

CivilCAD 2014

Essential Toolkit for Civil Professionals



Roads | Pipes | Earthworks | Survey | 3D

CivilCAD 2014 Solution Suite provides civil professionals with a complete software solution that cover all their needs. From surveyors and contractors to designers and engineers, whether on site or in the office, CivilCAD 2014 Solution Suite offers wide-ranging solutions to meet all their needs including roads construction and design, pipes layout planning, earthworks calculations, comprehensive surveying capabilities, and life-like 3D visualization.

CivilCAD 2014 Solution Suite Highlights -

- **Complete integration** – design elements, views, calculations, work processes and drawings are all dynamically linked and instantly updated upon every change resulting in maximum productivity and speedy project output
- **Innovative work environment** – supports Autodesk® AutoCAD® 2014 drawing environment
- **Intuitive user-interface** – intelligent task based toolbars and contextual menus simplify work environment and resulting in greater usability
- **Flexible import and export capabilities** – bi-directional import and export capabilities from any standard conforming equipment

Autodesk®
Authorised Developer

Microsoft®
CERTIFIED
Partner

CivilCAD 2014 Solution Suite enfolds Autodesk™ AutoCAD® working environment with supplementary set of advanced design tools for civil professionals allowing time-consuming tasks to be done effortlessly and accurately. CivilCAD 2014 Solution Suite consists of five profession based modules to match user's requirements avoiding overwhelming and complex work environment and resulting in intuitive and exceptionally easy to operate user interface.

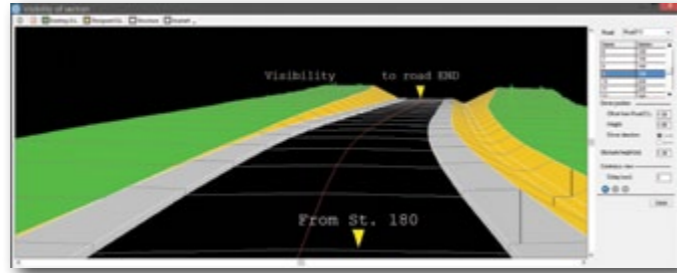


CivilCAD 2014-Roads

CivilCAD 2014-Roads includes complete set of tools for road construction, road design, earthworks calculations, surveying, and above and underground infrastructure design. The software combines powerful design options, accurate and high-speed results, and enhanced usability setting new standards for roads engineers worldwide.

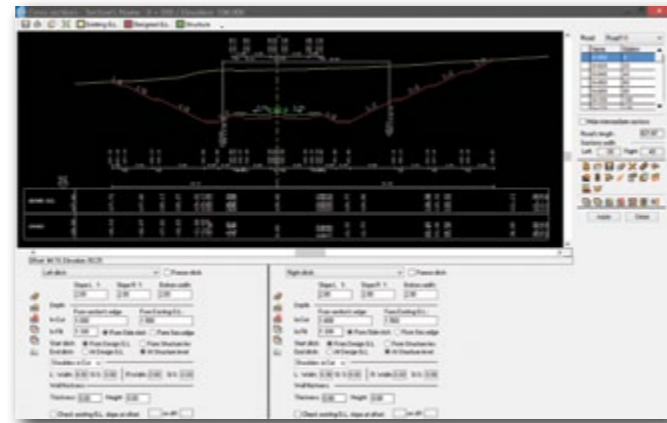
Horizontal and Vertical Alignment Design

- **New** – changes made to certain segments of the road's alignment geometry are reflected in the vertical alignment
- **New** – automatic highlight of the cut-fill transition point in horizontal alignment
- Automatic road segments selection
- Visual indication of cut-fill minimum and maximum extents
- Complete horizontal alignment design set of tools including curves transition by clothoids or cubic-parabola



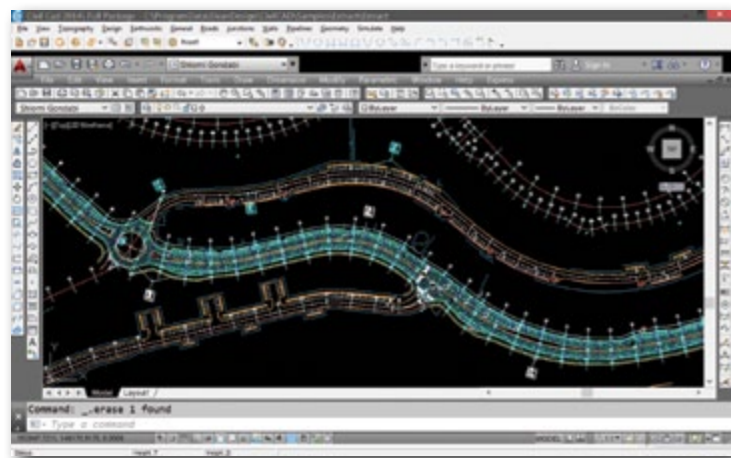
Powerful Cross Section Design

- **New** – sub layers associated with existing, structure and design layers are differentiated and displayed according to the defined material and thickness
- **New** – ability to attach a ditch to an offset reference-line in the cross section
- Detailed underground and upper ground utilities display in cross sections
- Information layers can be separated to support authorities CAD standards
- Side ditches and gutters definition according to cut, fill or in-between situations
- Automatic height based side slopes cut or fill definition
- Automatic emphasize of parallel and intersecting roads levels
- Automatic side berms design
- Ability to define super elevation per cross section segment
- Ability to accurately place blocks in cross sections



