YOUR CONSTRUCTION TECHNOLOGY PROVIDER



Field Reference Guides

EARTHWORKS EXCAVATOR Version 2.9

SITECH XXX SITECH-XXX.COM



System: Earthworks Excavator

Version: 2.9

Training Guides	<u> Page #</u>
Starting Earthworks	3
Dashboard	4
Select Project, Design and Measured Data	5
Select Project, Design and Measured Data: VCL	6
Create New Project	7
Work Screen	8
Work Screen interface	9
Work Screen Setup	10
Text Ribbon Setup	12
Focus Point	13
Import Data with USB	14
Export Data with USB	15
Cutting Edge Wear / Overcut Protection	16
Verify System Accuracy	17
Vertical Offset / Memories	18
Horizontal Offset / Memories	20
Working Surface	21
Cut and Fill Mapping	22
Record Point	23
Delete / Edit Point	24
Navigate to Point	25
3D Line Guidance	26
Lane Guidance	27
Surface Manager	28
Layers Manager	29
UTS Setup	30
Change GNSS Radio Network	32
Level Surface	33
Sloping Surface	34





SITECH TECHNOLOGY DEALER

System: Earthworks Excavator

Training Checklist

Version: 2.9

Page #

Starting Earthworks	3
Dashboard	4
Select Project, Design and Measured Data	5
Select Project, Design and Measured Data: VCL	6
Create New Project	7
Work Screen	8
Work Screen interface	9
Work Screen Setup	10
Text Ribbon Setup	12
Focus Point	13
Import Data with USB	14
Export Data with USB	15
Cutting Edge Wear / Overcut Protection	16
Verify System Accuracy	17
Vertical Offset / Memories	18
Horizontal Offset / Memories	20
Cut and Fill Mapping	22
Record Point	23
Delete / Edit Point	24
Navigate to Point	25
3D Line Guidance	26
Lane Guidance	27
Surface Manager	28
Layers Manager	29
UTS Setup	30
Change Radio Network	32
Level Surface	33
Sloping Surface	34

Customer Copy

Training Acknowledgement:

SITECH TECHNOLOGY DEALER

System: Earthworks Excavator

Training Checklist

Version: 2.9

Page #

Starting Earthworks	3
Dashboard	4
Select Project, Design and Measured Data	5
Select Project, Design and Measured Data: VCL	6
Create New Project	7
Work Screen	8
Work Screen interface	9
Work Screen Setup	10
Text Ribbon Setup	12
Focus Point	13
Import Data with USB	14
Export Data with USB	15
Cutting Edge Wear / Overcut Protection	16
Verify System Accuracy	17
Vertical Offset / Memories	18
Horizontal Offset / Memories	20
Cut and Fill Mapping	22
Record Point	23
Delete / Edit Point	24
Navigate to Point	25
3D Line Guidance	26
Lane Guidance	27
Surface Manager	28
Layers Manager	29
UTS Setup	30
Change Radio Network	32
Level Surface	33
Sloping Surface	34

SITECH Copy

Training Acknowledgement:

Starting Earthworks



1. Touch EarthWorks



- 2. Select Operator
- 3. Enter Password if required and touch Login





Dashboard

Machine Setup

Guidance

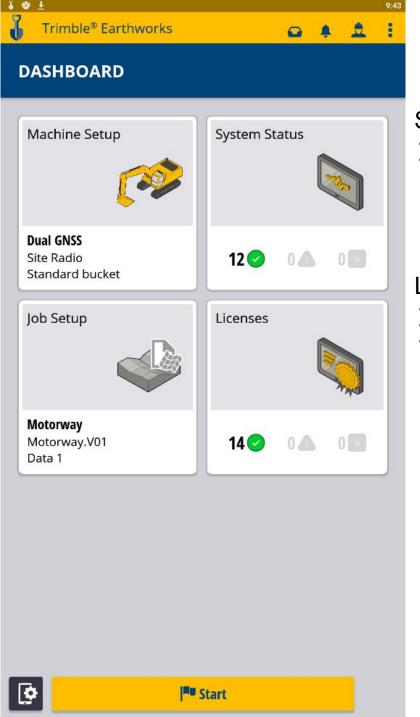
- Position Source
- Correction Source

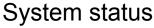
Attachments

Attachment Name

Job Setup

- Select or Create project
- Select or Create Design
 Select or Create new Measured Data Folder
- Select Mode: Depth and Slope, Design, Infield





