Doc No. 1718-081(Dergaon)/TRB/DPR/P2/REP-01A

NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORTION LIMITED
(MINISTRY OF ROAD TRANSPORT & HIGHWAYS)
GOVT. OF INDIA

Consultancy Services for preparation of Feasibility Study and DPR for upgradation of Dergaon Town Section of NH-37 from Km 426.800 to Km. 437.800 in the state of Assam






Detailed Project Report

Volume - IA
Appendices to Main Report

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LIST OF APPENDICES

Road Inventory

Sl. No.	Existing Chainage		Length (m)	Road Segment	Name of Village/Town	Terrain (Plain/ Rolling/ Hilly)	Land Use		Carriageway			Shoulder along Main Carriageway			Formation Width (m)	Observed Right of Way (m)	Average Embankment Height/Cut Depth (m)		Water Body	Details of Cross Road			Drain							Sub-mergence	Remarks
	From km	To km					Left	Right	Type	Avg. Width (m)	Condition	Type	Avg. Width (m)				Left	Right	Side/ Offset (m)	Type of Jn	Leading to	Type and C/W Width	Left			Right				
													Left	Right									Type	Width (m)	Condition	Type	Width (m)	Condition		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Dergaon Section																														
1	426+800	427+000	200	NH-37	Dergaon	Plain	A	A	BT	7.0	P	E	1.5	1.5	10.0	30.0	1.3	1.5		Refer Appendix 4.2										
2	427+000	427+500	500	NH-37	Dergaon	Plain	A	A	BT	7.0	P	E	1.5	1.5	10.0	28.0	1.5	1.5		Refer Appendix 4.2										
3	427+500	428+000	500	NH-37	Dergaon	Plain	A	A	BT	7.0	P	E	1.5	2.5	11.0	28.0	1.7	2.2		Refer Appendix 4.2										
4	428+000	428+500	500	NH-37	Dergaon	Plain	BU	BU/O	BT	7.0	P	E	1.5	2.0	10.5	28.5	0.9	0.8		Refer Appendix 4.2										
5	428+500	429+000	500	NH-37	Dergaon	Plain	BU/O	BU/O	BT	7.0	P	E	1.5	2.2	10.7	29.5	1.0	0.8		Refer Appendix 4.2			UL	0.5	P	UL	0.5	P		
6	429+000	429+500	500	NH-37	Dergaon	Plain	A/BU	A/BU	BT	7.0	P	E	2.0	1.8	10.8	24.5	1.9	2.2	LHS/20	Refer Appendix 4.2			UL	0.5	P	UL	0.5	P		
7	429+500	430+000	500	NH-37	Dergaon	Plain	BU/O	BU/O	BT	7.0	P	E	1.5	1.5	10.0	28.2	1.1	1.0		Refer Appendix 4.2										
8	430+000	430+500	500	NH-37	Dergaon	Plain	BU	BU	BT	7.0	P	E	1.5	1.5	10.0	13.0	0.2	0.2		Refer Appendix 4.2			L	1	G	L	1	G		Ch.430+250 to Ch.430+550, the available ROW is 11 to 14 m
9	430+500	431+000	500	NH-37	Dergaon	Plain	BU	BU	BT	7.0	P	E	1.5	1.5	10.0	20.0	0.2	0.2		Refer Appendix 4.2			L	1	F	L	1	G		
10	431+000	431+500	500	NH-37	Dergaon	Plain	BU	BU	BT	7.0	P	E	2.0	2.0	11.0	20.7	0.2	0.2		Refer Appendix 4.2			L	1	F	L	1	F		
11	431+500	432+000	500	NH-37	Dergaon	Plain	BU	BU	BT	7.0	P	E	2.0	2.0	11.0	23.2	0.2	0.2		Refer Appendix 4.2			L	1	G	L	1	F		
12	432+000	432+500	500	NH-37	Dergaon	Plain	BU	BU	BT	7.0	P	E	2.0	2.0	11.0	20.5	0.2	0.2		Refer Appendix 4.2										
13	432+500	433+000	500	NH-37	Dergaon	Plain	T	BU	BT	10.0	P	E	1.5	1.5	13.0	22.5	0.8	0.2		Refer Appendix 4.2			UL	0.5	P					
14	433+000	433+500	500	NH-37	Dergaon	Plain	T	BU	BT	10.0	P	E	1.5	1.5	13.0	33.0	1.5	1.2		Refer Appendix 4.2			UL	0.5	P					
15	433+500	434+000	500	NH-37	Dergaon	Plain	T	BU	BT	10.0	P	E	2.0	1.5	13.5	33.5	1.5	1.1		Refer Appendix 4.2			UL	0.5	P	UL	0.5	P		
16	434+000	434+500	500	NH-37	Dergaon	Plain	T	T	BT	7.5	P	E	2.0	2.0	11.5	25.0	1.9	1.1		Refer Appendix 4.2			UL	0.5	P	UL	0.5	P		
17	434+500	435+000	500	NH-37	Dergaon	Plain	T	T	BT	7.5	P	E	2.0	2.0	11.5	25.0	1.3	1.0		Refer Appendix 4.2			UL	0.5	P	UL	0.5	P		
18	435+000	435+500	500	NH-37	Balijan	Plain	T	T	BT	7.3	P	E	2.0	2.3	11.6	25.0	1.5	1.5		Refer Appendix 4.2			UL	0.5	P	UL	0.5	P		
19	435+500	436+000	500	NH-37	Balijan	Plain	T	T	BT	7.3	P	E	2.0	2.5	11.8	25.0	1.3	1.5		Refer Appendix 4.2			UL	0.5	P	UL	0.5	P		
20	436+000	436+500	500	NH-37	Balijan	Plain	BU	BU	BT	7.3	P	E	2.3	2.5	12.1	21.5	1.3	1.5		Refer Appendix 4.2										
21	436+500	437+000	500	NH-37	Balijan	Plain	BU	BU	BT	7.0	P	E	2.0	2.0	11.0	19.0	0.2	0.2		Refer Appendix 4.2										
22	437+000	437+500	500	NH-37	Balijan	Plain	T	T	BT	7.0	P	E	2.0	2.0	11.0	26.0	1.8	2.0		Refer Appendix 4.2										
23	437+500	437+800	300	NH-37	Balijan	Plain	O	A	BT	7.0	F	E	2.0	2.0	11.0	26.0	2.0	2.5		Refer Appendix 4.2										

Abbreviations

Land Use	Carriageway Surface type	Shoulder Type	Drain Type
A- Agriculture BU- Built-up F- Forest O-Open T- Tea Garden	BT - Bituminous CONC. - Concrete E - Earthen	E-Eathen M-Moorum BT-Bituminous	UL- Unlined drain L-Lined drain

Appendix - 4.2

Details of Cross Roads

Sl No.	Existing Chainage (km)	Type	Side	Surface Type of Cross Road	Width (m)	Remarks
Dergaon Section						
1	427+225	4-Arm	RHS	BT	4.0	
			LHS	BT	4.0	
2	427+870	4-Arm	RHS	Earthen	3.0	
			LHS	Earthen	3.1	
3	428+185	3-Arm	LHS	Earthen	2.5	
4	428+420	3-Arm	LHS	BT	3.8	
5	428+540	3-Arm	RHS	BT	4.0	
6	429+560	4-Arm	RHS	BT	3.5	
			LHS	BT	3.7	Goyal Village
7	430+450	4-Arm	RHS	BT	7.0	SH-34 towards Golaghat
			LHS	BT	5.5	Towards Jorhat
8	431+220	4-Arm	RHS	BT	5.5	
			LHS	BT	5.5	Raja Bahar Village
9	431+420	3-Arm	RHS	Earthen	3.5	
10	431+880	3-Arm	LHS	BT	3.0	
11	433+114	3-Arm	RHS	BT	5.5	Bongal Village
12	433+700	4-Arm	RHS	BT	3.6	
			LHS	BT	4.2	
13	433+825	3-Arm	RHS	BT	4.5	
14	434+130	3-Arm	RHS	BT	3.7	
15	434+815	3-Arm	RHS	Earthen	3.2	
16	435+655	3-Arm	RHS	BT	4.0	Khongi Village
17	437+470	3-Arm	LHS	BT	4.2	

Schedule of Existing Utilities (Parallel and Across the Project Road)

Existing Chainage (km)		Road Segment	Parallel																		Crossing				Remark
			LHS										RHS												
From	To		HT Line	LT Line	TRF	OFC	Tubewell	TP Line	TR Line	B. Well	WPL		HT Line	LT Line	TRF	OFC	Tubewell	TP Line	TR Line	B.Well	WPL	HT Line	LT Line	TR Line	WPL	
			(m)	(m)	(No.)	(m)	(No.)	(m)	(m)	(No.)	(m)		(m)	(m)	(No.)	(m)	(No.)	(m)	(m)	(No.)	(m)	(No.)	(No.)	(No.)	(No.)	
Chanti (CG/MP Border)-Kotadol Section																									
426+800	427+000	NH-37		60		200								120											
427+000	428+000	C-J Rd.		60	1	600								240	1								3		
428+000	429+000	C-J Rd.		600	2	1000								210									6		
429+000	430+000	C-J Rd.		900	2	500					440			450									5		
430+000	431+000	C-J Rd.		850	2						1000			550									4		
431+000	432+000	C-J Rd.		720	1						1000			600	1						1000		2		
432+000	433+000	C-J Rd.		550							1000			780	1						1000		3		
433+000	434+000	C-J Rd.		60		350					1000			650	1						1000		1		
434+000	435+000	C-J Rd.		390		600								600									2		
435+000	436+000	C-J Rd.		480										300									2		
436+000	437+000	C-J Rd.		450		400								180									1		
437+000	437+800	C-J Rd.		360		250								390											
Total			**0**	**5480**	**8**	**3900**	**0**	**0**	**0**	**0**	**4440**		**0**	**5070**	**4**	**0**	**0**	**0**	**0**	**0**	**3000**	**0**	**29**	**0**	**0**	

Details of Built-Up Area

Sl No.	Name of Settlement	Chainage (km)		Length (km)	Existing Cross Sectional Parameters (m)								No. of Structures Affected (1st Row beyond Property Line)												Remark
		From	To		C/W	PS	ES	FP	Drain	Flank (LHS)	Flank (RHS)	Total Available ROW	P-I/R	P-I/C	P-II/R	P-II/C	SP-I/R	SP-I/C	K-I/R	K-I/C	School	Religious str.	Health Center	Total	
Dergaon Section																									
1	Dergaon	426+800	427+000	0.200	7.0		3.0																	0	
2	Dergaon	427+000	428+000	1.000	7.0		3.0																	0	
3	Dergaon	428+000	429+000	1.000	7.0		3.7		1.0	9.0	8.0	28.7		1			3	6		1				11	
4	Dergaon	429+000	430+000	1.000	7.0		3.4		1.0	7.0	8.0	26.4					25		2	4				31	
5	Dergaon	430+000	431+000	1.000	7.0		3.0		2.0	2.5	2.0	16.5	38	62	14	7	52	65						238	
6	Dergaon	431+000	432+000	1.000	7.0		4.0		2.0	5.0	4.0	22.0	26	57	8	4	39	46				1		181	
7	Dergaon	432+000	433+000	1.000	10.0		3.5		0.5	5.0	2.5	21.5										1		1	C/W width 10m from Ch. 432+500
8	Dergaon	433+000	434+000	1.000	10.0		3.3		1.0	4.0	15.0	33.3	2				18	6		20				46	
9	Dergaon	434+000	435+000	1.000	10.0		4.0		1.0													1		1	
10	Balijan	435+000	436+000	1.000	7.5		4.4		1.0	4.0	3.5	20.4					2	5						7	Balijan started from Ch. 435+400
11	Balijan	436+000	437+000	1.000	7.3		4.4															1		1	
12	Balijan	437+000	437+800	0.800	7.0		4.0																	0	

List of Major Features

Features	Existing Chainage (km)	Road Segment	Side	Dist from C/W edge (m)	Remarks
Dergaon Section					
Aluminium Industry	429+300	NH-37	LHS	15.0	
SBI	430+250	NH-37	LHS	6.0	
Forest Beat Office	430800	NH-37	RHS	8.0	
Indian Oil Petro Punp	430+950	NH-37	RHS	5.0	
UNITED Bank Of India	431+000	NH-37	LHS	10.0	
Dergaon Development Authority	431+150	NH-37	RHS	6.0	
HP Petrol Pump	431+250	NH-37	LHS	5.0	
Mosque	431+800	NH-37	LHS	6.0	
Police Training Camp	431+850	NH-37	RHS	8.0	
PM Kaushal Kendra	431+950	NH-37	LHS	4.0	
Temple	432+050	NH-37	RHS	5.0	
Assam Police Quarter	432+350	NH-37	RHS	6.0	
Recruitment Training School	432+600	NH-37	RHS	9.0	
Police Training College	433+150	NH-37	RHS	8.0	
Temple	434+050	NH-37	LHS	2.5	
Passenger Shelter	435+600	NH-37	LHS	3.0	Balijan
Temple	436+750	NH-37	LHS	2.0	Balijan

Appendix 4.6 : Tree Cutting Details

Sl. No.	Design Chainage		TREE 1 (0 TO 300 DIA)				TREE 2 (300 TO 600 DIA)				TREE 3 (600 TO 900 DIA)				TREE 4 (900 TO ABOVE)			
			No. of Trees with respect to Proposed CL		No. of Trees with respect to Existing CL		No. of Trees with respect to Proposed CL		No. of Trees with respect to Existing CL		No. of Trees with respect to Proposed CL		No. of Trees with respect to Existing CL		No. of Trees with respect to Proposed CL		No. of Trees with respect to Existing CL	
	From	To	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right
1	426+800	427+000	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0
2	427+000	427+500	7	12	7	12	17	2	17	2	5	0	5	0	0	2	1	1
3	427+500	428+000	5	0	5	0	8	4	8	4	1	2	1	2	0	0	0	0
4	428+000	428+500	2	8	2	8	13	8	13	8	5	5	5	5	0	1	0	1
5	428+500	429+000	1	10	1	10	11	9	11	9	1	0	1	0	0	0	0	0
6	429+000	429+500	0	10	0	10	4	8	4	8	5	2	5	2	2	2	2	2
7	429+500	430+000	2	1	2	1	5	14	5	14	0	3	0	3	2	1	2	1
8	430+000	430+500	0	1	0	1	5	4	5	4	7	4	7	4	1	4	1	4
9	430+500	431+000	0	8	0	8	7	7	7	7	4	5	3	6	3	1	1	3
10	431+000	431+500	0	1	0	1	14	5	14	5	7	4	7	4	1	0	1	0
11	431+500	432+000	3	0	3	0	6	0	5	1	10	13	9	14	0	3	0	3
12	432+000	432+500	37	71	59	49	27	29	36	20	0	0	0	0	1	1	1	1
13	432+500	433+000	53	122	53	122	27	50	28	49	5	0	5	0	0	0	0	0
14	433+000	433+500	5	58	6	57	39	55	44	50	0	0	0	0	0	0	0	0
15	433+500	434+000	3	7	8	2	8	7	13	2	0	0	0	0	0	3	3	0
16	434+000	434+500	23	25	24	24	18	3	19	2	0	0	0	0	0	2	0	2
17	434+500	435+000	44	20	44	20	38	25	38	25	0	0	0	0	0	0	0	0
18	435+000	435+500	20	22	20	22	5	8	5	8	1	0	0	1	1	0	0	1
19	435+500	436+000	8	22	7	23	6	11	3	14	3	2	2	3	4	1	4	1
20	436+000	436+500	18	3	2	19	18	4	3	19	6	0	1	5	3	1	2	2
21	436+500	437+000	7	23	7	23	21	28	21	28	5	5	5	5	5	0	5	0
22	437+000	437+400	3	3	3	3	12	16	12	16	0	0	0	0	0	0	0	0
Sub Total			**241**	**427**	**253**	**415**	**310**	**298**	**312**	**296**	**65**	**45**	**56**	**54**	**23**	**22**	**23**	**22**
Total			**668**		**668**		**608**		**608**		**110**		**110**		**45**		**45**	

Details of Existing km Stones

km Stone	Road Segment	Latitude (N)		Longitude (E)		Errors Observed (m)
		Deg	Min	Deg	Min	
Dergaon Section						
427	NH-37	26	41.722	93	56.605	-
428	NH-37	26	42.055	93	57.080	1080
429	NH-37	26	42.386	93	57.565	1230
430	NH-37	Missing				-
431	NH-37	26	42.979	93	58.502	1910
432	NH-37	Missing				-
433	NH-37	26	43	93	60	1950
434	NH-37	Missing				-
435	NH-37					-
436	NH-37					-
437	NH-37					-

List of Items to be Dismantled

Chainage (km)		Road Segment	Features (Nos.)						Toe Wall / Guard wall		
From	To		Guard Post	Delineator	Road Signs	Hazard Markers	200m Stone	km Stone	Length (m)	Top width (m)	Avg. Height (m)
Dergaon Section											
426+800	427+000	NH-37	-	-	-	-	-	1	-	-	-
427+000	428+000	NH-37	-	-	-	-	-	1	-	-	-
428+000	429+000	NH-37	-	-	-	-	-	1	-	-	-
429+000	430+000	NH-37	-	-	-	-	-	-	-	-	-
430+000	431+000	NH-37	-	-	1	-	-	1	-	-	-
431+000	432+000	NH-37	-	-	-	-	-	-	-	-	-
432+000	433+000	NH-37	-	-	-	-	-	1	-	-	-
433+000	434+000	NH-37	-	-	-	-	-	-	-	-	-
434+000	435+000	NH-37	-	-	-	-	-	-	-	-	-
435+000	436+000	NH-37	-	-	-	-	4	-	-	-	-
436+000	437+000	NH-37	-	-	-	-	-	-	-	-	-
437+000	437+800	NH-37	-	-	-	-	-	-	-	-	-
Total			**0**	**0**	**1**	**0**	**4**	**5**	**0**		

Road Inventory : Details of Arboriculture

Sl No.	Stretch		Road Segment	Shoulder Area		Side Slope		Beyond Embankment Toe	
	From	To		Left	Right	Left	Right	Left	Right
Dergaon Section									
1	426+800	427+000	NH-37	3,4	3	3	4	3,4	4
2	427+000	427+500	NH-37	3,1	-	3,4,1	3	4,3	4,3
3	427+500	428+000	NH-37	3	-	3,4	3	3,4	3,4
4	428+000	428+500	NH-37	2,3	3	3,4	4	3,4	3,4
5	428+500	429+000	NH-37	3	3	4,3	3	3,4	4,3
6	429+000	429+500	NH-37	3	1	4,3	4,1	3,4,1	3,4,1
7	429+500	430+000	NH-37	3	1,3	3,4	1,4	3,4	1,4
8	430+000	430+500	NH-37	7	7	4	1,3	1,4	1,4
9	430+500	431+000	NH-37	7	7	4,3	1,4,3	1	1,4
10	431+000	431+500	NH-37	7	7	4	3,1	1	4,1
11	431+500	432+000	NH-37	7	7	3	4,3	1	4,3,1
12	432+000	432+500	NH-37	7	7	3,4	1,3	1	1,4
13	432+500	433+000	NH-37	2	7	3,4	1	1,3	1
14	433+000	433+500	NH-37	3	7	3	1,4	1	1,4
15	433+500	434+000	NH-37	2	3	1,4	1,4	1,2	3,1,4
16	434+000	434+500	NH-37	2	1	3,4	1,4	3,1	1,4,3
17	434+500	435+000	NH-37	3	-	3,1,4	4,1	1	4,1
18	435+000	435+500	NH-37	4	4	4,3	3,4	1	1,4
19	435+500	436+000	NH-37	3	4	3	4,3	3	4,1
20	436+000	436+500	NH-37	7	7	4	4,3	4,3	3,4,1
21	436+500	437+000	NH-37	7	7	1	4,3	1	1
22	437+000	437+500	NH-37	1,2	3,1,2	1,3,4	1	1,4	1
23	437+500	437+800	NH-37	1	3	1,4	1	4,1	1

Type	Code
Dense Plantation	1
Avenue Plantation	2
Isolated Tree	3
Bush	4
Hedge	5
Turfing	6
None	7

ROAD INVENTORY : DETAILS OF GEOMETRIC DEFICIENCIES

Horizontal Curves				Vertical Curves					
Sl No.	Location (km)		Type of Deficiency	Sl No.	Location (km)		Length of Curve (m)	Type of Curve	Type of Deficiency
	From	To			From	To			
Dergaon Section									
1	427+050	427+090	SRHC						
2	431+750	431+780	SRHC						
3	432+170	432+200	SRHC						
4	433+080	433+120	SLHC						
5	433+500	433+570	SRHC						
6	434+190	434+250	SRHC						
7	434+450	434+470	SLHC						
8	434+890	435+000	SLHC						
9	435+700	435+750	SRHC						
10	436+530	436+590	SLHC						
11	437+170	437+220	SRHC						
12	437+400	437+490	SLHC						

Note : (1) All the chainages furnished above are on the basis of existing kilometer stones

(2) Direction of curves are considered left and right while moving from CG/MP Border to Semaria

Abbreviations

Type of Deficiency of Horizontal Curve		Type of Vertical Curve		Type of Deficiency of Vertical Curve	
SRHC	Sharp Right Hand Curve	SC	Sumit Curve	IL	Inadequate Length
SLHC	Sharp Left Hand Curve	VC	Valley Curve	PV	Poor Visibility
SRC	Sharp Reverse Curve				
BBC	Broken Back Curve				

Appendix 4.11 : Pavement Condition of NH 37 (Km 426+800 to Km 437+800) by NSV

Chainage (km)		Failed Section		Cracking		Pothole		Ravelling		Rutting		Patching		Edge Break		Delamination		Edge Drop	
From	To	Severity	Extent	Severity	Extent	Severity	Extent	Severity	Extent	Severity	Extent	Severity	Extent	Severity	Extent	Severity	Extent	Severity	Extent
426+800	427+000	1	1	3	2	3	3	1	2	1	1	1	1	1	1	1	1	1	1
427+000	428+000	1	1	3	2	3	3	3	3	1	1	1	1	1	1	1	1	1	1
428+000	429+000	1	1	3	2	3	3	3	3	1	1	1	1	1	1	1	1	1	1
429+000	430+000	1	1	3	2	3	3	3	3	1	1	1	1	1	1	1	1	1	1
430+000	431+000	1	1	3	2	3	3	3	3	1	1	1	1	1	1	1	1	1	1
431+000	432+000	1	1	3	2	3	3	3	3	1	1	1	1	1	1	1	1	1	1
432+000	433+000	1	1	3	1	3	3	3	3	1	1	1	1	1	1	1	1	1	1
433+000	434+000	1	1	3	2	3	3	3	3	1	1	1	1	1	1	1	1	1	1
434+000	435+000	1	1	3	2	3	3	3	3	1	1	1	1	1	1	1	1	1	1
435+000	436+000	1	1	3	2	3	3	3	3	1	1	1	1	1	1	1	1	1	1
436+000	437+000	1	1	3	2	3	3	3	3	1	1	1	1	1	1	1	1	1	1
437+000	437+800	1	1	3	2	3	3	3	3	1	1	1	1	1	1	1	1	1	1

