



Government of Nepal
Ministry of Physical Infrastructure and Transport
Department of Roads
Maintenance Branch

ARMP software (Version 2.2, 2016) User's Manual

March, 2016

Softwel (P) Ltd.

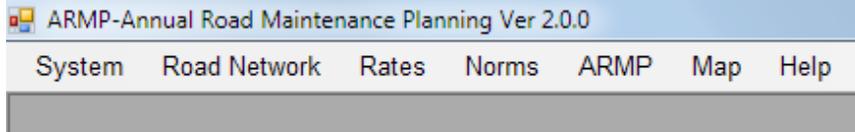
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1. Menu Bar



System Allows users to create new user, change password, view users, login and logout/quit.

Road Network Allows admin users to update the road network including dynamic segmentation using pavement data (width, last resurface etc)

Rates Allows users to view routine labour rates, work item and recurrent maintenance rates.

Norms Allows users to view routine and recurrent norms.

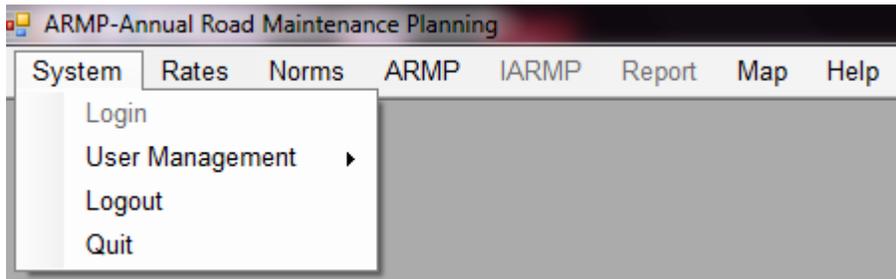
ARMP Provides users to perform the following

- To view road register
- To view details related to routine maintenance cost estimate and recurrent maintenance/periodic maintenance/specific maintenance
- To view details related to rehabilitation/reconstruction and upgradation of selected roads
- To view bridge routine details
- Select bridge for routine maintenance cost calculation, minor bridge maintenance details and its summary
- To view details related to bio-engineering, emergency maintenance , road safety and road inventory
- To view Annual Road Maintenance Summary taking into consideration a particular region/division/nation.

Map Allows users to view map of the assessed data.

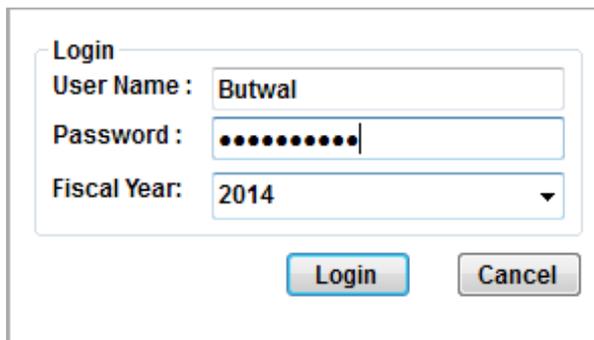
Help Provides brief detail about the software like version number etc.

2. System Menu



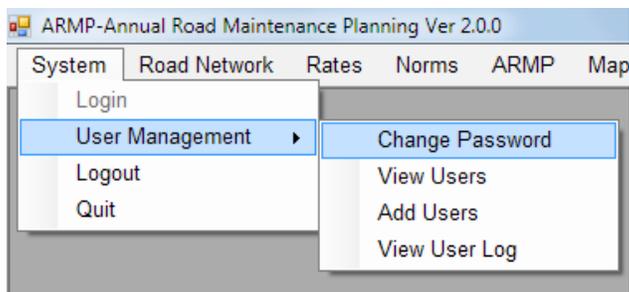
Within the system menu, users are provided with the option to login into the tool. Further, within the option of user management, one can change his/her login password. For users who login as 'Admin', they are able to view/add users. Logout/Quit options are also provided in this menu.

2.1 Login Screen



So as to prevent unauthorized access to the tool, users are supposed to login using a proper username and password. They can also choose the fiscal year, e.g. 2012 or 2013 for which the details are to be viewed.

2.2 User Management



By clicking on the user management sub menu, the user is provided with four options- change password, view users, add users and view user log.

2.3 Change Password

User ID :

Old Password :

New Password :

Retype Password :

To change the password, details such as user id, old password and new password are to be entered and 'Change' button is to be pressed for successfully changing the password.

2.4 View Users (For Admin Only)

For users with 'Admin' rights, it is possible to view all the users who are currently using the system. To view the same, view users option within the user management sub-menu is to be selected.

Admin users are able to view details such as name of the user, user id, login type (Editor/Admin/User) and the date on which the account was created.

User ID	User Name	User Type	Division Access	Created Date
Baglung	Baglung	Editor	Baglung	2015/03/03
Biratnagar	Biratnagar	Editor	Biratnagar	2015/03/03
Butwal	Butwal	Editor	Butwal	2015/03/04
Central	Central	User	Central	2015/03/03
Chandranigah...	Chandranigahapur	Editor	Chandranigah...	2015/03/04
Charikot	Charikot	Editor	Charikot	2015/03/04
Chaurjahari	Chaurjahari	Editor	Chaurjahari	2015/03/04
Damak	Damak	Editor	Damak	2015/03/03
Damauli	Damauli	Editor	Damauli	2015/03/04
Dang	Dang	Editor	Dang	2015/03/04
Dhankuta	Dhankuta	Editor	Dhankuta	2015/03/03
Doti	Doti	Editor	Doti	2015/03/04

2.5 Add Users Sub Menu(For Admin Only)

Admin users are able to add new users by selecting the 'Add Users' option within the user management sub menu.

The screenshot shows a 'Login Detail' form with the following fields and controls:

- User Name: Text input field
- User ID: Text input field
- Division: Dropdown menu
- Account Type: Dropdown menu
- Password: Text input field
- Retype Password: Text input field
- Year: Text input field
- Create: Button
- Cancel: Button

To add new users, a number of details are to be provided such as user name, user id, division (Eastern/Central/Western/Mid-Western/Bhaktapur/Dhankuta etc), account type (user/admin/editor), password and the current year.

2.6 View User Log (For Admin Only)

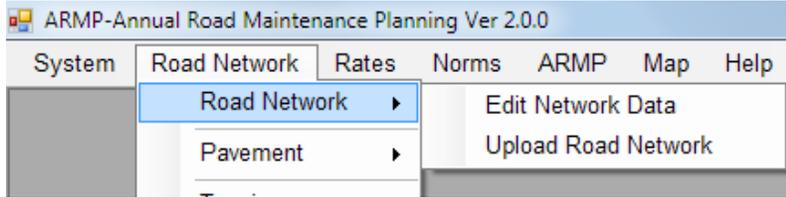
For users with 'Admin' rights, it is possible to view log of all the users including login time, logout time and the user's IP address using the system.

The screenshot shows the 'User Log' window with the following details:

- Window Title: User Log
- Select User: Baglung
- Load User: Button
- Total Records: 3

S.No	Log In Date Time	Log Out Date Time	Log In IP
1	03/03/2015 10:55:42	03/03/2015 12:12:36	192.168.0.2
2	03/03/2015 13:29:13	03/03/2015 13:29:33	192.168.0.2
3	04/03/2015 11:33:11	04/03/2015 11:35:07	192.168.0.2

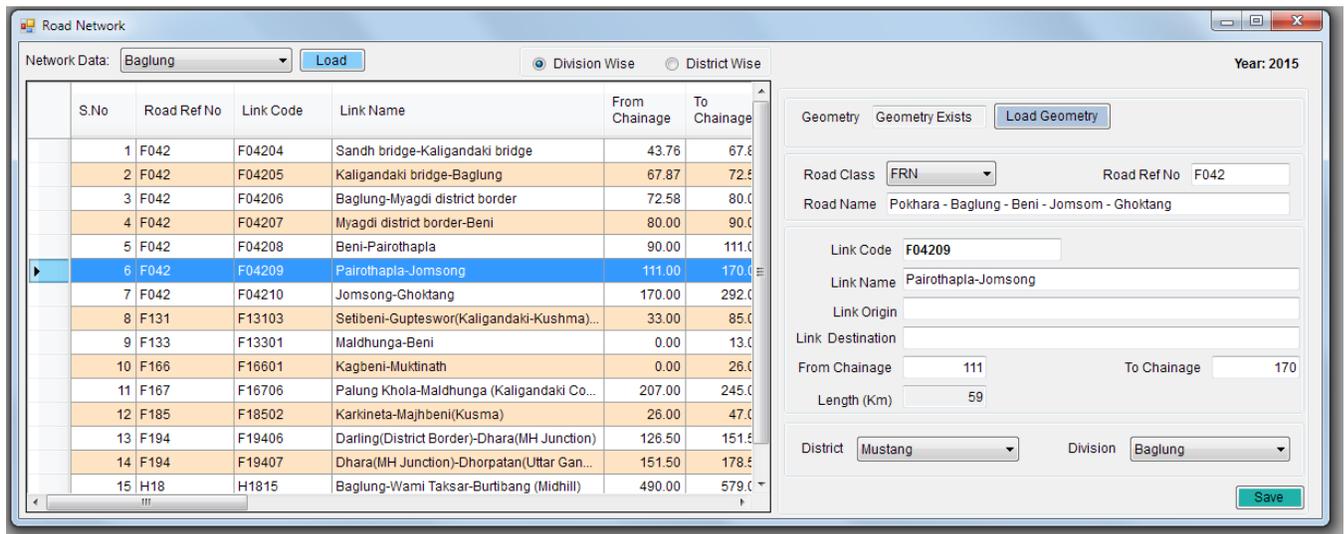
3. Road Network



The road network menu provides access to edit the network data including uploading of the road geometry using shape files. It also provides tools for creating sections within link with chainages for the various pavement types, resurfacing/construction dates and the road condition (IRI, SDI) and the traffic data.

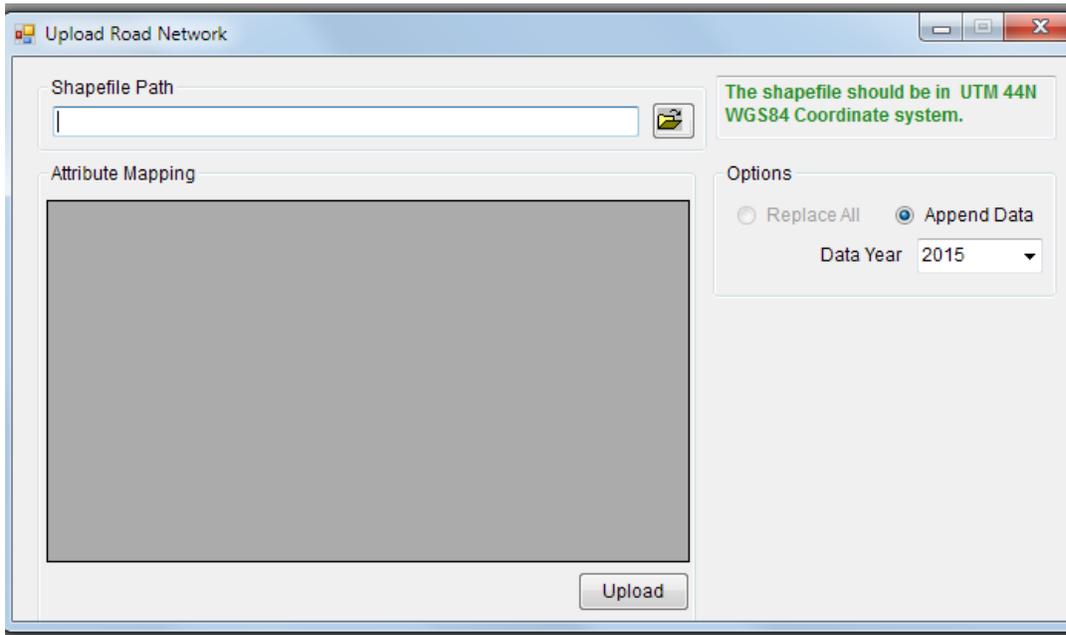
3.1 Edit Network Data

The Basic road network data can be edited or even road link deleted using this tool. Once deleted the road link is also deleted from the map.



3.2 Upload Road Network

The geometry of the road network can be uploaded using this tool. Basic attribute mapping is essential to uniquely identify the road (e.g road code etc..). The geometry should be UTM Zone 44N coordinate system.



