REFERENCE LIST

[1] Central Bank of Sri Lanka, "Econimic and Social Statistics of Sri Lanka," Central Bank of Sri Lanka, Colombo, 2019.

[2] Highway Capacity Manual, Washington D.C.: Transport Research Board, 2010.

[3] D. N. D. Jayaratne, P. W. P. R. Jayasinghe and H. R. Pasindu, "Evaluation of Level of Service for two-lane roads in Sri Lanka," in *IESL Annual Sessions*, Colombo, 2016.

[4] O. A. Nielsen and R. M. Jorgensen, "Estimation of Speed - Flow and Flow - Density Relations on the Motorway Network in the Greater Copenhagen Region," *IET Intelligent Transportation Systems,* vol. 2, no. 2, pp. 120-131, 2008.

[5] K. Luttinen and H. Innamaa, "Traffic Flow Simulation for an Inter-city Freeway Corridor," in *4th International Symposium on Highway Capacity, Transportation Research E-Circular*, 2000.

[6] A. Yadav, A. Arun and S. Velmurugan, "ROADWAY CAPACITY ESTIMATION FOR MULTI-LANE INTERURBAN HIGHWAYS IN INDIA," in *Colloquium on Transportation Systems Engineering and Management*, Calicut, 2014.

[7] Transport Research Board, Highway Capacity Manual, 2010.

[8] V. T. Arasan and K. Krishnamurthy, "Effect of Traffic Volume on PCU of Vehicles under Heterogeneous Traffic Conditions," *Road and Transport Research,* vol. 1, no. 17, pp. 32-49, 2008.

[9] J. Fazio, M. Hoque and G. Tiwari, "Fatalities of Heterogeneous Street Traffic," *Transportation Research Record: Journal of the Transportation Research Board,* vol. 1695, pp. 55-60, 1999.

[10] R. P. Roess and E. S. Prassas, The Highway Capacity Manual: A conceptual and Reseach History, New York: Springer, 2014.

[11] A. J. Johnson, "Traffic Capacity," in *Proceedings of the Highway Research Board*, Washinton DC, 1930.

[12] B. D. Greenshields, "A Study of Highway Capacity," in *Proceedings of the Highway Research Board, vol. 14*, Washington DC, 1935.

[13] Bureau of Public Roads, Highway Capacity Manual: Practical Applications of Research, Washinton DC: U.S. Department of Commerce, 1950.

[14] Transport Research Board, "Highway Capacity Manual," Transport Research Board, Washington DC, 1965.

[15] Transport Research Board, "Highway Capacity Manual, 3rd edn., Special Report 209," Washington DC, 1985 (Updated in 1994 and 1997).

[16] F. Hall and L. Hall, "Capacity and Speed-Flow Analysis of the Queen Elizabeth Way in Ontario," *Transportation Research Record 1287,* 1990.

[17] F. Hall, V. Hurdle and J. Banks, "A Synthesis of Recent Work on the Nature of Speed-Flow and Flow-Occupancy (or Density) Relationships on Freeways.," *Transportation Research Record 1365,* 1992.

[18] R. Gilchrist and F. Hall, "Three-Dimensional Relationships Among Traffic Flow Theory variables," *Transportation Research Record 1225,* 1989.

[19] M. Gunter and F. Hall, "Transitions in Speed-Flow Relationships," *Transportation Research Record 901,* 1986.

[20] Transportaion Research Board, Highway Capacity Manual, 3rd ed., Washington, D.C.: National Research Council, 2000.

[21] R. Ellis, "Analysis of Linear Relationships in Speed-Density and Speed-Occupancy Curves," Evanston, 1964.

[22] L. Edie, *Car-Following and Steady-State Theory for Non-Congested Travel,* 1961.

[23] S. Drake, J. Schofer and J. May, "A Statistical Analysis of Speed-Density Hypotheses," *Highway Research Record 154,* 1967.

