6 for Rs.69.30 Crore was taken up. At present, 90% of works have been completed and the balance works are in progress in the portions other than where the court cases are pending for its final disposal.



## 2.2 PART-II SCHEME

During the year 2016-17, Spillover works of 20 buildings were taken up for construction and 19 buildings have been completed at a cost of Rs. 5.78 Crore

## 2.3 CHENNAI METROPOLITAN DEVELOPMENT PLAN (CMDP)

The Chennai Metropolitan Development Plan is being implemented since 2003-04 utilizing State budgetary allocation to build infrastructure in the Chennai Metropolitan Area as per the Second Master Plan of the Chennai Metropolitan Development Authority (CMDA) for the year 2010-2026. The projects are prioritized based on the recommendations of the Comprehensive Traffic Transportation Study.

During 2016-17, about Rs. 153.84 Crore have been spent for these works. Details of head wise expenditure incurred based on allocation of funds during 2016-17 is shown in Table 9.

**TABLE 9: EXPENDITURE DETAILS**

<b>Sl. No</b>	<b>Head</b>	<b>RBE for 2016-17 (Rs. in lakhs)</b>	<b>RE for 2016-17 (Rs. in lakhs)</b>	<b>Expenditure (Rs. in lakhs)</b>
<b>1</b>	JW 1608 & 6407(lands)	25000.00	12944.75	8612.92
<b>2</b>	KJ 1603	5000.00	1707.07	1046.91
<b>3</b>	JH 1602 & 6401(lands)	660.00	1550.00	1429.95
<b>4</b>	JD 1601 Bridges	2686.26	3925.26	2133.05
<b>5</b>	JT 1604	4018.79	3024.46	2146.73
<b>6</b>	JJ 1601	228.75	20.00	15.27
	<b>Total</b>	<b>37593.80</b>	<b>23171.54</b>	<b>15384.83</b>

During 2016-17, 13 Grade Separators, 6 River Bridges, 9 Railway Over Bridge/ Railway Under Bridge, 5 Road Works were taken up as spillover works.

Out of 13 Grade separators (including 2 Nos. of DPR works), 3 Nos of Grade Separators at Nelson Manickam and Anna Nagar 3<sup>rd</sup> Avenue (Section I, II and III) at a cost of Rs.117.00 Crore, Vadapalani at a cost of Rs.69.43 Crore, Kolathur Rettai Eri (LHS) at a cost of Rs.55.25 Crore have been completed and opened for traffic.

Out of 6 River Bridges, 1 No of River Bridges at Km.15/8 of Mount – Poonamallee – Avadi road was completed at a cost of Rs. 5.50 Crore and opened for traffic.

### **2.3.1 GRADE SEPARATORS**

1. At the intersection of Mount - Poonamallee road with Kodambakkam - Sriperumbudur road at Porur at a cost of Rs. 54 Crore is in progress. The works are nearing completion.
2. At the junction of Kundrathur road and Santhai road at Pallavaram in GST road at a cost Rs. 82.66 Crore. The work is in progress.
3. At the junction of Taramani road, Tambaram–Velachery road and Velachery bypass in Velachery Vijayanagaram junction at a cost of Rs. 108 Crore. The work is in progress.
4. Connecting the junctions of Mofussil bus entrance of CMBT and Kaliamman Koil road junction in Jawaharlal Nehru Salai (IRR) at a cost of Rs. 93.50 Crore. The work is in progress.
5. At Medavakkam – Sholinganallur road junction, Medavakkam– Mambakkam road junction and Mount– Medavakkam junction in Maramalai Adigal Bridge–

Irumbuliyur (MBI) road at a cost of Rs. 146.41 Crore. The work is in progress.

6. At the intersection of Mount Medavakkam road and Pallavaram-Thuraipakkam road near Kilkattalai at a cost of Rs. 64 Crore. The work is in progress.
7. Construction of Grade Separator at the intersection of IRR near Kolathur Rettai Eri at Sembium Red Hill Road Junction (RHS) at a cost of Rs. 32.03 Crore. The work is in progress.
8. Construction of Grade Separator in ECR at Tiruvanmiyur Junction in Chennai (Land Acquisition only) at a cost of Rs.58 Crore. Land Acquisition is in progress.

### **2.3.2 RIVER BRIDGE WORKS**

1. Construction of additional three lane bridge across coovam river at EVR salai near Aminjekarai km 6/6 (upstream side) at a cost of Rs. 8 Crore is in progress and nearing completion.
2. Widening of the bridge at km 2/6 of Mount - Poonamallee – Avadi road at a cost of Rs. 17 Crore. The work is in progress.
3. Construction of high level bridge across “B” Canal at Km 0/6 of Thiruvottriyur –Ponneri –Panchetty Road at a cost of Rs.58.64 Crore. The work is in progress.
4. Construction of bridge across Coovam river at Nolambur road at a cost of Rs. 36 Crore (LA only). LA is in progress.
5. Construction of high level bridge across Coovam river at km 0/6 from M.P. road at Paruthipattu at a cost of Rs.3.10 Crore (LA only). LA is in progress.

### **2.3.3 ROAD OVER / UNDER BRIDGE AT RAILWAY CROSSING**

Construction of ROB / RUB taken up under CMDP are as follows :

1. Construction of ROB in LC No.3 between Thondiarpeth Thiruvottiyur Railway stations near Thiruvottiyur Mattumandhai at a cost of Rs. 47 Crore is in progress. The work is scheduled to be completed soon.
2. Construction of ROB in lieu LC No.14 between Thirunindravur – Thiruvallur near Veppampattu Railway Station at a cost of Rs.29.50 Crore is in progress.
3. Construction of RUB in LC No.4 at Railway km 8/600-700 in between Thiruvottriyur – Ennore (near Thiruvottriyur Railway station) at a cost of Rs.28 Crore.
4. Construction of RUB in LC No.6 at Railway km 10/10-12 in between Thiruvottriyur – Wimco Nagar Railway station at a cost of Rs.25.50 Crore.
5. Construction of RUB in lieu LC No.4 at Railway km 11/32-34 near Korattur at a cost of Rs.19.97 Crore.
6. Construction of ROB in lieu LC No.16 at Railway km 24/16-18 in Minjur – Kattur – Thiruppalaivanam in between Nandhiyambakkam and Minjur Railway station at a cost of Rs.28.32 Crore.
7. Construction of ROB in LC No.32 & 33 in lieu of LC 33 in between Tambaram – Vandalur Railway station at a cost of Rs.76 Crore.

8. Construction of ROB in lieu of LC No.22 at Railway km 21/10-11 near Thirusulam Railway station at a cost of Rs.14 Crore.
9. Construction of ROB in lieu of LC No.27 at Railway km 25/3-4 at Radha Nagar Main road at a cost of Rs.14.75 Crore.

#### **2.3.4 WIDENING OF RAILWAY OVER BRIDGES**

DPR for the work of widening of ROB at Km 20/8 of Mount – Poonamallee –Avadi road and widening of ROB to dual four lane at Km 12/2-13/2 of Inner Ring Road are under progress. On completion of DPR, the Railways portion works will be executed through Railways as deposit work.

