2 Sessions: Using Carlson for ADA Accessible Design

A Virtual Classroom demonstrating Carlson tools for accessible site grading, curb ramps, parking layouts and slope review

Using Carlson for ADA Accessible Design with Travis Maxwell covers practical methods for grading accessible routes, sidewalks, curb ramps and parking areas. The sessions use Carlson ramp design, RoadNet, ParkingNet and 3D polyline tools for layout and elevation control. Surface modeling, slope zone analysis and dynamic spot elevations help find grading issues and refine transitions to ADA and Fair Housing standards.

Key Topics:

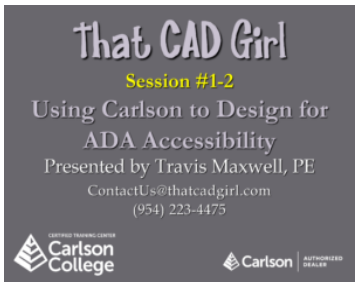
- Carlson site planning for accessible routes, parking spaces, access aisles and sidewalk connections
- Carlson curb ramp design, landings, taper adjustments and transitions along sloping streets
- Carlson RoadNet and ParkingNet workflows for roadway, curb and parking layout
- Carlson grading with sloped planes, 3D polylines, offsets and template polylines
- Carlson TIN surface inspection, triangulation editing and grading corrections
- Carlson slope zone analysis and visual review of running slopes and cross slopes
- Carlson dynamic spot elevations and labels linked to

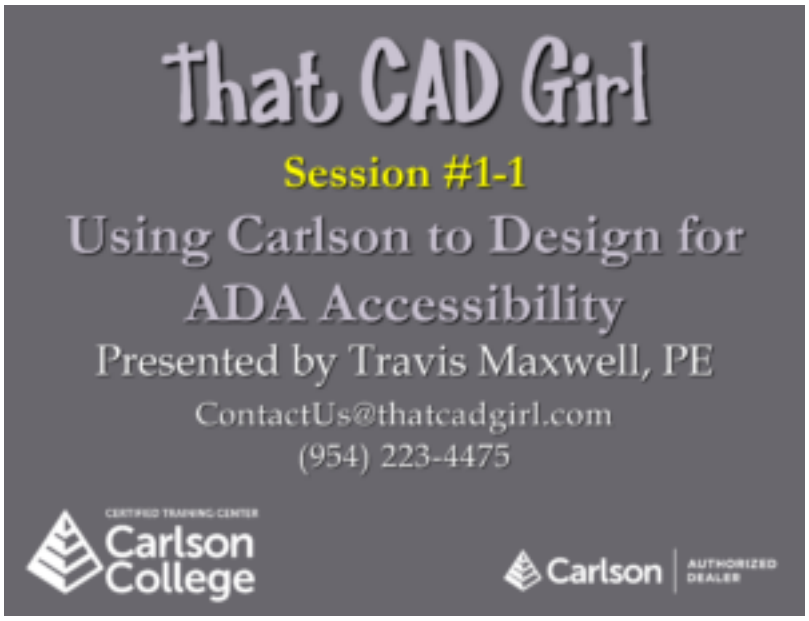
proposed surface files
- Carlson Google Earth data imports and imagery for reviewing site examples

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

These sessions were presented by Travis Maxwell.

Travis Maxwell designs accessible parking, curb ramps and routes to ADA and Fair Housing standards.Travis Maxwell continues ADA grading with slope control, curb ramp modeling and surface checks.





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6 Sessions: Fast Track to CAD and Carlson Software

A Virtual Classroom introducing CAD and Carlson fundamentals for precise drafting, organized survey drawings, point management and plotting

Fast Track to CAD and Carlson with Jennifer DiBona builds a foundation in AutoCAD and IntelliCAD drawing, editing and organization before introducing Carlson workflows. Day 1 covers the interface, command prompts, coordinate entry, object snaps, layers and blocks. Day 2 configures Carlson settings and templates, CRD point files, point import and editing and paper space layouts, viewports, title blocks and plot styles.

