YOUR CONSTRUCTION TECHNOLOGY PROVIDER



Field Reference Guides

EARTHWORKS Grader Version 2.9

SITECH XXX SITECH-XXX.COM



System: Earthworks Grader

Training Guides

Version: 2.9

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SITECH TECHNOLOGY DEALER TRAINING CHECKLIST

System: Earthworks Grader Version: 2.9 **Training Checklist** Page # Starting Earthworks 3 4 Dashboard 5 Select Project, Design and Measured Data Select Project, Design and Measured Data: VCL 6 Create Project 7 Earthworks Screen 8 Work Screen Interface 9 Work Screen Setup 10 Text Ribbon Setup 12 Blade Focus Point / Vertical Guidance 13 Import Data USB 14 Export Data USB 15 Cutting Edge Wear / Overcut Protection 16 Select Bolt Hole 17 Verify System Accuracy 18 Vertical Offset / Memories 19 Horizontal Offset 21 22 Cut Fill Mapping Record Point 23 Delete / Edit Point 24 25 Navigate to Point 26 Lane Guidance Surface Manager 27 Layers Manager 28 UTS Setup 29 Change Radio Network 31 Level Surface 32 Sloping Surface 33

SITECH Copy

Training Acknowledgement:

SITECH TECHNOLOGY DEALER TRAINING CHECKLIST

System: Earthworks Grader Version: 2.9 **Training Checklist** Page # Starting Earthworks 3 4 Dashboard Select Project, Design and Measured Data 5 Select Project, Design and Measured Data: VCL 6 Create Project 7 Earthworks Screen 8 Work Screen Interface 9 Work Screen Setup 10 Text Ribbon Setup 12 Blade Focus Point / Vertical Guidance 13 Import Data USB 14 Export Data USB 15 Cutting Edge Wear / Overcut Protection 16 Select Bolt Hole 17 Verify System Accuracy 18 Vertical Offset / Memories 19 Horizontal Offset 21 22 Cut Fill Mapping Record Point 23 Delete / Edit Point 24 25 Navigate to Point 26 Lane Guidance Surface Manager 27 Layers Manager 28 UTS Setup 29 Change Radio Network 31 Level Surface 32 Sloping Surface 33

Customer Copy

Training Acknowledgement:

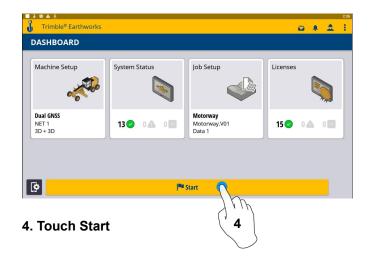
Starting Earthworks





2. Select operator

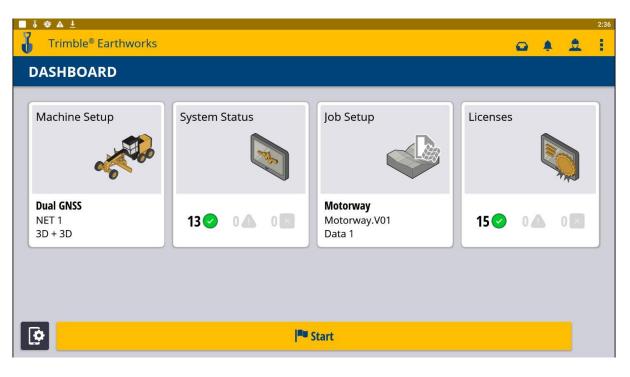
3. Enter password if required and touch login







Dashboard



Machine Setup



Position SourceCorrection Source

System Status



- Status of Devices
- Component Warnings



Job Setup

- Motorway.V01 Data 1
- Select or Create Project
- Select or Create Design
 Select or Create New Measured Data Folder
- 15 🕗 0 📣

Licenses

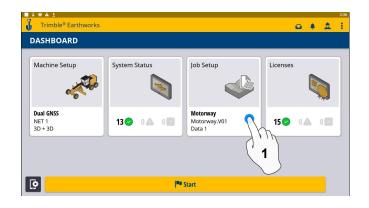
- EC520 License
- TD520 License
- GNSS Receiver License

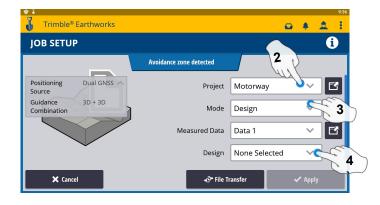
Licenses



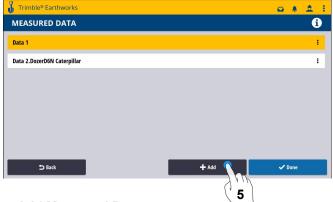


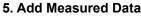
Select Project, Design and Measured Data