#### **2.3.5 ROAD WORKS**

1. Widening and Strengthening of Taramani Link Road km 0/0-3/650. (TNUDP III) at a cost of Rs. 32.23 Crore. Out of 3.65 km, 3.42km road work were completed. Remaining work is in progress.
2. Formation of new link road connecting Puzhal Chennai GNT road and Amullaivoyal in IRR at km 20/8 at a cost of Rs.22 Crore. Land demarcation is in progress
3. Formation of link road and construction of bridge across Buckingham canal connecting Rajiv Gandhi and ECR at Neelankarai at a cost of Rs. 204.20 Crore LA is in progress.
4. Formation of Tambaram Eastern By-pass road at km 0/0-8/4 (LA only) at a cost of Rs. 75.50 Crore. LA is in progress.
5. Forming six lanes of ECR from km 11/8-23/2 Thiruvanmiyur to Akkarai (LA only) at a cost of Rs. 354.66 Crore. LA is in progress.

### **2.3.6 PEDESTRIAN SUBWAYS**

Construction of Pedestrian subway at five locations at a cost of Rs. 19 Crore.

1. GST road near little Mount AG Church – Fresh AS to be obtained.
2. Guindy MKN road – Fresh AS to be obtained.
3. at km 1/6 of IRR near Ekkattuthangal – RAS proposal under preparation incorporating the Shifting of Utilities, current SOR etc.
4. at km 2/7 of IRR near Kasi Theatre – RAS proposal under preparation incorporating the Shifting of Utilities, current SOR etc.
5. at 7/7 of IRR near Koyambedu bus terminous – At the proposed Pedestrian Subway location, Kalamman Koil Grade Separator is under construction. Hence after completion of the Grade Separator, Pedestrian Subway or FOB will be finalised depending upon the feasibility.

### **2.3.7 FOOT OVER BRIDGES (FOB) AND SKYWALK**

Construction of Foot Over Bridge and skywalk with escalator at 26/8 of G.S.T. Road connecting Tambaram Railway Station and bus stand and improvements to the pedestrian movements at a cost of Rs. 19.49 Crore. Tender is under scrutiny.

### **2.4 ROAD OVER / UNDER BRIDGES AT RAILWAY LEVEL CROSSINGS**

Construction of Road Over Bridges (ROBs)/ Road Under Bridges (RUBs) are being implemented by this wing under Railway Works Programme in coordination with the Railways on 50:50 cost sharing basis with a view to eliminate the level crossings and

vehicle detention time. It also ensures safety of the general public as well as hassle free vehicular traffic.

Under the Railway Works Programme, 81 Spillover works were taken up in 2016-17, of which, 2 works have been completed at a cost of Rs. 52.54 Crore and 49 works are in progress for a value of Rs. 1447.94 Crore. The remaining works are in various stages of pre-construction.

In the year 2012-13, the Government has accorded Administrative Sanction for Rs. 100.90 Crore to carry out preliminary works for 12 ROB/RUB works, which are in various stages. In the year 2015-16, of these 12 works, Administrative Sanction has been accorded for Rs. 117.415 Crore for 6 ROB/RUB works. Out of these 6 works, for 5 works viz., LC 8, LC 43, LC 46, LC 346 and LC 6 – Palayamkottai, works are in progress. And for the remaining 1 work viz., LC 38, the estimate is under preparation and the work will be taken up for execution soon. For the remaining 6 ROB/RUB works, the preliminary works are in progress.

In the year 2013-14, the Government has accorded Administrative Sanction for Rs. 231.49 Crore to carry out preliminary works such as Land Acquisition, Shifting of Service Utilities and Investigation for 18 ROB/RUB works. Of these, Administrative Sanction has been accorded for Rs.49.56 Crore for two ROB works at LC 123 and LC 34. Out of 2 works for which Administrative Sanction is accorded, for one ROB work at LC 123 at Vellore Cantontment work is in progress and for the remaining one ROB work at LC 34 at Singalancheri the detailed estimate is under preparation. Meanwhile Land Acquisition is in progress for the ROB work at LC 34. Out of the remaining 16 works, 4 works

are in estimate stage, 9 works are in DPR stage and 2 works are in GAD stage. The remaining 1 ROB work at LC 29 is dropped.

In 2015-16, for taking up 12 ROB/ RUB in 7 districts, Rs. 3.52 Crore have been sanctioned by the Government for the preparation of Detailed project report under Railway Works Programme. Of these 12 works, 1 work is in Estimate stage, 7 works are in DPR stage and balance 4 works are in GAD stage.

During 2016-17, Government has accorded Administrative sanction for Rs. 347.07 Lakhs for the preparation of Detailed Project Report (DPR) through engaging consultants for the construction of 13 ROB/ RUB works. DPR preparation is in progress.

A sum of Rs. 318.53 Crore has been spent for this scheme in 2016-17.

## **2.5 NABARD LOAN ASSISTANCE SCHEMES**

### **2.5.1 CONSTRUCTION OF BRIDGES IN GOVERNMENT ROADS**

Under this scheme, spillover work of 1 bridge at a cost of Rs.2.05 Crore was taken up for execution during 2016-17. An expenditure of Rs 1.73 Crore has been incurred.

### **2.5.2 CONSTRUCTION OF BRIDGES IN GOVERNMENT AND RURAL ROADS**

105 bridges at a cost of Rs 355.75 Crore has been taken up during 2016-17 as spillover works under this scheme. Also, 47 new bridge works costing Rs 147.38 Crore were sanctioned during 2016-17. Further, 23 Minor Bridges / Culverts / Protective works in Flood affected Districts of Cuddalore, Tiruvallur, Kanchipuram and Salem to the tune of Rs.11.79 Crore were taken up for execution during 2016-17.



Out of 175 bridge works mentioned above, 64 bridge works at a cost of Rs 230.76 Crore were completed during 2016-17 in all respects and put to use general public. Presently, 97 bridge works are in progress and the balance 14 works are in pre-construction stage.

In addition, the NABARD has also given concurrence for the construction / reconstruction of 24 Bridges (located on SH and MDR) at a cost of Rs 56.75 Crore on 15.02.2017. The G.O. has been issued on 03.04.2017. Out of which 20 works are in tender stage and the balance 4 works are in Estimate stage.

### **2.5.3 IMPROVEMENTS TO MAJOR DISTRICT AND ROADS OTHER DISTRICT ROADS.**

During 2016-17, spillover works comprising of 40 Roads to a length of 115.16 km were taken up at a cost of Rs. 47.82 Crore. Out of these 39 road works to a length of 110.96 km have been completed incurring an expenditure of Rs.54.21 Crore. The remaining one road work to a length of 4.20 km is in progress.

Further, the Government accorded new sanction for 32 road works to a length of 85.49 km at a cost of Rs. 42.27 Crore in the year 2016-17. Out of which one Road work to a length of 2.50 km has been completed incurring an expenditure of Rs.1 Crore and the balance 31 road works to a length of 82.99 km are in progress.

### **2.5.4 RURAL ROADS SCHEME**

Construction of a bridge work on Panchayat Union Road near Anakaputhur has been taken up as spillover at a cost of Rs.1.28 Crore during 2016-17. The alienation of Indian Air Force (IAF) lands to Highways Department awaits approval from Ministry of Defence. Once all formalities are completed by GOI, the

required extent of land would be handed over to Highways Department. After that work will be resumed and completed.

## **2.6 BYPASSES FOR MAJOR TOWNS**

Bypasses are being formed to ease the traffic congestion in the built up areas of major towns and to ensure hassle free through traffic and reducing vehicle operating cost and time.

