

WORKS ROLLING STOCK AND M&P PROGRAM

PLANNING

Planning is Process of

Thinking about Activities

Required to Achieve a Desired Goal

Involves Creation and Maintenance of a plan

One of the Executive Functions of Brain

Consists of

Formulation

Evaluation

Selection

of Sequence of Thoughts/Actions

PLANNING IN BUSINESS

Planning

Basic Management Function

Identification of Goal to be achieved

Formulation of strategies to achieve

Arrangement or Creation of Means required

Implementation Direction Monitoring
of all Steps in Proper Sequence



PLANNING IN BUSINESS

Planning demands

High Level of Conceptual & Visionary Thinking

Not merely Expansion/Modernization of System

But also

To take Stock of Current Status

To take Corrective Actions

In world of

Changing Market

Changing Technology



PLANNING IN RAILWAYS

Objective

Quality

Safety

Security

Punctuality

Comfort for Passengers

Quantity

Expansion of Business

Better Utilization of Assets

Cost

Reduction in Cost

Man

Machine

Material

Downtime of Assets

PLANNING IN RAILWAYS

Planning Involves

Integrated Approach for

Creation of

Infrastructure

Assets

Machinery & Plants

Human Resource



PLANNING IN RAILWAYS

Planning has Three Levels

Corporate Planning at Railway Board

Based on Five Year Plan of Railways

Need for Infrastructure/Assets/M&P

Advise Zonal Railways for

Initiation of Proposals

Zonal Planning at Zonal Railways

To meet the Requirement of Zone

Unit Level

To replace Assets

To improve Quality

PLANNING IN RAILWAYS

Five Year Plan of Railways

Forecast the Growth of
Passenger And Freight Traffic
Area-wise

Identifying and Removing Bottlenecks

Anticipating Likely Bottlenecks

Working out Requirement of Rolling Stock

Replacement of Over-aged Assets

Adopting State-of-Art Technology

FIVE YEAR PLAN - RAILWAYS

Goals for Investment

Meeting Increased Traffic Needs

Improving Customer Focus

Improving Quality and Train Safety

To develop Capacity to deal with

Fluctuating Production Volumes

Human Resources

Employee Training Workplace Safety

Improved Working Conditions

New Technology Adoption

Environmental Responsibility

PLANNING IN RAILWAYS

Five Year Plan of Railways

Source of Funding

Internal Generation

Development Fund

DRF

Extra Budgetary Support

Borrowings

Gross Budgetary Support

PLANNING IN RAILWAYS

Annual Program

Review and Follow up of
Five Year Plan

Broadly Categorized as

Works Program

Rolling Stock Program

Machinery & Plant Program



PRESENT FIVE YEAR PLAN RAILWAYS

In 2015-16 Railways Budget

Beginning of a Rs 8560bn Five-Year Action Plan
To Transform Network

Four goals for IR

Sustainable and Measurable Improvement
in Customer Experience

Improved Safety

Substantial Expansion of

Passenger and Freight Capacity
Becoming Financially Self-sustainable

PRESENT FIVE YEAR PLAN RAILWAYS

Objective Target

To increase Capacity from

21 to 30 million Passengers/day

1 to 1.5 billion tones/year

Focus on

Gauge Conversion

Additional tracks

Electrification

on high-traffic routes

NITI AYOOG's India - Three Year Action Agenda
2017-18 to 2019-2020

WORKS PROGRAM

WORKS PROGRAM


Works Program

Primarily Meant for
Creation
Acquisition
Replacement
of Assets



WORKS PROGRAM

On the Basis of Estimate of
Plan Fund Requirement for Ensuing Year
Railway Board lay down Financial Limit
Under Various Plan Heads
Railways are required to make out
Program for Following Year
Duly vetted by Finance



WORKS PROGRAM

Examination of Program

By Railway Board

Discussion about

Necessity of Work to be undertaken

Outlay of Fund

For Preliminary Works Program

GM LAW Works



WORKS PROGRAM

Stages of Final Works Program

Formulation of Schemes as a part of
Advance Planning

Submission of Major Schemes for
Advance Scrutiny and Clearance by
Railway Board for
Selection of Projects



WORKS PROGRAM

Stages of Final Works Program

Preparation of Preliminary Works Program
within Financial Ceiling laid down by
Railway Board

Discussions with Railway Board

Submission of Final Works Program

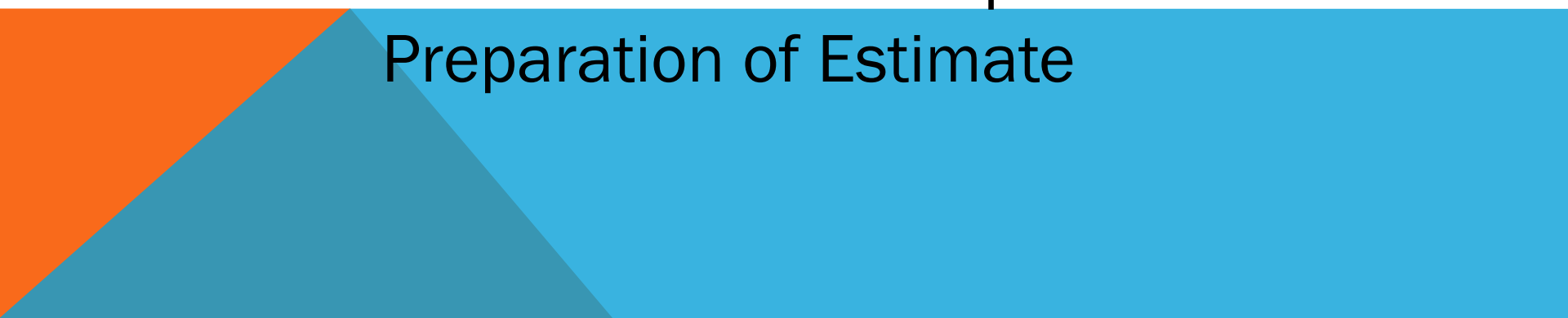


WORKS PROGRAM

Advance Planning

Part of Continuous Exercise at Division Level
Intended to improve Efficiency of Operation
Removal of Bottleneck

Major Railway Projects require
Co-ordination between Departments
Preparation of Estimate



WORKS PROGRAM

Advance Planning (Contd...)

