Notes to the Designer

Updated June 2024

3R Typical Section Sheets - Pavement Only

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. There is a sheet model for each type (FDR, FDR with widening, Mill and Overlay, Cold in-place recycle); Reference guardrail using the appropriate saved view from the design model to the appropriate sheet model.
- Update sheet title by renaming the model.
- Length of Project table is integrated into the sheet. Double click on the cell to edit.

-

3R Surfacing, Pavement Only Template Drawings. Refer to the 3R+ Matrix to ensure this is the appropriate template to use for your application. Use these template drawings when all improvements are on the bench and intended to rehabilitate the pavement and match existing pavement width and cross slope. This includes restoring normal cross slope.

When it comes to 3R surface treatments, there are a wide variety of options available. Some of the more common options are shown in this template drawing. However, you will probably need to adjust the template drawing to fit your project. Select the drawing that most closely fits your pavement recommendations and coordinate with the Pavements Engineer to adjust the template to fit your project.

- **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, 301, 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, but typically no roadway excavation or embankment is included.

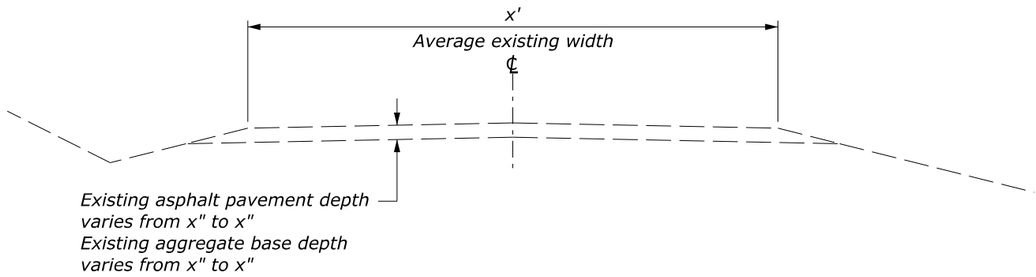
Other Recommendations for 3R Pavement Only

- Cross sections are not typically provided.
- Staking Reports are not typically provided.
- Plan/Plan Sheets typically provided.

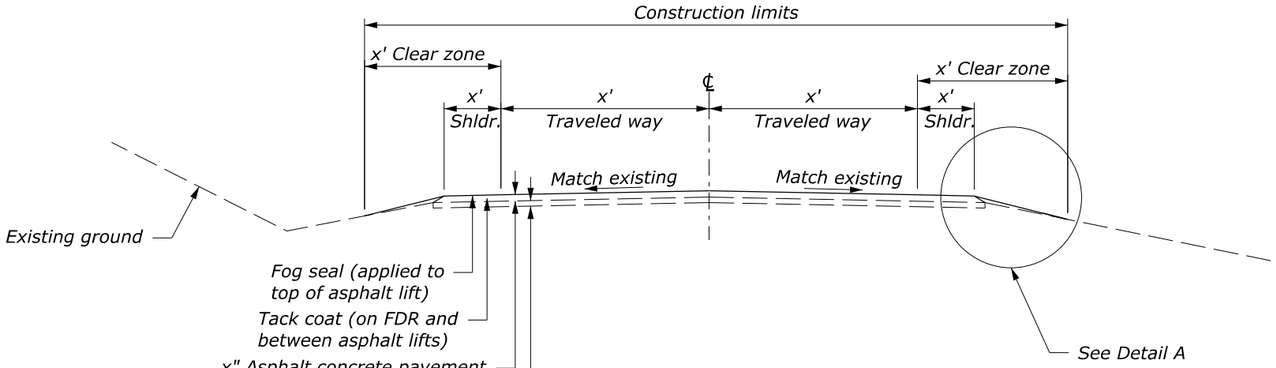
Updates

- **April 2021**
  - Added guardrail typical sections
  - Updated for OpenRoads Designer
  - Changed description, added SCR's and Pay Items, modified template drawings for 3R+ guidance
- **October 2022**
  - Updated border
- **April 2023**
  - Updated safety edge detail; updated border; updated to international seed file
- **June 2024**
  - Updated for FP24