Note :-
Severity: 1 = Low, 2 = Medium, 3 = High
Extent: 1 = Intermittent, 2 = Frequent, 3 = Extensive

Pavement Condition Suvey

NAME OF ROAD: Chanti (CG/MP Border) to Kotadol & Ramgarh to Semaria

Ex. chainage (km)		Length (m)	Carriageway*		Long.Cracking		Ravelling	Pothole	Patching	Edge Failure		Rut Depth		Shoulder				Embankment				Remarks
														Left		Right		Left		Right		
From	To		Width (m)	Type	Width < 3mm	Width > 3mm				Left	Right	Left	Right	Type	Condition	Type	Condition	Condition	Slope	Condition	Slope	
					(%)	(%)	(%)	(%)	(%)	(m)	(m)	(mm)	(mm)									
Dergaon Section																						
426+800	427+000	200	7.0	BT	8.57	7.14	21.43	8.57	5.71	20		-	-	E	Fair	E	Fair	Fair	1:0.6	Fair	1:0.5	**Aligator Crack**
427+000	427+500	500	7.0	BT	2.86	10.00	10.00	7.14	15.43			-	-	E	Fair	E	Fair	Fair	1:0.5	Fair	1:0.5	
427+500	428+000	500	7.0	BT	6.86	8.00	11.43	10.00	15.43			-	-	E	Fair	E	Fair	Fair	1:0.8	Fair	1:0.8	
428+000	428+500	500	7.0	BT	2.86	8.57	12.86	17.14	4.00	30		-	-	E	Fair	E	Fair	Fair	1:0.7	Fair	1:0.7	**Aligator Crack**
428+500	429+000	500	7.0	BT	5.71	13.14	12.00	5.14	2.57			-	-	E	Fair	E	Fair	Fair	1:0.8	Fair	1:0.8	
429+000	429+500	500	7.0	BT	4.29	8.57	5.71	4.00	18.57			-	-	E	Fair	E	Fair	Fair	1:0.8	Fair	1:0.8	
429+500	430+000	500	7.0	BT	5.14	10.86	7.43	3.43	20.57			-	-	E	Fair	E	Fair	Fair	1:0.6	Fair	1:0.8	
430+000	430+500	500	7.0	BT	4.29	8.57	4.29	2.00	3.43	25	20	-	-	E	Fair	E	Fair	Fair	1:1.5	Fair	1:1.5	**Aligator Crack**
430+500	431+000	500	7.0	BT	2.57	7.71	11.14	11.43	17.14	30	20	-	-	E	Fair	E	Fair	Fair	1:1.4	Fair	1:1.4	
431+000	431+500	500	7.0	BT	4.57	10.00	8.57	4.29	2.57	20	30	-	-	E	Fair	E	Fair	Fair	1:1.5	Fair	1:1.5	
431+500	432+000	500	7.0	BT	6.00	11.43	7.14	6.57	3.86	20	15	-	-	E	Fair	E	Fair	Fair	1:1.3	Fair	1:1.3	
432+000	432+500	500	7.0	BT	1.71	6.86	7.43	2.29	3.43		20	-	-	E	Fair	E	Fair	Fair	1:1.6	Fair	1:1.6	
432+500	433+000	500	10.0	BT	1.60	5.40	6.60	2.20	2.00			-	-	E	Fair	E	Fair	Fair	1:1.5	Fair	1:1	
433+000	433+500	500	10.0	BT	1.00	2.00	5.00	9.00	0.80	30	15	-	-	E	Poor	E	Poor	Fair	1:0.5	Fair	1:1.2	**Pavement failed**
433+500	434+000	500	10.0	BT	0.90	2.80	7.00	10.40	1.80	30	25	-	-	E	Poor	E	Poor	Fair	1:1	Fair	1:1	**Pavement failed**
434+000	434+500	500	7.5	BT	1.87	2.93	13.87	16.27	10.93	35	30	-	-	E	Fair	E	Poor	Fair	1:1	Fair	1:1	**Pavement failed**
434+500	435+000	500	7.5	BT	3.47	4.00	5.60	5.60	6.67	20	20	-	-	E	Fair	E	Poor	Fair	1:1	Fair	1:1	**Aligator Crack**
435+000	435+500	500	7.3	BT	2.74	6.03	9.32	10.41	9.86	40	25	-	-	E	Fair	E	Fair	Fair	1:1	Fair	1:1	**Pavement failed**
435+500	436+000	500	7.3	BT	3.56	7.40	9.04	7.40	8.77			-	-	E	Poor	E	Fair	Fair	1:1	Fair	1:1	**Pavement failed**
436+000	436+500	500	7.3	BT	1.37	4.11	9.32	15.89	8.22			-	-	E	Poor	E	Fair	Fair	1:1	Fair	1:1	**Pavement failed**
436+500	437+000	500	7.0	BT	2.57	5.43	11.14	14.86	9.14			-	-	E	Fair	E	Fair	Fair	1:1	Fair	1:1	**Pavement failed**
437+000	437+500	500	7.0	BT	1.43	8.29	2.57	1.43	1.14			-	-	E	Fair	E	Fair	Fair	1:0.8	Fair	1:0.8	
437+500	437+800	300	7.0	BT	1.90	10.00	3.33	0.00	0.00			-	-	E	Fair	E	Fair	Fair	1:0.8	Fair	1:0.8	**Aligator Crack**

* Carriageway width is inclusive of paved shoulder width

INVENTORY & CONDITION SURVEY OF BRIDGES (IRC SP:19-2001)

NAME OF THE PROJECT ROAD : Up-gradation of Dergaon town Section NH-37 (STATE OF ASSAM)

SL NO.	Vehicle Meter Reading (km)	NAME OF THE RIVER BRIDGE	YEAR OF CONSTRUCTION	NUMBER OF SPANS	SPAN ARRANGEMENT (EXPANSION JOINT TO EXPANSION JOINT) (m)	CLEAR SPANS	LENGTH OF BRIDGE FACE TO FACE OF ABUTMENTS (m)	HIGH LEVEL(HL) OR SUBMERSIBLE(SL)	CLEAR ROADWAY WIDTH BETWEEN KERBS (m)	TOTAL OUTER WIDTH OF BRIDGE (m)	WIDTH OF FOOTPATH (m)	SUPERSTRUCTURE						DETAILS OF WEARING COAT		SUBSTRUCTURE					PIER FOUNDATION		ABUTMENT FOUNDATION		PROTECTION WORK		SKEW ANGLE (DEGREE)	Vertical clearance upto the soffit of the superstructure(m)	DIRECTION OF FLOW	PRESENT CONDITION OF BRIDGE					*H. F. L (m)	*L. W. L (m)	REMARKS
												GRADIENT	TYPE	TYPE OF BEARING	THICKNESS OF SLAB/GIRDER (m)	MATERIAL OF SLAB/GIRDER	HANDRAIL, PARAPET THICKNESS & HEIGHT (m)	TYPE	THICKNESS (m)	TYPE	THICKNESS OF PIER(m) TOP	THICKNESS OF PIER(m) BOTTOM	*HEIGHT AT PIER & ABUTMENT (m)	MATERIALS USED ABUTMENT	MATERIALS USED PIER	TYPE	MATERIAL	TYPE	MATERIAL	BED	APPROACH				ABUTMENTS	PIERS	SLAB/GIRDER	BEARINGS	PARAPET			
1	427+860	Local Stream	-	2	8.1 + 8.4	16.5	18.9	HL	7.00	7.90	N.A.	-	RCC Slab	N.A.	~ 0.35	RCC	~ 0.7m (RCC Hand Rail)	Bituminous	~0.07	Wall Type	~0.60	~0.60	~ 3.7m (above EGL)	RCC	RCC	Open	RCC	Open	RCC	N.A.	Wing wall	-	~ 4.0m	R-L	F	F	F	N.A.	P	~ 0.658m above LBL	Lowest bed level	**1.** Wearing course is damaged, overlaying is done over structure only. **2.** RCC hand rail is broken. **3.** Weeds and vegetation growth is observed on superstructure. **4.** Scour on bed is observed at pier location. **5.** Stagnation of flow occurs at stream bed.
2	429+150	Local Stream	-	2	7.0 + 6.8	13.80	16.4	HL	7.00	7.80	N.A.	-	RCC Slab	N.A.	~ 0.40	RCC	~ 0.7m (RCC Hand Rail)	Bituminous	~0.065	Wall Type	~0.65	~0.65	~ 3.7m (above EGL)	RCC	RCC	Open	RCC	Open	RCC	N.A.	Wing wall	-	~ 3.8m	R-L	F	F	F	N.A.	P	~ 0.9m above LBL	Lowest bed level	**1.** RCC hand rail is broken. **2.** Growth of vegetation is observed on substructure and wing wall. **3.** Wearing course is damged, overlaying done. **4.** Utility pipe is attached to the superstructure. **5.** Wing wall is tilted.
3	435+350	Local Stream	-	2	6.7 + 6.9	13.60	16.2	HL	7.00	7.90	N.A.	-	RCC Slab	N.A.	~ 0.35	RCC	~ 0.7m (RCC Hand Rail)	Bituminous	~0.065	Wall Type	~0.60	~0.60	~ 3.9m (above EGL)	RCC	RCC	Open	RCC	Open	RCC	N.A.	Wing wall	-	~ 3.9m	R-L	F	F	F	N.A.	P	~ 0.86m above LBL	Lowest bed level	**1.** Wearing course is damaged. **2.** Drainage spouts are chocked. **3.** RCC railing is broken. **4.** Growth of vegetation is observed on substructure. **5.** Concrete is broken by layer at some locations of substructure.

RCC- Reinforced Cement Concrete, PCC-Plain Cement Concrete,BM-Brick Masonary,SM-Stone Masonary
r/f-Reinforcement,SL-Submerssible Bridge, HL- Heigh Level Bridge, LBL - Lowest Bed Level

Improvement Proposal For Culverts - Dergaon Town Section, NH-37 (Assam)

Existing Details					
Sl. No.	**Existing (Inventory) Chainage (km)**	**Type of Culvert**	**No. of span x Span length (m)**	**Width of Culvert (m)**	**Overall Condition**
1	430+820	Slab Culvert	1x5.5	10.0	Fair
2	431+020	Slab Culvert	1x1.5	11.1	Poor
3	433+050	HP Culvert	1x0.8ϕ	15.0	Poor
4	433+500	Slab Culvert	1x1.2	13.0	Poor
5	433+800	Slab Culvert	1x1.2	12.0	Poor
6	434+250	Slab Culvert	1x1.1	12.0	Poor
7	434+300	Slab Culvert	1x1.5	11.0	Poor
8	434+550	Slab Culvert	1x1.1	11.0	Poor
9	434+750	Slab Culvert	1x5.2	11.0	Poor
10	435+000	Slab Culvert	1x1.1	10.0	Poor
11	435+100	Slab Culvert	1x1.1	11.0	Poor
12	435+350	Chocked	Chocked	-	Chocked
13	435+750	Slab Culvert	1x1.2	13.5	Poor
14	436+500	Slab Culvert	1x5.5	11.0	Fair
15	436+800	HP Culvert	1x1.0	16.0	Poor

Appendix 4.15A

Summary of VDF values of Dergaon

Section : Dergaon

Location : Dergaon

Type of Vehicles	Directions of Traffic		Average VDF	Recommended VDF
	Numaligarh to Jorhat	Jorhat to Numaligarh		
2 Axle Truck	8.51	3.12	5.82	8.51
3 Axle Truck	10.53	3.23	6.88	10.53
Multi Axle Vehicles	13.47	6.22	9.85	13.47
LCV	1.62	1.07	1.34	1.62
Bus	1.83	1.52	1.68	1.83

Axle Load Survey Data and Analysis (Dergaon)

Section : Dergaon
Location : Dergaon
Direction : Numaligarh-Jorhat

Vehicle Type	Coding	Registration No.	Origin	Destination	Commodity Type	Wheel Load (Kg)					Axle Load (Kg)					Gross Weight (Tonnes)	Equivalency Factor					Total EF	Average VDF
						1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle	1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle		Front Axle	Rear Axle1	Rear Axle2	Tandem Axle	Tridem Axle		
2 Axle Truck	1.2	NL01	TEZPUR	KHATKHATI	FERTILIZER	4135	4580				8270	9160				17.43	2.4269	1.5919				4.0188	**11.93**
	1.2	NL03	MORCHUN	DIMAPUR	EMPTY	2190	2380				4380	4760				9.14	0.191	0.1161				0.3071	
	1.2	NL01	NAGALAND	BOKAJAN	EMPTY	2050	2670				4100	5340				9.44	0.1467	0.1839				0.3306	
	1.2	NL02	CHAINIJH	DIMAPUR	EMPTY	2230	2650				4460	5300				9.76	0.2053	0.1785				0.3838	
	1.2	NL07	SARIYAGANJ	DIMAPUR	EMPTY	2190	2650				4380	5300				9.68	0.191	0.1785				0.3695	
	1.2	AS09	CCI	BOKAJAN	EMPTY	1765	1990				3530	3980				7.51	0.0806	0.0568				0.1374	
	1.2	NL01	KHALIHAN	DIMAPUR	SAND	3460	7660				6920	15320				22.24	1.1898	12.4553				13.6451	
	1.2	NL01	GONSEN	KHATKHATI	EMPTY	2550	2250				5100	4500				9.6	0.351	0.0928				0.4438	
	1.2	NL01	NAGALAND	BOKAJAN	EMPTY	1790	1690				3580	3380				6.96	0.0853	0.0296				0.1149	
	1.2	MH01	JORAHAT	IMPHAL	OIL	3920	8845				7840	17690				25.53	1.9602	22.1426				24.1028	
	1.2	AS02	GOLLAGHAT	DIMAPUR	EMPTY	1950	2110				3900	4220				8.12	0.1201	0.0718				0.1919	
	1.2	NL04	LAIDING	BELAPUR	OIL	2950	6350				5900	12700				18.6	0.6287	5.8821				6.5108	
	1.2	AS02	BOKAJAN	BELAPUR	EMPTY	2110	2250				4220	4500				8.72	0.1646	0.0928				0.2574	
	1.2	AS01	SARIYAGANJ	BELAPUR	EMPTY	1940	2110				3880	4220				8.1	0.1176	0.0718				0.1894	
	1.2	NL01	DIMAPUR	DIMAPUR	SAND	2950	6850				5900	13700				19.6	0.6287	7.9653				8.594	
	1.2	AS09	GUWAHATI	LAHORI	COAL	3450	5020				6900	10040				16.94	1.1761	2.2975				3.4736	
	1.2	AS02	NUMALIGARH	DIMAPUR	PARCHUNE	4750	8950				9500	17900				27.4	4.2259	23.2129				27.4388	
	1.2	NL08	LAMDING	DIMAPUR	OIL	2190	6405				4380	12810				17.19	0.191	6.0886				6.2796	
	1.2	AS01	GOLLAGHAT	KHATKHATI	EMPTY	2350	2350				4700	4700				9.4	0.2532	0.1104				0.3636	
	1.2	AS09	BALUPNAGAR	DIMAPUR	SAND	3440	7885				6880	15770				22.65	1.1625	13.9844				15.1469	
	1.2	NL05	BALUPNAGAR	DIMAPUR	SAND	3734	9130				7468	18260				25.728	1.6138	25.1374				26.7512	
	1.2	AS01	LENPANI	DIMAPUR	SAND	3025	9950				6050	19900				25.95	0.6951	35.4592				36.1543	
	1.2	AS01	GUWAHATI	DIMAPUR	PARCHUNE	2460	3250				4920	6500				11.42	0.3041	0.4037				0.7078	
	1.2	AS01	TOLVEJAN	BHUKAJAN	EMPTY	2515	2220				5030	4440				9.47	0.3322	0.0879				0.4201	
	1.2	AS01	DEVPANI	DIMAPUR	SAND	5470	8825				10940	17650				28.59	7.4318	21.943				29.3748	
	1.2	NL05	KALYANI	DIMAPUR	VEGETABLE	2985	5200				5970	10400				16.37	0.6591	2.6452				3.3043	

Axle Load Survey Data and Analysis (Dergaon)

Section : Dergaon
Location : Dergaon
Direction : Numaligarh-Jorhat

Vehicle Type	Coding	Registration No.	Origin	Destination	Commodity Type	Wheel Load (Kg)					Axle Load (Kg)					Gross Weight (Tonnes)	Equivalency Factor					Total EF	Average VDF
						1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle	1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle		Front Axle	Rear Axle1	Rear Axle2	Tandem Axle	Tridem Axle		
	1.2	AS02	GOLLAGHAT	DIMAPUR	EMPTY	1990	2150				3980	4300				8.28	0.1302	0.0774				0.2076	
	1.2	NL01	TAMABDIN	DIMAPUR	OIL	3050	6450				6100	12900				19	0.7184	6.2615				6.9799	
	1.2	NL01	TAMABDIN	DIMAPUR	OIL	3950	6310				7900	12620				20.52	2.0209	5.7353				7.7562	
	1.2	AS09	CHAPCHAJAN	IMPHAL	EMPTY	2120	2680				4240	5360				9.6	0.1677	0.1867				0.3544	
	1.2	NL05	DEVPANI	DIMAPUR	SAND	2790	8750				5580	17500				23.08	0.503	21.2065				21.7095	
	1.2	NL01	DIGBOI	KHATKHATI	OIL	2750	6410				5500	12820				18.32	0.4748	6.1076				6.5824	
	1.2	NL01	DIGBOI	MANIPUR	OIL	3350	6195				6700	12390				19.09	1.0455	5.3285				6.374	
	1.2	NL02	DIGBOI	KHATKHATI	OIL	2910	5660				5820	11320				17.14	0.5953	3.7129				4.3082	
	1.2	MH01	GUWAHATI	MANIPUR	OIL	3310	6415				6620	12830				19.45	0.9965	6.1267				7.1232	
	1.2	NL09	TINSUKIA	SIMAPUR	OIL	2590	6210				5180	12420				17.6	0.3736	5.3803				5.7539	
	1.2	NL01	DIPAJAN	BHOKAJAN	SAND	2550	7480				5100	14960				20.06	0.351	11.3252				11.6762	
	1.2	NL01	DIPAJAN	BOKAJAN	EMPTY	1960	2120				3920	4240				8.16	0.1226	0.0731				0.1957	
	1.2	WB23	KOLKAJAN	KHATKHATI	EMPTY	2650	1845				5300	3690				8.99	0.4094	0.042				0.4514	
	1.2	NL01	MANIPUR	DIGBOI	EMPTY	2150	2210				4300	4420				8.72	0.1774	0.0863				0.2637	
	1.2	AS02	MANIPUR	DIGBOI	EMPTY	1990	2110				3980	4220				8.2	0.1302	0.0718				0.202	
	1.2	AS01	MOPUR	KHATKHATI	EMPTY	1950	2110				3900	4220				8.12	0.1201	0.0718				0.1919	
	1.2	AS03	MOPUR	DIMAPUR	EMPTY	2050	2150				4100	4300				8.4	0.1467	0.0774				0.2241	
	1.2	AS01	NIPALIGARH	DIMAPUR	EMPTY	1970	2110				3940	4220				8.16	0.1251	0.0718				0.1969	
	1.2	AS02	DIMAPUR	DIMAPUR	OIL	2850	4850				5700	9700				15.4	0.5477	2.0018				2.5495	
	1.2	AS05	SORPATH	SUKHAJAN	EMPTY	1330	1345				2660	2690				5.35	0.026	0.0119				0.0379	
	1.2	MN03	TINSUKIA	IMPHAL	GAS	2635	6550				5270	13100				18.37	0.4002	6.6589				7.0591	
	1.2	AS01	DIPAJAN	DIMAPUR	SAND	2550	3680				5100	7360				12.46	0.351	0.6635				1.0145	
	1.2	AS09	GOLLAGHAT	KHATKHATI	EMPTY	2450	2670				4900	5340				10.24	0.2991	0.1839				0.483	
	1.2	AS01	GOLLAGHAT	KHATKHATI	EMPTY	2305	2750				4610	5500				10.11	0.2344	0.207				0.4414	
	1.2	AS01	DEVPANI	KHATKHATI	SAND	3285	8890				6570	17780				24.35	0.9667	22.5967				23.5634	
	1.2	AS01	DEVPANI	KHATKHATI	SAND	3196	8750				6392	17500				23.892	0.8662	21.2065				22.0727	

Axle Load Survey Data and Analysis (Dergaon)

