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Modeling Through Traffic Speed at Roundabouts Along Urban and Suburban Street Arterials

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Abstract: A total of 30 roundabouts with different dimensions and characteristics were selected from three cities in Jordan . The collected data included the approaching road free flow speed (FFS), area type, entry width, circulating roadway width, exit width, roundabout internal and external circle diameters, circulating roadway super elevation, entry deviation angle and drive curve. The regression analysis showed that the entry width, internal circulating diameter, entry deviation angle, approaching FFS and drive curve were significant in determining the average and 85th percentile roundabout circulating speed. The developed model was compared with other international models developed in the United States and Italy.