- Status of Devices
- Component warnings

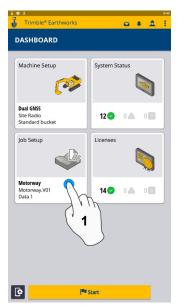
Licenses

- EC520 License
- TD520 License
- GNSS Receiver Licenses

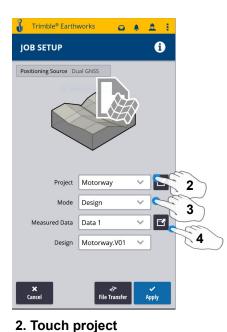




Select Project, Design and Measured Data

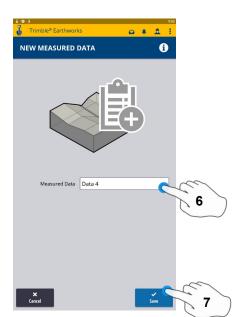


1. Touch Job Setup

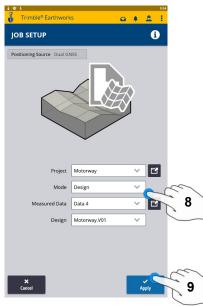


4. Measured Data (Create New)



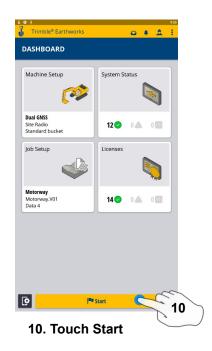


6. Type New Measured Data Name7. Touch Save, on next screen Touch Done



8. Touch Design 9. Touch Apply

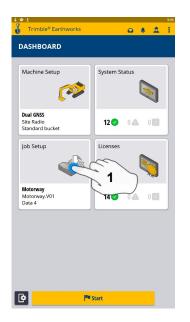
3. Touch Mode



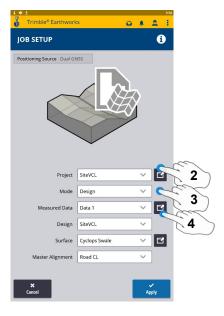




Select Project, Design and Measured Data: VCL



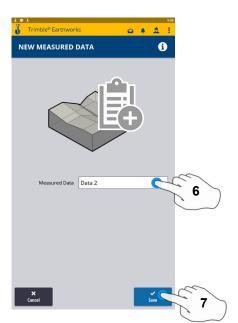
1. Touch Job Setup



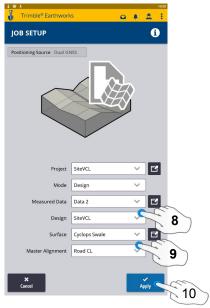
- 2. Touch Project- Select Project
- 3. Touch Mode- Select Design
- 4. Touch Measured Data



5. Add Measured Data



- 6. Type New Measured Data Name
- 7. Touch Save on next screen touch Done



- 8. Touch Design- Select Design that Contains a VCL
- 9. Touch Surface- Select Surface
- 10. Touch Apply

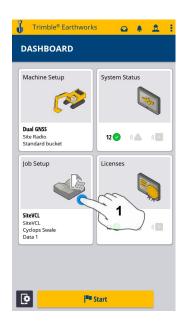


- 11. Select Master Alignment
- 12. Touch Apply
- 13. Touch Start

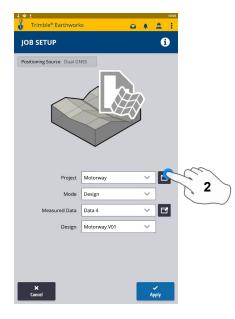




Create New Project



1. Touch Job Setup





2. Touch Project

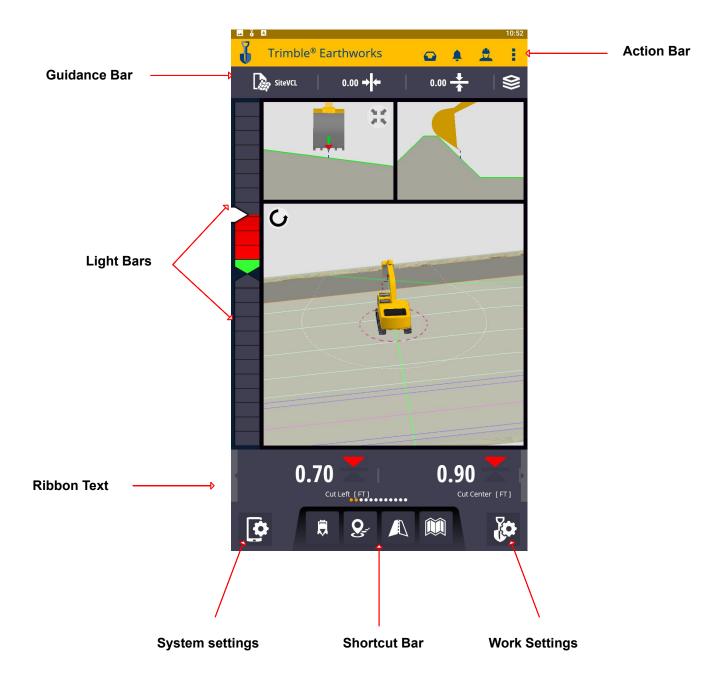


Trimble.