3.3 Pavement

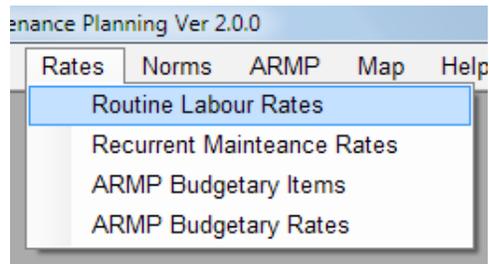
The pavement information is tool for dynamic segmentation of the road links by various parameters. Links sections can be defined using 'From' and 'To' Chainages and various parameters can be provided and the software will break the links accordingly.

The screenshot displays the 'Pavement Information' window. It includes a top navigation bar with 'Select Road Ref No' (H02) and 'Load Road Ref No' button. Below this, 'Select Link' (H0210) and 'Load Link' button are present. The 'Link Name' is 'Palung-Tistung', and 'Link Start Ch' (94.85), 'Link End Ch' (99.63), and 'Link Length' (4.78) are displayed. A central table shows pavement data for the selected link:

	From Chainage	To Chainage	Pavement Type	Pavement Width (m)	Last Resurface Year	SDI	IRI
▶	94.85	99.63	STGB	3.85	2014	1	-1

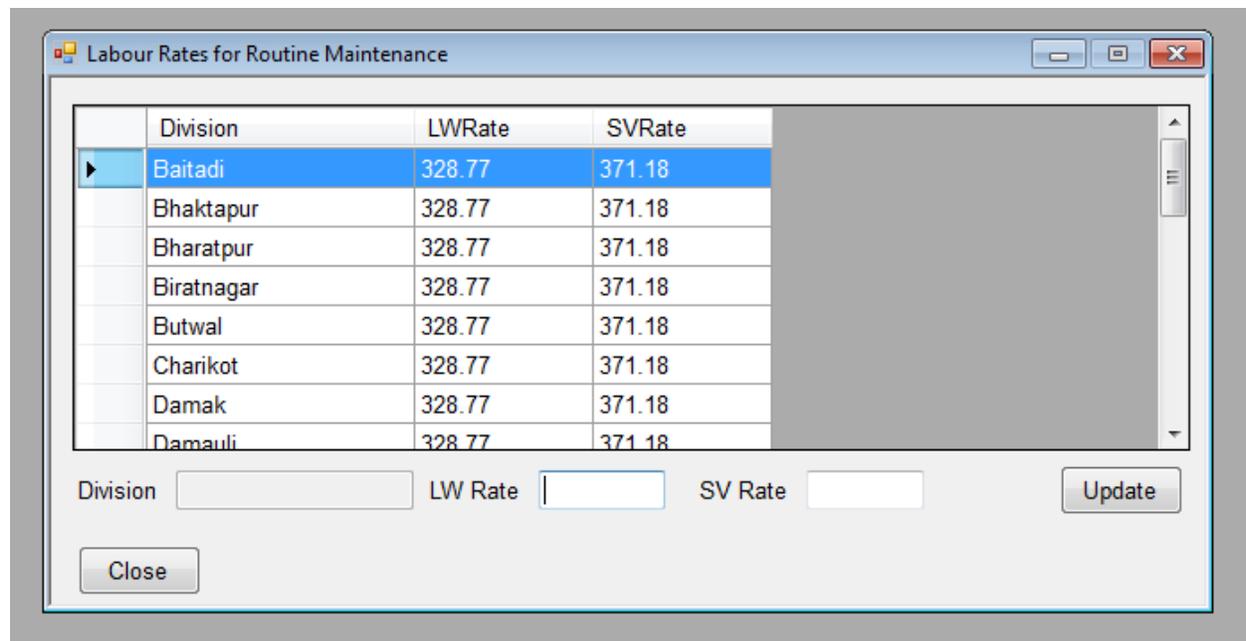
At the bottom of the table are 'Delete' and 'New' buttons. To the right of the table, the 'Entry Type' is set to 'Chainage'. The 'From Chainage' (94.85) and 'To Chainage' (99.63) fields are populated. Below these are fields for 'Longitude' and 'Latitude', all set to 0. Further down, 'Pavement Type' is 'STGB', 'Thickness' is 0, 'Base Thickness' is 0, and 'Sub-base Thickness' is 0. 'Pavement Width' is 3.85, 'Formation Width' is 0, and 'No of Lanes' is 0. 'Sub-grade Soil' is 'Ordinary Soil'. 'Left Shoulder Width' and 'Right Shoulder Width' are both 0, with 'Gravel' selected for both shoulder types. 'Last Update' and 'Inventory Year' are both 0. 'Update Notes' is 'RSDPAF 2011-12 SYPM ongoing'. 'Program/Project' is a dropdown menu. 'Construction Year' is 0 and 'Last Resurface Year' is 2014. 'SDI Value' is 1 and 'IRI Value' is -1. 'AADT Value' is 1843. A 'Save' button is located at the bottom right.

4. Rates Menu



Within the rates menu, users are able to view the routine labour rates(For Admin only). Work item and recurrent maintenance rates can also be viewed within the menu.

4.1 Routine Labour Rates (For Admin Only)



Admin users are able to view the routine labour rates for various divisions of the country and are also able to update the corresponding LWRate/SVRate.

4.2 Recurrent Maintenance Rates

Rates for the common items for recurrent maintenance work can be provided using this tool.

The screenshot shows the 'Recurrent Rate Entry' window for the 'Damak' division. It contains a table with the following data:

S.No	Work Description	Rate	Unit
1a	Blacktop Surface: Pothole/Patch/Edge Repair Works		
	1a.1 Asphalt Concrete Surface	4,000.00	m2
	1a.2 Surface Dressing/Premix	1,250.00	m2
	1a.3 Penetration Macadam	1,600.00	m2
1b	Blacktop Surface: Crack Sealing		
	1b.1 Asphalt Concrete Surface	0.00	m2
	1b.2 Surface Dressing/Premix	1,250.00	m2
	1b.3 Penetration Macadam	0.00	m2
2	Shoulder: Reshaping, Levelling and Compacting of GR Shoulder		
	2.1 In Single Lane Road	450.00	m2
	2.2 In Double Lane Road	0.00	m2
	2.3 Sealing of prime coat, SBST or BT macadam shoulder	0.00	m2
3	Access Road Repair Works		
	3.1 Gravel Access Pot Hole Repair	0.00	m2
	3.2 Bitumen Access Pot Hole Repair	1,200.00	m2
4	Culvert: Damaged Headwall/Wingwall/Catchpit/Abutment/Check dam/Scour Protection		
	4.1 Minor repair on Masonry Works	0.00	m3

4.3 ARMP Budgetary Items (Admin Only)

These are standard items defined for entire ARMP. Editing of items are only available for the admin users.

The screenshot shows the 'ARMP Budget Items' window. It features a list of items on the left and a form for editing a selected item on the right.

Activity No.	Short Description	Unit
1.01	Specific-Road Surface Repair Work/AC	Sqm
1.02	Specific-Road Surface Repair Work/SD	Sqm
1.03	Specific-Road Surface Repair Work/Otta/Premix	Sqm
1.04	Specific-Repair of Ret. Wall/Gabion	Cum
1.05	Specific-Repair of Ret. Wall/Masonry	Cum
1.06	Specific-Repair of Ret. Wall/ PCC/RCC/other	Cum
1.07	Specific-Repair of Culvert/Pipe	No
1.08	Specific-Repair of Culvert/Box/Slab	No
1.09	Specific-Repair of Causeway	No
1.10	Specific-Repair of Side Drain/Masonry	Rm
1.11	Specific-Repair of Side Drain/PCC/RCC	Rm
1.12	Specific-Lining of Drain surface	Rm
1.13	specific-Repair of Pavement support Structure	Rm
1.14	Specific-Road Furniture Works	No
1.15	Rehab-/Road Surface/AC	Km

The form on the right shows the details for the selected item (1.04):

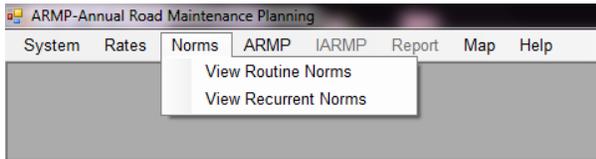
- Activity No.: 1.04
- Short Desc.: Specific-Repair of Ret. Wall/Gabion
- Unit: Cum

4.4 ARMP Budgetary Rates

The rates for standard items defined for entire ARMP can be entered using this tool. Each division should provide the rates applicable to the entire division.

Activity No.	Short Description	Unit	Rate
1.01	Specific-Road Surface Repair Work/AC	Sqm	500.00
1.02	Specific-Road Surface Repair Work/SD	Sqm	700.00
1.03	Specific-Road Surface Repair Work/Otta/Premix	Sqm	0.00
1.04	Specific-Repair of Ret. Wall/Gabion	Cum	3,700.00
1.05	Specific-Repair of Ret. Wall/Masonry	Cum	8,000.00
1.06	Specific-Repair of Ret. Wall/ PCC/RCC/other	Cum	13,000.00
1.07	Specific-Repair of Culvert/Pipe	No	0.00
1.08	Specific-Repair of Culvert/Box/Slab	No	0.00
1.09	Specific-Repair of Causeway	No	0.00
1.10	Specific-Repair of Side Drain/Masonry	Rm	0.00
1.11	Specific-Repair of Side Drain/PCC/RCC	Rm	0.00
1.12	Specific-Lining of Drain surface	Rm	0.00
1.13	specific-Repair of Pavement support Structure	Rm	0.00
1.14	Specific-Road Furniture Works	No	0.00
1.15	Rehab/-Road Surface/AC	Km	0.00
1.16	Rehab-Road Surface/STGB	Km	0.00
1.17	Rehab-Road Structure	Rm	0.00
1.18	Rehab-Side Drain/Masonry/PCC/RCC	Rm	2,000.00
1.19	Reconst-Road Surface/AC	Km	0.00
1.20	Reconst-Road Surface/SD	Km	0.00

5. Norms Menu



5.1 View Routine Norms

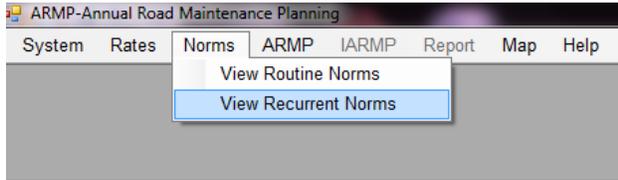
Provides the details of the labour based routine maintenance works/

The 'Routine Norms' dialog box displays the following data:

Surface Type	Terrain	Unit (Km)	Monsoon (120 days)	Other Season (245 days)
BT	H	3	1	1
BT	P	5	1	1
GR	P	5	1	1
GR	H	2	1	1
ER	H	2	0	0
ER	P	5	0	0
U	U	1	0.5	0.5
BT	R	5	1	1
GR	R	5	1	1

Additional details from the dialog box: Fiscal Year : 2013, Input Type: Lengthman. Buttons for 'Save' and 'Close' are visible at the bottom.

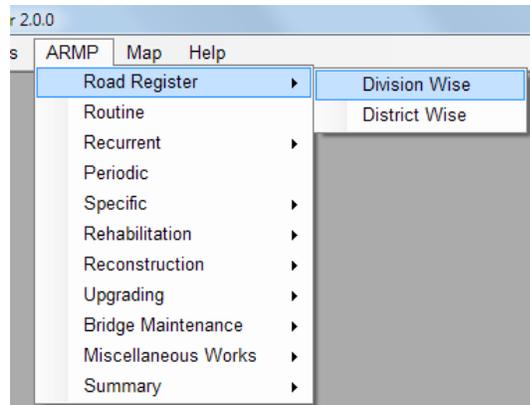
5.2 View Recurrent Norms Sub Menu



S.N.	Road Element	Work Description	Norms
1	Black top surface	Pot hole/Patch/Edge Repair	
		Crack Sealing	
2	Shoulder	Reshaping, levelling and Compacting of GR sho...	
		Asphalt Concrete Surface	0% - 0.2% of paved surface area
		Surface Dressing / Premix	0% - 0.75% of paved surface area
		Penetration Macadam	0% - 0.3% of paved surface area
		Asphalt Concrete Surface	0% - 0.3% of paved surface area
		Surface Dressing / Premix	0% - 0.2% of paved surface area
		Penetration Macadam	0% - 0.1% of paved surface area
		Shoulder Repairing for Single Lane Road	0% - 0.5% of shoulder surface area
		Shoulder Repairing for Double Lane Road	0% - 0.2% of shoulder surface area
		Sealing of prime coat,SBST or BT macadam sh...	0% - 0.15% of shoulder surface area
3	Access Road	Gravel Access Pot Hole Repair	0% - 0.4% of shoulder surface area
		Bitumen Access Pot Hole Repair	0% - 0.3% of shoulder surface area
4	Culverts	Damaged Headwall/Wingwall/Catchpit/Abutment...	0 - 0.1 m3 per Culvert
5.a	Gabion Wall	Damaged Dry Wall/Gabion Wall(Minor Repairs o...	0 - 1 m3 per 1000m Length
5.b	Masonry Wall	Damaged Masonry Wall(Minor Repairs on Maso...	0 - 0.5 m3 per 1000m Length
6.a	Earthen Drain	Reshaping (Earthwork)	0 - 5 m3 per 100m Length
6.b	Masonry Drain	Damaged Masonry work and water Proofing Bas...	0 - 2 m3 per 1000m length
6.c	Concrete Cover Drain	Replace Concrete Cover	0 - 0.25 m3 per 100m length
7.a	Embankment	Filling Rain Cuts and eroded Slopes	0 - 2% of embankment area
7.b		Turfing	0 - 1% of embankment area

6. ARMP Menu

6.1 Road Register



6.1.1 Division wise Road Register

Provides the road register by division. It also includes the sub-links and the activities e.g. last resurfacing, pavement status and project notes for each of the links and sub-links.

