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ANNEX 1-1: QUESTIONNAIRE USED FOR ROAD USERS

University of Moratura

Questionnaire Survey on Impacts on Road Users during Road Construction

Road ……

Duration ☐ Years ☐ Months

Project Status: ☐ Ongoing ☐ Completed

Type of user ☐ ☐ Motorist ☐ Pedestrian ☐ Passenger

Date and Time ……

Recorder ……

Sheet No: ……

Road Users

1. Travel distance along project Road ☐ km
2. Time duration taken before the project ☐ hours ☐ Minutes
3. Time duration taken during the project ☐ hours ☐ Minutes
4. Did you experience any inconvenience during the construction phase? Yes ☐ No ☐
5. Types of Inconveniences experienced and their Impact on Travel time and Comfort
   (Assign 5 for highest impact and 1 for lowest impact)

Incapable (or lack of) traffic controllers	1	2	3	4	5
Lack of advanced signage	1	2	3	4	5
Inadequate safety	1	2	3	4	5
Roadside friction due to construction	1	2	3	4	5
Lack of dust control	1	2	3	4	5
Possible Damages to vehicles	1	2	3	4	5
Increment of Travel Time	1	2	3	4	5

6. What are the improvements suggested?
   (Assign 5 for highly recommended and 1 for least recommended)

Allocate experienced (capable) traffic controllers	1	2	3	4	5
Place sign boards well in advance	1	2	3	4	5
Maintain pavement in motorable condition	1	2	3	4	5
Place speed humps to control the speed	1	2	3	4	5
Properly demarcate construction areas (using barricade)	1	2	3	4	5
Spray water frequently to control dust	1	2	3	4	5
Improve lighting at dangerous spots (during night)	1	2	3	4	5
Demarcate passages for pedestrians	1	2	3	4	5
Provide priority to public transport vehicles	1	2	3	4	5
Use blinkers during night time	1	2	3	4	5
Other ……	1	2	3	4	5

7. Have you made any official complain on the inconveniences experienced? Yes ☐ No ☐
8. What is your level of satisfaction on the actions they took for your complain?
   (Assign 5 for highest satisfaction and 1 for highest dissatisfaction)

   1 2 3 4 5
9. Your overall satisfaction on inconveniences experienced;
   ☐ Unacceptable ☐ Moderately acceptable ☐ Acceptable

ANNEX 1-2: QUESTIONNAIRE USED FOR RESIDENTS

University of Moratura

Questionnaire Survey on Impacts on adjacent Property Owners / Users during Road Construction

Road ..... Date and Time .....

Duration ☐ Years ☐ Months Recorder .....

Project Status: ☐ Ongoing ☐ Completed Sheet No: .....

Location Town ..... Chainage ..... Side .....

Type of Property ☐ Property Owner ☐ Commercial ☐ Residential

Residents and Property Owners

1. Ownership of the property ☐ Owned ☐ Rented (or leased)
2. Number of occupants (or employees) ☐ 1 ~ 5 ☐ 6 ~ 10 ☐ > 10
3. Type of access ☐ Only pedestrians ☐ Vehicle access
4. Width of the access ☐ 1 ~ 5m ☐ 6 ~ 10m ☐ > 10m
5. Number of parking spaces available ☐ 1 ~ 2 ☐ 3 ~ 5 ☐ > 5
6. Types of Inconveniences experienced and their impact
   (Assign 5 for highest inconvenience and 1 for least inconvenience)

Access damage	1	2	3	4	5
Air pollution (Dust)	1	2	3	4	5
Water pollution	1	2	3	4	5
Drainage issues	1	2	3	4	5
Utility line damages	1	2	3	4	5
Noise Pollution	1	2	3	4	5
.....	1	2	3	4	5

7. Have you made any official complain on the inconveniences experienced? Yes ☐ No ☐
7. If yes, how did you make the complain?
   - Verbally to the contractor ☐
   - Verbally to the Engineer/ Employer ☐
   - Letter to the Engineer/ Employer ☐
   - Letter to the contractor ☐
   - By other personal contact ☐
7. What is your level of satisfaction on the actions they took for your complain?
   (Assign 5 for highest satisfaction and 1 for highest dissatisfaction)

   1 2 3 4 5
8. Did you encounter any financial loss due to road construction activities? Yes ☐ No ☐
9. Your overall satisfaction on inconveniences experienced;