Requirement of Efficient Investment Planning

Realistic Estimate

Working out of Work in Details

Detailed Plan and Estimate

Co-ordinated among all Department

Financial Justification of Expenditure on

New Assets and Replacement

Indian Railways Finance Code Chapter-II

WORKS PROGRAM

Scrutiny of Major Project by Railway Board

Schemes above Specific Amount

Require Scrutiny prior to Preparation of PWP

Consists of

Purpose/Objective Technical Features

Cost Break-up Sketch of Map

Benefit Expected to Accrue

Financial Implications

Communication of Scrutiny by Board to Railways
With or without Modification

WORKS PROGRAM

Preparation

Chief Engineer – Co-Ordinator

Communication of Total Outlay by

Railway Board Plan Head wise

Railways to Frame Works Program

Within Outlay

Detailed Plan with Scheduling

In accordance with Financial Outlay

Prioritizing of Work

Vetting and Comment of Finance

WORKS PROGRAM

Working out of Outlay

Realistic Assessment of Work in Progress

Amount required for New Work

Submission

To be submitted to Railway Board

Prior to 1st September



WORKS PROGRAM

Sanction of Works Program

General Manager

Work upto Rs. 2.5 Cr

Work upto Rs. 1 Cr (PH-52)

PHOD and DRM/CWM

Work upto Rs. 2.5 Cr

(PH-16, 31, 32, 53)

Work upto Rs. 1 Cr

(PH-33, 36, 42, 64)

DRM/CWM

Work upto Rs. 20 Lakh (PH-52)

