



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

ROADWAY DESIGN DIVISION
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CLAY BRIGHT
COMMISSIONER

BILL LEE
GOVERNOR

INSTRUCTIONAL BULLETIN NO. 21-12

Regarding Revised MM Standard Drawings and Roadway Design Guidelines - Chapter 3

Effective on June 17, 2022 Letting (June 8, 2022 turn-in), the following Standard Drawings and Chapter 3 – Section 3-502.00 Bicycle Facility Selection of the Roadway Design Guidelines have been revised. In addition, Chapter 10 - Index of Standard Drawings of the Roadway Design Guidelines have been updated accordingly and available on the Design Division’s web site.

Revised Standard Drawings:

10-105.00 MULTIMODAL

10-105.05 TYPICAL SECTION

DRAWING NUMBER	REVISION DATE	DESCRIPTION
MM-TS-1	06-15-2021	BIKE ACCOMMODATION DESIGN GUIDANCE
MM-TS-2	06-15-2021	LATERAL OFFSETS FOR SIDEWALK AND SHARED USE PATH
MM-TS-3	06-15-2021	SEPARATED SHARED USE PATH TYPICAL SECTIONS
MM-PM-3	06-15-2021	SIGNING AND PAVEMENT MARKING FOR BIKE LANES ON URBAN ROADWAYS

Roadway Design Guidelines Chapter 3: Multimodal Design revised as follows:

3-502.00 BICYCLE FACILITY SELECTION

Bicycle facility selection is influenced by, bicyclist needs, range, connectivity, efficiency, and safety of cyclist. Roadway Standard Drawing MM-TS-1 provides the minimum bicycle accommodation guidance under various ADT volumes and posted speeds for rural and urban cross sections.

These standard drawings are located on the web site and in Chapter 3 and 10 of the Design Guidelines and can be found in the following links.

Standard Drawings:

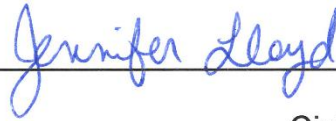
<https://www.tn.gov/content/tn/tdot/roadway-design/standard-drawings-library/standard-roadway-drawings.html>

Chapter 10 - Index of Standard Drawings is available online at this location:

https://www.tn.gov/content/dam/tn/tdot/roadway-design/documents/design_guidelines/DG-C10.pdf

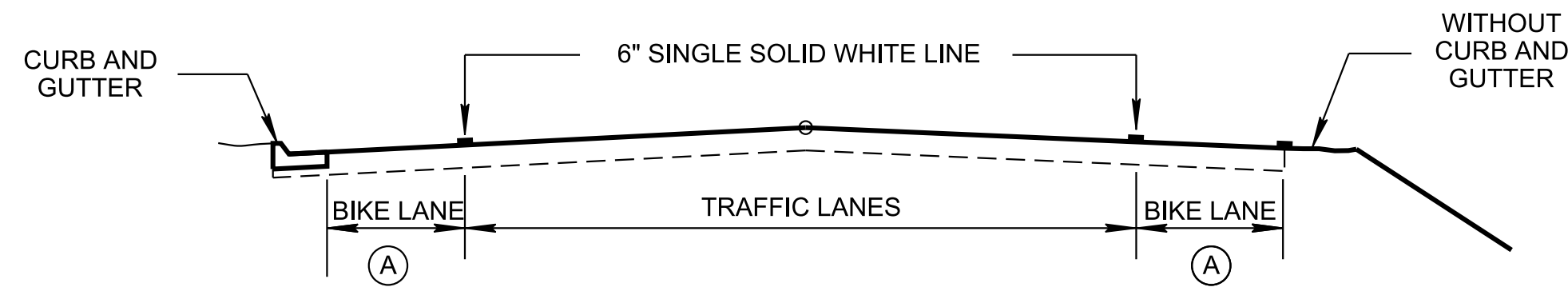
Chapter 3 – Multimodal Design is available online at this location:

https://www.tn.gov/content/dam/tn/tdot/roadway-design/documents/design_guidelines/DG-C3.pdf

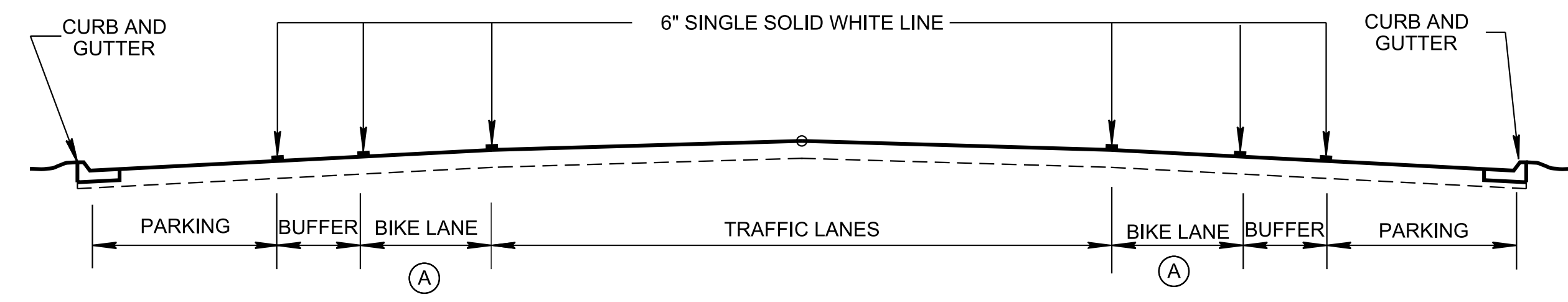
A handwritten signature in blue ink that reads "Jennifer Lloyd". The signature is written in a cursive style and is positioned above a horizontal line.

