

REVISION HISTORY

Revision History For NDOR Criteria:

Limits Undivided- 07.25.06 (JS)

Limits Divided- 07.25.06 (JS)

A bug existed that would cause the logic to fail intersecting the proposed finished grade in random locations due to “skew effect” issues in V8. Skew effect was removed from both of these typical sections.

MultiRamp- 06.21.06 (JS)

Corrected a bug that was incorrectly labeling the shoulder subgrade point when the foreslope intersected existing ground inside of the hinge point.

Rural Tie Slopes.bx- 06.21.06 (JS)

Changes were made in the logic allowing the shape cluster centerline to be offset from the superelevation shapes. Previous logic assumed the centerline would be located within the superelevation shapes of the roadway (DR3-DR6). This change was made to facilitate the use of this typical in phased cross sections (e.g. one half of a divided roadway).

Rural Tie Slopes.bx- 06.01.06 (JS)

A bug was fixed that existed in sections with a small Lateral Obstacle clearance in conjunction with the presence of a special ditch. The slope drawn from the shoulder subgrade point to the front of ditch location was incorrect.

Overlay Undivided- 05.10.06 (JS)

Overlay Divided- 05.10.06 (JS)

A bug was corrected that was exposed with GeopakV8. This bug existed when a user placed the override line “no minimum overlay check” within the limits of the cross section cell, but outside the limits of the existing ground. When this occurred, criteria would cause Microstation to lock up.

Urban Divided- 04.20.06 (JS)

Urban Undivided- 04.20.06 (JS)

Logic was incorporated into these typical sections to draw barrier curb and subsequent parking lot pavement based on the presence of these features in plan view. Adhoc information was added to both of these to increase the flexibility. New items were added to the ddb file for both plan view and cross section view.

ALL CRITERIA- 04.05.06(JS): Tolerance Check

Logic was added to all typical sections that will check the tolerance value the user has set in the proposed cross section run, and force the user to set this to a value less than or equal to 0.01. This was done to offset the problem that exists when a user creates a new run, and Geopak defaults this value to 0.1. In most cases, this value is too large for a cross section tolerance, and can cause problems with the criteria and cross sections if not set to 0.01 or less.

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Offset Elevation at Tie Point- 03.22.06 (JS)

Added logic to label the Offset and Elevation at the tie point with existing ground. This had previously been computed only as an offset rounded to the nearest foot. Design requested this change, and it was approved through the Design Standards Engineer (Phil Tenhulzen) and District personnel.

Overlay Undivided-03.20.06- (JS)

Overlay Divided-03.20.06- (JS)

Corrected a bug that was causing the subgrade line to be left off of widening sections (no grade raise) in the areas of new surfaced shoulders.

Pavement.bx-03.07.06- (JS)

Mr Pavement.bx-03.07.06- (JS)

Bug fix that was producing skewed pavement slopes when a pavement feature (i.e. Edge of Pavement) was skewed in relation to the pattern line, even though the pattern line was perpendicular to the baseline. In this case, the pavement slopes should be computed with no skew effect, but all features outside of the pavement will reflect the skew angle.

DR1-01.19.06- (JS)

DR2-01.19.06- (JS)

Corrected a bug that existed which may have caused the variables for the “turf shoulder extensions” to be computed incorrectly if the values entered differed on the outside and inside. Logic was also added to allow for the slope of the “turf shoulder extension” to default to the value indicated by the appropriate “turf shoulder slope” if the width of the extension exceeds 2’. This was previously hard coded to meet that of the paved shoulder slope.

MULTI RAMP-01.06.06- (JS)

Corrected a bug in the shoulder file that was causing an error if surfacing under guardrail existed without an adjacent paved shoulder.

DR1-12.30.05- (JS)

DR2-12.30.05- (JS)

Corrected a bug that existed in areas where a ditch was initially computed, but was overwritten due to the fact that the back of ditch point was above ground. In this scenario, the safety slope is projected to the lateral clear distance, with foreslopes projected to existing ground.

VARIABLE SAFETY SLOPE 11.16.05- (JS)

Modifications were made to the rural tie slope logic which provided user variables for the safety slope. This will allow the user to define something other than the standard 1:6. This was added to handle county road projects that require a clear zone. Along with this, modifications were also made to add a 1:1 Backslope override line. Typical affected by this are the DR3-DR6, Urban Undivided, Urban Divided, Overlay Undivided and Overlay Divided.

URBAN UNDIVIDED 10.26.05- (JS)

URBAN DIVIDED 10.26.05- (JS)

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Corrected a bug that existed which stopped the subgrade and grading symbology from closing on sections with a shoulder distance greater than 12'.

URBAN INTERSTATE 10.26.05- (JS)

Corrected a bug in the foundation course within the median area of an urban interstate. The foundation course was getting drawn to the wrong marked point.

SPECIAL DITCH LOGIC UPDATE 10.06.05- (JS)

The logic defining how special ditches are used was modified. The major change to this was to allow a single profile to be defined for each side of the road, for the entire length of the Alignment. The logic will ignore any elevation less than 10, so the user has control of entering valid station ranges for special ditch locations. Instructions are available on the Roadway Design Documents database, under Geopak>Cross Sections>Special Ditch Profile Logic within Criteria.

