

Appendix D

Catalog of Day 3 Handbook Web Resources

The following links list catalogs the supplemental web resources mentioned in each chapter of this *Day 3 Handbook* (with corresponding handbook page references provided). **[Tip: Save some typing and use the clickable links in the PDF copy of this Appendix (see “WebLinksD3.pdf” in Appendix C).]**

Note 1: Viewing many of the AGTEK resources linked below will require logging in with an AGTEK Support ID and Password (have them handy). **Note 2:** The AGTEK video links below were working when this catalog was last revised (January 31, 2025) but AGTEK occasionally changes/deletes links to older videos. If a video link returns a “404.0 – Not Found” error (or a non-responsive screen), AGTEK has likely renumbered, renamed or deleted the corresponding video (also see AGTEK’s **Videos FAQ** at <https://bit.ly/3MIDQGn>). **Note 3:** At some time after mid-2025, all resource links with a www.earthworksoftwareservices.com URL may require access via the web archive site at <https://web.archive.org/web/https://www.earthworksoftwareservices.com/>.

Title Page & Notices

www.earthworksoftwareservices.com/hbk-replace-order.aspx

Web Page: Order form for revised and expanded 2024 post-seminars AGTEK training handbooks (pages 1, 2, 185).

Author’s Note

www.agtek.com/video.html?id=583 [Gradework 4D]

AGTEK Video: Overview of new features in Gradework 4D v1.10 (page 2).

www.agtek.com/video.html?id=654 [Gradework 4D]

AGTEK Video: Overview of new features in Gradework 4D v1.11 (page 2).

<https://bit.ly/3So5Ps6>

Web Page: Order form for revised and expanded 2024 post-seminars AGTEK training handbooks (pages 1, 2, 185).

<https://bit.ly/4cZOHuE>

Web Page: Overview of the three-day AGTEK earthwork software seminar course and resource links (page 2).

Some Handbook Acronyms and Terminology

www.agtek.com/video.html?id=661

AGTEK Video: Beginner’s orientation to grade and surface references (page 3).

Program Overview

agtek.my.site.com/community/s/support-hardware-requirements

Web Page: Hardware guidelines for AGTEK software (page 19).

www.agtek.com/video.html?id=330

AGTEK Video: Overview of differences between Earthwork 3D and Earthwork 4D products (page 19).

www.agtek.com/video.html?id=655

AGTEK Video: Overview of differences between Earthwork 4D and Gradework 4D products (page 19).

www.agtek.com/video.html?id=273 [Gradework 4D]

AGTEK Video: Clearing Image Cache in Gradework 4D for higher-resolution drone background image update (page 21).

<https://bit.ly/4bai6H3>

Web Page: AGTEK’s Auto Save FAQ page (page 22).

<https://bit.ly/3xEvt4y>

Web Page: AGTEK’s BAK File FAQ page (page 22).

<https://bit.ly/3YM9u6U>

Web Page: AGTEK’s Auto Save and BAK File FAQ page (page 22).

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Program Overview (Cont.)

www.agtek.com/video.html?id=441

AGTEK Video: Earthwork 4D and Gradework 4D file compatibility (page 22).

Modeling Subsurface Strata

www.agtek.com/video.html?id=142

AGTEK Video: Older video on the basic steps of strata modeling (page 27).

www.agtek.com/video.html?id=405

AGTEK Video: Newer video on the basic steps of strata modeling (page 27).

www.agtek.com/video.html?id=603 [Gradework 4D]

AGTEK Video: New Gradework strata bore hole Elevation and Thickness entry options (pages 27, 35).

www.earthworksoftwareservices.com/resourceed.htm#readinglist

Web Page: Resource links for understanding geotechnical reports (page 27).

www.earthworksoftwareservices.com/resourcefiles.htm

Web Page: Download seminar sample strata bore map/bore logs and data files (pages 28, 211).

<https://bit.ly/3PVvs1J>

AGTEK Video: Good tips for simplifying entries in the Strata Layers List dialog (pages 30, 32).

www.agtek.com/video.html?id=538

AGTEK Video: An easy way to re-set all Report Region Fill Factors at the same time (page 31).

<https://bit.ly/3yQbDnO> [Gradework 4D]

AGTEK Video: New dialog and reporting features for Report Regions, Sectional Areas and Stripping Areas (pages 31, 83, 161, 276).

www.agtek.com/video.html?id=603 [Gradework 4D]

AGTEK Video: New Gradework strata bore hole Elevation and Thickness entry options (pages 27, 35).

www.agtek.com/video.html?id=638

AGTEK Video: Import strata surface data (page 38).

