

**Construction Claims—negligence--error in surveying construction work**

The trial court did not err in a negligence case arising out of a dispute over surveying construction work performed on a building by inferring that defendant company, who conducted an electronic survey and identified the points where the wall columns for the addition should be erected, was more likely than not the source of error because: (1) the evidence showed the south wall was parallel to the north wall but not at the correct angle, and it is unlikely that defendant properly plotted the points in a straight parallel line but that plaintiff then incorrectly placed the columns on different points which created a skewed but nonetheless straight line; (2) if plaintiff's negligence caused the line to be skewed it is highly probable that the line also would not be straight; and (3) the evidence does not show defendant checked the survey points to ensure the north and south walls of the addition would form parallel straight lines.

Justice EDMUNDS dissenting.

Justice PARKER joins in the dissenting opinion.

Appeal pursuant to N.C.G.S. § 7A-30(2) from the decision of a divided panel of the Court of Appeals, 162 N.C. App. 405, 590 S.E.2d 866 (2004), affirming a judgment entered 31 May 2002 and an order entered 17 June 2002 by Judge John O. Craig, III in Superior Court, Rockingham County. Heard in the Supreme Court 6 December 2004.

*Parker, Poe, Adams & Bernstein L.L.P., by R. Bruce Thompson II, for plaintiff-appellee.*

*Hedrick, Eatman, Gardner & Kincheloe, L.L.P., by C.J. Childers, for defendant-appellant.*

WAINWRIGHT, Justice.

The present case stems from a dispute over surveying construction work performed on a building in Swepsonville, North Carolina.

Honda Manufacturing hired plaintiff, Associated Industrial Contractors, Inc., to build an addition to Honda's die

cast facility. The addition was planned to be eighty feet wide and one hundred twenty feet long and sit on the west side of the die cast facility. The building plans required a ten ton bridge crane to run from the existing Honda building through the addition on the same runway. To accommodate this crane, the addition had to be perfectly square with the die cast facility. Existing buildings surrounding the location prohibited plaintiff from using traditional surveying methods to identify the points for the addition's columns. Moreover, windy conditions at the site prevented plaintiff from surveying the column points with a plumb bob (a weight attached to a line used for verifying true vertical alignment). Because of these complications, plaintiff hired defendant Fleming Engineering, Inc. to conduct an electronic survey and identify the points where the wall columns for the addition should be erected.

On 22 December 2000, Johnnie Register, Jr., one of defendant's employees, conducted the electronic survey. Lanny Joyce, plaintiff's superintendent for the Honda addition, told Register that the survey had to set points that were square to the existing die cast building. Register testified that he conducted the survey with an electronic transit. According to Register, this device has a scope that allows the operator to see string lines on a plumb bob a "couple of hundred feet away." The device also has an LCD screen that reports the angle that the person has rotated and distances that are being measured. Register's assistant, John Davis, operated the electronic transit while Register marked both the center points for the columns and

offset points with nails. Register testified that he "did look back through the [electronic transit] to confirm straight lines through most of these points."

Following defendant's completion of the survey, plaintiff began excavation of the site. Based on the points set by defendant's survey, plaintiff set "hubs" where the footings should be placed. Plaintiff then dug the footings. Plaintiff used "batter boards" to mark the exact location of the columns. Batter boards are offset lines which mark survey points by stringing a line diagonally from each corner of the batter boards. Plaintiff then erected the columns in accordance with the points set by defendant's survey.

In February 2001 plaintiff discovered that the south line of the addition was not properly aligned with the north line of the addition. The south line was straight but was skewed from west to east and was not square with the rest of the addition. On 28 June 2001, plaintiff filed suit, alleging that defendant negligently failed to survey two parallel straight lines. A bench trial was conducted during the 13 May 2002 term of Rockingham County Superior Court. The trial court denied defendant's N.C.G.S. § 1A-1, Rule 41(b) motions for dismissal at the close of plaintiff's evidence and at the close of all the evidence. On 31 May 2002, the trial court entered judgment in favor of plaintiff and awarded \$23,000.00 in damages. The court deducted \$436.00 (the amount plaintiff owed defendant for defendant's professional services) as a setoff from plaintiff's award and entered judgment for plaintiff in the amount of

\$22,564.00. On 17 June 2002, the trial court denied defendant's motions for a new trial and for judgment notwithstanding the verdict.

