

# WINNING PROJECTS WITH LIFT PLANNING APPLICATIONS



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## Feature Comparison

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## FEATURE COMPARISON

### INTRODUCTION

A variety of lift planning tools are available on the market to assist crane users with crane configuration and creating lift plans. But the right lift planning product is more than that. It's also a communication tool, sales tool, and risk management tool.

In addition to industry standards and OSHA regulations driving demand for lift planning tools, there is a trend for construction owners and general contractors to demand it for the bidding process. Recently A1A Software LLC, developer of 3D Lift Plan, learned of projects owned by the Army Corps of Engineers, a national developer of shopping centers, and a commercial gas services company, which required software-generated lift plans for bidding on and performing work. They see the risk mitigation benefits of lift planning software tools.

When comparing lift planning tools, Tawnia Weiss, President of A1A Software, advises crane users to consider the ease of use, the comprehensiveness of the crane database, and the level of detail and accuracy that can be achieved in producing a lift plan. In addition, consider whether the end product can be used to communicate effectively with the customer. Here are five key features she recommends crane owners compare when shopping for lift planning software.

### Subject Matter Expert



Tawnia Weiss has led A1A Software LLC for more than 10 years. The company got its start by developing the well-known lift planning program called 3D Lift Plan. With 3D Lift Plan, users input weights, dimensions, and jobsite obstructions and the application searches load charts to select the most economical crane configuration for the lift. In addition, A1A Software offers other business management tools specific to the needs of crane and construction equipment owners.

Weiss earned a degree in IT at the University of Washington, and has spent her entire career in the crane and transportation industries. Her roots are in trucking, where she worked for her family's company as a teenager, ultimately managing the operation. Later, Weiss managed sales of Compu-Crane and Rigging Pro software, where she gained experience in the technology side of equipment service. 3D Lift Plan was developed out of first-hand understanding of how equipment operates and how owner's manage their fleets and use their cranes.

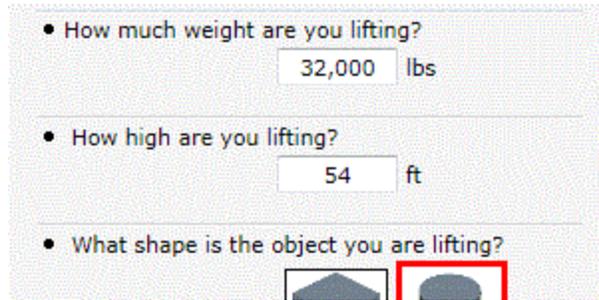
A1A Software is a member of the Specialized Carriers & Rigging Association and the Crane Rental Association of Canada. Weiss is a frequent speaker at industry meetings, including the Houston Business Roundtable, Florida Crane Owners Council, and Crane & Rigging Conference.

904-430-0355 or [www.3dliftplan.com](http://www.3dliftplan.com)

## FEATURES TO COMPARE

**1. Ease of Use** Some lift planning tools provide incredible detail and accuracy but require extensive training to be able to use. 3D Lift Plan can be used by people with all levels of crane and rigging knowledge and computer/technology savviness. Basic Level users, people whose job may be more sales oriented, for example, appreciate the Quick Lift Setup feature. Designed as a self-guided wizard, the tool asks the user to input specific data that automatically generates accurate jobsites and lift plans.

You provide the weight and dimensions of the object you are lifting and the location and size of any obstructions on the jobsite. 3D Lift Plan will search the load charts for all your cranes to find the most economical crane configurations for the lift. Program features, load charts, and crane graphics are all updated on our server, so there is no need for you to install updates. 3D Lift Plan is a standalone application. No additional CAD program is required.