Key Topics:

- Carlson and CAD platform relationships, workspaces, command access, aliases and Quick Keys
- CAD precision tools for Carlson users, including coordinate entry, object snaps and view navigation
- CAD drawing and editing for Carlson users, including selection, move, copy, trim, extend and fillet
- Carlson and CAD layers, entity properties, polylines, symbols and reusable blocks
- Carlson configuration, object linking, project folders and saved settings
- Carlson DWT templates, layer libraries, text styles and drafting standards
- Carlson annotation scalers, Auto Annotate, area labels and line and curve table settings
- Carlson CRD point import, display, editing, coordinate utilities and point history
- Carlson drawing output with paper space, viewport scales, title blocks and plot styles

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

*These sessions were presented by Jennifer DiBona.*Jennifer DiBona introduces CAD platforms, the interface, command line and Carlson vs CAD settings.Jennifer DiBona covers drawing and editing commands, object snaps, selection and text.





Jennifer DiBona explains layers, entity properties, blocks and external references.Jennifer DiBona starts Carlson setup, configuration, templates and project



folder organization.Jennifer DiBona covers text styles and scales, drawing templates, points and layer libraries.Jennifer DiBona imports and edits CRD points and sets up paper space layouts and plotting.







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6 Sessions: In-Depth Carlson Takeoff

A Virtual Classroom exploring Carlson Takeoff and CADnet workflows for plan digitizing, 3D surface preparation and earthwork and

material quantities.

In-Depth Carlson Takeoff with Jennifer DiBona shows how to prepare site plans for quantity estimating and surface modeling using Carlson Takeoff and CADnet. Day 1 compares Takeoff OEM and the Takeoff Suite and covers PDF import, scaling and digitizing contours and features. Day 2 turns spot elevations and 2D linework into 3D breaklines, defines materials and subgrades, accounts for topsoil and reviews earthwork reports and surface exports.

Key Topics:

- Carlson Takeoff, Takeoff Suite and Civil SiteNet workflow and menu comparisons
- Carlson CADnet raster and vector PDFs, multi-page imports, image merging and linework extraction
- Carlson image scaling, control references, layer organization and heads-up digitizing
- Carlson existing and proposed contours, spot elevations, material boundaries and counted features
- Carlson 2D to 3D polylines for building pads, sidewalks, curbs, swales and retaining walls
- Carlson drawing cleanup, elevation checks and breakline preparation for surface models
- Carlson existing, design and other layer targets, TRG files, material definitions and subgrade depths
- Carlson cut/fill calculations, topsoil stripping and replacement and material quantity reports
- Carlson surface inspection and LandXML and machine control export workflows