PROJECT	SHEET NUMBER
PROJECT NUMBER PROJECT NAME	Typical



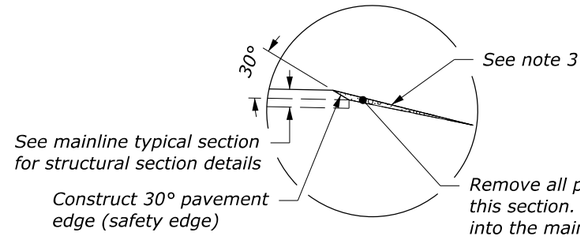
EXISTING TYPICAL SECTION
<<>> to <<>>



TYPICAL SECTION
<<>> to <<>>

Note:

1. *Existing superelevated and widened sections are not shown.*
2. *Dimensions shown are approximate and may be varied by the CO.*
3. *Construct a 1:4 or flatter foreslope. Steepen the foreslopes as necessary, but not steeper than 1:2, to stay on the existing bench.*
4. *Pulverize the existing paved width or as directed. Pulverize to a depth of xx".*



DETAIL A
(applies to both sides of roadway)

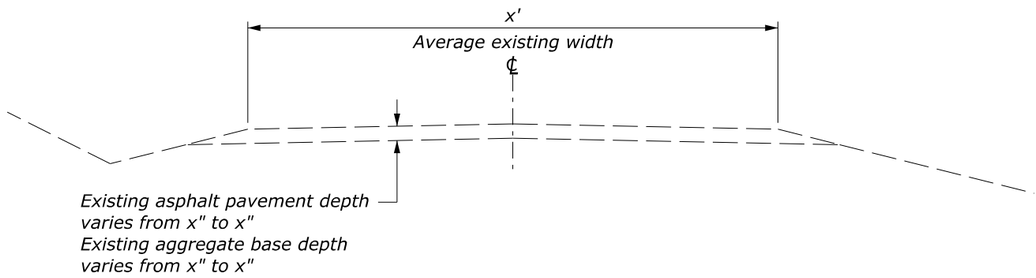
LENGTH OF PROJECT			
Station to Station	*Roadway (ft)*	*Bridge (ft)*	*Road Inventory Program Milepost Data (Cycle #)**
??+?? to ??+??			
??+?? to ??+??			
??+?? to ??+??			
TOTALS (ft)			
TOTALS (mi)			

**Road Inventory Program data shown for information only*

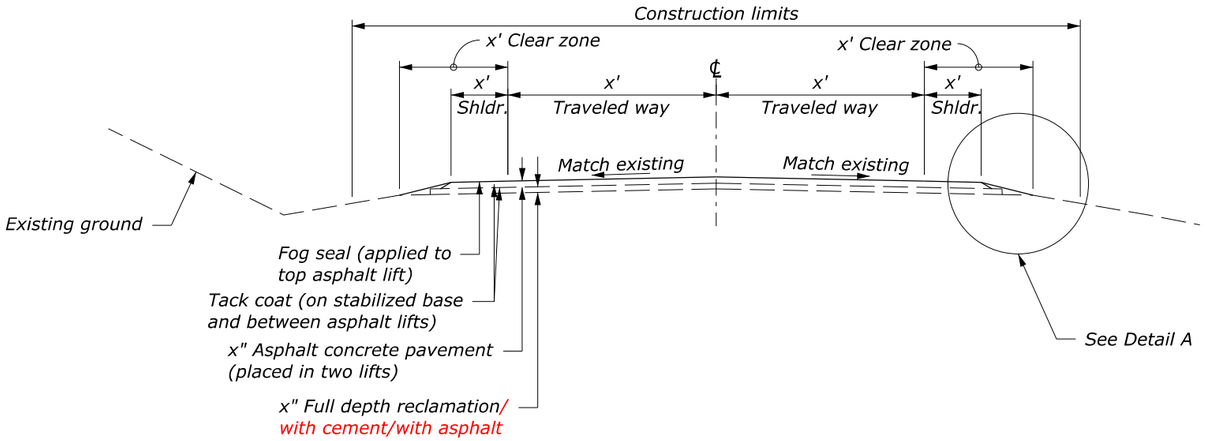
TYPICAL SECTION MAINLINE - FDR

K:\CADD_Coordinator\ORD Drawings\Templates\3R_typical_pavement_only.dgn [Typical Section Mainline - FDR]
5 June 2024 11:37 AM

