

TIN Manager & Surface TINs

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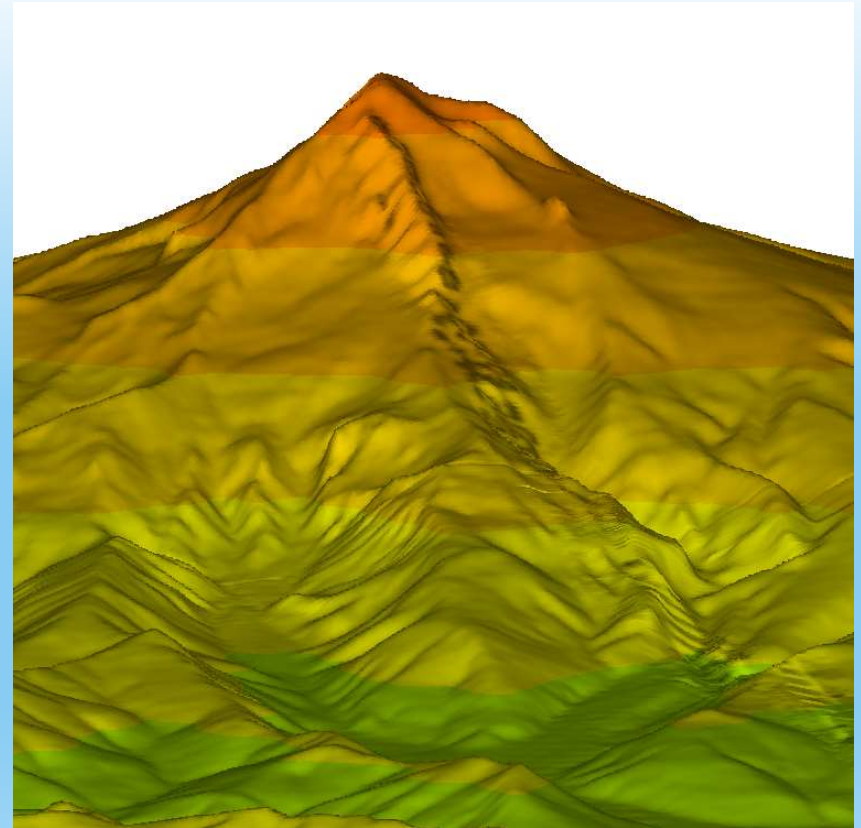
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