

Paving and Reconstruction

7000s

PAVING

NO.	DATE	TITLE
7101	10-19-10	Typical Details of PCC Pavement Header
7102	04-21-15	HMA Pavement Header
7117	10-02-01	Granular Shoulder Construction Thru Entrances
7130	07-21-87	Beginning or Ending Transition for Detour Pavement
7131	10-18-22	Ramp Transition - 18' Loop to Tangent 16' Ramp
7134	10-15-13	Typical Fillet Section for Type 'B' Granular Surfaced Shoulder (Adjacent to HMA Resurfacing)
7135	10-15-13	Typical Section for Type 'B' Granular Shoulder (Adjacent to HMA Resurfacing)
7137	10-15-13	HMA Shoulder Resurfacing
7145	04-15-03	Aggregate for Paved Shoulder Fillet
7146	04-15-03	Earth for Paved Shoulder Fillet
7148	10-21-14	Fillet for Non-Paved Entrances or Side Roads
7149	04-15-14	Fillet Extension for Non-Paved Side Roads
7151	10-15-13	Typical Section Retrofit Paved Shoulder
7152	10-15-13	Typical Section Retrofit HMA Paved Shoulders
7154	04-20-10	Paved Shoulder Detail at Ramp Tapers (Non-Interstate)
7154A	10-20-09	Paved Shoulder Detail at Turn Lanes
7154B	10-19-21	Paved Shoulder Detail at Returns
7155	10-21-03	Paved Shoulder Detail at Climbing/Passing Lanes
7156	10-18-22	Paved Shoulder at Guardrail (Granular Shoulder Adjacent to Mainline)
7157	04-19-22	Paved Shoulder at Guardrail (Adjacent to Partial Width Paved Shoulder)
7158	04-19-22	Paved Shoulder at Guardrail (Adjacent to Full Width Paved Shoulder)

SECTION

7200

MISCELLANEOUS DETAILS RECONSTRUCTION WORK

NO.	DATE	TITLE

SECTION

7300

MISCELLANEOUS RESURFACING DETAILS

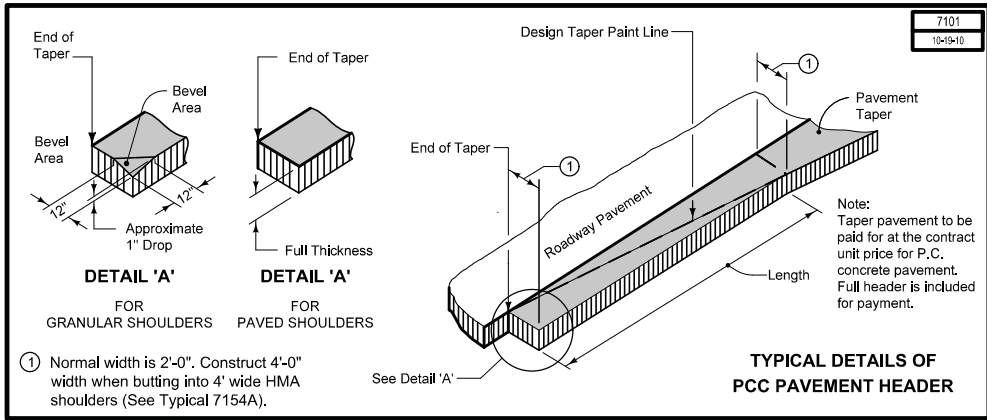
NO.	DATE	TITLE
7315	10-20-09	Longitudinal HMA Notched Wedge Joint

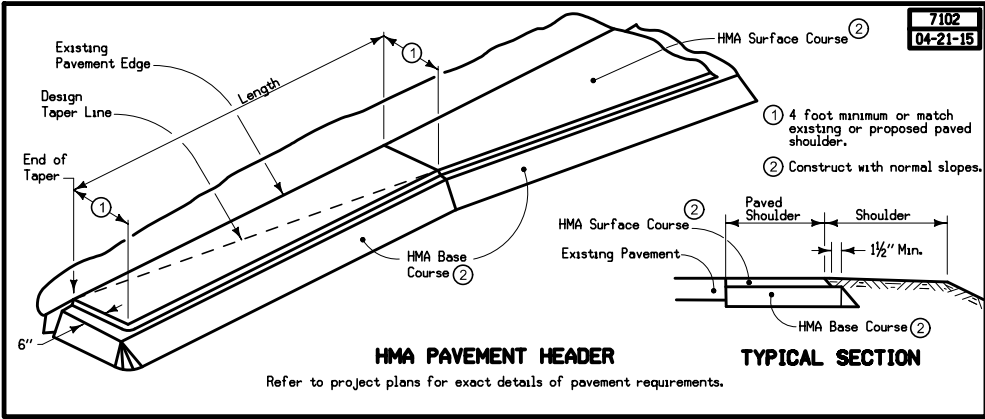
SECTION

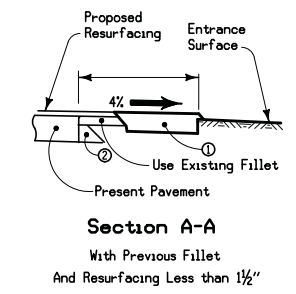
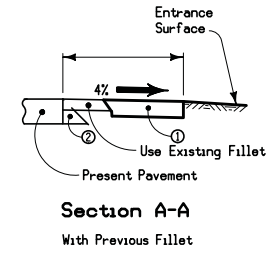
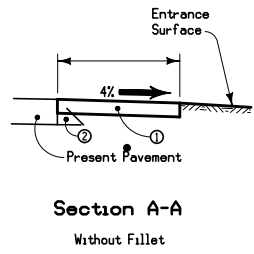
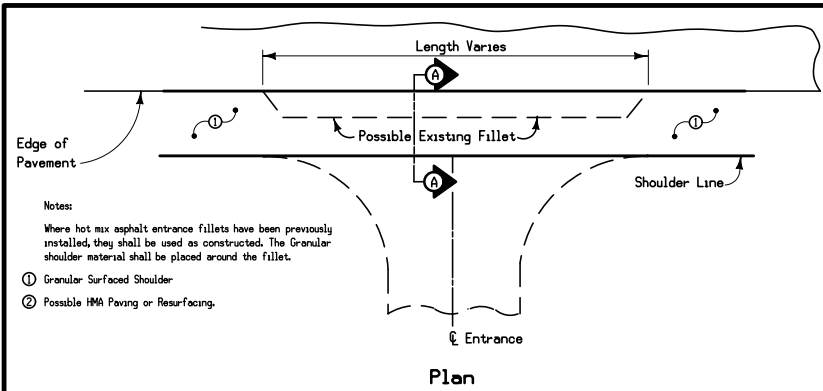
7400