PROJECT	SHEET NUMBER
PROJECT NUMBER PROJECT NAME	Typical



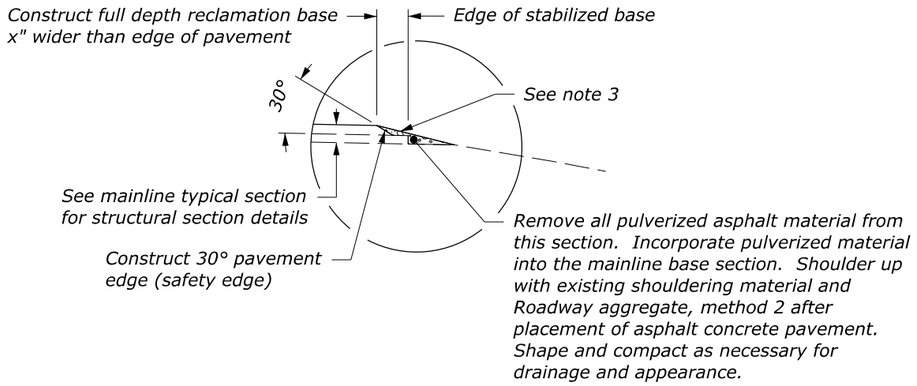
EXISTING TYPICAL SECTION
<<>> to <<>>



TYPICAL SECTION
<<>> to <<>>

Note:

1. Existing superelevated and widened sections are not shown.
2. Dimensions shown are approximate and may be varied by the CO.
3. Construct a 1:4 or flatter foreslope. Steepen the foreslopes as necessary, but not steeper than 1:2, to stay on the existing bench.
4. Extend depth of foamed asphalt/cement base to x".
5. Blade existing shoulder material away from the roadway prior to recycling operations. Use available subgrade width to provide a maximum recycled width. After placement of asphalt concrete pavement, use existing shouldering material as needed. Additional material will be paid for as Roadway aggregate, method 2.



DETAIL A
(applies to both sides of roadway)

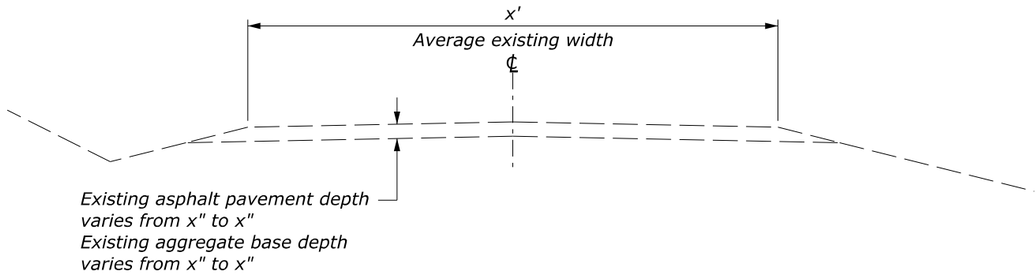
LENGTH OF PROJECT			
Station to Station	Roadway (ft)	Bridge (ft)	Road Inventory Program Milepost Data (Cycle #)*
??+?? to ??+??			
??+?? to ??+??			
??+?? to ??+??			
TOTALS (ft)			
TOTALS (mi)			

