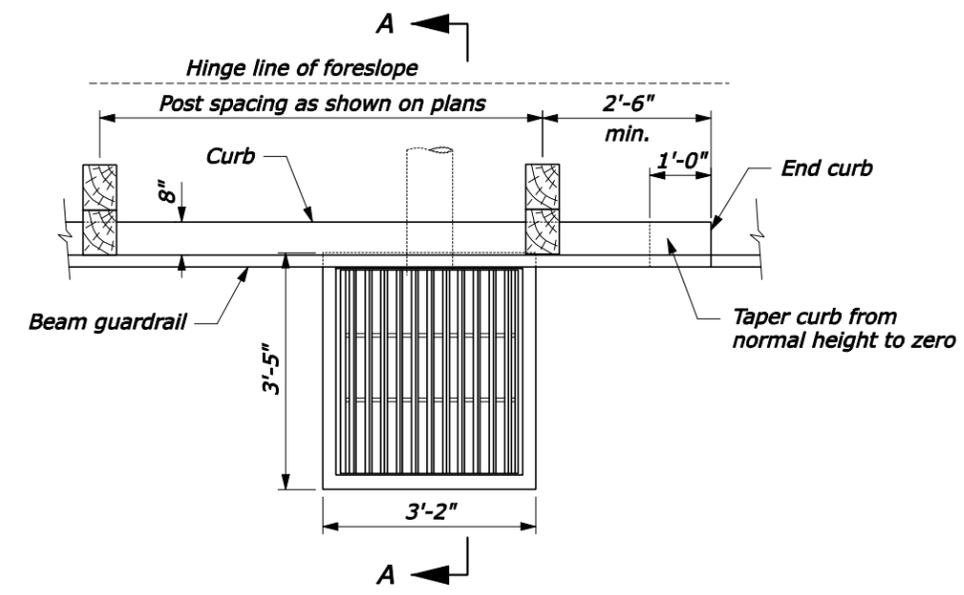


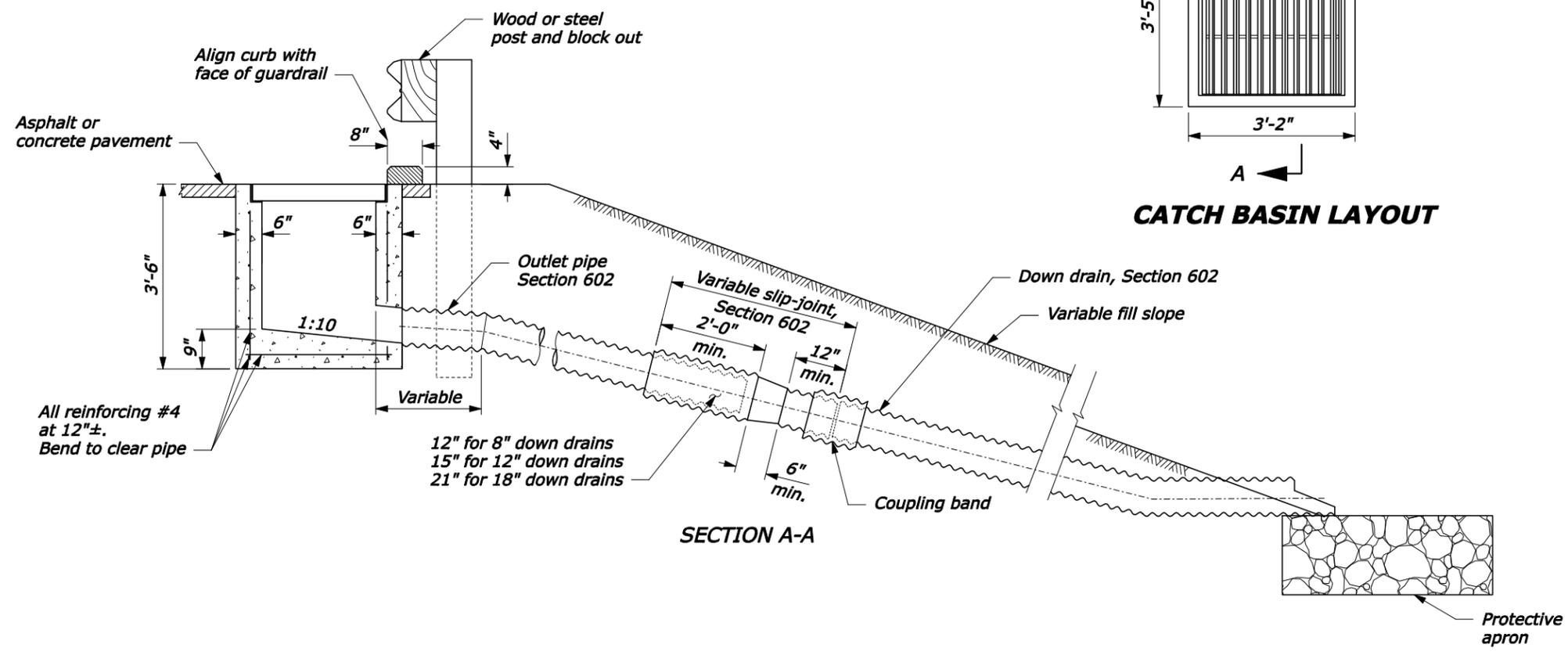
**PLAN**  
**CATCH BASIN LAYOUT AT BRIDGE ENDS**