<https://youtu.be/KDuLlCLxavY>

YouTube Video: AGTEK's profile views video (pages 51, 157, 171).

www.agtek.com/video.html?id=604 [Gradework 4D]

AGTEK Video: Good review of Background Image Selection dialog functions (page 53).

www.agtek.com/video.html?id=432 [Gradework 4D]

AGTEK Video: (@ 2:00 min) Use Alt-K function to capture cut-fill map colors for background image display (page 53).

<https://bit.ly/489uvt>

AGTEK Video: Adding 3D views to exported KMZ file in Google Earth, including use of *Print Screen* and *MS Paint* to capture and crop an AGTEK screen image (page 53).

www.agtek.com/video.html?id=425

AGTEK Video: Quantifying variable-depth stripping (page 56).

Balancing Onsite Cut and Fill

www.agtek.com/video.html?id=428

AGTEK Video: (AGTEK 4D) Editing the Design Perimeter alignment (page 65).

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Balancing Onsite Cut and Fill (Cont.)

www.agtek.com/video.html?id=367

AGTEK Video: (AGTEK 4D) Model pipe trenches from Subgrade using Pipe Lines layer and Apply Template utility, calculate trench excavation volume in Gradework 4D (page 67).

www.agtek.com/video.html?id=160

AGTEK Video: (AGTEK 4D) Model pipe trenches from Subgrade using Pipe Lines layer and Apply Template utility, calculate trench excavation volume in Earthwork 4D, quantify backfill volumes in Materials 4D (page 67).

www.agtek.com/video.html?id=342

AGTEK Video: (Gradework-Materials) Create lowest surface model as alternate pipe trench excavation reference, calculate all trench quantities in integrated Materials module, including trench excavation measured from Stripped, Subgrade and Lowest surfaces (pages 67, 146).

www.agtek.com/video.html?id=461

AGTEK Video: Short, simple demonstration of site balancing steps (page 72).

www.agtek.com/video.html?id=535

AGTEK Video: (@ ~17:29 min to ~37:00 min) Interesting site design and balancing manipulations (page 72).

www.agtek.com/video.html?id=641

AGTEK Video: Overview of the Cut-Fill Lines utility (page 73).

www.agtek.com/video.html?id=602

AGTEK Video: Overview of the On-Grade Limit utility (page 73).

Identifying Work Areas with Cut-Fill Lines

www.agtek.com/video.html?id=328

AGTEK Video: (@ 4:27 min) model subsidence at currently unworked site areas before importing drone progress topo (pages 75).

<https://bit.ly/3DFOqU2>

AGTEK Video: Insert and move points to correct overlapping Report Regions, Sectional Areas or Stripping Areas (page 82).

<https://bit.ly/3yQbDnO> [Gradework 4D]

AGTEK Video: New dialog and reporting features for Report Regions, Sectional Areas and Stripping Areas (pages 31, 83, 161, 276).

Modeling Vertically-Staged Earthwork

<https://bit.ly/3vL9DeT>

Web Page: AGTEK FAQ page with troubleshooting tips for 3D view not displaying when Staged Design is enabled (page 93).

www.agtek.com/video.html?id=467

AGTEK Video: Basic overview of AGTEK's Transfer Design/Subgrade utility (page 93).

www.agtek.com/video.html?id=328

AGTEK Video: Use Transfer Subgrade to Design option in preparing a job file for drone progress topo manipulations (page 93).

www.agtek.com/video.html?id=123

AGTEK Video: (@ 3:30 min) Overview of AGTEK 4D's improved New Surface options (page 98).

www.agtek.com/video.html?id=464

AGTEK Video: Short demonstration of AGTEK 4D's Stage Into utility (page 101).

www.agtek.com/video.html?id=474

AGTEK Video: Phasing an earthwork file and staging one phase area into another (page 101).