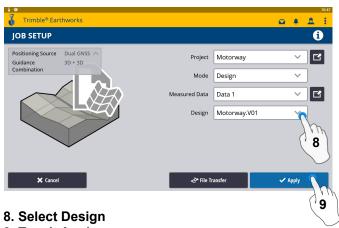


- 2. Select Project
- 4. Measured Data (Create New)
- 3. Select Mode

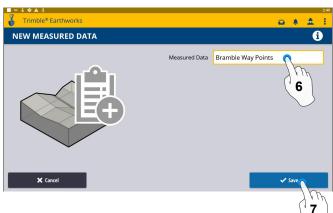




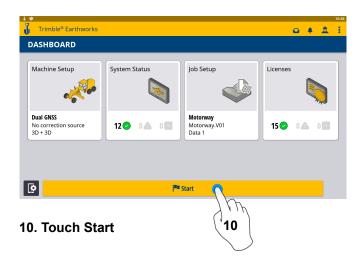
1. Touch Job Setup



9. Touch Apply



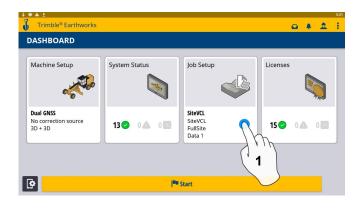
6. Type New Measured Data Name 7. Touch Save

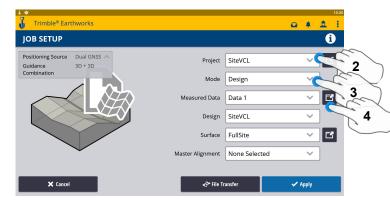




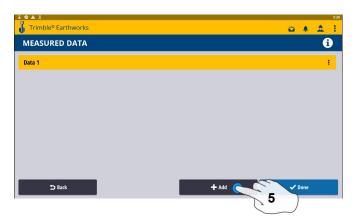


Select Project, Design and Measured Data: VCL



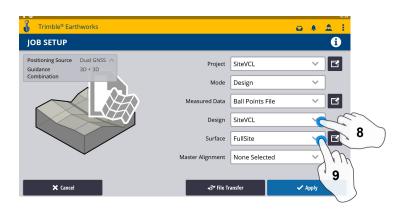


- 2. Touch Project- Select Project
- 3. Touch Mode- Select Design
- 4. Touch Measured Data

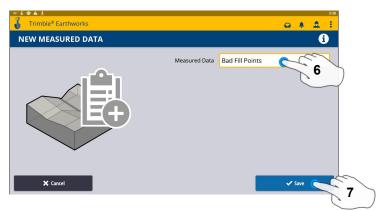


5. Add Measured Data

1.Touch Job Setup



- 8. Touch Design- Select Design that contains a VCL
- 9. Touch Surface- Select Surface



- 6. Type Measured Data Name
- 7. Touch Save

		<u>o</u> ę .	
Project	SiteVCL	~	Ľ
Mode	Design	~	
Measured Data	Ball Points File	~	Ľ
Design	SiteVCL	~	
Surface	FullSite	~	E
Master Alignment	Road CL	<u> </u>	10
Da ette - Te			
	Mode Measured Data Design Surface Master Alignment	Mode Design Measured Data Ball Points File Design SiteVCL Surface FullSite	Project SiteVCL Mode Design Measured Data Ball Points File Design SiteVCL Surface FullSite Master Alignment Road CL

- 10. Touch Master Alignment Select Alignment
- 11. Touch Apply
- 12. Touch Start

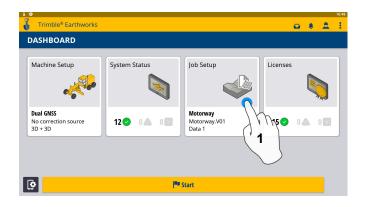




12

Start

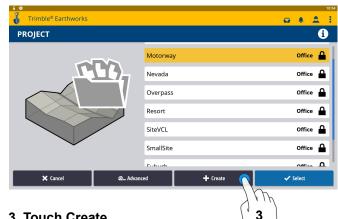
Create New Project



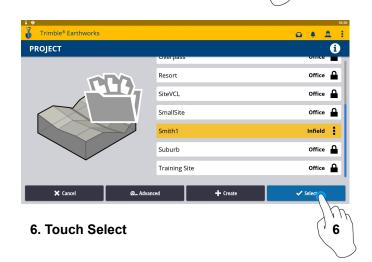
Trimble® Ear					i
Positioning Source Guidance Combination	Dual GNSS A 3D + 3D	Project Mode Measured Data	Motorway Design Data 1	× ×	
		Design	Motorway.V01	~	
🗙 Cancel		⊲S* file Tr	ansfer	🗸 Apply	