   ☐ Unacceptable ☐ Moderately acceptable ☐ Acceptable

ANNEX 02 - GUIDELINES FOR TEMPORARY TRAFFIC MANAGEMENT DURING ROAD CONSTRUCTION

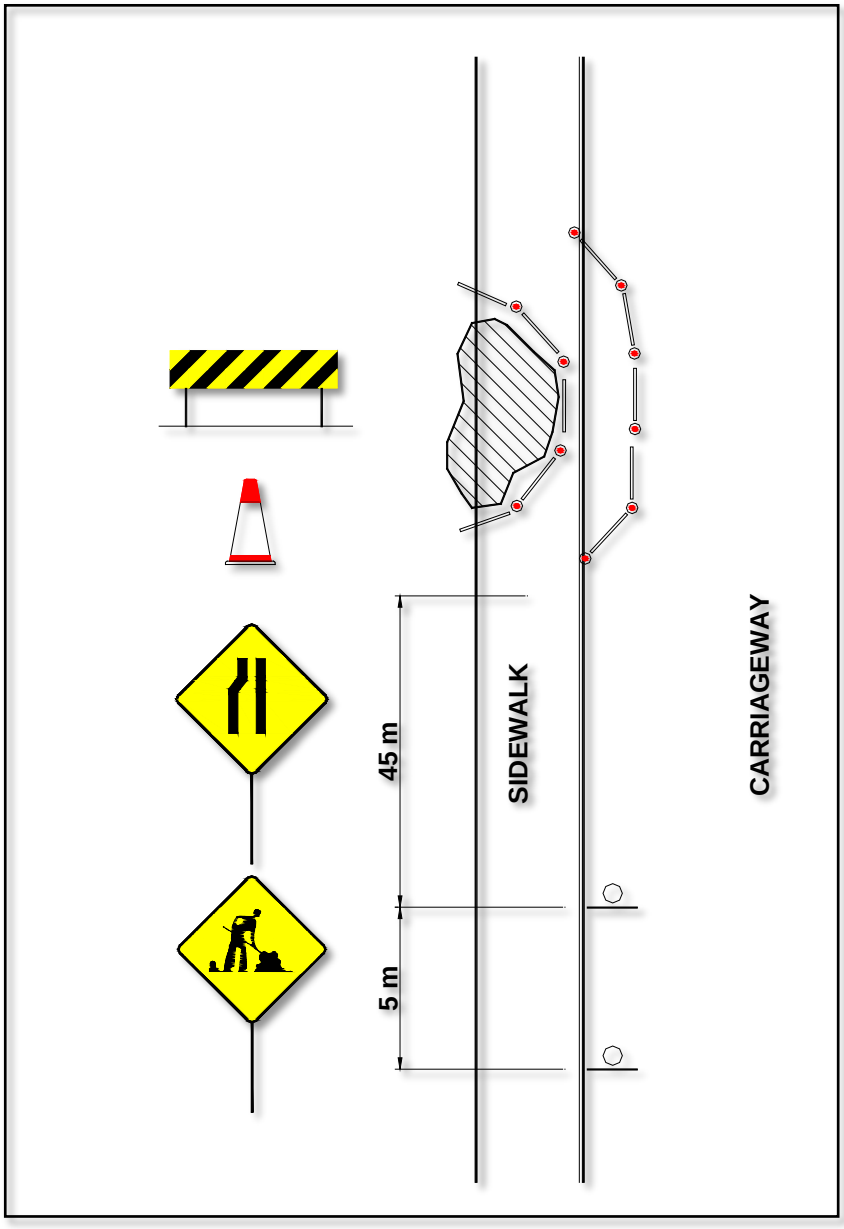

Figure A2-1: Maintenance operation of short duration on Pedestrian Sidewalk

Source: Manual on Traffic Control Devices, Part II

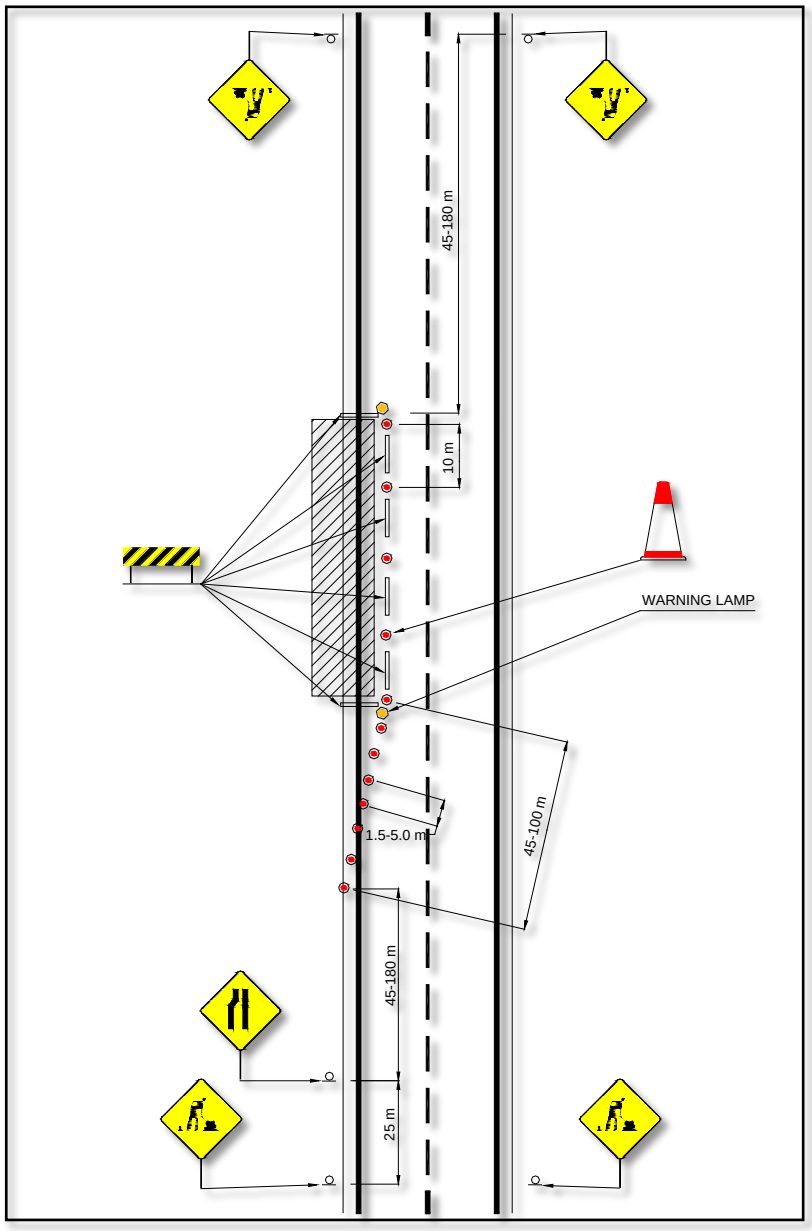

Figure A2-2: Edge Working

Source: Manual on Traffic Control Devices, Part II

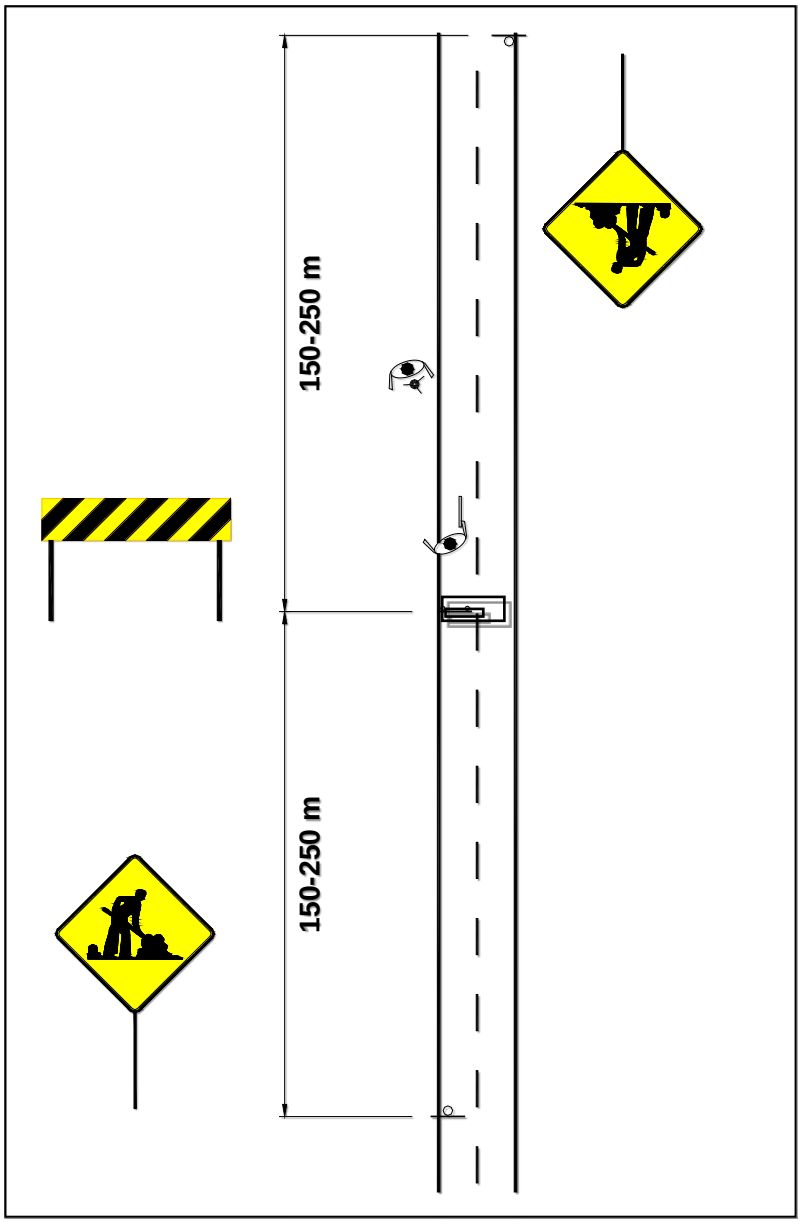