Jennifer Lloyd, PE
Civil Engineering Director
Roadway Design Division

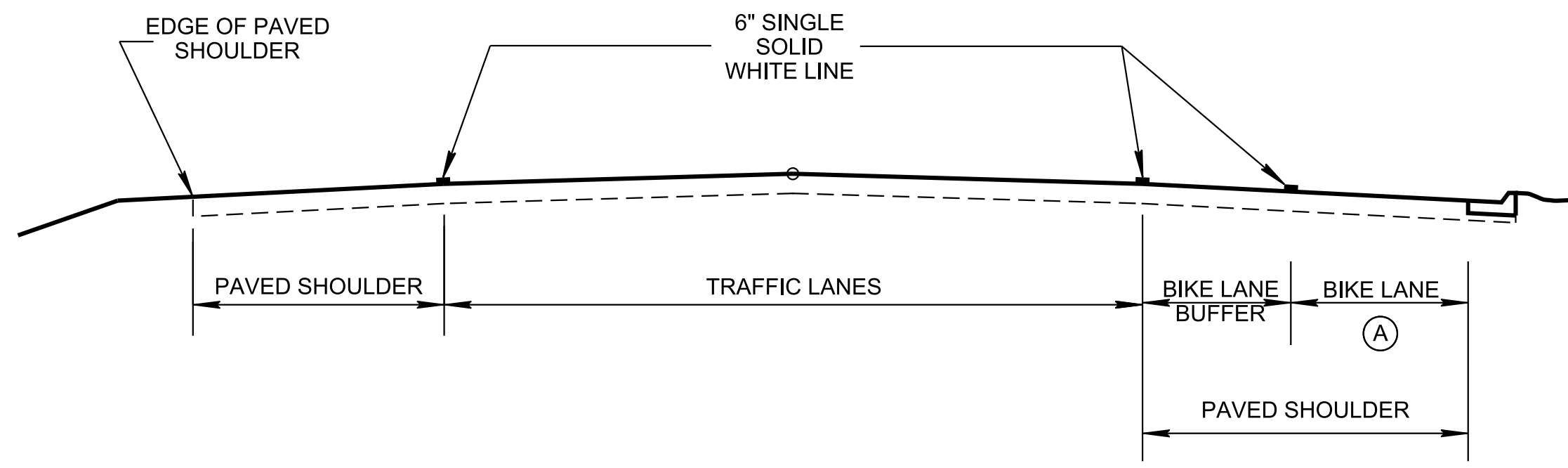
TYPICAL BIKE LANE CROSS SECTIONS FOR URBAN ROADWAYS



2-LANE URBAN AND STREETS WITH BIKE LANE

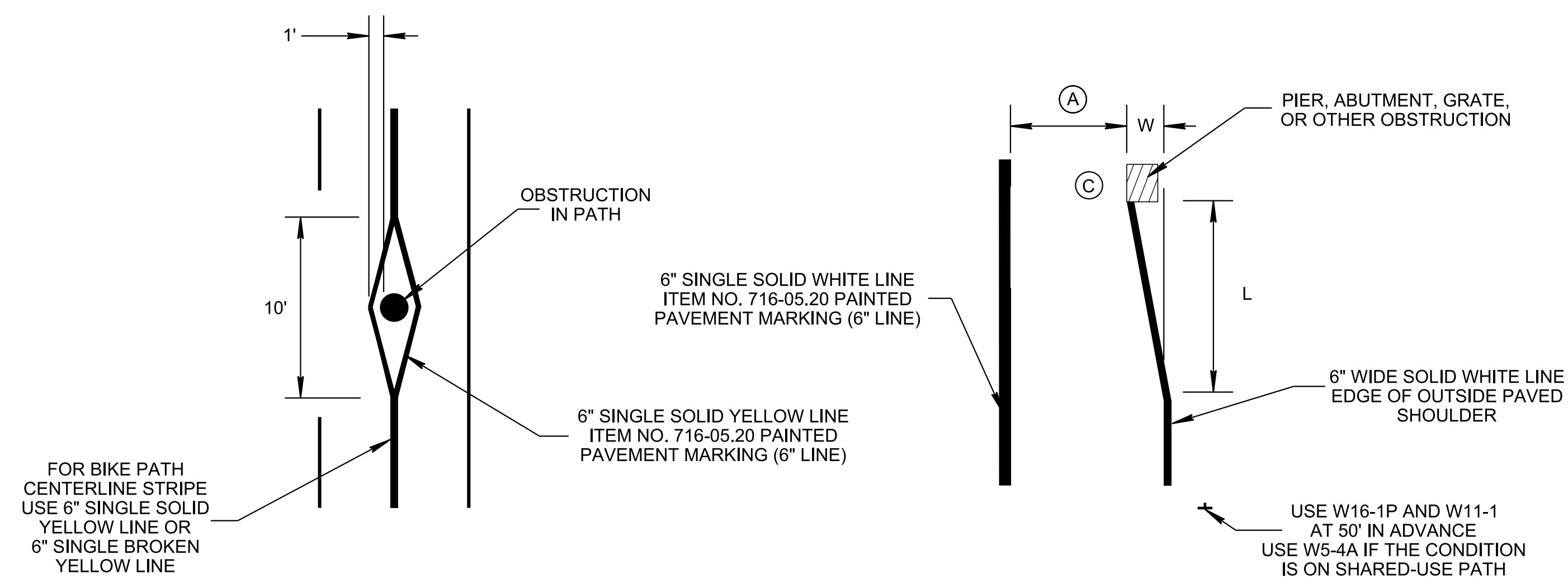


PARKING IS PERMITTED



PARKING IS PROHIBITED

URBAN ROADWAYS WITH BIKE LANE

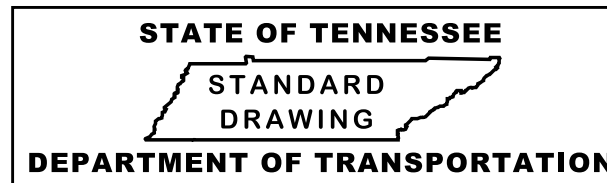


BARRIER POST STRIPING

TYPICAL BIKE LANE MARKING FOR OBSTRUCTIONS

GENERAL NOTES	
(A)	SEE MM-TS-1 FOR BIKE LANE WIDTHS.
(B)	BIKE LANE SIGNS SHOULD BE PLACED APPROXIMATELY EVERY 0.25 MILES AND AT ALL MAJOR INTERSECTIONS.
(C)	WHEN PIER, BRIDGE ABUTMENT, GRATE, OR OTHER ROADWAY OBSTRUCTION INTRUDES IN THE BIKE PATH, THE BIKE LANE SHOULD BE MARKED AS SHOWN; $L = WS$, WHERE "W" IS WIDTH OF THE OBSTRUCTION IN FEET IN BIKE LANE AND "S" IS BICYCLE AVERAGE APPROACH SPEED 20 MPH. PROVIDE AN ADDITIONAL FOOT OF OFFSET FOR A RAISED OBSTRUCTION AND USE THE FORMULA $L = (WS+1)$ FOR THE TAPER LENGTH. SEE SECTION 9C.06 OF THE MUTCD FOR ADDITIONAL INFORMATION.
(D)	ITEM NO. 716-04.13, PLASTIC PAVEMENT MARKING (BIKE LANE SYMBOL AND ARROW), PER EACH, TO INCLUDE BIKE SYMBOL AND ARROW AS ONE QUANTITY.
(E)	BIKE LANES DIRECTLY ADJACENT TO CURB FACE OR OTHER HAZARD SHOULD PROVIDE 5' MIN LANE WIDTH.

(Replaced Std Dwg T-M-12)



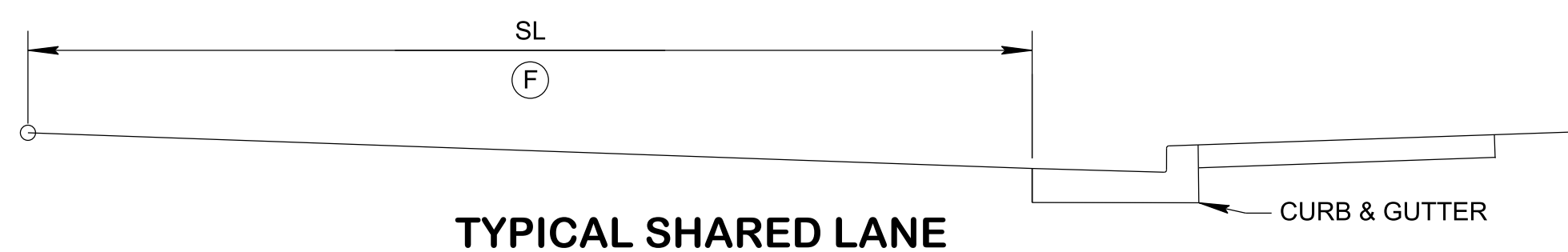
SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES ON URBAN ROADWAYS

7/27/2021 P:\StandDraw\DESIGN STANDARDS\Standards Drawings Library\Standard Roadway Drawings - CURRENT\10-105.00 Multimodal --1105.02 Pavement Markings\Edits\MMPM3-20210615.dgn

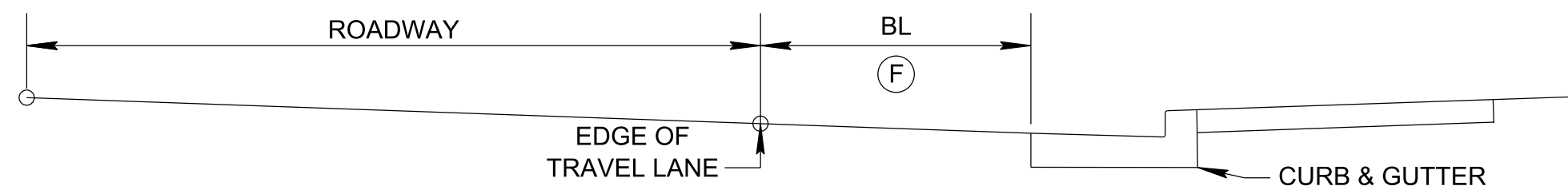
TYPICAL ROADWAY SECTION ELEMENTS TO ACCOMMODATE BIKE FACILITY

URBAN (CURB AND GUTTER)

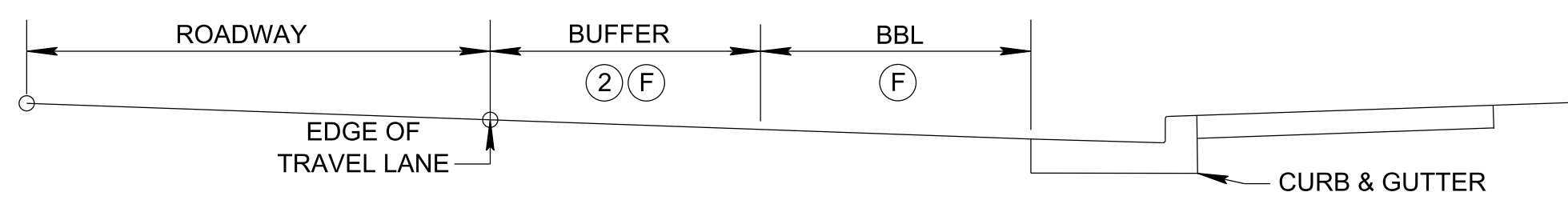
RURAL (SHOULDER AND DITCH)



