

Notes to the Designer

Updated June 2024

3R Typical Section Sheets - Widening

General Information

- All graphics and text will be in the design model. Only use the sheet model for printing and adding applicable guardrail as a reference; Reference guardrail using the appropriate saved view from the design model to the appropriate sheet model.
- Length of Project table is integrated into the sheet. Double click on the cell to edit.
- **3R Widening Template Drawings.** Refer to the 3R+ Matrix to ensure this is the appropriate template to use for your application. Use these template drawings for locations where the roadway will be widened to one or both sides. If superelevation corrections and widening is proposed, consider using the Horizontal/Vertical Adjustment template if geometric adjustments are also necessary.
- **Road Inventory Program Milepost data.** The NPS uses the Road Inventory Program (RIP) as part of their asset management program. Include the RIP milepost data in the 'Length of Project' table for NPS projects only. To find this information, use Pathweb (<https://pathweb.pathwayservices.com/rip/>) or ask Planning and Programming. Delete the last column in the 'Length of Project' table for all non-NPS projects (e.g. USFS, USFWS, IRR, etc.).

Applicable SCRs

- SCR's used can vary based on the project and pay items used. Ensure that SCR's provided are consistent with the pay items provided in the contract. Coordinate with the Pavements Engineer to select and edit the appropriate SCR for the project. Refer to the designer's notes in each SCR for common items needing input and editing.

Typical Pay Items Used

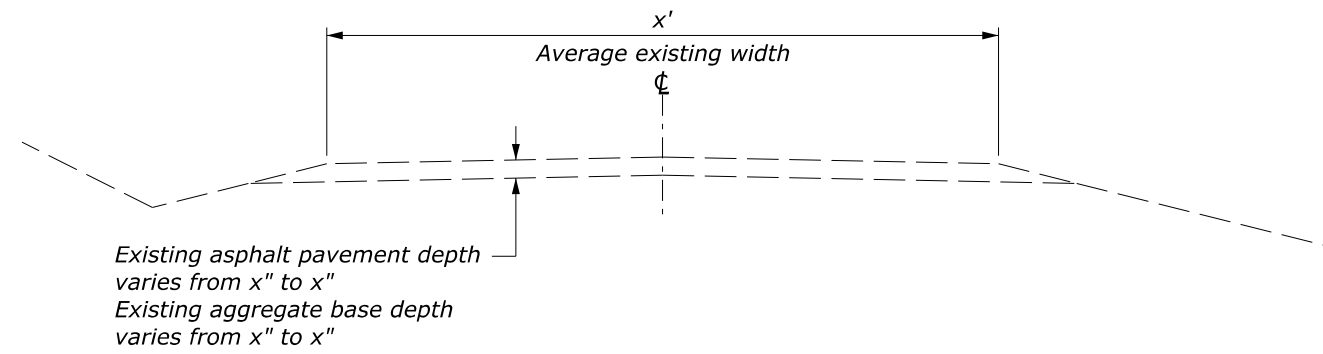
- The pay items used for 3R projects in Sections 152, 302, 304, 305, 306, 310, 401, 402, 403 can vary per project. Refer to the CFLHD Engineer's Estimate Manual for recommended pay items. The Pavements Engineer will provide the appropriate pay items for the structural section.
- Subexcavation may be included. Roadway excavation or embankment will likely be included to construct the widening.

