

DATE: JULY 30, 1997

TO: BRIDGE DETAILING MANUAL USERS

FROM: S. W. HORTON

SUBJECT: TECHNICAL MEMORANDUM #23
BRIDGE DECK ELEVATION DRAWINGS

The following information is being provided to revise the requirements for Bridge Deck Elevation Drawings which are included in the bridge plans. This new policy applies to all projects which have not had a field inspection review (F.I.R.) as of the date of this memorandum.

Project Coordinates, Northing and Easting, for all reported points, shall be included in the Bridge Deck Elevation Drawings. Information Systems (IS) has provided a utility, Bridge Geometry Project Coordinate Converter (PRCR), to provide these coordinates. This utility is available on the VAX system.

All input data and the full Bridge Geometry output, which is at top of concrete deck, shall be given on the Bridge Deck Elevation Drawings.

Bridge Deck Elevation drawings are to be in .dwg format.

Bridge Deck Elevations will no longer be included in the field pack, except in cases where the girder lines are not at top of concrete deck. Example: Centerline of pot bearing, were the data is below top of concrete deck. In this case the Bridge Geometry output shall be included in the two field packs.

Roadway approach elevations will no longer be provided, unless the region requests them and specifies the stationing for these elevations.

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PICASO shall no longer be used. Attached are directions on how to produce Bridge Deck Elevation drawings. Also attached is an example Bridge Deck Elevation Sheet. The Staff Bridge work sheets have been revised in accordance with the above mentioned revisions, see B-100-3 and C-100-3. The CDOT Bridge Detailing Manual will be revised in the future to conform with this memorandum.

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CONSTRUCTING BRIDGE DECK ELEVATION DRAWINGS

Project coordinates (Northing and Easting), will be included in the Bridge Deck Elevation drawings. The project coordinates for the intersection of the layout line and the reference line, (0,0 of the X and Y coordinate system), as well as the bearing of the layout line, needs to be input after the bridge geometry (MBGM) program has been completed and the .LIS file has been created. To insure that the roadway Autocad coordinates are correct and have not been rotated, they shall be checked against a copy of the roadway COGO run.

At this time, the Bridge Deck Elevations sheets will need to be cut and pasted on Bridge Standard C-100-3.

To accomplish the above:

1. Run Bridge Geometry using GEOM and MBGM on the CDOT computer cluster node "dhq0lv", this will create the .LIS file.
2. To convert a bridge geometry file (.LIS file) to a project coordinate file (.PCF file), use "GEOM" and "PRCR" for Bridge Geometry Project Coordinate Converter.
3. Enter filename with extension. Example: fl6dgeom.lis
4. Enter output "PCF" filename, without extension. Example:fl6dgeom (The filename can not exceed eight characters).
5. Enter Northing reference point value for coordinate 0,0 of the X and Y coordinate system. Example: 123456.789
6. Enter Easting reference point value for coordinate 0,0 of the X and Y coordinate system. Example: 12345.678
7. Enter the bearing of the layout line. Example:N 45 15 14.79 E, The following messages should appear on your screen:

OK. Valid file

Converting the LIS file to a PCF file...

Conversion of the LIS file to a PCF file has successfully completed.

8. If the XXX.pcf output file is in the project directory, it must be moved or copied to your personal directory on the VAX. The command is "move or copy XXX.pcf brg\$disk:[directory]". The XXX.pcf file may be created directly in the personal directory.
9. Using your favorite editor, either in VAX or windows, strip all extraneous information from the XXX.pcf file. This may also be done directly in the Autocad drawing, but is somewhat more challenging. Leave in the date and time of the run and the input data, add a blank line after every five lines of data.
If you chose to use Microsoft Word as your editor, go to "Windows" and open "My Computer". Pick the icon "Map Network Drive" on the tool bar and connect to "\\DHQ20V\username".

Open up the windows project directory you are working on and drag the XXX.pcf file from the \\DHQ20V\username directory to the project directory on your computer.

Open "My Computer", open "C" drive, and open "Microsoft Office", you then need to click on and drag the XXX.pcf file from your project directory and drop it on Microsoft Word in order for it to open up and let you edit it.

The font needs to be changes to "Courier" so that the columns line up, to do this hold down the "Ctrl" key and press the "A" key to select all, then under the "Font" icon pick "Courier" and set the "Font Size" to 10. To get the rows wide enough so the data will be on one line and you can see it all, from the tool bar pick "Zoom Control" and set it at 75%. Next from the tool bar pick "File", "Page Setup", "Paper Size", and set the Orientation to "Landscape" and the Paper Size to "11x17".

You can click the "Show/Hide" button on the tool bar to display all nonprinting characters such as paragraph marks, tab characters and spaces.

When you "Save" The XXX.pcf file two message boxes will come up.

"This document contains formatting that cannot be saved in text format. Do you want to save changes to XXX.pcf".

Choose "Yes".

"XXX.pcf is a text format document. Save XXX.pcf as".

Chose "Text only".

If you exit Microsoft Word and have not completed the editing of the XXX.pcf file, or want to re-edit the file, you must again open "My Computer" open "C" drive, and open "Microsoft Office", you then need to click on and drag the XXX.pcf file from your project directory and drop it on Microsoft Word in order for it to open up and let you re-edit it. However when the file opens you will again need to change the font to "Courier" by holding down the "Ctrl" key and press the "A" key to select all, then under the "Font" icon pick "Courier" and set the "Font Size" to 10. To get the rows wide enough that the data will fit on one line and you can see it all, from the tool bar pick "Zoom Control" and set it at 75%. Next from the tool bar pick "File", "Page Setup", "Paper Size", and set the Orientation to "Landscape" and the Paper Size to 11x17.

10. Copy sheet C1003.dwg from the Standards directory to the Windows folder which you are using. Remove the check mark from the "read only" attribute box. ("Properties" under the "File" menu.)
11. Bring up C1003.dwg in Autocad out of your working directory and save_as with a new name such as GEOM1, GEOM2, etc.
12. Set Style to "Monosimp", layers and colors to your preference. Set "Tilemode" to 1. ("Tiled Model Space" in the "View" menu).
13. Using the "ASCTEXT" lisp routine enter the XXX.pcf file into the Autocad drawing. (filename c:\XXX.pcf). Set the text size at 2.4.
14. Locate as much of the XXX.pcf file as will fit on the sheet comfortable with the Autocad "Move" command. "Wblock" the remainder for use on the next sheet.

15. Set "Tilemode" to 0 and finish out the sheet. Save it ("Paper Space" in the "View" menu).
16. Repeat the process until the entire file has been used.