PEDESTRIAN AND BICYCLE FACILITIES

NO.	DATE	TITLE
7402	04-17-12	Typical Cross Section Recreation Trail Paved Surface

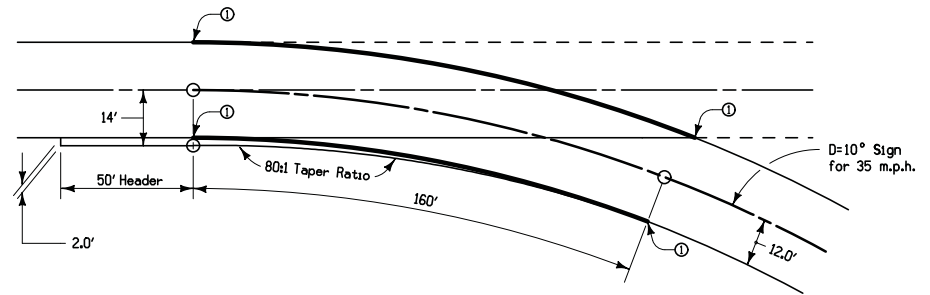






GRANULAR SHOULDER CONSTRUCTION THRU ENTRANCES

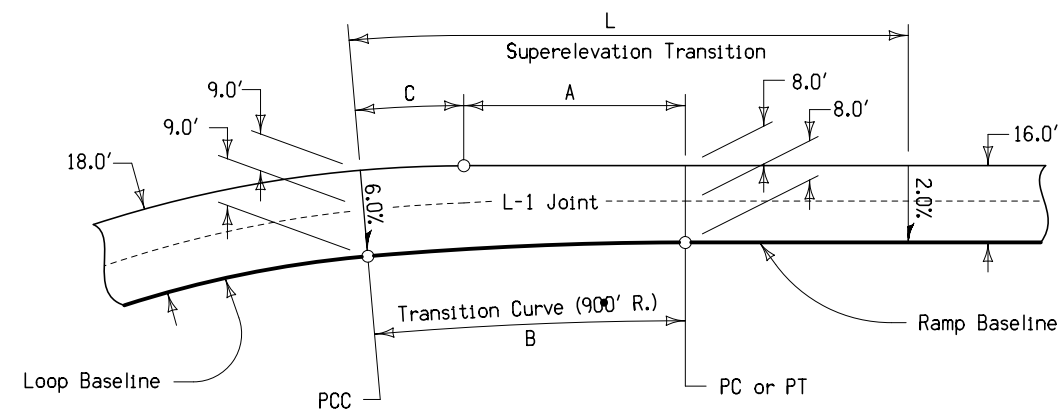
7130
07-21-87



① May be painted or taped edge line when pavement will be removed later; otherwise use removable tape.

**BEGINNING OR ENDING TRANSITION
FOR DETOUR PAVEMENT**

7131
10-18-22

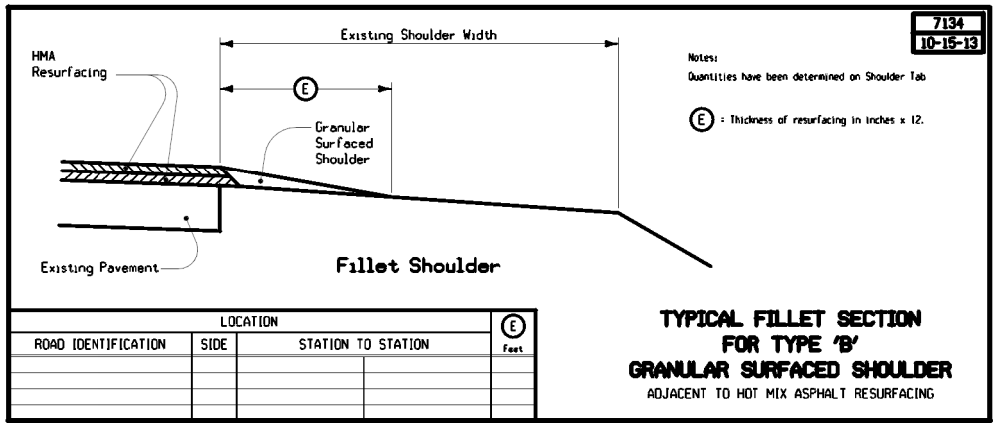


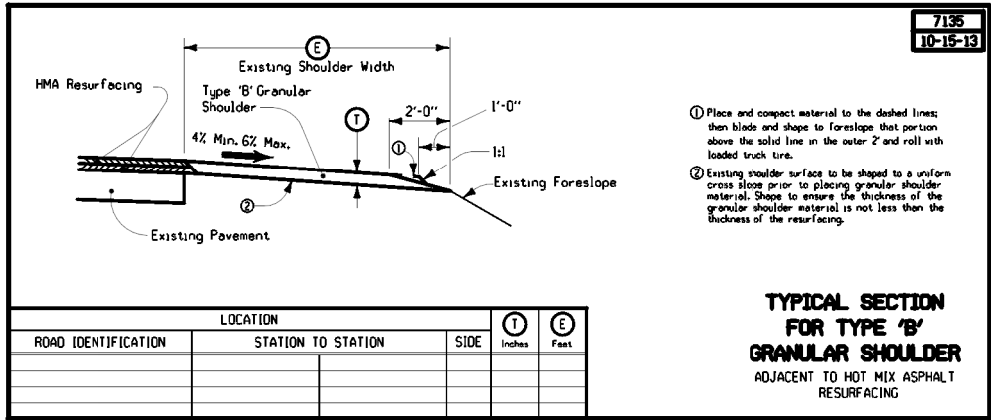
Notes:

Refer to Geometric Plan Sheet for
Ramp or Loop and Transition Curve Data
Line "A" = Tangent Edge of Slab
Arc "C" = Loop Radius + 18.0'

Loop Radius	A	B	C	L
150.00'	54.74'	65.74'	12.27'	86.0'
250.00'	50.95'	70.62'	21.03'	91.0'

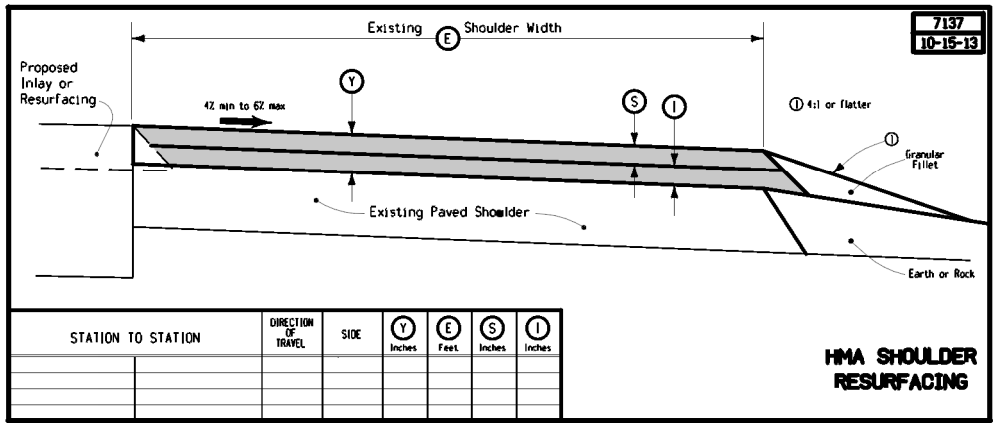
**RAMP TRANSITION
18' LOOP to
TANGENT 16' RAMP**





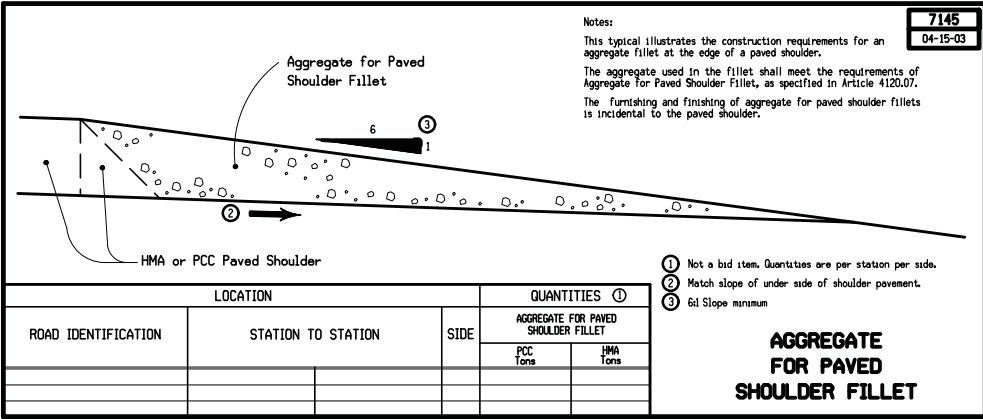
**TYPICAL SECTION
FOR TYPE 'B'
GRANULAR SHOULDER**
ADJACENT TO HOT MIX ASPHALT
RESURFACING

LOCATION			①	②
ROAD IDENTIFICATION	STATION TO STATION	SIDE	Inches	Feet



7137
10-15-13

**HMA SHOULDER
RESURFACING**



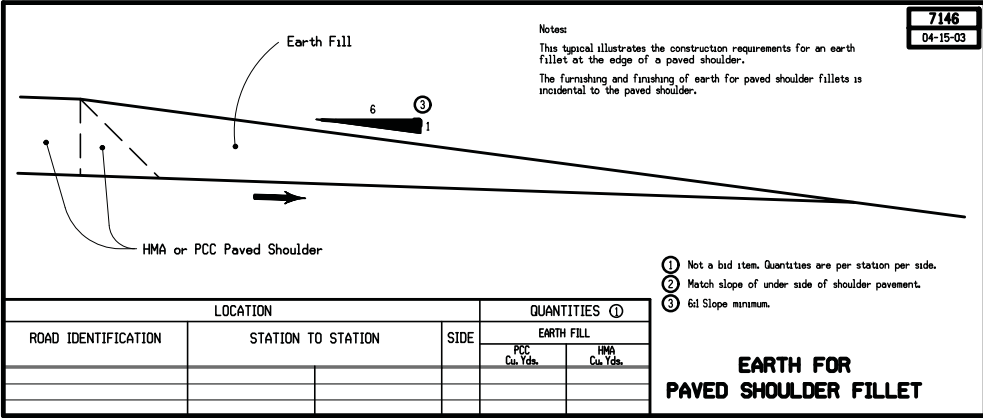
7145
04-15-03

Notes:
 This typical illustrates the construction requirements for an aggregate fillet at the edge of a paved shoulder.
 The aggregate used in the fillet shall meet the requirements of Aggregate for Paved Shoulder Fillet, as specified in Article 4120.07.
 The furnishing and finishing of aggregate for paved shoulder fillets is incidental to the paved shoulder.