The screenshot shows the 'Road Register' window for the year 2014, filtered by the Baitadi division. The table displays the following data:

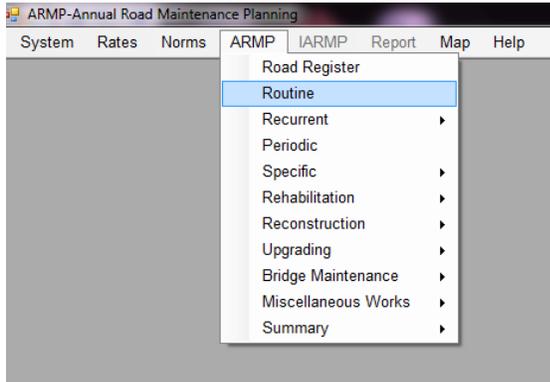
Road Ref No	Link Code	Link Name	Link From	Link To	Link Length	BT	GR	ER	UC	PL	Terrain	Link Section	Section From	Section To	Section Length
F049	F04901	Khodpe-Kalangagad	0.00	60.32	60.32	60.32	0.00	0.00	0.00	0.00	H	F04901-A	0.00	60.32	
F049	F04902	Kalangagad-Deura	60.32	67.42	7.10	7.10	0.00	0.00	0.00	0.00	H	F04902-A	60.32	67.42	
F049	F04903	Deura-Tamail	67.42	95.42	28.00	24.08	0.00	3.92	0.00	0.00	H	F04903-A	67.42	91.50	
												F04903-B	91.50	95.42	
F049	F04904	Tamail-Chainpur	95.42	108.68	13.26	0.00	0.00	13.26	0.00	0.00	H	F04904-A	95.42	108.68	
F050	F05001	Satbanj-Baitadi	0.00	18.45	18.45	18.45	0.00	0.00	0.00	0.00	H	F05001-A	0.00	18.45	
F050	F05002	Baitadi-Jhulaghat	18.45	42.05	23.60	4.00	0.00	19.60	0.00	0.00	H	F05002-A	18.45	22.45	
												F05002-B	22.45	42.05	
F175	F17501	Patan-Pancheswor	0.00	62.00	62.00	0.00	0.00	32.00	0.00	30.00	H	F17501-A	0.00	32.00	
												F17501-B	32.00	62.00	
H14	H1408	Anarkholi-Khodpe	153.76	160.94	7.18	7.18	0.00	0.00	0.00	0.00	H	H1408-A	153.76	160.94	
H14	H1409	Khodpe-Patan	160.94	184.17	23.23	23.23	0.00	0.00	0.00	0.00	H	H1409-A	160.94	184.17	
H14	H1410	Patan-Satbanj	184.17	200.76	16.59	16.59	0.00	0.00	0.00	0.00	H	H1410-A	184.17	200.76	
H14	H1411	Satbanj-Gokuleswor	200.76	253.73	52.97	52.97	0.00	0.00	0.00	0.00	H	H1411-A	200.76	253.73	
H14	H1412	Gokuleswor-Darchula	253.73	325.15	71.42	71.42	0.00	0.00	0.00	0.00	H	H1412-A	253.73	325.15	
H14	H1413	Darchula-Tinkar (IB)	325.15	415.15	90.00	0.00	0.00	7.00	8.00	75.00	H	H1413-A	325.15	332.15	
												H1413-B	332.15	340.15	
												H1413-C	340.15	415.15	
Total							474.12	285.34	0.00	75.78	8.00	105.00			

6.1.2 District wise Road Register

Provides the road register by district. It also includes the sub-links and the activities e.g. last resurfacing, pavement status and project notes for each of the links and sub-links.

Road Register District Wise																	
District		Achham														Year : 2015	
		Road Register (District Wise)															
Road Ref No	Link Code	Link Name	Link From	Link To	Link Length	BT	GR	ER	UC	PL	Terrain	Link Section	Section From	Section To			
F051	F05102	Chaukhutte Bajar-Sanfebagar	41.00	67.00	26.00	26.00	0.00	0.00	0.00	0.00	H	F05102-A	41.00	51.00			
													F05102-B	51.00	67.00		
F146	F14601	Sanphebagar-Rakse	0.00	14.00	14.00	14.00	0.00	0.00	0.00	0.00	H	F14601-A	0.00	14.00			
F195	F19504	Selli-Seti R(District Border)-Saphe Ba...	100.00	123.00	23.00	10.00	0.00	13.00	0.00	0.00	P	F19504-A	100.00	110.00			
													F19504-B	110.00	123.00		
H18	H1824	Rakam(Belkhet)-Mangalsen (Midhill)	945.00	993.00	48.00	0.00	0.00	48.00	0.00	0.00	H	H1824-A	945.00	993.00			
H18	H1825	Mangalsen-Safebagar (Midhill)	993.00	1,032.00	39.00	35.00	0.00	4.00	0.00	0.00	H	H1825-A	993.00	997.00			
													H1825-B	997.00	1,032.00		
Total					150.00	85.00	0.00	65.00	0.00	0.00							

6.2 Routine Maintenance



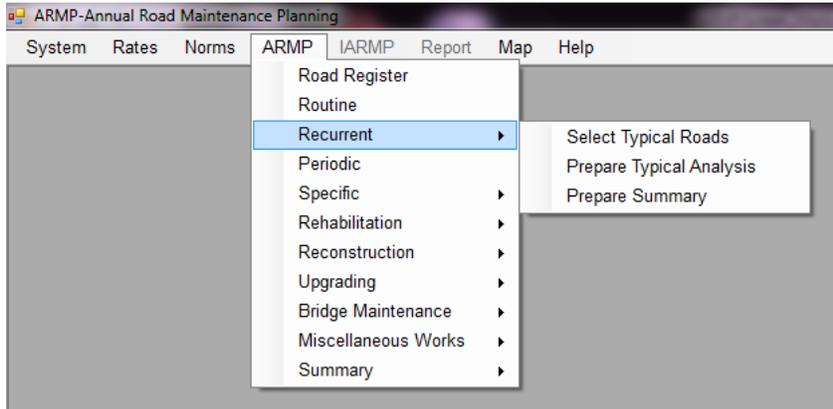
Routine Screen

The screenshot shows the 'Routine Maintenance Cost Estimate' window for the year 2015. The window title is 'Routine Maintenance Cost Estimate' and the division is 'Baglung'. The table below shows the data for various road links and sections.

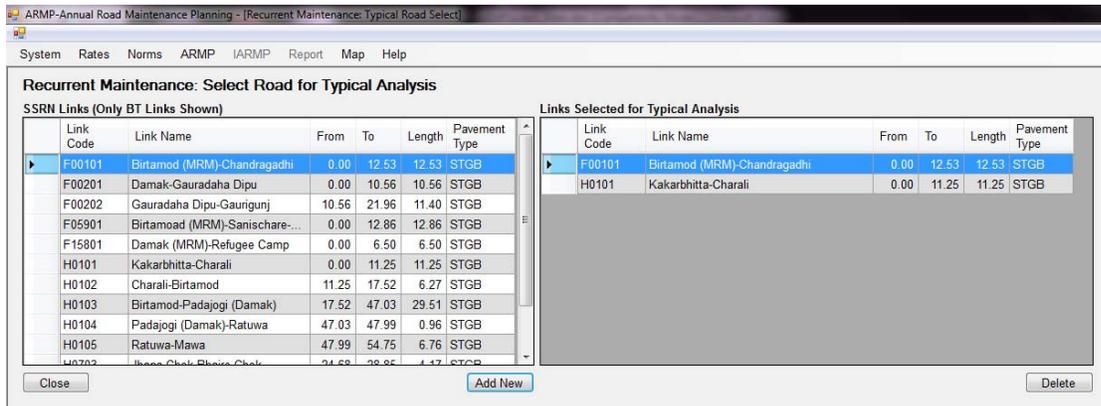
Road Ref No	Link Code	Link Name	Link From	Link To	Link Length	BT	GR	ER	UC	PL	Link Section	Section From	Section To	Section Length
F042	F04204	Sandh bridge-Kaligandaki bridge	43.76	67.87	24.11	24.11	0.00	0.00	0.00	0.00	F04204-A	43.76	67.87	24.11
F042	F04205	Kaligandaki bridge-Baglung	67.87	72.58	4.71	4.71	0.00	0.00	0.00	0.00	F04205-A	67.87	72.58	4.71
F042	F04206	Baglung-Myagdi district border	72.58	80.00	7.42	5.00	2.42	0.00	0.00	0.00	F04206-A	72.58	74.21	1.63
											F04206-B	74.21	77.58	3.37
											F04206-C	77.58	80.00	2.42
F042	F04207	Myagdi district border-Beni	80.00	90.00	10.00	0.00	10.00	0.00	0.00	0.00	F04207-A	80.00	90.00	10.00
F042	F04208	Beni-Pairothapla	90.00	111.00	21.00	0.00	0.00	21.00	0.00	0.00	F04208-A	90.00	111.00	21.00
F042	F04209	Pairothapla-Jomsong	111.00	170.00	59.00	0.00	0.00	59.00	0.00	0.00	F04209-A	111.00	170.00	59.00
F042	F04210	Jomsong-Ghoktang	170.00	292.00	122.00	0.00	0.00	122.00	0.00	0.00	F04210-A	170.00	292.00	122.00
F131	F13103	Setibeni-Gupteswor(Kaligandaki-Kus...	33.00	85.00	52.00	0.00	0.00	48.50	0.00	3.50	F13103-A	33.00	36.50	3.50
											F13103-B	36.50	85.00	48.50
F133	F13301	Maldhunga-Beni	0.00	13.00	13.00	13.00	0.00	0.00	0.00	0.00	F13301-A	0.00	13.00	13.00
F166	F16601	Kagbeni-Muktinath	0.00	26.00	26.00	0.00	0.00	26.00	0.00	0.00	F16601-A	0.00	26.00	26.00
F167	F16706	Palung Khola-Maldhunga (Kaligandak...	207.00	245.00	38.00	0.00	0.00	34.00	0.00	4.00	F16706-A	207.00	211.00	4.00
											F16706-B	211.00	245.00	34.00

- Select the Division and press 'Load'
- A decision has to be made to include or exclude the link from the routine maintenance based on the on-going project information. Reason for the excluding should be mentioned. The roads with PL or UC status are shown in red color and are automatically excluded.
- The routine maintenance of the earthen road is estimated at NRs 20,000 per km which also includes the recurrent maintenance. This is automatically calculated.
- After making changes, press save to record the changes.
- Right click on the grid to export the data to Excel

6.3 Recurrent Maintenance



6.3.1 Select Typical Roads



In order to carry out the typical analysis for the recurrent maintenance works, road should be selected. No need to select all the roads in the division but a typical road should be selected to compute the per kilometer cost. The division can also use its own measurement or judgment for particular roads to arrive at the recurrent maintenance cost.

6.3.2 Prepare Typical Analysis

Typical analysis for recurrent maintenance can be done using this tool. Provide the representative quantities for the selected road for each of the recurrent work items and the cost per Kilometer is computed which can be used to compute the total recurrent maintenance cost of the same road and also use it to for other roads. Right click on the grid to export the data to Excel.