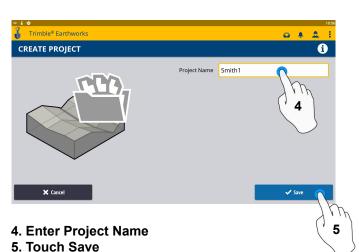
2. Touch Project

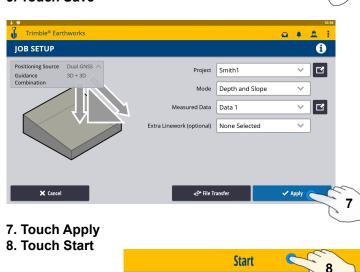
1. Touch Job Setup



3. Touch Create



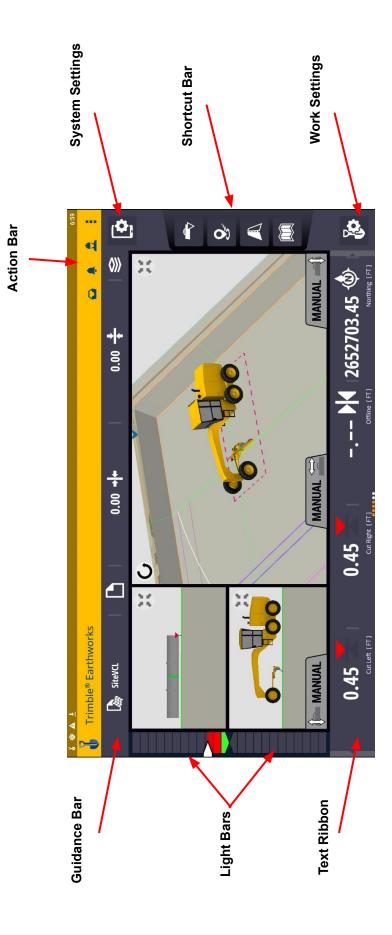








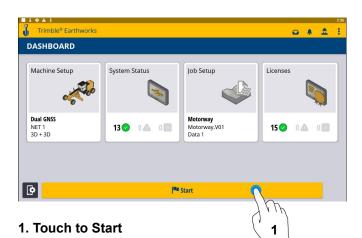
Earthworks Screen

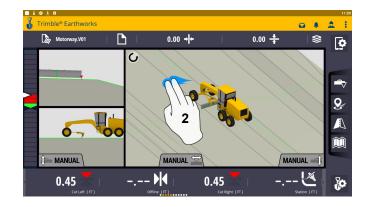




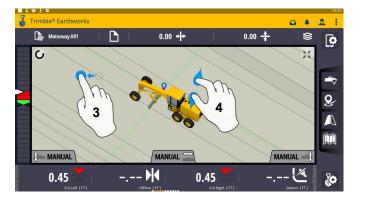


Work Screen Interface



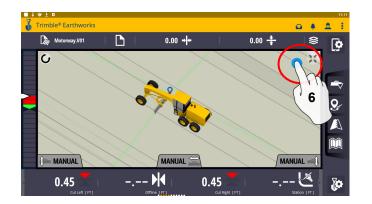


2. 2 Finger swipe to change views



3. Drag to pan

4. Pinch-Spread to zoom/Zoom out



6. Touch to re-center



5. Touch to select Pan or Rotate





Work Screen Setup



1. Touch Change View



- 2. Touch Cross Section
- 3. Touch Profile View
- 4. Touch Plan View



5. 2 Finger Swipe to single view



8. Touch 3D View



- 6. Touch and Hold
- 7. Select Change View

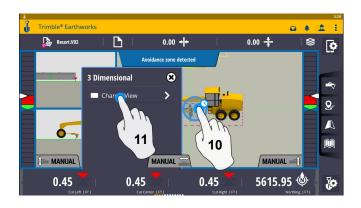


9. 2 Finger swipe to 2 Screen View





Work Screen Setup Cont:



- 10. Touch and Hold
- 11. Touch Change View

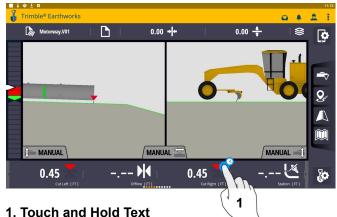


12. Touch Cross Section View

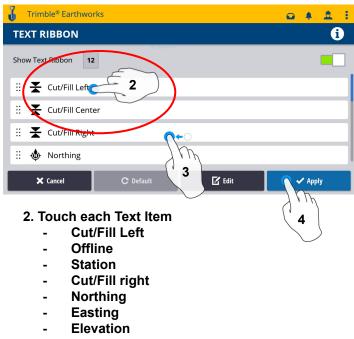




Text Ribbon Setup



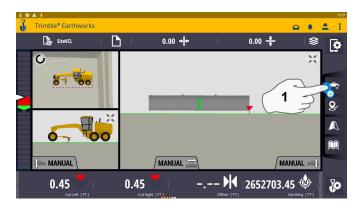
1. Touch and Hold Tex Ribbon



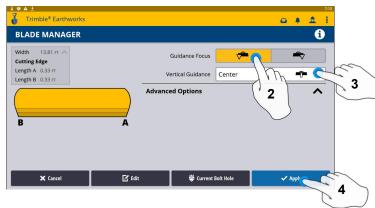
- Design Elevation
- Design Cross Slope
- Design Mainfall
- Vertical GNSS Precision
- Satellite Count
- 3. Touch-Hold-Drag to change position
- 4. Touch Done