- ① Not a bid item. Quantities are per station per side.
- ② Match slope of under side of shoulder pavement.
- ③ 6:1 Slope minimum

LOCATION			QUANTITIES ①	
ROAD IDENTIFICATION	STATION TO STATION	SIDE	AGGREGATE FOR PAVED SHOULDER FILLET	
			PCC Tons	HMA Tons

AGGREGATE FOR PAVED SHOULDER FILLET



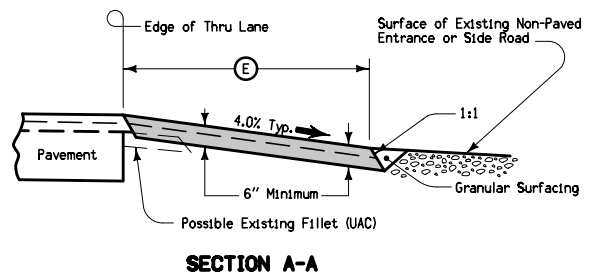
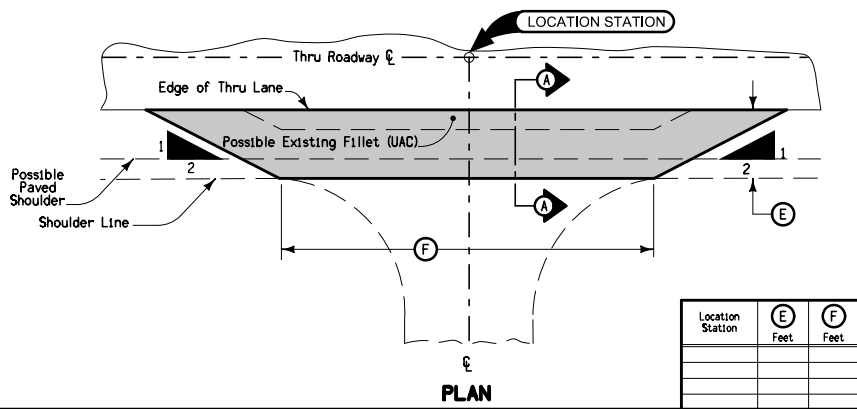
Notes:
 This typical illustrates the construction requirements for an earth fillet at the edge of a paved shoulder.
 The furnishing and finishing of earth for paved shoulder fillets is incidental to the paved shoulder.

7146
 04-15-03

- ① Not a bid item. Quantities are per station per side.
- ② Match slope of under side of shoulder pavement.
- ③ 6:1 Slope minimum.

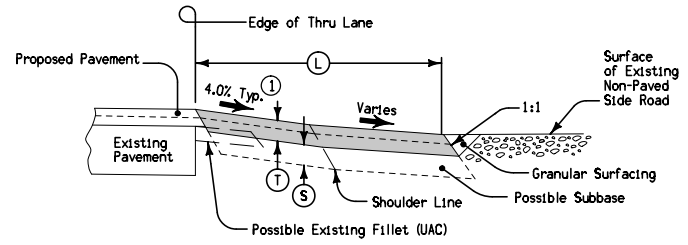
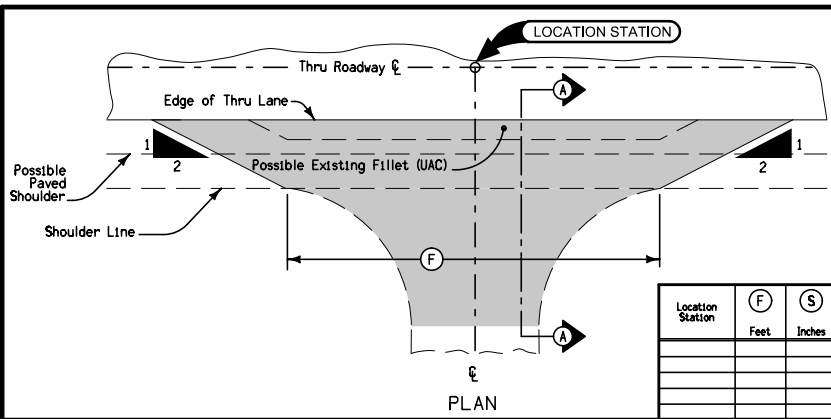
LOCATION			QUANTITIES ①	
ROAD IDENTIFICATION	STATION TO STATION	SIDE	EARTH FILL	
			PCC Cu. Yds.	HMA Cu. Yds.

**EARTH FOR
 PAVED SHOULDER FILLET**



Special shaping of existing surface prior to placement of fillet may be required by the Engineer and is incidental to other work on the project.
Quantities included with mainline quantities.

FILLET FOR NON-PAVED ENTRANCES OR SIDE ROADS



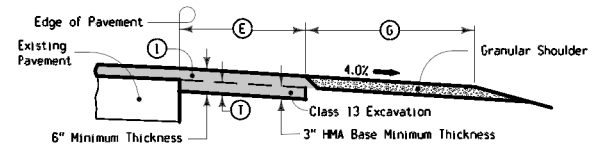
SECTION A-A

Location Station	(F) Feet	(S) Inches	(T) Inches	(L) (50' min.) Feet	Remarks

Special shaping of existing surface prior to placement of fillet or fillet extension may be required by the Engineer and is incidental to other work on the project.
Pavement quantities included with mainline quantities.
① Match existing slope.

FILLET EXTENSION FOR NON-PAVED SIDE ROADS

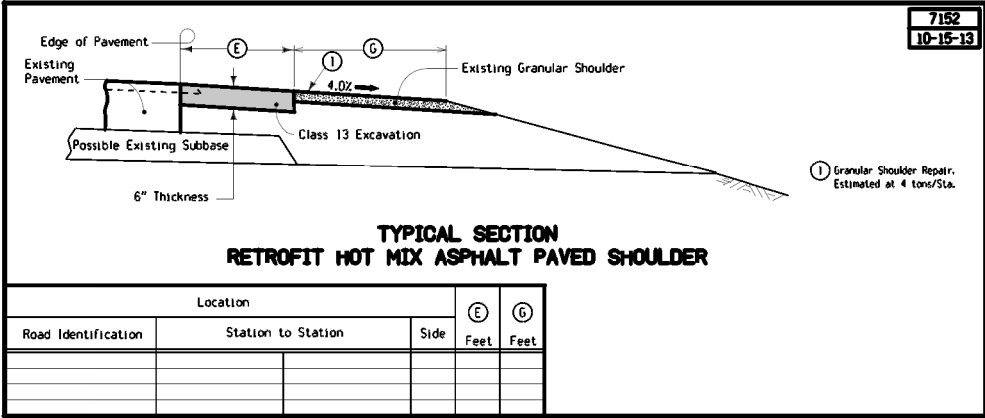
7151
10-15-13



**TYPICAL SECTION
RETROFIT PAVED SHOULDER**

① HMA and tack coat quantities above the HMA base are included with mainline quantities.