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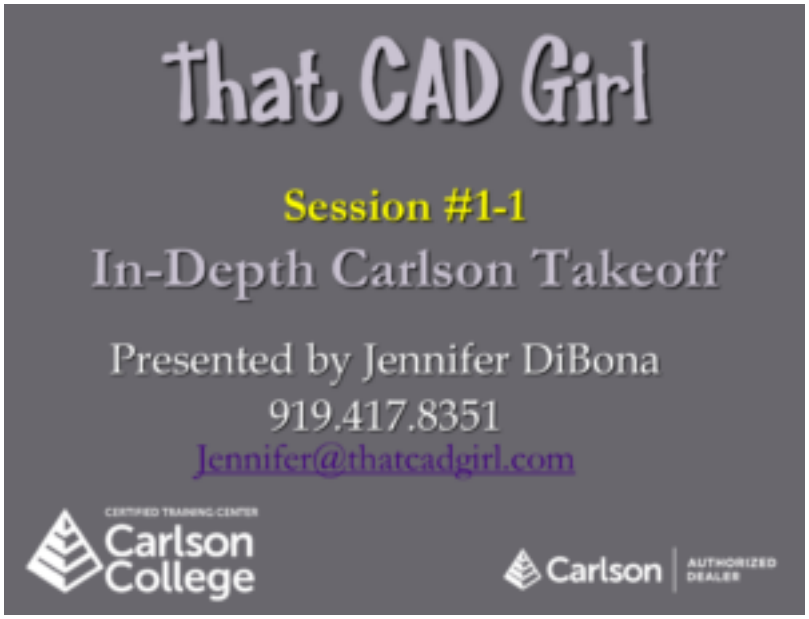
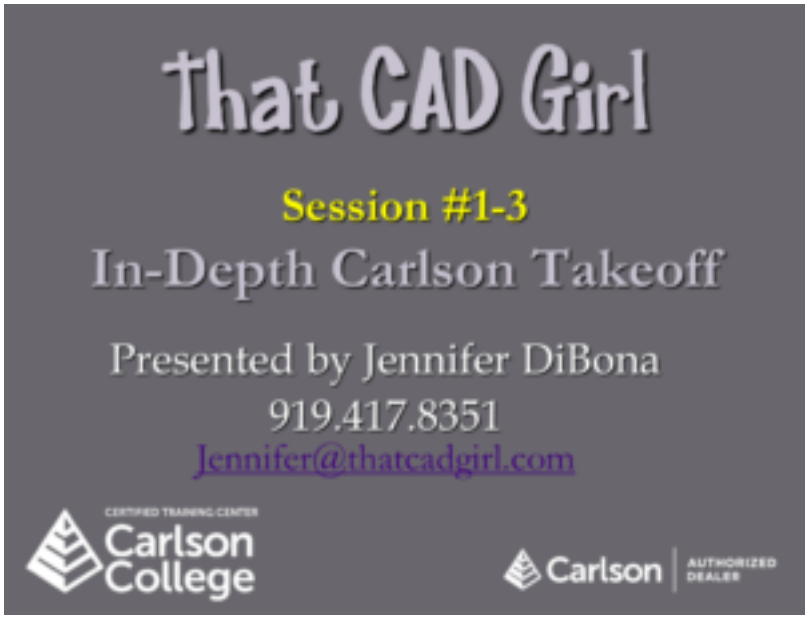
*These sessions were presented by Jennifer DiBona.*Jennifer DiBona compares Takeoff OEM and the Takeoff Suite and starts PDF import and setup.Jennifer DiBona imports, scales and digitizes PDF grading plans for existing and proposed surfaces.This final session of the first day continues the In-Depth Carlson Takeoff training, showing how to elevate 2D polylines to 3D in Carlson Civil by interior text, by text with leader and by points. It covers building pads, back of curb and top of curb lines, contours with a beginning elevation and increment and a step-down building pad with the ground outside it, then takes a first look at setting retaining wall top and bottom elevations.Jennifer DiBona builds 3D surfaces from 2D plans, including spot elevations and 3D polylines. Jennifer DiBona assigns layers and materials, builds surfaces and calculates cut/fill and



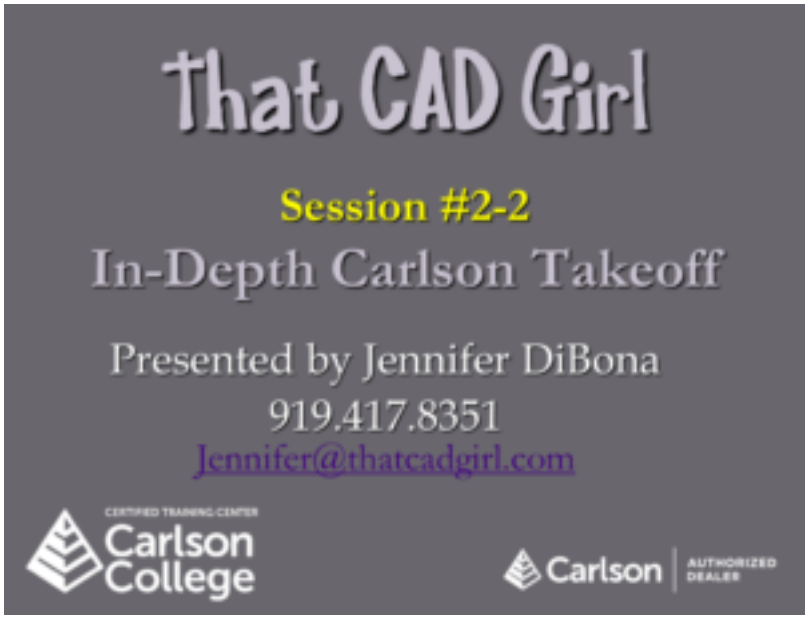






topsoil.Jennifer DiBona elevates 2D linework, grades pads and sidewalks and reports material quantities.





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9 Sessions: Fast Track to CAD, Carlson & MicroSurvey

A Virtual Classroom series introducing CAD fundamentals, MicroSurvey survey workflows and Carlson setup, point management and Field-to-Finish.