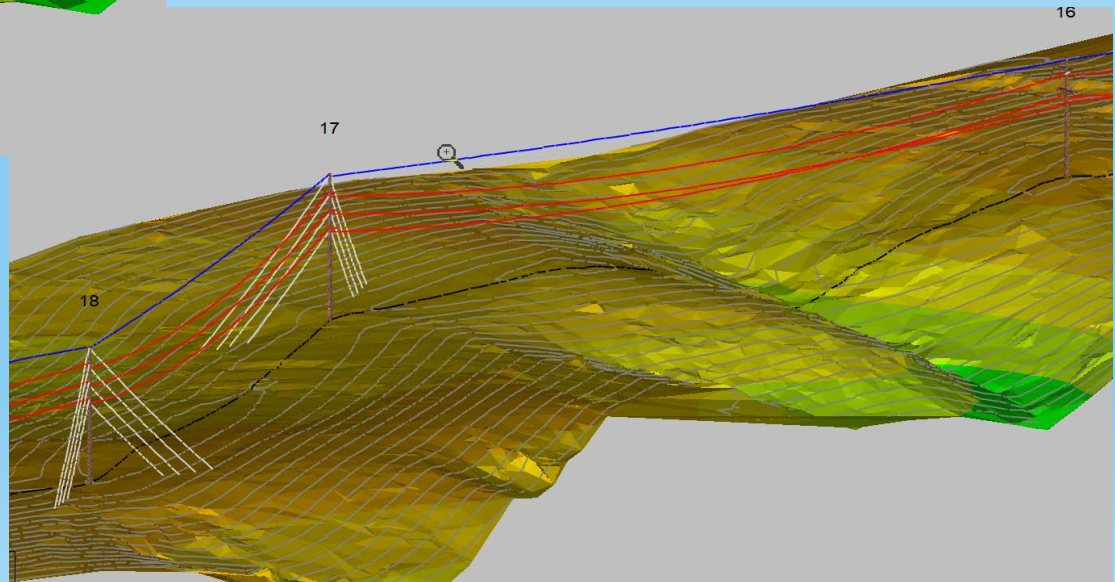
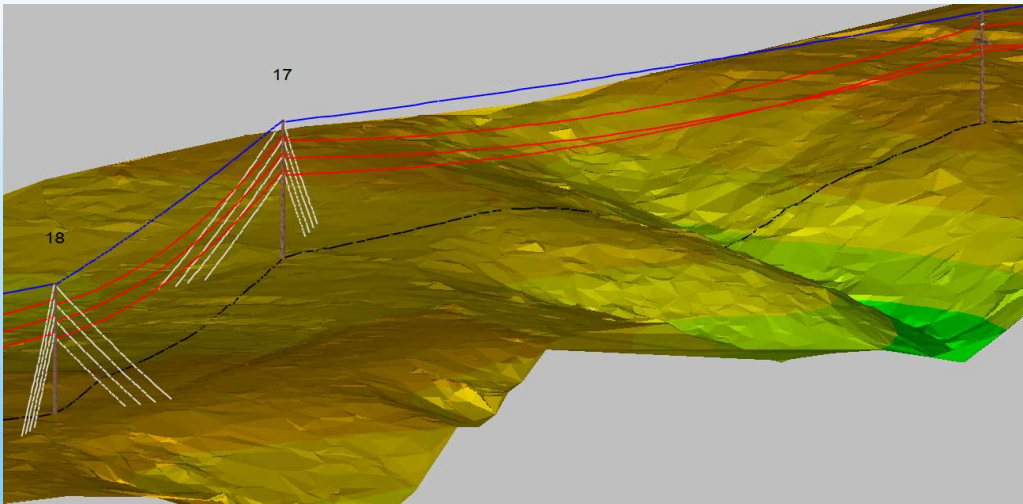
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TINs in PLS-CADD