IRPSM PORTAL

<https://ircep.gov.in/IRPSM>

Indian Railways Project Sanction & Management

Creation of Proposal

Vetting of Proposal by Finance Counterpart

Submission to HQ and Board

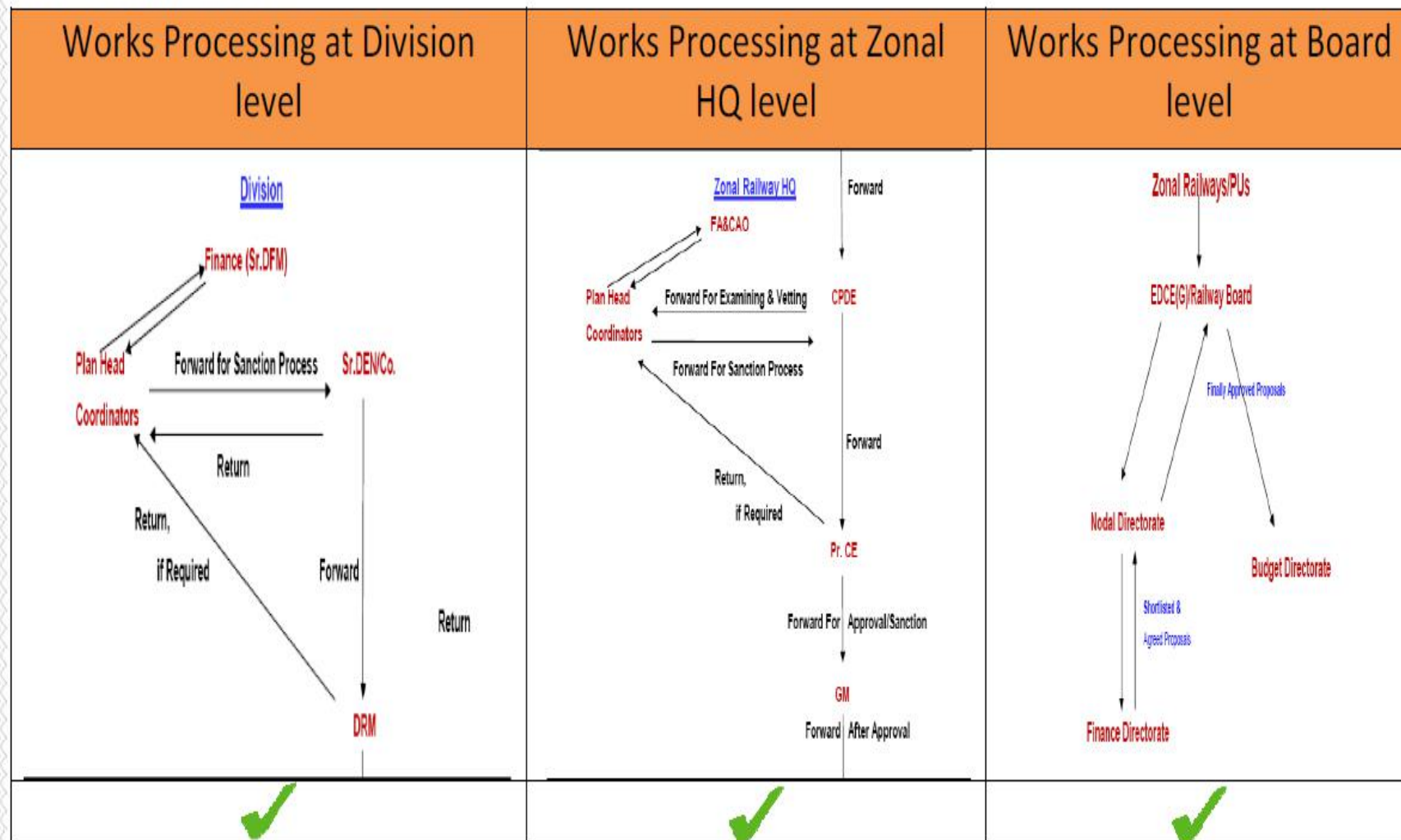
From Lower Level to Higher Level

Tracking for Sanction

Progress of Work

IRPSM PORTAL

Central Application



WORKS PROGRAM

Illustration in Pink Book

कारखाने - उत्पादन इकाइयों सहित / WORKSHOPS INCLUDING PRODUCTION UNITS

अ - चालू कार्य / A - Works in Progress							
566	नरकेलडागा कार शेड - 12-यान रैक की निर्माण हेतु लाईन सं.4 पर अतिरिक्त गर्त और लाईन सं.3 व 4 पर शेड	विनि (3)	DF(3)	5,28,00	1,94,84	63,61	18,69
	Narkeldanga Car Shed - Addl. pit on line No.4 & shed on line No.3 & 4 for 12-coach rakes formation	रोरेसंको	RRSK	2,00,00	..	1,15,00	2,00,00
567	लिलुआ - कारखाने का आधुनिकीकरण	पूँजी	Cap.	26,68,52	12,07,49	6,68,10	1,09,71
	Liluah - Modernisation of workshop	मूआनि	DRF	51,75,58	5,27,25	39,35	7,00,00
		विनि (3)	DF(3)	43,63,45	10,09,39	1,63,40	75,00
568	जमालपुर - कारखाने का आधुनिकीकरण	पूँजी	Cap.	80,15,94	41,43,14	3,00,00	5,37,00
	Jamalpur - Modernisation of workshop	मूआनि	DRF	37,29,78	42,61,54	1	1
569	कांचरापाड़ा कारखाना - 40 मोटर व 80 ट्रेलर सवारीडिब्बा प्रतिमाह की आवधिक ओवरहालिंग हेतु क्षमता का संवर्धन	पूँजी	Cap.	80,85,74	30,04,53	5,58,24	10,00,00
	Kanchrapara Workshop - Augmentation of capacity for periodical overhauling of 40 motor & 80 trailer coaches per month						
570	हावड़ा - डीजल शेड के ढाँचे में परिवर्तन	मूआनि	DRF	26,51	9,75	1	2,85
	Howrah - Remodelling of diesel shed	विनि (3)	DF(3)	1,81,00	93,74	31,50	60,76
		रोरेसंको	RRSK	75,00	..	50,00	10,76
594	2.5 करोड़ रुपए से कम लागत के प्रत्येक कार्य	पूँजी	Cap.	..	..	..	81,78
	Works costing below Rs.2.5 crore each	मूआनि	DRF	..	..	..	2,17,27
		विनि (3)	DF(3)	..	..	..	62,39
		रोरेसंको	RRSK	..	..	..	2,93,97

WORKS PROGRAM

Illustration in Pink Book

ब - नये कार्य / B - New Works							
595	टिकियापाड़ा - सवारीगाड़ी यार्ड के ढांचे में परिवर्तन (चरण-3) Tikiapara - Remodelling of coaching yard (Phase-3)	बिनि (3)	DF(3)	21,02,73	..	..	5,00
596	अंडाल - मालगाड़ी परीक्षण हेतु अप यार्ड में बी-श्रेणी अवसंरचनात्मक सुविधाओं का ए-श्रेणी में उन्नयन Andal - Upgradation of B-category infrastructural facilities of up yard to A-category for freight train examination	बिनि (3)	DF(3)	9,54,54	..	..	5,00
597	राणाघाट (ईएमयू कार शेड) - 15 डिब्बों की अनुरक्षण सुविधाओं हेतु परीक्षण-बे Ranaghat (EMU Car Shed) - Inspection bay for 15 coach maintenance facilities	पूँजी	Cap.	39,12,78	..	..	10,00
598	सियालदह - सवारीगाड़ी रुग्ण लाइन का विस्तार (100 मी) और सियालदह छोर पर आच्छादित शेड Sealdah - Extension of coaching sick line (100 m) with covered shed at Sealdah end	बिनि (3)	DF(3)	20,08,00	..	..	10,00
599	झील साइडिंग सवारीगाड़ी डिपो - अवसंरचनाओं का विकास Jheel Siding Coaching Depot - Infrastructure development	बिनि (3)	DF(3)	63,76,74	..	..	5,00
600	2.5 करोड़ रुपए से कम लागत के प्रत्येक कार्य Works costing below Rs.2.5 crore each	पूँजी	Cap.	..	..	..	1,00
		मूआनि	DRF	..	..	..	1,00
		बिनि (3)	DF(3)	..	..	..	1,00
		रोस्को	RRSK	..	..	..	3,00,00