System Rates Norms ARMP IARMP Report Map Help

Recurrent Maintenance Budget Estimates For Typical Road for Two Cycles

Division: Damak Load

Typical Link Name: Birtamod (MRM)-Chandragadhi F00101-0-12.53 Total Km: 12.53 Class: FRN Pavement Type: STGB Width: 5.8 SDI: 1.76 Export to Excel

S.N.	Road Element	Work Description	Norms	Quantity relevant for calculation as per assessment	Total Quantity as per actual or road inventory	Unit	Multiplication factor according to Norms	Total Quantity as per Norms	Unit	Rate (NRs /Unit)	Total (NRs)
1	Black top surface	Pot hole/Patch/Edge Repair									
		Asphalt Concrete Surface	0% - 0.2% of paved surface area			m2					
		Surface Dressing / Premix	0% - 0.75% of paved surface area		72,674.00	m2	0.0075	545.06	m2	1,250.00	68118.75
		Penetration Macadam	0% - 0.3% of paved surface area			m2					
		Crack Sealing									
		Asphalt Concrete Surface	0% - 0.2% of paved surface area			m2					
2	Shoulder	Shoulder Repairing for Double Lane Road	0% - 0.2% of shoulder surface area		72,674.00	m2	0.002	145.35	NA	0.00	0.00
		Sealing of prime coat, SSGT or BT macadam shoulder in Shoulder	0% - 0.15% of shoulder surface area			m2					
		Gravel Access Pot Hole Repair	0% - 0.4% of shoulder surface area		72,674.00	m2	0.004	200.70	NA	0.00	0.00
3	Access Road	Blumen Access Pot Hole Repair	0% - 0.3% of shoulder surface area			m2					
		Damaged Headwall/Wingwall/Catchpit/Abutment (Minor repairs on Masonry Works)	0 - 0.1 m3 per Culvert		80.00	m3	0.01	0.80	NA	0.00	0.00
4	Culverts	Damaged Check dam and Scur Protection (Minor repairs on Masonry Works)									
5.A	Gabion Wall	Damaged Dry Vack/Gabion Wall (Minor Repairs on Gabion Works)	0 - 1 m3 per 1000m Length		12.53	1000m	1	12.53	m3	3,600.00	45100.00
5.B	Masonry Wall	Damaged Masonry Wall	0 - 0.5 m3 per 1000m Length		12.53	1000m	0.5	6.27	m3	0.00	0.00

User: Damak1 Division: Damak Year: 2013

6.3.3 Prepare Summary

A summary of recurrent maintenance can be prepared using this tool. The recurrent maintenance of the gravel road is automatically assigned to NRs 30,000 and for the BT roads, rates per kilometer from the typical analysis has to be provided.

System Rates Norms ARMP IARMP Report Map Help

Division: Damak Load

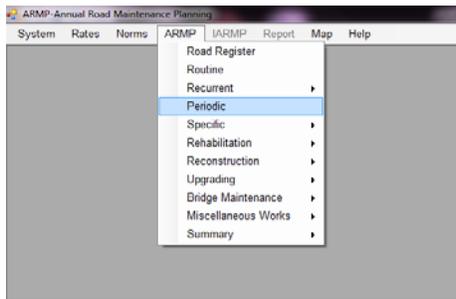
RECURRENT SUMMARY
(Only BT & GR Links are Shown)

Export

Road Class	Link Code	Link Name	From	To	Road Length (km)	Pavement Type	Length Under RM (km)	Recurrent Maintenance Rate (NRs/km)	Recurrent Maintenance Total (NRs '000)	Remarks
FRN	F00101	Birtamod (MRM)-Chandragadhi	0.00	12.53	12.53	STGB	12.53	40,000.00	601.44	
FRN	F00201	Damak-Gauradaha Dipu	0.00	10.56	10.56	STGB	10.56	45,000.00	475.20	
FRN	F00202	Gauradaha Dipu-Gaungun)	10.56	21.96	11.40	STGB	11.40	45,000.00	513.00	
FRN	F05001	Birtamod (MRM)-Sanischara-Bu...	0.00	12.86	12.86	STGB	12.86	60,000.00	771.60	
FRN	F15001	Damak (MRM)-Refugee Camp	0.00	6.50	6.50	STGB	6.50	35,000.00	227.50	
NH	H0101	Kakarshitta-Charali	0.00	11.25	11.25	STGB	11.25	43,170.67	485.76	
NH	H0102	Charali-Birtamod	11.25	17.52	6.27	STGB	6.27	63,000.00	395.01	
NH	H0103	Birtamod-Padajogi (Damak)	17.52	47.03	29.51	STGB	29.51	63,000.00	1,859.13	
NH	H0104	Padajogi (Damak)-Ratuwa	47.03	47.99	0.96	STGB	0.00	0.00	0.00	
NH	H0105	Ratuwa-Mawa	47.99	54.75	6.76	STGB	6.76	63,000.00	425.88	
NH	H0701	Kechns (B)-Kechns village	0.00	3.00	3.00	GR	0.00	0.00	0.00	
NH	H0702	Kechns village-Jhapa Chok	3.00	24.68	21.68	GR	0.00	0.00	0.00	
NH	H0703	Jhapa Chok-Bhairs Chok	24.68	28.85	4.17	STGB	0.00	0.00	0.00	
NH	H0704	Bhairs Chok-Charali	28.85	39.22	10.37	STGB	0.00	0.00	0.00	
NH	H0705	Charali-Chihanedanda	39.22	56.00	16.78	STGB	16.78	84,000.00	1,409.52	
PR	H1701	Bhadrapur-Ratuwa(Postal)	0.00	15.00	15.00	GR	0.00	0.00	0.00	
					179.60		124.43		7,164.04	

User: Damak1 Division: Damak Year: 2013

6.4 Periodic Maintenance

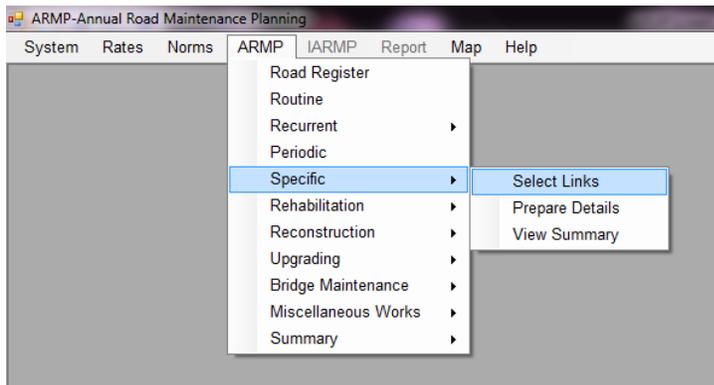


Periodic maintenance requirement (Yes/No) is computed automatically based on the last year of resurface, traffic, SDI values. The ARMP is already updated with the recent data on the pavement condition, traffic data and last re-surface year and also updated with the 2014 periodic plan. Decision can be made to include the road under periodic maintenance even the calculation shows "No" based on observation by the division. Right click on the grid to export the data to Excel

The screenshot shows the 'Periodic Maintenance' window in the ARMP software. The window title is 'ARMP-Annual Road Maintenance Planning - [Periodic Maintenance]'. The menu bar includes 'System', 'Rates', 'Norms', 'ARMP', 'IARMP', 'Report', 'Map', and 'Help'. Below the menu bar, there are tabs for 'Periodic Maintenance Worksheet', 'Periodic Screening', 'Periodic Ranking', and 'Rolling Plans'. The main area contains a data grid with the following columns: Link No, Link/road Name, From, To, Length KM, Surface Type, Pavement Type, Status of Pavement, Section from km, Section to km, link or section length km, Traffic Volumm Group, Year of Last surfacing, A-Age of surfacing in years as at, Road Condition, T-mainter cycle, ACF-Age Corrector Factor, Time for resealing years, Need resealing now?, Rate (NRs 000 /Km), Total Estimatec Cost (NRs 000), and Remarks. The grid contains 15 rows of data, including a 'Total' row at the bottom. The 'Total' row shows a value of 0.00 for the 'link or section length km' column and 0.00 for the 'Total Estimatec Cost' column. At the bottom of the window, there are 'Save' and 'Close' buttons. The status bar at the very bottom reads 'User: Damak1 Division: Damak Year: 2013'.

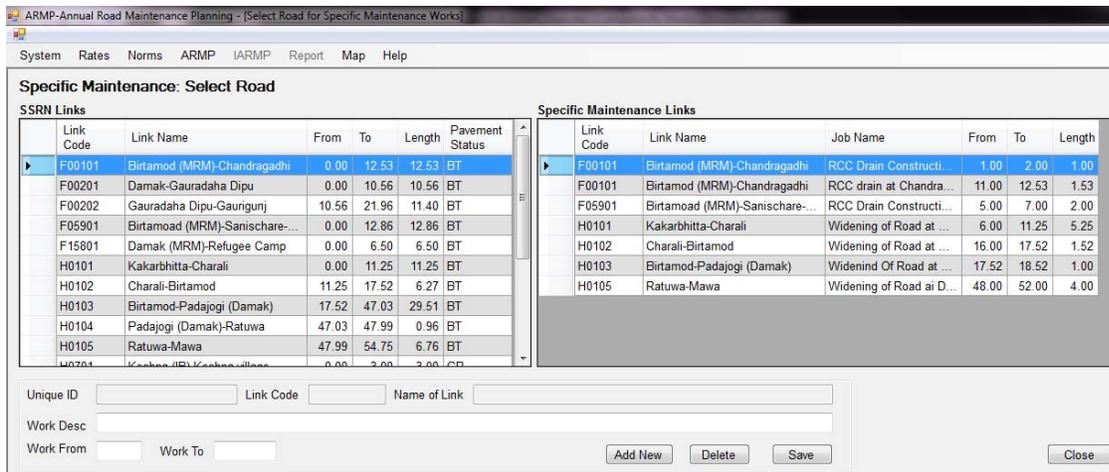
Link No	Link/road Name	From	To	Length KM	Surface Type	Pavement Type	Status of Pavement	Section from km	Section to km	link or section length km	Traffic Volumm Group	Year of Last surfacing	A-Age of surfacing in years as at	Road Condition	T-mainter cycle	ACF-Age Corrector Factor	Time for resealing years	Need resealing now?	Rate (NRs 000 /Km)	Total Estimatec Cost (NRs 000)	Remarks
F00101	Bitamo...	0	12.53	12.53	BT	STGB	RSDP Completed.ADB TPPF PHASE I				High	2012	1	Fair	6	0	5	No			
F00201	Damak...	0	10.56	10.56	BT	STGB	RNDP Completed				Moderate	2008	5	Good	7	2	2	No			
F00202	Gaurad...	10.56	21.96	11.40	BT	STGB	RNDP Completed				Moderate	2008	5	Good	7	2	2	No			
F05901	Bitamo...	0	12.86	12.86	BT	STGB	RSDP 2011-12 SYPM				Low	2013	0	Fair	8	0	8	No			
F15801	Damak...	0	6.5	6.50	BT	STGB	RSDP 2012-13 TYPM				Moderate	2013	0	Fair	7	0	7	No			
H0101	Kakarb...	0	11.25	11.25	BT	STGB	RSDP 2008-09 First Year KM				High	2010	3	Good	6	2	3	No			
H0102	Charal...	11.25	17.52	6.27	BT	STGB	RSDP 2008-09 First Year KM				High	2010	3	Good	6	2	3	No			
H0103	Bitamo...	17.52	47.03	29.51	BT	STGB	8.51km completed in 2010. 21 km on ...				High	2010	3	Good	6	2	3	No			
H0104	Padajo...	47.03	47.99	0.96	BT	STGB	RSDP 2008-09 First Year KM				High	2010	3	Good	6	2	3	No			
H0105	Ratuw...	47.99	54.75	6.76	BT	STGB	RSDP 2008-09 First Year KM				High	2010	3	Good	6	2	3	No			
H0703	Jhapa ...	24.68	28.85	4.17	BT	STGB	Postal Highway Project Phase I				Moderate	2013	0	Poor	7	-2	7	No			
H0704	Bhairs ...	28.85	39.22	10.37	BT	STGB	Postal Highway Project Phase I				Moderate	2013	0	Poor	7	-2	7	No			
H0705	Charal...	39.22	56	16.78	BT	STGB	RSDP Completed				High	2012	1	Good	6	2	5	No			
Total										0.00										0.00	

6.5 Specific Maintenance



6.5.1 Select Links

Links requiring specific maintenance should be selected using this tool. The work description should be provided and should not be repeated for the same link. It is better to mention specific works e.g "Wall Construction" etc. rather than putting generic description. The length of the section should also be provided.



