

# 2024 Virtual Workshops – Session #4-4 Recorded 12/11/2024

This advanced Carlson Software virtual workshop, led by Mark Long, demonstrates integrated civil and hydrology design workflows using Carlson Hydrology, Sewer Network, and Precision 3D Hydro. Participants learn how to model surfaces, design storm and sanitary systems, and visualize drainage networks in 3D for more efficient, accurate engineering.

## Key Topics:

- Precision 3D Hydro and Dynamic CAD integration
- Storm drainage and sewer network design in Carlson Hydrology
- Surface modeling, watershed analysis, and runoff coefficients
- Pipe sizing, hydraulic grade line (HGL) setup, and profile generation
- Utility network creation (water, conduit, laterals)
- Future Carlson Software enhancements (2026 release preview)

Descriptions, transcripts and other details of this recording have been AI-generated and may contain errors.

This session was presented by Mark Long on 12/11/2024.

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# **2024 Virtual Workshops – Session #4-3 Recorded 12/11/2024**

In this advanced Carlson Software virtual workshop, Mark Long demonstrates time-saving techniques for civil and hydrology design using Carlson Civil and Hydrology modules. The session focuses on efficient subdivision layout, road network design, templates, super elevation, and grading transitions to enhance productivity and precision in engineering workflows.

## **Key Topics:**

- Lot Network and Subdivision Layout Tools
- Road Network (RoadNet) Design and Settings
- Template Creation and Management
- Super Elevation and Transition Design
- Grading, Slopes, and Stream Impact Minimization

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This session was presented by Mark Long on 12/11/2024.

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# **2024 Virtual Workshops –**

# Session #4-2

## Recorded 12/11/2024

This virtual workshop continues the 2024 series on Carlson Software, focusing on surface modeling, pad grading, and 3D polyline workflows. Participants learn practical grading techniques, daylight line creation, and surface triangulation for real-world site design projects.

### Key Topics:

- Pad grading and daylight line creation
- 3D polyline utilities and elevation editing
- Building pad and curb grading workflows
- Surface triangulation, contour generation, and volume analysis
- Cut/fill color mapping and contour cleanup

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*This session was presented by Jennifer DiBona on 12/11/2024.*

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# 2024 Virtual Workshops – Session #4-1

# Recorded 12/11/2024

This session from *That CAD Girl's 2024 Virtual Workshop Series* introduces participants to surface modeling and grading workflows in Carlson Software. The training covers building existing ground surfaces, using breaklines, creating 3D polylines, merging surfaces, and integrating GIS imagery for visualization.

## Key Topics:

- Carlson Software surface modeling fundamentals
- Breaklines, boundaries, and triangulation (TIN) creation
- Field-to-Finish automation and 3D polyline generation
- Contour labeling, line-type generation, and cleanup
- Importing Google/NASA/USGS surfaces and merging TIN files
- Using GIS imagery and 3D flyovers for visualization

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This session was presented by Jennifer DiBona on 12/11/2024.

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# 2024 Virtual Workshops – Session #3-4 Recorded 12/10/2024

This session from *That CAD Girl's 2024 Virtual Workshop series* features Donnie's in-depth training on Carlson's Least Squares Adjustment tools for survey data analysis. The workshop covers interpreting reports, identifying blunders, understanding

statistical tests, and applying best practices for boundary and DOT survey adjustments.

**Key Topics:**

- Carlson Least Squares Adjustment fundamentals
- Error analysis and residual interpretation
- Chi-square testing and blunder detection
- ALTA/NSPS accuracy standards
- Practical examples: boundary and DOT survey data

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This session was presented by Donnie Stallings on 12/10/2024.

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## **2024 Virtual Workshops – Session #3-3, Recorded 12-10-2024**

This virtual Carlson Survey workshop, led by Donnie Stallings and hosted by That CAD Girl, introduced surveyors to the principles of least-squares adjustment and the use of Carlson Survey's SNET module. The session covered theory, workflow setup, and practical examples combining total-station and GPS data.

**Key Topics:**

- Introduction to least-squares adjustment theory
- History and development of Carlson Survey's SNET (Survey Net)

- Practical setup and configuration of SNET projects
- Combining total-station and GPS vectors
- Error analysis, blunder detection, and ALTA/NC DOT workflows

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This session was presented by Donnie Stallings on 12/10/2024.

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# **2024 Virtual Workshops – Session #3-2 Recorded 12/10/2024**

This advanced Carlson Software workshop, led by Doug Aaberg, explored powerful Field to Finish tools and workflows for surveyors, including annotation automation, tree and pipe features, and special coding techniques. The session offered practical demonstrations and Q&A to help users streamline drafting, labeling, and data collection processes.

## **Key Topics:**

- Carlson Field to Finish advanced features
- Annotation and MText automation
- Tree and pipe feature configuration
- Special codes, offsets, and templates
- Real-world Q&A on survey workflows

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This session was presented by Doug Aaberg on 12/10/2024.

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# **2024 Virtual Workshops – Session#3-1 Recorded 12/10/2024**

This virtual training session, led by Carlson Software expert Doug Oberg, provided an in-depth walkthrough of the Field to Finish feature in Carlson Survey. Attendees learned how to automate drafting from field data, manage code tables, apply special codes, and streamline survey workflows from data collection to finished CAD drawings.

## **Key Topics:**

- Introduction to Carlson Field to Finish
- Creating and editing code tables
- Using special codes (begin, end, PC/PT, jog, rectangle, join point number)
- Managing layers, linework, and symbols
- Handling point groups and reprocessing efficiency
- Q&A on practical field coding and data management

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This session was presented by Doug Aaberg on 12/10/2024.

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# 2024 Virtual Workshops – Session #2-4 Recorded 11/20/2024

This advanced Carlson Software workshop covered 2D-to-3D conversion tools, drawing cleanup, and CADnet functions for converting and merging raster and vector PDFs. Attendees learned practical workflows for elevating contours, creating 3D polylines, digitizing plans, and integrating geotechnical data into construction modeling.

## Key Topics:

- Carlson Civil and Takeoff 2D-to-3D tools
- Elevate and 3D Data menus: contour and polyline elevation
- CADnet for PDF import, raster/vector conversion, and image merging
- Geotech module for strata modeling and volume calculations
- Practical cleanup and modeling workflows

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This session was presented by Jennifer DiBona on 11/20/2024.

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# **2024 Virtual Workshops – Session #2-3 Recorded 11/20/2024**

This session from the 2024 Virtual Workshops series provides an in-depth walkthrough of Carlson Takeoff and Takeoff Suite, focusing on setup, layer management, surface modeling, and quantity takeoffs. The instructor demonstrates workflows, cleanup strategies, and practical tips for construction modeling and estimating using Carlson software.

## **Key Topics:**

- Overview of Carlson Takeoff and Takeoff Suite modules
- Comparison with Carlson Civil Suite
- Layer management, cleanup, and setup for takeoffs
- Creating and managing surfaces and subgrades
- Performing quantity takeoffs and topsoil calculations
- Using Carlson's visualization and reporting tools

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This session was presented by Jennifer DiBona on 11/20/2024.