[24] J. H. Banks, "The two-capacity phenomenon: some theoretical issues," *Transport Research Record,* vol. 1320, pp. 234-241, 1991.

[25] K. Agyemang-Duah and F. L. Hall, "Some Issues Regarding the Numerical Value of Freeway Capacity," in *Proceedings of the First International Conference on Highway Capacity*, Germany, 1991.

[26] Z. Li and R. Laurance, "An analysis of four methodologies for estimating highway capacity from ITS data," *Journal of Modern Transport,* vol. 23, no. 2, pp. 107-118, 2015.

[27] Directorate general of Highways, "Indonesian Highway Capacity Manual," Ministry of Public Works, 1997.

[28] Road Development Authority, Geometric Design Standards of Roads, 1998.

[29] H. Greenberg, "An Analysis of Traffic Flow," in *Operations Research Society of America 7(1)*, 1959.

[30] R. T. Underwood, "Speed, Volume, and Density Relationship: Quality and Theory of Traffic Flow," *Yale Bureau of Highway Traffic,* pp. 141-188, 1961.

[31] L. A. Pipes, "Car-Following Models and the Fundamental Diagram of Road Traffic," *Transportation Research,* pp. 21-29, 1967.

[32] M. Van Aerde, "Single regime speed-flow-density relationship for congested and uncongested highways," in *74th Annual TRB conference* , Washington DC, 1991.

[33] M. Lorenz and L. Elefteriadou, "Defining freeway capacity as a function of breakdown probability," *Transport Research record,* vol. 1776, no. 1, pp. 43-51, 2001.

[34] W. Brilon, J. Geistefeldt and M. Regler , "Reliability of freeway traffic flow: a stochastic concept of capacity," in *Proceedings of 16th international symposium of transportation and traffic theory*, University of Maryland, College Park, 2005.

[35] S. Sathishkumar , A. Rao and S. Velmurugan, "Base Capacity Estimation of Four Lane Divided Urban Carriageways under Mixed Traffic Conditions," in *12th transport planning and implementation methodologies for developing countries*, Bombay, 2016.

[36] S. Chandra, A. Mehar and V. Senathipathi, "Effect of traffic composition on capacity of multilane highways," *KSCE Journal of Civil Engineering,* pp. 1-8, 2015.

[37] Y. Anamika, A. Ashutosh and S. Velmurugan, "ROADWAY CAPACITY ESTIMATION FOR MULTI-LANE INTER-URBAN HIGHWAYS IN INDIA," in *Colloquium on Transportation Systems Engineering and Management*, Calicut, 2014.

[38] X. Yang and N. Zhang , "The Marginal Decrease of Lane Capacity with the Number of Lanes on Highway," in *Eastern Asia Society for Transportation Studies*, 2005.

[39] E. Madhu and S. Velmurugan, "Estimation of Roadway Capacity of Eight-lane Divided Urban Expressways under Heterogeneous Traffic hrough Microscopic Simulation Models," *International Journal of Science and Technology Education Research,* vol. 1, no. 6, 2011.

[40] A. M. Semeida, "New models to evaluate the level of service and capacity for rural multi-lane highways in Egypt," *Alexandria Engineering Journal,* vol. 52, pp. 455-466, 2013.

[41] S. Chandra and U. Kumar, "Effect of Lane Width on Capacity under Mixed Traffic Conditions in India," *Journal of Transportation Engineering,* pp. 155-160, 2003.

[42] H. J. W. Leong, "The Distribution and Trend of Free Speeds on Two-Way Rural Highways in New South Wales," *4th Australian Research Board Conference,* vol. 4, 1968.

[43] M. Nakamura, "Research and Application of Highway Capacity in Japan," in *2nd International Symposium on Highway Capacity: Country Reports*, 994.

[44] R. Moses and E. Mtoi, "Evaluation of Free Flow Speeds on Urban Arterials," Tallahassee, 2013.