6.5.2 Prepare Details

Under each of the selected link and the work description, details should be prepared. Standard items will be available and quantities should be provided. The total cost is automatically computed. Right click on the grid to export entire details data to Excel

Specific Maintenance Works: Details

Division: Damak

Name of Road: Birtamod (MRM)-Chandragadhi : F00101-0-12.53 Name of Job : RCC Drain Construction Work in Birtabazar

Work From: 1 To: 2

Activity Group	Activity No.	Description of Work	Unit	Quantity	Rate	Amount
100 : Users ...	100.17	RCC Drain Construction	rm	500	5000	2500000.00

Activity Group: 100 : Users Norm - Activity No: 100.1 Earth work Excavation

Work Desc: Earth work Excavation

Unit: m3 Quantity: Rate: 350 Amount: 0.00

Sub-Total	2,500,000.00
Contingencies 5%	125,000.00
Total with Contingencies	2,625,000.00
VAT 13%	341,250.00
Total (With VAT & Contingencies)	2,966,250.00

User: Damak1 Division: Damak Year: 2013

6.5.3 View Summary

Provides the summary of the specific maintenance works. Right click on the grid to export the data to Excel

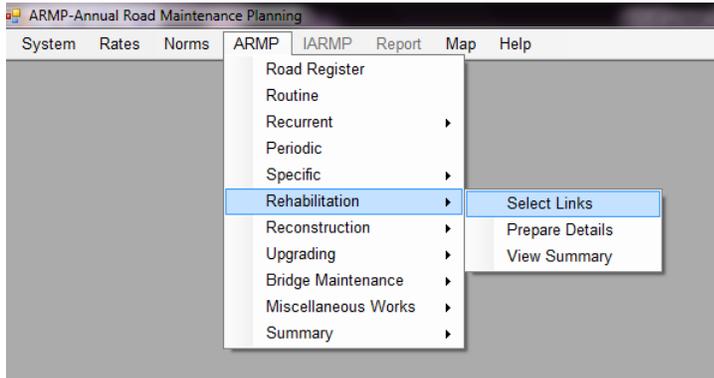
Specific Maintenance Summary Year: 2013

Division: Damak

Link Code	Link Name	From	To	Length	Specific Work Description	Work From	Work To	Work Length	Total Cost
F00101	Birtamod (MRM)-Chandragadhi	0	12.53	12.53	RCC Drain Construction Work ...	1.00	2.00	1.00	2,966,250.00
F00101	Birtamod (MRM)-Chandragadhi	0	12.53	12.53	RCC drain at Chandragadhi	11.00	12.53	1.53	4,746,000.00
F05901	Birtamoad (MRM)-Sanischare-Budhbare	0	12.86	12.86	RCC Drain Construction at Sa...	5.00	7.00	2.00	22,780,800.00
H0101	Kakarbhitta-Charali	0	11.25	11.25	Widening of Road at Dhalabani ...	6.00	11.25	5.25	15,187,200.00
H0102	Charali-Birtamod	11.25	17.52	6.27	Widening of Road at Birtmod B...	16.00	17.52	1.52	15,187,200.00
H0103	Birtamod-Padajogi (Damak)	17.52	47.03	29.51	Widening Of Road at Birtmod ...	17.52	18.52	1.00	15,187,200.00
H0105	Ratuwa-Mawa	47.59	54.75	6.76	Widening of Road at Damak B...	48.00	52.00	4.00	22,780,800.00
Total									96,635,450.00

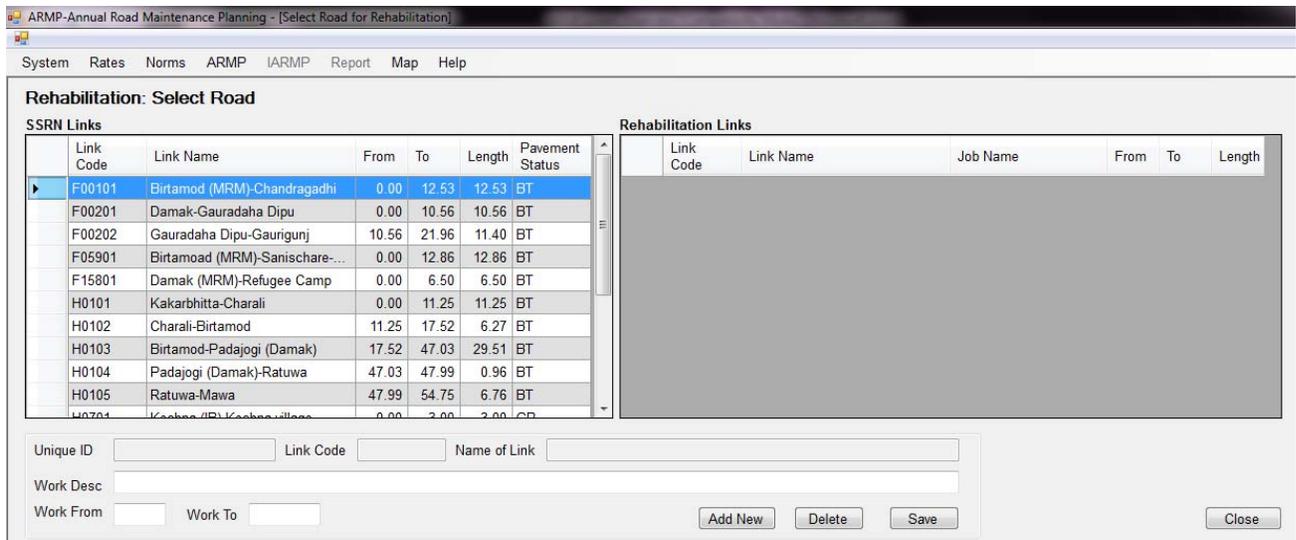
User: Damak1 Division: Damak Year: 2013

6.6 Rehabilitation



6.6.1 Select Links

Links requiring rehabilitation should be selected using this tool. The work description should be provided and should not be repeated for the same link. The length of the section should also be provided.



6.6.2 Prepare Details

Under each of the selected link and the work description, details should be prepared. Standard items will be available and quantities should be provided. The total cost is automatically computed. Right click on the grid to export entire details data to Excel

6.6.3 View Summary

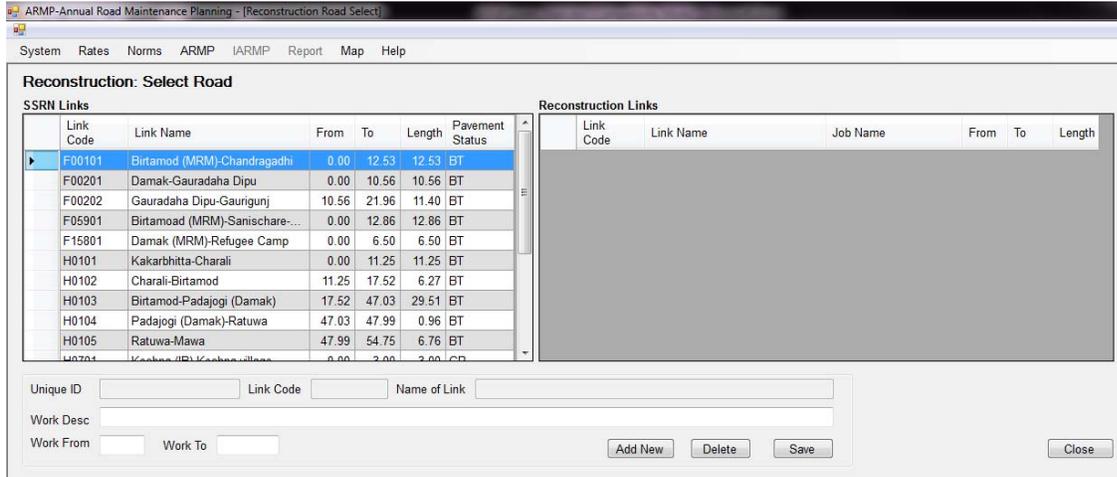
Provides the summary of the rehabilitation works. Right click on the grid to export the data to Excel

Link Code	Link Name	From	To	Length	Specific Work Description	Work From	Work To	Work Length	Total Cost
Total									0.00

6.7 Reconstruction

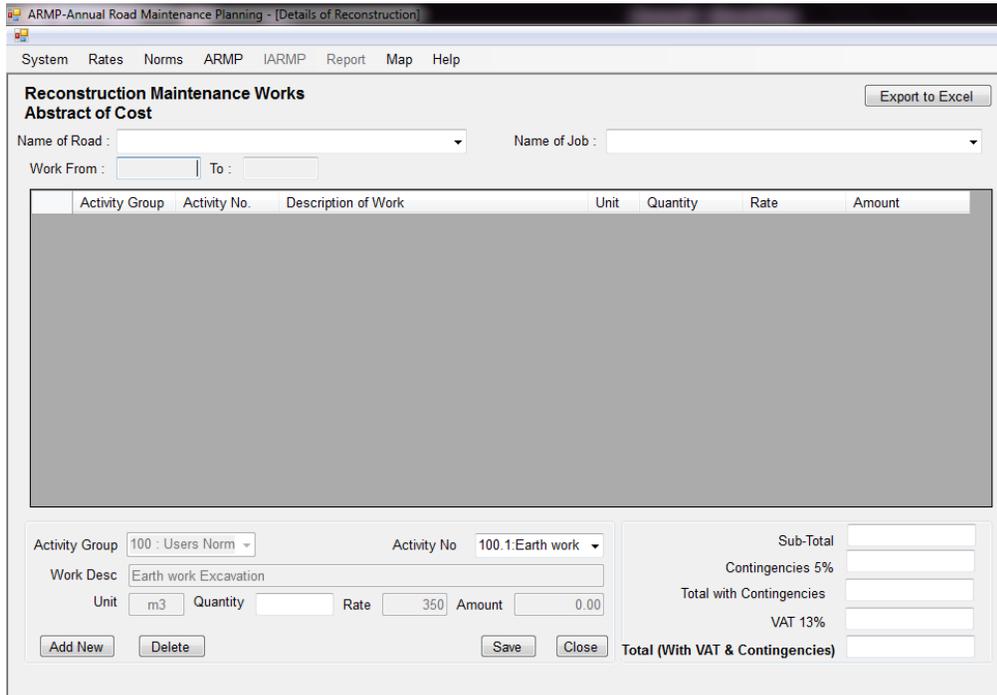
6.7.1 Select Links

Links requiring reconstruction should be selected using this tool. The work description should be provided and should not be repeated for the same link. The length of the section should also be provided.



6.7.2 Prepare Details

Under each of the selected link and the work description, details should be prepared. Standard items will be available and quantities should be provided. The total cost is automatically computed. Right click on the grid to export entire details data to Excel



6.7.3 View Summary

Provides the summary of the reconstruction works. Right click on the grid to export the data to Excel

ARMP-Annual Road Maintenance Planning - [Summary of Reconstruction Maintenance]

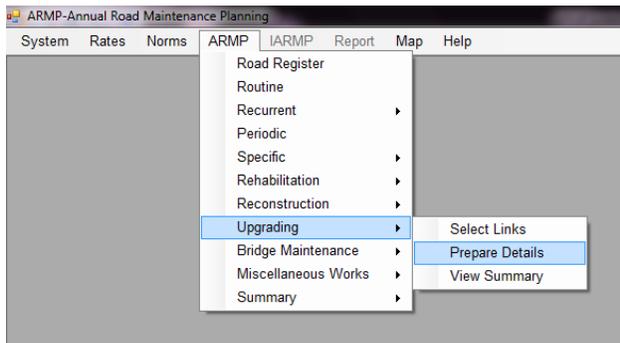
System Rates Norms ARMP IARMP Report Map Help

Reconstruction Summary Year: 2013

Division: Damak

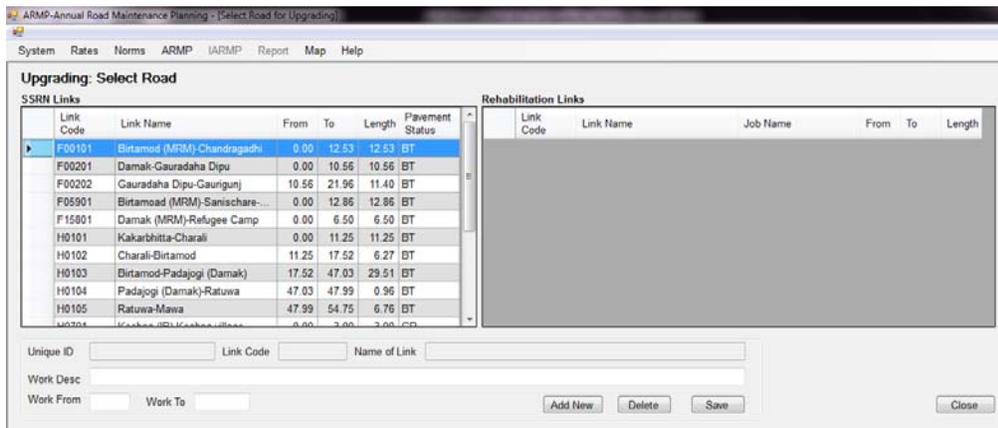
Link Code	Link Name	From	To	Length	Specific Work Description	Work From	Work To	Work Length	Total Cost
Total									0.00

