



National Highways Authority of India
(Ministry of Road Transport & Highways)

PATEL CHOLOPURAM-THANJAVUR HIGHWAY PRIVATE LIMITED

Four laning of Cholopuram - Thanjavur from Km 116.440 to
Km.164.275 section of NH-45C in the state of Tamilnadu under
NHDP Phase-IV on Hybrid Annuity Mode.

INDEPENDENT ENGINEER
M/s. Theme Engineering Services Pvt. Ltd

MONTHLY PROGRESS REPORT
DECEMBER 2019

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Executive Summary

The old National Highway (NH -36) runs through the state of Tamil Nadu. The project road is part of the 168 km long Vikravandi to Thanjavur section of the existing National Highway 36 (NH-36). Recently MORTH has amended the number and Length of the National Highways. The old NH 12 in the state of Tamil Nadu has become the part of the New National Highway 45C. It links Chennai with Thanjavur and is 418 km long.

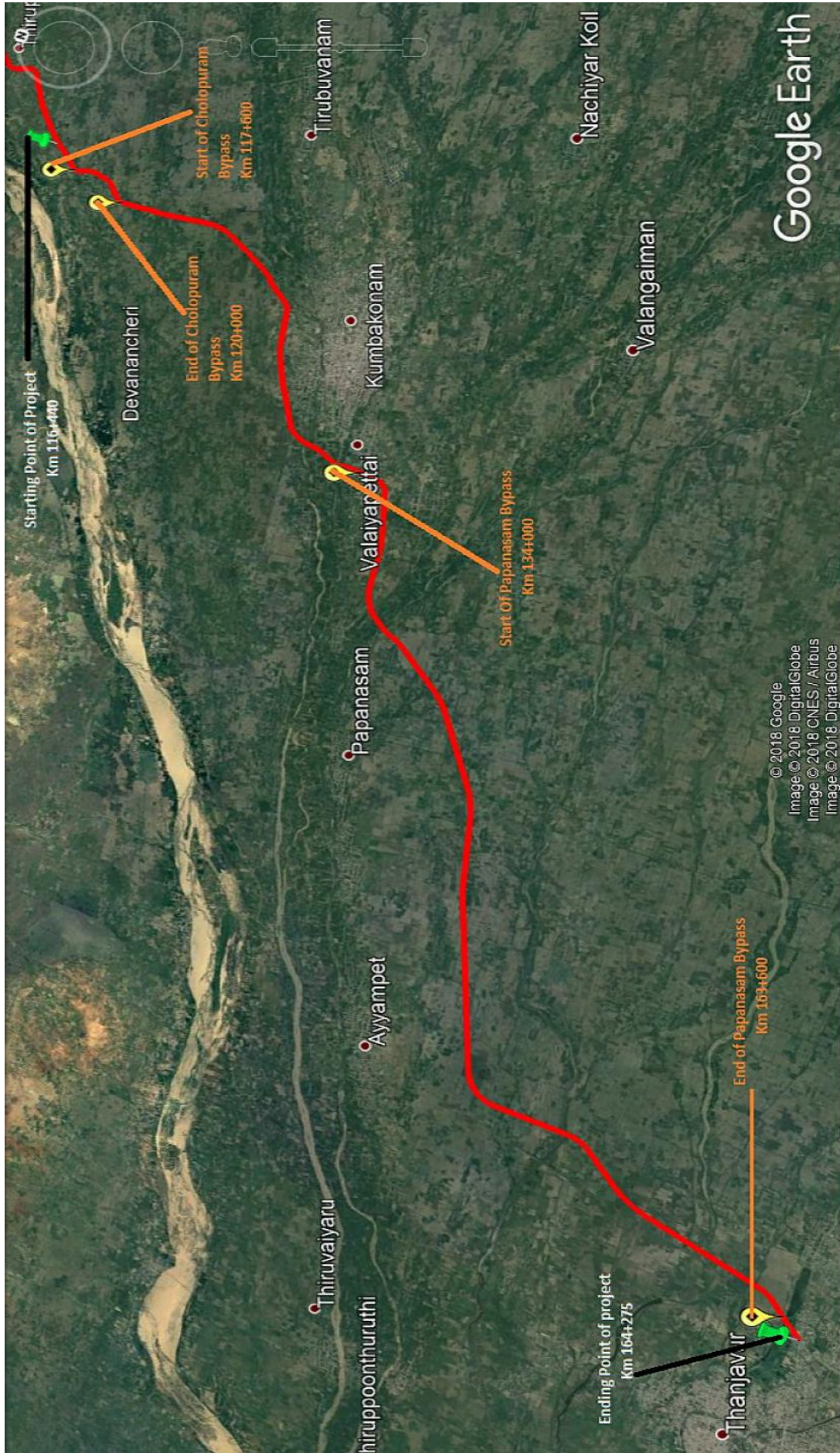
The Cholopuram to Thanjavur section of NH-45C is an important link to connect Metropolitan city of Chennai to religious and tourist places of Kumbakonam, Thanjavur, Tiruchirappalli. The project is also expected to provide improved connectivity to other religious places & other major cities like Thanjavur, Rameswaram, Madurai, Tiruchirappalli, etc.

Project Synopsis

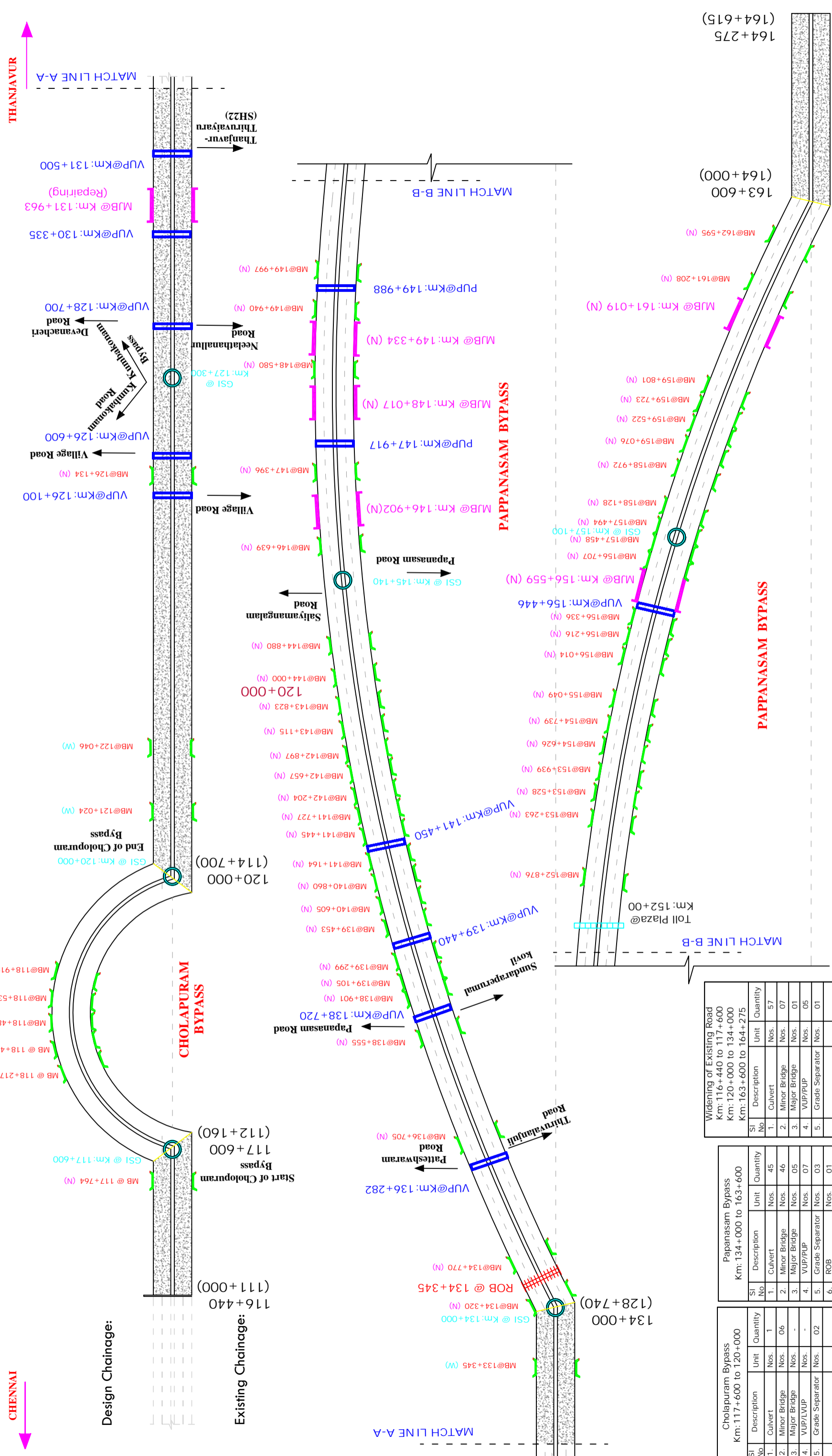
The Government of India had entrusted to the National Highway Authority of India (NHAI) the development, maintenance and management of National Highway No. 45C including the section from km 116.440 to Km 164.275 (approx. 47.835 Km). The Authority had resolved to augment for four Laning of Cholopuram - Thanjavur from Km 116.440 to Km 164.275 section of NH - 45C in the State of Tamilnadu under NHDP Phase-IV on "Hybrid Annuity" basis.

The scope of work will broadly include rehabilitation, upgradation and widening of the existing carriageway to four - lane standards with construction of new pavement, rehabilitation of existing pavement, construction and/or rehabilitation of major and minor bridges, culverts, road intersections, interchanges, drains etc. Including those prescribed in the Concession Agreement and its Schedule and the operation and maintenance itself. The map of project road is given in Figures below. The details of habitations are given in table - 01.

Figure 1: Project Location Map



STRIP PLAN - CHOLAPURAM TO THANJAVUR HIGHWAY PROJECT OF NH45 C



CHENNAI

THANJAVUR

Design Chainage:

Existing Chainage:

SI No	Description	Unit	Quantity
1.	Widening of Existing Road Km: 116+440 to 117+600	Culvert	Nos. 57
2.	Km: 120+000 to 134+000	Minor Bridge	Nos. 07
3.	Km: 163+600 to 164+275	Major Bridge	Nos. 01
4.	VUP/LVUP	VUP/PJP	Nos. 05
5.	Grade Separator	Grade Separator	Nos. 01

SI No	Description	Unit	Quantity
1.	Pappanasam Bypass Km: 134+000 to 163+600	Culvert	Nos. 45
2.	Minor Bridge	Minor Bridge	Nos. 46
3.	Major Bridge	Major Bridge	Nos. 01
4.	VUP/LVUP	VUP/PJP	Nos. 07
5.	Grade Separator	Grade Separator	Nos. 03
6.	ROB	ROB	Nos. 01

SI No	Description	Unit	Quantity
1.	Cholapuram Bypass Km: 117+600 to 120+000	Culvert	Nos. 1
2.	Minor Bridge	Minor Bridge	Nos. 06
3.	Major Bridge	Major Bridge	Nos. 01
4.	VUP/LVUP	VUP/PJP	Nos. -
5.	Grade Separator	Grade Separator	Nos. 02

LEGEND:

- Major Bridge(MJB)
- Minor Bridge(MB)
- Grade Separated Structure
- ROB
- Vehicle Under Pass (LVUP/VUP)
- Toll Plaza
- Reconstruction of Existing Road
- Bypass/Newconstruction

Salient Features of Project:

SI No	Description	Unit	Scope
1.	Total Length of Project	Km	47.835
2.	Length of Widening Portion	Km	15.335
3.	Length of Bypass	Km	32.000
4.	Length of service/Ship Road	Km	27.100
5.	Culverts	Nos.	74
6.	Slab Culvert	Nos.	29
7.	Minor Bridge	Nos.	59
8.	Major Bridge	Nos.	06
9.	VUP/PJP	Nos.	12
10.	Grade Separated Structure	Nos.	06
11.	Minor Intersection	Nos.	22
12.	Major Intersection	Nos.	20
13.	Bus Bays and Shelters	Nos.	05
14.	Toll Plaza	Nos.	01
15.	ROB	Nos.	01

Drawing Title
Strip Plan - Cholapuram to Thanjavur Highway Project

Date: 30-09-2018
Project No. PCTHP/NHAI/TN/001

Table- 01: Details of Project Alignments

Sr. no.	Design Chainage (Km)		Length (Km)	TCS Type	Remarks
	From	To			
1	116.440	117.200	0.760	Type-B (Fig 2.6 of the manual) without service road	Concentric widening
2	117.200	117.900	0.700	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
3	117.900	119.600	1.700	Type-A-3 (Fig 2.4 of the manual)	Bypass
4	119.600	120.420	0.820	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
5	120.420	122.000	1.580	Type-B (Fig 2.6 of the manual) without service road	Concentric widening
6	122.000	125.300	3.300	Type-A-3 (Fig 2.4 of the manual)	Eccentric widening
7	125.300	125.700	0.400	Type-B (Fig 2.6 of the manual) without service road	Concentric widening
8	125.700	127.700	2.000	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
9	127.700	128.300	0.600	Type-B (Fig 2.6 of the manual) without service road	Concentric widening
10	128.300	129.100	0.800	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
11	129.100	129.970	0.870	Type-B (Fig 2.6 of the manual) without service road	Concentric widening
12	129.970	130.700	0.730	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
13	130.700	131.050	0.350	Type-B (Fig 2.6 of the manual) without service road	Concentric widening
14	131.050	131.850	0.800	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
15	131.850	132.100	0.250	Type-A-3 (Fig 2.4 of the manual)	Eccentric widening
16	132.100	133.580	1.480	Type-B (Fig 2.6 of the manual) without service road	Concentric widening
17	133.580	134.800	1.220	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
18	134.800	136.000	1.200	Type-A-3 (Fig 2.4 of the manual)	Bypass
19	136.000	136.600	0.600	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
20	136.600	138.500	1.900	Type-A-3 (Fig 2.4 of the manual)	Bypass
21	138.500	139.750	1.250	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
22	139.750	141.100	1.350	Type-A-3 (Fig 2.4 of the manual)	Bypass

Sr. no.	Design Chainage (Km)		Length (Km)	TCS Type	Remarks
	From	To			
23	141.100	141.800	0.700	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
24	141.800	144.450	2.650	Type-A-3 (Fig 2.4 of the manual)	Bypass
25	144.450	145.580	1.130	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
26	145.580	147.600	2.020	Type-A-3 (Fig 2.4 of the manual)	Bypass
27	147.600	148.320	0.720	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
28	148.320	149.720	1.400	Type-A-3 (Fig 2.4 of the manual)	Bypass
29	149.720	150.450	0.730	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
30	150.450	152.700	2.250	Type-A-3 (Fig 2.4 of the manual)	Bypass
31	152.700	153.300	0.600	Toll Plaza	
32	153.300	156.000	2.700	Type-A-3 (Fig 2.4 of the manual)	Bypass
33	156.000	157.350	1.350	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
34	157.350	164.275	6.925	Type-A-3 (Fig 2.4 of the manual)	Bypass
		Total Length	47.835		

1. Background and Project Details

1.1. Project Overview

Name of Work	Four Laning of Cholopuram-Thanjavur from km. 116.440 to Km.164.275 of NH-45C under NHDP-IV on Hybrid Annuity Mode Basis
Name of Employer	National Highways Authority of India (NHAI) G-5 & 6, Sector-10, Dwarka, New Delhi -110075
Name of Concessionaire	Patel Cholopuram-Thanjavur Highway Pvt Ltd, Patel House, Beside Prakruti Resorts, Chanani Road, Vadodara. Gujarat- 391740 Tel: +91-265 277 6678 Fax: +91-265 277 7878
Independent Engineer	M/s. Theme Engineering Services Pvt. Ltd, 8, Thomaiyammal Nagar, 6 th Street, R.S College (Post), Thanjavur-613005.
EPC Contractor	M/s. Patel Infrastructure Limited, Patel House, Beside Prakruti Resorts, Chanani Road,Vadodara Gujarat- 391740, Tel: +91-265 277 6678 Fax: +91-265 277 7878
Design Consultant	CTL Global Services Pvt. Ltd. 101, IST Floor, Krishna Chambers, HAL, Airport Road, Bangalore-560017
Senior Lender	Punjab National Bank, Large Corporate Branch, Neelkamal Building, Opp. Sales India, Ashram Road, Ahmedabad - 380009
Lenders Independent Engineers	Sharul Techno-Financial Consultancy Services Pvt. Ltd., 403, Aspire Tower 5, Amanora Park Town, Hadapsar, Pune - 411028.
Length of Road (Design Length)	47.835 Kms.
Total Bid Cost	Rs. 1345.60 Crores (as per concession agreement)
Date of Concession Agreement	October 12, 2017
Concession Period	17 Years (Construction Period 2 Years from Appointed date, Operation period 15 years from COD)
Appointed Date	06.09.2018
Construction Period	02 years from Appointed date
Completion Date	04.09.2020
Maintenance Period	15 years from COD

1.2. Salient Project Features

Besides the construction of new carriageways and widening and strengthening of existing carriageways, the following table summaries the major elements of the project construction:

4 - Lane Divided Carriage Way	47.835 Kms
Service Road/ Slip Road	27.100 Kms
Major Bridge	06 Nos.
Minor Bridge	56 Nos.
Grade Separate Intersection	06 Nos.
Vehicular Underpass	10 Nos.
Pedestrian Underpass	02 Nos.
Rail-road Bridges	01 Nos
Box Culverts	74 Nos.
Slab Culverts	29 Nos.
Major Intersections	20 Nos.
Minor Intersections	22 Nos.
Bus Bays	05 Nos.
Rest Area	01 Nos
Toll Plaza	01 Nos.

1.3. Contractual Project Milestones

Following is a listing of the Key Project Milestones:

Mile Stone	Description	Target Date
Mile Stone-I	Concessionaire shall expended not less than 20 % of the Total capital cost and shall have commenced construction of the project and achieved 20% of physical progress on 214 th day from the Appointed Date.	07 th April 2019
Mile Stone-II	Concessionaire shall expended not less than 35% of the Total capital cost and shall have commenced construction of the project and achieved 35% of physical progress on 334 th day from the Appointed Date	05 th August 2019
Mile Stone-III	Concessionaire shall expended not less than 75 % of the Total capital cost and shall have commenced construction of the project and achieved 75% of physical progress on 584 th day from the Appointed Date	11 th April 2020
Scheduled Completion	Concessionaire shall have completed Project on 730 th day from the Appointed Date	04 th September 2020

1.4. Payment milestone during Construction Period

Payment Milestone	Eligibility Criteria	Payment Amount (Rs.)
Milestone-I	On Achievement of 10% of Physical Progress	107.65 Crs.
Milestone-II	On Achievement of 30% of Physical Progress	107.65 Crs.
Milestone-III	On Achievement of 50% of Physical Progress	107.65 Crs.
Milestone-IV	On Achievement of 75% of Physical Progress	107.65 Crs.
Milestone-V	On Achievement of 90% of Physical Progress	107.65 Crs.

1.5. Permits & Approvals

Sr. No.	Details	Authority	Current Status	Remarks
1	Extraction of Boulders from Quarries	Dist. Mining Officer	Obtained	PIL (EPC Contractor) have engaged Agate Infra Engineering for supply of boulders that is having a valid license for extraction of boulders and other required permission for the quarry at Kalpadi Village, Perambalur District.
2	Installation of Crusher	Village Panchayat Head	Obtained	
3	-----D O-----	Pollution Control Board	Obtained	
4	Use of Explosives	Dist. Collector	Obtained	
5	Labour License	Labour Commissioner	Obtained	
6	Environmental Clearance		NA	
7	Trees Cutting Permission	Forest department through NHAI	Obtained	Work in Progress (Permission for removal of Teak wood trees is awaited)
8	Electric Poles Shifting	Tamil Nadu Electricity Board	Obtained	Work in Progress
9	Water Pipes Shifting	Tamil Nadu Water Supply and Drainage Board	Obtained	Work in Progress
10	Drawing Water from river/ reservoir	-	NA	-

2. Right of Way Status

2.1. Land Acquisition

As per the Schedule – A of Concession Agreement, the Proposed Right of Way (ROW) is of 45 & 60 meters as per table below.

Table 2.1-1: Details of proposed ROW as per Schedule-A				
	Design Chainage (Km)	Design Length (Km)	Width (m)	Remarks
(i) Full Right of Way (full width)				
Stretch	116.440 to 117.600	1.160	30	Within 15 (Fifteen) days from the date of Agreement.
Stretch	117.600 to 120.000	2.400	60	
Stretch	120.000 to 134.000	14.000	30	
Stretch	134.000 to 164.275	30.280	60	
Total Length		47.835		

Balance Right of way (width)				
	Design Chainage (Km)	Design Length (Km)	Width (m)	Remarks
Stretch	116.440 to 117.600	1.160	30	Within 90 (Ninety) days of the Appointed date
Stretch	120.000 to 120.340	0.34	20	
Stretch	124.700 to 126.100	1.40	20	
Stretch	126.700 to 127.655	0.95	20	
Stretch	130.600 to 134.000	3.40	20	
Total Length		7.250		

Besides this, the Authority has to acquire additional land at Toll plaza location, Bus bays, turning radius at Major junctions.

Table 2.1-2: Status of Land Acquisition as per Site Condition				
Sl. No.	Description	Unit	Present Status	Remarks
A)	Total Length of the Project Highway	Km	47.835	
i)	Use of Existing Road Portion	Km	15.835	
ii)	Proposed Bypass / Realignment portion	Km	32.000	
B)	Hindered Length			
i)	LA Issues	Km	8.190	
ii)	Existing Buildings	Km	2.515	
iii)	Pending for Disbursement of Payment	Km	4.815	
iv)	Electrical Lines	Km	4.675	
v)	Rural Water Supply lines	Km	11.200	
C)	Net Hindered Length (both Side)	Km	17.700	
D)	Total Project Length (both Side)	Km	47.835	
E)	% Hindered Length	%	37.00%	

There has been increase in the Hindered length due to Diversion not possible at RE Wall stretches as Land not yet made available. The details of land acquisition status and available hindrances are produced on a strip chart under section O4.

The status of compensation disbursed is as below: -

Sr. No.	Name of the District	Total No. of Land cases	Amount paid (in Nos.)	Balance to be Paid (in Nos.)	Remarks
1	Thanjavur	1467	1039	428	
	Total in Nos.	1467	1039	428	
	Total in %		70.82%	29.17%	

Sr. No.	Name of the District	Total No. of structures	Amount paid (in Nos)	Balance to be Paid (in Nos)	Remarks
1	Thanjavur	813	653	154	
	Total in Nos	813	653	154	
	Total in %		80.31%	18.94%	

The details of Chainages under hindrance due to such balance compensation issues to their land owners, structure payment issues, standing crops, water pipe lines etc. are as below –

1) Details of Stretches Under Hindrance (LHS):-

Sr. No.	From	To	Length	Effective Hindered Length	Side	Remarks
1	116+400	117+230	830	830	LHS	Land not yet handed over compensation yet to be paid
2	117+230	117+870	640	640	LHS	RE Wall Location (i)BHS -Land not yet handed over- (ii)Compensation not yet paid for the structures, (iii)Compensation for 3 Nos of temples on LHS Side are yet to be paid, (iv)NOC for Existing pond at Km 117+742 to Km 117+814 . EB & Water Pipeline
3	119+620	120+390	770	770	LHS	RE Wall Location (i)Compensation not yet Paid for the Lands & Existing Buildings, (ii)NOC pending for existing pond on 120+200 to 120+242 to be cleared, (iii)Temples (Km 120+180)Compensation to be paid
4	120+390	120+800	410	410	LHS	(i)Compensation for Existing Buildings on LHS Side are yet to be paid, (ii) Existing pond on LHS 120+642 to 120+734 to be cleared

5	121+220	121+550	330	330	LHS	Existing Crops on LHS Side
6	121+550	121+700	150	150	LHS	Shops & Temple (Km 121+600) Compensations are to be paid, Water Pipeline
7	121+850	121+860	10	10	LHS	Water Pipeline
8	122+080	122+120	40	40	LHS	Water Pipeline
9	124+550	124+650	100	100	LHS	Trees with fencing on LHS to be removed, Water Pipeline
10	124+700	125+400	700	700	LHS	Religious Structures
11	125+400	125+500	100	100	LHS	Compensation pending for Huts & RCC & tached roof buildings on poramboke land are pending, EB & Water Pipeline
12	125+580	125+730	150	150	LHS	Existing Buidings compenstion not yet paid , EB & Water Pipeline
13	125+730	127+670	1940	1940	LHS	RE Wall Location (i) Compensation pending from Km125+730 to Km 125+950 for the existing buildings, (ii)NOC pending for Existing pond at Km 126+ 090 to Km 126 +163 & Km 126+ 546 to Km 126 +596 & Km 126+675 to Km 126 +772, (iii) Water Pipeline (iv) Religious Structures
14	128+320	129+060	740	740	LHS	RE Wall Location (i) Km 128+400 Temple to be removed, (ii) Km 128+700 to 128 +900 VUP Location Existing Structures, (iii) Petrolbunk Compensation are yet to be paid, (iv) Temple (Km 128+400) compenstion not yet paid, EB & Water Pipeline (v) Religious Structures
15	129+500	129+570	70	70	LHS	Religious Structures
16	129+570	129+600	30	30	LHS	EB Poles, Water Pipeline

17	129+700	129+800	100	100	LHS	Compensation pending for Land & Structures
18	129+990	130+670	680	270	LHS	RE Wall Location (i) Km 130+200 to 130+ 400 Moopakovil village Compensation pending for Existing Buildings, Poramboke houses , (ii)Existing Pond Km 130 +621 to Km 130+690, Religious structures
19	131+070	131+830	760	760	LHS	RE Wall Location, Compensation not yet paid for Land & Structures, EB & Water Pipeline
20	131+830	133+610	1780	1780	LHS	Comensation Not yet paid for Land & Structures, Temple(Km 133+180) compension not yet paid
21	133+610	134+770	1160	1160	LHS	RE Wall Location- (i) Comensation Not yet paid for Land & Structures, Existing irrigation Sluices at Km 134+770 to be relocated, (ii) EB & Water Pipeline
22	136+010	136+560	550	550	LHS	RE Wall Location
23	138+200	138+530	330	330	LHS	Land on dispute - Court Issue (Mr.Dharmalingam & Mr.Shanmugam)
24	138+530	139+720	1190	1190	LHS	RE Wall Location Km 138+750 to Km 138+850 Land on dispute -Court Case- Mr.Dhakshinamoorthy, Mr.Rajini , Mr.Nagaraj) Payment Issue of Land Owner Mrs.Valarmathi Kailasam
25	141+110	141+770	660		LHS	RE Wall Location
26	141+900	142+400	500	500	LHS	Payment Issue of Land owners Mr.Pakir Mohammed
27	144+470	145+530	1060	50	LHS	RE Wall Location Km 144+800 to Km 144+850 teak trees to be removed
28	146+600	147+400	800	800	LHS	Km 146+650 to Km 146+800, teak trees to be removed Obstruction of Existing irrigation canal needs to be relocated.
29	147+400	147+450	50	50	LHS	Teak Wood trees to be removed, Obstruction of Existing irrigation canal needs to be relocated.
30	147+450	148+270	820	650	LHS	RE Wall Location Km 148+000 to Km 148+ 100 Teak wood trees to be removed, Obstruction of Existing irrigation canal needs to be relocated.
31	149+330	149+340	10	10	LHS	Teak Wood trees to be removed
32	149+740	150+430	690		LHS	RE Wall Location
33	150+600	150+900	300	300	LHS	Existing irrigation Sluices at Km 150+800 to be relocated, Teak Wood trees to be removed