**“3D Lift Plan is by far the best program I have ever used for its simplicity and ease of use.” -- Greg Nachtegaele, Armstrong Crane & Rigging**

**2. Crane Database** When comparing crane databases, it's important that the available load charts represent the cranes in your fleet and provide an easy way to add in new models you acquire. Link-Belt, Manitowoc and Tadano Mantis each sponsor the data for their respective crane models in 3D Lift Plan. In addition, customers can request the addition of any crane, even those that are one-of-a-kind, custom cranes, such as a barge-mounted crane. 3D Lift Plan has at least 2500 models in a database that continues to grow all of the time. No other lift planning software has a [database](#) as large as we do.

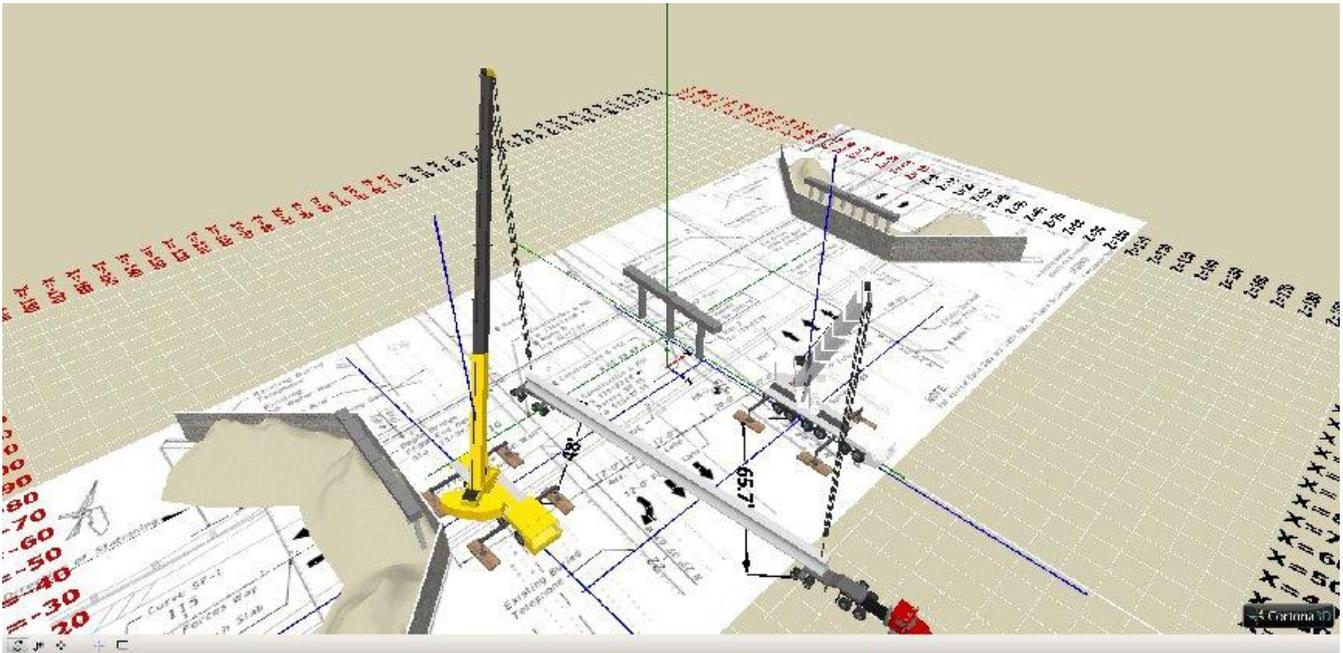


## From Altec to Zoomlion



# 60%

3D Lift Plan's crane library contains load charts for at least 60% of all crane brands ever manufactured.