*Road Inventory Program data shown for information only

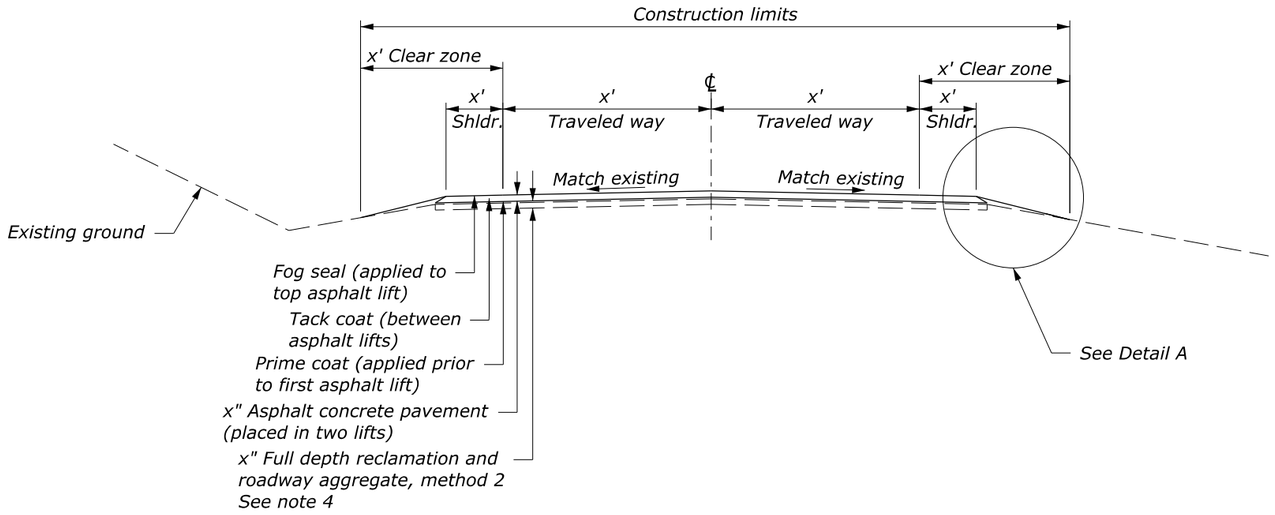
TYPICAL SECTION MAINLINE - FDR WITH WIDENED BASE

K:\CADD_Coordinator\ORD Drawings\Templates - 10.10 version\Updated\3R_typical_pavement_only.dgn [Typical Section Mainline - FDR with Widened Base]
23 May 2024 1:21 PM

PROJECT	SHEET NUMBER
PROJECT NUMBER PROJECT NAME	Typical



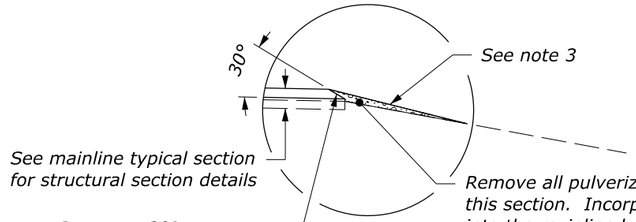
EXISTING TYPICAL SECTION
<<>> to <<>>



TYPICAL SECTION
<<>> to <<>>

Note:

1. *Existing superelevated and widened sections are not shown.*
2. *Dimensions shown are approximate and may be varied by the CO.*
3. *Construct a 1:4 or flatter foreslope. Steepen the foreslopes as necessary, but not steeper than 1:2, to stay on the existing bench.*
4. *Refer to Sections 302 and 304. Assumed quantities for imported roadway aggregate are shown in the Surfacing Summary.*



DETAIL A
(applies to both sides of roadway)

