1. ENVIRONMENTAL CAPACITY GUIDELINES FOR ROADWAYS POLICY (TP009) BACKGROUND

The concept of an 'Environmental Capacity Guidelines' was first developed in Calgary in the mid-1970s, and occurred in response to the observed frequency of traffic complaints on residential streets that were being received by The City of Calgary. The City identified the general daily traffic limits above which street-fronting resident complaints appeared to rise dramatically, on (local) residential streets and collector streets. On the basis of these observations, the current City policy (TP009) on Environmental Capacity Guidelines was originally approved in 1979, where The City of Calgary set the following Environmental Capacity Guidelines for the daily traffic volumes only for residential (local), collector and primary (divided) collector roadways.

- Local Residential Road — 1,000 vehicles per day
- Collector Road — 5,000 vehicles per day
- Primary Collector (Divided) Collector Road — 10,000 vehicles per day

It should be noted that these daily traffic volumes in no way relate to the physical capacity of the roadway to carry traffic, or to the roadway function.

Later, the 1979 Policy was amended in May 2003, to increase the daily traffic volume limits for residential, collector and primary collector roadways only for new subdivision plans approved after June 2003. In all other cases, the previous Policy guidelines apply. The Environmental Capacity Guidelines for new development areas were revised as follows;

- Local Residential Road — from 1,000 to 1,500 vehicles per day
- Collector Road — from 5,000 to 5,500 vehicles per day
- Primary Collector (Divided) Collector Road — from 10,000 to 12,500 vehicles per day

Again, these Environmental Capacity Guidelines relate neither to the physical capacity of these streets, nor to their roadway functions.

Earlier in 2000, The City completed the "Inner City Transportation System Management Strategy (ICTSMS)" to address missing major roadway links in the inner city that carry significant volumes of non-community traffic. Some streets were reclassified to supporting collector streets with a daily traffic volume threshold of 15,000.

2. DEVELOPMENT OF STREET CAPACITY GUIDELINES

The Calgary Transportation Plan (CTP) and Municipal Development Plan (MDP) contain transportation and land use policies that highlight a new transportation sustainability triangle (walking, cycling, transit first) and the need to densify activity nodes (e.g. TOD (Transit-Orient Development) Areas) and corridors (e.g. Urban Boulevards) to accommodate target population within these areas. Hence, the proposed Street Capacity Guidelines with increased traffic volume limits will not impact most existing local streets in the city.

Several key factors and principles were considered to establish the ranges for the street capacity for different streets types, including;

- Review of City Policy and reports related to daily traffic thresholds on local streets
- Survey of the practices of other Canadian and U.S. municipalities
- Review of trends in subdivision density and car ownership over the past 30 years

A survey of other municipalities revealed a number of things:

- Calgary is the only municipality with a Policy. Others have guidelines or none at all.
- Municipalities with local/residential street thresholds of 500 to 3,000 vehicles per day
- Municipalities with Collector street thresholds of 1,000 to 10,000 vehicles per day

Subdivision density has increased by 50% in Calgary over the past 30 years (5-6 units per acre to 8-9 units per acre). During this same period, car ownership has increased by 25% nation-wide.

This research helped develop a draft set of Street Capacity Guidelines that were discussed with key Transportation Planning staff. That engagement concluded a number of things:

- One set of city-wide street capacity thresholds will be clearer to understand and easier to administer
- A set of thresholds for the local streets that do not overlap will provide clarity to the development industry when it comes to street sizing
- Higher thresholds will lower the number of kilometres of primary collector and collector streets needed in a new community and associated costs

Given this research and engagement, it was concluded that existing daily traffic volume thresholds could be increased by up to 75%.

The Table 1 below shows the existing environmental capacity limits and proposed street capacity ranges for city-wide street classifications.

TABLE 1: EXISTING CAPACITY LIMITS & STREET CAPACITY RANGES

STREET CLASSIFICATION	EXISTING CAPACITY LIMITS (vehicles/day)	PROPOSED STREET CAPACITY RANGES (vehicles/day)
Arterial	30,000	20,000 – 35,000
Industrial Arterial	30,000	10,000 – 30,000
Local Arterial	15,000	15,000 – 20,000
Parkway	N/A	20,000 – 35,000
Urban Boulevard	N/A	17,500 – 25,000
Neighbourhood Boulevard	N/A	12,500 – 22,500
Primary Collector[1]	10,000 – 12,500	8,000 – 15,000
Activity Centre Street		3,000 – 15,000
Collector[1]	5,000 – 5,500	2,000 – 8,000
Industrial Collector	10,000	3,000 – 12,000
Residential[1]	1,000 – 1,500	2,000

1. Streets identified in the Environmental Capacity Guidelines for Roadways Policy (TP009)