Section : Dergaon
Location : Dergaon
Direction : Numaligarh-Jorhat

Vehicle Type	Coding	Registration No.	Origin	Destination	Commodity Type	Wheel Load (Kg)					Axle Load (Kg)					Gross Weight (Tonnes)	Equivalency Factor					Total EF	Average VDF
						1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle	1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle		Front Axle	Rear Axle1	Rear Axle2	Tandem Axle	Tridem Axle		
	1.2	NL07	SINGSAN	DIMAPUR	EMPTY	2425	2120				4850	4240				9.09	0.2871	0.0731				0.3602	
	1.2	NL09	SINGSAN	DIMAPUR	HOUSE HOLI	2040	2475				4080	4950				9.03	0.1438	0.1358				0.2796	
	1.2	NL05	SILONIGARH	DIMAPUR	OIL	3245	8900				6490	17800				24.29	0.9205	22.6985				23.619	
	1.2	NL08	DEVPANI	KHATKHATI	SAND	3900	9215				7800	18430				26.23	1.9205	26.0866				28.0071	
	1.2	NL05	TINSUKIA	DIMAPUR	OIL	2950	6650				5900	13300				19.2	0.6287	7.075				7.7037	
	1.2	HR55	KOLKATA	DIMAPUR	CAR	4550	6050				9100	12100				21.2	3.5579	4.8469				8.4048	
	1.2	HR55	KOLKATA	DIMAPUR	CAR	3350	5250				6700	10500				17.2	1.0455	2.7484				3.7939	
	1.2	NL01	KOLKATA	DIMAPUR	CAR	3650	5650				7300	11300				18.6	1.4734	3.6867				5.1601	
	1.2	AS05	SANDIPUR	DIMAPUR	SAND	4050	11302				8100	22604				30.704	2.2334	59.0279				61.2613	
	1.2	AS05	SANTIPUR	DIMAPUR	WOOD	2950	8460				5900	16920				22.82	0.6287	18.5318				19.1605	
	1.2	NL07	MUN	BOKAJAN	EMPTY	2250	2350				4500	4700				9.2	0.2128	0.1104				0.3232	
	1.2	NL02	KOYLAMTI	DIMAPUR	SAND	3350	10550				6700	21100				27.8	1.0455	44.8174				45.8629	
	1.2	NL05	KOYLAMTI	DIMAPUR	SAND	3450	10550				6900	21100				28	1.1761	44.8174				45.9935	
	1.2	NL05	KOYLAMTI	DIMAPUR	SAND	3900	9550				7800	19100				26.9	1.9205	30.0919				32.0124	
	1.2	NL05	SARIYAGANJ	BOKAJAN	WOOD	1650	7420				3300	14840				18.14	0.0616	10.9661				11.0277	
	1.2	NL07	LAMARU	DIMAPUR	SAND	2830	10195				5660	20390				26.05	0.5325	39.0828				39.6153	
	1.2	NL08	LAMARU	DIMAPUR	SAND	2600	9500				5200	19000				24.2	0.3794	29.4667				29.8461	
	1.2	NL07	LAMRU	DIMAPUR	SAND	2750	9980				5500	19960				25.46	0.4748	35.8888				36.3636	
	1.2	NL08	LAMRU	DIMAPUR	SAND	2615	9835				5230	19670				24.9	0.3882	33.8481				34.2363	
	1.2	NL07	GOLLAGHAT	DIMAPUR	PARCEL	1970	3125				3940	6250				10.19	0.1251	0.3451				0.4702	
	1.2	AS02	NAGOAN	DIMAPUR	PASSENGER	2165	3530				4330	7060				11.39	0.1824	0.5618				0.7442	
	1.2	NL01	MOKOKCHUM	KHATKHATI	EMPTY	1750	2710				3500	5420				8.92	0.0779	0.1952				0.2731	
	1.2	NL01	SAGIROAD	DIMAPUR	EMPTY	1910	2140				3820	4280				8.1	0.1105	0.0759				0.1864	
	1.2	NL05	SAG	DIMAPUR	EMPTY	2360	2440				4720	4880				9.6	0.2576	0.1283				0.3859	
	1.2	AS01	SAG	DIMAPUR	EMPTY	1960	2410				3920	4820				8.74	0.1226	0.1221				0.2447	
	1.2	NL01	SILINIJAN	BOKAJAN	SAND	2450	7535				4900	15070				19.97	0.2991	11.6619				11.961	

Axle Load Survey Data and Analysis (Dergaon)

Section : Dergaon
Location : Dergaon
Direction : Numaligarh-Jorhat

Vehicle Type	Coding	Registration No.	Origin	Destination	Commodity Type	Wheel Load (Kg)					Axle Load (Kg)					Gross Weight (Tonnes)	Equivalency Factor					Total EF	Average VDF
						1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle	1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle		Front Axle	Rear Axle1	Rear Axle2	Tandem Axle	Tridem Axle		
	1.2	AS07	LAMRU	DIMAPUR	SAND	3960	9550				7920	19100				27.02	2.0414	30.0919				32.1333	
	1.2	AS02	LAMRU	DIMAPUR	SAND	3830	9410				7660	18820				26.48	1.7863	28.3658				30.1521	
	1.2	AS02	LAMRU	DIMAPUR	SAND	3980	9570				7960	19140				27.1	2.083	30.3448				32.4278	
	1.2	AS02	LAMRU	DIMAPUR	SAND	4010	9530				8020	19060				27.08	2.1465	29.8407				31.9872	
	1.2	AS09	LAMRU	DIMAPUR	SAND	3830	9470				7660	18940				26.6	1.7863	29.0962				30.8825	
	1.2	NL01	LAMRU	DIMAPUR	SAND	3980	9580				7960	19160				27.12	2.083	30.4718				32.5548	
	1.2	AS02	LAMRU	DIMAPUR	SAND	3770	9420				7540	18840				26.38	1.677	28.4866				30.1636	
3 Axle Truck	1.22	NL02	BAGAJAN	LUCKNOW	EMPTY	2650	2750	2650			5300	5500	5300			16.1	0.4094			0.2627		0.6721	**12.35**
	1.22	AP16	VIJAYWADA	DIMAPUR	EGG	3750	6095	6035			7500	12190	12070			31.76	1.6417			6.6865		8.3282	
	1.22	NL02	GUWAHATI	MANIPUR	IRON	5250	11090	13050			10500	22180	26100			58.78	6.3064			104.8814		111.1878	
	1.22	NL01	LEBARKANDA	KHATKHATI	OIL	3465	6056	6350			6930	12112	12700			31.742	1.1967			7.3161		8.5128	
	1.22	NL02	NIMIGOND	DIMAPUR	OIL	3750	5295	5170			7500	10590	10340			28.43	1.6417			3.7043		5.346	
	1.22	NL01	TINSUKIA	DIMAPUR	OIL	4150	5950	5930			8300	11900	11860			32.06	2.4623			6.1520		8.6143	
	1.22	AS12	JORAHAT	DIMAPUR	EMPTY	2730	1975	1750			5460	3950	3500			12.91	0.4611			0.0595		0.5206	
	1.22	NL01	SAGIROAD	IMPHAL	BOX	5070	8160	8860			10140	16320	17720			44.18	5.485			25.9172		31.4022	
	1.22	NL07	EMLIGARH	DIMAPUR	PETROL	3360	6570	6050			6720	13140	12100			31.96	1.0581			7.8341		8.8922	
	1.22	NL01	DIGBOI	KHATKHATI	OIL	3350	6750	6410			6700	13500	12820			33.02	1.0455			9.2635		10.309	
	1.22	MH08	GUWAHATI	MANIPUR	OIL	2850	5070	6110			5700	10140	12220			28.06	0.5477			4.8253		5.373	
	1.22	AS01	BADAPTHAR	CHOKAJAN	OIL	3158	6575	6950			6316	13150	13900			33.366	0.8257			10.3348		11.1605	
	1.22	MN01	TINSUKIA	MANIPUR	OIL	3550	6050	6850			7100	12100	13700			32.9	1.3185			8.5528		9.8713	
	1.22	MN01	TINSUKIA	MANIPUR	GAS	3150	4910	5618			6300	9820	11236			27.356	0.8174			3.7944		4.6118	
	1.22	NL05	NIMALIGARH	DIMAPUR	OIL	3150	6750	5850			6300	13500	11700			31.5	0.8174			7.7846		8.602	
	1.22	AS09	KHATKHATI	NAGAON	EMPTY	2510	2150	1895			5020	4300	3790			13.11	0.3295			0.0827		0.4122	
	1.22	UP21	LUCKNOW	DIMAPUR	LPG GAS	4550	7250	6650			9100	14500	13300			36.9	3.5579			11.5295		15.0874	
	1.22	UP21	GUWAHATI	DIMAPUR	OIL	4650	7050	6550			9300	14100	13100			36.5	3.8811			10.5659		14.447	
	1.22	UP21	GUWAHATI	DIMAPUR	MACHINE	4920	6920	6480			9840	13840	12960			36.64	4.8642			9.9580		14.8222	

Axle Load Survey Data and Analysis (Dergaon)

Section : Dergaon
Location : Dergaon
Direction : Numaligarh-Jorhat

Vehicle Type	Coding	Registration No.	Origin	Destination	Commodity Type	Wheel Load (Kg)					Axle Load (Kg)					Gross Weight (Tonnes)	Equivalency Factor					Total EF	Average VDF
						1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle	1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle		Front Axle	Rear Axle1	Rear Axle2	Tandem Axle	Tridem Axle		
	1.22	MN05	NAMRUK	DIMAPUR	TOY	3050	5710	6160			6100	11420	12320			29.84	0.7184			6.1313		6.8497	
	1.22	MN02	NAMRUK	DIMAPUR	TOY	3460	6550	5850			6920	13100	11700			31.72	1.1898			7.3020		8.4918	
	1.22	MN03	NAMRUK	DIMAPUR	FERTILIZER	3890	5690	6050			7780	11380	12100			31.26	1.9009			5.8671		7.768	
	1.22	MN03	NAMRUK	DIMAPUR	FERTILIZER	3650	5230	5650			7300	10460	11300			29.06	1.4734			4.3278		5.8012	
	1.22	AS03	BANGAL	DIMAPUR	MILK	2410	4445	5870			4820	8890	11740			25.45	0.2801			3.4965		3.7766	
	1.22	WB23	KOLKATA	DIMAPUR	FRUITS	2610	6450	6010			5220	12900	12020			30.14	0.3853			7.4443		7.8296	
	1.22	WB23	KOLKATA	DIMAPUR	PIPE	2990	6550	5930			5980	13100	11860			30.94	0.6635			7.4922		8.1557	
	1.22	AP16	ANDRA	DIMAPUR	EGG	3475	5970	5730			6950	11940	11460			30.35	1.2105			5.7876		6.9981	
	1.22	AS01	BANGAL	KHATKHATI	CORN	5700	8250	9950			11400	16500	19900			47.8	8.7628			33.8872		42.65	
	1.22	NL01	LAHVARI	LOM	EMPTY	2675	2008	1750			5350	4016	3500			12.866	0.4251			0.0616		0.4867	
	1.22	AS17	DIMAPUR	LOM	EMPTY	2760	2270	1780			5520	4540	3560			13.62	0.4818			0.0831		0.5649	
	1.22	NL01	GUWAHATI	DIMAPUR	RICE	3440	5610	7240			6880	11220	14480			32.58	1.1625			8.4210		9.5835	
	1.22	CG12	GOLLAGHAT	DIMAPUR	RICE	3150	5430	6915			6300	10860	13830			30.99	0.8174			7.1733		7.9907	
MAV	1.122	AP03	CHENNAI	DIMAPUR	FERTILIZER	5170	2110	6920	5285		10340	4220	13840	10570		38.97	5.9307	0.0718		6.8534		12.8559	**20.22**
	1.122	AS01	JALGAON	BOKAJAN	POL	2850	3230	7825	5910		5700	6460	15650	11820		39.63	0.5477	0.3938		10.9917		11.9332	
	1.122	AS09	GUWAHATI	KOHIMA	FRUITS	5400		6850	7550		10800		13700	15100		39.6	7.0586	0		13.2801		20.3387	
	1.122	RJ07	GUWAHATI	DIMAPUR	PARCEL	4010	2810	11580	11280		8020	5620	23160	22560		59.36	2.1465	0.2256		84.3440		86.7161	
	1.122	NL01	DELHI	DIMAPUR	EMPTY	2340	2680	2810	2610		4680	5360	5620	5220		20.88	0.2489	0.1867		0.2666		0.7022	
	1.122	NL07	BENAGARH	DIMAPUR	PETROL	3910	3790	6490	5860		7820	7580	12980	11720		40.1	1.9403	0.7465		7.1849		9.8717	
	1.122	JK23	GUWAHATI	DIMAPUR	WHEAT	7865	4751	3630	1150		15730	9502	7260	2300		34.792	31.7642	1.8433		0.1613		33.7688	
	1.122	AS01	GOLLAGHAT	KHATKHATI	EMPTY	2360	2190	1690	1450		4720	4380	3380	2900		15.38	0.2576	0.0833		0.0301		0.371	
	1.122	MN01	NOMA	DIMAPUR	RICE	4650	1950	6950	6150		9300	3900	13900	12300		39.4	3.8811	0.0524		9.0957		13.0292	
	1.122	AS01	GUWAHATI	BOKAJAN	FEED	5450	5840	1580	10730		10900	11680	3160	21460		47.2	7.3237	4.2082		7.0923		18.6242	
	1.122	NL01	TINSUKIA	KHATKHATI	PLY WOODS	4050	3860	6250	7550		8100	7720	12500	15100		43.42	2.2334	0.8032		11.2013		14.2379	
LCV	1.2	TR01	GUWAHATI	DIMAPUR	ICE CREAM	1820	1730				3640	3460				7.1	0.0911	0.0325				0.1236	**1.62**
	1.2	AS09	BAKAJAN	BELAPUR	CLOTH	1950	2880				3900	5760				9.66	0.1201	0.2489				0.369	

Axle Load Survey Data and Analysis (Dergaon)

Section : Dergaon
Location : Dergaon
Direction : Numaligarh-Jorhat

Vehicle Type	Coding	Registration No.	Origin	Destination	Commodity Type	Wheel Load (Kg)					Axle Load (Kg)					Gross Weight (Tonnes)	Equivalency Factor					Total EF	Average VDF
						1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle	1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle		Front Axle	Rear Axle1	Rear Axle2	Tandem Axle	Tridem Axle		
	1.2	AS01	BAKAJAN	BELAPUR	CLOTH	2415	3455				4830	6910				11.74	0.2824	0.5155				0.7979	
	1.2	AS01	JORAHAT	DIMAPUR	BOX	1946	3585				3892	7170				11.062	0.1191	0.5976				0.7167	
	1.2	NL01	DEVPANI	DIMAPUR	SAND	3380	3215				6760	6430				13.19	1.0835	0.3866				1.4701	
	1.2	NL11	DEVPANI	DIMAPUR	SAND	3670	8360				7340	16720				24.06	1.506	17.6711				19.1771	
	1.2	AS09	KAPDADHAN	BHOKAJ	CLOTH	1590	3910				3180	7820				11	0.0531	0.8456				0.8987	
	1.2	NL01	TINSUKIA	SIMAPUR	GAS	2150	5550				4300	11100				15.4	0.1774	3.4325				3.6099	
	1.2	NL01	SASYAPAN	DIMAPUR	FEED	2110	2250				4220	4500				8.72	0.1646	0.0928				0.2574	
	1.2	AS09	SARIYAGANJ	BOKAJAN	EMPTY	920	1730				1840	3460				5.3	0.006	0.0325				0.0385	
	1.2	NL07	GOLLAGHAT	DIMAPUR	EMPTY	1680	1820				3360	3640				7	0.0662	0.0397				0.1059	
	1.2	A\F	TINSUKIA	DIMAPUR	EMPTY	745	500				1490	1000				2.49	0.0026	0.0003				0.0029	
	1.2	NL01	MOKOKCHUM	DIMAPUR	EMPTY	580	710				1160	1420				2.58	0.001	0.001				0.002	
	1.2	AS03	DULIAJAN	BOKAJAN	EMPTY	610	710				1220	1420				2.64	0.0012	0.001				0.0022	
	1.2	HR27	SILIGUDI	DIMAPUR	ANIMALS	2570	5230				5140	10460				15.6	0.3622	2.7068				3.069	
	1.2	AS30	GOLLAGHAT	KHATKHATI	ANIMALS	610	1705				1220	3410				4.63	0.0012	0.0306				0.0318	
	1.2	AS05	NAVJAN	HURIYAJAN	EMPTY	560	810				1120	1620				2.74	0.0009	0.0016				0.0025	
	1.2	NL05	GOLLAGHAT	BOKAJAN	PASSENGER	1115	1630				2230	3260				5.49	0.0129	0.0256				0.0385	
	1.2	AS09	SURIYAJAN	SUKHAJAN	WATER	935	1235				1870	2470				4.34	0.0064	0.0085				0.0149	
Bus	1.2	NL02	AAMGUDI	DIMAPUR	PASSENGER	1690	1850				3380	3700				7.08	0.0678	0.0424				0.1102	**1.83**
	1.2	AS01	JORAHAT	DIMAPUR	PASSENGER	2350	2950				4700	5900				10.6	0.2532	0.274				0.5272	
	1.2	AS03	JORAHAT	DIMAPUR	PASSENGER	1215	3080				2430	6160				8.59	0.0181	0.3256				0.3437	
	1.2	NL01	GOLLAGHAT	DIMAPUR	PASSENGER	1380	3150				2760	6300				9.06	0.0302	0.3562				0.3864	
	1.2	AS01	GOLLAGHAT	DIMAPUR	PASSENGER	2360	3125				4720	6250				10.97	0.2576	0.3451				0.6027	
	1.2	AS02	GUWAHATI	DIMAPUR	PASSENGER	2245	3435				4490	6870				11.36	0.2109	0.5037				0.7146	
	1.2	AS65	GOLLAGHAT	DIMAPUR	PASSENGER	2150	3350				4300	6700				11	0.1774	0.4557				0.6331	
	1.2	AS05	GOLLAGHAT	DIMAPUR	PASSENGER	2130	3250				4260	6500				10.76	0.1709	0.4037				0.5746	
	1.2	AS01	NAGAON	DIMAPUR	PASSENGER	3510	3980				7020	7960				14.98	1.2601	0.9078				2.1679	

Axle Load Survey Data and Analysis (Dergaon)

Section : Dergaon
Location : Dergaon
Direction : Numaligarh-Jorhat

Vehicle Type	Coding	Registration No.	Origin	Destination	Commodity Type	Wheel Load (Kg)					Axle Load (Kg)					Gross Weight (Tonnes)	Equivalency Factor					Total EF	Average VDF
						1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle	1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle		Front Axle	Rear Axle1	Rear Axle2	Tandem Axle	Tridem Axle		
	1.2	NL02	BHUJH	DIMAPUR	PASSENGER	3150	4710				6300	9420				15.72	0.8174	1.7805				2.5979	
	1.2	NL02	LILIGARH	DIMAPUR	PASSENGER	3085	3915				6170	7830				14	0.752	0.8499				1.6019	
	1.2	AS07	GOLLAGHAT	DIMAPUR	PASSENGER	1805	3500				3610	7000				10.61	0.0882	0.5429				0.6311	
	1.2	AS01	RUNACHAL PRADES	DIMAPUR	PASSENGER	2740	5210				5480	10420				15.9	0.4679	2.6656				3.1335	
	1.2	AS01	JHILON	DIMAPUR	PASSENGER	2980	4160				5960	8320				14.28	0.6547	1.0835				1.7382	
	1.2	AS06	GUWAHATI	DIMAPUR	PASSENGER	3095	5740				6190	11480				17.67	0.7618	3.9273				4.6891	
	1.2	NL07	MOKOKCHUM	DIMAPUR	PASSENGER	2300	4575				4600	9150				13.75	0.2324	1.5849				1.8173	
	1.2	AS02	BENAGARH	DIMAPUR	PASSENGER	3150	4215				6300	8430				14.73	0.8174	1.1419				1.9593	
	1.2	AR04	NAGAON	DIMAPUR	PASSENGER	3090	5430				6180	10860				17.04	0.7568	3.1452				3.902	
	1.2	AS02	NAGOAN	DIMAPUR	PASSENGER	2760	5610				5520	11220				16.74	0.4818	3.5834				4.0652	
	1.2	NL07	TINSUKIA	DIMAPUR	PASSENGER	2310	5835				4620	11670				16.29	0.2364	4.1938				4.4302	

Axle Load Survey Data and Analysis (Dergaon)

Section : Dergaon
Location : Dergaon
Direction : Jorhat - Numaligarh

Vehicle Type	Coding	Registration No.	Origin	Destination	Commodity Type	Wheel Load (Kg)					Axle Load (Kg)					Gross Weight (Tonnes)	Equivalency Factor					Total EF	Average VDF
						1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle	1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle		Front Axle	Rear Axle1	Rear Axle2	Tandem Axle	Tridem Axle		
2 Axle Truck	1.2	HR38	DIMAPUR	GUWAHATI	EMPTY	2150	2635				4300	5270				9.57	0.1774	0.1745				0.3519	**2.68**
	1.2	AS05	SUKHAJAN	RANGAJAN	EMPTY	2150	2330				4300	4660				8.96	0.1774	0.1067				0.2841	
	1.2	AS05	SUKHAJAN	RANGAJAN	EMPTY	2250	2150				4500	4300				8.8	0.2128	0.0774				0.2902	
	1.2	NL01	DIMAPUR	DEVPANI	EMPTY	2205	2235				4410	4470				8.88	0.1963	0.0903				0.2866	
	1.2	NL07	DIMAPUR	DEVPANI	EMPTY	2220	2380				4440	4760				9.2	0.2017	0.1161				0.3178	
	1.2	NL06	KHATKHATI	NUMALIGARH	EMPTY	1615	2250				3230	4500				7.73	0.0565	0.0928				0.1493	
	1.2	AS01	KHATKHATI	JORAHAT	EMPTY	1950	3040				3900	6080				9.98	0.1201	0.309				0.4291	
	1.2	NL01	KHATKHATI	NUMALIGARH	EMPTY	1750	1950				3500	3900				7.4	0.0779	0.0524				0.1303	
	1.2	NL02	SUKHAJAN	NUMALIGARH	EMPTY	1810	1990				3620	3980				7.6	0.0891	0.0568				0.1459	
	1.2	AS01	BOKAJAN	NUMALIGARH	EMPTY	1850	1990				3700	3980				7.68	0.0973	0.0568				0.1541	
	1.2	NL01	BOKAJAN	NUMALIGARH	EMPTY	1790	1950				3580	3900				7.48	0.0853	0.0524				0.1377	
	1.2	AS03	DIMAPUR	KUVENSAG	RICE	3405	6505				6810	13010				19.82	1.1159	6.4778				7.5937	
	1.2	HR55	DIMAPUR	CHANDIGAR	EMPTY	2340	2630				4680	5260				9.94	0.2489	0.1731				0.422	
	1.2	AS09	DIMAPUR	SUBASANG	RICE	2805	6920				5610	13840				19.45	0.5139	8.2959				8.8098	
	1.2	AS09	DIMAPUR	SUNCHANG	RICE	3505	5970				7010	11940				18.95	1.2529	4.5956				5.8485	
	1.2	AS01	DIMAPUR	DIGABORD	LPG GAS	1950	4520				3900	9040				12.94	0.1201	1.5101				1.6302	
	1.2	NL01	SUKHAJAN	DEVPANI	EMPTY	1790	1695				3580	3390				6.97	0.0853	0.0299				0.1152	
	1.2	AS09	DIMAPUR	NAGAON	RICE	2880	6990				5760	13980				19.74	0.5712	8.6367				9.2079	
	1.2	NL07	DIMAPUR	NAGAON	RICE	3010	6510				6020	13020				19.04	0.6815	6.4978				7.1793	
	1.2	AS06	DIMAPUR	ASSAM	LPG GAS	2250	4675				4500	9350				13.85	0.2128	1.7281				1.9409	
	1.2	AS09	BOKAJAN	SARIYAJAN	EMPTY	2245	2320				4490	4640				9.13	0.2109	0.1049				0.3158	
	1.2	NL01	DIMAPUR	DAKAPHEHMA	RICE	3460	6210				6920	12420				19.34	1.1898	5.3803				6.5701	
	1.2	AS23	KHATKHATI	NAGAON	EMPTY	2290	2020				4580	4040				8.62	0.2283	0.0603				0.2886	
	1.2	AS09	DIMAPUR	MAKMOHAN	RICE	2610	6220				5220	12440				17.66	0.3853	5.415				5.8003	
	1.2	NL04	DIMAPUR	MAKMOHAN	RICE	3210	6590				6420	13180				19.6	0.8814	6.8231				7.7045	