ROLLING STOCK PROGRAM

ROLLING STOCK PROGRAM

Annual Rolling Stock Program

Primarily Meant for

New Acquisition

Locomotive

Wagons

Track Machines

Modernization

Coaches

Tower Cars

BD Cranes

Also for

Major Modification

High Value Capital Unit Exchange Spares

ROLLING STOCK PROGRAM

Advance Planning of Rolling Stock Program

New Locomotive

Three Years in Advance

Coaches & Wagons

Two Years in Advance

To Match the Requirement

In Each Year of Plan Period

To Provide Lead Time

For Supply/Manufacturing

ROLLING STOCK PROGRAM

Advance Planning of Rolling Stock Program

In Order to Facilitate

Uninterrupted Production Planning

PUs Workshops Permitted to

Plan for 80% of Previous Years

Facilitates in Advance Preparation of

Materials Tooling Machining

for 80% of Next Year Requirement

without Waiting for

Specific Program from Board

ROLLING STOCK PROGRAM

Preparation of Rolling Stock Program

Draft Program

Prepared by COM

Addition and Renewal of Rolling Stocks

Forwarded to CME

Inclusion of

Major Modification

Capital Unit Exchange Spares

ROLLING STOCK PROGRAM

Preparation of Rolling Stock Program

Workshops Shed Depots

Requirement of Spares to CME for
Major Modification

Capital Unit Exchange Spares

Consolidation of RSP at CME

Addition and Renewal of Rolling Stocks

Inclusion of

Major Modification

Capital Unit Exchange Spares

ROLLING STOCK PROGRAM

Preparation of Rolling Stock Program

Forwarded to FA&CAO

Finance Concurrence

Against Each Item

Forwarded to General Manager

For Approval

Forwarded to Railway Board as

Itemized Rolling Stock Program

For Inclusion in Pink Book

ROLLING STOCK PROGRAM

Preparation of Rolling Stock Program

Time Frame

To reach Railway Board

Prior to 15th September of Preceding Year

Communication of Sanction of Railway Board

May of Current Year

ROLLING STOCK PROGRAM

Work Proposed in
Itemised Rolling Stock Program

In Two Format

Work Already Sanctioned by Railway Board
Called Programmed Delivery

New Work Proposed by PU/Zonal Railways
Pertains to Specific Requirement

ROLLING STOCK PROGRAM

Annual Rolling Stock Program

Procedure Calculation New Acquisition

Additional Reqmt for Increase In Traffic = B

Reduction for Change In Traffic Pattern = C

Condemned in Previous Year = E

Accident Damage = F

Provisions Required In The RSP = $B - C + E + F$

ROLLING STOCK PROGRAM

Calculation of New Acquisition

Renewal

Depends on Codal Life

Of Rolling Stock

Suitability of Existing Stock to

Meet Modern Requirement

Expenditure will Incur

To Maintain the Stock

CODAL LIFE - ILLUSTRATION

(iii) ELECTRICAL ASSETS

S.No.	Class of assets	Average life in years
1.	Electric Locomotives	35
2.	EMU/Metro Motor Coaches	25
3.	EMU/Metro Trailor Coaches	25
4.	Over Head Power Lines	40
29	Electric Locomotive Equipments	
(i)	All Electric rotating machines up to 25 HP used on Electric Locomotives, EMU's Coaches and for stationary items	12
(ii)	All Electric rotating machines above 25 HP and upto 750 HP used on Electric Locomotives, EMU's Coaches and for stationary items	12
(iii)	Traction Motor	18
(iv)	Traction Converters	18
(v)	Auxiliary Converters	18
(vi)	Control Electronics	18
(vii)	Tap-Changer	35
(viii)	Rectifier Block	18
(ix)	Traction Gears	12

CODAL LIFE - ILLUSTRATION

	ROLLING STOCK	
29	Diesel Electric/ Hydraulic Locomotives	36
30	Diesel Engine	18
31	Shunting Locomotives	36
32	Steam Locomotives	40
37	Full Stainless Steel Body Coaches including DMUs/EMUs, Restaurant Cars etc.	30
38	Light utilisation categories of coaches (steel body) like inspection carriages etc.	40
39	IRS Coaches	30
40	Open Bogie wagons with air brakes and Casnub bogies	30

ROLLING STOCK PROGRAM

Calculation of New Acquisition

Additional Requirement

Expected Increase in Traffic

On Existing Lines

Additional Traffic

On New Lines to be Commissioned

Spares for Mechanical Repairs etc

Scope for Peak Demand

Unit Exchange Spares Norm ALCO Locomotive

S. No	Description	Requirement of items		
		<100	≥100 & <175	≥175 & ≤250
1.	Diesel engine power pack complete with generator and turbo super charger.	3	4	6
2.	Truck assembly complete with wheels bearing springs, traction motors etc.	6	8	10
3.	Turbo supercharger	5	8	12
4.	Compressor	4	6	8
5.	Radiator set	4	6	8
6.	Lube oil cooler	4	6	8
7.	Radiator fan drive with eddy current clutch with complete gear box	4	6	8
8.	Engine Crank shaft	2	4	6
9.	Camshafts (FE) in loco set	6	8	10
10.	Camshafts (SU/C) in loco set	8	12	16
11.	Fuel injection pumps (loco set)	4	6	8
12.	Fuel injector nozzle with holder complete (loco set)	4	6	8
13.	Fuel pump supports (loco set)	4	6	8
14.	Cylinder heads (loco set)	5	7	9
15.	After cooler	5	7	9
16.	Water pump	5	7	9
17.	Lube oil pump	5	7	9
18.	RTTM blower	5	7	9
19.	Air filter cyclonic	1	4	6
20.	Pistons with connecting Rods and caps (loco set)	5	7	9
21.	Traction Alternator/ Generator (apart from those with the power pack)	4	6	8

