AutoCAD®
Civil 3D®
2008

Top 10 Benefits

AutoCAD® Civil 3D® 2008 software provides civil engineers, designers, surveyors, and drafters with a comprehensive AutoCAD®-based package for the design, drafting, and management of a wide range of civil engineering project types, including site development and road design. Using an industry-proven, dynamic engineering model, AutoCAD Civil 3D links design and production drafting, greatly reducing the time it takes to implement design changes and evaluate multiple scenarios. A change made in one place instantly updates an entire project, helping you complete projects faster, smarter, and more accurately. All team members work from the same consistent, up-to-date model, so they stay synchronized throughout all project phases.

Following are the top benefits of using AutoCAD Civil 3D 2008.

1. Save time and money and reduce errors with the dynamic engineering model.

Projects created with AutoCAD Civil 3D 2008 use a dynamic engineering model that links design and production drafting. As a result, a change to one part of the design propagates throughout the entire project, greatly reducing drafting errors as well as the time it takes to implement design changes and evaluate multiple what-if scenarios. For example, if you adjust the vertical design alignment, the software automatically updates the road model, redisplays proposed contours, recalculates volumes, updates profile labels, and corrects section plots for the road. If you change the curve length on your alignment, the profile, corridor model, and plotted cross sections all update instantly. If you lower a building pad, you can immediately retrieve updated volumes and display the new limits of construction. Civil 3D 2008 effectively maps the civil engineer's work process into an easy-to-use and powerful software environment, saving time and money and reducing errors.

2. Reduce purchase, deployment, and support costs with one complete solution.

AutoCAD Civil 3D 2008 provides the flexibility, depth of functionality, and power to address a variety of surveying and engineering project types, including site development, subdivision design, road rehabilitation, highway and rail design, environmental, and many others. Civil engineering, survey, engineering tech, and drafting professionals can now have the flexibility to work on any project at any time without needing to become experts in multiple niche products. And with a single solution in place, an organization can reduce training and support costs, simplify licensing and subscription renewals, and minimize data translation requirements.

3. Increase value to client by delivering more design alternatives in less time.

The AutoCAD Civil 3D 2008 dynamic engineering model enables you to explore conceptual proposals and complete final designs much faster. For example, you can begin by quickly laying out various alignment scenarios for a proposed roadway. You can then begin refining alignments, profiles, and the makeup of the corridor assemblies until the best design proposal has been

developed. With each change, all related objects and drawings update automatically. In the end, this allows you to evaluate more design alternatives in less time, providing your customers with a higher level of service and differentiating your firm from the competition.

4. Take full advantage of existing AutoCAD skills to get up to speed quickly.

Because AutoCAD Civil 3D is built on AutoCAD software, experienced AutoCAD users can work in a familiar environment with tools and processes they already know, while taking advantage of highly tuned engineering, surveying, and industry-specific drafting tools native to Civil 3D. By taking advantage of existing AutoCAD-based production drafting procedures such as CAD standards, management of sheet sets, plotting, and so forth, you can increase your civil engineering design and drafting productivity significantly without a substantial learning investment.

5. Create production sheets faster.

AutoCAD Civil 3D provides an environment where drafting is derived directly from the model. The style-based environment helps to ensure that objects and annotation in the drawing conform to production standards without requiring the user to be a CAD expert. Civil 3D also provides civil/survey-specific drafting tools and advanced drafting features such as the new roadway Sheet Generation functionality. Tools such as these automate what would typically be numerous steps, resulting in a significant boost in production drafting efficiency.

6. Be sure that production drafting is always in sync with your design.

AutoCAD Civil 3D 2008 dynamically links drafting elements, such as alignment or parcel labels and tables, with the engineering model so that a change to any part of the model produces updated annotation automatically. These intelligent labels and tables also keep track of the drawing scale and view orientation. For example, if you change the scale of the plan from 1:50 to 1:100, the annotation automatically resizes to maintain the proper plotted size. If you rotate the view orientation of the plan, the annotation of the objects automatically rotates to maintain plan readability. Automatic updating minimizes time-consuming and costly manual editing of drafting elements and helps ensure the accuracy of your final construction documentation. In other words, AutoCAD Civil 3D effectively eliminates the need to redraft when design changes occur. Once your drafting is generated, the model and Civil 3D annotation remain in sync.

7. Complete projects faster and reduce the chance of coordination errors using the Civil 3D project environment.

AutoCAD Civil 3D 2008 has scalable multiuser functionality that includes the use of AutoCAD xrefs, data shortcuts, and Autodesk® Vault-based project support to help small and large project teams complete projects more quickly and with less risk of errors. Multiple members of a design team can have simultaneous access to survey observations, points, surfaces, alignments, profiles, corridor models, and pipe networks so that more people can be involved in the surveying, design, and plan production process. Share an alignment across multiple drawings—with each drawing having different annotation and object appearance. If the master alignment changes, the alignment in your secondary drawings updates automatically. No need to re-create any drafting. Plan and profile remain in sync. Everyone can work together as a single, well-integrated team using the most up-to-date project data.

8. Exploit data compatibility.

AutoCAD Civil 3D 2008 enables you to work with any DWG™ drawing files, read and write MicroStation® DGN drawing files, and import and export AutoCAD® Land Desktop project data. In addition, AutoCAD Civil 3D 2008 works with LandXML data and GIS data formats, including ARC/INFO® coverages and Export (E00), ArcView® Shape, and more. AutoCAD Civil 3D also includes the ability export model graphics *and* metatdata for use outside Civil 3D. For example, a published DWF™ file includes all of the model data, such as pipe size and material, so that someone reviewing the design in Autodesk® Design Review can have all the information they need to validate the proposal. AutoCAD Civil 3D also includes the ability to export model elements such as parcels, pipes, and alignments to SDF format for use in GIS applications such as AutoCAD® Map 3D or Autodesk® Topobase™ software. Finally, Civil 3D supports interfacing with the industry-leading data collectors from companies such as Leica, Trimble, and Carlson. AutoCAD Civil 3D 2008 data compatibility creates an integrated CAD and GIS solution, making it easier to work with both internal and external engineering and GIS departments or consultants.

9. Build a foundation for your custom solution.
AutoCAD Civil 3D 2008 is a powerful platform for developing custom civil engineering applications. With its rich API (application programming interface) and a variety of third-party applications, you can tailor Civil 3D to suit your needs.

10. Clearly communicate design intent and complete final proposals with realistic 3D rendering.
AutoCAD Civil 3D inherits all of the rendering capabilities of AutoCAD® 2008 software, which helps you quickly communicate your design proposal. For example, corridor elements can be precoded with specific materials so that they automatically render properly. Surface models can be easily broken into subareas that display as different materials. Most important, the rendering environment is easy to use and handles a range of detail from simple shaded images to photorealistic images that can be used to sell a design. AutoCAD Civil 3D also includes utilities to help you integrate the design model into the Google Earth™ mapping interface for quickly communicating design intent to nontechnical audiences.

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