Axle Load Survey Data and Analysis (Dergaon)

Section : Dergaon
Location : Dergaon
Direction : Jorhat - Numaligarh

Vehicle Type	Coding	Registration No.	Origin	Destination	Commodity Type	Wheel Load (Kg)					Axle Load (Kg)					Gross Weight (Tonnes)	Equivalency Factor					Total EF	Average VDF
						1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle	1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle		Front Axle	Rear Axle1	Rear Axle2	Tandem Axle	Tridem Axle		
	1.2	AS04	DIMAPUR	MAKMOHAN	RICE	3310	6850				6620	13700				20.32	0.9965	7.9653				8.9618	
	1.2	AS05	TIMANIJAN	TEZPUR	GATTA	2110	3370				4220	6740				10.96	0.1646	0.4667				0.6313	
	1.2	AS01	SUKHAJAN	NAGAON	EMPTY	1990	2115				3980	4230				8.21	0.1302	0.0724				0.2026	
	1.2	NL01	SUKHAJAN	GUWAHATI	EMPTY	2110	2210				4220	4420				8.64	0.1646	0.0863				0.2509	
	1.2	AS01	SUKHAJAN	NAGAON	RICE	3380	6220				6760	12440				19.2	1.0835	5.415				6.4985	
	1.2	AS09	DIMAPUR	MOHAN	RICE	3690	6510				7380	13020				20.4	1.5391	6.4978				8.0369	
	1.2	AS09	BOKAJAN	NAGAON	EMPTY	1210	2210				2420	4420				6.84	0.0178	0.0863				0.1041	
	1.2	NL02	BOKAJAN	SARIYAJAN	EMPTY	1950	1730				3900	3460				7.36	0.1201	0.0325				0.1526	
	1.2	NL01	GUWAHATI	DIGABORD	EMPTY	1990	2150				3980	4300				8.28	0.1302	0.0774				0.2076	
	1.2	AS09	DIMAPUR	BHARAM	GAS	2615	4050				5230	8100				13.33	0.3882	0.9734				1.3616	
	1.2	AS06	DIMAPUR	HASAN	GAS	2380	5025				4760	10050				14.81	0.2664	2.3067				2.5731	
	1.2	NL05	DIMAPUR	KUNDNJAN	EMPTY	2550	6110				5100	12220				17.32	0.351	5.042				5.393	
	1.2	AS09	DIMAPUR	GUJRAT	OIL	2600	6510				5200	13020				18.22	0.3794	6.4978				6.8772	
	1.2	AS06	BOKAJAN	SARIYAJAN	GAS	2450	5510				4900	11020				15.92	0.2991	3.3346				3.6337	
	1.2	AS05	BOKAJAN	GOLLAGHAT	EMPTY	1990	2150				3980	4300				8.28	0.1302	0.0774				0.2076	
	1.2	NL01	DIMAPUR	GUWAHATI	EMPTY	1950	2050				3900	4100				8	0.1201	0.0639				0.184	
	1.2	NL01	KHATKHATI	GUWAHATI	EMPTY	2765	2530				5530	5060				10.59	0.4853	0.1483				0.6336	
	1.2	NL01	KHATKHATI	GUWAHATI	EMPTY	2050	2190				4100	4380				8.48	0.1467	0.0833				0.23	
	1.2	AS03	NEKAPAN	SARIYAJAN	EMPTY	2150	2210				4300	4420				8.72	0.1774	0.0863				0.2637	
	1.2	AS03	KHATKHATI	NUMALIGARH	EMPTY	1950	2110				3900	4220				8.12	0.1201	0.0718				0.1919	
	1.2	AS05	DIMAPUR	SARIYAJAN	EMPTY	2110	2250				4220	4500				8.72	0.1646	0.0928				0.2574	
	1.2	AS01	DIMAPUR	SARIYAJAN	EMPTY	1950	2050				3900	4100				8	0.1201	0.0639				0.184	
	1.2	AS01	KHATKHATI	SAYAJAN	EMPTY	1850	1990				3700	3980				7.68	0.0973	0.0568				0.1541	
	1.2	AS01	KHATKHATI	SAYAJAN	EMPTY	1950	2110				3900	4220				8.12	0.1201	0.0718				0.1919	
	1.2	AS01	KHATKHATI	NUMALIGARH	EMPTY	2150	2210				4300	4420				8.72	0.1774	0.0863				0.2637	

Axle Load Survey Data and Analysis (Dergaon)

Section : Dergaon
Location : Dergaon
Direction : Jorhat - Numaligarh

Vehicle Type	Coding	Registration No.	Origin	Destination	Commodity Type	Wheel Load (Kg)					Axle Load (Kg)					Gross Weight (Tonnes)	Equivalency Factor					Total EF	Average VDF
						1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle	1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle		Front Axle	Rear Axle1	Rear Axle2	Tandem Axle	Tridem Axle		
	1.2	NL07	DIMAPUR	SEPAHAJ	EMPTY	3780	9715				7560	19430				26.99	1.6948	32.2261				33.9209	
	1.2	NL12	DIMAPUR	LAMDING	EMPTY	2410	1735				4820	3470				8.29	0.2801	0.0328				0.3129	
	1.2	AS07	BOKAJAN	GOLLAGHAT	EMPTY	2145	1930				4290	3860				8.15	0.1758	0.0502				0.226	
	1.2	AS09	KHATKHATI	DEVPANI	EMPTY	3550	2030				7100	4060				11.16	1.3185	0.0615				1.38	
	1.2	AS01	DIMAPUR	GOLLAGHAT	EMPTY	2250	2320				4500	4640				9.14	0.2128	0.1049				0.3177	
	1.2	NL02	KHATKHATI	SARIYAJAN	EMPTY	2360	2150				4720	4300				9.02	0.2576	0.0774				0.335	
3 Axle Truck	1.22	AS02	DEPHU	NUMALIGARH	EMPTY	2250	2360	2650			4500	4720	5300			14.52	0.2128			0.1946		0.4074	**1.32**
	1.22	AS01	BOKAJAN	GUWAHATI	EMPTY	2880	2040	1870			5760	4080	3740			13.58	0.5712			0.0722		0.6434	
	1.22	AS65	DIMAPUR	EMLIGATE	EMPTY	2415	1685	1890			4830	3370	3780			11.98	0.2824			0.0505		0.3329	
	1.22	WB23	KHATKHATI	KOLKATA	EMPTY	2650	1845	1960			5300	3690	3920			12.91	0.4094			0.0648		0.4742	
	1.22	WB23	DIMAPUR	KOLKATA	EMPTY	2610	1910	1920			5220	3820	3840			12.88	0.3853			0.0665		0.4518	
	1.22	NL07	KHATKHATI	NAGAON	GATTA	2820	4850	5660			5640	9700	11320			26.66	0.525			3.7685		4.2935	
	1.22	AS01	DIMAPUR	LONI	EMPTY	2270	1970	2145			4540	3940	4290			12.77	0.2205			0.0886		0.3091	
	1.22	NL01	SUKHAJAN	SARIYAJAN	EMPTY	3105	2115	2015			6210	4230	4030			14.47	0.7716			0.0899		0.8615	
	1.22	HR55	DIMAPUR	TINSUKIA	FRUITS	4565	3050	3310			9130	6100	6620			21.85	3.6051			0.5054		4.1105	
MAV	1.1.22	UP17	DIMAPUR	KAMLANAGAR	GATTA	4250	2620	6200	6390		8500	5240	12400	12780		38.92	2.7084	0.1705		7.7599		10.6388	**3.25**
	1.1.22	NL01	TULJAPUR	KOLKATA	EMPTY	2115	3025	2585	2550		4230	6050	5170	5100		20.55	0.1662	0.303		0.2148		0.684	
	1.1.22	WB57	DIMAPUR	GOLLAGHAT	EMPTY	2350	2650	1730	1600		4700	5300	3460	3200		16.66	0.2532	0.1785		0.0380		0.4697	
	1.1.22	AP03	KHATKHATI	HYDRABAD	FERTILIZER	4480	3750	6670	5900		8960	7500	13340	11800		41.6	3.344	0.7155		7.7107		11.7702	
	1.1.22	HR55	KHATKHATI	HYDRABAD	EMPTY	2660	2855	3150	3200		5320	5710	6300	6400		23.73	0.4156	0.2404		0.5022		1.1582	
	1.1.22	NL01	KHATKHATI	GUWAHATI	EMPTY	2150	3275	2885	2565		4300	6550	5770	5130		21.75	0.1774	0.4162		0.2725		0.8661	
	1.1.22	RJ14	KHATKHATI	GUWAHATI	EMPTY	2110	3150	2840	2450		4220	6300	5680	4900		21.1	0.1646	0.3562		0.2419		0.7627	
	1.1.22	NL01	DIMAPUR	GUWAHATI	PLY WOOD	4150	1950	5760	5950		8300	3900	11520	11900		35.62	2.4623	0.0524		5.8074		8.3221	
	1.1.22	NL01	KHATKHATI	DELHI	EMPTY	2180	3220	2490	2990		4360	6440	4980	5980		21.76	0.1875	0.389		0.2786		0.8551	
	1.1.22	UP22	DIMAPUR	SORUPATHAR	PLY WOOD	3180	7010	5730	5915		6360	14020	11460	11830		43.67	0.8489	8.736		5.6795		15.2644	

Axle Load Survey Data and Analysis (Dergaon)

Section : Dergaon
Location : Dergaon
Direction : Jorhat - Numaligarh

Vehicle Type	Coding	Registration No.	Origin	Destination	Commodity Type	Wheel Load (Kg)					Axle Load (Kg)					Gross Weight (Tonnes)	Equivalency Factor					Total EF	Average VDF
						1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle	1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle		Front Axle	Rear Axle1	Rear Axle2	Tandem Axle	Tridem Axle		
	1.1.22	AS01	MOHALI	DIMAPUR	EMPTY	2150	2850	3150	3310		4300	5700	6300	6620		22.92	0.1774	0.2387		0.5379		0.954	
	1.1.22	NL01	DIMAPUR	DELHI	EMPTY	2340	2680	2850	2610		4680	5360	5700	5220		20.96	0.2489	0.1867		0.2745		0.7101	
	1.1.22	PB13	DIMAPUR	GOLLAGHAT	EMPTY	2760	2200	2185	2280		5520	4400	4370	4560		18.85	0.4818	0.0848		0.1228		0.6894	
	1.1.22	NL02	DIMAPUR	LANKA	EMPTY	2390	1950	1900	1750		4780	3900	3800	3500		15.98	0.2709	0.0524		0.0549		0.3782	
	1.1.22	HR55	DIMAPUR	DELHI	EMPTY	2010	1855	1970	1625		4020	3710	3940	3250		14.92	0.1355	0.0429		0.0516		0.23	
	1.1.22	DL01	DIMAPUR	MUMALIGARH	EMPTY	2240	1785	1910	1745		4480	3570	3820	3490		15.36	0.209	0.0368		0.0552		0.301	
	1.1.22	NL01	DIMAPUR	DULIAJAN	LPG GAS	2450	3150	2950	3250		4900	6300	5900	6500		23.6	0.2991	0.3562		0.4564		1.1117	
LCV	1.2	AS01	KHATKHATI	JORAHAT	FEED	2250	3230				4500	6460				10.96	0.2128	0.3938				0.6066	**0.23**
	1.2	NL07	DIMAPUR	NUMALIGARH	PASSENGER	2950	3650				5900	7300				13.2	0.6287	0.6422				1.2709	
	1.2	AS05	KHATKHATI	GOLLAGHAT	EMPTY	1050	1185				2100	2370				4.47	0.0101	0.0072				0.0173	
	1.2	AS01	KHATKHATI	SARIYAJAN	EMPTY	1450	1650				2900	3300				6.2	0.0367	0.0269				0.0636	
	1.2	UP17	KHATKHATI	DELHI	PARCEL	1975	2835				3950	5670				9.62	0.1264	0.2337				0.3601	
	1.2	AS09	KHATKHATI	GUWAHATI	EMPTY	1250	1410				2500	2820				5.32	0.0203	0.0143				0.0346	
	1.2	AS09	SUKHAJAN	SARIYAJAN	EMPTY	450	1150				900	2300				3.2	0.0004	0.0064				0.0068	
	1.2	AS05	BOKAJAN	PALIVNAR	IRON	640	3250				1280	6500				7.78	0.0014	0.4037				0.4051	
	1.2	AS05	SUKHAJAN	SORUPATHAR	EMPTY	850	1370				1700	2740				4.44	0.0044	0.0128				0.0172	
	1.2	AS02	DIMAPUR	TEZPUR	EMPTY	760	1060				1520	2120				3.64	0.0028	0.0046				0.0074	
	1.2	AS05	LOHRUGANJ	GORPATHAR	EMPTY	630	720				1260	1440				2.7	0.0014	0.001				0.0024	
	1.2	AS13	BOKAJAN	GOLLAGHAT	EMPTY	580	730				1160	1460				2.62	0.001	0.0011				0.0021	
Bus	1.2	AS05	DIMAPUR	GOLLAGHAT	PASSENGER	1450	2630				2900	5260				8.16	0.0367	0.1731				0.2098	**0.54**
	1.2	AS03	DIMAPUR	GUWAHATI	PASSENGER	2310	3650				4620	7300				11.92	0.2364	0.6422				0.8786	

Appendix 4.16 : Data Obtained through Falling Weight Deflectometer (FWD)

Sl No.	Chainage	Side	Road Stretch	Load (kN)	Geophone 1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Manual Temp. (°C)	Back Calculated Moduli		
													BT	Granular	Subgrade
NH 37															
1	426800	RHS	NH 37	40	0.4468	0.3563	0.1756	0.0974	0.0653	0.0473	0.0197	37.0	1241.7	277.8	112.0
2	426800	LHS	NH 37	40	0.3567	0.2656	0.1137	0.0645	0.0345	0.0207	0.0074	41.6	930.5	238.4	110.0
3	426860	RHS	NH 37	40	0.2179	0.1665	0.0761	0.0473	0.0250	0.0166	0.0056	41.6	919.9	237.6	110.0
4	426860	LHS	NH 37	40	0.2239	0.1777	0.0872	0.0595	0.0415	0.0347	0.0198	41.6	940.0	238.1	109.9
5	426920	RHS	NH 37	40	0.1338	0.0846	0.0550	0.0318	0.0152	0.0068	0.0033	41.6	922.6	236.9	110.0
6	426920	LHS	NH 37	40	0.2606	0.1778	0.0535	0.0323	0.0206	0.0080	0.0031	41.6	917.3	238.8	110.0
7	426980	RHS	NH 37	40	0.2417	0.1883	0.1031	0.0650	0.0456	0.0343	0.0042	41.6	913.1	237.6	110.0
8	426980	LHS	NH 37	40	0.2273	0.1702	0.0878	0.0538	0.0354	0.0250	0.0096	41.6	902.5	237.0	110.0
9	427040	RHS	NH 37	40	0.2522	0.1973	0.1095	0.0695	0.0520	0.0397	0.0256	41.6	938.9	239.0	109.9
10	427040	LHS	NH 37	40	0.2962	0.2144	0.0958	0.0535	0.0331	0.0266	0.0028	42.0	928.4	230.5	110.0
11	427100	RHS	NH 37	40	0.2500	0.1732	0.0676	0.0449	0.0335	0.0161	0.0061	42.0	930.5	238.0	110.0
12	427100	LHS	NH 37	40	0.2652	0.2094	0.1128	0.0684	0.0428	0.0372	0.0138	42.0	912.0	238.9	109.9
13	427160	RHS	NH 37	40	0.3371	0.2282	0.0899	0.0481	0.0339	0.0170	0.0083	42.0	905.2	237.8	110.0
14	427160	LHS	NH 37	40	0.1923	0.1311	0.1003	0.0738	0.0468	0.0236	0.0089	42.0	919.9	238.7	110.0
15	427220	RHS	NH 37	40	0.2501	0.1944	0.0910	0.0546	0.0389	0.0283	0.0109	42.0	928.4	237.9	109.9
16	427220	LHS	NH 37	40	0.3038	0.2173	0.0905	0.0627	0.0517	0.0393	0.0196	42.0	922.1	239.0	110.0
17	427280	RHS	NH 37	40	0.2513	0.1845	0.0904	0.0557	0.0351	0.0240	0.0089	42.0	935.8	238.9	110.0
18	427280	LHS	NH 37	40	0.3782	0.2773	0.1277	0.0747	0.0529	0.0348	0.0190	42.0	907.3	238.2	110.0
19	427340	RHS	NH 37	40	0.2137	0.1695	0.0858	0.0487	0.0296	0.0204	0.0050	42.0	915.2	238.9	110.0
20	427340	LHS	NH 37	40	0.1981	0.1547	0.0820	0.0533	0.0380	0.0261	0.0159	42.0	933.1	238.9	110.0
21	427400	RHS	NH 37	40	0.2293	0.1811	0.0852	0.0480	0.0304	0.0184	0.0079	42.0	905.2	238.5	110.0
22	427400	LHS	NH 37	40	0.4440	0.3267	0.1555	0.0957	0.0706	0.0571	0.0326	39.2	981.3	268.5	104.9
23	427460	RHS	NH 37	40	0.3983	0.3037	0.1466	0.0833	0.0596	0.0490	0.0100	39.2	981.3	267.5	105.0
24	427460	LHS	NH 37	40	0.2884	0.2107	0.0797	0.0402	0.0343	0.0276	0.0101	38.0	1048.6	223.2	96.0
25	427520	RHS	NH 37	40	0.4973	0.3808	0.1825	0.0983	0.0714	0.0553	0.0296	38.0	1036.7	221.3	96.0
26	427520	LHS	NH 37	40	0.4030	0.3122	0.1498	0.0835	0.0588	0.0506	0.0103	38.0	1031.5	215.5	111.0
27	427580	RHS	NH 37	40	0.3878	0.2734	0.1259	0.0712	0.0584	0.0525	0.0072	38.0	1017.6	216.9	111.0
28	427580	LHS	NH 37	40	0.2076	0.1326	0.0513	0.0312	0.0181	0.0094	0.0045	38.0	1035.4	210.4	111.0
29	427640	RHS	NH 37	40	0.4759	0.3654	0.1619	0.0915	0.0704	0.0461	0.0079	38.0	1037.4	212.3	111.0

Sl No.	Chainage	Side	Road Stretch	Load (kN)	Geophone 1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Manual Temp. (°C)	Back Calculated Moduli		
													BT	Granular	Subgrade
30	427640	LHS	NH 37	40	0.2691	0.1970	0.0925	0.0531	0.0397	0.0315	0.0073	38.0	1035.4	245.1	111.0
31	427700	RHS	NH 37	40	0.4838	0.3798	0.1615	0.0766	0.0359	0.0282	0.0097	38.0	1009.0	210.4	111.0
32	427700	LHS	NH 37	40	0.5912	0.4092	0.1699	0.0776	0.0540	0.0463	0.0228	37.0	987.4	210.0	111.0
33	427760	RHS	NH 37	40	0.2907	0.2143	0.0897	0.0502	0.0367	0.0298	0.0070	38.2	1038.0	244.6	102.0
34	427760	LHS	NH 37	40	0.2613	0.1779	0.0498	0.0313	0.0225	0.0123	0.0091	38.2	1047.3	239.1	102.0
35	427820	RHS	NH 37	40	0.3904	0.2786	0.1146	0.0658	0.0456	0.0318	0.0163	38.2	1024.9	244.7	102.0
36	427820	LHS	NH 37	40	0.4216	0.3282	0.1348	0.0692	0.0436	0.0290	0.0106	38.2	1040.0	235.9	102.0
37	427880	RHS	NH 37	40	0.3427	0.2413	0.1089	0.0652	0.0456	0.0394	0.0154	38.2	1022.9	244.5	102.0
38	427880	LHS	NH 37	40	0.3708	0.2800	0.1154	0.0573	0.0416	0.0378	0.0104	38.2	1036.1	227.9	108.0
39	427940	RHS	NH 37	40	0.3715	0.2751	0.1351	0.0790	0.0565	0.0414	0.0146	38.2	983.3	228.6	108.0
40	427940	LHS	NH 37	40	0.6811	0.5329	0.2233	0.1030	0.0690	0.0496	0.0181	39.6	970.7	226.3	108.0
41	428000	RHS	NH 37	40	0.4056	0.3287	0.1419	0.0758	0.0469	0.0364	0.0178	40.3	916.8	226.9	108.0
42	428000	LHS	NH 37	40	0.1823	0.1223	0.0675	0.0410	0.0323	0.0266	0.0071	42.7	937.4	319.8	107.0
43	428060	RHS	NH 37	40	0.2172	0.1385	0.0628	0.0461	0.0366	0.0224	0.0096	43.0	921.0	315.3	107.0
44	428060	LHS	NH 37	40	0.2313	0.1613	0.0676	0.0351	0.0240	0.0135	0.0066	42.0	907.3	237.4	110.0
45	428120	RHS	NH 37	40	0.1993	0.1571	0.0903	0.0563	0.0447	0.0363	0.0230	34.6	1339.1	341.3	110.0
46	428120	LHS	NH 37	40	0.2413	0.1754	0.0876	0.0538	0.0366	0.0239	0.0082	42.0	918.4	238.0	110.0
47	428180	RHS	NH 37	40	0.1315	0.0796	0.0533	0.0313	0.0153	0.0064	0.0032	42.0	935.2	237.6	110.0
48	428180	LHS	NH 37	40	0.3486	0.2520	0.1021	0.0603	0.0445	0.0389	0.0147	40.3	905.2	228.3	108.0
49	428240	RHS	NH 37	40	0.6350	0.4579	0.1960	0.1039	0.0752	0.0580	0.0095	40.3	937.9	226.3	108.0
50	428240	LHS	NH 37	40	0.4221	0.3121	0.1330	0.0724	0.0433	0.0285	0.0128	40.3	927.9	227.3	108.0
51	428300	RHS	NH 37	40	0.2574	0.1868	0.0927	0.0528	0.0318	0.0291	0.0103	42.0	936.8	236.4	110.0
52	428300	LHS	NH 37	40	0.3163	0.2659	0.1430	0.0882	0.0599	0.0516	0.0360	34.6	1354.4	346.7	109.9
53	428360	RHS	NH 37	40	0.2786	0.2065	0.1092	0.0664	0.0470	0.0336	0.0096	42.0	938.9	239.0	110.0
54	428360	LHS	NH 37	40	0.2546	0.1816	0.0872	0.0574	0.0331	0.0300	0.0116	42.0	933.7	237.2	110.0
55	428420	RHS	NH 37	40	0.3417	0.2464	0.0957	0.0528	0.0416	0.0334	0.0171	40.3	935.8	225.5	108.0
56	428420	LHS	NH 37	40	0.4283	0.2912	0.1226	0.0592	0.0418	0.0232	0.0058	40.3	909.9	228.7	108.0
57	428480	RHS	NH 37	40	0.4370	0.3291	0.1533	0.0971	0.0709	0.0563	0.0328	36.5	972.5	297.3	103.0
58	428480	LHS	NH 37	40	0.3801	0.2731	0.1030	0.0608	0.0382	0.0293	0.0191	41.5	931.6	245.6	112.0
59	428540	RHS	NH 37	40	0.2607	0.2072	0.0962	0.0588	0.0421	0.0301	0.0115	42.0	917.8	238.2	110.0
60	428540	LHS	NH 37	40	0.1986	0.1578	0.0793	0.0555	0.0391	0.0313	0.0064	34.6	1179.5	270.7	110.0
61	428600	RHS	NH 37	40	0.2312	0.1731	0.0920	0.0614	0.0431	0.0287	0.0147	42.0	933.1	234.9	110.0

