



**GRADEMETRIX<sup>®</sup> SCRAPER**  
3D GNSS GRADE CONTROL  
AND GUIDANCE SYSTEM





## GRADEMETRIX® SCRAPER SITE CONTROL & GUIDANCE POSITIONING SYSTEM

GradeMetrix® Scaper is packed with industry-leading technology. It is easy to use and delivered at an affordable price. The system can be installed and calibrated in less than 8 hours.

GradeMetrix® Scaper uses a VR1000 single antenna but can be scaled up to dual GNSS antenna solution for improved accuracy.

The GradeMetrix® system is designed to fit seamlessly into your existing site infrastructure using all the same design file formats and base station corrections. To ensure your peace of mind, all major components are covered by our best-in-class 3-year warranty.

New and experienced operators can dramatically increase accuracy, efficiency, and dependability with GradeMetrix®, resulting in significant ROI in your operations right away.



## GRADEMETRIX® KEY FEATURES

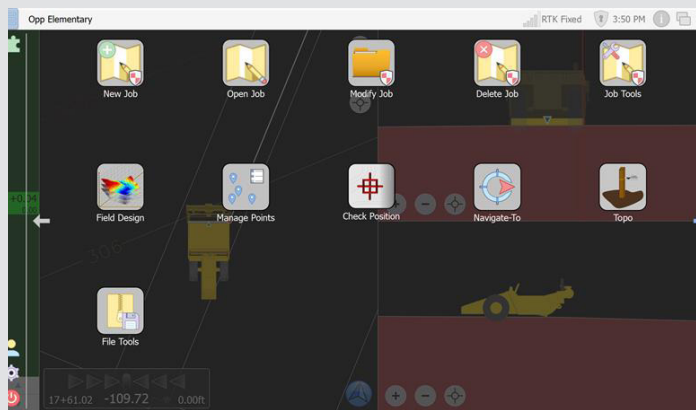
- Access to all GNSS satellite constellations for maximum accuracy and maximum coverage in difficult environments; including GPS, GNSS, GLONASS, BeiDou, Galileo, and QZSS.
- GNSS receiver supports industry standard RTCM3.x, ROX, CMR, and CMR+ RTK formats
- 2.5D and 3D operation modes all come standard. Operators can create pads to match an existing or required height, and create batters, ramps, and slopes all on-site from the cab within seconds. Operators can create TIN surfaces using points stored in GradeMetrix Scaper or imported from SiteMetrix Grade.
- Simplified user interface with multiple views including plan view, profile view, cross-section view, and more.
- Supports DTMs or 3D linework.
- Cut/Fill color maps are supported to show existing progress. The data can be output in several file format types.
- Supports industry standard file formats including dwg, dxf, and LandXML. Multiple design surfaces can be loaded and you can switch designs from the main Plan View.
- Easily locate lines and points yourself, checking site design and attributes as you go.
- Map projections or localized coordinate systems allow simple site coordination to existing coordinate systems or creation at new sites.
- Operators visualize the site in real time, eliminating delays and enabling fast and efficient completion of all site work including ramps, batters, slopes, and pads.

## COST SAVINGS – EFFECTIVE IMMEDIATELY

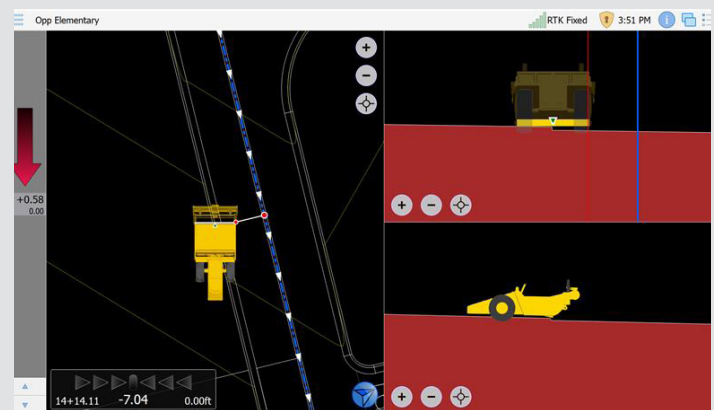
GradeMetrix® solutions offer immediate cost savings to your earthmoving activities. The simplified installation and calibration process gets your system up and running quickly. Our latest multi-frequency, multi-GNSS solution uses all available satellites in the sky as a standard feature, ensuring user access to a robust RTK solution in virtually any environment; reducing expensive machine downtime, especially in difficult environments like open-pit mines or in urban canyons.

Use of the GradeMetrix® GNSS-based system allows for tasks including land reclamation projects, dam and reservoir construction, new infrastructure projects, and landfills and waste deposits.