So far, 13 bypasses have been completed. 8 bypasses namely Thanjavur phase II (Part I), Thanjavur phase II (Part II), Pattukottai Phase II, Edappady, Pollachi Eastern Bypass, Thiruthani, Tharamangalam and Rasipuram Phase I, Part-II are in progress. Land Acquisition process for the bypasses to 19 towns are in progress. Preparation of Detailed Project Report for bypasses to Thiruvallur, Vettavalam, Dindigul and Thuraiyur phase II are in progress. Further, the proposal for sanction of land acquisition for bypasses to Thirukattupalli is in perusal.

## **2.7 TSUNAMI REHABILITATION PROGRAMME**

During 2016-17, spill over works of 6 bridges to a value of Rs.45.40 Crore were taken up and 2 bridge works has been completed at a cost of Rs.6 Crore.

## **2.8 WORKS IN CHENNAI EXTENDED CORPORATION AREA**

Highways Department maintains 251 Km length of roads in the extended Chennai Corporation area in Chennai, Thiruvallur and Kanchipuram districts.

Hon'ble Chief Minister has announced that works will be taken up for Rs.1033 Crore in these extended Chennai Corporation Area in a phased manner.

In pursuance of the announcement, Government sanctioned Rs.400 Crores for 36 works in two phases during 2014-16.

During 2016-17, spillover works of 33 works to a length of 91.26 km were taken up at a cost of Rs. 293.14 Crores and 9 works at a cost of Rs.152.72 Crores have been completed.

## **2.9 PERFORMANCE BASED MAINTENANCE CONTRACT (PBMC)**

Performance Based Maintenance Contracting (PBMC) is a new concept designed to resolve the problems related to traditional methods of contracting and has significant potential to improve the maintenance and management of road infrastructure. Contracting out road maintenance to the private sector based on performance measures is an alternative solution to maintain road infrastructure in a cost-effective way. Many countries have succeeded in minimizing road infrastructure maintenance costs using performance-based maintenance contracts over the last two decades.

This scheme includes Initial Rectification, Periodical Renewal, Minor Improvements, Ordinary Maintenance and Emergency works.

During the year 2012-13, in Pollachi division, Performance Based Maintenance Contract (PBMC) has been taken up in 377.38 Km length of roads comprising 191.40 Km of State Highways (SH) roads and 185.98 Km of Major District Roads for a period of five years at a cost of Rs.233.93 Crore. Initial rectification works in 152.59 Km and periodical renewal works in 81.15 km have been completed and balance works are in progress.

Based on the experience in Pollachi Division, PBMC has been extended to Krishnagiri, Ramanathapuram and Tiruvallur divisions in the year 2015-16. In Krishnagiri division, maintenance of 307 km length of State Highways and 274 km length of Major District Roads are also taken under Performance Based Maintenance Contract at a cost of Rs.450 Crore. Initial rectification works in 151.40 km have been completed and balance works are in progress.

In Ramanathapuram Division sanction was accorded for Rs. 460 Crore for maintenance of 229 km length of State Highways and 340 km length of Major District Roads under Performance Based Maintenance Contract (PBMC). Out of 196.67 km length of Initial rectification works, 185.37 km has been completed and balance works are in progress.

An amount of Rs. 630.38 Crore was accorded for the maintenance of 498 km length of State Highways and 278 km length of Major District Roads under this scheme in Tiruvallur Division. Out of 211.19 km length of Initial rectification works, 79.60 km has been completed and balance works are in progress.

## **2.10 ROAD SAFETY MEASURES**

The identification, analysis and treatment of road accident black spots are widely regarded as one of the most effective approaches to mitigate road accidents. It is well established that considerable safety benefits may accrue from the application of appropriate road engineering or traffic management measures at hazardous road locations. Results from such applications at "black spots" demonstrate high returns from relatively low cost measures.

The Government have sanctioned Rs. 300 Crore for road safety works under road safety fund. From 2014-15 onwards, road safety works has been taken up under Comprehensive road Infrastructure Development Programme. Thus, road safety works to a tune of Rs. 959.94 Crores were taken up under road safety funds and CRIDP so far as detailed below.

**TABLE 10: ROAD SAFETY FUND ALLOCATION DETAILS**

SI No	Year	Details of Fund allocation (Rs. in Crores)			
		CRIDP	Road Safety Fund under Highways Head	Total	
1	2014-15	250.00	200.00	450.00	
2	2015-16	206.87	100.00	306.87	
3	2016-17	203.07	-	203.07	
		<b>Total</b>			<b>959.94</b>

A study was made to identify black spots where more than 5 fatalities took place for the past 3 years. Totally 169 black spots have been identified and 73 are being improved at a cost of Rs. 31.58 Crores under CRIDP 2016-17. 50 black spots are being improved under other schemes. The remaining identified works will be taken up in the year 2017-18 on priority basis.

During the year 2016-17, 743 No. of works have been completed at an expenditure of Rs. 130.99 Crore.

## **2.11 NATIONAL HIGHWAYS WORKS**

Tamil Nadu has 4994 Km length of National Highways. Out of this 1985 km of roads are improved / maintained by National Highways wing of the State Government utilizing the funds

provided by Government of India. The balance 3009 Km length of roads are being maintained by National Highways Authority of India (NHAI).

#### **2.11.1 NATIONAL HIGHWAYS ORIGINAL WORKS**

17 road works having a length of 418 km and 10 bridge works at a cost of Rs.1544 Crore were taken up as spill over works during 2016-17. Under Annual Plan 2016-17, the MORT&H, Government of India has sanctioned 31 road works to a length of 69.84 km and 7 Bridge works amounting to Rs.307.91 Crore.

Out of the above, 9 road works to a length of 310 Km and 6 bridge works have been completed incurring an expenditure of Rs.640.11 Crore. The remaining works are in progress.

#### **2.11.2 PERIODICAL RENEWAL (PR) / IMPROVEMENT OF RIDING QUALITY PROGRAMME (IRQP)**

During the financial year 2016-17, under Periodical Renewal (PR) / Improvement of Riding Quality programme (IRQP), 21 road works to a length of 243 km amounting to Rs.151.90 Crore were taken up as spill over, Out of which 20 works to a length of 224.72 km have been completed incurring an expenditure of Rs.139.56 Crore.

Further, MORT&H, Government of India sanctioned 12 road works to a length of 91.44 km at a cost of Rs.61.52 Crore under PR/IRQP 2016-17. These works are in progress.

## **2.12 SCHEMES SPONSORED BY GOVERNMENT OF INDIA**

### **2.12.1 REVAMPED CENTRAL ROAD FUND SCHEME**

During the year 2016-17, 73 road works to a length of 479.31Km and 3 bridge works were taken up as spill over to a tune of Rs.263.92 Crore.

Out of the above, 70 road works to a length of 454.11 Km and one bridge work have been completed at a cost of Rs.162.92 Crore during 2016-17. Balance works are in progress.

147 road works to a length of 762.67 Km and one bridge work amounting to Rs.605.66 Crore was approved by the Government of India under RCRF 2016-17. These works are in progress

A budget provision of Rs.500 Crore has been made for the financial year 2017-18 by the State Government under this scheme.

### **2.12.2 INTER STATE CONNECTIVITY SCHEME**

During the year 2016-17, 2 road works to a length of 95.85 km were taken up as spillover to a tune of Rs. 90.13 Crore under this Scheme and the works are nearing completion.

During the year 2016-17, the MoRT&H ,GOI has sanctioned 5 road works to a length of 69.80 km and amounting to Rs.90.99 Crore .Out of these, four works are in tender stage and one work is in progress.

