

# Top 10 Benefits

Autodesk® Civil 3D® 2007 software is a powerful, mature, civil engineering application designed to significantly increase productivity, save time, and decrease costs. It uses an industry-proven dynamic engineering model that maintains intelligent object relationships. A change made in one place instantly updates your entire project, helping you complete transportation, site, sewer, storm drain, and subdivision projects faster and more accurately. All team members work from the same consistent, up-to-date model, so they stay synchronized throughout all project phases, including survey, design, drafting, reporting, analysis, and visualization. Enhanced consulting, training, third-party developer products, and application development tools form a powerful enterprise civil engineering solution.

With Civil 3D software, your organization can standardize on one powerful product for all of its civil engineering design, drafting, and GIS needs. Reduce training and support costs, simplify licensing and subscription renewals, minimize data translation requirements, and substantially improve the quality of your deliverables with one powerful solution.

Following are the top benefits of using Autodesk Civil 3D 2007.

## **1. Reduce purchase, deployment, maintenance, and support costs using a single solution that is equally well suited for civil/survey projects of any type or scale**

Autodesk Civil 3D 2007 software provides the flexibility, depth of functionality, and power to address a variety of surveying and engineering projects. This single product is equally well suited for a subdivision, road reconstruction, site, highway, utility layout, landfill, or other civil engineering project. Your survey, civil engineering and engineering tech, and drafting professionals can have the flexibility of working on any project at any time without needing to become experts in many niche products.

## **2. Save time and money with intelligent, dynamic model**

Autodesk Civil 3D 2007 software is a powerful, mature civil engineering tool from Autodesk. It creates relationships between objects so design changes update dynamically. Using Civil 3D 2007, designers and engineers can become significantly more productive by using a single model for design elements, drafting and reports, and analysis and visualization. In fact, based on results from pilot projects conducted in 2005, where Autodesk® Land Desktop 2006 software was used side by side with Autodesk® Civil 3D® 2006 on production projects, Civil 3D yielded productivity improvements of between 25 and 100 percent.\*

With Autodesk Civil 3D, a change to one part of the design propagates throughout the entire project. For example, if you lower the edge of a parking lot, the software updates all the slopes leading to that pavement line. Change the curve length on your alignment and

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 2007 effectively maps the civil engineer's work process into an easy-to-use and powerful software environment.

### **3. Complete projects faster and reduce the chance of coordination errors using Civil 3D Project environment**

Autodesk Civil 3D 2007 has expanded multiuser functionality that enables small and large project teams to complete projects more quickly and with less risk of errors. Multiple members of a design team have simultaneous access to survey observations, points, surfaces, alignments, profiles, and pipe networks so that you can involve more people 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. No plan and profile sheets get out of sync. Everyone can work together as a single, well-integrated team using the most up-to-date project data.

### **4. Increase efficiency and profits with easy-to-use, relationship-based surveying, design, and drafting procedures**

Autodesk Civil 3D 2007 streamlines the surveying, design, and drafting process so you can complete more work more quickly than ever. The consistent user interface, direct interaction with objects, and automated output of drafting, reports, and analysis combine to help you achieve productivity gains that are otherwise unattainable. Civil 3D provides direct interaction, tabular editing, a project workspace interface for model elements, real-time inquiry of project data, and an efficient style mechanism to control automated drafting. Accessible from a simple and powerful interface, these features help new users become productive quickly. For example, you can begin editing a pipe network by graphically changing the location of a manhole or the diameter of a pipe. When you change the pipe diameter, the system automatically snaps to match pipe diameter values in your pipe library. You can also use numeric input in the tabular editor to change the pipe diameter, slope, invert elevation, sump, and so on. According to Harry Ward, executive vice president of Outsource, Inc., who participated in the Civil 3D pilot project conducted in 2005 whereby Civil 3D was used side by side with Autodesk Land Desktop on production projects, *“the modification of pipes and structures was simple and the automated annotation improved production significantly.”*

### **5. Gain process efficiency via unified surveying, design, and drafting environment**

The world's premier 2D and 3D drafting system, AutoCAD® 2007 software, is integrated into Autodesk Civil 3D 2007. Use the familiar AutoCAD drafting, layout, printing, data sharing, and communication tools throughout the design process. In Civil 3D 2007, experienced AutoCAD users work in a familiar environment with tools and processes they already know, while taking advantage of new engineering tools and features. That means if you're already productive using AutoCAD for civil engineering design and drafting production, get ready to increase your productivity without significant learning time.

### **6. Help your clients make the best decisions possible by providing richer design options, faster**

Autodesk Civil 3D 2007 enables you to explore conceptual proposals and complete final designs faster with dynamic, real-time interaction between the objects that are part of your

civil engineering model. For example, when you change a road alignment, the software instantly updates parcels, profiles, the corridor model, design surfaces, and volumes. Also, the rules-driven design tools in Civil 3D help to ensure that design standards are reflected even while you work through conceptual proposals.

### **7. Experience faster plan production**

Autodesk Civil 3D 2007 dynamically links drafting elements, such as alignment or parcel labels and tables, with the engineering model. A change to any part of the model produces updated annotation. 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.

### **8. Reduce risk of drafting and design errors**

Because design and drafting objects are connected in the engineering model, changes that would typically require manual redrafting update automatically. For instance, if you adjust the vertical design alignment, the software automatically updates your road model, redisplayes proposed contours, recalculates volumes, updates profile labels, and corrects section plots for the road. That means you spend less time on revisions and gain peace of mind knowing all design data is accurate and up-to-date.

### **9. Exploit data compatibility**

Autodesk Civil 3D enables you to work with any DWG drawing files, read and write MicroStation® DGN drawing files, and import and export Autodesk Land Desktop project data. In addition, Civil 3D 2007 works with LandXML data and GIS data formats, including ARC/INFO® coverages and Export (E00), ArcView® Shape, and more. Autodesk Civil 3D 2007's 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.

### **10. Build a foundation for your custom solution**

Autodesk Civil 3D 2007 is a powerful platform for developing custom civil engineering applications. With its rich API (application programming interface) and a variety of third-party applications in development, you can tailor Civil 3D to suit your needs.

\* As with all performance tests, results may vary based on machine, operating system, filters, and even source material. While every effort was made to make the tests as fair and objective as possible, your results may differ.

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