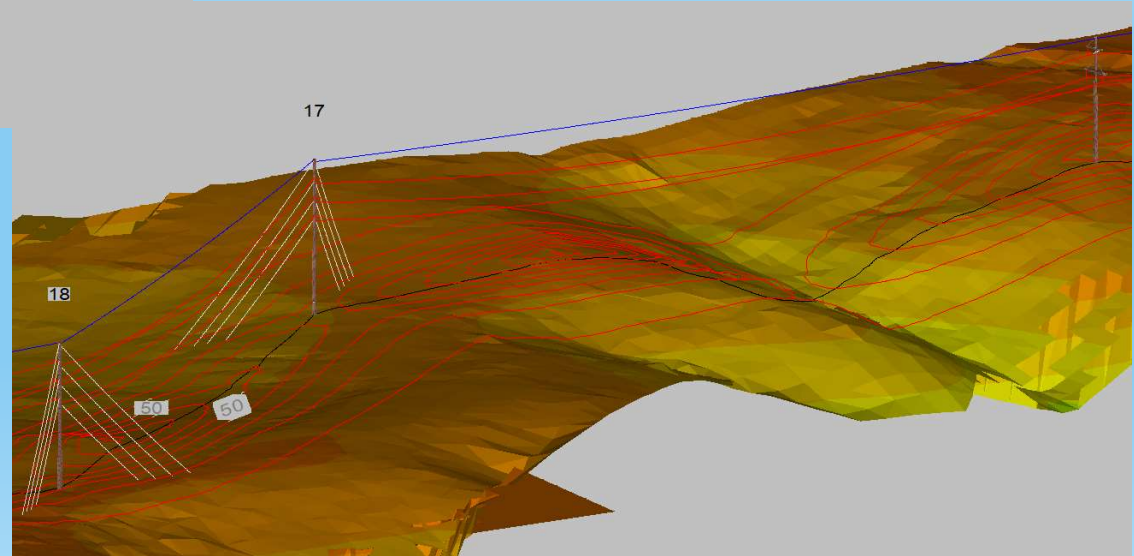
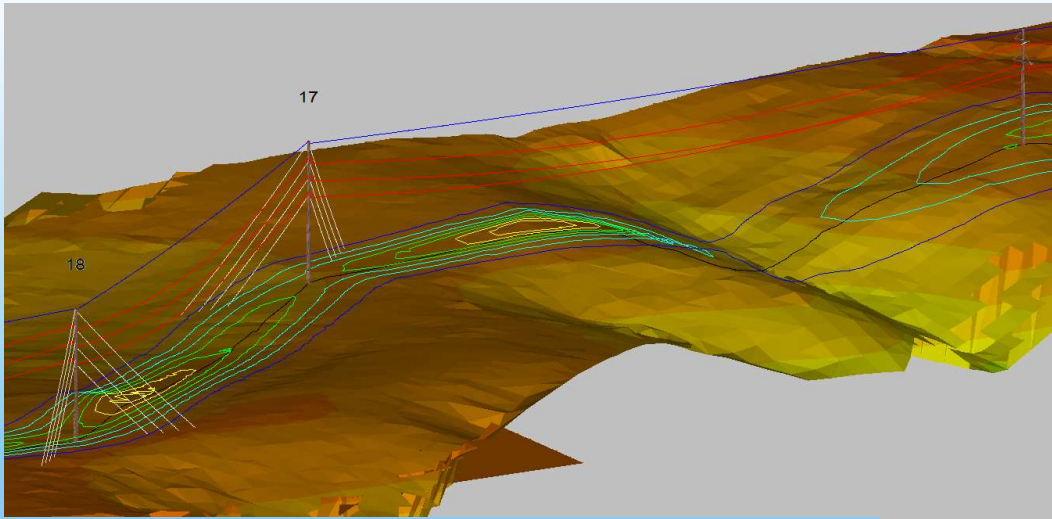
- There are nine (9) different types or variations of TIN models in PLS-CADD
- Each has its own purpose and they are created from different commands
- Not all TINs were saved with the PLS-CADD model and some had to be recreated in each new PLS-CADD session
- There must be a better way