- NOTE:**
1. **CONCRETE:** Chamfer exposed edges  $\frac{3}{4}$ " unless otherwise shown. Give all concrete surfaces a Class 1 finish.
  2. The minimum concrete cover to the face of any bar is  $1\frac{1}{2}$ " unless otherwise shown.
  3. See Standard 604-2 for Type A Frame and Grate and Standard 604-3 for Type B Frame and Grate.
  4. Make all coupling band connections watertight by placing  $\frac{3}{16}$ " bead of approved caulking under each half of the bands before tightening.
  5. Fabricate tapered portion of slip-joint from either flat or corrugated sheets.
  6. See Detail C251-50 for protective apron details.

DESCRIPTION	FRAME AND GRATE	
	TYPE A	TYPE B
Reinforcing Steel	70 lb	70 lb
Structural Steel	215 lb	238 lb
Concrete	0.85 cuyd	0.85 cuyd



**CATCH BASIN LAYOUT**



**SECTION A-A**

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY DETAIL <b>CATCH BASIN TYPE 2 WITH DOWN DRAIN</b>	
DETAIL APPROVED FOR USE 03/2009	DETAIL
REVISED:	<b>C604-50</b>

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## NOTES TO THE DESIGNER

Last Updated: March 2009

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### General Information

1. **Converted from an FLH Standard.** This drawing was originally an FLH Standard drawing that was modified to accommodate the new riprap SCR.
2. **Riprap classes.** Use this drawing only with NCHRP classifications (See the Section 251 SCRs on the LOS). Use [FLH Standard drawing 604-4](#) with FP-03 classifications.

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### Applicable SCRs

1. Section 251:  
[http://www.cflhd.gov/design/\\_documents/construction/scr\\_03/S251-03E.doc](http://www.cflhd.gov/design/_documents/construction/scr_03/S251-03E.doc)
2. Section 705:  
[http://www.cflhd.gov/design/\\_documents/construction/scr\\_03/S705-03E.doc](http://www.cflhd.gov/design/_documents/construction/scr_03/S705-03E.doc)

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### Typical Pay Items Used

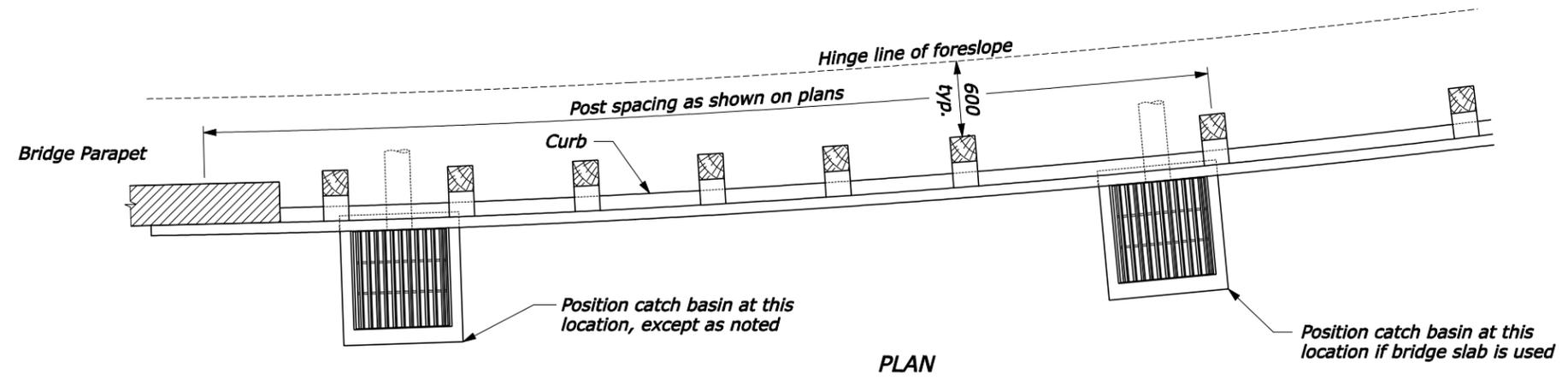
- 25101-2000 Placed riprap, class 2 and/or
- 25101-3000 Placed riprap, class 3 and/or
- 25101-4000 Placed riprap, class 4
  