Figure A2-3: Survey on road or in close vicinity of the road

Source: Manual on Traffic Control Devices, Part II

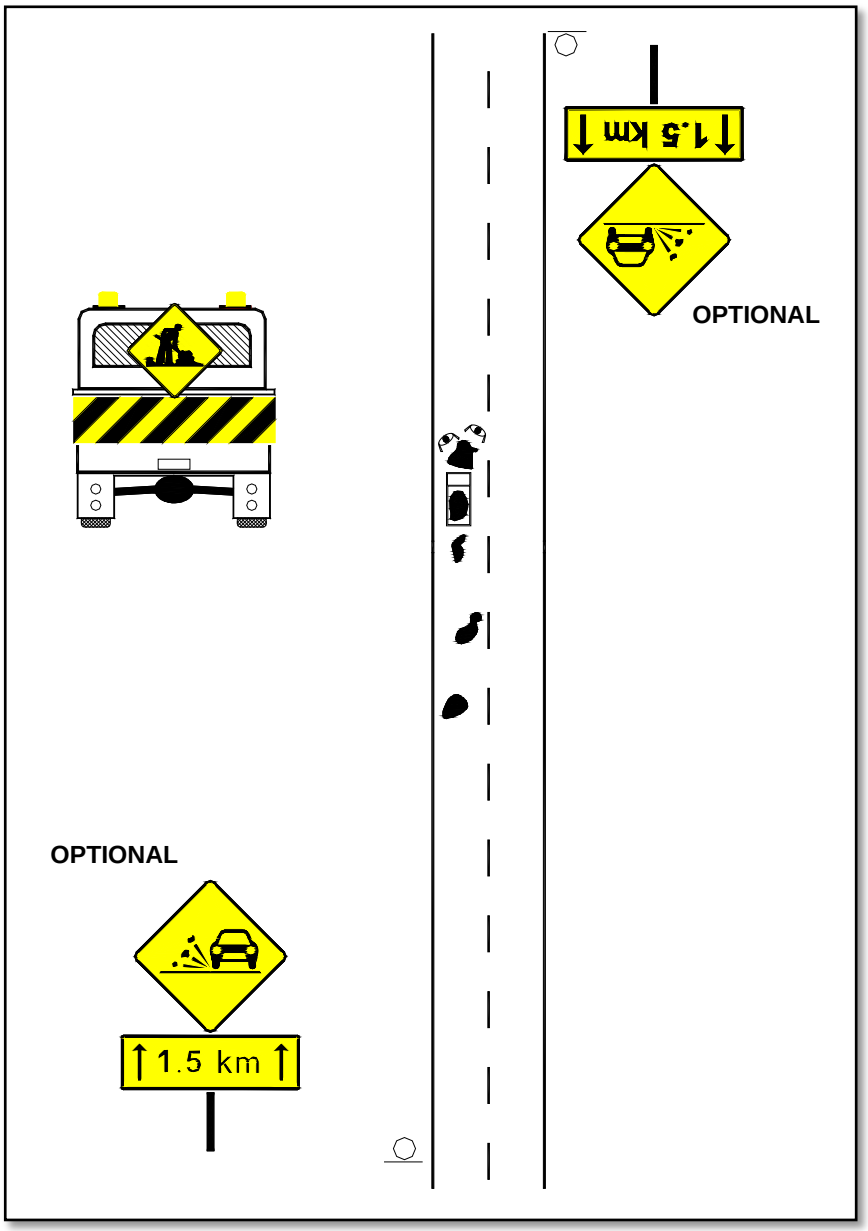

Figure A2-4: Asphalt patch work

Source: Manual on Traffic Control Devices, Part II

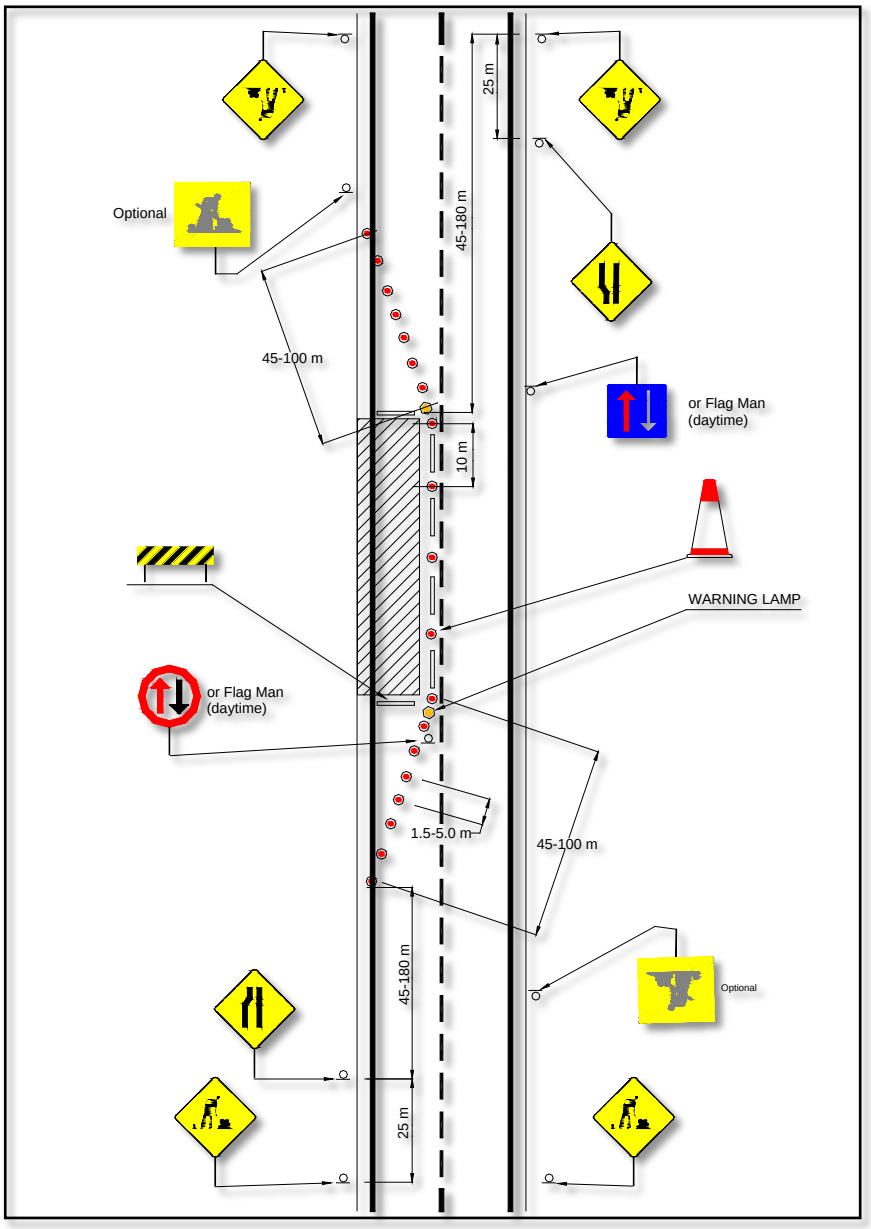

Figure A2-5: Lane Closure on a 2-Lane Road

Source: Manual on Traffic Control Devices, Part II

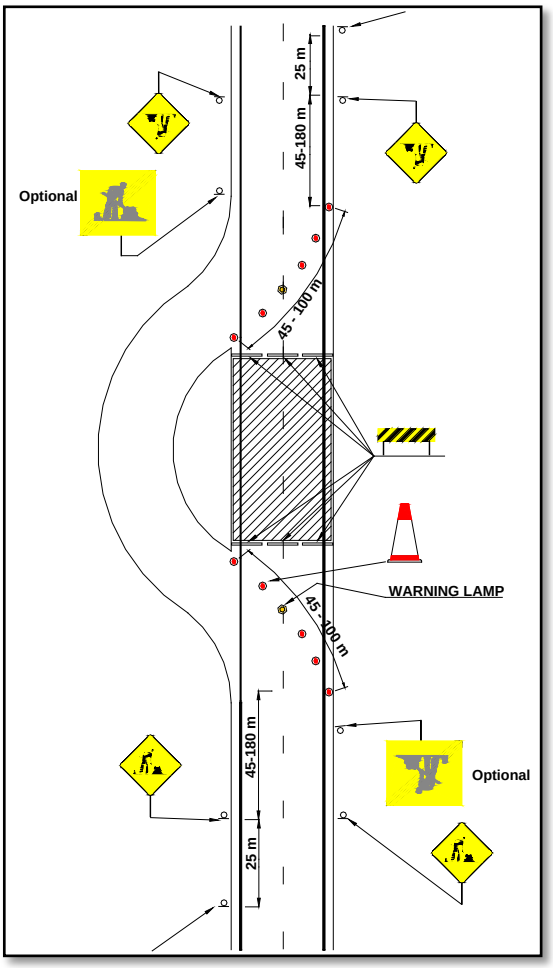

Figure A2-6: Simple Diversion