[45] A. Arun, S. Velmurugan, S. Kannan, S. Chakraborty and K. S. Roy, "Effect of road geometry and roughness on free-flow speeds and roadway capacity for Indian multilane interurban highways," in *Transportation Planning and Implementation Methodologies for Developing Countries*, Mumbai, 2016.

[46] S. Chand, S. Chandra and A. Dhamaniya, "Capacity Drop of Urban Arterial due to a Curbside Bus Stop," in *ICSCI 2014 © ASCE India Section*, Hyderabad, 2014.

[47] G. Pallavi, A. Merhar and D. Neeeraja, "Effect of side friction on the traffic flow behaviour of multilane divided urban road at mid-block sections," in *Transportation Planning and Implementation Methodologies for Developing Countries*, Bombay, 2016.

[48] H. J. Leong, "Distribution and Trend of Free Speeds on Two-Lane Two-Way Rural Highways in New South Wales," *ARRB 4,* vol. 1, pp. 798-814, 1978.

[49] V. Prakash, "Highway Shoulder," *Journal of Indian Roads Congress,* Vols. 33-3, pp. 441-446, 1970.

[50] S. Wijerathna, "Impacts of On-street Parking on Road Capacity," in *Australasian Transport Research Forum 2015*, Sydney, 2015.

[51] A. John and W. Glauz, "Speed and service on multilane upgrades," Transport Research Record No. 61, Washington D. C., 1976.

[52] M. J. Huber, "Estimation of passenger-car equivalents of trucks in traffic stream," Transportantion Research Record, 1982.

[53] G. Tiwari, J. Fazio and S. Pavitras, "Passenger car Units for Heterogenous traffic using modified density method," pp. 248-257, 2000.

[54] B. D. Greenshields, D. Shapiro and E. L. Eriksen, "Traffic performance at Urban Intersections," Bureau of Highway Traffic, 1947.

[55] R. A. Krammes and K. W. Crowley, "Passenger car equivalents for trucks on level freeway segments," Transportation Research Record, 1986.

[56] M. Van Aerde and S. Yagar, "Capacity, Speed and Platooning Vehicle Equivalents for Two-Lane Rural Highways," Transport Research Board, Washington D.C., 1983.

[57] S. Chandra, V. Kumar and P. K. Sikdar, "Dynamic PCU and estimation of capacity of urban roads," *Indian Highways,* pp. 17-28, 1995.

[58] J. Craus, A. Polus and I. Grinberg, "A revised method for the determination of passenger car equivalencies," *Transportation Research Part A: General, 14(4),* pp. 241-246, 1980.

[59] W. D. Cunagin and C. J. Messer, "Passenger Car Equivalents for Rural Highways," 1983.

[60] A. S. Kumarage, "PCU Standards for Sri Lanka Highway Design," 1996.

[61] M. A. Weerasinghe and H. R. Pasindu, "Development of PCU Factors for Four lane Roads under Sri Lankan Context," Colombo, 2015.

[62] P. Raj, G. Asaithambi and A. U. Ravi Shankar, "Review of Methods for Estimation of Passenger Car Unit Values of Vehicles," *Transportation engineering journal of ASCE,* vol. 145, no. 6, pp. 1-17, 2019.

[63] D. N. D. Jayaratne, R. M. C. B. Rathnayake and H. R. Pasindu, "Evaluating the Speed-Flow Relationship of Urban Four-lane Roads under Heterogeneous Traffic Conditions," in *4th International Multidisciplinary Engineering Research Conference MERCON*, Moratuwa, 2018.

[64] D. N. D. Jayaratne and H. R. Pasindu, "Empirical study on capacity evaluation of urban multi-lane roads under heterogeneous traffic conditions," in *15th World Conference on Transportation Research*, Mumbai, 2019.

[65] G. Leduc, Road Traffic Data: Collection Methods and Applications, 2008.

[66] B. N. Nagaraj, K. J. George and P. K. John, "A study of linear and lateral placement of vehicles in mixed traffic environment through video recording," *J. Indian Road Congress,* no. 42, pp. 105-136, 1990.