6.8 Upgrading



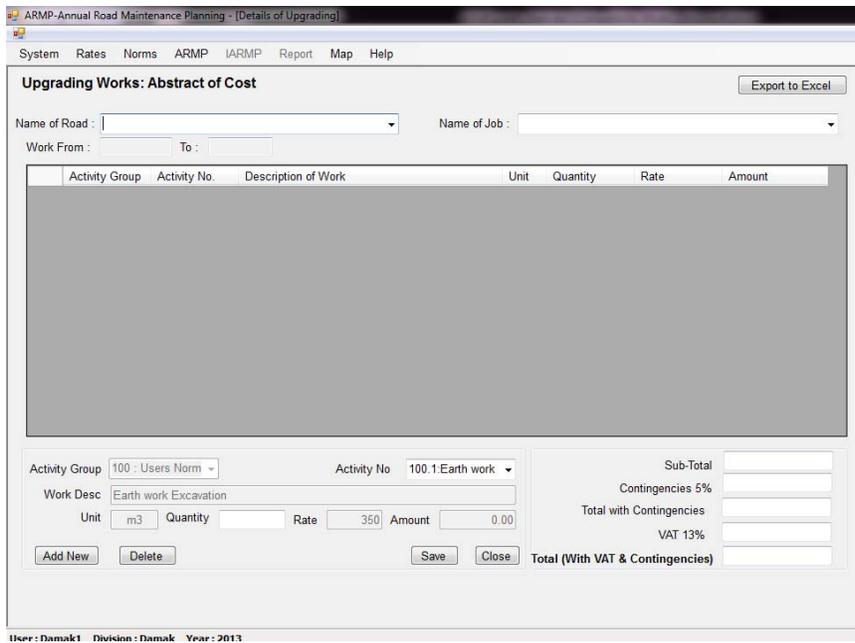
6.8.1 Select Links

Links requiring upgrading should be selected using this tool. The work description should be provided and should not be repeated for the same link. The length of the section should also be provided.



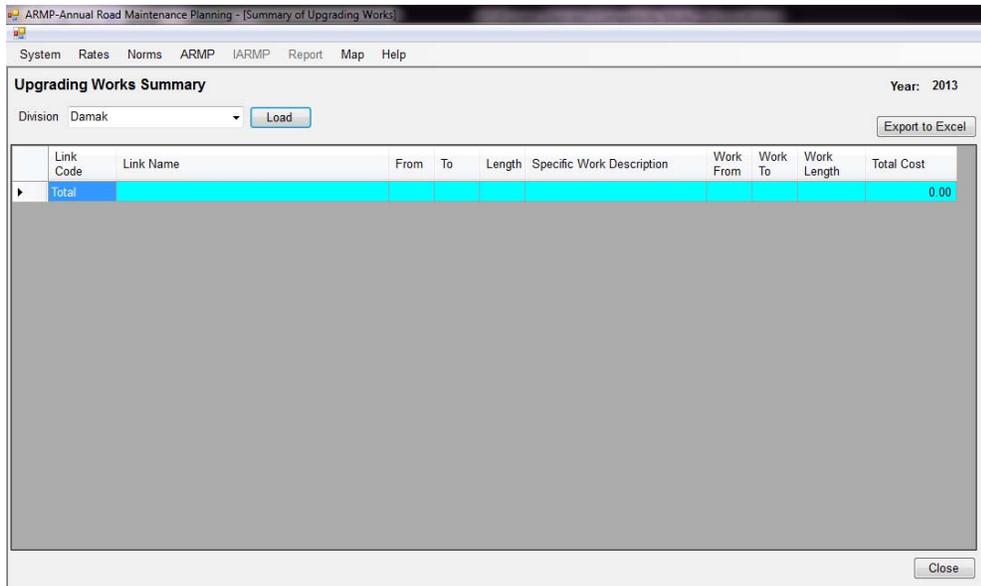
6.8.2 Prepare Details

Under each of the selected link and the work description, details should be prepared. Standard items will be available and quantities should be provided. The total cost is automatically computed. Right click on the grid to export entire details data to Excel

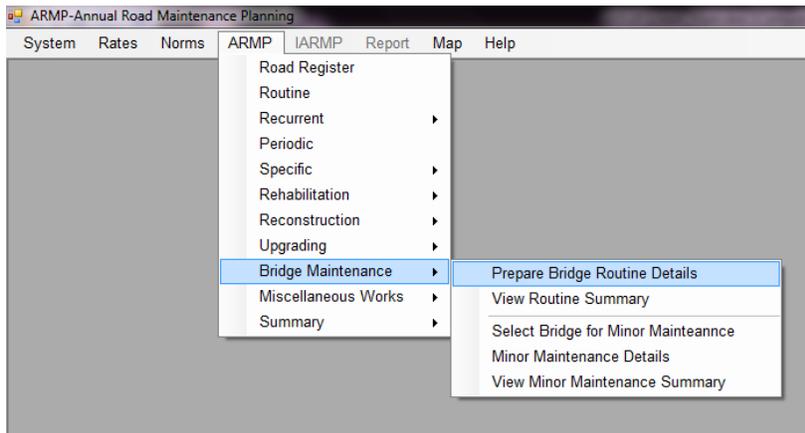


6.8.3 View Summary

Provides the summary of the reconstruction works. Right click on the grid to export the data to Excel

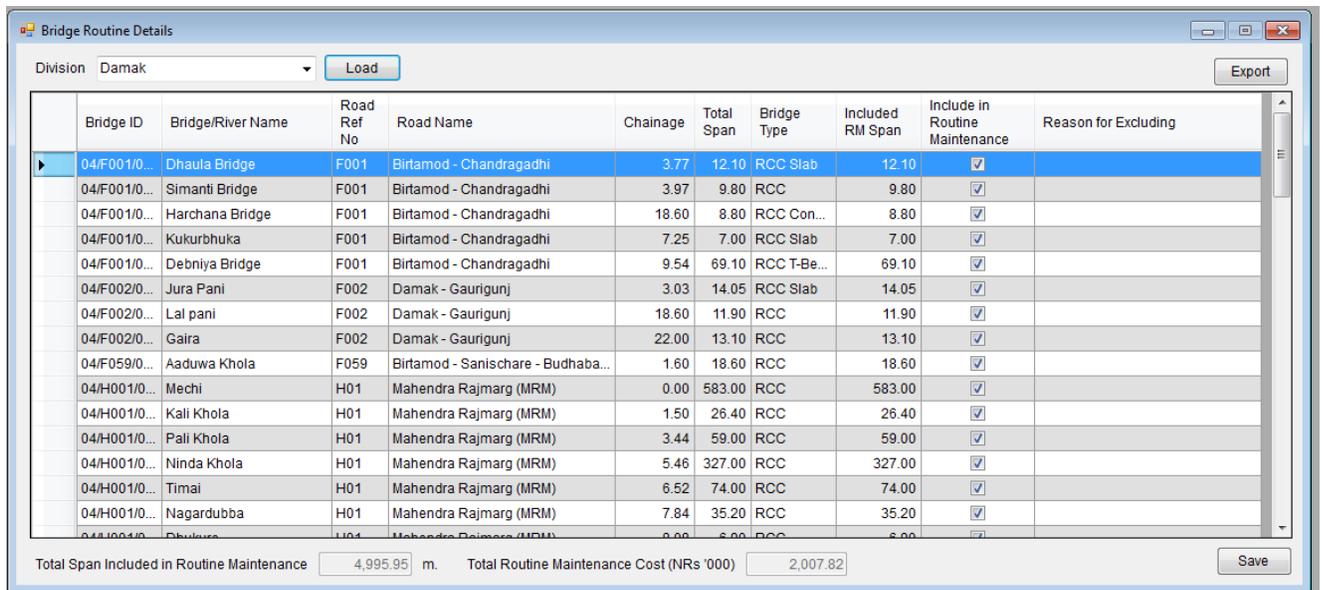


6.9 Bridge Maintenance

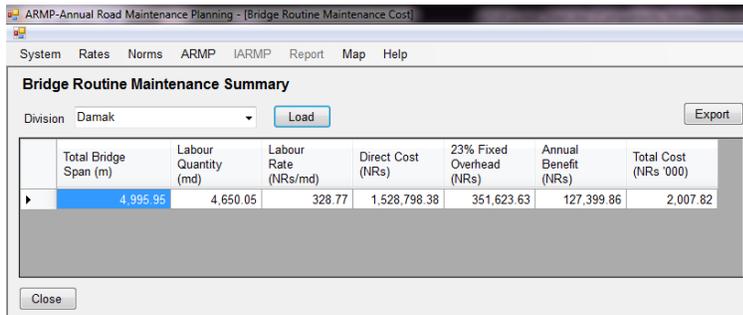


6.9.1 Prepare Bridge Routine Details

Select the bridge to include in the routine maintenance or not. Reason for exclusion also should be mentioned if the bridge is not included for routine maintenance.

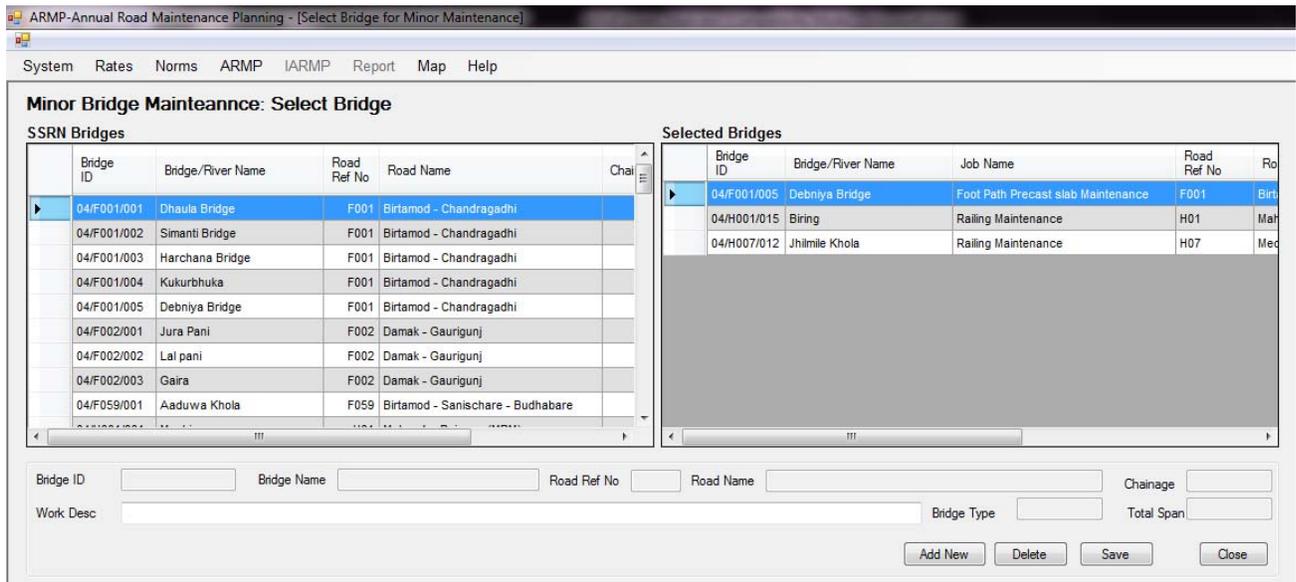


6.9.2 View Routine Summary



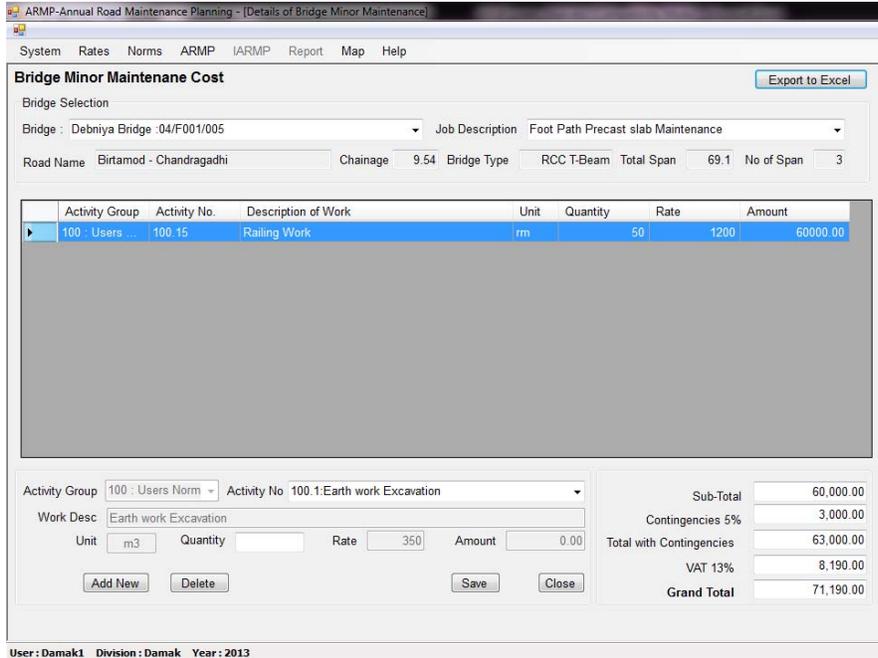
6.9.3 Select Bridge For Minor Maintenance

Select the bridges for minor maintenance and also provide the work descriptions. If same bridge is used for different works, the work description should be different.