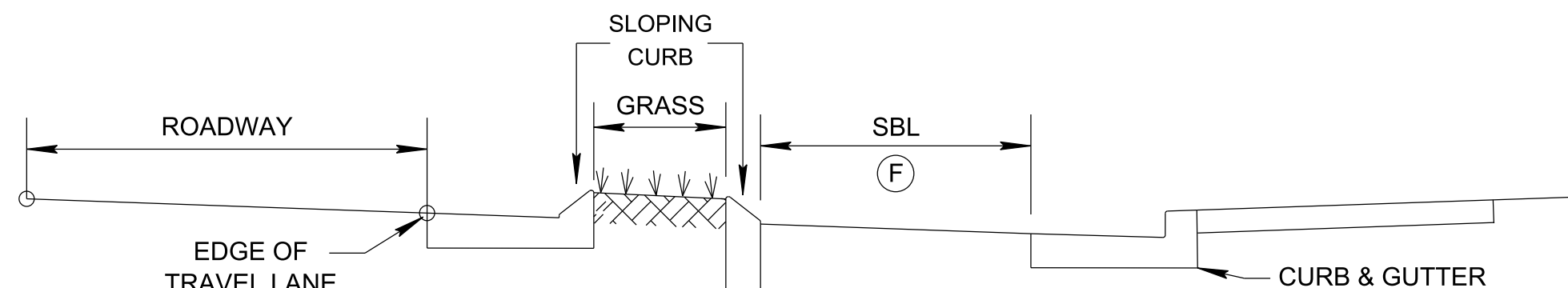
TYPICAL SHARED LANE



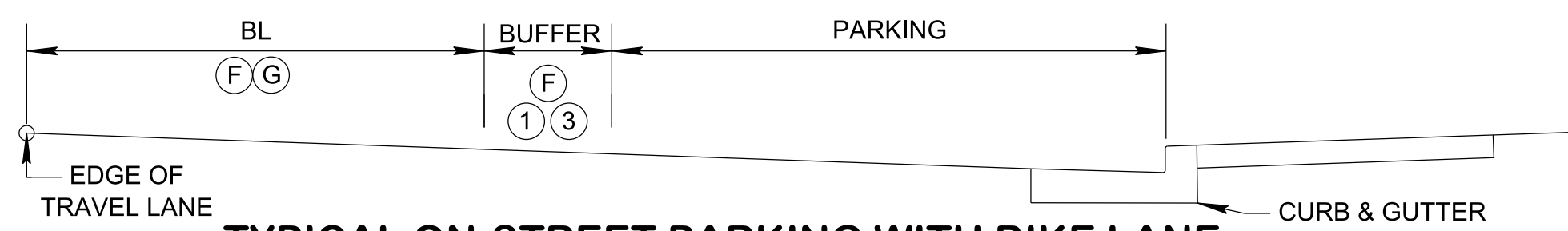
TYPICAL CONVENTIONAL BIKE LANE



TYPICAL BUFFERED BIKE LANE

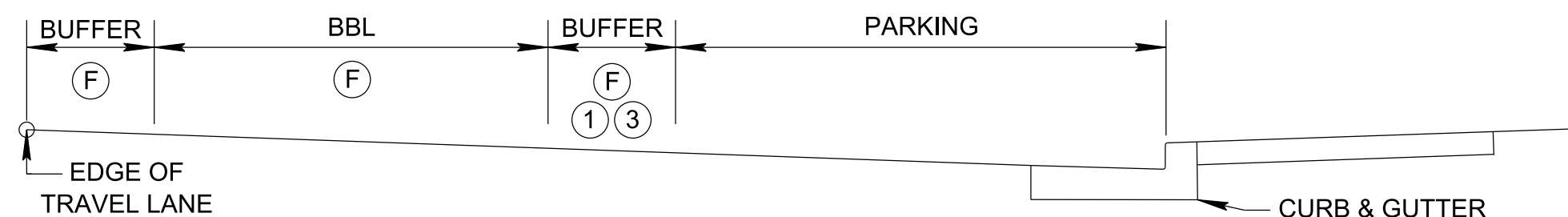


TYPICAL SEPARATED BIKE LANE

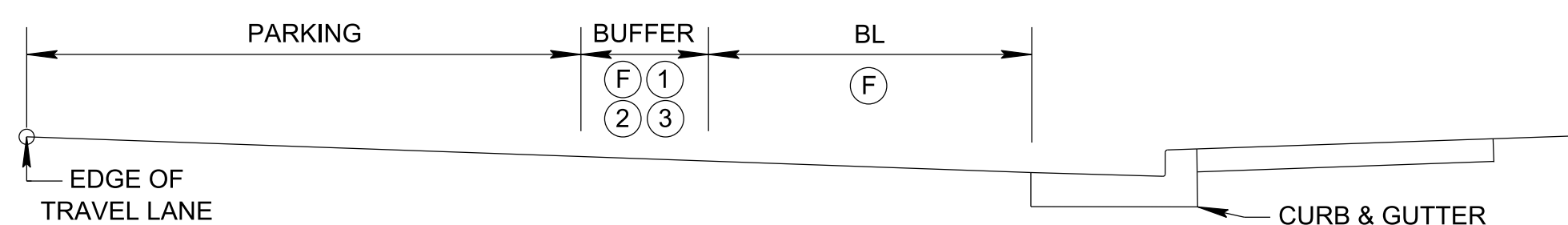


TYPICAL ON-STREET PARKING WITH BIKE LANE

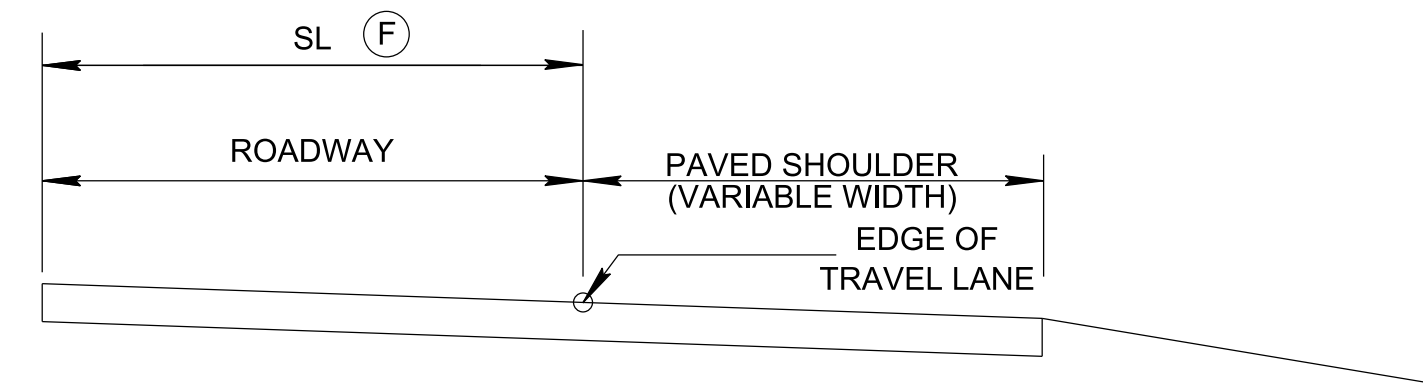
APPROPRIATE WHEN PARKING LANE PROPOSED OR EXISTING AND ROADWAY AADT AND SPEED LIMIT IS APPROPRIATE FOR NO BUFFER BETWEEN BIKE AND TRAVEL LANE