[67] V. M. Kumar, "A study of some traffic characteristics and simusimulation modeling of traffic operations on two lane highways," Indian Institute of Technology, Kharagpur, India, 1994.

[68] B. Singh, "Simulation and animation of heterogeneous traffic on urban roads," Indian Institute of Technology, Kanpur, India, 1999.

[69] S. Chandra, "Effect of road roughness on capacity of two-lane roads," *J. Trans. Eng.,* vol. 3, no. 130, pp. 360-364, 2004.

[70] D. K. G. M. M. B. D. S. V. S. Kalaanidhia, "Review of Data Collection Methods for Establishing the Capacity of Intercity Highway," 2015.

[71] L. Shou, D. Yingzi and J. Yi, "Site verification of Weigh-In-Motion traffic and TIRTL Classification Data," Indiana Department of Transportation and Purdue University, West Lafayette, 2010.

[72] S. P. Kumarage, R. P. G. K. S. Rajapaksha, G. L. D. I. De Silva and J. M. S. J. Bandara, "Traffic flow estimations for urban roads based on crowdsourced data and machine learning principles," in *First International Conference on Intelligent Transport Systems*, Cham, 2017.

[73] C. Mallikarjuna, A. Phanindra and K. Ramachandra Rao, "Traffic data collection under mixed traffic conditions using video image processing," *Journal of Transportation Engineering,* pp. 174-182, 2009.

[74] J. F. Hair, W. C. Black, B. J. Babin and R. E. Anderson, Multivariate data analysis, 7th ed., Harlow: Pearson, 2014.

[75] J. Zheng, J. Sun and Yang J, "Relationship of Lane Width to Capacity for Urban Expressways," *Transportation Research Record: Journal of the Transportation Research Board,* vol. 2483, pp. 10-19, 2015.

[76] T. Urbanik , W. Hinshaw and K. Barnes, "Evaluation of High-Volume Texas Freeways," *Transportation Research Record 1530,* 1991.

[77] T. Urbanik and Hinshaw W, "Evaluation of High-Volume Urban Texas Freeways," *Transportation Research Record 1320.,* 1991.

[78] H. Tiwari and A. Marsani, "Calibration of Conventional Macroscopic Traffic Flow Models for Nepalese Roads," in *IOEG Conference*, 2014, 2014.

[79] K. Shalini and B. Kumar , "Estimation of the Passenger Car Equivalent: A Review," *International Journal of Emerging Technology and Advanced Engineering,* vol. 4, no. 6, pp. 97-101, 2014.

[80] W. Reilly, D. Harwood and J. Schoen , "Capacity and Level of Service Procedures for Multilane Highways, Final Report, National Cooperative Highway Research Program Project 3-43," JHK & Associates, Tucson AZ, 1989.

[81] N. Persaud and V. Hurdle, "Some New Data That Challenge Old Ideas About Speed-Flow Relationships," *Transportation Research Record 1194,* 1988.

[82] M. Metkari, A. K. Budhkar and A. K. Maurya, "Review of Passenger Car Equivalence Studies in Indian Context," *International Journal of Computer Applications,* pp. 19-23, 2012.

[83] R. S. Dhapudkar, "Analysis and Development of Traffic Stream Parameters of Heterogeneous Traffic at Signalized Intersection," *The International Journal Of Engineering And Science (IJES),* vol. 3, no. 5, pp. 33-39, 2014.

[84] H. Botma, "Effect on traffic operation of a slow moving vehicle in on two lane roads," in *14th ARRB Conference*, Canberra, 1988.

[85] J. Banks, "Flow Processes at a Freeway Bottleneck," *Transportation Research Record 1287,* 1990.

[86] Ahuja and A. Singh, "Development of passenger car equivalents for freeway merging sections," Las Vegas, 2007.

[87] Road Development Authority, in *Geometric Design Standards of Roads*, Colombo, 1998, pp. 5-6.