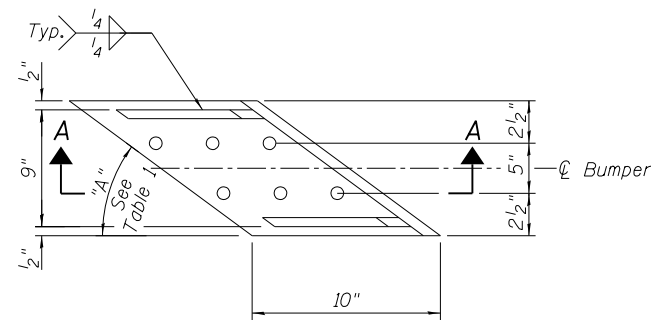
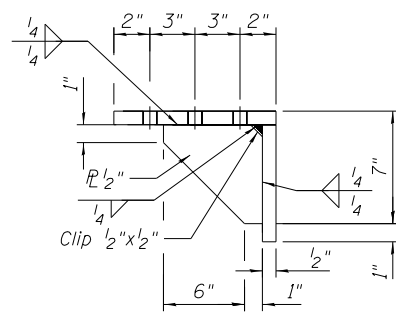


**PLAN AT ABUTMENT BRG.**  
Typical each Girder



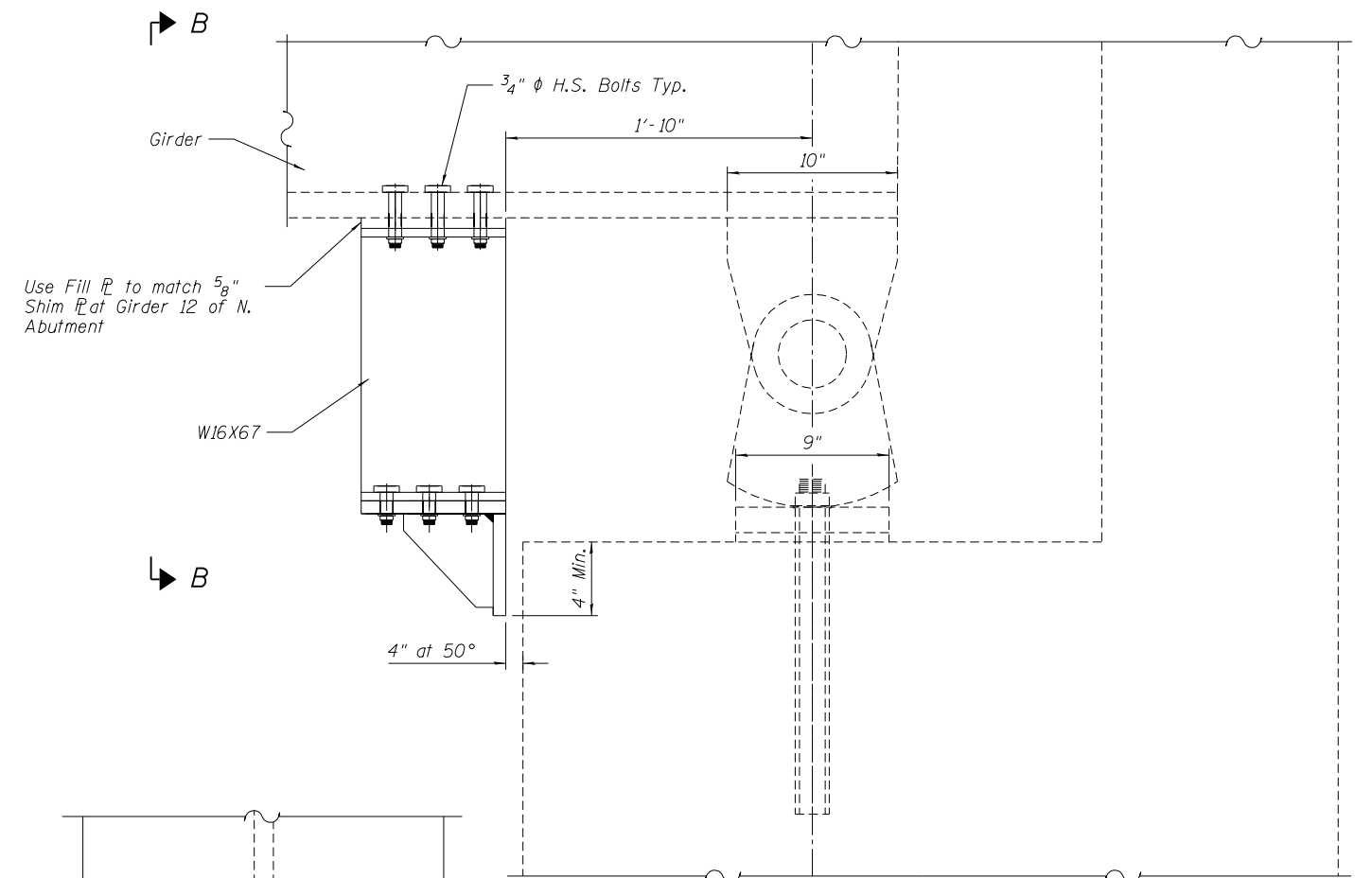
**SEISMIC BUMPER**



**SECTION A-A**

**TABLE 1**

| Location          | Angle "A" |
|-------------------|-----------|
| NB South Abutment | 30°52'25" |
| NB North Abutment | 53°35'17" |
| SB South Abutment | 31°49'17" |
| SB North Abutment | 53°35'17" |

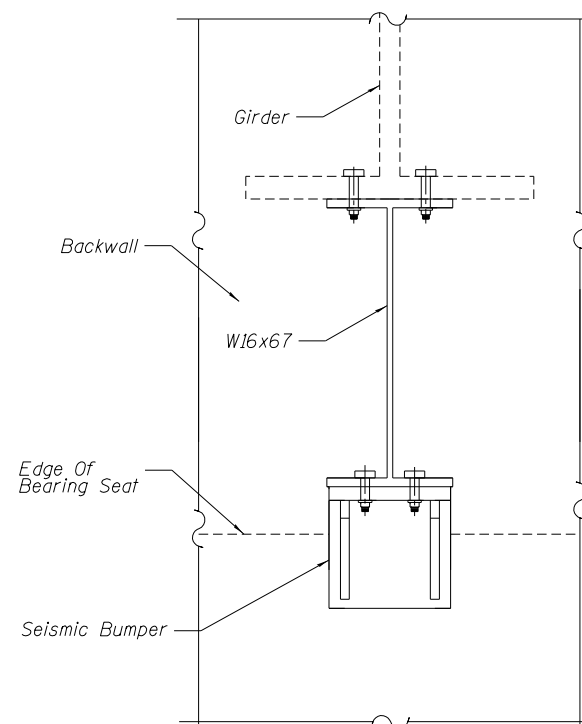


**ELEVATION AT ABUTMENT**

Expansion Bearing  
Typical each Girder

**NOTES:**

- Use 13/16" holes for 3/4"  $\phi$  A325 HS bolts.
- Attach Seismic Bumpers to each Girder at both North and South Abutments and both Structures (30 Each).
- Cost Of drilling holes in bottom flange of existing Girder shall be included in Furnishing and Erecting Structural Steel.
- Contractor shall verify all field dimensions necessary for Seismic Bumpers prior to fabrication.
- $F_y = 50$  Ksi (Structural Steel).
- Seismic Bumper shall be installed parallel to Abutment.
- The Seismic bumpers shall be coated as specified in Article 506.08 (b) of the Standard Specifications.



**VIEW B-B**  
Typical each Girder

**BILL OF MATERIAL**

| Item                                     | Unit  | Total |
|--|-------|-------|
| Furnishing and Erecting Structural Steel | Pound | 3120  |

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FILE NAME = 0600214&0253-76A89-16-Bumper.dgn



|                            |                |           |
|----------------------------|----------------|-----------|
| USER NAME = DMGoias        | DESIGNED - KRS | REVISED - |
| PLOT SCALE = 2/8" 1" = 10' | CHECKED - FAS  | REVISED - |
| PLOT DATE = 8/24/2012      | DRAWN - DMG    | REVISED - |
|                            | CHECKED - FAS  | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SEISMIC BUMPERS  
STRUCTURE NO. 060-0214 NB AND 060-0253 SB**

SHEET NO. 16 OF 16 SHEETS

| F.A.I. RTE. | SECTION       | COUNTY  | TOTAL SHEETS | SHEET NO.          |
|-------------|---------------|---------|--------------|--------------------|
| 255         | 60-(7,8) RS-2 | MADISON | 261          | 243                |
|             |               |         |              | CONTRACT NO. 76A89 |

ILLINOIS FED. AID PROJECT