**FIGURE 1 THE ABILITY TO IMPORT CAD DRAWINGS OR GOOGLE EARTH IMAGERY ARE JUST TWO WAYS 3D LIFT PLAN DELIVERS REALISTIC RENDERINGS OF YOUR LIFT PLAN.**

**“The accuracy of 3D Lift Plan assures our clients that the cranes selected will perform the tasks required safely and efficiently.” – Fred Honsinger, Modern Crane**

**3. Detail and Accuracy** A common mistake crane users make when planning lifts is to use load chart data provided on the sales brochures rather than the full in-cab charts. All load chart data in 3D Lift Plan is based on the crane OEM’s full in-cab charts, which on some all-terrain cranes translates to thousands of pages of load charts. When purchasing a lift planning tool, it’s important to know what the data is based on in order to assess the accuracy of the lift plan output.

Three-dimensional graphics, the ability to import CAD drawings or Google Earth imagery, individual crane model graphics that represent each specific crane, the ability to add in rigging or environmental obstructions, are all features that make 3D Lift Plan highly detailed and accurate. We provide hundreds of custom 3D objects, enabling you to deliver a realistic rendering of your lift plan to the customer.

Knowing the full range of force exerted through each outrigger or through the loading points on a crawler track has become a hot-button issue for crane owners. The recent Cranes & Derricks in Construction rule specifically requires crane users to identify and plan for ground conditions and the ground’s ability to support the pressure exerted. In fact, it’s one of the first items OSHA inspectors look for when conducting an investigation. Crane users can identify this critical information using 3D Lift Plan’s Ground Bearing Pressure tool.

If a crane in our database does not include the full data to calculate ground bearing pressure then 3D Lift Plan provides a way for the users to enter the data on a case-by-case basis. In addition, the tool can show what the ground bearing pressure is if the crane is set up on steel or timber crane mats, and we are currently working toward incorporating the ability to calculate for cranes setup on engineered polymer crane mats.

## 4. Communication/Sales Tool

It is becoming increasingly common for detailed lift plans to be required as part of the bidding process. But lift plans must be presented in a way that non-crane professionals can understand. Look for lift planning tools that can generate a simulated lift. 3D Lift Plan automatically monitors the crane's capacity while you change the boom angle, jib offset, load location, crane location, or lift radius. Snapshots through the load's travel path, printouts of the full plan, or URL links displaying the crane and rigging configuration, crane capacity, load details, notes, and your company information, are convenient ways you can use 3D Lift Plan to communicate with customers.

***"THANKS TO 3D LIFT PLAN AND THE ABILITY TO MAKE A LIFT MOVIE, WE COULD MODEL THE COMPLETE LIFT TO SHOW THE CLIENT THAT THE LIFT COULD BE PERFORMED SAFELY." — RONNIE WAGSTAFF, WAGSTAFF CRANE***



**FIGURE 2: DEMONSTRATION OF REFINERY VESSEL MOVE. MOVIE CREATED BY CRANE OWNER TO SHOW CLIENT THAT THE LIFT COULD BE PERFORMED SAFELY.**

As a communication tool with the construction owner, GC, and other trades, 3D Lift Plan can improve overall job safety and coordination. The 2014 ASME P30.1 Planning for load Handling Activities identifies the need for both standard and critical lift plans. While standard plans are not required to be written, critical lift plans must be. 3D Lift Plan allows users to create reports showing the area required to assemble the crane, or prepare critical lift worksheets, including pre-lift checklist, for use by lift director.

## CASE STUDY: MILLION DOLLAR CRANE SKETCH

All-West Crane and Rigging Ltd., serving western Canada, provides mobile crane rental and rigging services for commercial construction, forestry, mining, transmission & distribution, and oil and gas industries. The company's rental fleet includes boom trucks, rough-terrain cranes, telecrawlers, and a 100-ton Link-Belt truck crane. All-West began using 3D Lift Plan five years ago when it came with the purchase of a new Link-Belt crane.

All-West President and CEO Jerry van Halderen initially used 3D Lift Plan to determine crane setup and configuration. Within a few months he also realized its value as a sales tool. He says 3D Lift Plan gives his company a competitive advantage.

Van Halderen had never used any computerized lift planning tool before. "3D Lift Plan is so powerful that even after working with it for several years, we continue to find new ways to make our job easier and safer, and to win new contracts. Best of all, you don't need to be an engineer to use it," he said.

