

## **Ode to Cliff Lewis, LS 3311**

I have a good friend named Cliff Lewis who passed away Sat Oct. 25, 2003. He had been diagnosed with cancer a year or so ago. He fought a hard battle. Heck, he was working in the field close to the end. He always wanted to go with his plumb bob on, and damn near did it. He went quick and painless at home with family and Hospice support. I can't say enough good things about the Hospice program.

Cliff was born Dec. 30, 1937 in Santa Monica Ca. He grew up in Bunker Hill (now downtown L.A.) and attended Manual Arts High School. At 18 he started working on a City of Pasadena survey crew. To gain more knowledge he enrolled at Pasadena City College and took the survey courses offered by Dick Houk.

Drafted by the Army in 1961, (and getting married the same year to my mother Joyce) he got lucky and assigned to the construction battalion for two years in Fort Knox Kentucky. Lucky in that he could continue surveying while he was serving his two years. Settling in Arcadia in 1966, Cliff worked for Pafford and Associates in and around the LA area. My sister and I got involved in youth sports (soccer and baseball), and my folks volunteered their time and efforts to help out in any way they could. I remember setting up soccer goal posts late into the night before opening day. Headlights, flashlights and elbow grease were all used. He helped out with the grading of the baseball diamond, construction of the snack bar and equipment shed for the local little league. He developed a passion for soccer, and began coaching and was instrumental in organizing girl's club youth soccer in the Southern Ca. area for the Santa Anita Soccer Club in the 1970's with his good friend Per Hernholm. He took his U17 girl's team to Germany in a cultural exchange in the late 1970's, and we hosted numerous families from Australia and Germany during that time.

He found himself between jobs in the mid 1970's and decided to start his own business. A majority of his work was sub-contract fieldwork for other engineering and surveying firms. Working out of the house, my mother (Joyce) kept the books, and the spare bedroom was his office.

Things took off and he found himself working evenings and weekends to keep up. We had a standing joke that "if you went to work with Cliff on a Saturday, you need to bring extra flashlight batteries in your bags". He could slope tape by himself, tying the thong on the end of the chain to the bumper of the truck when no help was available. Adapt, improvise, and overcome. You could slow Cliff down, but he could not be stopped.

The man had an incredible knowledge of "rule of thumb" survey errors and analysis. 20" of angular error makes 0.01' per 100' horizontal. He knew that the human eye had resolution to about 3" of arc, and could use that to his advantage in certain situations. Other geometric examples include traditional intersections (two planes make a line, 3 points make a plane) that he would, show, tell, and demonstrate to anyone who was interested (with a string, pencil, the wall and/or floor).

Much of his work surrounded about “Class A” construction (a legal term I’ve been told). Working in the desert (Helendale), the military needed to build an aircraft runway that was level for a mile. Not the same elevation at both ends, but a “level runway”. I had the pleasure of laying out gridlines on construction sites with a calibrated steel tape and applying temp. corrections. Knowing that EDM’s are only plus minus 0.015’ plus your PPM’s for any measurement, he would choose the right tool for the right job to achieve the required/desired accuracy. He enjoyed solving the “classic 3 point resection problem”- long hand!

Notable projects he worked on (that I can remember) include: Terminal expansion Delta, Continental, and American Airlines LAX, Steven Spielberg’s “Dreamworks” facility in Burbank, Slausen and La Cienega (high rise), 9<sup>th</sup> and Figueroa St. (Pantry Building). Burbank Airport runway and taxiway expansion, The Magic Johnson Theater, Redondo Beach Pier, Riviera Country Club, Port of LA Pier 400 expansion, Cal State Dominguez Hills “Validrome” layout for 1984 Olympics (cycling), Metro Rail LA.

He did more low scale private boundary work for some of the following clients (indirectly): Neil Diamond, Coby Bryant, Arnold Swarchnager, and Frank Sinatra. Cliff didn’t really know who most of these people were, nor did he care. I understand his right-hand-man (Frank Guerrero) was getting autographs every coffee break Cliff would let him have!

Cliff’s door was always open, especially at the Cal. State Fresno Surveying Conference. He would befriend anyone who came along. He enjoyed the academic and social environment that surrounded the conference, and the surveying world in general. He and I have both met and become friends with so many students, faculty members and other surveying professionals that, well I’m speechless. I think a small book could be written.

In the late 90’s-00’s he was on the Board of Directors for the Surveyors Historical Society. He enjoyed spending time at their annual “Rendezvous” and Board meetings, getting to know many surveyors from all around the U.S.

In a way, I’m happy for Cliff. He’s at the “Intergalactic Baseline in the Sky” with many friends including Jefferson, Lincoln, and Washington. I’d sure like to be the “fly on the wall” listening to their conversations!

I believe I speak for all he touched when I say- “you will be missed my friend.”

Mark Lewis  
LS 6631