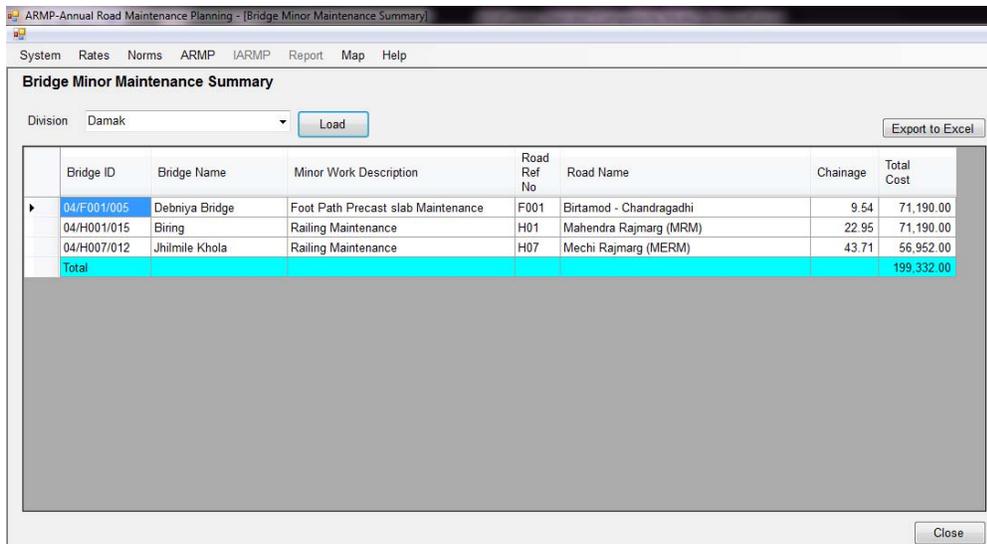
6.9.4 Minor Maintenance Details

Under each of the selected bridges and the work description, details should be prepared. Standard items will be available and quantities should be provided. The total cost is automatically computed. Right click on the grid to export entire details data to Excel



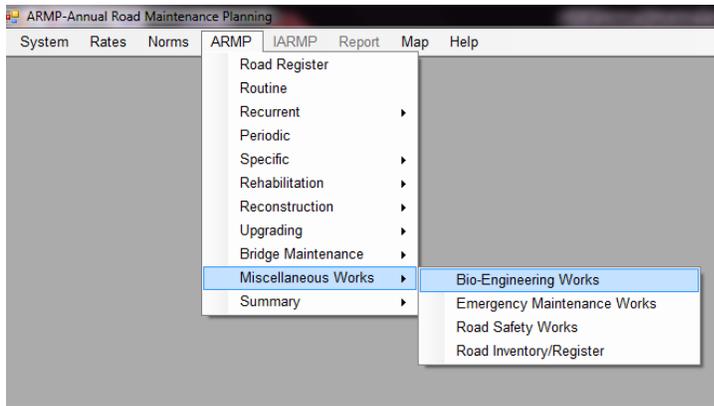
6.9.5 View Minor Maintenance Summary

Provides the summary of the minor bridge maintenance works by division. Right click on the grid to export the data to Excel



6.10 Miscellaneous Maintenance

It is similar to other maintenance works e.g. specific maintenance. First the required link should be selected and details prepared. The summary of the cost can be viewed using "View Summary". Right click on the grid to export the data to Excel



6.10.1 Bio-Engineering Works

The screenshot shows the 'Bio-Engineering Works' data grid in the ARMP software. The grid displays the following data:

Link Code	Link Name	From	To	Length	Pavement Status	Work Description	Total Cost (NRs x000)
F00101	Birtamod (MRM)-Chandragadhi	0.00	12.53	12.53	BT		0
F00201	Damak-Gauradaha Dipu	0.00	10.56	10.56	BT		0
F00202	Gauradaha Dipu-Gaungunj	10.56	21.96	11.40	BT		0
F05901	Birtamoad (MRM)-Sanischare-Budhbare	0.00	12.86	12.86	BT		0
F15801	Damak (MRM)-Refugee Camp	0.00	6.50	6.50	HT		0
H0101	Kakarbhitta-Charali	0.00	11.25	11.25	BT		0
H0102	Charali-Birtamod	11.25	17.52	6.27	BT		0
H0103	Birtamod-Padajog (Damak)	17.52	47.03	29.51	BT	Plantation	1000
H0104	Padajogi (Damak)-Ratuwa	47.03	47.99	0.96	BT		0
H0105	Ratuwa-Mawa	47.99	54.75	6.76	BT		0
H0701	Kechna (IB)-Kechna village	0.00	3.00	3.00	GR		0
H0702	Kechna village-Jhapa Chok	3.00	24.68	21.68	GR		0

6.10.2 Emergency Maintenance Works

The screenshot shows the 'Emergency Maintenance Works' data grid in the ARMP software. The grid displays the following data:

Link Code	Link Name	From	To	Length	Pavement Status	Work Description	Total Cost (NRs x000)
F00101	Birtamod (MRM)-Chandragadhi	0.00	12.53	12.53	BT	Emergency work	500
F00201	Damak-Gauradaha Dipu	0.00	10.56	10.56	BT		0
F00202	Gauradaha Dipu-Gaungunj	10.56	21.96	11.40	BT		0
F05901	Birtamoad (MRM)-Sanischare-Budhbare	0.00	12.86	12.86	BT		0
F15801	Damak (MRM)-Refugee Camp	0.00	6.50	6.50	BT		0
H0101	Kakarbhitta-Charali	0.00	11.25	11.25	BT		0
H0102	Charali-Birtamod	11.25	17.52	6.27	BT		0
H0103	Birtamod-Padajogi (Damak)	17.52	47.03	29.51	BT	Emergency work	500
H0104	Padajogi (Damak)-Ratuwa	47.03	47.99	0.96	BT		0
H0105	Ratuwa-Mawa	47.99	54.75	6.76	BT		0
H0701	Kechna (IB)-Kechna village	0.00	3.00	3.00	GR		0
H0702	Kechna village-Jhapa Chok	3.00	24.68	21.68	GR		0
H0703	Jhapa Chok-Bhaire Chok	24.68	28.85	4.17	BT		0
H0704	Bhaire Chok-Charali	28.85	39.22	10.37	BT		0

Right click on the grid to export the data to Excel

6.10.3 Road Safety Works

ARMP Annual Road Maintenance Planning - [Road Safety Works]

System Rates Norms ARMP IARMP Report Map Help

Road Safety Works

Division: Damak Year: 2013

Link Code	Link Name	From	To	Length	Pavement Status	Work Description	Total Cost (NRs x000)
F00101	Birtamod (MRM)-Chandragadhi	0.00	12.53	12.53	BT	Safety Barrier and Traffic sign	500
F00201	Damak-Gauradaha Dipu	0.00	10.56	10.56	BT		0
F00202	Gauradaha Dipu-Gaurigunj	10.56	21.96	11.40	BT		0
F05901	Birtamoad (MRM)-Sanischare-Budhbare	0.00	12.86	12.86	BT		0
F15801	Damak (MRM)-Refugee Camp	0.00	6.50	6.50	BT		0
H0101	Kakarbhitta-Charali	0.00	11.25	11.25	BT	Safety Barriers and Traffic sign	500
H0102	Charali-Birtamod	11.25	17.52	6.27	BT	Safety Barriers and Traffic sign	500
H0103	Birtamod-Padajogi (Damak)	17.52	47.03	29.51	BT	Safety Barriers and Traffic sign	500
H0104	Padajogi (Damak)-Ratuwa	47.03	47.99	0.96	BT		0
H0105	Ratuwa-Mawa	47.99	54.75	6.76	BT	Safety Barriers and Traffic sign	500
H0701	Kechna (IB)-Kechna village	0.00	3.00	3.00	GR		0
H0702	Kechna village-Jhapa Chok	3.00	24.68	21.68	GR		0
H0703	Jhapa Chok-Bhaire Chok	24.68	28.85	4.17	BT		0
H0704	Bhaire Chok-Charali	28.85	39.22	10.37	BT		0
H0705	Charali-Chihanedanda	39.22	56.00	16.78	BT		0
H1701	Bhadrapur-Ratuwa(Postal)	0.00	15.00	15.00	GR		0

Total Cost (NRs x000) 2,500.00

6.10.4 Road Inventory/Register

ARMP Annual Road Maintenance Planning - [Road Inventory / Register]

System Rates Norms ARMP IARMP Report Map Help

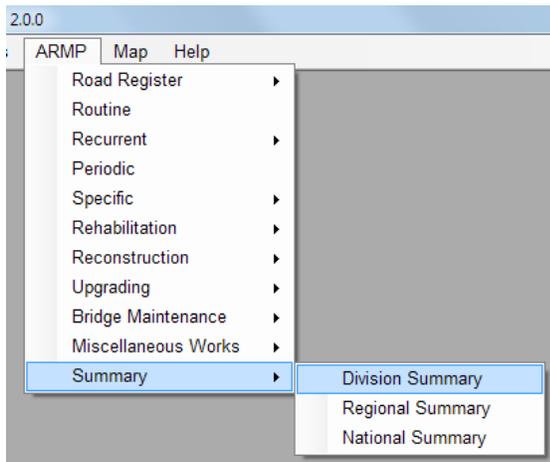
Road Inventory/Register Works

Division: Damak Year: 2013

Link Code	Link Name	From	To	Length	Pavement Status	Work Description	Total Cost (NRs x000)
F00101	Birtamod (MRM)-Chandragadhi	0.00	12.53	12.53	BT		0
F00201	Damak-Gauradaha Dipu	0.00	10.56	10.56	BT		0
F00202	Gauradaha Dipu-Gaurigunj	10.56	21.96	11.40	BT		0
F05901	Birtamoad (MRM)-Sanischare-Budhbare	0.00	12.86	12.86	BT		0
F15801	Damak (MRM)-Refugee Camp	0.00	6.50	6.50	BT		0
H0101	Kakarbhitta-Charali	0.00	11.25	11.25	BT		0
H0102	Charali-Birtamod	11.25	17.52	6.27	BT		0
H0103	Birtamod-Padajogi (Damak)	17.52	47.03	29.51	BT		0
H0104	Padajogi (Damak)-Ratuwa	47.03	47.99	0.96	BT		0
H0105	Ratuwa-Mawa	47.99	54.75	6.76	BT		0
H0701	Kechna (IB)-Kechna village	0.00	3.00	3.00	GR		0
H0702	Kechna village-Jhapa Chok	3.00	24.68	21.68	GR		0
H0703	Jhapa Chok-Bhaire Chok	24.68	28.85	4.17	BT		0
H0704	Bhaire Chok-Charali	28.85	39.22	10.37	BT		0
H0705	Charali-Chihanedanda	39.22	56.00	16.78	BT		0
H1701	Bhadrapur-Ratuwa(Postal)	0.00	15.00	15.00	GR		0