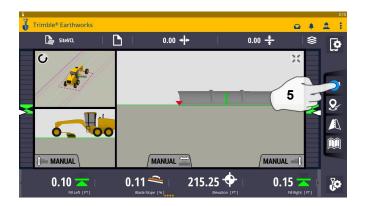
Blade Focus Point / Vertical Guidance



1. Touch and Hold Blade Icon



- 2. Touch Focus Option
- 3. Touch Vertical Guidance Option
- 4. Touch Apply



5. Touch Blade Icon to change focus point

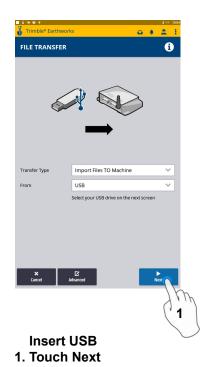


NOTE: "LINK TO FOCUS" vertical guidance will follow focus point.



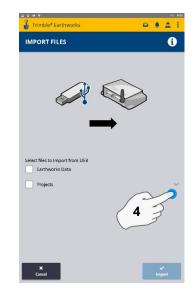


Import Data With USB

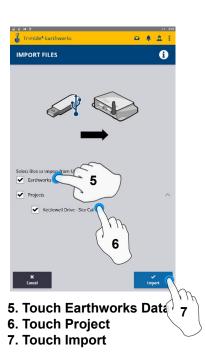




2. Touch USB 3. Touch Select



4. Touch "v"





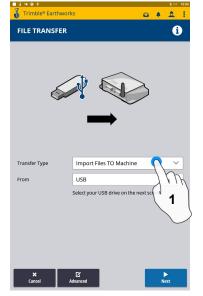
8. Touch OK



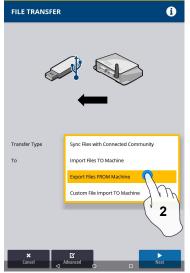


Export Data With USB

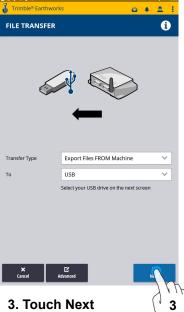
Trimble® Earthworks



Insert USB 1. Touch Transfer Type



2. Touch Export Files



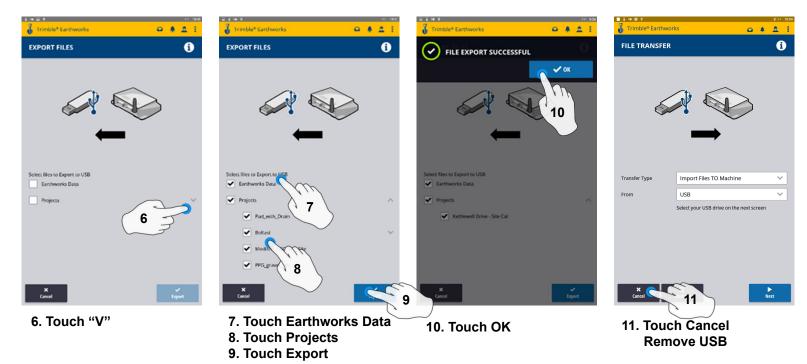
Trimble® Earthworks

0 4 Å I





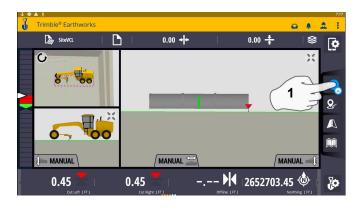
5. Touch Select

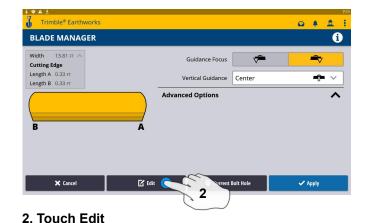




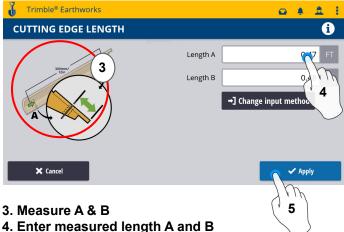


Cutting Edge Wear / Overcut Protection

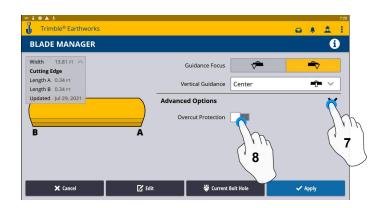




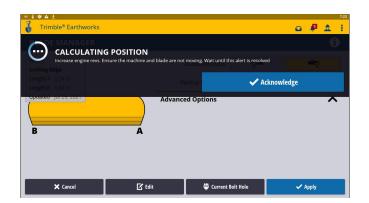
1. Touch and hold Focus Icon



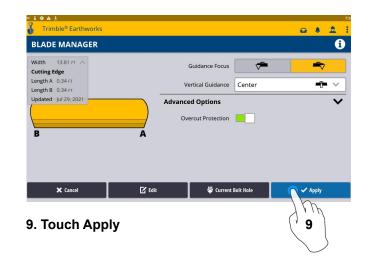
5. Touch Save



- 7. Touch Advanced Options
- 8. Touch Overcut Protection



6. Sensors will Initialize





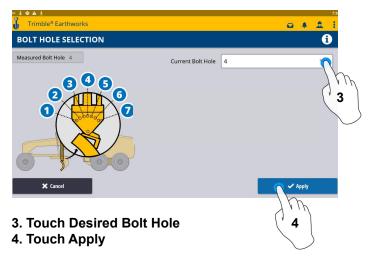


Select Bolt Hole



1. Touch and hold on Blade Manager Icon

Trimble® Earthworks		7:29
BLADE MANAGER		i
Width 13.81 FT A	Guidance Focus	-
Length A 0.34 FT Length B 0.34 FT	Vertical Guidance Center	- î- ~