### **2.12.3 PRADHAN MANTRI GRAM SADAK YOJANA PROGRAMME PHASE IX (2014-15)**

Under this programme, 57 Other District Road works to a length of 164.04 Km amounting to Rs.47.65 Crore have been taken up for

upgradation and all these works have been completed incurring an expenditure of Rs. 36.67 Crore.

#### **2.12.4 PRADHAN MANTRI GRAM SADAK YOJANA PROGRAMME PHASE X (2016-17)**

In continuation to PMGSY-Phase-IX, MoRD, GOI has sanctioned 41 Other District Road works to a length of 129.69 km and amounting to Rs.37.02 Crore during the year 2016-17 under PMGSY Phase -X. Out of this, 28 road works to a length of 85.80 Km have been completed incurring the expenditure of Rs. 23.61 Crore.

### **2.13 OTHER SPECIAL PROJECTS**

#### **2.13.1 ROAD OVER BRIDGE AT PALLIPALAYAM**

During 2013-14, Government has accorded Administrative Sanction for Construction of Railway Over Bridge in State Highways 79 at km 90/2 in Nammakal district for Rs. 40.16 Crore was taken up as deposit work. Presently, 60% of work is completed and further work is in progress.

#### **2.13.2 HIGH LEVEL BRIDGE AT KALLANAI ACROSS COLEROON RIVER**

During 2013-14, Government has accorded Administrative Sanction for Rs.13.00 lakhs for the preparation of DPR for the construction of High Level Bridge across the river Coleroon at Kallanai connecting Thiruvanaikoil road and Grant Anaicut road in Thanjavur district. The Detailed Project Report was prepared for this River Bridge work and during 2015-16, the Government has accorded Administrative Sanction for Rs.61.024 Crore and the work is in progress.



### **2.13.3 ROAD OVER BRIDGE AT AMBUR**

During 2013-14, Government has accorded Administrative Sanction for preliminary works for Rs.6.97 Crore for construction of Railway Over Bridge at Bethlegam area in Ambur Town, between Ambur and Vaniyambadi Railway Stations in Vellore district. The preliminary works are in progress.

### **2.13.4 HIGH LEVEL BRIDGE ACROSS NOYYAL RIVER NEAR CHIKKANA COLLEGE**

The High level bridge sanctioned for Rs. 3.85 Crore under CRIDP scheme during 2006-07 and temporarily held up due to court case has been resumed in 2015-16 as the case has been disposed of. Now the work is in progress and will be completed in this financial year.

### **2.13.5 CONSTRUCTION OF GRADE SEPARATOR IN ERODE DISTRICT**

In 2013-14, Government has accorded Administrative Sanction for Rs. 22.93 Crore to carry out preliminary works for construction of Grade Separator at Km 1/8 of Erode – Perundurai – Kangeyam Road near Government hospital Junction. The preliminary works were completed. Administrative Sanction has been accorded to a tune of Rs.58.54 Crore and the work is in progress.

### **2.13.6 ROAD OVER BRIDGE FOR ELCOT AT MADURAI (DEPOSIT WORK)**

During 2015-16, Government has accorded Administrative Sanction for Rs.13.82 Crore for the construction of Road Over Bridge at Vadapazhanji for ELCOT in SEZ, between Madurai and Usilampatty Railway Stations in Madurai district. The work is in progress.

### **2.13.7 CONSTRUCTION OF HIGH LEVEL RIVER BRIDGE AT CHIDAMBARAM ACROSS UPPANAR RIVER**

During 2015-16, Government has accorded Administrative Sanction for Rs. 10.06 Crores for the construction of High Level Bridge across the river Uppanar in Cuddalore district connecting km 6/8 of Chidambaram-T.S.Pettai and km 161/8 of PWD Coleroon river left bund road. Presently, 50% of work is completed and further work is in progress.

### **2.13.8 RECONSTRUCTION OF HIGH LEVEL RIVER BRIDGE NEAR BHUVANAGIRI ACROSS VELLAR RIVER**

During 2015-16, Government has accorded Administrative Sanction for Rs. 22.57 Crores for the reconstruction of High Level Bridge across the Vellar river at km 104/2 of abandoned NH 45A (Villupuram-Pondy-Nagapattinam road) near Bhuvanagiri in Cuddalore district. Presently, 50% of work is completed and further work is in progress.

### **2.13.9 CONSTRUCTION OF HIGH LEVEL RIVER BRIDGE ACROSS RIVER PAMBAR NEAR CHITHIRAMBUR**

During 2015-16, Government has accorded Administrative Sanction for Rs.18.82 Crores for the construction of High Level Bridge across the river Pambar with approaches near Chithirambur in Pudukottai district. Presently, 30% of work is completed and further work is in progress.

### **2.13.10 CONSTRUCTION OF HIGH LEVEL RIVER BRIDGE ACROSS RIVER VANİYAR NEAR PAPPIREDDIPATTI**

During 2015-16, Government has accorded Administrative Sanction for Rs.7.25 Crores for the construction of High Level Bridge at km 4/8 of Pappireddipatti – Mallapuram Road (M328) across Vaniyar river in Dharmapuri district. Presently, 30% of work is completed and further work is in progress.

### **2.13.11 CONSTRUCTION OF 3 FOOT OVER BRIDGES WITH ESCALATOR**

In the year 2015 – 2016, the Government have accorded Administrative Sanction for Rs. 30.18 Crore, for the construction of 2 Foot Over Bridges with Escalator in Coimbatore District and one Foot Over Bridge with Escalator at Karur District. One FOB work near Coimbatore Railway station is in tender stage. The other two foot over bridge works are in various stages of pre-construction. FOB works will be taken up for execution during 2017 – 2018.

### **2.13.12 DETAILED PROJECT REPORT PREPARATION FOR 22 NEW BRIDGE WORKS**

During 2016-17, Government has accorded Administrative sanction for Rs. 8.73 Crore for the preparation of Detailed Project Report (DPR) by engaging consultants for the construction of 22 bridge works in 11 districts comprising of 14 ROB/ RUBs, 7 HLBs and one Elevated Highway corridor along Avinashi road from Upplipalayam to Coimbatore International Airport. DPR preparation for these works will be completed in this financial year 2017-18.

### **2.13.13 SUGARCANE ROAD DEVELOPMENT SCHEME**

Utilising the cess fund collected from Sugar Mills by the Agriculture department, formation and improvement of roads leading to sugar mills through sugar cane fields are being taken up.

## **2.14 CHENNAI OUTER RING ROAD**

### **2.14.1 CHENNAI OUTER RING ROAD – PHASE I**

Administrative sanctions have been accorded for the development of Chennai Outer Ring Road (CORR) Project Phase-1 as a Green Field Project with the formation of dual three lanes with service roads for a length of 29.65 Km from Vandalur in NH-45 to

Nemilichery in NH-205 Via Nazarathpet in NH-4 at a cost of Rs.1081.40 Crore.

Tamil Nadu Road Development Company Ltd has been appointed as the "Managing Associate" for this project.

The completed portion of the project road to a length of 27 Km from Mannivakkam to Nemilichery has been inaugurated by the Hon'ble Chief Minister of Tamil Nadu on 28.08.2014 and put to public use.

The land acquisition process for the balance works are expected to be completed by the end of June 2017 and the balance stretch of the road is expected to be completed by December 2017.

#### **2.14.2 CHENNAI OUTER RING ROAD – PHASE II**

The Government have sanctioned the Chennai Outer Ring Project Phase-II, a major six lane road connectivity project to a length of 30.50 Km from Nemilichery in NH-205 to Minjur in Thiruvottiyur - Ponneri - Panchetti (TPP) Road via Padiyanallur in NH-5 at a cost of Rs. 1075 Crore under the Design, Build, Finance, Operate and Transfer (DBFOT) mode with Semi Annual Annuity payment.