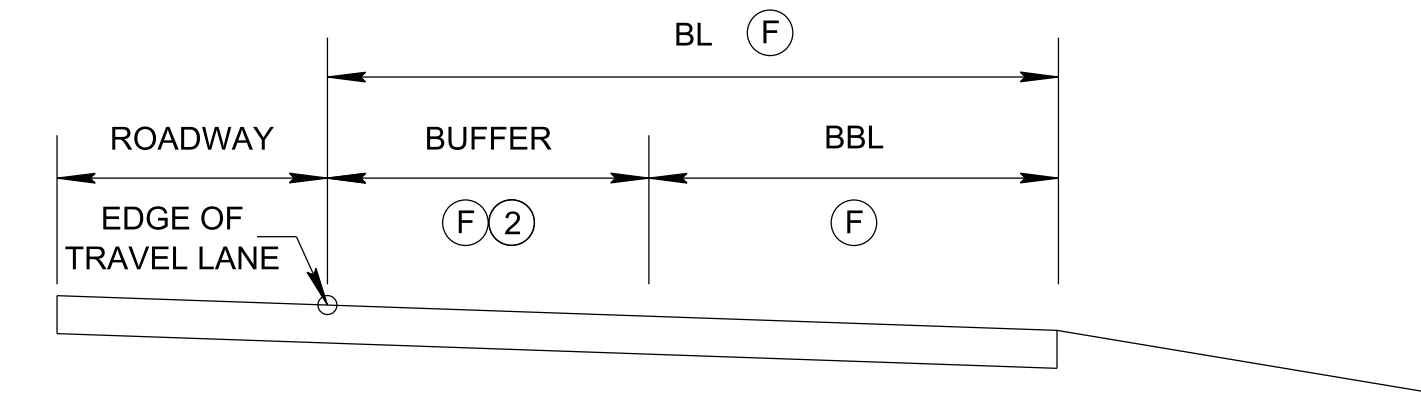
TYPICAL ON-STREET PARKING WITH BUFFERED BIKE LANE



TYPICAL ON-STREET PARKING WITH PROTECTED BIKE LANE



TYPICAL BIKE ACCOMMODATION/ BIKE ROUTE



TYPICAL BIKE LANE

TABLE 1 (C)

MINIMUM BICYCLE FACILITY GUIDANCE FOR URBAN (CURB AND GUTTER) CROSS SECTIONS

ADT		< 2000	2,000 - 20,000	> 20,000
POSTED SPEED LIMITS (D)	≤ 35 MPH	SL	BL (4FT)	BL (4FT)
	40 MPH	BL (5 FT)	BL (5 FT) or BBL (4 FT)	BBL (4 FT) or SBL (5 FT)
	45 -55 MPH	BBL (4 FT) or SBL (4 FT)	BBL (4 FT) or SBL (4 FT)	BBL (4 FT) or SBL (4 FT)
	> 55 MPH	SBL	SBL	SBL

SL = SHARED LANE BBL = BUFFERED BIKE LANE
SBL = SEPARATED BIKE LANE BL = CONVENTIONAL BIKE LANE

TABLE 2 (C)

MINIMUM BICYCLE FACILITY GUIDANCE FOR RURAL (SHOULDER AND DITCH) CROSS SECTIONS

ADT		< 2000	2,000 - 20,000	> 20,000
POSTED SPEED LIMITS (D)	≤ 35 MPH	SL	BL (4FT)	BL (4FT)
	40 MPH	BL (4 FT)	BL (5 FT) OR BBL (4 FT)	BL (5 FT) OR BBL (4 FT)
	> 45 MPH	BL (5 FT)	BBL (5 FT)	BBL (5 FT)

SL = SHARED LANE BBL = BUFFERED BIKE LANE
BL = CONVENTIONAL BIKE LANE WITHOUT BUFFER

TABLE 3 (C)

MINIMUM BIKE LANE BUFFER REQUIREMENTS

ADT		< 2000	2,000 - 20,000	> 20,000
POSTED SPEED LIMITS (D)	40 MPH	2 FT	2 FT	3 FT
	45 -55 MPH	3 FT	3 FT	3 FT
	> 55 MPH	SEPERATED BIKE LANE REQUIRED		

BUFFER NOTES

- BUFFERS ARE REQUIRED WHEN ADJACENT TO ON-STREET PARKING.
- BIKE LANES SHOULD BE LOCATED AS FAR FROM THE TRAVEL LANE AS CONDITIONS ALLOW. BUFFERS LESS THAN 3 FEET SHOULD BE EVALUATED AND SUPPLEMENTED BY DEVICES SUCH AS GROUND MOUNTED DELINEATORS OR SIMILAR DEVICES.
- WHEN A PARKING LANE IS PRESENT, A BUFFER SPACE IS REQUIRED. FOR SPEEDS LESS THAN 35 MPH, THE MINIMUM BUFFER IS 2 FEET.

GENERAL NOTES

- THE INTENT OF THIS DRAWING IS TO PROVIDE MINIMUM BIKE ACCOMMODATION DESIGN GUIDANCE FOR VARIOUS TYPICAL CONDITIONS. TDOT DESIGN GUIDELINES SECTION 3-500.00 SHOULD BE REFERENCED FOR ADDITIONAL INFORMATION AND GUIDANCE. THESE DESIGN STANDARDS ARE TO PROVIDE SAFE AND RELIABLE BICYCLE FACILITIES BASED ON ROADWAY CONDITIONS. THE ABSENCE OF THESE FACILITIES DOES NOT ELIMINATE THE RIGHT OF BICYCLISTS TO USE THE ROADWAY.
- SEE STD. DWG. MM-PM-2 THROUGH MM-PM-5 FOR PAVEMENT MARKING AND SIGNING.
- BIKE LANE AND BUFFER WIDTHS SHOWN ARE MINIMUM REQUIREMENTS, EXCEEDING MINIMUMS IS ALWAYS PREFERRED. PROPOSED DESIGNS THAT DO NOT MEET THE MINIMUMS IN THIS STANDARD REQUIRE DESIGN WAIVER REQUEST FORM BE APPROVED.
- POSTED SPEED IS ASSUMED MINIMALLY 5 MPH LESS THAN DESIGN SPEED FOR ROADWAY.
- REFERENCE: AASHTO GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES, 2019. & NCHRP REPORT 766 - RECOMMENDED BICYCLE LANE WIDTHS FOR VARIOUS ROADWAY CHARACTERISTICS, 2014
- SEE TABLES 1 & 2 FOR BIKE LANE WIDTHS, AND TABLE 3 FOR BUFFER WIDTH REQUIREMENTS.
- IN SCENARIO WHERE PARKING LANE EXISTS BUT AADT & SPEED DOES NOT REQUIRE A TRAFFIC BUFFER, BIKE LANE MINIMUM WIDTH SHALL BE DETERMINED AS IF NO PARKING BUFFER IS PRESENT.

REV. 01-07-19: REVISED DIMENSIONS AND DRAWINGS TO ALIGN WITH DESIGN GUIDELINES SECTION 9-500. ADDED TYPICAL FOR SEPARATED BIKE LANE, BUFFER NOTES, TABLE 1 AND 2. REPLACED GENERAL NOTES (2), (3) AND (4). ADDED GENERAL NOTE (5). REDREW SHEET.

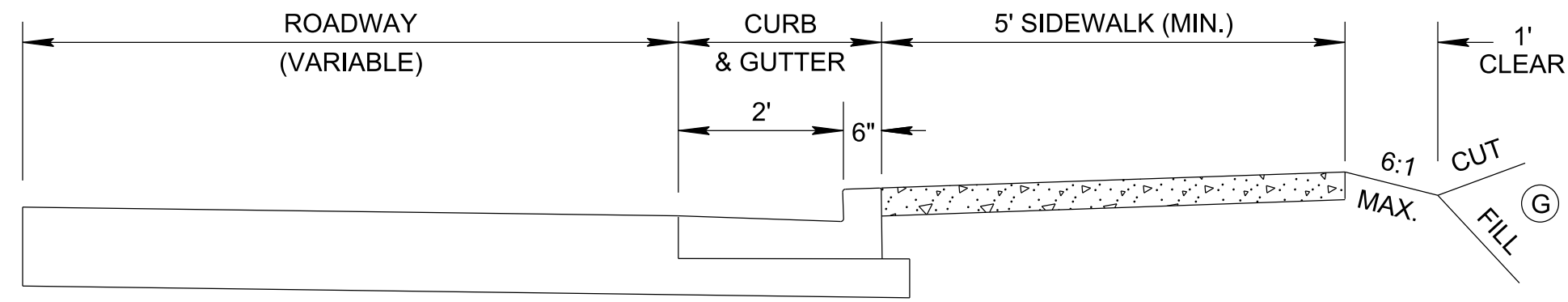
REV. 06-28-19: REVISED TYPICAL FOR SEPARATED BIKE LANE. FIXED SPELLING IN TABLE 1. ADJUSTED FOOTNOTES IN TABLE 2. REVISED BUFFER NOTES NO. (3) AND GENERAL NOTES (A) AND (B).