34	152+800	153+100	300	300	LHS	Existing Irrigation Sluices at Km 152+900 to be relocated,
35	154+500	154+900	400	400	LHS	Vaiyacheri Village land on Dispute, Obstruction of Existing irrigation canal needs to be relocated.
36	156+030	157+360	1330	300	LHS	RE Wall Location Km 156+200 to Km 156+500 Teak wood trees to be removed
37	158+500	158+700	200	200	LHS	Hindrances of High Tension Transmission Towers.
38	160+200	160+400	200	200	LHS	Compensation Disbursement balance - Not allowed to work by owner
39	161+000	162+000	1000	1000	LHS	Land on dispute - Court Issue Ms Tamilselvi
Total Hindered Length LHS (Km.)				17910		

2) Details of Stretches Under Hindrance (RHS):-

Table 2.1-5 B - Details of Stretches Under Hindrance (RHS)

Sr. No.	From	To	Length	Effective Hindered Length	Side	Remarks
1	116+400	117+230	830	830	RHS	Land not yet handed over compensation yet to be paid
2	117+230	117+870	640	640	RHS	RE Wall Location (i) BHS -Land not yet handed over- Compensation not paid for the structures, (ii) Church Compensation to be Paid. (iii) NOC for Existing pond at Km 117+742 to Km 117+814 . (iv)EB & Water Pipeline
3	119+620	120+390	770	770	RHS	RE Wall Location (i) Compensation not yet Paid for the Land & Existing Buildings, (ii) Temple (Km120+200) Compensation to be paid, (iii) Water Pipeline
4	120+390	120+800	410	410	RHS	(i) Existing Buildings on LHS Side and compensation not yet paid from for land owners (ii) Existing pond on RHS 120+642 to 120+732 to be cleared, Water Pipeline
5	121+400	121+450	50	50	RHS	LA Issue- House under Arbitration, Water Pipeline
6	121+550	121+700	150	150	RHS	Water Pipeline

7	121+850	121+860	10	10	RHS	Temple-Religious Statue on RHS side and compensation to be done, Water Pipeline
8	122+080	122+120	40	40	RHS	Vana kalamman temple (Km 122+080) on RHS side with banyan tree compensation to be paid, Water Pipeline
9	124+550	124+650	100	100	RHS	Toyoto Showroom yard on RHS Side with fencing compensation to be paid, Water Pipeline
10	124+700	125+400	700	700	RHS	Religious Structures
11	125+400	125+500	100	100	RHS	Water Pipeline
12	125+580	125+730	150	150	RHS	Existing Buidings Temple(Km 125+670) compenstion not yet paid , Water Pipeline
13	125+730	127+670	1940	1940	RHS	RE Wall Location (i) 125+730 to 125+950 Existing building to dismantled, (ii) Compensation to be paid (Including Toyoto showroom), (iii) 127+300 Anuj Tiles showroom to be removed, Temple (Km 126+870) compenstion not yet paid , (iii) NOC pending for Existing pond at Km 126+ 546 to Km 126 +596 & Km 126+675 to Km 126 +772, Water Pipeline (iv) Religious Structures
14	128+320	129+060	740	740	RHS	RE Wall Location EB & Water Pipeline Religious Structures
15	129+500	129+570	70	70	RHS	Religious Structures
16	129+570	129+600	30	30	RHS	Existing Temple at Km 129+570 Compensation to be paid , EB Poles, Water Pipeline
17	129+700	129+800	100	100	RHS	Compensation pending for Land & Structures

18	129+990	130+670	680	200	RHS	RE Wall Location 130+200 to 130+ 400 Moopakovil Existing Buildings Compensation to be paid, Religious structures
19	131+070	131+830	760	760	RHS	RE Wall Location Existing Buildings & Shops Compensation not paid, EB & Water Pipeline
20	131+830	133+610	1780	1780	RHS	Comensation Not yet paid for Land & Structures, EB & Water Pipeline
21	133+610	134+770	1160	1160	RHS	RE Wall Location- (i)Comensation Not yet paid for Land & Structures, (ii) NOC pending for Existing pond at Km 133+756 to Km 133+814 & Km 134+320 to 134+340, EB & Water Pipeline
22	136+010	136+560	550	550	RHS	RE Wall Location
23	138+200	138+530	330	330	RHS	Land on dispute - Court Issue (Mr.Dharmalingam & Mr.Shanmugam)
24	138+530	139+720	1190	1190	RHS	RE Wall Location Km 138+750 to Km 138+850 Land on dispute -Court Case- Mr.Dhakshinamoorthy, Mr.Rajini , Mr.Nagaraj) Payment Issue of Land Owner Mrs.Valarmathi Kailasam
25	141+110	141+770	660		RHS	RE Wall Location
26	141+900	142+400	500	500	RHS	Payment Issue of Land owners Mr.Pakir Mohammed
27	144+470	145+530	1060	200	RHS	RE Wall Location Km 144+800 to Km 144+850, Km 146+650 to Km 146+800, teak trees to be removed
28	146+600	147+400	800	800	RHS	Km 146+650 to Km 146+800, teak trees to be removed Obstruction of Existing irrigation canal needs to be relocated.
29	147+400	147+450	50	50	RHS	Teak Wood trees to be removed
30	147+630	148+270	640	100	RHS	RE Wall Location Km 148+000 to Km 148+ 100 Teak wood trees to be removed
31	149+330	149+340	10	10	RHS	Teak Wood trees to be removed
32	149+740	150+430	690		RHS	RE Wall Location
33	150+600	150+900	300	300	RHS	Existing irrigation Sluices at Km 150+800 to be relocated, Teak Wood trees to be removed
34	152+900	152+930	30	30	RHS	

35	154+500	154+800	300	300	RHS	Vaiyacheri Village land on Dispute
36	156+030	157+360	1330	300	RHS	RE Wall Location Km 156+200 to Km 156+500 Teak wood trees to be removed
37	158+500	158+700	200	200	RHS	Hindrances of High Tension Transmission Towers.
38	160+200	160+400	200	200	RHS	Compensation Disbursement balance - Not allowed to work by owner
39	161+000	162+000	1000	1000	RHS	Land on dispute - Court Issue Ms Tamilselvi
Total Hindered Length RHS (Km.)				17160		

2.2. Removal of Religious Structures

The following structures coming within the ROW are to be demolished

Sl. No.	Name of the District	Total No. of structures	Removed as on Date (in Nos.)	Balance (in Nos.)
1	Thanjavur	13	0	13

Note: Pending for disbursement of payment to the Religious structures.

2.3. Shifting of Utilities and Electrical HT/LT Lines

To proceed with the project construction, several utilities are required to be shifted under the supervision of the respective authorities. These include a water supply line, hand pumps, overhead water tanks, besides Electrical lines, as shown in the table below.

Sl. No	Name of the District	Chainages			Total Number of Estimates	Remarks
		From	To	Length in Km		
1	Thanjavur	116+440	164+275	47.835	32	Work is in Progress

Sl. No	Name of the District	Chainages			Number of Estimates	Present Status	Remarks
		From	To	Length in Km			
1	Thanjavur	116+440	164+275	47.835	16	Work in Progress	

Estimates for shifting of the above Electric lines have been prepared. The estimated cost is approximately Rs. 10.50 crores.

Sl. No.	Authority	Description	Unit	Total Length/ Nos.	Work done	Balance	Remarks
1	BDO & EE,TWAD	Water Supply Pipe Line	Kms.	35.750	6.501	29.249	Work in Progress
2	BDO of Concern Union	Hand Pump/Pump Room with Bore well	Nos.	16	0	16	
3	BDO of Concern Union	Over Head Tank	Nos.	2	2	0	Completed
4	TNEB	Electrical Lines	Kms.	19.215	14.540	4.675	Work in Progress

Estimates have been done for the shifting of the water supply pipeline & related items mentioned above. The estimated cost is approximately Rs. 6.8 crores.

2.4. Tree felling

Sl. No.	Name of the District	Chainages			Effected Length in Kms	Total No. of Trees	Felled/ Removed as on Date	Balance no. of Trees	Remarks
		From	To	Length in Km					
1	Thanjavur	116+440	164+275	47.837	15.310	1461	1448	13	Work in Progress
Total				47.835					

Teak Wood trees are not included in the above table since permissions for removal of teak wood trees is not yet obtained.

Table 2.1.6 - Hindrance Photographs (31.12.2019)

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	30	Houses (2 nos)	116+440	116+470	Houses (6 nos), Mango farm, Cocunut farm	30		
	60	Houses (6 nos), Culvert & Trees	116+520	116+580				
			116+580	116+600	Canal crossing, culvert & Trees	20		
	50	Houses (4 nos), Electrical Pole & Trees	116+600	116+650	Canal crossing & Trees	50		
	50	Houses (2 nos), Electrical Pole & Trees	116+650	116+700	Bore Well, Pump set, Electrical Pole & Trees	50		
	50	Trees	116+700	116+750	Houses (7 nos), Electrical Pole & Trees	50		
	50	Houses (6 nos), Electrical Pole & Trees	116+750	116+800	Houses (4 nos) & Cocunut Trees	50		
	50	Vinayagar Temple, Houses (7 nos) & Electrical Pole (3 nos)	116+800	116+850	Houses (5 nos), & Cocunut Trees	50		
	50	Houses (7 nos), Electrical Poles & Trees	116+850	116+900	Houses (8 nos) & Cocunut Trees	50		
	50	Houses (5 nos), Culvert, Electrical Poles & Cocunut Trees	116+900	116+950	Houses (6 nos) & Cocunut Trees	50		
	30	Houses (2 nos), Electrical Pole (3 nos) & Trees	116+950	117+980	Cocunut Trees & Nala	30		
	20	Houses (2 nos), Electrical Poles & Trees	116+980	117+000	Cocunut Trees, Fencing & Electrical Pole	20		
	50	Houses (7 nos), Electrical Pole (4 nos) & Trees	117+000	117+050	Church & Shops (3 nos)	50		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	50	Houses (5 nos), Electrical Poles & Trees	117+050	117+100	Houses (7 nos), Electrical Poles & Trees	50		
	50	Houses (8 nos), Electrical Poles (3 nos) & Trees	117+150	117+200	Houses (6 nos), Ration Shop, Electrical Poles, Trees & Pond	50		
	50	Temple, Houses (2 nos) & Coconut Trees	117+200	117+250	Houses (9 nos), Electrical Poles & Trees	50		
	50	Houses (3 nos), Electrical Poles & Trees	117+250	117+300	Houses (2 nos), Electrical Poles & Trees	50		
	50	Houses (3 nos), Electrical Poles & Trees	117+300	117+350	Houses (3 nos), Electrical Poles & Trees	50		
	50	Houses (4 nos), Electrical Poles & Trees	117+350	117+400	Houses (4 nos), Electrical Poles & Trees	50		
	50	Houses (5 nos), Electrical Poles & Trees	117+400	117+450	Houses (6 nos), Electrical Poles & Coconut Trees	50		
	50	Houses (4 nos), Bus shelter, Water Tank, Electrical Poles & Trees	117+450	117+500	Houses (5 nos), Electrical Poles & Trees	50		
	50	Houses (4 nos), Electrical Poles & Trees	117+500	117+550	Trees & Electrical Poles	50		
	50	Trees & Electrical Poles	117+550	117+600	Houses (4 nos), Electrical Poles & Trees	50		
	50	Electrical Poles	117+600	117+650	Electrical Poles	50		
	20	House (1 no.) & Coconut Trees	120+000					
	50	House (3 nos), Teak wood Trees	120+050	120+100	Bus shelter, House (3 nos), Electrical Pole (3 nos) & Teak wood Trees	50		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	50	Cocunut farm, Pond & Trees	120+200	120+250	Temple, Houses (2 nos) & Electrical Pole	50		
	30	Houses (2 nos), Electrical Pole, Culvert & Cocunut farm	120+250	120+280	Houses (3 nos), Electrical Poles & Cocunut farm	30		
	20	Houses (1 no.), Electrical Pole, Culvert, Nala & Cocunut farm	120+280	120+300	Houses (2 nos), Electrical Poles & Cocunut farm	20		
	50	Houses (4 nos), Electrical Poles & Cocunut farm	120+300	120+350	Houses (3 nos), Electrical Poles, Culvert & Trees	50		
	50	Shops, Electrical Pole & Cocunut farm	120+350	120+400	House, Electrical Pole & Teak wood Trees	50		
	50	Houses (2 nos), Electrical Poles & Cocunut Trees	120+400	120+450	Houses (4 nos), Petrol Pump, Electrical Poles (2 nos) & Cocunut Trees	50		
	50	Houses (2 nos), Shops, Cocunut & Teak wood Trees	120+450	120+500	Houses (3 nos), Electrical Poles & Trees	50		
	50	Houses (8 nos), Electrical Poles, Cocunut & Teak wood Trees	120+500	120+550	Houses (8 nos), Electrical Poles, Cocunut & Teak wood Trees	50		
	50	Houses (4 nos) & Cocunut farm	120+550	120+600	House (1 no.), Electrical Pole & Cocunut Trees	50		
	50	Houses (6 nos), Fencing, Electrical Pole, Cocunut & Teak wood Trees	120+600	120+650	Houses (5 nos), Fencing, Electrical Pole, Cocunut, Mango Trees & Fish Pond	50		
	30	Houses, Cocunut & Teak wood Trees	120+650	120+680	Pond & Trees	30		
	40	Shops, Cocunut & Teak wood Trees	120+680	120+720	Next crop planted & Fencing	40		
	80	Next crop planted, Electrical Poles & Trees	120+720	120+800	House (1 no.), Transformer, Electrical Poles (4 nos) & Trees	80		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	50	Houses (3 nos), Culvert & Trees	120+800	120+850	Houses (2 nos), Electrical Poles (3 nos) & Trees	50		
	30	Houses (3 nos), Electrical Poles & Trees	120+900	121+930	Houses (1 no.), Fencing, Electrical Pole (4 nos) & Trees	30		
	20	Preparing for next crop, Electrical Pole & Trees	121+930	121+950	Houses (2 nos), Electrical Pole (2 nos) & Trees	20		
	50	Electrical Pole & Trees	121+950	121+000	Houses (2 nos), Electrical Pole (2 nos) & Trees	50		
	10	Electrical Pole & Trees	121+050		Transformer, Electrical Poles (3 nos) & Trees	20		
	-	-	121+100		Electrical Pole	10		
	50	Cocunut Trees, Teak wood Trees & Jungle	121+150		Electrical Pole & Trees	20		
	50	Bus shelter, Houses (3 nos), Electrical Poles (2 nos) & Trees	121+200	121+250	Bus shelter, Trees & Jungle	50		
	50	House (1 no.), Electrical Pole & Trees	121+250	121+300	House (3 no.), Electrical Poles (5 nos) & Trees	50		
	50	Electrical Pole, Trees & Jungle	121+300	121+350	House (2 nos), Electrical Pole & Trees	50		
	80	Electrical Pole, Trees & Jungle	121+350	121+430	Houses (9 nos), Electrical Poles (3 nos) & Trees	80		
	70	Electrical Poles, Trees & Jungle	121+430	121+500	Electrical Poles, Trees & Jungle	70		
	50	House (1 no.), Electrical Poles, Trees & Jungle	121+500	121+550	Electrical Poles, Culvert, Trees & Jungle	50		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	70	Temple, Houses (3 nos) & Coconut Trees	121+550	121+620	Houses (2 nos), Electrical Pole, Mango Trees 7 Jungle	70		
	60	Shops, Houses, Electrical Poles, Coconut Trees, Jungle & Culvert	121+620	121+680	Coconut Trees (12 nos), Trees & Jungle	60		
	40	Pump set, Structure & Coconut Trees (8 nos)	121+680	121+720	Electrical Pole & Trees	40		
	20	Trees & Jungle	121+720	121+800	Electrical Pole	10		
	50	Transformer, Electrical Poles & Trees	121+800	121+850	Church Gate, Boundary Wall	50		
	15	Transformer, Electrical Poles (4 nos)	121+930		Electrical Poles (2 nos)	15		
	20	Electrical Poles, existing bridge structure & Trees	122+020		Electrical Pole & Trees	10		
		River crossing & Trees	122+030		River crossing & Trees			
	-	-	122+080		Temple, Electrical Pole, Canal & Banyan Trees	25		
	20	Electrical Pole & Trees	122+130		Trees (3 nos)	20		
	15	Electrical Poles, Canal, Banana farm & Teak wood Trees	122+200		Pump set & Electrical Poles	15		
	80	Banana farm, Canal, Teak wood Trees, Transformer & Electrical Poles	122+220	122+300	Teak wood Trees, Electrical Pole & Banana farm	80		
	100	Electrical Poles, Teak wood Trees & Canal	122+300	122+400	HP Petrol Bunk & Electrical Poles	100		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
			122+900		Electrical Pole & Jungle	10		
			122+900	123+000	Electrical Pole, Trees & Jungle	100		
			123+000	123+150	Electrical Poles (3 nos)	150		
	70	Canal, Teak wood Trees & Jungle	123+230	123+300	Transformer, Electrical Poles (3 nos) & Trees	70		
	50	Electrical Pole & line crossing	123+300	123+350	Electrical Poles	50		
			123+900		Electrical Poles	15		
	100	Electrical Pole & Trees	125+700	125+800	Compound Wall	100		
	50	Houses (3 nos), Electrical Poles & Trees	125+800	125+850	Houses (4 nos), Electrical Poles & Trees	50		
	50	Houses (4 nos), Electrical Poles & Trees	125+850	125+900	Houses (2 nos), Electrical Poles & Trees	50		
	50	Govt building, House (1 no), Electrical Poles & Trees	125+900	125+950	Houses (3 nos), Electrical Poles & Trees	50		
	100	House (1 no), Water tap & Trees	125+950	126+050	Houses (3 nos) & Trees	100		
	50	Building, Hut (2 nos) & Trees (21 nos)	126+050	126+100	Temple, Houses (5 nos), Electrical Pole (4 nos) & Trees (13 nos)	50		
	100	Pond & Trees	126+400	126+500	Pond & Trees	100		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	100	Bus shelter, Fencing, Houses (4 nos), Electrical Pole & Trees (7 nos)	126+700	126+800	Rice Mill, Houses (4 nos), Hut, Electrical Pole & Trees (13 nos)	100		
	100	Houses (4 nos), Hand pump, Transformer & Electrical Poles	126+800	126+900	Temple, Houses (4 nos), Electrical Pole (2 nos) & Trees (13 nos)	100		
	100	Bus shelter, Pump house, Electrical Pole (4 nos) & Trees (13 nos)	126+900	127+000	Electrical Pole (4 nos), Telephone Pole, Sign board & Trees (14 nos)	100		
	100	Building (4 nos), Electrical Pole (4 nos), Sign boards (4 nos) & Trees (14 nos)	127+100	127+200	Pump house, Electrical Poles (4 nos), Transformer, Sign boards & Trees (10 nos)	100		
	100	Building (2 nos), Electrical Pole (9 nos), Sign boards (4 nos) & Trees (10 nos)	127+200	127+300	Arch, Compound Wall, Electrical Pole (5 nos) & Trees (3 nos)	100		
	30	Commercial building (3 nos), Electrical Pole (6 nos) & Line crossing & Trees (3 nos)	127+650	127+800	Building Compound Wall, Electrical Pole (6 nos) & Trees (2nos)	30		
			128+000	128+120	Pump house, Bore well, Transformer & Electrical Pole (3 nos)	30		
	10	Electrical Pole (1 no.)	128+120	128+200	Electrical Pole (4 nos)	40		
			128+200	128+300	Electrical Pole (2 nos)	20		
	25	Small Temple with Gate	128+300	128+350	Electrical Pole (2 nos)	20		
			128+350	128+400	Electrical Pole (2 nos)	20		
	15	Electrical Pole	128+400	128+500	Electrical Poles (3 nos)	30		
			128+500	128+550	Electrical Poles (2 nos)	20		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	-	-	128+550	128+600	Electrical Poles	10		
			128+600	128+700	Shops (6 nos) & Houses (2 nos), Electrical Poles (5 nos)	40		
	60	Fencing, Trees & Jungle	128+700	128+800	-	-		
	40	Indian Oil Petrol Bunk, Small Temple, steel pole & Trees	128+800	128+900	-	-		
	50	Shops (9 nos), Transformer & Electrical Poles (5 nos)	128+950	129+000	Electrical Pole & Trees	20		
	30	Electrical Pole (3 nos), Street light & Steel arch	129+120	129+200	Under construction house, Trees & Jungle	40		
	30	Electrical Pole	129+200	129+300				
	50	Wooden work factory, Electrical Pole (4 nos)	129+700	129+750	Electrical Pole	50		
	50	Building, Electrical Pole, Trees (4 nos)	129+900	129+950	Compound Wall, Electrical Pole & Trees	50		
			129+950	130+000	Transformer, Electrical Poles (2 nos)	20		
	20	Electrical Pole	130+000	130+120	Electrical Poles (5 nos), Arch	20		
	60	Electrical Pole (3 nos)	130+120	130+200	Houses (3 nos), Electrical Poles (4 nos) & Transformer	60		
	50	Houses (2 nos), Electrical Pole	130+200	130+250	Houses (6 nos), Electrical Poles (2 nos)	50		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	50	Shops, Electrical Pole	130+300	130+350	Compound Wall, Electrical Pole (3 nos)	50		
	50	Houses (3 nos), Electrical Poles (2 nos)	130+350	130+400	Houses (6 nos), Electrical Poles (2 nos)	50		
	50	Houses (7 nos), Electrical Poles (2 nos)	130+400	130+450	Houses (3 nos)	50		
			130+550	130+600	Fencing Pole preparation shop, Trees & Jungle	20		
			130+600	130+700	Shops (6 nos), Electrical Poles (2 nos) & Trees	40		
	30	House with Gate (1 no), Electrical Pole (3 nos),	130+700	130+780	Trees, Electrical Poles & Culvert structure	30		
	10	Electrical Pole & Line crossing	130+780	130+800	Electrical Pole & Line crossing	10		
			130+800	130+900	Electrical Pole	40		
	20	Electrical Pole (3 nos),	130+900	131+000	Arch, Existing culvert, Electrical Pole,	20		
	20	Electrical Pole	131+000	131+100	Building (4 nos), Shop & Electrical Pole	40		
	20	Electrical Pole	131+100	131+200	Temple (1 no.)	25		
			131+200	131+300	Electrical Pole	20		
	30	Carpenter Shop, Electrical Pole (4 nos) & Jungle	131+300	131+400	Under construction building, Electrical Pole, Pump set, Trees & Jungle	30		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	40	Electrical Poles (2 nos)	131+400	131+500	Electrical Pole,	35		
			131+500	131+600	Marble showroom, Electrical Poles & Line crossing (2 nos), Trees & Jungle	40		
	20	Electrical Poles (2 nos)	131+600	131+700	Electrical Pole	20		
	40	High mast light, Sign boards, Houses (4 nos), Electrical Poles (3 nos) & Trees (8 nos)	131+700	131+800	Advertisement board, Fencing, Houses (4 nos), Electrical Poles (2 nos) & Trees	40		
	40	Cocunut farm	132+000	132+100	Trees & Jungle	40		
	60	Banana farm & Trees (10 nos)	132+100	132+200	Trees & Jungle	40		
	50	Houses (3 nos), Shop (1 no. & Electrical Pole	132+200	132+250	Electrical Pole, Trees & Jungle	50		
	60	House, Teak wood Trees, Banana & Cocunut Trees	132+300	132+400	Teak wood Trees, Banana & Cocunut Trees, Electrical Pole & Jungle	60		
	30	Teak wood Trees & Trees (6 nos)	132+500	132+600	Compound wall, Trees (6 nos) & Jungle	30		
	30	Bore well, Pump set, Electrical Poles (9 nos) & Line crossing & Trees	132+600	132+730	Under construction House (1 no.), Electrical Poles (4 nos) & Line crossing & Trees	30		
	50	Electrical Pole	132+800	132+900	Cocunut farm, Electrical Poles (2 nos), Teak wood Trees & Jungle	50		
	100	Banana farm, Pump set & Trees	132+900	133+000	Pump set, Banana farm, Electrical Poles (2 nos) & Line crossing & Cocunut Trees	100		
	100	Motor garage shop, Electrical Pole (2 nos) & Banana farm	133+000	133+100	Cocunut Trees, Existing culvert & Jungle	100		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	45	Temple, Hand pump, 1 no. of buildings, Electrical Poles (2 nos) & Trees	133+100	133+150	Electrical Poles (2 nos) & line crossing & Trees	20		
	50	High mast light, 3 no. of buildings, Electrical Poles (4 nos) & Trees	133+150	133+200	Houses (3 nos), Street lighting pole, Electrical Poles (2 nos) & Trees	50		
	50	Cocunut farm, Pump set & Trees	133+350	133+400	Trees & Jungle	50		
	50	Compound wall, Electrical Pole & Trees (7 nos)	133+400	133+500	Trees, Existing culvert & Jungle	30		
	60	Hotels (2 nos), Electrical Poles (2 nos) & Trees	133+500	133+600				
	30	Houses (2 nos), Electrical Pole (1 no.), School compound wall fencing	133+600	133+700	Compound wall, Transformer, Electrical Poles (2 nos), Arch & Trees (10 nos)	60		
	40	Compound Wall, Electrical Pole, Trees & Jungle	133+700	133+750	House (1 no.), Pond, Compound wall, building & Electrical Poles & Trees	40		
	30	House, Electrical Pole, Trees & Jungle	133+750	133+800	House, Electrical Poles & Trees	30		
	50	Houses (3 nos), Trees & Jungle	133+800	133+900	House (1 no.), Electrical Poles (3 nos), Trees & Jungle	40		
	30	Sign boards, Houses (2 nos), Building, Electrical Poles (2 nos),	133+900	133+950	Shops, Lighting Poles (2 nos) & Electrical Poles (2 nos)	30		
	30	High mast light, Sign boards & Electrical Poles	133+950	134+000	High mast light, Sign boards & Electrical Poles	30		
	30	House & Trees	134+080		House & Trees	30		Encroachment
	-	Railway Crossing	134+380		Railway Crossing	-		ROB @ CH: 134+345