Tamil Nadu Road Development Company Ltd has been appointed as "Managing Associate" for Chennai Outer Ring Road Project Phase-II.

The Hon'ble Chief Minister of Tamil Nadu laid Foundation Stone for Chennai Outer Ring Road Phase-II on 28.08.2014.

Presently 90% of the work have been completed and the balance works are expected to be completed in June 2017.

## **2.15 ENNORE MANALI ROAD IMPROVEMENT PROJECT (EMRIP)**

The Project envisages the improvement of about 30 Km road network in North Chennai with the objective of establishing seamless and efficient road connectivity from Chennai and Ennore Ports to NH network. The roads that are being improved include the Ennore Expressway, Manali Oil Refinery Road, Northern part of Inner Ring Road and Thiruvottiyur-Ponneri-Panchetti Road.

NHAI, the project lead sponsor, has engaged TNRDC as its Managing Associate and subsequently as Supervision Consultant.

This work has been completed in all respects except a small stretch at N.T.O.kuppam and Kasimedu fish drying yard.

Negotiations with Stakeholders is in progress and on resolving the issue the balance work will be completed soon.

## **2.16 NORTHERN PORT ACCESS ROAD (CHENNAI PERIPHERAL ROAD PHASE-I)**

The proposed Northern Port Access Road is an important link to the fast growing Ennore and Kattupalli Ports which handle major cargo movements. The proposed new road will connect the Northern Gate of Ennore Port with Thatchur on NH-5 and with an additional spur road linking Thiruvottiyur – Ponneri - Panchetti (TPP) Road.

This will also cater to the needs of the recently developed Kattupalli Port by L&T.

The total length of this road connecting Ennore Port to Thatchur is about 21.15 km and length of the TPP link Road is 4.35 km. The work is proposed for execution in two phases.

**Phase-I:** Construction of the road from Ennore Port entrance to Neidavoyal village (km 0/0 to 6/2), from Neidavoyal village to TPP Link road (4.35 km) totaling 10.550 Km.

**Phase-II:** Construction of the balance portion of length 14.95 Km from Neidavoyal to Thatchur in NH-5.

The Government in G.O.(Ms).No.33 Highways and Minor Port (HF2) Department, dated 19.02.2016 accorded administrative sanction for Land Acquisition for Northern Port Access Road for a sum of Rs.951 Crore (Rupees Nine Hundred and Fifty One Crore only). Land acquisition work is under process in 15 Villages of Ponneri Taluk in Thiruvallur District. Land is being acquired under Highways Act 2001 and notification under clause 15(2) for 5 villages published and 15(2) enquiry completed for 4 villages.

## **2.17 WIDENING OF EAST COAST ROAD FROM DOUBLE LANE INTO FOUR LANE FROM KM.22/300 TO KM 55/800 INCLUDING IMPROVEMENTS TO 13 CURVED STRETCHES AND 7 JUNCTIONS FROM KM 55/800 TO KM.135/500**

The East Coast Road, from Akkarai (near Chennai) to Koonimedu on the outskirts of Puducherry state limit was initially improved to two lane carriageway with hard shoulders and maintained by TNRDC as a Toll Road from 21<sup>st</sup> March 2002. The growing traffic intensity coupled with the absence of centre median causes increased accidents. The insufficient carriageway has necessitated the widening of this road to four lane divided carriageway. The stretch from Akkarai to Mamallapuram has been taken up as Phase I for widening to 4 lane width including geometric improvements to curves and junctions between Mamallapuram and Puducherry border wherever necessary.

All the works have been completed and put to public use.

## **2.18 RAJIV GANDHI SALAI (IT CORRIDOR)**

### **2.18.1 PHASE I:**

The Rajiv Gandhi Salai (IT Corridor) Phase-I was developed as a dual three lane road from Madhya Kailash to Siruseri for a length of 20.10 Km. The link road connecting Sholinganallur and East Coast Road for a length of 2.15 Km was also included in the project and was widened to a four lane road. This road is being maintained as a toll road.

### **Phase II:**

In view of extending the Phase-I of Rajiv Gandhi Salai (IT Corridor) upto Mahabalipuram, the Government has proposed construction of six lane road from Siruseri to Mahabalipuram for a length of 25 km, including two bypasses (Kelambakkam and Thiruporur) in Phase-II of Rajiv Gandhi Salai, under a viable financial arrangement through public private partnership.

The Government have sanctioned Rs.294.68 Crore for land acquisition works in First Phase. An extent of 88.62 hectares has to be acquired in 13 villages for widening this road to a right of way width of 60 m. So far, possession of 8 villages handed over to the Highways Department and the land acquisition process is in various stages for the remaining 5 villages.

The consultant had submitted the final DPR for Phase II. The estimated Project Cost as per the DPR is Rs. 573.99 Crore. The Government have decided to implement the two bypasses for Kelambakkam and Tiruporur in the first stage.

The total estimated cost for Kelambakkam and Tiruporur bypasses are assessed as Rs.250 Crore. This work is proposed under TNIPP-II and the same is under scrutiny.

## **2.19 MULTI-LEVEL CAR PARKING (MLCP) AT SIRUSERI**

The Hon'ble Chief Minister of Tamil Nadu made an announcement for "the Construction of a Multi Level Car Parking (MLCP) at Siruseri, under Public Private Partnership mode". It will be designed with 9 floors to accommodate 632 cars. The project will be executed under Design, Build, Finance, Operate and Transfer (DBFOT) basis. The estimated cost of this project is Rs.200 Crore.

The concession period is fixed as 25 years including 36 months construction period.

The proposal is submitted to TNIDB for approval since it is Public Private Partnership (PPP) project.

## **2.20 ELEVATED ROAD**

The Hon'ble Chief Minister of Tamil Nadu has made an announcement for the construction of an Elevated Corridor from Taramani to Siruseri under Phase-I and from Siruseri to Mahabalipuram under Phase-II, for a total length of 45 Km. Administrative sanction of Rs.5 Crore has been accorded for the preparation of DPR for the above work.

The DPR has been finalized for the construction of Elevated Road from Taramani to Siruseri. As the Metro Rail is also planned on this corridor, the integration work of both the projects are in progress. Once it is finalized, the construction of the Elevated Road will be taken up most probably during 2018.



## **2.21 ORAGADAM INDUSTRIAL CORRIDOR PROJECT**

Considering the speedy development of Industries in and around Sriperumpudur in Kancheepuram District, it was decided during the year 2005-06 to improve the road infrastructure facilities to Oragadam Industrial Park at an estimated cost of Rs.300 Crore in Phase-I, Rs.86.65 Crore in Phase-II in 2011-12, Rs.115 Crores in Phase-III in 2014-15 and Rs.189.81 Crore in Phase-IV in 2015-16. The schemes Phase-I & Phase-II are under implementation with the revised estimated cost of Rs.547.82 Crore and Rs.108.66 Crore respectively.

### **2.21.1 ORAGADAM INDUSTRIAL CORRIDOR PROJECT (PHASE – I)**

Widening of Singaperumalkoil – Sriperumpudur road (SH-57 part 24 km) and Vandalur – Wallajabad road (SH-48 part 33.40 km) were taken up at a cost of Rs.300 Crores in the year 2005-06 for a total length of 57.40km under this phase. One Grade Separator at the Junction of the above two roads was also taken up in this project.