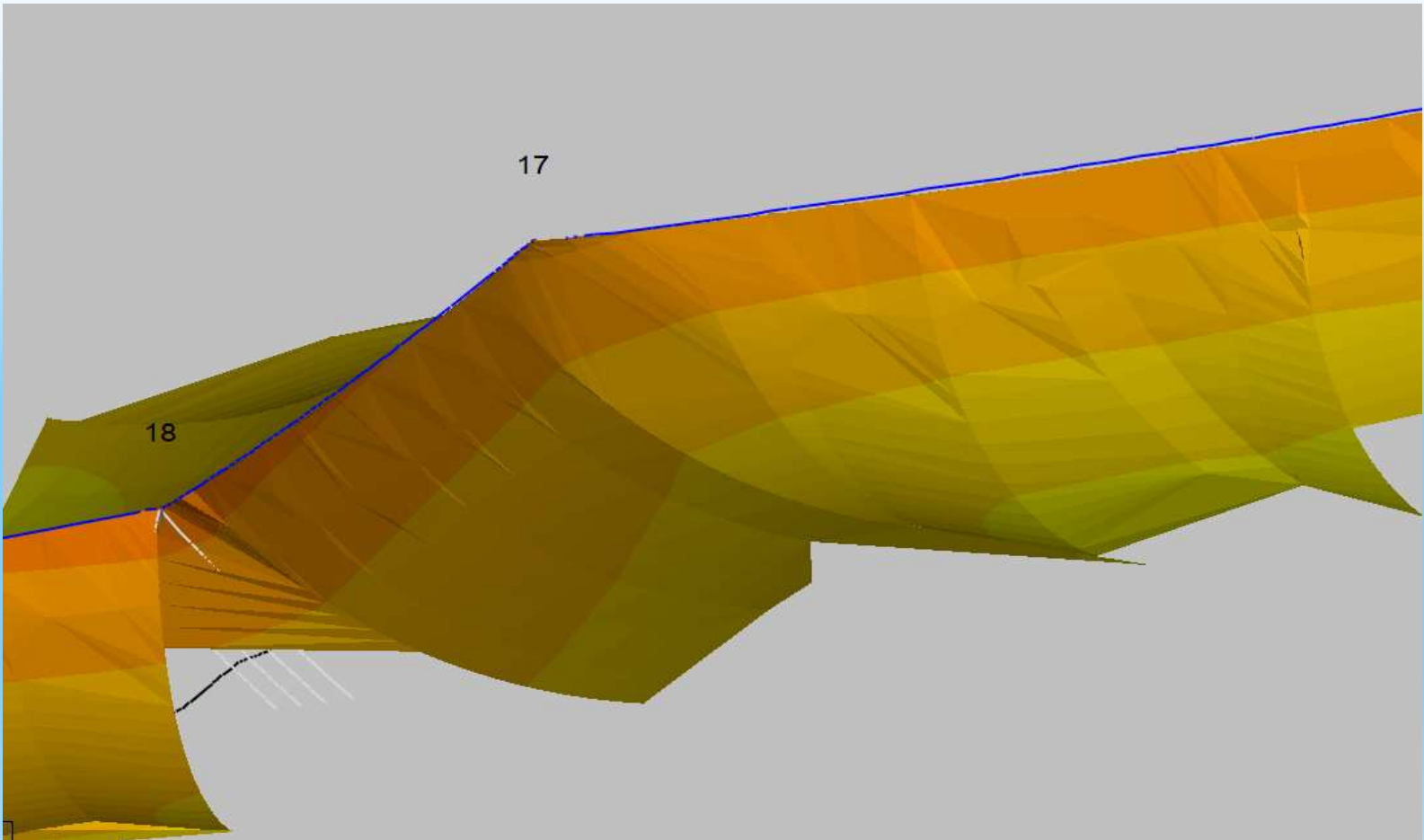
Ground TIN and ISOTIN



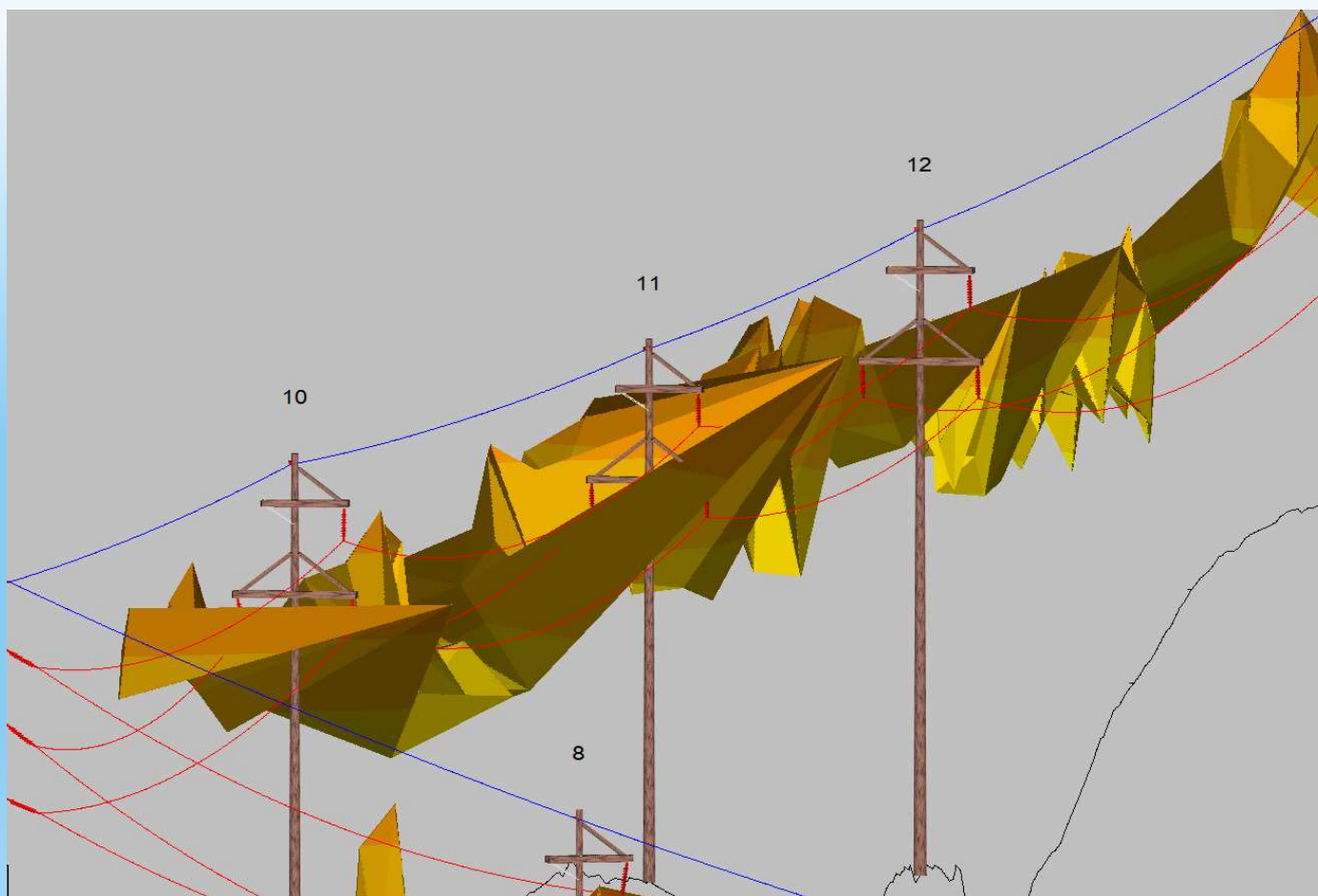
3D Electric and Magnetic Field TINs



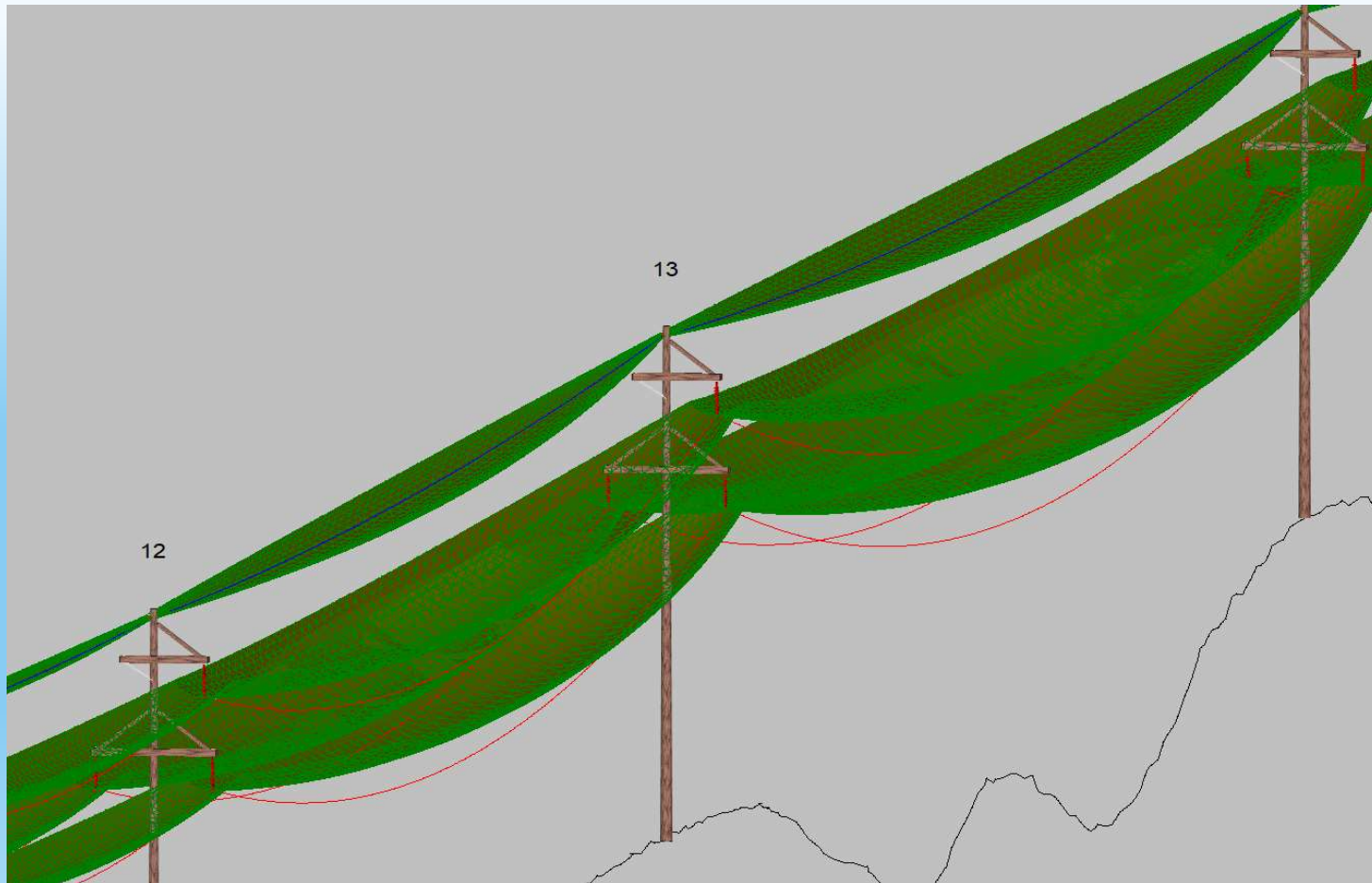
Lightning Protection TIN



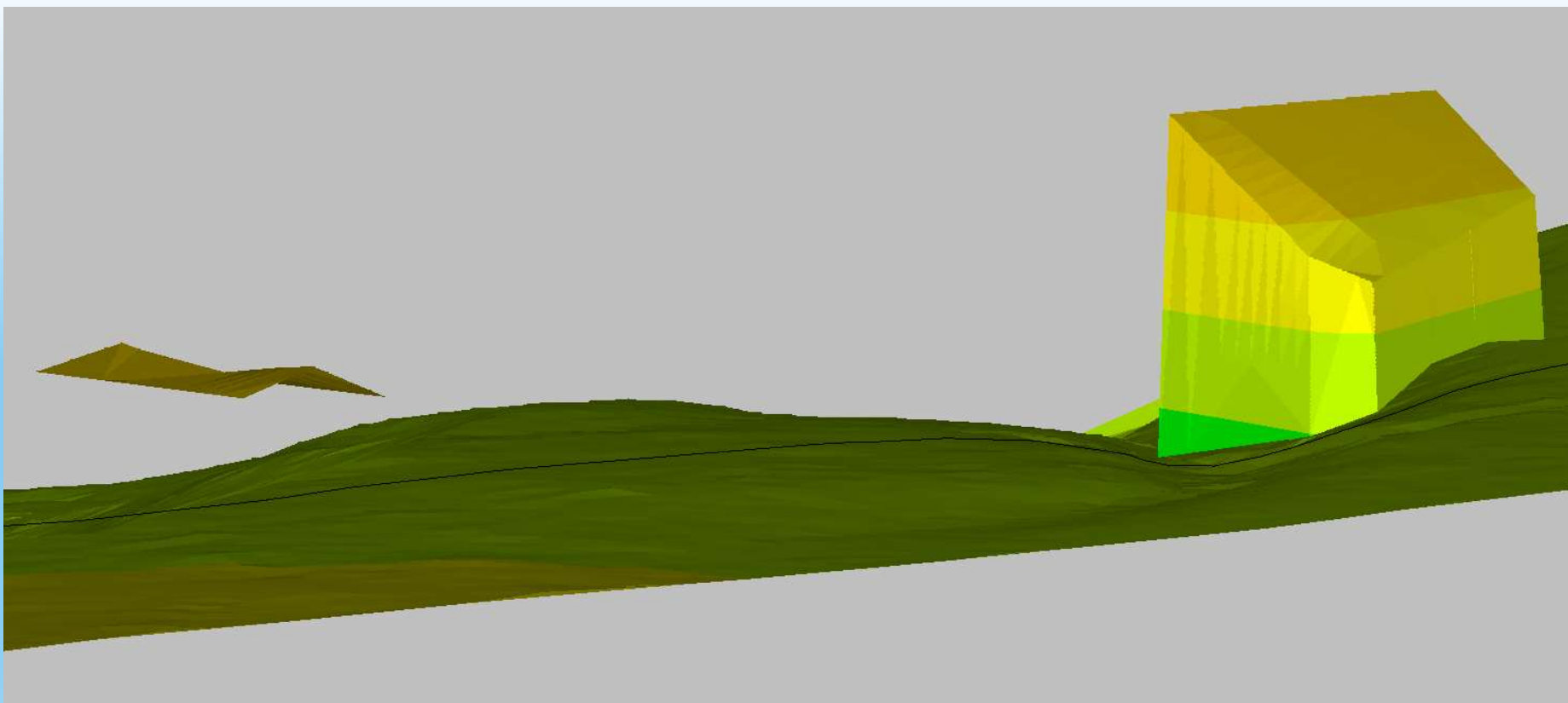
Vegetation TIN and ISOTIN



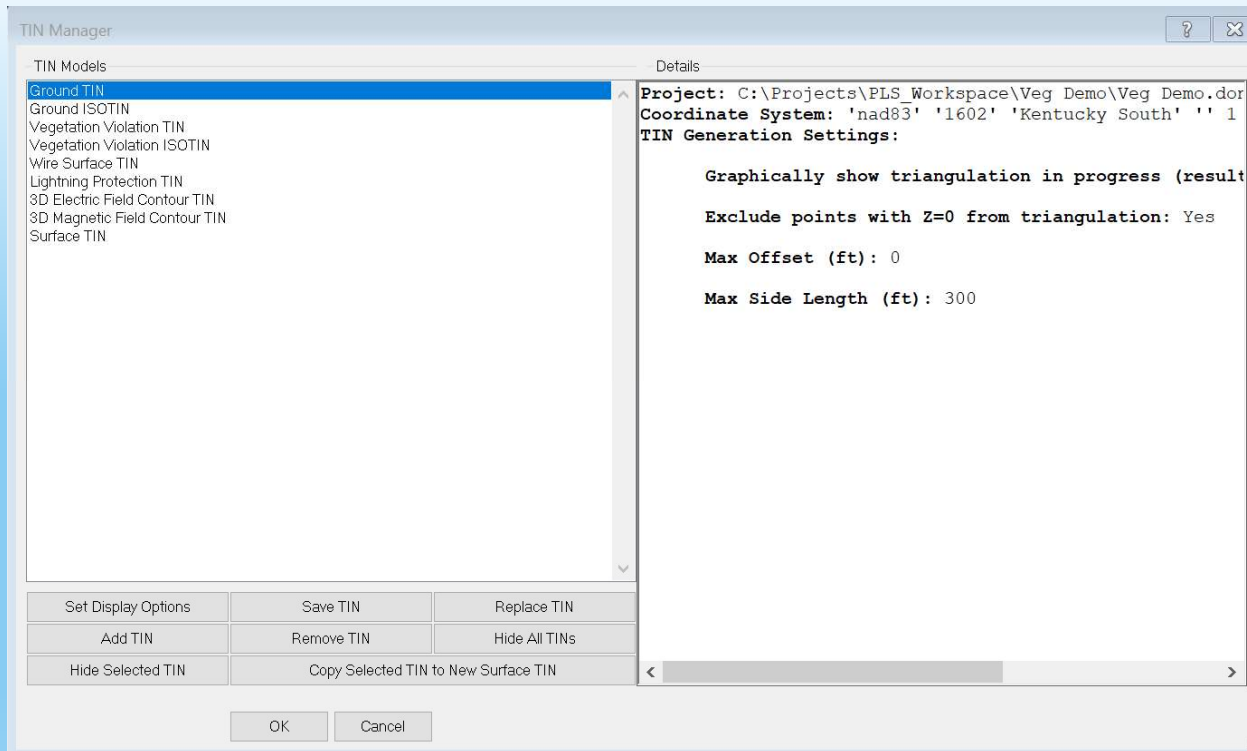
Wire Surface TIN



Surface TIN (New)



TIN Manager Dialog



- Introduced in v18.00 (May 2023)
- Provides a single dialog to manage all types of TIN models generated by PLS-CADD
- Built with capability to manage multiple TINs of the same type

Surface TINs in PLS-CADD