Source: Manual on Traffic Control Devices, Part II

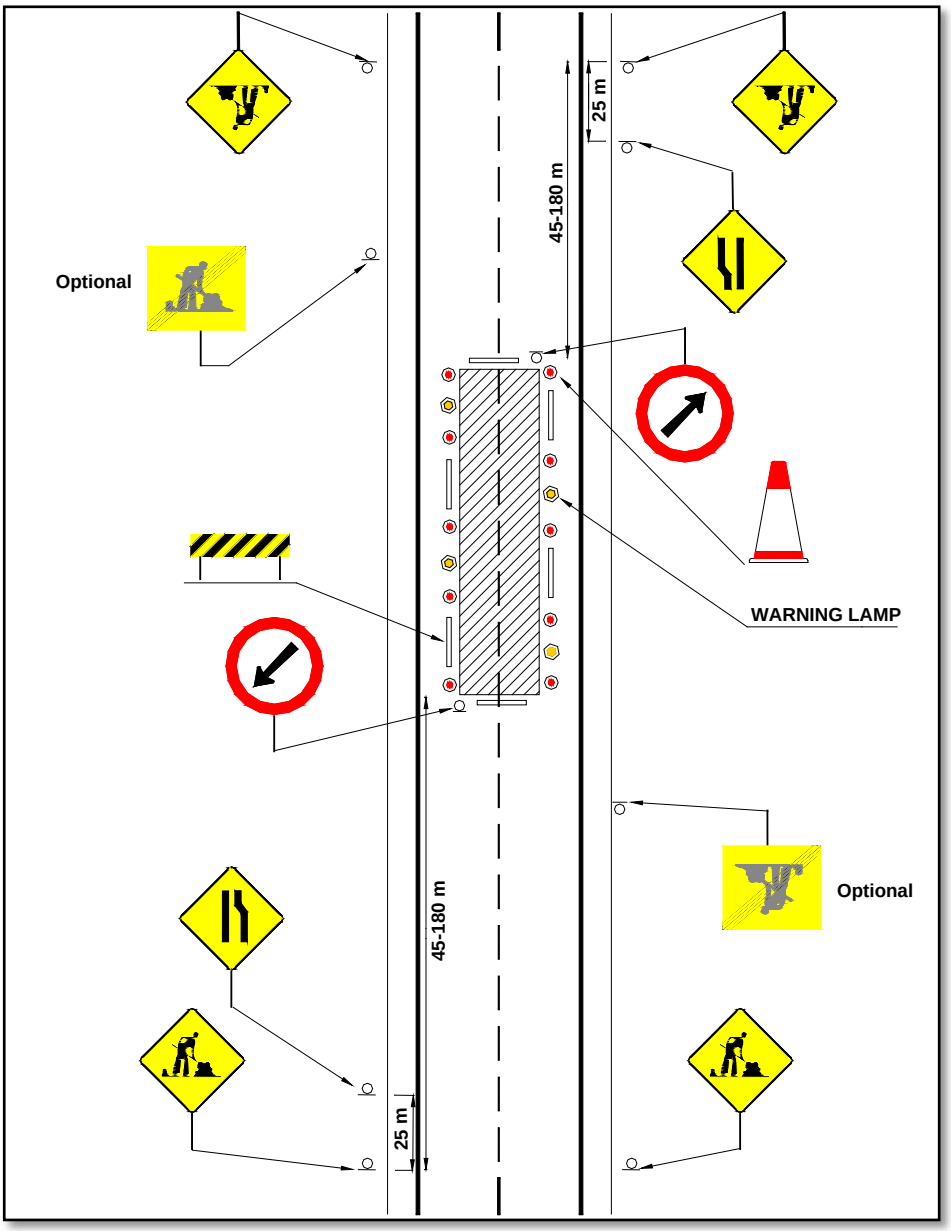

Figure A2-7: Repairs to the Centre Section of the Carriageway

Source: Manual on Traffic Control Devices, Part II

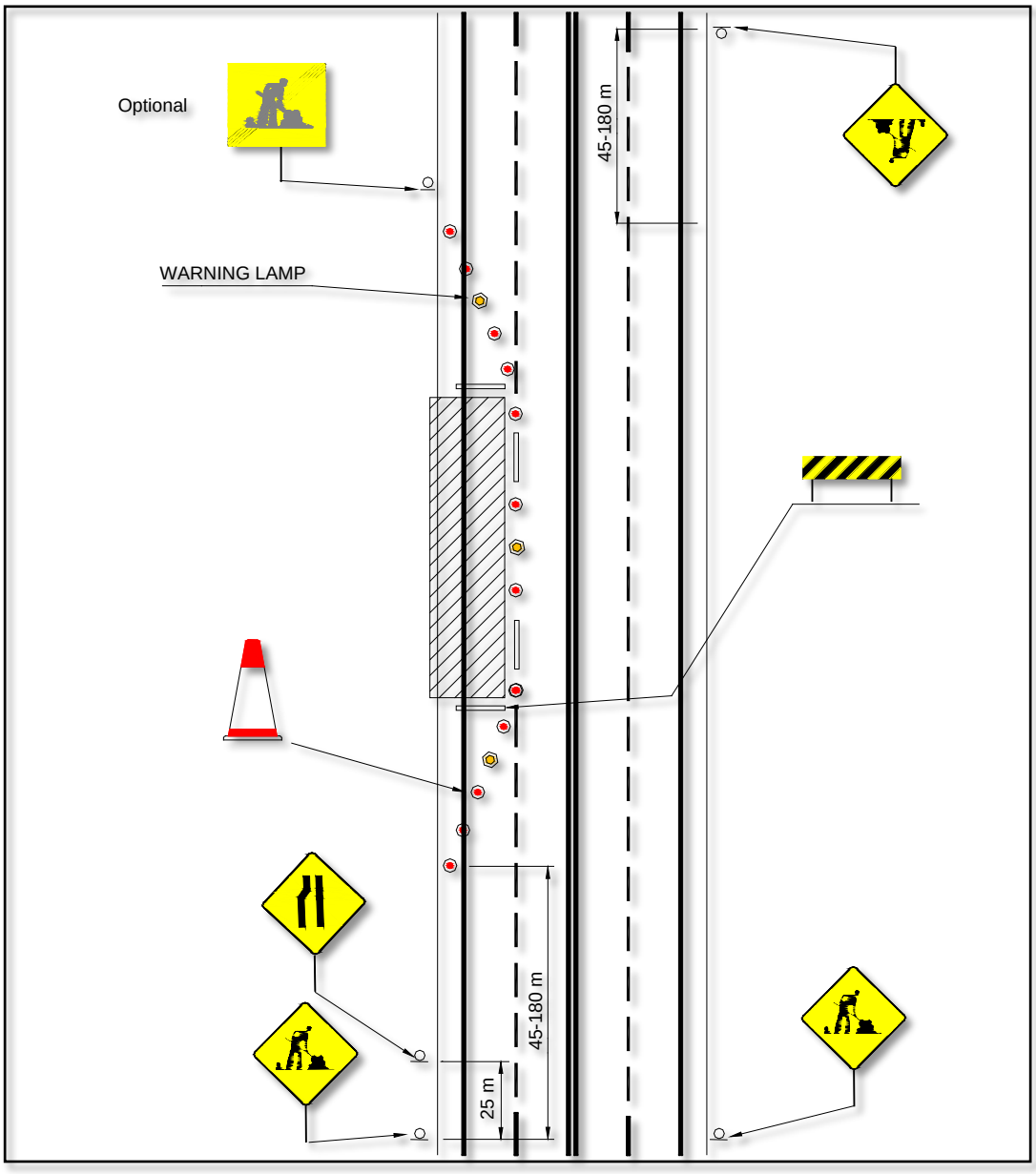

Figure A2-8: Repairs to an Outer Lane of a 4-lane Road without Centre Median

Source: Manual on Traffic Control Devices, Part II

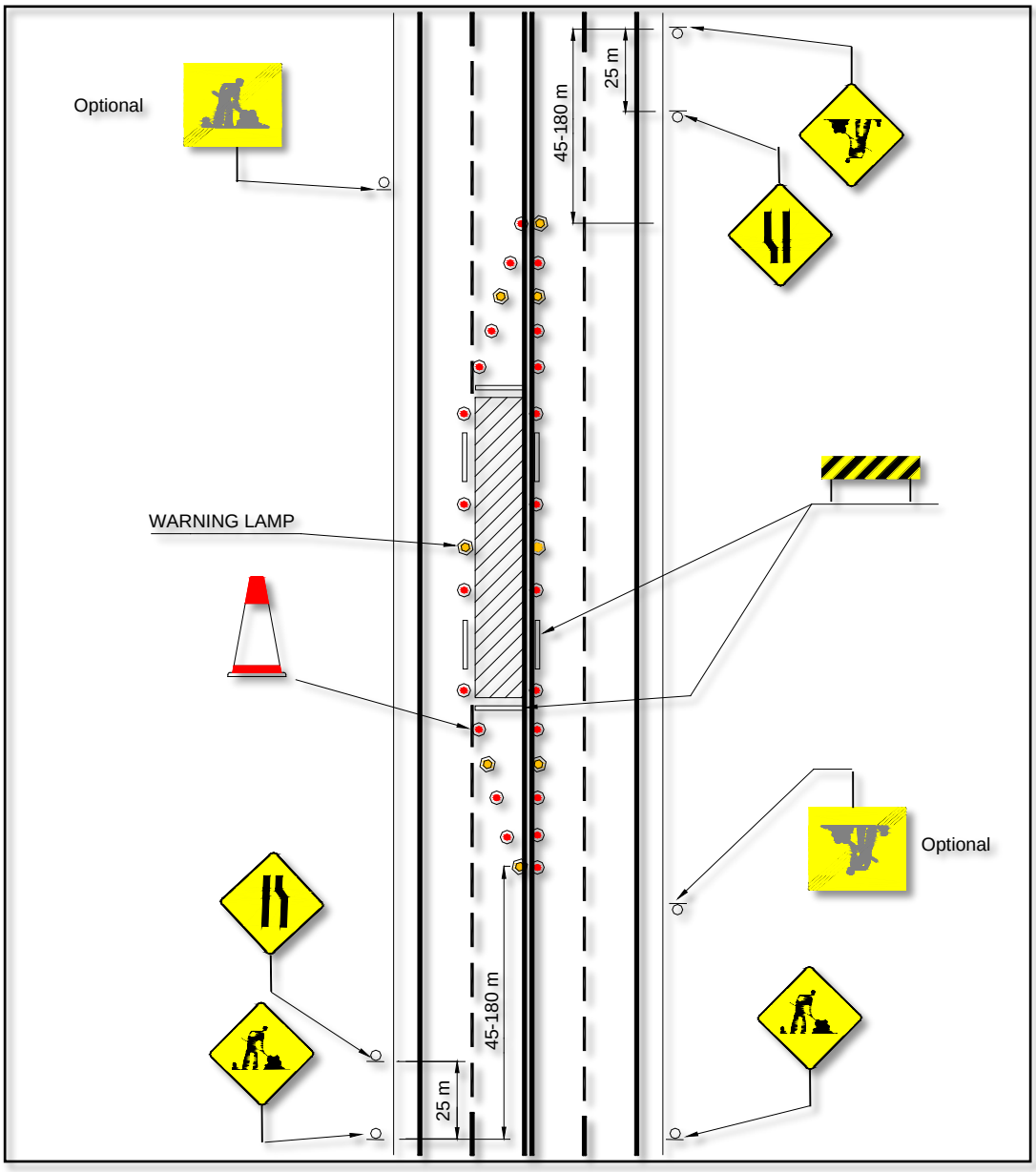

Figure A2-9: Repairs to an Inner Lane of a 4-lane Road without Centre Median