Unit Exchange Spares Norm ALCO Locomotive

22.	Air brake valves (loco set)	4	6	8
23.	Traction motors (apart from those with the trucks)	24	36	48
24.	Aux. generator	4	6	8
25.	Exciter alternator	4	6	8
26.	Dynamic brake blower motor	4	6	8
27.	Fuel pump motor	4	6	8
28.	Crank case exhaustor motors	4	6	8
29.	BKT 1 & 2	4	6	8
30.	Reverser 1 & 2	4	6	8
31.	Power contractors	4	6	8
32.	FS contractors	4	6	8
33.	Exciter panel	1	2	3
34.	Voltage regulator	2	4	5
35.	FS resistance	4	6	8
36.	Dynamic brake gird resistance	4	6	8
37.	Governor Wood word/MCBG	4	6	8
38.	Tacho Generator	4	6	8
39.	Axle alternators	4	6	8
40.	All safety relays	4	6	8
41.	Batteries	4	6	8
42.	Fuel pump	4	6	8
43.	Governor oil pump	4	6	8

Unit Exchange Spares Norm HHP Locomotive

Sl. No.	Description	Requirement of items		
		<100	≥100 & <175	≥175 & ≤250
1.	Power pack complete (with Generator and Turbo-supercharger)	2	3	4
2.	Power Assembly (Fork Rod)	16	32	32
3.	Power Assembly (Blade Rod)	16	32	32
4.	Turbo supercharger	5	8	10
5.	Turbo clutch assembly	4	5	6
6.	Turbo soak back pump and motor assembly	2	4	4
7.	Piston cooling and pressure pump	2	4	4
8.	Air filter cyclonic	1	1	2
9.	After cooler Assembly	5	6	6
10.	Unit fuel injectors	192	192	192
11.	Fuel pump motor	4	8	10
12.	Lube oil cooler	4	7	9
13.	Lube oil scavenging pump	2	4	4
14.	Engine Crank shaft	1	2	3
15.	Camshaft in loco set	6	8	10
16.	Cylinder heads	16	32	48
17.	Water pump	4	8	12
18.	Radiator fan with Motor	6	10	12
19.	Radiator set	4	8	10
20.	Starter motor	4	8	8
21.	Governor assembly	3	3	3
22.	Air dryer	5	8	8
23.	Air brake pneumatic valves and CRU Cards	1	3	3
24.	Air Compressor	4	5	5
25.	Truck assembly complete with wheels bearing springs, traction motors etc. P4	2	4	5

Unit Exchange Spares Norm HHP Locomotive

26.	Truck assembly complete with wheels bearing springs, traction motors etc. G4	2	4	5
27.	Wheel set Assembly without traction motor G4 & P4	12	24	30
28.	Traction Alternator assembly (apart from those with the power pack)	3	4	5
29.	Auxiliary Alternator	3	4	5
30.	Traction motors P4 (apart from those with the trucks)	18	36	42
31.	Traction motors G4 (apart from those with the trucks)	18	36	42
32.	Dynamic brake grid with motor	3	5	5
33.	EM 2000 with Modules Chassis assembly etc	1	3	3
34.	DC Link Switch gear	1	3	3
35.	TCC Electronic Blower with motor	1	3	3
36.	Dust bin Blower with Motor	1	3	3
37.	Traction Motor Blower with Motor	2	3	3
38.	DB Hatch assembly	1	1	2
39.	Detector assembly EPD	4	8	8
40.	Radar assembly	2	4	6
41.	Dynamic brake controller	5	8	8
42.	GP relay- 2 NO, 2 NC	8	12	12
43.	GP relay- 3 NO, 3 NC	20	40	40
44.	GP relay – 4 NO, 4 NC	10	20	20
45.	Ground relay	5	8	8
46.	Generator field contactor	3	6	6
47.	Starting contactor	3	6	6
48.	Starting auxiliary contactor	3	6	6
49.	GFD contactor	3	6	6
50.	DB contactor	8	12	12
51.	Module motor	3	6	6

Unit Exchange Spares Norm AC Locomotive

Equipment	Existing New Norms %	Proposed New Norms %
Conventional Loco:		
TM Armature:		
TAO-659	7.5%	5% .
HS15250	5%	4%.
TM Stator:		
TAO-659	7.5%	5%
HS15250	5%	4%
Transformer		
3900 KVA	2.5%	1.5%
5400 KVA	2.5%	2%
Tap changer	2.5%	1.5%
RSI block Set	1.5%	1%
VCB	5%	3%

Unit Exchange Spares Norm AC Locomotive

Air Blast DJ	5%	--
Bogie frame:		
Tri-mount	7.5%	5%
Flexi coil	7.0%	6%
Fabricated.	5.0%	4%
3-Phase Loco:		
TM Rotor:		
6FXA7059	12.5%	10%
6FRA6068	8.3%	7%
TM Stator:		
6FXA7059	12.5%	10%
6FRA6068	8.3%	7%
Transformer		
WAP5	2%	2%
WAP7	2%	2%
WAG9	2%	2%
Traction Converter	1%	1%
Aux. Converter loco set	2%	2%
Control Electronics set	2%	2%
OCB complete	15%	15%
Main CP with motor set	4%	3%
E-70 brake panels	2%	2%
Bogie frame:		
Bo-Bo (WAP5)	3%	3%
Co-Co (WAP7, WAG9)	3%	3%

ROLLING STOCK PROGRAM

Information to be Furnished

Programmed Delivery

PB LB No. and Year of Sanction

Particulars

Allocation

Latest Anticipated Cost

Expected Expenditure in Current Year

Expected Expenditure in Next Year

ROLLING STOCK PROGRAM

Information to be Furnished (Contd..)