REV. 06-15-21: REVISED TO EXCLUDE 2FT GUTTER FROM BEING CONSIDERED TRAVERSABLE SURFACE. REVISED ALLOWABLE MINIMUM BIKE AND BUFFER WIDTHS. REVISED TABLE 1 AND 2 AND MADE TABLE 3. ADDED TYPICAL EXAMPLES OF ON-STREET PARKING WITH A BIKE LANE. ADDED NOTE G. REVISED NOTE C. REVISED NOTE E. REVISED NOTE F.

LATERAL OFFSET/BUFFER DETAILS

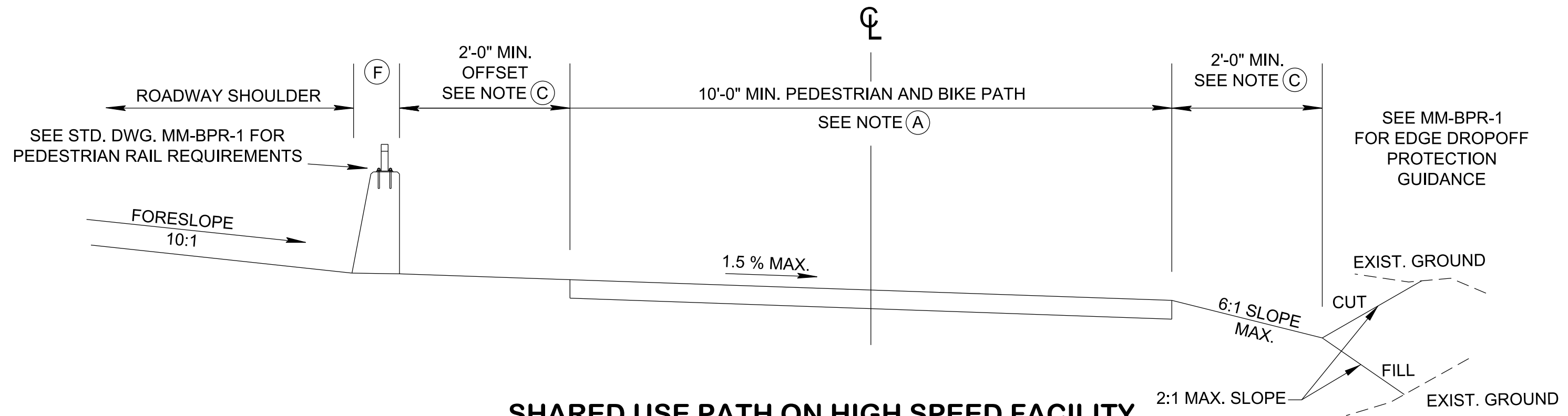
REV. 01-07-19: REVISED DIMENSIONS TO ALIGN WITH SECTION 9 OF DESIGN GUIDELINES. REVISED DRAWING NAME AND THE GENERAL NOTES. REDREW SHEET.

REV. 06-15-21: ADDED EXAMPLE FOR SHARED USE PATH ON HIGH SPEED FACILITY WHEN MINIMUM BUFFER COULD NOT BE MAINTAINED USE POSITIVE PROTECTION.

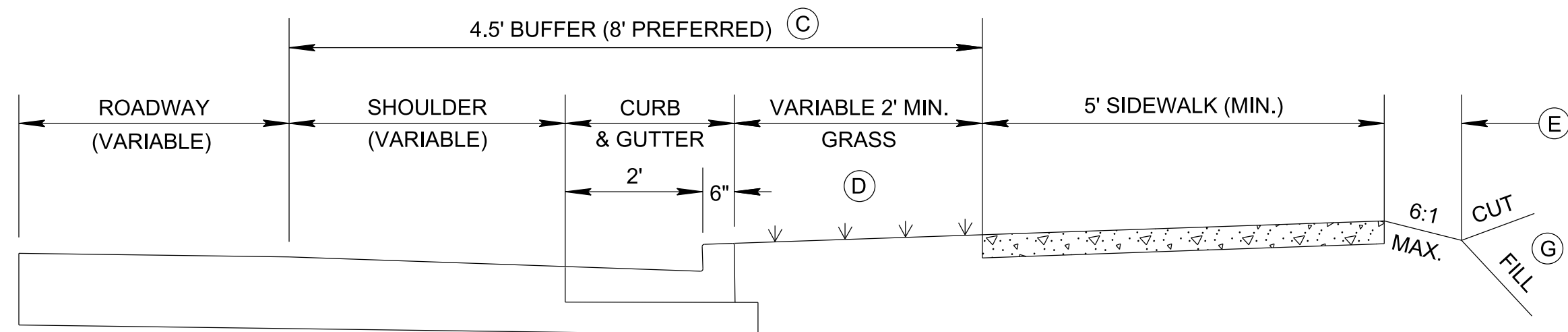


SIDEWALK ADJACENT TO CURB & GUTTER

POSTED SPEEDS ≤ 35 MPH (H)

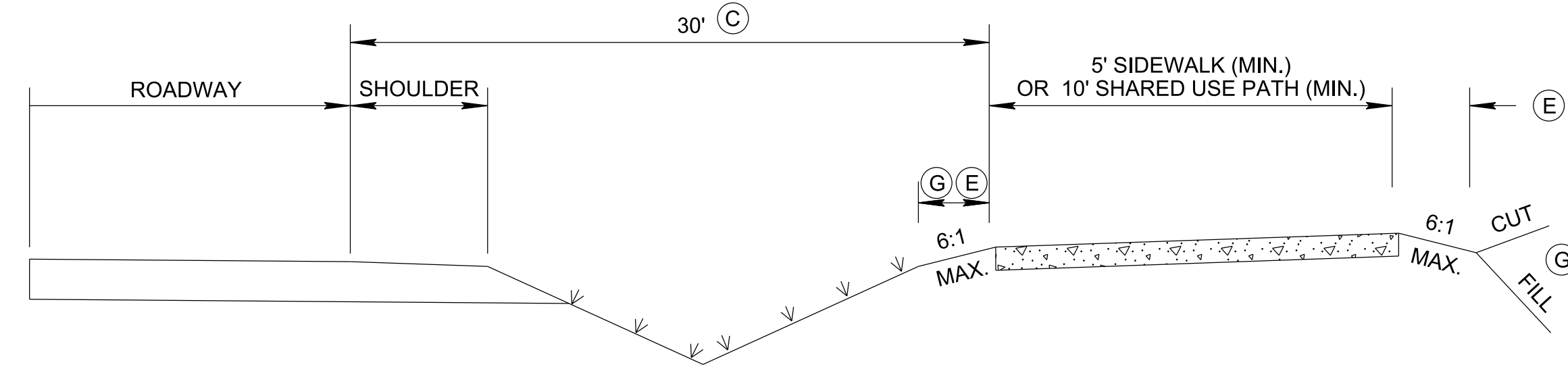


**SHARED USE PATH ON HIGH SPEED FACILITY
WHEN MINIMUM BUFFER (12.5 FT) COULD NOT BE MAINTAINED
USE POSITIVE PROTECTION (K)**

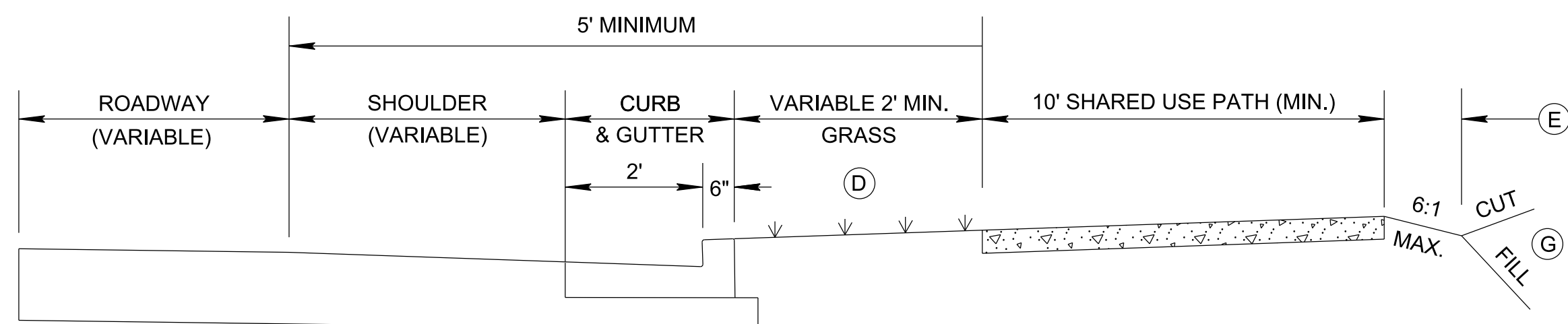


SIDEWALK W/ GRASS STRIP BEHIND CURB & GUTTER

POSTED SPEED = 40 MPH (H)

