



CARTER + CLARK

SURVEYORS ■ PLANNERS ■ ENGINEERS

C+C Building Solutions: A North Carolina Subsidiary of Carter + Clark

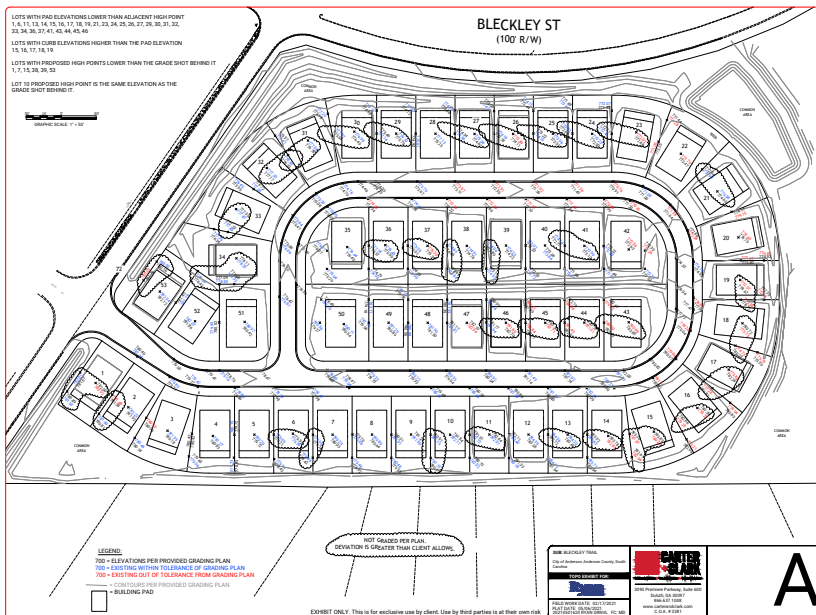
WHITE PAPER

THE VALUE OF TOPOGRAPHIC COMPARISONS: SAVE HUNDREDS OF THOUSANDS OF DOLLARS WITH THIS SMART UPFRONT INVESTMENT

What Are Topographic Comparisons?

Topographic comparisons are highly useful tools for analyzing the difference in proposed grading plans and the actual grades on 30+ finished lots at a time. This upfront investment can save homebuilders a great deal of money and stress when executed before vertical construction begins on a project.

The topographic (topo) comparison deliverable is a simplistic PDF drawing of the lot layout, along with proposed and existing elevations at ~6 points per lot. The drawing visually indicates and lists any lots and points where the actual grades vary beyond the acceptable threshold for error provided by the builder, allowing errors to be corrected and resolved before developers and land sellers are paid and removed from the process.



HOMEBUILDERS WHO WORK
WITH CARTER + CLARK
ESTIMATED THEIR
AVERAGE SAVINGS TO BE
\$798,000
PER COMMUNITY WHEN
INVESTING IN TOPO
COMPARISONS UPFRONT



How Topographic Comparisons Protect The Homebuilder

Oftentimes, without topographic comparisons, builders receive lots that are not graded to-plan, delaying projects and incurring exorbitant costs to move dirt. With a topographic comparison, which is a relatively nominal upfront investment, builders can quickly identify which lots are not graded per the plan and how much the existing grades deviate from the proposed grades. This allows homebuilders to proactively address grading issues with land sellers and/or internal or external land development teams before they are paid and gone, at which point the builder must eat the cost associated with re-grading lots.



TOPOGRAPHIC COMPARISONS SHOULD BE COMPLETED PRIOR TO CLOSING ON A FINISHED-LOT LAND DEAL AND/OR BEFORE VERTICAL CONSTRUCTION BEGINS

Land and construction teams for production homebuilders can save hundreds of thousands of dollars per community by verifying grades before acquiring finished lots and/or before vertical construction begins. By committing to topographic comparisons on each lot at a national or regional level, area presidents and divisional operators can minimize land busts associated with grading and better control costs.



HOW MUCH CAN RE-GRADING LOTS REALLY COST YOU?