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	20	Regulator & Trees	134+710		-	-	-	water regulator sluice to be relocated
	40	HT Tower	135+400				-	
	10	Electrical Pole & Line Crossing	136+100		Electrical Pole & Line Crossing	10		
	10	Road crossing, Electrical pole & Trees	136+300		Pattaswaram to Swamimalai Road	10		VUP @ CH: 136+282
	10	Electrical Pole & Line crossing	137+040		Electrical Pole & Line crossing	10		
	20	Road crossing & Electrical pole	137+100		House & Trees	20		
	-	-	137+150		Electrical Pole	10		
	70	Standing crop, Transformer, Electrical Pole & Trees	137+550	137+620	Standing crop, Road crossing (Pattaswaram to Sundaraperumalkoil) & Trees	70		
	10	Electrical Pole & Line Crossing	137+850		Electrical Pole & Line Crossing	10		
	10	Electrical Pole	137+900		Electrical Pole	10		
	150	Mango farm & Teak wood Trees	138+300	138+450	Pump set, Mango farm & Teak wood Trees	150		
	100	Pump set, Banana farm, Coconut farm & Canal crossing	138+450	138+550	Pump set, Banana farm, Coconut farm & Canal crossing	100		
	50	Fish pond	138+620	138+670				

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	10	Electrical Pole & Line Crossing & Trees	138+680		Electrical Pole & Line Crossing & Trees	10		
	20	Road Crossing, Trees & EB Pole	138+730					
	20	Cocunut farm, Electrical Pole & Trees	138+730	138+750	Cocunut farm, Electrical Pole & Trees	20		
	50	Houses (7 nos), Trees & Electrical Poles	138+750	138+800	Cocunut farm, Banana farm & Teak wood Trees	50		
	20	Electrical Poles & Line Crossing, Road crossing & Trees	139+450		Electrical Poles & Line Crossing, Road crossing & Trees	20		
	-	-	139+460		Sump, Pump house & Bore Well	30		
	20	Small Temple	140+900		EB Pole & Line Crossing	20		
	15	Road crossing & Trees	141+102		Nallur to Avuru Road	15		
	-	Electrical Pole & Line Crossing & Trees	141+330		Electrical Pole & Line Crossing & Trees	-		
	20	Bore well, Pump house & Trees	142+260		EB Pole & Line Crossing	10		
	20	Bore Well	142+500		Electrical Pole & Line Crossing	10		
	80	Bamboo, Mango trees & Sugarcane farm	142+570	142+650	Bamboo, Mango trees & Sugarcane farm	80		
	20	High Tension Tower	142+850		-	-		
















Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	-	-	143+100		High Tension Tower	20		
	20	EB Pole	143+600		EB Pole	20		
			143+850		Electrical Pole & Line Crossing & Trees	15		
	50	Teak wood trees	144+750		Teak wood trees	50		
	20	Temple	145+500		-	-		
	-	-	145+520		Pump Set & Electrical Pole	20		
	10	Electrical Pole & Line Crossing	146+000		Electrical Pole & Line Crossing	10		
	20	Pump set	146+050		Electrical Pole & Line Crossing	10		
	10	Electrical Pole & Line Crossing	146+070					
	20	Pump set & Trees	146+130		Electrical Pole & Line Crossing	10		
	10	Electrical Pole	146+200		-	-		
	20	Electrical Pole	146+300		Electrical Pole	20		
	20	Electrical Pole & Line Crossing	146+700	146+720	Electrical Pole & Line Crossing & Trees	20		



















Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	1500	Existing Canal	146+600	148+100	Existing Canal	1500		
	10	Nala Crossing, Trees & Electrical Pole	146+780		Nala Crossing, Trees & Electrical Pole	10		
	20	Pump set, River Crossing, Trees & Electrical Pole	146+830		River Crossing, Trees & Electrical Pole	20		
	20	Pump set	146+900		Trees & EB Pole	20		
	30	Nala Crossing & Trees	146+900		Nala Crossing & Trees	30		
	15	Pump set	147+050		-	-		
			147+100		High Tension Tower	40		
	20	High Tension Tower	147+330		-	-		
	20	Bore well & Pump house	147+380		-	-		
	30	Nala Crossing & Trees	147+370	147+400	House	30		
	-	-	147+410	147+450	Houses, Trees & Electrical Line	40		
	20	Teak wood trees	147+520		Teak wood trees	20		
	30	Electrical Pole & Line Crossing	147+880		Electrical Pole & Line Crossing	30		





































Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	20	Road Crossing, Trees & EB Pole	147+900		Road Crossing, Trees & EB Pole	20		
			147+900	148+020	EB Pole	50		
	250	Pump set & EB Pole	148+300	148+550	Pump set & EB Pole	250		
	10	EB Pole & trees (5 nos)	149+100		Pump set & EB Pole	20		
	10	EB Electrical Pole	149+150		EB Electrical Pole	10		
	20	Pump set	149+900		Pump set & Electrical Pole	20		
	20	Pump house	150+610		EB Pole & Line crossing & Trees (2 nos)	10		
	70	River Crossing, Trees & EB Pole	150+780		Regulator & trees	70		
		Existing Sluice	150+800		Existing Sluice			
			151+500	151+630	Electrical Pole	50		
	20	Pump set & Electrical Pole & line crossing	151+650		Electrical Pole	20		
	-	Road Crossing, Trees & EB Pole	152+350		Sulamangalam to Palasakudi Road existing culvert	-		
		Existing Sluice	152+900		Existing Sluice			

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	20	Canal Crossing & Trees	152+900		Canal Crossing & Trees	20		
	10	EB Pole & Trees	153+500		EB Pole & Trees	10		
	15	Electrical Tower	153+720		Electrical Pole & Trees	15		
	40	Houses (6 nos), Electrical pole & Trees	154+590	154+630	Houses (6 nos), Electrical pole & Trees	40		
	120	Bamboo trees & trees & Canal crossing	154+630	154+750	Bamboo trees & trees & Canal crossing	120		
	10	Electrical Pole	154+650		Electrical Pole & Trees	15		
	90	Houses (4 nos) & Trees	154+680	154+770	Bamboo trees	90		
	50	Electrical poles	155+950	155+080	Electrical poles	50		
	10	Pump set & Electrical poles	155+760	155+770	Road crossing	10		
	20	Water tank & Trees	155+780					
	10	Canal crossing & Electrical Pole & Line crossing	156+000		Canal crossing & Electrical Pole & Line crossing	10		
	20	Electrical Pole	156+420	156+440	Teak wood trees	20		
	10	Road Crossing, Trees & EB Pole	156+470	156+480	Kondavattanthidal & Perunakkanallur	10		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	70	Road Crossing, Trees & EB Pole	156+480	156+550	Kondavattanhidal & Perunakkanallur	70		
	60	River crossing & Trees	156+700		River crossing & Trees	60		
	50	Electrical pole	157+150		Electrical pole	50		
	20	Canal crossing, Jungle & Trees	159+510		Canal crossing, Jungle & Trees	10		
	150	Agricultural Land (Court case)	161+050	161+200	Agricultural Land (Court case)	150		
			162+150	162+250	House, Trees (5 nos), Bore well & Pump Set	100		
	-	-	163+620	163+650	Houses (2 nos), Electrical pole, Road Crossing & Trees	30		
	400	River crossing, Jungle & Trees	163+700	164+100	River crossing, Jungle & Trees	400		
	25	Shops (6 nos)	164+250	164+275	Trees (7 nos)	25		

3.1. Pre-Construction Activities

Detailed Design & Drawings

The Plan and Profile, as well as the Pavement Designs for the entire 47.835 km project length has been completed and reviewed by the Independent Engineer (IE). Construction Methodology, QA & QC procedures submitted to the IE has been reviewed and accepted.

Table 3.1-1: Status of Design and Drawings-Highway

Sl. No.	Description	Unit	Total Scope as per Sch.-B	Design/ Drawings submitted	Design/ Drawings Approved
1	Pavement Design	Km	47.835	47.835	47.835
2	Plan & Profile	Km	47.835	47.835	47.835
3	Typical Cross Sections	Type	5	5	-
4	Major Intersections	No	20	-	-
5	Minor Intersections	No	22	-	-
6	Toll Plaza (a) Toll Plaza Layout, (b) Toll Building, (c) Toll Booth, (d) Toll Canopy, (e) Toll Tunnel,	No	05	03	-
7	Rest Area	No	01	-	
8	Bus Bay	No	05	-	
9	Service Roads	No	27.10	27.10	23.680

Table 3.1-2 : Status of Design and Drawings –Structures

Sr. No	Description	Unit	Total Scope as per Sch. B	Design/ Drawings Submitted	Design/ Drawings Approved
1	Major Bridges	No	06	04	01
2	Minor Bridges	No	56	56	44
3	Grade Separated Intersection	No	06	06	06
4	VUP/PUP	No	12	12	12
5	Box /Slab Culvert	No	103	99	99
6	ROB	No	01	01	GAD approved

4. Physical Progress of Work

4.1. Physical Progress of Work

The following table summarize the quantum of work achieved towards the construction of the various elements of the highway.

The Progress of the Major Works carried out at the Site in the Month of December 2019 is as follows.

CUMMULATIVE STATEMENT**For Main Carriageway**

Sr. No.	Description	Total Length of Highway Excluding Toll Plaza (in. Km.)	Progress up to Previous Month (in Km)	Progress during this Month (In Km.)	Cumulative Progress Achieved up to this Month (In Km)	In Progress (In Km.)	Balance Length to be Completed	Cumulative % of Progress Achieved
1	Clearing and Grubbing							
	LHS	46.925	34.13	0	34.13	0	12.795	72.73%
	RHS	46.925	32.68	0	32.68	0	14.245	69.64%
2	Embankment							
	LHS	46.925	4.91	0	4.91	15.55	42.020	10.45%
	RHS	46.925	4.34	0	4.44	15.03	42.485	9.46%
3	Sub grade							
	LHS	46.925	1.92	0	1.92	0	45.005	4.09%
	RHS	46.925	2.08	0	2.08	0	44.845	4.43%
4	GSB/ Cement Treated Sub-Base							
	LHS	46.925	0	0.89	0.89	0.08	46.925	1.89%
	RHS	46.925	0	0	0	0.11	46.925	0.00%
5	Wet Mix Macadam							
	LHS	46.925	0	0	0	0	46.925	0.00%
	RHS	46.925	0	0	0	0	46.925	0.00%
6	Dense Bitumen Macadam							
	LHS	46.925	0	0	0	0	46.925	0.00%
	RHS	46.925	0	0	0	0	46.925	0.00%
7	Bituminous Concrete							
	LHS	46.925	0	0	0	0	46.925	0.00%
	RHS	46.925	0	0	0	0	46.925	0.00%

For Service Road

Sr. No.	Description	Total Length of Service Road (Km.)	Progress up to Previous Month (in Km)	Progress during this Month (In Km.)	Cumulative Progress Achieved up to this Month (In Km)	In Progress (In Km.)	Balance Length to be Completed	Cumulative % of Progress Achieved
1	Embankment	27.1	0	0	0	0	27.1	0.00%
2	Sub grade	27.1	0	0	0	0	27.1	0.00%
3	GSB/ Cement Treated Base	27.1	0	0	0	0	27.1	0.00%
4	Wet Mix Macadam	27.1	0	0	0	0	27.1	0.00%
5	Dense Bitumen Macadam	27.1	0	0	0	0	27.1	0.00%
6	Bituminous Concrete	27.1	0	0	0	0	27.1	0.00%

Structure Work

Sr. No.	Type of Structure	Total No. of Structures	No. of Structures		
			Completed	In Progress	Balance
1	Culvert	103	37	25	41
2	Light Vehicular Underpass	2	0.5	1.5	0
3	Vehicular Underpass	10	0	9	1
4	Minor Bridges	56	16.5	20.5	19
5	Major Bridge	5	0	1	4
6	Flyover	6	0	6	0
7	ROB	1	0	1	0

Physical Progress of Project up to December 2019 as per approved Schedule G:

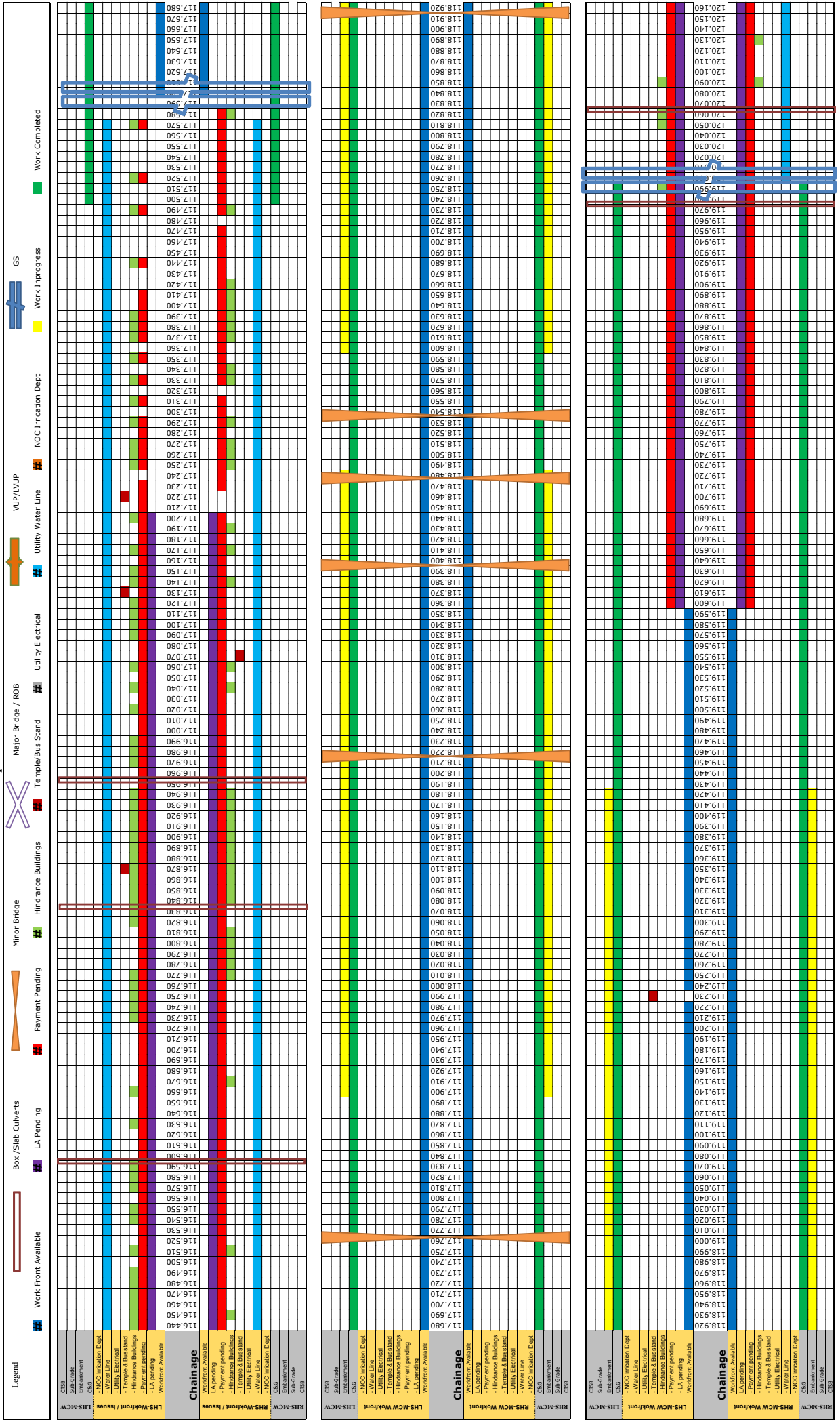
Item	Stage for Payment	Unit	Qty.	Weightage in % to Contract Price	Completed up to December'19	% Physical Progress
Road works including culverts, minor bridges, underpasses, overpasses, approaches to ROB/RUB/ Major Bridges/ Structures (but excluding service roads)	A- Widening and strengthening of existing road					
	(1) Earthwork up to top of the sub-grade	Km.	28.70	4.26%	2.00	0.297%
	(2) Granular work (sub-base, base, shoulders)	Km.				
	(a) GSB/ Cement Treated Base	Km.	28.70	1.40%		0.000%
	(b) WMM/ Cement Treated Base	Km.	28.70	2.10%		0.000%
	(3) Shoulders	Km.	7.10	0.03%		0.000%
	(4) Bituminous work					
	(a) DBM	Km.	28.70	1.61%		0.000%
	(b) BC	Km.	28.70	1.48%		0.000%
	(5) Rigid Pavement					
	Concrete Work	Km.				
	(6) Widening and Repair of Culverts	Nos.	33	0.57%	11.70	0.203%
	(7) Widening and Repair of Minor Bridges	Nos.	3	0.38%		0.000%
	B- New realignment/bypass					
	(1) Earthwork up to top of the sub-grade	Km.	63.33	16.30%	2.00	0.515%
	(2) Granular work (sub-base, base, shoulders)	Km.				
	(a) GSB/ Cement Treated Base	Km.	62.13	3.39%	0.89	0.049%
	(b) WMM/ Cement Treated Base	Km.	62.13	3.83%		0.000%
	(3) Shoulders	Km.	48.19	0.10%		0.000%
	(4) Bituminous work					
	(a) DBM	Km.	62.13	3.39%		0.000%
	(b) BC	Km.	62.13	3.83%		0.000%
	(5) Rigid Pavement					
	Concrete Work	Km				
	C- New culverts, minor bridges, underpasses, overpasses on existing					

	road, realignments, bypasses:					
Road works including culverts, minor bridges, underpasses, overpasses, approaches to ROB/RUB/ Major Bridges/ Structures (but excluding service roads)	(1) Culverts	Nos.	70	5.95%	22.60	1.919%
	(2) Minor bridges					
	(i) Foundation	Nos.	170	6.71%	64.00	2.527%
	(ii) Substructure	Nos.	270	3.50%	87.50	1.133%
	(iii) Superstructure (including crash barrier etc. complete)	Nos.	142	3.78%	29.00	0.771%
	(3) Cattle/Pedestrian underpasses					
	(i) Foundation	Nos.	4	0.15%	4.00	0.150%
	(ii) Substructure	Nos.	8	0.08%	4.00	0.042%
	(iii) Superstructure (including crash barrier etc. complete)	Nos.	4	0.06%	1.00	0.014%
	(4) Pedestrian overpasses					
	(i) Foundation	Nos.				
	(ii) Substructure	Nos.				
	(iii) Superstructure (including crash barrier etc. complete)	Nos.				
	(5) Grade separated structures					
	(a) Underpass (10 VUP)					
	(i) Foundation	Nos.	40	2.50%	30.00	1.874%
	(ii) Substructure	Nos.	40	0.91%	5.00	0.114%
	(iii) Superstructure (including crash barrier etc. complete)	Nos.	20	1.14%		0.000%
	(c) Vehicular Overpass (VOP)					
	(i) Foundation	Nos.				
	(ii) Substructure	Nos.				
	(iii) Superstructure (including crash barrier etc. complete)	Nos.				
	(c) Flyover					
	(i) Foundation	Nos.	24	2.25%	20.00	1.875%
(ii) Substructure	Nos.	24	0.82%		0.114%	
(iii) Superstructure (including crash barrier etc. complete)	Nos.	12	1.02%		0.000%	
Major Bridge works and ROB/RUB	Major Bridge works and ROB/RUB					
	A- Widening and Repair of Minor Bridges					
	(1) Foundations					
	(a) Open Foundation	Nos.				
	(b) Pile foundation/ well foundation	Nos.				
	(2) Substructure	Nos.				
	(3) Superstructure (including crash barrier etc. complete)	Nos.				
	C- New Major Bridges					
	(1) Foundations					
	(a) Open Foundation	Nos.				
	(b) Pile foundation/ well foundation	Nos.	76	2.17%		0.000%
	(2) Substructure	Nos.	76	1.23%		0.000%
	(3) Superstructure (including crash barrier etc. complete)	Nos.	62	1.49%		0.000%
	D- New rail-road bridges					
(a) ROB						
(i) Foundation	Nos.	8	1.50%		0.000%	

	(ii) Substructure	Nos.	8	0.80%		0.000%
	(iii) Superstructure (including crash barrier etc. complete)	Nos.	6	1.49%		0.000%
Structures (elevated sections, reinforced earth)	Structures (elevated sections, reinforced earth)					
	(1) Foundation	Nos.				
	(2) Substructure	Nos.				
	(3) Superstructure (including crash barrier etc. complete)	Nos.				
	(4) Reinforced earth Wall (includes Approaches of ROB, Underpasses, Overpasses, Flyover etc)		179469	7.52%	33,362.01	1.398%
Other Works	Other Works					
	(i) Service roads/ Slip Roads	Km	27.10	3.86%		0.000%
	(ii) Toll Plaza	Nos.	1	1.38%		0.000%
	(iii) Road side drains	Km	12.08	1.64%		0.000%
	(iv) Road signs, markings, km stones, safety devices,					
	(a) Road signs, markings, km stones, ...	Km	95.67	2.02%		0.000%
	(b) Concrete Crash Barrier/ W-Beam Crash Barrier in Road work	Km				
	(i) Concrete Crash Barrier	Km	25.42	2.01%		0.000%
	(ii) W-Beam Crash Barrier	Km	32.75	0.70%		0.000%
	(v) Project facilities					
	(a) Bus Bays	No.	20	0.01%		0.000%
	(b) Truck Lay-byes	No.				
	(b) Rest areas	No.	2	0.22%		0.000%
	(vi) Repairs to bridges/structures	Nos.	4	0.01%		
	(vii) Road side plantation	Km	22.54	0.61%		0.000%
	(viii) Protection works					
	(a) Boulder pitchin on slopes	Km	32.75	0.19%		0.000%
	(b) Toe/Retaining wall	Km				
	(x) Miscellaneous	Ls.	100%	0.150%		0.000%
		Total			100.00%	

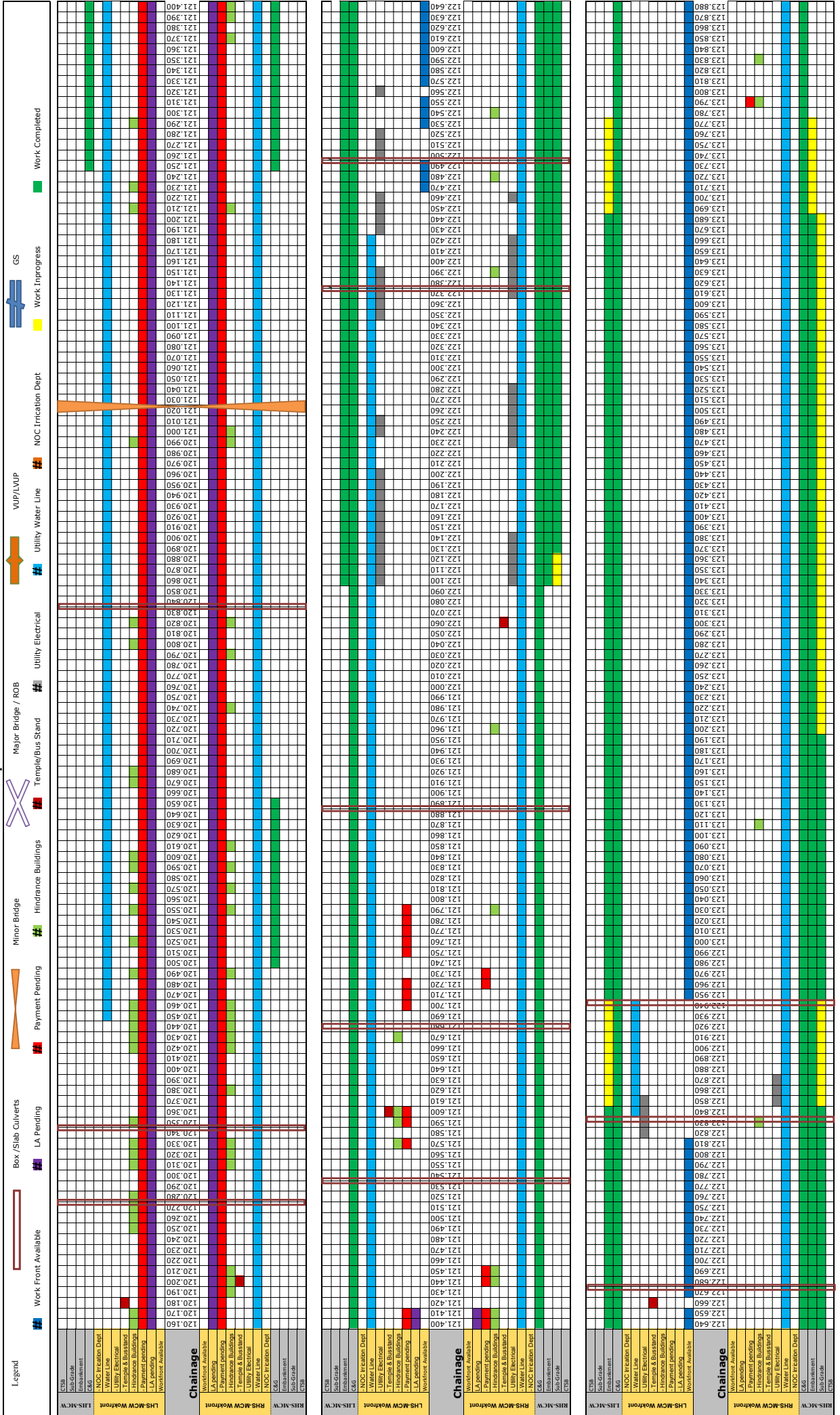
Four Lining of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode
Cholopuram - Thanjavur Project