Location			⑤	①	⑥
Road Identification	Station To Station	Side	Feet	Inches	Feet

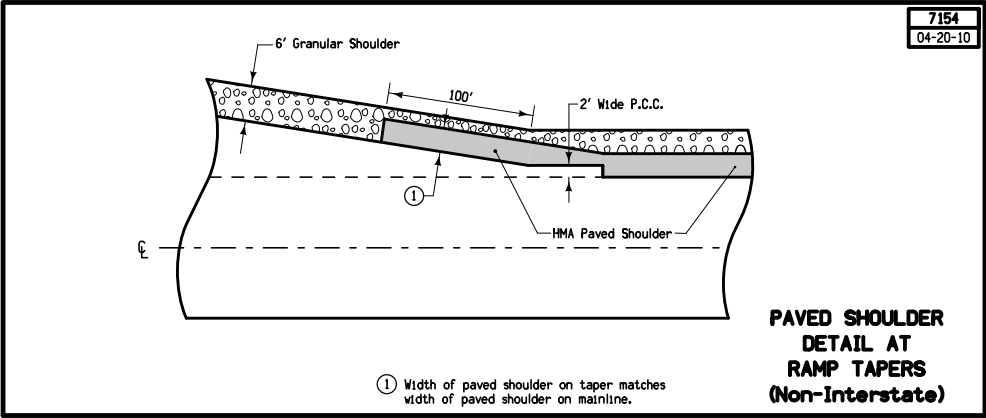


7152
10-15-13

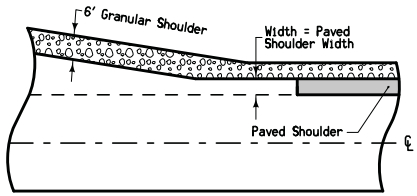
**TYPICAL SECTION
RETROFIT HOT MIX ASPHALT PAVED SHOULDER**

① Granular Shoulder Repair.
Estimated at 4 tons/Sta.

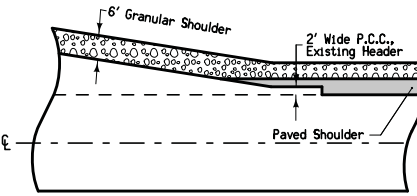
Location			①	②
Road Identification	Station to Station	Side	Feet	Feet



