

Roadway and Overhead Structure Types	Pier Location	Pier to ETL Offset	Pier Protection Type	Collision Wall Required
TLTW w/Single Overhead Structure	Both Sides	≤4.9 m	Guardrail w/ GP Trans.	Frame Bent Only
		>4.9 m	Shoulder Guardrail	No
TLTW /Twin Overhead Structures	Both Sides	≤4.9 m	Guardrail w/ GP Trans.	Frame Bent & Pier Gap
		>4.9 m	Shoulder Guardrail	No
MLD w/Single or Tandem Overhead Structures	Right Side	≤4.9 m	Guardrail w/ GP Trans.	Frame Bent Only
		>4.9 m	Shoulder Guardrail	No
MLD w/Twin Overhead Structures	Right Side	≤4.9 m	Guardrail w/ GP Trans.	Frame Bent & Pier Gap
		>4.9 m	Shoulder Guardrail	No
MLD w/Single Overhead Structures	Median	≥7.6 m	ED Attenuator	Frame Bent Only
		<7.6 m	R2 Attenuator	Frame Bent Only
MLD w/Twin Overhead Structures	Median	≥7.6 m	ED Attenuator	Frame Bent & Pier Gap
		<7.6 m	R2 Attenuator	Frame Bent & Pier Gap
MLD w/Tandem Overhead Structure	Median Side	≤4.9 m	Guardrail w/ GP Trans.	Frame Bent Only
		>4.9 m	Shoulder Guardrail	No

Note: TLTW = Two-Lane, Two-Way Roadway; MLD = Multi-Lane Divided; ETL = Edge of Travel Lane; Pier = Pier or Frame Bent; ED = Energy Dissipation Attenuator; R2 = Redirective on 2 Sides Attenuator; GP = Guardrail to Bridge Pier Transitions; Shoulder guardrail should only be used when all clearance requirements are met; otherwise, guardrail with GP Transition should be used.

PIER PROTECTION GUARDRAIL REQUIREMENTS

Figure 49-3M