

EXHIBIT B

B. General Information

The purpose of the *Specifications and Standards for Roadways and Bridges in Prince George's County, Maryland (Specifications and Standards)* is to promote uniform and consistent criteria, standards, and practices for the construction of roadways in Prince George's County, Maryland (the County). Section I serves as a guide to Permittees and their engineers, County Department of Public Works and Transportation (the Department) staff reviewers and designers, and consultants. It is intended for use, in conjunction with the requirements set out in Section II, "Technical Specifications," and Section III, "Standard Roadway Sections and Details," and regulations and policies of the Department, as well as applicable State and Federal standards, for the design and construction of a roadway system that is safe, efficient, durable, aesthetically pleasing, and environmentally acceptable.

The engineering data and recommendations presented herein are intended to represent acceptable standards for routine designs in normal circumstances. For Regional Transit Districts and Local Centers, the Urban Street Design Standards in Table I-1.5 and Exhibit A shall apply. The Table I-1.5 and Exhibit A standards may also be used elsewhere in the county. The user of this document should be alert, however, to the existence of special or nonstandard situations involving roadway design. Any departures from normal circumstances should be considered in consultation with Department reviewing engineers. Lowering of the acceptable standards established herein should be avoided unless there is a reasonable expectation that the situation will be upgraded at a future time to conform to these standards and it is evident that the lowered standards will fully meet the needs of the design requirements and predicted traffic volume for the life of the development without jeopardizing safety.

NOTE: For all roadways in Regional Transit Districts and Local Centers Urban Street Design Standards shall be used, see Table I-1.5 in Section I, and Exhibit A

NOTE: Any lowering of standards from those prescribed in this document shall occur only with the prior written approval of the Department Director.

Departures from these standards that result in consistently higher standards and innovative solutions promoting traffic safety, and roadway durability and capacity, are encouraged.

NOTE: In all cases, roadway designs prepared for use in Prince George's County are subject to final review and approval by the Department Director.

These *Specifications and Standards* govern the design and construction work done in relation to Prince George's County Capital Improvement Program (CIP) projects and construction contracts administered by the Department, except in those instances referenced in such contracts. The scope of services to be performed under a departmental design contract, the design approval criteria, and the exact work to be performed under a departmental construction contract will be established by the Department Offices of Engineering, Highway Maintenance, Project Management, and/or Transportation, using the guidelines, specifications, and standards provided in these

specifications.

1. Definitions

The technical, geometric, structural, and design terms used in these *Specifications and Standards* shall have the meanings stated in the *Standard Specifications for Construction and Materials* of the Maryland State Highway Administration (MSHA), and the Prince George’s County Code, Subtitle 23. Where not defined therein, those terms shall have the meanings established by the American Association of State Highway and Transportation Officials (AASHTO) and the American Society for Testing and Materials (ASTM).

In addition, certain terms that are used in this document, pertaining to areas outside Regional Transit Districts and Local Centers, shall be defined as follows:

Arterial roadway—A through roadway with four to six traffic lanes divided by a median and designed to carry higher traffic volumes where parking and direct access are generally prohibited, and entrances, intersections, and median crossings are placed at wide intervals

Major Collector roadway—A through roadway with four traffic lanes divided by a median and designed to carry moderate traffic volumes where parking is generally prohibited and direct property access is limited

Collector roadway—A through roadway with four traffic lanes divided by a painted centerline and designed to carry moderate traffic volumes where parking is generally prohibited and direct property access is limited

Commercial roadway—A roadway designed with sufficient strength to serve adjacent properties with commercial zoning designations; low-volume two-way traffic lanes may be accommodated, as well as some on-street parking, unless otherwise prohibited

Department—The Prince George’s County Department of Public Works and Transportation

Industrial roadway—A roadway designed with superior strength to accommodate all industrial-related vehicles and serve adjacent properties having industrial zoning designations; high-volume two-way traffic lanes may be accommodated where on-street parking is prohibited

Residential roadway—A local roadway designed to accommodate light vehicle traffic and to serve adjacent property having residential zoning classifications

Road Ordinance—Subtitle 23 of the Prince George’s County Code

For roadways and related facilities inside Regional Transit Centers and Local Centers, the additional urban street types defined in Exhibit A Urban Street Design Standards, July 2023, and summarized in Table I-1.5 shall be used. The additional urban street type standard may be used in the rest of the county. Current street type standards are prohibited in Regional Transit Districts and Local Centers.