\$121,807 PER ACRE AT 6" DEEP National average dirt removal rate

\$45,525 Average cost to fill up to 1 acre of low grades at a 6" depth

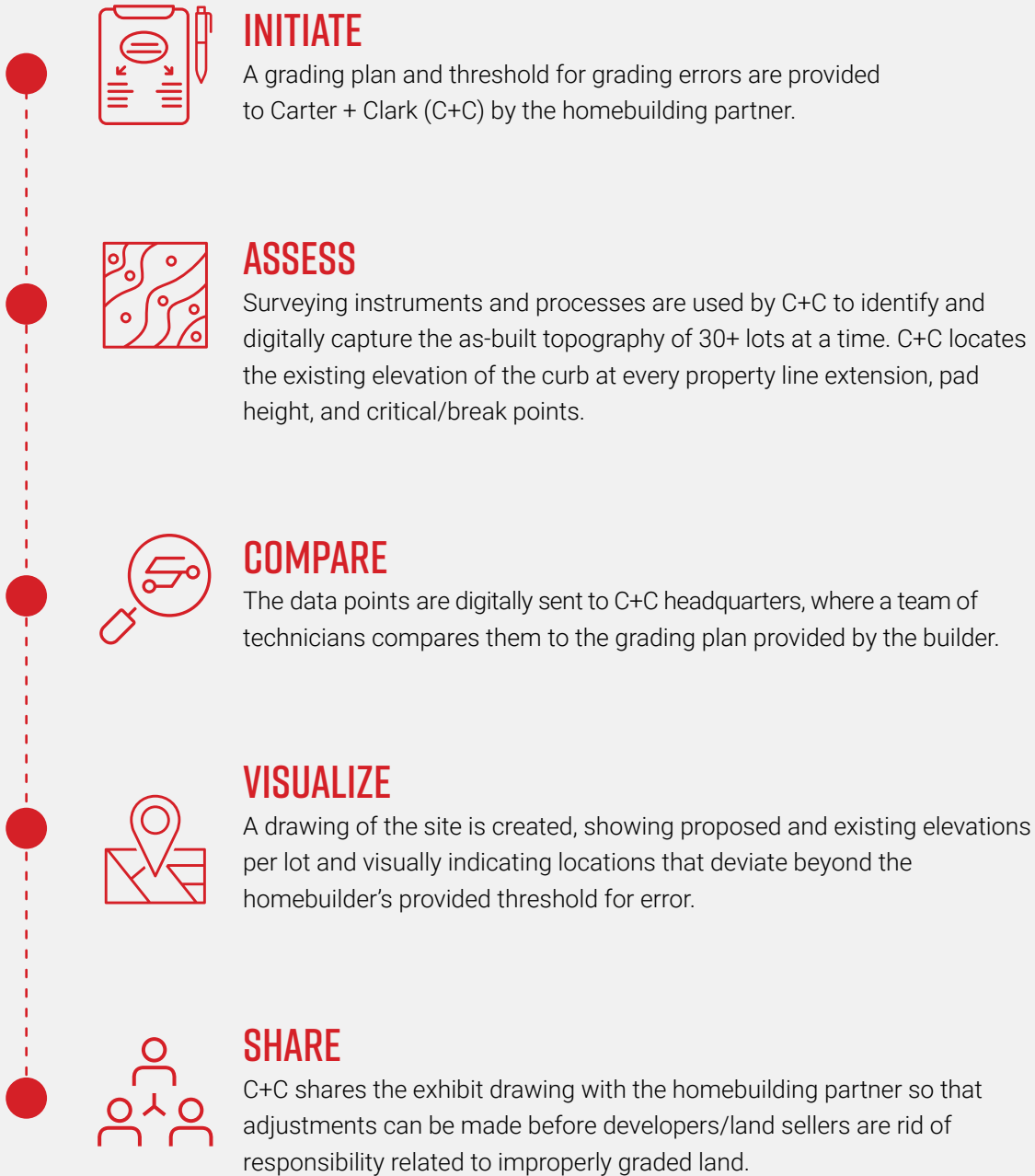
\$151 PER CUBIC YARD National average of labor and equipment to remove dirt

\$675 PER TRUCKLOAD Average cost of delivered dirt, topsoil, or sand, including installation/spreading

63 TRUCKLOADS Estimated amount of dirt, topsoil, or sand needed to fill a total of 1 acre of land at 6" deep



The Topographic Comparison Process

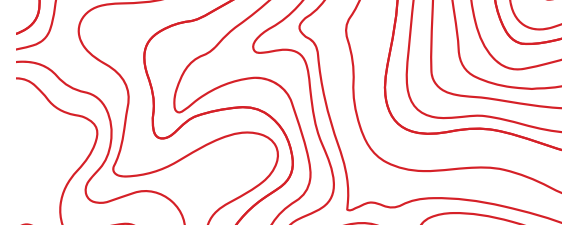




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About C+C

The Leading Technology-Driven Surveying Firm Dedicated to Product and Service Innovation

For 40+ years, we have taken pride in utilizing the latest technologies to reduce cycle times and decrease costs for our valued customers.

EXPECT INNOVATION



Our advanced technology elevates our services.

- We provide round-the-clock access to a secure, cloud-based platform that documents the workflow, status, and deliverables associated with client projects.



We're a technology company.

- With in-house Research + Development and \$5M+ invested in software development, we lead the industry in technical, product, and service innovation.



Unmatched customer experience and transparency.

- Our proprietary operational system, CCConnect, leverages cutting-edge technology to deliver superior customer service and rigorous quality control, while leading the industry in turnaround times.

SERVICE YOU CAN COUNT ON

Your Trusted Partner In Innovative Builder Services

- Permit Faster
- Reduce Cycle Time 5+ Days
- Decrease Total Costs
- Consolidate Vendors

Standard Builder Services Package (Market-Specific)

C+C welcomes the opportunity to discuss surveying services and needs per market, such as:

- Plot Plan / Permit Drawing
- Stake House / Set Pins
- Forms Survey / Foundation Survey
- Final Survey

Additional Services

- Property Corner + Buildable Area Staking for Land Development
- Lot Fit Matrices
- Calculations for Estimating
- Elevation Certificates
- Boundary Surveys
- Tree Surveys
- Swale Surveys

VISIT WWW.CARTERANDCLARK.COM TO GET STARTED