- 60201-0300 8-inch pipe culvert or
- 60204-0400 12-inch pipe culvert or
- 60201-0600 18-inch pipe culvert
  
- 60404-2000 Catch basin, type 2
  
- 60409-0100 Metal frame and grate type A or
- 60409-0200 Metal frame and grate type B
  
- Other project-specific items, including curb, guardrail, and pavement surfacing
- Geotextile quantity is shown for information only

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### Updates

March 2009

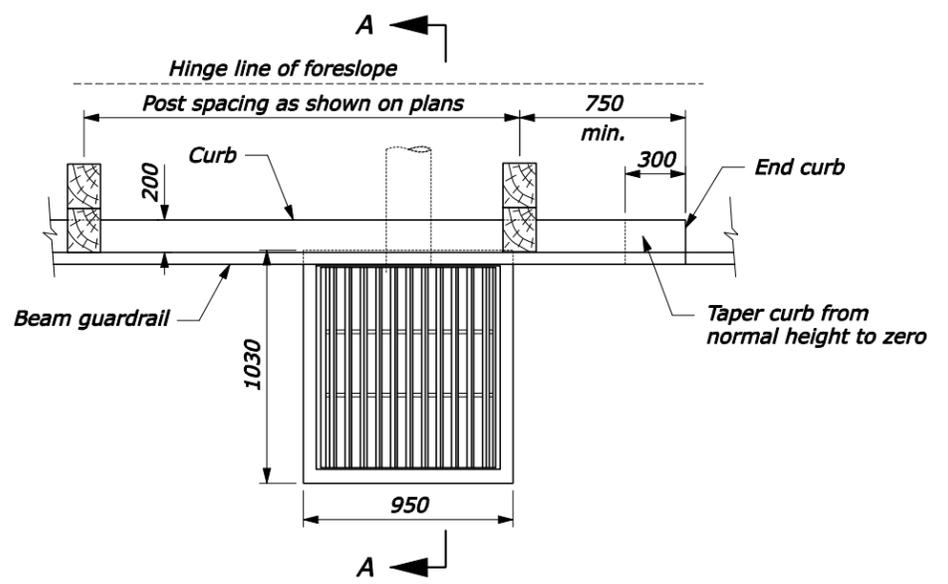
- Converted from an FLH Standard
- Deleted protective apron detail – refers to CFL Detail 251-50 for riprap apron details.