7154A
10-20-09



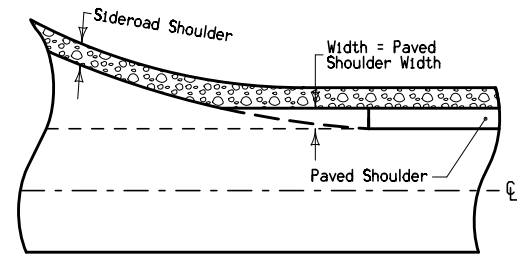
With Newly Constructed Turn Lanes



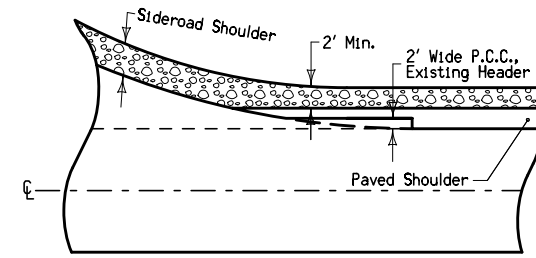
At UAC Turn Lanes

**PAVED SHOULDER
DETAIL AT
TURN LANES**

7154B
10-19-21

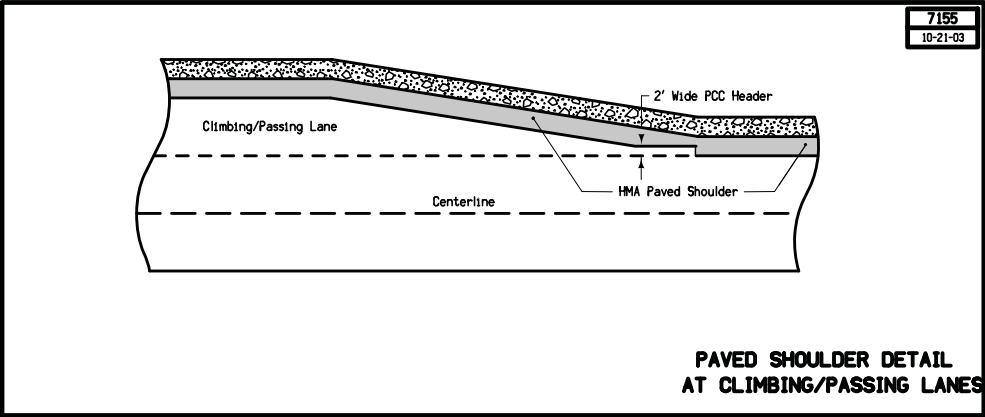


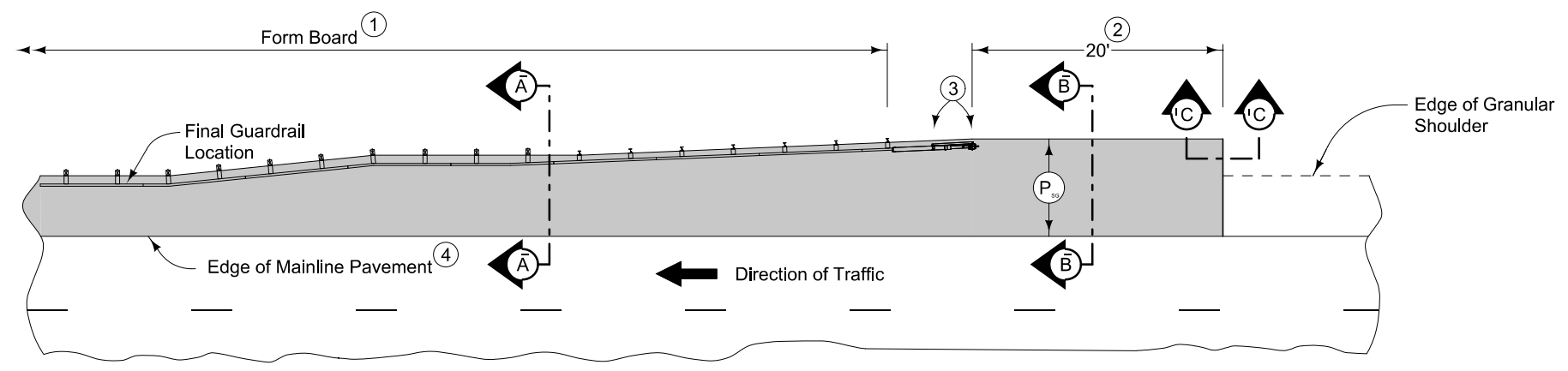
With Newly Constructed Returns



At UAC Returns

**PAVED SHOULDER
DETAIL AT RETURNS**





PLAN VIEW

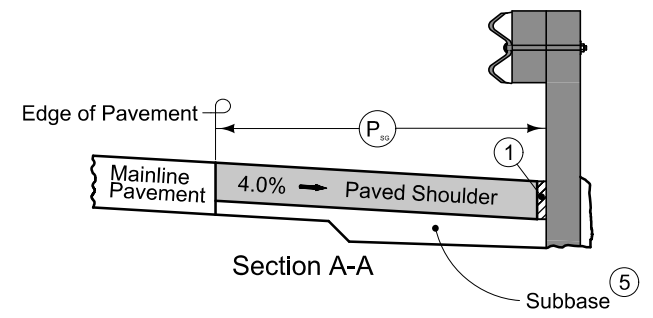
9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

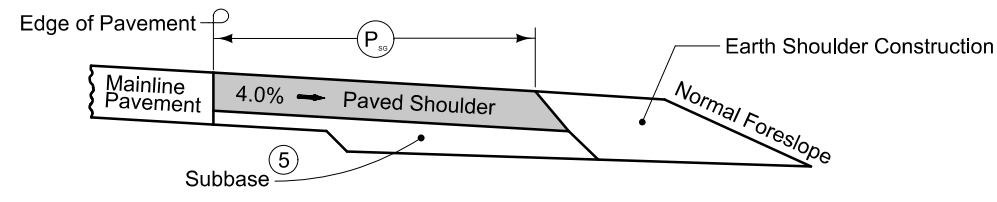
Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

Refer to Tabulation 112-9 for shoulder quantities.

- ① PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.
- ② Continue paved shoulder 20 feet beyond the center of the first post.
- ③ Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ④ 'KT' joint (per PV-101) for PCC shoulder. 'B' joint (per PV-101) for HMA shoulder.
- ⑤ Refer to other details in the plan.