New Item

Particulars

Allocation

Anticipated Cost

Expected Expenditure in Next Year

Justification in Detail

Concurrence by FA&CAO

ROLLING STOCK PROGRAM

Budget Provision

Fund Allocation

Capital

DRF

Fund for Bulk Order Item

Controlled by Railway Board

Fund for Non-Bulk Item

Allotted to Zonal Railways

ROLLING STOCK PROGRAM

Budget Review

Budget Estimate for Next Year

Budget Grant

August Review

Revised Estimate

Final Modification Estimate

Appropriation

Comparison

Budget Grant vis a vis Final Grant

Final Grant vis a vis Actual Expenditure

ROLLING STOCK PROGRAM

Illustration in Pink Book

मद सं. / Item No.	विवरण / Particulars	आवंटन / Allocation	स्वीकृत लागत / Sanctioned Cost	मार्च 2016 के अंत तक व्यय / Exp. at the end of March 2016	2016-17 के लिए संशोधित परिव्यय / Revised Outlay for 2016-17	2017-18 के लिए प्रस्तावित परिव्यय / Outlay proposed for 2017-18
अ - निर्धारित समय पर मिलने वाले सामान		A - PROGRAMMED DELIVERIES				
रेल इंजन / Locomotives						
CLW						
1	मीएलडब्लू से 110 अदद डब्लूएपी/डब्लूएजी 6000अ.श. विद्युत लोको (820/8-9,200/10-11,145/11-12 121/12-13 102/13-14)	पूंजी	Cap.	52,12,02	52,12,02	..
	110 Nos. WAP/WAG 6000 HP elect.locos ex. CLW Rs.1420 lacs (820/8-9, 200/10-11, 102/13-14, 102/14-15, 99/15-16, 5/16-17)	मूआनि	DRF	63,20,00	52,12,02	..
		ईबीआर(बॉण्ड)	EBR(IRFC)	1446,67,98	1128,69,12	1
2	1000 अदद उच्च अक्षशक्ति विजली रेल इंजन 18 करोड़ रुपये प्रत्येक (858/8-9,238/10-11,183/11-12,159/12-13 140/13-14)	पूंजी	Cap.	17964,00,00	60,17,58	..
	1000 Nos. High Horse Power elect.locos Rs. 18 Cr. each (858/8-9, 238/10-11, 140/13-14, 140/14-15, 133/15-16, 6/16-17)	ईबीआर(बॉण्ड)	EBR(IRFC)	36,00,00	..	1 50,00,00
95	चिरेका से 70 अदद पहिया सेट रु. 9 लाख की दर से/प्रति यूनिट(706/7-8,196/8-9,176/10-11,121/11-12 85/13-14)	मूआनि	DRF	6,30,00	2,86,40	..
	70 Nos. wheelsets Rs.9 lacs/unit ex.CLW (706/7-8, 196/8-9, 85/13-14, 85/14-15, 82/15-16, 95/16-17)	ईबीआर(बॉण्ड)	EBR(IRFC)	10,00	..	1
96	चिरेका से 14 अदद कर्षण कंवर्टर बस स्टेशन दर 45 लाख रु. (711/7-8,201/8-9,181/10-11,126/11-12)	मूआनि	DRF	1,30,00	90,06	..
	14 Nos. Traction convertor Bus station @ Rs.45 lacs/CLW (711/7-8, 201/8-9, 88/13-14, 88/14-15, 85/15-16, 96/16-17)	ईबीआर(बॉण्ड)	EBR(IRFC)	5,00,00	..	1

ROLLING STOCK PROGRAM

Illustration in Pink Book

2017-18 के लिए चल स्टाक कार्यक्रम / Rolling Stock Programme for 2017-18

(आंकड़े हजार रु. में) (Figures in thousand of Rupees)						
मद सं. / Item No.	विवरण / Particulars	आवंटन / Allocation	स्वीकृत लागत / Sanctioned Cost	मार्च 2016 के अंत तक व्यय / Exp. at the end of March 2016	2016-17 के लिए संशोधित परिव्यय / Revised Outlay for 2016-17	2017-18 के लिए प्रस्तावित परिव्यय / Outlay proposed for 2017-18
ब - नई खरीद		B - NEW ACQUISITION				
1189	सीएलडब्ल्यू से 6000 एचपी से 9000 एचपी के लिए डब्ल्यूएजी7 इंजनों का उन्नयन, 16.2 करोड़ रु., 10 - अदद	पूंजी	Cap.	32,00,00	..	1
	Upgradation of WAP7 locomotives from 6000 HP to 9000 HP ex. CLW -10 nos. Rs.16.2 cr.	मूआनि	DRF	30,00,00	..	..
		ईबीआर(बॉण्ड)	EBR(IRFC)	100,00,00	..	..
1190	सीएलडब्ल्यू/डीएलडब्ल्यू/दानकुनी से एचएचपी 3-चरण लोको , 15 करोड़ रु. 737 अदद	पूंजी	Cap.	555,00,00	..	1
	737 Nos. HHP 3-ph. elect. loco ex.CLW/DLW/Dankuni Rs.15 cr.	मूआनि	DRF	500,00,00	..	..
		ईबीआर(बॉण्ड)	EBR(IRFC)	10000,00,00	..	..
जोड़ -रेल इंजन / TOTAL-Locomotives-CLW		पूंजी	Cap.			3
		मूआनि	DRF			..
		ईबीआर(बॉण्ड)	EBR(IRFC)			..
1194	जीटीओ से आईजीबीटी तक कनवर्सन - 10 लोको, 250 लाख रु.	पूंजी	Cap.	15,00,00	..	..
	GTO to IGBT conversion-10 locos Rs.250 lakhs	ईबीआर(बॉण्ड)	EBR(IRFC)	10,00,00	..	7,50,00
1195	1000 लोकोमोटिव में लोको गार्ड 80000 रु.	पूंजी	Cap.	8,00,00	..	1
	Loco guard in 1000 locomotives Rs.80000/-					
1196	20एचएचपी लोको के लिए एमटीए, 1.71 करोड़ रु.	पूंजी	Cap.	34,20,00	..	1
	MTA for 20 HHP locos Rs.1.71 cr.					