Out of 57.40 Km length of Oragadam Industrial Corridor Project, 55.10 Km have been completed in Phase-I. In 1.80 km the work is in progress. Balance work in 0.50 Km will be taken up after completion of LA. The work of construction of a Grade Separator at Oragadam junction has been completed and is in public use.

Total expenditure incurred in phase-I is Rs.474.88 Crore which includes the expenditure of Rs.184.62 Crore for Land acquisition.

### **2.21.2 ORAGADAM INDUSTRIAL CORRIDOR PROJECT (PHASE – II)**

In this phase the work of Improvements from four laning to six laning of Singaperumalkoil – Sriperumpudur road from Km

12/6 to 24/6 was taken up during 2011-12 at a cost of Rs.86.50 Crore. Now the Government have accorded revised sanction for Rs.108.66 Crore and the works are in progress.

Out of 12.00 Km, 11.20 Km (excluding Sriperumpudur and Mathur LA stretches) had been completed and the balance 0.80 Km would be taken up after the completion of LA. An expenditure of Rs.96.41 Crore has been incurred so far.

### **2.21.3 ORAGADAM INDUSTRIAL CORRIDOR PROJECT (PHASE – III)**

During the year 2014 -15 under this phase the work of Improvements from four laning to six laning of Singaperumalkoil – Sriperumpudur road km 0/6 – 12/6 (SH-57) was taken up for implementation at a cost of Rs. 115.00 Crore and the works are in progress.

Out of 12 Km, 10.50 Km have been completed. The work is in progress for a length 1.30 Km and in remaining 0.20 Km will be taken up after completion of Land Acquisition. An expenditure of Rs.98.03 Crore has been incurred so far. The phase-III works will be completed during this financial year.

### **2.21.4 ORAGADAM INDUSTRIAL CORRIDOR PROJECT (PHASE – IV)**

The work of Improvements from four laning to six laning of Vandalur to Wallajabad road km 30/400 – 47/000 including Land Acquisition for formation of Padappai Bypass Road upto Oragadam was taken up under this phase during 2015-16. The Government have accorded sanction of Rs.189.81 Crore for this phase. The works are in progress.

Out of 16.60 km, in 13 km work is in progress in various stages. An expenditure of Rs.37.61 Crore has been incurred so far.

The phase-IV works would be completed during the next financial year.

## **2.22 FOUR LANING OF MADURAI RING ROAD**

The work of Widening the Madurai Ring Road from double lane to four lane from Km 0/0 – 27/2, has been taken up for implementation through Tamil Nadu Road Infrastructure Development Corporation under BOT (Toll) scheme at a cost of Rs.213.69 Crore during the year 2015-16.

This four laning proposal consists of widening on both sides so as to have a 9.0 m carriageway on either sides with center median of 1.20 m. Further it involves widening of 2 Railway Over Bridges and one River bridge.

Agreement with the concessionaire has been executed and the work has been commenced.

## **2.23 RESEARCH WORKS UNDER TANII SCHEME**

During the year 2016-17, the following two research schemes were taken up for Rs.283.70 lakhs under Tamil Nadu Innovative Initiation Fund by Highways Research Station.

1. Study on performance of Bituminous pavement laid over stabilized Sub base
2. Accident study for vulnerable road users

An expenditure of Rs. 243.75 Lakhs for the work has been done so far. Balance works are in progress.

For the financial year 2017-18, Rs.255 Lakhs has been sanctioned under Tamil Nadu Innovative Initiation Fund by Highways Research Station for the following three research works .

1. Bridge instrumentation for Structural Health Monitoring System.
2. Study on Improving the sub-grade soil by adding quarry dust.
3. Study on the technology of long pavement with aid of Circular Test Track.

The results of the studies will be helpful in improving the Highways Construction in the State.

## **2.24 DESIGN WORKS COMPLETED**

During 2016-17, 57 works have been completed from Planning, Design and Investigation wing. This includes 6 ROBs / RUBs / LUS, 16 river bridges, one Grade Separator and one Pedestrian subway.

Further, 21 No. of revision / modification works for river bridges, ROBs / RUBs / FOBs, grade separators have been completed. Apart from these, proof checking for construction of 6 river bridges, 2 Grade separators / Fly overs, 2 Foot Over Bridges, 1 Limited Use Subway and Design for construction of retaining wall at km 16/2 of NH207 (Sarjapur-Pagalur-Hosur Road) have been completed.

## **PROGRAMME OF WORK FOR 2017-18**

During the current financial year 2017-18, 62 Design works in Design Divisions and 23 Investigation works in Investigation Divisions are taken up. In Design Divisions, 36 ROBs/ RUBs, 5 High Level Bridges and 3 Limited Use Subways totaling to 44 works are in progress.

Further, 7 No. of revision / modification works for river bridges, ROBs / RUBs, Grade separators are in progress. In addition, proof checking is being carried out for DPR works

prepared by consultants for 5 ROBs / RUBs, 1 River Bridge, 4 Grade Separators and bridges in Chennai Peripheral ring road.

In addition guidance to Field engineers a "Hand book on collection of Field data and Formulation of proposals for Bridges" was released.

## **2.25 TAMIL NADU ROAD SECTOR PROJECT (TNRSP)**

The Tamil Nadu Road Sector Project I was implemented through the World Bank loan assistance at a total project cost of Rs. 2442 Crores from 2004 to 2012. Works taken up under the project include - Up gradation of 725 Km of roads, Enhanced Maintenance Works in 1330 Km of roads, Road Safety, Black Spot Improvement Works and Institutional Development etc. On successful completion of Phase I of the Project, Strategic Option Study II was carried out to arrive at candidate projects for improvement through World Bank and other financial agencies. This study was conducted through M/s. Indian Institute of Technology Madras (IITM), Chennai and as part of this, roads to a length of 2867 Km were analysed and prioritized based on economic return consideration.

The Tamil Nadu Infrastructure Development Board (TNIDB) under the Chairmanship of Hon'ble Chief Minister allotted an amount of Rs. 65 Crore to carry out the Detailed Project Report (DPR) Preparation for 2079 Km of roads selected through economic priority. DPR preparation for the selected roads have been taken up through five Consultants and so far 1980 Km length of roads have been completed. Preparation of Detailed Project Report for the remaining works are in the final stage of completion.

The World Bank appraisal mission for the initial phase of the Project was completed in December 2014. The Loan Agreement and Project Agreement were signed on 28.05.2015. The World Bank has approved to fund the following components and the works are in progress.

- **Upgradation and maintenance through EPC contracts :**

Construction of civil works for widening and upgrading of approximately 427 Km of roads of Core Road Network (CRN) to two-lane with paved shoulders standards through ten (10) EPC contracts including maintenance for a 5-year period after the construction, at a cost of Rs 1705 Crore is in progress.

- **Up gradation and maintenance through Public Private Partnership (PPP) concessions:**

For construction of civil works for widening and upgrading of approximately 146 km of roads of CRN, to four-lane standards and maintenance during the concession period, estimates have been prepared at a cost of Rs.1218.01 Crore, adopting modified annuity mode. After obtaining final no objection from the World Bank, tenders will be invited.

- **Maintenance through Multi-year Output and Performance-based Maintenance Contracts (OPRC)**

Maintenance of approximately 597 Km of CRN upgraded under TNRSP-I (Arcot-Tiruvarur & Nagapattinam-Thoothukudi) for a 5-year period, at a cost of Rs. 220 Crore is in progress.