2. Abbreviations

The abbreviations listed in GP-Section 1, Item 1.04, of the *MSHA General Provisions for Construction Contracts*, latest edition, are adopted.

Chapter 2

Objectives and Road Classifications

A. Objectives

The general intention of these roadway classifications is to meet ~~[three]~~ objectives. First, new roadway construction or reconstruction shall result in roadways that are safe and that promote mobility for auto, pedestrian, bicycle, public transit, and all other elements of the traveling public. ~~[Second, to the extent possible, sufficient roadway capacity should be developed to accommodate existing local and regional traffic as well as that anticipated by recognized future traffic projections. Third, t]~~These objectives should be attained in a manner that is aesthetically pleasing, with minimal adverse impact on the environment, including all lands adjoining the roadway. Because the primary objective is safety, all aspects of roadway design and construction (including hiker/biker trails, sidewalks, and street lighting) are expected to adhere to minimum nationally recognized standards. Where it is practical and consistently attainable, the highest level of safety should be sought by exceeding these minimum standards.

Subject to the foregoing, all roadway design and construction must meet the additional objectives of providing a safe, durable, low maintenance, right-of-way area that is free of clutter, drainage problems, and other nuisances in a high-quality and visually pleasing environment. In all cases, the Department Director or a duly authorized representative shall have final approval authority for all proposed

roadway improvement projects within County rights-of way.

B. Road Classifications

The following are the functional classifications of roadways in Prince George's County. Urban classifications are closed section (e.g., with curb and gutter) and rural classifications are open-section (e.g., no curb and gutter) roadways. For appropriate widths and rights-of-way, see Table I-1. and Table I-1.5 in Section I. The Urban Street Design Standards defined in Exhibit A and Table I-1.5 shall control in the event of any conflicts between these standards and the road classifications cited here.

1. Arterial Road (Urban and Rural)

A through roadway which links principal State highways, or County arterial or collector roads. An arterial road:

- Is intended to serve major centers of activity in urban and rural areas and to carry the highest traffic volumes of County roadways;
- Separates opposing traffic with a median of sufficient width to contain exclusive left-turn lanes and to allow crossing vehicles to clear one-half of the roadway and wait safely in the median before entering the other half;
- Provides four or six through lanes; • Generally prohibits on-street parking and direct

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- private property access; where allowed, such parking and access are supported by additional lanes and specially approved entrances;
- Provides controlled access, limited to widely spaced entrances, intersections, and median crossings; with left turn, acceleration, and deceleration lanes; and signals provided as necessary;
 - May use curbed or open drainage construction in both the median and roadside areas, depending on the setting and conditions of connecting roads; and • In urban areas only, may provide either sidewalks or hiker/biker trails for pedestrian use.

Chapter 3
Road Design Guidelines and Criteria

A. Design

1. Design Speeds, Radii, Grades, and Sight Distances

For purposes of designing safe roadways, the geometric and sight distance values recommended in Table I-2 should be used. They are derived from the applicable AASHTO criteria. In accordance with AASHTO publications, the designer is expected to make a reasonable effort to provide sight distances equaling or exceeding those stated herein or as appropriate to the approved design speed throughout the length of the roadway under design.

Bearing in mind the goal of consistent driver expectation, the designer should use consistent standards to discourage driving at excessive speeds when transitioning onto roads with more restrictive standards. Specific situations, however, may allow other design speeds and provisions for corresponding sight distances, in consultation with Department reviewing engineers. The designer has latitude to submit designs based on other speeds if supported by recognized, authoritative references for the expected future traffic situation.

In urban situations and when approaching all intersections, necessary stopping sight distances require that pavement geometry, markings, and other traffic controls be visible sufficiently in advance for vehicle operators to stop their vehicles before they reach objects in their paths. Drivers should be able to comply without having to make abrupt maneuvers.

NOTE: For all roadways in Regional Transit Districts and Local Centers Urban Street Design Standards shall be used, see Table I-1.5 in Section I, and Exhibit A

NOTE: See Table I-2 at the end of Section I for recommended radii, grades, and stopping sight distances.