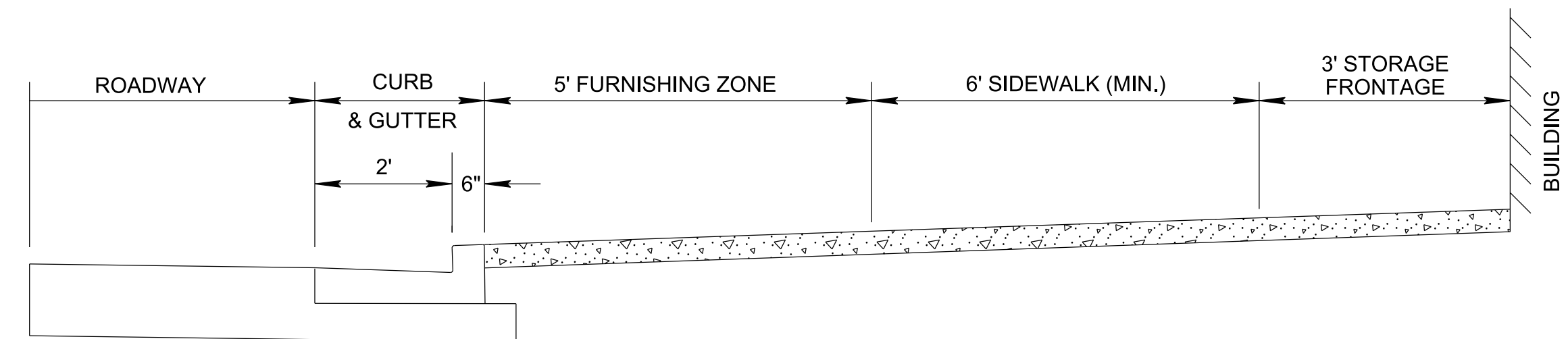


**SIDEWALK OR SHARED USE PATH ON HIGH-SPEED FACILITY
RURAL HIGH SPEED ROADWAYS**



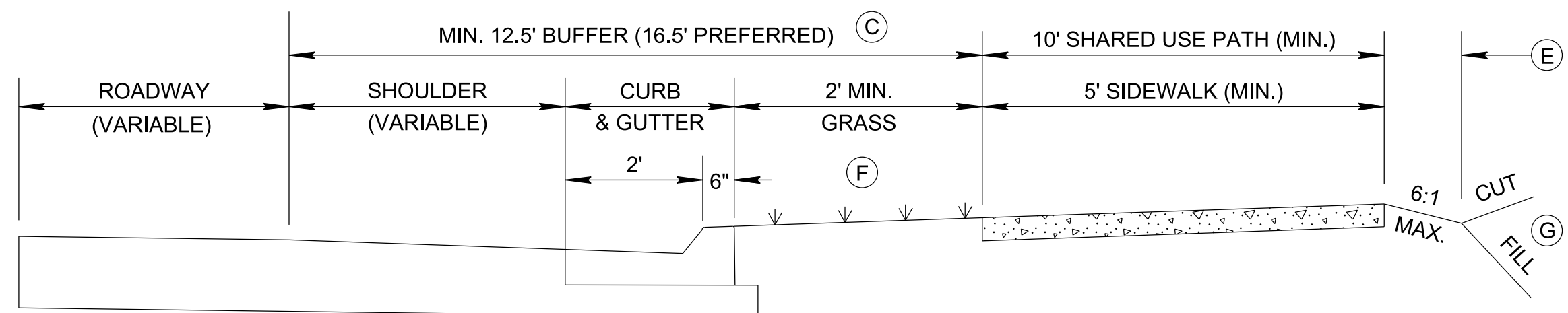
SHARED USE PATH W/ GRASS STRIP BEHIND CURB & GUTTER

POSTED SPEEDS ≤ 40 MPH (H)



SIDEWALK IN CENTRAL BUSINESS DISTRICT/COMMERCIAL AREA

POSTED SPEEDS ≤ 35 MPH (DESIGN SPEEDS ≤ 40 MPH)

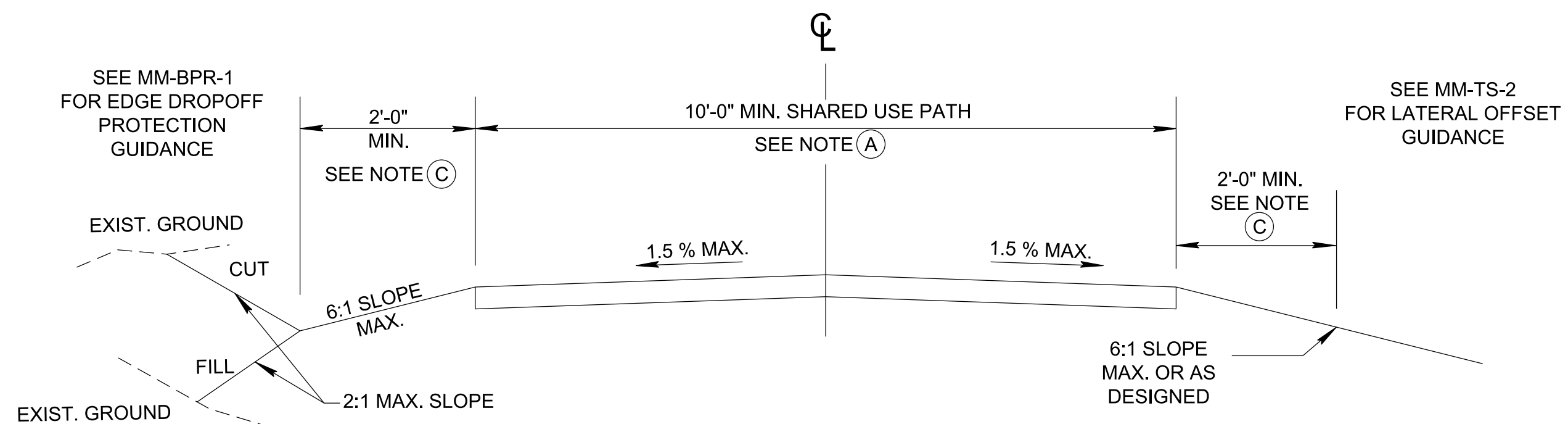


SIDEWALK OR SHARED USE PATH W/ GRASS STRIP BEHIND CURB & GUTTER

POSTED SPEEDS 45 TO 55 MPH (H)

GENERAL NOTES

- (A) THE INTENT OF THIS DRAWING IS TO PROVIDE MINIMUM AND PREFERRED PEDESTRIAN BUFFER DESIGN CRITERIA FOR NEW, RECONSTRUCTION, AND RESURFACING PROJECTS.
- (B) SEE STD. DWG. MM-SW-1 FOR CONCRETE SIDEWALK DETAILS.
- (C) A SHOULDER/ PARKING LANE/ OR BIKE LANE CAN BE UTILIZED IN PLACE OF A GRASS STRIP (OR IN COMBINATION WITH A GRASS STRIP) TO MEET THE MINIMUM BUFFER REQUIREMENT SEPARATING PEDESTRIAN FACILITIES FROM THE TRAFFIC LANE. WHEN THE MINIMUM BUFFER REQUIREMENTS CANNOT BE MET ON NEW CONSTRUCTION OR RECONSTRUCTION PROJECTS, A MULTIMODAL DESIGN DEVIATION FORM SHALL BE COMPLETED AND SUBMITTED TO TDOT HEADQUARTERS DESIGN. FOR ADDITIONAL INFORMATION REFER TO SECTION 9 OF TDOT'S DESIGN GUIDELINES.
- (D) TYPICALLY GRASS STRIP. AREA CAN BE PAVED TO CREATE A FURNISHING ZONE.
- (E) 1' CLEAR ZONE FOR SIDEWALKS (MIN.), 2' CLEAR ZONE FOR SHARED USE PATHS (MIN.)
- (F) BARRIER BETWEEN SIDEWALK/SHARED USE PATH AND ROADWAY SHOULD BE USED WHEN SIDEWALK/SHARED USE PATH IS PLACED WITHIN CLEAR ZONE OR MINIMUM LATERAL OFFSET CANNOT BE MAINTAINED.
- (G) SEE STD. DWG. MM-BPR-1 FOR GUIDANCE REGARDING SAFETY REQUIREMENTS OR MM-VPR-1 FOR GUIDANCE REGARDING VEHICLE AND PEDESTRIAN SAFETY RAILS.
- (H) POSTED SPEED IS 5 M.P.H. LESS THAN DESIGN SPEED.
- (I) SEE AASHTO, GUIDE FOR THE PLANNING, DESIGN, AND OPERATION OF PEDESTRIAN FACILITIES (CURRENT ADDITION).
- (J) FOR BUFFERS REFER TO STD. DWG. MM-TS-3, SEPARATED SHARED USE PATH TYPICAL SECTIONS.
- (K) LOCATIONS WHERE 30 FT CLEAR ZONE CANNOT BE PROVIDED, MIN. BUFFER 12.5 FT (16.5 FT PREFERRED)