Sl No.	Chainage	Side	Road Stretch	Load (kN)	Geophone 1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Manual Temp. (°C)	Back Calculated Moduli		
													BT	Granular	Subgrade
62	428600	LHS	NH 37	40	0.2397	0.1822	0.0923	0.0538	0.0331	0.0187	0.0067	42.0	933.7	238.6	110.0
63	428660	RHS	NH 37	40	0.2691	0.1926	0.0886	0.0524	0.0380	0.0299	0.0103	42.0	934.2	239.0	109.9
64	428660	LHS	NH 37	40	0.2118	0.1648	0.0839	0.0521	0.0352	0.0205	0.0075	42.7	902.5	238.4	110.0
65	428720	RHS	NH 37	40	0.2410	0.1706	0.0694	0.0435	0.0271	0.0113	0.0055	42.7	931.0	235.3	110.0
66	428720	LHS	NH 37	40	0.2552	0.1898	0.0870	0.0517	0.0351	0.0239	0.0121	42.7	937.4	238.0	109.8
67	428780	RHS	NH 37	40	0.3207	0.2130	0.0659	0.0447	0.0332	0.0232	0.0111	41.5	931.0	234.5	112.0
68	428780	LHS	NH 37	40	0.4779	0.3781	0.1760	0.0940	0.0676	0.0527	0.0198	41.5	939.5	221.9	112.0
69	428840	RHS	NH 37	40	0.4385	0.3104	0.1367	0.0680	0.0513	0.0337	0.0121	38.3	1049.3	204.0	112.0
70	428840	LHS	NH 37	40	0.3117	0.2306	0.1013	0.0625	0.0478	0.0380	0.0194	41.5	893.0	316.8	112.0
71	428900	RHS	NH 37	40	0.4624	0.3053	0.1302	0.0605	0.0398	0.0233	0.0112	38.3	995.8	208.5	112.0
72	428900	LHS	NH 37	40	0.5471	0.3993	0.1739	0.0867	0.0589	0.0483	0.0098	41.5	926.8	204.2	112.0
73	428960	RHS	NH 37	40	0.4914	0.3669	0.1665	0.0935	0.0688	0.0583	0.0293	38.3	1034.8	230.8	112.0
74	428960	LHS	NH 37	40	0.2321	0.1808	0.0697	0.0432	0.0251	0.0219	0.0079	38.3	1005.1	247.4	112.0
75	429020	RHS	NH 37	40	0.2664	0.1994	0.0824	0.0546	0.0366	0.0273	0.0115	42.7	931.0	238.5	110.0
76	429020	LHS	NH 37	40	0.3418	0.2672	0.1180	0.0808	0.0522	0.0377	0.0291	34.6	1367.8	338.8	110.0
77	429080	RHS	NH 37	40	0.3665	0.2653	0.1088	0.0595	0.0447	0.0291	0.0144	42.7	930.5	238.7	110.0
78	429080	LHS	NH 37	40	0.2079	0.1444	0.0700	0.0497	0.0405	0.0330	0.0081	42.7	937.4	238.9	110.0
79	429140	RHS	NH 37	40	0.2508	0.2029	0.1061	0.0599	0.0393	0.0287	0.0087	42.7	936.8	237.4	110.0
80	429140	LHS	NH 37	40	0.2954	0.2328	0.1138	0.0692	0.0509	0.0394	0.0279	42.7	934.7	238.6	109.7
81	429200	RHS	NH 37	40	0.2698	0.2165	0.1139	0.0638	0.0416	0.0310	0.0094	42.7	919.4	238.1	109.9
82	429200	LHS	NH 37	40	0.2689	0.2186	0.1105	0.0582	0.0414	0.0277	0.0116	42.1	938.4	268.8	114.0
83	429260	RHS	NH 37	40	0.2973	0.2353	0.1016	0.0549	0.0354	0.0201	0.0098	41.6	933.1	285.2	115.0
84	429260	LHS	NH 37	40	0.2855	0.2159	0.1115	0.0646	0.0497	0.0252	0.0110	41.6	916.2	282.4	115.0
85	429320	RHS	NH 37	40	0.2009	0.1623	0.0956	0.0679	0.0417	0.0352	0.0198	41.6	935.8	285.7	114.8
86	429320	LHS	NH 37	40	0.3511	0.2569	0.1004	0.0469	0.0313	0.0188	0.0103	41.6	930.5	278.8	115.0
87	429380	RHS	NH 37	40	0.2747	0.2006	0.0927	0.0558	0.0365	0.0255	0.0128	39.5	982.5	311.3	117.0
88	429380	LHS	NH 37	40	0.2573	0.1802	0.0837	0.0488	0.0267	0.0180	0.0104	39.5	1003.2	240.8	117.0
89	429440	RHS	NH 37	40	0.2592	0.1739	0.0710	0.0416	0.0282	0.0186	0.0072	39.5	1003.2	221.1	117.0
90	429440	LHS	NH 37	40	0.3009	0.2158	0.0865	0.0531	0.0410	0.0324	0.0178	39.5	999.1	344.4	117.0
91	429500	RHS	NH 37	40	0.2512	0.1764	0.0757	0.0323	0.0173	0.0117	0.0059	41.6	932.1	272.5	115.0
92	429500	LHS	NH 37	40	0.2340	0.1779	0.0833	0.0421	0.0262	0.0169	0.0111	41.6	925.7	279.9	115.0
93	429560	RHS	NH 37	40	0.3287	0.2465	0.0982	0.0604	0.0395	0.0303	0.0108	38.5	1061.8	239.2	106.0

Sl No.	Chainage	Side	Road Stretch	Load (kN)	Geophone 1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Manual Temp. (°C)	Back Calculated Moduli		
													BT	Granular	Subgrade
94	429560	LHS	NH 37	40	0.2534	0.1904	0.0864	0.0546	0.0377	0.0256	0.0126	38.5	1053.2	237.9	106.0
95	429620	RHS	NH 37	40	0.2253	0.1609	0.0776	0.0540	0.0342	0.0273	0.0105	41.6	937.4	237.0	106.0
96	429620	LHS	NH 37	40	0.3626	0.2798	0.1342	0.0832	0.0611	0.0486	0.0275	39.5	986.1	242.2	103.0
97	429680	RHS	NH 37	40	0.2390	0.1661	0.0805	0.0521	0.0390	0.0284	0.0079	39.5	993.2	242.7	103.0
98	429680	LHS	NH 37	40	0.2655	0.1989	0.0959	0.0551	0.0372	0.0232	0.0121	39.5	945.3	242.7	103.0
99	429740	RHS	NH 37	40	0.2596	0.1797	0.0857	0.0599	0.0438	0.0345	0.0172	39.5	967.7	242.8	103.0
100	429740	LHS	NH 37	40	0.2357	0.1697	0.0705	0.0420	0.0349	0.0222	0.0087	38.5	1061.8	237.1	106.0
101	429800	RHS	NH 37	40	0.2678	0.2077	0.1048	0.0659	0.0433	0.0379	0.0132	41.6	917.3	238.1	106.0
102	429800	LHS	NH 37	40	0.2052	0.1683	0.0851	0.0435	0.0252	0.0165	0.0083	38.5	1048.6	239.7	106.0
103	429860	RHS	NH 37	40	0.2394	0.1773	0.0904	0.0586	0.0440	0.0296	0.0103	41.6	930.0	238.5	106.0
104	429860	LHS	NH 37	40	0.2687	0.1808	0.1004	0.0577	0.0350	0.0245	0.0065	38.5	1063.8	236.9	106.0
105	429920	RHS	NH 37	40	0.1888	0.1464	0.0747	0.0521	0.0374	0.0290	0.0060	41.6	919.4	238.7	106.0
106	429920	LHS	NH 37	40	0.1814	0.1246	0.0651	0.0323	0.0206	0.0118	0.0090	38.5	1008.4	238.7	106.0
107	429980	RHS	NH 37	40	0.2537	0.1915	0.0900	0.0453	0.0277	0.0182	0.0119	39.5	930.5	242.5	103.0
108	429980	LHS	NH 37	40	0.1424	0.0965	0.0432	0.0225	0.0152	0.0095	0.0062	39.5	998.5	242.3	103.0
109	430040	RHS	NH 37	40	0.3253	0.2309	0.1045	0.0473	0.0277	0.0183	0.0096	39.5	972.5	240.5	103.0
110	430040	LHS	NH 37	40	0.2527	0.1950	0.0933	0.0463	0.0256	0.0126	0.0070	39.5	968.3	242.2	103.0
111	430100	RHS	NH 37	40	0.2337	0.1603	0.0720	0.0467	0.0320	0.0173	0.0088	39.5	930.5	242.9	103.0
112	430100	LHS	NH 37	40	0.2034	0.1303	0.0597	0.0426	0.0342	0.0207	0.0090	39.5	966.6	241.3	103.0
113	430160	RHS	NH 37	40	0.2356	0.1606	0.0751	0.0455	0.0298	0.0196	0.0096	41.6	900.4	237.9	106.0
114	430160	LHS	NH 37	40	0.2335	0.1629	0.0628	0.0422	0.0314	0.0150	0.0057	38.5	1066.4	238.1	106.0
115	430220	RHS	NH 37	40	0.2541	0.1760	0.0734	0.0421	0.0287	0.0192	0.0072	41.6	924.2	240.0	105.9
116	430220	LHS	NH 37	40	0.2130	0.1525	0.0685	0.0435	0.0226	0.0123	0.0042	38.5	1072.4	239.8	106.0
117	430280	RHS	NH 37	40	0.2728	0.1977	0.1003	0.0582	0.0340	0.0308	0.0110	41.6	939.5	238.0	106.0
118	430280	LHS	NH 37	40	0.2502	0.1991	0.0970	0.0589	0.0364	0.0284	0.0140	41.6	909.9	239.4	106.0
119	430340	RHS	NH 37	40	0.2542	0.1806	0.0986	0.0660	0.0468	0.0310	0.0159	41.6	902.5	239.2	106.0
120	430340	LHS	NH 37	40	0.2367	0.1552	0.0644	0.0455	0.0339	0.0209	0.0092	41.6	934.2	239.3	106.0
121	430400	RHS	NH 37	40	0.2458	0.1908	0.0951	0.0583	0.0425	0.0284	0.0111	38.5	1061.8	239.5	105.9
122	430400	LHS	NH 37	40	0.2051	0.1627	0.0998	0.0694	0.0421	0.0351	0.0200	39.9	995.5	239.5	106.0
123	430460	RHS	NH 37	40	0.2871	0.2036	0.0945	0.0536	0.0350	0.0290	0.0131	39.9	996.7	238.8	106.0
124	430460	LHS	NH 37	40	0.2087	0.1452	0.0722	0.0516	0.0397	0.0215	0.0063	38.5	1074.3	239.7	106.0
125	430520	RHS	NH 37	40	0.3353	0.2501	0.0999	0.0589	0.0392	0.0300	0.0070	39.9	984.9	236.9	106.0

Sl No.	Chainage	Side	Road Stretch	Load (kN)	Geophone 1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Manual Temp. (°C)	Back Calculated Moduli		
													BT	Granular	Subgrade
126	430520	LHS	NH 37	40	0.2504	0.1875	0.0972	0.0603	0.0430	0.0325	0.0112	39.9	935.8	240.0	106.0
127	430580	RHS	NH 37	40	0.2117	0.1632	0.0978	0.0586	0.0431	0.0291	0.0099	39.9	974.2	239.8	106.0
128	430580	LHS	NH 37	40	0.2354	0.1567	0.0774	0.0327	0.0162	0.0079	0.0045	39.9	993.2	238.2	106.0
129	430640	RHS	NH 37	40	0.2354	0.1789	0.0940	0.0543	0.0345	0.0209	0.0050	38.5	980.6	239.9	106.0
130	430640	LHS	NH 37	40	0.3357	0.2597	0.1360	0.0783	0.0420	0.0330	0.0107	39.9	905.1	239.7	106.0
131	430700	RHS	NH 37	40	0.2893	0.2440	0.1276	0.0766	0.0534	0.0370	0.0082	39.9	982.5	238.6	106.0
132	430700	LHS	NH 37	40	0.2393	0.1852	0.0957	0.0563	0.0365	0.0258	0.0066	39.9	958.9	238.9	106.0
133	430760	RHS	NH 37	40	0.2480	0.1655	0.0678	0.0485	0.0361	0.0220	0.0099	39.9	915.1	239.5	106.0
134	430760	LHS	NH 37	40	0.2045	0.1488	0.0739	0.0488	0.0313	0.0175	0.0087	38.5	1056.5	240.0	106.0
135	430825	RHS	NH 37	40	0.1802	0.1225	0.0625	0.0360	0.0314	0.0183	0.0103	39.9	1002.0	237.9	106.0
136	430825	LHS	NH 37	40	0.2204	0.1743	0.0981	0.0591	0.0458	0.0283	0.0087	39.2	1003.2	260.4	105.0
137	430880	RHS	NH 37	40	0.2218	0.1692	0.0994	0.0646	0.0501	0.0388	0.0314	39.2	994.4	312.7	105.0
138	430880	LHS	NH 37	40	0.1798	0.1257	0.0606	0.0382	0.0295	0.0217	0.0053	39.9	992.6	281.7	105.0
139	430940	RHS	NH 37	40	0.2580	0.2073	0.1127	0.0547	0.0346	0.0155	0.0078	36.4	1246.0	219.9	110.0
140	430940	LHS	NH 37	40	0.2740	0.2230	0.1056	0.0608	0.0505	0.0298	0.0104	38.5	1062.5	291.6	105.0
141	431000	RHS	NH 37	40	0.1743	0.1159	0.0632	0.0390	0.0309	0.0251	0.0068	39.9	1000.9	319.4	105.0
142	431000	LHS	NH 37	40	0.1878	0.1527	0.0715	0.0405	0.0149	0.0076	0.0037	38.5	1059.2	208.8	105.0
143	431060	RHS	NH 37	40	0.1033	0.0718	0.0344	0.0202	0.0136	0.0092	0.0040	39.9	947.0	323.1	105.0
144	431060	LHS	NH 37	40	0.2135	0.1711	0.0847	0.0663	0.0407	0.0305	0.0125	38.5	985.3	322.6	105.0
145	431120	RHS	NH 37	40	0.2668	0.1972	0.0875	0.0532	0.0371	0.0269	0.0111	39.2	999.7	241.9	105.0
146	431120	LHS	NH 37	40	0.1992	0.1483	0.0813	0.0556	0.0395	0.0292	0.0163	39.2	971.9	314.5	105.0
147	431180	RHS	NH 37	40	0.2092	0.1652	0.0622	0.0454	0.0244	0.0126	0.0084	39.2	999.1	206.7	104.9
148	431180	LHS	NH 37	40	0.1578	0.1168	0.0657	0.0487	0.0360	0.0247	0.0121	39.5	1003.8	313.5	105.0
149	431240	RHS	NH 37	40	0.2201	0.1587	0.0854	0.0428	0.0257	0.0197	0.0070	39.5	1000.3	211.4	105.0
150	431240	LHS	NH 37	40	0.1366	0.1010	0.0606	0.0451	0.0364	0.0263	0.0167	39.5	1003.2	312.9	104.9
151	431300	RHS	NH 37	40	0.1255	0.0781	0.0510	0.0296	0.0143	0.0062	0.0031	39.9	993.2	210.5	105.0
152	431300	LHS	NH 37	40	0.1983	0.1375	0.0825	0.0353	0.0207	0.0139	0.0094	38.5	1057.2	311.4	105.0
153	431360	RHS	NH 37	40	0.1415	0.0857	0.0504	0.0225	0.0113	0.0057	0.0029	39.9	1002.0	209.1	105.0
154	431360	LHS	NH 37	40	0.1124	0.1004	0.0527	0.0276	0.0201	0.0150	0.0050	38.5	1013.0	319.3	105.0
155	431420	RHS	NH 37	40	0.1789	0.1219	0.0936	0.0681	0.0435	0.0222	0.0083	39.9	984.3	321.1	105.0
156	431420	LHS	NH 37	40	0.1214	0.0905	0.0443	0.0267	0.0170	0.0087	0.0043	38.5	1063.1	318.4	105.0
157	431480	RHS	NH 37	40	0.2178	0.1557	0.0717	0.0310	0.0148	0.0072	0.0042	39.9	988.4	206.7	105.0

Sl No.	Chainage	Side	Road Stretch	Load (kN)	Geophone 1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Manual Temp. (°C)	Back Calculated Moduli		
													BT	Granular	Subgrade
158	431480	LHS	NH 37	40	0.1296	0.0841	0.0394	0.0281	0.0149	0.0043	0.0026	38.5	1013.0	205.9	105.0
159	431540	RHS	NH 37	40	0.2517	0.1657	0.0712	0.0448	0.0275	0.0226	0.0124	39.5	1002.6	298.3	105.0
160	431540	LHS	NH 37	40	0.2234	0.1705	0.0822	0.0545	0.0396	0.0349	0.0277	39.5	999.1	311.1	105.0
161	431600	RHS	NH 37	40	0.1603	0.1209	0.0628	0.0431	0.0313	0.0163	0.0116	39.5	996.1	286.8	99.0
162	431600	LHS	NH 37	40	0.1338	0.0928	0.0522	0.0369	0.0286	0.0166	0.0112	39.5	981.3	285.5	99.0
163	431660	RHS	NH 37	40	0.2217	0.1743	0.0903	0.0462	0.0270	0.0177	0.0086	39.8	992.0	231.1	105.0
164	431660	LHS	NH 37	40	0.1933	0.1414	0.0810	0.0542	0.0360	0.0262	0.0094	39.8	999.7	280.5	105.0
165	431720	RHS	NH 37	40	0.2550	0.2059	0.0905	0.0531	0.0337	0.0308	0.0117	39.8	1000.3	282.3	105.0
166	431720	LHS	NH 37	40	0.2389	0.2002	0.1083	0.0634	0.0431	0.0290	0.0118	39.8	994.4	282.3	105.0
167	431780	RHS	NH 37	40	0.2214	0.1898	0.1010	0.0593	0.0399	0.0270	0.0111	39.9	955.9	320.6	105.0
168	431780	LHS	NH 37	40	0.5126	0.3725	0.1642	0.0871	0.0588	0.0472	0.0234	35.5	1292.3	244.4	102.0
169	431840	RHS	NH 37	40	0.2048	0.1583	0.0931	0.0552	0.0402	0.0270	0.0094	38.5	1032.8	323.3	105.0
170	431840	LHS	NH 37	40	0.1498	0.1119	0.0640	0.0409	0.0301	0.0184	0.0056	39.9	934.6	319.3	105.0
171	431900	RHS	NH 37	40	0.2284	0.1594	0.0700	0.0397	0.0298	0.0205	0.0099	38.5	1054.5	324.2	105.0
172	431900	LHS	NH 37	40	0.3917	0.2433	0.1102	0.0839	0.0603	0.0434	0.0107	36.0	1149.0	223.2	114.0
173	431960	RHS	NH 37	40	0.3197	0.2451	0.1278	0.0846	0.0602	0.0468	0.0181	36.0	1090.4	324.2	105.0
174	431960	LHS	NH 37	40	0.3119	0.2215	0.1187	0.0912	0.0558	0.0435	0.0127	35.5	1097.1	323.3	105.0
175	432020	RHS	NH 37	40	0.2238	0.1406	0.0629	0.0383	0.0193	0.0091	0.0030	36.4	966.1	212.1	106.0
176	432020	LHS	NH 37	40	0.2552	0.1678	0.0723	0.0444	0.0278	0.0225	0.0122	39.8	999.7	277.2	105.0
177	432080	RHS	NH 37	40	0.1911	0.1493	0.0875	0.0577	0.0472	0.0330	0.0246	41.6	919.4	285.0	104.9
178	432080	LHS	NH 37	40	0.2895	0.2293	0.1158	0.0622	0.0442	0.0289	0.0125	41.6	934.2	267.4	105.0
179	432140	RHS	NH 37	40	0.2223	0.1694	0.0959	0.0562	0.0410	0.0323	0.0262	41.6	925.7	283.9	105.0
180	432140	LHS	NH 37	40	0.3040	0.2323	0.1188	0.0688	0.0525	0.0268	0.0117	41.6	939.5	248.1	105.0
181	432200	RHS	NH 37	40	0.2901	0.2317	0.1205	0.0734	0.0551	0.0416	0.0324	41.6	935.2	283.1	104.9
182	432200	LHS	NH 37	40	0.2533	0.1915	0.0953	0.0623	0.0476	0.0310	0.0111	41.6	937.4	282.7	105.0
183	432260	RHS	NH 37	40	0.3156	0.2230	0.1282	0.0694	0.0432	0.0326	0.0100	41.6	934.7	202.8	105.0
184	432260	LHS	NH 37	40	0.3374	0.2653	0.1266	0.0931	0.0617	0.0449	0.0063	36.4	1055.6	213.1	106.0
185	432320	RHS	NH 37	40	0.2041	0.1407	0.0558	0.0381	0.0134	0.0068	0.0034	36.4	1072.2	205.8	111.0
186	432320	LHS	NH 37	40	0.3024	0.2302	0.1268	0.0849	0.0661	0.0549	0.0065	36.4	1058.0	212.7	111.0
187	432380	RHS	NH 37	40	0.3556	0.2694	0.1453	0.1011	0.0835	0.0618	0.0125	37.8	991.7	256.7	111.0
188	432380	LHS	NH 37	40	0.2131	0.1633	0.0849	0.0528	0.0444	0.0277	0.0052	37.8	1071.3	207.2	111.0
189	432440	RHS	NH 37	40	0.2430	0.1686	0.0740	0.0420	0.0319	0.0222	0.0106	41.6	932.6	273.5	105.0