- Currently in Insider Release version and will be available in v20.00
- Allows for creation of a three-dimensional TIN based on ground or non-ground survey points
- Surface TIN can be alongside, under or above the structures and wires
- Surface area options include Canopy TIN or Full TIN
- Display options same as for other TINs
- Can define minimum clearance to surface TIN
- Break lines are currently ignored for Surface TINs

Clearances to Surface TINs

- Use Survey Point Clearance report to check clearances to Surface TIN
- Supports all existing SPC clearance functionality, including:
 - Rectangular and radial clearances
 - Single or bundled conductor options
 - Jumpers and separator cables
 - Structures and circuits
 - Reports and markers

Survey Point Clearances Report

Points and Clearances | Structures and Circuits | Report and Markers

Survey Points and Centerline

Feature codes to include: None selected...

Horizontal distance from wire beyond which survey points and centerline points should be ignored (ft) 50

Station interval for clearance check to interpolated points on centerline ground (0 to disable) (ft) 0

TIN Clearance

☐ Check clearances to Ground TIN ☒ Check clearances to Surface TIN

Station and offset interval at which to check rectangular clearance to selected TINs (ft) 1

Max offset from wire for checking rectangular clearance to selected TINs (0 to limit check to directly below wire) (ft) 10

Warning: non zero values can greatly increase run time.

Type of clearance requirement

☐ Rectangular: Must violate both horizontal and vertical clearance requirements (from feature code table) to be a violation

☒ Radial: Is violation if total distance to wire is less than 'Req. Vert. Clear' from the feature code table.

☐ Make wire surface TIN showing wire positions considered (Use Terrain/TIN/TIN Manager to view)

☐ Outline wire and ground surface triangles at violations (memory intensive and slow).

Wind, Ice and Required Clearance Options

Clearances checked for weather cases in Criteria/Survey Point Clearances Edit Survey Point Clearance Criteria

Required horizontal and vertical clearances are defined in the feature code table Edit Feature Code Table

Edit Feature Code for Ground or TIN

☐ Add optional concentrated load or ice to the span under consideration

☐ Check clearance to jumpers and separator cables

OK Cancel

Demonstration