











ALEXANDRIA COMPLETE STREETS DESIGN GUIDELINES

CONTENTS

1-1 Chapter 1: Overview

- 1-2 Vision
- 1-2 Guiding Principles
- 1-3 Supporting Policies and Documents

2-1 Chapter 2: Street Types

- 2-2 Street Typology Overview
- 2-3 Functional Classification
- **2-4** Alexandria Street Typology
- 2-13 Street Overlays
- **2-14** Using Street Types in Complete Streets Design

3-1 Chapter 3: Sidewalks

- 3-3 Sidewalk Zones
- **3-5** Preferred Widths for Sidewalk Zones
- 3-7 Features to Activate Sidewalks
- 3-17 Sidewalk Materials
- 3-21 Street Trees
- 3-25 Plantings and Stormwater Management
- 3-31 Wayfinding and Street Furnishings
- 3-48 Street Lights

4-1 Chapter 4: Roadways

- 4-2 Safe Speeds
- 4-3 Minimum Lane Widths
- **4-4** Design Features that Reduce Operating Speeds
- 4-9 Travel Lanes
- 4-15 Transit Lanes
- 4-22 Bicycle Facilities

5-1 Chapter 5: Intersections

- **5-5** Intersection Geometry
- 5-16 Crosswalk Design
- 5-19 Guidelines for Crosswalk Installation
- **5-27** Signalized Intersections
- 5-32 Transit Accommodations at Intersections
- 5-35 Transit Prioritization at Intersections
- 5-40 Bicycle Accommodations at Intersections

6-1 Chapter 6: Curbsides

6-2 Multimodal Parking

Acknowledgements

Technical Advisory Committee Members

Hillary Orr, Project Manager,

Transportation and

Environmental Services (T&ES)

Steve Sindiong, T&ES

Raymond Hayhurst, T&ES

Patrick Reed, T&ES

Carrie Sanders, T&ES

Bob Garbacz, T&ES

Maha Gilini, T&ES

Matt Melkerson, T&ES

Jesse Maines, T&ES

Lisa Jaatinen, T&ES

Pierre Holloman, T&ES

Jeff Duval, T&ES

Jeff Farner,

Planning and Zoning (P&Z)

Carrie Beach, P&Z

Nathan Imm, P&Z

Jim Roberts, P&Z

Al Cox, P&Z

James Bryant, Information

Technology Services

Tony Gammon, Department of

Project Implementation (DPI)

Daphne Kott, DPI

Chris Balallo, DPI

Katie Leonard,

Department of Health

Dana Wedeles, Department of

Recreation, Parks and Cultural

Activities (RPCA)

Beth Znidersic, RPCA

Maurice Jones,

Fire Department

Mike Hatfield,

Office of Human Rights

Consultant Team

Prime Consultant: Toole Design Group

Subconsultant: Nelson/Nygaard

Portions of these Guidelines were derived from the Boston Complete Streets Guidelines, prepared by the City of Boston Transportation Department, with permission.

Intent Of The Guidelines

The intent of the Complete Streets Design Guidelines is to ensure that Alexandria's streets meet the needs of all users, including pedestrians, bicyclists, transit users, drivers, residents, workers, visitors, and business owners. The Guidelines are intended to clearly communicate expectations regarding the design of the City's public and private streets.

Many of Alexandria's recent Small Area Plans have called for a green street approach that combines street design with environmental mitigation (i.e. reductions in impervious surfaces, onsite stormwater treatment, and other measures). As a part of the City's efforts to meet environmental goals, green street elements and best management practices (BMPs) have been incorporated into these Guidelines.

The City of Alexandria endorsed the *National Association of City Transportation Officials (NACTO) Urban Street and Bikeway Design Guides* on August 13th, 2015. These guides form the basis of the street design guidance contained in this document and are important reference documents for street design. In addition, the Alexandria Complete Streets Design Guidelines are consistent with, and have been developed to supplement, existing engineering and environmental manuals and standards including the Manual of Uniform Traffic Control Devices (MUTCD) and guidance issued by the American Association of State Transportation Officials (AASHTO).

These Guidelines apply to all street projects in the City. The Guidelines are designed to be comprehensive, covering all aspects of street design. Where necessary, these Guidelines refer the reader to other City policies and design guides.

The Guidelines were formed around the current best practices in street design in Alexandria, the metropolitan DC area, and around the world. As such, they are intended to evolve and adapt to incorporate new treatments and techniques as they are developed and proven. The Guidelines encourage tailoring designs to meet the needs relevant to each neighborhood context. These guidelines are therefore intended to be flexible and responsive to unique site circumstances. In all cases, street design will be subject to staff approval based on these design guidelines and professional judgment.

Audience

The Guidelines are a resource for City departments, design professionals, and private developers and their consultants. Though not intended as a primary audience, they may also serve as reference for elected officials, neighborhood groups, advocates, and interested residents.

Process for Design Exceptions

Many aspects of design require coordination with various City departments and commissions. These departments and commissions are responsible for approving various aspects of street design, as specified throughout this document.

In cases where a modification is desired, applicants should submit a completed Alexandria Design Exception form. All exceptions must be signed off on by the Director of the Department of Transportation and Environmental Services or the relevant department.

At the discretion of the department responsible for reviewing the modification, additional information may be required beyond that which is included in the City form.