Sl No.	Chainage	Side	Road Stretch	Load (kN)	Geophone 1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Manual Temp. (°C)	Back Calculated Moduli		
													BT	Granular	Subgrade
190	432440	LHS	NH 37	40	0.2462	0.1777	0.0736	0.0451	0.0374	0.0235	0.0093	41.6	939.5	255.4	105.0
191	432500	RHS	NH 37	40	0.2132	0.1371	0.0643	0.0450	0.0363	0.0217	0.0097	41.6	940.0	284.8	105.0
192	432500	LHS	NH 37	40	0.2483	0.1881	0.1008	0.0620	0.0433	0.0268	0.0162	41.6	928.9	284.8	105.0
193	432560	RHS	NH 37	40	0.2617	0.1988	0.1003	0.0628	0.0450	0.0384	0.0081	37.8	1015.6	229.0	111.0
194	432560	LHS	NH 37	40	0.2950	0.2389	0.1216	0.0769	0.0567	0.0378	0.0240	38.5	1069.1	274.7	101.0
195	432620	RHS	NH 37	40	0.4008	0.3010	0.1523	0.0976	0.0735	0.0526	0.0266	38.5	1051.9	256.4	101.0
196	432620	LHS	NH 37	40	0.3589	0.2651	0.1197	0.0707	0.0497	0.0326	0.0176	41.6	924.2	238.7	110.0
197	432680	RHS	NH 37	40	0.2583	0.1951	0.0867	0.0498	0.0310	0.0274	0.0094	41.6	931.0	235.9	110.0
198	432680	LHS	NH 37	40	0.3441	0.2662	0.1582	0.1121	0.0809	0.0554	0.0294	38.5	1053.9	274.2	101.0
199	432740	RHS	NH 37	40	0.2299	0.1371	0.0778	0.0412	0.0332	0.0210	0.0105	38.5	1067.1	274.4	101.0
200	432740	LHS	NH 37	40	0.2918	0.2327	0.1170	0.0769	0.0487	0.0368	0.0153	38.5	1046.6	247.8	108.0
201	432800	RHS	NH 37	40	0.2043	0.1481	0.0795	0.0507	0.0425	0.0312	0.0125	38.5	1066.4	249.6	107.9
202	432800	LHS	NH 37	40	0.3801	0.2967	0.1426	0.0906	0.0676	0.0484	0.0191	38.5	1063.1	248.3	108.0
203	432860	RHS	NH 37	40	0.2615	0.1880	0.0951	0.0589	0.0365	0.0248	0.0093	41.6	930.5	238.3	110.0
204	432860	LHS	NH 37	40	0.3567	0.2656	0.1137	0.0645	0.0345	0.0207	0.0074	41.6	930.5	238.4	110.0
205	432920	RHS	NH 37	40	0.2179	0.1665	0.0761	0.0473	0.0250	0.0166	0.0056	41.6	919.9	237.6	110.0
206	432920	LHS	NH 37	40	0.1718	0.1235	0.0529	0.0344	0.0162	0.0079	0.0039	38.5	1073.7	204.2	105.0
207	432980	RHS	NH 37	40	0.2136	0.1351	0.0629	0.0395	0.0307	0.0219	0.0069	39.5	990.2	240.4	103.0
208	432980	LHS	NH 37	40	0.2483	0.1930	0.0862	0.0506	0.0314	0.0283	0.0109	39.5	1005.0	242.1	103.0
209	433040	RHS	NH 37	40	0.2337	0.1785	0.1070	0.0688	0.0540	0.0413	0.0336	39.5	958.3	243.0	103.0
210	433040	LHS	NH 37	40	0.3077	0.2408	0.1448	0.0937	0.0630	0.0546	0.0146	36.4	1042.1	324.9	110.0
211	433100	RHS	NH 37	40	0.2593	0.1878	0.0940	0.0574	0.0394	0.0246	0.0087	36.4	1004.9	303.1	112.0
212	433100	LHS	NH 37	40	0.2797	0.2073	0.1157	0.0674	0.0481	0.0335	0.0095	37.4	1027.9	232.6	97.0
213	433160	RHS	NH 37	40	0.1203	0.1081	0.0546	0.0299	0.0217	0.0160	0.0053	37.4	1025.0	231.8	97.0
214	433160	LHS	NH 37	40	0.2042	0.1656	0.0891	0.0558	0.0426	0.0283	0.0188	39.2	990.2	232.9	96.9
215	433220	RHS	NH 37	40	0.1850	0.1471	0.0838	0.0538	0.0430	0.0332	0.0227	39.2	1000.9	231.9	96.9
216	433220	LHS	NH 37	40	0.1944	0.1508	0.0743	0.0456	0.0325	0.0231	0.0137	39.2	987.3	232.1	97.0
217	433280	RHS	NH 37	40	0.1659	0.1302	0.0786	0.0412	0.0338	0.0206	0.0114	39.2	991.4	232.5	97.0
218	433280	LHS	NH 37	40	0.1414	0.0978	0.0511	0.0326	0.0268	0.0166	0.0080	39.2	978.4	232.4	97.0
219	433340	RHS	NH 37	40	0.2683	0.2011	0.0937	0.0541	0.0373	0.0231	0.0124	39.2	1005.0	232.6	96.9
220	433340	LHS	NH 37	40	0.1597	0.1147	0.0602	0.0424	0.0368	0.0251	0.0134	39.2	971.3	314.3	105.0
221	433400	RHS	NH 37	40	0.2250	0.1648	0.0754	0.0462	0.0243	0.0131	0.0045	39.2	999.7	198.9	105.0

Sl No.	Chainage	Side	Road Stretch	Load (kN)	Geophone 1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Manual Temp. (°C)	Back Calculated Moduli		
													BT	Granular	Subgrade
222	433400	LHS	NH 37	40	0.2608	0.1990	0.1009	0.0641	0.0473	0.0348	0.0256	39.2	1003.8	314.5	105.0
223	433460	RHS	NH 37	40	0.3038	0.2418	0.1469	0.0947	0.0631	0.0539	0.0145	39.2	996.1	264.2	105.0
224	433460	LHS	NH 37	40	0.2050	0.1687	0.0972	0.0636	0.0468	0.0338	0.0221	39.2	998.5	312.4	104.9
225	433520	RHS	NH 37	40	0.2483	0.1983	0.1083	0.0737	0.0561	0.0428	0.0250	39.2	979.6	314.9	104.9
226	433520	LHS	NH 37	40	0.1502	0.1117	0.0621	0.0377	0.0231	0.0183	0.0089	39.2	1002.0	314.3	105.0
227	433580	RHS	NH 37	40	0.2604	0.1822	0.0788	0.0423	0.0284	0.0088	0.0045	39.2	981.3	198.5	105.0
228	433580	LHS	NH 37	40	0.2307	0.1773	0.0943	0.0580	0.0408	0.0259	0.0151	39.2	1005.0	313.7	105.0
229	433640	RHS	NH 37	40	0.3531	0.2731	0.1481	0.0969	0.0779	0.0558	0.0135	39.5	986.7	200.9	116.0
230	433640	LHS	NH 37	40	0.3834	0.3049	0.1669	0.0953	0.0803	0.0420	0.0216	39.5	999.1	198.0	116.0
231	433700	RHS	NH 37	40	0.3620	0.2859	0.1469	0.0955	0.0690	0.0520	0.0164	39.5	992.6	198.4	116.0
232	433700	LHS	NH 37	40	0.3064	0.2268	0.1306	0.0912	0.0650	0.0580	0.0290	39.5	982.5	306.6	116.0
233	433760	RHS	NH 37	40	0.3117	0.2256	0.1059	0.0620	0.0421	0.0251	0.0071	39.5	1003.8	197.9	116.0
234	433760	LHS	NH 37	40	0.2883	0.2094	0.1147	0.0796	0.0609	0.0501	0.0177	39.5	994.9	306.8	116.0
235	433820	RHS	NH 37	40	0.3050	0.2228	0.1407	0.0722	0.0609	0.0344	0.0196	39.5	1005.0	298.8	116.0
236	433820	LHS	NH 37	40	0.3392	0.2539	0.1331	0.0929	0.0666	0.0533	0.0271	39.5	988.4	307.9	116.0
237	433880	RHS	NH 37	40	0.3193	0.2492	0.1241	0.0879	0.0609	0.0485	0.0179	39.5	1001.5	330.6	113.0
238	433880	LHS	NH 37	40	0.2821	0.1902	0.1027	0.0604	0.0293	0.0217	0.0114	39.5	1001.5	228.1	113.0
239	433940	RHS	NH 37	40	0.3790	0.2909	0.1438	0.0905	0.0670	0.0488	0.0188	39.9	1002.0	244.9	113.0
240	433940	LHS	NH 37	40	0.2546	0.1816	0.0872	0.0574	0.0331	0.0300	0.0116	42.0	933.7	237.2	110.0
241	434000	RHS	NH 37	40	0.2607	0.2072	0.0962	0.0588	0.0421	0.0301	0.0115	42.0	917.8	238.2	110.0
242	434000	LHS	NH 37	40	0.2312	0.1731	0.0920	0.0614	0.0431	0.0287	0.0147	42.0	933.1	234.9	110.0
243	434060	RHS	NH 37	40	0.2397	0.1822	0.0923	0.0538	0.0331	0.0187	0.0067	42.0	933.7	238.6	110.0
244	434060	LHS	NH 37	40	0.2691	0.1926	0.0886	0.0524	0.0380	0.0299	0.0103	42.0	934.2	239.0	109.9
245	434120	RHS	NH 37	40	0.2118	0.1648	0.0839	0.0521	0.0352	0.0205	0.0075	42.7	902.5	238.4	110.0
246	434120	LHS	NH 37	40	0.2410	0.1706	0.0694	0.0435	0.0271	0.0113	0.0055	42.7	931.0	235.3	110.0
247	434180	RHS	NH 37	40	0.2552	0.1898	0.0870	0.0517	0.0351	0.0239	0.0121	42.7	937.4	238.0	109.8
248	434180	LHS	NH 37	40	0.2664	0.1994	0.0824	0.0546	0.0366	0.0273	0.0115	42.7	931.0	238.5	110.0
249	434240	RHS	NH 37	40	0.3665	0.2653	0.1088	0.0595	0.0447	0.0291	0.0144	42.7	930.5	238.7	110.0
250	434240	LHS	NH 37	40	0.2079	0.1444	0.0700	0.0497	0.0405	0.0330	0.0081	42.7	937.4	238.9	110.0
251	434305	RHS	NH 37	40	0.2508	0.2029	0.1061	0.0599	0.0393	0.0287	0.0087	42.7	936.8	237.4	110.0
252	434305	LHS	NH 37	40	0.2954	0.2328	0.1138	0.0692	0.0509	0.0394	0.0279	42.7	934.7	238.6	109.7
253	434360	RHS	NH 37	40	0.2698	0.2165	0.1139	0.0638	0.0416	0.0310	0.0094	42.7	919.4	238.1	109.9

Sl No.	Chainage	Side	Road Stretch	Load (kN)	Geophone 1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Manual Temp. (°C)	Back Calculated Moduli		
													BT	Granular	Subgrade
254	434360	LHS	NH 37	40	0.3299	0.2430	0.1283	0.0714	0.0451	0.0325	0.0162	42.7	930.5	238.4	109.9
255	434420	RHS	NH 37	40	0.2114	0.1598	0.0698	0.0375	0.0210	0.0107	0.0052	42.7	898.8	238.1	110.0
256	434420	LHS	NH 37	40	0.2749	0.2091	0.0969	0.0584	0.0381	0.0208	0.0099	42.7	928.4	238.9	110.0
257	434480	RHS	NH 37	40	0.1504	0.1122	0.0398	0.0285	0.0207	0.0164	0.0062	42.7	934.2	237.7	110.0
258	434480	LHS	NH 37	40	0.3378	0.2650	0.1121	0.0538	0.0341	0.0250	0.0122	42.7	910.4	234.8	110.0
259	434540	RHS	NH 37	40	0.2464	0.1860	0.0825	0.0474	0.0297	0.0262	0.0089	42.7	902.5	317.4	107.0
260	434540	LHS	NH 37	40	0.2960	0.2325	0.1033	0.0551	0.0365	0.0213	0.0102	42.7	910.4	279.5	107.0
261	434600	RHS	NH 37	40	0.3165	0.2201	0.1022	0.0473	0.0273	0.0189	0.0092	42.7	924.2	205.8	107.0
262	434600	LHS	NH 37	40	0.1369	0.0856	0.0567	0.0324	0.0154	0.0068	0.0033	42.7	929.4	216.4	107.0
263	434660	RHS	NH 37	40	0.1778	0.1301	0.0727	0.0502	0.0341	0.0236	0.0088	42.7	911.5	318.0	107.0
264	434660	LHS	NH 37	40	0.3317	0.2391	0.1189	0.0835	0.0541	0.0366	0.0119	39.9	981.3	221.1	113.0
265	434720	RHS	NH 37	40	0.2239	0.1777	0.0872	0.0595	0.0415	0.0347	0.0198	41.6	940.0	238.1	109.9
266	434720	LHS	NH 37	40	0.3824	0.2965	0.1448	0.0918	0.0685	0.0488	0.0191	38.5	1057.2	247.5	108.0
267	434780	RHS	NH 37	40	0.2659	0.1875	0.1014	0.0717	0.0509	0.0412	0.0192	38.5	1074.3	247.3	108.0
268	434780	LHS	NH 37	40	0.2859	0.2095	0.1008	0.0576	0.0484	0.0374	0.0134	38.5	1073.0	249.3	108.0
269	434840	RHS	NH 37	40	0.1338	0.0846	0.0550	0.0318	0.0152	0.0068	0.0033	41.6	922.6	236.9	110.0
270	434840	LHS	NH 37	40	0.2606	0.1778	0.0535	0.0323	0.0206	0.0080	0.0031	41.6	917.3	238.8	110.0
271	434900	RHS	NH 37	40	0.2657	0.2000	0.0919	0.0654	0.0557	0.0419	0.0173	38.5	1067.1	248.1	107.9
272	434900	LHS	NH 37	40	0.2436	0.1480	0.0822	0.0440	0.0359	0.0218	0.0111	38.5	1067.1	249.5	108.0
273	434960	RHS	NH 37	40	0.3007	0.2182	0.1041	0.0658	0.0436	0.0393	0.0181	38.5	1075.0	248.4	108.0
274	434960	LHS	NH 37	40	0.3101	0.2256	0.1135	0.0731	0.0579	0.0426	0.0158	38.5	1071.0	249.9	108.0
275	435020	RHS	NH 37	40	0.3613	0.2753	0.1512	0.0984	0.0788	0.0587	0.0137	38.5	1044.6	249.9	108.0
276	435020	LHS	NH 37	40	0.3142	0.2428	0.1313	0.0812	0.0578	0.0471	0.0234	38.5	1044.6	249.9	108.0
277	435080	RHS	NH 37	40	0.2688	0.1725	0.0747	0.0519	0.0371	0.0236	0.0092	39.0	1000.9	281.0	112.0
278	435080	LHS	NH 37	40	0.3161	0.2430	0.1256	0.0886	0.0637	0.0499	0.0253	39.0	1000.9	281.0	112.0
279	435140	RHS	NH 37	40	0.3207	0.2475	0.1223	0.0787	0.0659	0.0415	0.0162	39.0	994.9	292.7	112.0
280	435140	LHS	NH 37	40	0.3598	0.2918	0.1675	0.1152	0.0866	0.0565	0.0225	39.0	977.2	296.0	112.0
281	435200	RHS	NH 37	40	0.3289	0.2577	0.1387	0.0874	0.0631	0.0496	0.0241	39.0	980.8	295.4	112.0
282	435200	LHS	NH 37	40	0.4268	0.3384	0.1656	0.1073	0.0756	0.0542	0.0134	39.0	1004.4	215.8	112.0
283	435260	RHS	NH 37	40	0.3155	0.2256	0.1201	0.0922	0.0575	0.0450	0.0132	39.0	989.6	293.8	112.0
284	435260	LHS	NH 37	40	0.3241	0.2470	0.1346	0.0874	0.0646	0.0485	0.0093	39.0	1000.9	231.5	112.0
285	435320	RHS	NH 37	40	0.2348	0.1797	0.0927	0.0606	0.0411	0.0316	0.0061	39.0	1000.9	238.1	112.0

Sl No.	Chainage	Side	Road Stretch	Load (kN)	Geophone 1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Manual Temp. (°C)	Back Calculated Moduli		
													BT	Granular	Subgrade
286	435320	LHS	NH 37	40	0.2043	0.1628	0.1046	0.0643	0.0544	0.0426	0.0180	39.0	1000.9	238.1	112.0
287	435380	RHS	NH 37	40	0.2729	0.2095	0.1108	0.0776	0.0539	0.0471	0.0171	39.0	1005.0	292.2	112.0
288	435380	LHS	NH 37	40	0.2956	0.1880	0.1166	0.0934	0.0481	0.0291	0.0104	39.0	995.5	289.3	112.0
289	435440	RHS	NH 37	40	0.3045	0.2288	0.1430	0.0726	0.0601	0.0352	0.0194	39.0	973.7	294.8	112.0
290	435440	LHS	NH 37	40	0.2417	0.1883	0.1031	0.0650	0.0456	0.0343	0.0042	41.6	913.1	237.6	110.0
291	435500	RHS	NH 37	40	0.2273	0.1702	0.0878	0.0538	0.0354	0.0250	0.0096	41.6	902.5	237.0	110.0
292	435500	LHS	NH 37	40	0.2522	0.1973	0.1095	0.0695	0.0520	0.0397	0.0256	41.6	938.9	239.0	109.9
293	435560	RHS	NH 37	40	0.2962	0.2144	0.0958	0.0535	0.0331	0.0266	0.0028	42.0	928.4	230.5	110.0
294	435560	LHS	NH 37	40	0.2500	0.1732	0.0676	0.0449	0.0335	0.0161	0.0061	42.0	930.5	238.0	110.0
295	435620	RHS	NH 37	40	0.2652	0.2094	0.1128	0.0684	0.0428	0.0372	0.0138	42.0	912.0	238.9	109.9
296	435620	LHS	NH 37	40	0.3371	0.2282	0.0899	0.0481	0.0339	0.0170	0.0083	42.0	905.2	237.8	110.0
297	435680	RHS	NH 37	40	0.1923	0.1311	0.1003	0.0738	0.0468	0.0236	0.0089	42.0	919.9	238.7	110.0
298	435680	LHS	NH 37	40	0.2501	0.1944	0.0910	0.0546	0.0389	0.0283	0.0109	42.0	928.4	237.9	109.9
299	435740	RHS	NH 37	40	0.3038	0.2173	0.0905	0.0627	0.0517	0.0393	0.0196	42.0	922.1	239.0	110.0
300	435740	LHS	NH 37	40	0.2513	0.1845	0.0904	0.0557	0.0351	0.0240	0.0089	42.0	935.8	238.9	110.0
301	435800	RHS	NH 37	40	0.3782	0.2773	0.1277	0.0747	0.0529	0.0348	0.0190	42.0	907.3	238.2	110.0
302	435800	LHS	NH 37	40	0.2137	0.1695	0.0858	0.0487	0.0296	0.0204	0.0050	42.0	915.2	238.9	110.0
303	435860	RHS	NH 37	40	0.1981	0.1547	0.0820	0.0533	0.0380	0.0261	0.0159	42.0	933.1	238.9	110.0
304	435860	LHS	NH 37	40	0.2293	0.1811	0.0852	0.0480	0.0304	0.0184	0.0079	42.0	905.2	238.5	110.0
305	435920	RHS	NH 37	40	0.2313	0.1613	0.0676	0.0351	0.0240	0.0135	0.0066	42.0	907.3	237.4	110.0
306	435920	LHS	NH 37	40	0.2413	0.1754	0.0876	0.0538	0.0366	0.0239	0.0082	42.0	918.4	238.0	110.0
307	435980	RHS	NH 37	40	0.1315	0.0796	0.0533	0.0313	0.0153	0.0064	0.0032	42.0	935.2	237.6	110.0
308	435980	LHS	NH 37	40	0.2708	0.1926	0.0762	0.0526	0.0363	0.0302	0.0160	39.0	981.9	295.8	112.0
309	436040	RHS	NH 37	40	0.3656	0.2630	0.1547	0.0953	0.0709	0.0569	0.0276	39.0	1000.3	294.8	112.0
310	436040	LHS	NH 37	40	0.2686	0.1868	0.0715	0.0495	0.0417	0.0311	0.0133	39.0	980.8	291.2	112.0
311	436100	RHS	NH 37	40	0.2574	0.1868	0.0927	0.0528	0.0318	0.0291	0.0103	42.0	936.8	236.4	110.0
312	436100	LHS	NH 37	40	0.2786	0.2065	0.1092	0.0664	0.0470	0.0336	0.0096	42.0	938.9	239.0	110.0
313	436160	RHS	NH 37	40	0.4138	0.3006	0.1525	0.0915	0.0668	0.0463	0.0237	39.0	1002.0	291.5	112.0
314	436160	LHS	NH 37	40	0.3757	0.3012	0.1454	0.0870	0.0654	0.0494	0.0179	39.0	1005.0	287.0	112.0
315	436220	RHS	NH 37	40	0.3113	0.2339	0.1243	0.0911	0.0586	0.0449	0.0127	39.5	1001.5	291.7	112.0
316	436220	LHS	NH 37	40	0.2301	0.1623	0.0857	0.0603	0.0457	0.0378	0.0071	39.5	996.7	279.7	112.0
317	436280	RHS	NH 37	40	0.3190	0.2401	0.1121	0.0715	0.0461	0.0425	0.0193	39.5	991.4	295.9	112.0