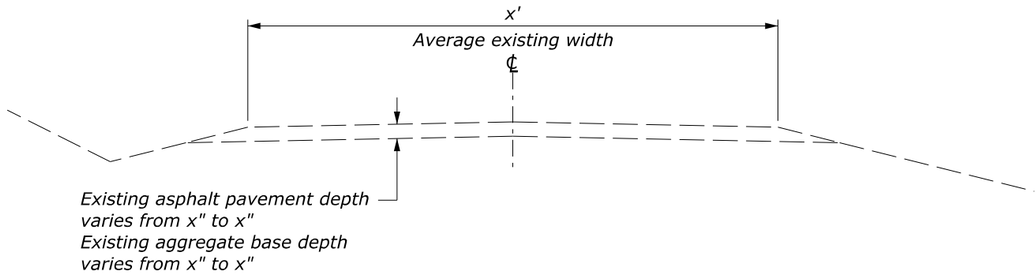
LENGTH OF PROJECT			
Station to Station	*Roadway (ft)*	*Bridge (ft)*	*Road Inventory Program Milepost Data (Cycle #)**
??+?? to ??+??			
??+?? to ??+??			
??+?? to ??+??			
TOTALS (ft)			
TOTALS (mi)			

**Road Inventory Program data shown for information only*

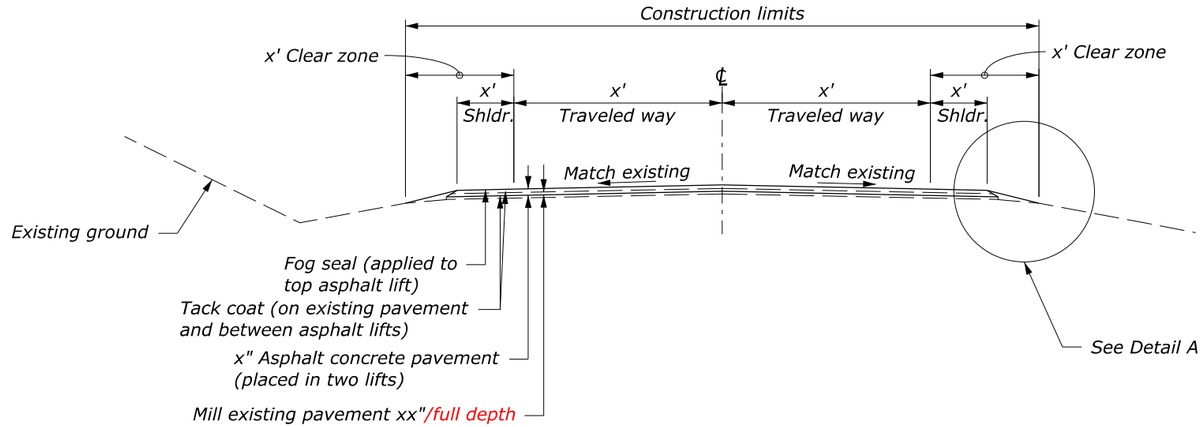
TYPICAL SECTION MAINLINE - FDR+AGG

K:\CADD_Coordinator\ORD Drawings\Templates - 10.10 version\Updated\3R_typical_pavement_only.dgn [Typical Section Mainline - FDR+Agg]
23 May 2024 1:21 PM

PROJECT	SHEET NUMBER
PROJECT NUMBER PROJECT NAME	Typical



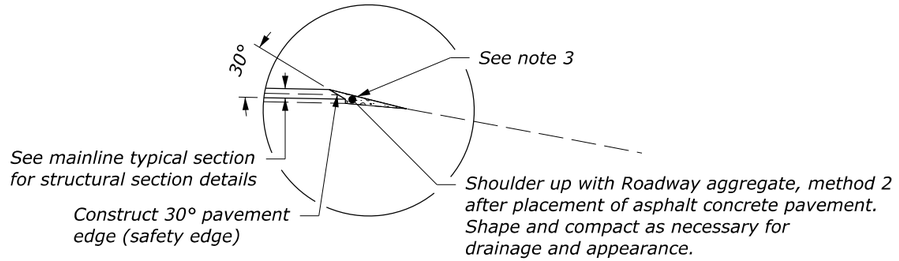
EXISTING TYPICAL SECTION
<<>> to <<>>



TYPICAL SECTION
<<>> to <<>>

Note:

1. *Existing superelevated and widened sections are not shown.*
2. *Dimensions shown are approximate and may be varied by the CO.*
3. *Construct a 1:4 or flatter foreslope. Steepen the foreslopes as necessary, but not steeper than 1:2, to stay on the existing bench.*