Updated jul 29, 2021	Advanced Options	^
🗙 Cancel	🗹 Edit 😽 Curr Bolt Hole	🗸 Apply
2. Touch Curr	rent Bolt Hole	



Note machine must be measured up for additional bolt holes.



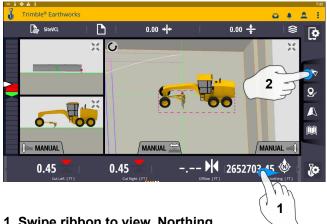


Verify System Accuracy

Verify the system accuracy by checking into a bench



Position the blade tip over the bench point



1. Swipe ribbon to view, Northing, Easting, Elevation



3. Verify Accuracy Northing, Easting, Elevation

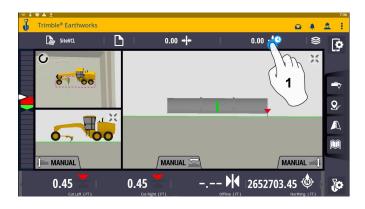
2. Touch blade focus to match verification location

See Supervisor if Northing, Easting and Elevation do not match Project tolerances

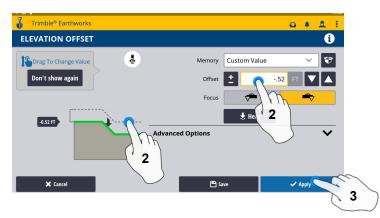




Vertical Offset / Memories



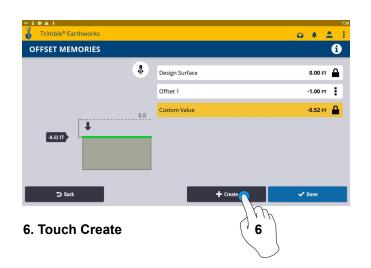
1. Touch and hold Vertical Offsets



- 2. Enter Offset or Drag Green line to Desired Grade
- 3. Touch Apply to use immediately

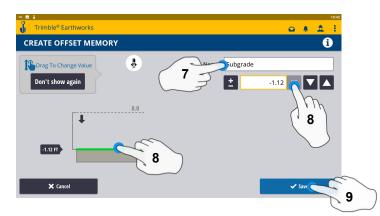


4. Touch and Hold Vertical Offsets





5. Touch Memories

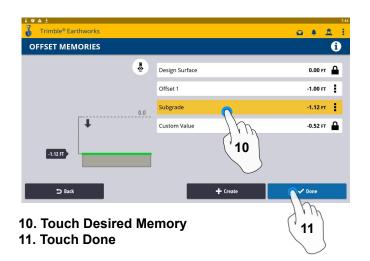


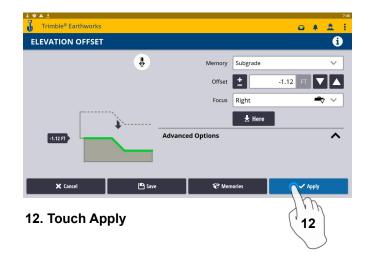
- 7. Enter Description
- 8. Enter a Value or Drag Green Line to Desired Grade
- 9. Touch Save





Vertical Offset / Memories Cont:





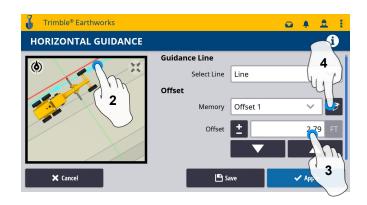




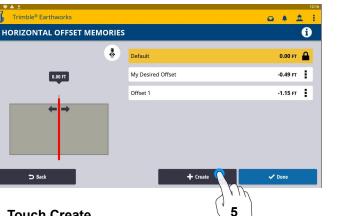
Horizontal Offset



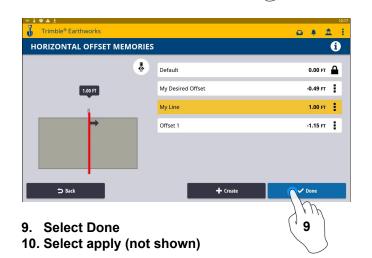
1. Touch and hold Horizontal Offset

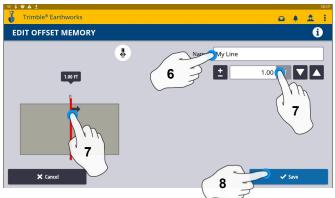


- 2. Touch Select Desired Alignment
- 3. Enter your desired offset (Manually) or:
- 4. Touch Memories