7

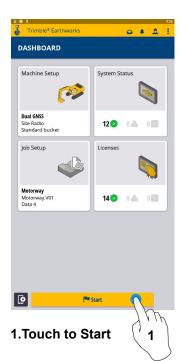
Work Screen

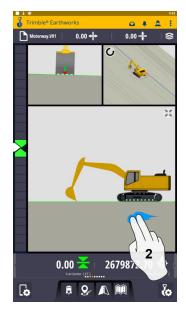




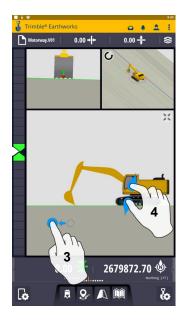


Work Screen Interface

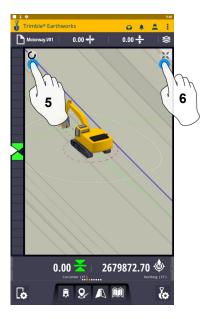




2. 2 Finger Swipe to Change Views



 3. Drag to Pan
 4. Pinch-Spread to Zoom in-out

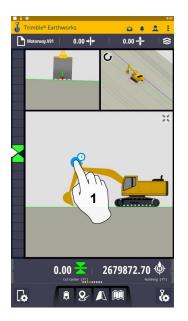


- 5. Touch to select Pan or Rotate
- 6. Touch to re-center

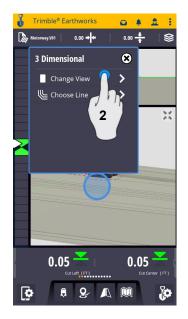




Work Screen Setup



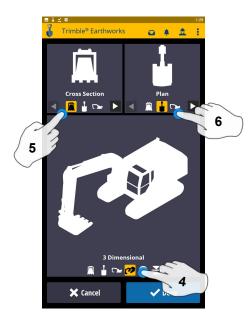
1. Touch and Hold



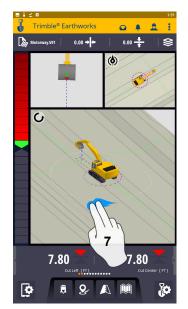
2. Change View



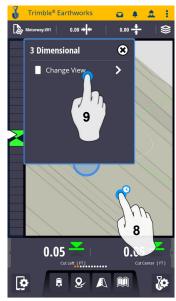
3. Touch View Selection



- 4. Touch 3 Dimensional 5. Touch Cross Section
- 6. Touch Plan



7. 2 finger swipe to 1 view screen



8. Touch and Hold 9. Change View



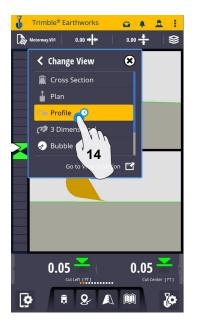




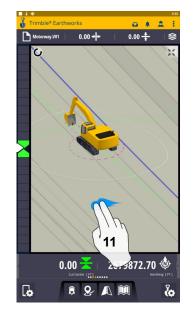
Work Screen Setup: Continued



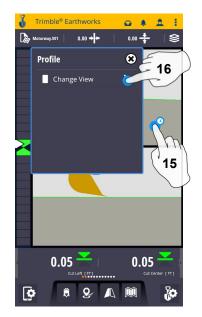
10. Touch 3D View



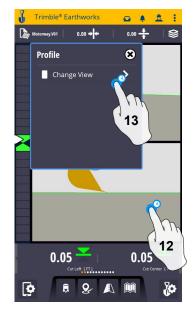
14. Touch Profile



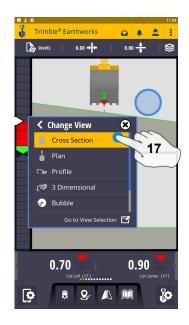
11. 2 Finger swipe to 2 view screen



15. Touch and hold 16. Change View



12. Touch and hold 13. Change View

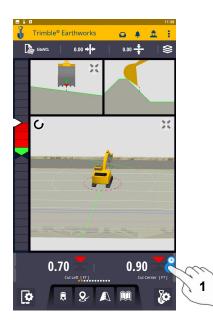


17. Touch Cross Section





Text Ribbon Setup



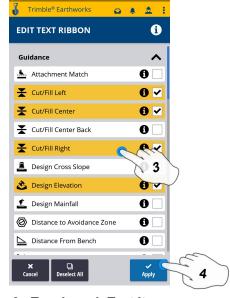
1. Touch and Hold Text Ribbon

J		11:38 ble® Earthworks 👝 🌲 🚊		
TEXT RIBBON i				
Sh	ow Tex	tt Ribbon 12		
H	¥	Cut/Fill Left		
÷	¥	Cut/Fill Center		
÷	¥	Cut/Fill Right		
÷	٩	Northing		
::	۴	Easting		
::	¢	Elevation		
÷	٢	Design Elevation		
::	8	GNSS Horizontal Precision		
÷	1	GNSS Vertical Precision		
H		GNSS Satellite Count		
	× Cancel	C E C C C C C C C C C C C C C C C C C C		