DETAIL A
(applies to both sides of roadway)

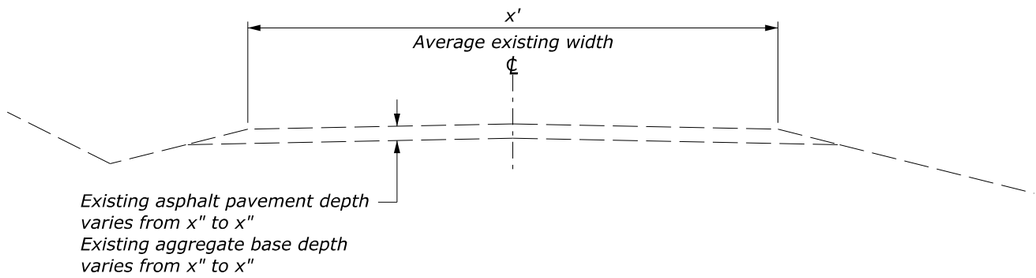
LENGTH OF PROJECT			
Station to Station	Roadway (ft)	Bridge (ft)	Road Inventory Program Milepost Data (Cycle #)*
??+?? to ??+??			
??+?? to ??+??			
??+?? to ??+??			
TOTALS (ft)			
TOTALS (mi)			

**Road Inventory Program data shown for information only*

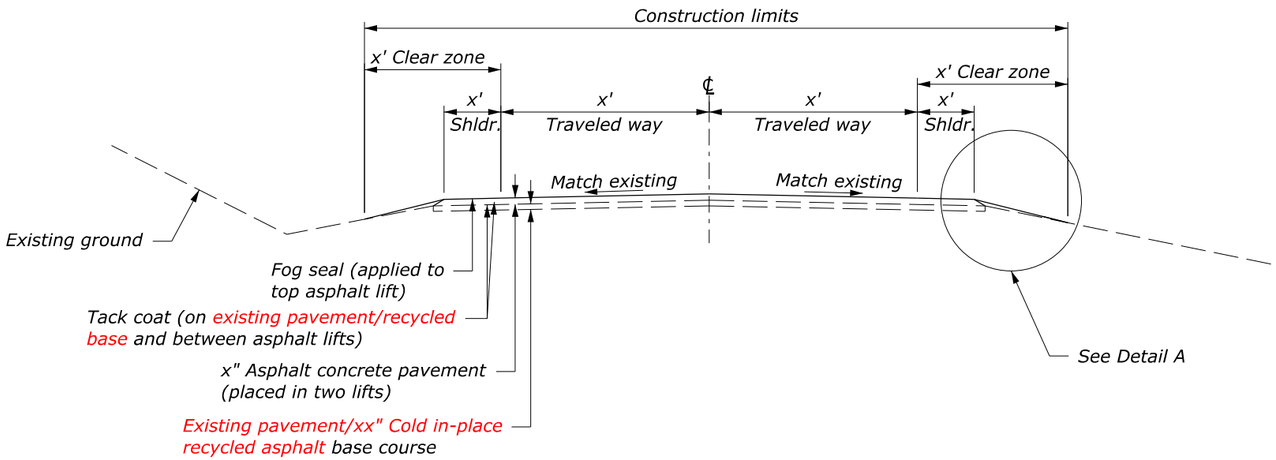
TYPICAL SECTION MAINLINE - MILL +OVERLAY

23 May 2024 1:21 PM K:\CADD_Coordinator\ORD Drawings\Templates - 10.10 version\Updated\3R_typical_pavement_only.dgn [Typical Section Mainline - Mill +Overlay]