Advanced Design Features

- **New** – innovative junctions design including typical sections, islands, roundabouts and detailed reports.
- **New** – define bridges and tunnels in the design including earthworks volumes calculations and reports.
- **New** – unique and advanced visibility evaluation mechanism with export and reporting capabilities
- Automatic alert and delete mechanism of an overlapping area between two topography surfaces
- Ability to automatically create frequent backups of the project revisions with quick restore capabilities
- Load and save centerline's data in LandXML format
- Advanced retaining walls design module
- Complex urban roads design using extract module
- Comprehensive underground infrastructure information
- Intelligent earthworks calculations per layer



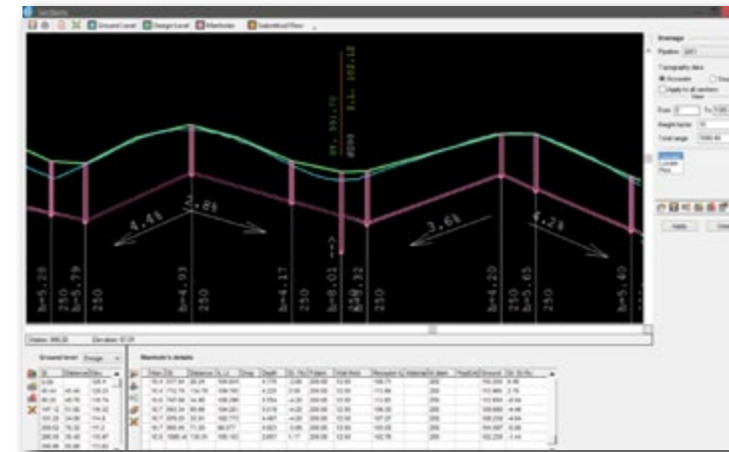
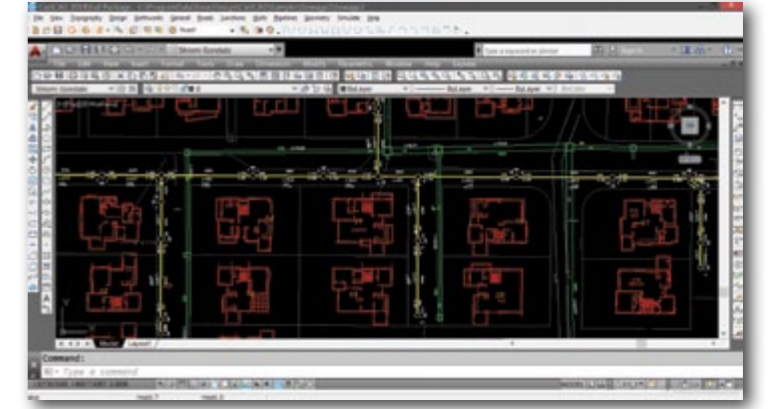
CivilCAD 2014-Pipes

CivilCAD 2014-Pipes includes complete set of tools for infrastructure pipelines planning including water, sewage, drainage, oil, gas, and telecommunication cables. Supporting both design and surveying aspects of upper and underground infrastructures, CivilCAD 2014-Pipes offers limitless design capabilities.

CivilCAD 2014-Pipes intuitive task-based interface supplies the engineer with contextual set of tools to easily handle each design phase unique needs.

Pipeline Layout Design

- **New** – pipeline search by name with duplicate naming alert mechanism
- **New** – display the pipeline's name near the manhole
- **New** – ability to locate in the layout a crossing point between pipelines chosen from Crossing window
- Pipelines alignment and layout tools
- Actual size manholes, pillars and pipes display in both layout and section design
- Layout extraction from drawings



Detailed Section Design

- **New** – ability to design sections in Drawing Environment Interface (AutoCAD)
- **New** – receptors Invert Levels are displayed in the section's drawing table
- **New** – broad toolset for defining pipeline depth, slopes, drops, manholes depth, manholes diameter, etc.
- Automatic air valves design capabilities to shorten design process
- Interactive updates between section and layout design
- Simultaneous presentation of existing and designed ground levels
- Detailed crossing infrastructures including depth and diameter
- Water pressure valves positioning along a pipeline feature