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Modeling Vertically-Staged Earthwork (Cont.)

www.agtek.com/video.html?id=343

AGTEK Video: Use Stage Subgrade Into utility to create pipe trench calculation surface beyond grading limits, includes trench volume calculations in Gradework-Materials program module (page 101).

www.agtek.com/video.html?id=575 [Gradework 4D]

AGTEK Video: (@ 29:18 min) Advance to the min mark in this hour-long webinar video for a brief example using the paint/brush entry option with Balance Regions to get quick volume breakouts (page 104)

www.agtek.com/video.html?id=207

AGTEK Video: Demonstrates use of Apply Survey utility to process imported survey data (page 108).

www.agtek.com/video.html?id=473

AGTEK Video: Basic overview of Stage Over-Ex utility at building pad (pages 113, 166).

www.agtek.com/video.html?id=463

AGTEK Video: Short demonstration of Conform Selected utility's To Data Lines and To Current Surface options (page 128).

<https://bit.ly/47bHbAA>

AGTEK Video: AGTEK 4D's Cut/Paste function (page 128).

www.agtek.com/video.html?id=284

AGTEK Video: Two variations of building undercut with AGTEK 4D's Apply Template utility (page 133).

www.agtek.com/video.html?id=176

AGTEK Video: Structural over-ex at adjacent tanks with AGTEK 4D's Apply Template utility (page 133).

www.agtek.com/video.html?id=482

AGTEK Video: Use AGTEK 4D's Apply Template utility for building over-ex from Stripped surface (pages 133, 181).

www.agtek.com/video.html?id=506

AGTEK Video: (@ 18:50 min) Use AGTEK 4D's Apply Template utility for building over-ex from Subgrade surface (page 133).

www.agtek.com/video.html?id=228

AGTEK Video: Use AGTEK 4D's Apply Template utility for strata over-ex at building (pages 133, 181).

www.agtek.com/video.html?id=219

AGTEK Video: Overview of Lowest Surface utility (page 146).

www.agtek.com/video.html?id=342

AGTEK Video: (Gradework-Materials) Create lowest surface model as alternate pipe trench excavation reference, calculate all trench quantities in integrated Materials module, including trench excavation measured from Stripped, Subgrade and Lowest surfaces (pages 67, 146).

www.agtek.com/video.html?id=504

AGTEK Video: Some useful techniques for modeling retaining walls (page 146).

www.agtek.com/video.html?id=636

AGTEK Video: Model and quantify MSE wall excavation and backfill, including use of Offset Line utility to delineate strap lengths based on wall height (page 149).

www.agtek.com/video.html?id=369

AGTEK Video: (AGTEK 4D) Model and quantify MSE wall excavation and backfill, including use of Offset Line utility to delineate strap lengths based on wall height and Stage Into utility (page 149).

www.agtek.com/video.html?id=581

AGTEK Video: Retaining wall cut-back template model when a lowest surface is not needed (page 151).

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Modeling Vertically-Staged Earthwork (Cont.)

<https://bit.ly/30vVB7o>

AGTEK Video: Horizontal Slice calculation and reporting option with Balance Regions (page 155).

<https://bit.ly/3AqpK3C>

AGTEK Video: Measure the face area of a retaining wall (page 156).

<https://youtu.be/KDuLlCLxavY>

YouTube Video: AGTEK's profile views video (pages 51, 157, 171).

<https://bit.ly/3yQbDnO> [Gradework 4D]

AGTEK Video: New dialog and reporting features for Report Regions, Sectional Areas and Stripping Areas (pages 31, 83, 161, 276).

www.agtek.com/video.html?id=210

AGTEK Video: Creating a blast-rock removal model with steps that work in AGTEK 3D/4D (page 163).

www.agtek.com/video.html?id=473

AGTEK Video: Basic overview of Stage Over-Ex utility at building pad (pages 113, 166).

www.agtek.com/video.html?id=228

AGTEK Video: Strata over-ex at building area using AGTEK 4D's Apply Template utility (pages 133, 181).

www.agtek.com/video.html?id=482

AGTEK Video: Use AGTEK 4D's Apply Template utility for building over-ex from Stripped surface (pages 133, 181).

<https://youtu.be/KDuLlCLxavY>

YouTube Video: AGTEK's profile views video (pages 51, 157, 171).

Appendix A – How to Get Help, Training, and Program Updates

agtek.com/services-support/

Web Page: AGTEK's overview page for training and support options (page 183).

www.agtek.com/video.html?id=566

AGTEK Video: Webinar video including a segment covering features of the AGTEK Community support site (page 183).

www.agtek.com/help/sw/earthwork4dhelp.htm

Web Page: Earthwork 4D program help files (page 183).

www.agtek.com/help/gw/gradework4dhelp.htm

Web Page: Gradework 4D program help files (page 183).

www.youtube.com/c/AGTEKDirtSimpleSolutions/videos

Web Page: AGTEK's public YouTube video channel with numerous Tech Tip video (pages 183, 185).

www.linkedin.com/groups/2015287/

Web Page: LinkedIn AGTEK Users Group (page 183).

agtek.my.site.com/community/s/training-self-paced

Web Page: AGTEK's main video library page for all current products (pages 183, 185).

agtek.my.site.com/community/s/

Web Page: AGTEK Community home page with links to all support resources (pages 183, 186).

agtek.my.site.com/community/s/homepage-support

Web Page: AGTEK Community home page with links to all support resources (page 183).