2. Touch Edit

Trimble® Earthworks	
TEXT RIBBON	
Show Text Ribbon 12	
🗄 👗 Cut/Fill Left	
🗄 🗶 Cut/Fill Center	
🗄 🛣 Cut/Fill Right	
🗄 💩 Northing	5
ii 🔶 Easting	
🗄 💠 Elevation	
🗄 💩 Design Elevation	
🗄 🔮 GNSS Horizontal Precision	
🗄 💩 GNSS Vertical Precision	
🗄 💸 GNSS Satellite Count	
Cancel Ca	6

5. Touch-hold-drag to change position 6. Touch Apply



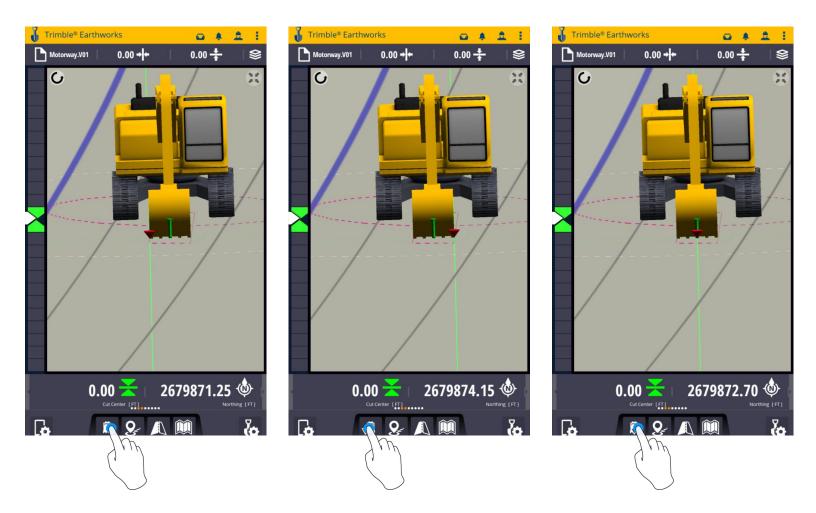
- 3. Touch each Text Item
 - Cut/Fill Center
 - Offline
 - Station
 - Northing
 - Easting
 - Elevation
 - Design Elevation
 - Vertical GNSS Precision
 - Satellite Count
- 4. Touch Apply