PROJECT	SHEET NUMBER
PROJECT NUMBER PROJECT NAME	Typical



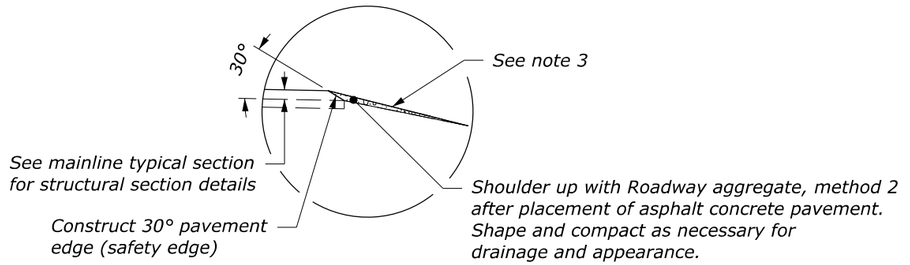
EXISTING TYPICAL SECTION
<<>> to <<>>



TYPICAL SECTION
<<>> to <<>>

Note:

1. *Existing superelevated and widened sections are not shown.*
2. *Dimensions shown are approximate and may be varied by the CO.*
3. *Construct a 1:4 or flatter foreslope. Steepen the foreslopes as necessary, but not steeper than 1:2, to stay on the existing bench.*



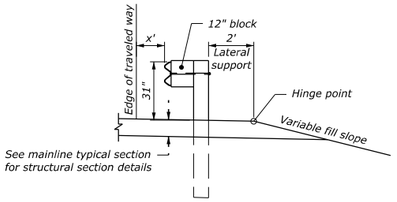
DETAIL A
(applies to both sides of roadway)

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*

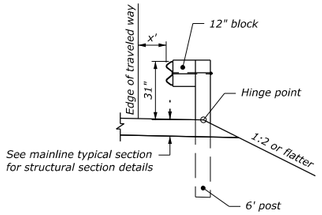
TYPICAL SECTION MAINLINE - OVERLAY_CIPR

K:\CADD_Coordinator\ORD Drawings\Templates - 10.10 version\Updated\3R_typical_pavement_only.dgn [Typical Section Mainline - Overlay_CIPR]
23 May 2024 1:22 PM



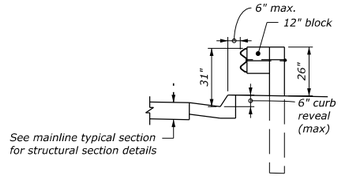
MGS GUARDRAIL
TYPICAL SECTION

12" Block & 2' Lateral Support



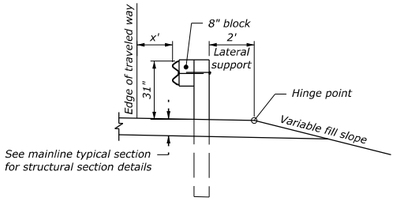
MGS GUARDRAIL
TYPICAL SECTION

12" Block & No Lateral Support



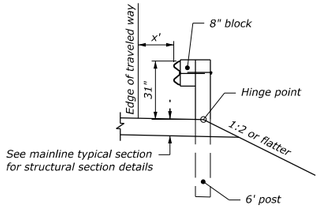
MGS GUARDRAIL
TYPICAL SECTION

12" Block & Curb and Gutter



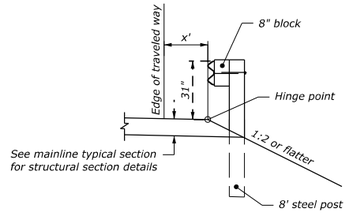
MGS GUARDRAIL
TYPICAL SECTION

8" Block & 2' Lateral Support



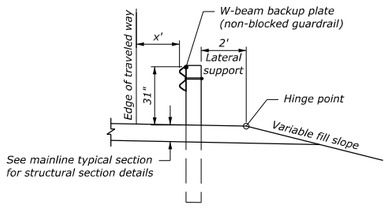
MGS GUARDRAIL
TYPICAL SECTION

8" Block & No Lateral Support



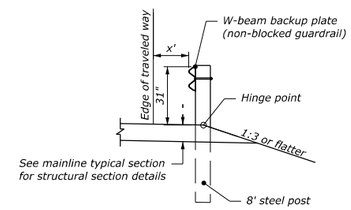
MGS GUARDRAIL
TYPICAL SECTION

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