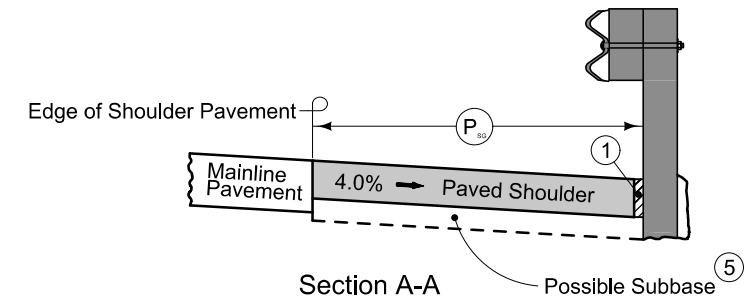


Section A-A

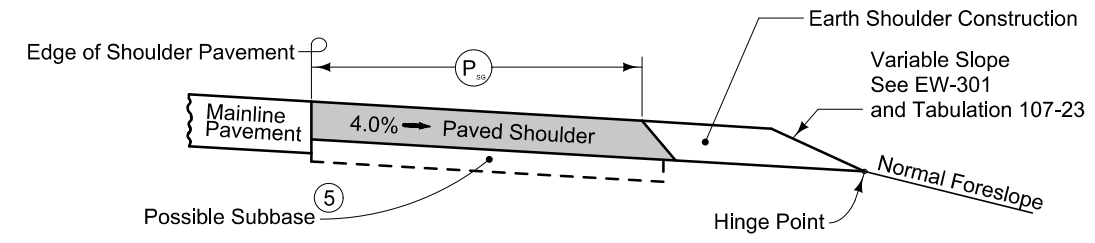


Section B-B

NEW CONSTRUCTION

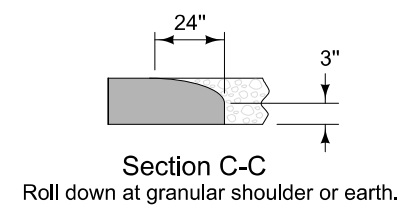


Section A-A

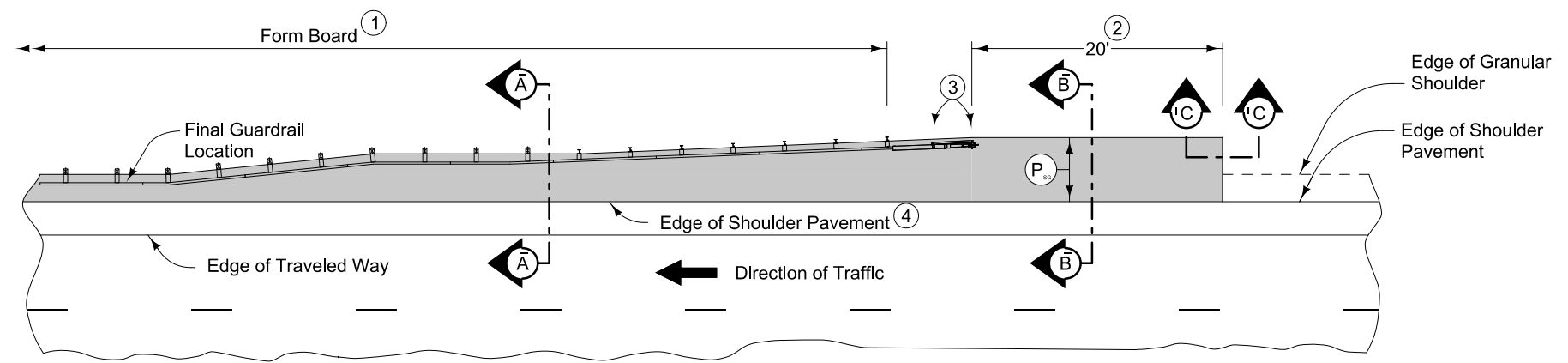


Section B-B

EXISTING SHOULDER



PAVED SHOULDER AT GUARDRAIL
(GRANULAR SHOULDER ADJACENT TO MAINLINE)



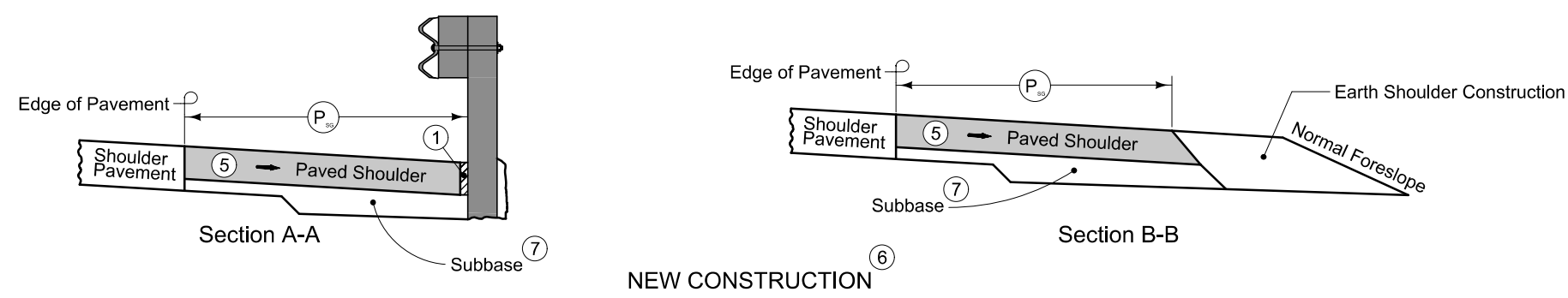
PLAN VIEW

9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

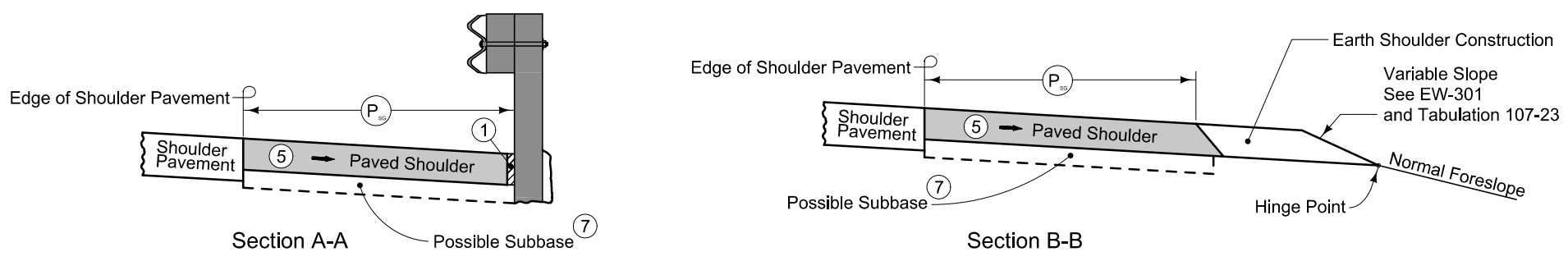
Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

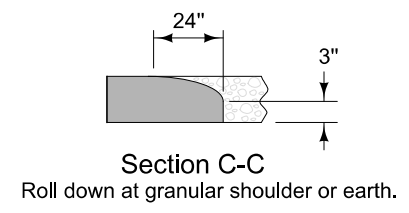
Refer to Tabulation 112-9 for shoulder quantities.