Other Recommendations for 3R Widening

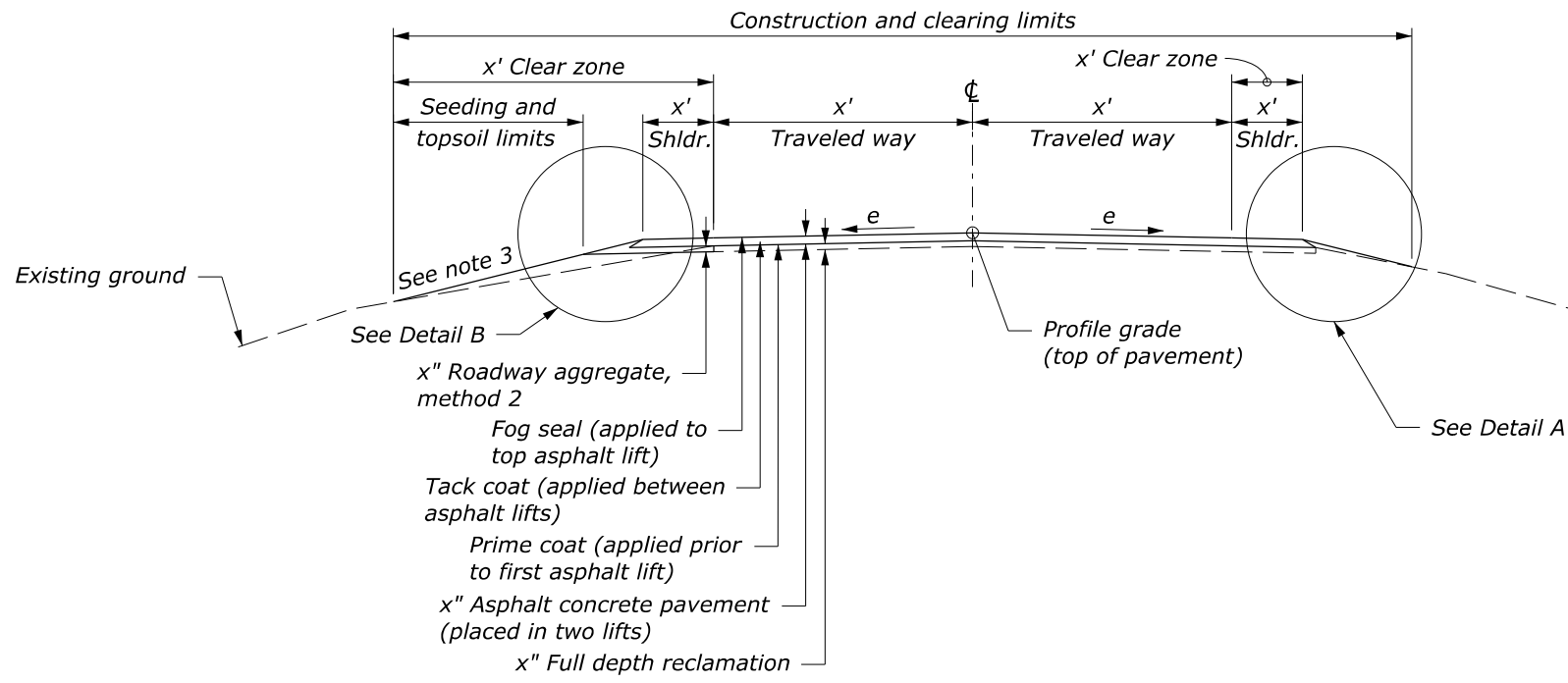
- Cross sections are typically provided.
- Staking Reports are typically provided. Provide subgrade template and blue top reports for the widened area. May also need to provide blue top report for the existing pavement.
- Plan/Plan Sheets or Plan/Profile sheets typically provided.

Updates

- **April 2021**
 - Template sheet created
- **October 2022**
 - Updated border
- **April 2023**
 - Updated safety edge detail; updated border; updated to international seed file
- **June 2024**
 - Updated for FP24



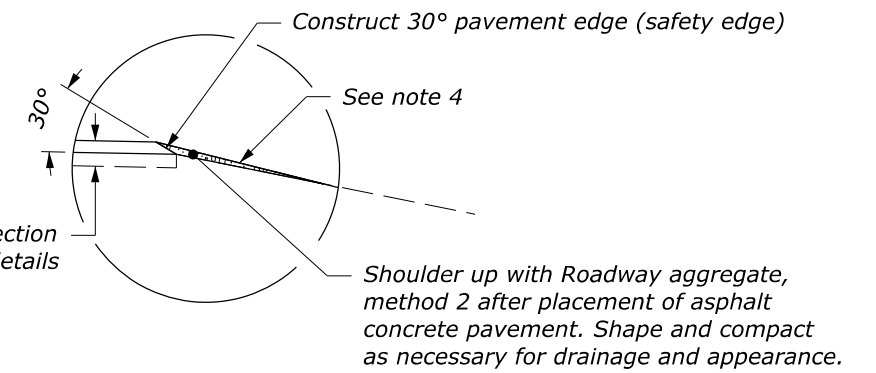
EXISTING TYPICAL SECTION
 <<>> to <<>>



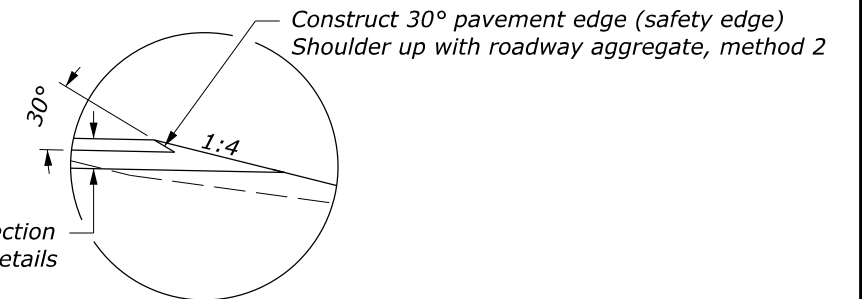
TYPICAL SECTION
 <<>> to <<>>

Note:

- Existing superelevated and widened sections are not shown.
- Dimensions shown are approximate and may be varied by the CO.
- See cross sections for superelevation and cut and fill slope ratios.
- Construct a 1:4 foreslope. Steepen the foreslopes as necessary, but not steeper than 1:2, to stay on the existing bench.