- **Institutional Capacity Enhancement (ICE)**

The Institutional Capacity Enhancement component is being implemented by the Director General, Highways. For the effective implementation of ICE component, Institutional Capacity Enhancement & road Safety (ICERS) Cell under the Director General, Highways has been established comprising of one Superintending Engineer, a Divisional Engineer, two Assistant Divisional Engineers and two Assistant Engineers.

- **Road Safety (RS)**

Road Safety component is being implemented by the ICERS cell under the control of the Director General, Highways. A Road Safety protocol had been formulated for identification and removal of blackspots through engineering measures, which will be facilitated by the Engineering Committees. The proposal shortlisted by the engineering committees will be recommended to Government for approval.

- **Land acquisition (LA) and Resettlement and Rehabilitation (R& R)**

A Resettlement Policy Frame work (RPF) has been prepared for the project in line with the new " Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR) ACT 2013 " and the World Bank Operational guidelines and the same was approved by the Government. This is being implemented.

## **II. MINOR PORTS WING**

### **3. TAMIL NADU MARITIME BOARD**

The State of Tamil Nadu has a coast line of about 1076 Kms. Along this coastline, there are three Major Ports, namely, Ennore, Chennai and Tuticorin notified under the Major Port Trust Act, 1963 and 24 Non-Major (Minor) Ports notified under the Indian Ports Act 1908. The major ports come under the control of Government of India and the non-major ports come under the control of the State Government.

M/s. Chemplast Sanmar Ltd., import Vinyl Chloride Monomer (VCM) for their P.V.C. factory established at Cuddalore SIPCOT Complex through their Captive Marine Terminal Facility (MTF) located within the port limits of Cuddalore Minor port.

M/s Chennai Petroleum Corporation Ltd., (CPCL) export Petroleum Products from their Narimanam (Nagapattinam District) refinery through their captive open sea jetty located within the port limits of Nagapattinam port. Edible oil import take place at Nagapattinam port regularly.

Small ships are piloted through Pamban Channel. Kanyakumari and Rameswaram ports are used for short trip passenger ferry service.

The Captive Ports are operated by private companies for their own use. The development of entire infrastructure facilities in these captive ports are the responsibility of the companies concerned.

Kattupalli Port (Thiruvallur District), Ennore Minor Port (Thiruvallur District) and Thirukkadaiyur Port (Nagapattinam District) operate either for import / export of cargo



for their captive industry. Kattupalli Port handles commercial cargo also.

### 3.1 COMMODITIES HANDLED IN MINOR PORTS

**TABLE 11: GOVERNMENT PORTS**

Sl. No.	Port	Shipped	Landed
1.	Cuddalore		Vinyl Chloride Monomer
2.	Nagapattinam	Diesel and Naphtha	Edible Oil and General cargo

**Table 12: CAPTIVE PORTS**

Sl. No.	Port	Shipped	Landed
1.	Kattupalli Port	Containers	Shipbuilding and ship repair activities take place @ Kattupalli Port, General cargo
2.	Ennore Minor Port		Liquid Ammonia
3.	Thirukkadaiyur		Naphtha and Natural Gas.

### 3.2 PORT DEVELOPMENTS

#### 3.2.1 GOVERNMENT PORTS

##### 3.2.1.1 CUDDALORE PORT

M/s. Chemplast Sanmar Limited handles Vinyl Chloride Monomer (VCM) required for the Poly Vinyl Chloride (PVC) factory, established at SIPCOT Complex through their Marine Terminal Facility. The cargo handled at this port during the year 2016-2017 is detailed below:-

**TABLE 13: LANDED AND SHIPPED**

<b>Sl. No.</b>	<b>Commodity</b>	<b>No. of Ships</b>	<b>Quantity (in M.T)</b>
	<b>Landed</b>		
<b>1</b>	Vinyl Chloride Monomer	39	2,82,688
<b>2</b>	Miscellaneous	-	8
	<b>Total (A)</b>	<b>39</b>	<b>2,82,696</b>
	<b>Shipped</b>		
<b>1</b>	Petroleum Products	-	76
<b>2</b>	Steel/Machineries	-	206
<b>3</b>	Miscellaneous	-	1,558
	<b>Total (B)</b>		<b>1,840</b>
	<b>Grand Total (A+B)</b>	<b>39</b>	<b>2,84,536</b>

**3.2.1.2 NAGAPATTINAM - CPCL PORTS.**

M/s. Chennai Petroleum Corporation Limited, Chennai handles Crude Oil and petroleum products for their refinery established at Nagapattinam through their Open Sea Trestle jetty. The cargo handled at this port during the year 2016-2017 is detailed below

**Table 14: LANDED AND SHIPPED**

<b>Sl. No.</b>	<b>Commodity</b>	<b>No. of Ships</b>	<b>Quantity (in M.T)</b>
	<b>Landed</b>		
<b>1</b>	Crude Oil	-	1,469
<b>2</b>	Miscellaneous	-	67
<b>3</b>	HSD	-	23,128
<b>4</b>	RBD Palm oil	11	34,500
	<b>Total (A)</b>	<b>11</b>	<b>59,164</b>
	<b>Shipped</b>		
<b>1</b>	Naphtha	18	1,97,536
<b>2</b>	HSD	6	54,367
<b>3</b>	Miscellaneous	-	1,198
	<b>Total (B)</b>	<b>24</b>	<b>2,53,101</b>
	<b>Grand Total (A+B)</b>	<b>35</b>	<b>3,12,265</b>

**3.2.1.3 PAMBAN PORT**

The activity at this port is to pilot small drafted vessels passing through Pamban Channel in the Gulf of Mannar. 205 vessels were piloted at this port during the year 2016-2017.

**3.2.1.4 RAMESWARAM PORT**

A short distance passenger ferry service near Agnitheertham in Rameswaram is operated. 1,76,152 passengers were ferried during the year 2016-2017.

**3.2.1.5 KANNIYAKUMARI PORT**

Ferry service between shore and Vivekananda Rock Memorial/ Ayyan Thiruvalluvar Statue is operated by M/s. Poompuhar Shipping Corporation Limited. Tamil Nadu Maritime Board is supervising the ferry service and derive establishment charges from the Corporation. 20,79,928 passengers were ferried during the year 2016-2017.

### 3.2.1.6 COLACHEL PORT

The Ministry of Shipping, New Delhi has proposed to develop this port as a major container transshipment port and the Government of Tamil Nadu has informed the Ministry of Shipping that the Government of Tamil Nadu will provide necessary facilitation, co-operation and support for implementation of the project.