MACHINERY & PLANT PROGRAM

M&P PROGRAM

Annual M&P Program

Machinery & Plants

Expensive Assets

To acquire and to Maintain

Primarily Meant for

New Acquisition of Machinery and Plants

Rehabilitation of M&P

New Tools & Plants costing > Rs. 10 Lakh

M&P PROGRAM

Definition of Machinery & Plants

Stationary and Immovable

Jobs come to Machine

Not Vice versa

Movable items

Staff Cars

Lorry

Utility Vehicles

Road Mobile Crane

JCB Loader

Forklift



M&P PROGRAM

Definition of Tools and Plant

Movable Machines

All Measuring Instruments

Small Tools

Office Equipment as

Furniture

Computer and Printers



M&P PROGRAM

Category of Machinery for Procurement Purpose

C – Special Machines

No domain Knowledge in COFMOW

Procured by User Railway

Dispensation from COFMOW

D – Machines of Smaller Value

Not barred by Railway Board

Procured by User Railway



M&P PROGRAM

Sanction of Annual M&P Program

General Manager

Machines upto Rs. 50 Lakh

Two Wheelers for RPF

PHOD

Machines upto Rs. 50 Lakh

Excl'd Road Vehicle

DRM/CWM

Machines upto Rs. 20 lakh

M&P PROGRAM

Sanction of Annual M&P Program

JAG/SG Officers

Machines upto Rs. 10 lakh

Railway Board

Machines not covered above

All Motor Vehicles



M&P PROGRAM

Preparation of M&P Program

New Acquisition of Machines

Renewal

Depends on

Codal Life

Condition

Additional Requirement

Repair/Reconditioning

M&P Program can be initiated under

Capital DF DRF RRSK

M&P PROGRAM

M&P Program under DF

Should be restricted and
limited to

Equipment of ART/ARME



M&P PROGRAM

M&P Program under Capital (Additional)
Supported with Financial Justification
Rate of Return

In accordance with IRFC-I
Duly vetted by Associate Finance

Rate of Return

Benefit to be Quantified in terms of
Reduction in Cycle Time
Increase in Outturn
Improvement in Quality Reliability

M&P PROGRAM

M&P Program under Replacement - DRF

Following Details required

Codal Life and Actual Years Worked

Intensity of Usage/Load Factor

Jobs Undertaken/Workload of Machine

Outcome if Considered

Reconditioning of Machine

Outsourcing of Job

Total No. of Similar Machine

Workload & Shortfall vs Target

M&P PROGRAM

M&P Program under Replacement - DRF

Following Details required (Contd...)

Comparison of Cost of Replacement
with Original Machine

Reason for Increase
Replacement for Same Function

Difference if any to be explained
Indenting Specification

For Road Vehicle

Recommendation of
Survey Committee

M&P PROGRAM

M&P Program For Reconditioning of
M&P under - DRF

Following Details required (Contd...)

Partial or Full

More Financially Viable Option

Comparison of

Condemnation/Replacement
with Reconditioning



CODAL LIFE –(RBA 25/2006)

S.No.	Class of assets	Average life in years
	Machinery & Plant	
1	Machine Tools like Lathes, Planners, Drilling, Boring and Milling machines etc.	15
2	High Precision and special purpose machines like wheel Lathes etc.	15
3	Tool Room and Testing Laboratory equipment	15
4	Foundry and Forge Equipment	15
5	Heat Treatment Equipment	15
6	Cranes-EOT	25
7	Power Generation Machinery & Switches	15
8	General purpose light machinery e.g. band saws, floor grinder etc.	10
9	Air Compressors	15
10	Other miscellaneous machines e.g. light cleaning machines, test equipment in diesel sheds, workshops, depots & sick lines	15
11	(i). Construction Machinery	15
	(ii). Track Maintenance equipment	20
12	Station machinery e.g. weighing machines etc.	15

CODAL LIFE – (RBA 25/2006)

13	Miscellaneous machinery and equipment for hospital, offices etc.	10
14	Mechanical Weigh Bridges	15
15	Electronic in motion Weigh Bridges	08
16	Diesel Pumps	10
17	Welding equipment including diesel welding sets	10
18	Diesel refrigeration equipment	15
19	Material handling equipment like FLT, Lister trucks etc.	10
20	Traversers	25
21	Fuel Station Dispensation Equipment	10
22	Bulldozers and other earth moving equipment	15
23	Motor Boats	10
24	Hydraulic re-railing equipment	15
	ROAD VEHICLES	
25	Staff Cars including Jeeps	07
26	Light Motor Vehicles	10
27	Heavy Motor Vehicles	10
28	Tractors	10

M&P PROGRAM

Preparation of M&P Program

Time Frame



M&P PROGRAM

Proposed in Two Format

Work Already Sanctioned by Railway Board
Called Programmed Delivery

New Work Proposed by PU/Zonal Railways
Pertains to Specific Requirement



M&P PROGRAM

Information to be Furnished

Programmed Delivery

PB LB No. and Year of Sanction

Particulars

Allocation

Latest Anticipated Cost

Expected Expenditure in Current Year

Expected Expenditure in Next Year

M&P PROGRAM

Information to be Furnished (Contd..)