Sl No.	Chainage	Side	Road Stretch	Load (kN)	Geophone 1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Manual Temp. (°C)	Back Calculated Moduli		
													BT	Granular	Subgrade
318	436280	LHS	NH 37	40	0.2363	0.1819	0.1017	0.0679	0.0494	0.0377	0.0134	39.5	953.0	294.9	112.0
319	436340	RHS	NH 37	40	0.3636	0.2665	0.1535	0.0974	0.0709	0.0566	0.0279	39.5	1001.5	294.8	112.0
320	436340	LHS	NH 37	40	0.3233	0.2418	0.1294	0.0836	0.0555	0.0480	0.0165	39.5	1003.8	264.3	116.0
321	436400	RHS	NH 37	40	0.3746	0.2809	0.1441	0.0881	0.0627	0.0442	0.0223	39.5	999.7	230.3	116.0
322	436400	LHS	NH 37	40	0.3374	0.2648	0.1451	0.0988	0.0782	0.0601	0.0226	39.5	999.7	230.3	116.0
323	436460	RHS	NH 37	40	0.3422	0.2616	0.1411	0.0853	0.0596	0.0507	0.0258	39.5	990.8	299.7	116.0
324	436460	LHS	NH 37	40	0.2780	0.2157	0.1090	0.0711	0.0468	0.0345	0.0147	39.5	1003.2	283.1	116.0
325	436520	RHS	NH 37	40	0.2940	0.1852	0.1209	0.0919	0.0486	0.0302	0.0104	39.5	981.3	201.4	116.0
326	436520	LHS	NH 37	40	0.3299	0.2430	0.1283	0.0714	0.0451	0.0325	0.0162	42.7	930.5	238.4	109.9
327	436580	RHS	NH 37	40	0.2114	0.1598	0.0698	0.0375	0.0210	0.0107	0.0052	42.7	898.8	238.1	110.0
328	436580	LHS	NH 37	40	0.2749	0.2091	0.0969	0.0584	0.0381	0.0208	0.0099	42.7	928.4	238.9	110.0
329	436640	RHS	NH 37	40	0.1504	0.1122	0.0398	0.0285	0.0207	0.0164	0.0062	42.7	934.2	237.7	110.0
330	436640	LHS	NH 37	40	0.3378	0.2650	0.1121	0.0538	0.0341	0.0250	0.0122	42.7	910.4	234.8	110.0
331	436700	RHS	NH 37	40	0.2464	0.1860	0.0825	0.0474	0.0297	0.0262	0.0089	42.7	902.5	317.4	107.0
332	436700	LHS	NH 37	40	0.2960	0.2325	0.1033	0.0551	0.0365	0.0213	0.0102	42.7	910.4	279.5	107.0
333	436760	RHS	NH 37	40	0.3165	0.2201	0.1022	0.0473	0.0273	0.0189	0.0092	42.7	924.2	205.8	107.0
334	436760	LHS	NH 37	40	0.1369	0.0856	0.0567	0.0324	0.0154	0.0068	0.0033	42.7	929.4	216.4	107.0
335	436820	RHS	NH 37	40	0.1778	0.1301	0.0727	0.0502	0.0341	0.0236	0.0088	42.7	911.5	318.0	107.0
336	436820	LHS	NH 37	40	0.1823	0.1223	0.0675	0.0410	0.0323	0.0266	0.0071	42.7	937.4	319.8	107.0
337	436880	RHS	NH 37	40	0.2172	0.1385	0.0628	0.0461	0.0366	0.0224	0.0096	43.0	921.0	315.3	107.0
338	436880	LHS	NH 37	40	0.3269	0.2486	0.0992	0.0604	0.0390	0.0228	0.0081	41.5	904.6	210.3	112.0
339	436940	RHS	NH 37	40	0.2777	0.1896	0.0528	0.0338	0.0241	0.0129	0.0099	38.3	1049.9	203.0	112.0
340	436940	LHS	NH 37	40	0.4217	0.3175	0.1419	0.0832	0.0560	0.0362	0.0160	41.5	922.6	228.3	112.0
341	437000	RHS	NH 37	40	0.3673	0.2550	0.0935	0.0594	0.0375	0.0249	0.0100	38.3	1028.8	206.0	112.0
342	437000	LHS	NH 37	40	0.6152	0.4754	0.1934	0.0923	0.0584	0.0195	0.0097	41.5	931.6	204.2	112.0
343	437060	RHS	NH 37	40	0.3101	0.2012	0.0847	0.0516	0.0436	0.0296	0.0126	42.0	918.9	265.4	111.0
344	437060	LHS	NH 37	40	0.4372	0.2863	0.1146	0.0647	0.0544	0.0340	0.0103	39.7	976.6	261.5	111.0
345	437120	RHS	NH 37	40	0.3641	0.2796	0.1113	0.0631	0.0367	0.0229	0.0080	39.7	996.7	264.2	111.0
346	437120	LHS	NH 37	40	0.3892	0.2860	0.1485	0.0863	0.0631	0.0522	0.0221	39.7	996.7	264.9	111.0
347	437180	RHS	NH 37	40	0.2118	0.1345	0.0509	0.0311	0.0183	0.0094	0.0045	42.0	906.7	264.5	111.0
348	437180	LHS	NH 37	40	0.4046	0.3059	0.1295	0.0731	0.0624	0.0448	0.0116	39.7	940.5	265.2	111.0
349	437240	RHS	NH 37	40	0.4491	0.3085	0.1323	0.0860	0.0673	0.0489	0.0182	42.0	925.7	264.5	111.0

Sl No.	Chainage	Side	Road Stretch	Load (kN)	Geophone 1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Manual Temp. (°C)	Back Calculated Moduli		
													BT	Granular	Subgrade
350	437240	LHS	NH 37	40	0.2458	0.1797	0.0788	0.0460	0.0348	0.0251	0.0121	39.7	966.6	265.9	111.0
351	437300	RHS	NH 37	40	0.3389	0.2625	0.1241	0.0720	0.0479	0.0284	0.0140	41.7	926.8	261.3	111.0
352	437300	LHS	NH 37	40	0.3961	0.3083	0.1333	0.0838	0.0669	0.0480	0.0228	41.5	939.5	299.0	108.0
353	437360	RHS	NH 37	40	0.3034	0.2049	0.0861	0.0524	0.0429	0.0278	0.0128	39.7	1004.4	299.9	108.0
354	437360	LHS	NH 37	40	0.3846	0.2829	0.1182	0.0582	0.0427	0.0383	0.0106	40.1	940.0	246.1	108.0
355	437420	RHS	NH 37	40	0.3471	0.2514	0.1026	0.0593	0.0425	0.0383	0.0145	41.5	937.4	300.3	108.0
356	437420	LHS	NH 37	40	0.2065	0.1652	0.0820	0.0490	0.0311	0.0256	0.0132	43.0	909.9	319.4	107.0
357	437480	RHS	NH 37	40	0.2717	0.2329	0.1292	0.0782	0.0597	0.0372	0.0302	43.0	915.7	318.1	107.0
358	437480	LHS	NH 37	40	0.1658	0.1156	0.0580	0.0381	0.0296	0.0152	0.0075	43.0	937.9	318.4	107.0
359	437540	RHS	NH 37	40	0.4621	0.3273	0.1235	0.0593	0.0467	0.0272	0.0128	40.1	896.2	207.9	108.0
360	437540	LHS	NH 37	40	0.4726	0.3137	0.1362	0.0621	0.0410	0.0238	0.0118	40.1	938.4	203.9	108.0
361	437600	RHS	NH 37	40	0.2741	0.2122	0.0982	0.0491	0.0270	0.0135	0.0075	43.0	927.3	206.5	107.0
362	437600	LHS	NH 37	40	0.2876	0.2412	0.1394	0.0824	0.0557	0.0454	0.0311	43.0	917.3	319.9	107.0
363	437660	RHS	NH 37	40	0.2796	0.2320	0.1104	0.0606	0.0501	0.0268	0.0091	43.0	938.9	273.4	107.0
364	437660	LHS	NH 37	40	0.3010	0.2297	0.1364	0.0909	0.0671	0.0501	0.0211	43.0	924.2	318.8	107.0
365	437720	RHS	NH 37	40	0.2503	0.1764	0.0839	0.0486	0.0349	0.0282	0.0099	43.0	935.8	282.5	102.9
366	437720	LHS	NH 37	40	0.1685	0.1223	0.0638	0.0413	0.0293	0.0120	0.0041	43.0	923.1	273.2	103.0
367	437780	RHS	NH 37	40	0.2663	0.1923	0.0815	0.0488	0.0329	0.0276	0.0134	43.0	898.8	283.7	103.0

Appendix 4.17 : Road Roughness of NH 37 (Km 426+800 to Km 437+800) by NSV

Chainage (km)		BI (mm/km)			IRI (m/km)
From	**To**	**LHS**	**RHS**	**Average**	**Average**
426+800	427+000	5846.58	5674.24	5760.41	7.21
427+000	428+000	5107.24	5796.84	5452.04	6.87
428+000	429+000	5656.48	5425.38	5540.93	6.97
429+000	430+000	5645.74	5485.76	5565.75	7.00
430+000	431+000	5485.34	5155.25	5320.30	6.72
431+000	432+000	5732.54	5531.65	5632.10	7.07
432+000	433+000	5248.42	5145.28	5196.85	6.58
433+000	434+000	5788.27	5624.32	5706.30	7.15
434+000	435+000	5820.48	5625.35	5722.92	7.17
435+000	436+000	5642.15	5485.24	5563.70	6.99
436+000	437+000	5485.38	5297.46	5391.42	6.80
437+000	437+800	5872.14	4546.65	5209.40	6.59

Appendix 4.18 : Details of Existing Pavement Composition

S.NO	Side	Chainage (KM)	Crust Composition (mm)				Total Thickness (mm)
			Bituminous	BASE COARSE	SUB-BASE COARSE	SUBGRADE	
NH-37							
1	LHS	427+000	125	200	230	500	1055
2	RHS	427+500	125	195	225	500	1045
3	LHS	428+000	124	192	228	500	1044
4	RHS	428+500	130	193	226	500	1049
5	LHS	429+000	125	189	224	500	1038
6	RHS	429+500	121	188	227	500	1036
7	LHS	430+000	125	185	223	500	1033
8	RHS	430+500	125	187	225	500	1037
9	LHS	431+000	121	184	231	500	1036
10	RHS	431+500	119	185	224	500	1028
11	LHS	432+000	121	182	221	500	1024
12	RHS	432+600	120	180	220	500	1020
13	LHS	433+000	123	182	223	500	1028
14	RHS	433+500	125	185	220	500	1030
15	LHS	434+000	126	187	215	500	1028
16	RHS	434+500	125	184	210	500	1019
17	LHS	435+000	128	188	180	500	996
18	LHS	435+400	130	190	150	500	970
19	RHS	436+000	128	188	175	500	991
20	LHS	436+500	128	185	190	500	1003
21	RHS	437+000	128	187	205	500	1020
22	LHS	437+500	130	183	210	500	1023

Appendix 4.19 : DCPT CBR VALUE CALCULATION

Sl. No.	Location	Graph Equation	Depth of Penetration in mm	No.of Blows Corresponding to depth of Penetration	Penetration in mm/blow	CBR as per IRC 37 Clause 5.1
			y	x	N=y/x	Log_{10} CBR
1	427+000 LHS	y = 2.382x - 0.022	200	8.41	23.79	8.39
			400	16.8	23.81	8.38
2	428+000 RHS	y = 4.063x + 3.963	200	3.95	50.67	3.6
			400	8.87	45.1	4.1
3	429+000 LHS	y = 4.172x - 6.027	200	6.24	32.06	6.01
			400	11.03	36.26	5.23
4	430+000 RHS	y = 4.071x + 10.14	200	2.42	82.58	2.08
			400	7.33	54.53	3.31
5	431+000 LHS	y = 2.241x + 8.060	200	5.33	37.54	5.03
			400	14.25	28.07	6.97
6	432+600 RHS	y = 7.65x + 4.7	200	2	100	1.68
			400	4.61	86.69	1.97
7	433+500 LHS	y = 3.854x + 11.8	200	2.13	94	1.8
			400	7.32	54.67	3.3
8	434+500 RHS	y = 5.875x - 1.571	200	3.67	54.47	3.32
			400	7.08	56.53	3.18
9	435+400 LHS	y = 1.990x + 8.980	200	5.54	36.12	5.26
			400	15.59	25.66	7.71
10	436+500 RHS	y = 0.579x + 7.719	200	21.21	9.43	23.66
			400	55.75	7.17	32.16
11	437+500 LHS	y = 7.1x + 5.133	200	2.09	95.51	1.77
			400	4.91	81.45	2.11

Appendix 4.20 : DCPT CBR Table

Location :- 427+000 LHS		
No. of Blows	**Sum of Blows**	**Penetration in cm**
2	2	**7.5**
2	4	**11**
2	6	**14**
2	8	**17**
2	10	**21**
2	12	**24**
2	14	**29**
2	16	**38**
2	18	**49**
2	20	**51**
2	22	**57**
2	24	**60**
2	26	**60.5**
2	28	**61**

Location :- 428+000 RHS		
No. of Blows	**Sum of Blows**	**Penetration in cm**
2	2	**11**
2	4	**19**
2	6	**26**
2	8	**38**
2	10	**44**
2	12	**56**

DCPT CBR Graph

2	14	**63**
2	16	**71**
2	18	**79**
2	20	**84**
2	22	**89**

Location :- 429+000 LHS		
No. of Blows	**Sum of Blows**	**Penetration in cm**
2	2	**6**
2	4	**12.5**
2	6	**21**
2	8	**34**
2	10	**2**
2	12	**51**
2	14	**60**
2	16	**66**
2	18	**72**
2	20	**77**
2	22	**83**

Location :- 430+000 RHS		
No. of Blows	**Sum of Blows**	**Penetration in cm**
2	2	**15**
2	4	**26**
2	6	**38**

2	8	**44**
2	10	**53**
2	12	**59**
2	14	**64**

Location :- 431+000 LHS		
No. of Blows	**Sum of Blows**	**Penetration in cm**
2	2	**7**
2	4	**15**
2	6	**26**
2	8	**30**
2	10	**35**
2	12	**38**
2	14	**40**
2	16	**42.5**
2	18	**45**
2	20	**48**
2	22	**51**
2	24	**61**
2	26	**70**
2	28	**75**

DCPT CBR Graph

Location :- 432+600 RHS		
No. of Blows	**Sum of Blows**	**Penetration in cm**
2	2	**18**
2	4	**33**
2	6	**57**
2	8	**68**
2	10	**77**

Location :- 433+500 LHS		
No. of Blows	**Sum of Blows**	**Penetration in cm**
2	2	**12**
2	4	**29**
2	6	**35**
2	8	**44**
2	10	**53**
2	12	**62**
2	14	**70**
2	16	**76**
2	18	**79**
2	20	**82**

DCPT CBR Graph

Location :- 434+500 LHS		
No. of Blows	**Sum of Blows**	**Penetration in cm**
2	2	**11**
2	4	**22**
2	6	**33**
2	8	**45**
2	10	**56**
2	12	**70**
2	14	**81**

Location :- 435+400 LHS		
No. of Blows	**Sum of Blows**	**Penetration in cm**
2	2	**7**
2	4	**17**
2	6	**21**
2	8	**25**
2	10	**28**
2	12	**33**
2	14	**41**
2	16	**47**
2	18	**49**
2	20	**51**
2	22	**52.5**
2	24	**53.5**
2	26	**54**

DCPT CBR Graph

Location :- 436+500 RHS		
No. of Blows	**Sum of Blows**	**Penetration in cm**
2	2	**4.5**
2	4	**7.5**
2	6	**10**
2	8	**12.5**
2	10	**14.5**
2	12	**16.5**
2	14	**18**
2	16	**19**
2	18	**20.5**
2	20	**21.5**
2	22	**22**
2	24	**22.5**
2	26	**23**
2	28	**24**
2	30	**24.5**
2	32	**25.5**
2	34	**26**
2	36	**27**
2	38	**28**

DCPT CBR Graph

Location :- 437+500 LHS		
No. of Blows	**Sum of Blows**	**Penetration in cm**
2	2	**12**
2	4	**36**
2	6	**54**
2	8	**67**
2	10	**74**
2	12	**86**

Appendix 4.21 : Gradation of GSB Samples

Location :-km 427+000 of NH-37 (LHS), Total Weight - 11400 gm					
Sl No.	**IS Sieve Size (mm)**	**Retained Weight (gm)**	**Cumulative Retained Weight (gm)**	**Cumulative % Retained**	**% Passing**
1	75	0	0	0.00	100.00
2	53	421.8	421.8	3.70	96.30
3	26.5	1242.6	1664.4	14.60	85.40
4	9.5	2120.4	3784.8	33.20	66.80
5	4.75	1995.0	5779.8	50.70	49.30
6	2.36	1892.4	7672.2	67.30	32.70
7	0.85	1299.6	8971.8	78.70	21.30
8	0.425	843.6	9815.4	86.10	13.90
9	0.075	1060.2	10875.6	95.40	4.60
10	pan	524.4	11400	100.00	

Location :-km 430+000 of NH-37 (RHS), Total Weight - 15600 gm					
Sl No.	**IS Sieve Size (mm)**	**Retained Weight (gm)**	**Cumulative Retained Weight (gm)**	**Cumulative % Retained**	**% Passing**
1	75	0	0	0.00	100.00
2	53	1263.6	1263.6	8.10	91.90
3	26.5	1918.8	3182.4	20.40	79.60
4	9.5	2464.8	5647.2	36.20	63.80
5	4.75	2683.2	8330.4	53.40	46.60
6	2.36	1840.8	10171.2	65.20	34.80
7	0.85	1794	11965.2	76.70	23.30
8	0.425	1279.2	13244.4	84.90	15.10
9	0.075	1794	15038.4	96.40	3.60
10	pan	561.6	15600	100.00	

Location :-km 432+600 of NH-37 (RHS), Total Weight - 13300 gm					
Sl No.	**IS Sieve Size (mm)**	**Retained Weight (gm)**	**Cumulative Retained Weight (gm)**	**Cumulative % Retained**	**% Passing**
1	75	0	0	0.00	100.00
2	53	611.8	611.8	4.60	95.40
3	26.5	2500.4	3112.2	23.40	76.60
4	9.5	1888.6	5000.8	37.60	62.40
5	4.75	1742.3	6743.1	50.70	49.30
6	2.36	2154.6	8897.7	66.90	33.10
7	0.85	1369.9	10267.6	77.20	22.80
8	0.425	1077.3	11344.9	85.30	14.70
9	0.075	1436.4	12781.3	96.10	3.90
10	pan	518.7	13300	100.00	

Appendix 4.21 : Gradation of GSB Samples

Location :-km 435+400 of NH-37(LHS), Total Weight - 12200 gm					
Sl No.	**IS Sieve Size (mm)**	**Retained Weight (gm)**	**Cumulative Retained Weight (gm)**	**Cumulative % Retained**	**% Passing**
1	75	0	0	0.00	100.00
2	53	1171.2	1171.2	9.60	90.40
3	26.5	1354.2	2525.4	20.70	79.30
4	9.5	1464	3989.4	32.70	67.30
5	4.75	1952	5941.4	48.70	51.30
6	2.36	1781.2	7722.6	63.30	36.70
7	0.85	2171.6	9894.2	81.10	18.90
8	0.425	939.4	10833.6	88.80	11.20
9	0.075	1024.8	11858.4	97.20	2.80
10	pan	341.6	12200	100.00	

Appendix 4.22 : Gradation of WMM Samples

Location :-km 427+000 of NH-37 (LHS), Total Weight - 13500 gm					
Sl No.	IS Sieve Size (mm)	Retained Weight (gm)	Cumulative Retained Weight (gm)	Cumulative % Retained	% Passing
1	53	0	0	0.00	100.00
2	45	351.0	351.0	2.60	97.40
3	22.4	2740.5	3091.5	22.90	77.10
4	11.2	2902.5	5994.0	44.40	55.60
5	4.75	1998.0	7992.0	59.20	40.80
6	2.36	1822.5	9814.5	72.70	27.30
7	0.6	1242.0	11056.5	81.90	18.10
8	0.075	1957.5	13014.0	96.40	3.60
9	pan	486.0	13500.0	100.00	

Location :-km 430+000 of NH-37 (RHS), Total Weight - 14100 gm					
Sl No.	IS Sieve Size (mm)	Retained Weight (gm)	Cumulative Retained Weight (gm)	Cumulative % Retained	% Passing
1	53	0	0	0.00	100.00
2	45	155.1	155.1	1.10	98.90
3	22.4	3313.5	3468.6	24.60	75.40
4	11.2	2326.5	5795.1	41.10	58.90
5	4.75	2721.3	8516.4	60.40	39.60
6	2.36	2044.5	10560.9	74.90	25.10
7	0.6	1339.5	11900.4	84.40	15.60
8	0.075	1889.4	13789.8	97.80	2.20
9	pan	310.2	14100	100.00	

Location :-km 432+600 of NH-37 (RHS), Total Weight - 12400 gm					
Sl No.	IS Sieve Size (mm)	Retained Weight (gm)	Cumulative Retained Weight (gm)	Cumulative % Retained	% Passing
1	53	0	0	0.00	100.00
2	45	434	434	3.50	96.50
3	22.4	2393.2	2827.2	22.80	77.20
4	11.2	2120.4	4947.6	39.90	60.10
5	4.75	2232	7179.6	57.90	42.10
6	2.36	2170	9349.6	75.40	24.60
7	0.6	892.8	10242.4	82.60	17.40
8	0.075	1748.4	11990.8	96.70	3.30
9	pan	409.2	12400	100.00	

Appendix 4.22 : Gradation of WMM Samples

Location :-km 435+400 of NH-37(LHS), Total Weight - 14100 gm					
Sl No.	**IS Sieve Size (mm)**	**Retained Weight (gm)**	**Cumulative Retained Weight (gm)**	**Cumulative % Retained**	**% Passing**
1	53	0	0	0.00	100.00
2	45	126.9	126.9	0.90	99.10
3	22.4	2791.8	2918.7	20.70	79.30
4	11.2	3299.4	6218.1	44.10	55.90
5	4.75	2538	8756.1	62.10	37.90
6	2.36	2227.8	10983.9	77.90	22.10
7	0.6	1170.3	12154.2	86.20	13.80
8	0.075	1607.4	13761.6	97.60	2.40
9	pan	338.4	14100	100.00	