Stopping sight distance is measured from a height of 3.5 feet (equivalent to a driver's eye) to the height of a 2-foot object lying on the surface of the road. Intersection sight distance is measured from a point on the minor roadway at least 15 feet from the edge of the major roadway pavement and measured from a height of 3.5 feet on the minor roadway to a 3.5-foot-high object in the major roadway. Both of these values must be considered at a driveway or intersection located near vertical or horizontal curves.

These eye-height and object-height criteria are established in the AASHTO Policy on Geometric Design of Highways and Streets, latest edition, which shall be used as the principal authority to justify any variance of design elements from these recommendations. The designer shall make a reasonable effort to provide sight distances equal to or exceeding those established by the applicable AASHTO publication.

The minimum centerline grades for all classes of roads are:

- 1 percent for urban (curbed) roads; and
- 2 percent for rural (side ditch or swale-drained) roads in cuts.

Where it will be necessary to allow surface flow across an intersection to drain to a curb return, the minimum grade of the roadway parallel to the swale shall not be

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Table I-1.5**

Urban Street Type Standards for Regional Transit Districts and Local Centers

The additional urban street type standards shall be used in Regional Transit Districts and Local Centers, they may be used in the rest of the county. Current street type standards are prohibited in Regional Transit Districts and Local Centers.

Source: Prince George’s County Department of Public Works and Transportation, 2017 Urban Street Design Standards.

Additional Urban Street Type*	Right of Way***	Design Speed**	Total # of Travel Lanes	Maximum Lane Widths	Median Width***	Minimum Buffer	Maximum Turning Radius****	On Street Parking	Minimum Sidewalk	Bike Facility
Mixed Use Boulevard (A) -2 Travel Lanes	99' (89') (83')	25 mph	2	10' (11' if bus route)	16' (6')(0')	6'	15'	8'	8'	6.5' separated bike lane
Mixed Use Boulevard (B) -2 Travel Lanes	92' (82') (76')	25 mph	2	10' (11' if bus route)	16' (6') (0')	6'	15'	8'	8'	5' bike lane
Mixed Use Boulevard (A) -4 Travel Lanes	119' (109')	25 mph	4	10' (11' if bus route)	16' (6')	6'	15'	8'	8'	6.5' separated bike lane
Mixed Use Boulevard (B) - 4 Travel Lanes	116' (106')	25 mph	4	10' (11' if bus route)	16' (6')	6'	15'	8'	8'	5' bike lane with 2' painted buffer
Mixed Use Boulevard – Transit priority – 4 Travel Lanes*****	119' (109')	25 mph	2-4	10' (11' if bus lane)	TBD	6'	15'	8'	8'	6.5' separated bike lane
Mixed Use Boulevard (A) – Center Turn Lane	93'	25 mph	2	10' (11' if bus route)	none	6'	15'	8'	8'	6.5' separated bike lane
Mixed Use Boulevard (B) – Center Turn Lane	86'	25 mph	2	10' (11' if bus route)	none	6'	15'	8'	8'	5' bike lane
Neighborhood Connector (A)	83' (75')	20-25 mph	2	10'	none	6'	15'	8'	8'	6.5' separated bike lane
Neighborhood Connector (B)	66' (58')	20-25 mph	2	10'	none	6'	15'	8'	8'	Option to add 5' bike lane
Neighborhood Residential	60' (53')	20 mph	2	10'	none	6'	15'	7'	6'	Option to add 5' bike lane
Industrial Street	48' (57')	20 mph	2	11'	none	6'	15'	(9')	6'	none
Shared Street	50'	10 mph	2	10'	none	6'	15'	none	8'	none
Alley	20'	10 mph	1	10'	none	none	15'	none	none	none

* Streets in Regional Transit Districts and Local Centers

** For additional horizontal and vertical design constraints relevant to these designs speeds, refer to AASHTO: A Policy on Geometric Design of Highways and Streets

*** Figures in parenthesis indicate alternative configurations related to reduction in median width or optional on-street parking shown in the standard details.

**** Slip lanes and multiple left turn lanes prohibited.

***** Transit Priority cross-section details to be determined by Department of Public Works and Transportation, and NACTO sources