SITECH TECHNOLOGY DEALER

Focus Point

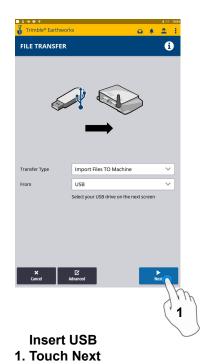


Touch Bucket Focus to Change Focus point



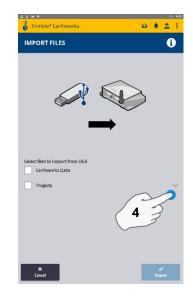


Import Data With USB

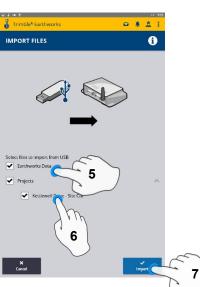




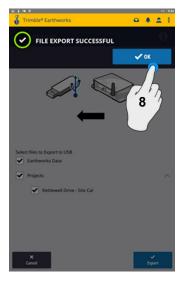
2. Touch USB 3. Touch Select



4. Touch "V"



- 5. Touch Earthworks Data
- 6. Touch Project
- 7. Touch Import

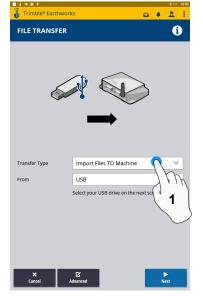


8. Touch OK

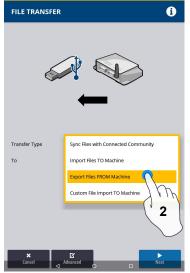


Export Data With USB

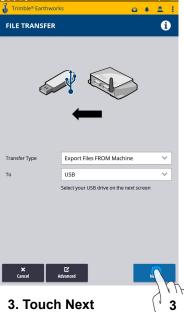
Trimble® Earthworks



Insert USB 1. Touch Transfer Type



2. Touch Export Files



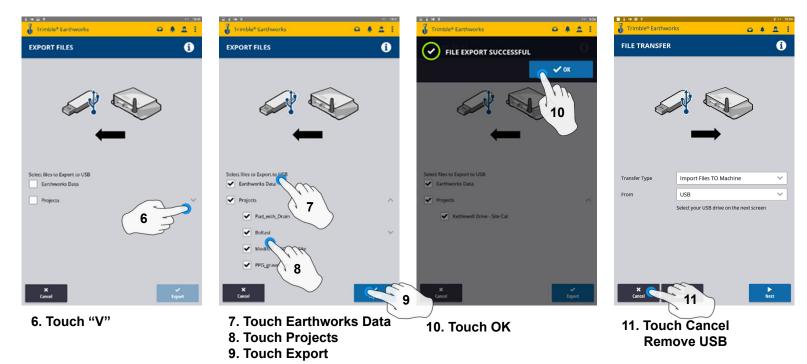
Trimble® Earthworks

0 4 Å I





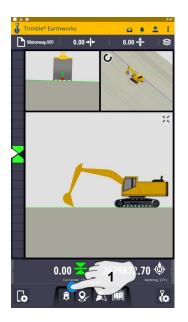
5. Touch Select



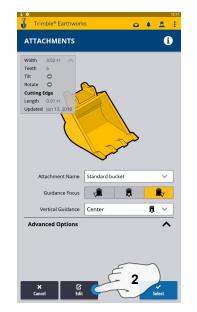




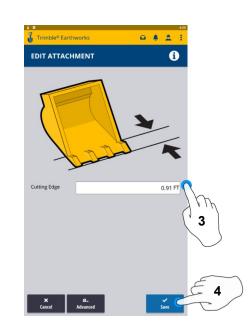
Cutting Edge Wear / Overcut Protection



1. Touch and Hold Bucket Focus



2. Touch Edit

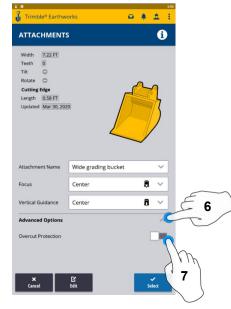


3. Enter Measured Length





5. Touch Save



 6. Touch Advanced Options
 7. Touch Overcut protection to Turn On/Off





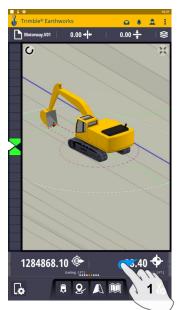


Verify System Accuracy

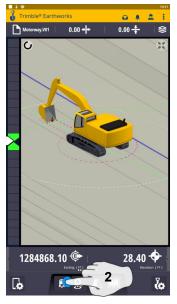
Verify the System accuracy by checking into a Bench Point



Position the Bucket Tip over the Bench point



1. Swipe Ribbon to View Northing, Easting, Elevation



2. Touch Bucket Focus Select Point on Bucket to Measure



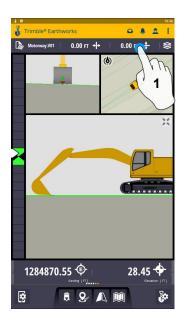
3. Verify Northing, Easting, Elevation

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





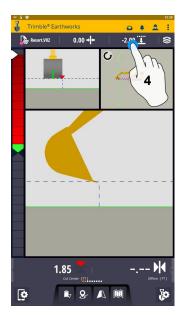
Vertical Offset / Memories



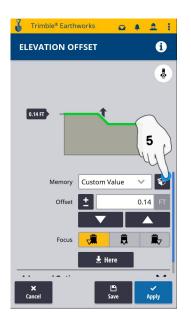
1. Touch and Hold Vertical Offset



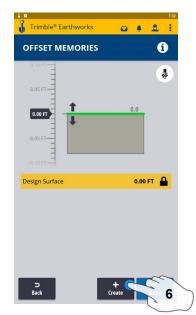
2. Enter Offset
 3. Touch Apply to Use Immediately



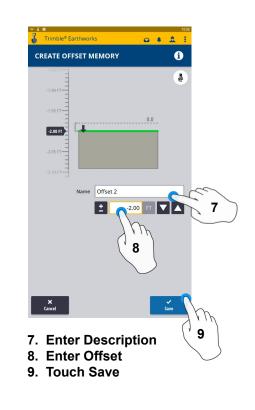
4. Touch and Hold Vertical Offset



5. Touch Memories



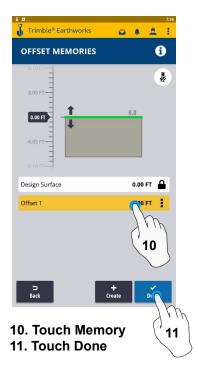
6. Touch Create to Add New Offset







Vertical Offset / Memories Cont:



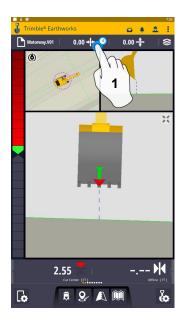


12. Touch Apply

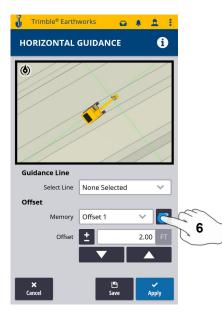




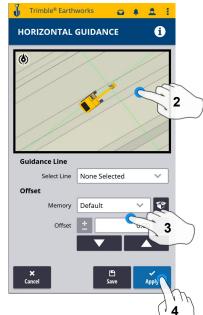
Horizontal Offset / Memories



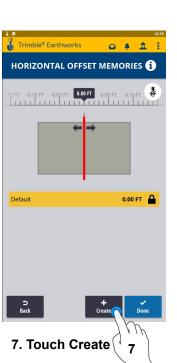
1. Touch and Hold Horizontal Offset or touch to cycle through memories

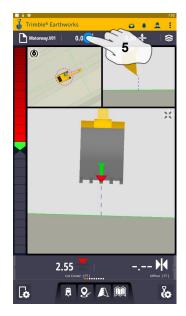


6. Touch Memories

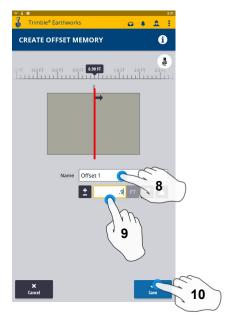


- 2. Touch Line to select
- 3. Enter Offset Value
- 4. Touch Apply to use immediately





5. Touch and Hold Horizontal Offset

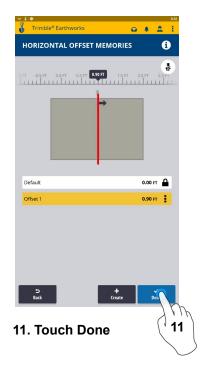


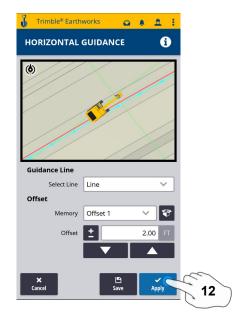
- 8. Name Offset to be saved
- 9. Enter Offset Value
- 10. Touch Save





Horizontal Offset / Memories Cont:



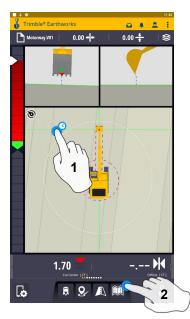


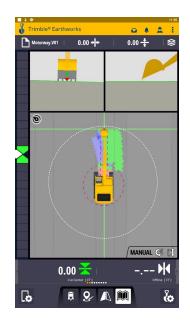
12. Touch Apply





Cut and Fill Mapping





Touch and Hold screen to change to plan view
 Press Mapping Icon to view

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

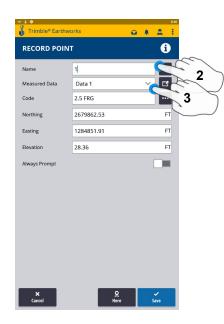




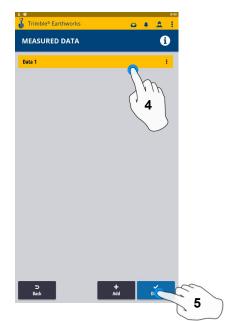
Record Point



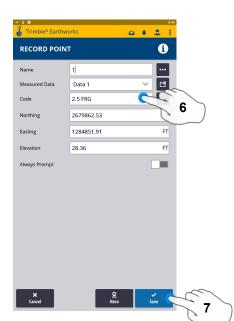
1. Press and Hold Record Point



2.Touch to Edit Name 3.Select or create Measured Data



 Select Measured Data Folder for Point location
 Select done



- 6. Type Code
- 7. Touch Save to record point



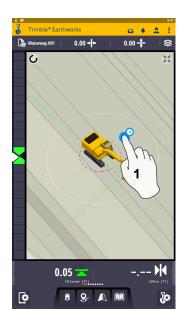
8. Touch Point Icon Records Point ** Note- After recording a point, it will save automatically in the Measured Data folder Created during project setup. **







Delete / Edit Point



1. Touch and Hold over point



2. Touch point information



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

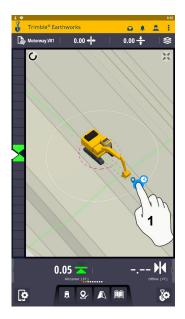


- 5. Confirm Delete (Once Deleted it can no longer viewed)