DETAIL A
 (applies to non-widened sides of roadway)



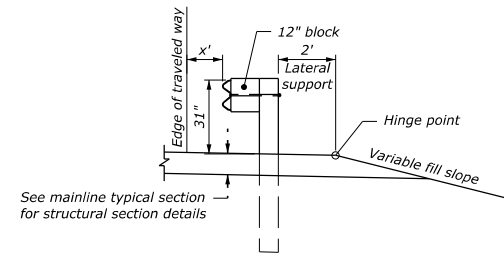
DETAIL B
 (applies to widened sides of roadway)

LENGTH OF PROJECT

Station to Station	Roadway (ft)	Bridge (ft)	Road Inventory Program Milepost Data (Cycle #)*
??+?? to ??+??			
??+?? to ??+??			
??+?? to ??+??			
TOTALS (ft)			
TOTALS (mi)			

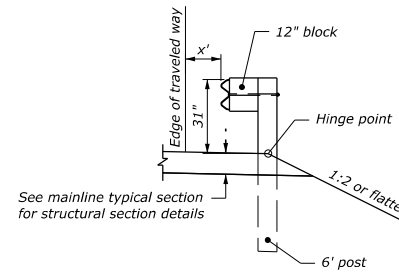
*Road Inventory Program data shown for information only

TYPICAL SECTION MAINLINE



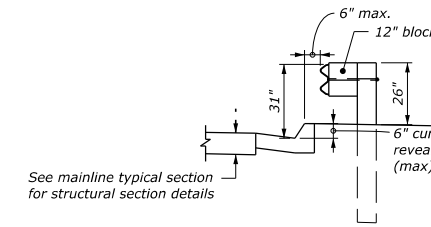
**MGS GUARDRAIL
TYPICAL SECTION**

12" Block & 2' Lateral Support



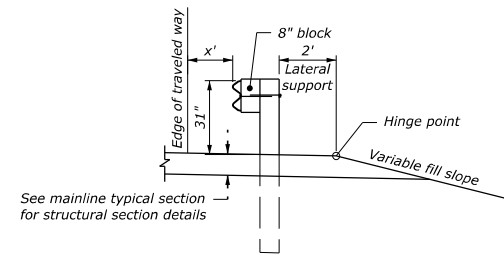
**MGS GUARDRAIL
TYPICAL SECTION**

12" Block & No Lateral Support



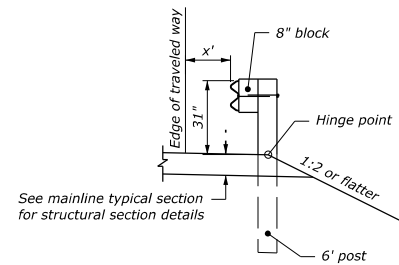
**MGS GUARDRAIL
TYPICAL SECTION**

12" Block & Curb and Gutter



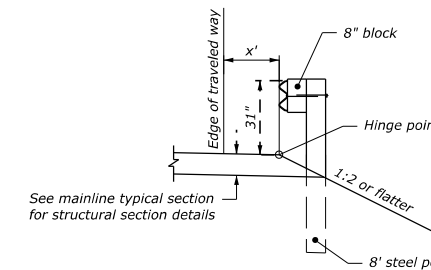
**MGS GUARDRAIL
TYPICAL SECTION**

8" Block & 2' Lateral Support



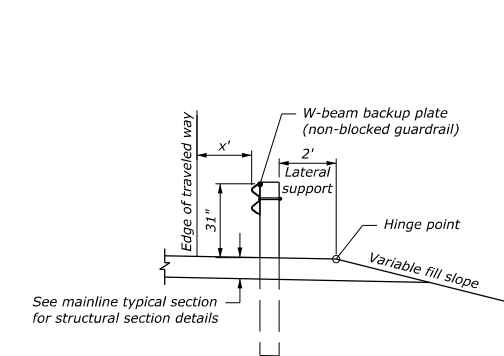
**MGS GUARDRAIL
TYPICAL SECTION**

8" Block & No Lateral Support



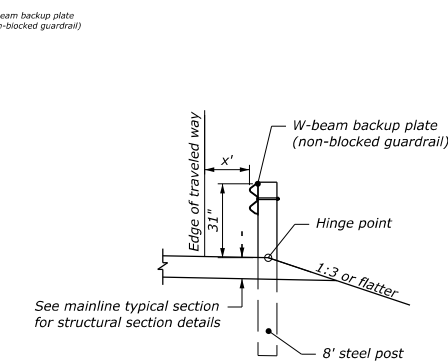
**MGS GUARDRAIL
TYPICAL SECTION**

8" Block & Face of GR at Hinge Point



**MGS GUARDRAIL
TYPICAL SECTION**

No Block & 2' Lateral Support



**MGS GUARDRAIL
TYPICAL SECTION**

No Block & No Lateral Support