This nine-session Virtual Classroom introduces CAD fundamentals, MicroSurvey survey workflows and Carlson setup for new and transitioning users. Jennifer DiBona teaches precise CAD drafting, then Carlson templates, configuration, CRD points,

deed processing and Field-to-Finish. James Johnston leads the MicroSurvey day on project setup, construction stakeout and digital terrain modeling.

Key Topics:

- CAD workspaces, templates, drawing units, command prompts and screen navigation
- Precise linework with coordinate entry, object snaps, selection, editing and inquiry tools
- Layers, colors, lineweights, linetypes and model space and paper space considerations
- MicroSurvey CAD orientation, project setup, coordinate files and point workflows
- MicroSurvey construction layout, stakeout points and layer organization
- MicroSurvey digital terrain models, surface inputs, breaklines and model inspection
- Carlson startup, project folders, DWT templates, drawing setup and saved configuration
- Carlson CRD points, coordinate systems, layer standards and GIS imagery context
- Carlson deed entry and processing, point groups and Field-to-Finish codes, symbols and non-surface points

Sessions In This Series:

- Sessions 1-1 to 1-3: Getting Started with CAD, presented by Jennifer DiBona
- Sessions 2-1 to 2-3: Fast Track to MicroSurvey, presented by James Johnston
- Sessions 3-1 to 3-3: Getting Started with Carlson, presented by Jennifer DiBona

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

*These sessions were presented by Jennifer DiBona or James Johnston.*Jennifer DiBona introduces CAD platforms, the interface, command line and drawing settings.Jennifer DiBona covers coordinates, line commands, object snaps and precision drafting tools.





Jennifer DiBona teaches editing commands, selection methods, polylines and layer control.James Johnston introduces MicroSurvey field-to-finish, AutoMap setup and survey d import.James Johnston covers MicroSurvey construction stakeout, drawing cleanup and grid





and point tools.James Johnston builds DTM surfaces, contours and volumes and introduces Auto Design.Jennifer DiBona starts Carlson setup, modules, project folders and configuration files.Jennifer DiBona builds drawing templates, layers and styles and manages CRD point files.Jennifer DiBona covers deed entry, deed correlation and Field-to-Finish in Carlson Survey.





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16 Sessions: 2024 Virtual Workshop

A Virtual Workshop series featuring Carlson Software training for surveying, surface modeling, construction takeoff and civil design.

The 2024 Virtual Workshops bring together practical Carlson demonstrations for surveyors, civil engineers and construction professionals. Jennifer DiBona, Doug Aaberg, Mark Long and Bruce Carlson overview Carlson Software, Survey and GIS, point clouds and Photo Capture, Civil and Hydrology, Precision 3D and the Takeoff Suite. Later sessions go deeper on advanced Field-to-Finish, SurvNet least squares with Donnie Stallings, surface modeling and advanced civil and hydrology design.

Key Topics:

- Carlson setup, project organization, Civil 3D and LandXML imports, deed entry and lot layout
- Carlson GIS data imports, imagery, feature attributes and field collection
- Carlson Point Cloud and Photo Capture workflows for drone imagery, LiDAR filtering and feature extraction
- Carlson Field-to-Finish code tables, automated linework, symbols and annotations
- Carlson Survey SNET least squares adjustment, residuals, blunder detection and accuracy checks
- Carlson surface modeling, breaklines, 3D polylines, pad grading and cut/fill analysis
- Carlson Takeoff, CADnet and Geotech workflows for PDF data, subgrades, topsoil and material quantities
- Carlson Civil, Hydrology and Precision 3D Hydro workflows

for RoadNet, culverts, drainage and utility networks

Sessions In This Series:

- 1-1: Overview of Carlson Software, presented by Jennifer DiBona
- 1-2: Overview of Carlson Survey and GIS, presenter by Doug Aaberg
- 1-3: Overview of Carlson Point Cloud and Carlson Photo Capture, presented by Doug Aaberg
- 1-4: Overview of Carlson Civil and Hydrology, presented by Mark Long
- 2-1: Overview of Carlson Precision 3D Topo and Hydrology, presented by Bruce Carlson
- 2-2: Continuation of Overview of Carlson Precision 3D Topo and Hydrology, presented by Bruce Carlson
- 2-3: Overview of Carlson Takeoff Suite modules, presented by Jennifer DiBona
- 2-4: Continuation of Overview of Carlson Takeoff Suite modules, presented by Jennifer DiBona
- 3-1: Advanced Carlson Survey and Field to Finish, presented by Doug Aaberg
- 3-2: Continuation of Advanced Carlson Survey and Field to Finish, presented by Doug Aaberg
- 3-3: Adjusting YOUR Datasets with SurvNet, presented by Donnie Stallings
- 3-4: Continuation of Adjusting YOUR Datasets with SurvNet, presented by Donnie Stallings
- 4-1: Surface Modeling in Carlson Software, presented by Jennifer DiBona
- 4-2: Continuation of Surface Modeling, presented by Jennifer DiBona
- 4-3: Advanced Design with Carlson Civil and Hydrology, presented by Mark Long
- 4-4: Continuation of Advanced Design with Carlson Civil