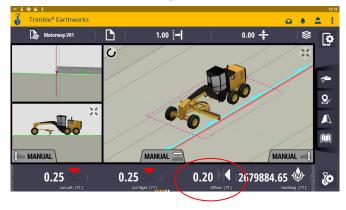


5. Touch Create





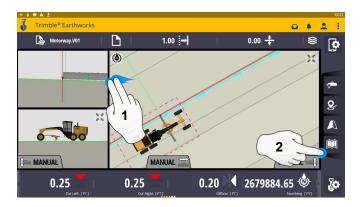
- 6. Enter Desired Name for offset memory
- 7. Adjust Offset or Drag Line to Desired Grade
- 8. Touch Save once complete







Cut Fill Mapping





- 1. Two Finger Swipe to 3 screen view
- 2. Touch Mapping Icon to View

Cut Fill Mapping will only be visible in Plan, Cross section, and Profile views





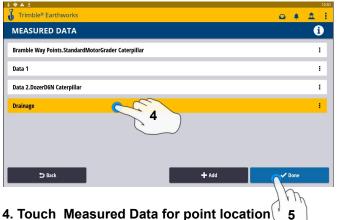
Record Point

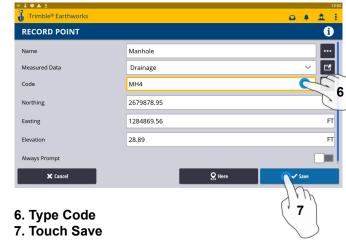


1. Touch and Hold Record Point

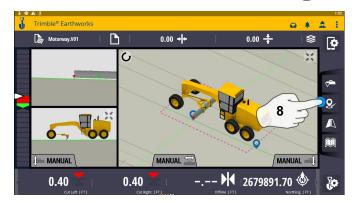
Trimble® Earthworks			12:32
RECORD POINT			0
Name	1		
Measured Data	Data 1	i Th	Z Z
Code		2	
Northing	2679878.95		
Easting	1284869.56	0	F
Elevation	28.89		FT
Always Prompt			
🗙 Cancel	<u>8</u> #	ere	✔ Save

- 2. Touch to Edit Name
- 3. Touch and Select Measured Data Folder





4. Touch Measured Data for point location (5. Touch done



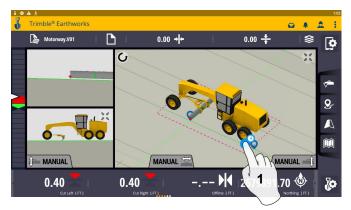
8. Touch Point Icon Records Point

** Note- After recording a point, it will save automatically in the Measured Data folder created during project setup. **