Source: Manual on Traffic Control Devices, Part II

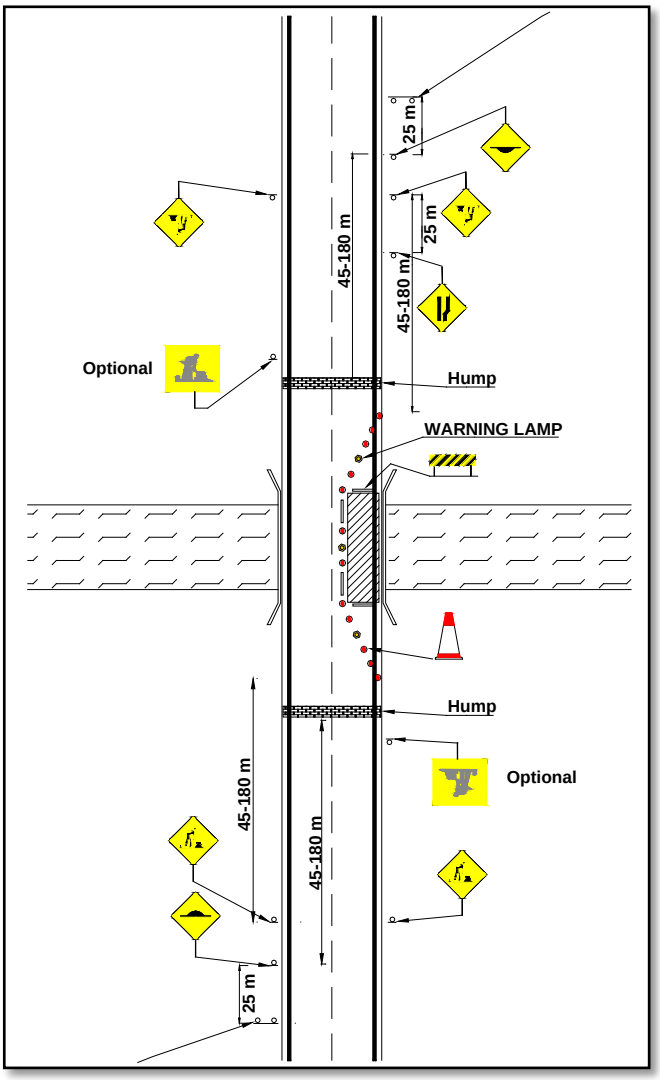

Figure A2-10: Repairs to Bridges/Culvert

Source: Manual on Traffic Control Devices, Part II

APPENDIX 1 - RANKING CALCULATION FOR ROAD USER INCONVININCES

Dust Generation									
Impact	**Weight**	**B120**		**B084**		**A002**		**Total**	**Points**
Lowest Impact	1	-	-	8	8	39	39	47	
Less Impact	2	-	-	12	25	35	71	96	
Moderate Impact	3	46	137	23	68	42	127	332	**15.71**
High Impact	4	58	232	28	111	32	128	472	
Highest Impact	5	72	361	32	160	20	101	622	
Total		**176**	**730**	**103**	**372**	**169**	**466**	**1,569**	
Possible Damages to Vehicles									
Impact	**Weight**	**B120**		**B084**		**A002**		**Total**	**Points**
Lowest Impact	1	55	55	30	30	42	42	127	
Less Impact	2	46	92	27	54	34	68	213	
Moderate Impact	3	35	106	32	96	32	96	298	
High Impact	4	23	92	6	25	34	135	251	**11.55**
Highest Impact	5	18	88	8	41	27	135	264	
Total		**176**	**431**	**103**	**245**	**169**	**477**	**1,153**	
Inadequate Safety Arrangements									
Impact	**Weight**	**B120**		**B084**		**A002**		**Total**	**Points**
Lowest Impact	1	11	11	12	12	19	19	42	
Less Impact	2	55	109	25	49	30	61	219	
Moderate Impact	3	62	185	22	65	47	142	392	
High Impact	4	33	134	27	107	37	149	390	**13.89**
Highest Impact	5	16	79	18	88	35	177	344	
Total		**176**	**517**	**103**	**321**	**169**	**548**	**1,386**	