OVERVIEW



Complete Streets are streets that are designed to work for all users. On any given street this may include pedestrians, transit users, bicyclists, and motor vehicle drivers of all ages and abilities. Complete streets are a cornerstone of Alexandria's vision for maintaining and enhancing the City's livability and quality of life. Alexandria's streets have

evolved over centuries of growth and development. Some areas of the city are easily experienced on foot or by bicycle, while other areas are oriented toward motor vehicles. The Guidelines include designs that rebalance the use of Alexandria's streets so that walking, bicycling and transit are safe and are top priorities for the City.

Vision

Streets are vital to the health, mobility, and accessibility of Alexandria's residents, workers, and visitors. Alexandria aspires to have a comprehensive, integrated transportation network with design that allows safe and convenient travel for people of all ages and abilities, including children, older adults and individuals with disabilities. The network should accommodate all users, including pedestrians, bicyclists, transit users, and motorists and incorporate green infrastructure to enhance the city's environmental quality.

Guiding Principles

The vision is implemented through complete street design guidance that follows and advances five core principles:



ACCOMMODATE ALL MODES OF TRAVEL

Alexandria's streets should be safe and convenient for people walking, bicycling, taking transit and using motor vehicles. Projects that impact the public right-of-way will consider the characteristics of all modes of travel so that all users are safe and comfortable.



HEALTH AND SAFETY FOR ALL USERS

Street design in Alexandria should take into account the safety of all users, including children, older adults and individuals with disabilities with a particular emphasis on the protection of vulnerable road users. Alexandria's streets should encourage walking, bicycling and taking transit as safe, convenient modes of transportation that promote health and independence for all people. Street design will minimize impacts of traffic and strive to protect all users.



NEIGHBORHOOD AND ECONOMIC VITALITY

Alexandria is a city of great neighborhoods. Street design will help to support sustainable neighborhoods by providing more efficient multimodal access between destinations and by creating neighborhoods that attract people and strengthen local economies.



PLACEMAKING AND NEIGHBORHOOD CHARACTER

Streets represent the largest public resource by area in Alexandria. Their design and function should enhance the public realm and create multifunctional places that attract people and commerce. Street design should maintain, and in some cases accentuate, the history and identity of each neighborhood and commercial district while allowing for flexibility in design to strengthen the attributes that make these areas unique.



SUSTAINABLE DESIGN

Transportation projects should emphasize design techniques that reduce lifecycle costs and integrate green infrastructure to improve street tree health, treat stormwater runoff, and improve environmental quality.

Supporting Policies and Documents

Relationship between the Alexandria Complete Streets Guidelines and Small Area Plans:

The Complete Streets Guidelines are intended to supplement the Small Area Planning Process. There are a variety of Small Area Plans (see list and links below) that pre-date the Complete Streets Guidelines. Some of these Small Area Plans address street design. On matters of basic design policy (dimensions, allowable materials, accessibility, design measures related to safety), the Complete Streets Guidelines supercede guidelines found in Small Area Plans. On matters of aesthetic design treatments, or where specific design elements have been selected for consistency and context (for example street tree choices, bench and lighting types, and other similar design issues, Small Area Plans should be followed.

Future Small Area Plans should not conflict with this Guide and should refer to this Guide for more detail on street design.

Small Area Plans that pre-date the Complete Streets Guidelines include the following:

Alexandria Master Plan (and Small Area Plans) http://alexandriava.gov/planning/info/default.aspx?id=44614

- MVA Business Area Plan
- Carlyle Streetscape Design Guidelines
- Etc.

For a map of Alexandria's Small Area Plans, click here.

Complete Streets Policy

https://alexandriava.gov/uploadedFiles/tes/info/1-6-2010%20Complete%20Streets%20update%281%29.pdf

Comprehensive Transportation Master Plan http://alexandriava.gov/tes/info/default.aspx?id=3088

Pedestrian and Bicycle Mobility Plan https://www.alexandriava.gov/uploadedFiles/tes/ info/FINAL_FULLPLAN_060108.pdf **Eco-City Charter 2008**

https://www.alexandriava.gov/uploadedFiles/tes/info/FINAL_FULLPLAN_060108.pdf

Environmental Action Plan 2030

http://alexandriava.gov/uploadedFiles/tes/eco-city/EAP_FINAL_06_18_09.pdf

Energy and Climate Change Action Plan http://alexandriava.gov/uploadedFiles/tes/ eco-city/DraftEnergyClimateActionPlan03.14.2011. pdf

2010 Strategic Plan

https://alexandriava.gov/uploadedFiles/council/info/ApprovedStrategicPlan.pdf

Green Sidewalks BMP Design Guidelines http://alexandriava.gov/uploadedFiles/tes/info/ GreenSidewalksBMPDesignGuidelines%20.pdf

Landscape Guidelines

https://alexandriava.gov/uploadedFiles/recreation/info/040907 land guidelines.pdf

Urban Forestry Master Plan

https://www.alexandriava.gov/uploadedFiles/recreation/info/UFMP%20Final.pdf

Natural Resource Management Plan

http://alexandriava.gov/recreation/info/default.aspx?id=48838

Citywide Parks Improvement Plan

http://alexandriava.gov/recreation/info/default.aspx?id=65170

Water Quality Management Supplement

https://alexandriava.gov/uploadedFiles/planning/info/masterplan/Alexandria_Water_Quality_Master Plan 2001.pdf