NEW CONSTRUCTION

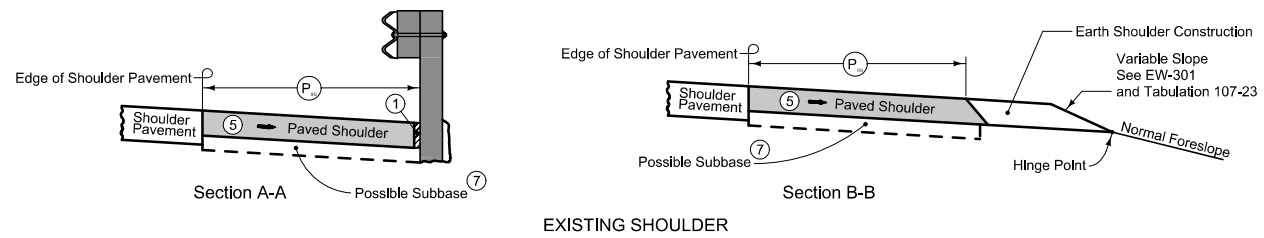
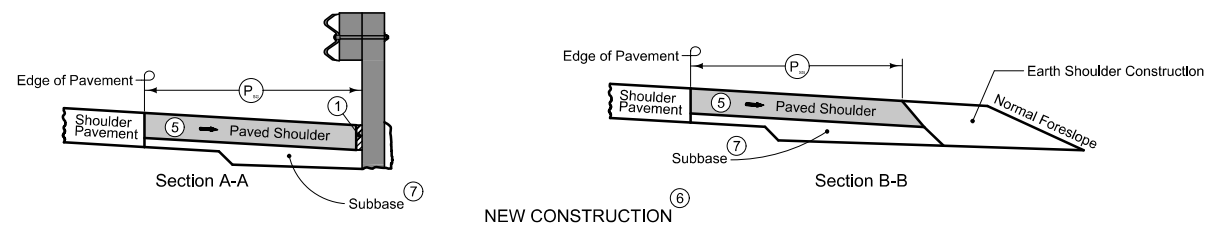
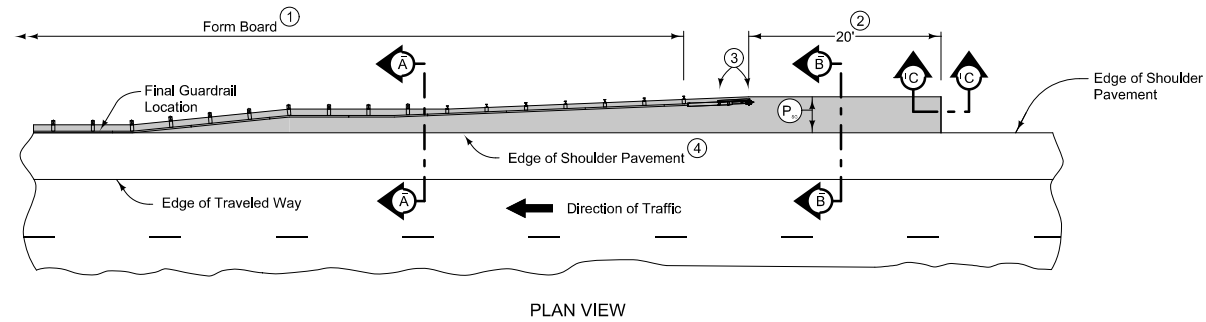


EXISTING SHOULDER



PAVED SHOULDER AT GUARDRAIL (ADJACENT TO PARTIAL WIDTH PAVED SHOULDER)

- ① PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.
- ② Continue paved shoulder 20 feet beyond the center of the first post.
- ③ Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ④ 'KT' (per PV-101) joint for PCC shoulder. 'B' (per PV-101) joint for HMA shoulder.
- ⑤ Match shoulder slope.
- ⑥ The Contractor has the option to pave the paved shoulder at guardrail and the partial width paved shoulder as one operation.
- ⑦ Refer to other details in the plan.



DESIGNER INFO 7158 04-19-22

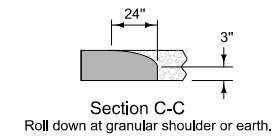
9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

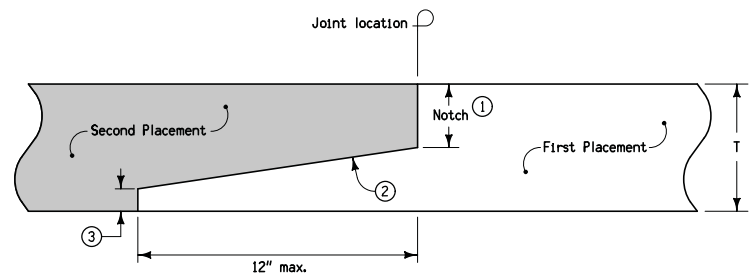
Refer to Tabulation 112-9 for shoulder quantities.

- ① PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.
- ② Continue paved shoulder 20 feet beyond the center of the first post.
- ③ Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ④ 'KT' (per PV-101) joint for PCC shoulder. 'B' (per PV-101) joint for HMA shoulder.
- ⑤ Match shoulder slope.
- ⑥ The Contractor has the option to pave the paved shoulder at guardrail and the full width paved shoulder as one operation.
- ⑦ Refer to other details in the plan.



PAVED SHOULDER AT GUARDRAIL (ADJACENT TO FULL WIDTH PAVED SHOULDER)

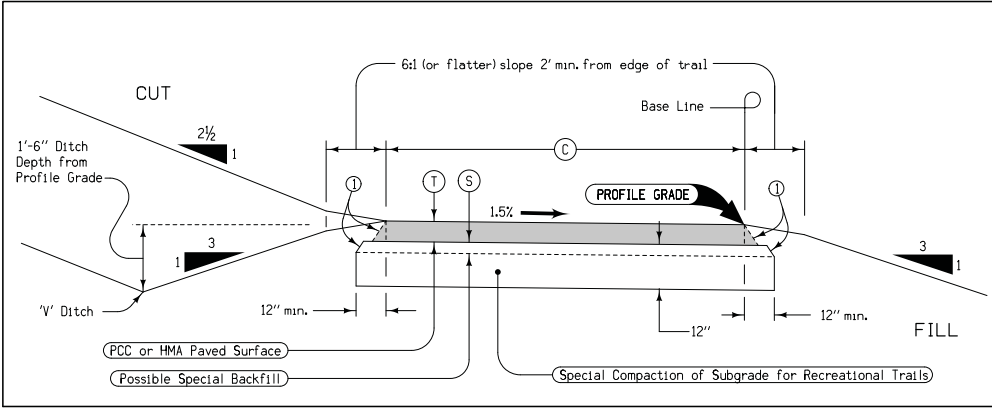
7315
10-20-09



Notes:

- ① Notch: Min = nominal maximum aggregate size + 1/4". Max = T/2.
- ② 12:1 Slope
- ③ Optional step at toe of slope: Max = 1".

**LONGITUDINAL HMA
NOTCHED WEDGE JOINT
T = 2" OR GREATER**



PAVEMENT THICKNESS		
Pavement Type	Trail Width	
	(C)	(T)
PCC	8'	4"
	10' or greater	5"
HMA	8'	5"
	10' or greater	6"

Notes:
Bid Item is "Recreational Trail".
ⓐ Nominal 1:1 slope (HMA only)

STATION TO STATION	PAVEMENT TYPE PCC, HMA, or option	Trail Width		'V' DITCH	
		(C) Feet	(S) Inches	Left	Right

TYPICAL CROSS SECTION
RECREATIONAL TRAIL
PAVED SURFACE