### Implementation as a Sales Tool

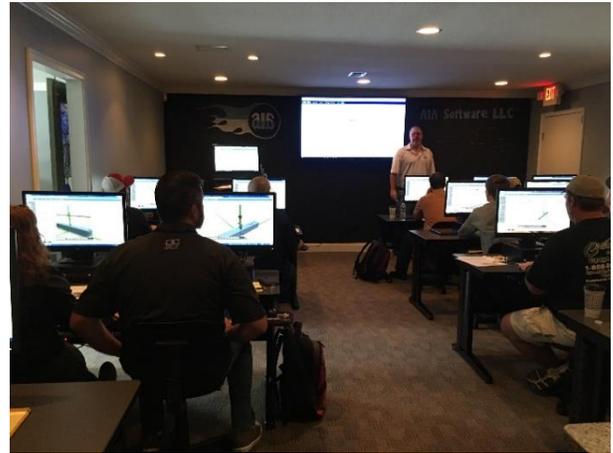
"Within three months of acquiring the software, we quoted a job that had previously used a much larger crane. The customer did think the crane we were recommending would work. Using 3D Lift Plan, we were able to prove that our crane could make the lift within load chart safety margins and boom-to-load clearances," said van Halderen.

It took him only an hour to produce a lift plan. A 2D rendering was emailed to the customer along with a link to view the 3D execution. They were awarded the job, which was scheduled to last eight weeks. "Two and a half years later, we moved our last crane out from the project. At peak construction, All-West supplied seven cranes, two of which were on 24-hour operation schedules. I still have that drawing and often refer to it as my million dollar drawing," said van Halderen.

The award of that single job allowed van Halderen's small business to more than double in size.

**5. Training** Once you have selected a lift planning product, it's also important to consider the level of support provided by the developer. Can you get help learning to use the program and troubleshooting it or are you on your own to become proficient? While 3D Lift Plan is designed to be used by even non-crane personnel, to fully realize the features of the program, we encourage new users to participate in training.

A1A Software offers weekly online classes for free. We also offer training at your location or boot camp classes held at new training facility in Florida. The Training Center features dedicated high speed internet and 18 computer stations featuring graphics cards and 16 gig of ram.



## BENEFITS FOR CRANE AND RIGGING BUSINESSES

“3D Lift Plan helps our company and our customers be more successful,” says Jerry van Halderen, President and CEO of All-West Crane & Rigging. Here’s how.

### Safety & Documentation

Procedural documentation is a major component of most projects today. It satisfies these requirements, even for the bidding process, in many cases. When used properly, the lift plan conveys a clear message to all parties managing a project and those involved in and around the lift. 3D Lift Plan can generate rigging lists, load charts for the given crane configuration, and even critical lift worksheets. The result is a safer, more efficient lift.

“As a certified lift planner, I like the ability to zoom in and out so I can look at a given lift from virtually any vantage point. This quickly identifies any potential issues with a lift plan while spatially representing a lift to within inches of the real life scenario,” said van Halderen.

### Communication

Often a 2D rendering of a 3D Lift Plan is all that is required to satisfy the needs or concerns of the customer and other contractors. The “share function” allows customers to view and manipulate the plan when double checking complicated lifts. One feature All-West uses frequently is the ability to import the customer’s own drawings, a photograph, or a satellite image to build the plan from. “This is a huge time saver by reducing the need to visit the site to take extensive measurements,” says van Halderen. It helps customers better visualize the conceptual lift as it pertains to their jobsite.

### Performance

An accurate 3-D rendering of any jobsite and lift scenario shows the crane position to the load, obstacles, and how it could impact other contractors working near a lift zone. It can assist with better planning and efficiencies for material placements to avoid double handling thereby increasing productivity while decreasing costs.



Jerrv van Halderen