Reservoirs and Dams Design

- Unique method for reservoirs, dams and ponds design (combined with the Roads package)
- Balanced earthworks calculations
- Production of operational plans (scraper plane and sections)
- Levels based capacity computations
- Multi ponds design supporting shared embankments and slopes
- Special features allowing reservoir bottom-surface elevations design

Comprehensive reports and plotting

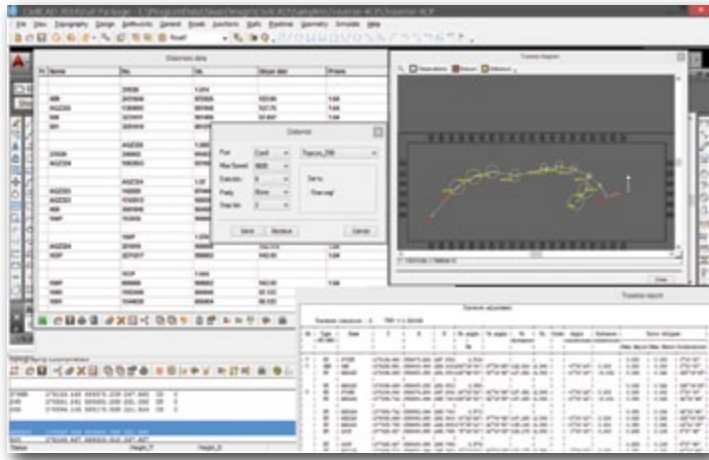
- Volume calculations report generation
- Detailed reports: IPs, manholes, pipes quantities, size and depth, air valves and design details
- Discharges report
- Automatic division of sections according to the paper size for plotting



CivilCAD 2014-Survey

CivilCAD 2014-Survey package provide surveyors with a professional tool to fully meet their field-to-office requirements and needs.

- **New** – automatic alert and delete mechanism of an overlapping area between two topography surfaces
- **New** – Coordinates having exceptional data can be automatically excluded from interpolation
- Direct interface with standardized surveying equipment (RAW & coordinates)
- Unique solutions for least squares traverse adjustments including polygon network and free network
- Superior coordinates editor for easy manipulation and filtering
- Points extraction by filtering drawing elements
- Easy to use setting-out tool from office-to-field
- Complete menu for geometric computations (COGO)
- Special feature for computing points relative to centerline
- User-defined sets of codes and their presentation as blocks in the drawing
- Customized drawing division for plotting purposes
- Unlimited points import and export capabilities



Civil Simulate

3D

Civil Simulate provides a life-like 3D simulation at a single click to support and assist both design and decision-making processes.

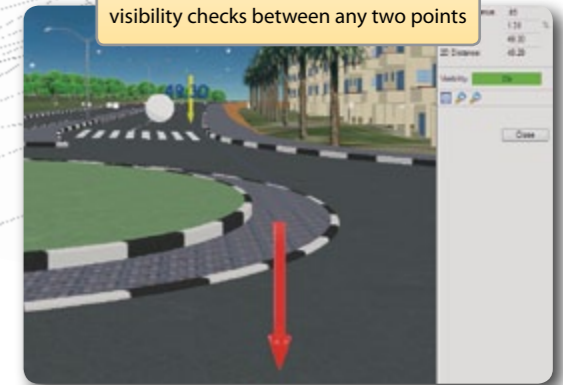
While the creation of a good quality 3D simulation can take weeks, with Civil Simulate you can instantly simulate and enhance your design.



3D Simulation at a Click

- Smart tools to identify and overcome design challenges
- Visualization of side slopes, landscape effects, line of sight etc.
- User friendly navigation interface with unlimited viewing angles
- Simulation of actual driving on the designed road, including visibility object
- Marking critical points in the 3D simulation and presenting them in the design
- Placement of 3D objects: houses, trees, traffic signs, light poles etc.
- Urban roads simulation: junction, roundabout, parking lot etc.
- Highway elements simulation: Interchange, ramp, bridge, tunnel etc.

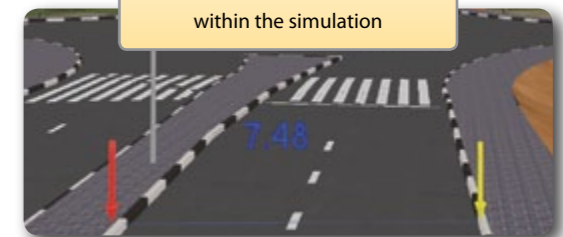
Ability to trail objects and perform visibility checks between any two points