Incapable Traffic Controllers									
Impact	**Weight**	**B120**		**B084**		**A002**		**Total**	**Points**
Lowest Impact	1	18	18	25	25	20	20	63	**14.07**
Less Impact	2	44	88	11	23	37	74	185	
Moderate Impact	3	56	169	20	59	30	91	319	
High Impact	4	39	155	15	62	41	162	379	
Highest Impact	5	19	97	32	160	41	203	459	
Total		**176**	**526**	**103**	**328**	**169**	**551**	**1,405**	
Road Side Friction									
Impact	**Weight**	**B120**		**B084**		**A002**		**Total**	**Points**
Lowest Impact	1	60	60	16	16	20	20	97	**12.21**
Less Impact	2	42	84	24	47	42	85	216	
Moderate Impact	3	39	116	25	74	56	167	358	
High Impact	4	21	84	19	74	32	128	287	
Highest Impact	5	14	70	20	98	19	93	261	
Total		**176**	**415**	**103**	**310**	**169**	**493**	**1,219**	
Increment of Travel Time									
Impact	**Weight**	**B120**		**B084**		**A002**		**Total**	**Points**
Lowest Impact	1	-	-	-	-	8	8	8	**19.40**
Less Impact	2	-	-	-	-	17	34	34	
Moderate Impact	3	14	42	10	31	30	91	164	
High Impact	4	42	169	20	78	47	189	437	
Highest Impact	5	120	598	73	366	66	330	1,294	
Total		**176**	**810**	**103**	**475**	**169**	**652**	**1,937**	

Lack of Advanced Signage									
Impact	**Weight**	**B120**		**B084**		**A002**		**Total**	**Points**
Lowest Impact	1	51	51	20	20	24	24	94	**13.17**
Less Impact	2	42	84	22	43	25	51	178	
Moderate Impact	3	35	106	30	90	32	96	292	
High Impact	4	26	106	20	78	41	162	346	
Highest Impact	5	21	106	12	62	47	237	404	
Total		**176**	**452**	**103**	**293**	**169**	**570**	**1,314**	

APPENDIX 02 - RANKING CALCULATION FOR RESIDENTS/ BUSINESSES INCONVININCES

Access Damages								
Impact	**Weight**	**B120**		**B084**		**A002**		**Total**	**Points**
Least Inconvenience	1	-	-	-	-	-	-	-	19.37
Lesser Inconvenience	2	-	-	10	20	47	94	115	
Moderately Inconvenience	3	40	119	28	84	69	207	411	
Higher Inconvenience	4	37	148	61	246	75	301	695	
Highest Inconvenience	5	187	937	156	781	122	612	2,330	
Total			1,204		1,132		1,215	3,551	
Drainage Issues									
Impact	**Weight**	**B120**		**B084**		**A002**		**Total**	**Points**
Least Inconvenience	1	-	-	8	8	9	9	17	17.73
Lesser Inconvenience	2	18	37	69	138	35	69	244	
Moderately Inconvenience	3	26	79	67	200	44	132	411	
Higher Inconvenience	4	77	306	74	297	60	239	842	
Highest Inconvenience	5	143	713	38	192	166	832	1,737	
Total			1,135		835		1,281	3,251	
Dust Generation									
Impact	**Weight**	**B120**		**B084**		**A002**		**Total**	**Points**
Least Inconvenience	1	-	-	8	8	53	53	61	17.40
Lesser Inconvenience	2	8	16	20	41	60	119	176	
Moderately Inconvenience	3	24	71	38	115	79	236	422	
Higher Inconvenience	4	77	306	49	195	66	264	765	
Highest Inconvenience	5	156	779	141	704	57	283	1,765	
Total			1,172		1,062		955	3,189	

Utility Interruptions								
Impact	**Weight**	**B120**		**B084**		**A002**		**Total**	**Points**
Least Inconvenience	1	-	-	-	-	-	-	-	20.94
Lesser Inconvenience	2	-	-	5	10	6	13	23	
Moderately Inconvenience	3	11	32	10	31	28	85	147	
Higher Inconvenience	4	71	285	72	287	57	226	798	
Highest Inconvenience	5	182	911	169	845	223	1,115	2,870	
Total			1,228		1,172		1,438	3,838	
Water Pollution									
Impact	**Weight**	**B120**		**B084**		**A002**		**Total**	**Points**
Least Inconvenience	1	84	84	125	125	192	192	401	9.37
Lesser Inconvenience	2	55	111	49	97	66	132	340	
Moderately Inconvenience	3	42	127	33	100	35	104	330	
Higher Inconvenience	4	50	201	44	174	22	88	463	
Highest Inconvenience	5	32	158	5	26	-	-	184	
Total			681		522		515	1,718	
Noise									
Impact	**Weight**	**B120**		**B084**		**A002**		**Total**	**Points**
Least Inconvenience	1	13	13	23	23	60	60	96	15.19
Lesser Inconvenience	2	29	58	49	97	60	119	275	
Moderately Inconvenience	3	53	158	61	184	79	236	578	
Higher Inconvenience	4	100	401	56	225	47	188	815	
Highest Inconvenience	5	69	343	67	333	69	345	1,021	
Total			974		863		948	2,785	