Total Cost (NRs x000) 0.00

6.11 Summary Sub Menu



6.11.1 Division Summary

Division: Damak

Annual Road Maintenance Summary Sheet

	Link Code	Link Name	From	To	Pavement Status	Routine Cost (NRs '000)	Recurrent Cost (NRs '000)	Periodic Length (Km)	Periodic Cost (NRs '000)	Specific Maintenance Cost (NRs '000)	Rehabilitation Cost (NRs '000)	Reconstruction Cost (NRs '000)	Upgrading Cost (NRs '000)	Emergency Maintenance (NRs '000)	Bio Engineering Cost (NRs '000)
▶	F00101	Bitamod (MRM)-Chandragadhi	0.00	12.53	BT	506.42	601.44	0.00	0.00	7,712.25	0.00	0.00	0.00	500.00	0.00
	F00201	Damak-Gauradaha Dipu	0.00	10.56	BT	426.80	475.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	F00202	Gauradaha Dipu-Gaurigunj	10.56	21.96	BT	460.75	513.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	F05901	Bitamoad (MRM)-Sanischare-Budhbare	0.00	12.86	BT	519.76	771.60	0.00	0.00	22,780.80	0.00	0.00	0.00	0.00	0.00
	F15801	Damak (MRM)-Refugee Camp	0.00	6.50	BT	262.71	227.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	H0101	Kakarbhitta-Charali	0.00	11.25	BT	454.69	485.76	0.00	0.00	15,187.20	0.00	0.00	0.00	0.00	0.00
	H0102	Charali-Bitamod	11.25	17.52	BT	253.41	395.01	0.00	0.00	15,187.20	0.00	0.00	0.00	0.00	0.00
	H0103	Bitamod-Padajogi (Damak)	17.52	47.03	BT	1,192.70	1,859.13	0.00	0.00	15,187.20	0.00	0.00	0.00	500.00	1,000.00
	H0104	Padajogi (Damak)-Ratuwa	47.03	47.99	BT	38.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	H0105	Ratuwa-Mawa	47.99	54.75	BT	273.22	425.88	0.00	0.00	22,780.80	0.00	0.00	0.00	0.00	0.00
	H0701	Kechna (B)-Kechna village	0.00	3.00	GR	112.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	H0702	Kechna village-Jhapa Chok	3.00	24.68	GR	814.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	H0703	Jhapa Chok-Bhaire Chok	24.68	28.85	BT	168.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	H0704	Bhaire Chok-Charali	28.85	39.22	BT	419.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	H0705	Charali-Chihanedanda	39.22	56.00	BT	678.19	1,409.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	H1701	Bhadrapur-Ratuwa(Postal)	0.00	15.00	GR	563.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	H1701	Bhadrapur-Ratuwa(Postal)	15.00	32.00	ER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	H1701	Bhadrapur-Ratuwa(Postal)	32.00	42.00	UC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Division Total					7,145.89	7,164.04	0.00	0.00	98,835.45	0.00	0.00	0.00	1,000.00	1,000.00

Right click on the grid to export the data to Excel

6.11.2 Regional Summary

The screenshot shows a software window titled 'Regional Summary' with a dropdown menu set to 'Eastern' and a 'Load' button. The main area is a table titled 'Annual Road Maintenance Summary Sheet (Regional Summary)'. The table has 15 columns: Division, Total Length (Km), Routine Length (Km), Routine Cost (NRs '000), Recurrent Length (Km), Recurrent Cost (NRs '000), Periodic Length (Km), Periodic Cost (NRs '000), Specific Length (Km), Specific Maintenance Cost (NRs'000), Rehabilitation Length (Km), Rehabilitation Cost (NRs'000), econstruction Length (Km), and econstruction Cost (NRs'000). The rows include Biratnagar, Damak, Dhankuta, Harkhapur, Ilam, Lahan, Tumlingtar, and a Total row. All numerical values in the table are 0.00.

Division	Total Length (Km)	Routine Length (Km)	Routine Cost (NRs '000)	Recurrent Length (Km)	Recurrent Cost (NRs '000)	Periodic Length (Km)	Periodic Cost (NRs '000)	Specific Length (Km)	Specific Maintenance Cost (NRs'000)	Rehabilitation Length (Km)	Rehabilitation Cost (NRs'000)	econstruction Length (Km)	econstruction Cost (NRs'000)
Biratnagar	441.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Damak	212.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dhankuta	260.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Harkhapur	445.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ilam	622.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lahan	634.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tumlingtar	335.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	2,952.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Right click on the grid to export the data to Excel

6.11.3 National Summary

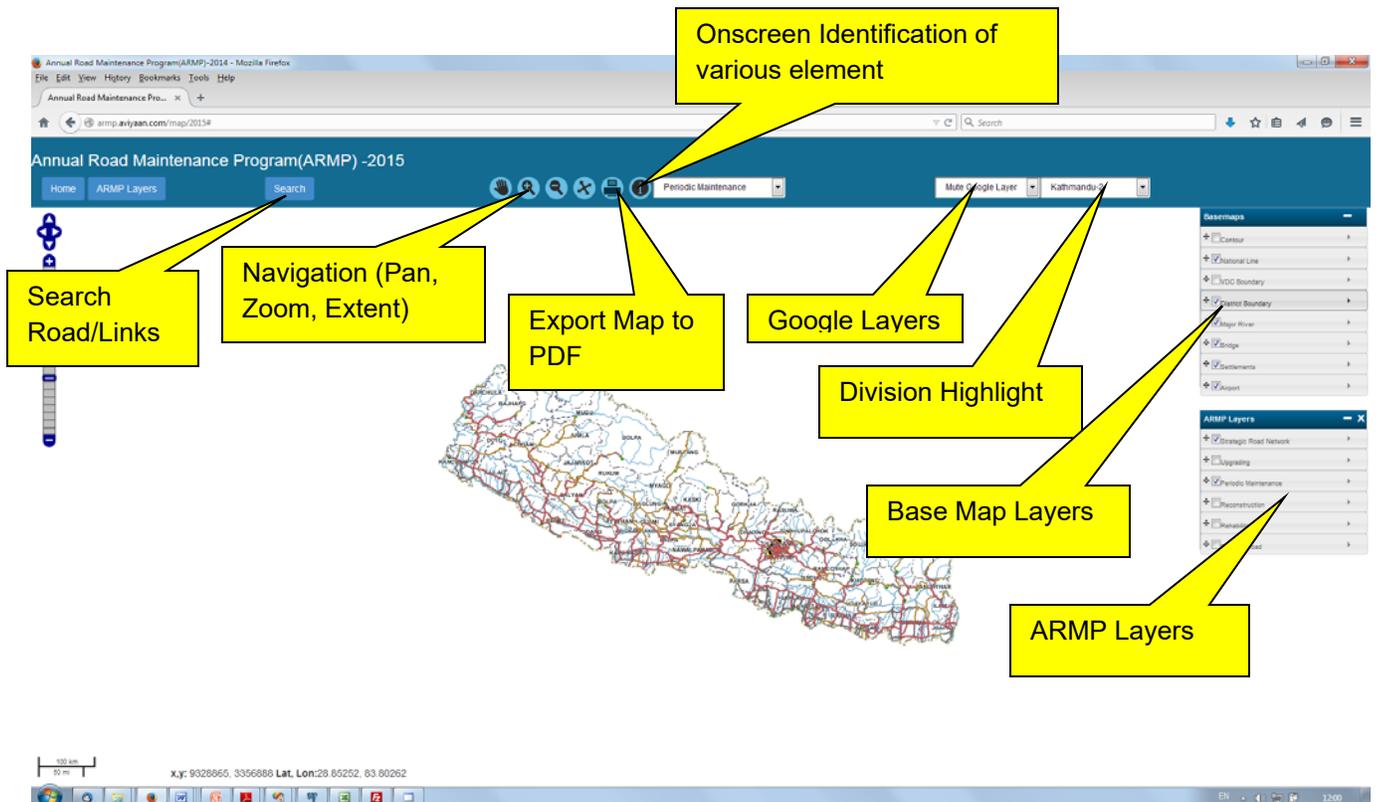
The screenshot shows a software window titled "ARMP National Summary" with a sub-window "Annual Road Maintenance Summary Sheet (National Summary)". The window contains a table with the following columns: Division, Total Length (Km), Routine Length (Km), Routine Cost (NRs '000), Recurrent Length (Km), Recurrent Cost (NRs '000), Periodic Length (Km), Periodic Cost (NRs '000), Specific Length (Km), Specific Maintenance Cost (NRs'000), Rehabilitation Length (Km), Rehabilitation Cost (NRs'000), econstruction Length (Km), and econstruction Cost (NRs'000). The table lists 20 divisions: Batadi, Bhaktapur, Bharatpur, Biratnagar, Butwal, Charikot, Damak, Damauli, Dang, Devasthan, Dhankuta, Doti, DSBP, Hetauda, Ilam, Janakpur, Kathmandu, and Lahan. Each row contains numerical values for these metrics. An "Export" button is visible in the top right corner of the table area.

Division	Total Length (Km)	Routine Length (Km)	Routine Cost (NRs '000)	Recurrent Length (Km)	Recurrent Cost (NRs '000)	Periodic Length (Km)	Periodic Cost (NRs '000)	Specific Length (Km)	Specific Maintenance Cost (NRs'000)	Rehabilitation Length (Km)	Rehabilitation Cost (NRs'000)	econstruction Length (Km)	econstruction Cost (NRs'000)
Batadi	474.12	354.12	22,891.45	285.05	20,278.70	135.74	244,332.00	4.60	23,907.98	0.00	0.00	0.00	0.00
Bhaktapur	234.91	220.11	15,064.05	208.81	20,814.12	11.40	64,750.00	143.38	60,668.01	44.24	180,067.99	0.00	0.00
Bharatpur	425.03	411.32	24,499.46	312.16	35,555.12	27.65	351,720.00	155.22	203,832.97	3.00	33,815.25	1.00	33,459.30
Biratnagar	416.25	342.25	15,689.31	294.25	29,053.41	18.00	45,000.00	137.46	39,344.34	12.00	86,851.80	2.04	10,678.50
Butwal	540.92	406.54	17,649.25	331.84	25,865.85	12.45	23,904.00	5.12	40,934.25	7.33	134,109.38	0.00	0.00
Charikot	679.35	375.30	24,055.09	300.40	30,976.83	78.41	141,138.00	177.54	196,629.75	0.25	3,322.20	2.90	38,537.52
Damak	212.60	196.60	8,879.62	106.35	7,869.22	21.96	35,136.00	65.72	102,157.65	0.00	0.00	0.00	0.00
Damauli	566.77	305.37	13,882.14	183.42	15,918.11	22.06	44,840.00	272.68	101,697.29	48.00	68,342.40	0.00	0.00
Dang	728.28	725.28	38,059.68	401.28	34,065.32	27.75	69,375.00	523.87	316,258.83	33.73	249,165.00	0.00	0.00
Devasthan	406.84	244.84	13,503.29	138.86	13,388.60	30.00	55,500.00	205.84	144,112.73	0.33	8,097.86	0.00	0.00
Dhankuta	604.45	294.95	18,864.64	238.55	12,584.95	47.70	93,260.00	42.65	36,128.92	13.47	185,094.00	0.00	0.00
Doti	976.54	364.84	23,523.45	294.84	23,101.37	39.50	79,971.50	287.24	116,424.70	0.00	0.00	0.00	0.00
DSBP	160.00	142.50	9,736.58	142.50	9,881.64	16.40	49,200.00	237.93	35,357.70	0.00	0.00	0.00	0.00
Hetauda	953.73	495.73	26,529.01	463.97	33,561.40	34.50	84,697.50	70.77	50,147.41	43.38	144,278.40	0.00	0.00
Ilam	616.71	335.81	20,357.18	249.31	25,492.10	78.72	165,312.00	361.70	80,351.56	4.50	119,518.28	0.00	0.00
Janakpur	787.15	417.91	17,293.74	291.66	22,924.38	11.00	38,500.00	16.64	143,913.53	8.06	89,070.55	0.00	0.00
Kathmandu	447.55	321.05	31,935.92	305.59	61,833.98	20.95	95,345.00	41.00	138,927.25	20.20	217,159.16	0.00	0.00
Lahan	1,132.45	362.29	17,715.47	422.22	19,437.96	83.63	190,075.00	157.42	51,445.27	24.55	194,489.90	0.00	0.00

Right click on the grid to export the data to Excel

6.12 Map

A basic map interface is provided using web based mapping.



The map interface provides following facilities.

- View the SRN network
- Zoom to Divisions and highlight
- Export to PDF with various scales and paper size of A4/A3 in Portrait/Landscape orientation.
- Overlay Google maps (Satellite, Hybrid, street, Terrain etc)
- Search Roads using road code/link code
- Turn On/Off various layers (Base Map and ARMP layers)
- On screen Identification of various elements of the map.

The map loading may vary with the internet speed.

6.13 Help Sub Menu (About)