Strip Chart as on 31-12-2019



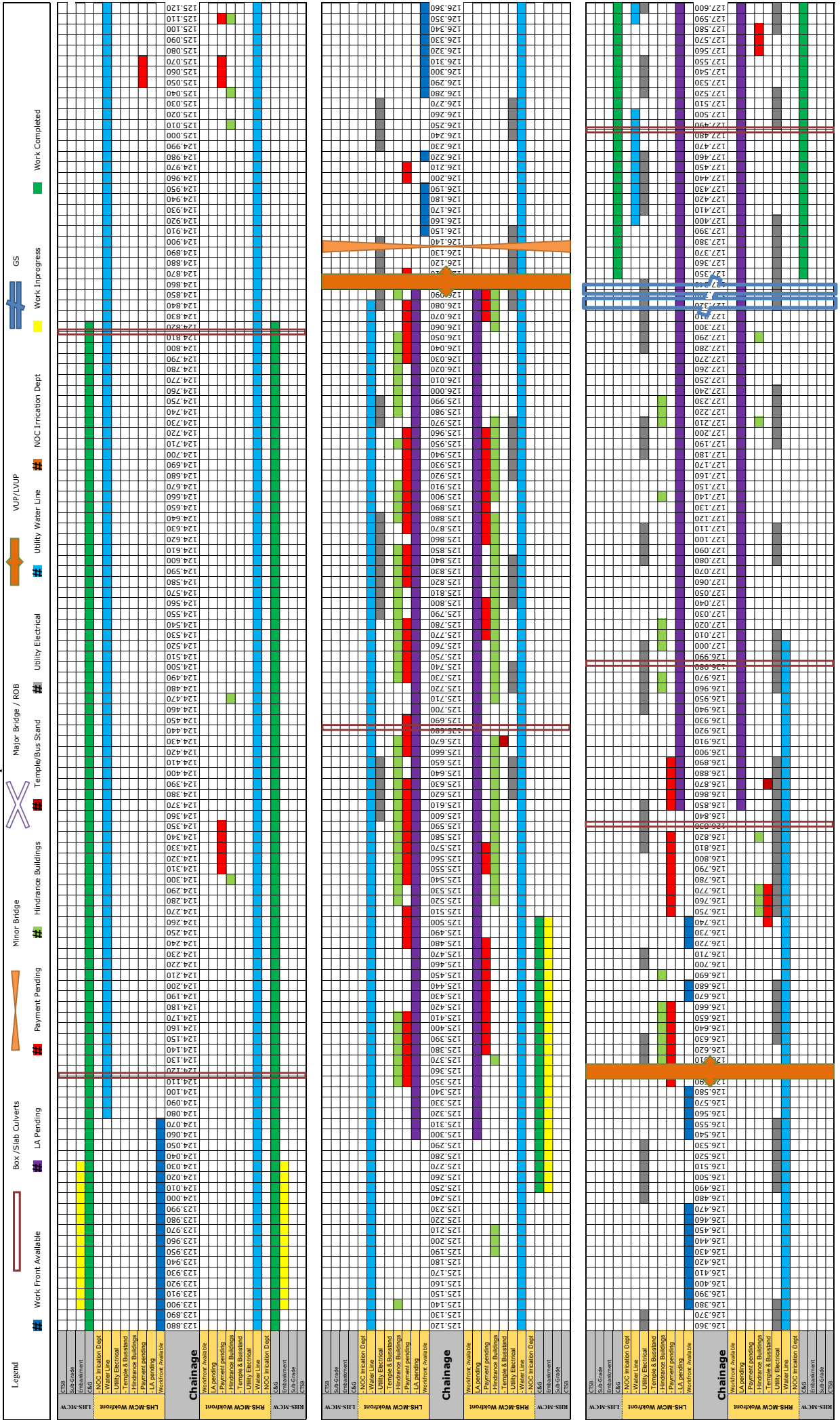
Four Lining of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode
Cholopuram - Thanjavur Project

Strip Chart as on 31-12-2019



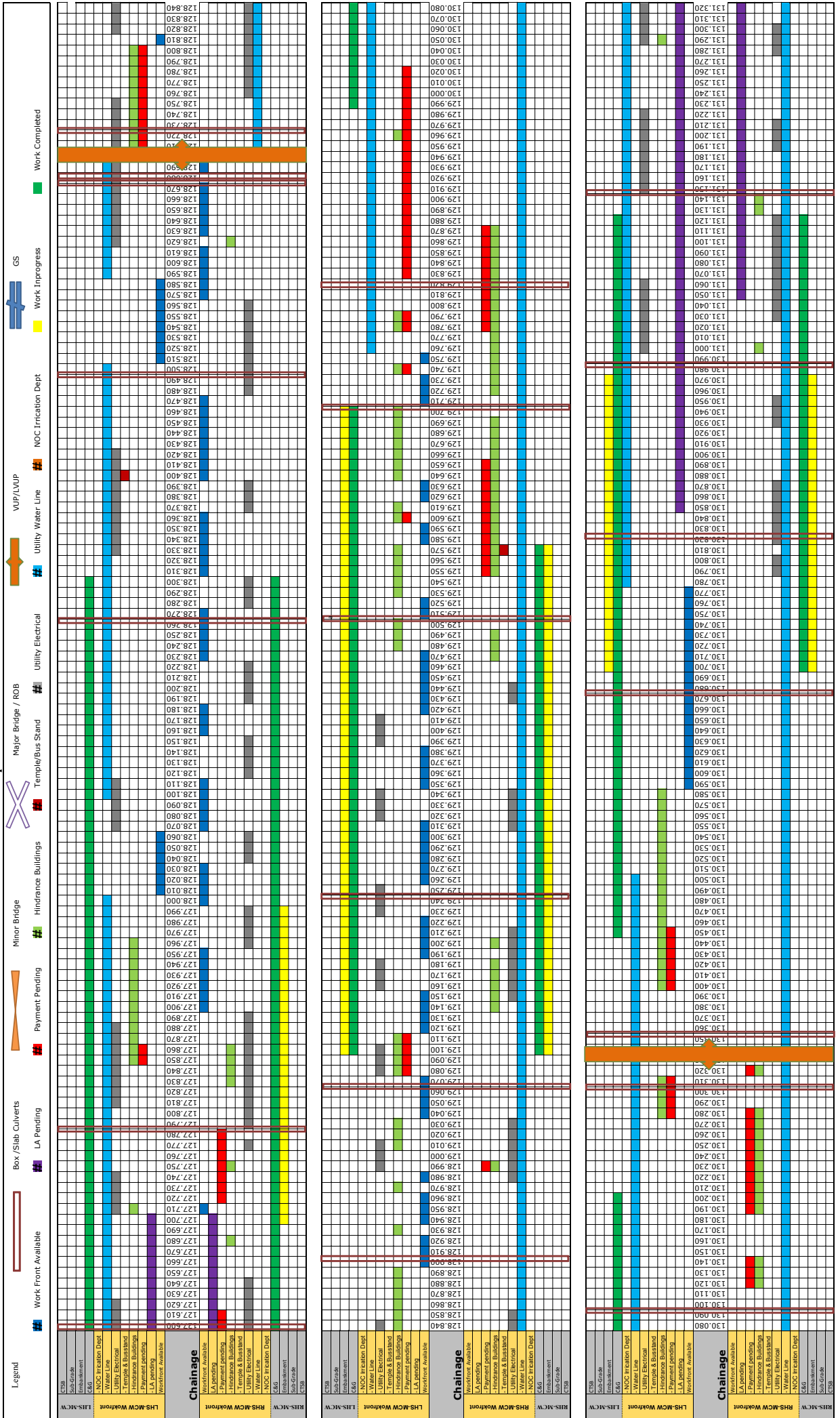
Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode
Cholopuram - Thanjavur Project

Strip Chart as on 31-12-2019



Four Lining of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode
Cholopuram - Thanjavur Project

Strip Chart as on 31-12-2019



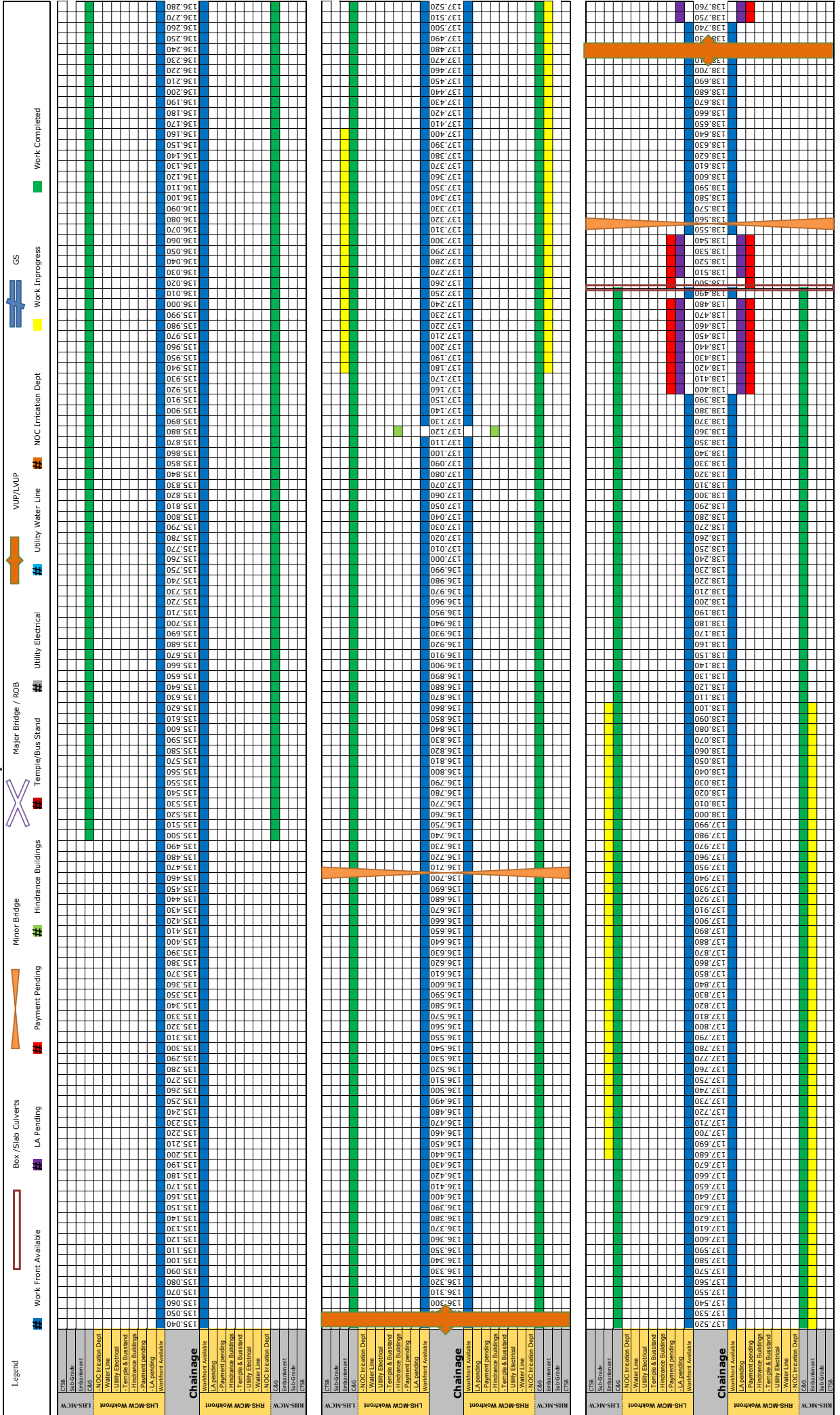
Four Lining of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode
Cholopuram - Thanjavur Project

Strip Chart as on 31-12-2019



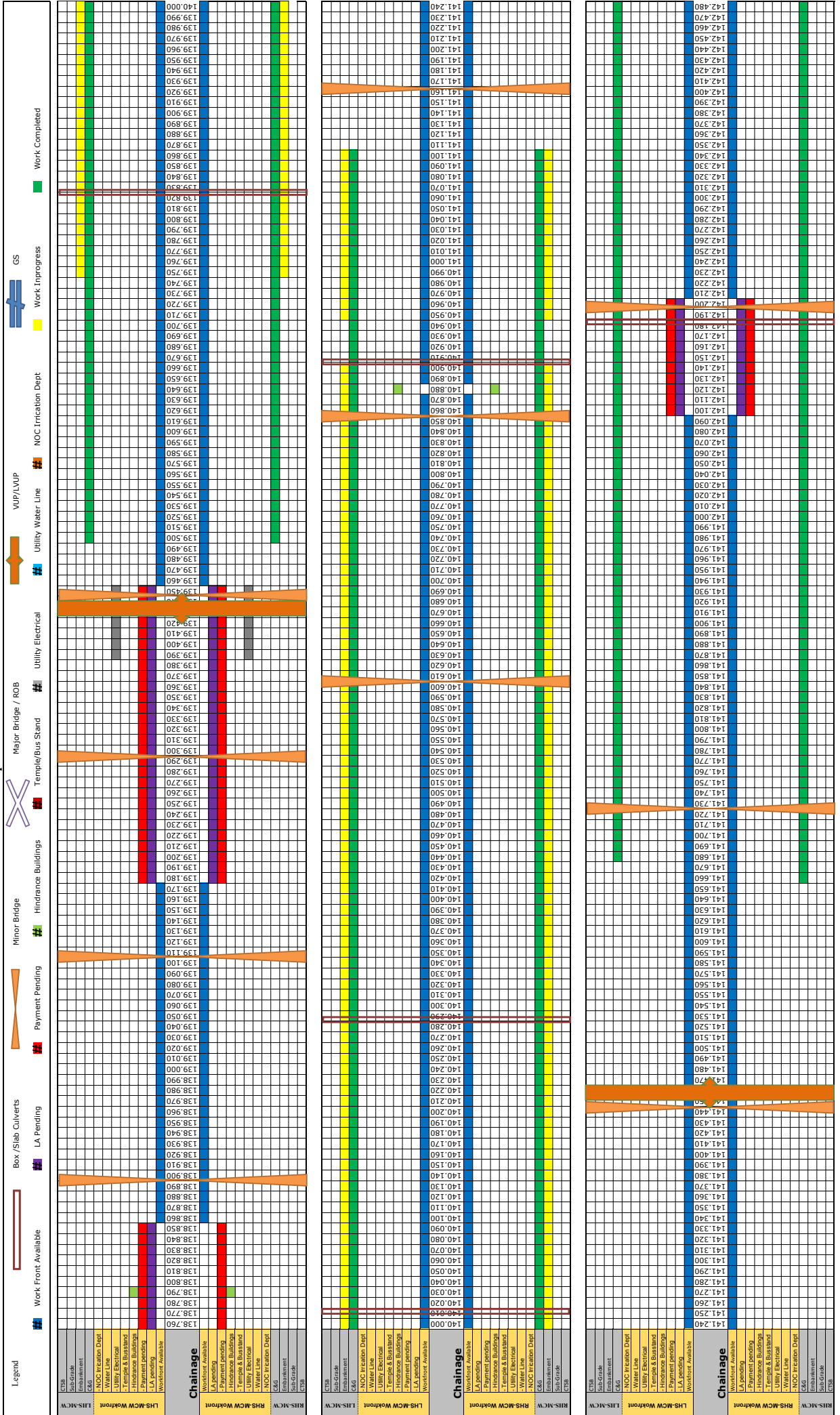
Four Lining of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode
Cholopuram - Thanjavur Project

Strip Chart as on 31-12-2019



Four Lining of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode
Cholopuram - Thanjavur Project

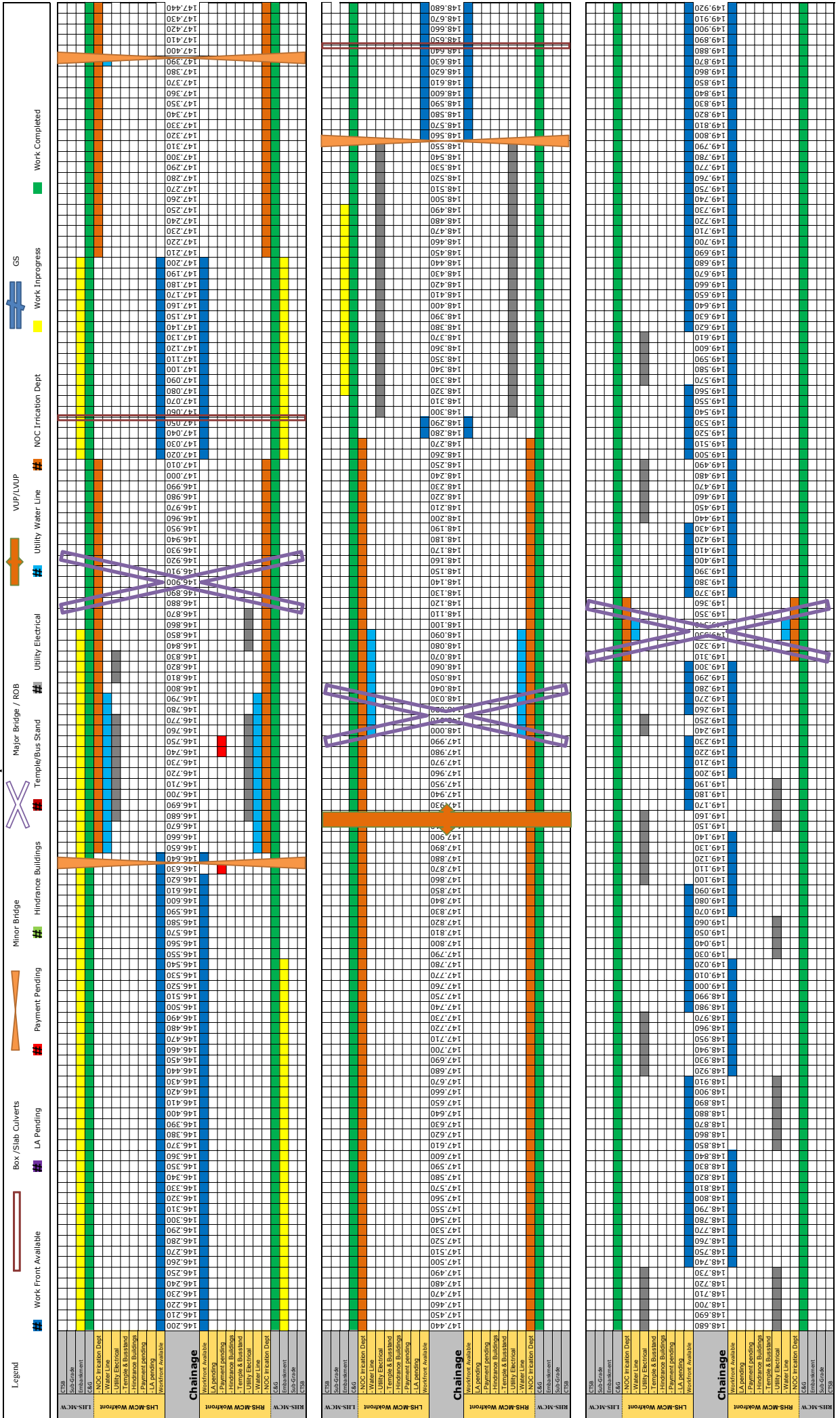
Strip Chart as on 31-12-2019



Four Lining of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

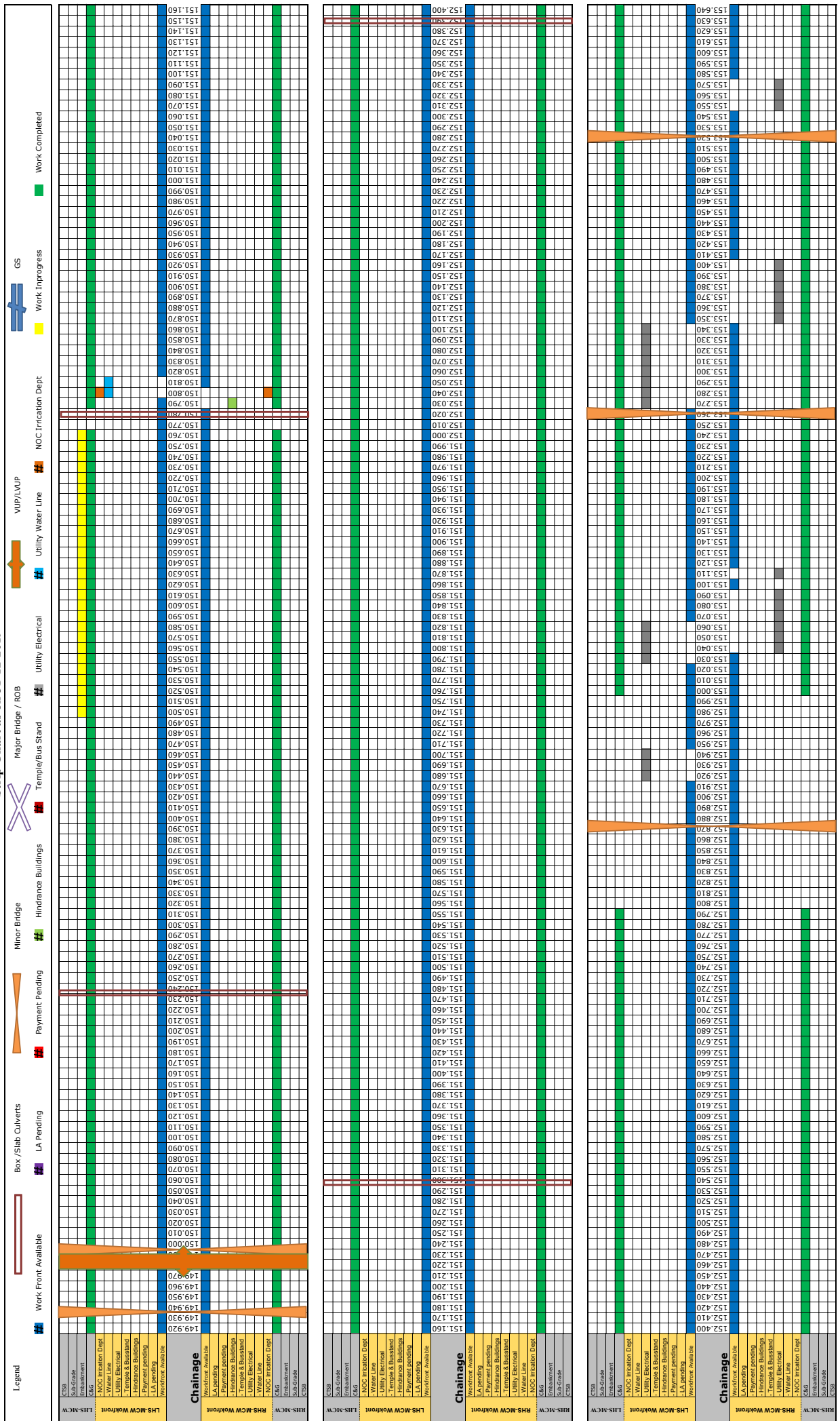
Cholopuram - Thanjavur Project

Strip Chart as on 31-12-2019



Four Lining of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode
Cholopuram - Thanjavur Project