and Hydrology, presented by Mark Long

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

These sessions were presented by Jennifer DiBona, Doug Aaberg, Mark Long, Bruce Carlson, or Donnie StallingsJennifer DiBona presents an overview of Carlson Software products and how they fit together.Doug Aaberg overviews Carlson Survey and GIS tools and



workflows.



Doug Aaberg overviews Carlson Point Cloud and Carlson Phot Capture.Mark Long overviews Carlson Civil and Hydrology design tools and workflows.Bruce Carlson overviews Carlson Precision 3D Topo and



Hydrology tools.Bruce Carlson continues the Precision 3D Topo and Hydrology overview.Jennifer DiBona overviews the Takeoff Suite, including CADnet, Construction, Trench and GeoTech.





Jennifer DiBona continues the overview of Carlson Takeoff Suite modules.Doug Aaberg begins advanced Carlson Survey and Field-to-Finish coding techniques.Doug Aaberg continues advanced Carlson Survey and Field-to-Finish coding techniques.





Donnie Stallings shows how to adjust survey datasets with

SurvNet.Donnie Stallings continues the session on adjusting survey datasets with SurvNet.Jennifer DiBona covers practical surface modeling techniques in Carlson Software.Jennifer DiBona continues practical surface modeling techniques in Carlson Software.Mark Long presents advanced design with Carlson Civil and Hydrology. Mark Long continues advanced design with Carlson Civil and











Hydrology.



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6 Sessions: Fast Track to Carlson Civil Suite & CADnet

A series of virtual classrooms introducing Carlson Civil Suite and CADnet workflows for survey drafting, surface modeling, subdivision and road design and PDF data preparation.

Fast Track to Carlson Civil Suite and CADnet with Jennifer DiBona connects 2024 software setup and GIS data with survey drafting and civil design workflows. Day 1 covers point files,

deeds, Field-to-Finish and surfaces. Day 2 demonstrates LotNet and grading, centerlines, profiles and RoadNet, storm network drafting and CADnet handling of raster and vector PDFs.

Key Topics:

- Carlson configuration, drawing setup, object linking, project folders and saved settings
- Carlson GIS shapefile imports, attribute queries, labels, imagery and Google Earth exports
- Carlson point import and display, deed processing, legal descriptions and survey annotation
- Carlson Field-to-Finish codes, layers, symbols, breaklines and non-surface points
- Carlson surface boundaries, triangulation, contours, 3D inspection and cut/fill comparisons
- Carlson lot and deed files, area labels, line and curve tables and LotNet subdivision design
- Carlson 2D to 3D polylines, building pads, slope-based points and grading offsets
- Carlson centerlines, profiles and RoadNet templates, intersections, cul-de-sacs and surface outputs
- Carlson Hydrology storm network drafting, structures, pipe settings and profile display
- Carlson CADnet raster and vector PDF imports, scaling, image merging and linework conversion

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

*These sessions were presented by Jennifer DiBona.*Jennifer DiBona introduces Civil Suite 2024 setup, the interface, project

folders and GIS data.Jennifer DiBona covers GIS imagery, point import, deed entry and surface validation with breaklines.



Jennifer DiBona processes Field-to-Finish, surfaces, labeling and lot and deed files.Jennifer DiBona uses LotNet, site grading and 3D tools to move from 2D layout to design surfaces.



Jennifer DiBona creates centerlines, profiles,





templates and RoadNet roadway designs.Jennifer DiBona continues RoadNet, drafts storm networks and converts PDFs with CADnet.





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6 Sessions: Fast Track to Carlson Takeoff

A Virtual Workshop covering Carlson Takeoff workflows for drawing cleanup, plan digitizing, surface modeling and construction quantity estimates.