TYPICAL SECTION FOR TWO-WAY SHARED USE PATH

GEOMETRIC DESIGN CRITERIA

- 18 MPH BICYCLE DESIGN SPEED
- PEDESTRIAN DENSITY ≥ 200 PED/HR
- HORIZONTAL CURVE 60' MIN. RADIUS
- VERTICAL GRADE 5% MAX.
- MINIMUM PAVED PATH WIDTH 10' WITH MAX. 6:1 SLOPE, 2' WIDE, CLEAR OF OBSTRUCTIONS
- MAXIMUM CROSS SLOPE 1.5%

WHEN IMMEDIATELY ADJACENT TO ROADWAY WITHIN EXISTING RIGHT OF WAY SHARED USE PATH MAY FOLLOW ROADWAY GEOMETRIC DESIGN

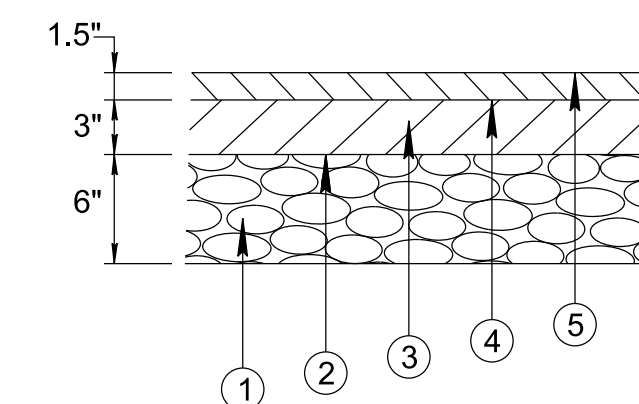
REFERENCED STANDARD DRAWINGS

- SEE RP-VC-10 OR 11 FOR VERTICAL CONCRETE CURB AND CONCRETE CURBS AND GUTTER DETAILS
- SEE RP-D-15 & 16 FOR CONCRETE DRIVEWAYS
- SEE RP-SC-1 FOR 6" SLOPING CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
- SEE MM-CR SERIES FOR CURB RAMP DETAILS
- SEE MM-BPR-1 FOR BIKE AND PEDESTRIAN SAFETY RAIL
- SEE MM-BPR-2 FOR BIKE AND PEDESTRIAN MEDIAN BARRIER RAIL
- SEE MM-SW-2 FOR ALTERNATE DETAILS FOR CONCRETE SIDEWALK (REHABILITATION)
- SEE MM-PM-1 THRU MM-PM-5 FOR BIKE LANE/ROUTE PAVEMENT MARKINGS
- SEE MM-TS-1 FOR BIKE ACCOMMODATION DESIGN GUIDANCE
- SEE MM-TS-2 LATERAL OFFSETS FOR SIDEWALK AND SHARED USE PATH
- SEE S-PL-6 FOR GUARDRAIL PLACEMENT
- SEE T-M-4 FOR CROSS WALK MARKING

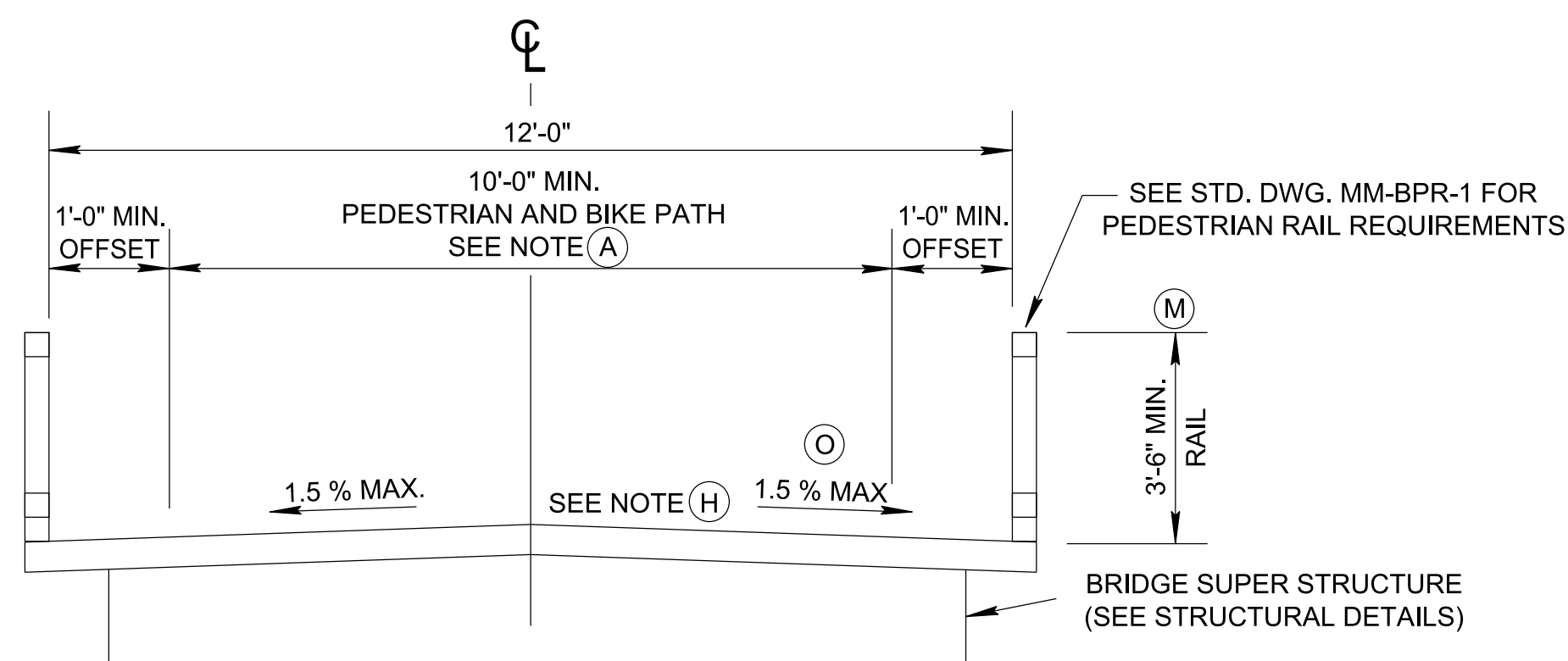
REV. 06-28-19: REVISED ALL DETAILS TO SHOW 1.5% MAX. GRADE. ADJUSTED WORDING IN GENERAL NOTES (I) AND (L)
 REV. 06-15-21: REMOVED TYPICAL SECTION FOR TWO-WAY SHARED USE PATH ADJACENT TO HIGH SPEED HIGHWAY AND MOVED IT TO MM-TS-2. REVISED RAILINGS ON BRIDGE TYPICAL SECTION FOR SHARED USE PATH. ADDED NOTE O. REVISED GEOMETRIC DESIGN CRITERIA NOTES.