The Court of Appeals affirmed the trial court's judgment and award. *Associated Indus. Contr'rs, Inc. v. Fleming Eng'g Inc.*, 162 N.C. App. 405, 590 S.E.2d 866 (2004). The Court of Appeals majority identified the central issue at trial as "whether [defendant] Fleming negligently misidentified the location for the columns or whether [plaintiff] AIC [Associated Industrial Contractors] improperly placed the columns after the center points for the columns had been correctly set by [defendant] Fleming." *Id.* at 407, 590 S.E.2d at 868. The Court of Appeals held that "the record contains sufficient evidence to support the trial court's determination that [defendant] Fleming was the negligent party." *Id.* However, the dissent concluded that "plaintiff failed to establish the applicable standard of care and the trial court improperly denied defendant's motion to dismiss." 162 N.C. App. at 419, 590 S.E.2d at 876.

Pursuant to N.C.G.S. § 7A-30, this Court now considers the issue raised by the dissent. After thoroughly reviewing the record and briefs in this case, we are unable to discern any error by the trial court in its handling of the present case.

In response to plaintiff's complaint, defendant alleged in its answer that plaintiff negligently "failed to heed the generally accepted standards of construction with regards to placement of anchor bolts in the erection of steel at the site of the construction in question." Further, at trial, defendant's

surveyor, Johnnie Register, agreed that the south line of columns was straight, but skewed in relation to the rest of the addition by as much as six inches. The parties agree that either plaintiff or defendant was responsible for the south line of columns being skewed. Accordingly, the critical issue at trial was not whether an error occurred which caused the south line to be skewed, but which party, plaintiff or defendant, committed the error which caused the line to be skewed. Specifically, the trial court had to consider whether the south line was skewed because defendant failed to set the points properly during the survey or because plaintiff did not set the columns on the points identified during the survey. At trial, plaintiff argued that defendant improperly placed the column points. Defendant argued that it properly placed the column points, but that those points became misaligned when plaintiff's employees moved a batter board and recreated the column points.

The context for our consideration of this issue is whether there was competent evidence to support the trial court's verdict. In this case, the trial court acted as the trier of the facts. "The findings of fact made by the trial judge are conclusive on appeal if supported by competent evidence, even if, *arguendo*, there is evidence to the contrary." *Lumbee River Elec. Membership Corp. v. City of Fayetteville*, 309 N.C. 726, 741, 309 S.E.2d 209, 219 (1983).

Two facts support the trial court's verdict. First, the fact that the south line was skewed, but still formed a straight line, supports the trial court's judgment. The evidence

presented at trial showed that the south line was straight, but skewed rather than parallel to the north line. It is unlikely that defendant properly plotted the points in a straight, parallel line, but plaintiff then incorrectly placed the columns on different points which created a skewed but nonetheless straight line. In fact, plaintiff's project manager for the job, Curtis Flanigan, testified that if plaintiff's employees had improperly placed the columns, and if they had "just placed the columns willy-nilly, [Flanigan would] expect one column to be up, one to be down, another one to be down, another one to be back up." Instead, as Flanigan testified, all the columns in the south line were in a straight line. Simply put, if plaintiff's negligence caused the line to be skewed, it is highly probable that the line also would not be straight. Because all four columns on the south wall formed a straight line, the evidence supported the trial court's conclusion that defendant was responsible for the south wall's misalignment.

Second, the evidence does not show defendant checked the survey points to ensure the north and south walls of the addition would form parallel, straight lines. Register testified that his assistant, John Davis, ran the transit instrument while Register set the points. Although Register testified that he "look[ed] back through the [transit] instrument to confirm straight lines through *most* of [the] points," Register did not confirm all of the points. Specifically, Register did not testify that he confirmed the south line was properly aligned with the north line. Davis, who was responsible for confirming

the lines and angles of the survey points, did not testify. Thus, the record does not show Register, or anyone else, confirmed that the south line of columns was properly aligned.

The trial court was entitled to infer that defendant was more likely than not the source of error from (1) the evidence showing the south wall was parallel to the north wall but not at the correct angle, and (2) the absence of evidence showing defendant confirmed the alignment of the south wall. The evidence presented in this case supports the trial court's finding that defendant was negligent. Therefore, the trial court's finding is supported by competent evidence and is conclusive on appeal. *Id.* at 741-42, 309 S.E.2d at 218-19.