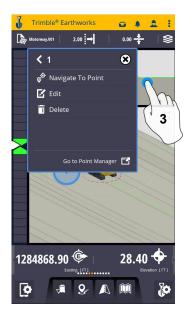




Navigate to Point



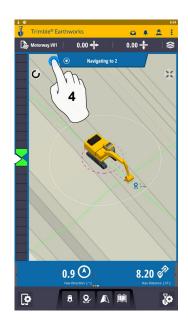
1. Touch and Hold on Point



3. Touch Navigate to point



2. Touch Point info

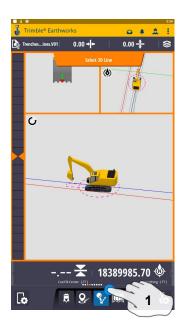


4. Touch Stop Icon once complete

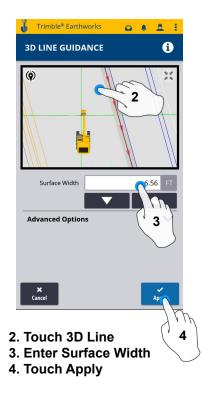


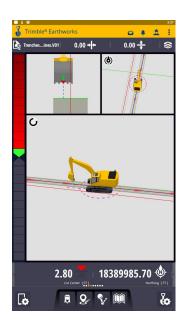


3D Line Guidance



1. Touch 3D Line Select

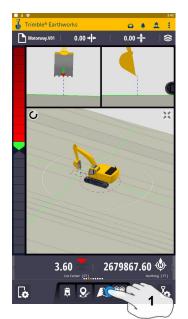




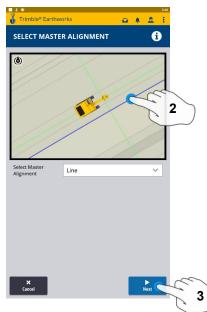




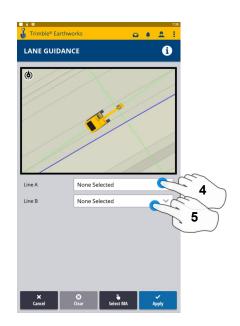
Lane Guidance



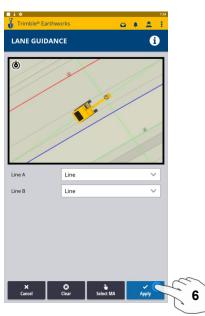
1. Touch and Hold Lane Guidance



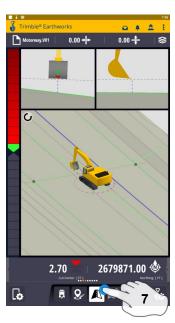
2. Select Master Alignment 3. Touch Next



- 4. Select Line A
- 5. Select Line B



6. Touch Apply



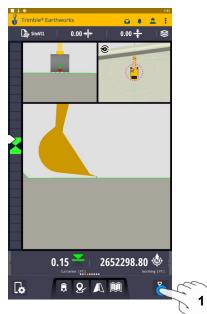
7. Touch Lane Guidance icon to stop

Note: Slope Between Alignment A and B will be projected slope





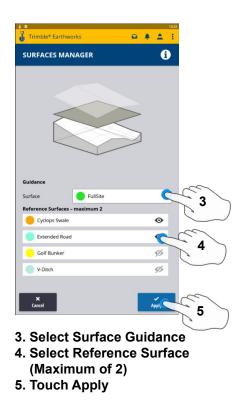
Surface Manager ** Will only work in VCL format Designs**



1. Touch Worksettings



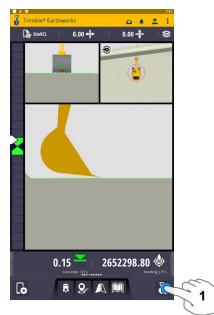
2. Select Surface Manager







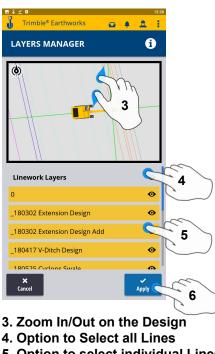
Layers Manager ** Will only work in VCL format Designs**



1. Select Worksettings



2. Select Layers Manager



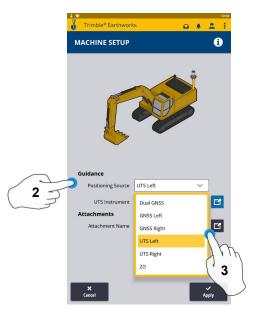
- 5. Option to select individual Lines
- 6. Touch Apply