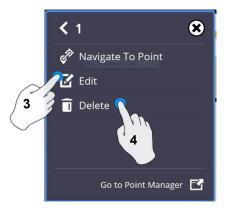
Delete / Edit Point



1. Touch and hold over point created

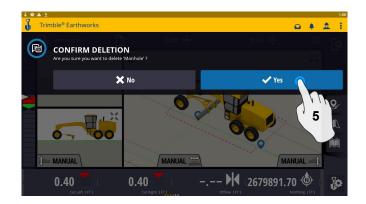


2. Touch point information



- 3. Edit point information if needed
- 4. Touch Delete





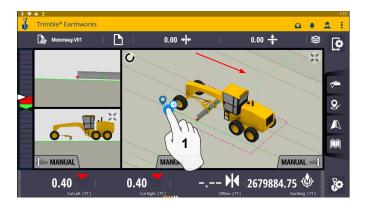
5. Touch Yes to Confirm Delete

NOTE: once deleted can no longer retrieved





Navigate to Point



1. Touch and hold on Point



2. Touch Point Info



3. Touch Navigate to Point



4. Touch Stop icon once complete

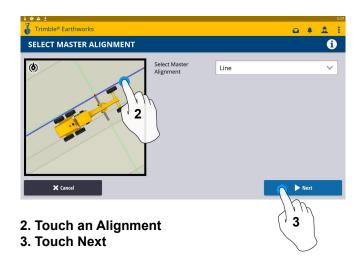


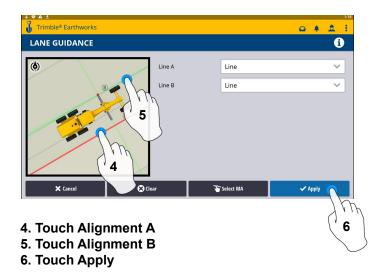


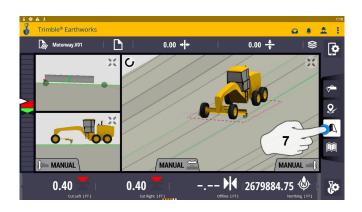
Lane Guidance



1. Touch and hold Lane Guidance







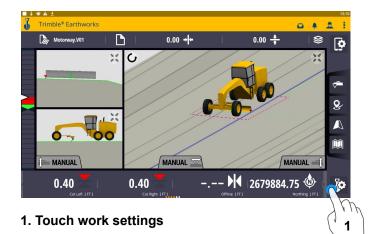
7. Touch Lane Guidance to Cancel

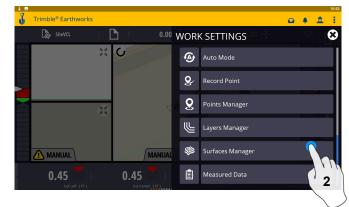
The slope between the two lines will be projected



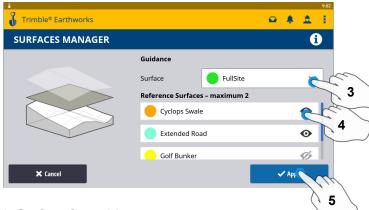


Surface Manager ** Will only work in VCL format Designs**





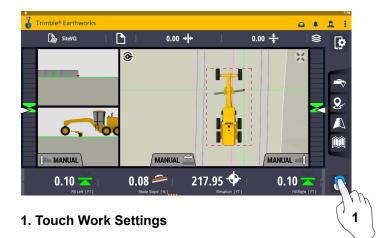
2. Touch Surfaces Manager

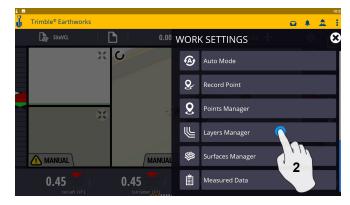


- 3. Surface for guidance
- 4. Touch which Reference Surface(Maximum of 2)
- 5. Touch Apply

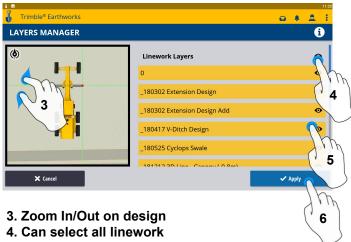


Layers Manager ** Will only work in VCL format Designs**





2. Touch Layers Manager



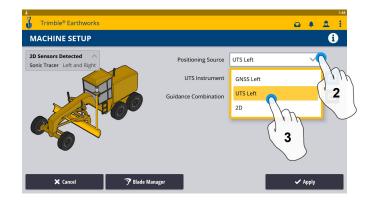
- 5. Select Individual linework
- 6. Touch apply once complete





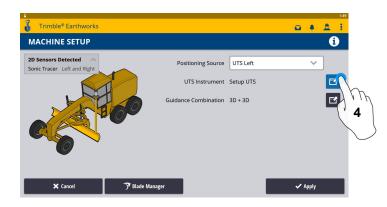
UTS Setup





1. Touch Machine Setup

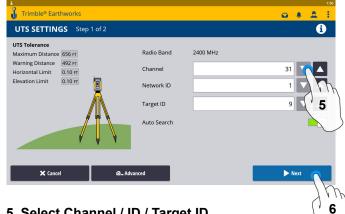
- 2. Touch Positioning Source
- 3. Touch UTS (Right or Left)



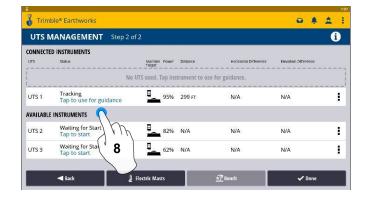
4. Touch to Edit / Add UTS



7. Touch to Start



5. Select Channel / ID / Target ID 6. Touch Next

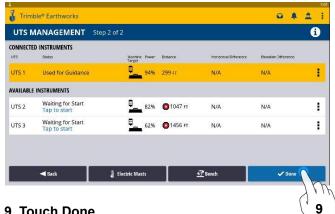


8. Touch to use for guidance

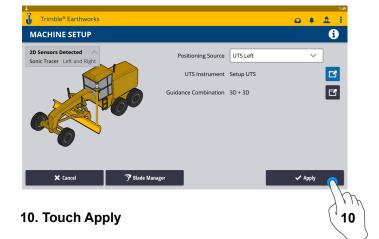


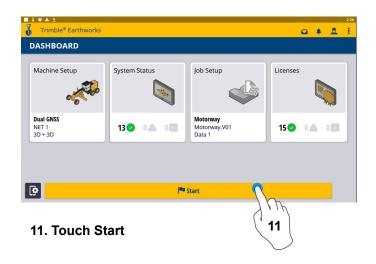


UTS Setup Cont:







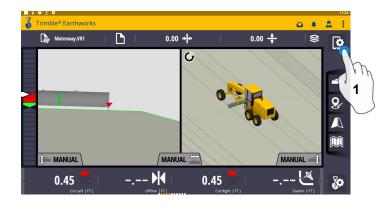






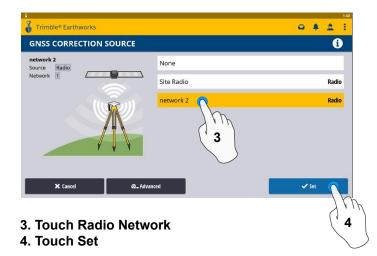
Change Radio Network

1. Touch System Settings





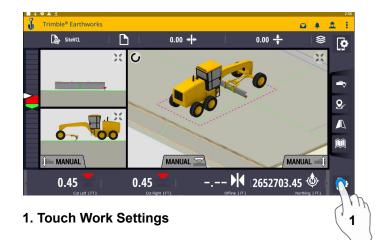
2. Touch GNSS Correction Source

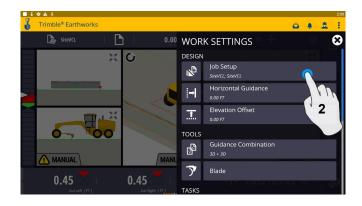




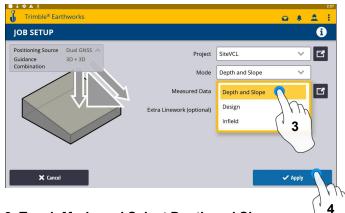


Level Surface



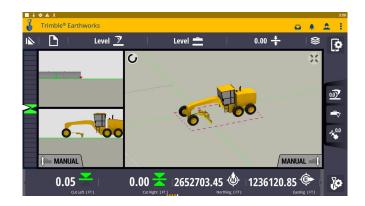


2. Touch Job Setup





5. Touch Bench Heading



Touch Mode and Select Depth and Slope
 Touch Apply

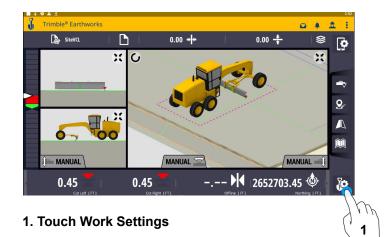


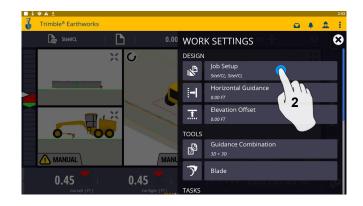
- 6. Touch Blade Tip Focus Point
- 7. Place Blade Tip at Elevation and Touch Bench



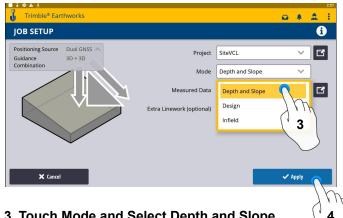


Sloping Surface

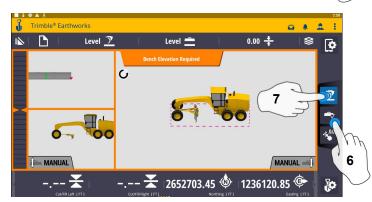




2. Touch Job Setup



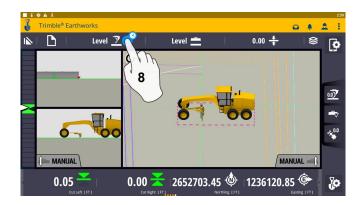




- 6. Select Blade Tip Focus Point
- 7. Place Blade Tip at Elevation and Touch Bench



5. Touch Bench Heading

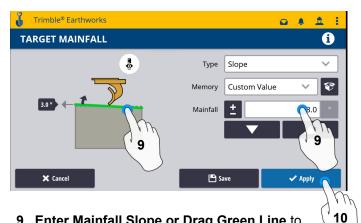


8. Touch and Hold Target Mainfall

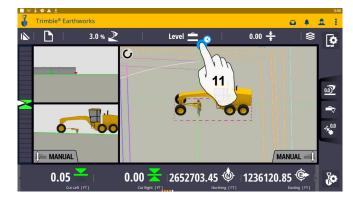




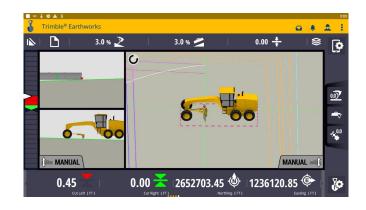
Sloping Surface Cont:

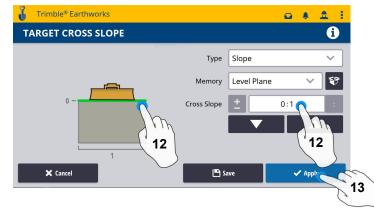


- 9. Enter Mainfall Slope or Drag Green Line to Desired Mainfall
- 10. Touch Apply



11. Touch and Hold Cross Slope





- 12. Enter Cross Slope or Drag Green Line to Desired Slope
- 13. Touch Apply