We fail to find any legal error in the trial of the present matter. Accordingly, we affirm the decision of the Court of Appeals.

AFFIRMED.

Justice EDMUNDS dissenting.

The majority concludes that the trial court correctly determined that, between the two parties, the evidence supported finding defendant responsible for the error. However, a finding of responsibility does not necessarily imply a finding of negligence. The majority identifies but never addresses the issue raised in Chief Judge Eagles' dissent in the Court of Appeals, that is, whether plaintiff was required to present expert evidence as to the standard of care required of defendant. Absent such evidence, the finder of fact had no basis for concluding that defendant was negligent.

The practice in North Carolina is to require expert testimony as to the applicable standard of care whenever a negligence action is brought against a professional or other individual who works in an area where the standard of care involves "highly specialized knowledge with respect to which a layman can have no reliable information." *Mazza v. Huffaker*, 61 N.C. App. 170, 175, 300 S.E.2d 833, 837 (quoting *Jackson v. Mountain Sanitarium & Asheville Agric. Sch.*, 234 N.C. 222, 227, 67 S.E.2d 57, 61 (1951)), *disc. rev. denied*, 309 N.C. 192, 305 S.E.2d 734 (1983); see also David A. Logan & Wayne A. Logan, *North Carolina Torts* § 11.10 (2d ed. 2004). An exception to this rule, on which the majority apparently relies, arises where the "common knowledge and experience of the [fact finder] is sufficient to evaluate compliance with a standard of care."



*Delta Envtl. Consultants of N.C., Inc. v. Wysong & Miles Co.*, 132 N.C. App. 160, 168, 510 S.E.2d 690, 695, *disc. rev. denied*, 350 N.C. 379, 536 S.E.2d 70 (1999). This exception applies when professional conduct is so grossly negligent that lay knowledge is sufficient to "make obvious the shortcomings of the professional." *Id.* at 168, 510 S.E.2d at 696; *see also McGill v. French*, 333 N.C. 209, 218, 424 S.E.2d 108, 113 (1993); *Groce v. Myers*, 224 N.C. 165, 170, 29 S.E.2d 553, 557 (1944).

I do not believe that this "common knowledge" exception applies in the instant case to relieve plaintiff of its duty to provide expert testimony as to the standard of care that defendant was required to meet. As detailed in the majority opinion, the evidence shows that Honda planned to add to an existing building an extension that was to be 80 feet wide by 120 feet long. Because it would tie into an existing crane, the extension had to be in the precise shape of a rectangle with 90 degree angles at each corner. Defendant made the measurements. Once construction began, however, the 120 foot long south wall was found to be straight but not parallel to the 120 foot long north wall. At its far end, the south wall deviated 5.75 inches from the path it would have followed had it been perfectly parallel to the north wall. Using this information, straightforward trigonometric analysis reveals that the angle at the southern corner where the extension met the existing building

was 90 degrees 13 minutes 12 seconds (or 90.2288 degrees) rather than 90 degrees exactly.<sup>1</sup>

While this small error had large consequences, those consequences may not be dispositive as to whether any actionable negligence occurred when defendant measured the angle. Large effects can result from a minuscule initial cause, as in the classic example where a kicked pebble triggers a landslide. While we hope for perfection among professionals, we do not require it. The record is devoid of any evidence as to the tolerances those in the surveying profession observe in carrying out their responsibilities. Nor does the evidence suggest whether a surveying error is judged on the basis of the magnitude of the mistake in the original measurement, on the basis of the results of the mismeasurement, or on both. Without such evidence, the fact finder had insufficient grounds on which to decide whether defendant was negligent. Therefore, plaintiff had the burden of introducing expert testimony as to the standard of care required of a surveyor, especially where, as here, conditions challenged or confounded usual surveying techniques. Accordingly, I respectfully dissent.

Justice PARKER joins in this dissenting opinion.

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<sup>1</sup> To recreate this calculation, draw a horizontal line representing the south wall as it should have been, parallel to the north wall and 1,440 inches (120 feet) long. Draw down from the left end of the horizontal line a vertical line that is 5.75 inches long, the amount by which the far end of the south wall deviated from being parallel with the north wall. These two lines meet at a 90-degree angle. Connect the ends of these two lines to make a right triangle. The hypotenuse of the triangle is the path the south wall actually followed. The remaining characteristics of the triangle can be derived from the known right angle and the two known sides.