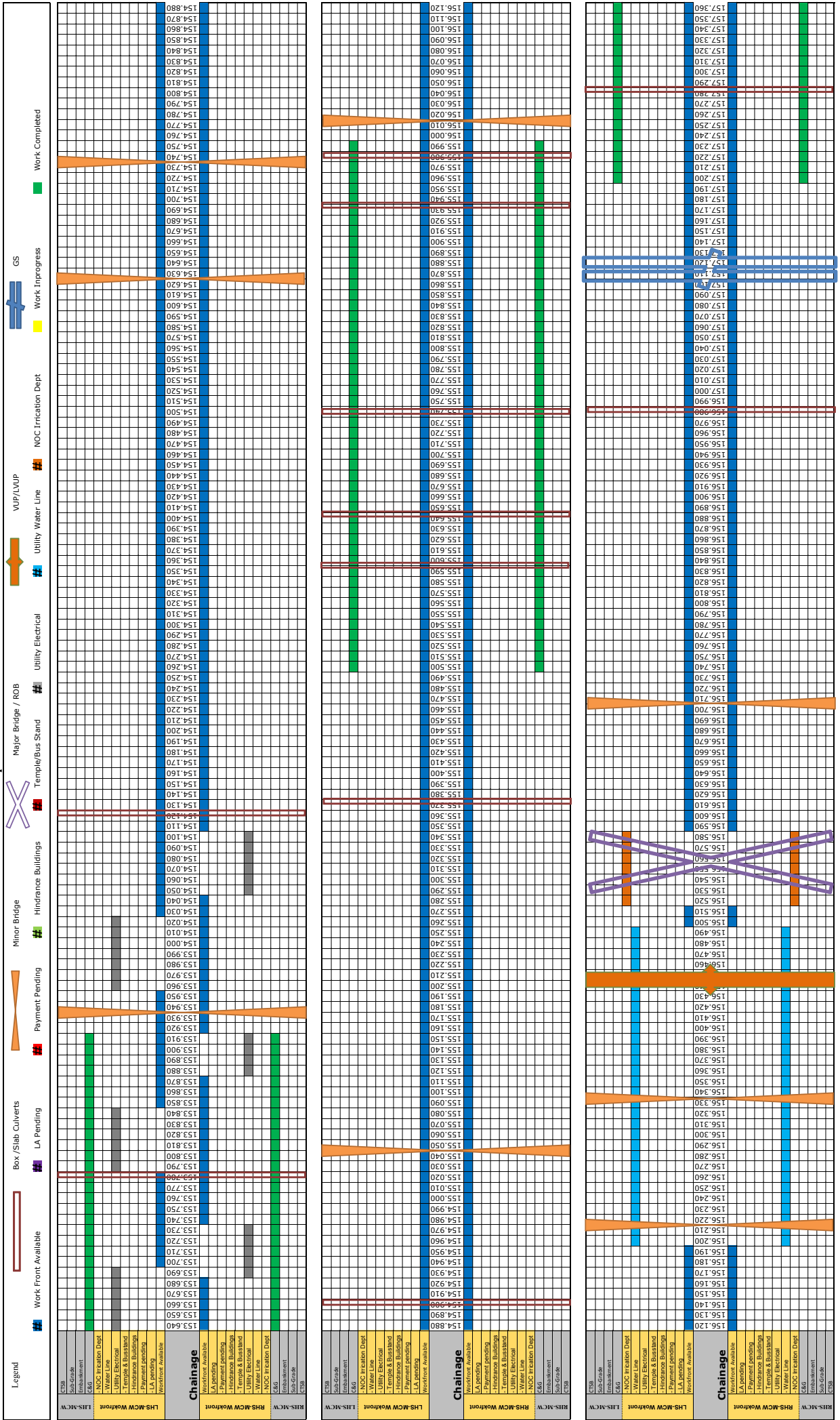
Strip Chart as on 31-12-2019



Four Lining of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

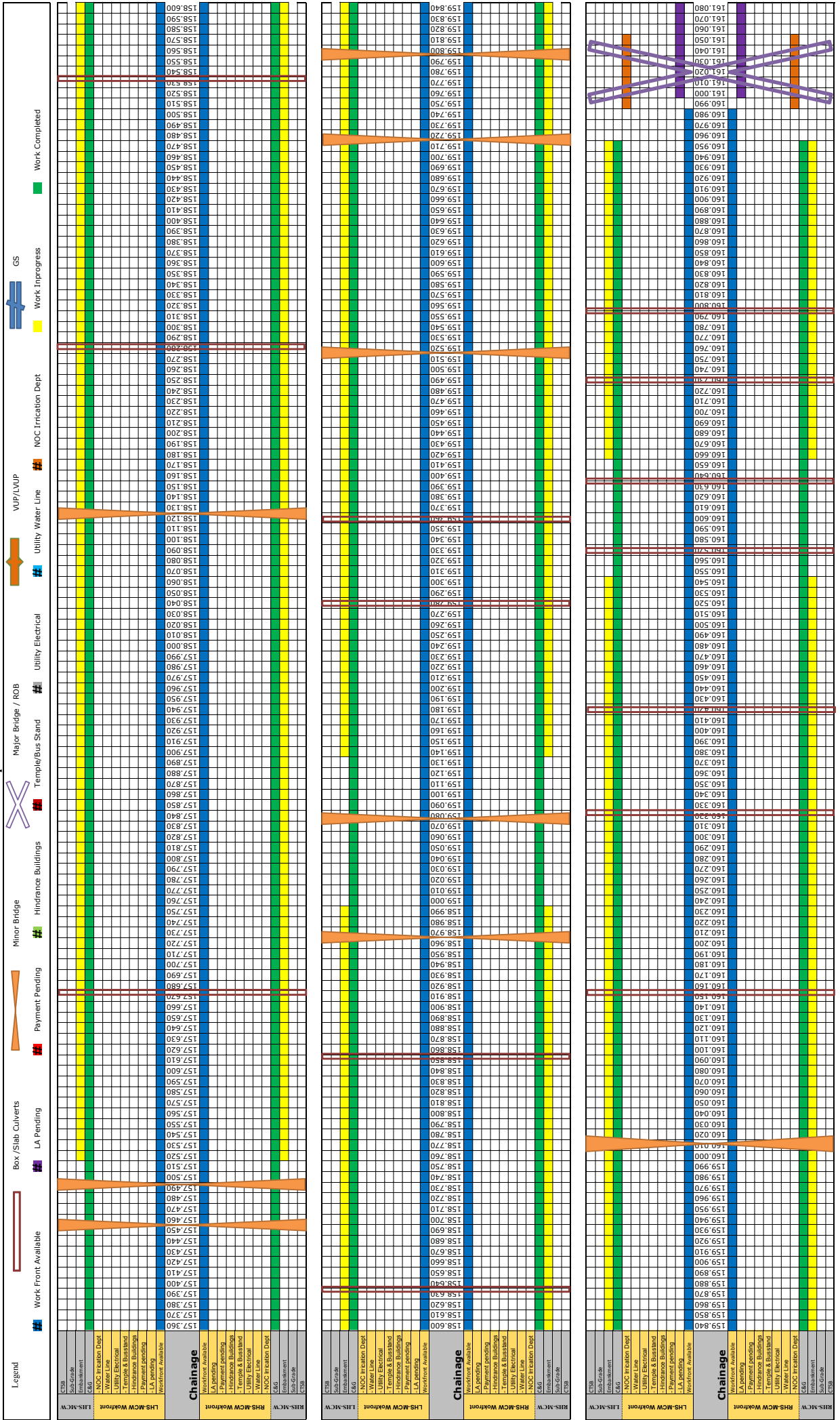
Cholopuram - Thanjavur Project

Strip Chart as on 31-12-2019



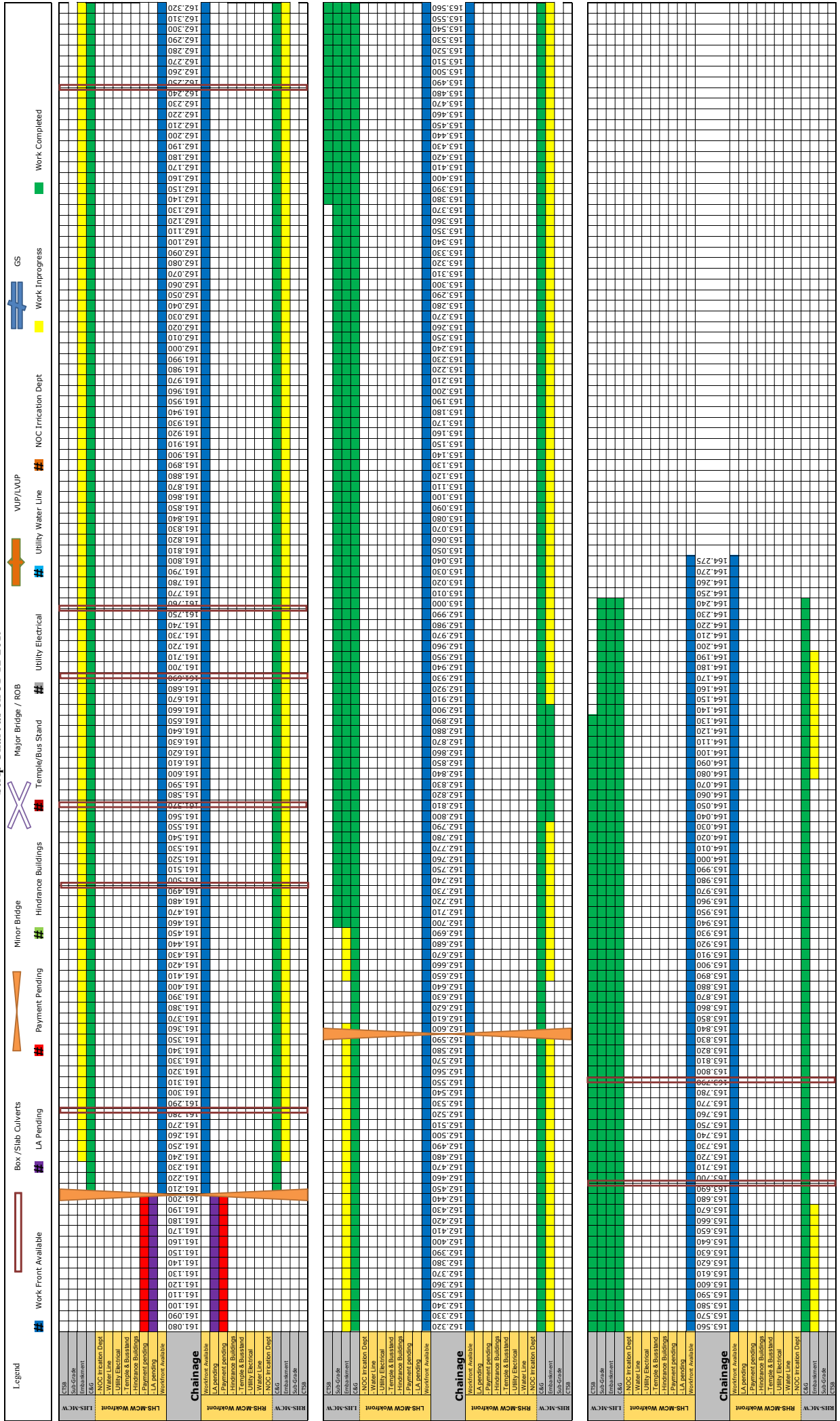
Four Lining of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode
Cholopuram - Thanjavur Project

Strip Chart as on 31-12-2019



Four Lining of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode
 Cholopuram - Thanjavur Project

Strip Chart as on 31-12-2019



Four Laning of Cholopuram to Thanjavur from Km. 116.440 to Km. 164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

COMPLETED									IN PROGRESS								LHS								RHS															
Table 4.2 - 1 : Strip Chart for status of Box Culverts on Existing Road (Main Carriageway)																																								
Sr. No.	Design Chirnage As per CA	M/R	DECEMBER 2019	Revised Design Chirnage	Number and Length of Spans (m)	Remarks (As per Schd B)	Type of Existing Structure	Protection Work	Return Wall &	Slab	Wall	Rath	PCC	Gravilar Filling	Excavation	PCC	Gravilar Filling	Excavation	Protection Work	Return Wall &	Slab	Wall	Rath	PCC	Gravilar Filling	Excavation	PCC	Gravilar Filling	Excavation	Protection Work	Return Wall &	Slab	Wall	Rath	PCC	Gravilar Filling	Excavation			
1	116.602				1 x 2.0m	Widening	Slab Culvert																																	
2	116.837				1 x 2.0m	Widening	Slab Culvert																																	
3	116.954				1 x 1.6m	Widening	Slab Culvert																																	
4	120.068				1 x 3.0	Reconstruction	Slab Culvert																																	
5	120.280				1 x 1.5	Reconstruction	Slab Culvert																																	
6	120.346				1 x 1.5	Reconstruction	Box Culvert																																	
7	120.836				1 x 2.0m	Widening	Box Culvert																																	
8	121.540				1 x 3.0m	Widening	Slab Culvert																																	
9	121.683			121.693	1 x 1.5m	Widening	Slab Culvert																																	
10	121.885			121.895	2 x 1.0m	Widening	Pipe Culvert																																	
11	122.375			122.385	1 x 1.0m	Widening	Pipe Culvert																																	
12	122.497			122.508	2 x 1.0m	Widening	Pipe Culvert																																	
13	122.678			122.688	2 x 1.0m	Widening	Pipe Culvert																																	
14	122.835			122.845	1 x 3.0m	Widening	Slab Culvert																																	
15	122.943			122.952	2 x 1.0m	Widening	Pipe Culvert																																	
16	124.118			124.120	1 x 1.5m	Widening	Slab Culvert																																	
17	124.820			124.823	1 x 1.0m	Widening	Pipe Culvert																																	
18	125.682				1 x 1.5m	Widening	Slab Culvert																																	
19	126.836			126.854	1 x 3.0	Reconstruction	Slab Culvert																																	
20	126.987				1 x 2.0	Reconstruction	Slab Culvert																																	
21	127.488			127.498	1 x 1.2	Reconstruction	Pipe Culvert																																	
22	127.600			127.612	3 x 1.2	Reconstruction	Pipe Culvert																																	
23	127.788			127.800	1 x 0.9m	Widening	Pipe Culvert																																	
24	128.267			128.279	1 x 0.9m	Widening	Pipe Culvert																																	
25	128.494			128.505	1 x 1.2	Reconstruction	Pipe Culvert																																	
26	128.675				1 x 2.0	Reconstruction	Box Culvert																																	
27	128.682				1 x 2.0	Reconstruction	Slab Culvert																																	
28	128.727				3 x 1.2	Reconstruction	Pipe Culvert																																	
29	128.904			128.916	1 x 1.2	Reconstruction	Pipe Culvert																																	
30	129.067			129.079	1 x 1.2	Reconstruction	Pipe Culvert																																	
31	129.246			129.260	1 x 0.9m	Widening	Pipe Culvert																																	
32	129.507			129.519	1 x 3.0m	Widening	Slab Culvert																																	
33	129.707				1x2.5m	Widening	Slab Culvert																																	
34	129.823			129.835	1 x 0.9m	Widening	Pipe Culvert																																	
35	130.096				1 x 1.2	Reconstruction	Pipe Culvert																																	
36	130.307			130.318	1 x 1.5	Reconstruction	Slab Culvert																																	
37	130.357			130.368	1 x 1.5	Reconstruction	Slab Culvert																																	
38	130.680			130.693	2 x 1.2	Reconstruction	Pipe Culvert																																	
39	130.827				1 x 0.9m	Widening	Pipe Culvert																																	
40	130.989				1 x 3.0m	Widening	Slab Culvert																																	
41	131.146			131.159	1 x 0.9m	Widening	Pipe Culvert																																	
42	131.505				1 x 3.0	Reconstruction	Slab Culvert																																	
43	131.722			131.733	1 x 1.2	Reconstruction	Pipe Culvert																																	
44	131.780			131.792	1 x 1.2	Reconstruction	Pipe Culvert																																	
45	132.300			132.318	1 x 3.0m	Widening	Slab Culvert																																	
46	132.557			132.571	1 x 3.0m	Widening	Slab Culvert																																	
47	132.730			132.742	1 x 3.0m	Widening	Slab Culvert																																	
48	132.789				1 x 2.0m	Widening	Slab Culvert																																	
49	133.115				1 x 5.0m	Widening	Slab Culvert																																	
50	133.210				1 x 2.0m	Widening	Slab Culvert																																	
51	133.240				1 x 0.9m	Widening	Pipe Culvert																																	
52	133.635			133.679	1 x 2.0	Reconstruction	Slab Culvert																																	
53	133.734			133.748	1 x 2.0	Reconstruction	Slab Culvert																																	
54	133.935				1 x 1.2	Reconstruction	Pipe Culvert																																	
55	133.987				1 x 1.5	Reconstruction	Slab Culvert																																	
56	163.700			163.700	2 x 0.9m	Widening	Pipe Culvert																																	
57	163.793			163.794	1 x 0.9m	Widening	Pipe Culvert																																	

Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

Table 4.2 - 1 : Strip Chart for status of Box Culverts on Existing Road (Service Road)																						
Sr. No.	MPR	DECEMBER 2019	Revised Design Chaiange	Number and Length of Spans (m)	Remarks (As per Schd B)	Type of Existing Structure	IN PROGRESS				COMPLETED											
							Protection Work	Return Wall & Parapet	Slab	Wall	Raft	PCC	Excavation	Granular Filling	PCC	Raft	Wall	Slab	Return Wall & Parapet	Protection Work		
1	120.068	120.068	120.068	1 x 3.0	Reconstruction	Slab Culvert																
2	120.280	120.288	120.288	1 x 1.5	Reconstruction	Slab Culvert																
3	120.346	120.356	120.356	1 x 1.5	Reconstruction	Box Culvert																
4	126.836	126.829	126.829	1 x 3.0	Reconstruction	Slab Culvert																
5	126.987	127.007	127.007	1 x 2.0	Reconstruction	Slab Culvert																
6	127.488	127.433	127.433	1 x 1.2	Reconstruction	Pipe Culvert																
7	127.600	127.612	127.612	3 x 1.2	Reconstruction	Pipe Culvert																
8	128.494	128.504	128.504	1 x 1.2	Reconstruction	Pipe Culvert																
9	128.675	128.667	128.667	1 x 2.0	Reconstruction	Box Culvert																
10	128.682	128.674	128.674	1 x 2.0	Reconstruction	Slab Culvert																
11	128.727	128.738	128.738	3 x 1.2	Reconstruction	Pipe Culvert																
12	128.904	128.916	128.916	1 x 1.2	Reconstruction	Pipe Culvert																
13	129.067	129.079	129.079	1 x 1.2	Reconstruction	Pipe Culvert																
14	130.096	130.109	130.109	1 x 1.2	Reconstruction	Pipe Culvert																
15	130.307	130.318	130.318	1 x 1.5	Reconstruction	Slab Culvert																
16	130.357	130.369	130.369	1 x 1.5	Reconstruction	Slab Culvert																
17	130.680	130.692	130.692	2 x 1.2	Reconstruction	Pipe Culvert																
18	131.146	131.159	131.159	1 X 0.9	Widening	Pipe Culvert																
19	131.505	131.516	131.516	1 x 3.0	Reconstruction	Slab Culvert																
20	131.722	131.732	131.732	1 x 1.2	Reconstruction	Pipe Culvert																
21	131.780	131.791	131.791	1 x 1.2	Reconstruction	Pipe Culvert																
22	133.635	133.579	133.579	1 x 2.0	Reconstruction	Slab Culvert																
23	133.734	133.747	133.747	1 x 2.0	Reconstruction	Slab Culvert																
24	133.935	133.938	133.938	1 x 1.2	Reconstruction	Pipe Culvert																
25	133.987	133.979	133.979	1 x 1.2	Reconstruction	Pipe Culvert																

Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

		IN PROGRESS				COMPLETED																				
		LHS							RHS																	
Sr. No.	MPR	DECEMBER	2019	Revised Design Chainage	Number and Length of Spans (m)	Remarks	Type of Structure	Protection Work	Return Wall & Parapet	Slab	Wall	Raft	PCC	Granular Filling	Excavation	Granular Filling	Excavation	Return Wall & Parapet	Slab	Wall	Raft	PCC	Granular Filling	Excavation	Protection Work	
1	119.971			119.978	1 x 1.5	Reconstruction	Slab Culvert																			
2	134.500			134.515	1 x 2.0m x 2.0m	New Construction	Box Culvert																			
3	138.492			138.503	1 x 4.0m x 2.0m	New Construction	Box Culvert																			
4	144.426			144.500	1 x 4.0m x 2.0m	New Construction	Box Culvert																			
5	150.237			150.268	1 x 4.0m x 2.0m	New Construction	Box Culvert																			
6	156.984			156.991	1 x 3.0m x 2.0m	New Construction	Box Culvert																			
7	157.283			157.289	1 x 4.0m x 2.0m	New Construction	Box Culvert																			

Four Lining of Cholapuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

Table 4-2 - 3 : Strip Chart for status of MNB - Box
(Main Cartageaway)

Sr. No.	Design Chainage As per CA	MPR	DECEMBER 2019	Revised Chainage	Number and Length of Spans (m)	Type of Structure	Stretch	COMPLETED			IN PROGRESS							LHS							RHS												
								Excavation	Granulor Filling	PCC	Raft	Wall	Slab	Retain Wall + CB	Protection Work	Excavation	Granulor Filling	PCC	Raft	Wall	Slab	Retain Wall + CB	Protection Work	Excavation	Granulor Filling	PCC	Raft	Wall	Slab	Retain Wall + CB	Protection Work						
MNB IN EXISTING LENGTH																																					
1	121.024				1 x 6.0m	MNBB	Existing																														
2	122.046				3 x 7.5m	MNBB	Existing																														
MNB IN BYPASS																																					
1	117.764			117.764	2 x 10.0m	MNBB	Bypass																														
2	118.217			118.110	1 x 8.0m	MNBB	Bypass																														
3	118.400			119.570	1 x 6.0m	MNBB	Bypass																														
4	118.480			118.480	1 x 6.0m	MNBB	Bypass																														
5	118.539			118.548	1 x 8.0m	MNBB	Bypass																														
6	118.919			119.100	1 x 6.0m	MNBB	Bypass																														
7	126.134				2 X 10.0m	MNBB	Bypass																														
8	134.320				2x 10.0m	MNBB	Bypass																														
9	134.770			134.774	1 x 10.0m	MNBB	Bypass																														
10	136.705			136.738	1 x 6.0m	MNBB	Bypass																														
11	138.555			138.585	1 x 6.0m	MNBB	Bypass																														
12	138.901			138.935	6 x 7.5m	MNBB	Bypass																														
13	139.105			139.138	2 x 15m	MNBB	Bypass																														
14	139.299			139.335	4 x 7.5m	MNBB	Bypass																														
15	139.453				1 x 7.0m	MNBB	Bypass																														
16	140.605			140.637	1 x 6.0m	MNBB	Bypass																														
17	140.860			140.892	1 x 8.0m	MNBB	Bypass																														
18	141.164			141.145	1 x 10.0m	MNBB	Bypass																														
19	141.445				1 x 8.0m	MNBB	Bypass																														
20	141.727			141.760	1 x 8.0m	MNBB	Bypass																														
21	142.204			142.235	1 x 8.0m	MNBB	Bypass																														
22	142.657			142.687	1 x 6.0m	MNBB	Bypass																														
23	142.897			142.932	2 x 8.0m	MNBB	Bypass																														
24	143.115			143.136	6 x 7.5m	MNBB	Bypass																														
25	143.823			143.852	2 x 8.0m	MNBB	Bypass																														
26	144.000			143.995	2 x 10.0m	MNBB	Bypass																														
27	146.639				1 x 10.0m	MNBB	Bypass																														
28	147.396			147.426	1 x 8.0m	MNBB	Bypass																														
29	148.560			148.592	1 x 8.0m	MNBB	Bypass																														
30	144.880			144.916	4 x 7.5m	MNBB	Bypass																														
31	149.940			149.962	1 x 10.0m	MNBB	Bypass																														
32	149.997				1 x 6.0m	MNBB	Bypass																														
33	152.876				2 x 10.0m	MNBB	Bypass																														
34	153.263			153.287	1 x 10.0m	MNBB	Bypass																														
35	153.528			153.557	1 x 6.0m	MNBB	Bypass																														
36	153.939			153.968	1 x 10.0m	MNBB	Bypass																														
37	154.626			154.659	1 x 6.0m	MNBB	Bypass																														
38	154.739			154.764	1 x 10.0m	MNBB	Bypass																														
39	155.049			155.082	2 x 7.5m	MNBB	Bypass																														
40	156.014			156.040	1 x 8.0m	MNBB	Bypass																														
41	156.216			156.244	1 x 6.0m	MNBB	Bypass																														
42	156.336			156.366	1 x 6.0m	MNBB	Bypass																														
43	156.707				1 x 10.0m	MNBB	Bypass																														
44	157.458			157.485	1 x 7.0m	MNBB	Bypass																														
45	157.494			157.517	1 x 8.0m	MNBB	Bypass																														
46	158.128			158.155	1 x 7.0m	MNBB	Bypass																														
47	158.972			158.994	1 x 6.0m	MNBB	Bypass																														
48	159.076			159.742	1 x 8.0m	MNBB	Bypass																														
49	159.723				1 x 6.0m	MNBB	Bypass																														
50	159.801				1 x 6.0m	MNBB	Bypass																														
51	161.208			161.227	1 x 8.0m	MNBB	Bypass																														
52	162.595			162.595	2 x 15m	MNBB	Bypass																														

Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

Table 4.2 - 3 : Strip Chart for status of MNB - Deck Type (Main Carriageway)		Mode																				
SR.NO.	MNB at Chainage	MPR	DECEMBER	2019	Span	Pier/ Abutment	IN PROGRESS					COMPLETED										
							Crash Barrier	Slab	Girder Launching	Girder Casting	Piercap/Abtc op	Pier/Abt	Pile Cap	Pier/Abt	Piercap/Abtc op	Girder Casting	Girder Launching	Slab	Crash Barrier			
							LHS					RHS										
1	133+345				3x12.5m	A1	EXISTING STRUCTURE															
						P1																
						A2																
2	159+522				1x15.0m	A1																
						A2																

Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

Table 4.2 - 3 : Strip Chart for status of MNB - Box (Service Road)										COMPLETED									
										IN PROGRESS									
										LHS					RHS				
Sr. No.	Design Chainage As per CA	MPR	DECEMBER	2019	Revised Chainage	Number and Length of Spans (m)	Type of Structure	Stretch	Protection Work	Slab	Wall	Raft	PCC	Granular Filling	PCC	Raft	Wall	Slab	Protection Work
MNB SERVICE ROAD IN BYPASS																			
1	117.764			117.764		2 x 10.0m	MNBB	Bypass											
2	126.134			126.134		2 X 10.0m	MNBB	Realign											
3	134.320			134.320		2x 10.0m	MNBB	Bypass											
4	134.770			134.774		1 x 10.0m	MNBB	Bypass											
5	138.555			138.585		1 x 6.0m	MNBB	Bypass											
6	138.901			138.935		6 x 7.5m	MNBB	Bypass											
7	139.453			139.485		1 x 7.0m	MNBB	Bypass											
8	139.105			139.138		2 x 15m	MNBB	Bypass											
9	139.299			139.335		4 x 7.5m	MNBB	Bypass											
10	139.453			139.485		1 x 7.0m	MNBB	Bypass											
11	141.164			141.145		1 x 10.0m	MNBB	Bypass											
12	141.445			141.466		1 x 8.0m	MNBB	Bypass											
13	141.727			141.760		1 x 8.0m	MNBB	Bypass											
14	144.880			144.916		4 x 7.5m	MNBB	Bypass											
15	149.940			149.962		1 x 10.0m	MNBB	Bypass											
16	149.997			150.028		1 x 6.0m	MNBB	Bypass											
17	156.014			156.040		1 x 8.0m	MNBB	Bypass											
18	156.216			156.244		1 x 6.0m	MNBB	Bypass											
19	156.336			156.366		1 x 6.0m	MNBB	Bypass											
20	156.707			156.734		1 x 10.0m	MNBB	Bypass											

Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

Table 4.2 - 4 : Strip Chart for status of PUP																			
Sr. No.	MPR	DECEMBER	2019	Number and Length of Spans (m)	BYPASS	IN PROGRESS					COMPLETED								
						Design Chainage As per CA	Chainage as Per Site	Slab	Wall	Raft	PCC	Excavation	Protection Work	Slab	Wall	Raft	PCC	Excavation	Protection Work
1	147.917	147.951	1 X 7 m	BYPASS															
2	149.988	150.023	1 X 7 m	BYPASS															

Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

Table 4.2 - 5 : Strip Chart for status of MJB (Main Carriageway)											COMPLETED					
MPR DECEMBER 2019											IN PROGRESS					
MJB at Chainage 146+902 (4x20)-BYPASS																
LHS/LSR											RHS/LSR					
Crash Barrier	Slab	Girder Launching	Girder Casting	Pier Cap/Abt Cap	Pier/Abt	Pile Cap	Pile	Pier Cap/Abt Cap	Pier/Abt	Pile Cap	Pile	Pier Cap/Abt Cap	Girder Casting	Girder Launching	Slab	Crash Barrier
A1																
P1																
P2																
P3																
A2																
MJB at Chainage 148+017 (3x20)- BYPASS																
LHS/LSR											RHS/LSR					
Crash Barrier	Slab	Girder Launching	Girder Casting	Pier Cap/Abt Cap	Pier/Abt	Pile Cap	Pile	Pier Cap/Abt Cap	Pier/Abt	Pile Cap	Pile	Pier Cap/Abt Cap	Girder Casting	Girder Launching	Slab	Crash Barrier
A1																
P1																
P2																
A2																
MJB at Chainage 149+334 (3x20)- BYPASS																
LHS/LSR											RHS/LSR					
Crash Barrier	Slab	Girder Launching	Girder Casting	Pier Cap/Abt Cap	Pier/Abt	Pile Cap	Pile	Pier Cap/Abt Cap	Pier/Abt	Pile Cap	Pile	Pier Cap/Abt Cap	Girder Casting	Girder Launching	Slab	Crash Barrier
A1																
P1																
P2																
A2																
MJB at Chainage 156+559 (6x20)- BYPASS																
LHS/LSR											RHS/LSR					
Crash Barrier	Slab	Girder Launching	Girder Casting	Pier Cap/Abt Cap	Pier/Abt	Pile Cap	Pile	Pier Cap/Abt Cap	Pier/Abt	Pile Cap	Pile	Pier Cap/Abt Cap	Girder Casting	Girder Launching	Slab	Crash Barrier
A1																
P1																
P2																
P3																
P4																
P5																
A2																
MJB at Chainage 161+019 (6x20)- BYPASS																
LHS/LSR											RHS/LSR					
Crash Barrier	Slab	Girder Launching	Girder Casting	Pier Cap/Abt Cap	Pier/Abt	Pile Cap	Pile	Pier Cap/Abt Cap	Pier/Abt	Pile Cap	Pile	Pier Cap/Abt Cap	Girder Casting	Girder Launching	Slab	Crash Barrier
A1																
P1																
P2																
P3																
P4																
P5																
A2																

Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode																								
Table 4.2 - 6 : Strip Chart for status of FLYOVER		IN PROGRESS										COMPLETED												
Sr.No.	FO at Chainage	Span	BYPASS+ EXISTING	A1 A2	Crash Barrier	Slab	Girder Launching	Girder Casting	Piercap/Abtc op	Pier/Abt	Pile Cap	PCC	Pile	RHS										
														Pier/Abt	Pile Cap	PCC	Pile	Pier/Abt	Pile Cap	PCC	Pile	Pier/Abt	Pile Cap	PCC
MPR DECEMBER 2019															LHS					RHS				
1	117+600	1 x 30 m	BYPASS+ EXISTING	A1 A2																				
2	120+000	1 x 30 m	BYPASS+ EXISTING	A1 A2																				
3	127+300	1 x 30 m	EXISTING	A1 A2																				
4	134+000	1 x 30 m	BYPASS+ EXISTING	A1 A2																				
5	145+140	1 x 30 m	BYPASS	A1 A2																				
6	157+100	1 x 30 m	BYPASS	A1 A2																				

**Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu
Under NHDP Phase-IV on Hybrid Annuity Mode**

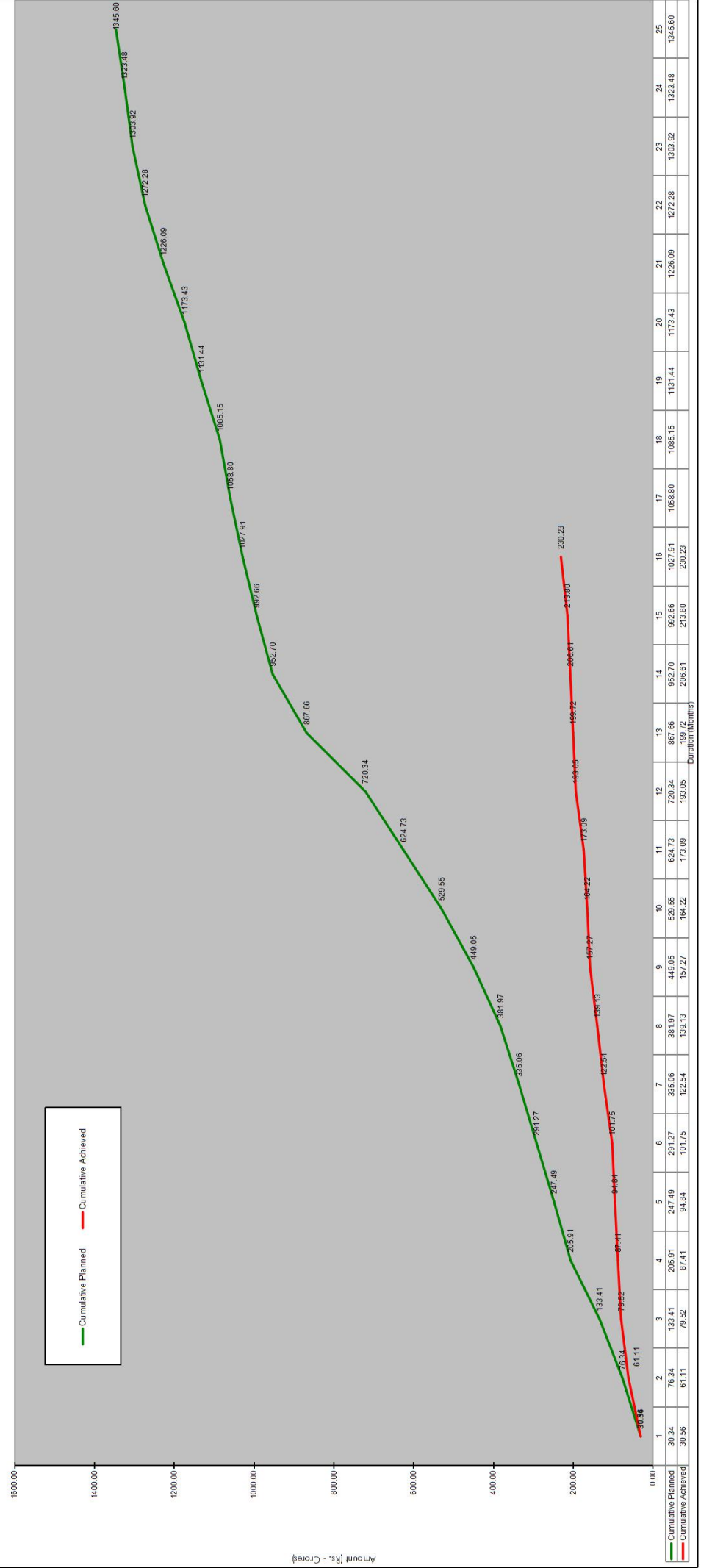
SR.NO.	VUP at Chainage	Span	Status	Table 4.2 - 7 : Strip Chart for status of VUP																															
				IN PROGRESS										COMPLETED																					
				Crash Barrier	Slab	Girder Launching	Girder Casting	Piercap/Abtc op	Pier/Abt	Pile Cap	PCC	Pile	Crash Barrier	Slab	Girder Launching	Girder Casting	Piercap/Abtc op	Pier/Abt	Pile Cap	PCC	Pile	Crash Barrier													
			MPR DECEMBER 2019	LHS										RHS																					
1	126+100	1x25	EXISTING																																
2	126+600	1x25	EXISTING																																
3	128+700	1x25	EXISTING																																
4	130+335	1x25	EXISTING																																
5	131+500	1x25	EXISTING																																
6	136+282	1x25	BYPASS																																
7	138+720	1x25	BYPASS																																
8	139+440	1x25	BYPASS																																
9	141+450	1x25	BYPASS																																
10	156+446	1x25	BYPASS																																

Four Laning of Cholopuram to Thanjavur from Km. 116.440 to Km. 164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode																		
Table 4.2 - 8 : Strip Chart for status of ROB											COMPLETED							
IN PROGRESS																		
MPR DECEMBER 20	ROB at Chainage 134+345 (1 x 20.285m+1 x 30.426m+1 x 20.285m (Skew 9.6 °))- EXISTING																	
	LHS/LSR											RHS/LSR						
	Crash Barrier	Slab	Steel Girder Launching	Steel Girder Erection	Girder Launching	Girder Casting	Pier Cap/Abt	Pier/Abt	Pile Cap	Pier/Abt	Pier Cap/Abt	Girder Casting	Girder Launching	Steel Girder Erection	Steel Girder Launching	Slab	Crash Barrier	
A1																		
P1																		
P2																		
A2																		

5. Financial & Physical Progress of Work

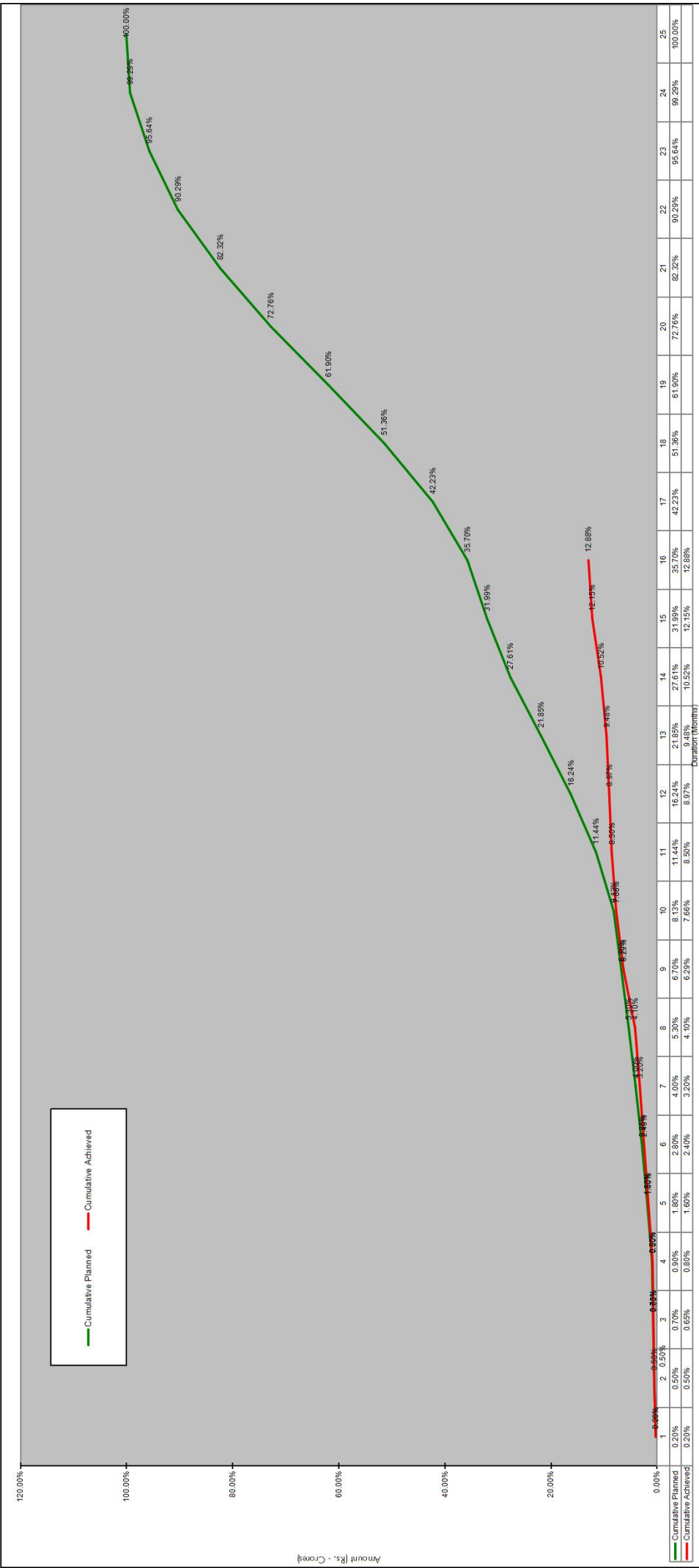
Figure 3a : Financial Progress - Planned vs Achieved - S Curve
Figure 3b : Physical Progress - Planned vs Achieved - S Curve

Four Laning of Cholopuram – Thanjavur from Km. 116.440 to 164.275 Section of NH45C in the state of Tamilnadu under NHDP-IV on Hybrid Annuity Mode
Fig. 03a- Financial Progress (S-Curve)



Schedule	2019												2020												
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Monthly Planned	30.34	46.00	57.07	72.50	41.58	43.78	46.91	67.08	80.50	95.17	95.61	147.32	85.04	39.97	35.24	30.90	26.34	46.29	41.99	52.67	46.19	31.64	19.56	22.12	
Monthly Achieved	30.56	30.56	18.41	7.89	7.43	6.90	16.59	18.14	6.95	8.87	19.96	6.67	6.89	7.18	16.43										
Cumulative Planned	30.34	76.34	133.41	205.91	247.49	291.27	335.06	381.97	449.05	529.55	624.73	720.34	867.66	952.70	992.66	1027.91	1058.80	1085.15	1131.44	1173.43	1226.09	1272.28	1303.92	1323.48	1345.60
Cumulative Achieved	30.56	61.11	79.52	87.41	94.84	101.75	122.54	139.13	164.22	173.09	193.05	199.72	206.61	213.80	230.23										
Monthly Planned (%)	2.3%	3.4%	4.2%	5.4%	3.1%	3.3%	3.3%	5.0%	6.0%	7.1%	7.1%	10.9%	6.3%	3.0%	2.6%	2.3%	2.0%	3.4%	3.1%	3.9%	3.4%	2.4%	1.5%	1.6%	
Monthly Achieved (%)	2.3%	2.3%	1.4%	0.6%	0.6%	0.5%	1.5%	1.2%	0.5%	0.7%	1.5%	0.5%	0.5%	0.5%	1.2%										
Cumulative Planned (%)	2.3%	5.7%	9.9%	15.3%	18.4%	21.6%	24.9%	28.4%	33.4%	39.4%	46.4%	53.5%	64.5%	70.8%	73.8%	76.4%	78.7%	80.6%	84.1%	87.2%	91.1%	94.6%	96.9%	98.4%	100.0%
Cumulative Achieved (%)	2.3%	4.5%	5.91%	6.50%	7.05%	7.56%	9.11%	10.3%	12.2%	12.9%	14.3%	14.8%	15.4%	15.9%	17.1%										

Four Lining of Cholopuram – Thanjavur from Km. 116.440 to 164.275 Section of NH45C in the state of Tamilnadu under NHDP-IV on Hybrid Annuity Mode
Fig. 03b- Physical Progress (S-Curve)



Schedule	2019												2020												
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Monthly Planned	0.20%	0.30%	0.20%	0.20%	0.90%	1.00%	1.20%	1.30%	1.40%	1.43%	3.31%	4.80%	5.61%	5.76%	4.38%	3.71%	6.53%	9.13%	10.54%	10.86%	9.56%	7.97%	5.35%	3.65%	0.71%
Monthly Achieved	0.20%	0.30%	0.15%	0.15%	0.80%	0.80%	0.80%	0.90%	1.37%	0.85%	0.85%	0.46%	0.51%	1.04%	1.63%	0.73%									
Cumulative Planned	0.20%	0.50%	0.70%	0.90%	1.80%	2.80%	4.00%	5.30%	6.70%	8.13%	11.44%	16.24%	21.85%	27.61%	31.99%	35.70%	42.23%	51.36%	61.90%	72.76%	82.32%	90.29%	95.64%	99.29%	100.00%
Cumulative Achieved	0.20%	0.50%	0.65%	0.80%	1.60%	2.40%	3.20%	4.10%	5.47%	6.28%	8.50%	9.97%	10.52%	12.15%	12.88%	12.88%	12.88%	12.88%	12.88%	12.88%	12.88%	12.88%	12.88%	12.88%	12.88%

6.1. List of Lab Equipment's

A site laboratory has been set up with all equipment required for testing soil, GSB, WMM, Bitumen, aggregate and concrete. Following tables represents the list of QA/QC equipment's available at Pateeswaram Lab.

Table 6.1 - 2 QA/QC Lab Equipment at Pateeswaram Lab		
Sl. No	Equipment List	Quantity
A) SOIL		
1	Proctor Moulds (Big) Collar or Base plate & Rammer 4.89 kg	6
2	Proctor Moulds (Small) Collar or Base plate & Rammer 2.6 kg	4
3	Atterberg Limits Test(Apparatus)	1
4	Soil Cone Penetrometer	1
5	CBR Moulds with collar or Base Plate	60
6	CBR Plunger	4
7	Proving Ring(25 KN)	1
8	Proving Ring(10 KN)	1
9	Proving Ring(2.5 KN)	1
10	FSI JARS BOROSIL -100 ml	40
11	Spacer Disc(with Handle)	4
12	CBR Testing Machine	1
13	CBR Surcharge Central Hole Weights 2.5 kg	60
14	CBR Surcharge Slotted Weights 2.5 kg	60
15	CBR Perorated Brass plates	60
16	Sand Pouring Cylinders (100 mm Dia) Complete with Calibrating Container with Trays	2
17	Sand Pouring Cylinders (150 mm Dia) Complete with Calibrating Container with Trays	2
18	Sand Pouring Cylinders (200 mm Dia) Complete with Calibrating Container with Trays	2
19	Rapid Moisture Meters	4
20	Calcium Carbide Bottles	10
21	Spatula Big	10
22	Spatula Small	10
23	Hammers big	4
24	Chisels big	20
25	Electronic Balance Capacity 100 kg (10 gram accuracy)	1
26	Electronic Balance Capacity 50 kg (1 gram accuracy)	2
27	Electronic Balance Capacity 30 kg (1 gram accuracy)	2
28	Electronic Balance Capacity 10 kg (1 gram accuracy)	1
29	Electronic Balance Capacity 5 kg (0.5 gram accuracy)	1
30	Electronic Balance Capacity 600gram(0.01 gram accuracy)	2
31	Hot Air Oven (Big)250oC	1
32	Hot Air Oven (Small)250oC	1
33	Direct Shear Test Apparatus	1

Sl. No	Equipment List	Quantity
34	Filter Paper Dia 100 mm	10
35	Filter Paper Dia 150 mm	10
36	Pipettes	4
37	Plastic Bottles	4
38	Enamel tray -450x300x40 mm	12
39	G.I tray-1500x1500x100mm	4
40	French Curves	2
B) CONCRETE WORKS		
41	Compressive Testing machine(2000KN)	1
42	Flextural strength testing machine digital	1
43	Concrete Cube Moulds With Base Plate(15cm)	200
44	Concrete Cube Moulds With Base Plate(10cm)	18
45	Motor Cube Moulds (7.06cm) with Base Plate	12
46	Motor Cube Vibrating Machine(12000 Rmp)	1
47	Concrete Mixer Electrically Operated	1
48	Cube Vibrating Machine (Big)	1
49	Slump Cone Testing Apparatus	10
50	Vicat Needle Apparatus , with dash pot complete with set of needles and brass mould	2
51	Soundness Testing Apparatus	2
52	Trowels With Wodden Handles	4
53	A I V Testing Machine	1
54	Loss Angels abrasion Testing Machine	1
55	Sand Equivalant Testing Apparatus	1
56	Flakiness Index Test Guage	1
57	Elongation Index Test Guage	1
58	Density Basket	2
59	Bulk Density Cylinder (5lt)	1
60	Bulk Density Cylinder (15lt)	1
61	Bulk Density Cylinder (30lt)	1
62	Gi trays -450x600x50mm	9
63	Enamel trays -300x250x40 mm	9
64	Trays for Samples Collections	12
65	Riffle Box (40 MM)	1
66	Riffle Box (20 MM)	1
67	PYcnometer Bottels (1000 ml)	4
68	Specific Gravity & water absorotio test apparatus with Electronic balance	1
69	DLC Compaction vibrating hammer	1
70	Cement mortar cube mould 5.0 cm	12
71	Sandard Sand Grade-1 bag of 25 kg	2
72	Sandard Sand Grade-2 bag of 25 kg	2
73	Sandard Sand Grade-3 bag of 25 kg	2
C) BITUMINOUS WORKS		
74	Specific Gravity Bottels (50 ml)	2
75	Specific Gravity Bottels (100 ml)	2

Sl. No	Equipment List	Quantity
76	Pen Sky- Martins closed Tester (Flash & Fire point)	2
77	Dial gauge 0.01x30 mm adis make	4
78	Ring & Ball Apparatus (Softening Point)	1
79	Bitumen Penetrometer (automatic)	1
80	Marshall Stability Apparatus (set)	1
81	Marshall Compaction Pedestal	2
82	Marshall Compaction Rammer 4.53 KG	4
83	Marshall Moulds (101.6 mm Dia)	30
84	Modified Marshall Compaction Pedestal	1
85	Modified Marshall Compaction Rammer 10.2 KG	4
86	viscometer u tub size no 12	2
87	Breaker - glass 600 ml for ring and ball apparatus	4
88	Bitumen Extraction Apparatus (centrifuge Type)	1
89	Proving Ring(50 KN)	1
90	Proving Ring(100 KN)	1
91	Digital Thermometers	10
92	Glass Thermometer	10
93	IR Thermometer	5
94	Core Cutting Machine With Apparatus (set)	1
95	Diamond Core Cutting Bit (100mm Dia)	1
96	Core Barrels for Core Cutting Machine	1
97	Vacuum Pump (specific Gravity of Bitumen Mix GMM)	1
98	Constant temperature Water bath (Digital)	2
99	Penetration cup 55x70 mm	2
100	penetration cup 55x35 mm	2
101	Specific Gravity Flask (2000 ml)	1
102	Specific Gravity Flask (5000 ml)	1
103	Specimen Extractor (Tikki, Goli & Rod)Marshall	1
104	Emulsion Trays	6
105	Viscometer viscosity of emulsified bitumen	1
106	Stop Watch	4
107	Hot Plates Electrical	2
108	Viscometer viscosity of bitumen	1
FOR I.S SIEVES 450 MM DIA		
109	100MM	2
110	90MM	2
111	75MM	2
112	63MM	2
113	53MM	2
114	50MM	2
115	45MM	2
116	40MM	2
117	37.5MM	2
118	31.5MM	2
119	26.5MM	2
120	25MM	2

Sl. No	Equipment List	Quantity
121	22.4MM	2
122	20MM	2
123	19MM	2
124	16 MM	2
125	14MM	2
126	13.2MM	2
127	12.5MM	2
128	11.2MM	2
129	10MM	2
130	9.5MM	2
131	6.3MM	2
132	5.6MM	2
133	4.75MM	2
134	2.36 MM	2
FOR I.S SIEVES 200 MM DIA		
135	37.5MM	2
136	6.5MM	2
137	22.4MM	2
138	19MM	2
139	16MM	2
140	14 MM	2
141	13.2MM	2
142	12.5MM	2
143	11.2MM	2
144	10MM	2
145	9.5MM	2
146	5.6MM	2
147	4.75MM	2
148	2.80MM	2
149	2.36MM	2
150	2.00MM	2
151	1.80MM	2
152	1.40MM	2
153	1.18MM	2
154	1.00MM	2
155	0.710 mc	1
156	0.600 mc	2
157	0.500 mc	1
158	0.45 mc	1
159	0.425 mc	2
160	0.355 mc	2
161	0.300 mc	2
162	0.150 mc	2
163	0.090 mc	2
164	0.075 mc	6

Sl. No	Equipment List	Quantity
GENERAL & CONTROL OF PROFILE AND SURFACE EVENNESS		
165	Rain Guage	1
166	Vernier Calliper	1
167	Glass Measuring Cylinder -1000 ml	2
168	Glass Measuring Cylinder -500 ml	2
169	Glass Measuring Cylinder -250 ml	2
170	Glass Measuring Cylinder -250 ml	2
171	Plastic Measuring Cylinder- 1000 ml	2
172	Plastic Measuring Cylinder- 500 ml	2
173	Plastic Measuring Cylinder- 250 ml	2
174	Plastic Measuring Cylinder- 250 ml	2
175	Depth gauge	4
176	Digital thermo hygrometer	2
177	Sampling containers 100 gms	200
178	3 Meter straight edge and measuring wedge	1
179	Camber template board	2
180	5 mtr tape	2
181	10 mtr tape	2
182	30 mtr tape	4
183	50 mtr tape	4

6.2. Quality Control Test Summary

GSB material, soil samples from borrow areas, aggregates, cement and bitumen are being tested regularly. Trial mix design for concrete with different admixtures is also in progress.

The detailed list of quality control test conducted up to the month of December - 2019 are tabulated below -

Four Laning of Cholopuram – Thanjavur From km 116.440 to km 164.275 Section of NH-45C in the State of TamilNadu Under NHDP Phase-IV on Hybrid Annuity Mode.

Summary of Quality Control Report / Monthly Progress Report (QC) - MONTH : DECEMBER-2019

S. No.	Description	IS Specification Clause	Frequency of Tests	Test conducted upto Previous month				Tests conducted during reporting month upto 25 th OCTOBER-2019				Test conducted upto this month				
				No. of test Conducted (1 Test =3Sets)	Passed	Failed	Nos. of test witnessed by IE	No. of test Conducted	Passed	Failed	Nos. of test witnessed by IE	No. of test Conducted	Passed	Failed	Nos. of test witnessed by IE	
1.0 Tests on OGL																
1.1	Grain size analysis	IS:2720 (Part4)	1 test / 250 meters	421	421	0	224	0	0	0	0	0	421	421	0	224
1.2	Atterberg Limits	IS:2720 (Part5)	1 test / 250 meters	421	421	0	224	0	0	0	0	0	421	421	0	224
1.3	Proctor	IS:2720 (Part8)	1 test / 250 meters	233	233	0	68	0	0	0	0	0	233	233	0	68
1.4	Free Swell index	IS:2720 (Part40)	1 test / 250 meters	421	403	18	224	0	0	0	0	0	421	403	18	224
1.5	California bearing ratio	IS:2720 (Part16)	As required	0	0	0	0	0	0	0	0	0	0	0	0	0
2.0 Cutting portion & Existing for EMB/SG (MoRT&H 305)																
2.1	Grain size analysis	IS:2720 (Part4)	1 test / 1500 m ³	31	31	0	11	0	1	0	0	1	32	32	0	12
2.2	Atterberg Limits	IS:2720 (Part5)	1 test / 1500 m ³	31	31	0	11	0	1	0	0	1	32	32	0	12
2.3	Proctor	IS:2720 (Part8)	1 test / 1500 m ³	31	31	0	11	0	1	0	0	1	32	32	0	12
2.4	Free Swell index	IS:2720 (Part40)	1 test / 1500 m ³	31	31	0	11	0	1	0	0	1	32	32	0	12
2.5	California bearing ratio	IS:2720 (Part16)	1 test / 3000 m ³	20	20	0	7	0	6	0	0	3	26	26	0	10
3.0 Borrow Area for EMB/Subgrade (MoRT&H 305)																
3.1	Grain size analysis	IS:2720 (Part4)	1 test / 1500 m ³	551	551	0	146	94	94	0	25	645	645	645	0	171
3.2	Atterberg Limits	IS:2720 (Part5)	1 test / 1500 m ³	551	551	0	146	94	94	0	25	645	645	645	0	171
3.3	Proctor	IS:2720 (Part8)	1 test / 1500 m ³	551	551	0	146	94	94	0	25	645	645	645	0	171
3.4	Free Swell index	IS:2720 (Part40)	1 test / 1500 m ³	551	551	0	146	94	94	0	25	645	645	645	0	171
3.5	California bearing ratio	IS:2720 (Part16)	1 test / 3000 m ³	81	81	0	34	21	21	0	5	102	102	102	0	39
3.6	Water Soluble Sulphate	IS:2720 (Part27)	As required	2	2	0	0	0	0	0	0	0	2	2	0	0
3.7	Angle of Internal Friction(φ)	IS:2720 (Part13)	As required	0	0	0	0	0	5	5	5	5	5	5	5	5
4.0 Field Density Test MoRT&H 305																
4.1	Field density (OGL)	IS:2720 (Part28)	1 test / 3000 sqm	4377	4377	15	1754	0	0	0	0	0	4377	4377	15	1754
4.2	Field density (EMB)	IS:2720 (Part28)	1 test / 3000 sqm	10250	10220	36	2656	156	150	6	21	10406	10370	42	2677	
4.3	Field density (SG)	IS:2720 (Part28)	1 test / 2000 sqm	553	553	3	65	143	140	3	43	696	556	3	108	
4.4	Field density (Shoulder)	IS:2720 (Part28)	1 test / 2000 sqm	0	0	0	0	0	0	0	0	0	0	0	0	
5.0 Safe Bearing capacity of soil																
5.1	Grain size analysis	IS:2720 (Part40)	As required	148	148	0	36	3	3	0	3	151	151	0	39	
5.2	Atterberg Limits	IS:2720 (Part4)	As required	148	148	0	35	3	3	0	3	151	151	0	38	
5.3	Proctor	IS:2720 (Part5)	As required	148	148	0	35	3	3	0	3	151	151	0	38	
5.4	Free Swell index	IS:2720 (Part8)	As required	148	147	1	36	3	3	0	3	151	150	1	39	
5.5	Bearing Capacity	IS:6403 / IS 1888	As required	148	1	147	37	3	0	3	3	151	1	150	40	
5.6	Plate Load Test	IS:6403 / IS 1888	As required	24	24	0	19	3	3	0	3	27	27	0	22	
6.0 Filter Media & Back filling MoRT&H 2500(Design)																
6.1	Gradation		As required	61	61	0	40	8	8	0	4	69	69	0	44	
6.2	Backfilling field density		1 test / 1000 m ³	0	0	0	0	20	20	0	5	20	0	0	5	
7.0 Granular Bedding Material (For Structures-Ground Improvement)-Design Approval																
7.1	Gradation	Table 400-1	As required	15	15	0	15	0	0	0	0	15	15	0	15	
7.2	Atterberg Limits	IS:2720 (Part5)	As required	13	13	0	7	0	0	0	0	13	13	0	7	
7.3	Proctor	IS:2720 (Part8)	As required	9	9	0	9	0	0	0	0	9	9	0	9	
7.4	CBR Test	IS:2720 (Part16)	As required	3	3	0	3	0	0	0	0	3	3	0	3	
7.5	Aggregate Impact value	IS:2386 Part-4	As required	9	9	0	9	0	0	0	0	9	9	0	9	

Four Laning of Cholopuram – Thanjavur From km 116.440 to km 164.275 Section of NH-45C in the State of TamilNadu Under NHDP Phase-IV on Hybrid Annuity Mode.