Place notes in simulation to be later reviewed in design



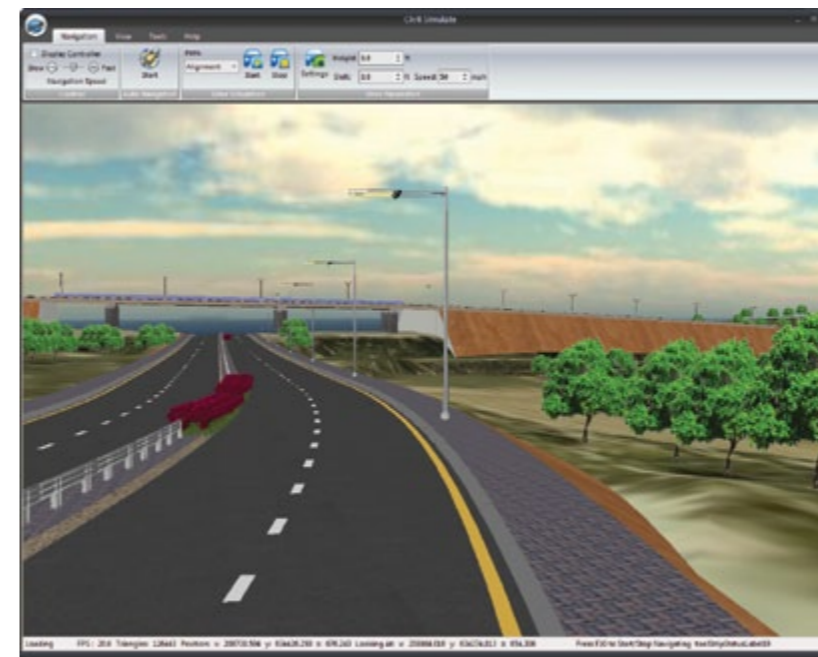
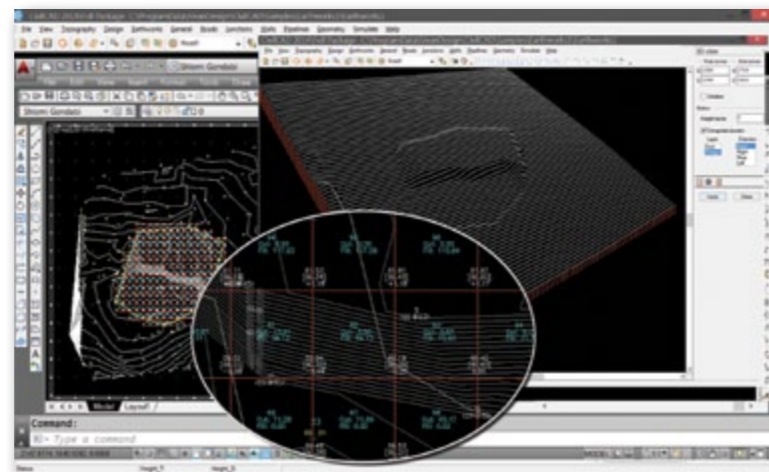
Take accurate measurements within the simulation



CivilCAD 2014-Standard

CivilCAD 2014-Standard package appends to the Survey package a full set of features for handling contour lines and land development calculations. The package simplifies broad work processes from field data input, via area maps production, to a successful carrying out of the final set-out stage.

- Automatic creation and processing of contour lines
- Advanced and automatic solutions for handling open and closed breaklines
- Visual aids differentiate breaklines on the drawing
- Simultaneous work with existing and designed 3D-models
- Fast and easy creation of ground sections between any two points
- Cross layers quantities calculation and visualization using earthworks grid, triangles grid, or parcels
- Volume calculations report generation
- Wide range solutions for handling lots and their side-slopes
- Zero line drawing and earthworks contour lines



Sivan Design was incorporated in 1996 and rapidly became a global provider of customized enterprise level geospatial solutions integrating ERP (Enterprise Resource Planning) with GIS (Geographical Information System) capabilities, a developer of 3D GIS applications, and a developer of Civil Engineering CAD and 3D Simulation software.

The company is highly experienced in the development and implementation of solutions for:

- Land administration, contracts performance and maintenance, underground infrastructure and utilities management
- 3D GIS cloud based applications supporting iPad and mobile devices
- Surveying, road design, pipelines planning, and 3D simulation CAD software

CivilCAD 2014

Solution Suite



CivilCAD 2014-Survey

- » Surveying and COGO calculations

CivilCAD 2014-Standard

- » Topography, land development and volumes calculations

CivilCAD 2014-Roads

- » Roads construction and design

CivilCAD 2014-Pipes

- » Water engineering solutions

CivilCAD 2014-Full Package

- » The complete package

Civil Simulate

- » Real-time 3D simulation at a click!

Autodesk®
Authorised Developer

Microsoft®
CERTIFIED
Partner

 **CivilCAD 2014**
Essential Toolkit for Civil Professionals

Sivan design
www.sivandesign.com

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