New Item

Particulars

Allocation

Anticipated Cost

Expected Expenditure in Next Year

Justification in Detail



M&P PROGRAM

Budget Provision

Fund Allocation

Capital

DRF

RRSK



M&P PROGRAM

Budget Review

Budget Estimate for Next Year

Budget Grant

August Review

Revised Estimate

Final Modification Estimate

Appropriation

Comparison

Budget Grant vis a vis Final Grant

Final Grant vis a vis Actual Expenditure

M&P PROGRAM

Illustration in Pink Book

			(आंकड़े हजार रु. में) (Figures in thousand of Rupees)			
मद सं. / Item No.	विवरण / Particulars	आवंटन / Allocation	स्वीकृत लागत / Sanctioned Cost	मार्च 2017 के अंत तक व्यय / Exp. at the end of March 2017	2017-18 के लिए संशोधित परिव्यय / Revised Outlay for 2017-18	2018-19 के लिए प्रस्तावित परिव्यय / Outlay proposed for 2018-19
अ - निर्धारित समय पर मिलने वाले सामान		A - PROGRAMMED DELIVERIES				
746	आसनघोल - सिमुलेटर (विद्युत - ईएमयू / एमईएमयू) Asansol - Simulator (electric - EMU / MEMU)	पूँजी रोस्को	Cap. RRSK	1,39 8,73,61	1,39 ..	.. 1
747	सियालदह - भूमिगत पहिया लेथ (बड़ी लाइन) Sealdah- Under-floor wheel lathes (broad gauge)	मूआनि रोस्को	DRF RRSK	3,43,29 1,66,57	3,43,29 ..	.. 1
748	सियालदह/तारसराय - भूमिगत पहिया लेथ (बड़ी व मीटर लाइन) Sealdah/Tarsarai - Underfloor wheel lathes (broad & metre gauge)	पूँजी रोस्को	Cap. RRSK	3,26,76 1,94,44	2,89,86 ..	.. 1
749	चल स्टॉक की ऑन लाइन निगरानी प्रणाली (ओएमआरएस) (2 अदद) System of Online Monitoring of Rolling Stock (OMRS) (2 nos)	रोस्को	RRSK	7,70,00	..	1
750	आसनघोल - सीएनजी भूतल पहिया लेथ Asansol - CNC surface wheel lathe	मूआनि रोस्को	DRF RRSK	5,39,54 2,70,23	5,42,13 ..	.. 2,64
766	2.5 करोड़ रुपए से कम लागत के प्रत्येक कार्य Works costing below Rs.2.5 crore each	पूँजी मूआनि बिनि (2) बिनि (3) रोस्को	Cap. DRF DF(2) DF(3) RRSK	.. .. .. .. ..	.. .. .. .. ..	3,44,97 4,12,06 1,89,81 2,21,25 2,50,63

M&P PROGRAM

Illustration in Pink Book

ब - नई खरीद

B - NEW ACQUISITION

767	कांचरापाड़ा कारखाना - सीएनसी वर्टिकल टर्निंग लेथ टेबल डाय्या 1500	मूआनि	DRF	3,27,57	..	..	1
	Kanchrapada Workshop- CNC Vertical Turning Lathe Table dia 1500 mm						
768	कांचरापाड़ा कारखाना - सीएनसी सर्फेस व्हील लेथ (बला)	रारसंको	RRSK	7,38,51	..	..	1
	Kanchrapada Workshop- CNC Surface Wheel Lathe (BG)						
769	लिलुआ कारखाना - कुंडल स्प्रिंग स्कैगिंग व लोड डिफ्लेक्शन टेस्टिंग मशीन - 25 टी	रारसंको	RRSK	3,11,27	..	..	1
	Liluah Workshop- Coil Spring Scragging & Load Deflection Testing Machine - 25T						
770	हावड़ा - सीएनसी शेड के साथ अंडरफ्लोर व्हील लेथ	रारसंको	RRSK	7,40,71	..	..	1
	Hawrah- CNC Underfloor Wheel Lathe with Shed						
771	2.5 करोड़ रुपए से कम लागत के प्रत्येक कार्य	पूजी	Cap.	..	..	..	52,00
	Works costing below Rs.2.5 crore each	मूआनि	DRF	..	..	..	35
		रारसंको	RRSK	..	..	..	50,00
जोड़ - नई खरीद / Total-New Acquisition		पूजी	Cap.	..	..	..	52,00
		मूआनि	DRF	..	..	..	36
		रारसंको	RRSK	..	..	..	50,03
जोड़ - मशीनरी और संयंत्र /		पूजी	Cap.	..	..	..	6,20,49
Total - Machinery & Plant		मूआनि	DRF	..	..	..	4,14,26
		विनि (2)	DF(2)	..	..	..	1,89,81
		विनि (3)	DF(3)	..	..	..	2,21,25
		रारसंको	RRSK	..	..	..	8,96,69

M&P PORTAL

www.irmnp.com

Creation of Proposal

Vetting of Proposal by Finance Counterpart

Submission to HQ and Board

From Lower Level to Higher Level

Tracking for Sanction

Progress for Procurement

Updation of M&P Assets

REFERENCE

Indian Railways Rolling Stock Code

Indian Railways Engineering Code

Indian Railways Code for
Mechanical Department (Workshop)