Summary of Quality Control Report / Monthly Progress Report (QC) - MONTH : DECEMBER-2019															
S. No.	Description	IS Specification Clause	Frequency of Tests	Test conducted upto Previous month			Tests conducted during reporting month upto 25 th OCTOBER-2019			Test conducted upto this month					
				No. of test Conducted (1 Test =3Sets)	Passed	Failed	Nos. of test witnessed by IE	No. of test Conducted	Passed	Failed	No. of test witnessed by IE	No. of test Conducted	Passed	Failed	
8.0 Granular Bedding Material (For Structures-Ground Improvement)- Stock & Site Testing															
8.1	Gradation	Table 400.1	As required	72	72	0	35	3	3	0	3	75	75	0	38
8.2	Aterberg Limits	IS:2720 (Part5)	As required	72	72	0	35	3	3	0	3	75	75	0	38
8.3	Proctor	IS:2720 (Part8)	As required	10	10	0	9	1	1	0	1	11	11	0	10
8.4	CBR Test	IS:2720 (Part1.6)	As required	10	10	0	9	1	1	0	1	11	11	0	10
8.5	Aggregate Impact value	IS:2386 Part-4	As required	7	7	0	7	1	1	0	1	8	8	0	8
8.6	Field Density	IS:2720 (Part28)	As required	1111	1111	0	253	42	42	0	42	1153	1153	0	295
9.0 CTSB Mix Design MoRT&H 403															
9.1	Gradation	Table 400.4	1 test/400m ³	63	63	0	52	0	0	0	0	63	63	0	52
9.2	Aterberg Limits	IS:2720 (Part5)	1 test/400m ³	24	24	0	15	0	0	0	0	24	24	0	15
9.3	Proctor	IS:2720 (Part8)	As required	29	29	0	21	0	0	0	0	29	29	0	21
9.4	Aggregate Impact value	IS:2386 Part-4	As required	24	24	0	14	0	0	0	0	24	24	0	14
9.5	Field Density	IS:2720 (Part28)	1 set of 2 Test per 500Sq.m	0	0	0	0	0	0	0	0	0	0	0	0
9.6	Specific gravity & Water absorption	IS:2386 (Part2)	As required	14	14	0	5	0	0	0	0	14	14	0	5
9.7	Cubes casting & Testing(Sets)	IRC SP 89 (2010)	Minimum 5 Cubes	42	42	0	32	0	0	0	0	42	42	0	32
9.8	CBR Test(Set)	IS:2720 (Part1.6)	As required	6	6	0	6	0	0	0	0	6	6	0	6
9.9	Organic Content	IRC SP 89 (2010)	As required	2	2	0	0	0	0	0	0	2	2	0	0
9.10	Total SO4 Content	IRC SP 89 (2010)	As required	2	2	0	0	0	0	0	0	2	2	0	0
9.11	Chloride Content	IRC SP 89 (2010)	As required	1	1	0	0	0	0	0	0	1	1	0	0
9.12	10% Fines Value	BS:812 (111)	As required	2	2	0	0	0	0	0	0	2	2	0	0
9.13	Durability Test	IRC SP 89 (2010)	As required	6	6	0	6	0	0	0	0	6	6	0	6
9.14	Permeability Test	IS:2720 (Part 36)	As required	1	1	0	0	0	0	0	0	1	1	0	0
10.0 CTSB Site Frequency															
10.1	Gradation	Table 400.4	1 test/400m ³	5	5	0	5	2	2	0	2	7	7	0	7
10.2	Aterberg Limits	IS:2720 (Part5)	1 test/400m ³	3	3	0	3	2	2	0	2	5	5	0	5
10.3	Proctor	IS:2720 (Part8)	As required	1	1	0	1	1	1	0	1	2	2	0	2
10.4	Aggregate Impact value	IS:2386 Part-4	As required	3	3	0	3	1	1	0	1	4	4	0	4
10.5	Field Density	IS:2720 (Part28)	1 set of 2 Test per 500Sq.m	9	9	12	9	30	30	0	5	39	33	12	14
10.6	Specific gravity & Water absorption	IS:2386 (Part2)	As required	0	0	0	0	1	1	0	1	1	1	0	1
10.7	Cubes casting & Testing(Sets)	IRC SP 89 (2010)	Minimum 5 Cubes	3	3	0	3	0	0	0	0	3	3	0	3
10.8	CBR Test	IS:2720 (Part1.6)	As required	1	1	0	1	1	1	0	1	2	2	0	2
11.0 WMM Mix (Design)															
11.1	Individual / Combined Gradation	Table 400.3	1 test/200m ³	88	88	0	67	0	0	0	0	88	88	0	67
11.2	Aggregate Impact Value	IS:2386 Part-4	1 test/ 1000 m ³	13	13	0	11	0	0	0	0	13	13	0	11
11.3	Flakiness & Elongation index	IS:2386 Part1	1 test/ 500 m ³	13	13	0	11	0	0	0	0	13	13	0	11
11.4	Aterberg Limits	IS:2720 (Part5)	1 test/200m ³	11	11	0	9	0	0	0	0	11	11	0	9
11.5	Water absorption	IS:2386 Part2	As required	8	8	0	8	0	0	0	0	8	8	0	8
11.6	Proctor	IS:2720 (Part8)	As required	6	6	0	6	0	0	0	0	6	6	0	6
11.7	CBR	IS:2720 (Part1.6)	As required	6	6	0	6	0	0	0	0	6	6	0	6
11.8	Field Density(Trial stretch)	IS:2720 (Part28)	1 set Test per 1000Sq.m / 3	0	0	0	0	0	0	0	0	0	0	0	0
12.0 WMM Site Frequency MoRT&H 406															
12.1	Individual / Combined Gradation	Table 400.3	1 test/200m ³	3	3	0	3	0	0	0	0	3	3	0	3
12.2	Aggregate Impact Value	IS:2386 Part-4	1 test/ 1000 m ³	1	1	0	1	0	0	0	0	1	1	0	1

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S. No.	Description	IS Specification Clause	Frequency of Tests	Test conducted upto Previous month				Tests conducted during reporting month upto 25 th OCTOBER-2019				Test conducted upto this month					
				No. of test Conducted (1 Test =3Sets)	Passed	Failed	Nos.of test witnessed by IE	No. of test Conducted	Passed	Failed	Nos.of test witnessed by IE	No. of test Conducted	Passed	Failed	Nos.of test witnessed by IE		
12.3	Flakiness & Elongation index	IS:2386 Part1	1 test/ 500 m ³	1	1	0	1	0	0	0	0	0	1	1	0	0	1
12.4	Afterberg Limits	IS:2720 (Part5)	1 test/200m ³	3	0	0	3	0	0	0	0	0	3	0	0	0	3
12.5	Proctor	IS:2720 (Part8)	As required	1	1	0	1	0	0	0	0	0	1	1	0	0	1
12.6	CBR	IS:2720 (Part16)	As required	1	1	0	1	0	0	0	0	0	1	1	0	0	1
12.7	Field Density(Trial stretch)	IS:2720 (Part28)	1 set Test per 1000sq.m / 3 pits	6	3	0	6	0	0	0	0	0	6	3	0	0	6
13.0 Dense Bituminous Macadam (Grade - II) (Design)																	
13.1	Gradation	MORTH Section-500/Clause-507 & Table 500-10	One set for individual constituent and mixed aggregate from dryer for each	50	50	0	50	0	0	0	0	0	50	50	0	0	50
13.2	Flakiness & Elongation Index	IS: 2386 (Part 1)1963	1 Test for 350 m ³	9	9	0	9	0	0	0	0	0	9	9	0	0	9
13.3	Aggregate Impact Value Test	IS: 2386 (Part 4)1963	1 Test for 350 m ³	9	9	0	9	0	0	0	0	0	9	9	0	0	9
13.4	Binder content and grading of mix	IRC: SP 11 -1988(APP-5)	One Test for each 400 tonnes of mix produced subject to a	9	9	0	9	0	0	0	0	0	9	9	0	0	9
13.5	Marshall Stability of mix	ASTM D 2726/1188	3 Tests for stability flow value density and void contents for each 400 tonnes of mix subject	10	10	0	10	0	0	0	0	0	10	10	0	0	10
13.6	Sand Equivalent Test	IS: 2720 Part 37)1963	One Test for each each source	12	12	0	12	0	0	0	0	0	12	12	0	0	12
13.7	Los Angeles Abrasion Value	IS: 2386 (Part 3)1963	1 Test for 350 m ³	9	9	0	9	0	0	0	0	0	9	9	0	0	9
13.8	Stripping	IS : 6241	One Test for each each source	3	3	0	3	0	0	0	0	0	3	3	0	0	3
13.9	Retained Satfallity	AASHTO 283	One Test for each each source	8	8	0	8	0	0	0	0	0	8	8	0	0	8
14.0	Retained Tensile Strength	AASHTO 284	One Test for each each source	8	8	0	8	0	0	0	0	0	8	8	0	0	8
14.1	Refusal	AASHTO 285	One Test for each each source	5	5	0	5	0	0	0	0	0	5	5	0	0	5
14.2	Plasticity Index	IS: 2720(Part 5)	One Test for each each source	3	3	0	3	0	0	0	0	0	3	3	0	0	3
14.3	Cleanliness (Dust)	IS: 2386 (Part 1)	One Test for each each source	3	3	0	3	0	0	0	0	0	3	3	0	0	3
15.0 Bitumen test																	
15.1	Absolute Viscosity at 60° C,poise,Minimum	IS: 1206-1978 part-2	As per table 2 of IS 73-2013	3	3	0	3	0	0	0	0	0	3	3	0	0	3
15.2	Penetration Test at 25° C,100gr,0.1mm,5sec	IS: 1203-1978	As per table 2 of IS 73-2013	3	3	0	3	0	0	0	0	0	3	3	0	0	3
15.3	Softening point(R&B) Min	IS: 1205-1978	As per table 2 of IS 73-2013	3	3	0	3	0	0	0	0	0	3	3	0	0	3
15.4	Flash point(Cleveland open cup) ^a C,Min	IS: 1209-1978	1 Test per Lot	3	3	0	3	0	0	0	0	0	3	3	0	0	3
15.5	Test on Residue from TFO																
15.6	Viscosity ratio at 60° C, max	IS: 1206-1978 part-2	1 Test per Lot	3	3	0	3	0	0	0	0	0	3	3	0	0	3
15.7	Ductility at 25° C ,cm,Min	IS: 1208-1978	1 Test per Lot	3	3	0	3	0	0	0	0	0	3	3	0	0	3

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S. No.	Description	IS Specification Clause	Frequency of Tests	Test conducted upto Previous month			Tests conducted during reporting month upto 25 th OCTOBER-2019			Test conducted upto this month					
				No. of test Conducted (1 Test =3Sets)	Passed	Failed	Nos. of test witnessed by IE	No. of test Conducted	Passed	Failed	No. of test Conducted	Passed	Failed	Nos. of test witnessed by IE	
17.0 Fine Aggregate MoRT&H 1008															
17.1	Grade / Sieve analysis	IS:2386 (Part1)	As required	379	379	0	116	31	31	0	10	410	410	0	126
17.2	Specific gravity & Water absorption	IS:2386 (Part2)	As required	16	16	0	6	2	2	0	1	18	18	0	7
17.3	Fineness Modulus	MoRT&H Sec. 1008&383	As required	379	379	0	116	31	31	0	10	410	410	0	126
17.4	Alkali aggregate reactivity test	IS:2386 (Part-7)IS : 456	1 test per source	2	2	0	0	0	0	0	0	2	2	0	0
17.5	Deleterious material/silt	IS:2386 (Part2)	1 test per source	2	2	0	0	0	0	0	0	2	2	0	0
18.0 Coarse Aggregate MoRT&H 1007															
18.1	Gradation	IS:2386 (Part2)	As required	594	594	0	196	31	31	0	20	625	625	0	216
18.2	Specific gravity & Water absorption	IS:2386 (Part3)	As required	24	24	0	11	2	2	0	2	26	26	0	13
18.3	Aggregate Impact Value	IS:2386 (Part4)	As required	78	78	0	26	4	4	0	2	82	82	0	28
18.4	Flakiness index	IS:2386 (Part1)	As required	78	78	0	26	4	4	0	2	82	82	0	28
18.5	Soundness	IS:2386 (Part5)	As required	1	1	0	1	0	0	0	0	1	1	0	1
18.6	Alkali aggregate reactivity test	IS:2386 (Part-7)IS : 456	1 test per source	1	1	0	1	0	0	0	0	1	1	0	1
18.7	Deleterious constituents	IS:2386 (Part2)	1 test per source	1	1	0	1	0	0	0	0	1	1	0	1
18.8	Petrographic Examination	IS:2386 (Part8)	1 test per source	1	1	0	1	0	0	0	0	1	1	0	1
19.0 Cement MoRT&H 1006															
19.1	Chemical test	IS:4031,4032	1 test per source	12	12	0	7	0	0	0	0	12	12	0	7
19.2	Fineness	IS:4031 (Part1)	500mt (or) Every week	88	88	0	40	9	9	0	4	97	97	0	44
19.3	Normal Consistency	IS:4031 (Part4)	500mt (or) Every week	88	88	0	43	9	9	0	4	97	97	0	47
19.4	Initial, Final setting time	IS:4031 (Part5)	500mt (or) Every week	88	88	0	43	9	9	0	4	97	97	0	47
19.5	Soundness of Cement	IS:4031 (Part3)	500mt (or) Every week	88	88	0	43	9	9	0	4	97	97	0	47
19.6	Compressive Strength-set	IS:4031 (Part6)													
	3 days		500mt (or) Every week	107	107	0	49	8	8	0	8	115	115	0	57
	7 days		500mt (or) Every week	107	107	0	51	6	6	0	6	113	113	0	57
	28 days		500mt (or) Every week	107	107	0	27	4	4	0	4	111	111	0	31
20	Chemical test	IS 2386	1 test per source	7	7	0	3	0	0	0	0	7	7	0	3
21.0 Admixture															
21.1	Chemical Test	IS 9103	1 test per source	3	3	0	1	0	0	0	0	3	3	0	1
22.0 Steel															
22.1	8 mm Dia	IS 1786	Physical & Chemical Properties	15	15	0	7	0	0	0	0	15	15	0	7
22.2	10 mm Dia	IS 1786	(1) Test on first lot,(2) Further supply will be provided with mtc. (3) As required by engineer.	15	15	0	8	0	0	0	0	15	15	0	8
22.3	12 mm Dia	IS 1786		19	19	0	9	0	0	0	0	19	19	0	9
22.4	16 mm Dia	IS 1786		20	20	0	9	0	0	0	0	20	20	0	9
22.5	20 mm Dia	IS 1786		20	20	0	8	0	0	0	0	20	20	0	8
22.6	25 mm Dia	IS 1786		22	22	0	12	0	0	0	0	22	22	0	12
22.7	32 mm Dia	IS 1786		8	8	0	5	0	0	0	0	8	8	0	5

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S. No.	Description	IS Specification Clause	Frequency of Tests	Test conducted upto Previous month				Tests conducted during reporting month upto 25 th OCTOBER-2019				Test conducted upto this month							
				Passed		Failed		No. of test Conducted		Nos. of test witnessed by IE		Passed		Failed		No. of test Conducted		Nos. of test witnessed by IE	
				No. of test Conducted (1 Test =3Sets)															
23.(A) Concrete Cube Strength of Design Mix																			
M15 PCC																			
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	60	60	0	0	56	9	9	0	0	9	9	69	69	0	65	
	28Days Compressive Strength			65	62	0	0	55	0	0	0	0	0	65	62	0	55		
M20 PCC																			
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	57	57	0	0	53	9	9	0	0	9	9	66	66	0	62	
	28Days Compressive Strength			59	56	0	0	55	0	0	0	0	0	59	56	0	55		
M20 KERB																			
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	8	8	0	0	8	0	0	0	0	0	8	8	0	8		
	28Days Compressive Strength			8	8	0	0	8	0	0	0	0	0	8	8	0	8		
M25 RCC																			
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	57	57	0	0	53	9	9	0	0	9	9	66	66	0	62	
	28Days Compressive Strength			59	56	0	0	55	0	0	0	0	0	59	56	0	55		
M30 RCC																			
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	60	60	0	0	56	0	0	0	0	0	60	60	0	56		
	28Days Compressive Strength			63	59	0	0	59	0	0	0	0	0	63	59	0	59		
M30 RCC PUMPABLE																			
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	38	38	0	0	34	9	9	0	0	9	9	47	47	0	43	
	28Days Compressive Strength			37	35	0	0	33	0	0	0	0	0	37	35	0	33		
M35 RCC																			
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	56	56	0	0	52	0	0	0	0	0	56	56	0	52		
	28Days Compressive Strength			58	56	0	0	54	0	0	0	0	0	58	56	0	54		
M35 RCC PILING																			
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	56	56	0	0	52	9	9	0	0	9	9	65	65	0	61	
	28Days Compressive Strength			58	56	0	0	54	0	0	0	0	0	58	56	0	54		
M35 RCC PUMPABLE																			
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	38	38	0	0	34	9	9	0	0	9	9	47	47	0	43	
	28Days Compressive Strength			37	35	0	0	33	0	0	0	0	0	37	35	0	33		
M35 RE BLOCK																			
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	60	60	0	0	54	0	0	0	0	0	60	60	0	54		
	28Days Compressive Strength			55	55	0	0	55	0	0	0	0	0	55	55	0	55		
M40 RCC																			
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	26	24	0	0	26	9	9	0	0	9	9	35	33	0	35	
	28Days Compressive Strength			13	9	0	0	13	9	9	0	0	9	22	18	0	22		
M45 RCC																			
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	27	21	0	0	28	9	9	0	0	9	9	36	30	0	37	
	28Days Compressive Strength			34	34	0	0	31	9	9	0	0	9	43	43	0	40		
M45 RCC PUMPABLE																			
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	23	15	0	0	20	0	0	0	0	0	23	15	0	20		
	28Days Compressive Strength			26	22	0	0	23	0	0	0	0	0	26	22	0	23		

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S. No.	Description	IS Specification Clause	Frequency of Tests	Test conducted upto Previous month				Tests conducted during reporting month upto 25 th OCTOBER-2019				Test conducted upto this month			
				Passed		Failed		Passed		Failed		Passed		Failed	
				No. of test Conducted (1 Test =3Sets)	Nos. of test witnessed by IE	No. of test Conducted	Nos. of test witnessed by IE	No. of test Conducted	Nos. of test witnessed by IE	No. of test Conducted	Nos. of test witnessed by IE	No. of test Conducted	Nos. of test witnessed by IE	No. of test Conducted	Nos. of test witnessed by IE
23.(B) Concrete Cube Strength of Site Cubes															
M15 PCC															
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	210	210	0	108	10	10	0	5	220	220	0	113
	28Days Compressive Strength			414	414	0	212	13	13	0	7	427	427	0	219
M20 PCC															
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	3	3	0	2	0	0	0	0	3	3	0	2
	28Days Compressive Strength			8	8	0	4	0	0	0	0	8	8	0	4
M25 RCC															
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	10	10	0	5	1	1	0	1	11	11	0	6
	28Days Compressive Strength			15	15	0	9	0	0	0	0	15	15	0	9
M30 RCC															
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	385	385	0	152	15	15	0	10	400	400	0	162
	28Days Compressive Strength			781	781	0	286	25	25	0	15	806	806	0	301
M30 RCC PUMPABLE															
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	9	9	0	4	2	2	0	2	11	11	0	6
	28Days Compressive Strength			27	27	0	12	7	7	0	7	34	34	0	19
M35 RCC															
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	269	269	0	113	8	8	0	4	277	277	0	117
	28Days Compressive Strength			578	578	0	243	24	24	0	10	602	602	0	253
M35 RCC PILING															
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	453	453	0	133	18	18	0	20	471	471	0	153
	28Days Compressive Strength			1465	1465	0	616	25	25	0	35	1490	1490	0	651
M35 RCC PUMPABLE															
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	233	233	0	108	48	48	0	40	281	281	0	148
	28Days Compressive Strength			574	574	0	240	142	142	0	100	716	716	0	340
M35 RE BLOCK															
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	777	777	0	269	0	0	0	0	777	777	0	269
	28Days Compressive Strength			1414	1414	0	459	0	0	0	0	1414	1414	0	459
M40 RCC															
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	0	0	0	0	3	3	0	3	3	3	0	3
	28Days Compressive Strength			0	0	0	0	0	0	0	0	0	0	0	0
M45 RCC															
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	4	4	0	4	0	0	0	0	4	4	0	4
	28Days Compressive Strength			4	4	0	2	0	0	0	0	4	4	0	2
24.0 BENTONITE															
20.1	Density			219	219	0	69	25	25	0	10	244	244	0	79
20.2	Marsh Cone Viscosity			219	219	0	69	25	25	0	10	244	244	0	79
20.3	pH Value		As required	219	219	0	69	25	25	0	10	244	244	0	79
20.4	Silt Content			14	14	0	5	1	1	0	1	15	15	0	6
20.5	Liquid Limit			17	17	0	6	1	1	0	1	18	18	0	7

Four Laning of Cholopuram – Thanjavur From km 116.440 to km 164.275 Section of NH-45C in the State of TamilNadu Under NHDP Phase-IV on Hybrid Annuity Mode.

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				No. of test Conducted (1 Test =3Sets)	Passed	Failed	Nos.of test witnessed by IE	No. of test Conducted	Passed	Failed	Nos.of test witnessed by IE	No. of test Conducted	Passed	Failed	Nos.of test witnessed by IE	
25.0 Fine Aggregate MoRT&H 1008-(RE-Block)																
21.1	Grade / Sieve analysis	IS:2386 (Part1)	As required	460	460	0	134	0	0	0	0	0	460	460	0	134
21.2	Fineness Modulus	MORT&H Sec. 1008&383	As required	460	460	0	134	0	0	0	0	0	460	460	0	134
21.3	Specific gravity& Water absorption	IS:2386 (Part2)	As required	11	11	0	4	0	0	0	0	0	11	11	0	4
26.0 Coarse Aggregate MoRT&H 1007-(RE-Block)																
22.1	Gradation	IS:2386 (Part2)	As required	416	416	0	113	0	0	0	0	0	416	416	0	113
22.2	Specific gravity& Water absorption	IS:2386 (Part3)	As required	9	9	0	3	0	0	0	0	0	9	9	0	3
22.3	Aggregate Impact Value	IS:2386 (Part4)	1 test / each source &	16	16	0	5	0	0	0	0	0	16	16	0	5
22.4	Flakiness index	IS:2386 (Part1)	1 test / each source &	14	14	0	4	2	2	0	0	1	16	16	0	5

7. Weather Report

Date	Temperature (Celsius)		Humidity (%)		Rainfall (mm)	Remarks
	Min	Max	Min	Max		
01-12-19	25.8	28.2	83	97	22.1	Cloudy & Rainy
02-12-19	26.4	29.4	79	97	31.4	Cloudy & Rainy
03-12-19	24	29.4	79	99	31.3	Cloudy & Rainy
04-12-19	24.7	30.4	67	99	0	Cloudy & Sunny
05-12-19	24.7	29.2	65	82	0.8	Cloudy & Sunny
06-12-19	24.5	27.8	65	82	0	Cloudy & Sunny
07-12-19	24.6	28.6	71	89	17.6	Cloudy & Rainy
08-12-19	24.4	29.7	60	90	0	Cloudy & Sunny
09-12-19	24.2	30.1	60	89	0	Sunny
10-12-19	24.6	30.4	57	84	0	Sunny
11-12-19	24.9	26.4	78	84	0	Sunny
12-12-19	25.4	30.7	59	84	0	Sunny
13-12-19	27.5	29.9	68	94	47.1	Cloudy/Rainy
14-12-19	25.8	25.1	90	84	5.7	Sunny/Rainy
15-12-19	25.1	25.8	84	90	5.7	Sunny & Rainy
16-12-19	24.8	30.6	65	91	3.3	Sunny & Rainy
17-12-19	24.7	29.8	57	87	0	Sunny & Cloudy
18-12-19	24.9	29.5	68	94	0.6	Sunny & Cloudy
19-12-19	24.8	30	65	89	0	Sunny & Cloudy
20-12-19	24.5	29.6	62	88	0	Sunny
21-12-19	24.7	25.2	81	85	0	Sunny
22-12-19	24.9	25.9	79	81	0	Sunny
23-12-19	24.8	29.2	62	86		Sunny & Cloudy
24-12-19	24.1	27.9	79	92	30.6	Rainy
25-12-19	24.4	27.2	86	96	43.4	Rainy
26-12-19	24.2	30.4	61	89	0	Sunny
27-12-19	23.8	26.5	81	91	0	Sunny
28-12-19	25.8	28.2	83	97	22.1	Cloudy & Rainy
29-12-19	26.4	29.4	79	97	31.4	Cloudy & Rainy
30-12-19	24	29.4	79	99	31.3	Cloudy & Rainy
31-12-19	24.7	30.4	67	99	0	Cloudy & Sunny

Various issues related to environment and safety, such as traffic management, safety signage's, disposal of waste materials and oil spillage, housekeeping, area barricading and traffic management, etc., are being taken care of during the execution of the project.

Periodic Safety meetings being conducted on a regular basis and the details of the photographs for the same along with action taken are as below.

1. Safety Tool Box Meeting conducted for Sub Contractors at Ch. 120+000.



Concessionaire requests NHAI to take early action on the following issues:

1. Pending Disbursement of Payment to the beneficiaries from CALA towards Land and Buildings in Thanjavur District. – Request Authority to advise/instruct the Competent Authority of Land Acquisition to speed up the process of disbursement of pending payment.
2. Permission from Local Authorities for procurement of Borrow Earth for Irrigation Tanks.
3. Rerouting of existing canal between Km.146+600 to 148+100
4. NOC from PWD/WRO, Govt. of Tamil Nadu for construction of Minor Bridge (07 Nos) and Major Bridge (04 Nos)
5. NOC from PWD/WRO, Govt. of Tamil Nadu for construction of project highways in the existing ponds (in a length of 1.667 Kms).
6. Removal/relocation of existing irrigation sluice and regulator in the locations of Km: 150+800, Km: 152+900 & Km: 134+770.
7. Additional land acquisition for Toll plaza location, Bus bays. Turning radius at Major junctions.
8. Permission for Removal of Teak wood trees from the Project Highway in length of 680m.
9. Removal of Religious structures of 13 Nos. and Bus stand from the proposed ROW.
10. Removal of Government Buildings like VAO office, School, Post Office & Ration Shop etc. in 15 nos. of locations.
11. Removal of unauthorized occupations in 25 nos. of locations in the project highways.
12. Required State Support Agreement between NHAI & Govt. of Tamil Nadu as due priority will be given to NH Projects by the State Govt. officials.
13. Removal of Fuel Stations at Km: 120+400, Km: 128+850 and Km: 122+450.
14. Revised Estimates for Electrical Shifting due to non-available of vertical clearance – Request Authority for earlier Approval.
15. Removal of Existing Motor Rooms of 22 nos. from the project highway. – Request Authority to advise/instruct the competent department to take the possession of land.