Fast Track to Carlson Takeoff with Jennifer DiBona shows how to turn CAD drawings, PDFs and scanned plans into working drawings for quantity takeoffs and surface models. Sessions cover layer organization, elevation tools, materials, subgrades and topsoil

and comparing existing and proposed surfaces. The class also includes surface inspection, machine-control exports and introductory Geotech and Trench workflows, plus CADnet PDF import and heads-up digitizing.

- Carlson Takeoff, Takeoff Suite and Civil SiteNet menu and workflow comparisons
- Carlson layer targets, material definitions, subgrade depths and TRG settings files
- Carlson existing and design surfaces, cut/fill volumes, topsoil stripping and replacement
- Carlson Surface Inspector, quick profiles, 3D review and LandXML and machine control exports
- Carlson drawing cleanup, Civil 3D imports, external references, blocks, layers and duplicate entities
- Carlson elevation tools for contours, spot elevations, building pads and 2D to 3D polylines
- Carlson CADnet raster and vector PDFs, image alignment, scaling and imported linework cleanup
- Carlson heads-up digitizing of contours, material boundaries, spot elevations and site features
- Carlson Geotech drill holes and strata and Trench networks, bedding templates and quantities

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

*These sessions were presented by Jennifer DiBona.*Jennifer DiBona introduces Takeoff Suite modules and how to prepare clean

working drawings.Jennifer DiBona reports material quantities, topsoil, surface inspection and machine-control exports.Jennifer DiBona cleans imported CAD and Civil 3D drawings and prepares 3D working models.





Jennifer DiBona continues cleanup and elevations and introduces Geotech and Trench workflows.Jennifer DiBona uses Trench templates and CADnet to import, merge and convert PDF plans.Jennifer DiBona digitizes and elevates plan features to build 3D





takeoff surfaces.



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6 Sessions: In Depth Carlson Hydrology

A Virtual Classroom providing in-depth Carlson Hydrology training from beginning to end, with practical hydrology design workflows

This six-session In Depth Carlson Hydrology class with Travis Maxwell goes from setup through advanced detention design in Carlson Civil and Hydrology. Day 1 covers libraries and rainfall data, Rational and SCS methods, Civil 3D data and terrain, storm network layout and hydraulic grade line and spread analysis. Day 2 adds utility crossings, HydroNet detention and hydrographs,

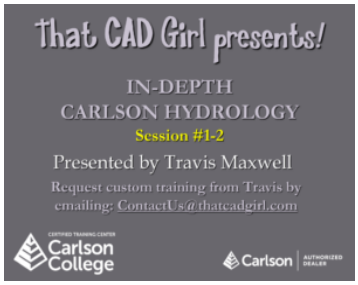
pond grading and stage-storage, underground chambers and HydroCAD exchange.

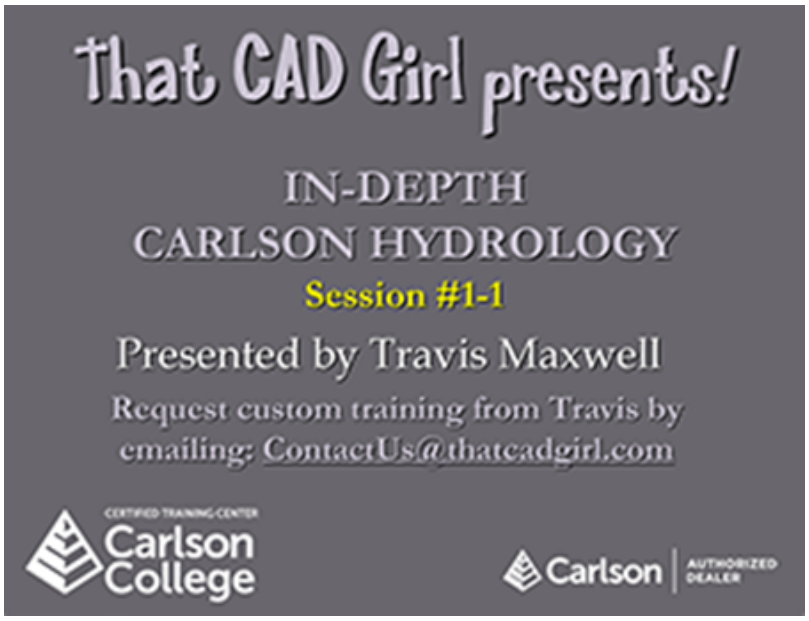
Key Topics:

- Carlson Hydrology module overview and setup
- Sewer and storm network configuration
- Use of SCS and Rational methods for runoff and detention
- Inlet libraries, rainfall data, and HydroNet integration
- Best practices for file management and dynamic modeling

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

*These sessions were presented by Travis Maxwell.*Travis Maxwell introduces Carlson Hydrology setup, libraries, sewer networks and Rational and SCS methods.Travis Maxwell converts Civil 3D data, builds terrain and starts stormwater network design.

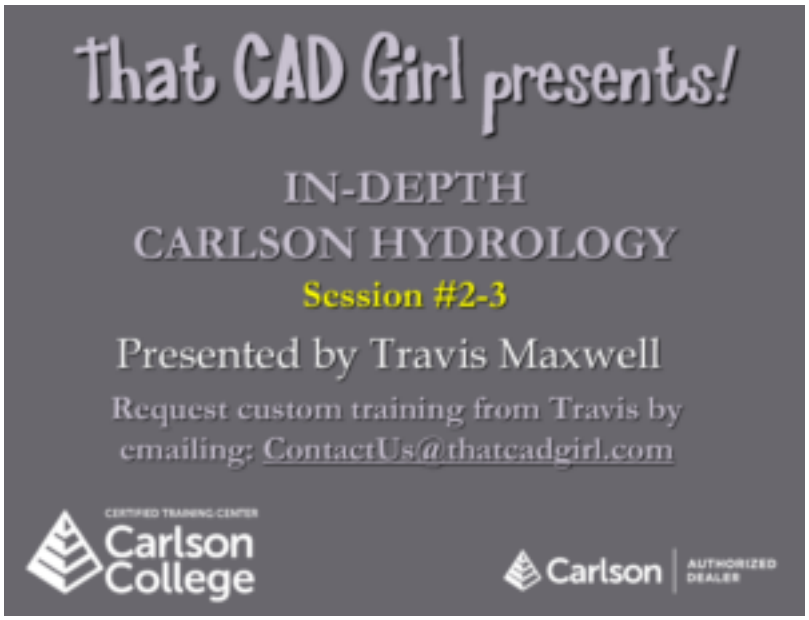




Travis Maxwell models storm sewers, delineates watersheds and analyzes hydraulic grade lines and

spread.Travis Maxwell covers collection systems, utility crossings and HydroNet detention setup.Travis Maxwell designs detention ponds, stage-storage and outlet controls HydroNet.Travis Maxwell finishes with chambers, HydroCAD exchange and wet pond detailing.





Standardizing Layers, Linetypes & Dimensions

A Virtual Webinar Using CAD – Learn to Standardize Layers, Linetypes and Dimensions

This webinar by That CAD Girl covers how to standardize CAD drawings using the National CAD Standard (NCS) within Carlson Software and AutoCAD. It explains best practices for managing layers, linetypes and dimension styles to ensure consistency across civil and survey projects.

Although Carlson Software with IntelliCAD was used in this session and a few Carlson-specific commands are shown, the workflows are by and large the same for all AutoCAD or IntelliCAD based programs, and other programs will likely have their own version of those Carlson commands.

Key Topics:

- National CAD Standard (NCS) layer naming and structure
- Carlson template and layer library management
- Linetype scaling, polyline generation and plotting behavior
- Dimension style creation and scaling for different drawing types

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

This session was presented by Jennifer DiBona on 05/07/2024.

Importing Publicly Available Lidar for Surface Creation

A Virtual Webinar Using Carlson Software – Learn Publicly Available LiDAR for Surface Creation

This Carlson Software webinar demonstrates how publicly available LiDAR can be downloaded, filtered, thinned and prepared for surface creation. Travis Maxwell shows how LAS and LAZ point-cloud files, LAS tools batch processing, Carlson grid files, contours and Google Earth checks can support preliminary terrain modeling workflows.

Key Topics:

- Public LiDAR sources and download workflow
- LAS and LAZ file handling
- Class 2 ground-point filtering
- Grid-file surface creation in Carlson
- Contour review and Google Earth verification

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

This session was presented by Travis Maxwell on 06/14/2023.