Appendix D Catalog of Day 3 Handbook Web Resources (Cont.)

Appendix A – How to Get Help, Training, and Program Updates (Cont.)

support@agtek.com

Web Page: AGTEK support email link (page 184).

<https://bit.ly/3R8R0ly>

AGTEK Video: AGTEK 4D's ESZ Save As function with multiple background image attachment option (page 184).

<https://sendit.hexagon.com/filedrop/support@agtek.com>

Web Page: AGTEK's Send IT app for transferring large files to AGTEK Support, AGTEK Support login required (page 184).

www.agtek.com/video.html?id=561

AGTEK Video: (@ 2:49 min) AGTEK Access' file-sharing utility (page 184).

www.earthworksoftwareservices.com/resourceed.htm#beginners

Web Page: Beginners' earthwork construction learning resource page (page 185).

www.earthworksoftwareservices.com/hbk-replace-order.aspx

Web Page: Order form for revised and expanded 2024 post-seminars AGTEK training handbooks (pages 1, 2, 185).

agtek.my.site.com/community/s/homepage-training

Web Page: AGTEK's training home page with links to all currently available training options (page 185).

agtek.com/services-support/web-training-classes/

Web Page: AGTEK web-based "hands-on" training info/signup page (page 185).

agtek.com/services-support/beginner-intermediate-training/

Web Page: AGTEK classroom "hands-on" training info/signup form (page 185).

agtek.com/services-support/intermediate-advanced-training/

Web Page: AGTEK classroom "hands-off" seminars info/signup form (page 185).

agtek.my.site.com/community/s/product-gradework?tabset-ec09d=ae123

Web Page: Three video-augmented AGTEK 4D basic training courses with corresponding data file downloads (page 185).

agtek.my.site.com/community/s/training-self-paced

Web Page: AGTEK's main video library page for all current products (pages 183, 185).

<https://agtek.s3.amazonaws.com/Agtek/Bsxxz8VFfoGuP>

PDF: Well-organized AGTEK Training checklist with clickable links to training resources (videos, slideshows, documents) for all current AGTEK desktop and mobile products (page 185).

www.youtube.com/c/AGTEKDirtSimpleSolutions/videos

Web Page: AGTEK's public YouTube video channel with numerous Tech Tip videos (pages 183, 185).

www.agtek.com/video.html?id=559

AGTEK Video: Download and install AGTEK 4D program update (page 186).

agtek.my.site.com/community/s/

Web Page: AGTEK Community home page with links to all support resources (pages 183, 186).

agtek.my.site.com/community/s/support-downloads

Web Page: Downloads home page for AGTEK software installation files (page 186).

agtek.my.site.com/community/s/selfhelp-manuals

Web Page: Download page for AGTEK software and PDF user manuals (page 188).

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Catalog of Day 3 Handbook Web Resources (Cont.)

Appendix A – How to Get Help, Training, and Program Updates (Cont.)

www.earthworksoftwareservices.com/resourcesw.htm#gtco [Earthwork 3D]

Web Page: GTCO digitizer resource links (page 188).

Appendix B – Keyboard Shortcuts Reference

www.agtek.com/help/gw/keyboard_shortcuts.htm

Web Page: AGTEK 4D keyboard shortcut help pages (page 189).

www.agtek.com/video.html?id=545

AGTEK Video: Using Fillet Line utility (Ctrl-F) for line work clean up (page 192)

www.agtek.com/video.html?id=280

AGTEK Video: Using Join (Ctrl-J) for line work cleanup (page 192).

www.agtek.com/video.html?id=607

AGTEK Video: More Join (Ctrl-J) examples for line work cleanup (page 192).

<https://bit.ly/41X9Jxy> [Gradework 4D]

AGTEK Video: New shortcuts for entry/edit of Report Regions, Sectional Areas and Stripping Areas (pages 192, 198).