### 3.2.2 CAPTIVE PORTS

#### 3.2.2.1 KATTUPALLI PORT

M/s L&T Shipbuilding Limited has been handling General and Project Cargo at this port. The cargo handled at this port during the year 2016-2017 is detailed below:-

**Table 15: LANDED AND SHIPPED**

Sl. No.	Commodity	No. of Ships	Quantity (in M.T)
	<b>LANDED</b>		
1	Fabricated Steel Structure	52	3,60,545
2	Machineries	-	1,027
3	HSD	3	239
4	Wheat	2	58,232
	<b>Total (A)</b>	57	<b>4,20,043</b>
	<b>SHIPPED</b>		
1	Machineries	24	20,953
2	Steel	-	36,896
3	Granite	4	15,527
4	HSD	-	258
5	Electrical goods	1	106
	<b>Total (B)</b>	<b>29</b>	<b>73,740</b>
	<b>Grand Total (A+B)</b>	<b>86</b>	<b>4,93,783</b>

**Table 16: LANDED & SHIPPED DETAILS**

LANDED				SHIPPED		
Sl. No.	Containers	No. of Ships	Units	Containers	No. of Ships	Units
1	20Ft Loaded		36585	20Ft Loaded		61851
2	40Ft Loaded		32838	40Ft Loaded		50878
3	20 Ft Empty		2541	20 Ft Empty		31884
4	40 Ft Empty		2190	40 Ft Empty		20596
	<b>Total (C)</b>		<b>74154</b>	<b>Total (D)</b>		<b>165209</b>
	<b>Grand Total (C+D)</b>				<b>334</b>	<b>239363</b>
	<b>LANDED</b>					
	Heavy Motor Vehicle				8	283
	<b>Total (E)</b>				<b>8</b>	<b>283</b>

**(A+B+C+D+E)Total No. of ships - 428**

### 3.2.2.2 ENNORE MINOR PORT

M/s. Coromandel International Ltd., Chennai are importing Liquid Ammonia through Multiple Buoy Mooring System with submarine pipelines, required for their Fertiliser plant in this port. During the year 2016-2017, 7 vessels called at this port and 36,411 M.Ts. of Liquid Ammonia has been handled.

### 3.2.2.3 THIRUKKADAIYUR PORT

M/s. PPN Power Generating Company are handling Naphtha and Natural gas required for their 330 MW gas combined Cycle Power Project. The cargo handled at this port during the year 2016-2017 is detailed below:-

**Table 17: LANDED AND SHIPPED**

Sl. No.	Commodity	No. of Ships	Quantity (in M.T)
	<b>Landed</b>		
<b>1</b>	Naphtha	5	40,369
<b>2</b>	Gas	-	257
<b>3</b>	Crude Oil	-	2,295
	<b>Total</b>	<b>5</b>	<b>42,921</b>

**Table 18: SHIPPED**

Sl. No.	Commodity	Quantity (in MMBTU)
1	Gas	609626.547

**3.2.3 CARGO TRAFFIC**

In the year 2016-17, about 11,69,916 MT of cargo, 2,39,646 Nos. Containers and General cargo including vehicles 283 Nos were handled through 514 vessels in the Minor Ports.

**3.3 TAMIL NADU MARITIME ACADEMY**

The Tamil Nadu Maritime Academy at Thoothukudi is functioning under Tamil Nadu Maritime Board. The Academy has so far conducted 27 batches of pre-sea (GP) rating courses. It is conducting General Purpose Crew training Course of 6 months duration with 40 trainees per batch. The Academy is also conducting STCW-2010 courses namely, 'Personal Survival Techniques', 'Elementary First Aid', 'Personal Safety and Social Responsibility', 'Oil Tanker Familiarization' and 'Augmentation of Fire Prevention and Fire Fighting'. The 28<sup>th</sup> batch of GP rating course has commenced from January 2017.

#### **4. POOMPUHAR SHIPPING CORPORATION LIMITED**

Poompuhar Shipping Corporation Limited (PSC) was formed on 11.04.1974 under the Companies Act, 1956 with the objective of transporting the coal required for the thermal power stations of Tamil Nadu Generation and Distribution Corporation (TANGEDCO). PSC has acquired three specially designed shallow draft geared bulk carriers of 40000 DWT each between August 1985 and January 1987 which are exclusively utilized for this purpose.

The Dead Weight Tonnage (DWT) of the vessels were increased to 45000 M.T during dry docking of the vessels as follows

**TABLE 19: CARRYING CAPACITY OF THE VESSELS**

<b>Name of the vessels</b>	<b>Month and year</b>	<b>Total carrying capacity (MT)</b>
M.V.Tamil Kamaraj	November 2004	45000
M.V.Tamil Periyar	May 2005	45000
M.V.Tamil Anna	November 2005	45000

In addition to its own three ships, PSC also charters ships from other Shipping Companies to transport the coal required by TANGEDCO for the various Thermal Power Stations in Tamil Nadu.

## **4.1 MOVEMENT OF COAL**

### **4.1.1 COAL MOVEMENT FOR TANGEDCO**

The coal required by TANGEDCO is transported from the load ports at Haldia, Paradip and Vizag and discharged at Kamarajar Port, Ennore and V.O. C Port, Tuticorin.

### **4.1.2 COAL MOVEMENT FOR NTECL**

The corporation is also transporting coal through chartered vessels for M/s. NTPC Tamil Nadu Energy Company Ltd., (NTECL), a joint venture company of TANGEDCO and NTPC, from the load ports of Paradip / Dhamra to Kamarajar Port, Ennore for their 3 x 500 MW thermal power stations at Vallur, North Chennai, as per the Memorandum of Understanding.

The details of linkage of coal, arrival of coal at load ports and coal moved by own and chartered vessels for the last three years are as follows:

**Table 20: COAL MOVEMENT**

<b>Year</b>	<b>Target for coal movement</b>	<b>Coal arrived at load ports</b>	<b>Coal moved by chartered vessels</b>	<b>Coal moved by own vessels</b>	<b>Total coal moved</b>	<b>Achievements</b>
	(In lakhs Metric Tonnes)					
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2014-15	230.44	162.68	127.96	33.58	161.54	99.30%
2015-16	262.51	192.63	159.49	32.52	192.01	99.68%
2016-17	272.25	171.86	135.02	34.35	169.37	98.60%



## 4.2 PHYSICAL AND FINANCIAL PERFORMANCE

### 4.2.1 PHYSICAL PERFORMANCE

Physical performance of own and chartered vessels for the period 2015-16 and 2016-17 are as follows:

**Table 21: PHYSICAL PERFORMANCE**

	<b>2015-16</b>	<b>2016-17</b>
<b>OWN VESSELS</b>		
No. of vessels	3	3
No. of voyages	73	77
Quantity of coal moved (in lakhs MT)	32.52	34.35
Average quantity of coal moved per voyage in MT	44554	44610
<b>CHARTERED VESSELS</b>		
No. of Vessels	12	10
No. of voyages	277	219
Quantity of coal moved (in Lakh MT)	159.49	135.02
Average quantity of coal moved per voyage in MT	57576	61652
<b>Total quantity moved (in Lakh MT)</b>	<b>192.01</b>	<b>169.37</b>

### 4.2.2 FINANCIAL PERFORMANCE

The overall financial performances of the corporation during the last three financial years are as follows:

**TABLE 22: FINANCIAL PERFORMANCE OF PSC**

**(Rs.in Crore)**

<b>Year</b>	<b>Turn Over</b>	<b>Profit</b>
2014-2015	628.12	6.89
2015-2016	556.62	6.37
2016-2017	525.60	5.80*

\* provisional

### **4.3 KANNIYAKUMARI FERRY SERVICE**

Besides transporting of coal to M/s TANGEDCO and M/s NTECL, PSC is also operating ferry services from the shore of Kanniyakumari to Vivekananda Rock Memorial and the Ayyan Thiruvalluvar Statue. The physical and financial performances of the ferry service for the last two years are given below:

**Table 23: PHYSICAL & FINANCIAL PERFORMANCE OF FERRY SERVICE**

	<b>2015-2016</b>	<b>2016-2017*</b>
No. of Ferry in service	3	3
No. of Passengers ferried (In lakhs)	19.80	20.65
Fare collection (Rs. in lakhs)	666.16	708.06
Operational Profit (Rs. in lakhs)	184.25	190.60*

\*provisional

**Edappadi K. Palaniswami**

Chief Minister