URBAN UNDIVIDED 08.25.05- (JS)

URBAN DIVIDED 08.25.05- (JS)

Modified the criteria file that draws tie slopes behind the curb. There were problems that existed with the shoulders and tie slopes when the shoulder width hit unusual situations, some elements were not getting drawn. These were corrected to take those scenario's into account.

PGRAD E BLUETOP DIVIDED 05.25.05- (JS)

Modified the paving grade typical section to allow a PGL location to exist outside of the limits of the superelevation shape. This scenario applies when a designer wants to set the PGL location at the back of curb in a raised median area.

PAVEMENT CRITERIA 05.25.05- (JS)

Modified both the pavement files for new construction typical sections to correct a problem exposed in the V8 environment. Because of new Microstation accuracy, elements were getting drawn smaller than tolerance, which caused major problems to the "draw trace" command used in report generation. Due to this, modification was made to the code to eliminate the possibility of elements this size getting created.

ALL CRITERIA (JS): UPDATE TO V8

Modified all criteria files to work in Geopak2004 Edition. This included updating all levels to work with both the old structure, and the new named levels. Most features are now read and written directly from the NDOR_V8.ddb file. All metric typicals, as well as the Temp Road typical section were removed from the library. The typical sections were also renamed due to the elimination of the 6 character constraint. All descriptions will be provided in PDF format. Along with this, modifications were made to the configuration of NDOR geopak files.

PG D-04.12.04- (JS)

Modified criteria file to work correctly with divided roadways containing a raised surfaced median. This involves situations where the subgrade is unbroken through both pavement surfaces.

DR1-04.07.04- (JS)

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DR2-04.07.04- (JS)

Made additions to the surfacing under guardrail logic that allows it to be present in the event no paved shoulder exists. This was occurring in the median of roadways with 30' tops, in which case no paved shoulder line was present.

DR1-04.07.04- (JS)

DR2-04.07.04- (JS)

URBINT-04.07.04- (JS)

Added logic to draw intercepting dikes into cross section view based on the presence of "dike" symbology in plan view (feature file). This includes the ability to place a profile elevation on the top of dike.

ZMR02.06.04- (JS)

Created the metric multi ramp typical section.

URBINT12.03.03- (JS)

Logic was added to allow the new concrete barrier to be built by default in the median of the Urban Interstate.

MR-12.03.03- (JS)

These modifications include adding surfacing under guardrail, guardrail grading, erosion control and 4" interstate (concrete) curbs, and a new concrete barrier. In addition to this, specific logic was added to control tie slopes by using "shoulder tie", "cut from shoulder", "drop tieslopes", "drop safety section", and "safety slope tie" graphic override lines.

DR1-10.27.03- (JS)

DR2-10.27.03- (JS)

URBINT-10.27.03- (JS)

Corrected a bug that was causing erroneous results in areas where the front of ditch was below ground and the back of ditch was above ground. In this case, by default, the foreslope will get extended to intercept existing ground with no ditch.

DR1-09.20.03- (JS)

DR2-09.20.03- (JS)

URBINT-09.20.03- (JS)

Major modifications were made to the typical sections that make up the divided roadways. These modifications include adding surfacing under guardrail, guardrail grading, erosion control and 4" interstate (concrete) curbs. In addition to this, specific logic was added to control tie slopes by using "shoulder tie", "cut from shoulder", "drop tieslopes" and "drop safety section" graphic override lines, as well as adding a foreslope profile in the median for grading at guardrail locations.

URBUND-06.26.03- (JS)

Significant modifications were made to both the driveway and tie slope logic. This includes adding the dgn elements "Construction Line Back of Sidewalk", "Construction Line Front of Sidewalk", and "Building Front Back of Sidewalk" to allow the designer to control how criteria

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behaves in these conditions. Modified the subgrade logic to allow it to completed drawing in driveway and intersection locations, which previously did not occur. For a detailed description of this, see the URBUND typical description, which was re-written at the same time.

DR1-06.22.03- (JS)

DR2-06.22.03- (JS)

Corrected a bug that was causing an incorrect label in the cross section. This was occurring when the section was in a special ditch, with a foreslope that changed after the hinge point. The point that the foreslope crossed existing ground was being labeled incorrectly.

ROA-06.20.03- (JS)

Additional logic was added to allow the 1:10 foreslope grading line to work with this typical.

ROW-06.09.03- (JS)

Changed the symbology of the ROW easement line to match the standards that reside in the DDB file (D&C Manager)

LMTU-04.15.03- (JS)

Logic was added to the criteria file to handle labeling in plan view the ditch lines, flow arrows and slopes when a “V” ditch has been designed.

LMTD-04.15.03- (JS)

Logic was added to the criteria file to handle labeling in plan view the ditch lines, flow arrows and slopes when a “V” ditch has been designed.

PG U-04.09.03- (JS)

Major modifications to previous typical section called “PGRADE”. Logic was added to make the criteria more flexible and to produce the output necessary to create the construction books for Paving Grades and Bluetops. I also created a new typical called **PG_D** that runs with shapes to create this information for divided roadways.

PG D-04.09.03- (JS)

This typical section was created.

LABEL-04.09.03- (JS)

Added the variables “Level” and “Color” to allow the user to define this symbology for the label and the leader.