C3.2.4 Railroad crossings

C3.2.4.1 BNSF and UP overhead structures

C3.2.4.1.1 Vertical clearance

C3.2.4.1.2 Horizontal clearance

C3.2.4.1.3 Piers

C3.2.4.1.4 Bridge berms

C3.2.4.1.5 Drainage

C3.2.4.1.6 Barrier rails and fencing

C3.2.4.2 Non-BNSF and -UP overhead structures

C3.2.4.2.1 Vertical clearance

C3.2.4.2.2 Horizontal clearance

C3.2.4.2.3 Piers

C3.2.4.2.4 Bridge berms

C3.2.4.2.5 Drainage

C3.2.4.2.6 Barrier rails and fencing

C3.2.4.3 Underpass structures

C3.2.4.4 Submittals

1 December 2008

In discussions with the BNSF and UP railroads, the office has agreed to provide the new standard sheet 1067 and the information listed below. This information will be provided by Preliminary Design Section on the Plan View and Elevation View on the TS & L sheet of all bridge projects that involve BNSF and UP railroad except the items noted with an asterisk (*). These items will be provided by the Final Design Sections. Final Design Sections should review the list to make sure all information is provided.

Plan View

1. Centerline of bridge and/or centerline of project.
2. Track layout and limits of railroad right-of-way with respect to centerline of main lines.
3. Future tracks, access roadways and existing tracks as main line, siding, spur, etc.
4. Horizontal clearance at right angle from centerline of nearest existing or future

track to the face of obstruction such as substructure above grade.
* 5. Horizontal clearance at right angle from centerline of nearest existing or future track to the face of nearest foundation below grade.
6. Horizontal spacing at right angle between centerlines of existing and/or future tracks.
* 7. Limits of shoring and minimum distance at right angle from centerline of nearest track.
8. All existing facilities and utilities.
9. Existing ground shots and proposed grading.
10. Railroad Milepost and direction of increasing Milepost (Provided by Railroad).
11. Direction of flow for all drainage systems within project limits.
* 12. Limits of barrier rail and fence with respect to centerline of track.
* 13. Location of deck drains (Note drains shall not be located over the railroad right-ofway).
* 14. Total width of superstructure.
15. Width of shoulder and/or sidewalk.
16. North arrow
17. Footprint of proposed superstructure and substructure including existing structure if Applicable

Elevation View
1. Future tracks, access roadways and existing tracks as main line, siding, spur, etc.
2. Point of minimum vertical clearance and distance within the vertical clearance envelope, measured perpendicular from the centerline of nearest track.
* 3. Limits of shoring and minimum distance at right angle from centerline of nearest track.
4. Toe of slope and/or limits of retaining wall.
* 5. Limits of barrier rail and fence with respect to centerline of track.
6. Depth of foundation from top of tie / base of rail.
* 7. Top and bottom of pier protection wall elevation relative to top of rail elevation.
8. Controlling dimensions of drainage ditches and/or drainage structures.
9. Top of rail elevations for all tracks.
10. Minimum permanent vertical clearance above the top of high rail to the lowest point under the bridge.
11. Existing and proposed groundline and roadway profile.
12. Show slope and specify type of slope paving. Toe of slope shall be shown relative to drainage ditch and top of subgrade.

Note: Items denoted with an asterisk shall be provided by Final Design.

The new 1067 CADD standard shows details of:
1. Railroad General Notes
2. General Shoring Notes
3. General Excavation Zones detail
4. Minimum Construction Clearance Envelope detail
5. Top of Rail Elevations chart.

For additional information, see BNSF Railway – Union Pacific Railroad, Guidelines for

Railroad Grade Separation Projects.