TYPICAL PAVEMENT DETAILS

- 1 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D, 6 INCHES
- 2 PRIME COAT
402-01 BATUMINOUS MATERIAL FOR PRIME COAT (PC) AT 0.30 - 0.35 GAL./S.Y.
402-02 AGGREGATE FOR COVER MATERIAL (PC) AT 8 - 12 LBS/S.Y.
- 3 BITUMINOUS BINDER AT 3 INCHES THICK (APPROX. 339 LBS/S.Y.)
307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2
- 4 TACK COAT
403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) AT 0.05 - 0.10 GAL./S.Y.
- 5 BITUMINOUS SURFACING (SHOULDERS) AT 1.5 INCHES THICK (APPROX. 154.5 LBS/S.Y.)
411-01.07 ACS MIX (PG64-22) GRADING E SHOULDER



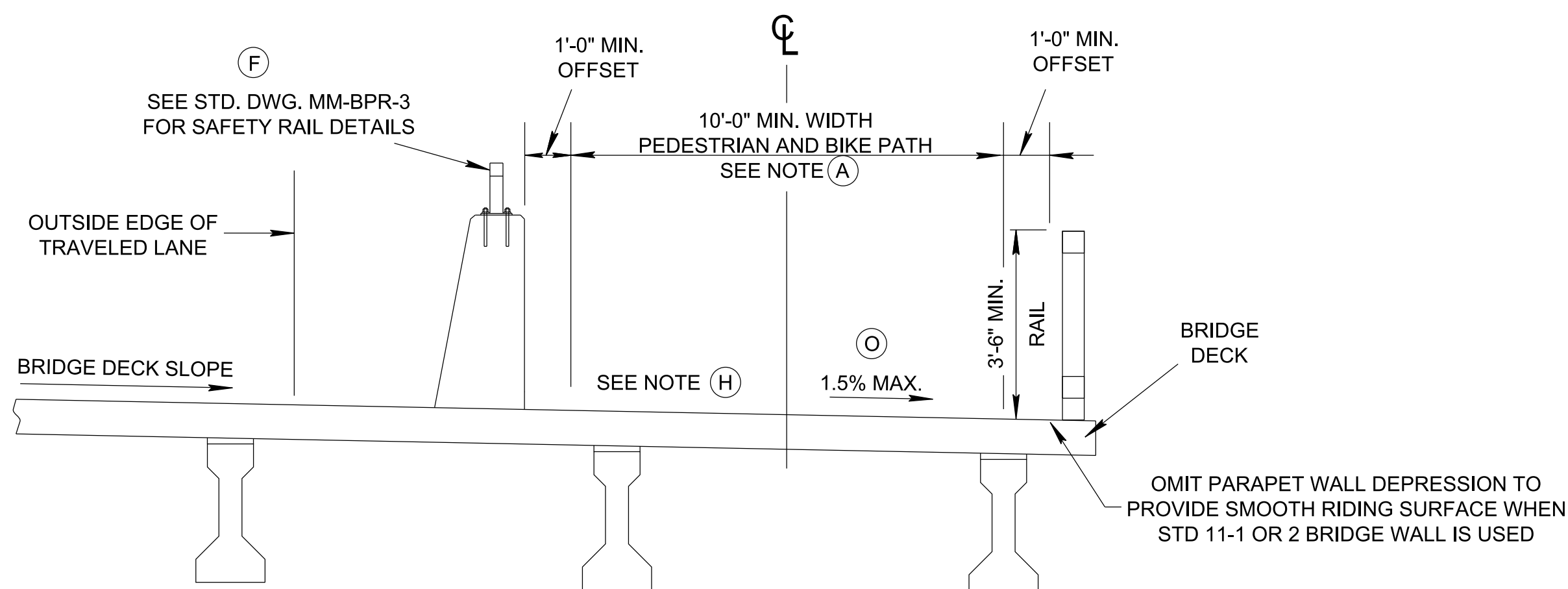
TYPICAL PAVEMENT DETAILS ARE PROVIDED FOR GUIDANCE. PAVEMENT DESIGN SHOULD CONSIDER OCASIONAL MAINTENANCE AND EMERGENCY VEHICLES OR ALTERNATIVE MATERIAL OTHER THAN ASPHALT MAY BE USED AND SHOWN ON THE PLANS.



BRIDGE TYPICAL SECTION FOR SEPARATE SHARED USE PATH (N)

GENERAL NOTES

- (A) UNDER CERTAIN CONDITIONS IT MAY BE NECESSARY OR DESIRABLE TO USE ALTERNATIVE PATH WIDTHS. TDOT STANDARDS ARE BASED ON 200 - 300 USERS PER HOUR, A LEVEL OF SERVICE (LOS) OF "C". REFER TO THE HIGHWAY CAPACITY MANUAL, 6TH EDITION FOR MORE INFORMATION.
- (B) THE MINIMUM WIDTH OF A ONE DIRECTIONAL SHARED USE PATH IS 6 FEET AND TWO DIRECTIONAL IS 10 FEET.
- (C) 2 FEET ON A 6:1 SLOPE IS DESIRABLE TO PROVIDE LATERAL OFFSET FROM TREES, POLES, WALLS, FENCES, GUARDRAILS, OR OTHER LATERAL OBSTRUCTIONS. WHERE THE PATH IS ADJACENT TO CANALS, DITCHES OR SLOPES STEEPER THAN 3:1, A WIDER SEPARATION SHOULD BE CONSIDERED.
- (D) THE MINIMUM VERTICAL CLEARANCE TO OBSTRUCTIONS SHALL BE 10 FEET TO PERMIT PASSAGE OF MAINTENANCE AND EMERGENCY VEHICLES AND TO PROVIDE ADEQUATE VERTICAL SHY DISTANCE.
- (E) A DRAINAGE OR STORMWATER CONVEYANCE SYSTEM DITCH SHOULD BE LOCATED PROPERLY BETWEEN THE SHARED USE PATH AND ROADWAY TO ENSURE THAT WATER DOES NOT FLOW ONTO THE ROADWAY OR SHOULDER. ALSO, DITCH SHOULD BE SUFFICIENT ENOUGH TO REMOVE THE ADDITIONAL RUNOFF.
- (F) WHEN THE DISTANCE BETWEEN THE EDGE OF TRAVEL LANE AND THE SHARED USE PATH IS LESS THAN 12.5 FEET ON A FACILITY WITH POSTED SPEED OF ≥ 45 MILES PER HOUR, A BARRIER RAIL IS REQUIRED. (THIS REDUCED WIDTH SHALL MEET THE REQUIREMENTS FOR OCCASIONAL MAINTENANCE ACTIVITIES.) SEE STD. DWG. MM-BPR-2 FOR DETAILS.
- (G) CLEAR ZONE SHOULD BE MAINTAINED BETWEEN THE ROADWAY AND THE SHARED USE PATH. IF CLEAR ZONE CAN NOT BE ACHIEVED, AN APPROPRIATE BARRIER SHOULD BE CONSIDERED FOR POSTED SPEED MORE THAN 45 MPH.
- (H) ON ALL BRIDGE DECKS, SPECIAL CARE SHALL BE TAKEN TO ENSURE THAT BICYCLE- SAFE EXPANSION JOINTS ARE USED AND DECKING MATERIALS THAT MAY BECOME SLIPPERY WHEN WET ARE AVOIDED.
- (I) SEE STD. DWG. MM-PM SERIES FOR SIGNING AND PAVEMENT MARKINGS.
- (J) THE PURPOSE OF THIS STANDARD IS TO PROVIDE MINIMUM GEOMETRIC AND SAFETY DESIGN STANDARDS DURING THE DEVELOPMENT OF NON-MOTORIZED TRANSPORTATION FACILITIES. ALL FACILITIES SHALL BE DESIGNED FOR ADA ACCESSIBILITY.
- (K) FOR FURTHER INFORMATION, REFER TO AASHTO "GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES" FOR GEOMETRIC DESIGN REQUIREMENTS AND TDOT ROADWAY DESIGN GUIDELINES MULTI-MODAL DESIGN GUIDE SECTION.
- (L) PAVEMENT MARKINGS MAY BE OPTIONAL ON SHARED USE PATHS, HOWEVER, PROPER SIGNAGE MUST BE INSTALLED PER STANDARDS AND THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- (M) BRIDGES THAT CROSS OVER RAIL ROAD TRACKS MAY NEED SPECIAL FENCING.
- (N) FOR INFORMATION TO DETERMINE LOADS AND RESISTANCES FOR WOODEN GREENWAY STRUCTURES SEE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS; SECTION 3, LOADS AND LOAD FACTORS AND SECTION 8, WOOD STRUCTURES.
- (O) EXISTING BRIDGE DECK SLOPES MAY BE GREATER THAN 1.5 %.



BRIDGE TYPICAL SECTION FOR SHARED USE PATH