16. Hindrances/Occupations/Land Acquisition issues in the following locations due to various reasons,

Sl. No	From	To	Effectuated Length in (M)	Nature of Hindrance	Survey No	Name of Village	Name of Land Owner
1	138+400	138+480	520 m	Court Stay	4/4A	Thiruvalanzuli	Mr.Dharmalingam
2	138+500	138+540		Court Stay	-	Thiruvalanzuli	Mr.Shanmugam
3	138+750	138+850	500 m	Court Stay		Thiruvalanzuli	Mr.Dhahshnamoorthy , Mr.Rajini, Mr.nagaraj
4	142+100	142+200	500 m	Payment Issue	326/1, 326/2, 326/3, 326/4, 326/5, 326/ 6	Gopurajapuram	Mr.Pakir Mohammed 9566541123
5	161+100	161+200	1000 m	LA issues	3/1A,3/1B	Kadakadapai	Ms Tamilselvi
Total Effectuated Length in Meters			2520				

Table 10.1. Details of Important Events

Sl. No	Date of Events	Description of Events	Remarks
1)	11.12.2019	Progress Review Meeting at Pateeswaram Camp with IE Officials	

The following figures represent the organization structure of the EPC and SPV Team.

1. Fig. 4 - Organization Chart - EPC Team
2. Fig. 5 - Organization Chart - SPV Team

Figure 4 - ORGANIZATION CHART - EPC TEAM

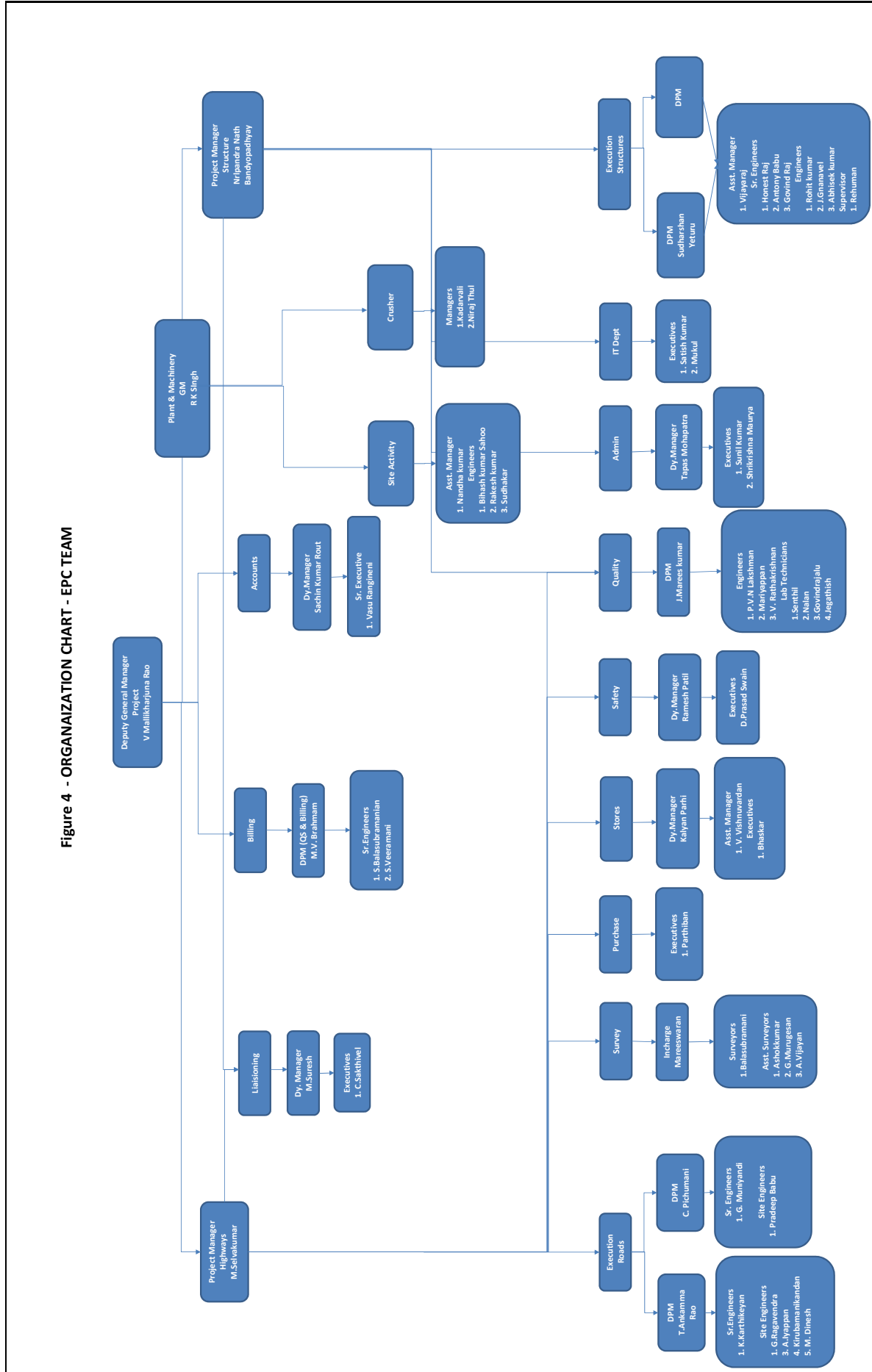
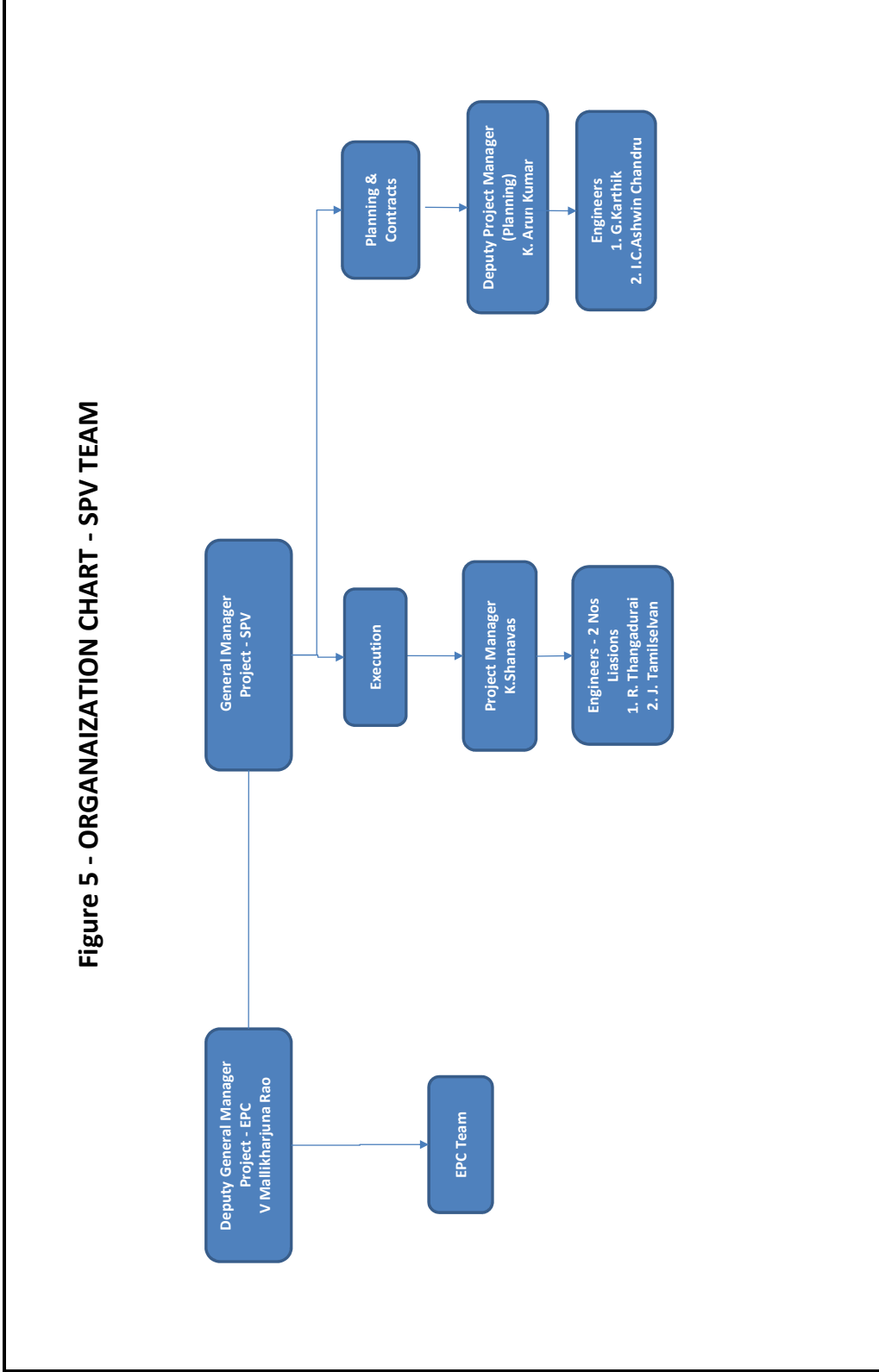


Figure 5 - ORGANAIZATION CHART - SPV TEAM



12. List of Plants, Machinery and Equipment's

S.No	Name of the Machinery	Capacity / Model	Mobilized at Site	Remarks
1	Grader	120K2	5	
2	Excavator/JCB	JCB-220	6	
3	Dozer		1	
4	Soil Compactor	HAMM 311	4	
5	Backhoe Loader	JCB 3DX	5	
6	Tipper	Bharat Benz- 3128C	16	
7	Transit Mixer	2523C	11	
8	Loader	455 ZX	6	
9	Trailer		3	
10	Water Tanker		8	
11	Diesel Tanker		3	
12	Boom Placer	S-36	0	
13	Tractor	5036 D V-2	3	
14	Mobile Service Van		1	
15	Tower Light	AJASKY	3	
16	Hydra Crane		4	
17	Asphalt Batch Mix Plant		1	
18	Wet Mix Plant	250 TPH	1	
14	Concrete Batch Mix Plant 45 cum	45 cum	2	
15	Concrete Batch Mix Plant 60 cum	60 cum	1	
16	Crusher Plant (3 Stage)	250 TPH	3	
17	Weigh Bridge for Camp 100MT	100MT	2	
18	Weigh Bridge for Crusher 100MT	100MT	1	
19	Genset Base Camp	25KV	2	
20	Genset (Crusher) 63KVA	63KVA	3	
21	Genset (H.M & B/P)	82.50KV	3	
22	Genset (B/P-CP-45)	125KV	1	
23	Genset 650 KVA	650 KVA	1	
26	Genset (Crusher)	1010KVA	3	
27	Genset 15KVA	15KVA	1	

Table 13.1 - Status of Change of Scope Proposals

Sl. No.	Proposal Details	Date of Proposal	Current Status	COS Amount	Actual Date of Approval
1	Replacement of Pipe Culvert with box Culvert	25.04.2018	Approved in-principle by Authority. Preparation of Details Quantities in proper order is in Progress	NA	NA
2	Upgradation strengthening the Incident Management services.	10.05.2019	IE recommended to Authority vide ref.148 for issuance under COS and is under scrutiny with Authority	NA	NA
3	Construction of Major Bridge at Km 131+963- under Change of Scope	01.06.2019	IE recommended to Authority vide ref.141 for issuance under COS.	NA	NA

14. Details of Correspondences

The following tables list out the correspondences between the parties.

Table 14.1. - Concessionaire to NHAI

Table 14.2. - NHAI to Concessionaire

Table 14.3. - Concessionaire to Independent Engineer

Table 14.4. - Independent Engineer to Concessionaire

Project Name:- Four Lining of Cholopuram – Thanjavur from Km. 116.440 to 164.275 Section of NH45C in the state of Tamilnadu under NHDP-IV on Hybrid Annuity

TABLE 14.1 - CORRESPONDANCE - CONCESSIONAIRE TO NHAI

S.No	Date	Letter No	Subject	Remarks
1	12/7/2019	PCTHPL/CTP/NHAI/2019/591	R.A.Bill No.14 -Shifting of Electrical Utility as per Cl.11 .2.1 of Concession Agreement.	
2	12/18/2019	PCTHPL/CTP/NHAI/2019/600	Permission from the District Collector of Pudukkottai for extracting soil from the proposed Borrow Areas	
3	12/18/2019	PCTHPL/CTP/NHAI/2019/601	Permission from the District Collector of Thiruvarur for extracting soil from the proposed Borrow Areas	
4	12/18/2019	PCTHPL/CTP/NHAI/2019/602	Permission from the District Collector of Thanjavur for extracting soil from the proposed Borrow Areas	
5	12/23/2019	PCTHPL/CTP/NHAI/2019/606	Submission of Design and drawings of proposed ROB@ Km 134+355	
6	12/24/2019	PCTHPL/CTP/NHAI/2019/608	Details of Non-workable front for execution of construction activities due to presence of hindrance encroachments within RoW	
7	12/25/2019	PCTHPL/CTP/NHAI/2019/610	Request to provide Land Acquisition Plan for Project Highway	
8	12/28/2019	PCTHPL/CTP/NHAI/2019/612	Acknowledgment for receipt of Mobilization Bank Guarantee in original - reg.	
9	12/30/2019	PCTHPL/CTP/NHAI/2019/613	Maintenance of Existing Road – Compliance Report	

Project Name:- Four Lining of Cholopuram – Thanjavur from Km. 116.440 to 164.275 Section of NH45C in the state of Tamilnadu under NHDP-IV on Hybrid Annuity

TABLE 14.2 - CORRESPONDANCE - NHAI TO CONCESSIONAIRE

S.No	Date	Letter No	Subject	Remarks
1	12/7/2019	NHAI/PIU/Thanj/11019/35/2013/2446	Disruption of Construction activities in between Km 161+019 to Km 162+800 due to some Court cases	
2	12/7/2019	NHAI/PIU/Thanj/11026/13/2018/2445	Shifting of Water Pipe Line - Report Called	
3	12/10/2019	NHAI/PIU/Thanj/11026/21/2018/2447	Damaged pipe culvert- Rectification requested	
4	12/10/2019	NHAI/PIU/Thanj/11026/05/2018/2460	Road Safety meeting held on 28.11.2019 at Thanjavur- Suggestions made by the Superintendent of Police-communicated	
5	12/17/2019	NHAI/PIU/Thanj/11026/24/2019/2525	Proposed 4L ROB at Rly Km 320_800 in between Darasuram and Swamimalai Stations in Villupuram - Tiruchirappalli section of Tiruchirappalli division	
6	12/17/2019	NHAI/PIU/Thanj/11026/12/2018/2522	Details of payment made for electrical utility shifting	
7	12/21/2019	NHAI/PIU/Thanj/11026/15/2018/2581	Details of payment made for milestone-I	

TABLE 14.3 - CORRESPONDANCE - CONCESSIONAIRE TO INDEPENDENT ENGINEER

S.No	Date	Letter No	Subject	Remarks
1	12/5/2019	PCTHPL/CTP/E/2019/585	Removal_ Relocation of High Voltage transmission line of TANGEDCO at Km.158+860	
2	12/5/2019	PCTHPL/CTP/E/2019/586	Compliance report - RE wall drawings for VUP at Km 136+307	
3	12/5/2019	PCTHPL/CTP/E/2019/587	Compliance report - Release of the Bank Guarantee - Report call for	
4	12/5/2019	PCTHPL/CTP/E/2019/588	Submission of Revised Design & Drawings of Major Bridge at Ch. 131 +980	
5	12/5/2019	PCTHPL/CTP/E/2019/589	Compliance report - Design and drawings of proposed Major Bridge cum VUP at Km.156 + 584	
6	12/6/2019	PCTHPL/CTP/E/2019/590	Construction Activities hampered due to unprecedented and unseasonal intermittent rains.	
7	12/7/2019	PCTHPL/CTP/E/2019/592	Submission of Monthly Progress Report for the Month of November 2019	
8	12/9/2019	PCTHPL/CTP/E/2019/593	Submission of Credentials alongwith Design & Construction Methodology for Geogrid from Ms Techfab India Industries Ltd - Reply Comments	
9	12/9/2019	PCTHPL/CTP/E/2019/594	Regarding Submission of Revised Plan & Profile Drawing of Service Road (R4) from Km. 156+000 to Km. 157 +350	
10	12/10/2019	PCTHPL/CTP/E/2019/595	Clarification of Utilization of POT-PTFE Bearings in the Project Highway- Reply	
11	12/10/2019	PCTHPL/CTP/E/2019/596	Submission of Revised Design & Drawings of Major Bridge at Ch. 131 +980	
12	12/10/2019	PCTHPL/CTP/E/2019/596A	Submission of Job Mix Formula for DBM (Grading-II)	
13	12/12/2019	PCTHPL/CTP/E/2019/597	Change of scope notice for construction of Major Bridge at Km: 131+963 as per clause 16.2.1 of Concession Agreement - Reg.	
14	12/14/2019	PCTHPL/CTP/E/2019/598	Submission of Design & Drawings for Toll Plaza Building, Toll Well and Toll Tunnel for the proposed Toll Plaza at Ch. 152+000 of the Project Highway	
15	12/16/2019	PCTHPL/CTP/E/2019/599	Test Pile Drawings for a Major Bridge at Ch. 156+585 (R0) - Compliance Report	
16	12/19/2019	PCTHPL/CTP/E/2019/603	Proposal for Retrouting of Existing canal between Km: 146+600 to Km:147+050 and Km: 147+900 to Km:148+ 150.	
17	12/23/2019	PCTHPL/CTP/E/2019/604	Submission of Soil Test Report for the Borrow Area No.32	
18	12/23/2019	PCTHPL/CTP/E/2019/605	Submission of Soil Test Report for the Borrow Area No.36	
19	12/24/2019	PCTHPL/CTP/E/2019/607	Submission of Design & Drawings for Crash Barrier with Friction slab of the Project Highway	
20	12/25/2019	PCTHPL/CTP/E/2019/609	Regarding matter related to additional land required to accommodate bulb portion in Service Road near VUP_GSI Structure in Project Highway.	
21	12/25/2019	PCTHPL/CTP/E/2019/611	Compliance Report- Disruption of Construction activities between Km 161+019 to 162+800 due to pending resolution of petitions	

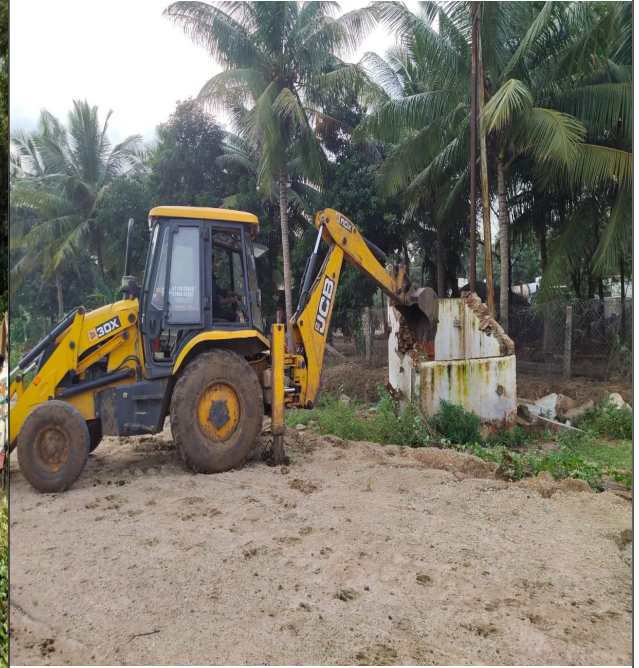
Project Name:- Four Laning of Cholapuram – Thanjavur from Km. 116.440 to 164.275 Section of NH45C in the state of Tamilnadu under NHDP-IV on Hybrid Annuity

TABLE 1.4.4 - CORRESPONDANCE - INDEPENDENT ENGINEER TO CONCESSIONAIRE / NHAI

S.No	Date	Letter No	Subject	Remarks
1	03-12-19	THEME/NHAI/CHO-TNJR/CON/1219/471	Review of Soil Test Reports for the Borrow Area No. 31	
2	03-12-19	THEME/NHAI/CHO-TNJR/CON/1219/472	Review of Design and Drawings of Staging and Form work for VUPs and GSIs	
3	04-12-19	THEME/NHAI/CHO-TNJR/CON/1219/473	Review of Job Mix Design Report for Filler Media	
4	04-12-19	THEME/NHAI/CHO-TNJR/CON/1219/475	Clarification of Utilization of POT – PTFE Bearings from Ms BBR India Pvt Ltd & Ms Dynamic Prestress (I) Pvt Ltd	
5	09-12-19	THEME/NHAI/CHO-TNJR/CON/1219/476	Review of RE Wall Drawings for VUP at Km 136+307	
6	12-12-19	THEME/NHAI/CHO-TNJR/CON/1219/477	Minutes of Project Review Meeting No.14	
7	12-12-19	THEME/NHAI/CHO-TNJR/CON/1219/478	Quality concern over structure finishing works	
8	12-12-19	THEME/NHAI/CHO-TNJR/CON/1219/479	Submission of GAD for 2 Nos of proposed Major Bridges for the concurrences of Tamil Nadu PWD WRO-NOC issued - communicated	
9	13-12-19	THEME/NHAI/CHO-TNJR/CON/1219/480	Review of test pile Design and Drawings for Major Bridge at Ch.131+980 (R0)	
10	14-12-19	THEME/NHAI/CHO-TNJR/CON/1219/481	Review of Credentials alongwith Design & Construction Methodology for Geogrid from Ms Techfab India Industries Ltd	
11	16-12-19	THEME/NHAI/CHO-TNJR/CON/1219/482	Construction Activities hampered due to unprecedented and unseasonal intermittent rains	
12	16-12-19	THEME/NHAI/CHO-TNJR/CON/1219/483	Ms. BBR India Pvt Ltd Credentials and Design for POT – PTFE bearings	
13	17-12-19	THEME/NHAI/CHO-TNJR/CON/1219/484	Test Pile drawings for a Major Bridge at Ch. 156+585 (R0)	
14	17-12-19	THEME/NHAI/CHO-TNJR/CON/1219/485	Maintenance of Existing Road and Diversion Road	
15	17-12-19	THEME/NHAI/CHO-TNJR/CON/1219/486	Review of Revised Plan and Profile Drawings of Service Road (R4) from Km. 156+000 to Km. 157+350	
16	17-12-19	THEME/NHAI/CHO-TNJR/CON/1219/487	Review of Revised Design and Drawings of Major Bridge at Ch.131+980	
17	26-12-19	THEME/NHAI/CHO-TNJR/CON/1219/489	Estimated cost for bridge proper for ROB - requested	
18	26-12-19	THEME/NHAI/CHO-TNJR/CON/1219/490	Review of RE Wall drawings for a VUP at Ch 136+307	
19	26-12-19	THEME/NHAI/CHO-TNJR/CON/1219/491	Review of Design and Drawings for POT-PTFE Bearings from Ms. BBR India Pvt Ltd	

15. Progress Photographs

Sl. No	Description	Location	Side	Remarks
1.	DISMANTLING OF EXISTING STRUCTURES IS IN PROGRESS	117+350	LHS	
2.	DISMANTLING OF EXISTING STRUCTURES IS IN PROGRESS	132+560	RHS	



Sl. No	Description	Location	Side	Remarks
3.	DISMANTLING OF EXISTING STRUCTURES IS IN PROGRESS	117+500	RHS	
4.	DISMANTLING OF EXISTING STRUCTURES IS IN PROGRESS	117+600	LHS	



Sl. No	Description	Location	Side	Remarks
5.	MAINTAINENCE OF EXISTING ROAD IS IN PROGRESS			
6.	MAINTAINENCE OF EXISTING ROAD IS IN PROGRESS			



Sl. No	Description	Location	Side	Remarks
7.	EMBANKMENT IS IN PROGRESS	124+005	BHS	
8.	EMBANKMENT IS IN PROGRESS	123+890	BHS	



Sl. No	Description	Location	Side	Remarks
9.	CTSB 1 st LAYER IS IN PROGRESS	163+880	LHS	
10.	CTSB 1 st LAYER IS IN PROGRESS	164+120	LHS	



Sl. No	Description	Location	Side	Remarks
11.	EMBANKMENT 4 th LAYER IS IN PROGRESS	160+300	RHS	
12.	SUBGRADE TOP COMPACTION IS IN PROGRESS	161+110	RHS	



Sl. No	Description	Location	Side	Remarks
13.	BOX CULVERT – TOP SLAB CONCRETING IS IN PROGRESS	129+260	LHS	
14.	BOX CULVERT – RETURN WALL SHUTTERING COMPLETED	160+658	LHS	



Sl. No	Description	Location	Side	Remarks
15.	BOX CULVERT – BOTTOM HAUNCH CONCRETING IS IN PROGRESS	131+733	LHS	
16.	BOX CULVERT – SLAB CONCRETING COMPLETED	121+895	LHS	



Sl. No	Description	Location	Side	Remarks
17.	MNB – RAFT SHUTTERING IN PROGRESS	158+994	RHS	
18.	MNB – SLAB CURING IN PROGRESS	141+760	LHS	



Sl. No	Description	Location	Side	Remarks
19.	PUP – BRACKET DESHUTTERING IN PROGRESS	147+951	BHS	
20.	PUP – SLAB REINFORCEMENT IN PROGRESS	147+951	RHS	



Sl. No	Description	Location	Side	Remarks
21.	GSI- GIRDER CONCRETING IN PROGRESS	134+028		
22.	GSI- ABUTMENT WALL SHUTTERING IN PROGRESS	157+188	LHS	



Sl. No	Description	Location	Side	Remarks
23.	VUP- A1 SIDE ABUTMENT CAP & PEDESTAL CURING IN PROGRESS	136+307	RHS	
24.	VUP- GIRDER DESHUTTERING IN PROGRESS	128+715	LHS	



Sl. No	Description	Location	Side	Remarks
25.	VUP – A1 SIDE PILE CAP CURING COMPLETED	126+093	LHS	
26.				



Sl. No	Description	Location	Side	Remarks
27.	VUP – GIRDER CONCRETING IN PROGRESS	139+477		
28.	VUP – WALL FINAL LIFT CONCRETING IN PROGRESS	139+477		