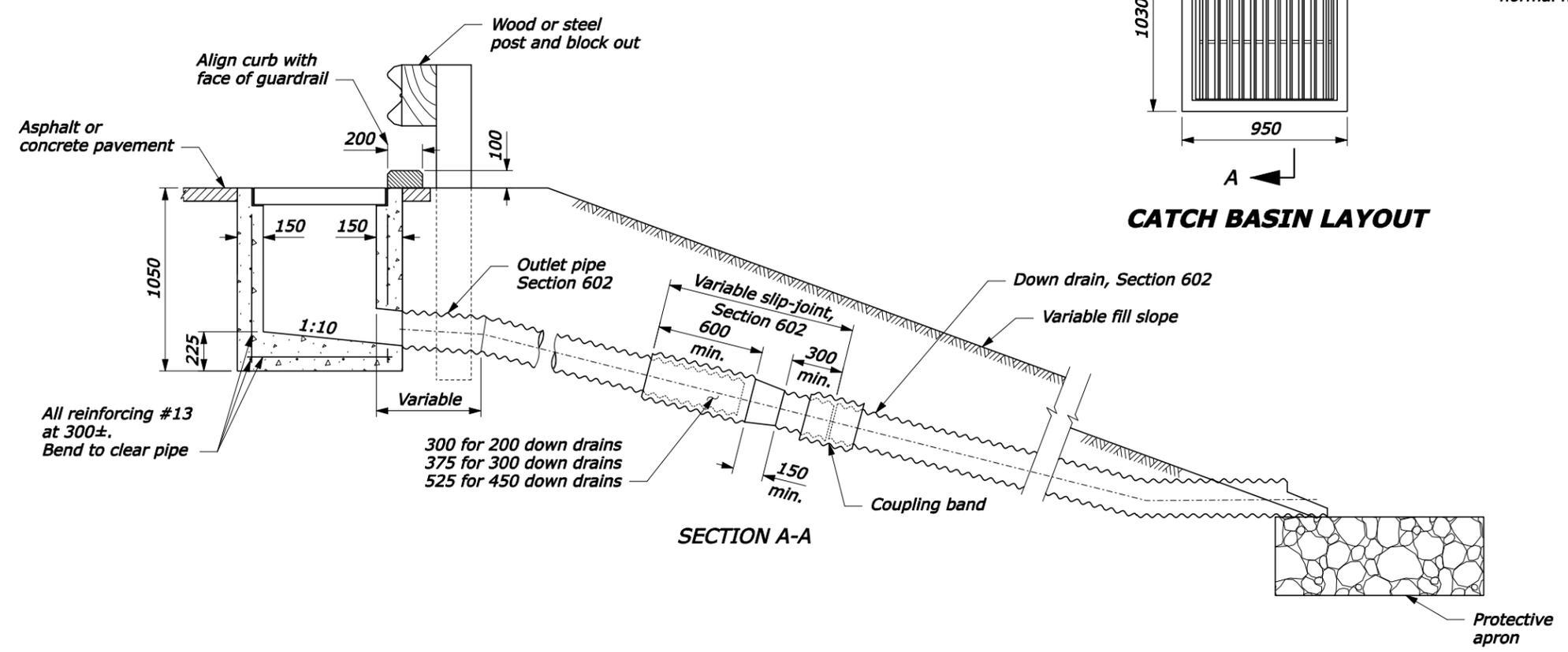
**PLAN**  
**CATCH BASIN LAYOUT AT BRIDGE ENDS**

- NOTE:**
1. **CONCRETE:** Chamfer exposed edges 20 mm unless otherwise shown. Give all concrete surfaces a Class 1 finish.
  2. The minimum concrete cover to the face of any bar is 50 mm unless otherwise shown.
  3. See Standard M604-2 for Type A Frame and Grate and Standard M604-3 for Type B Frame and Grate.
  4. Make all coupling band connections watertight by placing 5 mm bead of approved caulking under each half of the bands before tightening.
  5. Fabricate tapered portion of slip-joint from either flat or corrugated sheets.
  6. See Detail CM251-50 for protective apron details.
  7. Dimensions without units are millimeters.

DESCRIPTION	FRAME AND GRATE	
	TYPE A	TYPE B
Reinforcing Steel	32 kg	32 kg
Structural Steel	98 kg	108 kg
Concrete	0.6 m <sup>3</sup>	0.6 m <sup>3</sup>



**CATCH BASIN LAYOUT**



**SECTION A-A**

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

METRIC DETAIL

**CATCH BASIN  
TYPE 2  
WITH DOWN DRAIN**

DETAIL APPROVED FOR USE 03/2009

REVISID: \_\_\_\_\_

DETAIL  
CM604-50

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## NOTES TO THE DESIGNER

Last Updated: March 2009

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### General Information

1. **Converted from an FLH Standard.** This drawing was originally an FLH Standard drawing that was modified to accommodate the new riprap SCR.
2. **Riprap classes.** Use this drawing only with NCHRP classifications (See the Section 251 SCRs on the LOS). Use [FLH Standard drawing 604-4](#) with FP-03 classifications.

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### Applicable SCRs

1. Section 251:  
[http://www.cflhd.gov/design/\\_documents/construction/scr\\_03/S251-03M.doc](http://www.cflhd.gov/design/_documents/construction/scr_03/S251-03M.doc)
2. Section 705:  
[http://www.cflhd.gov/design/\\_documents/construction/scr\\_03/S705-03M.doc](http://www.cflhd.gov/design/_documents/construction/scr_03/S705-03M.doc)

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### Typical Pay Items Used

- 25101-2000 Placed riprap, class 2 and/or
- 25101-3000 Placed riprap, class 3 and/or
- 25101-4000 Placed riprap, class 4
  
- 60201-0300 200mm pipe culvert or
- 60204-0400 300mm pipe culvert or
- 60201-0600 450mm pipe culvert
  
- 60404-2000 Catch basin, type 2
  
- 60409-0100 Metal frame and grate type A or
- 60409-0200 Metal frame and grate type B
  
- Other project-specific items, including curb, guardrail, and pavement surfacing
- Geotextile quantity is shown for information only

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### Updates

March 2009

- Converted from an FLH Standard
- Deleted protective apron detail – refers to CFL Detail 251-50 for riprap apron details.