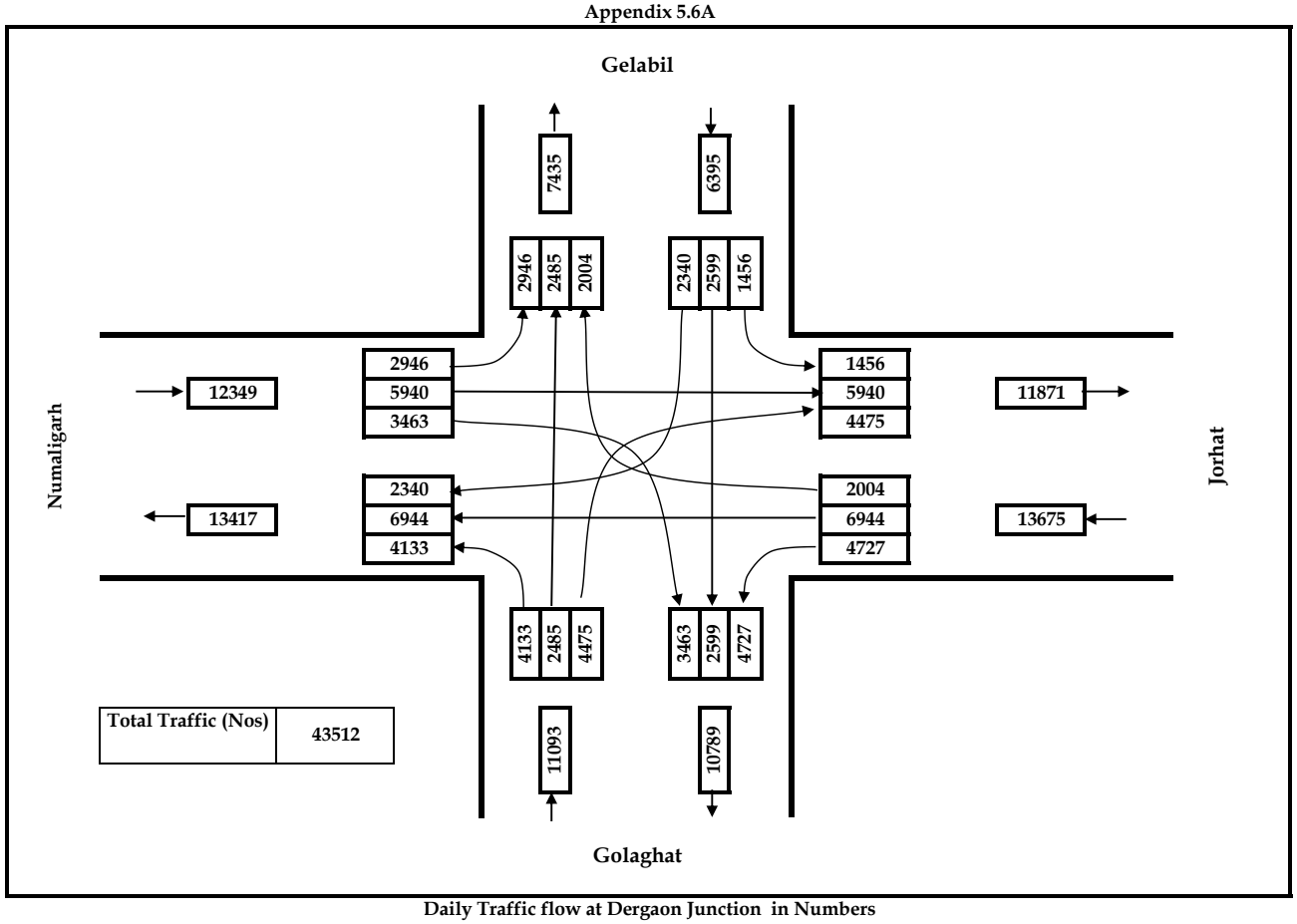
INTERSECTION COUNT SURVEY AT DERGAON JUNCTION

Location: Dergaon
Junction: Dergaon Junction

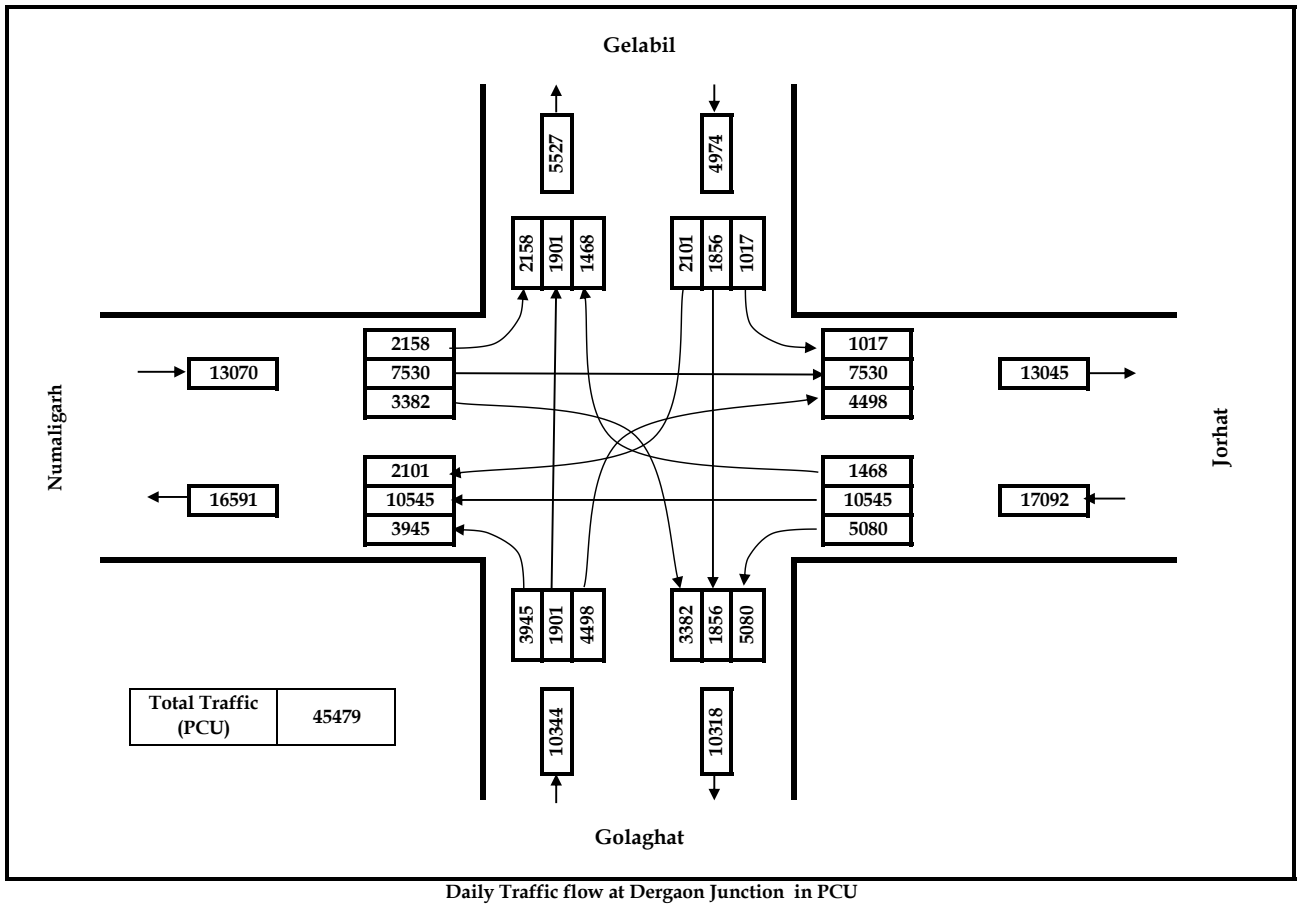
Direction : **All**
Date: 17-07-2019

Flow No	Direction	Car/ Jeep/ Taxi	2 Wheeler	3 Wheeler (P)	3 wheeler (G)	Mini Bus	Standard Bus	LCV	2 Axle	3 Axle	MAV	Tractor	Tractor with Trailer	Cycle	Cycle Rickshaw	Animal Drawn	Others	Total Passenger	Total Goods	Fast Vehicles	Slow Vehicles	Total		Remarks
																						Vehicle	PCU	
Average Daily Traffic																								
1	Numaligarh to Jorhat	1950	1837	185	68	125	163	564	536	186	131	5	6	183	0	0	1	4260	1497	5757	183	5940	7530	Numaligarh to Jorhat
2	Numaligarh to Gelabil	563	1172	417	27	2	2	152	0	3	0	3	3	602	0	0	0	2156	188	2344	602	2946	2158	Numaligarh to Gelabil
3	Numaligarh to Golaghat	436	948	837	38	60	12	594	77	31	9	1	0	419	0	0	1	2293	751	3044	419	3463	3382	Numaligarh to Golaghat
	Arm 1	**2949**	**3957**	**1439**	**133**	**187**	**177**	**1310**	**613**	**220**	**140**	**9**	**9**	**1204**	**0**	**0**	**2**	**8709**	**2436**	**11145**	**1204**	**12349**	**13070**	**Arm 1**
4	Jorhat to Numaligarh	1943	1837	179	12	117	191	916	670	642	297	7	5	128	0	0	0	4267	2549	6816	128	6944	10545	Jorhat to Numaligarh
5	Jorhat to Gelabil	225	1084	229	28	2	2	194	3	0	0	4	3	230	0	0	0	1542	232	1774	230	2004	1468	Jorhat to Gelabil
6	Jorhat to Golaghat	1052	1550	481	45	77	160	760	194	49	16	3	3	336	0	0	1	3320	1071	4391	336	4727	5080	Jorhat to Golaghat
	Arm 2	**3220**	**4471**	**889**	**85**	**196**	**353**	**1870**	**867**	**691**	**313**	**14**	**11**	**694**	**0**	**0**	**1**	**9129**	**3852**	**12981**	**694**	**13675**	**17092**	**Arm 2**
7	Gelabil to Numaligarh	354	786	381	7	2	3	396	51	0	0	3	6	351	0	0	0	1526	463	1989	351	2340	2101	Gelabil to Numaligarh
8	Gelabil to Jorhat	198	878	162	8	0	2	81	0	0	0	3	3	120	0	0	1	1240	96	1336	120	1456	1017	Gelabil to Jorhat
9	Gelabil to Golaghat	259	1201	377	7	0	2	183	9	2	1	3	3	552	0	0	0	1839	208	2047	552	2599	1856	Gelabil to Golaghat
	Arm 3	**811**	**2865**	**920**	**22**	**2**	**7**	**660**	**60**	**2**	**1**	**9**	**12**	**1023**	**0**	**0**	**1**	**4605**	**767**	**5372**	**1023**	**6395**	**4974**	**Arm 3**
10	Golaghat to Numaligarh	483	1320	955	50	81	10	551	112	46	12	5	4	501	0	1	2	2849	782	3631	502	4133	3945	Golaghat to Numaligarh
11	Golaghat to Jorhat	914	1839	405	20	56	109	607	196	60	0	3	3	263	0	0	0	3323	889	4212	263	4475	4498	Golaghat to Jorhat
12	Golaghat to Gelabil	494	866	332	45	1	2	192	4	0	0	3	3	543	0	0	0	1695	247	1942	543	2485	1901	Golaghat to Gelabil
	Arm 4	**1891**	**4025**	**1692**	**115**	**138**	**121**	**1350**	**312**	**106**	**12**	**11**	**10**	**1307**	**0**	**1**	**2**	**7867**	**1918**	**9785**	**1308**	**11093**	**10344**	**Arm 4**
	Junction Total	**8871**	**15318**	**4940**	**355**	**523**	**658**	**5190**	**1852**	**1019**	**466**	**43**	**42**	**4228**	**0**	**1**	**6**	**30310**	**8973**	**39283**	**4229**	**43512**	**45479**	
	Peak Hour Traffic	**Junction Peak Hour**																						
1	Numaligarh to Jorhat	141	118	10	5	8	14	33	19	12	7	0	1	15	0	0	0	291	77	368	15	383	455	Numaligarh to Jorhat
2	Numaligarh to Gelabil	82	103	50	3	0	0	6	0	1	0	0	0	74	0	0	0	235	10	245	74	319	236	Numaligarh to Gelabil
3	Numaligarh to Golaghat	22	91	84	0	0	0	14	0	0	0	0	0	23	0	0	0	197	14	211	23	234	184	Numaligarh to Golaghat
	Arm 1	**245**	**312**	**144**	**8**	**8**	**14**	**53**	**19**	**13**	**7**	**0**	**1**	**112**	**0**	**0**	**0**	**723**	**101**	**824**	**112**	**936**	**875**	**Arm 1**
4	Jorhat to Numaligarh	142	141	14	1	4	4	60	15	17	20	1	2	7	0	0	0	305	116	421	7	428	536	Jorhat to Numaligarh
5	Jorhat to Gelabil	22	76	12	1	0	0	9	1	0	0	0	0	0	0	0	0	110	11	121	0	121	90	Jorhat to Gelabil
6	Jorhat to Golaghat	85	79	43	6	5	16	58	10	3	0	0	0	22	0	0	1	228	78	306	22	328	371	Jorhat to Golaghat
	Arm 2	**249**	**296**	**69**	**8**	**9**	**20**	**127**	**26**	**20**	**20**	**1**	**2**	**29**	**0**	**0**	**1**	**643**	**205**	**848**	**29**	**877**	**996**	**Arm 2**
7	Gelabil to Numaligarh	38	52	38	0	0	0	30	0	0	0	0	0	27	0	0	0	128	30	158	27	185	161	Gelabil to Numaligarh
8	Gelabil to Jorhat	9	66	5	0	0	0	2	0	0	0	0	0	9	0	0	0	80	2	82	9	91	55	Gelabil to Jorhat
9	Gelabil to Golaghat	20	98	32	0	0	0	10	0	0	0	0	0	49	0	0	0	150	10	160	49	209	141	Gelabil to Golaghat
	Arm 3	**67**	**216**	**75**	**0**	**0**	**0**	**42**	**0**	**0**	**0**	**0**	**0**	**85**	**0**	**0**	**0**	**358**	**42**	**400**	**85**	**485**	**356**	**Arm 3**
10	Golaghat to Numaligarh	30	81	118	0	3	0	29	4	0	0	0	1	33	0	0	0	232	34	266	33	299	270	Golaghat to Numaligarh
11	Golaghat to Jorhat	89	129	40	5	8	13	49	8	3	0	0	0	20	0	0	0	279	65	344	20	364	366	Golaghat to Jorhat
12	Golaghat to Gelabil	67	12	31	9	0	0	12	1	0	0	0	0	57	0	0	0	110	22	132	57	189	163	Golaghat to Gelabil
	Arm 4	**186**	**222**	**189**	**14**	**11**	**13**	**90**	**13**	**3**	**0**	**0**	**1**	**110**	**0**	**0**	**0**	**621**	**121**	**742**	**110**	**852**	**798**	**Arm 4**
	Junction Total	**747**	**1046**	**477**	**30**	**28**	**47**	**312**	**58**	**36**	**27**	**1**	**4**	**336**	**0**	**0**	**1**	**2345**	**469**	**2814**	**336**	**3150**	**3024**	

Appendix 5.6A

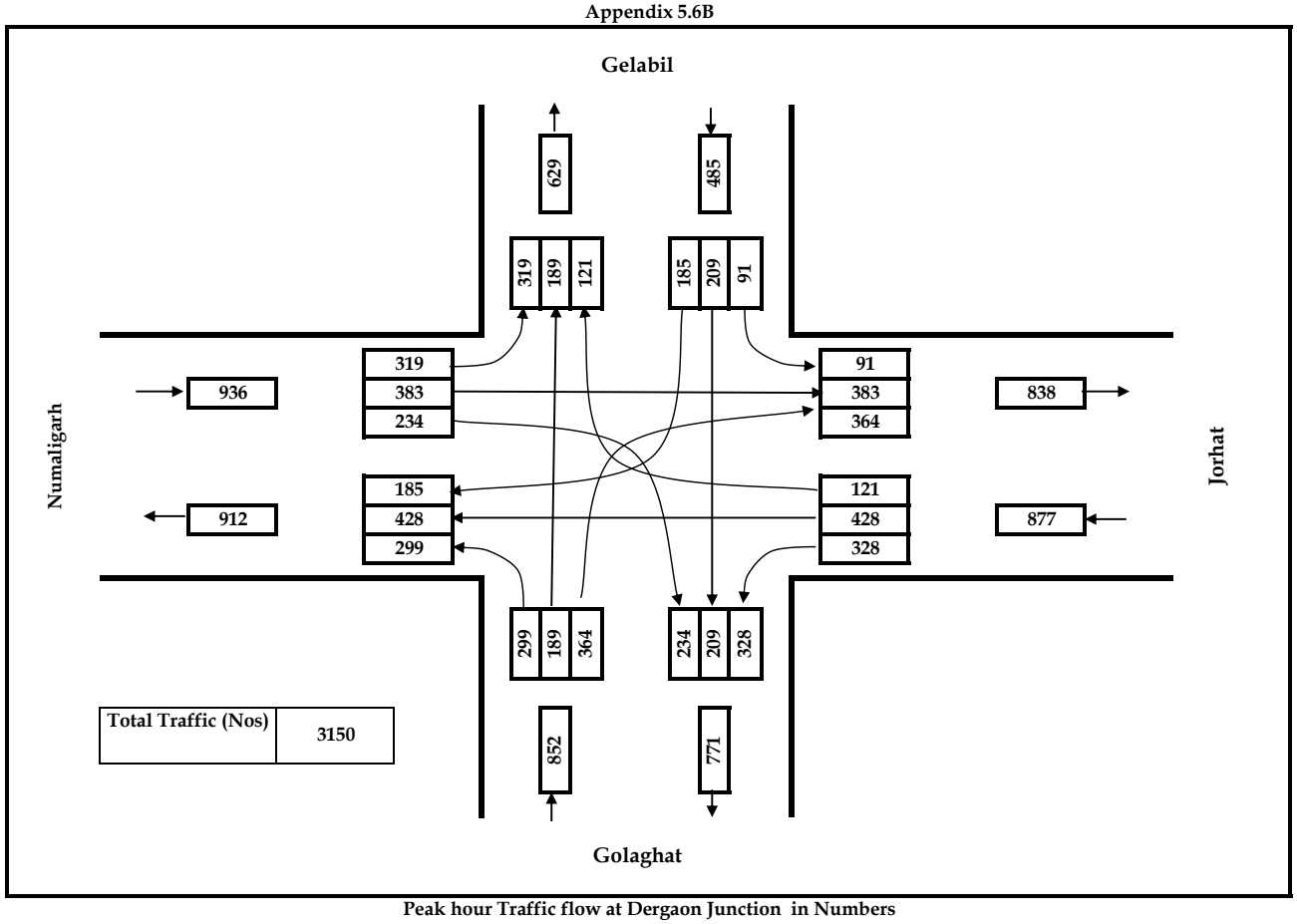


Daily Traffic flow at Dergaon Junction in Numbers

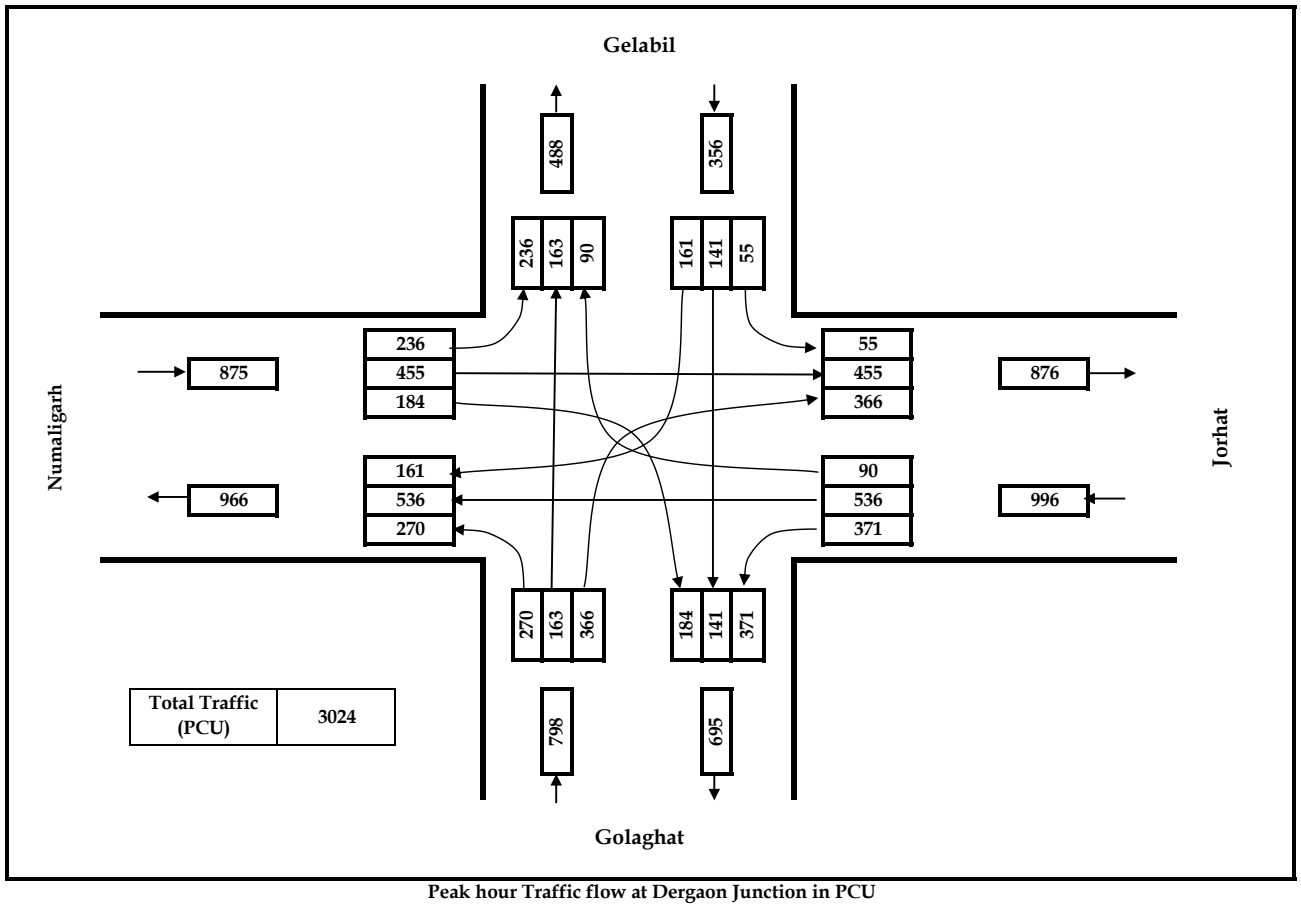


Daily Traffic flow at Dergaon Junction in PCU

Appendix 5.6B



Peak hour Traffic flow at Dergaon Junction in Numbers



Peak hour Traffic flow at Dergaon Junction in PCU