<https://youtu.be/xRzd60zssxs>

YouTube Video: AGTEK's F7 Move-Point utility applications (page 193).

www.agtek.com/video.html?id=592 [Gradework 4D]

AGTEK Video: F11 Shrink-Wrap utility (page 193).

<https://bit.ly/3Plc660> [Gradework 4D]

AGTEK Video: New entry functions with Report Regions, Sectional Areas and Stripping Areas (page 198).

<https://bit.ly/3WqD2oQ>

AGTEK Video: Status Bar Display drafting/entry examples (pages 198, 199).

www.agtek.com/video.html?id=267

AGTEK Video: F12 Discreet Distance/Angle entry application example (page 199).

www.agtek.com/video.html?id=355

AGTEK Video: Another F12 Discreet Distance/Angle entry application example (page 199).

Appendix C – Download and Use Day 3 Seminar Training Files

www.earthworksoftwareservices.com/resourcefiles.htm

Web Page: Download Day 3 seminar training files from main website (pages 28, 211).

<https://web.archive.org/web/https://www.earthworksoftwareservices.com/resourcefiles.htm>

Web Page: Download Day 3 seminar training files from alternate web archive site (pages 211, 215).

Appendix I – “Painting” Balance Regions for Haul Planning

www.agtek.com/video.html?id=580

AGTEK Video: Basic overview of Trackwork 4D's haul planning and analysis applications (pages 257, 278).

www.agtek.com/video.html?id=578

AGTEK Video: Detailed instructions for haul planning with Trackwork (page 257).

www.agtek.com/video.html?id=423 [Gradework 4D]

AGTEK Video: Paint method for Balance Region haul planning (pages 257, 265).

Appendix D

Catalog of Day 3 Handbook Web Resources (Cont.)

Appendix J – Shrink/Swell Adjustments

<https://bit.ly/3A4Mjlr>

PDF: Day 1 Handbook's "Shrink/Swell Adjustments" discussion (page 269). [Note: This PDF link may expire sometime after mid-2025 but the corresponding shrink/swell topic can be found on pages 231-240 of the Day 1 Handbook.]

<https://bit.ly/47EqAp0>

AGTEK Video: What causes, and how to remove, an "Unspecified" line item on the Volume Report (page 277).

www.agtek.com/video.html?id=580

AGTEK Video: Basic overview of Trackwork 4D's haul planning and analysis applications (pages 257, 278).

<https://bit.ly/3yQbDnO> [Gradework 4D]

AGTEK Video: New dialog and reporting features for Report Regions, Sectional Areas and Stripping Areas (pages 31, 83, 161, 276).

https://flh.fhwa.dot.gov/resources/design/pddm/Geotechnical_TGM.pdf#4.6.2

PDF: Chapter 6, Section 4.6.2 of the USDOT FHWA's "Federal Lands Highway Project Development and Design Manual", which includes Church's material shrink/swell tables (page 279).

https://etd.auburn.edu/xmlui/bitstream/handle/10415/3532/Crooks,%20Alexandria_MS%20Thesis_Spring%202013.pdf

PDF: "Application of Shrinkage and Swelling Factors on State Highway Construction" [Master's thesis, Auburn University] (page 280).

www.earthworksoftwareservices.com/downloads/Spahn.pdf

Web Page: "Veteran Lessons on Machine Control" article (page 280).

ftp://ftp.dot.state.oh.us/pub/Innovative_Delivery/Portsmouth/Final_RFP/Current_All_Ref_Info/GE-Geotechnical/GE-65_Phase_1_and_3_Technical_Memo_-_Earthwork_Factors.pdf

PDF: "Portsmouth Bypass Phase 1 Earthwork Factors" technical memo (page 280).

<https://pdhonline.com/courses/g106/g106.htm#!>

Web Page: "Understanding the Geotechnical Report as an Engineering and Construction Reference" (page 280).

www.scribd.com/document/352797986/White-Et-Al-2010-CAT-CFED-Phase-IV

PDF: "Earthwork Volumetric Calculations and Characterization of Additional CFED Soils - CFED Phase IV" (page 280).

About the Author and Seminar Instructor

www.earthworksoftwareservices.com/downloads/whitepaper.pdf

PDF: Handbook author's white paper, "Digital Surface Modeling and Volumetric Analysis Techniques Applied to the Measurement of Plan-View Earthwork Quantities" (page 283). [Note: This PDF link may break sometime after mid-2025 but the document link is active on the web archive site referenced in Note 3 on page 215.]