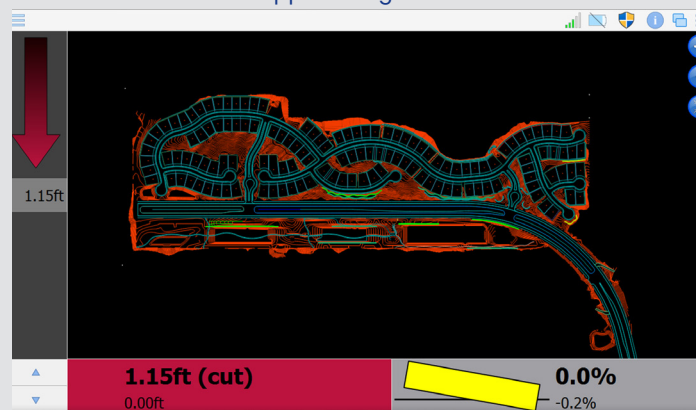
Intuitive Menu Design



Multiple Views



Supports large DTM's



## OUR BENEFITS AT A GLANCE

- **RIGHT FIRST TIME** – Less Passes – Work Faster – Reduced Operator Skill Requirement – Reduced Fuel Costs
- **MATERIAL SAVINGS** – Optimize Remove/Replace – Improve Transportation Cost – Control Soil Disposal Cost
- **REDUCED SURVEY COST** – Less Site Preparation – Less Checking – Less Rework – Less Stake Replacement
- **IMPROVED SAFETY** – Less Personnel Around Machines – Operator Stays In Machine
- **3-YEAR WARRANTY** – Best In Class Warranty
- **EASILY ADAPTABLE** – Primary Components Can Be Moved Easily And Quickly Between Machines



## USE GNSS AT EVERY SITE

The embedded 2.5D function in GradeMetrix® allows you to use the GNSS Guidance Technology for a vast array of simple useful applications. without the need for complex 3D files from a land surveyor.

Using only a few keystrokes you can easily create simple layers, single or dual slopes, ramps, and even roads; using your GNSS as a reference.

Also using the optional Hemisphere C631 base station you can provide RTK corrections to your Scraper.

No survey points, no local transformations, or projections needed. In addition to the 3D model benefits, the 2.5D functionality will significantly speed up your work cycles and dramatically reduce your ROI time.

## RUGGEDIZED HARDWARE

Hemisphere's GradeMetrix® Scraper solution is powered by hardware components that have undergone extensive shock, vibration, and environmental testing to withstand the harshest job site conditions.

The system is designed in a unique format centered around the VR1000 GNSS RTK Receiver. The VR1000, with its integrated UHF radio and GNSS receiver requires a single cable connection to the IronTwo display, resulting in the most simplified installation and calibration procedure on the market, and is the result of multiple decades of experience merging GNSS technology with precision applications.

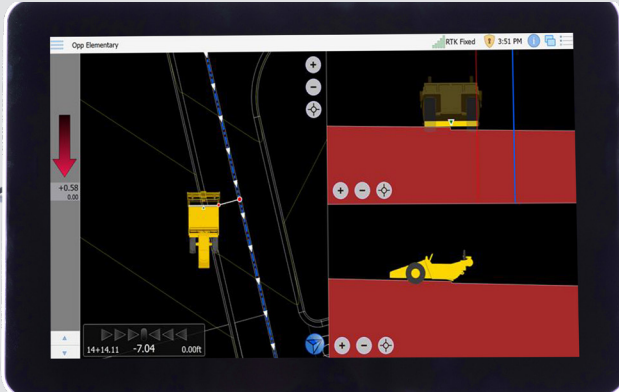
## APPLICATION EXAMPLES



### BULK EARTH MOVING



### SITE PREPARATION



### IRONTWO RUGGED DISPLAY

- 10" (1920 x 1200 resolution) touchscreen
- Microsoft Windows™ operating system
- Sunlight Viewable display
- Easy and intuitive user interface
- Handles large 3D DTM project files
- Wi-Fi, Bluetooth, and ethernet support
- Integrated cellular modem for Ntrip corrections or remote/data support
- IP65 rating



### VR1000 GNSS RTK HEADING RECEIVER

- Multi-frequency, Multi-GNSS GPS/GLONASS/BeiDou/Galileo/QZSS capable
- Rugged GNSS Receiver
- IP69K and MIL-STD-810G
- Integrated 400 MHz UHF Radio
- Powerful WebUI with ethernet, CAN, serial, Bluetooth and Wi-Fi connections
- Hemisphere GNSS Athena® RTK engine
- Supports Hemisphere GNSS Atlas® L-band Correction Service



### A46 GNSS ANTENNA

- IP69K Enclosure / EP455 Shock/Vibration Rating
- Compact Design
- Signals Received: GPS L1/L2/L5, GLONASS G1/G2, BeiDou
- B1/B2/B3, SBAS, L-band, Galileo E1/E5a and b, and QZSS
- LNA Gain: 30 dBn





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