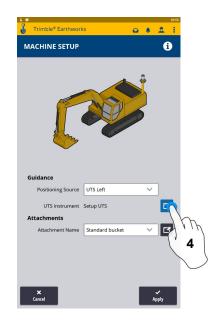


UTS Setup

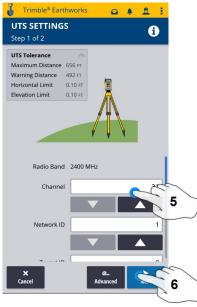




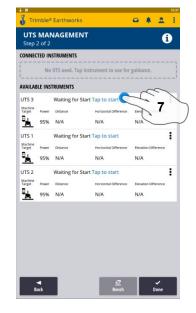
2. Touch Positioning Source 3. Touch UTS (Right or Left)



- 1. Touch Machine Setup
- 4. Touch to Edit / Add UTS



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

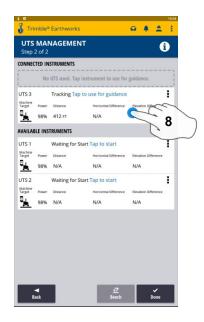


7. Tap to Start



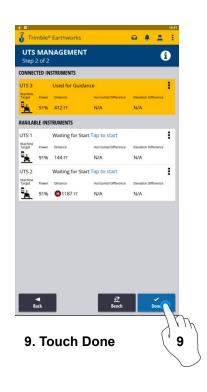


UTS Setup Cont:



8. Tap to use for Guidance









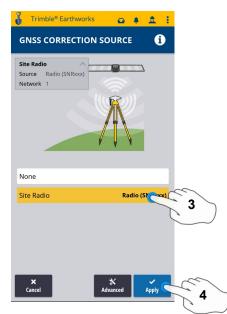


Change Radio Network (GNSS)





2. Touch GNSS correction source

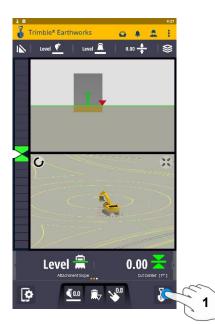


- 3. Touch Radio Network
- 4. Touch Apply





Level Surface



1. Touch Work Settings



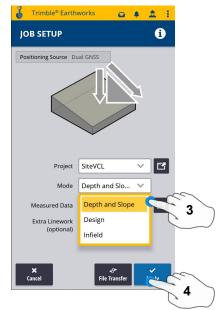
2. Touch Job setup



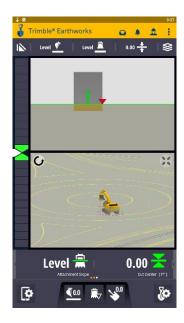
5. Touch Bench Heading



6. Select Blade Tip Focus Point7. Place Blade Tip at Elevation and Touch Bench



- 3. Touch Mode and select Depth and Slope
- 4. Touch Apply







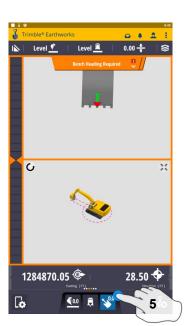
Sloping Surface



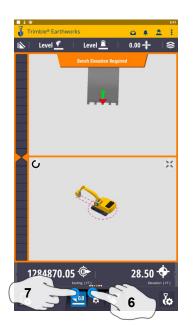
1. Touch Work Settings



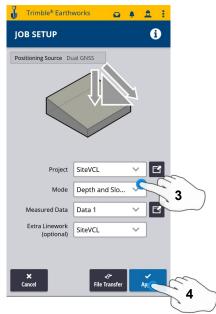
2. Touch Job setup



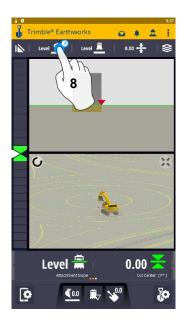
5. Touch Bench Heading



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



- 3. Touch Mode and select Depth and Slope
- 4. Touch Apply



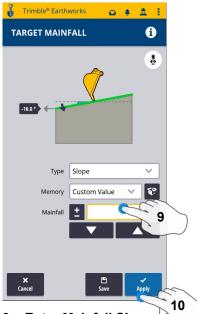
8. Touch and Hold Target Mainfall

Note: This will apply a slope parallel to the direction of heading

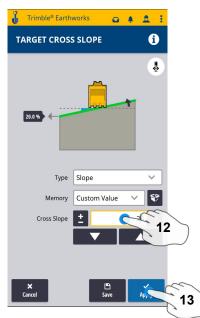




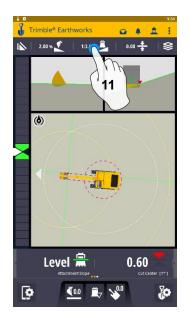
Sloping Surface Cont:



- 9. Enter Mainfall Slope
- 10. Touch Apply



12. Enter Cross Slope 13. Touch Apply



11. Press and Hold Cross Slope Note: This will apply a slope perpendicular to the direction of the heading

